

# Parts Manual



See "General Information"  
for New Parts Manual  
Features.

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## **C11 Industrial Engine**

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GLS1-Up (Engine)

This Parts Manual is also Available in .PDF Format on Compact Disc  
(CD-ROM) - Caterpillar Form No. SERP4127

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# Product and Dealer Information

Note: For product identification plate locations, see the section "Product Identification Information" in the Operation and Maintenance Manual.

Delivery Date: \_\_\_\_\_

## Product Information

Model: \_\_\_\_\_

Product Identification Number: \_\_\_\_\_

Engine Serial Number: \_\_\_\_\_

Transmission Serial Number: \_\_\_\_\_

Generator Serial Number: \_\_\_\_\_

Attachment Serial Numbers: \_\_\_\_\_

Attachment Information: \_\_\_\_\_

Customer Equipment Number: \_\_\_\_\_

Dealer Equipment Number: \_\_\_\_\_

## Dealer Information

Name: \_\_\_\_\_ Branch: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Dealer Contact

Phone Number

Hours

Sales: \_\_\_\_\_

Parts: \_\_\_\_\_

Service: \_\_\_\_\_

# Informations produit et concessionnaire

Nota: Voir l'emplacement de la plaque signalétique du produit au chapitre "Informations produit" du guide d'utilisation et d'entretien.

Date de livraison: \_\_\_\_\_

## Informations produit

Modèle: \_\_\_\_\_

Numéro d'identification produit: \_\_\_\_\_

Numéro de série du moteur: \_\_\_\_\_

Numéro de série de la boîte de vitesses: \_\_\_\_\_

Numéro de série de l'alternateur: \_\_\_\_\_

Numéros de série d'équipement: \_\_\_\_\_

Informations sur l'équipement: \_\_\_\_\_

Numéro matériel client: \_\_\_\_\_

Numéro matériel concessionnaire: \_\_\_\_\_

## Informations concessionnaire

Nom: \_\_\_\_\_ Agence: \_\_\_\_\_

Adresse: \_\_\_\_\_

Contact concessionnaire

Numéro de téléphone

Heures

Ventes: \_\_\_\_\_

Pièces: \_\_\_\_\_

Service: \_\_\_\_\_

# Información del Producto/Distribuidor

Nota: Para saber la ubicación de las placas de identificación del producto, ver la sección “Información sobre identificación del producto” en el Manual de Operación y Mantenimiento.

Fecha de entrega: \_\_\_\_\_

## Información del producto

Modelo: \_\_\_\_\_

Número de identificación del producto: \_\_\_\_\_

Número de serie del motor: \_\_\_\_\_

Número de serie de la transmisión: \_\_\_\_\_

Número de serie del generador: \_\_\_\_\_

Números de serie de los accesorios: \_\_\_\_\_

Información sobre los accesorios: \_\_\_\_\_

Número del equipo del cliente: \_\_\_\_\_

Número del equipo del distribuidor: \_\_\_\_\_

## Información del distribuidor

Nombre: \_\_\_\_\_ Sucursal: \_\_\_\_\_

Dirección: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Comunicación con el distribuidor

Número de teléfono

Horas

Ventas: \_\_\_\_\_

Piezas: \_\_\_\_\_

Servicio: \_\_\_\_\_

# Informações Sobre Produto e Revendedor

Nota: Para localizações da placa de identificação do produto, consulte a seção, "Informações Sobre Identificação do Produto" no Manual de Operação e Manutenção.

Data de Entrega: \_\_\_\_\_

## Informações Sobre o Produto

Modelo: \_\_\_\_\_

Número de Identificação do Produto: \_\_\_\_\_

Número de Série do Motor: \_\_\_\_\_

Número de Série da Transmissão: \_\_\_\_\_

Número de Série do Gerador: \_\_\_\_\_

Números de Série de Acessórios: \_\_\_\_\_

Informações Sobre Acessórios: \_\_\_\_\_

Número do Equipamento do Cliente: \_\_\_\_\_

Número do Equipamento do Revendedor: \_\_\_\_\_

## Informações Sobre o Revendedor

Nome: \_\_\_\_\_ Filial: \_\_\_\_\_

Endereço: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contato do Revendedor

Telefone

Horas

Vendas: \_\_\_\_\_

Peças: \_\_\_\_\_

Serviço: \_\_\_\_\_

# Produkt- und Händlerinformation

Anmerkung: Für die Lage der Produkt-Identnummer und Seriennummern siehe Abschnitt "Produkt-Identinformation" im Betriebs- und Wartungshandbuch.

Lieferdatum: \_\_\_\_\_

## Produkt-Identinformation

Modell: \_\_\_\_\_

Produkt-Identnummer: \_\_\_\_\_

Seriennummer des Motors: \_\_\_\_\_

Seriennummer des Getriebes: \_\_\_\_\_

Seriennummer des Generators: \_\_\_\_\_

Seriennummern der Arbeitsgeräte: \_\_\_\_\_

Arbeitsgeräteinformation: \_\_\_\_\_

Kundennummer: \_\_\_\_\_

Händlernummer: \_\_\_\_\_

## Händlerinformation

Name: \_\_\_\_\_ Niederlassung: \_\_\_\_\_

Adresse: \_\_\_\_\_

Kontaktperson beim Händler

Telefon

Dienststunden

Verkauf: \_\_\_\_\_

Ersatzteile: \_\_\_\_\_

Service: \_\_\_\_\_

# MEMORANDA



# TABLE OF CONTENTS

Name	Page	Name	Page
<b>GENERAL INFORMATION</b> .....	A14	MOUNTING GP-ALTERNATOR .....	115
<b>REPAIR ALTERNATIVES</b> .....	A24	MOUNTING GP-FAN DRIVE .....	117
<b>SUPPLEMENTAL COOLANT ADDITIVES</b> .....	A29	MOUNTING GP-VALVE MECHANISM .....	120
<b>MAINTENANCE PARTS</b> .....	A34	PAN GP-OIL .....	121
<b>INDEX</b> .....	A47	PISTON & ROD GP .....	133
<b>ENGINE ARRANGEMENT</b> .....	1	PLUG GP-CYLINDER BLOCK .....	134
ENGINE AR-COMPLETE .....	1	PLUG GP-ENGINE .....	137
ENGINE AR-CORE .....	2	PLUG GP-FLYWHEEL HOUSING .....	139
<b>BASIC ENGINE</b> .....	5	POWER TAKE-OFF GP .....	140
ADAPTER GP-ENGINE TO TMSN .....	5	PULLEY GP .....	141
AIR COMPRESSOR GP .....	10	PULLEY GP-CRANKSHAFT .....	142
BASE GP-VALVE COVER .....	21	PULLEY GP-FAN & ALT DRIVE .....	148
BRACKET GP-SUPPORT .....	22	PULLEY GP-FAN DRIVE .....	149
CAMSHAFT GP .....	23	PULLEY-ALTERNATOR .....	153
CLUTCH GP .....	27	ROCKER ARM GP .....	155
COMPRESSOR GP-REFRIGERANT .....	29	SEAL GP-CRANKSHAFT .....	159
COVER GP-CRANKSHAFT .....	31	SHAFT GP-STUB .....	163
COVER GP-CYLINDER BLOCK .....	32	SUPPORT GP-ENGINE .....	166
COVER GP-FLYWHEEL HOUSING .....	33	SUPPORT GP-POWER TAKE-OFF .....	171
COVER GP-FRONT HOUSING .....	35	VALVE MECHANISM GP .....	172
COVER GP-VALVE MECHANISM .....	37	<b>LUBRICATION SYSTEM</b> .....	174
CRANKSHAFT GP .....	39	BASE GP-OIL FILTER .....	174
CYLINDER BLOCK AS .....	41	COVER GP-OIL FILTER BASE .....	186
CYLINDER BLOCK GP .....	43	FILLER GP-ENGINE OIL .....	187
CYLINDER HEAD AS .....	45	FILTER GP-CENTRIFUGAL .....	193
CYLINDER HEAD GP .....	46	FILTER GP-ENGINE OIL .....	194
DAMPER & PULLEY GP .....	48	FUMES DISPOSAL GP .....	197
DAMPER GP .....	49	GAUGE GP-OIL LEVEL (DIPSTICK) .....	200
DRAIN GP-ENGINE OIL .....	50	LINES GP-TURBOCHARGER OIL .....	210
DRIVE GP-ACCESSORY .....	51	PUMP GP-ENGINE OIL .....	213
DRIVE GP-FAN .....	57	<b>COOLING SYSTEM</b> .....	215
FASTENER GP-CYLINDER HEAD .....	58	ADAPTER GP-FAN .....	215
FASTENER GP-DAMPER & PULLEY .....	59	COOLANT CONDITIONER GP .....	221
FASTENER GP-FLYWHEEL .....	61	COOLER GP-ENGINE OIL .....	223
FASTENER GP-FRONT HOUSING .....	67	COOLER GP-TRANSMISSION OIL .....	226
FASTENER GP-STUB SHAFT .....	69	CORE GP-OIL COOLER .....	229
FITTING GP-AIR COMPRESSOR .....	72	ELEMENT GP-COOLANT CONDITIONER .....	230
FLANGE GP-OUTPUT SHAFT .....	73	FAN GP-BLOWER .....	233
FLYWHEEL GP .....	74	FAN GP-SUCTION .....	235
GEAR GP-FRONT .....	84	FLANGE GP-OIL COOLER .....	238
GEAR GP-REAR .....	85	LINES GP-WATER .....	239
GOVERNOR GP-AIR COMPRESSOR .....	96	PLUG GP-ENGINE OIL COOLER .....	247
HOUSING GP-FLYWHEEL .....	99	PUMP GP-WATER .....	248
HOUSING GP-FRONT .....	107	<b>AIR INLET AND EXHAUST SYSTEM</b> .....	251
KIT-CRANKSHAFT BEARING .....	109	AIR CLEANER GP .....	251
LIFTER GP-VALVE .....	110	CAP AS-RAIN .....	255
LIFTING GP-ENGINE .....	111	CONNECTION GP-EXHAUST .....	256
LINES GP-AIR COMPRESSOR .....	113	COVER GP-AIR INLET .....	257
		ELBOW-EXHAUST .....	258
		FITTING GP-EXHAUST .....	260
		FLANGE GP-EXHAUST .....	261

# TABLE OF CONTENTS

Name	Page	Name	Page
KIT-EXHAUST PARTS .....	262	METER GP-SERVICE .....	433
LINES GP-AIR .....	263	MODULE GP-DISPLAY .....	434
MANIFOLD GP-EXHAUST .....	272	MOUNTING GP-INSTRUMENT .....	435
MANIFOLD GP-INLET .....	274	MOUNTING GP-TACHOMETER .....	436
MOUNTING GP-TURBOCHARGER .....	275	PANEL GP-INSTRUMENT .....	437
PIPE GP-EXHAUST .....	277	TACHOMETER GP-ELECTRIC .....	439
PLUG GP-AIR INLET MANIFOLD .....	278	VOLTMETER GP .....	440
PRECLEANER GP .....	279		
SHUTOFF GP-AIR .....	280	<b>ENCLOSURES, GUARDS AND BASES</b> .....	442
TURBOCHARGER GP .....	283	BASE AS .....	442
		BASE GP-ENGINE .....	443
<b>FUEL SYSTEM</b> .....	296	<b>SERVICE EQUIPMENT AND SUPPLIES</b> .....	444
FILTER GP-FUEL .....	296	CHART-PLATE & FILM .....	444
FILTER GP-WATER SEP & FUEL .....	299		
FITTING GP-FUEL LINES .....	301	<b>PART NUMBER INDEX</b> .....	B1
INJECTOR GP-FUEL .....	307		
LINES GP-FLEXIBLE FUEL .....	309		
LINES GP-FUEL FILTER .....	310		
PUMP GP-FUEL INJECTION .....	324		
PUMP GP-FUEL TRANSFER .....	326		
VALVE GP-CHECK .....	327		
VALVE GP-FUEL BYPASS .....	329		
<b>ELECTRICAL AND STARTING SYSTEM</b> .....	330		
ALTERNATOR GP-CHARGING .....	330		
ATOMIZER AS-ETHER .....	350		
BATTERY GP .....	351		
CABLE GP-BATTERY .....	353		
CONNECTION GP-ELECTRICAL .....	354		
CONTROL & MTG GP-ENGINE ELEK .....	356		
CONTROL GP-ENGINE ELECTRONIC .....	358		
CONTROL GP-ENGINE SPEED .....	359		
CONTROL GP-REMOTE SPEED .....	361		
CONTROL GP-UNPROGRAMMED .....	362		
GUARD GP-ALTERNATOR .....	363		
SENSOR GP-ENGINE .....	364		
SENSOR GP-LIQUID LEVEL .....	365		
SENSOR GP-POSITION .....	366		
SENSOR GP-PRESSURE .....	367		
SENSOR GP-SPEED .....	373		
SENSOR GP-TEMPERATURE .....	379		
STARTING AID GP-ETHER .....	381		
STARTING MOTOR GP-ELECTRIC .....	383		
SUPPORT GP-BATTERY .....	419		
SWITCH GP-MAGNETIC .....	420		
VALVE GP-ETHER STARTING .....	421		
WIRING GP-ELECTRONIC CONTROL .....	423		
WIRING GP-ENGINE .....	427		
WIRING GP-UNIT INJECTOR .....	428		
<b>OPERATOR STATION</b> .....	430		
AMMETER AS .....	430		
CONVERTER GP-ELECTRICAL .....	431		
GAUGE GP-FUEL LEVEL .....	432		

# TABLE DES MATIÈRES

Désignation	Page	Désignation	Page
<b>GÉNÉRALITÉS</b> .....	A16	BOULONNERIE DE CARTER AV (ASS) .....	67
<b>OPTIONS DE RÉPARATION</b> .....	A25	BOULONNERIE-ARBRE DE VOLANT (ASS) .....	69
<b>ADDITIFS POUR LIQUIDE DE REFROIDISSEMENT</b> .....	A30	*FITTING GP-AIR COMPRESSOR .....	72
<b>PIÈCES DE RECHANGE</b> .....	A36	BRIDE - ARBRE DE SORTIE (ASS) .....	73
<b>INDEX</b> .....	A54	VOLANT MOTEUR (ASS) .....	74
<b>MOTEUR COMPLET</b> .....	1	PIGNONNERIE AV (ASS) .....	84
VERSION DE MOTEUR COMPLET .....	1	PIGNON AR (ASS) .....	85
MOTEUR - PARTIE CENTRALE (VERSION) .....	2	RÉGULATEUR - COMPRESSEUR D'AIR (ASS) .....	96
<b>MOTEUR</b> .....	5	CARTER DE VOLANT (ASS) .....	99
ADAPTATEUR DU MOTEUR A LA TRANSMISSION (ASS) .....	5	CARTER AV (ASS) .....	107
COMPRESSEUR D'AIR (ASS) .....	10	KIT DE COUSSINET DE VILEBREQUIN .....	109
SUPPORT - CACHE-SOUPAPES (ASS) .....	21	POUSSOIR DE SOUPAPE (ASS) .....	110
SUPPORT (ASS) .....	22	OEILLETONS DE LEVAGE MOTEUR (ASS) .....	111
ARBRE A CAMES (ASS) .....	23	CANALISATIONS DU COMPRESSEUR D'AIR (ASS) .....	113
EMBRAYAGE (ASS) .....	27	MONTAGE D'ALTERNATEUR (ASS) .....	115
COMPRESSEUR DE REFRIGERANT (ASS) .....	29	MONTAGE D'ENTRAÎNEMENT DE VENTILATEUR (ASS) .....	117
COUVERCLE DE VILEBREQUIN (ASS) .....	31	MONTAGE DE CULBUTERIE (ASS) .....	120
BLOC-CYLINDRES - COUVERCLE (ASS) .....	32	HUILE MOTEUR - CARTER (ASS) .....	121
COUVERCLE DE CARTER DE VOLANT (ASS) .....	33	PISTON ET BIELLE (ASS) .....	133
COUVERCLE DE CARTER AV (ASS) .....	35	BOUCHON DE BLOC-CYLINDRES (ASS) .....	134
CACHE-SOUPAPES (ASS) .....	37	BOUCHON DE MOTEUR (ASS) .....	137
VILEBREQUIN (ASS) .....	39	BOUCHON DU CARTER DE VOLANT (ASS) .....	139
BLOC-CYLINDRES (ENS) .....	41	PRISE DE FORCE (ASS) .....	140
BLOC-CYLINDRES (ASS) .....	43	POULIE (ASS) .....	141
CULASSE (ENS) .....	45	VILEBREQUIN - POULIE (ASS) .....	142
CULASSE (ASS) .....	46	POULIE - ENTRAÎNEMENT D'ALterna. ET DE VENTI. ....	148
AMORTISSEUR DE VIBRATIONS ET POULIE (ASS) .....	48	POULIE D'ENTRAÎNEMENT DE VENTILATEUR (ASS) .....	149
AMORTISSEUR DE VIBRATIONS (ASS) .....	49	POULIE D'ALTERNATEUR .....	153
VIDANGE-HUILE DE MOTEUR (ASS) .....	50	AXE DE CULBUTEUR (ASS) .....	155
ENTRAÎNEMENT AUXILIAIRE (ASS) .....	51	JOINT DE VILEBREQUIN (ASS) .....	159
ENTRAÎNEMENT DE VENTILATEUR (ASS) .....	57	ARBRE DE VOLANT (ASS) .....	163
BOULONNERIE DE LA CULASSE (ASS) .....	58	SUPPORT DE MOTEUR (ASS) .....	166
BOULONNERIE D'AMORTISSEUR ET DE POULIE .....	59	SUPPORT DE PRISE DE FORCE (ASS) .....	171
VOLANT - BOULONNERIE (ASS) .....	61	CULBUTERIE (ASS) .....	172
		<b>CIRCUIT DE GRAISSAGE</b> .....	174
		SUPPORT DE FILTRE À HUILE (ASS) .....	174
		COUVERCLE DU SUPPORT DE FILTRE A HUILE (ASS) .....	186
		BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS) .....	187

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# TABLE DES MATIÈRES

Désignation	Page	Désignation	Page
*FILTER GP-CENTRIFUGAL .....	193	ARRÊT D'AIR (ASS) .....	280
FILTRE À HUILE MOTEUR (ASS) .....	194	TURBOCOMPRESSEUR (ASS) .....	283
DISPOSITIF D'EVACUATION DES VAPEURS DE CARTER .....	197	<b>CIRCUIT DE CARBURANT</b> .....	296
JAUGE D'HUILE MOTEUR (BAIONNETTE) (ASS) .....	200	FILTRE A CARBURANT (ASS) .....	296
CANALISATIONS D'HUILE DE TURBOCOMPRESSEUR (ASS) .....	210	FILTRE DE SÉPARATEUR D'EAU ET DE CARBURANT (ASS) .....	299
POMPE A HUILE MOTEUR (ASS) .....	213	RACCORD - CANALISATIONS DE CARBURANT (ASS) .....	301
<b>CIRCUIT DE REFROIDISSEMENT</b> .....	215	INJECTEUR DE CARBURANT (ASS) . . . . .	307
ADAPTATEUR DE VENTILATEUR (ASS) .....	215	TUYAUX FLEXIBLES DE CARBURANT (ASS) .....	309
ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (ASS) .....	221	CANALISATIONS DU FILTRE A CARBURANT (ASS) .....	310
REFROIDISSEUR D'HUILE MOTEUR (ASS) .....	223	POMPE D'INJECTION DE CARBURANT (ASS) .....	324
REFROIDISSEUR D'HUILE DE BOÎTE (ASS) .....	226	POMPE D'ALIMENTATION EN CARBURANT (ASS) .....	326
FAISCEAU DU REFROIDISSEUR D'HUILE (ASS) .....	229	CLAPET DE RETENUE (ENS) .....	327
ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS) .....	230	SOUPAPE DE DÉRIVATION DE CARBURANT (ASS) .....	329
VENTILATEUR SOUFFLANT (ASS) .....	233	<b>CIRCUIT ELECTRIQUE ET DE</b>	
VENTILATEUR ASPIRANT (ASS) .....	235	<b>DEMARRAGE</b> .....	330
BRIDE DE REFROIDISSEUR D'HUILE (ASS) .....	238	ALTERNATEUR DE CHARGE (ASS) .....	330
CANALISATIONS D'EAU (ASS) .....	239	GICLEUR-ÉTHER (ENS) .....	350
BOUCHON DE REFROIDISSEUR D'HUILE MOTEUR (ASS) .....	247	BATTERIE (ASS) .....	351
*PUMP GP-WATER .....	248	CABLE DE BATTERIE (ASS) .....	353
POMPE A EAU (ASS) .....	249	BRANCHEMENT ÉLECTRIQUE (ASS) . . . . .	354
<b>SYSTEME D'ÉCHAPPEMENT ET</b>		COMMANDE ET MONTAGE - MOTEUR .....	356
<b>D'ADMISSION D'AIR</b> .....	251	COMMANDE ELECTRONIQUE DE MOTEUR (ASS) .....	358
FILTRE A AIR (ASS) .....	251	COMMANDE DE RÉGIME MOTEUR (ASS) .....	359
DÉFLECTEUR DE PLUIE (ENS) .....	255	*CONTROL GP-ENGINE SPEED .....	360
RACCORD D'ÉCHAPPEMENT (ASS) . . . . .	256	COMMANDE DE VITESSE À DISTANCE (ASS) .....	361
*COVER GP-AIR INLET .....	257	COMMANDE NON PROGRAMMEE (ASS) .....	362
COUDE D'ÉCHAPPEMENT .....	258	PROTEGE-ALTERNATEUR (ASS) .....	363
RACCORD D'ÉCHAPPEMENT (ASS) . . . . .	260	CAPTEUR - MOTEUR (ASS) .....	364
BRIDE D'ÉCHAPPEMENT (ASS) .....	261	CAPTEUR DE NIVEAU DU LIQUIDE (ASS) .....	365
KIT DE PIÈCES D'ÉCHAPPEMENT . . . . .	262	SONDE - CIRCUIT DE CARBURANT . . . . .	366
CANALISATIONS D'AIR (ASS) .....	263	CAPTEUR DE PRESSION (ASS) .....	367
COLLECTEUR D'ÉCHAPPEMENT (ASS) .....	272	CAPTEUR DE VITESSE (ASS) .....	373
COLLECTEUR D'ADMISSION (ASS) . . . . .	274	CAPTEUR DE TEMPERATURE (ASS) . . . . .	379
MONTAGE DE TURBOCOMPRESSEUR (ASS) .....	275	AUXILIAIRE DE DÉMARRAGE À L'ÉTHER .....	381
ECHAPPEMENT - TUYAU (ASS) .....	277	DÉMARREUR ÉLECTRIQUE (ASS) .....	383
BOUCHON DE COLLECTEUR D'ADMISSION (ASS) .....	278	SUPPORT DE BATTERIE (ASS) .....	419
PREFILTRE (ASS) .....	279	CONTACTEUR MAGNETIQUE (ASS) . . . . .	420

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# TABLE DES MATIÈRES

Désignation	Page	Désignation	Page
SOUPEPE DE DÉMARRAGE À L'ÉTHER (ASS) .....	421		
COMMANDE ÉLECTRONIQUE - CABLAGE .....	423		
CABLAGE DE MOTEUR (ASS) .....	427		
CABLAGE D'INJECTEUR .....	428		
<b>POSTE DE CONDUITE</b> .....	430		
AMPÈREMÈTRE (ENS) .....	430		
TRANSFORMATION ELECTRIQUE (ASS) .....	431		
BAÏONNETTE- NIVEAU DE CARBURANT (ASS) .....	432		
COMPTEUR D'ENTRETIEN (ASS) .....	433		
MODULE D'AFFICHAGE (ASS) .....	434		
MONTAGE DES INSTRUMENTS (ASS) .....	435		
MONTAGE DE COMPTE-TOURS (ASS) .....	436		
TABLEAU DE BORD (ASS) .....	437		
COMPTE-TOURS ÉLECTRIQUE (ASS) .....	439		
VOLTMÈTRE (ASS) .....	440		
<b>ENVELOPPES, PROTECTEURS ET SUPPORTS</b> .....	442		
SUPPORT (ENS) .....	442		
SUPPORT DE MOTEUR (ASS) .....	443		
<b>MATÉRIEL ET FOURNITURES D'ENTRETIEN</b> .....	444		
TABLEAU - PLAQUE ET AUTOCOLLANT .....	444		
<b>INDEX DE NUMÉROS DE PIÈCES</b> .....	B1		

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# CONTENIDO

Nombre	Página	Nombre	Página
<b>INFORMACIÓN GENERAL</b> .....	A18	BRIDA DEL EJE DE SALIDA (GR) .....	73
<b>ALTERNATIVAS DE REPARACIÓN</b> .....	A26	VOLANTE (GR) .....	74
<b>ADITIVOS DE REFRIGERANTE SUPLEMENTARIOS</b> .....	A31	ENGRANAJE DELANTERO (GR) .....	84
<b>PIEZAS DE MANTENIMIENTO</b> .....	A39	ENGRANAJE TRASERO (GR) .....	85
<b>INDICE</b> .....	A61	REGULADOR DEL COMPRESOR DE AIRE (GR) .....	96
<b>CONFIGURACIÓN DE MOTOR</b> .....	1	VOLANTE - CAJA DE (GR) .....	99
MOTOR COMPLETO (CONFIG) .....	1	CAJA DELANTERA (GR) .....	107
MOTOR - NÚCLEO (CONFIG) .....	2	JUEGO DE COJINETES DE BANCADA .....	109
<b>MOTOR BÁSICO</b> .....	5	VÁLVULA DE LEVANTAMIENTO (GR) .....	110
ADAPTADOR DEL MOTOR A LA TRANSMISIÓN .....	5	CÁNCAMOS DE LEVANTAMIENTO DEL MOTOR (GR) .....	111
COMPRESOR DE AIRE (GR) .....	10	TUBERÍAS DEL COMPRESOR DE AIRE (GR) .....	113
BASE DE LA TAPA DE VÁLVULAS (GR) .....	21	MONTAJE DEL ALTERNADOR (GR) .....	115
SOPORTE (GR) .....	22	MONTAJE DEL MANDO DE VENTILADOR (GR) .....	117
ÁRBOL DE LEVAS (GR) .....	23	MECANISMO DE LA VÁLVULA - MONTAJE DEL (GR) .....	120
EMBRAGUE (GR) .....	27	CÁRTER - COLECTOR DEL (GR) .....	121
COMPRESOR DE REFRIGERANTE (GR) .....	29	PISTÓN Y BIELA (GR) .....	133
TAPA DE CIGÜEÑAL .....	31	TAPÓN DEL BLOQUE MOTOR (GR) .....	134
TAPA DEL BLOQUE MOTOR (GR) .....	32	TAPÓN DEL MOTOR (GR) .....	137
TAPA DE LA CAJA DE VOLANTE (GR) .....	33	TAPÓN DE LA CAJA DEL VOLANTE (GR) .....	139
TAPA DE LA CAJA DELANTERA (GR) .....	35	TOMA DE FUERZA (GR) .....	140
TAPA DEL MECANISMO DE VÁLVULAS (GR) .....	37	POLEA (GR) .....	141
CIGÜEÑAL (GR) .....	39	CIGÜEÑAL - POLEA DE (GR) .....	142
BLOQUE MOTOR (CONJ) .....	41	POLEA DE MANDO DEL ALTERNADOR Y VENTILADOR (GR) .....	148
BLOQUE MOTOR (GR) .....	43	POLEA DEL MANDO DE VENTILADOR (GR) .....	149
CULATA DE CILINDROS (CONJ) .....	45	POLEA DEL ALTERNADOR .....	153
CULATA DE CILINDROS (GR) .....	46	BALANCÍN (GR) .....	155
AMORTIGUADOR Y POLEA (GR) .....	48	SELLO DE CIGÜEÑAL (GR) .....	159
AMORTIGUADOR DE VIBRACIONES (GR) .....	49	EJE CORTO (GR) .....	163
DRENAJE DEL ACEITE DE MOTOR .....	50	MOTOR - SOPORTE DEL (GR) .....	166
ACCESORIOS - IMPULSOR DE (GR) .....	51	SOPORTE DE LA TOMA DE FUERZA (GR) .....	171
IMPULSOR DE VENTILADOR (GR) .....	57	MECANISMO DE VÁLVULAS (GR) .....	172
CULATA DE CILINDROS - TORNILLERÍA DE LA (GR) .....	58	<b>SISTEMA DE LUBRICACIÓN</b> .....	174
GRUPO DE TORNILLERÍA-AMORTIGUADOR Y POLEA .....	59	FILTRO DE ACEITE - BASE DEL (GR) .....	174
TORNILLERÍA DE VOLANTE (GR) .....	61	TAPA DE LA BASE DEL FILTRO DE ACEITE (GR) .....	186
CAJA DELANTERA - TORNILLERÍA DE LA (GR) .....	67	TUBO DE LLENADO DE ACEITE (GR) .....	187
SUJETADOR DE EJE CORTO (GR) .....	69	*FILTER GP-CENTRIFUGAL .....	193
*FITTING GP-AIR COMPRESSOR .....	72	FILTRO DE ACEITE DEL MOTOR (GR) .....	194
		ESCAPE DE GASES (GR) .....	197
		INDICADOR DEL NIVEL DE ACEITE (VARILLA) (GR) .....	200
		TURBOCOMPRESOR - TUBERÍAS DE ACEITE DEL (GR) .....	210

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# CONTENIDO

Nombre	Página	Nombre	Página
BOMBA DE ACEITE DEL MOTOR (GR) .....	213	CONEXIÓN DE ENGRASE DE LAS TUBERÍAS DE COMBUSTIBLE .....	301
<b>SISTEMA DE ENFRIAMIENTO</b> .....	215	INYECTOR DE COMBUSTIBLE (GR) . . . . .	307
ADAPTADOR DE VENTILADOR (GR) . . . . .	215	COMBUSTIBLE - TUBERIAS FLEXIBLES DE .....	309
ACONDICIONADOR DE REFRIGERANTE (GR) .....	221	TUBERÍAS DEL FILTRO DE COMBUSTIBLE .....	310
ENFRIADOR DE ACEITE DEL MOTOR (GR) .....	223	BOMBA DE INYECCIÓN DE COMBUSTIBLE (GR) .....	324
ENFRIADOR DE ACEITE DE LA TRANSMISIÓN (GR) .....	226	BOMBA DE TRANSFERENCIA DE COMBUSTIBLE (GR) .....	326
NÚCLEO DEL ENFRIADOR DE ACEITE (GR) .....	229	VÁLVULA DE RETENCIÓN (GR) .....	327
ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR) .....	230	VALVULA DE DERIVACION DE COMBUSTIBLE (GR) .....	329
SOPLADOR - VENTILADOR (GR) .....	233	<b>SISTEMA ELECTRICO Y DE ARRANQUE</b> .....	330
SUCCIÓN - VENTILADOR DE (GR) .....	235	CARGA - ALTERNADOR DE (GR) .....	330
BRIDA DE ENFRIADOR DE ACEITE (GR) .....	238	ATOMIZADOR DE ÉTER (CONJ) .....	350
TUBERÍAS DEL AGUA (GR) .....	239	BATERÍA (GR) .....	351
GRUPO DE TAPON, REFRIGERANTE DE ACEITE DE MOTOR .....	247	CABLE DE LA BATERÍA (GR) .....	353
*PUMP GP-WATER .....	248	CONEXIÓN ELÉCTRICA (GR) .....	354
BOMBA DE AGUA (GR) .....	249	CONTROL ELECTRÓNICO DEL MOTOR Y MONTAJE .....	356
<b>SISTEMA DE ADMISION DE AIRE Y ESCAPE</b> .....	251	CONTROL ELECTRÓNICO DEL MOTOR (GR) .....	358
FILTRO DE AIRE (GR) .....	251	CONTROL DE VELOCIDAD DE MOTOR (GR) .....	359
TAPA CONTRA LA LLUVIA (CONJ) .....	255	*CONTROL GP-ENGINE SPEED .....	360
CONEXIÓN DE ESCAPE (GR) .....	256	CONTROL REMOTO DE VELOCIDAD (GR) .....	361
*COVER GP-AIR INLET .....	257	CONTROL NO PROGRAMADO (GR) . . . . .	362
CODO DE ESCAPE .....	258	PROTECTOR DEL ALTERNADOR (GR) .....	363
CONEXIÓN DE ESCAPE (GR) .....	260	SENSOR DEL MOTOR (GR) .....	364
BRIDA DE ESCAPE (GR) .....	261	SENSOR DEL NIVEL DE LÍQUIDO . . . . .	365
JUEGO DE LAS PIEZAS DE ESCAPE .....	262	DETECTOR DE POSICIÓN (SISTEMA DE COMBUST.) (GR) .....	366
AIRE - TUBERÍAS DE (GR) .....	263	SENSOR DE PRESIÓN (GR) .....	367
MÚLTIPLE DE ESCAPE (GR) .....	272	SENSOR DE VELOCIDAD (GR) .....	373
MÚLTIPLE DE ADMISIÓN (GR) .....	274	SENSOR DE TEMPERATURA (GR) .....	379
MONTAJE DEL TURBOCOMPRESOR (GR) .....	275	AUXILIAR DE ARRANQUE CON ÉTER (GR) .....	381
TUBO DE ESCAPE (GR) .....	277	MOTOR DE ARRANQUE ELÉCTRICO (GR) .....	383
GRUPO DE TAPÓN DEL MÚLTIPLE DE ADMISIÓN .....	278	SOPORTE DE BATERÍA (GR) .....	419
ANTEFILTRO (GR) .....	279	INTERRUPTOR MAGNÉTICO (GR) .....	420
CORTE DE AIRE (GR) .....	280	GRUPO DE VÁLVULA-ARRANQUE CON ÉTER .....	421
TURBOCOMPRESOR (GR) .....	283	CABLES DEL CONTROL ELECTRÓNICO (GR) .....	423
<b>SISTEMA DE COMBUSTIBLE</b> .....	296	CABLES DEL MOTOR (GR) .....	427
FILTRO DE COMBUSTIBLE (GR) .....	296	CABLES DE INYECTOR (GR) .....	428
FILTRO DE COMBUSTIBLE Y SEPARADOR DE AGUA (GR) .....	299		

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# CONTENIDO

Nombre	Página	Nombre	Página
<b>PUESTO DEL OPERADOR</b> .....	430		
AMPERIMETRO, CONJUNTO .....	430		
CONVERTIDOR ELÉCTRICO (GR) .....	431		
INDICADOR DEL NIVEL DE ACEITE (GR) .....	432		
MEDIDOR DE SERVICIO (GR) .....	433		
MODULO DE LA PANTALLA (GR) .....	434		
MONTAJE DE LOS INSTRUMENTOS (GR) .....	435		
MONTAJE DEL TACOMETRO(GR) .....	436		
TABLERO DE INSTRUMENTOS (GR) .....	437		
TACÓMETRO ELÉCTRICO (GR) .....	439		
GRUPO DE VOLTIMETRO .....	440		
<b>COMPARTIMIENTOS, PROTECTORES Y BASES</b> .....	442		
BASE (CONJ) .....	442		
BASE DEL MOTOR (GR) .....	443		
<b>EQUIPO DE SERVICIO Y SUMINISTROS</b> .....	444		
TABLA DE LOCALIZACIÓN DE LAS PLACAS Y CALCOMANÍAS .....	444		
<b>INDICE DE NUMEROS DE PIEZA</b> .....	B1		

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION



# ÍNDICE

Designação	Página	Designação	Página
<b>INFORMAÇÃO GERAL</b> .....	A20	REGULADOR - COMPRESSOR DE AR .....	96
<b>ALTERNATIVAS DE REPARO</b> .....	A27	CAIXA DO VOLANTE DO MOTOR .....	99
<b>ADITIVOS SUPLEMENTARES DO LÍQUIDO ARREFECEDOR</b> .....	A32	CAIXA DIANTEIRA .....	107
<b>PEÇAS DE MANUTENÇÃO</b> .....	A42	JOGO DE MANCAL PRINCIPAL DO MOTOR .....	109
<b>ÍNDICE</b> .....	A68	TUCHO DA VÁLVULA .....	110
<b>ARRANJO DO MOTOR</b> .....	1	LEVANTAMENTO DO MOTOR .....	111
MOTOR COMPLETO .....	1	TUBOS - COMPRESSOR DE AR .....	113
MOTOR - NÚCLEO .....	2	MONTAGEM - ALTERNADOR .....	115
<b>MOTOR BÁSICO</b> .....	5	MONTAGEM - COMANDO DO VENTILADOR .....	117
ADAPTADOR ENTRE O MOTOR E A TRANSMISSÃO .....	5	MONTAGEM - MECANISMO DAS VÁLVULAS .....	120
COMPRESSOR DE AR .....	10	CÁRTER DO ÓLEO DO MOTOR .....	121
BASE - TAMPA DA VÁLVULA .....	21	PISTÃO E BIELA .....	133
SUPORTE - TIRANTE .....	22	BUJÃO DO BLOCO DO CILINDRO .....	134
EIXO-COMANDO DE VÁLVULA .....	23	BUJÃO DO MOTOR .....	137
EMBREAGEM .....	27	BUJÃO - CAIXA DO VOLANTE DO MOTOR .....	139
COMPRESSOR DE REFRIGERANTE .....	29	TOMADA DE FORÇA .....	140
TAMPA - VIRABREQUIM .....	31	POLIA .....	141
TAMPA - BLOCO DO MOTOR .....	32	POLIA DO VIRABREQUIM .....	142
TAMPA - CAIXA DO VOLANTE .....	33	POLIA - VENTILADOR E COMANDO DO ALTERNADOR .....	148
TAMPA - CAIXA DIANTEIRA .....	35	POLIA - ACIONADOR DO VENTILADOR .....	149
TAMPA - MECANISMO DAS VÁLVULAS .....	37	POLIA DO ALTERNADOR .....	153
VIRABREQUIM .....	39	BALANCIM .....	155
BLOCO DO MOTOR .....	41	RETENTOR DO VIRABREQUIM .....	159
CABEÇOTE DO MOTOR .....	45	EIXO CURTO DA TOMADA DE FORÇA DO VOLANTE .....	163
AMORTECEDOR DE VIBRAÇÕES E POLIA .....	48	SUPORTE DO MOTOR .....	166
AMORTECEDOR .....	49	SUPORTE - TOMADA DE FORÇA .....	171
DRENO - ÓLEO DO MOTOR .....	50	MECANISMO DAS VÁLVULAS .....	172
COMANDO DE ACESSÓRIOS .....	51	<b>SISTEMA DE LUBRIFICAÇÃO</b> .....	174
COMANDO DO VENTILADOR .....	57	BASE DO FILTRO DE ÓLEO .....	174
FIXADORES - CABEÇOTE DO MOTOR .....	58	TAMPA - BASE DO FILTRO DE ÓLEO .....	186
FIXADOR - AMORTECEDOR E POLIA .....	59	BOCAL DE ENCHIMENTO DE ÓLEO DO MOTOR .....	187
FIXADORES DO VOLANTE DO MOTOR .....	61	*FILTER GP-CENTRIFUGAL .....	193
FIXADORES - CAIXA DIANTEIRA .....	67	FILTRO - ÓLEO DO MOTOR .....	194
FIXADOR - EIXO CURTO .....	69	ELIMINAÇÃO DE VAPORES DO CÁRTER .....	197
*FITTING GP-AIR COMPRESSOR .....	72	INDICADOR - NÍVEL DO ÓLEO (VARETA) .....	200
FLANGE - EIXO DE SAÍDA .....	73	TUBOS - ÓLEO DO TURBOALIMENTADOR .....	210
VOLANTE DO MOTOR .....	74	BOMBA DE ÓLEO - MOTOR .....	213
ENGRENAGENS DE DISTRIBUIÇÃO .....	84	<b>SISTEMA DE ARREFECIMENTO</b> .....	215
ENGRENAGENS DE COMANDO TRASEIRO .....	85	ADAPTADOR DO VENTILADOR .....	215

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
CONDICIONADOR DO LÍQUIDO ARREFECEDOR .....	221	VÁLVULA DE DERIVAÇÃO DO COMBUSTÍVEL .....	329
ARREFECEDOR - ÓLEO DO MOTOR .....	223	<b>SISTEMA ELÉTRICO E DE PARTIDA</b> .....	330
ARREFECEDOR DE ÓLEO DA TRANSMISSÃO .....	226	ALTERNADOR DE CORRENTE .....	330
COLMÉIA - ARREFECEDOR DE ÓLEO .....	229	ATOMIZADOR - ÉTER .....	350
ELEMENTO - CONDICIONADOR ARREFECEDOR .....	230	BATERIA .....	351
VENTILADOR DE SOPRO .....	233	CABO DA BATERIA .....	353
VENTILADOR DE SUÇÃO .....	235	CONEXÃO - ELÉTRICA .....	354
FLANGE - ARREFECEDOR DE ÓLEO .....	238	CONTROLE ELETRÔNICO E MONTAGEM - MOTOR .....	356
TUBOS - ÁGUA .....	239	CONTROLE ELETRÔNICO - MOTOR .....	358
BUJÃO - ARREFECEDOR DO ÓLEO DO MOTOR .....	247	CONTROLE-ROTAÇÃO DO MOTOR .....	359
*PUMP GP-WATER .....	248	*CONTROL GP-ENGINE SPEED .....	360
BOMBA DE ÁGUA .....	249	CONTROLE REMOTO DA ROTAÇÃO .....	361
<b>SISTEMA DE ADMISSÃO E ESCAPE</b> .....	251	CONTROLE - NÃO PROGRAMADO .....	362
PURIFICADOR DE AR .....	251	PROTETOR - ALTERNADOR .....	363
PROTETOR CONTRA CHUVA .....	255	SENSOR DO MOTOR .....	364
CONEXÃO DO TUBO DE ESCAPE .....	256	SENSOR - NÍVEL DE LÍQUIDO .....	365
*COVER GP-AIR INLET .....	257	EMISSOR - POSIÇÃO .....	366
COTOVELO DE ESCAPE .....	258	SENSOR - PRESSÃO .....	367
CONEXÃO DE ESCAPE .....	260	SENSOR DE VELOCIDADE .....	373
FLANGE DE ESCAPE .....	261	SENSOR - TEMPERATURA .....	379
JOGO DE PEÇAS DO ESCAPAMENTO .....	262	AUXILIAR DE PARTIDA A ÉTER .....	381
TUBOS - AR .....	263	MOTOR ELÉTRICO DE PARTIDA .....	383
COLETOR DE ESCAPE .....	272	SUORTE - BATERIA .....	419
COLETOR DE ADMISSÃO .....	274	INTERRUPTOR - MAGNÉTICO .....	420
MONTAGEM - TURBOALIMENTADOR .....	275	VALVULA - PARTIDA A ÉTER .....	421
CANO DE ESCAPE .....	277	CABOS/FIOS ELÉTRICOS - CONTROLE ELETRÔNICO .....	423
BUJÃO - COLETOR DE ADMISSÃO .....	278	CABOS/FIOS ELÉTRICOS - MOTOR .....	427
PRÉ-PURIFICADOR .....	279	CABOS/FIOS ELÉTRICOS - INJETOR .....	428
PARADA DO AR .....	280	<b>POSTO DO OPERADOR</b> .....	430
TURBOALIMENTADOR .....	283	AMPERÍMETRO .....	430
<b>SISTEMA DE COMBUSTÍVEL</b> .....	296	CONVERSOR ELÉTRICO .....	431
FILTRO - COMBUSTÍVEL .....	296	MEDIDOR - NÍVEL DE COMBUSTÍVEL .....	432
FILTRO DE COMBUSTÍVEL E SEPARADOR DE ÁGUA .....	299	MARCADOR DE HORAS DE SERVIÇO .....	433
CONEXÃO - TUBOS DE COMBUSTÍVEL .....	301	MÓDULO DO VISOR .....	434
INJETOR DE COMBUSTÍVEL .....	307	MONTAGEM DOS INSTRUMENTOS .....	435
TUBOS - FLEXÍVEIS DO COMBUSTÍVEL .....	309	MONTAGEM - TACÔMETRO .....	436
TUBOS - FILTRO DO COMBUSTÍVEL .....	310	PAINEL DE INSTRUMENTOS .....	437
BOMBA DE INJEÇÃO DO COMBUSTÍVEL .....	324	TACÔMETRO - ELÉTRICO .....	439
BOMBA DE TRANSFERÊNCIA DO COMBUSTÍVEL .....	326	VOLTÍMETRO .....	440
VÁLVULA DE RETENÇÃO .....	327	<b>COBERTURAS, PROTETORES E BASES</b> .....	442
		BASE .....	442
		SUORTE DO MOTOR .....	443
		<b>EQUIPAMENTOS DE SERVIÇO E SUPRIMENTOS</b> .....	444
		TABELA - PLACA E DECALQUE .....	444

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
ÍNDICE DE NÚMERO DE PEÇA .....	B1		

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# INHALTSVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
<b>ALLGEMEINE HINWEISE</b> .....	A22	DRUCKLUFTKOMPRESSORLEITUN- GEN .....	113
<b>REPARaturalTERNATIVEN</b> .....	A28	DREHSTROMGENERATOR - BEFESTIGUNG .....	115
<b>KÜHLMITTELZUSATZ</b> .....	A33	LÜFTERANTRIEBSAUFHÄNGUNG .....	117
<b>WARTUNGSTEILE</b> .....	A45	VENTILMECHANISMUSAUFHÄN- GUNG .....	120
<b>STICHWORTVERZEICHNIS</b> .....	A75	ÖLWANNE .....	121
<b>MOTOR</b> .....	1	PLEUELSTANGE UND KOLBEN .....	133
MOTOR, KOMPLETT .....	1	ZYLINDERBLOCKSCHRAUBE .....	134
MOTORKÜHLERBLOCK .....	2	MOTORSTOPFEN .....	137
<b>MOTOR (GRUNDAUSFÜHRUNG)</b> .....	5	SCHWUNGRADGEHÄUSESTOPFEN .....	139
GETRIEBEANSCHLUSS .....	5	ZAPFWELLE .....	140
LUFTKOMPRESSOR .....	10	RIEMENSCHLEIBE .....	141
VENTILDECKEL - UNTERTEIL .....	21	KURBELWELLEN-RIEMENSCHLEIBE .....	142
STÜTZE .....	22	RIEMENSCHLEIBE - LÜFTER- U. DREHSTROMGENERATOR .....	148
NOCKENWELLE .....	23	LÜFTERRIEMENSCHLEIBE .....	149
KUPPLUNG .....	27	DREHSTROMGENERATOR- RIEMENSCHLEIBE .....	153
KÄLTEMITTELKOMPRESSOR .....	29	VENTILKIPPHEBEL .....	155
KURBELWELLENABDECKUNG .....	31	KURBELWELLENDICHTUNG .....	159
MOTORBLOCKDECKEL .....	32	FLANSCHWELLE .....	163
SCHWUNGRADGEHÄUSEDECKEL .....	33	MOTORAUFHÄNGUNG .....	166
STIRNRADGEHÄUSEDECKEL .....	35	ZAPFWELLENTRÄGER .....	171
VENTILDECKEL .....	37	VENTILSTEUERUNG .....	172
KURBELWELLE .....	39	<b>SCHMIERSYSTEM</b> .....	174
MOTORBLOCK .....	41	ÖLFILTERSOCKEL .....	174
ZYLINDERKOPF .....	45	ÖLFILTERSOCKELDECKEL .....	186
DÄMPFER UND RIEMENSCHLEIBE .....	48	MOTORÖLEINFÜLLSTUTZEN .....	187
DÄMPFER .....	49	*FILTER GP-CENTRIFUGAL .....	193
MOTORÖLABLASS .....	50	ÖLFILTER .....	194
NEBENANTRIEB .....	51	ENTDUNSTER .....	197
LÜFTERANTRIEB .....	57	ÖLMESSSTAB .....	200
ZYLINDERKOPF-HALTETEILE .....	58	TURBOLADERÖLLEITUNGEN .....	210
BEFESTIGUNG - DÄMPFER U. RIEMENSCHLEIBE .....	59	SCHMIERPUMPE .....	213
SCHWUNGRAD-HALTETEILE .....	61	<b>KÜHLSYSTEM</b> .....	215
STIRNRADGEHÄUSE-HALTETEILE .....	67	LÜFTERANSCHLUSS .....	215
FLANSCHWELLE - HALTETEILE .....	69	KÜHLWASSERZUSATZELEMENT .....	221
*FITTING GP-AIR COMPRESSOR .....	72	MOTORÖLKÜHLER .....	223
ABTRIEBSFLANSCH .....	73	GETRIEBEÖLKÜHLER .....	226
SCHWUNGRAD .....	74	ÖLKÜHLERBLOCK .....	229
STIRNRAD .....	84	KÜHLMITTELZUSATZELEMENT .....	230
ZAHNRADVORGELEGE .....	85	DRUCKLÜFTER .....	233
DREHZAHNREGLER F. LUFTKOMPRES- SOR .....	96	SAUGLÜFTER .....	235
SCHWUNGRADGEHÄUSE .....	99	ÖLKÜHLERFLANSCH .....	238
STIRNRADGEHÄUSE .....	107	KÜHLWASSERLEITUNGEN .....	239
KURBELLAGER-EINBAUSATZ .....	109	MOTORÖLKÜHLERSCHRAUBE .....	247
HUBVENTIL .....	110	*PUMP GP-WATER .....	248
MOTORHUBÖSE .....	111	KÜHLWASSERPUMPE .....	249

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# INHALTSVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
<b>LUFTANSAUG- UND ABGASSYSTEM</b> .....	251	FLÜSSIGKEITSSTANDESENSOR .....	365
LUFTREINIGER .....	251	STELLUNGSSENSOR .....	366
REGENKAPPE .....	255	DRUCKSENSOR .....	367
AUSPUFFANSCHLUSS .....	256	DREHZAHLSSENSOR .....	373
*COVER GP-AIR INLET .....	257	TEMPERATURSENSOR .....	379
AUSPUFFBOGEN .....	258	ÄTHERSTARTHILFE .....	381
AUSPUFFANSCHLUSS .....	260	STARTERMOTOR .....	383
AUSPUFFFLANSCH .....	261	BATTERIETRÄGER .....	419
AUSPUFF - TEILESATZ .....	262	MAGNETSCHALTER .....	420
DRUCKLUFTLEITUNGEN .....	263	ÄTHERSTARTVENTIL .....	421
AUSPUFFKRÜMMER .....	272	VERDRAHTUNG (ELEKTRON.	
ANSAUGKRÜMMER .....	274	STEUERUNG) .....	423
TURBOLADER-ANBAUSATZ .....	275	MOTORVERDRAHTUNG .....	427
AUSPUFFROHR .....	277	VERDRAHTUNG (EINSPRITZEIN-	
EINLASSKRÜMMERSTOPFEN .....	278	HEIT) .....	428
VORREINIGER .....	279		
LUFTEINLASS-ABSTELLVORRICHTUNG .....	280	<b>BEDIENUNGSSTAND</b> .....	430
TURBOLADER .....	283	AMPEREMETER .....	430
<b>KRAFTSTOFFSYSTEM</b> .....	296	ELEKTR. UMFORMER .....	431
KRAFTSTOFFFILTER .....	296	KRAFTSTOFFSTANDANZEIGE .....	432
WASSERABSCHIEDER- U. KRAFTSTOFFFILTER .....	299	BETRIEBSSTUNDENZÄHLER .....	433
ANSCHLUSSSTÜCK (KRAFTSTOFFLEITUNGEN) .....	301	ANZEIGEMODUL .....	434
KRAFTSTOFFEINSPRITZDÜSE .....	307	INSTRUMENTENBEFESTIGUNG .....	435
KRAFTSTOFFLEITUNGEN, ELAST. ....	309	DREHZAHLMESSERBEFESTIGUNG .....	436
KRAFTSTOFFFILTERLEITUNGEN .....	310	INSTRUMENTENTAFEL .....	437
KRAFTSTOFFEINSPRITZPUMPE .....	324	DREHZAHLMESSER, ELEKTR. ....	439
KRAFTSTOFFFÖRDERPUMPE .....	326	VOLTMETER .....	440
SPERRVENTIL .....	327		
KRAFTSTOFFNEBENSTROMVENTIL .....	329	<b>GEHÄUSE, SCHUTZVERKLEIDUNGEN UND</b>	
		<b>SOCKEL</b> .....	442
		SOCKEL .....	442
		MOTORSOCKEL .....	443
		<b>WARTUNGSAUSRÜSTUNG UND</b>	
		<b>-ZUBEHÖR</b> .....	444
		TABELLE - SCHILD U. AUFKLEBER .....	444
<b>ELEKTRISCHE ANLAGE UND</b>		<b>ERSATZTEILNUMMERNINDEX</b> .....	B1
<b>STARTSYSTEM</b> .....	330		
DREHSTROMGENERATOR .....	330		
ÄTHERSPRÜHGERÄT .....	350		
BATTERIE .....	351		
BATTERIEKABEL .....	353		
ANSCHLUSS, ELEKTR. ....	354		
STEUERUNGSEINHEIT, ELEKTRON. FÜR MOTOR UND BEFEST. ....	356		
MOTORSTEUERUNG, ELEKTRON. ....	358		
MOTORDREHZAHLSTEUERUNG .....	359		
*CONTROL GP-ENGINE SPEED .....	360		
FERNDREHZAHLREGELUNG .....	361		
STEUERUNG - NICHT PROGRAMMIERT .....	362		
DREHSTROMGENERATORVERKLEIDUNG .....	363		
MOTORSENSOR .....	364		

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# GENERAL INFORMATION

## 1. ENGINE IDENTIFICATION

Caterpillar engines are identified with Serial Numbers and Arrangement Numbers. In some cases, Modification Numbers are also used. The serial number plate which shows these numbers is mounted on the engine.

Caterpillar dealers need this information to determine which components were included on the engine when it was assembled at the factory. This permits accurate identification of replacement part numbers.

## 2. ORDERING PARTS

### **WARNING**

**When replacement parts are required for this product Caterpillar recommends using Caterpillar replacement parts or parts with equivalent specifications including, but not limited to, physical dimensions, type, strength and material.**

**Failure to heed this warning can lead to premature failures, product damage, personal injury or death.**

Quality Caterpillar replacement parts are available from Caterpillar dealers throughout the world. Their parts inventories are up to date and include all parts normally required to protect your investment in Caterpillar Engines. Dealers may offer repair kits or remanufactured parts to allow selection of the most effective repair alternative for a particular situation. When ordering parts, your order should specify the quantity, part number, part name, and the serial number/product identification number of the engine for which the parts are needed.

## 3. PARTS MANUAL ORGANIZATION

Product information in this manual is presented as "information elements" that represent all of the components for the specific model. An Engine Arrangement is an example of an information element. The information elements are organized alphabetically by part name and secondarily by part number within each major section of the manual.

## 4. TABLE OF CONTENTS

A table of contents (TOC) is found at the beginning of the manual. The TOC lists each section of the manual with a complete list of all information elements organized as they appear in the manual. Page numbers are provided for quick reference to detailed parts identification illustrations and serviceable consist lists.

## 5. MAINTENANCE PARTS INDEX

The Maintenance Parts Index, located near the beginning of the manual, references most frequently used maintenance part numbers, providing description, quantity, usage and page number. This information is organized alphabetically by part description.

## 6. INDEX

The index located near the front of the manual is an alphabetical listing of all information elements included in the manual. Page numbers are provided for quick reference to detailed parts identification illustrations and serviceable consist lists.

## 7. PART NUMBER INDEX

A numerical index listing all part numbers and the corresponding page number(s) appears at the back of the manual.

## 8. CAPTIONS

Captions located at the beginning each information element identify the part number and part name along with additional descriptive information. S/N information found in each caption should be used to select correct information for a specific engine. Field replacement options, identification of optional attachment components, and where used ("part of") information is also provided.

The first line of a caption is shown in larger type font to indicate the beginning of an information element. Captions for additional pages that may be required to illustrate an information element will be shown in standard type font and will include the term (*contd.*) .

## 9. NON-SERVICED PARTS

In some instances it is necessary to display non-serviced parts that are a link to lower level serviceable consist lists. These non-serviced part numbers are shown in *italic* type indicating that they are not available. All consist lists have not been converted to reflect this enhancement.

# GENERAL INFORMATION

## 10. PARTS LIST REFERENCE NUMBERS

Numbers shown in the Ref No column correspond to numbers used in the associated graphic(s). An alphabetic suffix may be added to a reference number to identify lower level consist items. Numbers shown in the Graphic Ref column refer to the graphic number identifier displayed in the lower left corner of each illustration. The Graphic Ref number may be used in combination with the item Ref No to determine the correct part number. There may be intentional omission of a Ref No in a consist list as information is updated to reflect the latest serviceable part numbers.

## 11. INDENTED PART NAMES

When a part name is indented in a parts list, it is part of (included in) the group or assembly under which it is indented.

## 12. ILLUSTRATION REFERENCE LETTERS

When necessary, illustrations contain reference letters (A, B, C etc.) that are intended to track lines and harnesses from one point to another. They are also used to show where to reconnect illustrations that have been separated.

## 13. ABBREVIATIONS AND SYMBOLS

**O.D.** – Outside Diameter  
**I.D.** – Inside Diameter  
**A** – Not Part Of This Group  
**B** – Use As Required  
**C** – Change From Previous Type  
**D** – Order By The Meter  
**E** – Order By The Centimeter  
**F** – Not Shown  
**G** – Order By The Inch  
**I** – Refer To Hydraulic Information System  
**M** – Metric Part  
**R** – Remfg Part May Be Available  
**Y** – Separate Illustration  
**Z** – Not Serviced Separately

 *New Feature*

## 14. <END>

This symbol indicates the end of an information element.

## NOTE:

Continuing improvement and advancement of product design may cause changes to your engine which may not be included in this publication. Whenever a question arises regarding your Caterpillar product or this publication, please consult your Caterpillar dealer for the latest available information.

# GÉNÉRALITÉS

## 1. IDENTIFICATION DU MOTEUR

Les moteurs Caterpillar portent des numéros de série et des numéros de version. Dans certains cas, des numéros de modification sont aussi utilisés. Ces numéros figurent sur la plaque de numéro de série qui se trouve sur le moteur.

Les concessionnaires Caterpillar ont besoin de ces renseignements pour déterminer les composants inclus sur le moteur lors de l'assemblage à l'usine. Cela permet d'identifier les numéros de pièces de rechange avec précision.

## 2. COMMANDE DE PIÈCES



**Lorsqu'il faut remplacer des pièces de rechange pour ce produit Caterpillar recommande d'utiliser les pièces de rechange Caterpillar ou les pièces qui ont des spécifications équivalentes dont les dimensions physiques, le type, la force et le matériau. Ces équivalences ne se limitent pas à l'énoncé précédent.**

**L'inobservation de cette mise en garde peut entraîner des défaillances prématurées, des dommages au produit, des blessures ou même la mort.**

Les concessionnaires Caterpillar fournissent dans le monde entier des pièces de rechange de qualité Caterpillar. Leurs stocks de pièces sont constamment réapprovisionnés et comptent toutes les pièces nécessaires pour assurer la bonne marche de vos moteurs Caterpillar. Certains concessionnaires proposent également des kits de réparation ou des pièces rénovées, ce qui permet de choisir la solution la plus économique dans une situation donnée. Lors des commandes de pièces, mentionner la quantité, le numéro de pièce et la désignation des pièces ainsi que le numéro de série/numéro d'identification (PIN) du moteur pour lequel ces pièces sont requises.

## 3. ORGANISATION DU CATALOGUE DE PIÈCES

Les renseignements sur les produits sont présentés sous forme de "Information element" (élément d'information) représentant tous les composants d'un modèle donné. "Engine Arrangement" (version de moteur) est un exemple d'un élément d'information. Les éléments d'information sont classés par ordre alphabétique par la désignation standard des pièces et par numéros de pièces dans chaque partie importante du manuel.

## 4. TABLE DES MATIÈRES



### *Nouvelle Caractéristique*

La table des matières se trouve au début du manuel. La table des matières fournit la liste de tous les chapitres du manuel avec une liste complète de tous les éléments d'information classés par ordre d'apparition dans le manuel. Les numéros de page sont fournis afin que l'utilisateur puisse trouver rapidement les illustrations détaillées concernant l'identification des pièces et les listes des pièces d'entretien.

## 5. INDEX DES PIÈCES D'ENTRETIEN

La rubrique "Index des pièces d'entretien" qui se trouve au début du manuel renvoie aux pièces d'entretien les plus fréquemment utilisées en précisant la désignation, la quantité, là où la pièce est utilisée et le numéro de page. Ces pièces sont classés par ordre alphabétique.

## 6. INDEX

L'index qui se trouve vers le début du manuel est une liste alphabétique de tous les éléments d'information du manuel. Les numéros de page sont fournis afin que l'utilisateur puisse trouver rapidement les illustrations détaillées concernant l'identification des pièces et les listes des pièces d'entretien.

## 7. INDEX DES NUMÉROS DE PIÈCES

Une liste numérique de tous les numéros de pièces et des pages correspondantes se trouve à la fin du manuel.

## 8. LÉGENDES

Les légendes qui se trouvent en haut de chaque page de chaque élément d'information fournissent le numéro de pièce, la désignation ainsi que des renseignements supplémentaires sur les pièces. Les renseignements concernant les numéros de série (S/N) qui se trouvent dans chaque légende doivent être utilisés pour sélectionner les informations correctes pour un moteur donné. Les informations concernant les options de remplacement sur le chantier, l'identification des composants des équipements offerts en option et les lieux d'application sont aussi fournies.



### *Nouvelle Caractéristique*

Les lettres de la première ligne d'une légende sont présentées en police plus grande afin d'indiquer le début d'une unité d'information. Les légendes qui pourraient être requises pour des pages supplémentaires afin d'illustrer une unité d'information seront présentées en police standard et comprendront le terme (à suivre).



# GÉNÉRALITÉS

## 9. PIÈCES NON FOURNIES



### *Nouvelle Caractéristique*

Dans certains cas, il est nécessaire d'indiquer les pièces non fournies qui sont en aval de la liste des pièces d'entretien. Les numéros des pièces non fournies dans la liste des pièces et les légendes seront en italique pour signaler qu'ils ne sont pas disponibles.

## 10. NUMÉROS DE RÉFÉRENCE DE LA LISTE DES PIÈCES



### *Nouvelle Caractéristique*

Les numéros indiqués dans la colonne des numéros de références correspondent aux numéros utilisés dans les illustrations auxquelles ils sont associés. Un suffixe alphabétique peut être ajouté à un numéro de référence pour identifier la liste des articles en aval. Les numéros indiqués dans la colonne de référence de l'illustration renvoient à l'identification du numéro affiché dans le coin inférieur gauche de chaque illustration. Le numéro de référence de l'illustration pourrait être utilisé avec le numéro de référence de l'article pour déterminer le numéro de pièce correct. Il peut y avoir une omission intentionnelle d'un numéro de référence dans une liste de pièces suite à la mise à jour des informations en vue de refléter les numéros de pièces les plus récentes.

## 11. DÉSIGNATIONS DE PIÈCES EN RETRAIT

Lorsqu'une désignation de pièce est en retrait, cela veut dire que l'article en regard fait partie de l'ensemble sous lequel il figure.

## 12. LETTRES DE RÉFÉRENCE DES ILLUSTRATIONS

Quand cela est nécessaire, les illustrations comportent des lettres de référence (A, B, C, etc.) pour montrer le trajet des canalisations et faisceaux de câbles d'un point à l'autre. Elles sont utilisées également pour indiquer où relier les illustrations séparées auparavant.

## 13. ABRÉVIATIONS ET SYMBOLES

- O.D. – Diamètre extérieur
- I.D. – Diamètre intérieur
- A – Ne fait pas partie de ce groupe
- B – Utiliser selon besoin
- C – Modification
- D – Commander par mètre
- E – Commander par centimètre
- F – Non représenté
- G – Commander par pouce
- I – Voir "Hydraulic Information System"
- M – Pièce métrique
- R – Pièce rénovée éventuellement disponible
- Y – Illustration séparée
- Z – Non fourni séparément

### NOTA:

En raison du progrès technique et des améliorations continues apportées au matériel, votre moteur comporte peut-être des modifications qui n'apparaissent pas dans la présente publication. En cas de doute sur un détail de votre moteur Caterpillar ou sur le texte de la présente publication, adressez-vous à votre concessionnaire Caterpillar.

# INFORMACIÓN GENERAL

## 1. IDENTIFICACIÓN DEL MOTOR

Los motores Caterpillar se identifican con Números de Identificación del Producto (PIN). El motor se identifica además con Números de Configuración y en algunos casos, Números de Modificación. Estos números están en las placas de identificación que se encuentran montadas en el motor.

Los distribuidores Caterpillar necesitan esta información para determinar que componentes fueron incluidos en el motor cuando lo ensamblaron en la fábrica. Estos números permiten identificar con exactitud los números de piezas de repuesto.

## 2. COMO PEDIR REPUESTOS

### ADVERTENCIA

**Cuando se necesiten piezas de repuesto para este producto, Caterpillar recomienda usar piezas de repuesto Caterpillar o piezas que tengan especificaciones equivalentes incluyendo, pero sin estar limitadas a, dimensiones físicas, tipo, fortaleza y material.**

**El no hacer caso de esta advertencia puede llevar a fallas prematuras, daños al producto y lesiones graves o mortales.**

Las piezas de repuesto Caterpillar de calidad están disponibles de los distribuidores Caterpillar en todo el mundo. Sus existencias actualizadas incluyen todas las piezas normalmente requeridas para proteger su inversión en motores Caterpillar. Los distribuidores pueden tener juegos de reparación o piezas remanufacturadas para permitir la selección de la mejor alternativa de reparación en un caso en particular. Al pedir piezas de repuesto, especifique en su pedido la cantidad, el número de pieza, el nombre de la pieza y el número de serie/número de identificación del producto del motor para la cual se necesitan estas piezas.

## 3. ORGANIZACION DEL MANUAL DE PIEZAS

La información sobre el producto, se presenta en este manual, como "elementos de información" que representan todos los componentes de un modelo específico. Las configuraciones de motores es un ejemplo de un elemento de información. Los elementos de información están organizados primeramente por nombres de piezas en orden alfabético y en segundo lugar, por el número de pieza dentro de cada sección principal del manual.

## 4. CONTENIDO

La página de Contenido se encuentra al comienzo del manual. El Contenido indica cada sección del manual con una lista completa de todos los elementos de información organizados en el orden que aparecen en el manual. Los números de página proporcionan una referencia rápida a las ilustraciones detalladas de identificación de piezas y a las listas de componentes de repuesto de dichas piezas.

## 5. INDICE DE PIEZAS DE MANTENIMIENTO

Al frente de este catálogo se encuentra un índice de los números de piezas utilizadas más frecuentemente para el mantenimiento, que incluye descripción, cantidad necesaria, lugar de utilización y número de página. Esta información está organizada alfabéticamente, por descripción de la pieza.

## 6. ÍNDICE

El Índice, ubicado cerca frente del manual, es una lista en orden alfabético de todos los elementos de información incluidos en el manual. Los números de página proporcionan una referencia rápida a las ilustraciones detalladas de identificación de piezas y a las listas de componentes de repuesto de dichas piezas.

## 7. INDICE NUMÉRICO DE PIEZAS

Un índice numérico de piezas con el correspondiente número de página aparece al final de este catálogo.

## 8. TÍTULOS

Los títulos ubicados al principio de cada elementos de información identifican el número y el nombre de la pieza junto con información descriptiva adicional para ayudar al usuario a seleccionar información correcta para un motor en particular. También se suministra información sobre las opciones de reparación en el campo, la identificación de componentes de accesorios optativos y el lugar de ubicación de la pieza ("es parte de").

La primera línea del título se muestra con un tipo de letra más grande para indicar el comienzo de un elemento de información. Si se requieren páginas adicionales para ilustrar un elemento de información, los títulos se muestran con un tipo de letra normal y la continuación se indica entre paréntesis.

# INFORMACIÓN GENERAL

## 9. PIEZAS QUE NO SE SUMINISTRAN COMO REPUESTO

En algunos casos es necesario indicar piezas que no se suministran como repuesto pero que pueden estar conectadas a listas de componentes de otras piezas de repuesto. En tal caso, dichas piezas se muestran en cursiva para indicar que no son piezas disponibles.

## 10. NÚMEROS DE REFERENCIA

Los números en la columna de No. de Referencia corresponden a los números indicados en la ilustración que pertenece a ese número de pieza. Los números que tienen un sufijo alfabético identifican artículos de las listas de componentes de piezas. Los números en la columna de Referencia de la ilustración se identifican en la esquina inferior izquierda de cada ilustración. Para determinar el número correcto de pieza se puede utilizar tanto el No. de Referencia de la ilustración como el No. de Referencia del artículo. A medida que se actualiza la información para indicar los más recientes números de piezas de repuesto, puede omitirse intencionalmente un No. de Referencia en una lista de componentes de piezas.

## 11. NOMBRES DE PIEZA SANGRADOS


Cuando el nombre de una pieza está sangrado en una lista, significa que esta pieza forma parte del grupo o conjunto del renglón inmediatamente superior.

## 12. LETRAS DE REFERENCIA DE ILUSTRACIONES

Las ilustraciones contienen algunas veces letras de referencia (A, B, C etc.) cuyo propósito es seguir el trayecto de líneas y mazos de cables de un punto a otro. También se utilizan para mostrar dónde volver a unir ilustraciones que se habían separado.

## 13. ABREVIATURAS Y SIMBOLOS

- O.D. – Diámetro exterior
- I.D. – Diámetro interior
- A – No es pieza de este grupo
- B – Utilizado según la demanda
- C – Indica cambio
- D – Se pide por metro
- E – Se pide por centímetro
- F – No se muestra
- G – Se pide por pulgada
- I – Consulte el sistema de información hidráulica
- M – Pieza métrica
- R – Puede estar disponible como pieza remanufacturada
- Y – Ilustración separada
- Z – No se suministra por separado

 *Nueva Característica*

## 14. <END>

Este símbolo indica el final de un elemento de información.

## NOTA:

Las continuas mejoras y adelantos en diseño podrían originar cambios a su motor que no se incluyen en esta publicación. Cuando tenga alguna pregunta acerca de su producto Caterpillar o de esta publicación, consulte al distribuidor Caterpillar para obtener la información más reciente.

# INFORMAÇÃO GERAL

## 1. IDENTIFICAÇÃO DO MOTOR

Os motores Caterpillar são identificadas pelos Números de Série e Números de Arranjo. Em alguns casos, Números de Modificação são também usados. A placa do número de série que exibe esses números encontra-se no motor.

Os revendedores Caterpillar necessitam destas informações para determinar que componentes foram incluídos no motor durante a montagem na fábrica. Isto facilita a identificação precisa dos números de peça de reposição.

## 2. COMO OBTER PEÇAS



**Quando peças de substituição são exigidas para este produto, a Caterpillar recomenda a utilização de peças de substituição Caterpillar ou peças com as especificações equivalentes incluindo, mas não limitadas, à dimensões físicas, tipos, resistência e materiais.**

**A inobservância desta advertência poderá resultar em falhas prematuras, danos ao produto, ferimentos ou morte.**

As Peças de Reposição de Qualidade Caterpillar encontram-se disponíveis nos revendedores Caterpillar no mundo inteiro. Seus estoques de peças são atualizados e incluem todas as peças normalmente necessárias para proteger seu investimento em motores Caterpillar. Alguns revendedores podem oferecer jogos de reparo ou peças de troca/remanufaturadas disponíveis como uma opção da alternativa de reparo mais eficaz para uma situação específica. Ao encomendar peças, seu pedido deve especificar a quantidade, o número e o nome da peça e o número de série/número de identificação do produto referentes ao motor para o qual as peças se destinam.

## 3. ORGANIZAÇÃO DO MANUAL DE PEÇAS

A informação do produto neste manual é apresentada em forma de "elementos de informação" que representam todos os componentes para o modelo específico. O Arranjo de Motor é um exemplo de elemento de informação. Os elementos de informação são organizados em ordem alfabética por nome de peça ou, secundariamente, por número de peça incluído em cada seção principal do manual.

## 4. LISTA DE CONTEÚDOS

A Lista de Conteúdos (TOC) se encontra no princípio do manual. A Lista de Conteúdos (TOC) relaciona em cada seção do manual uma lista completa com todos os elementos de informação organizados conforme aparecem no manual. Números de página são fornecidos para que se tenha referência rápida de ilustrações de peças detalhadas e listas de conteúdos que podem receber serviço de manutenção.

## 5. ÍNDICE DE PEÇAS DE MANUTENÇÃO

O Índice de Peças de Manutenção, localizado perto do princípio do manual, faz referência aos números de peça de manutenção usados com maior frequência, fornecendo uma descrição, a quantidade, o uso e o número de página. Esta informação é organizada com a descrição da peça em ordem alfabética.

## 6. ÍNDICE

O Índice localizado perto do princípio do manual, consiste de uma lista em ordem alfabética de todos os elementos de informação incluídos no manual. Números de página são fornecidos para que se tenha referência rápida de ilustrações de peças detalhadas e listas de conteúdos que podem receber serviço de manutenção.

## 7. ÍNDICE DE NÚMERO DE PEÇA

Um índice numérico relacionando todos os números de peça e a(s) página(s) correspondentes, aparece no final do manual.

## 8. LEGENDAS

As legendas localizadas no início de cada elemento de informação identifica o número de peça e o nome da peça, juntamente com informação descritiva adicional. Informações sobre o Número de Série (S/N) encontradas em cada legenda devem ser usadas para selecionar a informação correta sobre um motor específico. Opções de substituição no campo, identificação de componentes de acessórios opcionais e informações sobre onde são utilizados ("parte de") são também fornecidas.

A primeira linha de uma legenda é indicada em tipo maior para indicar o princípio de um elemento de informação. Legendas para páginas adicionais que podem ser necessárias para ilustrar um elemento de informação serão apresentadas em tipo padrão e incluirão o termo (*continua*) .

# INFORMAÇÃO GERAL

## 9. NÃO DISPONÍVEL SEPARADAMENTE

Em alguns casos, é necessário mostrar peças não disponíveis separadamente que têm uma ligação com listas de conteúdos de nível inferior que podem receber serviço de manutenção. Os números de peça destes componentes não disponíveis aparecerão em *itálico*, a fim de indicar que não estão disponíveis.

## 10. NÚMEROS DE REFERÊNCIA À LISTA DE PEÇAS

Os números indicados na coluna Ref No (No. de Referência) correspondem-se aos números usados no(s) gráfico(s) correspondente(s). Um sufixo com letras pode ser acrescentado a um número de referência para identificar itens de conteúdo de nível inferior. Os números indicados na coluna Graphic Ref (Referência de Gráfico) referem-se ao identificador de número de gráfico presente no canto esquerdo inferior de cada ilustração. O número de Referência de Gráfico pode ser usado em combinação com o item Ref No para determinar-se o número de peça correto. Poderá haver omissão intencional de um número de referência (Ref No) de uma lista de conteúdos uma vez que as informações são atualizadas para refletir os números de peça mais recentes que podem receber serviço de manutenção.

## 11. NOMES DE PEÇAS DESALINHADOS

Quando um nome de peça encontra-se desalinhado numa lista de peças, significa que tal item faz parte do (está incluído no) grupo ou conjunto sob o qual está relacionado.

## 12. LETRAS DE REFERÊNCIA NAS ILUSTRAÇÕES

Quando necessário, as ilustrações contêm letras de referência (A, B, C, etc.) que são utilizadas para seguir tubulações e cabos elétricos de um ponto a outro. Também foram utilizadas para indicar onde se pode reconectar as ilustrações que foram separadas.

## 13. ABREVIACÕES E SÍMBOLOS

- O.D. – "Outside Diameter" (Diâmetro Externo)
- I.D. – "Inside Diameter" (Diâmetro Interno)
- A – Não faz parte deste grupo
- B – Use conforme necessário
- C – Indica modificação
- D – Vendido por metro
- E – Vendido por centímetro
- F – Não ilustrado
- G – Vendido por polegada
- I – Consultar o Sistema de Informações Hidráulicas
- M – Peça métrica
- R – Peça remanufaturada pode estar disponível; consulte o seu revendedor Cat
- Y – Ilustração separada
- Z – Não disponível separadamente



## 14. <END>

Este símbolo indica o final de um elemento de informação.

### NOTA:

**Os contínuos aperfeiçoamentos e avanços no projeto do produto podem ocasionar modificações em seu motor que talvez ainda não estejam incluídas nesta publicação. Sempre que surgirem dúvidas quanto a um produto Caterpillar ou quanto à presente publicação, consulte o seu revendedor Caterpillar para obter as informações mais recentes disponíveis.**

# ALLGEMEINE HINWEISE

## 1. MOTORENKENNZEICHNUNG

Caterpillar-Motoren sind mit SERIAL NUMBERS (Seriennummern) und ARRANGEMENT NUMBERS (Ausführungsnummern) gekennzeichnet. In einigen Fällen werden auch MODIFICATION NUMBERS (Änderungsnummern) erteilt. Diese Nummern befinden sich auf dem Typenschild des Motors.

Die Caterpillar-Händler benötigen diese Nummern, um festzustellen, welche Bauteile bei der Montage des Motors verwendet wurden. Dies ermöglicht das Auffinden der richtigen Ersatzteilnummern.

## 2. BESTELLEN VON ERSATZTEILEN

### **WARNUNG**

**Wenn für diese Maschine Ersatzteile benötigt werden, empfiehlt Caterpillar, ausschließlich Caterpillar-Ersatzteile oder solche zu verwenden, die die gleichen technischen Merkmale hinsichtlich Typ, Festigkeit, Werkzeugeigenschaften und die gleichen Maße aufweisen.**

**Bei Nichtbeachtung dieser Warnung besteht Verletzungs- oder sogar Lebensgefahr! Ferner kann Nichtbeachtung vorzeitige Ausfälle der Teile und Beschädigung der Maschine zur Folge haben.**

Original Caterpillar-Ersatzteile können weltweit bei jedem Caterpillar-Händler bestellt werden. Die umfangreichen Händlerlager enthalten normalerweise alle Teile, die Sie für Ihren Caterpillar-Motor benötigen. Einige Händler bieten Reparatursätze, Austausch- oder werküberholte Teile an, so daß Sie eine Auswahl unter verschiedenen Reparaturmöglichkeiten treffen können. Ihre Bestellung muß folgende Angaben enthalten: Anzahl der benötigten Teile, Bestellnummer, Bezeichnung des Teils und Serien-Nr./Produkt-Ident-Nr. des Motors, für den diese Teile benötigt werden.

## 3. AUFBAU DES PARTS MANUAL

Die Produktinformationen für alle Komponenten eines bestimmten Modells sind in INFORMATION ELEMENTS (Informationseinheiten) gegliedert. ENGINE ARRANGEMENT (Motorausführung) ist ein Beispiel für solche Informationseinheiten. Sie sind innerhalb jeder Gruppe alphabetisch, entsprechend der Ersatzteilbezeichnung, und zusätzlich numerisch, entsprechend der Ersatzteilnummer, geordnet.

## 4. INHALTSVERZEICHNIS

Das Inhaltsverzeichnis befindet sich am Anfang des Buches. Im Inhaltsverzeichnis werden die einzelnen Abschnitte des Buches aufgeführt. Die Abschnitte enthalten eine vollständige Aufstellung aller Informationseinheiten. Diese sind entsprechend ihrem Erscheinen im Buch geordnet. Das Inhaltsverzeichnis enthält Seitenangaben für Schnellverweise auf detaillierte Abbildungen und Teillisten.

## 5. INDEX FÜR WARTUNGSTEILE

Der Index für Wartungsteile vorn im Buch enthält die Bestellnummern, Seitenangaben, Mengenangaben und Informationen über den Einsatzbereich für die am häufigsten benötigten Ersatzteile. Die Angaben sind alphabetisch entsprechend der Teilebezeichnung geordnet.

## 6. INDEX

Der Index vorn im Buch enthält eine alphabetische Liste aller Informationseinheiten. Er enthält Seitenangaben für Schnellverweise auf detaillierte Abbildungen und Teillisten.

## 7. INDEX FÜR BESTELLNUMMERN

Hinten im Buch befindet sich ein numerischer Index, mit allen Bestellnummern und dem Hinweis auf die Seite, auf der sich die betreffende Abbildung befindet.

## 8. ÜBERSCHRIFTEN

Die Überschriften, die sich am Anfang jeder der Informationseinheiten befinden, enthalten Bestellnummern, Ersatzteilbezeichnungen und zusätzliche beschreibende Informationen. Die Seriennummern in den Überschriften sollten zur Auswahl der richtigen Informationen für den betreffenden Motor verwendet werden. Die Überschriften enthalten außerdem Informationen über möglichen Außendienstersatz, mögliche Baugerätekomponenten und die Baugruppe, zu der das Teil gehört.

Die erste Zeile einer Überschrift erscheint in einer größeren Schriftart, um den Anfang einer Informationseinheit zu kennzeichnen. Überschriften für zusätzliche Seiten, die zur Erläuterung einer Informationseinheit notwendig sind, erscheinen in normaler Schriftart und enthalten den Begriff "(contd.)".

# ALLGEMEINE HINWEISE

## 9. NICHT EINZELN LIEFERBARE TEILE

In einigen Fällen ist es notwendig nicht lieferbare Teile, die selbst mit einer eigenen Teilliste im Buch vertreten sind, aufzuführen. Die Bestellnummern dieser nicht einzeln lieferbaren Teile erscheinen kursiv, wodurch angezeigt wird, daß sie nur in Verbindung mit anderen Teilen lieferbar sind.

## 10. REFERENZNUMMER FÜR ERSATZTEILE

Die Zahlen, die in der Spalte "Ref No" aufgeführt sind, stimmen mit den Zahlen in den beigefügten Abbildungen überein. Ein Buchstaben-Suffix kann zu einer Referenznummer hinzugefügt werden, um zu kennzeichnen, daß das Teil mit einer eigenen Teilliste im Buch aufgeführt ist. Die in der Spalte "Graphic Ref" angeführten Zahlen verweisen auf die Identifikationsnummer der Abbildung, die sich in der linken unteren Ecke der Abbildung befindet. Diese Nummer kann zusammen mit der Referenznummer des Teils angegeben werden, um die richtige Ersatzteilnummer zu ermitteln. Referenznummern können absichtlich weggelassen werden, da die Nummern der lieferbaren Ersatzteile ständig aktualisiert werden.

## 11. EINGERÜCKTE BEZEICHNUNGEN


Wenn eine Bezeichnung eingerückt ist, wird dadurch angezeigt, daß das Teil zu einer Baugruppe gehört, unter deren Bezeichnung es eingerückt ist.

## 12. REFERENZBUCHSTABEN

Falls erforderlich sind in den Abbildungen Referenzbuchstaben enthalten (z.B. A, B, C, usw.), die Leitungen und Kabelbäume von einem Punkt zum anderen verfolgen. Außerdem geben sie die Stelle an, an der getrennte Abbildungen fortgesetzt werden.

## 13. ABKÜRZUNGEN UND SYMBOLE

- O.D. – Außendurchmesser
- I.D. – Innendurchmesser
- A – kein Teil dieser Gruppe
- B – nach Bedarf verwenden
- C – Hinweis auf eine Änderung
- D – in Meter-Länge bestellen
- E – in Zentimeter-Länge bestellen
- F – nicht gezeigt
- G – in Zoll-Länge bestellen
- I – siehe Hydraulikinformationssystem
- M – metrisches Teil
- R – werküberholtes Teil unter Umständen lieferbar
- Y – separate Abbildung
- Z – nicht einzeln lieferbar

 *Neu im Parts Manual*

## 14. <END>

Dieses Symbol zeigt das Ende eines Informationselements an.

## ANMERKUNG:

**Ständig vorgenommene Verbesserungen und Weiterentwicklungen an Ihrem Motor können Änderungen verursachen, die in der vorliegenden Ausgabe noch nicht berücksichtigt sind. Fragen zu Ihrem Caterpillar-Motor oder diesem Ersatzteibuch beantwortet Ihr Caterpillar-Händler.**

# REPAIR ALTERNATIVES

## REMANUFACTURED COMPONENTS

As an option when making repairs consider Caterpillar Remanufactured Components. Components that are available through the Caterpillar Remanufactured Program are identified three ways in the parts book:

- with the letter R in the note field of the parts list
- with an R\* at the beginning of the first line of the caption
- with an \*R at the end of the first line of the caption

Typical components included in the Remanufacturing Program include:

ALTERNATORS  
CONNECTING RODS  
CRANKSHAFTS - UNDERSIZE  
CRANKSHAFTS - UPGRADE TO NEW  
CYLINDER HEADS  
ELECTRONIC CONTROL MODULES (ECM)  
ELECTRONIC SENSORS  
FUEL INJECTORS  
FUEL NOZZLES  
FUEL PUMPS  
GOVERNORS  
OIL PUMPS  
PISTONS  
SHORT BLOCKS  
STARTERS  
TURBOCHARGERS - COMPLETE  
TURBOCHARGER CARTRIDGES  
WATER PUMPS

Caterpillar Remanufactured engines for many engine arrangements are also available.



# OPTIONS DE RÉPARATION

## COMPOSANTS RÉNOVÉS

Comme option de réparation, considérer les composants rénovés Caterpillar. Les composants disponibles dans le cadre du programme Caterpillar de composants rénovés sont identifiés de trois façons dans le catalogue de pièces:

- avec la lettre "R" dans l'espace note de la liste des pièces
- avec R\* au début de la première ligne des légendes
- avec \*R à la fin de la première ligne des légendes

Les composants suivants figurent parmi les composants typiques du programme de rénovation:

ALTERNATEURS  
BIELLES  
VILEBREQUINS - SOUS-DIMENSIONNÉS  
VILEBREQUINS - REMIS À NEUF  
CULASSES  
MODULES DE COMMANDE ÉLECTRONIQUE (ECM)  
CAPTEURS ÉLECTRONIQUES  
INJECTEURS  
TÊTES D'INJECTEURS  
POMPES À CARBURANT  
RÉGULATEURS  
POMPES À HUILE  
PISTONS  
BLOCS EMBIELLÉS  
DÉMARREURS  
TURBOCOMPRESSEURS - COMPLETS  
CARTOUCHES DE TURBOCOMPRESSEUR  
POMPES À EAU

Des moteurs rénovés sont aussi disponibles pour plusieurs versions de moteur.

# ALTERNATIVAS DE REPARACIÓN

## COMPONENTES REMANUFACTURADOS

Al hacer reparaciones, tenga en cuenta la opción de Componentes Remanufacturados Caterpillar. Los componentes que están disponibles por medio del programa de Productos Remanufacturados Caterpillar se identifican de tres maneras en el manual de piezas:

- con la letra R en el espacio de Nota de la lista de piezas
- con una R\* al comienzo de la primera línea de la leyenda
- con una \*R al final de la primera línea de la leyenda

Los componentes que se incluyen típicamente en el Programa de Productos Remanufacturados son:

ALTERNADORES  
BIELAS  
CIGÜEÑALES - BAJOMEDIDA  
CIGÜEÑALES - REMANUFACTURADOS A NUEVO  
CULATAS  
MÓDULOS DE CONTROL ELECTRÓNICO (ECM)  
SENSORES ELECTRONICOS  
INYECTORES  
BOQUILLAS  
BOMBAS DE COMBUSTIBLE  
REGULADORES  
BOMBAS DE ACEITE  
PISTONES  
MONOBLOQUES  
MOTORES DE ARRANQUE  
TURBOCOMPRESORES - COMPLETOS  
NÚCLEOS DE TURBOCOMPRESOR  
BOMBAS DE AGUA

También hay disponibles motores Remanufacturados Caterpillar para muchas de las configuraciones de motores.

# ALTERNATIVAS DE REPARO

## COMPONENTES REMANUFATURADOS

Considere o uso de Componentes Remanufaturados Caterpillar ao efetuar reparos. Os componentes disponíveis através do Programa de Remanufatura Caterpillar são identificados de três formas no manual de peças:

- com um R na área da nota da lista de peças
- com um R\* no princípio da primeira linha da legenda
- com um \*R no final da primeira linha da legenda

Os componentes típicos que constam no Programa de Remanufatura incluem:

ALTERNADORES  
BIELAS  
VIRABREQUINS - SUBMEDIDAS  
VIRABREQUINS - ATUALIZAÇÃO  
CABEÇOTES  
MÓDULOS DE CONTROLE ELETRÔNICO (ECM)  
SENSORES ELETRÔNICOS  
INJETORES DE COMBUSTÍVEL  
BICOS DE ABASTECIMENTO DE COMBUSTÍVEL  
BOMBAS DE COMBUSTÍVEL  
GOVERNADORES  
BOMBAS DE ÓLEO  
PISTÕES  
BLOCOS BÁSICOS DO MOTOR  
MOTORES DE PARTIDA  
TURBOALIMENTADORES - COMPLETOS  
CARTUCHOS DE TURBOALIMENTADORES  
BOMBAS D'ÁGUA

Motores Remanufaturados Caterpillar também encontram-se disponíveis para diversos arranjos de motor.

# REPARATURALTERNATIVEN

## WERKÜBERHOLTE AT-PRODUKTE

Bei Reparaturen sollten werküberholte AT-Produkte von Caterpillar in Betracht gezogen werden. Die durch das AT-Programm von Caterpillar erhältlichen Teile sind im Parts Book auf drei verschiedene Arten gekennzeichnet:

- mit dem Buchstaben R in der Spalte NOTE der Ersatzteilliste
- mit einem R\* am Anfang der ersten Zeile der Überschrift
- mit einem \*R am Ende der ersten Zeile der Überschrift

Das AT-Programm umfaßt u.a. folgende Produkte:

DREHSTROMGENERATOREN  
PLEUELSTANGEN  
KURBELWELLEN - MIT UNTERMASSE  
KURBELWELLEN - MIT ORIGINALMASSE  
ZYLINDERKÖPFE  
ELEKTRONISCHE STEUEREINHEITEN (EMC)  
ELEKTRONISCHE SENSOREN  
PUMPENDÜSEN  
EINSPRITZDÜSEN  
KRAFTSTOFFPUMPEN  
DREHZAHLREGLER  
ÖLPUMPEN  
KOLBEN  
TEILMOTOREN  
ANLASSER  
TURBOLADER - KOMPLETT  
TURBOLADERLAUFZEUGE  
KÜHLWASSERPUMPEN

Viele Motoren können durch werküberholte AT-Motoren von Caterpillar ersetzt werden.

# SUPPLEMENTAL COOLANT ADDITIVES

## CUSTOMER BENEFITS:

Protects against cavitation, foam, erosion, corrosion, and scale buildup in cooling systems.

- Provides measured coolant conditioner.

## DESCRIPTION:

Additives deplete from the coolant with normal operation. For this reason, Supplemental Coolant Additives (SCA) must be added to all heavy duty coolants at regular intervals. In addition, when not using a fully formulated, pre-charged antifreeze, like Caterpillar's DEAC, an initial charge of SCA must be added to the cooling system. The amount of SCA added to the system is dependent on the capacity of the system.

The SCA for initial fill is provided as a liquid. SCA's for maintenance intervals are available in liquid form and as a spin-on element. (No Spin-on available for 3600 Family of Engines)

## NOTE:

The amount of SCA added at initial fill is not the same as the amount added at maintenance intervals.

The coolant additive elements can be used with any ethylene or propylene glycol type antifreeze which meets ASTM D4985 or ASTM D5345 Specifications.

## NOTE:

For use with standard heavy duty coolant only, not for use with Extended Life Coolant.

## PARTS NEEDED:

Cooling System Capacity		Liquid SCA at Initial Fill	Liquid SCA at Maintenance*	Spin-on SCA Maintenance Element*
Liters	Gallons			
22-30	(6-8)	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	(8-10)	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	(10-13)	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	(13-17)	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	(17-22)	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	(22-30)	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	(30-43)	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	(43-64)	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

\* Normal maintenance period is 250 hrs. See your Operation and Maintenance Manual for complete coolant maintenance instructions.

( ) Indicates quantity required.

# ADDITIFS POUR LIQUIDE DE REFROIDISSEMENT

## AVANTAGES POUR LE CLIENT

L'additif protège contre la cavitation, la mousse, l'érosion, la corrosion et l'accumulation de dépôts dans le circuit de refroidissement.

- L'additif complémentaire fournit une quantité mesurée d'additif.

## DESCRIPTION:

Les additifs s'épuisent pendant l'utilisation du moteur. C'est pourquoi l'on doit ajouter de l'additif au liquide de refroidissement/antigel pour moteurs diesel à intervalles réguliers. En plus, si l'on n'utilise pas de l'antigel entièrement formulé et pré-chargé comme le liquide de refroidissement/antigel Caterpillar pour moteurs diesel, une quantité initiale d'additif doit être ajoutée au circuit de refroidissement. La quantité d'additif à ajouter au circuit dépend de la contenance du circuit.

L'additif pour le remplissage initial est fourni sous forme liquide. L'additif pour l'entretien ultérieur est disponible sous forme liquide et sous forme d'élément à visser. (Il n'y a pas d'élément à visser pour les moteurs de la famille 3600).

## NOTA:

La quantité d'additif à ajouter au remplissage initial diffère de la quantité à ajouter aux intervalles d'entretien.

Les éléments d'additif peuvent être utilisés avec tout antigel de type éthylène ou propylène-glycol conforme à la norme ASTM D4985 ou ASTM D5345.

## NOTA:

A utiliser uniquement avec du liquide de refroidissement pour moteurs diesel et non avec le liquide de refroidissement longue durée.

## PIÈCES NÉCESSAIRES:

Contenance du circuit de refroidissement		Additif liquide au remplissage initial	Additif liquide aux intervalles d'entretien*	Élément d'additif à visser aux intervalles d'entretien*
Litres	Gallons U.S.			
22-30	(6-8)	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	(8-10)	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	(10-13)	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	(13-17)	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	(17-22)	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	(22-30)	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	(30-43)	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	(43-64)	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

\* L'intervalle d'entretien normal est de 250 heures-service. Voir le Guide d'utilisation et d'entretien pour de plus amples renseignements concernant l'entretien du circuit de refroidissement.

( ) Indique la quantité exigée.

# ADITIVOS DE REFRIGERANTE SUPLEMENTARIOS

## VENTAJAS PARA EL USUARIO:

Protegen contra la cavitación, la formación de espuma, la corrosión y la acumulación de escamas en los sistemas de enfriamiento.

- Suministra un acondicionador dosificado de refrigerante.

## DESCRIPCIÓN:

Los aditivos en el refrigerante se agotan con la operación normal. Por esta razón, se debe agregar Aditivo de refrigerante suplementario (SCA) a todos los refrigerantes para servicio pesado, a intervalos regulares. Además, cuando no se usa un anticongelante de precarga completo, tal como el DEAC de Caterpillar, es necesario agregar una cantidad de aditivo de refrigerante suplementario inicial al sistema de enfriamiento. La cantidad de aditivo que se debe agregar depende de la capacidad del sistema.

El SCA de llenado inicial es líquido. El que se usa para el mantenimiento está disponible tanto en líquido como en un elemento enroscable. (No hay elemento enroscable disponible para la Familia de Motores 3600).

## NOTA:

La cantidad de aditivo de llenado inicial no es la misma que se agrega en los intervalos de mantenimiento.

Los elementos de aditivo de refrigerante se pueden usar con cualquier anticongelante de tipo glicol etilénico o propílico que esté de acuerdo con las especificaciones de las normas ASTM D4985 o ASTM D5345.

## NOTA:

Se debe utilizar únicamente con refrigerante estándar para servicio pesado; no se debe usar con Refrigerante de Larga Duración.

## PIEZAS NECESARIAS:

Capacidad del Sistema de Enfriamiento		SCA líquido de llenado inicial	SCA líquido de mantenimiento*	Elemento de mantenimiento enroscable*
litros	gal EE.UU.			
22-30	6-8	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	8-10	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	10-13	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	13-17	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	17-22	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	22-30	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	30-43	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	43-64	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

\* El período normal de mantenimiento es de 250 horas. Para ver las instrucciones completas sobre el mantenimiento del refrigerante, consulte el Manual de Operación y Mantenimiento.

( ) Indica la cantidad necesaria.

# ADITIVOS SUPLEMENTARES DO LÍQUIDO ARREFECEDOR

## BENEFÍCIOS PARA O CLIENTE:

Protege contra cavitação, espuma, erosão, corrosão e acúmulo de crostas nos sistemas de arrefecimento.

- Fornece uma quantidade pré-determinada de condicionador de arrefecimento.

## DESCRIÇÃO:

Com a operação normal, os aditivos se esgotam do líquido arrefecedor. Por isso, Aditivos Suplementares do Líquido Arrefecedor (SCA) devem ser acrescentados a todos os líquidos arrefecedores para serviço pesado em intervalos regulares. Além disso, quando um anticongelante pré-carregado, totalmente formulado não for usado, como o DEAC Caterpillar, uma carga inicial de SCA deve ser acrescentada ao sistema de arrefecimento. A quantidade de SCA acrescentada ao sistema depende da capacidade do sistema.

O SCA para abastecimento inicial é fornecido em forma de líquido. Os aditivos suplementares (SCA) para intervalos de manutenção estão à disposição em forma líquida e como um elemento com roscas. (Exceto os Motores da Família 3600)

## NOTA:

A quantidade de SCA adicionada no abastecimento inicial não é a mesma que a acrescentada nos intervalos de manutenção.

Os elementos do aditivo do líquido arrefecedor podem ser usados com qualquer tipo de anticongelante etileno ou propileno que satisfaz as Especificações ASTM D4985 ou ASTM D5345.

## NOTA:

Para uso apenas com líquido arrefecedor para serviço pesado padrão, não deve ser usado com Líquido Arrefecedor de Vida Longa.

## PEÇAS NECESSÁRIAS:

Capacidade do Sistema de Arrefecimento		Líquido SCA Durante Abastecimento Inicial	Líquido SCA Durante Manutenção*	Elemento de Manutenção de SCA com Roscas*
Litros	Galões			
22-30	6-8	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	8-10	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	10-13	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	13-17	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	17-22	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	22-30	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	30-43	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	43-64	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

\* O período normal de manutenção é de 250 horas. Consulte o Manual de Operação e Manutenção para obter instruções completas quanto à manutenção do líquido arrefecedor.

( ) Indica a quantidade exigida.



# KÜHLMITTELZUSATZ

## VORTEILE FÜR DEN KUNDEN:

Schutz gegen Kavitation, Schaumbildung, Erosion, Korrosion und Kesselsteinbildung in Kühlsystemen.

- Richtig dosierter Kühlmittelzusatz

## BESCHREIBUNG:

Additive erschöpfen sich während des Motorbetriebs. Deshalb muß allen HD-Kühlmitteln regelmäßig Kühlmittelzusatz beigefügt werden. Wenn bei Erstfüllung kein vollwertiges Fertigmittel, wie das Frostschutz- und Kühlmittel für Dieselmotoren von Caterpillar (DEAC), verwendet wird, muß bei Erstfüllung Kühlmittelzusatz beigefügt werden. Wieviel Kühlmittelzusatz beigefügt werden muß, hängt vom Inhalt des Kühlsystems ab.

Für Erstfüllung ist Kühlmittelzusatz nur in flüssiger Form erhältlich. Für Wartungsintervalle ist Kühlmittelzusatz in flüssiger Form und als Zusatzelement erhältlich. (Für die Motorbaureihe 3600 sind keine Zusatzelemente erhältlich.)

## ANMERKUNG:

Die Kühlmittelmenge bei Erstfüllung ist nicht die gleiche Menge, die bei Wartungsintervallen beigefügt werden muß.

Die Kühlmittelzusatzelemente können mit allen Frostschutzmitteln auf Ethylen- oder Propylenglykolbasis verwendet werden, die den Standards nach ASTM D4985 oder ASTM D5345 entsprechen.

## ANMERKUNG:

Den Kühlmittelzusatz nicht mit Langzeitkühlmittel (ELC) von Caterpillar verwenden. Der Kühlmittelzusatz ist nur für HD-Kühlmittel bestimmt.

## TEILEBEZEICHNUNG:

Kühlsysteminhalt		Kühlmittelzusatz bei Erstfüllung	Flüssiger Kühlmittelzusatz bei Wartung*	Kühlmittelzusatzelement bei Wartung*
Liter	US-Gall.			
22-30	(6-8)	3P-2044 (1)	6V-3542 (1)	111-2370 (1)
30-38	(8-10)	3P-2044 (1) 6V-3542 (1)	111-2372 (1)	111-2369 (1)
38-49	(10-13)	3P-2044 (1) 8T-1589 (1)	111-2372 (1)	111-2369 (1)
49-64	(13-17)	3P-2044 (2)	8T-1589 (1)	9N-3368 (1)
64-83	(17-22)	3P-2044 (2) 8T-1589 (1)	111-2372 (1) 6V-3542 (1)	111-2371 (1)
83-114	(22-30)	3P-2044 (3) 8T-1589 (1)	3P-2044 (1)	9N-3718 (1)
114-163	(30-43)	3P-2044 (5)	3P-2044 (1) 6V-3542 (1)	111-2371 (2)
163-242	(43-64)	3P-2044 (8)	3P-2044 (2)	9N-3718 (2)

\* Der normale Wartungsintervall beträgt 250 Betriebsstunden. Für vollständige Anweisungen zur Wartung des Kühlsystems, siehe Betriebs- und Wartungshandbuch.

( ) Erforderliche Anzahl

# MAINTENANCE PARTS

DESCRIPTION	PART NUMBER	QTY	WHERE USED	PAGE
<b>AIR INLET AND EXHAUST SYSTEM</b>				
FILTER ELEMENT AS-AIR (PRIMARY)	6I - 2505	1	AIR CLEANER GP	251
	6I - 2509	1	AIR CLEANER GP	253
FILTER ELEMENT AS-AIR (SECONDARY)	6I - 2506	1	AIR CLEANER GP	251
	6I - 2510	1	AIR CLEANER GP	253
INDICATOR (AIR SHUTOFF)	242 - 7499	1	SHUTOFF GP-AIR	281
<b>BASIC ENGINE</b>				
BREATHER AS (CRANKCASE)	9Y - 4357	1	BASE GP-VALVE COVER	21
GASKET (CRANKCASE BREATHER)	9Y - 1758	1	BASE GP-VALVE COVER	21
HOSE-FUMES DISPOSAL	126 - 0146	1	DRIVE GP-ACCESSORY	51
PLUG-DRAIN (ENGINE OIL PAN)	9X - 6451	2	PAN GP-OIL	121
		2	PAN GP-OIL	123
		4	PAN GP-OIL	125
		2	PAN GP-OIL	127
		4	PAN GP-OIL	129
		1	PAN GP-OIL	131
SEAL-ISOLATION (VALVE COVER)	229 - 5711	1	COVER GP-VALVE MECHANISM	37
		1	COVER GP-VALVE MECHANISM	38
<b>COOLING SYSTEM</b>				
ELEMENT AS-COOLANT CONDITIONER (MAINTENANCE)	9N - 3368	1	ELEMENT GP-COOLANT CONDITIONER	230
	9N - 3717	1	ELEMENT GP-COOLANT CONDITIONER	231
ELEMENT AS-COOLANT CONDITIONER (PRECHARGE)	9N - 6123	1	ELEMENT GP-COOLANT CONDITIONER	231
		1	ELEMENT GP-COOLANT CONDITIONER	232
ELEMENT AS-PRECHARGE (COOLANT CONDITIONER)	9N - 3367	1	ELEMENT GP-COOLANT CONDITIONER	230
FILTER GP-COOLANT (MAINTENANCE)	9N - 3718	1	ELEMENT GP-COOLANT CONDITIONER	231
		1	ELEMENT GP-COOLANT CONDITIONER	232
PLUG-DRAIN (TRANSMISSION OIL COOLER)	8M - 9307	1	COOLER GP-TRANSMISSION OIL	226
REGULATOR-TEMPERATURE (98-DEG C) (WATER, COOLANT)	247 - 7133	1	LINES GP-WATER	240
		1	LINES GP-WATER	242
REGULATOR-WATER TEMPERATURE (92-DEG C) (COOLANT)	248 - 5513	1	LINES GP-WATER	245
SEAL-LIP TYPE (WATER TEMPERATURE REGULATOR)	3S - 9643	1	LINES GP-WATER	242
		1	LINES GP-WATER	245
		1	LINES GP-WATER	240
SEAL (TEMPERATURE REGULATOR HOUSING)	227 - 5075	1	LINES GP-WATER	240
		1	LINES GP-WATER	242
		1	LINES GP-WATER	245

# MAINTENANCE PARTS

DESCRIPTION	PART NUMBER	QTY	WHERE USED	PAGE
<b>ELECTRICAL AND STARTING SYSTEM</b>				
BATTERY (12-VOLT)	9X-9720	2	BATTERY GP	351
	9X-9730	2	BATTERY GP	352
<b>FUEL SYSTEM</b>				
FILTER AS-FUEL	1R-0762	1	FILTER GP-FUEL	296
	1R-0771	1	FILTER GP-WATER SEP & FUEL	300
GASKET (FUEL PRIMING PUMP)	1P-0436	1	LINES GP-FUEL FILTER	310
		1	LINES GP-FUEL FILTER	313
		1	LINES GP-FUEL FILTER	316
		1	LINES GP-FUEL FILTER	320
SEAL (WATER SEPARATOR, FUEL)	220-8678	1	FILTER GP-WATER SEP & FUEL	300
<b>LUBRICATION SYSTEM</b>				
BREATHER AS (CRANKCASE)	9Y-4357	1	FUMES DISPOSAL GP	198
CAP AS-FILLER (ENGINE OIL)	5L-2952	1	FILLER GP-ENGINE OIL	187
		1	FILLER GP-ENGINE OIL	189
		2	FILLER GP-ENGINE OIL	191
	163-9361	1	FILLER GP-ENGINE OIL	190
FILTER AS-ENGINE OIL	1W-8845	1	FILTER GP-ENGINE OIL	195
FILTER ELEMENT AS-ENGINE OIL	1R-1808	1	FILTER GP-ENGINE OIL	194
		1	FILTER GP-ENGINE OIL	196
GASKET (CRANKCASE BREATHER)	9Y-1758	2	FUMES DISPOSAL GP	198
HOSE (FUMES DISPOSAL)	220-7134	1	FUMES DISPOSAL GP	197
HOSE-FUMES DISPOSAL	224-5539	1	FUMES DISPOSAL GP	198
		1	FUMES DISPOSAL GP	199

# PIÈCES DE RECHANGE

DESCRIPTION	NUMÉRO DE PIÈCES	QTÉ	DOMAINE D'APPLICATION	PAGE
<b>CIRCUIT DE CARBURANT</b>				
BOURRELET D'ÉTANCHÉITÉ (SÉPARATEUR D'EAU)	220-8678	1	FILTRE DE SÉPARATEUR D'EAU ET DE CARBURANT (ASS)	300
FILTRE A CARBURANT (ENS)	1R-0762	1	FILTRE A CARBURANT (ASS)	296
	1R-0771	1	FILTRE DE SÉPARATEUR D'EAU ET DE CARBURANT (ASS)	300
JOINT PLAT (POMPE D'AMORÇAGE DE CARBURANT)	1P-0436	1	CANALISATIONS DU FILTRE A CARBURANT (ASS)	310
		1	CANALISATIONS DU FILTRE A CARBURANT (ASS)	313
		1	CANALISATIONS DU FILTRE A CARBURANT (ASS)	316
		1	CANALISATIONS DU FILTRE A CARBURANT (ASS)	320
<b>CIRCUIT DE GRAISSAGE</b>				
BOUCHON DE GOULOTTE DE REMPLISSAGE (ENS) (HUILE MOTEUR)	5L-2952	1	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS)	187
		1	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS)	189
		2	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS)	191
	163-9361	1	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS)	190
ÉLÉMENT DE FILTRE (ENS)-HUILE MOTEUR	1R-1808	1	FILTRE À HUILE MOTEUR (ASS)	194
		1	FILTRE À HUILE MOTEUR (ASS)	196
FILTRE A HUILE MOTEUR (ENS)	1W-8845	1	FILTRE À HUILE MOTEUR (ASS)	195
FLEXIBLE D'ÉVACUATION DES VAPEURS	224-5539	1	DISPOSITIF D'ÉVACUATION DES VAPEURS DE CARTER	198
		1	DISPOSITIF D'ÉVACUATION DES VAPEURS DE CARTER	199
FLEXIBLE (ÉVACUATION DES GAZ DE CARTER)	220-7134	1	DISPOSITIF D'ÉVACUATION DES VAPEURS DE CARTER	197
JOINT PLAT (RENIFLARD DE CARTER)	9Y-1758	2	DISPOSITIF D'ÉVACUATION DES VAPEURS DE CARTER	198
RENIFLARD (ENS) (CARTER)	9Y-4357	1	DISPOSITIF D'ÉVACUATION DES VAPEURS DE CARTER	198

# PIÈCES DE RECHANGE

DESCRIPTION	NUMÉRO DE PIÈCES	QTÉ	DOMAINE D'APPLICATION	PAGE
<b>CIRCUIT DE REFROIDISSEMENT</b>				
BOUCHON DE VIDANGE (REFROIDISSEUR D'HUILE DE BOÎTE)	8M-9307	1	REFROIDISSEUR D'HUILE DE BOÎTE (ASS)	226
BOURRELET D'ÉTANCHÉITÉ (BOÎTIER DE RÉGULATEUR DE TEMPÉRATURE)	227-5075	1	CANALISATIONS D'EAU (ASS)	240
			1 CANALISATIONS D'EAU (ASS)	242
ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (ENTRETIEN)	9N-3717	1	1 CANALISATIONS D'EAU (ASS)	245
	9N-3368	1	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	231
ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (PRÉCHARGE)	9N-6123	1	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	230
			1 ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	232
ÉLÉMENT DE PRÉCHARGE (ENS) (ADDITIF POUR LIQUIDE DE REFROIDISSEMENT)	9N-3367	1	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	230
FILTRE DE LIQUIDE DE REFROIDISSEMENT (ASS) (ENTRETIEN)	9N-3718	1	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	231
			1 ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS)	232
THERMOSTAT-TEMPÉRATURE D'EAU (92-DEG C) (LIQUIDE DE REFROIDISSEMENT)	248-5513	1	CANALISATIONS D'EAU (ASS)	245
THERMOSTAT (98 DEG C) (EAU, LIQUIDE DE REFROIDISSEMENT)	247-7133	1	CANALISATIONS D'EAU (ASS)	240
			1 CANALISATIONS D'EAU (ASS)	242
TYPE LÈVRE À JOINT (RÉGULATEUR DE TEMPÉRATURE D'EAU)	3S-9643	1	CANALISATIONS D'EAU (ASS)	240
			1 CANALISATIONS D'EAU (ASS)	242
			1 CANALISATIONS D'EAU (ASS)	245
<b>CIRCUIT ELECTRIQUE ET DE DEMARRAGE</b>				
BATTERIE (12 VOLTS)	9X-9720	2	BATTERIE (ASS)	351
	9X-9730	2	BATTERIE (ASS)	352
<b>MOTEUR</b>				
BOUCHON DE VIDANGE (CARTER D'HUILE MOTEUR)	9X-6451	2	HUILE MOTEUR - CARTER (ASS)	121
			2 HUILE MOTEUR - CARTER (ASS)	123
			4 HUILE MOTEUR - CARTER (ASS)	125
			2 HUILE MOTEUR - CARTER (ASS)	127
			4 HUILE MOTEUR - CARTER (ASS)	129
			1 HUILE MOTEUR - CARTER (ASS)	131
FLEXIBLE D'ÉVACUATION DES VAPEURS	126-0146	1	ENTRAÎNEMENT AUXILIAIRE (ASS)	51
JOINT ISOLANT (CACHE-SOUPAPES)	229-5711	1	CACHE-SOUPAPES (ASS)	37
			1 CACHE-SOUPAPES (ASS)	38
JOINT PLAT (RENIFLARD DE CARTER)	9Y-1758	1	SUPPORT - CACHE-SOUPAPES (ASS)	21
RENIFLARD (ENS) (CARTER)	9Y-4357	1	SUPPORT - CACHE-SOUPAPES (ASS)	21

# PIÈCES DE RECHANGE

DESCRIPTION	NUMÉRO DE PIÈCES	QTÉ	DOMAINE D'APPLICATION	PAGE
<b>SYSTEME D'ÉCHAPPEMENT ET D'ADMISSION D'AIR</b>				
ÉLÉMENT DE FILTRE À AIR (ENS) (PRINCIPAL)	6I - 2505	1	FILTRE A AIR (ASS)	251
	6I - 2509	1	FILTRE A AIR (ASS)	253
ÉLÉMENT DE FILTRE À AIR (ENS) (SECONDAIRE)	6I - 2506	1	FILTRE A AIR (ASS)	251
	6I - 2510	1	FILTRE A AIR (ASS)	253
TÉMOIN (ARRÊT D'AIR)	242 - 7499	1	ARRÊT D'AIR (ASS)	281

# PIEZAS DE MANTENIMIENTO

DESCRIPCION	NUMERO DE PIEZA	CANT	SE UTILIZA EN	PAGINA
<b>MOTOR BÁSICO</b>				
EMPAQUETADURA (RESPIRADERO DEL CARTER)	9Y - 1758	1	BASE DE LA TAPA DE VÁLVULAS (GR)	21
MANGUERA DE ESCAPE DE GASES	126 - 0146	1	ACCESORIOS - IMPULSOR DE (GR)	51
RESPIRADERO (CONJ) (CÁRTER DEL MOTOR)	9Y - 4357	1	BASE DE LA TAPA DE VÁLVULAS (GR)	21
SELLO-AISLAMIENTO (TAPA DE VÁLVULA)	229 - 5711	1	TAPA DEL MECANISMO DE VÁLVULAS (GR)	37
		1	TAPA DEL MECANISMO DE VÁLVULAS (GR)	38
TAPÓN DE DRENAJE (COLECTOR DE ACEITE DEL MOTOR)	9X - 6451	2	CÁRTER - COLECTOR DEL (GR)	121
		2	CÁRTER - COLECTOR DEL (GR)	123
		4	CÁRTER - COLECTOR DEL (GR)	125
		2	CÁRTER - COLECTOR DEL (GR)	127
		4	CÁRTER - COLECTOR DEL (GR)	129
		1	CÁRTER - COLECTOR DEL (GR)	131
<b>SISTEMA DE ADMISION DE AIRE Y ESCAPE</b>				
ELEMENTO DEL FILTRO DE AIRE (CONJ) (PRIMARIO)	6I - 2505	1	FILTRO DE AIRE (GR)	251
	6I - 2509	1	FILTRO DE AIRE (GR)	253
ELEMENTO DEL FILTRO DE AIRE (CONJ) (SECUNDARIO)	6I - 2506	1	FILTRO DE AIRE (GR)	251
	6I - 2510	1	FILTRO DE AIRE (GR)	253
INDICADOR (CORTE DE AIRE)	242 - 7499	1	CORTE DE AIRE (GR)	281
<b>SISTEMA DE COMBUSTIBLE</b>				
EMPAQUETADURA (BOMBA DE CEBADO DE COMBUSTIBLE)	1P - 0436	1	TUBERÍAS DEL FILTRO DE COMBUSTIBLE	310
		1	TUBERÍAS DEL FILTRO DE COMBUSTIBLE	313
		1	TUBERÍAS DEL FILTRO DE COMBUSTIBLE	316
		1	TUBERÍAS DEL FILTRO DE COMBUSTIBLE	320
FILTRO DE COMBUSTIBLE (CONJ)	1R - 0762	1	FILTRO DE COMBUSTIBLE (GR)	296
	1R - 0771	1	FILTRO DE COMBUSTIBLE Y SEPARADOR DE AGUA (GR)	300
SELLO (SEPARADOR DE AGUA, COMBUSTIBLE)	220 - 8678	1	FILTRO DE COMBUSTIBLE Y SEPARADOR DE AGUA (GR)	300

# PIEZAS DE MANTENIMIENTO

DESCRIPCION	NUMERO DE PIEZA	CANT	SE UTILIZA EN	PAGINA
<b>SISTEMA DE ENFRIAMIENTO</b>				
ELEMENTO ACONDICIONADOR DE REFRIGERANTE (CONJ) (MANTENIMIENTO)	9N-3368	1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	230
	9N-3717	1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	231
ELEMENTO ACONDICIONADOR DE REFRIGERANTE (CONJ) (PRECARGA)	9N-6123	1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	231
		1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	232
ELEMENTO DE PRECARGA (CONJ) (ACONDICIONADOR DE REFRIGERANTE)	9N-3367	1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	230
FILTRO DE REFRIGERANTE (GR) (MANTENIMIENTO)	9N-3718	1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	231
		1	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR)	232
REGULADOR DE TEMPERATURA DEL AGUA (92 GRADOS CENTÍGRADOS) (REFRIGERANTE)	248-5513	1	TUBERÍAS DEL AGUA (GR)	245
REGULADOR DE TEMPERATURA (TERMOSTATO) (98 GRADOS C) (REFRIGERANTE, AGUA)	247-7133	1	TUBERÍAS DEL AGUA (GR)	240
		1	TUBERÍAS DEL AGUA (GR)	242
SELLO (CAJA DEL REGULADOR DE TEMPERATURA)	227-5075	1	TUBERÍAS DEL AGUA (GR)	240
		1	TUBERÍAS DEL AGUA (GR)	242
		1	TUBERÍAS DEL AGUA (GR)	245
SELLO DE LABIO (REGULADOR DE TEMPERATURA DEL AGUA)	3S-9643	1	TUBERÍAS DEL AGUA (GR)	240
		1	TUBERÍAS DEL AGUA (GR)	242
		1	TUBERÍAS DEL AGUA (GR)	245
TAPÓN DE DRENAJE (REFRIGERANTE DE ACEITE DE TRANSMISIÓN)	8M-9307	1	ENFRIADOR DE ACEITE DE LA TRANSMISIÓN (GR)	226
<b>SISTEMA DE LUBRICACIÓN</b>				
ELEMENTO DE FILTRO DE ACEITE DE MOTOR (CONJ)	1R-1808	1	FILTRO DE ACEITE DEL MOTOR (GR)	194
		1	FILTRO DE ACEITE DEL MOTOR (GR)	196
EMPAQUETADURA (RESPIRADERO DEL CARTER)	9Y-1758	2	ESCAPE DE GASES (GR)	198
FILTRO DE ACEITE DEL MOTOR (CONJ)	1W-8845	1	FILTRO DE ACEITE DEL MOTOR (GR)	195
MANGUERA DE ESCAPE DE GASES	224-5539	1	ESCAPE DE GASES (GR)	198
		1	ESCAPE DE GASES (GR)	199
MANGUERA (ELIMINACION DE GASES)	220-7134	1	ESCAPE DE GASES (GR)	197
RESPIRADERO (CONJ) (CÁRTER DEL MOTOR)	9Y-4357	1	ESCAPE DE GASES (GR)	198
TAPA DE LLENADO (CONJ) (ACEITE DEL MOTOR)	5L-2952	1	TUBO DE LLENADO DE ACEITE (GR)	187
		1	TUBO DE LLENADO DE ACEITE (GR)	189
		2	TUBO DE LLENADO DE ACEITE (GR)	191
	163-9361	1	TUBO DE LLENADO DE ACEITE (GR)	190



# PIEZAS DE MANTENIMIENTO

DESCRIPCION	NUMERO DE PIEZA	CANT	SE UTILIZA EN	PAGINA
<b>SISTEMA ELECTRICO Y DE ARRANQUE</b>				
BATERÍA (12 VOLTIOS)	9X-9720	2	BATERÍA (GR)	351
	9X-9730	2	BATERÍA (GR)	352

# PEÇAS DE MANUTENÇÃO

DESCRIÇÃO	NÚMERO DE PEÇA	QUANT	UTILIZADA EM	PÁGINA
<b>MOTOR BÁSICO</b>				
BUJÃO DO DRENO (CÁRTER DE ÓLEO DO MOTOR)	9X-6451	2	CÁRTER DO ÓLEO DO MOTOR	121
			CÁRTER DO ÓLEO DO MOTOR	123
			CÁRTER DO ÓLEO DO MOTOR	125
			CÁRTER DO ÓLEO DO MOTOR	127
			CÁRTER DO ÓLEO DO MOTOR	129
			CÁRTER DO ÓLEO DO MOTOR	131
JUNTA (RESPIRO DO CÁRTER DO ÓLEO DO MOTOR)	9Y-1758	1	BASE - TAMPA DA VÁLVULA	21
MANGUEIRA - ELIMINAÇÃO DE VAPORES	126-0146	1	COMANDO DE ACESSÓRIOS	51
RESPIRO (CÁRTER DO MOTOR)	9Y-4357	1	BASE - TAMPA DA VÁLVULA	21
RETENTOR - ISOLAMENTO (MECANISMO DAS VÁLVULAS - TAMPA)	229-5711	1	TAMPA - MECANISMO DAS VÁLVULAS	37
			TAMPA - MECANISMO DAS VÁLVULAS	38
<b>SISTEMA DE ADMISSÃO E ESCAPE</b>				
ELEMENTO DO FILTRO DE AR (PRIMÁRIO)	6I-2505	1	PURIFICADOR DE AR	251
			PURIFICADOR DE AR	253
ELEMENTO DO FILTRO DE AR (SECUNDÁRIO)	6I-2506	1	PURIFICADOR DE AR	251
			PURIFICADOR DE AR	253
INDICADOR (CORTE DE AR)	242-7499	1	PURIFICADOR DE AR	253
			PARADA DO AR	281

# PEÇAS DE MANUTENÇÃO

DESCRIÇÃO	NÚMERO DE PEÇA	QUANT	UTILIZADA EM	PÁGINA
<b>SISTEMA DE ARREFECIMENTO</b>				
BUJÃO DO DRENO (ARREFECEDOR DO ÓLEO DA TRANSMISSÃO)	8M-9307	1	ARREFECEDOR DE ÓLEO DA TRANSMISSÃO	226
ELEMENTO - CONDICIONADOR DO LÍQUIDO ARREFECEDOR (MANUTENÇÃO)	9N-3368	1	ELEMENTO - CONDICIONADOR ARREFECEDOR	230
	9N-3717	1	ELEMENTO - CONDICIONADOR ARREFECEDOR	231
ELEMENTO - CONDICIONADOR DO LÍQUIDO ARREFECEDOR (PRÉ-CARGA)	9N-6123	1	ELEMENTO - CONDICIONADOR ARREFECEDOR	231
		1	ELEMENTO - CONDICIONADOR ARREFECEDOR	232
ELEMENTO - PRÉ-CARGA (CONDICIONADOR DO LÍQUIDO ARREFECEDOR)	9N-3367	1	ELEMENTO - CONDICIONADOR ARREFECEDOR	230
FILTRO - REFRIGERANTE (MANUTENÇÃO)	9N-3718	1	ELEMENTO - CONDICIONADOR ARREFECEDOR	231
		1	ELEMENTO - CONDICIONADOR ARREFECEDOR	232
REGULADOR DE TEMPERATURA DA ÁGUA (92 GRAUS C) (LÍQUIDO ARREFECEDOR)	248-5513	1	TUBOS - ÁGUA	245
REGULADOR DE TEMPERATURA/ TERMOSTATO (98 GRAUS C) (ÁGUA, LÍQUIDO ARREFECEDOR)	247-7133	1	TUBOS - ÁGUA	240
		1	TUBOS - ÁGUA	242
RETENTOR (ALOJAMENTO DO REGULADOR DE TEMPERATURA)	227-5075	1	TUBOS - ÁGUA	240
		1	TUBOS - ÁGUA	242
		1	TUBOS - ÁGUA	245
VEDADOR TIPO LABIO (REGULADOR DA TEMPERATURA DA ÁGUA)	3S-9643	1	TUBOS - ÁGUA	240
		1	TUBOS - ÁGUA	242
		1	TUBOS - ÁGUA	245
<b>SISTEMA DE COMBUSTÍVEL</b>				
FILTRO - COMBUSTÍVEL	1R-0762	1	FILTRO - COMBUSTÍVEL	296
	1R-0771	1	FILTRO DE COMBUSTÍVEL E SEPARADOR DE ÁGUA	300
JUNTA (BOMBA DE ESCORVA DE COMBUSTÍVEL)	1P-0436	1	TUBOS - FILTRO DO COMBUSTÍVEL	310
		1	TUBOS - FILTRO DO COMBUSTÍVEL	313
		1	TUBOS - FILTRO DO COMBUSTÍVEL	316
		1	TUBOS - FILTRO DO COMBUSTÍVEL	320
RETENTOR (SEPARADOR DE ÁGUA, COMBUSTÍVEL)	220-8678	1	FILTRO DE COMBUSTÍVEL E SEPARADOR DE ÁGUA	300

# PEÇAS DE MANUTENÇÃO

DESCRIÇÃO	NÚMERO DE PEÇA	QUANT	UTILIZADA EM	PÁGINA
<b>SISTEMA DE LUBRIFICAÇÃO</b>				
ELEMENTO FILTRANTE - ÓLEO DO MOTOR	1R - 1808	1	FILTRO - ÓLEO DO MOTOR	194
		1	FILTRO - ÓLEO DO MOTOR	196
FILTRO - ÓLEO DO MOTOR	1W - 8845	1	FILTRO - ÓLEO DO MOTOR	195
JUNTA (RESPIRO DO CÂRTER DO ÓLEO DO MOTOR)	9Y - 1758	2	ELIMINAÇÃO DE VAPORES DO CÂRTER	198
MANGUEIRA - ELIMINAÇÃO DE VAPORES	224 - 5539	1	ELIMINAÇÃO DE VAPORES DO CÂRTER	198
		1	ELIMINAÇÃO DE VAPORES DO CÂRTER	199
MANGUEIRA (ELIMINAÇÃO DE VAPORES)	220 - 7134	1	ELIMINAÇÃO DE VAPORES DO CÂRTER	197
RESPIRO (CÂRTER DO MOTOR)	9Y - 4357	1	ELIMINAÇÃO DE VAPORES DO CÂRTER	198
TAMPA - BOCAL DE ENCHIMENTO (ÓLEO DO MOTOR)	5L - 2952	1	BOCAL DE ENCHIMENTO DE ÓLEO DO MOTOR	187
		1	BOCAL DE ENCHIMENTO DE ÓLEO DO MOTOR	189
		2	BOCAL DE ENCHIMENTO DE ÓLEO DO MOTOR	191
	163 - 9361	1	BOCAL DE ENCHIMENTO DE ÓLEO DO MOTOR	190
<b>SISTEMA ELÉTRICO E DE PARTIDA</b>				
BATERIA (12-VOLTS)	9X - 9720	2	BATERIA	351
	9X - 9730	2	BATERIA	352

# WARTUNGSTEILE

BESCHREIBUNG	ERSATZTEIL- NUMMER	MENGE	VERWENDET IN	SEITE
<b>ELEKTRISCHE ANLAGE UND STARTSYSTEM</b>				
BATTERIE (12 V)	9X-9720	2	BATTERIE	351
	9X-9730	2	BATTERIE	352
<b>KRAFTSTOFFSYSTEM</b>				
DICHTUNG (KRAFTSTOFFENTLÜFTUNGSPUMPE)	1P-0436	1	KRAFTSTOFFFILTERLEITUNGEN	310
			1 KRAFTSTOFFFILTERLEITUNGEN	313
			1 KRAFTSTOFFFILTERLEITUNGEN	316
			1 KRAFTSTOFFFILTERLEITUNGEN	320
DICHTUNG (WASSERABSCHIEDER, KRAFTSTOFF)	220-8678	1	WASSERABSCHIEDER- U. KRAFTSTOFFFILTER	300
KRAFTSTOFFFILTER	1R-0762	1	KRAFTSTOFFFILTER	296
	1R-0771	1	WASSERABSCHIEDER- U. KRAFTSTOFFFILTER	300
<b>KÜHLSYSTEM</b>				
ABLASSSTOPFEN (GETRIEBESÖLKÜHLER)	8M-9307	1	GETRIEBESÖLKÜHLER	226
DICHTUNG (TEMPERATURREGELGEHÄUSE)	227-5075	1	KÜHLWASSERLEITUNGEN	240
			1 KÜHLWASSERLEITUNGEN	242
			1 KÜHLWASSERLEITUNGEN	245
ERSTELEMENT (KÜHLMITTELZUSATZ)	9N-3367	1	KÜHLMITTELZUSATZELEMENT	230
KÜHLMITTELFILTER (WARTUNG)	9N-3718	1	KÜHLMITTELZUSATZELEMENT	231
			1 KÜHLMITTELZUSATZELEMENT	232
			1 KÜHLMITTELZUSATZELEMENT	231
KÜHLWASSERZUSATZELEMENT (ERSTELEMENT)	9N-6123	1	KÜHLMITTELZUSATZELEMENT	231
			1 KÜHLMITTELZUSATZELEMENT	232
KÜHLWASSERZUSATZELEMENT (WARTUNG)	9N-3368	1	KÜHLMITTELZUSATZELEMENT	230
LIPPENDICHTUNG (KÜHLWASSERTHERMOSTAT)	9N-3717	1	KÜHLMITTELZUSATZELEMENT	231
	3S-9643	1	KÜHLWASSERLEITUNGEN	240
TEMPERATURREGLER (98 GRAD C) (WASSER, KÜHLMITTEL)			1 KÜHLWASSERLEITUNGEN	242
			1 KÜHLWASSERLEITUNGEN	245
	247-7133	1	KÜHLWASSERLEITUNGEN	240
WASSERTemperaturREGLER (92 GRAD) (KÜHLMITTEL)			1 KÜHLWASSERLEITUNGEN	242
	248-5513	1	KÜHLWASSERLEITUNGEN	245
<b>LUFTANSAUG- UND ABGASSYSTEM</b>				
ANZEIGE (LUFTABSPERRUNG)	242-7499	1	LUFTEINLASS-ABSTELLVORRICHTUNG	281
LUFTFILTER (HAUPTLEMENT)	6I-2505	1	LUFTREINIGER	251
	6I-2509	1	LUFTREINIGER	253
LUFTFILTER (HILFSELEMENT)	6I-2506	1	LUFTREINIGER	251
	6I-2510	1	LUFTREINIGER	253

# WARTUNGSTEILE

BESCHREIBUNG	ERSATZTEIL- NUMMER	MENGE	VERWENDET IN	SEITE
<b>MOTOR (GRUNDAUSFÜHRUNG)</b>				
ABLASSSTOPFEN (MOTORÖLWANNE)	9X - 6451	2	ÖLWANNE	121
		2	ÖLWANNE	123
		4	ÖLWANNE	125
		2	ÖLWANNE	127
		4	ÖLWANNE	129
		1	ÖLWANNE	131
DICHTUNG (KURBELGEHÄUSEENT- LÜFTER)	9Y - 1758	1	VENTILDECKEL - UNTERTEIL	21
ENTDUNSTERSCHLAUCH	126 - 0146	1	NEBENANTRIEB	51
ENTLÜFTER (KURBELGEHÄUSE)	9Y - 4357	1	VENTILDECKEL - UNTERTEIL	21
ISOLIERDICHTUNG (VENTILDECKEL)	229 - 5711	1	VENTILDECKEL	37
		1	VENTILDECKEL	38
<b>SCHMIERSYSTEM</b>				
DICHTUNG (KURBELGEHÄUSEENT- LÜFTER)	9Y - 1758	2	ENTDUNSTER	198
EINFÜLLKAPPE (MOTORÖL)	5L - 2952	1	MOTORÖLEINFÜLLSTUTZEN	187
		1	MOTORÖLEINFÜLLSTUTZEN	189
		2	MOTORÖLEINFÜLLSTUTZEN	191
		1	MOTORÖLEINFÜLLSTUTZEN	190
ENTDUNSTERSCHLAUCH	163 - 9361	1	MOTORÖLEINFÜLLSTUTZEN	190
	224 - 5539	1	ENTDUNSTER	198
ENTLÜFTER (KURBELGEHÄUSE)	9Y - 4357	1	ENTDUNSTER	199
		1	ENTDUNSTER	198
MOTORÖLFILTERELEMENT	1R - 1808	1	ÖLFILTER	194
		1	ÖLFILTER	196
ÖLFILTER	1W - 8845	1	ÖLFILTER	195
SCHLAUCHLEITUNG (ENTDUNSTER)	220 - 7134	1	ENTDUNSTER	197

# INDEX

Name	Page	Name	Page
<b>A</b>			
ADAPTER GP-ENGINE TO TMSN .....	5	BRACKET GP-SUPPORT-PRECOOLER .....	22
	6	BREATHER AS (CRANKCASE) .....	21
	7		198
	8		
	9	<b>C</b>	
ADAPTER GP-FAN .....	215	CABLE GP-BATTERY .....	353
	216	CAMSHAFT GP .....	23
	217		25
	218		26
	219	CAP AS-FILLER (ENGINE OIL) .....	187
	220		189
AIR CLEANER GP .....	251		190
	252		191
	253	CAP AS-RAIN .....	255
	254	CARTRIDGE GP-TURBOCHARGER .....	283
AIR COMPRESSOR GP .....	10		285
	12		287
	14		290
	16	CHART-PLATE & FILM .....	444
	18	CLUTCH GP .....	27
	20	COMPRESSOR GP-REFRIGERANT .....	29
ALTERNATOR GP-CHARGING .....	330		30
	333	CONNECTION GP-ELECTRICAL .....	354
	336		355
	338	CONNECTION GP-EXHAUST .....	256
	340	CONTROL & MTG GP-ENGINE ELEK .....	356
	342		357
	344	CONTROL GP-ENGINE ELECTRONIC .....	358
	346	CONTROL GP-ENGINE SPEED .....	359
	348		360
	349	CONTROL GP-MACHINE .....	356
AMMETER AS .....	430	CONTROL GP-REMOTE SPEED .....	361
ATOMIZER AS-ETHER-		CONTROL GP-UNPROGRAMMED .....	362
STARTING AID, AIR INLET ELBOW .....	350	CONVERTER GP-ELECTRICAL .....	431
		COOLANT CONDITIONER GP .....	221
<b>B</b>			222
BASE AS-COOLANT CONDITIONER .....	442	COOLER GP-ENGINE OIL .....	223
BASE GP-ENGINE .....	443		225
BASE GP-OIL FILTER-ENGINE .....	176	COOLER GP-TRANSMISSION OIL .....	226
	177	CORE AS-OIL COOLER (ENGINE) .....	223
	178		225
	179	CORE GP-OIL COOLER-	
	180	TRANSMISSION OIL .....	229
	183	COVER GP-AIR INLET .....	257
BASE GP-OIL FILTER-ENGINE OIL .....	174	COVER GP-CRANKSHAFT .....	31
	175	COVER GP-CYLINDER BLOCK .....	32
BASE GP-OIL FILTER-		COVER GP-FLYWHEEL HOUSING .....	33
ENGINE, SINGLE FILTER .....	182		34
BASE GP-VALVE COVER .....	21	COVER GP-FRONT HOUSING .....	35
BATTERY GP .....	351		36
	352	COVER GP-OIL FILTER BASE-ENGINE .....	186
BATTERY (12-VOLT) .....	351	COVER GP-VALVE MECHANISM .....	37
			38

# INDEX

Name	Page	Name	Page
CRANKSHAFT GP .....	39		65
CYLINDER AS-ETHER (STARTING AID) .....	381		66
	382	FASTENER GP-FRONT HOUSING .....	67
CYLINDER BLOCK AS .....	41		68
	42	FASTENER GP-STUB SHAFT .....	69
CYLINDER BLOCK GP .....	43		70
CYLINDER HEAD AS .....	45		71
CYLINDER HEAD GP .....	46	FILLER GP-ENGINE OIL .....	190
	47		191
		FILLER GP-ENGINE OIL-LEFT FRONT .....	187
			189
<b>D</b>		FILM-AIR CLEANER (RADIAL SEAL) .....	253
DAMPER & PULLEY GP .....	48	FILM-GAUGE IDENTIFICATION (AMMETER) ...	430
DAMPER GP .....	49	FILM-IDENTIFICATION	
DRAIN GP-ENGINE OIL .....	50	(ELECTRICAL CONVERTER) .....	431
DRIVE GP-ACCESSORY .....	51	FILM-INFORMATION (AIR CLEANER) .....	251
	53	FILM-SERVICE METER .....	433
	55	FILTER AS-ENGINE OIL .....	195
	56	FILTER AS-FUEL .....	296
DRIVE GP-FAN .....	57		300
		FILTER ELEMENT AS-AIR (PRIMARY) .....	251
			253
		FILTER ELEMENT AS-AIR (SECONDARY) .....	251
			253
		FILTER ELEMENT AS-ENGINE OIL .....	194
			196
		FILTER GP-CENTRIFUGAL-ENGINE OIL .....	193
		FILTER GP-COOLANT (MAINTENANCE) .....	231
			232
		FILTER GP-ENGINE OIL .....	194
			195
			196
		FILTER GP-FUEL .....	296
			297
		FILTER GP-WATER SEP & FUEL .....	299
			300
		FITTING GP-AIR COMPRESSOR .....	72
		FITTING GP-EXHAUST .....	260
		FITTING GP-FUEL LINES .....	301
			302
			303
			304
			305
			306
		FLANGE GP-EXHAUST .....	261
		FLANGE GP-OIL COOLER-TRANSMISSION ...	238
		FLANGE GP-OUTPUT SHAFT .....	73
		FLYWHEEL GP .....	74
			75
			76
			77
			78
			79
			80
			81



# INDEX

Name	Page	Name	Page
	82		
	83		
FUMES DISPOSAL GP .....	197		
	198		
	199		
<b>G</b>			
GASKET (CRANKCASE BREATHER) .....	21		
	198		
GASKET (FUEL PRIMING PUMP) .....	310		
	313		
	316		
	320		
GAUGE AS-OIL (DIPSTICK) (ENGINE) .....	205		
GAUGE GP-COOLANT TEMPERATURE .....	437		
GAUGE GP-FUEL LEVEL .....	432		
GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE ...	200		
	201		
	203		
	205		
	206		
	207		
GEAR GP-FRONT .....	84		
GEAR GP-REAR .....	85		
	88		
	92		
GOVERNOR GP-AIR COMPRESSOR .....	96		
	97		
GUARD GP-ALTERNATOR .....	363		
<b>H</b>			
HARNESS AS-CONTROL (ELECTRONIC CONTROL MODULE) .....	425		
HARNESS AS (ELECTRONIC CONTROL MODULE) .....	423		
HARNESS AS-ENGINE (UNIT INJECTOR) .....	428		
HARNESS AS-SENSOR (FUEL) .....	320		
HARNESS AS-SENSOR (FUEL JUMPER) .....	313		
HARNESS AS-SENSOR (FUEL SENSORS) .....	316		
HARNESS AS-SENSOR (JUMPER) .....	310		
HARNESS AS-WIRING (BATTERY) .....	427		
HARNESS AS-WIRING (SPEED SENSOR) .....	376		
HOSE (FUMES DISPOSAL) .....	197		
HOSE-FUMES DISPOSAL .....	51		
	198		
	199		
HOUSING GP-FLYWHEEL .....	99		
	101		
	102		
	104		
	105		
HOUSING GP-FRONT .....	107		
		<b>I</b>	
		INDICATOR-AIR FILTER CHANGE .....	252
			254
		INDICATOR (AIR SHUTOFF) .....	281
		INDICATOR AS (ENGINE OIL PRESSURE) .....	437
		INDICATOR AS (FUEL PRESSURE) .....	437
		INJECTOR GP-FUEL .....	307
			308
		<b>K</b>	
		KIT-AIR CLEANER CLAMP .....	251
		KIT-ALTERNATOR GUARD .....	338
		KIT-ALTERNATOR TERMINAL (BATTERY) .....	330
		KIT-ALTERNATOR TERMINAL (BATTERY) .....	336
			338
		KIT-ALTERNATOR TERMINAL (RELAY) .....	336
			338
		KIT-BEARING (ALTERNATOR) .....	340
			344
			346
			349
		KIT-BEARING (ALTERNATOR) .....	342
		KIT-BEARING (STARTING MOTOR) .....	386
		KIT-BRUSH (STARTING MOTOR) .....	386
			397
			399
			401
			403
			405
			408
			411
			413
		KIT-BUSHING (STARTING MOTOR) .....	397
			399
			401
			403
			405
			408
			411
			413
		KIT-CRANKSHAFT BEARING .....	39
			109
		KIT-ENGINE ADAPTER (TRANSMISSION) .....	8
			9
		KIT-EXHAUST PARTS .....	262
		KIT-GASKET (AIR COMPRESSOR) .....	16
			18
		KIT-GASKET (AIR COMPRESSOR HEAD) .....	20
		KIT-GOVERNOR OVERHAUL (AIR COMPRESSOR) .....	96
			97
		KIT-HARDWARE (ALTERNATOR) .....	340
			342

# INDEX

Name	Page	Name	Page
	344	LINES GP-AIR-TURBOCHARGER OUTLET . . . .	263
	346		264
	349		265
KIT-HARDWARE (STARTING MOTOR) . . . . .	386		266
KIT-INSULATOR (STARTING MOTOR) . . . . .	397		270
	399	LINES GP-AIR COMPRESSOR . . . . .	113
	401	LINES GP-FLEXIBLE FUEL . . . . .	309
	403	LINES GP-FUEL FILTER . . . . .	310
	405		313
	408		316
	411		320
	413	LINES GP-TURBOCHARGER OIL . . . . .	210
KIT-LEVER (STARTING MOTOR) . . . . .	397		211
	399		212
	401	LINES GP-WATER-INLET ELBOW . . . . .	239
	403		244
	405	LINES GP-WATER-	
	408	SINGLE TEMPERATURE REGULATOR . . . . .	240
	411		242
	413	LINES GP-WATER-	
KIT-OUTPUT TERMINAL (ALTERNATOR) . . . . .	333	SINGLE WATER REGULATOR . . . . .	245
KIT-OUTPUT TERMINAL (ALTERNATOR) . . . . .	330		
KIT-RELAY TERMINAL (ALTERNATOR) . . . . .	333		
KIT-SEAL (AIR COMPRESSOR) . . . . .	16		
	18		
	20		
KIT-SOLENOID (12-VOLT) (STARTING MOTOR) . . . . .	397		
	399		
	401		
	403		
KIT-STARTING MOTOR PIN . . . . .	386		
KIT-STARTING MOTOR SEAL . . . . .	386		
KIT-TERMINAL (ALTERNATOR) . . . . .	340		
	342		
	344		
	346		
	349		
KIT-TERMINAL (STARTING MOTOR) . . . . .	384		
KIT-TERMINAL (STARTING MOTOR) . . . . .	416		
KIT-UNLOADER (AIR COMPRESSOR) . . . . .	16		
	18		
	20		
KIT-WASHER (STARTING MOTOR) . . . . .	386		
		<b>M</b>	
		MANIFOLD GP-EXHAUST . . . . .	272
			273
		MANIFOLD GP-INLET . . . . .	274
		METER GP-SERVICE . . . . .	433
		METER GP-SERVICE-HOURS . . . . .	433
		MODULE GP-DISPLAY-MESSENGER . . . . .	434
		MOUNTING GP-ALTERNATOR . . . . .	115
			349
		MOUNTING GP-FAN DRIVE . . . . .	117
			118
			119
		MOUNTING GP-INSTRUMENT . . . . .	435
		MOUNTING GP-TACHOMETER . . . . .	436
		MOUNTING GP-TURBOCHARGER . . . . .	275
			276
		MOUNTING GP-VALVE MECHANISM . . . . .	120
		<b>P</b>	
		PAN GP-OIL-ENGINE . . . . .	121
			123
			125
			127
			129
			131
		PANEL GP-INSTRUMENT . . . . .	437
		PIPE GP-EXHAUST . . . . .	277
		PISTON & ROD GP . . . . .	133
		PLATE-INSTRUCTION (POWER TAKE-OFF) (SERVICING) . . . . .	27
		PLATE-WARNING (POWER TAKE-OFF) . . . . .	27
<b>L</b>			
LIFTER GP-VALVE-MECHANISM . . . . .	110		
LIFTING GP-ENGINE . . . . .	111		
	112		
LINES GP-AIR-INTAKE . . . . .	268		
	269		
	271		
LINES GP-AIR- TURBOCHARGER, AIR CLEANER . . . . .	267		



# INDEX

Name	Page	Name	Page
SENSOR GP-SPEED- CRANKSHAFT SPEED, TIMING .....	376 377		413 415
SENSOR GP-SPEED-MAGNETIC- ENGINE TIMING .....	375	SUPPORT GP-BATTERY .....	419
SENSOR GP-SPEED- MAGNETIC, LOW OUTPUT- ENGINE .....	374	SUPPORT GP-ENGINE .....	166 167 168 169 170
SENSOR GP-SPEED- MAGNETIC, LOW OUTPUT- ENGINE TIMING .....	373	SUPPORT GP-POWER TAKE-OFF .....	171
SENSOR GP-TEMPERATURE .....	379 380	SWITCH GP-MAGNETIC .....	420
SENSOR GP-TEMPERATURE- FUEL, AIR INTAKE MANIFOLD .....	379	<b>T</b>	
SENSOR GP-TEMPERATURE- WATER, COOLANT .....	380	TACHOMETER GP-ELECTRIC .....	439
SHAFT GP-STUB .....	163 164 165	TAG-NOTICE (STARTING AID) (ETHER) .....	381
SHUTOFF GP-AIR .....	280 281	TURBOCHARGER GP .....	283 284 285 286 287 288 289 290 291 292 293 294 295
SOLENOID AS (24-VOLT) (STARTING MOTOR) .....	386	<b>V</b>	
SOLENOID AS (24-VOLT) (STARTING MOTOR) .....	405 407 411 413	VALVE AS-PRESSURE RELIEF (AIR COMPRESSOR) .....	16 18 20
SOLENOID AS (24-VOLT, STARTING MOTOR) .....	384 416	VALVE AS-VENT (WATER LINES) .....	240 242 245
SOLENOID-SHUTOFF (24-VOLT) (AIR RIGSAVER) .....	281	VALVE GP-CHECK-FUEL FILTER .....	327 328
STARTING AID GP-ETHER-12-VOLT .....	381	VALVE GP-ETHER STARTING-12-VOLT .....	422
STARTING AID GP-ETHER-24-VOLT .....	382	VALVE GP-ETHER STARTING-24-VOLT .....	421
STARTING MOTOR GP-ELECTRIC .....	383 386 388 389 390 391 392 393 394 395 396 397 399 401 403 405 407 410 411	VALVE GP-FUEL BYPASS .....	329
		VALVE GP-RELIEF (REFRIGERANT COMPRESSOR) .....	29
		VALVE MECHANISM GP .....	172
		VOLTMETER GP .....	440 441
		<b>W</b>	
		WIRE AS-SENSOR (14-GA WIRE) (CUSTOMER CONNECTOR) .....	354
		WIRE AS-SENSOR (14-GA WIRE) (THROTTLE POSITION) .....	354

# INDEX

Name	Page	Name	Page
WIRING GP-ELECTRONIC CONTROL .....	423		
	425		
WIRING GP-ENGINE .....	427		
WIRING GP-UNIT INJECTOR .....	428		
	429		

# INDEX

Désignation	Page	Désignation	Page
<b>A</b>		<b>B</b>	
ADAPTATEUR DE VENTILATEUR (ASS) . . . . .	215	BAÏONNETTE- NIVEAU DE CARBURANT (ASS) . . . . .	432
	216	BATTERIE (ASS) . . . . .	351
	217		352
	218	BATTERIE (12 VOLTS) . . . . .	351
	219		352
	220	BLOC-CYLINDRES - COUVERCLE (ASS) . . . . .	32
ADAPTATEUR DU MOTEUR A LA TRANSMISSION (ASS) . . . . .	5	BLOC-CYLINDRES (ASS) . . . . .	43
	6	BLOC-CYLINDRES (ENS) . . . . .	41
	7		42
	8	BOUCHON DE BLOC-CYLINDRES (ASS) . . . . .	134
	9		135
ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (ASS) . . . . .	221		136
	222	BOUCHON DE COLLECTEUR D'ADMISSION (ASS) . . . . .	278
ALTERNATEUR DE CHARGE (ASS) . . . . .	330	BOUCHON DE GOULOTTE DE REMPLISSAGE (ENS) (HUILE MOTEUR) . . . . .	187
	336		189
	340		190
	342		191
	344	BOUCHON DE MOTEUR (ASS) . . . . .	137
	346		138
	348	BOUCHON DE REFROIDISSEUR D'HUILE MOTEUR (ASS) . . . . .	247
	349	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS) . . . . .	187
ALTERNATEUR DE CHARGE (ASS) . . . . .	333	BOUCHON DE REMPLISSAGE D'HUILE MOTEUR (ASS) . . . . .	189
	338		190
AMORTISSEUR DE VIBRATIONS (ASS) . . . . .	49		191
AMORTISSEUR DE VIBRATIONS ET POULIE (ASS) . . . . .	48	BOUCHON DE VIDANGE (CARTER D'HUILE MOTEUR) . . . . .	121
AMPÈREMÈTRE (ENS) . . . . .	430		123
ARBRE A CAMES (ASS) . . . . .	23		125
	25		127
	26	BOUCHON DE VIDANGE (REFROIDISSEUR D'HUILE DE BOÎTE) . . . . .	226
ARBRE DE VOLANT (ASS) . . . . .	163	BOUCHON DU CARTER DE VOLANT (ASS) . . . . .	139
	164	BOULONNERIE-ARBRE DE VOLANT (ASS) . . . . .	69
	165		70
ARRÊT D'AIR (ASS) . . . . .	280		71
	281	BOULONNERIE D'AMORTISSEUR ET DE POULIE . . . . .	59
AUTOCOLLANT-COMPTEUR D'ENTRETIEN . . . . .	433		60
AUTOCOLLANT DE FILTRE A AIR (JOINT RADIAL) . . . . .	253	BOULONNERIE DE CARTER AV (ASS) . . . . .	67
AUTOCOLLANT D'IDENTIFICATION (CONVERTISSEUR ÉLECTRIQUE) . . . . .	431		68
AUTOCOLLANT D'IDENTIFICATION D'INSTRUMENT (AMPÈREMÈTRE) . . . . .	430	BOULONNERIE DE LA CULASSE (ASS) . . . . .	58
AUTOCOLLANT-INFORMATION (FILTRE À AIR) . . . . .	251	BOURRELET D'ÉTANCHÉITÉ (BOÎTIER DE RÉGULATEUR DE TEMPÉRATURE) . . . . .	240
AUXILIAIRE DE DÉMARRAGE À L'ÉTHÉR . . . . .	382		242
AUXILIAIRE DE DÉMARRAGE À L'ÉTHÉR . . . . .	381		
AXE DE CULBUTEUR (ASS) . . . . .	155		
	156		
	157		
	158		

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDEX

Désignation	Page	Désignation	Page
	245	CAPTEUR DE TEMPERATURE (ASS) .....	379
BOURRELET D'ÉTANCHÉITÉ			380
(SÉPARATEUR D'EAU) .....	300	CAPTEUR DE VITESSE (ASS) .....	373
BRANCHEMENT ÉLECTRIQUE (ASS) .....	354		374
	355		375
BRIDE - ARBRE DE SORTIE (ASS) .....	73		376
BRIDE DE REFROIDISSEUR D'HUILE (ASS) ...	238		377
BRIDE D'ÉCHAPPEMENT (ASS) .....	261		378
		CARTER AV (ASS) .....	107
		CARTER DE VOLANT (ASS) .....	99
			101
			102
			104
			105
		CLAPET DE DECHARGE (ASS)	
		(COMPRESSEUR DE RÉFRIGÉRANT) .....	29
		CLAPET DE DECHARGE DE PRESSION	
		(COMPRESSEUR D'AIR) .....	16
			18
			20
		CLAPET DE RETENUE (ENS) .....	327
			328
		COLLECTEUR D'ADMISSION (ASS) .....	274
		COLLECTEUR D'ÉCHAPPEMENT (ASS) .....	272
			273
		COMMANDE DE FAISCEAU (ENS) (MODULE	
		DE COMMANDE ÉLECTRONIQUE) .....	425
		COMMANDE DE MACHINE (ASS) .....	356
		COMMANDE DE RÉGIME MOTEUR (ASS) .....	359
		COMMANDE DE VITESSE À DISTANCE	
		(ASS) .....	361
		COMMANDE ÉLECTRONIQUE - CABLAGE ...	423
			425
		COMMANDE ELECTRONIQUE DE MOTEUR	
		(ASS) .....	358
		COMMANDE ET MONTAGE - MOTEUR .....	356
			357
		COMMANDE NON PROGRAMMEE (ASS) .....	362
		COMPRESSEUR D'AIR (ASS) .....	10
			12
			14
			16
		COMPRESSEUR D'AIR (ASS) .....	18
			20
		COMPRESSEUR DE REFRIGERANT (ASS) ...	29
			30
		COMPTE-TOURS ÉLECTRIQUE (ASS) .....	439
		COMPTEUR D'ENTRETIEN (ASS) .....	433
		CONTACTEUR MAGNETIQUE (ASS) .....	420
		*CONTROL GP-ENGINE SPEED .....	360
		COUDE D'ÉCHAPPEMENT .....	258
			259
		COUVERCLE DE CARTER AV (ASS) .....	35

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDEX

Désignation	Page	Désignation	Page
COUVERCLE DE CARTER DE VOLANT (ASS) .....	36 33	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS) .....	232
COUVERCLE DE VILEBREQUIN (ASS) .....	34	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (ENTRETIEN) .....	231
COUVERCLE DU SUPPORT DE FILTRE A HUILE (ASS) .....	31 186	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (ENTRETIEN) .....	230
*COVER GP-AIR INLET .....	257	ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDISSEMENT (PRÉCHARGE) .....	231 232
CULASSE (ASS) .....	46 47	ÉLÉMENT DE FILTRE À AIR (ENS) (PRINCIPAL) .....	251
CULASSE (ENS) .....	45	ÉLÉMENT DE FILTRE À AIR (ENS) (PRINCIPAL) .....	253
CULBUTERIE (ASS) .....	172	ÉLÉMENT DE FILTRE À AIR (ENS) (SECONDAIRE) .....	251 253
CYLINDRE D'ETHER (ENS) (AUXILIAIRE DE DÉMARRAGE) .....	381	ÉLÉMENT DE FILTRE (ENS)-HUILE MOTEUR .....	194 196
CYLINDRE D'ETHER (ENS) (AUXILIAIRE DE DÉMARRAGE) .....	382	ÉLÉMENT DE PRÉCHARGE (ENS) (ADDITIF POUR LIQUIDE DE REFROIDISSEMENT) ...	230
<b>D</b>		EMBRAYAGE (ASS) .....	27
DÉFLECTEUR DE PLUIE (ENS) .....	255	ENTRAÎNEMENT AUXILIAIRE (ASS) .....	51 53 55 56 57
DÉMARREUR ÉLECTRIQUE (ASS) .....	386 407 410 411 413 415	ENTRAÎNEMENT DE VENTILATEUR (ASS) .....	57
DÉMARREUR ÉLECTRIQUE (ASS) .....	383	ÉTIQUETTE DE REMARQUE (AUXILIAIRE DE DÉMARRAGE) (ÉTHER) ...	381
DÉMARREUR ÉLECTRIQUE (ASS) .....	388 389 390 391 392 393 394 395 396 397 399 401 403 405	<b>F</b>	
DISPOSITIF D'EVACUATION DES VAPEURS DE CARTER .....	197 198 199	FAISCEAU DE CABLES - CAPTEUR (ENS) (CÂBLE VOLANT) .....	310
<b>E</b>		FAISCEAU DE CABLES - CAPTEUR (ENS) (CAPTEURS DE CARBURANT) .....	316
ECHAPPEMENT - TUYAU (ASS) .....	277	FAISCEAU DE CABLES - CAPTEUR (ENS) (CARBURANT) .....	320
ELEMENT D'ADDITIF POUR LIQUIDE DE REFROIDIS. (ASS) .....	230 231	FAISCEAU DE CABLES - CAPTEUR (ENS) (*FUEL JUMPER) .....	313
		FAISCEAU DE CABLES (ENS) (BATTERIE) .....	427
		FAISCEAU DE CABLES (ENS) (CAPTEUR DE VITESSE) .....	376
		FAISCEAU DE CABLES (ENS) (MODULE DE COMMANDE ÉLECTRONIQUE) .....	423
		FAISCEAU DU REFROIDISSEUR D'HUILE (ASS) .....	229
		FAISCEAU DU REFROIDISSEUR D'HUILE (ENS) (MOTEUR) .....	223 225
		FIL DE CAPTEUR (ENS) (FIL DE CALIBRE 14) (POSITION D'ACCÉLÉRATION) .....	354

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION



# INDEX

Désignation	Page	Désignation	Page
FIL DE CAPTEUR (ENS) (FIL DE CALIBRE 14) (PRISE CLIENT) .....	354	INSTRUMENT DE TEMPÉRATURE DE LIQUIDE DE REFROIDISSEMENT (ASS) .....	437
*FILTER GP-CENTRIFUGAL .....	193		
FILTRE A AIR (ASS) .....	251	<b>J</b>	
	252	JAUGE À HUILE (ENS) (JAUGE BAÏONNETTE) (MOTEUR) .....	205
FILTRE A CARBURANT (ASS) .....	296	JAUGE D'HUILE MOTEUR (BAIONNETTE) (ASS) .....	200
FILTRE A CARBURANT (ENS) .....	296		201
	300		203
FILTRE À HUILE MOTEUR (ASS) .....	194		205
FILTRE À HUILE MOTEUR (ASS) .....	195	JAUGE D'HUILE MOTEUR (BAIONNETTE) (ASS) .....	206
	196		207
FILTRE A HUILE MOTEUR (ENS) .....	195	JOINT (ASS) (POMPE À EAU) .....	248
FILTRE DE LIQUIDE DE REFROIDISSEMENT (ASS) (ENTRETIEN) .....	231	JOINT DE VILEBREQUIN (ASS) .....	85
	232		88
FILTRE DE SÉPARATEUR D'EAU ET DE CARBURANT (ASS) .....	299		92
	300	JOINT DE VILEBREQUIN (ASS) .....	107
*FITTING GP-AIR COMPRESSOR .....	72		159
FLEXIBLE D'ÉVACUATION DES VAPEURS .....	51		160
	199		161
FLEXIBLE D'ÉVACUATION DES VAPEURS .....	198	JOINT ISOLANT (CACHE-SOUPAPES) .....	37
FLEXIBLE (ÉVACUATION DES GAZ DE CARTER) .....	197		38
		JOINT PLAT (POMPE D'AMORÇAGE DE CARBURANT) ...	313
<b>G</b>			316
GICLEUR-ÉTHER (ENS) .....	350		320
		JOINT PLAT (POMPE D'AMORÇAGE DE CARBURANT) ...	310
<b>H</b>		JOINT PLAT (RENIFLARD DE CARTER) .....	21
HUILE MOTEUR - CARTER (ASS) .....	121	JOINT PLAT (RENIFLARD DE CARTER) .....	198
	123		
	125	<b>K</b>	
	127	KIT - DÉCHARGE (COMPRESSEUR D'AIR) (COMPRESSEUR D'AIR) .....	16
	129		18
	131		20
<b>I</b>		KIT DE BAGUE (DÉMARREUR) .....	397
INDICATEUR DE REMPLACEMENT DE FILTRE À AIR .....	252		399
	254		401
INDICATEUR (ENS) (PRESSION D'HUILE MOTEUR) .....	437		403
INDICATEUR (ENS) (PRESSION DU CARBURANT) .....	437		405
INJECTEUR DE CARBURANT (ASS) .....	307		408
	308	KIT DE BALAIS (DÉMARREUR) .....	386
			411
		KIT DE BALAIS (DÉMARREUR) .....	413
			413
		KIT DE BALAIS (DÉMARREUR) .....	397

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDEX

Désignation	Page	Désignation	Page
	399	KIT DE RACCORD DE MOTEUR	
	401	(BOÎTE DE VITESSES) .....	8
	403		9
	405	KIT DE RONDELLE (DÉMARREUR) .....	386
KIT DE BALAIS (DÉMARREUR) .....	408	KIT DE SOLÉNOÏDE (12 VOLTS)	
KIT DE BORNE (ALTERNATEUR) .....	340	(DÉMARREUR) .....	397
	342		399
	344		401
	346		403
	349	KIT DE VERIFICATION DU REGULATEUR	
KIT DE BORNE D'ALTERNATEUR		(COMPRESSEUR D'AIR) .....	96
(BATTERIE) .....	330		97
KIT DE BORNE D'ALTERNATEUR		KIT D'ISOLANT (DÉMARREUR) .....	405
(BATTERIE) .....	336		408
	338		411
KIT DE BORNE D'ALTERNATEUR (RELAIS) ....	336		413
	338	KIT D'ISOLANT (DÉMARREUR) .....	397
KIT DE BORNE DE RELAIS (ALTERNATEUR) ...	333		399
KIT DE BORNE DE SORTIE (ALTERNATEUR) ...	330		401
	333		403
KIT DE BORNE (DÉMARREUR) .....	384	KIT (JOINT CHASSIS PORTEUR)	
	416	(COMPRESSEUR D'AIR) .....	16
KIT DE BOULONNERIE (ALTERNATEUR) .....	340		18
	342	KIT (JOINT CHASSIS PORTEUR) (TÊTE DE	
	344	COMPRESSEUR PNEUMATIQUE) .....	20
	346		
	349		
KIT DE BOULONNERIE (DÉMARREUR) .....	386		
KIT DE BRIDE DE FIXATION DE FILTRE A		<b>M</b>	
AIR .....	251	MODULE D'AFFICHAGE (ASS) .....	434
KIT DE BROCHE DE DÉMARREUR .....	386	MONTAGE D'ALTERNATEUR (ASS) .....	115
KIT DE COUSSINET (ALTERNATEUR) .....	340		349
	342	MONTAGE DE COMPTE-TOURS (ASS) .....	436
	344	MONTAGE DE CULBUTERIE (ASS) .....	120
	346	MONTAGE DE TURBOCOMPRESSEUR	
	349	(ASS) .....	275
KIT DE COUSSINET DE VILEBREQUIN .....	39		276
	109	MONTAGE D'ENTRAÎNEMENT DE	
KIT DE COUSSINET (DÉMARREUR) .....	386	VENTILATEUR (ASS) .....	117
KIT DE JOINT DE DÉMARREUR .....	386		118
KIT DE JOINTS (COMPRESSEUR D'AIR) .....	16		119
	18	MONTAGE DES INSTRUMENTS (ASS) .....	435
	20	MOTEUR - PARTIE CENTRALE (VERSION) ....	2
KIT DE LEVIER (DÉMARREUR) .....	408		3
KIT DE LEVIER (DÉMARREUR) .....	397		4
	399		
	401		
	403	<b>O</b>	
	405	OEILLETONS DE LEVAGE MOTEUR (ASS) ....	111
KIT DE LEVIER (DÉMARREUR) .....	411		112
	413		
KIT DE PIÈCES D'ÉCHAPPEMENT .....	262	<b>P</b>	
KIT DE PROTECTION D'ALTERNATEUR .....	338	PIGNON AR (ASS) .....	85

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDEX

Désignation	Page	Désignation	Page
	88	RÉGULATEUR - COMPRESSEUR D'AIR	
	92	(ASS) .....	97
PIGNONNERIE AV (ASS) .....	84	RÉGULATEUR - COMPRESSEUR D'AIR	
PISTON ET BIELLE (ASS) .....	133	(ASS) .....	96
PLAQUE - AVERTISSEMENT		REGULATEUR DE LA TENSION (ENS)	
(PRISE DE FORCE) .....	27	(24 VOLTS) (ALTERNATEUR) .....	330
PLAQUE D'INSTRUCTIONS (PRISE DE FORCE)			340
(ENTRETIEN) .....	27		342
POMPE A EAU (ASS) .....	249		344
	250		346
POMPE A HUILE MOTEUR (ASS) .....	213		349
	214	RÉGULATEUR (ENS) (12 VOLTS)	
POMPE D'ALIMENTATION EN CARBURANT		(ALTERNATEUR) .....	333
(ASS) .....	326		336
POMPE D'AMORÇAGE DE CARBURANT			338
(ASS) .....	310	RENIFLARD (ENS) (CARTER) .....	21
	313		198
	316		
	320		
POMPE D'INJECTION DE CARBURANT		<b>S</b>	
(ASS) .....	324	SOLÉNOÏDE D'ARRÊT (24 VOLTS) (*AIR	
	325	RIGSAVER) .....	281
POULIE - ENTRAÎNEMENT D'ALterna. ET DE		SOLÉNOÏDE (ENS) (24 VOLTS)	
VENTI .....	148	(DÉMARREUR) .....	386
POULIE (ASS) .....	141		405
POULIE D'ALTERNATEUR .....	153		407
	154		411
POULIE D'ENTRAÎNEMENT DE VENTILATEUR		SOLÉNOÏDE (ENS) (24V, DÉMARREUR) .....	413
(ASS) .....	149		384
	150		416
	151	SONDE - CIRCUIT DE CARBURANT .....	366
	152	SONDE - CIRCUIT DE CARBURANT (ROTATIF)	
POUSSOIR DE SOUPAPE (ASS) .....	110	(RÉGIME MOTEUR) .....	359
PREFILTRE (ASS) .....	279	SOUPAPE - RENIFLARD	
PRISE DE FORCE (ASS) .....	140	(CANALISATIONS D'EAU) .....	240
PROTEGE-ALTERNATEUR (ASS) .....	363		242
*PUMP GP-WATER .....	248		245
		SOUPAPE DE DÉMARRAGE À L'ÉTHÉR	
		(ASS) .....	421
			422
		SOUPAPE DE DÉRIVATION DE CARBURANT	
		(ASS) .....	329
<b>R</b>		SUPPORT - CACHE-SOUPAPES (ASS) .....	21
RACCORD - CANALISATIONS DE CARBURANT		SUPPORT (ASS) .....	22
(ASS) .....	301	SUPPORT DE BATTERIE (ASS) .....	419
	302	SUPPORT DE FILTRE À HUILE (ASS) .....	174
	303		175
	304		176
	305		177
	306		178
RACCORD D'ÉCHAPPEMENT (ASS) .....	256		179
	260		180
REFROIDISSEUR D'HUILE DE BOÎTE (ASS) ...	226		182
REFROIDISSEUR D'HUILE MOTEUR (ASS) ....	223		
	225		

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDEX

Désignation	Page	Désignation	Page
	183	VENTILATEUR SOUFFLANT (ASS) .....	233
SUPPORT DE MOTEUR (ASS) .....	166		234
	167	VERSION DE MOTEUR COMPLET .....	1
	168	VIDANGE-HUILE DE MOTEUR (ASS) .....	50
	169	VILEBREQUIN - POULIE (ASS) .....	142
	170		143
SUPPORT DE MOTEUR (ASS) .....	443		144
SUPPORT DE PRISE DE FORCE (ASS) .....	171		145
SUPPORT (ENS) .....	442		146
			147
		VILEBREQUIN (ASS) .....	39
		VOLANT - BOULONNERIE (ASS) .....	61
			62
			63
			64
			65
			66
		VOLANT MOTEUR (ASS) .....	74
			75
			76
			77
			78
			79
			80
			81
			82
			83
		VOLTMÈTRE (ASS) .....	440
			441
			442
			443
			444
			437
			281
			245
			240
			242
			431
			283
			285
			287
			290
			283
			284
			285
			286
			287
			288
			289
			290
			291
			292
			293
			294
			295
			309
			240
			242
			245
			235
			236
			237

\* TRADUCTION NON DISPONIBLE AU MOMENT DE LA PUBLICATION

# INDICE

Nombre	Página	Nombre	Página
<b>A</b>			
ACCESORIOS - IMPULSOR DE (GR) .....	51	BLOQUE MOTOR (CONJ) .....	41
	53		42
	55	BLOQUE MOTOR (GR) .....	43
	56	BOMBA DE ACEITE DEL MOTOR (GR) .....	213
ACONDICIONADOR DE REFRIGERANTE (GR) .....	221		214
	222	BOMBA DE AGUA (GR) .....	249
ADAPTADOR DE VENTILADOR (GR) .....	215		250
	216	BOMBA DE CEBADO DE COMBUSTIBLE (GR) .....	310
	217		313
	218		316
	219	BOMBA DE INYECCIÓN DE COMBUSTIBLE (GR) .....	320
	220		324
ADAPTADOR DEL MOTOR A LA TRANSMISIÓN .....	5		325
	6	BOMBA DE TRANSFERENCIA DE COMBUSTIBLE (GR) .....	326
	7	BRIDA DE ENFRIADOR DE ACEITE (GR) .....	238
	8	BRIDA DE ESCAPE (GR) .....	261
	9	BRIDA DEL EJE DE SALIDA (GR) .....	73
AIRE - TUBERÍAS DE (GR) .....	263	<b>C</b>	
	264	CABLE CONJ.-SENSOR (CABLE DE 14 GA) (CONECTOR DE CLIENTE) .....	354
	265	CABLE CONJ.-SENSOR (CABLE DE 14 GA) (POSICION DE ACELERADOR) .....	354
	266	CABLE DE LA BATERÍA (GR) .....	353
	267	CABLES DE INYECTOR (GR) .....	429
	268	CABLES DE INYECTOR (GR) .....	428
	269	CABLES DEL CONTROL ELECTRÓNICO (GR) .....	423
	270		425
	271	CABLES DEL MOTOR (GR) .....	427
AMORTIGUADOR DE VIBRACIONES (GR) .....	49	CAJA DELANTERA - TORNILLERÍA DE LA (GR) .....	67
AMORTIGUADOR Y POLEA (GR) .....	48		68
AMPERIMETRO, CONJUNTO .....	430	CAJA DELANTERA (GR) .....	107
ANTEFILTRO (GR) .....	279	CALCOMANÍA DE IDENTIFICACIÓN (CONVERTIDOR ELECTRICO) .....	431
ÁRBOL DE LEVAS (GR) .....	23	CALCOMANIA DE MEDIDOR DE SERVICIO .....	433
	25	CALCOMANIA, IDENTIFICACIÓN DE MEDIDOR (AMPERIMETRO) .....	430
	26	CÁNCAMOS DE LEVANTAMIENTO DEL MOTOR (GR) .....	111
ATOMIZADOR DE ÉTER (CONJ) .....	350		112
AUXILIAR DE ARRANQUE CON ÉTER (GR) .....	381	CARGA - ALTERNADOR DE (GR) .....	330
	382		333
<b>B</b>			
BALANCÍN (GR) .....	155		336
	156		338
	157		340
	158		342
BASE (CONJ) .....	442		344
BASE DE LA TAPA DE VÁLVULAS (GR) .....	21		
BASE DEL MOTOR (GR) .....	443		
BATERÍA (GR) .....	351		
	352		
BATERÍA (12 VOLTIOS) .....	351		
	352		

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# INDICE

Nombre	Página	Nombre	Página
	346		281
	348	*COVER GP-AIR INLET .....	257
CÁRTER - COLECTOR DEL (GR) .....	121	CULATA DE CILINDROS - TORNILLERÍA DE LA (GR) .....	58
	123	CULATA DE CILINDROS (CONJ) .....	45
	125	CULATA DE CILINDROS (GR) .....	46
	127		47
	129		
	131		
CIGÜEÑAL - POLEA DE (GR) .....	142		
	143		
	144	<b>D</b>	
	145	DETECTOR DE POSICIÓN (SISTEMA DE COMBUST.) (GR) .....	366
	146	DETECTOR DE POSICIÓN (SISTEMA DE COMBUST.) (GR) (ROTATORIO) (VELOCIDAD DEL MOTOR) .....	359
CIGÜEÑAL (GR) .....	39	DRENAJE DEL ACEITE DE MOTOR .....	50
CILINDRO DE ÉTER (CONJ) (AUXILIAR DE ARRANQUE) .....	381		
	382		
CODO DE ESCAPE .....	258		
	259	<b>E</b>	
COMBUSTIBLE - TUBERIAS FLEXIBLES DE ...	309	EJE CORTO (GR) .....	163
COMPRESOR DE AIRE (GR) .....	10		164
	12		165
	14	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (CONJ) (MANTENIMIENTO) .....	230
	16		231
	18	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (CONJ) (PRECARGA) .....	231
COMPRESOR DE REFRIGERANTE (GR) .....	29		232
	30	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR) .....	230
CONEXIÓN DE ENGRASE DE LAS TUBERÍAS DE COMBUSTIBLE .....	301		231
	302	ELEMENTO ACONDICIONADOR DE REFRIGERANTE (GR) .....	232
	303	ELEMENTO DE FILTRO DE ACEITE DE MOTOR (CONJ) .....	194
	304		196
	305	ELEMENTO DE PRECARGA (CONJ) (ACONDICIONADOR DE REFRIGERANTE) .....	230
	306	ELEMENTO DEL FILTRO DE AIRE (CONJ) (PRIMARIO) .....	251
CONEXIÓN DE ESCAPE (GR) .....	256		253
	260	ELEMENTO DEL FILTRO DE AIRE (CONJ) (SECUNDARIO) .....	251
CONEXIÓN ELÉCTRICA (GR) .....	355		253
CONEXIÓN ELÉCTRICA (GR) .....	354	EMBRAGUE (GR) .....	27
CONTROL DE MAQUINA (GR) .....	356	EMPAQUETADURA (BOMBA DE CEBADO DE COMBUSTIBLE) ...	310
CONTROL DE VELOCIDAD DE MOTOR (GR) ...	359		313
CONTROL ELECTRÓNICO DEL MOTOR (GR) .....	358		320
CONTROL ELECTRÓNICO DEL MOTOR Y MONTAJE .....	356	EMPAQUETADURA (BOMBA DE CEBADO DE COMBUSTIBLE) ...	316
	357		
*CONTROL GP-ENGINE SPEED .....	360		
CONTROL NO PROGRAMADO (GR) .....	362		
CONTROL REMOTO DE VELOCIDAD (GR) .....	361		
CONVERTIDOR ELÉCTRICO (GR) .....	431		
CORTE DE AIRE (GR) .....	280		

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# INDICE

Nombre	Página	Nombre	Página
EMPAQUETADURA (RESPIRADERO DEL CARTER) .....	21 198	GRUPO DE TAPON, REFRIGERANTE DE ACEITE DE MOTOR .....	247
ENFRIADOR DE ACEITE DE LA TRANSMISIÓN (GR) .....	226	GRUPO DE TORNILLERIA-AMORTIGUADOR Y POLEA .....	59 60
ENFRIADOR DE ACEITE DEL MOTOR (GR) ...	225	GRUPO DE VÁLVULA-ARRANQUE CON ÉTER .....	421 422
ENFRIADOR DE ACEITE DEL MOTOR (GR) ...	223	GRUPO DE VOLTIMETRO .....	440 441
ENGRANAJE DELANTERO (GR) .....	84		
ENGRANAJE TRASERO (GR) .....	85 88 92		
ESCAPE DE GASES (GR) .....	197 198 199		
<b>F</b>			
*FILTER GP-CENTRIFUGAL .....	193	IMPULSOR DE VENTILADOR (GR) .....	57
FILTRO DE ACEITE - BASE DEL (GR) .....	174 175 176 177 178 179 180 182 183	INDICADOR- CAMBIO DE FILTRO DE AIRE ....	252 254
FILTRO DE ACEITE DEL MOTOR (CONJ) .....	195	INDICADOR (CONJ) - ACEITE (VARILLA) (MOTOR) .....	205
FILTRO DE ACEITE DEL MOTOR (GR) .....	194 195 196	INDICADOR (CONJ) (PRESION DE ACEITE DE MOTOR) .....	437
FILTRO DE AIRE (GR) .....	251 252 253 254	INDICADOR (CONJ) (PRESION DE COMBUSTIBLE) .....	437
FILTRO DE COMBUSTIBLE (CONJ) .....	300	INDICADOR (CORTE DE AIRE) .....	281
FILTRO DE COMBUSTIBLE (CONJ) .....	296	INDICADOR DE TEMPERATURA DEL REFRIGERANTE (GR) .....	437
FILTRO DE COMBUSTIBLE (GR) .....	296 297	INDICADOR DEL NIVEL DE ACEITE (GR) .....	432
FILTRO DE COMBUSTIBLE Y SEPARADOR DE AGUA (GR) .....	299 300	INDICADOR DEL NIVEL DE ACEITE (VARILLA) (GR) .....	200 201 203 205
FILTRO DE REFRIGERANTE (GR) (MANTENIMIENTO) .....	231 232	INDICADOR DEL NIVEL DE ACEITE (VARILLA) (GR) .....	206 207
*FITTING GP-AIR COMPRESSOR .....	72	INTERRUPTOR MAGNÉTICO (GR) .....	420
<b>G</b>			
GRUPO DE SELLO (BOMBA DE AGUA) .....	248	INYECTOR DE COMBUSTIBLE (GR) .....	307 308
GRUPO DE TAPÓN DEL MÚLTIPLE DE ADMISIÓN .....	278		
<b>J</b>			
		JUEGO, ADAPTADOR DE MOTOR (TRANSMISION) .....	8 9
		JUEGO (AISLADOR) (MOTOR DE ARRANQUE) .....	397 399 401 403 405
		JUEGO (AISLADOR) (MOTOR DE ARRANQUE) .....	411 413

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# INDICE

Nombre	Página	Nombre	Página
JUEGO (AISLADOR) (MOTOR DE ARRANQUE).....	408	JUEGO DE PASADOR DEL MOTOR DE ARRANQUE.....	386
JUEGO DE ABRAZADERA DEL FILTRO DE AIRE.....	251	JUEGO DE REACONDICIONAMIENTO DEL REGULADOR (COMPRESOR DE AIRE).....	96 97
JUEGO DE ARANDELA (MOTOR DE ARRANQUE).....	386	JUEGO DE SELLO DEL MOTOR DE ARRANQUE.....	386
JUEGO DE BUJES (MOTOR DE ARRANQUE)...	397 399 401 403 405 408 411 413	JUEGO DE SELLOS (COMPRESOR DE AIRE).....	16 18 20
JUEGO DE COJINETES (ALTERNADOR).....	340 342 344 346 349	JUEGO DE SOLENOIDE (12 VOLTIOS) (MOTOR DE ARRANQUE).....	397 399 401 403
JUEGO DE COJINETES DE BANCADA.....	39 109	JUEGO DE TERMINAL (ALTERNADOR).....	342 349
JUEGO DE COJINETES (MOTOR DE ARRANQUE).....	386	JUEGO DE TERMINAL (ALTERNADOR).....	340 342 344 346
JUEGO DE DESCARGADOR (COMPRESOR DE AIRE) (COMPRESOR DE AIRE).....	16 18 20	JUEGO DE TERMINAL DE ALTERNADOR (BATERIA).....	330
JUEGO DE EMPAQUETADURA (COMPRESOR DE AIRE).....	16 18	JUEGO DE TERMINAL DE ALTERNADOR (BATERÍA).....	336 338
JUEGO DE EMPAQUETADURA (CULATA DE COMPRESOR DE AIRE).....	20	JUEGO DE TERMINAL DE ALTERNADOR (RELE).....	336 338
JUEGO DE ESCOBILLAS (MOTOR DE ARRANQUE).....	386 397 399 401 403 405 408 411 413	JUEGO DE TERMINAL DE ALTERNADOR (RELE).....	336 338
JUEGO DE LAS PIEZAS DE ESCAPE.....	262	JUEGO DE TERMINAL DE RELÉ (ALTERNADOR).....	333
JUEGO DE PALANCA (MOTOR DE ARRANQUE).....	397 399 401 403 405 408 411 413	JUEGO DE TERMINAL DE SALIDA (ALTERNADOR).....	330
		JUEGO DE TERMINAL DE SALIDA (ALTERNADOR).....	333
		JUEGO DE TERMINAL (MOTOR DE ARRANQUE).....	384
		JUEGO DE TERMINAL (MOTOR DE ARRANQUE).....	416
		JUEGO DE TORNILLERÍA (ALTERNADOR)....	340 342 344 346 349
		JUEGO DE TORNILLERÍA (MOTOR DE ARRANQUE).....	386
		JUEGO DEL PROTECTOR DE ALTERNADOR...	338
		<b>M</b>	
		MANGUERA DE ESCAPE DE GASES.....	51 198

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION



# INDICE

Nombre	Página	Nombre	Página
	199		395
MANGUERA (ELIMINACION DE GASES).....	197		396
MAZO DE CABLES (CONJ) (BATERÍA).....	427		397
MAZO DE CABLES (CONJ) (SENSOR DE VELOCIDAD).....	376		399
MAZO DE CABLES DE CONTROL (CONJ) (MÓDULO DE CONTROL ELECTRONICO)...	425		401
MAZO DE CABLES DE SENSOR (CONJ) (COMBUSTIBLE).....	320		403
MAZO DE CABLES DE SENSOR (CONJ) (*FUEL JUMPER).....	313		405
MAZO DE CABLES DE SENSOR (CONJ) (PUENTE).....	310	MÚLTIPLE DE ADMISIÓN (GR).....	274
MAZO DE CABLES DE SENSOR (CONJ) (SENSORES DE COMBUSTIBLE).....	316	MÚLTIPLE DE ESCAPE (GR).....	272
MAZO DE CABLES DEL MOTOR (CONJ) (BOMBA INYECTORA INDIVIDUAL).....	428		273
MAZO DE CABLES (MODULO DE CONTROL ELECTRONICO)...	423		
MECANISMO DE LA VÁLVULA - MONTAJE DEL (GR).....	120	<b>N</b>	
MECANISMO DE VÁLVULAS (GR).....	172	NÚCLEO DE TURBOCOMPRESOR (GR).....	283
MEDIDOR DE SERVICIO (GR).....	433		285
MODULO DE LA PANTALLA (GR).....	434		287
MONTAJE DE LOS INSTRUMENTOS (GR).....	435	NÚCLEO DEL ENFRIADOR DE ACEITE (CONJ) (MOTOR).....	223
MONTAJE DEL ALTERNADOR (GR).....	115		225
	349	NÚCLEO DEL ENFRIADOR DE ACEITE (GR)...	229
MONTAJE DEL MANDO DE VENTILADOR (GR).....	117		
	118	<b>P</b>	
	119	PISTÓN Y BIELA (GR).....	133
MONTAJE DEL TACOMETRO (GR).....	436	PLACA DE ADVERTENCIA (TOMA DE FUERZA).....	27
MONTAJE DEL TURBOCOMPRESOR (GR).....	275	PLACA DE INFORMACION (FILTRO DE AIRE).....	251
	276	PLACA DE INSTRUCCIONES (TOMA DE FUERZA) (SERVICIO).....	27
MOTOR - NÚCLEO (CONFIG).....	2	PLACA DEL FILTRO DE AIRE (SELLO RADIAL).....	253
	3	PLACA INDICADOR (AUXILIAR DE ARRANQUE) (ETER).....	381
	4	POLEA DE MANDO DEL ALTERNADOR Y VENTILADOR (GR).....	148
MOTOR - SOPORTE DEL (GR).....	166	POLEA DEL ALTERNADOR.....	153
	167		154
	168	POLEA DEL MANDO DE VENTILADOR (GR)...	149
	169		150
	170		151
MOTOR COMPLETO (CONFIG).....	1	POLEA (GR).....	152
MOTOR DE ARRANQUE ELÉCTRICO (GR).....	383	POLEA (GR).....	141
	386	PROTECTOR DEL ALTERNADOR (GR).....	363
	388	*PUMP GP-WATER.....	248
	389		
	390		
	391		
	392		
	393		
	394		

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# INDICE

Nombre	Página	Nombre	Página
<b>R</b>			369
REGULADOR (CONJ) (12 VOLTIOS) (ALTERNADOR) .....	333 336		370 371
REGULADOR (CONJ) (12 VOLTIOS) (ALTERNADOR) .....	338	SENSOR DE TEMPERATURA (GR) .....	372 379
REGULADOR DE TEMPERATURA DEL AGUA (92 GRADOS CENTÍGRADOS) (REFRIGERANTE) .....	245	SENSOR DE VELOCIDAD (GR) .....	380 373
REGULADOR DE TEMPERATURA (TERMOSTATO) (98 GRADOS C) (REFRIGERANTE, AGUA) .....	240 242	SENSOR DE VELOCIDAD (GR) .....	374 375 376
REGULADOR DE VOLTAJE (24 VOLTIOS) (ALTERNADOR) .....	349	SENSOR DE VELOCIDAD (GR) .....	377 378
REGULADOR DE VOLTAJE (24 VOLTIOS) (ALTERNADOR) .....	340 342 344 346	SENSOR DEL MOTOR (GR) .....	364
REGULADOR DE VOLTAJE (24 VOLTIOS) (ALTERNADOR) .....	330	SENSOR DEL NIVEL DE LÍQUIDO .....	365
REGULADOR DEL COMPRESOR DE AIRE (GR) .....	96 97	SOLENOIDE (CONJ) (24 VOLTIOS) (MOTOR DE ARRANQUE) .....	386 405 407 411 413
RESPIRADERO (CONJ) (CÁRTER DEL MOTOR) .....	21 198	SOLENOIDE (CONJ) (24 VOLTIOS, MOTOR DE ARRANQUE) .....	384 416
<b>S</b>		SOLENOIDE DE CORTE (24 VOLTIOS) (*AIR RIGSAVER) .....	281
SELLO-AISLAMIENTO (TAPA DE VÁLVULA) .....	37 38	SOPLADOR - VENTILADOR (GR) .....	233 234
SELLO (CAJA DEL REGULADOR DE TEMPERATURA) .....	240 242 245	SOPORTE DE BATERÍA (GR) .....	419
SELLO DE CIGÜEÑAL (GR) .....	85 88 92 159 160 161 162	SOPORTE DE LA TOMA DE FUERZA (GR) .....	171
SELLO DE CIGÜEÑAL (GR) .....	107	SOPORTE (GR) .....	22
SELLO DE LABIO (REGULADOR DE TEMPERATURA DEL AGUA) .....	240 242 245	SUCCIÓN - VENTILADOR DE (GR) .....	235 236 237
SELLO (SEPARADOR DE AGUA, COMBUSTIBLE) ...	300	SUJETADOR DE EJE CORTO (GR) .....	69 70 71
SENSOR DE PRESIÓN (GR) .....	367 368	<b>T</b>	
		TABLA DE LOCALIZACIÓN DE LAS PLACAS Y CALCOMANÍAS .....	444
		TABlero DE INSTRUMENTOS (GR) .....	437
		TACÓMETRO ELÉCTRICO (GR) .....	439
		TAPA CONTRA LA LLUVIA (CONJ) .....	255
		TAPA DE CIGÜEÑAL .....	31
		TAPA DE LA BASE DEL FILTRO DE ACEITE (GR) .....	186
		TAPA DE LA CAJA DE VOLANTE (GR) .....	33 34
		TAPA DE LA CAJA DELANTERA (GR) .....	35 36
		TAPA DE LLENADO (CONJ) (ACEITE DEL MOTOR) .....	187

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# INDICE

Nombre	Página	Nombre	Página
	189		289
	190		290
	191		291
TAPA DEL BLOQUE MOTOR (GR).....	32		292
TAPA DEL MECANISMO DE VÁLVULAS (GR)...	37		293
	38		294
TAPÓN DE DRENAJE (COLECTOR DE ACEITE DEL MOTOR).....	121		295
	123		
	125		
	127		
	129		
	131		
TAPÓN DE DRENAJE (REFRIGERANTE DE ACEITE DE TRANSMISIÓN).....	226		
TAPÓN DE LA CAJA DEL VOLANTE (GR).....	139		
TAPÓN DEL BLOQUE MOTOR (GR).....	134		
	135		
	136		
TAPÓN DEL MOTOR (GR).....	137		
	138		
TOMA DE FUERZA (GR).....	140		
TORNILLERIA DE VOLANTE (GR).....	61		
	62		
	63		
	64		
	65		
	66		
TUBERÍAS DEL AGUA (GR).....	239		
	240		
	242		
	244		
	245		
TUBERÍAS DEL COMPRESOR DE AIRE (GR)...	113		
TUBERÍAS DEL FILTRO DE COMBUSTIBLE...	310		
	313		
	316		
	320		
TUBO DE ESCAPE (GR).....	277		
TUBO DE LLENADO DE ACEITE (GR).....	187		
	189		
	190		
	191		
TURBOCOMPRESOR - TUBERÍAS DE ACEITE DEL (GR).....	210		
	211		
	212		
TURBOCOMPRESOR (GR).....	283		
	284		
	285		
	286		
	287		
	288		

## V

VÁLVULA DE ALIVIO DE PRESIÓN (CONJ) (COMPRESOR DE AIRE).....	16
	18
	20
VÁLVULA DE ALIVIO (GR) (COMPRESOR DEL REFRIGERANTE).....	29
VALVULA DE DERIVACION DE COMBUSTIBLE (GR).....	329
VÁLVULA DE LEVANTAMIENTO (GR).....	110
VÁLVULA DE RETENCIÓN (GR).....	327
	328
VÁLVULA DEL RESPIRADERO (CONJ) (TUBERIAS DE AGUA).....	240
	242
	245
VOLANTE - CAJA DE (GR).....	99
	101
	102
	104
	105
VOLANTE (GR).....	74
	75
	76
	77
	78
	79
	80
	81
	82
	83

\* NO HAY TRADUCCION DISPONIBLE EN EL MOMENTO DE LA IMPRESION

# ÍNDICE

Designação	Página	Designação	Página
<b>A</b>			
ADAPTADOR DO VENTILADOR .....	215	BATERIA .....	351
	216		352
	217	BATERIA (12-VOLTS) .....	351
	218		352
	219	BLOCO DO MOTOR .....	41
	220		42
ADAPTADOR ENTRE O MOTOR E A			43
TRANSMISSÃO .....	5	BOCAL DE ENCHIMENTO DE ÓLEO DO	
	6	MOTOR .....	187
	7		189
	8	BOMBA DE ÁGUA .....	190
	9		191
ADESIVO - IDENTIFICAÇÃO DE MEDIDORES		BOMBA DE ESCORVA DO COMBUSTÍVEL .....	249
(AMPERÍMETRO) .....	430		250
ALTERNADOR DE CORRENTE .....	330	BOMBA DE ESCORVA DO COMBUSTÍVEL .....	310
	333		313
	336		316
	338	BOMBA DE INJEÇÃO DO COMBUSTÍVEL .....	320
	340		324
	342		325
	344	BOMBA DE ÓLEO - MOTOR .....	213
	346		214
	348	BOMBA DE TRANSFERÊNCIA DO	
	349	COMBUSTÍVEL .....	326
AMORTECEDOR .....	49	BUJÃO - ARREFECEDOR DO ÓLEO DO	
AMORTECEDOR DE VIBRAÇÕES E POLIA .....	48	MOTOR .....	247
AMPERÍMETRO .....	430	BUJÃO - CAIXA DO VOLANTE DO MOTOR .....	139
ARREFECEDOR - ÓLEO DO MOTOR .....	223	BUJÃO - COLETOR DE ADMISSÃO .....	278
	225	BUJÃO DO BLOCO DO CILINDRO .....	134
			135
ARREFECEDOR DE ÓLEO DA			136
TRANSMISSÃO .....	226	BUJÃO DO DRENO (ARREFECEDOR DO ÓLEO	
ATOMIZADOR - ÉTER .....	350	DA TRANSMISSÃO) .....	226
AUXILIAR DE PARTIDA A ÉTER .....	381	BUJÃO DO DRENO	
	382	(CÁRTER DE ÓLEO DO MOTOR) .....	121
			123
			125
			127
			129
			131
		BUJÃO DO MOTOR .....	137
			138
<b>B</b>			
BALANCIM .....	155		
	156		
	157		
	158		
BASE .....	442		
BASE - TAMPA DA VÁLVULA .....	21		
BASE DO FILTRO DE ÓLEO .....	174		
	175		
	176		
	177		
	178		
	179		
	180		
	182		
	183		
<b>C</b>			
		CABEÇOTE DO MOTOR .....	45
			46
			47
		CABO DA BATERIA .....	353
		CABOS/FIOS ELÉTRICOS - CONTROLE	
		ELETRÔNICO .....	423
			425
		CABOS/FIOS ELÉTRICOS - INJETOR .....	428

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
	429		30
CABOS/FIOS ELÉTRICOS - MOTOR.....	427	CONDICIONADOR DO LÍQUIDO	
CAIXA DIANTEIRA.....	107	ARREFECEDOR.....	221
CAIXA DO VOLANTE DO MOTOR.....	99		222
	101	CONEXÃO - ELÉTRICA.....	354
	102		355
	104	CONEXÃO - TUBOS DE COMBUSTÍVEL.....	301
	105		302
CANO DE ESCAPE.....	277		303
CÁRTER DO ÓLEO DO MOTOR.....	121		304
	123		305
	125		306
	127	CONEXÃO DE ESCAPE.....	260
	129	CONEXÃO DO TUBO DE ESCAPE.....	256
	131	*CONTROL GP-ENGINE SPEED.....	360
CARTUCHO DO TURBOALIMENTADOR.....	283	CONTROLE - NÃO PROGRAMADO.....	362
	285	CONTROLE DA MÁQUINA.....	356
	287	CONTROLE ELETRÔNICO - MOTOR.....	358
	290	CONTROLE ELETRÔNICO E MONTAGEM -	
CHICOTE - CABOS ELÉTRICOS (BATERIA)....	427	MOTOR.....	356
CHICOTE - CABOS ELÉTRICOS			357
(SENSOR DE VELOCIDADE).....	376	CONTROLE REMOTO DA ROTAÇÃO.....	361
CHICOTE - MOTOR (UNIDADE INJETORA)....	428	CONTROLE-ROTAÇÃO DO MOTOR.....	359
CHICOTE - SENSOR (CABO AUXILIAR).....	310	CONVERSOR ELÉTRICO.....	431
CHICOTE - SENSOR (COMBUSTÍVEL).....	320	COTOVELO DE ESCAPE.....	258
CHICOTE - SENSOR			259
(SENSORES DE COMBUSTÍVEL).....	316	*COVER GP-AIR INLET.....	257
CHICOTE - SENSOR			
(SUPRIMENTO DE COMBUSTIVEL).....	313		
CHICOTE			
(MÓDULO DE CONTROLE ELETRÔNICO)....	423		
CILINDRO DE ÉTER			
(AUXILIAR DE PARTIDA).....	381		
	382		
COLETOR DE ADMISSÃO.....	274	DECALQUE - IDENTIFICAÇÃO	
COLETOR DE ESCAPE.....	272	(CONVERSOR ELÉTRICO).....	431
	273	DECALQUE - INFORMAÇÕES	
COLMÉIA - ARREFECEDOR DE ÓLEO.....	229	(PURIFICADOR DE AR).....	251
COLMÉIA - ARREFECEDOR DE ÓLEO		DECALQUE - MEDIDOR DE HORAS DE	
(MOTOR).....	223	SERVIÇO.....	433
	225	DECALQUE - PURIFICADOR DE AR	
COMANDO DE ACESSÓRIOS.....	51	(RETENTOR RADIAL).....	253
	53	DRENO - ÓLEO DO MOTOR.....	50
	55		
	56		
COMANDO DO VENTILADOR.....	57		
COMPRESSOR DE AR.....	10		
	12		
	14		
	16		
	18		
	20		
COMPRESSOR DE REFRIGERANTE.....	29		

## D

## E

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
ELEMENTO - CONDICIONADOR DO LÍQUIDO ARREFECEDOR (MANUTENÇÃO) .....	230		70
	231	FIXADORES - CABEÇOTE DO MOTOR .....	71
ELEMENTO - CONDICIONADOR DO LÍQUIDO ARREFECEDOR (PRÉ-CARGA) .....	231	FIXADORES - CAIXA DIANTEIRA .....	58
	232		67
ELEMENTO - PRÉ-CARGA (CONDICIONADOR DO LÍQUIDO ARREFECEDOR) .....	230	FIXADORES DO VOLANTE DO MOTOR .....	68
ELEMENTO DO FILTRO DE AR (PRIMÁRIO) ...	251		61
	253		62
ELEMENTO DO FILTRO DE AR (SECUNDÁRIO) .....	251		63
	253	FLANGE - ARREFECEDOR DE ÓLEO .....	64
ELEMENTO FILTRANTE - ÓLEO DO MOTOR ...	194	FLANGE - EIXO DE SAÍDA .....	65
	196	FLANGE DE ESCAPE .....	66
ELIMINAÇÃO DE VAPORES DO CÂRTER .....	197		238
	198		73
	199		261
EMBREAGEM .....	27		
EMISSOR - POSIÇÃO .....	366	<b>I</b>	
EMISSOR - POSIÇÃO (GIRATÓRIO) (ROTAÇÃO DO MOTOR) .....	359	INDICADOR - NÍVEL DO ÓLEO (VARETA) .....	200
ENGRENAGENS DE COMANDO TRASEIRO ...	85		201
	88		203
	92	INDICADOR - ÓLEO (VARETA DE NÍVEL) (MOTOR) .....	205
ENGRENAGENS DE DISTRIBUIÇÃO .....	84		206
ETIQUETA - AVISO (AUXILIAR DE PARTIDA) (ÉTER) .....	381	INDICADOR (CORTE DE AR) .....	207
		INDICADOR (PRESSÃO DE ÓLEO DO MOTOR) .....	205
		INDICADOR (PRESSÃO DO COMBUSTÍVEL) ...	281
		INDICADOR (CORTE DE AR) .....	437
		INDICADOR (PRESSÃO DO COMBUSTÍVEL) ...	437
		INDICADOR-TROCAR FILTRO DE AR .....	252
			254
		INJETOR DE COMBUSTÍVEL .....	307
			308
		INTERRUPTOR - MAGNÉTICO .....	420
		<b>J</b>	
		JOGO - ADAPTADOR DO MOTOR (TRANSMISSÃO) .....	8
			9
		JOGO DE ABRAÇADEIRA DO PURIFICADOR DE AR .....	251
		JOGO DE ALAVANCA (MOTOR DE PARTIDA) ...	397
			399
			401
			403
			405
			408
			411
			413
		JOGO DE ARRUELA (MOTOR DE PARTIDA) ...	386
		JOGO DE BUCHA (MOTOR DE PARTIDA) .....	397
			399

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
	401	JOGO DE RETENTOR DO MOTOR DE	
	403	PARTIDA.....	386
	405	JOGO DE REVISÃO - GOVERNADOR	
	411	(COMPRESSOR DE AR).....	96
	413		97
JOGO DE BUCHA (MOTOR DE PARTIDA).....	408	JOGO DE SOLENÓIDE (12-VOLTS)	
JOGO DE DESCARREGADOR		(MOTOR DE PARTIDA).....	397
(COMPRESSOR DE AR).....	16	JOGO DE SOLENÓIDE (12-VOLTS)	
	18	(MOTOR DE PARTIDA).....	399
	20		401
JOGO DE ESCOVA (MOTOR DE PARTIDA)....	386		403
	397	JOGO DE TERMINAL (ALTERNADOR).....	340
	399		342
	401		344
	403		346
	405	JOGO DE TERMINAL (ALTERNADOR).....	349
	408	JOGO DE TERMINAL ALTERNADOR	
	411	(BATERIA).....	330
	413		336
JOGO DE FIXADORES (ALTERNADOR).....	340		338
	342	JOGO DE TERMINAL ALTERNADOR (RELÉ)...	336
	344		338
	346	JOGO DE TERMINAL DE SAÍDA	
	349	(ALTERNADOR).....	330
JOGO DE FIXADORES			333
(MOTOR DE PARTIDA).....	386	JOGO DE TERMINAL (MOTOR DE PARTIDA)...	384
JOGO DE ISOLADOR (MOTOR DE PARTIDA)...	405		416
	408	JOGO DE TERMINAL RELÉ (ALTERNADOR)...	333
	411	JUNTA (BOMBA DE ESCORVA DE	
	413	COMBUSTÍVEL).....	310
JOGO DE ISOLADOR (MOTOR DE PARTIDA)...	397		313
	399		316
	401		320
	403	JUNTA (RESPIRO DO CÂRTER DO ÓLEO DO	
JOGO DE JUNTAS		MOTOR).....	21
(CABEÇA DO COMPRESSOR DE AR).....	20		198
JOGO DE JUNTAS (COMPRESSOR DE AR)...	16		
	18		
JOGO DE MANCAL (ALTERNADOR).....	340		
	342		
	344		
	346		
	349		
JOGO DE MANCAL (MOTOR DE PARTIDA)....	386		
JOGO DE MANCAL PRINCIPAL DO MOTOR...	39		
	109		
JOGO DE PEÇAS DO ESCAPAMENTO.....	262		
JOGO DE PINO DO MOTOR DE PARTIDA.....	386		
JOGO DE PROTETOR DO ALTERNADOR.....	338		
JOGO DE RETENTOR			
(COMPRESSOR DE AR).....	16		
	18		
	20		

## L

LEVANTAMENTO DO MOTOR.....	111
	112

## M

MANGUEIRA - ELIMINAÇÃO DE VAPORES....	51
	198
	199
MANGUEIRA (ELIMINAÇÃO DE VAPORES)....	197
MARCADOR DE HORAS DE SERVIÇO.....	433
MECANISMO DAS VÁLVULAS.....	172
MEDIDOR - NÍVEL DE COMBUSTÍVEL.....	432
MEDIDOR DE TEMPERATURA DO LÍQUIDO	
ARREFECEDOR.....	437

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO





# ÍNDICE

Designação	Página	Designação	Página
	160		189
	161		190
	162		191
RETENTOR (SEPARADOR DE ÁGUA, COMBUSTÍVEL) . . . . .	300	TAMPA - CAIXA DIANTEIRA . . . . .	35
			36
		TAMPA - CAIXA DO VOLANTE . . . . .	33
			34
		TAMPA - MECANISMO DAS VÁLVULAS . . . . .	37
			38
<b>S</b>		TAMPA - VIRABREQUIM . . . . .	31
SENSOR - NÍVEL DE LÍQUIDO . . . . .	365	TOMADA DE FORÇA . . . . .	140
SENSOR - PRESSÃO . . . . .	367	TUBOS - ÁGUA . . . . .	239
	368		240
	369		242
	370		244
	371		245
	372	TUBOS - AR . . . . .	263
SENSOR - TEMPERATURA . . . . .	379		264
	380		265
SENSOR DE VELOCIDADE . . . . .	373		266
	374		267
	375		268
	376		269
	377		270
	378		271
SENSOR DO MOTOR . . . . .	364	TUBOS - COMPRESSOR DE AR . . . . .	113
SOLENOIDE DE PARADA (24 VOLTS) (ECONMIZADOR DE AR) . . . . .	281	TUBOS - FILTRO DO COMBUSTÍVEL . . . . .	310
SOLENÓIDE (24 VOLTS) (MOTOR DE PARTIDA) . . . . .	386		313
	405		316
	407		320
	411	TUBOS - FLEXÍVEIS DO COMBUSTÍVEL . . . . .	309
	413	TUBOS - ÓLEO DO TURBOALIMENTADOR . . . . .	210
			211
SOLENÓIDE (24 VOLTS, MOTOR DE PARTIDA) . . . . .	384		212
	416	TUCHO DA VÁLVULA . . . . .	110
SUPORTE - BATERIA . . . . .	419	TURBOALIMENTADOR . . . . .	283
SUPORTE - TIRANTE . . . . .	22		284
SUPORTE - TOMADA DE FORÇA . . . . .	171		285
SUPORTE DO MOTOR . . . . .	166		286
	167		287
	168		288
	169		289
	170		290
	443		291
			292
			293
			294
			295
<b>T</b>			
TABELA - PLACA E DECALQUE . . . . .	444		
TACÔMETRO - ELÉTRICO . . . . .	439		
TAMPA - BASE DO FILTRO DE ÓLEO . . . . .	186		
TAMPA - BLOCO DO MOTOR . . . . .	32		
TAMPA - BOCAL DE ENCHIMENTO (ÓLEO DO MOTOR) . . . . .	187		
		<b>V</b>	
		VALVULA - PARTIDA A ETER . . . . .	421
			422

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# ÍNDICE

Designação	Página	Designação	Página
VÁLVULA DE ALÍVIO (COMPRESSOR DO REFRIGERANTE).....	29		
VÁLVULA DE ALÍVIO DE PRESSÃO (COMPRESSOR DE AR).....	16 18 20		
VÁLVULA DE DERIVAÇÃO DO COMBUSTÍVEL.....	329		
VÁLVULA DE RETENÇÃO.....	327 328		
VÁLVULA DE VENTILAÇÃO (TUBULAÇÃO DE ÁGUA).....	240 242 245		
VEDADOR (BOMBA D'ÁGUA).....	248		
VEDADOR TIPO LABIO (REGULADOR DA TEMPERATURA DA ÁGUA).....	240 242 245		
VENTILADOR DE SOPRO.....	233 234		
VENTILADOR DE SUCÇÃO.....	235 236 237		
VIRABREQUIM.....	39		
VOLANTE DO MOTOR.....	74 75 76 77 78 79 80 81 82 83		
VOLTÍMETRO.....	440 441		

\* TRADUÇÃO NÃO DISPONÍVEL NO MOMENTO DA IMPRESSÃO

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
<b>A</b>			
ABLASSSTOPFEN (GETRIEBESÖLKÜHLER) ...	226	AUFKLEBER - LUFTREINIGER (RINGDICHTUNG) .....	253
ABLASSSTOPFEN (MOTORÖLWANNE) .....	121	AUSGANGS-ANSCHLUSSKLEMMENSATZ (DREHSTROMGENERATOR) .....	330
	123		333
	125	AUSPUFF - TEILESATZ .....	262
	127	AUSPUFFANSCHLUSS .....	256
	129		260
	131	AUSPUFFBOGEN .....	258
ABSTELLSOLENOID (24 V) (*AIR RIGSAVER) ...	281		259
ABTRIEBSFLANSCH .....	73	AUSPUFFKRÜMMER .....	272
AMPEREMETER .....	430		273
ANHÄNGER - HINWEIS (STARTHILFE) (ÄTHER) .....	381	AUSPUFFFLANSCH .....	261
ANSAUGKRÜMMER .....	274	AUSPUFFROHR .....	277
ANSCHLUSS, ELEKTR. ....	354		
	355	<b>B</b>	
ANSCHLUSSKLEMMENSATZ (DREHSTROM- GENERATOR) .....	340	BATTERIE .....	351
	342		352
	344	BATTERIE (12 V) .....	351
	346		352
	349	BATTERIEKABEL .....	353
ANSCHLUSSKLEMMENSATZ (DREHSTROM- GENERATOR) .....	342	BATTERIETRÄGER .....	419
ANSCHLUSSKLEMMENSATZ (STARTERMO- TOR) .....	416	BEFESTIGUNG - DÄMPFER U. RIEMENSCHIBE .....	59
ANSCHLUSSKLEMMENSATZ (STARTERMO- TOR) .....	384		60
ANSCHLUSSSTÜCK (KRAFTSTOFFLEITUN- GEN) .....	301	BEFESTIGUNGSTEILE (DREHSTROMGENE- RATOR) .....	340
	302		342
	303		344
	304		346
	305		349
	306	BEFESTIGUNGSTEILE (STARTERMOTOR) ....	386
ANZEIGE (KRAFTSTOFFDRUCK) .....	437	BEILAGSCHEIBEN-SATZ (STARTERMO- TOR) .....	386
ANZEIGE (LUFTABSPERRUNG) .....	281	BELÜFTUNGSVENTIL (WASSERLEITUN- GEN) .....	240
ANZEIGE (MOTORÖLDRUCK) .....	437		242
ANZEIGEMODUL .....	434		245
ÄTHERSPRÜHGERÄT .....	350	BETRIEBSSTUNDENZÄHLER .....	433
ÄTHERSTARTHILFE .....	381	BUCHSEN-EINBAUSATZ (STARTERMOTOR) ...	408
	382		411
ÄTHERSTARTHILFEZYLINDER (STARTHIL- FE) .....	381		413
	382	BUCHSEN-EINBAUSATZ (STARTERMOTOR) ...	397
ÄTHERSTARTVENTIL .....	421		399
	422		401
AUFKLEBER - ANZEIGENKENNZEICHNUNG (AMPEREMETER) .....	430		403
AUFKLEBER - BETRIEBSSTUNDENZÄHLER ...	433		405
AUFKLEBER - INFORMATION (LUFTREINI- GER) .....	251	BÜRSTEN-EINBAUSATZ (STARTERMOTOR) ...	386
			408
			411
			413
		BÜRSTEN-EINBAUSATZ (STARTERMOTOR) ...	397

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
	399		349
	401	DREHSTROMGENERATOR-RIEMENSCH- BE .....	153
	403		154
	405	DREHSTROMGENERATOR-SCHUTZVORRICH- TUNGSSATZ .....	338
		DREHSTROMGENERATORVERKLEIDUNG ....	363
<b>C</b>		DREHZAHLMESSER, ELEKTR. ....	439
*CONTROL GP-ENGINE SPEED .....	360	DREHZAHLMESSERBEFESTIGUNG .....	436
*COVER GP-AIR INLET .....	257	DREHZAHLREGLER F. LUFTKOMPRESSOR ...	96
		DREHZAHLREGLER F. LUFTKOMPRESSOR ...	97
		DREHZAHLSENSOR .....	373
			374
			375
			376
			377
			378
		DRUCKLÜFTER .....	233
			234
		DRUCKLUFTKOMPRESSORLEITUNGEN .....	113
		DRUCKLUFTLEITUNGEN .....	263
			264
			265
			266
			267
			268
			269
			270
			271
		DRUCKSENSOR .....	367
			368
			369
			370
			371
			372
		<b>E</b>	
		EINFÜLLKAPPE (MOTORÖL) .....	187
			189
			190
			191
		EINLASSKRÜMMERSTOPFEN .....	278
		ELEKTR. UMFORMER .....	431
		ENTDUNSTER .....	197
			198
			199
		ENTDUNSTERSCHLAUCH .....	51
			198
			199
		ENTLASTUNGSVENTIL (LUFTKOMPRES- SOR) .....	16
			18

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
ENTLÜFTER (KURBELGEHÄUSE) .....	20	ISOLATOR-EINBAUSATZ (STARTERMO-	
	21	TOR) .....	408
	198		411
ERSTELEMENT (KÜHLMITTELZUSATZ) .....	230		413
<b>F</b>			
FERNDREHZAHLREGELUNG .....	361	ISOLATOR-EINBAUSATZ (STARTERMO-	
*FILTER GP-CENTRIFUGAL .....	193	TOR) .....	405
*FITTING GP-AIR COMPRESSOR .....	72	ISOLIERDICHTUNG (VENTILDECKEL) .....	37
FLANSCHWELLE .....	163		38
	164	<b>K</b>	
	165	KABELSTRANG (ELEKTRON. STEUERMO-	
FLANSCHWELLE - HALTETEILE .....	69	DUL) .....	423
	70	KÄLTEMITTELKOMPRESSOR .....	29
	71		30
FLÜSSIGKEITSSTANDESENSOR .....	365	KRAFTSTOFF-ENTLÜFTUNGSPUMPE .....	310
<b>G</b>			
GETRIEBEANSCHLUSS .....	5		313
	6		316
	7		320
	8	KRAFTSTOFFEINSPRITZDÜSE .....	307
	9		308
GETRIEBEÖLKÜHLER .....	226	KRAFTSTOFFEINSPRITZPUMPE .....	324
<b>H</b>			
HEBEL-EINBAUSATZ (STARTERMOTOR) .....	397		325
	399	KRAFTSTOFFFILTER .....	296
	401		297
	403		300
	405	KRAFTSTOFFFILTERLEITUNGEN .....	310
	408		313
HEBEL-EINBAUSATZ (STARTERMOTOR) .....	411		316
	413		320
HUBVENTIL .....	110	KRAFTSTOFFEINSPRITZDÜSE .....	307
<b>I</b>			
IDENTIFIZIERUNGS-AUFKLEBER			308
(UMFORMER) .....	431	KRAFTSTOFFEINSPRITZPUMPE .....	324
INSTRUKTIONSSCHILD (NEBENANTRIEB)			325
(WARTUNG) .....	27	KRAFTSTOFFFILTER .....	296
INSTRUMENTENBEFESTIGUNG .....	435		297
INSTRUMENTENTAFEL .....	437		300
ISOLATOR-EINBAUSATZ (STARTERMO-		KRAFTSTOFFFILTERLEITUNGEN .....	310
TOR) .....	397		313
	399		316
	401	KRAFTSTOFFLEITUNGEN, ELAST. ....	309
	403	KRAFTSTOFFNEBENSTROMVENTIL .....	329
		KRAFTSTOFFFÖRDERPUMPE .....	326
		KRAFTSTOFFSTANDANZEIGE .....	432
		KÜHLMITTELFILTER (WARTUNG) .....	231
			232
		KÜHLMITTELTEMPERATURANZEIGE .....	437
		KÜHLMITTELZUSATZELEMENT .....	230
			231
			232
		KÜHLWASSERLEITUNGEN .....	239
			240
			242
			244
			245
		KÜHLWASSERPUMPE .....	249
			250
		KÜHLWASSERZUSATZELEMENT .....	221
			222
		KÜHLWASSERZUSATZELEMENT	
		(ERSTELEMENT) .....	231
			232

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
KÜHLWASSERZUSATZELEMENT (WARTUNG) .....	230	LUFTFILTER (HILFSELEMENT) .....	251
	231	LUFTFILTERWECHSELANZEIGE .....	252
KUPPLUNG .....	27	LUFTKOMPRESSOR .....	10
KURBELLAGER-EINBAUSATZ .....	39		12
	109		14
KURBELWELLE .....	39		16
KURBELWELLEN-RIEMENSCHLEIBE .....	142		18
	143		20
	144	LUFTREINIGER .....	251
	145		252
	146		253
	147		254
KURBELWELLENABDECKUNG .....	31	LUFTREINIGERKLEMMEN-EINBAUSATZ .....	251
KURBELWELLENDICHTUNG .....	85		251
	88		
	92		
	107		
	159		
	160		
	161		
	162		
		<b>M</b>	
		MAGNETSCHALTER .....	420
		MAGNETSPULE (24 V) (STARTERMOTOR) .....	411
			413
		MAGNETSPULE (24 V) (STARTERMOTOR) .....	386
		MAGNETSPULE (24 V) (STARTERMOTOR) .....	405
			407
		MAGNETSPULE (24 V, STARTERMOTOR) .....	384
			416
		MASCHINENSTEUERUNG .....	356
		MOTOR, KOMPLETT .....	1
		MOTORADAPTERSATZ (GETRIEBE) .....	8
			9
		MOTORAUFHÄNGUNG .....	166
			167
			168
			169
			170
		MOTORBLOCK .....	41
			42
			43
		MOTORBLOCKDECKEL .....	32
		MOTORDREHZAHLSSTEUERUNG .....	359
		MOTORHÜBÖSE .....	111
			112
		MOTORKABELSTRANG (PUMPENDÜSE) .....	428
		MOTORKÜHLERBLOCK .....	2
			3
			4
		MOTORÖLABLASS .....	50
		MOTORÖLEINFÜLLSTUTZEN .....	187
			189
			190
			191
		MOTORÖLFILTERELEMENT .....	194
			196

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
MOTORÖLKÜHLER .....	223	<b>P</b>	
	225	PLEUELSTANGE UND KOLBEN .....	133
MOTORÖLKÜHLERSCHRAUBE .....	247	*PUMP GP-WATER .....	248
MOTORSENSOR .....	364	<b>R</b>	
MOTORSOCKEL .....	443	REGENKAPPE .....	255
MOTORSTEUERUNG, ELEKTRON. ....	358	REGLER (12 V) (DREHSTROMGENERATOR) ...	333
MOTORSTOPFEN .....	137		336
	138		338
MOTORVERDRAHTUNG .....	427	REGLEREINBAUSATZ (LUFTKOMPRES-	
<b>N</b>		SOR) .....	96
NEBENANTRIEB .....	51		97
	53	RELAISANSCHLUSSKLEMMENSATZ	
	55	(DREHSTROMGENERATOR) .....	333
	56	RIEMENSCHLEIBE .....	141
NOCKENWELLE .....	23	RIEMENSCHLEIBE - LÜFTER- U.	
	25	DREHSTROMGENERATOR .....	148
	26	<b>S</b>	
<b>O</b>		SAUGLÜFTER .....	235
ÖLANZEIGE (ÖLMESSTAB) (MOTOR) .....	205		236
ÖLFILTER .....	194		237
	195	SCHLAUCHLEITUNG (ENTDUNSTER) .....	197
	196	SCHMIERPUMPE .....	213
ÖLFILTERSOCKEL .....	174		214
	175	SCHWUNGRAD .....	74
	176		75
	177		76
	178		77
	179		78
	180		79
	182		80
	183		81
ÖLFILTERSOCKELDECKEL .....	186		82
ÖLKÜHLERBLOCK .....	229		83
ÖLKÜHLERBLOCK (MOTOR) .....	223	SCHWUNGRAD-HALTETEILE .....	61
	225		62
	238		63
ÖLKÜHLERFLANSCH .....	238		64
ÖLMESSTAB .....	200		65
	201		66
	203	SCHWUNGRADGEHÄUSE .....	99
	205		101
	206		102
	207		104
ÖLWANNE .....	121		105
	123	SCHWUNGRADGEHÄUSEDECKEL .....	33
	125		34
	127	SCHWUNGRADGEHÄUSESTOPFEN .....	139
	129	SENSOR, KABELSTRANG (*FUEL JUMPER) ...	313
	131	SENSOR, KABELSTRANG (KRAFTSTOFF) ...	320

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
SENSOR, KABELSTRANG (KRAFTSTOFFSENSOREN) .....	316	STEUERUNGSEINHEIT, ELEKTRON. FÜR MOTOR UND BEFEST. ....	356
SENSOR, KABELSTRANG (ÜBERBRÜCKUNGSKABEL) .....	310		357
SENSORVERDRAHTUNG (STÄRKE 14) (GASSTELLUNG) .....	354	STIRNRAD .....	84
SENSORVERDRAHTUNG (STÄRKE 14) (KUNDEN-VERBINDER) .....	354	STIRNRADGEHÄUSE .....	107
SOCKEL .....	442	STIRNRADGEHÄUSE-HALTETEILE .....	67
SOLENOID-EINBAUSATZ (12 V) (STARTERMOTOR) .....	397		68
	399	STIRNRADGEHÄUSEDECKEL .....	35
	401		36
	403	STÜTZE .....	22
		<b>T</b>	
SPANNUNGSREGLER (24 V) (DREHSTROMGENERATOR) .....	330	TABELLE - SCHILD U. AUFKLEBER .....	444
	340	TEMPERATURREGLER (98 GRAD C) (WASSER, KÜHLMITTEL) .....	240
	342		242
	344	TEMPERATURSENSOR .....	379
	346		380
	349	TURBOLADER .....	283
SPERRVENTIL .....	327		284
	328		285
STARTERMOTOR .....	383		286
	386		287
	388		288
	389		289
	390		290
	391		291
	392		292
	393		293
	394		294
	395	TURBOLADER-ANBAUSATZ .....	275
	396		276
	397	TURBOLADEREINSATZ .....	283
	399		285
	401		287
	403		290
	405	TURBOLADERÖLLEITUNGEN .....	210
	407		211
	410		212
	411		
	413		
	415	<b>U</b>	
STARTERMOTOR-DICHTUNGSSATZ .....	386	ÜBERDRUCKVENTIL (DRUCKLUFTKOMPRESSOR) .....	18
STARTERMOTOR-STIFTEINBAUSATZ .....	386		20
STELLUNGSSENSOR .....	366	ÜBERDRUCKVENTIL (DRUCKLUFTKOMPRESSOR) .....	16
STELLUNGSSENSOR (ROTIEREND) (MOTORDREHZAHL) .....	359	ÜBERDRUCKVENTIL (KÄLTEMITTELKOMPRESSOR) .....	29
STEUERUNG - NICHT PROGRAMMIERT .....	362		
STEUERUNGS-KABELSTRANG (ELEKTRN. STEUERMODUL) .....	425		

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN



# STICHWORTVERZEICHNIS

Bezeichnung	Seite	Bezeichnung	Seite
<b>V</b>			
VENTILDECKEL .....	37		
	38		
VENTILDECKEL - UNTERTEIL .....	21		
VENTILKIPPHEBEL .....	155		
	156		
	157		
	158		
VENTILMECHANISMUSAUFHÄNGUNG .....	120		
VENTILSTEUERUNG .....	172		
VERDRAHTUNG (EINSPRITZEINHEIT) .....	428		
	429		
VERDRAHTUNG (ELEKTRON. STEUE- RUNG) .....	425		
VERDRAHTUNG (ELEKTRON. STEUE- RUNG) .....	423		
VERDRAHTUNGSKABELBAUM (BATTERIE) ...	427		
VERDRAHTUNGSKABELBAUM (DREHZAHLSENSOR) .....	376		
VOLTMETER .....	440		
	441		
VORREINIGER .....	279		
<b>W</b>			
WARNSCHILD (NEBENANTRIEB) .....	27		
WASSERABSCHIEDER- U. KRAFTSTOFFFIL- TER .....	299		
	300		
WASSERTEMPERATURREGLER (92 GRAD) (KÜHLMITTEL) .....	245		
<b>Z</b>			
ZAHNRADVORGELEGE .....	85		
	88		
	92		
ZAPFWELLE .....	140		
ZAPFWELLENTRÄGER .....	171		
ZYLINDERBLOCKSCHRAUBE .....	134		
	135		
	136		
ZYLINDERKOPF .....	45		
	46		
	47		
ZYLINDERKOPF-HALTETEILE .....	58		

\* ÜBERSETZUNG ZUM ZEITPUNKT DER DRUCKLEGUNG NICHT VORHANDEN

# MEMORANDA

# ENGINE ARRANGEMENT

## 257-9491 ENGINE AR-COMPLETE

242 BRAKE KW (325 BHP) AT 1800 RPM

SMCS - 1000

i02288505

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	227-6764	1	BRACKET GP-SUPPORT (FUEL COOLER)						22
Y	233-6191	1	CONTROL & MTG GP-ENGINE ELEK						357
Y	231-0152	1	COOLER GP-ENGINE OIL						225
Y	244-8674	1	COOLER GP-TRANSMISSION OIL						226
Y	234-4409	1	COVER GP-CYLINDER BLOCK						32
Y	127-5728	1	COVER GP-FLYWHEEL HOUSING						33
Y	227-2574	1	COVER GP-FRONT HOUSING						36
Y	117-2786	1	COVER GP-OIL FILTER BASE						186
Y	229-2615	1	COVER GP-VALVE MECHANISM						38
Y	117-2766	1	DAMPER GP						49
Y	183-4189	1	DRIVE GP-ACCESSORY						51
			S/N: GLS1-116						
Y	262-2762	1	DRIVE GP-ACCESSORY						56
			S/N: GLS117-UP						
Y	236-4572	1	ENGINE AR-CORE						2
Y	117-2771	1	FASTENER GP-DAMPER & PULLEY						59
Y	219-7440	1	FASTENER GP-FRONT HOUSING						68
Y	244-8676	1	FILLER GP-ENGINE OIL						187
Y	117-2787	1	FILTER GP-ENGINE OIL						195
Y	116-5436	1	FILTER GP-FUEL						296
Y	243-3026	1	FILTER GP-FUEL (PRIMARY)						297
Y	224-5540	1	FUMES DISPOSAL GP						198
Y	243-3031	1	GAUGE GP-OIL LEVEL (DIPSTICK)						201
Y	225-9556	1	GEAR GP-REAR						88
Y	224-0880	1	LIFTING GP-ENGINE						111
Y	126-0081	1	LINES GP-AIR (INLET ELBOW)						265
Y	237-9754	1	LINES GP-AIR						270
Y	245-1099	1	LINES GP-FUEL FILTER						310
Y	234-7843	1	LINES GP-TURBOCHARGER OIL						211
Y	238-8720	1	LINES GP-WATER (INLET ELBOW)						244
Y	243-1667	1	LINES GP-WATER (SINGLE THERMOSTAT)						245
Y	230-6355	1	MANIFOLD GP-EXHAUST						273
Y	222-3092	1	MANIFOLD GP-INLET (MID)						274
Y	244-8675	1	PAN GP-OIL						127
Y	227-5518	1	PLUG GP-AIR INLET MANIFOLD						278
Y	117-0165	1	PLUG GP-CYLINDER BLOCK (OIL GALLERY, END)						134
Y	227-9545	1	PLUG GP-CYLINDER BLOCK (OIL GALLERY)						136
Y	224-7662	1	PLUG GP-ENGINE OIL COOLER						247
Y	237-9753	1	PLUG GP-ENGINE						137
Y	231-1975	1	SENSOR GP-ENGINE						364
Y	207-1562	1	STARTING MOTOR GP-ELECTRIC						413
Y	211-6790	1	SUPPORT GP-ENGINE						170
Y	238-4453	1	TURBOCHARGER GP						286
Y	219-7462	1	WIRING GP-ELECTRONIC CONTROL						423

GASKET KITS WILL BE PROVIDED WHEN AVAILABLE

Y-SEPARATE ILLUSTRATION

# ENGINE ARRANGEMENT

## 236-4572 ENGINE AR-CORE

287 BRAKE KW (385 BHP) AT 2100 RPM

SMCS - 1000

i02283735

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	223-1615	1	BASE GP-OIL FILTER (ENGINE)						176
			S/N: GLS1-116						
Y	229-2611	1	BASE GP-VALVE COVER						21
Y	223-7460	1	CAMSHAFT GP						23
			S/N: GLS1-116						
Y	223-7462	1	CAMSHAFT GP						25
			S/N: GLS117-UP						
Y	113-8987	1	COVER GP-FRONT HOUSING						35
Y	224-3882	1	CRANKSHAFT GP						39
Y	240-7271	1	CYLINDER BLOCK GP						43
Y	240-7679	1	CYLINDER HEAD GP						46
Y	231-3492	1	FILTER GP-ENGINE OIL						196
			S/N: GLS1-116						
Y	222-3088	1	GEAR GP-FRONT						84
Y	218-7272	1	HOUSING GP-FRONT						107
Y	229-8084	1	MOUNTING GP-VALVE MECHANISM						120
Y	238-2721	6	PISTON & ROD GP						133
Y	223-3875	1	PLUG GP-CYLINDER BLOCK						135
Y	233-5221	1	PUMP GP-ENGINE OIL						214
Y	253-1459	6	PUMP GP-FUEL INJECTION						324
			S/N: GLS1-116						
Y	253-1461	6	PUMP GP-FUEL INJECTION						325
			S/N: GLS117-UP						
Y	227-5723	1	PUMP GP-FUEL TRANSFER						326
Y	228-5812	1	PUMP GP-WATER						250
Y	241-9092	1	MOUNTING GP-TURBOCHARGER						275
			S/N: GLS1-116						
Y	264-2952	1	MOUNTING GP-TURBOCHARGER						276
			S/N: GLS117-UP						
Y	240-7272	1	VALVE MECHANISM GP						172
Y	230-0961	1	WIRING GP-UNIT INJECTOR						428
	243-0452	1	ELECTRONICS GP-ENGINE RATINGS						

Y-SEPARATE ILLUSTRATION

# ENGINE ARRANGEMENT

## 236-4577 ENGINE AR-CORE

336 BRAKE KW (450 BHP) AT 2100 RPM

SMCS - 1000

i02282245

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	229-2611	1	BASE GP-VALVE COVER						21
Y	252-0620	1	CAMSHAFT GP						26
Y	113-8987	1	COVER GP-FRONT HOUSING						35
Y	224-3882	1	CRANKSHAFT GP						39
Y	240-7271	1	CYLINDER BLOCK GP						43
Y	240-7679	1	CYLINDER HEAD GP						46
Y	222-3088	1	GEAR GP-FRONT						84
Y	218-7272	1	HOUSING GP-FRONT						107
Y	229-8084	1	MOUNTING GP-VALVE MECHANISM						120
Y	238-2721	6	PISTON & ROD GP						133
Y	223-3875	1	PLUG GP-CYLINDER BLOCK						135
Y	233-5221	1	PUMP GP-ENGINE OIL						214
Y	253-1461	6	PUMP GP-FUEL INJECTION						325
Y	227-5723	1	PUMP GP-FUEL TRANSFER						326
Y	228-5812	1	PUMP GP-WATER						250
Y	253-4100	1	TURBOCHARGER GP						288
Y	240-7272	1	VALVE MECHANISM GP						172
Y	230-0961	1	WIRING GP-UNIT INJECTOR						428
	253-3734	1	ELECTRONICS GP-ENGINE RATINGS						

Y-SEPARATE ILLUSTRATION

# ENGINE ARRANGEMENT

## 236-4580 ENGINE AR-CORE

271 BRAKE KW (364 BHP) AT 2100 RPM

SMCS-1000

i02208165

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	229-2611	1	BASE GP-VALVE COVER						21
Y	223-7460	1	CAMSHAFT GP						23
Y	113-8987	1	COVER GP-FRONT HOUSING						35
Y	224-3882	1	CRANKSHAFT GP						39
Y	240-7271	1	CYLINDER BLOCK GP						43
Y	240-7679	1	CYLINDER HEAD GP						46
Y	222-3088	1	GEAR GP-FRONT						84
Y	218-7272	1	HOUSING GP-FRONT						107
Y	229-8084	1	MOUNTING GP-VALVE MECHANISM						120
Y	238-2721	6	PISTON & ROD GP						133
Y	223-3875	1	PLUG GP-CYLINDER BLOCK						135
Y	233-5221	1	PUMP GP-ENGINE OIL						214
Y	253-1459	6	PUMP GP-FUEL INJECTION						324
Y	227-5723	1	PUMP GP-FUEL TRANSFER						326
Y	228-5812	1	PUMP GP-WATER						250
Y	241-9092	1	MOUNTING GP-TURBOCHARGER						275
Y	240-7272	1	VALVE MECHANISM GP						172
Y	230-0961	1	WIRING GP-UNIT INJECTOR						428
	254-9239	1	ELECTRONICS GP-ENGINE RATINGS						

Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

## 117-0176 ADAPTER GP-ENGINE TO TMSN

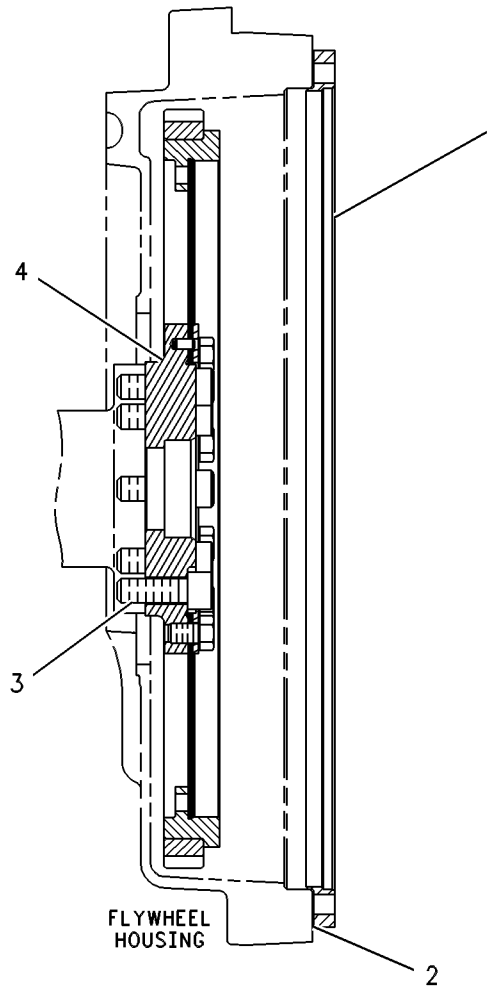
FOR USE WITH 117-2766-PAGE 49. CANNOT BE USED WITH 117-2794-PAGE 62, REAR  
POWER TAKE-OFF  
AN ATTACHMENT

SMCS-1004, 1157

i01409240

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-3476	1	ADAPTER-HOUSING						
	2	1	7E-3478	1	GASKET						
M	3	1	6V-8201	1	BOLT-SOCKET HEAD (M16X2X45MM)						
	4	1	6I-3612	1	PLATE AS-FLEXIBLE						

M-METRIC PART



GRAPHIC #1

<END>

g00251316

# BASIC ENGINE

## 117-0206 ADAPTER GP-ENGINE TO TMSN

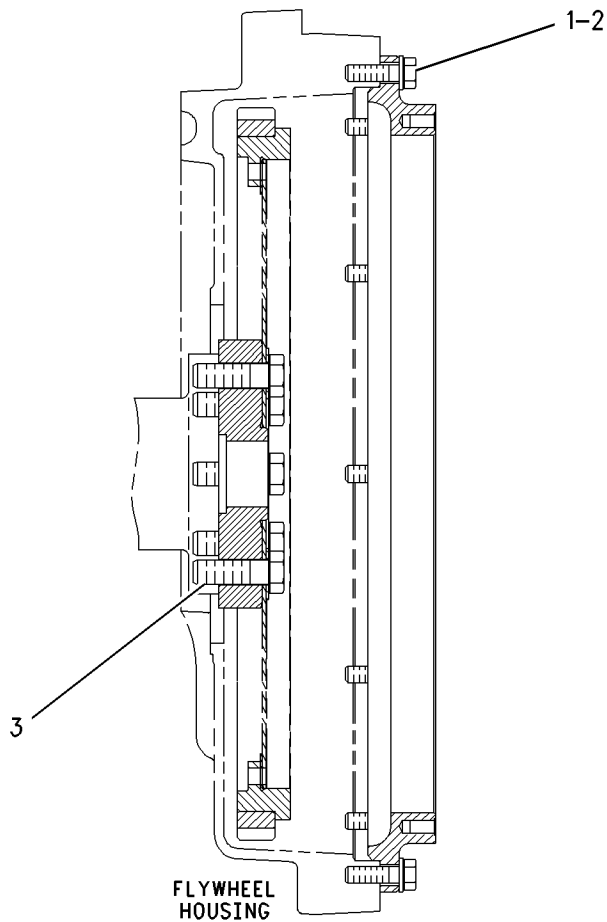
CANNOT BE USED WITH 117-2794—PAGE 62, REAR POWER TAKE-OFF  
AN ATTACHMENT

SMCS-1004, 1157

i01409302

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0T-0772	12	BOLT (7/16-14X1.5-IN)						
	2	1	5P-8244	12	WASHER-HARD (12X22.5X2.5-MM THK)						
M	3	1	6V-5686	8	BOLT (M16X2X50-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00741794



# BASIC ENGINE

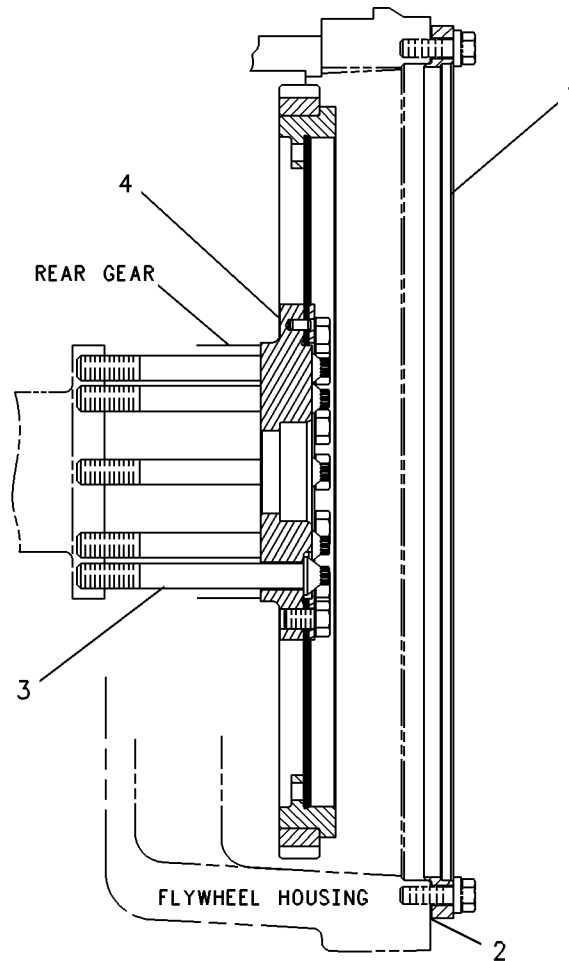
## 117-0208 ADAPTER GP-ENGINE TO TMSN

FOR USE WITH 117-2766—PAGE 49. CANNOT BE USED WITH 117-2793—PAGE 61  
AN ATTACHMENT

SMCS-1004, 1157

i00830121

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-3476	1	ADAPTER-HOUSING						
	2	1	7E-3478	1	GASKET						
	3	1	6I-3721	8	BOLT						
	4	1	6I-3612	1	PLATE AS-FLEXIBLE						



GRAPHIC #1

<END>

g00232751

# BASIC ENGINE

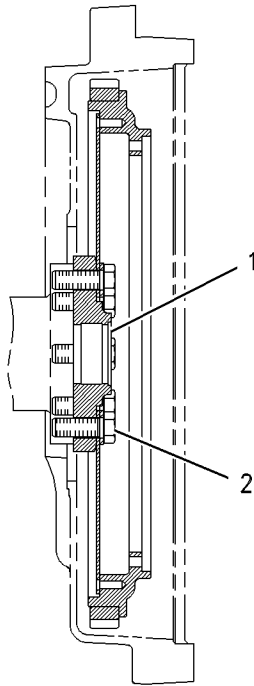
## 124-2665 ADAPTER GP-ENGINE TO TMSN

FOR USE WITH 117-2766-PAGE 49, VISCOUS DAMPER. CANNOT BE USED WITH  
117-2794-PAGE 62, REAR POWER TAKE-OFF  
AN ATTACHMENT

SMCS-1004, 1157

i01830914

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	160-2280	1	KIT-ENGINE ADAPTER (TRANSMISSION) (INCLUDES BOLTS, ADAPTER AS, PLATE AS AND RETAINER RING)						
M	2	1	9X-2021	8	BOLT-LOCKING (M16X2X45MM)						
M-METRIC PART											



GRAPHIC #1

<END>

g00461279

# BASIC ENGINE

## 142-2024 ADAPTER GP-ENGINE TO TMSN

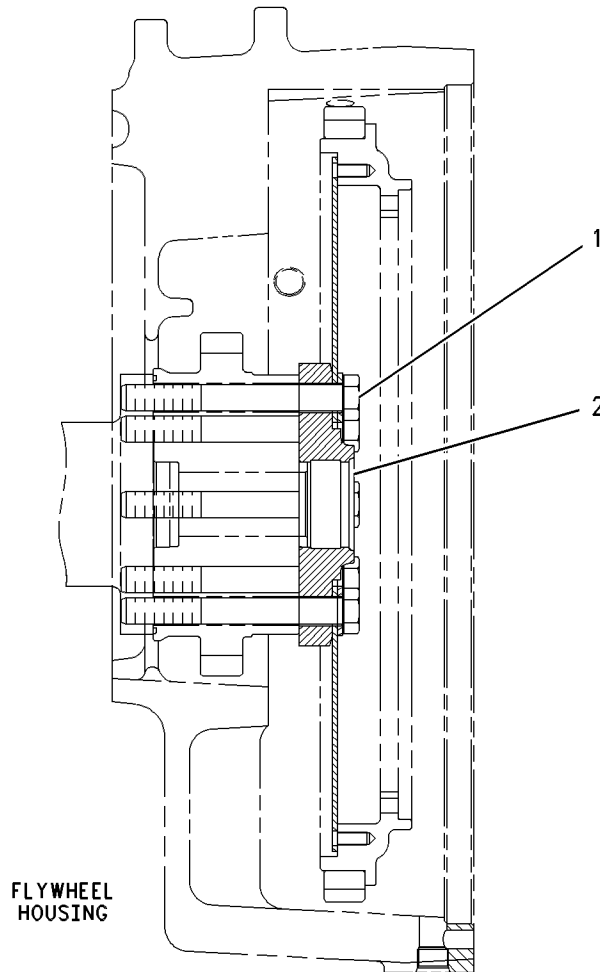
FOR USE WITH 117-2766—PAGE 49. CANNOT BE USED WITH 117-2793—PAGE 61  
AN ATTACHMENT

SMCS-1004, 1157

i01830915

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	146-5132	8	BOLT-HEX HEAD (M16 X 2.0 X 135MM)						
	2	1	160-2280	1	KIT-ENGINE ADAPTER (TRANSMISSION) (INCLUDES BOLTS, ADAPTER AS, PLATE AS, & RETAINER RING)						

M-METRIC PART



GRAPHIC #1

<END>

g00461347

# BASIC ENGINE

## 222-2900 AIR COMPRESSOR GP

PROVIDES AIR COMPRESSOR WITHOUT GOVERNOR  
FOR USE WITH AIR COMPRESSOR AIR LINES  
AN ATTACHMENT  
TYPE 1

SMCS-1803

i02154670

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
I	1	1	222-2887	1	HOSE AS						
	2	1	222-2889	1	BRACKET						
	3	1	223-3505	1	SEAL (AIR COMPRESSOR)						
C	4	1	250-6143	1	TUBE AS						
Y	5	1	253-1736	1	AIR COMPRESSOR GP						16
I	6	1	254-3853	1	HOSE AS						
	7	1	005-4173	1	ELBOW						
	8	1	1B-3057	1	CLIP						
	9	1	2N-1287	1	ELBOW-FLARED						
	10	1	4K-8864	1	CLIP						
	11	1	5P-8245	3	WASHER-HARD (13.5X25.5X3-MM THK)						
	12	1	6V-3251	1	SEAL-O-RING						
M	13	1	6V-4248	6	BOLT (M10X1.5X25-MM)						
	14	1	6V-5839	8	WASHER (11X21X2.5-MM THK)						
	15	1	6V-6609	3	SEAL-O-RING						
	17	1	7B-1598	1	CLIP						
M	18	1	6V-8197	3	BOLT (M12X1.75X40-MM)						
C	19	1	8M-0505	3	CONNECTOR						

C-CHANGE FROM PREVIOUS TYPE  
I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION



# BASIC ENGINE

## 222-2900 AIR COMPRESSOR GP

PROVIDES AIR COMPRESSOR WITHOUT GOVERNOR  
FOR USE WITH AIR COMPRESSOR AIR LINES  
AN ATTACHMENT  
TYPE 2

SMCS-1803

i02229222

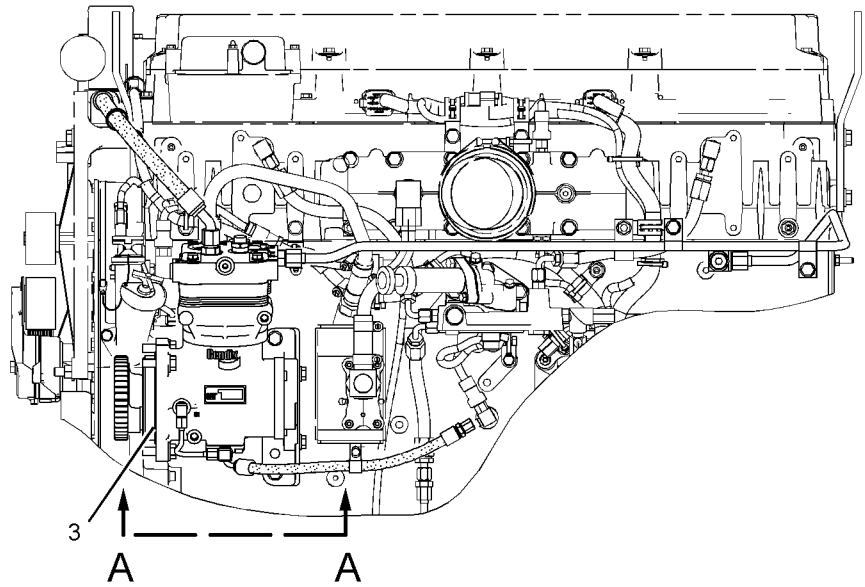
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
I	1	1	222-2887	1	HOSE AS						
	2	1	222-2889	1	BRACKET						
	3	1	223-3505	1	SEAL (AIR COMPRESSOR)						
	4	1	250-6143	1	TUBE AS						
CY	5	1	255-4160	1	AIR COMPRESSOR GP						18
CI	6	1	257-9950	1	HOSE AS						
	7	1	005-4173	1	ELBOW						
C	8	1	030-7946	1	ELBOW						
	9	1	1B-3057	1	CLIP						
	10	1	4K-8864	1	CLIP						
	11	1	5P-8245	3	WASHER-HARD (13.5X25.5X3-MM THK)						
	12	1	6V-3251	1	SEAL-O-RING						
M	13	1	6V-4248	6	BOLT (M10X1.5X25-MM)						
C	14	1	6V-5048	1	SEAL-O-RING						
	15	1	6V-5839	8	WASHER (11X21X2.5-MM THK)						
	16	1	6V-6609	3	SEAL-O-RING						
	17	1	7B-1598	1	CLIP						
M	18	1	6V-8197	3	BOLT (M12X1.75X40-MM)						
	19	1	8M-0505	3	CONNECTOR						
	20	1	204-1611	1	STRAP-CABLE						

C-CHANGE FROM PREVIOUS TYPE  
I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

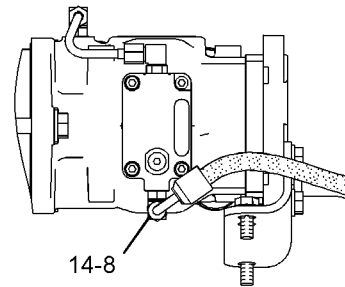
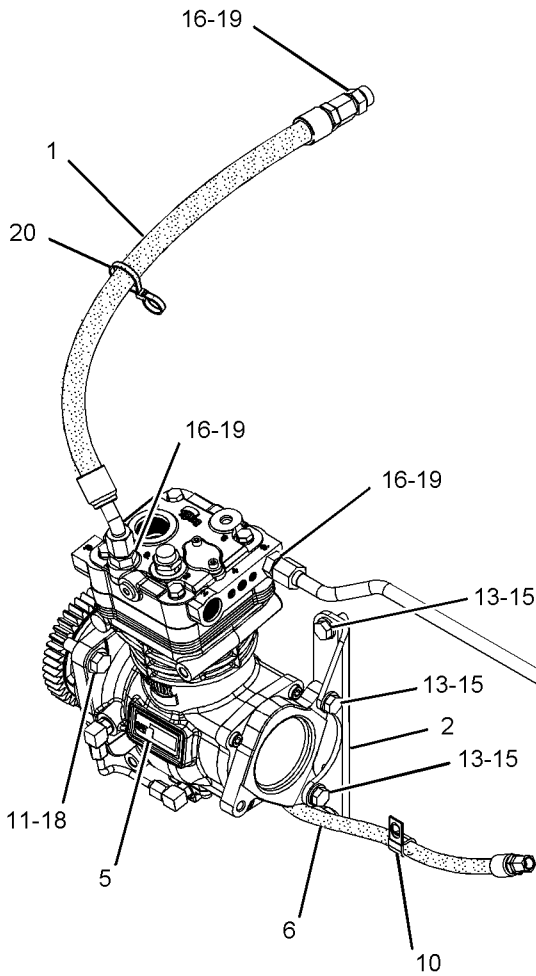
# BASIC ENGINE

222-2900 AIR COMPRESSOR GP (contd.)

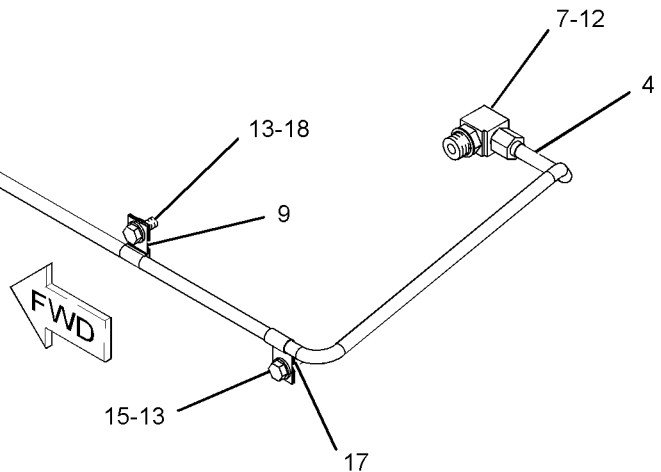
i02229222



LEFT SIDE VIEW



VIEW A-A



GRAPHIC #1

<END>

g01124829

# BASIC ENGINE

## 232-5186 AIR COMPRESSOR GP

FOR USE WITH AIR INLET LINES GROUP  
AN ATTACHMENT

SMCS-1803

i02216449

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5D-1026	2	CLAMP-HOSE						
	2	1	6V-4292	1	ELBOW (90 DEGREE)						
	3	1	8R-3600	1	ANGLE						
	4	1	222-2889	1	BRACKET						
	5	1	223-3505	1	SEAL						
Y	6	1	257-9346	1	AIR COMPRESSOR GP						20
	7	1	235-0180	1	TUBE AS						
I	8	1	235-0181	1	HOSE AS						
I	9	1	235-0182	1	HOSE AS						
	10	1	005-4173	1	ELBOW (90 DEGREE)						
	11	1	030-7946	1	ELBOW (90 DEGREE)						
	12	1	159-5255	1	ADAPTER						
	13	1	1B-3057	1	CLIP						
M	14	1	2Y-5829	1	NUT (M10X1.5-THD)						
	15	1	3J-7354	1	SEAL-O-RING						
	16	1	5P-8245	3	WASHER-HARD (13.5X25.5X3-MM THK)						
	17	1	6D-3479	1	CLIP						
	18	1	6V-3251	1	SEAL-O-RING						
M	19	1	6V-4248	6	BOLT (M10X1.5X25-MM)						
	20	1	6V-5839	11	WASHER (11X21X2.5-MM THK)						
M	21	1	6V-6317	2	BOLT (M10X1.5X20-MM)						
	22	1	6V-6609	4	SEAL-O-RING						
	23	1	7B-1598	1	CLIP						
M	24	1	6V-8197	3	BOLT (M12X1.75X40-MM)						
	25	1	8M-0505	2	CONNECTOR						
E	26	1	5P-1505		HOSE (8-CM)						
	27	1	204-1611	1	STRAP-CABLE						

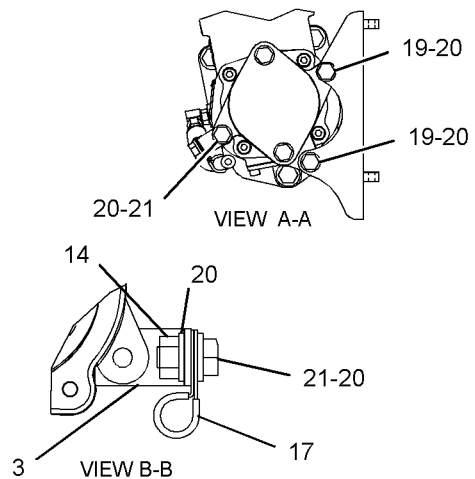
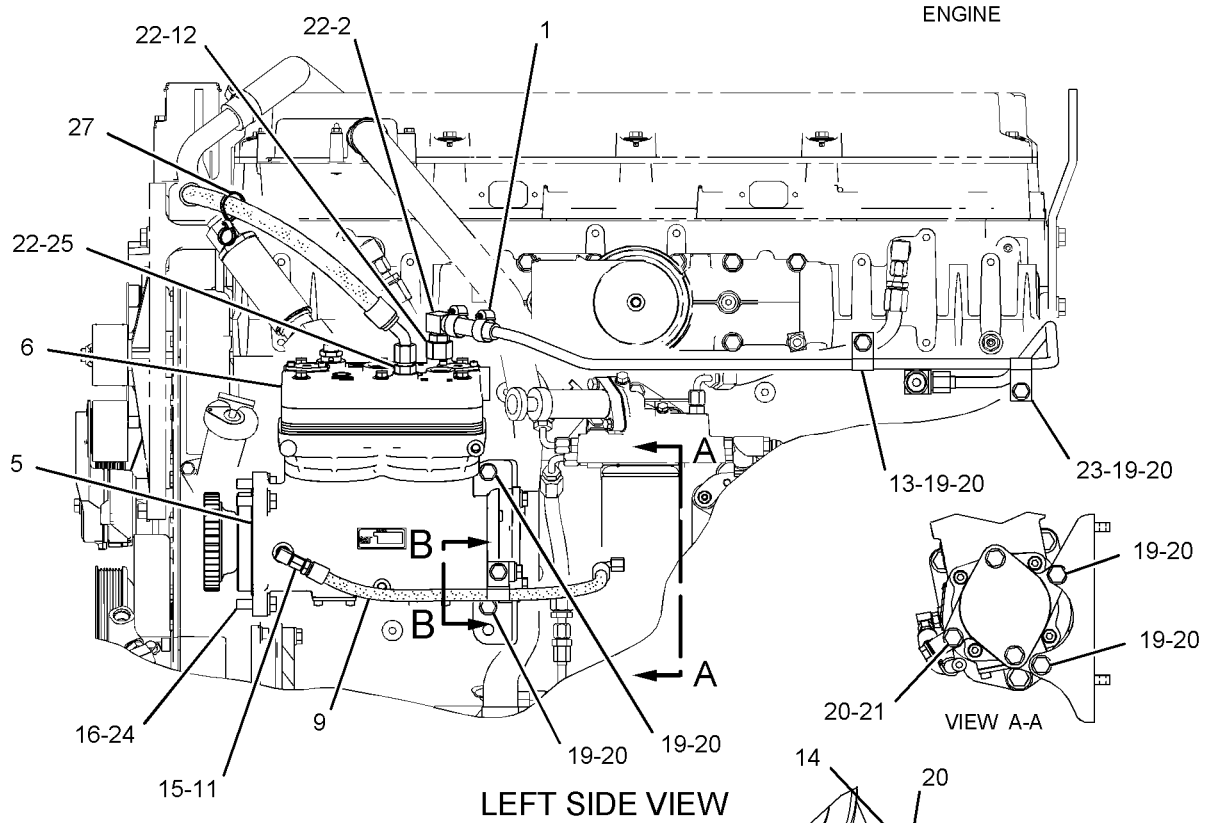
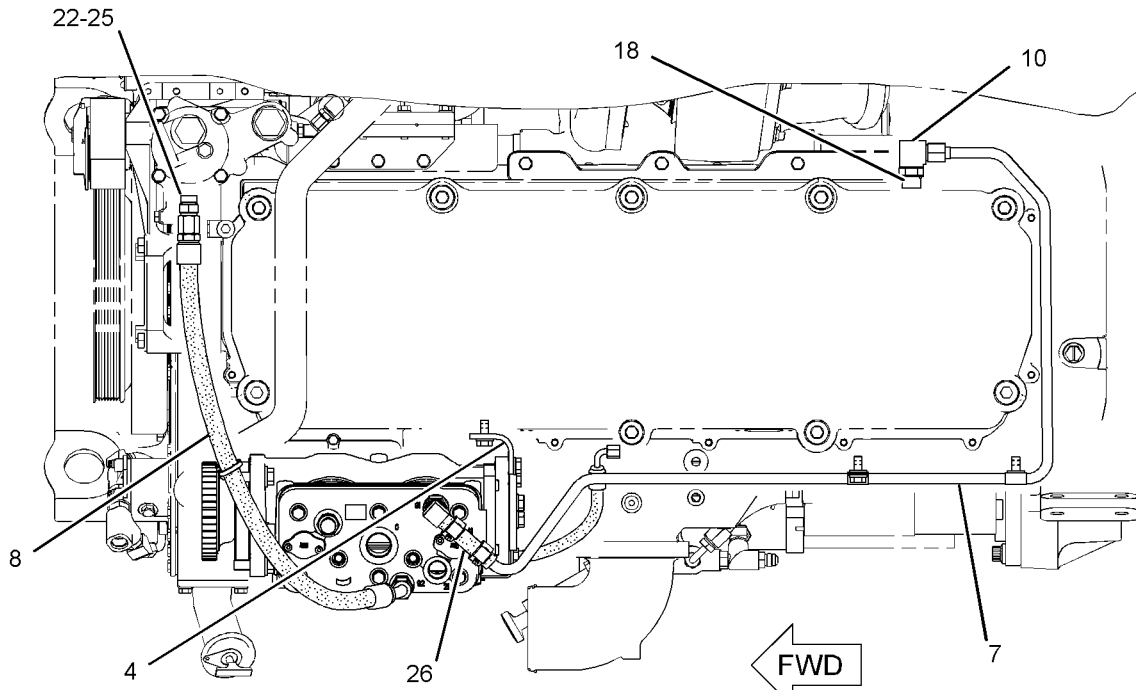
E-ORDER BY THE CENTIMETER  
I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION



# BASIC ENGINE

232-5186 AIR COMPRESSOR GP (contd.)

i02216449



GRAPHIC #1

<END>

g01120226

# BASIC ENGINE

## 253-1736 AIR COMPRESSOR GP

PART OF 222-2900 AIR COMPRESSOR GP  
AN ATTACHMENT

SMCS-1803

i02300502

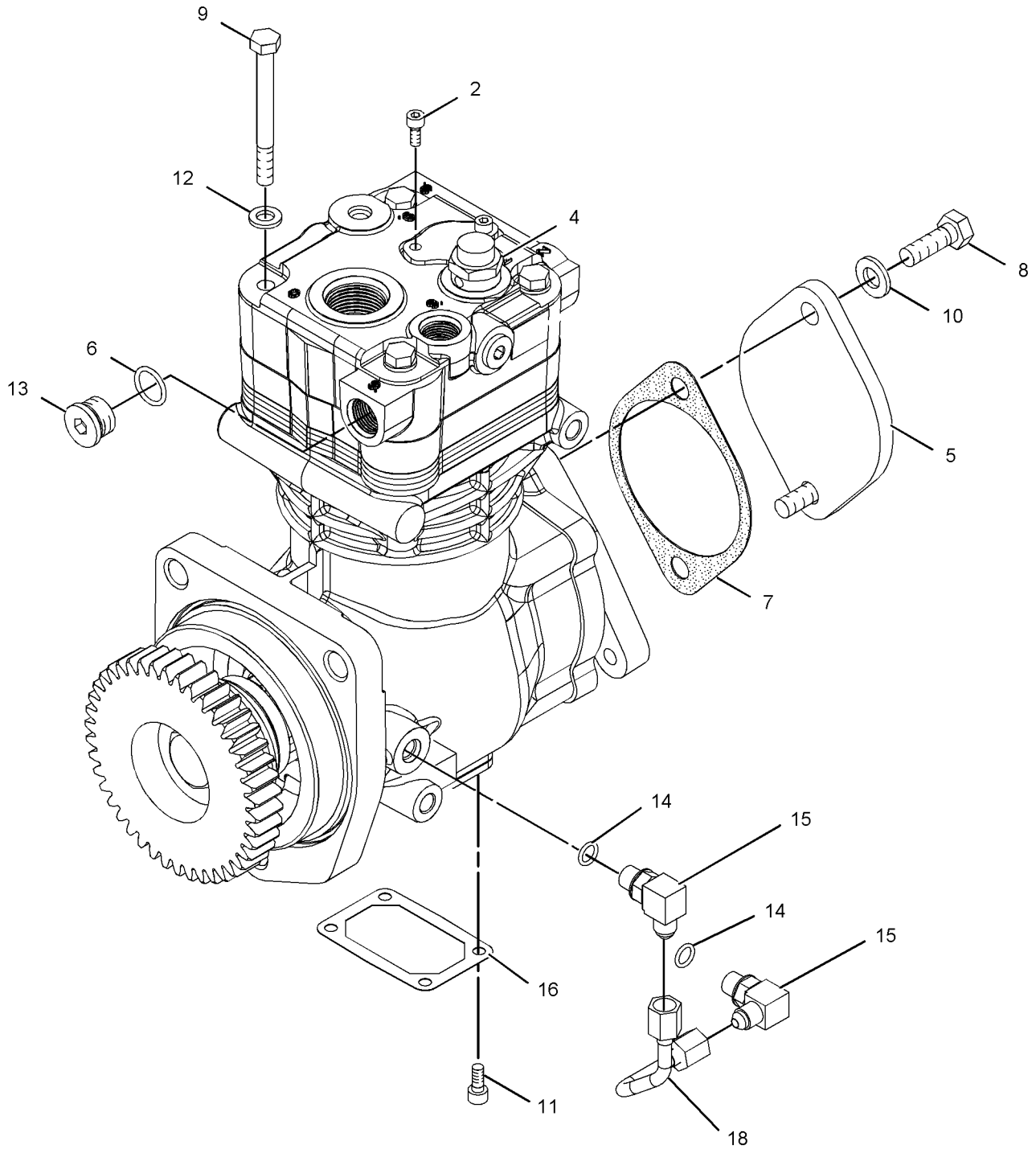
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	2	1	<b>099-2374</b>	2	BOLT-SOCKET HEAD (M5X0.8X12-MM)						
	4	1	<b>225-5222</b>	1	VALVE AS-PRESSURE RELIEF (AIR COMPRESSOR)						
		1	<b>2M-9780</b>	1	SEAL-O-RING						
	5	1	<b>2P-4358</b>	1	FLANGE						
	6	1	<b>3K-0360</b>	1	SEAL-O-RING						
	7	1	<b>6D-1004</b>	1	GASKET						
M	8	1	<b>6V-1820</b>	2	BOLT (M10X1.5X30-MM)						
M	9	1	<b>6V-5221</b>	4	BOLT (M8X1.25X80-MM)						
	10	1	<b>6V-5839</b>	2	WASHER (11X21X2.5-MM THK)						
	11	1	<b>255-0696</b>	4	BOLT-SOCKET HEAD						
	12	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)						
	13	1	<b>9S-8005</b>	1	PLUG						
	14	1	<b>3J-7354</b>	2	SEAL-O-RING						
	15	1	<b>030-7946</b>	2	ELBOW						
	16	1	<b>179-4790</b>	1	GASKET						
	18	1	<b>254-3364</b>	1	TUBE AS						
					AVAILABLE GASKET KIT(S):						
			<b>217-5232</b>	1	KIT-GASKET (AIR COMPRESSOR) (INCLUDES INLET REED VALVE/GASKET AND CYLINDER HEAD GASKET)						
			<b>217-5237</b>	1	KIT-UNLOADER (AIR COMPRESSOR) (INCLUDES UNLOADER CAP GASKET, ESS BALANCE PISTON, ESS SPRING, ESS PISTON AND O-RINGS)						
			<b>217-5240</b>	1	KIT-SEAL (AIR COMPRESSOR) (INCLUDES O-RINGS AND CRANKCASE COVER GASKET)						

M-METRIC PART

# BASIC ENGINE

253-1736 AIR COMPRESSOR GP (contd.)

i02300502



GRAPHIC #1

<END>

g01135813

# BASIC ENGINE

## 255-4160 AIR COMPRESSOR GP

PART OF 222-2900 AIR COMPRESSOR GP  
AN ATTACHMENT

SMCS - 1803

i02253989

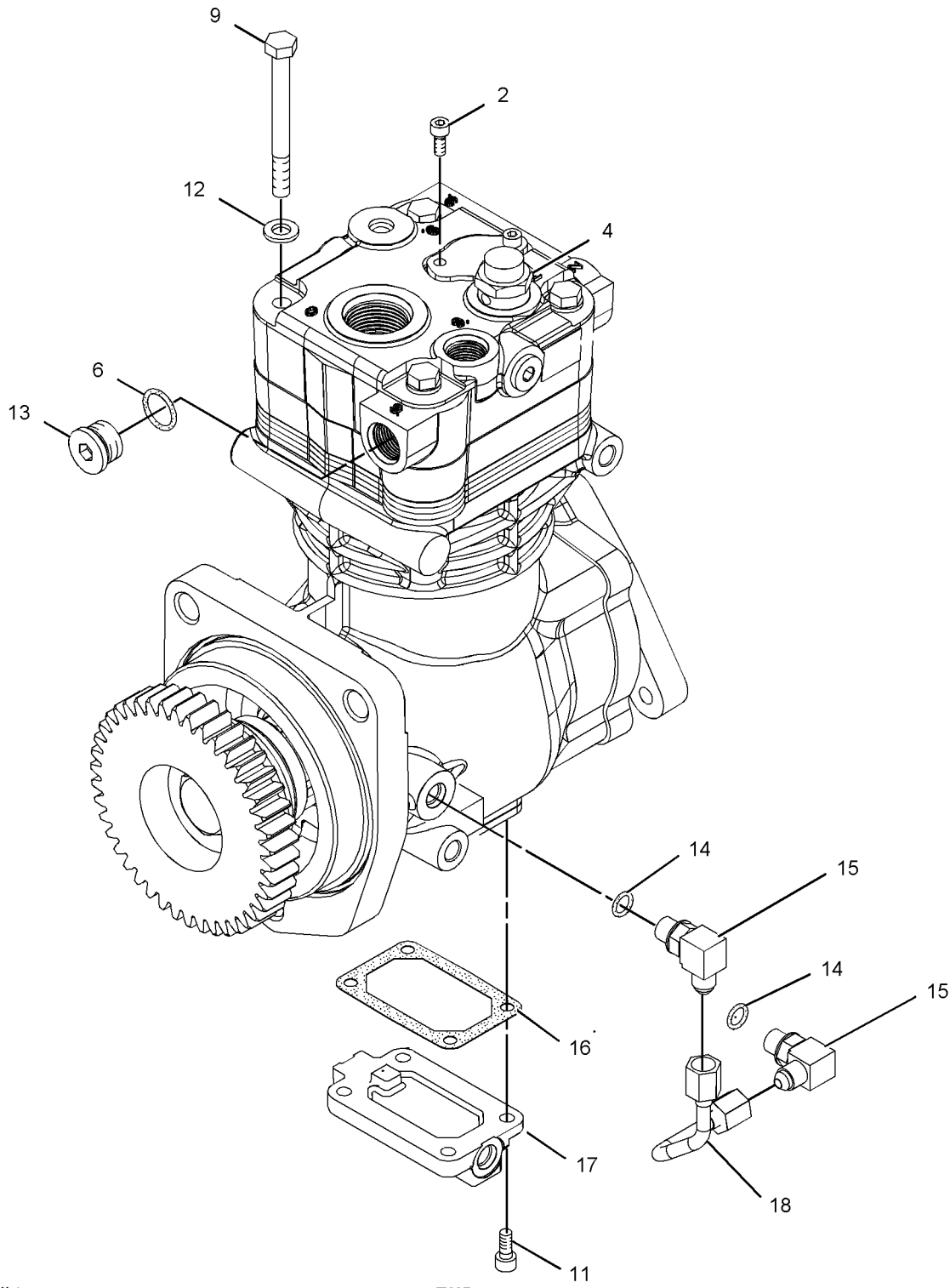
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE	
					1	2	3	4	5	6 (PRODUCT LEVEL)		
M	2	1	<b>099-2374</b>	2	BOLT-SOCKET HEAD (M5X0.8X12-MM)							
	4	1	<b>225-5222</b>	1	VALVE AS-PRESSURE RELIEF (AIR COMPRESSOR)							
			1	<b>2M-9780</b>	1	SEAL-O-RING						
	6	1	<b>3K-0360</b>	1	SEAL-O-RING							
	M	9	1	<b>6V-5221</b>	4	BOLT (M8X1.25X80-MM)						
		11	1	<b>255-0696</b>	4	BOLT-SOCKET HEAD						
12		1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)							
13		1	<b>9S-8005</b>	1	PLUG							
14		1	<b>3J-7354</b>	2	SEAL-O-RING							
15		1	<b>030-7946</b>	2	ELBOW							
16		1	<b>179-4790</b>	1	GASKET							
17		1	<b>255-4161</b>	1	COVER AS							
18	1	<b>254-3364</b>	1	TUBE AS								
					AVAILABLE GASKET KIT(S):							
			<b>217-5232</b>	1	KIT-GASKET (AIR COMPRESSOR) (INCLUDES INLET REED VALVE/GASKET AND CYLINDER HEAD GASKET)							
			<b>217-5237</b>	1	KIT-UNLOADER (AIR COMPRESSOR) (INCLUDES UNLOADER CAP GASKET, ESS BALANCE PISTON, ESS SPRING, ESS PISTON AND O-RINGS)							
			<b>217-5240</b>	1	KIT-SEAL (AIR COMPRESSOR) (INCLUDES O-RINGS AND CRANKCASE COVER GASKET AND REAR COVER HEAD GASKET)							

M-METRIC PART

# BASIC ENGINE

255-4160 AIR COMPRESSOR GP (contd.)

i02253989



GRAPHIC #1

<END>

g01136573

# BASIC ENGINE

## 257-9346 AIR COMPRESSOR GP

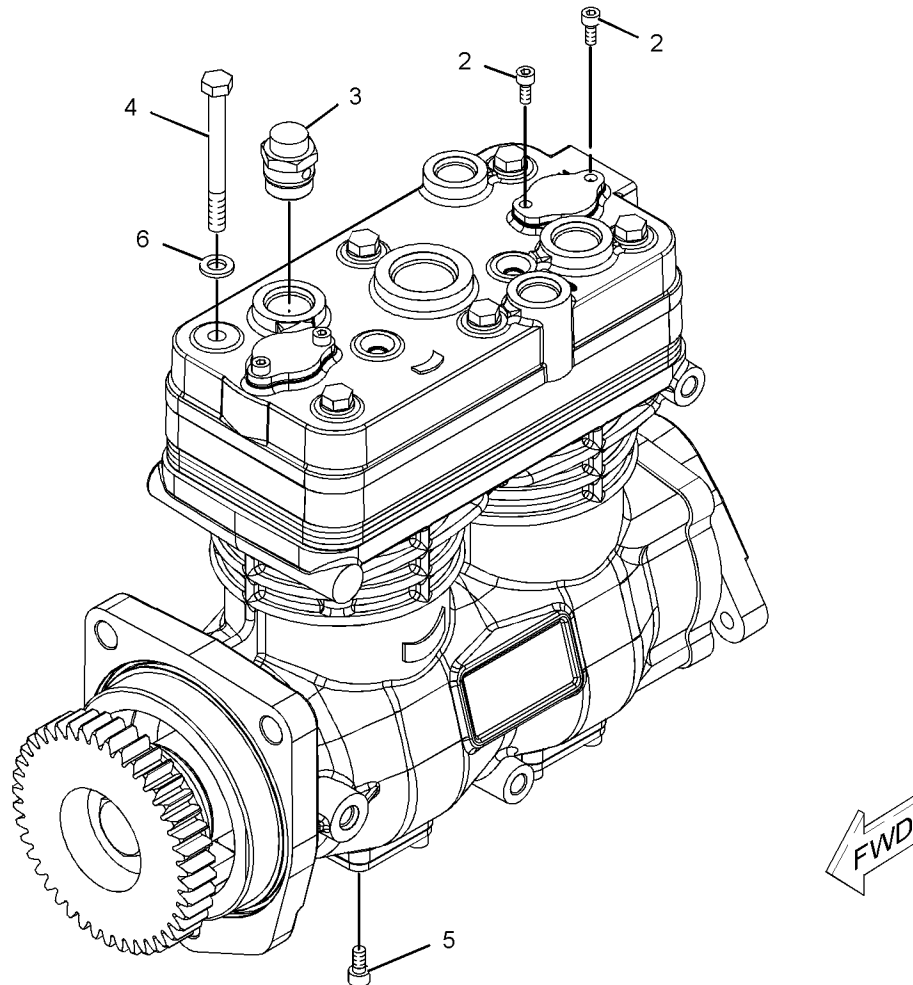
PART OF 232-5186 AIR COMPRESSOR GP  
AN ATTACHMENT

SMCS-1803

i02253894

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
M	2	1	099-2374	4	BOLT-SOCKET HEAD (M5X0.8X12-MM)	
	3	1	225-5222	1	VALVE AS-PRESSURE RELIEF (AIR COMPRESSOR)	
		1	2M-9780	1	SEAL-O-RING	
M	4	1	6V-5221	6	BOLT (M8X1.25X80-MM)	
M	5	1	8T-0267	8	BOLT-SOCKET HEAD (M6X1X12-MM)	
	6	1	9M-1974	6	WASHER-HARD (8.8X16X2-MM THK)	
AVAILABLE REPAIR KIT(S):						
			217-5237	2	KIT-UNLOADER (AIR COMPRESSOR) (EACH INCLUDES UNLOADER CAP GASKET, ESS BALANCE PISTON, ESS SPRING, ESS PISTON, AND O-RINGS)	
			217-5240	1	KIT-SEAL (AIR COMPRESSOR) (INCLUDES O-RING, CRANKCASE COVER GASKET, AND REAR COVER GASKET)	
			231-7753	1	KIT-GASKET (AIR COMPRESSOR HEAD) (INCLUDES VALVE AND HEAD GASKETS)	

M-METRIC PART



GRAPHIC #1

<END>

g01138999

# BASIC ENGINE

## 229-2611 BASE GP-VALVE COVER

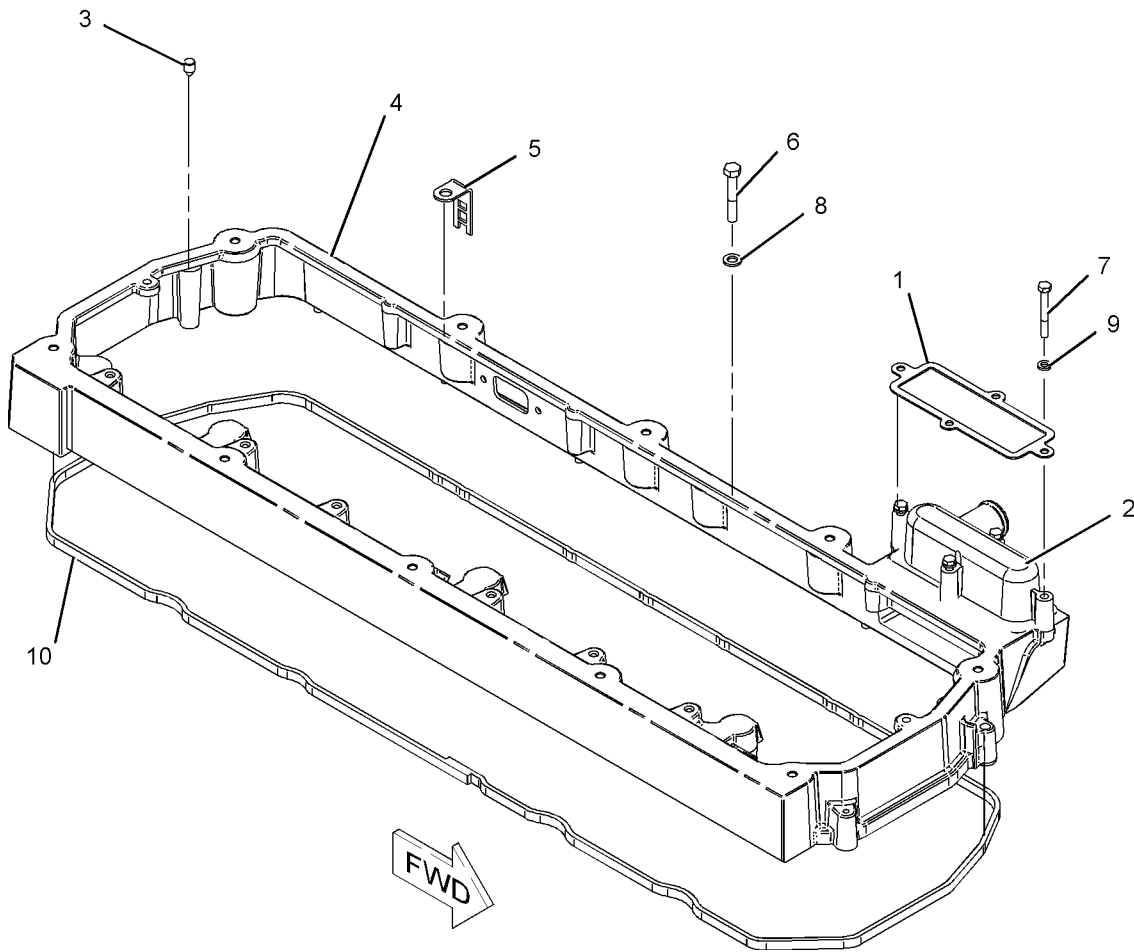
FOR USE WITH NON VVA APPLICATIONS

SMCS-1120

i02279655

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-1758	1	GASKET (CRANKCASE BREATHER)						
	2	1	9Y-4357	1	BREATHER AS (CRANKCASE)						
	3	1	180-1538	2	DOWEL						
	4	1	229-2612	1	BASE						
	5	1	132-5789	1	CLIP						
M	6	1	6V-3918	13	BOLT (M8X1.25X50-MM)						
M	7	1	8T-0275	4	BOLT (M6X1X50-MM)						
	8	1	9M-1974	13	WASHER-HARD (8.8X16X2-MM THK)						
	9	1	9X-8267	4	WASHER (6.6X12X2-MM THK)						
D	10	1	5P-5678		SEAL (3-M)						

D-ORDER BY THE METER  
M-METRIC PART



GRAPHIC #1

<END>

g01064798

# BASIC ENGINE

## 227-6764 BRACKET GP-SUPPORT-PRECOOLER

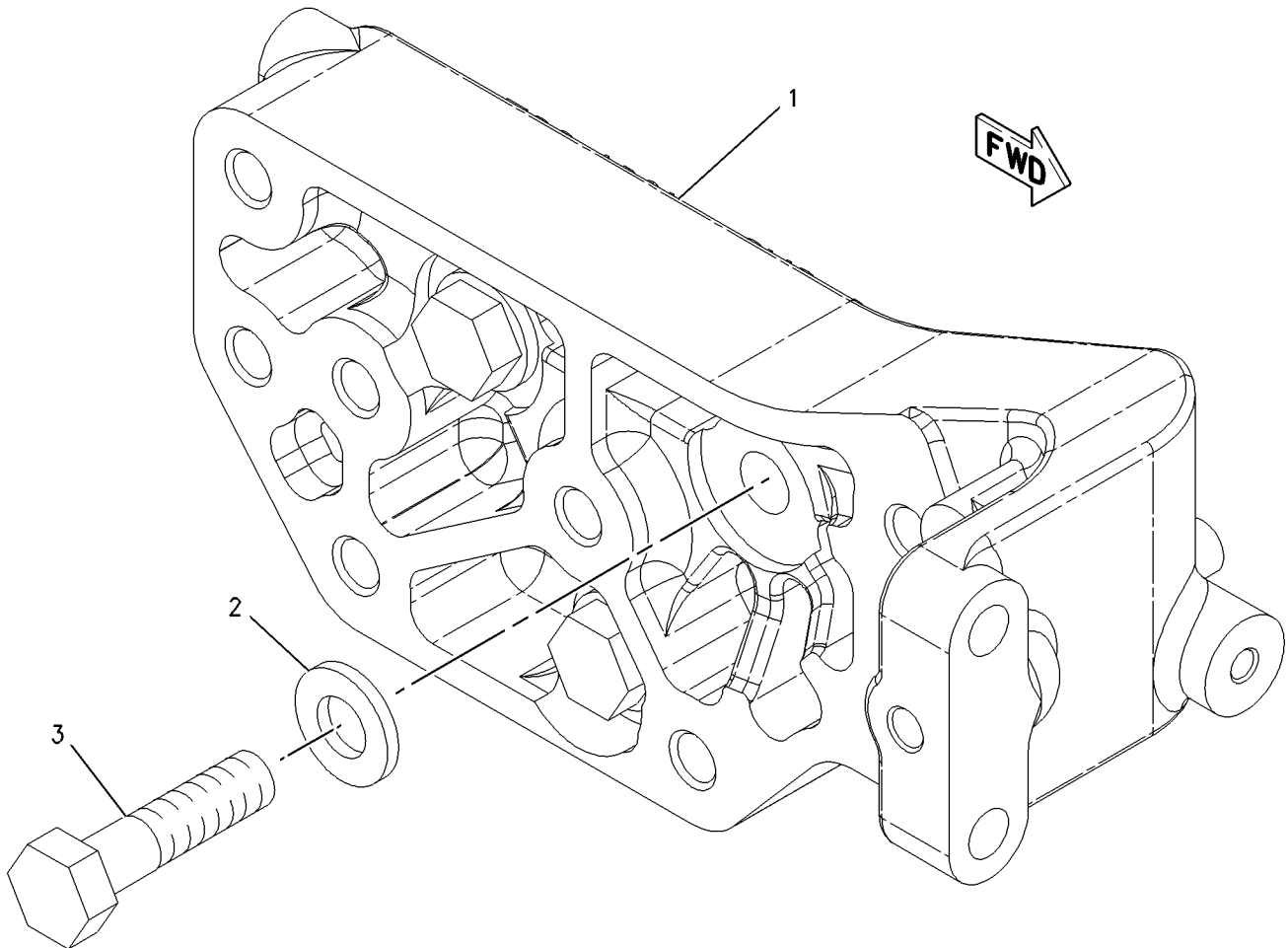
FOR USE WITH FRONT END ACCESSORY DRIVE GROUPS  
ALSO AN ATTACHMENT

SMCS-1000, 1151

i01916304

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	236-4591	1	BRACKET						
	2	1	6V-5839	4	WASHER (11X21X2.5MM THK)						
M	3	1	6V-5842	4	BOLT (M10X1.50X40MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00998621



# BASIC ENGINE

## 223-7460 CAMSHAFT GP

SMCS-1210

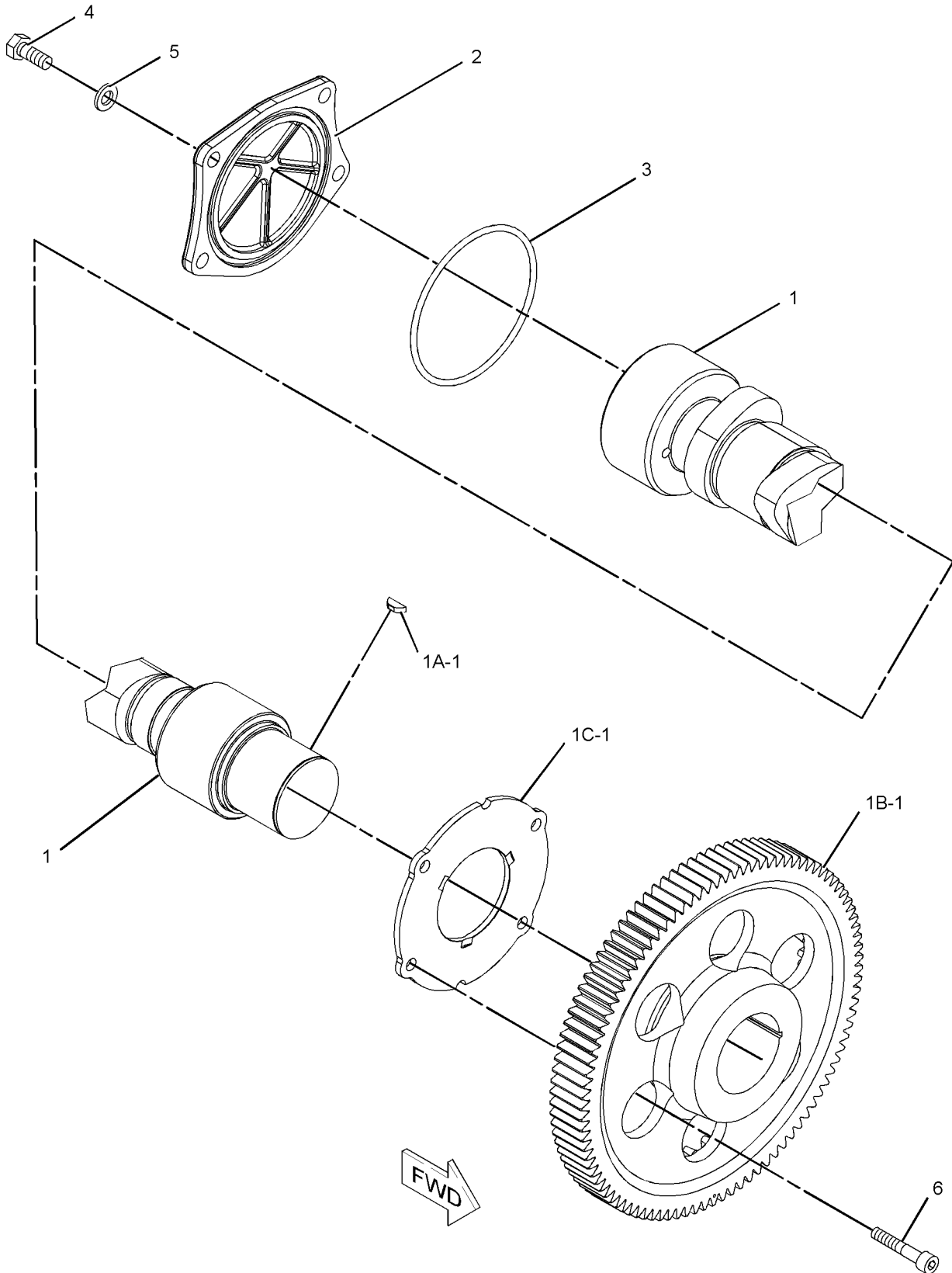
i02056540

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>223-7466</b>	1	CAMSHAFT AS (SINGLE)						
	1A	1	<b>1B-8705</b>	1	KEY-WOODRUFF						
	1B	1	<b>222-3907</b>	1	GEAR (96-TEETH)						
	1C	1	<b>223-7471</b>	1	PLATE-THRUST						
	2	1	<b>229-5684</b>	1	COVER						
	3	1	<b>131-3718</b>	1	SEAL-O-RING						
M	4	1	<b>6V-5217</b>	4	BOLT (M8X1.25X20-MM)						
	5	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)						
M	6	1	<b>8T-0338</b>	4	BOLT-SOCKET HEAD (M8X1.25X45-MM)						
M-METRIC PART											

# BASIC ENGINE

223-7460 CAMSHAFT GP (contd.)

i02056540



GRAPHIC #1

<END>

g01065447

# BASIC ENGINE

## 223-7462 CAMSHAFT GP

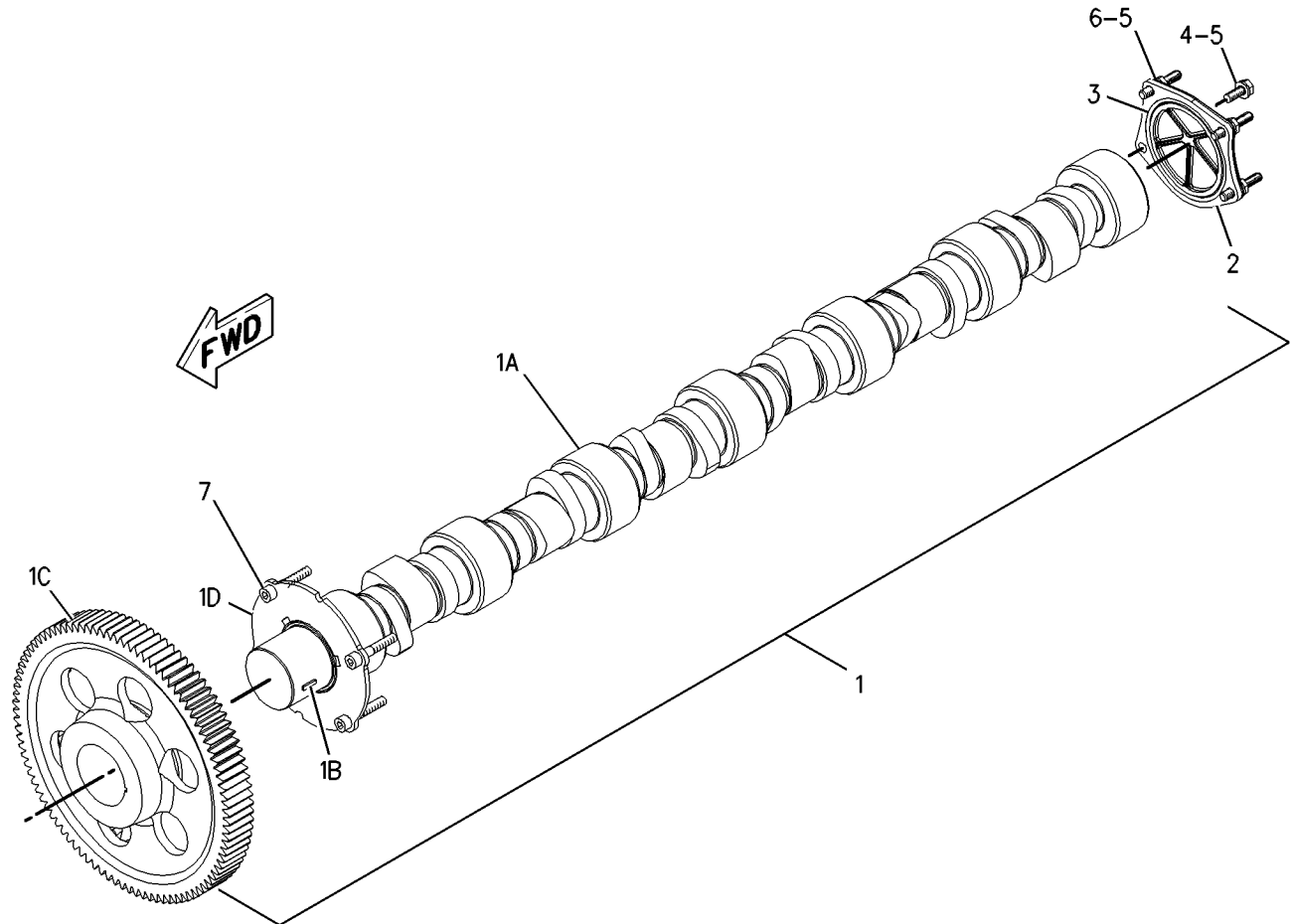
S/N: GLS117-UP

SMCS-1210

i01839662

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>223-7467</b>	1	CAMSHAFT AS						
	1A	1	<b>230-0065</b>	1	CAMSHAFT						
	1B	1	<b>1B-8705</b>	1	KEY-WOODRUFF						
	1C	1	<b>222-3907</b>	1	GEAR (96 TEETH)						
	1D	1	<b>223-7471</b>	1	PLATE-THRUST						
	2	1	<b>229-5684</b>	1	COVER						
	3	1	<b>131-3718</b>	1	SEAL-O-RING						
M	4	1	<b>6V-5217</b>	1	BOLT (M8X1.25X20MM)						
	5	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2MM THK)						
M	6	1	<b>9X-2097</b>	3	STUDBOLT (M8X1.25 THD)						
M	7	1	<b>8T-0338</b>	4	BOLT-SOCKET HEAD (M8X1.25X45MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00940147

# BASIC ENGINE

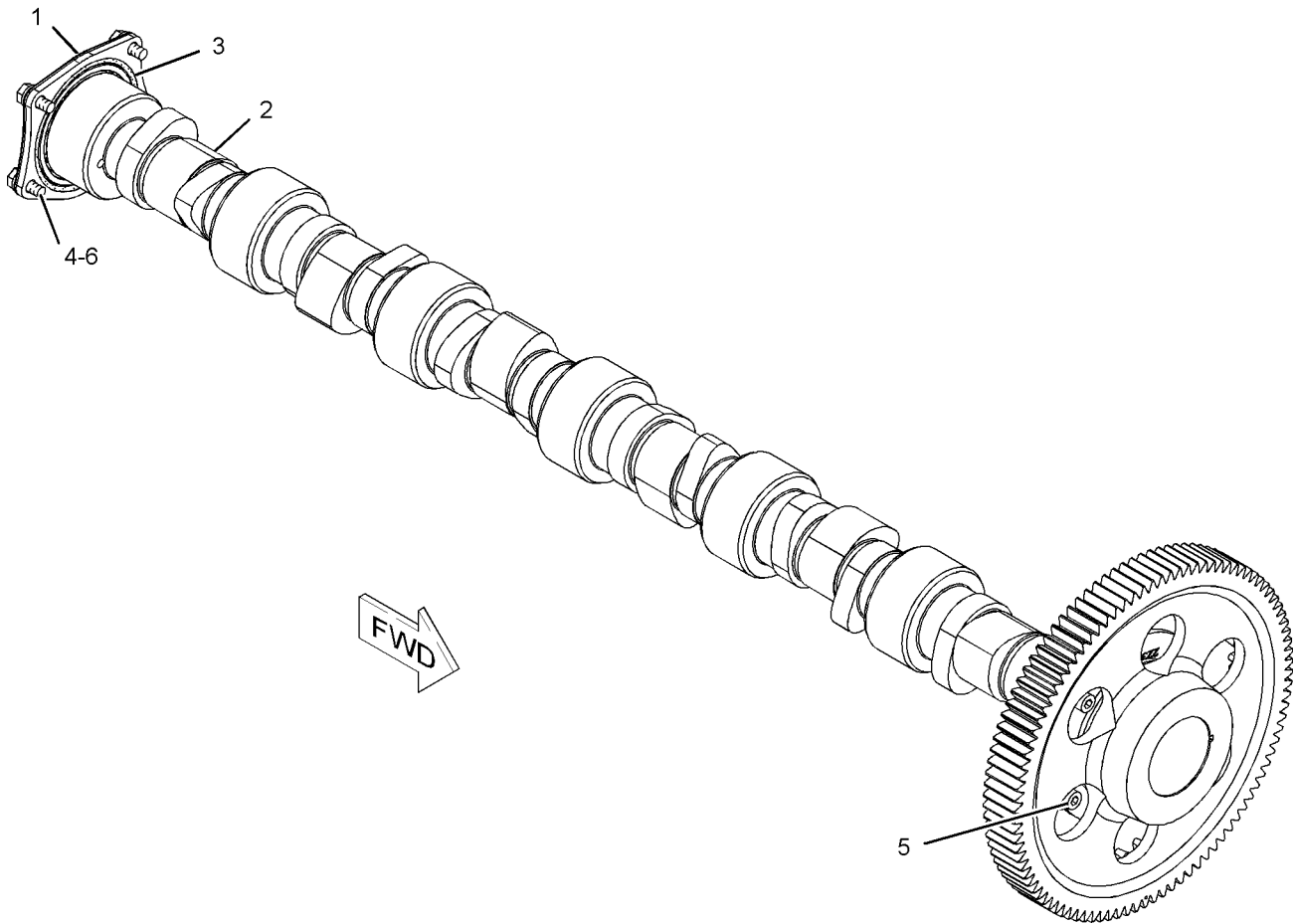
## 252-0620 CAMSHAFT GP

SMCS-1210

i02099120

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	229-5684	1	COVER						
	2	1	252-0619	1	CAMSHAFT AS						
		1	1B-8705	1	KEY-WOODRUFF						
		1	222-3907	1	GEAR (96-TEETH)						
		1	223-7471	1	PLATE-THRUST						
		1	240-1856	1	CAMSHAFT						
	3	1	131-3718	1	SEAL-O-RING (CAMSHAFT)						
M	4	1	6V-5217	4	BOLT (M8X1.25X20-MM)						
M	5	1	8T-0338	4	BOLT-SOCKET HEAD (M8X1.25X45-MM)						
	6	1	9M-1974	4	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g01071435

# BASIC ENGINE

## 4P-3073 CLUTCH GP

PART OF 4P-3074 POWER TAKE-OFF GP  
FOR USE WITH SAE NO. 1 FLYWHEEL AND FLYWHEEL HOUSING  
AN ATTACHMENT

SMCS-1007

i01850112

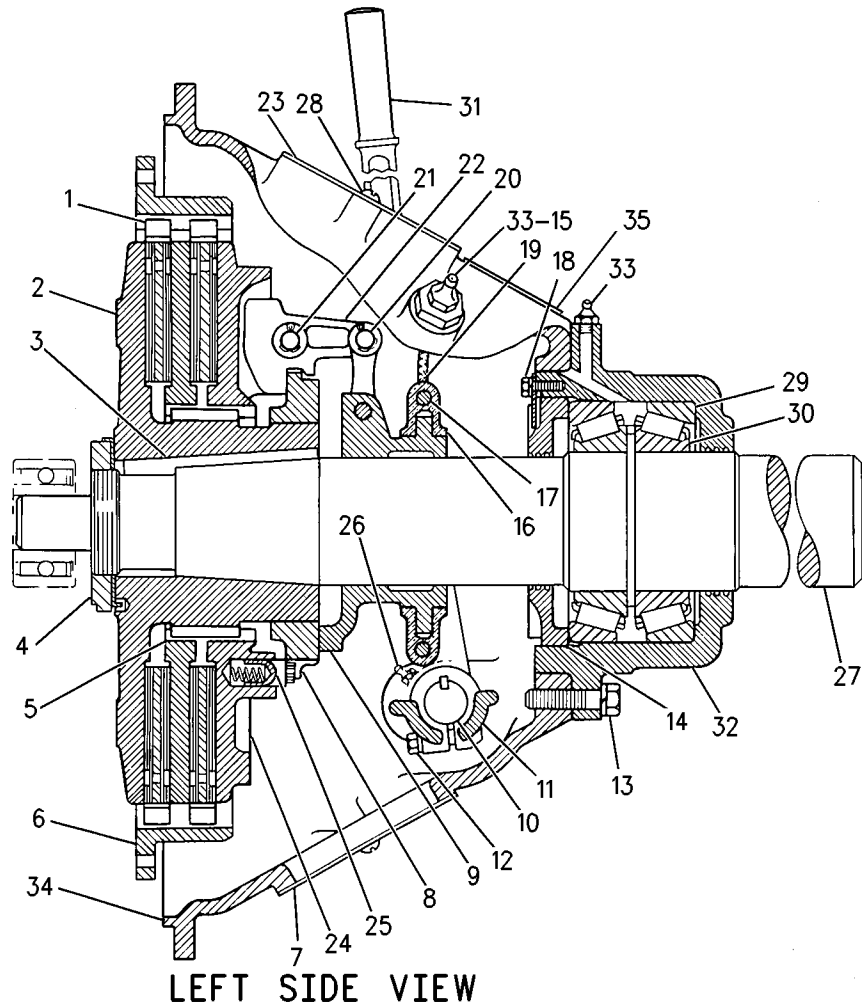
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4L-3527	2	PLATE-CLUTCH DRIVING						
	2	1	5L-9652	1	HUB						
	3	1	8B-7987	1	KEY						
	4	1	5L-9653	1	NUT						
		1	5L-9654	1	LOCK						
	5	1	3H-9571	1	PLATE-CENTER						
	6	1	5N-9317	1	RING-DRIVE						
	7	1	7F-8897	1	PLATE						
	8	1	3H-9572	1	RING-ADJUSTMENT						
	9	1	3H-9574	1	SLEEVE						
	10	1	4B-4754	1	SHAFT						
		1	6L-5151	2	KEY-WOODRUFF						
	11	1	4B-4792	1	YOKE AS						
	12	1	0S-1591	2	BOLT (3/8-16X1.5-IN)						
		1	3B-4506	2	LOCKWASHER						
	13	1	1A-1460	6	BOLT (1/2-13X2-IN)						
		1	5P-8245	6	WASHER-HARD (13.5X25.5X3-MM THK)						
	14	1	5L-9655	1	RETAINER-BEARING						
	15	1	9S-1354	1	NUT (5/8-18-THD)						
		1	6F-0253	1	LOCKWASHER						
	16	1	4B-4716	1	COLLAR AS-SLEEVE						
	17	1	0L-0639	2	BOLT (3/8-24X2.25-IN)						
		1	2L-6267	2	LOCKNUT (3/8-24-THD)						
B		1	4B-4758	2	SHIM (0.06-IN THK)						
	18	1	0S-1617	1	BOLT (5/16-18X0.75-IN)						
		1	3F-9556	1	LOCKWASHER						
		1	5B-2407	1	LOCK						
	19	1	5B-2410	1	HOSE AS (38.1CM)						
	20	1	4B-4721	8	LINK						
		1	6L-3967	8	PIN						
		1	3B-5301	8	PIN-COTTER						
	21	1	6L-3972	4	PIN						
		1	3B-4627	4	PIN-COTTER						
		1	1L-4863	8	WASHER-SPRING						
	22	1	4H-0002	4	LEVER						
	23	1	108-3561	1	PLATE-INSTRUCTION (POWER TAKE-OFF) (SERVICING)						
	24	1	3N-8125	1	PLATE AS-PRESSURE						
	25	1	3N-8124	1	SPRING						
		1	3N-8123	1	LOCK PIN						
	26	1	8B-7121	2	FITTING-HYDRAULIC (CLUTCH)						
	27	1	3N-4896	1	SHAFT-CLUTCH						
	28	1	1S-7443	4	SCREW-MACHINE						
		1	1H-3338	4	LOCKWASHER						
	29	1	6B-3223	2	CUP-BEARING						
	30	1	4B-7270	2	CONE-BEARING						
	31	1	4B-4810	1	LEVER AS-HAND						
	32	1	7F-8916	1	CARRIER-BEARING						
	33	1	3B-8489	2	FITTING-GREASE (CLUTCH)						
	34	1	7W-7155	1	HOUSING-CLUTCH						
	35	1	108-3560	1	PLATE-WARNING (POWER TAKE-OFF)						

B-USE AS REQUIRED

# BASIC ENGINE

4P-3073 CLUTCH GP (contd.)

i01850112



LEFT SIDE VIEW

GRAPHIC #1

<END>

g00783572

# BASIC ENGINE

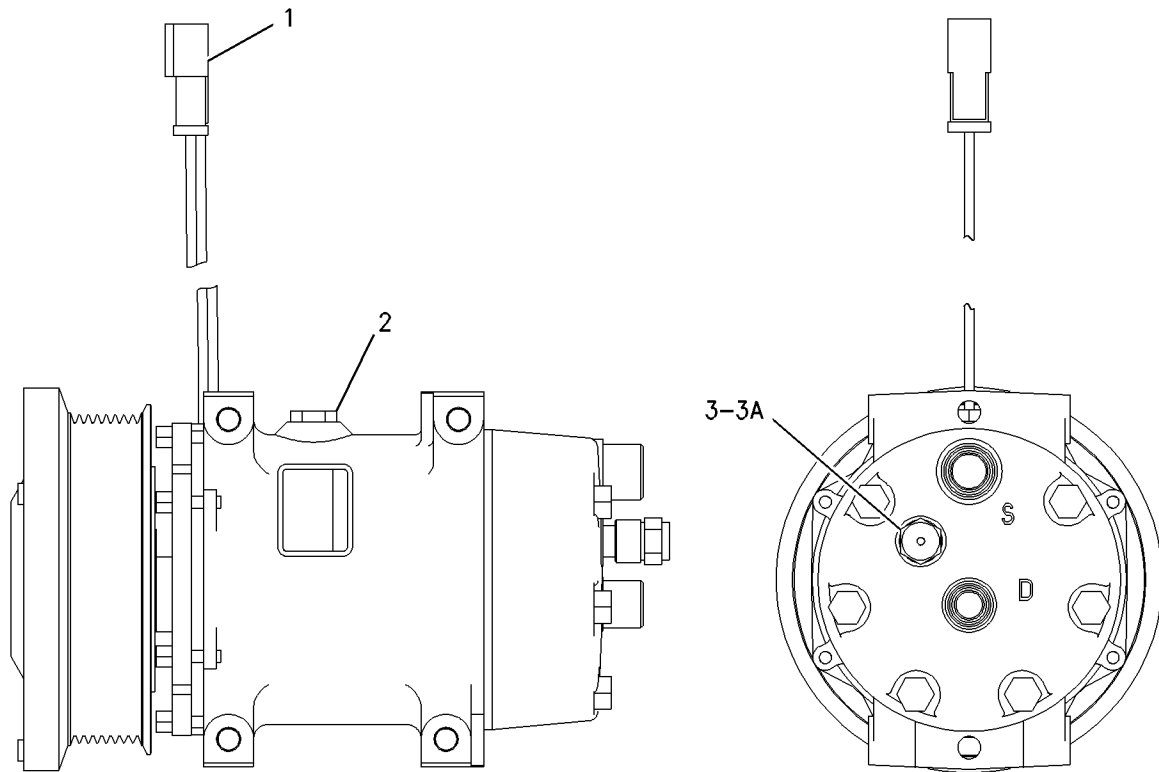
## 178-9570 COMPRESSOR GP-REFRIGERANT

PART OF 259-1905 COMPRESSOR GP-REFRIGERANT  
AN ATTACHMENT

SMCS-1802

i02223461

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	102-8802	1	KIT-RECEPTACLE (2-PIN)						
					(INCLUDES RECEPTACLE AS AND WEDGE)						
	2	1	7T-4532	1	PLUG AS						
	3	1	114-3469	1	VALVE GP-RELIEF (REFRIGERANT COMPRESSOR)						
	3A	1	9X-7378	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01005404

# BASIC ENGINE

## 259-1905 COMPRESSOR GP-REFRIGERANT

AN ATTACHMENT

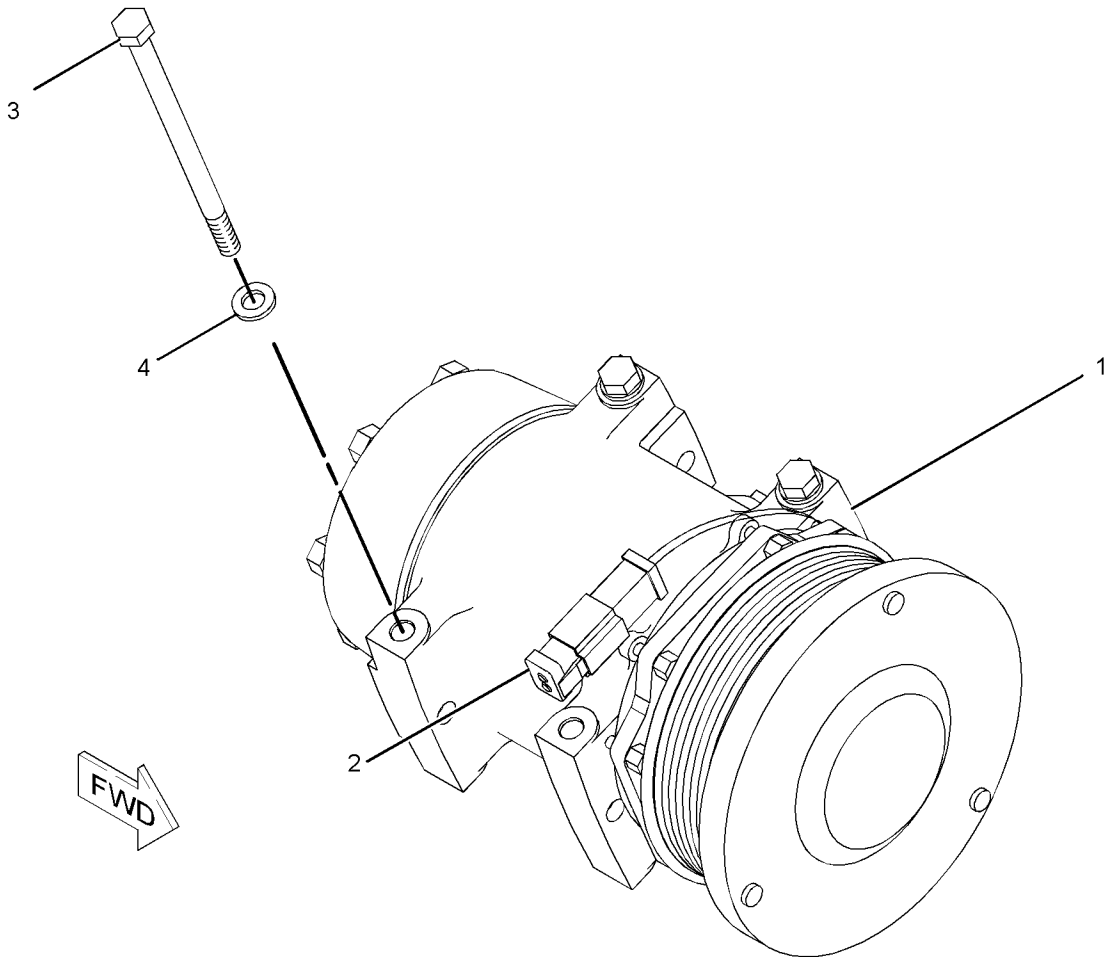
SMCS-1802

i02208570

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	178-9570	1	COMPRESSOR GP-REFRIGERANT						29
	2	1	188-2128	1	PLUG AS						
		1	155-2270	1	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES WEDGE AND PLUG AS)						
M	3	1	6V-5223	4	BOLT (M8X1.25X100-MM)						
	4	1	9M-1974	4	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01126468



# BASIC ENGINE

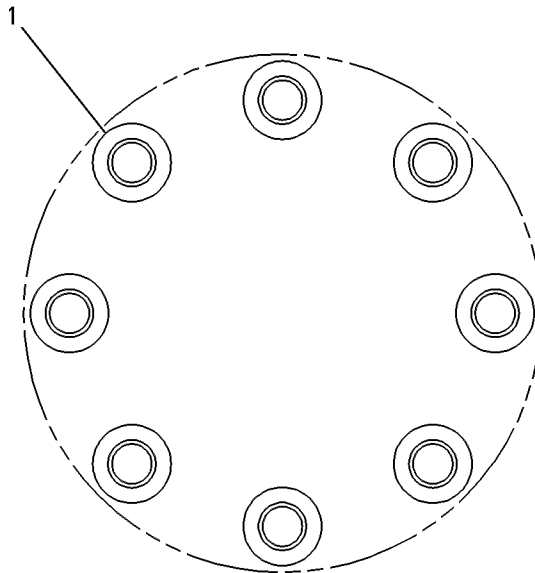
## 117-0178 COVER GP-CRANKSHAFT

PROVIDES PLUGS FOR REAR CRANKSHAFT FLANGE WHEN ENGINE BUILT WITHOUT FLYWHEEL  
CANNOT BE USED WITH FLYWHEEL  
AN ATTACHMENT

SMCS-1202

i00829735

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-0995	8	PLUG-SEAL						



REAR VIEW

GRAPHIC #1

<END>

g00251313

# BASIC ENGINE

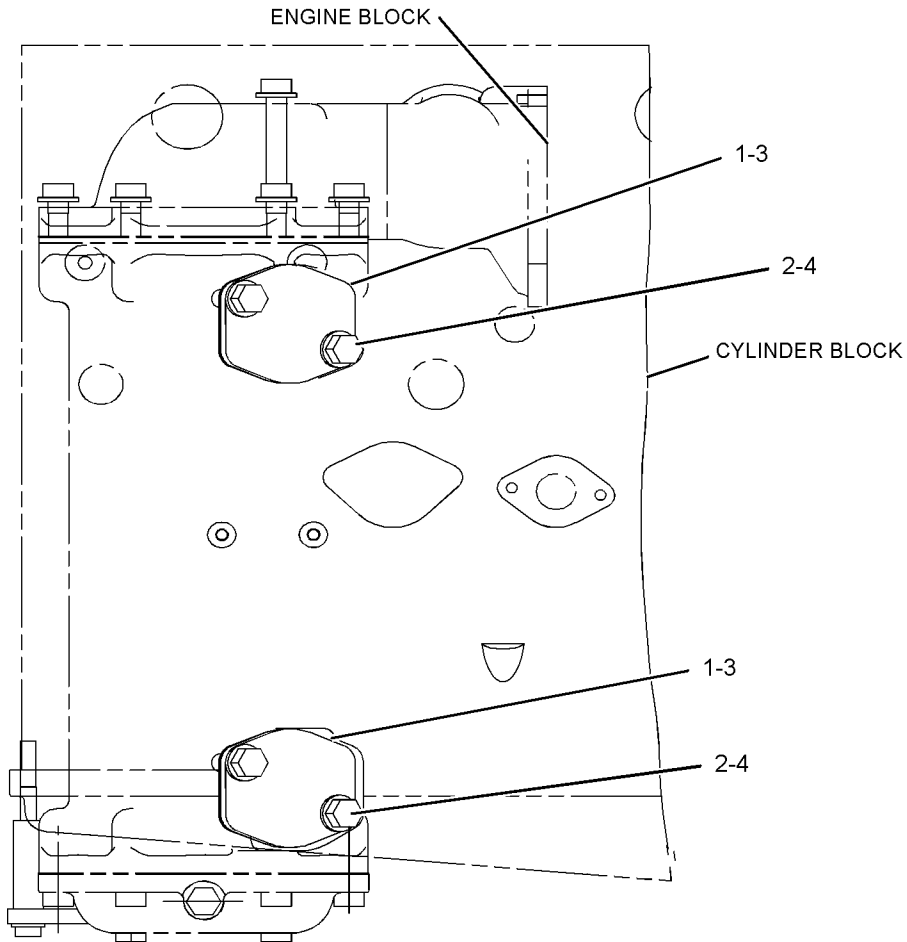
## 234-4409 COVER GP-CYLINDER BLOCK

ALSO AN ATTACHMENT

SMCS-1201

i01953449

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8J-5893</b>	2	COVER						
	2	1	<b>0S-1595</b>	4	BOLT (1/2-13X1.25-IN)						
	3	1	<b>3J-5553</b>	2	GASKET						
	4	1	<b>8T-4223</b>	4	WASHER-HARD (13.5X25.5X3-MM THK)						



RIGHT SIDE VIEW  
<END>

GRAPHIC #1

g01020452

# BASIC ENGINE

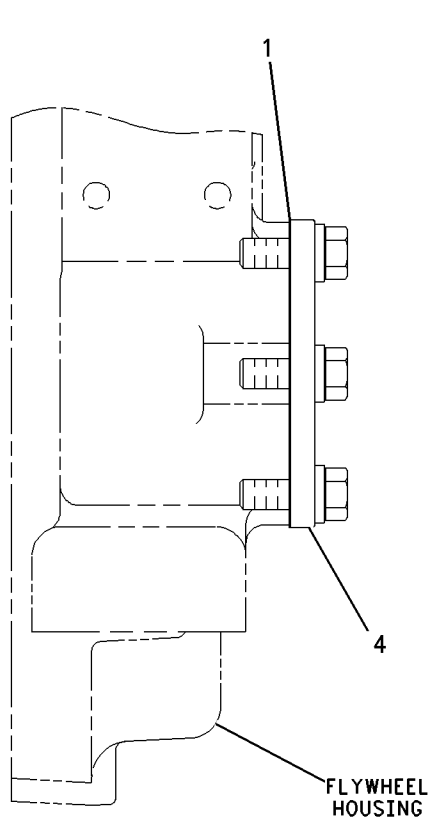
## 127-5728 COVER GP-FLYWHEEL HOUSING

LEFT STARTER BORE  
ALSO AN ATTACHMENT

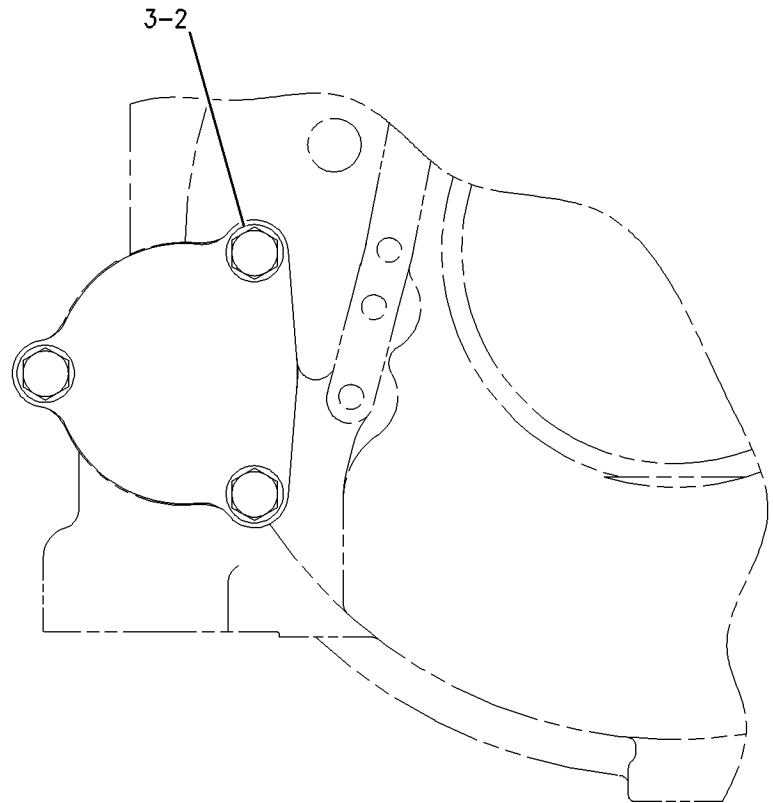
SMCS-1157

i01509333

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-6089	1	GASKET						
	2	1	OS-1589	3	BOLT (5/8-11X1.75 IN)						
	3	1	4D-3704	3	WASHER-HARD (17X30X5MM THK)						
	4	1	4N-1114	1	COVER						



RIGHT SIDE VIEW



FRONT VIEW

GRAPHIC #1

<END>

g00783561

# BASIC ENGINE

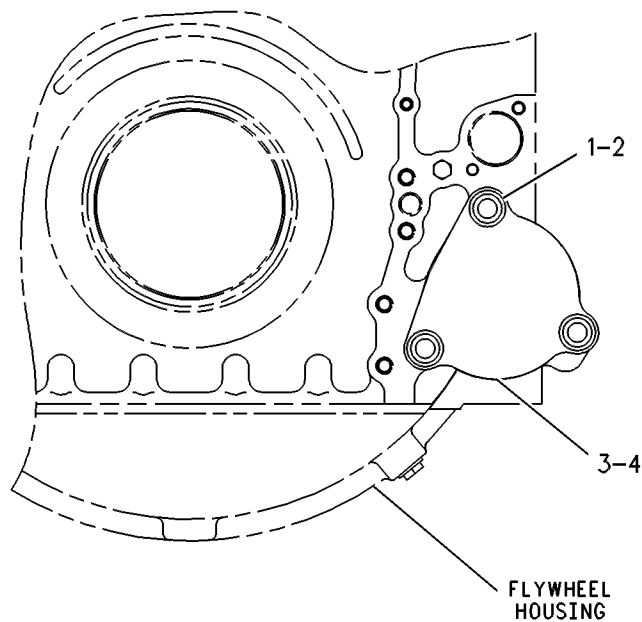
## 133-1209 COVER GP-FLYWHEEL HOUSING

RIGHT STARTER BORE  
CANNOT BE USED WITH ELECTRIC STARTING MOTORS  
AN ATTACHMENT

SMCS-1157

i00840947

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8S-2332</b>	3	BOLT-12 POINT HEAD (5/8-11X1.75IN)						
	2	1	<b>4D-3704</b>	3	WASHER-HARD (5MM THK)						
	3	1	<b>4N-1114</b>	1	COVER						
	4	1	<b>4H-7869</b>	1	GASKET						



GRAPHIC #1

<END>

g00260698

# BASIC ENGINE

## 113-8987 COVER GP-FRONT HOUSING

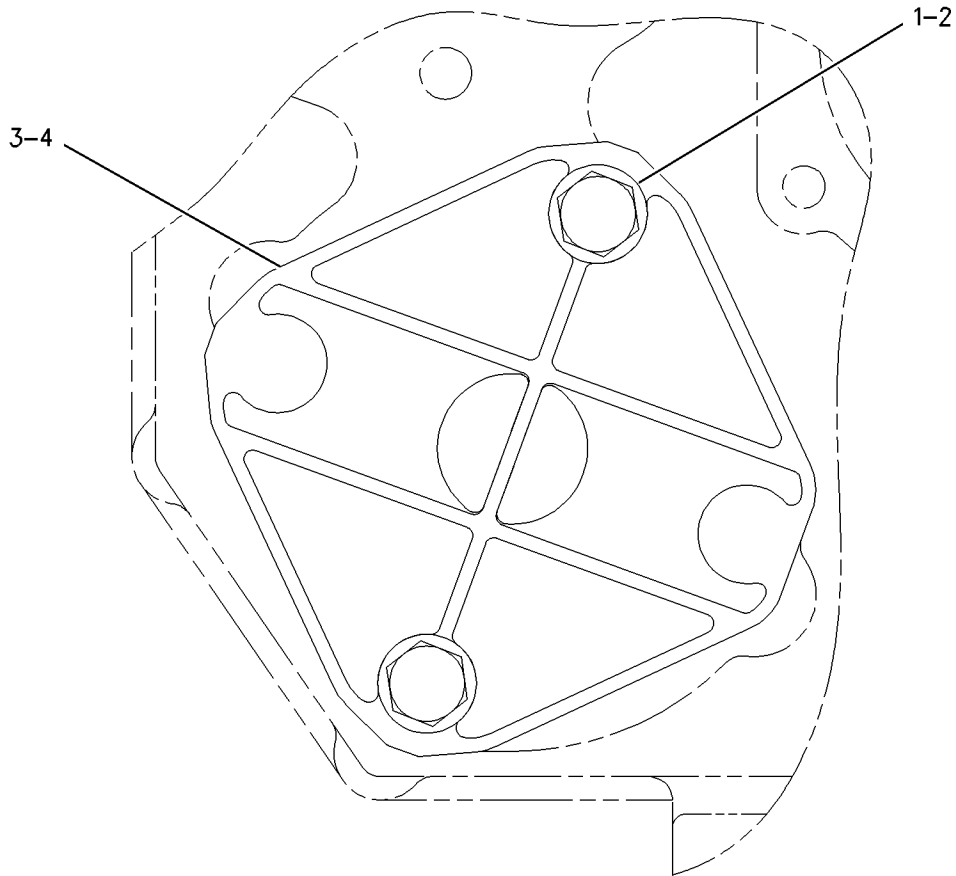
POWER TAKE-OFF

SMCS-1151, 1166

i01659298

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	6V-5842	2	BOLT (M10X1.50X40MM)						
	2	1	6V-5839	2	WASHER (11X21X2.5MM THK)						
	3	1	129-2905	1	COVER						
	4	1	107-5769	1	SEAL-O-RING						

M-METRIC PART



GRAPHIC #1

<END>

g00856137

# BASIC ENGINE

## 227-2574 COVER GP-FRONT HOUSING

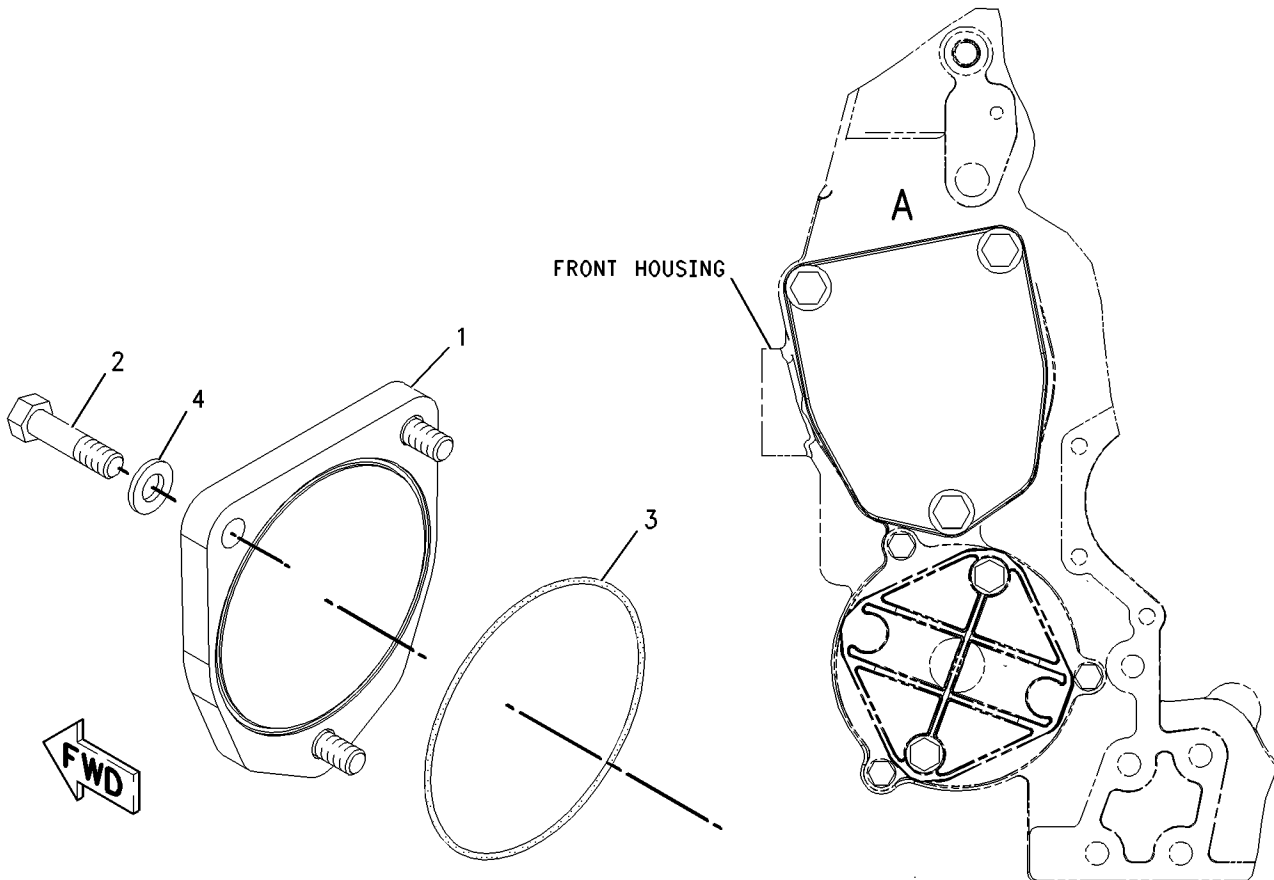
PROVIDES COVER WHEN AIR COMPRESSOR IS NOT USED  
ALSO AN ATTACHMENT

SMCS-1151, 1166

i01926325

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	227-2576	1	COVER						
M	2	1	6V-8197	3	BOLT (M12X1.75X40-MM)						
	3	1	7J-6285	1	SEAL-O-RING						
	4	1	8T-4223	3	WASHER-HARD (13.5X25.5X3-MM THK)						

M-METRIC PART



EXPLODED VIEW OF AREA A

FRONT VIEW

GRAPHIC #1

<END>

g01003191

# BASIC ENGINE

## 229-2614 COVER GP-VALVE MECHANISM

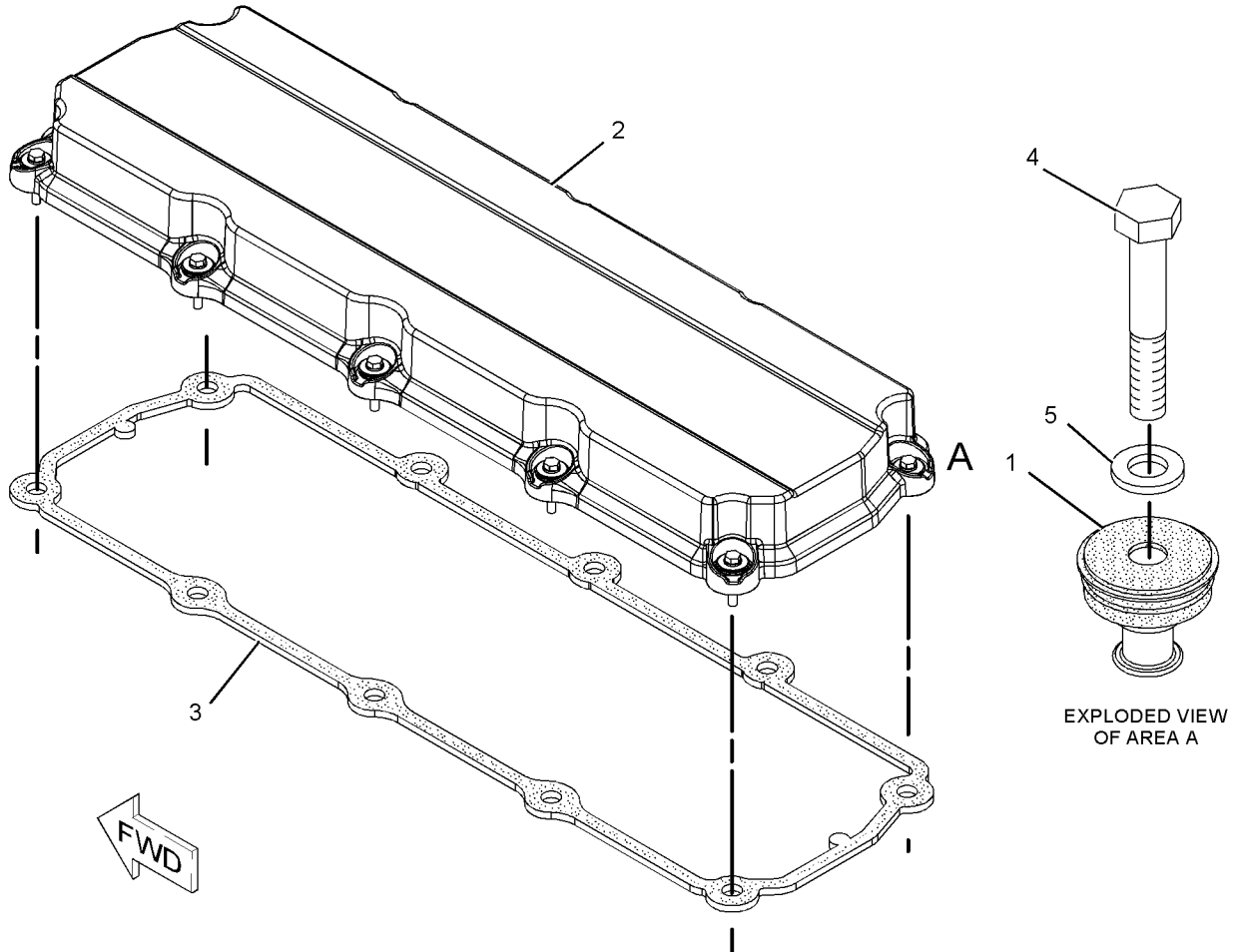
FOR USE WITH ALL ENGINES THAT REQUIRE A VARIABLE VALVE ACTUATOR GROUP OR A BRAKE. CANNOT BE USED WITH 229-2615—PAGE 38 AN ATTACHMENT

SMCS-1107

i02216156

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	212-7728	10	ISOLATOR AS						
	2	1	229-2616	1	COVER-VALVE						
	3	1	229-5711	1	SEAL-ISOLATION (VALVE COVER)						
M	4	1	6V-3918	10	BOLT (M8X1.25X50-MM)						
	5	1	9M-1974	10	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g01121078

# BASIC ENGINE

## 229-2615 COVER GP-VALVE MECHANISM

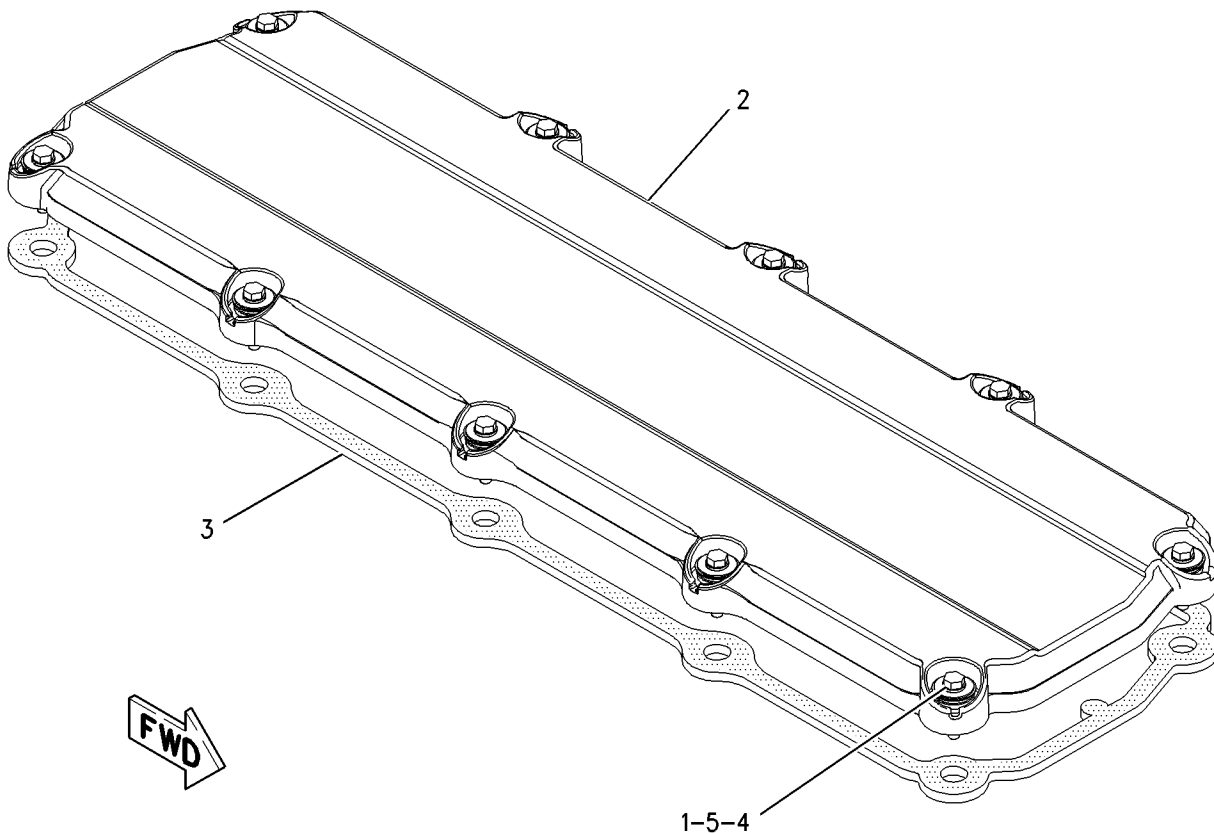
FOR USE WITH ENGINES THAT DO NOT REQUIRE A VARIABLE VALVE ACTUATOR. CANNOT  
BE USED WITH 229-2614—PAGE 37  
ALSO AN ATTACHMENT

SMCS-1107

i02112194

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	212-7728	10	ISOLATOR AS						
	2	1	229-2617	1	COVER						
	3	1	229-5711	1	SEAL-ISOLATION (VALVE COVER)						
M	4	1	6V-3918	10	BOLT (M8X1.25X50-MM)						
	5	1	9M-1974	10	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g00951733



# BASIC ENGINE

## 224-3882 CRANKSHAFT GP

SMCS - 1202

i02250603

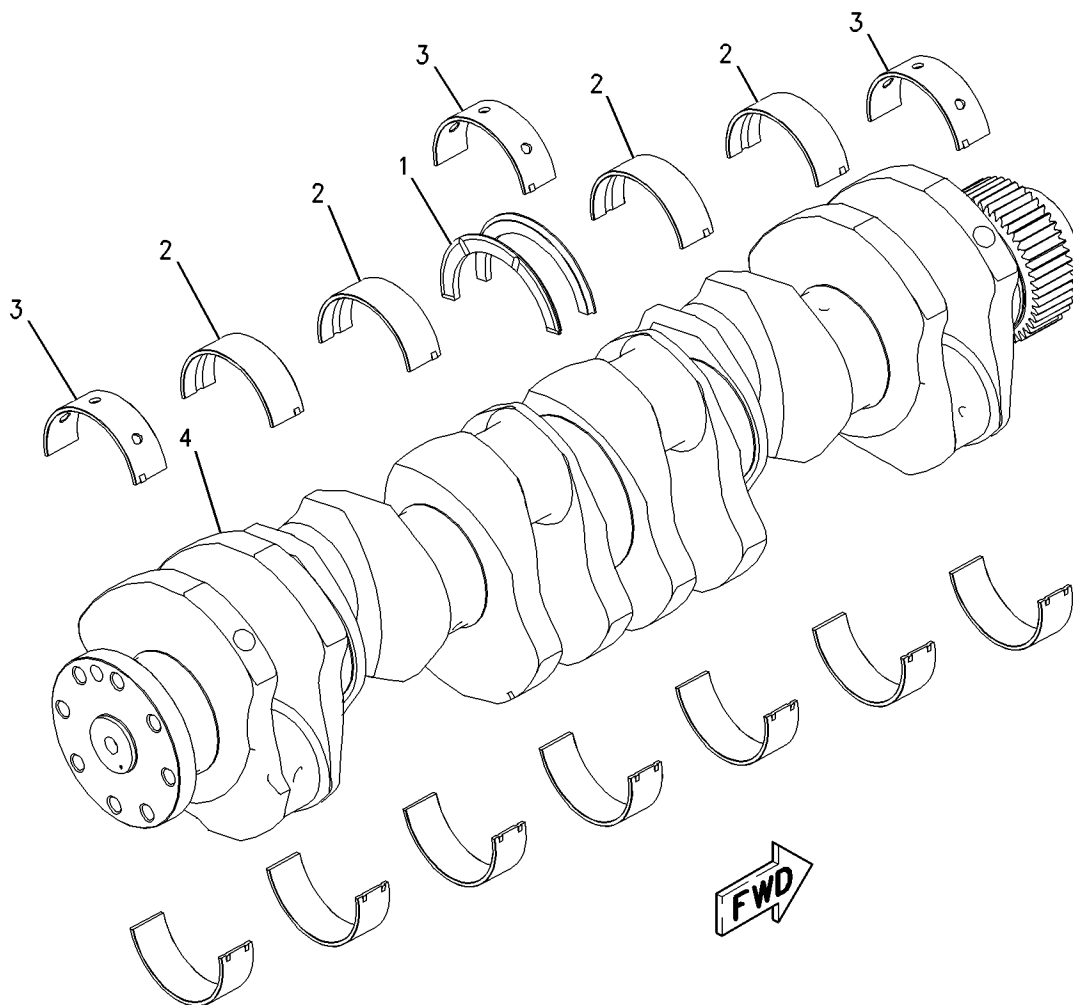
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	246-3144	2	PLATE-THRUST						
J	2	1	211-0587	4	BEARING-MAIN (STANDARD)						
AB		1	128-0400		BEARING-MAIN (0.51-MM US)						
AB		1	128-0401		BEARING-MAIN (0.76-MM US)						
AB		1	128-0402		BEARING-MAIN (0.51-MM OS)						
AB		1	128-0403		BEARING-MAIN (0.51-MM US TO 0.51-MM OS)						
J	3	1	211-0588	3	BEARING-MAIN (STANDARD)						
AB		1	128-0382		BEARING-MAIN (0.51-MM US)						
AB		1	128-0383		BEARING-MAIN (0.76-MM US)						
AB		1	128-0384		BEARING-MAIN (0.51-MM OS)						
AB		1	128-0385		BEARING-MAIN (0.51-MM US TO 0.51-MM OS)						
R	4	1	221-9362	1	CRANKSHAFT AS						
		1	6V-3536	1	DOWEL						
		1	9Y-0810	1	SLEEVE-WEAR (REAR SEAL)						
		1	9Y-0821	1	SLEEVE (FRONT SEAL)						
		1	187-8972	1	GEAR-CRANKSHAFT (48-TEETH)						
AVAILABLE REPAIR KIT(S):											
JY			243-6717	1	KIT-CRANKSHAFT BEARING						109
(INCLUDES STANDARD BEARINGS AND THRUST PLATES)											

A-NOT PART OF THIS GROUP  
 B-USE AS REQUIRED  
 J-KIT MARKED J INCLUDES PARTS MARKED J  
 R-REMG PART MAY BE AVAILABLE  
 Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

224-3882 CRANKSHAFT GP (contd.)

i02250603



GRAPHIC #1

<END>

g00939576

# BASIC ENGINE

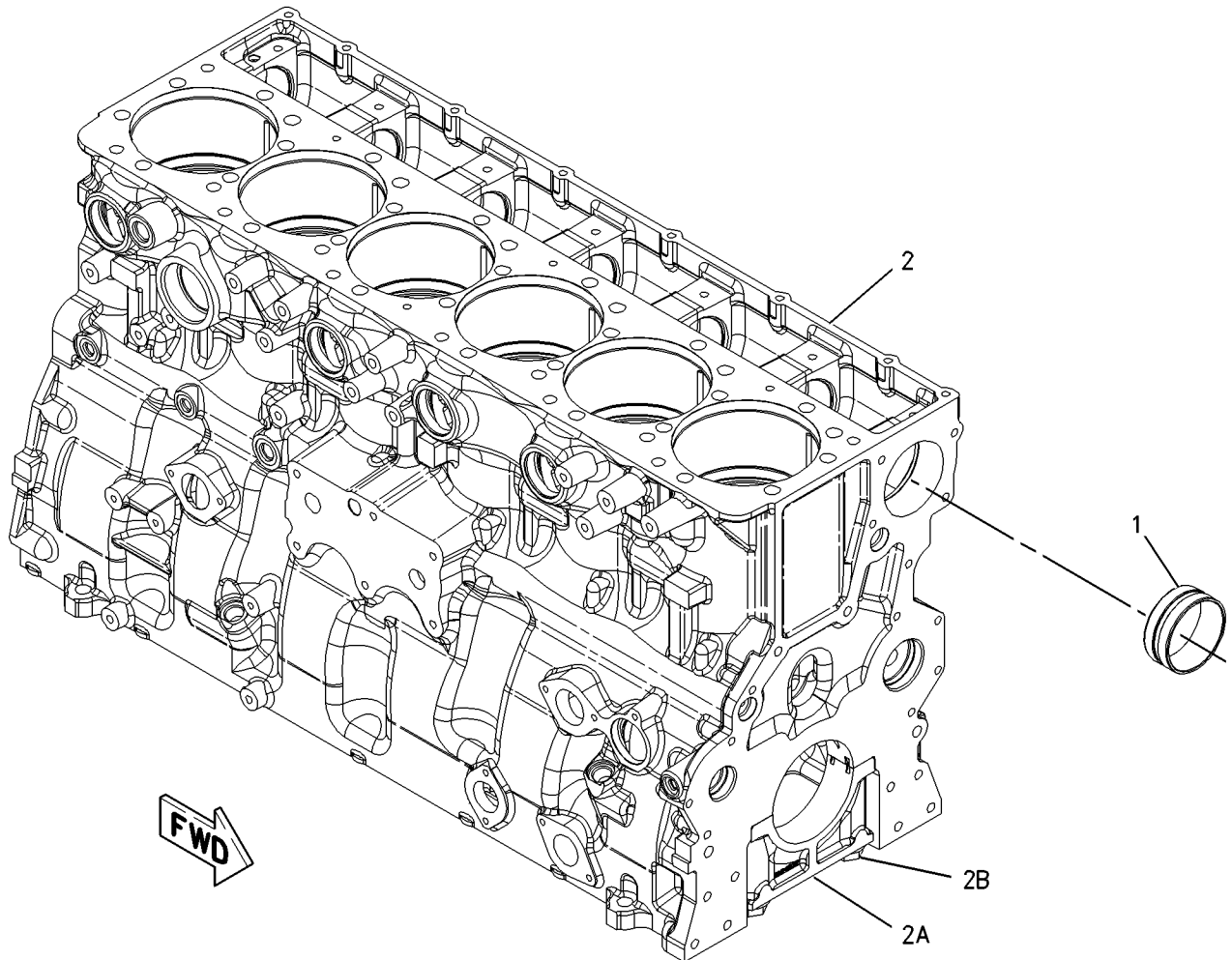
## 252-2180 CYLINDER BLOCK AS

PART OF 252-2181 CYLINDER BLOCK AS

SMCS-1201

i02142442

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	187-8969	7	BEARING						
	2	1	239-7359	1	CYLINDER BLOCK AS						
	2A	1	207-8572	7	CAP-BEARING						
	2B	1	223-6546	14	BOLT (M18X2.5X170-MM)						
		1	5P-8248	14	WASHER-HARD (20X36.5X3.5-MM THK)						



GRAPHIC #1

<END>

g00950396

# BASIC ENGINE

## 252-2181 CYLINDER BLOCK AS

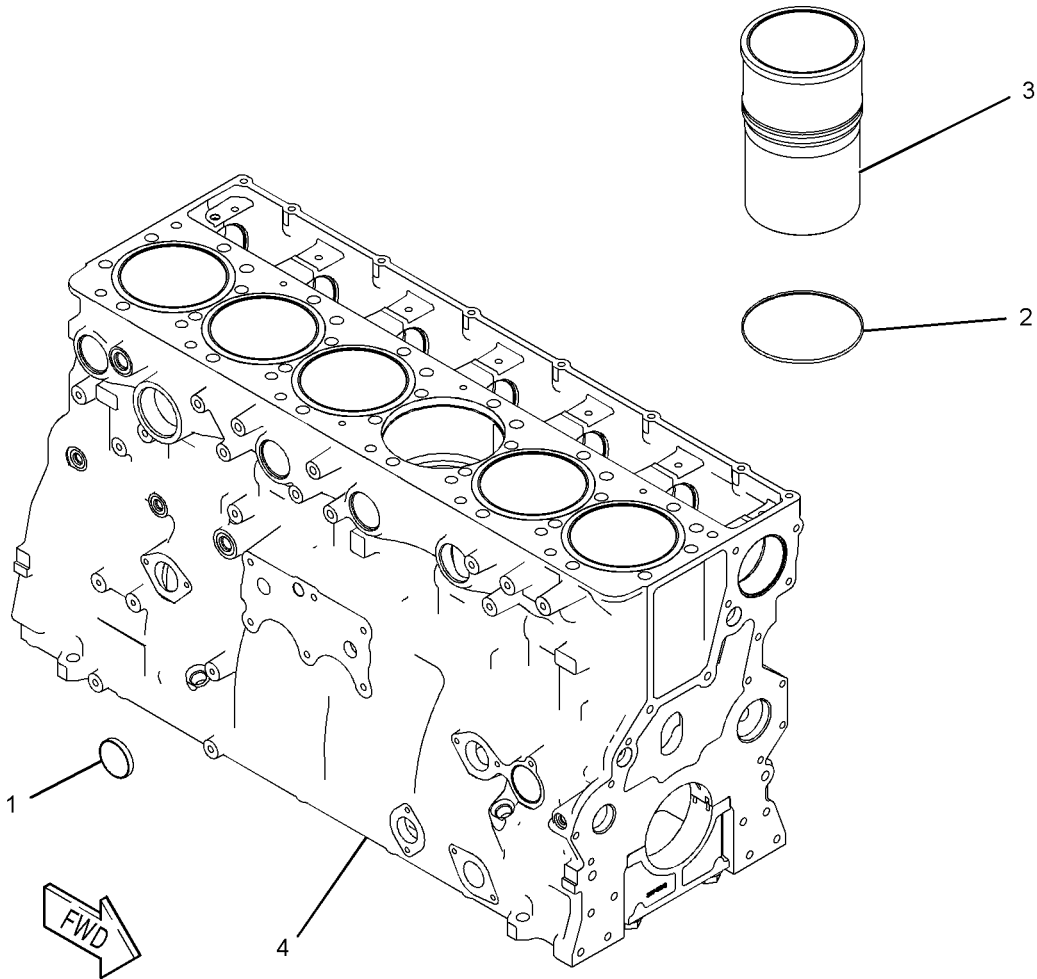
PART OF 240-7271 CYLINDER BLOCK GP

SMCS-1201

i02142434

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4F-5695</b>	5	PLUG-CUP						
	2	1	<b>104-3560</b>	6	SEAL-LINER						
	3	1	<b>197-9330</b>	6	LINER-CYLINDER						
Y	4	1	<b>252-2180</b>	1	CYLINDER BLOCK AS						41

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01009480

# BASIC ENGINE

## 240-7271 CYLINDER BLOCK GP

SMCS-1201

i02142421

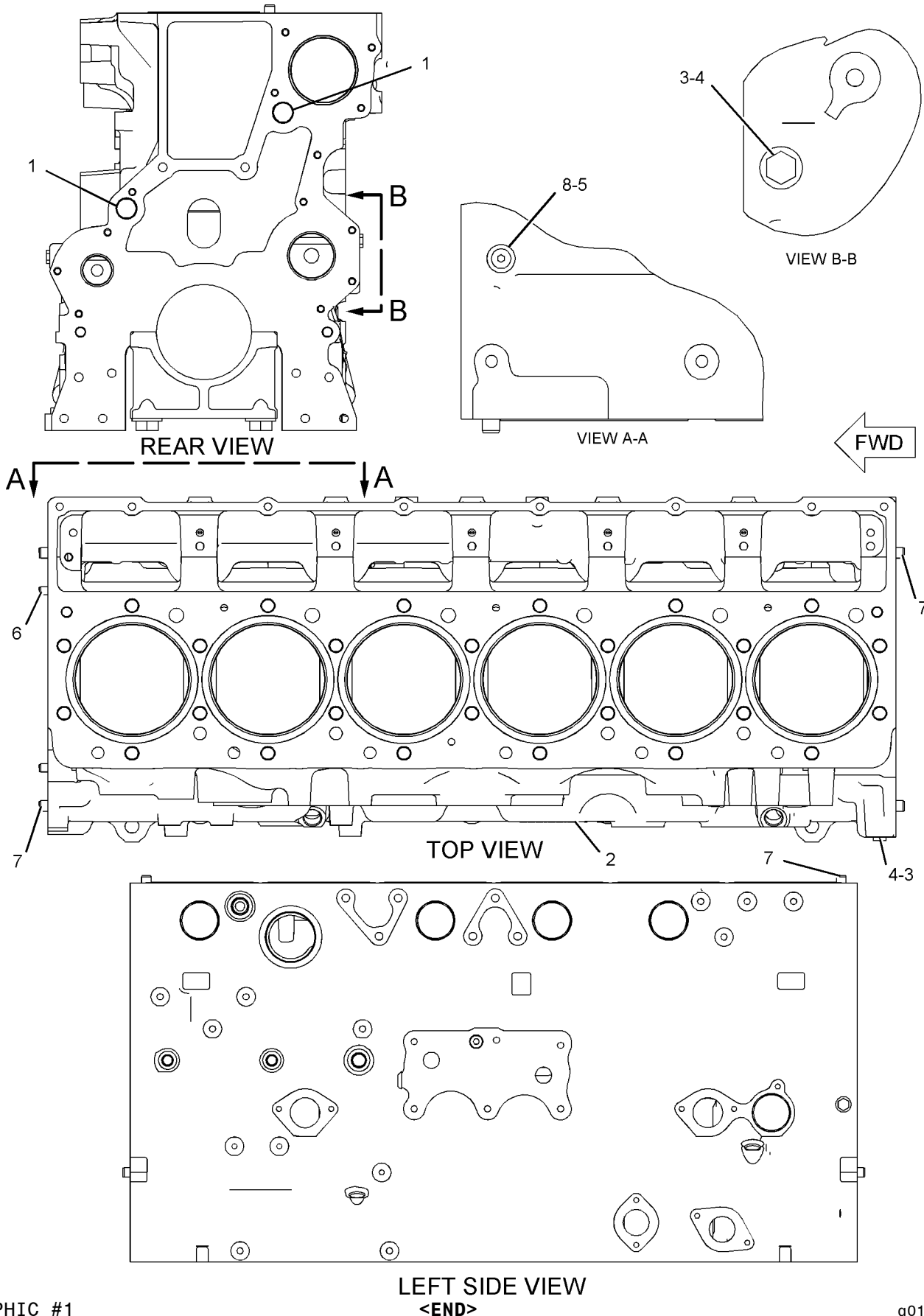
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	<b>3B-0623</b>	3	PLUG-CUP	
CY	2	1	<b>252-2181</b>	1	CYLINDER BLOCK AS	42
	3	1	<b>9X-7378</b>	2	SEAL-O-RING	
	4	1	<b>9S-4182</b>	2	PLUG (7/16-2 THD)	
	5	1	<b>6V-5048</b>	1	SEAL-O-RING	
	6	1	<b>6V-3538</b>	2	DOWEL	
	7	1	<b>7N-5683</b>	6	DOWEL	
	8	1	<b>9S-8002</b>	1	PLUG (7/16-2 THD)	

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

240-7271 CYLINDER BLOCK GP (contd.)

i02142421



GRAPHIC #1

<END>

g01017611

# BASIC ENGINE

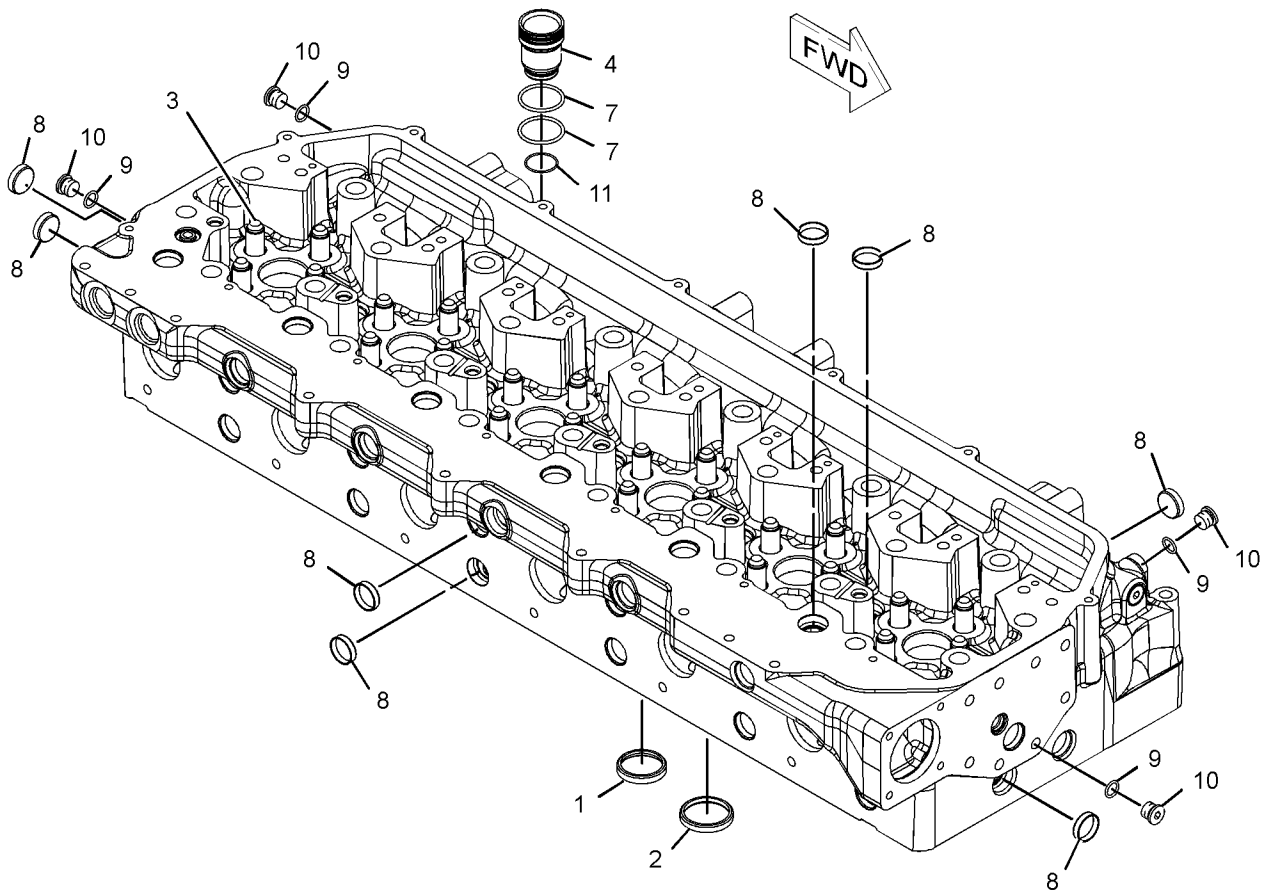
## 257-2170 CYLINDER HEAD AS

PART OF 257-4095 CYLINDER HEAD GP

SMCS-1100, 1101

i02305070

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	224-1270	12	INSERT-VALVE (EXHAUST)						
	2	1	224-2410	12	INSERT-VALVE (INLET)						
	3	1	259-2186	24	GUIDE-VALVE						
	4	1	227-4239	6	SLEEVE-INJECTOR						
	7	1	166-2904	12	SEAL-O-RING						
	8	1	3B-0623	36	PLUG-CUP						
	9	1	6V-5049	7	SEAL-O-RING						
	10	1	9S-8004	7	PLUG						
	11	1	9X-7430	6	SEAL-O-RING						



GRAPHIC #1

<END>

g01151927

# BASIC ENGINE

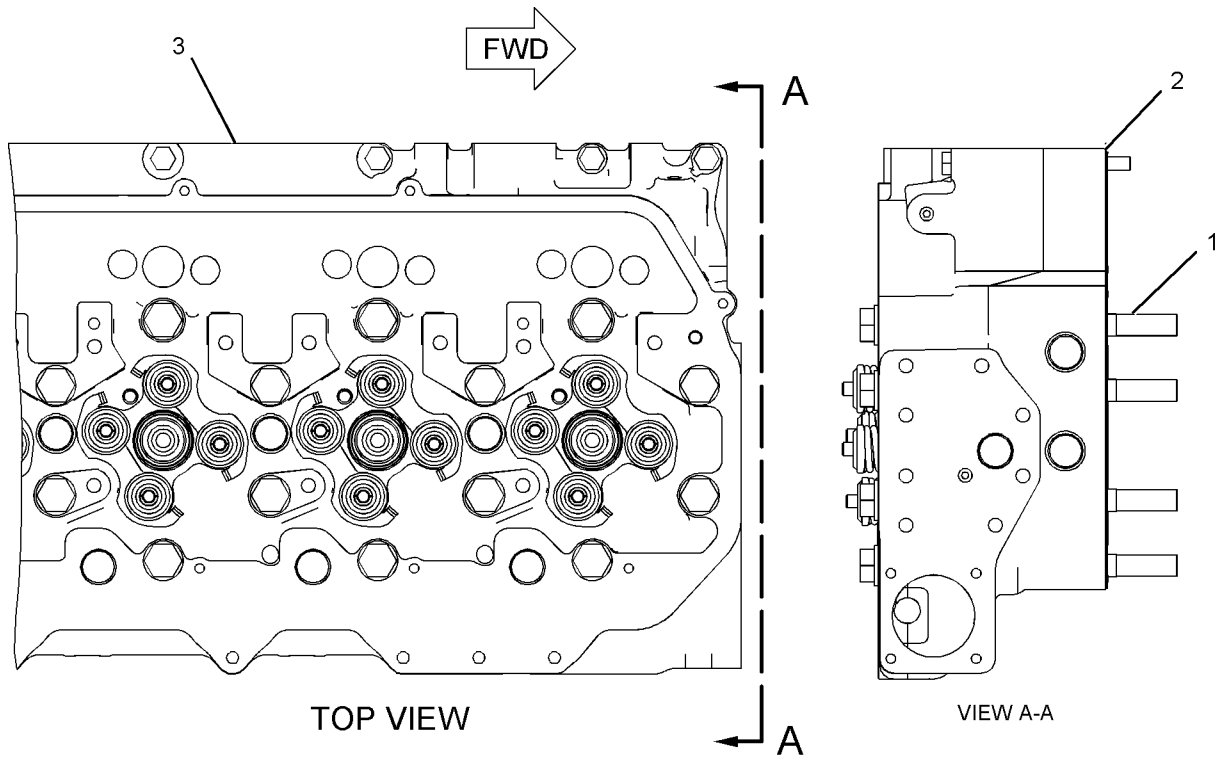
## 240-7679 CYLINDER HEAD GP

SMCS-1100

i02250642

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	198-4963	1	FASTENER GP-CYLINDER HEAD						58
	2	1	221-9392	1	GASKET (CYLINDER HEAD)						
CY	3	1	257-4095	1	CYLINDER HEAD GP						47

C- CHANGE FROM PREVIOUS TYPE  
 Y- SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01018879



# BASIC ENGINE

## 257-4095 CYLINDER HEAD GP

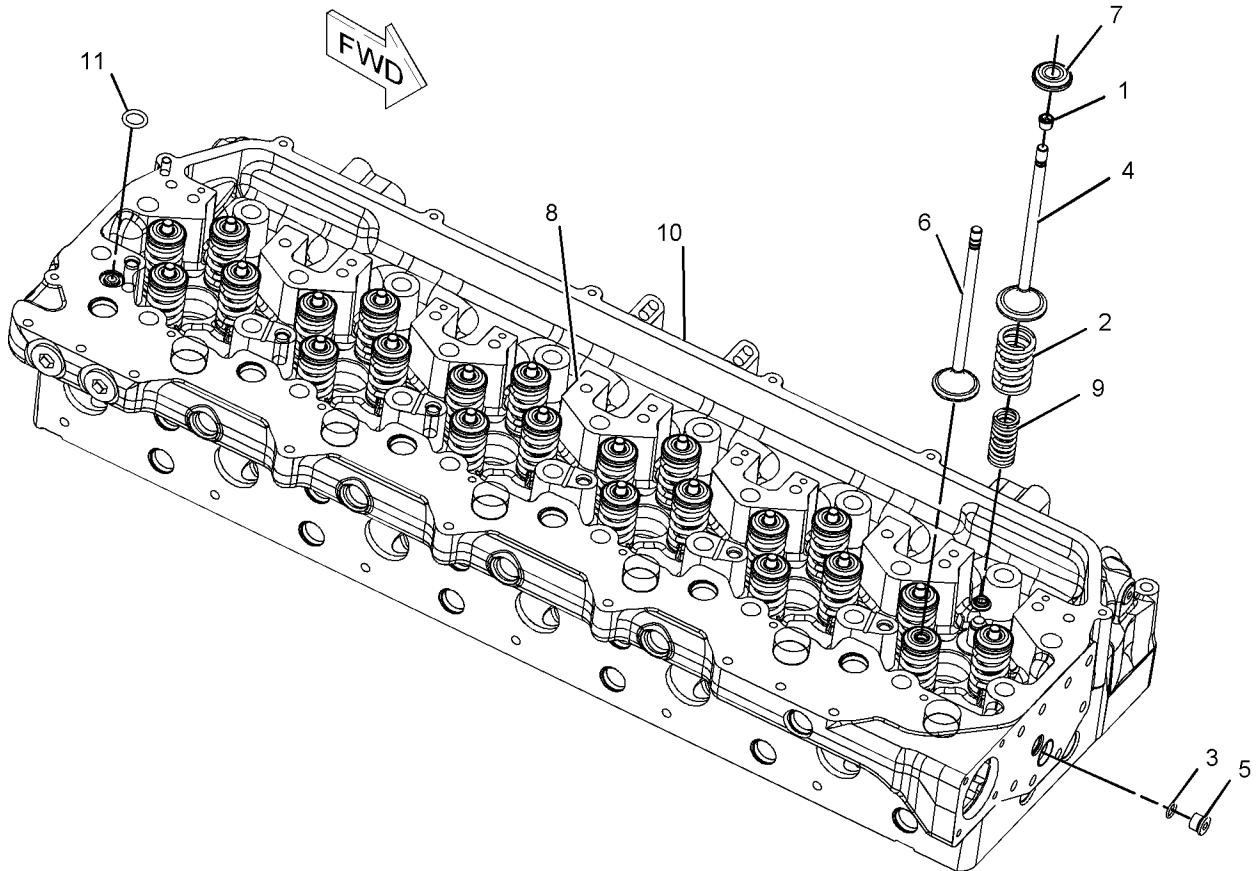
PART OF 240-7679 CYLINDER HEAD GP

SMCS-1100

i02311697

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2A-4429	48	LOCK-RETAINER						
	2	1	214-0586	24	SPRING (OUTER)						
	3	1	6V-5063	2	SEAL-O-RING						
	4	1	224-3028	12	VALVE-INLET						
	5	1	9S-8008	2	PLUG						
	6	1	224-3030	12	VALVE-EXHAUST						
	7	1	7E-7977	24	ROTOCOIL AS (CYLINDER)						
					(EACH INCLUDES)						
		1	7E-7978	1	SHIELD						
	8	1	224-3125	12	BASE						
	9	1	224-4441	24	SPRING (INNER)						
Y	10	1	257-2170	1	CYLINDER HEAD AS						45
	11	1	5P-5598	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01094864

# BASIC ENGINE

## 192-8982 DAMPER & PULLEY GP

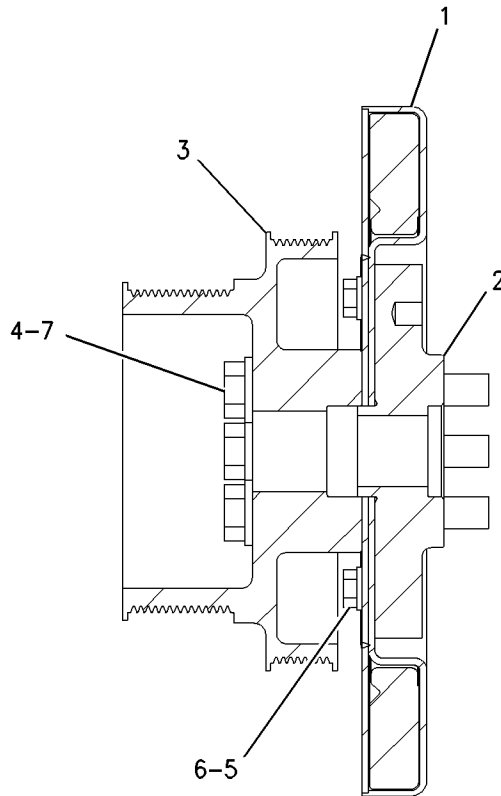
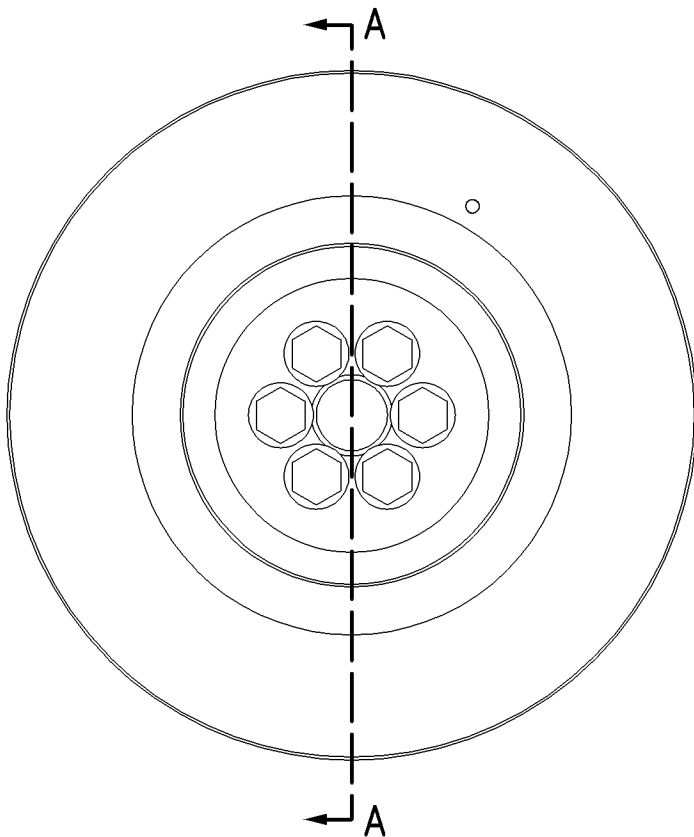
FOR USE WITH POLY-VEE ACCESSORY DRIVE AND SEPARATE POLY-VEE FAN DRIVE  
AN ATTACHMENT

SMCS-1205

i01726420

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	167-8125	1	DAMPER AS						
	2	1	179-0092	1	ADAPTER						
	3	1	193-2268	1	PULLEY						
	4	1	5P-8247	6	WASHER-HARD (17X32X3.5MM THK)						
M	5	1	6V-1820	8	BOLT (M10X1.50X30MM)						
	6	1	6V-5839	8	WASHER (11X21X2.5MM THK)						
M	7	1	8T-0282	6	BOLT (M16X2.0X120MM)						

M-METRIC PART



SECTION A-A

GRAPHIC #1

<END>

g00887545

# BASIC ENGINE

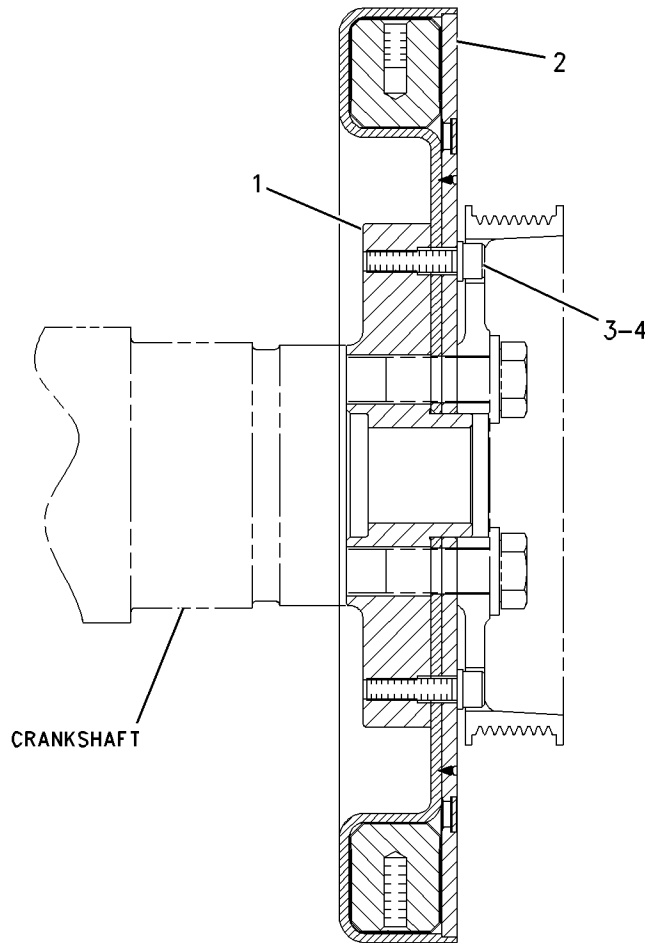
## 117-2766 DAMPER GP ALSO AN ATTACHMENT

SMCS-1205

i01509699

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	179-0092	1	ADAPTER						
	2	1	167-8125	1	DAMPER AS						
M	3	1	136-4183	8	BOLT-12 POINT HEAD (M10X1.5X30MM)						
	4	1	9X-2027	8	WASHER (11X18X2MM THK)						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00783687

# BASIC ENGINE

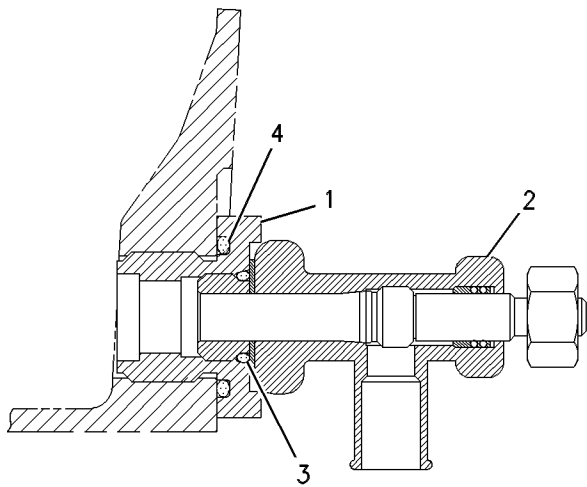
## 163-1383 DRAIN GP-ENGINE OIL

ENVIRONMENTAL DRAIN  
FOR USE WITH OIL PAN  
AN ATTACHMENT

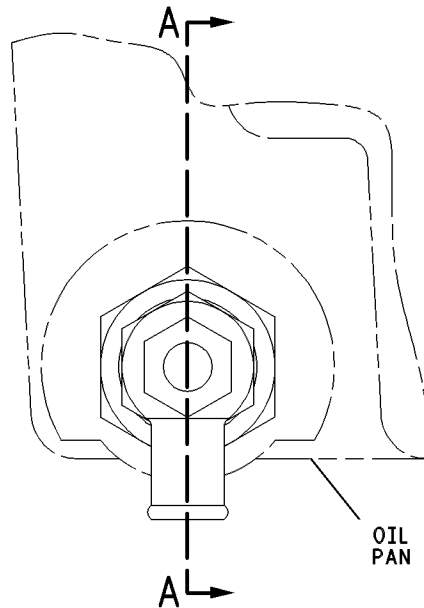
SMCS-1302

i01998402

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3E-7427	1	ADAPTER						
	2	1	7E-4761	1	VALVE-SHUTOFF (ENGINE OIL DRAIN)						
	3	1	8L-2786	1	SEAL-O-RING						
	4	1	061-9458	1	SEAL-O-RING						



SECTION A-A



OIL PAN

GRAPHIC #1

<END>

g00663286

# BASIC ENGINE

## 183-4189 DRIVE GP-ACCESSORY

S/N: GLS1-116

SAE B DRIVE

SMCS-1207

i01433842

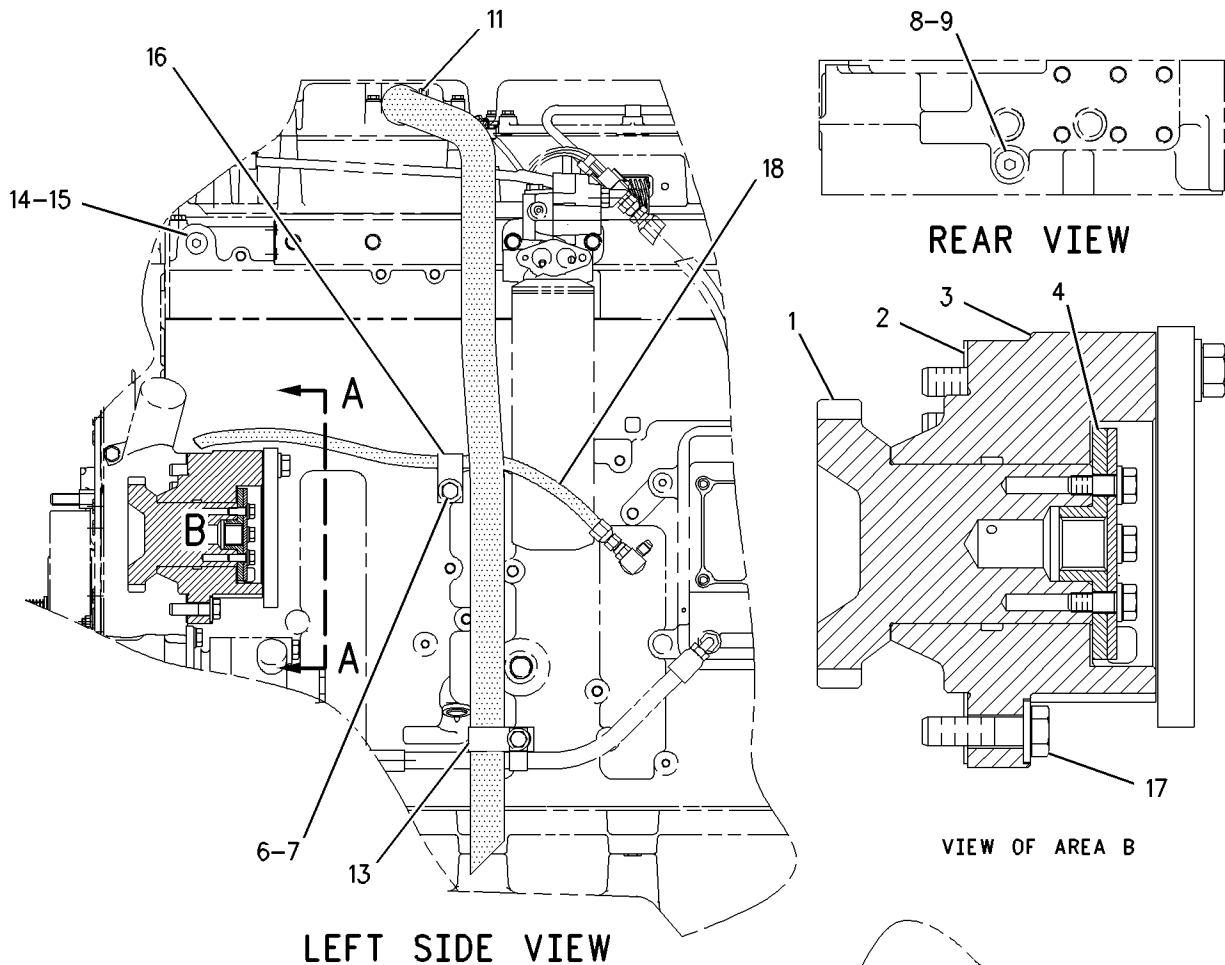
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	155-2946	1	GEAR (42-TEETH)						
	2	1	129-2181	1	SEAL-INTEGRAL						
	3	1	155-2943	1	BEARING						
	4	1	1N-3974	1	COUPLING						
	5	1	9S-8008	1	PLUG						
M	6	1	6V-6317	1	BOLT (M10X1.5X20-MM)						
	7	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						
	8	1	9S-8005	1	PLUG						
	9	1	6V-6609	1	SEAL-O-RING						
	10	1	6V-5063	1	SEAL-O-RING						
	11	1	126-0146	1	HOSE-FUMES DISPOSAL						
	12	1	9M-2904	1	CLAMP-HOSE						
	13	1	2S-2053	1	CLIP						
	14	1	6V-3251	1	SEAL-O-RING						
	15	1	9S-8006	1	PLUG						
	16	1	8F-8513	1	CLIP						
	17	1	8T-4223	3	WASHER-HARD (13.5X25.5X3-MM THK)						
I	18	1	124-5049	1	HOSE AS						
	19	1	6V-5048	1	SEAL-O-RING						
	20	1	030-7946	1	ELBOW						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART

# BASIC ENGINE

183-4189 DRIVE GP-ACCESSORY (contd.)

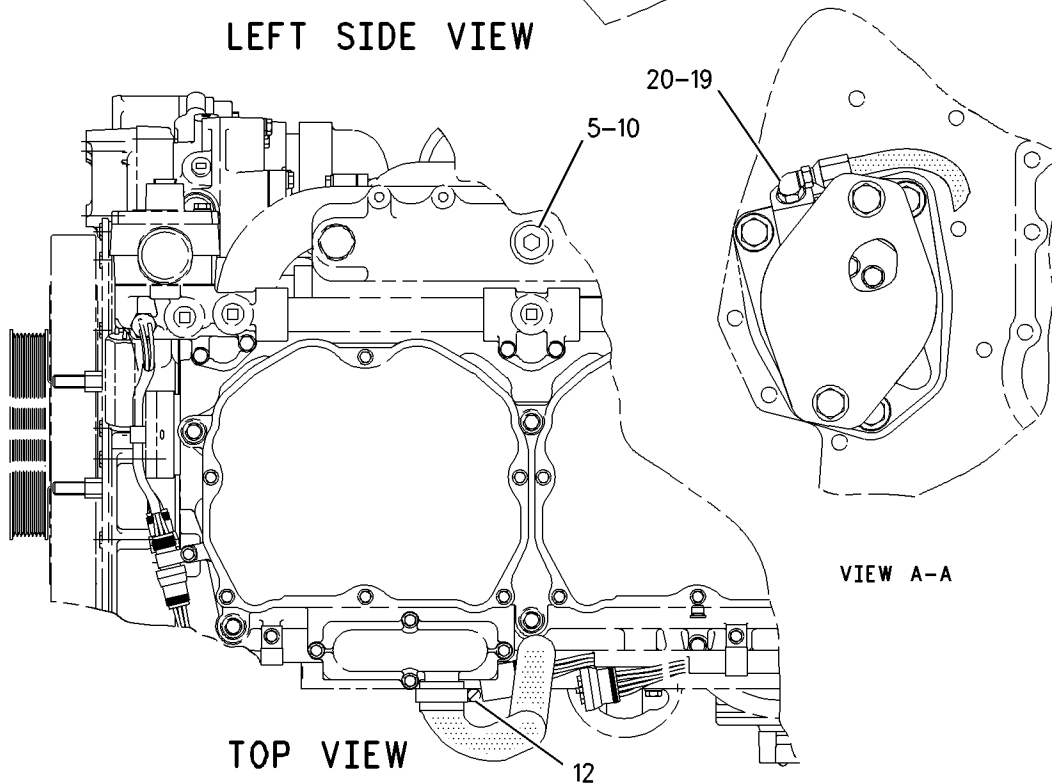
i01433842



LEFT SIDE VIEW

REAR VIEW

VIEW OF AREA B



TOP VIEW

VIEW A-A

GRAPHIC #1

<END>

g00752629

# BASIC ENGINE

## 215-1819 DRIVE GP-ACCESSORY AN ATTACHMENT

SMCS-1207

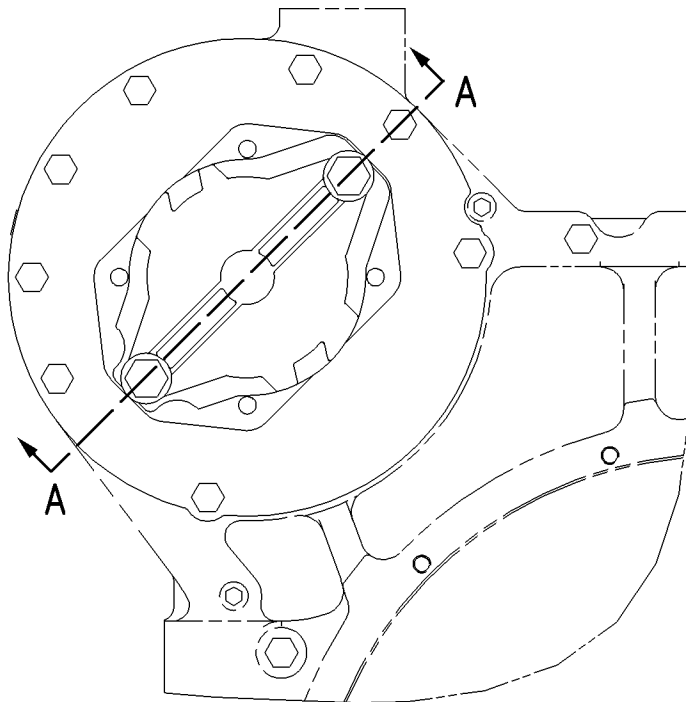
i01865462

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>187-8236</b>	1	ADAPTER AS						
		1	<b>160-8184</b>	1	BEARING-SLEEVE						
	2	1	<b>215-1816</b>	1	GEAR AS (48 TEETH)						
		1	<b>4F-6024</b>	1	PIN						
		1	<b>215-1817</b>	1	GEAR (48 TEETH)						
	3	1	<b>2D-9572</b>	1	SEAL-O-RING						
M	4	1	<b>8T-0646</b>	8	BOLT (M12X1.75X110-MM)						
	5	1	<b>9X-7371</b>	1	SEAL-O-RING						
M-METRIC PART											

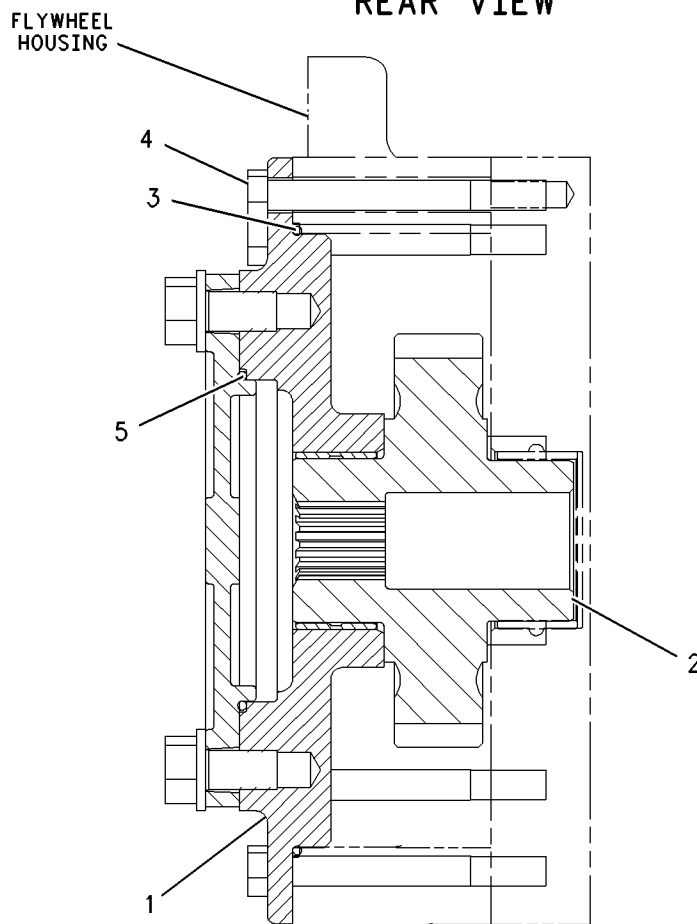
# BASIC ENGINE

215-1819 DRIVE GP-ACCESSORY (contd.)

i01865462



REAR VIEW



SECTION A-A

GRAPHIC #1

<END>

g00998780



# BASIC ENGINE

## 241-7608 DRIVE GP-ACCESSORY

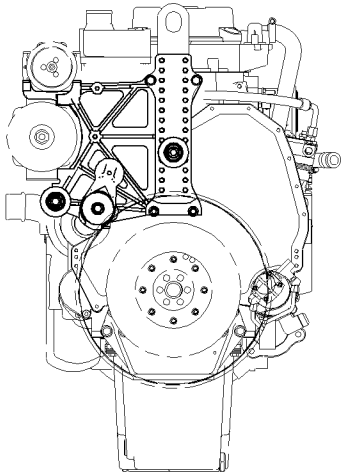
PROVIDES AN 8 GROOVE, SINGLE BELT DRIVE SYSTEM  
 FOR USE WITH PAD MOUNTED ALTERNATOR WITH 57 MM PULLEY, 207-8103-PAGE 147,  
 219-7440-PAGE 68, 227-6764-PAGE 22  
 AN ATTACHMENT

SMCS-1207

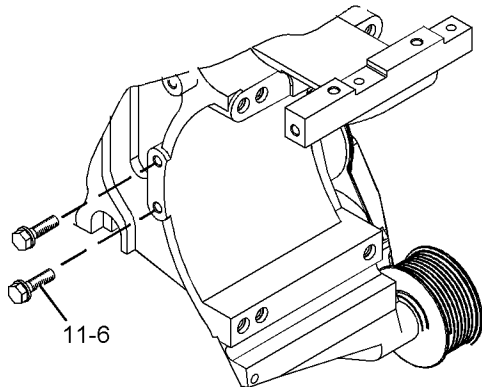
i01986583

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	197-9642	1	PULLEY AS-IDLER (8-GROOVE)						
	2	1	211-7895	1	BELT TENSIONER						
	3	1	222-2899	1	BRACKET-SUPPORT						
	4	1	227-8313	1	PULLEY AS-IDLER (8-GROOVE)						
	5	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	6	1	6V-2317	2	BOLT (M8X1.25X30-MM)						
M	7	1	6V-8149	2	NUT (M12X1.75-THD)						
M	8	1	8T-0646	2	BOLT (M12X1.75X110-MM)						
	9	1	8T-4121	1	WASHER-HARD (11X21X2.5-MM THK)						
M	10	1	8T-4178	1	BOLT (M10X1.5X90-MM)						
	11	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						

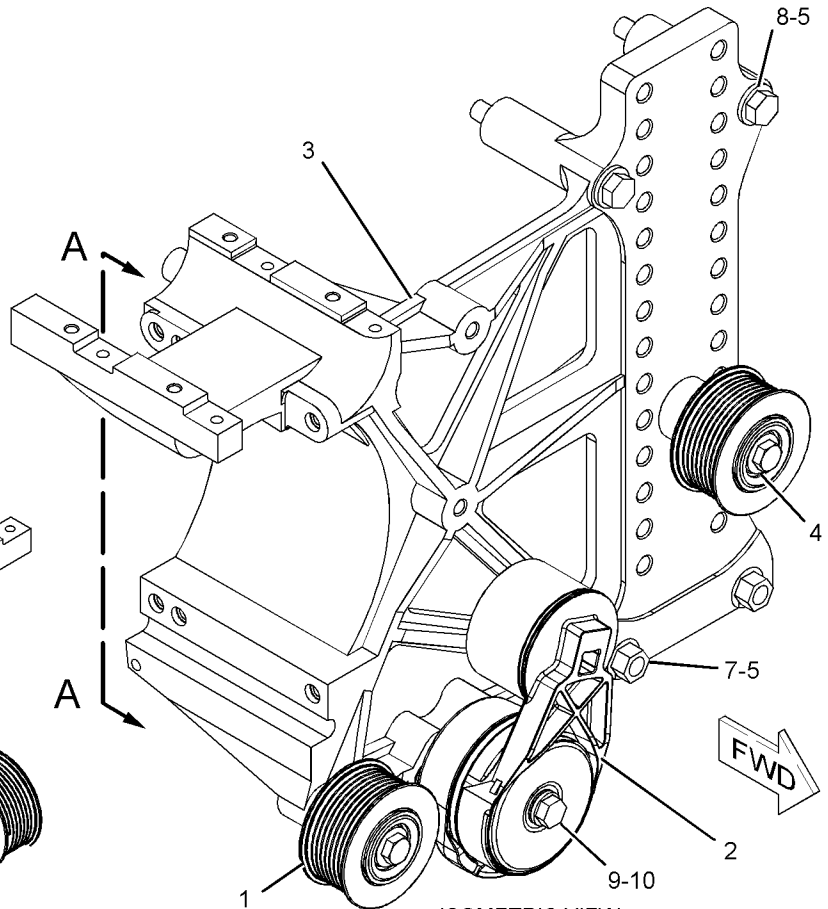
M-METRIC PART



FRONT VIEW



VIEW A-A



ISOMETRIC VIEW

<END>

GRAPHIC #1

g01029875

# BASIC ENGINE

## 262-2762 DRIVE GP-ACCESSORY

S/N: GLS117-UP

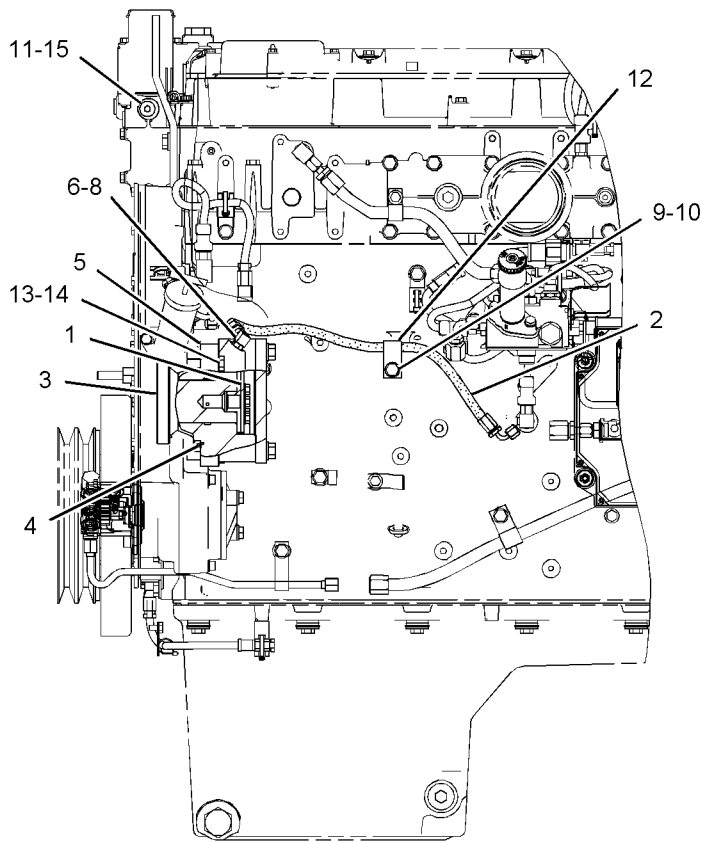
CANNOT BE USED WITH AIR COMPRESSOR GROUPS, 237-9753-PAGE 137  
ALSO AN ATTACHMENT

SMCS-1207

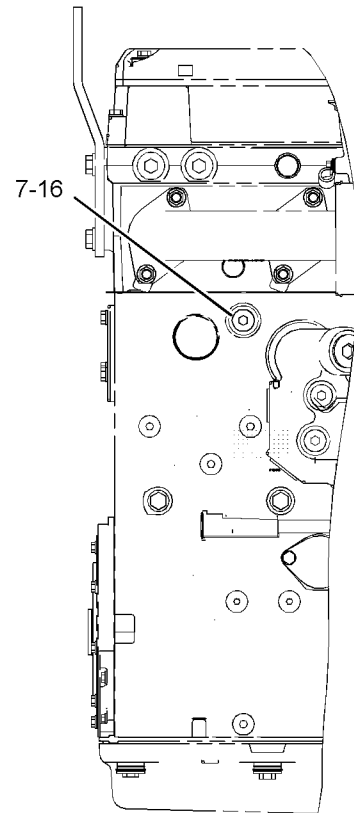
i02208354

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1N-3974	1	COUPLING						
I	2	1	124-5049	1	HOSE AS						
	3	1	155-2946	1	GEAR (42-TEETH)						
	4	1	223-3505	1	SEAL						
	5	1	257-5812	1	BEARING						
	6	1	030-7946	1	ELBOW						
	7	1	6V-3251	1	SEAL-O-RING						
	8	1	6V-5048	1	SEAL-O-RING						
	9	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						
M	10	1	6V-6317	1	BOLT (M10X1.5X20-MM)						
	11	1	6V-6609	1	SEAL-O-RING						
	12	1	8F-8513	1	CLIP						
M	13	1	8T-4184	3	BOLT (M12X1.75X45-MM)						
	14	1	8T-4223	3	WASHER-HARD (13.5X25.5X3-MM THK)						
	15	1	9S-8005	1	PLUG						
	16	1	9S-8006	1	PLUG						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART



LEFT SIDE VIEW



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01138263

# BASIC ENGINE

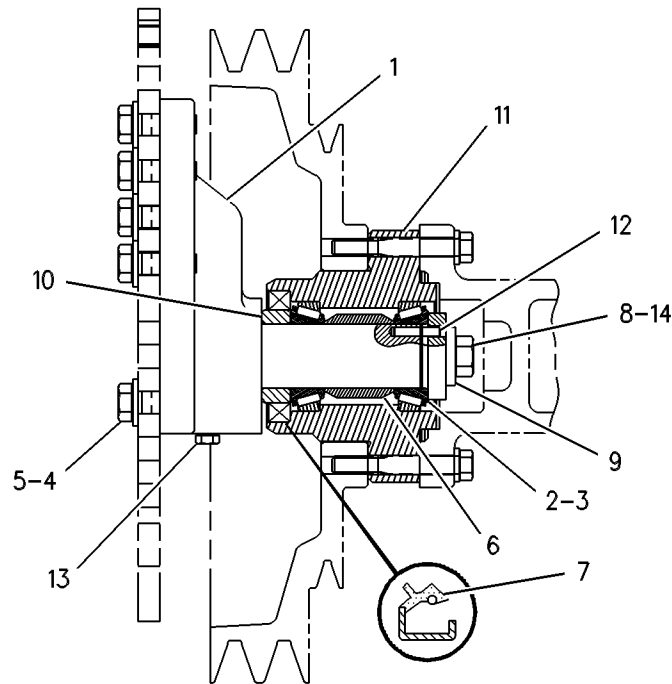
## 128-3415 DRIVE GP-FAN ADJUSTABLE AN ATTACHMENT

SMCS - 1359

i00640002

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	128-3416	1	BRACKET AS-FAN						
		1	129-5617	1	SHAFT-FAN						
		1	129-5618	1	BRACKET						
	2	1	4W-1203	2	CUP-BEARING						
	3	1	4W-1204	2	CONE-BEARING						
M	4	1	6V-8675	5	BOLT (M12X1.75X35-MM)						
	5	1	5P-8245	5	WASHER-HARD (13.5X25.5X3-MM THK)						
	6	1	4W-2042	1	SPACER (35.3X45.5X38.331-MM THK)						
	7	1	6V-9748	1	SEAL-LIP TYPE						
M	8	1	8T-0162	1	BOLT (M12X1.75X160-MM)						
	9	1	7E-4808	1	PLATE						
	10	1	5S-9062	1	SPACER (35.032X50.8X15.88-MM THK)						
	11	1	1W-5039	1	HUB-FAN PULLEY						
	12	1	6H-3956	1	PIN						
	13	1	8T-6764	1	PLUG-PIPE						
	14	1	7D-1649	1	WASHER-HARD (13.5X32X5-MM THK)						

M-METRIC PART



RIGHT SIDE VIEW

<END>

GRAPHIC #1

g00262629

# BASIC ENGINE

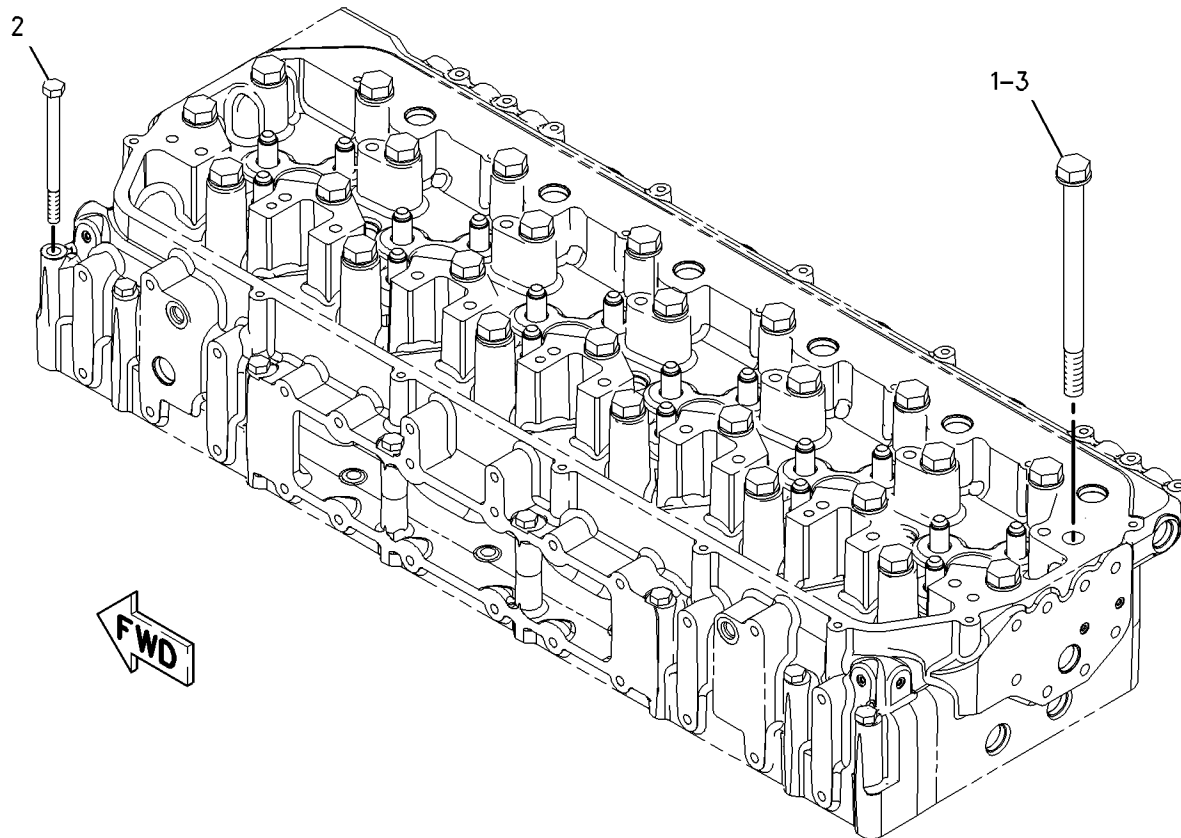
## 198-4963 FASTENER GP-CYLINDER HEAD

PART OF 240-7679 CYLINDER HEAD GP

SMCS-1100

i02023739

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	242-1811	26	BOLT						
	2	1	210-4460	8	BOLT (M10X1.5X130-MM)						
	3	1	2S-5658	26	WASHER-HARD (17X29X3-MM THK)						



GRAPHIC #1

<END>

g00949755

# BASIC ENGINE

## 117-2771 FASTENER GP-DAMPER & PULLEY

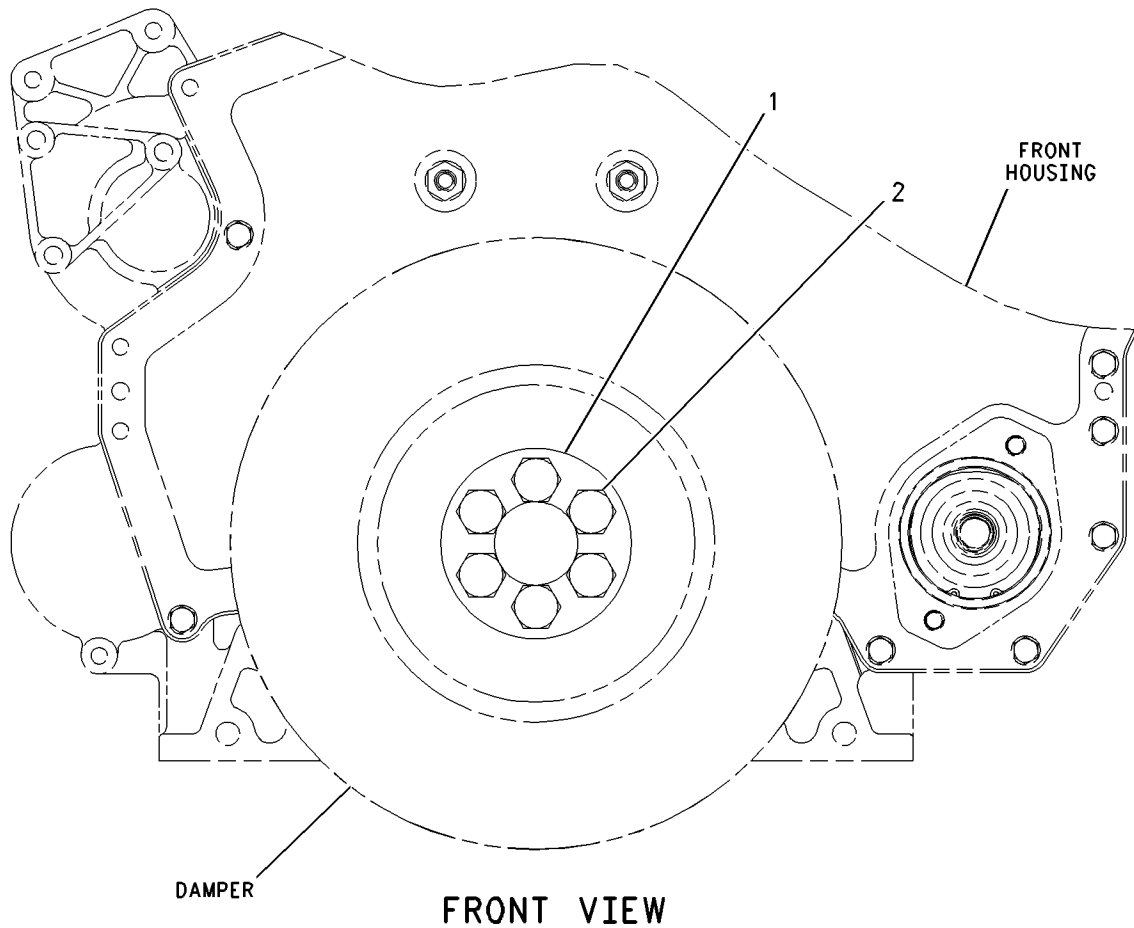
FOR USE WITH 117-2795-PAGE 142. CANNOT BE USED WITH 124-7311-PAGE 143  
ALSO AN ATTACHMENT

SMCS-1205, 7553

i01831217

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	213-1585	1	SPACER						
M	2	1	8T-0281	6	BOLT (M16X2X80-MM)						

C- CHANGE FROM PREVIOUS TYPE  
M- METRIC PART



GRAPHIC #1

<END>

g00783716

# BASIC ENGINE

## 180-5168 FASTENER GP-DAMPER & PULLEY

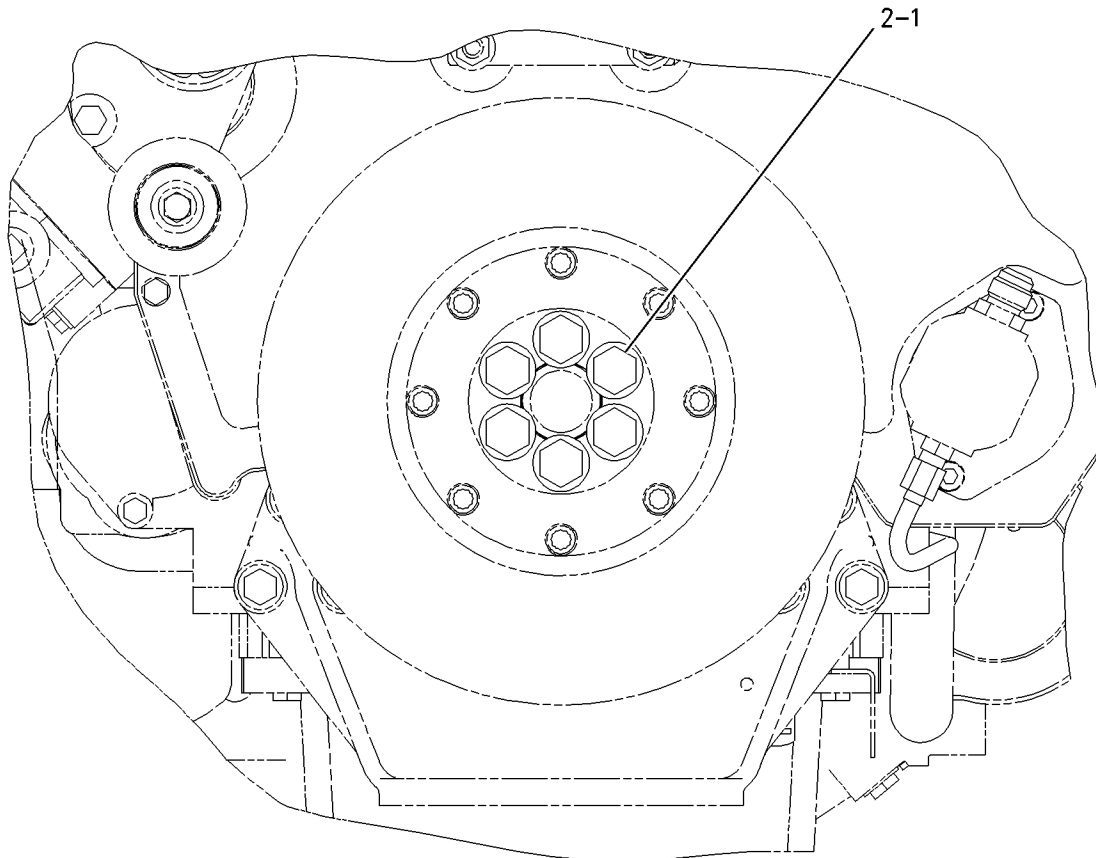
FOR USE WITH CAST IRON CRANKSHAFT PULLEYS. CANNOT BE USED WITH  
117-2795-PAGE 142  
AN ATTACHMENT

SMCS-1205, 7553

i02240573

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8247	6	WASHER-HARD (17X32X3.5-MM THK)						
M	2	1	8T-0281	6	BOLT (M16X2X80-MM)						

M-METRIC PART



FRONT VIEW

GRAPHIC #1

<END>

g00746590

# BASIC ENGINE

## 117-2793 FASTENER GP-FLYWHEEL

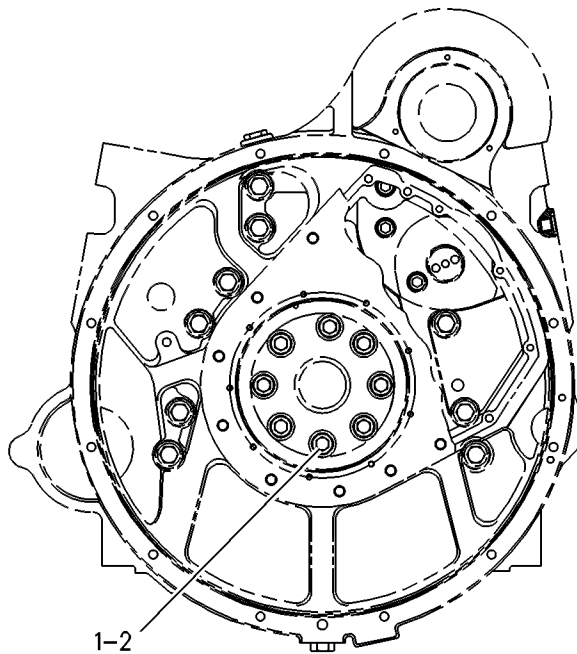
FOR USE WITH 117-2774—PAGE 75. CANNOT BE USED WITH 117-0208—PAGE 7,  
142-2024—PAGE 9  
AN ATTACHMENT

SMCS-1156

i01942326

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8247	8	WASHER-HARD (17X32X3.5MM THK)						
M	2	1	146-5132	8	BOLT (M16X2X135MM)						

M-METRIC PART



REAR VIEW

GRAPHIC #1

<END>

g00251373

# BASIC ENGINE

## 117-2794 FASTENER GP-FLYWHEEL

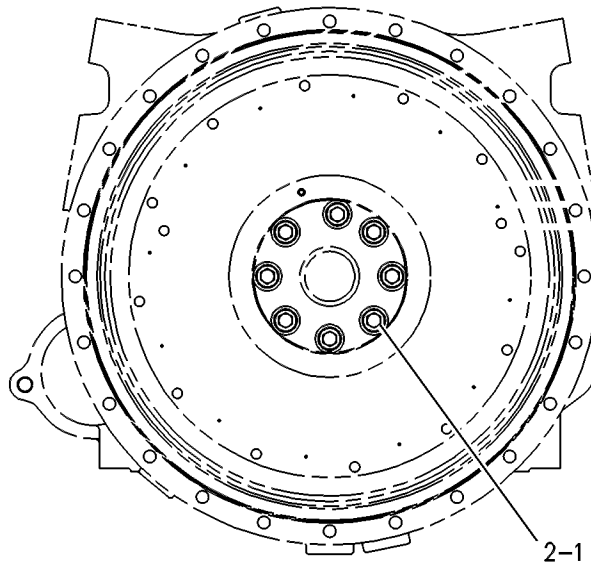
FOR USE WITH 123-0815-PAGE 76, 117-2774-PAGE 75. CANNOT BE USED WITH  
117-0206-PAGE 6, 117-0176-PAGE 5, 124-2665-PAGE 8  
AN ATTACHMENT

SMCS-1156

i02202361

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8247	8	WASHER-HARD (17X32X3.5-MM THK)						
M	2	1	9X-2021	8	BOLT-LOCKING (M16X2X45-MM)						

M-METRIC PART



REAR VIEW

GRAPHIC #1

<END>

g00251372



# BASIC ENGINE

## 126-0177 FASTENER GP-FLYWHEEL

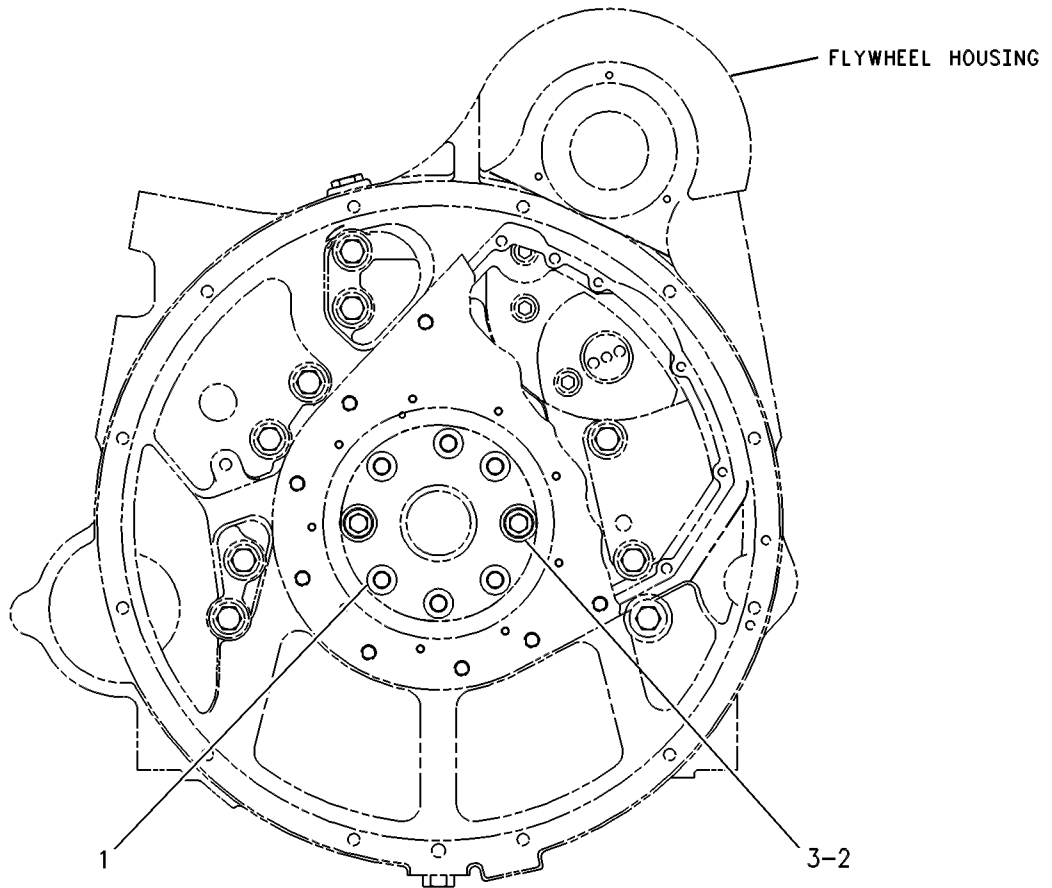
FOR USE WITH REAR POWER TAKE-OFF ENGINES WITHOUT A FLYWHEEL. CANNOT BE USED  
WITH FLYWHEEL GP  
AN ATTACHMENT

SMCS-1156

i01942339

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>5P-0997</b>	6	PLUG-SEAL						
	2	1	<b>5P-8247</b>	2	WASHER-HARD (17X32X3.5MM THK)						
M	3	1	<b>095-0706</b>	2	BOLT-SOCKET HEAD (M16X2X110MM)						

M-METRIC PART



REAR VIEW

GRAPHIC #1

<END>

g00251330

# BASIC ENGINE

## 155-4312 FASTENER GP-FLYWHEEL

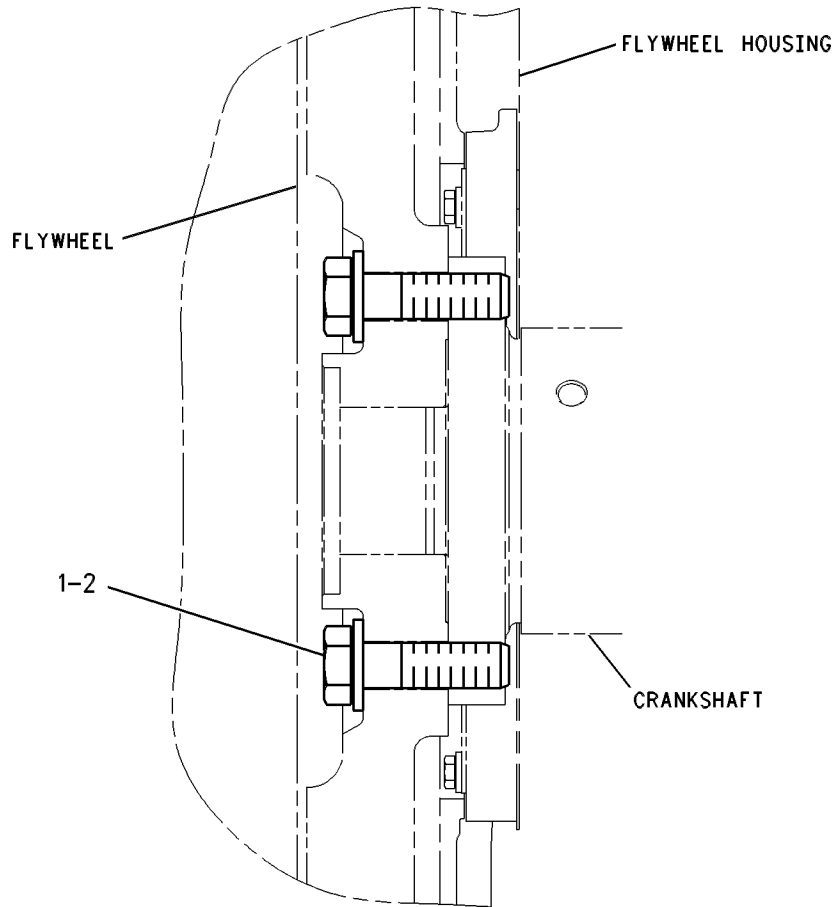
FOR USE WITH 155-4311—PAGE 79  
AN ATTACHMENT

SMCS-1156

i00967005

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	162-2776	8	BOLT-HEX HEAD (M16X2.0X55MM)						
	2	1	5P-8247	8	WASHER-HARD (3.5MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g00349028

# BASIC ENGINE

## 156-3678 FASTENER GP-FLYWHEEL

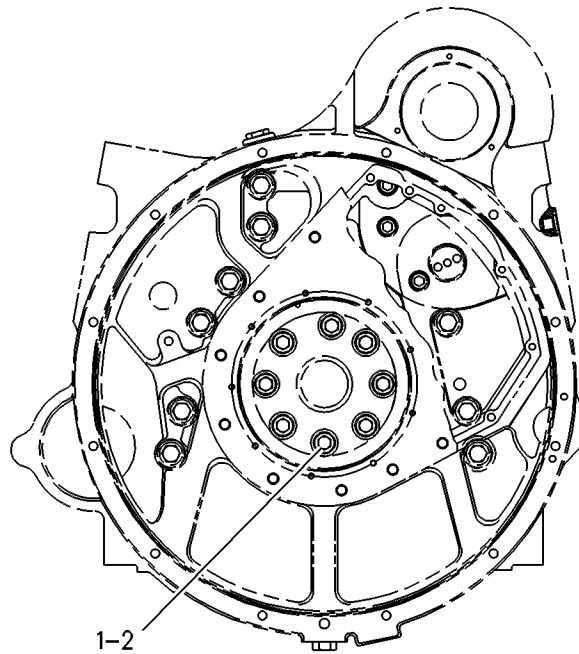
FOR USE WITH 155-6615-PAGE 80, REAR PTO  
AN ATTACHMENT

SMCS-1156

i01830553

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9H-1024	8	WASHER-HARD (17X30X6MM THK)						
M	2	1	6V-8154	8	BOLT (M16X2.0X150 MM)						

M-METRIC PART



REAR VIEW

<END>

GRAPHIC #1

g00251373

# BASIC ENGINE

## 162-7213 FASTENER GP-FLYWHEEL

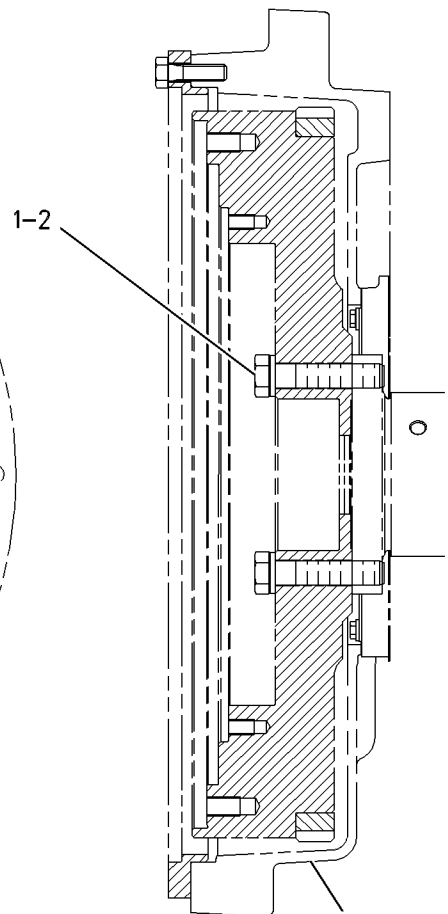
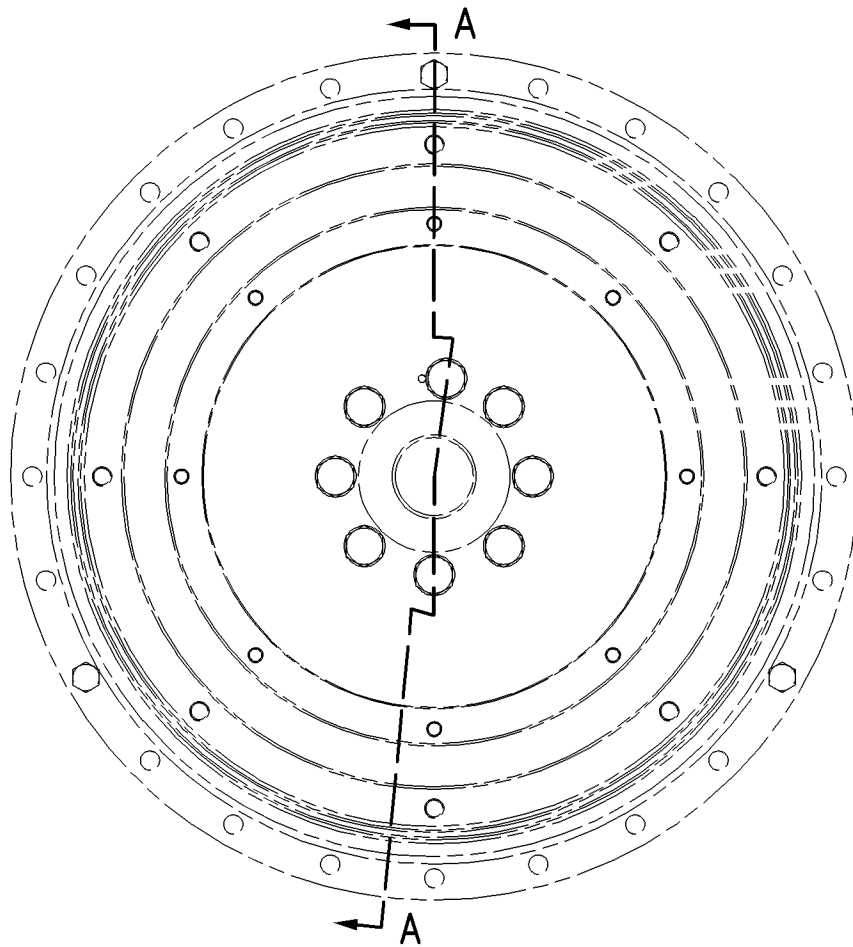
FOR USE WITH 155-4310—PAGE 78  
AN ATTACHMENT

SMCS-1156

i01239666

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	162-7181	8	BOLT-HEX HEAD						
	2	1	2S-0736	8	WASHER-HARD						

M-METRIC PART



FLYWHEEL HOUSING  
SECTION A-A

GRAPHIC #1

<END>

g00663170

# BASIC ENGINE

## 117-2773 FASTENER GP-FRONT HOUSING

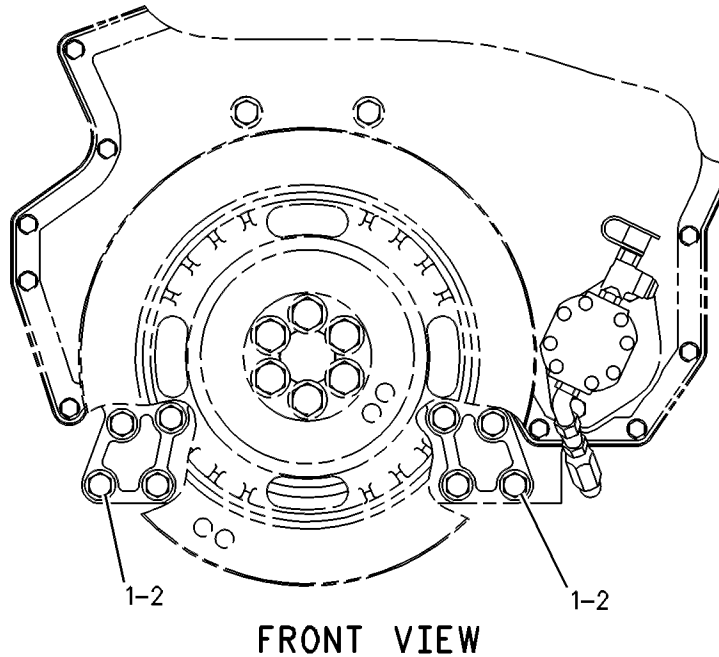
FOR THE LOWER HOUSING BLOCK JOINT WHEN NO FRONT SUPPORT IS PROVIDED  
CANNOT BE USED WITH 115-3004-PAGE 166, 129-2910-PAGE 167  
AN ATTACHMENT

SMCS-1151, 1162

i01942343

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	6V-7673	8	BOLT (M12X1.75X50-MM)						
	2	1	5P-8245	8	WASHER-HARD (13.5X25.5X3-MM THK)						

M-METRIC PART



FRONT VIEW

GRAPHIC #1

<END>

g00251389

# BASIC ENGINE

## 219-7440 FASTENER GP-FRONT HOUSING

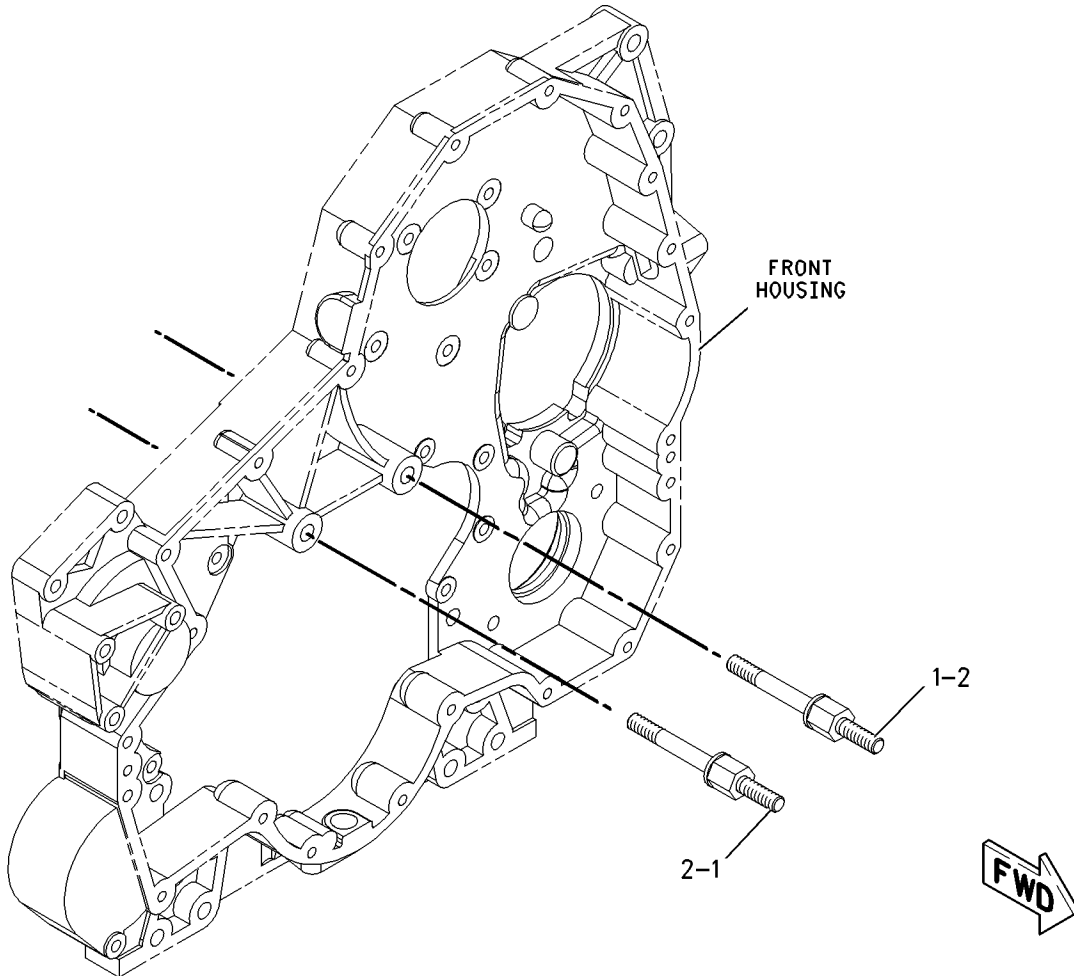
PROVIDES 2 FAN DRIVE MOUNTING STUDS 52MM IN LENGTH  
FOR USE WITH FAN DRIVE MOUNTING  
ALSO AN ATTACHMENT

SMCS-1151, 1162

i01879231

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	123-0764	2	STUD (M12X1.75X86.3-MM OAL)						
	2	1	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g00948687

# BASIC ENGINE

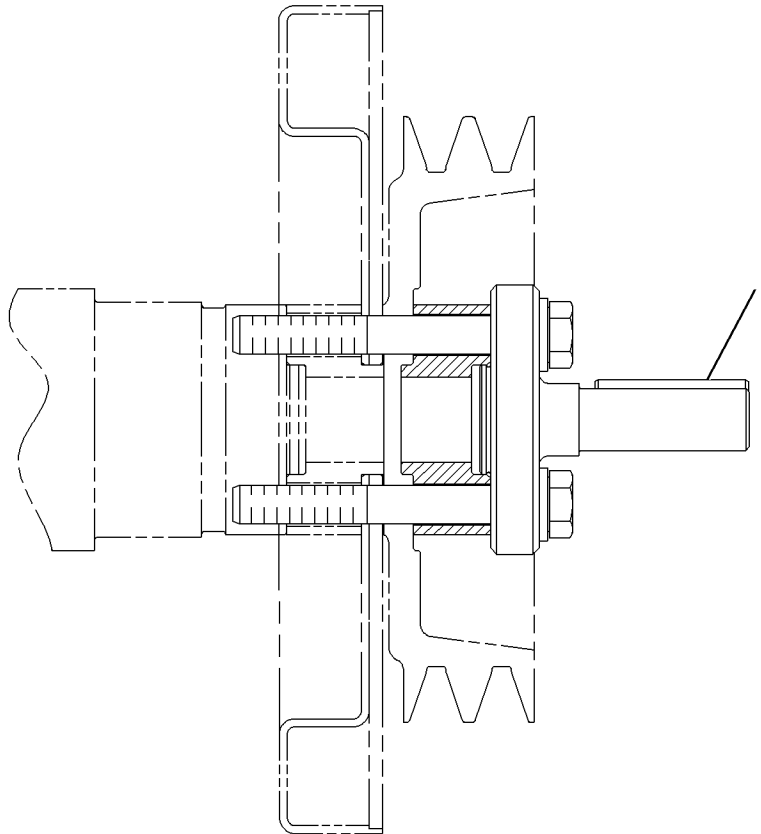
## 157-2608 FASTENER GP-STUB SHAFT

FOR USE WITH 149-5548-PAGE 163, 155-7415-PAGE 164  
AN ATTACHMENT

SMCS-1237

i01602081

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9F-2186	1	KEY						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00830171

# BASIC ENGINE

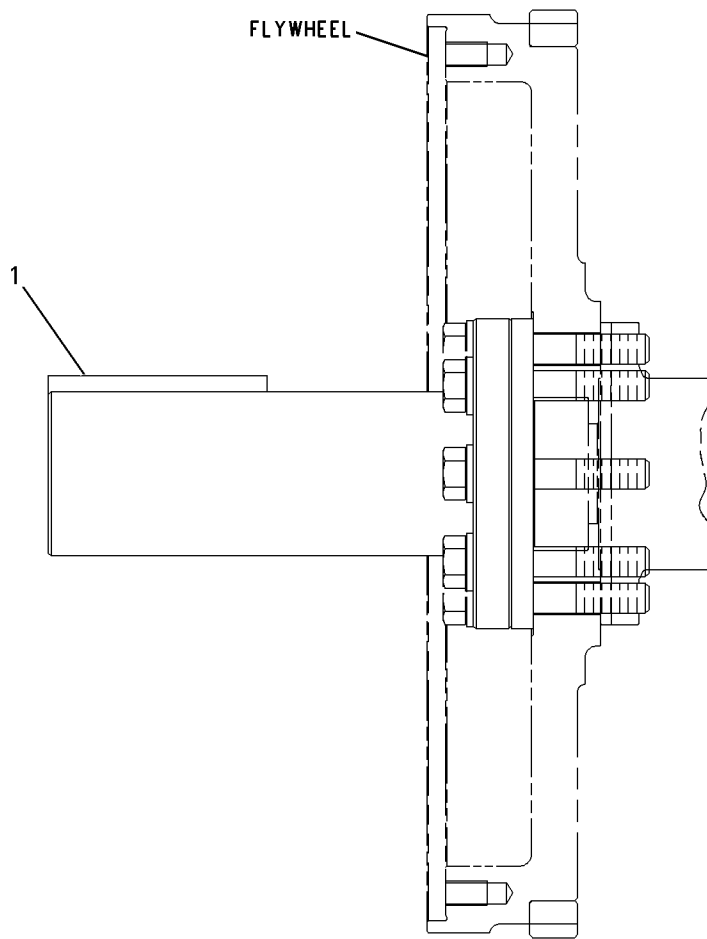
## 157-2609 FASTENER GP-STUB SHAFT

FOR USE WITH 155-7415-PAGE 164  
AN ATTACHMENT

SMCS-1237

i01602083

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1D-1158	1	KEY						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00830174



# BASIC ENGINE

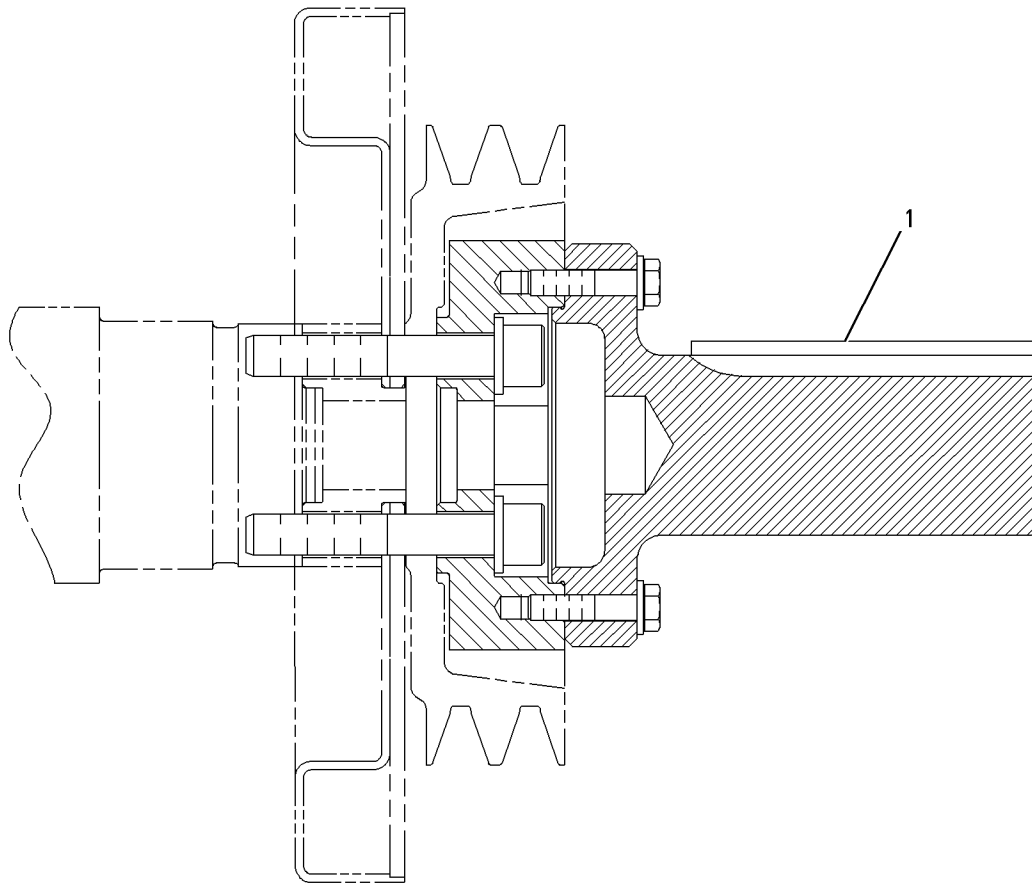
## 192-2065 FASTENER GP-STUB SHAFT

FOR USE WITH 192-1955-PAGE 165  
AN ATTACHMENT

SMCS-1237

i01602086

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1D-2328	1	KEY-WOODRUFF						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00830178

# BASIC ENGINE

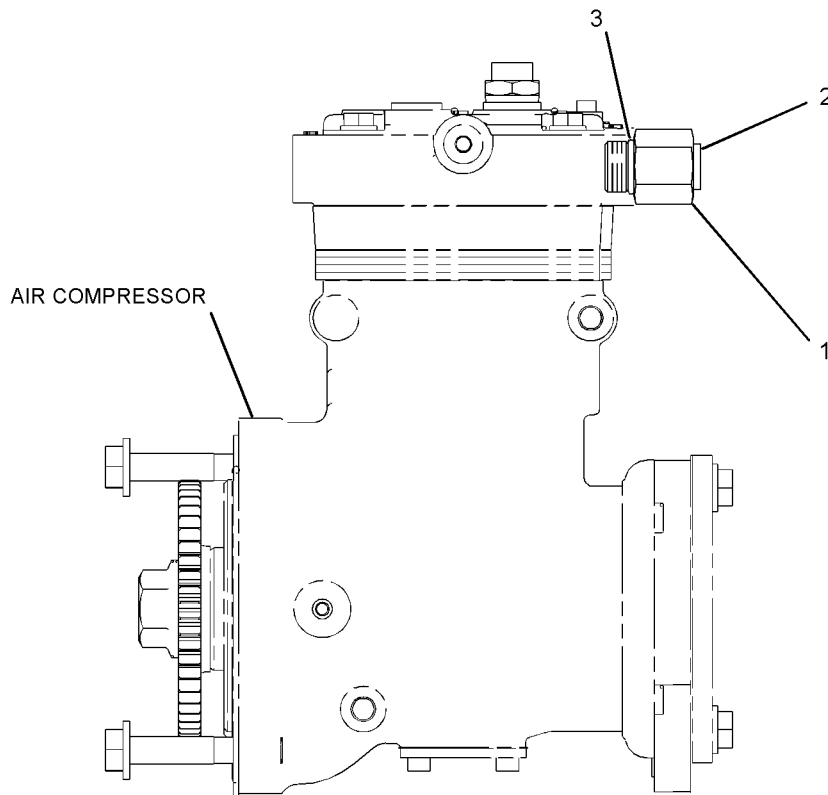
## 238-6874 FITTING GP-AIR COMPRESSOR

PROVIDES AIR COMPRESSOR DISCHARGE FITTING WITH FEMALE THREAD  
FOR USE WITH AIR COMPRESSOR  
AN ATTACHMENT

SMCS-1803

i02007011

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-4481	1	ADAPTER-O-RING (1/-14 NPTF THD)						
	2	1	2B-0858	1	PLUG-PIPE						
	3	1	6V-4589	1	SEAL-O-RING						



LEFT SIDE VIEW  
<END>

GRAPHIC #1

g01038730

# BASIC ENGINE

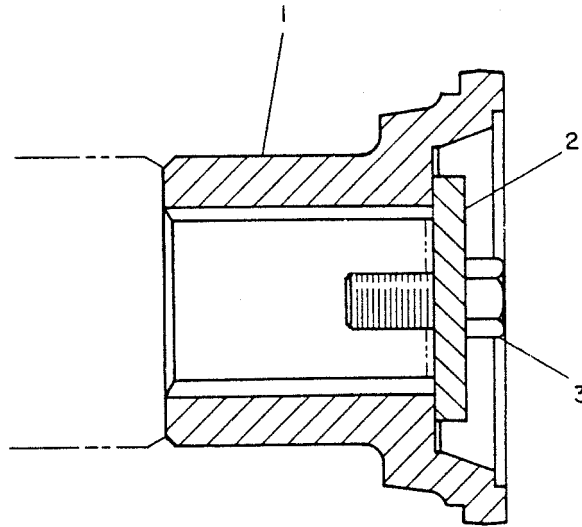
## 117-2747 FLANGE GP-OUTPUT SHAFT

FOR USE WITH CUSTOMER SUPPLIED PTO FLANGE  
AN ATTACHMENT

SMCS-1014

i01102495

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7C-6496	1	FLANGE						
	2	1	5V-7190	1	WASHER-HARD (6MM THK)						
	3	1	0L-1351	1	BOLT (3/8-16X.875IN)						



GRAPHIC #1

<END>

g00185991

# BASIC ENGINE

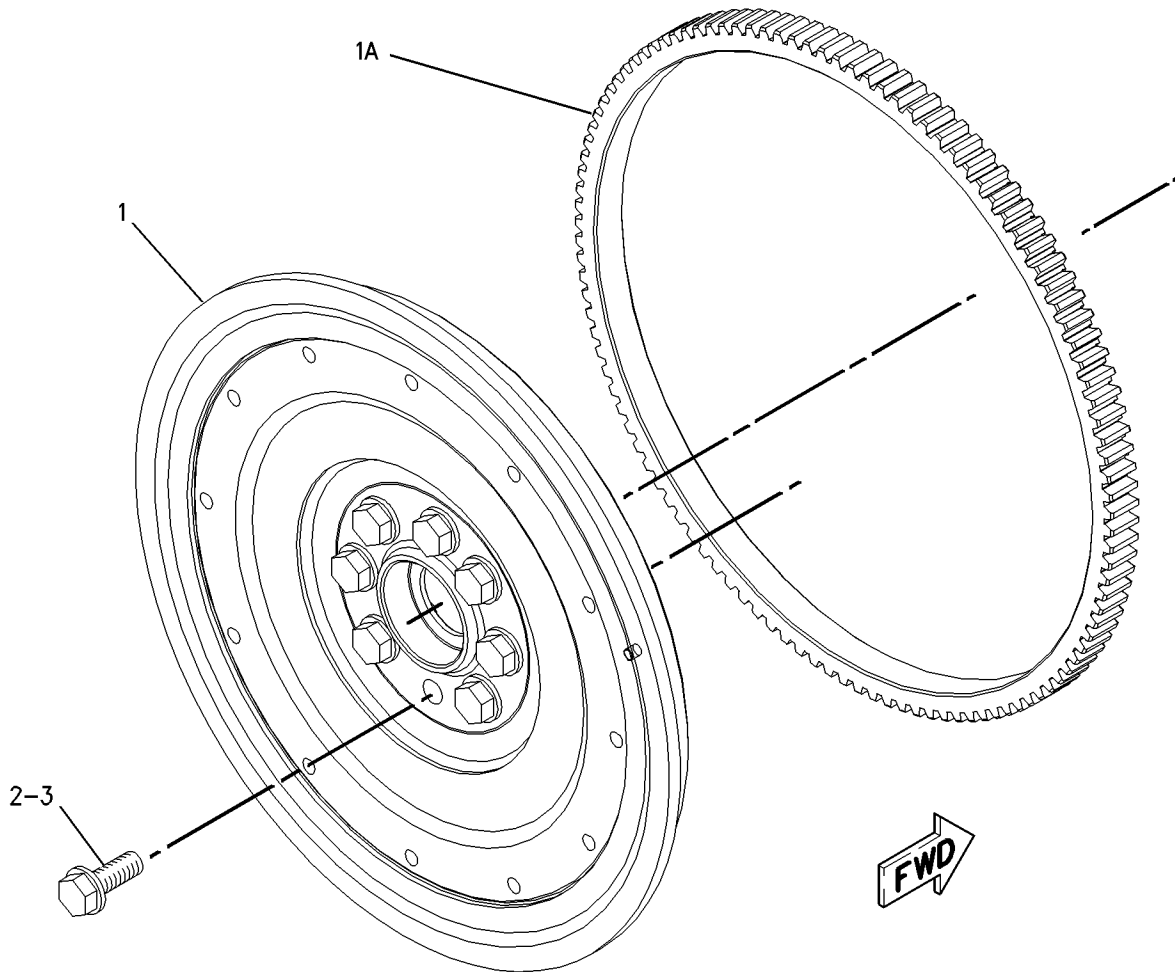
## 102-3596 FLYWHEEL GP AN ATTACHMENT

SMCS-1156

i01494779

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	163-0424	1	FLYWHEEL AS						
	1A	1	4N-2514	1	GEAR (113 TEETH)						
M	2	1	9X-2021	8	BOLT-LOCKING (M16X2X45MM)						
	3	1	5P-8247	8	WASHER-HARD (17X32X3.5MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g00779246

# BASIC ENGINE

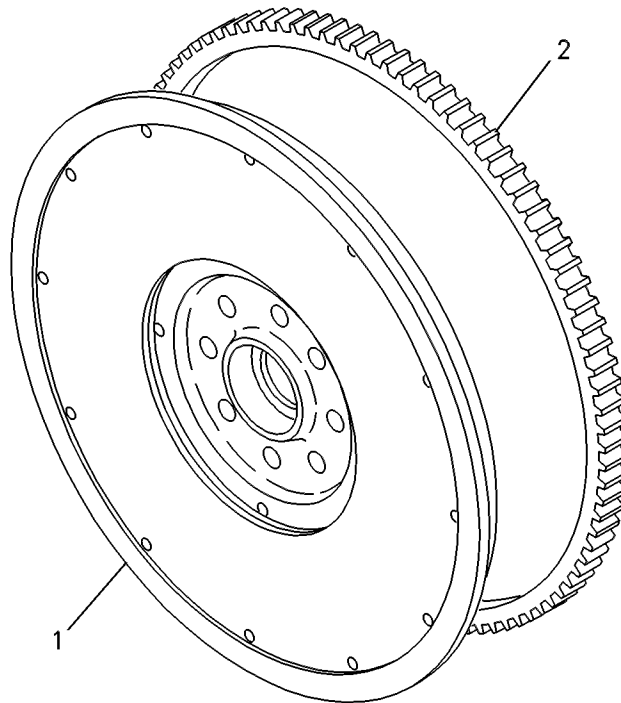
## 117-2774 FLYWHEEL GP

394-MM (15.5-INCH). FLAT  
 FOR USE WITH 117-2793-PAGE 61, 117-2794-PAGE 62  
 AN ATTACHMENT

SMCS-1156

i00829977

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4P-8502	1	FLYWHEEL AS						
	2	1	4N-2514	1	GEAR (113 TEETH)						



GRAPHIC #1

<END>

g00251390

# BASIC ENGINE

## 123-0815 FLYWHEEL GP

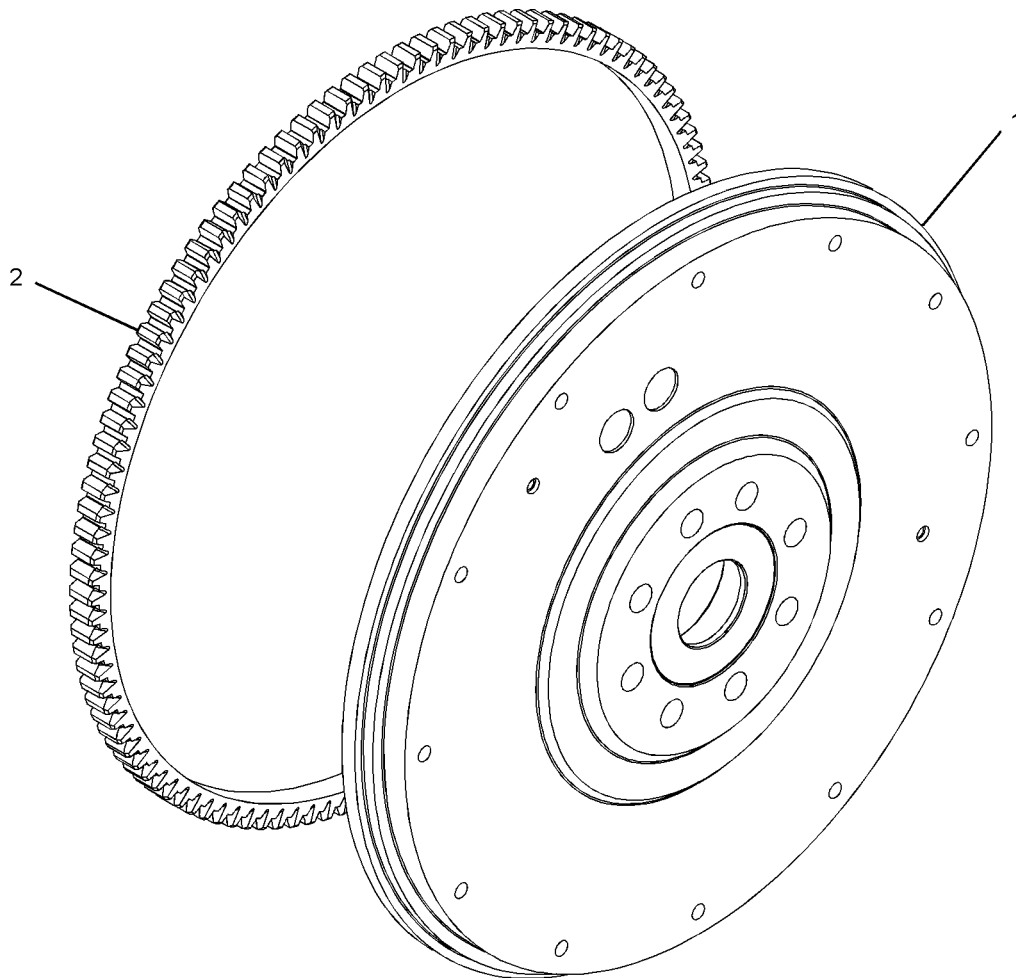
394-MM (15.5-INCH). FLAT

FOR USE WITH 7-SPRING CLUTCH, 117-2793-PAGE 61, 117-2794-PAGE 62  
AN ATTACHMENT

SMCS-1156

i02177011

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	256-9652	1	FLYWHEEL AS						
	2	1	256-9651	1	GEAR-FLYWHEEL (113-TEETH)						



GRAPHIC #1

<END>

g01102856

# BASIC ENGINE

## 123-0816 FLYWHEEL GP

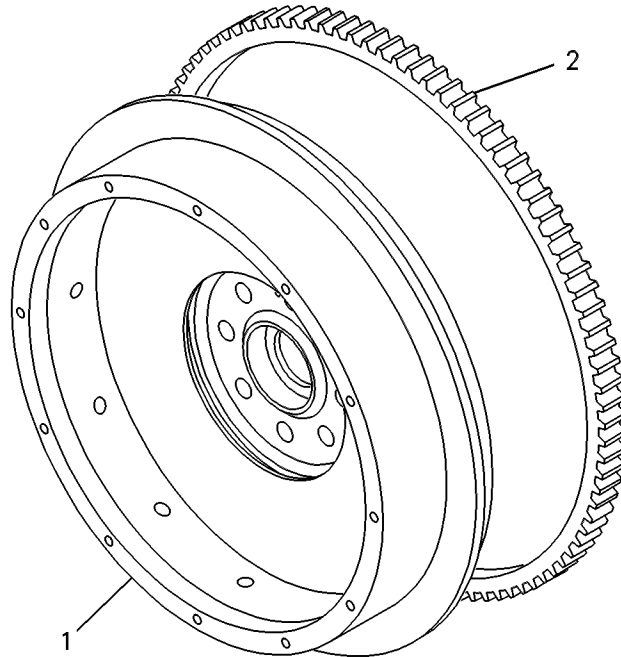
356-MM (14-INCH)

FOR USE WITH 117-2794-PAGE 62, 117-2793-PAGE 61  
AN ATTACHMENT

SMCS-1156

i00830476

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4P-8494	1	FLYWHEEL AS						
	2	1	4N-2514	1	GEAR (113 TEETH)						



GRAPHIC #1

<END>

g00251347

# BASIC ENGINE

## 155-4310 FLYWHEEL GP

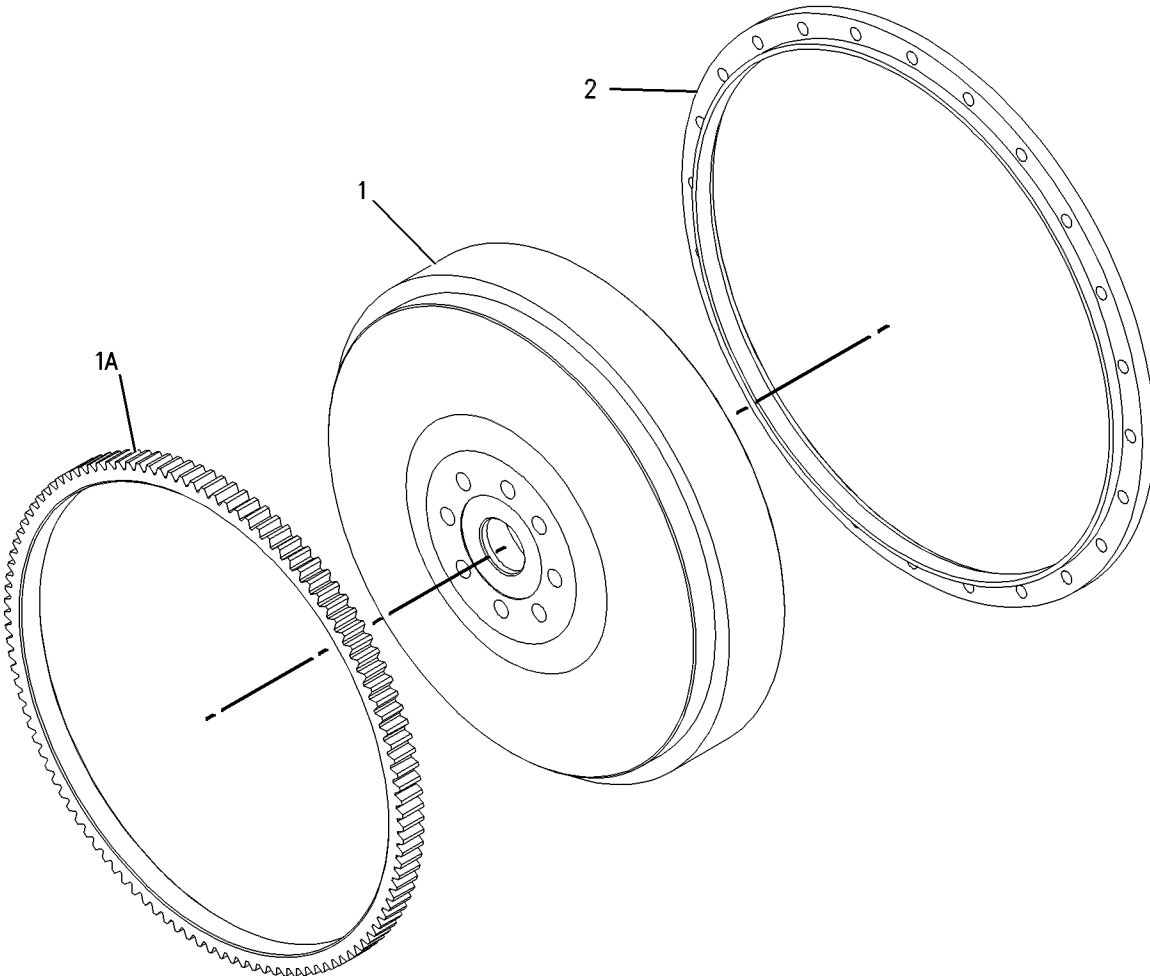
14 INCH

FOR USE WITH SAE NO.1 FLYWHEEL HOUSING  
AN ATTACHMENT

SMCS-1156

i00919179

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	158-5909	1	FLYWHEEL AS						
	1A	1	4N-2514	1	GEAR (113 TEETH)						
	2	1	133-5554	1	ADAPTER-FLYWHEEL HOUSING						



GRAPHIC #1

<END>

g00535540



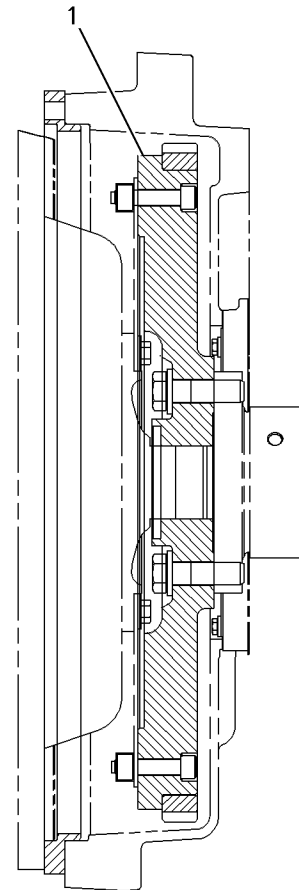
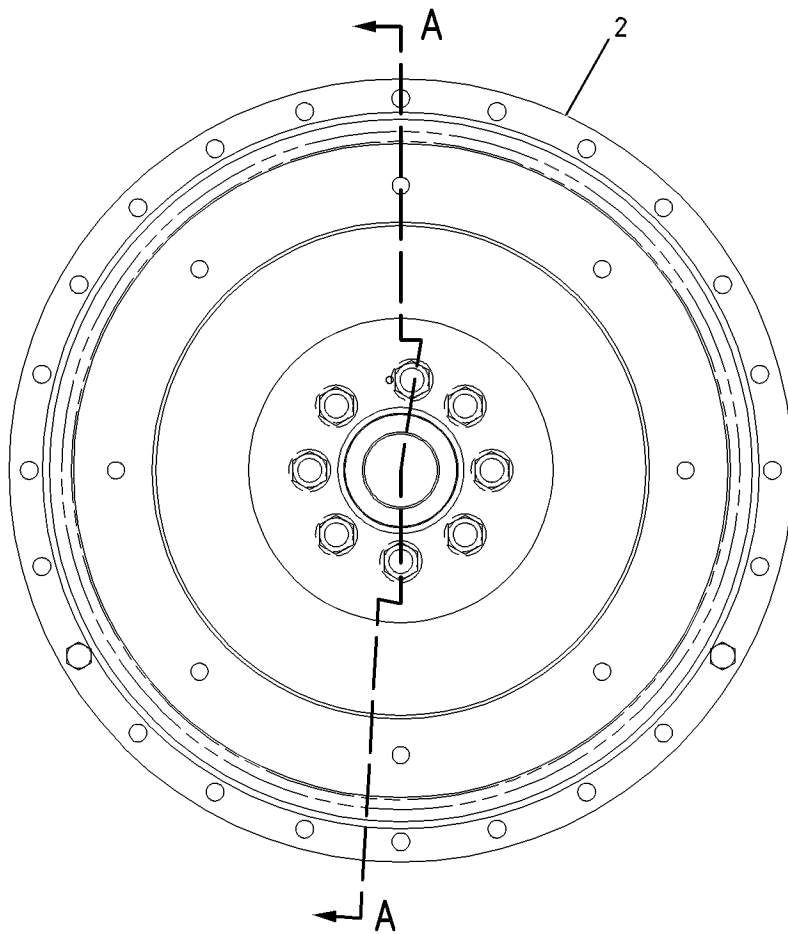
# BASIC ENGINE

## 155-4311 FLYWHEEL GP FOR USE WITH SAE NO. 1 FLYWHEEL HOUSING AN ATTACHMENT

SMCS-1156

i01697105

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	125-1276	1	FLYWHEEL AS						
		1	4N-2514	1	GEAR (113 TEETH)						
2		1	133-5554	1	ADAPTER-FLYWHEEL HOUSING						



SECTION A-A

GRAPHIC #1

<END>

g00349026

# BASIC ENGINE

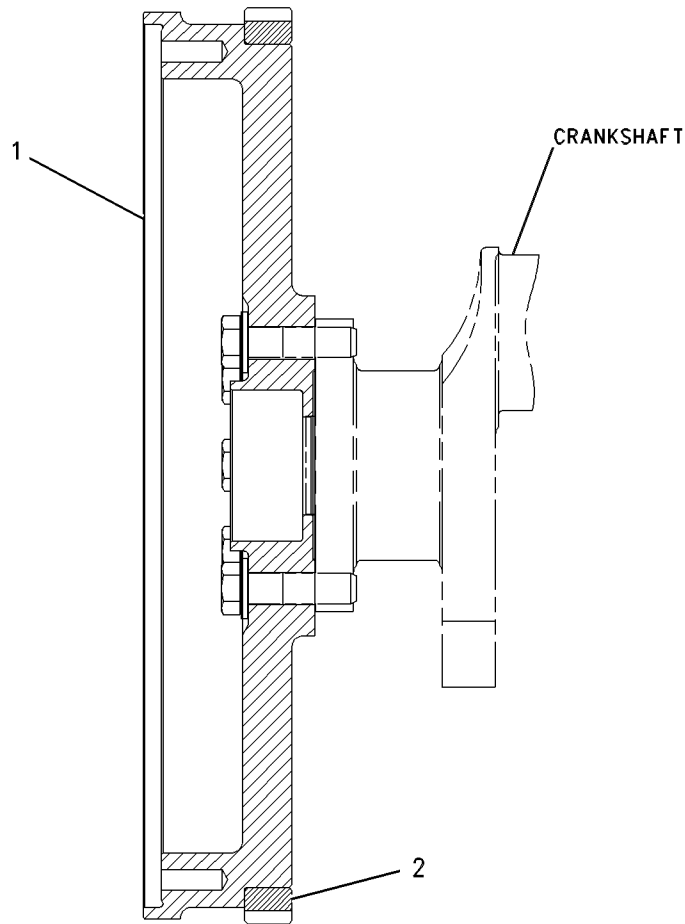
## 155-6615 FLYWHEEL GP

SAE NO. 1  
AN ATTACHMENT

SMCS-1156

i00943472

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	103-0712	1	FLYWHEEL AS						
	2	1	4N-2514	1	GEAR (113 TEETH)						



GRAPHIC #1

<END>

g00354693

# BASIC ENGINE

## 174-1581 FLYWHEEL GP

NO. 2

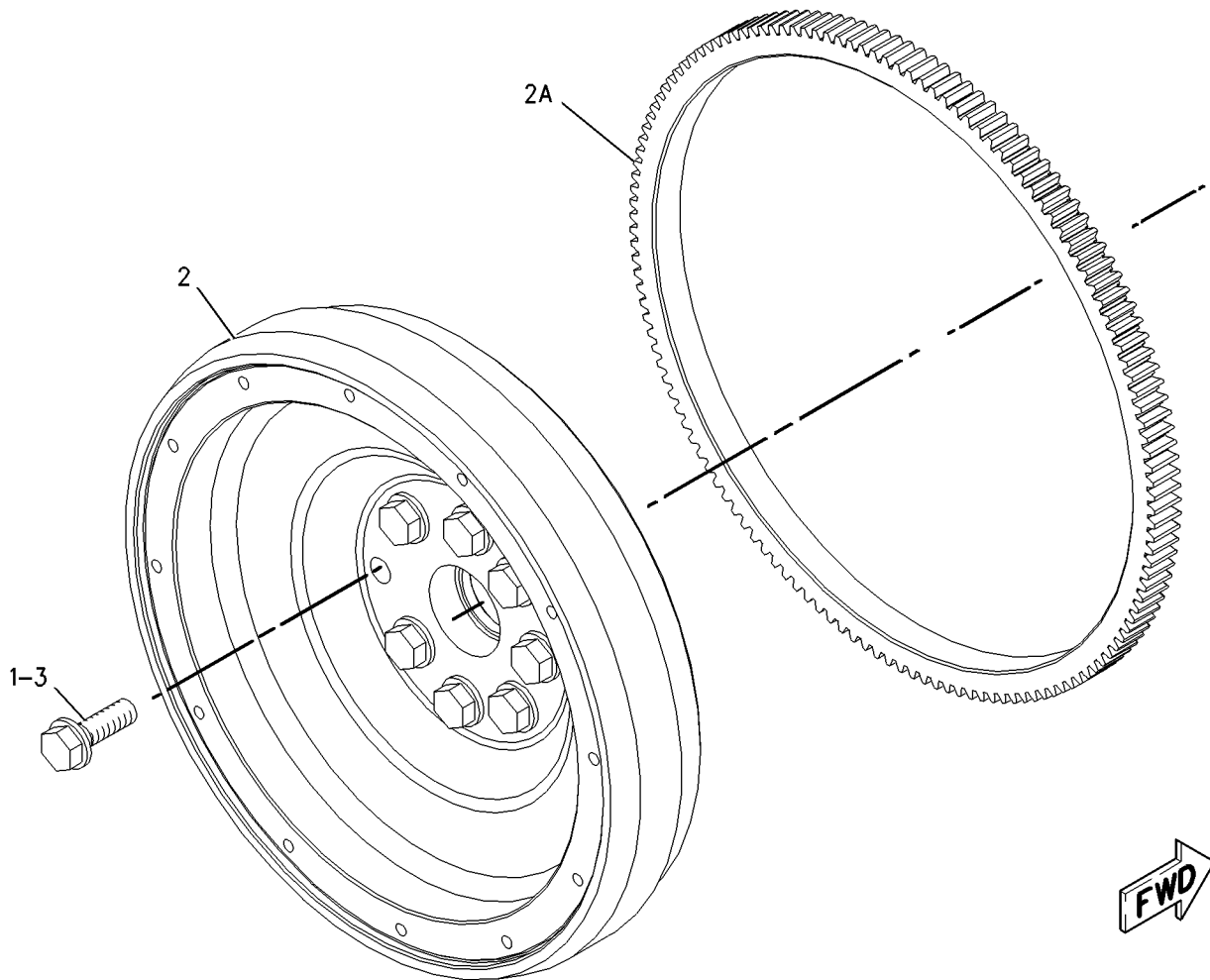
FOR USE WITH NO. 2 HOUSING GP  
AN ATTACHMENT

SMCS-1156

i01787228

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	162-2776	8	BOLT-HEX HEAD (M16X2.0X55MM)						
	2	1	224-3240	1	FLYWHEEL AS						
	2A	1	160-8185	1	GEAR-FLYWHEEL (138 TEETH)						
	3	1	5P-8247	8	WASHER-HARD (17X32X3.5MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g00915284

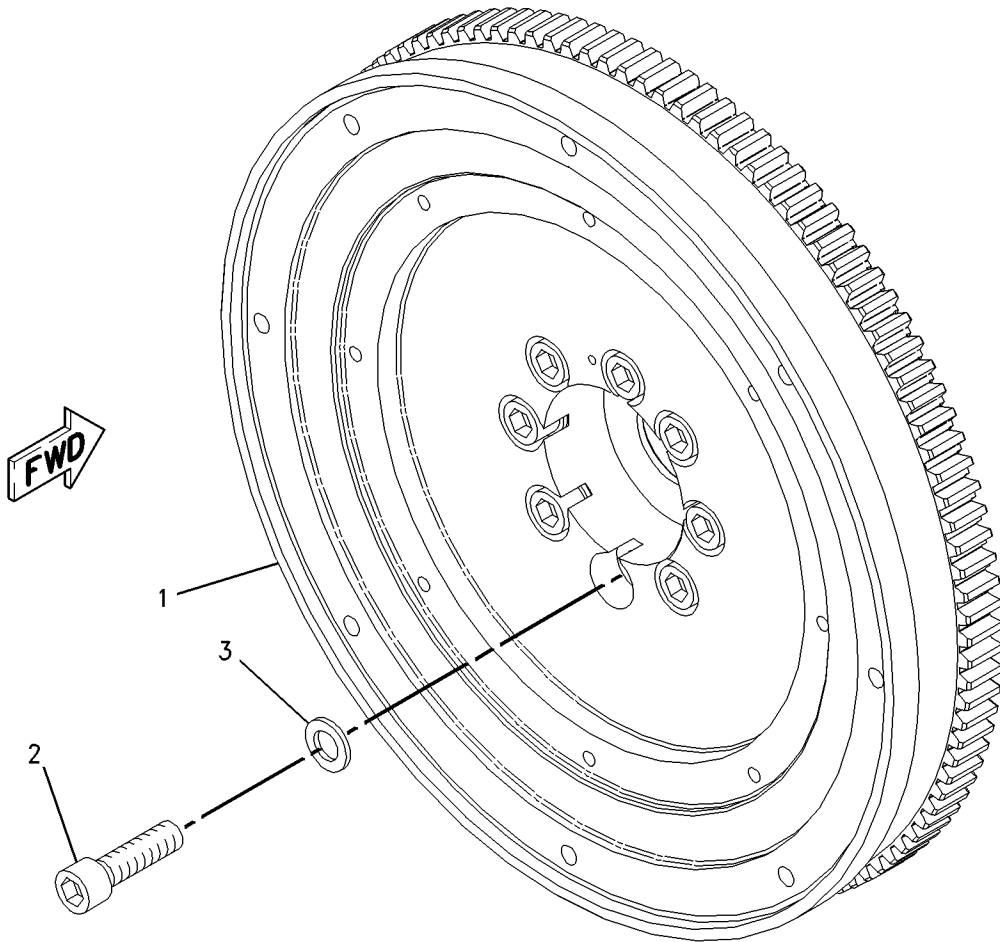
# BASIC ENGINE

## 200-0875 FLYWHEEL GP FOR USE WITH SAE NO. 1 FLYWHEEL HOUSING AN ATTACHMENT

SMCS-1156

i01506577

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	199-1368	1	FLYWHEEL AS						
		1	4N-2514	1	GEAR (113 TEETH)						
	2	1	203-1074	8	BOLT-SOCKET HEAD						
	3	1	2S-5658	8	WASHER-HARD (17X29X3MM THK)						



GRAPHIC #1

<END>

g00783536

# BASIC ENGINE

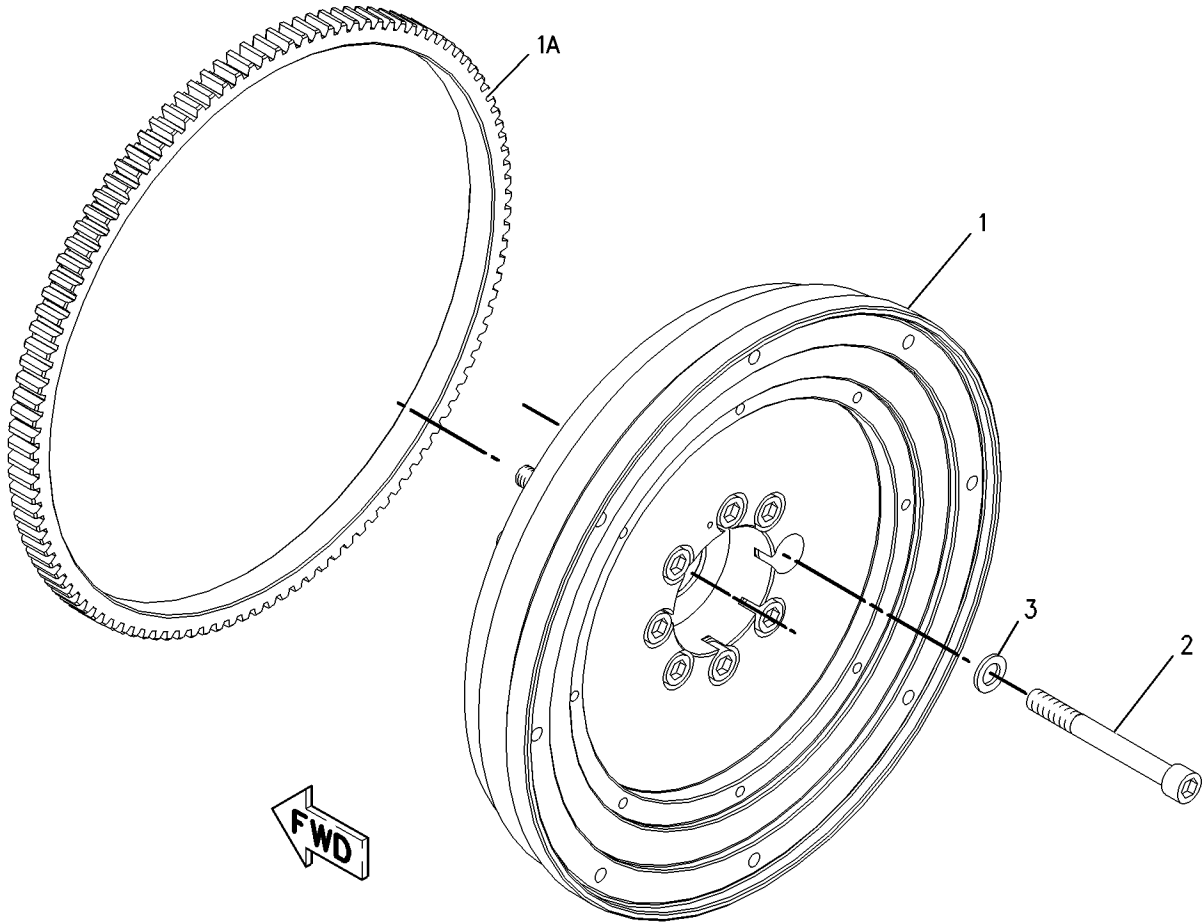
## 217-8206 FLYWHEEL GP

FOR USE WITH SAE NO. 1 FLYWHEEL HOUSING, REAR POWER TAKE-OFF  
AN ATTACHMENT

SMCS-1156

i01999350

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	199-1368	1	FLYWHEEL AS						
	1A	1	4N-2514	1	GEAR (113 TEETH)						
	2	1	217-8205	8	BOLT-SOCKET HEAD						
	3	1	2S-5658	8	WASHER-HARD (17X29X3MM THK)						



GRAPHIC #1

<END>

g00869999

# BASIC ENGINE

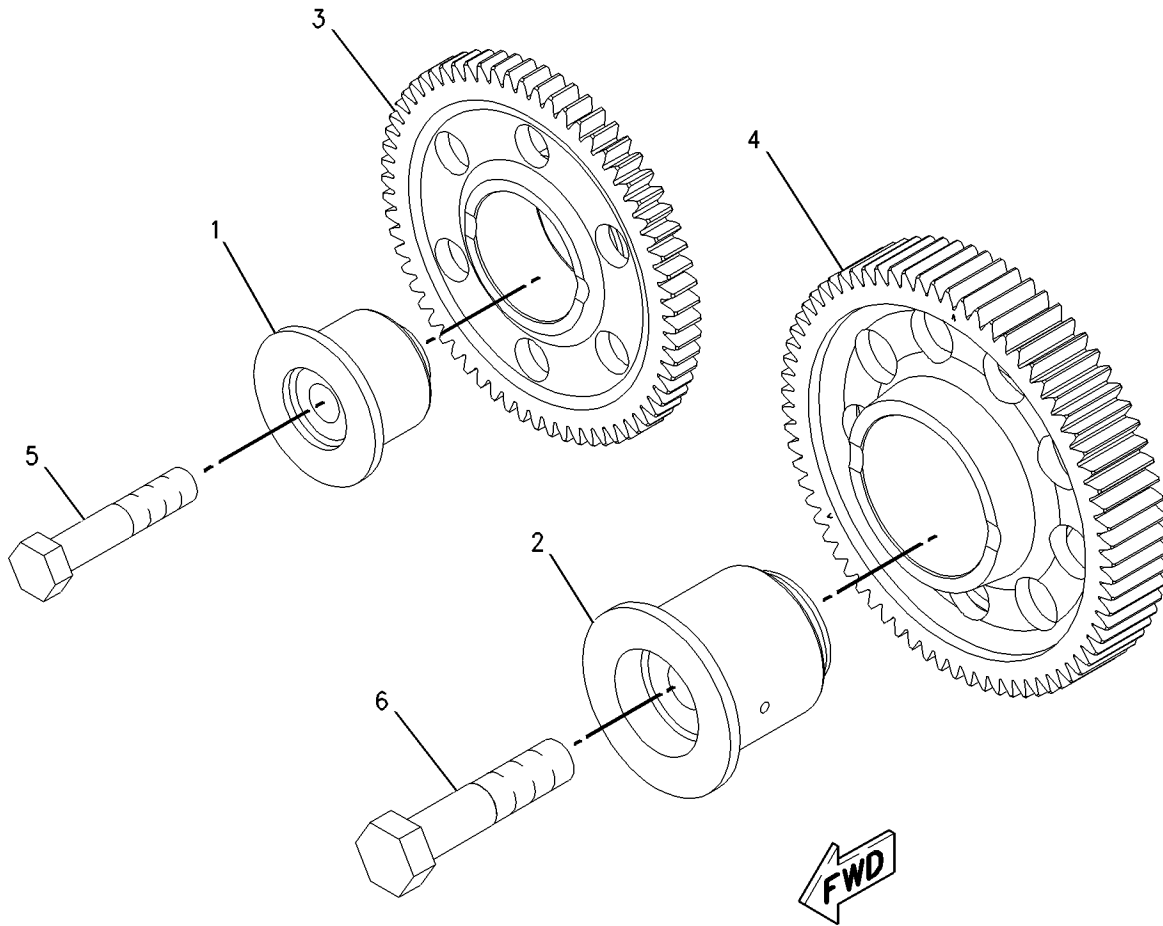
## 222-3088 GEAR GP-FRONT

SMCS-1206

i01839630

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7C-7851	1	SHAFT						
	2	1	218-7270	1	SHAFT						
	3	1	222-3902	1	GEAR AS (64 TEETH)						
		1	7C-7852	1	BEARING						
	4	1	222-3905	1	GEAR AS (CAM IDLER) (71 TEETH)						
M	5	1	8T-0281	1	BOLT (M16X2X80MM)						
M	6	1	8T-0360	1	BOLT (M20X2.5X90 MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00939640

# BASIC ENGINE

## 219-7469 GEAR GP-REAR

OUTPUT RATIO IS 1:1.3, REAR FACING ON SAE NO. 1 FLYWHEEL HOUSING  
FOR USE WITH 117-2793-PAGE 61, OR, 126-0177-PAGE 63  
AN ATTACHMENT

SMCS-1204

i01996484

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4P-3325	1	PLATE-THRUST						
	2	1	4P-3647	1	GEAR AS (43-TEETH)						
		1	9M-2418	1	BEARING-SLEEVE						
	3	1	4P-4178	1	WASHER-THRUST						
	4	1	4P-4181	1	WASHER-THRUST						
	5	1	7C-1445	1	COVER						
	7	1	107-5806	1	GEAR (46-TEETH)						
	8	1	107-5807	1	GEAR (35-TEETH)						
	9	1	109-5290	1	CARRIER AS-BEARING						
		1	5S-8543	1	BEARING-SLEEVE						
	10	1	109-5292	1	SHAFT-IDLER GEAR						
	11	1	110-5145	1	SHAFT-OUTPUT						
	12	1	157-0058	1	COVER AS						
		1	3F-6795	2	DOWEL						
	13	1	160-2283	1	GASKET						
	14	1	219-7468	1	HOUSING AS-FLYWHEEL						
		1	3F-6795	4	DOWEL						
		1	5S-8543	1	BEARING-SLEEVE						
	15	1	226-4757	1	SEAL GP-CRANKSHAFT						
		1	7C-1728	1	SEAL GP-CRANKSHAFT						
		1	107-6280	1	SEAL-O-RING						
	16	1	228-1616	1	COVER						
	17	1	233-8517	1	GASKET						
	18	1	235-2496	3	WASHER-HARD						
	19	1	061-9455	1	SEAL-O-RING						
M	20	1	095-9805	12	BOLT-SOCKET HEAD (M14X2X40-MM)						
	21	1	3E-6768	1	SEAL-LIP TYPE						
	22	1	5P-7701	1	SEAL-O-RING						
	23	1	5P-8246	9	WASHER-HARD (15.5X29X3-MM THK)						
	24	1	6V-1197	1	SEAL-O-RING						
	25	1	6V-5048	1	SEAL-O-RING						
	26	1	6V-5049	2	SEAL-O-RING						
	27	1	6V-5134	1	SEAL-O-RING						
M	28	1	6V-5230	2	BOLT (M10X1.5X60-MM)						
	29	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						
M	30	1	6V-8214	26	BOLT (M6X1X20-MM)						
M	31	1	6V-8490	4	BOLT (M6X1X25-MM)						
M	32	1	6V-8837	2	BOLT (M6X1X16-MM)						
M	33	1	7X-0870	2	BOLT (M8X1.25X140-MM)						
	34	1	8L-2786	2	SEAL-O-RING						
M	35	1	8T-3957	8	BOLT-SOCKET HEAD (M12X1.75X30-MM)						
	36	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	37	1	9S-4182	1	PLUG						
	38	1	9S-4185	2	PLUG						
	39	1	9S-8004	2	PLUG						
	40	1	9S-9334	1	PLUG						
	41	1	9X-4576	1	SEAL-O-RING						
	42	1	9X-7287	1	SEAL-O-RING						
	43	1	9X-8267	30	WASHER (6.6X12X2-MM THK)						

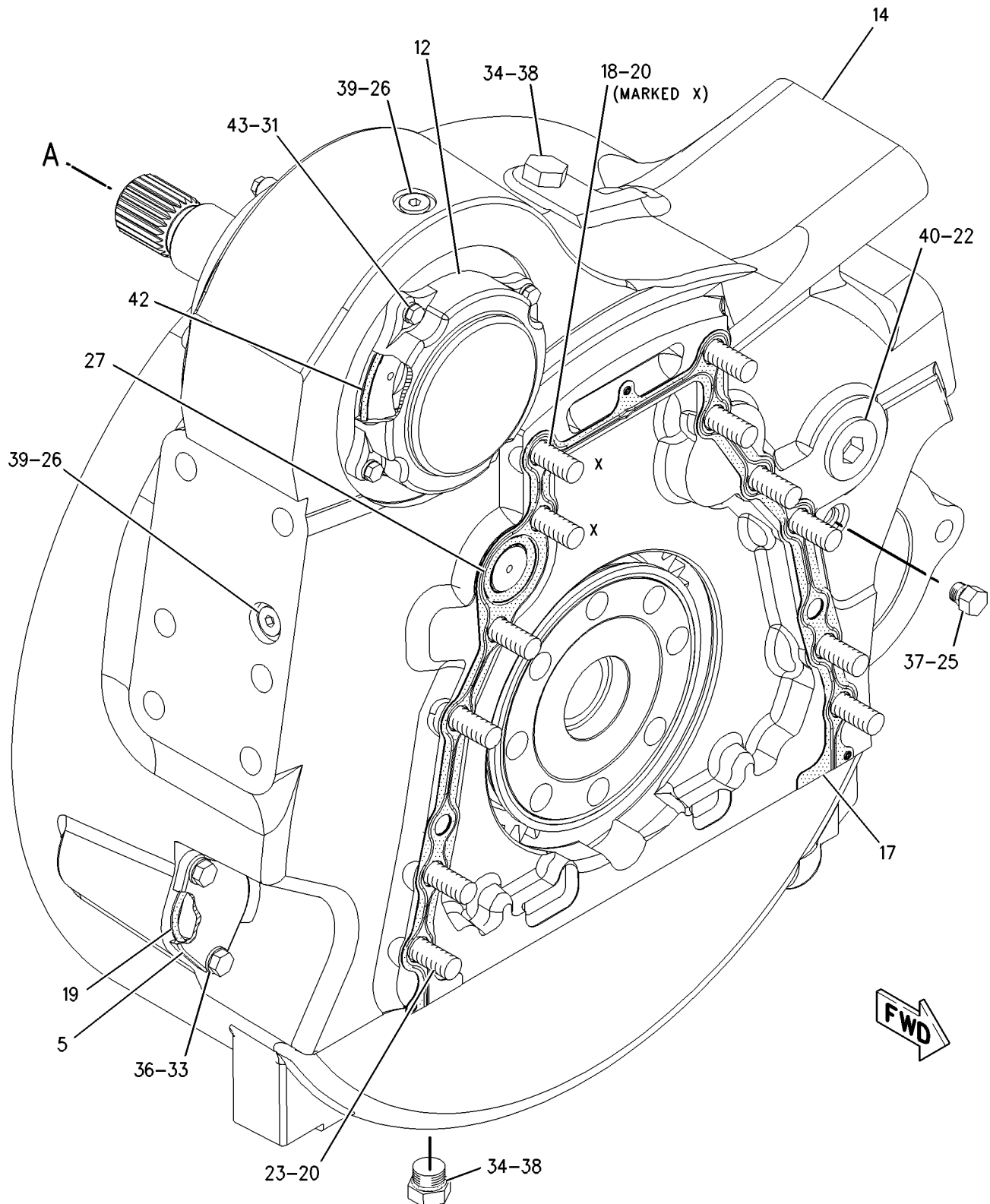
M-METRIC PART

# BASIC ENGINE

219-7469 GEAR GP-REAR (contd.)

i01996484

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



GRAPHIC #1

g00998965

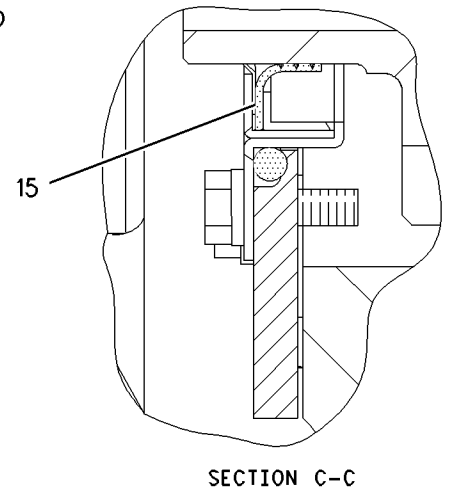
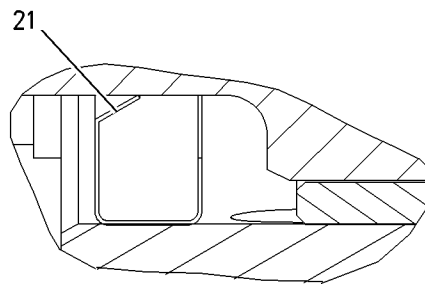
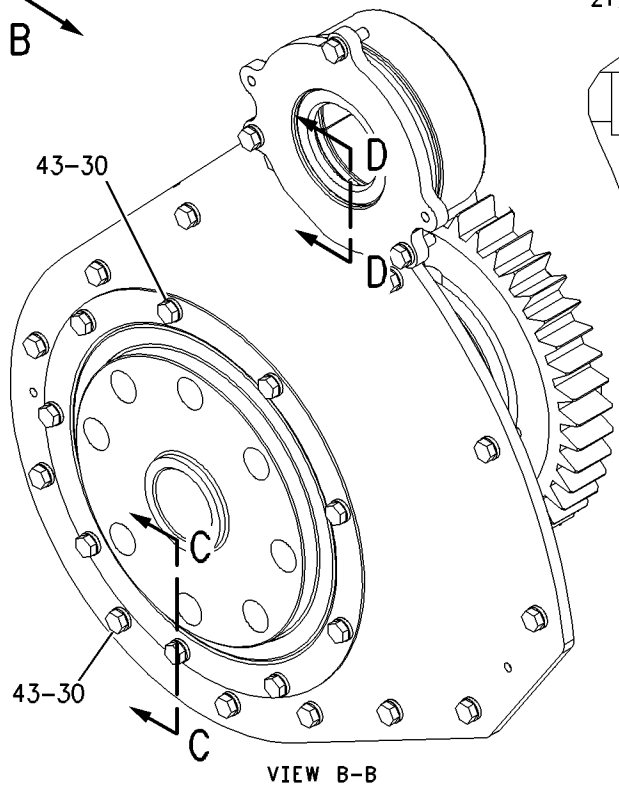
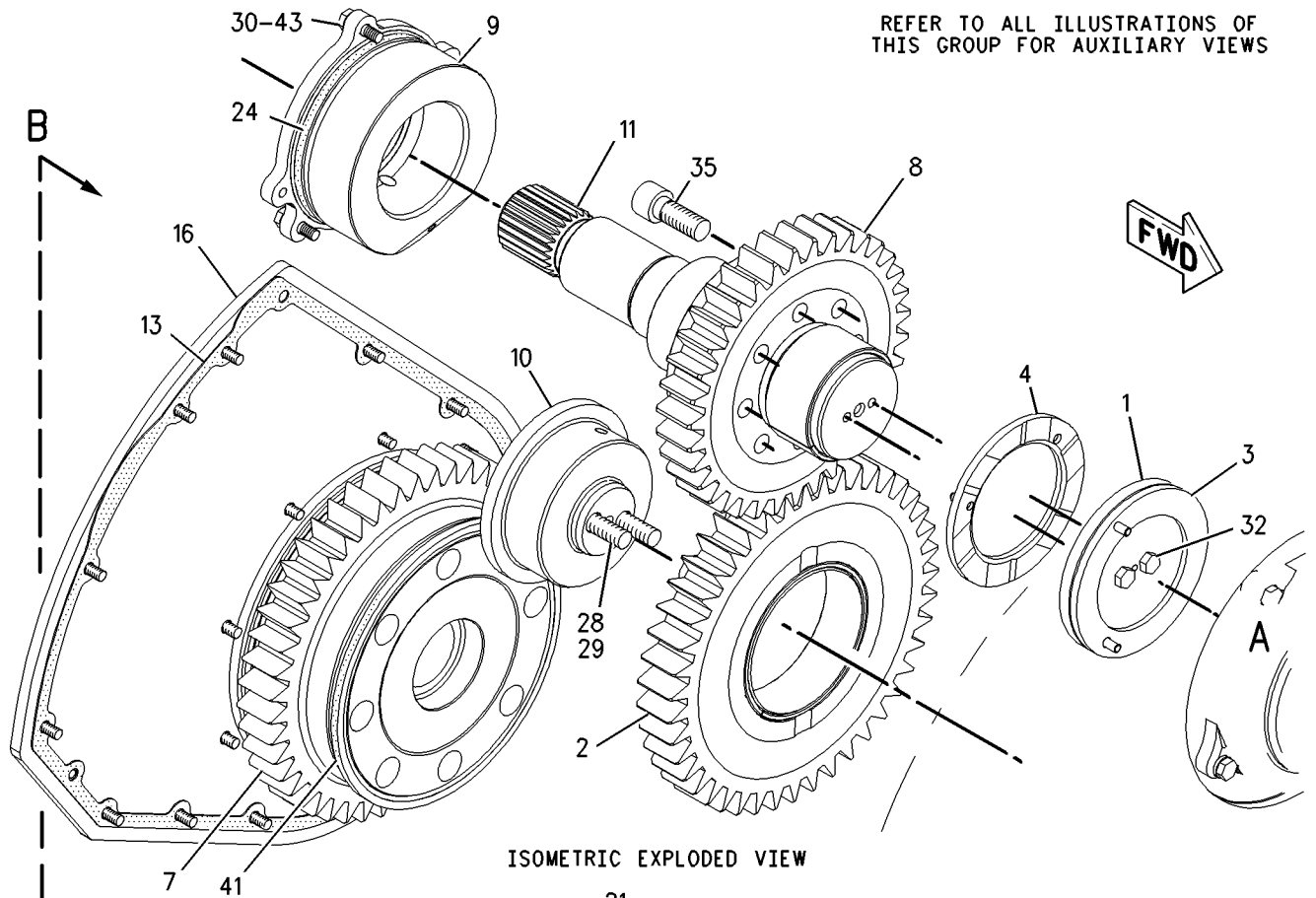


# BASIC ENGINE

219-7469 GEAR GP-REAR (contd.)

i01996484

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



GRAPHIC #2

<END>

g00998967

# BASIC ENGINE

## 225-9556 GEAR GP-REAR

S/N: GLS1-118

ALSO AN ATTACHMENT

SMCS-1204

i02206816

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME 1 2 3 4 5 6 (PRODUCT LEVEL)	SEE PAGE
	1	2	178-6279	1	GEAR (63-TEETH)	
	2	2	187-8203	2	GEAR AS-DRIVE (14-TEETH)	
					(EACH INCLUDES)	
		2	4F-6024	1	PIN	
	3	2	151-1339	1	GEAR AS-IDLER (70-TEETH)	
		2	152-7254	1	BEARING-SLEEVE	
	4	2	9X-4576	1	SEAL-O-RING	
	5	2	147-3723	2	GEAR AS-IDLER (49-TEETH)	
					(EACH INCLUDES)	
		2	152-7254	1	BEARING-SLEEVE	
	6	2	144-2918	2	COVER AS	
					(EACH INCLUDES)	
		2	8M-9315	1	BEARING-SLEEVE	
	7	2	170-5941	2	SEAL-O-RING	
M	8	2	6V-3822	12	BOLT (M10X1.5X35-MM)	
	9	2	5P-4141	6	BOLT-SELF-LOCKING (1/2-13X1.75-IN)	
	10	2	2D-9572	2	SEAL-O-RING	
	14	2	153-1325	3	SHAFT-IDLER GEAR	
	16	2	225-9554	1	PLATE AS (REAR GEAR)	
		2	7N-5683	2	DOWEL	
M	17	2	8T-0646	16	BOLT (M12X1.75X110-MM)	
	18	2	6V-5048	1	SEAL-O-RING	
	19	2	187-8236	1	ADAPTER AS (REAR POWER TAKE-OFF) (LH)	
		2	160-8184	1	BEARING-SLEEVE	
	20	2	9S-4182	1	PLUG	
M	21	2	8T-0226	7	BOLT (M14X2X45-MM)	
	22	2	9S-8003	4	PLUG	
	23	2	5P-7814	5	SEAL-O-RING	
	24	2	5P-2618	1	CONNECTOR	
	25	2	030-7942	1	ELBOW	
	26	2	6V-5049	1	SEAL-O-RING	
	27	2	7X-7730	1	PLUG-PIPE	
M	28	1	108-1782	1	BOLT-SOCKET HEAD (M12X1.75X90-MM)	
M	29	1	8T-0106	3	BOLT (M12X1.75X100-MM)	
M	30	1	3E-6910	1	BOLT-SOCKET HEAD (M12X1.75X70-MM)	
M	31	1	8T-6991	1	BOLT (M12X1.75X180-MM)	
Y	32	1	135-8015	1	PLUG GP-FLYWHEEL HOUSING	139
M	33	1	6V-4248	2	BOLT (M10X1.5X25-MM)	
	34	1	6V-5839	2	WASHER (11X21X2.5-MM THK)	
	35	1	9M-1164	1	COVER	
	36	1	061-9455	1	SEAL-O-RING	
M	37	1	161-0154	5	BOLT-SELF-LOCKING (M10X1.5X70-MM)	
M	38	1	6V-5696	5	BOLT (M12X1.75X80-MM)	
M	39	1	161-0155	5	BOLT-SELF-LOCKING (M14X2X115-MM)	
B	40	1	1U-8846		SEALANT-GASKET	
	41	2	187-8237	1	ADAPTER AS (REAR POWER TAKE-OFF) (RH)	
		2	160-8184	1	BEARING-SLEEVE	
I	42	1	211-6007	1	HOSE AS	
	43	1	225-9551	1	HOUSING-FLYWHEEL	
M	44	2	6V-8214	9	BOLT (M6X1X20-MM)	
	45	2	9X-8267	9	WASHER (6.6X12X2-MM THK)	
	46	2	7C-1728	1	SEAL GP-CRANKSHAFT	
			107-6280	1	SEAL-O-RING	
	47	1,2	5P-8246	12	WASHER-HARD (15.5X29X3-MM THK)	
M	48	1	7X-2436	4	BOLT (M12X1.75X100-MM)	
M	49	2	6V-5684	2	BOLT (M12X1.75X45-MM)	

# BASIC ENGINE

225-9556 GEAR GP-REAR (contd.)

i02206816

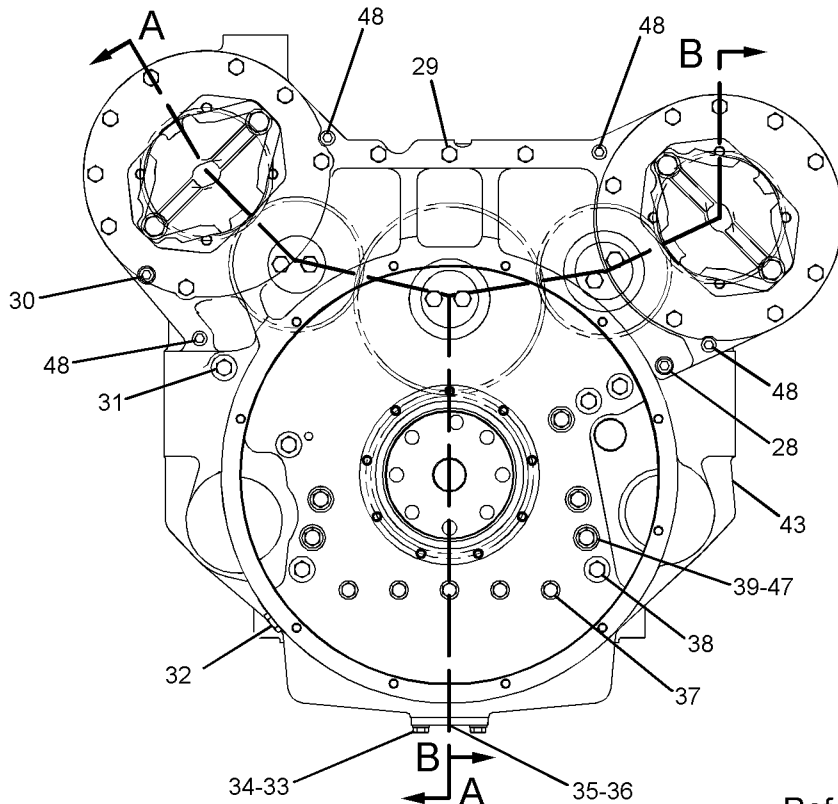
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	50	2	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)	

B-USE AS REQUIRED  
I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

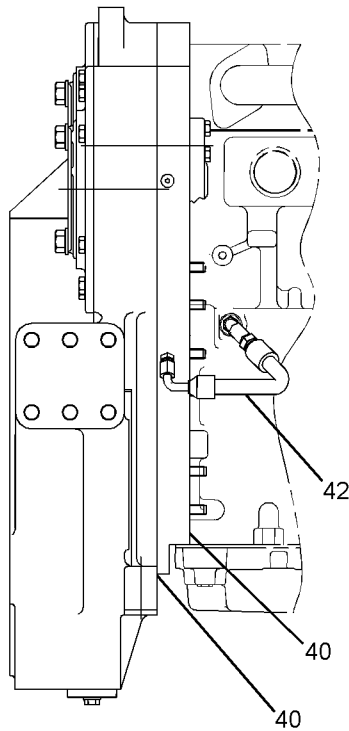
225-9556 GEAR GP-REAR (contd.)

i02206816



FRONT VIEW

Refer to all Illustrations  
of this group for auxiliary  
views



LEFT SIDE VIEW

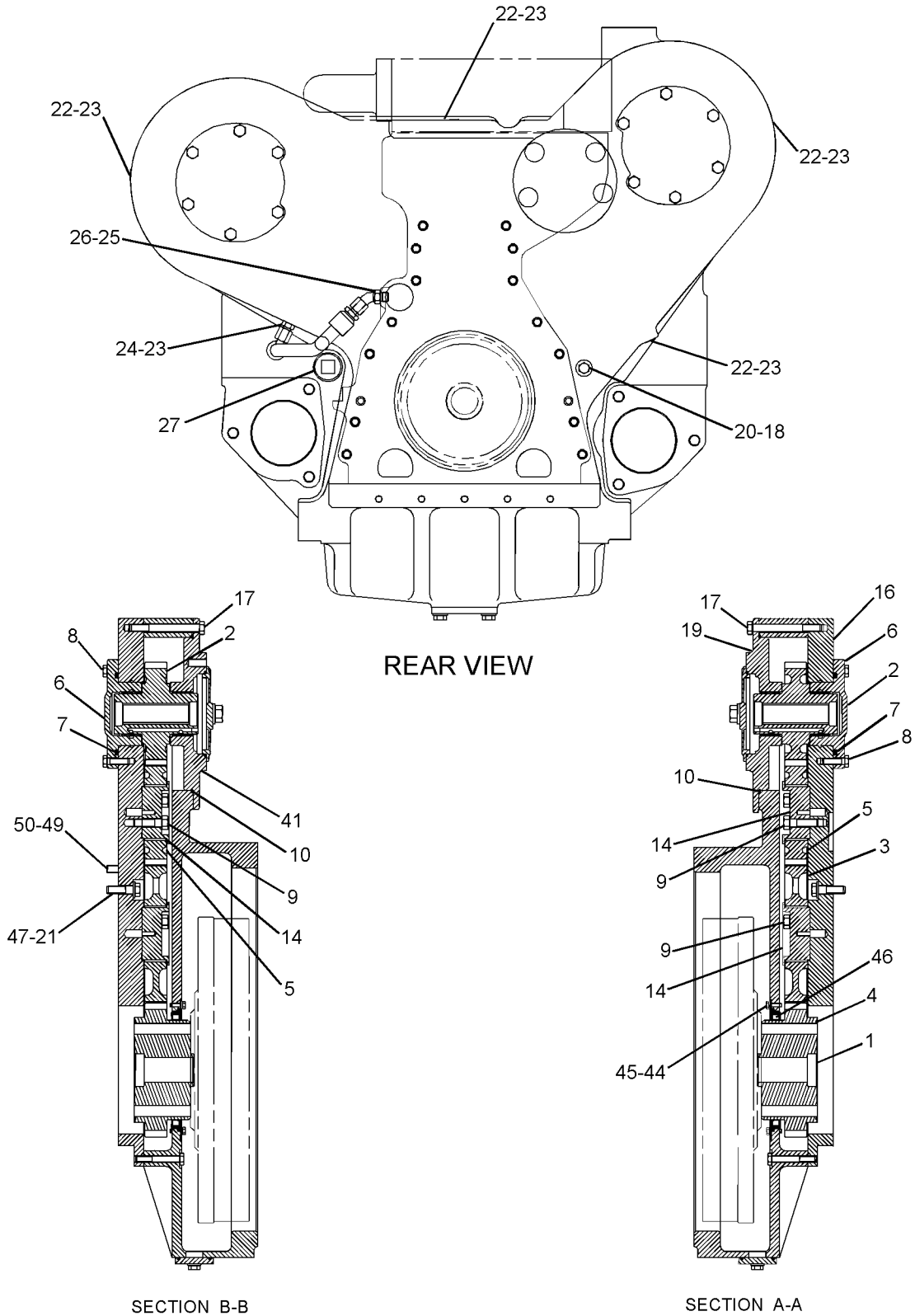
GRAPHIC #1

g01088845

# BASIC ENGINE

225-9556 GEAR GP-REAR (contd.)

i02206816



GRAPHIC #2

<END>

g01092240

# BASIC ENGINE

## 225-9556 GEAR GP-REAR

S/N: GLS119-UP

ALSO AN ATTACHMENT

SMCS-1204

i02227321

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	178-6279	1	GEAR (63-TEETH)						
	2	2	187-8203	2	GEAR AS-DRIVE (14-TEETH)						
					(EACH INCLUDES)						
		2	4F-6024	1	PIN						
	3	2	151-1339	1	GEAR AS-IDLER (70-TEETH)						
		2	152-7254	1	BEARING-SLEEVE						
	4	2	9X-4576	1	SEAL-O-RING						
	5	2	147-3723	2	GEAR AS-IDLER (49-TEETH)						
					(EACH INCLUDES)						
		2	152-7254	1	BEARING-SLEEVE						
	6	2	144-2918	2	COVER AS						
					(EACH INCLUDES)						
		2	8M-9315	1	BEARING-SLEEVE						
	7	2	170-5941	2	SEAL-O-RING						
M	8	2	6V-3822	12	BOLT (M10X1.5X35-MM)						
	9	2	5P-4141	6	BOLT-SELF-LOCKING (1/2-13X1.75-IN)						
	10	2	2D-9572	2	SEAL-O-RING						
	14	2	153-1325	3	SHAFT-IDLER GEAR						
	16	1	225-9554	1	PLATE AS (REAR GEAR)						
		1	7N-5683	2	DOWEL						
M	17	1	8T-0646	16	BOLT (M12X1.75X110-MM)						
	18	2	6V-5048	1	SEAL-O-RING						
	19	2	187-8236	1	ADAPTER AS (REAR POWER TAKE-OFF) (LH)						
		2	160-8184	1	BEARING-SLEEVE						
	20	2	9S-4182	1	PLUG						
M	21	1	8T-0226	7	BOLT (M14X2X45-MM)						
	22	2	9S-8003	4	PLUG						
	23	2	5P-7814	5	SEAL-O-RING						
C	24	2	8K-0968	1	ELBOW						
	25	2	030-7942	1	ELBOW						
	26	2	6V-5049	1	SEAL-O-RING						
	27	2	7X-7730	1	PLUG-PIPE						
M	28	1	108-1782	1	BOLT-SOCKET HEAD (M12X1.75X90-MM)						
M	29	1	8T-0106	3	BOLT (M12X1.75X100-MM)						
M	30	1	3E-6910	1	BOLT-SOCKET HEAD (M12X1.75X70-MM)						
M	31	1	8T-6991	1	BOLT (M12X1.75X180-MM)						
Y	32	1	135-8015	1	PLUG GP-FLYWHEEL HOUSING						139
M	33	1	6V-4248	2	BOLT (M10X1.5X25-MM)						
	34	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						
	35	1	9M-1164	1	COVER						
	36	1	061-9455	1	SEAL-O-RING						
M	37	1	161-0154	5	BOLT-SELF-LOCKING (M10X1.5X70-MM)						
M	38	1	6V-5696	5	BOLT (M12X1.75X80-MM)						
M	39	1	161-0155	5	BOLT-SELF-LOCKING (M14X2X115-MM)						
B	40	1	1U-8846		SEALANT-GASKET						
	41	2	187-8237	1	ADAPTER AS (REAR POWER TAKE-OFF) (RH)						
		2	160-8184	1	BEARING-SLEEVE						
CI	42	1	244-5931	1	HOSE AS						
	43	1	225-9551	1	HOUSING-FLYWHEEL						
M	44	1	6V-8214	9	BOLT (M6X1X20-MM)						
	45	1	9X-8267	9	WASHER (6.6X12X2-MM THK)						
	46	2	7C-1728	1	SEAL GP-CRANKSHAFT						
			107-6280	1	SEAL-O-RING						
	47	1	5P-8246	12	WASHER-HARD (15.5X29X3-MM THK)						
M	48	1	7X-2436	4	BOLT (M12X1.75X100-MM)						
M	49	2	6V-5684	2	BOLT (M12X1.75X45-MM)						

# BASIC ENGINE

225-9556 GEAR GP-REAR (contd.)

i02227321

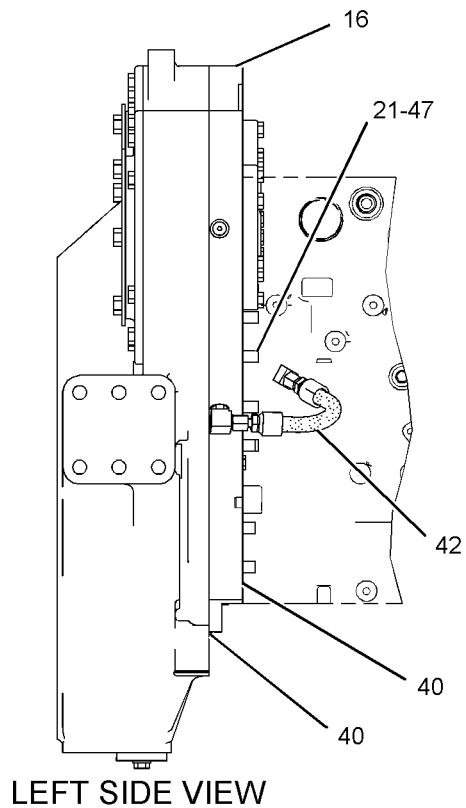
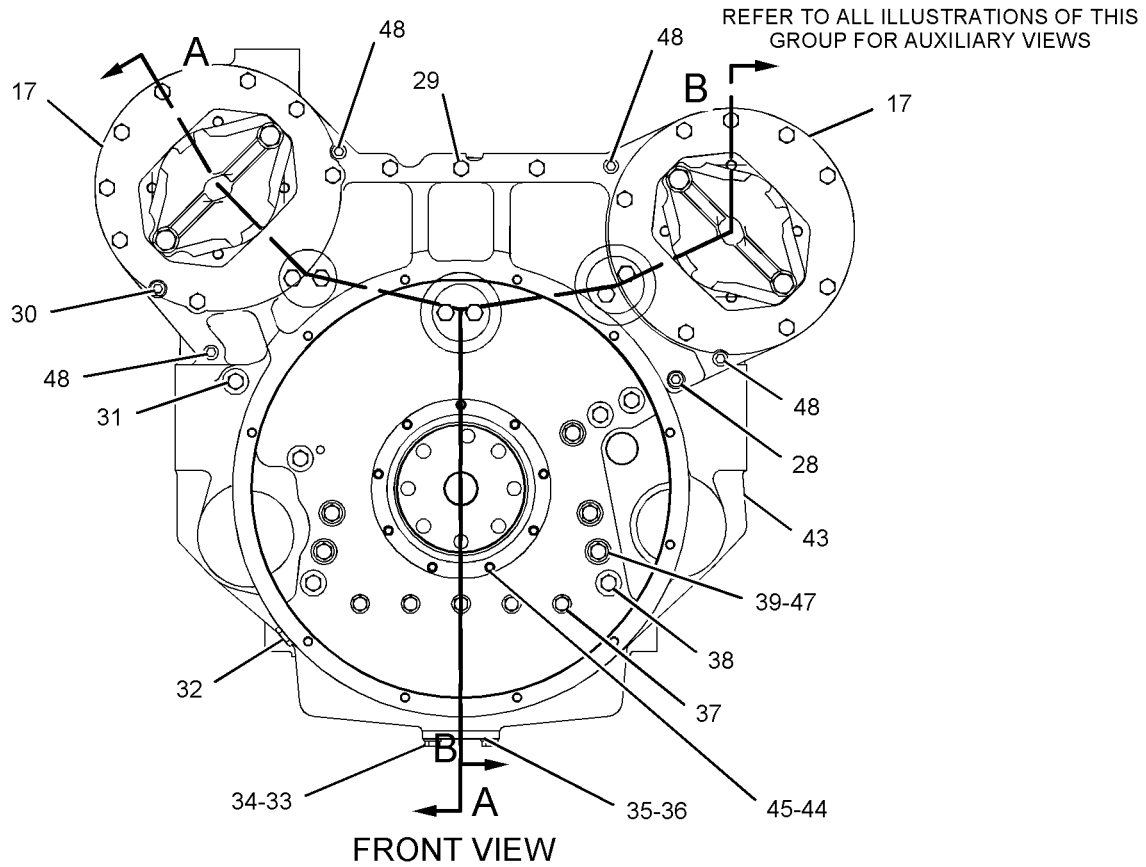
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	50	2	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						

B-USE AS REQUIRED  
C-CHANGE FROM PREVIOUS TYPE  
I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

225-9556 GEAR GP-REAR (contd.)

i02227321



GRAPHIC #1

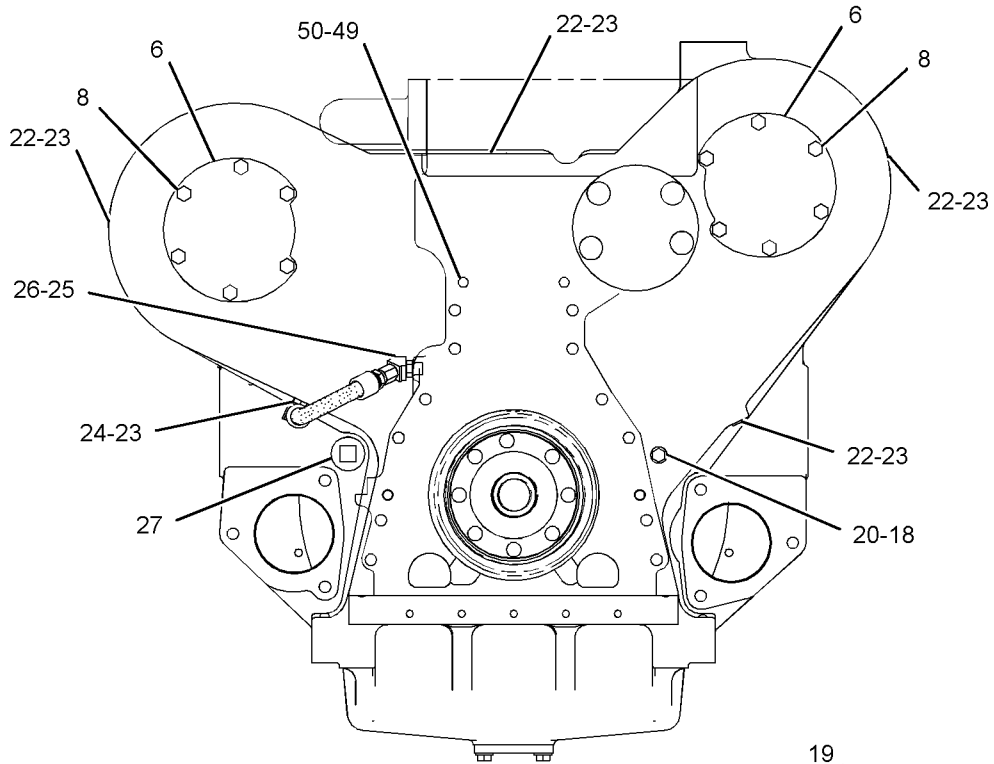
g01124417



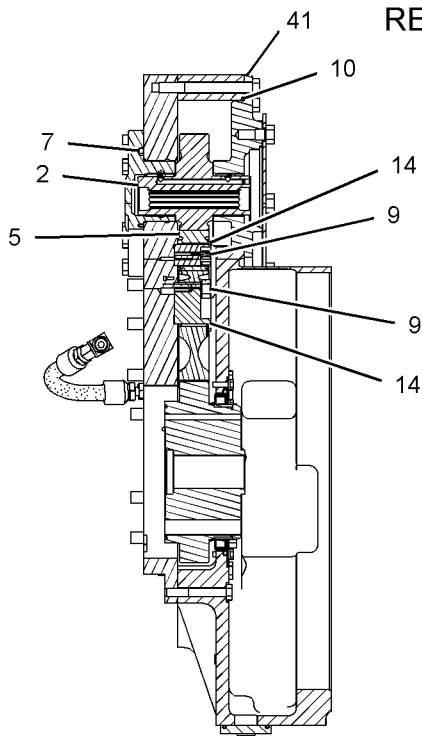
# BASIC ENGINE

225-9556 GEAR GP-REAR (contd.)

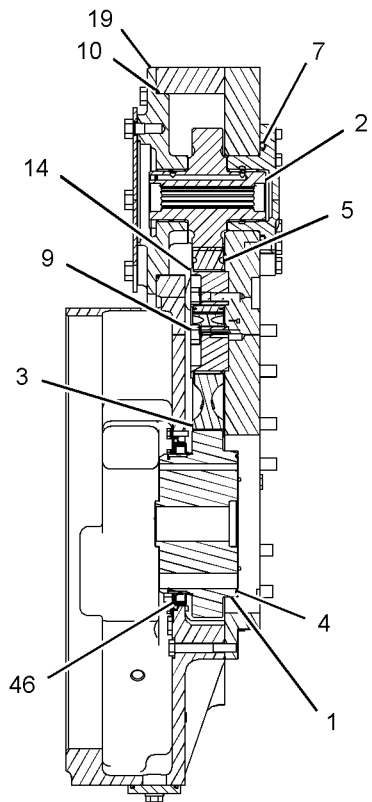
i02227321



REAR VIEW



SECTION B-B



SECTION A-A

GRAPHIC #2

<END>

g01124418

# BASIC ENGINE

## 4N-9680 GOVERNOR GP-AIR COMPRESSOR

AN ATTACHMENT

SMCS - 1804

i02145533

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	2S-2923	1	COVER						
	9M-0402	1	KIT-GOVERNOR OVERHAUL (AIR COMPRESSOR)						
			(INCLUDES GROMMETS, FILTERS, SPRING, VALVES, COVER, RING AND GASKET)						
			<b>&lt;END&gt;</b>						

# BASIC ENGINE

## 224-4501 GOVERNOR GP-AIR COMPRESSOR

AN ATTACHMENT

SMCS - 1804

i02250770

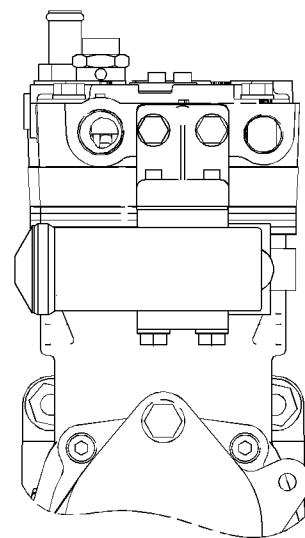
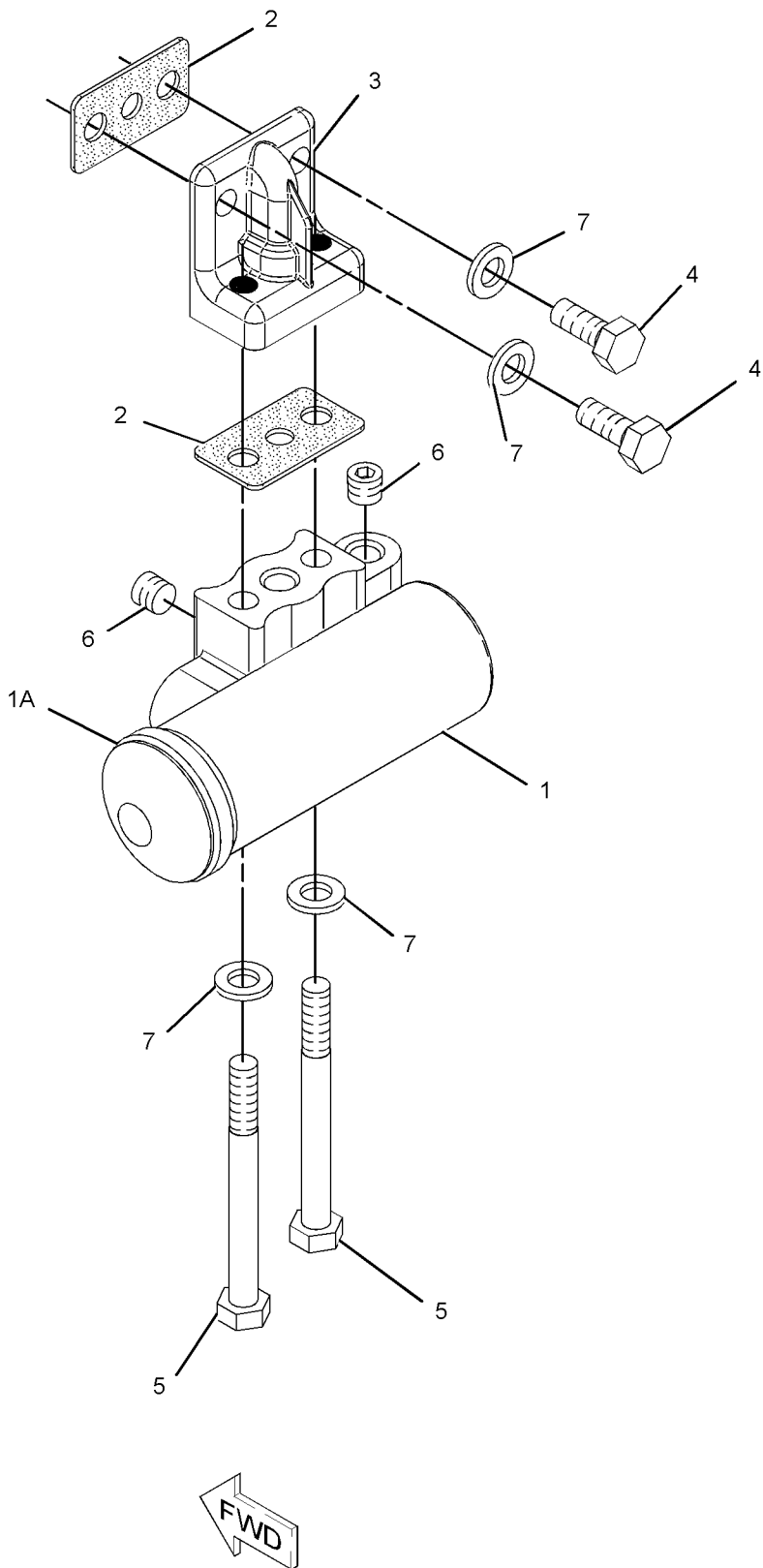
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4N-9680</b>	1	GOVERNOR GP-AIR COMPRESSOR						
	1A	1	<b>2S-2923</b>	1	COVER						
		1	<b>9M-0402</b>	1	KIT-GOVERNOR OVERHAUL (AIR COMPRESSOR)						
					(INCLUDES GROMMETS, FILTERS, SPRING, VALVE, COVER, RING, AND GASKET)						
	2	1	<b>6L-1883</b>	2	GASKET						
	3	1	<b>179-4787</b>	1	ADAPTER						
M	4	1	<b>6V-5217</b>	2	BOLT (M8X1.25X20-MM)						
M	5	1	<b>6V-5221</b>	2	BOLT (M8X1.25X80-MM)						
	6	1	<b>8T-6757</b>	3	PLUG-PIPE						
	7	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART

# BASIC ENGINE

224-4501 GOVERNOR GP-AIR COMPRESSOR (contd.)

i02250770



REAR VIEW

GRAPHIC #1

<END>

g01068320

# BASIC ENGINE

## 174-1584 HOUSING GP-FLYWHEEL

SAE NO. 2  
FOR USE WITH SAE NO. 2 FLYWHEEL  
AN ATTACHMENT

SMCS-1157

i01625089

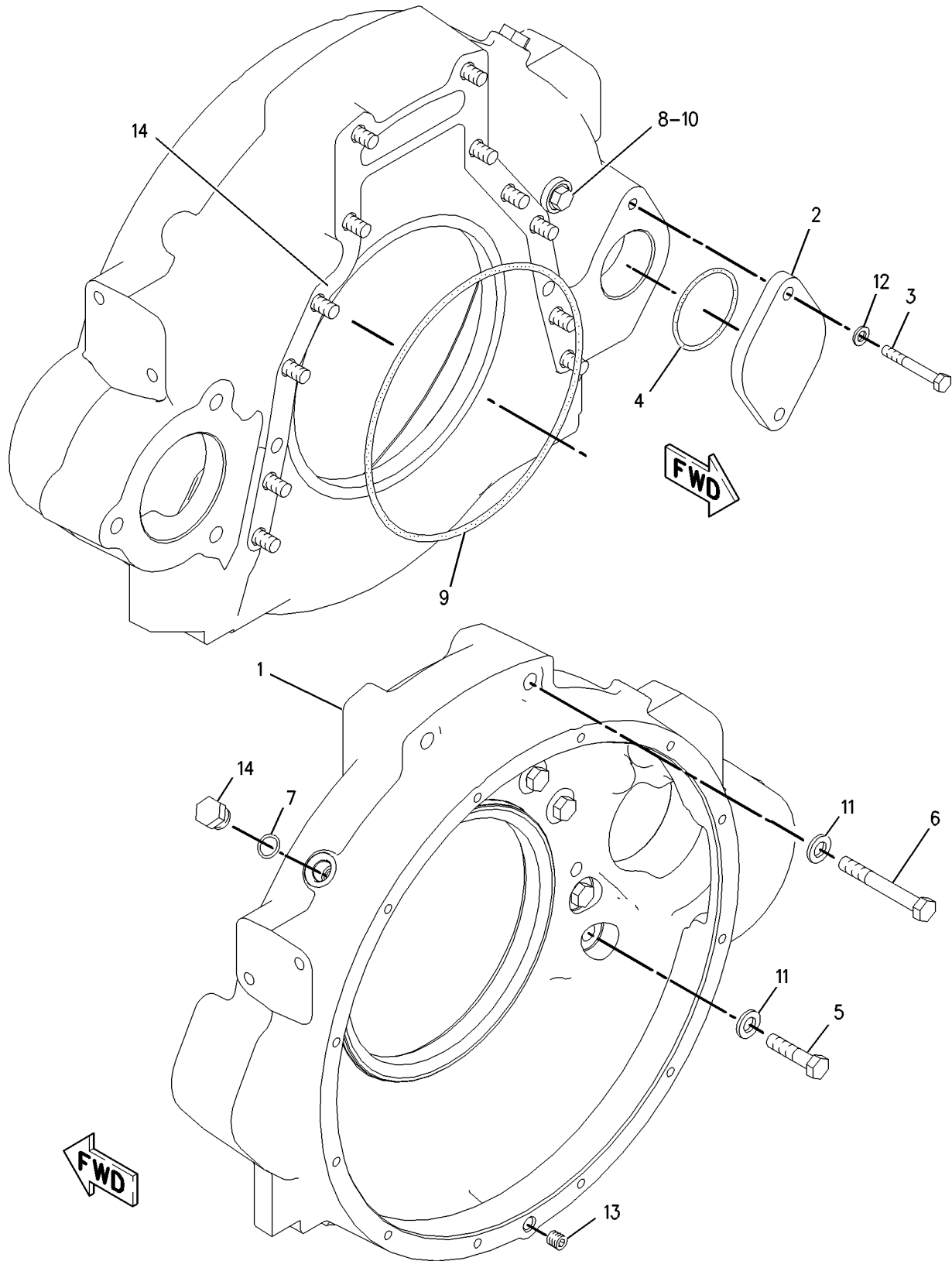
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	174-1586	1	HOUSING-FLYWHEEL						
	2	1	199-4051	1	COVER (1/2-20)						
M	3	1	099-3649	2	BOLT (M8X1.25X40-MM)						
	4	1	1H-5728	1	SEAL-O-RING						
	5	1	214-6277	10	BOLT						
	6	1	214-6278	2	BOLT						
	7	1	3K-0360	1	SEAL-O-RING						
	8	1	3K-8460	1	PLUG						
	9	1	5D-9344	1	SEAL-O-RING						
	10	1	5P-7814	1	SEAL-O-RING						
	11	1	5P-8246	12	WASHER-HARD (15.5X29X3-MM THK)						
	12	1	8T-4224	2	WASHER-HARD (8.8X16X2-MM THK)						
	13	1	8T-6763	1	PLUG-PIPE						
	14	1	9S-4185	1	PLUG						
B	15	1	1U-8846		SEALANT-GASKET						

B-USE AS REQUIRED  
M-METRIC PART

# BASIC ENGINE

174-1584 HOUSING GP-FLYWHEEL (contd.)

i01625089



GRAPHIC #1

<END>

g00842018

# BASIC ENGINE

## 222-3090 HOUSING GP-FLYWHEEL

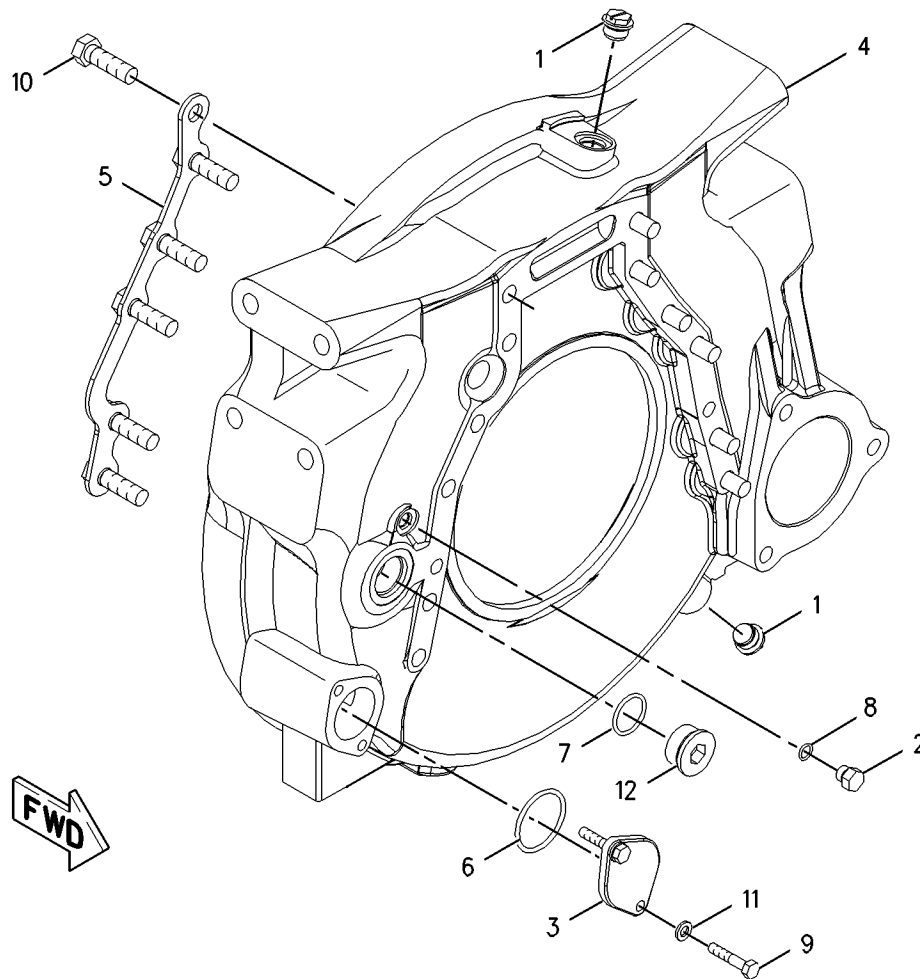
SAE NO. 1. INSTALLATION ANGLE IS VERTICAL  
FOR USE WITH WET TRANSMISSION  
AN ATTACHMENT

SMCS-1157

i02138453

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1P-1669	3	PLUG-SEAL						
	2	1	3K-8460	1	PLUG						
	3	1	7C-1445	1	COVER						
	4	1	222-3089	1	HOUSING-FLYWHEEL						
	5	1	227-2573	2	SPACER						
	6	1	061-9455	1	SEAL-O-RING						
	7	1	5P-7701	1	SEAL-O-RING						
	8	1	5P-7814	1	SEAL-O-RING						
M	9	1	6V-5219	2	BOLT (M8X1.25X40-MM)						
M	10	1	8T-0226	12	BOLT (M14X2X45-MM)						
	11	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	12	1	9S-9334	1	PLUG						

M-METRIC PART



GRAPHIC #1

<END>

g00948890

# BASIC ENGINE

## 230-1103 HOUSING GP-FLYWHEEL AN ATTACHMENT

SMCS-1157

i02138454

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>5F-0304</b>	1	PLUG (FLYWHEEL HOUSING)						
	2	1	<b>7C-1445</b>	1	COVER						
	3	1	<b>231-4543</b>	1	HOUSING-FLYWHEEL						
	4	1	<b>061-9455</b>	1	SEAL-O-RING						
	5	1	<b>2A-1162</b>	1	GASKET						
	6	1	<b>3K-8460</b>	1	PLUG						
	7	1	<b>5D-9344</b>	1	SEAL-O-RING						
	8	1	<b>5P-7814</b>	1	SEAL-O-RING						
	9	1	<b>5P-8246</b>	12	WASHER-HARD (15.5X29X3-MM THK)						
	10	1	<b>6V-5050</b>	1	SEAL-O-RING						
M	11	1	<b>6V-5219</b>	2	BOLT (M8X1.25X40-MM)						
	12	1	<b>8L-2786</b>	1	SEAL-O-RING						
M	13	1	<b>8T-0226</b>	12	BOLT (M14X2X45-MM)						
	14	1	<b>9M-1974</b>	2	WASHER-HARD (8.8X16X2-MM THK)						
	15	1	<b>9S-4185</b>	1	PLUG						
	16	1	<b>9S-8008</b>	1	PLUG						
B	17	1	<b>1U-8846</b>		SEALANT-GASKET						

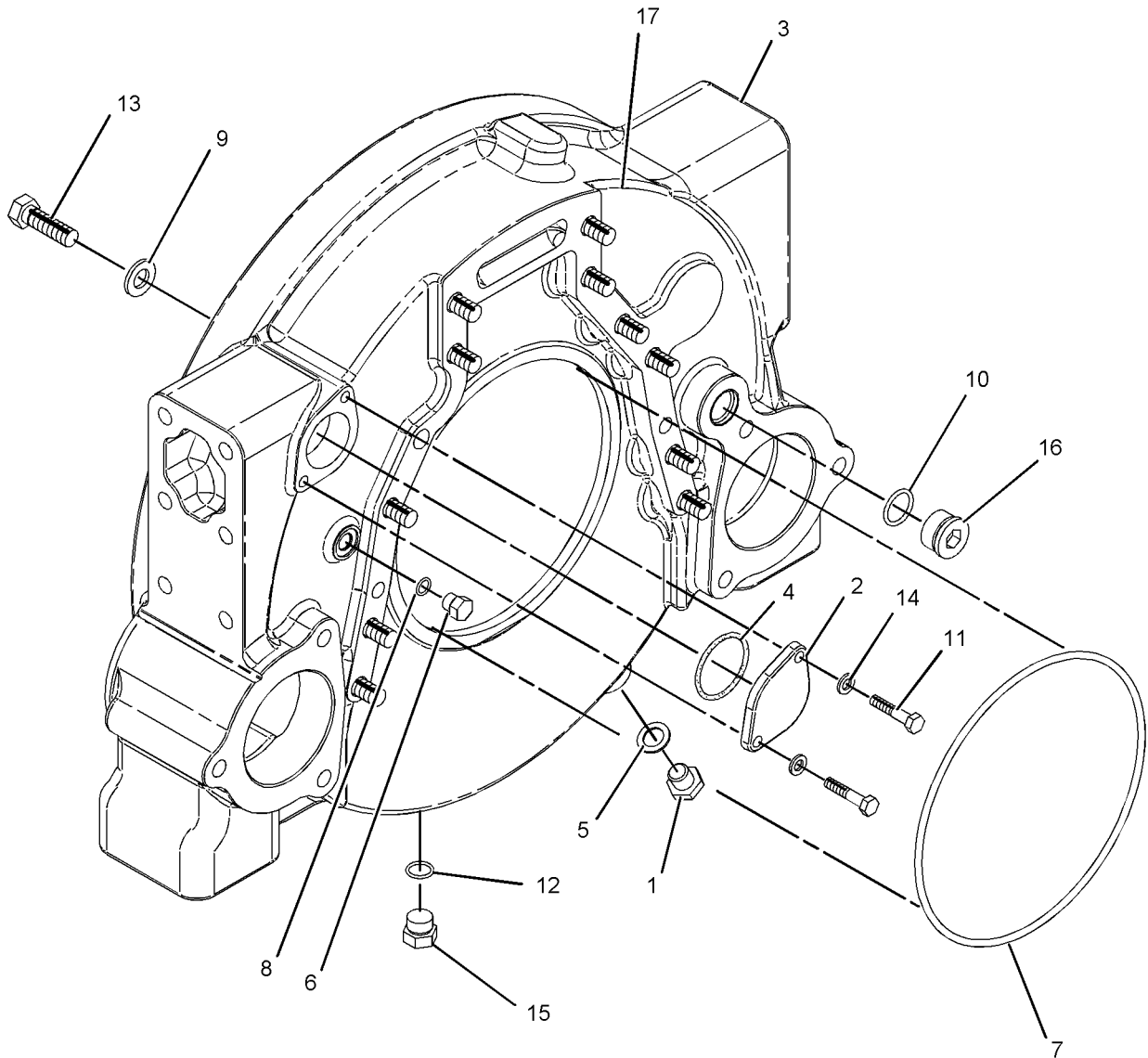
B-USE AS REQUIRED  
M-METRIC PART



# BASIC ENGINE

230-1103 HOUSING GP-FLYWHEEL (contd.)

i02138454



GRAPHIC #1

<END>

g01060575

# BASIC ENGINE

## 245-0224 HOUSING GP-FLYWHEEL

SAE NO. 1 ALUMINUM FLYWHEEL HOUSING, 10 DEGREE SLANT PADS,  
SINGLE LH STARTER MOUNTING

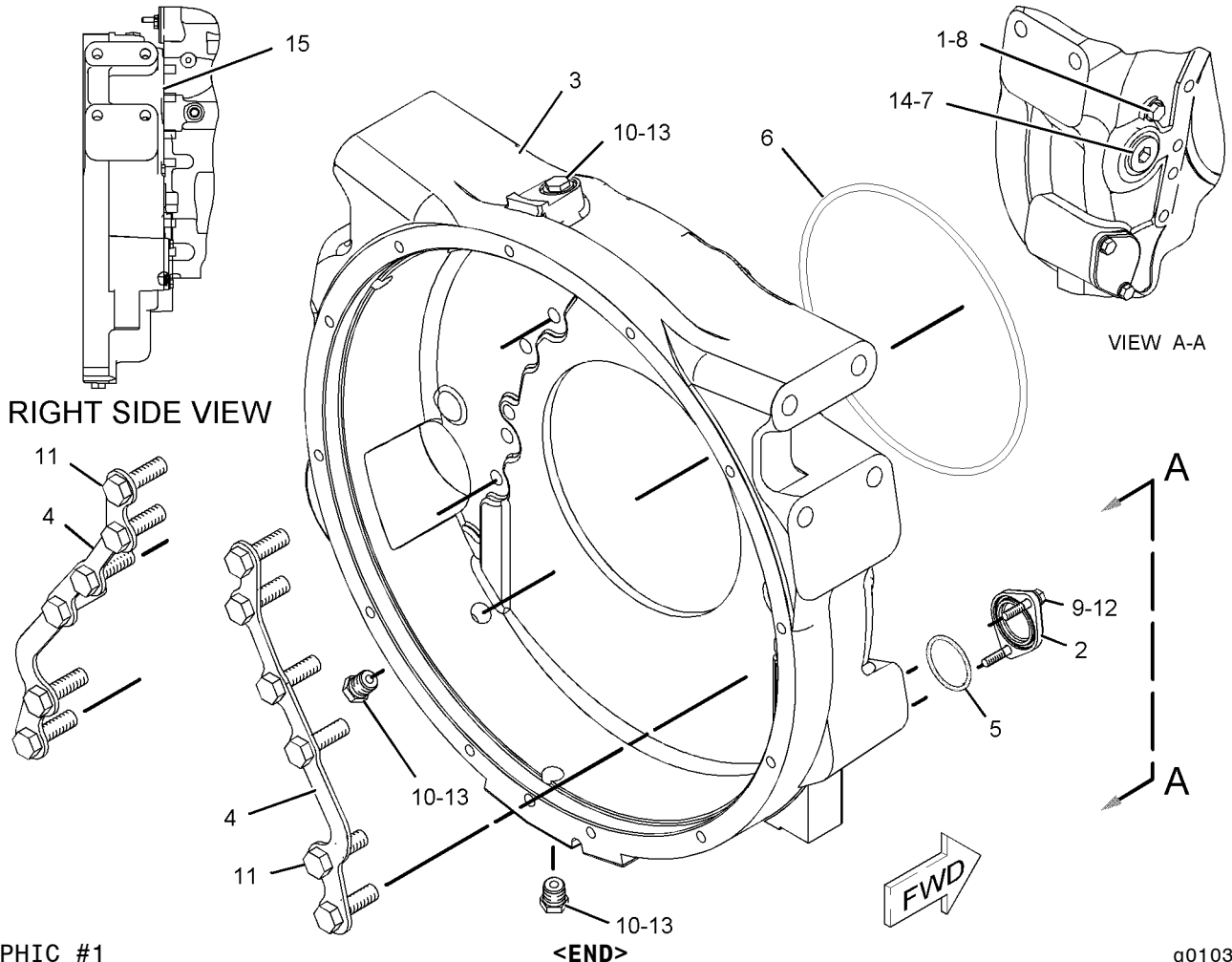
FOR USE WITH WET TRANSMISSION WHEN ENGINE IS VERTICAL, VISCONIC DAMPER WHEN  
DRIVEN INERTIA EXCEEDS 3 N.M/S<sup>2</sup>, 117-2766—PAGE 49, DUAL LIP REAR CRANKSHAFT  
SEAL, 124-2661—PAGE 160  
AN ATTACHMENT

SMCS-1157

i02142118

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3K-8460	1	PLUG						
	2	1	7C-1445	1	COVER						
	3	1	222-3089	1	HOUSING-FLYWHEEL						
	4	1	227-2573	2	SPACER						
	5	1	061-9455	1	SEAL-O-RING						
	6	1	5D-9344	1	SEAL-O-RING						
	7	1	5P-7701	1	SEAL-O-RING						
	8	1	5P-7814	1	SEAL-O-RING						
M	9	1	6V-5219	2	BOLT (M8X1.25X40-MM)						
	10	1	8L-2786	3	SEAL-O-RING						
M	11	1	8T-0226	12	BOLT (M14X2X45-MM)						
	12	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	13	1	9S-4185	3	PLUG						
	14	1	9S-9334	1	PLUG						
B	15	1	1U-8846		SEALANT-GASKET						

B-USE AS REQUIRED  
M-METRIC PART



GRAPHIC #1

<END>

g01038769

# BASIC ENGINE

## 264-4643 HOUSING GP-FLYWHEEL

FOR USE WITH SAE #1 FLYWHEEL HOUSING  
AN ATTACHMENT

SMCS-1157

i02300509

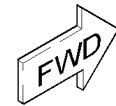
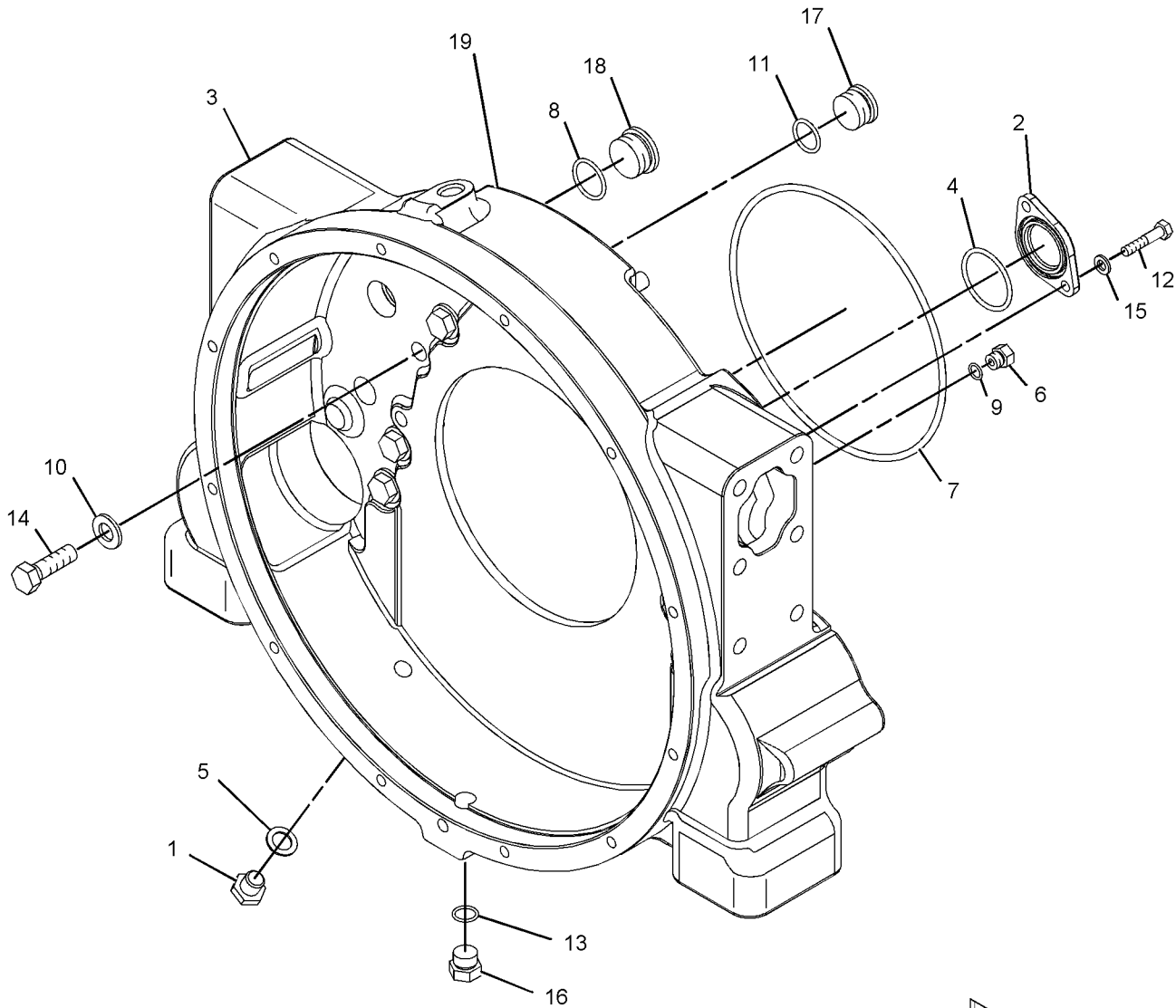
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5F-0304	1	PLUG						
	2	1	7C-1445	1	COVER						
	3	1	263-4909	1	HOUSING						
	4	1	061-9455	1	SEAL-O-RING						
	5	1	2A-1162	1	GASKET						
	6	1	3K-8460	1	PLUG						
	7	1	5D-9344	1	SEAL-O-RING						
	8	1	5P-7701	1	SEAL-O-RING						
	9	1	5P-7814	1	SEAL-O-RING						
	10	1	5P-8246	12	WASHER-HARD (15.5X29X3-MM THK)						
	11	1	6V-5050	1	SEAL-O-RING						
M	12	1	6V-5219	2	BOLT (M8X1.25X40-MM)						
	13	1	8L-2786	1	SEAL-O-RING						
M	14	1	8T-0226	12	BOLT (M14X2X45-MM)						
	15	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	16	1	9S-4185	1	PLUG						
	17	1	9S-8008	1	PLUG						
	18	1	9S-9334	1	PLUG						
B	19	1	1U-8846		SEALANT-GASKET						

B-USE AS REQUIRED  
M-METRIC PART

# BASIC ENGINE

264-4643 HOUSING GP-FLYWHEEL (contd.)

i02300509



GRAPHIC #1

<END>

g01147157

# BASIC ENGINE

## 218-7272 HOUSING GP-FRONT

SMCS-1151, 1162

i02177707

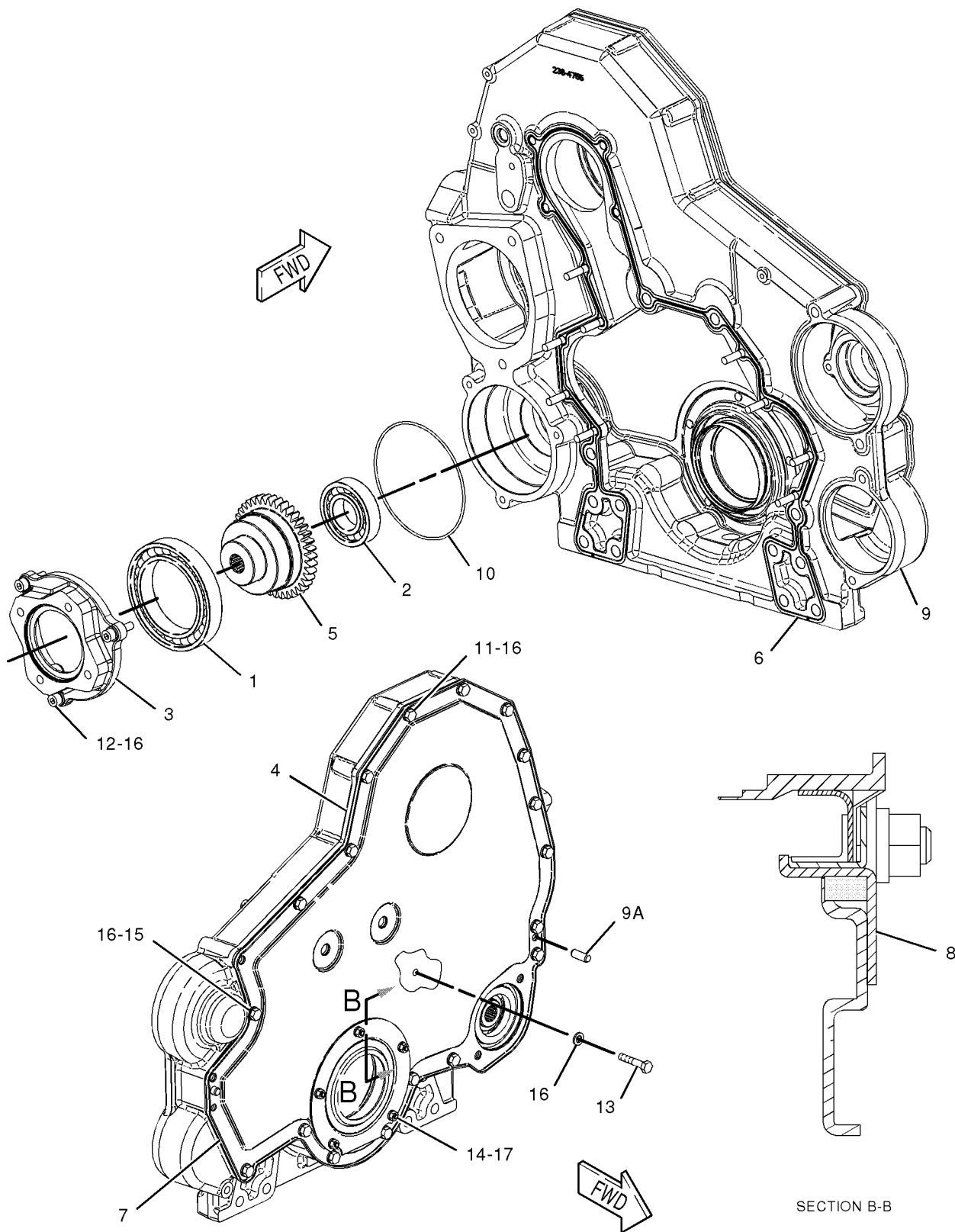
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>5P-6727</b>	1	BALL BEARING						
	2	1	<b>8H-9789</b>	1	BALL BEARING						
	3	1	<b>251-4314</b>	1	ADAPTER						
	4	1	<b>240-1880</b>	1	COVER AS						
	5	1	<b>221-9357</b>	1	GEAR (40-TEETH)						
	6	1	<b>257-2015</b>	1	GASKET						
	7	1	<b>223-7852</b>	1	SEAL - INTEGRAL						
	8	1	<b>226-4755</b>	1	SEAL GP-CRANKSHAFT						
	9	1	<b>238-4756</b>	1	HOUSING AS						
	9A	1	<b>6V-3535</b>	2	DOWEL						
	10	1	<b>117-8801</b>	1	SEAL-O-RING						
M	11	1	<b>6V-2317</b>	17	BOLT (M8X1.25X30-MM)						
M	12	1	<b>6V-5192</b>	3	BOLT-SOCKET HEAD (M8X1.25X30-MM)						
M	13	1	<b>6V-5219</b>	9	BOLT (M8X1.25X40-MM)						
M	14	1	<b>6V-8225</b>	5	NUT (M6X1-THD)						
M	15	1	<b>8T-5093</b>	1	BOLT-LOCKING (M8X1.25X25-MM)						
	16	1	<b>9M-1974</b>	30	WASHER-HARD (8.8X16X2-MM THK)						
	17	1	<b>9X-8256</b>	5	WASHER (6.6X12X2-MM THK)						

M-METRIC PART

# BASIC ENGINE

218-7272 HOUSING GP-FRONT (contd.)

i02177707



GRAPHIC #1

<END>

g01009822

# BASIC ENGINE

## 243-6717 KIT-CRANKSHAFT BEARING

INCLUDES: STANDARD MAIN AND THRUST BEARINGS

PART OF 224-3882 CRANKSHAFT GP

ALSO FIELD INSTALLATION

SMCS-1202, 1203, 1230

i02174948

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	211-0587	4	BEARING-MAIN						
	211-0588	3	BEARING-MAIN						
	246-3144	2	PLATE-THRUST						

<END>

# BASIC ENGINE

## 237-4376 LIFTER GP-VALVE-MECHANISM

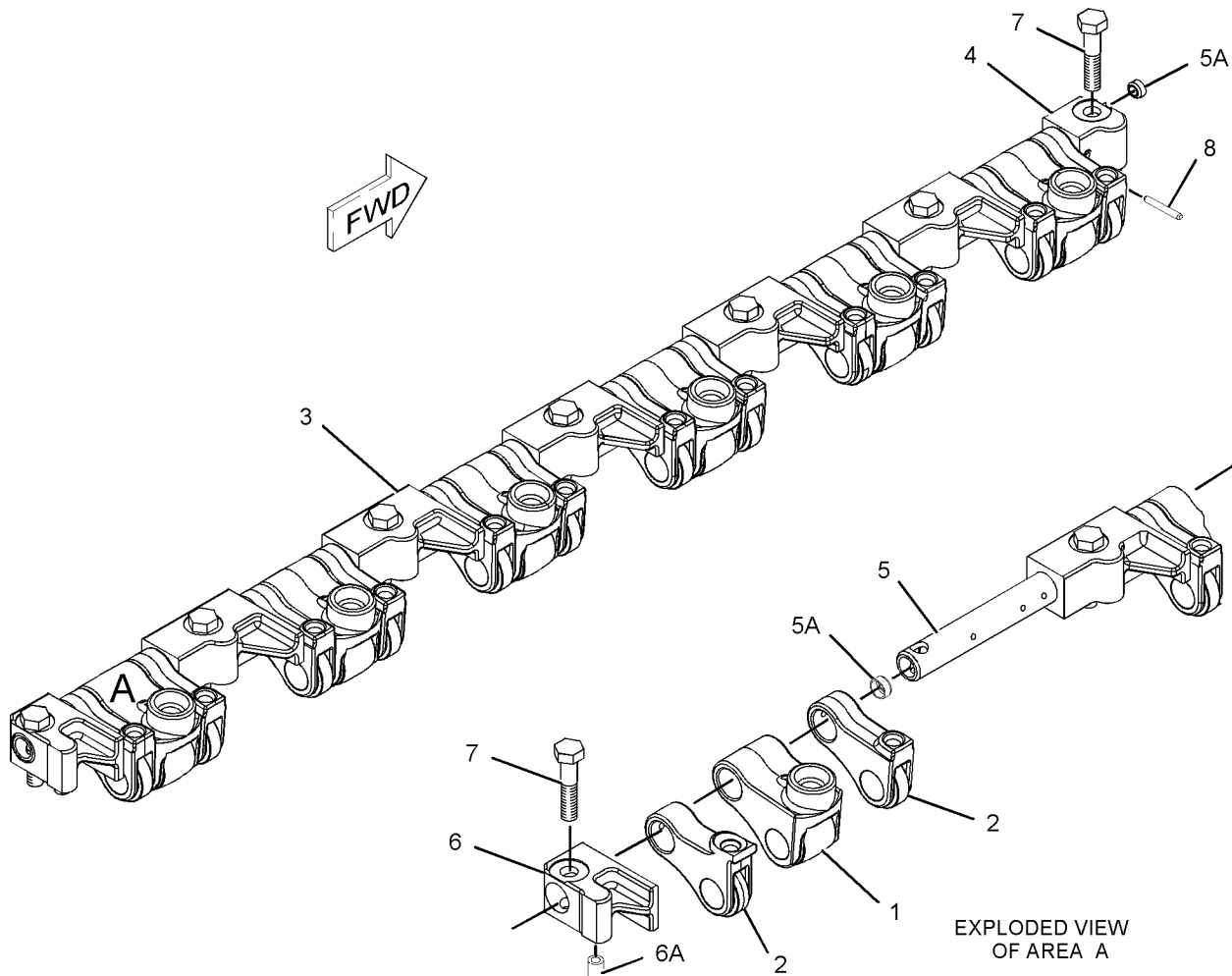
PART OF 240-7272 VALVE MECHANISM GP

SMCS - 1209

i02285082

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	202-7475	6	LIFTER AS (UNIT INJECTOR)						
	2	1	251-1005	12	LIFTER AS-VALVE						
	3	1	269-2862	5	BRACKET AS (INTERMEDIATE)						
	4	1	269-2860	1	BRACKET AS (FRONT)						
	5	1	240-2636	1	SHAFT AS						
	5A	1	0L-1026	2	PLUG-CUP						
	6	1	269-2864	1	BRACKET AS (REAR)						
	6A	1	5L-4763	1	PIN-SPRING						
M	7	1	6V-5843	7	BOLT (M10X1.5X45-MM)						
	8	1	8E-8439	1	DOWEL						

M-METRIC PART



GRAPHIC #1

<END>

EXPLODED VIEW  
OF AREA A

g01119838



# BASIC ENGINE

## 224-0880 LIFTING GP-ENGINE

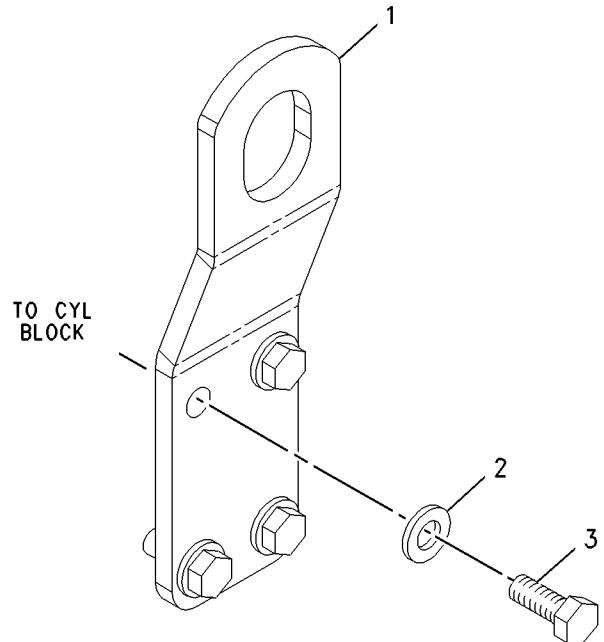
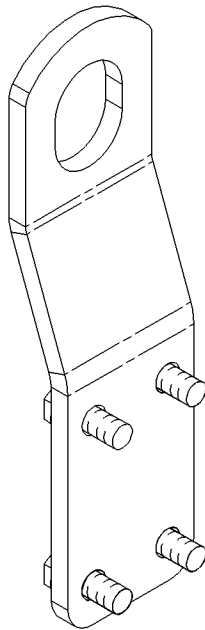
BASIC  
ALSO AN ATTACHMENT

SMCS-1122

i01861300

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	224-4140	2	EYE-LIFTING						
	2	1	5P-8245	8	WASHER-HARD (13.5X25.5X3-MM THK)						
M	3	1	6V-3668	8	BOLT (M12X1.75X30-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00950265

# BASIC ENGINE

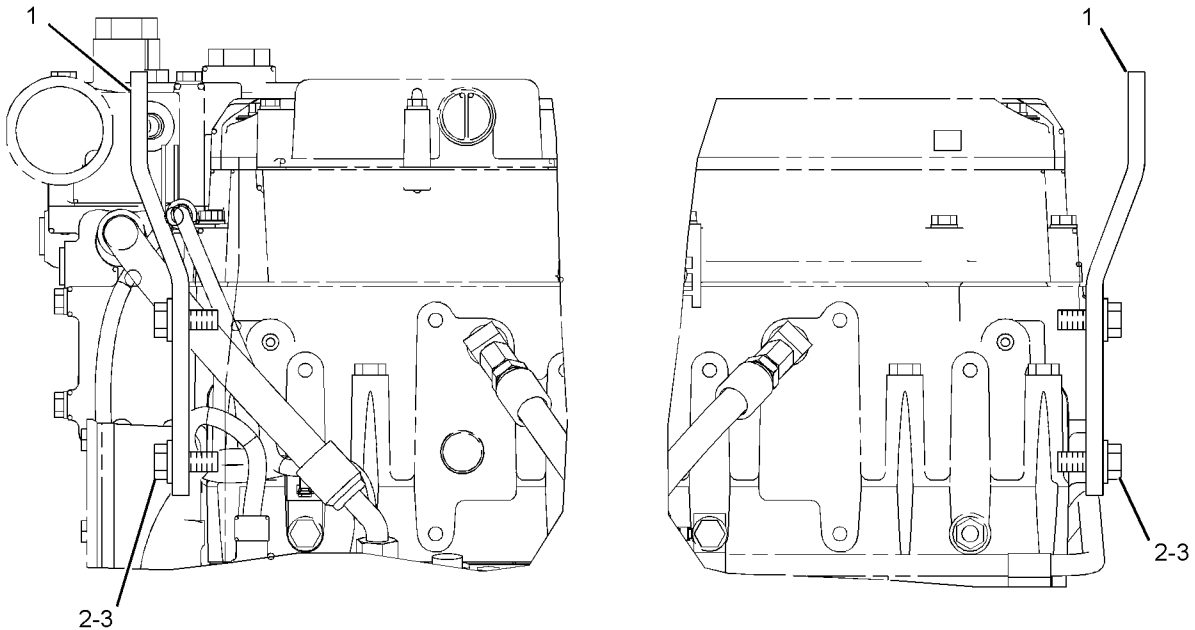
## 255-4647 LIFTING GP-ENGINE AN ATTACHMENT

SMCS-1122

i02208331

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	255-4648	2	EYE-LIFTING						
	2	1	5P-8245	8	WASHER-HARD (13.5X25.5X3-MM THK)						
M	3	1	6V-3668	8	BOLT (M12X1.75X30-MM)						

M-METRIC PART



LEFT SIDE VIEW

GRAPHIC #1

<END>

g01124077

# BASIC ENGINE

## 264-7790 LINES GP-AIR COMPRESSOR AN ATTACHMENT

SMCS-1803, 5502

i02312566

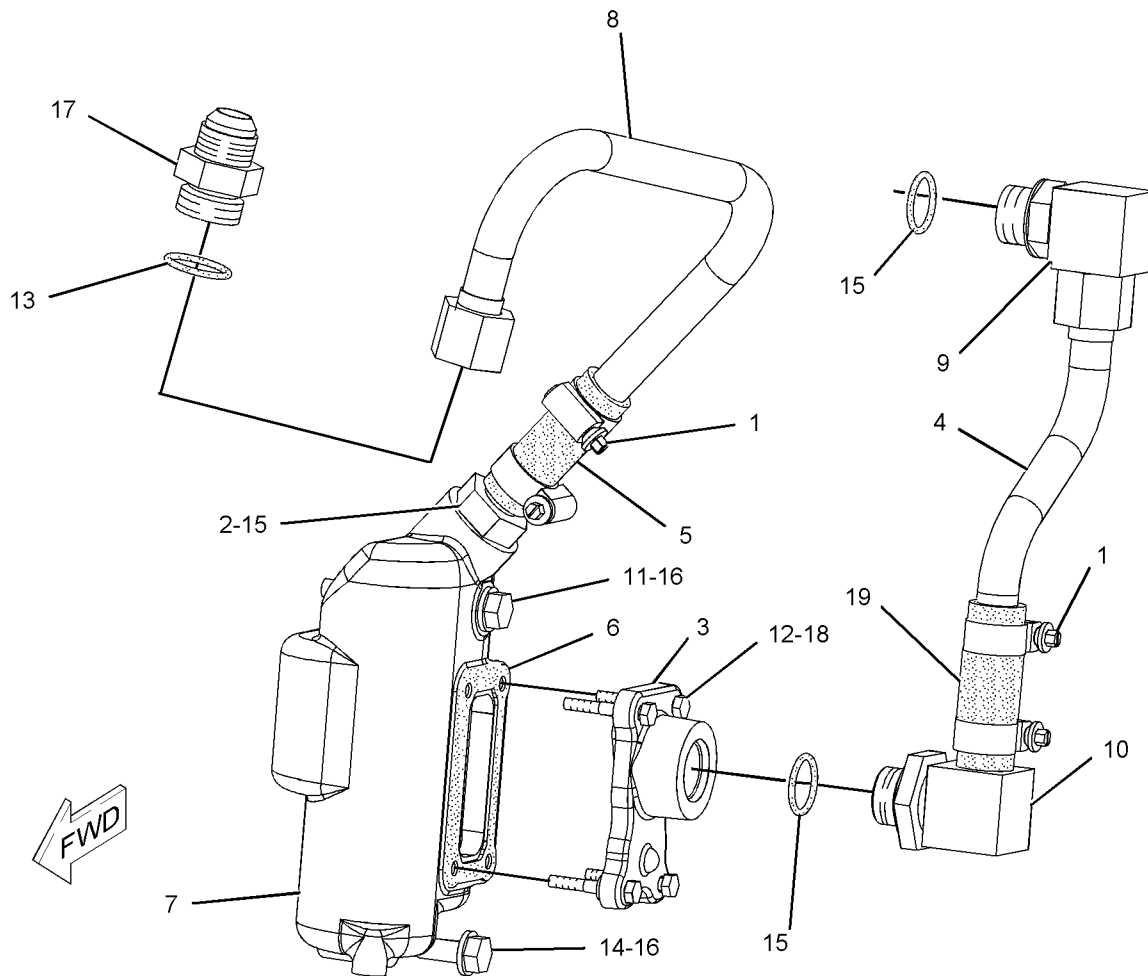
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8T-0154	4	CLAMP-HOSE						
	2	1	033-6783	1	FITTING						
	3	1	240-5881	1	VALVE AS (INLET, AIR COMPRESSOR)						
	4	1	241-4330	1	TUBE AS						
	5	1	241-6388	1	HOSE						
	6	1	250-6591	1	GASKET						
	7	1	252-8402	1	CHAMBER						
		1	8L-2786	1	SEAL-O-RING						
		1	9S-8005	1	PLUG						
	8	1	252-9525	1	TUBE AS						
	9	1	030-7950	1	ELBOW						
	10	1	032-8487	1	ELBOW						
M	11	1	160-8492	1	BOLT (M10X1.5X85-MM)						
M	12	1	2W-9499	4	BOLT (M6X1X40-MM)						
	13	1	6V-1903	1	SEAL-O-RING						
M	14	1	6V-4249	1	BOLT (M10X1.5X50-MM)						
	15	1	6V-5050	3	SEAL-O-RING						
	16	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						
	17	1	9K-1242	1	CONNECTOR						
	18	1	9X-8267	4	WASHER (6.6X12X2-MM THK)						
E	19	1	136-1955		HOSE (8-CM)						

E-ORDER BY THE CENTIMETER  
M-METRIC PART

# BASIC ENGINE

264-7790 LINES GP-AIR COMPRESSOR (contd.)

i02312566



GRAPHIC #1

<END>

g01139402

# BASIC ENGINE

## 243-3019 MOUNTING GP-ALTERNATOR

FOR USE WITH FAN DRIVE MOUNTING GROUP  
AN ATTACHMENT

SMCS-1154, 1405

i02125815

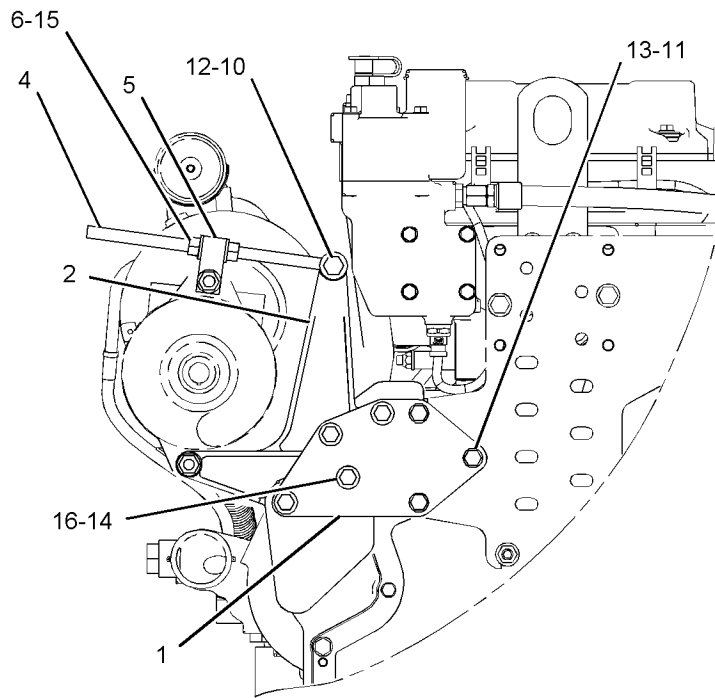
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	243-3021	1	PLATE						
	2	1	243-3020	1	BRACKET						
	3	1	243-3022	1	BRACKET AS						
M		1	8T-3490	4	NUT-WELD (M10X1.5-THD)						
	4	1	9L-5134	1	ROD						
	5	1	4W-8320	1	BLOCK						
	6	1	7X-3374	2	NUT-FULL (1/2-20-THD)						
	7	1	7X-0339	1	BOLT (1/2-13X6.25-IN)						
	8	1	6V-8188	2	NUT (1/2-13-THD)						
	9	1	9X-8278	1	BOLT						
	10	1	5P-2566	1	BOLT (1/2-13X1.5-IN)						
	11	1	8T-4121	7	WASHER-HARD (11X21X2.5-MM THK)						
	12	1	5P-1076	1	WASHER-HARD (13.5X30X4-MM THK)						
M	13	1	8T-4136	7	BOLT (M10X1.5X25-MM)						
M	14	1	8T-4178	4	BOLT (M10X1.5X90-MM)						
	15	1	8T-4223	6	WASHER-HARD (13.5X25.5X3-MM THK)						
	16	1	7X-7729	4	WASHER (11X25X3-MM THK)						

M-METRIC PART

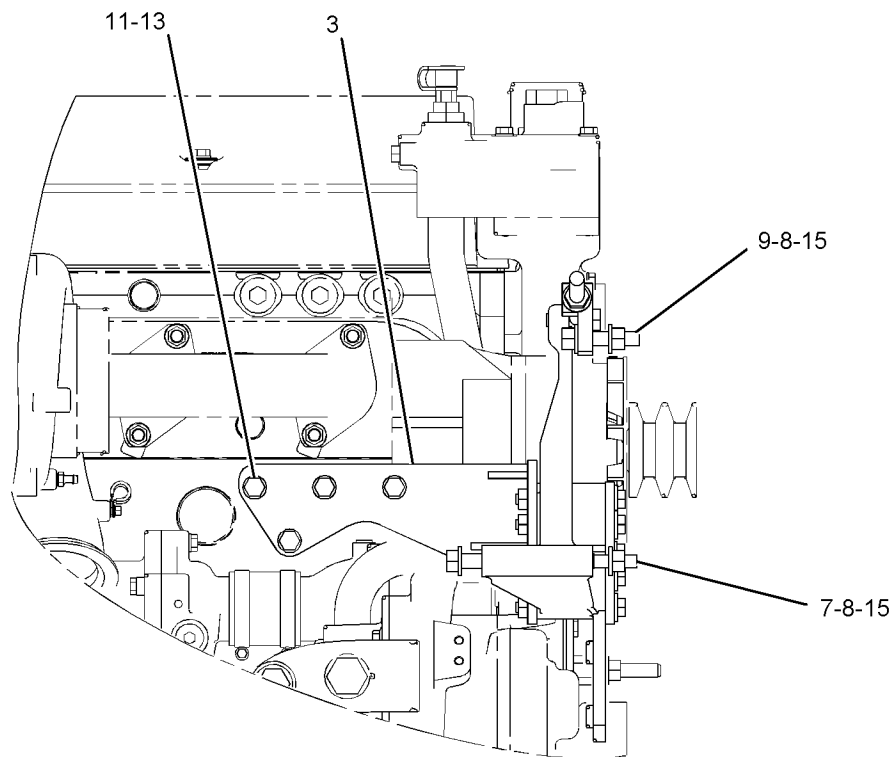
# BASIC ENGINE

243-3019 MOUNTING GP-ALTERNATOR (contd.)

i02125815



**FRONT VIEW**



**RIGHT SIDE VIEW**  
<END>

GRAPHIC #1

g01082345

# BASIC ENGINE

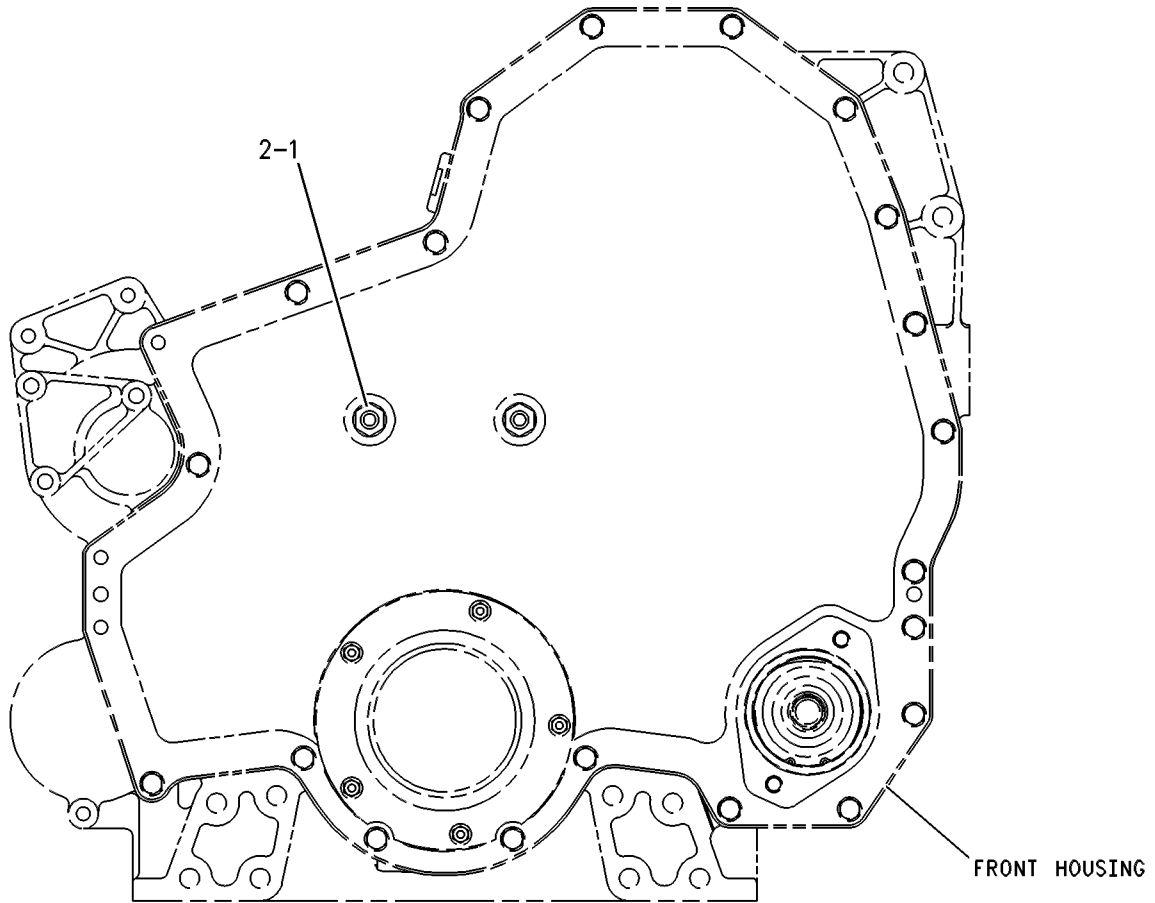
## 138-2550 MOUNTING GP-FAN DRIVE AN ATTACHMENT

SMCS - 1359

i00800153

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5R-7137	2	WASHER-SEALING						
M	2	1	123-0764	2	STUD (M12X1.75X86.3-MM OAL)						

M-METRIC PART



FRONT VIEW

GRAPHIC #1

<END>

g00262300

# BASIC ENGINE

## 138-2551 MOUNTING GP-FAN DRIVE

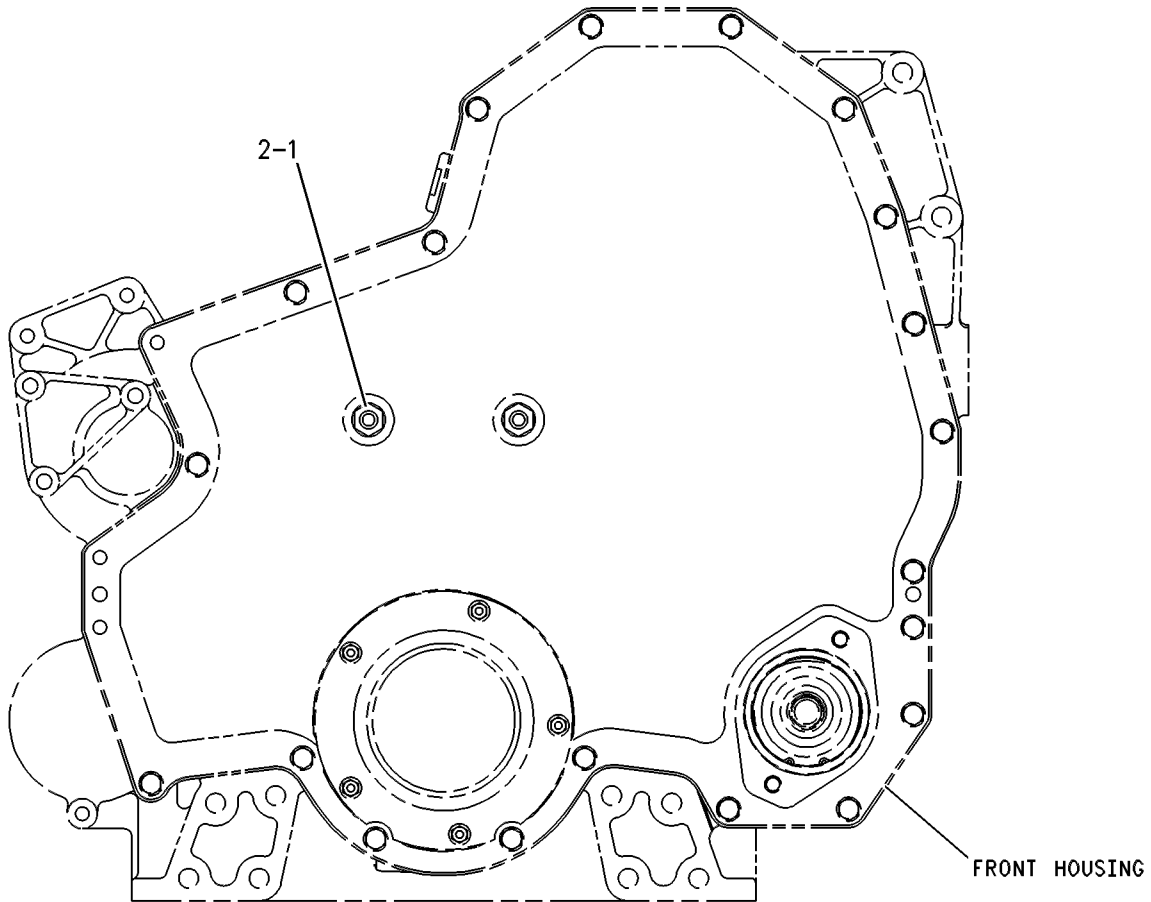
ADAPTABLE TO MULTIPLE FAN MOUNTING STUDS  
AN ATTACHMENT

SMCS-1359

i00833796

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5R-7137	2	WASHER-SEALING						
M	2	1	132-3250	2	STUD						

M-METRIC PART



FRONT VIEW

GRAPHIC #1

<END>

g00262300



# BASIC ENGINE

## 243-3023 MOUNTING GP-FAN DRIVE

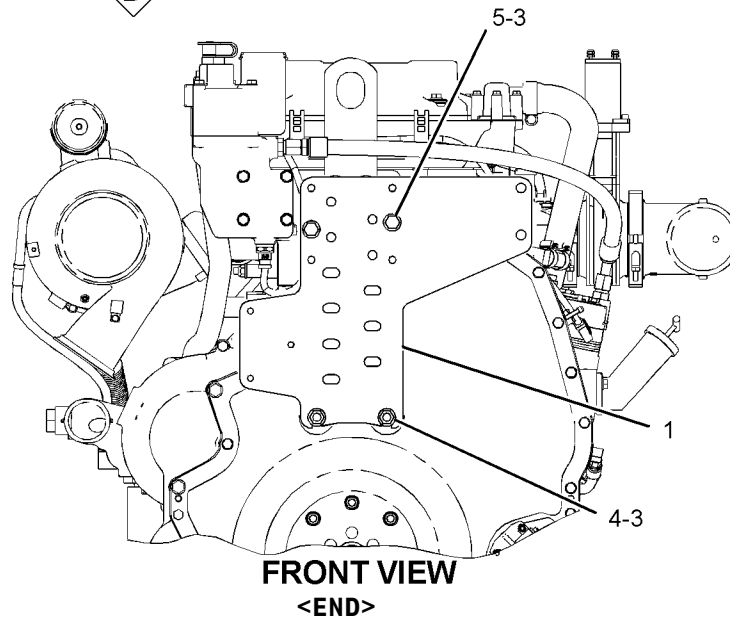
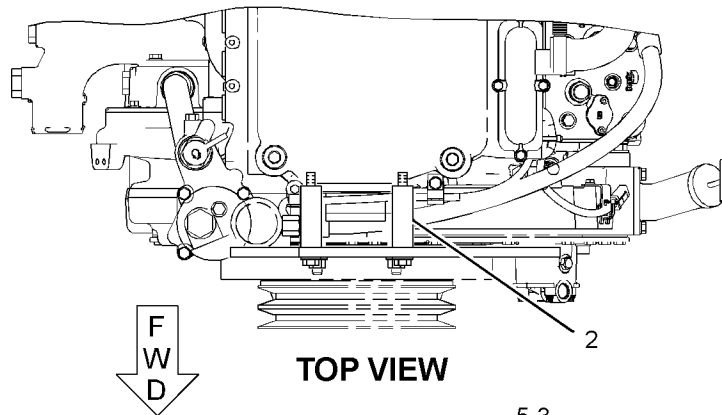
FOR FAN TO CRANK HEIGHTS OF 304.8, 355.6, 381, 431.8, AND 482.6-MM  
 FOR USE WITH CAT SUPPLIED MULTI-POSITIONED FAN DRIVE GROUP, PULLEYS, AND  
 ADAPTER GROUPS  
 AN ATTACHMENT

SMCS-1359

i02125823

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	243-3024	1	PLATE						
	2	1	243-3025	2	SPACER						
	3	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	4	1	6V-8149	2	NUT (M12X1.75-THD)						
M	5	1	8T-0646	2	BOLT (M12X1.75X110-MM)						

M-METRIC PART



GRAPHIC #1

g01082364

# BASIC ENGINE

## 229-8084 MOUNTING GP-VALVE MECHANISM

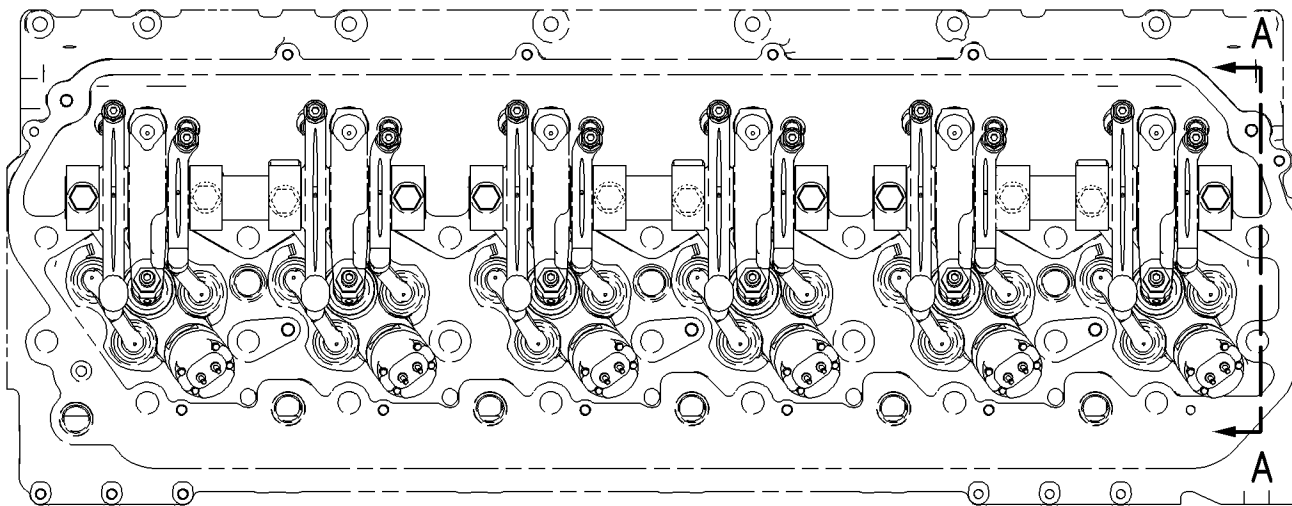
NON-VARIABLE VALVE ACTUATOR

FOR USE WITH NON-VARIABLE VALVE ACTUATOR ENGINES

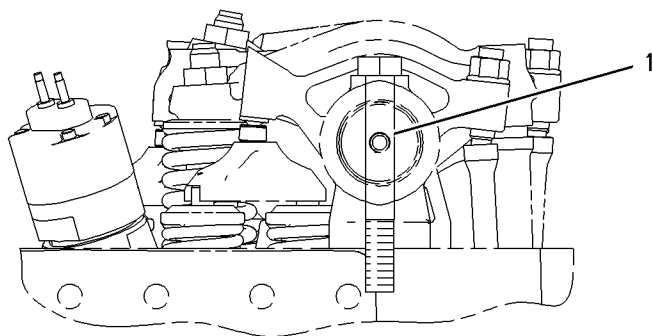
SMCS-1102

i02038719

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	241-0847	6	BOLT (M12-1.75X93-MM THD)						



TOP VIEW



VIEW A-A

GRAPHIC #1

<END>

g00950829

# BASIC ENGINE

**215-9005 PAN GP-OIL-ENGINE**  
 PROVIDES A FRONT, DEEP SUMP CONFIGURATION  
 FOR USE WITH 228-4712-PAGE 200  
 AN ATTACHMENT

SMCS-1302

i01996254

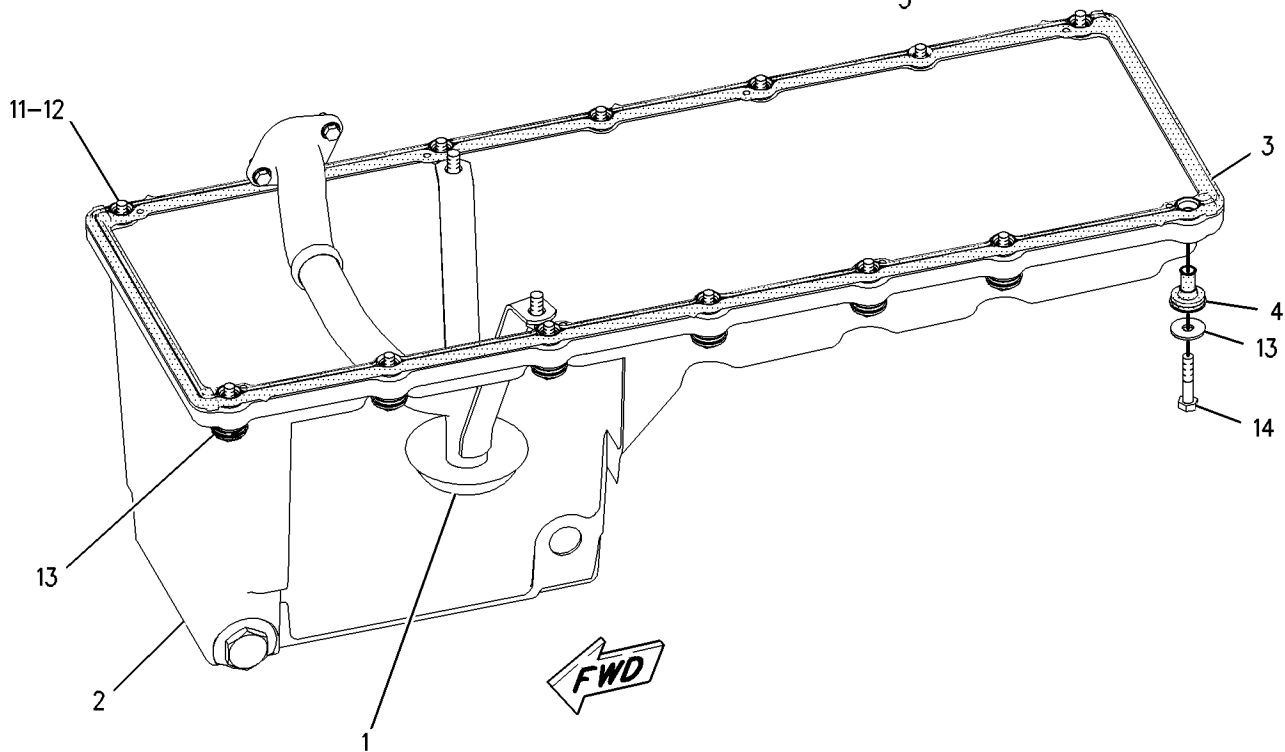
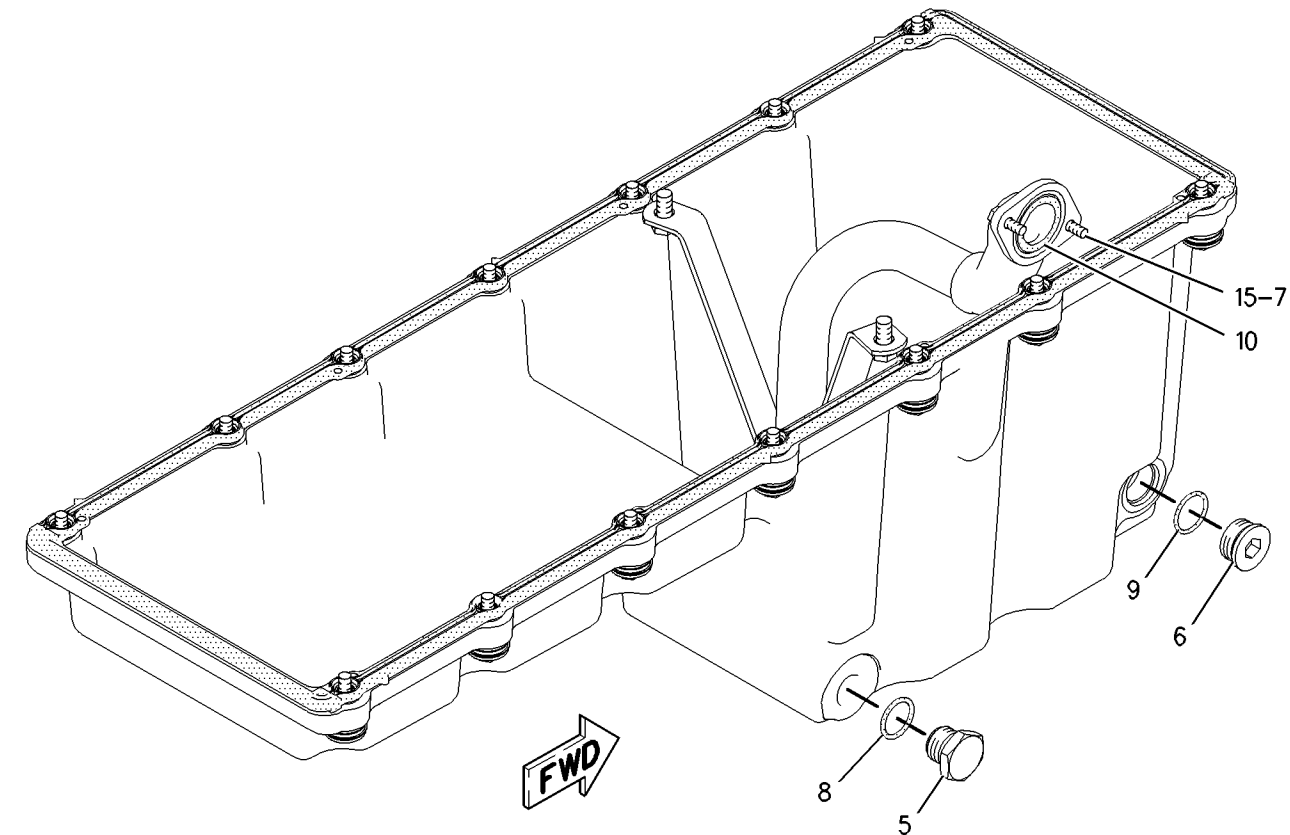
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	210-1744	1	BELL AS-SUCTION						
		1	210-1743	1	ELBOW						
	2	1	210-1745	1	PAN-OIL						
	3	1	217-3673	1	SEAL-ISOLATION						
	4	1	217-3674	14	FASTENER AS						
	5	1	9X-6451	2	PLUG-DRAIN (ENGINE OIL PAN)						
	6	1	9S-9334	2	PLUG						
M	7	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	8	1	061-9458	2	SEAL-O-RING						
	9	1	5P-7701	2	SEAL-O-RING						
	10	1	5P-8211	1	SEAL-O-RING						
	11	1	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						
M	12	1	6A-5591	2	BOLT (M12X1.75X25-MM)						
	13	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	14	1	6V-4249	14	BOLT (M10X1.5X50-MM)						
	15	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART

# BASIC ENGINE

215-9005 PAN GP-OIL (contd.)

i01996254



GRAPHIC #1

<END>

g01001592

# BASIC ENGINE

## 215-9007 PAN GP-OIL-ENGINE PROVIDES A REAR, DEEP SUMP CONFIGURATION AN ATTACHMENT

SMCS-1302

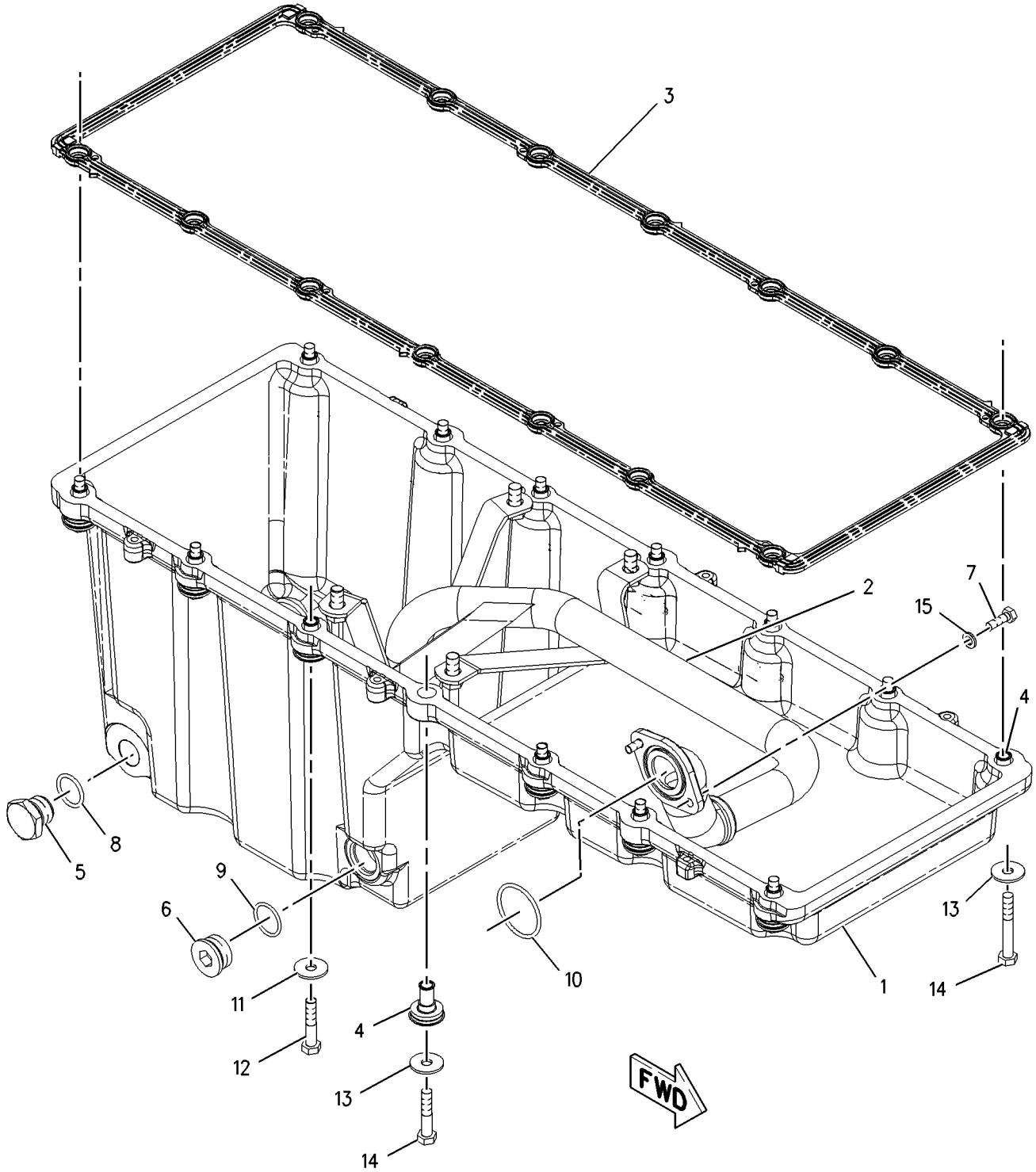
i02009148

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	210-1745	1	PAN-OIL						
	2	1	210-1746	1	BELL AS-SUCTION						
		1	210-1743	1	ELBOW						
	3	1	217-3673	1	SEAL-ISOLATION (OIL PAN)						
	4	1	217-3674	14	FASTENER AS						
	5	1	9X-6451	2	PLUG-DRAIN (ENGINE OIL PAN)						
	6	1	9S-9334	2	PLUG						
M	7	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	8	1	061-9458	2	SEAL-O-RING (OIL PAN DRAIN PLUG)						
	9	1	5P-7701	2	SEAL-O-RING						
	10	1	5P-8211	1	SEAL-O-RING						
	11	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	12	1	6A-5591	4	BOLT (M12X1.75X25-MM)						
	13	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	14	1	6V-4249	14	BOLT (M10X1.5X50-MM)						
	15	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
M-METRIC PART											

# BASIC ENGINE

215-9007 PAN GP-OIL (contd.)

i02009148



GRAPHIC #1

<END>

g01002195

# BASIC ENGINE

## 229-6171 PAN GP-OIL-ENGINE CENTER SUMP CONFIGURATION WITH SHALLOW SUMP OIL PAN AN ATTACHMENT

SMCS-1302

i02009172

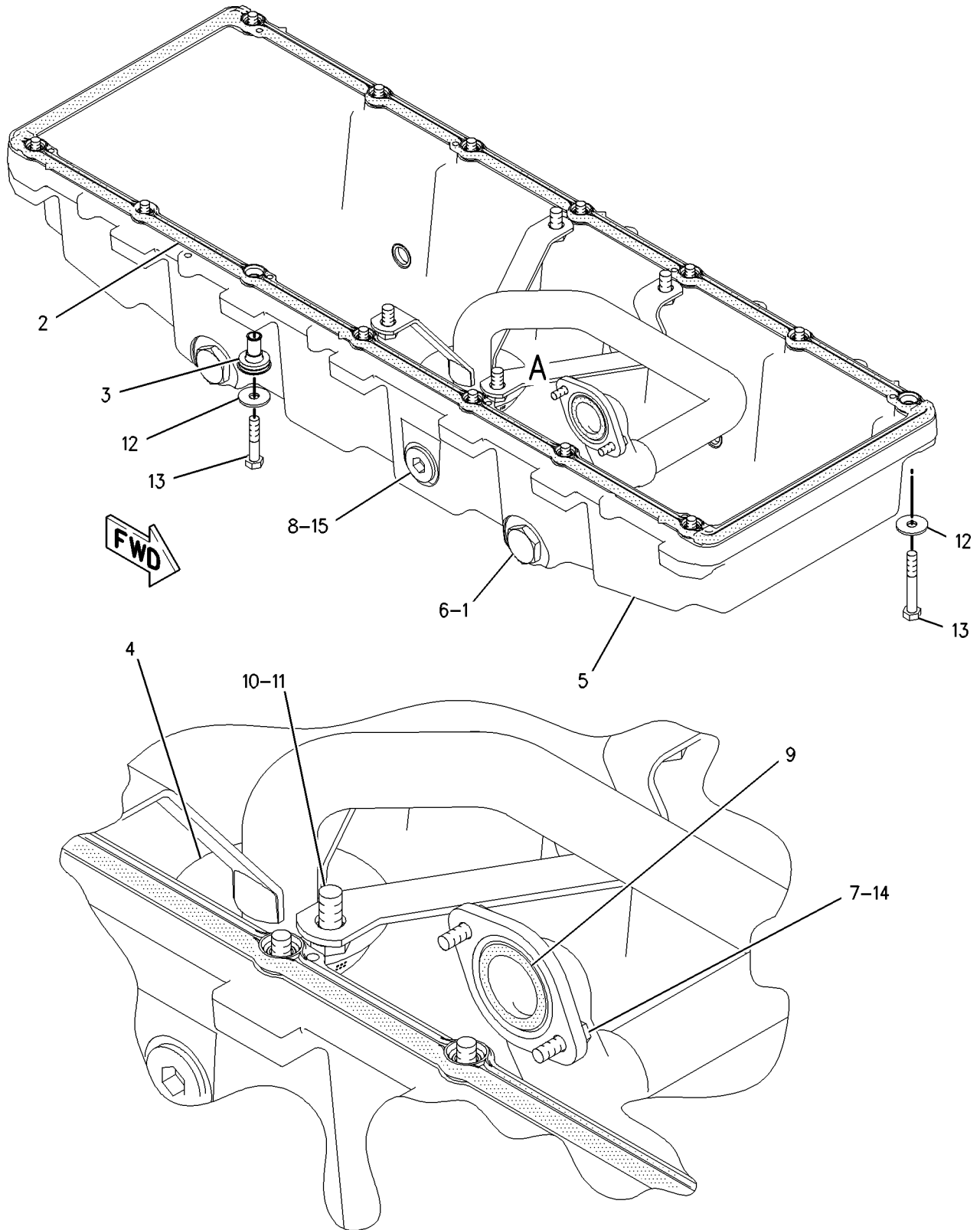
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9X-6451	4	PLUG-DRAIN (ENGINE OIL PAN)						
	2	1	217-3673	1	SEAL-ISOLATION						
	3	1	217-3674	14	FASTENER AS						
	4	1	229-6200	1	BELL AS						
		1	210-1743	1	ELBOW						
	5	1	229-7252	1	PAN-OIL						
	6	1	061-9458	4	SEAL-O-RING						
M	7	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	8	1	5P-7701	2	SEAL-O-RING						
	9	1	5P-8211	1	SEAL-O-RING						
	10	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	11	1	6A-5591	4	BOLT (M12X1.75X25-MM)						
	12	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	13	1	6V-4249	14	BOLT (M10X1.5X50-MM)						
	14	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	15	1	9S-9334	2	PLUG						

M-METRIC PART

# BASIC ENGINE

229-6171 PAN GP-OIL (contd.)

i02009172



VIEW OF AREA A

GRAPHIC #1

<END>

g00998497



# BASIC ENGINE

## 244-8675 PAN GP-OIL-ENGINE

REAR SUMP

FOR USE WITH TRANSMISSION OIL COOLER GROUP  
ALSO AN ATTACHMENT

SMCS-1302

i02096368

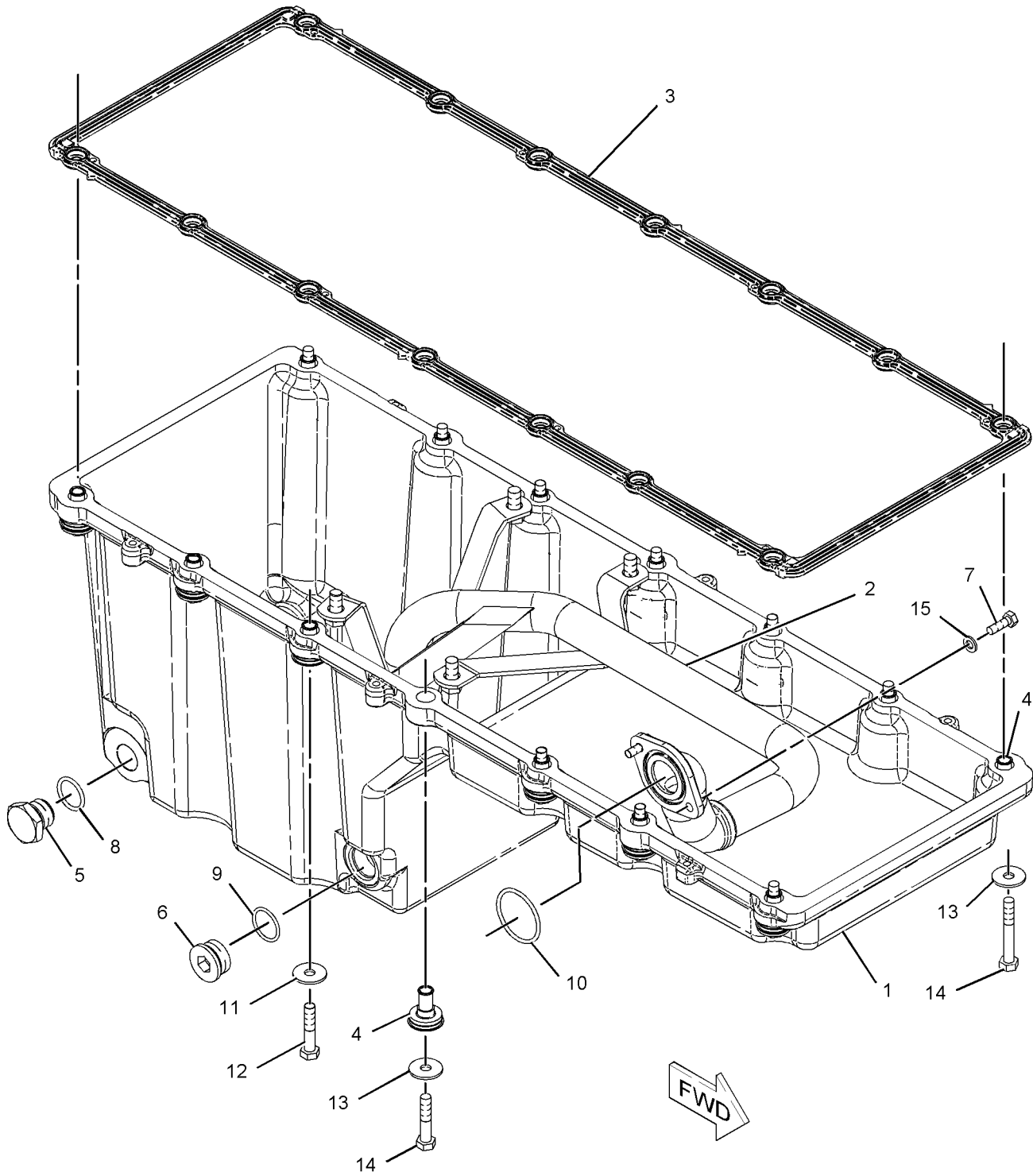
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	210-1745	1	PAN-OIL						
	2	1	210-1746	1	BELL AS-SUCTION						
		1	210-1743	1	ELBOW						
	3	1	217-3673	1	SEAL-ISOLATION (OIL PAN)						
	4	1	217-3674	14	FASTENER AS						
	5	1	9X-6451	2	PLUG-DRAIN (ENGINE OIL PAN)						
	6	1	9S-9334	2	PLUG						
M	7	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	8	1	061-9458	2	SEAL-O-RING (OIL PAN DRAIN PLUG)						
	9	1	5P-7701	2	SEAL-O-RING						
	10	1	5P-8211	1	SEAL-O-RING						
	11	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	12	1	6A-5591	4	BOLT (M12X1.75X25-MM)						
	13	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	14	1	6V-4249	12	BOLT (M10X1.5X50-MM)						
	15	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART

# BASIC ENGINE

244-8675 PAN GP-OIL (contd.)

i02096368



GRAPHIC #1

<END>

g01073500

# BASIC ENGINE

## 251-9356 PAN GP-OIL-ENGINE

CENTER SUMP  
AN ATTACHMENT

SMCS-1302

i02067633

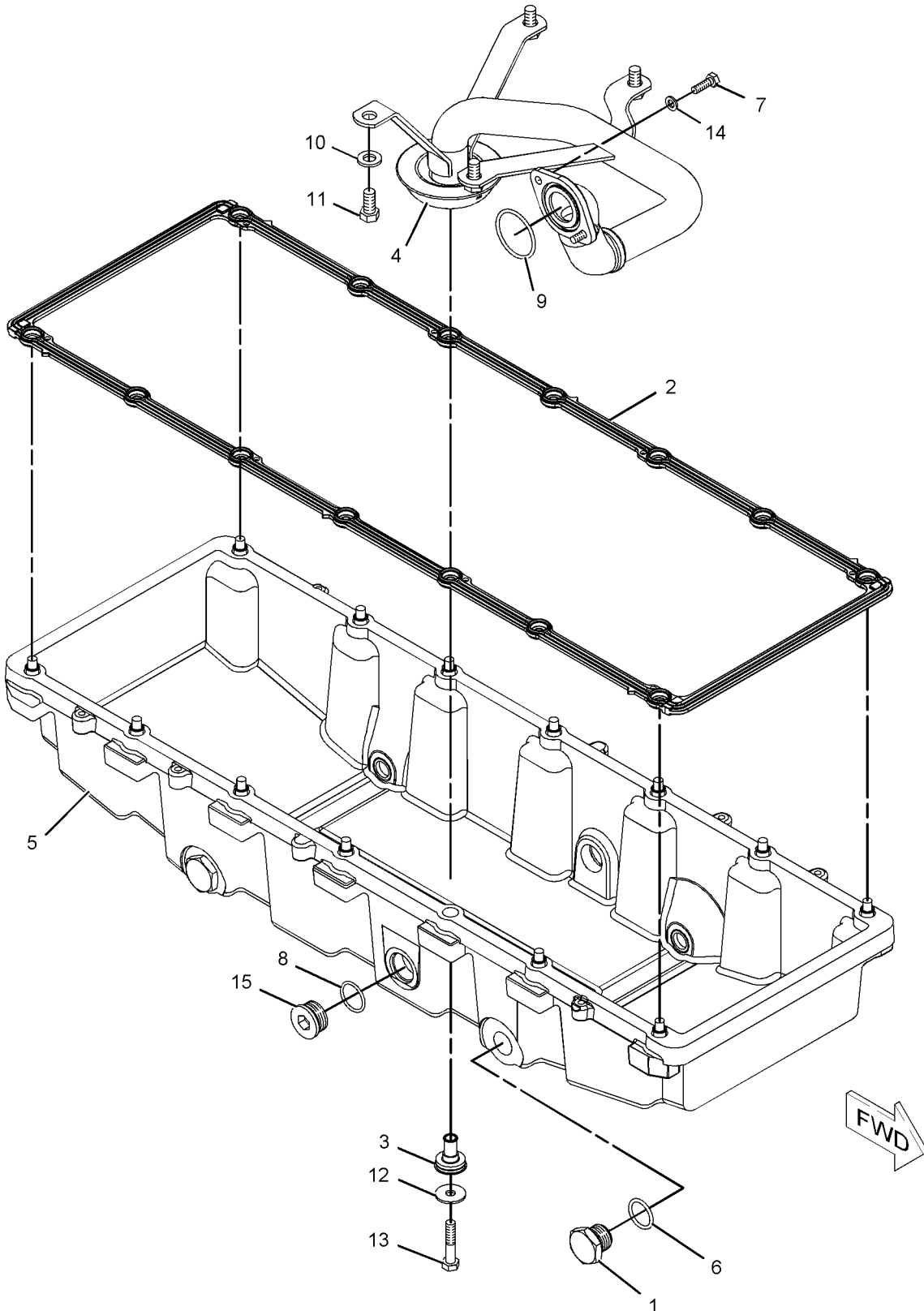
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9X-6451	4	PLUG-DRAIN (ENGINE OIL PAN)						
	2	1	217-3673	1	SEAL-ISOLATION						
	3	1	217-3674	14	FASTENER AS						
	4	1	229-6200	1	BELL AS						
		1	210-1743	1	ELBOW						
	5	1	229-7252	1	PAN-OIL						
	6	1	061-9458	4	SEAL-O-RING						
M	7	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	8	1	5P-7701	1	SEAL-O-RING						
	9	1	5P-8211	1	SEAL-O-RING						
	10	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	11	1	6A-5591	4	BOLT (M12X1.75X25-MM)						
	12	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	13	1	6V-4249	14	BOLT (M10X1.5X50-MM)						
	14	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	15	1	9S-9334	1	PLUG						

M-METRIC PART

# BASIC ENGINE

251-9356 PAN GP-OIL (contd.)

i02067633



GRAPHIC #1

<END>

g01062483

# BASIC ENGINE

## 255-4656 PAN GP-OIL-ENGINE

FRONT SUMP  
AN ATTACHMENT

SMCS-1302

i02208337

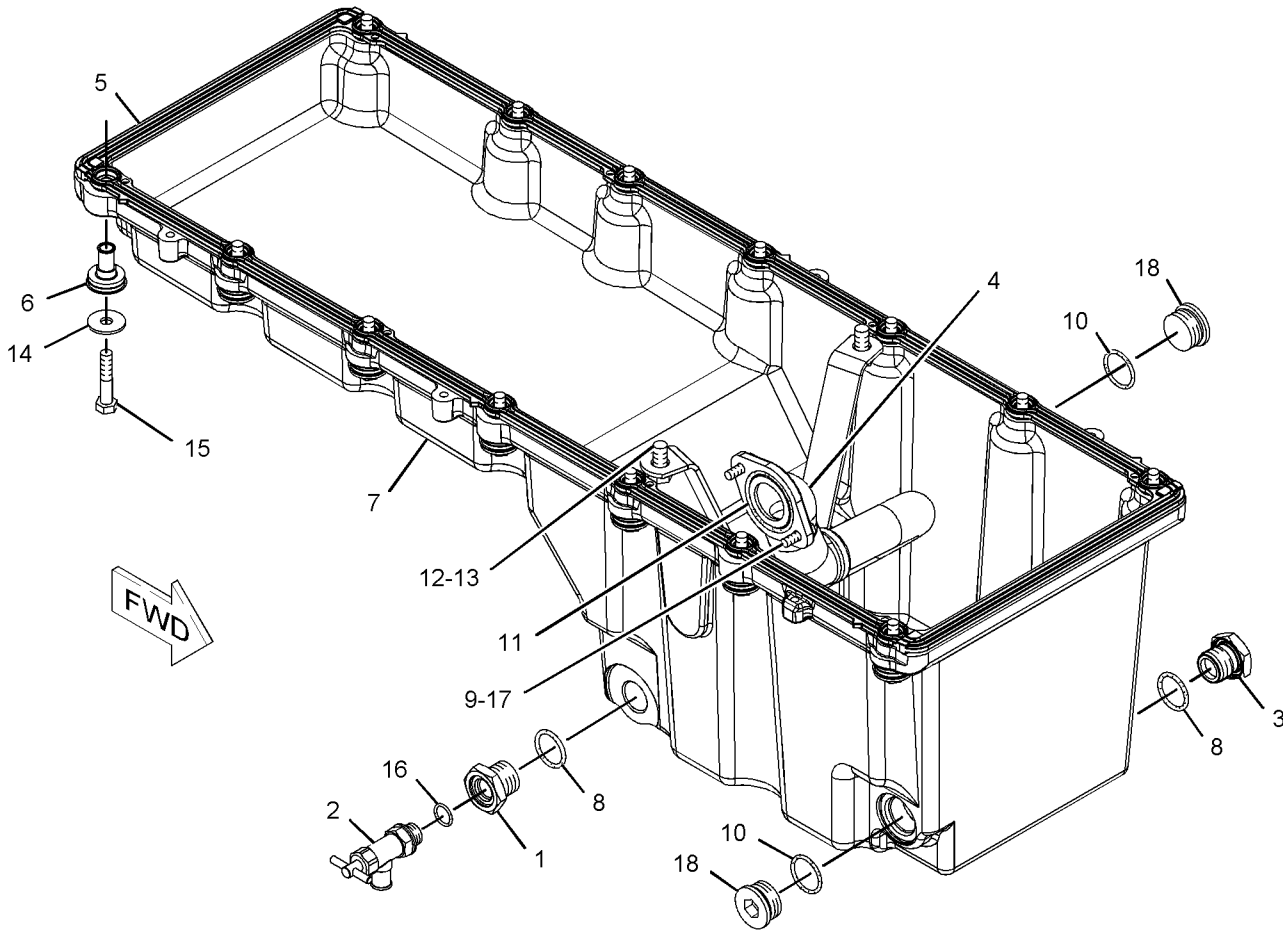
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3E-7427	1	ADAPTER						
	2	1	6V-7238	1	VALVE-SHUTOFF (ENGINE OIL PAN DRAIN)						
	3	1	9X-6451	1	PLUG-DRAIN (ENGINE OIL PAN)						
	4	1	210-1744	1	BELL AS-SUCTION						
		1	210-1743	1	ELBOW						
	5	1	217-3673	1	SEAL-ISOLATION						
	6	1	217-3674	14	FASTENER AS						
	7	1	240-3277	1	PAN-OIL (ENGINE)						
	8	1	061-9458	2	SEAL-O-RING						
M	9	1	3E-8016	2	BOLT-SELF-LOCKING (M8X1.25X25-MM)						
	10	1	5P-7701	2	SEAL-O-RING						
	11	1	5P-8211	1	SEAL-O-RING						
	12	1	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						
M	13	1	6A-5591	2	BOLT (M12X1.75X25-MM)						
	14	1	6N-8863	14	WASHER (10.2X32X2.5-MM THK)						
M	15	1	6V-4249	14	BOLT (M10X1.5X50-MM)						
	16	1	8L-2786	1	SEAL-O-RING						
	17	1	9M-1974	2	WASHER-HARD (8.8X16X2-MM THK)						
	18	1	9S-9334	2	PLUG						

M-METRIC PART

# BASIC ENGINE

255-4656 PAN GP-OIL (contd.)

i02208337



GRAPHIC #1

<END>

g01124223

# BASIC ENGINE

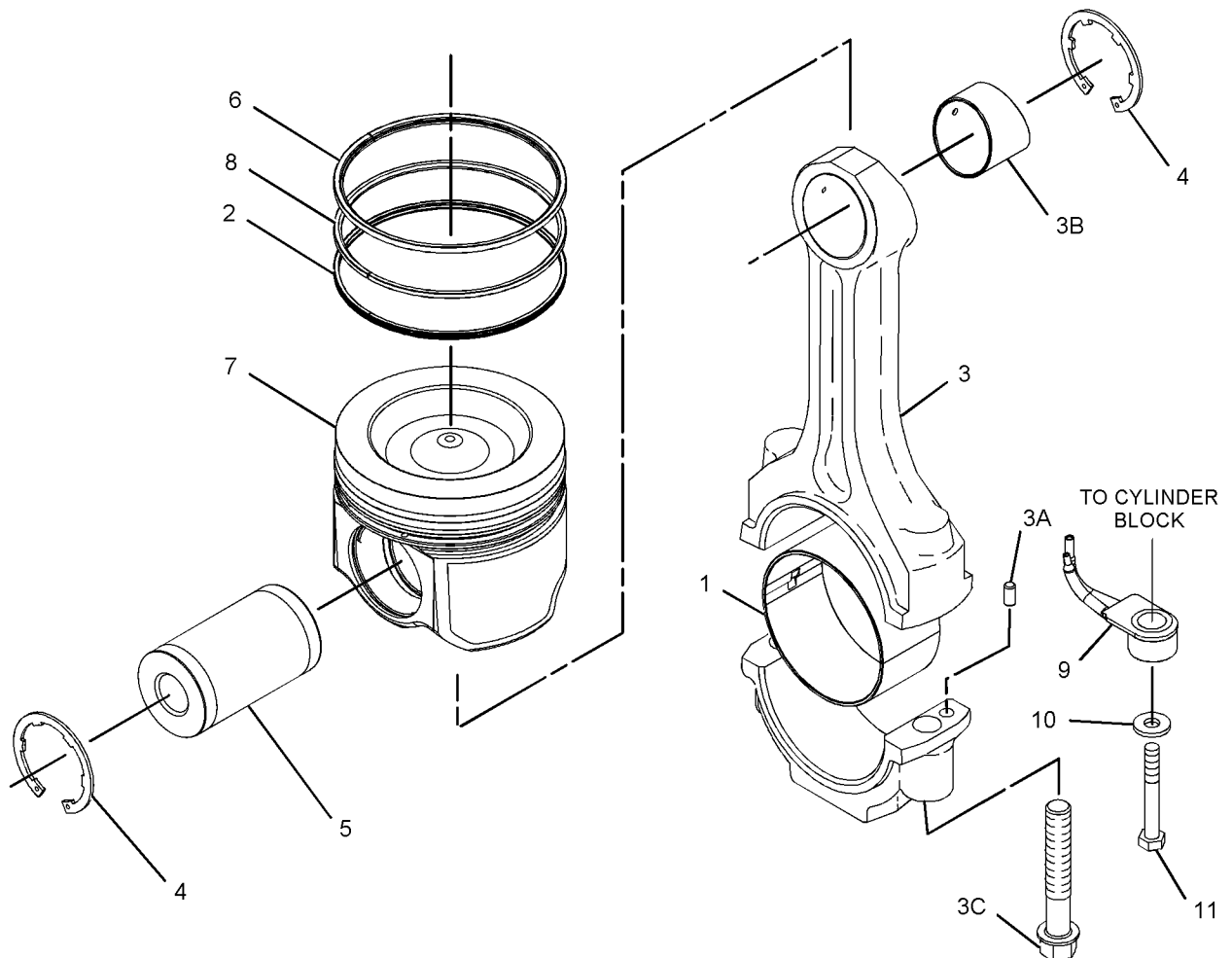
## 238-2721 PISTON & ROD GP

SMCS - 1225

i02258554

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	1 2 3 4 5 6 (PRODUCT LEVEL)						SEE PAGE
	1	1	116-1089	1	BEARING-CONNECTING ROD (STANDARD)							
AB			128-0395	1	BEARING-CONNECTING ROD (0.51-MM US)							
AB			128-0396	1	BEARING-CONNECTING ROD (0.76-MM US)							
	2	1	265-1113	1	RING-PISTON-OIL							
R	3	1	160-8192	1	ROD AS-CONNECTING							
	3A	1	219-4458	2	PIN-DOWEL							
	3B	1	115-2972	1	BEARING-CONNECTING ROD							
M	3C	1	115-2973	2	BOLT-CONNECTING ROD							
	4	1	197-9326	2	RETAINER							
	5	1	197-9327	1	PIN-PISTON							
	6	1	238-2717	1	RING-PISTON-TOP							
	7	1	265-1111	1	BODY AS-PISTON							
	8	1	197-9257	1	RING-INTERMEDIATE							
	9	1	226-6478	1	JET AS-PISTON COOLING							
	10	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)							
M	11	1	8T-0100	1	BOLT (M8X1.25X60-MM)							

A - NOT PART OF THIS GROUP  
 B - USE AS REQUIRED  
 M - METRIC PART  
 R - REMFG PART MAY BE AVAILABLE



GRAPHIC #1

<END>

g01137115

# BASIC ENGINE

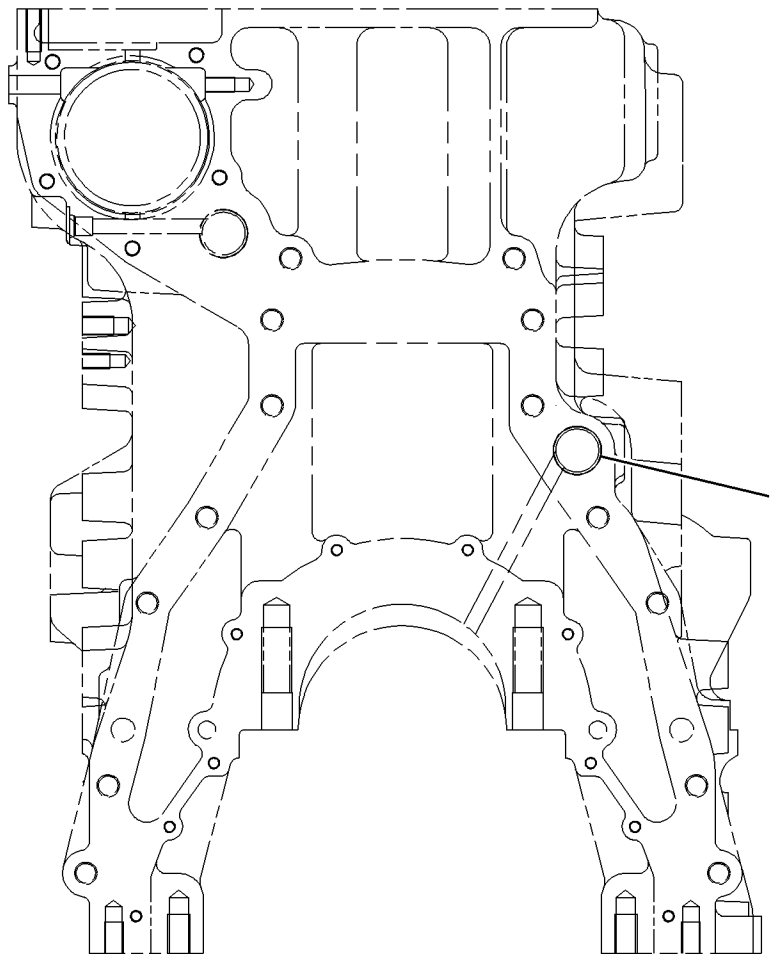
## 117-0165 PLUG GP-CYLINDER BLOCK

RIGHT REAR OIL GALLERY  
ALSO AN ATTACHMENT

SMCS-1201

i01534512

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3B-0623	1	PLUG-CUP						



REAR VIEW

<END>

GRAPHIC #1

g00796766



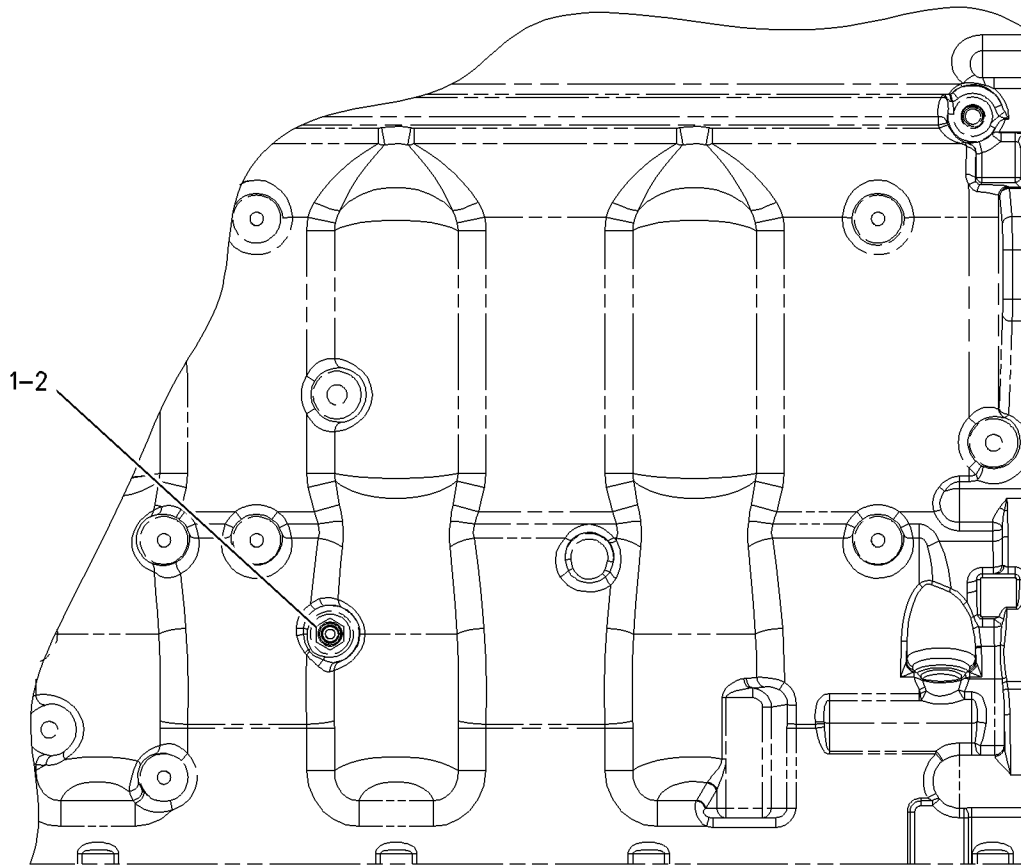
# BASIC ENGINE

## 223-3875 PLUG GP-CYLINDER BLOCK FUEL PRESSURE OPENING

SMCS-1201

i01839661

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-5048	1	SEAL-O-RING						
	2	1	9S-4182	1	PLUG						



LEFT SIDE VIEW

GRAPHIC #1

<END>

g00939495

# BASIC ENGINE

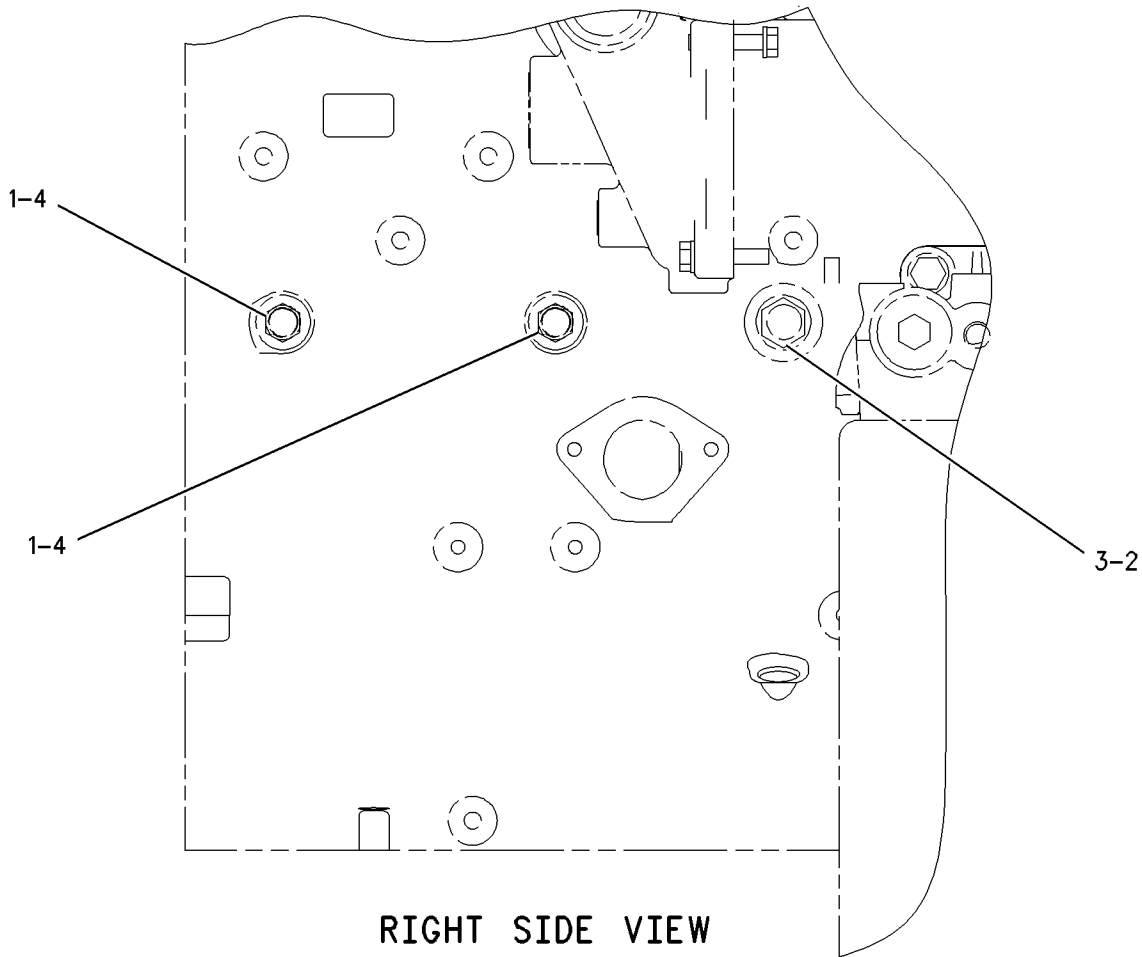
## 227-9545 PLUG GP-CYLINDER BLOCK

PROVIDES PLUGS FOR PORTS IN RIGHT HAND SIDE OIL GALLERY  
ALSO AN ATTACHMENT

SMCS-1201

i01863078

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-5049	2	SEAL-O-RING						
	2	1	8L-2786	1	SEAL-O-RING						
	3	1	9S-4185	1	PLUG (3/4-16 THD)						
	4	1	9S-4191	2	PLUG (9/16-18 THD)						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00950033

# BASIC ENGINE

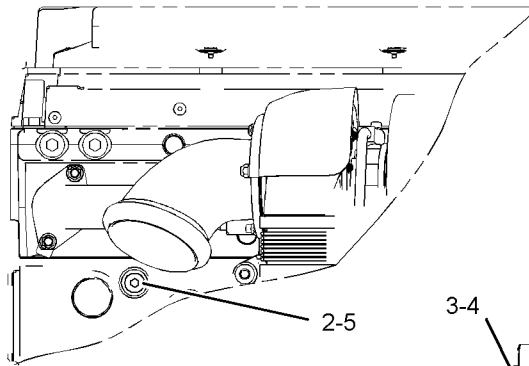
## 237-9753 PLUG GP-ENGINE

CANNOT BE USED WITH AIR COMPRESSOR  
ALSO AN ATTACHMENT

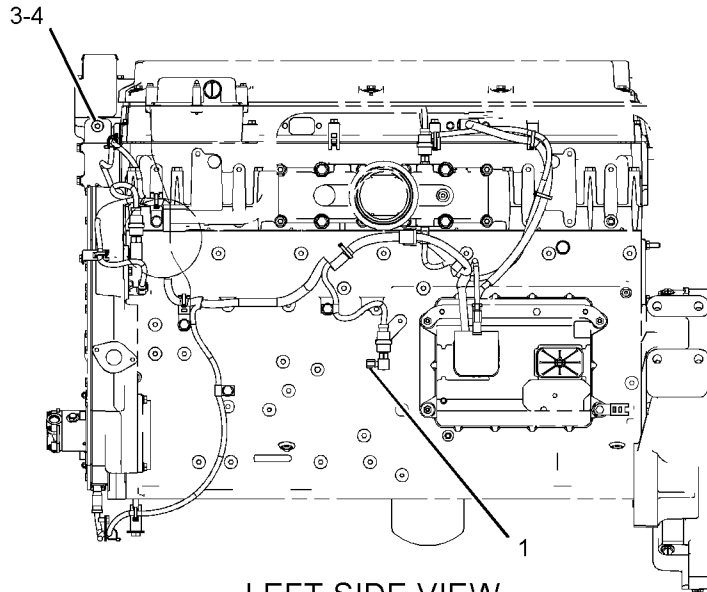
SMCS-1100

i02096344

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9L-8493	1	CAP						
	2	1	6V-3251	1	SEAL-O-RING						
	3	1	6V-6609	1	SEAL-O-RING						
	4	1	9S-8005	1	PLUG						
	5	1	9S-8006	1	PLUG						



RIGHT SIDE VIEW



LEFT SIDE VIEW

GRAPHIC #1

<END>

g01073921

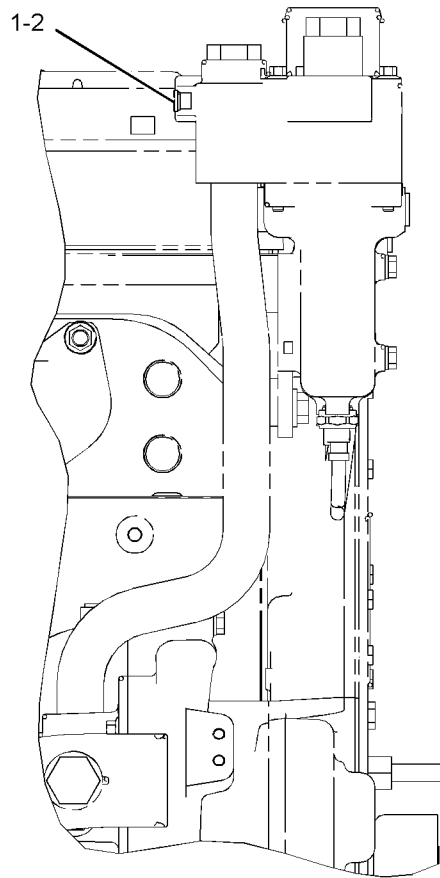
# BASIC ENGINE

## 262-4166 PLUG GP-ENGINE-TEMPERATURE REGULATOR AN ATTACHMENT

SMCS-1100

i02198391

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3J-7354</b>	1	SEAL-O-RING						
	2	1	<b>9S-8002</b>	1	PLUG						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01138272

# BASIC ENGINE

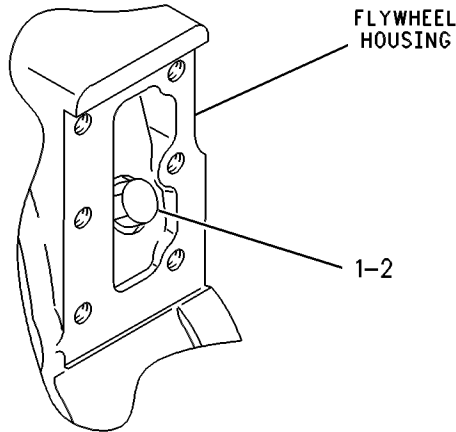
## 135-8015 PLUG GP-FLYWHEEL HOUSING

PART OF 225-9556 GEAR GP-REAR  
ALSO AN ATTACHMENT

SMCS-1157

i01912490

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5F-0304	1	PLUG (FLYWHEEL HOUSING)						
	2	1	2A-1162	1	GASKET						



VIEWED FROM UPPER  
RIGHT REAR OF ENGINE

GRAPHIC #1

<END>

g00269049

# BASIC ENGINE

## 4P-3074 POWER TAKE-OFF GP

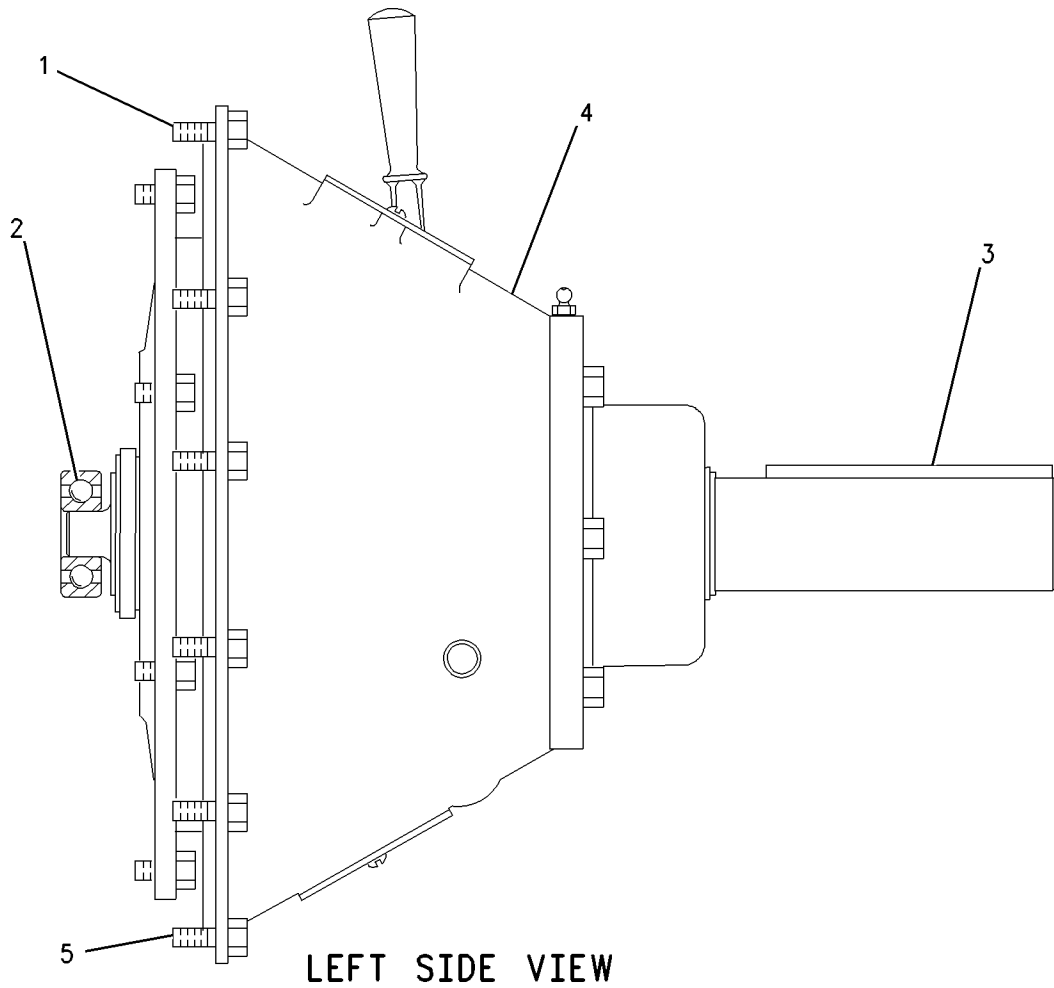
REAR CLUTCH SUPPORT IS REQUIRED FOR SIDE LOAD APPLICATIONS  
 FOR USE WITH IN-LINE LOAD ONLY, SAE NO. 1 FLYWHEEL AND FLYWHEEL HOUSING.  
 CANNOT BE USED WITH REAR STUB SHAFT  
 AN ATTACHMENT

SMCS-1165

i01509984

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7B-3235	8	BOLT (1/2-13X1.375 IN)						
	2	1	6V-0455	1	BALL BEARING						
	3	1	7F-8896	1	KEY						
Y	4	1	4P-3073	1	CLUTCH GP						27
	5	1	3H-5368	12	BOLT (7/16-14X1.375IN)						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00784075

# BASIC ENGINE

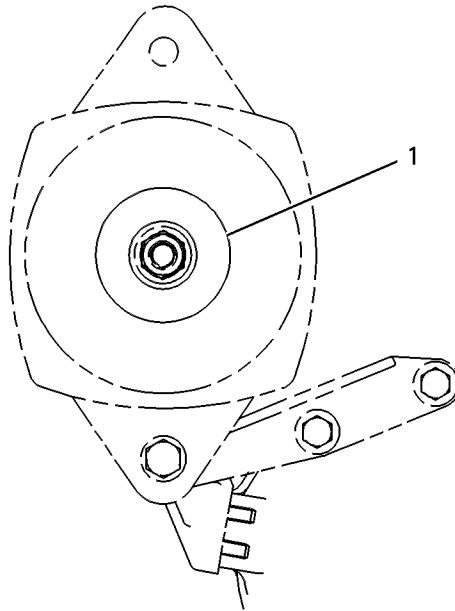
## 138-2516 PULLEY GP-ALTERNATOR

2.8:1 DRIVE RATIO-82MM (3.23 INCH) DIAMETER PULLEY-FREIGHTLINER  
FOR USE WITH 228.5MM (9 INCH) DIAMETER CRANK PULLEY, 22.19MM (.87 INCH)  
DIAMETER SHAFT WITH OR W/O KEY  
AN ATTACHMENT

SMCS-1205, 1359, 1384, 1425

i02148160

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	138-2515	1	PULLEY (8 GROOVE)						



FRONT VIEW

GRAPHIC #1

<END>

g00251352

# BASIC ENGINE

## 117-2795 PULLEY GP-CRANKSHAFT

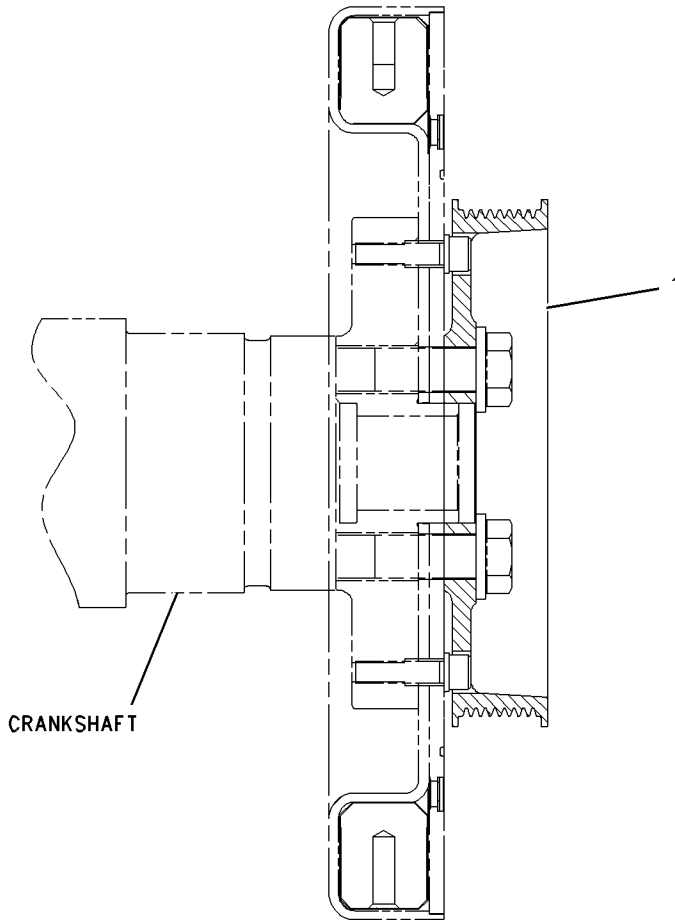
190.5-MM (7.5-INCH) DIAMETER, 8 GROOVE

FOR USE WITH 117-2771-PAGE 59. CANNOT BE USED WITH 180-5168-PAGE 60,  
117-0177-PAGE 148  
AN ATTACHMENT

SMCS-1205

i02144243

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	175-7314	1	PULLEY (8 GROOVE)						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00783978



# BASIC ENGINE

## 124-7311 PULLEY GP-CRANKSHAFT

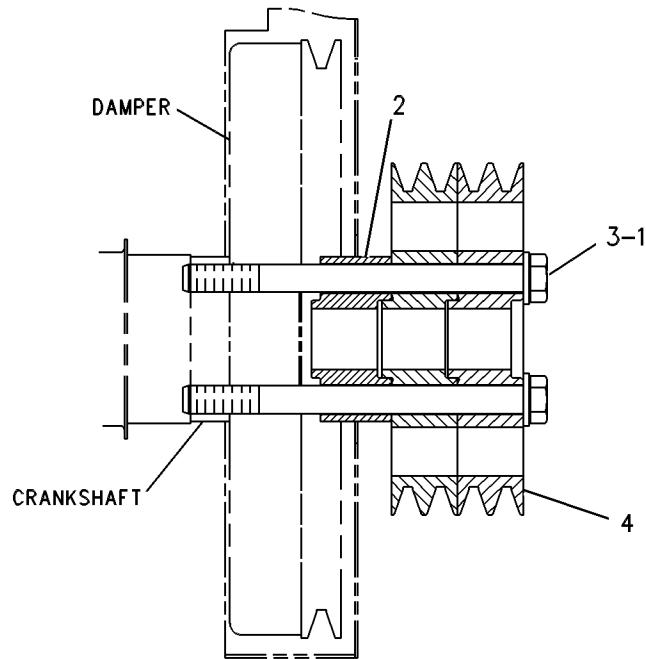
FRONT, 4-GROOVE  
AN ATTACHMENT

SMCS - 1205

i02144244

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8247	6	WASHER-HARD (17X32X3.5-MM THK)						
	2	1	127-7213	1	ADAPTER						
M	3	1	9X-2075	6	BOLT (M16X2X200-MM)						
	4	1	100-8528	2	PULLEY (2 GROOVE)						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00264966

# BASIC ENGINE

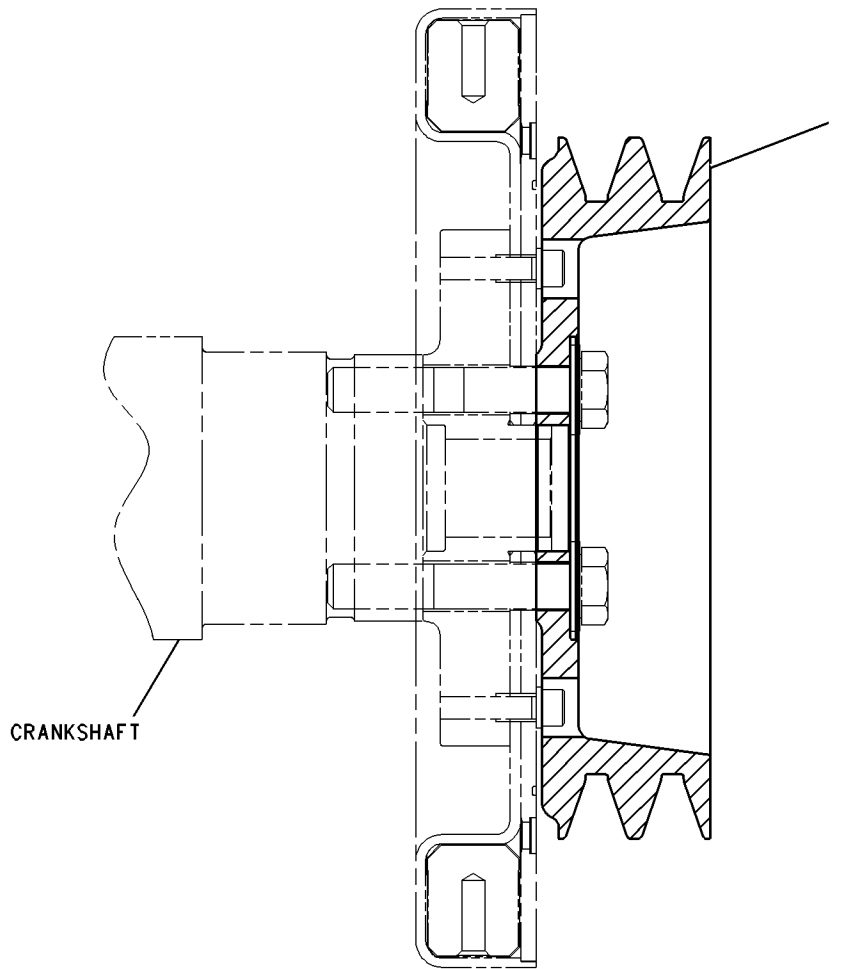
## 138-2579 PULLEY GP-CRANKSHAFT

V-BELT, 2 GROOVE  
AN ATTACHMENT

SMCS-1205

i01976492

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	136-4295	1	PULLEY - CRANKSHAFT						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00783980

# BASIC ENGINE

## 155-3843 PULLEY GP-CRANKSHAFT

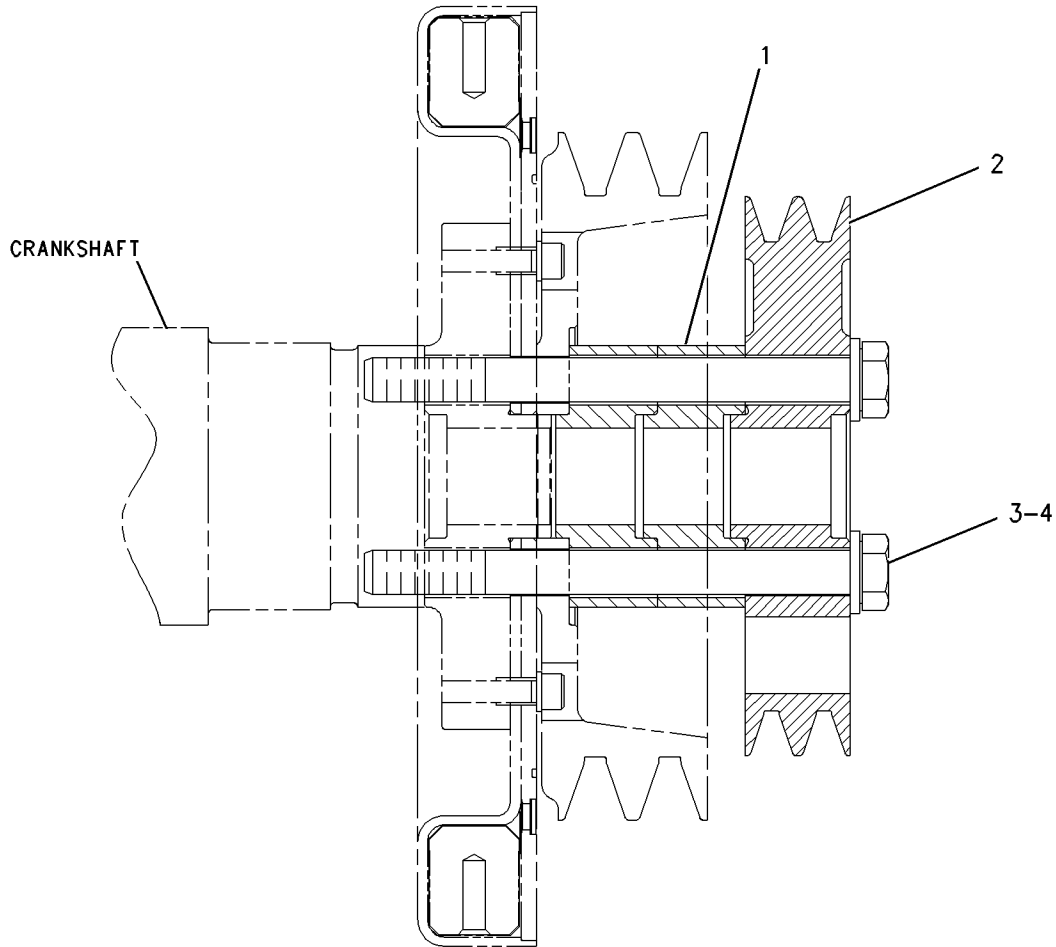
V-BELT, 2 GROOVE, STACK-ON  
AN ATTACHMENT

SMCS-1205

i02144248

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	100-8527	2	ADAPTER						
	2	1	100-8528	1	PULLEY (2 GROOVE)						
M	3	1	8T-5002	6	BOLT (M16X180-MM)						
	4	1	9X-8268	6	WASHER (17.5X30X3.5-MM THK)						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00783802

# BASIC ENGINE

## 192-2074 PULLEY GP-CRANKSHAFT

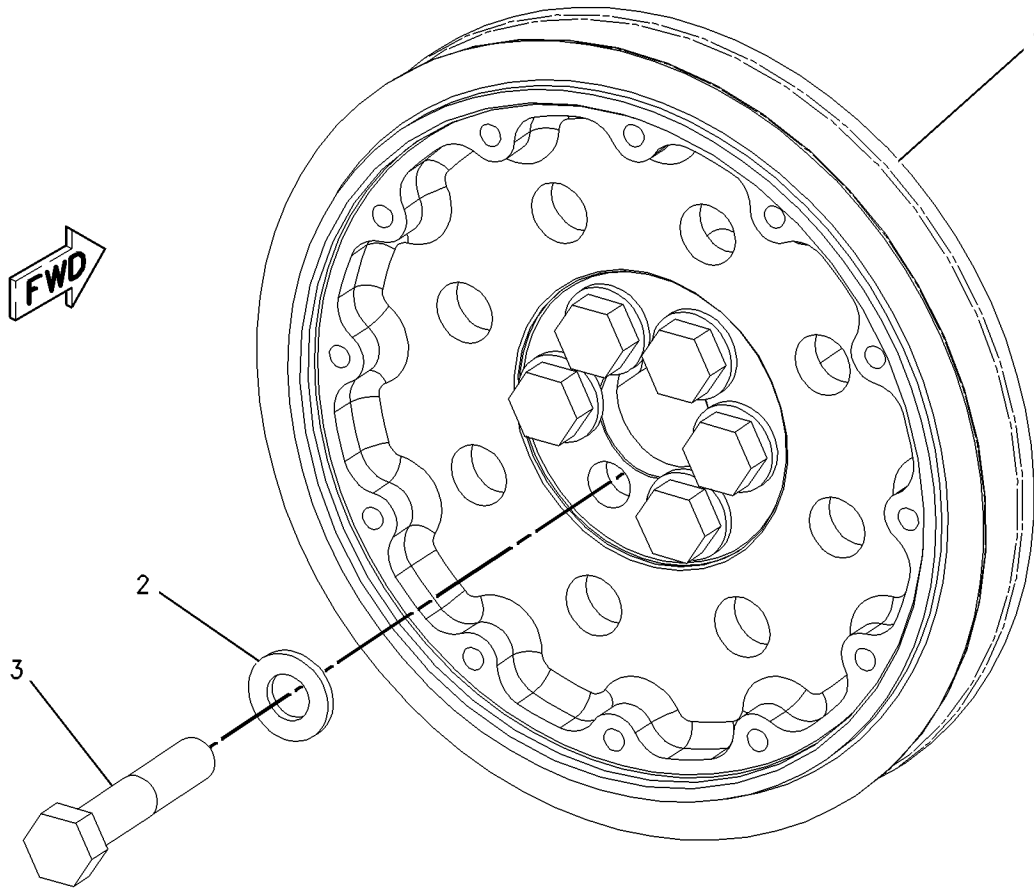
V-BELT SINGLE GROOVE-300 MM DIAMETER  
AN ATTACHMENT

SMCS-1205

i02144250

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	192-2073	1	PULLEY (1 GROOVE)						
	2	1	5P-8247	6	WASHER-HARD (17X32X3.5-MM THK)						
M	3	1	8T-0281	6	BOLT (M16X2X80-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00831541

# BASIC ENGINE

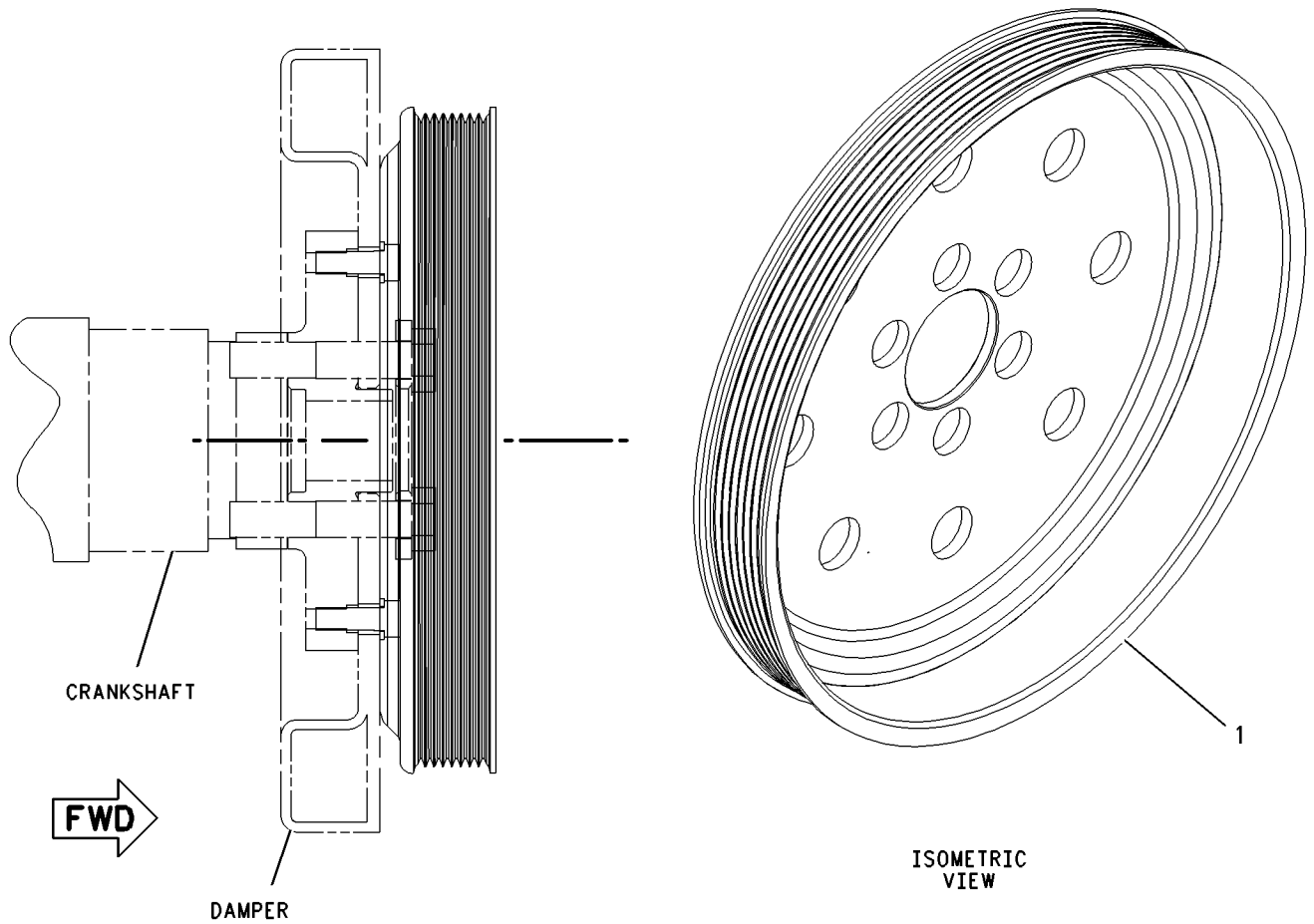
## 207-8103 PULLEY GP-CRANKSHAFT

261.2MM DIAMETER, 8 GROOVE "K" SECTION  
FOR USE WITH ADAPTER OR FASTENER  
AN ATTACHMENT

SMCS-1205

i02144251

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	207-8107	1	PULLEY (8 GROOVE)						



GRAPHIC #1

<END>

g00951710

# BASIC ENGINE

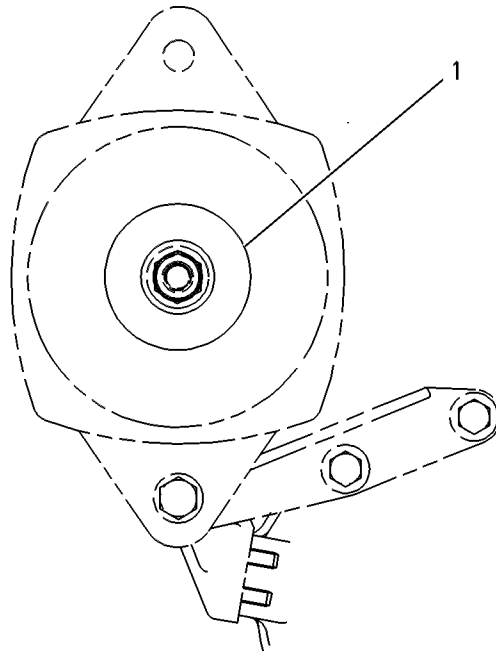
## 117-0177 PULLEY GP-FAN & ALT DRIVE

3.34:1 DRIVE RATIO. 68.5 MM (2.9 IN) DIAMETER, 8 GROOVE  
 FOR USE WITH 22.19 MM (0.87 IN) DIAMETER ALTERNATOR SHAFT WITH OR WITHOUT  
 KEY, 228.5 MM (9.0 IN) DIAMETER CRANKSHAFT PULLEY. CANNOT BE USED WITH  
 117-2795—PAGE 142  
 AN ATTACHMENT

SMCS-1359, 1425

i01998401

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	123-0791	1	PULLEY (8-GROOVE) (ALTERNATOR)						



FRONT VIEW

GRAPHIC #1

<END>

g00251314

# BASIC ENGINE

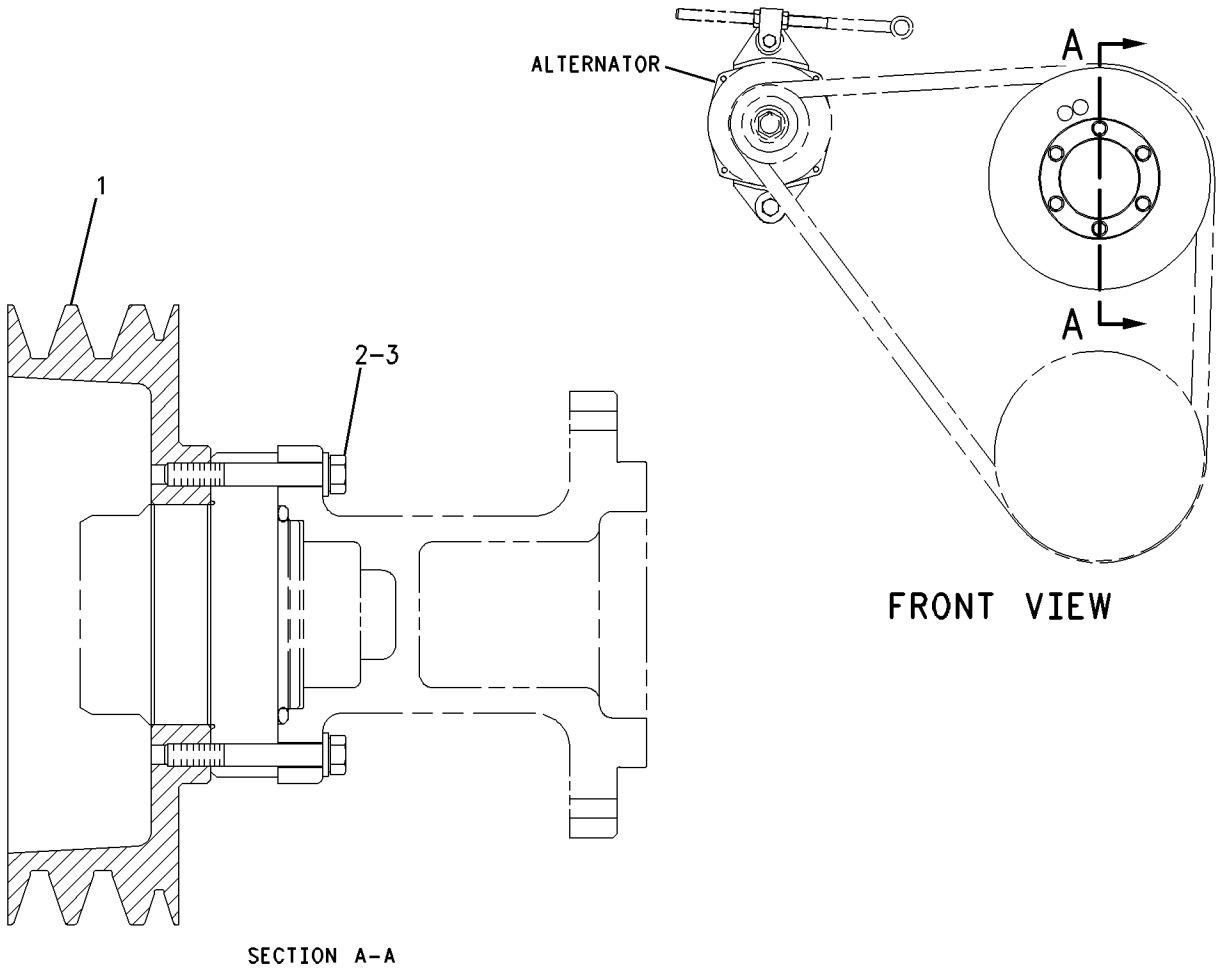
## 128-3405 PULLEY GP-FAN DRIVE

FAN DRIVE RATIO: .94:1  
AN ATTACHMENT

SMCS-1359

i02144245

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	127-8683	1	PULLEY-FAN (3 GROOVE)						
	2	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5-MM THK)						
	3	1	8T-9101	6	BOLT (3/8-16X2.75-IN)						



GRAPHIC #1

<END>

g00783795

# BASIC ENGINE

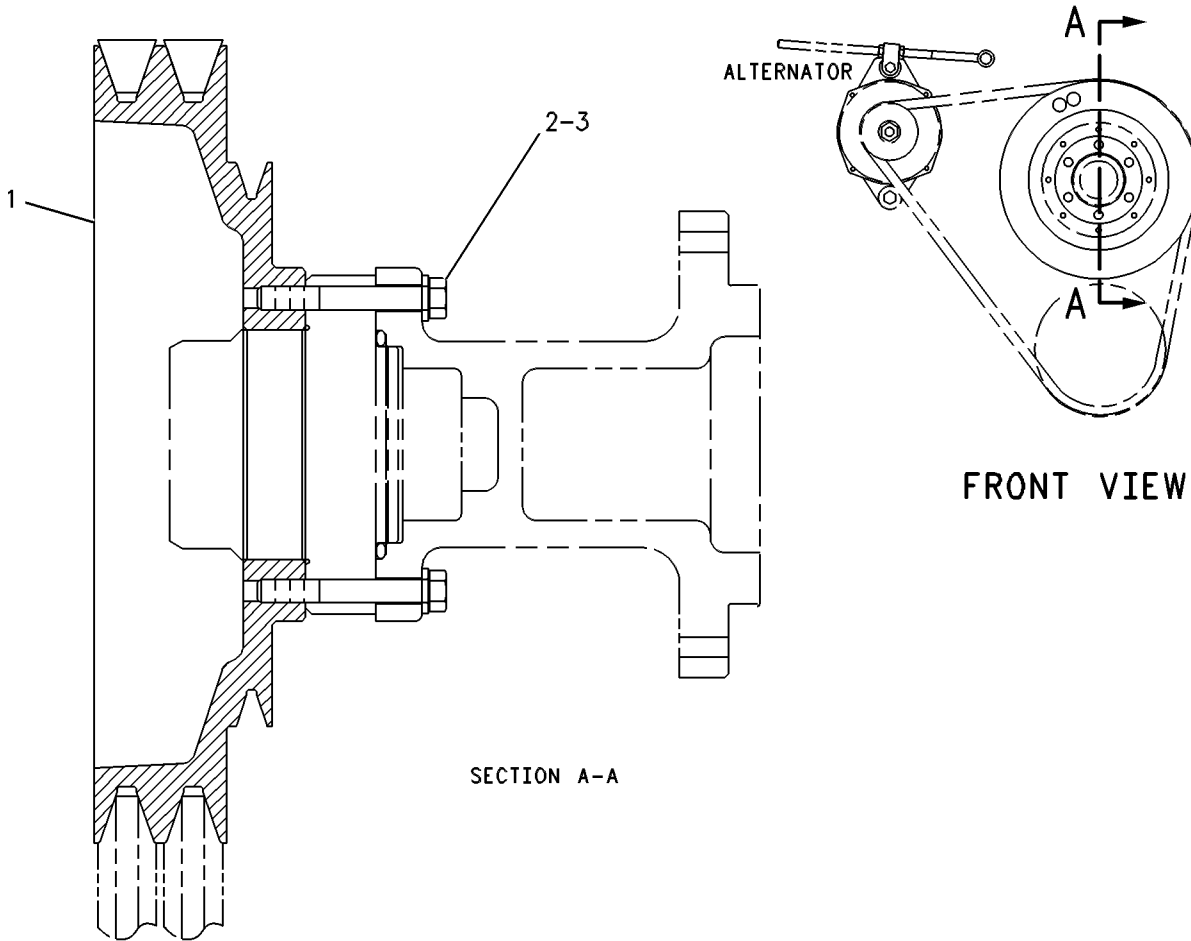
## 130-5480 PULLEY GP-FAN DRIVE

FAN DRIVE RATIO: .625:1  
AN ATTACHMENT

SMCS-1359

i01998405

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-8559	1	PULLEY-FAN DRIVE						
	2	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5-MM THK)						
	3	1	8T-9101	6	BOLT (3/8-16X2.75-IN)						



GRAPHIC #1

<END>

g00264713



# BASIC ENGINE

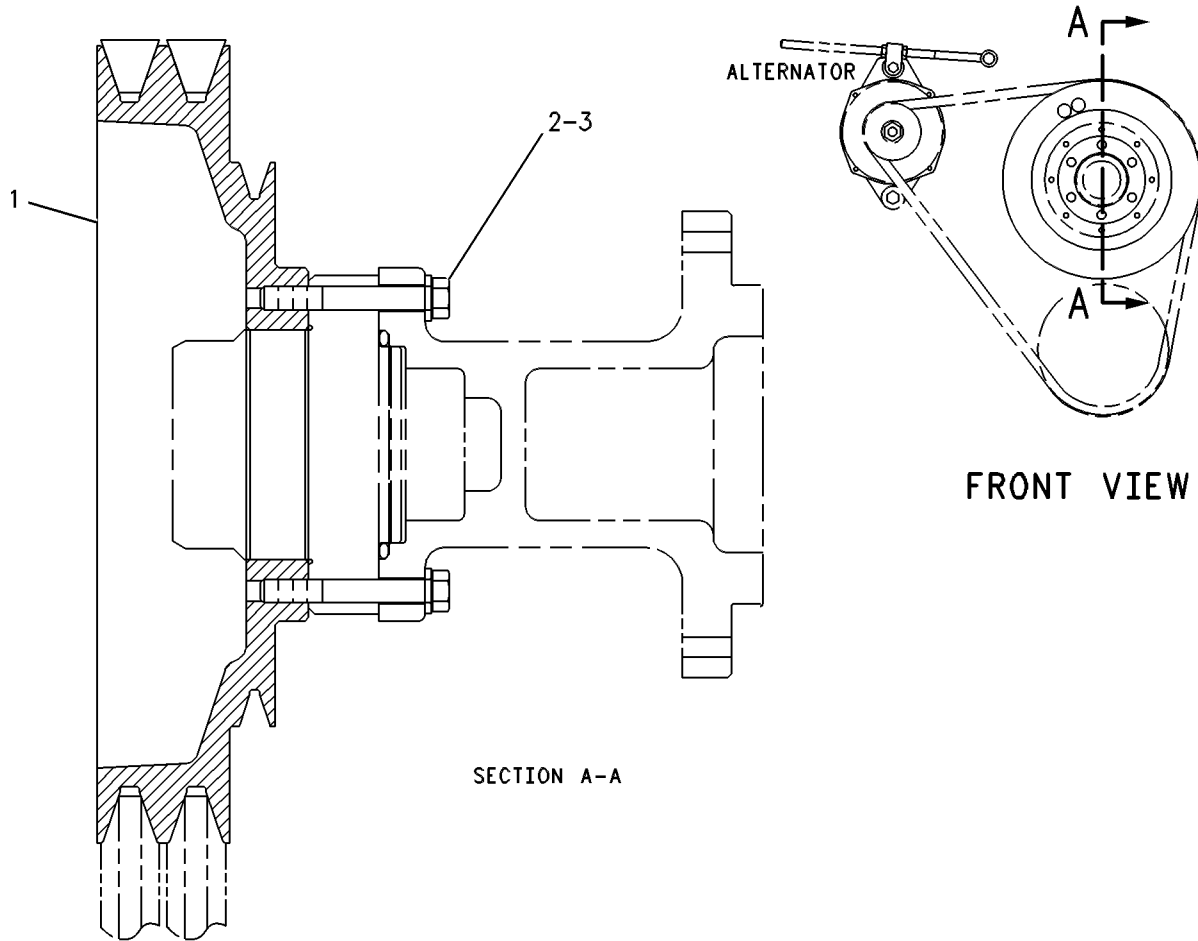
## 130-5481 PULLEY GP-FAN DRIVE

FAN DRIVE RATIO: .694:1  
AN ATTACHMENT

SMCS-1359

i01998406

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-9582	1	PULLEY-FAN DRIVE						
	2	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5-MM THK)						
	3	1	8T-9101	6	BOLT (3/8-16X2.75-IN)						



GRAPHIC #1

<END>

g00264715

# BASIC ENGINE

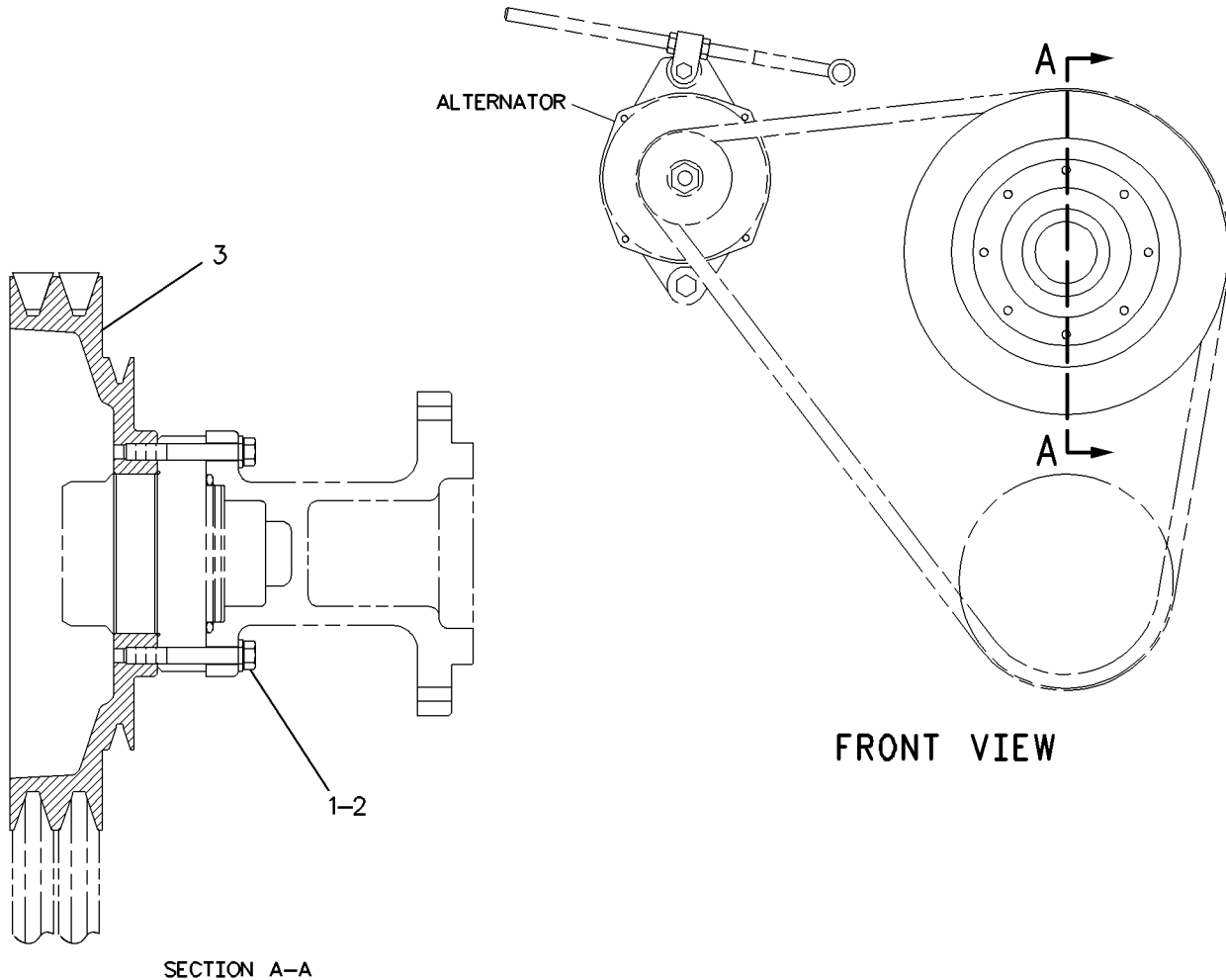
## 131-9141 PULLEY GP-FAN DRIVE

FAN DRIVE RATIO: .8:1  
AN ATTACHMENT

SMCS-1359

i02144246

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5-MM THK)						
	2	1	8T-9101	6	BOLT (3/8-16X2.75-IN)						
	3	1	131-9142	1	PULLEY-FAN (3 GROOVE)						



GRAPHIC #1

<END>

g00783874

# BASIC ENGINE

## 2W-8494 PULLEY-ALTERNATOR

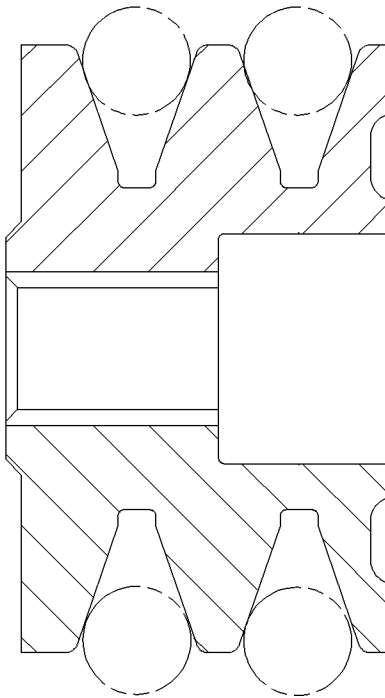
93.68-MM DIAMETER, 2-GROOVE. V-BELT

FOR USE WITH 121-4134-PAGE 336, 125-9597-PAGE 338, 4N-3986-PAGE 330  
AN ATTACHMENT

SMCS-1425

i01605488

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)											



GRAPHIC #1

<END>

g00324492

# BASIC ENGINE

## 100-2854 PULLEY-ALTERNATOR

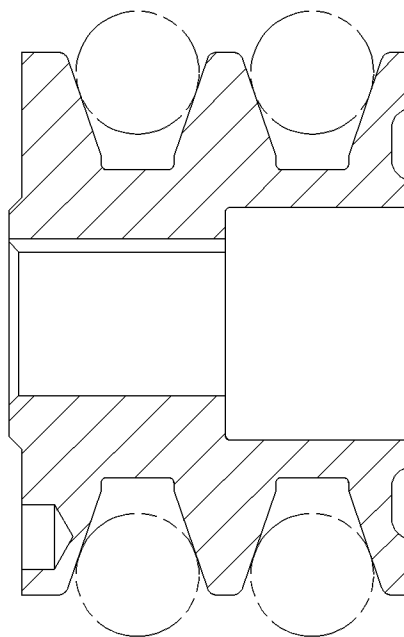
84-MM DIAMETER, 2-GROOVE. V-BELT

FOR USE WITH 121-4134-PAGE 336, 125-9597-PAGE 338, 4N-3986-PAGE 330  
AN ATTACHMENT

SMCS-1425

i01209616

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)						



GRAPHIC #1

<END>

g00324491

# BASIC ENGINE

## 240-8461 ROCKER ARM GP-INLET

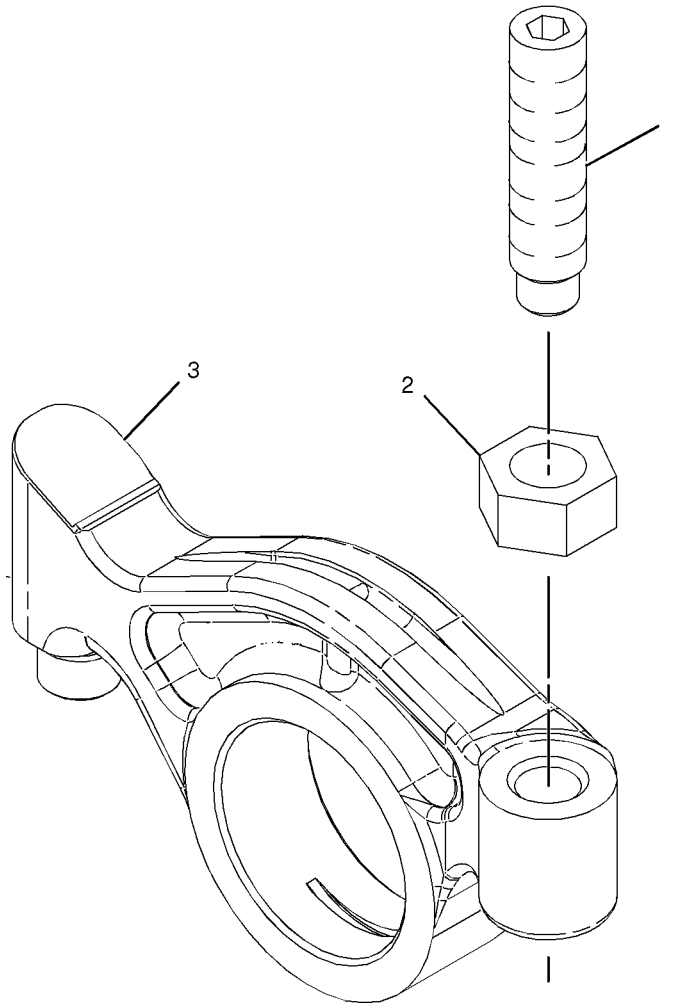
PART OF 241-0835 ROCKER ARM GP

SMCS-1123

i02121369

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	<b>183-4365</b>	1	SCREW-ADJUSTMENT (M10X1.5-THD)						
M	2	1	<b>2Y-5829</b>	1	NUT (M10X1.5-THD)						
	3	1	<b>240-8460</b>	1	ROCKER ARM AS						

M-METRIC PART



GRAPHIC #1

g01030820

# BASIC ENGINE

## 240-8463 ROCKER ARM GP-EXHAUST

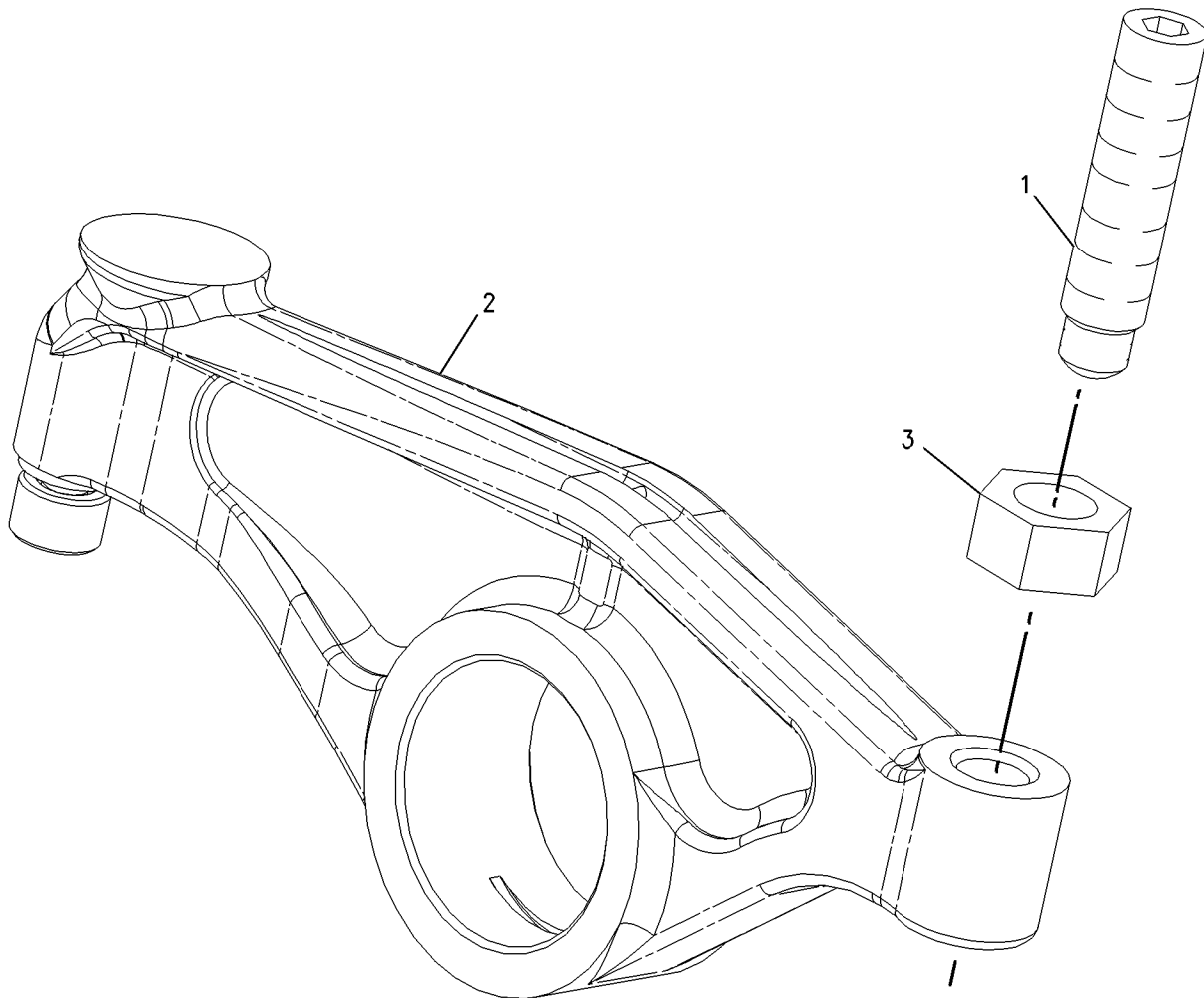
PART OF 241-0835 ROCKER ARM GP

SMCS-1123

i02121424

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	183-4365	1	SCREW-ADJUSTMENT (M10X1.5-THD)						
	2	1	240-8462	1	ROCKER ARM AS						
M	3	1	2Y-5829	1	NUT (M10X1.5-THD)						

M-METRIC PART



GRAPHIC #1

<END>

g00956228

# BASIC ENGINE

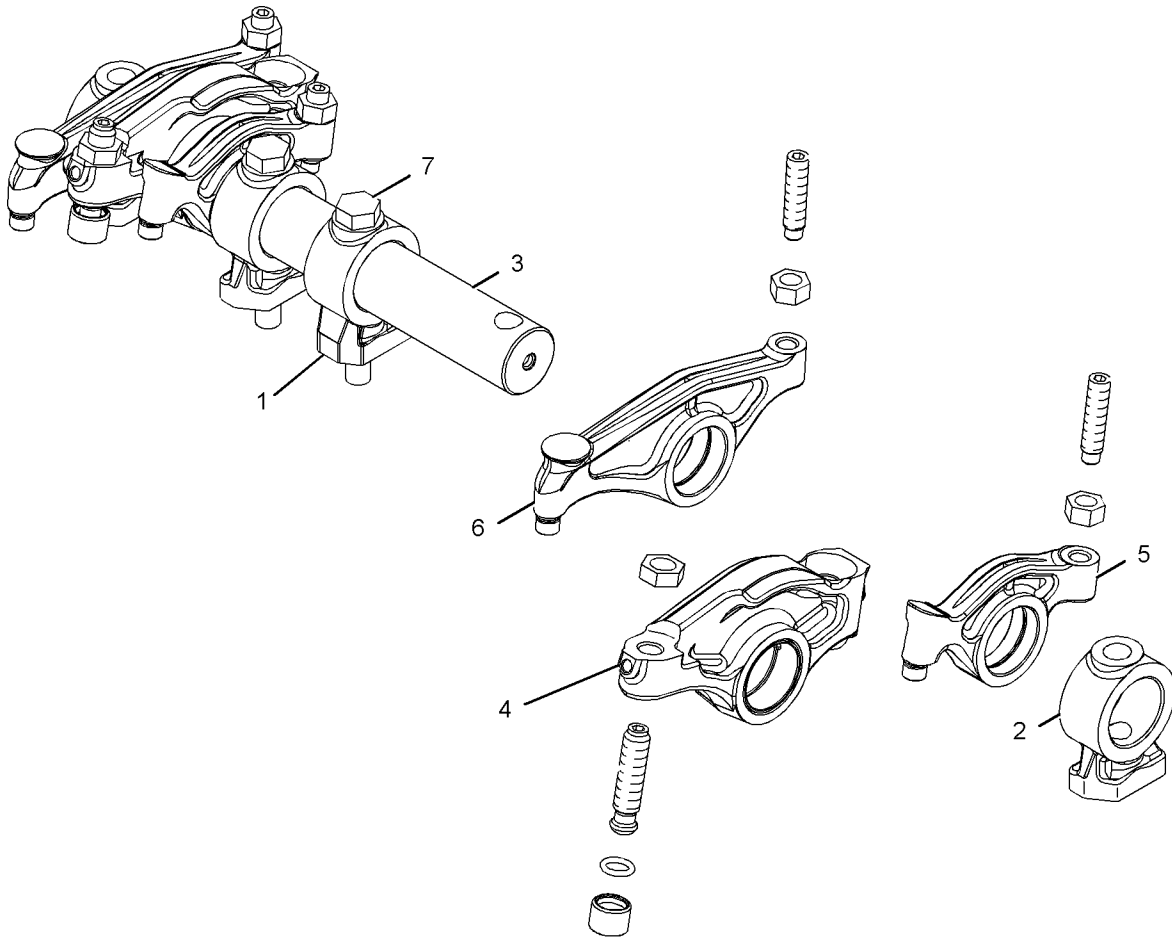
## 241-0835 ROCKER ARM GP PART OF 240-7272 VALVE MECHANISM GP

SMCS-1123

i02177064

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6	
	1	1	242-7418	1	BASE						
	2	1	242-1401	2	BASE AS						
	3	1	224-4418	1	SHAFT AS						
		1	3S-6605	2	PLUG-CUP						
CY	4	1	241-0845	2	ROCKER ARM GP (UNIT INJECTOR)						158
Y	5	1	240-8461	2	ROCKER ARM GP (INLET)						155
Y	6	1	240-8463	2	ROCKER ARM GP (EXHAUST)						156
	7	1	241-0847	2	BOLT (M12-1.75X93-MM THD)						

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01083998

# BASIC ENGINE

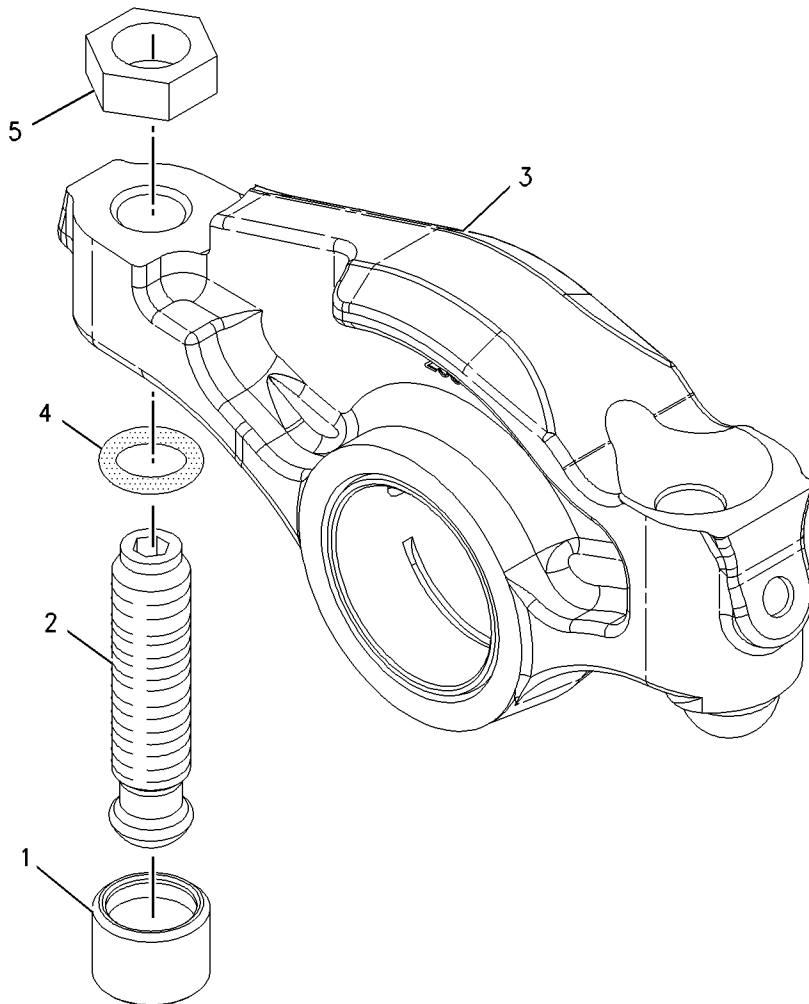
## 241-0845 ROCKER ARM GP-UNIT INJECTOR

PART OF 241-0835 ROCKER ARM GP

SMCS-1123

i02127592

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7W-7235	1	BUTTON						
	2	1	229-5279	1	SCREW-ADJUSTMENT						
	3	1	241-0844	1	ROCKER ARM AS						
		1	2D-6642	2	BALL						
	4	1	8L-2777	1	SEAL-O-RING						
	5	1	245-6095	1	NUT-HEX THIN						



GRAPHIC #1

<END>

g01007579



# BASIC ENGINE

## 116-1091 SEAL GP-CRANKSHAFT-SINGLE LIP

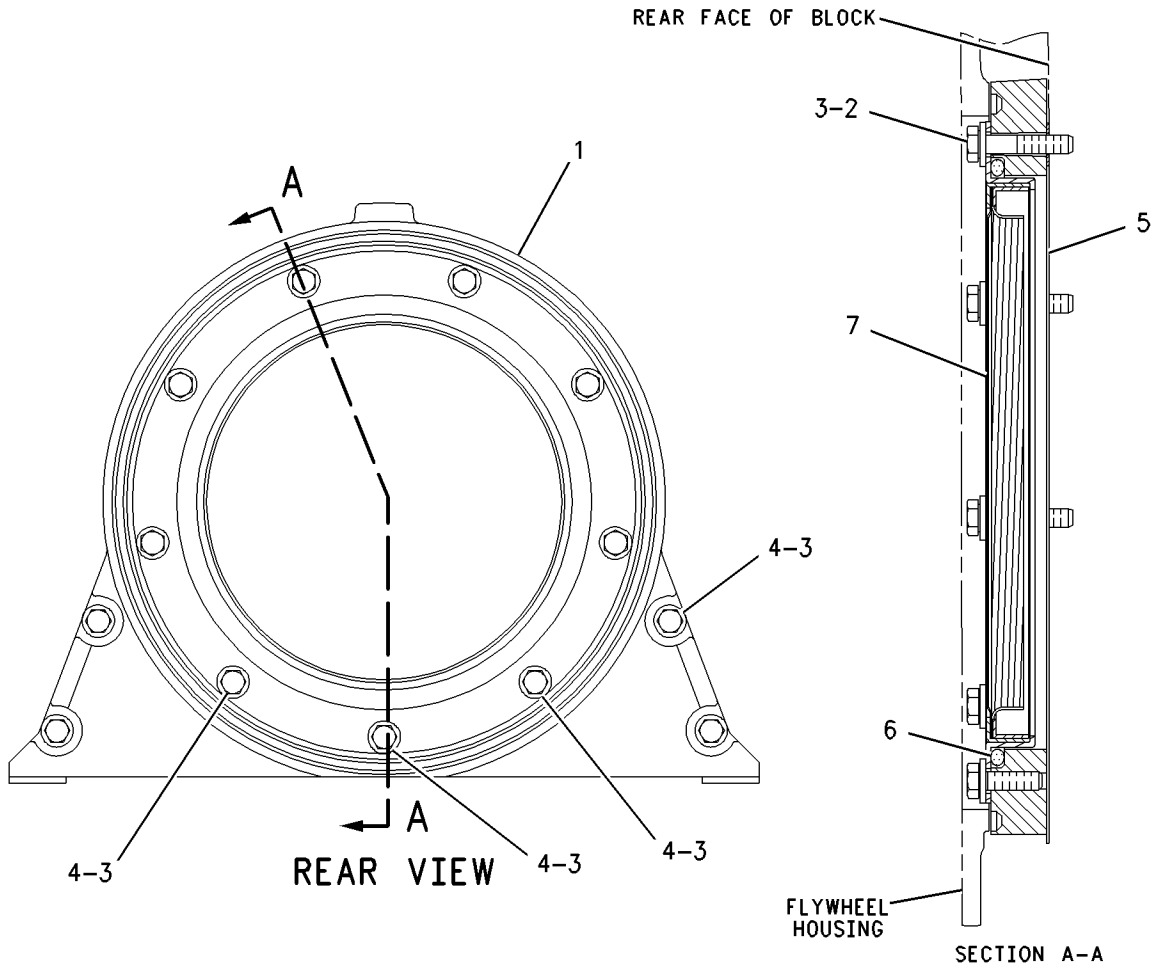
FOR USE WITH DRY TRANSMISSIONS  
AN ATTACHMENT

SMCS-1160, 1161

i02147065

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6	
	1	1	160-2323	1	COVER						
M	2	1	8T-0640	6	BOLT (M6X1X30-MM)						
	3	1	5P-0537	13	WASHER-HARD (7.2X14.5X2-MM THK)						
M	4	1	9X-2022	7	BOLT-SELF-LOCKING (M6X1X20-MM)						
	5	1	7C-1583	1	GASKET						
	6	1	107-6280	1	SEAL-O-RING						
	7	1	7C-1728	1	SEAL GP-CRANKSHAFT						

M-METRIC PART



GRAPHIC #1

<END>

g00785779

# BASIC ENGINE

## 124-2661 SEAL GP-CRANKSHAFT-DOUBLE LIP

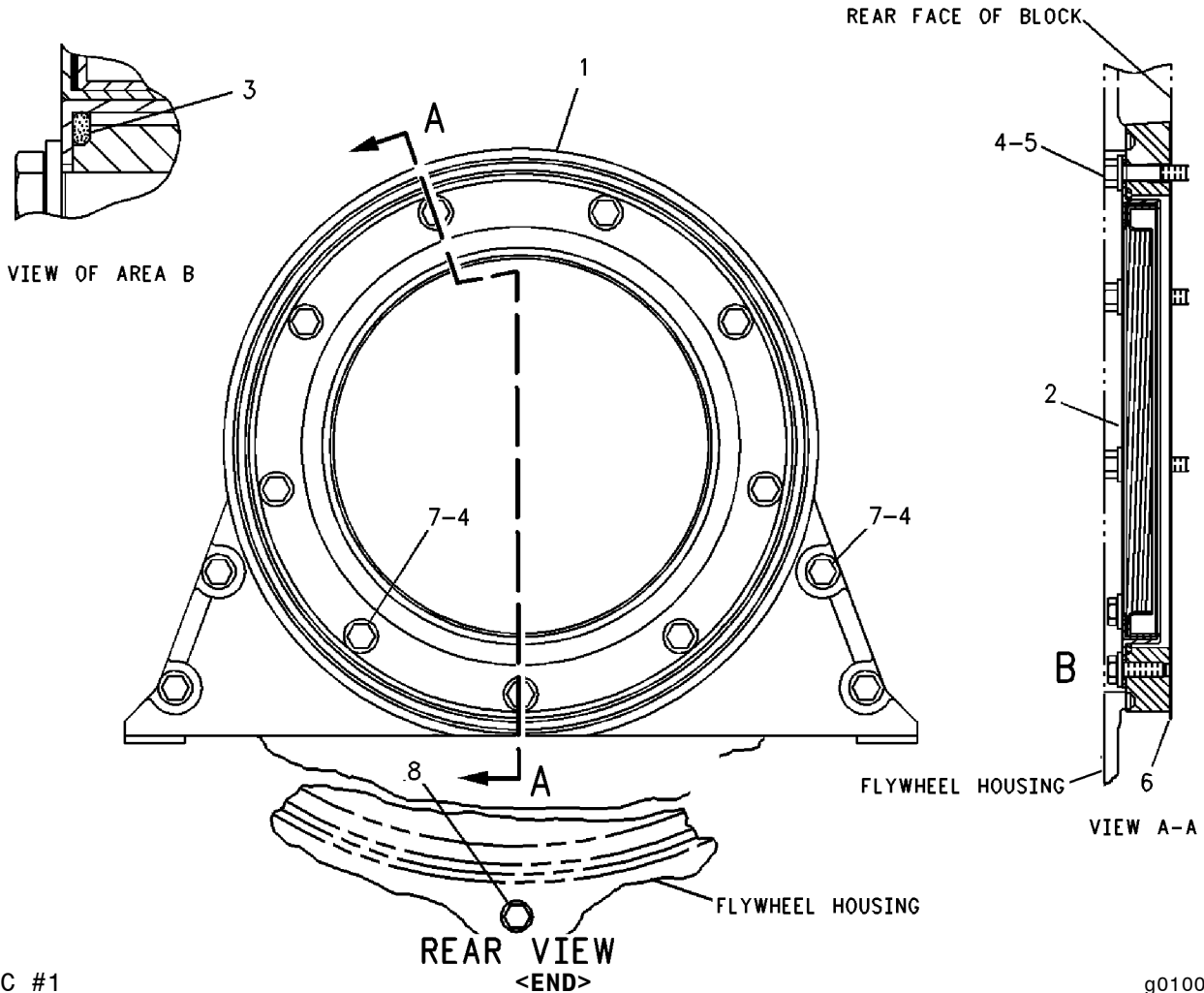
FOR USE WITH WET FLYWHEEL  
AN ATTACHMENT

SMCS-1160, 1161

i01921634

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	1 2 3 4 5 6 (PRODUCT LEVEL)						SEE PAGE
	1	1	160-2323	1	COVER							
	2	1	100-5421	1	SEAL GP-CRANKSHAFT							
	3	1	107-6280	1	SEAL-O-RING							
	4	1	9X-8267	13	WASHER (6.6X12X2-MM THK)							
M	5	1	8T-0640	6	BOLT (M6X1X30-MM)							
	6	1	7C-1583	1	GASKET							
M	7	1	9X-2022	7	BOLT-Self-LOCKING (M6X1X20-MM)							
	8	1	106-1565	1	PLUG							

M-METRIC PART



GRAPHIC #1

g01000589

# BASIC ENGINE

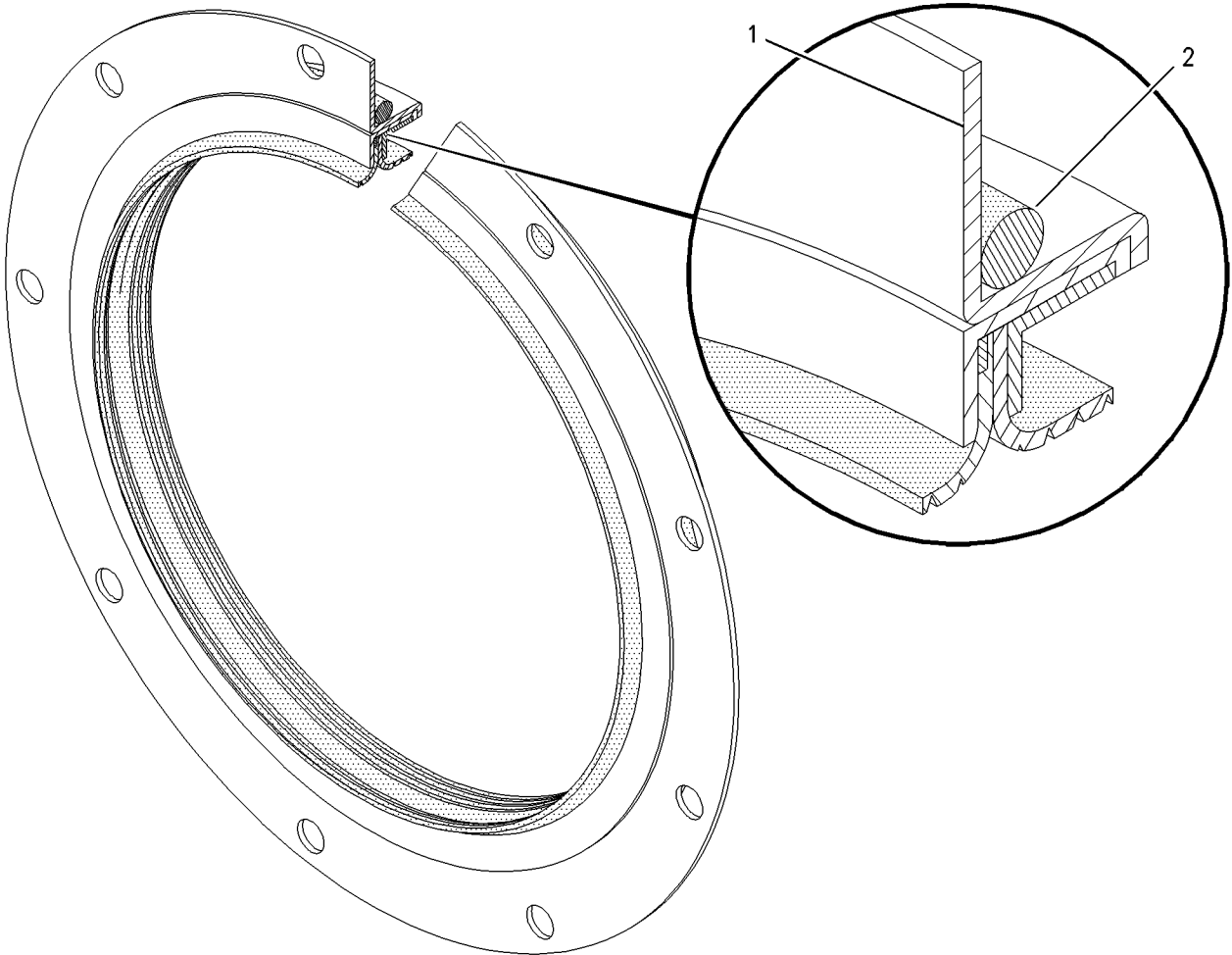
## 227-0838 SEAL GP-CRANKSHAFT

COUNTER CLOCKWISE ROTATION  
PART OF 252-6255 SEAL GP-CRANKSHAFT  
AN ATTACHMENT

SMCS-1160, 1161

i01891808

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	100-5421	1	SEAL GP-CRANKSHAFT						
	2	1	107-6280	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00985056

# BASIC ENGINE

## 252-6255 SEAL GP-CRANKSHAFT

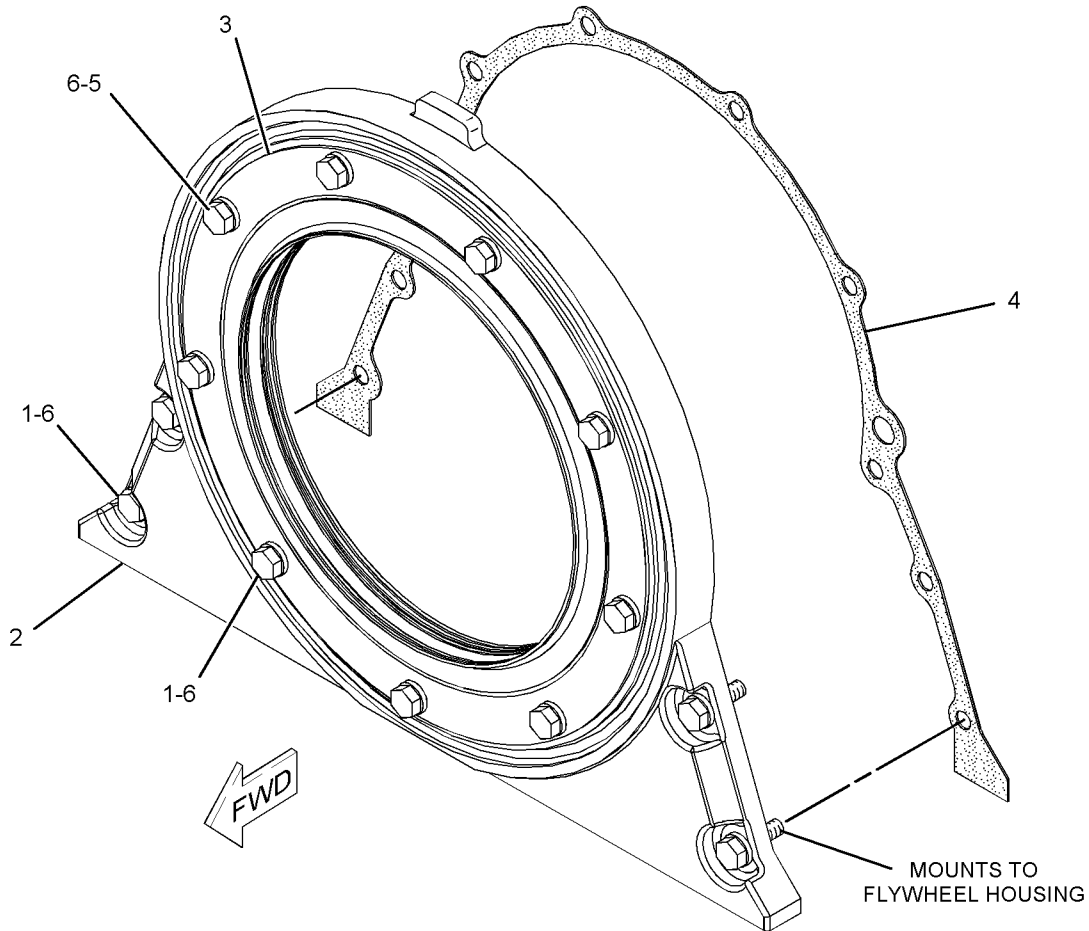
FOR USE WITH WET FLYWHEEL HOUSING  
AN ATTACHMENT

SMCS-1160, 1161

i02217274

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	<b>9X-2022</b>	7	BOLT-SELF-LOCKING (M6X1X20-MM)						
	2	1	<b>160-2323</b>	1	COVER						
Y	3	1	227-0838	1	SEAL GP-CRANKSHAFT						161
	4	1	<b>7C-1583</b>	1	GASKET						
M	5	1	<b>8T-0640</b>	6	BOLT (M6X1X30-MM)						
	6	1	<b>9X-8267</b>	13	WASHER (6.6X12X2-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01120280

# BASIC ENGINE

## 149-5548 SHAFT GP-STUB

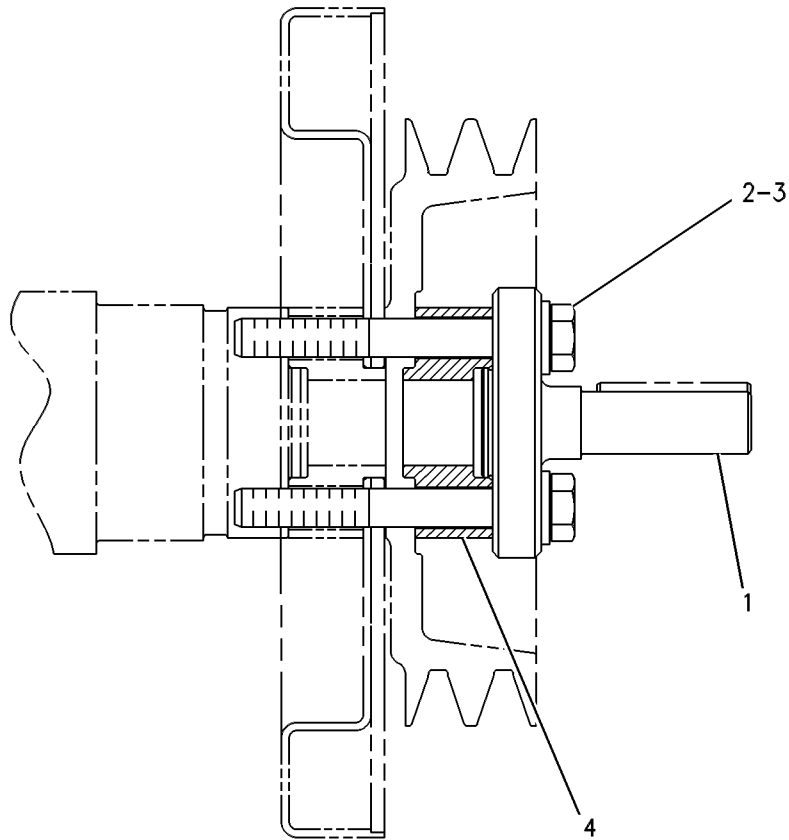
FOR USE WITH 117-2766-PAGE 49  
AN ATTACHMENT

SMCS-1237

i00940247

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	118-7572	1	SHAFT-STUB						
M	2	1	8T-0359	6	BOLT (M16X2.0X130MM)						
	3	1	5P-8247	6	WASHER-HARD (3.5MM THK)						
	4	1	100-8527	1	ADAPTER						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00287748

# BASIC ENGINE

## 155-7415 SHAFT GP-STUB

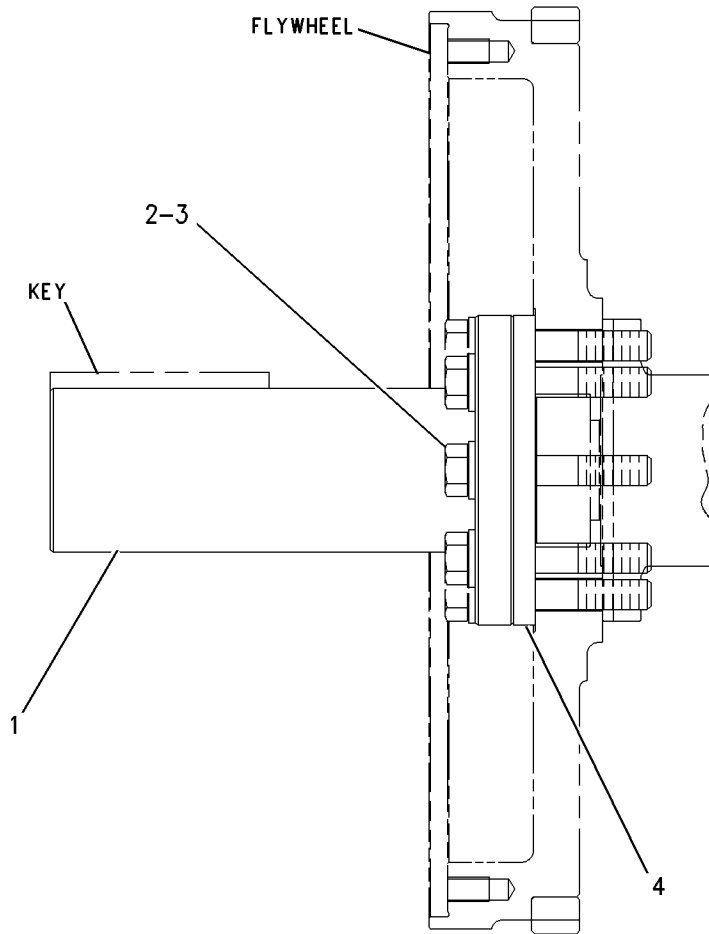
87.5-MM DIAMETER X 222-MM LONG SHAFT  
AN ATTACHMENT

SMCS-1237

i02126240

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	123-3981	1	SHAFT						
	2	1	5P-8247	8	WASHER-HARD (17X32X3.5-MM THK)						
M	3	1	8T-0358	8	BOLT (M16X2X90-MM)						
	4	1	123-4357	1	SPACER						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00783964

# BASIC ENGINE

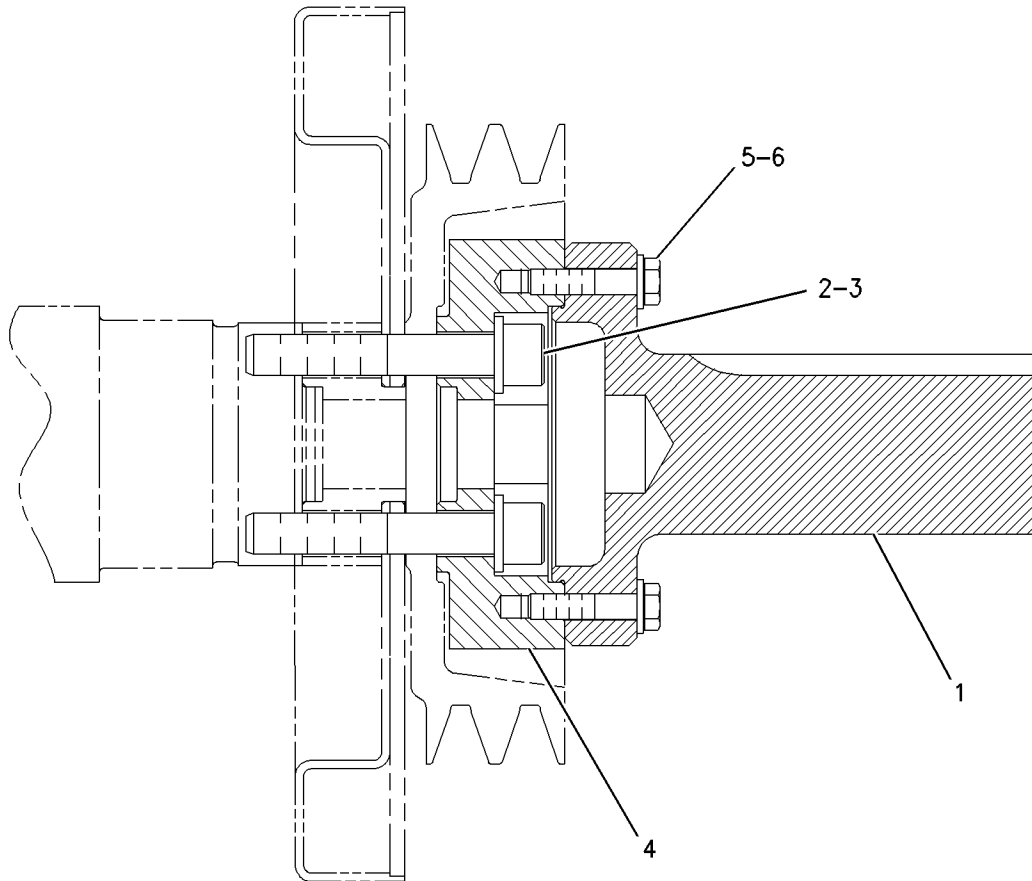
## 192-1955 SHAFT GP-STUB 2.75 INCH DIAMETER X 4.50 INCH LONG SHAFT AN ATTACHMENT

SMCS-1237

i01433891

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>6L-2681</b>	1	SHAFT-STUB						
M	2	1	<b>095-0705</b>	6	BOLT-SOCKET HEAD (M16X2X100MM)						
	3	1	<b>9X-8268</b>	6	WASHER (17.5X30X3.5MM THK)						
	4	1	<b>192-2058</b>	1	ADAPTER						
M	5	1	<b>6V-5843</b>	6	BOLT (M10X1.50X45MM)						
	6	1	<b>6V-5839</b>	6	WASHER (11X21X2.5MM THK)						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00752138

# BASIC ENGINE

## 115-3004 SUPPORT GP-ENGINE

FRONT

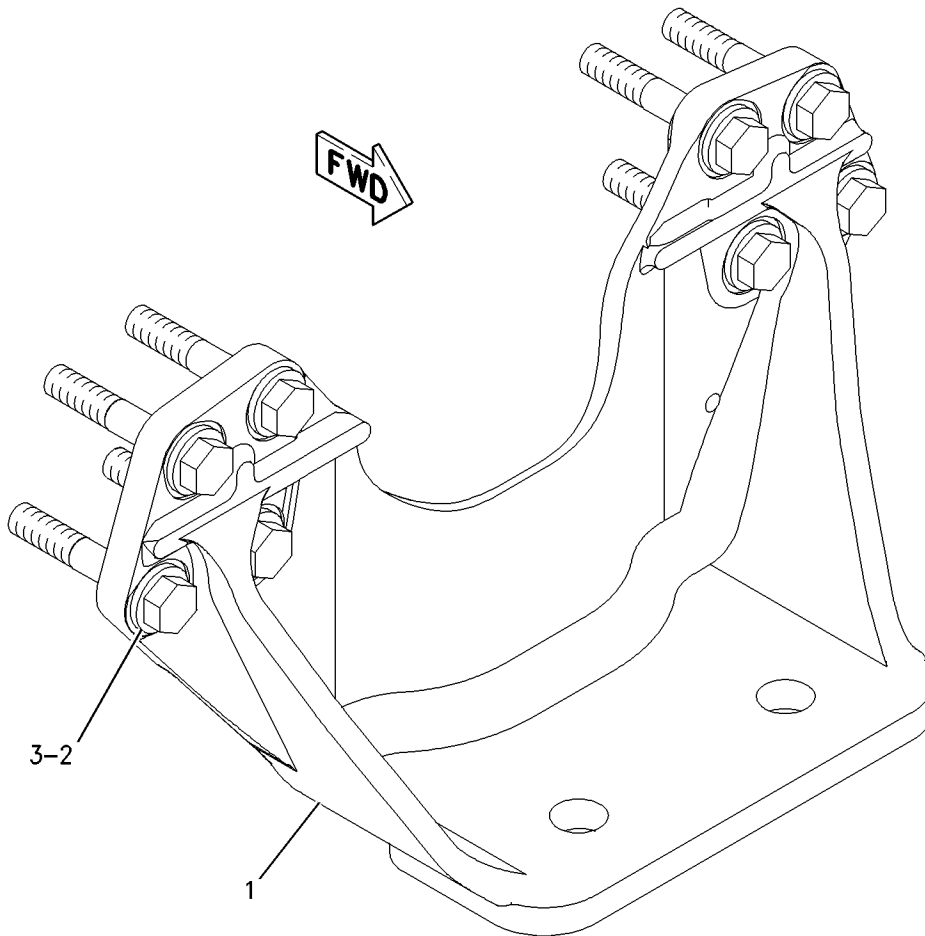
CANNOT BE USED WITH 117-2773-PAGE 67  
AN ATTACHMENT

SMCS-1154

i01509972

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	175-7321	1	SUPPORT - FRONT						
	2	1	5P-8245	8	WASHER - HARD (13.5X25.5X3-MM THK)						
M	3	1	6V-8336	8	BOLT (M12X1.75X70-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00783947



# BASIC ENGINE

## 129-2910 SUPPORT GP-ENGINE

FRONT

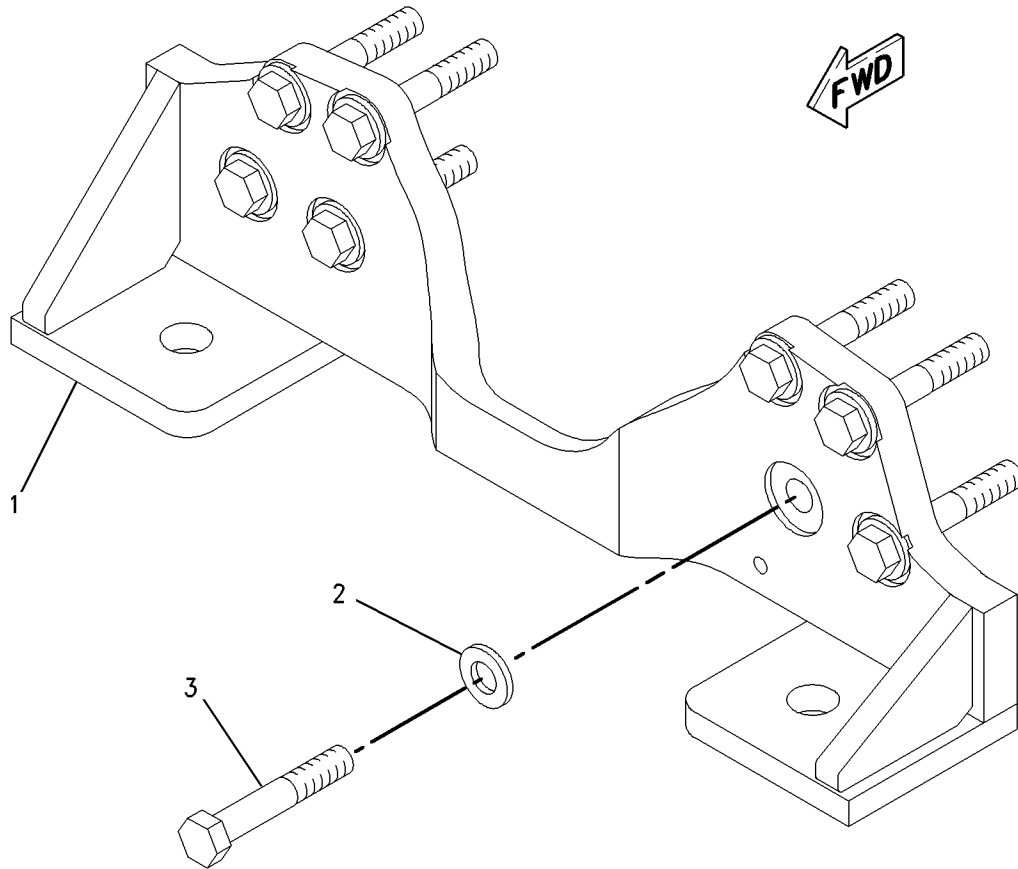
CANNOT BE USED WITH 117-2773-PAGE 67  
AN ATTACHMENT

SMCS-1154

i01534625

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	175-7327	1	SUPPORT AS-FRONT						
	2	1	5P-8245	8	WASHER-HARD (13.5X25.5X3-MM THK)						
M	3	1	6V-8336	8	BOLT (M12X1.75X70-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00796933

# BASIC ENGINE

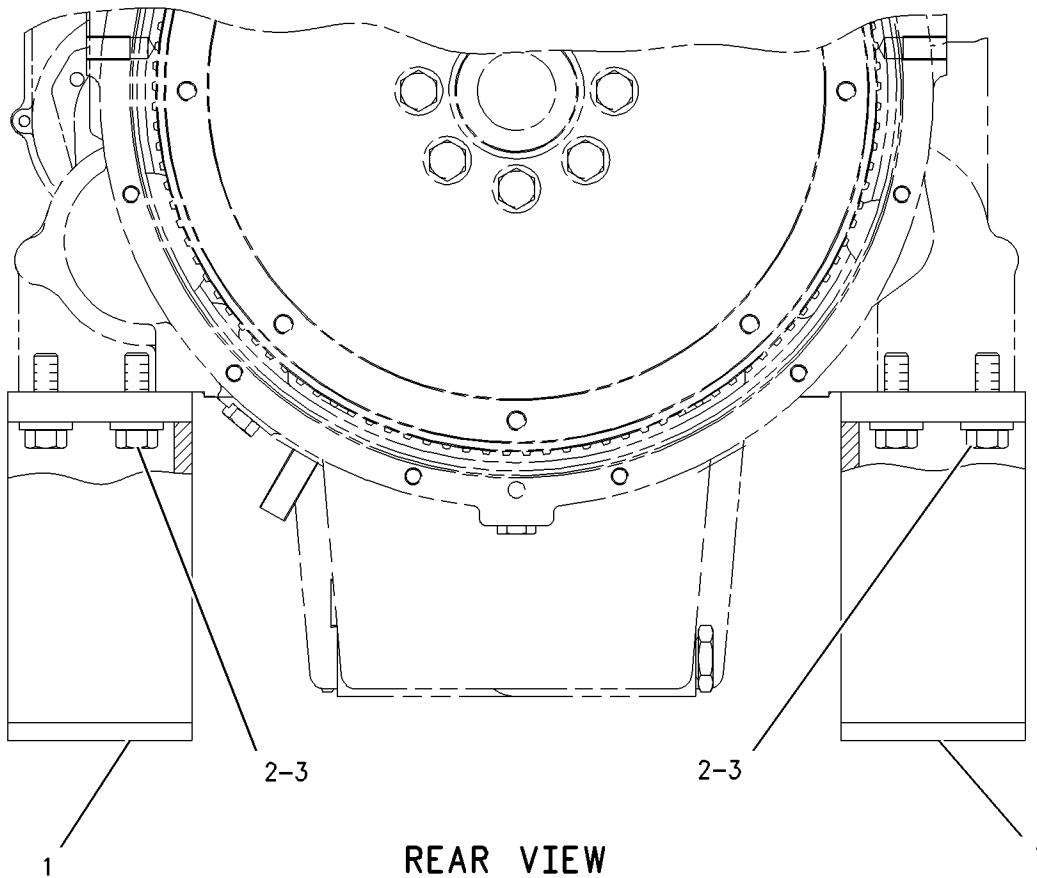
## 129-4865 SUPPORT GP-ENGINE

REAR  
AN ATTACHMENT

SMCS-1154

i01509968

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	129-3855	2	SUPPORT AS-REAR						
	2	1	9X-8880	8	BOLT (5/8-11X2 IN)						
	3	1	2S-7593	8	WASHER-HARD (17X35X5MM THK)						



REAR VIEW

GRAPHIC #1

<END>

g00783943

# BASIC ENGINE

## 188-2872 SUPPORT GP-ENGINE

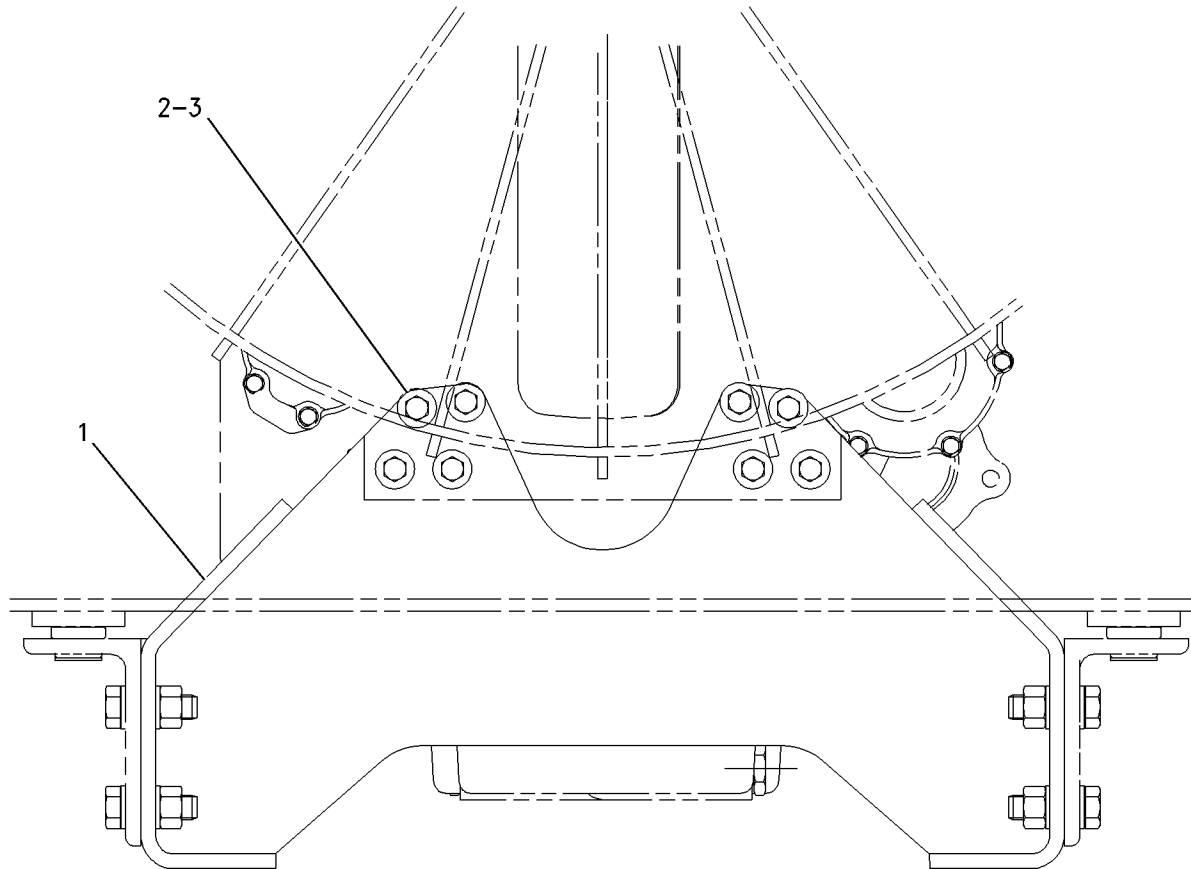
FRONT  
AN ATTACHMENT

SMCS-1154

i01433874

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	183-6323	1	SUPPORT AS-FRONT						
M	2	1	6V-8336	8	BOLT (M12X1.75X70MM)						
	3	1	7D-1649	8	WASHER-HARD (13.5X32X5MM THK)						

M-METRIC PART



FRONT VIEW

GRAPHIC #1

<END>

g00752141

# BASIC ENGINE

## 211-6790 SUPPORT GP-ENGINE

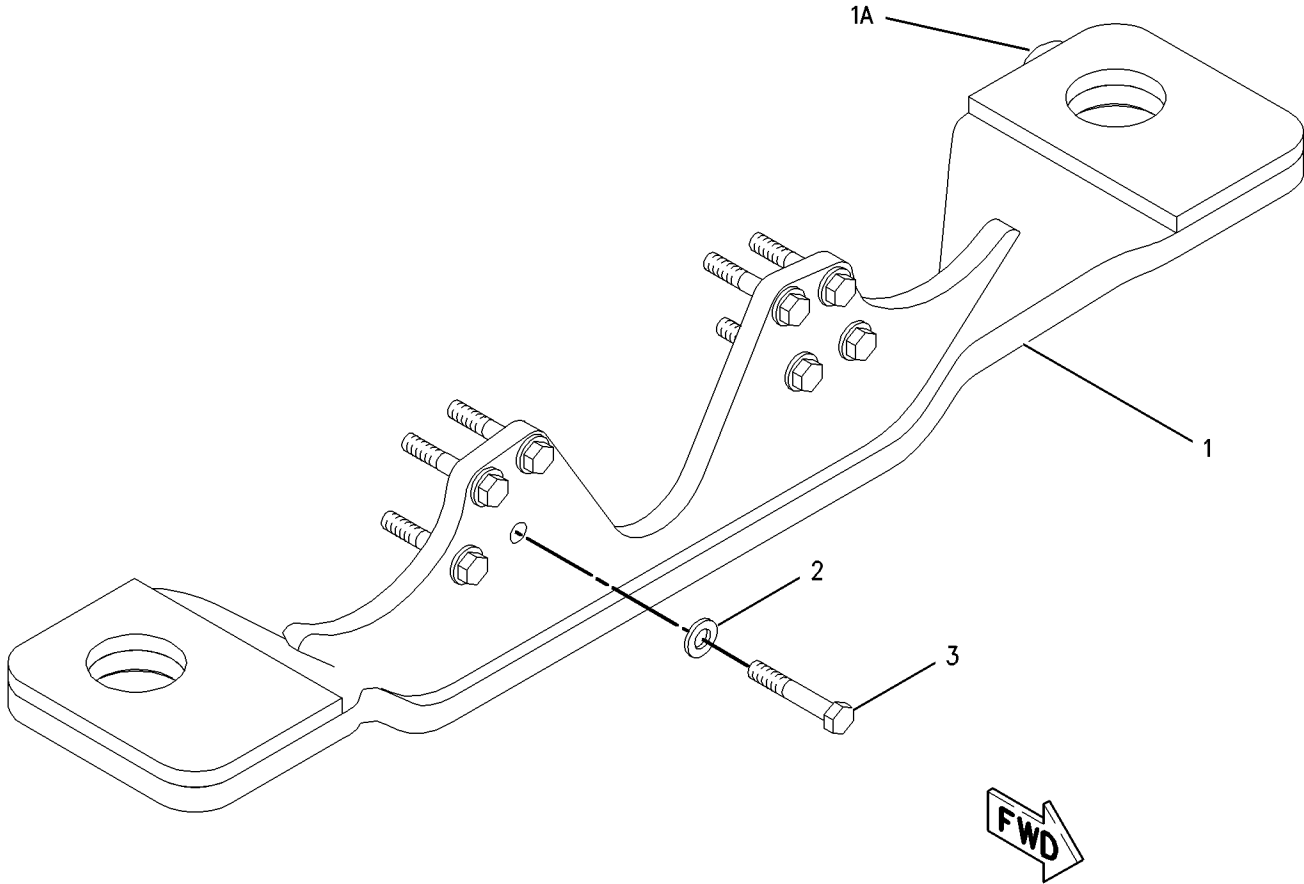
WIDE MOUNT MOBILE SUPPORT WITH HOLES FOR ISOLATORS  
 CANNOT BE USED WITH 188-2872-PAGE 169, 115-3004-PAGE 166  
 ALSO AN ATTACHMENT

SMCS-1154

i01595231

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	211-6791	1	SUPPORT AS						
	1A	1	7T-1099	1	LINK						
	2	1	5P-8245	8	WASHER-HARD (13.5X25.5X3-MM THK)						
M	3	1	6V-8336	8	BOLT (M12X1.75X70-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00828295

# BASIC ENGINE

## 5N-1933 SUPPORT GP-POWER TAKE-OFF

CLUTCH

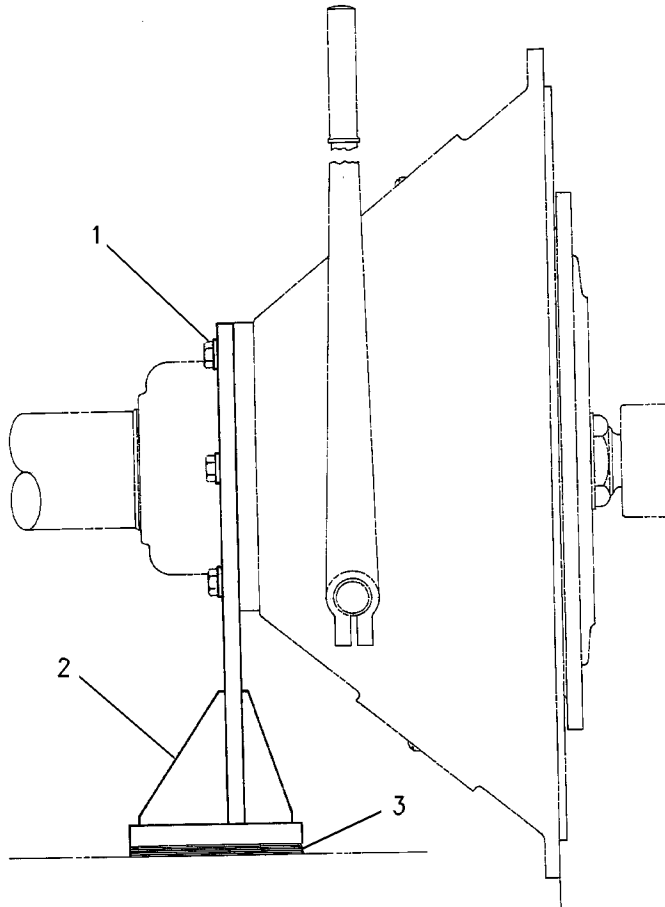
FOR USE WITH 4P-3074-PAGE 140. CANNOT BE USED WITH FUEL TANK BASE  
AN ATTACHMENT

SMCS-1165

i01509987

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8245	6	WASHER-HARD (13.5X25.5X3-MM THK)						
	2	1	7L-5810	1	SUPPORT AS						
B	3	1	9F-2187	16	SHIM (.355MM THICK)						
B		1	9F-2188	30	SHIM (.813MM THICK)						

B-USE AS REQUIRED



GRAPHIC #1

<END>

g00783948

# BASIC ENGINE

## 240-7272 VALVE MECHANISM GP

SMCS-1102, 1121, 1123

i02011468

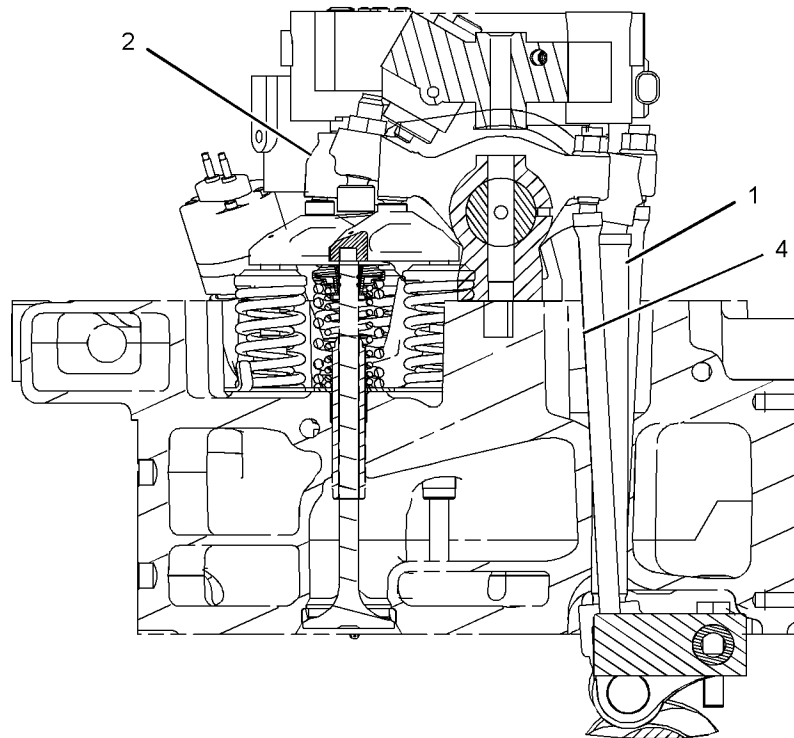
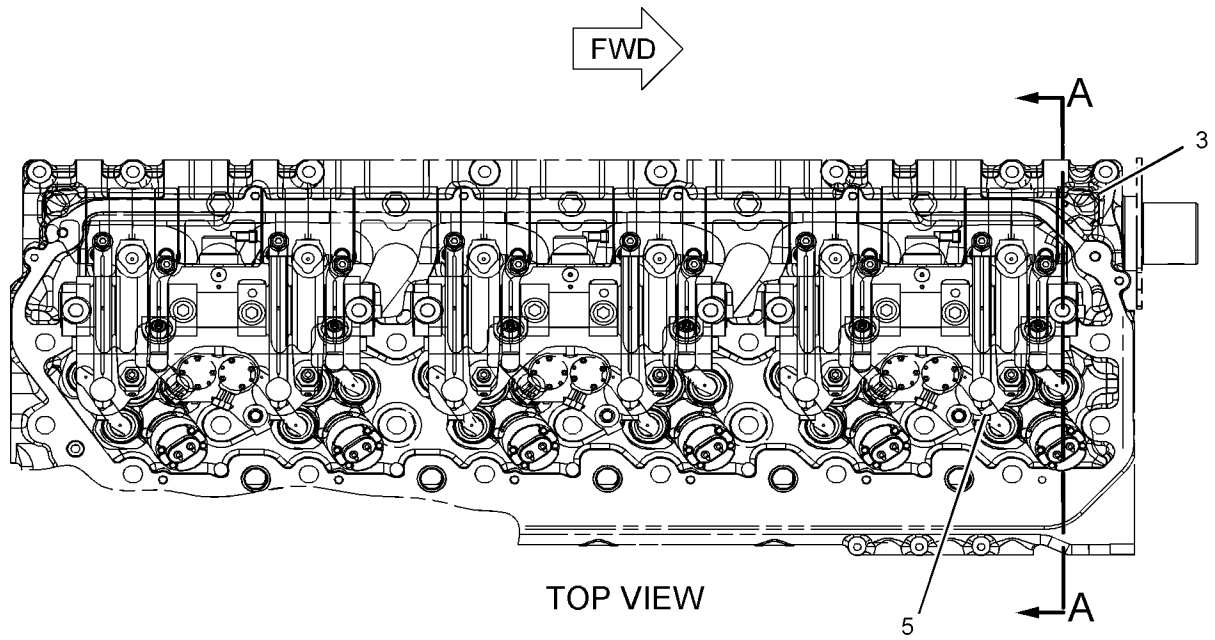
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>224-3117</b>	6	PUSHROD (INJECTOR)						
Y	2	1	241-0835	3	ROCKER ARM GP						157
Y	3	1	237-4376	1	LIFTER GP-VALVE						110
	4	1	<b>237-6469</b>	12	PUSHROD-VALVE						
	5	1	<b>237-7253</b>	12	BRIDGE-VALVE						

Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

240-7272 VALVE MECHANISM GP (contd.)

i02011468



VIEW A-A

<END>

GRAPHIC #1

g01017512

# LUBRICATION SYSTEM

## 223-1609 BASE GP-OIL FILTER-ENGINE OIL

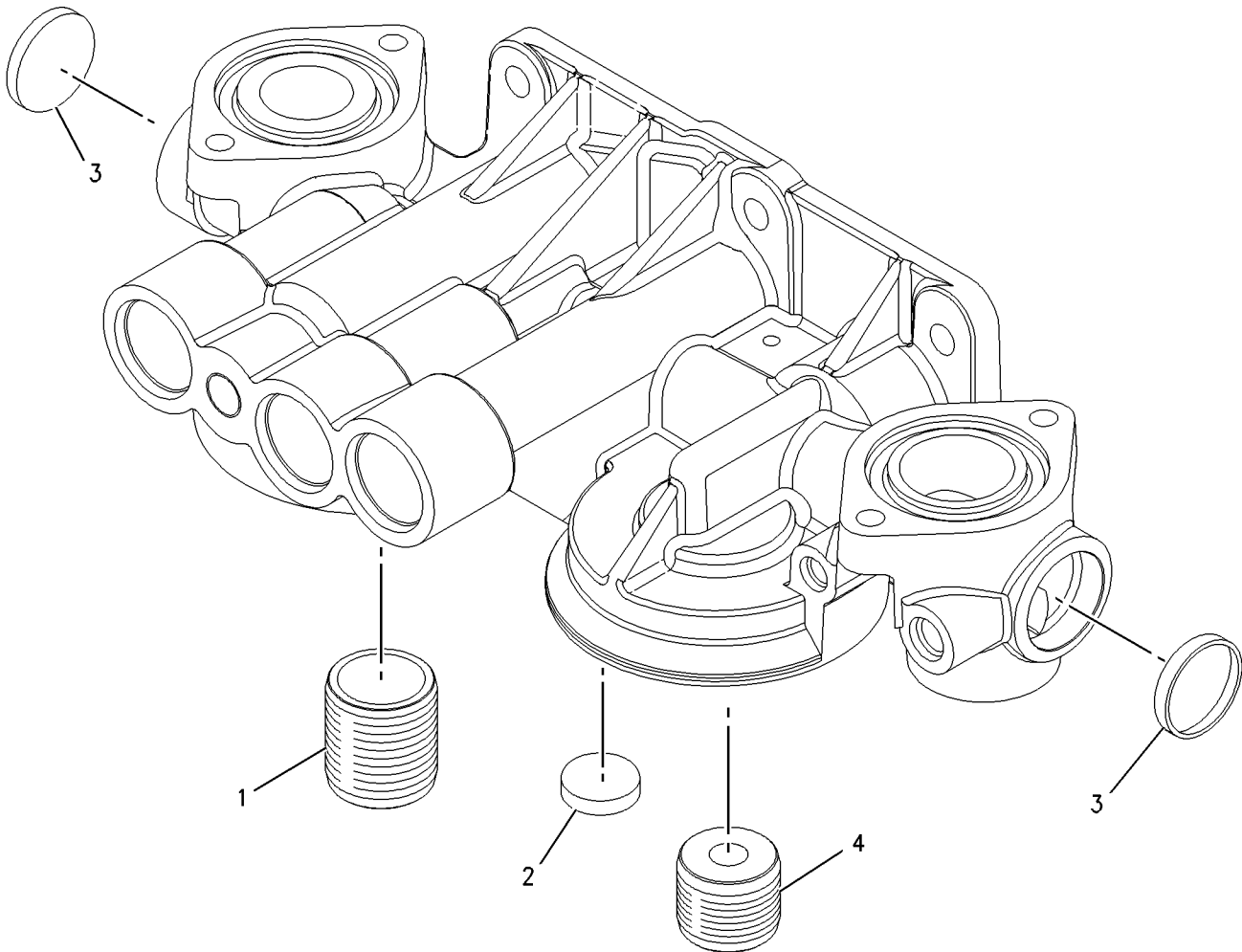
S/N: GLS1-116

PART OF 223-1611 BASE GP-OIL FILTER  
ALSO AN ATTACHMENT

SMCS-1306

i01856392

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>2P-4304</b>	1	STUD-TAPERLOCK						
	2	1	<b>3B-0623</b>	1	PLUG-CUP						
	3	1	<b>3P-1896</b>	2	PLUG-CUP						
	4	1	<b>7W-6390</b>	1	STUD-FILTER BASE						



GRAPHIC #1

<END>

g00948011



# LUBRICATION SYSTEM

## 223-1611 BASE GP-OIL FILTER-ENGINE OIL

S/N: GLS1-116

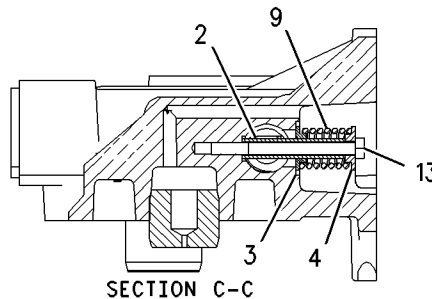
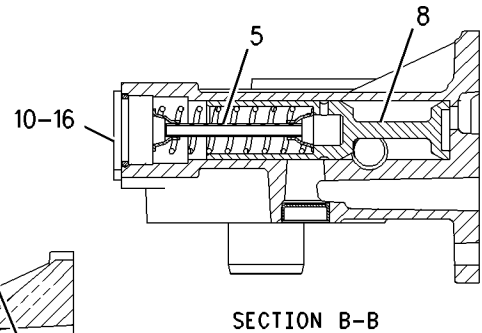
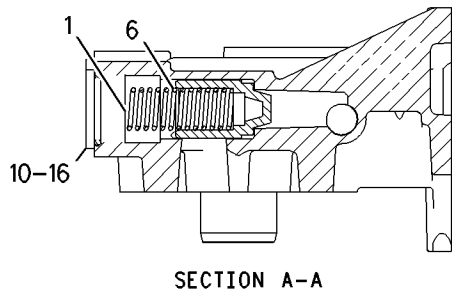
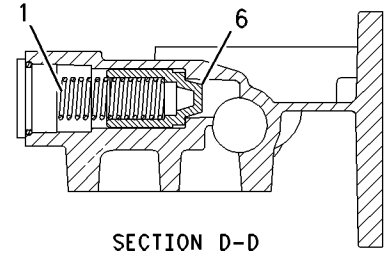
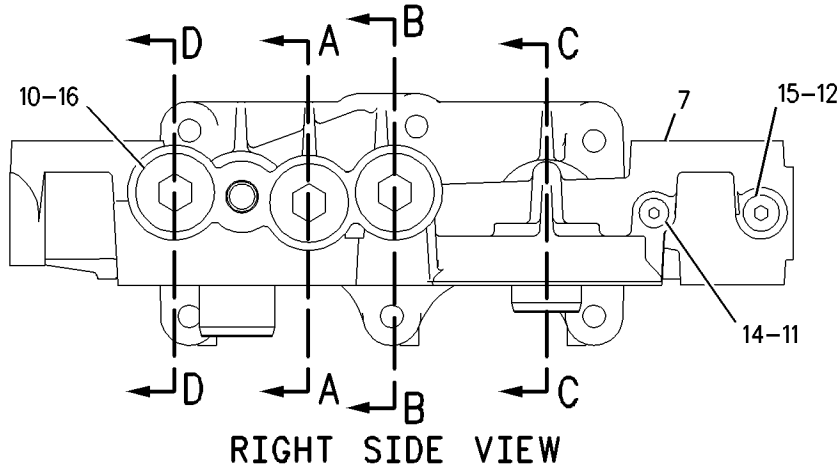
PART OF 223-1615 BASE GP-OIL FILTER  
ALSO AN ATTACHMENT

SMCS-1306

i02001248

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	1 2 3 4 5 6 (PRODUCT LEVEL)						SEE PAGE	
	1	1	4N-8150	2	SPRING								
	2	1	7C-3081	1	SPACER (6.88X9.53X50-MM THK)								
	3	1	7C-3082	1	RETAINER								
	4	1	7C-3083	1	SEAT-RELIEF VALVE SPRING								
	5	1	7C-3954	1	SPRING AS								
	6	1	9M-0853	2	PLUNGER-VALVE								
Y	7	1	223-1609	1	BASE GP-OIL FILTER (ENGINE OIL FILTER)								174
	8	1	224-3405	1	VALVE AS (OIL PUMP BYPASS) (ENGINE OIL)								
	9	1	1A-2170	1	SPRING-RETAINER								
	10	1	5P-7701	3	SEAL-O-RING								
	11	1	6V-5048	1	SEAL-O-RING								
	12	1	6V-5049	1	SEAL-O-RING								
M	13	1	6V-8359	1	BOLT (M6X1X70-MM)								
	14	1	9S-8002	1	PLUG								
	15	1	9S-8004	1	PLUG								
	16	1	9S-9334	3	PLUG								

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00942176

# LUBRICATION SYSTEM

## 223-1615 BASE GP-OIL FILTER-ENGINE

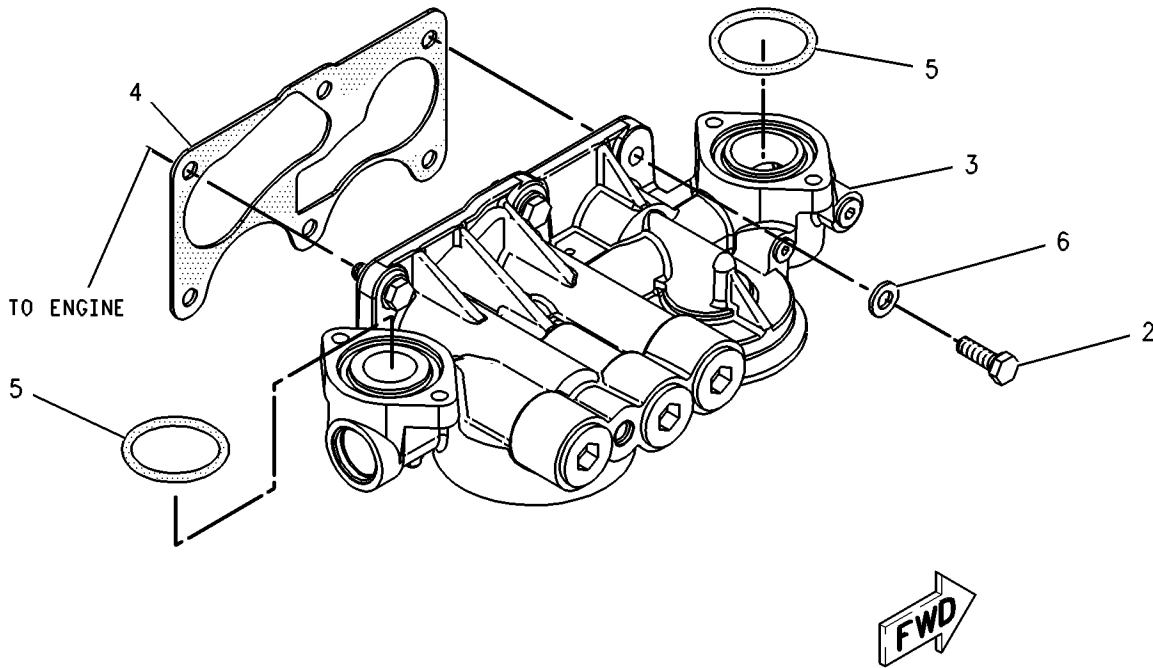
S/N: GLS1-115  
ALSO AN ATTACHMENT

SMCS-1306

i02206758

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	2	1	134-5245	6	BOLT (M10X1.5X30-MM)						
Y	3	1	223-1611	1	BASE GP-OIL FILTER (ENGINE)						175
	4	1	224-6357	1	SEAL-INTEGRAL						
	5	1	3P-0650	2	SEAL-O-RING						
	6	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00955746

# LUBRICATION SYSTEM

## 223-1615 BASE GP-OIL FILTER-ENGINE

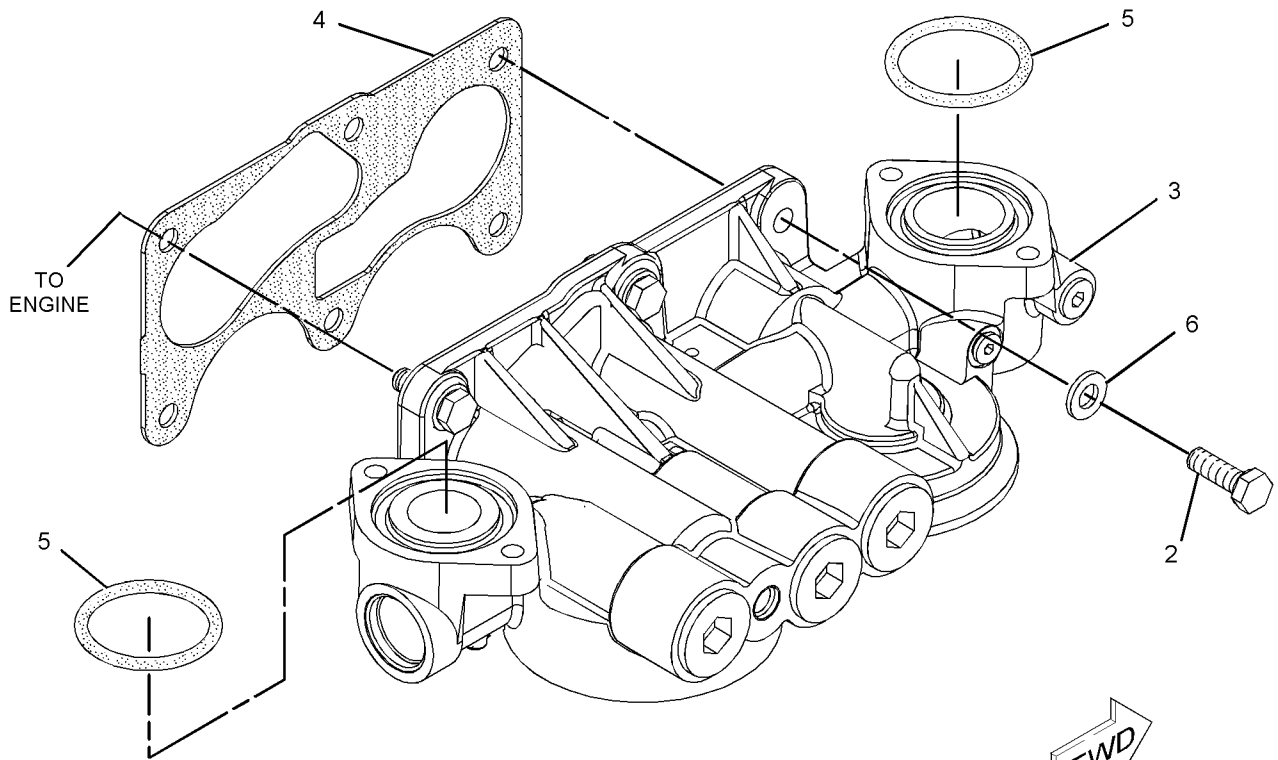
S/N: GLS116  
ALSO AN ATTACHMENT

SMCS-1306

i02234534

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	2	1	134-5245	6	BOLT (M10X1.5X30-MM)						
CY	3	1	251-6669	1	BASE GP-OIL FILTER (ENGINE)						180
C	4	1	227-4892	1	GASKET						
	5	1	3P-0650	2	SEAL-O-RING						
	6	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						

C-CHANGE FROM PREVIOUS TYPE  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01103709

# LUBRICATION SYSTEM

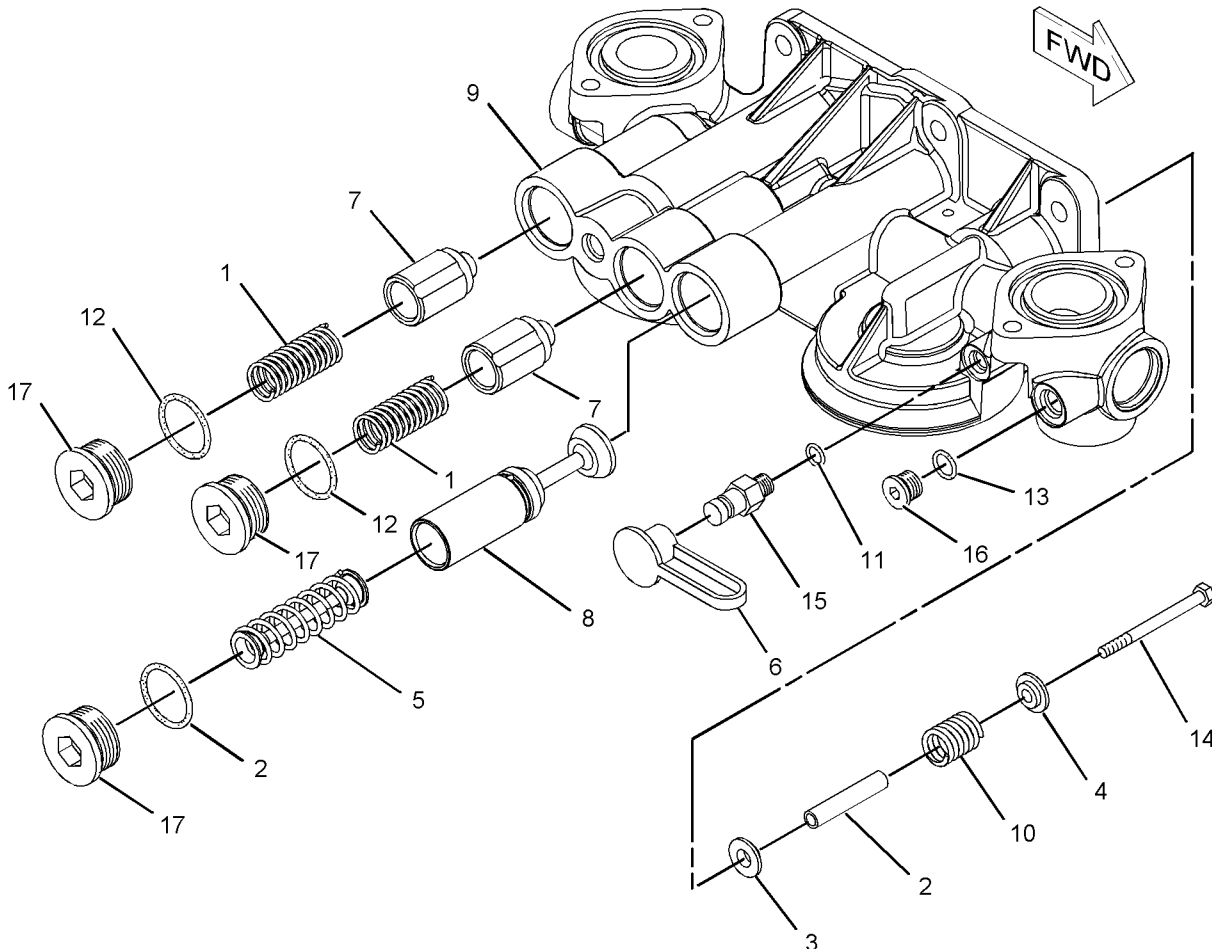
## 247-9664 BASE GP-OIL FILTER-ENGINE PART OF 247-9665 BASE GP-OIL FILTER AN ATTACHMENT

SMCS-1306

i02214683

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-8150	2	SPRING						
	2	1	7C-3081	1	SPACER (6.88X9.53X50-MM THK)						
	3	1	7C-3082	1	RETAINER						
	4	1	7C-3083	1	SEAT-RELIEF VALVE SPRING						
	5	1	7C-3954	1	SPRING AS						
	6	1	8C-3445	1	CAP-DUST						
	7	1	9M-0853	2	PLUNGER-VALVE						
	8	1	224-3405	1	VALVE AS (OIL PUMP BYPASS)						
	9	1	251-6668	1	BASE AS						
	10	1	1A-2170	1	SPRING-RETAINER						
	11	1	3J-7354	1	SEAL-O-RING						
	12	1	5P-7701	3	SEAL-O-RING						
	13	1	6V-5049	1	SEAL-O-RING						
M	14	1	6V-8359	1	BOLT (M6X1X70-MM)						
	15	1	8C-3446	1	VALVE AS-FLUID SAMPLING						
	16	1	9S-8004	1	PLUG						
	17	1	9S-9334	3	PLUG						

M-METRIC PART



GRAPHIC #1

<END>

g01118091

# LUBRICATION SYSTEM

## 247-9665 BASE GP-OIL FILTER-ENGINE

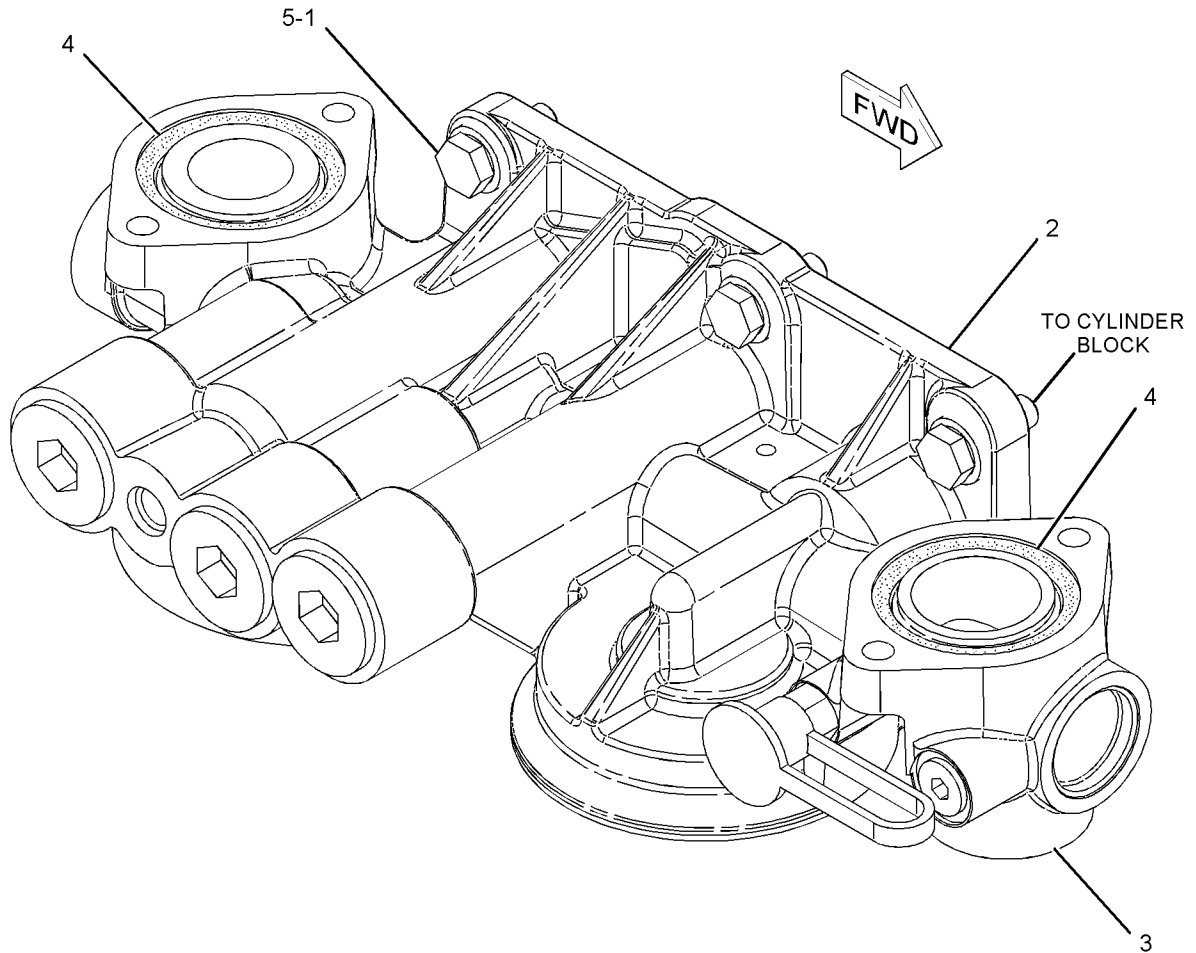
CANNOT BE USED WITH RH STARTER GPS  
AN ATTACHMENT

SMCS - 1306

i02214682

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	134-5245	6	BOLT (M10X1.5X30-MM)						
	2	1	227-4892	1	GASKET						
Y	3	1	247-9664	1	BASE GP-OIL FILTER (ENGINE OIL FILTER)						178
	4	1	3P-0650	2	SEAL-O-RING						
	5	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01118311

# LUBRICATION SYSTEM

## 251-6669 BASE GP-OIL FILTER-ENGINE

PART OF 223-1615 BASE GP-OIL FILTER

ALSO AN ATTACHMENT

SMCS - 1306

i02174553

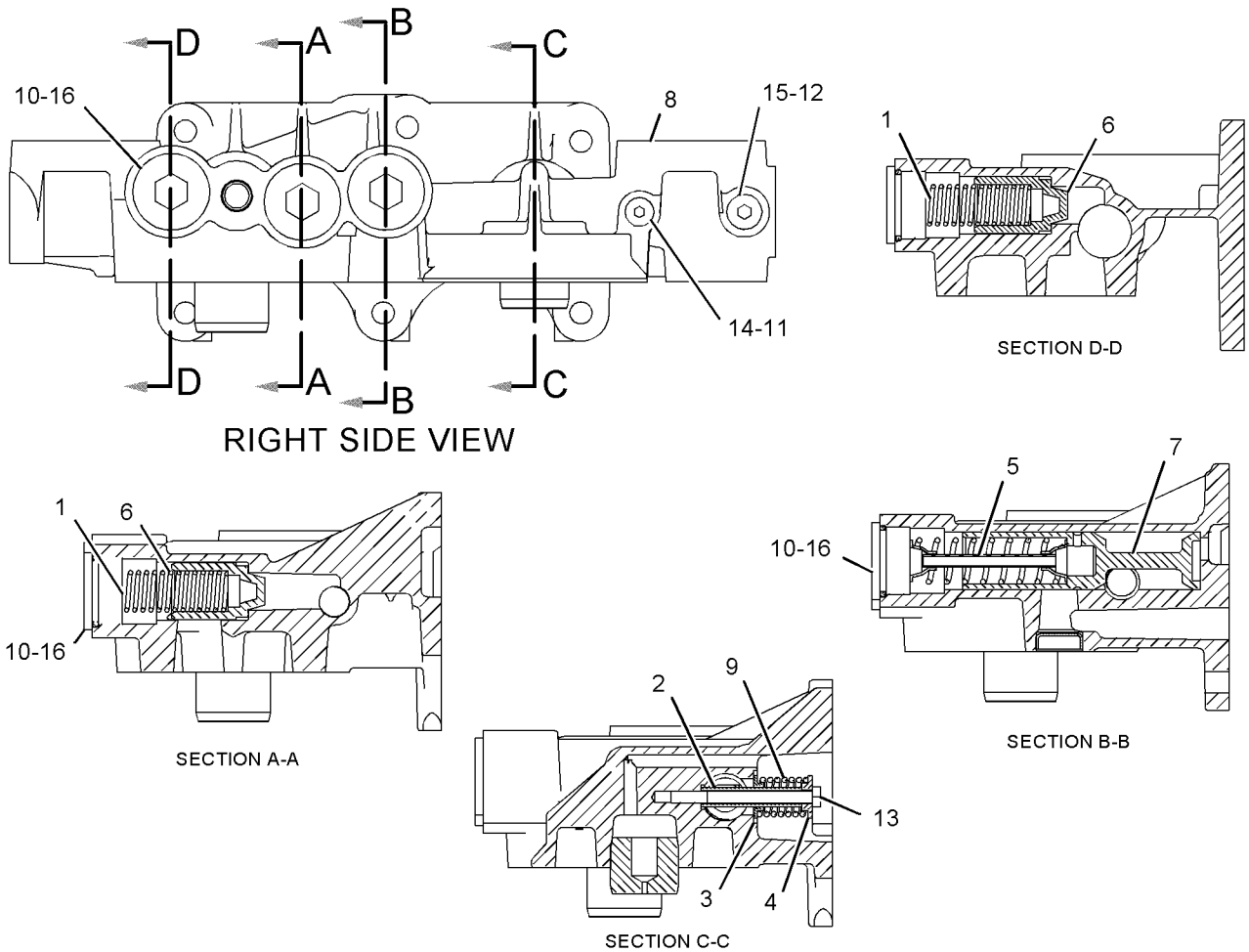
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-8150	2	SPRING						
	2	1	7C-3081	1	SPACER (6.88X9.53X50-MM THK)						
	3	1	7C-3082	1	RETAINER						
	4	1	7C-3083	1	SEAT-RELIEF VALVE SPRING						
	5	1	7C-3954	1	SPRING AS						
		1	2N-6005	1	SPRING						
	6	1	9M-0853	2	PLUNGER-VALVE						
	7	1	224-3405	1	VALVE AS (OIL PUMP BYPASS)						
	8	1	251-6668	1	BASE AS						
		1	2P-4304	1	STUD-TAPERLOCK						
		1	3B-0623	1	PLUG-CUP						
		1	3P-1896	2	PLUG-CUP						
		1	7W-6390	1	STUD-FILTER BASE						
	9	1	1A-2170	1	SPRING-RETAINER						
	10	1	5P-7701	3	SEAL-O-RING						
	11	1	6V-5048	1	SEAL-O-RING						
	12	1	6V-5049	1	SEAL-O-RING						
M	13	1	6V-8359	1	BOLT (M6X1X70-MM)						
	14	1	9S-8002	1	PLUG						
	15	1	9S-8004	1	PLUG						
	16	1	9S-9334	3	PLUG						

M-METRIC PART

# LUBRICATION SYSTEM

251-6669 BASE GP-OIL FILTER (contd.)

i02174553



RIGHT SIDE VIEW

SECTION A-A

SECTION D-D

SECTION B-B

SECTION C-C

GRAPHIC #1

<END>

g01104407

# LUBRICATION SYSTEM

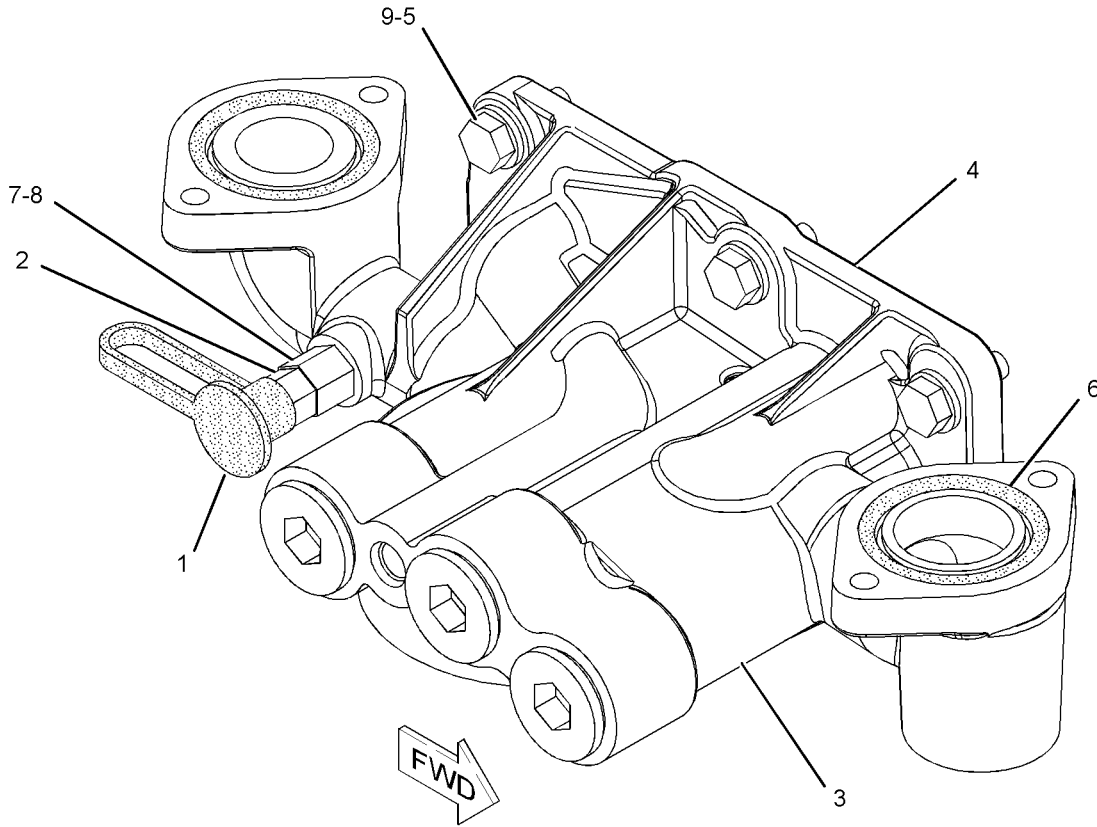
## 260-6883 BASE GP-OIL FILTER-ENGINE, SINGLE FILTER WITH ENGINE OIL SAMPLING VALVE FOR USE WITH RIGHT HAND STARTER APPLICATIONS AN ATTACHMENT

SMCS-1306

i02300536

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8C-3445	1	CAP-DUST						
	2	1	217-9060	1	VALVE AS-FLUID SAMPLING (ENGINE OIL)						
		1	3J-7354	1	SEAL-O-RING						
		1	154-9023	1	VALVE-SAMPLING (ENGINE OIL)						
Y	3	1	260-6884	1	BASE GP-OIL FILTER (ENGINE)						183
	4	1	237-9751	1	GASKET						
M	5	1	134-5245	6	BOLT (M10X1.5X30-MM)						
	6	1	3P-0650	2	SEAL-O-RING						
	7	1	5P-9617	1	ADAPTER						
	8	1	6V-5049	1	SEAL-O-RING						
	9	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01082096



# LUBRICATION SYSTEM

## 260-6884 BASE GP-OIL FILTER-ENGINE

PART OF 260-6883 BASE GP-OIL FILTER

AN ATTACHMENT

SMCS-1306

i02208353

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-8150	2	SPRING						
	2	1	7C-3081	1	SPACER (6.88X9.53X50-MM THK)						
	3	1	7C-3082	1	RETAINER						
	4	1	7C-3083	1	SEAT-RELIEF VALVE SPRING						
	5	1	7C-3954	1	SPRING AS						
	6	1,2	1P-1367	2	PLUNGER (OIL COOLER RELIEF VALVE)						
	7	1	224-3405	1	VALVE AS (OIL PUMP BYPASS) (ENGINE)						
	8	1	237-9749	1	BASE AS						
	8A	1	2P-4304	1	STUD-TAPERLOCK						
	9	1	1A-2170	1	SPRING-RETAINER						
	10	1	5P-7701	3	SEAL-O-RING						
	11	2	6V-5049	2	SEAL-O-RING						
M	12	1	6V-8359	1	BOLT (M6X1X70-MM)						
	13	2	9S-8004	2	PLUG						
	14	1	9S-9334	3	PLUG						
	15	1	9S-8006	1	PLUG						
	16	1	2M-9780	1	SEAL-O-RING						

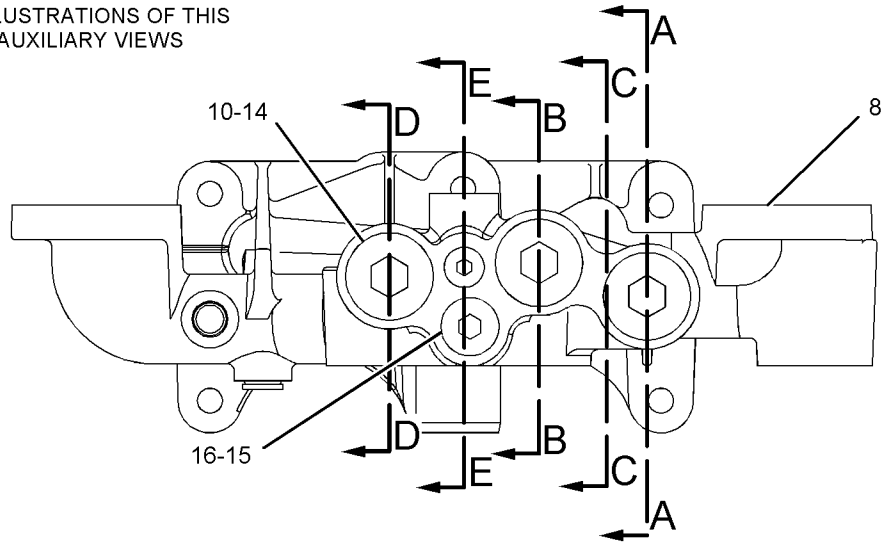
M-METRIC PART

# LUBRICATION SYSTEM

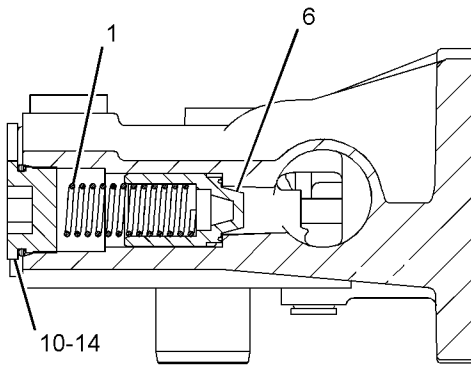
260-6884 BASE GP-OIL FILTER (contd.)

i02208353

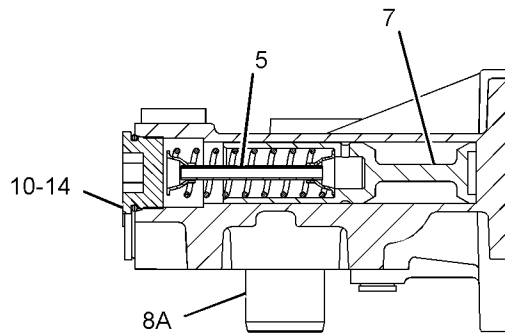
REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



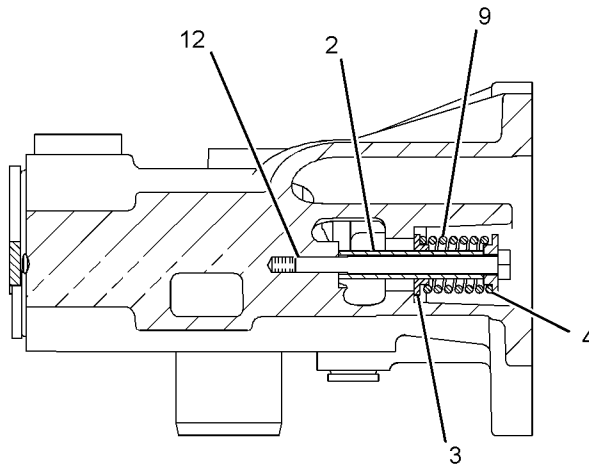
FRONT VIEW



SECTION A-A



SECTION B-B



SECTION C-C

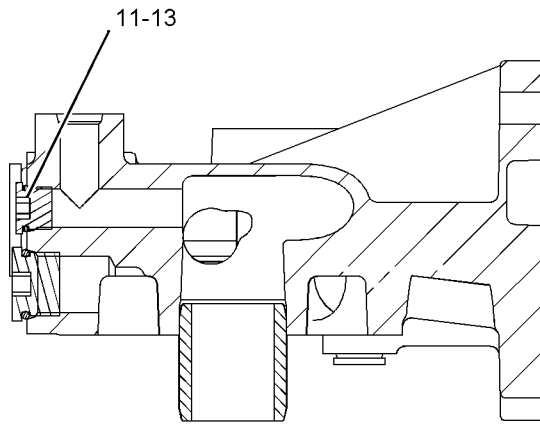
GRAPHIC #1

g01103881

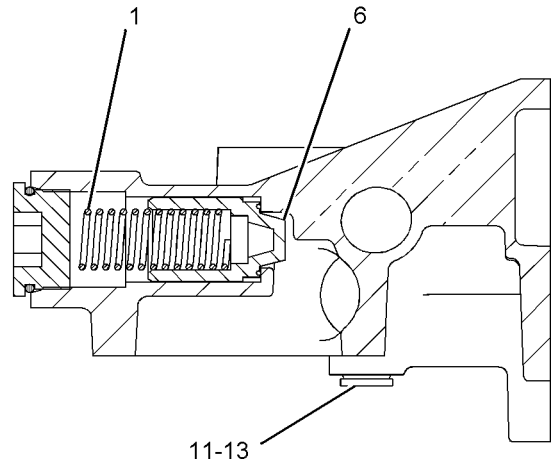
# LUBRICATION SYSTEM

260-6884 BASE GP-OIL FILTER (contd.)

i02208353



SECTION E-E



SECTION D-D

GRAPHIC #2

<END>

g01103898

# LUBRICATION SYSTEM

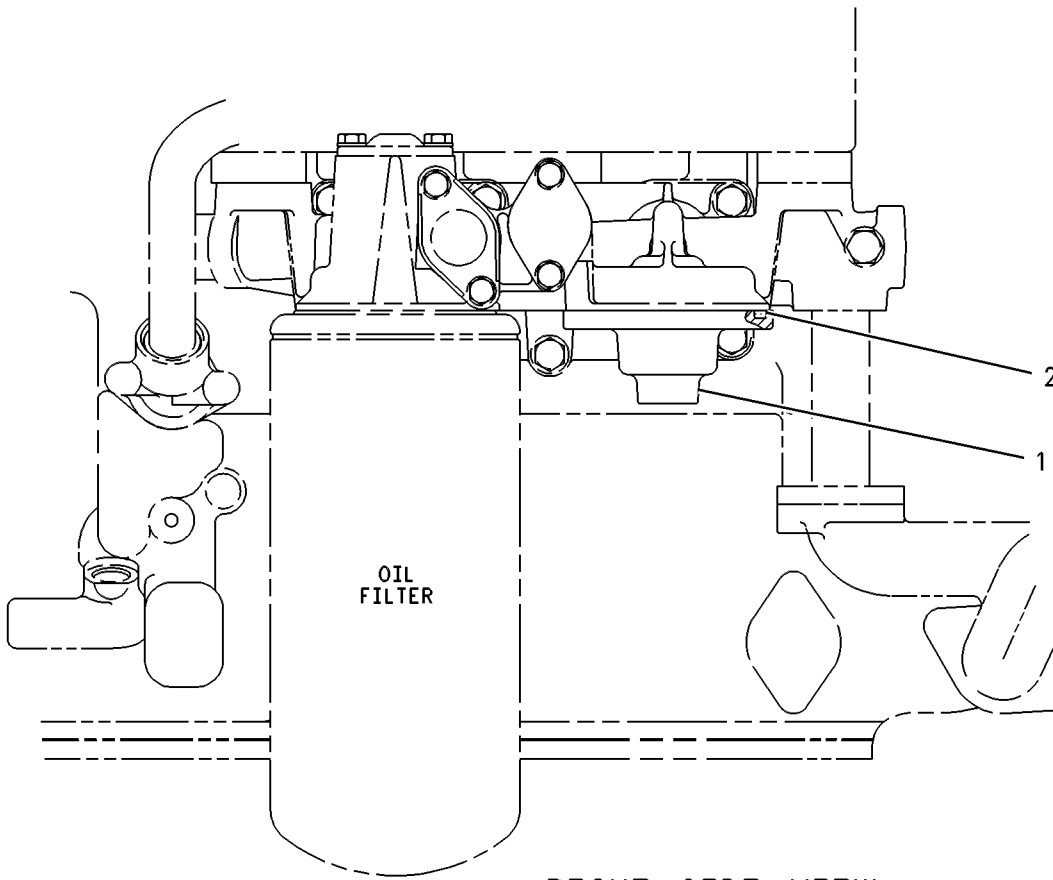
## 117-2786 COVER GP-OIL FILTER BASE-ENGINE

NO BYPASS  
ALSO AN ATTACHMENT

SMCS - 1306

i01008840

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7C-9542	1	COVER-FILTER BASE						
	2	1	5S-9134	1	SEAL-O-RING						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00251382

# LUBRICATION SYSTEM

## 244-8676 FILLER GP-ENGINE OIL-LEFT FRONT ALSO AN ATTACHMENT

SMCS-1316

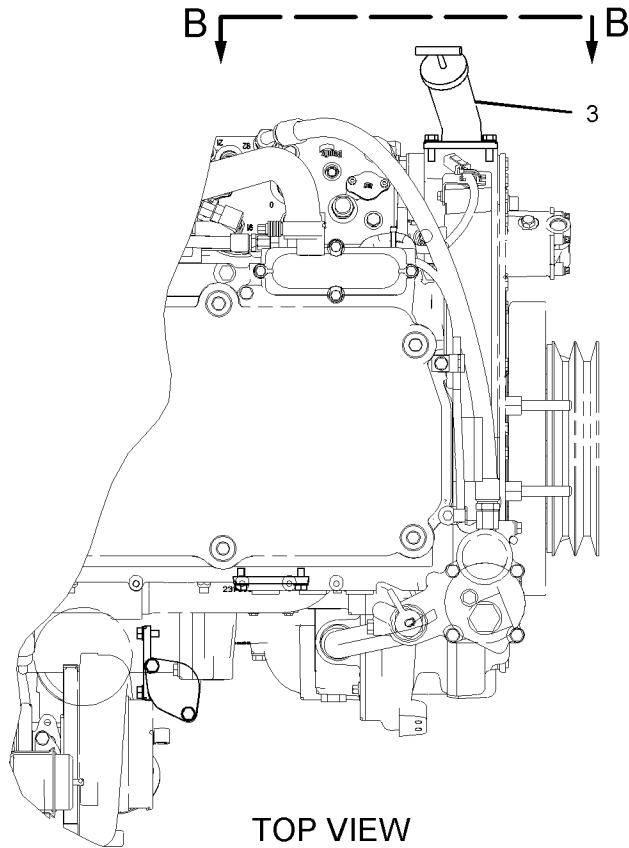
i02096400

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5L-2952	1	CAP AS-FILLER (ENGINE OIL)						
		1	6L-2609	1	SEAL-RUBBER						
	2	1	7C-1445	3	COVER						
	3	1	7C-2909	1	TUBE-OIL FILLER						
	4	1	061-9455	4	SEAL-O-RING						
M	5	1	6V-3940	2	BOLT (M8X1.25X25-MM)						
M	6	1	6V-5217	6	BOLT (M8X1.25X20-MM)						
	7	1	9M-1974	8	WASHER-HARD (8.8X16X2-MM THK)						
M-METRIC PART											

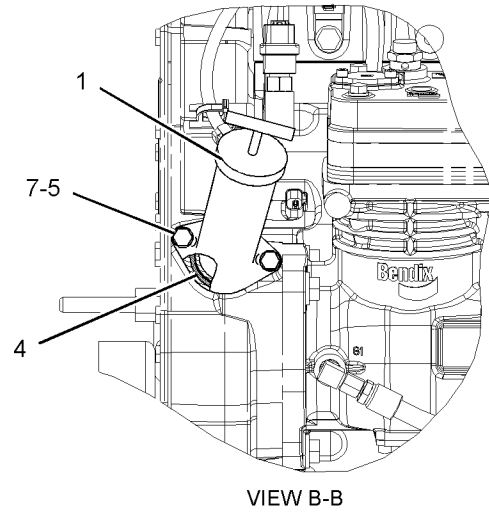
# LUBRICATION SYSTEM

244-8676 FILLER GP-ENGINE OIL (contd.)

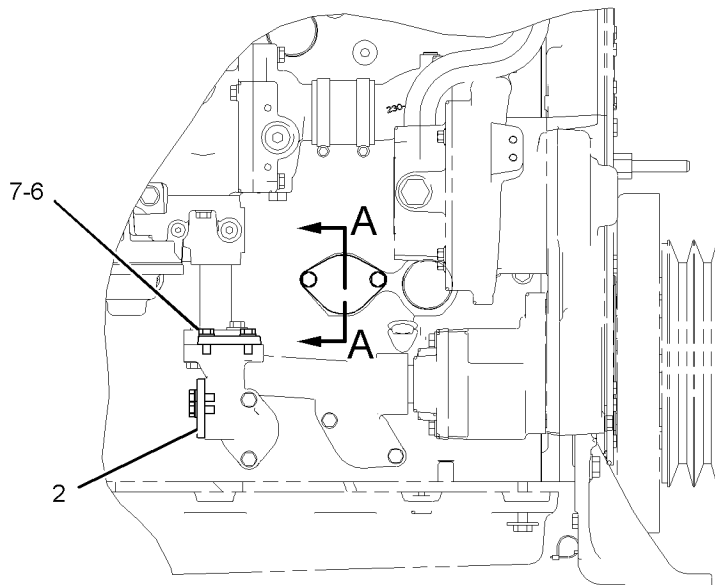
i02096400



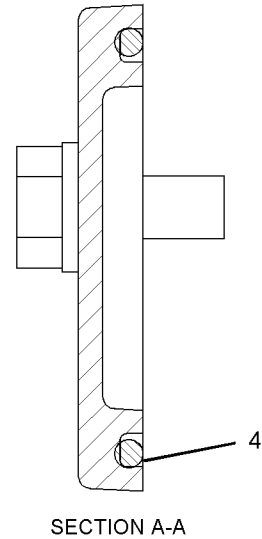
TOP VIEW



VIEW B-B



RIGHT SIDE VIEW



SECTION A-A

GRAPHIC #1

<END>

g01073232

# LUBRICATION SYSTEM

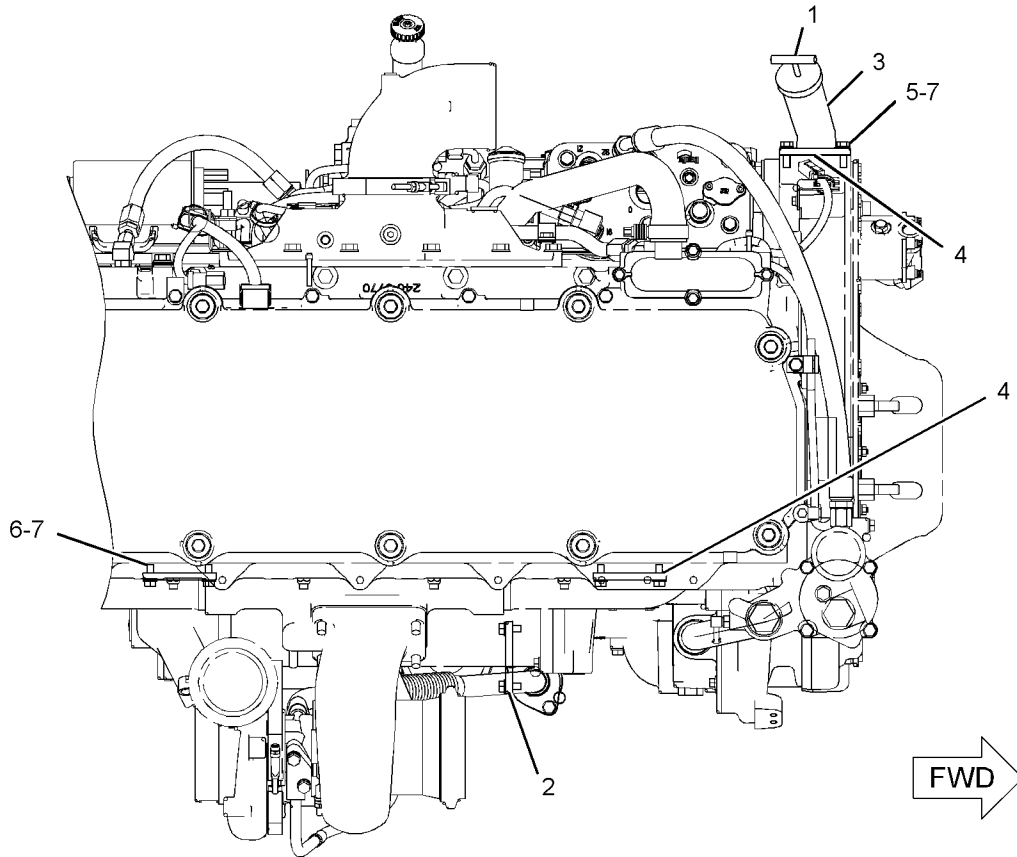
## 244-8677 FILLER GP-ENGINE OIL-LEFT FRONT AN ATTACHMENT

SMCS-1316

i02096403

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5L-2952	1	CAP AS-FILLER (ENGINE OIL)						
		1	6L-2609	1	SEAL-RUBBER						
	2	1	7C-1445	3	COVER						
	3	1	7C-2909	1	TUBE-OIL FILLER						
	4	1	061-9455	4	SEAL-O-RING						
M	5	1	6V-3940	2	BOLT (M8X1.25X25-MM)						
M	6	1	6V-5217	6	BOLT (M8X1.25X20-MM)						
	7	1	9M-1974	8	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART



TOP VIEW  
<END>

GRAPHIC #1

g01073151

# LUBRICATION SYSTEM

## 250-1882 FILLER GP-ENGINE OIL

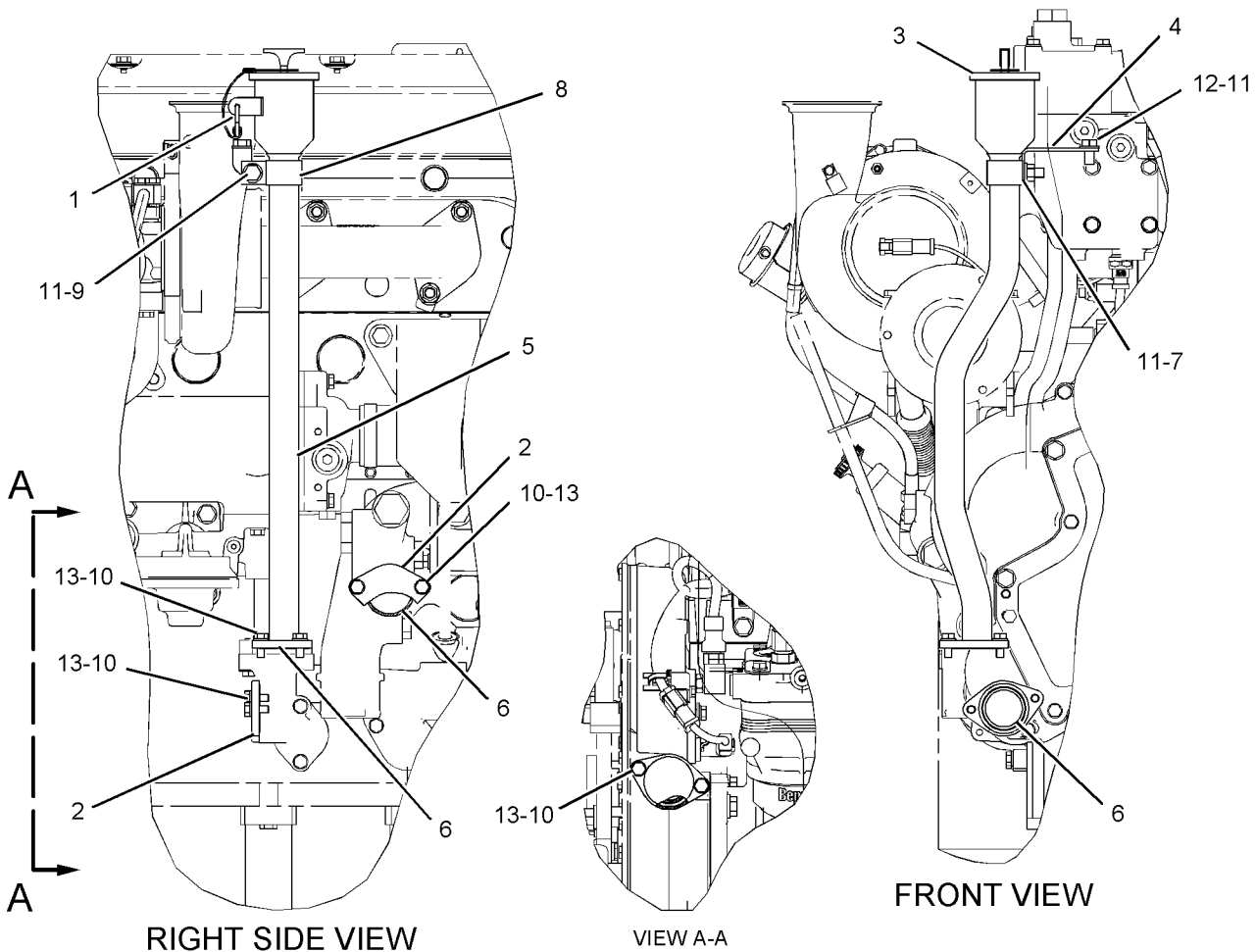
CANNOT BE USED WITH FRONT EXHAUST TURBO  
AN ATTACHMENT

SMCS-1316

i02208284

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3F-6156	1	HOOK						
	2	1	7C-1445	3	COVER						
	3	1	163-9361	1	CAP AS-FILLER (ENGINE OIL)						
	4	1	235-0936	1	BRACKET						
	5	1	250-1883	1	TUBE AS						
	6	1	061-9455	4	SEAL -O-RING						
M	7	1	2Y-5829	1	NUT (M10X1.5-THD)						
	8	1	5P-7854	1	CLIP						
M	9	1	6V-1820	1	BOLT (M10X1.5X30-MM)						
M	10	1	6V-5217	8	BOLT (M8X1.25X20-MM)						
	11	1	6V-5839	3	WASHER (11X21X2.5-MM THK)						
M	12	1	6V-6317	1	BOLT (M10X1.5X20-MM)						
	13	1	9M-1974	8	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g01123913



# LUBRICATION SYSTEM

## 270-0508 FILLER GP-ENGINE OIL

FOR USE WITH INDUSTRIAL ENGINES. CANNOT BE USED WITH FORWARD EXHAUST  
AN ATTACHMENT

SMCS-1316

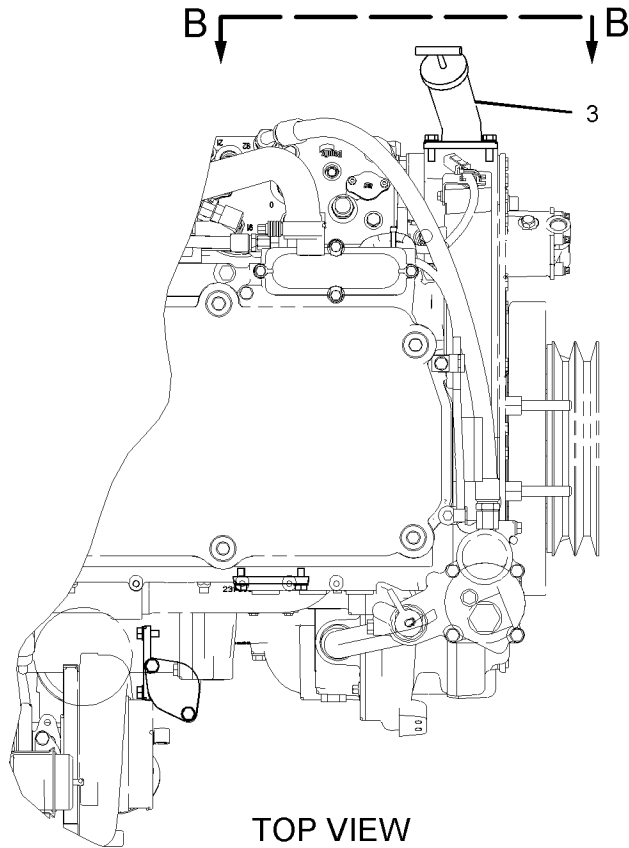
i02301071

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5L-2952	2	CAP AS-FILLER (ENGINE OIL)						
					(EACH INCLUDES)						
		1	6L-2609	1	SEAL-RUBBER (ENGINE OIL FILLER CAP)						
	2	1	7C-1445	2	COVER						
	3	1	7C-2909	2	TUBE-OIL FILLER						
	4	1	061-9455	4	SEAL-O-RING						
M	5	1	6V-3940	2	BOLT (M8X1.25X25-MM)						
M	6	1	6V-5217	6	BOLT (M8X1.25X20-MM)						
	7	1	9M-1974	8	WASHER-HARD (8.8X16X2-MM THK)						
M-METRIC PART											

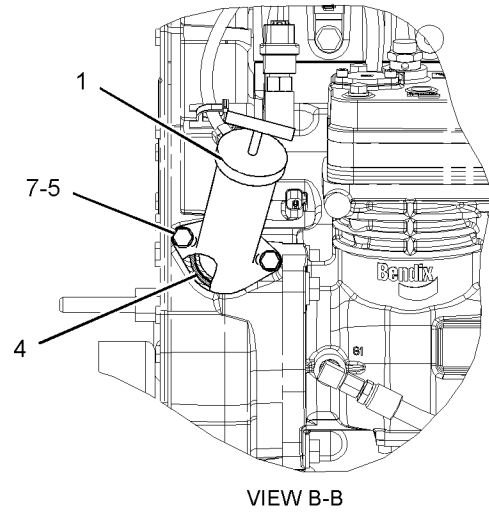
# LUBRICATION SYSTEM

270-0508 FILLER GP-ENGINE OIL (contd.)

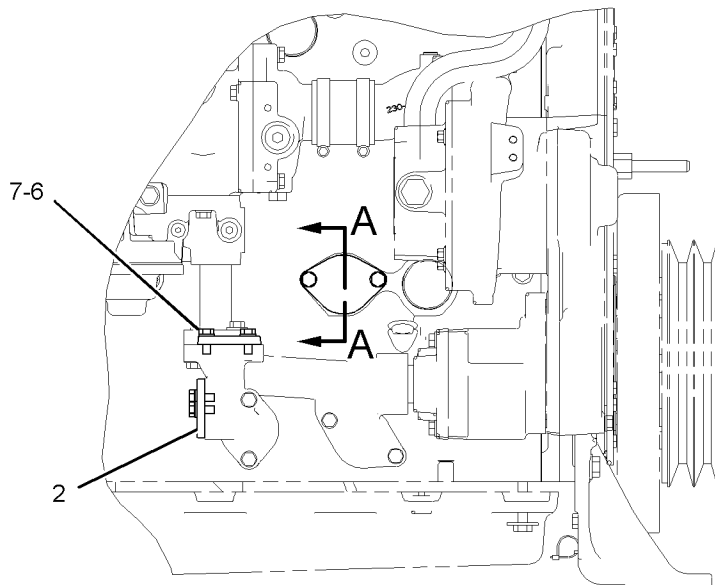
i02301071



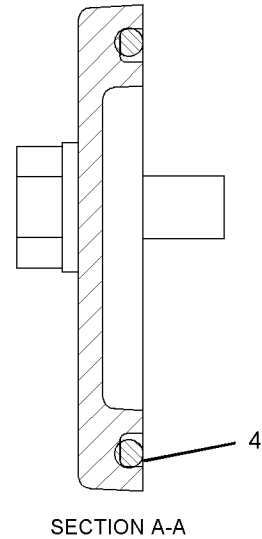
TOP VIEW



VIEW B-B



RIGHT SIDE VIEW



SECTION A-A

GRAPHIC #1

<END>

g01073232

# LUBRICATION SYSTEM

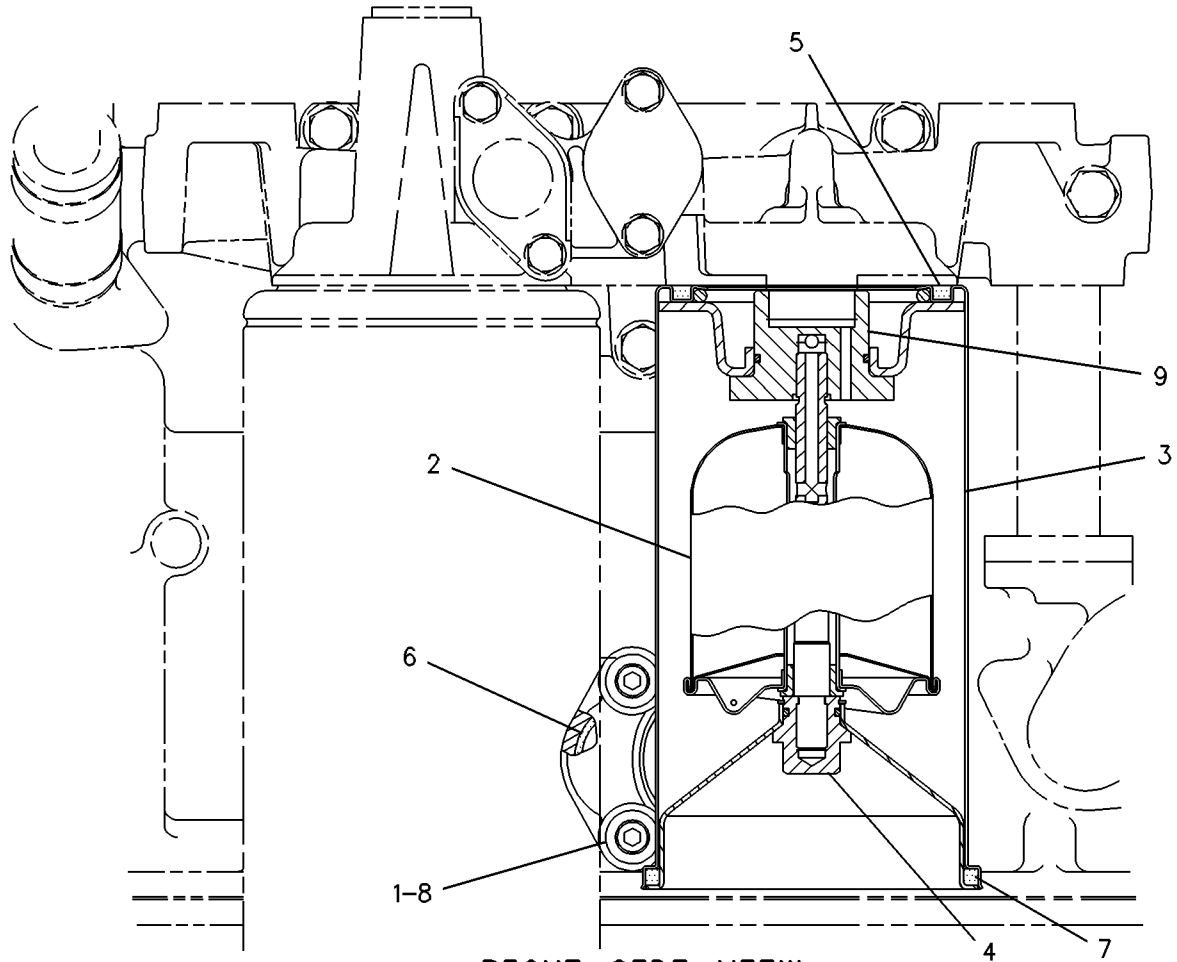
## 124-2668 FILTER GP-CENTRIFUGAL-ENGINE OIL BYPASS AN ATTACHMENT

SMCS-1328

i00830666

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3E-4352	2	WASHER-HARD (2.5MM THK)						
	2	1	4P-8922	1	ROTOR AS-FILTER						
	3	1	4P-8917	1	BODY AS-FILTER						
	4	1	4P-8919	1	COVER AS-FILTER						
	5	1	9Y-5611	1	SEAL						
	6	1	6V-1250	1	SEAL-O-RING (39.34MM ID)						
	7	1	9Y-5615	1	SEAL						
M	8	1	6V-5195	2	BOLT-SOCKET HEAD (M8X1.25X50 MM)						
	9	1	4P-8918	1	ADAPTER AS-FILTER						

M-METRIC PART



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00233276

# LUBRICATION SYSTEM

## 116-1853 FILTER GP-ENGINE OIL

NO BYPASS  
AN ATTACHMENT

SMCS-1306, 1308

i02086689

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	102-5829	1	ADAPTER						
	104-7995	1	BASE GP-OIL FILTER						
	2P-4304	1	STUD-TAPERLOCK						
	102-5828	1	COVER						
	030-7951	4	ELBOW-FLARED						
	1R-1808	1	FILTER ELEMENT AS-ENGINE OIL						
I	9L-5709	2	HOSE AS						
	5P-7701	4	SEAL-O-RING						
	6V-3908	2	SEAL-O-RING						

I-REFER TO HYDRAULIC INFORMATION SYSTEM

<END>

# LUBRICATION SYSTEM

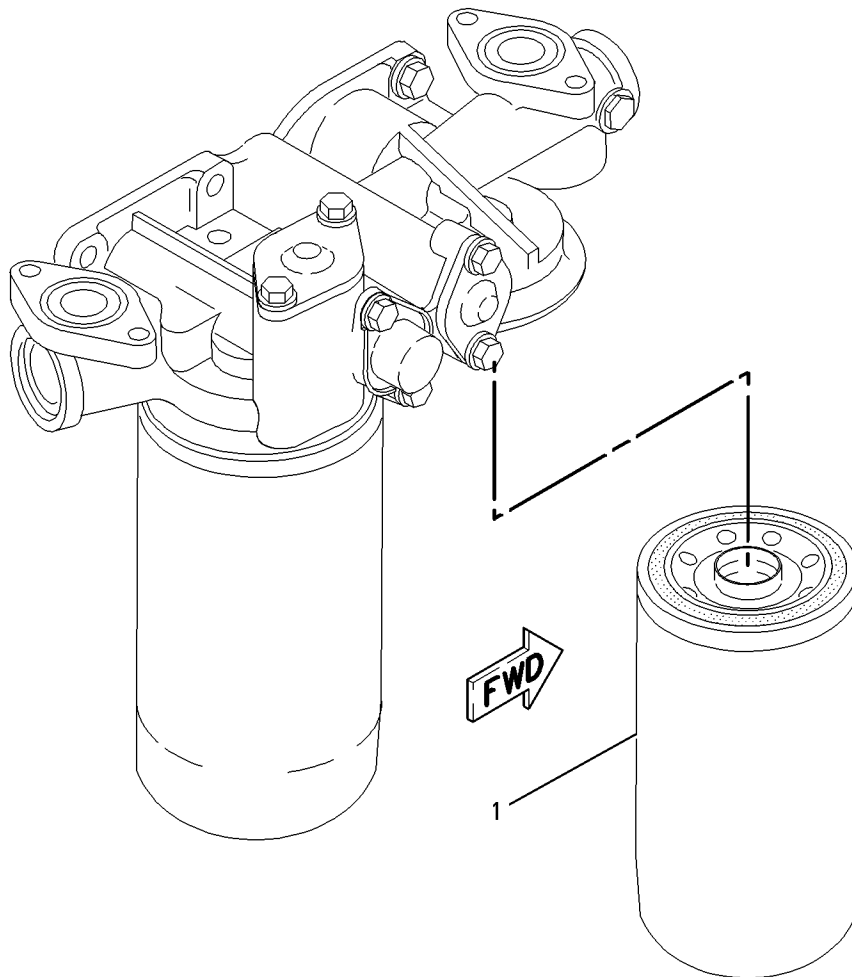
## 117-2787 FILTER GP-ENGINE OIL

SPIN-ON BYPASS  
ALSO AN ATTACHMENT

SMCS-1306, 1308

i01510183

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-8845	1	FILTER AS-ENGINE OIL						



GRAPHIC #1

<END>

g00784146

# LUBRICATION SYSTEM

## 231-3492 FILTER GP-ENGINE OIL

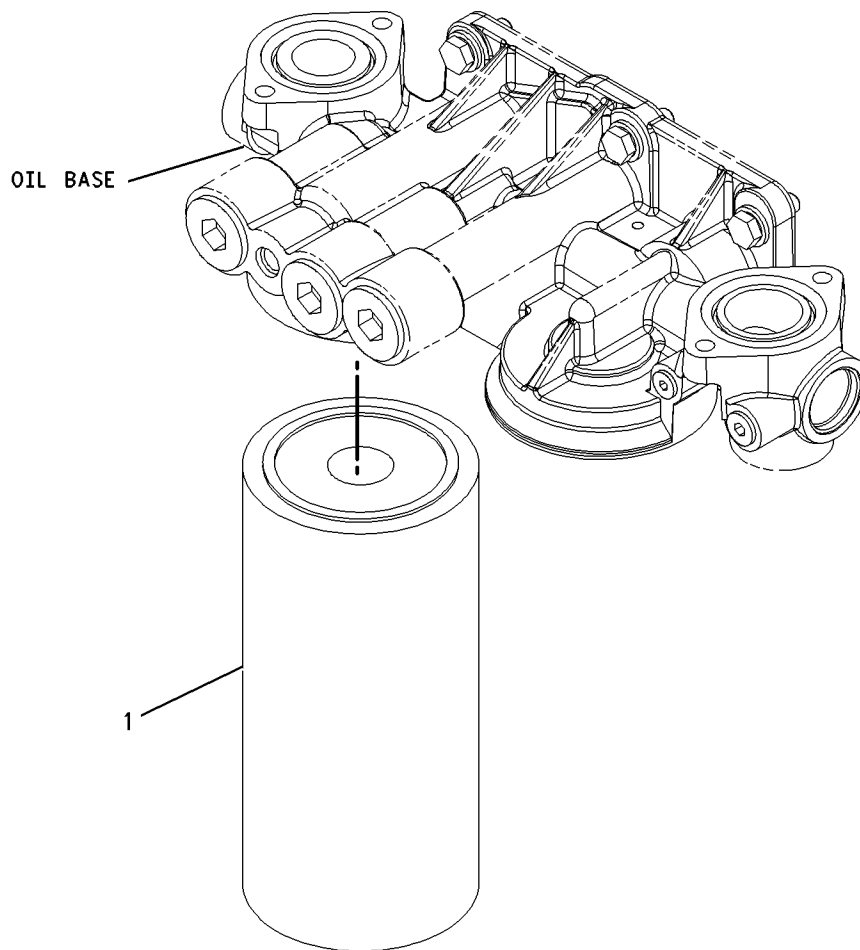
S/N: GLS1-116

PROVIDES PRIMARY HIGH EFFICIENCY OIL FILTER  
ALSO AN ATTACHMENT

SMCS-1306, 1308

i02021373

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1R-1808	1	FILTER ELEMENT AS-ENGINE OIL						



GRAPHIC #1

<END>

g00951313

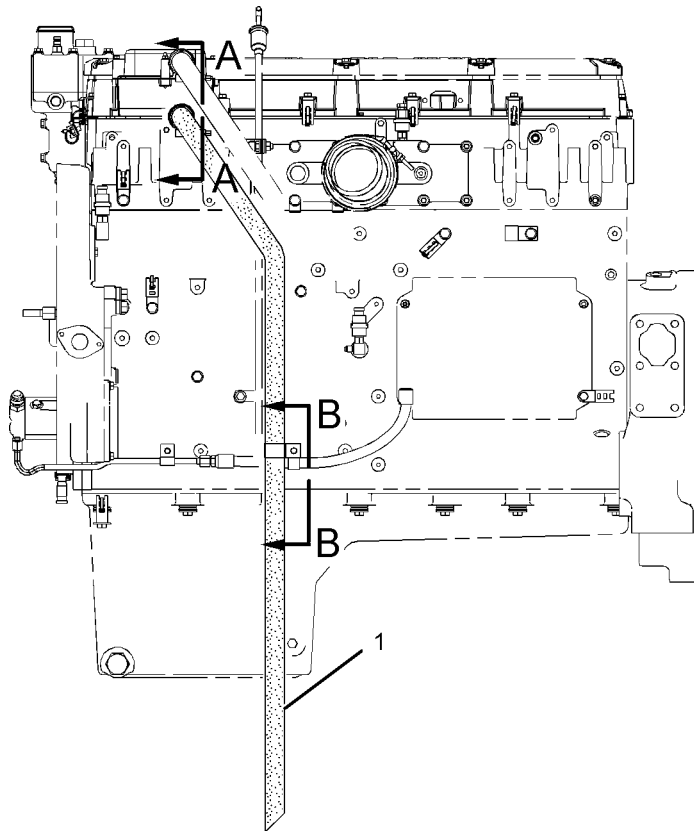
# LUBRICATION SYSTEM

## 220-7133 FUMES DISPOSAL GP AN ATTACHMENT

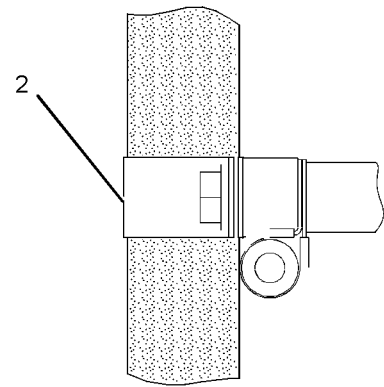
SMCS-1317

i02176880

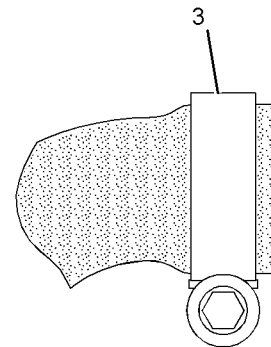
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>220-7134</b>	1	HOSE (FUMES DISPOSAL)						
	2	1	<b>2S-2053</b>	1	CLIP						
	3	1	<b>8T-4983</b>	1	CLAMP-HOSE						



LEFT SIDE VIEW



VIEW B-B



VIEW A-A

GRAPHIC #1

<END>

g01102217

# LUBRICATION SYSTEM

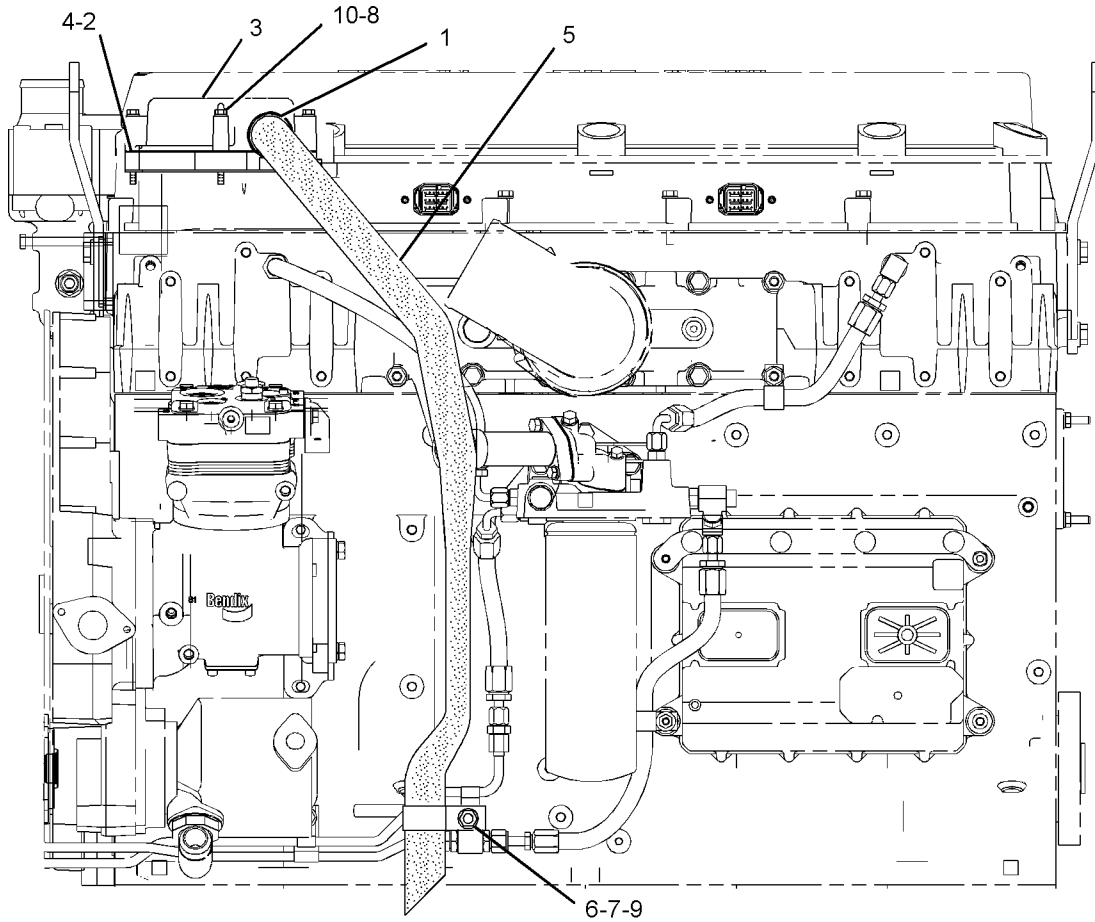
## 224-5540 FUMES DISPOSAL GP PROVIDES HOSE MOUNTED OFF THE VALVE COVER BASE ALSO AN ATTACHMENT

SMCS-1317

i02209963

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9M-2904	1	CLAMP-HOSE						
	2	1	9Y-1758	2	GASKET (CRANKCASE BREATHER)						
	3	1	9Y-4357	1	BREATHER AS (CRANKCASE)						
	4	1	221-3934	1	SPACER						
	5	1	224-5539	1	HOSE-FUMES DISPOSAL						
M	6	1	2Y-5829	1	NUT (M10X1.5-THD)						
	7	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						
M	8	1	6V-8359	4	BOLT (M6X1X70-MM)						
	9	1	7L-3203	1	CLIP						
	10	1	9X-8267	4	WASHER (6.6X12X2-MM THK)						

M-METRIC PART



LEFT SIDE VIEW  
<END>

GRAPHIC #1

g01076010



# LUBRICATION SYSTEM

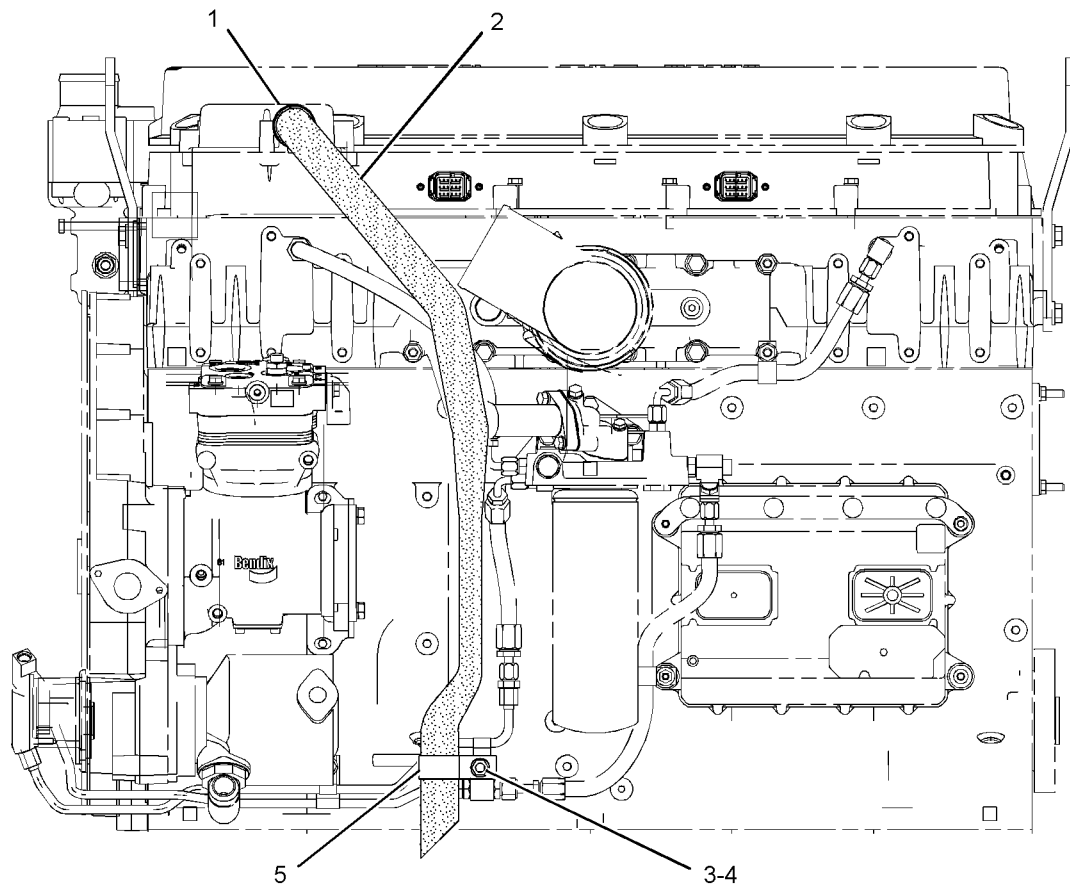
## 258-4484 FUMES DISPOSAL GP AN ATTACHMENT

SMCS-1317

i02137592

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9M-2904	1	CLAMP-HOSE						
	2	1	224-5539	1	HOSE-FUMES DISPOSAL						
M	3	1	2Y-5829	1	NUT (M10X1.5-THD)						
	4	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						
	5	1	7L-3203	1	CLIP						

M-METRIC PART



LEFT SIDE VIEW  
<END>

GRAPHIC #1

g01086224

# LUBRICATION SYSTEM

## 228-4712 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE

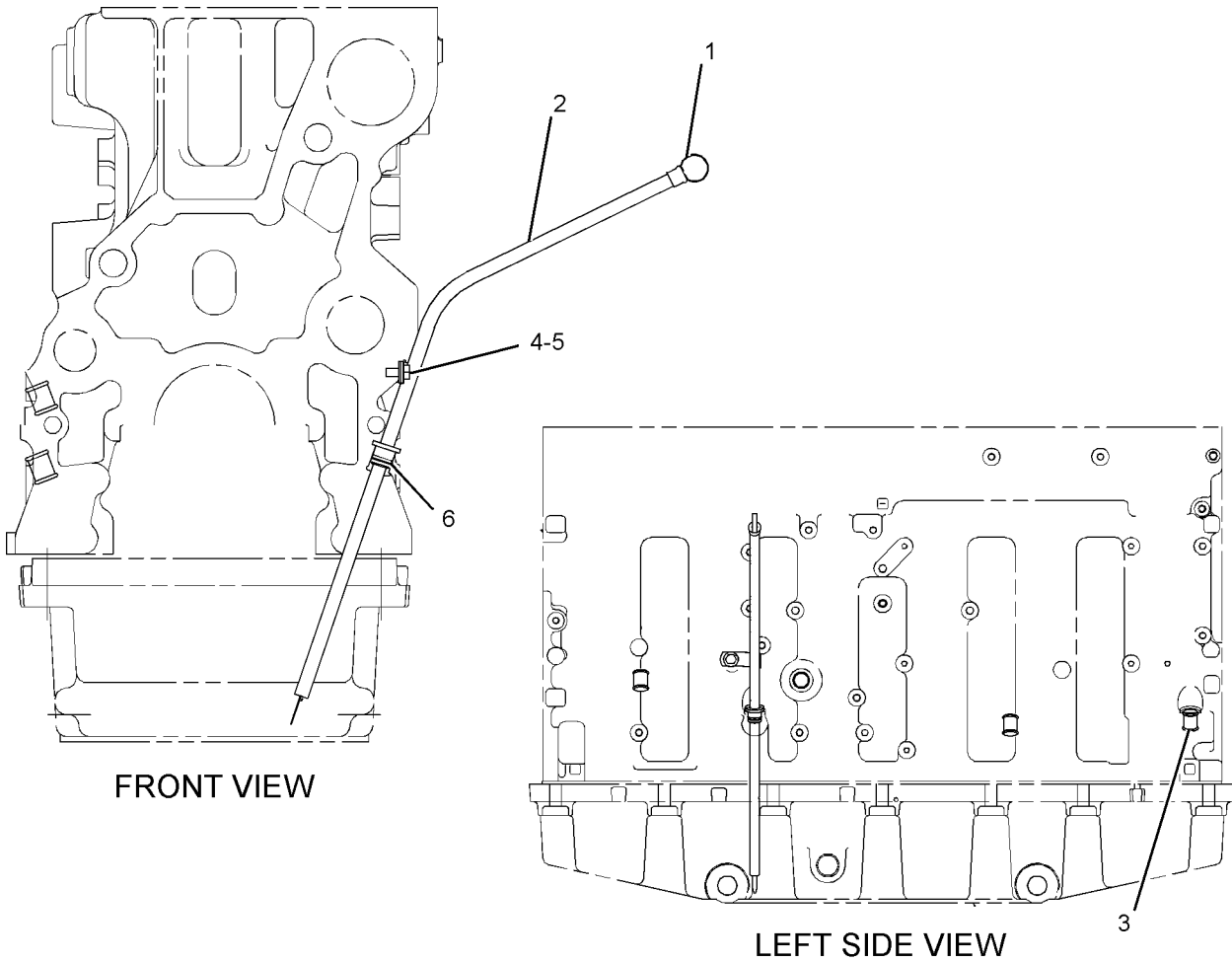
LEFT FRONT  
AN ATTACHMENT

SMCS-1326

i02283696

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	231-0764	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
	2	1	228-4713	1	TUBE AS-OIL						
J	3	1	209-7309	3	PLUG						
M	4	1	6V-5215	1	BOLT (M8X1.25X16-MM)						
	5	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	6	1	3P-0647	1	SEAL-O-RING						

J-USE TO PLUG OPTIONAL DIPSTICK LOCATIONS  
M-METRIC PART



GRAPHIC #1

<END>

g01147112

# LUBRICATION SYSTEM

## 243-3031 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE

S/N: GLS1-115

PROVIDES A LEFT HAND REAR MOUNTED OIL LEVEL GAGE AND 3 RUBBER BLOCK PLUGS  
FOR USE WITH ENGINE INSTALLATION TILT OF 2 TO 4 DEGREES AND 0 SLANT,  
215-9007-PAGE 123

SMCS-1326

i02161486

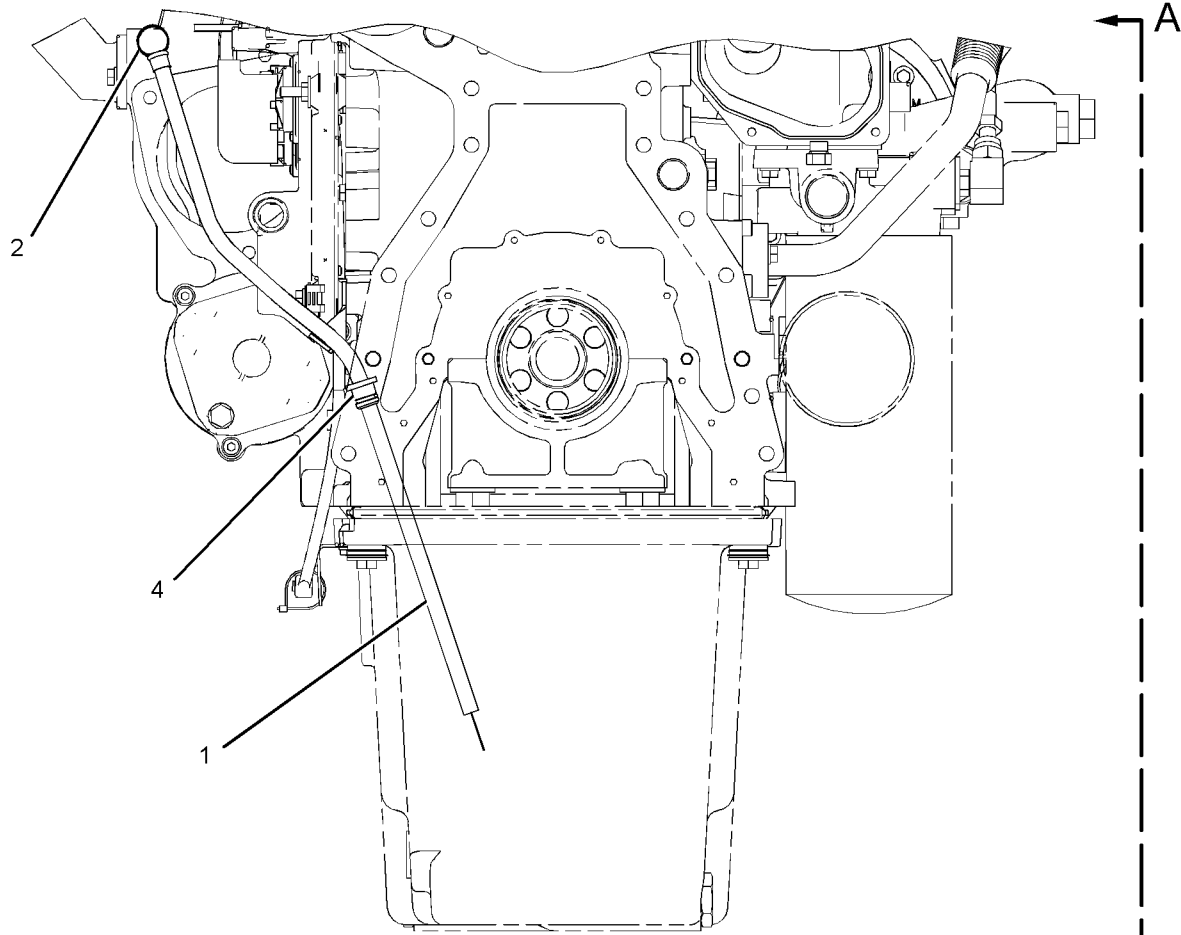
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>133-7047</b>	1	TUBE AS-OIL GAUGE						
	2	1	<b>126-0116</b>	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
J	3	1	<b>209-7309</b>	3	PLUG						
	4	1	<b>3P-0647</b>	1	SEAL-O-RING						

J-USE TO PLUG OPTIONAL DIPSTICK LOCATIONS

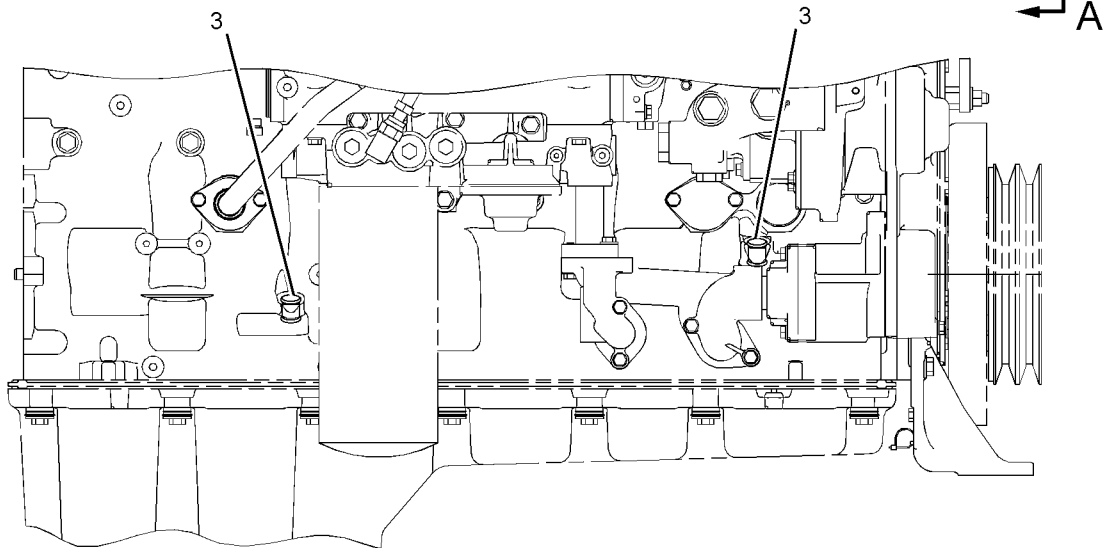
# LUBRICATION SYSTEM

243-3031 GAUGE GP-OIL LEVEL (DIPSTICK) (contd.)

i02161486



REAR VIEW



VIEW A-A  
<END>

GRAPHIC #1

g01073501

# LUBRICATION SYSTEM

## 243-3031 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE

S/N: GLS116-UP

PROVIDES A LEFT HAND REAR MOUNTED OIL LEVEL GAGE AND 3 RUBBER BLOCK PLUGS  
FOR USE WITH ENGINE INSTALLATION TILT OF 2 TO 4 DEGREES AND 0 SLANT,

215-9007-PAGE 123

ALSO AN ATTACHMENT

SMCS-1326

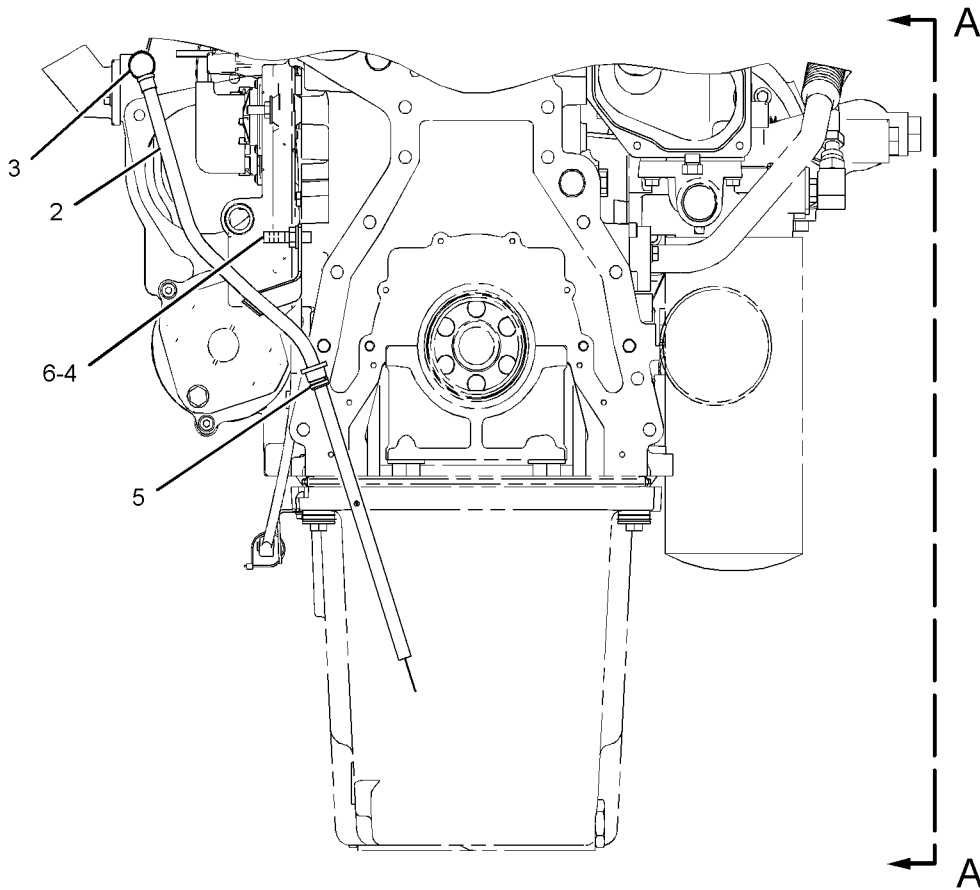
i02161485

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	209-7309	3	PLUG						
C	2	1	252-5215	1	TUBE AS						
	3	1	126-0116	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
C	4	1	212-0431	1	STUD						
	5	1	3P-0647	1	SEAL-O-RING						
C	6	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						
C-CHANGE FROM PREVIOUS TYPE											
J-USE TO PLUG OPTIONAL DIPSTICK LOCATIONS											

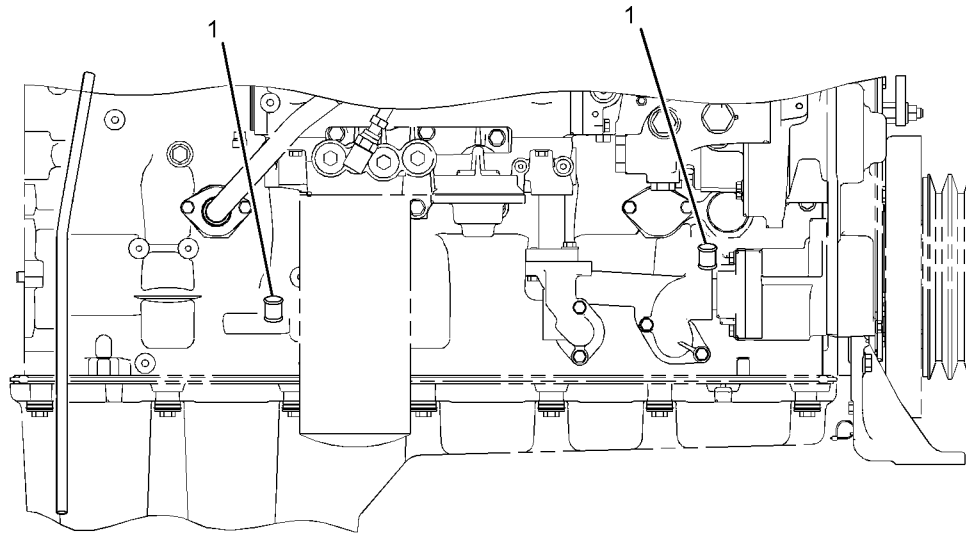
# LUBRICATION SYSTEM

243-3031 GAUGE GP-OIL LEVEL (DIPSTICK) (contd.)

i02161485



REAR VIEW



VIEW A-A  
<END>

GRAPHIC #1

g01082037

# LUBRICATION SYSTEM

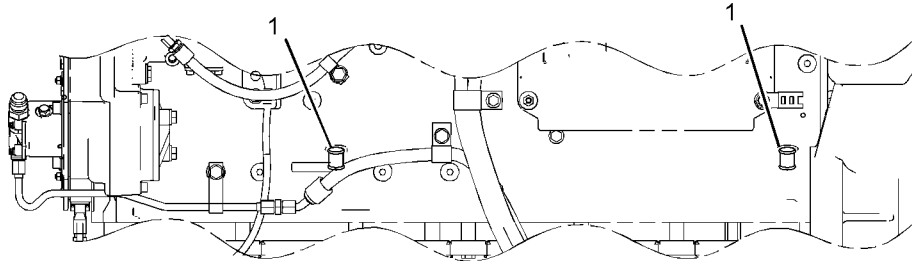
## 257-7269 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE FOR USE WITH FRONT SUMP OIL PAN. CANNOT BE USED WITH FRONT FACING WATER INLET ELBOW AN ATTACHMENT

SMCS-1326

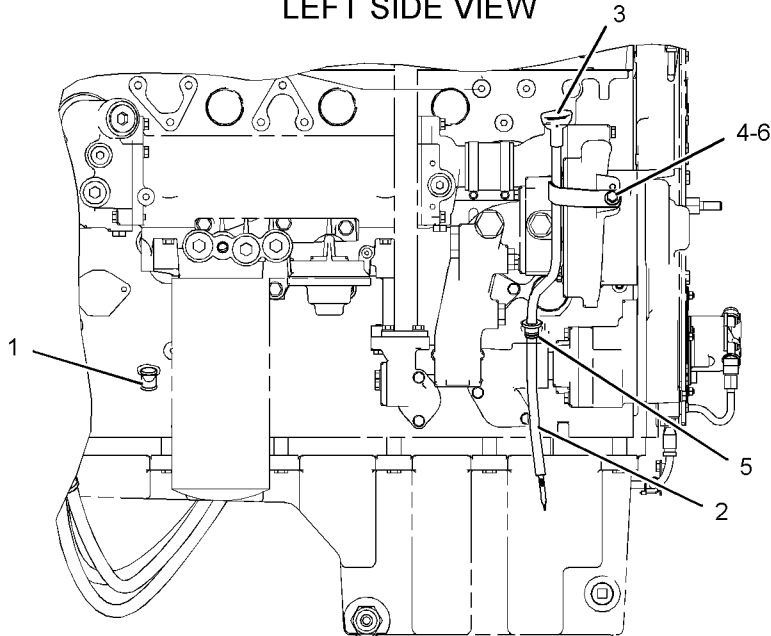
i02208340

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	<b>209-7309</b>	3	PLUG						
	2	1	<b>257-7270</b>	1	TUBE AS-OIL						
	3	1	<b>266-0771</b>	1	GAUGE AS-OIL (DIPSTICK) (ENGINE)						
	4	1	<b>3E-4352</b>	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	5	1	<b>3P-0647</b>	1	SEAL-O-RING						
M	6	1	<b>6V-5217</b>	1	BOLT (M8X1.25X20-MM)						

J-USE TO PLUG OPTIONAL DIPSTICK LOCATIONS  
M-METRIC PART



LEFT SIDE VIEW



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01124248

# LUBRICATION SYSTEM

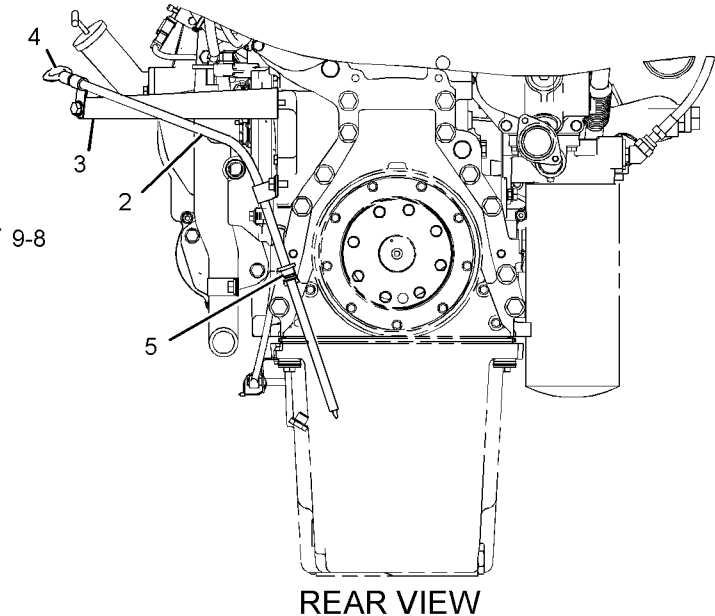
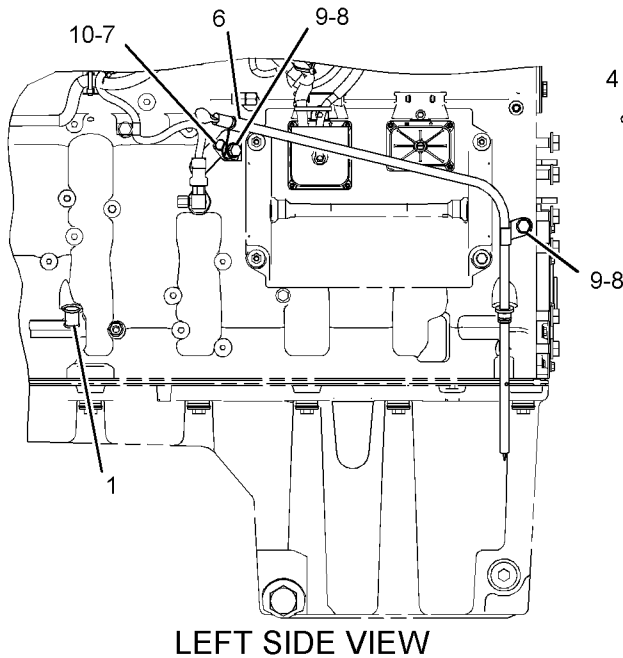
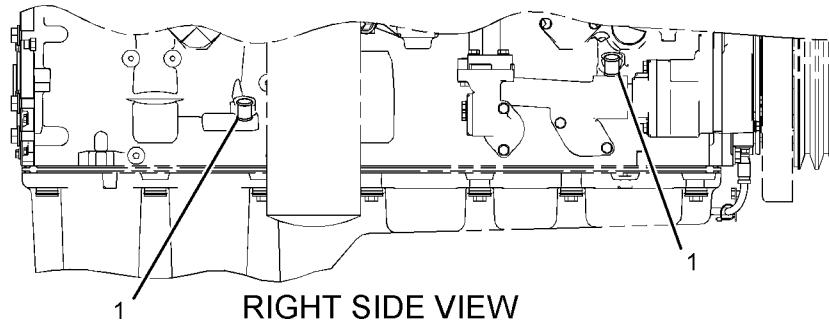
## 267-3473 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE 40-LITRE. REAR SUMP AN ATTACHMENT

SMCS-1326

i02289480

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	209-7309	3	PLUG						
	2	1	267-3474	1	TUBE AS						
	3	1	267-3475	1	BRACKET AS						
M	1	1	8T-3490	1	NUT-WELD (M10X1.5-THD)						
	4	1	132-9830	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
	5	1	3P-0647	1	SEAL-O-RING						
M	6	1	4D-9517	1	CLIP						
	7	1	6V-5215	1	BOLT (M8X1.25X16-MM)						
	8	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						
M	9	1	6V-6317	2	BOLT (M10X1.5X20-MM)						
	10	1	9M-1974	1	WASHER-HARD (8.8X16X2-MM THK)						

J-USE TO PLUG OPTIONAL DIPSTICK LOCATIONS  
M-METRIC PART



GRAPHIC #1

<END>

g01147110



# LUBRICATION SYSTEM

## 270-1758 GAUGE GP-OIL LEVEL (DIPSTICK)-ENGINE FOR USE WITH FOR USE WITH ENGINE REAR OIL SUMP.. CANNOT BE USED WITH RIGHT-HAND STARTER AN ATTACHMENT

SMCS-1326

i02301069

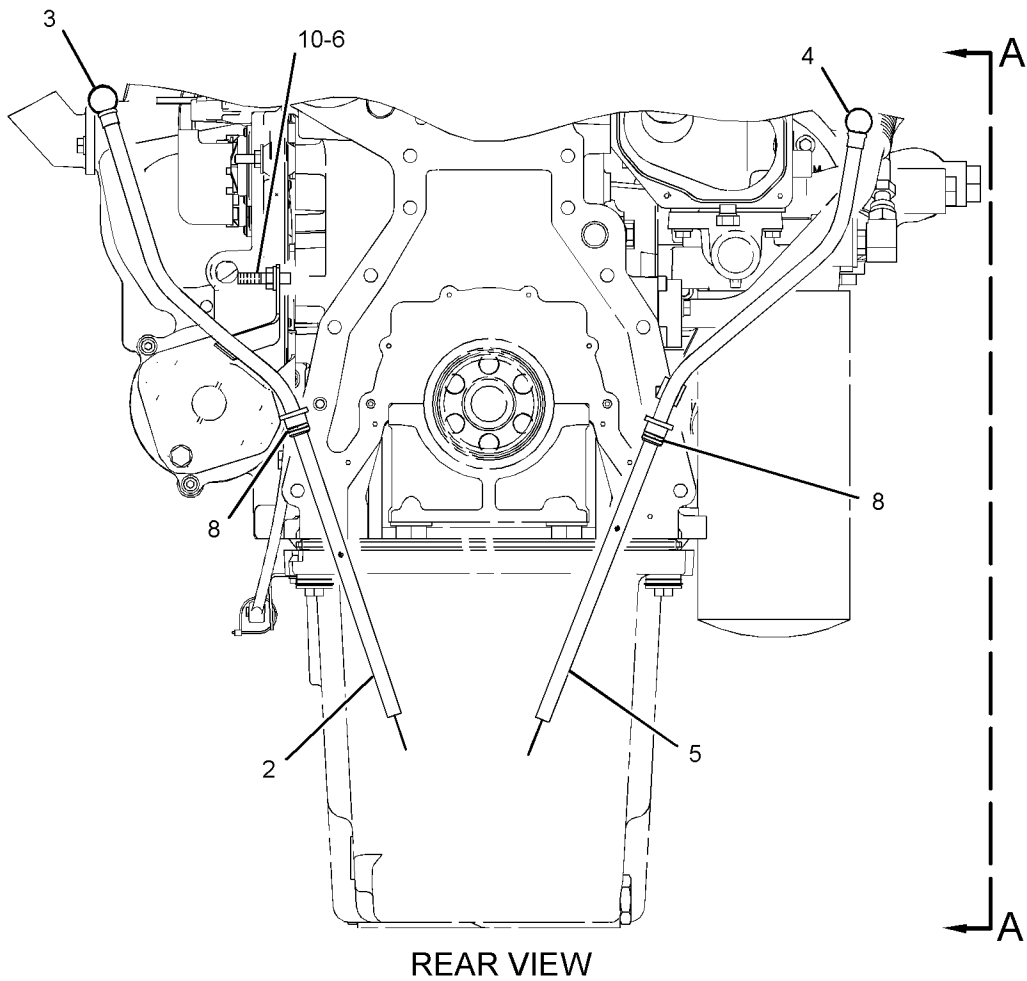
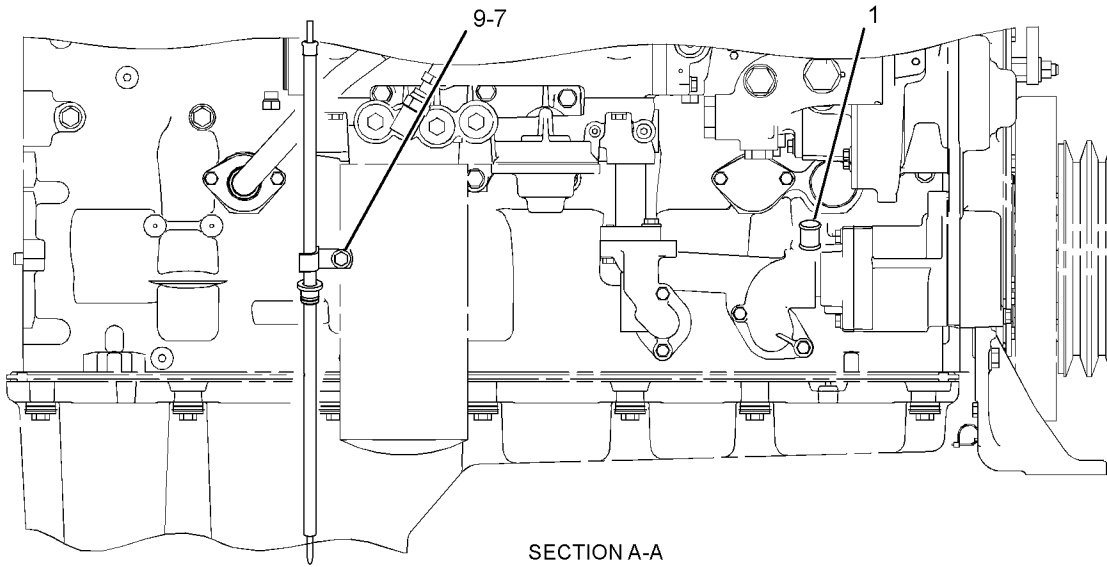
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1,2	209-7309	2	PLUG						
	2	1	252-5215	1	TUBE AS						
	3	1	126-0116	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
	4	1	126-0129	1	GAUGE AS-OIL LEVEL (DIPSTICK) (ENGINE)						
	5	1	136-4278	1	TUBE AS-OIL						
	6	1	212-0431	1	STUD						
	7	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	8	1	3P-0647	2	SEAL-O-RING						
M	9	1	6V-5215	1	BOLT (M8X1.25X16-MM)						
	10	1	6V-5839	1	WASHER (11X21X2.5-MM THK)						

J-USED TO PLUG OPTIONAL DIPSTICK LOCATIONS  
M-METRIC PART

# LUBRICATION SYSTEM

270-1758 GAUGE GP-OIL LEVEL (DIPSTICK) (contd.)

i02301069



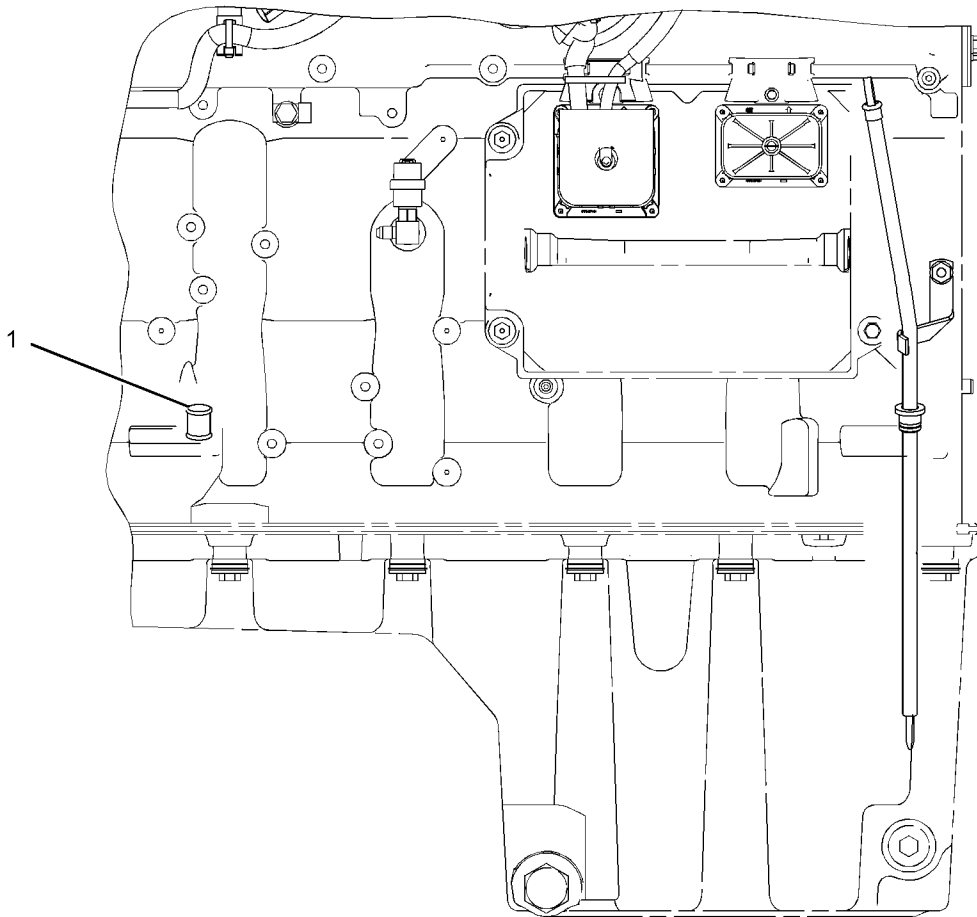
GRAPHIC #1

g01154040

# LUBRICATION SYSTEM

270-1758 GAUGE GP-OIL LEVEL (DIPSTICK) (contd.)

i02301069



LEFT SIDE VIEW

<END>

GRAPHIC #2

g01154068

# LUBRICATION SYSTEM

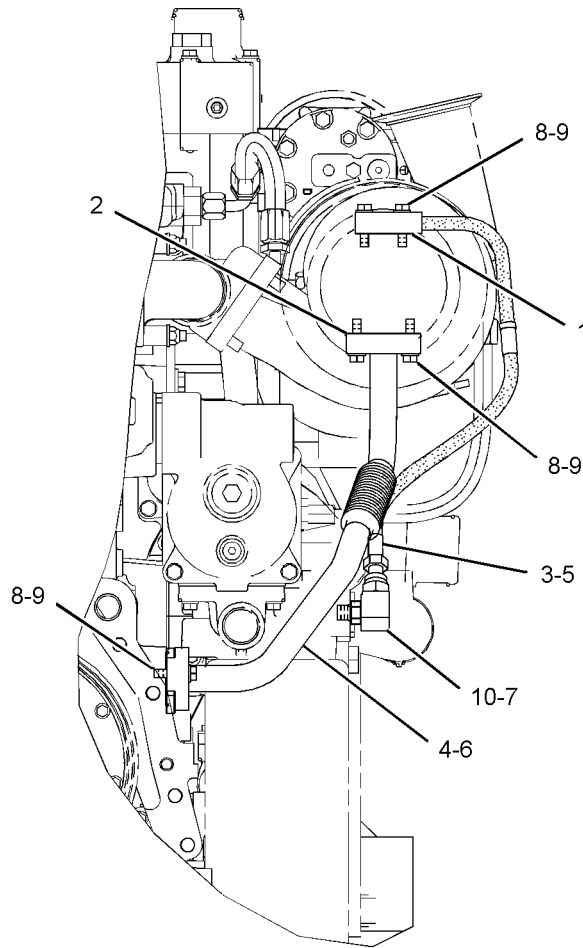
## 224-8170 LINES GP-TURBOCHARGER OIL AN ATTACHMENT

SMCS-1052, 1307

i02068607

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	197-8418	1	GASKET						
	2	1	197-8419	1	GASKET						
	3	1	224-8171	1	HOSE AS (SUPPLY)						
	4	1	224-8172	1	TUBE AS (DRAIN)						
	5	1	033-6033	1	SEAL-O-RING						
	6	1	225-6948	1	SEAL-O-RING						
	7	1	6V-5049	1	SEAL-O-RING						
M	8	1	7X-2537	6	BOLT (M8X1.25X35-MM)						
	9	1	8T-4224	6	WASHER-HARD (8.8X16X2-MM THK)						
	10	1	8T-6876	1	ELBOW						

M-METRIC PART



REAR VIEW  
<END>

GRAPHIC #1

g01060502

# LUBRICATION SYSTEM

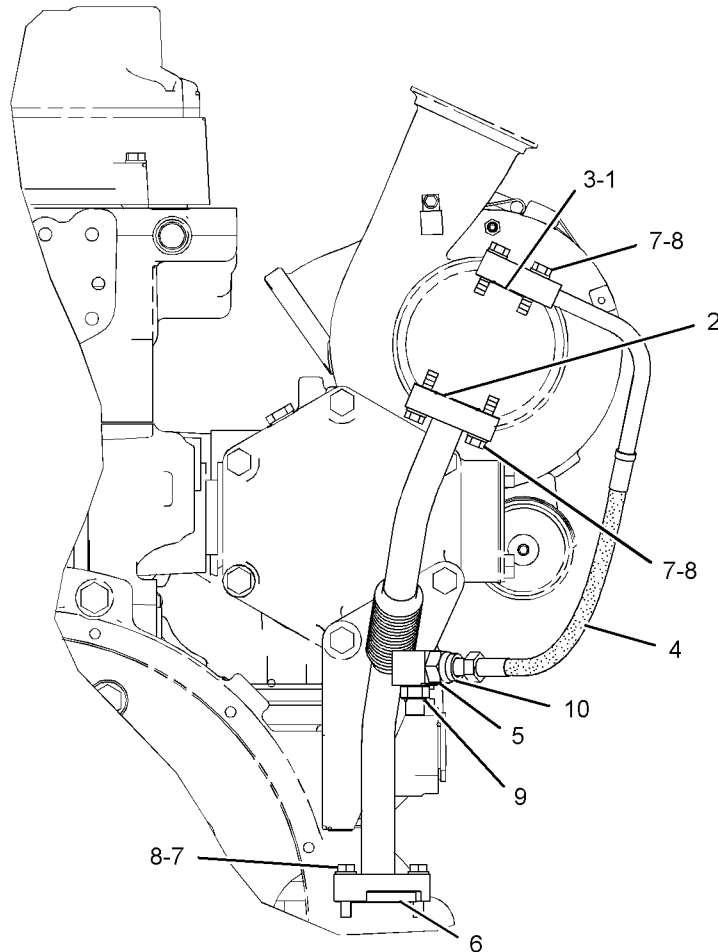
## 234-7843 LINES GP-TURBOCHARGER OIL ALSO AN ATTACHMENT

SMCS-1052, 1307

i02174681

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	197-8418	1	GASKET						
	2	1	197-8419	1	GASKET						
	3	1	235-1071	1	HOSE AS						
	4	1	227-9920	1	TUBE AS-DRAIN						
	5	1	8T-6876	1	ELBOW						
	6	1	225-6948	1	SEAL-O-RING						
M	7	1	6V-5218	6	BOLT (M8X1.25X35-MM)						
	8	1	9M-1974	6	WASHER-HARD (8.8X16X2-MM THK)						
	9	1	6V-8398	1	SEAL-O-RING						
	10	1	3J-1907	1	SEAL-O-RING						

M-METRIC PART



REAR VIEW

<END>

GRAPHIC #1

g01111090

# LUBRICATION SYSTEM

## 240-4815 LINES GP-TURBOCHARGER OIL

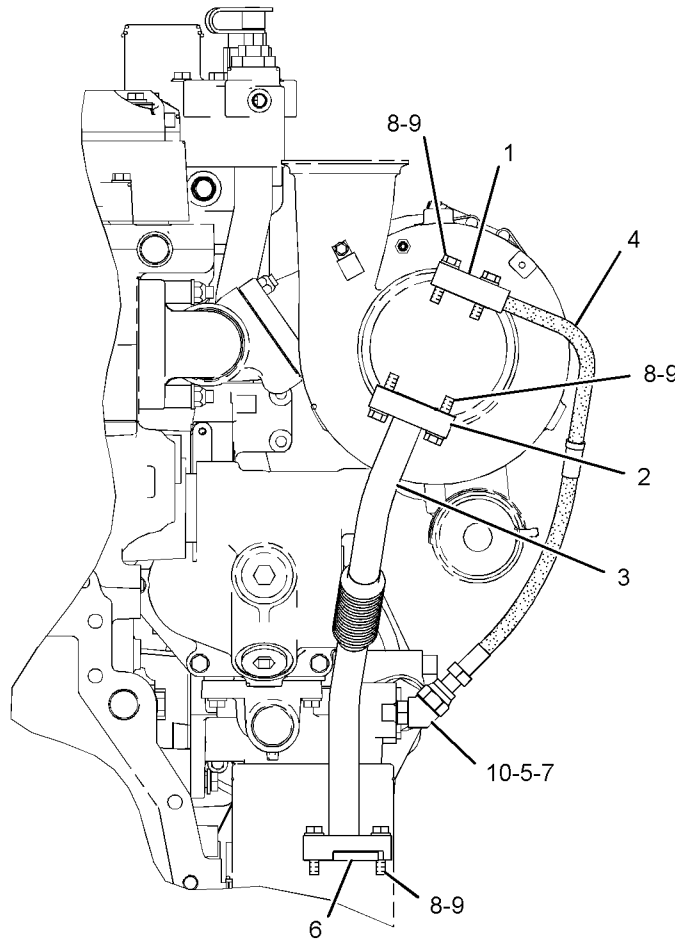
FOR USE WITH FORWARD EXHAUST SYSTEM  
AN ATTACHMENT

SMCS-1052, 1307

i02214593

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	197-8418	1	GASKET						
	2	1	197-8419	1	GASKET						
	3	1	227-9920	1	TUBE AS-DRAIN						
	4	1	235-1071	1	HOSE AS						
	5	1	033-6033	1	SEAL-O-RING						
	6	1	225-6948	1	SEAL-O-RING						
	7	1	6V-5049	1	SEAL-O-RING						
M	8	1	6V-5218	6	BOLT (M8X1.25X35-MM)						
	9	1	9M-1974	6	WASHER-HARD (8.8X16X2-MM THK)						
	10	1	9X-2085	1	ELBOW						

M-METRIC PART



REAR VIEW

GRAPHIC #1

<END>

g01118285

# LUBRICATION SYSTEM

## 233-5220 PUMP GP-ENGINE OIL

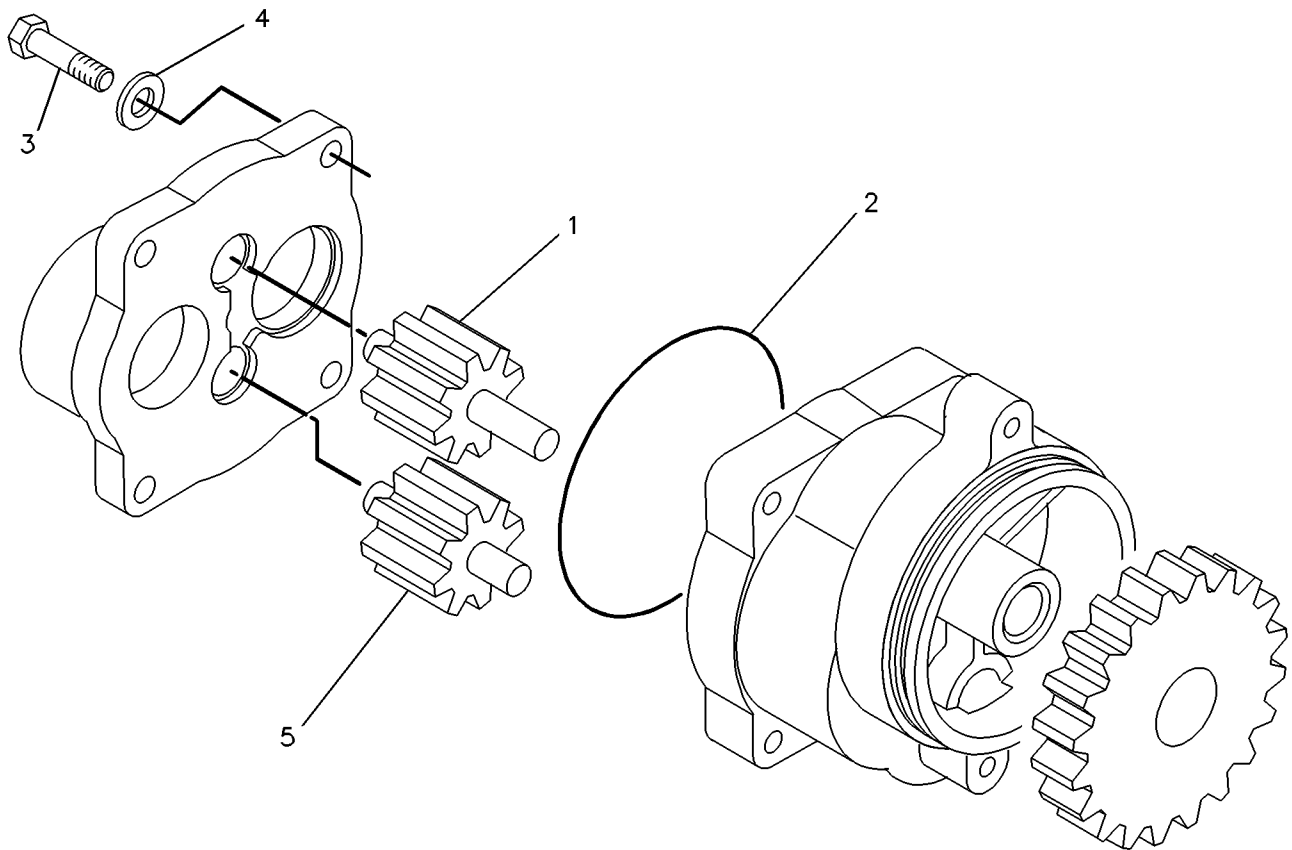
PART OF 233-5221 PUMP GP-ENGINE OIL

SMCS-1304, 1315

i01982981

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-8076	1	SHAFT AS-OIL PUMP (8 TEETH)						
	2	1	6D-7146	1	SEAL-O-RING						
M	3	1	6V-2317	4	BOLT (M8X1.25X30MM)						
	4	1	9M-1974	4	WASHER-HARD (8.8X16X2MM THK)						
	5	1	9Y-8075	1	SHAFT AS-OIL PUMP (8 TEETH)						

M-METRIC PART



GRAPHIC #1

<END>

g00228139

# LUBRICATION SYSTEM

## 233-5221 PUMP GP-ENGINE OIL

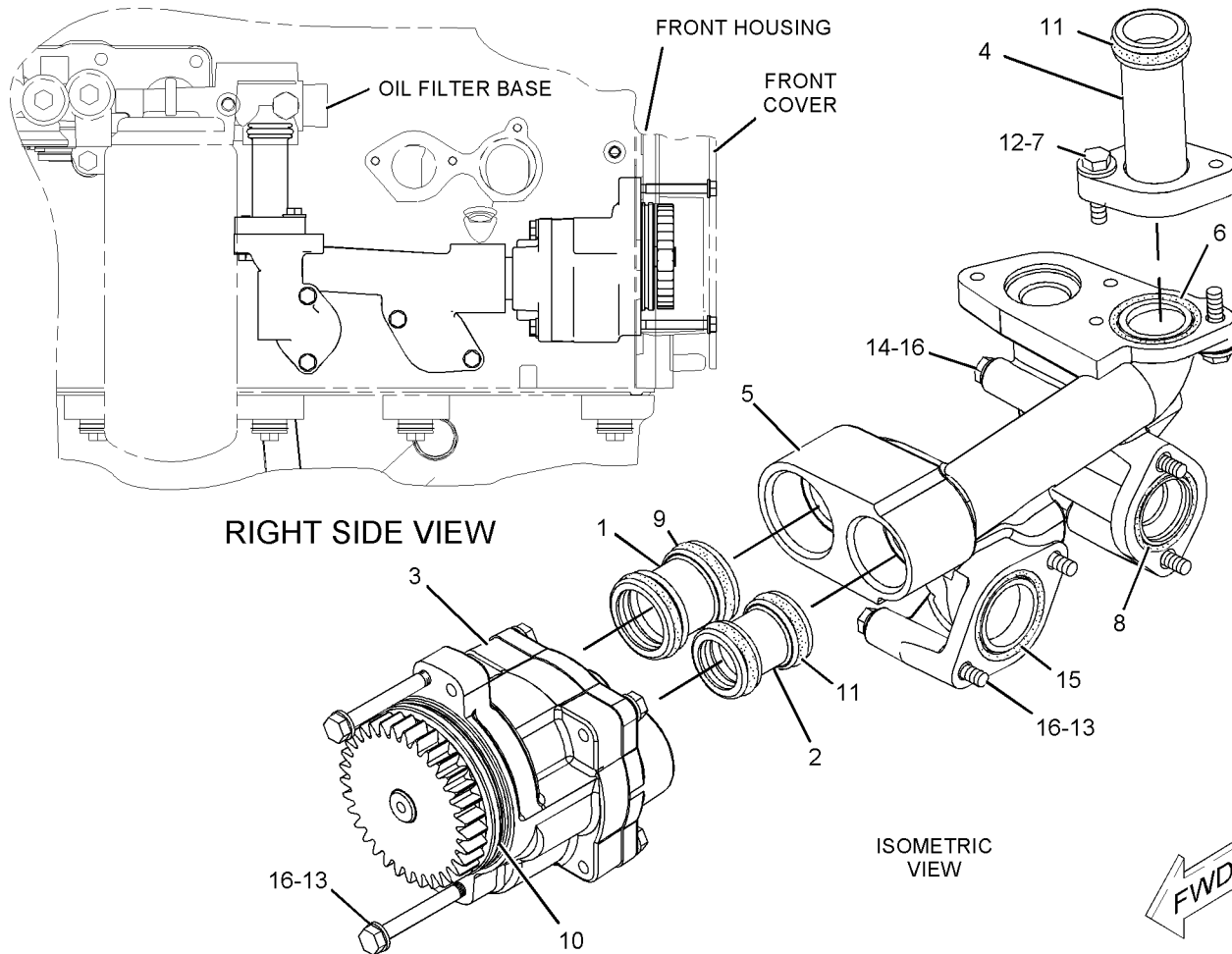
CONTAINS ALL LINES AND FASTENERS

SMCS-1304, 1315

i01982980

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7C-1821	1	COUPLING						
	2	1	7C-1822	1	COUPLING						
YR	3	1	233-5220	1	PUMP GP-ENGINE OIL						213
	4	1	235-1448	1	TUBE AS						
	5	1	235-1451	1	ELBOW-OIL PUMP						
	6	1	061-8561	1	SEAL-O-RING						
	7	1	3E-4352	2	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	8	1	3E-6788	1	SEAL-O-RING						
	9	1	5P-8068	2	SEAL-O-RING						
	10	1	6V-3834	1	SEAL-O-RING						
	11	1	6V-5134	3	SEAL-O-RING						
M	12	1	6V-5218	2	BOLT (M8X1.25X35-MM)						
M	13	1	6V-5221	5	BOLT (M8X1.25X80-MM)						
M	14	1	7X-0870	1	BOLT (M8X1.25X140-MM)						
	15	1	8J-4351	1	SEAL-O-RING						
	16	1	9M-1974	6	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART  
R-REMG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01029145



# COOLING SYSTEM

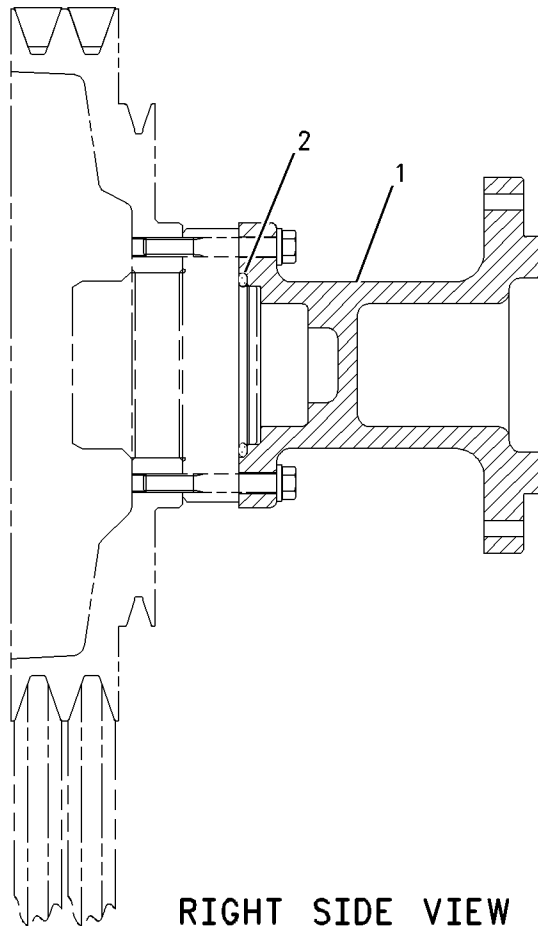
## 131-7700 ADAPTER GP-FAN

FOR USE WITH 40 INCH BLOWER FAN  
AN ATTACHMENT

SMCS-1356, 1359

i01510173

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	130-5917	1	ADAPTER-FAN						
	2	1	9F-4446	1	SEAL-O-RING						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00784091

# COOLING SYSTEM

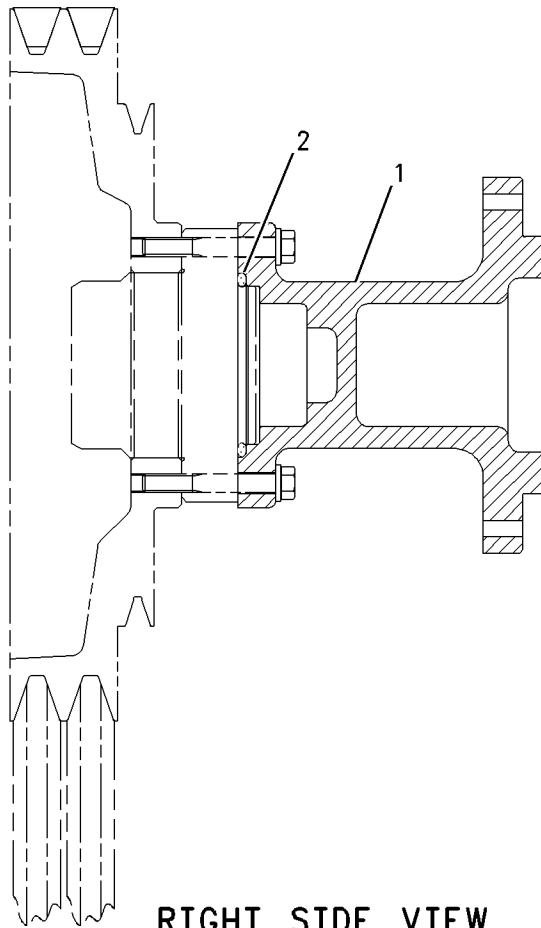
## 131-7701 ADAPTER GP-FAN

FOR USE WITH 40 INCH SUCTION FAN  
AN ATTACHMENT

SMCS-1356, 1359

i01510175

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	130-5916	1	ADAPTER-FAN						
	2	1	9F-4446	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00784103

# COOLING SYSTEM

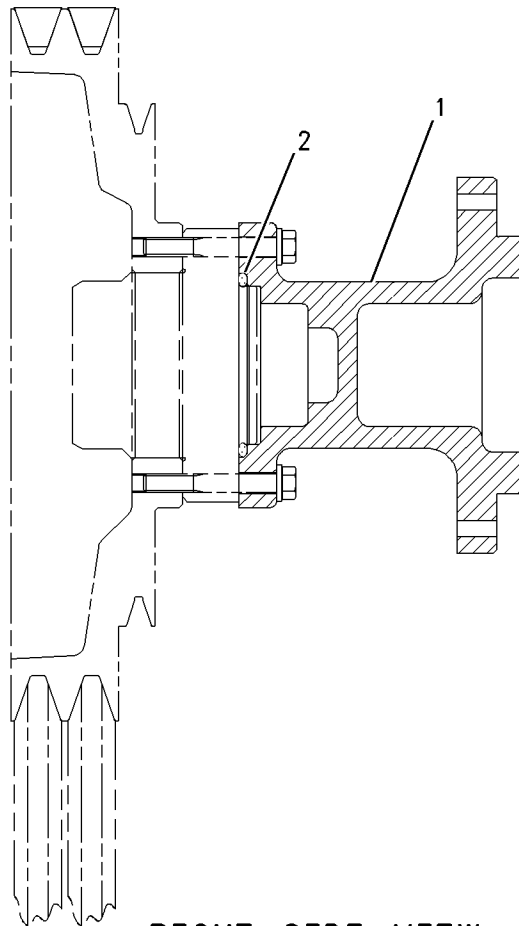
## 131-8029 ADAPTER GP-FAN

FOR USE WITH 36 INCH SUCTION FAN  
AN ATTACHMENT

SMCS-1356, 1359

i01510176

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>7E-8560</b>	1	ADAPTER-FAN						
	2	1	<b>9F-4446</b>	1	SEAL-O-RING						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00784111

# COOLING SYSTEM

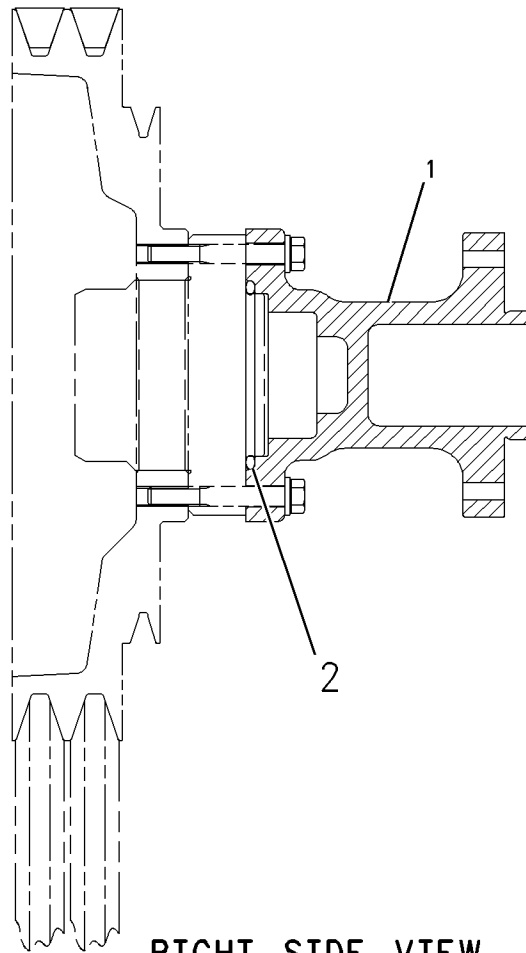
## 131-8150 ADAPTER GP-FAN

FOR USE WITH 33 INCH BLOWER FAN  
AN ATTACHMENT

SMCS-1356, 1359

i01510179

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	131-8154	1	ADAPTER-FAN						
	2	1	9F-4446	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00784122

# COOLING SYSTEM

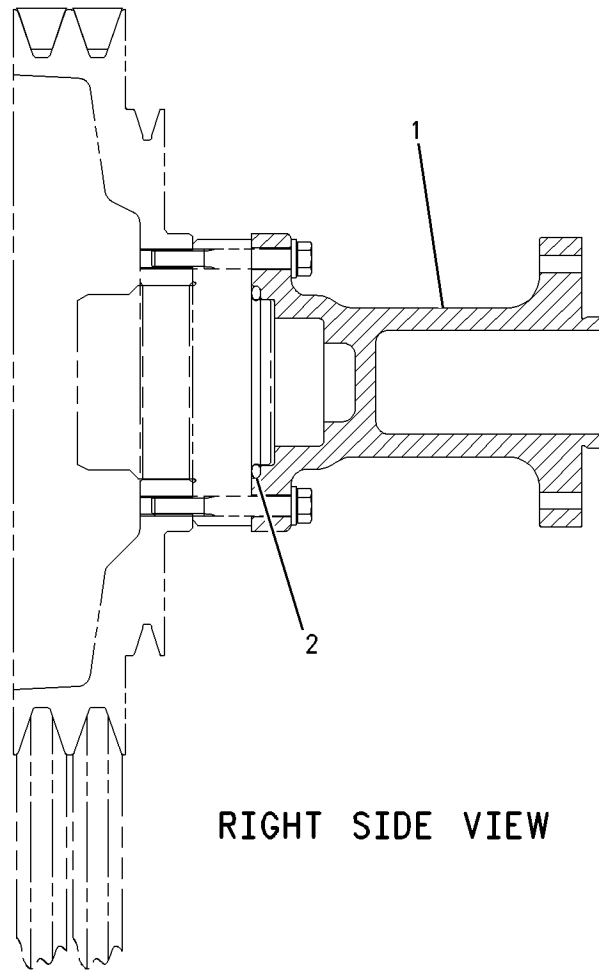
## 131-8151 ADAPTER GP-FAN

FOR USE WITH 33 INCH SUCTION FAN  
AN ATTACHMENT

SMCS-1356, 1359

i01510172

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	131-8149	1	ADAPTER - FAN						
	2	1	9F-4446	1	SEAL - O-RING						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00784086

# COOLING SYSTEM

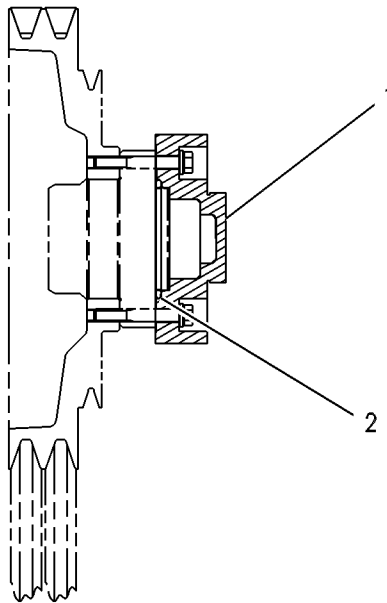
## 147-6908 ADAPTER GP-FAN

FOR USE WITH FAN PULLEY  
AN ATTACHMENT

SMCS-1356, 1359

i00939411

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	147-6907	1	ADAPTER-FAN						
	2	1	9F-4446	1	SEAL-O-RING (78.74MM ID)						



GRAPHIC #1

<END>

g00284278

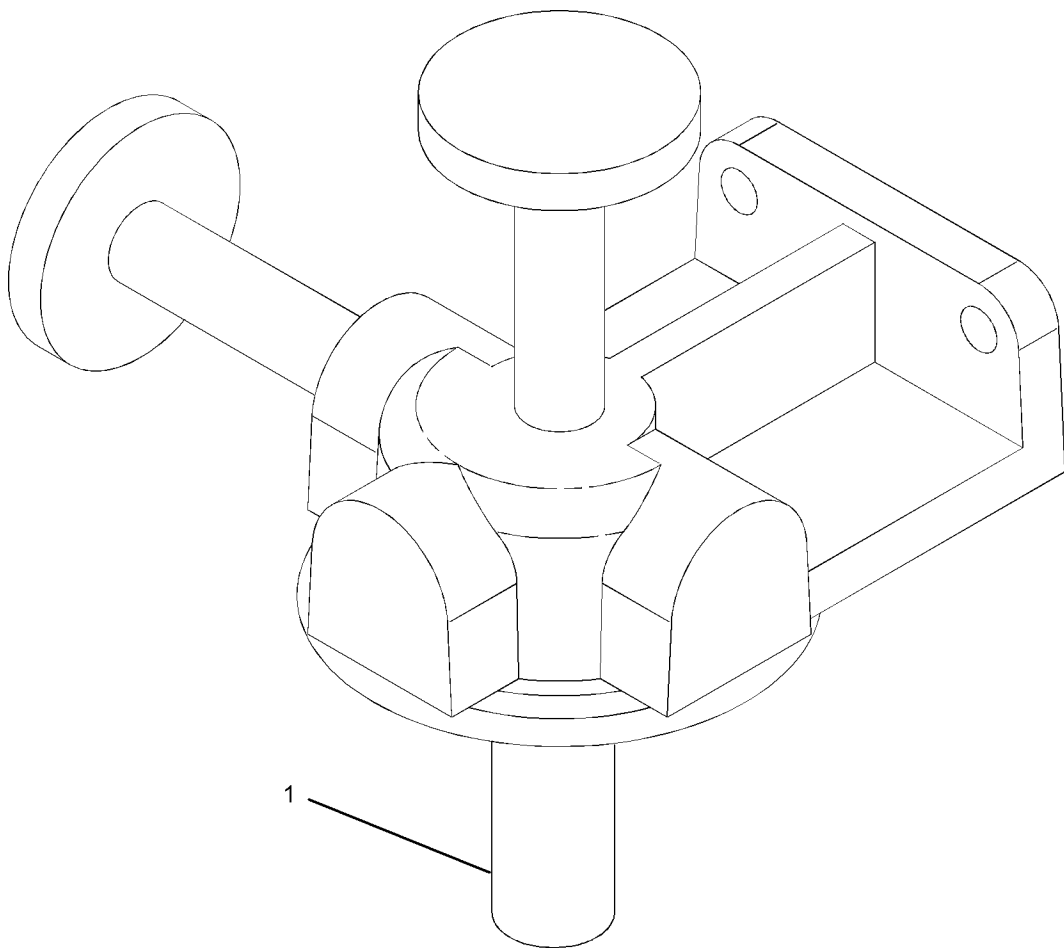
# COOLING SYSTEM

## 9Y-3205 COOLANT CONDITIONER GP AN ATTACHMENT

SMCS-1352

i02041983

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9N-3645	1	STUD-TAPERLOCK						



GRAPHIC #1

<END>

g01058131

# COOLING SYSTEM

## 229-9425 COOLANT CONDITIONER GP

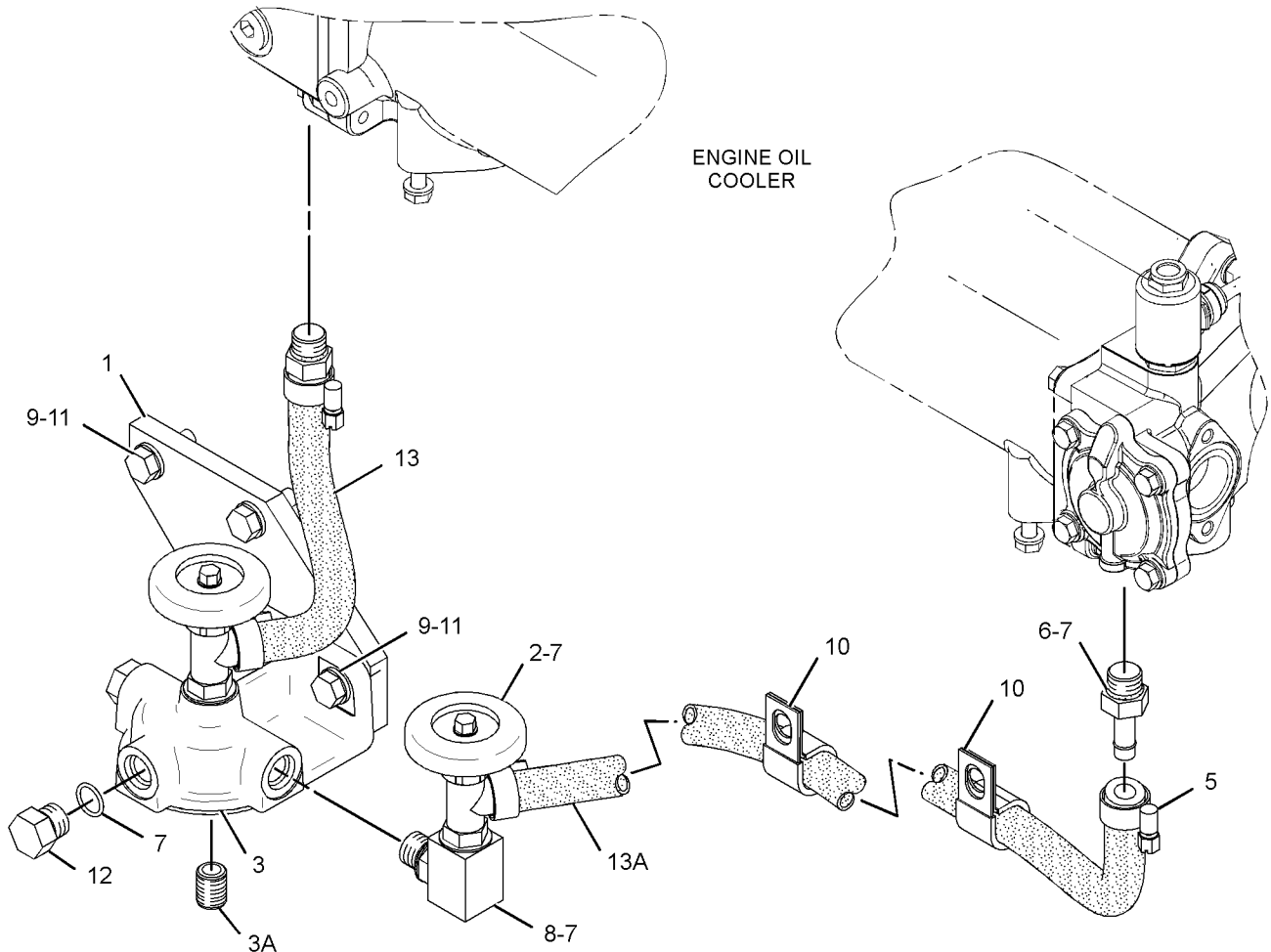
FOR USE WITH 117-0180-PAGE 230, 123-0794-PAGE 231. CANNOT BE USED WITH  
224-7662-PAGE 247  
AN ATTACHMENT

SMCS-1352

i02312804

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	229-9431	1	BRACKET						
	2	1	235-3577	2	VALVE-SHUTOFF (COOLANT CONDITIONER)						
	3	1	236-6993	1	BASE AS (COOLANT)						
	3A	1	9N-3645	1	STUD-TAPERLOCK						
	5	1	109-1145	4	CLAMP-HOSE						
	6	1	195-5830	2	CONNECTOR						
	7	1	3J-1907	7	SEAL-O-RING						
	8	1	6V-0484	1	ADAPTER-O-RING						
M	9	1	6V-3940	4	BOLT (M8X1.25X25-MM)						
	10	1	8M-2773	2	CLIP						
	11	1	9M-1974	4	WASHER-HARD (8.8X16X2-MM THK)						
	12	1	9S-4191	2	PLUG						
E	13	1	101-2840		HOSE (19-CM)						
E	13A	1	101-2840		HOSE (51-CM)						

E-ORDER BY THE CENTIMETER  
M-METRIC PART



GRAPHIC #1

<END>

g01159278



# COOLING SYSTEM

## 230-4523 COOLER GP-ENGINE OIL

OVAL SHAPED OIL COOLER

CANNOT BE USED WITH COOLANT DIVERTER VALVE  
AN ATTACHMENT

SMCS-1378

i02289679

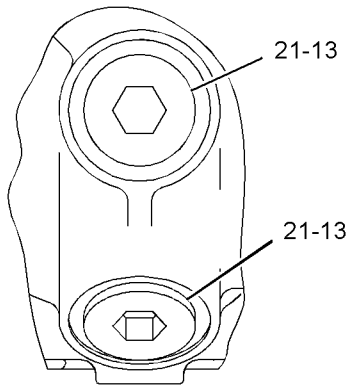
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	124-5043	1	COUPLING						
	2	1	224-2675	1	SEAL						
	3	1	224-5757	1	HOSE						
	4	1	224-6360	2	SEAL						
	5	1	8T-4984	2	CLAMP-HOSE						
	6	1	230-4518	1	ELBOW						
	7	1	230-4519	1	BONNET (OIL COOLER) (ENGINE)						
	8	1	236-2660	1	BONNET (OIL COOLER) (ENGINE)						
	9	1	236-8745	1	CORE AS-OIL COOLER (ENGINE)						
	10	1	2N-5243	2	SEAL-O-RING						
M	11	1	6V-2317	5	BOLT (M8X1.25X30-MM)						
	12	1	6V-3251	2	SEAL-O-RING						
	13	1	6V-5064	3	SEAL-O-RING						
M	15	1	6V-5219	10	BOLT (M8X1.25X40-MM)						
M	16	1	6V-5221	1	BOLT (M8X1.25X80-MM)						
	17	1	6V-9027	1	SEAL-O-RING						
	18	1	9M-1974	16	WASHER-HARD (8.8X16X2-MM THK)						
	19	1	9S-8002	1	PLUG						
	20	1	9S-8006	2	PLUG						
	21	1	9S-9334	3	PLUG						
	22	1	6V-5063	1	SEAL-O-RING						
	23	1	9S-8008	1	PLUG						

M-METRIC PART

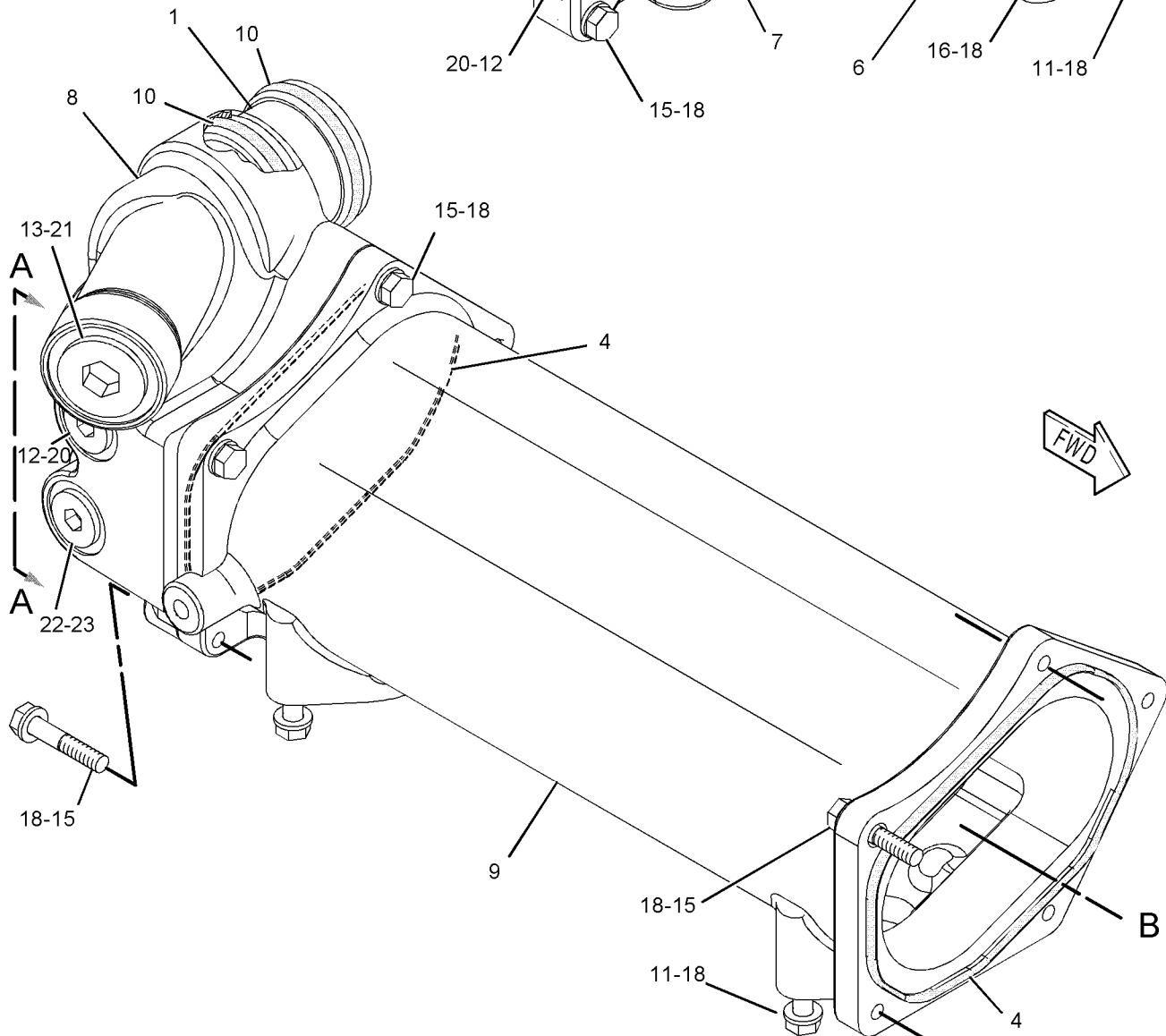
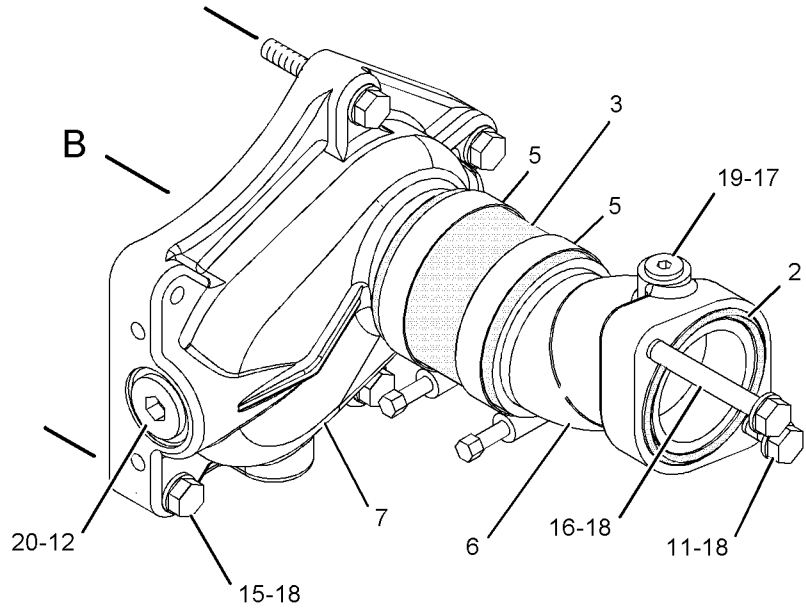
# COOLING SYSTEM

230-4523 COOLER GP-ENGINE OIL (contd.)

i02289679



REAR VIEW



GRAPHIC #1

<END>

g01124690

# COOLING SYSTEM

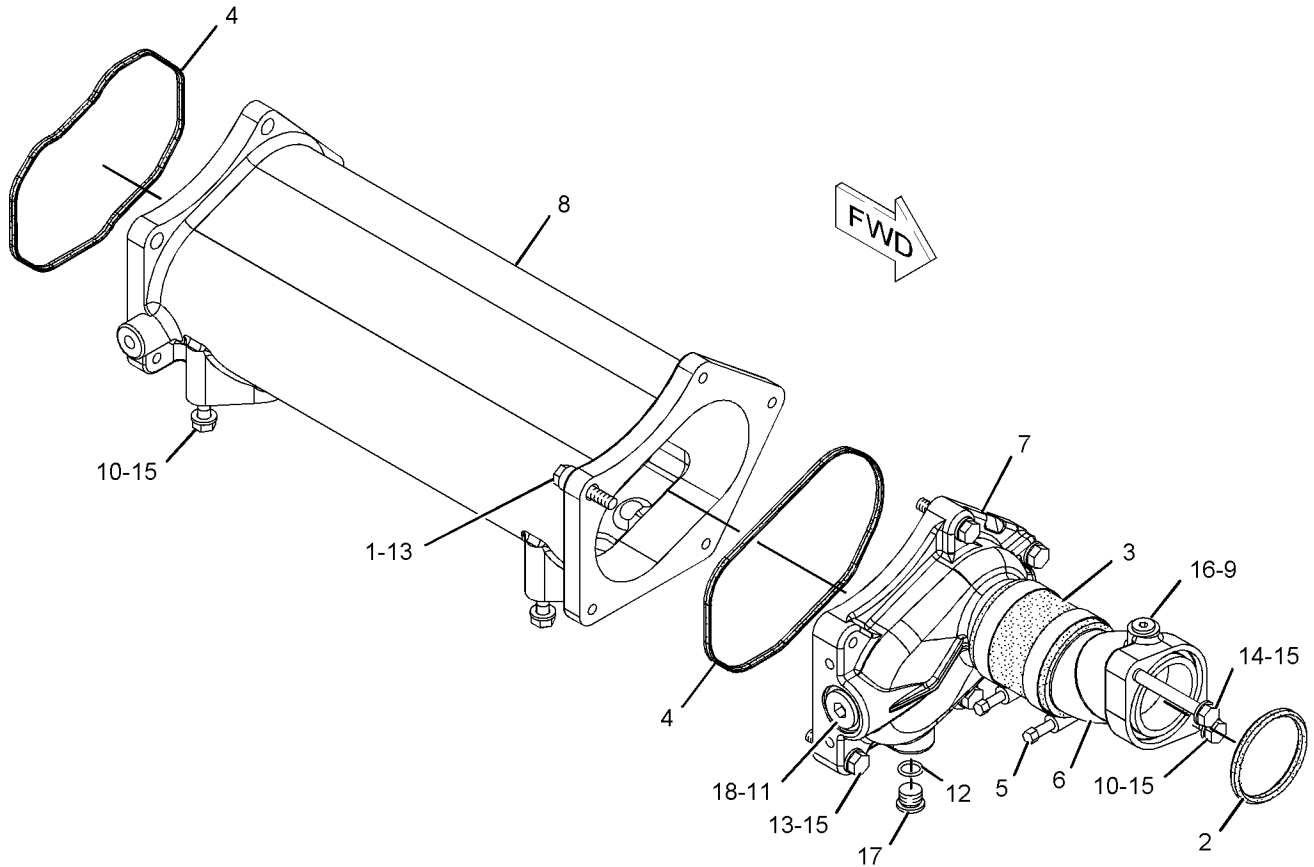
## 231-0152 COOLER GP-ENGINE OIL ALSO AN ATTACHMENT

SMCS-1378

i02223544

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8E-9571	1	WASHER-HARD (8.8X16X7-MM THK)						
	2	1	224-2675	1	SEAL						
	3	1	224-5757	1	HOSE						
	4	1	224-6360	2	SEAL						
	5	1	8T-4984	2	CLAMP-HOSE						
	6	1	230-4518	1	ELBOW						
	7	1	230-4519	1	BONNET (OIL COOLER)						
	8	1	236-8745	1	CORE AS-OIL COOLER (ENGINE)						
	9	1	3J-7354	1	SEAL-O-RING						
M	10	1	6V-2317	5	BOLT (M8X1.25X30-MM)						
	11	1	6V-4589	1	SEAL-O-RING						
	12	1	6V-5049	1	SEAL-O-RING						
M	13	1	6V-5219	5	BOLT (M8X1.25X40-MM)						
M	14	1	6V-5221	1	BOLT (M8X1.25X80-MM)						
	15	1	9M-1974	10	WASHER-HARD (8.8X16X2-MM THK)						
	16	1	9S-8002	1	PLUG						
	17	1	9S-8004	1	PLUG						
	18	1	9S-8006	1	PLUG						

M-METRIC PART



GRAPHIC #1

<END>

g01065182

# COOLING SYSTEM

## 244-8674 COOLER GP-TRANSMISSION OIL

FOR USE WITH 231-0152-PAGE 225, 244-8675-PAGE 127

ALSO AN ATTACHMENT

SMCS-1375

i02254951

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	<b>2S-0795</b>	2	GASKET						
YR	2	1	<b>4W-9822</b>	1	CORE GP-OIL COOLER (TRANSMISSION)						229
	3	2	<b>8E-9571</b>	2	WASHER-HARD (8.8X16X7-MM THK)						
	4	2	<b>8M-9307</b>	1	PLUG-DRAIN (TRANSMISSION OIL COOLER)						
	5	1	<b>8S-4304</b>	1	BONNET-TMSN OIL COOLER						
	6	1	<b>124-5043</b>	1	COUPLING						
	7	1	<b>145-1750</b>	1	BRACKET						
	8	1	<b>201-5926</b>	2	TUBE						
	9	2	<b>231-0153</b>	1	ELBOW						
	10	2	<b>231-3178</b>	1	BRACKET						
	11	2	<b>0S-1587</b>	4	BOLT (1/2-13X1.75-IN)						
	12	1	<b>0S-1595</b>	4	BOLT (1/2-13X1.25-IN)						
	13	1	<i>148-8406</i>	1	PLUG AS						
		1	<b>7M-8485</b>	1	SEAL-O-RING						
		1	<b>9S-9334</b>	1	PLUG						
	14	2	<b>162-0177</b>	1	PLUG AS						
		2	<b>3J-1907</b>	1	SEAL-O-RING						
		2	<b>9S-8004</b>	1	PLUG						
	15	1	<b>2N-0475</b>	2	SEAL-O-RING						
	16	2	<b>3E-4353</b>	2	WASHER-HARD (11X25X3-MM THK)						
	17	1,2	<b>5P-8245</b>	10	WASHER-HARD (13.5X25.5X3-MM THK)						
	18	2	<b>6F-7062</b>	1	WASHER (12.7X19.05X1.83-MM THK)						
M	19	2	<b>6V-1820</b>	2	BOLT (M10X1.5X30-MM)						
M	20	2	<b>6V-3668</b>	2	BOLT (M12X1.75X30-MM)						
M	21	1,2	<b>6V-5219</b>	5	BOLT (M8X1.25X40-MM)						
	22	1	<b>8T-4121</b>	2	WASHER-HARD (11X21X2.5-MM THK)						
M	23	1	<b>8T-5436</b>	2	BOLT (M10X1.5X130-MM)						
	24	1,2	<b>9M-1974</b>	3	WASHER-HARD (8.8X16X2-MM THK)						
	25	1	<b>9X-8873</b>	2	BOLT (1/2-13X2.25-IN)						
	26	2	<b>9X-8876</b>	2	BOLT (1/2-13X4.75-IN)						

M-METRIC PART

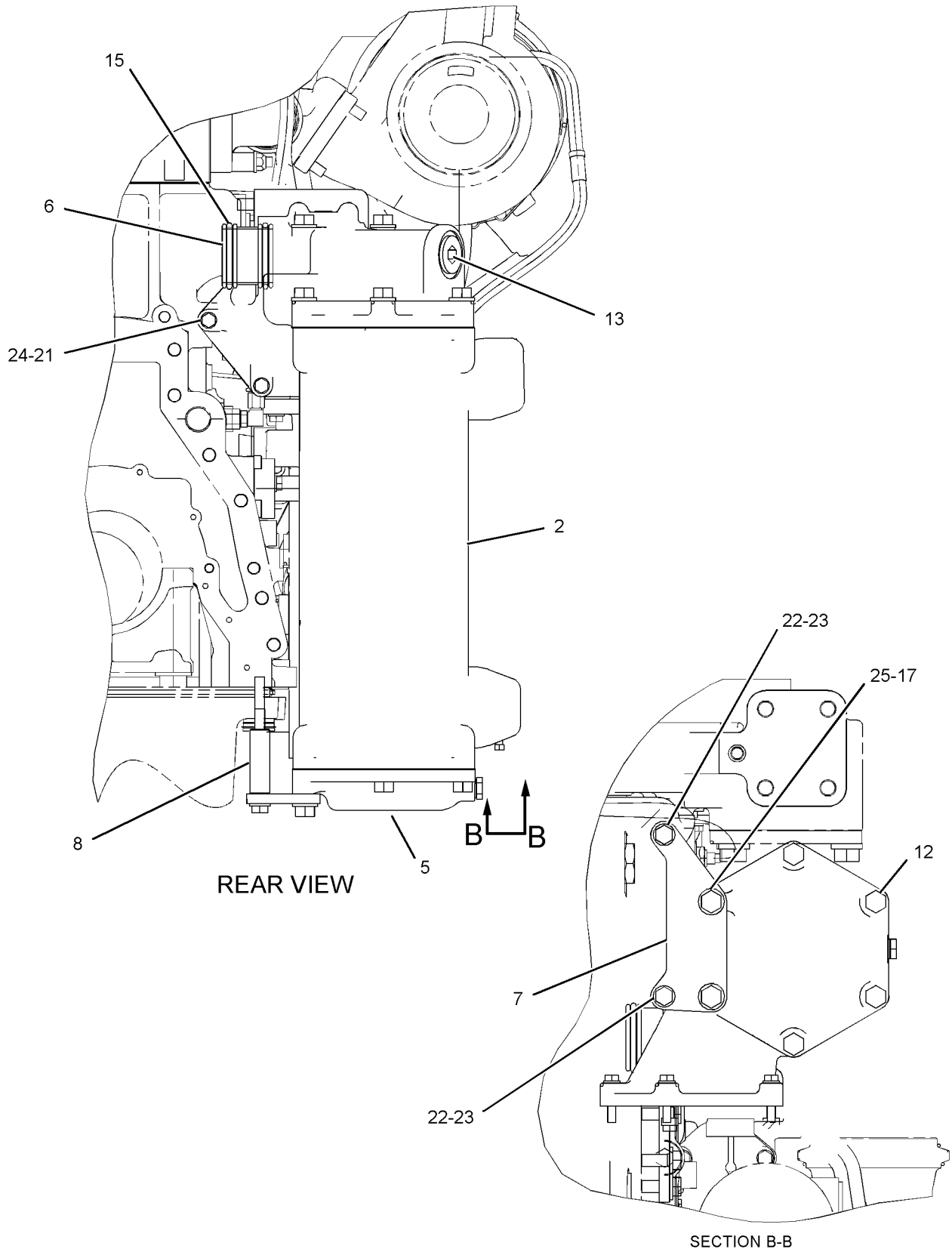
R-REMG PART MAY BE AVAILABLE

Y-SEPARATE ILLUSTRATION

# COOLING SYSTEM

244-8674 COOLER GP-TRANSMISSION OIL (contd.)

i02254951



REAR VIEW

SECTION B-B

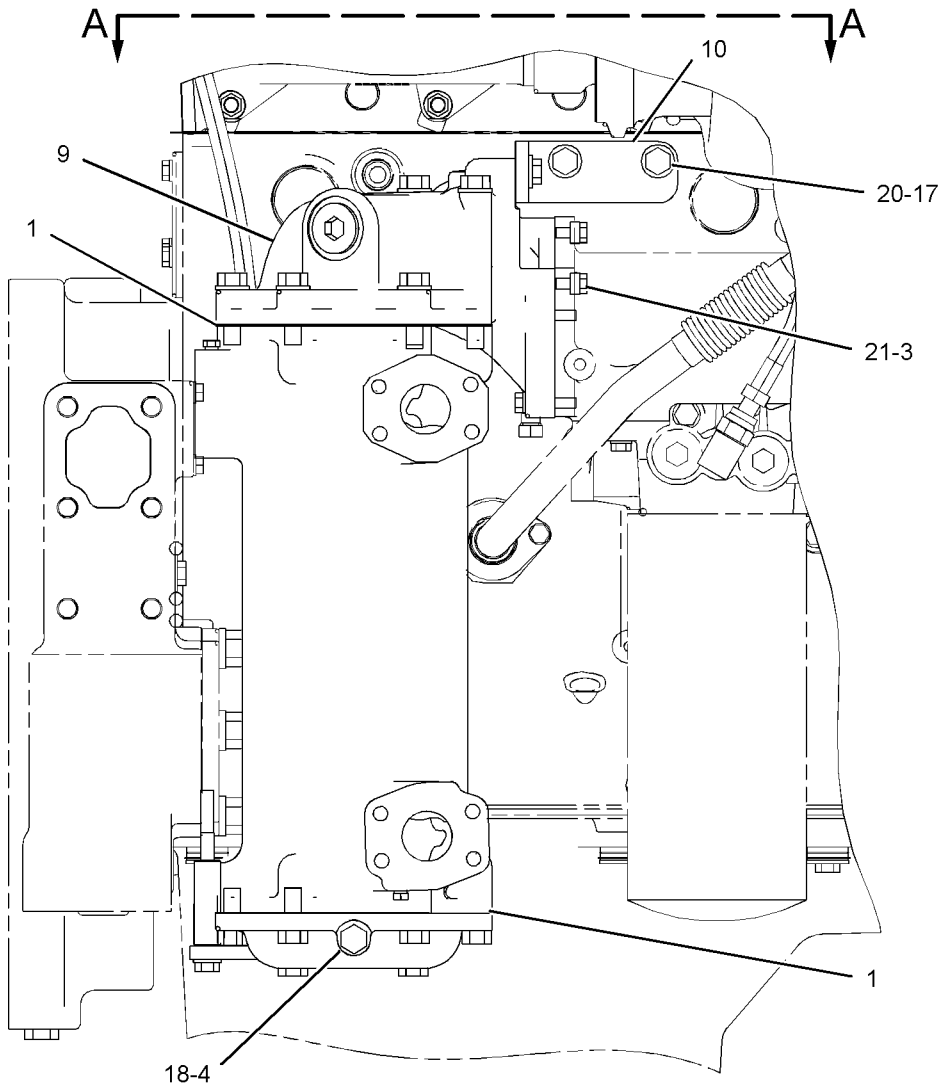
GRAPHIC #1

g01070758

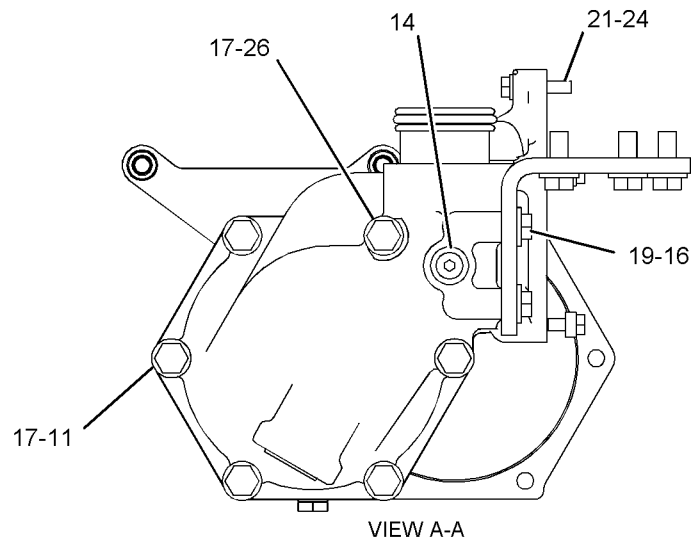
# COOLING SYSTEM

244-8674 COOLER GP-TRANSMISSION OIL (contd.)

i02254951



RIGHT SIDE VIEW



VIEW A-A

GRAPHIC #2

<END>

g01135606

# COOLING SYSTEM

## 4W-9822 CORE GP-OIL COOLER-TRANSMISSION OIL\*R

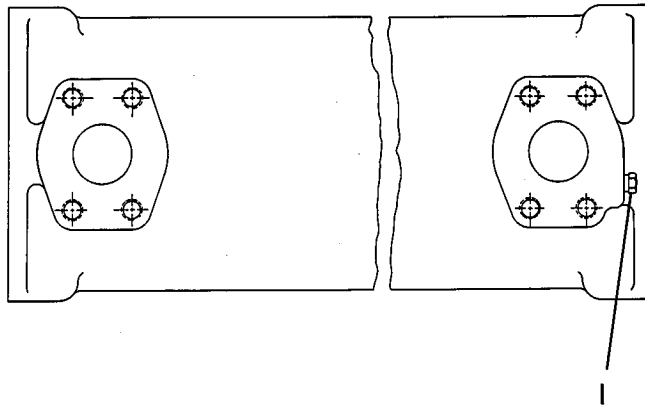
PART OF 244-8674 COOLER GP-TRANSMISSION OIL

ALSO AN ATTACHMENT

SMCS-1378

i00571959

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5M-6214	1	PLUG-PIPE (1/8-27 THD)						



GRAPHIC #1

<END>

g00177858

# COOLING SYSTEM

## 117-0180 ELEMENT GP-COOLANT CONDITIONER

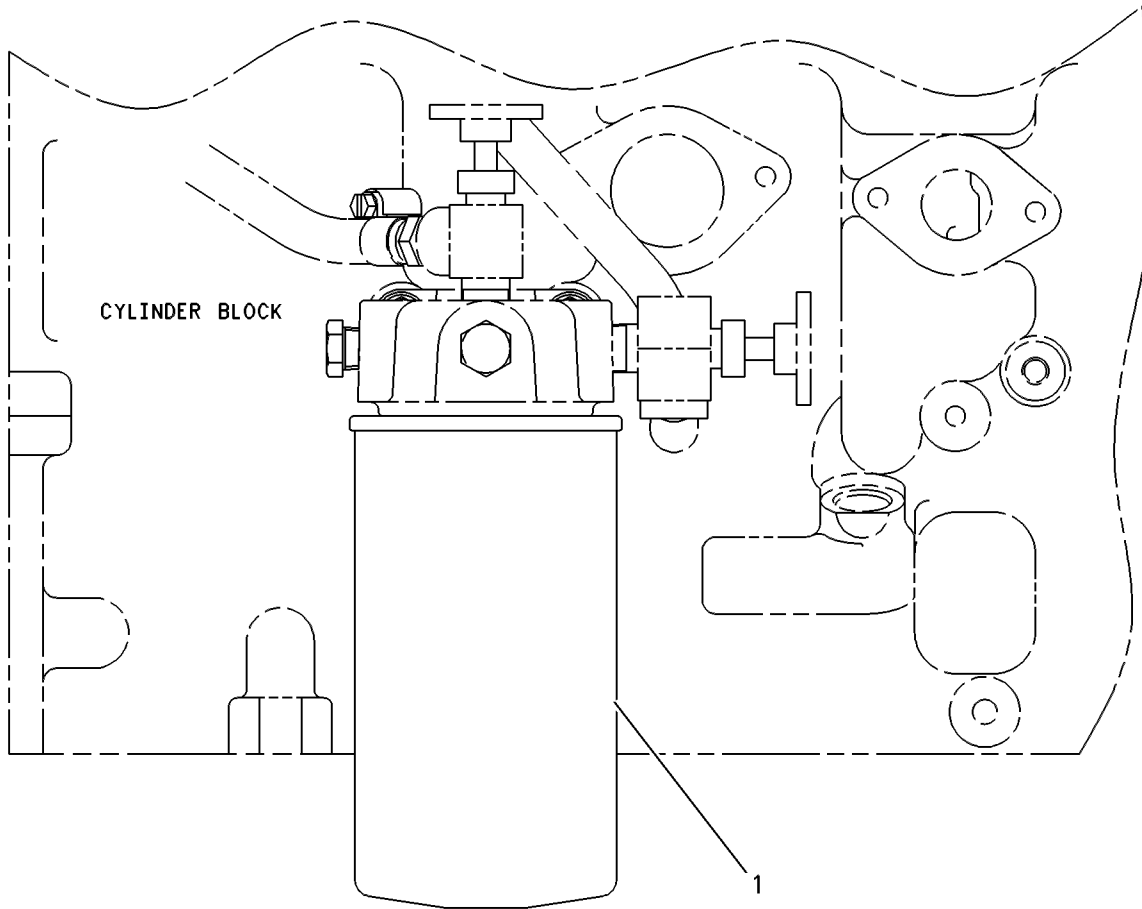
22-30 LITERS (6-8 GALLONS)  
FOR USE WITH COOLANT CONDITIONER GP  
AN ATTACHMENT

SMCS-1352

i01979926

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	9N-3368	1	ELEMENT AS-COOLANT CONDITIONER (MAINTENANCE)						
-OR-											
A		1	9N-3367	1	ELEMENT AS-PRECHARGE (COOLANT CONDITIONER)						

A-NOT PART OF THIS GROUP  
J-REFER TO CHART FOR COOLANT CONDITIONER INFORMATION



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00251310



# COOLING SYSTEM

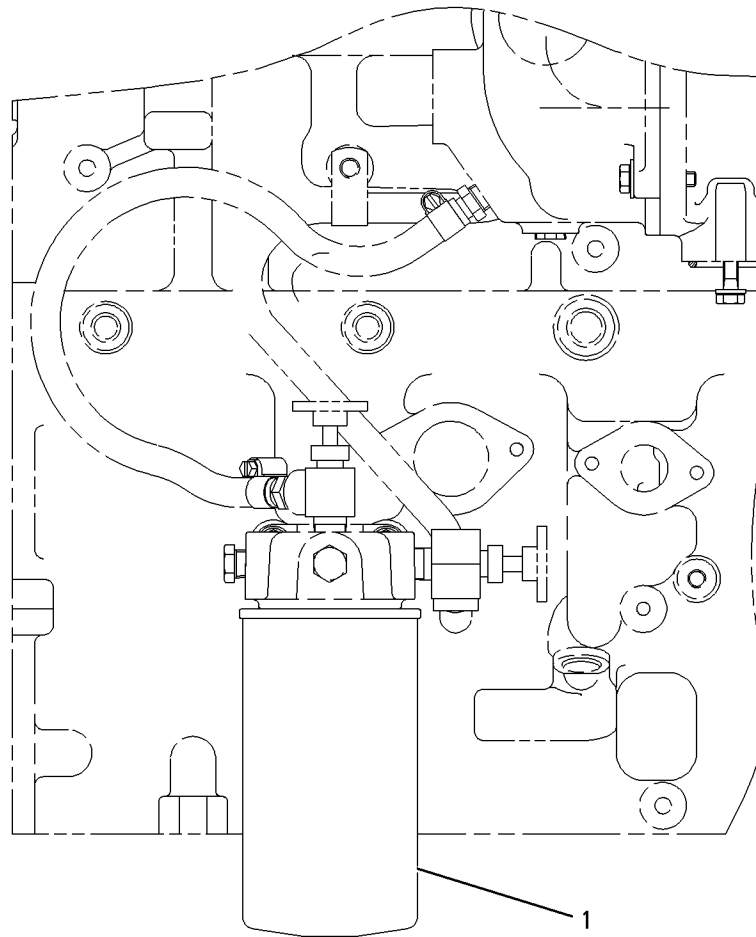
## 123-0794 ELEMENT GP-COOLANT CONDITIONER FOR USE WITH 10-13 GALLON COOLING SYSTEM, COOLANT CONDITIONER GP AN ATTACHMENT

SMCS-1352

i01731027

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
J	1	1	9N-6123	1	ELEMENT AS-COOLANT CONDITIONER (PRECHARGE) -OR-	
A		1	9N-3717	1	ELEMENT AS-COOLANT CONDITIONER (MAINTENANCE) -OR-	
A		1	9N-3718	1	FILTER GP-COOLANT (MAINTENANCE)	

A-NOT PART OF THIS GROUP  
J-REFER TO CHART FOR COOLANT INFORMATION



RIGHT SIDE VIEW

<END>

GRAPHIC #1

g00869859

# COOLING SYSTEM

## 126-0112 ELEMENT GP-COOLANT CONDITIONER

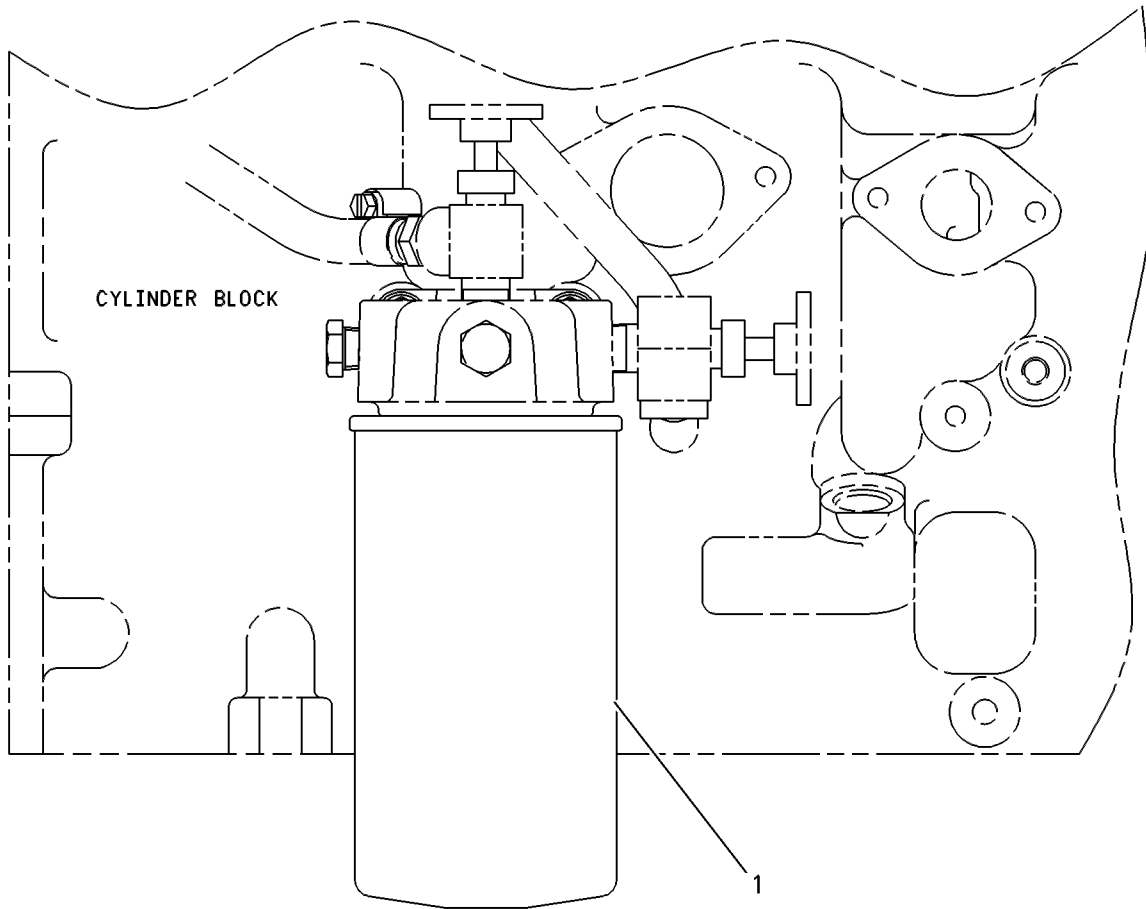
38-49 LITERS (10-13 GALLONS). NO PRECHARGE, PROVIDES FILTER ONLY  
FOR USE WITH COOLANT CONDITIONER GP  
AN ATTACHMENT

SMCS-1352

i01749489

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	9N-6123	1	ELEMENT AS-COOLANT CONDITIONER (PRECHARGE)						
-OR-											
A		1	9N-3718	1	FILTER GP-COOLANT (MAINTENANCE)						

A-NOT PART OF THIS GROUP  
J-REFER TO CHART FOR COOLANT INFORMATION CONDITIONER



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00251332

# COOLING SYSTEM

## 4N-2569 FAN GP-BLOWER

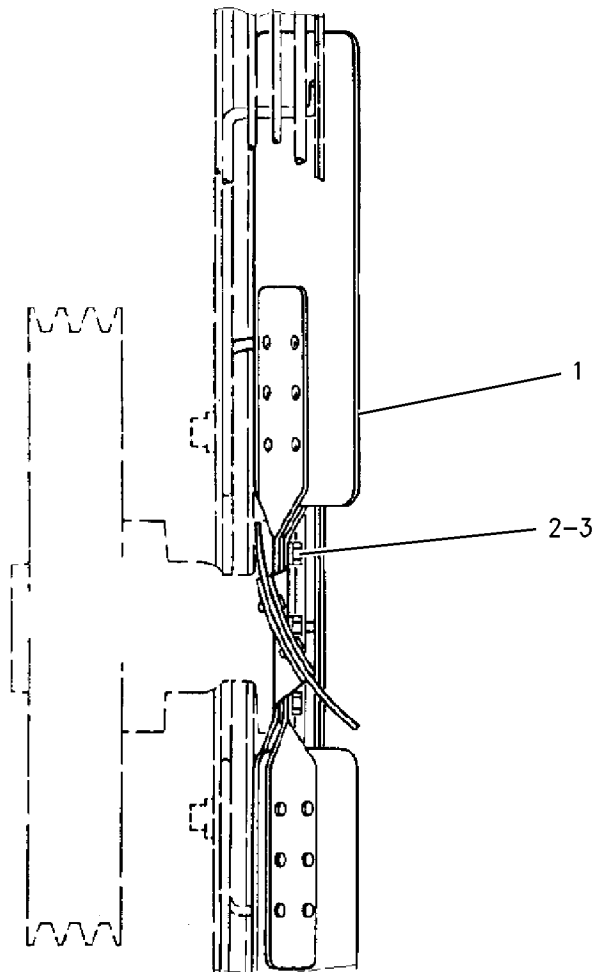
838 MM (33 INCH)

AN ATTACHMENT

SMCS-1356, 1360

i02014613

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-2571	1	SPIDER AS-FAN (6 BLADE)						
	2	1	8T-2502	6	BOLT (3/8-16X1.125-IN)						
	3	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5-MM THK)						



GRAPHIC #1

<END>

g00727447

# COOLING SYSTEM

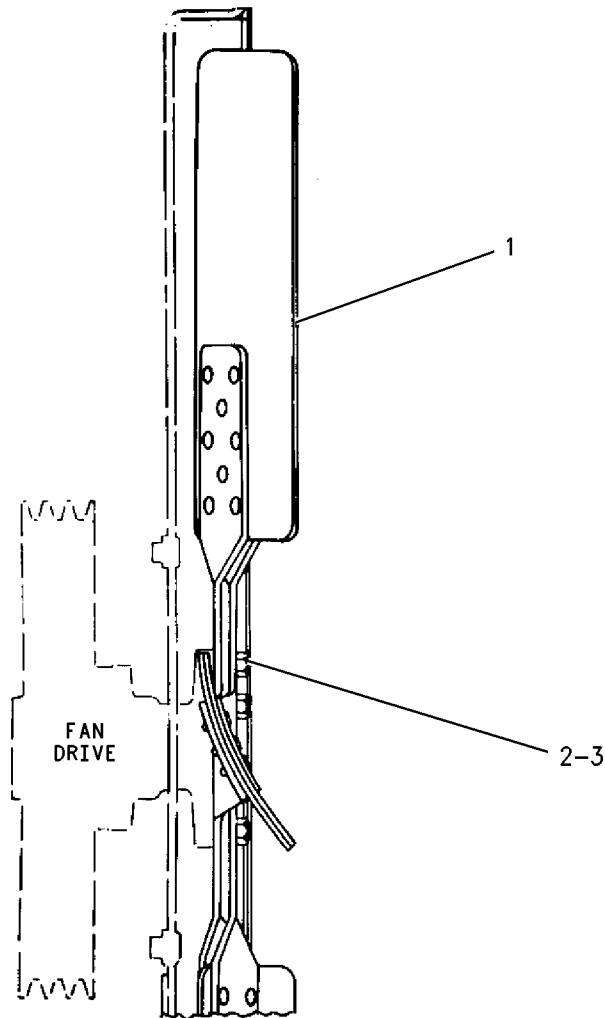
## 4N-3093 FAN GP-BLOWER

1016 MM (40 INCH)  
AN ATTACHMENT

SMCS-1356, 1360

i01950005

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-3091	1	SPIDER AS (8-BLADE) (BLOWER FAN)						
	2	1	5P-2566	6	BOLT (1/2-13X1.5-IN)						
	3	1	8T-4223	6	WASHER-HARD (13.5X25.5X3-MM THK)						



GRAPHIC #1

<END>

g00723269

# COOLING SYSTEM

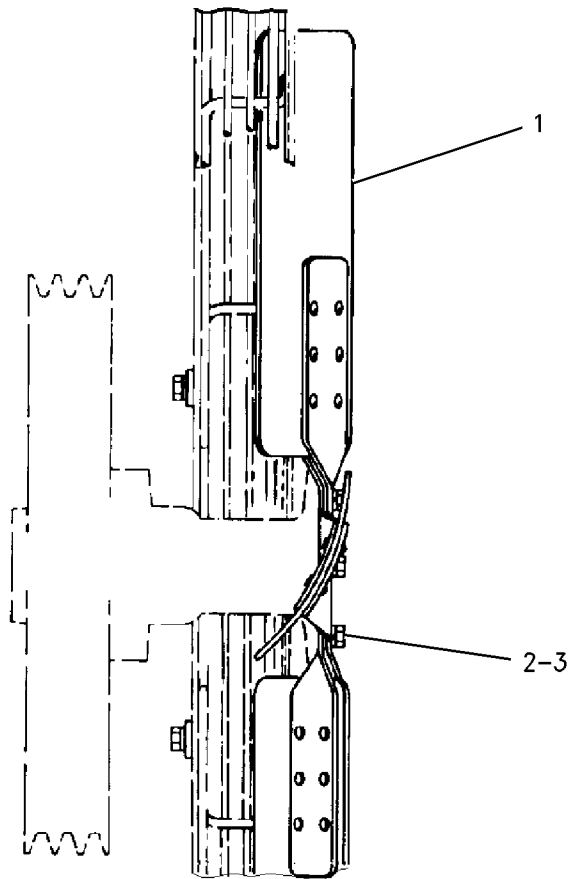
## 4N-2570 FAN GP-SUCTION

838 MM (33 INCH)  
AN ATTACHMENT

SMCS-1356

i01517204

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-2572	1	SPIDER AS-FAN (6 BLADE)						
	2	1	8T-2502	6	BOLT (3/8-16X1.125 IN)						
	3	1	8T-4896	6	WASHER-HARD (10.2X18.5X2.5MM THK)						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00787102

# COOLING SYSTEM

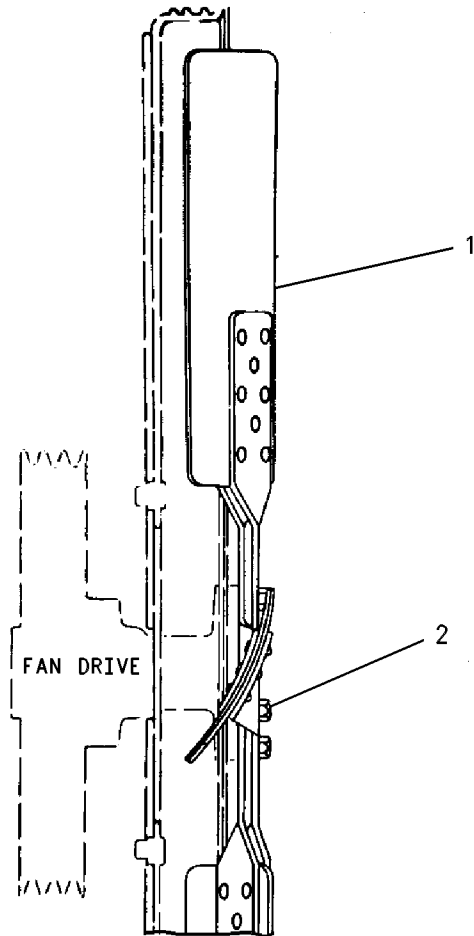
## 4N-3094 FAN GP-SUCTION

1016 MM (40 INCH)  
AN ATTACHMENT

SMCS-1356

i01950191

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4N-3092	1	SPIDER AS (FAN) (8 BLADE)						
	2	1	5P-2566	6	BOLT (1/2-13X1.5 IN)						
		1	2M-0849	6	WASHER-HARD (13.5X25.5X5MM THK)						



GRAPHIC #1

<END>

g00567378

# COOLING SYSTEM

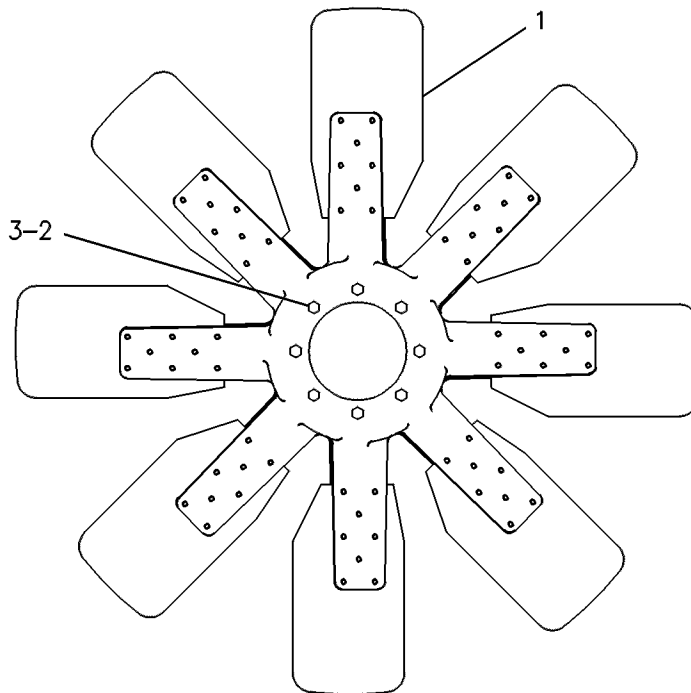
## 103-0733 FAN GP-SUCTION

36 INCH  
AN ATTACHMENT

SMCS-1356

i01516757

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7N-7313	1	SPIDER AS-FAN (8 BLADES)						
	2	1	9B-7237	8	BOLT (3/8-16X1.25 IN)						
	3	1	8T-4896	8	WASHER-HARD (10.2X18.5X2.5MM THK)						



GRAPHIC #1

<END>

g00235473

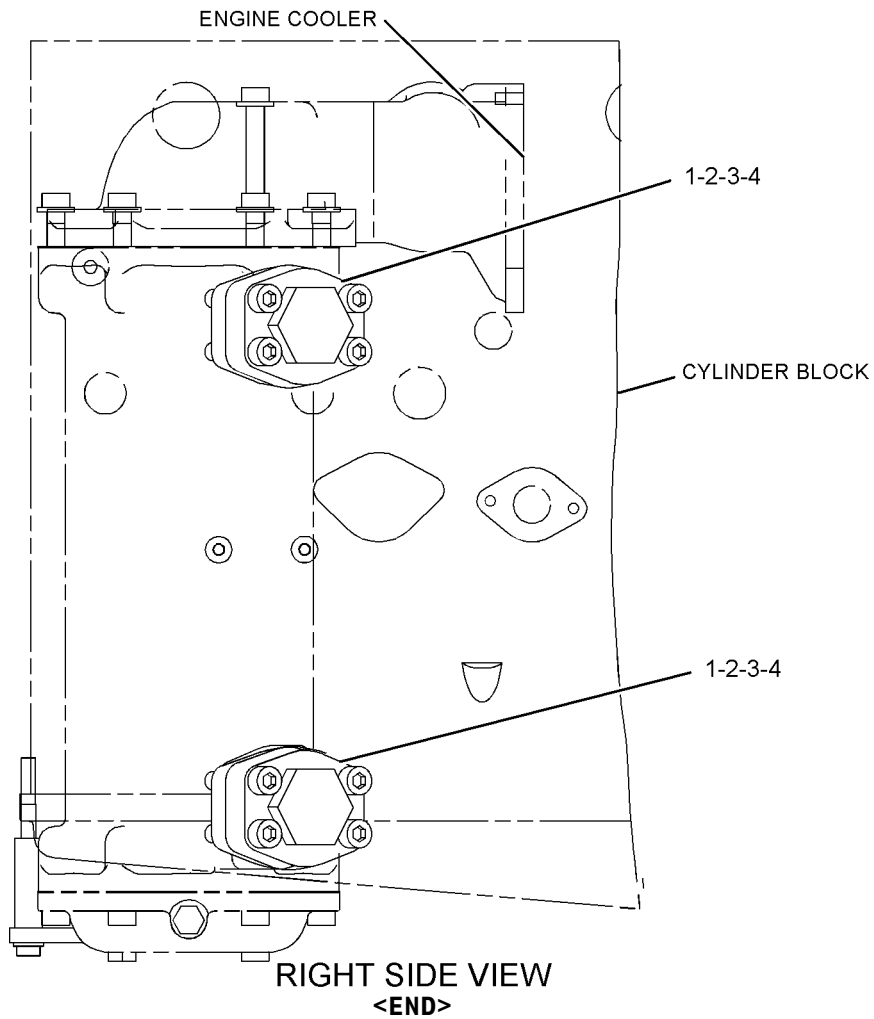
# COOLING SYSTEM

## 234-4410 FLANGE GP-OIL COOLER-TRANSMISSION AN ATTACHMENT

SMCS-1378

i01953450

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1U-9870</b>	2	FLANGE						
	2	1	<b>171-5338</b>	2	PLUG-PIPE						
	3	1	<b>1P-3705</b>	2	SEAL-RECTANGULAR						
	4	1	<b>8B-7979</b>	8	BOLT (1/2-13X2.5 IN)						



GRAPHIC #1

g01020431



# COOLING SYSTEM

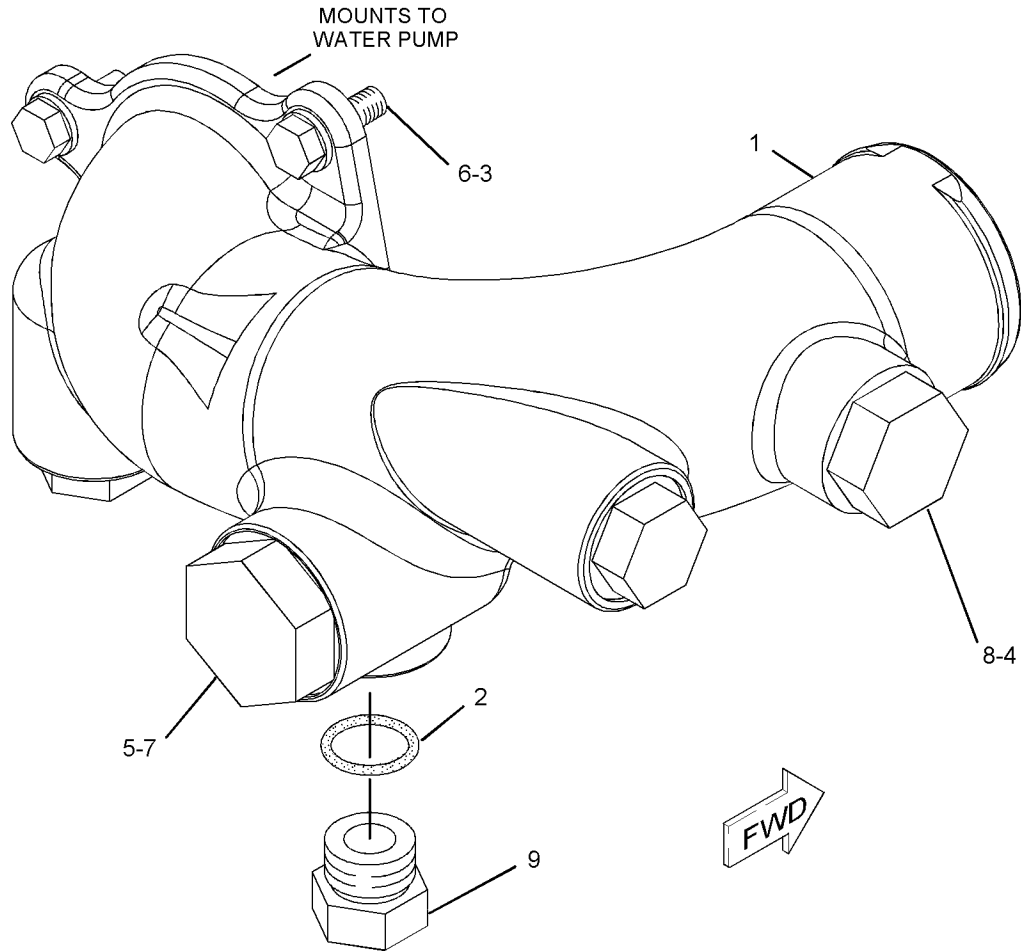
## 236-5900 LINES GP-WATER-INLET ELBOW AN ATTACHMENT

SMCS-1355, 1380, 1393

i02182620

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	252-2685	1	ELBOW						
	2	1	6V-3251	3	SEAL-O-RING						
M	3	1	6V-3940	3	BOLT (M8X1.25X25-MM)						
	4	1	6V-5063	1	SEAL-O-RING						
	5	1	7M-8485	1	SEAL-O-RING						
	6	1	9M-1974	3	WASHER-HARD (8.8X16X2-MM THK)						
	7	1	9S-4181	1	PLUG						
	8	1	9S-4183	1	PLUG						
	9	1	9S-4190	3	PLUG						

M-METRIC PART



GRAPHIC #1

<END>

g01071495

# COOLING SYSTEM

**238-6725 LINES GP-WATER-SINGLE TEMPERATURE REGULATOR**  
 PROVIDES SINGLE THERMOSTAT WATER REGULATOR HOUSING WITH 190 DEGREE  
 FAHRENHEIT THERMOSTAT, WATER BYPASS LINE, AND A VERTICAL 2 INCH WATER OUTLET  
 CONNECTION  
 AN ATTACHMENT

SMCS-1355, 1380, 1393

i02300542

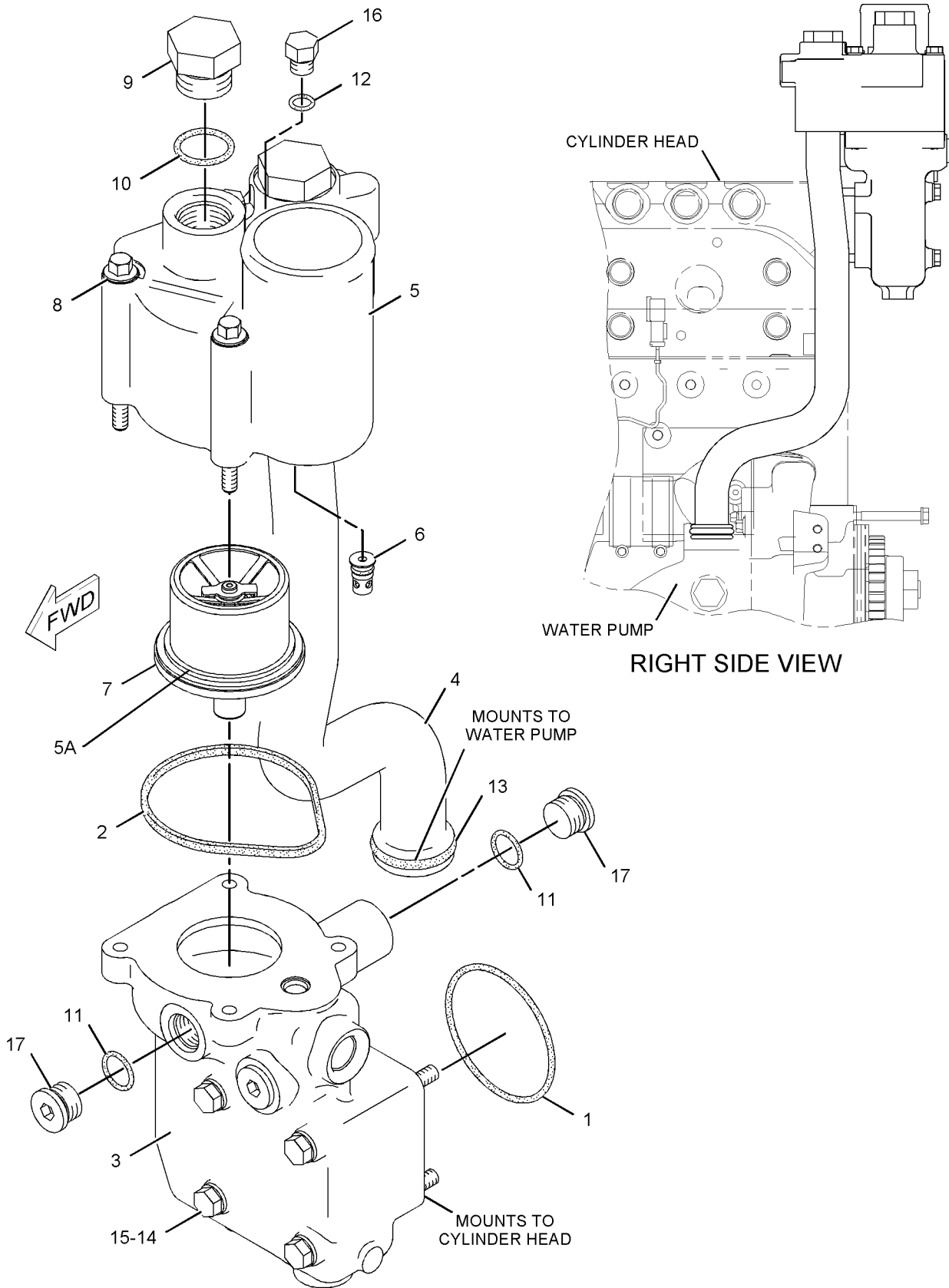
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	224-6361	1	SEAL						
	2	1	227-5075	1	SEAL (TEMPERATURE REGULATOR HOUSING)						
	3	1	238-6721	1	BASE						
	4	1	238-6728	1	TUBE-BYPASS						
	5	1	238-6730	1	HOUSING AS-REGULATOR						
	5A	1	3S-9643	1	SEAL-LIP TYPE (WATER TEMPERATURE REGULATOR)						
	6	1	239-8135	1	VALVE AS-VENT (WATER LINES)						
		1	9X-7380	1	SEAL-O-RING						
	7	1	247-7133	1	REGULATOR-TEMPERATURE (98-DEG C) (WATER, COOLANT)						
	8	1	230-2603	4	BOLT (M8X1.25X90-MM)						
	9	1	5P-9436	2	PLUG-THREADED O-RING						
	10	1	6V-5063	2	SEAL-O-RING						
	11	1	6V-6609	3	SEAL-O-RING						
	12	1	6V-9027	1	SEAL-O-RING						
	13	1	7L-6580	2	SEAL-O-RING						
M	14	1	8T-0292	4	BOLT (M8X1.25X90-MM)						
	15	1	9M-1974	4	WASHER-HARD (8.8X16X2-MM THK)						
	16	1	9S-4182	1	PLUG						
	17	1	9S-8005	3	PLUG						

M-METRIC PART

# COOLING SYSTEM

238-6725 LINES GP-WATER (contd.)

i02300542



GRAPHIC #1

<END>

g01084210

# COOLING SYSTEM

**238-6727 LINES GP-WATER-SINGLE TEMPERATURE REGULATOR**  
 PROVIDES A SINGLE THERMOSTAT WATER REGULATOR HOUSING WITH A 190 DEGREE  
 FAHRENHEIT THERMOSTAT AND WATER BY-PASS LINE , AND PROVIDES A HORIZONTAL,  
 LEFT HAND FACING 2.5 INCH WATER OUTLET CONNECTION  
 AN ATTACHMENT

SMCS-1355, 1380, 1393

i02259868

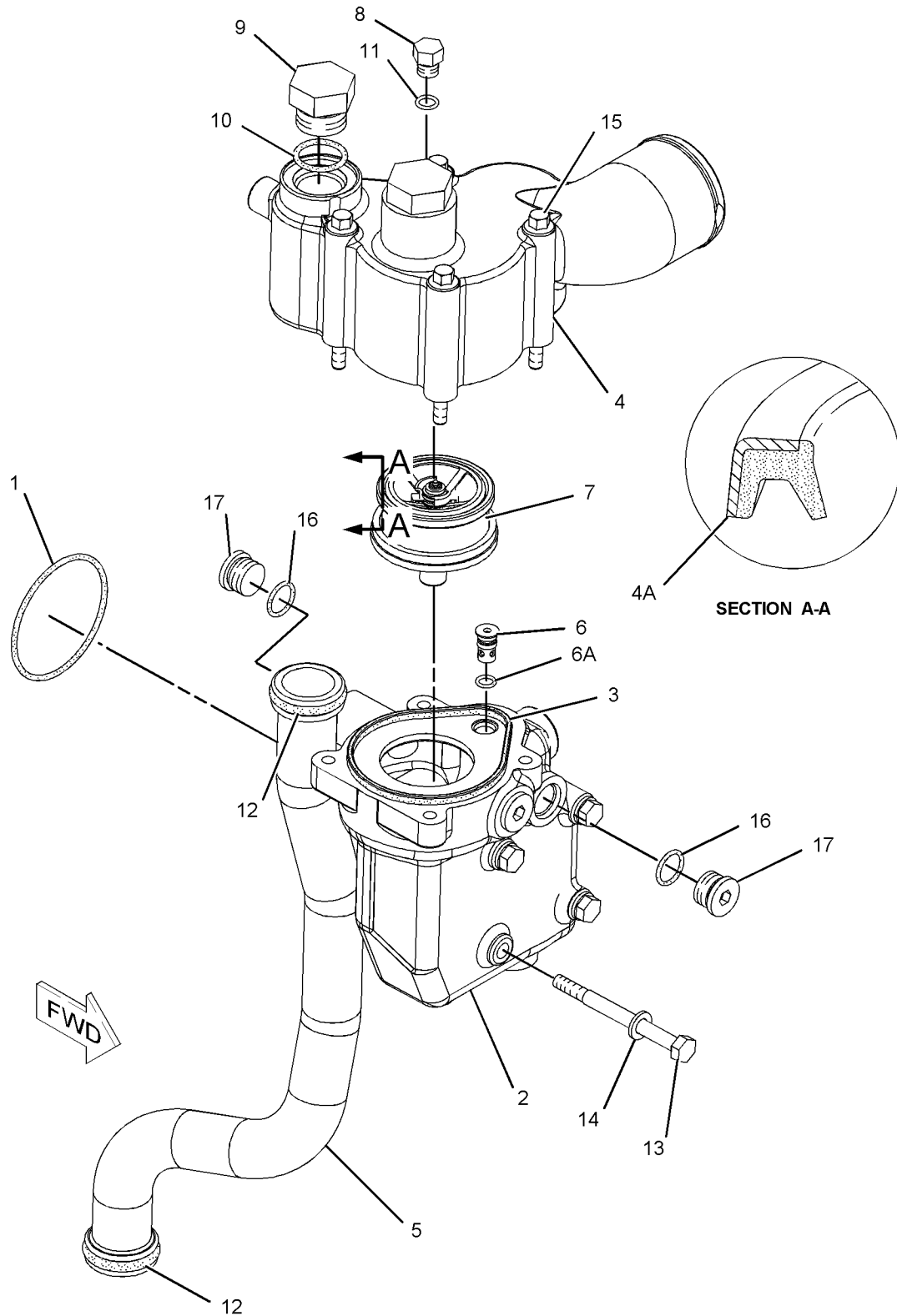
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>224-6361</b>	1	SEAL						
	2	1	<b>238-6721</b>	1	BASE						
	3	1	<b>227-5075</b>	1	SEAL (TEMPERATURE REGULATOR HOUSING)						
	4	1	<b>238-6732</b>	1	HOUSING AS-REGULATOR						
	4A	1	<b>3S-9643</b>	1	SEAL-LIP TYPE (WATER TEMPERATURE REGULATOR)						
	5	1	<b>238-6728</b>	1	TUBE-BYPASS						
	6	1	<b>239-8135</b>	1	VALVE AS-VENT (WATER LINES)						
	6A	1	<b>9X-7380</b>	2	SEAL-O-RING						
	7	1	<b>247-7133</b>	1	REGULATOR-TEMPERATURE (98-DEG C) (WATER, COOLANT)						
	8	1	<b>9S-4182</b>	1	PLUG						
	9	1	<b>5P-9436</b>	2	PLUG-THREADED O-RING						
	10	1	<b>6V-5063</b>	2	SEAL-O-RING						
	11	1	<b>6V-9027</b>	1	SEAL-O-RING						
	12	1	<b>7L-6580</b>	2	SEAL-O-RING						
M	13	1	<b>8T-0292</b>	4	BOLT (M8X1.25X90-MM)						
	14	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)						
	15	1	<b>230-2603</b>	4	BOLT (M8X1.25X90-MM)						
	16	1	<b>6V-6609</b>	3	SEAL-O-RING						
	17	1	<b>9S-8005</b>	3	PLUG						

M-METRIC PART

# COOLING SYSTEM

238-6727 LINES GP-WATER (contd.)

i02259868



GRAPHIC #1

<END>

g01135887

# COOLING SYSTEM

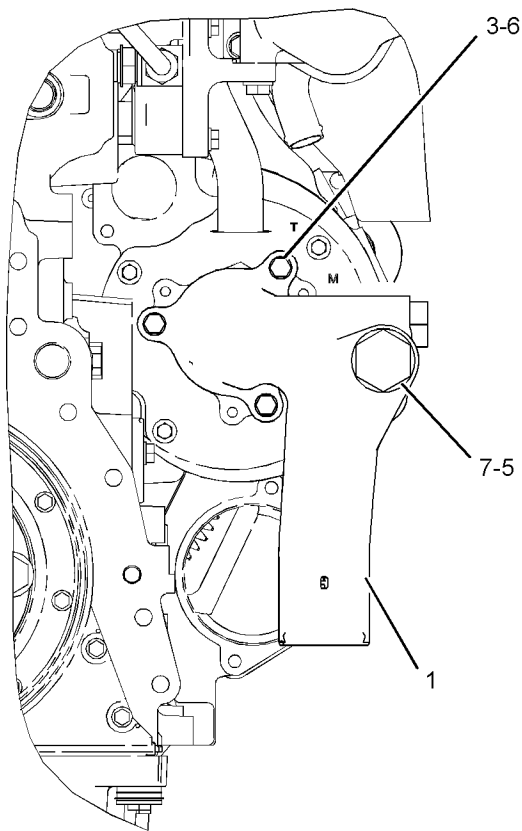
## 238-8720 LINES GP-WATER-INLET ELBOW ALSO AN ATTACHMENT

SMCS-1355, 1380, 1393

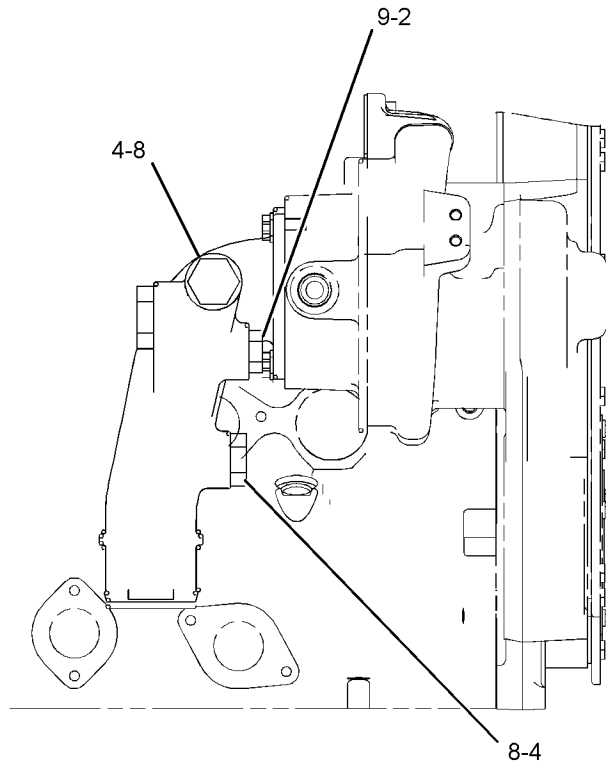
i02068429

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	229-6231	1	ELBOW-WATER PUMP						
	2	1	6V-3251	1	SEAL-O-RING						
M	3	1	6V-3940	3	BOLT (M8X1.25X25-MM)						
	4	1	6V-5063	2	SEAL-O-RING						
	5	1	7M-8485	1	SEAL-O-RING						
	6	1	9M-1974	3	WASHER-HARD (8.8X16X2-MM THK)						
	7	1	9S-4181	1	PLUG (1 5/16-12-2A THD)						
	8	1	9S-4183	2	PLUG (1 1/16-12-2A THD)						
	9	1	9S-4190	1	PLUG (7/8-14-2A THD)						

M-METRIC PART



REAR VIEW



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01061712

# COOLING SYSTEM

## 243-1667 LINES GP-WATER-SINGLE WATER REGULATOR

SMCS-1355, 1380, 1393

i02227336

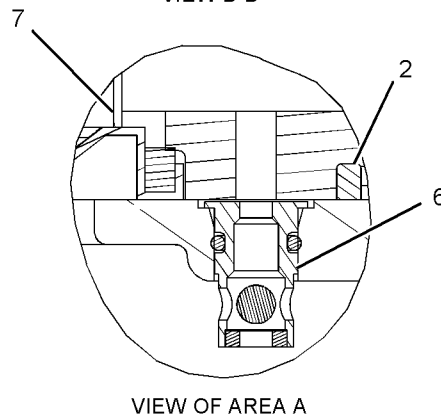
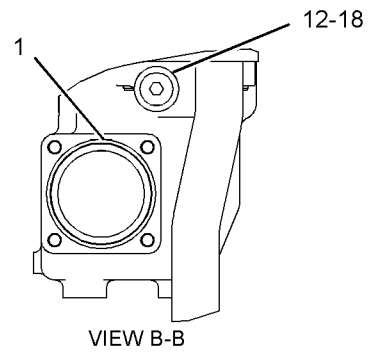
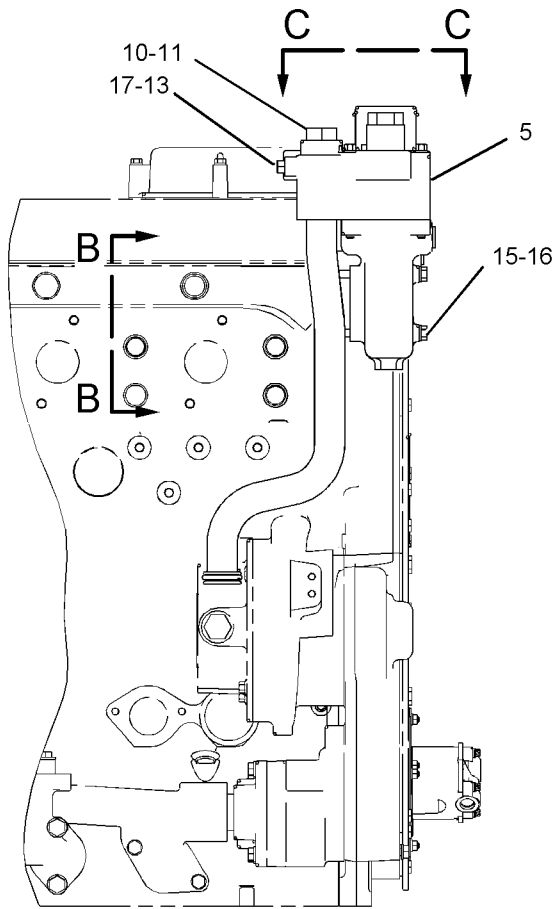
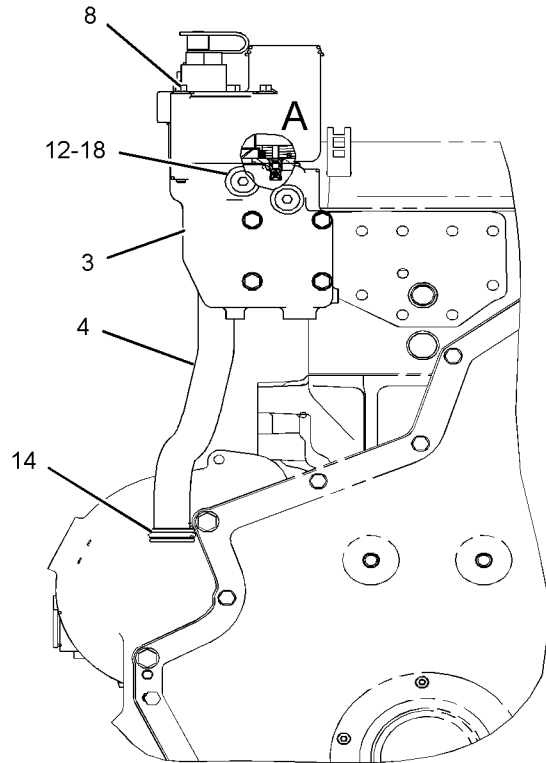
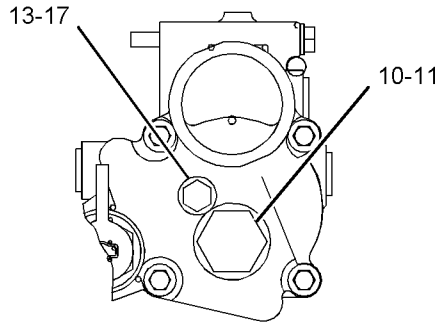
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>224-6361</b>	1	SEAL						
	2	1	<b>227-5075</b>	1	SEAL (TEMPERATURE REGULATOR HOUSING)						
	3	1	<b>238-6721</b>	1	BASE						
	4	1	<b>238-6728</b>	1	TUBE-BYPASS						
	5	1	<b>238-6730</b>	1	HOUSING AS-REGULATOR						
		1	<b>3S-9643</b>	1	SEAL-LIP TYPE (WATER TEMPERATURE REGULATOR)						
	6	1	<b>239-8135</b>	1	VALVE AS-VENT (WATER LINES)						
		1	<b>9X-7380</b>	1	SEAL-O-RING						
		1	<b>9X-7380</b>	1	SEAL-O-RING						
	7	1	<b>248-5513</b>	1	REGULATOR-WATER TEMPERATURE (92-DEG C) (COOLANT)						
	8	1	<b>230-2603</b>	4	BOLT (M8X1.25X90-MM)						
	10	1	<b>5P-9436</b>	2	PLUG-THREADED O-RING						
	11	1	<b>6V-5063</b>	2	SEAL-O-RING						
	12	1	<b>6V-6609</b>	3	SEAL-O-RING						
	13	1	<b>6V-9027</b>	2	SEAL-O-RING						
	14	1	<b>7L-6580</b>	2	SEAL-O-RING						
M	15	1	<b>8T-0292</b>	4	BOLT (M8X1.25X90-MM)						
	16	1	<b>9M-1974</b>	4	WASHER-HARD (8.8X16X2-MM THK)						
	17	1	<b>9S-4182</b>	2	PLUG (STRAIGHT THREAD-O RING)						
	18	1	<b>9S-8005</b>	3	PLUG						

M-METRIC PART

# COOLING SYSTEM

243-1667 LINES GP-WATER (contd.)

i02227336



GRAPHIC #1

<END>

g01123849



# COOLING SYSTEM

## 224-7662 PLUG GP-ENGINE OIL COOLER

REQUIRED WHEN A COOLANT CONDITIONER IS NOT USED

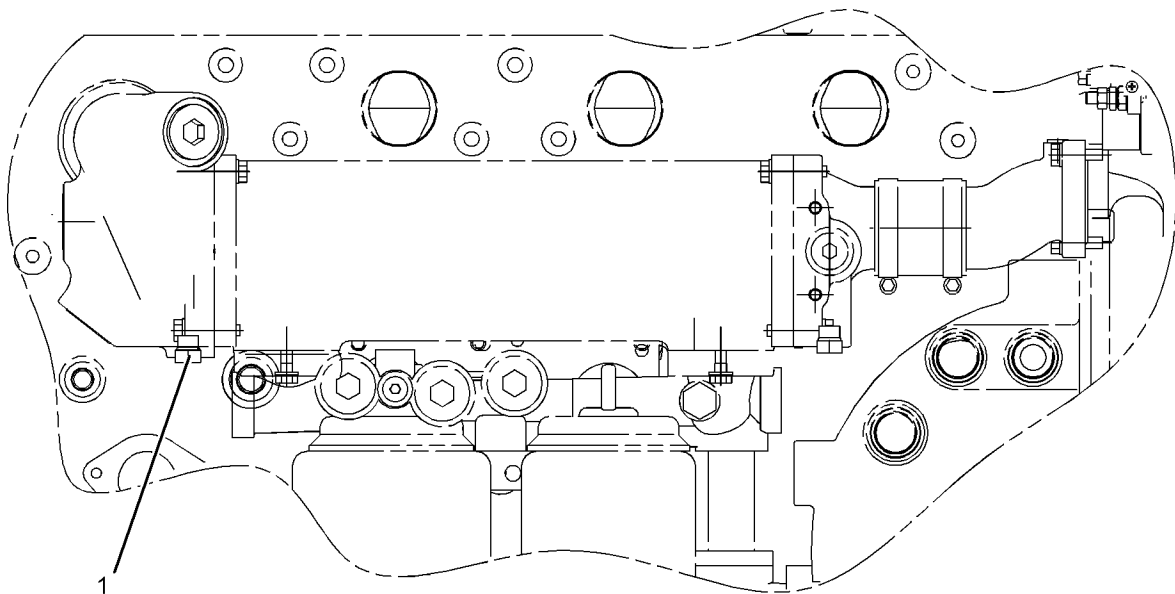
CANNOT BE USED WITH 229-9425—PAGE 222

ALSO AN ATTACHMENT

SMCS-1378

i02250781

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	241-6168	2	PLUG AS						
					(EACH INCLUDES)						
		1	9S-4191	1	PLUG						
		1	6V-3250	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01030029

# COOLING SYSTEM

## 223-9147 PUMP GP-WATER

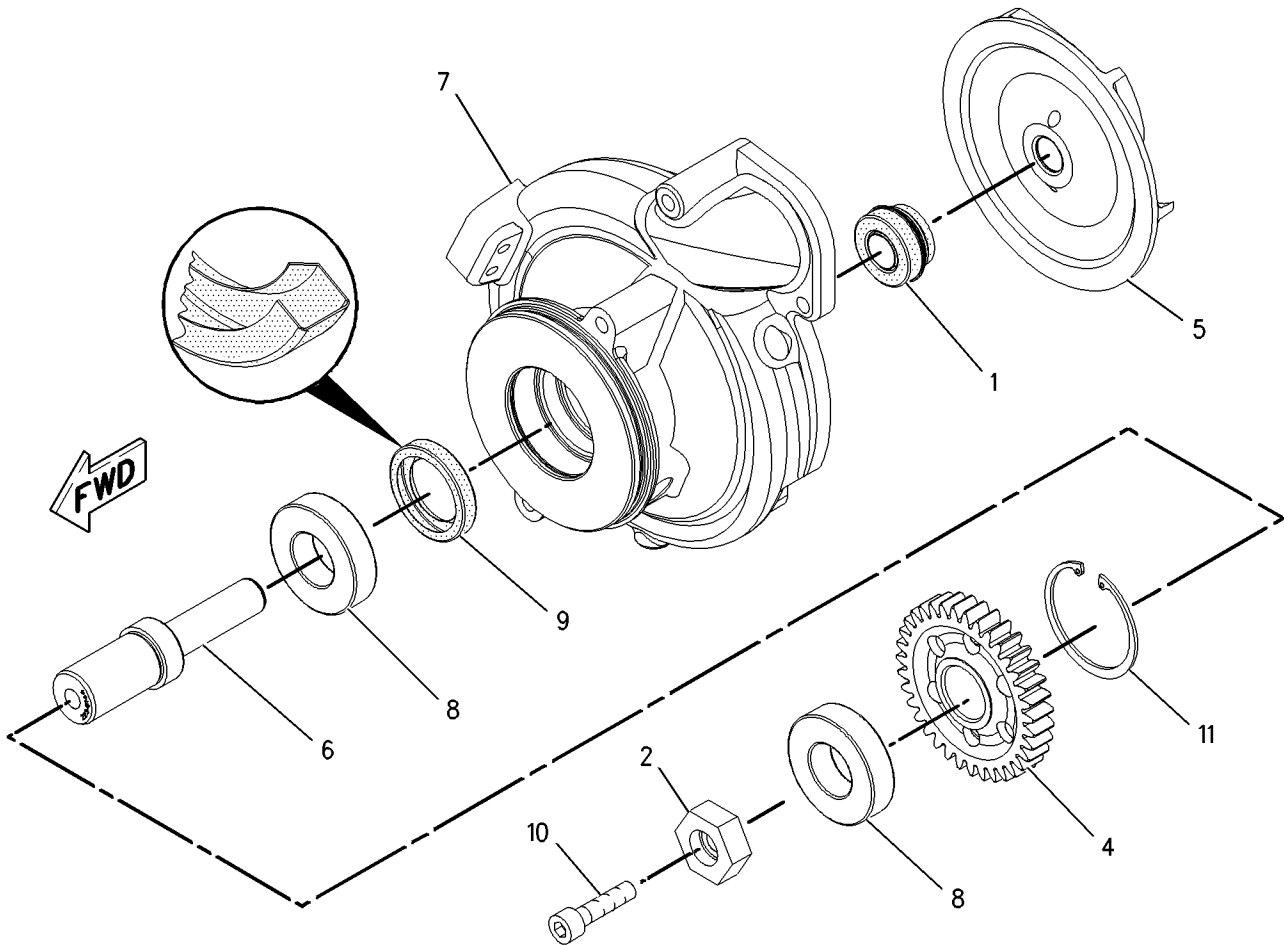
PART OF 228-5811 PUMP GP-WATER

SMCS-1361

i02009236

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	128-0317	1	SEAL GP (WATER PUMP)						
	2	1	176-6994	1	WASHER						
	4	1	222-3904	1	GEAR (35 TEETH)						
	5	1	223-9143	1	IMPELLER						
	6	1	223-9144	1	SHAFT-PUMP						
	7	1	223-9145	1	HOUSING-PUMP						
	8	1	1B-3867	2	BALL BEARING						
	9	1	8C-3100	1	SEAL-LIP TYPE						
M	10	1	8T-9515	1	BOLT-SOCKET HEAD (M10X1.5X40MM)						
	11	1	8T-9598	1	RING-RETAINING						

M-METRIC PART



GRAPHIC #1

<END>

g00950215

# COOLING SYSTEM

## 228-5811 PUMP GP-WATER

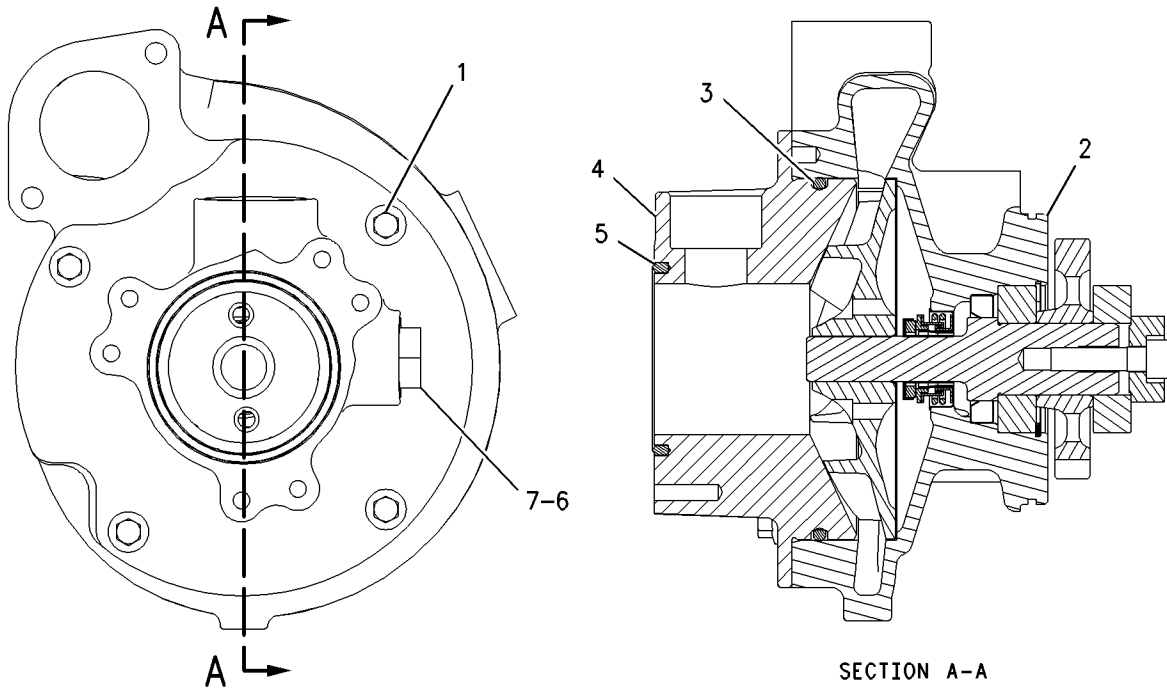
PART OF 228-5812 PUMP GP-WATER

SMCS-1361

i02090986

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	208-9281	4	BOLT-FLANGE HEAD						
Y	2	1	223-9147	1	PUMP GP-WATER						248
	3	1	225-7003	1	SEAL-O-RING						
	4	1	228-5810	1	COVER						
	5	1	229-8810	1	SEAL						
	6	1	6V-3251	1	SEAL-O-RING						
	7	1	9S-4190	1	PLUG						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00950338

# COOLING SYSTEM

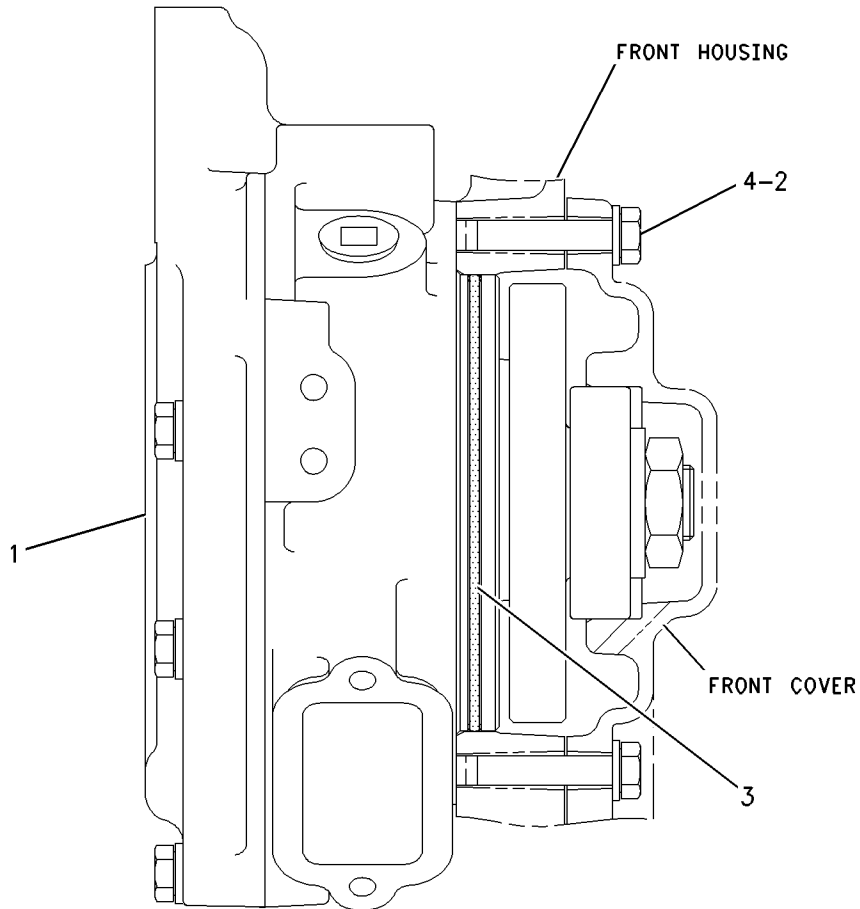
## 228-5812 PUMP GP-WATER

SMCS-1361

i01840685

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	228-5811	1	PUMP GP-WATER						249
	2	1	6V-5839	2	WASHER (11X21X2.5MM THK)						
	3	1	6V-7350	1	SEAL-O-RING						
M	4	1	8T-0643	2	BOLT (M10X1.50X80MM)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00942142

# AIR INLET AND EXHAUST SYSTEM

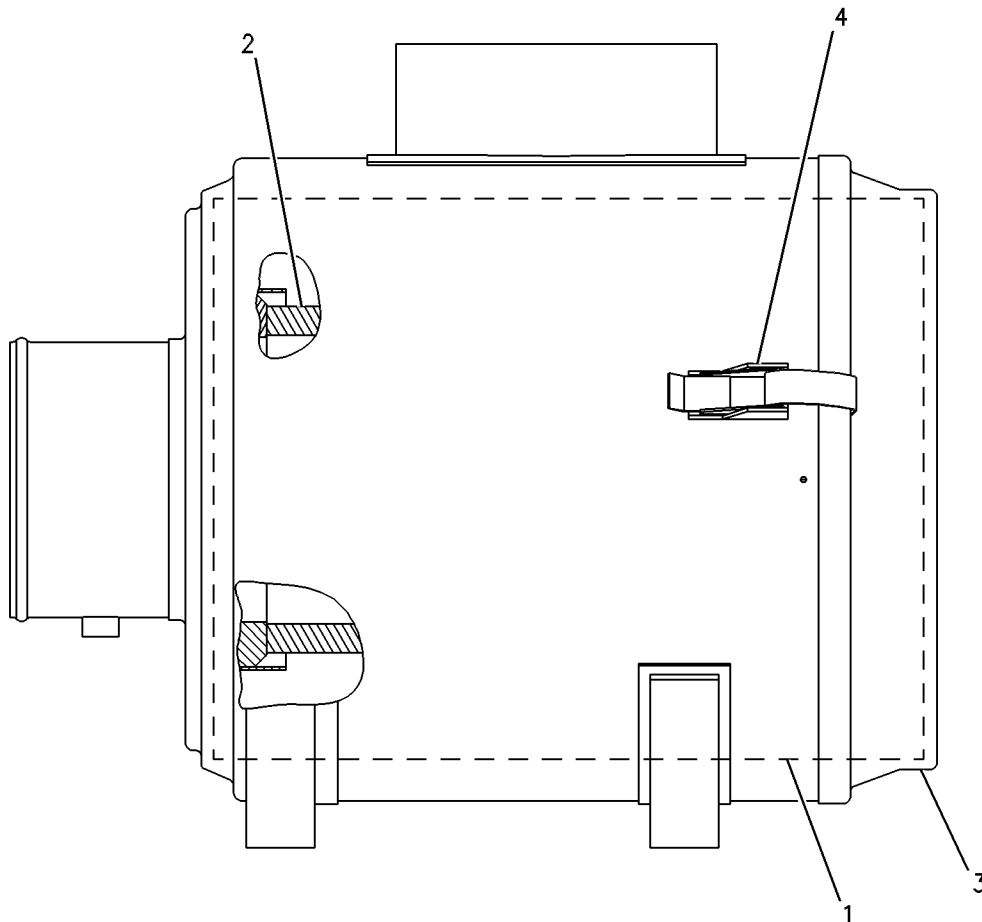
## 143-4800 AIR CLEANER GP

PART OF 156-2602 AIR CLEANER GP  
AN ATTACHMENT

SMCS-1051, 1054

i02138233

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>6I-2505</b>	1	FILTER ELEMENT AS-AIR (PRIMARY)						
	2	1	<b>6I-2506</b>	1	FILTER ELEMENT AS-AIR (SECONDARY)						
	3	1	<b>6I-4465</b>	1	COVER AS-AIR CLEANER						
		1	<b>101-2850</b>	1	FILM-INFORMATION (AIR CLEANER)						
	4	1	<b>8N-4617</b>	2	KIT-AIR CLEANER CLAMP						
					(EACH INCLUDES)						
		1	<b>9B-2596</b>	1	RIVET						



GRAPHIC #1

<END>

g00281307

# AIR INLET AND EXHAUST SYSTEM

## 156-2602 AIR CLEANER GP

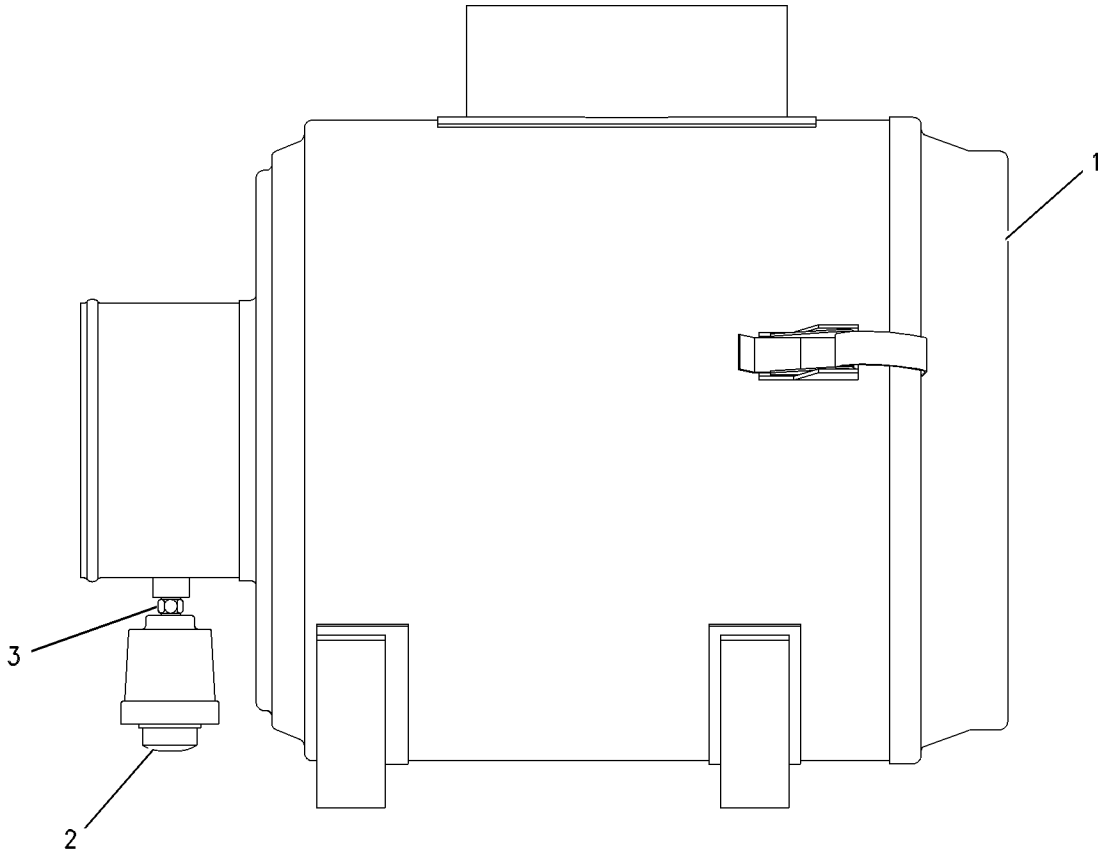
TWO STAGE, DRY ELEMENT  
AN ATTACHMENT

SMCS-1051, 1054

i02251440

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	143-4800	1	AIR CLEANER GP						251
	2	1	8N-2694	1	INDICATOR-AIR FILTER CHANGE						
	3	1	5L-3233	1	FITTING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00339365

# AIR INLET AND EXHAUST SYSTEM

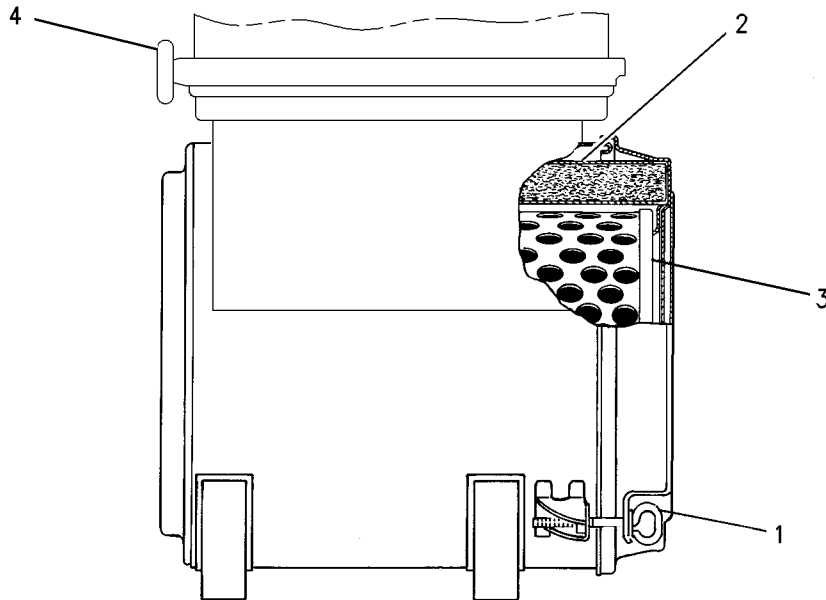
## 163-0820 AIR CLEANER GP

PART OF 243-3032 AIR CLEANER GP  
AN ATTACHMENT

SMCS-1051, 1054

i01864400

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>6I-4467</b>	1	COVER AS-AIR CLEANER						
		1	<b>101-2850</b>	1	FILM-AIR CLEANER (RADIAL SEAL)						
	2	1	<b>6I-2509</b>	1	FILTER ELEMENT AS-AIR (PRIMARY)						
	3	1	<b>6I-2510</b>	1	FILTER ELEMENT AS-AIR (SECONDARY)						
	4	1	<b>8S-6824</b>	1	CLAMP AS						



GRAPHIC #1

<END>

g00760184

# AIR INLET AND EXHAUST SYSTEM

## 243-3032 AIR CLEANER GP

FOR USE WITH FRONT EXHAUST, 230-6355—PAGE 273  
AN ATTACHMENT

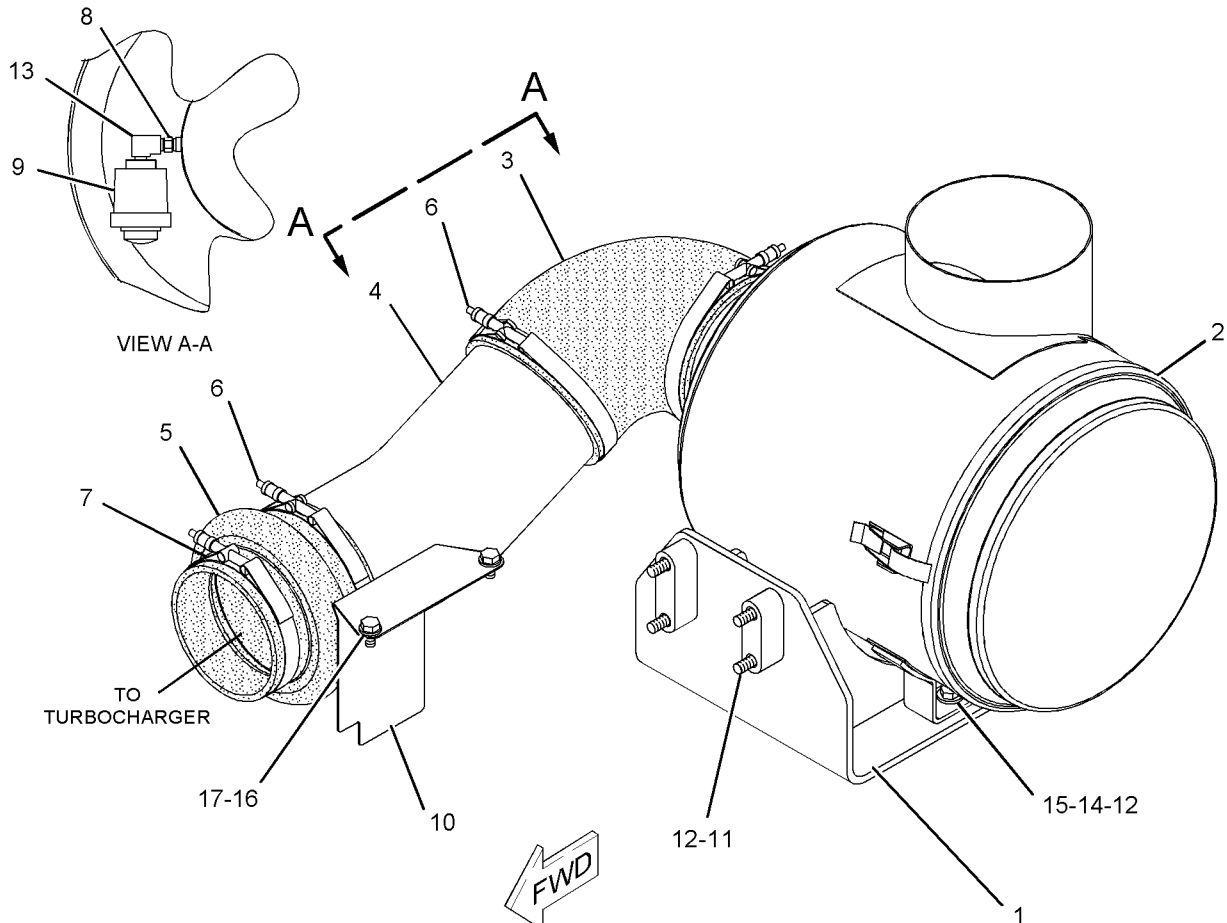
SMCS-1051, 1054

i02216729

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	243-3033	1	BRACKET AS						
Y	2	1	163-0820	1	AIR CLEANER GP						253
	3	1	158-6099	1	HOSE						
	4	1	158-4989	1	TUBE - INLET						
	5	1	4W-7731	1	HOSE-REDUCER						
	6	1	135-6261	3	CLAMP						
	7	1	135-6260	1	CLAMP						
	8	1	5L-3233	1	FITTING						
	9	1	8N-2694	1	INDICATOR-AIR FILTER CHANGE						
	10	1	243-3034	1	SHIELD						
M	11	1	6V-3823	4	BOLT (M12X1.75X60-MM)						
	12	1	5P-8245	12	WASHER-HARD (13.5X25.5X3-MM THK)						
	13	1	3B-6552	1	ELBOW						
M	14	1	6V-8149	4	NUT (M12X1.75-THD)						
M	15	1	6V-8675	4	BOLT (M12X1.75X35-MM)						
M	16	1	6V-6317	2	BOLT (M10X1.5X20-MM)						
	17	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						

M-METRIC PART

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01120258



# AIR INLET AND EXHAUST SYSTEM

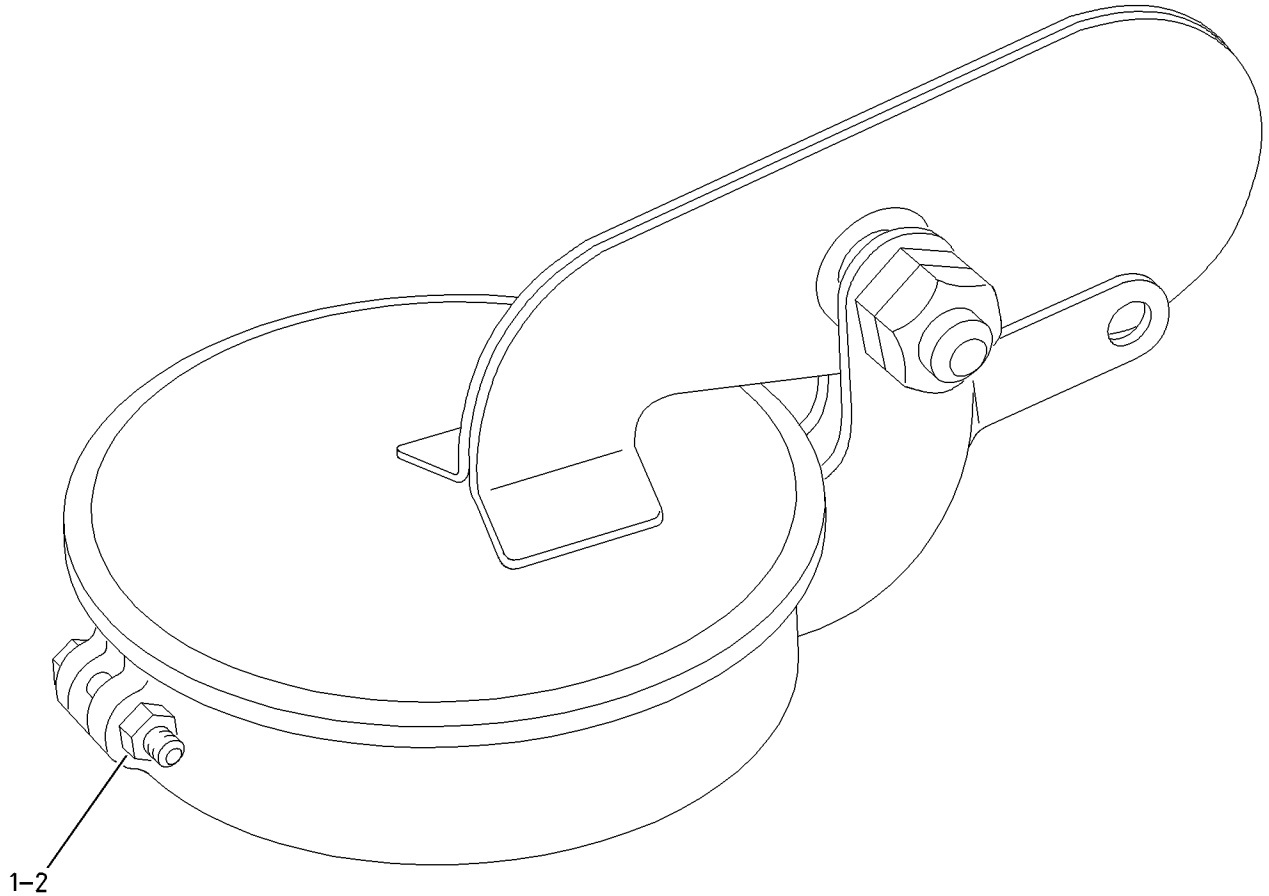
## 9S-7148 CAP AS-RAIN

5 TO 5-3/16 INCH DIAMETER, 10-1/4 INCH OVERALL LENGTH  
FOR USE WITH MUFFLER OR EXHAUST PIPE  
AN ATTACHMENT

SMCS-1072

i01523237

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1B-2713	1	BOLT (1/4-20X1.75IN)						
	2	1	9S-8750	1	NUT-FULL (1/4-20 THD)						



GRAPHIC #1

<END>

g00791291

# AIR INLET AND EXHAUST SYSTEM

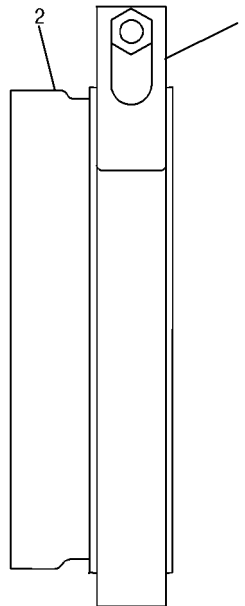
## 4W-9183 CONNECTION GP-EXHAUST

PROVIDES A 5 INCH (127-MM) O.D. EXHAUST WELD CONNECTOR AT ONE END,  
A FULL MARMON CONNECTOR AT THE OTHER END  
AN ATTACHMENT

SMCS-1061

i01586669

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4W-9160	1	CLAMP AS						
	2	1	9N-1940	1	ADAPTER-EXHAUST PIPE						



GRAPHIC #1

<END>

g00196564

# AIR INLET AND EXHAUST SYSTEM

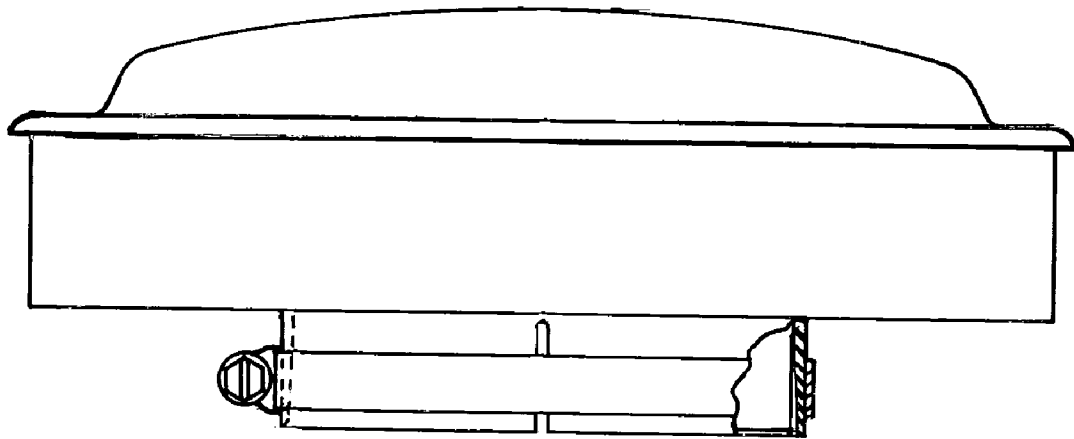
## 4W-5828 COVER GP-AIR INLET

FOR USE WITH 117.8MM DIA AIR INLET  
AN ATTACHMENT

SMCS-1087

i01378641

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)											



GRAPHIC #1

<END>

g00728565

# AIR INLET AND EXHAUST SYSTEM

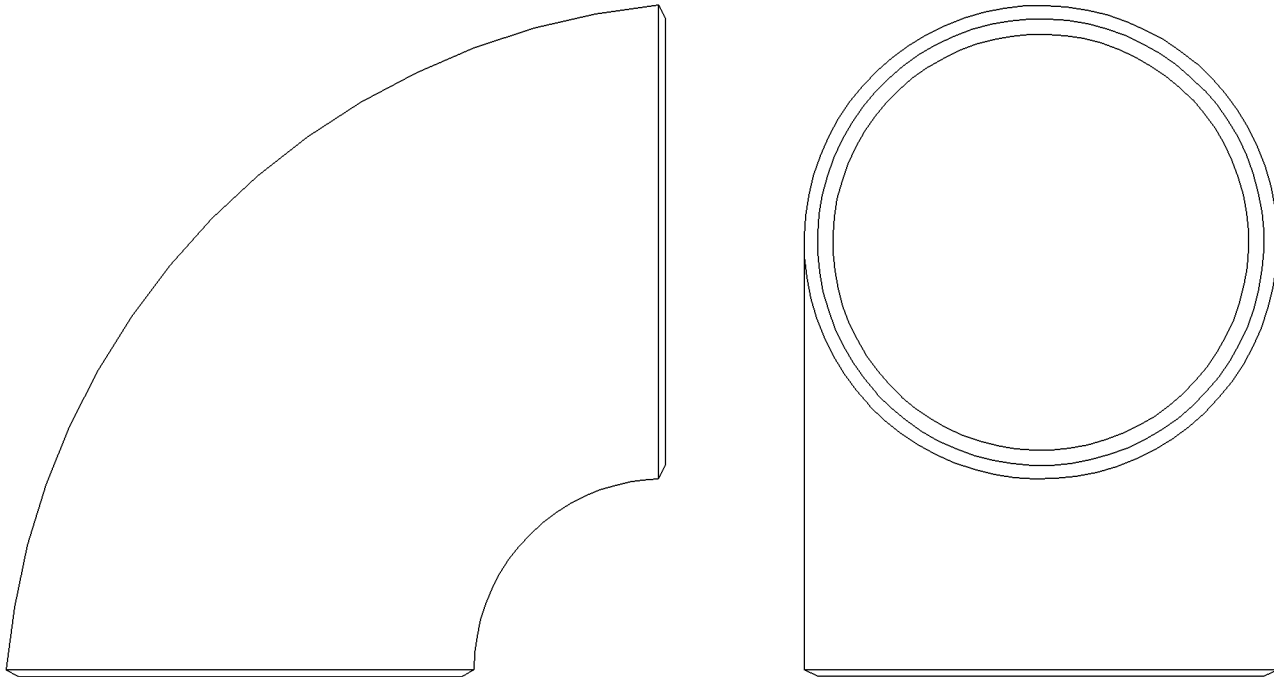
## 2N-9263 ELBOW-EXHAUST

127 MM (5 INCH), 90 DEGREE BEND. EXHAUST, WELDABLE  
AN ATTACHMENT

SMCS-1061

i01376091

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)						



GRAPHIC #1

<END>

g00648631

# AIR INLET AND EXHAUST SYSTEM

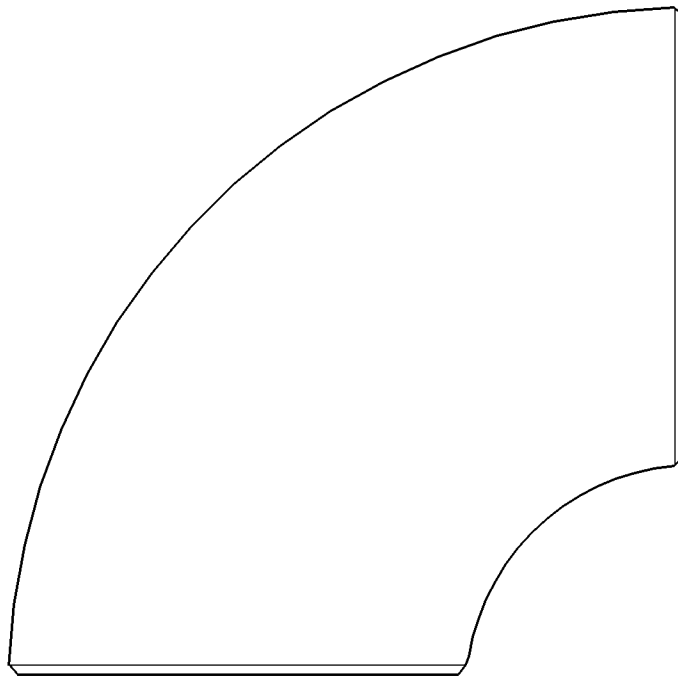
## 8L-9859 ELBOW-EXHAUST

152.4-MM (6-INCH) PIPE  
AN ATTACHMENT

SMCS-1061

i01373048

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)											



GRAPHIC #1

<END>

g00724697

# AIR INLET AND EXHAUST SYSTEM

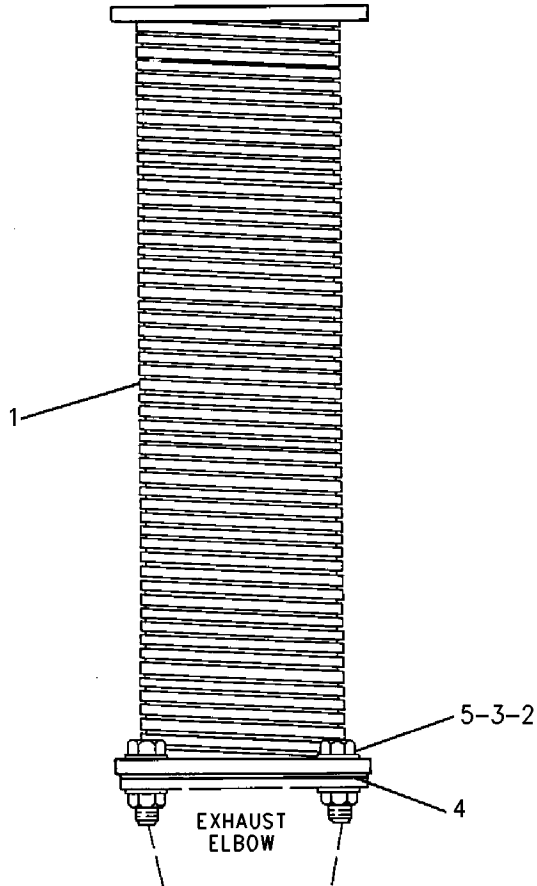
## 2W-7846 FITTING GP-EXHAUST

127 MM (5 INCH). FLEXIBLE  
AN ATTACHMENT

SMCS-1061

i01933513

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3N-3015	1	ADAPTER AS (FLEXIBLE)						
		1	5N-4741	2	FLANGE						
		1	5N-4742	1	HOSE-EXHAUST						
	2	1	5P-8247	8	WASHER-HARD (17X32X3.5MM THK)						
	3	1	1B-5358	4	NUT-FULL						
	4	1	5L-8484	1	GASKET						
	5	1	8S-9092	4	BOLT (5/8-11X2.25 IN)						



GRAPHIC #1

<END>

g00657424

# AIR INLET AND EXHAUST SYSTEM

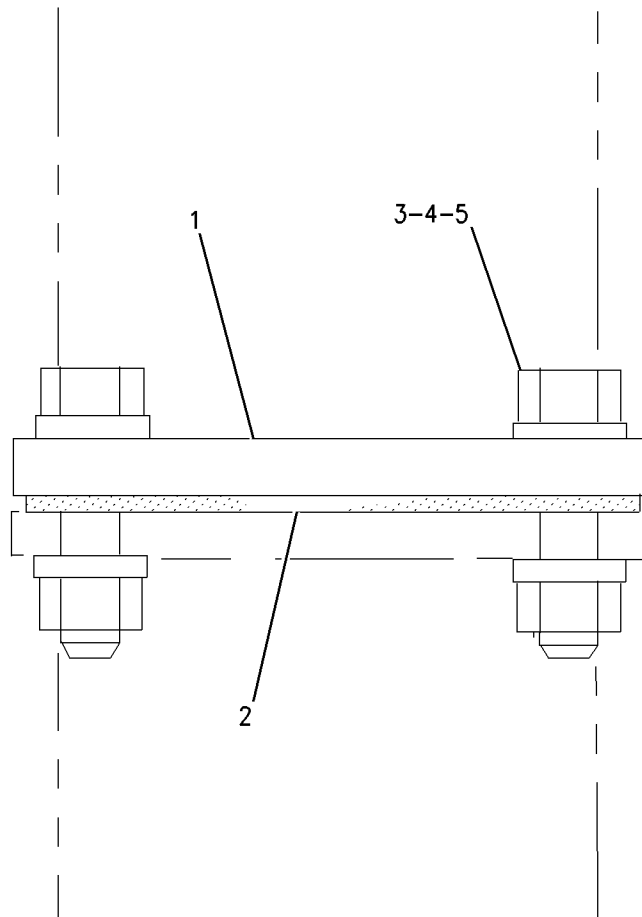
## 2W-7850 FLANGE GP-EXHAUST

127 MM (5 INCH) DIAMETER PIPE  
FOR USE WITH 2N-9263-PAGE 258  
AN ATTACHMENT

SMCS-1061

i02011527

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5N-4741	1	FLANGE						
	2	1	5L-8484	1	GASKET						
	3	1	202-9008	4	BOLT (5/8-11X50.8MM)						
	4	1	1B-5358	4	NUT-FULL (5/8-11 THD)						
	5	1	8T-4122	8	WASHER-HARD (17X32X3.5MM THK)						



GRAPHIC #1

<END>

g00783319

# AIR INLET AND EXHAUST SYSTEM

## 116-5399 KIT-EXHAUST PARTS

TURBO EXHAUST FLANGE CLAMP  
CANNOT BE USED WITH WASTEGATED TURBOCHARGERS  
AN ATTACHMENT

SMCS-1061

i01083393

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	4W-9160	1	CLAMP AS (V-BAND)						
<END>									



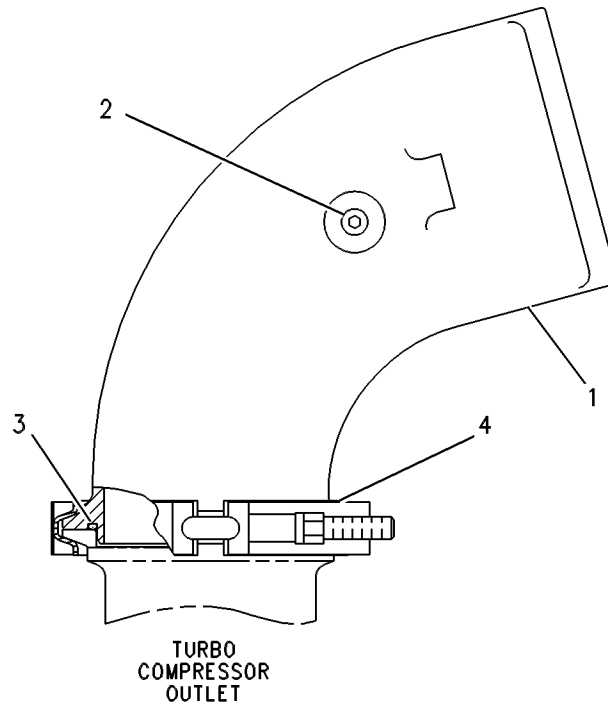
# AIR INLET AND EXHAUST SYSTEM

## 126-0076 LINES GP-AIR-TURBOCHARGER OUTLET 75 DEGREE OUTLET ELBOW AN ATTACHMENT

SMCS-1071

i00831536

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	126-0073	1	ELBOW						
	2	1	8T-6757	1	PLUG-PIPE (1/8-27 NPTF THD)						
	3	1	8C-3089	1	SEAL-O-RING (82.22MM ID)						
	4	1	127-0929	1	CLAMP						



GRAPHIC #1

<END>

g00251433

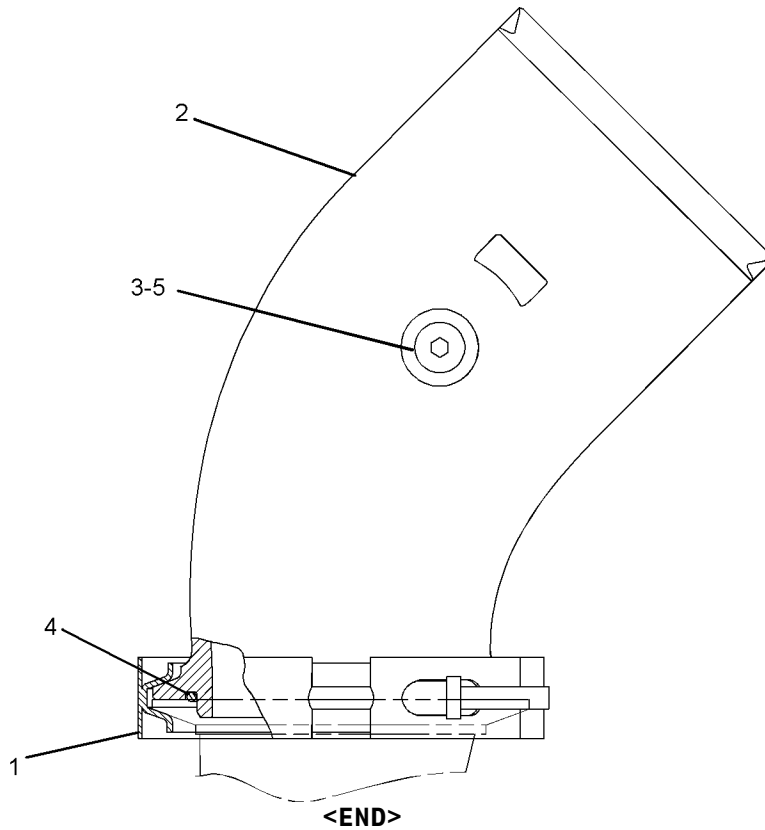
# AIR INLET AND EXHAUST SYSTEM

## 126-0079 LINES GP-AIR-TURBOCHARGER OUTLET 45 DEGREE OUTLET ELBOW AN ATTACHMENT

SMCS-1071

i02046568

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	127-0929	1	CLAMP						
	2	1	217-8947	1	ELBOW (AFTERCOOLER, OUTLET)						
	3	1	6V-5048	1	SEAL-O-RING						
	4	1	8C-3089	1	SEAL-O-RING						
	5	1	9S-8002	1	PLUG						



GRAPHIC #1

g01055394

# AIR INLET AND EXHAUST SYSTEM

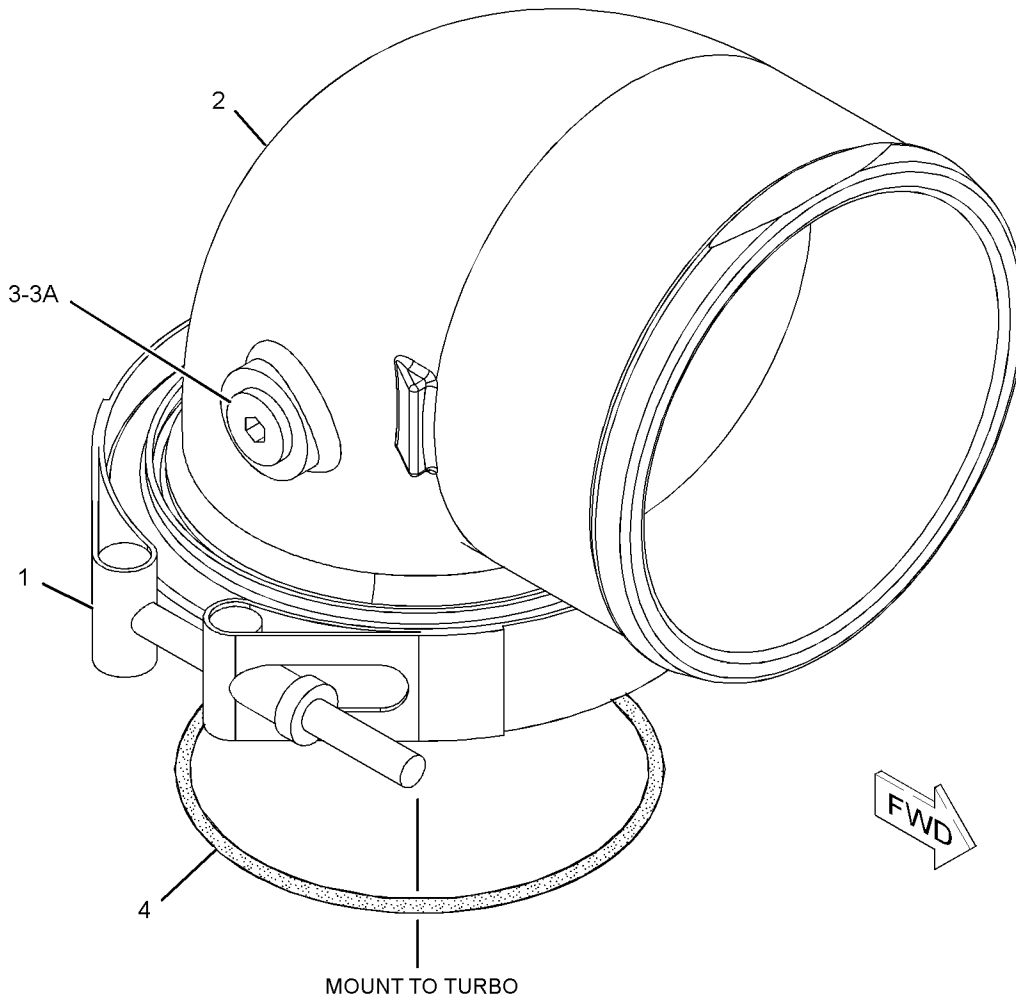
## 126-0081 LINES GP-AIR-TURBOCHARGER OUTLET 90 DEGREE OUTLET ELBOW ALSO AN ATTACHMENT

SMCS-1071

i02305444

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	127-0929	1	CLAMP						
C	2	1	217-8946	1	ELBOW						
C	3	1	183-3409	1	PLUG AS						
	3A	1	033-5853	1	SEAL-O-RING						
		1	9S-8002	1	PLUG						
	4	1	8C-3089	1	SEAL-O-RING						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g01154678

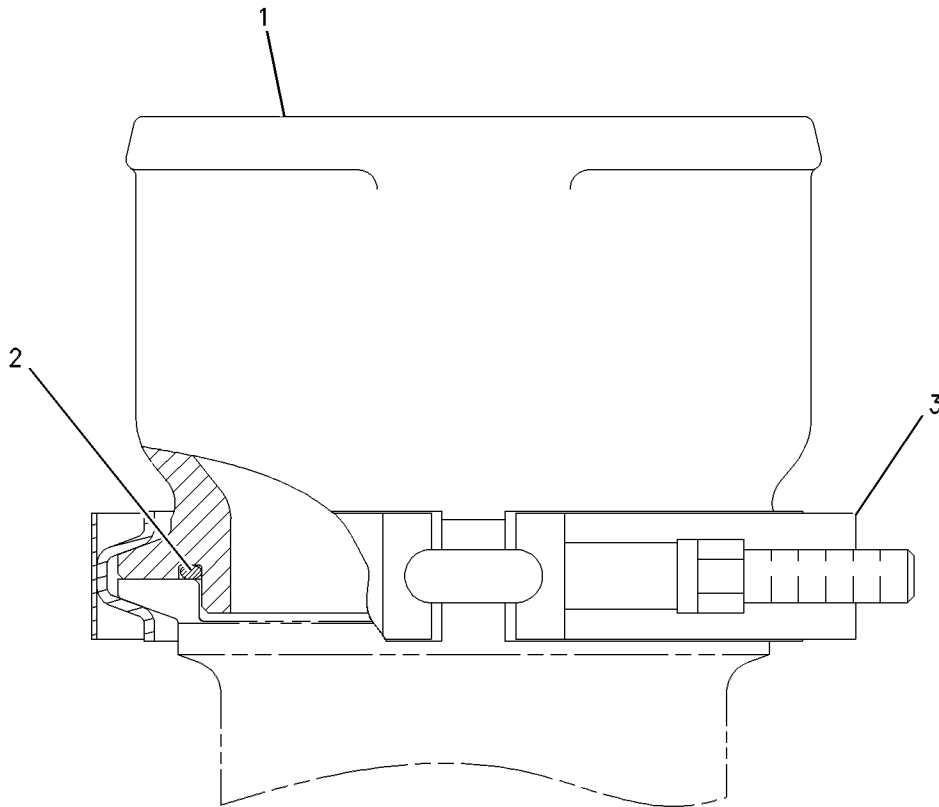
# AIR INLET AND EXHAUST SYSTEM

## 161-1052 LINES GP-AIR-TURBOCHARGER OUTLET ZERO DEGREE AN ATTACHMENT

SMCS-1071

i00965916

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	129-6400	1	ADAPTER						
	2	1	8C-3089	1	SEAL-O-RING (82.22MM ID)						
	3	1	127-0929	1	CLAMP						



GRAPHIC #1

<END>

g00507728

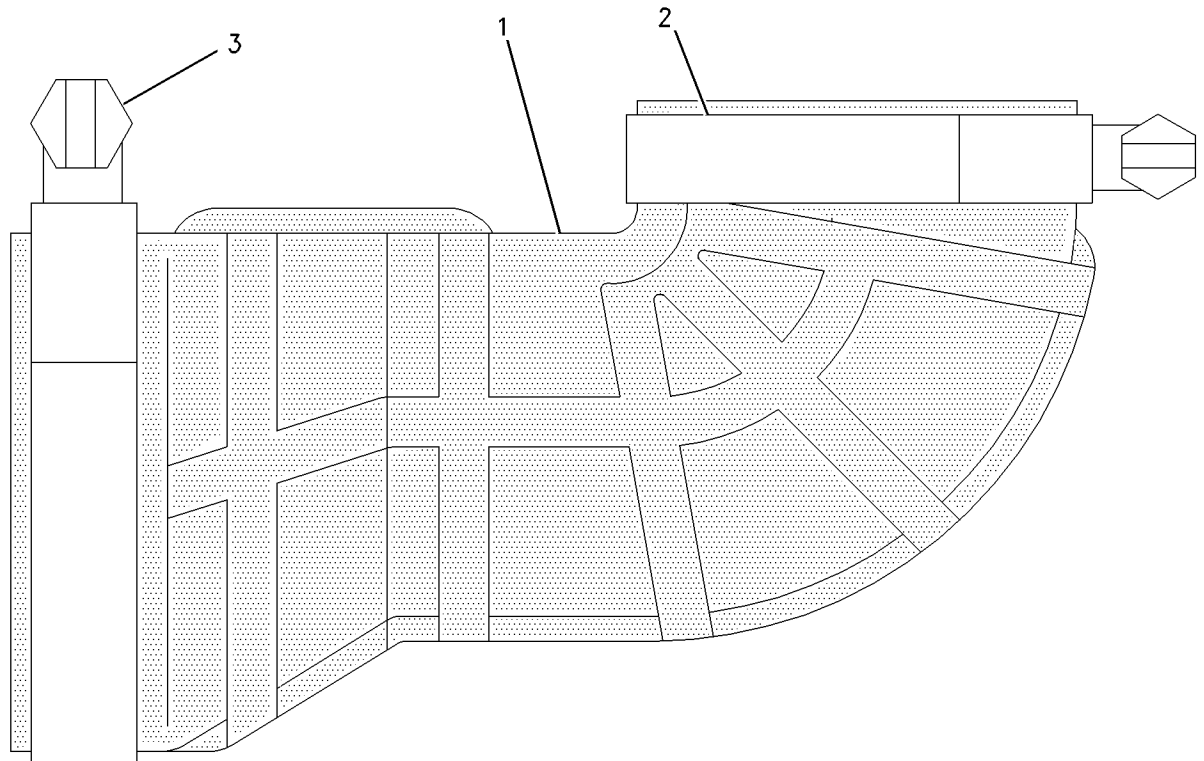
# AIR INLET AND EXHAUST SYSTEM

**192-7701 LINES GP-AIR-TURBOCHARGER, AIR CLEANER**  
 CLOSE RADIUS INLET HOSE-5 INCH TURBOCHARGER INLET-6 INCH AIR CLEANER INLET  
 AN ATTACHMENT

SMCS-1071

i01433943

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	192-7704	1	HOSE - ELBOW						
	2	1	8T-4987	1	CLAMP - HOSE (133-156 MM RANGE)						
	3	1	8T-4988	1	CLAMP - HOSE (159-181 MM RANGE)						



GRAPHIC #1

<END>

g00753294

# AIR INLET AND EXHAUST SYSTEM

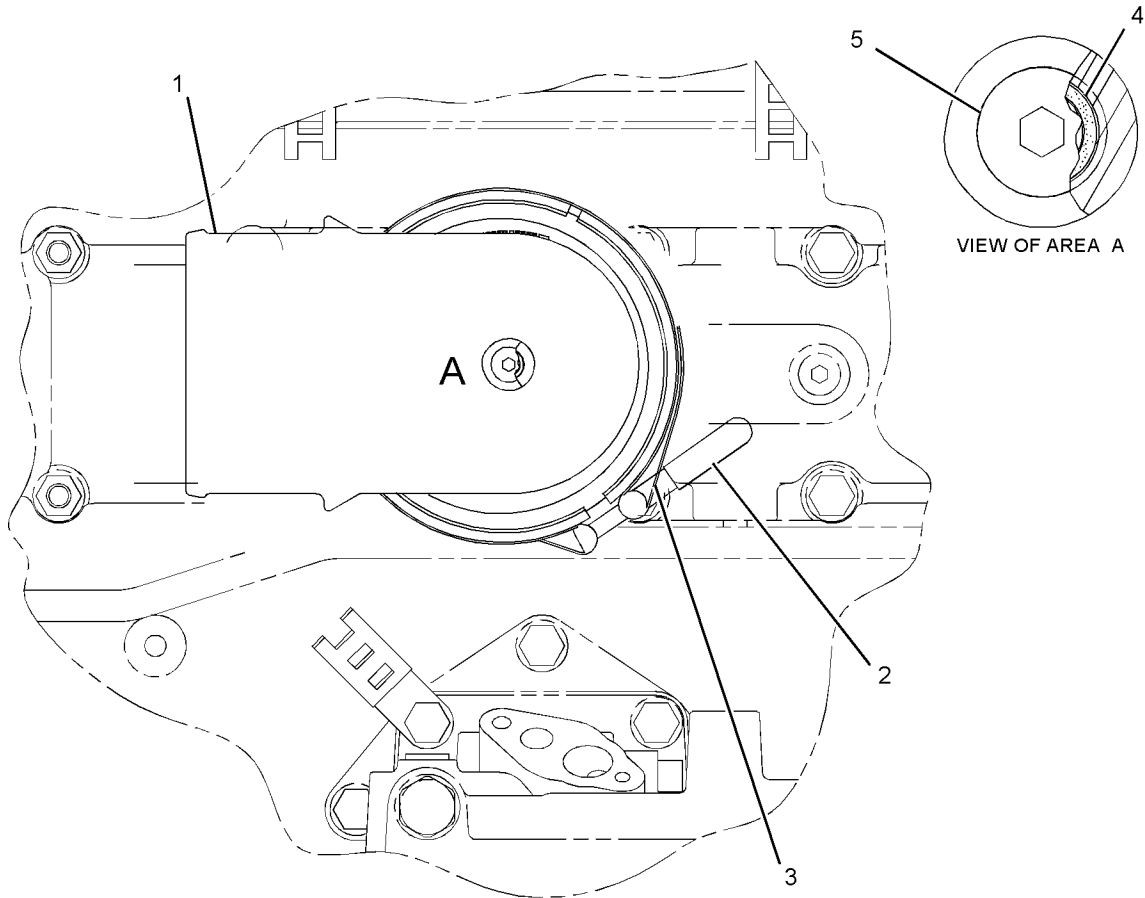
## 203-0348 LINES GP-AIR-INTAKE

PROVIDES A STANDARD 4 INCH 90 DEGREE ELBOW FOR THE AIR INTAKE MANIFOLD  
AN ATTACHMENT

SMCS-1071

i02100396

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	203-0351	1	ELBOW-AIR						
	2	1	248-4840	1	CAP						
	3	1	248-4841	1	CLAMP-BAND						
	4	1	6V-5048	1	SEAL-O-RING						
	5	1	9S-8002	1	PLUG						



LEFT SIDE VIEW

<END>

GRAPHIC #1

g01076607

# AIR INLET AND EXHAUST SYSTEM

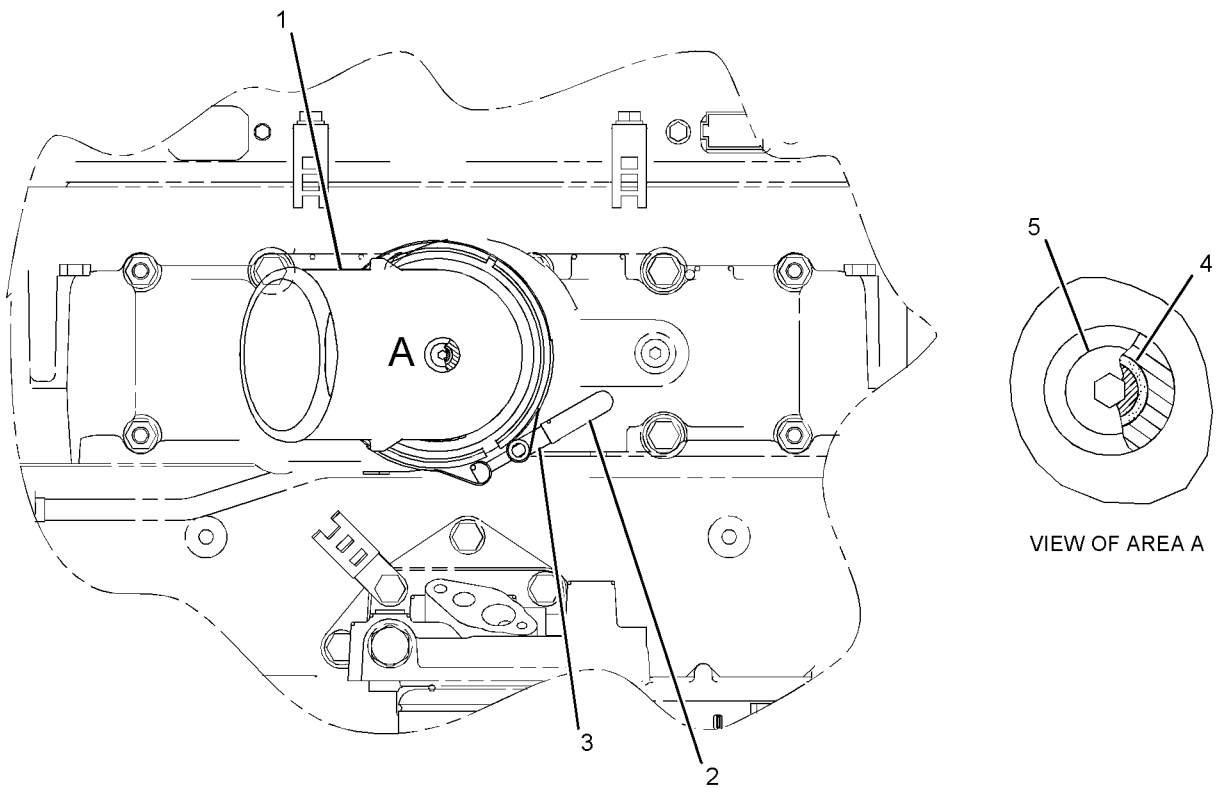
## 233-2514 LINES GP-AIR-INTAKE

PROVIDES A STANDARD 4 INCH 60 DEGREE AIR INTAKE ELBOW FOR THE LEFT HAND  
AIR INTAKE MANIFOLD  
FOR USE WITH 222-3092-PAGE 274  
AN ATTACHMENT

SMCS-1071

i02100402

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	229-9377	1	ELBOW-AIR						
	2	1	248-4840	1	CAP						
	3	1	248-4841	1	CLAMP-BAND						
	4	1	6V-5048	1	SEAL-O-RING						
	5	1	9S-8002	1	PLUG						



LEFT SIDE VIEW  
<END>

GRAPHIC #1

g01076639

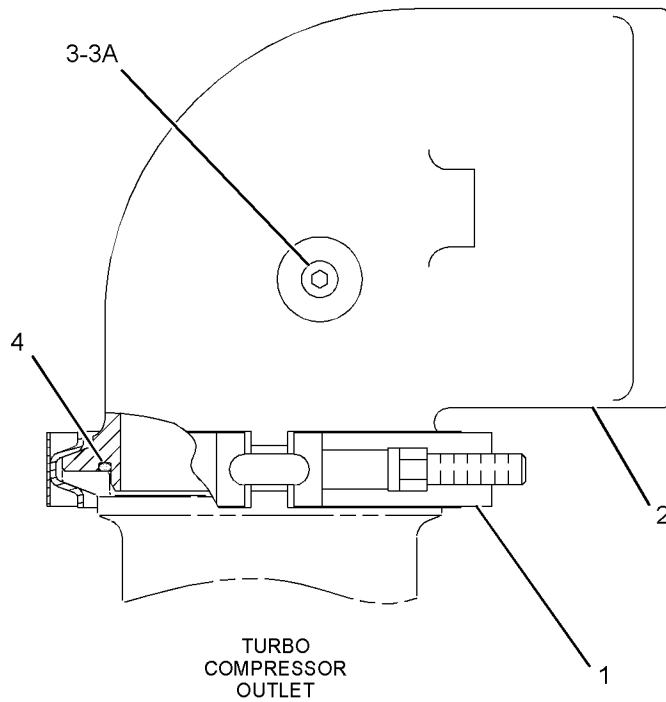
# AIR INLET AND EXHAUST SYSTEM

## 237-9754 LINES GP-AIR-TURBOCHARGER OUTLET ALSO AN ATTACHMENT

SMCS-1071

i02312429

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	127-0929	1	CLAMP						
		1	8T-0122	1	NUT-FULL (1/4-28-THD)						
	2	1	217-8946	1	ELBOW						
	3	1	183-3409	1	PLUG AS						
	3A	1	033-5853	1	SEAL-O-RING						
		1	9S-8002	1	PLUG						
	4	1	8C-3089	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01158720



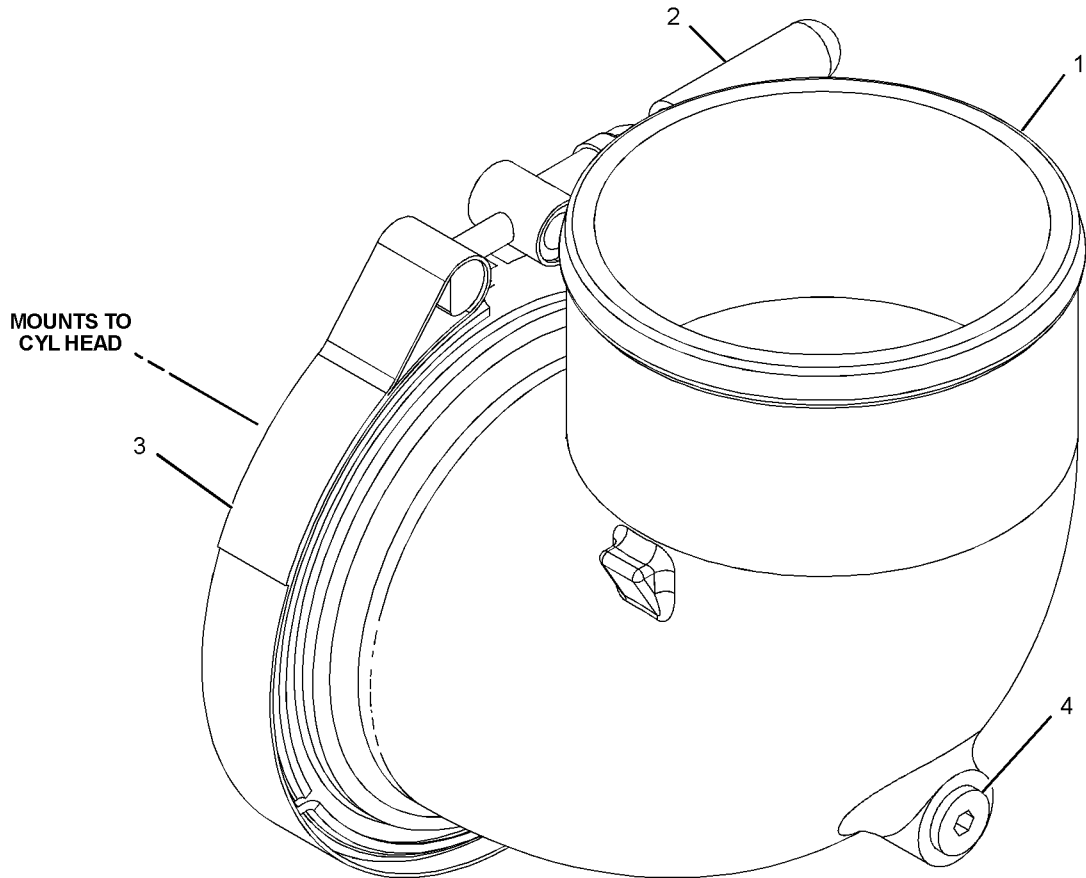
# AIR INLET AND EXHAUST SYSTEM

## 241-0983 LINES GP-AIR-INTAKE PROVIDES A 4-INCH 90-DEGREE AIR INTAKE ELBOW AN ATTACHMENT

SMCS-1071

i02297021

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	203-0351	1	ELBOW-AIR						
	2	1	248-4840	1	CAP						
	3	1	248-4841	1	CLAMP-BAND						
	5	1	183-3409	1	PLUG AS						
		1	9S-8002	1	PLUG						
		1	6V-5048	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01152246

# AIR INLET AND EXHAUST SYSTEM

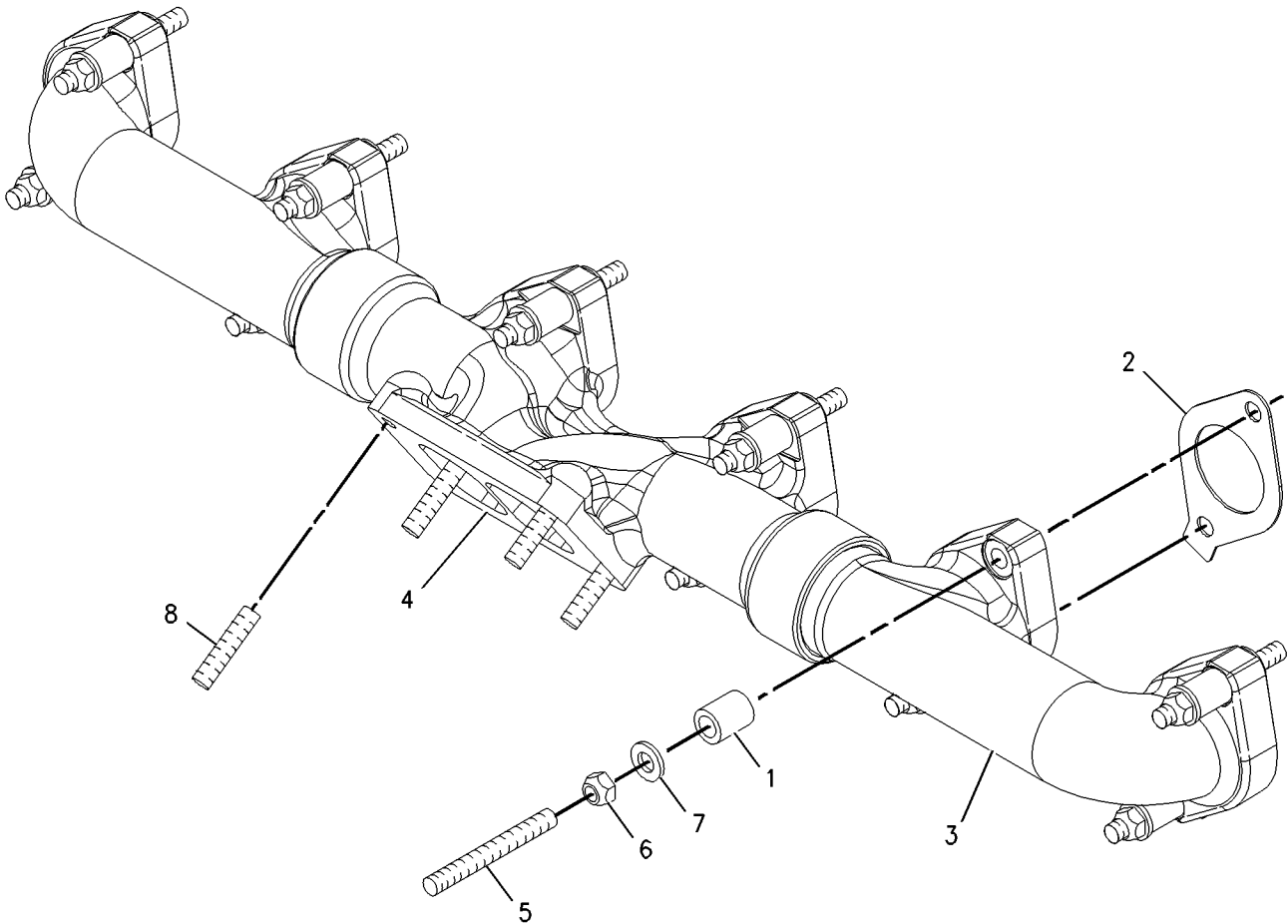
## 224-5383 MANIFOLD GP-EXHAUST AN ATTACHMENT

SMCS - 1059

i01935837

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4P-4369</b>	12	SPACER (12X19X23.5-MM THK)						
	2	1	<b>224-5389</b>	6	GASKET						
	3	1	<b>231-9030</b>	2	MANIFOLD-EXHAUST						
	4	1	<b>229-3567</b>	1	MANIFOLD-EXHAUST						
M	5	1	<b>116-3715</b>	12	STUD-TAPERLOCK (M10X1.5X85-MM)						
M	6	1	<b>3E-8017</b>	12	LOCKNUT (M10X1.5-MM THD)						
	7	1	<b>6V-5839</b>	12	WASHER (11X21X2.5-MM THK)						
M	8	1	<b>9X-8281</b>	4	STUD-TAPERLOCK (M10X1.5X45-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00950200

# AIR INLET AND EXHAUST SYSTEM

## 230-6355 MANIFOLD GP-EXHAUST

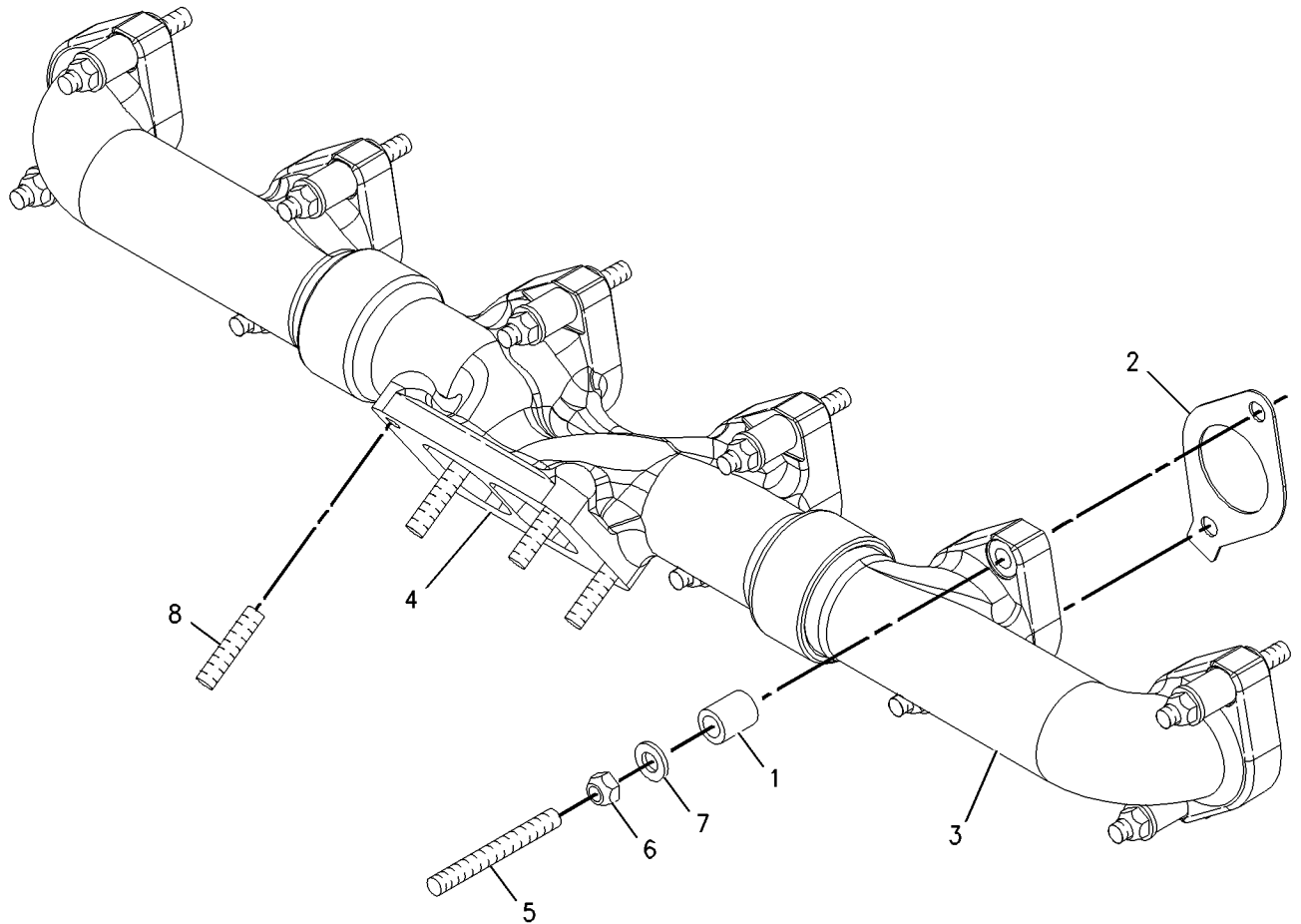
ALSO AN ATTACHMENT

SMCS - 1059

i02099786

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4P-4369</b>	12	SPACER (12X19X23.5-MM THK)						
	2	1	<b>224-5389</b>	6	GASKET						
	3	1	<b>231-9030</b>	2	MANIFOLD-EXHAUST						
	4	1	<b>229-3567</b>	1	MANIFOLD-EXHAUST						
M	5	1	<b>116-3715</b>	12	STUD-TAPERLOCK (M10X1.5X85-MM)						
M	6	1	<b>3E-8017</b>	12	LOCKNUT (M10X1.5-MM THD)						
	7	1	<b>6V-5839</b>	12	WASHER (11X21X2.5-MM THK)						
M	8	1	<b>9X-8281</b>	4	STUD-TAPERLOCK (M10X1.5X45-MM)						

M-METRIC PART



GRAPHIC #1

<END>

g00950200

# AIR INLET AND EXHAUST SYSTEM

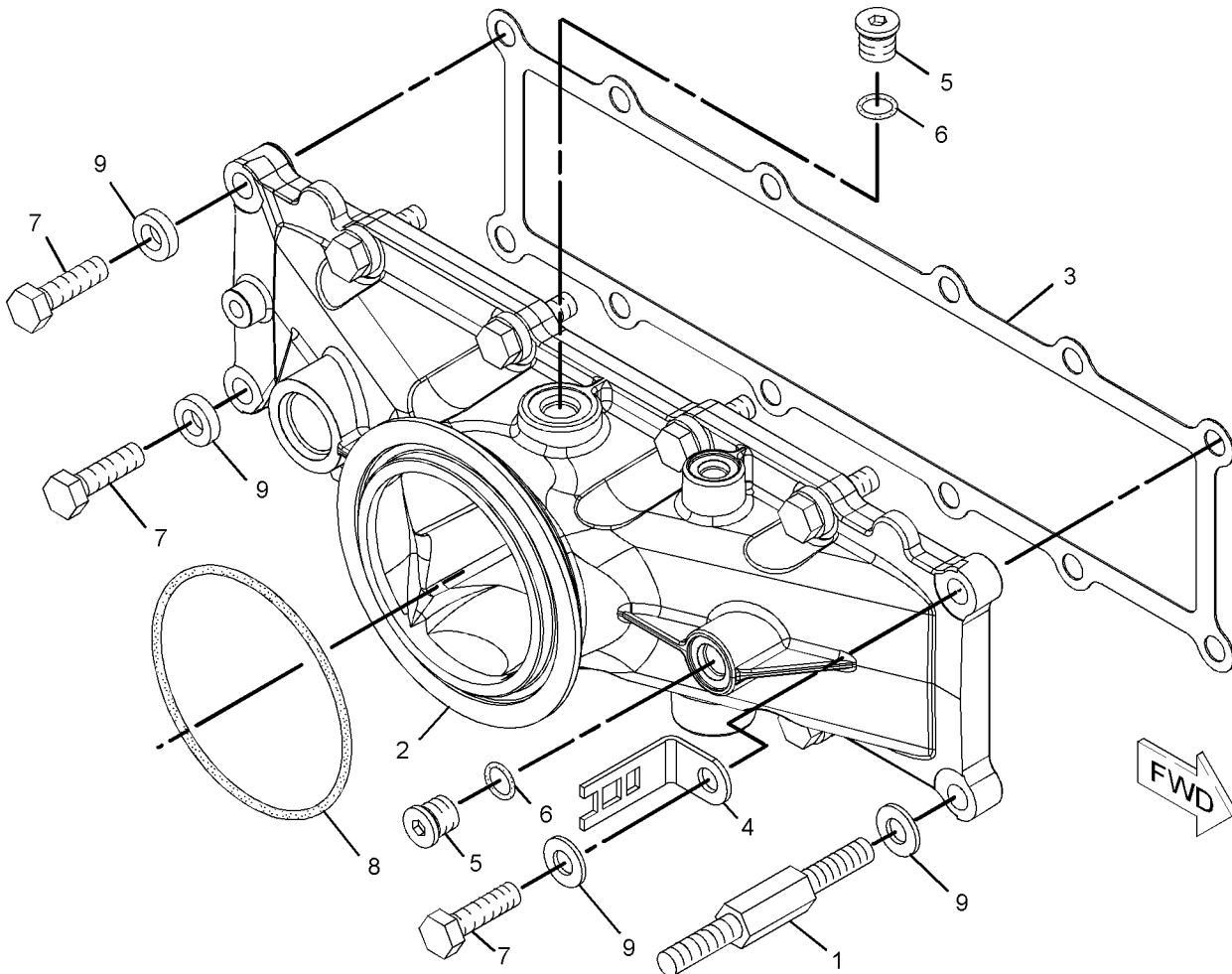
## 222-3092 MANIFOLD GP-INLET ALSO AN ATTACHMENT

SMCS - 1058

i02123204

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6	
	1	1	121-5908	1	STUD						
	2	1	222-3091	1	MANIFOLD-INLET						
	3	1	230-3518	1	GASKET-MANIFOLD						
	4	1	132-5789	1	CLIP						
	5	1	162-9527	2	PLUG						
	6	1	3J-1907	2	SEAL-O-RING						
M	7	1	6V-3822	11	BOLT (M10X1.5X35-MM)						
	8	1	6V-6353	1	SEAL-O-RING						
	9	1	7X-0623	12	WASHER (10.5X21X2-MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

g01081872

# AIR INLET AND EXHAUST SYSTEM

## 241-9092 MOUNTING GP-TURBOCHARGER

SMCS-1052

i02117267

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	1S-4295	1	GASKET (TURBOCHARGER)						
M	3E-8017	4	LOCKNUT (M10X1.5-MM THD)						
M-METRIC PART									

<END>

# AIR INLET AND EXHAUST SYSTEM

## 264-2952 MOUNTING GP-TURBOCHARGER

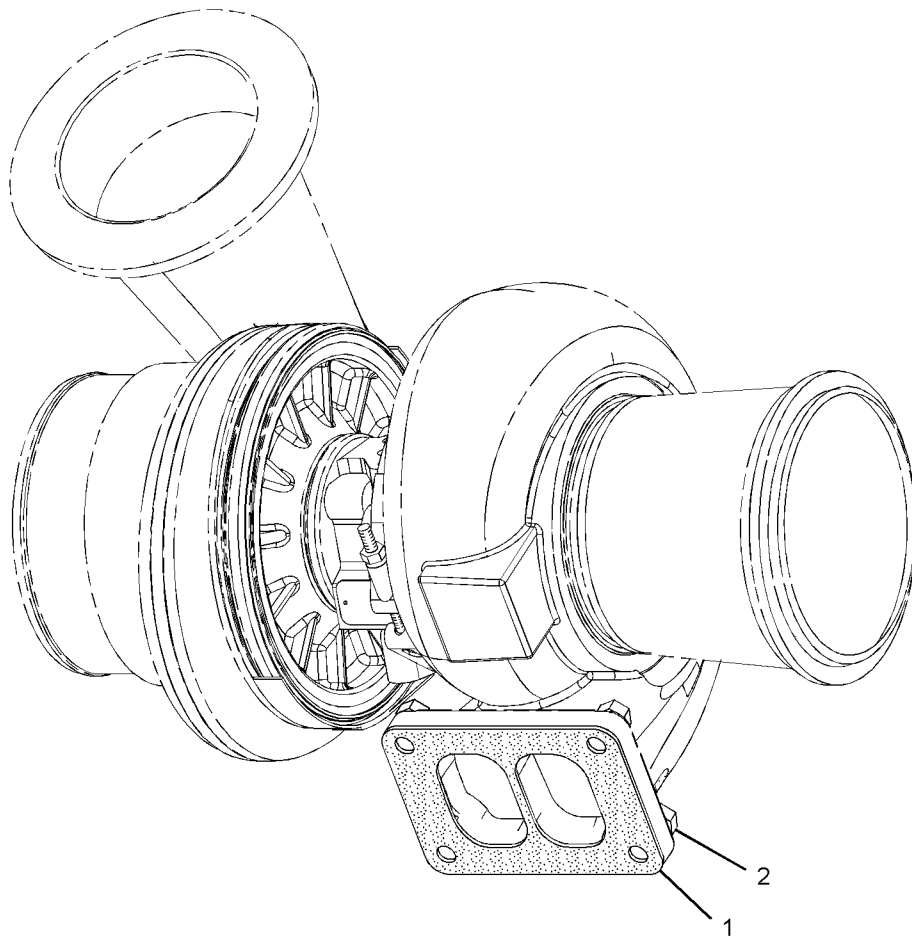
S/N: GLS117-UP

SMCS-1052

i02283736

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1S-4295</b>	1	GASKET (TURBOCHARGER)						
M	2	1	<b>3E-8017</b>	4	LOCKNUT (M10X1.5-MM THD)						

M-METRIC PART



GRAPHIC #1

<END>

g01147094

# AIR INLET AND EXHAUST SYSTEM

## 5L-8632 PIPE GP-EXHAUST

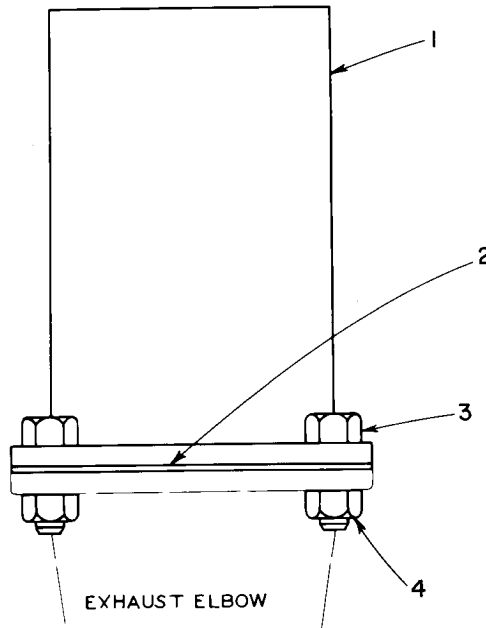
127 MM (5 INCH) DIA

AN ATTACHMENT

SMCS-1061

i01508871

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5L-8605	1	PIPE AS-EXHAUST						
	2	1	5L-8484	1	GASKET						
	3	1	8T-9393	4	BOLT (5/8-11X1.5 IN)						
	4	1	1B-5358	4	NUT-FULL						



GRAPHIC #1

<END>

g00200874

# AIR INLET AND EXHAUST SYSTEM

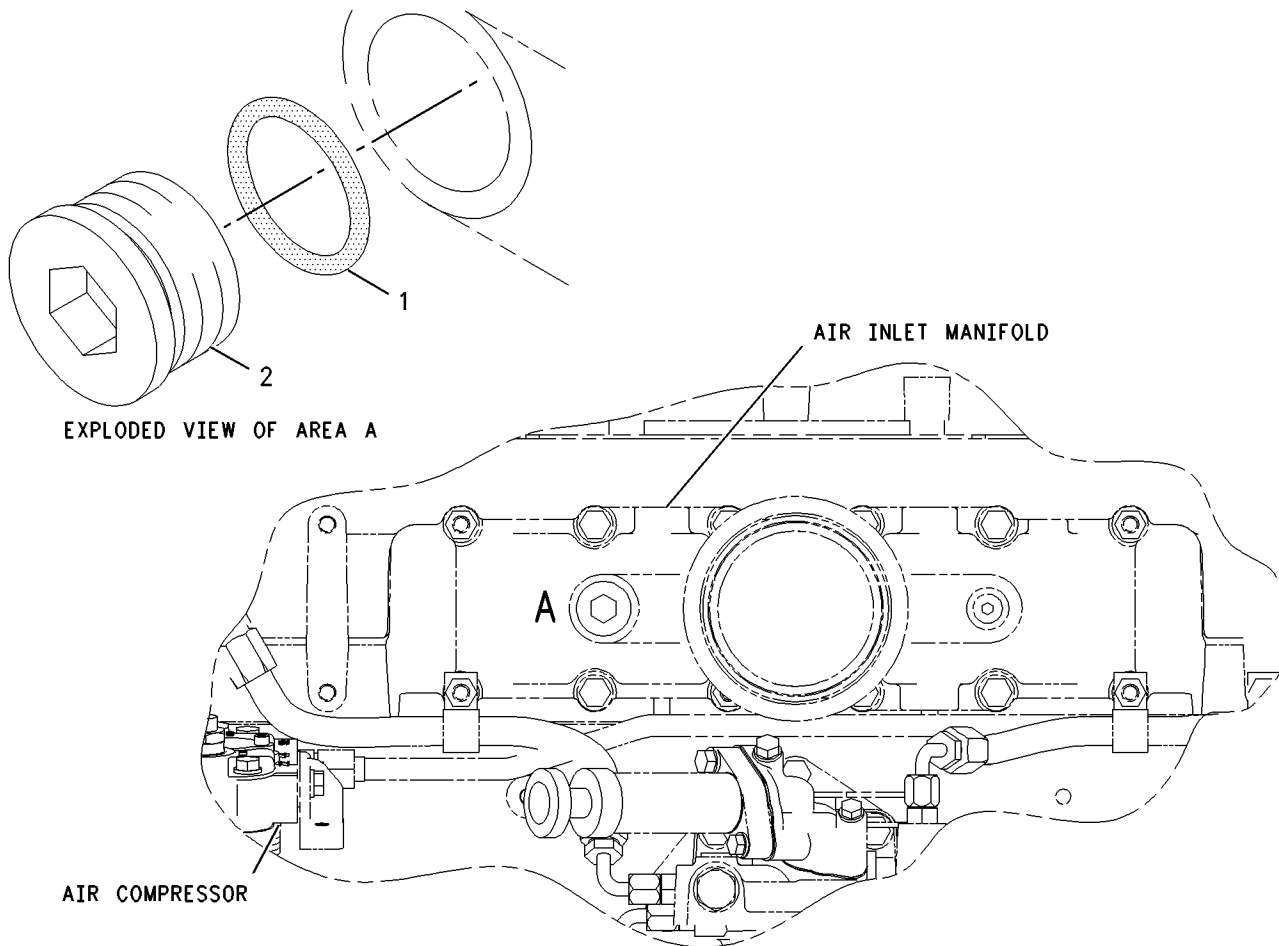
## 227-5518 PLUG GP-AIR INLET MANIFOLD

PROVIDES PLUG WHEN NO AIR COMPRESSOR AIR LINES ARE USED  
ALSO AN ATTACHMENT

SMCS-1058

i01862517

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	189-9377	1	SEAL-O-RING						
	2	1	9S-8008	1	PLUG						



LEFT SIDE VIEW

GRAPHIC #1

<END>

g00951570



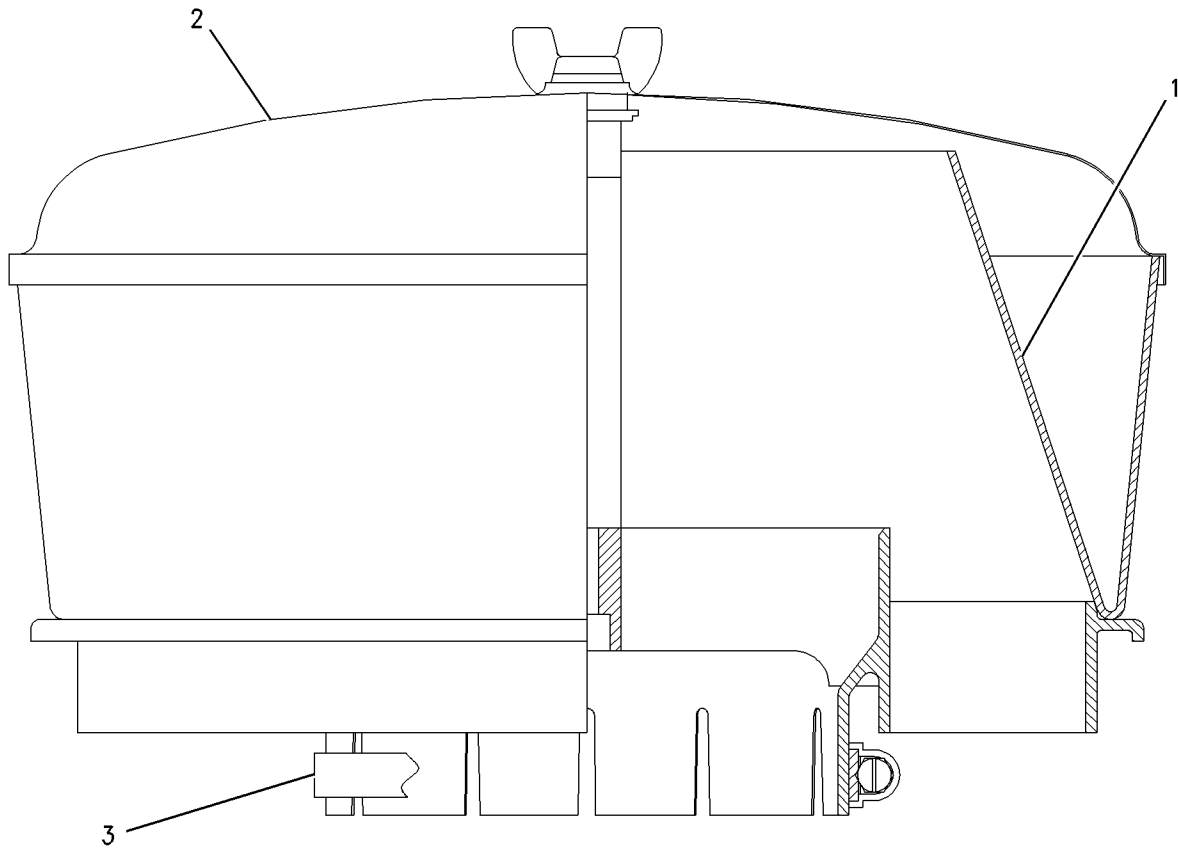
# AIR INLET AND EXHAUST SYSTEM

## 150-1714 PRECLEANER GP-AIR FITS OVER 177.8 MM (7 INCH) DIA INLET TUBE FOR USE WITH DUAL ELEMENT AIR CLEANER AN ATTACHMENT

SMCS-1055

i01476323

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>2S-6708</b>	1	COLLECTOR-DUST						
	2	1	<b>2S-2493</b>	1	COVER AS-PRECLEANER						
	3	1	<b>5P-0600</b>	1	CLAMP (HOSE)						



GRAPHIC #1

<END>

g00769430

# AIR INLET AND EXHAUST SYSTEM

## 267-1355 SHUTOFF GP-AIR

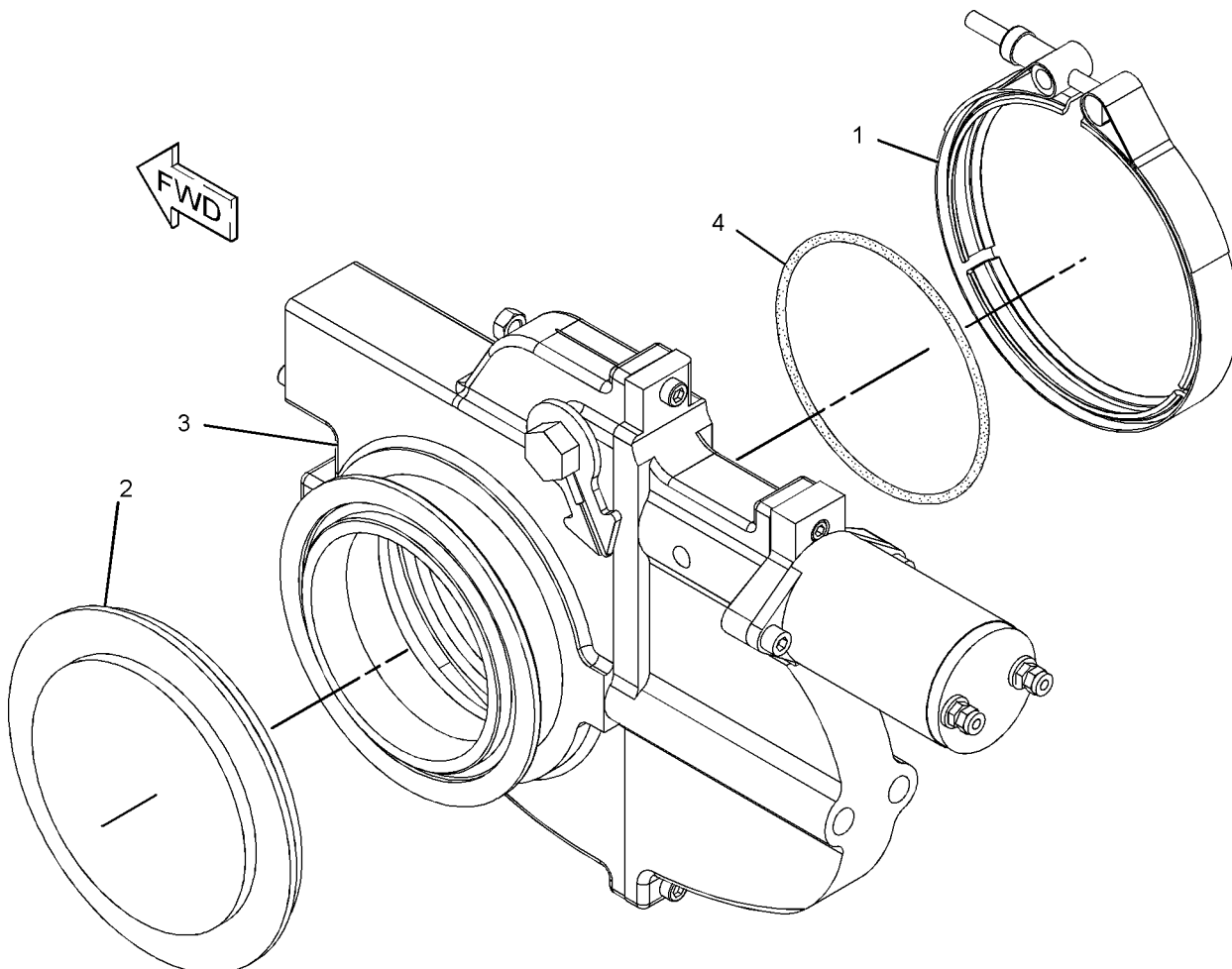
FOR USE WITH 24-VOLT RIGSAVER  
AN ATTACHMENT

SMCS-1078

i02301110

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	248-4841	1	CLAMP-BAND						
	2	1	250-8346	1	COVER						
Y	3	1	267-1360	1	SHUTOFF GP-AIR						281
	4	1	6V-6353	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01153179

# AIR INLET AND EXHAUST SYSTEM

## 267-1360 SHUTOFF GP-AIR

24-VOLT

PART OF 267-1355 SHUTOFF GP-AIR  
AN ATTACHMENT

SMCS-1078

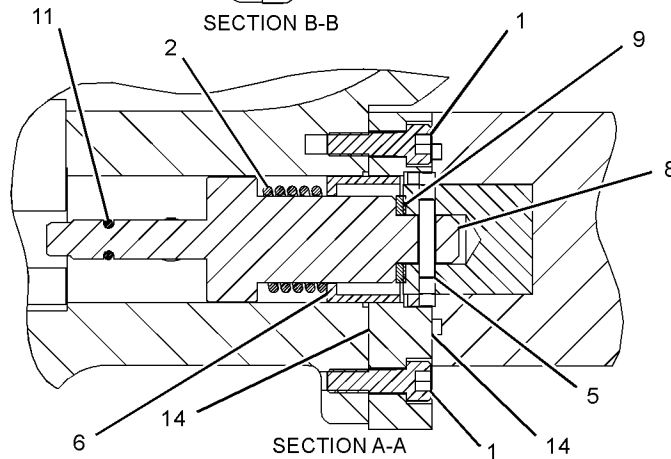
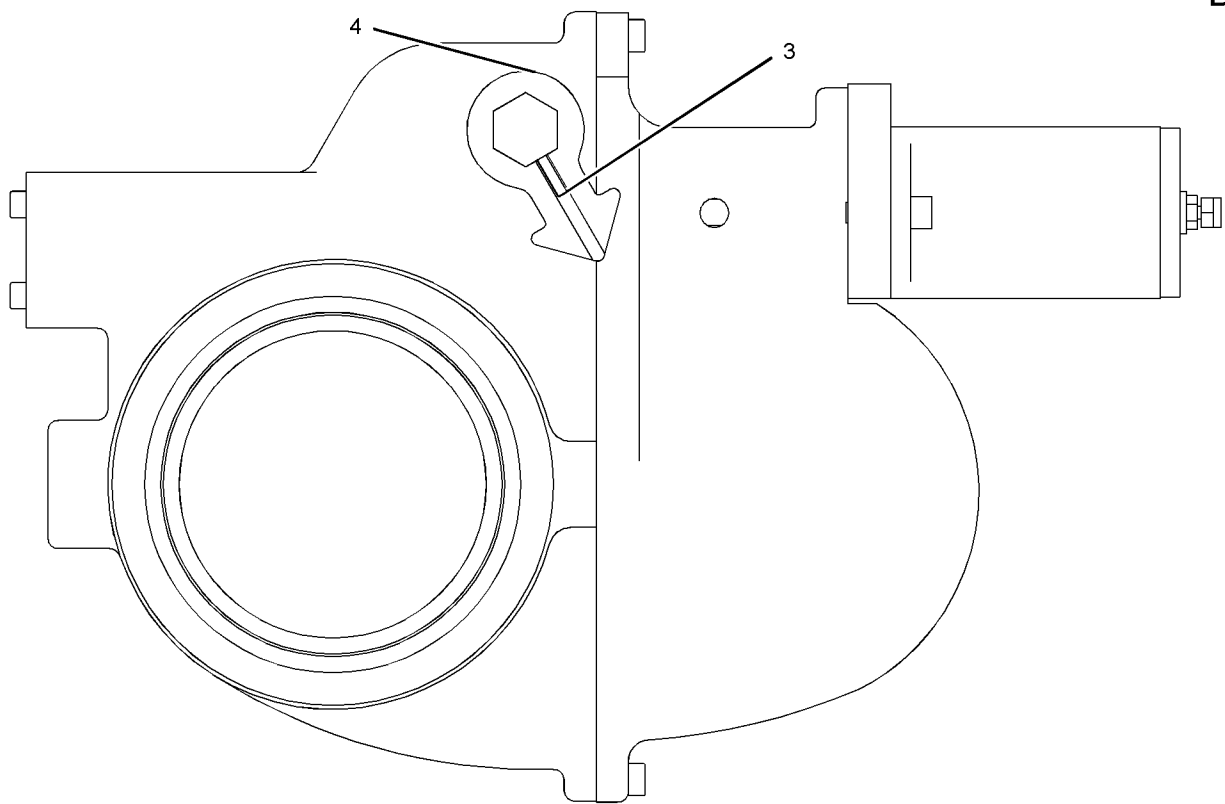
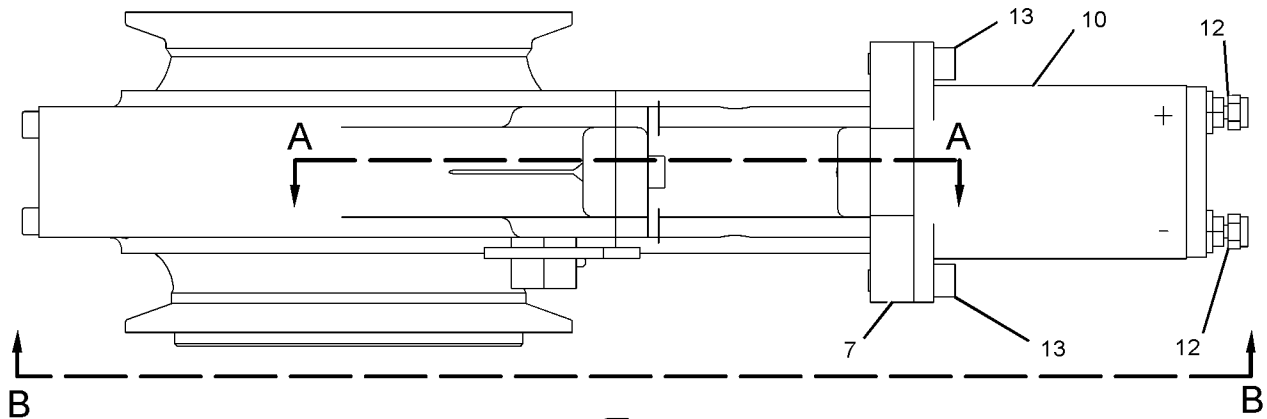
i02301163

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2H-0191	2	BOLT (10-24X0.625-IN)						
	2	1	215-5519	1	SPRING						
	3	1	233-6205	1	PIN-SPRING						
	4	1	242-7499	1	INDICATOR (AIR SHUTOFF)						
	5	1	244-2674	1	PIN						
	6	1	244-2676	1	RETAINER						
	7	1	244-2677	1	ADAPTER						
	8	1	244-2678	1	SPINDLE						
	9	1	244-2679	1	WASHER-SPRING						
	10	1	267-2170	1	SOLENOID-SHUTOFF (24-VOLT) (AIR RIGSAVER)						
	11	1	150-8698	1	SEAL-O-RING						
	12	1	6D-5801	2	NUT (8-32-THD)						
	13	1	8H-3127	2	BOLT (1/4-20X0.75-IN)						
B	14	1	4C-9614		SEALANT-SILICONE (RED RTV)						
B-USE AS REQUIRED											

# AIR INLET AND EXHAUST SYSTEM

267-1360 SHUTOFF GP-AIR (contd.)

i02301163



GRAPHIC #1

<END>

g01153157

# AIR INLET AND EXHAUST SYSTEM

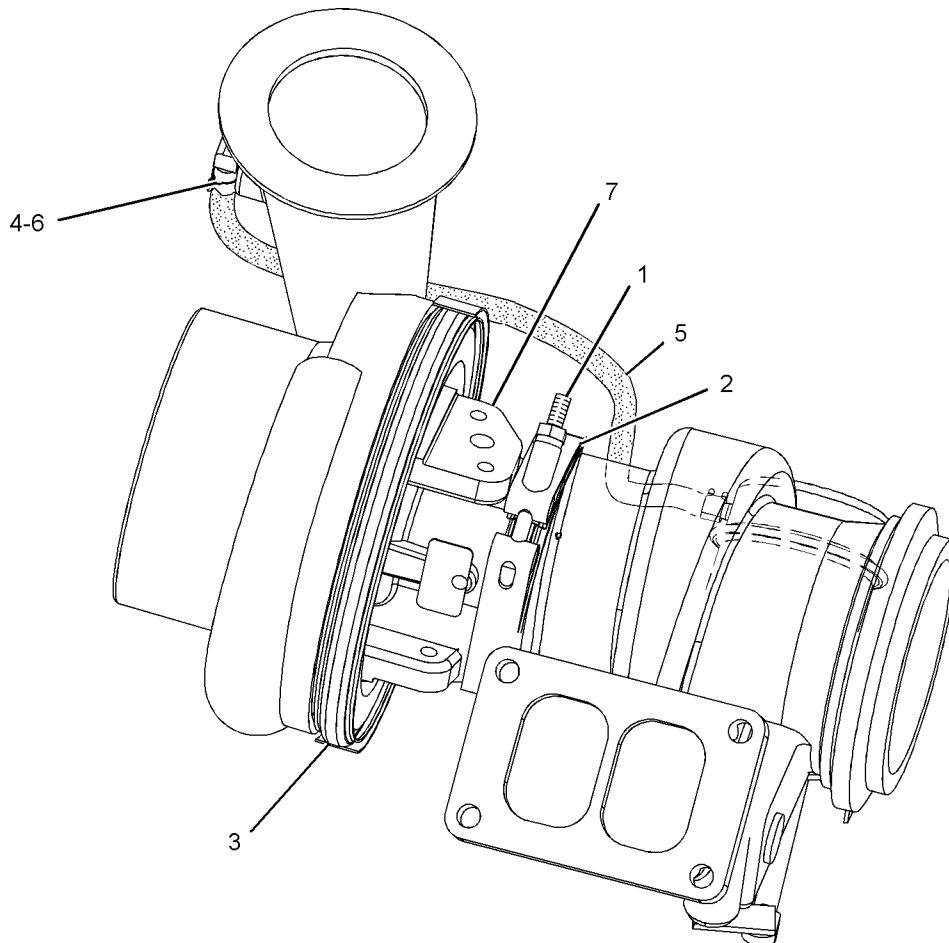
## 234-6757 TURBOCHARGER GP

PART OF 234-6759 TURBOCHARGER GP  
AN ATTACHMENT

SMCS-1052, 1053

i02250626

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	2	1	123-8253	1	CLAMP AS (TURBINE)						
	3	1	135-7875	1	CLAMP AS-COMPRESSOR						
	4	1	161-6958	1	CLIP-HOSE						
	5	1	161-6960	1	HOSE (WASTE GATE)						
	6	1	161-6963	2	CLAMP						
	7	1	240-7988	1	CARTRIDGE GP-TURBOCHARGER						



GRAPHIC #1

<END>

g01082325

# AIR INLET AND EXHAUST SYSTEM

## 234-6759 TURBOCHARGER GP

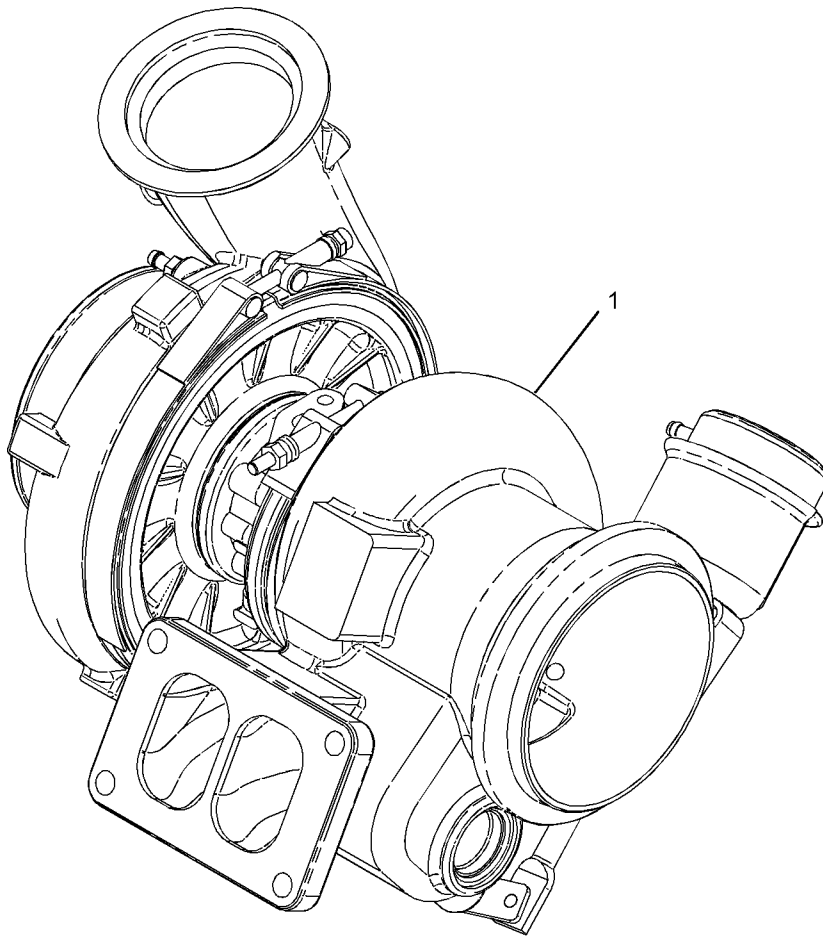
AN ATTACHMENT

SMCS-1052, 1053

i02068604

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	234-6757	1	TURBOCHARGER GP						283

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01060439

# AIR INLET AND EXHAUST SYSTEM

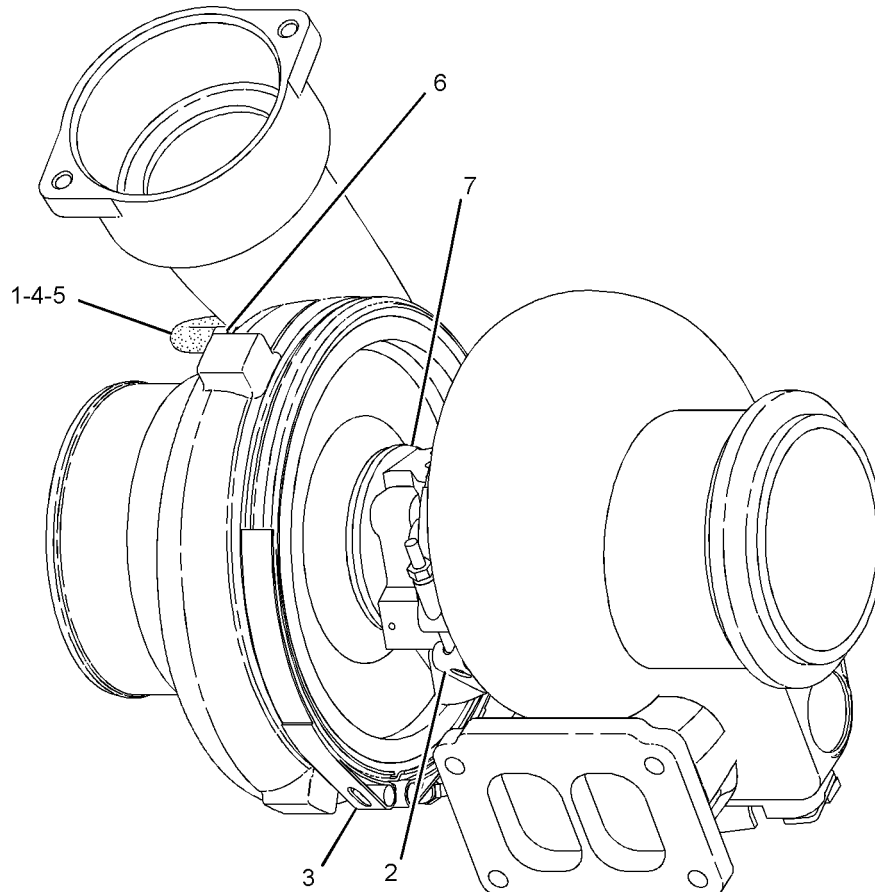
## 238-4450 TURBOCHARGER GP

PART OF 238-4453 TURBOCHARGER GP  
ALSO AN ATTACHMENT

SMCS-1052, 1053

i02136630

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	2	1	123-8253	1	CLAMP AS (TURBINE)						
	3	1	135-7875	1	CLAMP AS-COMPRESSOR						
	4	1	161-6958	1	CLIP-HOSE						
	5	1	161-6960	1	HOSE (WASTEGATE)						
	6	1	161-6963	2	CLAMP						
	7	1	249-2457	1	CARTRIDGE GP-TURBOCHARGER						



GRAPHIC #1

<END>

g01087138

# AIR INLET AND EXHAUST SYSTEM

## 238-4453 TURBOCHARGER GP

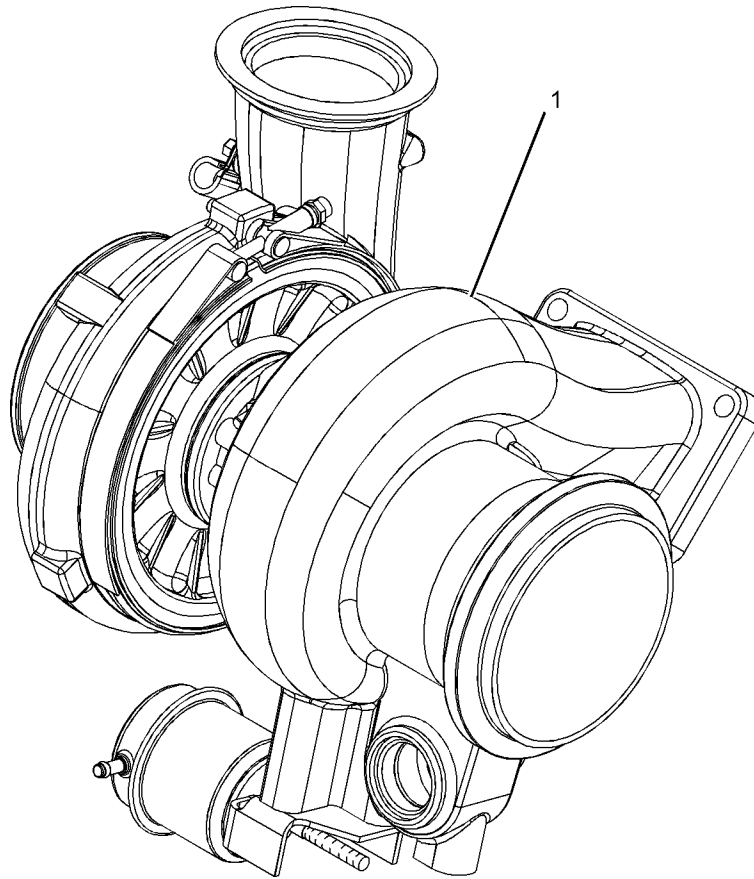
ALSO AN ATTACHMENT

SMCS-1052, 1053

i02136625

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	238-4450	1	TURBOCHARGER GP						285

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01087144



# AIR INLET AND EXHAUST SYSTEM

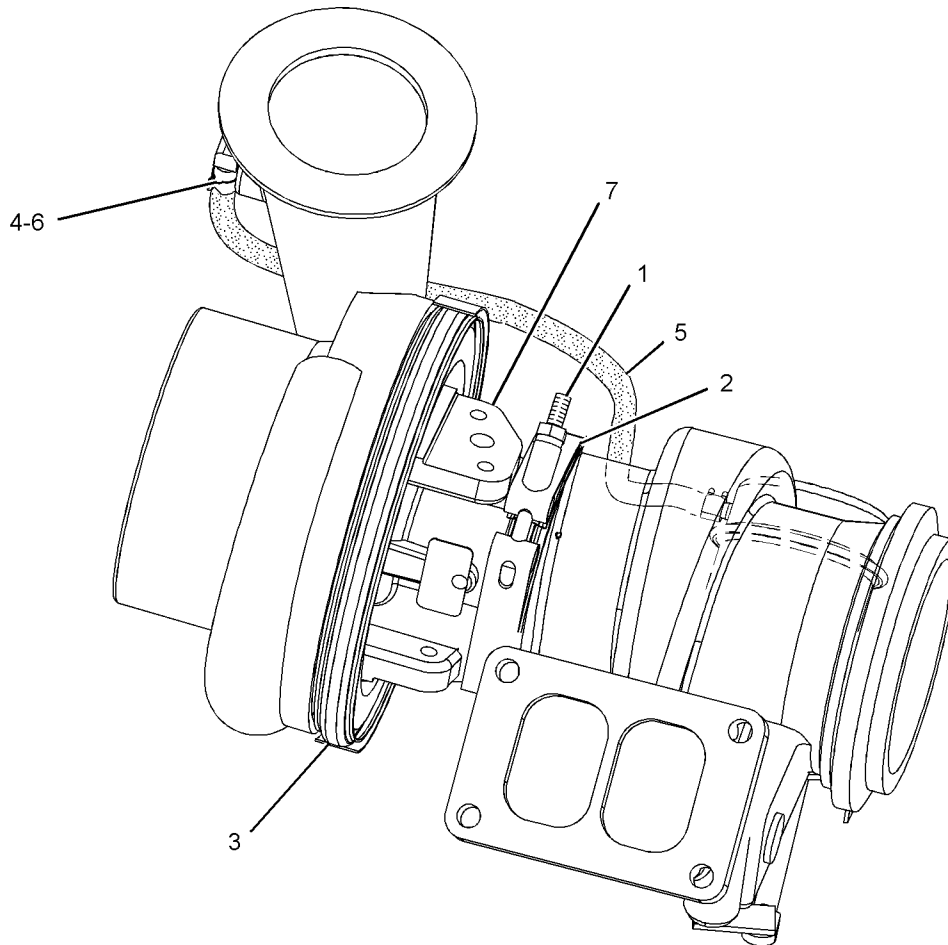
## 252-9698 TURBOCHARGER GP

PART OF 253-4518 TURBOCHARGER GP  
AN ATTACHMENT

SMCS-1052, 1053

i02125559

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	2	1	123-8253	1	CLAMP AS (TURBINE)						
		1	7M-9918	1	LOCKNUT (1/4-28-THD)						
	3	1	135-7875	1	CLAMP AS-COMPRESSOR						
		1	7M-9918	1	LOCKNUT (1/4-28-THD)						
	4	1	161-6958	1	CLIP-HOSE						
	5	1	161-6960	1	HOSE (WASTEGATE)						
	6	1	161-6963	2	CLAMP						
	7	1	240-7988	1	CARTRIDGE GP-TURBOCHARGER						



GRAPHIC #1

<END>

g01082325

# AIR INLET AND EXHAUST SYSTEM

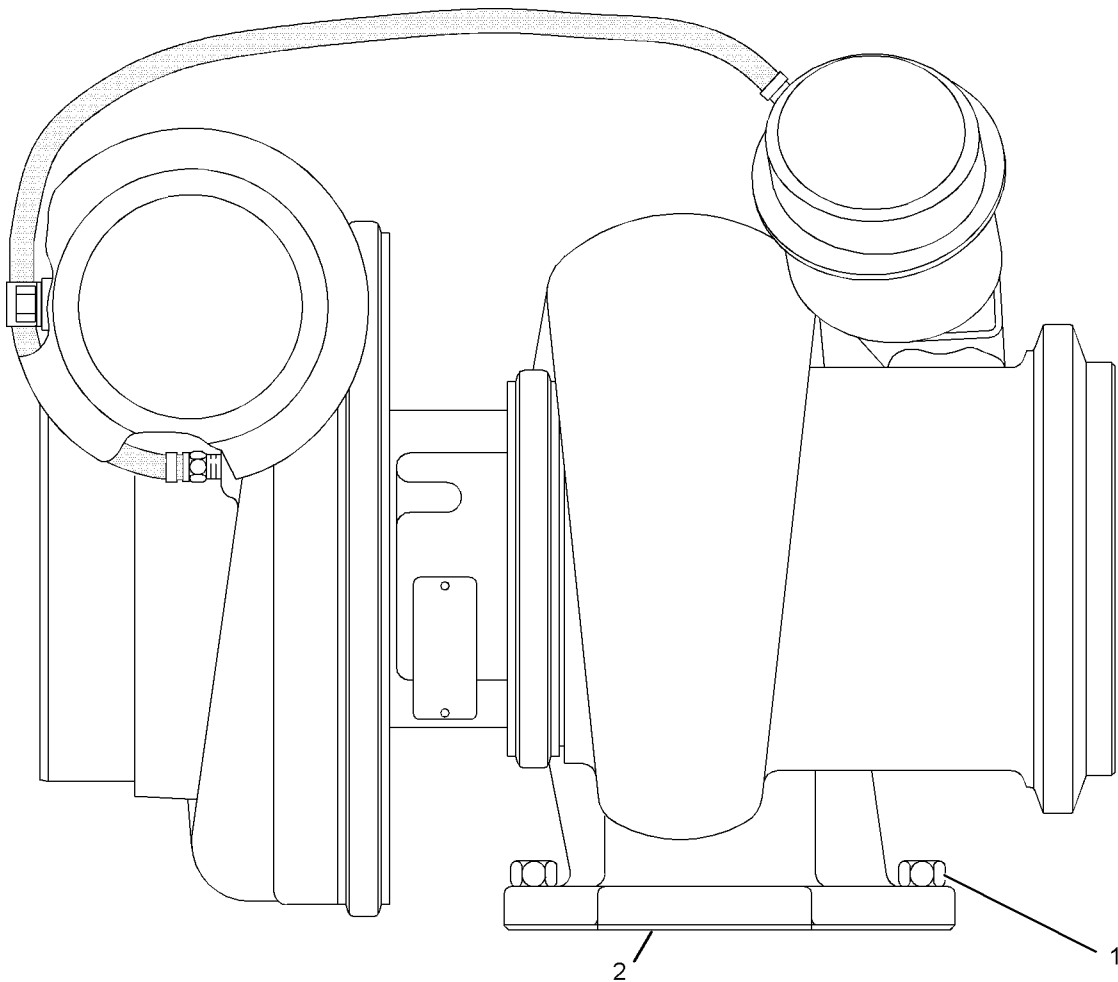
## 253-4100 TURBOCHARGER GP

SMCS-1052, 1053

i02125049

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	3E-8017	4	LOCKNUT (M10X1.5-MM THD)						
	2	1	1S-4295	1	GASKET (TURBOCHARGER)						

M-METRIC PART



GRAPHIC #1

<END>

g01081492

# AIR INLET AND EXHAUST SYSTEM

## 253-4518 TURBOCHARGER GP

EXHAUST REAR  
AN ATTACHMENT

SMCS-1052, 1053

i02125558

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	252-9698	1	TURBOCHARGER GP						287

Y-SEPARATE ILLUSTRATION

<END>

# AIR INLET AND EXHAUST SYSTEM

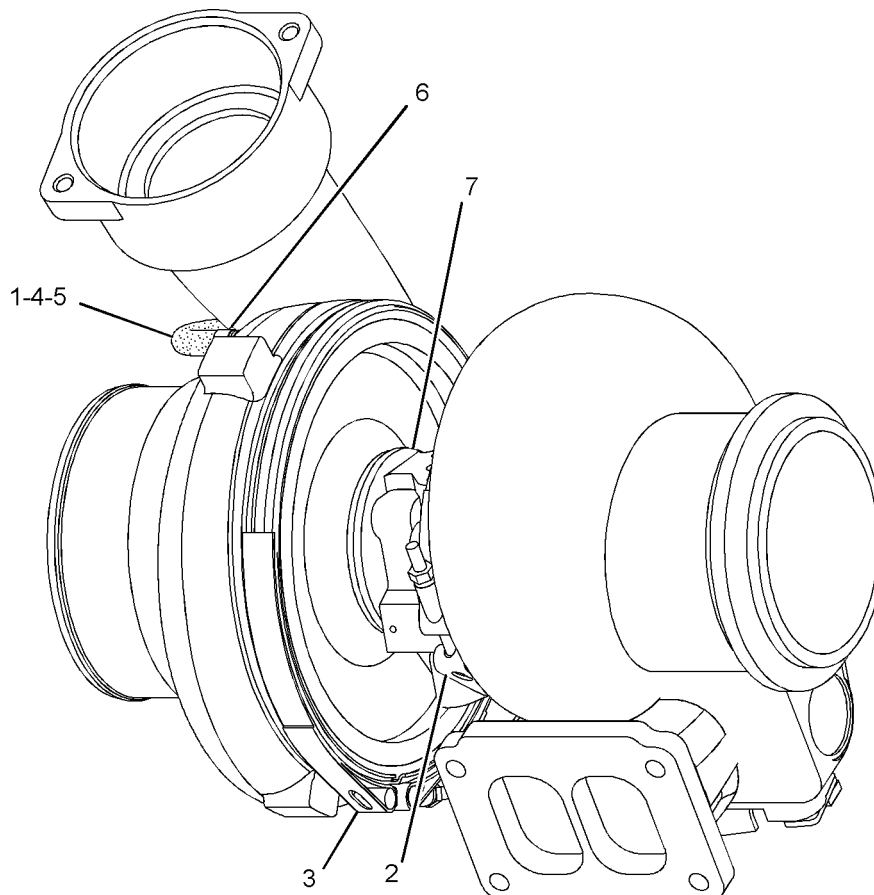
## 255-8140 TURBOCHARGER GP

PART OF 264-1416 TURBOCHARGER GP  
AN ATTACHMENT

SMCS-1052, 1053

i02281597

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	2	1	123-8253	1	CLAMP AS (TURBINE)						
	3	1	135-7875	1	CLAMP AS-COMPRESSOR						
	4	1	161-6958	1	CLIP-HOSE						
	5	1	161-6960	1	HOSE (WASTEGATE)						
	6	1	161-6963	2	CLAMP						
	7	1	240-7988	1	CARTRIDGE GP-TURBOCHARGER						



GRAPHIC #1

<END>

g01152404

# AIR INLET AND EXHAUST SYSTEM

## 264-1416 TURBOCHARGER GP

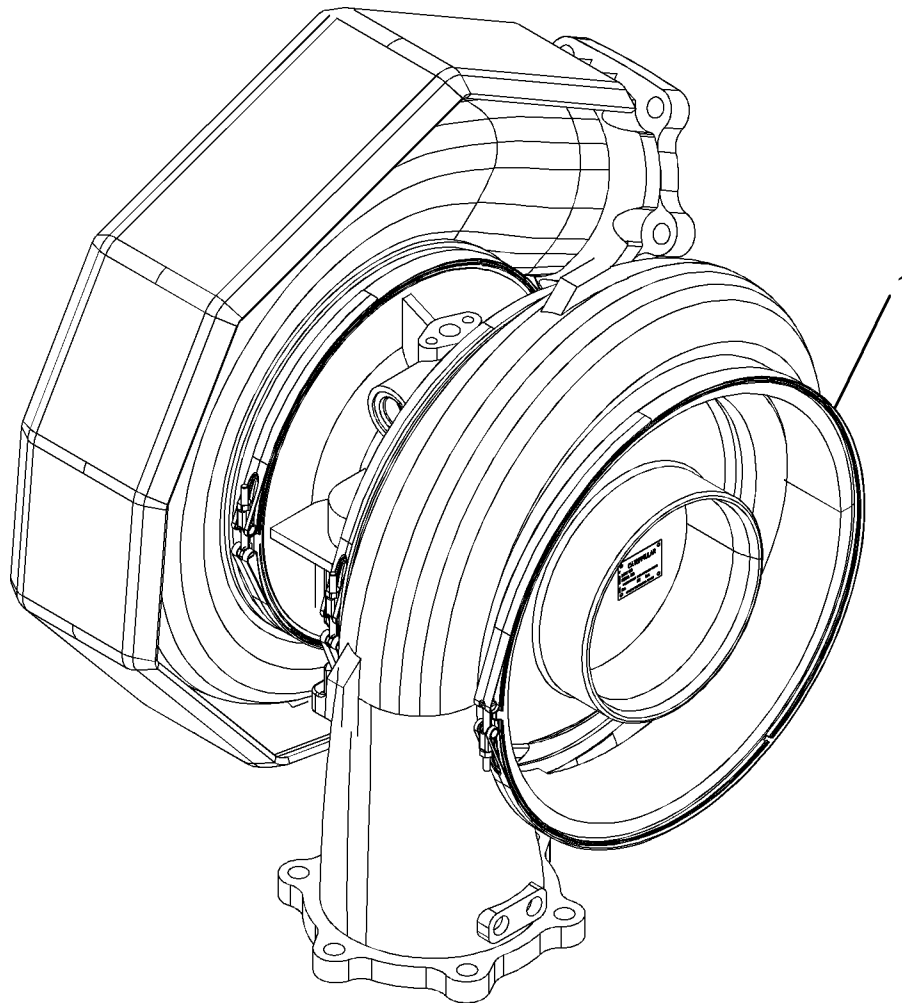
FOR USE WITH EXHAUST FORWARD EXHAUST MANIFOLD GROUP  
AN ATTACHMENT

SMCS-1052, 1053

i02281594

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	255-8140	1	TURBOCHARGER GP						290

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01152408

# AIR INLET AND EXHAUST SYSTEM

## 264-1417 TURBOCHARGER GP

PART OF 264-1425 TURBOCHARGER GP  
AN ATTACHMENT

SMCS-1052, 1053

i02232618

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	161-6963	2	CLAMP						
	123-8253	1	CLAMP AS (TURBINE)						
	7M-9918	1	LOCKNUT (1/4-28-THD)						
	135-7875	1	CLAMP AS-COMPRESSOR						
	7M-9918	1	LOCKNUT (1/4-28-THD)						
	161-6958	1	CLIP-HOSE						
E	242-3360		HOSE (49-CM)						

E-ORDER BY THE CENTIMETER

<END>

# AIR INLET AND EXHAUST SYSTEM

## 264-1418 TURBOCHARGER GP

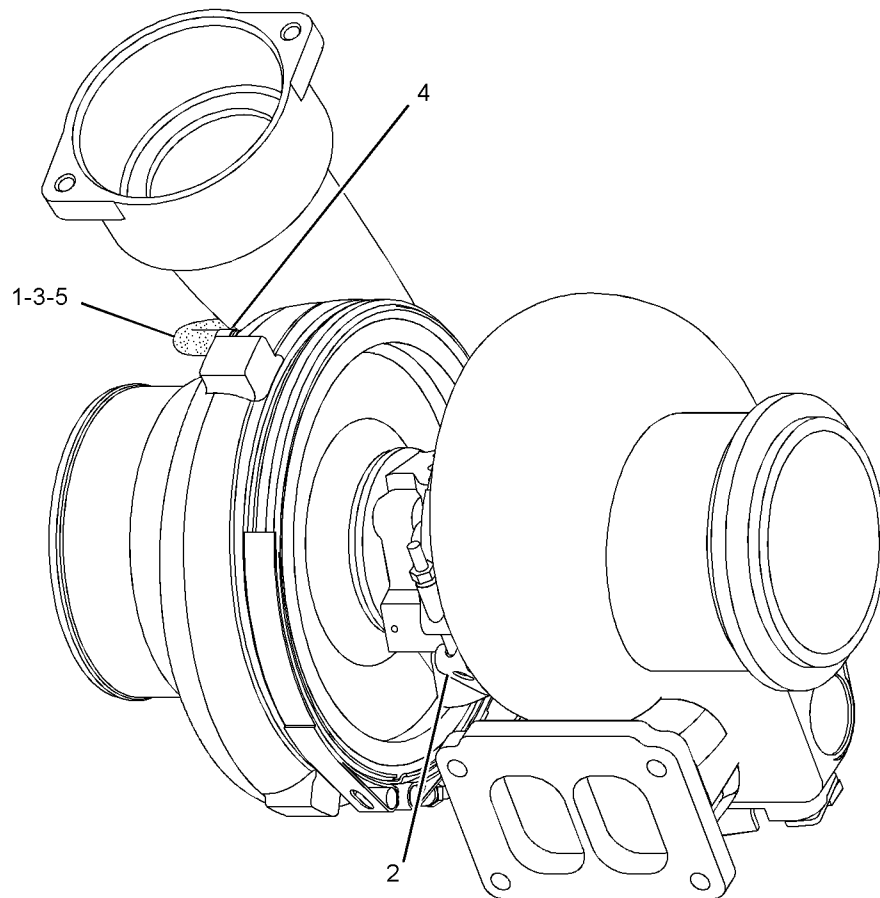
FORWARD EXHAUST CONFIGURED  
PART OF 264-1426 TURBOCHARGER GP  
AN ATTACHMENT

SMCS-1052, 1053

i02232607

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	115-7087	1	BOLT (M6X0.04X10.4-MM)						
	2	1	123-8253	1	CLAMP AS (TURBINE)						
		1	7M-9918	1	LOCKNUT (1/4-28-THD)						
	3	1	161-6958	1	CLIP-HOSE						
	4	1	161-6963	2	CLAMP						
E	5	1	242-3360		HOSE (49-CM WASTEGATE)						

E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g01138300

# AIR INLET AND EXHAUST SYSTEM

## 264-1425 TURBOCHARGER GP

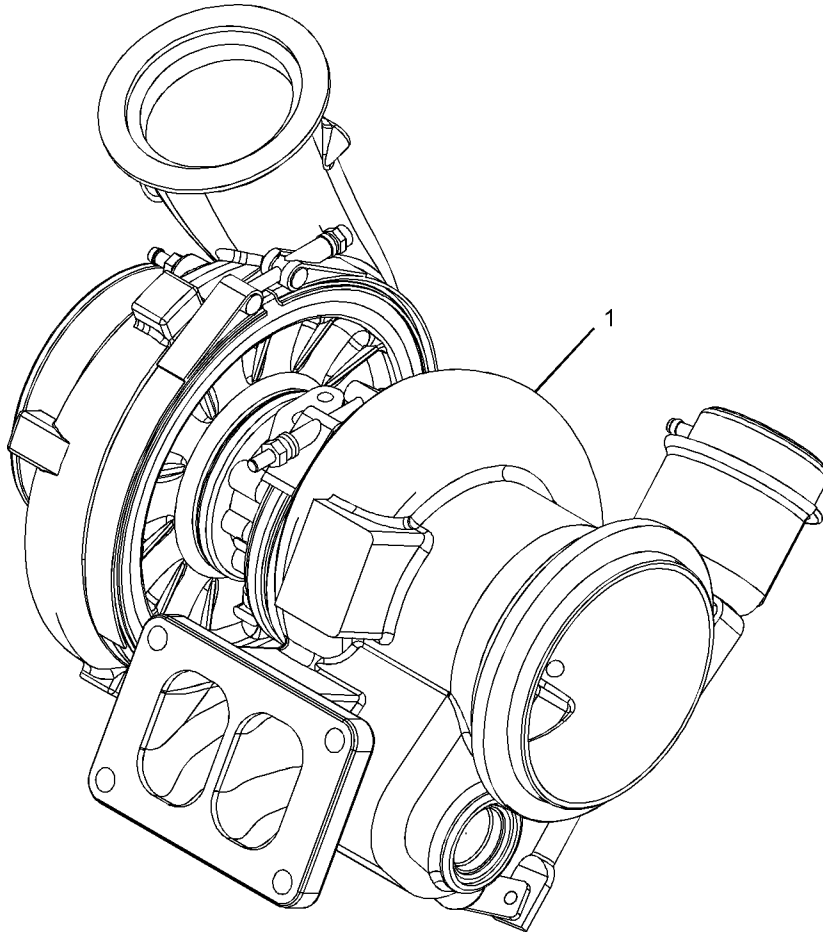
REAR EXHAUST CONFIGURATION  
AN ATTACHMENT

SMCS-1052, 1053

i02232615

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	264-1417	1	TURBOCHARGER GP						292

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01138314



# AIR INLET AND EXHAUST SYSTEM

## 264-1426 TURBOCHARGER GP

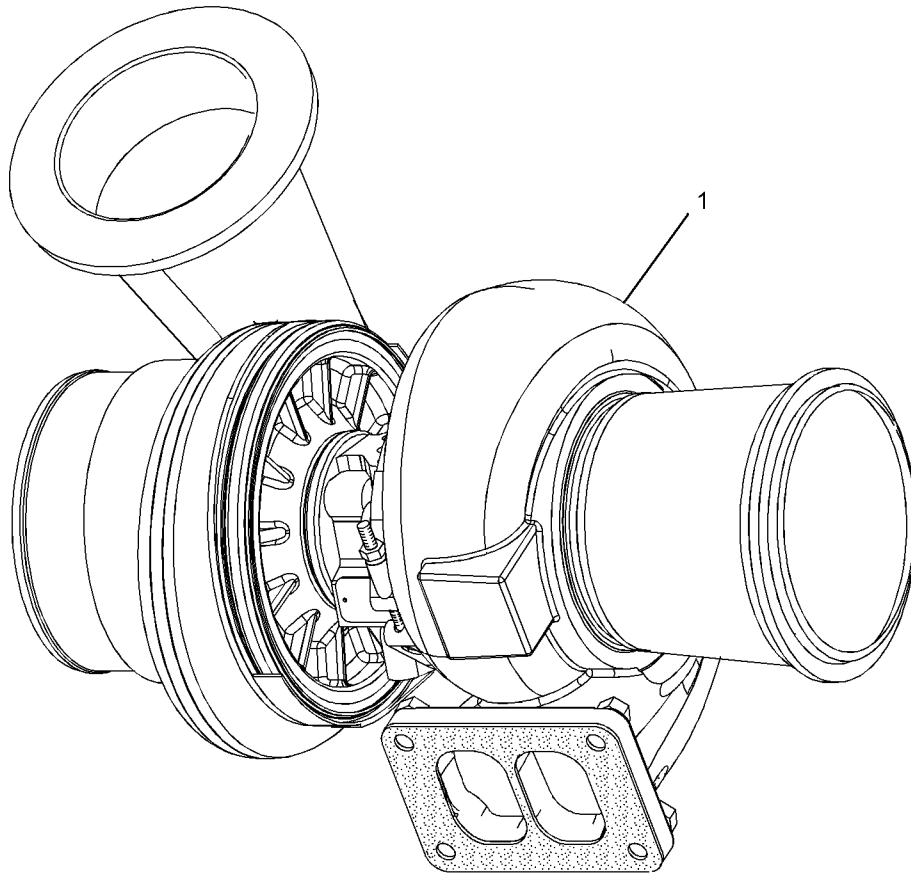
EXHAUST FORWARD CONFIGURATION  
AN ATTACHMENT

SMCS-1052, 1053

i02232603

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	264-1418	1	TURBOCHARGER GP						293

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01138321

# FUEL SYSTEM

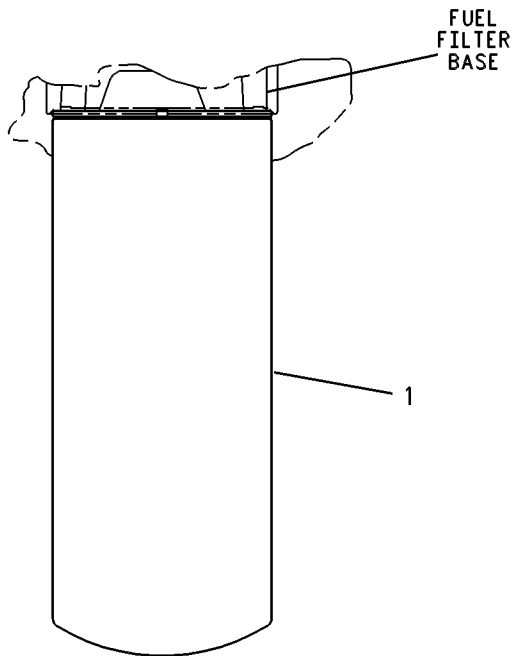
## 116-5436 FILTER GP-FUEL

HIGH EFFICIENCY  
ALSO AN ATTACHMENT

SMCS-1261

i01250482

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1R-0762	1	FILTER AS-FUEL						



GRAPHIC #1

<END>

g00269424

# FUEL SYSTEM

## 243-3026 FILTER GP-FUEL

FOR USE WITH FRONT MOUNTED FUEL TRANSFER PUMP, 243-3023-PAGE 119  
ALSO AN ATTACHMENT

SMCS-1261

i02125824

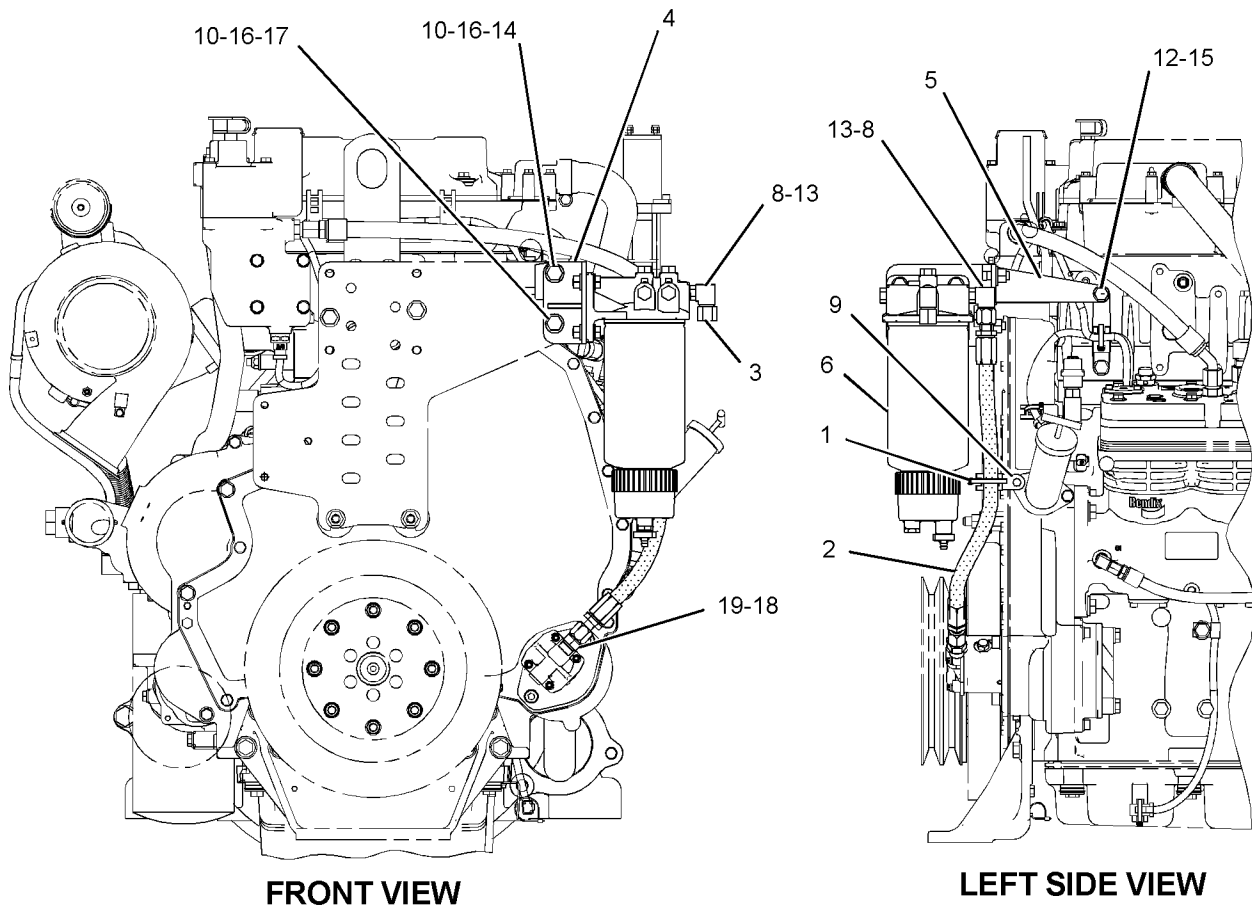
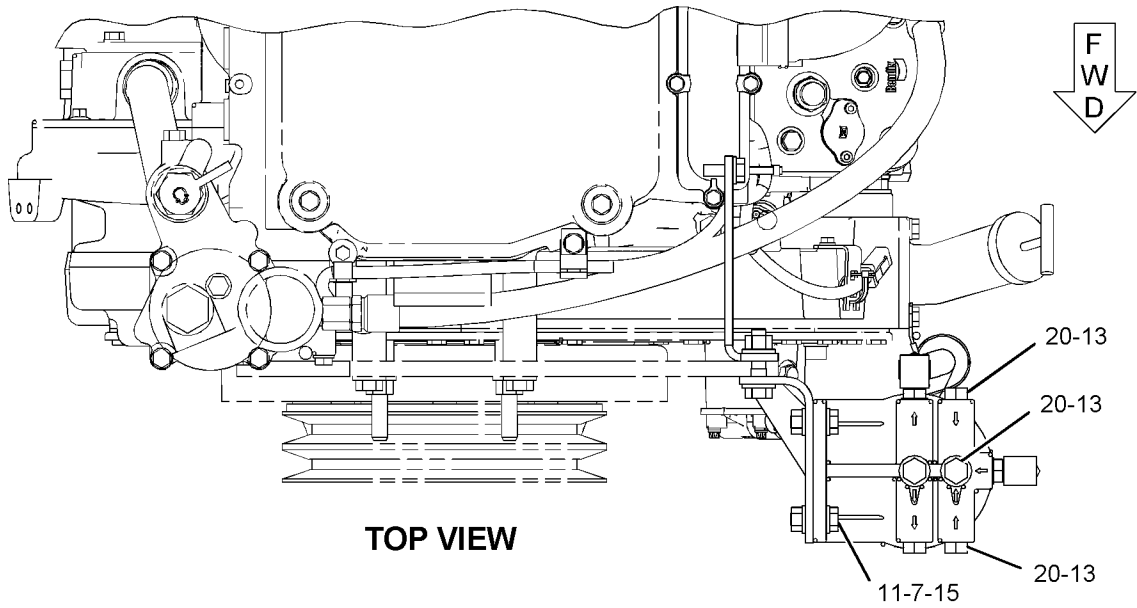
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3S-2093</b>	1	STRAP-CABLE						
I	2	1	<b>6I-4027</b>	1	HOSE AS						
	3	1	<b>8S-4951</b>	1	CAP (FLARED)						
	4	1	<b>243-3027</b>	1	BRACKET AS						
	5	1	<b>243-3028</b>	1	BRACKET						
Y	6	1	<b>212-9431</b>	1	FILTER GP-WATER SEP & FUEL						299
M	7	1	<b>2Y-5829</b>	4	NUT (M10X1.5-THD)						
	8	1	<b>4K-6297</b>	2	ELBOW						
	9	1	<b>4P-7581</b>	1	CLIP						
	10	1	<b>5P-8245</b>	4	WASHER-HARD (13.5X25.5X3-MM THK)						
M	11	1	<b>6V-1820</b>	4	BOLT (M10X1.5X30-MM)						
M	12	1	<b>6V-4248</b>	1	BOLT (M10X1.5X25-MM)						
	13	1	<b>6V-5049</b>	7	SEAL-O-RING						
M	14	1	<b>6V-5684</b>	1	BOLT (M12X1.75X45-MM)						
	15	1	<b>6V-5839</b>	9	WASHER (11X21X2.5-MM THK)						
M	16	1	<b>6V-8149</b>	2	NUT (M12X1.75-THD)						
M	17	1	<b>6V-8197</b>	1	BOLT (M12X1.75X40-MM)						
	18	1	<b>8L-2786</b>	1	SEAL-O-RING						
	19	1	<b>8M-0505</b>	1	CONNECTOR						
	20	1	<b>9S-4191</b>	5	PLUG						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# FUEL SYSTEM

243-3026 FILTER GP-FUEL (contd.)

i02125824



GRAPHIC #1

<END>

g01082275

# FUEL SYSTEM

## 212-9431 FILTER GP-WATER SEP & FUEL

PART OF 243-3026 FILTER GP-FUEL

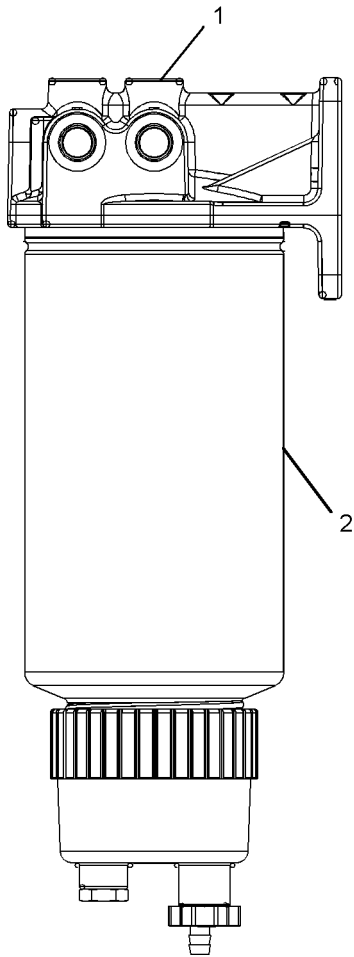
ALSO AN ATTACHMENT

SMCS-1261, 1263

i02116123

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	177-9778	1	BASE AS						
Y	2	1	212-9580	1	FILTER GP-WATER SEP & FUEL						300

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01078385

# FUEL SYSTEM

## 212-9580 FILTER GP-WATER SEP & FUEL

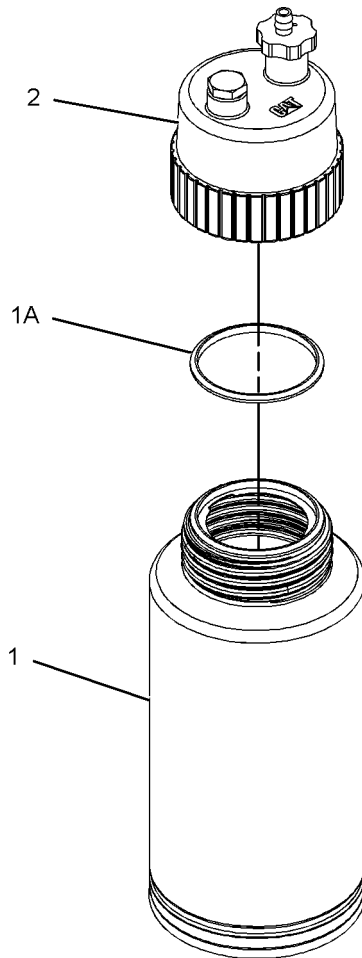
PART OF 212-9431 FILTER GP-WATER SEP & FUEL

ALSO AN ATTACHMENT

SMCS-1261, 1263

i02138805

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1R-0771	1	FILTER AS-FUEL						
	1A	1	220-8678	1	SEAL (WATER SEPARATOR, FUEL)						
	2	1	173-7126	1	BOWL AS						



GRAPHIC #1

<END>

g01078201

# FUEL SYSTEM

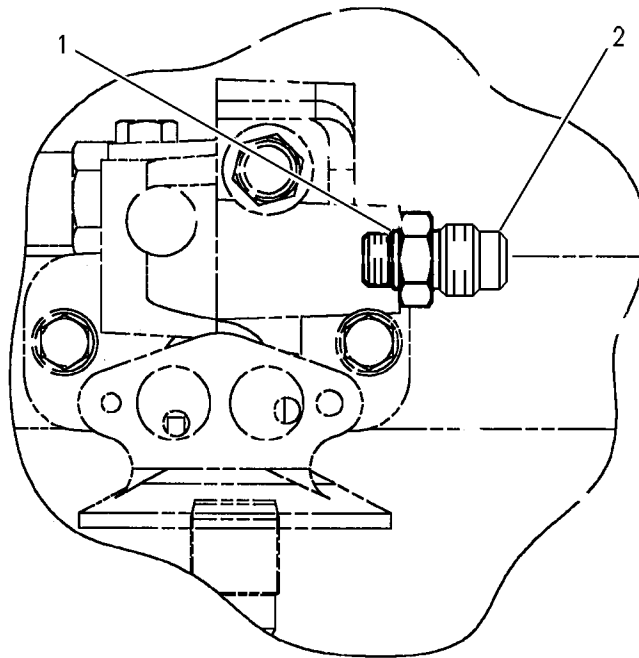
## 116-5419 FITTING GP-FUEL LINES

3/4-16X45 DEGREE FLARE- #8 STRAIGHT CONNECTOR  
AN ATTACHMENT

SMCS-1274

i00829511

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3J-1907	1	SEAL-O-RING						
	2	1	107-9343	1	CONNECTOR						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00262104

# FUEL SYSTEM

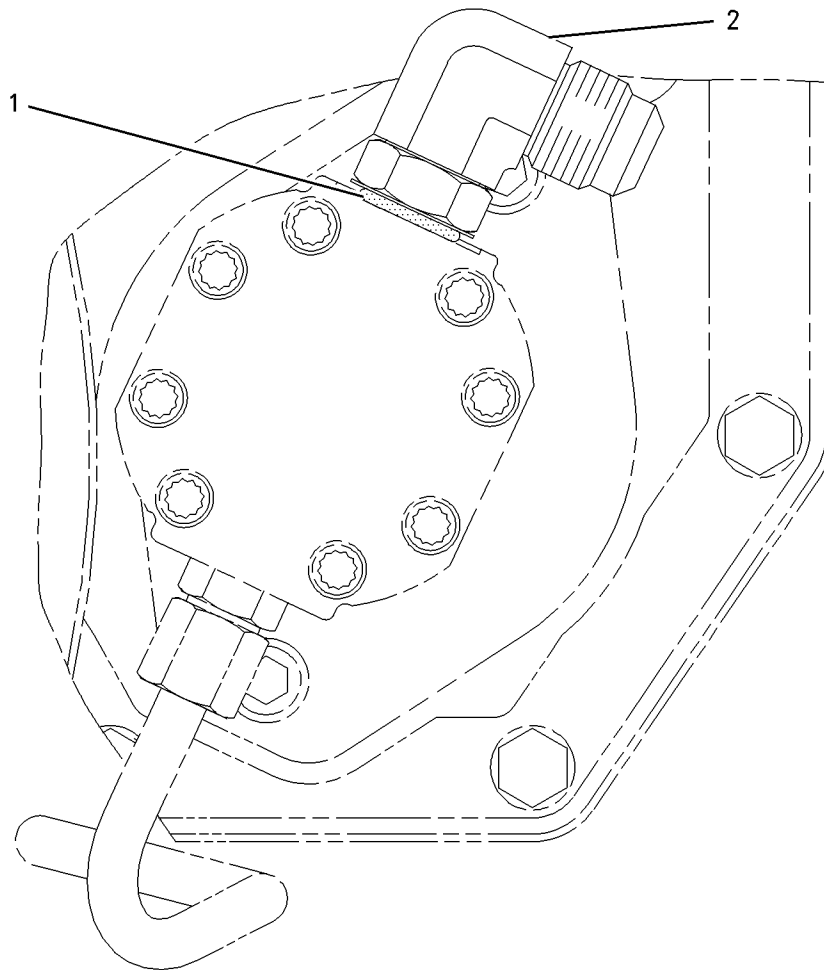
## 116-5420 FITTING GP-FUEL LINES

7/8-14X45-DEG FLARE, 90-DEG ELBOW. #10 FUEL SUPPLY CONNECTION  
AN ATTACHMENT

SMCS-1274

i01602295

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3K-0360	1	SEAL-O-RING						
	2	1	103-4675	1	ELBOW						



GRAPHIC #1

<END>

g00830421



# FUEL SYSTEM

## 116-5437 FITTING GP-FUEL LINES

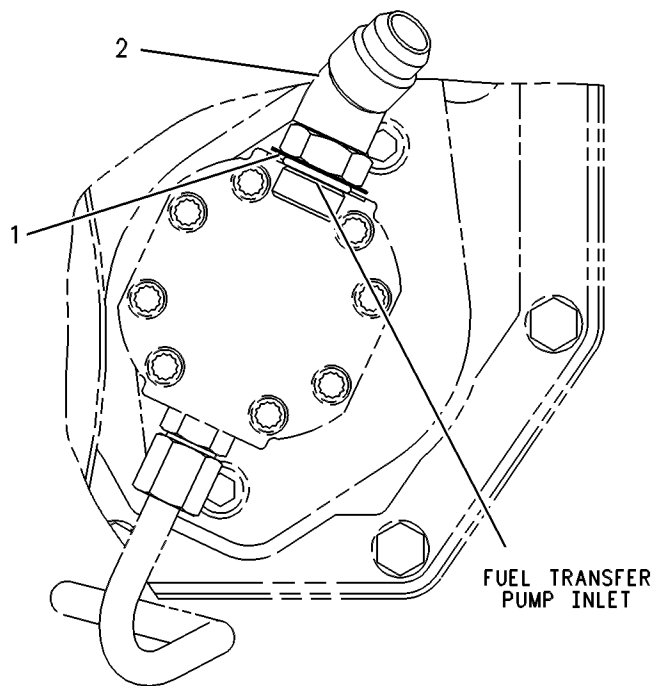
7/8-14X37 DEGREE FLARE, 45 DEGREE ELBOW

FOR USE WITH DUAL SEAT HOSE ENDS  
AN ATTACHMENT

SMCS-1274

i00829410

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3K-0360	1	SEAL-O-RING						
	2	1	141-2375	1	ELBOW						



GRAPHIC #1

<END>

g00271831

# FUEL SYSTEM

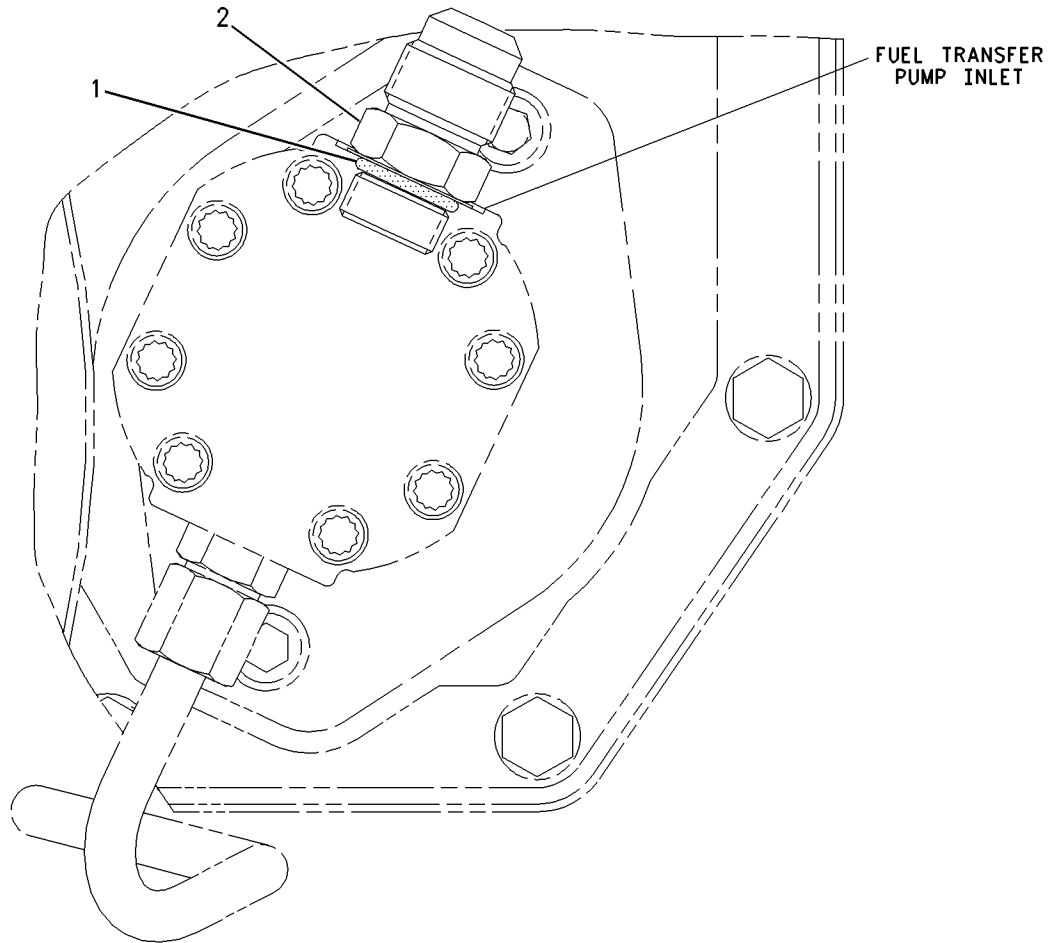
## 117-0183 FITTING GP-FUEL LINES

NUMBER 10 STRAIGHT FUEL INLET FITTING WITHOUT BLEED AND HAS 7/8-14X45-DEG  
FLARE  
AN ATTACHMENT

SMCS-1274

i01515035

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3K-0360	1	SEAL-O-RING						
	2	1	9X-6650	1	CONNECTOR						



FRONT VIEW

GRAPHIC #1

<END>

g00786150

# FUEL SYSTEM

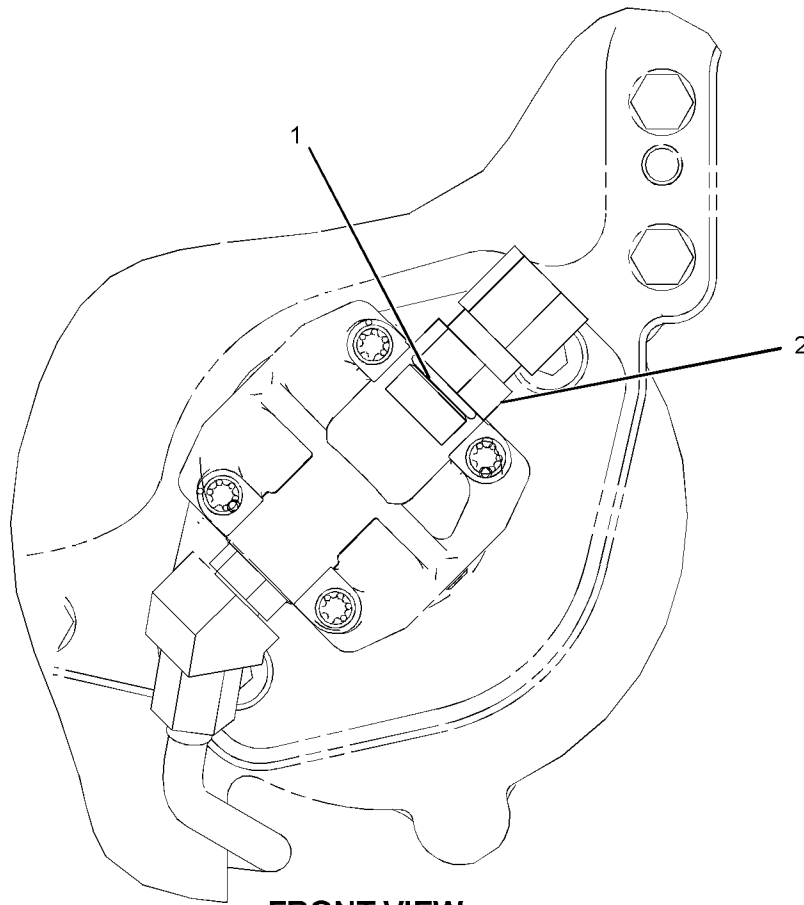
## 255-9253 FITTING GP-FUEL LINES

PROVIDES A STANDARD 3/4 INCH JIC FUEL SUPPLY FITTING GROUP  
CANNOT BE USED WITH PRIMARY FUEL FILTER/WATER SEPARATOR  
AN ATTACHMENT

SMCS-1274

i02125635

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8L-2786	1	SEAL-O-RING						
	2	1	8M-0505	1	CONNECTOR						



**FRONT VIEW**  
<END>

GRAPHIC #1

g01082080

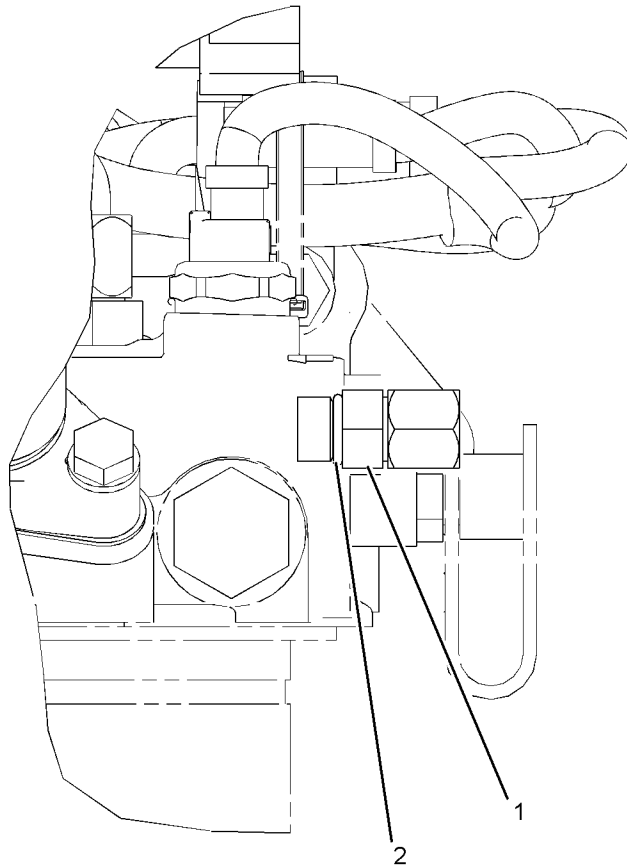
# FUEL SYSTEM

## 255-9254 FITTING GP-FUEL LINES PROVIDES A STANDARD 9/16 JIC FITTING GROUP (FUEL RETURN) AN ATTACHMENT

SMCS-1274

i02125642

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2R-6806	1	CONNECTOR						
	2	1	6V-5049	1	SEAL-O-RING						



**RIGHT SIDE VIEW**  
<END>

GRAPHIC #1

g01082016

# FUEL SYSTEM

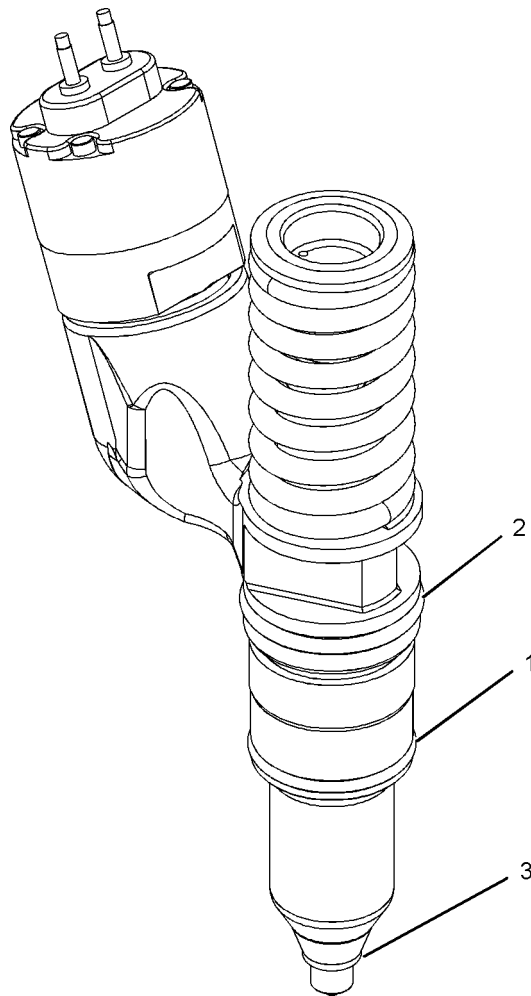
## 249-0712 INJECTOR GP-FUEL

PART OF 253-1459 PUMP GP-FUEL INJECTION

SMCS-1251, 1254, 1290, 1713

i02117262

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	230-3728	1	SEAL-O-RING						
	2	1	230-3775	1	SEAL-O-RING						
	3	1	9X-7317	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01065270

# FUEL SYSTEM

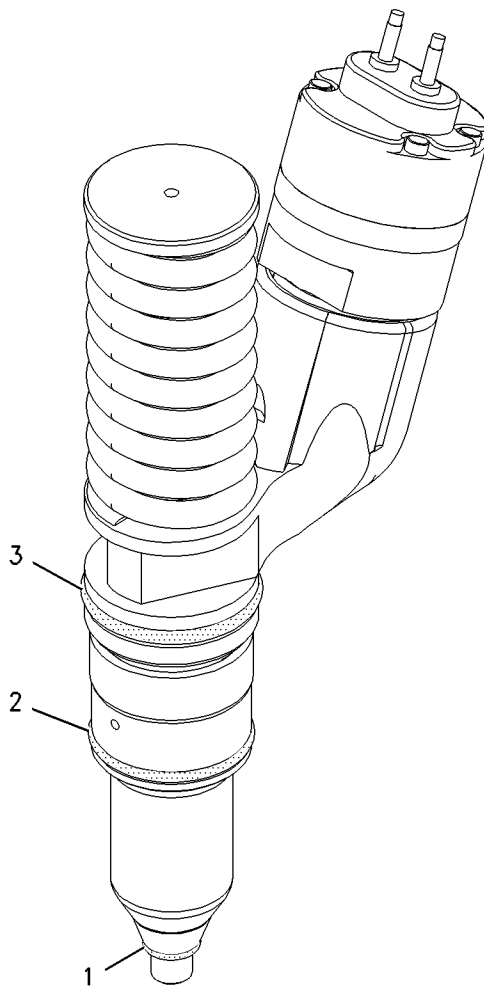
## 249-0713 INJECTOR GP-FUEL

PART OF 253-1461 PUMP GP-FUEL INJECTION

SMCS-1251, 1254, 1290, 1713

i02144582

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9X-7317	1	SEAL-O-RING						
	2	1	230-3728	1	SEAL-O-RING						
	3	1	230-3775	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00914176

# FUEL SYSTEM

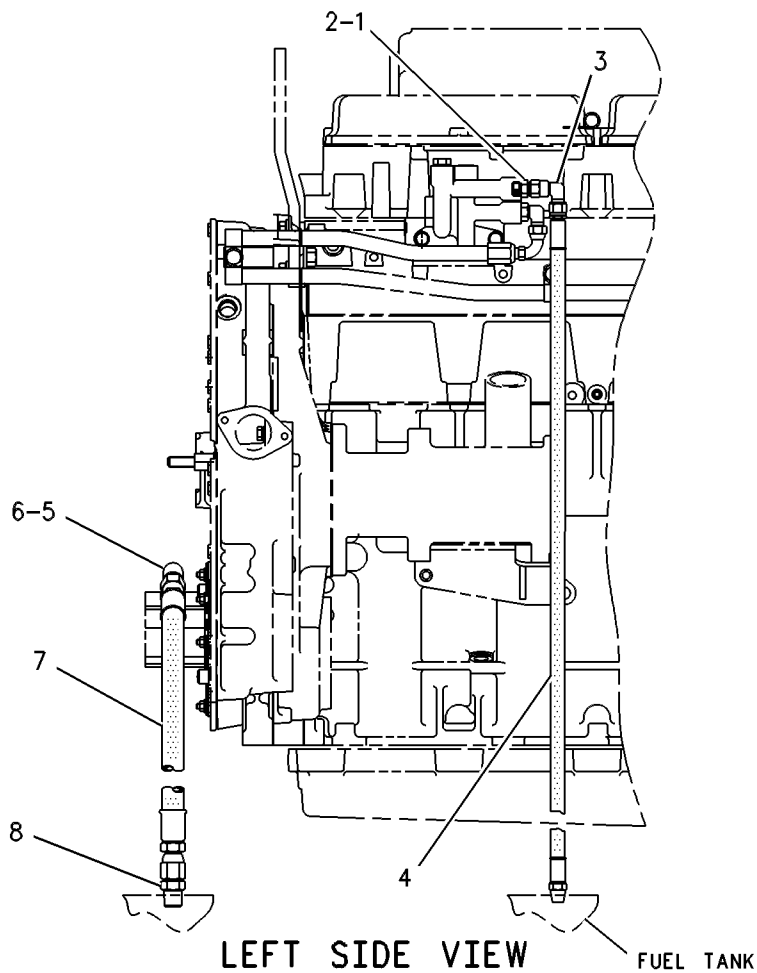
## 125-0032 LINES GP-FLEXIBLE FUEL AN ATTACHMENT

SMCS-1274

i00670050

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2R-6806	1	CONNECTOR						
	2	1	3J-1907	1	SEAL-O-RING						
	3	1	6K-9194	1	ELBOW						
I	4	1	9Y-7332	1	HOSE AS						
	5	1	1P-7625	1	ELBOW						
	6	1	3K-0360	1	SEAL-O-RING						
I	7	1	124-5268	1	HOSE AS						
	8	1	9M-6522	1	CONNECTOR						

I-REFER TO HYDRAULIC INFORMATION SYSTEM



LEFT SIDE VIEW

FUEL TANK

GRAPHIC #1

<END>

g00264981

# FUEL SYSTEM

## 245-1099 LINES GP-FUEL FILTER

S/N: GLS1-129

FOR USE WITH FRONT MOUNTED FUEL TRANSFER PUMP, FUEL FILTER GROUP  
ALSO AN ATTACHMENT

SMCS-1261, 1274

i02289751

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1P-0436	1	GASKET (FUEL PRIMING PUMP)						
	2	1	3S-2093	1	STRAP-CABLE						
I	3	1	4W-9576	1	HOSE AS						
	4	1	6V-0852	1	CAP-DUST						
	5	1	6Y-1352	1	SPACER (10.5X20.5X27-MM THK)						
I	6	1	7E-2871	1	HOSE AS						
	8	1	9C-5344	1	SPACER (10.5X20X18-MM THK)						
	9	1	123-6948	1	PLUG						
	10	1	137-5541	1	PUMP GP-FUEL PRIMING						
		1	7E-5346	2	VALVE AS						
		1	061-7539	1	SEAL-O-RING						
Y	11	1	139-6873	1	VALVE GP-FUEL BYPASS						329
	12	1	160-8124	1	PLUG AS						
		1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	8T-8737	2	PLUG-SEAL						
M	13	1	175-9079	1	ROD-LINK						
Y	14	1	197-8391	1	SENSOR GP-TEMPERATURE (FUEL)						379
	15	1	215-7350	1	BRACKET						
	16	1	227-5722	1	TUBE AS						
Y	17	1	233-6742	1	VALVE GP-CHECK						327
I	18	1	237-2706	1	HOSE AS						
	19	1	237-9314	1	BASE AS						
		1	9S-4167	1	STUD-HOLLOW						
Y	20	1	239-2396	1	SENSOR GP-PRESSURE (FUEL)						370
	21	1	240-8721	1	HARNES AS-SENSOR (JUMPER)						
		1	102-8803	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	102-8806	1	KIT-RECEPTACLE (8-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	155-2270	2	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES PLUG AS AND WEDGE)						
		1	8T-8737	1	PLUG-SEAL						
	22	1	030-7942	2	ELBOW						
	23	1	030-7947	1	ELBOW						
	24	1	030-7962	1	ELBOW						
	25	1	030-8188	2	CONNECTOR						
	26	1	132-5789	1	CLIP						
	27	1	169-7397	1	ADAPTER GP						
	27A	1	3K-0360	1	SEAL-O-RING						
		1	3P-1932	1	ADAPTER						
	28	1	2R-6806	2	CONNECTOR						
	29	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	30	1	5P-0537	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	31	1	5P-6944	1	ADAPTER						
	32	1	6V-3922	1	SEAL-O-RING						
	33	1	6V-3965	1	FITTING AS (QUICK DISCONNECT)						
	34	1	6V-4589	1	SEAL-O-RING						
	35	1	6V-5049	6	SEAL-O-RING						
M	36	1	5P-7970	1	NUT (M8X1.25-THD)						
M	37	1	6V-5218	1	BOLT (M8X1.25X35-MM)						
	38	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						
M	39	1	6V-5842	3	BOLT (M10X1.5X40-MM)						
M	40	1	6V-5843	2	BOLT (M10X1.5X45-MM)						
M	41	1	6V-6317	1	BOLT (M10X1.5X20-MM)						



# FUEL SYSTEM

245-1099 LINES GP-FUEL FILTER (contd.)

i02289751

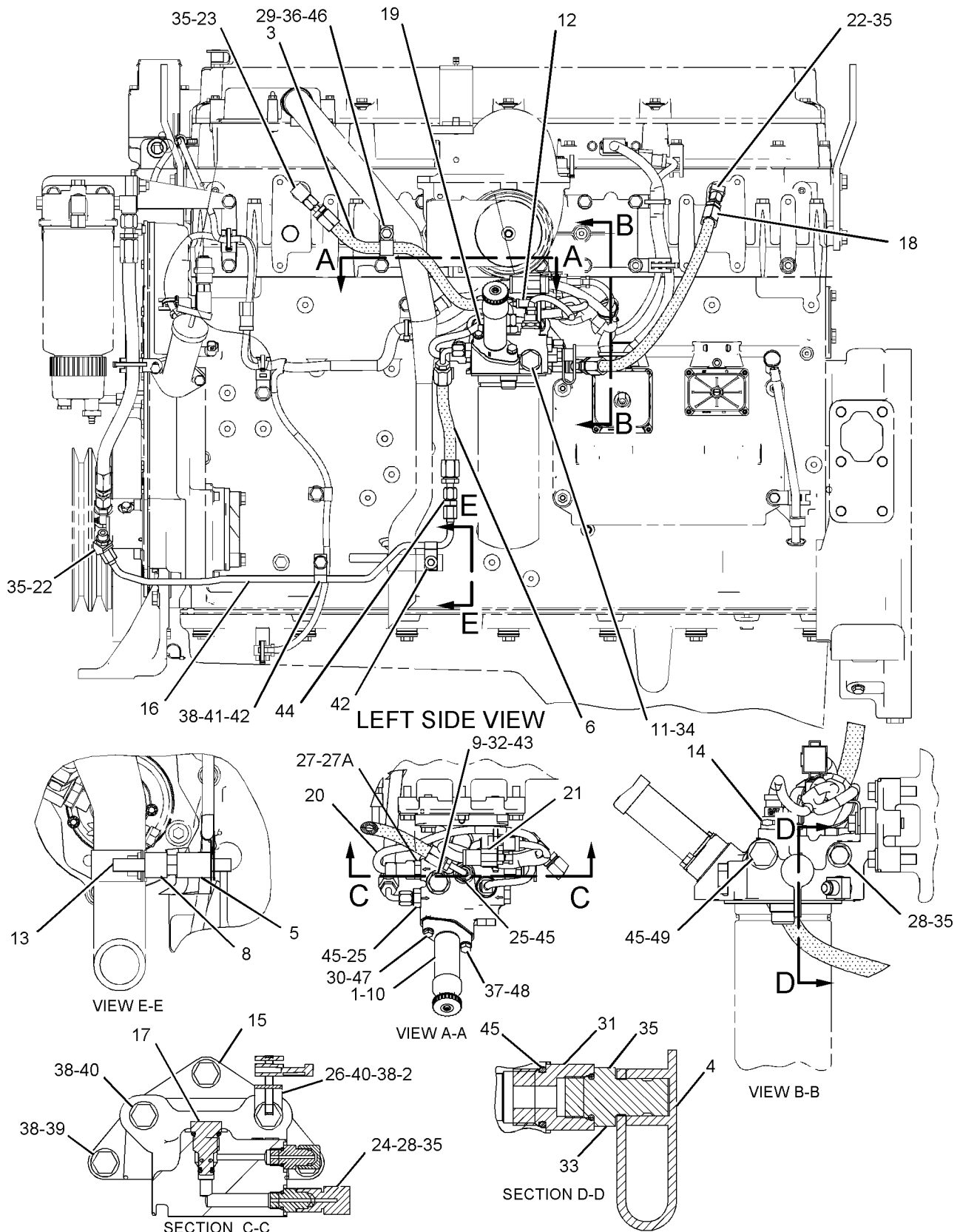
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	42	1	<b>7H-7055</b>	2	CLIP						
	43	1	<b>7J-9108</b>	1	SEAL-O-RING						
	44	1	<b>7K-4129</b>	1	UNION-FLARED						
	45	1	<b>8L-2786</b>	4	SEAL-O-RING						
	46	1	<b>8M-2773</b>	1	CLIP						
M	47	1	<b>8T-0640</b>	1	BOLT (M6X1X30-MM)						
	48	1	<b>9M-1974</b>	1	WASHER-HARD (8.8X16X2-MM THK)						
	49	1	<b>9S-4185</b>	1	PLUG						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# FUEL SYSTEM

245-1099 LINES GP-FUEL FILTER (contd.)

i02289751



GRAPHIC #1

<END>

g01146493

# FUEL SYSTEM

## 245-1099 LINES GP-FUEL FILTER

S/N: GLS130-UP

FOR USE WITH FRONT MOUNTED FUEL TRANSFER PUMP, FUEL FILTER GROUP  
ALSO AN ATTACHMENT

SMCS-1261, 1274

i02296818

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1P-0436	1	GASKET (FUEL PRIMING PUMP)						
	2	1	3S-2093	1	STRAP-CABLE						
I	3	1	4W-9576	1	HOSE AS						
	4	1	6V-0852	1	CAP-DUST						
	5	1	6Y-1352	1	SPACER (10.5X20.5X27-MM THK)						
I	6	1	7E-2871	1	HOSE AS						
	8	1	9C-5344	1	SPACER (10.5X20X18-MM THK)						
	9	1	123-6948	1	PLUG						
	10	1	137-5541	1	PUMP GP-FUEL PRIMING						
		1	229-3218	2	VALVE AS						
		1	061-7539	1	SEAL-O-RING						
Y	11	1	139-6873	1	VALVE GP-FUEL BYPASS						329
	12	1	160-8124	1	PLUG AS						
		1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	8T-8737	2	PLUG-SEAL						
M	13	1	175-9079	1	ROD-LINK						
Y	14	1	197-8391	1	SENSOR GP-TEMPERATURE (FUEL)						379
	15	1	215-7350	1	BRACKET						
	16	1	227-5722	1	TUBE AS						
Y	17	1	233-6742	1	VALVE GP-CHECK (FUEL)						327
C	18	1	246-6645	1	TUBE AS						
	19	1	237-9314	1	BASE AS						
		1	9S-4167	1	STUD-HOLLOW						
Y	20	1	239-2396	1	SENSOR GP-PRESSURE (FUEL)						370
	21	1	240-8721	1	HARNES AS-SENSOR (FUEL JUMPER)						
		1	102-8803	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	102-8806	1	KIT-RECEPTACLE (8-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	155-2270	2	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES PLUG AS AND WEDGE)						
C	22	1	030-7942	1	ELBOW						
C	23	1	030-7947	3	ELBOW						
	25	1	030-8188	2	CONNECTOR						
	26	1	132-5789	1	CLIP						
	27	1	169-7397	1	ADAPTER GP						
	27A	1	3K-0360	1	SEAL-O-RING						
		1	3P-1932	1	ADAPTER						
C	28	1	2R-6806	1	CONNECTOR						
	29	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	30	1	5P-0537	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	31	1	5P-6944	1	ADAPTER						
	32	1	6V-3922	1	SEAL-O-RING						
	33	1	6V-3965	1	FITTING AS (QUICK DISCONNECT)						
	34	1	6V-4589	1	SEAL-O-RING						
	35	1	6V-5049	6	SEAL-O-RING						
M	36	1	5P-7970	1	NUT (M8X1.25-THD)						
M	37	1	6V-5218	1	BOLT (M8X1.25X35-MM)						
	38	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						
M	39	1	6V-5842	3	BOLT (M10X1.5X40-MM)						
M	40	1	6V-5843	2	BOLT (M10X1.5X45-MM)						
M	41	1	6V-6317	1	BOLT (M10X1.5X20-MM)						
	42	1	7H-7055	2	CLIP						
	43	1	7J-9108	1	SEAL-O-RING						

# FUEL SYSTEM

245-1099 LINES GP-FUEL FILTER (contd.)

i02296818

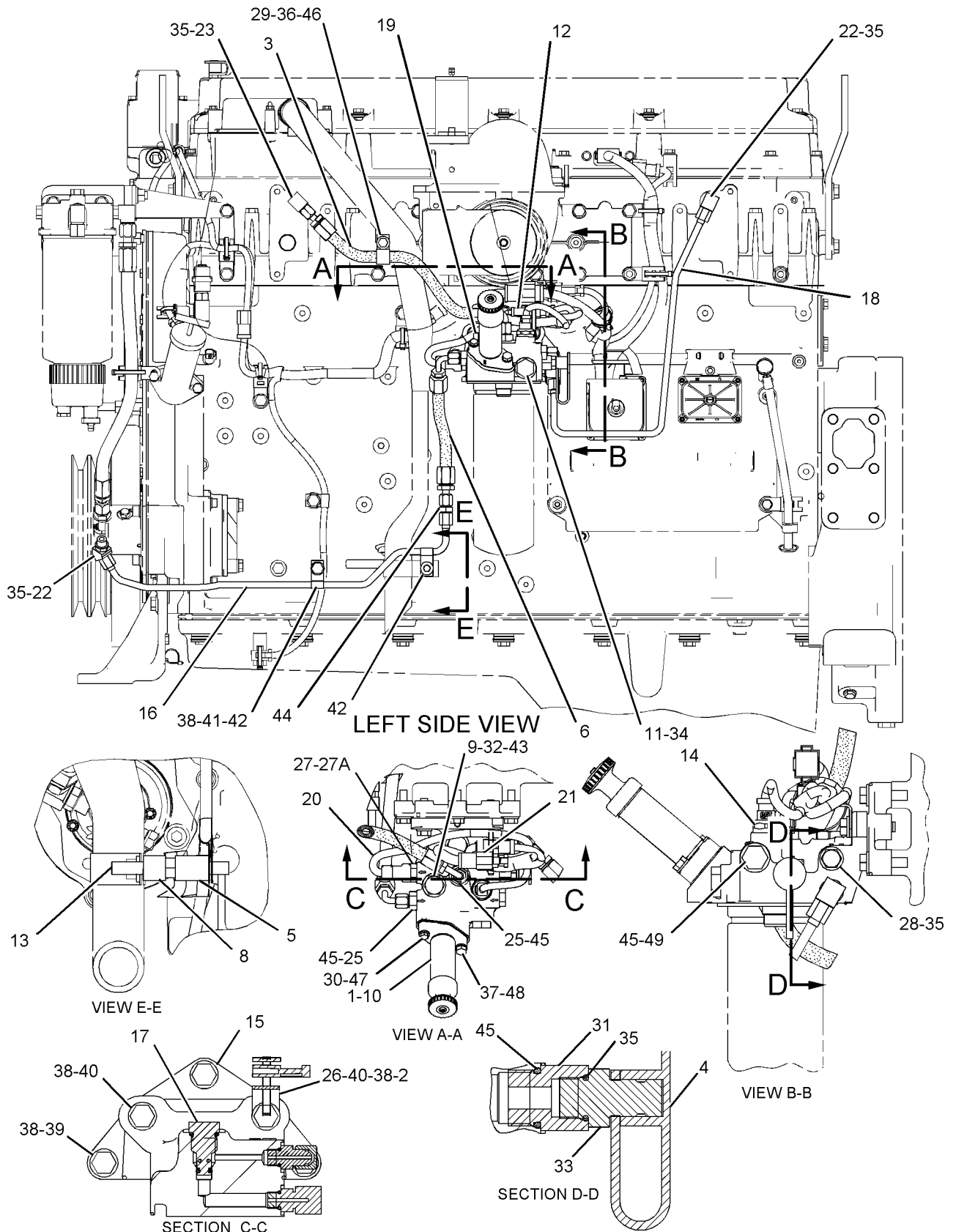
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	44	1	<b>7K-4129</b>	1	UNION-FLARED						
	45	1	<b>8L-2786</b>	4	SEAL-O-RING						
	46	1	<b>8M-2773</b>	1	CLIP						
M	47	1	<b>8T-0640</b>	1	BOLT (M6X1X30-MM)						
	48	1	<b>9M-1974</b>	1	WASHER-HARD (8.8X16X2-MM THK)						
	49	1	<b>9S-4185</b>	1	PLUG						

C-CHANGE FROM PREVIOUS TYPE  
 I-REFER TO HYDRAULIC INFORMATION SYSTEM  
 M-METRIC PART  
 Y-SEPARATE ILLUSTRATION

# FUEL SYSTEM

245-1099 LINES GP-FUEL FILTER (contd.)

i02296818



GRAPHIC #1

<END>

g01150327

# FUEL SYSTEM

## 255-0658 LINES GP-FUEL FILTER

PROVIDED FOR USE WITH FRONT MOUNTED FUEL TRANSFER PUMP AND FUEL COOLED ECM  
FOR USE WITH FUEL COOLED ECM  
AN ATTACHMENT

SMCS-1261, 1274

i02300554

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	1P-0436	1	GASKET (FUEL PRIMING PUMP)						
	2	2	3S-2093	1	STRAP-CABLE						
I	3	1	4W-9576	1	HOSE AS						
I	4	1	4W-9783	1	HOSE AS						
	5	2	6V-0852	1	CAP-DUST						
	6	2	6Y-1352	1	SPACER (10.5X20.5X27-MM THK)						
	7	1	7C-8246	1	SPACER (10.5X20X24-MM THK)						
	8	2	9C-5344	1	SPACER (10.5X20X18-MM THK)						
	9	1	9J-6189	1	CLIP						
	10	2	9X-0262	1	ADAPTER						
	11	2	123-6948	1	PLUG						
	12	2	137-5541	1	PUMP GP-FUEL PRIMING						
Y	13	1	139-6873	1	VALVE GP-FUEL BYPASS						329
	14	1	160-8124	1	PLUG AS						
		1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	8T-8737	2	PLUG-SEAL						
M	15	2	175-9079	1	ROD-LINK						
	16	2	195-4778	1	SPACER						
Y	17	1	197-8391	1	SENSOR GP-TEMPERATURE (FUEL)						379
	18	2	215-7350	1	BRACKET						
I	19	1	233-0077	1	HOSE AS						
Y	20	2	233-6742	1	VALVE GP-CHECK						327
	21	1	237-9314	1	BASE AS						
		1	9S-4167	1	STUD-HOLLOW						
Y	22	2	239-2396	1	SENSOR GP-PRESSURE (FUEL)						370
	23	2	240-8721	1	HARNES AS-SENSOR (FUEL SENSORS)						
		2	102-8803	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		2	102-8806	1	KIT-RECEPTACLE (8-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		2	155-2270	2	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES PLUG AS AND WEDGE)						
		2	8T-8737	1	PLUG-SEAL						
	24	1	246-6645	1	TUBE AS						
	25	1	005-4362	1	ELBOW						
	26	1	030-7942	1	ELBOW						
	27	1	030-7947	3	ELBOW						
	28	1,2	030-8188	3	CONNECTOR						
	29	1	033-6028	2	SEAL-O-RING						
	30	2	132-5789	1	CLIP						
	31	2	169-7397	1	ADAPTER GP						
		2	3K-0360	1	SEAL-O-RING						
	32	1	206-7337	1	TUBE AS						
	33	1	3E-4352	1	WASHER-HARD (8.8X20.5X2.5-MM THK)						
	34	1	4D-7735	1	CLIP						
	35	2	5P-0537	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	36	2	5P-6944	1	ADAPTER						
M	37	1	6V-1819	1	BOLT (M10X1.5X100-MM)						
	38	2	6V-3922	1	SEAL-O-RING						
	39	2	6V-3965	1	FITTING AS (QUICK DISCONNECT)						
	40	1	6V-4589	1	SEAL-O-RING						
	41	2	6V-5048	1	SEAL-O-RING						
	42	1,2	6V-5049	5	SEAL-O-RING						
M	43	1	6V-5215	1	BOLT (M8X1.25X16-MM)						

# FUEL SYSTEM

**255-0658 LINES GP-FUEL FILTER (contd.)**

**i02300554**

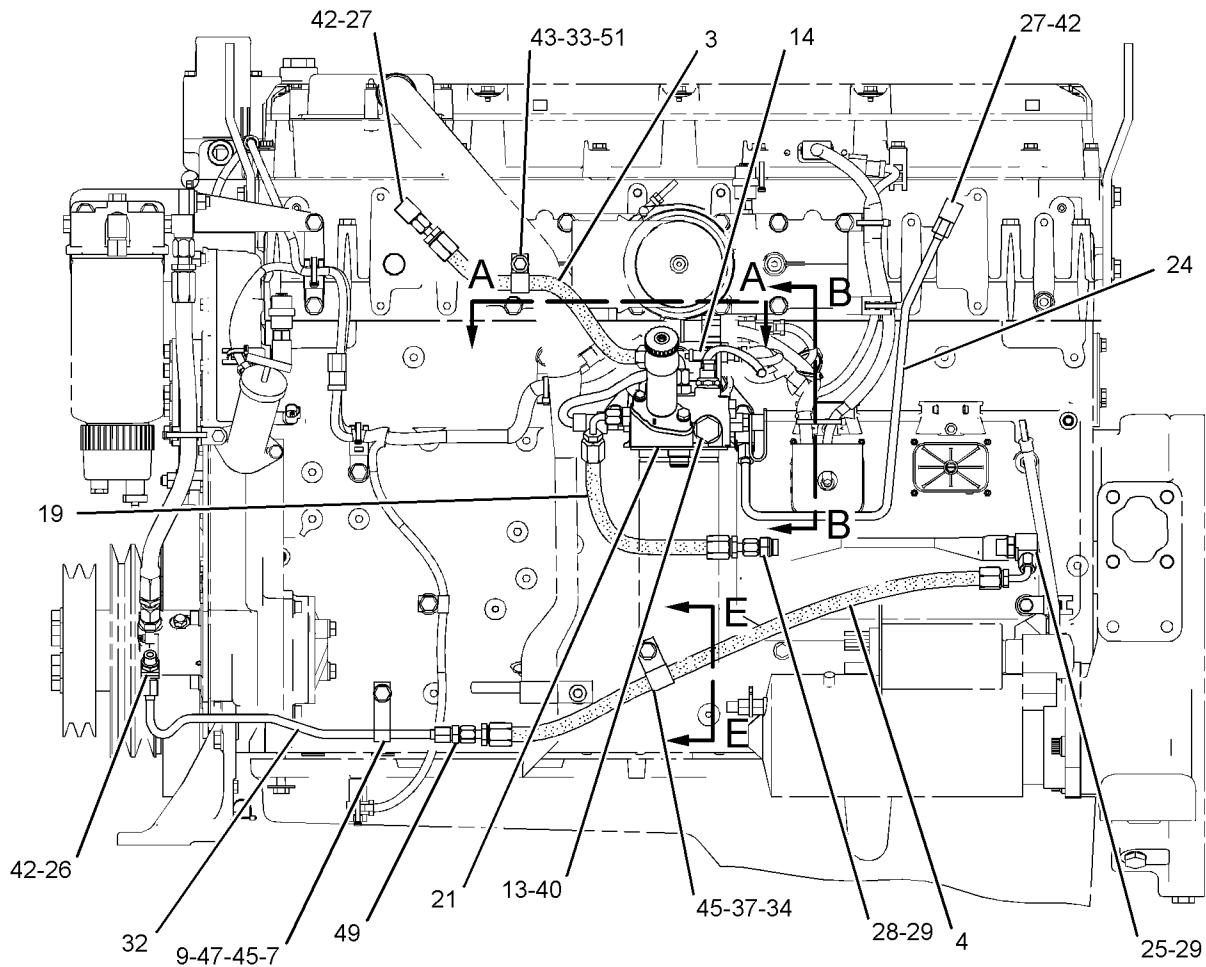
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	44	2	<b>6V-5218</b>	1	BOLT (M8X1.25X35-MM)						
	45	1,2	<b>6V-5839</b>	7	WASHER (11X21X2.5-MM THK)						
M	46	2	<b>6V-5842</b>	3	BOLT (M10X1.5X40-MM)						
M	47	1,2	<b>6V-5843</b>	3	BOLT (M10X1.5X45-MM)						
	48	2	<b>7J-9108</b>	1	SEAL-O-RING						
	49	1	<b>7K-4129</b>	1	UNION-FLARED						
	50	1,2	<b>8L-2786</b>	4	SEAL-O-RING						
	51	1	<b>8M-2773</b>	1	CLIP						
M	52	2	<b>8T-0640</b>	1	BOLT (M6X1X30-MM)						
	53	2	<b>9M-1974</b>	1	WASHER-HARD (8.8X16X2-MM THK)						
	54	1	<b>9S-4185</b>	1	PLUG						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

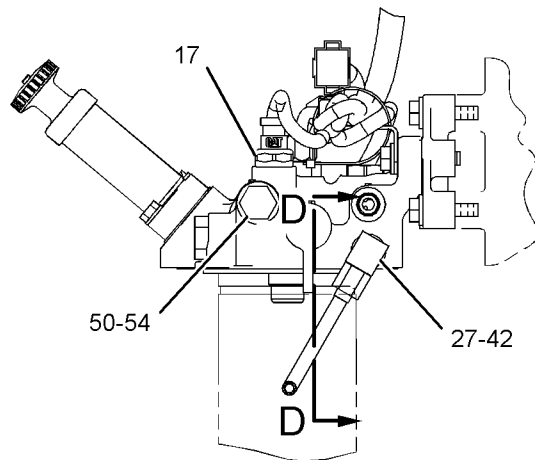
# FUEL SYSTEM

255-0658 LINES GP-FUEL FILTER (contd.)

i02300554



## LEFT SIDE VIEW



## SECTION B-B

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

GRAPHIC #1

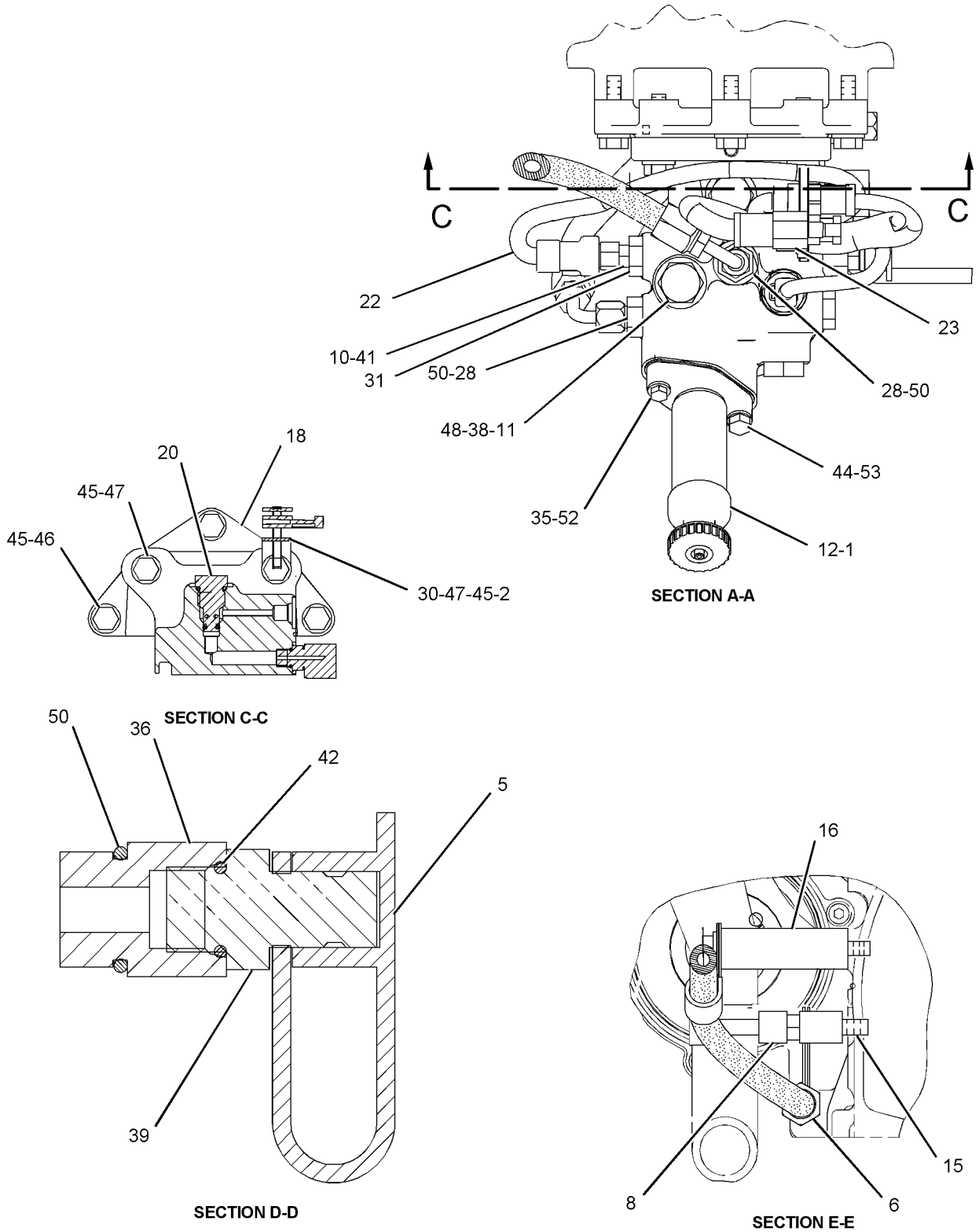
g01082075



# FUEL SYSTEM

255-0658 LINES GP-FUEL FILTER (contd.)

i02300554



GRAPHIC #2

<END>

g01082076

# FUEL SYSTEM

## 267-1413 LINES GP-FUEL FILTER

FOR USE WITH FRONT MOUNTED FUEL TRANSFER PUMP AND FUEL COOLED ECM  
AN ATTACHMENT

SMCS-1261, 1274

i02289472

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME 1 2 3 4 5 6 (PRODUCT LEVEL)	SEE PAGE
	1	1	<b>1P-0436</b>	1	GASKET (FUEL PRIMING PUMP)	
	2	1	<b>3S-2093</b>	1	STRAP-CABLE	
I	3	1	<b>4W-9576</b>	1	HOSE AS	
I	4	1	<b>4W-9783</b>	1	HOSE AS	
	5	2	<b>6V-0852</b>	1	CAP-DUST	
	6	2	<b>6Y-1352</b>	1	SPACER (10.5X20.5X27-MM THK)	
	7	1	<b>7C-8246</b>	1	SPACER (10.5X20X24-MM THK)	
	8	2	<b>9C-5344</b>	1	SPACER (10.5X20X18-MM THK)	
	9	1	<b>9J-6189</b>	1	CLIP	
	10	2	<b>105-7704</b>	1	TEE	
	11	1	<b>123-6948</b>	1	PLUG	
	12	1	<b>137-5541</b>	1	PUMP GP-FUEL PRIMING	
Y	13	1	<b>139-6873</b>	1	VALVE GP-FUEL BYPASS	329
	14	1	<b>160-8124</b>	1	PLUG AS	
		1	<b>102-8802</b>	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)	
M	15	2	<b>175-9079</b>	1	ROD-LINK	
	16	2	<b>195-4778</b>	1	SPACER	
Y	17	2	<b>197-8391</b>	1	SENSOR GP-TEMPERATURE (FUEL)	379
	18	1	<b>215-7350</b>	1	BRACKET	
I	19	1	<b>233-0077</b>	1	HOSE AS	
Y	20	1	<b>233-6742</b>	1	VALVE GP-CHECK (FUEL)	327
	21	1	<b>237-9314</b>	1	BASE AS	
		1	<b>9S-4167</b>	1	STUD-HOLLOW	
Y	22	1	<b>239-2396</b>	1	SENSOR GP-PRESSURE (FUEL)	370
	23	1	<b>240-8721</b>	1	HARNASS AS-SENSOR (FUEL)	
		1	<b>102-8803</b>	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)	
		1	<b>102-8806</b>	1	KIT-RECEPTACLE (8-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)	
		1	<b>155-2270</b>	2	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES PLUG AS AND WEDGE)	
	24	1	<b>246-6645</b>	1	TUBE AS	
	25	1	<b>005-4362</b>	1	ELBOW	
	26	1	<b>030-7942</b>	1	ELBOW	
	27	1,2	<b>030-7947</b>	3	ELBOW	
	28	1	<b>030-8188</b>	3	CONNECTOR	
	29	1	<b>033-6028</b>	2	SEAL-O-RING	
	30	1	<b>132-5789</b>	1	CLIP	
	31	1	<b>206-7337</b>	1	TUBE AS	
	32	1	<b>3E-4352</b>	1	WASHER-HARD (8.8X20.5X2.5-MM THK)	
	33	1	<b>4D-7735</b>	1	CLIP	
	34	1	<b>5P-0537</b>	1	WASHER-HARD (7.2X14.5X2-MM THK)	
M	35	1	<b>6V-1819</b>	1	BOLT (M10X1.5X100-MM)	
	36	1	<b>6V-3922</b>	1	SEAL-O-RING	
	37	2	<b>6V-3965</b>	1	FITTING AS (QUICK DISCONNECT)	
	38	1	<b>6V-4589</b>	1	SEAL-O-RING	
	39	1,2	<b>6V-5049</b>	6	SEAL-O-RING	
M	40	1	<b>6V-5215</b>	1	BOLT (M8X1.25X16-MM)	
M	41	1	<b>6V-5218</b>	1	BOLT (M8X1.25X35-MM)	
	42	1	<b>6V-5839</b>	7	WASHER (11X21X2.5-MM THK)	
M	43	1	<b>6V-5842</b>	3	BOLT (M10X1.5X40-MM)	
M	44	1	<b>6V-5843</b>	3	BOLT (M10X1.5X45-MM)	
	45	1	<b>7J-9108</b>	1	SEAL-O-RING	
	46	1	<b>7K-4129</b>	1	UNION-FLARED	
	47	1,2	<b>8L-2786</b>	5	SEAL-O-RING	

# FUEL SYSTEM

**267-1413 LINES GP-FUEL FILTER (contd.)**

**i02289472**

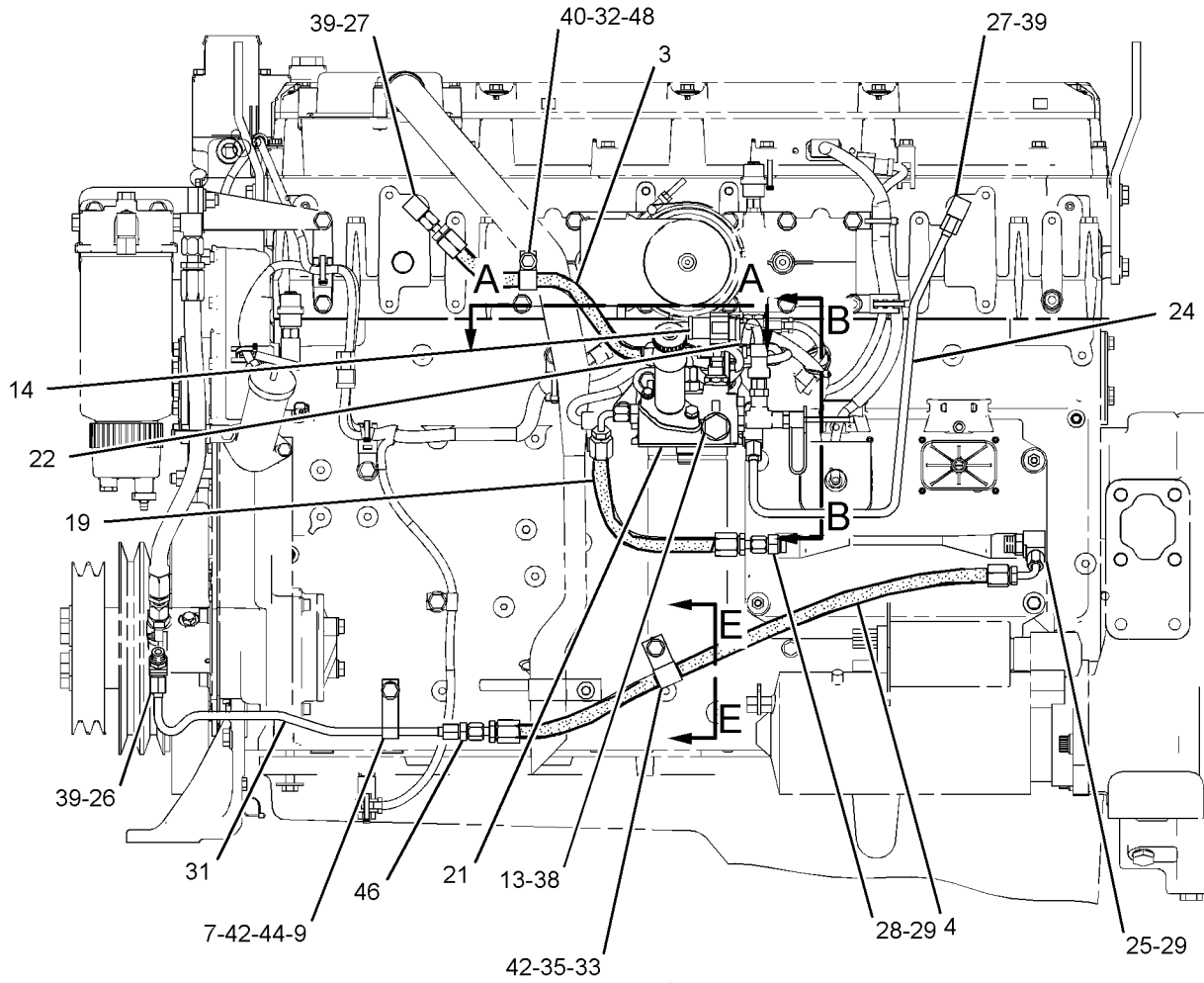
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	48	1	<b>8M-2773</b>	1	CLIP						
M	49	1	<b>8T-0640</b>	1	BOLT (M6X1X30-MM)						
	50	1	<b>9M-1974</b>	1	WASHER-HARD (8.8X16X2-MM THK)						
	51	1,2	<b>9S-4185</b>	2	PLUG						
	52	2	<b>9X-0261</b>	1	ADAPTER						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

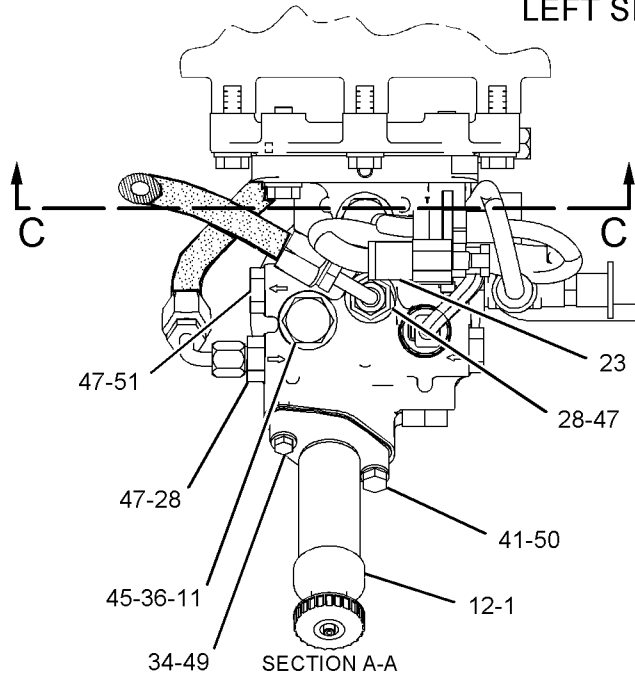
# FUEL SYSTEM

267-1413 LINES GP-FUEL FILTER (contd.)

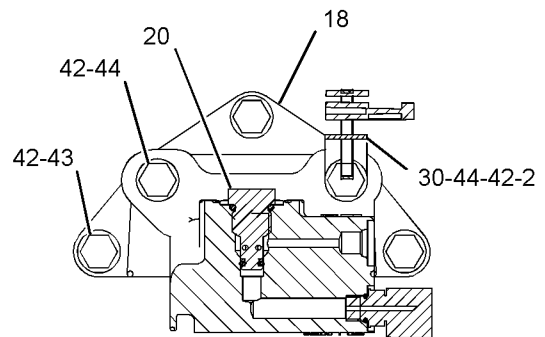
i02289472



LEFT SIDE VIEW



SECTION A-A



SECTION C-C

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

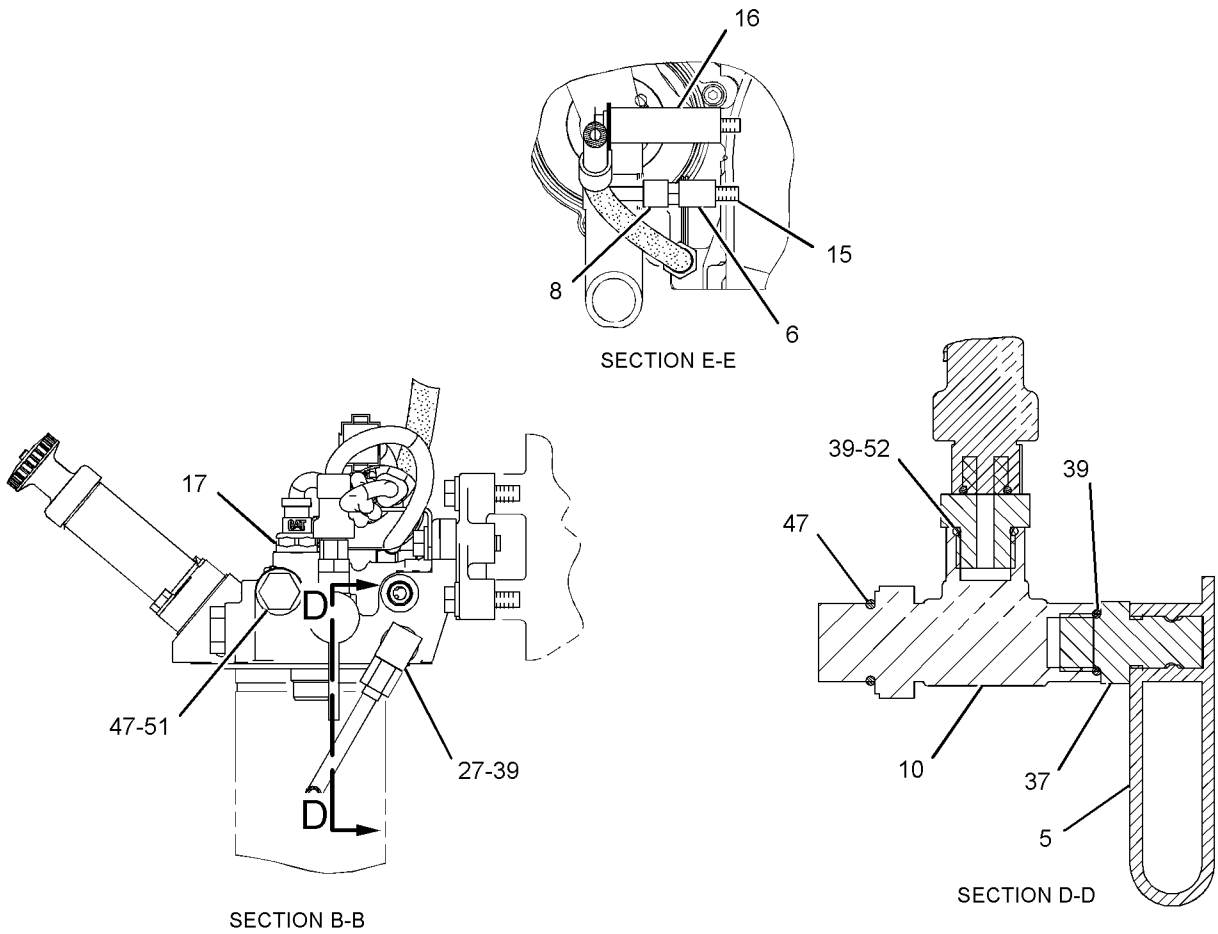
GRAPHIC #1

g01147116

# FUEL SYSTEM

267-1413 LINES GP-FUEL FILTER (contd.)

i02289472



GRAPHIC #2

<END>

g01147117

# FUEL SYSTEM

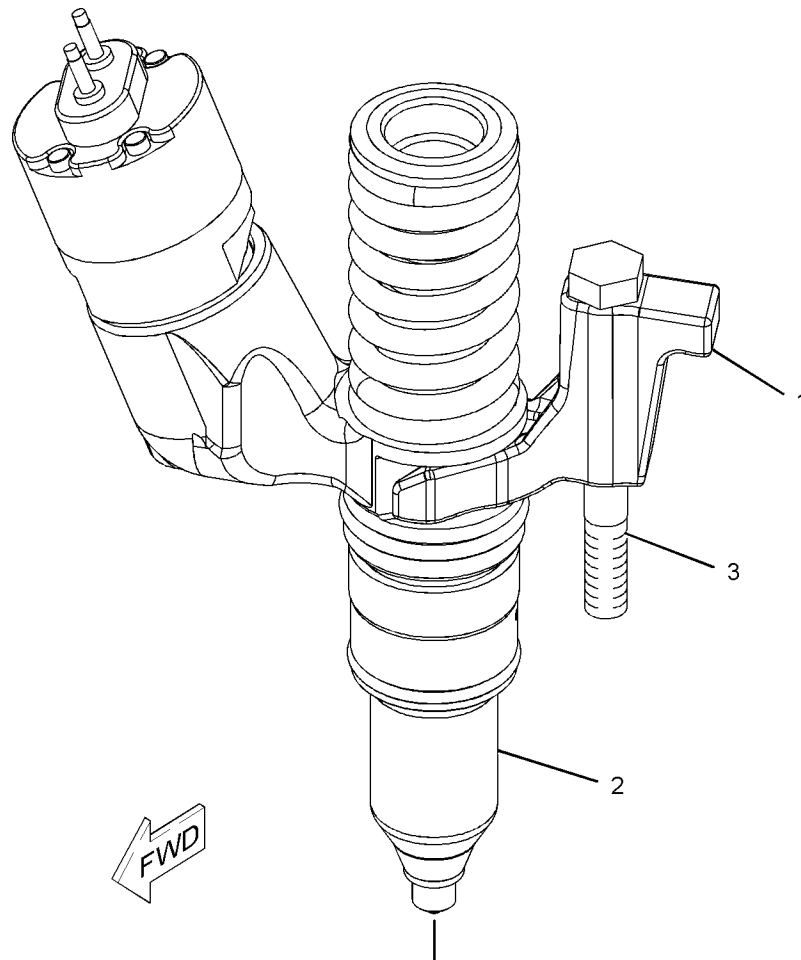
## 253-1459 PUMP GP-FUEL INJECTION

SMCS-1251, 1290

i02151135

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	224-4991	1	CLAMP-INJECTOR						
Y	2	1	249-0712	1	INJECTOR GP-FUEL						307
M	3	1	8T-0644	1	BOLT (M10X1.50X90-MM)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

MOUNTS TO CYL HEAD  
<END>

g01065170

# FUEL SYSTEM

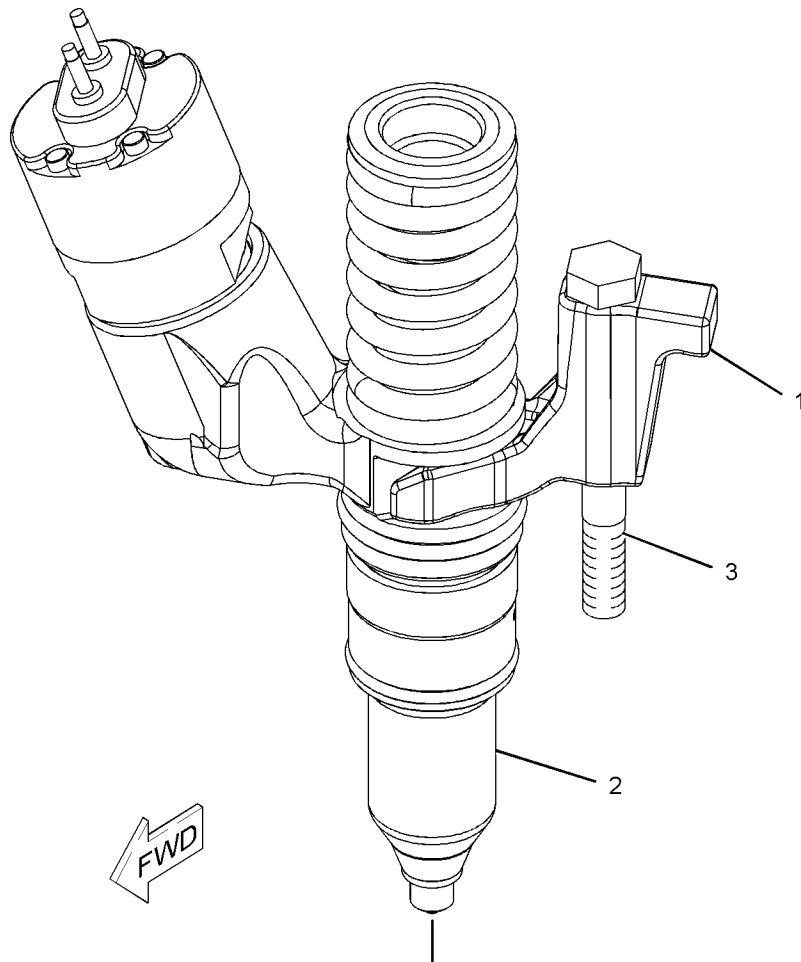
## 253-1461 PUMP GP-FUEL INJECTION

SMCS-1251, 1290

i02099142

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	224-4991	1	CLAMP-INJECTOR						
Y	2	1	249-0713	1	INJECTOR GP-FUEL						308
M	3	1	8T-0644	1	BOLT (M10X1.50X90-MM)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

MOUNTS TO CYL HEAD  
<END>

g01065170

# FUEL SYSTEM

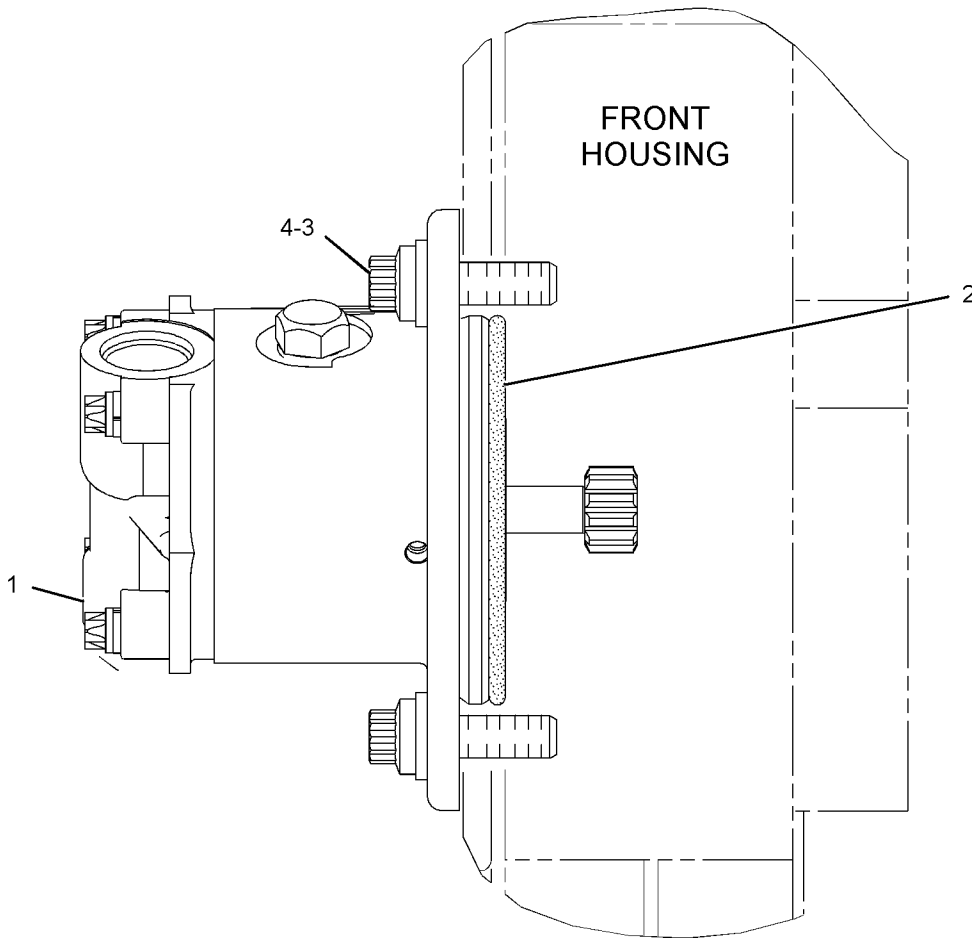
## 227-5723 PUMP GP-FUEL TRANSFER

SMCS-1256

i02171972

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	190-3443	1	PUMP GP-FUEL TRANSFER						
	2	1	5P-4889	1	SEAL-O-RING						
	3	1	5M-2894	2	WASHER-HARD (10.2X18.5X2.5-MM THK)						
M	4	1	136-4183	2	BOLT-12 POINT HEAD (M10X1.5X30-MM)						

M-METRIC PART



LEFT SIDE VIEW  
<END>

GRAPHIC #1

g01101661



# FUEL SYSTEM

## 233-6742 VALVE GP-CHECK-FUEL FILTER

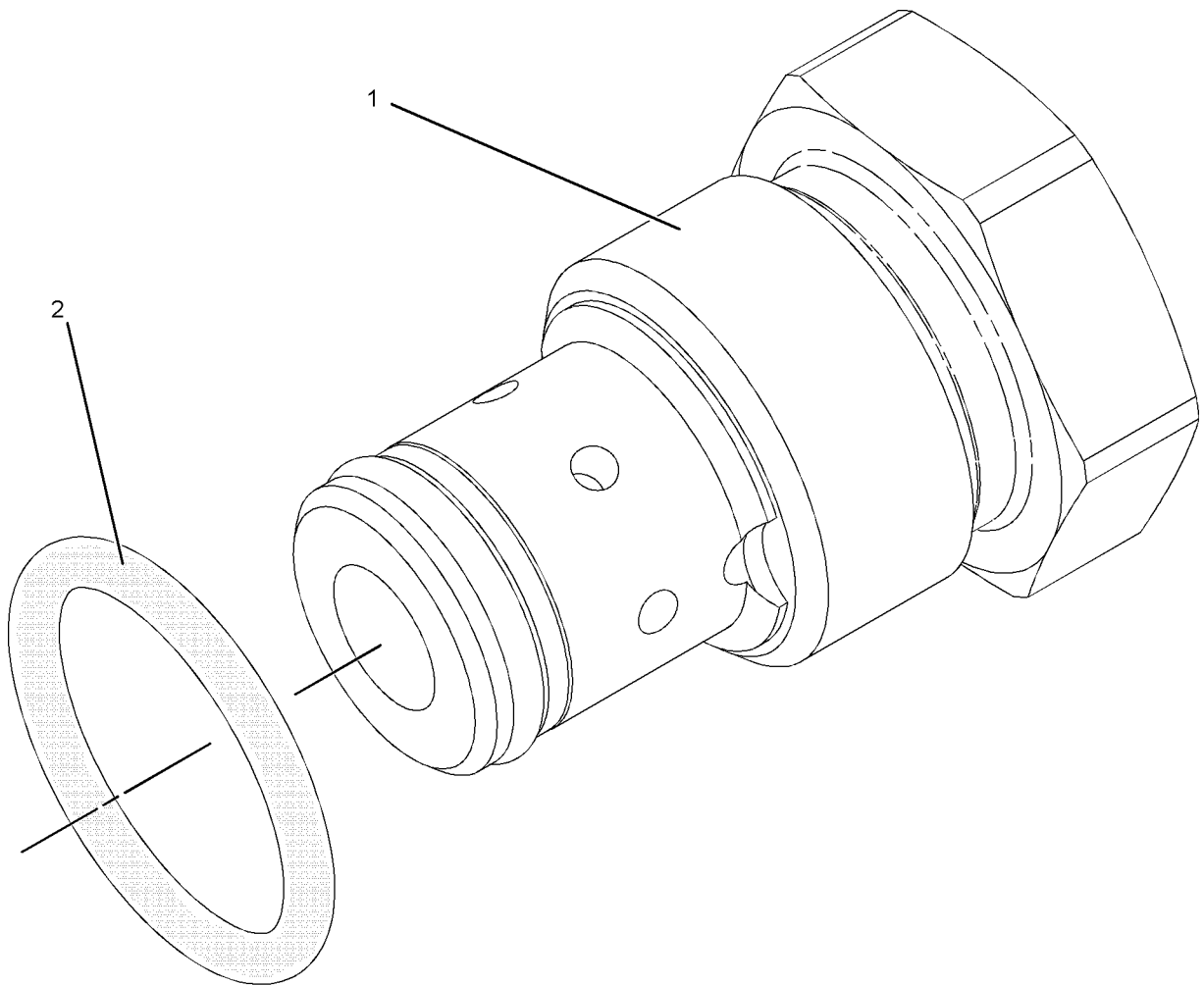
PART OF 245-1099, 255-0658, 267-1413 LINES GP-FUEL FILTER  
ALSO AN ATTACHMENT

SMCS-1262

i02274525

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	238-0296	1	VALVE GP-CHECK (FUEL FILTER)						328
	2	1	6V-4589	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01031823

# FUEL SYSTEM

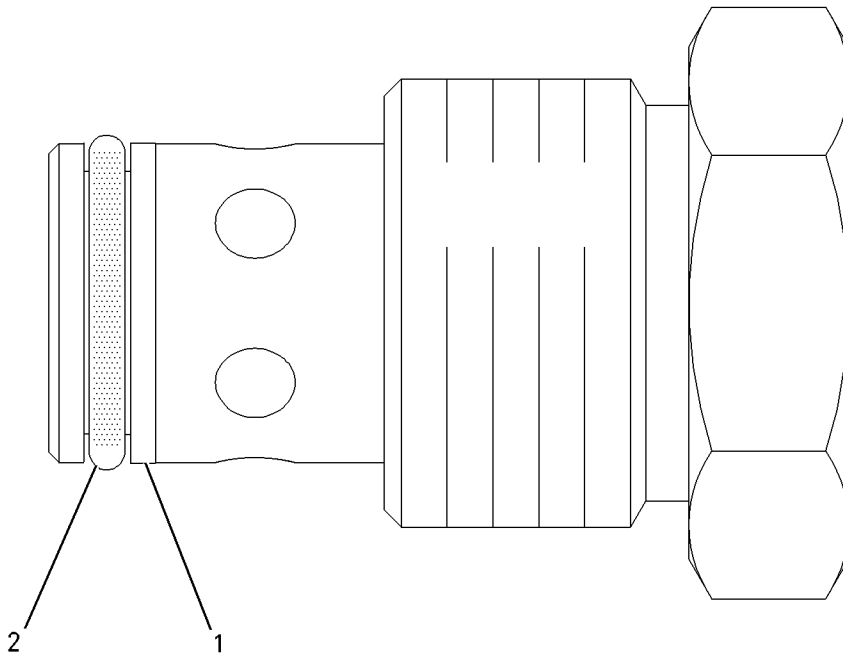
## 238-0296 VALVE GP-CHECK-FUEL FILTER

PART OF 233-6742 VALVE GP-CHECK  
ALSO AN ATTACHMENT

SMCS-1262

i02140024

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-6923	1	RING-BACKUP						
	2	1	033-6033	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00864141

# FUEL SYSTEM

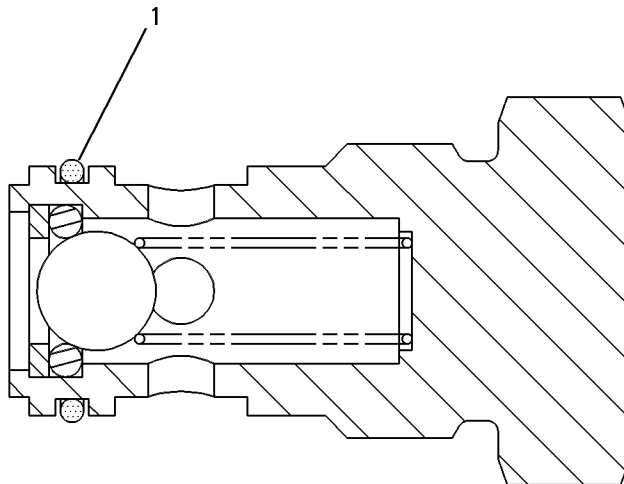
## 139-6873 VALVE GP-FUEL BYPASS

PART OF 245-1099, 255-0658, 267-1413 LINES GP-FUEL FILTER  
ALSO AN ATTACHMENT

SMCS-1256

i01986135

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9X-7737	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00266124

# ELECTRICAL AND STARTING SYSTEM

## 4N-3986 ALTERNATOR GP-CHARGING\*R

24-VOLT, 60-AMPERE

FOR USE WITH 2W-8494-PAGE 153, 100-2854-PAGE 154  
AN ATTACHMENT

SMCS-1405

i02289090

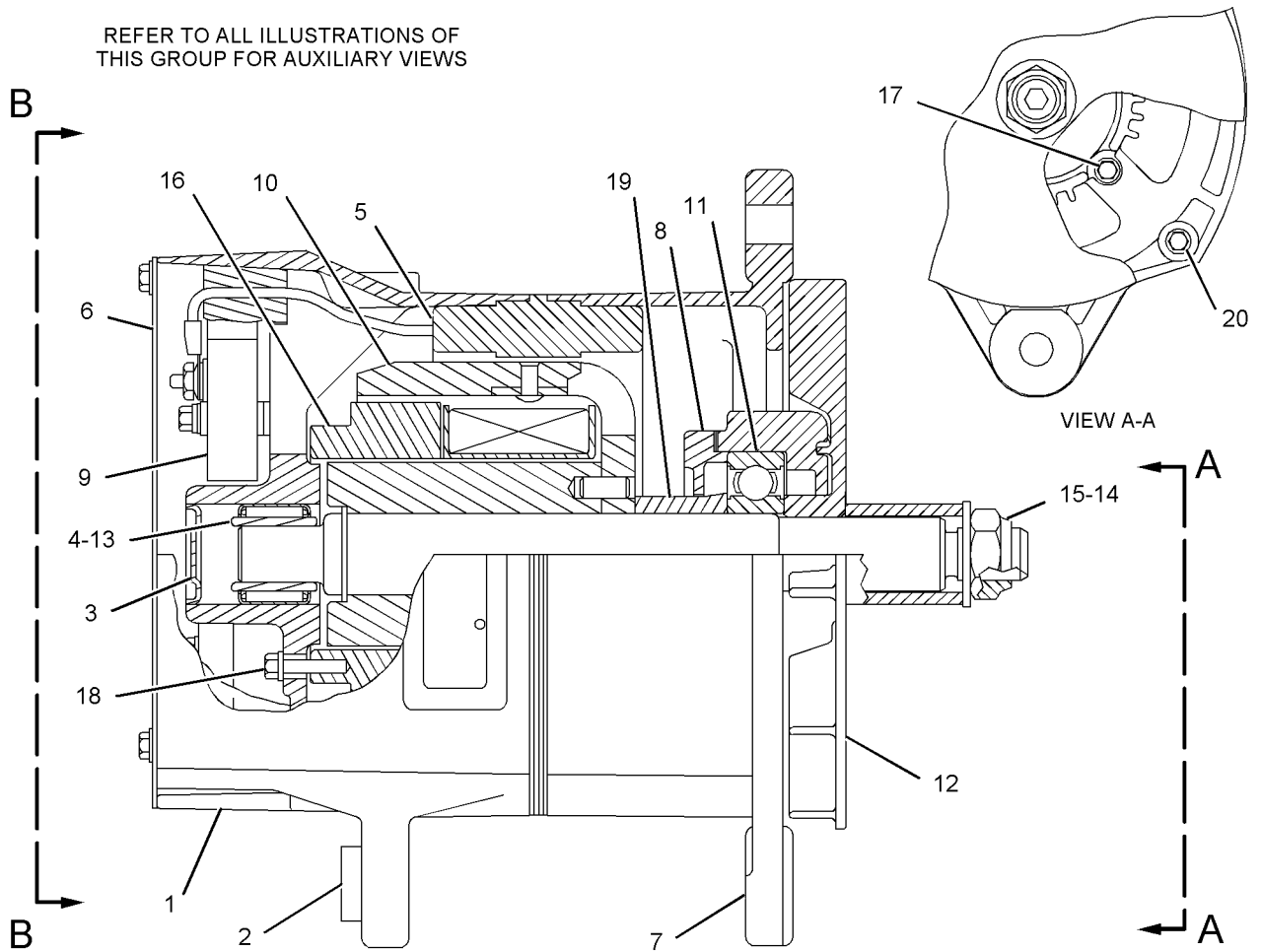
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6N-1876	1	HOUSING AS (RECTIFIER)						
	2	1	9S-2396	1	BUSHING-TERMINAL						
	3	1	9N-0943	1	PLUG-BEARING WELL						
	4	1	5P-3418	1	BEARING-ROLLER						
	5	1	6N-1968	1	STATOR AS						
		1	9S-2014	3	CLIP						
		1	9N-0939	1	GROMMET						
	6	1	9N-0942	1	PLATE-COVER						
	7	1	2P-5616	1	FRAME-DRIVE END						
	8	1	9S-2390	1	RETAINER						
	9	1	9N-0937	1	RECTIFIER AS						
	10	1	9S-2302	1	ROTOR AS						
	11	1	5P-7807	1	BALL BEARING						
	12	1	100-6531	1	FAN-ALTERNATOR (14-BLADE)						
	13	1	5P-3419	1	RACE-BEARING INNER						
	14	1	7F-7621	1	WASHER (0.635X1.25X0.09-IN THK)						
	15	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	16	1	6N-1945	1	COIL AS-FIELD						
	17	1	9X-2500	4	SCREW-HEX FLANGE (10-24X38.1-MM)						
	18	1	9N-3388	5	BOLT (10-24X0.75-IN)						
	19	1	100-6532	1	COLLAR-ALTERNATOR						
	20	1	9S-2009	4	SCREW-HEAD (10-24X3.625-IN)						
	21	2	6N-1944	1	DIODE AS						
	22	2	6N-1870	2	SCREW AS (8-32X34-MM)						
	23	2	8T-0328	2	WASHER-HARD (5.5X10X1-MM THK)						
	24	2	9S-2544	7	SCREW-HEX HEAD (8-32X11.13-MM)						
	25	2	9B-7233	11	LOCKWASHER						
	26	2	4B-2043	4	NUT (8-32X3.18-MM)						
	27	2	6V-8187	2	NUT (1/4-28-THD)						
	28	2	1H-3244	2	LOCKWASHER						
	29	2	6N-1925	1	BRACKET						
	30	2	6N-1946	1	CAPACITOR AS						
	31	2	6N-1872	3	SCREW AS (8-32X1.25-IN)						
	32	2	3T-6354	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
	33	2	6N-1873	1	LEAD AS						
	34	2	2L-8075	3	TERMINAL (16-AWG TO 14-AWG)						
	35	2	8T-4205	2	WASHER-HARD (7.2X14.5X2-MM THK)						
	36	2	6N-1871	1	LEAD AS						
	37	2	8M-6701	3	WASHER (0.281X0.5X0.032-IN THK)						
	38	2	6N-1856	4	BUSHING-TERMINAL						
					AVAILABLE REPAIR KIT(S):						
			6N-1875	1	KIT-OUTPUT TERMINAL (ALTERNATOR) (INCLUDES TERMINAL, LEAD ASSEMBLY, BUSHING, WASHERS, NUTS AND LOCKWASHERS)						
			105-3762	1	KIT-ALTERNATOR TERMINAL (BATTERY) (INCLUDES TERMINAL ASSEMBLY, INSULATOR, BUSHING, WASHER, NUTS AND LOCKWASHERS)						

# ELECTRICAL AND STARTING SYSTEM

4N-3986 ALTERNATOR GP-CHARGING (contd.)

i02289090

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



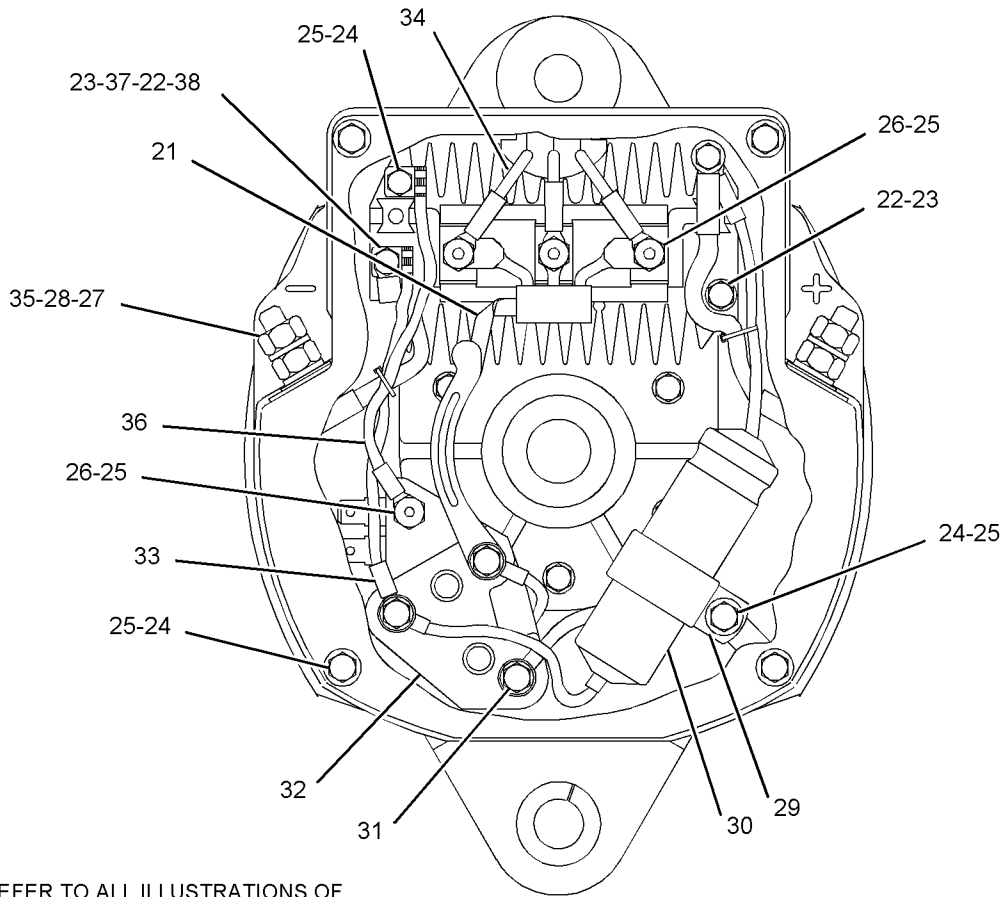
GRAPHIC #1

g01100218

# ELECTRICAL AND STARTING SYSTEM

4N-3986 ALTERNATOR GP-CHARGING (contd.)

i02289090



REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

VIEW B-B

<END>

GRAPHIC #2

g01117023

# ELECTRICAL AND STARTING SYSTEM

## 7G-7889 ALTERNATOR GP-CHARGING\*R

12-VOLT, 60-AMPERE  
AN ATTACHMENT

SMCS - 1405

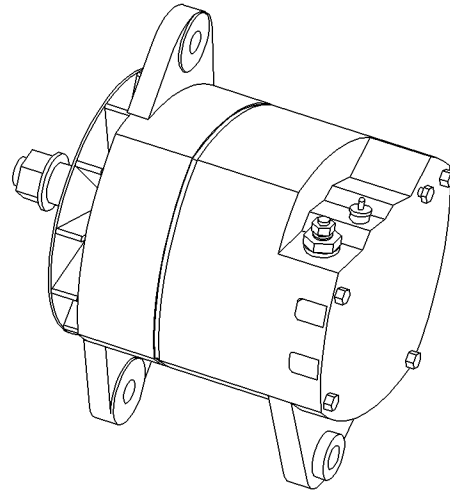
i02195849

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-6920	1	BEARING-ROLLER						
	2	1	9G-5233	1	COIL AS-FIELD						
	3	1	9G-5234	1	STATOR AS						
	4	1	7N-7795	1	COLLAR						
	5	1	7N-7810	1	FRAME AS-DRIVE END						
	6	1	6V-2202	1	BALL BEARING						
	7	1	9L-2140	1	PLATE						
	8	1,2	8F-1434	4	LOCKWASHER						
	9	1	7N-7800	1	ROTOR AS						
	10	1	187-2034	1	NUT-FLANGE (5/8-18-THD)						
	11	2	8T-4205	2	WASHER-HARD (7.2X14.5X2-MM THK)						
	12	1	7N-9024	4	BOLT (M10X24X63.5-MM)						
	13	1	9L-2139	1	WASHER-FELT						
	14	1	3E-5454	1	FAN-ALTERNATOR						
	15	1	9S-2437	3	SCREW-TAPPING (10-24X19.05-MM)						
	16	1	9L-2137	1	RETAINER AS						
	17	2	206-4202	1	RECTIFIER AS						
	18	1	7N-7805	1	HOUSING						
	19	1	7X-3353	4	SCREW-HEX HEAD (10X24X19.05-MM)						
	20	1	7N-7809	1	PLATE						
	21	2	9G-5232	1	KIT-OUTPUT TERMINAL (ALTERNATOR) (INCLUDES INSULATOR, SCREW, WASHERS, LOCKWASHERS AND NUTS)						
	22	2	7N-7808	1	KIT-RELAY TERMINAL (ALTERNATOR) (INCLUDES STUD, BUSHINGS, WASHERS AND NUT AS)						
	23	2	9L-6770	1	CAP						
	24	1,2	030-9612	5	SCREW-FORMING (10-24X0.5-IN)						
	25	2	6N-1872	2	SCREW AS (8-32X1.25-IN)						
	26	2	7N-9023	2	SCREW AS (8-32X26.9-MM)						
	27	2	3E-5451	1	REGULATOR AS (12-VOLT) (ALTERNATOR)						
	28	2	6V-8377	4	NUT (8-32-THD)						
	29	2	7N-7811	1	CONNECTOR						
	30	2	9S-2544	2	SCREW-HEX HEAD (8-32X11.13-MM)						
	31	2	112-9119	1	DIODE AS-ALTERNATOR						
	32	1,2	8T-0328	6	WASHER-HARD (5.5X10X1-MM THK)						
	33	2	7N-9021	1	SCREW AS (8-32X1.34-IN)						
		2	7N-7796	1	BUSHING-TERMINAL						
	34	2	7N-7802	1	CAPACITOR AS						
	35	2	7N-7798	1	CONNECTOR						
	36	2	7N-7801	1	CONNECTOR						
	37	2	9B-7233	6	LOCKWASHER						
	39	2	1H-3244	1	LOCKWASHER						
	40	2	6V-8187	1	NUT (1/4-28-THD)						

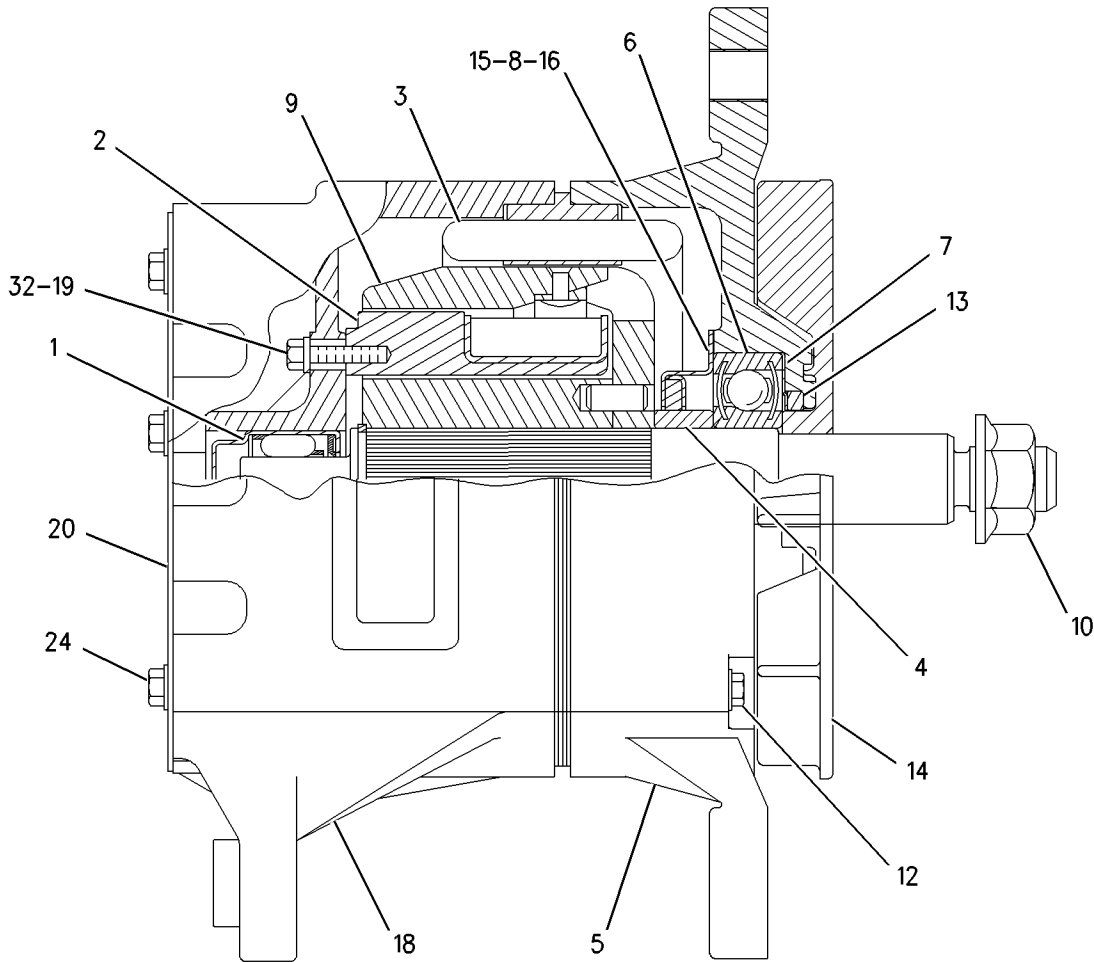
# ELECTRICAL AND STARTING SYSTEM

7G-7889 ALTERNATOR GP-CHARGING (contd.)

i02195849



ISOMETRIC VIEW



GRAPHIC #1

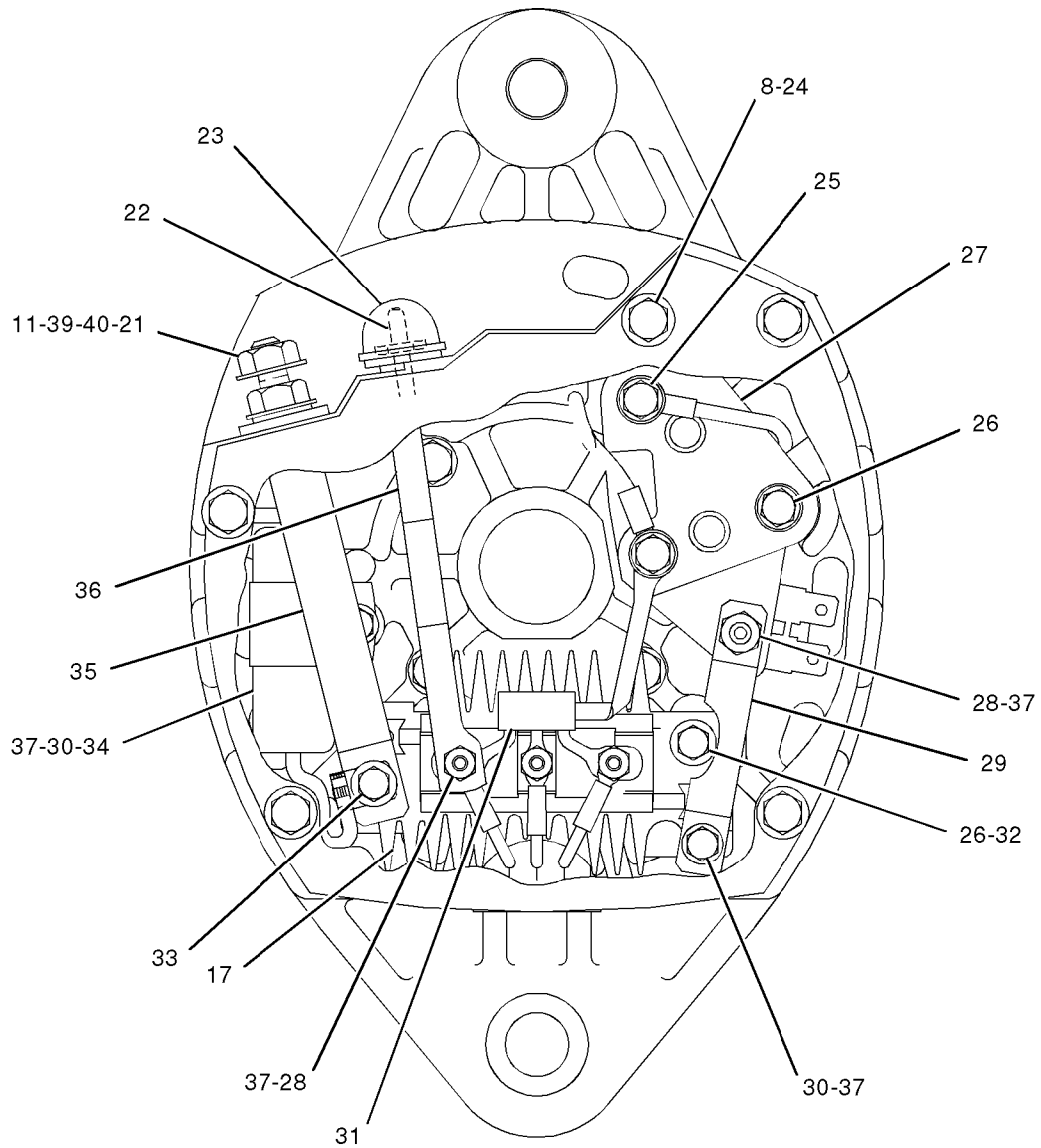
g00806410



# ELECTRICAL AND STARTING SYSTEM

7G-7889 ALTERNATOR GP-CHARGING (contd.)

i02195849



GRAPHIC #2

<END>

g01033326

# ELECTRICAL AND STARTING SYSTEM

## 121-4134 ALTERNATOR GP-CHARGING\*R

12-VOLT, 115-AMPERE  
AN ATTACHMENT

SMCS - 1405

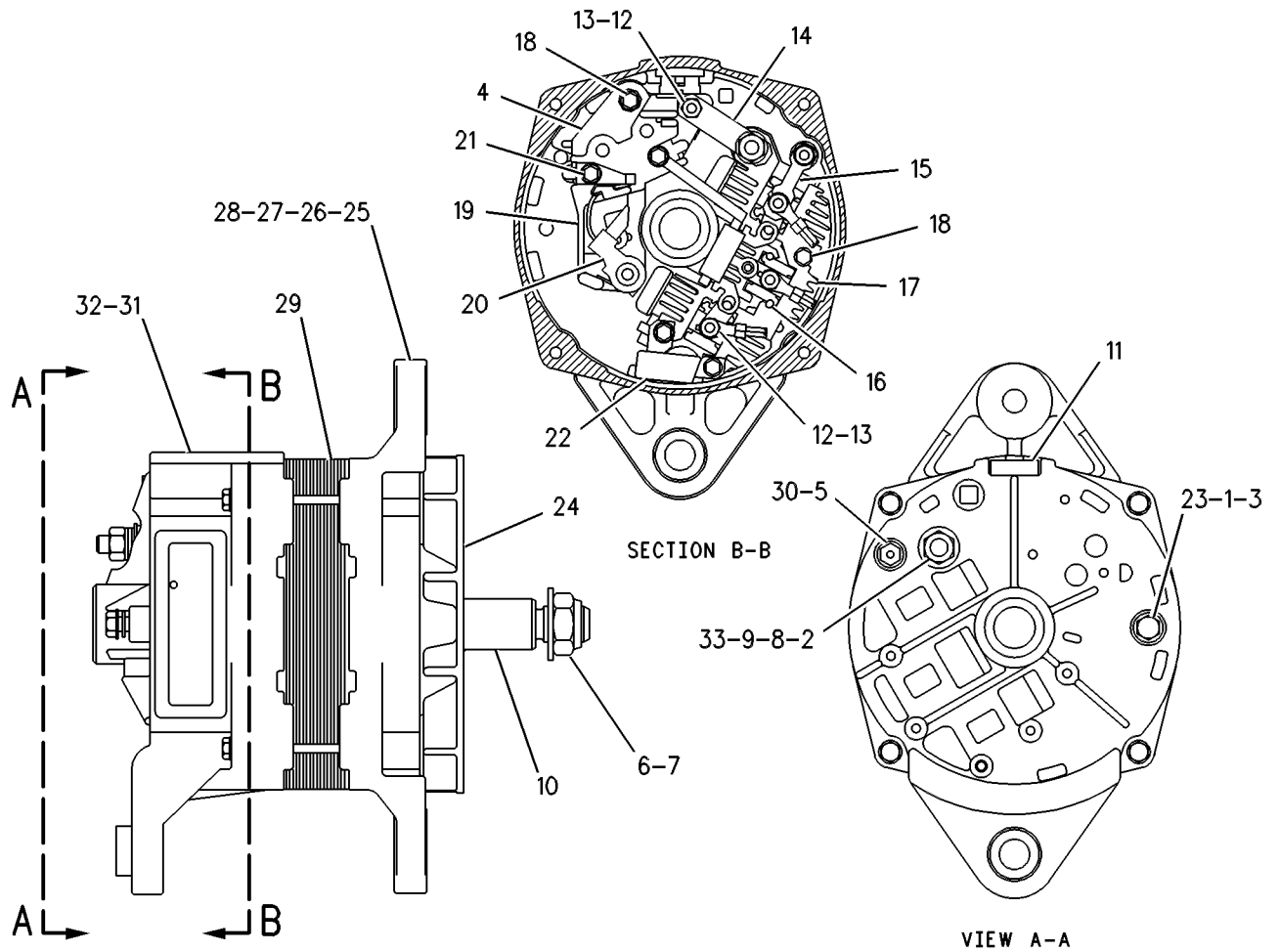
i02262510

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1H-3244	1	LOCKWASHER						
	2	1	6V-8189	1	NUT (5/16-18-THD)						
	3	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	4	1	3E-5451	1	REGULATOR AS (12-VOLT) (ALTERNATOR)						
	5	1	9L-6770	1	CAP						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	7F-7621	1	WASHER (0.635X1.25X0.09-IN THK)						
	8	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	9	1	3F-9556	1	LOCKWASHER						
	10	1	137-4936	1	ROTOR AS-ALTERNATOR						
	11	1	3E-5450	1	COVER						
	12	1	4B-2043	4	NUT (8-32X3.18-MM)						
	13	1	9B-7233	4	LOCKWASHER						
	14	1	3E-5448	1	CONNECTOR						
	15	1	3E-5446	1	CONNECTOR						
	16	1	3E-5457	1	DIODE AS						
	17	1	3E-5461	1	RECTIFIER AS						
	18	1	7N-9023	3	SCREW AS (8-32X26.9-MM)						
	19	1	3E-5460	1	HOLDER AS-BRUSH						
	20	1	3E-5459	2	BRUSH AS-ALTERNATOR						
	21	1	3N-3718	2	SCREW AS						
	22	1	3E-5458	1	CAPACITOR AS-ALTERNATOR						
	23	1	4M-5281	1	BOLT (1/4-20X0.75-IN)						
	24	1	3E-5454	1	FAN-ALTERNATOR						
	25	1	3E-5455	1	HOUSING						
	26	1	5P-7807	1	BALL BEARING						
	27	1	3E-5447	1	PLATE						
	28	1	030-9612	3	SCREW-FORMING (10-24X0.5-IN)						
	29	1	3E-5452	1	STATOR AS						
	30	1	132-1230	1	KIT-ALTERNATOR TERMINAL (RELAY) (INCLUDES INSULATOR, WASHER, NUT AND TERMINAL)						
	31	1	132-1224	1	FRAME AS-ALTERNATOR						
	32	1	5P-6920	1	BEARING-ROLLER						
	33	1	3E-5462	1	KIT-ALTERNATOR TERMINAL (BATTERY) (INCLUDES INSULATOR, LOCKWASHER, NUTS AND TERMINAL)						

# ELECTRICAL AND STARTING SYSTEM

121-4134 ALTERNATOR GP-CHARGING (contd.)

i02262510



GRAPHIC #1

<END>

g00266002

# ELECTRICAL AND STARTING SYSTEM

## 125-9597 ALTERNATOR GP-CHARGING\*R

12-VOLT, 145-AMPERE  
AN ATTACHMENT

SMCS - 1405

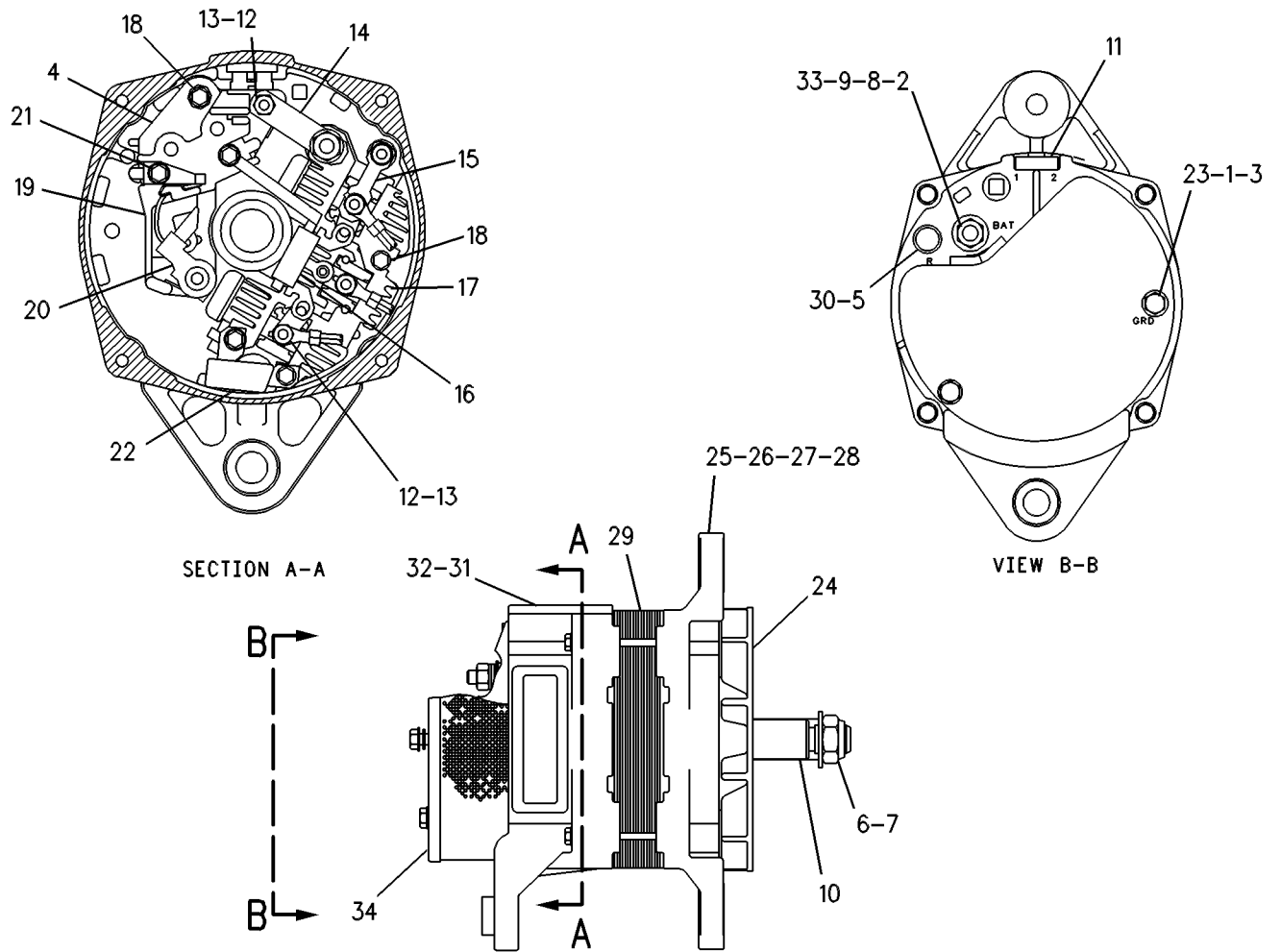
i02262508

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1H-3244	1	LOCKWASHER						
	2	1	6V-8189	1	NUT (5/16-18-THD)						
	3	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	4	1	3E-5451	1	REGULATOR AS (12-VOLT) (ALTERNATOR)						
	5	1	9L-6770	1	CAP						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	7F-7621	1	WASHER (0.635X1.25X0.09-IN THK)						
	8	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	9	1	3F-9556	1	LOCKWASHER						
	10	1	137-4937	1	ROTOR AS-ALTERNATOR						
	11	1	3E-5450	1	COVER						
	12	1	4B-2043	4	NUT (8-32X3.18-MM)						
	13	1	9B-7233	4	LOCKWASHER						
	14	1	3E-5448	1	CONNECTOR						
	15	1	3E-5446	1	CONNECTOR						
	16	1	3E-5457	1	DIODE AS						
	17	1	3E-5461	1	RECTIFIER AS						
	18	1	7N-9023	3	SCREW AS (8-32X26.9-MM)						
	19	1	3E-5460	1	HOLDER AS-BRUSH						
	20	1	3E-5459	2	BRUSH AS-ALTERNATOR						
	21	1	3N-3718	2	SCREW AS						
	22	1	3E-5458	1	CAPACITOR AS-ALTERNATOR						
	23	1	8T-9367	1	BOLT (1/4-20X2-IN)						
	24	1	3E-5454	1	FAN-ALTERNATOR						
	25	1	3E-5455	1	HOUSING						
	26	1	5P-7807	1	BALL BEARING						
	27	1	3E-5447	1	PLATE						
	28	1	030-9612	3	SCREW-FORMING (10-24X0.5-IN)						
	29	1	137-4938	1	STATOR AS-ALTERNATOR						
	30	1	132-1230	1	KIT-ALTERNATOR TERMINAL (RELAY) (INCLUDES BUSHING, WASHER, NUT AND TERMINAL)						
	31	1	132-1224	1	FRAME AS-ALTERNATOR						
	32	1	5P-6920	1	BEARING-ROLLER						
	33	1	3E-5462	1	KIT-ALTERNATOR TERMINAL (BATTERY) (INCLUDES NUTS, TERMINAL, LOCKWASHER AND INSULATOR)						
	34	1	126-2368	1	KIT-ALTERNATOR GUARD (INCLUDES GUARD, BOLT, SCREW AND LOCKWASHER)						

# ELECTRICAL AND STARTING SYSTEM

125-9597 ALTERNATOR GP-CHARGING (contd.)

i02262508



GRAPHIC #1

<END>

g00272795

# ELECTRICAL AND STARTING SYSTEM

## 169-3345 ALTERNATOR GP-CHARGING\*R

24-VOLT, 50-AMPERE  
AN ATTACHMENT

SMCS - 1405

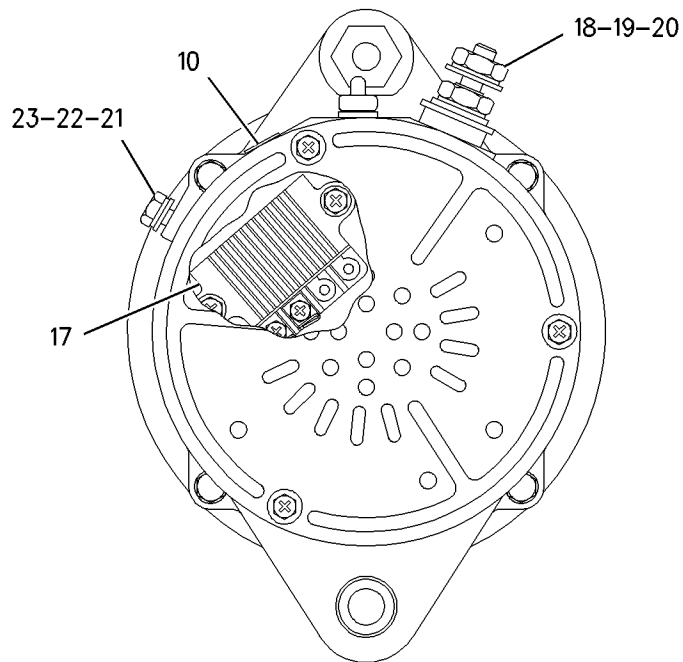
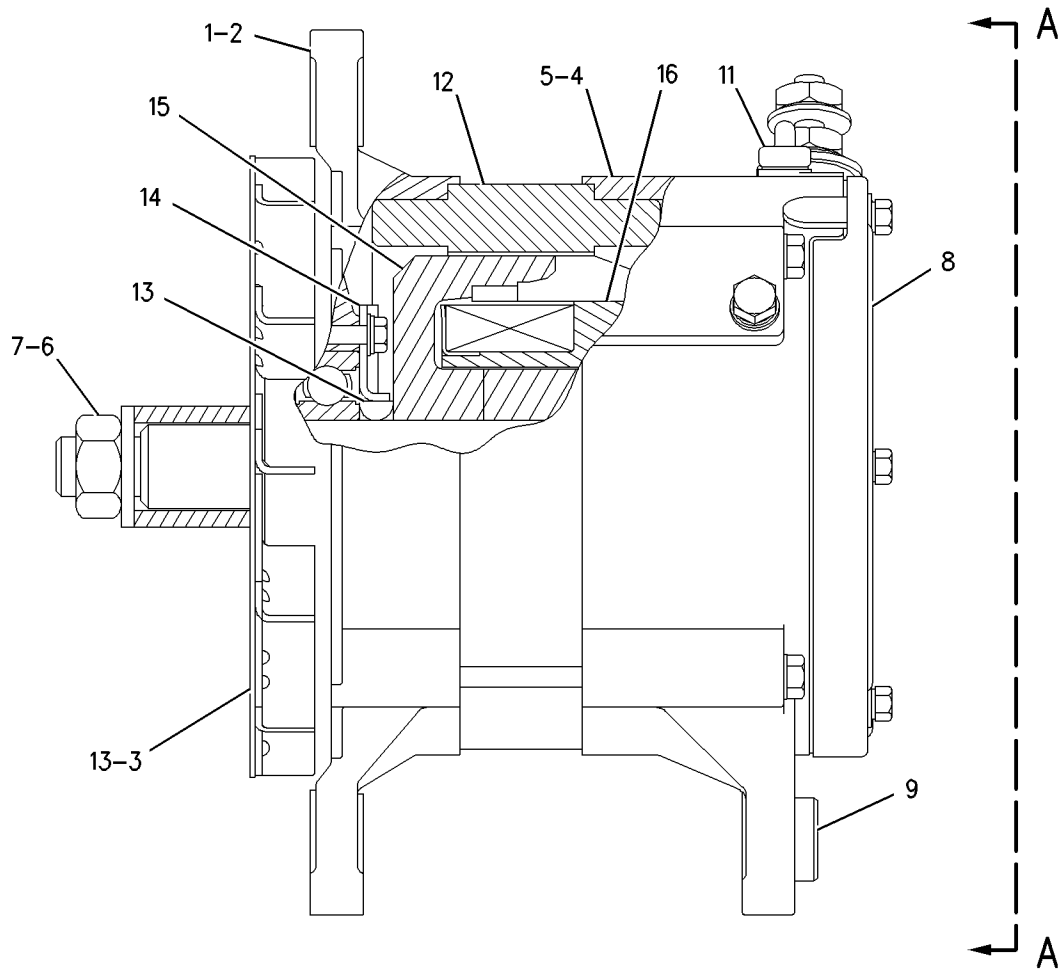
i02138273

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	185-2653	1	FRAME						
	2	1	185-2652	1	FRAME AS						
	3	1	185-2639	1	FAN AS						
	4	1	185-2640	1	FRAME AS						
	5	1	185-2645	1	FRAME						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	5P-8247	1	WASHER-HARD (17X32X3.5-MM THK)						
	8	1	185-2651	1	COVER						
	9	1	185-2646	1	BUSHING						
	10	1	185-2647	1	GROMMET						
	11	1	9L-6770	1	CAP						
	12	1	190-0065	1	STATOR AS-ALTERNATOR						
	13	1	185-2638	2	COLLAR						
	14	1	185-2654	1	PLATE						
	15	1	185-2650	1	ROTOR AS						
	16	1	185-2644	1	COIL AS						
	17	1	185-2648	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
	18	1	6V-8189	1	NUT (5/16-18-THD)						
	19	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	20	1	3F-9556	1	LOCKWASHER						
	21	1	5S-7349	1	BOLT (1/4-20X0.5-IN)						
	22	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	23	1	1H-3244	1	LOCKWASHER						
					AVAILABLE REPAIR KIT(S):						
			185-2655	1	KIT-BEARING (ALTERNATOR) (INCLUDES BEARINGS)						
			199-8436	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES HOLDER AS, PLATE, INSULATOR, PIN, BOLT KITS, GROMMET AND NUT)						
			199-7891	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES INSULATORS, WASHERS AND NUTS)						
			185-2658	1	KIT-HARDWARE (ALTERNATOR) (INCLUDES BOLT KITS)						

# ELECTRICAL AND STARTING SYSTEM

169-3345 ALTERNATOR GP-CHARGING (contd.)

i02138273



VIEW A-A

<END>

GRAPHIC #1

g00724069

# ELECTRICAL AND STARTING SYSTEM

## 177-9953 ALTERNATOR GP-CHARGING\*R

24-VOLT, 80-AMPERE

AN ATTACHMENT

SMCS - 1405

i02298927

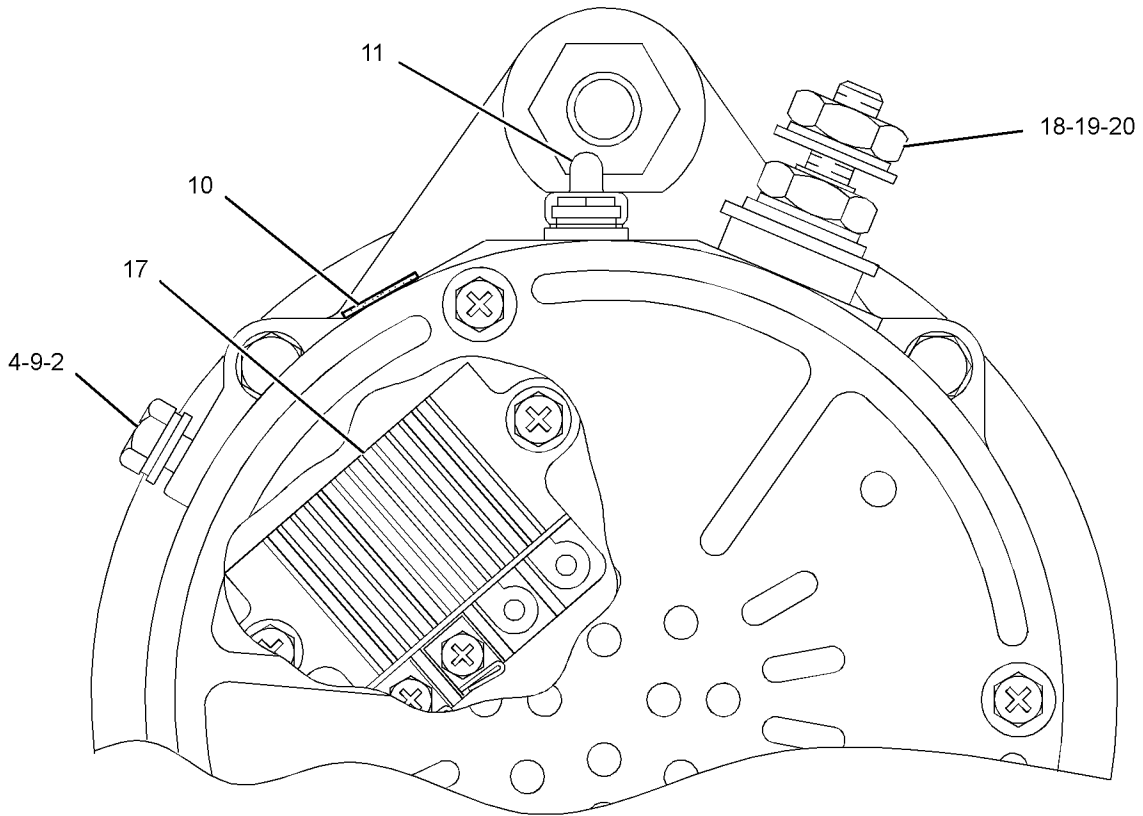
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	185-2653	1	FRAME						
	2	1	5S-7349	1	BOLT (1/4-20X0.5-IN)						
	3	1	185-2639	1	FAN AS						
	4	1	1H-3244	1	LOCKWASHER						
	5	1	185-2645	1	FRAME						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	5P-8247	1	WASHER-HARD (17X32X3.5-MM THK)						
	8	1	185-2651	1	COVER						
	9	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	10	1	185-2647	1	GROMMET						
	11	1	9L-6770	1	CAP						
	12	1	185-2643	1	STATOR AS						
	13	1	185-2638	2	COLLAR						
	14	1	185-2654	1	PLATE						
	15	1	185-2650	1	ROTOR AS						
	16	1	185-2644	1	COIL AS						
	17	1	185-2648	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
J	18	1	6V-8189	1	NUT (5/16-18-THD)						
J	19	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
J	20	1	3F-9556	1	LOCKWASHER						
					AVAILABLE REPAIR KIT(S):						
J			199-7891		KIT-TERMINAL (ALTERNATOR) (INCLUDES INSULATORS, WASHERS, NUT, AND STEP NUT)						
			185-2655		KIT-BEARING (ALTERNATOR) (INCLUDES 3 BEARINGS)						
			199-8436		KIT-TERMINAL (ALTERNATOR) (INCLUDES HOLDER AS, PLATE, INSULATOR, PIN, BOLT, GROMMET, AND NUT)						
			185-2658		KIT-HARDWARE (ALTERNATOR) (INCLUDES BOLTS)						
J-KIT MARKED J SERVICES PARTS MARKED J											



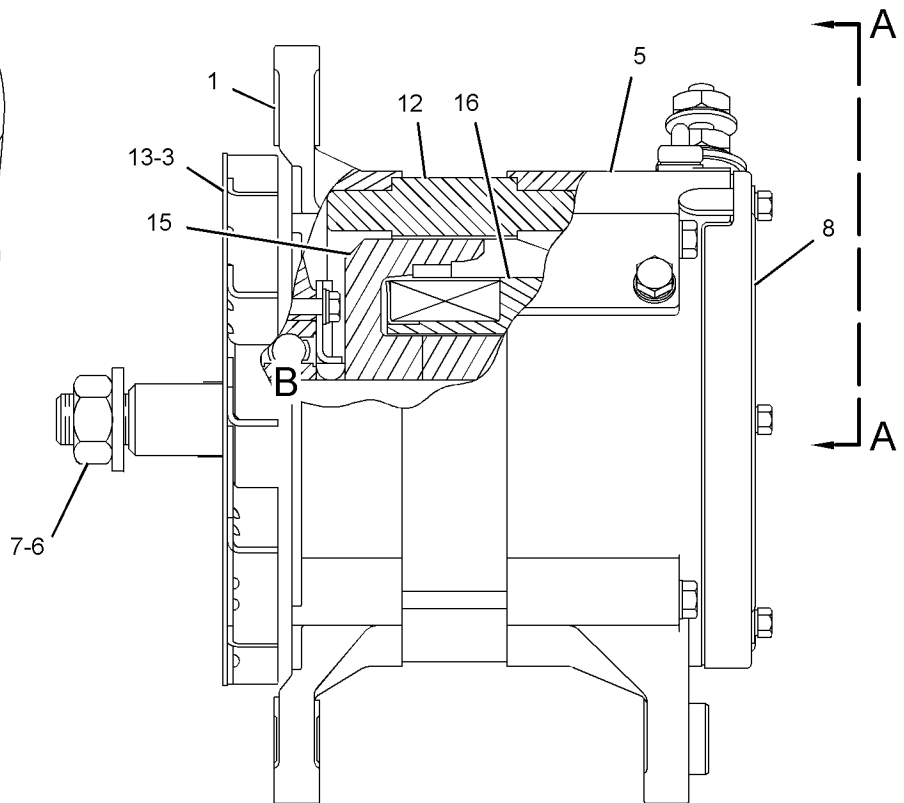
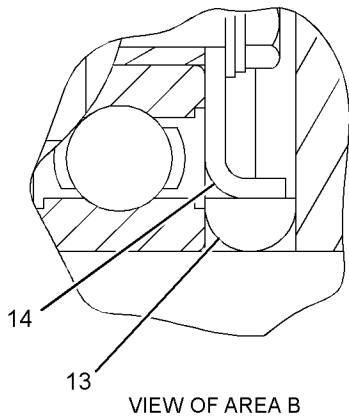
# ELECTRICAL AND STARTING SYSTEM

177-9953 ALTERNATOR GP-CHARGING (contd.)

i02298927



VIEW A-A



<END>

GRAPHIC #1

g01151601

# ELECTRICAL AND STARTING SYSTEM

## 185-5294 ALTERNATOR GP-CHARGING\*R

24 VOLT, 65 AMPERE  
AN ATTACHMENT

SMCS-1405

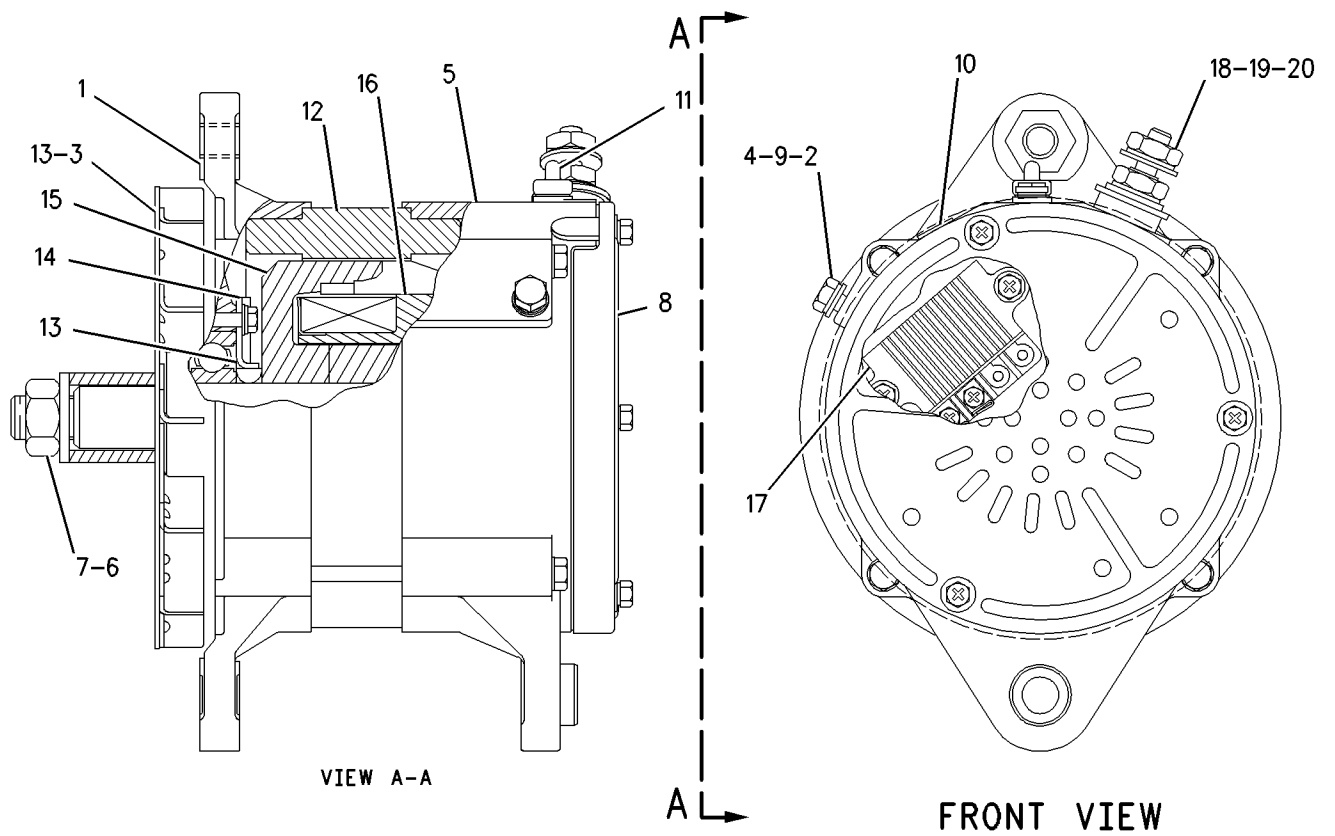
i02147128

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	185-2653	1	FRAME						
	2	1	5S-7349	1	BOLT (1/4-20X0.5-IN)						
	3	1	185-2639	1	FAN AS						
	4	1	1H-3244	1	LOCKWASHER						
	5	1	185-2645	1	FRAME						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	5P-8247	1	WASHER-HARD (17X32X3.5-MM THK)						
	8	1	185-2651	1	COVER						
	9	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	10	1	185-2647	1	GROMMET						
	11	1	9L-6770	1	CAP (ALTERNATOR RELAY TERMINAL)						
	12	1	185-2642	1	STATOR AS						
	13	1	185-2638	2	COLLAR						
	14	1	185-2654	1	PLATE						
	15	1	185-2650	1	ROTOR AS						
	16	1	185-2644	1	COIL AS						
	17	1	185-2648	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
	18	1	6V-8189	1	NUT (5/16-18-THD)						
	19	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	20	1	3F-9556	1	LOCKWASHER						
					AVAILABLE REPAIR KIT(S):						
			185-2655	1	KIT-BEARING (ALTERNATOR) (INCLUDES 2 BEARINGS)						
			199-8436	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES HOLDER AS, PLATE, INSULATOR, PIN, BOLT, GROMMET, AND NUT)						
			199-7891	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES INSULATORS, WASHERS AND NUT)						
			185-2658	1	KIT-HARDWARE (ALTERNATOR) (INCLUDES BOLTS)						

# ELECTRICAL AND STARTING SYSTEM

185-5294 ALTERNATOR GP-CHARGING (contd.)

i02147128



GRAPHIC #1

<END>

g00806894

# ELECTRICAL AND STARTING SYSTEM

## 197-8820 ALTERNATOR GP-CHARGING\*R

24-VOLT, 95-AMPERE  
AN ATTACHMENT

SMCS-1405

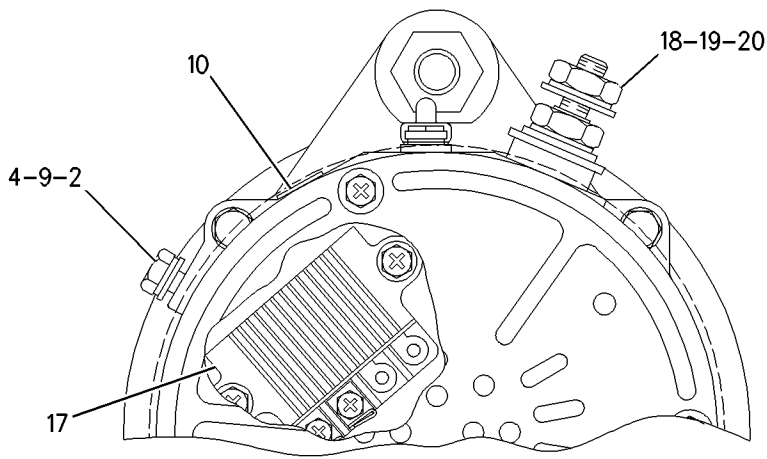
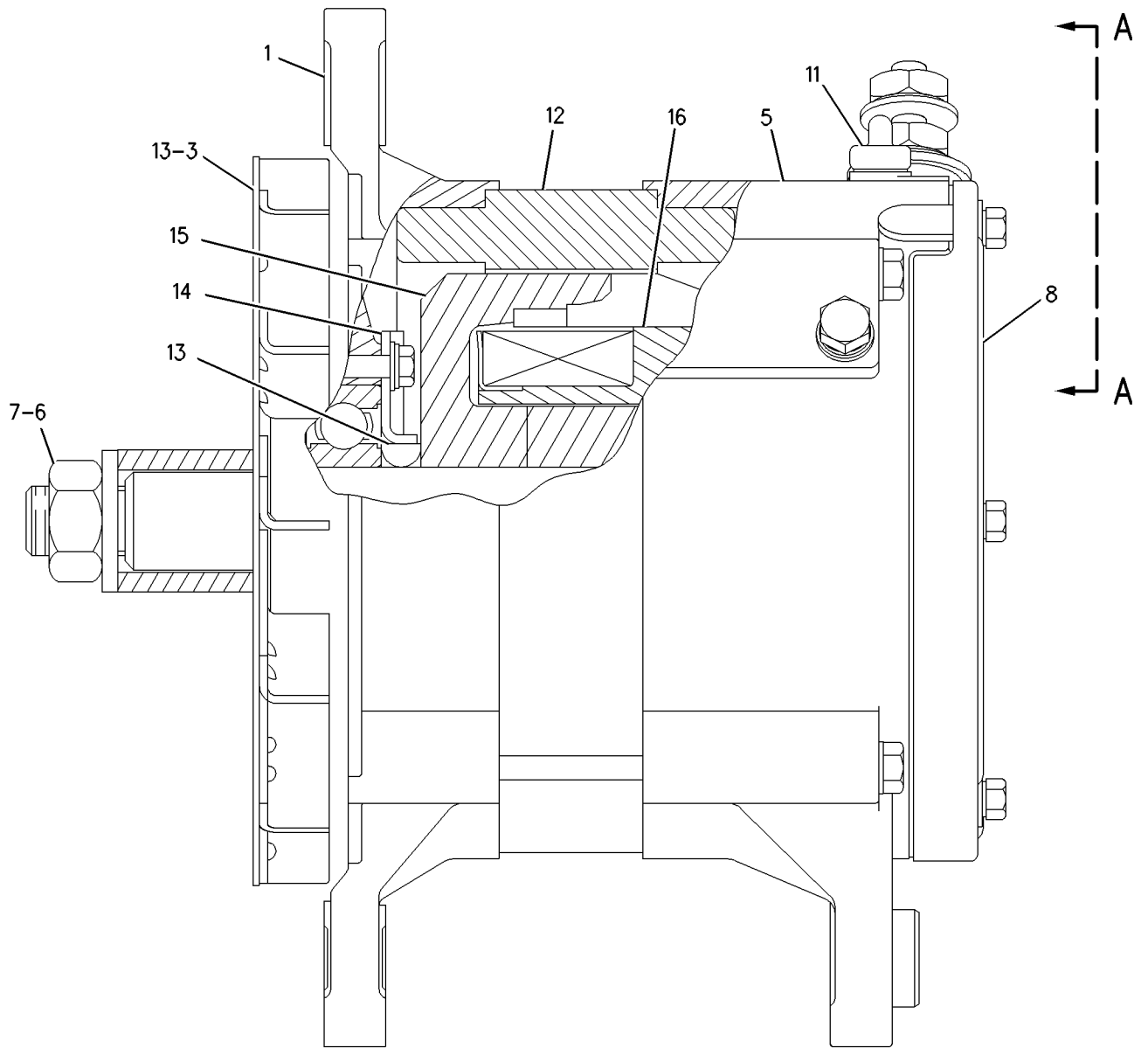
i02197631

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	185-2653	1	FRAME						
	2	1	5S-7349	1	BOLT (1/4-20X0.5-IN)						
	3	1	185-2639	1	FAN AS						
	4	1	1H-3244	1	LOCKWASHER						
	5	1	185-2645	1	FRAME						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	5P-8247	1	WASHER-HARD (17X32X3.5-MM THK)						
	8	1	185-2651	1	COVER						
	9	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	10	1	185-2647	1	GROMMET						
	11	1	9L-6770	1	CAP						
	12	1	205-0626	1	STATOR AS-ALTERNATOR						
	13	1	185-2638	2	COLLAR						
	14	1	185-2654	1	PLATE						
	15	1	185-2650	1	ROTOR AS						
	16	1	185-2644	1	COIL AS						
	17	1	185-2648	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
	18	1	6V-8189	1	NUT (5/16-18-THD)						
	19	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	20	1	3F-9556	1	LOCKWASHER						
					AVAILABLE REPAIR KIT(S):						
			185-2655	1	KIT-BEARING (ALTERNATOR) (INCLUDES 2 BEARINGS)						
			199-8436	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES HOLDER AS, PLATE, INSULATOR, PIN, BOLTS, GROMMET, AND NUT)						
			199-7891	1	KIT-TERMINAL (ALTERNATOR) (INCLUDES INSULATORS, WASHERS, AND NUTS)						
			185-2658	1	KIT-HARDWARE (ALTERNATOR) (INCLUDES BOLTS)						

# ELECTRICAL AND STARTING SYSTEM

197-8820 ALTERNATOR GP-CHARGING (contd.)

i02197631



VIEW A-A

<END>

GRAPHIC #1

g00873198

# ELECTRICAL AND STARTING SYSTEM

## 220-8305 ALTERNATOR GP-CHARGING

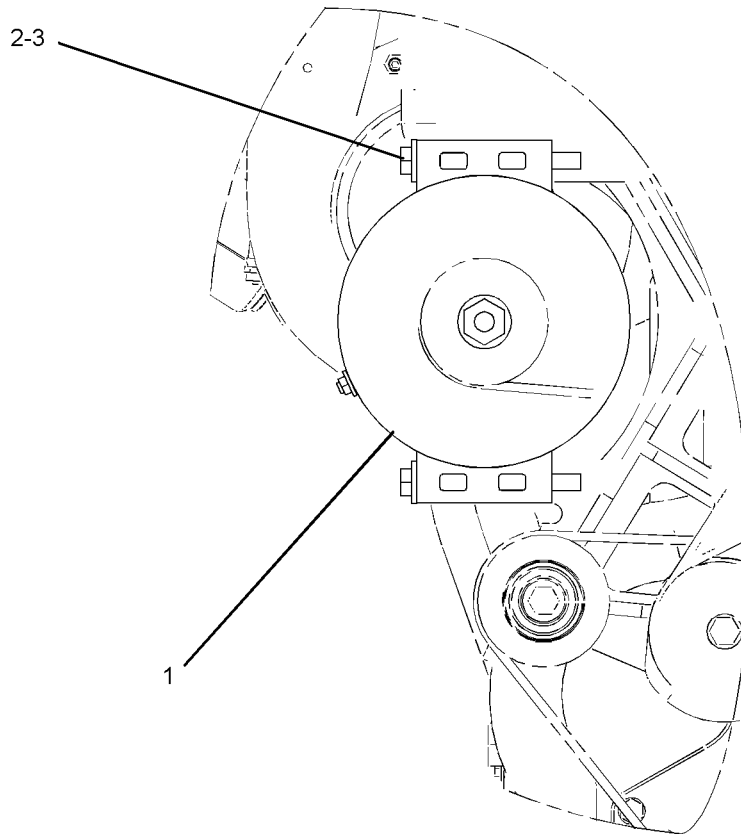
24-VOLT, 95-AMPERE  
AN ATTACHMENT

SMCS-1405

i02286253

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
Y	1	1	226-7683	1	ALTERNATOR GP-CHARGING (24-VOLT, 95-AMPERE)	349
	2	1	3E-4353	4	WASHER-HARD (11X25X3-MM THK)	
M	3	1	6V-1819	4	BOLT (M10X1.5X100-MM)	

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



FRONT VIEW

GRAPHIC #1

<END>

g01144410

# ELECTRICAL AND STARTING SYSTEM

## 226-7683 ALTERNATOR GP-CHARGING

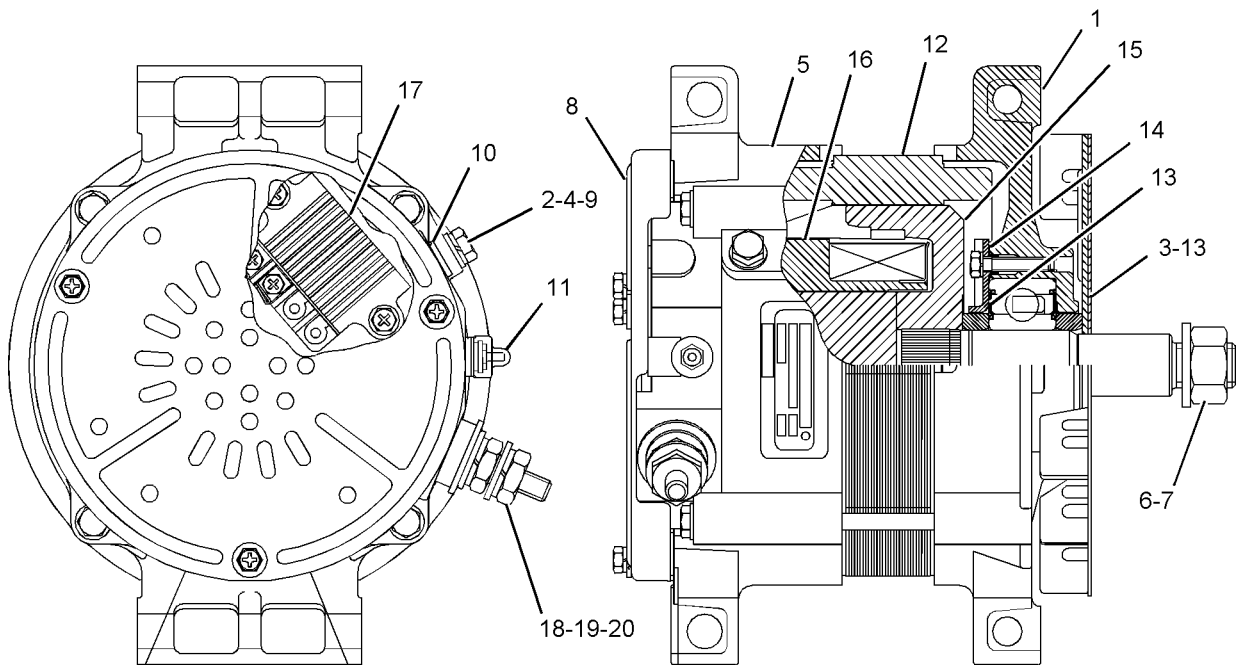
24-VOLT, 95-AMPERE

PART OF 220-8305 ALTERNATOR GP-CHARGING  
AN ATTACHMENT

SMCS-1405

i02144668

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	228-9656	1	MOUNTING GP-ALTERNATOR						
	2	1	5S-7349	1	BOLT (1/4-20X0.5-IN)						
	3	1	185-2639	1	FAN AS						
	4	1	1H-3244	1	LOCKWASHER						
	5	1	228-9655	1	MOUNTING GP-ALTERNATOR						
	6	1	2K-4821	1	LOCKNUT (5/8-18-THD)						
	7	1	5P-8247	1	WASHER-HARD (17X32X3.5-MM THK)						
	8	1	228-9657	1	COVER AS						
	9	1	8T-4205	1	WASHER-HARD (7.2X14.5X2-MM THK)						
	10	1	185-2647	1	GROMMET						
	11	1	9L-6770	1	CAP						
	12	1	205-0626	1	STATOR AS-ALTERNATOR						
	13	1	185-2638	2	COLLAR						
	14	1	185-2654	1	PLATE						
	15	1	185-2650	1	ROTOR AS						
	16	1	185-2644	1	COIL AS						
	17	1	185-2648	1	REGULATOR AS-VOLTAGE (24-VOLT) (ALTERNATOR)						
	18	1	6V-8189	1	NUT (5/16-18-THD)						
	19	1	8T-4224	1	WASHER-HARD (8.8X16X2-MM THK)						
	20	1	3F-9556	1	LOCKWASHER						
					AVAILABLE REPAIR KIT(S):						
			185-2655	1	KIT-BEARING (ALTERNATOR)						
			185-2658	1	KIT-HARDWARE (ALTERNATOR)						
			199-8436	1	KIT-TERMINAL (ALTERNATOR)						
			199-7891	1	KIT-TERMINAL (ALTERNATOR)						



GRAPHIC #1

<END>

g01088551

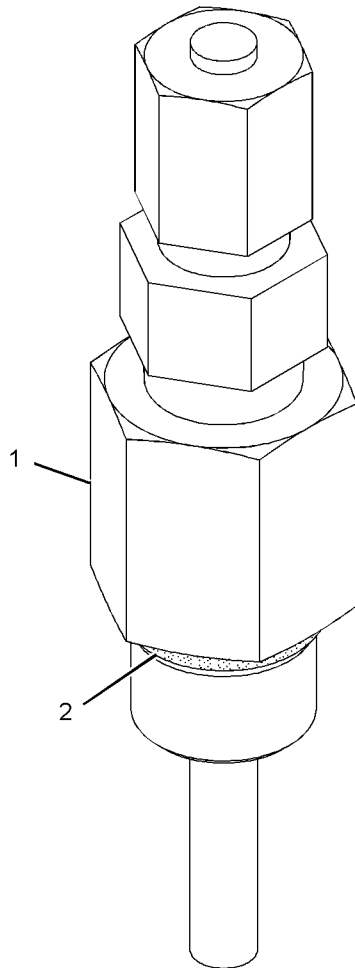
# ELECTRICAL AND STARTING SYSTEM

## 245-4101 ATOMIZER AS-ETHER- STARTING AID, AIR INLET ELBOW PART OF 260-3931, 260-3933 STARTING AID GP-ETHER AN ATTACHMENT

SMCS-1456

i02273047

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-5528	1	ADAPTER-O-RING						
	2	1	6V-5048	1	SEAL-O-RING						



GRAPHIC #1

<END>

g01139611



# ELECTRICAL AND STARTING SYSTEM

## 7L-7871 BATTERY GP

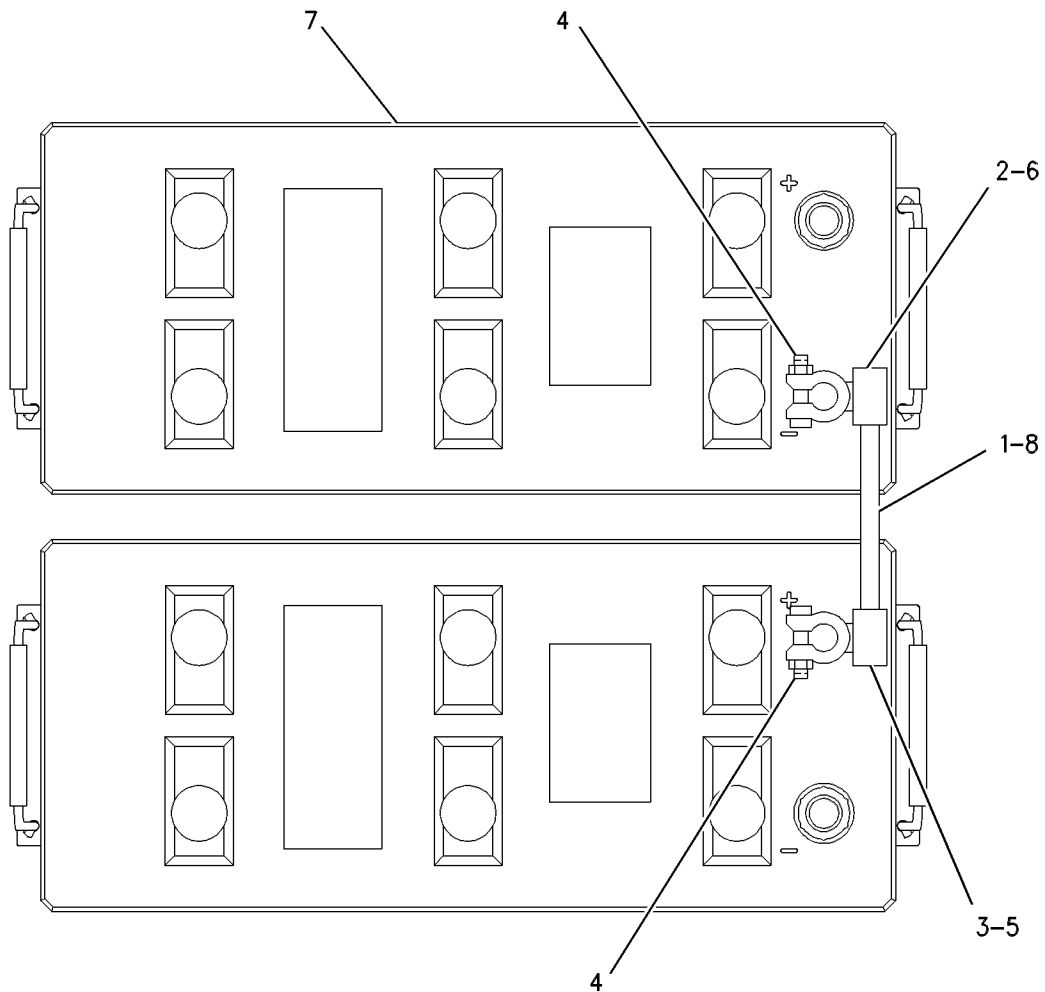
24-VOLT, 1000-COLD CRANKING AMPERE, 140-AMPERE HOUR  
AN ATTACHMENT

SMCS-1401

i02246848

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2V-7397	1	CABLE AS						
E		1	5P-0747		CABLE (00-GA, BLACK) (20-CM)						
	2	1	8T-9757	1	TERMINAL AS-BATTERY (NEGATIVE)						
	3	1	8C-5917	1	TERMINAL AS-BATTERY (POSITIVE)						
	4	1	1M-6119	2	BOLT (5/16-18X1.375-IN)						
		1	1M-6120	2	NUT (5/16-18-THD)						
	5	1	9G-0004	1	COVER-TERMINAL (RED)						
	6	1	9G-0003	1	COVER-TERMINAL (BLACK)						
C	7	1	9X-9720	2	BATTERY (12-VOLT)						
					(EACH INCLUDES)						
		1	7N-0060	6	VENT AS (BATTERY)						
	8	1	8L-8413	2	STRAP-CABLE						

C-CHANGE FROM PREVIOUS TYPE  
E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00621897

# ELECTRICAL AND STARTING SYSTEM

## 7L-7872 BATTERY GP

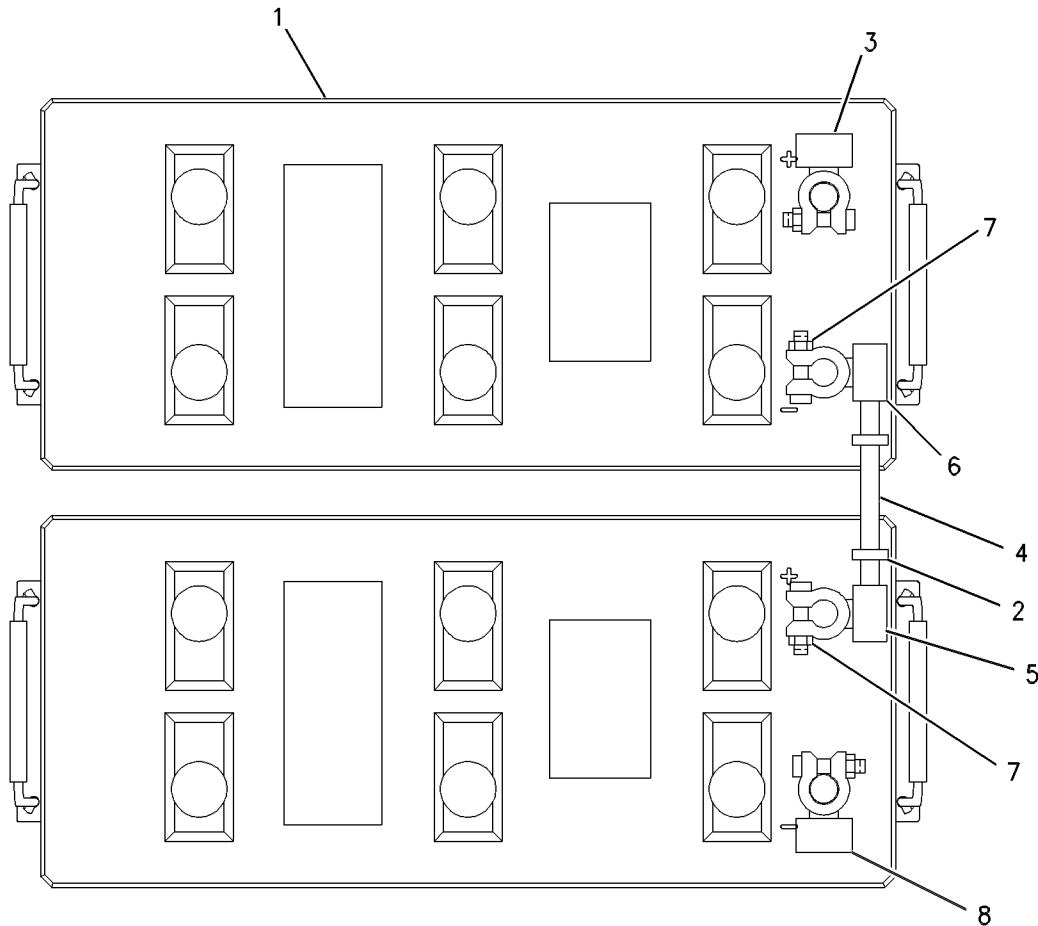
24-VOLT, 1300-COLD CRANKING AMPERE, 190-AMPERE HOUR  
AN ATTACHMENT

SMCS-1401

i02246852

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	9X-9730	2	BATTERY (12-VOLT)						
					(EACH INCLUDES)						
		1	7N-0060	6	VENT AS (BATTERY)						
C	2	1	8L-8413	2	STRAP-CABLE						
C	3	1	9G-0004	1	COVER-TERMINAL (RED)						
C	4	1	2V-7397	1	CABLE AS						
E		1	5P-0747		CABLE (00-GA, BLACK) (20-CM)						
		1	1M-6120	2	NUT (5/16-18-THD)						
	5	1	8C-5917	1	TERMINAL AS-BATTERY (POSITIVE)						
	6	1	8T-9757	1	TERMINAL AS-BATTERY (NEGATIVE)						
	7	1	1M-6119	2	BOLT (5/16-18X1.375-IN)						
C	8	1	9G-0003	1	COVER-TERMINAL (BLACK)						

C-CHANGE FROM PREVIOUS TYPE  
E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00622754

# ELECTRICAL AND STARTING SYSTEM

## 7W-0825 CABLE GP-BATTERY

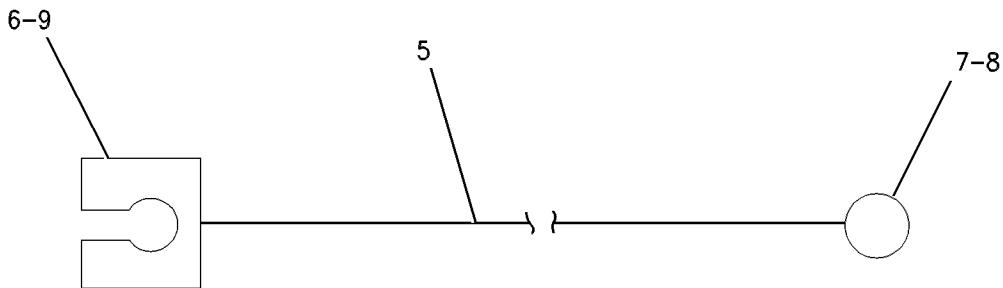
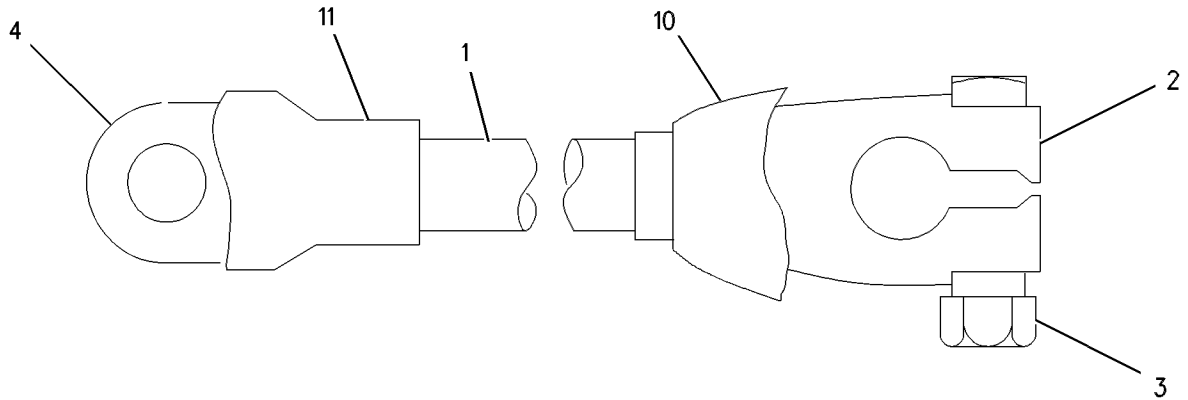
PROVIDES A POSITIVE AND A NEGATIVE CABLE ASSEMBLY  
AN ATTACHMENT

SMCS-1402

i02118505

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3K-1715	1	CABLE AS (BATTERY)						
	2	1	3S-6050	1	TERMINAL AS-BATTERY (NEGATIVE)						
	3	1	1M-6119	1	BOLT (5/16-18X1.375-IN)						
		1	1M-6120	1	NUT (5/16-18-THD)						
	4	1	1S-7251	1	TERMINAL-RING						
	5	1	3V-6785	1	CABLE AS (BATTERY)						
E		1	5P-0761		CABLE (00-GA, RED) (188-CM)						
	6	1	3S-6049	1	TERMINAL AS-BATTERY (POSITIVE)						
		1	1M-6119	1	BOLT (5/16-18X1.375-IN)						
		1	1M-6120	1	NUT (5/16-18-THD)						
	7	1	1S-7251	1	TERMINAL-RING						
	8	1	7N-5274	1	COVER-TERMINAL (BLACK) (BATTERY)						
	9	1	8N-0869	1	COVER-TERMINAL (RED) (RING)						
	10	1	8N-1725	1	COVER-TERMINAL (RED) (BATTERY)						
	11	1	9G-8909	1	COVER-TERMINAL (BLACK) (RING)						

E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00623828

# ELECTRICAL AND STARTING SYSTEM

## 240-6054 CONNECTION GP-ELECTRICAL FOR CUSTOMER HOOKUP ON INDUSTRIAL ENGINES WITH ADEM IV ECMS AN ATTACHMENT

SMCS-1408

i02116672

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
J	8T-8732	1	RECEPTACLE (3-PIN)						
L	8T-8737	66	PLUG-SEAL						
L	9W-0844	3	SOCKET-CONNECTOR						
L	133-0969	1	CONNECTOR-SOCKET						
	160-7689	1	PLUG AS-CONNECTOR (70-PIN)						
	159-9322	1	SEAL-O-RING						
	9X-3401	3	PIN-CONNECTOR (16-GA TO 18-GA WIRE)						
			-OR-						
	126-1767	3	PIN-CONNECTOR (14-GA WIRE)						
J	194-5226	1	WIRE AS-HARNESS (16-GA TO 18-GA) (THROTTLE POSITION)						
			-OR-						
J	194-5227	1	WIRE AS-SENSOR (14-GA WIRE) (THROTTLE POSITION)						
L	194-5226	1	WIRE AS-HARNESS (16-GA TO 18-GA) (CUSTOMER CONNECTOR)						
			-OR-						
L	194-5227	1	WIRE AS-SENSOR (14-GA WIRE) (CUSTOMER CONNECTOR)						
J-FOR THROTTLE POSITION SENSOR CONNECTION L-FOR CUSTOMER CONNECTOR (70-PIN)									
<b>&lt;END&gt;</b>									

# ELECTRICAL AND STARTING SYSTEM

## 241-7601 CONNECTION GP-ELECTRICAL

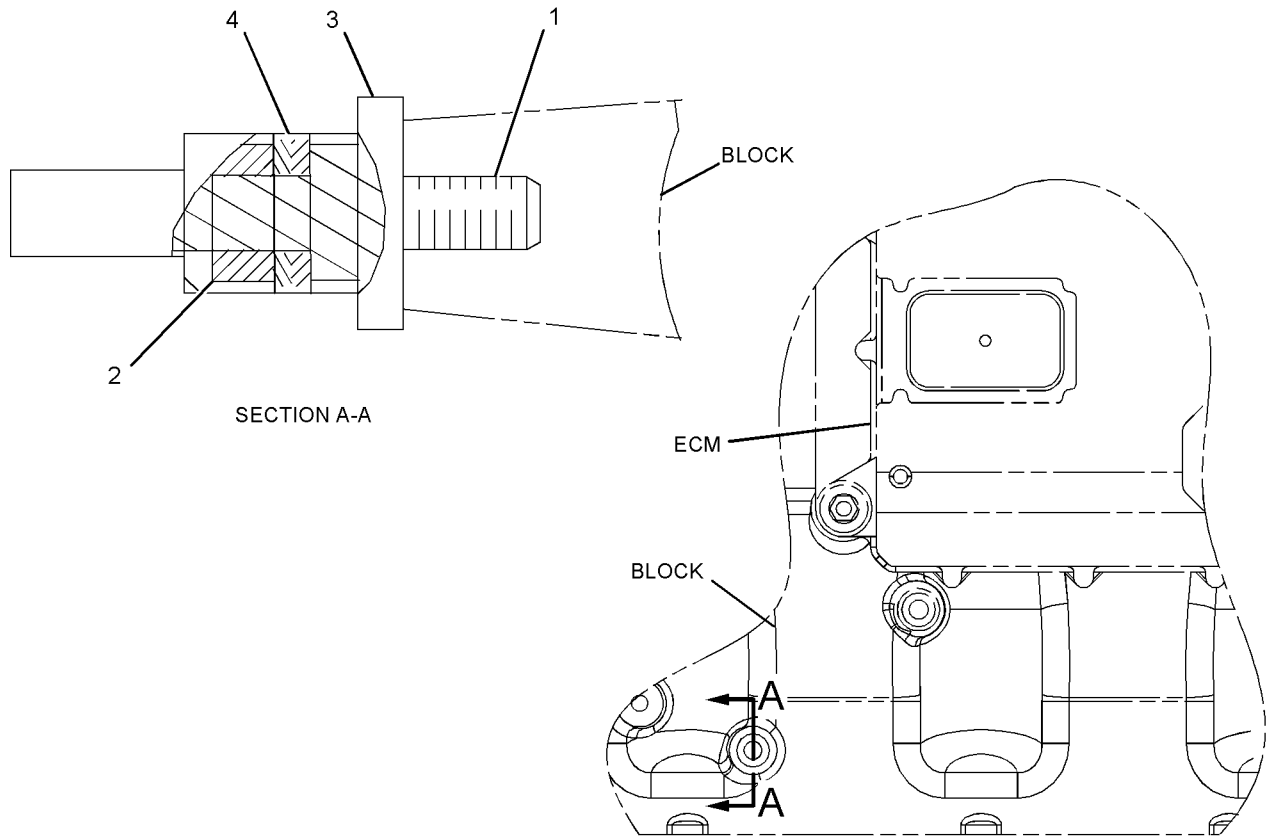
PROVIDES ADDITIONAL 8MM GROUND STUD BELOW ECM  
AN ATTACHMENT

SMCS-1408

i01986748

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	9X-2097	1	STUDBOLT (M8X1.25 THD)						
M	2	1	5C-7261	1	NUT (M8X1.25 THD)						
	3	1	6V-3964	1	WASHER-HARD (8.8X25.5X5MM THK)						
	4	1	8T-4224	2	WASHER-HARD (8.8X16X2MM THK)						

M-METRIC PART



GRAPHIC #1

<END>

LEFT SIDE VIEW

g01015601

# ELECTRICAL AND STARTING SYSTEM

## 229-8437 CONTROL & MTG GP-ENGINE ELEK

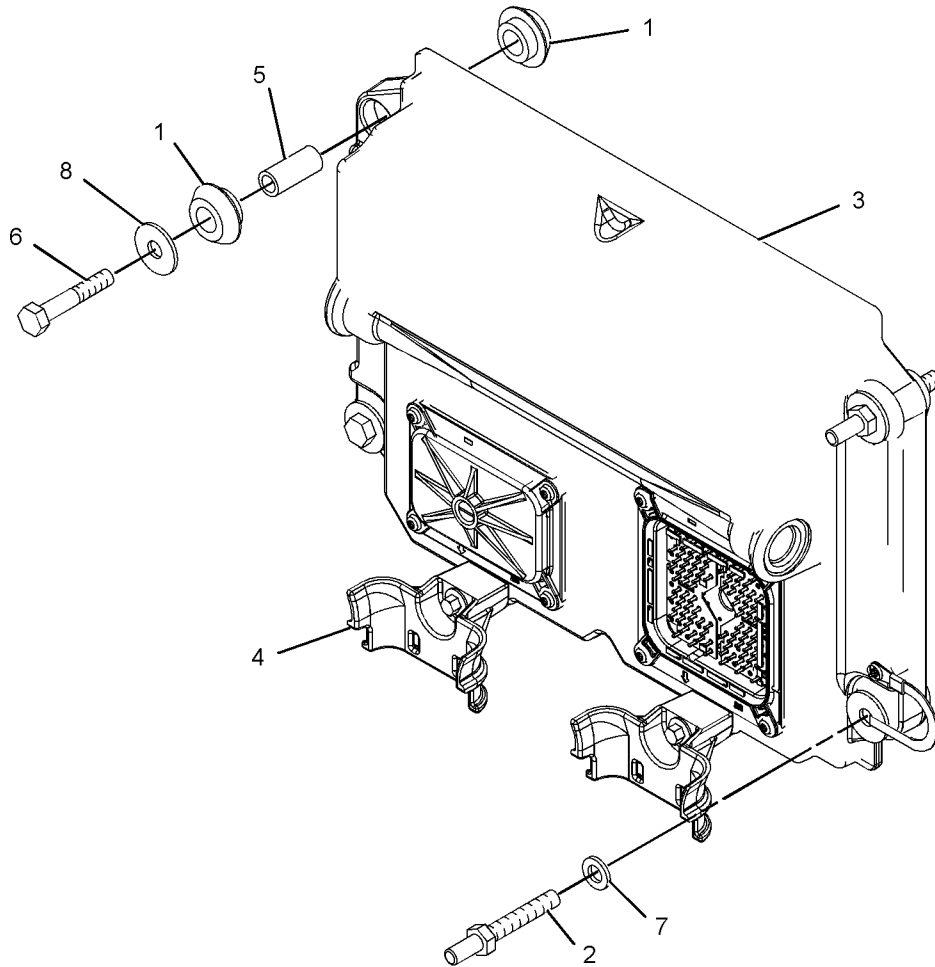
FUEL COOLED  
AN ATTACHMENT

SMCS-1900, 1901

i02210586

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8T-9655</b>	8	MOUNT-ISOLATION						
M	2	1	<b>9X-2098</b>	2	STUD (M8X1.25X67.75-MM OAL)						
C	3	1	<b>255-5285</b>	1	CONTROL GP-MACHINE						
	4	1	<b>233-0891</b>	2	BRACKET AS						
	5	1	<b>6I-1418</b>	4	SPACER (8.2X12.7X28.7-MM THK)						
M	6	1	<b>8T-0276</b>	2	BOLT (M8X1.25X45-MM)						
	7	1	<b>9M-1974</b>	1	WASHER-HARD (8.8X16X2-MM THK)						
	8	1	<b>9N-0869</b>	4	WASHER-HARD (8.8X25.5X2-MM THK)						

C-CHANGE FROM PREVIOUS TYPE  
M-METRIC PART



GRAPHIC #1

<END>

g01119715

# ELECTRICAL AND STARTING SYSTEM

## 233-6191 CONTROL & MTG GP-ENGINE ELEK

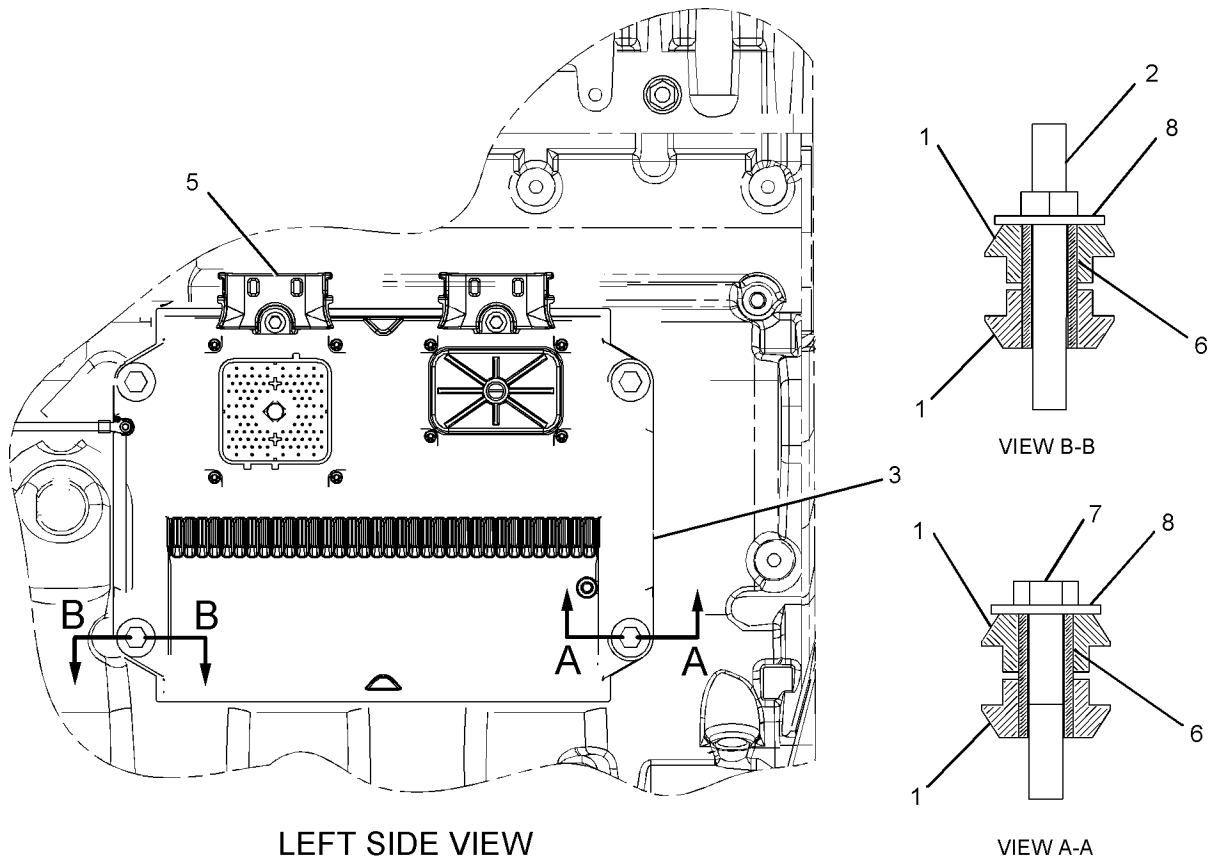
ALSO AN ATTACHMENT

SMCS-1900, 1901

i02279617

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8T-9655</b>	8	MOUNT-ISOLATION						
M	2	1	<b>9X-2098</b>	2	STUD (M8X1.25X67.75-MM OAL)						
Y	3	1	<b>226-7473</b>	1	CONTROL GP-ENGINE ELECTRONIC						358
	5	1	<b>233-0891</b>	2	BRACKET AS						
	6	1	<b>6I-1418</b>	4	SPACER (8.2X12.7X28.7-MM THK)						
M	7	1	<b>8T-0276</b>	2	BOLT (M8X1.25X45-MM)						
	8	1	<b>9N-0869</b>	4	WASHER-HARD (8.8X25.5X2-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

g01094987

# ELECTRICAL AND STARTING SYSTEM

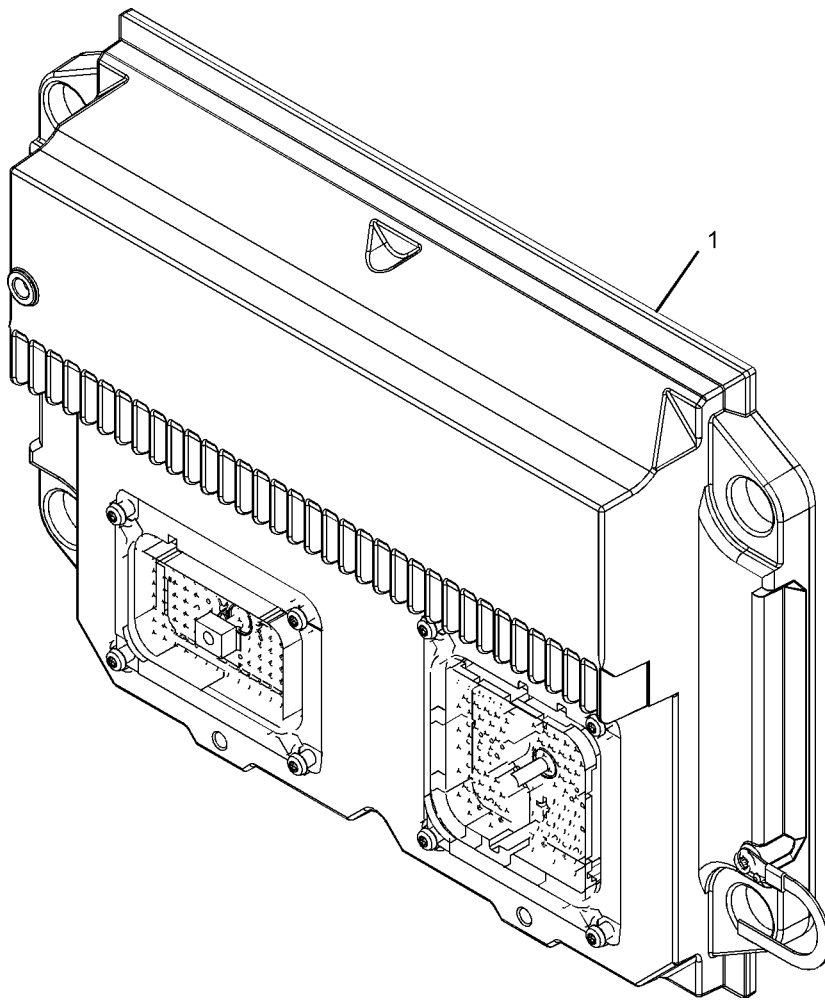
## 226-7473 CONTROL GP-ENGINE ELECTRONIC

PART OF 233-6191 CONTROL & MTG GP-ENGINE ELEK  
ALSO AN ATTACHMENT

SMCS-1901

i02311021

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	262-2878	1	CONTROL GP-MACHINE	



GRAPHIC #1

<END>

g01101798



# ELECTRICAL AND STARTING SYSTEM

## 134-0597 CONTROL GP-ENGINE SPEED

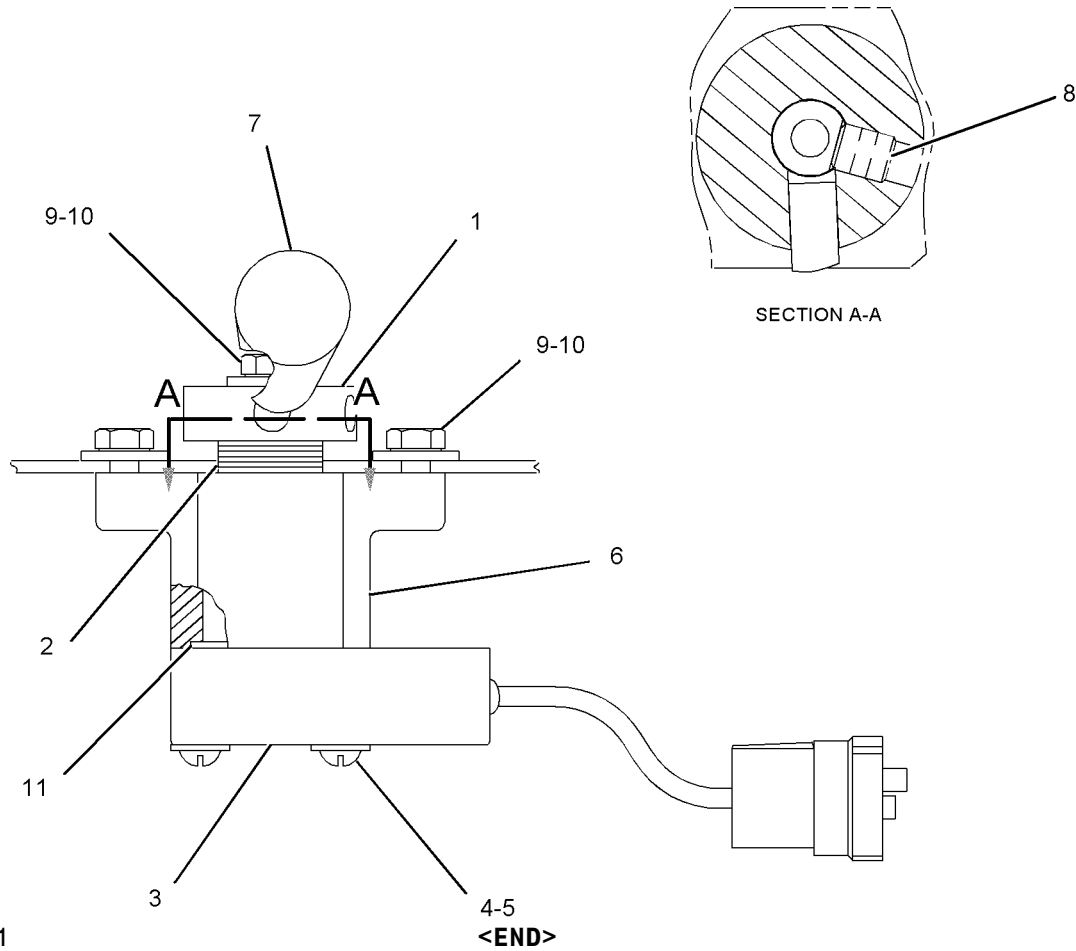
LEVER OPERATED  
FOR USE WITH ELECTRONIC ENGINES  
AN ATTACHMENT

SMCS-1901

i02198240

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	114-0268	1	LEVER AS						
	2	1	2N-9421	6	SPRING-DISC						
Y	3	1	219-2384	1	SENSOR GP-POSITION (ROTARY) (ENGINE SPEED)						366
	4	1	4B-4274	2	WASHER (5.5X13X1.2-MM THK)						
	5	1	2F-7888	2	SCREW-MACHINE (10-32X1.25-IN)						
	6	1	166-0690	1	BLOCK AS-MOUNTING						
	7	1	039-7601	1	KNOB						
	8	1	8B-7179	1	SETSCREW-SOCKET (5/16-18X3/8-IN)						
	9	1	031-0215	3	BOLT-LOCKING (1/4-20X0.625-IN)						
	10	1	5P-4115	3	WASHER-HARD (7.2X19X2-MM THK)						
	11	1	6V-0894	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



g01088428

# ELECTRICAL AND STARTING SYSTEM

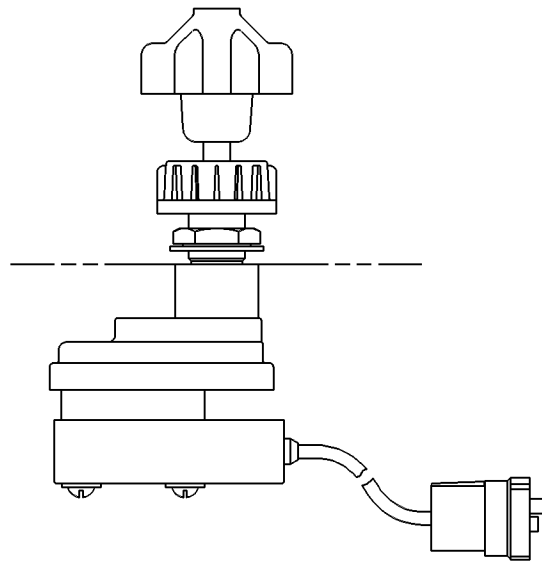
## 134-0670 CONTROL GP-ENGINE SPEED

KNOB OPERATED  
FOR USE WITH ELECTRONIC ENGINES  
AN ATTACHMENT

SMCS-1901

i00700609

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
(INDIVIDUAL PARTS ARE NOT SERVICED SEPARATELY)						



GRAPHIC #1

<END>

g00263246

# ELECTRICAL AND STARTING SYSTEM

## 140-2175 CONTROL GP-REMOTE SPEED

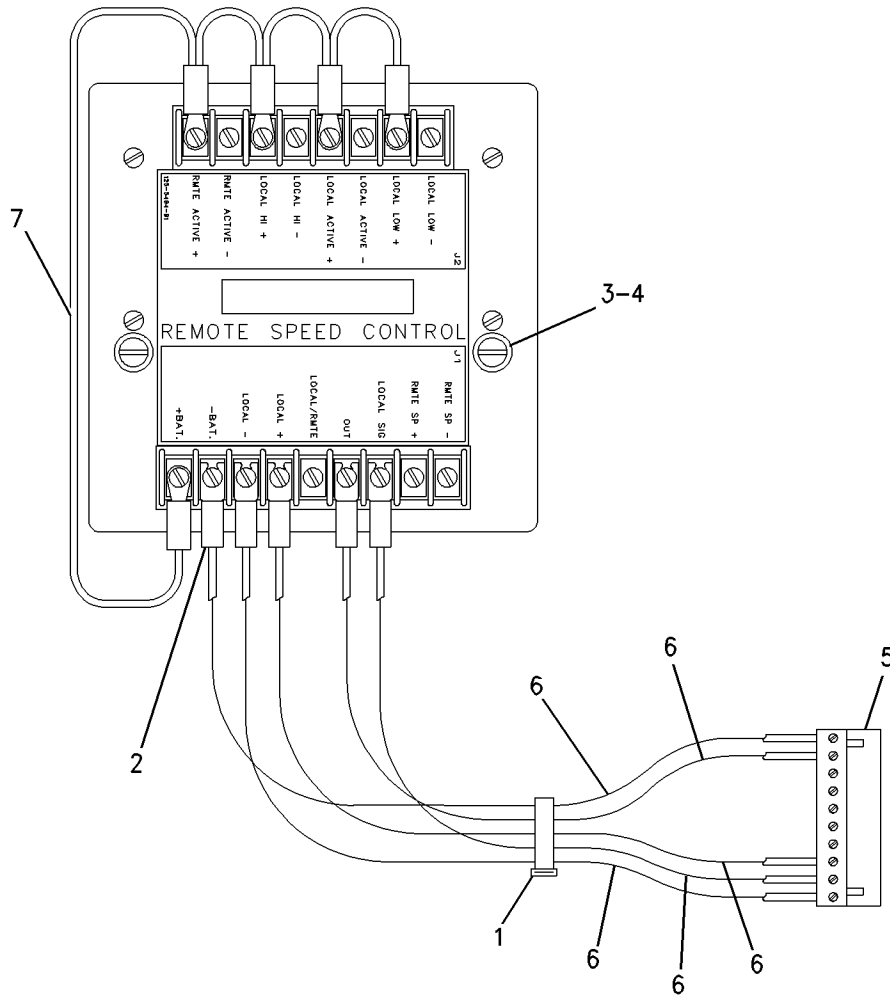
AN ATTACHMENT

SMCS-1907, 1915

i01678441

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8L-8413	1	STRAP-CABLE						
	2	1	5P-2321	5	TERMINAL (14-GA TO 16-GA)						
	3	1	7S-1198	2	SCREW-MACHINE (8-32X1.5-IN)						
	4	1	4B-4863	2	WASHER (4.7X11X1.2-MM THK)						
	5	1	9X-9672	1	CONNECTOR-PLUG						
BD	6	1	5P-5677		WIRE (18-GA, BLACK)						
	7	1	132-5559	1	WIRE AS (18-GA)						

B-USE AS REQUIRED  
D-ORDER BY THE METER



GRAPHIC #1

<END>

g00730904

# ELECTRICAL AND STARTING SYSTEM

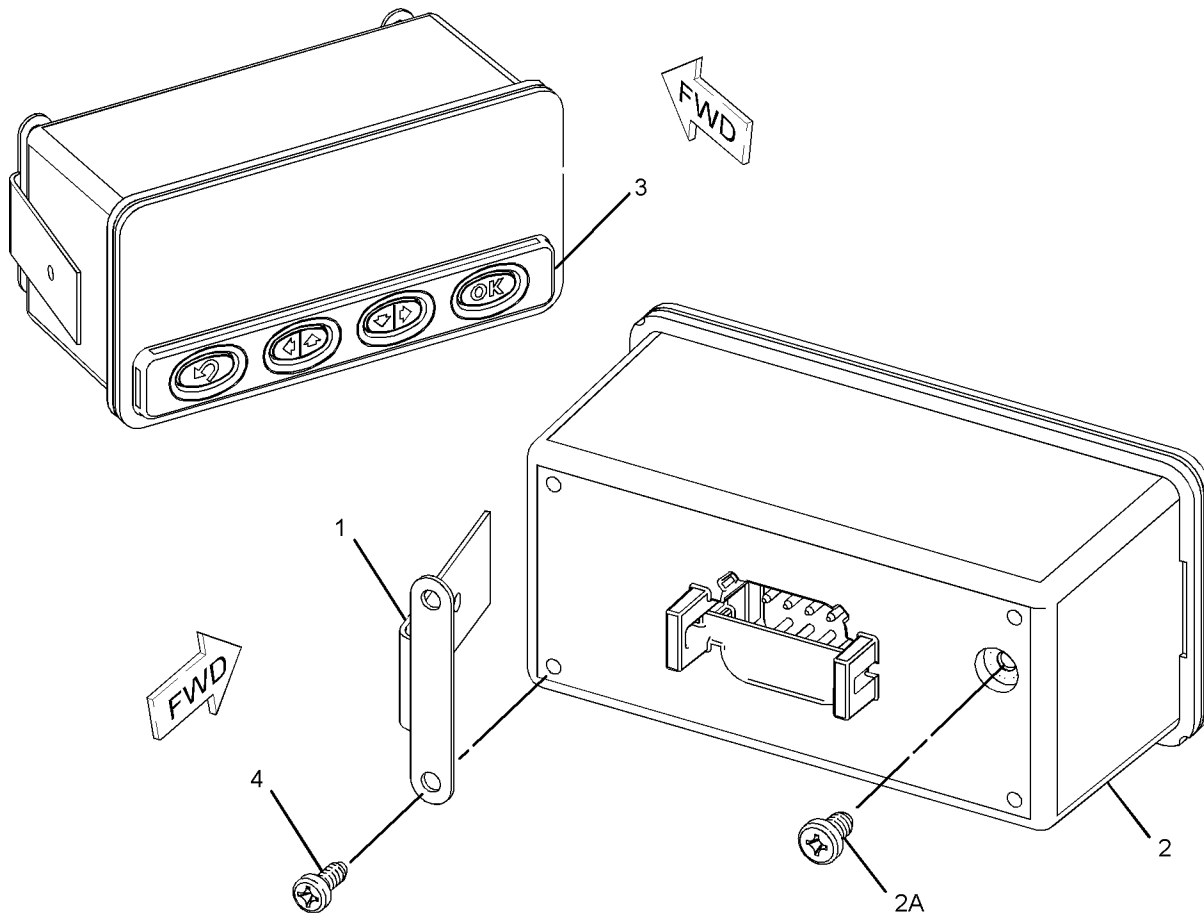
## 239-5025 CONTROL GP-UNPROGRAMMED

PART OF 243-3820 MODULE GP-DISPLAY  
AN ATTACHMENT

SMCS-7610

i02179372

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	208-8375	2	BRACKET						
	2	1	239-5024	1	CONTROL GP-MONITOR						
	2A	1	124-0312	1	SCREW-PAN HEAD (8-16X0.32-IN)						
	3	1	242-2461	1	BEZEL						
	4	1	156-6198	4	SCREW-MACHINE (6-20X0.37-IN)						



GRAPHIC #1

<END>

g01103089

# ELECTRICAL AND STARTING SYSTEM

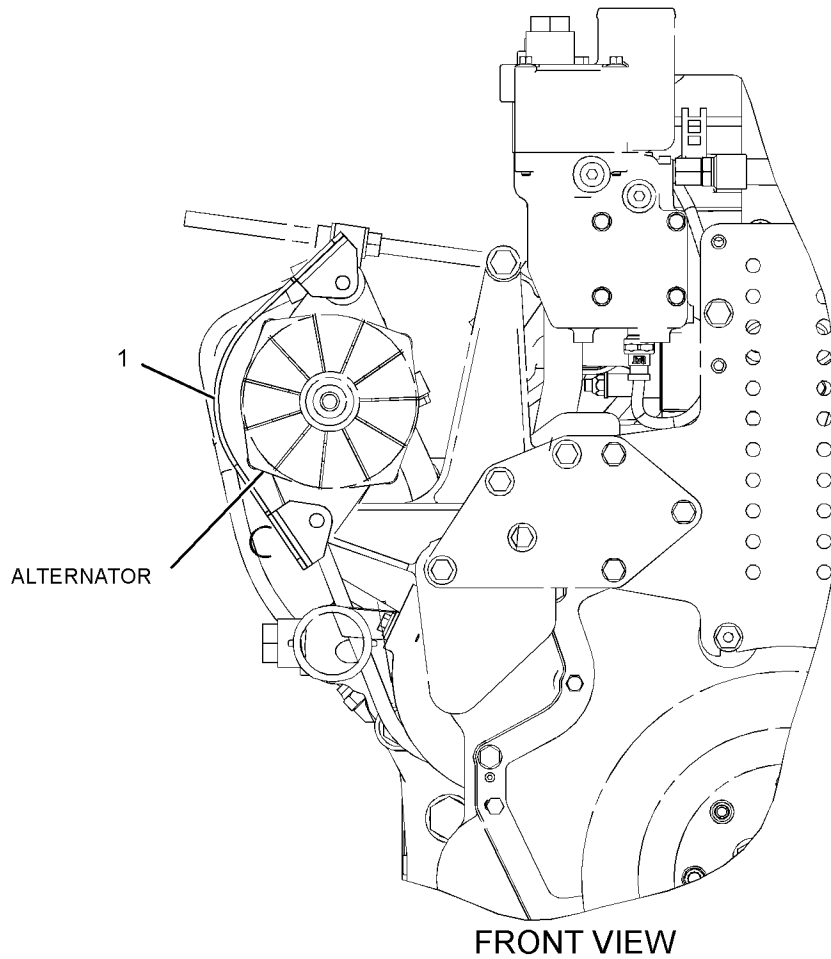
## 269-8598 GUARD GP-ALTERNATOR

FOR USE WITH INDUSTRIAL ENGINES, 243-3019-PAGE 115  
AN ATTACHMENT

SMCS-7168

i02301108

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	143-7409	1	GUARD						



GRAPHIC #1

<END>

g01154032

# ELECTRICAL AND STARTING SYSTEM

## 231-1975 SENSOR GP-ENGINE

ALSO AN ATTACHMENT

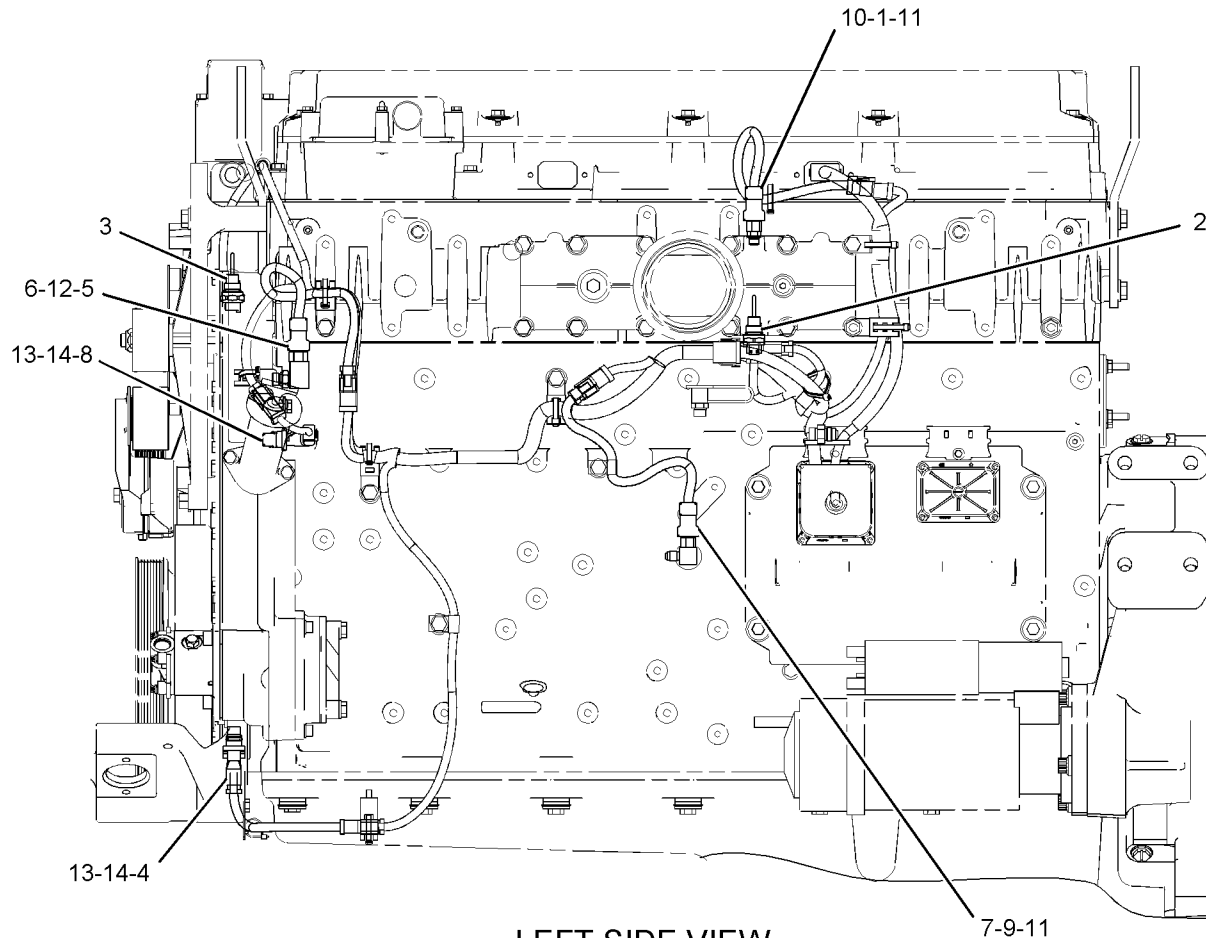
SMCS-1000, 1718, 1906, 1907, 1912, 1917, 1923,  
1924, 1925, 1928, 1929, 7400, 7422

i02176995

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>9X-0262</b>	1	ADAPTER						
Y	2	1	197-8391	1	SENSOR GP-TEMPERATURE (AIR INLET MANIFOLD)						379
Y	3	1	197-8392	1	SENSOR GP-TEMPERATURE (WATER, COOLANT)						380
Y	4	1	<b>230-7149</b>	1	SENSOR GP-SPEED (CRANKSHAFT SPEED, TIMING)						377
	5	1	<b>234-4355</b>	1	ADAPTER-O-RING						
Y	6	1	239-2395	1	SENSOR GP-PRESSURE (ATMOSPHERIC)						369
Y	7	1	239-2396	1	SENSOR GP-PRESSURE (ENGINE OIL)						370
Y	8	1	239-2397	1	SENSOR GP-SPEED (CAMSHAFT SPEED, TIMING)						378
	9	1	<b>164-9609</b>	1	ELBOW						
Y	10	1	239-5674	1	SENSOR GP-PRESSURE (AIR INLET MANIFOLD)						372
	11	1	<b>6V-5048</b>	2	SEAL-O-RING						
	12	1	<b>6V-5049</b>	1	SEAL-O-RING						
M	13	1	<b>8T-0642</b>	2	BOLT (M8X1.25X14-MM)						
	14	1	<b>9M-1974</b>	2	WASHER-HARD (8.8X16X2-MM THK)						

M-METRIC PART

Y-SEPARATE ILLUSTRATION



LEFT SIDE VIEW

<END>

GRAPHIC #1

g01061281

# ELECTRICAL AND STARTING SYSTEM

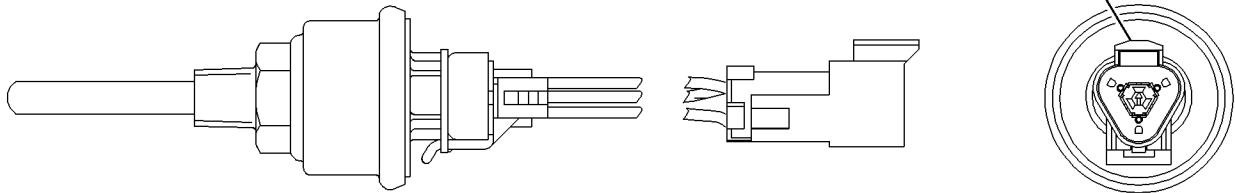
## 165-6634 SENSOR GP-LIQUID LEVEL

AN ATTACHMENT

SMCS-7422

i02195857

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	102-8803	1	KIT-RECEPTACLE (3-PIN)						
					(INCLUDES RECEPTACLE AS AND WEDGE)						
	2	1	3E-3371	1	WEDGE-RECEPTACLE LOCK (3-PIN)						
	3	1	186-3735	3	PIN-CONNECTOR (16-GA TO 18-GA)						



GRAPHIC #1

<END>

g00785629

# ELECTRICAL AND STARTING SYSTEM

## 219-2384 SENSOR GP-POSITION-ENGINE SPEED

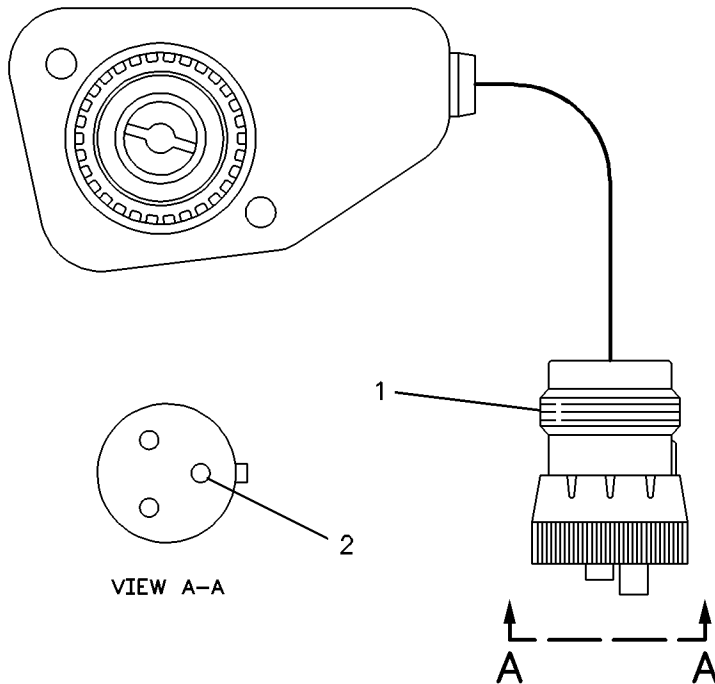
LEVER OPERATED

PART OF 134-0597 CONTROL GP-ENGINE SPEED  
AN ATTACHMENT

SMCS-1905, 1911

i01761274

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8T-8731	1	PLUG - CONNECTOR						
	2	1	8T-8730	3	SOCKET - CONNECTOR						



GRAPHIC #1

<END>

g00083170



# ELECTRICAL AND STARTING SYSTEM

## 194-6722 SENSOR GP-PRESSURE-ATMOSPHERIC AIR

PART OF 239-2395 SENSOR GP-PRESSURE

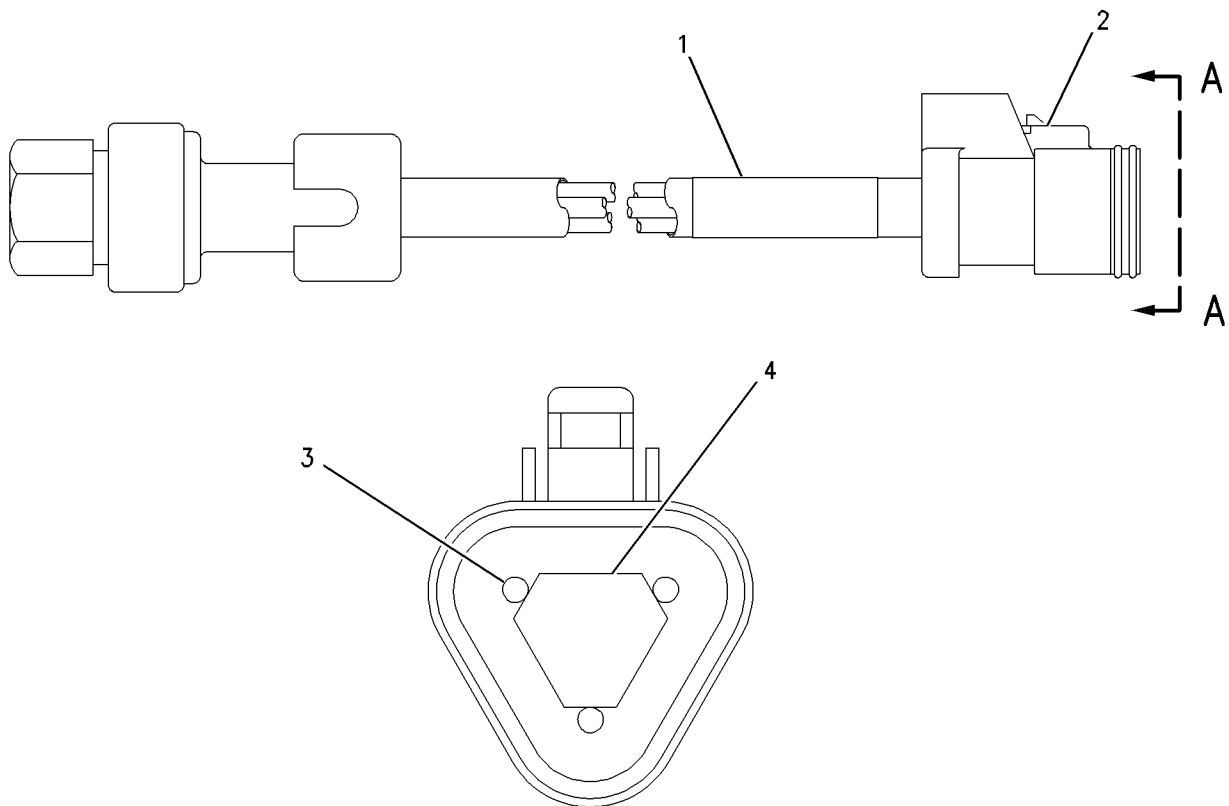
ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i02230727

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
BE	1	1	9X-1813		SLEEVE						
	2	1	155-2260	1	KIT-CONNECTING PLUG (3-PIN) (INCLUDES PLUG AS & WEDGE)						
	3	1	180-9340	3	SOCKET-CONNECTOR						
	4	1	3E-3368	1	WEDGE-PLUG LOCK (3-PIN)						

B-USE AS REQUIRED  
E-ORDER BY THE CENTIMETER



VIEW A-A

GRAPHIC #1

<END>

g00934579

# ELECTRICAL AND STARTING SYSTEM

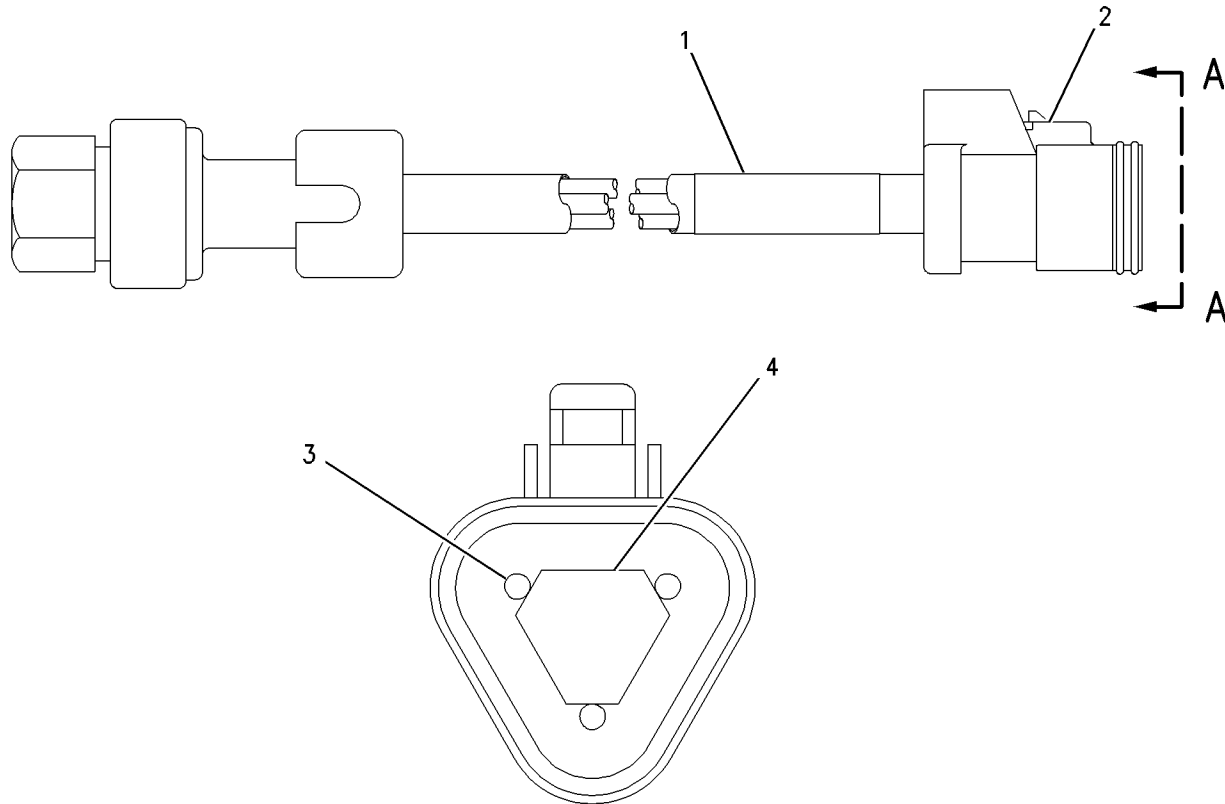
## 194-6725 SENSOR GP-PRESSURE-ENGINE OIL, FUEL PART OF 239-2396 SENSOR GP-PRESSURE ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i02276739

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
E	1	1	<b>9X-1813</b>		SLEEVE (34-CM)						
	2	1	<b>155-2260</b>	1	KIT-CONNECTING PLUG (3-PIN) (INCLUDES PLUG AS AND WEDGE)						
	3	1	<b>194-5226</b>	3	WIRE AS-HARNESS (16-GA TO 18-GA)						
	4	1	<b>3E-3368</b>	1	WEDGE-PLUG LOCK (3-PIN)						

E-ORDER BY THE CENTIMETER



VIEW A-A

GRAPHIC #1

<END>

g00851220

# ELECTRICAL AND STARTING SYSTEM

## 239-2395 SENSOR GP-PRESSURE-ATMOSPHERIC AIR

PART OF 231-1975 SENSOR GP-ENGINE

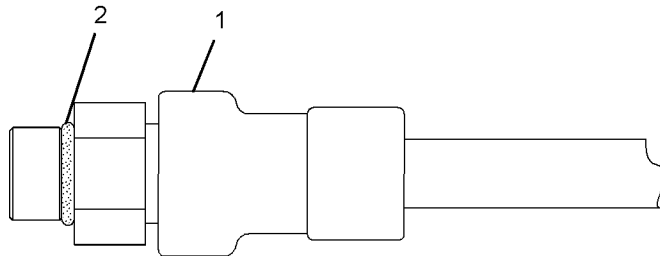
ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i02310090

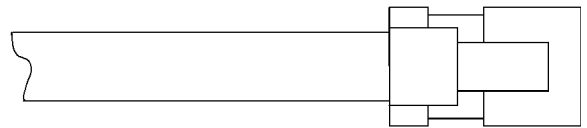
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	194-6722	1	SENSOR GP-PRESSURE						367
	2	1	6V-5049	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>



g01019702

# ELECTRICAL AND STARTING SYSTEM

## 239-2396 SENSOR GP-PRESSURE-ENGINE OIL, FUEL

PART OF 245-1099, 255-0658, 267-1413 LINES GP-FUEL FILTER, 231-1975 SENSOR  
GP-ENGINE

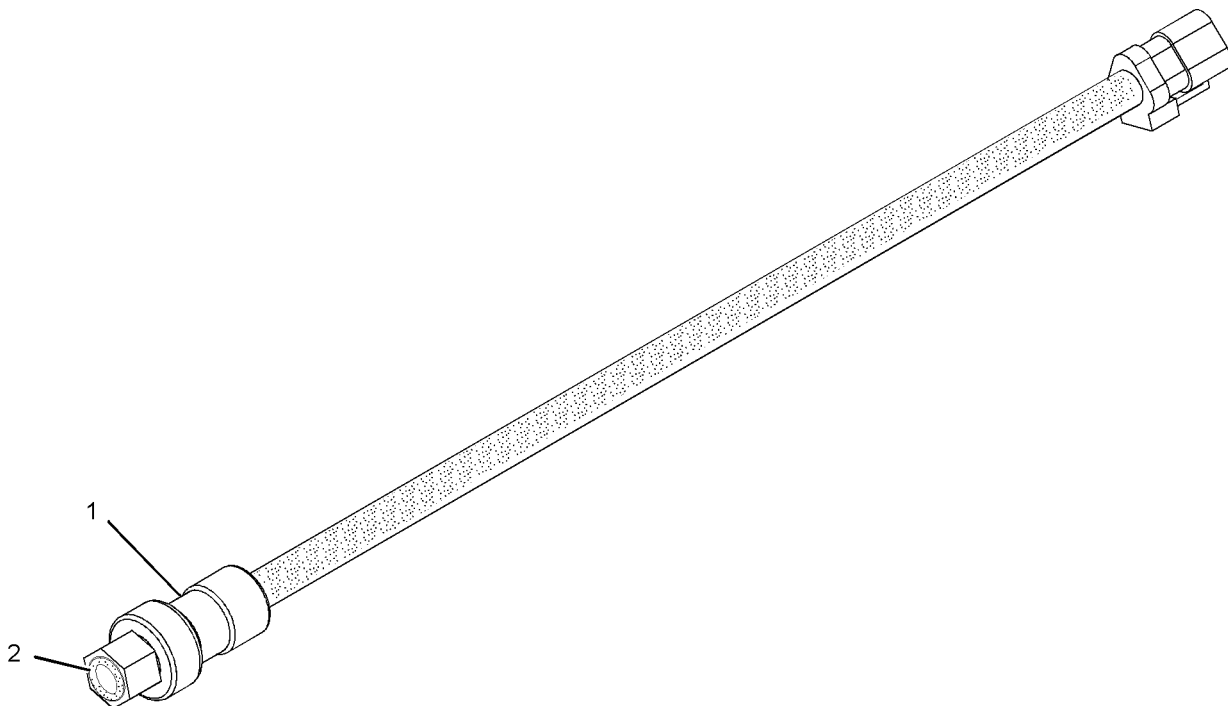
ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i02279684

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	194-6725	1	SENSOR GP-PRESSURE						368
	2	1	6V-5048	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01019323

# ELECTRICAL AND STARTING SYSTEM

## 239-3478 SENSOR GP-PRESSURE-AIR INLET MANIFOLD

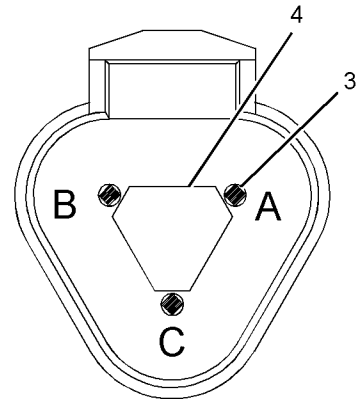
PART OF 239-5674 SENSOR GP-PRESSURE  
ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

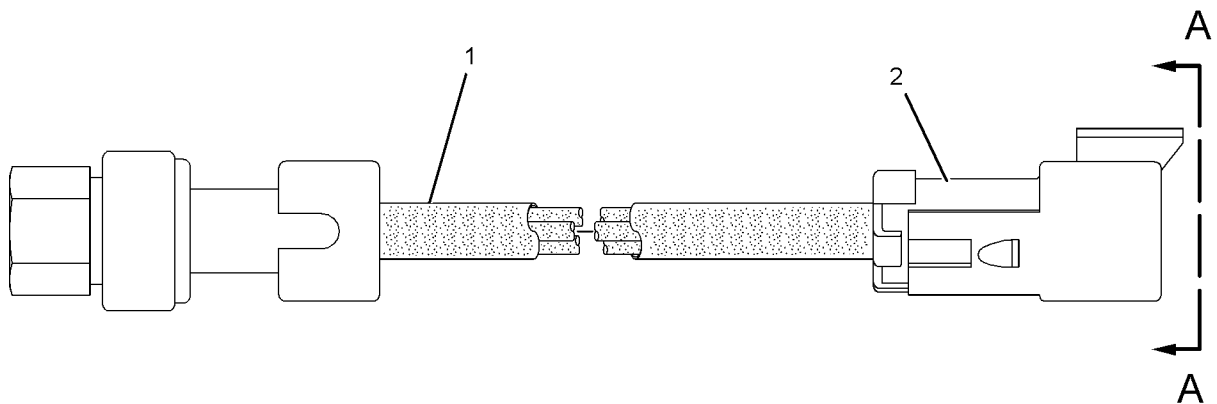
i02178818

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
BE	1	1	9X-1813		SLEEVE						
	2	1	102-8803	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
	3	1	9X-3401	3	PIN-CONNECTOR						
	4	1	3E-3371	1	WEDGE-RECEPTACLE LOCK (3-PIN)						

B-USE AS REQUIRED  
E-ORDER BY THE CENTIMETER



VIEW A-A



GRAPHIC #1

<END>

g01019421

# ELECTRICAL AND STARTING SYSTEM

## 239-5674 SENSOR GP-PRESSURE-AIR INLET MANIFOLD

PART OF 231-1975 SENSOR GP-ENGINE

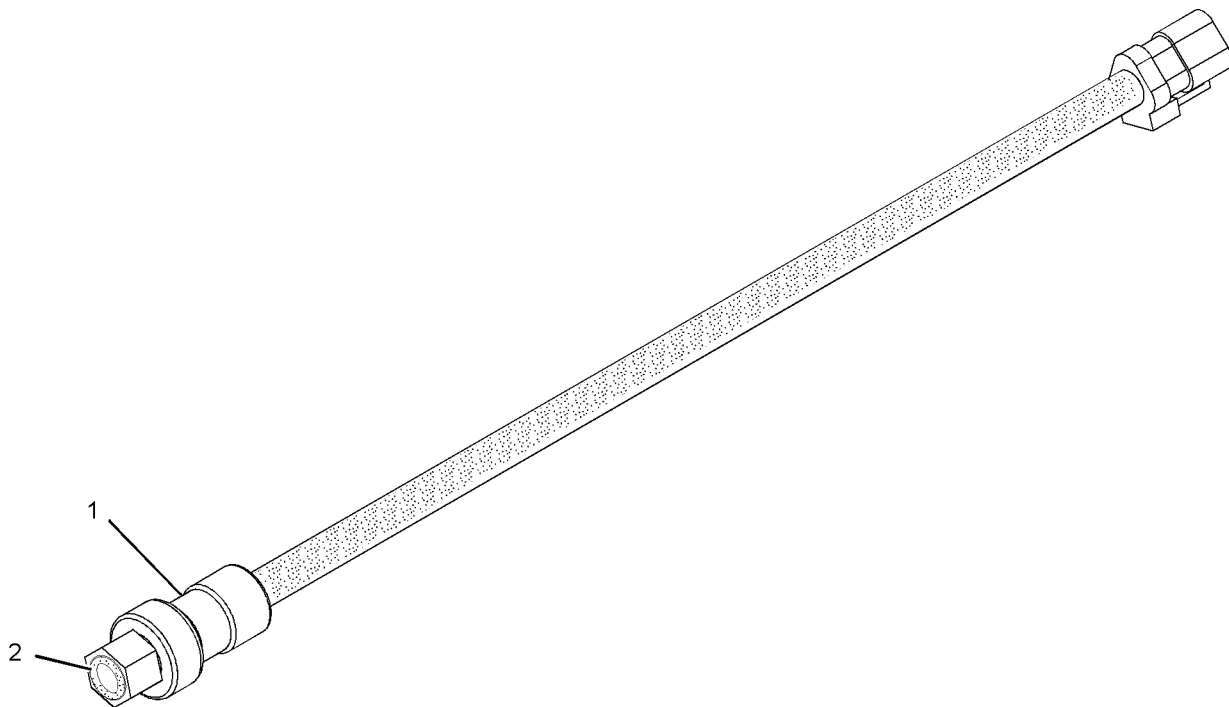
ALSO AN ATTACHMENT

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i02289634

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	239-3478	1	SENSOR GP-PRESSURE						371
	2	1	6V-5048	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01019323

# ELECTRICAL AND STARTING SYSTEM

## 2W-8918 SENSOR GP-SPEED-MAGNETIC, LOW OUTPUT- ENGINE TIMING

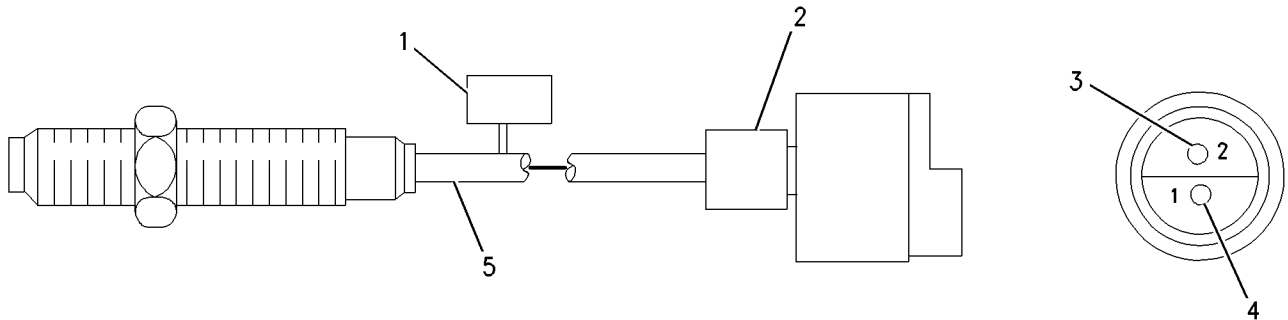
PART OF 7W-3354 SENSOR GP-SPEED  
FIELD REPLACEMENT ORDER 155-2270 KIT-CONNECTING PLUG, 186-3736  
SOCKET-CONNECTOR, 4P-5820-PAGE 374  
AN ATTACHMENT

SMCS-1907

i01932656

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	171-5349	1	MARKER						
	2	1	7N-9738	1	HOUSING-RECEPTACLE						
	3	1	7N-7780	1	PIN-CONNECTOR						
	4	1	7N-7779	1	SOCKET-CONNECTOR						
BE	5	1	9X-1386		SLEEVE						

B-USE AS REQUIRED  
E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00784266

# ELECTRICAL AND STARTING SYSTEM

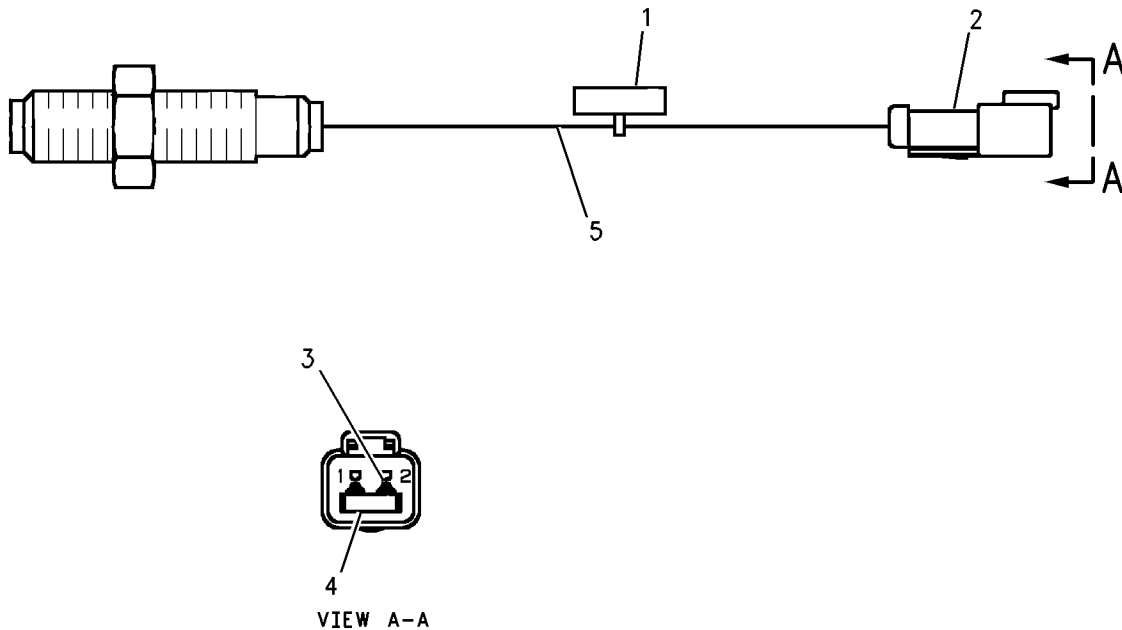
## 4P-5820 SENSOR GP-SPEED-MAGNETIC, LOW OUTPUT-ENGINE FIELD REPLACEMENT FOR 2W-8918-PAGE 373

SMCS-1907

i02289753

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	171-5349	1	MARKER						
	2	1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
	3	1	186-3735	2	PIN-CONNECTOR (16-GA TO 18-GA)						
	4	1	3E-3365	1	WEDGE-RECEPTACLE LOCK (2-PIN)						
BE	5	1	9X-1386		SLEEVE (14-CM)						

B-USE AS REQUIRED  
E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00780739



# ELECTRICAL AND STARTING SYSTEM

## 7W-3354 SENSOR GP-SPEED-MAGNETIC-ENGINE TIMING

FOR USE WITH 7C-1072-PAGE 439

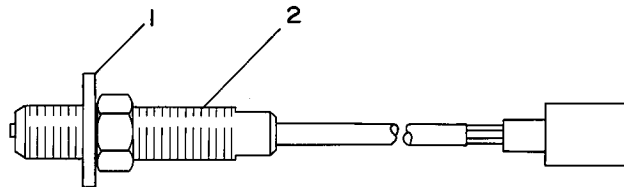
AN ATTACHMENT

SMCS-1907

i02300555

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5P-8248	1	WASHER-HARD (20X36.5X3.5-MM THK)						
Y	2	1	2W-8918	1	SENSOR GP-SPEED						373

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00173759

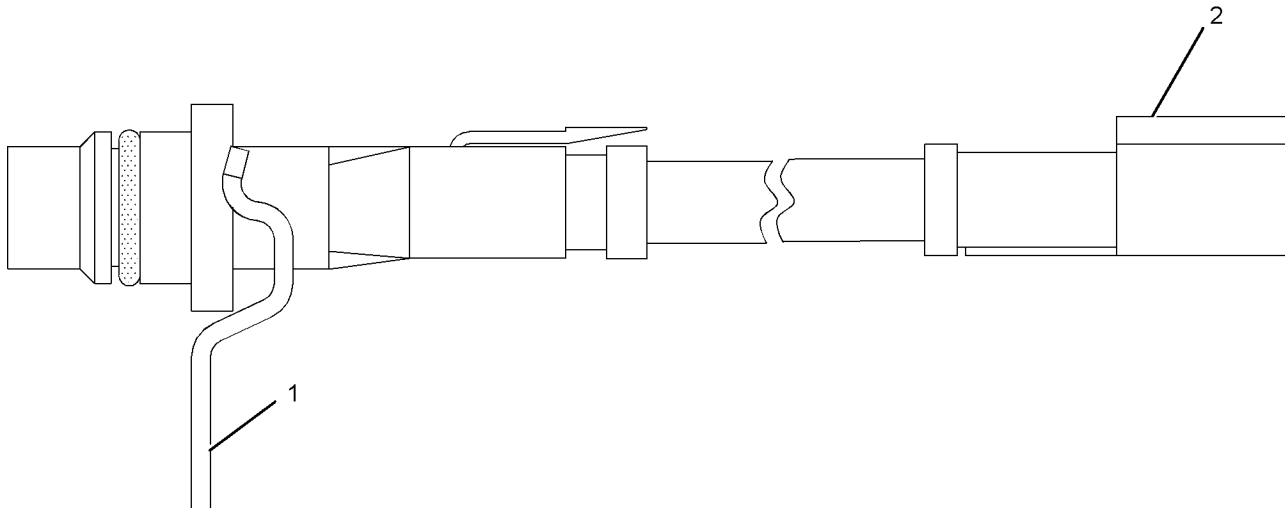
# ELECTRICAL AND STARTING SYSTEM

## 201-6615 SENSOR GP-SPEED-CRANKSHAFT SPEED, TIMING PART OF 230-7149 SENSOR GP-SPEED ALSO AN ATTACHMENT

SMCS-1907

i02235021

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>133-0260</b>	1	BRACKET						
	2	1	<b>188-9429</b>	1	HARNESS AS-WIRING (SPEED SENSOR)						
		1	<b>102-8802</b>	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	<b>155-2270</b>	1	KIT-CONNECTING PLUG (2-PIN) (INCLUDES PLUG AS AND WEDGE)						



GRAPHIC #1

<END>

g01009894

# ELECTRICAL AND STARTING SYSTEM

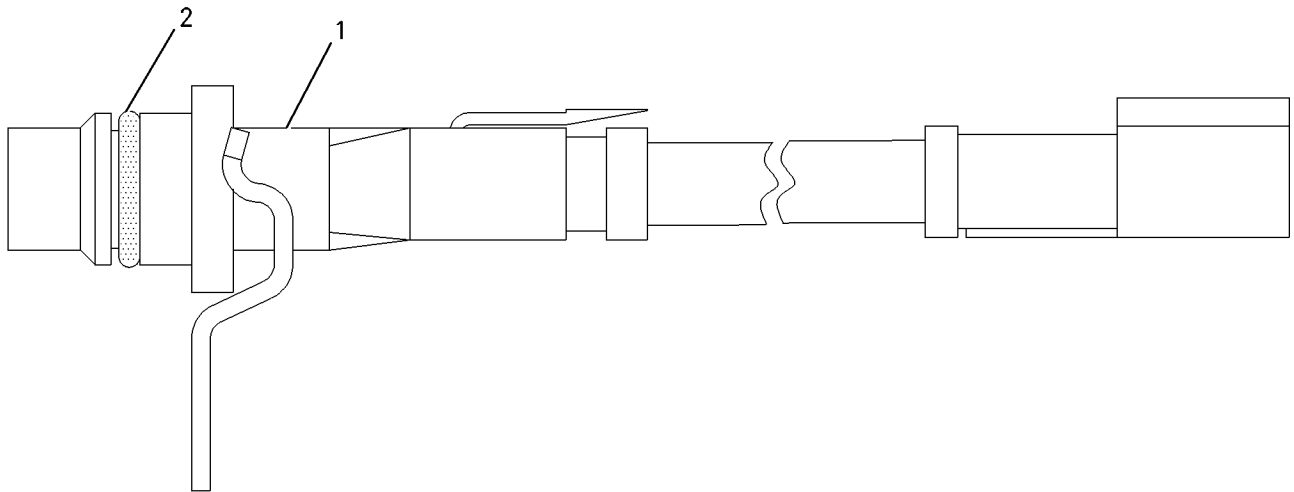
## 230-7149 SENSOR GP-SPEED-CRANKSHAFT SPEED, TIMING PART OF 231-1975 SENSOR GP-ENGINE ALSO AN ATTACHMENT

SMCS-1907

i02250758

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	201-6615	1	SENSOR GP-SPEED						376
	2	1	228-4947	1	SEAL-O-RING						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01007584

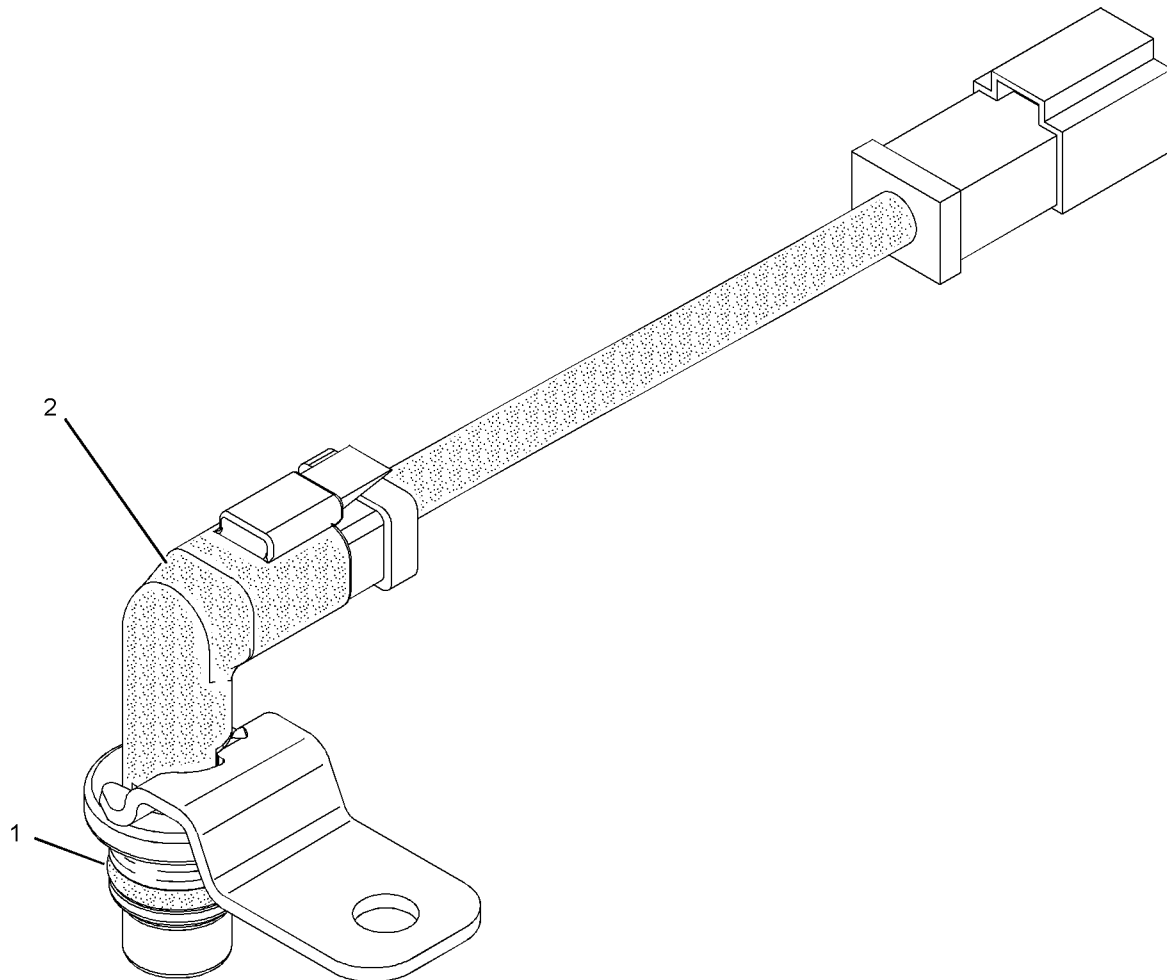
# ELECTRICAL AND STARTING SYSTEM

## 239-2397 SENSOR GP-SPEED-CAMSHAFT SPEED, TIMING PART OF 231-1975 SENSOR GP-ENGINE ALSO AN ATTACHMENT

SMCS-1907

i02235592

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	228-4947	1	SEAL-O-RING						
	2	1	201-6616	1	SENSOR GP-SPEED						



GRAPHIC #1

<END>

g01019337

# ELECTRICAL AND STARTING SYSTEM

## 197-8391 SENSOR GP-TEMPERATURE- FUEL, AIR INTAKE MANIFOLD

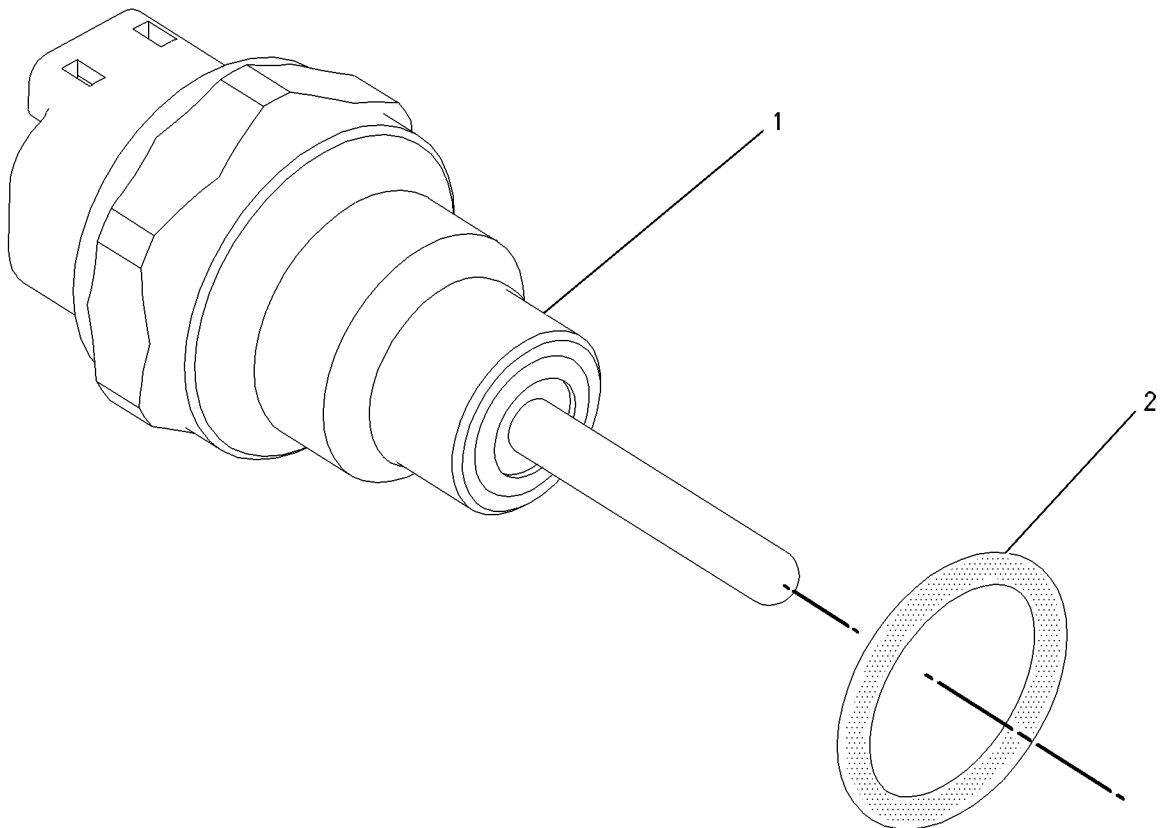
PART OF 245-1099, 255-0658, 267-1413 LINES GP-FUEL FILTER, 231-1975 SENSOR  
GP-ENGINE

ALSO AN ATTACHMENT

SMCS-1906, 1919, 1921, 1922, 1928, 1929

i02277443

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	130-9811	1	SENSOR GP-TEMPERATURE						
	2	1	8L-2786	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00856011

# ELECTRICAL AND STARTING SYSTEM

## 197-8392 SENSOR GP-TEMPERATURE-WATER, COOLANT

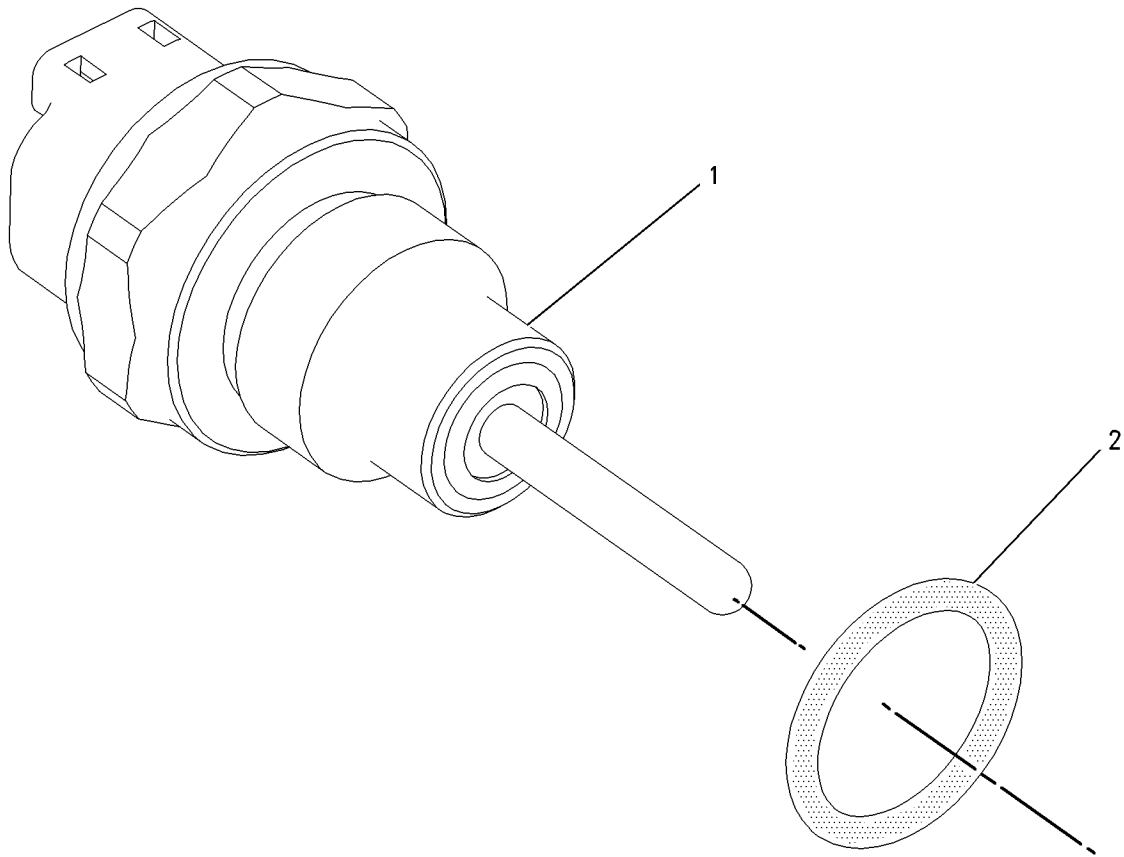
PART OF 231-1975 SENSOR GP-ENGINE

ALSO AN ATTACHMENT

SMCS-1906, 1919, 1921, 1922, 1928, 1929

i02277444

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	130-9811	1	SENSOR GP-TEMPERATURE	
	2	1	6V-6609	1	SEAL-O-RING	



GRAPHIC #1

<END>

g00856005

# ELECTRICAL AND STARTING SYSTEM

## 260-3931 STARTING AID GP-ETHER-12-VOLT CONTINUOUS FLOW AN ATTACHMENT

SMCS - 1456

i02282119

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	245-4101	1	ATOMIZER AS-ETHER (STARTING AID)						350
	7N-2059	1	CLAMP AS						
	5P-2948	1	CONNECTOR AS						
	230-0917	1	FITTING (ETHER STARTING AID)						
	186-3736	2	SOCKET-CONNECTOR (16-AWG TO 18-AWG)						
	2V-1713	1	TAG-NOTICE (STARTING AID) (ETHER)						
	7N-0140	1	TUBE AS-COIL						
	8N-3536	1	TUBE-STEEL						
	155-2270	1	KIT-CONNECTING PLUG (2-PIN) (INCLUDES PLUG AS AND WEDGE)						
Y	260-1844	1	VALVE GP-ETHER STARTING (24-VOLT)						422
BD	5P-5623		WIRE-ELECTRICAL (16-GA, BLACK) (3-M)						
			AVAILABLE REPLACEMENT KIT(S):						
A	7N-0296		CYLINDER AS-ETHER (STARTING AID) (CAN BE PROCURED THROUGH YOUR LOCAL CATERPILLAR DEALER)						
A-NOT PART OF THIS GROUP B-USE AS REQUIRED D-ORDER BY THE METER Y-SEPARATE ILLUSTRATION									

**<END>**

# ELECTRICAL AND STARTING SYSTEM

## 260-3933 STARTING AID GP-ETHER-24-VOLT CONTINUOUS FLOW, RELAY NOT REQUIRED AN ATTACHMENT

SMCS-1456

i02273040

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	245-4101	1	ATOMIZER AS-ETHER (TO INLET MANIFOLD) (INSTALL WITH CROSS DRILLED HOLE IN TIP FACING OPPOSITE DIRECTION OF AIR FLOW PARALLEL TO AIR FLOW)						350
Y	239-1134	1	VALVE GP-ETHER STARTING (24-VOLT)						421
	7N-2059	1	CLAMP AS (TO CYLINDER)						
	5P-2948	1	CONNECTOR AS (TO VALVE ASSEMBLY)						
	230-0917	1	FITTING (ETHER STARTING AID) (TO VALVE ASSEMBLY)						
	155-2270	1	KIT-CONNECTING PLUG (2-PIN) (TO VALVE ASSEMBLY) (INCLUDES PLUG AS AND WEDGE)						
	186-3736	2	SOCKET-CONNECTOR (16-AWG TO 18-AWG) (TO VALVE ASSEMBLY)						
	7N-0140	1	TUBE AS-COIL (TO CONNECTOR)						
	8N-3536	1	TUBE-STEEL						
	5P-5623		WIRE-ELECTRICAL (16-GA, BLACK) (0.3-M)						
A	7N-0296		AVAILABLE REPLACEMENT PART(S): CYLINDER AS-ETHER (STARTING AID) (CAN BE PROCURED THROUGH YOUR LOCAL CATERPILLAR DEALER)						

A-NOT PART OF THIS GROUP  
Y-SEPARATE ILLUSTRATION

**<END>**



# ELECTRICAL AND STARTING SYSTEM

## 6V-0885 STARTING MOTOR GP-ELECTRIC

24 VOLT

PART OF 7N-1059 STARTING MOTOR GP-ELECTRIC

FIELD REPLACEMENT ORDER 237-1962-PAGE 415

AN ATTACHMENT

SMCS-1453

i02092947

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7M-0326	1	CONNECTOR						
	2	1	9H-3757	2	WASHER (0.516X1X0.094-IN THK)						
	3	1	1S-7446	3	SCREW-MACHINE (8-32X0.437-IN)						
	4	1	8C-9660	3	WASHER (4.6X7.9X0.8-MM THK)						
	5	1	9S-2544	9	SCREW-HEX HEAD (8-32X11.13-MM)						
	6	1	7M-0327	1	WASHER-THRUST (17.4X25.4X1.6-MM THK)						
	7	1	3T-3418	1	FRAME AS-END						
	7A	1	3T-3424	1	PLUG-FELT						
	7B	1	3T-3423	1	CUP						
	7C	1	9G-4101	1	BUSHING-END						
	8	1	3T-9525	1	PLATE AS-BRUSH						
	8A	1	9F-5599	12	LOCKWASHER						
	8B	1	6T-0371	1	INSULATOR						
	8C	1	6T-0363	6	HOLDER AS-BRUSH (STARTING MOTOR) (EACH INCLUDES)						
	8D	1	3T-9494	1	SPRING (STARTING MOTOR BRUSH)						
	8E	1	3T-4709	3	PLATE						
	8F	1	3T-4710	3	PLATE						
	8G	1	2L-6679	3	PLATE-INSULATOR						
	8H	1	7F-3525	6	WASHER-BUSHING (0.209X0.39X0.09-MM THK)						
	8J	1	6T-0372	1	PLATE						
	8K	1	5P-6298	12	SCREW-MACHINE (10-32X0.5-IN)						
	9	1	7F-3491	2	WASHER (0.516X1X0.094-IN THK)						
	10	1	3T-3422	1	WIRE AS						
	11	1	2J-8163	2	SEAL-O-RING						
	12	1	7X-3373	1	BOLT (5/16-18X0.88-IN)						
B	13	1	3T-3434	6	PLUG						
	14	1	5J-5314	5	BOLT (5/16-18X1.5-IN)						
	15	1	3L-3380	1	BUSHING-TERMINAL						
	16	1	036-9821	1	WASHER						
	17	1	4M-1828	1	RETAINER-SPRING						
	18	1	4M-1829	1	BOOT-RUBBER						
	19	1	4M-1827	1	RETAINER-SPRING						
	20	1	9M-7609	1	SPRING (SHIFT LEVER)						
	21	1	8C-3089	1	SEAL-O-RING						
	22	1	4M-1853	1	LEVER AS-SHIFT						
	23	1	5M-3034	1	LOCKNUT (5/16-24-IN THD)						
	24	1	7L-2894	4	GASKET						
	25	1	4M-1831	4	PLUG-LEVER HOUSING						
	26	1	4M-1854	1	SHAFT-LEVER						
	27	1	1H-1023	1	SEAL-O-RING						
	28	1	2D-6392	1	SEAL-O-RING						
	29	1	7T-3974	1	HOUSING AS-DRIVE						
	30	1	6N-3826	1	DRIVE AS-MOTOR						
	31	1	2H-3429	2	RING-RETAINING						
	32	1	6V-1322	4	BOLT (1/4-20X0.375-IN)						
	33	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	34	1	6N-3279	1	INSULATOR						
	35	1	036-9823	13	BOLT (1/4-28X1-IN)						
	36	1	1M-9971	1	SPACER (0.84X1.72X1.88-IN THK)						
	37	1	1H-2629	3	STRIP-INSULATION						
	38	1	7M-0324	1	COIL AS-FIELD						
	39	1	3F-0379	12	SCREW-POLE SHOE (3/8-24-THD)						
	40	1	7F-3488	6	SHOE-POLE						

# ELECTRICAL AND STARTING SYSTEM

**6V-0885 STARTING MOTOR GP-ELECTRIC (contd.)**

**i02092947**

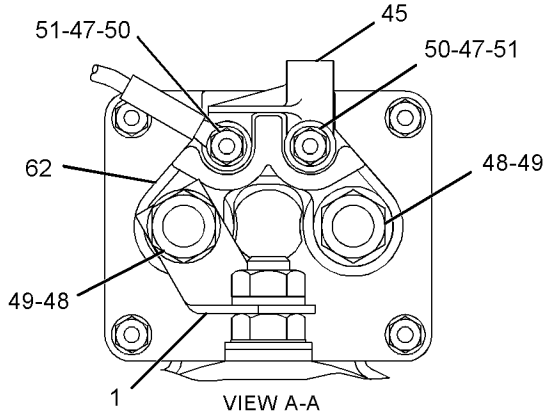
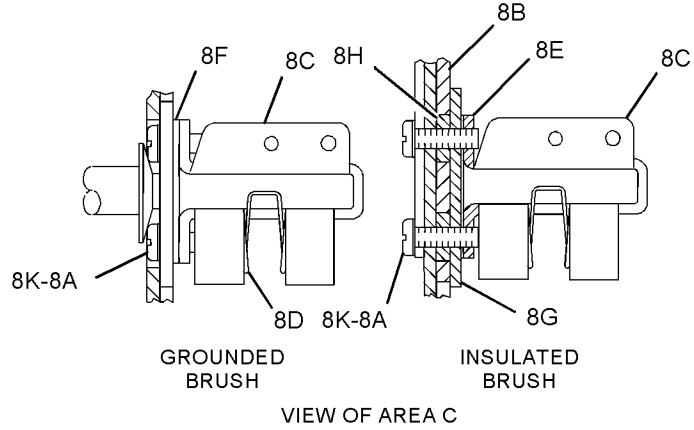
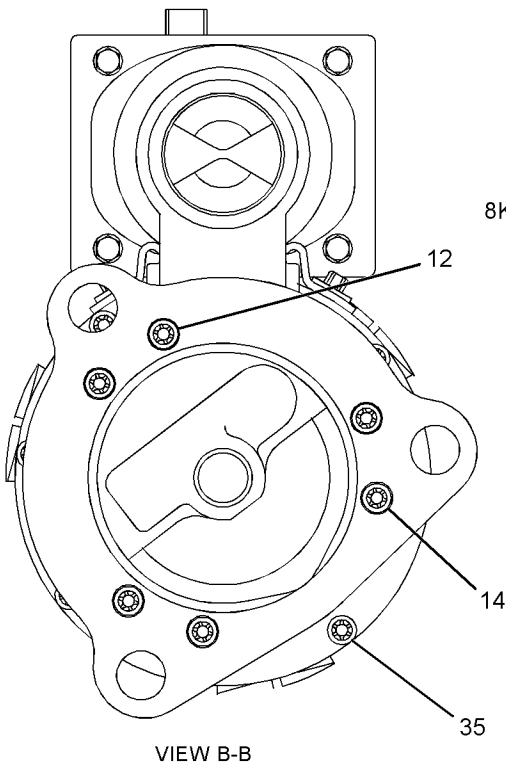
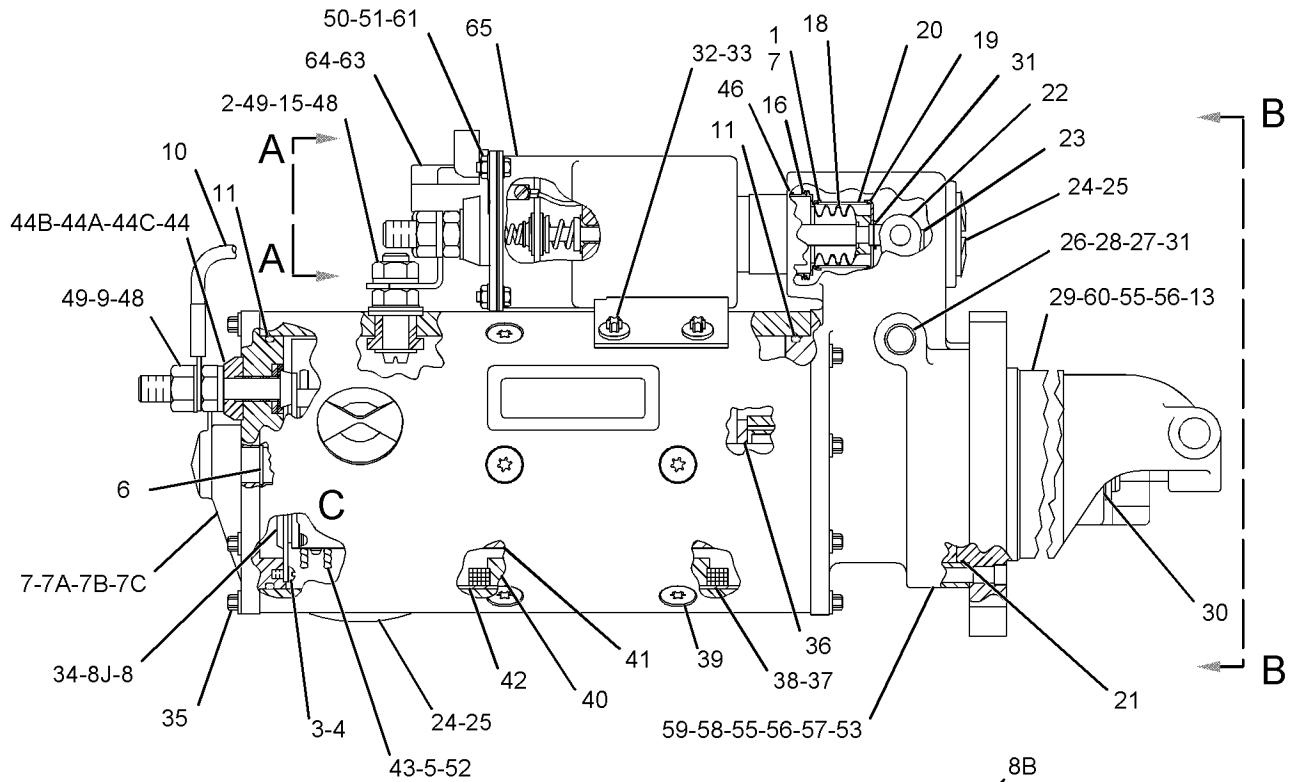
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	41	1	<b>7M-8651</b>	1	ARMATURE AS						
	42	1	<b>7M-0325</b>	1	INSULATOR						
	43	1	<b>3T-9524</b>	6	BRUSH AS (STARTING MOTOR)						
J	44	1	<b>3N-3763</b>	1	KIT-TERMINAL (STARTING MOTOR)						
JZ	44A	1		1	BUSHING						
JZ	44B	1		1	BUSHING						
JZ	44C	1		1	WASHER						
	45	1	<b>125-6535</b>	1	COVER-STARTING MOTOR						
	46	1	<b>3R-8801</b>	1	CLAMP						
	47	1	<b>8F-1434</b>	2	LOCKWASHER						
	48	1	<b>6V-8188</b>	6	NUT (1/2-13-THD)						
	49	1	<b>7X-0562</b>	6	WASHER-HARD (13.5X19X0.8-MM THK)						
	50	1	<b>4B-2049</b>	6	NUT (10-32-THD)						
	51	1	<b>8T-0328</b>	10	WASHER-HARD (5.5X10X1-MM THK)						
	52	1	<b>3T-9494</b>	6	SPRING (STARTING MOTOR BRUSH)						
	53	1	<b>3E-7771</b>	1	HOUSING AS						
	55	1	<b>3T-3424</b>	2	PLUG-FELT						
	56	1	<b>3T-3423</b>	2	CUP						
	57	1	<b>1M-9968</b>	1	BUSHING						
	58	1	<b>2F-6678</b>	1	SEAL-LIP TYPE						
	59	1	<b>4L-2729</b>	1	WASHER (0.844X1.9X0.188-IN THK)						
	60	1	<b>4M-1896</b>	1	BUSHING-TERMINAL						
	61	1	<b>045-4065</b>	4	SCREW-MACHINE (10-32X0.75-IN)						
	62	1	<b>125-6537</b>	1	INSULATOR						
	63	1	<b>7T-9123</b>	1	GASKET-PLATE						
	64	1	<b>125-6536</b>	1	TERMINAL AS						
C	65	1	<b>238-1851</b>	1	SOLENOID AS (24-VOLT, STARTING MOTOR)						

B-USE AS REQUIRED  
 C-CHANGE FROM PREVIOUS TYPE  
 J-KIT MARKED J INCLUDES PARTS MARKED J  
 Z-NOT SERVICED SEPARATELY

# ELECTRICAL AND STARTING SYSTEM

6V-0885 STARTING MOTOR GP-ELECTRIC (contd.)

i02092947



GRAPHIC #1

<END>

g01073134

# ELECTRICAL AND STARTING SYSTEM

## 6V-5582 STARTING MOTOR GP-ELECTRIC

24-VOLT

PART OF 207-1556 STARTING MOTOR GP-ELECTRIC  
AN ATTACHMENT

SMCS-1453

i02253251

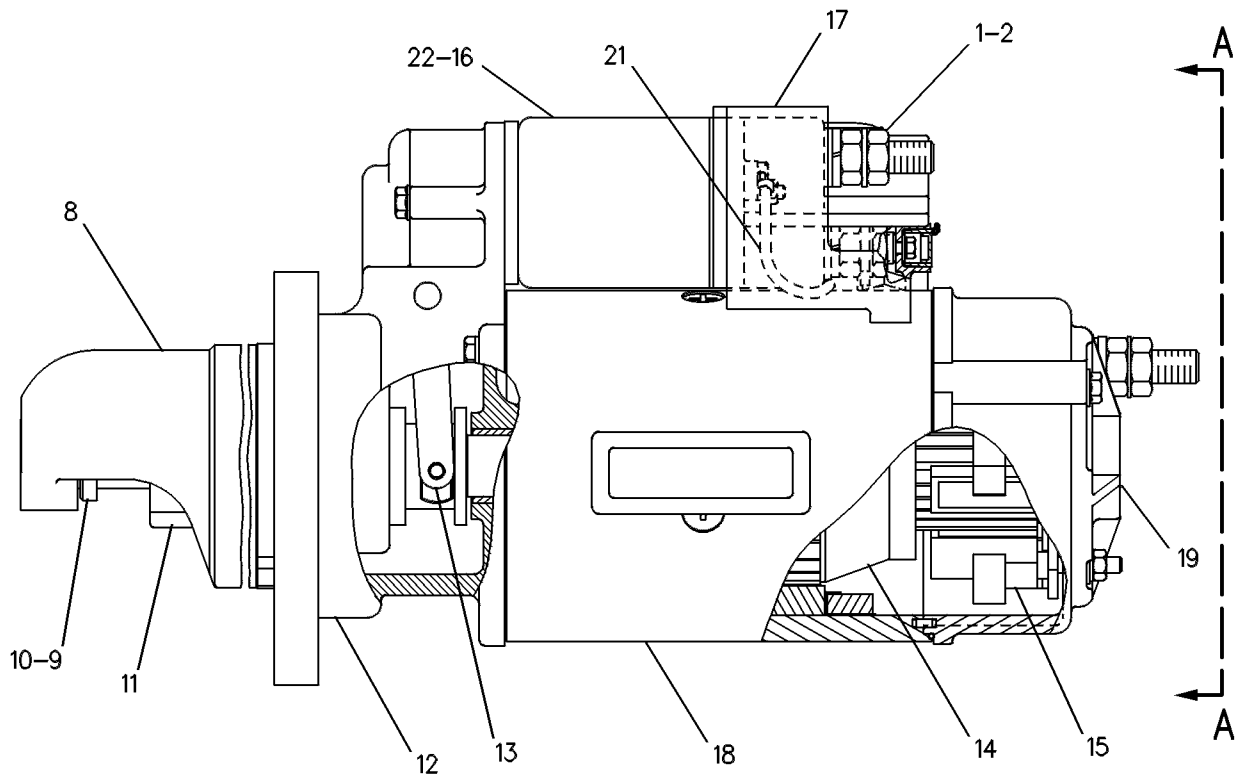
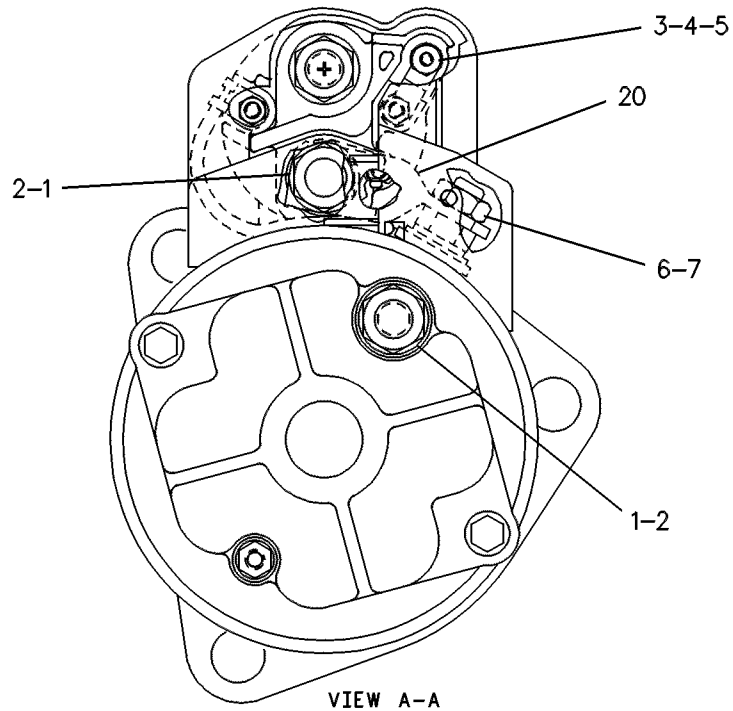
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-8188	3	NUT (1/2-13-THD)						
	2	1	7X-0562	3	WASHER-HARD (13.5X19X0.8-MM THK)						
	3	1	4B-2049	1	NUT (10-32-THD)						
	4	1	8F-1434	1	LOCKWASHER						
	5	1	8T-0328	1	WASHER-HARD (5.5X10X1-MM THK)						
M	6	1	8T-4133	1	NUT (M10X1.5-THD)						
	7	1	8T-4121	1	WASHER-HARD (11X21X2.5-MM THK)						
	8	1	3E-0142	1	HOUSING AS						
	9	1	3E-0141	1	STOP-STARTING MOTOR						
	10	1	4N-7521	1	RING-LOCK						
	11	1	3E-0146	1	DRIVE AS-STARTING MOTOR						
	12	1	3E-0144	1	HOUSING AS						
	13	1	3E-0140	1	LEVER AS-STARTER						
	14	1	3E-0138	1	ARMATURE AS (24-VOLT)						
	15	1	3E-0137	1	HOLDER AS-BRUSH (STARTING MOTOR)						
	16	1	3E-0135	1	SOLENOID AS (24-VOLT) (STARTING MOTOR)						
	17	1	3E-0125	1	COVER AS-STARTING MOTOR						
	18	1	3E-0139	1	HOUSING AS						
	19	1	3E-0136	1	HOUSING AS						
	20	1	3E-0132	1	CONNECTOR						
	21	1	3E-0133	1	WIRE AS-STARTING MOTOR						
	22	1	3E-0134	1	COVER-PLUNGER						
					AVAILABLE REPAIR KIT(S):						
					3E-0127 KIT-BEARING (STARTING MOTOR)						
					(INCLUDES BEARINGS, SEAL AND BUSHING)						
					3E-0128 KIT-BRUSH (STARTING MOTOR)						
					(INCLUDES O-RINGS, SCREW, SPRING, AND BRUSH)						
					3E-0129 KIT-HARDWARE (STARTING MOTOR)						
					(INCLUDES WASHERS, BOLTS, LOCKWASHERS, NUTS, BUSHINGS, AND PLATE)						
					3E-0145 KIT-STARTING MOTOR PIN						
					(INCLUDES O-RINGS, SHAFT, AND RING)						
					3E-0130 KIT-STARTING MOTOR SEAL						
					(INCLUDES SEAL AND O-RINGS)						
					3E-0131 KIT-WASHER (STARTING MOTOR)						
					(INCLUDES WASHERS)						

M-METRIC PART

# ELECTRICAL AND STARTING SYSTEM

6V-5582 STARTING MOTOR GP-ELECTRIC (contd.)

i02253251



GRAPHIC #1

<END>

g00084516

# ELECTRICAL AND STARTING SYSTEM

## 7N-1059 STARTING MOTOR GP-ELECTRIC

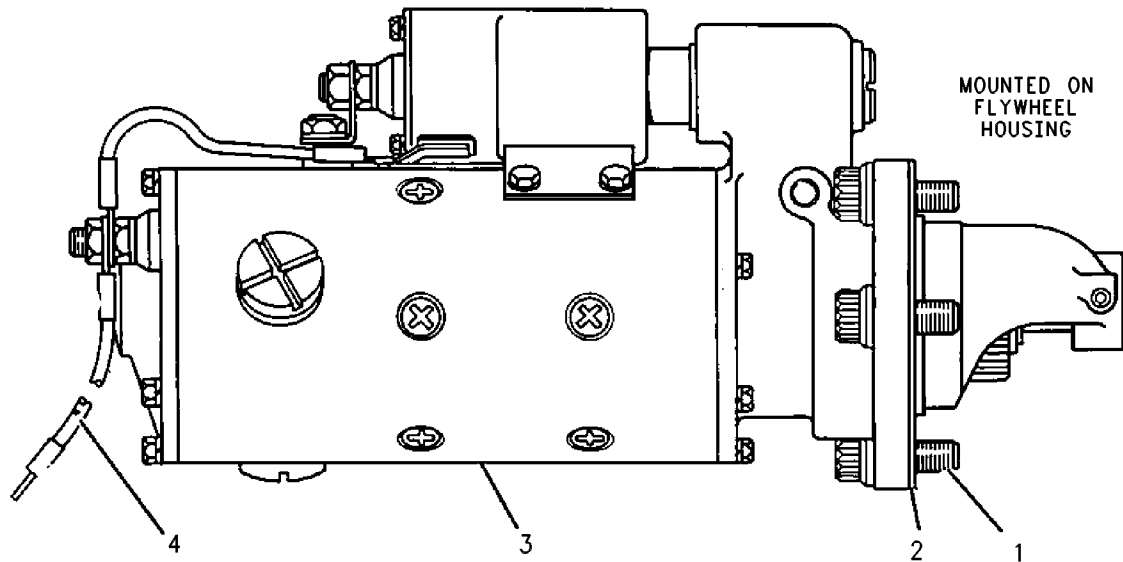
24 VOLT  
AN ATTACHMENT

SMCS-1453

i01551055

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	<b>8S-2332</b>	3	BOLT-12 POINT HEAD (5/8-11X1.75-IN)	
	2	1	<b>4H-7869</b>	1	GASKET	
CY	3	1	<b>6V-0885</b>	1	STARTING MOTOR GP-ELECTRIC (24-VOLT)	383
	4	1	<b>105-4728</b>	1	WIRE AS	

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00535151

# ELECTRICAL AND STARTING SYSTEM

## 9Y-7129 STARTING MOTOR GP-ELECTRIC

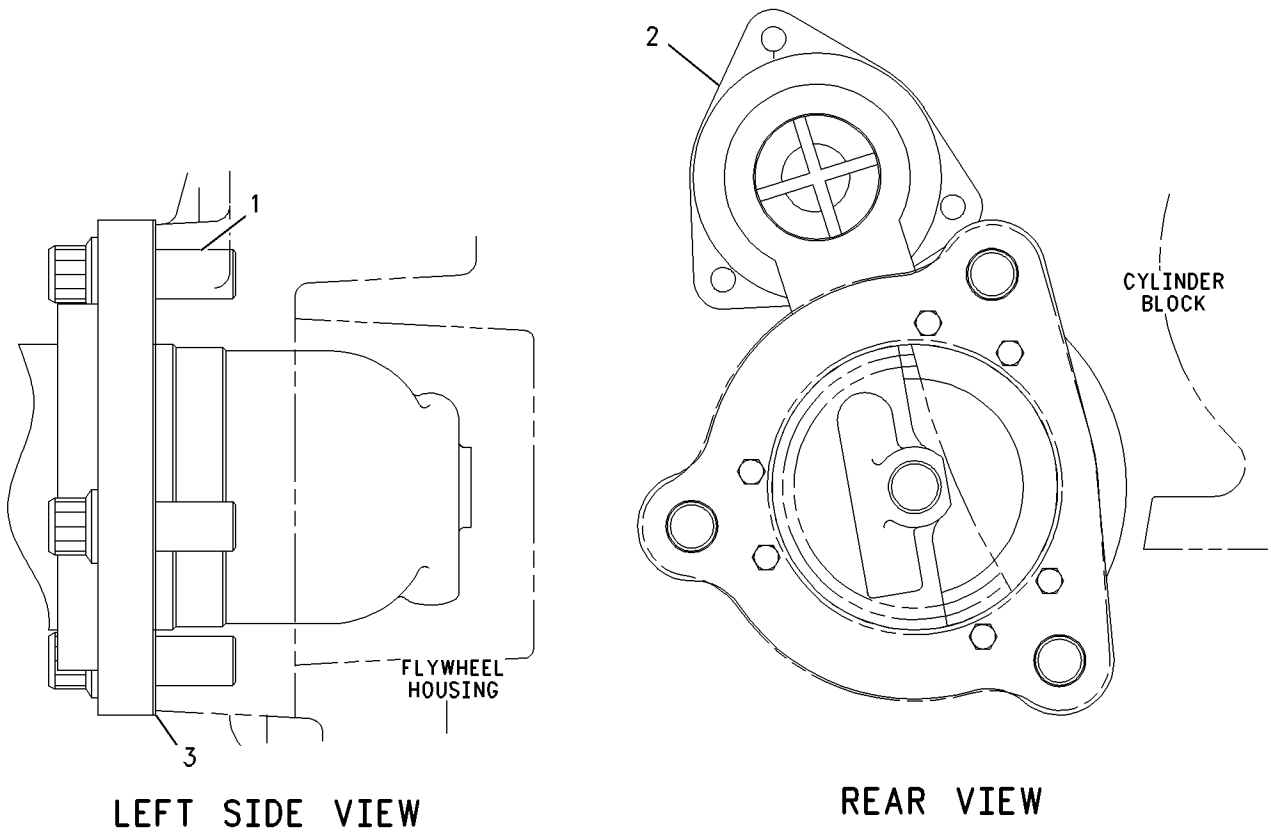
12-VOLT. STARTING AID RECOMMENDED BELOW 0 DEG CELSIUS (32 DEG F)  
AN ATTACHMENT

SMCS-1453

i02219141

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8S-2332</b>	3	BOLT-12 POINT HEAD (5/8-11X1.75-IN)						
CY	2	1	207-1537	1	STARTING MOTOR GP-ELECTRIC						403
	3	1	<b>4H-7869</b>	1	GASKET						

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00832264

# ELECTRICAL AND STARTING SYSTEM

## 102-5836 STARTING MOTOR GP-ELECTRIC

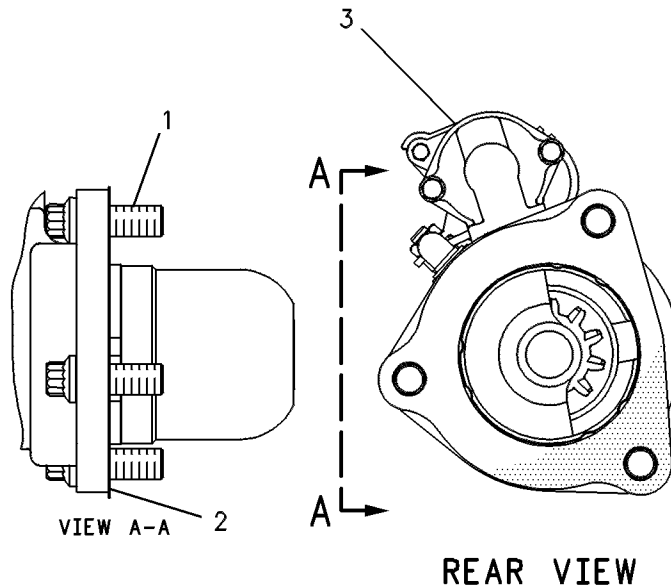
24-VOLT. STARTING AID RECOMMENDED BELOW 0-DEG CELSIUS (32-DEG F)  
 FOR USE WITH 24-VOLT SYSTEM AND LH STARTER MOUNT FLYWHEEL HOUSING, REQUIRES:  
 SAE NO. 1 FLYWHEEL HOUSING  
 AN ATTACHMENT

SMCS-1453

i01622350

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8S-2332	3	BOLT-12 POINT HEAD (5/8-11X1.75 IN)						
	2	1	4H-7869	1	GASKET						
CY	3	1	207-1556	1	STARTING MOTOR GP-ELECTRIC						410

C-CHANGE FROM PREVIOUS TYPE  
 Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00235472



# ELECTRICAL AND STARTING SYSTEM

## 111-2675 STARTING MOTOR GP-ELECTRIC

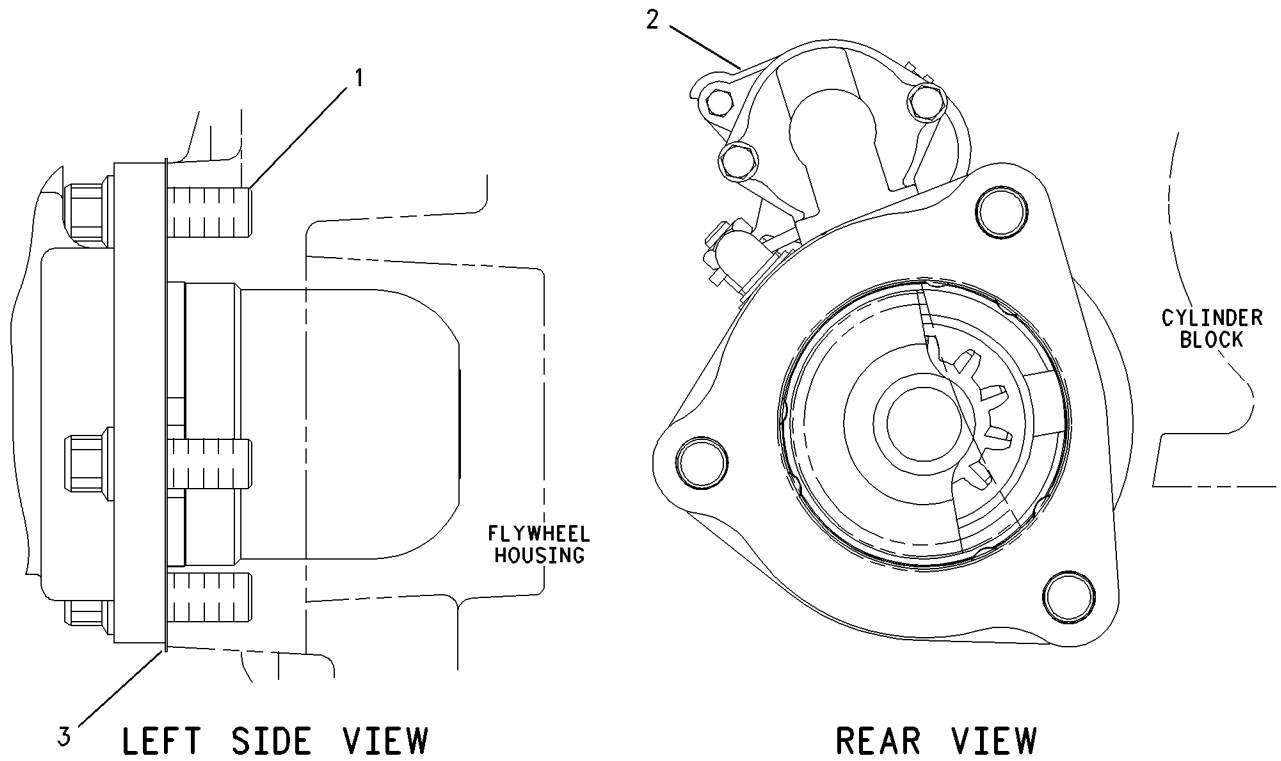
24-VOLT  
AN ATTACHMENT

SMCS-1453

i01599317

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>8S-2332</b>	3	BOLT-12 POINT HEAD (5/8-11X1.75 IN)						
Y	2	1	207-1548	1	STARTING MOTOR GP-ELECTRIC						405
	3	1	<b>4H-7869</b>	1	GASKET						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00829251

# ELECTRICAL AND STARTING SYSTEM

## 131-3401 STARTING MOTOR GP-ELECTRIC

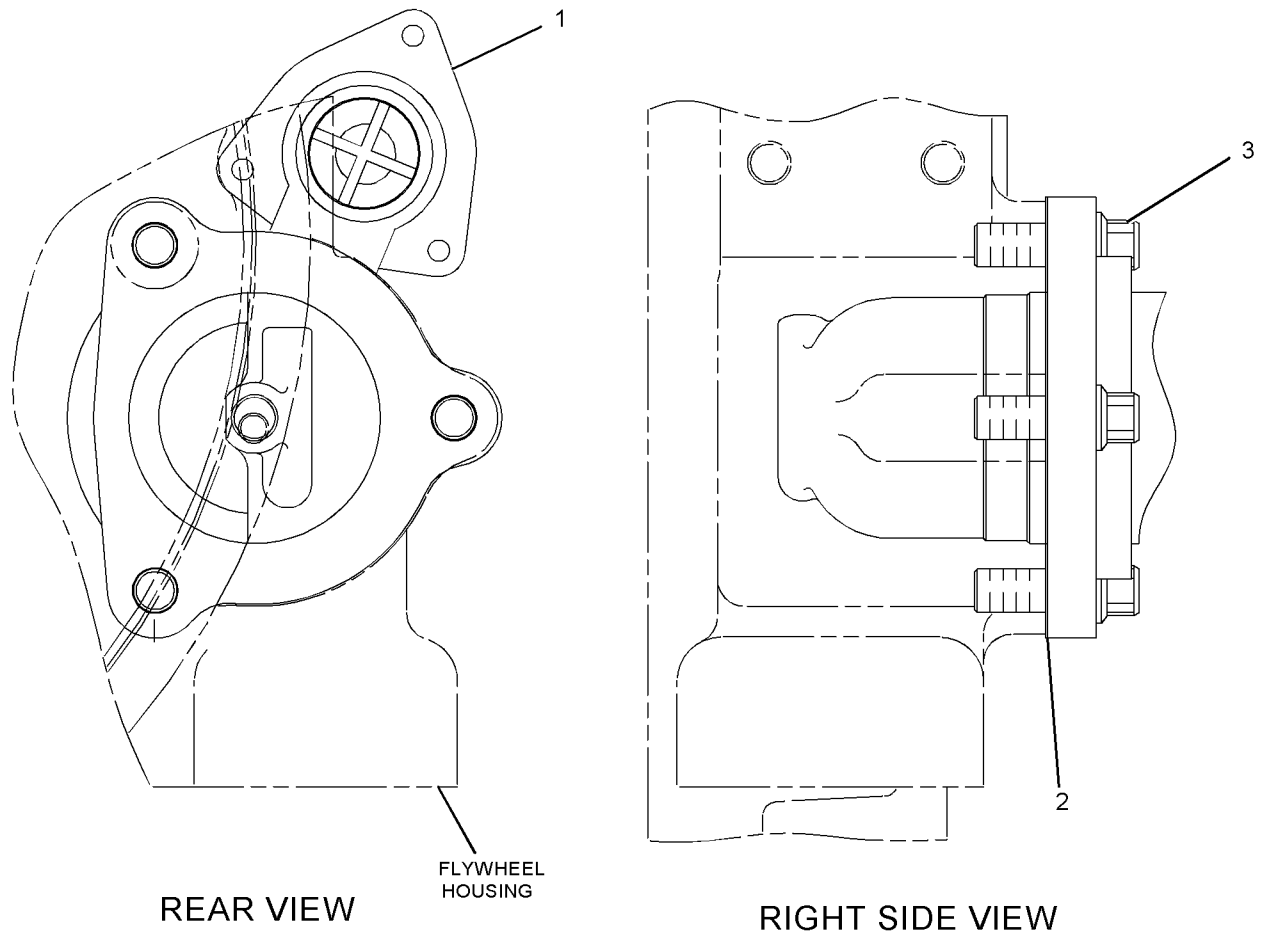
24-VOLT  
AN ATTACHMENT

SMCS-1453

i02228495

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	207-1549	1	STARTING MOTOR GP-ELECTRIC						407
	2	1	155-8725	1	GASKET						
	3	1	176-2543	3	BOLT-12 POINT HEAD						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01124878

# ELECTRICAL AND STARTING SYSTEM

## 131-4850 STARTING MOTOR GP-ELECTRIC

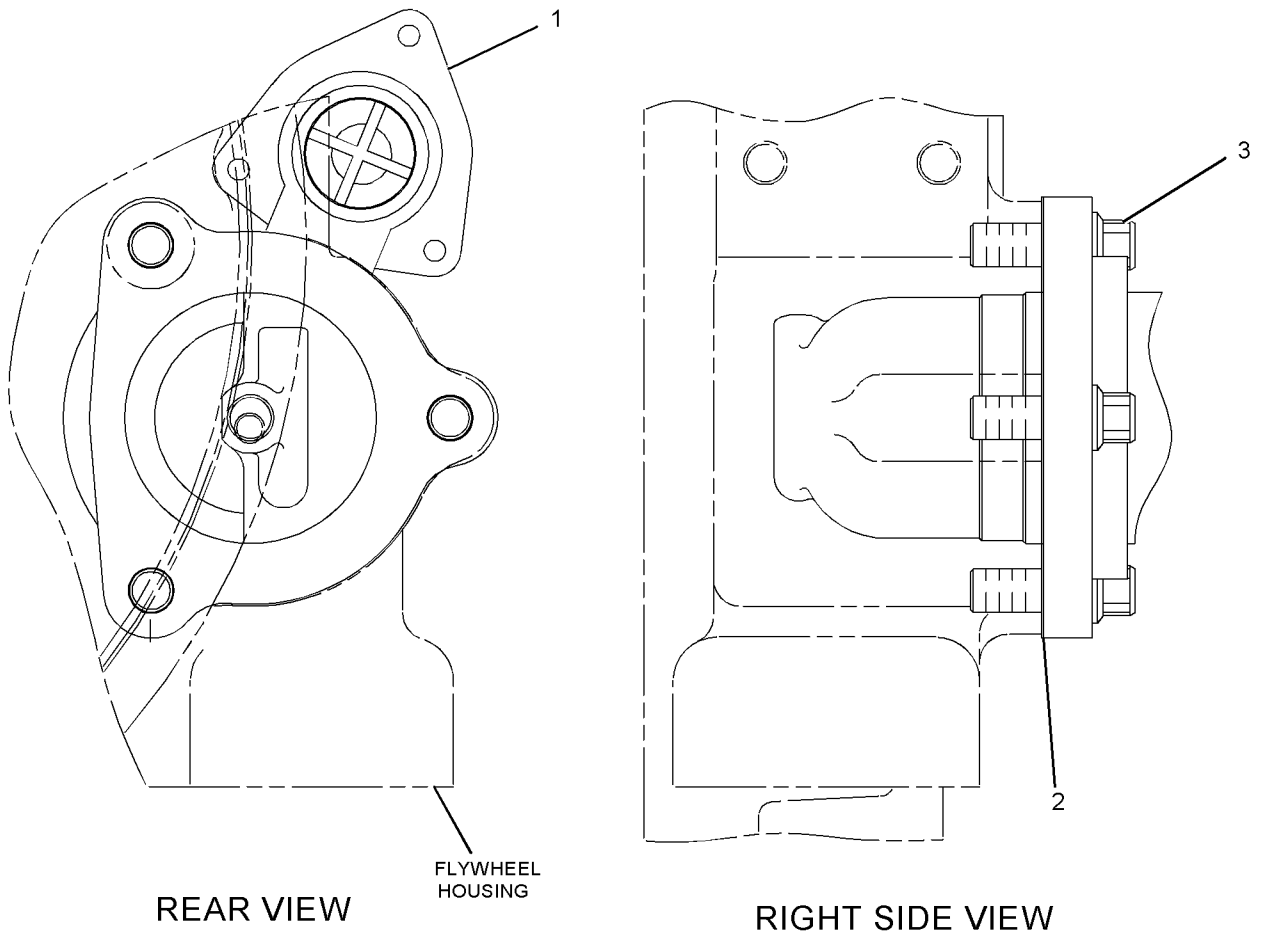
12-VOLT  
AN ATTACHMENT

SMCS-1453

i02228496

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	207-1520	1	STARTING MOTOR GP-ELECTRIC						397
	2	1	155-8725	1	GASKET						
	3	1	176-2543	3	BOLT-12 POINT HEAD						

Y-SEPARATE ILLUSTRATION



REAR VIEW

RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01124878

# ELECTRICAL AND STARTING SYSTEM

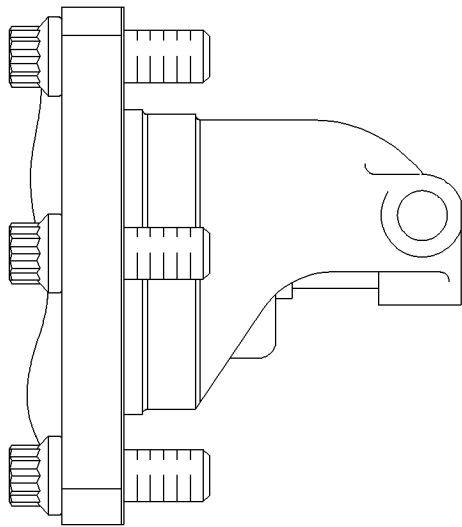
## 150-8867 STARTING MOTOR GP-ELECTRIC

PART OF 153-7290 STARTING MOTOR GP-ELECTRIC  
AN ATTACHMENT

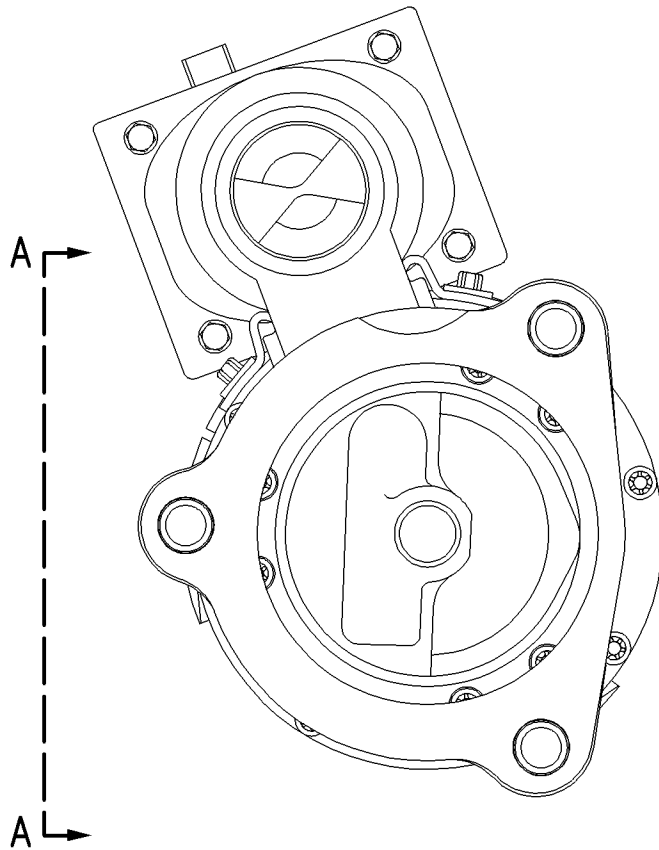
SMCS-1453

i01757806

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)											



VIEW A-A



GRAPHIC #1

<END>

g00901132

# ELECTRICAL AND STARTING SYSTEM

## 153-7290 STARTING MOTOR GP-ELECTRIC

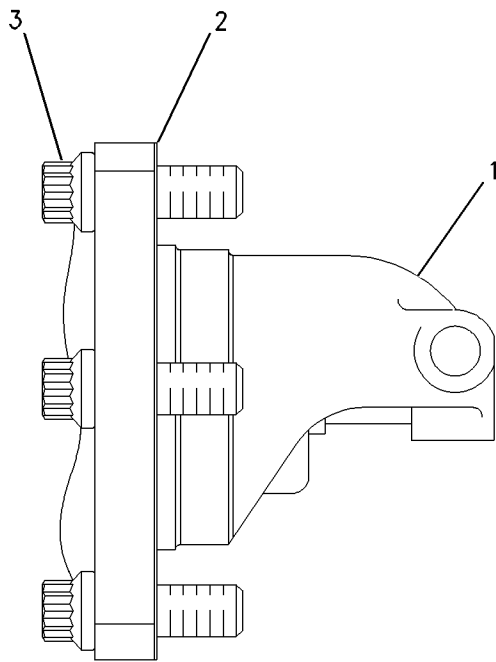
12-VOLT  
AN ATTACHMENT

SMCS-1453

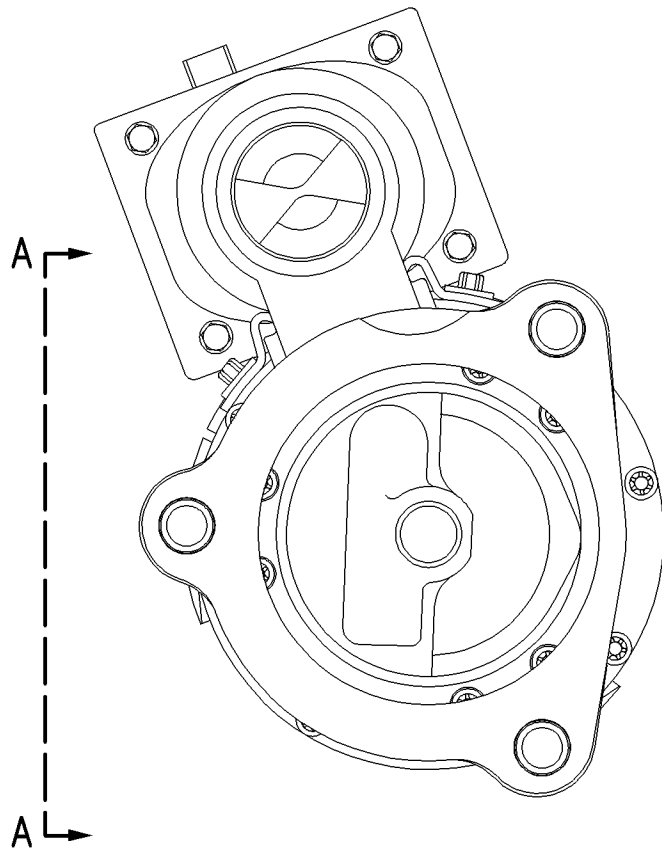
i01757832

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	150-8867	1	STARTING MOTOR GP-ELECTRIC						394
	2	1	4H-7869	1	GASKET						
	3	1	8S-2332	3	BOLT-12 POINT HEAD (5/8-11X1.75 IN)						

Y-SEPARATE ILLUSTRATION



VIEW A-A



GRAPHIC #1

<END>

g00901125

# ELECTRICAL AND STARTING SYSTEM

## 197-0986 STARTING MOTOR GP-ELECTRIC

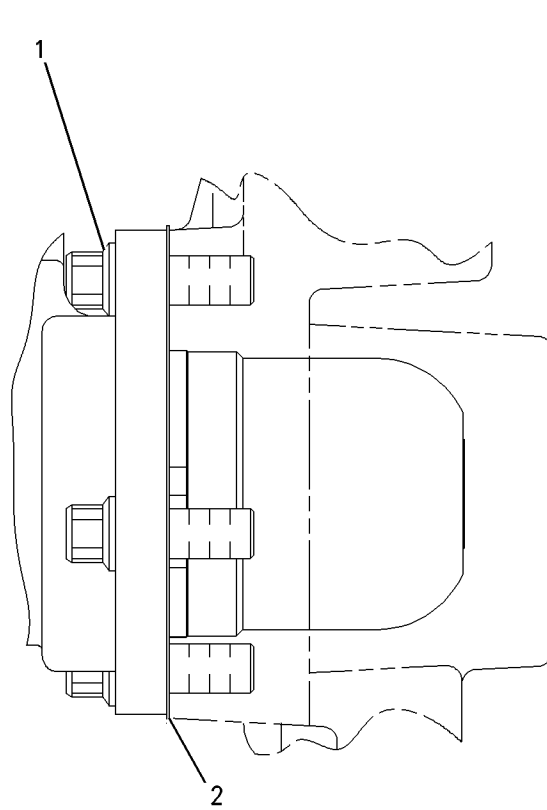
24 VOLT  
AN ATTACHMENT

SMCS-1453

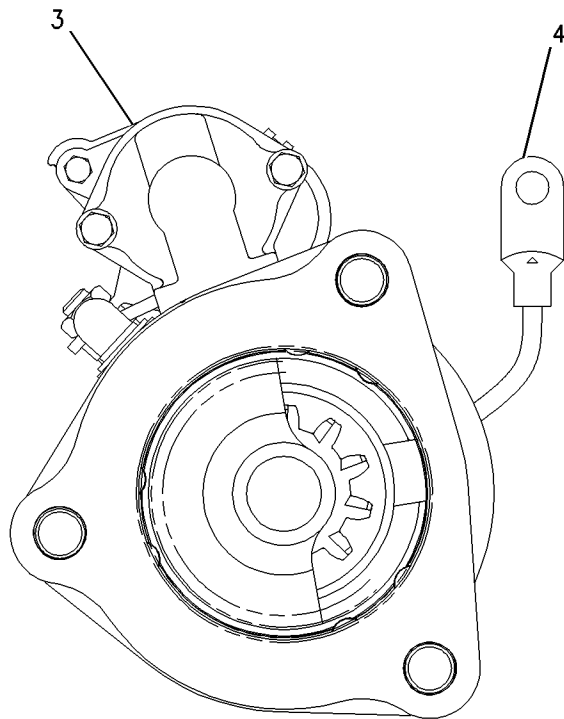
i01827909

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8S-2332	3	BOLT-12 POINT HEAD (5/8-11X1.75-IN)						
	2	1	4H-7869	1	GASKET						
CYR	3	1	207-1556	1	STARTING MOTOR GP-ELECTRIC						410
	4	1	8Y-9603	1	CABLE AS-STARTING MOTOR						
		1	1S-7251	1	TERMINAL-RING						
		1	1S-7252	1	TERMINAL-RING						
E		1	5P-0747		CABLE (00-GA, BLACK) (28CM)						

C-CHANGE FROM PREVIOUS TYPE  
E-ORDER BY THE CENTIMETER  
R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



LEFT SIDE VIEW



REAR VIEW

GRAPHIC #1

<END>

g00816694

# ELECTRICAL AND STARTING SYSTEM

## 207-1520 STARTING MOTOR GP-ELECTRIC

12-VOLT

PART OF 131-4850 STARTING MOTOR GP-ELECTRIC

FIELD REPLACEMENT ORDER 207-1532-PAGE 401

AN ATTACHMENT

SMCS-1453

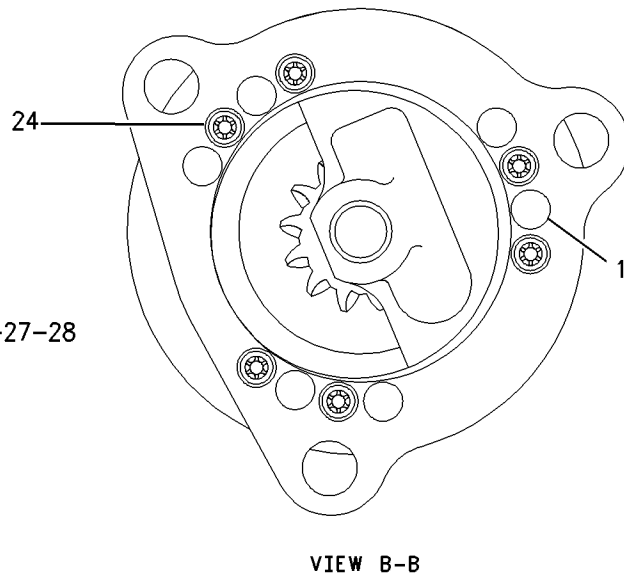
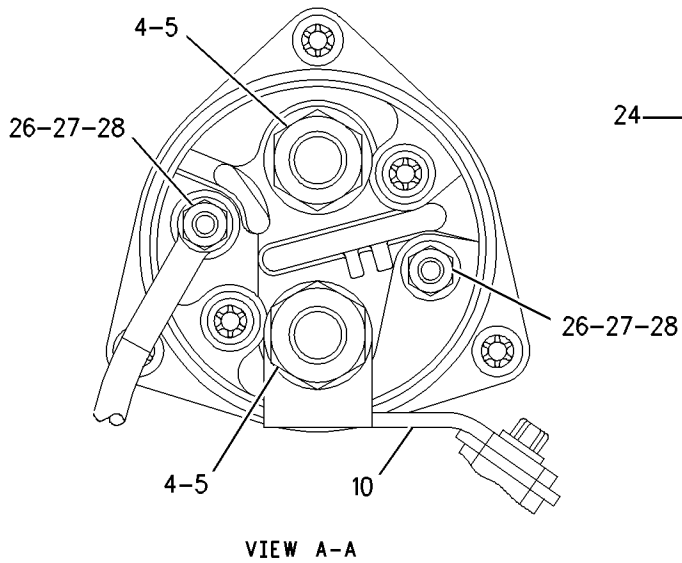
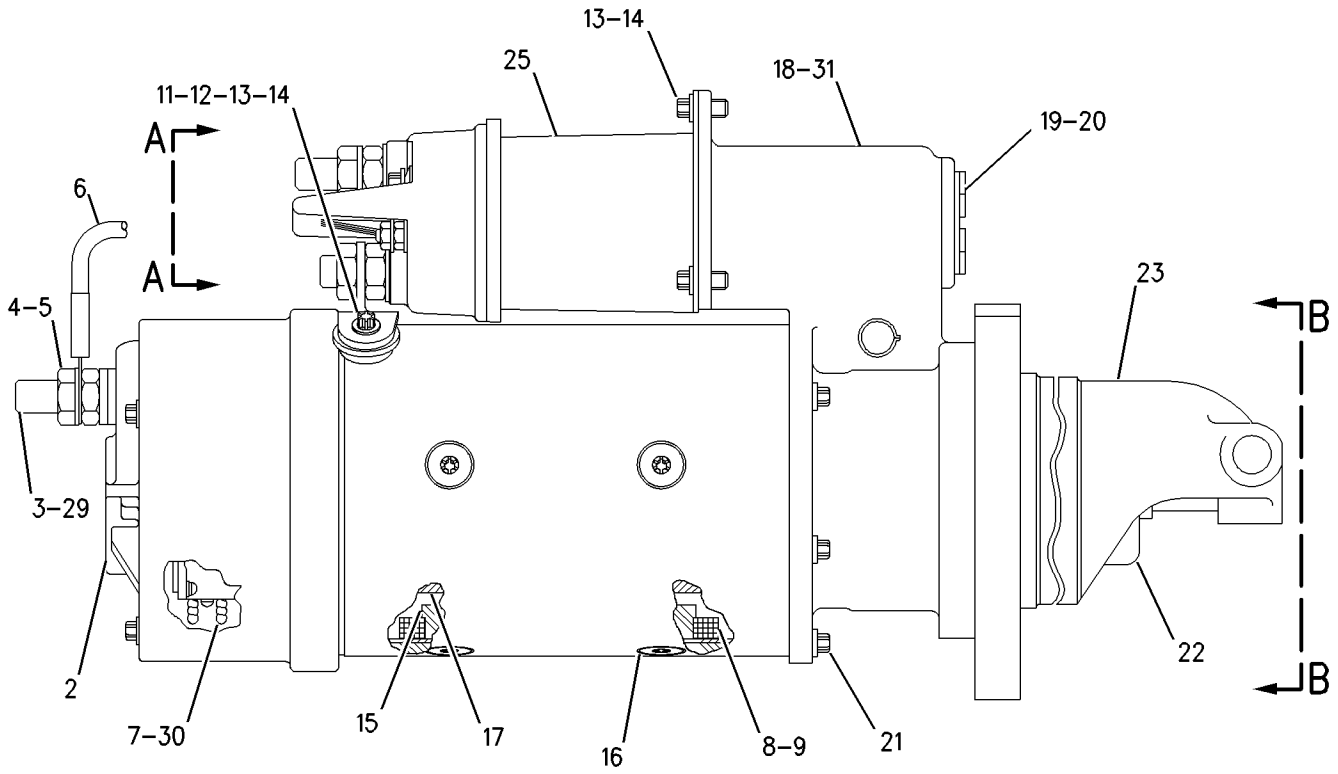
i02225099

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3T-3434</b>	6	PLUG						
	2	1	<b>7T-3279</b>	1	HOUSING AS						
	3	1	<b>8T-8566</b>	1	TERMINAL AS						
	4	1	<b>6V-8188</b>	4	NUT (1/2-13-THD)						
	5	1	<b>7X-0562</b>	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	<b>3T-3422</b>	1	WIRE AS						
	7	1	<b>8T-8570</b>	1	HOLDER AS-BRUSH						
	8	1	<b>8T-8568</b>	1	COIL AS-FIELD						
	9	1	<b>7T-3454</b>	1	INSULATOR						
	10	1	<b>7T-3271</b>	1	CONNECTOR						
	11	1	<b>7T-3451</b>	1	INSULATOR-TERMINAL						
	12	1	<b>8T-8569</b>	1	INSULATOR-TERMINAL						
	13	1	<b>5S-7349</b>	4	BOLT (1/4-20X0.5-IN)						
	14	1	<b>8T-4205</b>	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	<b>8H-1141</b>	4	SHOE-POLE						
	16	1	<b>3F-0379</b>	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	<b>7T-3275</b>	1	ARMATURE AS (12-VOLT)						
	18	1	<b>7T-3973</b>	1	HOUSING AS-LEVER						
	19	1	<b>4M-1831</b>	1	PLUG-LEVER HOUSING						
	20	1	<b>7L-2894</b>	1	GASKET						
	21	1	<b>036-9823</b>	5	BOLT (1/4-28X1-IN)						
	22	1	<b>6N-3826</b>	1	DRIVE AS-MOTOR						
	23	1	<b>7T-3974</b>	1	HOUSING AS-DRIVE						
	24	1	<b>7X-3373</b>	6	BOLT (5/16-18X0.88-IN)						
	25	1	<b>206-8789</b>	1	KIT-SOLENOID (12-VOLT) (STARTING MOTOR)						
	26	1	<b>6V-8378</b>	2	NUT (10-32-THD)						
	27	1	<b>8F-1434</b>	2	LOCKWASHER						
	28	1	<b>8T-0328</b>	2	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	<b>8T-9884</b>	1	KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS AND BUSHING)						
	30	1	<b>8T-9885</b>	1	KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, SEAL, AND SCREW ASSEMBLIES)						
	31	1	<b>7T-3268</b>	1	KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET AND RETAINER)						
					AVAILABLE REPAIR KIT(S):						
			<b>7T-3267</b>	1	KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW ASSEMBLIES, WASHERS, SPACER, AND NUT)						

# ELECTRICAL AND STARTING SYSTEM

207-1520 STARTING MOTOR GP-ELECTRIC (contd.)

i02225099



GRAPHIC #1

<END>

g00854288



# ELECTRICAL AND STARTING SYSTEM

## 207-1524 STARTING MOTOR GP-ELECTRIC

12-VOLT

FIELD REPLACEMENT FOR 207-1537-PAGE 403

SMCS-1453

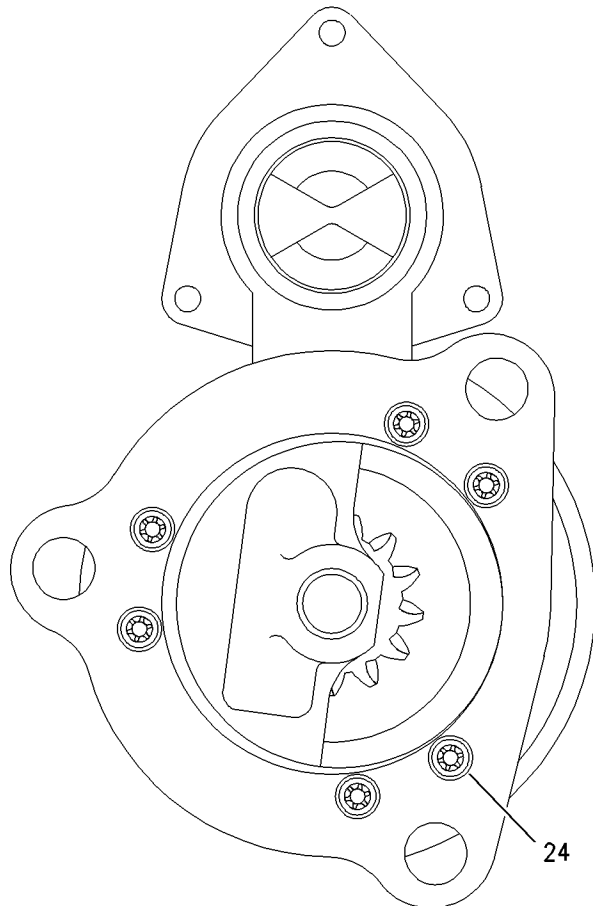
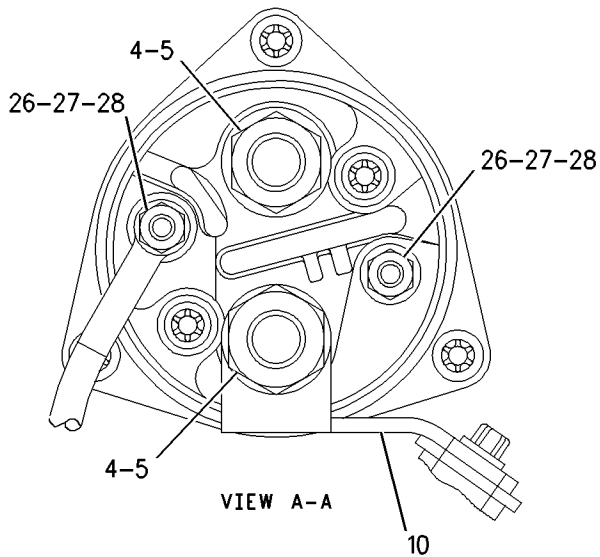
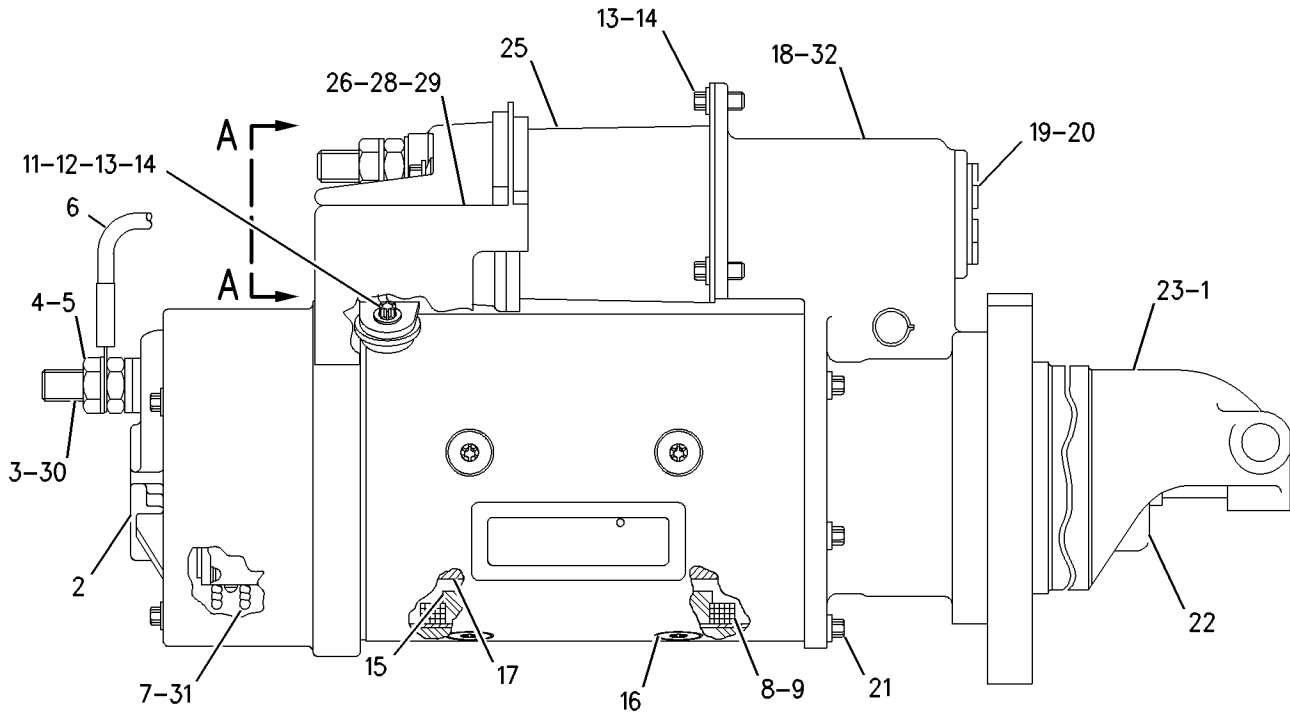
i02238115

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3T-3434	6	PLUG						
	2	1	7T-3279	1	HOUSING AS						
	3	1	8T-8566	1	TERMINAL AS						
	4	1	6V-8188	4	NUT (1/2-13-THD)						
	5	1	7X-0562	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	3T-3422	1	WIRE AS						
	7	1	8T-8570	1	HOLDER AS-BRUSH						
	8	1	8T-8568	1	COIL AS-FIELD						
	9	1	7T-3454	1	INSULATOR						
	10	1	7T-3271	1	CONNECTOR						
	11	1	7T-3451	1	INSULATOR-TERMINAL						
	12	1	8T-8569	1	INSULATOR-TERMINAL						
	13	1	5S-7349	4	BOLT (1/4-20X0.5-IN)						
	14	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	8H-1141	4	SHOE-POLE						
	16	1	3F-0379	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	7T-3275	1	ARMATURE AS (12-VOLT)						
	18	1	3E-7775	1	HOUSING AS						
	19	1	4M-1831	1	PLUG-LEVER HOUSING						
	20	1	7L-2894	1	GASKET						
	21	1	036-9823	5	BOLT (1/4-28X1-IN)						
	22	1	6N-3826	1	DRIVE AS-MOTOR						
	23	1	7T-3974	1	HOUSING AS-DRIVE						
	24	1	7X-3373	6	BOLT (5/16-18X0.88-IN)						
	25	1	206-8789	1	KIT-SOLENOID (12-VOLT) (STARTING MOTOR)						
	26	1	6V-8378	3	NUT (10-32-THD)						
	27	1	8F-1434	2	LOCKWASHER						
	28	1	8T-0328	3	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	9X-4824	1	COVER-STARTING MOTOR						
	30	1	8T-9884	1	KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS AND BUSHING)						
	31	1	8T-9885	1	KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, AND SEAL)						
	32	1	7T-3268	1	KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET, AND RETAINER)						
					AVAILABLE REPAIR KIT(S):						
			7T-3267	1	KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW AS, WASHERS, SPACER, AND NUT)						

# ELECTRICAL AND STARTING SYSTEM

207-1524 STARTING MOTOR GP-ELECTRIC (contd.)

i02238115



GRAPHIC #1

<END>

g00830160

# ELECTRICAL AND STARTING SYSTEM

## 207-1532 STARTING MOTOR GP-ELECTRIC\*R

12-VOLT. SEMI-SOLID LINK 42 MT  
FIELD REPLACEMENT FOR 207-1520-PAGE 397

SMCS-1453

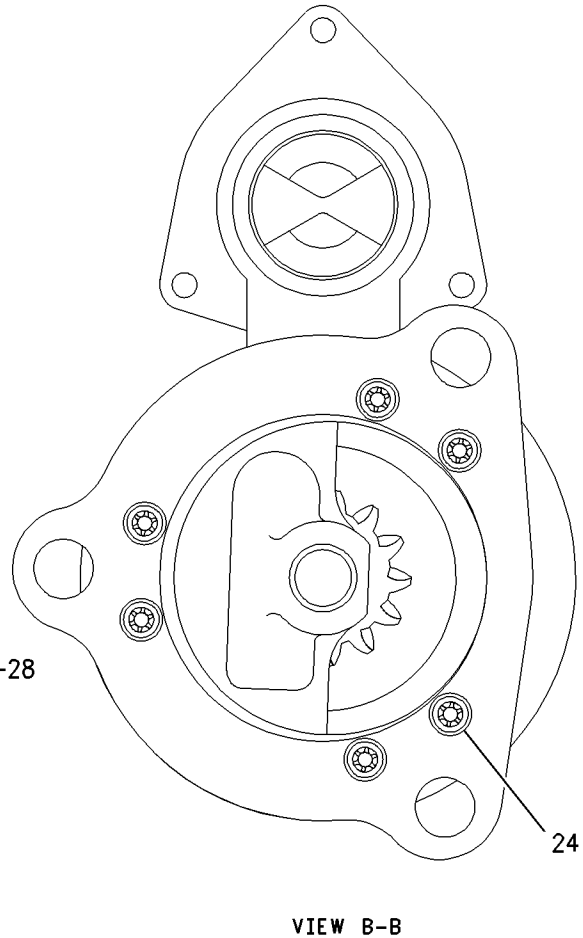
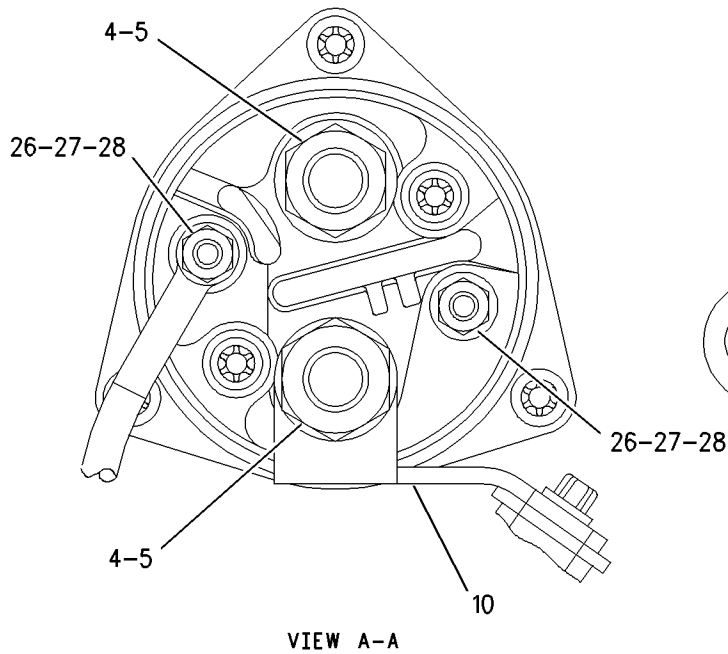
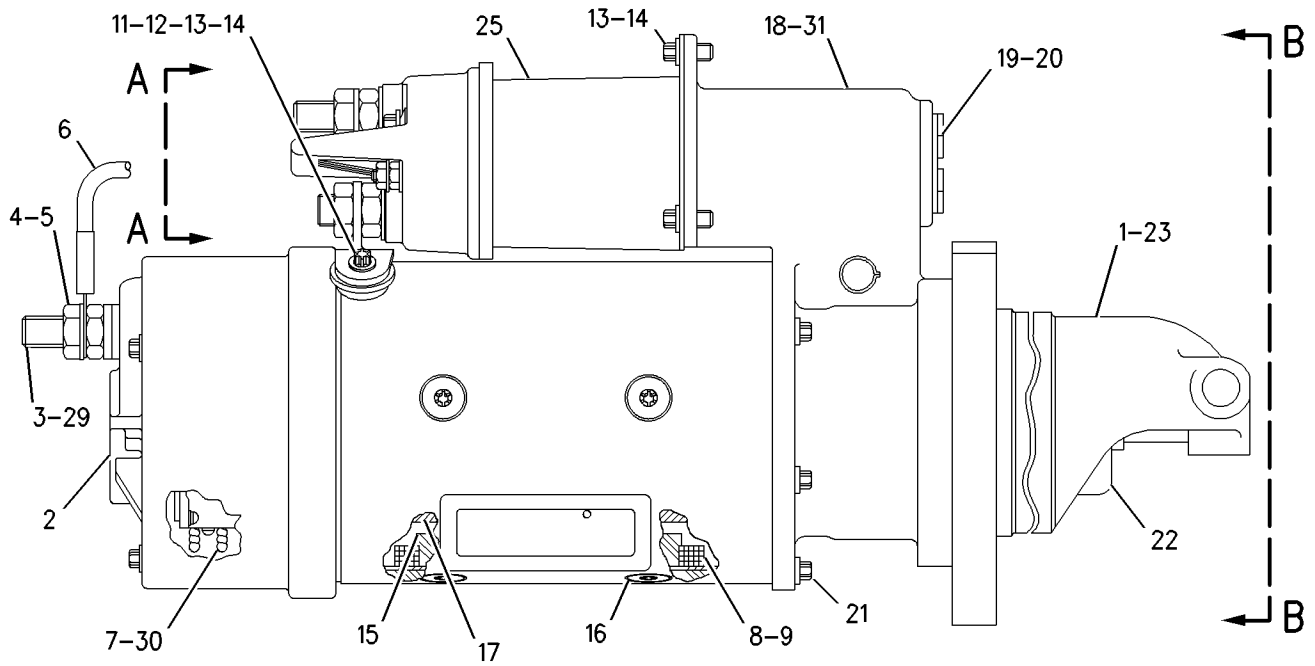
i02240621

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3T-3434	6	PLUG						
	2	1	7T-3279	1	HOUSING AS						
	3	1	8T-8566	1	TERMINAL AS						
	4	1	6V-8188	4	NUT (1/2-13-THD)						
	5	1	7X-0562	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	3T-3422	1	WIRE AS						
	7	1	8T-8570	1	HOLDER AS-BRUSH (STARTING MOTOR)						
	8	1	8T-8568	1	COIL AS-FIELD						
	9	1	7T-3454	1	INSULATOR						
	10	1	7T-3271	1	CONNECTOR						
	11	1	7T-3451	1	INSULATOR-TERMINAL						
	12	1	8T-8569	1	INSULATOR-TERMINAL						
	13	1	5S-7349	4	BOLT (1/4-20X0.5-IN)						
	14	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	8H-1141	4	SHOE-POLE						
	16	1	3F-0379	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	7T-3275	1	ARMATURE AS (12-VOLT)						
	18	1	3E-7775	1	HOUSING AS						
	19	1	4M-1831	1	PLUG-LEVER HOUSING						
	20	1	7L-2894	1	GASKET						
	21	1	036-9823	5	BOLT (1/4-28X1-IN)						
	22	1	6N-3826	1	DRIVE AS-MOTOR						
	23	1	110-5035	1	HOUSING AS						
	24	1	7X-3373	6	BOLT (5/16-18X0.88-IN)						
	25	1	206-8789	1	KIT-SOLENOID (12-VOLT) (STARTING MOTOR)						
	26	1	6V-8378	2	NUT (10-32-THD)						
	27	1	8F-1434	2	LOCKWASHER						
	28	1	8T-0328	2	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	8T-9884	1	KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS)						
	30	1	8T-9885	1	KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, SEAL AND SCREW AS)						
	31	1	7T-3268	1	KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER AS, SEALS, NUT, GASKET AND RETAINER)						
	32	1	7T-3267	1	KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, WASHERS, SCREW AS. AND NUT)						

# ELECTRICAL AND STARTING SYSTEM

207-1532 STARTING MOTOR GP-ELECTRIC (contd.)

i02240621



GRAPHIC #1

<END>

g00840525

# ELECTRICAL AND STARTING SYSTEM

## 207-1537 STARTING MOTOR GP-ELECTRIC

12-VOLT

PART OF 9Y-7129 STARTING MOTOR GP-ELECTRIC

FIELD REPLACEMENT ORDER 207-1524-PAGE 399

AN ATTACHMENT

SMCS-1453

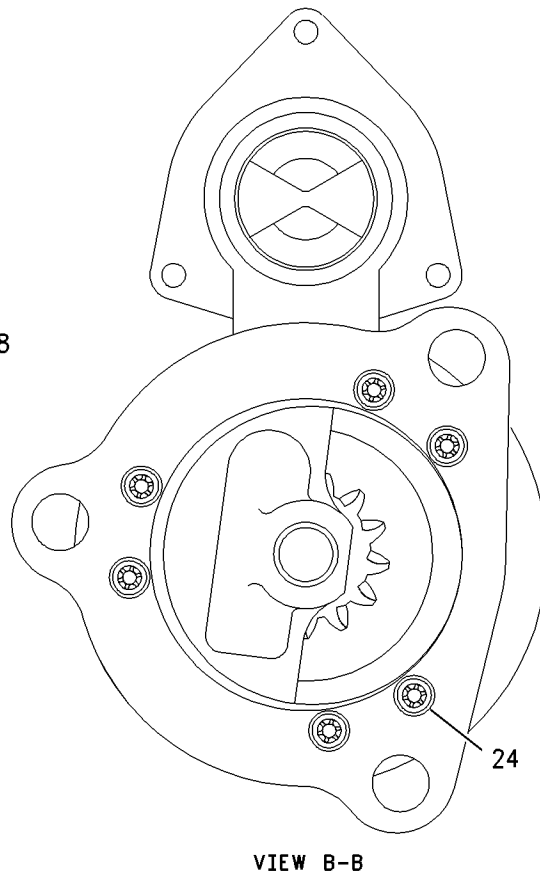
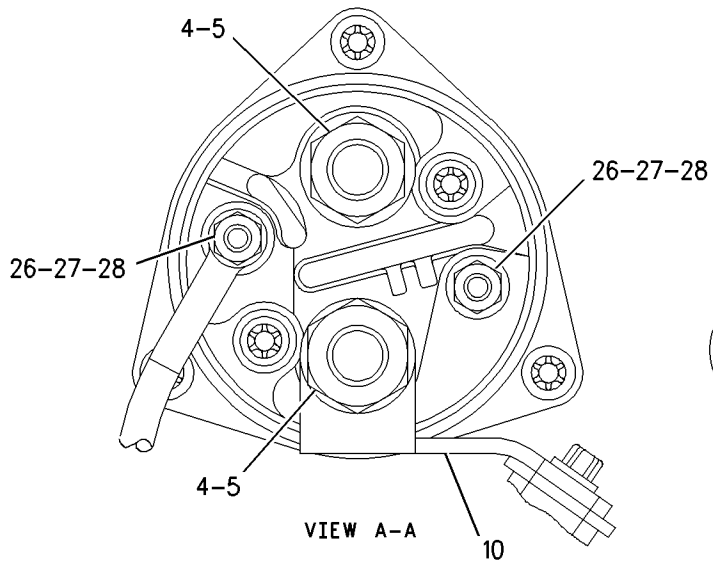
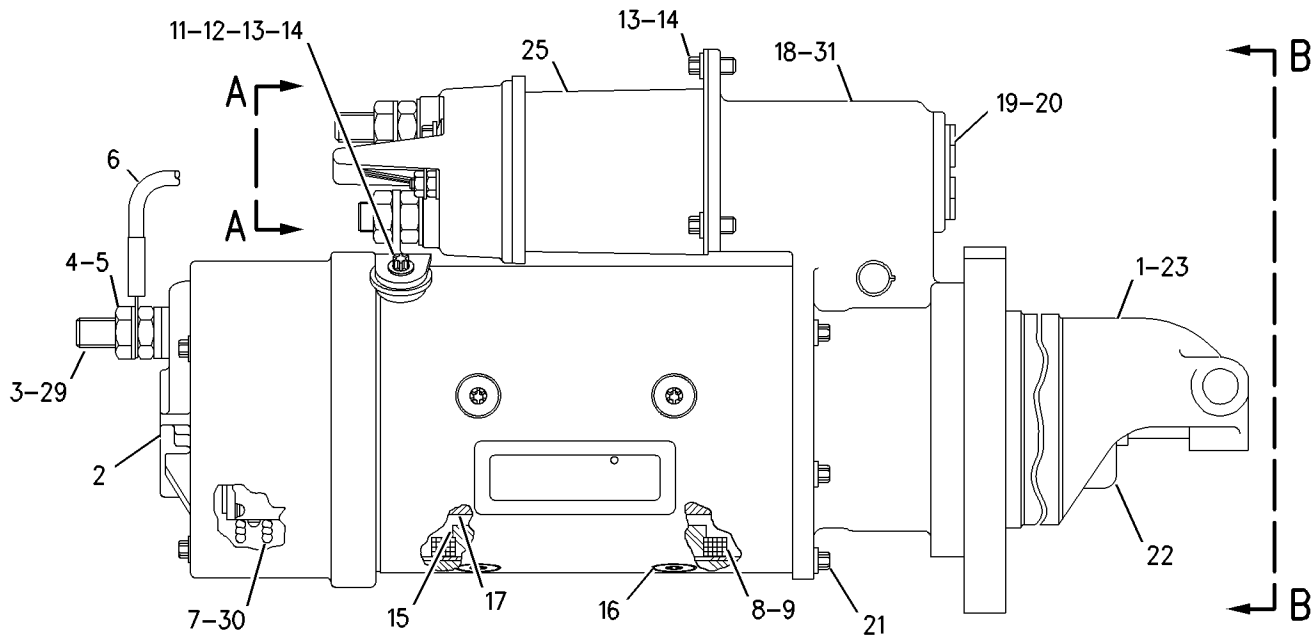
i02238118

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3T-3434</b>	6	PLUG						
	2	1	<b>7T-3279</b>	1	HOUSING AS						
	3	1	<b>8T-8566</b>	1	TERMINAL AS						
	4	1	<b>6V-8188</b>	4	NUT (1/2-13-THD)						
	5	1	<b>7X-0562</b>	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	<b>3T-3422</b>	1	WIRE AS						
	7	1	<b>8T-8570</b>	1	HOLDER AS-BRUSH						
	8	1	<b>8T-8568</b>	1	COIL AS-FIELD						
	9	1	<b>7T-3454</b>	1	INSULATOR						
	10	1	<b>7T-3271</b>	1	CONNECTOR						
	11	1	<b>7T-3451</b>	1	INSULATOR-TERMINAL						
	12	1	<b>8T-8569</b>	1	INSULATOR-TERMINAL						
	13	1	<b>5S-7349</b>	4	BOLT (1/4-20X0.5-IN)						
	14	1	<b>8T-4205</b>	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	<b>8H-1141</b>	4	SHOE-POLE						
	16	1	<b>3F-0379</b>	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	<b>7T-3275</b>	1	ARMATURE AS (12-VOLT)						
	18	1	<b>3E-7775</b>	1	HOUSING AS						
	19	1	<b>4M-1831</b>	1	PLUG-LEVER HOUSING						
	20	1	<b>7L-2894</b>	1	GASKET						
	21	1	<b>036-9823</b>	5	BOLT (1/4-28X1-IN)						
	22	1	<b>6N-3826</b>	1	DRIVE AS-MOTOR						
	23	1	<b>7T-3974</b>	1	HOUSING AS-DRIVE						
	24	1	<b>7X-3373</b>	6	BOLT (5/16-18X0.88-IN)						
	25	1	<b>206-8789</b>	1	KIT-SOLENOID (12-VOLT) (STARTING MOTOR)						
	26	1	<b>6V-8378</b>	2	NUT (10-32-THD)						
	27	1	<b>8F-1434</b>	2	LOCKWASHER						
	28	1	<b>8T-0328</b>	2	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	<b>8T-9884</b>	1	KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS AND BUSHING)						
	30	1	<b>8T-9885</b>	1	KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, AND SEAL)						
	31	1	<b>7T-3268</b>	1	KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET, AND RETAINER)						
					AVAILABLE REPAIR KIT(S):						
			<b>7T-3267</b>	1	KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW AS, WASHERS, SPACER, AND NUT)						

# ELECTRICAL AND STARTING SYSTEM

207-1537 STARTING MOTOR GP-ELECTRIC (contd.)

i02238118



# ELECTRICAL AND STARTING SYSTEM

## 207-1548 STARTING MOTOR GP-ELECTRIC

24-VOLT

PART OF 111-2675 STARTING MOTOR GP-ELECTRIC

FIELD REPLACEMENT ORDER 207-1556—PAGE 410

AN ATTACHMENT

SMCS-1453

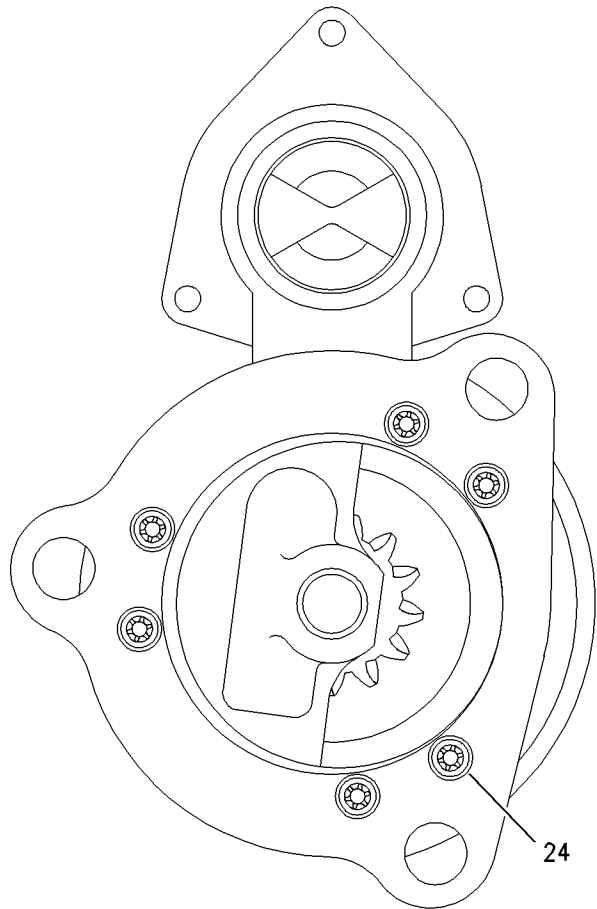
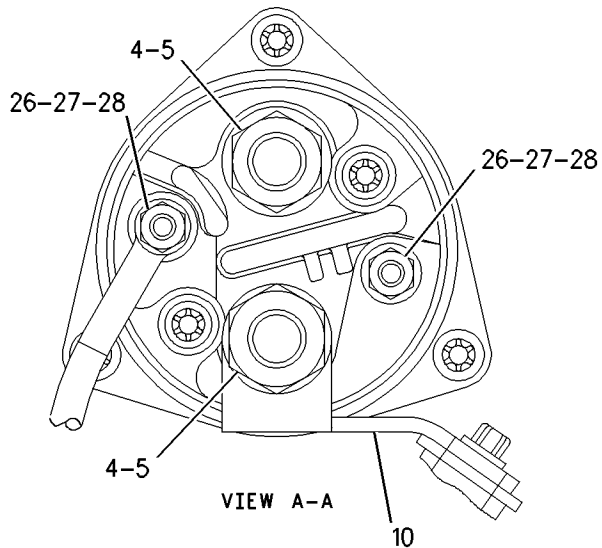
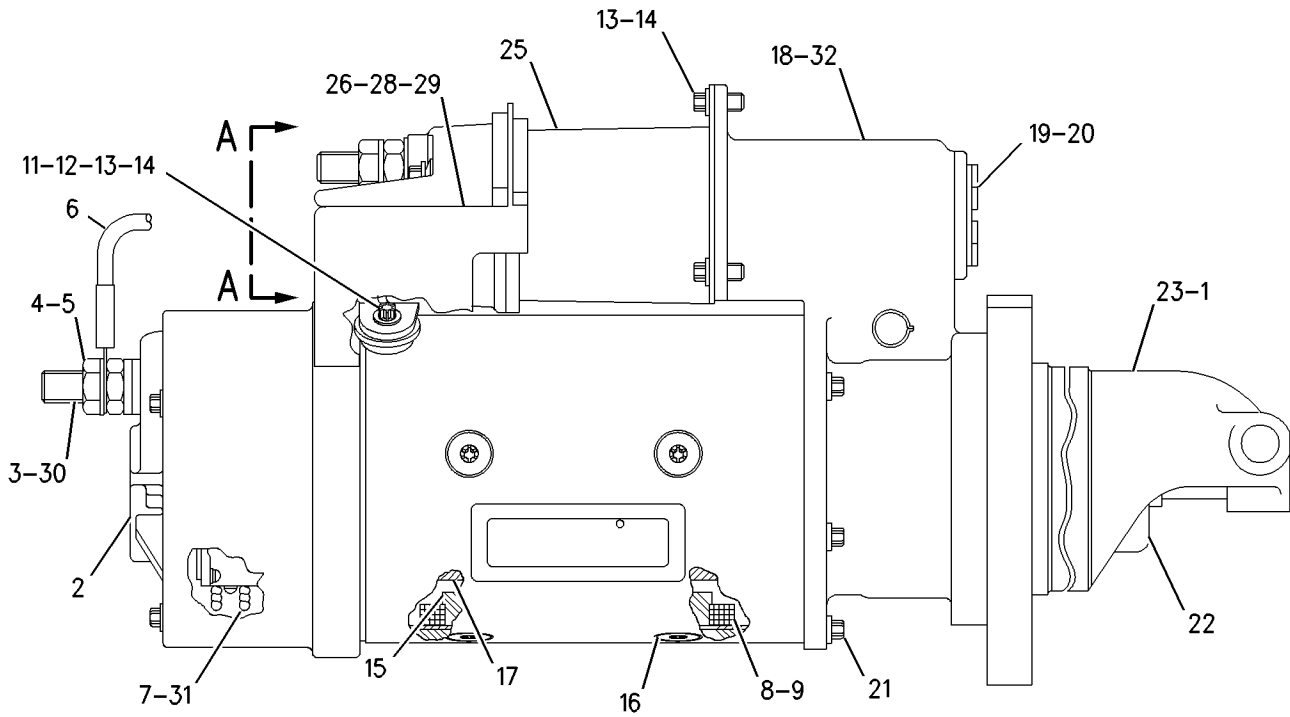
i02197799

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3T-3434</b>	6	PLUG						
	2	1	<b>7T-3279</b>	1	HOUSING AS						
	3	1	<b>8T-8566</b>	1	TERMINAL AS						
	4	1	<b>6V-8188</b>	4	NUT (1/2-13-THD)						
	5	1	<b>7X-0562</b>	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	<b>3T-3422</b>	1	WIRE AS						
	7	1	<b>7T-3278</b>	1	HOLDER AS-BRUSH						
	8	1	<b>7T-3277</b>	1	COIL AS-FIELD						
	9	1	<b>7T-3454</b>	1	INSULATOR						
	10	1	<b>7T-3271</b>	1	CONNECTOR						
	11	1	<b>7T-3451</b>	1	INSULATOR-TERMINAL						
	12	1	<b>8T-8569</b>	1	INSULATOR-TERMINAL						
	13	1	<b>5S-7349</b>	4	BOLT (1/4-20X0.5-IN)						
	14	1	<b>8T-4205</b>	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	<b>8H-1141</b>	4	SHOE-POLE						
	16	1	<b>3F-0379</b>	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	<b>7T-3276</b>	1	ARMATURE AS (24-VOLT)						
	18	1	<b>3E-7775</b>	1	HOUSING AS						
	19	1	<b>4M-1831</b>	1	PLUG-LEVER HOUSING						
	20	1	<b>7L-2894</b>	1	GASKET						
	21	1	<b>036-9823</b>	5	BOLT (1/4-28X1-IN)						
	22	1	<b>6N-3826</b>	1	DRIVE AS-MOTOR						
	23	1	<b>7T-3974</b>	1	HOUSING AS-DRIVE						
	24	1	<b>7X-3373</b>	6	BOLT (5/16-18X0.88-IN)						
	25	1	<b>193-8570</b>	1	SOLENOID AS (24-VOLT) (STARTING MOTOR)						
	26	1	<b>6V-8378</b>	3	NUT (10-32-THD)						
	27	1	<b>8F-1434</b>	2	LOCKWASHER						
	28	1	<b>8T-0328</b>	3	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	<b>9X-4824</b>	1	COVER-STARTING MOTOR						
	30	1	<b>8T-9884</b>	1	KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS AND BUSHING)						
	31	1	<b>8C-3655</b>	1	KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, SEAL, AND SCREW ASSEMBLIES)						
	32	1	<b>7T-3268</b>	1	KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET, AND RETAINER)						
					AVAILABLE REPAIR KIT(S):						
			<b>7T-3267</b>	1	KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW ASSEMBLIES, WASHERS, SPACER, AND NUT)						

# ELECTRICAL AND STARTING SYSTEM

207-1548 STARTING MOTOR GP-ELECTRIC (contd.)

i02197799



GRAPHIC #1

<END>

g00830401



# ELECTRICAL AND STARTING SYSTEM

## 207-1549 STARTING MOTOR GP-ELECTRIC

24-VOLT. 42MT SEMI-SOLID LINK  
 PART OF 131-3401 STARTING MOTOR GP-ELECTRIC  
 FIELD REPLACEMENT ORDER 207-1556-PAGE 410  
 AN ATTACHMENT

SMCS-1453

i02138421

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3T-3434	6	PLUG						
	2	1	7T-3279	1	HOUSING AS						
	3	1	8T-8566	1	TERMINAL AS						
	4	1	6V-8188	4	NUT (1/2-13-THD)						
	5	1	7X-0562	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	3T-3422	1	WIRE AS						
	7	1	7T-3278	1	HOLDER AS-BRUSH (STARTING MOTOR)						
	8	1	7T-3277	1	COIL AS-FIELD						
	9	1	7T-3454	1	INSULATOR						
	10	1	7T-3271	1	CONNECTOR						
	11	1	7T-3451	1	INSULATOR-TERMINAL						
	12	1	8T-8569	1	INSULATOR-TERMINAL						
	13	1	5S-7349	4	BOLT (1/4-20X0.5-IN)						
	14	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	8H-1141	4	SHOE-POLE						
	16	1	3F-0379	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	7T-3276	1	ARMATURE AS (24-VOLT)						
	18	1	3E-7775	1	HOUSING AS						
	19	1	4M-1831	1	PLUG-LEVER HOUSING						
	20	1	7L-2894	1	GASKET						
	21	1	036-9823	5	BOLT (1/4-28X1-IN)						
	22	1	6N-3826	1	DRIVE AS-MOTOR						
	23	1	7T-3974	1	HOUSING AS-DRIVE						
	24	1	7X-3373	6	BOLT (5/16-18X0.88-IN)						
	25	1	193-8570	1	SOLENOID AS (24-VOLT) (STARTING MOTOR)						
	26	1	6V-8378	2	NUT (10-32-THD)						
	27	1	8F-1434	2	LOCKWASHER						
	28	1	8T-0328	2	WASHER-HARD (5.5X10X1-MM THK)						
Z	29	1		1	HOUSING						
JZ	30	1		4	SPRING						
JZ	31	1		4	BRUSH						
JZ	32	1		4	SCREW						
JPZ	33	1		6	SCREW AS						
JPZ	34	1		1	SEAL-O-RING						
LZ	35	1		3	INSULATOR						
NZ	36	1		1	LEVER AS						
NPZ	37	1		1	NUT						
NPZ	38	1		1	SEAL-O-RING						
PZ	39	1		1	SEAL-O-RING						
NZ	40	1		1	RETAINER						
PZ	41	1		1	GASKET						
PZ	42	1		1	BUSHING						
PZ	43	1		2	PLUG-CUP						
PZ	44	1		1	PLUG-CUP						
PZ	45	1		1	PLUG						
PZ	46	1		1	PLUG						
PZ	47	1		1	PLUG						
PZ	48	1		1	BUSHING						
PZ	49	1		1	WASHER						
NZ	50	1		1	SEAL-O-RING						
NZ	51	1		1	SEAL-O-RING						
PZ	52	1		1	RETAINER						
PZ	53	1		1	SPACER						
PZ	54	1		1	BUSHING						

# ELECTRICAL AND STARTING SYSTEM

207-1549 STARTING MOTOR GP-ELECTRIC (contd.)

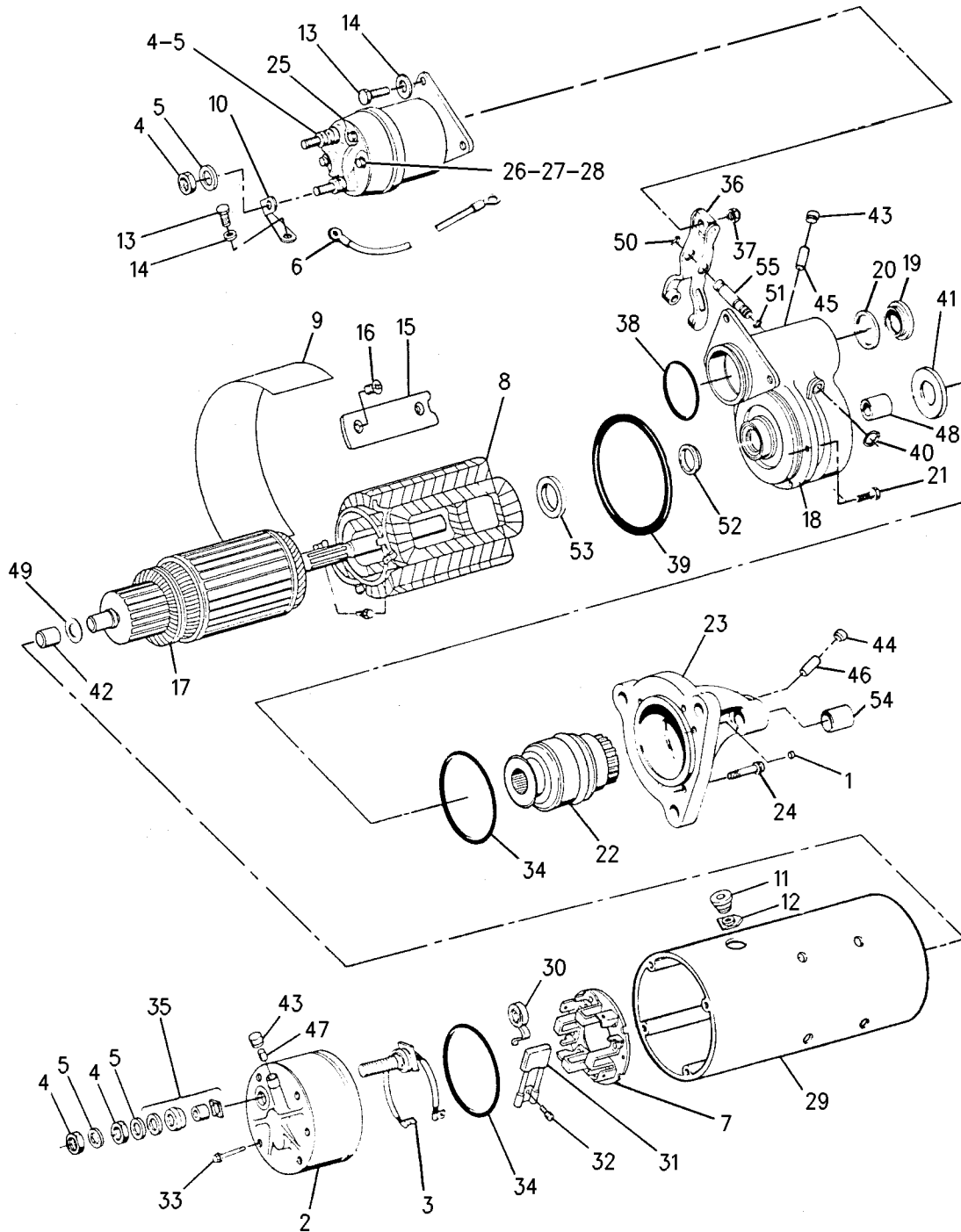
i02138421

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
LZ	55	1		1	BUSHING						
AVAILABLE REPAIR KIT(S):											
J			<b>8C-3655</b>	1	KIT-BRUSH (STARTING MOTOR)						
P			<b>7T-3267</b>	1	KIT-BUSHING (STARTING MOTOR)						
N			<b>7T-3268</b>	1	KIT-LEVER (STARTING MOTOR)						
L			<b>8T-9884</b>	1	KIT-INSULATOR (STARTING MOTOR)						
J-KIT MARKED J INCLUDES PARTS MARKED J L-KIT MARKED L INCLUDES PARTS MARKED L N-KITS MARKED N INCLUDES PARTS MARKED N P-KITS MARKED P INCLUDES PARTS MARKED P Z-NOT SERVICED SEPARATELY											

# ELECTRICAL AND STARTING SYSTEM

207-1549 STARTING MOTOR GP-ELECTRIC (contd.)

i02138421



GRAPHIC #1

<END>

g00836417

# ELECTRICAL AND STARTING SYSTEM

## 207-1556 STARTING MOTOR GP-ELECTRIC\*R

24-VOLT

PART OF 102-5836, 197-0986 STARTING MOTOR GP-ELECTRIC  
FIELD REPLACEMENT FOR 207-1562-PAGE 413: FOR 207-1557-PAGE 411: FOR  
207-1549-PAGE 407: FOR 207-1548-PAGE 405  
AN ATTACHMENT

SMCS-1453

i02105118

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	6V-5582	1	STARTING MOTOR GP-ELECTRIC						386
			-OR-						
Y	207-1557	1	STARTING MOTOR GP-ELECTRIC						411
Y-SEPARATE ILLUSTRATION									

<END>

# ELECTRICAL AND STARTING SYSTEM

## 207-1557 STARTING MOTOR GP-ELECTRIC

24-VOLT

PART OF 207-1556 STARTING MOTOR GP-ELECTRIC

FIELD REPLACEMENT ORDER 207-1556-PAGE 410

AN ATTACHMENT

SMCS-1453

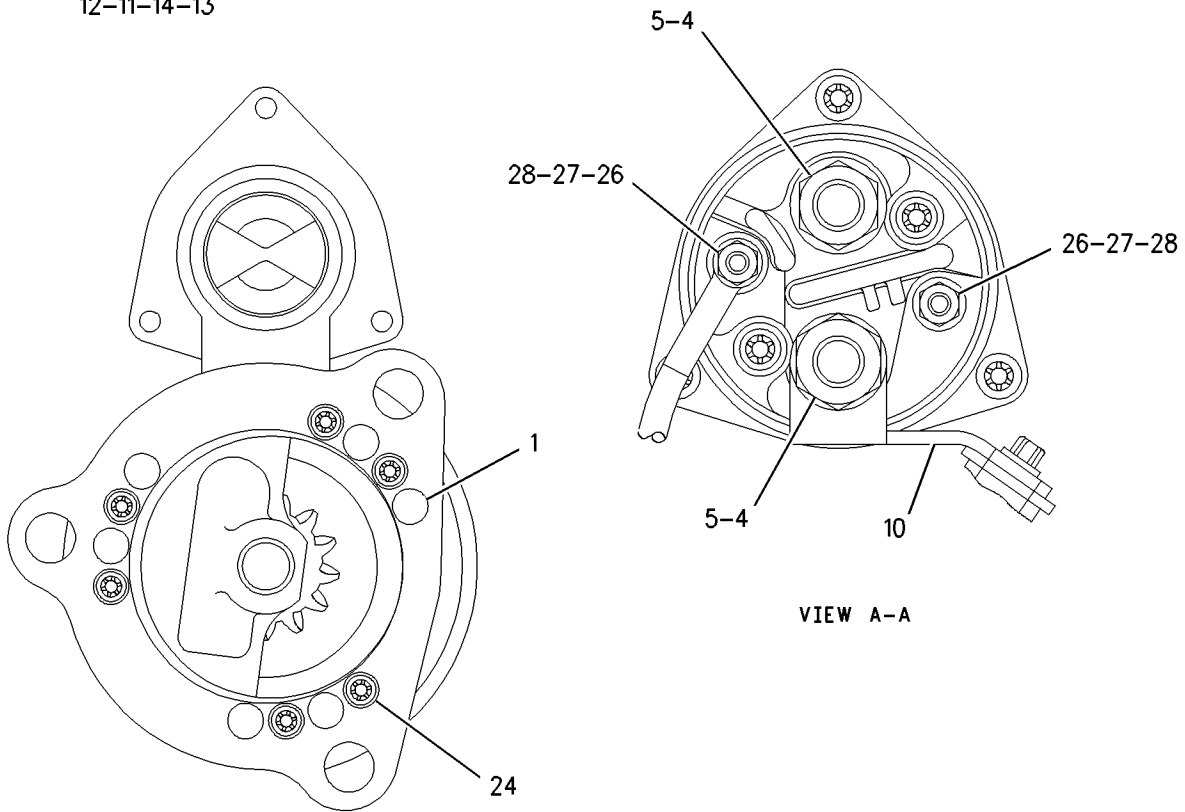
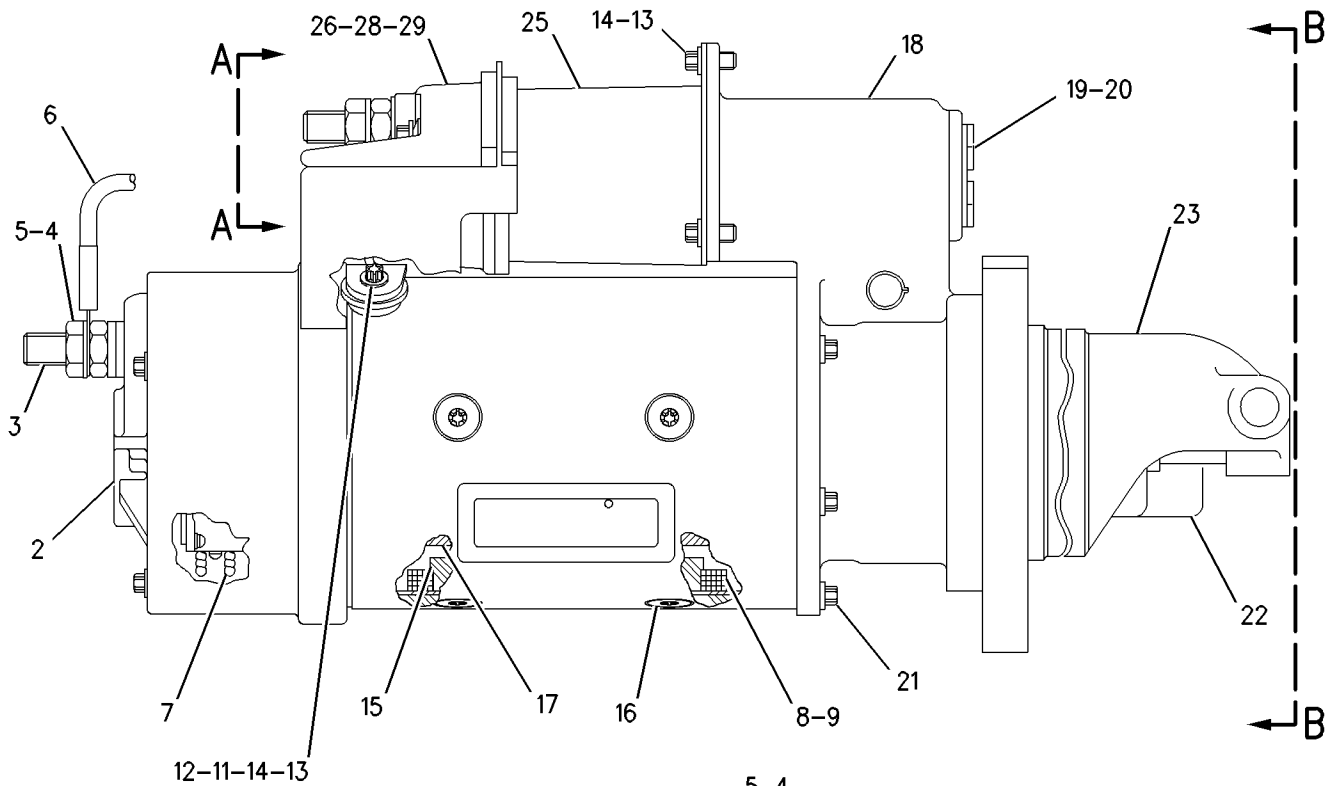
i02253252

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3T-3434	6	PLUG						
	2	1	7T-3279	1	HOUSING AS						
	3	1	8T-8566	1	TERMINAL AS						
	4	1	6V-8188	4	NUT (1/2-13-THD)						
	5	1	7X-0562	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	3T-3422	1	WIRE AS						
	7	1	7T-3278	1	HOLDER AS-BRUSH						
	8	1	7T-3277	1	COIL AS-FIELD						
	9	1	7T-3454	1	INSULATOR						
	10	1	7T-3271	1	CONNECTOR						
	11	1	7T-3451	1	INSULATOR-TERMINAL						
	12	1	8T-8569	1	INSULATOR-TERMINAL						
	13	1	5S-7349	4	BOLT (1/4-20X0.5-IN)						
	14	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	8H-1141	4	SHOE-POLE						
	16	1	3F-0379	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	7T-3276	1	ARMATURE AS (24-VOLT)						
	18	1	3E-7775	1	HOUSING AS						
	19	1	4M-1831	1	PLUG-LEVER HOUSING						
	20	1	7L-2894	1	GASKET						
	21	1	036-9823	5	BOLT (1/4-28X1-IN)						
	22	1	6N-3826	1	DRIVE AS-MOTOR						
	23	1	7T-3974	1	HOUSING AS-DRIVE						
	24	1	7X-3373	6	BOLT (5/16-18X0.88-IN)						
	25	1	193-8570	1	SOLENOID AS (24-VOLT) (STARTING MOTOR)						
	26	1	6V-8378	3	NUT (10-32-THD)						
	27	1	8F-1434	2	LOCKWASHER						
	28	1	8T-0328	3	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	9X-4824	1	COVER-STARTING MOTOR						
					AVAILABLE REPAIR KIT(S):						
			7T-3268	1	KIT-LEVER (STARTING MOTOR)						
					(INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET AND RETAINER)						
			7T-3267	1	KIT-BUSHING (STARTING MOTOR)						
					(INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW AS, WASHERS, SPACER AND NUT)						
			8C-3655	1	KIT-BRUSH (STARTING MOTOR)						
					(INCLUDES BRUSHES, SPRINGS, SCREWS, SCREW AS AND SEAL)						
			8T-9884	1	KIT-INSULATOR (STARTING MOTOR)						
					(INCLUDES INSULATORS AND BUSHING)						

# ELECTRICAL AND STARTING SYSTEM

207-1557 STARTING MOTOR GP-ELECTRIC (contd.)

i02253252



# ELECTRICAL AND STARTING SYSTEM

## 207-1562 STARTING MOTOR GP-ELECTRIC

24-VOLT

FIELD REPLACEMENT ORDER 207-1556-PAGE 410

SMCS-1453

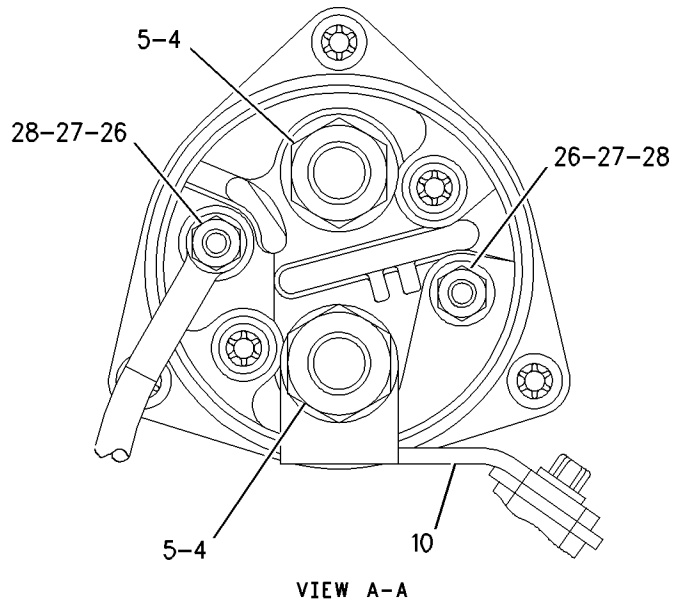
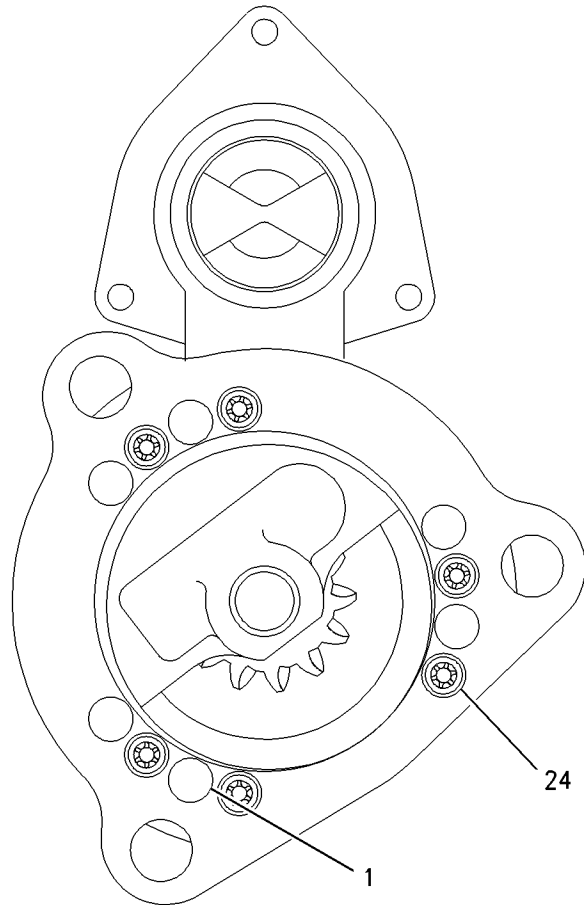
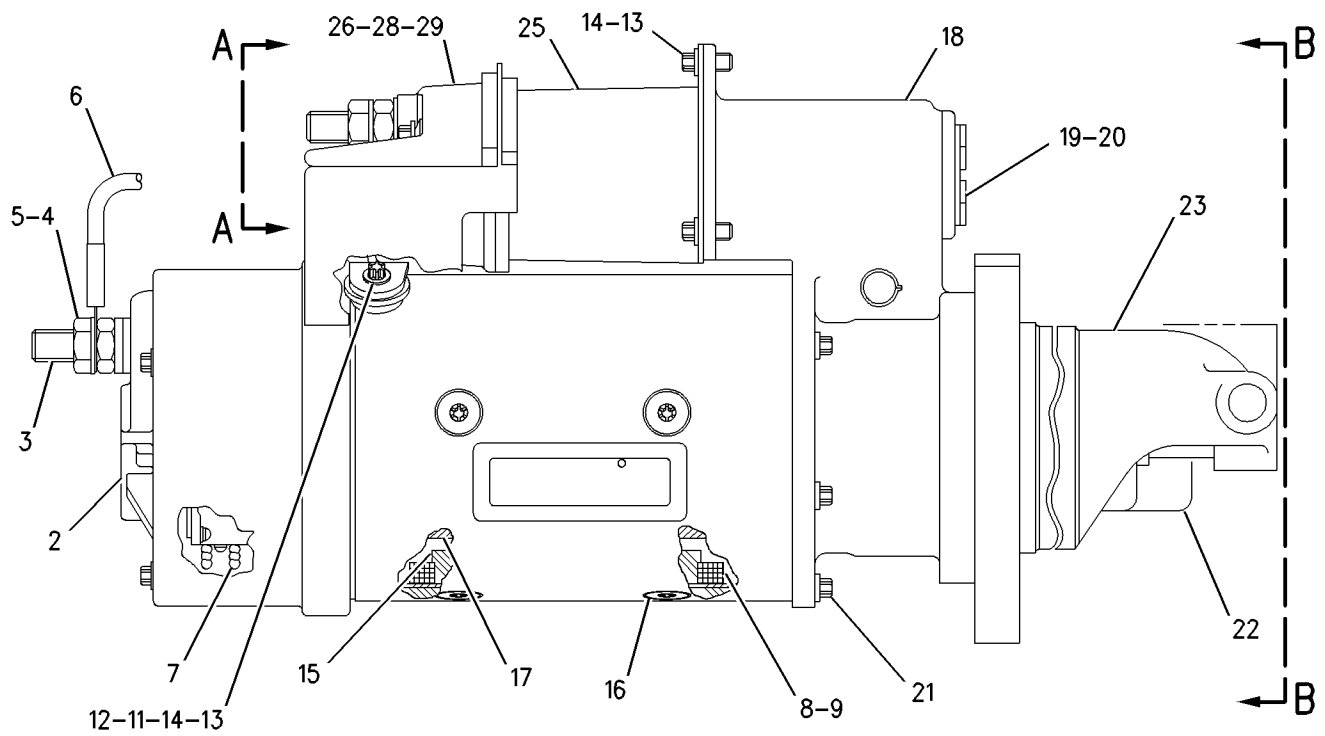
i02225037

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3T-3434</b>	6	PLUG						
	2	1	<b>7T-3279</b>	1	HOUSING AS						
	3	1	<b>8T-8566</b>	1	TERMINAL AS						
	4	1	<b>6V-8188</b>	4	NUT (1/2-13-THD)						
	5	1	<b>7X-0562</b>	4	WASHER-HARD (13.5X19X0.8-MM THK)						
	6	1	<b>3T-3422</b>	1	WIRE AS						
	7	1	<b>7T-3278</b>	1	HOLDER AS-BRUSH (STARTING MOTOR)						
	8	1	<b>7T-3277</b>	1	COIL AS-FIELD						
	9	1	<b>7T-3454</b>	1	INSULATOR						
	10	1	<b>7T-3271</b>	1	CONNECTOR						
	11	1	<b>7T-3451</b>	1	INSULATOR-TERMINAL						
	12	1	<b>8T-8569</b>	1	INSULATOR-TERMINAL						
	13	1	<b>5S-7349</b>	4	BOLT (1/4-20X0.5-IN)						
	14	1	<b>8T-4205</b>	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	15	1	<b>8H-1141</b>	4	SHOE-POLE						
	16	1	<b>3F-0379</b>	8	SCREW-POLE SHOE (3/8-24-THD)						
	17	1	<b>7T-3276</b>	1	ARMATURE AS (24-VOLT)						
	18	1	<b>3E-7775</b>	1	HOUSING AS						
	19	1	<b>4M-1831</b>	1	PLUG-LEVER HOUSING						
	20	1	<b>7L-2894</b>	1	GASKET						
	21	1	<b>036-9823</b>	5	BOLT (1/4-28X1-IN)						
	22	1	<b>6N-3826</b>	1	DRIVE AS-MOTOR						
	23	1	<b>7T-3974</b>	1	HOUSING AS-DRIVE						
	24	1	<b>7X-3373</b>	6	BOLT (5/16-18X0.88-IN)						
	25	1	<b>193-8570</b>	1	SOLENOID AS (24-VOLT) (STARTING MOTOR)						
	26	1	<b>6V-8378</b>	3	NUT (10-32-THD)						
	27	1	<b>8F-1434</b>	2	LOCKWASHER						
	28	1	<b>8T-0328</b>	3	WASHER-HARD (5.5X10X1-MM THK)						
	29	1	<b>9X-4824</b>	1	COVER-STARTING MOTOR						
					AVAILABLE REPAIR KIT(S):						
			<b>7T-3268</b>		KIT-LEVER (STARTING MOTOR) (INCLUDES LEVER ASSEMBLIES, SEALS, NUT, GASKET & RETAINER)						
			<b>7T-3267</b>		KIT-BUSHING (STARTING MOTOR) (INCLUDES BUSHINGS, WICKS, CUPS, SEALS, GASKET, SCREW ASSEMBLIES, WASHERS, SPACER & NUT)						
			<b>8C-3655</b>		KIT-BRUSH (STARTING MOTOR) (INCLUDES BRUSHES, SPRINGS, SCREWS, SCREW ASSEMBLIES, & SEAL)						
			<b>8T-9884</b>		KIT-INSULATOR (STARTING MOTOR) (INCLUDES INSULATORS AND BUSHING)						

# ELECTRICAL AND STARTING SYSTEM

207-1562 STARTING MOTOR GP-ELECTRIC (contd.)

i02225037





# ELECTRICAL AND STARTING SYSTEM

## 237-1962 STARTING MOTOR GP-ELECTRIC\*R 24-VOLT

FIELD REPLACEMENT FOR 6V-0885—PAGE 383

SMCS-1453

i02249643

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7M-0326	1	CONNECTOR						
	2	1	9H-3757	2	WASHER (0.516X1X0.094-IN THK)						
	3	1	1S-7446	3	SCREW-MACHINE (8-32X0.437-IN)						
	4	1	8C-9660	3	WASHER (4.6X7.9X0.8-MM THK)						
	5	1	9S-2544	9	SCREW-HEX HEAD (8-32X11.13-MM)						
	6	1	7M-0327	1	WASHER-THRUST (17.4X25.4X1.6-MM THK)						
	7	1	3T-3418	1	FRAME AS-END						
		1	3T-3423	1	CUP						
		1	3T-3424	1	PLUG-FELT						
		1	9G-4101	1	BUSHING-END						
	8	1	3T-9525	1	PLATE AS-BRUSH						
	8A	2	6T-0371	1	INSULATOR						
	8B	2	5P-6298	12	SCREW-MACHINE (10-32X0.5-IN)						
		1	9F-5599	12	LOCKWASHER						
	8C	2	7F-3525	6	WASHER-BUSHING (0.209X0.39X0.09-MM THK)						
	8D	2	6T-0372	1	PLATE						
	8E	2	3T-4709	3	PLATE						
	8F	2	2L-6679	3	PLATE-INSULATOR						
	8G	2	3T-4710	3	PLATE						
	8H	2	6T-0363	6	HOLDER AS-BRUSH (EACH INCLUDES)						
	8J	2	3T-9494	1	SPRING						
	9	1	7F-3491	2	WASHER (0.516X1X0.094-IN THK)						
	10	1	3T-3422	1	WIRE AS (STARTER)						
	11	1	2J-8163	2	SEAL-O-RING						
	12	1	7X-3373	1	BOLT (5/16-18X0.88-IN)						
	13	1	3T-3434	6	PLUG						
	14	1	5J-5314	5	BOLT (5/16-18X1.5-IN)						
	15	1	3L-3380	1	BUSHING-TERMINAL						
	16	2	036-9821	1	WASHER						
	17	2	4M-1828	1	RETAINER-SPRING						
	18	2	4M-1829	1	BOOT-RUBBER						
	19	2	9M-7609	1	SPRING (SHIFT LEVER)						
	20	2	4M-1827	1	RETAINER-SPRING						
	21	1	8C-3089	1	SEAL-O-RING						
	22	2	4M-1853	1	LEVER AS-SHIFT						
	23	2	5M-3034	1	LOCKNUT (5/16-24-IN THD)						
	24	1	7L-2894	4	GASKET						
	25	1	4M-1831	4	PLUG-LEVER HOUSING						
	26	1	4M-1854	1	SHAFT-LEVER						
	27	1	1H-1023	1	SEAL-O-RING						
	28	1	2D-6392	1	SEAL-O-RING						
	29	1	7T-3974	1	HOUSING AS-DRIVE						
	30	1	6N-3826	1	DRIVE AS-MOTOR						
	31	1,2	2H-3429	2	RING-RETAINING						
	32	1	6V-1322	4	BOLT (1/4-20X0.375-IN)						
	33	1	8T-4205	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	34	1	6N-3279	1	INSULATOR						
	35	1	036-9823	13	BOLT (1/4-28X1-IN)						
	36	1	1M-9971	1	SPACER (0.84X1.72X1.88-IN THK)						
	37	1	1H-2629	3	STRIP-INSULATION						
	38	1	7M-0324	1	COIL AS-FIELD						
	39	1	3F-0379	12	SCREW-POLE SHOE (3/8-24-THD)						
	40	1	7F-3488	6	SHOE-POLE						
	41	1	7M-8651	1	ARMATURE AS						
	42	1	7M-0325	1	INSULATOR (COIL)						

# ELECTRICAL AND STARTING SYSTEM

237-1962 STARTING MOTOR GP-ELECTRIC (contd.)

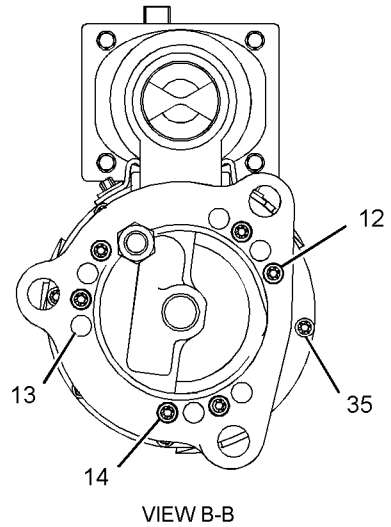
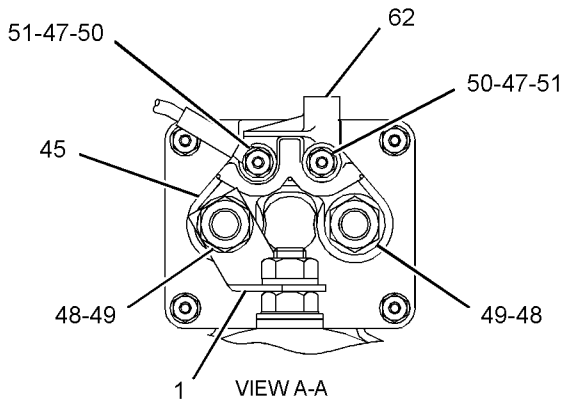
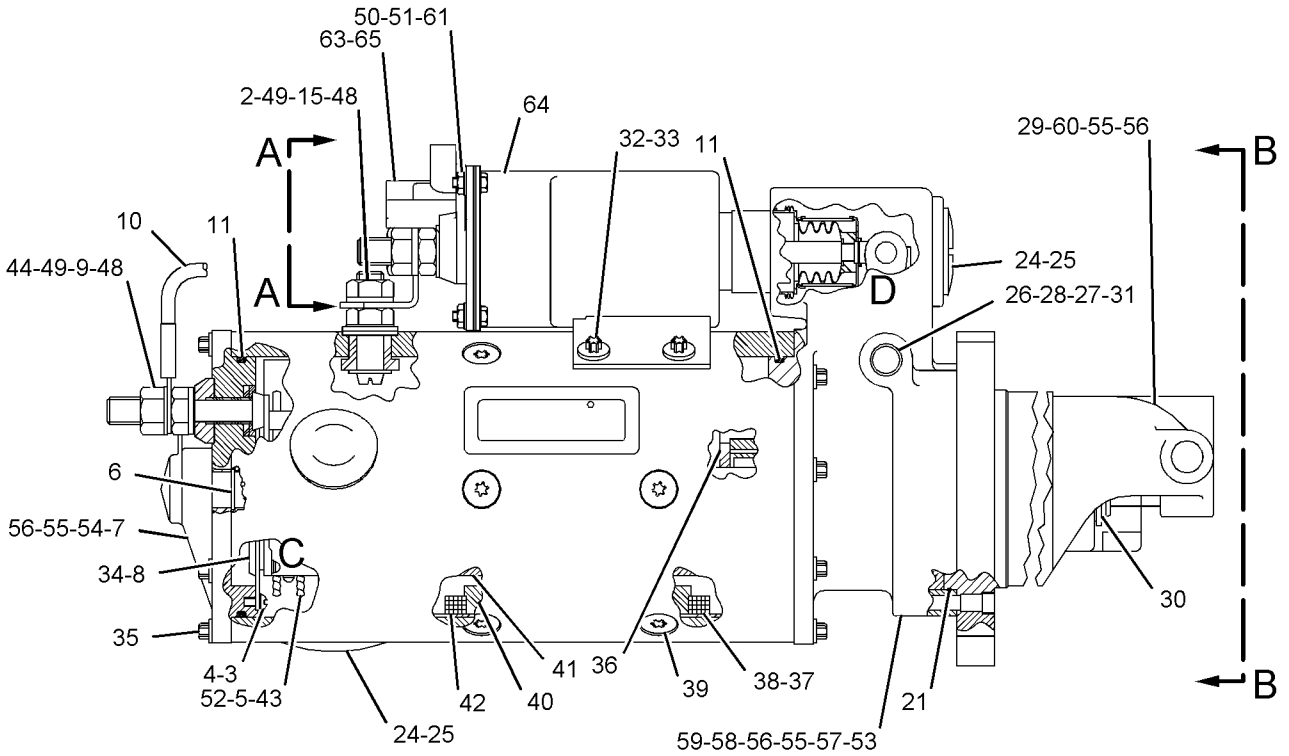
i02249643

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	43	1	<b>3T-9524</b>	6	BRUSH AS						
	44	1	<b>3N-3763</b>	1	KIT-TERMINAL (STARTING MOTOR) (INCLUDES BUSHINGS AND WASHERS)						
	45	1	<b>125-6537</b>	1	INSULATOR (STARTER)						
	46	2	<b>3R-8801</b>	1	CLAMP						
	47	1	<b>8F-1434</b>	2	LOCKWASHER						
	48	1	<b>6V-8188</b>	6	NUT (1/2-13-THD)						
	49	1	<b>7X-0562</b>	6	WASHER-HARD (13.5X19X0.8-MM THK)						
	50	1	<b>4B-2049</b>	6	NUT (10-32-THD)						
	51	1	<b>8T-0328</b>	10	WASHER-HARD (5.5X10X1-MM THK)						
	52	1	<b>3T-9494</b>	6	SPRING						
	53	1	<b>3E-7771</b>	1	HOUSING AS						
	54	1	<b>9G-4101</b>	1	BUSHING-END						
	55	1	<b>3T-3424</b>	3	PLUG-FELT						
	56	1	<b>3T-3423</b>	3	CUP						
	57	1	<b>1M-9968</b>	1	BUSHING						
	58	1	<b>2F-6678</b>	1	SEAL-LIP TYPE						
	59	1	<b>4L-2729</b>	1	WASHER (0.844X1.9X0.188-IN THK)						
	60	1	<b>4M-1896</b>	1	BUSHING-TERMINAL						
	61	1	<b>045-4065</b>	4	SCREW-MACHINE (10-32X0.75-IN)						
	62	1	<b>125-6535</b>	1	COVER-STARTING MOTOR						
	63	1	<b>7T-9123</b>	1	GASKET-PLATE						
	64	1	<b>238-1851</b>	1	SOLENOID AS (24-VOLT, STARTING MOTOR)						
	65	1	<b>125-6536</b>	1	TERMINAL AS						

# ELECTRICAL AND STARTING SYSTEM

237-1962 STARTING MOTOR GP-ELECTRIC (contd.)

i02249643



REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

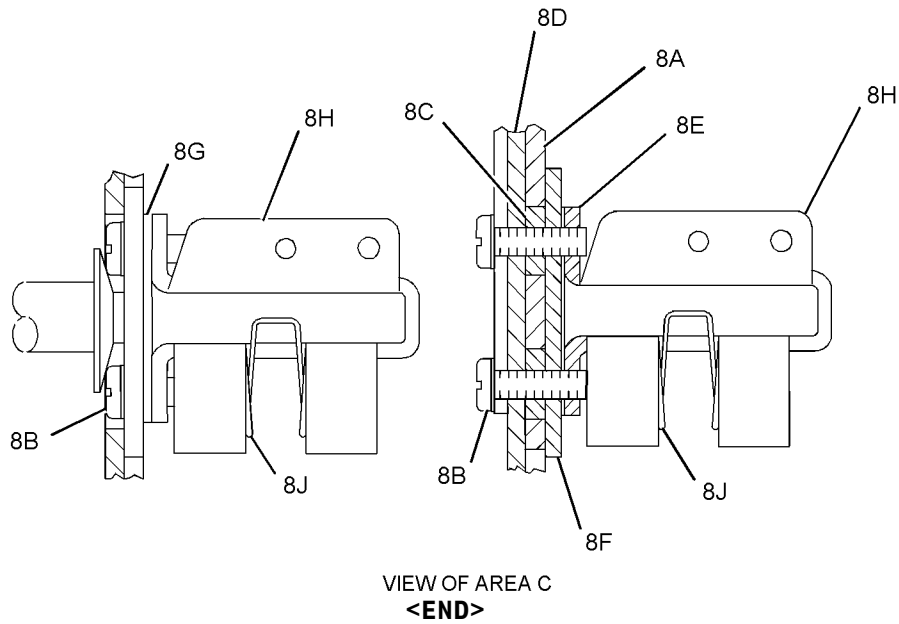
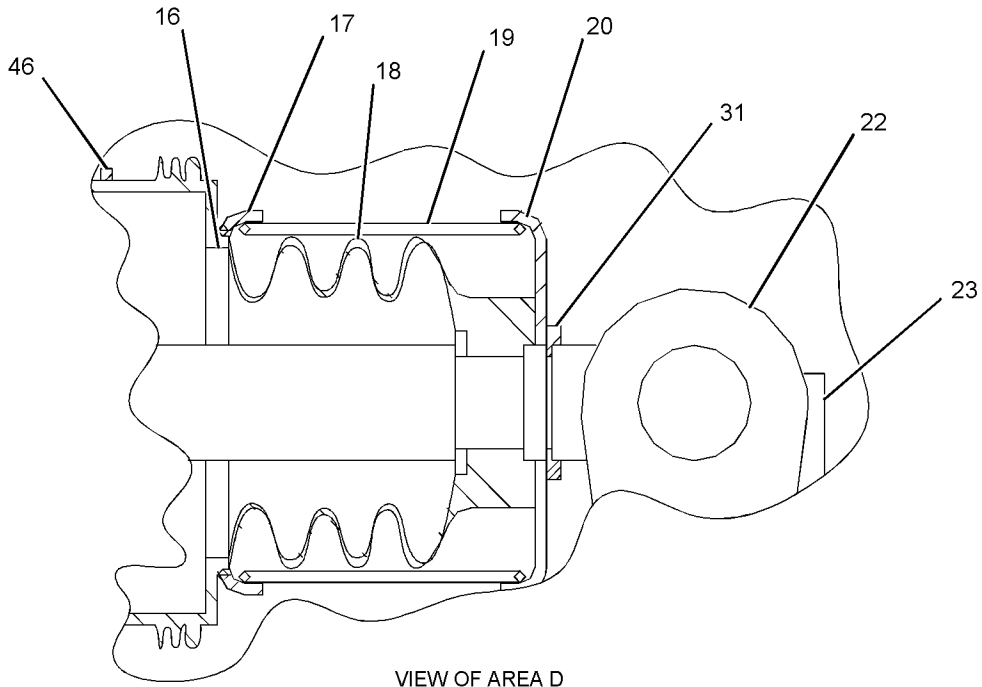
GRAPHIC #1

g01087643

# ELECTRICAL AND STARTING SYSTEM

237-1962 STARTING MOTOR GP-ELECTRIC (contd.)

i02249643



GRAPHIC #2

g01087783

# ELECTRICAL AND STARTING SYSTEM

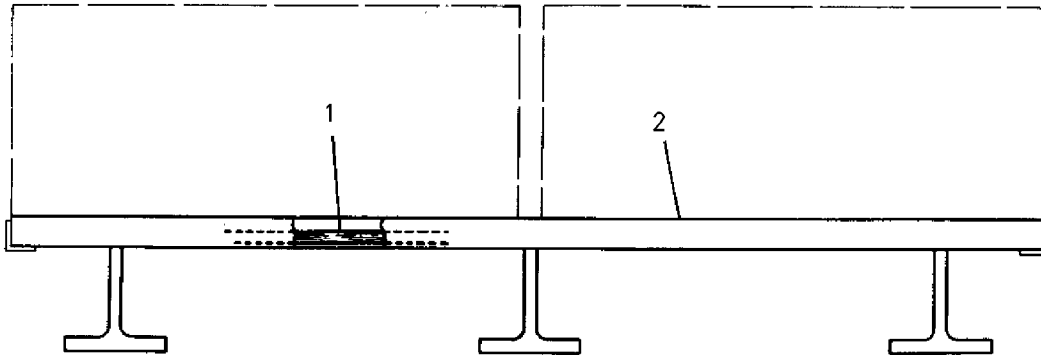
## 3N-7056 SUPPORT GP-BATTERY

FLOOR TYPE, 2-BATTERY  
AN ATTACHMENT

SMCS-7257

i01380951

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3N-7055	1	BOARD						
	2	1	3N-7054	1	SUPPORT AS-BATTERY						



GRAPHIC #1

<END>

g00729953

# ELECTRICAL AND STARTING SYSTEM

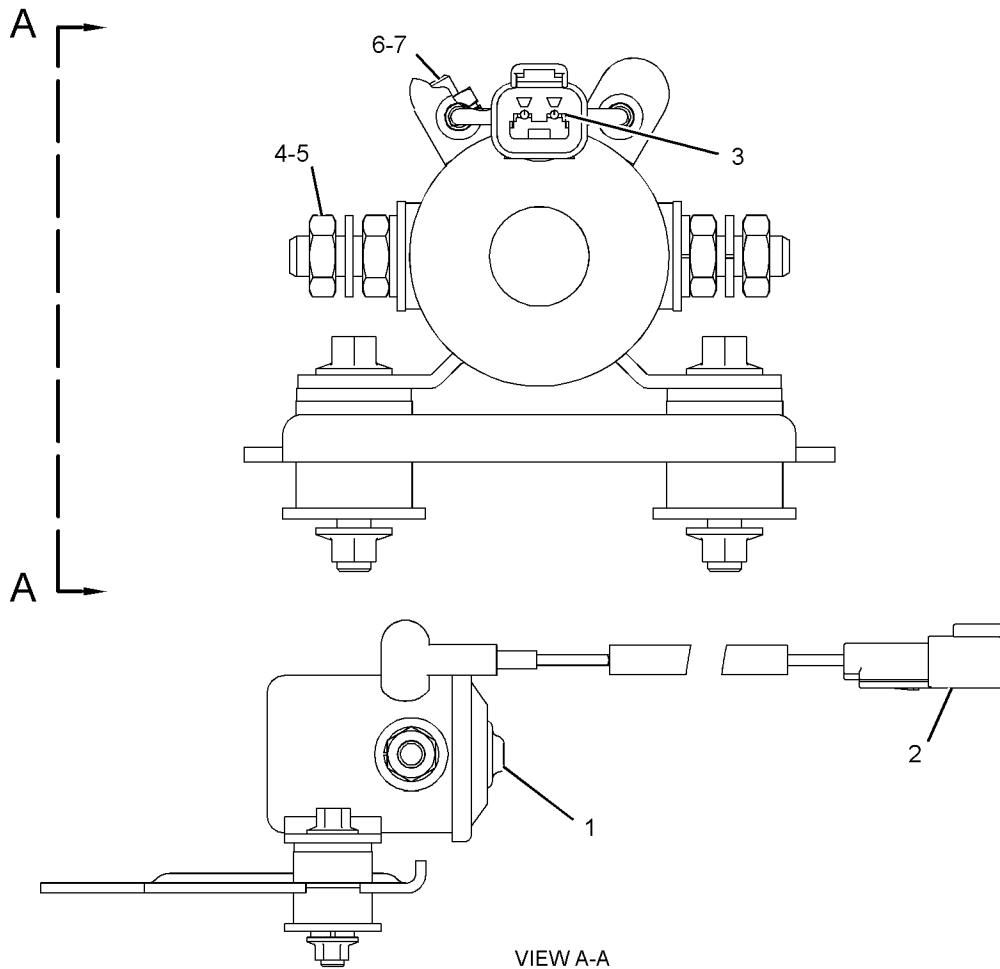
## 241-8372 SWITCH GP-MAGNETIC

24-VOLT  
AN ATTACHMENT

SMCS-7499

i02297018

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	209-5582	1	SWITCH AS-MAGNETIC (24-VOLT)						
	2	1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
	3	1	186-3735	2	PIN-CONNECTOR (16-GA TO 18-GA)						
	4	1	3F-9556	2	LOCKWASHER						
	5	1	6V-8186	2	NUT-FULL (5/16-24-THD)						
	6	1	6V-8378	2	NUT (10-32-THD)						
	7	1	8F-1434	2	LOCKWASHER						



GRAPHIC #1

<END>

g01153175

# ELECTRICAL AND STARTING SYSTEM

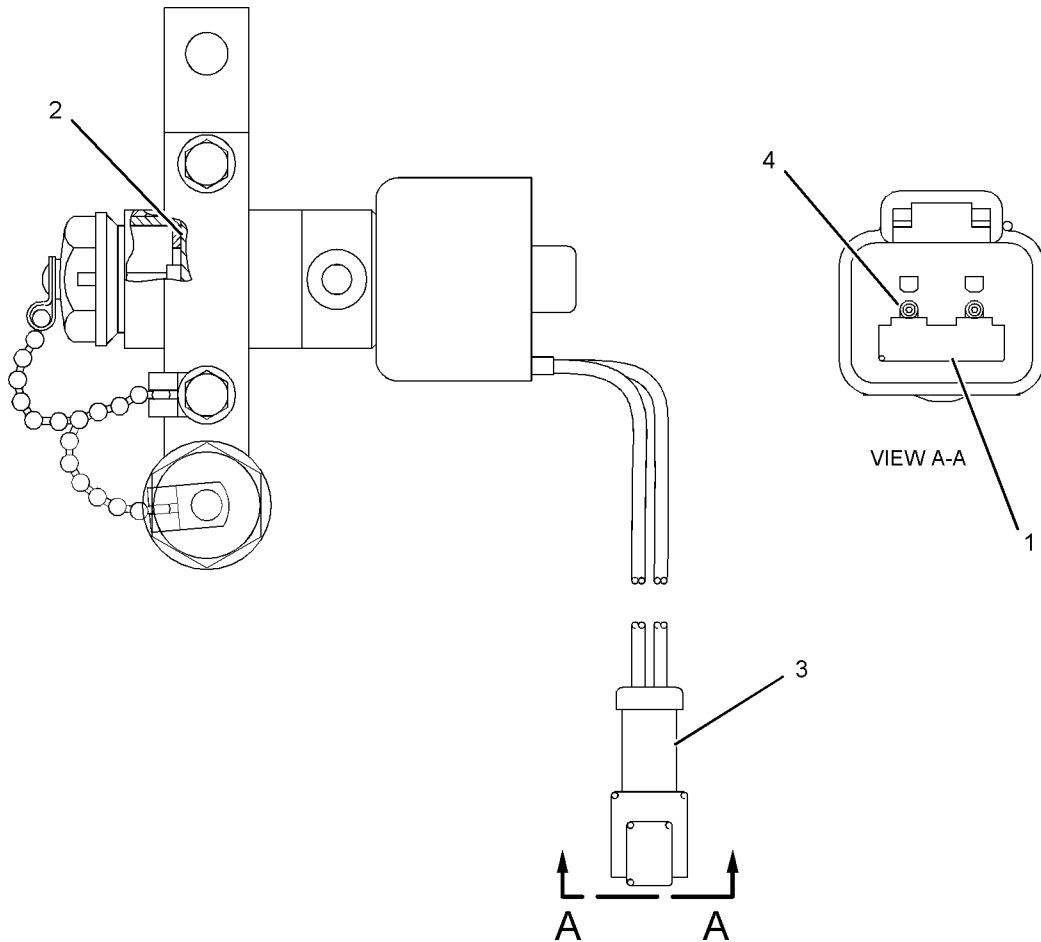
## 239-1134 VALVE GP-ETHER STARTING-24-VOLT

PART OF 260-3933 STARTING AID GP-ETHER  
AN ATTACHMENT

SMCS-1456

i02145416

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3E-3365</b>	1	WEDGE-RECEPTACLE LOCK (2-PIN)						
	2	1	<b>7N-9801</b>	1	GASKET						
	3	1	<b>102-8802</b>	1	KIT-RECEPTACLE (2-PIN)						
					(KIT INCLUDES RECEPTACLE AS & WEDGE)						
	4	1	<b>186-3735</b>	2	PIN-CONNECTOR (16-GA TO 18-GA)						



GRAPHIC #1

<END>

g01053000

# ELECTRICAL AND STARTING SYSTEM

## 260-1844 VALVE GP-ETHER STARTING-12-VOLT

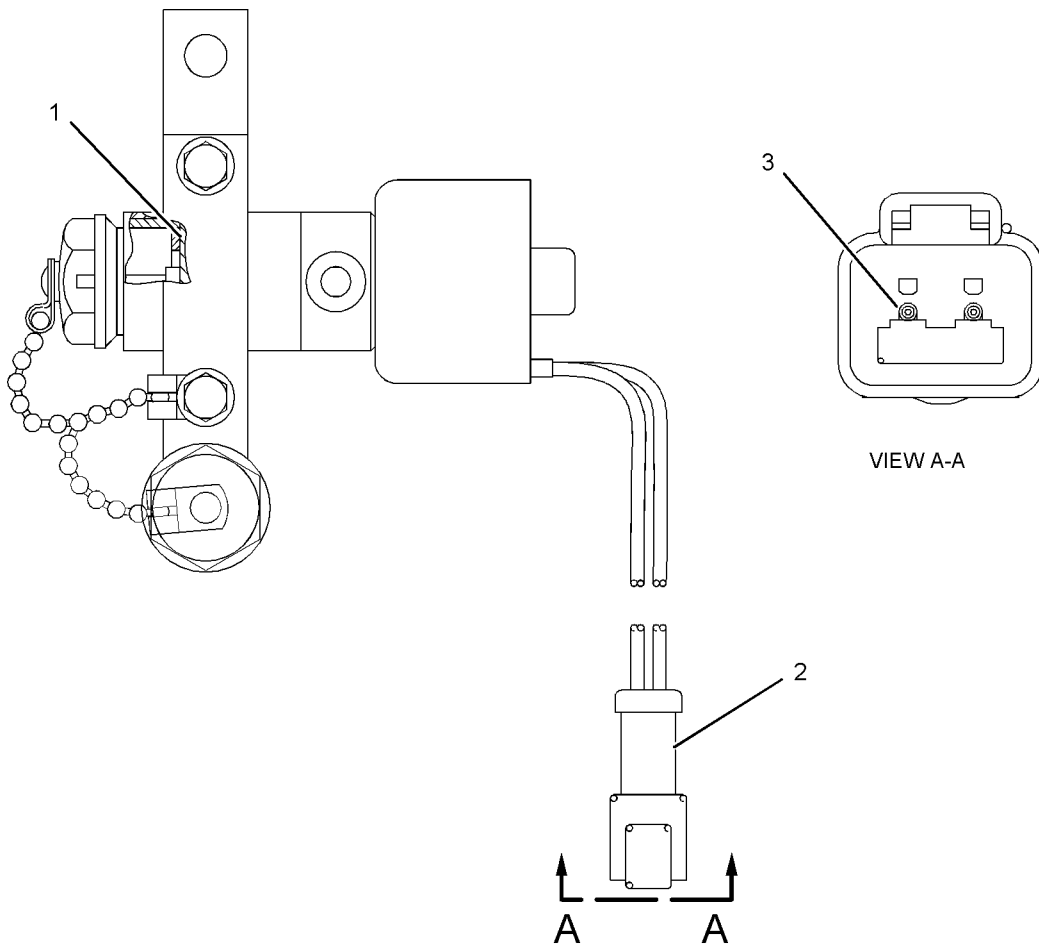
STARTING AID

PART OF 260-3931 STARTING AID GP-ETHER  
AN ATTACHMENT

SMCS-1456

i02265141

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7N-9801	1	GASKET						
	2	1	102-8802	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
	3	1	186-3735	2	PIN-CONNECTOR (16-GA TO 18-GA)						



GRAPHIC #1

<END>

g01136571



# ELECTRICAL AND STARTING SYSTEM

## 219-7462 WIRING GP-ELECTRONIC CONTROL

ALSO AN ATTACHMENT

SMCS-1408, 1900

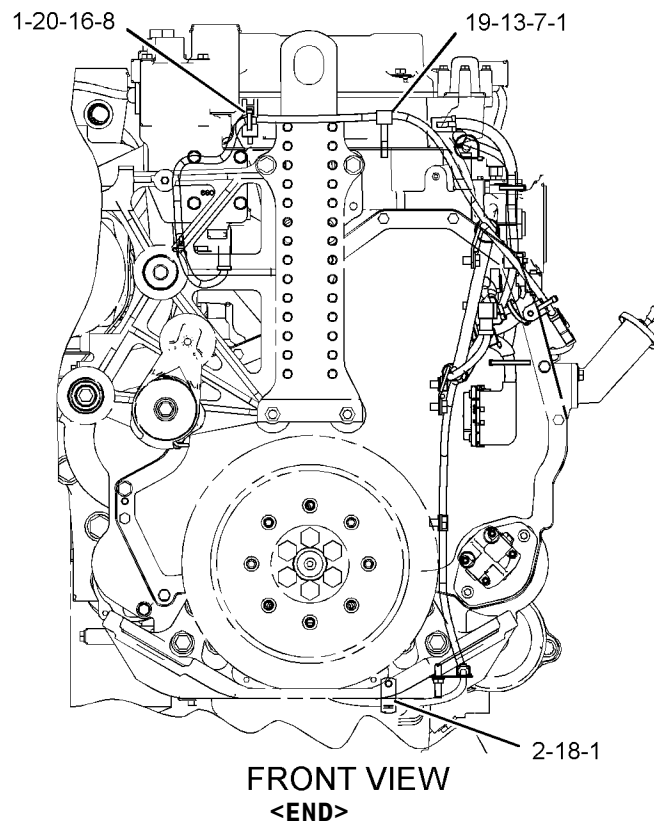
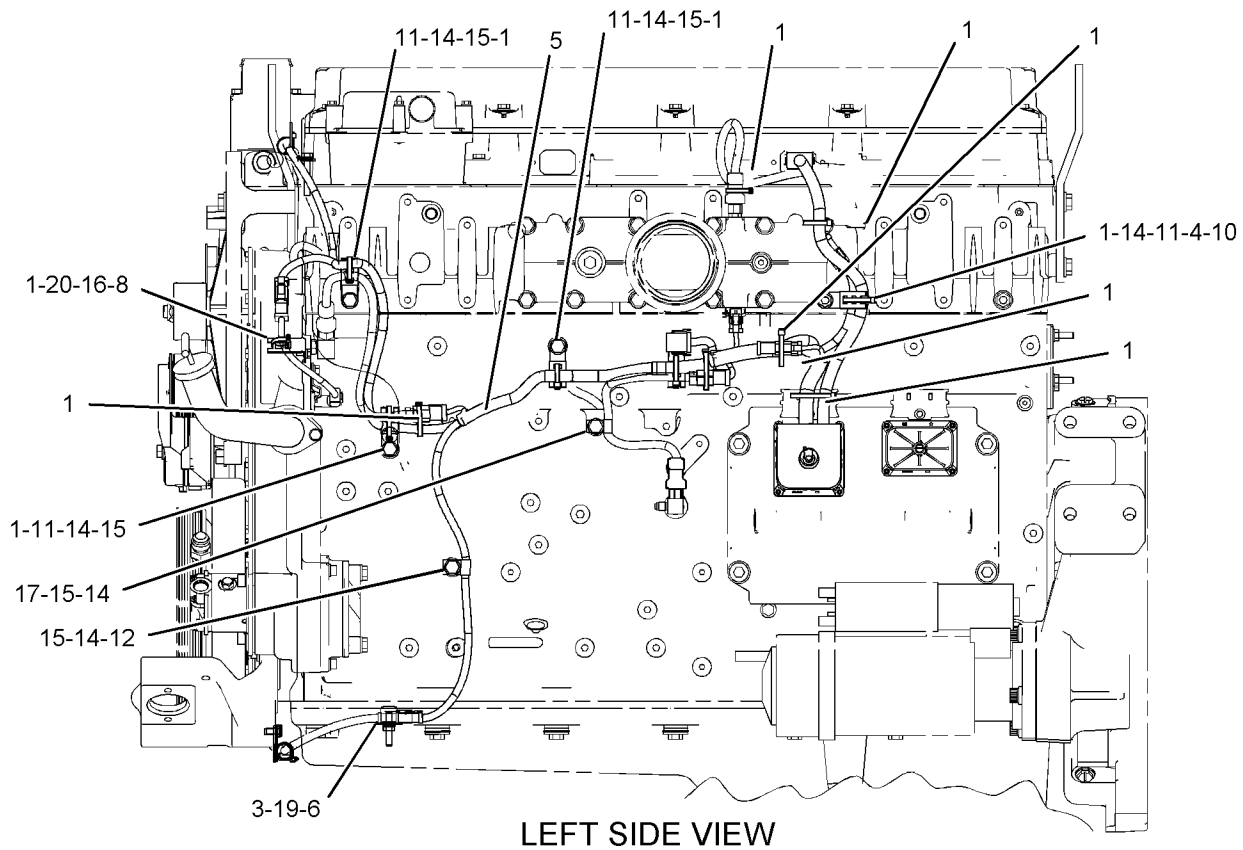
i02171967

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3S-2093</b>	15	STRAP-CABLE						
	2	1	<b>4P-5918</b>	1	CLIP						
M	3	1	<b>9X-2097</b>	1	STUD (M8X1.25-THD)						
	4	1	<b>127-5447</b>	1	SPACER (10.5X20X12-MM THK)						
	5	1	<b>219-7461</b>	1	HARNESS AS (ELECTRONIC CONTROL MODULE)						
		1	<b>102-8802</b>	1	KIT-RECEPTACLE (2-PIN) (INCLUDES RECEPTACLE AS AND WEDGE)						
		1	<b>102-8803</b>	2	KIT-RECEPTACLE (3-PIN) (EACH INCLUDES RECEPTACLE AS AND WEDGE)						
		1	<b>8T-8737</b>	87	PLUG-SEAL						
		1	<b>155-2255</b>	1	KIT-CONNECTING PLUG (12-PIN) (INCLUDES PLUG AS AND WEDGE)						
		1	<b>155-2265</b>	1	KIT-CONNECTING PLUG (8-PIN) (INCLUDES PLUG AS AND WEDGE)						
		1	<b>155-2260</b>	1	KIT-CONNECTING PLUG (3-PIN) (INCLUDES PLUG AS AND WEDGE)						
		1	<b>155-2270</b>	5	KIT-CONNECTING PLUG (2-PIN) (EACH INCLUDES PLUG AS AND WEDGE)						
		1	<b>227-4002</b>	1	PLUG AS-CONNECTOR (108-PIN)						
	6	1	<b>130-5300</b>	1	CLIP						
	7	1	<b>132-5789</b>	1	CLIP						
	8	1	<b>156-6175</b>	2	CLIP						
M	10	1	<b>2Y-5829</b>	1	NUT (M10X1.5-THD)						
	11	1	<b>4P-7581</b>	5	CLIP						
	12	1	<b>5P-9085</b>	1	CLIP						
M	13	1	<b>6V-3918</b>	1	BOLT (M8X1.25X50-MM)						
	14	1	<b>6V-5839</b>	7	WASHER (11X21X2.5-MM THK)						
M	15	1	<b>6V-8212</b>	6	BOLT (M10X1.5X16-MM)						
M	16	1	<b>6V-8836</b>	2	BOLT (M6X1X14-MM)						
	17	1	<b>8M-2772</b>	1	CLIP						
M	18	1	<b>8T-0642</b>	1	BOLT (M8X1.25X14-MM)						
	19	1	<b>9M-1974</b>	2	WASHER-HARD (8.8X16X2-MM THK)						
	20	1	<b>9X-8267</b>	2	WASHER (6.6X12X2-MM THK)						
M-METRIC PART											

# ELECTRICAL AND STARTING SYSTEM

219-7462 WIRING GP-ELECTRONIC CONTROL (contd.)

i02171967



GRAPHIC #1

g01101825

# ELECTRICAL AND STARTING SYSTEM

## 264-2357 WIRING GP-ELECTRONIC CONTROL

FOR USE WITH INDUSTRIAL ENGINES. CANNOT BE USED WITH GAUGE PANEL KEY SWITCH  
AN ATTACHMENT

SMCS-1408, 1900

i02301125

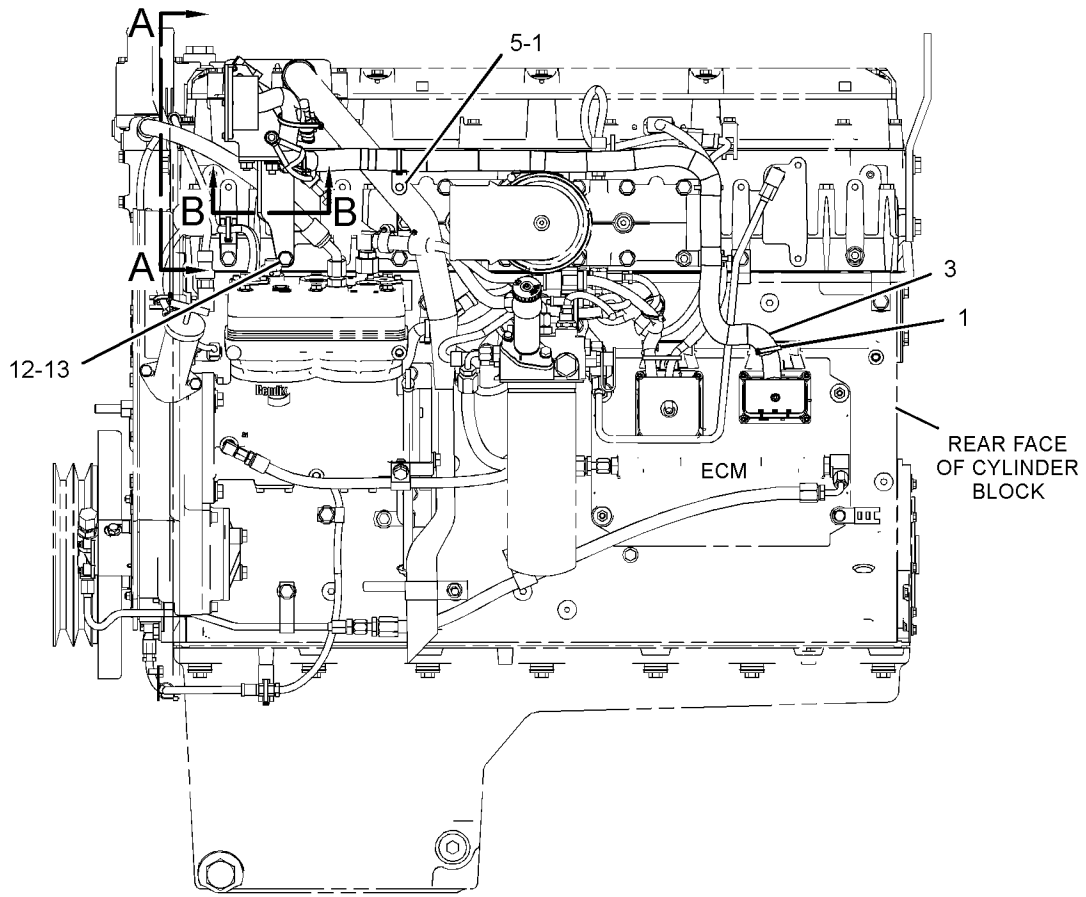
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3S-2093	3	STRAP-CABLE						
	2	1	131-5526	1	BRACKET AS						
		1	7C-2644	1	CLIP						
		1	8C-3334	2	RIVET-TUBULAR						
	3	1	264-2354	1	HARNESS AS-CONTROL (ELECTRONIC CONTROL MODULE)						
		1	3S-2093	1	STRAP-CABLE						
D		1	5P-6001		TUBE (0.2-M)						
		1	6I-4348	1	BOOT (40-PIN)						
		1	8C-6354	1	CAP-RECEPTACLE (DUST)						
		1	8T-8736	1	RECEPTACLE-CONNECTOR (9-PIN)						
		1	9W-0844	7	SOCKET-CONNECTOR						
		1	9W-0852	6	PIN-CONNECTOR (14-GA)						
		1	9X-1343	1	RECEPTACLE AS (40-PIN)						
E		1	125-7874		TUBE-HEAT SHRINK (5-CM)						
E		1	125-7875		TUBE-HEAT SHRINK (25-CM)						
E		1	125-7876		TUBE-HEAT SHRINK (20-CM)						
		1	133-0967	2	CONNECTOR-PIN						
		1	133-0969	2	CONNECTOR-SOCKET						
		1	134-2540	1	RECEPTACLE AS (3-PIN)						
E		1	153-2707		CABLE-ELECTRICAL (19-GA) (208-CM)						
		1	160-7689	1	PLUG AS-CONNECTOR (70-PIN)						
		1	159-9322	1	SEAL-O-RING						
		1	174-0503	1	KIT-CONNECTING PLUG (3-PIN) (INCLUDES PLUG AS AND WEDGE)						
		1	180-9340	37	SOCKET-CONNECTOR (EACH INCLUDES)						
		1	194-5226	1	WIRE AS-HARNESS (16-GA TO 18-GA) -OR-						
		1	194-5227	1	WIRE AS-SENSOR (14-GA WIRE)						
		1	237-0336	1	CONNECTOR						
	4	1	267-3478	1	BRACKET AS						
	5	1	132-5789	1	CLIP						
M	6	1	2Y-5829	2	NUT (M10X1.5-THD)						
	7	1	4B-5324	4	WASHER (3.9X9.6X1.2-MM THK)						
	8	1	4P-7581	1	CLIP						
	9	1	5M-2894	3	WASHER-HARD (10.2X18.5X2.5-MM THK)						
M	10	1	6V-1820	1	BOLT (M10X1.5X30-MM)						
M	11	1	6V-4248	1	BOLT (M10X1.5X25-MM)						
	12	1	6V-5839	6	WASHER (11X21X2.5-MM THK)						
M	13	1	6V-6317	2	BOLT (M10X1.5X20-MM)						
	14	1	9S-8752	2	NUT-FULL (3/8-16-THD)						
	15	1	9X-6258	4	SCREW-MACHINE (6-32X0.5-IN)						

D-ORDER BY THE METER  
E-ORDER BY THE CENTIMETER  
M-METRIC PART

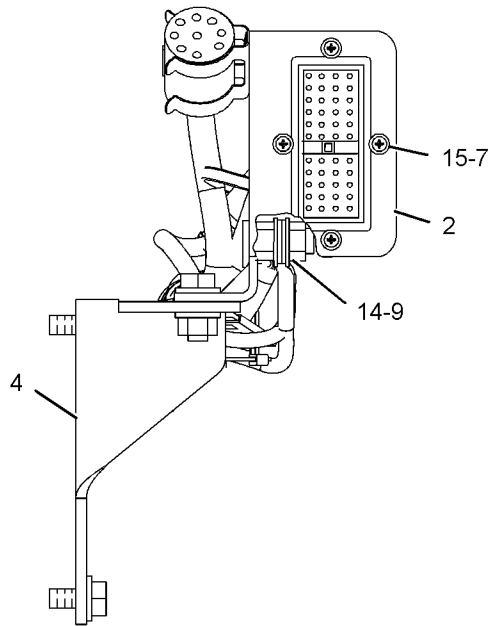
# ELECTRICAL AND STARTING SYSTEM

264-2357 WIRING GP-ELECTRONIC CONTROL (contd.)

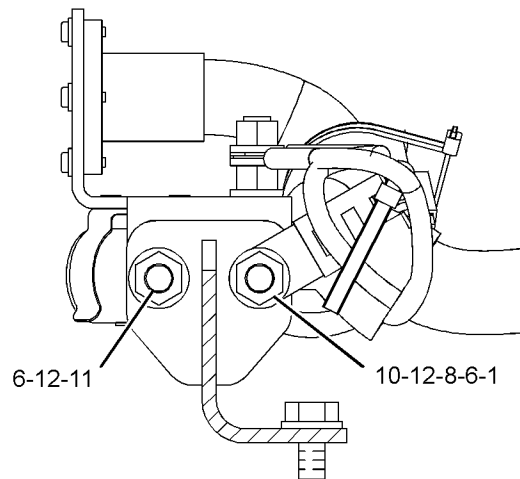
i02301125



LEFT SIDE VIEW



VIEW A-A



SECTION B-B

GRAPHIC #1

<END>

g01153193

# ELECTRICAL AND STARTING SYSTEM

## 263-7214 WIRING GP-ENGINE

AN ATTACHMENT

SMCS-1000, 1408

i02234825

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	232-4609	1	CABLE AS						
	1S-7251	1	TERMINAL-RING (FOR 1/2-IN BOLT)						
BD	5P-5621		WIRE (12-GA)						
	8N-0869	1	COVER-TERMINAL (RED)						
	8N-1541	1	SOCKET-CONNECTION						
	8N-1725	1	COVER-TERMINAL (RED)						
	8L-8413	1	STRAP-CABLE						
	129-7163	1	PLUG AS-CONNECTOR (1-PIN)						
E	159-8049		CABLE (00-GA, RED) (189-CM)						
	235-8105	1	TERMINAL AS-BATTERY						
	1M-6119	1	BOLT (5/16-18X1.375-IN)						
	1M-6120	1	NUT (5/16-18-THD)						
	232-4610	1	CABLE AS						
	1S-7251	1	TERMINAL-RING (FOR 1/2-IN BOLT)						
BD	5P-5621		WIRE (12-GA)						
	7N-5274	1	COVER-TERMINAL (BLACK)						
	8L-8413	1	STRAP-CABLE						
	8N-1541	1	SOCKET-CONNECTION						
	9G-8909	1	COVER-TERMINAL (BLACK)						
	129-7163	1	PLUG AS-CONNECTOR (1-PIN)						
E	159-8050		CABLE (00-GA, BLACK) (189-CM)						
	235-8106	1	TERMINAL AS-BATTERY						
	1M-6119	1	BOLT (5/16-18X1.375-IN)						
	1M-6120	1	NUT (5/16-18-THD)						
	235-5264	1	HARNESS AS-WIRING (BATTERY)						
	102-8802	1	KIT-RECEPTACLE (2-PIN)						
			(INCLUDES RECEPTACLE AS AND WEDGE)						
	3E-3365	1	WEDGE-RECEPTACLE LOCK (2-PIN)						
	8N-1540	2	PIN-CONNECTOR						
	9W-0852	2	PIN-CONNECTOR (14-GA)						
	129-7164	2	RECEPTACLE AS (1-PIN)						
B-USE AS REQUIRED D-ORDER BY THE METER E-ORDER BY THE CENTIMETER									
<b>&lt;END&gt;</b>									

# ELECTRICAL AND STARTING SYSTEM

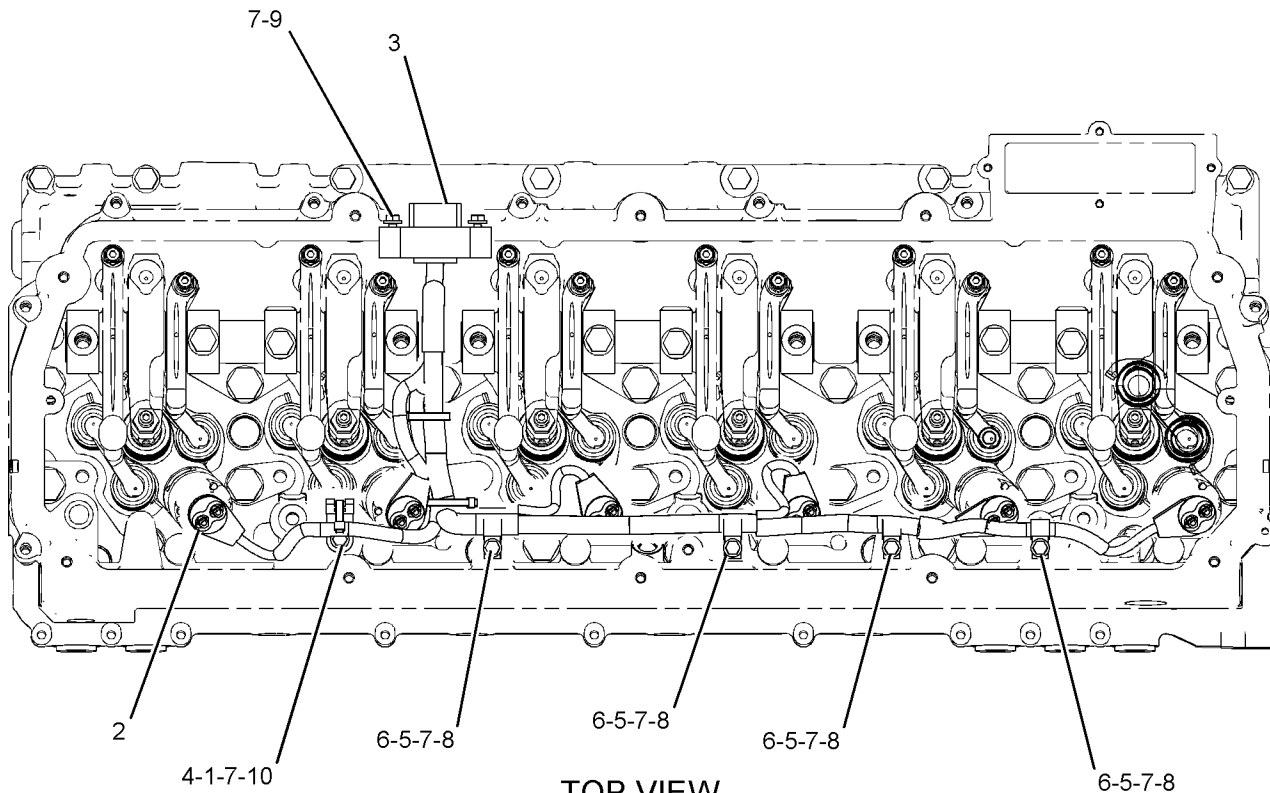
## 230-0961 WIRING GP-UNIT INJECTOR

SMCS-1290, 1408, 1900

i02230646

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3S-2093</b>	1	STRAP-CABLE						
	2	1	<b>7E-6508</b>	6	CAP AS						
	3	1	<b>230-0960</b>	1	HARNESS AS-ENGINE (UNIT INJECTOR)						
		1	<b>3E-7990</b>	1	RECEPTACLE AS (12-PIN)						
		1	<b>103-8133</b>	1	KIT-RECEPTACLE (12-PIN)						
					(INCLUDES RECEPTACLE AND WEDGE)						
		1	<b>3S-2093</b>	2	STRAP-CABLE						
		1	<b>8T-8737</b>	3	PLUG-SEAL						
4		1	<b>237-9960</b>	1	CLIP						
5		1	<b>117-1802</b>	4	DOWEL-HOLLOW						
6		1	<b>2V-3216</b>	4	CLIP						
7		1	<b>5P-0537</b>	7	WASHER-HARD (7.2X14.5X2-MM THK)						
M	8	1	<b>6V-7728</b>	4	BOLT (M6X1X45-MM)						
M	9	1	<b>6V-8214</b>	2	BOLT (M6X1X20-MM)						
M	10	1	<b>6V-8836</b>	1	BOLT (M6X1X14-MM)						

M-METRIC PART



GRAPHIC #1

TOP VIEW  
<END>

g01064811

# ELECTRICAL AND STARTING SYSTEM

## 257-4183 WIRING GP-UNIT INJECTOR

FOR USE AS SERVICE REPAIR FOR INJECTOR HARNESSSES WITH THE 7E-6513 CONNECTOR  
FIELD INSTALLATION

SMCS-1290, 1408, 1900

i02231604

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
			(NO SERVICED PARTS)						
			<END>						

# OPERATOR STATION

## 3N-9012 AMMETER AS

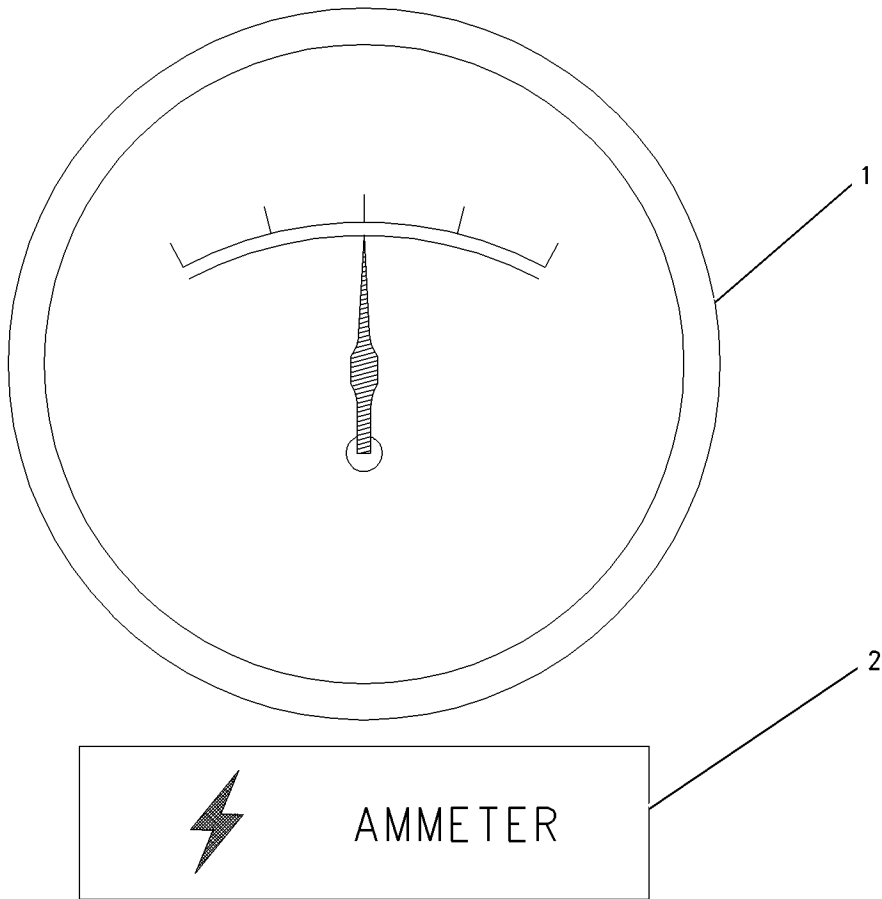
60-AMPERE

FOR USE WITH PREMIUM INSTRUMENT PANEL  
AN ATTACHMENT

SMCS-7467

i02183801

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	3N-5992	1	AMMETER AS (60-AMPERE)						
		1	6V-8378	5	NUT (10-32-THD)						
		1	8F-1434	3	LOCKWASHER						
	2	1	3N-5990	1	FILM-GAUGE IDENTIFICATION (AMMETER)						



GRAPHIC #1

<END>

g00781783



# OPERATOR STATION

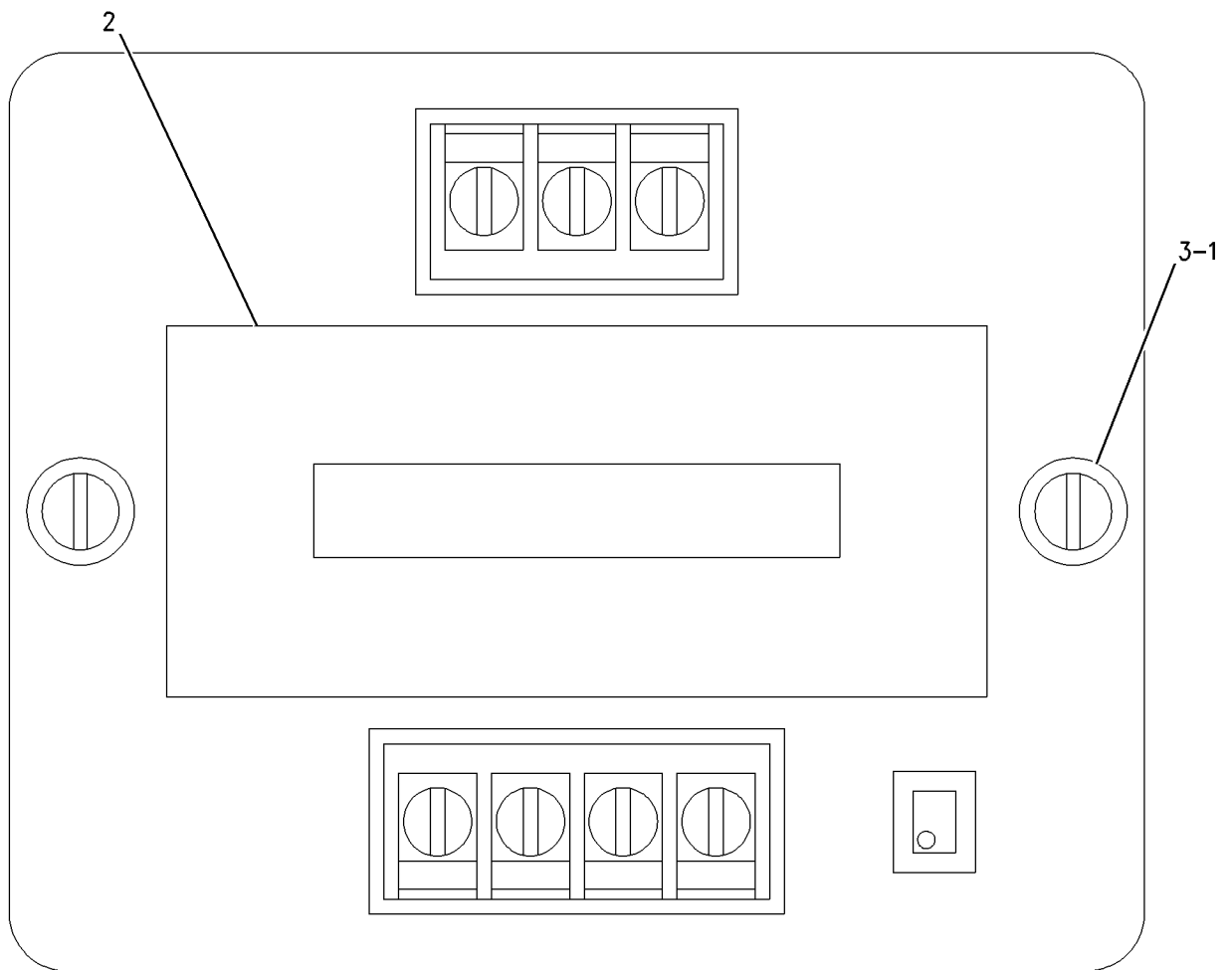
## 9X-9591 CONVERTER GP-ELECTRICAL

PULSE WIDTH MODULATED  
AN ATTACHMENT

SMCS-1421

i02183032

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4B-4863	2	WASHER (4.7X11X1.2-MM THK)						
	2	1	9X-9857	1	FILM-IDENTIFICATION (ELECTRICAL CONVERTER)						
	3	1	3K-8106	2	SCREW-MACHINE (8-32X1-IN)						



GRAPHIC #1

<END>

g00774430

# OPERATOR STATION

## 147-1231 GAUGE GP-FUEL LEVEL

PROVIDES WATER INDICATOR KIT  
AN ATTACHMENT

SMCS-7481

i01939744

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
(NO SERVICED PARTS)									
<END>									

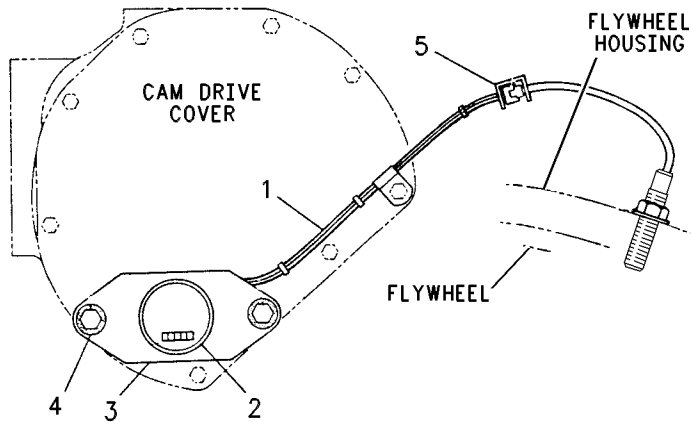
# OPERATOR STATION

## 162-9267 METER GP-SERVICE-HOURS AN ATTACHMENT

SMCS-7478

i01871369

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4W-3474	1	WIRE AS-METER						
	2	1	6T-7337	1	METER GP-SERVICE						
		1	8T-0701	1	FILM-SERVICE METER						
	3	1	1N-3755	1	BRACKET AS						
	4	1	6N-8744	2	MOUNT						
	5	1	9G-9151	1	CLIP						



GRAPHIC #1

<END>

g00537287

# OPERATOR STATION

## 243-3820 MODULE GP-DISPLAY-MESSENGER AN ATTACHMENT

SMCS-7490

i02276394

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	239-5025	1	CONTROL GP-UNPROGRAMMED (MESSENGER)						362
Y-SEPARATE ILLUSTRATION									

<END>

# OPERATOR STATION

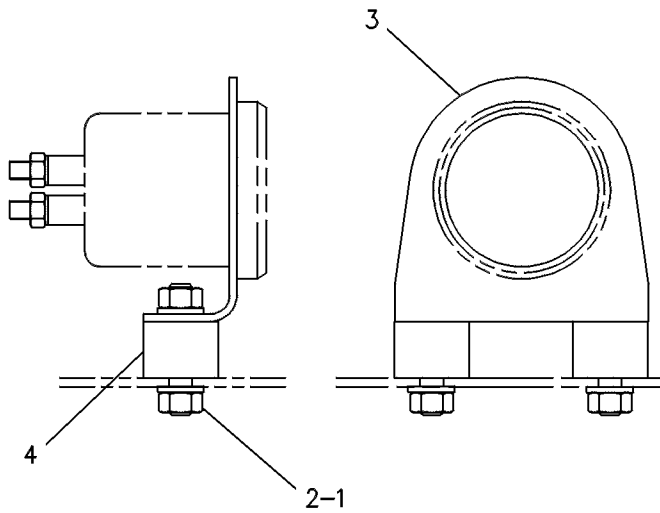
## 110-8310 MOUNTING GP-INSTRUMENT

RH  
AN ATTACHMENT

SMCS-7451

i00639068

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9M-1974	4	WASHER-HARD (2MM THK)						
	2	1	5S-0003	4	NUT-FULL (5/16-18 THD)						
	3	1	6L-2845	1	BRACKET-MOUNTING						
	4	1	7C-0100	2	MOUNT-SHOCK						



GRAPHIC #1

<END>

g00242080

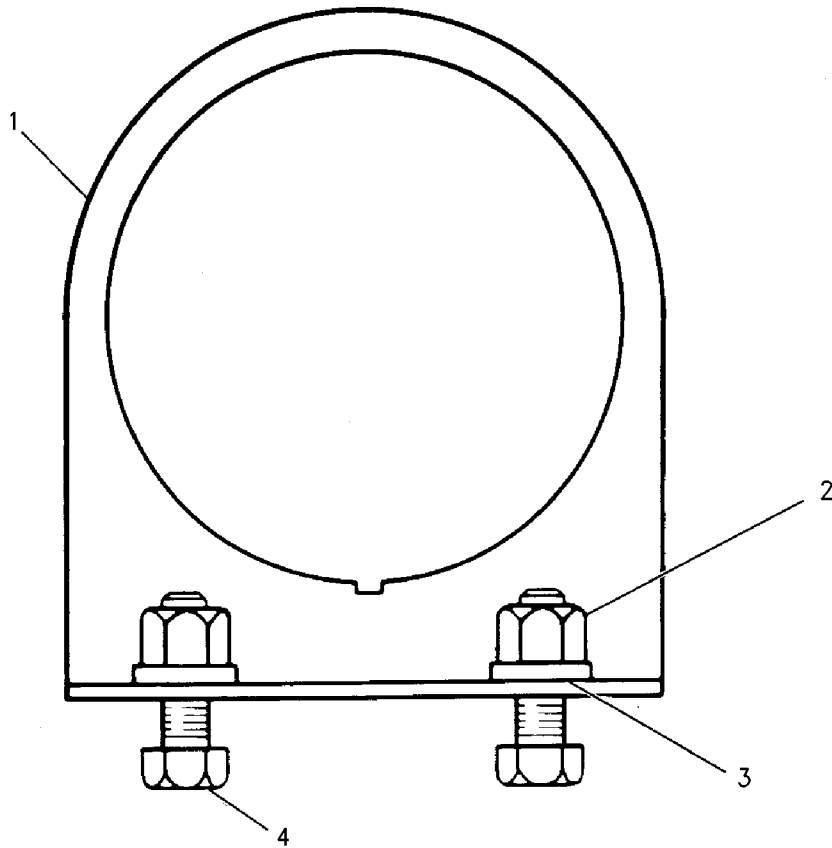
# OPERATOR STATION

## 7L-4535 MOUNTING GP-TACHOMETER FOR USE WITH ENGINE MOUNTED MECHANICAL TACHOMETERS AN ATTACHMENT

SMCS-7462

i01791177

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7L-4536	1	BRACKET-TACHOMETER						
	2	1	6V-8189	2	NUT (5/16-18 THD)						
	3	1	8T-4224	2	WASHER-HARD (8.8X16X2MM THK)						
	4	1	5K-0906	2	BOLT (5/16-18X0.63 IN)						



GRAPHIC #1

<END>

g00917518

# OPERATOR STATION

## 243-3029 PANEL GP-INSTRUMENT AN ATTACHMENT

SMCS-7451

i02125076

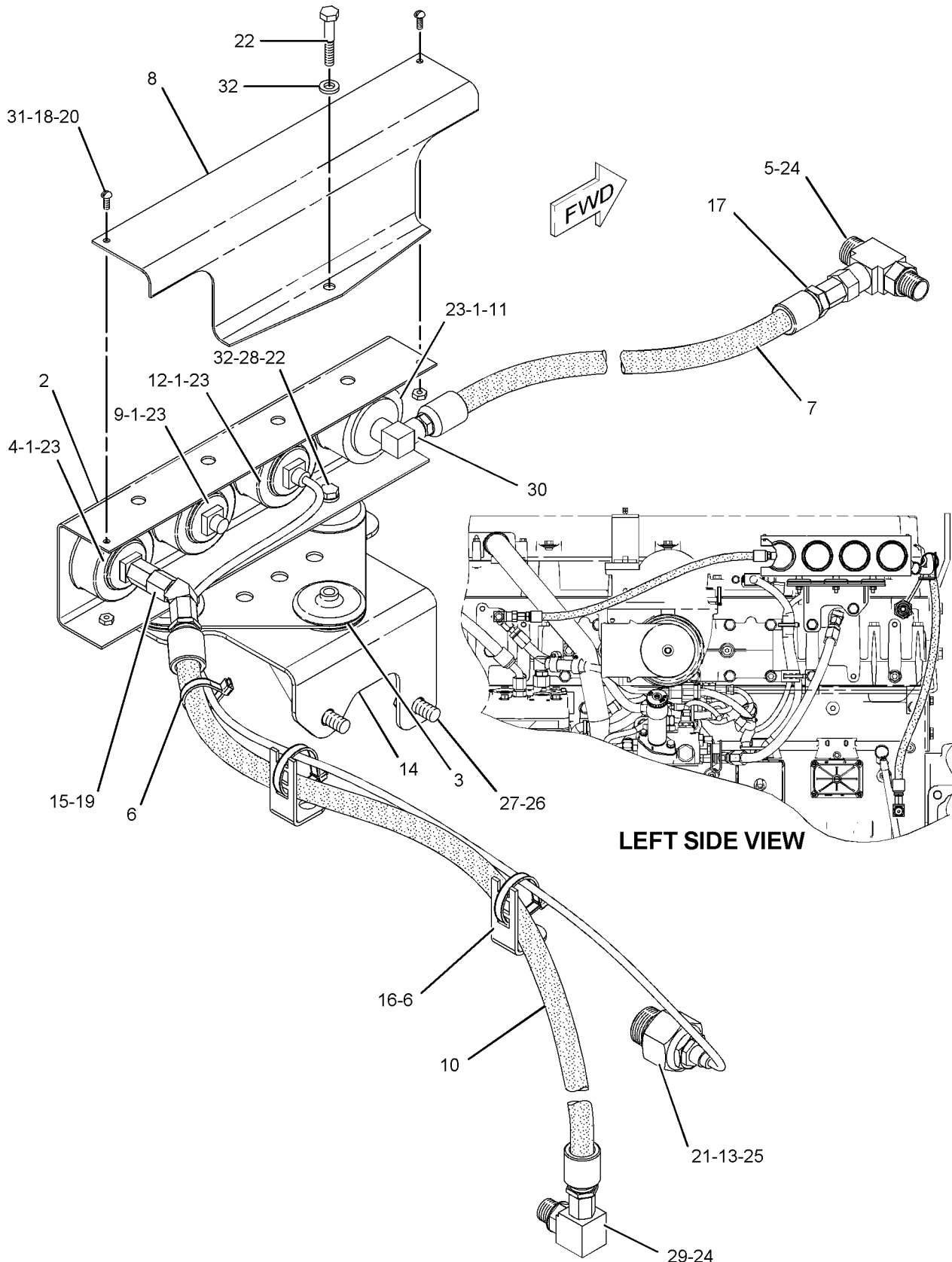
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2N-0794	4	RETAINER						
	2	1	2N-0816	1	PANEL-INSTRUMENT						
	3	1	2N-5848	1	BASE AS						
	4	1	2W-3681	1	INDICATOR AS (ENGINE OIL PRESSURE)						
	5	1	3E-7410	1	TEE-O-RING						
	6	1	3S-2093	3	STRAP-CABLE						
I	7	1	6N-3170	1	HOSE AS						
	8	1	6N-3171	1	COVER-PANEL						
Y	9	1	104-5687	1	VOLTMETER GP (12-VOLT)						440
I	10	1	148-0202	1	HOSE AS						
	11	1	163-7833	1	INDICATOR AS (FUEL PRESSURE)						
	12	1	200-5231	1	GAUGE GP-COOLANT TEMPERATURE						
		1	4B-2049	2	NUT (10-32-THD)						
		1	8F-1434	2	LOCKWASHER						
	13	1	214-3613	1	ADAPTER						
	14	1	243-3030	1	BRACKET AS						
	15	1	030-7961	1	ELBOW						
	16	1	132-5789	2	CLIP						
	17	1	2P-1314	1	CONNECTOR						
	18	1	4B-2041	2	NUT (6-32-THD)						
	19	1	5D-9231	1	CONNECTOR						
	20	1	5S-7348	2	SCREW-MACHINE (6-32X0.375-IN)						
	21	1	6L-9952	1	ADAPTER						
M	22	1	6V-2315	3	BOLT (M6X1X35-MM)						
	23	1	6V-3507	4	SEAL-RECTANGULAR						
	24	1	6V-5049	3	SEAL-O-RING						
	25	1	6V-5063	1	SEAL-O-RING						
	26	1	6V-5839	2	WASHER (11X21X2.5-MM THK)						
M	27	1	6V-6317	2	BOLT (M10X1.5X20-MM)						
M	28	1	6V-8225	3	NUT (M6X1-THD)						
	29	1	7J-4026	1	ELBOW						
	30	1	8B-4884	1	ELBOW						
	31	1	9B-1117	2	LOCKWASHER						
	32	1	9X-8267	6	WASHER (6.6X12X2-MM THK)						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# OPERATOR STATION

243-3029 PANEL GP-INSTRUMENT (contd.)

i02125076



LEFT SIDE VIEW

GRAPHIC #1

<END>

g01082139



# OPERATOR STATION

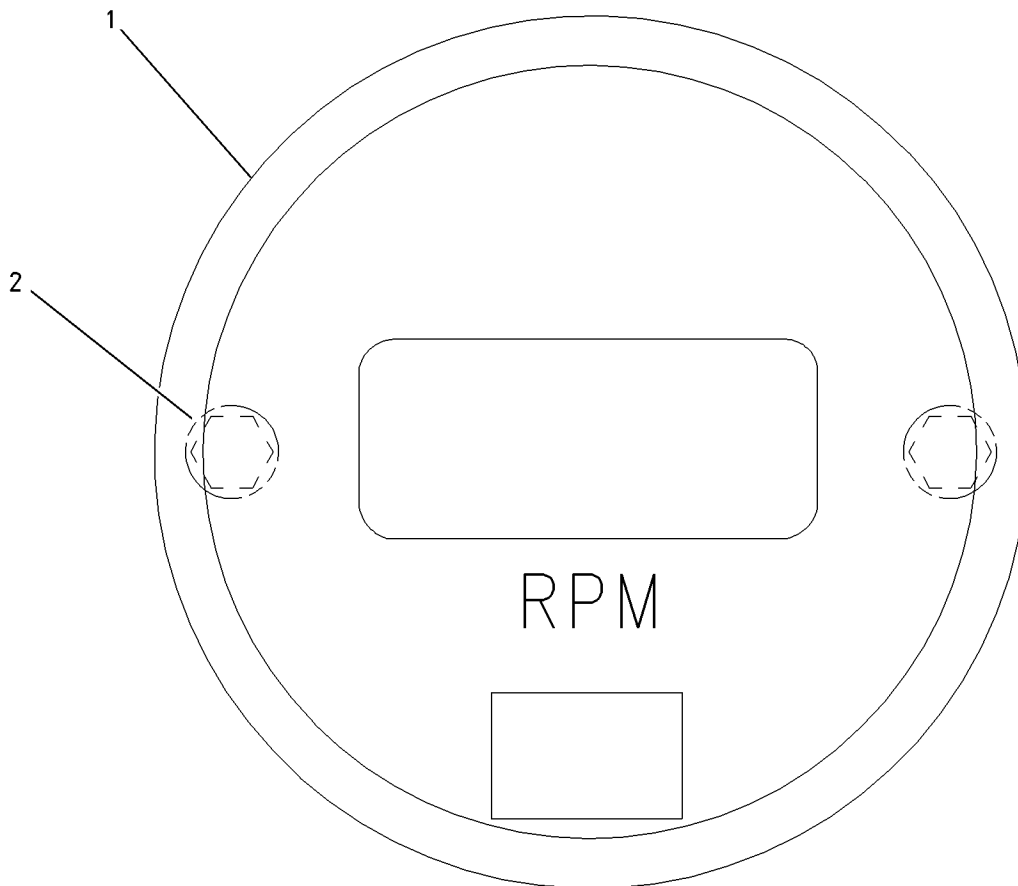
## 7C-1072 TACHOMETER GP-ELECTRIC

FOR USE WITH SAE NO. 1 FLYWHEEL HOUSING  
AN ATTACHMENT

SMCS-7462

i02016304

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	197-7348	1	TACHOMETER GP						
	2	1	6V-8377	2	NUT (8-32-THD)						
		1	9B-7233	2	LOCKWASHER						



GRAPHIC #1

<END>

g00780579

# OPERATOR STATION

## 104-5687 VOLTMETER GP

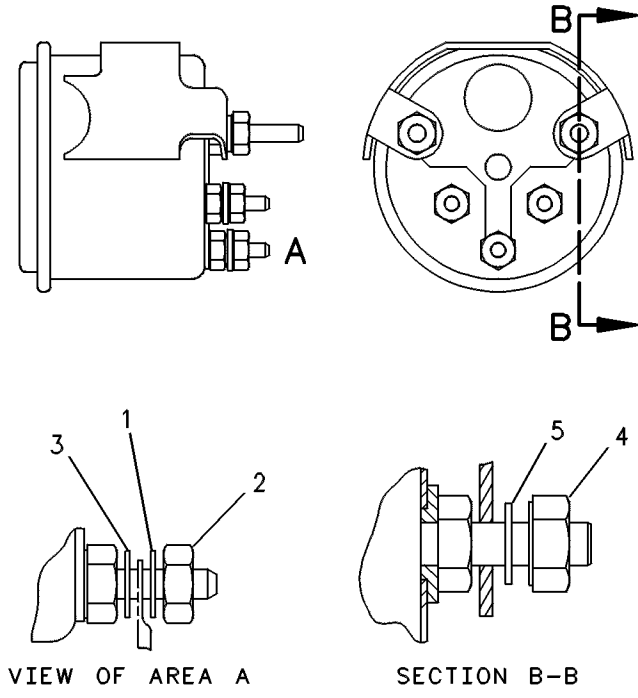
12-VOLT

PART OF 243-3029 PANEL GP-INSTRUMENT  
AN ATTACHMENT

SMCS-7468, 7469

i01455111

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4B-5324	2	WASHER (3.9X9.6X1.2-MM THK)						
	2	1	6V-8368	2	NUT (6-32-THD)						
	3	1	3L-8187	2	LOCKWASHER						
	4	1	4B-2043	2	NUT (8-32X3.18-MM)						
	5	1	9B-7233	2	LOCKWASHER						



GRAPHIC #1

<END>

g00236444

# OPERATOR STATION

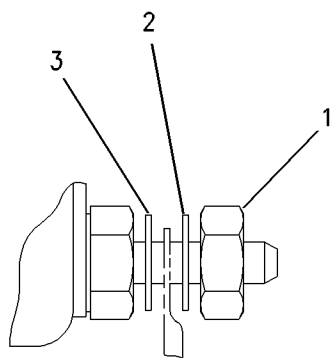
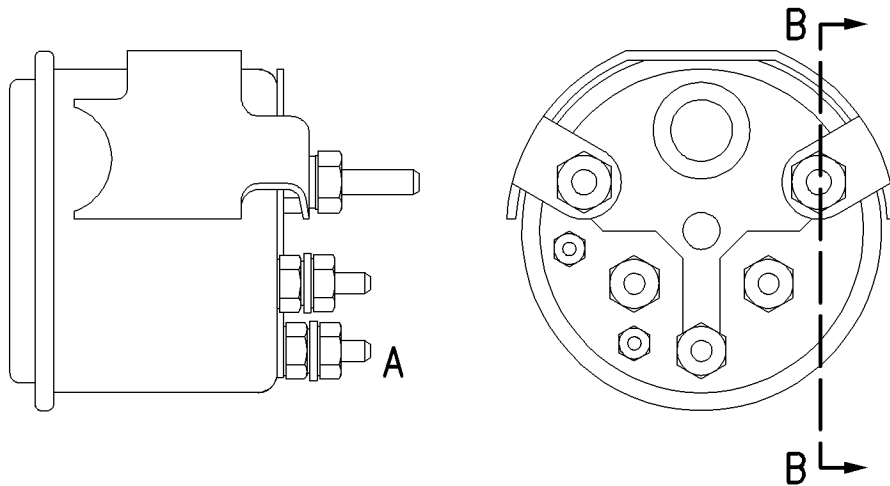
## 105-1457 VOLTMETER GP

24-VOLT. ALTERNATOR  
AN ATTACHMENT

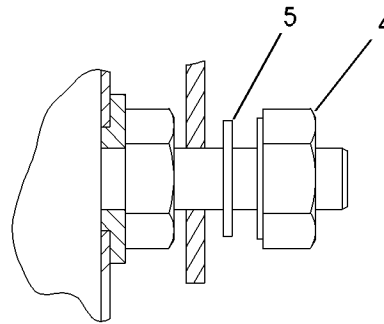
SMCS-7468, 7469

i01393797

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-8368	2	NUT (6-32-THD)						
	2	1	4B-5324	2	WASHER (3.9X9.6X1.2-MM THK)						
	3	1	3L-8187	2	LOCKWASHER						
	4	1	4B-2043	2	NUT (8-32X3.18-MM)						
	5	1	9B-7233	2	LOCKWASHER						



VIEW OF AREA A



SECTION B-B

GRAPHIC #1

<END>

g00734608

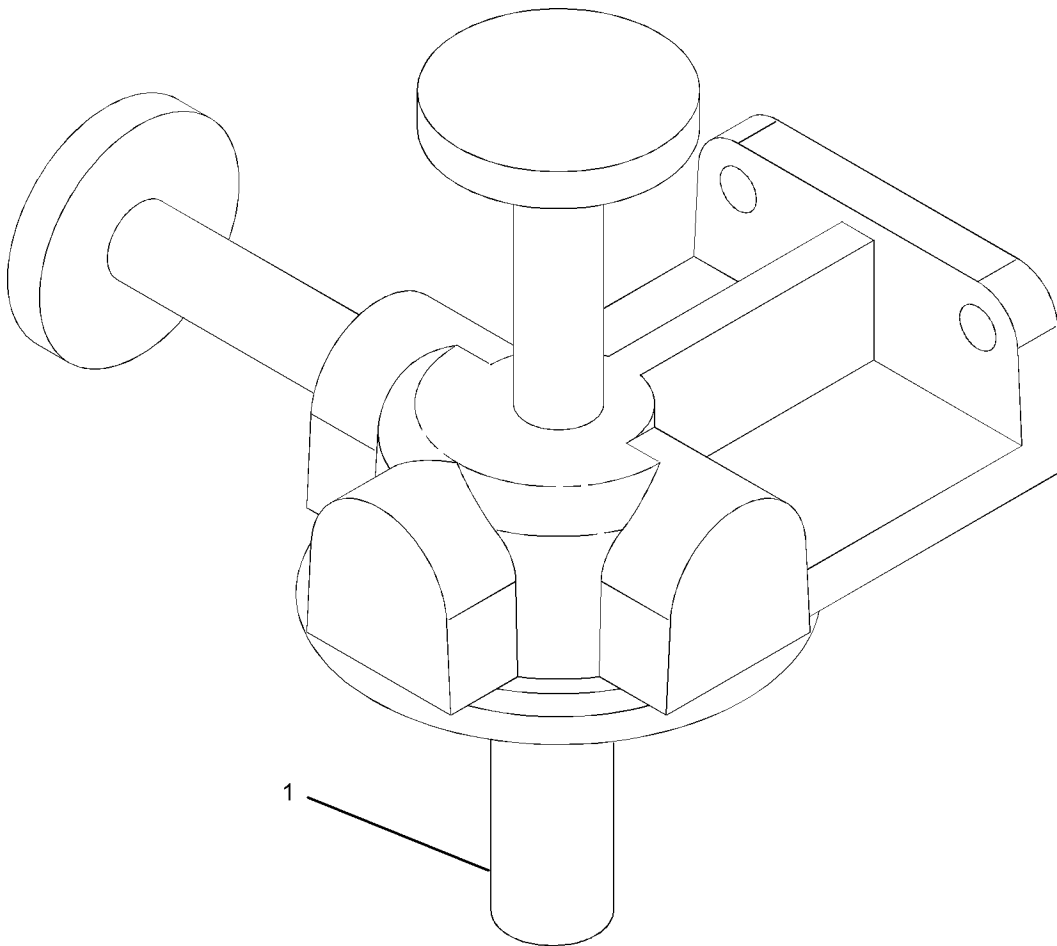
# ENCLOSURES, GUARDS AND BASES

## 236-6993 BASE AS-COOLANT CONDITIONER AN ATTACHMENT

SMCS-7060

i02301330

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9N-3645	1	STUD-TAPERLOCK						



GRAPHIC #1

<END>

g01058131

# ENCLOSURES, GUARDS AND BASES

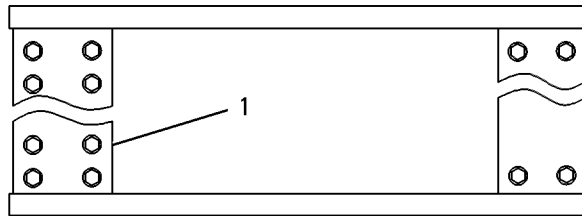
## 127-2680 BASE GP-ENGINE AN ATTACHMENT

SMCS-7060

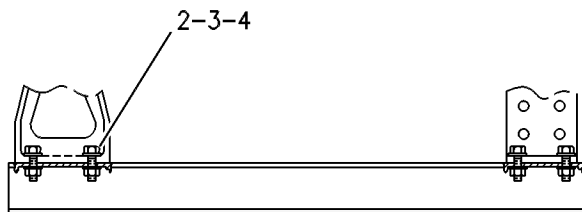
i00639942

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	127-2679	1	BASE AS						
M	2	1	6V-3532	12	BOLT (M20X2.5X60-MM)						
	3	1	8T-5439	24	WASHER (21.5X45X6-MM THK)						
M	4	1	6V-7742	12	NUT-FULL (M20X2.5-THD)						

M-METRIC PART



TOP VIEW



LEFT SIDE VIEW

GRAPHIC #1

<END>

g00262161

# SERVICE EQUIPMENT AND SUPPLIES

## 6L-4502 CHART-PLATE & FILM

SMCS-7557

i02139132

NOTE	PART NUMBER	QTY	PART NAME 1 2 3 4 5 6 (PRODUCT LEVEL)	SEE PAGE
	<b>7E-8070</b>	1	FILM (INFO) (ENGINE SERIAL NUMBER BAR CODE) INSTALL ON LH SIDE OF VALVE COVER BASE JUST FORWARD OF THE BREATHER.	
	<b>114-5988</b>	1	FILM-IDENTIFICATION (FUEL FILTER)	
	<b>118-2136</b>	1	FILM-INFORMATION (3176-IND MAINT) (C11 IND)	
	<b>9Y-4294</b>	2	FILM-WARNING (FUEL INJECTOR) *** REQUIRES 2 PER ENGINE *** INSTALL ONE TOWARDS FRONT AND ONE TOWARDS REAR OF ENGINE ON LH AND RH SIDES OF VALVE COVER BASE.	
	<b>228-3581</b>	2	FILM-WARNING (UNIVERSAL, READ OMM)	
	<b>229-5664</b>	1	PLATE (C11 ACERT) INSTALL ON CENTER OF VALVE COVER TO READ FROM LEFT SIDE OF ENGINE	
	<b>115-5852</b>	1	PLATE & FILM GP (ENGINE RATING) (GLPS) INSTALL ON RH SIDE OF ENGINE ON FRONT HALF OF INTAKE MANIFOLD AS HIGH AS POSSIBLE ON VERTICLE SURFACE INSTALL LAMINANT OVER SILVER FILM, SUCH THAT BOTTOM EDGE OF FILM IS COVERED	
	<b>4W-1413</b>	1	PLATE-SERIAL NUMBER (ENGINE)	
	<b>8L-8413</b>	1	STRAP-CABLE (FOR ENGINE PRESTART TAG)	
	<b>3N-3469</b>	1	TAG-INSTRUCTION (ENGINE PRESTART) INSTALL ON RH OR LH SIDE ENGINE IN A VISIBLE LOCATION. DO NOT INSTALL ON FRONT OR REAR OF ENGINE OR COMPONENT	
<b>&lt;END&gt;</b>				

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
<b>0</b>							
		1P-0436 . . . . .	310	2L-8075 . . . . .	330		174
0L-0639 . . . . .	27		313	2M-0849 . . . . .	236		180
0L-1026 . . . . .	110		316	2M-9780 . . . . .	16	3B-4506 . . . . .	27
0L-1351 . . . . .	73	1P-1367 . . . . .	183		18	3B-4627 . . . . .	27
0S-1587 . . . . .	226	1P-1669 . . . . .	101		20	3B-5301 . . . . .	27
0S-1589 . . . . .	33	1P-3705 . . . . .	238	2N-0475 . . . . .	226	3B-6552 . . . . .	254
0S-1591 . . . . .	27	1P-7625 . . . . .	309	2N-0794 . . . . .	437	3B-8489 . . . . .	27
0S-1595 . . . . .	32	1R-0762 . . . . .	296	2N-0816 . . . . .	437	3E-0125 . . . . .	386
	226	1R-0771 . . . . .	300	2N-1287 . . . . .	10	3E-0127 . . . . .	386
0S-1617 . . . . .	27	1R-1808 . . . . .	194	2N-5243 . . . . .	223	3E-0128 . . . . .	386
0T-0772 . . . . .	6		196	2N-5848 . . . . .	437	3E-0129 . . . . .	386
		1S-4295 . . . . .	275	2N-6005 . . . . .	180	3E-0130 . . . . .	386
			276	2N-9263 . . . . .	258	3E-0131 . . . . .	386
			288	2N-9421 . . . . .	359	3E-0132 . . . . .	386
<b>1</b>							
		1S-7251 . . . . .	353	2N-9421 . . . . .	359	3E-0133 . . . . .	386
1A-1460 . . . . .	27		396	2P-1314 . . . . .	437	3E-0134 . . . . .	386
1A-2170 . . . . .	175		427	2P-4304 . . . . .	174	3E-0135 . . . . .	386
	178	1S-7252 . . . . .	396		180	3E-0136 . . . . .	386
	180	1S-7443 . . . . .	27		183	3E-0137 . . . . .	386
	183	1S-7446 . . . . .	383	2P-4358 . . . . .	16	3E-0138 . . . . .	386
1B-2713 . . . . .	255		415	2P-5616 . . . . .	330	3E-0139 . . . . .	386
1B-3057 . . . . .	10	1U-8846 . . . . .	88	2R-6806 . . . . .	306	3E-0140 . . . . .	386
	12		92		309	3E-0141 . . . . .	386
	14		99		310	3E-0142 . . . . .	386
1B-3867 . . . . .	248		102		313	3E-0144 . . . . .	386
1B-5358 . . . . .	260		104	2S-0736 . . . . .	66	3E-0145 . . . . .	386
	261		105	2S-0795 . . . . .	226	3E-0146 . . . . .	386
	277	1U-9870 . . . . .	238	2S-2053 . . . . .	51	3E-3365 . . . . .	374
1B-8705 . . . . .	23	1W-5039 . . . . .	57		197		421
	25	1W-8845 . . . . .	195	2S-2493 . . . . .	279	3E-3368 . . . . .	367
	26			2S-2923 . . . . .	96		368
1D-1158 . . . . .	70	<b>2</b>					
1D-2328 . . . . .	71	2A-1162 . . . . .	102	2S-5658 . . . . .	58	3E-3371 . . . . .	365
1H-1023 . . . . .	383		105		82	3E-4352 . . . . .	133
	415		102		83		193
1H-2629 . . . . .	383		105	2S-6708 . . . . .	279		200
	415		139	2S-7593 . . . . .	168		205
1H-3244 . . . . .	330	2A-4429 . . . . .	47	2V-1713 . . . . .	381		207
	333	2B-0858 . . . . .	72	2V-3216 . . . . .	428		214
	336	2D-6392 . . . . .	383	2V-7397 . . . . .	351		310
	338		415		352		313
	340	2D-6642 . . . . .	158	2W-3681 . . . . .	437		316
	342	2D-9572 . . . . .	53	2W-7846 . . . . .	260		320
	344		88	2W-7850 . . . . .	261	3E-4353 . . . . .	226
	346		92	2W-8494 . . . . .	153		348
	349	2F-6678 . . . . .	384	2W-8918 . . . . .	373	3E-5446 . . . . .	336
1H-3338 . . . . .	27		416		375		338
1H-5728 . . . . .	99	2F-7888 . . . . .	359	2W-9499 . . . . .	113	3E-5447 . . . . .	336
1L-4863 . . . . .	27	2H-0191 . . . . .	281	2Y-5829 . . . . .	14		338
1M-6119 . . . . .	351	2H-3429 . . . . .	383		155	3E-5448 . . . . .	336
	352		415		156		338
	353	2J-8163 . . . . .	383		190	3E-5450 . . . . .	336
	427		415		198		338
1M-6120 . . . . .	351	2K-4821 . . . . .	330		199	3E-5451 . . . . .	333
	352		336		297		336
	353		338		423		338
	427		340		425	3E-5452 . . . . .	336
1M-9968 . . . . .	384		342			3E-5454 . . . . .	333
	416		344				336
1M-9971 . . . . .	383		346	<b>3</b>			
	415		349			3E-5455 . . . . .	336
1N-3755 . . . . .	433	2L-6267 . . . . .	27	3B-0623 . . . . .	43		338
1N-3974 . . . . .	51	2L-6679 . . . . .	383		45	3E-5457 . . . . .	336
	56		415		134		338

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
3E-5458 . . . . .	336		226	3S-2093 . . . . .	297		336
	338		274		310		338
3E-5459 . . . . .	336		301		313		440
	338		309		316		441
3E-5460 . . . . .	336	3J-5553 . . . . .	32		320	4B-2049 . . . . .	384
	338	3J-7354 . . . . .	14		423		386
3E-5461 . . . . .	336		16		425		416
	338		18		428		437
3E-5462 . . . . .	336		138		437	4B-4274 . . . . .	359
	338		178	3S-6049 . . . . .	353	4B-4716 . . . . .	27
3E-6768 . . . . .	85		182	3S-6050 . . . . .	353	4B-4721 . . . . .	27
3E-6788 . . . . .	214		225	3S-6605 . . . . .	157	4B-4754 . . . . .	27
3E-6910 . . . . .	88	3K-0360 . . . . .	16	3S-9643 . . . . .	240	4B-4758 . . . . .	27
	92		18		242	4B-4792 . . . . .	27
3E-7410 . . . . .	437		99		245	4B-4810 . . . . .	27
3E-7427 . . . . .	50		302	3T-3418 . . . . .	383	4B-4863 . . . . .	361
	131		303		415		431
3E-7771 . . . . .	384		304	3T-3422 . . . . .	383	4B-5324 . . . . .	425
	416		309		397		440
3E-7775 . . . . .	399		310		399		441
	401		313		401	4B-7270 . . . . .	27
	403		316		403	4C-9614 . . . . .	281
	405	3K-1715 . . . . .	353		405	4D-3704 . . . . .	33
	407	3K-8106 . . . . .	431		407		34
	411	3K-8460 . . . . .	99		411	4D-7735 . . . . .	316
	413		101		413		320
3E-7990 . . . . .	428		102		415	4D-9517 . . . . .	206
3E-8016 . . . . .	121		104	3T-3423 . . . . .	383	4F-5695 . . . . .	42
	123		105		384	4F-6024 . . . . .	53
	125	3L-3380 . . . . .	383		415		88
	127		415		416		92
	129	3L-8187 . . . . .	440	3T-3424 . . . . .	383	4H-0002 . . . . .	27
	131		441		384	4H-7869 . . . . .	34
3E-8017 . . . . .	272	3N-3015 . . . . .	260		415		388
	273	3N-3469 . . . . .	444		416		389
	275	3N-3718 . . . . .	336	3T-3434 . . . . .	383		390
	276		338		397		391
	288	3N-3763 . . . . .	384		399		395
3F-0379 . . . . .	383		416		401		396
	397	3N-4896 . . . . .	27		403	4K-6297 . . . . .	297
	399	3N-5990 . . . . .	430		405	4K-8864 . . . . .	10
	401	3N-5992 . . . . .	430		407		12
	403	3N-7054 . . . . .	419		411	4L-2729 . . . . .	384
	405	3N-7055 . . . . .	419		413		416
	407	3N-7056 . . . . .	▶419		415	4L-3527 . . . . .	27
	411	3N-8123 . . . . .	27	3T-4709 . . . . .	383	4M-1827 . . . . .	383
	413	3N-8124 . . . . .	27		415		415
	415	3N-8125 . . . . .	27	3T-4710 . . . . .	383	4M-1828 . . . . .	383
3F-6156 . . . . .	190	3N-9012 . . . . .	▶430		415		415
3F-6795 . . . . .	85	3P-0647 . . . . .	200	3T-6354 . . . . .	330	4M-1829 . . . . .	383
3F-9556 . . . . .	27		201	3T-9494 . . . . .	383		415
	336		203		384	4M-1831 . . . . .	383
	338		205		415		397
	340		206		416		399
	342		207	3T-9524 . . . . .	384		401
	344	3P-0650 . . . . .	176		416		403
	346		177	3T-9525 . . . . .	383		405
	349		179		415		407
	420		182	3V-6785 . . . . .	353		411
3H-5368 . . . . .	140	3P-1896 . . . . .	174				413
3H-9571 . . . . .	27		180				415
3H-9572 . . . . .	27	3P-1932 . . . . .	310	<b>4</b>		4M-1853 . . . . .	383
3H-9574 . . . . .	27		313				415
3J-1907 . . . . .	211	3R-8801 . . . . .	384	4B-2041 . . . . .	437	4M-1854 . . . . .	383
	222		416	4B-2043 . . . . .	330		415



# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
4M-1896 . . . . .	384		320		236		12
	416	4W-9822 . . . . .	226	5P-2618 . . . . .	88		14
4M-5281 . . . . .	336		▶229	5P-2948 . . . . .	381		27
4N-1114 . . . . .	33				382		55
	34			5P-3418 . . . . .	330		57
4N-2514 . . . . .	74	<b>5</b>		5P-3419 . . . . .	330		67
	75			5P-4115 . . . . .	359		68
	77	5B-2407 . . . . .	27	5P-4141 . . . . .	88		89
	78	5B-2410 . . . . .	27		92		93
	79	5C-7261 . . . . .	355	5P-4481 . . . . .	72		111
	80	5D-1026 . . . . .	14	5P-4889 . . . . .	326		112
	82	5D-9231 . . . . .	437	5P-5528 . . . . .	350		119
	83	5D-9344 . . . . .	99	5P-5598 . . . . .	47		121
4N-2569 . . . . .	▶233		102	5P-5621 . . . . .	427		123
4N-2570 . . . . .	▶235		104	5P-5623 . . . . .	381		125
4N-2571 . . . . .	233		105		382		127
4N-2572 . . . . .	235	5F-0304 . . . . .	102	5P-5677 . . . . .	361		129
4N-3091 . . . . .	234		105	5P-5678 . . . . .	21		131
4N-3092 . . . . .	236		139	5P-6001 . . . . .	425		166
4N-3093 . . . . .	▶234	5J-5314 . . . . .	383	5P-6298 . . . . .	383		167
4N-3094 . . . . .	▶236		415		415		170
4N-3986 . . . . .	▶330	5K-0906 . . . . .	436	5P-6727 . . . . .	107		171
4N-7521 . . . . .	386	5L-2952 . . . . .	187	5P-6920 . . . . .	333		226
4N-8150 . . . . .	175		189		336		254
	178		191		338		297
	180	5L-3233 . . . . .	252	5P-6944 . . . . .	310	5P-8246 . . . . .	85
	183		254		313		88
4N-9680 . . . . .	▶96	5L-4763 . . . . .	110		316		92
	97	5L-8484 . . . . .	260	5P-7701 . . . . .	85		99
4P-3073 . . . . .	▶27		261		101		102
	140		277		104		105
4P-3074 . . . . .	▶140	5L-8605 . . . . .	277		105	5P-8247 . . . . .	48
4P-3325 . . . . .	85	5L-8632 . . . . .	▶277		121		60
4P-3647 . . . . .	85	5L-9652 . . . . .	27		123		61
4P-4178 . . . . .	85	5L-9653 . . . . .	27		125		62
4P-4181 . . . . .	85	5L-9654 . . . . .	27		127		63
4P-4369 . . . . .	272	5L-9655 . . . . .	27		129		64
	273	5M-2894 . . . . .	326		131		74
4P-5820 . . . . .	▶374		425		175		81
4P-5918 . . . . .	423	5M-3034 . . . . .	383		178		143
4P-7581 . . . . .	297		415		180		146
	423	5M-6214 . . . . .	229		183		163
	425	5N-1933 . . . . .	▶171		194		164
4P-8494 . . . . .	77	5N-4741 . . . . .	260	5P-7807 . . . . .	330		260
4P-8502 . . . . .	75		261		336		340
4P-8917 . . . . .	193	5N-4742 . . . . .	260		338		342
4P-8918 . . . . .	193	5N-9317 . . . . .	27	5P-7814 . . . . .	88		344
4P-8919 . . . . .	193	5P-0537 . . . . .	159		92		346
4P-8922 . . . . .	193		310		99		349
4W-1203 . . . . .	57		313		101	5P-8248 . . . . .	41
4W-1204 . . . . .	57		316		102		375
4W-1413 . . . . .	444		320		104	5P-9085 . . . . .	423
4W-2042 . . . . .	57		428		105	5P-9436 . . . . .	240
4W-3474 . . . . .	433	5P-0600 . . . . .	279	5P-7854 . . . . .	190		242
4W-5828 . . . . .	▶257	5P-0747 . . . . .	351	5P-7970 . . . . .	310		245
4W-7731 . . . . .	254		352		313	5P-9617 . . . . .	182
4W-8320 . . . . .	115		396	5P-8068 . . . . .	214	5R-7137 . . . . .	117
4W-9160 . . . . .	256	5P-0761 . . . . .	353	5P-8211 . . . . .	121		118
	262	5P-0995 . . . . .	31		123	5S-0003 . . . . .	435
4W-9183 . . . . .	▶256	5P-0997 . . . . .	63		125	5S-7348 . . . . .	437
4W-9576 . . . . .	310	5P-1076 . . . . .	115		127	5S-7349 . . . . .	340
	313	5P-1505 . . . . .	14		129		342
	316	5P-2321 . . . . .	361		131		344
	320	5P-2566 . . . . .	115	5P-8244 . . . . .	6		346
4W-9783 . . . . .	316		234	5P-8245 . . . . .	10		349

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	397	6N-1945 . . . . .	330		51		56
	399	6N-1946 . . . . .	330		56		85
	401	6N-1968 . . . . .	330		137		88
	403	6N-3170 . . . . .	437		223		92
	405	6N-3171 . . . . .	437		239		135
	407	6N-3279 . . . . .	383		244		175
	411		415		249		180
	413	6N-3826 . . . . .	383	6V-3507 . . . . .	437		264
5S-8543 . . . . .	85		397	6V-3532 . . . . .	443		268
5S-9062 . . . . .	57		399	6V-3535 . . . . .	107		269
5S-9134 . . . . .	186		401	6V-3536 . . . . .	39		271
5V-7190 . . . . .	73		403	6V-3538 . . . . .	43		316
			405	6V-3668 . . . . .	111		350
			407		112		364
			411		226		370
			413	6V-3822 . . . . .	88		372
			415		92	6V-5049 . . . . .	45
6A-5591 . . . . .	121	6N-8744 . . . . .	433		274		85
	123	6N-8863 . . . . .	121	6V-3823 . . . . .	254		88
	125		123	6V-3834 . . . . .	214		92
	127		125	6V-3908 . . . . .	194		136
	129		127	6V-3918 . . . . .	21		175
	131		129		37		178
6B-3223 . . . . .	27		131		38		180
6D-1004 . . . . .	16	6T-0363 . . . . .	383		423		182
6D-3479 . . . . .	14		415	6V-3922 . . . . .	310		183
6D-5801 . . . . .	281	6T-0371 . . . . .	383		313		210
6D-7146 . . . . .	213		415		316		212
6F-0253 . . . . .	27	6T-0372 . . . . .	383		320		225
6F-7062 . . . . .	226		415	6V-3940 . . . . .	187		297
6H-3956 . . . . .	57	6T-7337 . . . . .	433		189		306
6I-1418 . . . . .	356	6V-0455 . . . . .	140		191		310
	357	6V-0484 . . . . .	222		222		313
6I-2505 . . . . .	251	6V-0852 . . . . .	310		239		316
6I-2506 . . . . .	251		313		244		320
6I-2509 . . . . .	253		316	6V-3964 . . . . .	355		364
6I-2510 . . . . .	253		320	6V-3965 . . . . .	310		369
6I-3612 . . . . .	5	6V-0885 . . . . .	▶383		313		437
	7		388		316	6V-5050 . . . . .	102
6I-3721 . . . . .	7	6V-0894 . . . . .	359		320		105
6I-4027 . . . . .	297	6V-1197 . . . . .	85	6V-4248 . . . . .	10		113
6I-4348 . . . . .	425	6V-1250 . . . . .	193		12	6V-5063 . . . . .	47
6I-4465 . . . . .	251	6V-1322 . . . . .	383		14		51
6I-4467 . . . . .	253		415		88		223
6K-9194 . . . . .	309	6V-1819 . . . . .	316		92		239
6L-1883 . . . . .	97		320		297		240
6L-2609 . . . . .	187		348		425		242
	189	6V-1820 . . . . .	16	6V-4249 . . . . .	113		244
	191		48		121		245
6L-2681 . . . . .	165		190		123		437
6L-2845 . . . . .	435		226		125	6V-5064 . . . . .	223
6L-3967 . . . . .	27		297		127	6V-5134 . . . . .	85
6L-3972 . . . . .	27		425		129		214
6L-4502 . . . . .	▶444	6V-1903 . . . . .	113		131	6V-5192 . . . . .	107
6L-5151 . . . . .	27	6V-2202 . . . . .	333	6V-4292 . . . . .	14	6V-5195 . . . . .	193
6L-9952 . . . . .	437	6V-2315 . . . . .	437	6V-4589 . . . . .	72	6V-5215 . . . . .	200
6N-1856 . . . . .	330	6V-2317 . . . . .	55		225		206
6N-1870 . . . . .	330		107		310		207
6N-1871 . . . . .	330		213		313		316
6N-1872 . . . . .	330		223		316		320
	333		225		320	6V-5217 . . . . .	23
6N-1873 . . . . .	330	6V-3250 . . . . .	247		327		25
6N-1875 . . . . .	330	6V-3251 . . . . .	10	6V-5048 . . . . .	12		26
6N-1876 . . . . .	330		12		43		97
6N-1925 . . . . .	330		14		51		187
6N-1944 . . . . .	330						

## 6

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	189		310		413	<b>7</b>	
	190		313		416		
	191		317	6V-8189 . . . . .	336	7B-1598 . . . . .	10
	205		320		338		12
6V-5218 . . . . .	211		423		340		14
	212		425		342	7B-3235 . . . . .	140
	214		437		344	7C-0100 . . . . .	435
	310	6V-5842 . . . . .	22		346	7C-1072 . . . . .	▶439
	313		35		349	7C-1445 . . . . .	85
	317		310		436		101
	320		313	6V-8197 . . . . .	10		102
6V-5219 . . . . .	101		317		12		104
	102		320		14		105
	104	6V-5843 . . . . .	110		36		187
	105		165		297		189
	107		310	6V-8201 . . . . .	5		190
	223		313	6V-8212 . . . . .	423		191
	225		317	6V-8214 . . . . .	85	7C-1583 . . . . .	159
	226		320		88		160
6V-5221 . . . . .	16	6V-6317 . . . . .	14		92		162
	18		51		428	7C-1728 . . . . .	85
	20		56	6V-8225 . . . . .	107		88
	97		190		437		92
	214		206	6V-8336 . . . . .	166		159
	223		254		167	7C-1821 . . . . .	214
	225		310		169	7C-1822 . . . . .	214
6V-5223 . . . . .	30		313		170	7C-2644 . . . . .	425
6V-5230 . . . . .	85		425	6V-8359 . . . . .	175	7C-2909 . . . . .	187
6V-5582 . . . . .	▶386		437		178		189
	410	6V-6353 . . . . .	274		180		191
6V-5684 . . . . .	88		280		183	7C-3081 . . . . .	175
	92	6V-6609 . . . . .	10		198		178
	297		12	6V-8368 . . . . .	440		180
6V-5686 . . . . .	6		14		441		183
6V-5696 . . . . .	88		51	6V-8377 . . . . .	333	7C-3082 . . . . .	175
	92		56		439		178
6V-5839 . . . . .	10		137	6V-8378 . . . . .	397		180
	12		240		399		183
	14		242		401	7C-3083 . . . . .	175
	16		245		403		178
	22		380		405		180
	35	6V-6923 . . . . .	328		407		183
	48	6V-7238 . . . . .	131		411	7C-3954 . . . . .	175
	51	6V-7350 . . . . .	250		413		178
	56	6V-7673 . . . . .	67		420		180
	85	6V-7728 . . . . .	428		430		183
	88	6V-7742 . . . . .	443	6V-8398 . . . . .	211	7C-6496 . . . . .	73
	92	6V-8149 . . . . .	55	6V-8490 . . . . .	85	7C-7851 . . . . .	84
	113		119	6V-8675 . . . . .	57	7C-7852 . . . . .	84
	165		254		254	7C-8246 . . . . .	316
	176		297	6V-8836 . . . . .	423		320
	177	6V-8154 . . . . .	65		428	7C-9542 . . . . .	186
	179	6V-8186 . . . . .	420	6V-8837 . . . . .	85	7D-1649 . . . . .	57
	182	6V-8187 . . . . .	330	6V-9027 . . . . .	223		169
	190		333		240	7E-2871 . . . . .	310
	198	6V-8188 . . . . .	115		242		313
	199		384		245	7E-3476 . . . . .	5
	203		386	6V-9748 . . . . .	57		7
	206		397	6Y-1352 . . . . .	310	7E-3478 . . . . .	5
	207		399		313		7
	250		401		316	7E-4761 . . . . .	50
	254		403		320	7E-4808 . . . . .	57
	272		405			7E-5346 . . . . .	310
	273		407			7E-6508 . . . . .	428
	297		411			7E-7977 . . . . .	47

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
7E-7978 . . . . .	47		293		401		407
7E-8070 . . . . .	444	7N-0060 . . . . .	351		403		411
7E-8559 . . . . .	150		352	7T-3276 . . . . .	405		413
7E-8560 . . . . .	217	7N-0140 . . . . .	381		407		416
7E-9582 . . . . .	151		382		411	7X-0623 . . . . .	274
7F-3488 . . . . .	383	7N-0296 . . . . .	381		413	7X-0870 . . . . .	85
	415		382	7T-3277 . . . . .	405		214
7F-3491 . . . . .	383	7N-1059 . . . . .	▶388		407	7X-2436 . . . . .	88
	415	7N-2059 . . . . .	381		411		92
7F-3525 . . . . .	383		382		413	7X-2537 . . . . .	210
	415	7N-5274 . . . . .	353	7T-3278 . . . . .	405	7X-3353 . . . . .	333
7F-7621 . . . . .	330		427		407	7X-3373 . . . . .	383
	336	7N-5683 . . . . .	43		411		397
	338		88		413		399
7F-8896 . . . . .	140		92	7T-3279 . . . . .	397		401
7F-8897 . . . . .	27	7N-7313 . . . . .	237		399		403
7F-8916 . . . . .	27	7N-7779 . . . . .	373		401		405
7G-7889 . . . . .	▶333	7N-7780 . . . . .	373		403		407
7H-7055 . . . . .	311	7N-7795 . . . . .	333		405		411
	313	7N-7796 . . . . .	333		407		413
7J-4026 . . . . .	437	7N-7798 . . . . .	333		411		415
7J-6285 . . . . .	36	7N-7800 . . . . .	333		413	7X-3374 . . . . .	115
7J-9108 . . . . .	311	7N-7801 . . . . .	333	7T-3451 . . . . .	397	7X-7729 . . . . .	115
	313	7N-7802 . . . . .	333		399	7X-7730 . . . . .	88
	317	7N-7805 . . . . .	333		401		92
	320	7N-7808 . . . . .	333		403		
7K-4129 . . . . .	311	7N-7809 . . . . .	333		405		
	314	7N-7810 . . . . .	333		407		
	317	7N-7811 . . . . .	333		411		
	320	7N-9021 . . . . .	333		413		
7L-2894 . . . . .	383	7N-9023 . . . . .	333	7T-3454 . . . . .	397	8B-4884 . . . . .	437
	397		336		399	8B-7121 . . . . .	27
	399		338		401	8B-7179 . . . . .	359
	401	7N-9024 . . . . .	333		403	8B-7979 . . . . .	238
	403	7N-9738 . . . . .	373		405	8B-7987 . . . . .	27
	405	7N-9801 . . . . .	421		407	8C-3089 . . . . .	263
	407		422		411		264
	411	7S-1198 . . . . .	361		413		265
	413	7T-1099 . . . . .	170	7T-3973 . . . . .	397		266
	415	7T-3267 . . . . .	397	7T-3974 . . . . .	383		270
7L-3203 . . . . .	198		399		397		383
	199		401		399		415
7L-4535 . . . . .	▶436		403		399	8C-3100 . . . . .	248
7L-4536 . . . . .	436		405		403	8C-3334 . . . . .	425
7L-5810 . . . . .	171		408		405	8C-3445 . . . . .	178
7L-6580 . . . . .	240		411		407		182
	242		413		411	8C-3446 . . . . .	178
	245	7T-3268 . . . . .	397		413	8C-3655 . . . . .	405
7L-7871 . . . . .	▶351		399	7T-4532 . . . . .	29		408
7L-7872 . . . . .	▶352		401	7T-9123 . . . . .	384		411
7M-0324 . . . . .	383		403		416	8C-5917 . . . . .	351
	415		405	7W-0825 . . . . .	▶353		352
7M-0325 . . . . .	384		408	7W-3354 . . . . .	▶375	8C-6354 . . . . .	425
	415		411	7W-6390 . . . . .	174	8C-9660 . . . . .	383
7M-0326 . . . . .	383		413		180		415
	415	7T-3271 . . . . .	397	7W-7155 . . . . .	27	8E-8439 . . . . .	110
7M-0327 . . . . .	383		399	7W-7235 . . . . .	158	8E-9571 . . . . .	225
	415		401	7X-0339 . . . . .	115		226
7M-8485 . . . . .	226		403	7X-0562 . . . . .	384	8F-1434 . . . . .	333
	239		405		386		384
	244		407		397		386
7M-8651 . . . . .	384		411		399		397
	415		413		401		399
7M-9918 . . . . .	287	7T-3275 . . . . .	397		403		401
	292		399		405		403

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	405		427		314	8T-4896 . . . . .	149
	407	8N-2694 . . . . .	252		317		150
	411		254		321		151
	413	8N-3536 . . . . .	381	8T-0642 . . . . .	364		152
	416		382		423		233
	420	8N-4617 . . . . .	251	8T-0643 . . . . .	250		235
	430	8R-3600 . . . . .	14	8T-0644 . . . . .	324		237
	437	8S-2332 . . . . .	34		325	8T-4983 . . . . .	197
8F-8513 . . . . .	51		388	8T-0646 . . . . .	53	8T-4984 . . . . .	223
	56		389		55		225
8H-1141 . . . . .	397		390		88	8T-4987 . . . . .	267
	399		391		92	8T-4988 . . . . .	267
	401		395		119	8T-5002 . . . . .	145
	403		396	8T-0701 . . . . .	433	8T-5093 . . . . .	107
	405	8S-4304 . . . . .	226	8T-2502 . . . . .	233	8T-5436 . . . . .	226
	407	8S-4951 . . . . .	297		235	8T-5439 . . . . .	443
	411	8S-6824 . . . . .	253	8T-3490 . . . . .	115	8T-6757 . . . . .	97
	413	8S-9092 . . . . .	260		206		263
8H-3127 . . . . .	281	8T-0100 . . . . .	133	8T-3957 . . . . .	85	8T-6763 . . . . .	99
8H-9789 . . . . .	107	8T-0106 . . . . .	88	8T-4121 . . . . .	55	8T-6764 . . . . .	57
8J-4351 . . . . .	214		92		115	8T-6876 . . . . .	210
8J-5893 . . . . .	32	8T-0122 . . . . .	270		226		211
8K-0968 . . . . .	92	8T-0154 . . . . .	113		386	8T-6991 . . . . .	88
8L-2777 . . . . .	158	8T-0162 . . . . .	57	8T-4122 . . . . .	261		92
8L-2786 . . . . .	50	8T-0226 . . . . .	88	8T-4133 . . . . .	386	8T-8566 . . . . .	397
	85		92	8T-4136 . . . . .	115		399
	102		101	8T-4178 . . . . .	55		401
	104		102		115		403
	105		104	8T-4184 . . . . .	56		405
	113		105	8T-4205 . . . . .	330		407
	131	8T-0267 . . . . .	20		333		411
	136	8T-0275 . . . . .	21		336		413
	297	8T-0276 . . . . .	356		338	8T-8568 . . . . .	397
	305		357		340		399
	311	8T-0281 . . . . .	59		342		401
	314		60		344		403
	317		84		346	8T-8569 . . . . .	397
	320		146		349		399
	379	8T-0282 . . . . .	48		383		401
8L-8413 . . . . .	351	8T-0292 . . . . .	240		397		403
	352		242		399		405
	361		245		401		407
	427	8T-0328 . . . . .	330		403		411
	444		333		405		413
8L-9859 . . . . .	▶259		384		407	8T-8570 . . . . .	397
8M-0505 . . . . .	10		386		411		399
	12		397		413		401
	14		399		415		403
	297		401	8T-4223 . . . . .	32	8T-8730 . . . . .	366
	305		403		36	8T-8731 . . . . .	366
8M-2772 . . . . .	423		405		51	8T-8732 . . . . .	354
8M-2773 . . . . .	222		407		56	8T-8736 . . . . .	425
	311		411		115	8T-8737 . . . . .	310
	314		413		234		313
	317		416	8T-4224 . . . . .	99		316
	321	8T-0338 . . . . .	23		210		354
8M-6701 . . . . .	330		25		336		423
8M-9307 . . . . .	226		26		338		428
8M-9315 . . . . .	88	8T-0358 . . . . .	164		340	8T-9101 . . . . .	149
	92	8T-0359 . . . . .	163		342		150
8N-0869 . . . . .	353	8T-0360 . . . . .	84		344		151
	427	8T-0640 . . . . .	159		346		152
8N-1540 . . . . .	427		160		349	8T-9367 . . . . .	338
8N-1541 . . . . .	427		162		355	8T-9393 . . . . .	277
8N-1725 . . . . .	353		311		436	8T-9515 . . . . .	248

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
8T-9598 . . . . .	248	9K-1242 . . . . .	113		314		311
8T-9655 . . . . .	356	9L-2137 . . . . .	333		317		314
	357	9L-2139 . . . . .	333		321		317
8T-9757 . . . . .	351	9L-2140 . . . . .	333		356		321
	352	9L-5134 . . . . .	115		364	9S-4190 . . . . .	239
8T-9884 . . . . .	397	9L-5709 . . . . .	194		423		244
	399	9L-6770 . . . . .	333		435		249
	401		336	9M-2418 . . . . .	85	9S-4191 . . . . .	136
	403		338	9M-2904 . . . . .	51		222
	405		340		198		247
	408		342		199		297
	411		344	9M-6522 . . . . .	309	9S-7148 . . . . .	▶255
	413		346	9M-7609 . . . . .	383	9S-8002 . . . . .	43
8T-9885 . . . . .	397		349		415		138
	399	9L-8493 . . . . .	137	9N-0869 . . . . .	356		175
	401	9M-0402 . . . . .	96		357		180
	403		97	9N-0937 . . . . .	330		223
8Y-9603 . . . . .	396	9M-0853 . . . . .	175	9N-0939 . . . . .	330		225
			178	9N-0942 . . . . .	330		264
			180	9N-0943 . . . . .	330		265
		9M-1164 . . . . .	88	9N-1940 . . . . .	256		268
			92	9N-3367 . . . . .	230		269
		9M-1974 . . . . .	16	9N-3368 . . . . .	230		270
			18	9N-3388 . . . . .	330		271
9B-1117 . . . . .	437		20	9N-3645 . . . . .	221	9S-8003 . . . . .	88
9B-2596 . . . . .	251		21		222		92
9B-7233 . . . . .	330		23		442	9S-8004 . . . . .	45
	333		25	9N-3717 . . . . .	231		85
	336		26	9N-3718 . . . . .	231		175
	338		30		232		178
	439		37	9N-6123 . . . . .	231		180
	440		38		232		183
	441		55	9S-1354 . . . . .	27		225
9B-7237 . . . . .	237		85	9S-2009 . . . . .	330		226
9C-5344 . . . . .	310		97	9S-2014 . . . . .	330	9S-8005 . . . . .	16
	313		101	9S-2302 . . . . .	330		18
	316		102	9S-2390 . . . . .	330		51
	320		104	9S-2396 . . . . .	330		56
9F-2186 . . . . .	69		105	9S-2437 . . . . .	333		113
9F-2187 . . . . .	171		107	9S-2544 . . . . .	330		137
9F-2188 . . . . .	171		121		333		240
9F-4446 . . . . .	215		123		383		242
	216		125		415		245
	217		127	9S-4167 . . . . .	310	9S-8006 . . . . .	51
	218		129		313		56
	219		131		316		137
	220		187		320		183
9F-5599 . . . . .	383		189	9S-4181 . . . . .	239		223
	415		190		244		225
9G-0003 . . . . .	351		191	9S-4182 . . . . .	43	9S-8008 . . . . .	47
	352		206		85		51
9G-0004 . . . . .	351		211		88		102
	352		212		92		105
9G-4101 . . . . .	383		213		135		223
	415		214		240		278
	416		222		242	9S-8750 . . . . .	255
9G-5232 . . . . .	333		223		245	9S-8752 . . . . .	425
9G-5233 . . . . .	333		225	9S-4183 . . . . .	239	9S-9334 . . . . .	85
9G-5234 . . . . .	333		226		244		101
9G-8909 . . . . .	353		239	9S-4185 . . . . .	85		104
	427		240		99		105
9G-9151 . . . . .	433		242		102		121
9H-1024 . . . . .	65		244		104		123
9H-3757 . . . . .	383		245		105		125
	415		311		136		127
9J-6189 . . . . .	316						
	320						

## 9

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	129	9X-8267 . . . . .	21	030-7951 . . . . .	194	<b>1</b>	
	131		85	030-7961 . . . . .	437		
	175		88	030-7962 . . . . .	310	100-2854 . . . . .	▶154
	178		92	030-8188 . . . . .	310	100-5421 . . . . .	160
	180		113		313		161
	183		160		316	100-6531 . . . . .	330
	223		162		320	100-6532 . . . . .	330
	226		198	030-9612 . . . . .	333	100-8527 . . . . .	145
9W-0844 . . . . .	354		423		336		163
	425		437		338	100-8528 . . . . .	143
9W-0852 . . . . .	425	9X-8268 . . . . .	145	031-0215 . . . . .	359		145
	427		165	032-8487 . . . . .	113	101-2840 . . . . .	222
9X-0261 . . . . .	321	9X-8278 . . . . .	115	033-5853 . . . . .	265	101-2850 . . . . .	251
9X-0262 . . . . .	316	9X-8281 . . . . .	272		270		253
	364		273	033-6028 . . . . .	316	102-3596 . . . . .	▶74
9X-1343 . . . . .	425	9X-8873 . . . . .	226		320	102-5828 . . . . .	194
9X-1386 . . . . .	373	9X-8876 . . . . .	226	033-6033 . . . . .	210	102-5829 . . . . .	194
	374	9X-8880 . . . . .	168		212	102-5836 . . . . .	▶390
9X-1813 . . . . .	367	9X-9591 . . . . .	▶431		328	102-8802 . . . . .	29
	368	9X-9672 . . . . .	361	033-6783 . . . . .	113		310
	371	9X-9720 . . . . .	351	036-9821 . . . . .	383		313
9X-2021 . . . . .	8	9X-9730 . . . . .	352		415		316
	62	9X-9857 . . . . .	431	036-9823 . . . . .	383		320
	74	9Y-0810 . . . . .	39		397		374
9X-2022 . . . . .	159	9Y-0821 . . . . .	39		399		376
	160	9Y-1758 . . . . .	21		401		420
	162		198		403		421
9X-2027 . . . . .	49	9Y-3205 . . . . .	▶221		405		422
9X-2075 . . . . .	143	9Y-4294 . . . . .	444		407		423
9X-2085 . . . . .	212	9Y-4357 . . . . .	21		411		427
9X-2097 . . . . .	25		198		413	102-8803 . . . . .	310
	355	9Y-5611 . . . . .	193		415		313
	423	9Y-5615 . . . . .	193	039-7601 . . . . .	359		316
9X-2098 . . . . .	356	9Y-6089 . . . . .	33	045-4065 . . . . .	384		320
	357	9Y-7129 . . . . .	▶389		416		365
9X-2500 . . . . .	330	9Y-7332 . . . . .	309	061-7539 . . . . .	310		371
9X-3401 . . . . .	354	9Y-8075 . . . . .	213		313		423
	371	9Y-8076 . . . . .	213	061-8561 . . . . .	214	102-8806 . . . . .	310
9X-4576 . . . . .	85			061-9455 . . . . .	85		313
	88				88		316
	92				92		320
9X-4824 . . . . .	399	<b>0</b>			101	103-0712 . . . . .	80
	405				102	103-0733 . . . . .	▶237
	411	005-4173 . . . . .	10		104	103-4675 . . . . .	302
	413		12		105	103-8133 . . . . .	428
9X-6258 . . . . .	425		14		187	104-3560 . . . . .	42
9X-6451 . . . . .	121	005-4362 . . . . .	316		189	104-5687 . . . . .	437
	123		320		190		▶440
	125	030-7942 . . . . .	88		191	104-7995 . . . . .	194
	127		92	061-9458 . . . . .	50	105-1457 . . . . .	▶441
	129		310		121	105-3762 . . . . .	330
	131		313		123	105-4728 . . . . .	388
9X-6650 . . . . .	304		316		125	105-7704 . . . . .	320
9X-7287 . . . . .	85		320		127	106-1565 . . . . .	160
9X-7317 . . . . .	307	030-7946 . . . . .	12		129	107-5769 . . . . .	35
	308		14		131	107-5806 . . . . .	85
9X-7371 . . . . .	53		16	095-0705 . . . . .	165	107-5807 . . . . .	85
9X-7378 . . . . .	29		18	095-0706 . . . . .	63	107-6280 . . . . .	85
	43		51	095-9805 . . . . .	85		88
9X-7380 . . . . .	240		56	099-2374 . . . . .	16		92
	242	030-7947 . . . . .	310		18		159
	245		313		20		160
9X-7430 . . . . .	45		316	099-3649 . . . . .	99		161
9X-7737 . . . . .	329		320			107-9343 . . . . .	301
9X-8256 . . . . .	107	030-7950 . . . . .	113			108-1782 . . . . .	88

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	92	118-7572	163	127-5728	1	132-9830	206
108-3560	27	121-4134	▶336		▶33	133-0260	376
108-3561	27	121-5908	274	127-7213	143	133-0967	425
109-1145	222	123-0764	68	127-8683	149	133-0969	354
109-5290	85		117	128-0317	248		425
109-5292	85	123-0791	148	128-0382	39	133-1209	▶34
110-5035	401	123-0794	▶231	128-0383	39	133-5554	78
110-5145	85	123-0815	▶76	128-0384	39		79
110-8310	▶435	123-0816	▶77	128-0385	39	133-7047	201
111-2675	▶391	123-3981	164	128-0395	133	134-0597	▶359
112-9119	333	123-4357	164	128-0396	133	134-0670	▶360
113-8987	2	123-6948	310	128-0400	39	134-2540	425
	3		313	128-0401	39	134-5245	176
	4		316	128-0402	39		177
	▶35		320	128-0403	39		179
114-0268	359	123-8253	283	128-0405	▶149		182
114-3469	29		285	128-3415	57	135-6260	254
114-5988	444		287	128-3416	57	135-6261	254
115-2972	133		290	129-2181	51	135-7875	283
115-2973	133		292	129-2905	35		285
115-3004	▶166		293	129-2910	▶167		287
115-5852	444	124-0312	362	129-3855	168		290
115-7087	283	124-2661	▶160	129-4865	▶168		292
	285	124-2665	▶8	129-5617	57	135-8015	88
	287	124-2668	▶193	129-5618	57		92
	290	124-5043	223	129-6400	266		▶139
	292		226	129-7163	427	136-1955	113
	293	124-5049	51	129-7164	427	136-4183	49
116-1089	133		56	130-5300	423		326
116-1091	▶159	124-5268	309	130-5480	▶150	136-4278	207
116-1853	▶194	124-7311	▶143	130-5481	▶151	136-4295	144
116-3715	272	125-0032	▶309	130-5916	216	137-4936	336
	273	125-1276	79	130-5917	215	137-4937	338
116-5399	▶262	125-6535	384	130-9811	379	137-4938	338
116-5419	▶301		416		380	137-5541	310
116-5420	▶302	125-6536	384	131-3401	▶392		313
116-5436	1		416	131-3718	23		316
	▶296	125-6537	384		25		320
116-5437	▶303		416		26	138-2515	141
117-0165	1	125-7874	425	131-4850	▶393	138-2516	▶141
	▶134	125-7875	425	131-5526	425	138-2550	▶117
117-0176	▶5	125-7876	425	131-7700	▶215	138-2551	▶118
117-0177	▶148	125-9597	▶338	131-7701	▶216	138-2579	▶144
117-0178	▶31	126-0073	263	131-8029	▶217	139-6873	310
117-0180	▶230	126-0076	▶263	131-8149	219		313
117-0183	▶304	126-0079	▶264	131-8150	▶218		316
117-0206	▶6	126-0081	1	131-8151	▶219		320
117-0208	▶7		▶265	131-8154	218		▶329
117-1802	428	126-0112	▶232	131-9141	▶152	140-2175	▶361
117-2747	▶73	126-0116	201	131-9142	152	141-2375	303
117-2766	1		203	132-1224	336	142-2024	▶9
	▶49		207		338	143-4800	▶251
117-2771	1	126-0129	207	132-1230	336		252
	▶59	126-0146	51		338	143-7409	363
117-2773	▶67	126-0177	▶63	132-3250	118	144-2918	88
117-2774	▶75	126-1767	354	132-5559	361		92
117-2786	1	126-2368	338	132-5789	21	145-1750	226
	▶186	127-0929	263		274	146-5132	9
117-2787	1		264		310		61
	▶195		265		313	147-1231	▶432
117-2793	▶61		266		316	147-3723	88
117-2794	▶62		270		320		92
117-2795	▶142	127-2679	443		423	147-6907	220
117-8801	107	127-2680	▶443		425	147-6908	▶220
118-2136	444	127-5447	423		437	148-0202	437



# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
148-8406	226		316	175-9079	310		344
149-5548	▶163		320		313		346
150-1714	▶279	160-8184	53		316		349
150-8698	281		88		320	185-2651	340
150-8867	▶394		92	176-2543	392		342
	395	160-8185	81		393		344
151-1339	88	160-8192	133	176-6994	248		346
	92	160-8492	113	177-9778	299	185-2652	340
152-7254	88	161-0154	88	177-9953	▶342	185-2653	340
	92		92	178-6279	88		342
153-1325	88	161-0155	88		92		344
	92		92	178-9570	▶29		346
153-2707	425	161-1052	▶266		30	185-2654	340
153-7290	▶395	161-6958	283	179-0092	48		342
154-9023	182		285		49		344
155-2255	423		287	179-4787	97		346
155-2260	367		290	179-4790	16		349
	368		292		18	185-2655	340
	423		293	180-1538	21		342
155-2265	423	161-6960	283	180-5168	▶60		344
155-2270	30		285	180-9340	367		346
	310		287		425		349
	313		290	183-3409	265	185-2658	340
	316	161-6963	283		270		342
	320		285		271		344
	376		287	183-4189	1		346
	381		290		▶51		349
	382		292	183-4365	155	185-5294	▶344
	423		293		156	186-3735	365
155-2943	51	162-0177	226	183-6323	169		374
155-2946	51	162-2776	64	185-2638	340		420
	56		81		342		421
	▶145	162-7181	66		344		422
155-3843	▶78	162-7213	▶66		346	186-3736	381
155-4310	▶79	162-9267	▶433		349		382
155-4311	▶64	162-9527	274	185-2639	340	187-2034	333
155-4312	▶80	163-0424	74		342	187-8203	88
155-6615	▶164	163-0820	▶253		344		92
155-7415	392		254		346	187-8236	53
155-8725	393	163-1383	▶50		349		88
	▶252	163-7833	437	185-2640	340		92
156-2602	▶65	163-9361	190	185-2642	344	187-8237	88
156-3678	423	164-9609	364	185-2643	342		92
156-6175	362	165-6634	▶365	185-2644	340	187-8969	41
156-6198	85	166-0690	359		342	187-8972	39
157-0058	▶69	166-2904	45		344	188-2128	30
157-2608	▶70	167-8125	48		346	188-2872	▶169
157-2609	254		49		349	188-9429	376
158-4989	78	169-3345	▶340	185-2645	340	189-9377	278
158-5909	254	169-7397	310		342	190-0065	340
158-6099	14		313		344	190-0065	340
159-5255	427		316		346	190-3443	326
159-8049	427	170-5941	88	185-2646	340	192-1955	▶165
159-8050	354		92	185-2647	340	192-2058	165
159-9322	425	171-5338	238		342	192-2065	▶71
	8	171-5349	373		344	192-2073	146
	9		374		346	192-2074	▶146
160-2280	85	173-7126	300		349	192-7701	▶267
160-2283	159	174-0503	425	185-2648	340	192-7704	267
160-2323	160	174-1581	▶81		342	192-8982	▶48
	162	174-1584	▶99		344	193-2268	48
	354	174-1586	99		346	193-8570	405
160-7689	425	175-7314	142		349		407
	310	175-7321	166	185-2650	340		411
160-8124	313	175-7327	167		342		413
						194-5226	354

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	368		14		38	221-3934 . . . . .	198
	425	205-0626 . . . . .	346	212-9431 . . . . .	297	221-9357 . . . . .	107
194-5227 . . . . .	354		349		▶299	221-9362 . . . . .	39
	425	206-4202 . . . . .	333	212-9580 . . . . .	299	221-9392 . . . . .	46
194-6722 . . . . .	▶367	206-7337 . . . . .	316		▶300	222-2887 . . . . .	10
	369		320	213-1585 . . . . .	59		12
194-6725 . . . . .	▶368	206-8789 . . . . .	397	214-0586 . . . . .	47	222-2889 . . . . .	10
	370		399	214-3613 . . . . .	437		12
195-4778 . . . . .	316		401	214-6277 . . . . .	99		14
	320		403	214-6278 . . . . .	99	222-2899 . . . . .	55
195-5830 . . . . .	222	207-1520 . . . . .	393	215-1816 . . . . .	53	222-2900 . . . . .	▶10
197-0986 . . . . .	▶396		▶397	215-1817 . . . . .	53		▶12
197-7348 . . . . .	439	207-1524 . . . . .	▶399	215-1819 . . . . .	▶53	222-3088 . . . . .	2
197-8391 . . . . .	310	207-1532 . . . . .	▶401	215-5519 . . . . .	281		3
	313	207-1537 . . . . .	389	215-7350 . . . . .	310		4
	316		▶403		313		▶84
	320	207-1548 . . . . .	391		316	222-3089 . . . . .	101
	364		▶405		320		104
	▶379	207-1549 . . . . .	392	215-9005 . . . . .	▶121	222-3090 . . . . .	▶101
197-8392 . . . . .	364		▶407	215-9007 . . . . .	▶123	222-3091 . . . . .	274
	▶380	207-1556 . . . . .	390	217-3673 . . . . .	121	222-3092 . . . . .	1
197-8418 . . . . .	210		396		123		▶274
	211		▶410		125	222-3902 . . . . .	84
	212	207-1557 . . . . .	410		127	222-3904 . . . . .	248
197-8419 . . . . .	210		▶411		129	222-3905 . . . . .	84
	211	207-1562 . . . . .	1		131	222-3907 . . . . .	23
	212		▶413	217-3674 . . . . .	121		25
197-8820 . . . . .	▶346	207-8103 . . . . .	▶147		123		26
197-9257 . . . . .	133	207-8107 . . . . .	147		125	223-1609 . . . . .	▶174
197-9326 . . . . .	133	207-8572 . . . . .	41		127		175
197-9327 . . . . .	133	208-8375 . . . . .	362		129	223-1611 . . . . .	▶175
197-9330 . . . . .	42	208-9281 . . . . .	249		131		176
197-9642 . . . . .	55	209-5582 . . . . .	420	217-5232 . . . . .	16	223-1615 . . . . .	2
198-4963 . . . . .	46	209-7309 . . . . .	200		18		▶176
	▶58		201	217-5237 . . . . .	16		▶177
199-1368 . . . . .	82		203		18	223-3505 . . . . .	10
	83		205		20		12
199-4051 . . . . .	99		206	217-5240 . . . . .	16		14
199-7891 . . . . .	340		207		18		56
	342	210-1743 . . . . .	121		20	223-3875 . . . . .	2
	344		123	217-8205 . . . . .	83		3
	346		125	217-8206 . . . . .	▶83		4
	349		127	217-8946 . . . . .	265		▶135
199-8436 . . . . .	340		129		270	223-6546 . . . . .	41
	342		131	217-8947 . . . . .	264	223-7460 . . . . .	2
	344	210-1744 . . . . .	121	217-9060 . . . . .	182		4
	346		131	218-7270 . . . . .	84		▶23
	349	210-1745 . . . . .	121	218-7272 . . . . .	2	223-7462 . . . . .	2
			123		3		▶25
			127		4	223-7466 . . . . .	23
		210-1746 . . . . .	123		▶107	223-7467 . . . . .	25
			127	219-2384 . . . . .	359	223-7471 . . . . .	23
		210-4460 . . . . .	58		▶366		25
200-0875 . . . . .	▶82	211-0587 . . . . .	39	219-4458 . . . . .	133		26
200-5231 . . . . .	437		109	219-7440 . . . . .	1	223-7852 . . . . .	107
201-5926 . . . . .	226	211-0588 . . . . .	39		▶68	223-9143 . . . . .	248
201-6615 . . . . .	▶376		109	219-7461 . . . . .	423	223-9144 . . . . .	248
	377	211-6007 . . . . .	88	219-7462 . . . . .	1	223-9145 . . . . .	248
201-6616 . . . . .	378		1		▶423	223-9147 . . . . .	▶248
202-7475 . . . . .	110	211-6790 . . . . .	▶170	219-7468 . . . . .	85		249
202-9008 . . . . .	261		170	219-7469 . . . . .	▶85	224-0880 . . . . .	1
203-0348 . . . . .	▶268	211-6791 . . . . .	55	220-7133 . . . . .	▶197		▶111
203-0351 . . . . .	268	211-7895 . . . . .	203	220-7134 . . . . .	197	224-1270 . . . . .	45
	271	212-0431 . . . . .	207	220-8305 . . . . .	▶348	224-2410 . . . . .	45
203-1074 . . . . .	82		37	220-8678 . . . . .	300	224-2675 . . . . .	223
204-1611 . . . . .	12	212-7728 . . . . .					

2

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	225	227-2574 . . . . .	1	229-7252 . . . . .	125		▶357
224-3028 . . . . .	47		▶36		129	233-6205 . . . . .	281
224-3030 . . . . .	47	227-2576 . . . . .	36	229-8084 . . . . .	2	233-6742 . . . . .	310
224-3117 . . . . .	172	227-4002 . . . . .	423		3		313
224-3125 . . . . .	47	227-4239 . . . . .	45		4		316
224-3240 . . . . .	81	227-4892 . . . . .	177		▶120		320
224-3405 . . . . .	175		179	229-8437 . . . . .	▶356		▶327
	178	227-5075 . . . . .	240	229-8810 . . . . .	249	233-8517 . . . . .	85
	180		242	229-9377 . . . . .	269	234-4355 . . . . .	364
	183		245	229-9425 . . . . .	▶222	234-4409 . . . . .	1
224-3882 . . . . .	2	227-5518 . . . . .	1	229-9431 . . . . .	222		▶32
	3		▶278	230-0065 . . . . .	25	234-4410 . . . . .	▶238
	4	227-5722 . . . . .	310	230-0917 . . . . .	381	234-6757 . . . . .	▶283
	▶39		313		382		284
224-4140 . . . . .	111	227-5723 . . . . .	2	230-0960 . . . . .	428	234-6759 . . . . .	▶284
224-4418 . . . . .	157		3	230-0961 . . . . .	2	234-7843 . . . . .	1
224-4441 . . . . .	47		4		3		▶211
224-4501 . . . . .	▶97		▶326		4	235-0180 . . . . .	14
224-4991 . . . . .	324	227-6764 . . . . .	1		▶428	235-0181 . . . . .	14
	325		▶22	230-1103 . . . . .	▶102	235-0182 . . . . .	14
224-5383 . . . . .	▶272	227-8313 . . . . .	55	230-2603 . . . . .	240	235-0936 . . . . .	190
224-5389 . . . . .	272	227-9545 . . . . .	1		242	235-1071 . . . . .	211
	273		▶136		245		212
224-5539 . . . . .	198	227-9920 . . . . .	211	230-3518 . . . . .	274	235-1448 . . . . .	214
	199		212	230-3728 . . . . .	307	235-1451 . . . . .	214
224-5540 . . . . .	1	228-1616 . . . . .	85		308	235-2496 . . . . .	85
	▶198	228-3581 . . . . .	444	230-3775 . . . . .	307	235-3577 . . . . .	222
224-5757 . . . . .	223	228-4712 . . . . .	▶200		308	235-5264 . . . . .	427
	225	228-4713 . . . . .	200	230-4518 . . . . .	223	235-8105 . . . . .	427
224-6357 . . . . .	176	228-4947 . . . . .	377		225	235-8106 . . . . .	427
224-6360 . . . . .	223		378	230-4519 . . . . .	223	236-2660 . . . . .	223
	225	228-5810 . . . . .	249		225	236-4572 . . . . .	1
224-6361 . . . . .	240	228-5811 . . . . .	▶249	230-4523 . . . . .	▶223		▶2
	242		250	230-6355 . . . . .	1	236-4577 . . . . .	▶3
	245	228-5812 . . . . .	2		▶273	236-4580 . . . . .	▶4
224-7662 . . . . .	1		3	230-7149 . . . . .	364	236-4591 . . . . .	22
	▶247		4		▶377	236-5900 . . . . .	▶239
224-8170 . . . . .	▶210		▶250	231-0152 . . . . .	1	236-6993 . . . . .	222
224-8171 . . . . .	210	228-9655 . . . . .	349		▶225		▶442
224-8172 . . . . .	210	228-9656 . . . . .	349	231-0153 . . . . .	226	236-8745 . . . . .	223
225-5222 . . . . .	16	228-9657 . . . . .	349	231-0764 . . . . .	200		225
	18	229-2611 . . . . .	2	231-1975 . . . . .	1	237-0336 . . . . .	425
	20		3		▶364	237-1962 . . . . .	▶415
225-6948 . . . . .	210		4	231-3178 . . . . .	226	237-2706 . . . . .	310
	211		▶21	231-3492 . . . . .	2	237-4376 . . . . .	▶110
	212	229-2612 . . . . .	21		▶196		172
225-7003 . . . . .	249	229-2614 . . . . .	▶37	231-4543 . . . . .	102	237-6469 . . . . .	172
225-9551 . . . . .	88	229-2615 . . . . .	1	231-7753 . . . . .	20	237-7253 . . . . .	172
	92		▶38	231-9030 . . . . .	272	237-9314 . . . . .	310
225-9554 . . . . .	88	229-2616 . . . . .	37		273		313
	92	229-2617 . . . . .	38	232-4609 . . . . .	427		316
225-9556 . . . . .	1	229-3218 . . . . .	313	232-4610 . . . . .	427		320
	▶88	229-3567 . . . . .	272	232-5186 . . . . .	▶14	237-9749 . . . . .	183
	▶92		273	233-0077 . . . . .	316	237-9751 . . . . .	182
226-4755 . . . . .	107	229-5279 . . . . .	158		320	237-9753 . . . . .	1
226-4757 . . . . .	85	229-5664 . . . . .	444	233-0891 . . . . .	356		▶137
226-6478 . . . . .	133	229-5684 . . . . .	23		357	237-9754 . . . . .	1
226-7473 . . . . .	357		25	233-2514 . . . . .	▶269		▶270
	▶358		26	233-5220 . . . . .	▶213	237-9960 . . . . .	428
226-7683 . . . . .	348	229-5711 . . . . .	37		214	238-0296 . . . . .	327
	▶349		38	233-5221 . . . . .	2		▶328
227-0838 . . . . .	▶161	229-6171 . . . . .	▶125		3	238-1851 . . . . .	384
	162	229-6200 . . . . .	125		4		416
227-2573 . . . . .	101		129		▶214	238-2717 . . . . .	133
	104	229-6231 . . . . .	244	233-6191 . . . . .	1	238-2721 . . . . .	2

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
	3		287	244-2679 . . . . .	281	252-9525 . . . . .	113
	4		290	244-5931 . . . . .	92	252-9698 . . . . .	▶287
	▶133	240-8460 . . . . .	155	244-8674 . . . . .	1		289
238-4450 . . . . .	▶285	240-8461 . . . . .	▶155		▶226	253-1459 . . . . .	2
	286		157	244-8675 . . . . .	1		4
238-4453 . . . . .	1	240-8462 . . . . .	156		▶127		▶324
	▶286	240-8463 . . . . .	▶156	244-8676 . . . . .	1	253-1461 . . . . .	2
238-4756 . . . . .	107		157		▶187		3
238-6721 . . . . .	240	240-8721 . . . . .	310	244-8677 . . . . .	▶189		▶325
	242		313	245-0224 . . . . .	▶104	253-1736 . . . . .	10
	245		316	245-1099 . . . . .	1		▶16
238-6725 . . . . .	▶240		320		▶310	253-3734 . . . . .	3
238-6727 . . . . .	▶242	241-0835 . . . . .	▶157		▶313	253-4100 . . . . .	3
238-6728 . . . . .	240		172	245-4101 . . . . .	▶350		▶288
	242	241-0844 . . . . .	158		381	253-4518 . . . . .	▶289
	245	241-0845 . . . . .	157		382	254-3364 . . . . .	16
238-6730 . . . . .	240		▶158	245-6095 . . . . .	158		18
	245	241-0847 . . . . .	120	246-3144 . . . . .	39	254-3853 . . . . .	10
238-6732 . . . . .	242		157		109	254-9239 . . . . .	4
238-6874 . . . . .	▶72	241-0983 . . . . .	▶271	246-6645 . . . . .	313	255-0658 . . . . .	▶316
238-8720 . . . . .	1	241-4330 . . . . .	113		316	255-0696 . . . . .	16
	▶244	241-6168 . . . . .	247		320		18
239-1134 . . . . .	382	241-6388 . . . . .	113	247-7133 . . . . .	240	255-4160 . . . . .	12
	▶421	241-7601 . . . . .	▶355		242		▶18
239-2395 . . . . .	364	241-7608 . . . . .	▶55	247-9664 . . . . .	▶178	255-4161 . . . . .	18
	▶369	241-8372 . . . . .	▶420		179	255-4647 . . . . .	▶112
239-2396 . . . . .	310	241-9092 . . . . .	2	247-9665 . . . . .	▶179	255-4648 . . . . .	112
	313		4	248-4840 . . . . .	268	255-4656 . . . . .	▶131
	316		▶275		269	255-5285 . . . . .	356
	320	242-1401 . . . . .	157		271	255-8140 . . . . .	▶290
	364	242-1811 . . . . .	58	248-4841 . . . . .	268		291
	▶370	242-2461 . . . . .	362		269	255-9253 . . . . .	▶305
239-2397 . . . . .	364	242-3360 . . . . .	292		271	255-9254 . . . . .	▶306
	▶378		293		280	256-9651 . . . . .	76
239-3478 . . . . .	▶371	242-7418 . . . . .	157	248-5513 . . . . .	245	256-9652 . . . . .	76
	372	242-7499 . . . . .	281	249-0712 . . . . .	▶307	257-2015 . . . . .	107
239-5024 . . . . .	362	243-0452 . . . . .	2		324	257-2170 . . . . .	▶45
239-5025 . . . . .	▶362	243-1667 . . . . .	1	249-0713 . . . . .	▶308		47
	434		▶245		325	257-4095 . . . . .	46
239-5674 . . . . .	364	243-3019 . . . . .	▶115	249-2457 . . . . .	285		▶47
	▶372	243-3020 . . . . .	115	250-1882 . . . . .	▶190	257-4183 . . . . .	▶429
239-7359 . . . . .	41	243-3021 . . . . .	115	250-1883 . . . . .	190	257-5812 . . . . .	56
239-8135 . . . . .	240	243-3022 . . . . .	115	250-6143 . . . . .	10	257-7269 . . . . .	▶205
	242	243-3023 . . . . .	▶119		12	257-7270 . . . . .	205
	245	243-3024 . . . . .	119	250-6591 . . . . .	113	257-9346 . . . . .	14
240-1856 . . . . .	26	243-3025 . . . . .	119	250-8346 . . . . .	280		▶20
240-1880 . . . . .	107	243-3026 . . . . .	1	251-1005 . . . . .	110	257-9491 . . . . .	▶1
240-2636 . . . . .	110		▶297	251-4314 . . . . .	107	257-9950 . . . . .	12
240-3277 . . . . .	131	243-3027 . . . . .	297	251-6668 . . . . .	178	258-4484 . . . . .	▶199
240-4815 . . . . .	▶212	243-3028 . . . . .	297		180	259-1905 . . . . .	▶30
240-5881 . . . . .	113	243-3029 . . . . .	▶437	251-6669 . . . . .	177	259-2186 . . . . .	45
240-6054 . . . . .	▶354	243-3030 . . . . .	437		▶180	260-1844 . . . . .	381
240-7271 . . . . .	2	243-3031 . . . . .	1	251-9356 . . . . .	▶129		▶422
	3		▶201	252-0619 . . . . .	26	260-3931 . . . . .	▶381
	4		▶203	252-0620 . . . . .	3	260-3933 . . . . .	▶382
	▶43	243-3032 . . . . .	▶254		▶26	260-6883 . . . . .	▶182
240-7272 . . . . .	2	243-3033 . . . . .	254	252-2180 . . . . .	▶41	260-6884 . . . . .	182
	3	243-3034 . . . . .	254		42		▶183
	4	243-3820 . . . . .	▶434	252-2181 . . . . .	▶42	262-2762 . . . . .	1
	▶172	243-6717 . . . . .	39		43		▶56
240-7679 . . . . .	2		▶109	252-2685 . . . . .	239	262-2878 . . . . .	358
	3	244-2674 . . . . .	281	252-5215 . . . . .	203	262-4166 . . . . .	▶138
	4	244-2676 . . . . .	281		207	263-4909 . . . . .	105
	▶46	244-2677 . . . . .	281	252-6255 . . . . .	▶162	263-7214 . . . . .	▶427
240-7988 . . . . .	283	244-2678 . . . . .	281	252-8402 . . . . .	113	264-1416 . . . . .	▶291

# PART NUMBER INDEX

Part	Page	Part	Page	Part	Page	Part	Page
264-1417 . . . . .	▶292						
	294						
264-1418 . . . . .	▶293						
	295						
264-1425 . . . . .	▶294						
264-1426 . . . . .	▶295						
264-2354 . . . . .	425						
264-2357 . . . . .	▶425						
264-2952 . . . . .	2						
	▶276						
264-4643 . . . . .	▶105						
264-7790 . . . . .	▶113						
265-1111 . . . . .	133						
265-1113 . . . . .	133						
266-0771 . . . . .	205						
267-1355 . . . . .	▶280						
267-1360 . . . . .	280						
	▶281						
267-1413 . . . . .	▶320						
267-2170 . . . . .	281						
267-3473 . . . . .	▶206						
267-3474 . . . . .	206						
267-3475 . . . . .	206						
267-3478 . . . . .	425						
269-2860 . . . . .	110						
269-2862 . . . . .	110						
269-2864 . . . . .	110						
269-8598 . . . . .	▶363						
270-0508 . . . . .	▶191						
270-1758 . . . . .	▶207						

# MEMORANDA







**SEBP4127-06**

**C11 Industrial Engine**

**GLS1-Up**