

# Parts Manual



See "General Information"  
for New Parts Manual  
Features.

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## **G3612 INDUSTRIAL**

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BKE252 (Engine) BDRRR00 (ESO)

This Parts Manual is also available in .PDF Format on Compact Disc  
(CD-ROM) - Caterpillar Form No. SERL3600.

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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: \_\_\_\_\_

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# GENERAL INFORMATION

## 1. ENGINE IDENTIFICATION

Caterpillar 3600 family of engines are identified with serial numbers and Engine Shipping Order Numbers. The serial number plate 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 of 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.

## SEE TECHNICAL MANUALS FOR ALL PACKAGING ARRANGEMENTS

This manual is shipped with all 3600 Engines and contains major components not serviced by Caterpillar. Contact Lafayette plant for further information.

Telephone: 765-448-2200

7:30 AM - 4:00 PM EST USA

Internet e-mail:

[LECServicesupport@cat.com](mailto:LECServicesupport@cat.com)

Website:

<https://lecservicesupport.cat.com>

# 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 for 3600 Series Engines include:

CONNECTING RODS  
CYLINDER HEADS  
FUEL INJECTORS  
OIL COOLERS  
OIL PUMPS  
WATER PUMPS

Check with your local Caterpillar Dealer for the availability of Remanufactured Components.



# 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.

# MAINTENANCE PARTS

DESCRIPTION	PART NUMBER	QTY	WHERE USED	PAGE
<b>AIR INLET AND EXHAUST SYSTEM</b>				
ELEMENT AS-PRIMARY (AIR CLEANER)	105-9741	2	AIR CLEANER GP	104
<b>BASIC ENGINE</b>				
CAP GP-ENGINE OIL FILLER	7E-1659	1	COVER GP-CYLINDER BLOCK	11
SEAL-O-RING (VALVE COVER)	6V-3602	1	COVER GP-VALVE MECHANISM	19
	8T-8883	1	COVER GP-VALVE MECHANISM	19
<b>COOLING SYSTEM</b>				
REGULATOR-OIL TEMPERATURE (85-DEG C)	120-9453	4	LINES GP-OIL COOLER	85
REGULATOR-WATER TEMPERATURE	174-3504	8	REGULATOR GP-TEMPERATURE	96
	204-6708	8	REGULATOR GP-TEMPERATURE	98
SEAL-LIP TYPE	3S-9643	4	LINES GP-OIL COOLER	85
SEAL-LIP TYPE (TEMPERATURE REGULATOR)	3S-9643	8	REGULATOR GP-TEMPERATURE	96
		8	REGULATOR GP-TEMPERATURE	98
<b>ELECTRICAL AND STARTING SYSTEM</b>				
SPARK PLUG (ENGINE IGNITION)	194-8518	12	IGNITION GP-GAS ENGINE	151
<b>FUEL SYSTEM</b>				
BREATHER (HYDRAULIC TANK)	143-4880	1	TANK GP-HYDRAULIC	141
CAP-FILLER (HYDRAULIC TANK)	7H-1447	1	TANK GP-HYDRAULIC	141
SEAL-O-RING	5D-5957	1	PUMP GP-GEAR	138
<b>LUBRICATION SYSTEM</b>				
BREATHER AS (CRANKCASE)	4W-3027	4	BREATHER GP	57
CAP-FILLER (ENGINE OIL)	4P-6979	1	CAP GP-ENGINE OIL FILLER	58
ELEMENT AS-OIL FILTER	179-1502	6	FILTER GP-ENGINE OIL	59
FILTER ELEMENT AS-OIL	1G-8878	1	FILTER GP-ENGINE OIL	61
SCREEN AS-SUCTION	9Y-3307	1	LINES GP-ENGINE OIL	63
SEAL-O-RING	6V-3602	4	BREATHER GP	57
SEAL-O-RING (VALVE COVER)	8T-8883	4	BREATHER GP	57
<b>OPERATOR STATION</b>				
FUSE (15-AMPERE)	036-5774	1	BOX GP-CONTROL PANEL	191
FUSE (6-AMPERE)	233-8091	1	BOX GP-CONTROL PANEL	191
LAMP (CLEAR)	3E-1814	1	BOX GP-CONTROL PANEL	195
LAMP (GREEN)	153-5040	1	BOX GP-CONTROL PANEL	195
LAMP-INDICATOR (AMBER)	153-5042	1	BOX GP-CONTROL PANEL	195
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# ENGINE SHIPPING ORDER

## Lafayette 3612 Engine

ESO: BDRR00  
AR: 176-3612

S/N: BKE252  
ENGR MDL: E539

STATUS: F  
SALES MDL: 3612SITA

PART NUMBER	PRODUCT LEVEL	PART NAME	QTY	CHANGE LEVEL
1W-0798	1	FILTER GP-ENGINE OIL	1	23
4P-9185	2	COVER AS	1	00
4W-0379	2	INDICATOR AS	2	01
7C-1124	2	TUBE AS	1	00
7C-1128	2	SHAFT AS	1	00
7W-2970	2	SUPPORT AS	1	01
1W-0887	1	COOLER GP-ENGINE OIL	1	06
1W-0899	1	PUMP GP-PRELUBRICATION	1	07
1W-4776	2	PUMP GP-PRELUBRICATION	1	00
2W-0642	1	LINES GP-AIR	1	04
2W-2678	1	CONNECTION GP-WATER	2	02
2W-2680	1	MOUNTING GP-BELLOWS	2	07
2W-2681	1	FITTING GP-EXHAUST	2	04
2W-2682	1	FLANGE GP-EXHAUST	2	04
2W-2742	1	COVER GP-ENGINE LIFTING EYE	2	00
4P-2268	1	DRAIN GP-ENGINE OIL	1	01
4W-0361	1	LINES GP-WATER	1	11
8N-9071	2	VALVE AS	1	00
4W-0675	1	PUMP GP-ENGINE OIL	1	01
4W-0674	2	PUMP GP-ENGINE OIL	1	03
4W-3471	1	LINES GP-AIR	1	04
4W-8071	1	CONNECTION GP-WATER	2	03
5P-2506	1	LITERATURE GP	1	00
6I-2075	1	FLYWHEEL GP	1	02
7C-5269	1	MOUNTING GP-ENGINE	1	04
7C-7950	1	LIFTING GP-ENGINE	1	03
7E-8181	1	PUMP GP-WATER	2	03
7E-8179	2	PUMP GP-WATER	2	08
7W-0014	1	STARTING MOTOR GP-AIR	1	02
4W-6273	2	SUPPORT AS-MOTOR	2	01
7W-0016	2	STARTING MOTOR GP-AIR	2	00
7W-0127	1	DAMPER GP	1	04
7C-2122	2	DAMPER GP	2	02
7W-6583	1	GUARD GP-DAMPER	1	03
* 7X-1414	1	CABLE AS-ADAPTER	1	00
9Y-1851	1	GEAR GP-RING	1	00
9Y-3300	1	LINES GP-LUBE OIL	1	03
9Y-3303	1	LINES GP-ENGINE OIL	1	00
9Y-4252	1	BARRING GP	1	01
9Y-4254	2	BRACKET AS	1	00
105-3177	1	LINES GP-OIL COOLER	1	07
109-9717	1	MOUNTING GP-ENGINE	1	00
116-3767	1	SILENCER GP-AIR STARTING	2	02
122-2083	1	ORIFICE	12	00
124-8584	1	REGULATOR GP-TEMPERATURE	1	03
132-9325	1	AIR CLEANER GP	2	00

\* SEE TECHNICAL MANUAL FOR DRAWING REFERENCE

# ENGINE SHIPPING ORDER

## Lafayette 3612 Engine *(contd.)*

ESO: BDRR00  
AR: 176-3612

S/N: BKE252  
ENGR MDL: E539

STATUS: F  
SALES MDL: 3612SITA

PART NUMBER	PRODUCT LEVEL	PART NAME	QTY	CHANGE LEVEL
132-9324	2	PRECLEANER GP	6	00
132-9326	2	AIR CLEANER GP	2	00
145-5660	1	ELBOW GP-AIR INLET	2	02
178-4977	2	ELBOW GP-AIR INLET	2	02
149-3992	1	LINES GP-AIR STARTING	1	04
119-6284	2	LUBRICATOR GP-AIR MOTOR	2	01
119-6282	3	LUBRICATOR GP-AIR MOTOR	2	00
119-6283	3	LUBRICATOR GP-AIR MOTOR	2	00
229-5867	2	STRAINER GP-AIR LINES	2	01
159-1527	1	AFTERCOOLER GP-TREATED WATER	1	05
168-5027	1	LINES GP-WATER	1	01
* 171-4400	1	ADAPTER GP-COMMUNICATION	1	04
176-3612	1	ENGINE AR	1	05
1W-0790	2	GEAR GP-FRONT	1	09
1W-0804	2	VALVE GP-PRIORITY	1	08
1W-3382	2	COVER GP-GEAR INSPECTION	1	05
4P-3760	2	VALVE GP-SOLENOID	1	07
9Y-6992	3	VALVE GP-SOLENOID	1	05
103-0692	4	VALVE GP-SOLENOID	1	07
4W-0012	2	MOUNTING GP-FUEL FILTER	1	01
4W-0365	2	COVER GP-FRONT HOUSING	1	01
4W-0698	2	COVER GP-CAMSHAFT	1	01
7C-0400	2	CYLINDER HEAD GP	12	18
219-2955	3	CYLINDER HEAD GP	12	00
219-2954	4	CYLINDER HEAD AS	12	01
7C-0403	2	COVER GP-VALVE MECHANISM	8	06
7C-0408	2	CAMSHAFT GP	1	04
143-4118	3	CAMSHAFT AS	1	05
7E-7155	4	JOURNAL AS-CAMSHAFT	1	00
7E-7156	4	JOURNAL AS-CAMSHAFT	2	00
7E-7157	4	JOURNAL AS-CAMSHAFT	2	00
7E-7166	4	SHAFT AS-DRIVE	1	00
150-4911	4	JOURNAL AS-CAMSHAFT	1	00
143-4119	3	CAMSHAFT AS	1	03
7E-7061	4	SHAFT AS	1	00
7E-7155	4	JOURNAL AS-CAMSHAFT	1	00
7E-7156	4	JOURNAL AS-CAMSHAFT	2	00
7E-7157	4	JOURNAL AS-CAMSHAFT	2	00
7C-0417	2	VALVE MECHANISM GP	12	15
7C-0418	3	LIFTER GP-VALVE	12	07
153-3932	4	GUIDE AS-LIFTER	12	00
153-3931	5	ADAPTER AS	12	00
7C-0419	3	ROCKER ARM GP	12	21
1W-8410	4	SHAFT AS-ARM	12	03
7C-0444	2	PISTON & ROD GP	12	14

\* SEE TECHNICAL MANUAL FOR DRAWING REFERENCE

# ENGINE SHIPPING ORDER

## Lafayette 3612 Engine *(contd.)*

**ESO:** BDRR00  
**AR:** 176-3612

**S/N:** BKE252  
**ENGR MDL:** E539

**STATUS:** F  
**SALES MDL:** 3612SITA

PART NUMBER	PRODUCT LEVEL	PART NAME	QTY	CHANGE LEVEL
195-5917	3	CONNECTING ROD GP	12	03
7C-8431	2	BREATHER GP	1	06
7E-9610	2	SEAL GP-CRANKSHAFT	1	06
7W-0146	2	PAN GP-OIL	1	09
9Y-9926	2	GUIDE GP-OIL LEVEL GAUGE	1	00
105-3182	2	LINES GP-ENGINE OIL	1	10
116-6965	2	PUMP GP-GEAR	1	03
184-6957	3	PUMP GP-GEAR	1	00
117-3195	2	TANK & MTG GP-HYDRAULIC	1	02
143-4770	3	TANK GP-HYDRAULIC	1	04
127-1119	2	MOUNTING GP-ENGINE	1	00
4W-6277	3	SUPPORT AS	6	02
134-8347	2	HOUSING GP-FRONT	1	02
7C-1897	3	SENSOR GP-SPEED	1	04
4P-2351	3	HOUSING GP-FRONT	1	06
149-0560	2	GEAR GP-REAR	1	02
150-5489	2	LINES GP-GAS	1	05
150-6796	2	COVER GP-CYLINDER BLOCK	1	04
7E-1659	3	CAP GP-ENGINE OIL FILLER	1	01
153-2958	2	CYLINDER BLOCK GP	1	04
153-2956	3	CYLINDER BLOCK AS	1	03
214-6058	2	CYLINDER BLOCK GP	1	00
214-6057	3	CYLINDER BLOCK AS	1	01
153-2960	2	COVER GP-CYLINDER BLOCK	1	02
159-4641	2	COVER GP-REAR HOUSING	1	03
159-9408	2	DRIVE GP-TIMING & SPEED	1	01
191-5424	2	CRANKSHAFT GP	1	01
1W-8260	3	BRACKET AS-CRANKSHAFT	1	01
195-3910	2	MOUNTING GP-TURBOCHARGER	1	03
195-3914	2	LINES GP-TURBOCHARGER OIL	1	02
195-3916	2	LINES GP-WATER	1	03
195-3919	2	SHIELD GP-MANIFOLD	1	05
195-5915	2	COVER GP-CAMSHAFT	1	01
195-6243	2	BOX GP-CONTROL PANEL	1	01
195-6244	3	BOX GP-CONTROL PANEL	1	05
210-9470	4	CONTROL GP-ENGINE ELECTRONIC	1	02
211-5228	5	CONTROL GP-UNPROGRAMMED	1	02
207-5399	4	HARNESS AS-PANEL	1	01
197-0064	4	BOX AS-JUNCTION	1	01
195-6245	2	SENSOR GP-COMBUSTION	1	04
136-7346	3	MODULE GP-ELECTRONIC	2	07
242-8988	4	MODULE GP-ELECTRONIC	2	00
152-0807	3	SENSOR GP-TEMPERATURE	12	04
116-2649	3	SENSOR GP-TEMPERATURE	12	02
195-6246	2	IGNITION GP-GAS ENGINE	1	02

\* SEE TECHNICAL MANUAL FOR DRAWING REFERENCE



# ENGINE SHIPPING ORDER

## Lafayette 3612 Engine *(contd.)*

ESO: BDRR00  
AR: 176-3612

S/N: BKE252  
ENGR MDL: E539

STATUS: F  
SALES MDL: 3612SITA

PART NUMBER	PRODUCT LEVEL	PART NAME	QTY	CHANGE LEVEL
195-6247	2	WIRING GP-ENGINE	1	04
195-6053	3	HARNESS AS-ENGINE	1	02
207-6859	3	SENSOR GP-PRESSURE	1	01
211-3504	3	SWITCH AS-PRESSURE	1	01
130-8299	3	SENSOR GP-TEMPERATURE	3	02
130-9811	3	SENSOR GP-TEMPERATURE	1	05
149-5150	3	SENSOR GP-PRESSURE	1	04
162-7289	3	CONTROL GP-GAS PRESSURE	1	04
211-6713	4	CONTROL GP-GAS PRESSURE	1	00
162-7292	5	CONTROL GP-GAS PRESSURE	1	02
163-8523	3	SENSOR GP-PRESSURE	2	03
191-8305	3	SENSOR GP-SPEED	1	00
195-2431	3	SENSOR GP-KNOCK	6	02
196-4653	2	HOUSING GP-REAR	1	05
206-6539	2	BYPASS GP-EXHAUST	1	04
133-8501	3	COVER AS	1	00
211-8175	3	ACTUATOR GP-ELECTRONIC	1	01
211-8176	4	ACTUATOR GP-ELECTRONIC	1	01
206-6545	2	LINES GP-ENGINE OIL	1	00
138-6144	3	FILTER GP-ENGINE OIL	1	03
211-9944	2	CONTROL GP-FUEL	1	05
7E-8253	3	VALVE GP-CONTROL	1	01
211-8175	3	ACTUATOR GP-ELECTRONIC	1	01
211-8176	4	ACTUATOR GP-ELECTRONIC	1	01
213-6789	2	MANIFOLD GP-EXHAUST	1	01
218-3893	2	PRECHAMBER GP	12	03
188-3081	1	MODULE GP-SYSTEM COMMUNICATION	1	00
188-3080	2	MODULE GP-SYSTEM COMMUNICATION	1	02
197-0667	1	TURBOCHARGER GP	2	01
197-4090	1	LINES GP-WATER	1	02
202-3227	1	ADAPTER GP-AIR CLEANER	1	01
204-6689	1	BOX GP-CONTROL PANEL	1	02
168-5274	2	MODULE GP-DISPLAY	1	08
200-6198	2	MODULE GP-KEYPAD	1	01
204-6687	2	BOX GP-CONTROL PANEL	1	01
206-6540	1	LINES GP-AIR	1	01
6I-0733	2	HOUSING AS	1	02
211-8175	2	ACTUATOR GP-ELECTRONIC	1	01
211-8176	3	ACTUATOR GP-ELECTRONIC	1	01
206-6544	1	HARNESS AS	1	01
215-3891	1	REGULATOR GP-TEMPERATURE	1	00
216-8696	1	LINES GP-AIR	1	03
4W-2100	2	VALVE GP-PRESSURE REDUCING	1	02
7W-0522	2	LUBRICATOR GP-AIR MOTOR	1	02
164-0717	2	VALVE GP-SOLENOID	1	01

\* SEE TECHNICAL MANUAL FOR DRAWING REFERENCE

# ENGINE SHIPPING ORDER

## Lafayette 3612 Engine (contd.)

ESO: BDRRR00  
AR: 176-3612

S/N: BKE252  
ENGR MDL: E539

STATUS: F  
SALES MDL: 3612SITA

PART NUMBER	PRODUCT LEVEL	PART NAME	QTY	CHANGE LEVEL
217-3856	1	LINES GP-AIR STARTING	1	00
164-0717	2	VALVE GP-SOLENOID	1	01
6L-4502	1	CHART-PLATE & FILM	1	539
* 257-8773	1	PACKAGING AR	1	00

\* SEE TECHNICAL MANUAL FOR DRAWING REFERENCE

# MEMORANDA

# BASIC ENGINE

## 9Y-4252 BARRING GP (CHG -00, -01, -01D1, -01D2)

SMCS - 1235

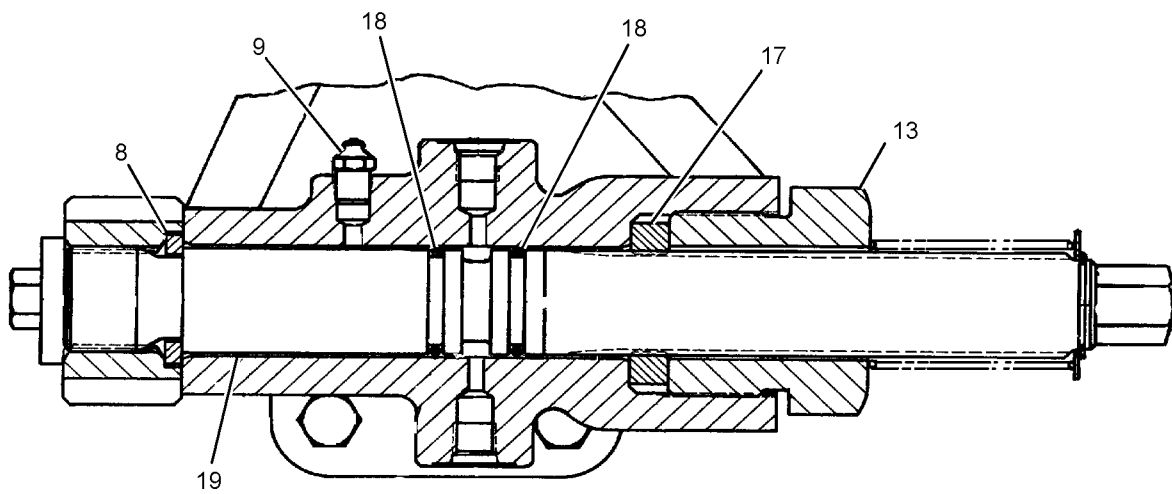
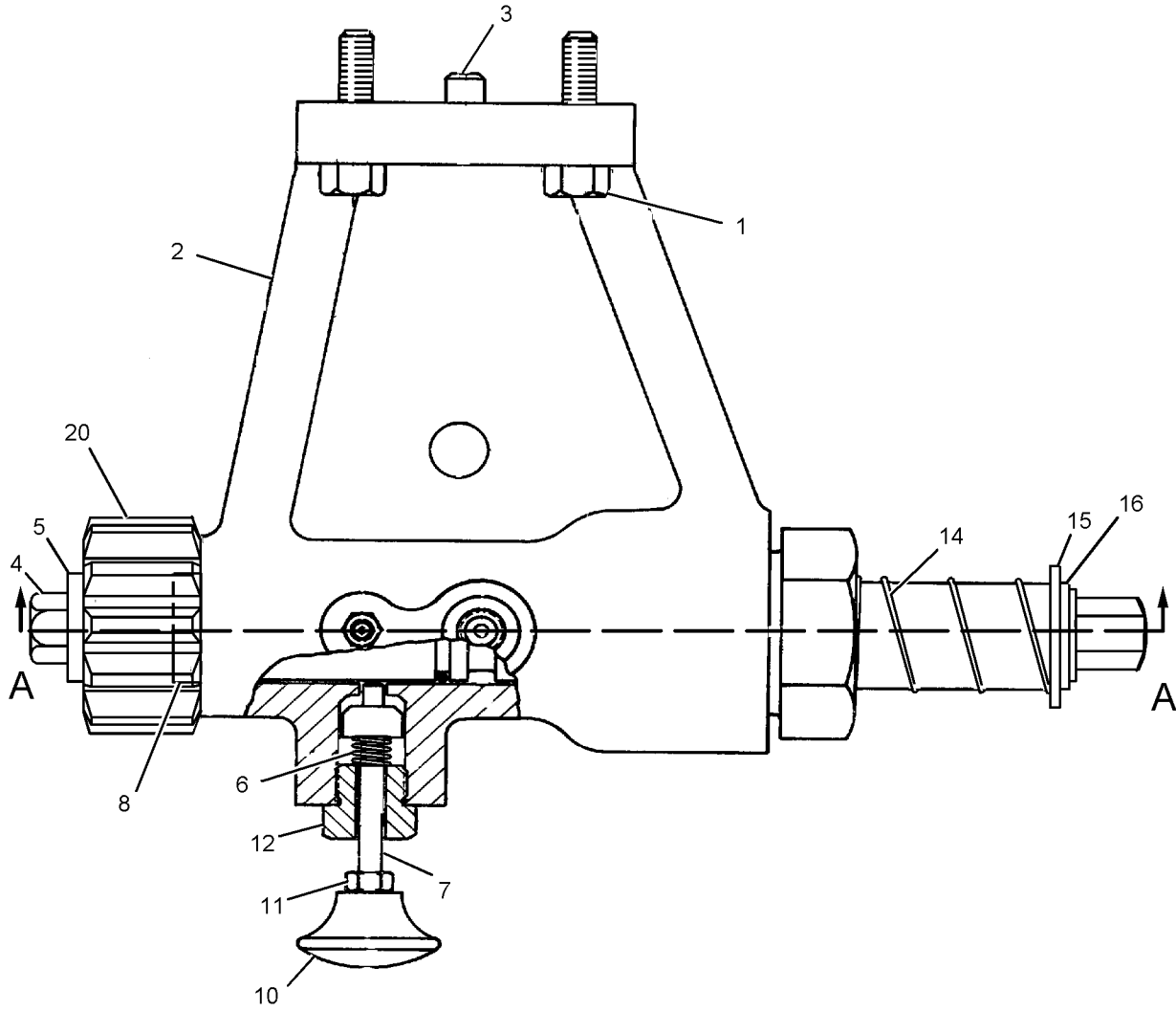
i02030838

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1585	4	BOLT (1/2-13X1.5-IN)						
	2	1	9Y-4254	1	BRACKET AS						
	3	1	6V-3538	2	DOWEL						
	4	1	0S-1594	1	BOLT (3/8-16X1-IN)						
	5	1	1P-7346	1	WASHER-HARD (10.2X35X6-MM THK)						
	6	1	5L-1091	1	SPRING						
	7	1	7W-0195	1	STEM						
	8	1	4W-9551	1	RETAINER						
	9	1	3B-8489	1	FITTING-GREASE						
	10	1	5H-9573	1	KNOB-CHOKE						
	11	1	9S-8748	1	NUT-FULL (1/4-28-THD)						
	12	1	7W-0196	1	GUIDE						
	13	1	7W-0194	1	GUIDE						
	14	1	4T-4027	1	SPRING						
	15	1	9S-1328	1	WASHER (26X41X1.6-MM THK)						
	16	1	6H-6109	1	RING-SNAP						
	17	1	7W-0193	1	SPACER (26.65X44X10-MM THK)						
	18	1	5P-3456	2	SEAL-O-RING						
	19	1	9Y-0539	1	SHAFT-BARRING						
	20	1	4W-9549	1	PINION (11-TEETH)						

# BASIC ENGINE

9Y-4252 BARRING GP (contd.)

i02030838



SECTION A-A  
<END>

GRAPHIC #1

g01047403

# BASIC ENGINE

## 143-4118 CAMSHAFT AS (CHG -04, -05)

STANDARD ROTATION. LEFT HAND SIDE

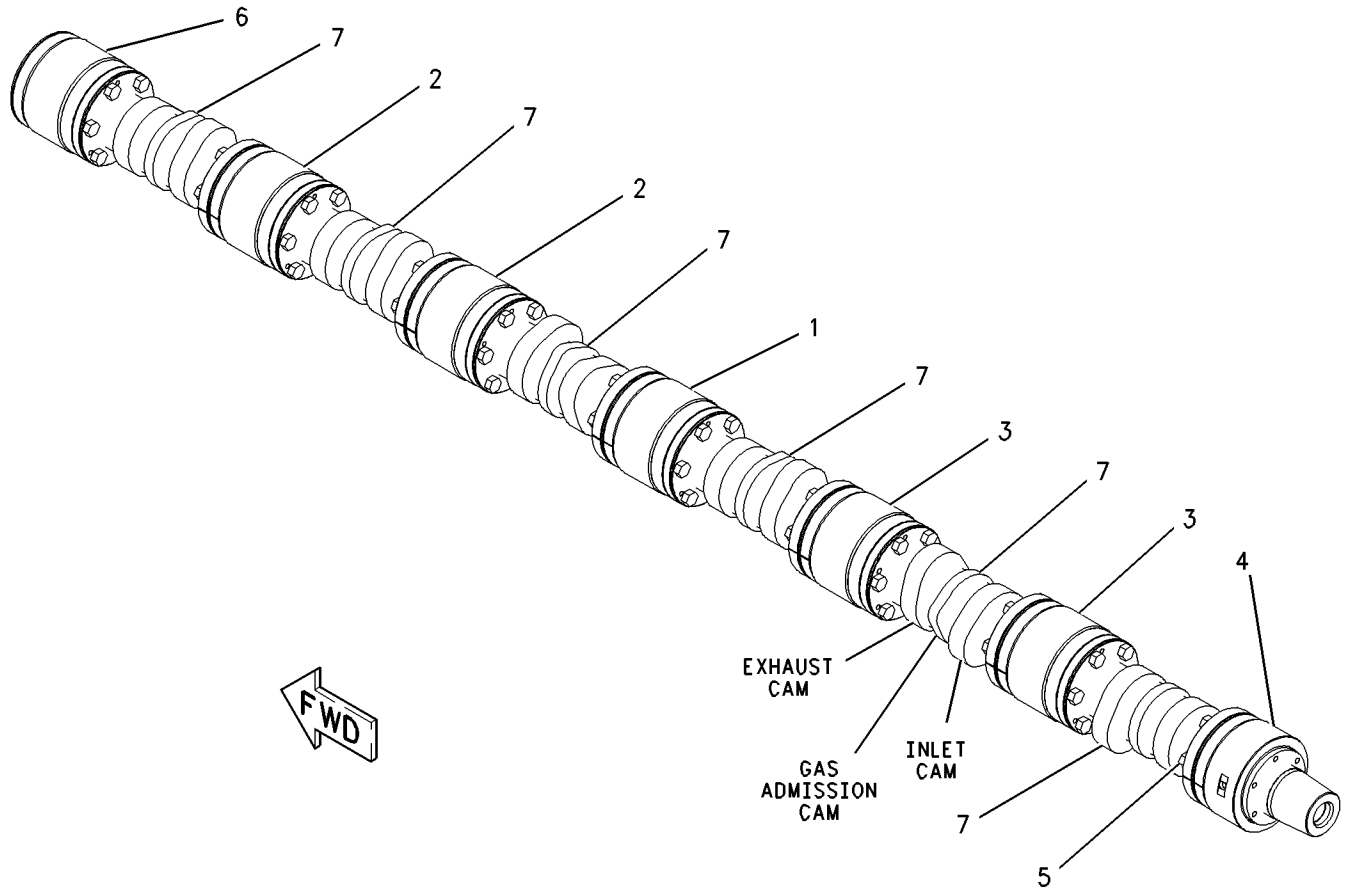
PART OF 7C-0408 CAMSHAFT GP

SMCS-1210

i01359074

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-7155	1	JOURNAL AS-CAMSHAFT						
		1	6V-3538	2	DOWEL (20MM OAL)						
R		1	7E-7153	1	JOURNAL-CAMSHAFT						
	2	1	7E-7156	2	JOURNAL AS-CAMSHAFT						
					(EACH INCLUDES)						
		1	6V-3538	2	DOWEL (20MM OAL)						
R		1	7E-7153	1	JOURNAL-CAMSHAFT						
	3	1	7E-7157	2	JOURNAL AS-CAMSHAFT						
					(EACH INCLUDES)						
		1	6V-3538	2	DOWEL (20MM OAL)						
R		1	7E-7153	1	JOURNAL-CAMSHAFT						
	4	1	7E-7166	1	SHAFT AS-DRIVE						
		1	6V-3538	1	DOWEL (20MM OAL)						
	5	1	9X-6380	72	BOLT (5/8-11 X 1.5 IN)						
	6	1	150-4911	1	JOURNAL AS-CAMSHAFT						
		1	6V-3538	2	DOWEL (20MM OAL)						
R		1	7E-7153	1	JOURNAL-CAMSHAFT						
	7	1	176-3209	6	CAMSHAFT						

R-REMFG PART MAY BE AVAILABLE



GRAPHIC #1

<END>

g00717461

# BASIC ENGINE

## 143-4119 CAMSHAFT AS (CHG -02, -03)

STANDARD ROTATION. RIGHT HAND SIDE

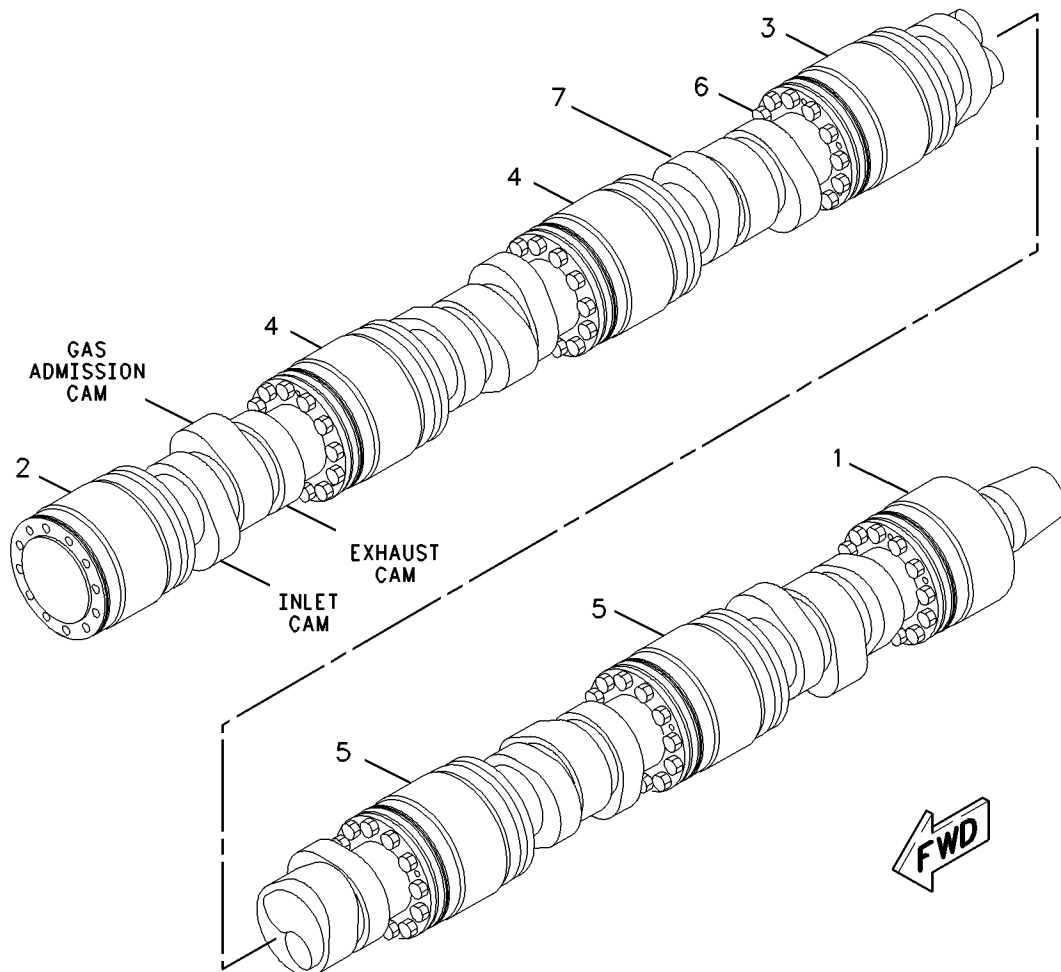
PART OF 7C-0408 CAMSHAFT GP

SMCS-1210

i01922201

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
R	1	1	7E-7061	1	SHAFT AS						
		1	6V-3538	1	DOWEL						
R	2	1	7E-7064	1	JOURNAL - CAMSHAFT						
	3	1	7E-7155	1	JOURNAL AS - CAMSHAFT						
		1	6V-3538	2	DOWEL						
R		1	7E-7153	1	JOURNAL - CAMSHAFT						
	4	1	7E-7156	2	JOURNAL AS - CAMSHAFT						
					(EACH INCLUDES)						
		1	6V-3538	2	DOWEL						
R		1	7E-7153	1	JOURNAL - CAMSHAFT						
	5	1	7E-7157	2	JOURNAL AS - CAMSHAFT						
					(EACH INCLUDES)						
		1	6V-3538	2	DOWEL						
R		1	7E-7153	1	JOURNAL - CAMSHAFT						
	6	1	9X-6380	72	BOLT (5/8-11 X 1.5 IN)						
	7	1	176-3213	6	CAMSHAFT						

R-REMFG PART MAY BE AVAILABLE



GRAPHIC #1

<END>

g00717588

# BASIC ENGINE

## 7C-0408 CAMSHAFT GP (CHG -01 THRU -04)

SMCS-1210

i01547760

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1,2	<b>7W-0592</b>	2	PLATE-THRUST						
	2	1,2	<b>7W-0855</b>	2	BOLT (5/8-11 X 3IN)						
CY	3	1	143-4118	1	CAMSHAFT AS						3
CY	4	2	143-4119	1	CAMSHAFT AS						4
	5	1,2	<b>177-7760</b>	2	PLATE-CAM						
	6	1,2	<b>0S-1588</b>	12	BOLT (3/8-16X1.25 IN)						
	7	1,2	<b>3B-1915</b>	6	BOLT (3/8-16X1.37 IN)						
	8	1,2	<b>3V-3308</b>	6	WASHER-HARD (10.2X20.5X2.5MM THK)						

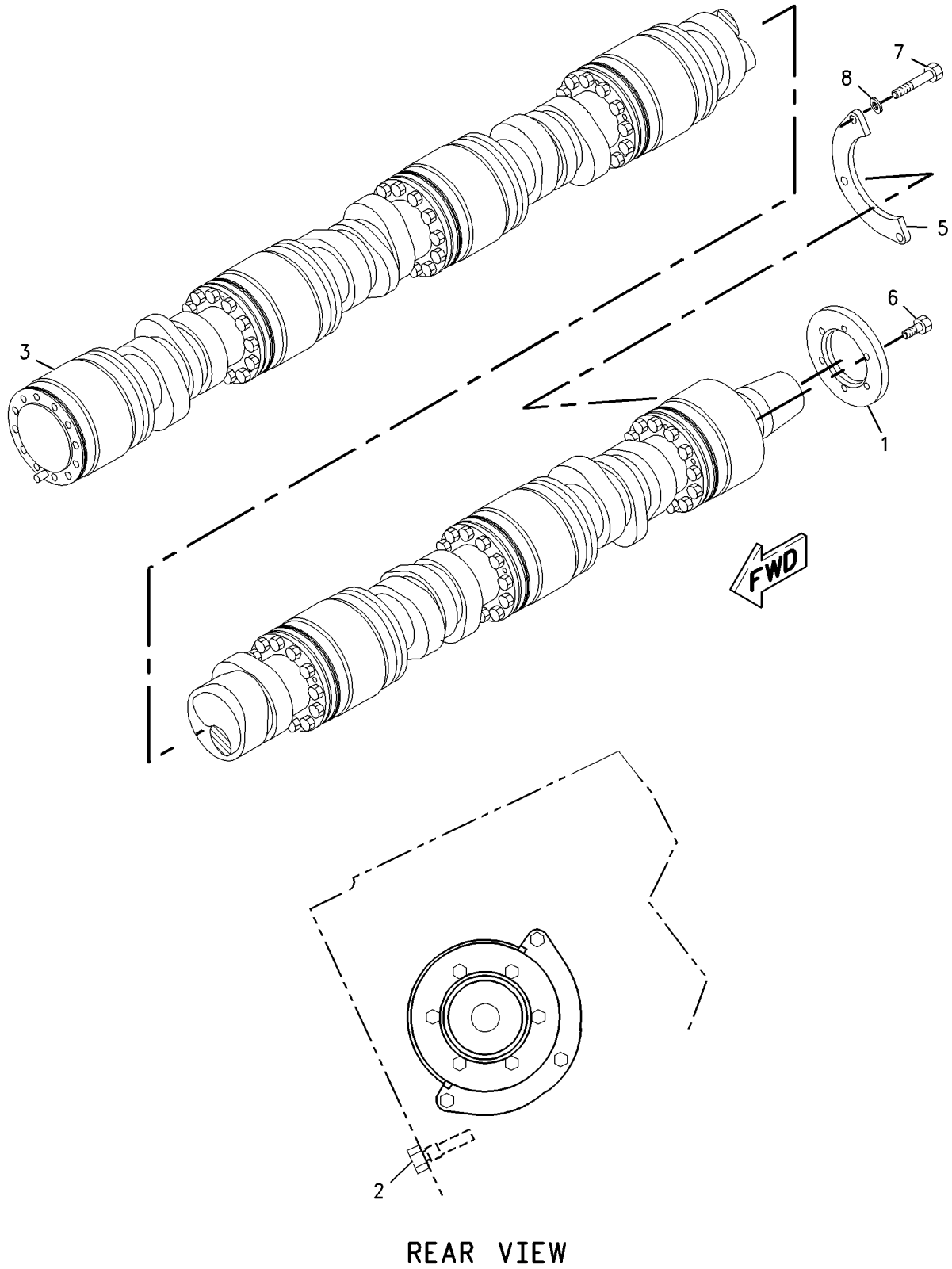
C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION



# BASIC ENGINE

7C-0408 CAMSHAFT GP (contd.)

i01547760



REAR VIEW

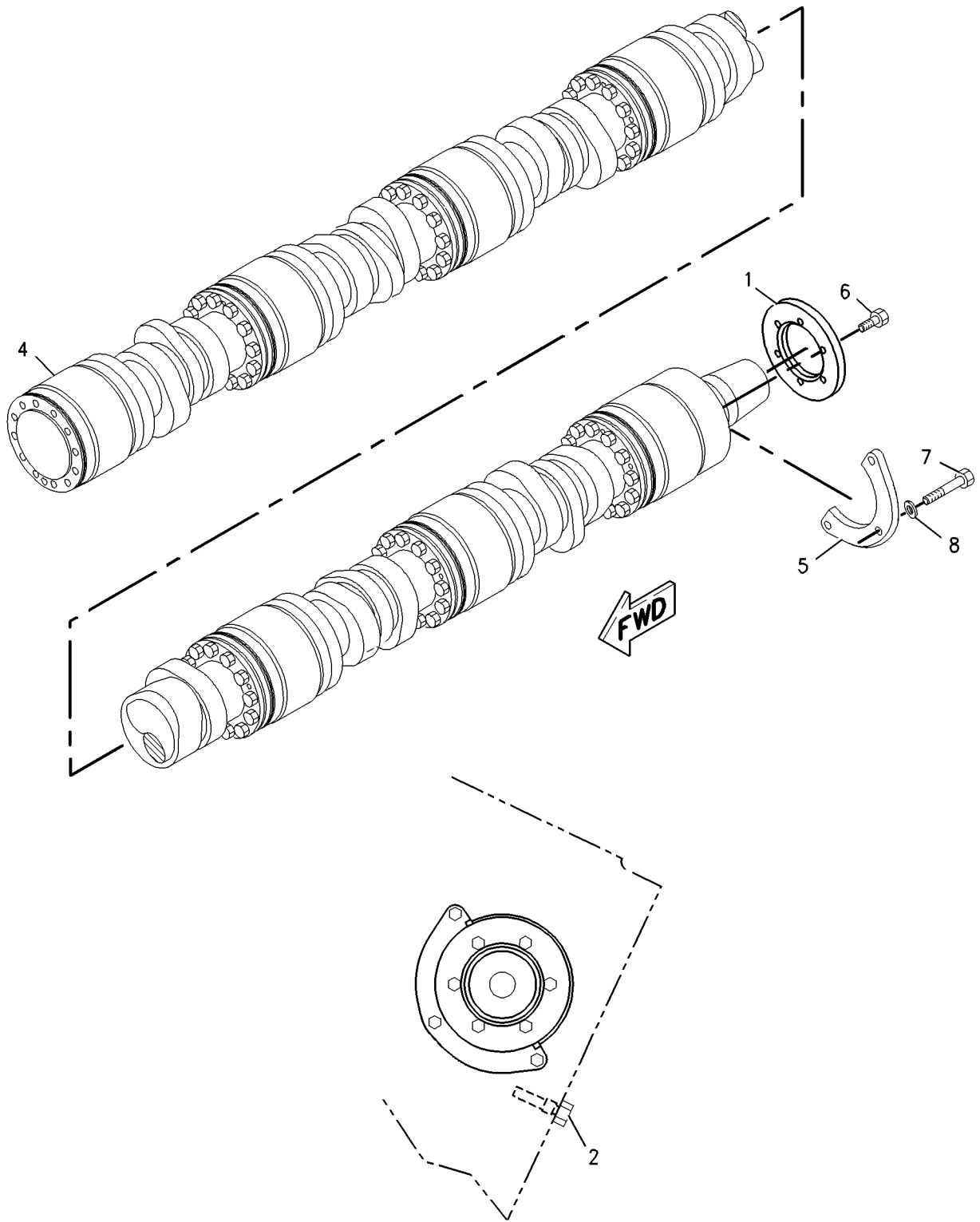
GRAPHIC #1

g00804418

# BASIC ENGINE

7C-0408 CAMSHAFT GP (contd.)

i01547760



REAR VIEW

GRAPHIC #2

<END>

g00804419

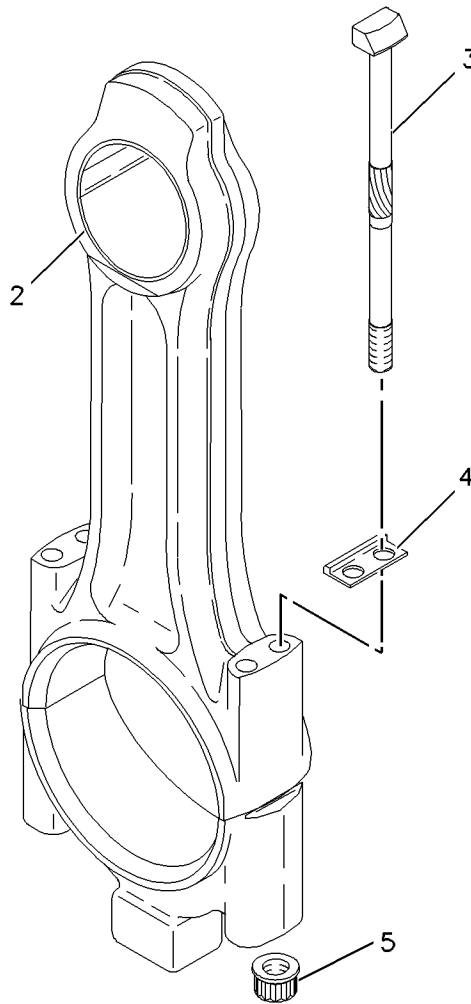
# BASIC ENGINE

## 195-5917 CONNECTING ROD GP\*R (CHG -00 THRU -03) PART OF 7C-0444 PISTON & ROD GP

SMCS-1218

i01919938

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	2	1	<b>4P-6125</b>	1	BEARING-SLEEVE						
	3	1	<b>1W-0098</b>	4	BOLT-CONNECTING ROD (3/4-16X12.87IN)						
	4	1	<b>4W-8344</b>	2	RETAINER						
	5	1	<b>205-0640</b>	4	NUT (3/4-16 THD)						



GRAPHIC #1

<END>

g00819078

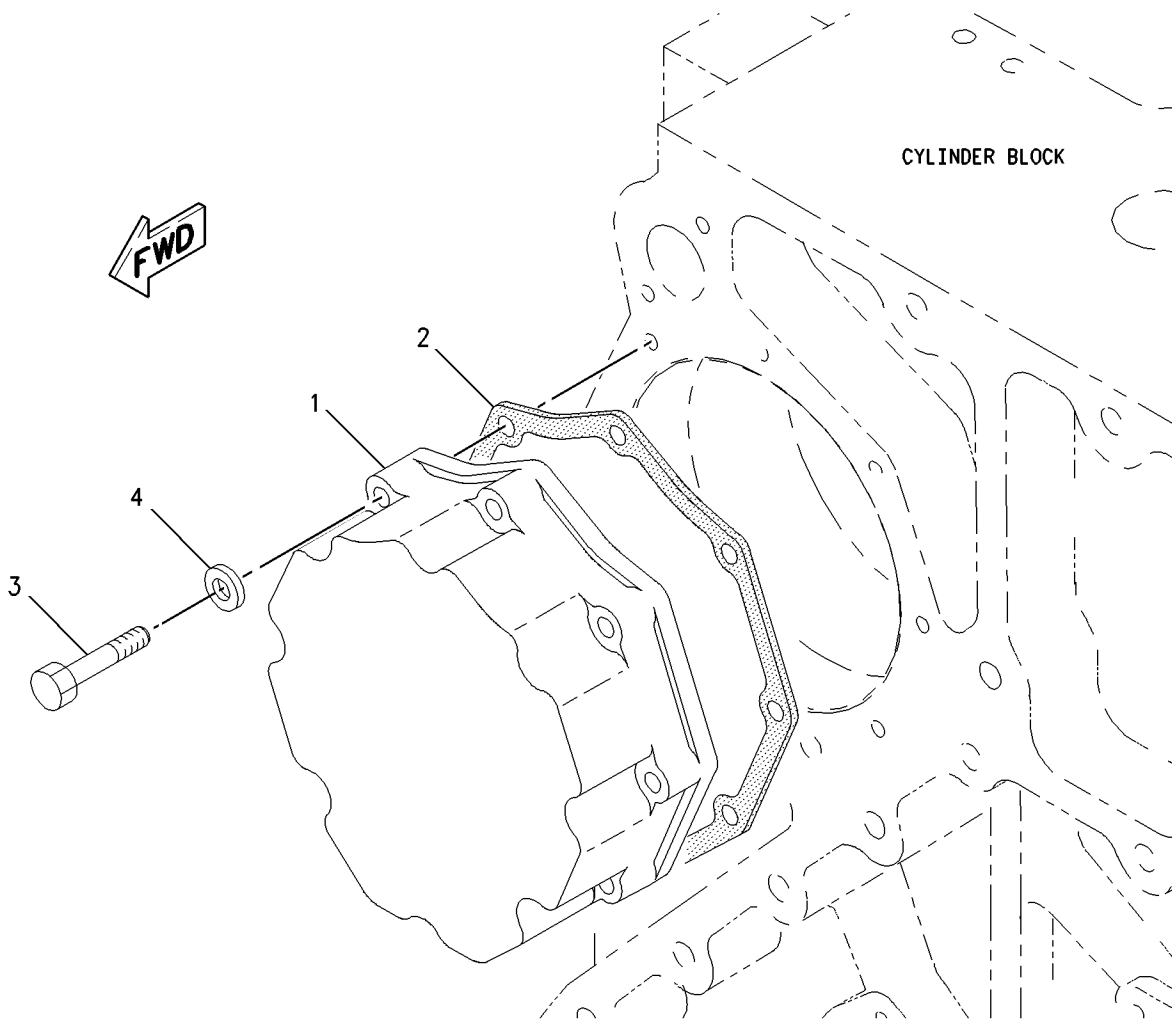
# BASIC ENGINE

## 4W-0698 COVER GP-CAMSHAFT (CHG -01)

SMCS-1210

i01458753

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1W-0843</b>	1	COVER-CAMSHAFT						
	2	1	<b>1W-2334</b>	1	GASKET						
	3	1	<b>0S-1590</b>	8	BOLT (3/8-16X2 IN)						
	4	1	<b>3V-3308</b>	8	WASHER-HARD (20.5X10.2X2.5MM THK)						



GRAPHIC #1

<END>

g00764293

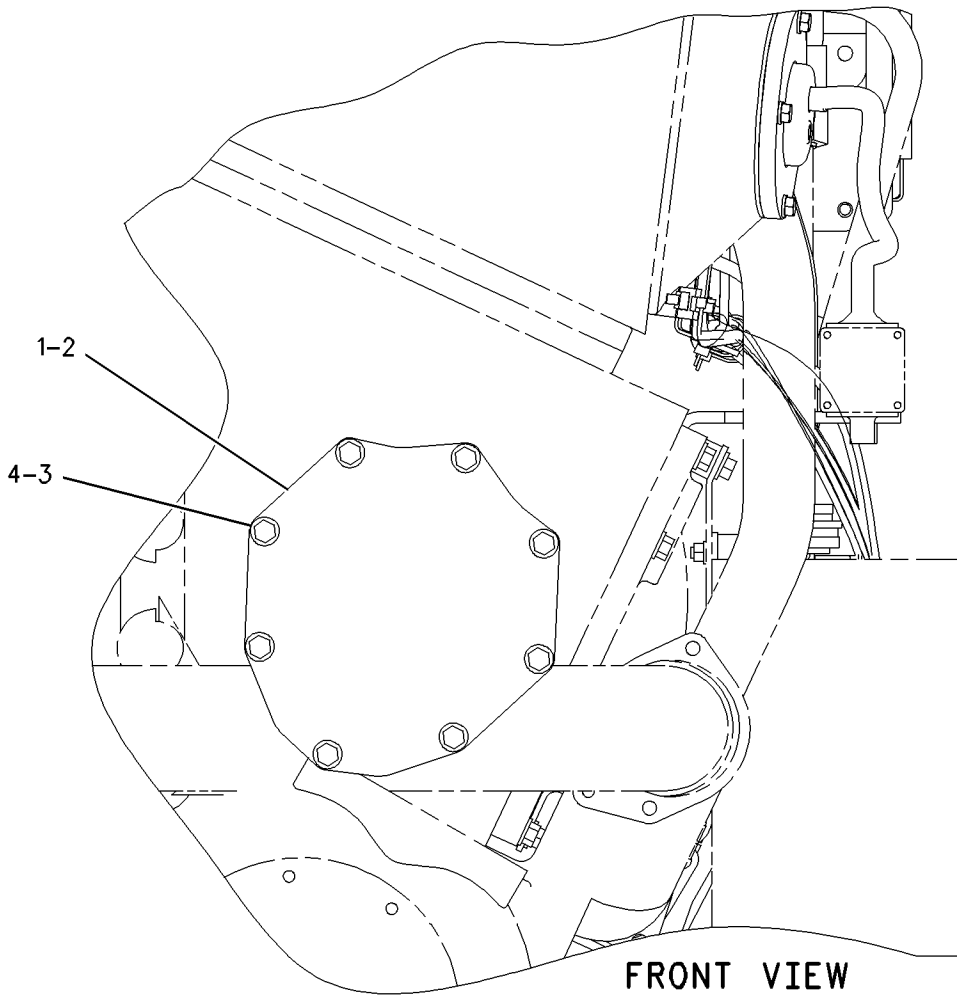
# BASIC ENGINE

## 195-5915 COVER GP-CAMSHAFT (CHG -00, -01) LEFT FRONT CAMSHAFT

SMCS-1210

i01869553

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1W-2334</b>	1	GASKET						
	2	1	<b>206-6583</b>	1	COVER						
	3	1	<b>0S-1594</b>	8	BOLT (3/8-16X1 IN)						
	4	1	<b>3V-3308</b>	8	WASHER-HARD (10.2X20.5X2.5MM THK)						



FRONT VIEW

GRAPHIC #1

<END>

g00807434

# BASIC ENGINE

## 150-6796 COVER GP-CYLINDER BLOCK (CHG -00 THRU -04) RIGHT HAND SERVICE

SMCS-1201

i02113068

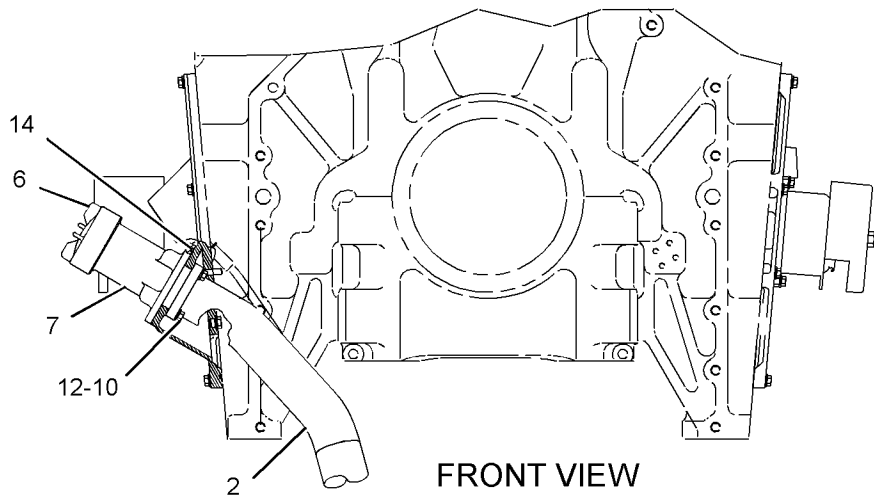
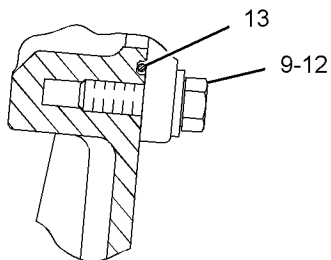
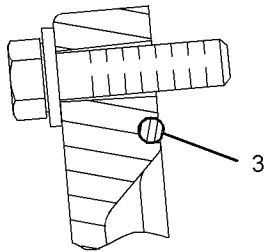
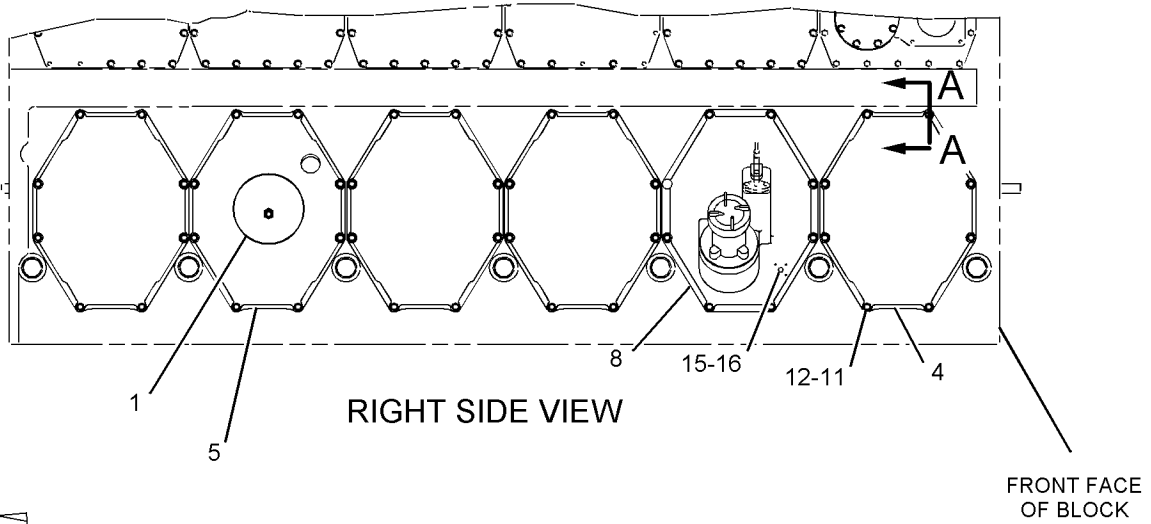
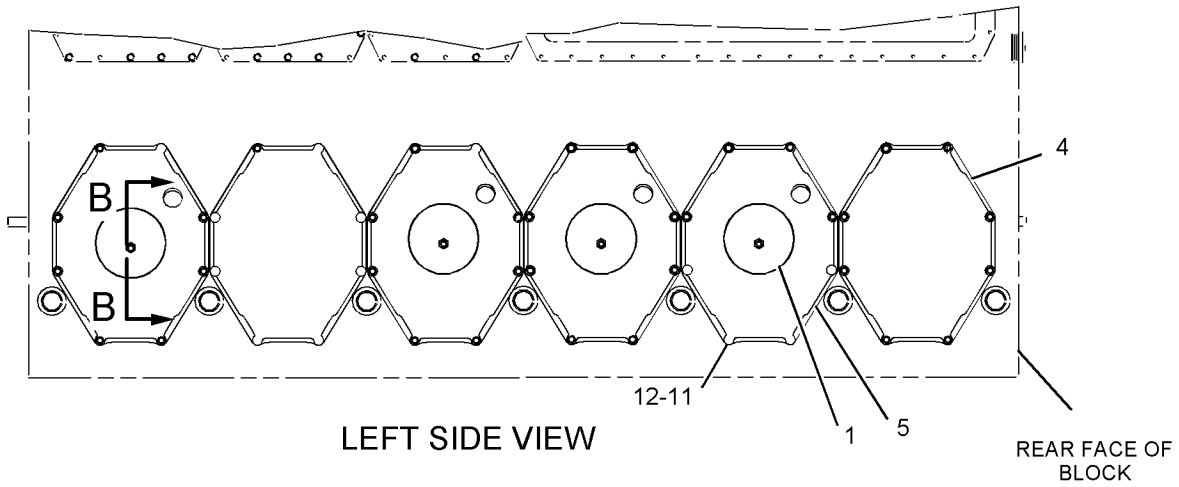
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	<b>1W-2834</b>	5	VALVE GP-EXPLOSION RELIEF						
	2	1	<b>4P-5304</b>	1	TUBE AS						
	3	1	<b>6I-4545</b>	12	SEAL-O-RING						
	4	1	<b>7E-0768</b>	6	COVER-CYLINDER BLOCK						
	5	1	<b>7E-0769</b>	5	COVER-CYLINDER BLOCK						
Y	6	1	<b>7E-1659</b>	1	CAP GP-ENGINE OIL FILLER						58
	7	1	<b>9Y-6874</b>	1	ELBOW-OIL FILLER						
	8	1	<b>9Y-9924</b>	1	COVER-CYLINDER BLOCK						
	9	1	<b>0S-1588</b>	30	BOLT (3/8-16X1.25-IN)						
	10	1	<b>0S-1590</b>	4	BOLT (3/8-16X2-IN)						
	11	1	<b>0S-1591</b>	85	BOLT (3/8-16X1.5-IN)						
	12	1	<b>3V-3308</b>	119	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	13	1	<b>6V-1904</b>	5	SEAL-O-RING						
	14	1	<b>6V-4314</b>	1	SEAL-O-RING						
	15	1	<b>6V-5049</b>	1	SEAL-O-RING						
	16	1	<b>9S-4191</b>	1	PLUG						
					AVAILABLE REPAIR KIT(S):						
J			<b>2W-3584</b>	1	KIT-RELIEF VALVE (CRANKCASE) (KIT INCLUDES VALVE PLATE AND SPINDLE O-RINGS)						

J-REPAIR KIT AVAILABLE FOR PART(S) MARKED J  
Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

150-6796 COVER GP-CYLINDER BLOCK (contd.)

i02113068



GRAPHIC #1

<END>

g01076626

# BASIC ENGINE

## 153-2960 COVER GP-CYLINDER BLOCK (CHG -00 THRU -02)

SMCS-1201

i02094613

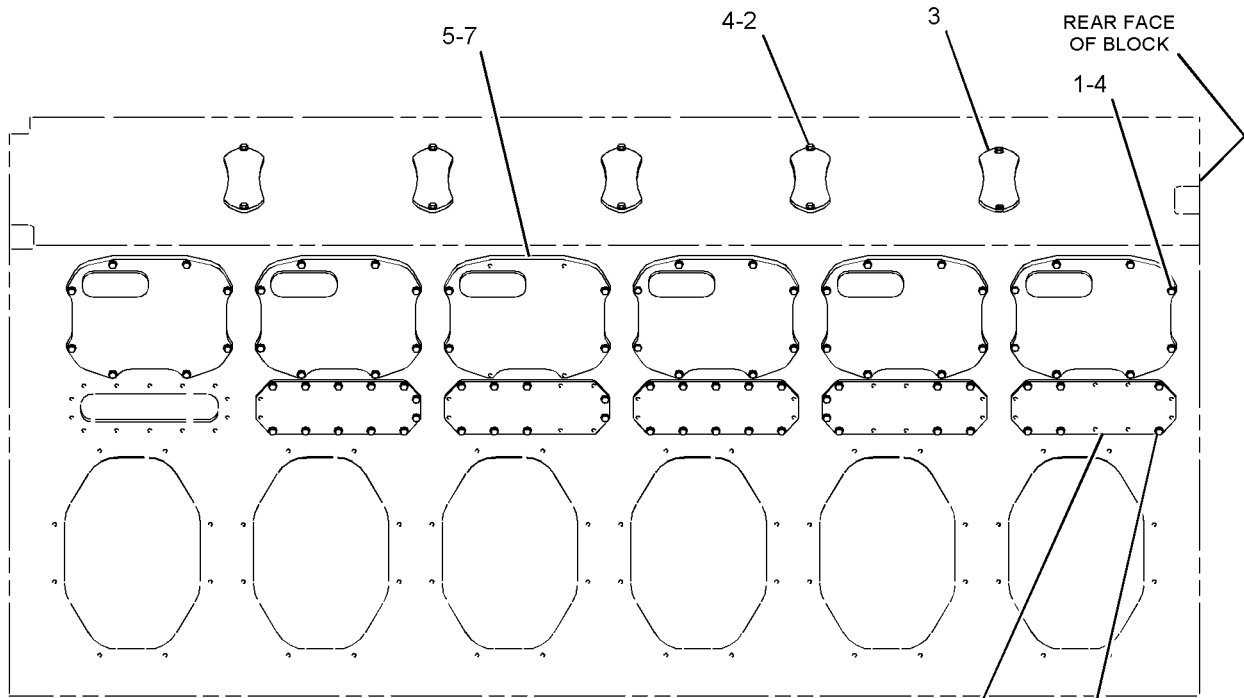
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1591	86	BOLT (3/8-16X1.5-IN)						
	2	1	0S-1594	120	BOLT (3/8-16X1-IN)						
	3	1	1W-8811	10	COVER						
	4	1	3V-3308	206	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	5	1	7E-0728	12	COVER-CAMSHAFT						
	6	1	7W-0805	10	COVER (CYLINDER BLOCK)						
	7	1	8T-0098	12	SEAL-O-RING						
	8	1	121-3874	10	GASKET						



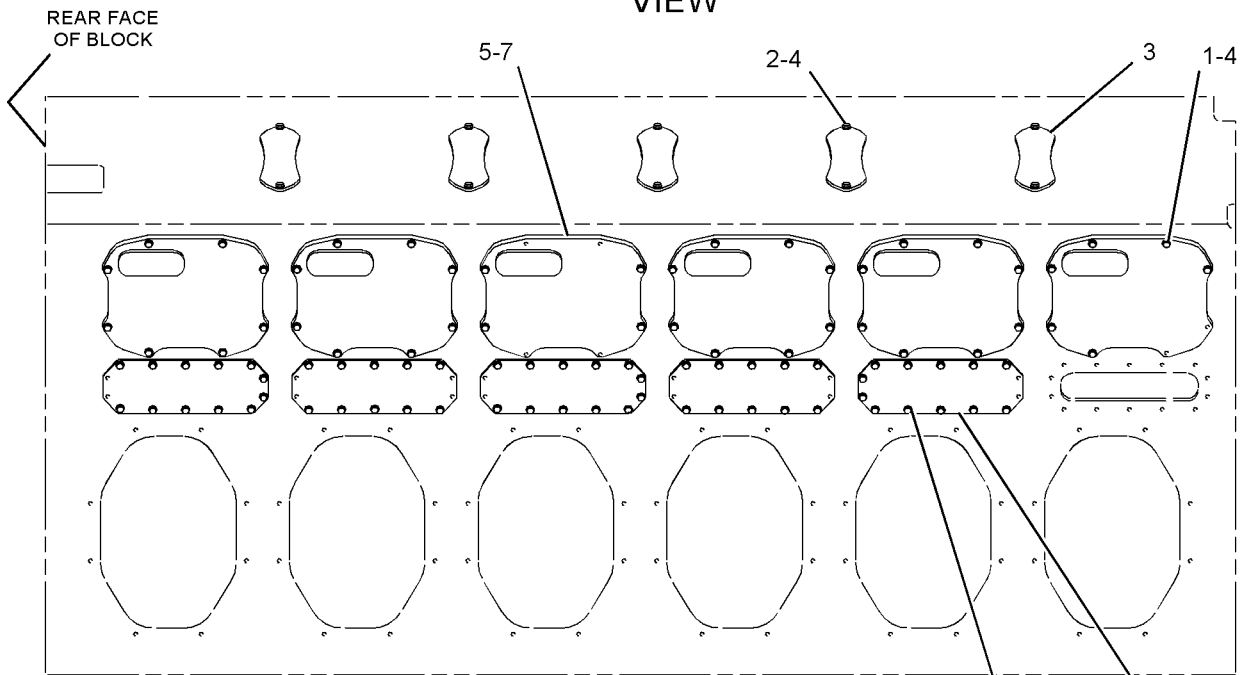
# BASIC ENGINE

153-2960 COVER GP-CYLINDER BLOCK (contd.)

i02094613



LEFT SIDE VIEW



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01068909

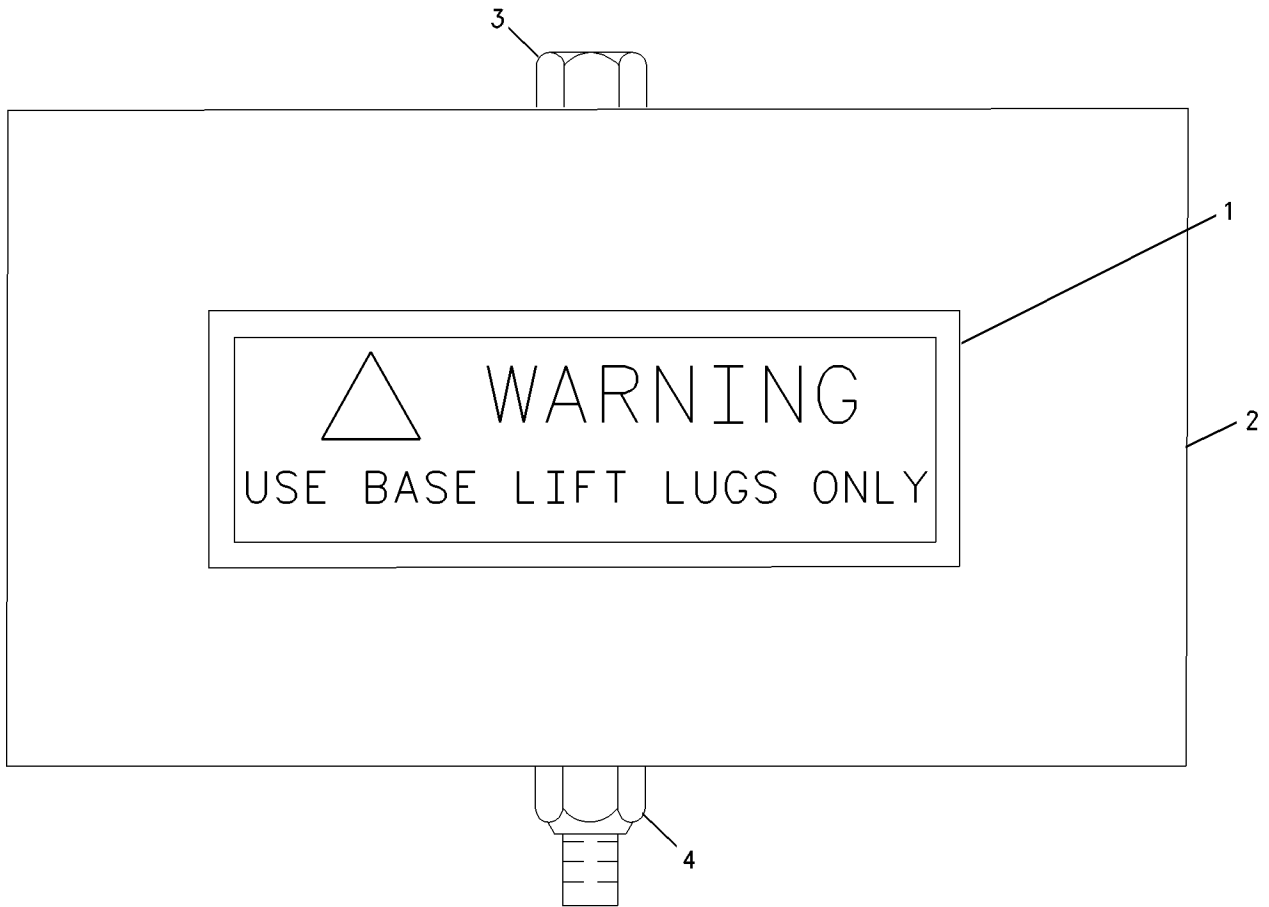
# BASIC ENGINE

## 2W-2742 COVER GP-ENGINE LIFTING EYE (CHG -00)

SMCS-1122

i02015142

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3N-8591</b>	2	FILM-INFORMATION (DO NOT LIFT PICTOGRAPH)						
	2	1	<b>2W-2972</b>	2	COVER-LIFTING						
	3	1	<b>8S-4714</b>	2	BOLT (1/4-28X4-IN)						
	4	1	<b>3F-7674</b>	2	LOCKNUT (1/4-28 THD)						



TOP VIEW

<END>

GRAPHIC #1

g00783275

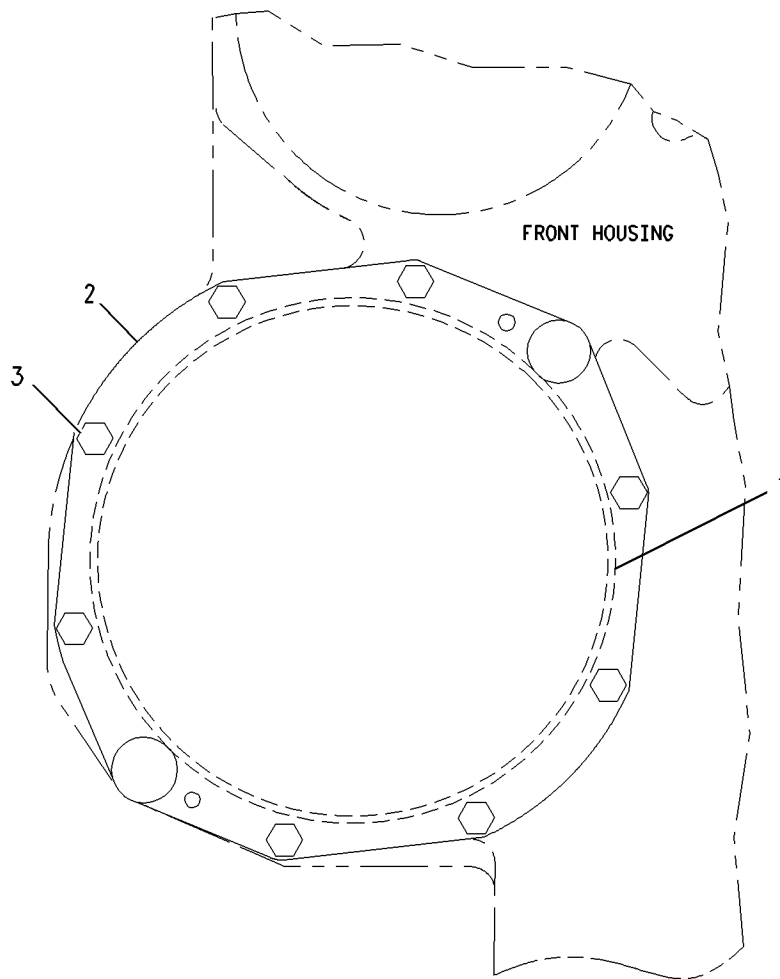
# BASIC ENGINE

## 4W-0365 COVER GP-FRONT HOUSING (CHG -01)

SMCS-1151, 1166

i01536351

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-7702	1	SEAL-O-RING						
	2	1	1W-3377	1	COVER						
	3	1	0S-1595	8	BOLT (1/2-13X1.25 IN)						



FRONT VIEW

<END>

GRAPHIC #1

g00799741

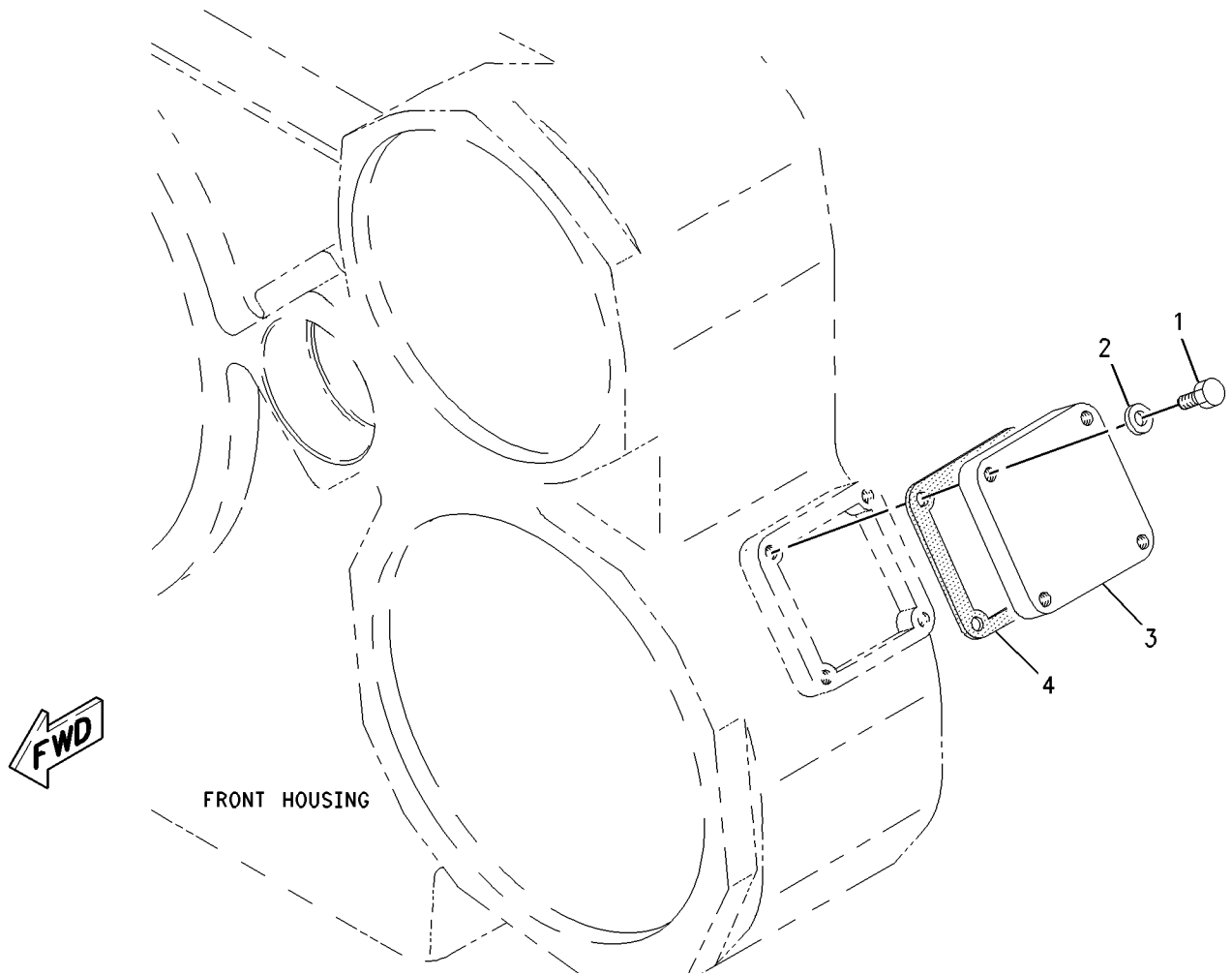
# BASIC ENGINE

## 1W-3382 COVER GP-GEAR INSPECTION (CHG -05)

SMCS-1166

i01458777

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>0S-1594</b>	4	BOLT (3/8-16X1 IN)						
	2	1	<b>3V-3308</b>	4	WASHER-HARD (20.5X10.2X2.5MM THK)						
	3	1	<b>4W-6637</b>	1	COVER						
	4	1	<b>4W-6638</b>	1	GASKET						



GRAPHIC #1

<END>

g00762517

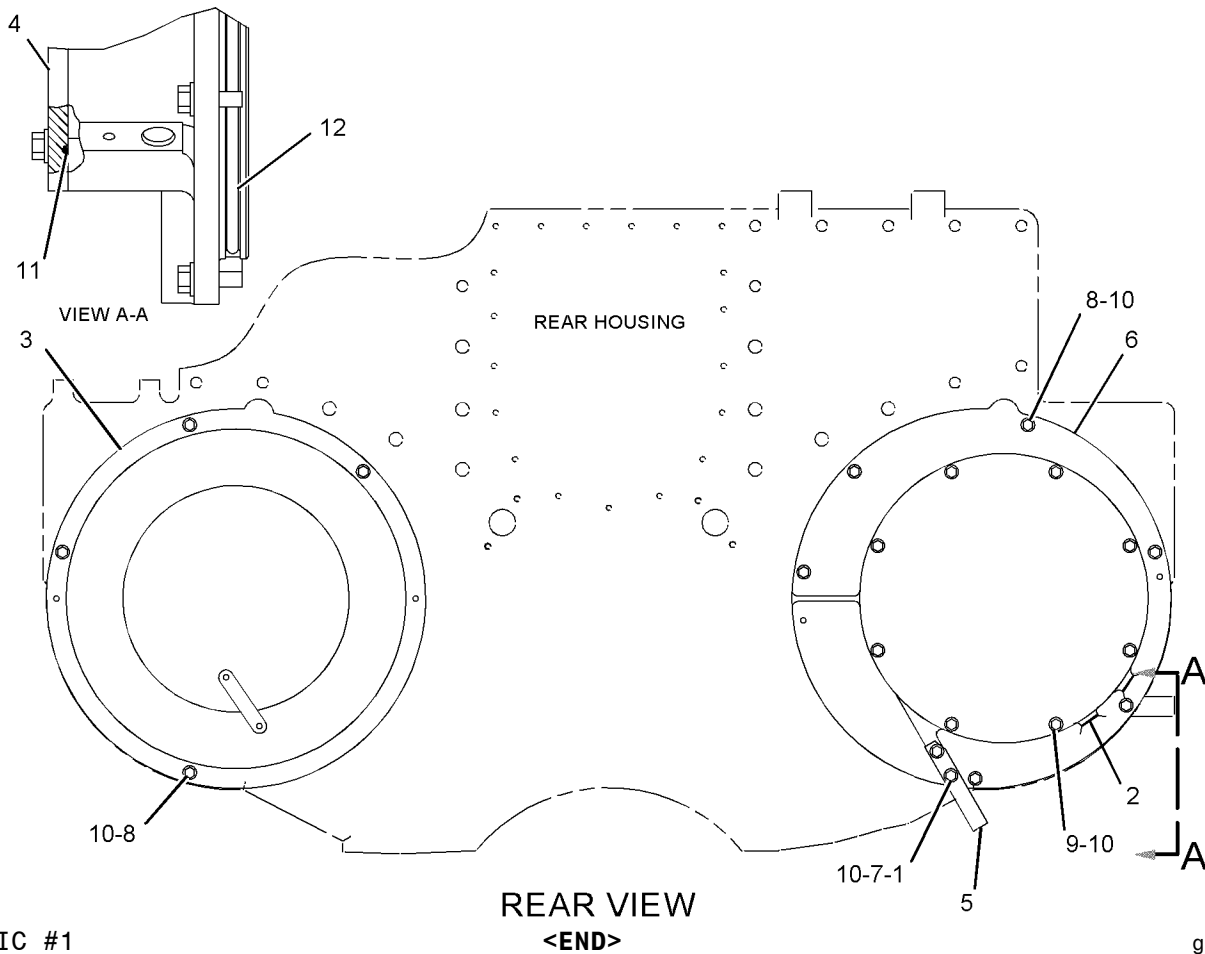
# BASIC ENGINE

## 159-4641 COVER GP-REAR HOUSING (CHG -00 THRU -02, -02D1, -03)

SMCS-1157

i02150025

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-7117	2	DOWEL - HOLLOW						
	2	1	4F-4585	1	PLUG - CORE						
	3	1	146-4297	1	COVER - CAMSHAFT						
	4	1	159-7187	1	COVER						
	5	1	206-7468	1	PLATE						
	6	1	253-8894	1	HOUSING						
	7	1	0L-1352	2	BOLT (3/8-16X3.25-IN)						
	8	1	0S-1588	10	BOLT (3/8-16X1.25-IN)						
	9	1	3B-1915	8	BOLT (3/8-16X1.75-IN)						
	10	1	3V-3308	20	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	11	1	4D-1577	1	SEAL-O-RING						
	12	1	6V-5060	2	SEAL-O-RING						



GRAPHIC #1

g01091015

# BASIC ENGINE

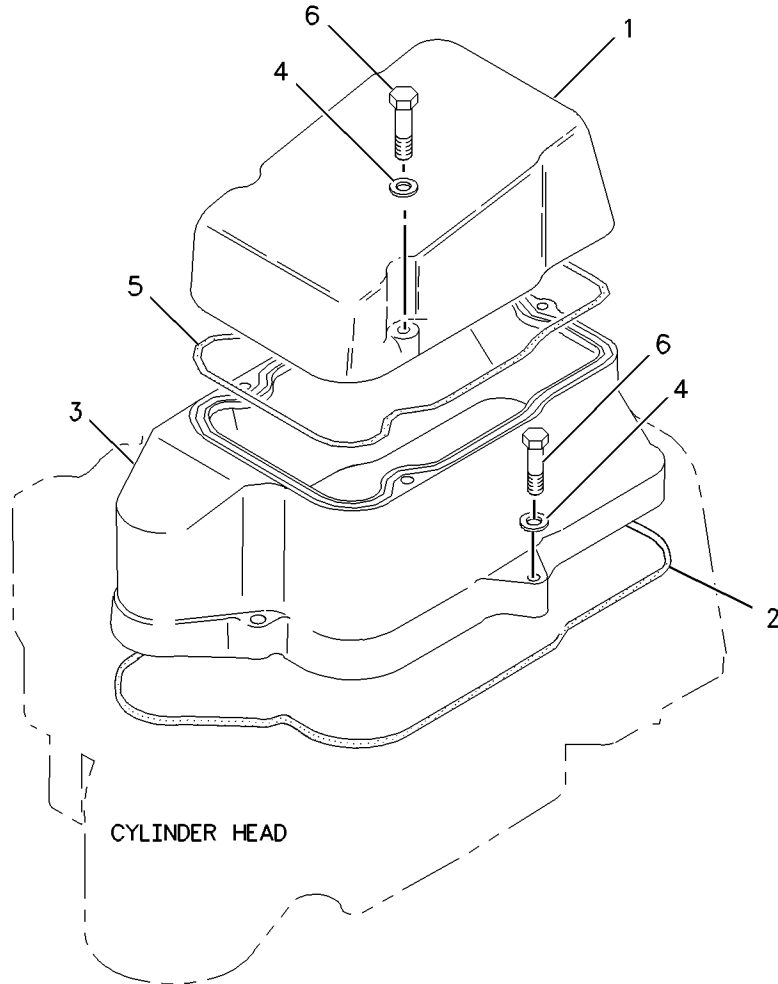
## 7C-0403 COVER GP-VALVE MECHANISM (CHG -05, -06)

SMCS-1107

i02093665

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>7E-0733</b>	2	COVER-VALVE MECHANISM						
	2	1	<b>8T-8883</b>	1	SEAL-O-RING (VALVE COVER)						
	3	1	<b>7W-8895</b>	1	BASE						
C	4	1	<b>3V-3308</b>	7	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	5	1	<b>6V-3602</b>	1	SEAL-O-RING (VALVE COVER)						
	6	1	<b>0S-1590</b>	7	BOLT (3/8-16X2-IN)						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00775813

# BASIC ENGINE

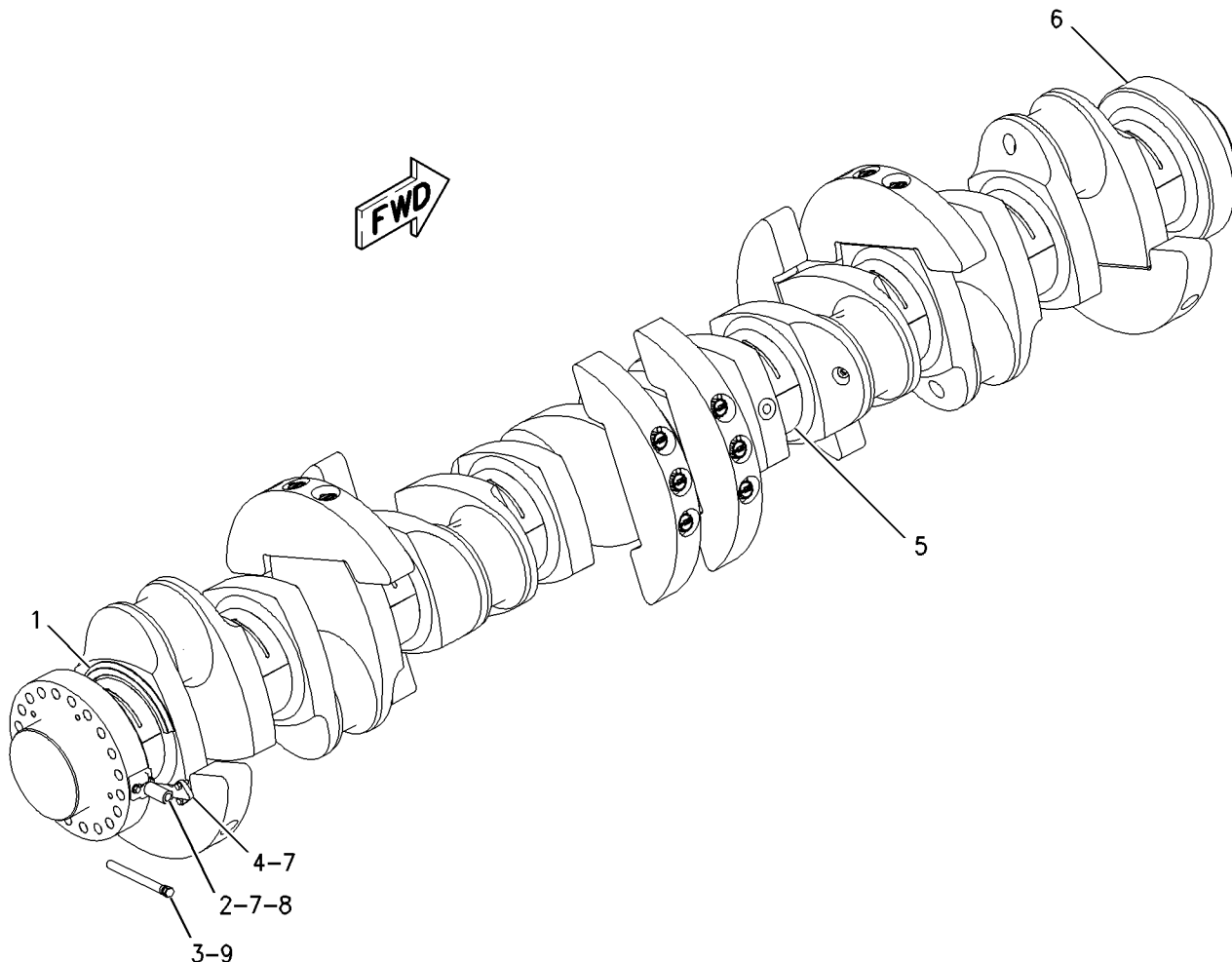
## 191-5424 CRANKSHAFT GP (CHG -00, -01)

SMCS - 1202

i01517252

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	1 2 3 4 5 6 (PRODUCT LEVEL)						SEE PAGE
	1	1	1W-1174	2	PLATE - THRUST							
	2	1	1W-8260	1	BRACKET AS-CRANKSHAFT							
		1	6V-3537	1	DOWEL							
	3	1	2W-0546	1	PIN - TIMING							
	4	1	4W-8010	1	BRACKET - GUIDE							
	5	1	129-4054	7	BEARING - CRANKSHAFT (MAIN)							
A		1	127-1916	1	BEARING - CRANKSHAFT (0.25MM UNDERSIZE)							
A		1	127-1921	1	BEARING - CRANKSHAFT (1.0MM OS/0.5MM US)							
A		1	143-6219	1	BEARING - CRANKSHAFT (0.5MM UNDERSIZE)							
A		1	143-6221	1	BEARING - CRANKSHAFT (1.0MM UNDERSIZE)							
A		1	143-6222	1	BEARING - CRANKSHAFT (1.0MM OVERSIZE)							
A		1	143-6224	1	BEARING - CRANKSHAFT (2.0MM OVERSIZE)							
	6	1	191-5423	1	CRANKSHAFT AS							
		1	7W-1632	6	PLUG							
		1	179-3576	12	COUNTERWEIGHT AS							
	7	1	0S-1594	4	BOLT (3/8-16X1 IN)							
	8	1	3V-3308	2	WASHER - HARD (20.5X10.2X2.5MM THK)							
	9	1	6V-4589	1	SEAL - O-RING							

A-NOT PART OF THIS GROUP



GRAPHIC #1

<END>

g00756024

# BASIC ENGINE

## 153-2956 CYLINDER BLOCK AS (CHG -00 THRU -03)

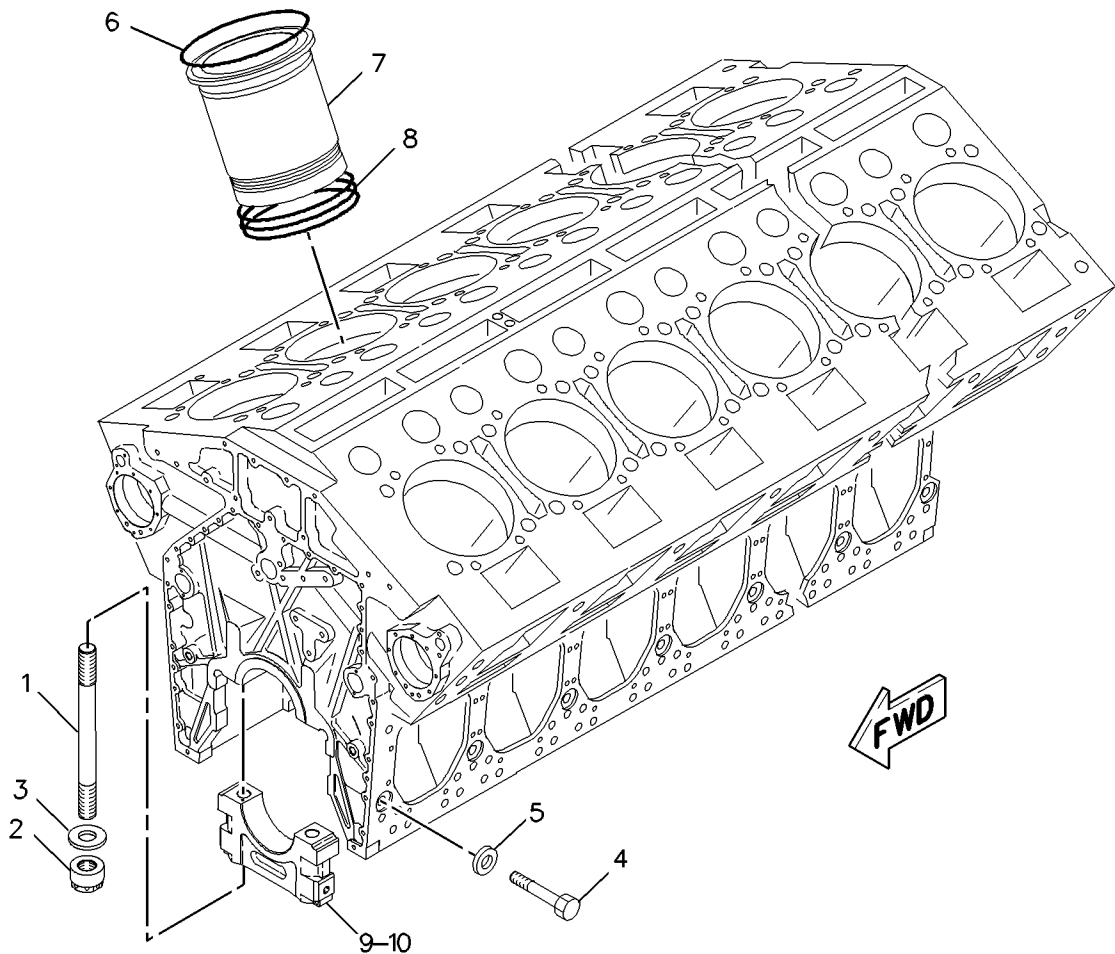
12 CYLINDER

PART OF 153-2958 CYLINDER BLOCK GP

SMCS-1201

i01592921

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-0121	14	STUD-TAPERLOCK						
	2	1	1W-0123	14	NUT (2-12 THD)						
	3	1	1W-0122	14	WASHER (52X110X12.0MM THK)						
	4	1	3S-7079	14	BOLT (1.25X12-2A THD)						
	5	1	4K-0684	14	WASHER-HARD (34X55X6MM THK)						
	6	1	6V-3602	12	SEAL-O-RING						
	7	1	7C-5044	12	LINER-CYLINDER						
	8	1	8T-9047	36	SEAL-O-RING						
	9	1	124-1836	7	CAP AS-CRANKSHAFT BEARING (EACH INCLUDES)						
	10	1	6V-3538	1	DOWEL						



GRAPHIC #1

<END>

g00783111



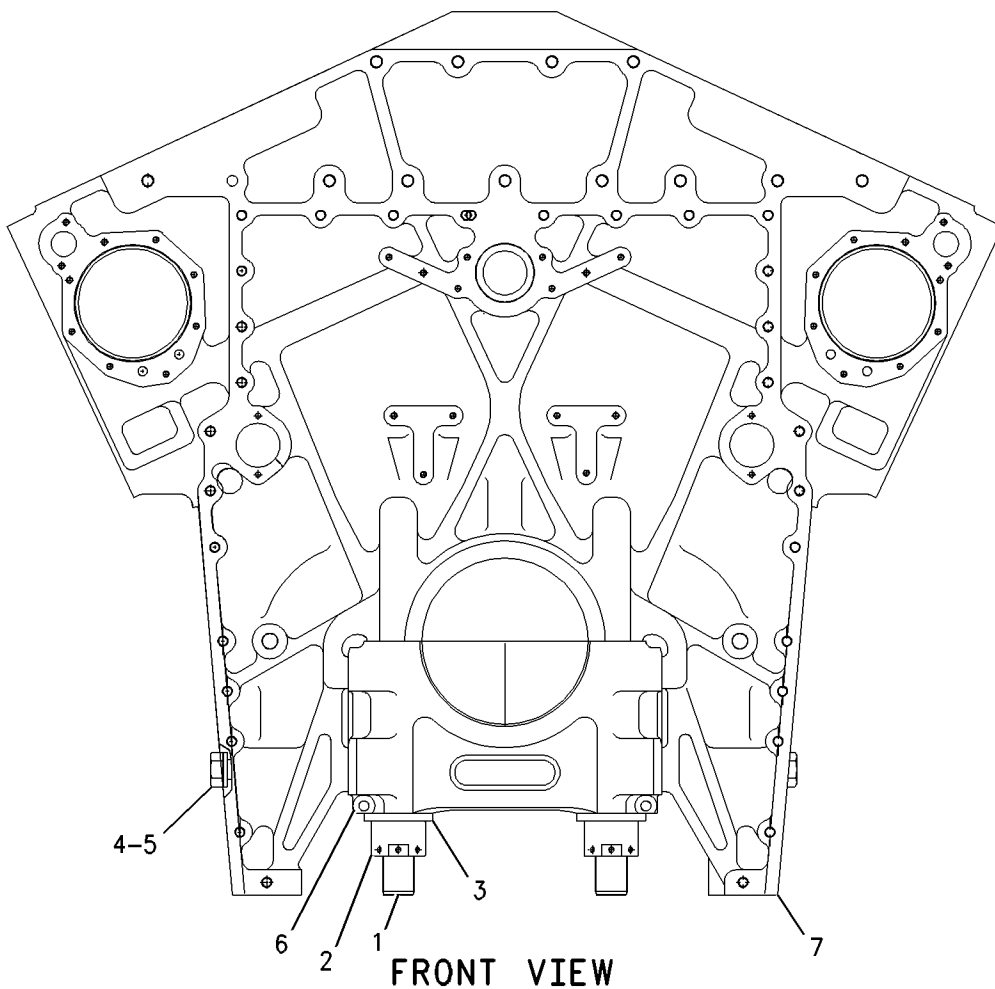
# BASIC ENGINE

## 214-6057 CYLINDER BLOCK AS (CHG -00, -01) PART OF 214-6058 CYLINDER BLOCK GP

SMCS-1201

i01852433

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1W-0121</b>	14	STUD-TAPERLOCK						
	2	1	<b>1W-0123</b>	14	NUT (2-12 THD)						
	3	1	<b>1W-0122</b>	14	WASHER (52X110X12.0MM THK)						
	4	1	<b>3S-7079</b>	14	BOLT (1.25X12-2A THD)						
	5	1	<b>4K-0684</b>	14	WASHER-HARD (34X55X6MM THK)						
	6	1	<b>124-1836</b>	7	CAP AS-CRANKSHAFT BEARING						
					(EACH INCLUDES)						
		1	<b>6V-3538</b>	1	DOWEL						



GRAPHIC #1

<END>

g00954744

# BASIC ENGINE

## 153-2958 CYLINDER BLOCK GP (CHG -00 THRU -04) 12 CYLINDER

FIELD REPLACEMENT ORDER 214-6058-PAGE 25

SMCS-1201

i01868802

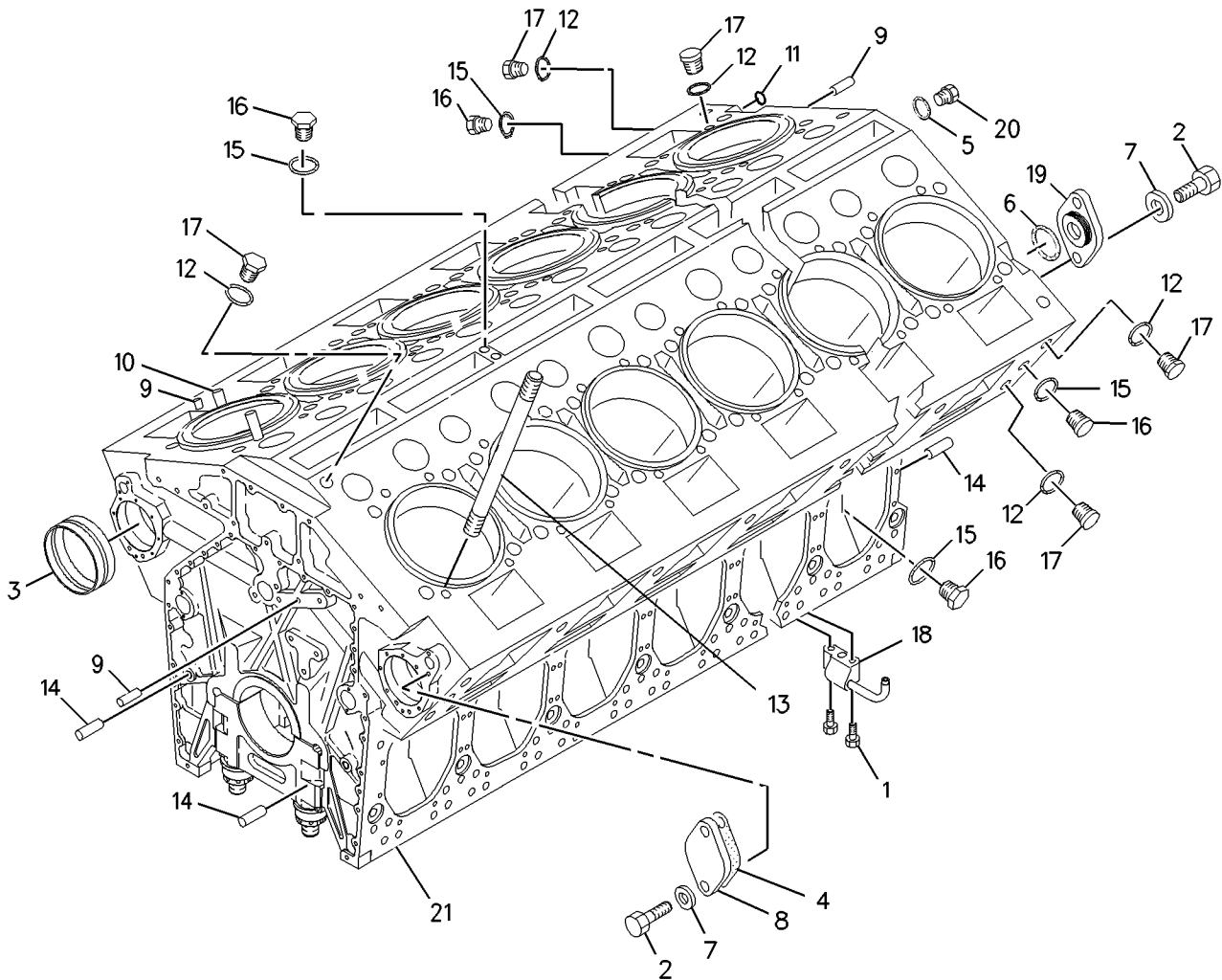
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0L-1143	24	BOLT (3/8-16X2.50-IN)						
	2	1	0S-1594	8	BOLT (3/8-16X1-IN)						
	3	1	1W-0105	14	BEARING-CAMSHAFT						
	4	1	1W-1960	2	GASKET						
	5	1	3P-0651	1	SEAL-O-RING						
	6	1	3P-0656	2	SEAL-O-RING						
	7	1	3V-3308	8	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	8	1	4B-3140	2	COVER (PRELUBRICATION)						
	9	1	6V-3538	27	DOWEL						
	10	1	6V-3539	24	DOWEL						
	11	1	6V-3955	3	SEAL-O-RING						
	12	1	6V-4589	20	SEAL-O-RING						
	13	1	187-0450	48	STUD-TAPERLOCK						
	14	1	7N-2328	4	DOWEL						
	15	1	8L-2786	17	SEAL-O-RING						
	16	1	9S-8005	17	PLUG						
	17	1	9S-8006	20	PLUG						
	18	1	120-9330	12	JET AS (PISTON COOLING)						
					(EACH INCLUDES)						
		1	1W-7117	2	DOWEL-HOLLOW						
	19	1	149-0564	2	PLUG						
	20	1	149-0565	1	PLUG						
Y	21	1	153-2956	1	CYLINDER BLOCK AS						21

Y-SEPARATE ILLUSTRATION

# BASIC ENGINE

153-2958 CYLINDER BLOCK GP (contd.)

i01868802



# BASIC ENGINE

## 214-6058 CYLINDER BLOCK GP (CHG -00) FIELD REPLACEMENT FOR 153-2958-PAGE 23

SMCS-1201

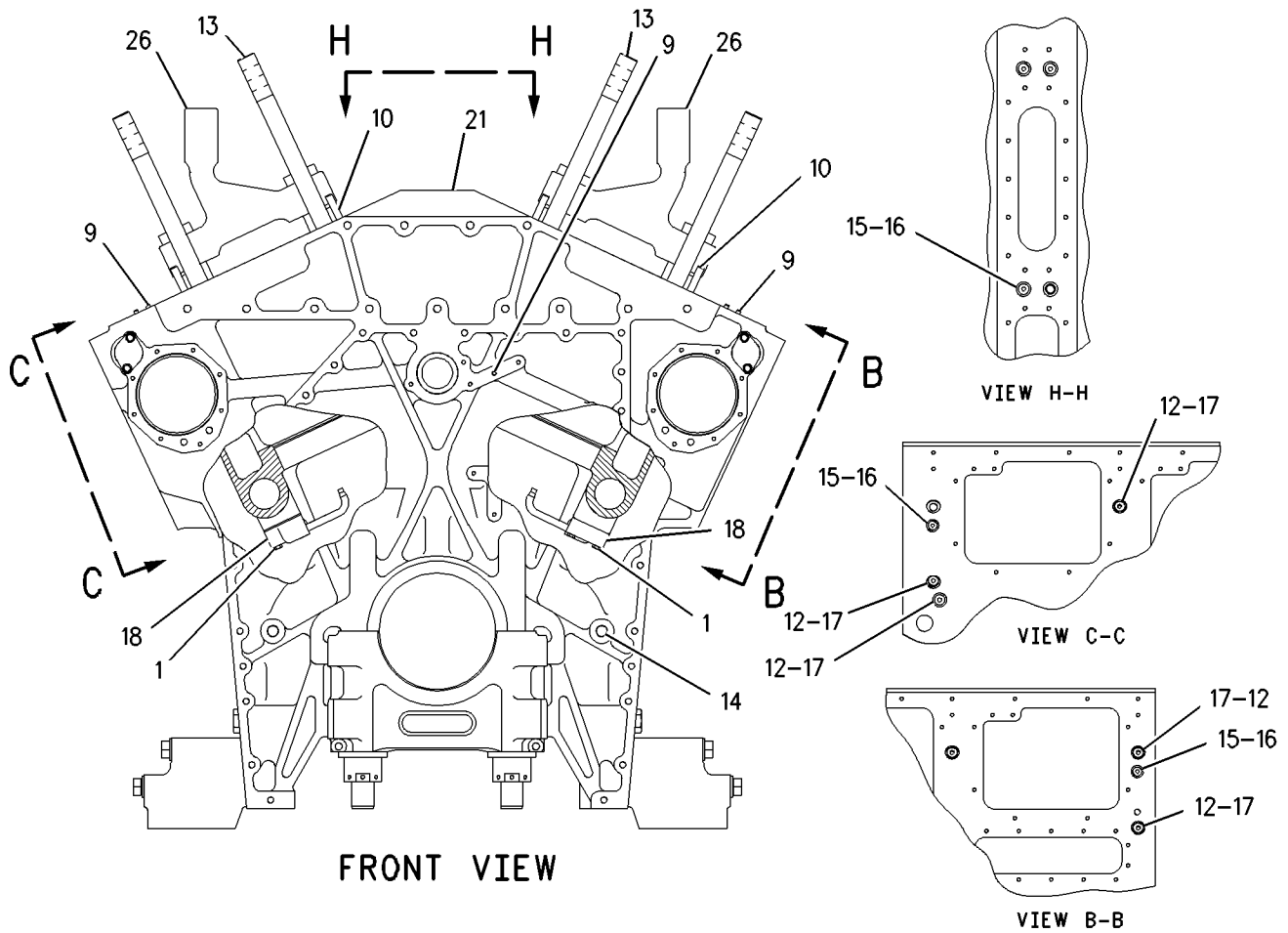
i01852435

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>0L-1143</b>	24	BOLT (3/8-16X2.50-IN)						
	2	1,2	<b>0S-1594</b>	8	BOLT (3/8-16X1-IN)						
	3	1,2	<b>1W-0105</b>	14	BEARING-CAMSHAFT						
	4	1	<b>1W-1960</b>	2	GASKET						
	5	2	<b>3P-0651</b>	1	SEAL-O-RING						
	6	2	<b>3P-0656</b>	2	SEAL-O-RING						
	7	1,2	<b>3V-3308</b>	8	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	8	1	<b>4B-3140</b>	2	COVER (PRELUBRICATION)						
	9	1	<b>6V-3538</b>	27	DOWEL						
	10	1	<b>6V-3539</b>	24	DOWEL						
	11	2	<b>6V-3955</b>	3	SEAL-O-RING						
	12	1,2	<b>6V-4589</b>	20	SEAL-O-RING						
	13	1	<b>187-0450</b>	48	STUD-TAPERLOCK						
	14	1,2	<b>7N-2328</b>	4	DOWEL						
	15	1,2	<b>8L-2786</b>	17	SEAL-O-RING						
	16	1,2	<b>9S-8005</b>	17	PLUG						
	17	1,2	<b>9S-8006</b>	20	PLUG						
	18	1	<b>120-9330</b>	12	JET AS (PISTON COOLING)						
					(EACH INCLUDES)						
		1	<b>1W-7117</b>	2	DOWEL-HOLLOW						
	19	2	<b>149-0564</b>	2	PLUG						
	20	2	<b>149-0565</b>	1	PLUG						
Y	21	1	<i>214-6057</i>	1	CYLINDER BLOCK AS						22
	22	1	<b>4W-6277</b>	4	SUPPORT AS						
					(EACH INCLUDES)						
		1	<b>7N-2328</b>	2	DOWEL						
	23	1	<b>8S-4757</b>	8	BOLT (1-14X8-IN)						
	24	1	<b>7B-8363</b>	16	BOLT (1-14X10-3/4-IN)						
	25	1	<b>5P-8250</b>	24	WASHER (28X49X5-MM THK)						
	26	1	<b>101-8189</b>	4	BRACKET-LIFTING						
	27	1	<b>214-6044</b>	16	SPACER (57.2X69.9X88-MM THK)						
	28	1	<b>218-0660</b>	16	BOLT (1 5/8-12X13.25-IN)						
Y-SEPARATE ILLUSTRATION											

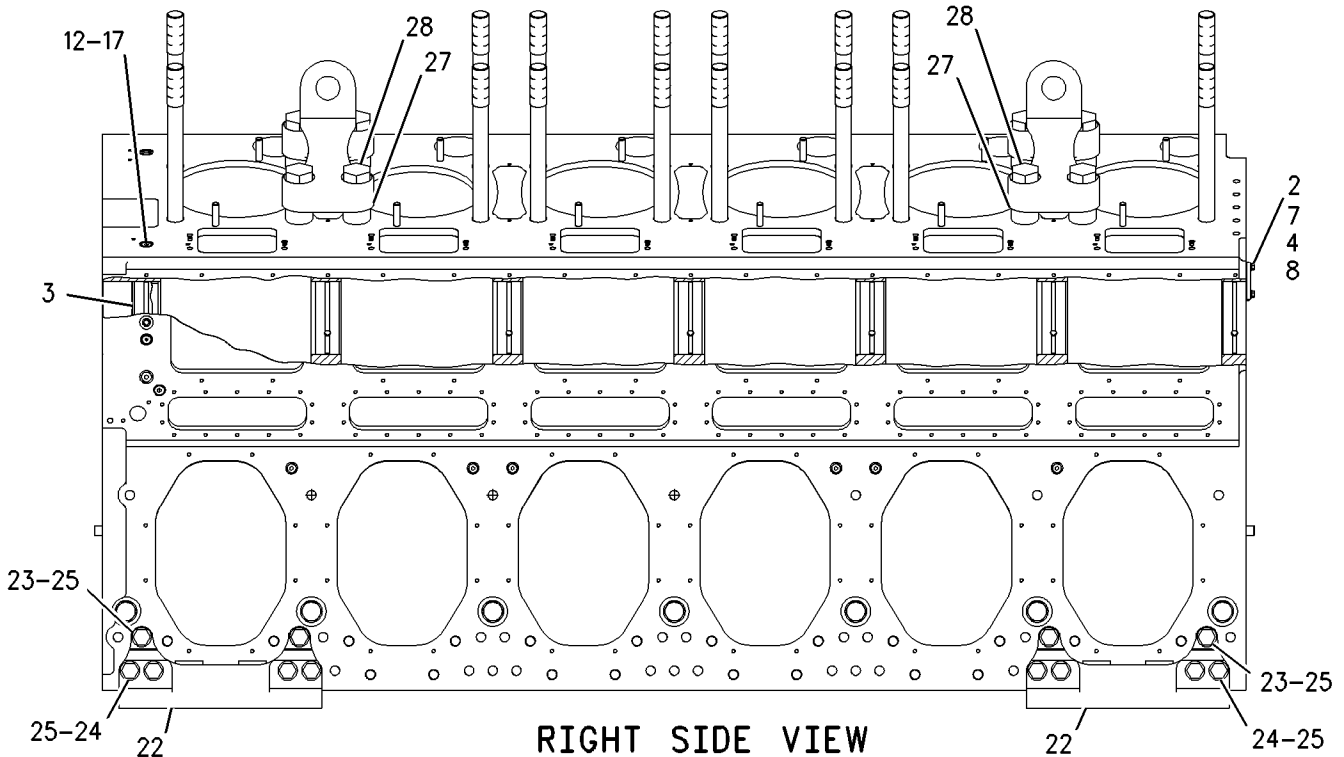
# BASIC ENGINE

214-6058 CYLINDER BLOCK GP (contd.)

i01852435



FRONT VIEW



RIGHT SIDE VIEW

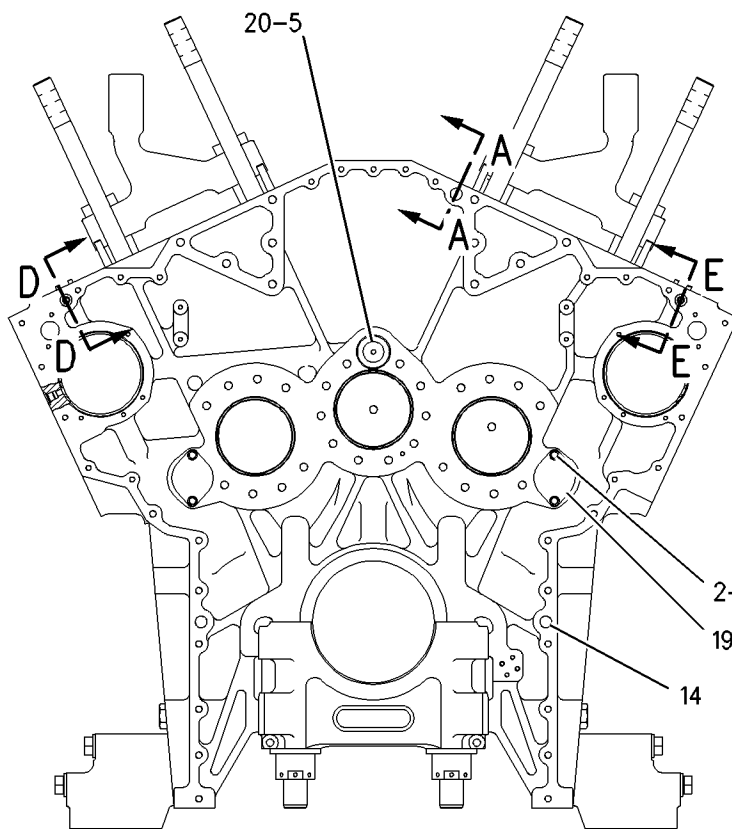
GRAPHIC #1

g00954535

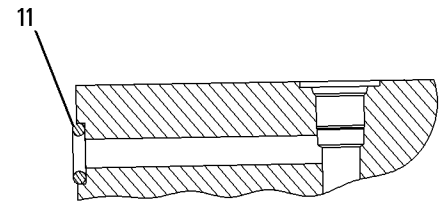
# BASIC ENGINE

214-6058 CYLINDER BLOCK GP (contd.)

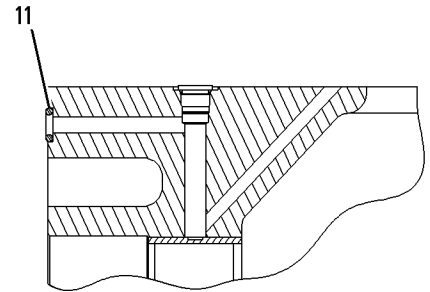
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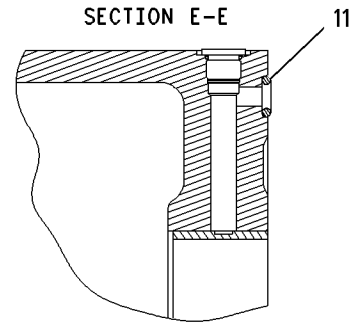
REAR VIEW



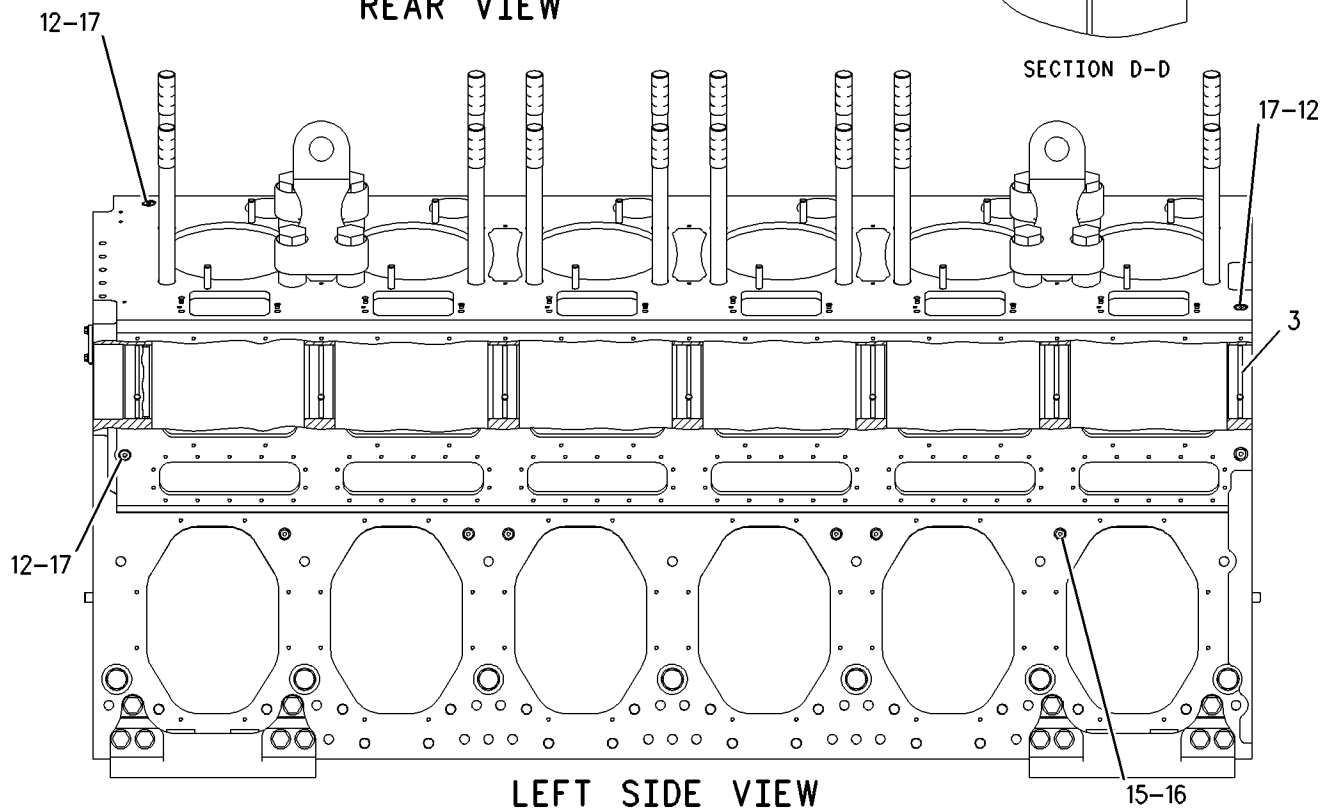
SECTION A-A



SECTION E-E



SECTION D-D



LEFT SIDE VIEW

GRAPHIC #2

<END>

g00954536

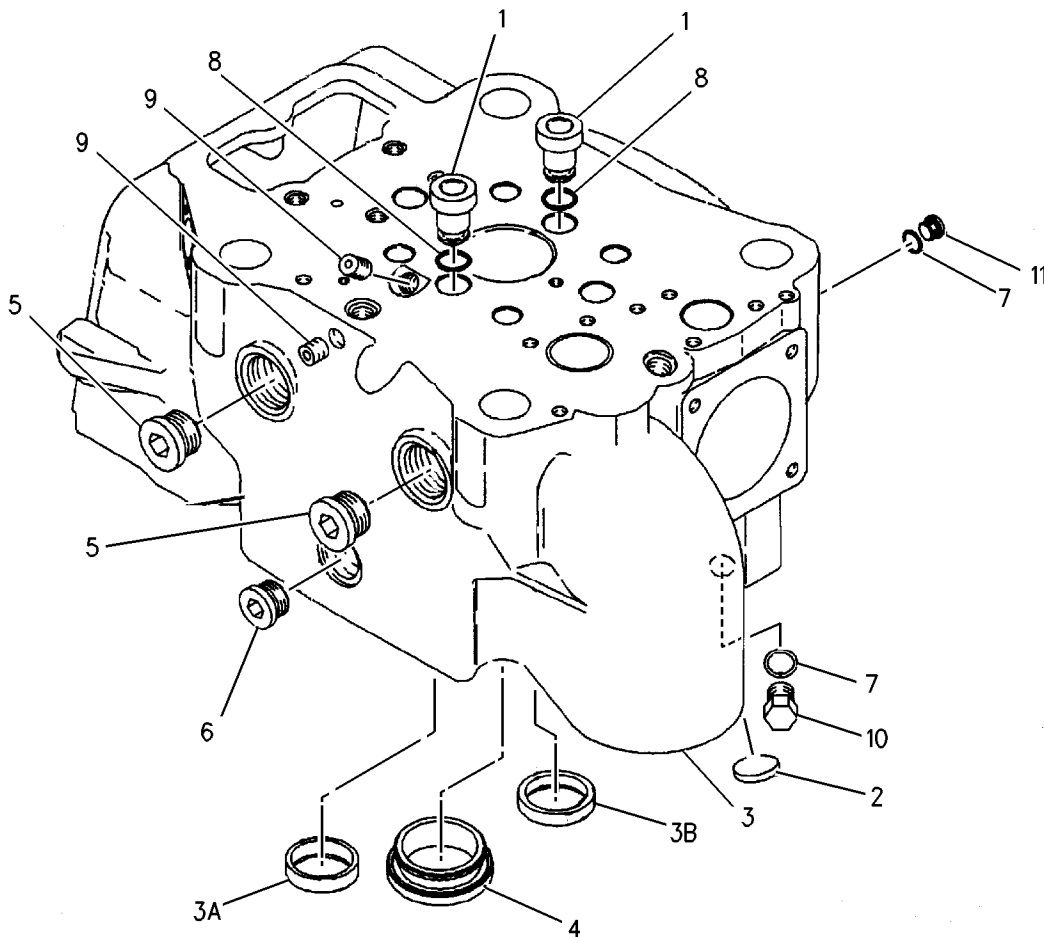
# BASIC ENGINE

## 219-2954 CYLINDER HEAD AS (CHG -00, -01) PART OF 219-2955 CYLINDER HEAD GP

SMCS-1100, 1101

i01892866

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4W-5442	2	PLUG-DOWEL						
	2	1	7C-4298	4	PLUG-CUP (ORIFICE)						
	3	1	219-2953	1	CYLINDER HEAD AS						
	3A	1	171-3992	2	INSERT-VALVE SEAT (INLET)						
	3B	1	171-3993	2	INSERT-VALVE SEAT (EXHAUST)						
	4	1	148-7142	1	INSERT (PRECHAMBER)						
	5	1	2M-6471	4	PLUG-CUP						
	6	1	3B-0645	7	PLUG-CUP						
	7	1	3J-7354	2	SEAL-O-RING						
	8	1	6V-5061	2	SEAL-O-RING						
	9	1	8T-6759	2	PLUG-PIPE						
	10	1	9S-4182	1	PLUG						
	11	1	9S-8002	1	PLUG						



GRAPHIC #1

<END>

g00985337

# BASIC ENGINE

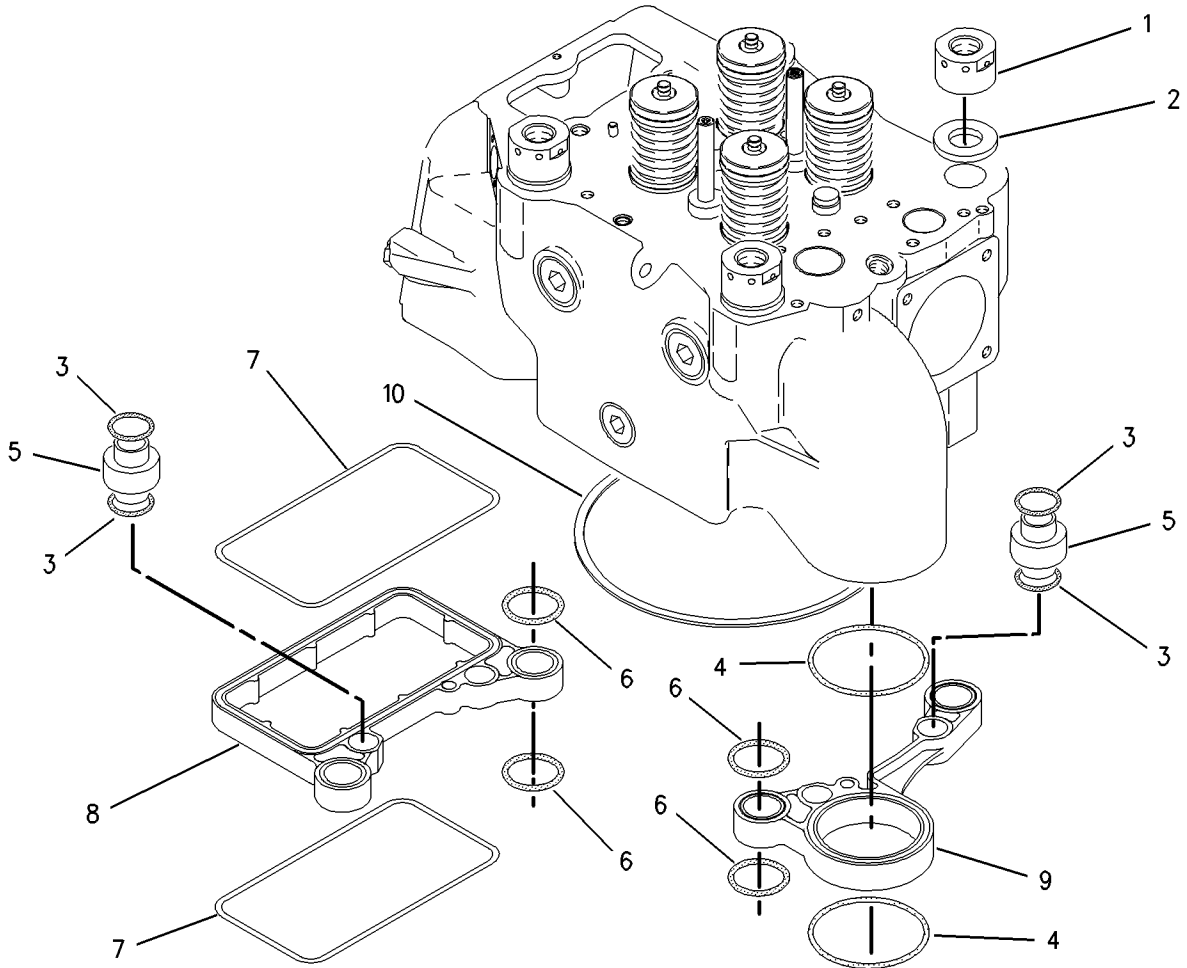
## 7C-0400 CYLINDER HEAD GP (CHG -18) SPARK IGNITED

SMCS-1100

i02173537

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-2361	4	NUT-CYLINDER HEAD (1-5/8-12UN SPL THD)						
	2	1	1W-2362	4	WASHER (41.5X85X12-MM THK)						
	3	1	2N-3350	8	SEAL-O-RING						
	4	1	6V-4314	2	SEAL-O-RING						
	5	1	7C-4299	4	ADAPTER						
	6	1	8C-5230	8	SEAL-O-RING						
	7	1	8C-9023	2	SEAL-O-RING						
	8	1	114-4301	1	PLATE-SEAL						
	9	1	114-4302	1	PLATE-SEAL						
	10	1	143-2878	1	GASKET						
CFYR		1	219-2955	1	CYLINDER HEAD GP						30
					-OR-						
CFR		1	219-2956	1	CYLINDER HEAD GP						

C-CHANGE FROM PREVIOUS TYPE  
F-NOT SHOWN  
R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00946793



# BASIC ENGINE

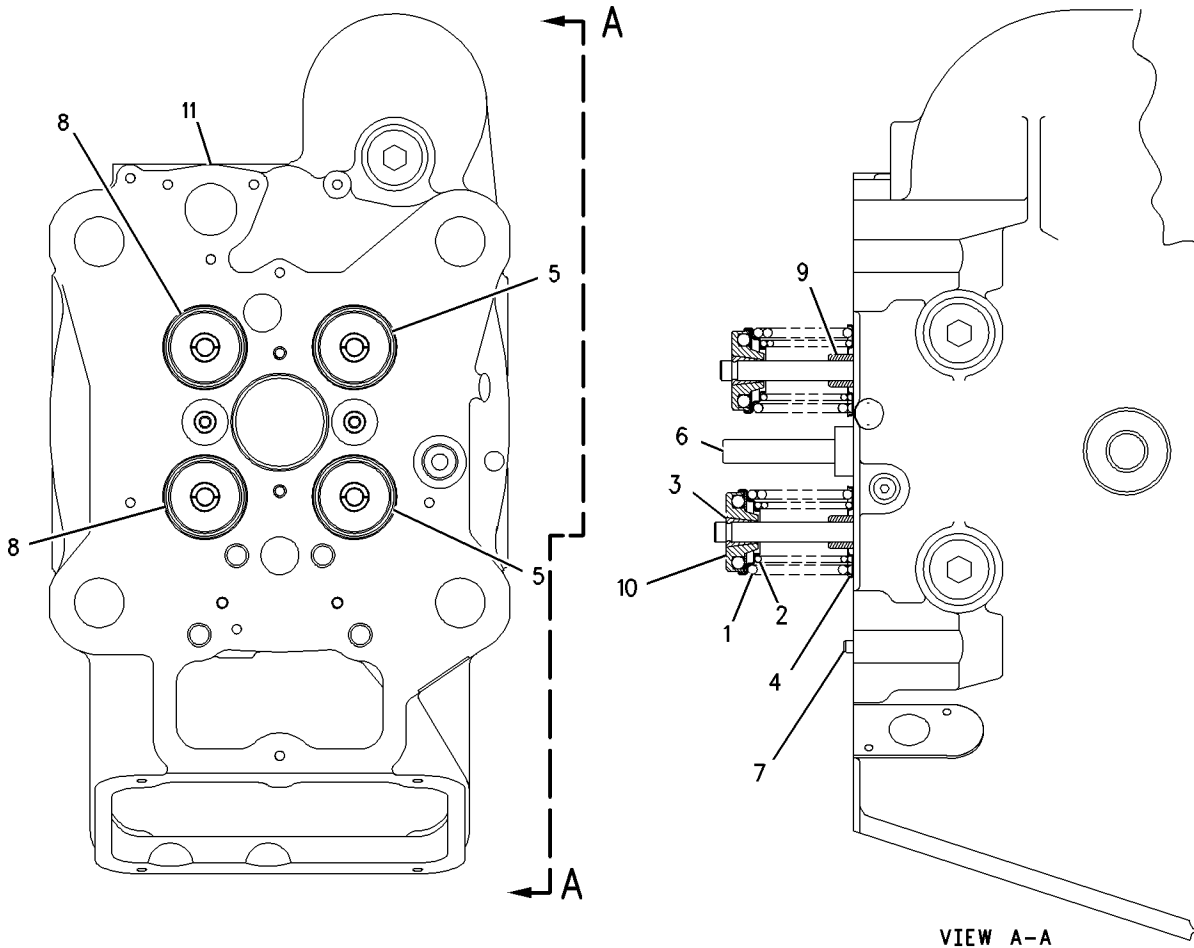
## 219-2955 CYLINDER HEAD GP (CHG -00, -00A1, -00B1) PART OF 7C-0400 CYLINDER HEAD GP

SMCS-1100

i02019772

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1W-1748</b>	4	SPRING-VALVE (OUTER)						
	2	1	<b>1W-1749</b>	4	SPRING-VALVE (INNER)						
	3	1	<b>1W-1752</b>	8	LOCK-VALVE RETAINER						
	4	1	<b>1W-1754</b>	4	GUIDE-VALVE SPRING						
	5	1	<b>4P-2854</b>	2	VALVE-INLET						
	6	1	<b>4W-5441</b>	2	DOWEL-BRIDGE GUIDE						
	7	1	<b>6V-3538</b>	2	DOWEL						
	8	1	<b>154-2417</b>	2	VALVE-EXHAUST						
	9	1	<b>175-6344</b>	4	GUIDE-VALVE						
	10	1	<b>189-4583</b>	4	ROTATOR AS						
Y	11	1	<b>219-2954</b>	1	CYLINDER HEAD AS						28

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01000341

# BASIC ENGINE

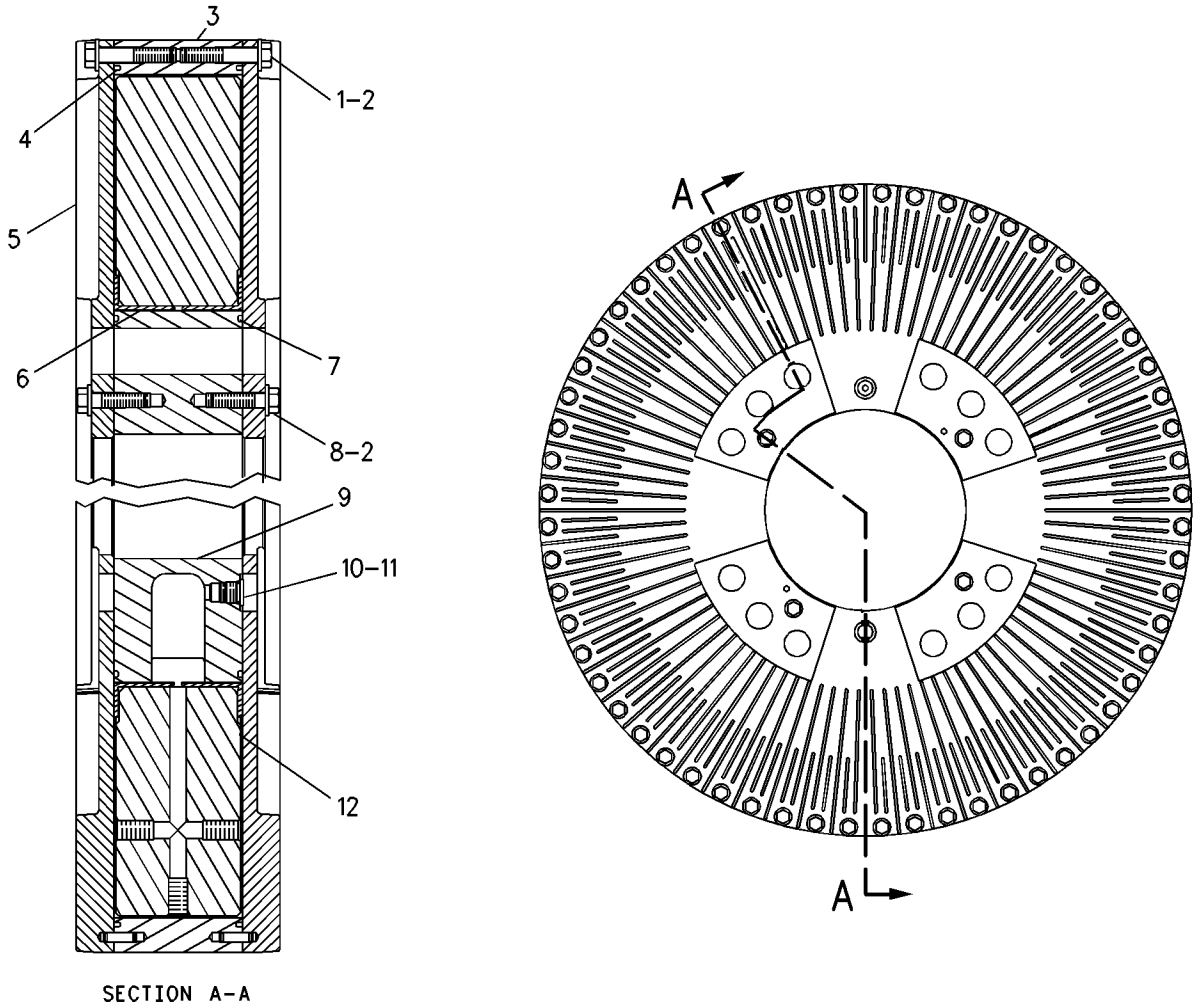
## 7C-2122 DAMPER GP\*R (CHG -00 THRU -02) PART OF 7W-0127 DAMPER GP

SMCS - 1205

i02016656

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1590	120	BOLT (3/8-16X2-IN)						
	2	1	3V-3308	128	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	3	1	7C-2120	1	RING AS						
		1	6V-3536	4	DOWEL						
J	4	1	1W-9217	2	SEAL						
	5	1	7C-2115	2	COVER						
J	6	1	9Y-2997	12	BEARING-NYLON						
J	7	1	6V-5058	2	SEAL-O-RING						
	8	1	0S-1591	8	BOLT (3/8-16X1.5-IN)						
	9	1	1W-8562	1	HUB AS						
		1	6V-3536	4	DOWEL						
	10	1	9S-8004	2	PLUG						
	11	1	6V-5049	2	SEAL-O-RING						
	12	1	1W-8564	1	WEIGHT-INERTIA						
					AVAILABLE REPAIR KIT(S):						
J			9Y-2749	1	KIT-DAMPER						
					(ALSO INCLUDES FLUID PACKET)						

J-KIT MARKED J INCLUDES PARTS MARKED J



GRAPHIC #1

<END>

g00762525

# BASIC ENGINE

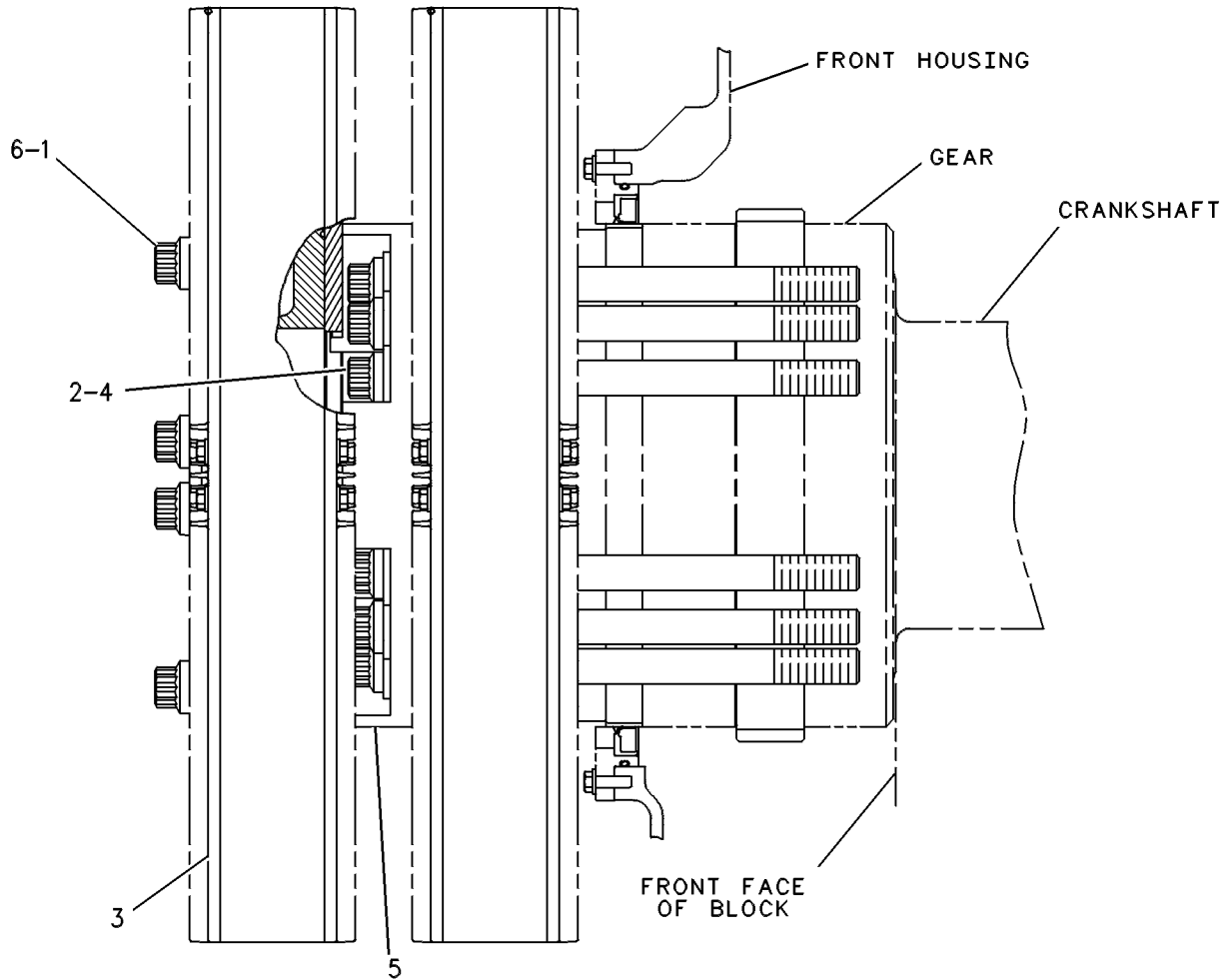
## 7W-0127 DAMPER GP (CHG -04)

SMCS - 1205

i02016661

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7X-3154	8	BOLT-12 POINT HEAD (1 1/8-7X6.5-IN)						
	2	1	3S-1349	12	WASHER-HARD (31X52.5X6-MM THK)						
YR	3	1	7C-2122	2	DAMPER GP						31
	4	1	7X-3324	12	BOLT-12 POINT HEAD (1-1/8-12X15.5-IN)						
C	5	1	106-2035	1	ADAPTER-CRANKSHAFT						
	6	1	9Y-6181	4	SPACER						

C-CHANGE FROM PREVIOUS TYPE  
 R-REMG PART MAY BE AVAILABLE  
 Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00065740

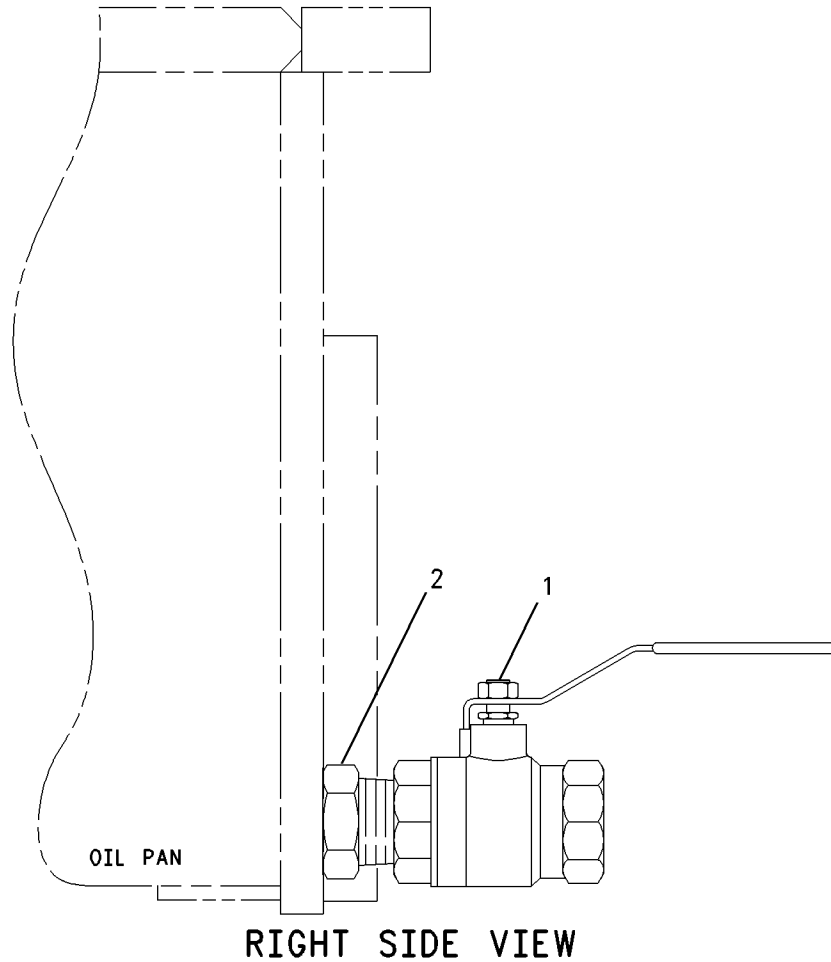
# BASIC ENGINE

## 4P-2268 DRAIN GP-ENGINE OIL (CHG -00, -01, -01D1, -01D2, -01D4, -01D5, -01D6, -01D7, -01D8)

SMCS-1302

i01544669

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-4444	1	VALVE						
	2	1	8C-3991	1	ADAPTER-STRAIGHT THREAD						
		1	5P-7816	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00802907

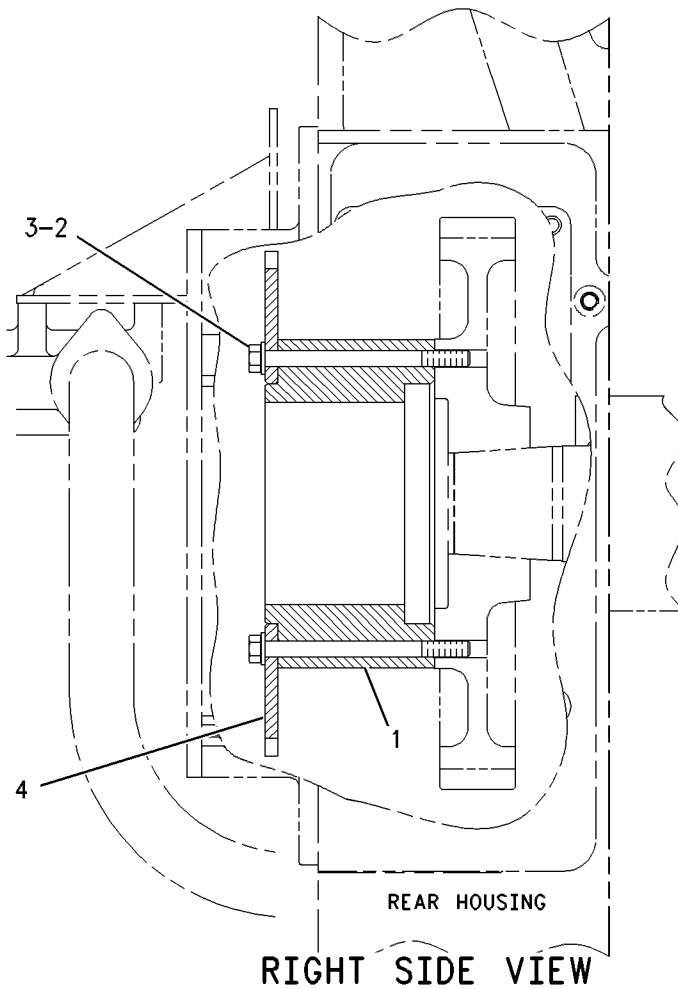
# BASIC ENGINE

## 159-9408 DRIVE GP-TIMING & SPEED (CHG -00, -01)

SMCS-1207, 1272

i01678862

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	154-8716	1	SPACER (160X260X134.2MM THK)						
	2	1	2A-1531	4	BOLT (1/2-13X6.5 IN)						
	3	1	5P-1076	4	WASHER-HARD (13.5X30X4MM THK)						
	4	1	154-2709	1	WHEEL						



GRAPHIC #1

<END>

g00570488

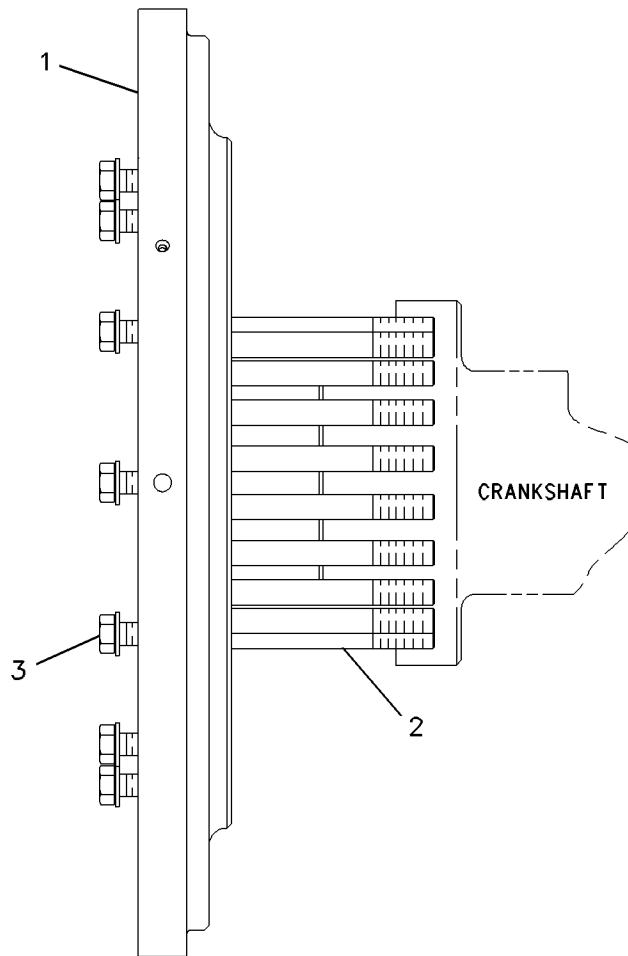
# BASIC ENGINE

## 6I-2075 FLYWHEEL GP (CHG -00 THRU -02)

SMCS-1156

i01563157

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>6I-2076</b>	1	FLYWHEEL						
	2	1	<b>6V-5605</b>	20	BOLT-12 POINT HEAD (1 1/8-12X12.5IN)						
		1	<b>3S-1349</b>	20	WASHER-HARD (31X52.5X6MM THK)						
	3	1	<b>2H-3745</b>	12	BOLT (1-14X2.75 IN)						
		1	<b>5P-8250</b>	12	WASHER (28X49X5MM THK)						



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00812212

# BASIC ENGINE

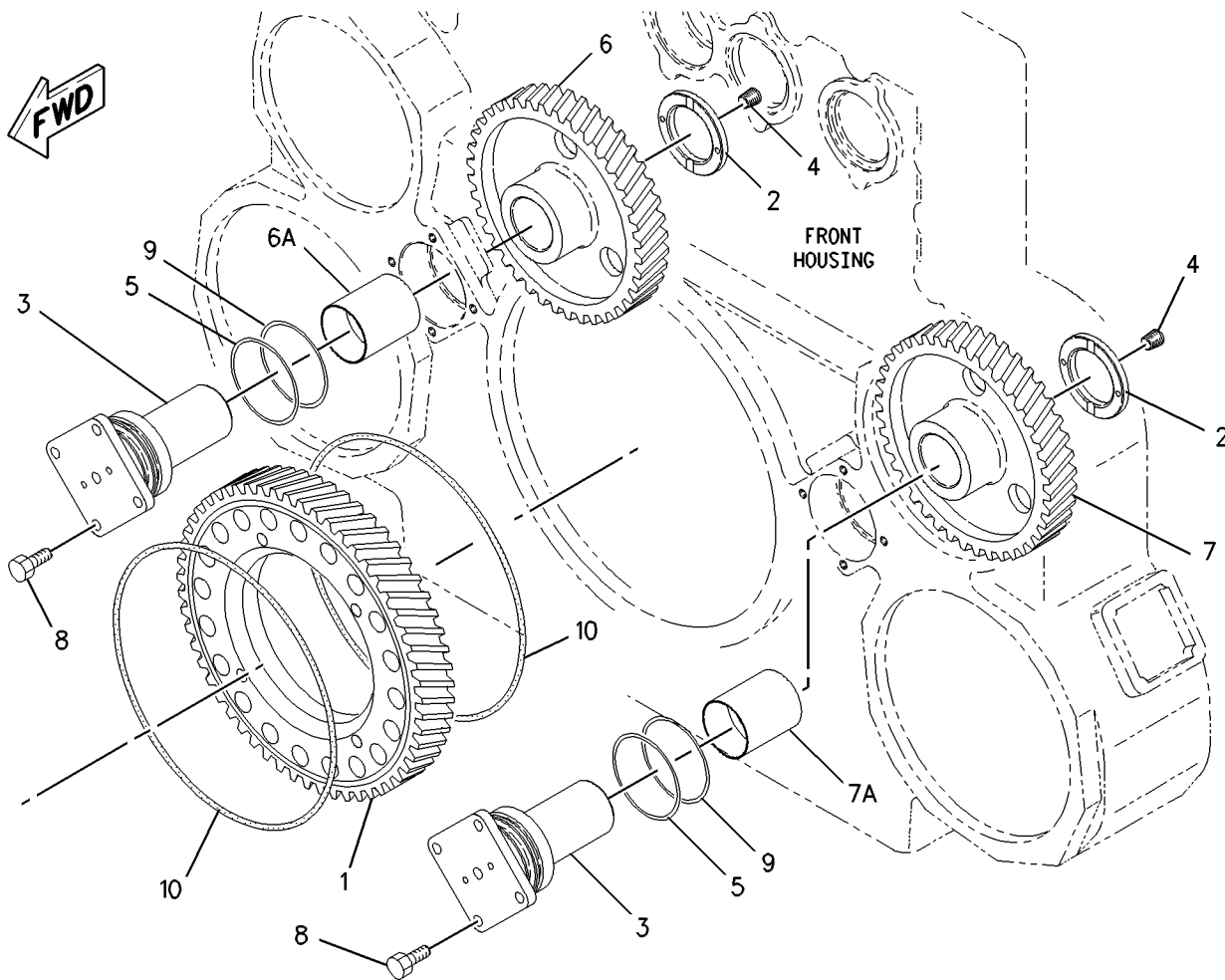
## 1W-0790 GEAR GP-FRONT (CHG -05 THRU -09)

SMCS - 1206

i01519484

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1N-3828	1	GEAR-CRANKSHAFT (96 TEETH)						
	2	1	1N-3834	2	WASHER-THRUST						
	3	1	1N-3842	2	SHAFT-IDLER						
	4	1	3G-7382	2	PLUG-ORIFICE						
	5	1	6V-5052	2	SEAL-O-RING						
C	6	1	180-3864	1	GEAR AS (68 TEETH)						
	6A	1	190-6465	1	BEARING						
C	7	1	180-3865	1	GEAR AS (67 TEETH)						
	7A	1	190-6465	1	BEARING						
	8	1	0S-1595	8	BOLT (1/2-13X1.25 IN)						
	9	1	5S-9134	2	SEAL-O-RING						
	10	1	6V-5058	2	SEAL-O-RING						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00788957

# BASIC ENGINE

## 149-0560 GEAR GP-REAR (CHG -00, -00A1, -00B1 THRU -02)

SMCS-1204

i02061770

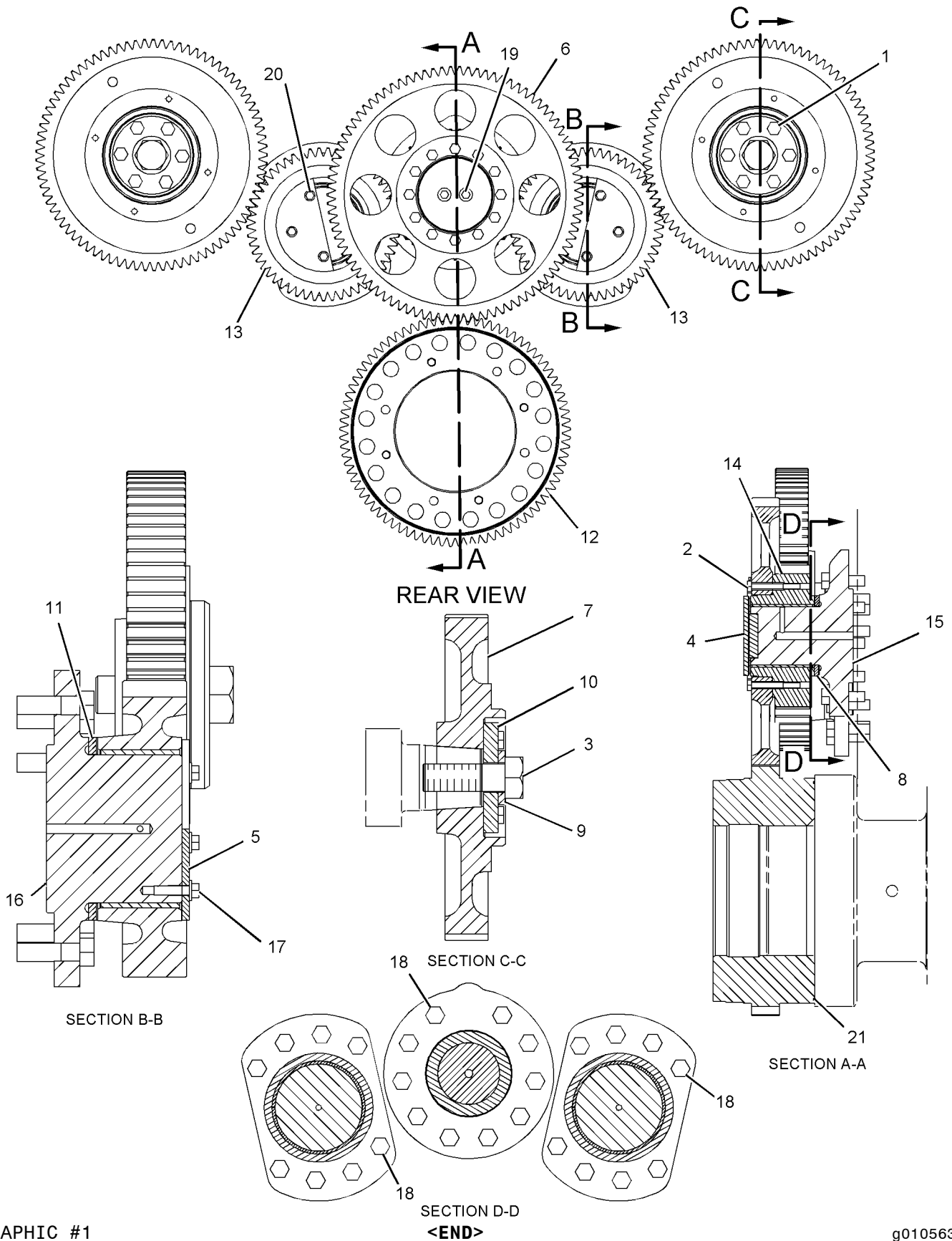
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1A-1135	12	BOLT (5/8-11X2-IN)						
	2	1	1D-4566	12	BOLT (1/2-13X3.5-IN)						
	3	1	1F-6762	2	BOLT (1 1/2-12X4.5-IN)						
	4	1	4P-0294	1	RETAINER						
	5	1	7C-6329	2	RETAINER						
	6	1	7E-7191	1	GEAR-IDLER (90-TEETH)						
	7	1	7E-7196	2	GEAR-CAMSHAFT DRIVE (81-TEETH)						
	8	1	7E-9638	1	WASHER-THRUST						
	9	1	7W-5033	2	WASHER (41X75X10-MM THK)						
	10	1	7W-5034	2	PLATE						
	11	1	7W-7687	2	WASHER-THRUST						
	12	1	121-3096	1	GEAR-CRANKSHAFT (81-TEETH)						
	13	1	130-5478	2	GEAR AS (53-TEETH)						
					(EACH INCLUDES)						
		1	9Y-1539	1	BEARING-SLEEVE						
	14	1	130-5479	1	GEAR AS (45-TEETH)						
		1	7E-9692	1	BEARING-SLEEVE						
	15	1	149-0562	1	SHAFT-IDLER						
	16	1	149-0563	2	SHAFT-IDLER						
	17	1	0S-1591	6	BOLT (3/8-16X1.5-IN)						
	18	1	1A-8063	26	BOLT (3/4-10X2.5-IN)						
	19	1	3B-1915	2	BOLT (3/8-16X1.75-IN)						
	20	1	3V-3308	6	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	21	1	6V-5058	1	SEAL-O-RING						



# BASIC ENGINE

149-0560 GEAR GP-REAR (contd.)

i02061770



GRAPHIC #1

g01056399

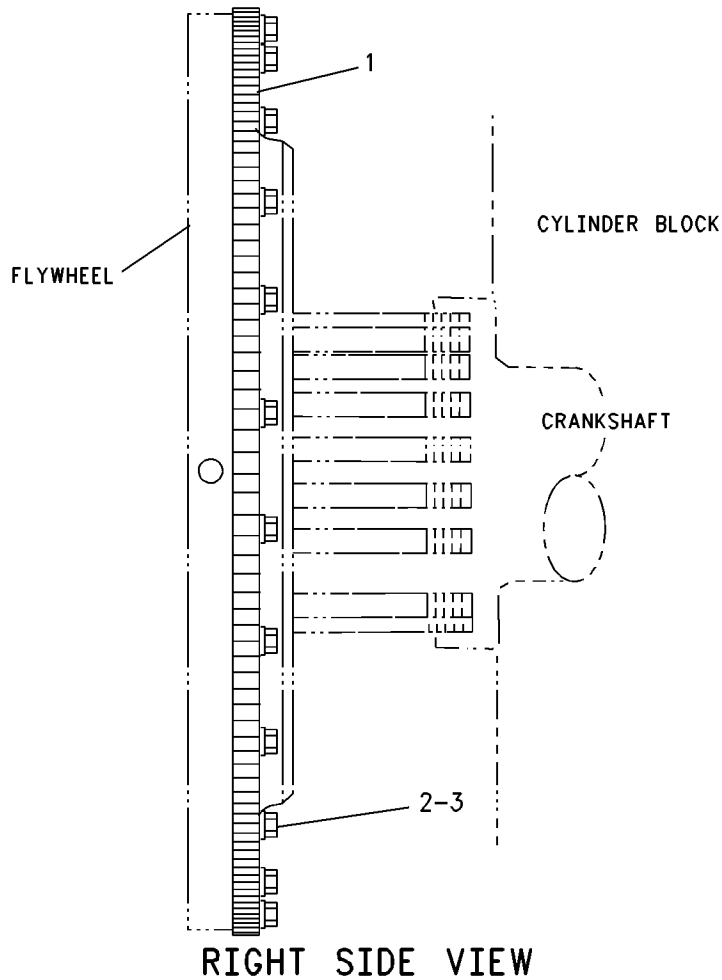
# BASIC ENGINE

## 9Y-1851 GEAR GP-RING (CHG -00) STARTER-STANDARD ROTATION

SMCS-1158

i01492339

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-5535	1	GEAR (255 TEETH)						
	2	1	OS-1590	24	BOLT (3/8-16X2 IN)						
	3	1	3V-3308	24	WASHER-HARD (20.5X10.2X2.5MM THK)						



GRAPHIC #1

<END>

g00774877

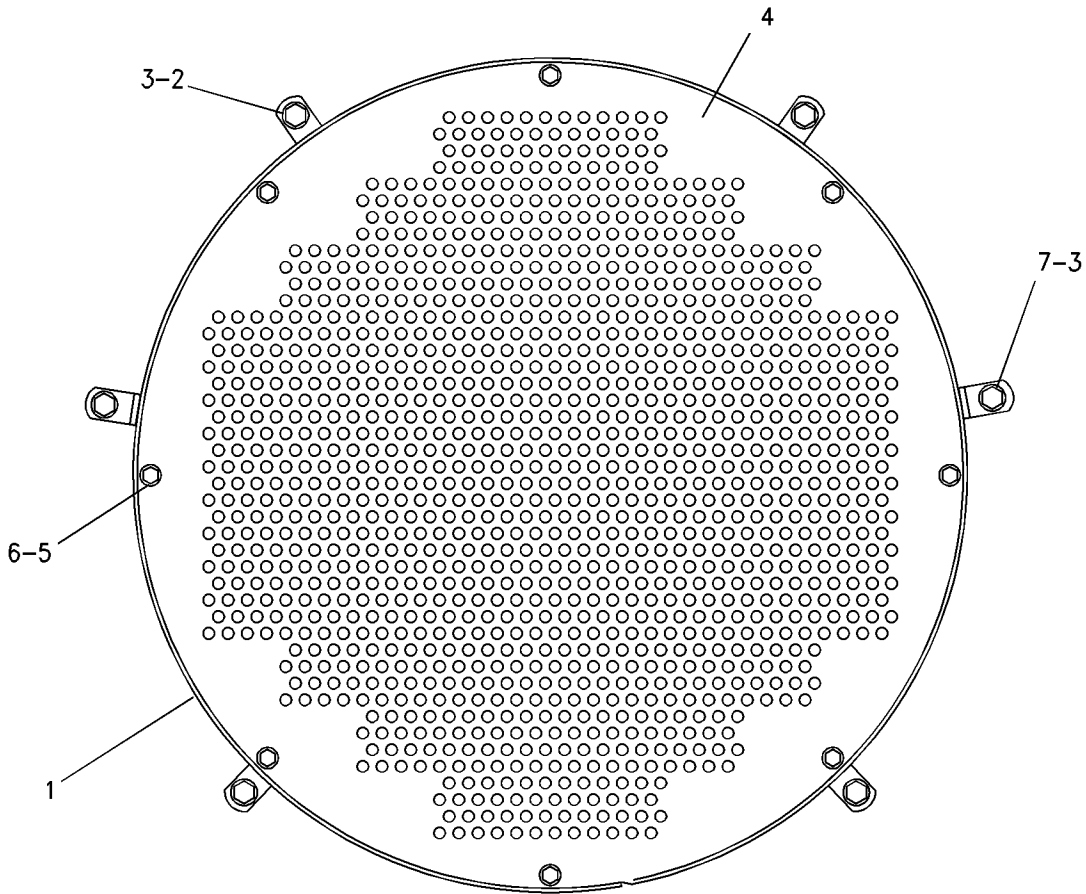
# BASIC ENGINE

## 7W-6583 GUARD GP-DAMPER (CHG -00 THRU -03, -03D1) FOR USE WITH DOUBLE 30 IN NARROW DAMPER

SMCS-1205

i02016667

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-1852	1	DAMPER & GUARD AS						
	2	1	0S-1621	4	BOLT (1/2-13X1-IN)						
	3	1	5P-8245	6	WASHER-HARD (13.5X25.5X3-MM THK)						
	4	1	7W-7096	1	COVER						
	5	1	0S-1594	8	BOLT (3/8-16X25.4-IN)						
	6	1	3V-3308	8	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	7	1	0S-1585	2	BOLT (1/2-13X1.50-IN)						



FRONT VIEW

GRAPHIC #1

<END>

g00803118

# BASIC ENGINE

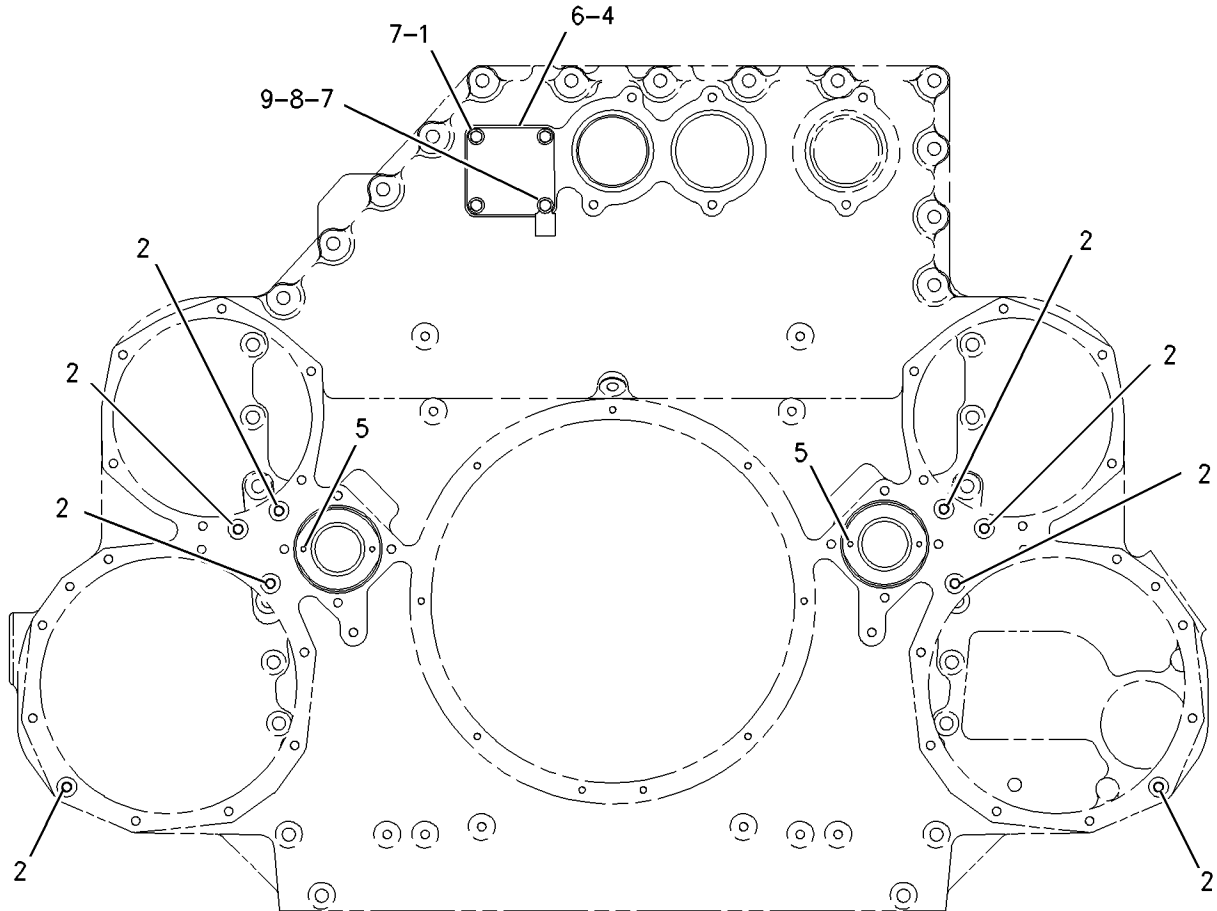
## 4P-2351 HOUSING GP-FRONT (CHG -00 THRU -06) PART OF 134-8347 HOUSING GP-FRONT

SMCS-1151, 1162

i01921188

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1594	3	BOLT (3/8-16X1 IN)						
	2	1	1W-0104	8	DOWEL-HOLLOW						
	4	1	6V-0973	1	SEAL-O-RING						
	5	1	7N-2043	4	DOWEL						
	6	1	153-9138	1	COVER (FRONT OIL DRAIN)						
	7	1	3V-3308	4	WASHER-HARD (10.2X20.5X2.5MM THK)						
B	8	1	1A-2029	1	BOLT (3/8-16X1.125 IN)						
	9	1	9G-9150	1	CLIP						

B-USE AS REQUIRED



FRONT VIEW

GRAPHIC #1

<END>

g00857722

# BASIC ENGINE

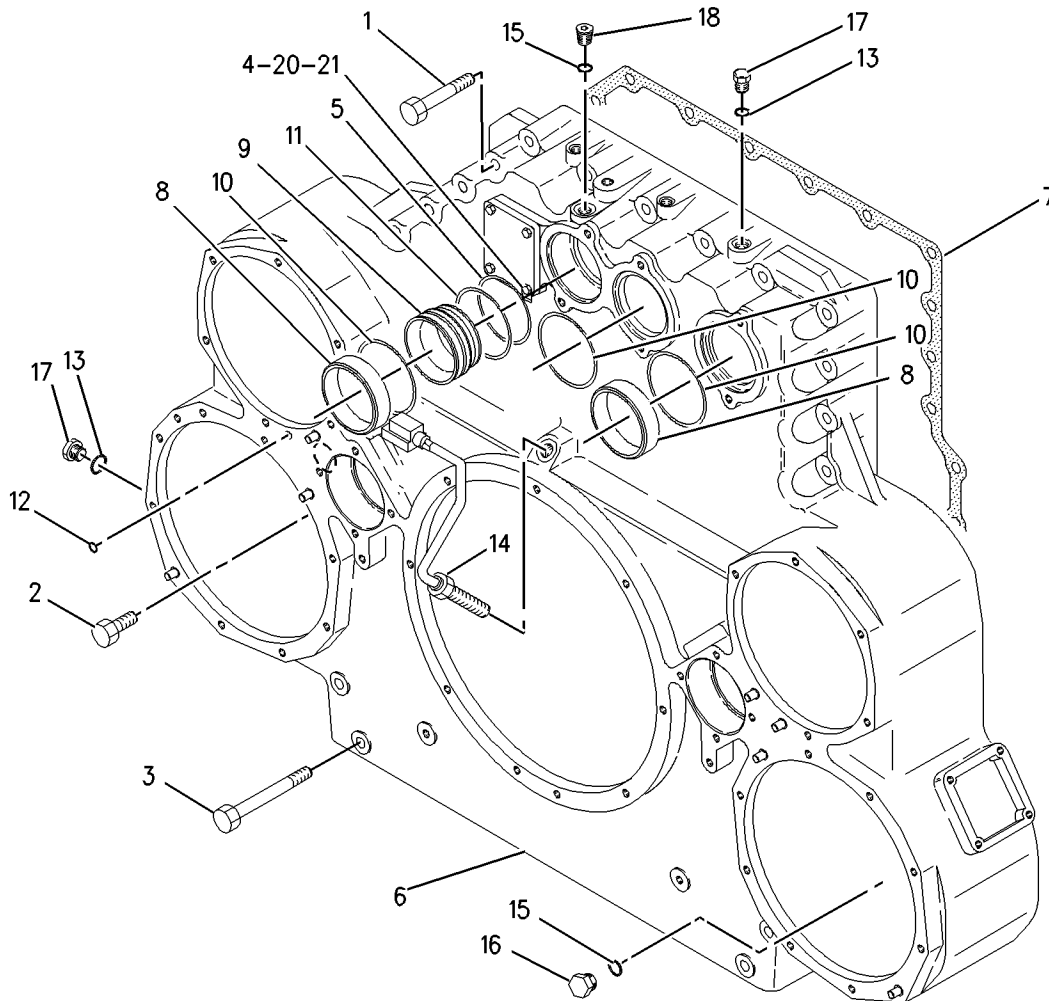
## 134-8347 HOUSING GP-FRONT (CHG -00 THRU -02)

SMCS-1151, 1162

i02030124

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1569	13	BOLT (5/8-11X4-IN)						
	2	1	0S-1625	12	BOLT (5/8-11X2.5-IN)						
	3	1	2H-3756	4	BOLT (5/8-11X9-IN)						
	4	1	9G-9150	1	CLIP						
	5	1	3P-0655	1	SEAL-O-RING						
Y	6	1	4P-2351	1	HOUSING GP-FRONT						41
	7	1	4W-4100	1	GASKET						
	8	1	4W-7483	2	SLEEVE						
	9	1	4W-7484	1	CONNECTOR						
	10	1	5P-7818	3	SEAL-O-RING						
	11	1	6V-3833	1	SEAL-O-RING						
	12	1	6V-3955	8	SEAL-O-RING						
	13	1	6V-5049	3	SEAL-O-RING						
Y	14	1	7C-1897	1	SENSOR GP-SPEED (MAGNETIC)						169
	15	1	8L-2786	2	SEAL-O-RING						
	16	1	9S-4185	1	PLUG						
	17	1	9S-8004	3	PLUG						
	18	1	9S-8005	1	PLUG						
	20	1	1A-2029	1	BOLT (3/8-16X1.125-IN)						
	21	1	3V-3308	1	WASHER-HARD (10.2X20.5X2.5-MM THK)						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00937221

# BASIC ENGINE

## 196-4653 HOUSING GP-REAR-GEAR (CHG -00 THRU -05)

SMCS-1166

i02093668

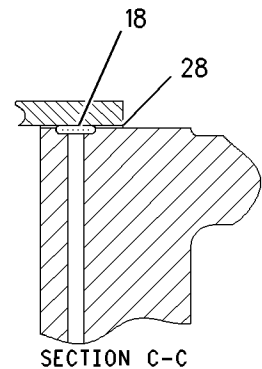
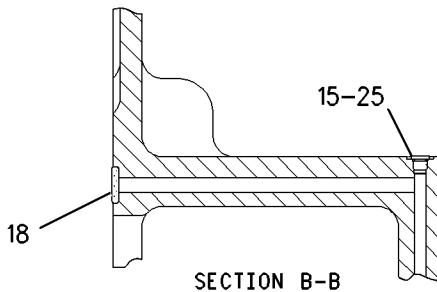
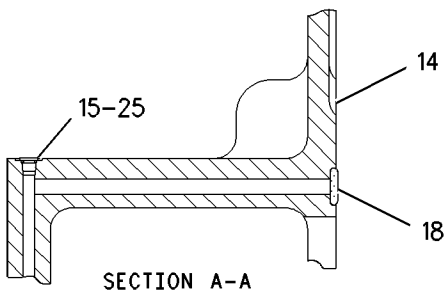
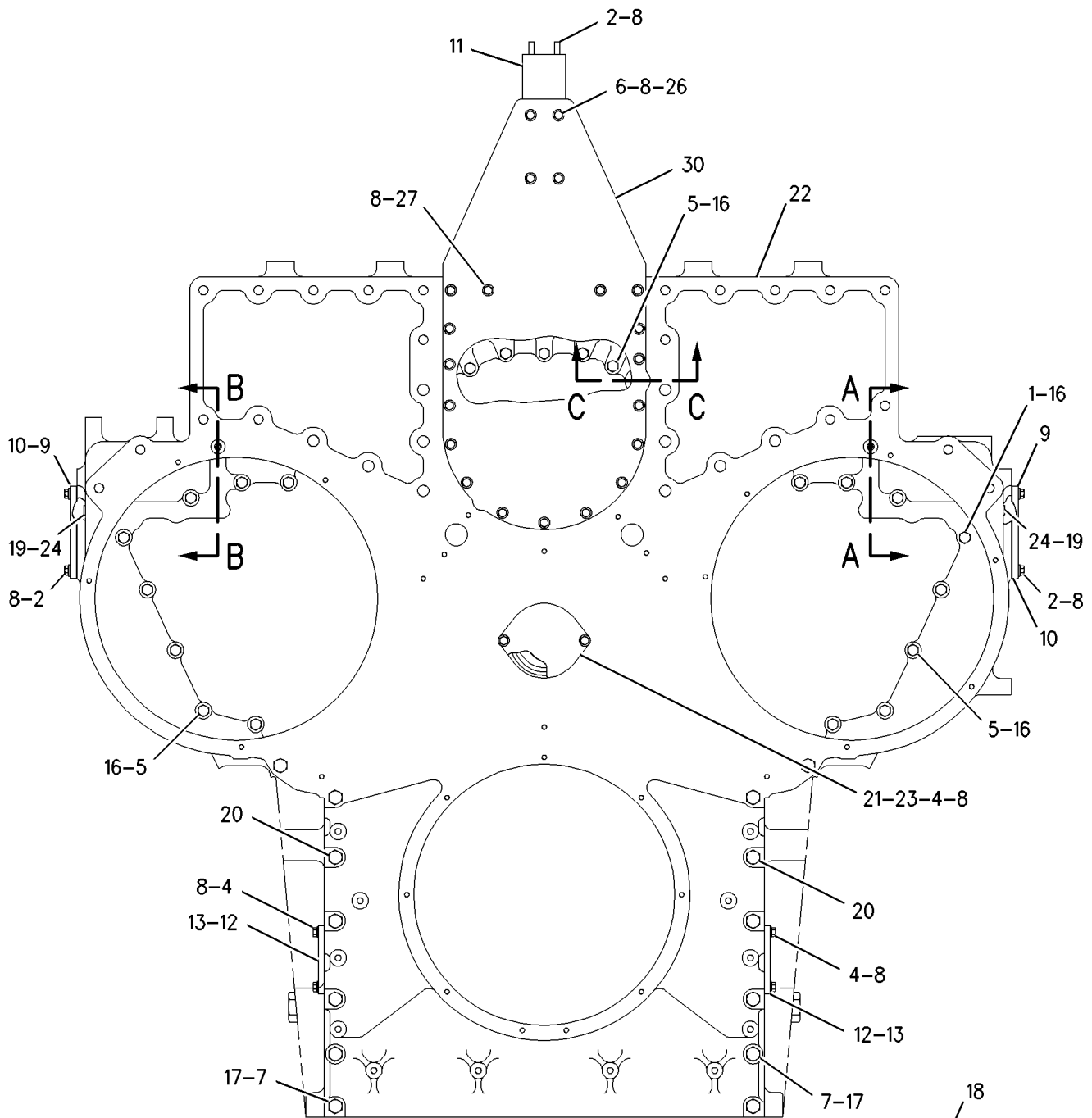
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1585	1	BOLT (1/2-13X1.50-IN)						
	2	1	0S-1588	12	BOLT (3/8-16X1.25-IN)						
	4	1	0S-1594	10	BOLT (3/8-16X1-IN)						
	5	1	1A-1460	20	BOLT (1/2-13X2-IN)						
	6	1	2A-4639	4	BOLT (3/8-16X1.625-IN)						
	7	1	2H-3756	4	BOLT (5/8-11X9-IN)						
	8	1	3V-3308	51	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	9	1	4P-0335	2	COVER						
	10	1	4P-0340	2	GASKET						
	11	1	218-4822	1	BRACKET						
	12	1	4W-6637	2	COVER						
	13	1	4W-6638	2	GASKET						
	14	1	4W-9653	1	GASKET						
	15	1	5P-7813	2	SEAL-O-RING						
M	16	1	5P-8245	21	WASHER-HARD (13.5X25.5X3-MM THK)						
	17	1	5P-8247	4	WASHER-HARD (17X32X3.5-MM THK)						
	18	1	6V-3955	3	SEAL-O-RING						
	19	1	6V-5049	2	SEAL-O-RING						
	20	1	6V-9608	10	BOLT (5/8-11X10-IN)						
	21	1	7E-0729	1	COVER-TOP FACE (RH-UPPER)						
	22	1	7E-9631	1	HOUSING-REAR						
	23	1	8C-3103	1	SEAL-FACE						
	24	1	9S-8004	2	PLUG						
	25	1	9S-8007	2	PLUG						
	26	1	9S-8752	4	NUT-FULL (3/8-16-THD)						
	27	1	1A-2029	17	BOLT (3/8-16X1.125-IN)						
	28	1	116-2480	1	GASKET						
	30	1	199-8969	1	COVER						

M-METRIC PART

# BASIC ENGINE

196-4653 HOUSING GP-REAR (contd.)

i02093668



GRAPHIC #1

<END>

g00881110

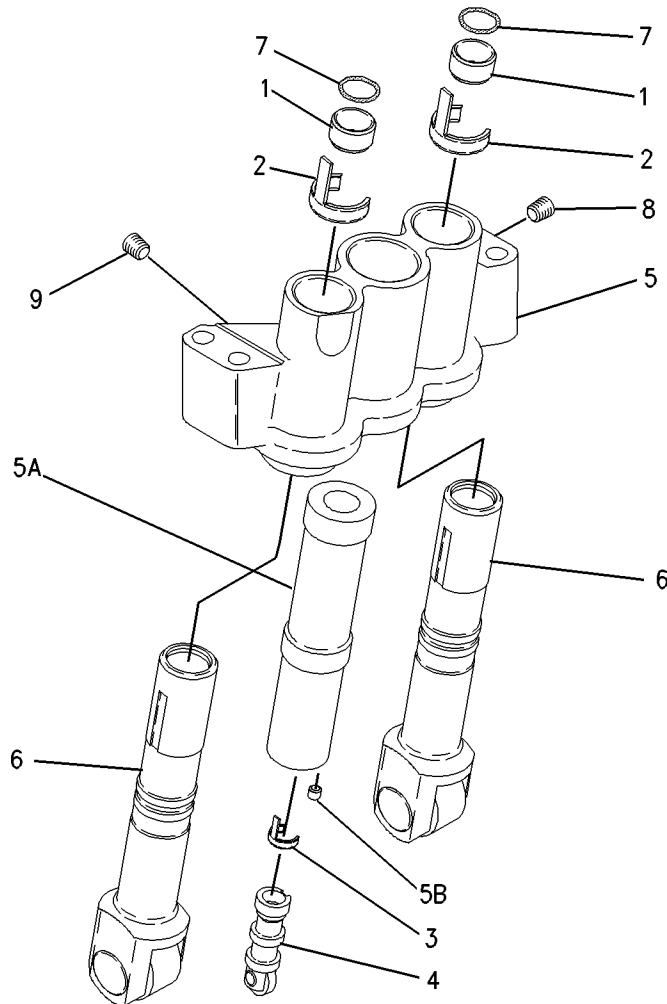
# BASIC ENGINE

## 7C-0418 LIFTER GP-VALVE (CHG -01 THRU -07) PART OF 7C-0417 VALVE MECHANISM GP

SMCS-1209

i01494643

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-1756	2	INSERT-LIFTER						
	2	1	1W-2473	2	SPRING-GUIDE						
	3	1	7W-8580	1	SPRING-LIFTER GUIDE						
	4	1	108-8235	1	LIFTER AS-VALVE						
	5	1	153-3932	1	GUIDE AS-LIFTER						
	5A	1	153-3931	1	ADAPTER AS						
	5B	1	1W-0605	1	PIN-HOUSING SIDE						
	6	1	194-0629	2	LIFTER AS-VALVE						
	7	1	5P-7701	2	SEAL-O-RING						
	8	1	8T-6757	1	PLUG-PIPE						
	9	1	8T-6759	3	PLUG-PIPE						



GRAPHIC #1

<END>

g00776146



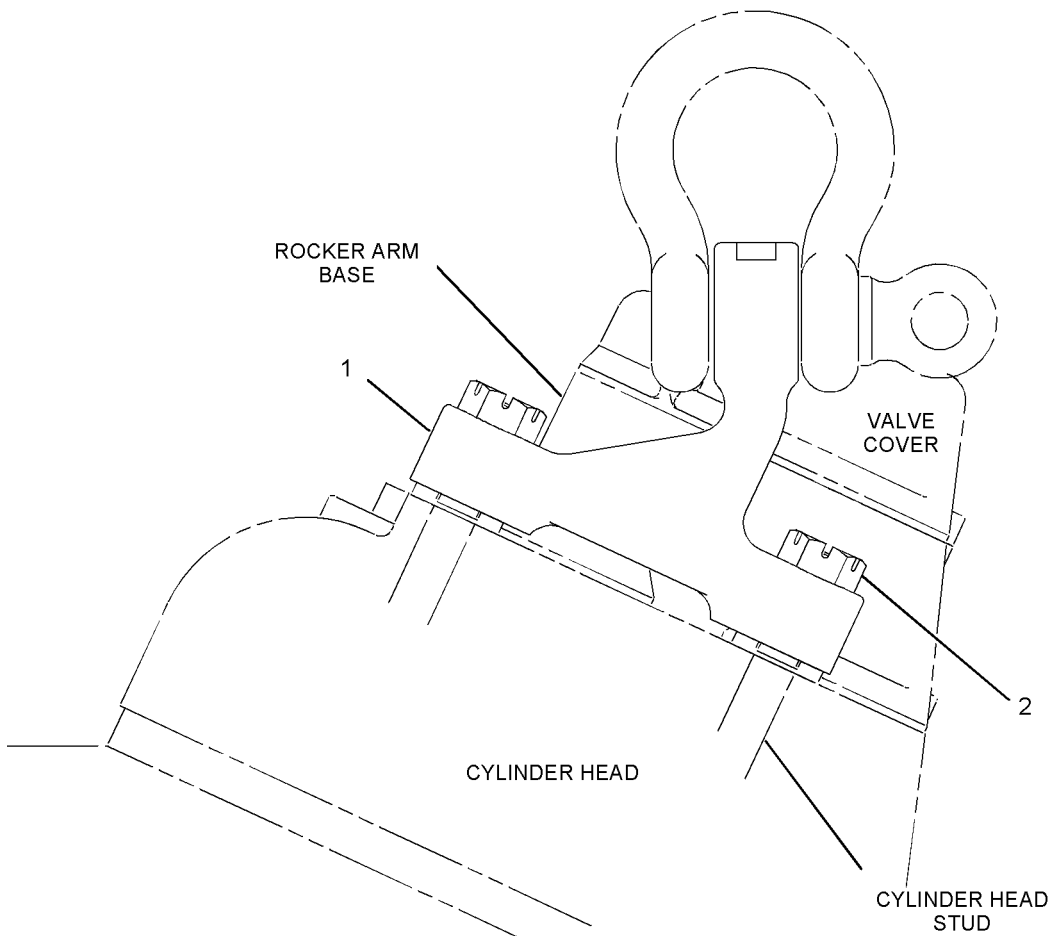
# BASIC ENGINE

## 7C-7950 LIFTING GP-ENGINE (CHG -00 THRU -02, -02A1, -02B1, -03)

SMCS-1122

i02093672

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	101-8189	4	BRACKET-LIFTING						
	2	1	9X-6003	16	NUT-SLOTTED (1-5/8-2-THD)						



FRONT VIEW

<END>

GRAPHIC #1

g01067478

# BASIC ENGINE

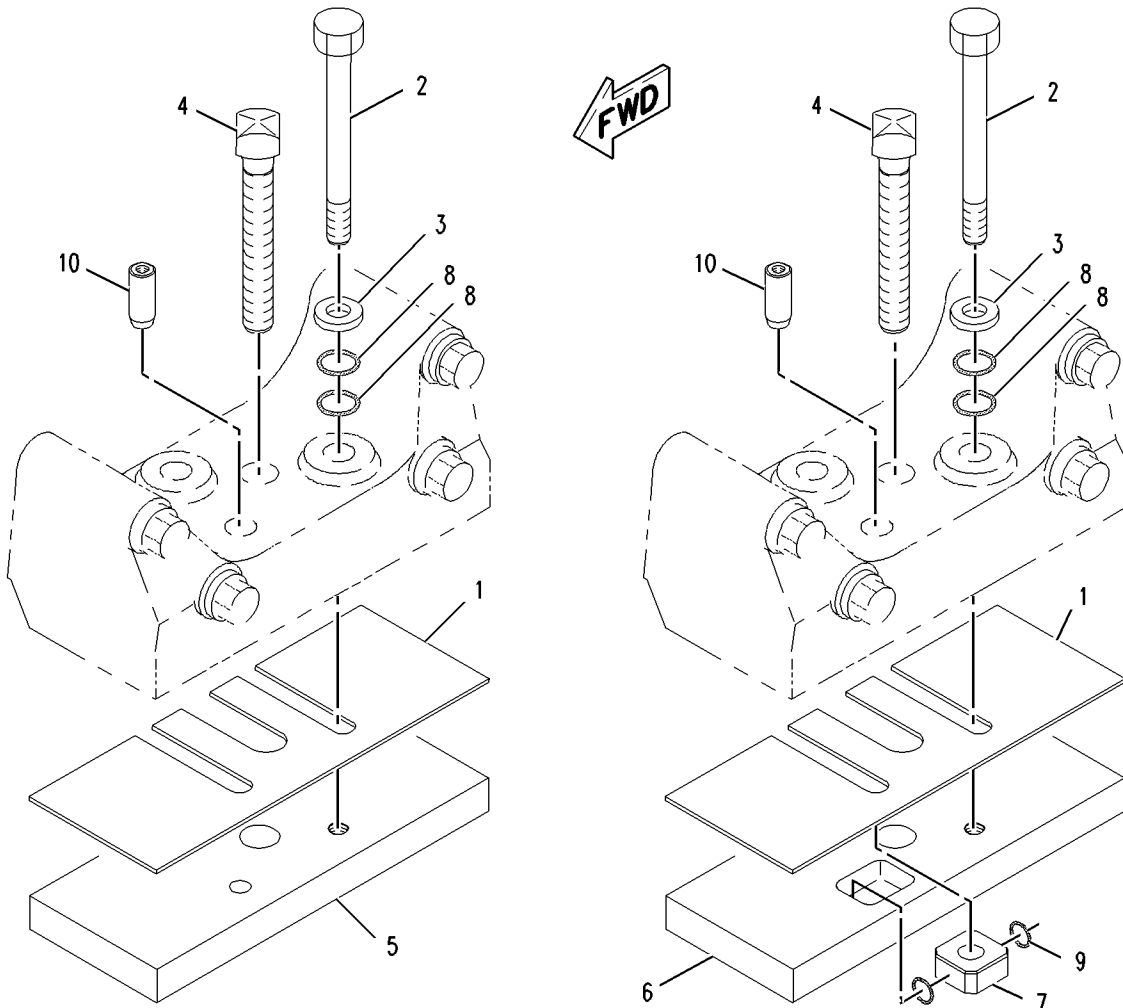
## 7C-5269 MOUNTING GP-ENGINE (CHG -00 THRU -04) 450-MM MOUNTING DIMENSION, LH

SMCS-1152

i02093267

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
B	1	1	7C-5273	3	SHIM (0.08-MM THK)						
	2	1	7F-4283	8	BOLT (1-14X6.5-IN)						
	3	1	5D-4661	8	WASHER-HARD (28X52.5X8-MM THK)						
	4	1	6V-5137	4	SETSCREW-SQUARE HEAD (1 1/2-12X190.5-MM)						
	5	1	7W-8487	3	PLATE-ENGINE MOUNTING						
	6	1	7W-8486	1	PLATE-ENGINE MOUNTING						
	7	1	7W-1771	1	GUIDE						
	8	1	8M-4446	16	SEAL-O-RING						
	9	1	5P-2428	2	SEAL-O-RING						
	10	1	2W-2988	2	DOWEL						

B-USE AS REQUIRED



GRAPHIC #1

<END>

g00801145

# BASIC ENGINE

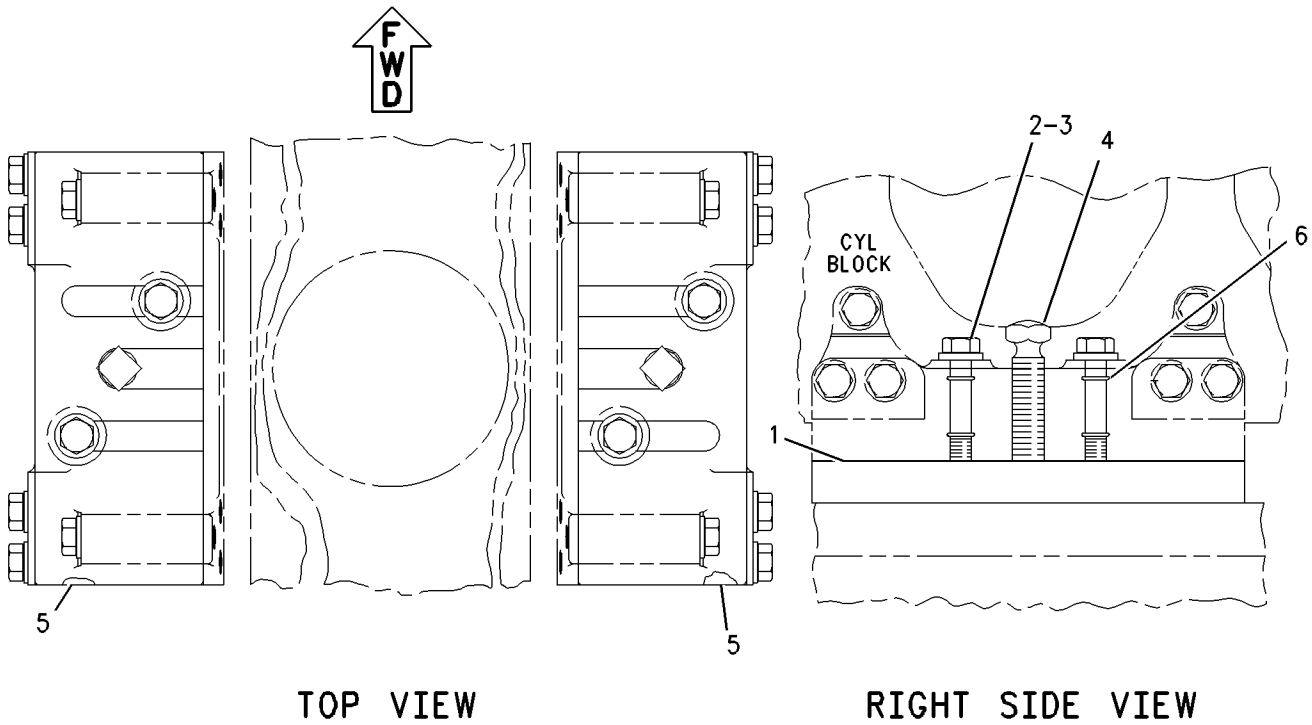
## 109-9717 MOUNTING GP-ENGINE (CHG -00)

SMCS-1152

i01678293

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
B	1	1	7C-5273	2	SHIM						
	2	1	7F-4283	4	BOLT (1-14X6.5IN)						
	3	1	5D-4661	4	WASHER-HARD (28X52.5X8MM THK)						
	4	1	6V-5137	2	SETSCREW-SQUARE HEAD (1-1/2-12X190.5MM)						
	5	1	7W-8487	2	PLATE-ENGINE MOUNTING						
	6	1	8M-4446	8	SEAL-O-RING						

B-USE AS REQUIRED



GRAPHIC #1

<END>

g00811854

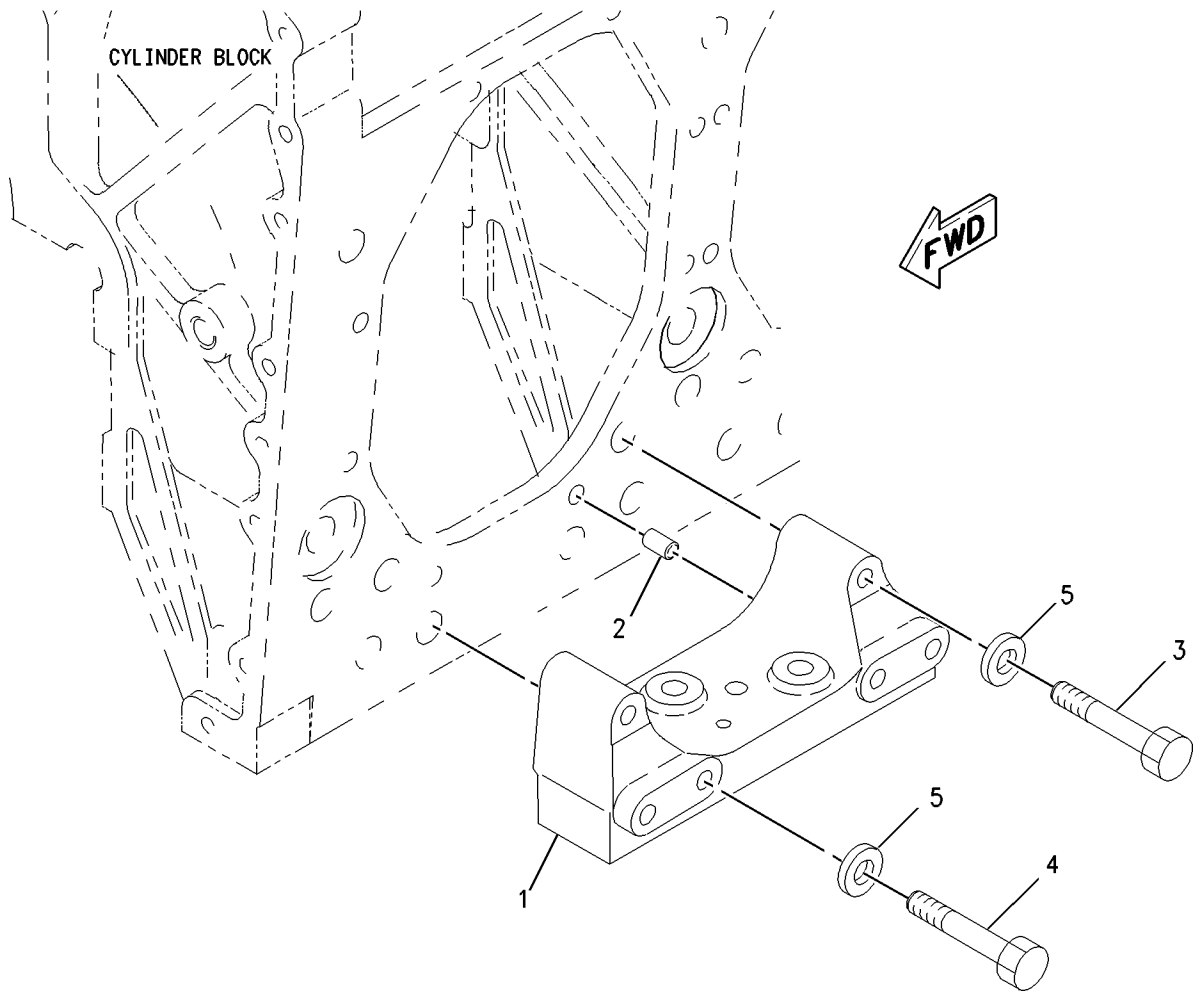
# BASIC ENGINE

## 127-1119 MOUNTING GP-ENGINE (CHG -00) 450 MM VEE

SMCS-1152

i01571114

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4W-6277	6	SUPPORT AS-RH						
					(EACH INCLUDES)						
	2	1	7N-2328	2	DOWEL						
	3	1	8S-4757	12	BOLT (1-14X8 IN)						
	4	1	7B-8363	24	BOLT (1-14X10-3/4IN)						
	5	1	5P-8250	36	WASHER (28X49X5MM THK)						



GRAPHIC #1

<END>

g00768696

# BASIC ENGINE

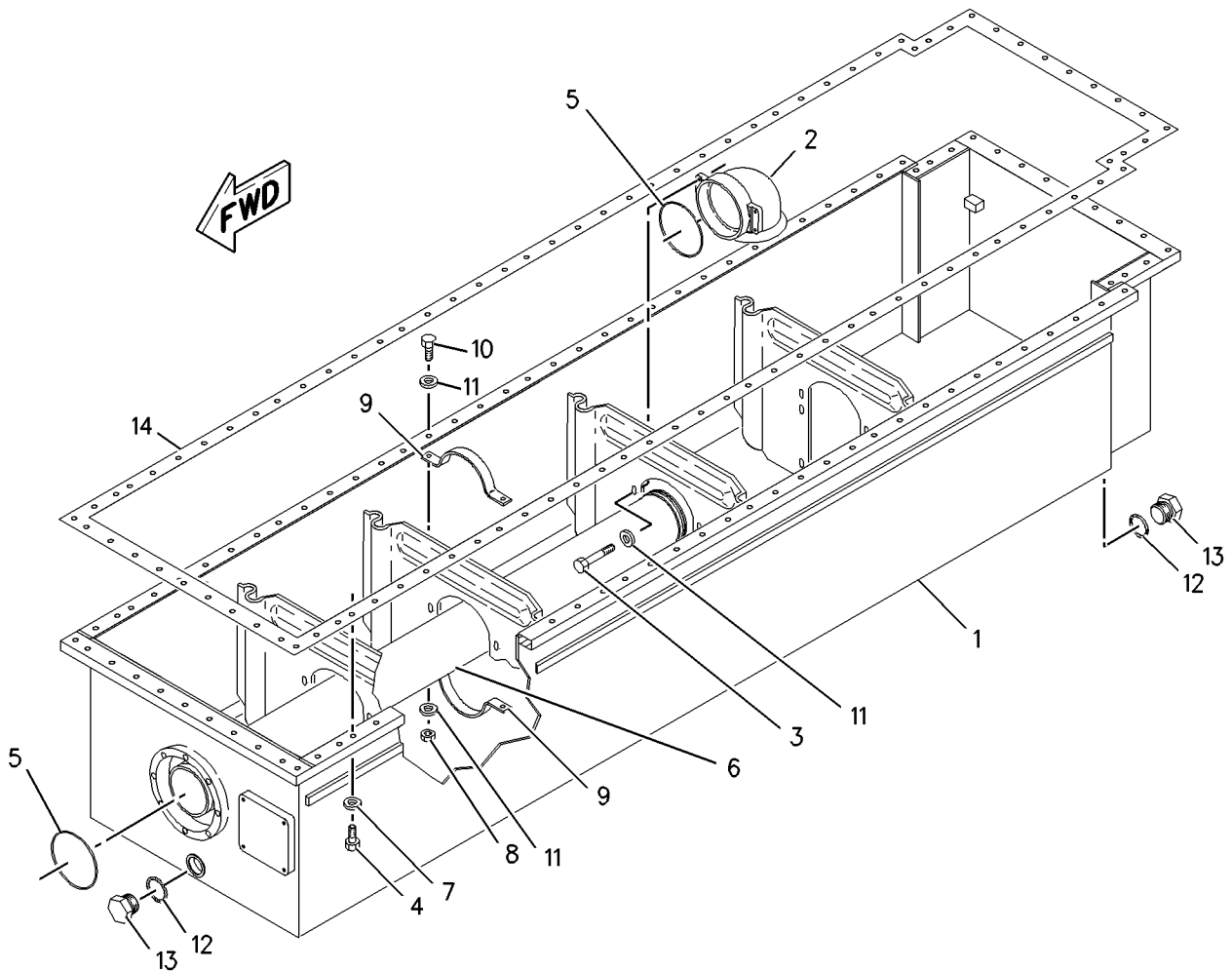
## 7W-0146 PAN GP-OIL (CHG -09) DEEP SUMP

SMCS-1302

i01544675

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	138-8200	1	PAN AS-OIL						
	2	1	4W-9775	1	BELL-PUMP SUCTION						
	3	1	0S-1594	6	BOLT (3/8-16X1 IN)						
	4	1	1A-1460	94	BOLT (1/2-13X2 IN)						
	5	1	5P-8861	2	SEAL-O-RING						
	6	1	9Y-3308	1	TUBE AS						
	7	1	5P-8245	94	WASHER-HARD (13.5X25.5X3MM THK)						
	8	1	9S-8752	2	NUT-FULL (3/8-16 THD)						
	9	1	1W-6702	2	CLAMP						
	10	1	0S-1591	2	BOLT (3/8-16X1.5 IN)						
	11	1	5P-1075	10	WASHER-HARD (10.2X22.5X3MM THK)						
	12	1	5P-7816	2	SEAL-O-RING						
	13	1	1N-5998	2	PLUG-O-RING						
	14	1	4W-5942	1	GASKET-OIL PAN						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00803098

# BASIC ENGINE

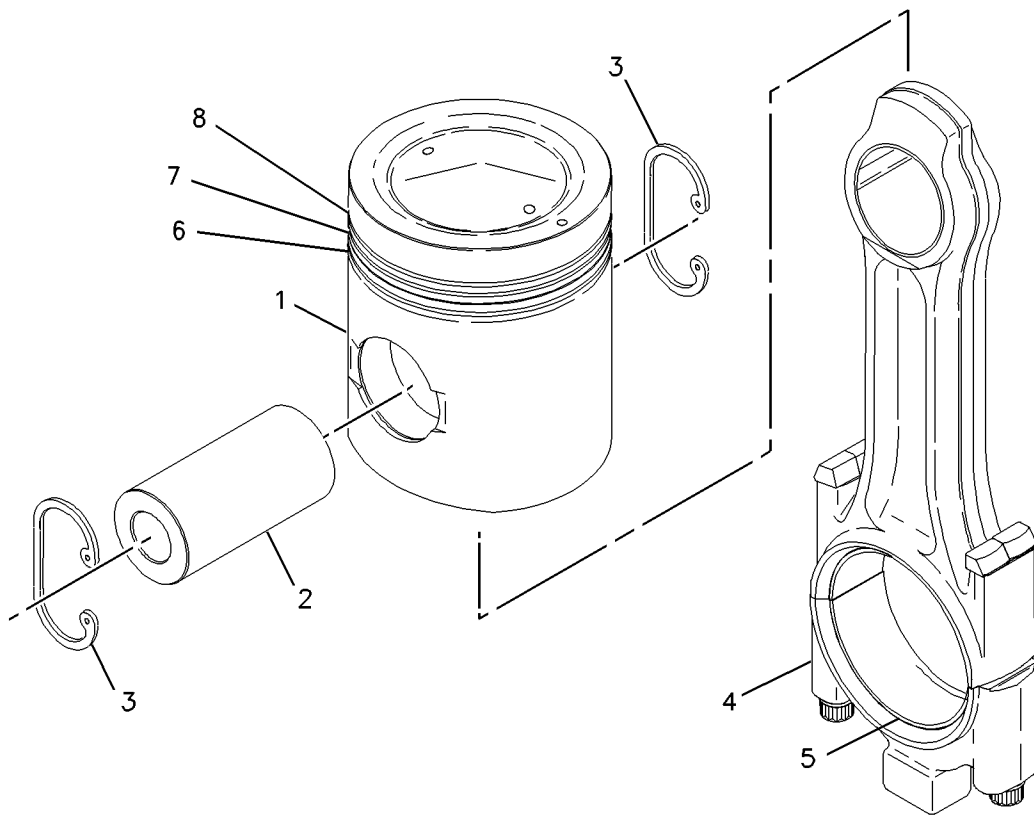
## 7C-0444 PISTON & ROD GP (CHG -12 THRU -14) 9:1 RATIO

SMCS-1225

i02015864

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	240-4641	1	PISTON AS						
	2	1	7C-1412	1	PIN-PISTON						
	3	1	7C-1413	2	RETAINER-PIN						
YR	4	1	195-5917	1	CONNECTING ROD GP						8
	5	1	192-7870	1	BEARING-CONNECTING ROD						
	6	1	4P-8958	1	RING-PISTON (OIL CONTROL)						
	7	1	7C-7886	1	RING-PISTON (INTERMEDIATE)						
	8	1	7E-8215	1	RING-PISTON (TOP)						

R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00822164

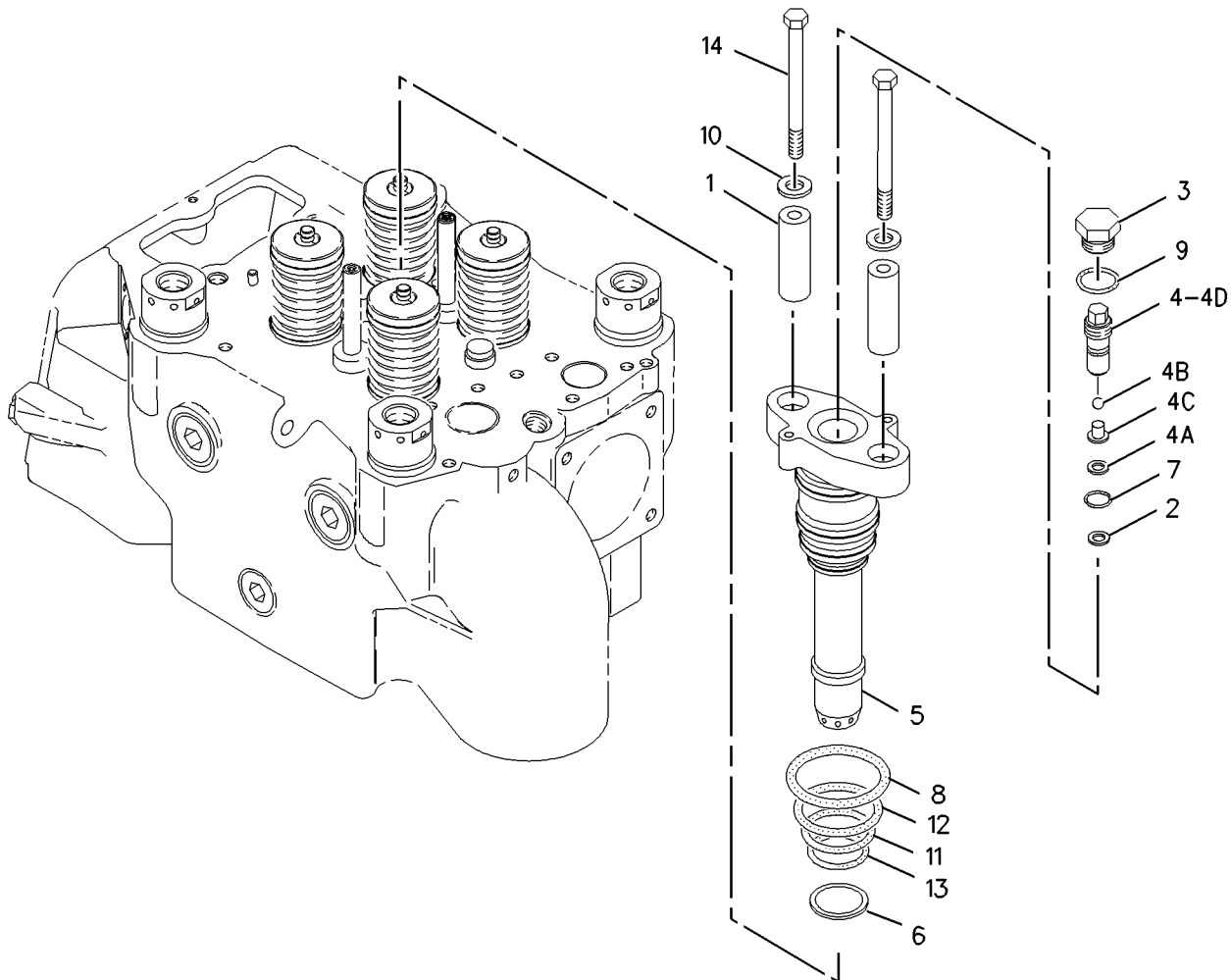
# BASIC ENGINE

## 218-3893 PRECHAMBER GP (CHG -00 THRU -03)

SMCS-1106

i02030401

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	5V-7652	2	SPACER (14.30X22.22X64.52-MM THK)						
	2	1	7E-1630	1	GASKET						
	3	1	102-4157	1	PLUG						
	4	1	208-9649	1	VALVE AS-CHECK						
	4A	1	237-8159	1	RING-RETAINING						
	4B	1	9M-5590	1	BALL						
	4C	1	218-1915	1	STOP						
	4D	1	221-0058	1	BODY-VALVE						
	5	1	218-3894	1	PRECHAMBER AS						
	6	1	219-6908	1	GASKET						
	7	1	3P-0647	1	SEAL-O-RING						
	8	1	5P-4889	1	SEAL-O-RING						
	9	1	5P-7815	1	SEAL-O-RING						
	10	1	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						
	11	1	6J-2244	1	SEAL-O-RING						
	12	1	6V-1179	1	SEAL-O-RING						
	13	1	6V-4368	1	SEAL-O-RING						
	14	1	8D-0648	2	BOLT-12 POINT HEAD (1/2-13X4.5)						



GRAPHIC #1

<END>

g00920613

# BASIC ENGINE

## 7C-0419 ROCKER ARM GP (CHG -14 THRU -21) PART OF 7C-0417 VALVE MECHANISM GP

SMCS-1123

i02168603

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-8409	2	PLATE-THRUST						
	2	1	1W-8410	1	SHAFT AS-ARM						
	2A	1	9F-2247	2	PLUG-PIPE						
	3	1	1W-8444	1	SUPPORT-SHAFT						
	4	1	2A-4429	2	LOCK-RETAINER						
	5	1	6I-2313	1	SEAL						
	6	1	7C-2359	1	SUPPORT AS						
	6A	1	100-4996	1	GUIDE-VALVE						
	7	1	7E-7074	1	RETAINER						
	8	1	7E-7202	2	BUTTON						
	9	1	7N-1903	1	SPRING-VALVE INNER						
	10	1	7N-1904	1	SPRING-VALVE OUTER						
	11	1	7W-5718	1	SEAL						
	12	1	7W-5720	1	SHAFT						
	13	1	7W-5725	1	ROCKER ARM AS						
		1	1W-0605	1	PIN-HOUSING SIDE						
	14	1	061-9455	1	SEAL-O-RING						
	15	1	108-5603	1	SCREW						
	16	1	115-2367	1	VALVE-EXHAUST						
R	17	1	122-9578	1	ARM AS						
	17A	1	1W-0605	1	PIN-HOUSING SIDE						
R	18	1	129-4859	2	ROCKER ARM AS						
					(EACH INCLUDES)						
	18A	1	6I-0578	1	BEARING-SLEEVE						
	18B	1	7E-7203	1	INSERT						
	18C	1	2D-6642	1	BALL						
	19	1	197-6999	1	ROTOCOIL AS						
	20	1	204-4385	2	SCREW-ADJUSTMENT						
	21	1	209-0962	1	WASHER (17.8X45X7.29-MM THK)						
	22	1	0S-1617	4	BOLT (5/16-18X0.75-IN)						
	23	1	6V-5019	2	NUT-JAM (3/4-16-THD)						
	24	1	7L-9061	2	SEAL-O-RING						
	25	1	8J-4351	1	SEAL-O-RING						
	26	1	9L-7712	1	NUT (3/8-24-THD)						
	27	1	9X-3978	1	SEAL-O-RING						

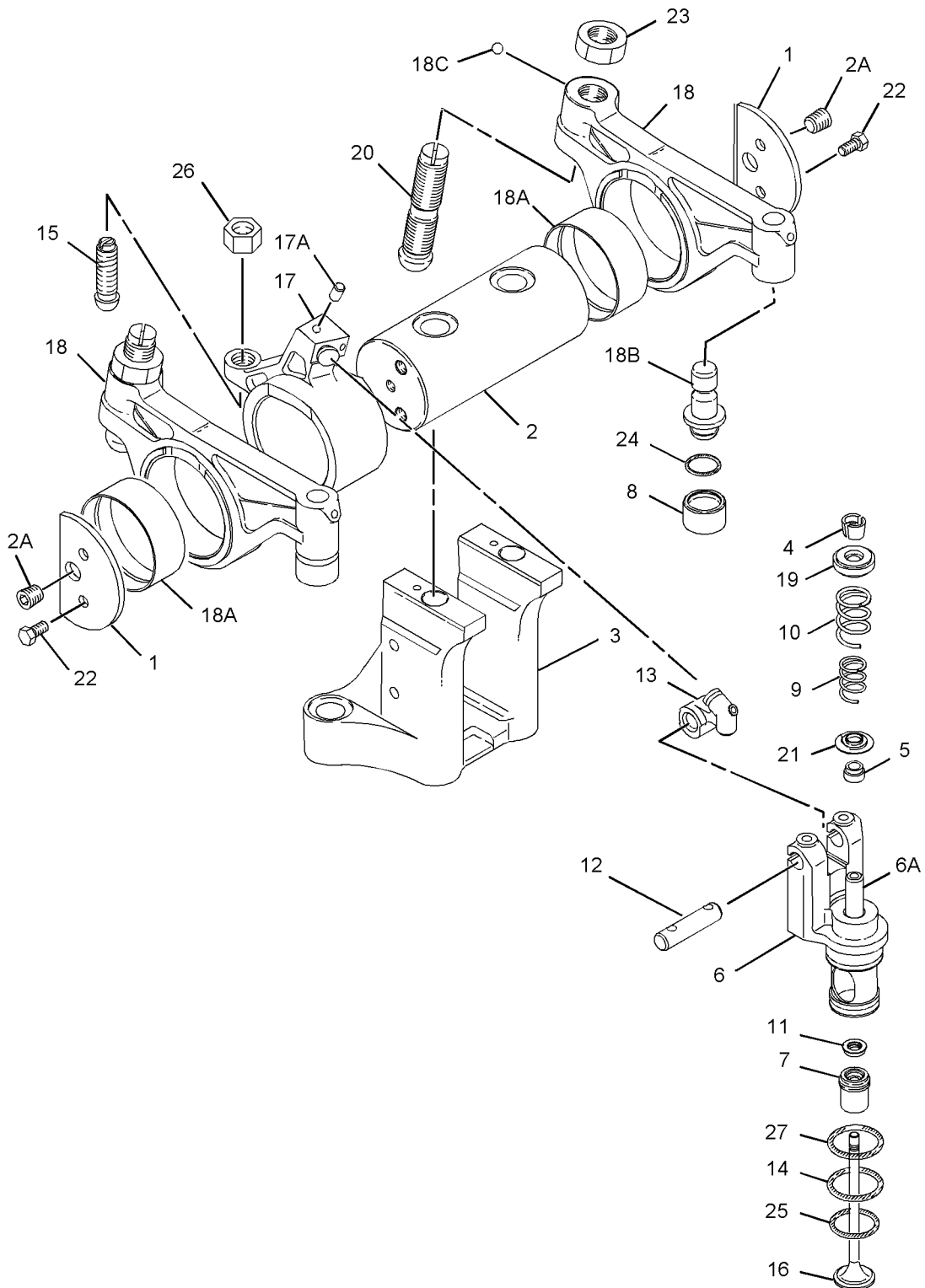
R-REMFG PART MAY BE AVAILABLE



# BASIC ENGINE

7C-0419 ROCKER ARM GP (contd.)

i02168603



GRAPHIC #1

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g01098777

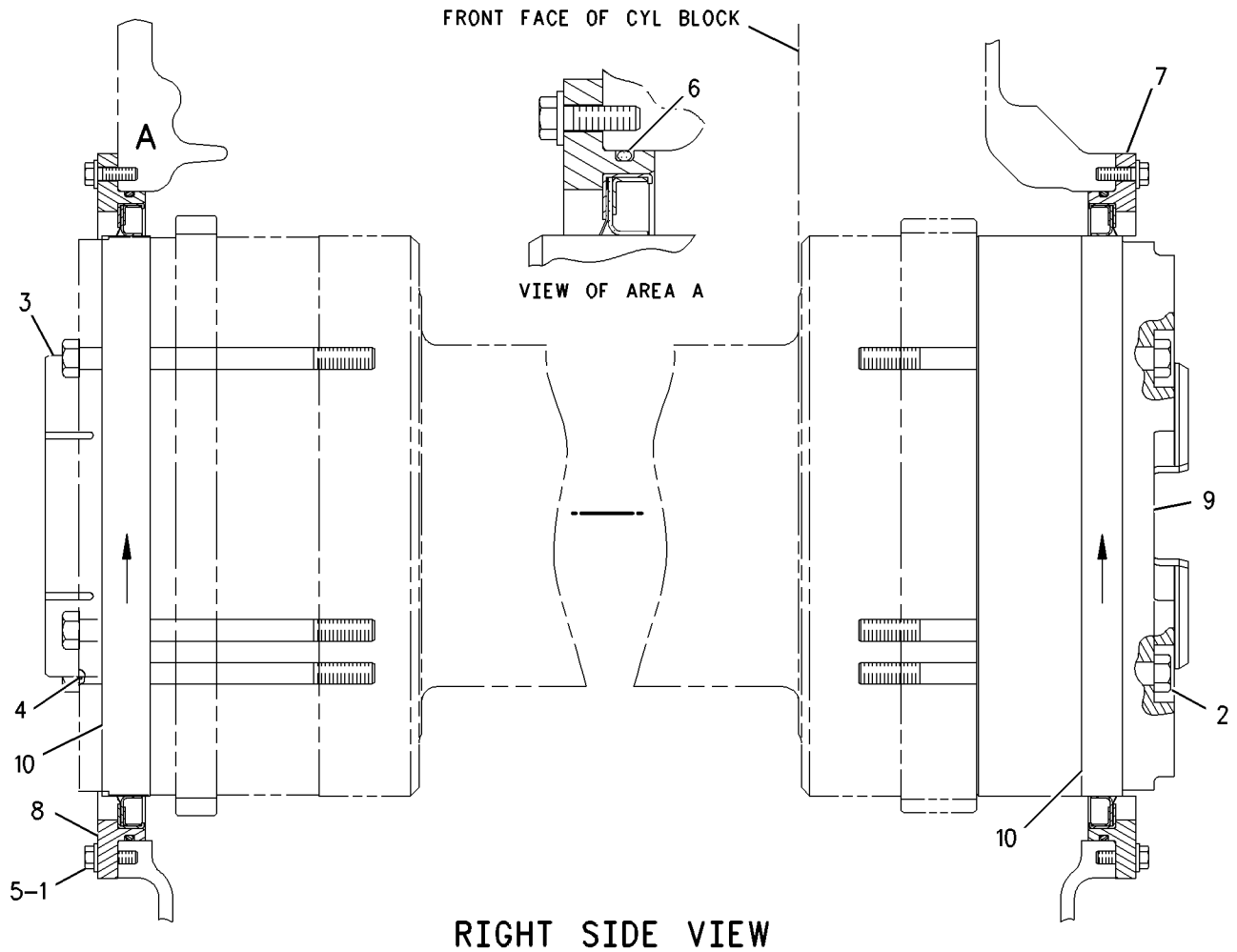
# BASIC ENGINE

## 7E-9610 SEAL GP-CRANKSHAFT (CHG -03 THRU -06)

SMCS-1160, 1161

i02030126

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1588	18	BOLT (3/8-16X1.25-IN)						
	2	1	1D-4601	8	BOLT (5/8-11X8.5-IN)						
	3	1	1W-2823	1	SLEEVE						
	4	1	1W-2824	1	RING-LOCK						
	5	1	3V-3308	18	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	6	1	6V-5059	2	SEAL-O-RING						
	7	1	190-2462	1	SEAL AS (CW ROTATION)						
	8	1	190-2463	1	SEAL AS (CCW ROTATION)						
	9	1	106-2033	1	ADAPTER-CRANKSHAFT						
	10	1	160-8173	2	SLEEVE-WEAR						



GRAPHIC #1

<END>

g00775867

# BASIC ENGINE

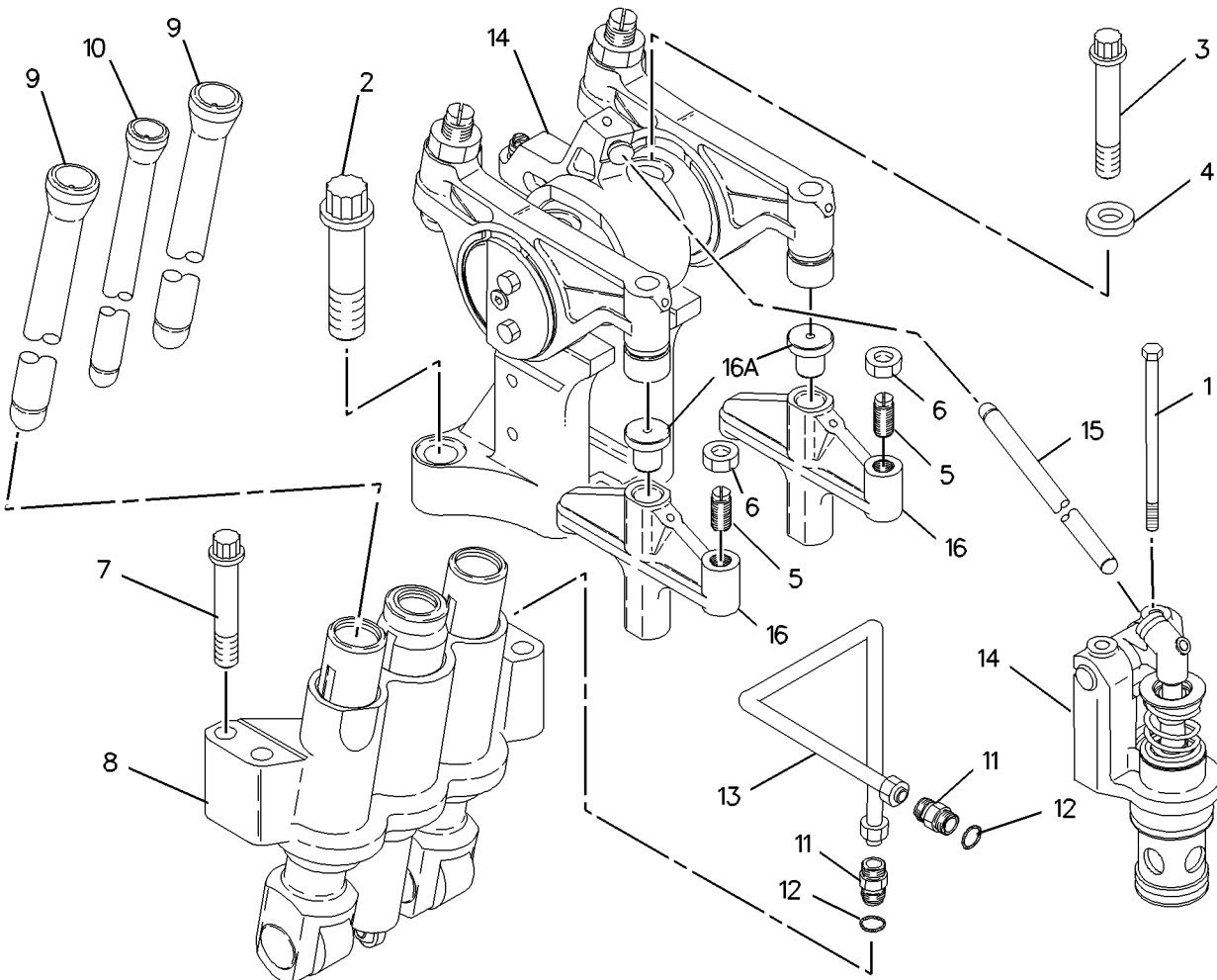
## 7C-0417 VALVE MECHANISM GP (CHG -01 THRU -15)

SMCS-1102, 1121, 1123

i01563271

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>5B-9603</b>	2	BOLT (3/8-16X5 IN)						
	2	1	<b>6V-6869</b>	2	BOLT-12 POINT HEAD (3/4-10X2 3/4 IN)						
	3	1	<b>6V-5625</b>	2	BOLT-12 POINT HEAD (3/4-10X9-1/2IN)						
	4	1	<b>6V-7607</b>	2	WASHER-HARD (20X30X2.5MM THK)						
	5	1	<b>1W-1760</b>	2	SCREW-ADJUSTMENT						
	6	1	<b>5P-0540</b>	2	NUT-HEX FULL (9/16-18 THD)						
	7	1	<b>8D-7941</b>	4	BOLT-12 POINT HEAD (5/8-11X4IN)						
Y	8	1	<b>7C-0418</b>	1	LIFTER GP-VALVE						45
	9	1	<b>179-9542</b>	2	PUSHROD						
	10	1	<b>7W-8575</b>	1	PUSHROD AS						
	11	1	<b>2R-6806</b>	2	CONNECTOR						
	12	1	<b>6V-5049</b>	2	SEAL-O-RING						
	13	1	<b>7E-1036</b>	1	TUBE AS						
Y	14	1	<b>7C-0419</b>	1	ROCKER ARM GP						53
	15	1	<b>7W-5722</b>	1	PUSHROD AS						
	16	1	<b>6I-2491</b>	2	BRIDGE AS						
					(EACH INCLUDES)						
	16A	1	<b>6I-2489</b>	1	INSERT-BRIDGE						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00812088

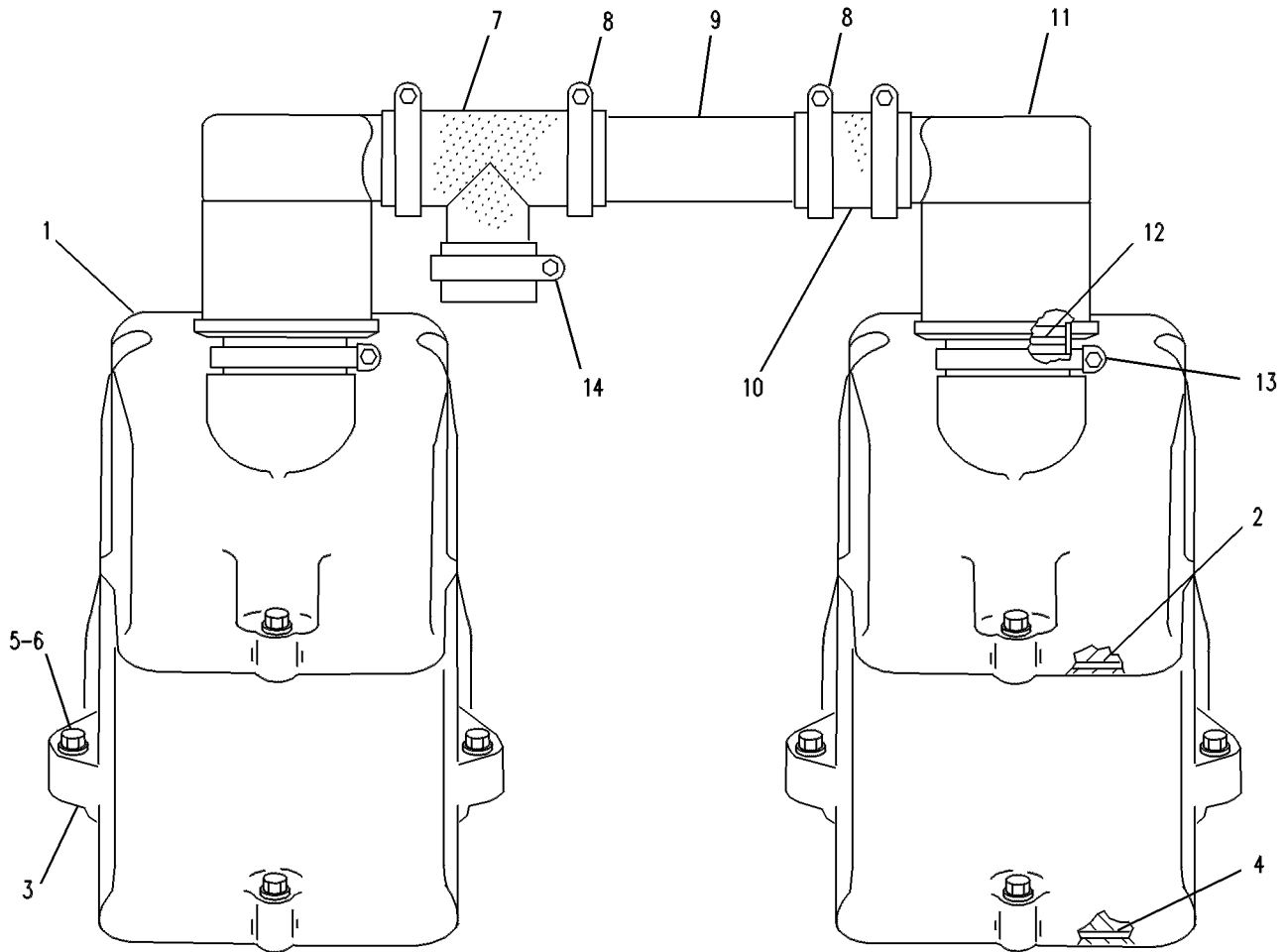
# LUBRICATION SYSTEM

## 7C-8431 BREATHER GP-CRANKCASE (CHG -00 THRU -06)

SMCS-1317

i02030145

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-0734	4	COVER AS-VALVE MECHANISM						
	2	1	6V-3602	4	SEAL-O-RING						
	3	1	7W-8895	4	BASE						
	4	1	8T-8883	4	SEAL-O-RING (VALVE COVER)						
	5	1	0S-1590	28	BOLT (3/8-16X2-IN)						
	6	1	3V-3308	28	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	7	1	217-6692	2	HOSE-TEE						
	8	1	5P-0597	8	CLAMP-HOSE						
	9	1	7W-9152	2	TUBE						
	10	1	6N-3792	2	HOSE						
	11	1	4W-3027	4	BREATHER AS (CRANKCASE)						
	12	1	5H-8848	4	SEAL-O-RING						
	13	1	4W-3034	4	CLAMP-HOSE						
	14	1	5P-4868	2	CLAMP-HOSE						



GRAPHIC #1

<END>

g00066116

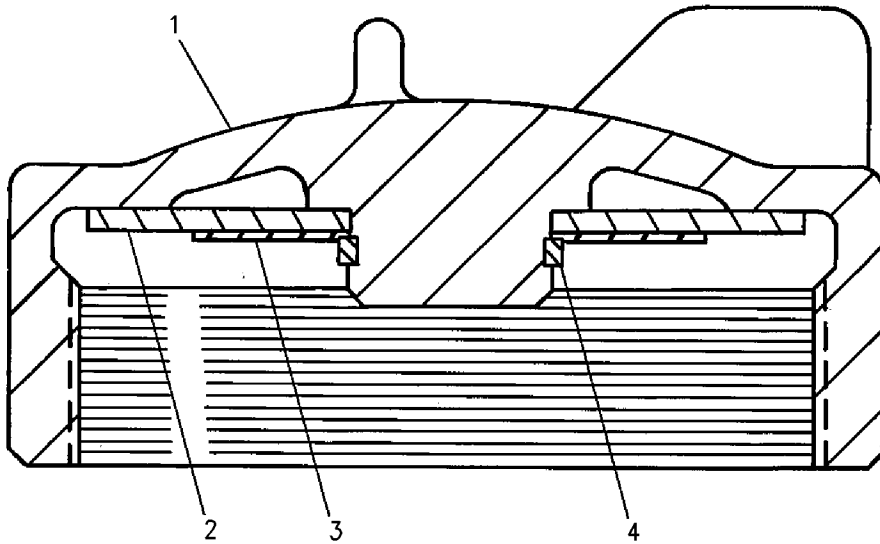
# LUBRICATION SYSTEM

## 7E-1659 CAP GP-ENGINE OIL FILLER (CHG -00, -01) PART OF 150-6796 COVER GP-CYLINDER BLOCK

SMCS-1316

i02030141

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4P-6979</b>	1	CAP-FILLER (ENGINE OIL)						
	2	1	<b>7E-1661</b>	1	GASKET						
	3	1	<b>7E-1660</b>	1	RETAINER						
	4	1	<b>9S-9979</b>	1	RING-RETAINING						



GRAPHIC #1

<END>

g00727016

# LUBRICATION SYSTEM

## 1W-0798 FILTER GP-ENGINE OIL (CHG -12 THRU -23, -23D1)

SMCS-1306, 1308

i02016682

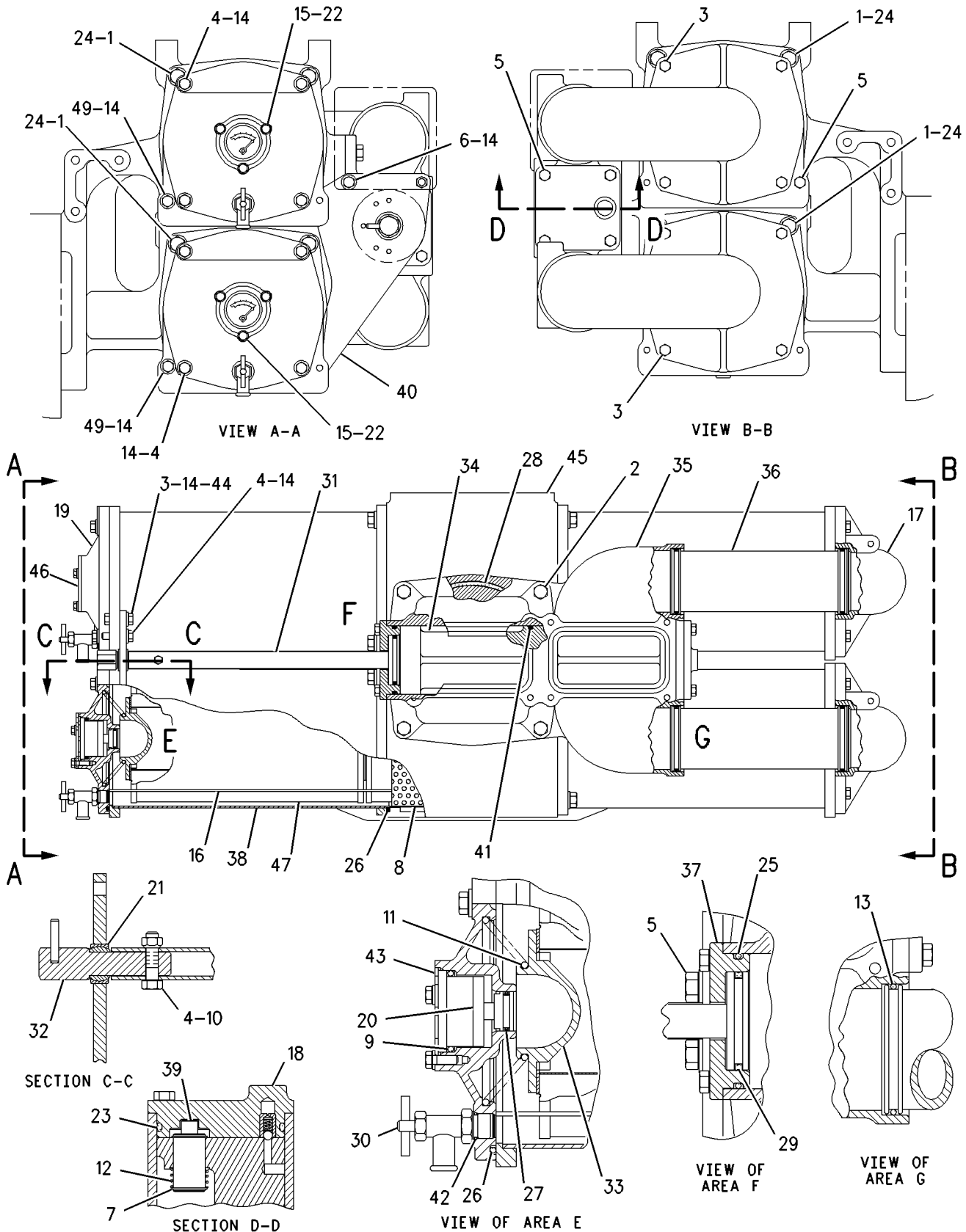
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	OS-1585	16	BOLT (1/2-13X1.5-IN)						
	2	1	OS-1587	4	BOLT (1/2-13X1.75-IN)						
	3	1	OS-1588	9	BOLT (3/8-16X1.25-IN)						
	4	1	OS-1591	11	BOLT (3/8-16X1.5-IN)						
	5	1	OS-1594	9	BOLT (3/8-16X1-IN)						
	6	1	OS-0509	1	BOLT (3/8-16X0.75-IN)						
	7	1	1K-9740	2	RING-RETAINING						
	8	1	1W-3958	2	TUBE						
	9	1	2H-3088	2	SEAL-O-RING						
	10	1	2K-4973	1	LOCKNUT (3/8-16-THD)						
	11	1	2W-6862	2	SPRING						
	12	1	3N-1308	1	SPRING						
	13	1	3P-0654	4	SEAL-O-RING						
	14	1	3V-3308	15	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	15	1	4F-7957	6	BOLT (1/4-20X0.875-IN)						
	16	1	4P-9168	2	RACK-OIL FILTER						
	17	1	4P-9169	2	HOUSING-OIL FILTER						
	18	1	4P-9185	1	COVER AS						
		1	4P-9174	1	DETENT AS						
	19	1	4P-9218	2	COVER						
	20	1	4W-0379	2	INDICATOR AS						
	21	1	5K-2294	1	BEARING-SELF-ALIGNING						
	22	1	5P-0537	6	WASHER-HARD (7.2X14.5X2-MM THK)						
C	23	1	5P-7818	1	SEAL-O-RING						
M	24	1	5P-8245	16	WASHER-HARD (13.5X25.5X3-MM THK)						
	25	1	6V-0973	1	SEAL-O-RING						
	26	1	6V-3349	8	SEAL-O-RING						
	27	1	6V-3683	2	SEAL-O-RING						
	28	1	6V-5141	1	SEAL-O-RING						
	29	1	6V-6963	1	SEAL-QUAD RING						
	30	1	6V-7238	2	VALVE-SHUTOFF						
	31	1	7C-1124	1	TUBE AS						
	32	1	7C-1128	1	SHAFT AS						
	33	1	7C-3945	2	RETAINER-ELEMENT						
C	34	1	7E-0930	1	VALVE-FILTER CHG						
C	35	1	7E-0932	1	HOUSING-VALVE						
	36	1	7W-2459	2	TUBE						
	37	1	7W-2467	1	PLATE-THRUST						
	38	1	7W-2470	4	HOUSING AS-FILTER						
	39	1	7W-2750	1	PISTON						
	40	1	7W-2970	1	SUPPORT AS						
C	41	1	7X-4789	1	SEAL-QUAD RING						
	42	1	8L-2786	2	SEAL-O-RING						
	43	1	8N-0453	2	RING-RETAINING						
	44	1	9S-8752	1	NUT-FULL (3/8-16-THD)						
	45	1	161-0083	1	BASE-OIL FILTER						
	46	1	169-8676	2	COVER						
	47	1	179-1502	6	ELEMENT AS-OIL FILTER						
	49	1	1A-2029	2	BOLT (3/8-16X1.125-IN)						

C-CHANGE FROM PREVIOUS TYPE  
M-METRIC PART

# LUBRICATION SYSTEM

1W-0798 FILTER GP-ENGINE OIL (contd.)

i02016682



GRAPHIC #1

<END>

g00848247

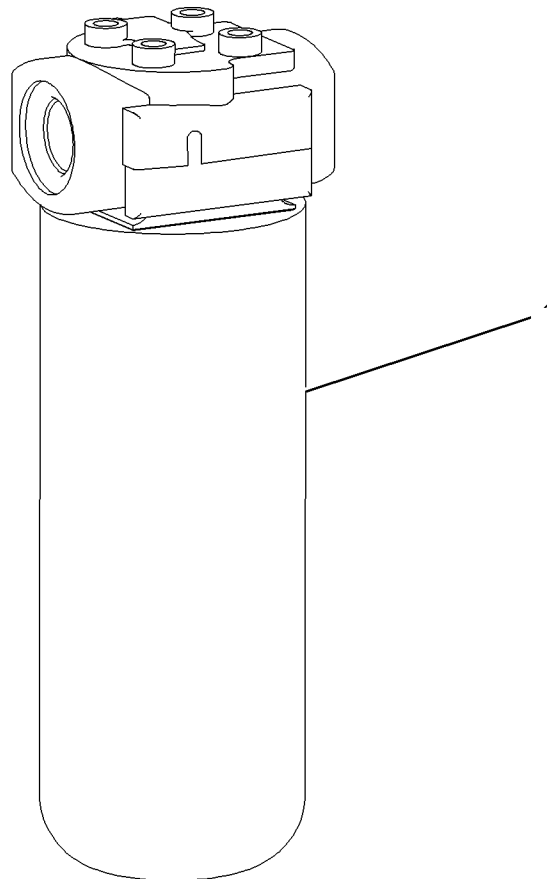
# LUBRICATION SYSTEM

## 138-6144 FILTER GP-ENGINE OIL (CHG -00 THRU -03) PART OF 206-6545 LINES GP-ENGINE OIL

SMCS-1306, 1308

i01693525

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	1G-8878	1	FILTER ELEMENT AS-OIL	



GRAPHIC #1

<END>

g00854501



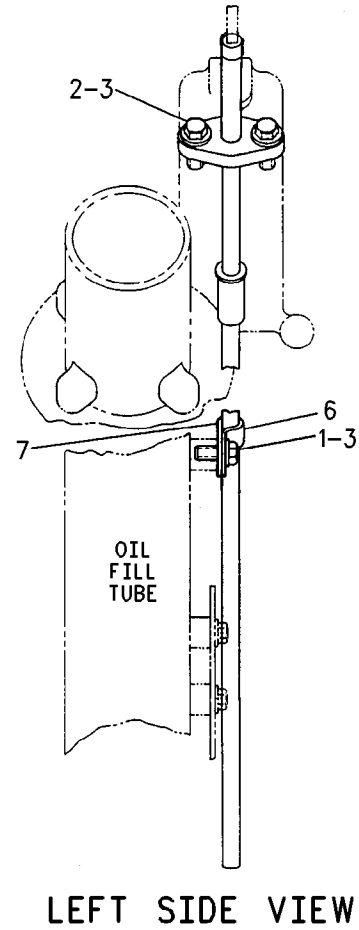
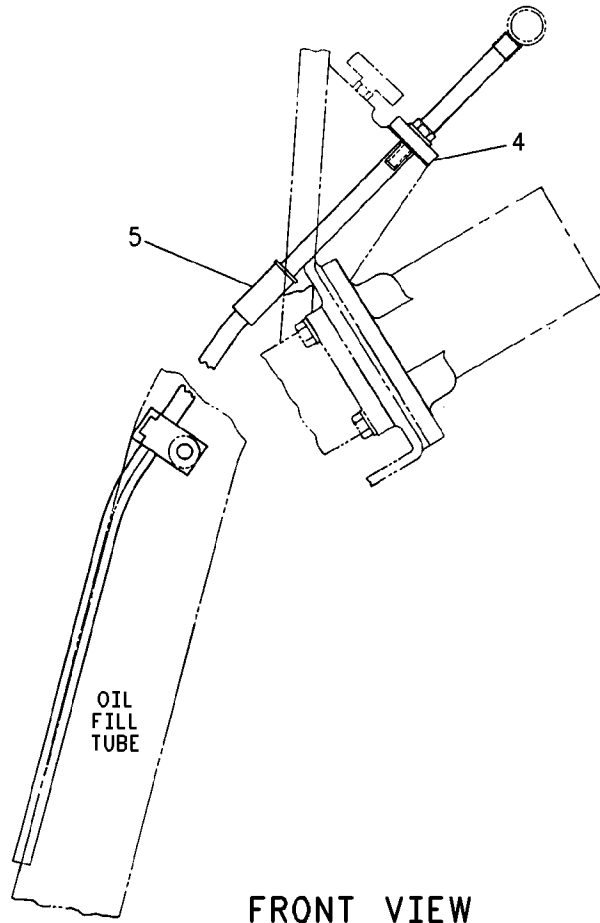
# LUBRICATION SYSTEM

## 9Y-9926 GUIDE GP-OIL LEVEL GAUGE (CHG -00)

SMCS-1326

i01494985

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	OS-1594	1	BOLT (3/8-16X1 IN)						
	2	1	OS-1588	2	BOLT (3/8-16X1.25 IN)						
	3	1	3V-3308	3	WASHER-HARD (20.5X10.2X2.5MM THK)						
	4	1	1W-1415	1	GASKET						
	5	1	9Y-4871	1	TUBE AS						
	6	1	8T-1885	1	CLIP (SLOT)						
	7	1	8T-1886	1	CLIP (TAB)						



GRAPHIC #1

<END>

g0077786

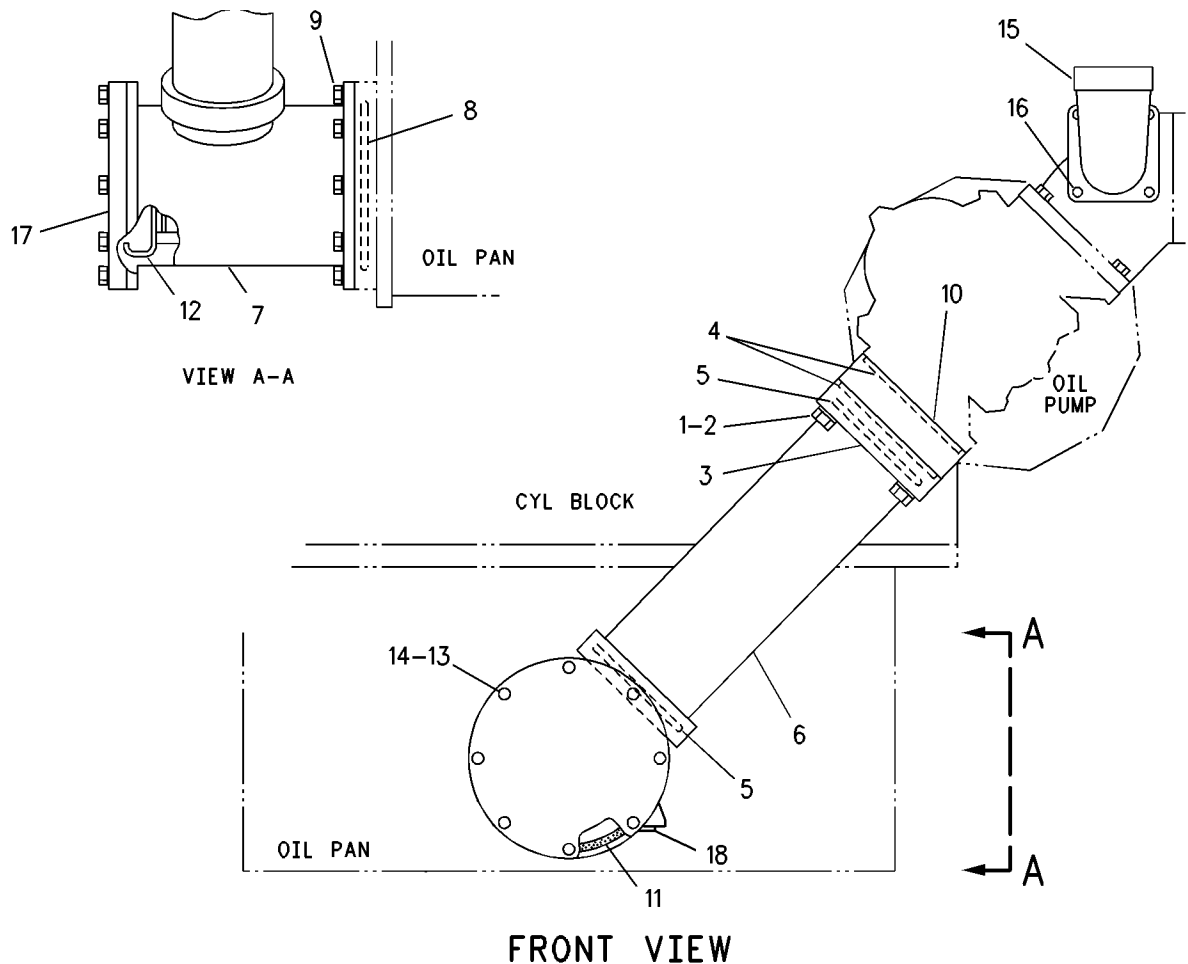
# LUBRICATION SYSTEM

## 9Y-3303 LINES GP-ENGINE OIL (CHG -00)

SMCS-1307

i02030157

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8S-9089	4	BOLT (1/2-13X4.5-IN)						
	2	1	5P-1076	4	WASHER-HARD (13.5X30X4-MM THK)						
	3	1	1W-6492	1	FLANGE						
	4	1	6V-3968	2	SEAL-O-RING						
	5	1	5P-8861	2	SEAL-O-RING						
	6	1	4W-2535	1	TUBE AS						
	7	1	9Y-3306	1	TEE-OUTLET						
	8	1	3P-0658	1	SEAL-O-RING						
	9	1	OS-1588	8	BOLT (3/8-16X1.25-IN)						
	10	1	4W-4555	1	SPACER						
	11	1	5P-8429	1	SEAL-O-RING						
	12	1	9Y-3307	1	SCREEN AS-SUCTION						
	13	1	OS-1591	8	BOLT (3/8-16X1.5-IN)						
	14	1	3V-3308	8	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	15	1	4W-1162	1	ELBOW						
	16	1	OS-1590	4	BOLT (3/8-16X2-IN)						
	17	1	9Y-3305	1	COVER						
	18	1	9S-9334	1	PLUG						
		1	5P-7701	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00727009

# LUBRICATION SYSTEM

## 105-3182 LINES GP-ENGINE OIL (CHG -00 THRU -10)

SMCS-1307

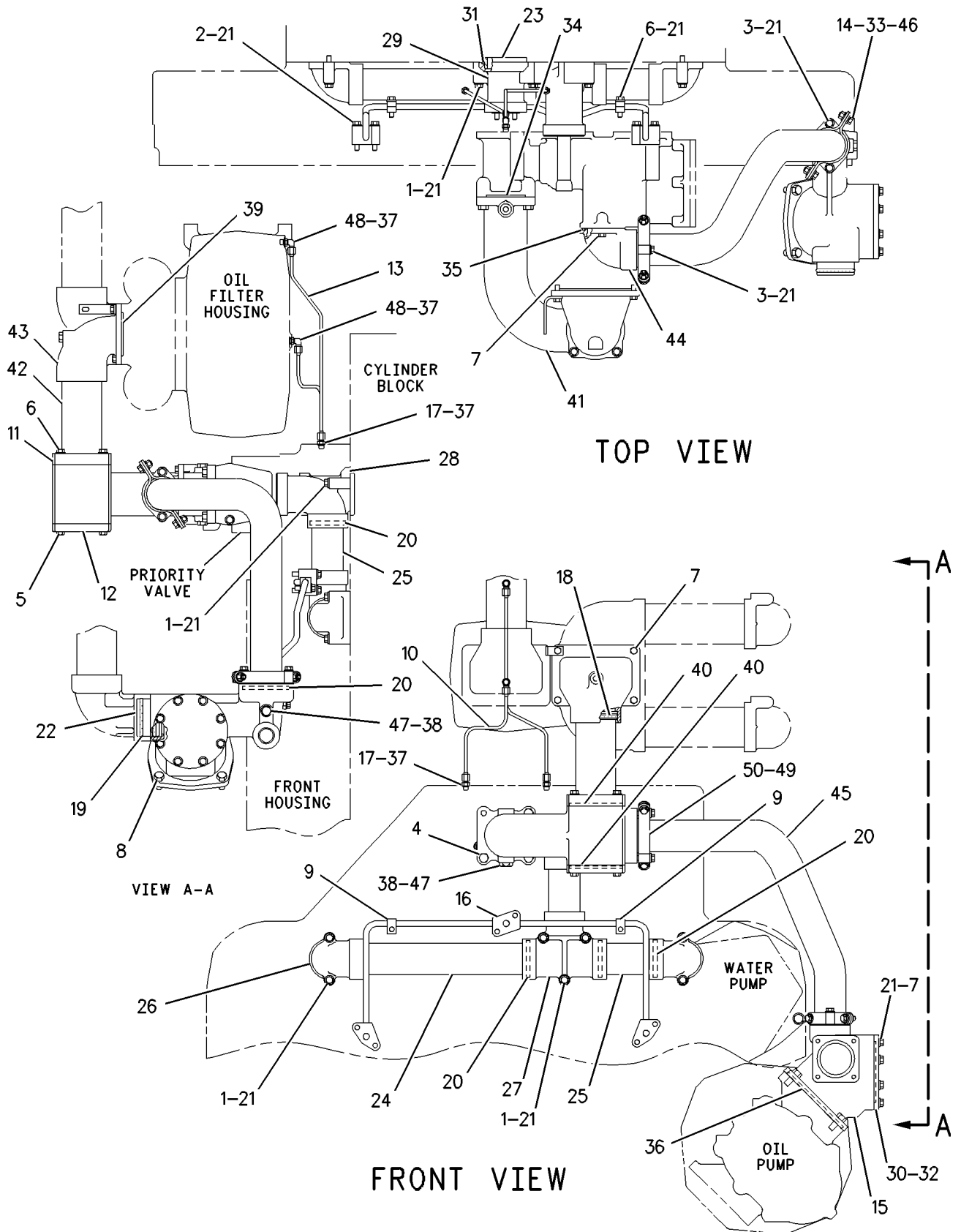
i01678073

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0L-1143	11	BOLT (3/8-16X2.5-IN)						
	2	1	0L-2070	6	BOLT (3/8-16X2.25-IN)						
	3	1	0S-1571	4	BOLT (3/8-16X1.75-IN)						
	4	1	0S-1585	3	BOLT (1/2-13X1.5-IN)						
	5	1	0S-1588	4	BOLT (3/8-16X1.25-IN)						
	6	1	0S-1591	6	BOLT (3/8-16X1.5-IN)						
	7	1	0S-1594	13	BOLT (3/8-16X1-IN)						
	8	1	0S-1595	4	BOLT (1/2-13X1.25-IN)						
	9	1	1N-4622	4	CLAMP						
	10	1	1W-2244	1	TUBE AS-VENT						
	11	1	1W-3979	1	FLANGE						
	12	1	1W-4059	1	COVER						
	13	1	1W-4307	1	TUBE AS-VENT						
	14	1	2B-2695	4	BOLT (5/16-18X0.875-IN)						
	15	1	2W-6317	1	TEE						
	16	1	2W-8216	1	TUBE AS						
	17	1	3J-7352	2	CONNECTOR						
	18	1	3P-0654	2	SEAL-O-RING						
	19	1	3P-0655	2	SEAL-O-RING						
	20	1	3P-0656	8	SEAL-O-RING						
	21	1	3V-3308	31	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	22	1	4W-1164	1	COUPLING						
	23	1	4W-7483	1	SLEEVE						
	24	1	4W-7485	1	TUBE						
	25	1	4W-7486	2	TUBE						
	26	1	4W-7487	2	ELBOW						
	27	1	4W-7488	1	TEE						
	28	1	4W-7489	1	ELBOW						
	29	1	4W-7490	1	ADAPTER						
	30	1	4W-8775	1	COVER (AIR CHAMBER)						
	31	1	5P-7818	1	SEAL-O-RING						
	32	1	5P-8872	1	SEAL-O-RING						
	33	1	5S-0003	4	NUT (5/16-18-THD)						
	34	1	5S-9134	1	SEAL-O-RING						
	35	1	6V-3833	1	SEAL-O-RING						
	36	1	6V-3968	1	SEAL-O-RING						
	37	1	6V-5048	4	SEAL-O-RING						
	38	1	6V-5049	2	SEAL-O-RING						
	39	1	6V-5055	1	SEAL-O-RING						
	40	1	6V-5101	2	SEAL-O-RING						
	41	1	7C-2322	1	ELBOW						
	42	1	7N-9044	1	TUBE						
	43	1	7W-3882	1	ELBOW						
	44	1	7W-7833	1	ELBOW						
	45	1	7W-9424	1	TUBE						
	46	1	9M-1974	8	WASHER-HARD (8.8X16X2-MM THK)						
	47	1	9S-4191	2	PLUG						
	48	1	030-7946	2	ELBOW						
	49	1	126-4229	2	RING-RETAINING						
	50	1	137-0257	4	CLAMP AS						

# LUBRICATION SYSTEM

105-3182 LINES GP-ENGINE OIL (contd.)

i01678073



GRAPHIC #1

<END>

g00793741

# LUBRICATION SYSTEM

## 206-6545 LINES GP-ENGINE OIL (CHG -00) HYDRAC-DISCHARGE

SMCS-1307

i01559172

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
I	1	1	4E-9277	2	HOSE AS						
	2	1	4P-6814	1	MANIFOLD						
	3	2	6V-9832	1	CAP AS						
	4	2	8C-0569	2	TEE-O-RING						
	5	2	8C-5053	1	ADAPTER						
	6	1	9C-5344	2	SPACER (10.5X20X18-MM THK)						
	7	1	121-6750	1	MANIFOLD						
Y	8	2	138-6144	1	FILTER GP-ENGINE OIL						61
	9	2	138-6158	1	VALVE-CHECK						
	10	1	148-7605	1	TUBE AS						
	11	1	148-7606	1	TUBE AS						
	12	1	148-7607	1	TUBE AS						
	13	1	148-7608	1	TUBE AS						
	14	1	148-7609	1	TUBE AS						
	15	2	148-7611	1	TUBE AS						
	16	2	148-7612	1	TUBE AS						
	17	1	148-7613	1	TUBE AS						
	18	1	148-7616	1	TUBE AS						
	19	1	148-7617	1	TUBE AS						
	20	1	148-7618	1	TUBE AS						
	21	1	148-7619	1	TUBE AS						
	22	2	148-7621	1	BRACKET AS						
	23	2	148-7622	2	BRACKET AS						
	24	2	148-7623	2	BRACKET						
	25	2	148-7625	1	BRACKET AS						
	26	1	148-7626	1	BRACKET						
	27	2	148-7627	2	CLAMP						
	28	2	148-7628	2	CLAMP						
	29	2	148-7630	1	BRACKET						
	30	1	148-7631	1	PLATE						
	31	2	148-7635	1	MANIFOLD						
	32	2	176-3586	1	VALVE AS-RELIEF						
			2M-9780	2	SEAL-O-RING						
	33	1	0L-1143	2	BOLT (3/8-16X2.5-IN)						
	34	1	0L-1352	2	BOLT (3/8-16X3.25-IN)						
	35	1	0L-2070	2	BOLT (3/8-16X2.25-IN)						
	36	1	0S-1571	2	BOLT (3/8-16X1.75-IN)						
	37	2	0S-1588	15	BOLT (3/8-16X1.25-IN)						
	38	2	0S-1591	1	BOLT (3/8-16X1.5-IN)						
39	2	0S-1594	12	BOLT (3/8-16X1-IN)							
40	2	1A-1460	2	BOLT (1/2-13X2-IN)							
41	1,2	1A-2029	6	BOLT (3/8-16X1.125-IN)							
42	2	1A-5183	1	BOLT (3/8-16X4.75-IN)							
43	1,2	2M-9780	7	SEAL-O-RING							
44	1,2	3D-2824	11	SEAL-O-RING							
45	1,2	3J-1907	11	SEAL-O-RING							
46	1	3K-0360	1	SEAL-O-RING							
47	1,2	3V-3308	63	WASHER-HARD (10.2X20.5X2.5-MM THK)							
48	1,2	5K-9660	6	CLIP							
M	49	2	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						
	50	1,2	6V-8398	12	SEAL-O-RING						
			6V-8629	1	ELBOW						
	52	2	6V-8637	5	CONNECTOR						
	53	1,2	6V-8638	3	CONNECTOR						
	54	1	6V-8640	2	CONNECTOR						
	55	1	6V-8721	1	ELBOW						
	56	1	6V-8733	2	UNION						

# LUBRICATION SYSTEM

206-6545 LINES GP-ENGINE OIL (contd.)

i01559172

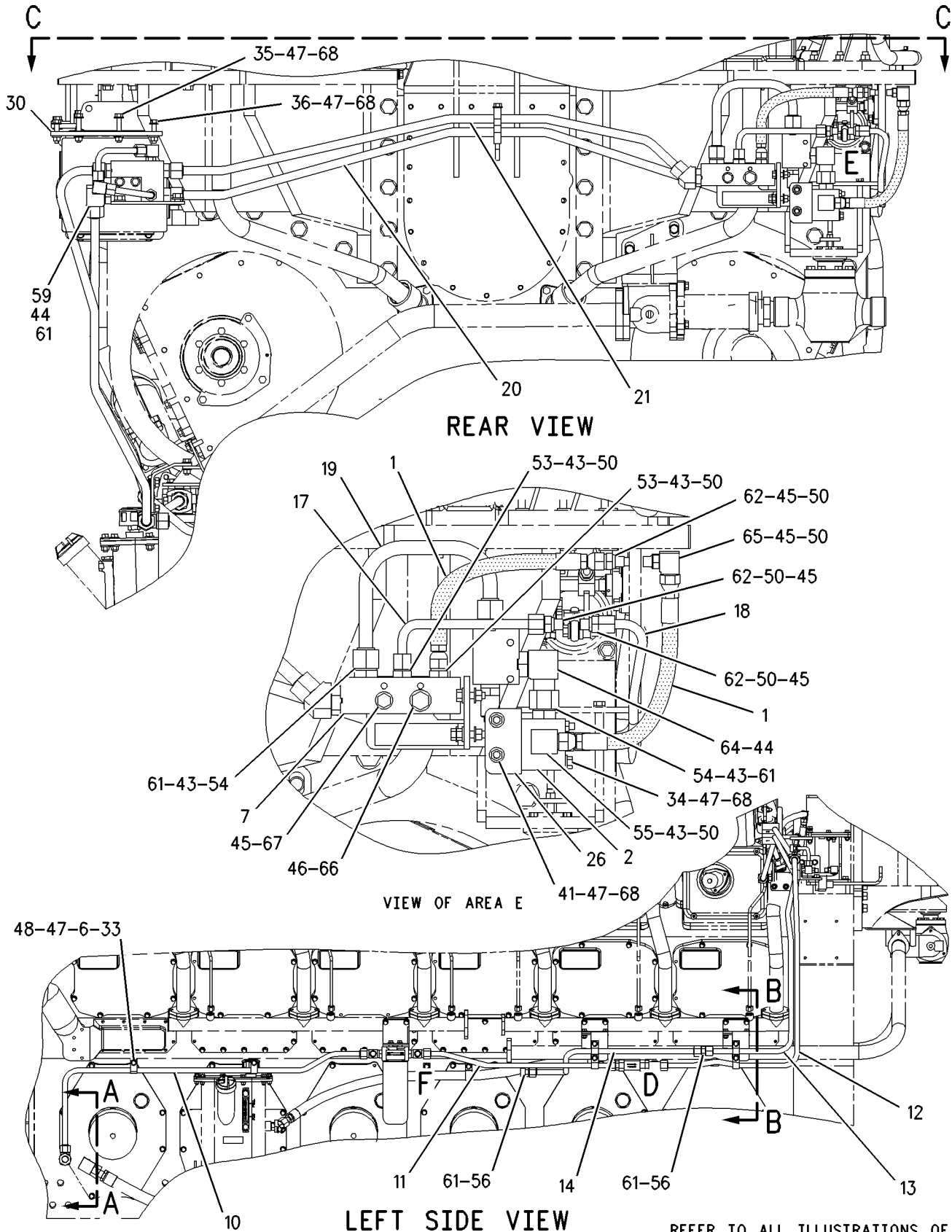
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	57	2	<b>6V-8784</b>	1	TEE-FACE SEAL						
	58	2	<b>6V-9004</b>	1	ELBOW						
	59	1	<b>6V-9007</b>	1	ELBOW						
	60	2	<b>6V-9182</b>	1	ELBOW						
	61	1,2	<b>6V-9746</b>	18	SEAL-O-RING						
	62	1,2	<b>6V-9873</b>	4	CONNECTOR						
	63	2	<b>7M-8485</b>	1	SEAL-O-RING						
	64	1	<b>8T-6451</b>	1	ELBOW						
	65	1,2	<b>8T-6876</b>	4	ELBOW						
	66	1	<b>9S-4185</b>	1	PLUG						
	67	1,2	<b>9S-4191</b>	3	PLUG						
	68	1,2	<b>9S-8752</b>	20	NUT-FULL (3/8-16-THD)						

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

# LUBRICATION SYSTEM

206-6545 LINES GP-ENGINE OIL (contd.)

i01559172



REAR VIEW

VIEW OF AREA E

LEFT SIDE VIEW

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

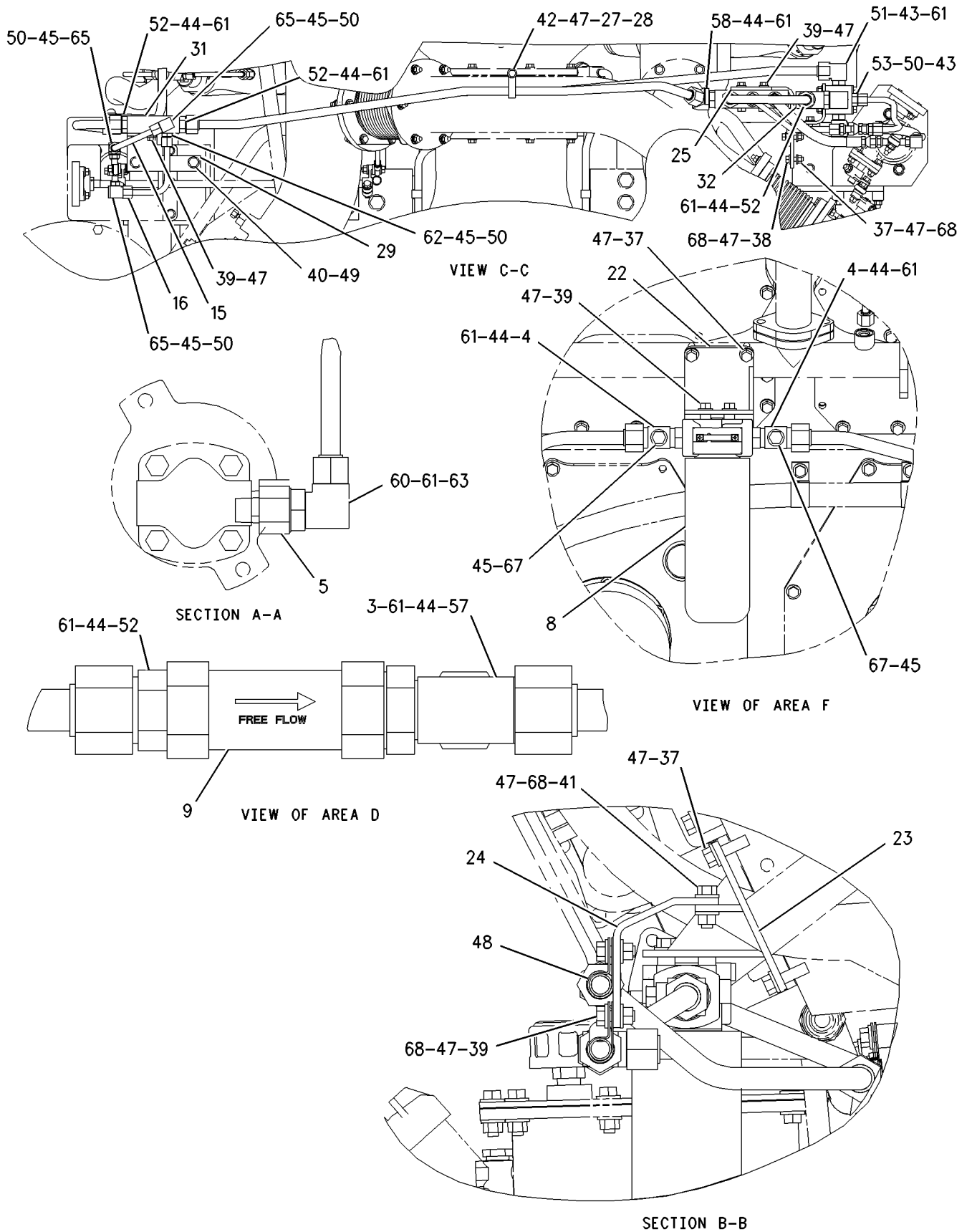
GRAPHIC #1

g00815662

# LUBRICATION SYSTEM

206-6545 LINES GP-ENGINE OIL (contd.)

i01559172



GRAPHIC #2

<END>

g00815663



# LUBRICATION SYSTEM

## 9Y-3300 LINES GP-LUBE OIL (CHG -03, -03D2, -03D3, -03D4, -03D5, -03D6) PRELUBE PUMP

SMCS-1307

i01922359

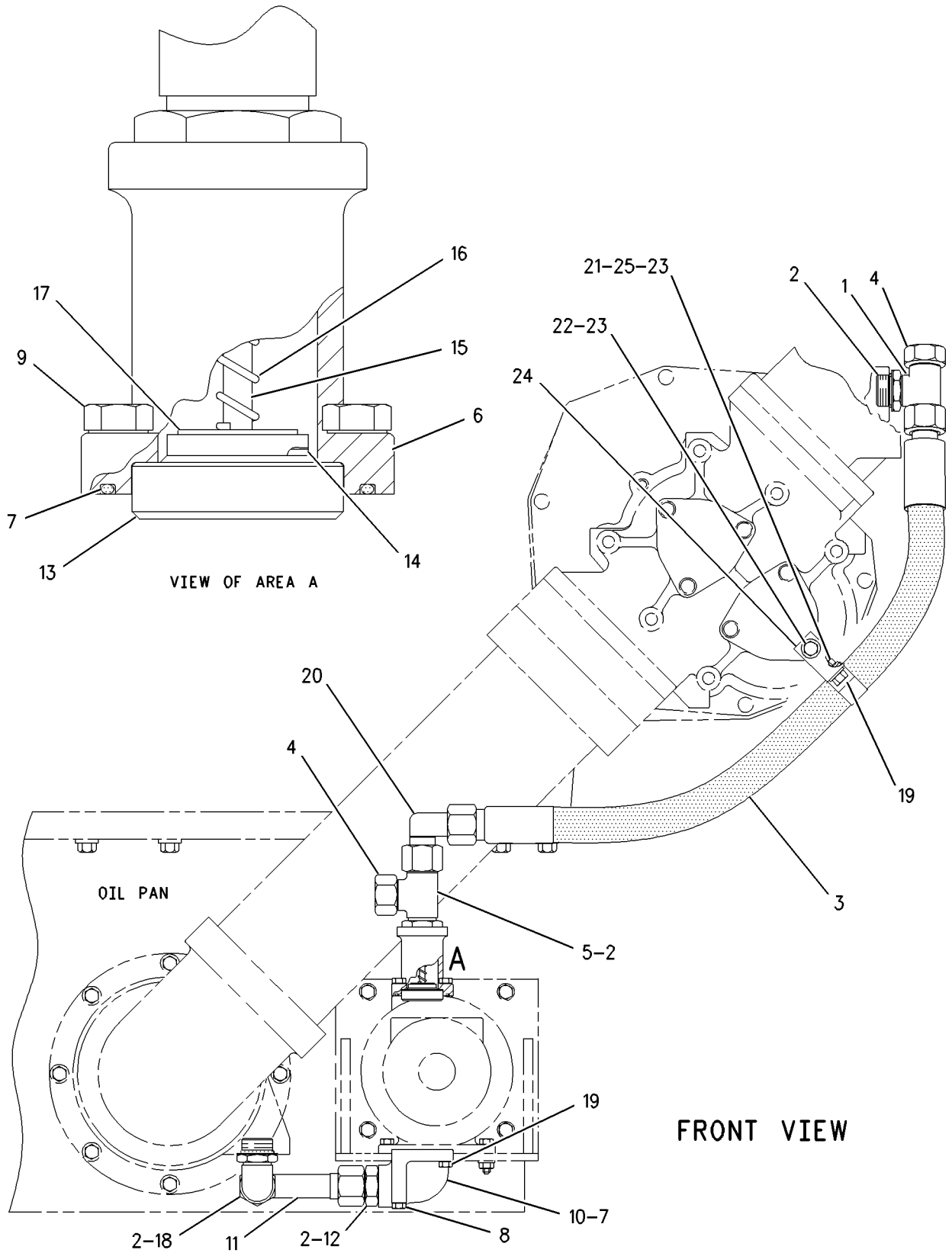
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	067-9921	1	TEE-FLARED						
	2	1	5P-7701	4	SEAL-O-RING						
I	3	1	1N-3134	1	HOSE AS						
	4	1	3R-6789	2	CAP-FLARED						
	5	1	030-7960	1	TEE-FLARED						
	6	1	4W-2139	1	HOUSING						
	7	1	6V-5100	2	SEAL-O-RING						
	8	1	1D-4540	2	BOLT (5/16-18X2.75 IN)						
	9	1	0S-1618	6	BOLT (5/16-18X1 IN)						
	10	1	4W-9774	1	ELBOW						
	11	1	9Y-3299	1	TUBE AS						
	12	1	030-7935	1	CONNECTOR						
	13	1	4W-2138	1	VALVE AS						
	14	1	3H-3433	1	PIN-SPRING						
	15	1	1P-5274	1	PIN-VALVE SPRING						
	16	1	9H-2367	1	SPRING-VALVE						
	17	1	9L-0672	1	VALVE-CHECK						
	18	1	030-7951	1	ELBOW-FLARED						
	19	1	7D-7233	1	CLIP						
	20	1	031-5744	1	ELBOW						
C	21	1	0S-0509	1	BOLT (3/8-16X0.75 IN)						
C	22	1	1A-2029	1	BOLT (3/8-16X1.125 IN)						
C	23	1	3V-3308	3	WASHER-HARD (10.2X20.5X2.5MM THK)						
C	24	1	9M-0766	1	BRACKET						
C	25	1	9S-8752	1	NUT-FULL (3/8-16 THD)						

C-CHANGE FROM PREVIOUS TYPE  
I-SEE HOSE FABRICATION GUIDE

# LUBRICATION SYSTEM

9Y-3300 LINES GP-LUBE OIL (contd.)

i01922359



VIEW OF AREA A

FRONT VIEW

GRAPHIC #1

<END>

g01000436

# LUBRICATION SYSTEM

## 195-3914 LINES GP-TURBOCHARGER OIL (CHG -00 THRU -02)

SMCS-1052, 1307

i01460519

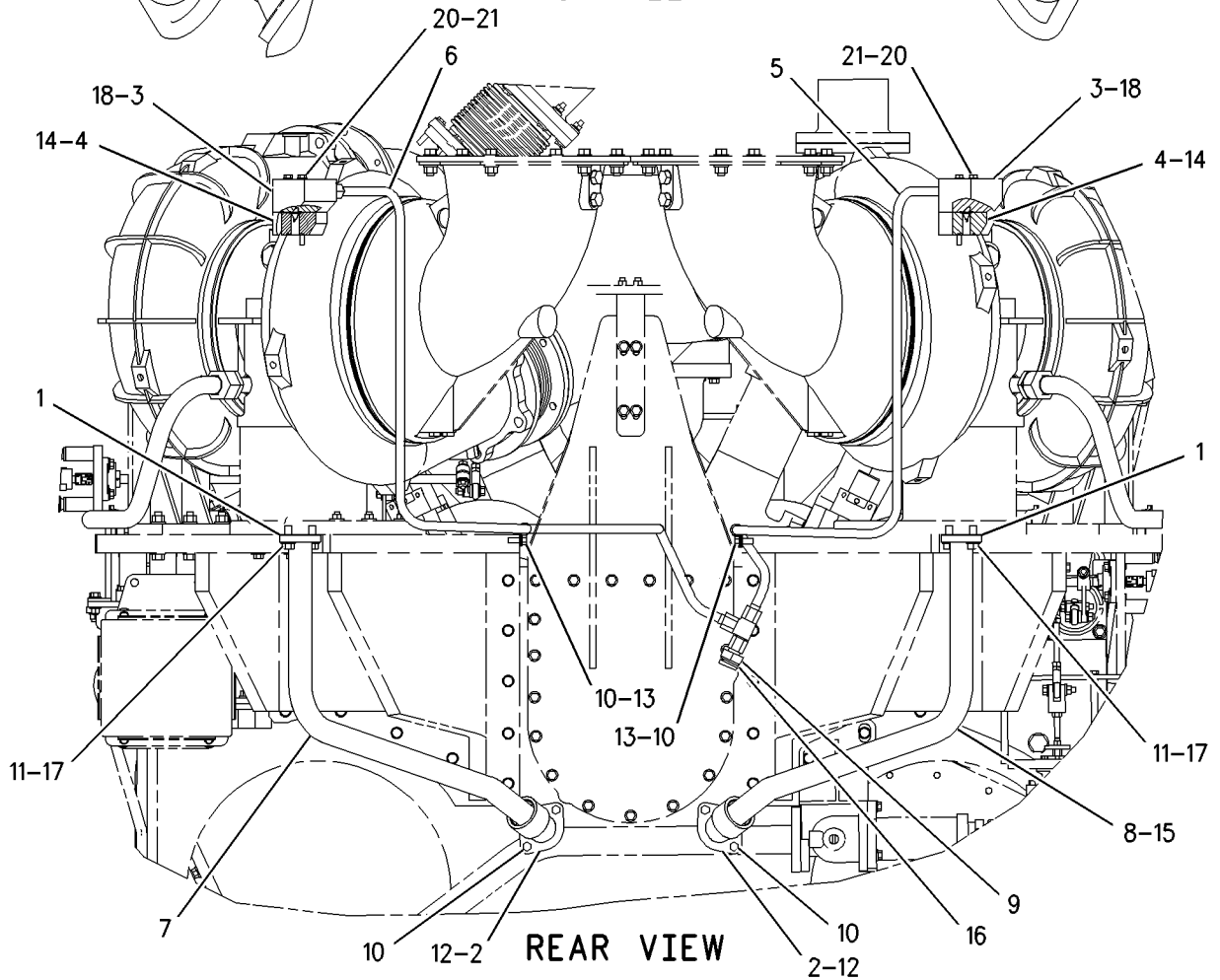
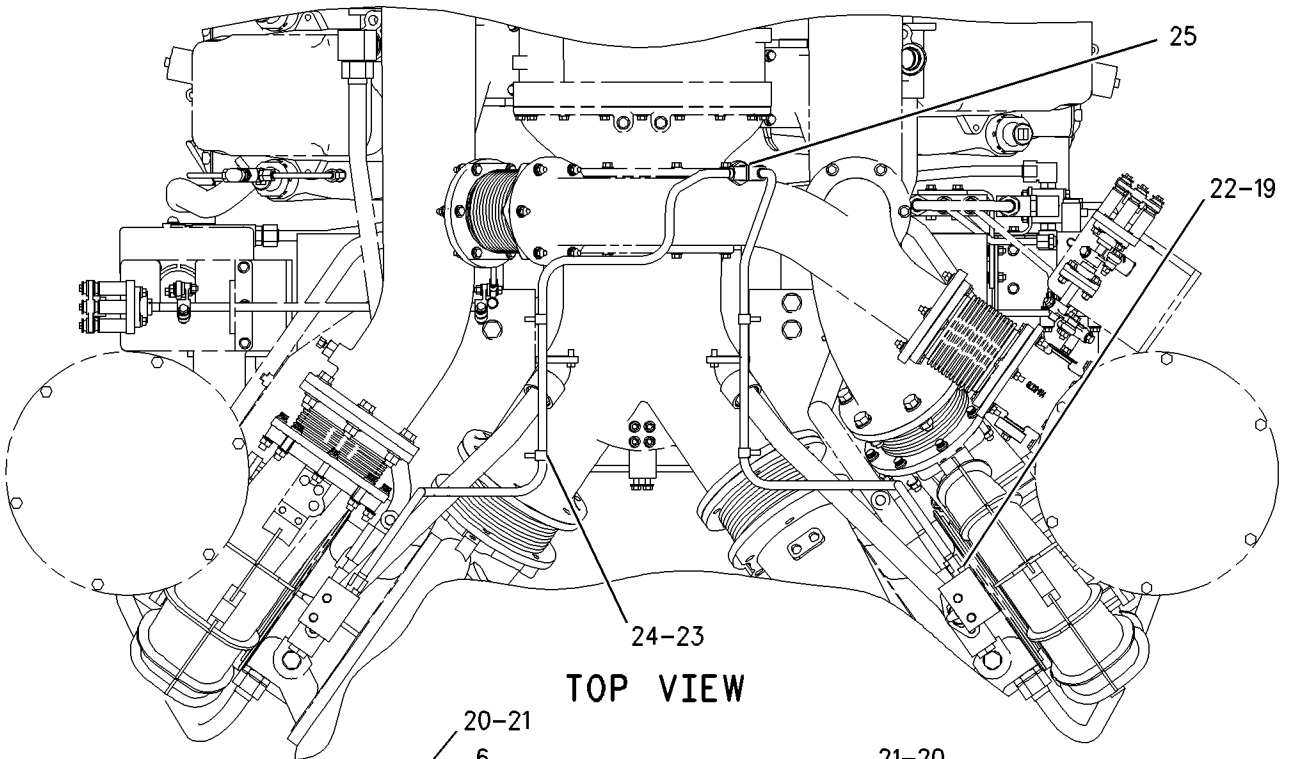
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-2577	2	GASKET						
	2	1	4W-7323	2	ELBOW						
	3	1	173-3712	2	BLOCK						
	4	1	174-4479	2	BLOCK						
	5	1	194-7750	1	TUBE AS						
	6	1	194-7751	1	TUBE AS						
	7	1	194-7752	1	TUBE AS						
	8	1	194-7753	1	TUBE AS						
	9	1	068-6074	1	CONNECTOR						
	10	1	0S-1594	8	BOLT (3/8-16X1 IN)						
	11	1	0S-1595	4	BOLT (1/2-13X1.25 IN)						
	12	1	3P-0649	2	SEAL-O-RING						
	13	1	5P-1075	4	WASHER-HARD (10.2X22.5X3MM THK)						
	14	1	5P-3456	2	SEAL-O-RING						
	15	1	5P-5846	2	SEAL-O-RING						
	16	1	5P-7701	1	SEAL-O-RING						
	17	1	5P-8245	4	WASHER-HARD (13.5X25.5X3MM THK)						
	18	1	5P-9757	2	SEAL-O-RING						
	19	1	6V-4589	2	SEAL-O-RING						
M	20	1	6V-9607	4	BOLT (M8X1.25X120MM)						
	21	1	9M-1974	4	WASHER-HARD (8.8X16X2MM THK)						
	22	1	9M-4584	2	CONNECTOR-FLARED						
	23	1	9R-1004	4	CLIP (TAB)						
	24	1	9R-1005	4	CLIP (SLOT)						
	25	1	9S-0176	1	TEE-SWIVEL						

M-METRIC PART

# LUBRICATION SYSTEM

195-3914 LINES GP-TURBOCHARGER OIL (contd.)

i01460519



GRAPHIC #1

<END>

g00763308

# LUBRICATION SYSTEM

**4W-0674 PUMP GP-ENGINE OIL\*R (CHG -01 THRU -03, 7W-2455-02)**  
**ONE SECTION GEAR**  
**PART OF 4W-0675 PUMP GP-ENGINE OIL**

SMCS-1304, 1315

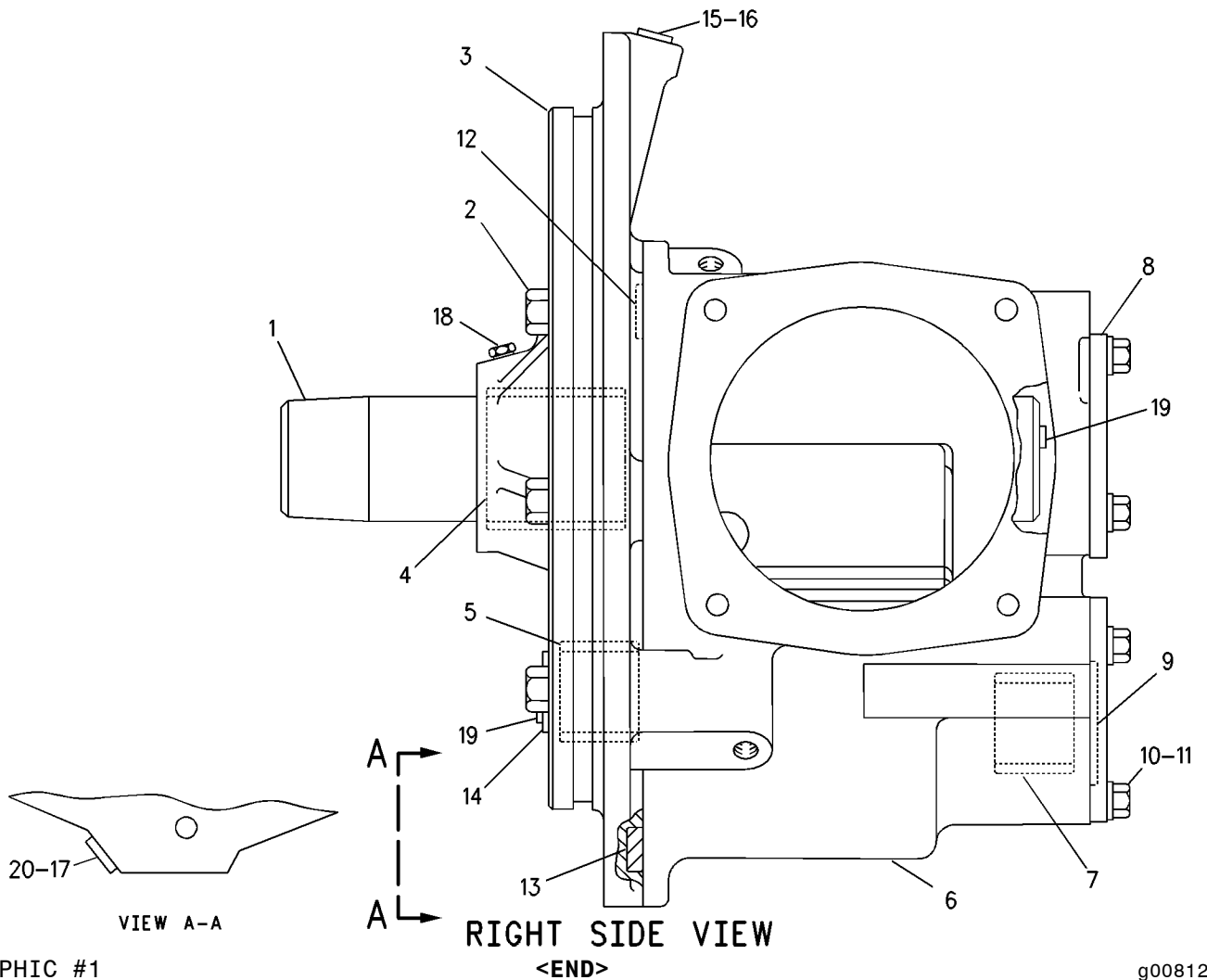
i01563330

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7W-2401	1	SHAFT AS-DRIVE						
	2	1	1A-5822	6	BOLT (1/2-13X2.75-IN)						
	3	1	4W-3998	1	COVER AS-PUMP						
		1	7N-5683	2	DOWEL						
	4	1	7E-7067	1	BEARING-SLEEVE						
	5	1	7E-7066	1	BEARING-SLEEVE						
	6	1	7W-2455	1	BODY AS-OIL PUMP						
	7	1	7E-7066	2	BEARING-SLEEVE						
	8	1	1W-2059	2	COVER						
	9	1	5P-4889	2	SEAL-O-RING						
	10	1	0S-1594	6	BOLT (3/8-16X1-IN)						
	11	1	3V-3308	6	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	12	1	3P-1156	6	SEAL-O-RING						
	13	1	6V-3603	1	SEAL-O-RING						
	14	1	4W-6862	1	SHAFT AS-IDLER						
	15	1	9S-8004	1	PLUG						
	16	1	6V-5049	1	SEAL-O-RING						
	17	1	5P-7813	1	SEAL-O-RING						
	18	1	5M-6214	1	PLUG-PIPE						
	19	1	7H-3171	3	PLUG-PIPE						
	20	1	9S-8007	1	PLUG						

# LUBRICATION SYSTEM

4W-0674 PUMP GP-ENGINE OIL (contd.)

i01563330



GRAPHIC #1

g00812222

# LUBRICATION SYSTEM

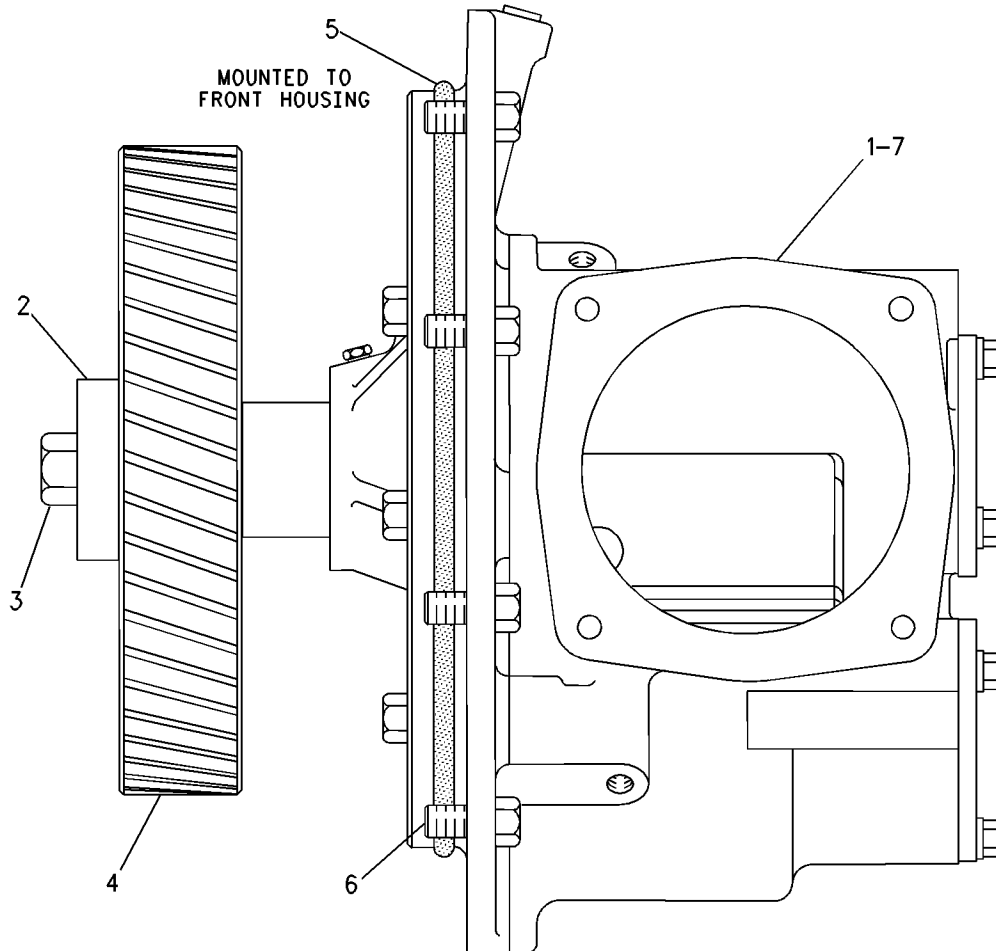
## 4W-0675 PUMP GP-ENGINE OIL\*R (CHG -01) ONE SECTION GEAR

SMCS-1304, 1315

i01572618

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
YR	1	1	<b>4W-0674</b>	1	PUMP GP-ENGINE OIL						74
	2	1	<b>1W-2058</b>	1	WASHER (20X80X19MM THK)						
	3	1	<b>9S-1364</b>	1	BOLT (3/4-16X3.5IN)						
	4	1	<b>1W-2057</b>	1	GEAR-OIL PUMP DRIVE (63 TEETH)						
	5	1	<b>6V-7702</b>	1	SEAL-O-RING						
	6	1	<b>0S-1595</b>	8	BOLT (1/2-13X1.25 IN)						
	7	1	<b>6V-3538</b>	1	DOWEL						

R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



**RIGHT SIDE VIEW**

<END>

GRAPHIC #1

g00812223

# LUBRICATION SYSTEM

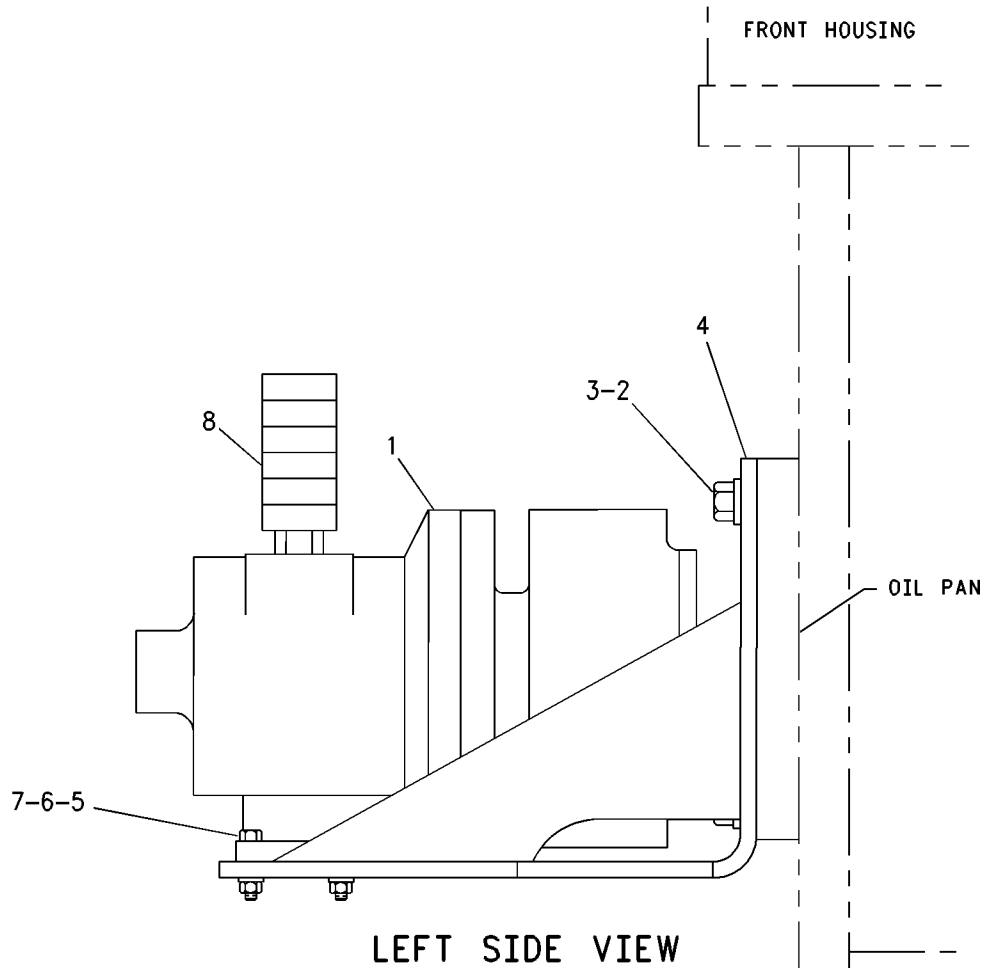
## 1W-0899 PUMP GP-PRELUBRICATION (CHG -04 THRU -07)

SMCS-1319

i01678458

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	1W-4776	1	PUMP GP-PRELUBRICATION						78
	2	1	1A-2029	4	BOLT (3/8-16X1.125 IN)						
	3	1	8M-9024	4	WASHER-HARD (10.2X22.5X5MM THK)						
	4	1	9Y-3297	1	BRACKET AS						
	5	1	1B-7182	4	BOLT (5/16-18X1.25 IN)						
	6	1	1T-0689	4	WASHER (9.93X22.22X2.54MM THK)						
	7	1	5S-0003	4	NUT (5/16-18 THD)						
	8	1	7C-5616	1	SILENCER-EXHAUST						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00699673



# LUBRICATION SYSTEM

## 1W-4776 PUMP GP-PRELUBRICATION (CHG -00, 3N-1287-03) PART OF 1W-0899 PUMP GP-PRELUBRICATION

SMCS-1319

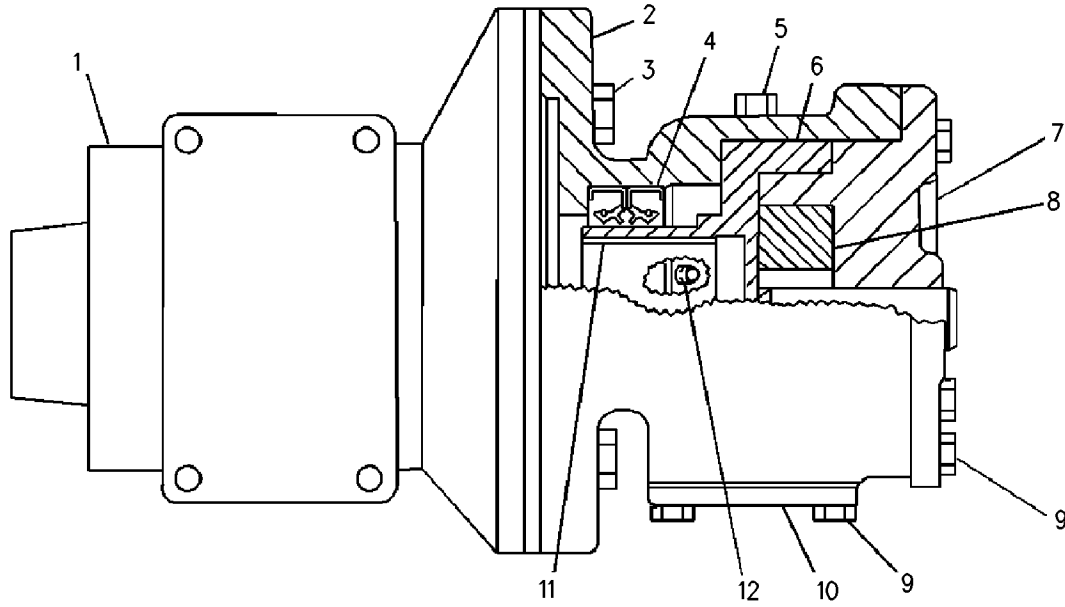
i02139200

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	<b>3N-1287</b>	1	STARTING MOTOR AS-AIR						
	2	1	<b>5N-6668</b>	1	HOUSING						
	3	1	<b>0S-1588</b>	4	BOLT (3/8-16X1.25-IN)						
	4	1	<b>1H-5959</b>	2	SEAL-LIP TYPE						
	5	1	<b>5M-6214</b>	2	PLUG-PIPE						
	6	1	<b>3N-1285</b>	1	ROTOR						
	7	1	<b>3N-1283</b>	1	HEAD AS						
	8	1	<b>3N-1284</b>	1	IDLER AS						
	9	1	<b>0S-1617</b>	9	BOLT (5/16-18X0.75-IN)						
	10	1	<b>2N-7521</b>	1	COVER						
		1	<b>2N-7520</b>	1	GASKET						
	11	1	<b>6F-2172</b>	1	KEY						
	12	1	<b>6D-3910</b>	1	SCREW-BUTTON HEAD (10-32X.25-IN)						
					AVAILABLE REPAIR KIT(S):						
			<b>2N-7522</b>	1	KIT-GASKET (PRELUBRICATION PUMP)						
J			<b>5N-7776</b>	1	KIT-MOTOR REPAIR (STARTING MOTOR) (INCLUDES VANES, PINS, BEARING, SEALS, SPRINGS, END CAP, GASKETS AND O-RING)						
J			<b>2W-6083</b>	1	KIT-GASKET (STARTING MOTOR) (INCLUDES GASKETS, END CAP, AND O-RING)						
J-KITS MARKED J AVAILABLE FOR PART MARKED J											

# LUBRICATION SYSTEM

1W-4776 PUMP GP-PRELUBRICATION (contd.)

i02139200



GRAPHIC #1

<END>

g00817242

# LUBRICATION SYSTEM

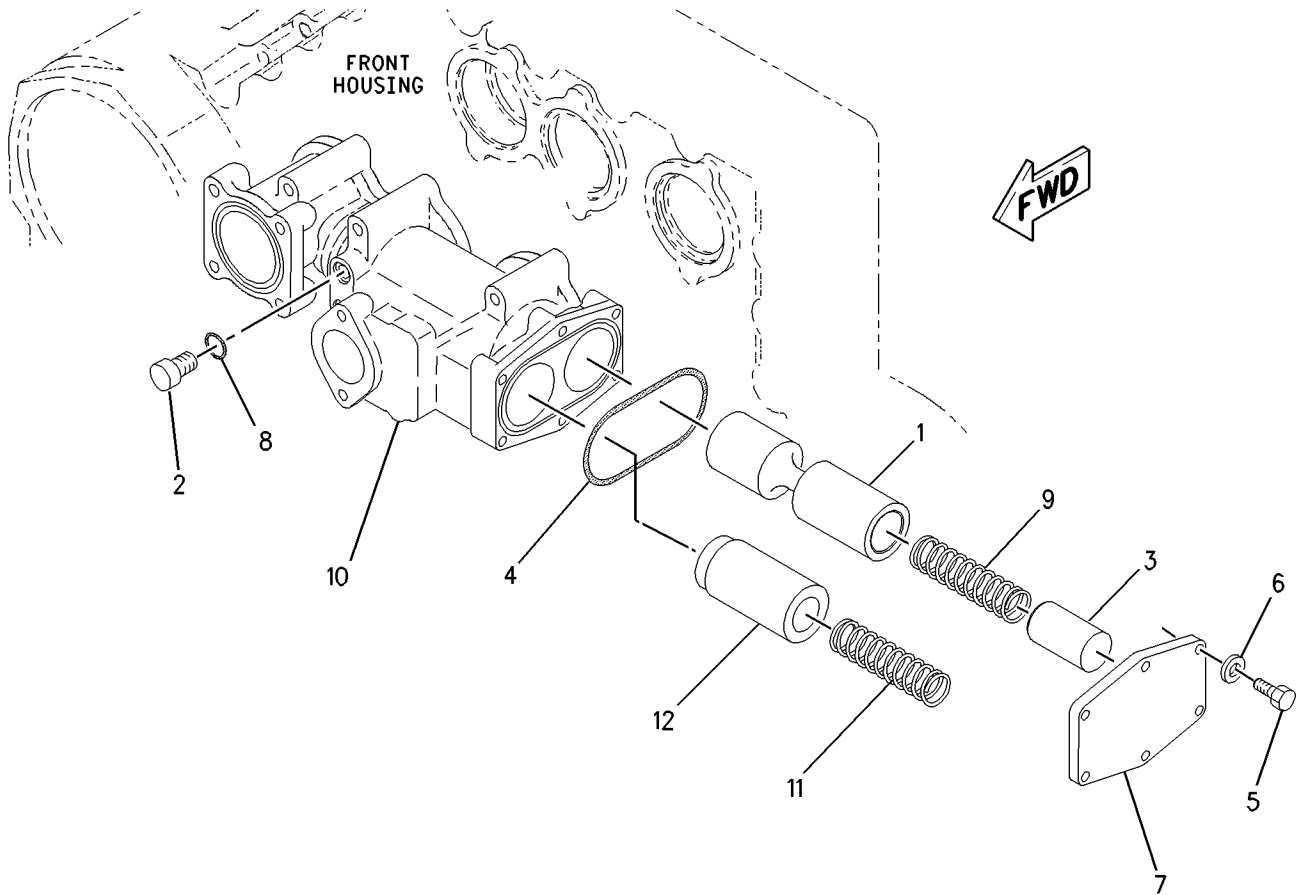
## 1W-0804 VALVE GP-PRIORITY (CHG -07, -08)

SMCS-1327

i01492321

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-2243	1	PISTON-CONTROL VALVE						
	2	1	9S-4191	2	PLUG						
	3	1	1W-2242	1	PISTON-INNER						
C	4	1	6V-3835	1	SEAL-O-RING						
C	5	1	1M-0644	6	BOLT (3/8-16X2-1/4-IN)						
C	6	1	3V-3308	6	WASHER-HARD (10.2X20.5X2.5-MM THK)						
C	7	1	7W-9423	1	COVER						
	8	1	6V-5049	2	SEAL-O-RING						
	9	1	1W-2240	1	SPRING-CONTROL VALVE						
C	10	1	7W-7825	1	BODY-VALVE						
C	11	1	2G-5664	1	SPRING						
C	12	1	7W-9425	1	PISTON						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00774883

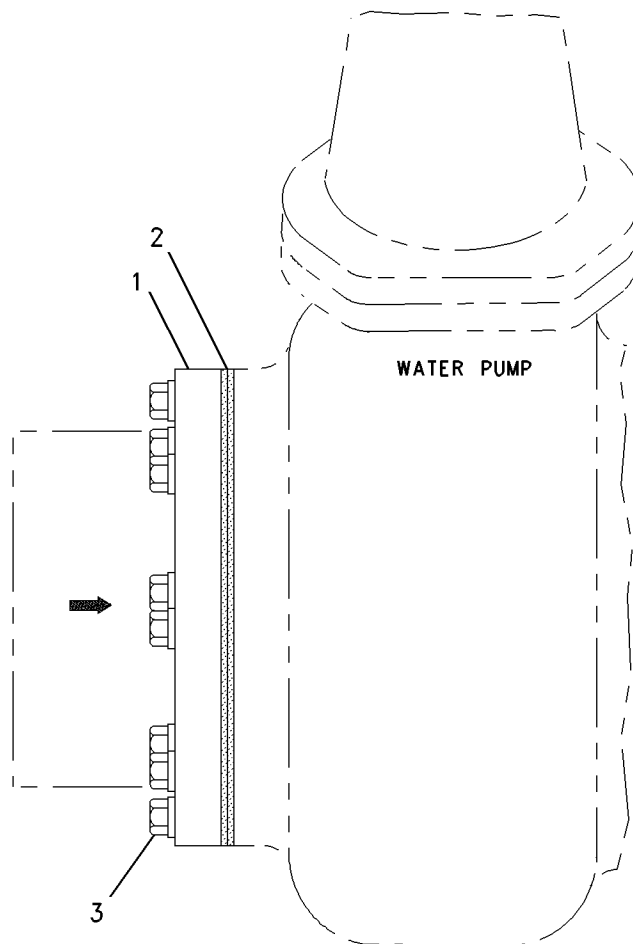
# COOLING SYSTEM

## 2W-2678 CONNECTION GP-WATER (CHG -01, -02, -02D1, -02D2, -02D3)

SMCS-1380

i01547883

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2W-7121	1	FLANGE - INLET						
	2	1	4W-7749	2	GASKET						
	3	1	0S-1591	8	BOLT (3/8-16X1.5 IN)						
		1	3V-3308	8	WASHER-HARD (10.2X20.5X2.5MM THK)						



LEFT SIDE VIEW

GRAPHIC #1

<END>

g00804540

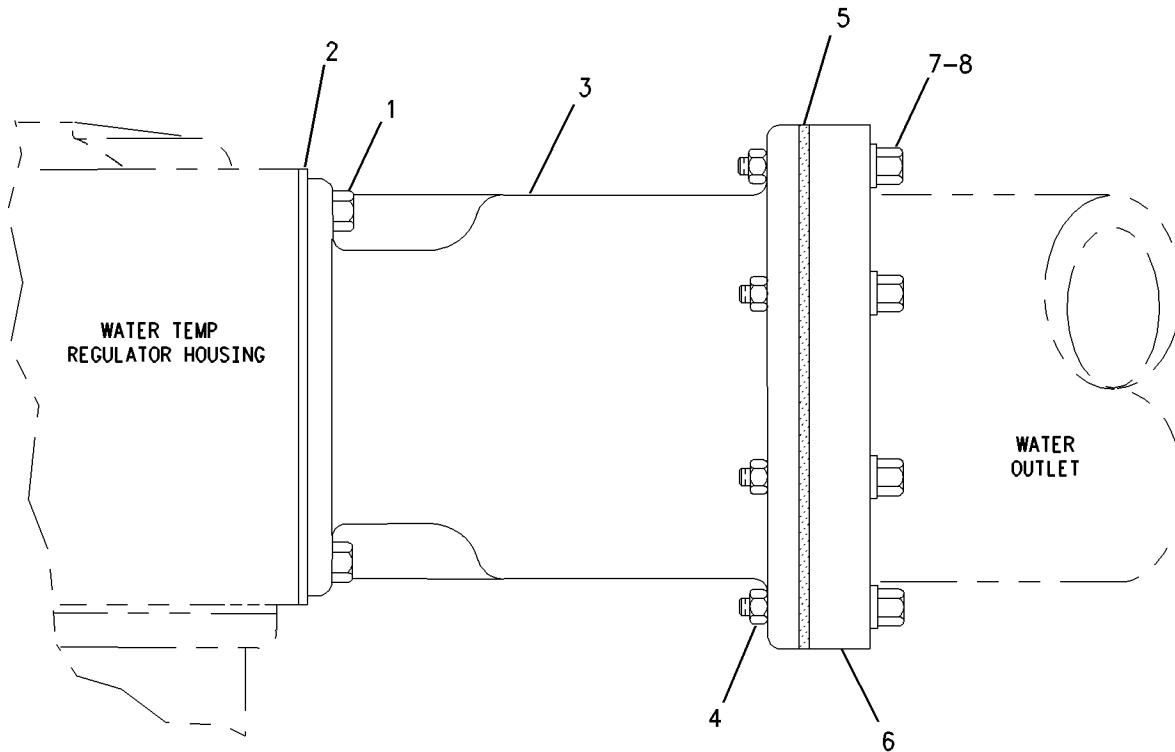
# COOLING SYSTEM

## 4W-8071 CONNECTION GP-WATER (CHG -00 THRU -03)

SMCS-1380

i01694103

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1594	4	BOLT (3/8-16X1 IN)						
	2	1	7W-3269	1	GASKET						
	3	1	7W-3709	1	ADAPTER-WATER						
	4	1	9S-8752	8	NUT-FULL (3/8-16 THD)						
	5	1	1S-5772	1	GASKET						
	6	1	7N-7009	1	FLANGE						
	7	1	0S-1590	8	BOLT (3/8-16X2 IN)						
	8	1	3V-3308	8	WASHER-HARD (10.2X20.5X2.5MM THK)						



FRONT VIEW

GRAPHIC #1

<END>

g00872083

# COOLING SYSTEM

## 1W-0887 COOLER GP-ENGINE OIL (CHG -04 THRU -06) TRIPLE

SMCS-1378

i02103264

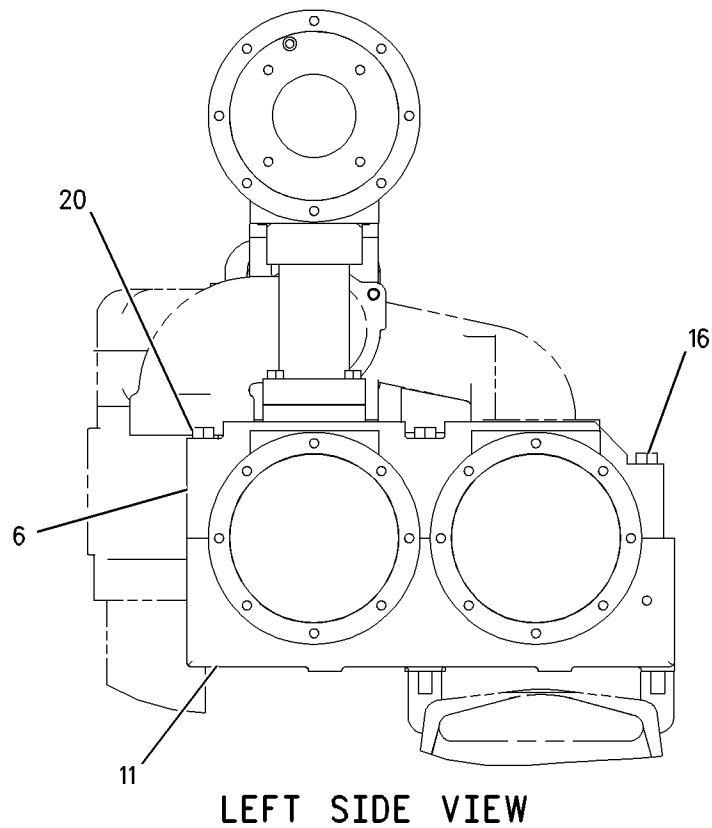
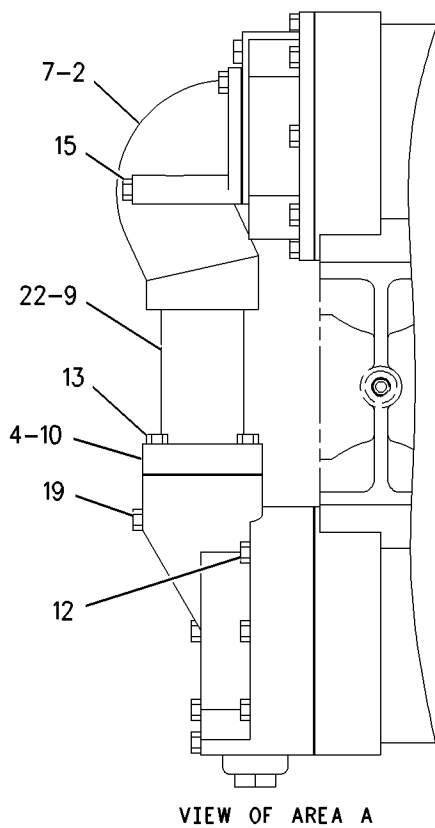
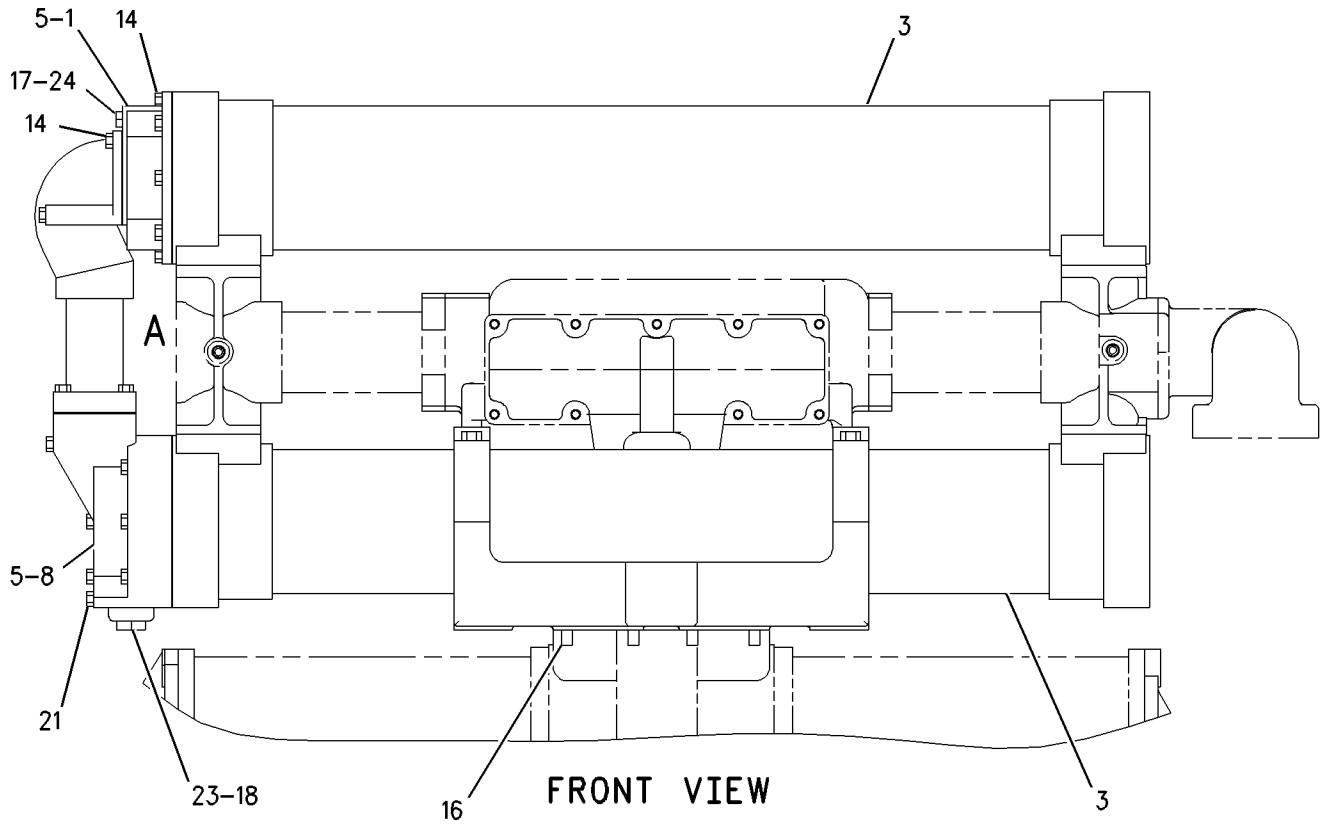
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-3785	1	BONNET-OIL COOLER						
	2	1	1W-4067	1	GASKET						
R	3	1	1W-5200	3	CORE AS (OIL COOLER)						
	4	1	4F-4873	1	GASKET						
	5	1	247-3796	3	GASKET						
	6	1	7W-2029	2	SUPPORT						
	7	1	7W-5846	1	ELBOW						
	8	1	7W-6093	1	BONNET						
	9	1	7W-6948	1	TUBE						
	10	1	9Y-1373	1	FLANGE						
C	11	1	201-3610	1	SUPPORT						
	12	1	0L-1143	6	BOLT (3/8-16X2.5-IN)						
	13	1	0S-1591	4	BOLT (3/8-16X1.5-IN)						
	14	1	0S-1594	10	BOLT (3/8-16X1-IN)						
	15	1	0T-0065	2	BOLT (3/8-16X3.5-IN)						
	16	1	1D-4566	10	BOLT (1/2-13X3.5-IN)						
	17	1	6V-3250	1	SEAL-O-RING						
	18	1	6V-5063	1	SEAL-O-RING						
	19	1	7F-3425	1	BOLT (3/8-16X5.75-IN)						
	20	1	8S-9089	4	BOLT (1/2-13X4.5-IN)						
	21	1	8S-9191	9	BOLT (3/8-16X4-IN)						
	22	1	8T-1919	2	SEAL-O-RING						
	23	1	9S-4183	1	PLUG						
	24	1	9S-4191	1	PLUG						

C-CHANGE FROM PREVIOUS TYPE  
R-REMFG PART MAY BE AVAILABLE

# COOLING SYSTEM

1W-0887 COOLER GP-ENGINE OIL (contd.)

i02103264



GRAPHIC #1

<END>

g00857353

# COOLING SYSTEM

## 105-3177 LINES GP-OIL COOLER (CHG -03 THRU -07)

83 DEGREES CELCIUS. TRIPLE

FOR USE WITH ESS PANEL WITH COMPUTERIZED MONITORING SYSTEM

SMCS-1307, 1378, 1380

i02030150

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-3979	2	FLANGE						
	2	1	2W-6318	1	TUBE						
	3	1	3S-9643	4	SEAL-LIP TYPE						
	4	1	4S-5719	1	SPACER (10.31X25X12.7-MM THK)						
	5	1	7C-6021	1	HOUSING-REGULATOR						
	6	1	7N-9044	2	TUBE						
	7	1	7W-2459	1	TUBE						
	8	1	7W-3881	1	ELBOW						
	9	1	7W-3882	1	ELBOW						
	10	1	7W-6600	1	MANIFOLD-OIL COOLER						
	11	1	7W-6601	1	MANIFOLD-OIL COOLER						
	12	1	9Y-4732	1	COVER						
	13	1	9Y-9842	1	GASKET						
	14	1	110-0096	2	RING						
C	15	1	120-9453	4	REGULATOR-OIL TEMPERATURE (85-DEG C)						
	16	1	122-1148	4	CLAMP AS						
	17	1	0L-1143	4	BOLT (3/8-16X2.5-IN)						
	18	1	0S-1571	4	BOLT (3/8-16X1.75-IN)						
	19	1	0S-1591	9	BOLT (3/8-16X1.5-IN)						
	20	1	0S-1594	40	BOLT (3/8-16X1-IN)						
	21	1	3P-0654	8	SEAL-O-RING						
	22	1	3P-0655	6	SEAL-O-RING						
	23	1	3V-3308	12	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	24	1	5S-9134	1	SEAL-O-RING						
	25	1	6V-4356	1	CLIP (SLOT)						
	26	1	6V-4357	1	CLIP (TAB)						
	27	1	6V-5049	3	SEAL-O-RING						
	28	1	6V-5055	1	SEAL-O-RING						
	29	1	6V-5101	2	SEAL-O-RING						
	30	1	8S-9191	4	BOLT (3/8-16X4-IN)						
	31	1	8T-6762	3	PLUG-PIPE						
	32	1	9L-9132	1	WASHER (10.2X25.5X2.5-MM THK)						
	33	1	9S-4191	3	PLUG						
	34	1	9S-8752	4	NUT-FULL (3/8-16-THD)						

C-CHANGE FROM PREVIOUS TYPE





# COOLING SYSTEM

## 4W-0361 LINES GP-WATER (CHG -09 THRU -11) TRIPLE OIL COOLER

SMCS-1355, 1380, 1393

i02091026

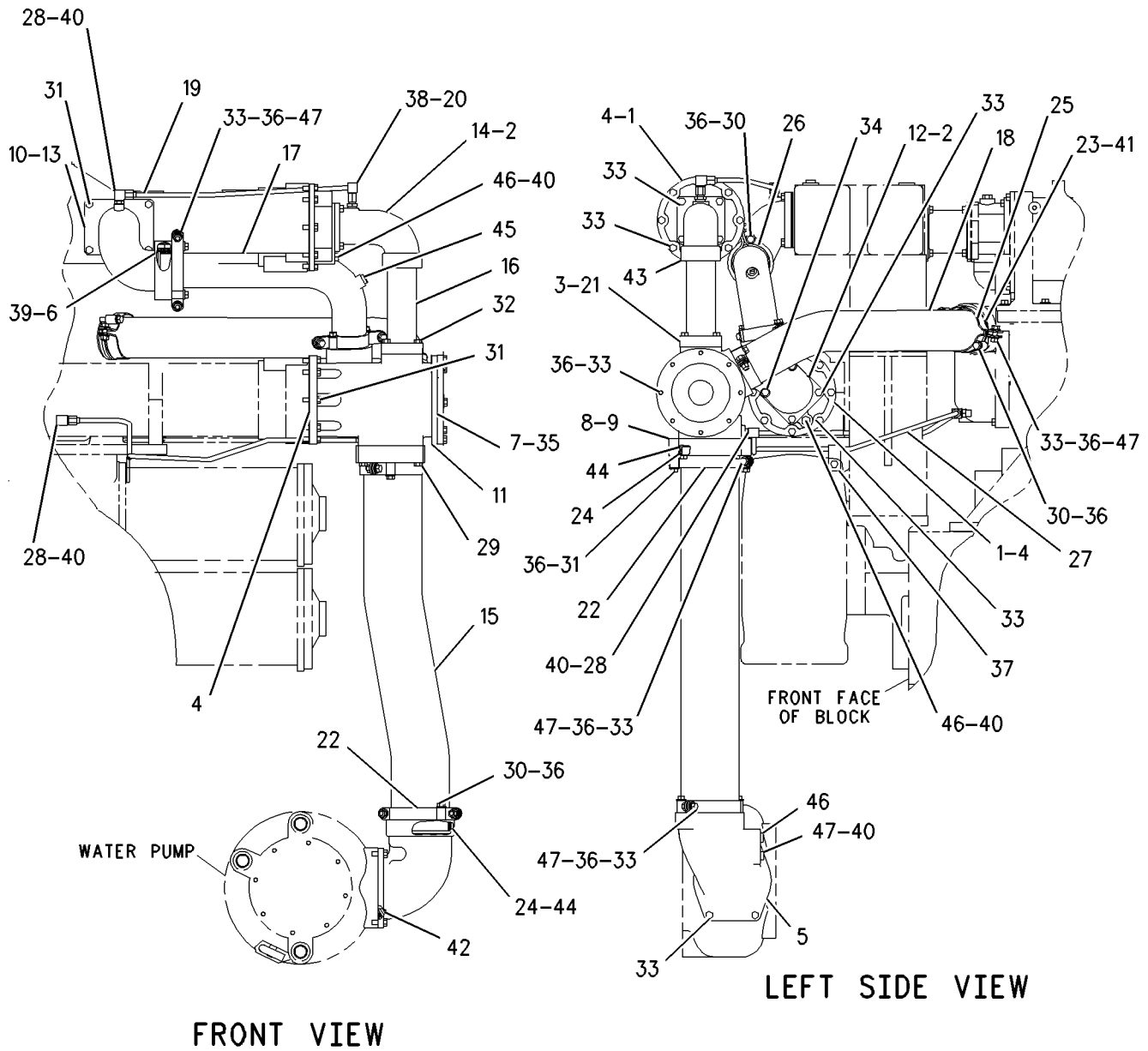
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1W-3785	2	BONNET-OIL COOLER						
	2	1	1W-4067	2	GASKET						
	3	1	4F-4873	1	GASKET						
	4	1	247-3796	3	GASKET						
	5	1	7E-5482	1	ELBOW						
	6	1	7E-7209	2	RING-RETAINING						
	7	1	7S-8420	1	COVER-HYDRAULIC PUMP						
	8	1	7W-2018	1	GASKET						
	9	1	7W-2026	1	FLANGE						
	10	1	7W-3269	1	GASKET						
	11	1	7W-5487	1	BONNET						
	12	1	7W-5526	1	ELBOW						
	13	1	7W-5527	1	ELBOW						
	14	1	7W-5845	1	ELBOW						
	15	1	7W-6945	1	TUBE						
	16	1	7W-6946	1	TUBE						
	17	1	7W-6949	1	TUBE						
	18	1	7W-6950	1	TUBE						
	19	1	7W-6964	1	TUBE AS						
	20	1	8N-9071	1	VALVE AS						
		1	7N-7688	1	FERRULE						
		1	8N-9072	1	BODY-VALVE						
		1	9M-5590	1	BALL						
	21	1	9Y-1373	1	FLANGE						
	22	1	108-6169	4	CLAMP AS						
	23	1	110-0096	2	RING						
	24	1	110-0097	2	RING						
	25	1	122-1148	4	CLAMP AS						
	26	1	124-6333	4	CLAMP AS						
C	27	1	217-6884	1	TUBE AS						
	28	1	030-7947	3	ELBOW						
	29	1	0L-2070	4	BOLT (3/8-16X2.25-IN)						
	30	1	0S-1571	12	BOLT (3/8-16X1.75-IN)						
	31	1	0S-1588	12	BOLT (3/8-16X1.25-IN)						
	32	1	0S-1591	4	BOLT (3/8-16X1.5-IN)						
	33	1	0S-1594	46	BOLT (3/8-16X1-IN)						
	34	1	0T-0065	2	BOLT (3/8-16X3.5-IN)						
	35	1	1S-5772	1	GASKET						
	36	1	3V-3308	44	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	37	1	5M-1198	1	CLIP						
	38	1	6K-9194	1	ELBOW						
	39	1	6V-1454	2	SEAL-O-RING						
	40	1	6V-3250	6	SEAL-O-RING						
	41	1	6V-5066	2	SEAL-O-RING						
	42	1	6V-6809	1	SEAL-O-RING						
	43	1	8T-1919	2	SEAL-O-RING						
	44	1	8T-2903	2	SEAL-O-RING						
	45	1	8T-6762	2	PLUG-PIPE						
	46	1	9S-4191	3	PLUG						
	47	1	9S-8752	12	NUT-FULL (3/8-16-THD)						

C-CHANGE FROM PREVIOUS TYPE

# COOLING SYSTEM

4W-0361 LINES GP-WATER (contd.)

i02091026



# COOLING SYSTEM

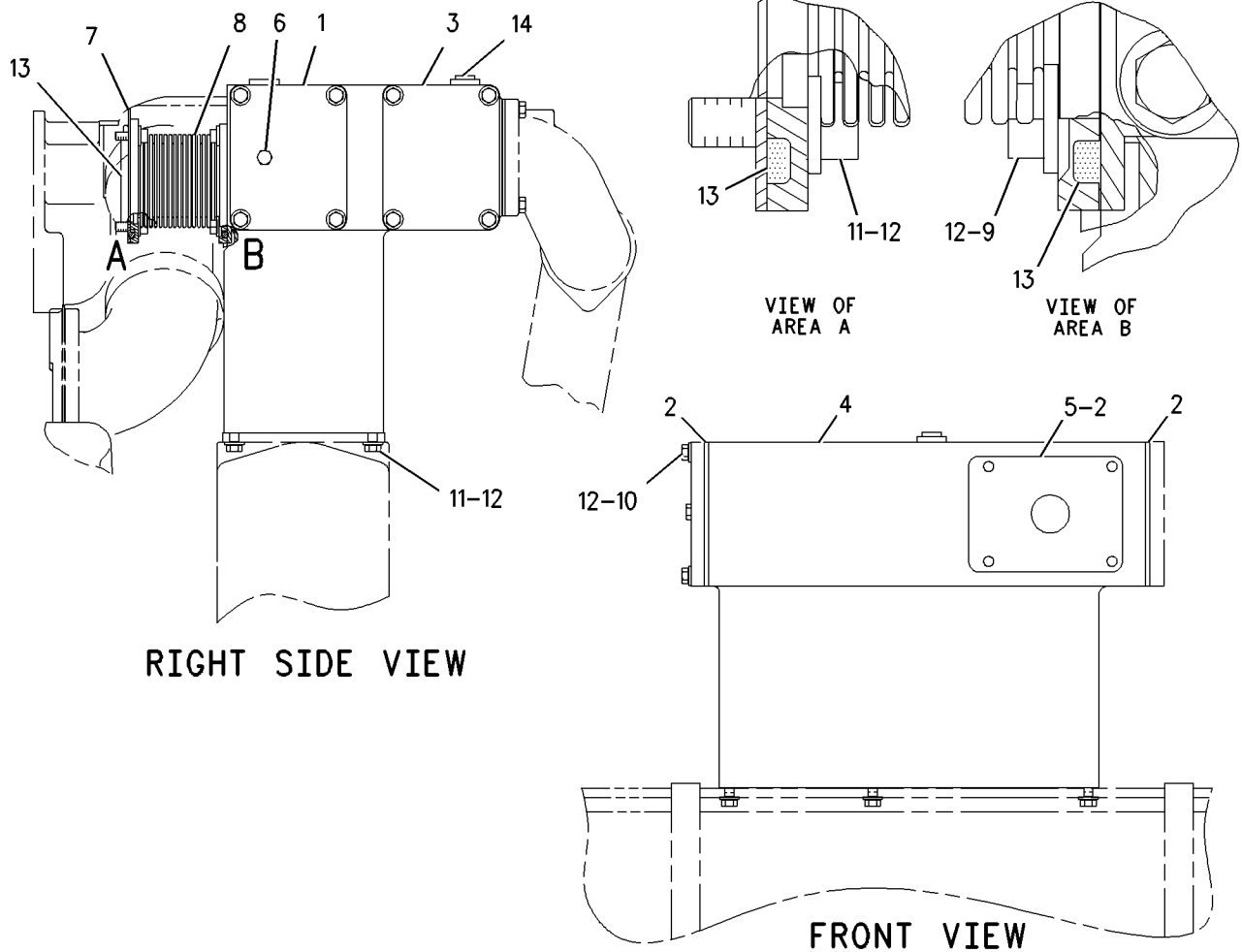
## 168-5027 LINES GP-WATER (CHG -00, -01)

REMOTE

SMCS-1355, 1380, 1393

i01911913

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4P-9224	1	COVER						
	2	1	7W-3269	3	GASKET						
	3	1	7W-3271	1	COVER						
	4	1	7W-6092	1	HOUSING						
	5	1	7W-6998	1	ORIFICE						
	6	1	8T-6765	1	PLUG-PIPE						
	7	1	167-2117	1	ORIFICE						
	8	1	222-4708	1	BELLOWS AS						
	9	1	0L-1351	4	BOLT (3/8-16X0.875 IN)						
	10	1	0S-1588	8	BOLT (3/8-16X1.25 IN)						
	11	1	0S-1594	10	BOLT (3/8-16X1 IN)						
	12	1	3V-3308	22	WASHER-HARD (10.2X20.5X2.5MM THK)						
	13	1	6V-5504	3	SEAL-O-RING						
	14	1	8T-6762	1	PLUG-PIPE						



GRAPHIC #1

<END>

g00995754

# COOLING SYSTEM

## 195-3916 LINES GP-WATER (CHG -00 THRU -03)

SMCS-1355, 1380, 1393

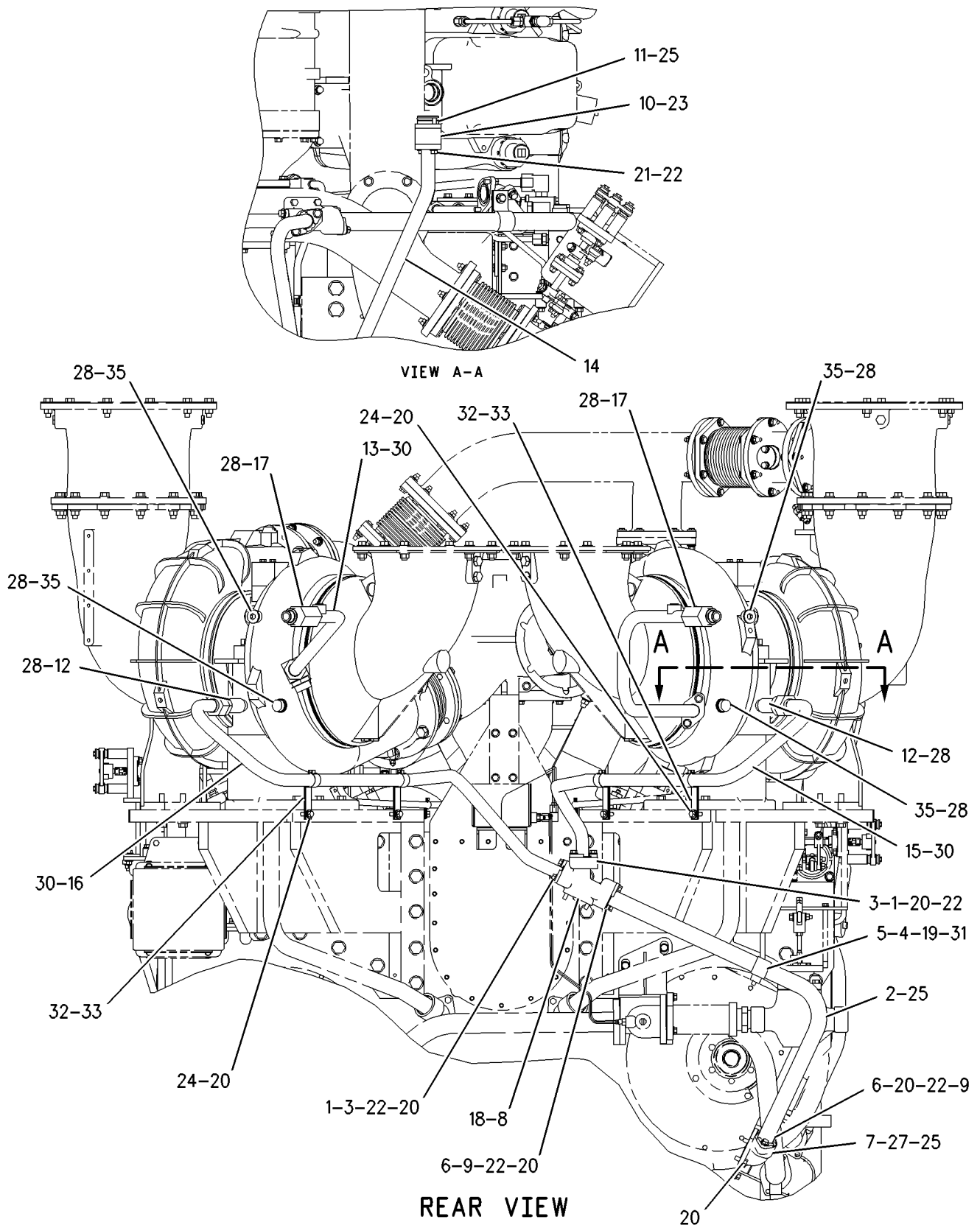
i01708081

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
1	1	1	1W-7020	2	RING-RETAINING						
2	1	1	2W-3793	1	TUBE-WATER SUPPLY						
3	1	1	2W-4032	4	RETAINER						
4	1	1	7K-3215	1	BOSS						
5	1	1	7K-6699	1	CLIP						
6	1	1	7W-3933	2	RING-RETAINING						
7	1	1	7W-4261	1	ELBOW						
8	1	1	7W-4262	1	TEE						
9	1	1	8N-0394	4	RETAINER						
10	1	1	188-1026	1	SPACER						
11	1	1	188-1027	1	ADAPTER						
12	1	1	196-4647	2	CONNECTOR-O-RING						
13	1	1	196-4648	1	TUBE AS						
14	1	1	196-4649	1	TUBE AS						
15	1	1	196-4650	1	TUBE AS						
16	1	1	196-4651	1	TUBE AS						
17	1	1	196-4652	2	ADAPTER						
18	1	1	0S-1571	2	BOLT (3/8-16X1.75 IN)						
19	1	1	0S-1591	1	BOLT (3/8-16X1.5 IN)						
20	1	1	0S-1594	14	BOLT (3/8-16X1 IN)						
21	1	1	0S-1619	2	BOLT (3/8-16X3 IN)						
22	1	1	3V-3308	10	WASHER-HARD (10.2X20.5X2.5MM THK)						
23	1	1	4J-0523	2	SEAL-O-RING						
24	1	1	5P-1075	4	WASHER-HARD (10.2X22.5X3MM THK)						
25	1	1	6L-7817	3	SEAL-O-RING						
26	1	1	6M-5652	1	ELBOW						
27	1	1	6V-1585	1	SEAL-O-RING						
28	1	1	6V-1903	8	SEAL-O-RING						
29	1	1	6V-5065	1	SEAL-O-RING						
30	1	1	7L-6580	4	SEAL-O-RING						
31	1	1	8M-9024	1	WASHER-HARD (10.2X22.5X5MM THK)						
32	1	1	8T-2602	4	CLIP (TAB)						
33	1	1	8T-2603	4	CLIP (SLOT)						
34	1	1	8T-6762	2	PLUG-PIPE						
35	1	1	9S-8009	4	PLUG						

# COOLING SYSTEM

195-3916 LINES GP-WATER (contd.)

i01708081



GRAPHIC #1

<END>

g00880219

# COOLING SYSTEM

**197-4090 LINES GP-WATER-JACKET (CHG -00 THRU -02)**  
**FOR USE WITH G3612 TPS57D TURBOCHARGERS. CANNOT BE USED WITH VTC254**  
**TURBOCHARGERS**

SMCS-1355, 1380, 1393

i02114569

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2W-4555	10	MANIFOLD-WATER						
	2	1	2W-5022	20	FLANGE						
	3	1	2W-5031	9	TUBE						
	4	1	2W-5032	1	TUBE						
	5	1	6V-3250	5	SEAL-O-RING						
	6	1	6V-5065	1	SEAL-O-RING						
	7	1	7C-7480	1	ORIFICE						
	8	1	7E-0596	1	MANIFOLD-WATER						
	9	1	7E-1424	1	MANIFOLD-WATER						
	10	1	7W-2152	1	ELBOW						
	11	1	7W-3270	2	GASKET						
	12	1	7W-3275	2	ELBOW						
	13	1	7W-5841	1	ELBOW						
	14	1	7W-5842	1	ELBOW						
	15	1	7W-6849	1	ELBOW						
	16	1	7W-6851	1	ELBOW						
	17	1	7W-6947	2	TUBE						
	18	1	8N-3639	4	RETAINER						
	19	1	8N-3640	2	RING-RETAINING						
	20	1	8T-6758	1	PLUG-PIPE						
	21	1	121-3874	2	GASKET						
	22	1	126-1082	1	TUBE AS						
	23	1	153-0446	1	TUBE						
	24	1	0S-1588	8	BOLT (3/8-16X1.25-IN)						
	25	1	0S-1591	80	BOLT (3/8-16X1.5-IN)						
	26	1	0S-1594	35	BOLT (3/8-16X1-IN)						
	27	1	0T-0573	3	BOLT (3/8-16X2.75-IN)						
	28	1	1A-5964	4	BOLT (3/8-16X4.5-IN)						
	29	1	2N-0475	12	SEAL-O-RING						
	30	1	2W-5023	22	GASKET						
	31	1	3H-6622	36	BOLT (3/8-16X1.25-IN)						
	32	1	3V-3308	4	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	33	1	6V-4356	1	CLIP (SLOT)						
	34	1	6V-4357	1	CLIP (TAB)						
	35	1	6V-5063	1	SEAL-O-RING						
	36	1	6V-5066	4	SEAL-O-RING						
	37	1	6V-5139	24	SEAL-O-RING						
	38	1	6V-6809	1	SEAL-O-RING						
	39	1	7F-3425	1	BOLT (3/8-16X5.75-IN)						
	40	1	8T-6762	14	PLUG-PIPE						
	41	1	9L-9132	1	WASHER (10.2X25.5X2.5-MM THK)						
	42	1	9S-4183	1	PLUG						
	43	1	9S-4191	5	PLUG						
	44	1	9S-6130	1	PLUG						





# COOLING SYSTEM

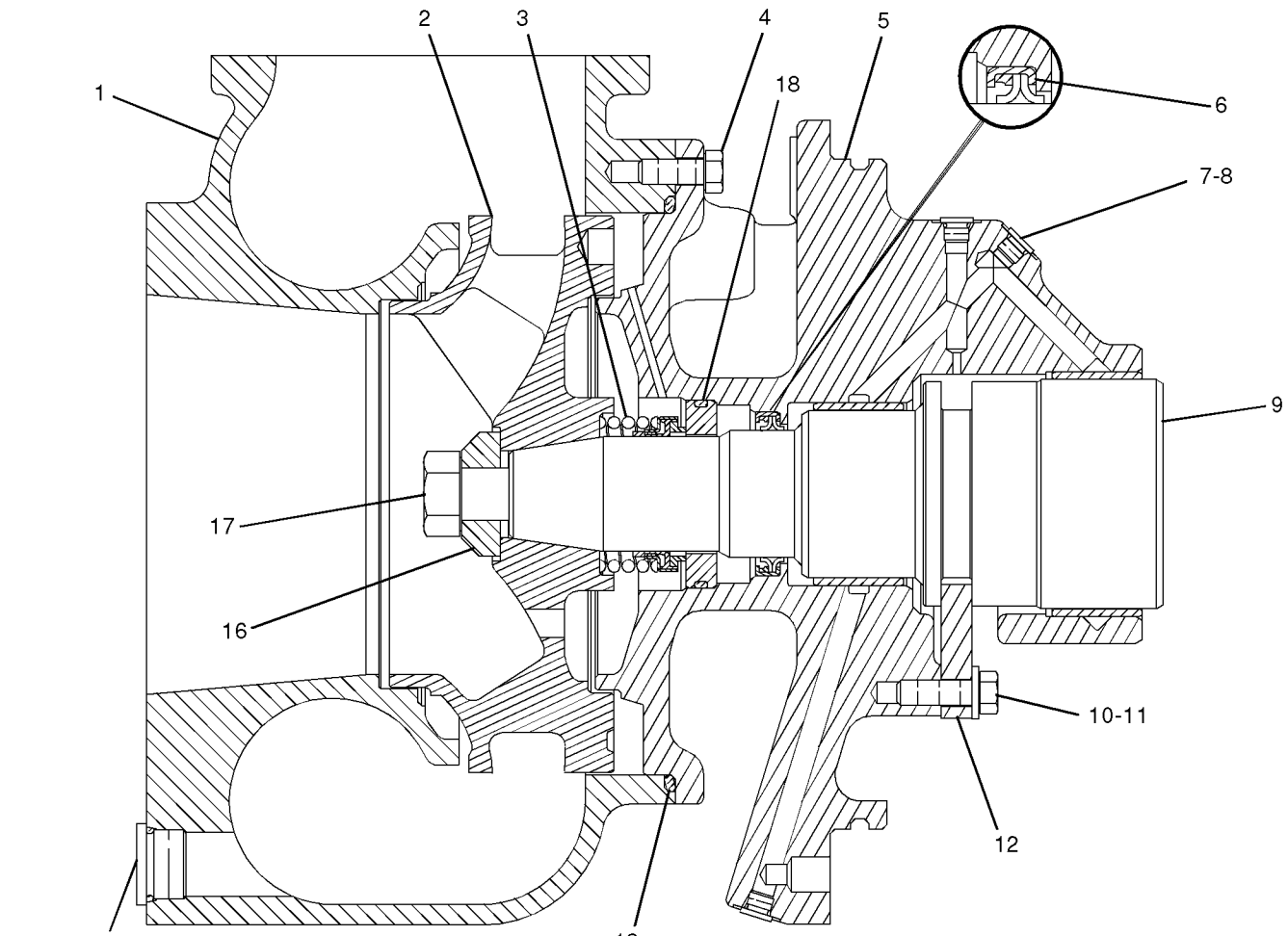
## 7E-8179 PUMP GP-WATER\*R (CHG -06 THRU -08) PART OF 7E-8181 PUMP GP-WATER

SMCS-1361

i01998145

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7E-3173	1	HOUSING-WATER PUMP						
	2	1	7E-8175	1	IMPELLER-PUMP						
	3	1	118-8086	1	SEAL GP-FACE						
	4	1	0S-1594	5	BOLT (3/8-16X1 IN)						
C	5	1	208-1007	1	HOUSING AS						
		1	188-0449	1	BEARING-SLEEVE (71.15MM OD)						
		1	188-0450	1	BEARING-SLEEVE (95.22MM OD)						
	6	1	7E-4356	1	SEAL-LIP TYPE						
	7	1	5P-7813	4	SEAL-O-RING						
	8	1	9S-8007	4	PLUG						
C	9	1	208-0327	1	SHAFT						
	10	1	0S-1588	3	BOLT (3/8-16X1.25 IN)						
	11	1	3V-3308	3	WASHER-HARD (10.2X20.5X2.5MM THK)						
	12	1	1W-2828	1	WASHER-THRUST						
	13	1	134-5958	1	SEAL-O-RING						
	14	1	6V-5063	2	SEAL-O-RING						
	15	1	9S-8008	2	PLUG						
	16	1	4W-0234	1	WASHER (20.5X48.0X15MM THK)						
C	17	1	3B-2968	1	BOLT (3/4-10X3.5 IN)						
	18	1	118-8706	1	SEAL-O-RING						

C-CHANGE FROM PREVIOUS TYPE



14-15  
GRAPHIC #1

<END>

g01033752

# COOLING SYSTEM

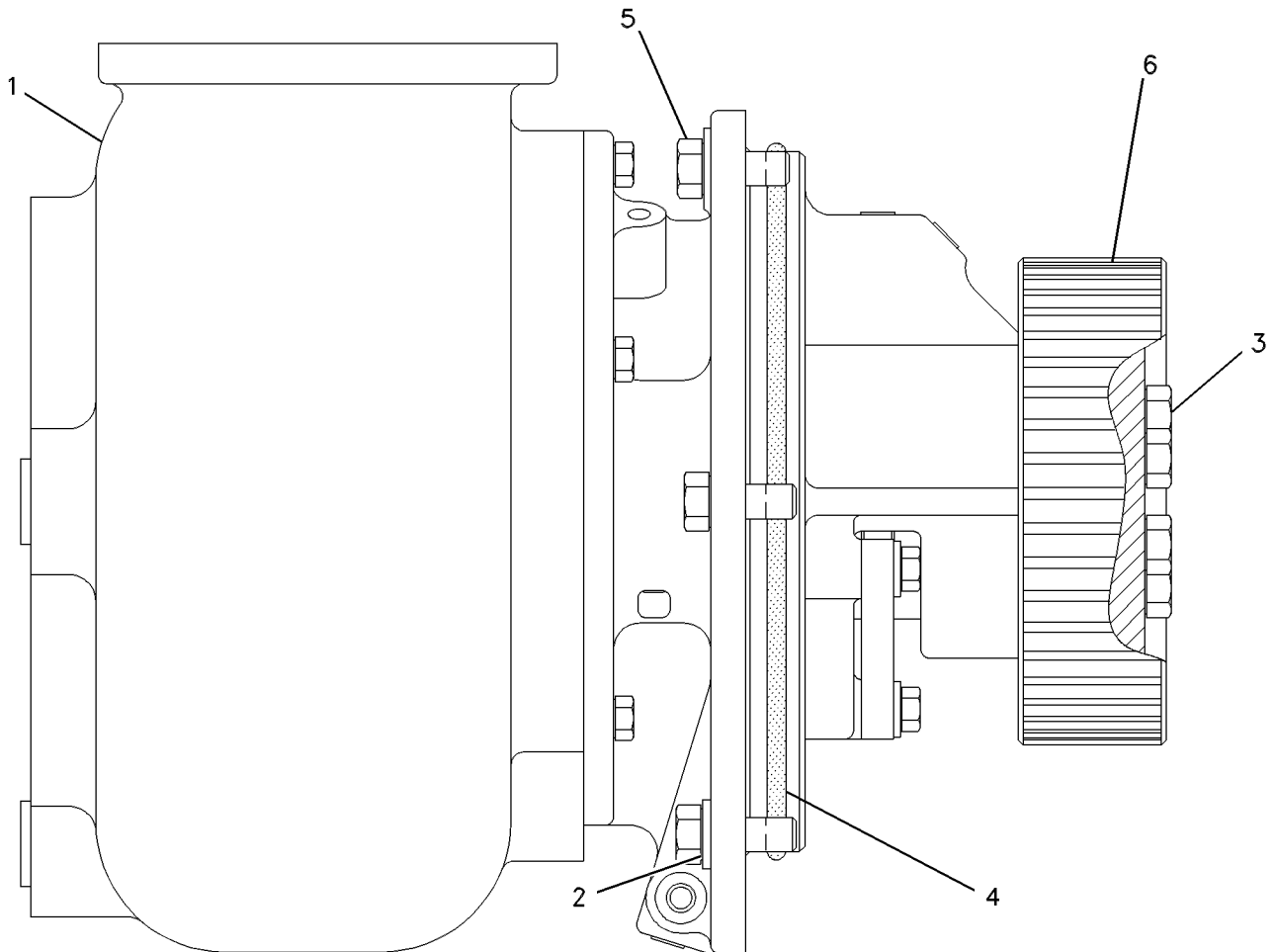
## 7E-8181 PUMP GP-WATER (CHG -00 THRU -03)

SMCS-1361

i01571860

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
YR	1	1	7E-8179	1	PUMP GP-WATER						94
	2	1	5P-8245	6	WASHER-HARD (13.5X25.5X3MM THK)						
	3	1	0S-1587	6	BOLT (1/2-13X1.75 IN)						
	4	1	6V-7701	1	SEAL-O-RING						
	5	1	0S-1585	6	BOLT (1/2-13X1.50 IN)						
	6	1	7E-4365	1	GEAR (38 TEETH)						

R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00461852

# COOLING SYSTEM

## 124-8584 REGULATOR GP-TEMPERATURE (CHG -01 THRU -03)

SMCS - 1355

i02030153

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>1S-5772</b>	13	GASKET						
	2	1	<b>2W-5036</b>	3	TUBE						
	3	1	<b>3S-9643</b>	8	SEAL-LIP TYPE (TEMPERATURE REGULATOR)						
	4	1	<b>6V-5139</b>	6	SEAL-O-RING						
	5	1	<b>7C-7784</b>	1	PLATE						
	6	1	<b>7C-8635</b>	2	PLATE-ORIFICE						
	7	1	<b>7N-7009</b>	3	FLANGE						
	8	1	<b>7W-3688</b>	2	GASKET						
	9	1	<b>7W-4111</b>	2	ADAPTER-EXPANSION TANK						
	10	1	<b>7W-4116</b>	2	HOUSING AS-REGULATOR						
					(EACH INCLUDES)						
		1	<b>2M-6471</b>	2	PLUG-CUP						
	11	1	<b>7W-8463</b>	2	ELBOW-ADAPTER						
	12	1	<b>7W-8464</b>	3	ADAPTER-HOUSING						
	13	1	<b>151-3001</b>	1	ELBOW-ADAPTER						
	14	1	<b>174-3504</b>	8	REGULATOR-WATER TEMPERATURE						
	15	1	<b>0S-1588</b>	32	BOLT (3/8-16X1.25-IN)						
	16	1	<b>0S-1591</b>	40	BOLT (3/8-16X1.5-IN)						
	17	1	<b>0S-1594</b>	16	BOLT (3/8-16X1-IN)						
	18	1	<b>3V-3308</b>	24	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	19	1	<b>8T-6762</b>	1	PLUG-PIPE						
	20	1	<b>9S-8752</b>	16	NUT-FULL (3/8-16-THD)						



# COOLING SYSTEM

## 215-3891 REGULATOR GP-TEMPERATURE (CHG -00) FOR USE WITH AN OUTLET CONTROLLED 54 DEG C AFTERCOOLER SYSTEM

SMCS-1355

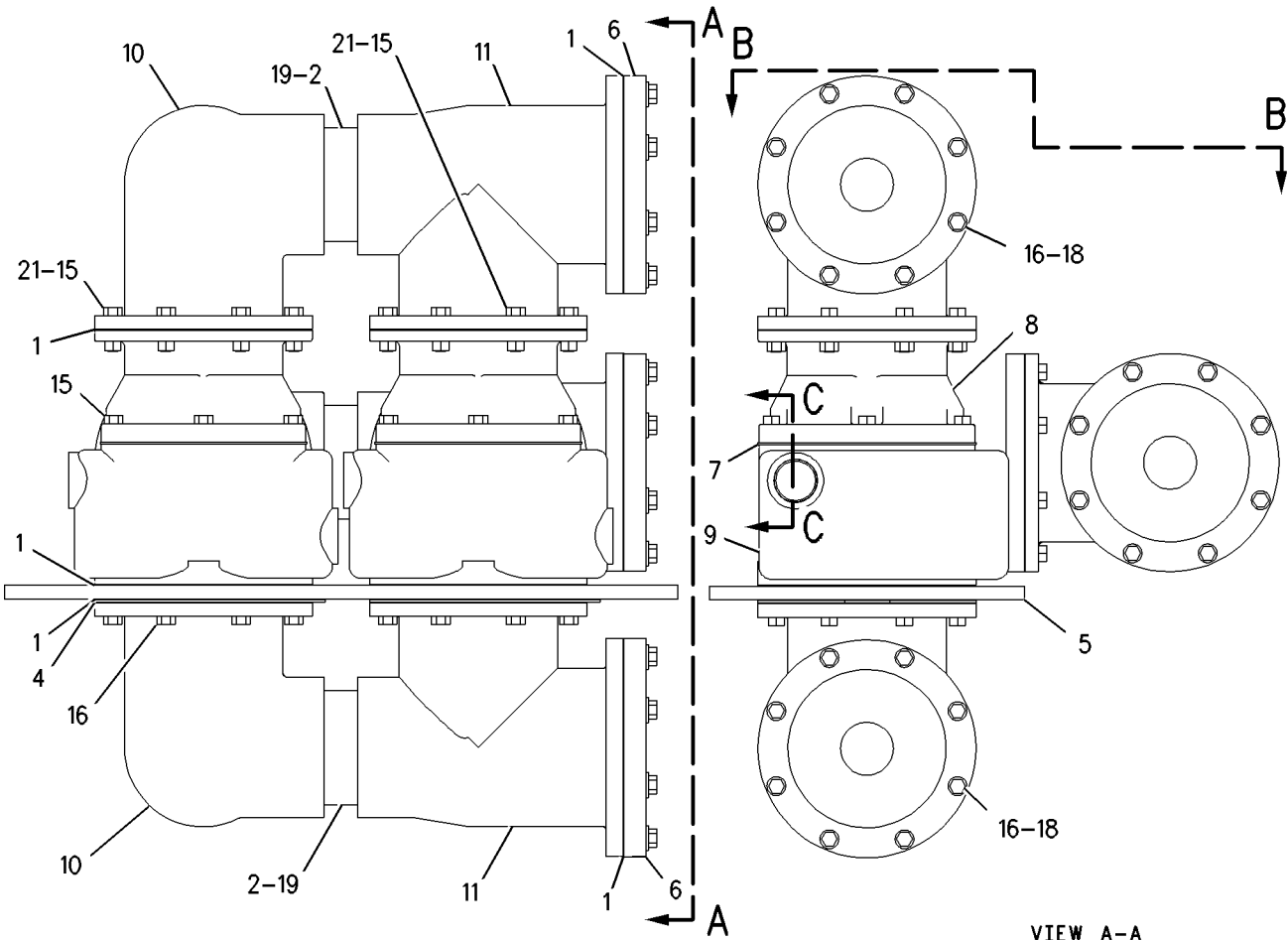
i02030154

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1S-5772	13	GASKET						
	2	1	2W-5036	3	TUBE						
	3	1	3S-9643	8	SEAL-LIP TYPE (TEMPERATURE REGULATOR)						
	4	1	7C-7481	2	PLATE-ORIFICE						
	5	1	7C-7784	1	PLATE						
	6	1	7N-7009	3	FLANGE						
	7	1	7W-3688	2	GASKET						
	8	1	7W-4111	2	ADAPTER-EXPANSION TANK						
	9	1	7W-4116	2	HOUSING AS-REGULATOR (EACH INCLUDES)						
		1	2M-6471	2	PLUG-CUP						
	10	1	7W-8463	2	ELBOW-ADAPTER						
	11	1	7W-8464	3	ADAPTER-HOUSING						
	13	1	151-3001	1	ELBOW-ADAPTER						
	14	1	204-6708	8	REGULATOR-WATER TEMPERATURE						
	15	1	0S-1588	32	BOLT (3/8-16X1.25-IN)						
	16	1	0S-1591	40	BOLT (3/8-16X1.5-IN)						
	17	1	0S-1594	16	BOLT (3/8-16X1-IN)						
	18	1	3V-3308	24	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	19	1	6V-5139	6	SEAL-O-RING						
	20	1	8T-6762	1	PLUG-PIPE						
	21	1	9S-8752	16	NUT-FULL (3/8-16-THD)						

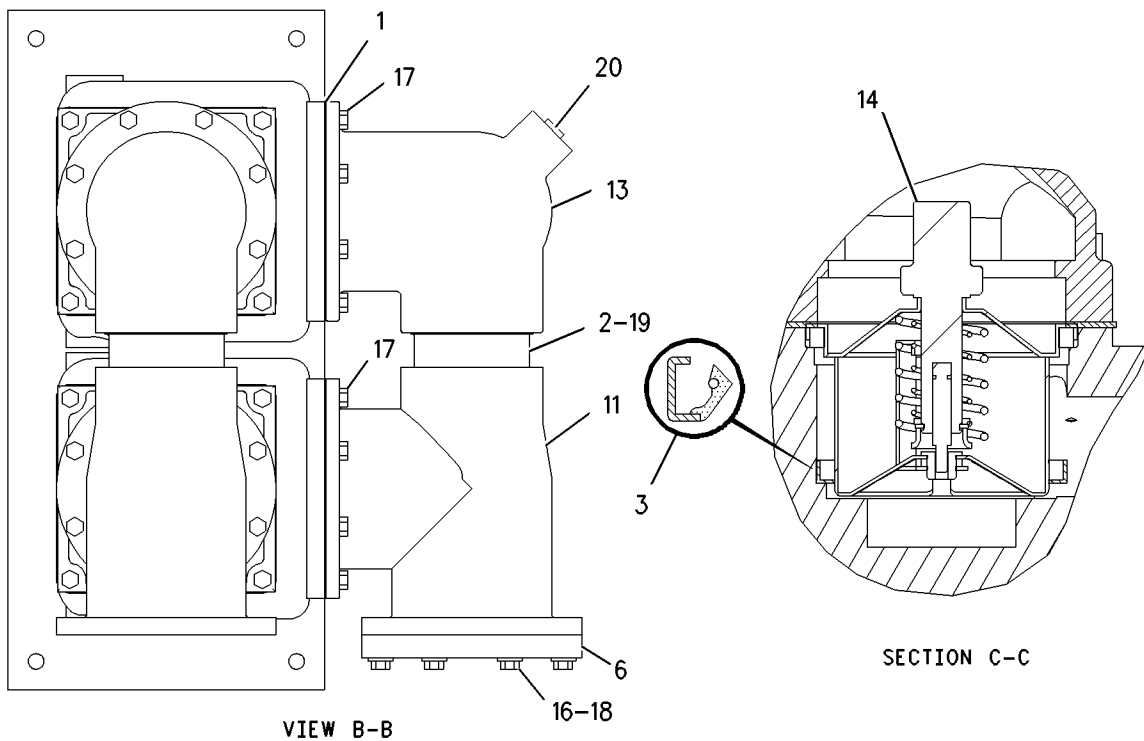
# COOLING SYSTEM

215-3891 REGULATOR GP-TEMPERATURE (contd.)

i02030154



VIEW A-A



VIEW B-B

SECTION C-C

GRAPHIC #1

<END>

g00919979

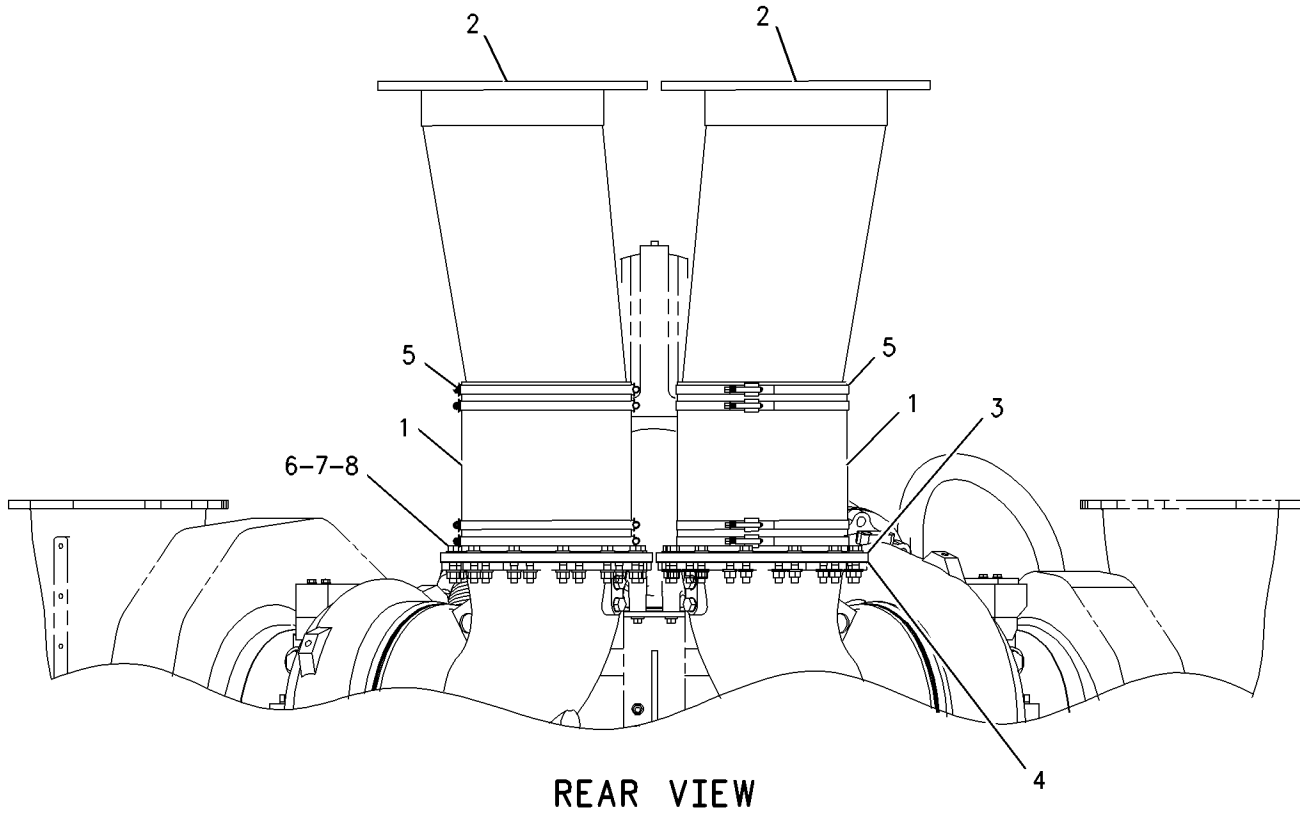
# AIR INLET AND EXHAUST SYSTEM

## 202-3227 ADAPTER GP-AIR CLEANER (CHG -00, -01)

SMCS-1051

i01872468

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	202-2624	2	HOSE						
	2	1	202-2633	2	ADAPTER (TURBO INLET)						
	3	1	202-3110	2	ADAPTER (TURBO INLET)						
	4	1	202-3156	2	GASKET						
	5	1	232-1779	8	CLAMP						
	6	1	1F-7958	24	NUT-FULL (1/2-13 THD)						
	7	1	5P-8245	48	WASHER-HARD (13.5X25.5X3MM THK)						
	8	1	9X-8873	24	BOLT (1/2-13X2.25 IN)						



REAR VIEW

GRAPHIC #1

<END>

g00953775

# AIR INLET AND EXHAUST SYSTEM

## 159-1527 AFTERCOOLER GP-TREATED WATER (CHG -00 THRU -05) SEA AIR

SMCS - 1063

i01961357

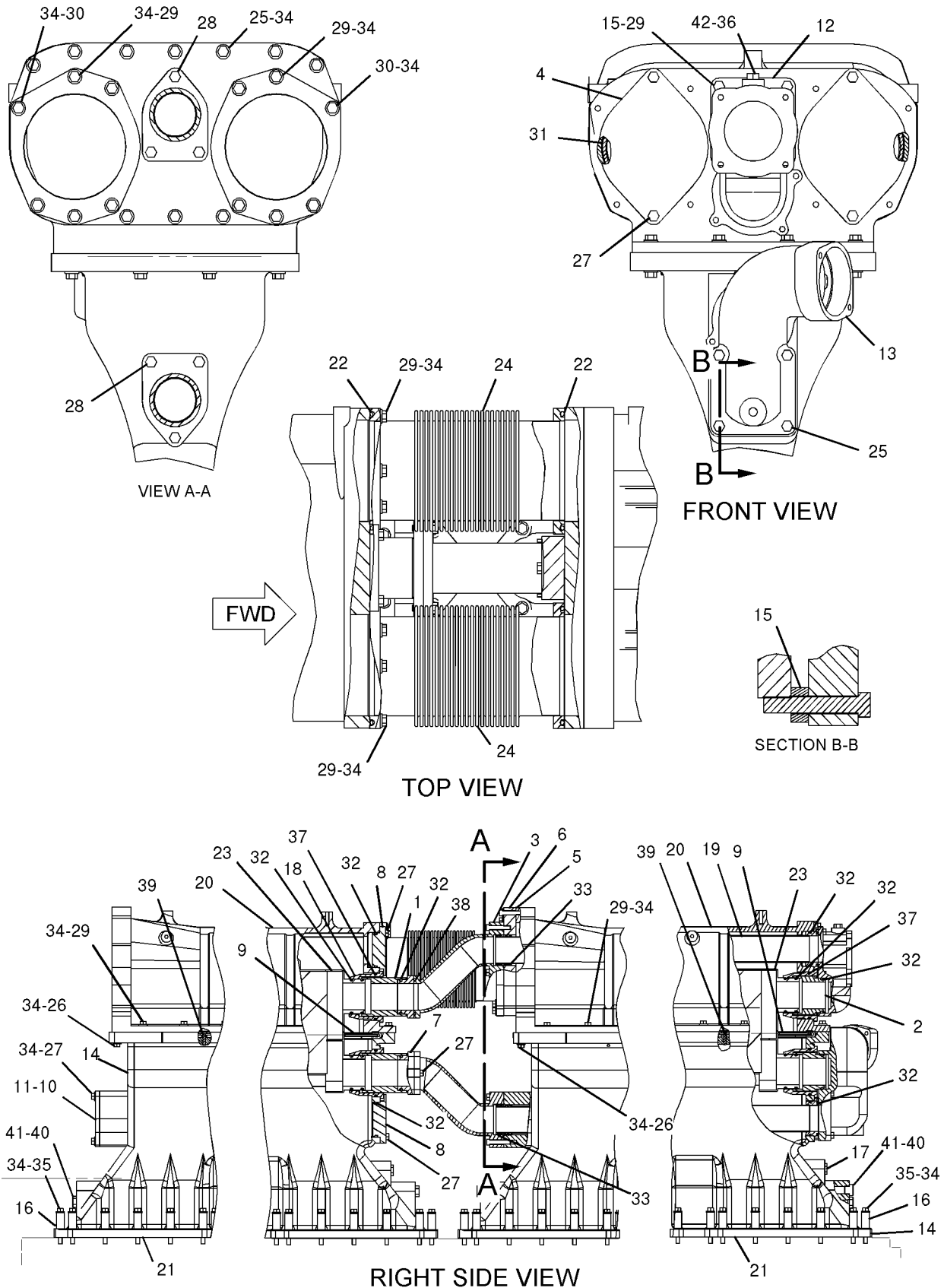
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2W-3789	2	PIPE						
	2	1	2W-3794	2	ADAPTER						
	3	1	2W-4027	2	PIPE						
	4	1	2W-4031	2	COVER						
	5	1	2W-4766	1	GASKET						
	6	1	2W-4769	1	SPACER						
	7	1	4W-7555	2	ADAPTER						
	8	1	4W-7557	2	COVER						
	9	1	4W-7563	2	SEAL						
	10	1	4W-9510	1	COVER						
	11	1	7C-0109	1	GASKET						
	12	1	7E-6211	1	ELBOW						
	13	1	7W-5528	1	ELBOW						
	14	1	7W-5905	2	HOUSING						
	15	1	7W-6333	8	SPACER (10.5X20X10.7-MM THK)						
	16	1	8B-2026	83	SPACER (7/16X3/4X1-1/2-IN THK)						
	17	1	8T-6766	2	PLUG-PIPE						
	18	1	123-6256	4	ADAPTER						
	19	1	123-6331	2	TUBE AS						
	20	1	127-9820	2	COVER						
	21	1	130-1288	6	SEAL-INTEGRAL						
	22	1	135-6950	4	SEAL-O-RING						
	23	1	152-1503	2	CORE AS						
	24	1	222-4715	2	BELLOWS AS						
	25	1	0L-2070	14	BOLT (3/8-16X2.25-IN)						
	26	1	0S-1571	8	BOLT (3/8-16X1.75-IN)						
	27	1	0S-1588	15	BOLT (3/8-16X1.25-IN)						
	28	1	0S-1590	6	BOLT (3/8-16X2-IN)						
	29	1	0S-1591	70	BOLT (3/8-16X1.5-IN)						
	30	1	0T-0573	6	BOLT (3/8-16X2.75-IN)						
	31	1	3E-6751	2	SEAL-O-RING						
	32	1	3P-0655	18	SEAL-O-RING						
	33	1	3P-0657	4	SEAL-O-RING						
	34	1	3V-3308	176	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	35	1	5K-5552	83	BOLT-LOCKING (3/8-16X3-IN)						
	36	1	6V-3250	1	SEAL-O-RING						
	37	1	6V-3908	4	SEAL-O-RING						
	38	1	6V-5051	2	SEAL-O-RING						
	39	1	7N-5352	2	DOWEL						
	40	1	8L-2786	7	SEAL-O-RING						
	41	1	9S-4185	7	PLUG						
	42	1	9S-4191	1	PLUG						



# AIR INLET AND EXHAUST SYSTEM

159-1527 AFTERCOOLER GP-TREATED WATER (contd.)

i01961357



GRAPHIC #1

RIGHT SIDE VIEW

<END>

g01018962

# AIR INLET AND EXHAUST SYSTEM

## 132-9325 AIR CLEANER GP (CHG -00)

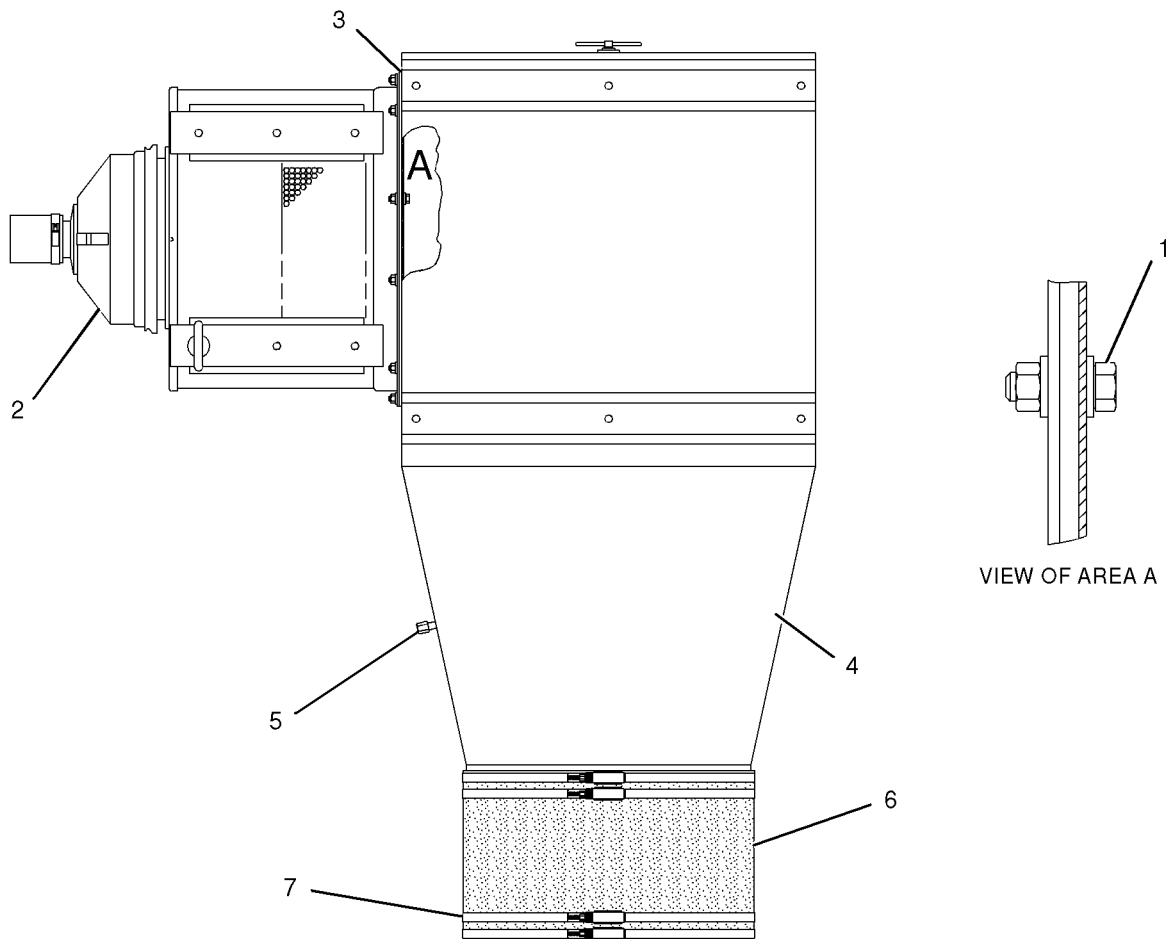
TWO-ELEMENT HORIZONTAL  
FOR USE WITH PRECLEANERS

SMCS-1051, 1054

i02062452

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	0S-1594	42	BOLT (3/8-16X25.4-IN)						
		1	9S-8752	42	NUT-FULL (3/8-16-THD)						
		1	3V-3308	84	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	2	1	132-9324	3	PRECLEANER GP						
	3	1	5N-8617	3	GASKET						
Y	4	1	132-9326	1	AIR CLEANER GP						104
	5	1	3B-7725	1	CAP-PIPE						
	6	1	4W-3637	1	HOSE						
	7	1	116-8535	8	CLAMP						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g01014291

# AIR INLET AND EXHAUST SYSTEM

## 132-9326 AIR CLEANER GP (CHG -00)

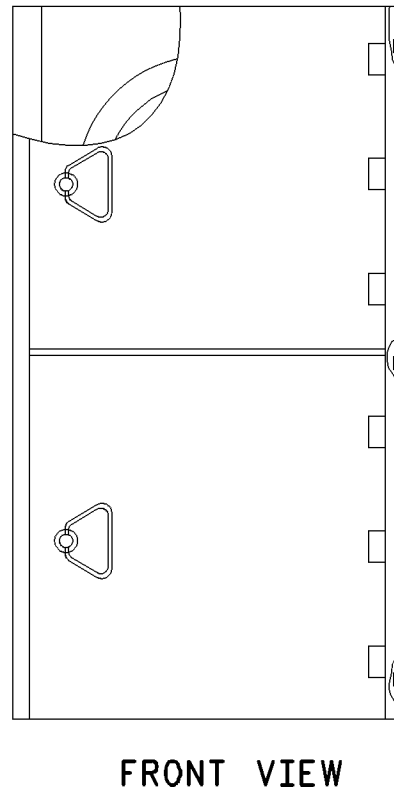
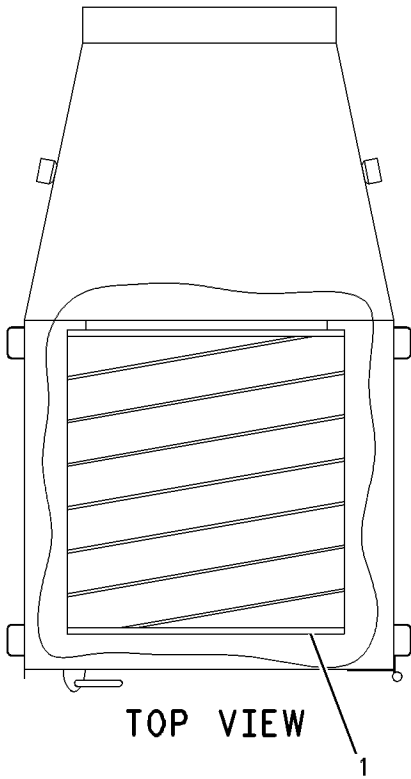
TWO-ELEMENT

PART OF 132-9325 AIR CLEANER GP  
FOR USE WITH PRECLEANERS

SMCS-1051, 1054

i01963440

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	105-9741	2	ELEMENT AS-PRIMARY (AIR CLEANER)						



GRAPHIC #1

<END>

g00110347

# AIR INLET AND EXHAUST SYSTEM

## 206-6539 BYPASS GP-EXHAUST-WASTEGATE (CHG -01 THRU -04)

SMCS-1057

i02097563

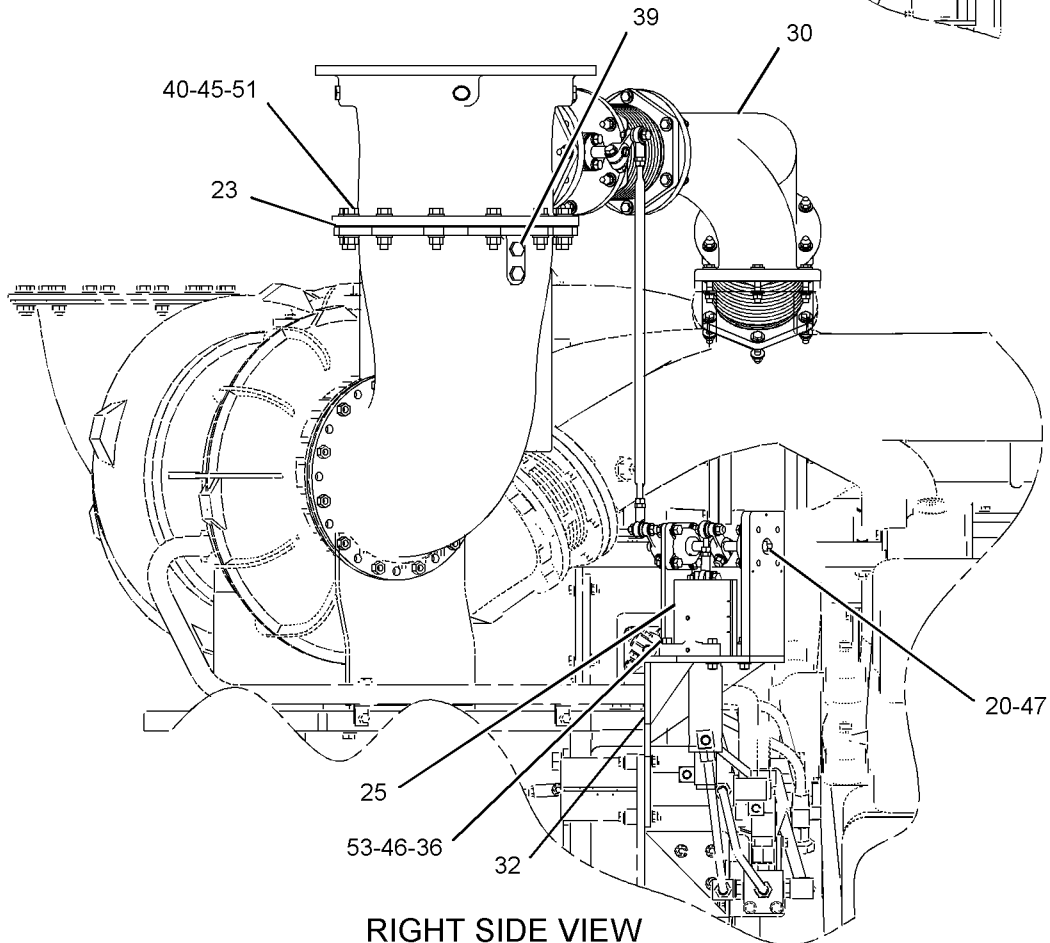
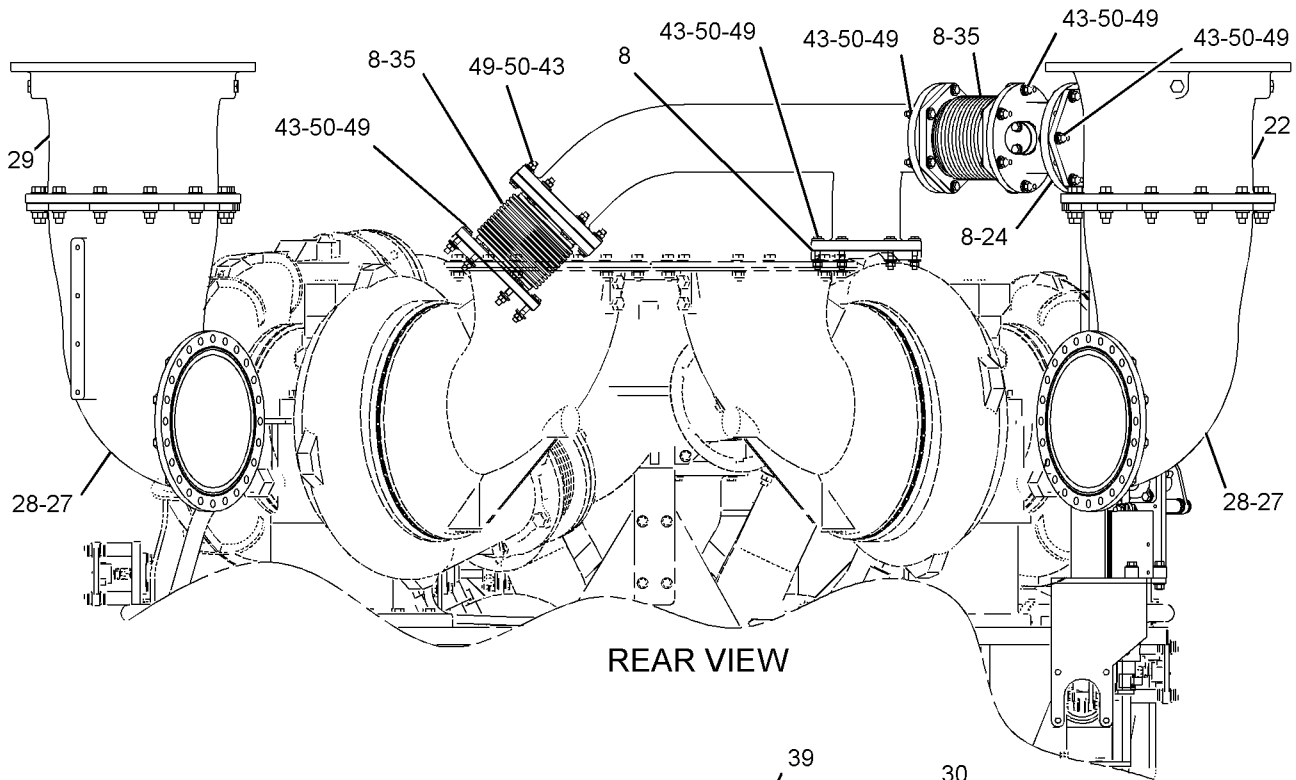
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	1S-3584	2	NUT-FULL (3/8-24 LH THD)						
	2	2	3S-2713	1	NUT-FULL (3/8-24-THD)						
	3	2	4F-2753	1	LOCK-NUT						
	4	2	4P-0394	3	LEVER						
	5	2	5L-3291	2	BEARING AS-BALL						
	6	2	5P-9960	2	BOLT (1/4-20X0.75-IN)						
	7	2	6V-1943	2	BOLT-HIGH TEMPERATURE (3/8-16X.125-IN)						
	8	1	7E-0701	6	GASKET						
	9	2	8C-6971	1	ROD END						
	10	2	8C-7321	1	ROD END						
	11	2	8H-3390	1	NUT-FULL (1 1/2-12-THD)						
	12	2	8M-2295	2	BOLT (3/8-16X1.625)						
	13	2	102-1694	1	PLATE						
	14	2	102-3457	1	COVER						
	15	2	102-6309	1	WASHER-THRUST						
	16	2	102-6311	1	STOP						
	17	2	110-8314	4	WASHER (10.3X18.3X2.66-MM THK)						
	18	2	119-5927	1	SHAFT						
	19	2	119-5931	1	SPACER						
	20	1	127-5154	1	SHAFT						
	21	2	133-8501	1	COVER AS						
	22	1	144-0605	1	ADAPTER-EXHAUST						
	23	1	144-0621	2	GASKET						
	24	1	146-8381	1	HOUSING AS (WASTEGATE)						
		1	119-5929	2	BUSHING						
	25	1	176-3583	2	GUARD						
	26	2	176-3587	1	CLEVIS						
	27	1	184-1613	2	ELBOW-EXHAUST						
	28	1	184-5290	2	GASKET						
	29	1	184-6375	1	ADAPTER-EXHAUST						
	30	1	184-6380	1	MANIFOLD-EXHAUST						
	31	2	193-7879	1	BOOT						
	32	1	200-2788	1	BRACKET AS						
	33	2	200-2789	1	ROD						
CY	34	2	211-8175	1	ACTUATOR GP-ELECTRONIC						130
	35	1	222-4718	2	BELLOWS AS						
	36	1,2	0S-1571	10	BOLT (3/8-16X1.75-IN)						
	37	2	0S-1588	4	BOLT (3/8-16X1.25-IN)						
	38	2	0S-1590	1	BOLT (3/8-16X2-IN)						
	39	1	119-0746	9	PLUG-PIPE						
	40	1	1F-7958	24	NUT-FULL (1/2-13-THD)						
C	41	2	225-3769	1	ROD END						
C	42	2	225-3770	1	ROD END						
	43	1	2N-2766	36	LOCKNUT (3/8-16-THD)						
	44	2	3B-1915	4	BOLT (3/8-16X1.75-IN)						
	45	1	3H-7654	48	WASHER-HARD (13.5X22.5X3-MM THK)						
	46	1,2	3V-3308	30	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	47	1,2	5H-2532	3	KEY-WOODRUFF						
	48	2	6V-6753	1	BOLT-HIGH TEMPERATURE (3/8X16X1.375-IN)						
	49	1	7L-6443	36	BOLT-HIGH TEMPERATURE (3/8-16X2.25-IN)						
	50	1	8C-8491	72	WASHER-HARD (10.2X22X3-MM THK)						
	51	1	8C-8589	24	BOLT-HIGH TEMPERATURE (1/2-13X2.25-IN)						
	52	2	8M-9024	3	WASHER-HARD (10.2X22.5X5-MM THK)						
	53	1,2	9S-8752	15	NUT-FULL (3/8-16-THD)						

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION

# AIR INLET AND EXHAUST SYSTEM

206-6539 BYPASS GP-EXHAUST (contd.)

i02097563



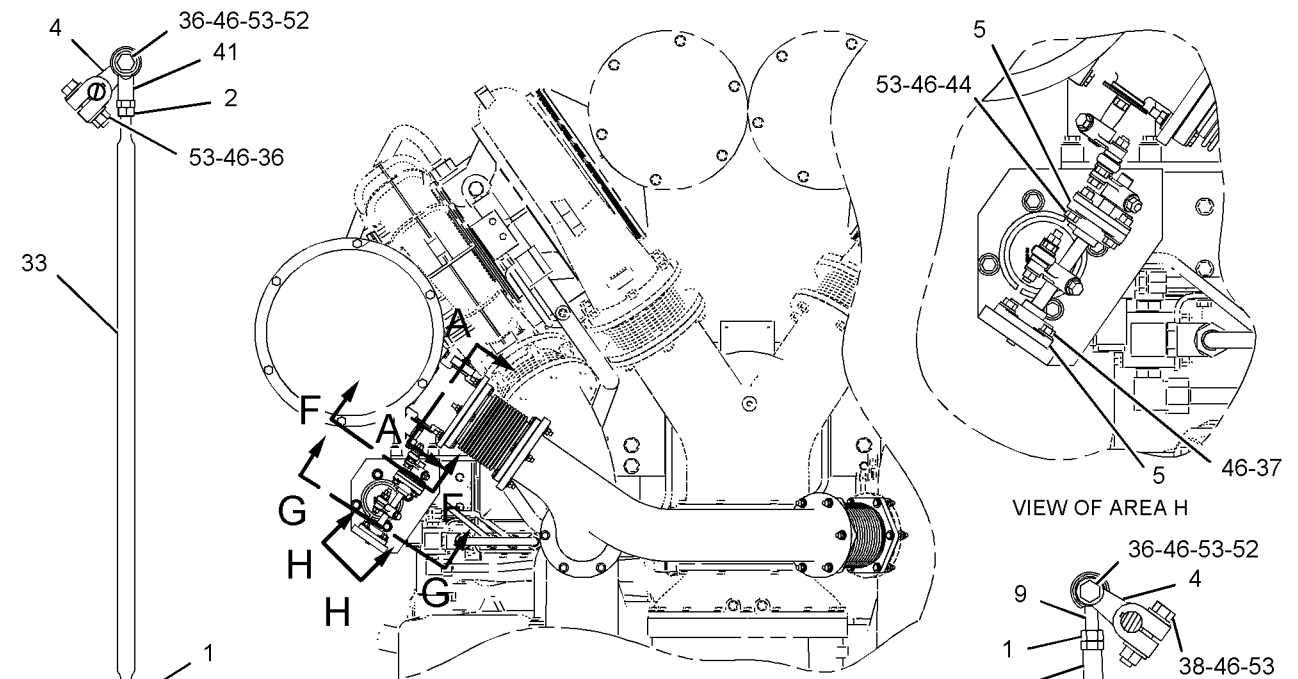
GRAPHIC #1

g01069300

# AIR INLET AND EXHAUST SYSTEM

206-6539 BYPASS GP-EXHAUST (contd.)

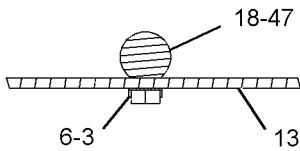
i02097563



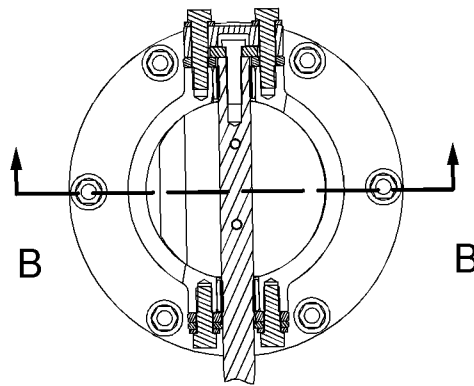
TOP VIEW

VIEW OF AREA H

SECTION F-F  
WASTE GATE CLOSED POSITION

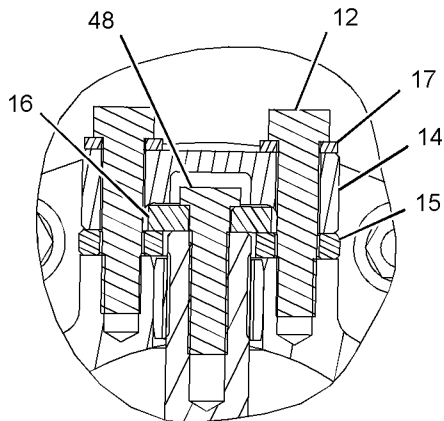


SECTION B-B

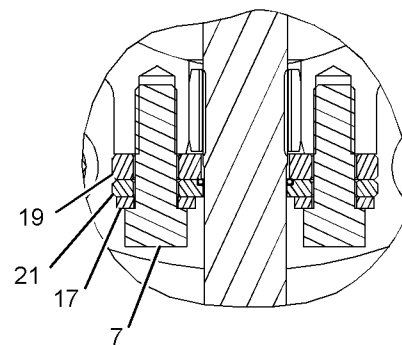


SECTION A-A

SECTION G-G  
WASTE GATE CLOSED POSITION



VIEW OF AREA D



VIEW OF AREA C

GRAPHIC #2

<END>

g01069299

# AIR INLET AND EXHAUST SYSTEM

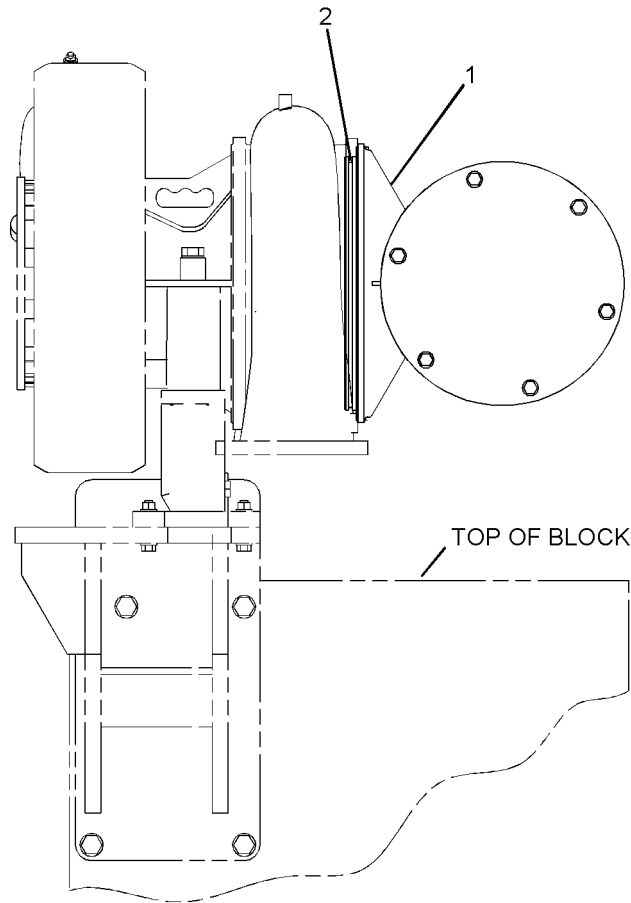
## 145-5660 ELBOW GP-AIR INLET (CHG -00 THRU -02)

SMCS-1087

i02066904

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
Y	1	1	178-4977	1	ELBOW GP-AIR INLET	109
	2	1	118-7536	1	SEAL-O-RING	

Y-SEPARATE ILLUSTRATION



REAR VIEW  
<END>

GRAPHIC #1

g01059464

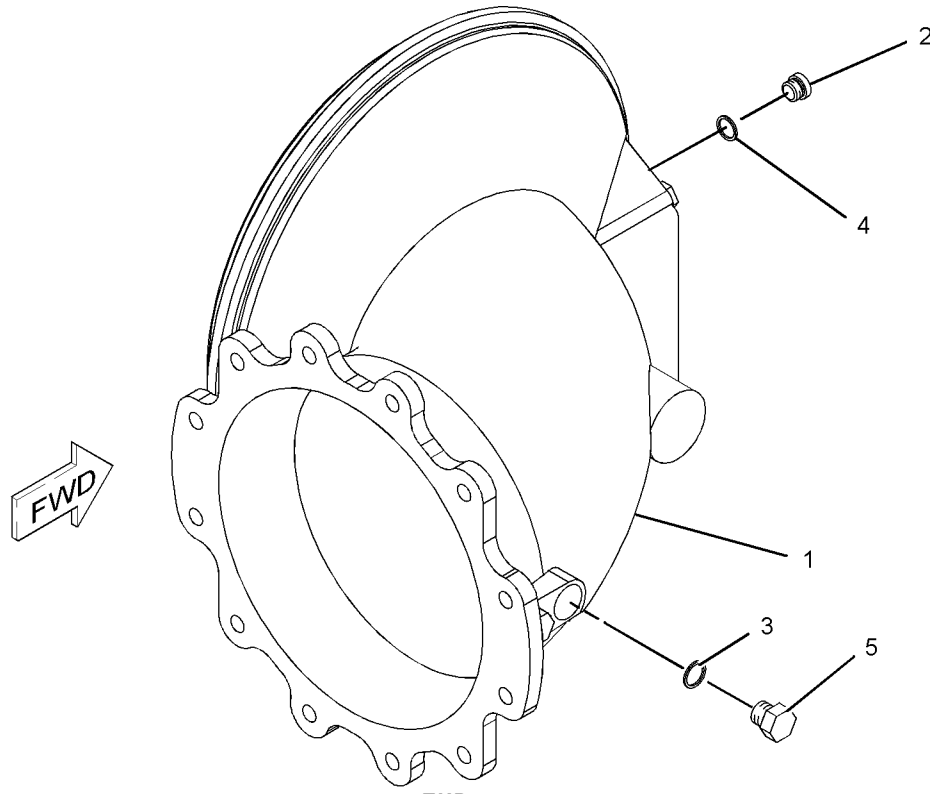
# AIR INLET AND EXHAUST SYSTEM

## 178-4977 ELBOW GP-AIR INLET (CHG -00 THRU -02) PART OF 145-5660 ELBOW GP-AIR INLET

SMCS-1087

i02120055

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	144-0614	1	ELBOW						
	2	1	137-4857	2	PLUG						
	3	1	3E-2331	2	PLUG						
	4	1	098-5800	2	WASHER-COPPER (16.2X20X1.5-MM THK)						
	5	1	151-2115	2	WASHER-COPPER (18X22X1.5-MM THK)						



GRAPHIC #1

g01080851



# AIR INLET AND EXHAUST SYSTEM

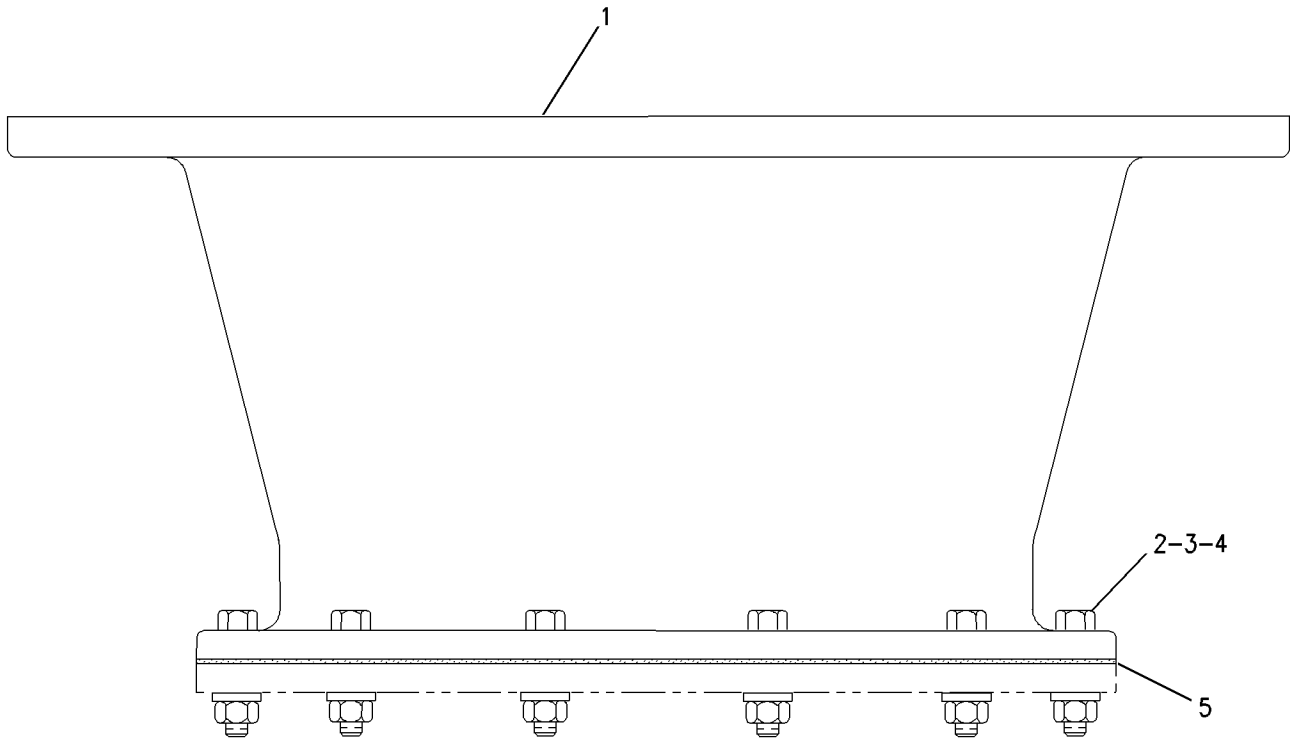
## 2W-2681 FITTING GP-EXHAUST (CHG -02 THRU -04) EXPANDER

SMCS-1061

i01552713

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>2W-3031</b>	1	FITTING-EXHAUST						
	2	1	<b>9X-8873</b>	12	BOLT (1/2-13X2.25 IN)						
	3	1	<b>5P-8245</b>	24	WASHER-HARD (13.5X25.5X3MM THK)						
	4	1	<b>1B-5357</b>	12	NUT-FULL (1/2-13 THD)						
C	5	1	<b>111-5822</b>	1	GASKET-EXHAUST						

C-CHANGE FROM PREVIOUS TYPE



MOUNTED TO FLEXIBLE  
EXHAUST FITTING

GRAPHIC #1

<END>

g00697435

# AIR INLET AND EXHAUST SYSTEM

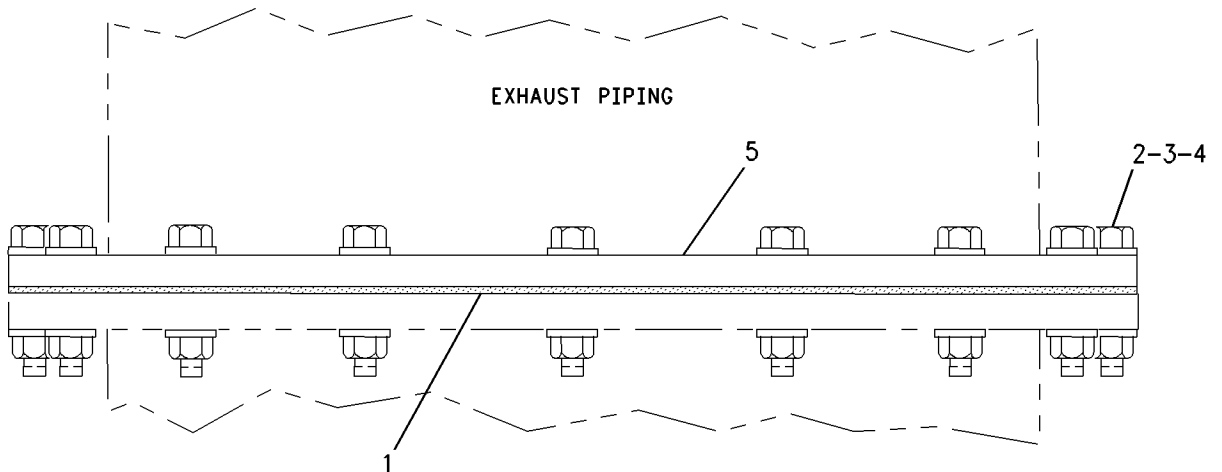
## 2W-2682 FLANGE GP-EXHAUST (CHG -02 THRU -04) 457.2-MM

SMCS-1061

i01553799

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	111-5819	1	GASKET-EXHAUST						
	2	1	9X-8873	16	BOLT (1/2-13X2.25 IN)						
	3	1	1B-5357	16	NUT-FULL (1/2-13 THD)						
	4	1	5P-8245	32	WASHER-HARD (13.5X25.5X3MM THK)						
	5	1	2W-7886	1	FLANGE-EXHAUST						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00697210

# AIR INLET AND EXHAUST SYSTEM

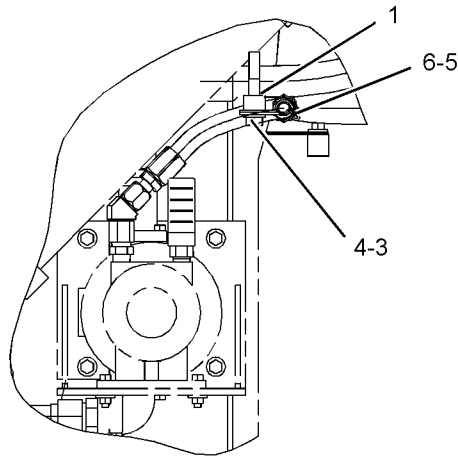
## 2W-0642 LINES GP-AIR (CHG -02, -03, -03D1, -04, -04D1, -04D2) PRELUBE-SIDE LINES

SMCS-1071

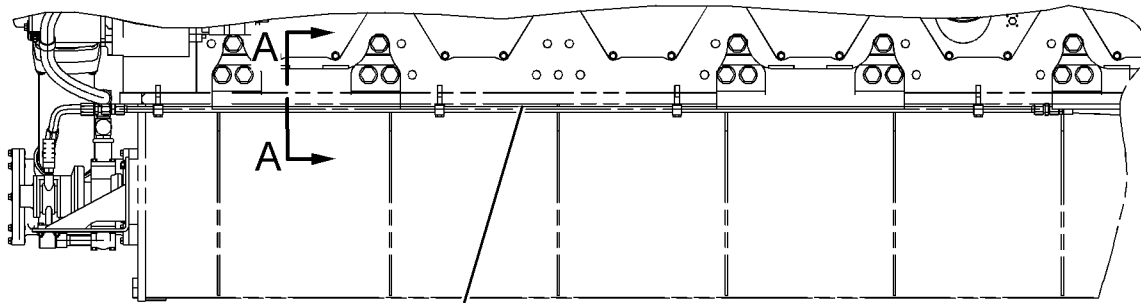
i01942567

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1P-2841	4	SPACER (.531X1.0X.69MM THK)						
	2	1	2W-1371	1	TUBE AS						
	3	1	5P-8245	4	WASHER-HARD (13.5X25.5X3MM THK)						
	4	1	9X-8874	4	BOLT (1/2-13X3 IN)						
B	5	1	6V-6759	4	CLIP						
B	6	1	6V-6758	4	CLIP						

B-USE AS REQUIRED



VIEW A-A



LEFT SIDE VIEW

2

<END>

GRAPHIC #1

g01011744

# AIR INLET AND EXHAUST SYSTEM

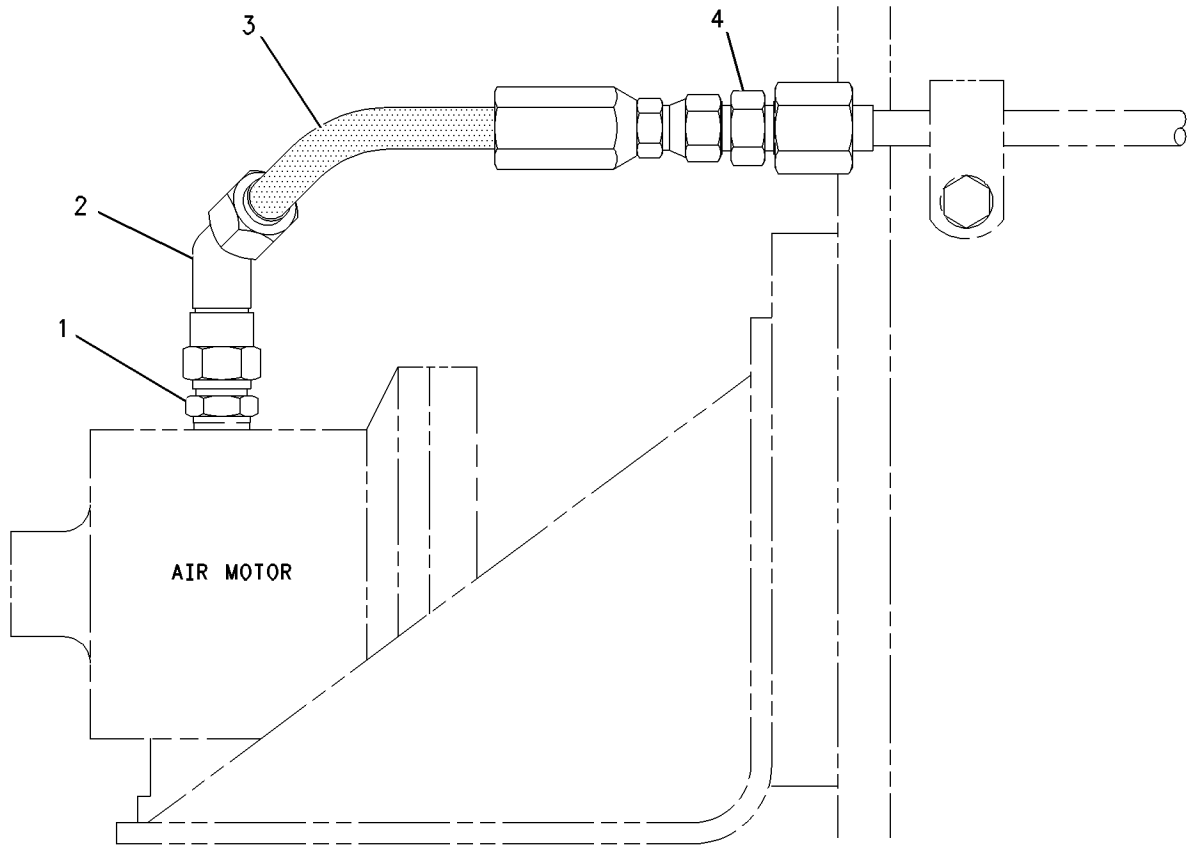
**4W-3471 LINES GP-AIR (CHG -02 THRU -04)**  
PRELUBE-FRONT. LH

SMCS-1071

i01661957

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>9M-6522</b>	1	CONNECTOR-FLARED						
	2	1	<b>030-7964</b>	1	ELBOW						
I	3	1	<b>1Y-3541</b>	1	HOSE AS						
	4	1	<b>061-8248</b>	1	UNION-FLARED						

I-SEE HOSE FABRICATION GUIDE



RIGHT SIDE VIEW

GRAPHIC #1

<END>

g00857744

# AIR INLET AND EXHAUST SYSTEM

## 206-6540 LINES GP-AIR (CHG -01) AIR INLET CHOKE

SMCS-1071

i01885579

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	1S-3584	2	NUT-FULL (3/8-24 LH THD)						
	2	1	2W-4766	1	GASKET						
	3	2	3S-2713	2	NUT-FULL (3/8-24-THD)						
	4	2	4P-0390	1	ROD						
	5	2	4P-0394	3	LEVER						
	6	2	5H-2532	3	KEY-WOODRUFF						
	7	2	5L-3291	2	BEARING AS-BALL						
	8	1	6I-0733	1	HOUSING AS						
		1	6V-5041	2	SEAL-LIP TYPE						
		1	161-1201	2	BEARING-SLEEVE						
	9	2	6I-1641	1	PLATE						
	10	2	6I-1642	1	PLATE						
	11	2	6I-1643	1	COVER AS						
	12	2	6I-1644	1	WASHER-THRUST						
	13	2	6I-1645	1	SHAFT						
	14	2	7C-8454	1	PLATE-BUTTERFLY						
	15	1	7W-6340	2	GASKET						
	16	2	8C-7315	2	ROD END						
	17	2	8C-7321	2	ROD END						
	18	2	8H-3390	1	NUT-FULL (1 1/2-12-THD)						
	19	2	032-1768	1	SETSCREW						
	20	2	118-3842	1	BRACKET AS						
	21	2	118-3843	1	SHAFT						
	22	2	145-0039	1	BRACKET AS						
	23	2	145-0040	1	BRACKET AS						
	24	2	145-0041	1	ROD						
	25	2	176-3583	2	GUARD						
	26	2	176-3587	1	CLEVIS						
	27	1	180-8408	1	ADAPTER						
	28	1	183-7232	2	BELLOWS AS						
	29	1	184-6379	1	HOUSING						
	30	2	193-7879	1	BOOT						
Y	31	2	211-8175	1	ACTUATOR GP-ELECTRONIC						130
	32	1	197-8120	4	GASKET						
	33	1	206-6569	1	PLATE						
	34	2	031-5085	4	BOLT-LOCKING (1/4-20X1-IN)						
	35	1	0S-1566	12	BOLT (5/8-11X1.5-IN)						
	36	1,2	0S-1571	22	BOLT (3/8-16X1.75-IN)						
	37	2	0S-1587	1	BOLT (1/2-13X1.75-IN)						
	38	2	0S-1588	12	BOLT (3/8-16X1.25-IN)						
	39	1	0S-1589	10	BOLT (5/8-11X1.75-IN)						
	40	2	0S-1590	5	BOLT (3/8-16X2-IN)						
	41	1	0S-1591	12	BOLT (3/8-16X1.5-IN)						
	42	2	0S-1594	6	BOLT (3/8-16X1-IN)						
	43	2	1A-9579	1	BOLT (5/16-18X1.5-IN)						
	44	1	1F-7958	1	NUT-FULL (1/2-13-THD)						
	45	1	1J-8668	4	STUD-TAPERLOCK (3/8-16X50-MM)						
	46	1,2	3V-3308	76	WASHER-HARD (10.2X20.5X2.5-MM THK)						
M	47	2	5P-8245	1	WASHER-HARD (13.5X25.5X3-MM THK)						
	48	1	5P-8247	24	WASHER-HARD (17X32X3.5-MM THK)						
	49	2	5S-0003	1	NUT (5/16-18-THD)						
	50	1	6V-5049	2	SEAL-O-RING						
	51	1	8B-7997	2	BOLT (1/2-13X2-IN)						
	52	2	8M-9024	3	WASHER-HARD (10.2X22.5X5-MM THK)						
	53	1	9S-4191	2	PLUG						
	54	1,2	9S-8752	21	NUT-FULL (3/8-16-THD)						

# AIR INLET AND EXHAUST SYSTEM

206-6540 LINES GP-AIR (contd.)

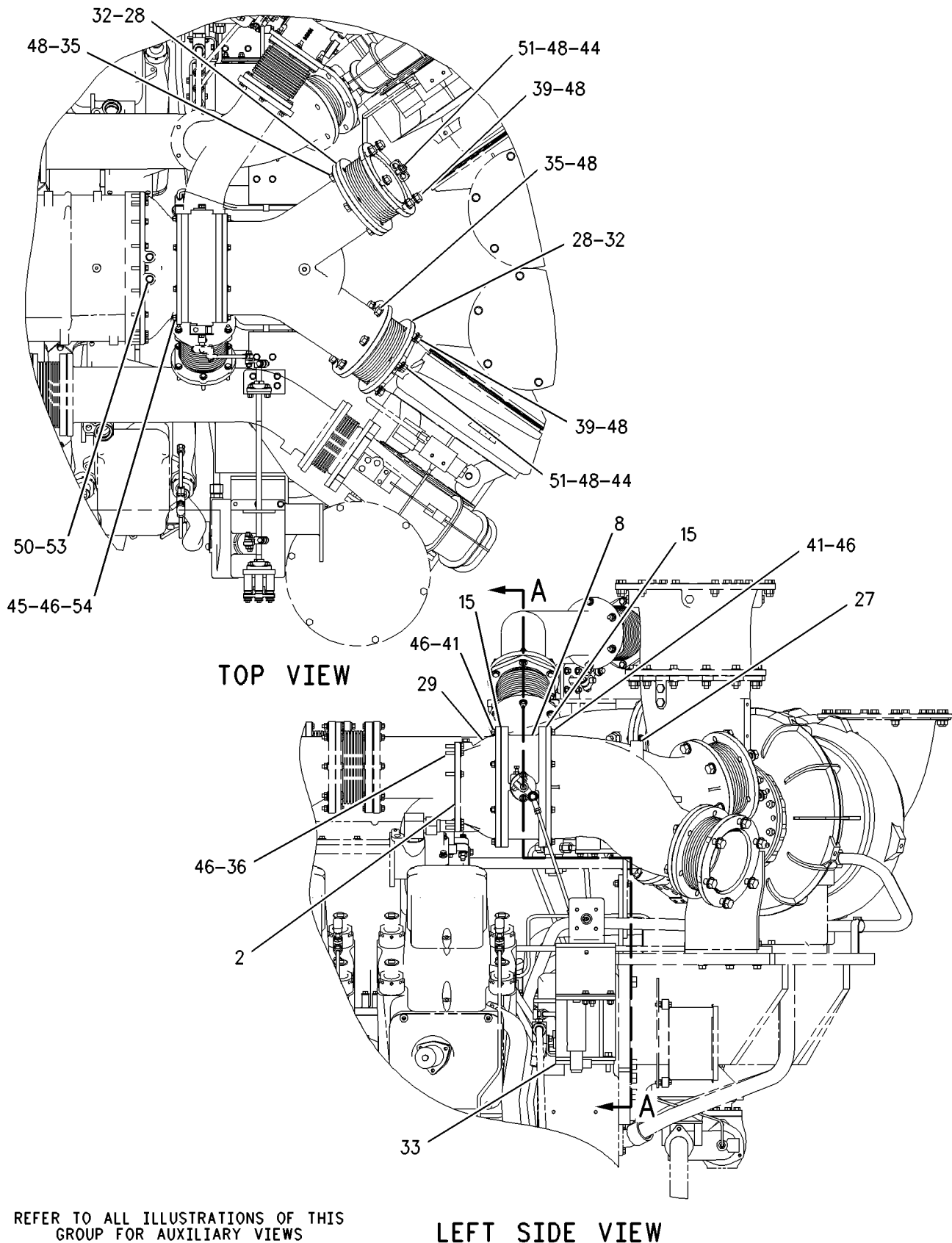
i01885579

M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# AIR INLET AND EXHAUST SYSTEM

206-6540 LINES GP-AIR (contd.)

i01885579



REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

LEFT SIDE VIEW

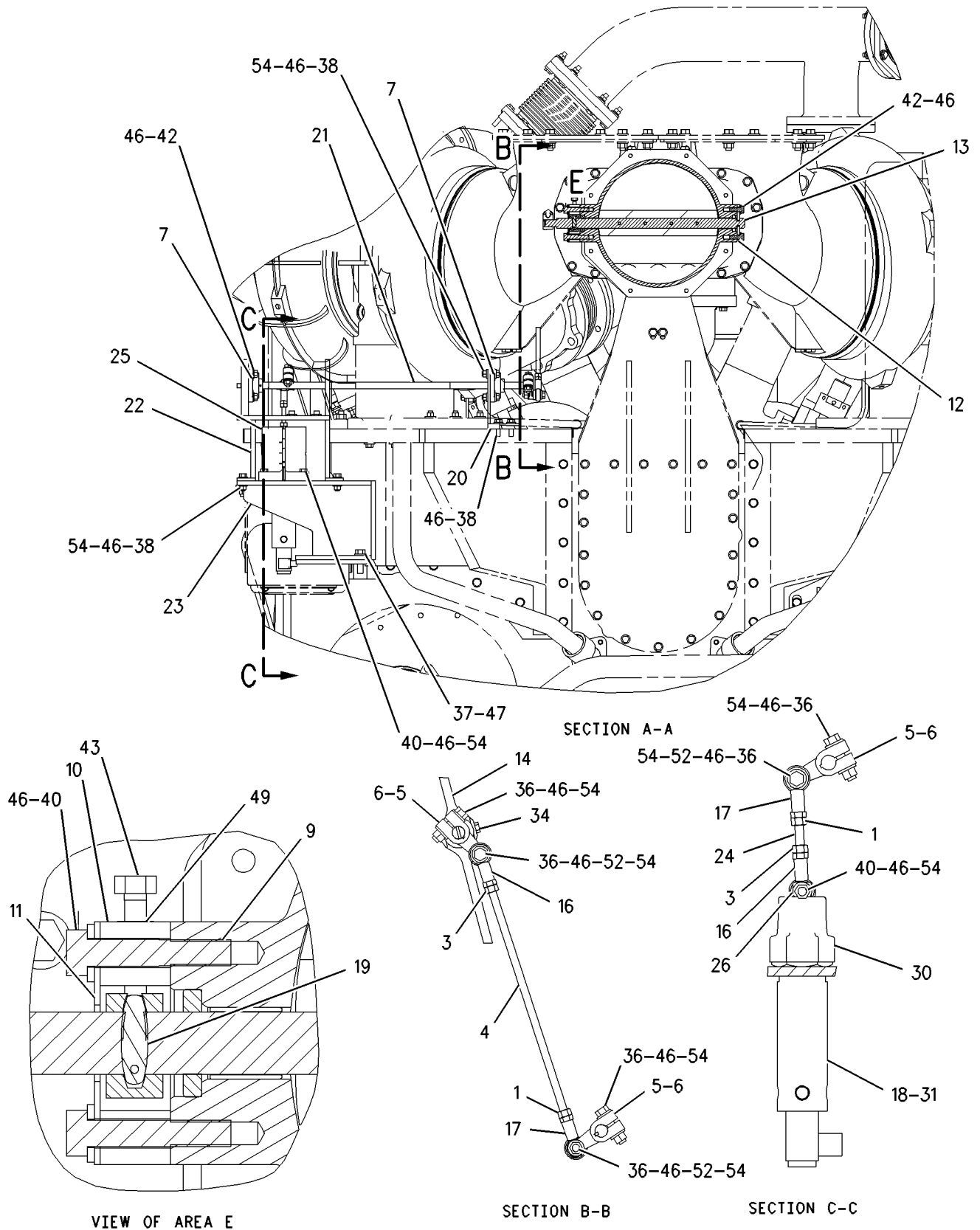
GRAPHIC #1

g00819928

# AIR INLET AND EXHAUST SYSTEM

206-6540 LINES GP-AIR (contd.)

i01885579



GRAPHIC #2

<END>

g00819929



# AIR INLET AND EXHAUST SYSTEM

**216-8696 LINES GP-AIR (CHG -00, -00D1 THRU -03)**  
**FOR USE WITH ENGINES WHICH HAVE AIR DRIVEN PRELUBE PUMPS**

SMCS-1071

i02071031

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3D-4022</b>	1	CROSS						
J	2	1	<b>4W-2100</b>	1	VALVE GP-PRESSURE REDUCING						
	3	1	<b>5H-0255</b>	1	BOSS (1/2-13X1.0-IN OAL)						
I	4	1	<b>5N-5646</b>	1	HOSE AS						
I	5	1	<b>6G-9870</b>	1	HOSE AS						
	6	1	<b>7C-2951</b>	1	BRACKET						
	7	1	<b>7M-9544</b>	1	VALVE (AIR STARTER)						
Y	8	1	<b>7W-0522</b>	1	LUBRICATOR GP-AIR MOTOR						158
I	9	1	<b>7W-1831</b>	1	HOSE AS						
Y	10	1	<b>164-0717</b>	1	VALVE GP-SOLENOID						181
	11	1	<b>165-7805</b>	1	VALVE (AIR SAFETY RELIEF)						
	12	1	<b>168-9913</b>	1	BRACKET AS						
	13	1	<b>001-6449</b>	3	CONNECTOR (FLARED)						
	14	1	<b>002-6453</b>	1	ELBOW						
	15	1	<b>061-8248</b>	1	UNION-FLARED						
	16	1	<b>0S-0509</b>	1	BOLT (3/8-16X0.75-IN)						
	17	1	<b>0S-1594</b>	2	BOLT (3/8-16X1-IN)						
	18	1	<b>0S-1621</b>	1	BOLT (1/2-13X1-IN)						
	19	1	<b>1Y-0412</b>	1	ELBOW-PIPE						
	20	1	<b>3B-7272</b>	1	NIPPLE-PIPE						
	21	1	<b>3V-3308</b>	7	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	22	1	<b>3Y-7829</b>	3	BOSS (3/8-16-THD)						
	23	1	<b>4S-6399</b>	1	CONNECTOR						
	24	1	<b>5B-4855</b>	2	BUSHING-REDUCER						
M	25	1	<b>5P-8245</b>	1	WASHER-HARD (13.5X25.5X3-MM THK)						
	26	1	<b>6D-3479</b>	2	CLIP						
	27	1	<b>6V-4516</b>	1	ADAPTER						
	28	1	<b>7K-9197</b>	2	ELBOW (SWIVEL)						
	29	1	<b>7L-6748</b>	1	U-BOLT						
	30	1	<b>8B-3308</b>	3	FITTING						
	31	1	<b>8D-9671</b>	1	CLIP						
	32	1	<b>8T-6762</b>	1	PLUG-PIPE						
	33	1	<b>9M-6522</b>	1	CONNECTOR						
	34	1	<b>9M-8729</b>	1	U-BOLT						
	35	1	<b>9S-8752</b>	4	NUT-FULL (3/8-16-THD)						
	36	1	<b>105-1861</b>	1	NIPPLE-PIPE						

AVAILABLE REPAIR KIT(S):

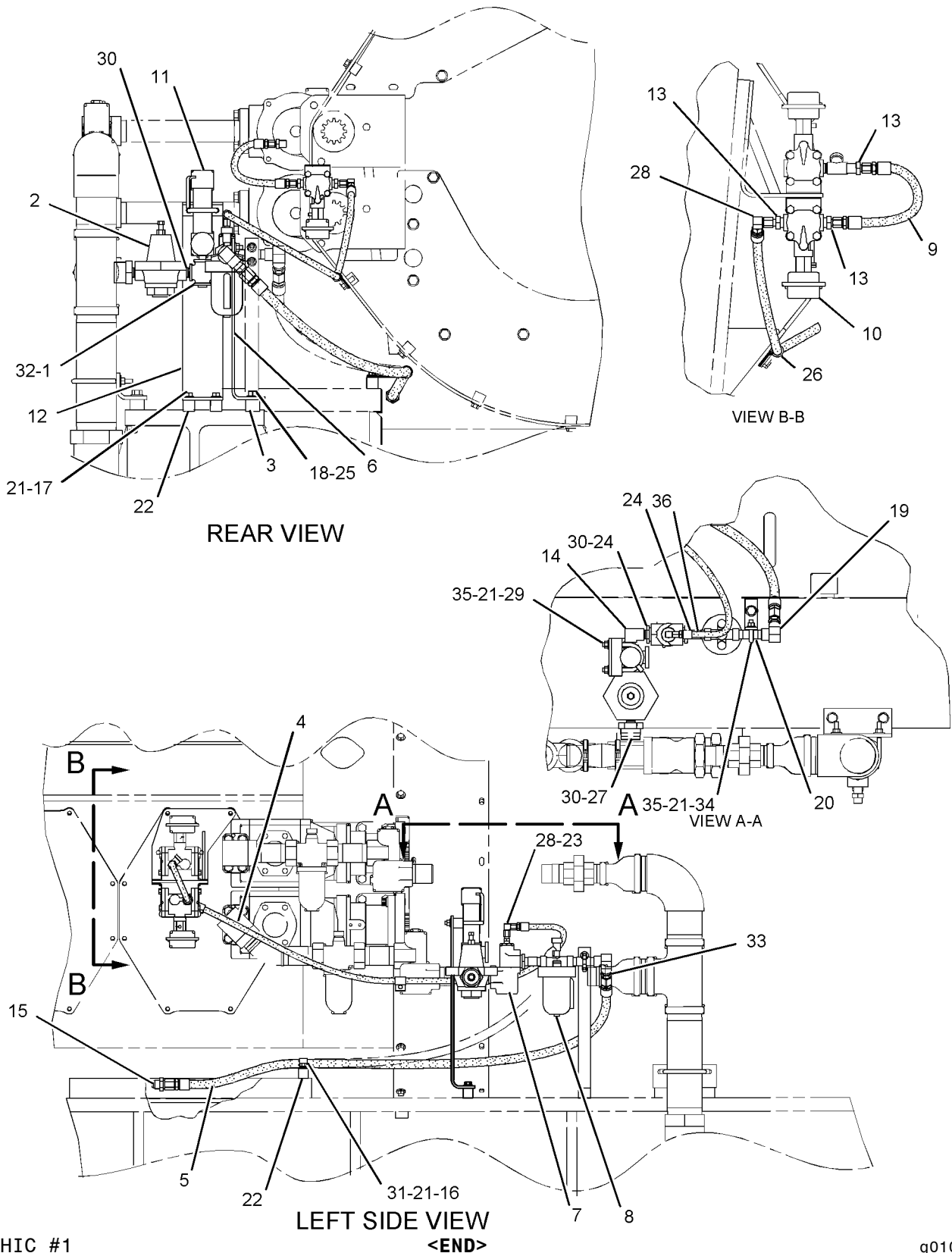
J	<b>7W-2819</b>	1	KIT-RELIEF VALVE (INCLUDES DIAPHRAGM, CYLINDER, PISTON AS, SCREEN, GASKET, AND SPRING)
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I-REFER TO HYDRAULIC INFORMATION SYSTEM  
 J-KIT MARKED J AVAILABLE FOR PART MARKED J  
 M-METRIC PART  
 Y-SEPARATE ILLUSTRATION

# AIR INLET AND EXHAUST SYSTEM

216-8696 LINES GP-AIR (contd.)

i02071031



GRAPHIC #1

<END>

g01061016

# AIR INLET AND EXHAUST SYSTEM

## 213-6789 MANIFOLD GP-EXHAUST (CHG -00, -01)

SMCS - 1059

i01885149

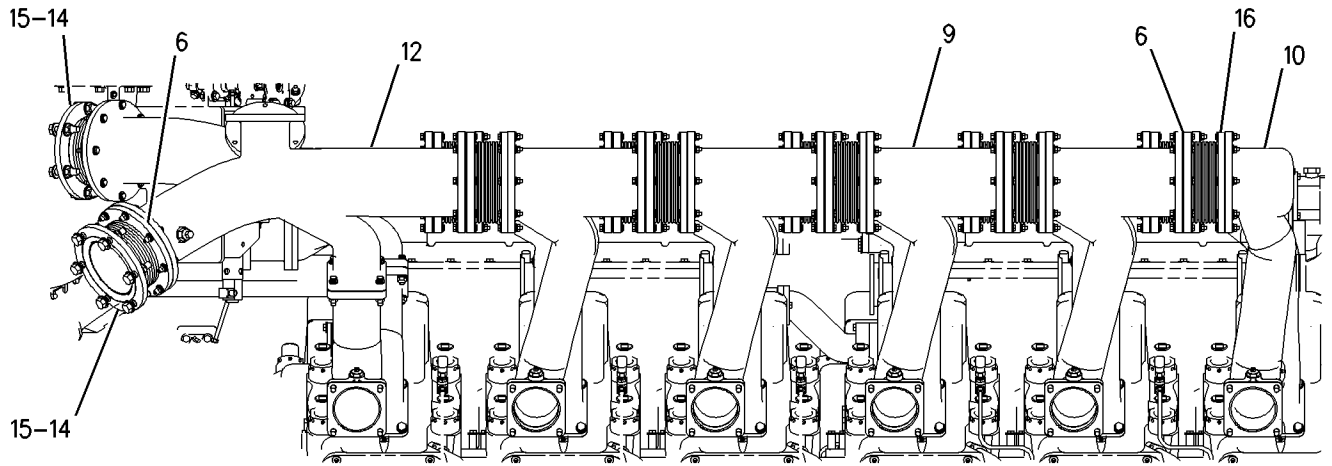
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>4P-3046</b>	2	MANIFOLD-EXHAUST (LOWER)						
	2	1	<b>6V-3630</b>	8	BOLT-HIGH TEMPERATURE (1/2-13X2.5-IN)						
	3	1	<b>6V-4605</b>	12	LOCKNUT						
	4	1	<b>7M-6101</b>	24	WASHER (0.656X1.31X0.095-IN THK)						
	5	1	<b>124-4383</b>	12	ADAPTER						
	6	1,2	<b>134-5643</b>	22	GASKET						
	7	1	<b>136-7730</b>	14	GASKET (CYLINDER HEAD)						
	8	2	<b>176-3593</b>	1	MANIFOLD-EXHAUST						
	9	1	<b>176-3594</b>	4	MANIFOLD-EXHAUST						
	10	1	<b>176-3595</b>	1	MANIFOLD-EXHAUST						
	11	2	<b>176-3597</b>	4	MANIFOLD-EXHAUST						
	12	1	<b>180-8409</b>	1	MANIFOLD-EXHAUST						
	13	2	<b>180-8410</b>	1	MANIFOLD-EXHAUST						
	14	1	<b>194-8110</b>	2	BELLOWS AS						
	15	1	<b>197-4185</b>	2	GASKET						
	16	1,2	<b>206-0406</b>	10	BELLOWS AS						
	17	2	<b>213-6791</b>	2	ADAPTER						
	18	1	<b>136-4185</b>	48	BOLT (1/2-13X1.75-IN)						
	19	2	<b>2N-2766</b>	176	LOCKNUT (3/8-16-THD)						
M	20	1	<b>5P-8245</b>	48	WASHER-HARD (13.5X25.5X3-MM THK)						
	21	1	<b>6V-4606</b>	12	BOLT-HIGH TEMPERATURE (5/8-11X2.75-IN)						
	22	2	<b>7L-6443</b>	176	BOLT-HIGH TEMPERATURE (3/8-16X2.25-IN)						
	23	2	<b>8C-8491</b>	192	WASHER-HARD (10.2X22X3-MM THK)						
	24	1	<b>8C-8763</b>	8	LOCKNUT (1/2X13X2-THD)						

M-METRIC PART

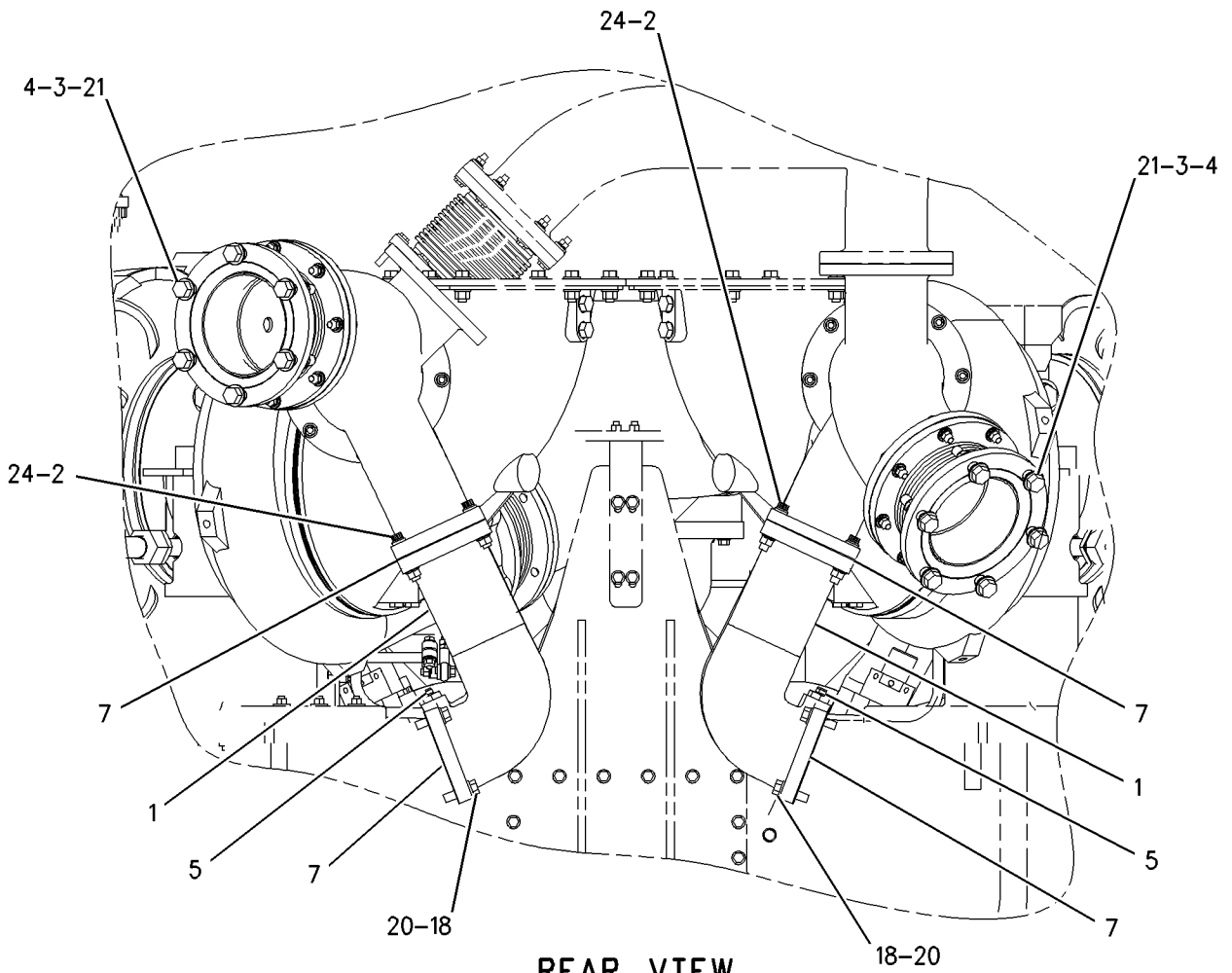
# AIR INLET AND EXHAUST SYSTEM

213-6789 MANIFOLD GP-EXHAUST (contd.)

i01885149



RIGHT SIDE VIEW



REAR VIEW

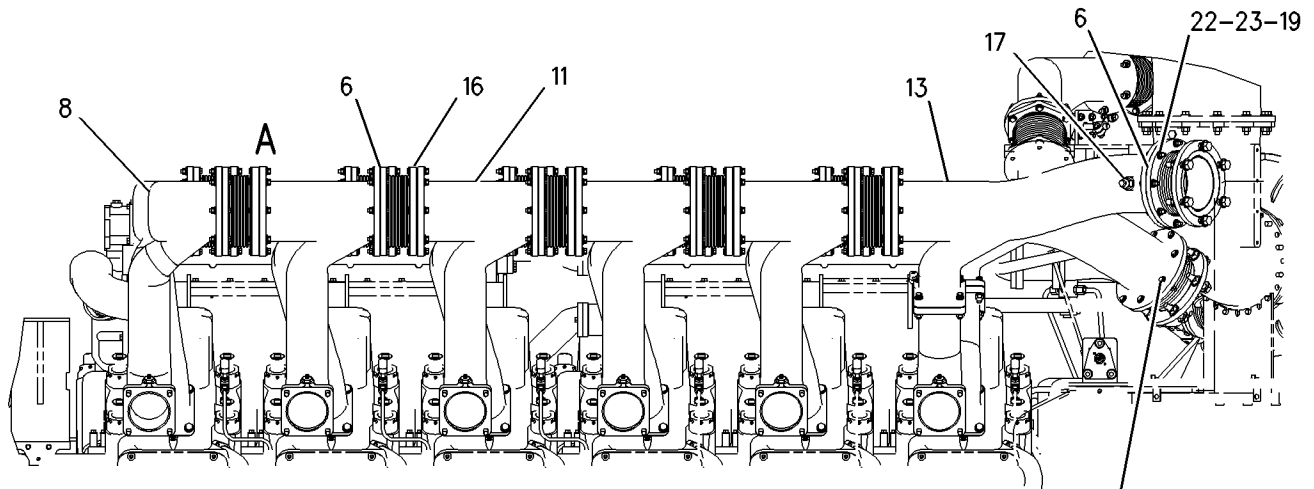
GRAPHIC #1

g00977440

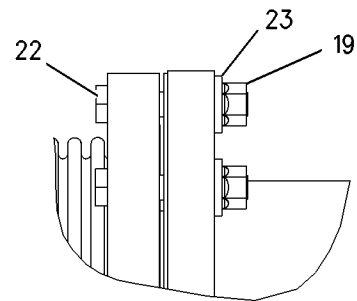
# AIR INLET AND EXHAUST SYSTEM

213-6789 MANIFOLD GP-EXHAUST (contd.)

i01885149



LEFT SIDE VIEW



VIEW OF AREA A

GRAPHIC #2

<END>

g00977442

# AIR INLET AND EXHAUST SYSTEM

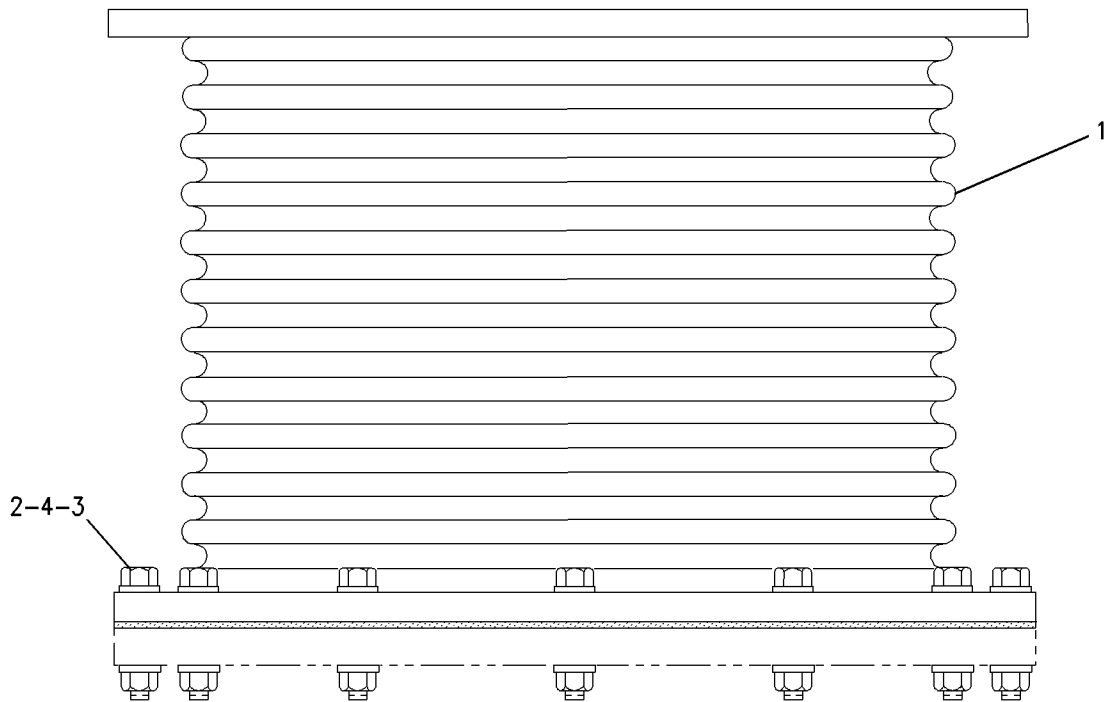
## 2W-2680 FITTING GP-EXHAUST (CHG -04 THRU -07) 356-MM. FLEXIBLE

SMCS-1061

i01811931

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	<b>207-1331</b>	1	BELLOWS AS						
	2	1	<b>9X-8873</b>	12	BOLT (1/2-13X2.25 IN)						
	3	1	<b>5P-8245</b>	24	WASHER-HARD (13.5X25.5X3MM THK)						
	4	1	<b>1B-5357</b>	12	NUT-FULL (1/2-13 THD)						

C-CHANGE FROM PREVIOUS TYPE



MOUNTED TO TURBOCHARGER OUTLET

GRAPHIC #1

<END>

g00697221

# AIR INLET AND EXHAUST SYSTEM

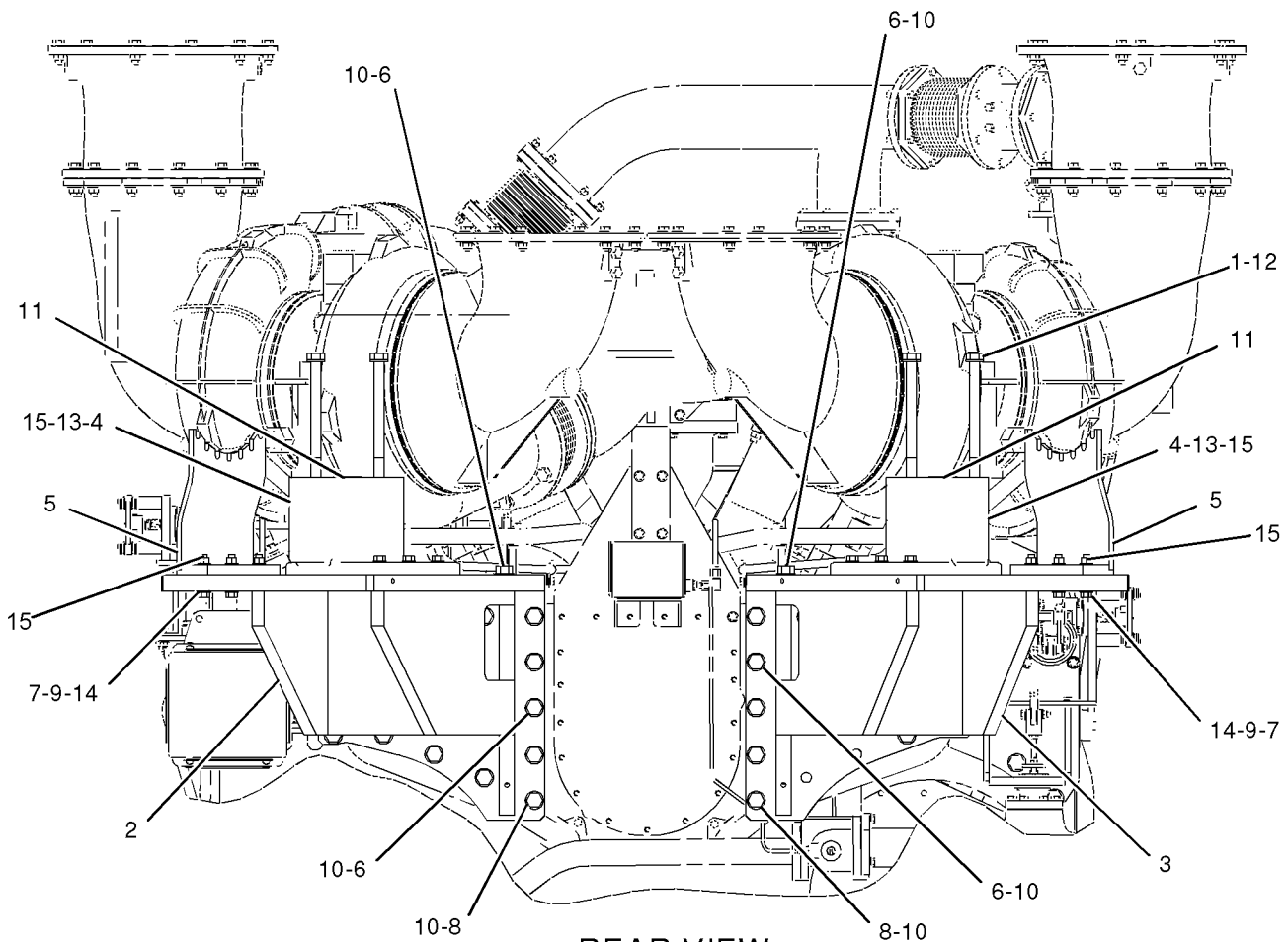
## 195-3910 MOUNTING GP-TURBOCHARGER (CHG -00 THRU -03)

SMCS - 1052

i02030158

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	089-7988	4	BOLT (M20X2.5X270-MM)						
	2	1	184-6376	1	SUPPORT AS (LEFT SIDE)						
	3	1	184-6377	1	SUPPORT AS (RIGHT SIDE)						
	4	1	191-0957	2	SUPPORT						
	5	1	199-4315	2	BRACKET AS						
	6	1	1A-8063	22	BOLT (3/4-10X2.5-IN)						
	7	1	1F-7958	6	NUT-FULL (1/2-13-THD)						
	8	1	4J-7945	8	BOLT (5/8-11X11.5-IN)						
	9	1	5P-8245	6	WASHER-HARD (13.5X25.5X3-MM THK)						
	10	1	5P-8248	30	WASHER-HARD (20X36.5X3.5-MM THK)						
	11	1	6V-3832	2	SEAL-O-RING						
	12	1	8T-3282	4	WASHER-HARD (22X35X3.5-MM THK)						
	13	1	9X-8873	12	BOLT (1/2-13X2.25-IN)						
	14	1	9X-8874	6	BOLT (1/2-13X3-IN)						
	15	1	5P-1076	18	WASHER-HARD (13.5X30X4-MM THK)						

M-METRIC PART



REAR VIEW  
<END>

GRAPHIC #1

g01042377

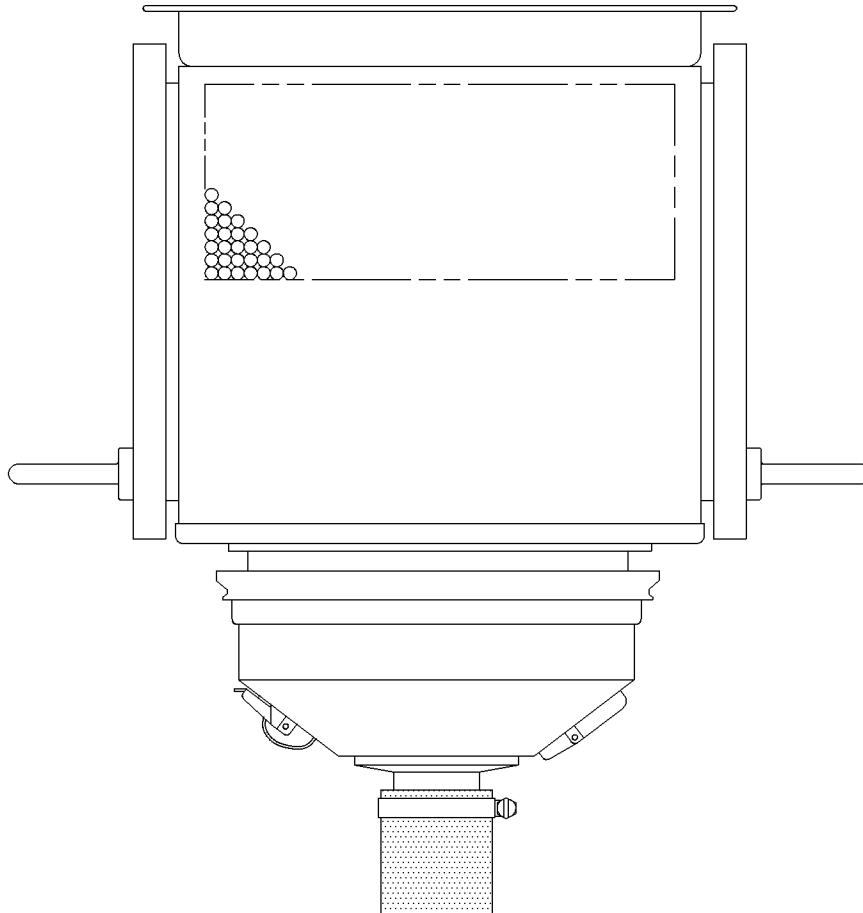
# AIR INLET AND EXHAUST SYSTEM

## 132-9324 PRECLEANER GP (CHG -00) PART OF 132-9325 AIR CLEANER GP

SMCS - 1055

i01378532

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>

g00728558



# AIR INLET AND EXHAUST SYSTEM

## 195-3919 SHIELD GP-MANIFOLD-G3612 TPS57D TURBO (CHG -00 THRU -06)

SMCS-1067

i02071053

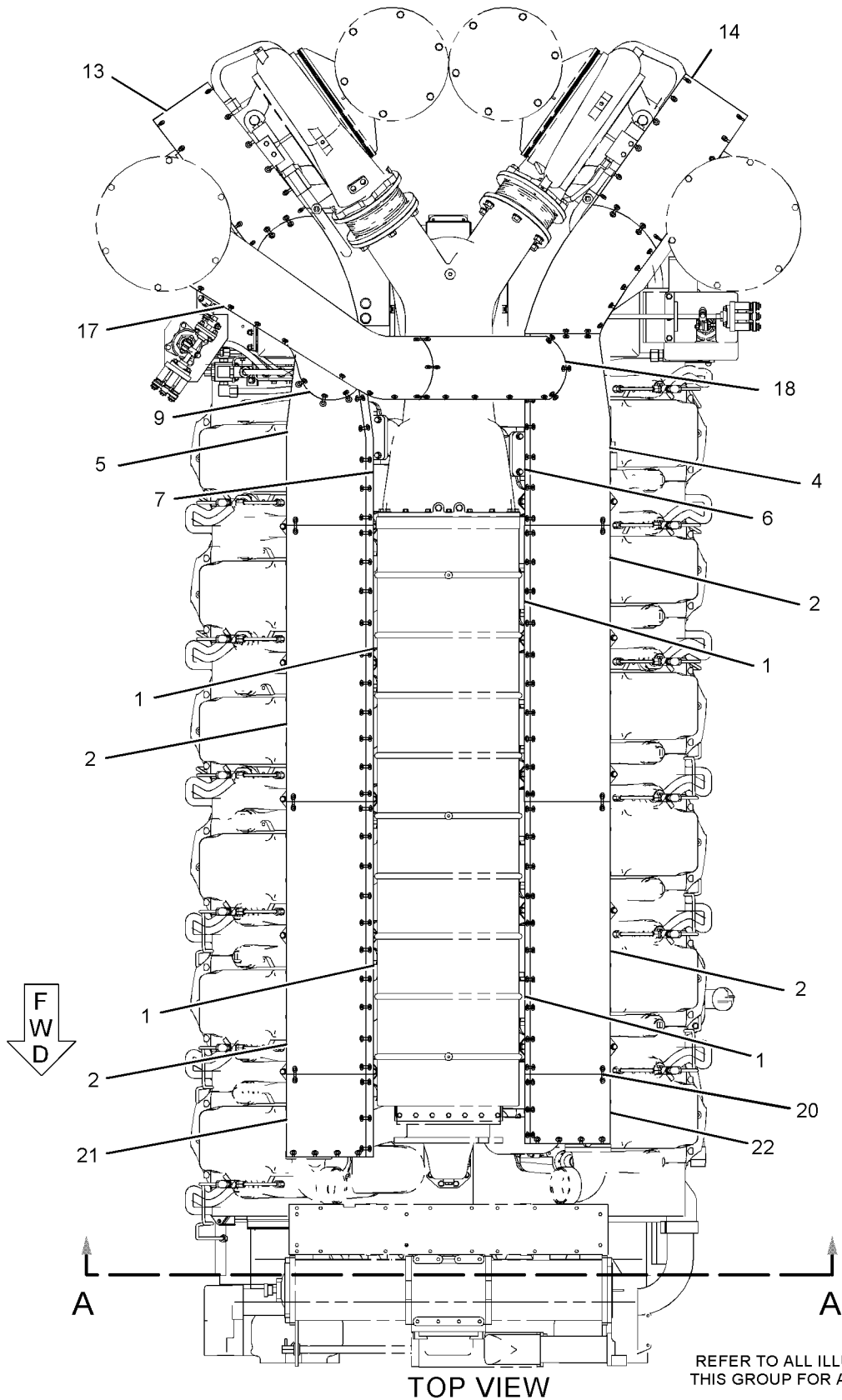
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	132-8292	4	SHIELD AS-EXHAUST (MID INSIDE, LH AND RH)						
	2	1	132-8298	4	SHIELD AS-EXHAUST (MID INSIDE, LH AND RH)						
	3	1	180-3990	2	SHIELD AS-ELBOW (REAR, LH)						
	4	1	199-8958	1	SHIELD AS-MANIFOLD (REAR, LH)						
	5	1	199-8959	1	SHIELD AS-MANIFOLD (REAR, LH)						
	6	1	199-8960	1	SHIELD AS-MANIFOLD (INSIDE REAR, LH)						
	7	2	199-8961	1	SHIELD AS-MANIFOLD (INSIDE REAR, RH)						
	8	1	199-8962	1	SHIELD AS-MANIFOLD (REAR, LH)						
	9	1	199-8964	1	SHIELD AS-MANIFOLD (REAR, RH)						
	10	1	199-8966	1	SHIELD AS-MANIFOLD (REAR, LH)						
	11	2	199-8967	1	SHIELD AS-MANIFOLD (REAR, LH)						
	12	1	204-5314	1	SHIELD AS-MANIFOLD (REAR, LH)						
	13	2	204-5315	1	SHIELD AS-MANIFOLD (REAR, RH)						
	14	2	204-5316	1	SHIELD AS-MANIFOLD (REAR, LH)						
	15	1	204-5317	1	SHIELD AS-MANIFOLD (REAR, RH)						
	16	2	204-5861	1	SHIELD AS-MANIFOLD (REAR, RH)						
	17	2	204-5862	1	SHIELD AS-MANIFOLD (REAR, RH)						
	18	1	207-4977	1	SHIELD AS-MANIFOLD (REAR, LH)						
	19	1	207-4978	1	SHIELD AS-MANIFOLD (REAR, RH)						
	20	2	220-5590	1	SHIELD AS-MANIFOLD (FRONT, LH)						
D	21	2	138-3331		WIRE-TIE (125-M)						
	22	2	248-2372	1	SHIELD AS-EXHAUST (FRONT, LH)						
	23	1	248-2373	1	SHIELD AS-EXHAUST (FRONT, RH)						

D-ORDER BY THE METER

# AIR INLET AND EXHAUST SYSTEM

195-3919 SHIELD GP-MANIFOLD (contd.)

i02071053



REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

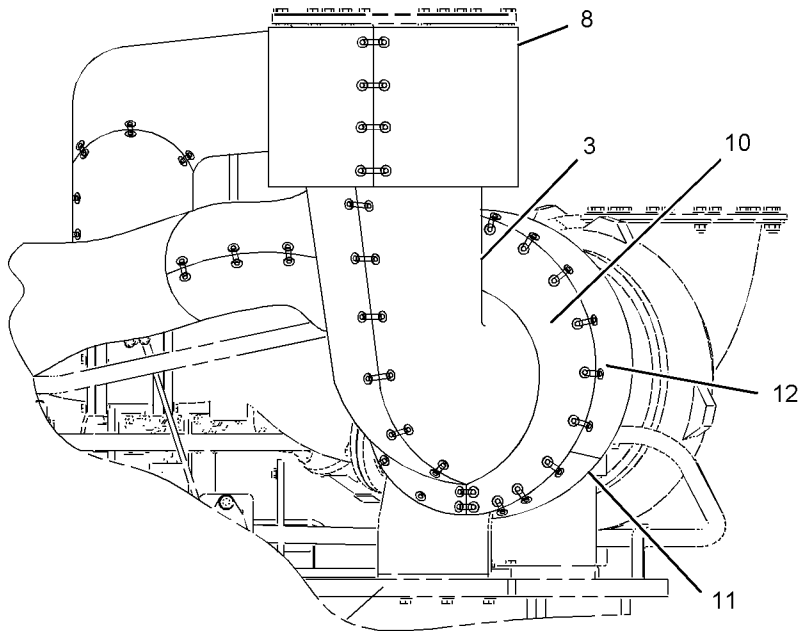
GRAPHIC #1

g01066529

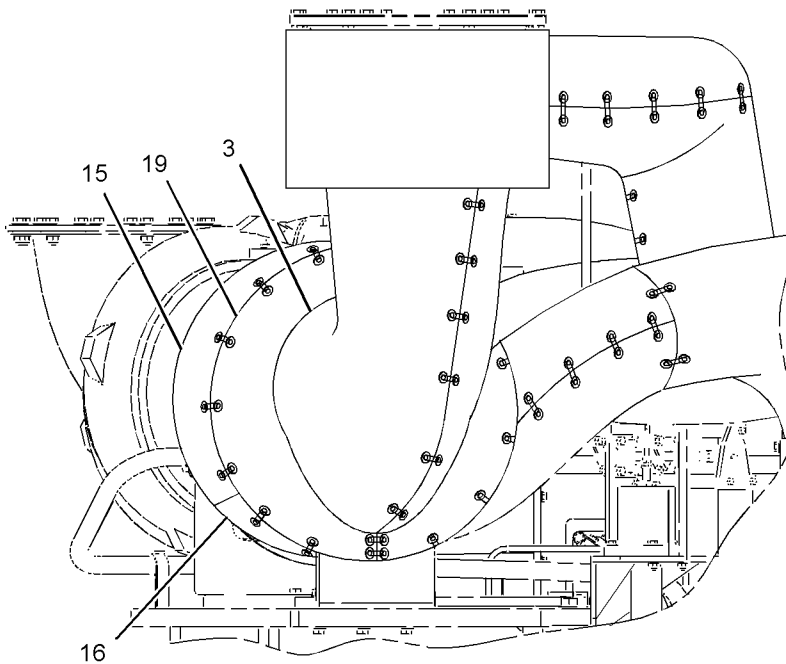
# AIR INLET AND EXHAUST SYSTEM

195-3919 SHIELD GP-MANIFOLD (contd.)

i02071053



LEFT SIDE VIEW



RIGHT SIDE VIEW

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS

GRAPHIC #2

<END>

g01066567

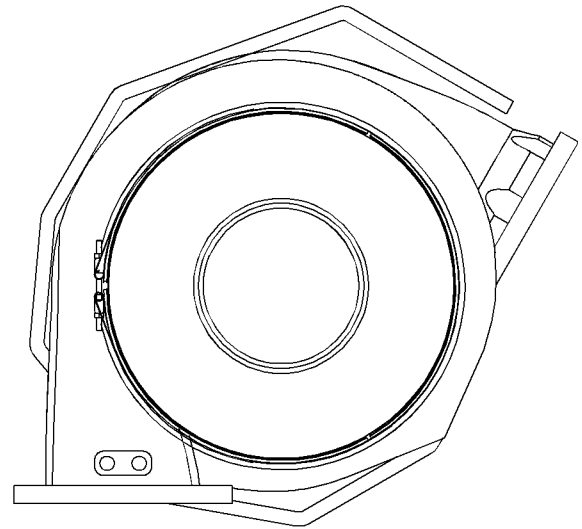
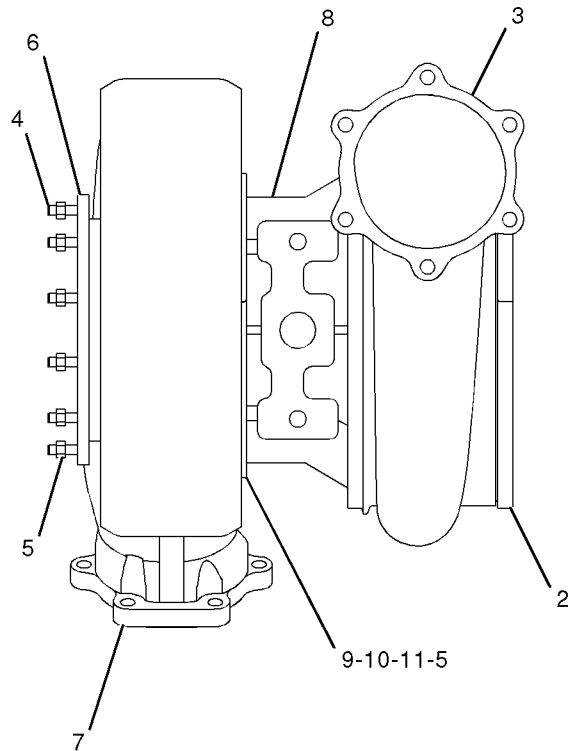
# AIR INLET AND EXHAUST SYSTEM

## 197-0667 TURBOCHARGER GP (CHG -01) CANNOT BE USED WITH VTC254 TURBOCHARGER SYSTEM

SMCS-1052, 1053

i01985464

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	2	1	176-3611	1	CLAMP - BAND						
	3	1	176-3614	1	HOUSING - COMPRESSOR						
	4	1	178-1797	12	STUD						
	5	1	178-1798	24	NUT (M12X19-THD)						
	6	1	188-5077	1	INSERT						
	7	1	211-3212	1	HOUSING						
	8	1	211-3215	1	HOUSING - BEARING						
	9	1	207-6109	4	CLIP						
	10	1	207-6110	12	WASHER (12.5X21.0X2.7-MM THK)						
	11	1	207-6111	12	STUD						



GRAPHIC #1

<END>

g01028864

# FUEL SYSTEM

## 211-8175 ACTUATOR GP-ELECTRONIC (CHG -00, -01)

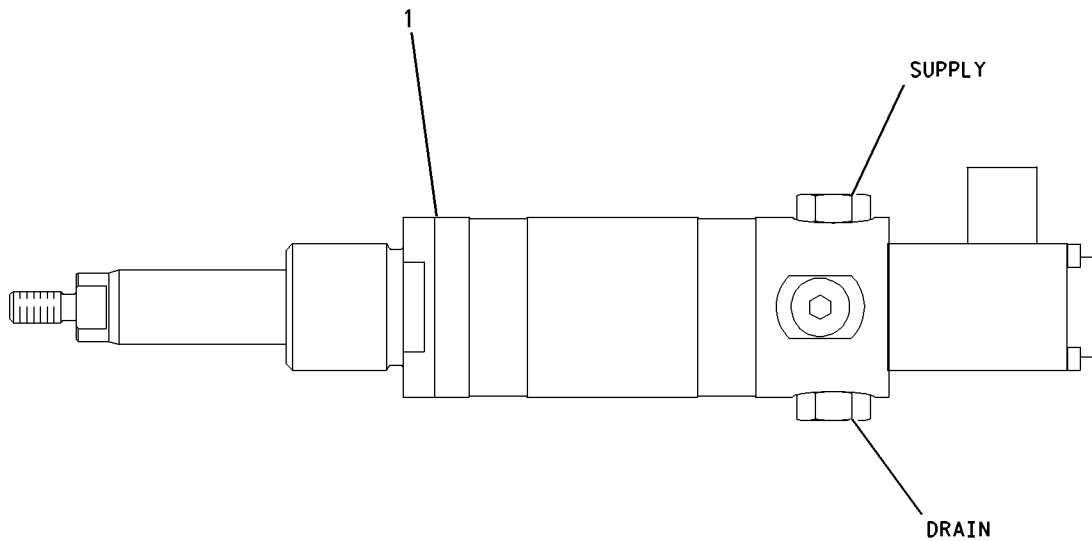
ELECTROHYDRAULIC

PART OF 206-6539 BYPASS GP-EXHAUST, 211-9944 CONTROL GP-FUEL, 206-6540 LINES  
GP-AIR

SMCS-1716

i01814188

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	211-8176	1	ACTUATOR GP-ELECTRONIC						131
Y-SEPARATE ILLUSTRATION											



GRAPHIC #1

<END>

g00806064

# FUEL SYSTEM

## 211-8176 ACTUATOR GP-ELECTRONIC (CHG -00, -01)

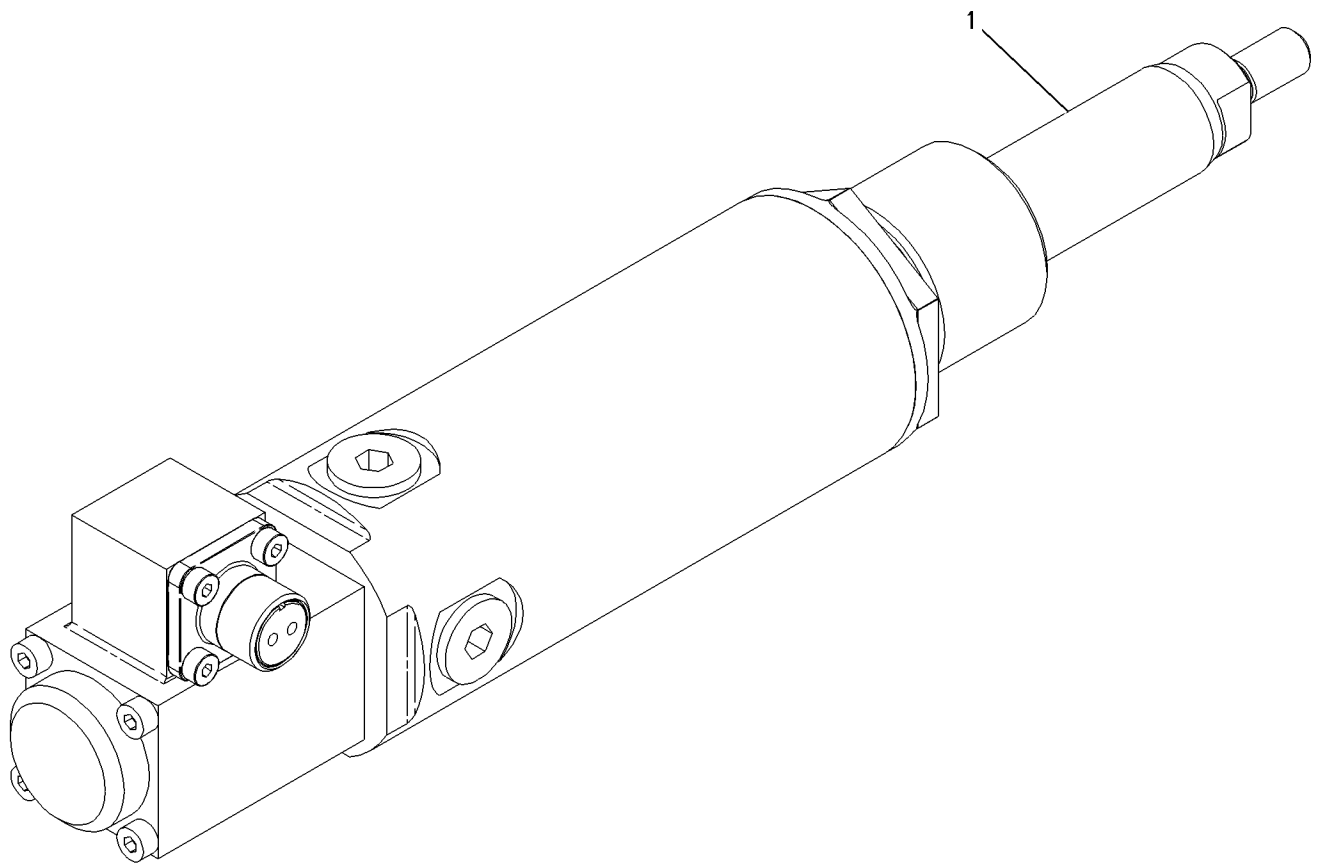
ELECTROHYDRAULIC

PART OF 211-8175 ACTUATOR GP-ELECTRONIC

SMCS-1716

i01873476

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	211-8177	1	PISTON AS						
		1	6V-9178	1	SEAL-O-RING						



GRAPHIC #1

<END>

g00955201

# FUEL SYSTEM

## 211-9944 CONTROL GP-FUEL (CHG -01 THRU -06)

SMCS - 1265

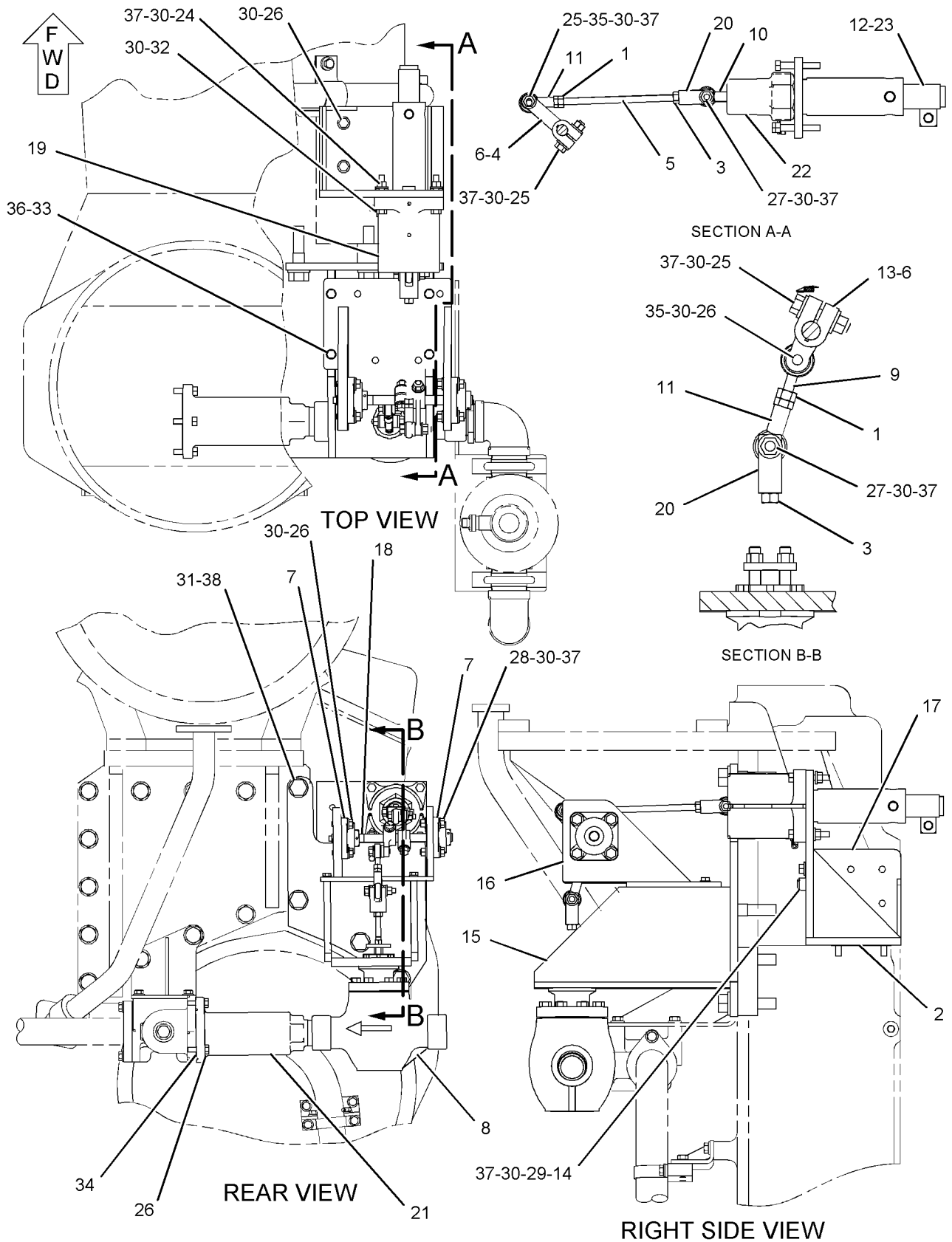
i02169690

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1S-3584	2	NUT-FULL (3/8-24 LH THD)						
	2	1	1W-3557	1	GASKET						
	3	1	3S-2713	2	NUT-FULL (3/8-24-THD)						
	4	1	4D-8532	1	LEVER						
	5	1	4P-0391	1	ROD						
	6	1	5H-2532	2	KEY-WOODRUFF						
	7	1	5L-3291	2	BEARING AS-BALL						
J	8	1	7E-8253	1	VALVE GP-CONTROL (GAS)						
	9	1	8C-6971	1	ROD END						
	10	1	8C-7315	1	ROD END						
	11	1	8C-7321	2	ROD END						
	12	1	8H-3390	1	NUT-FULL (1 1/2-12-THD)						
	13	1	115-7768	1	LEVER						
	14	1	116-0118	1	CLIP						
	15	1	118-6662	1	BRACKET AS						
	16	1	118-6663	1	BRACKET AS						
	17	1	118-6664	1	BRACKET AS						
	18	1	118-6665	1	SHAFT-FUEL						
	19	1	176-3583	2	GUARD						
	20	1	176-3587	2	CLEVIS						
	21	1	176-3588	1	TUBE						
	22	1	193-7879	1	BOOT						
Y	23	1	211-8175	1	ACTUATOR GP-ELECTRONIC						130
	24	1	0L-2070	4	BOLT (3/8-16X2.25-IN)						
	25	1	0S-1571	3	BOLT (3/8-16X1.75-IN)						
	26	1	0S-1588	12	BOLT (3/8-16X1.25-IN)						
	27	1	0S-1590	2	BOLT (3/8-16X2-IN)						
	28	1	0S-1591	4	BOLT (3/8-16X1.5-IN)						
	29	1	1A-2029	1	BOLT (3/8-16X1.125-IN)						
	30	1	3V-3308	34	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	31	1	5P-8248	4	WASHER-HARD (20X36.5X3.5-MM THK)						
	32	1	6K-8179	1	CLIP						
M	33	1	6V-3940	4	BOLT (M8X1.25X25-MM)						
	34	1	6V-8002	1	SEAL-O-RING						
	35	1	8M-9024	2	WASHER-HARD (10.2X22.5X5-MM THK)						
	36	1	9M-1974	4	WASHER-HARD (8.8X16X2-MM THK)						
	37	1	9S-8752	14	NUT-FULL (3/8-16-THD)						
	38	1	9X-8887	4	BOLT (3/4-10X3-IN)						
					AVAILABLE REPAIR KIT(S):						
J			4P-6542	1	KIT-VALVE GASKET (KIT INCLUDES GASKET-BONNET, GASKET-SHIM, GASKET-SPIRAL WOUND AND GASKET-SEAT RING)						
J			4P-6543	1	KIT-VALVE SEAL (KIT INCLUDES RINGS, DISK, DISK SEAT & RETAINER DISK)						
J			4P-6945	1	KIT-VALVE REPAIR (KIT INCLUDES INSTRUCTION SHEET, WASHER, SPRING, WIPER & PACKING RINGS)						
J-KITS MARKED J AVAILABLE FOR PART MARKED J M-METRIC PART Y-SEPARATE ILLUSTRATION											

# FUEL SYSTEM

211-9944 CONTROL GP-FUEL (contd.)

i02169690



GRAPHIC #1

<END>

g01100410



# FUEL SYSTEM

## 150-5489 LINES GP-GAS (CHG -00 THRU -05)

SMCS-1274

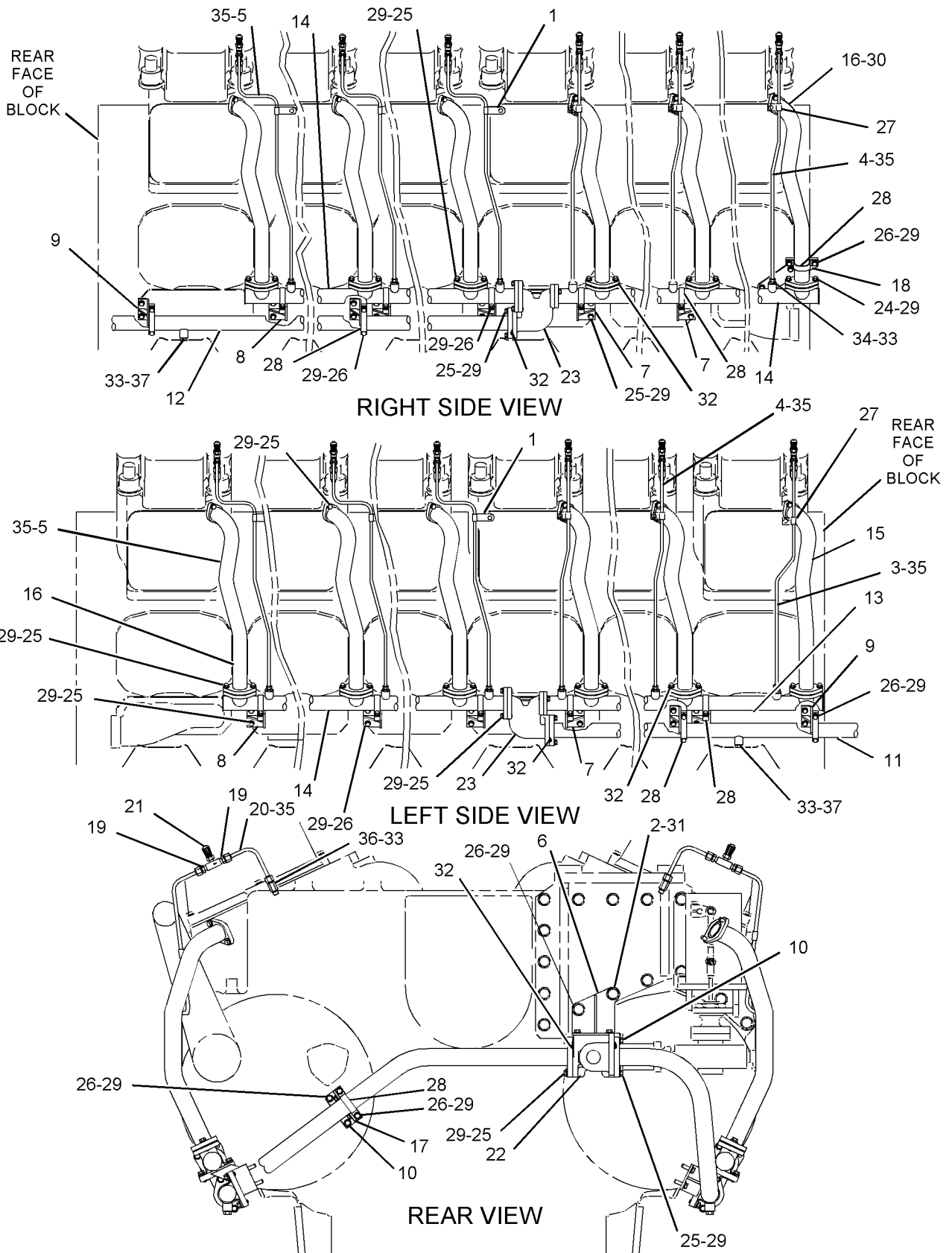
i02094783

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2Y-3812	6	CLIP						
	2	1	5D-1972	2	BOLT (3/4-10X11.75-IN)						
	3	1	6I-2404	1	TUBE AS						
	4	1	6I-2405	5	TUBE AS						
	5	1	6I-2406	6	TUBE AS						
	6	1	7E-2874	1	BRACKET AS						
	7	1	7E-2876	3	BRACKET AS						
	8	1	7E-2877	7	BRACKET AS						
	9	1	7E-2878	4	BRACKET AS						
	10	1	7E-2880	1	BRACKET AS						
	11	1	7E-2882	1	TUBE AS-LH						
	12	1	7E-2883	1	TUBE AS-RH						
	13	1	7E-2884	1	MANIFOLD AS						
	14	1	7E-2885	3	MANIFOLD AS						
	15	1	7E-2886	1	TUBE AS						
	16	1	7E-2887	11	TUBE AS						
	17	1	7E-7226	1	PLATE						
	18	1	7E-8167	1	BRACKET AS						
	19	1	8C-6868	24	CONNECTOR						
	20	1	105-4046	12	TUBE AS						
	21	1	118-2735	12	VALVE-NEEDLE						
	22	1	162-8185	1	ELBOW						
	23	1	162-8186	2	ELBOW						
	24	1	0S-1571	2	BOLT (3/8-16X1.75-IN)						
	25	1	0S-1588	92	BOLT (3/8-16X1.25-IN)						
	26	1	0S-1594	40	BOLT (3/8-16X1-IN)						
	27	1	124-9633	6	CLIP						
	28	1	1M-1462	16	CLIP						
	29	1	3V-3308	134	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	30	1	5P-8211	12	SEAL-O-RING						
	31	1	5P-8248	2	WASHER-HARD (20X36.5X3.5-MM THK)						
	32	1	6J-2244	32	SEAL-O-RING						
	33	1	6V-5049	26	SEAL-O-RING						
	34	1	6V-8636	12	CONNECTOR						
	35	1	8L-2779	48	SEAL-O-RING						
	36	1	8T-0075	12	CONNECTOR						
	37	1	9S-4191	2	PLUG						

# FUEL SYSTEM

150-5489 LINES GP-GAS (contd.)

i02094783



GRAPHIC #1

<END>

g01069626

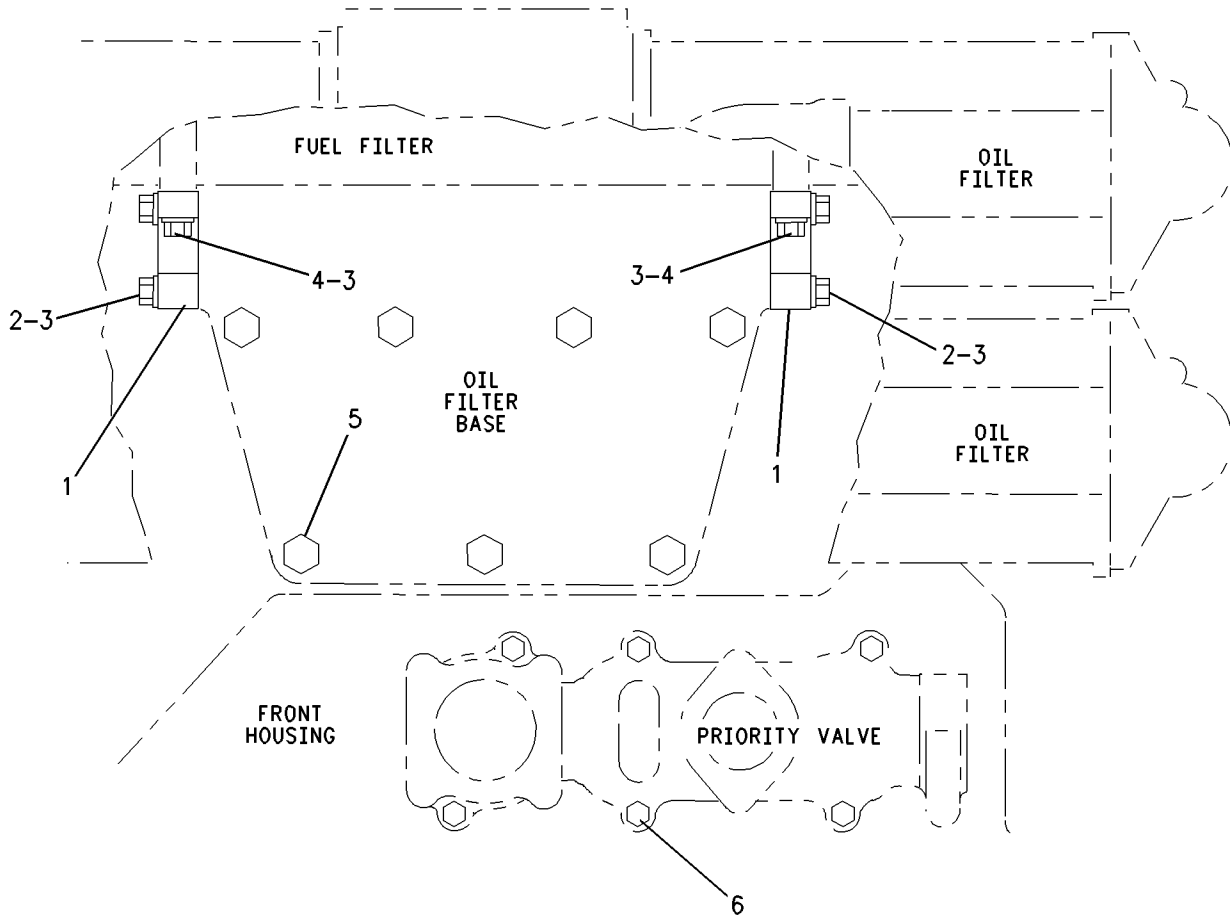
# FUEL SYSTEM

## 4W-0012 MOUNTING GP-FUEL FILTER (CHG -00, -01) FRONT STRUCTURE

SMCS-1262

i01552720

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4W-8556	2	SUPPORT						
	2	1	2B-0947	6	BOLT (1/2-13X2.25 IN)						
	3	1	5P-8245	10	WASHER-HARD (13.5X25.5X3MM THK)						
	4	1	0S-1587	4	BOLT (1/2-13X1.75 IN)						
	5	1	1A-8063	7	BOLT (3/4-10X2.5 IN)						
	6	1	2H-6488	6	BOLT (1/2-13X5IN)						



GRAPHIC #1

<END>

g00696227

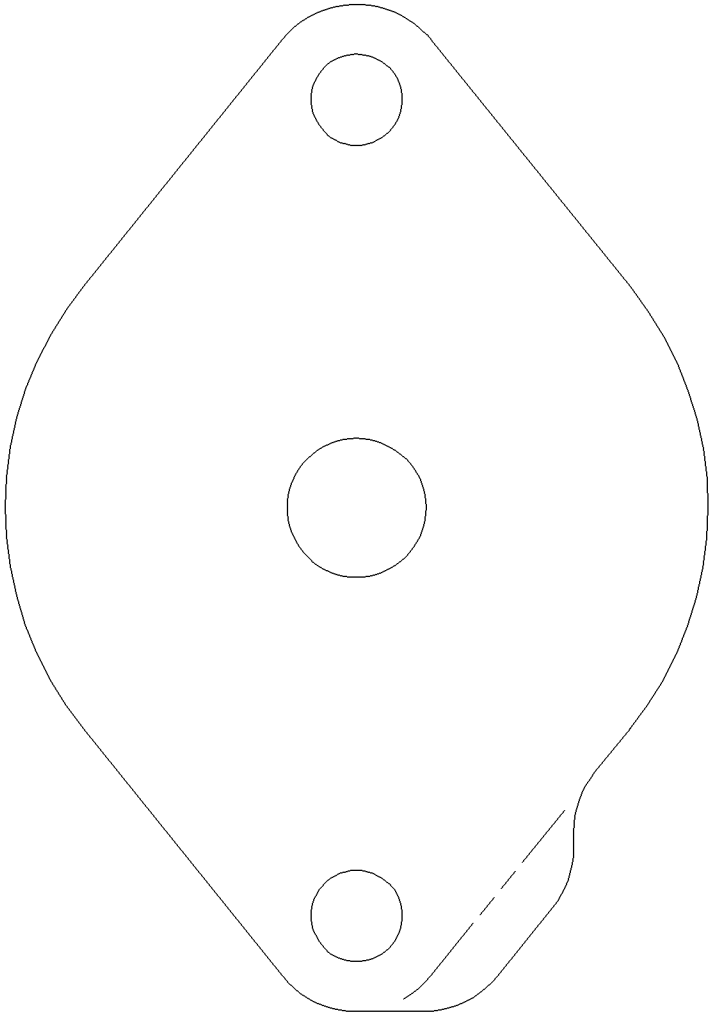
# FUEL SYSTEM

## 122-2083 ORIFICE (CHG -00)

SMCS-1274

i01289650

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>

g00683609

# FUEL SYSTEM

## 116-6965 PUMP GP-GEAR (CHG -00 THRU -03)

SMCS-1251, 1286

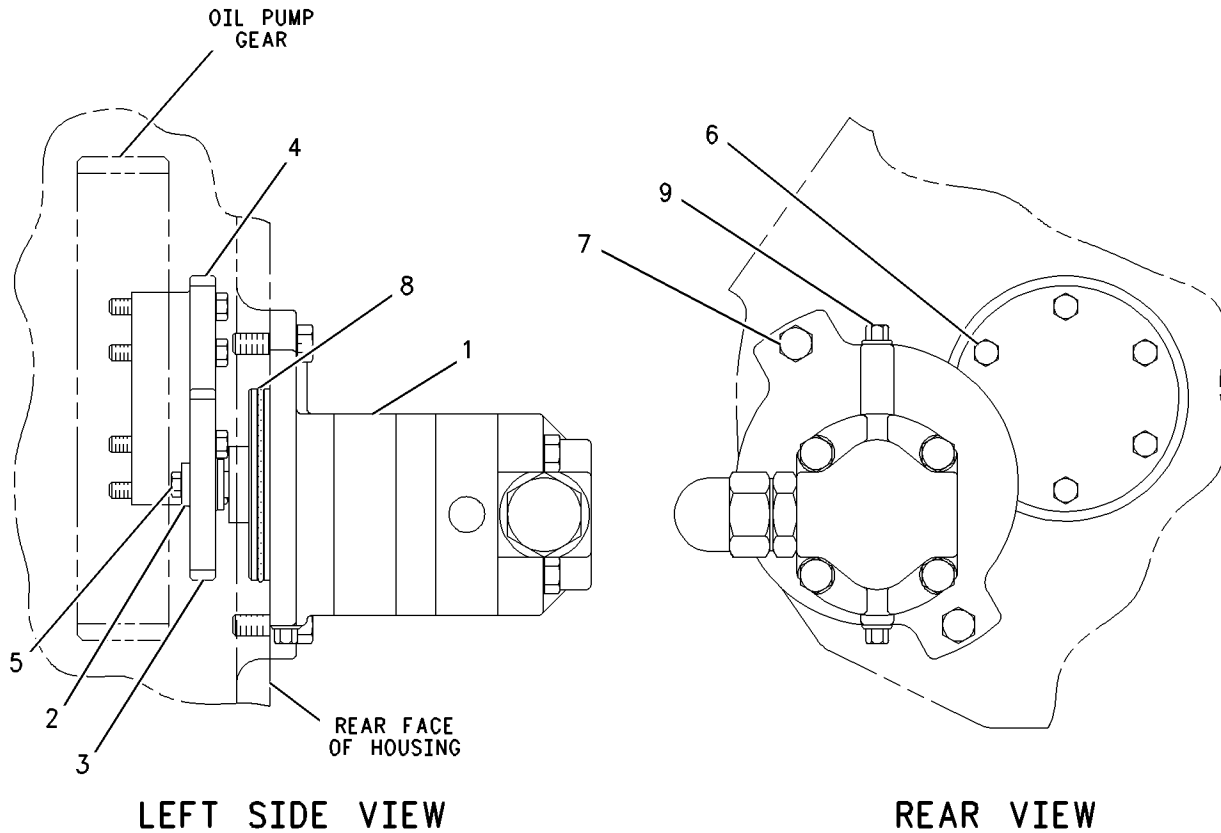
i02093517

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	184-6957	1	PUMP GP-GEAR (BASIC)						
	2	1	6V-3964	1	WASHER-HARD (8.8X25.5X5-MM THK)						
	3	1	1W-3390	1	GEAR (42-TEETH)						
	4	1	1W-3389	1	GEAR (55-TEETH)						
	5	1	1B-7182	1	BOLT (5/16-18X1.25-IN)						
	6	1	0L-1143	6	BOLT (3/8-16X2.50-IN)						
	7	1	0S-1585	2	BOLT (1/2-13X1.50-IN)						
	8	1	5D-5957	1	SEAL-O-RING						
	9	1	8T-6764	1	PLUG-PIPE						

AVAILABLE REPAIR KIT(S):

J	184-6959	1	KIT-SEAL (PUMP GP)		
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J-KIT MARKED J AVAILABLE FOR PART MARKED J



GRAPHIC #1

<END>

g00793141

# FUEL SYSTEM

## 117-3195 TANK & MTG GP-HYDRAULIC (CHG -00 THRU -02) HYDRAX

SMCS-5056

i02126486

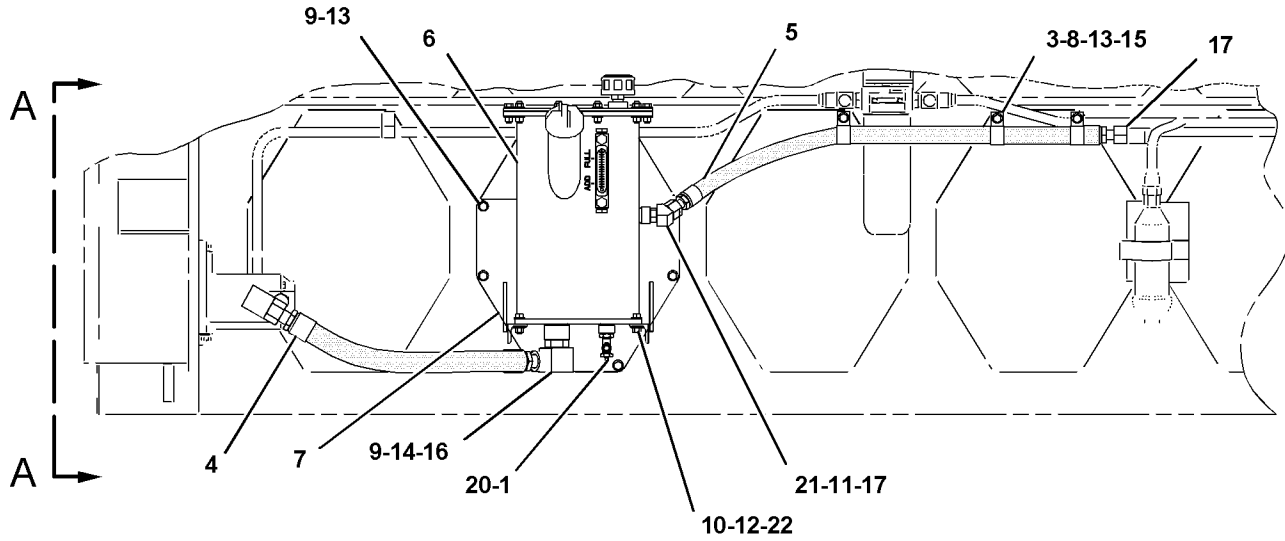
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-7238	1	VALVE-SHUTOFF						
	2	1	8C-6875	1	CONNECTOR						
	3	1	9C-5344	3	SPACER (10.5X20X18-MM THK)						
I	4	1	117-3197	1	HOSE AS						
I	5	1	117-3198	1	HOSE AS						
Y	6	1	143-4770	1	TANK GP-HYDRAULIC						141
	7	1	143-4773	1	BRACKET AS						
	8	1	0L-2070	3	BOLT (3/8-16X2.25-IN)						
	9	1	0S-1571	6	BOLT (3/8-16X1.75-IN)						
	10	1	0S-1588	4	BOLT (3/8-16X1.25-IN)						
	11	1	2M-9780	1	SEAL-O-RING						
	12	1	3V-2431	8	WASHER (10.2X16X2-MM THK)						
	13	1	3V-3308	9	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	14	1	5K-9090	3	SEAL-O-RING						
	15	1	5P-7854	3	CLIP						
	16	1	6V-9008	1	ELBOW						
	17	1	6V-9746	2	SEAL-O-RING						
	18	1	6V-9854	1	ELBOW (SWIVEL)						
	19	1	7M-8485	1	SEAL-O-RING						
	20	1	8L-2786	1	SEAL-O-RING						
	21	1	8T-5389	1	ELBOW						
	22	1	9S-8752	4	NUT-FULL (3/8-16-THD)						

I-REFER TO HYDRAULIC INFORMATION SYSTEM  
Y-SEPARATE ILLUSTRATION

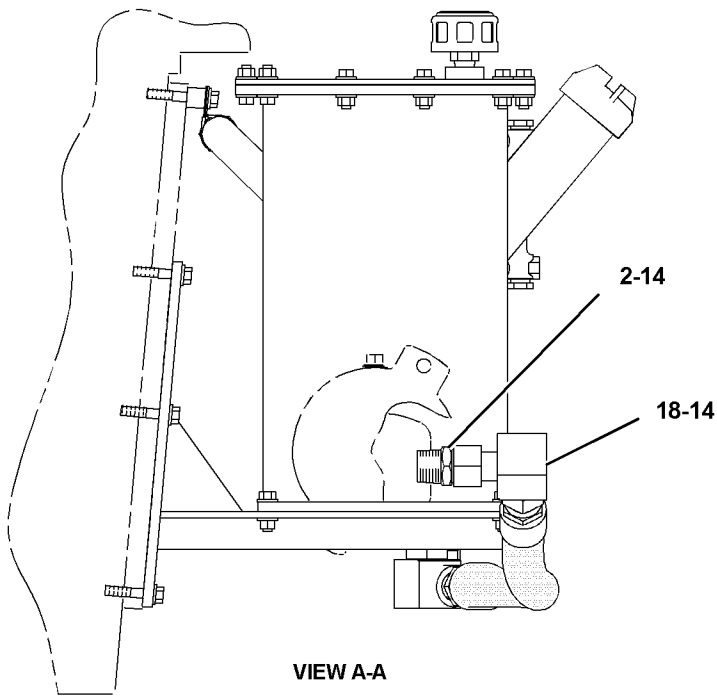
# FUEL SYSTEM

117-3195 TANK & MTG GP-HYDRAULIC (contd.)

i02126486



LEFT SIDE VIEW



VIEW A-A  
<END>

GRAPHIC #1

g01082600

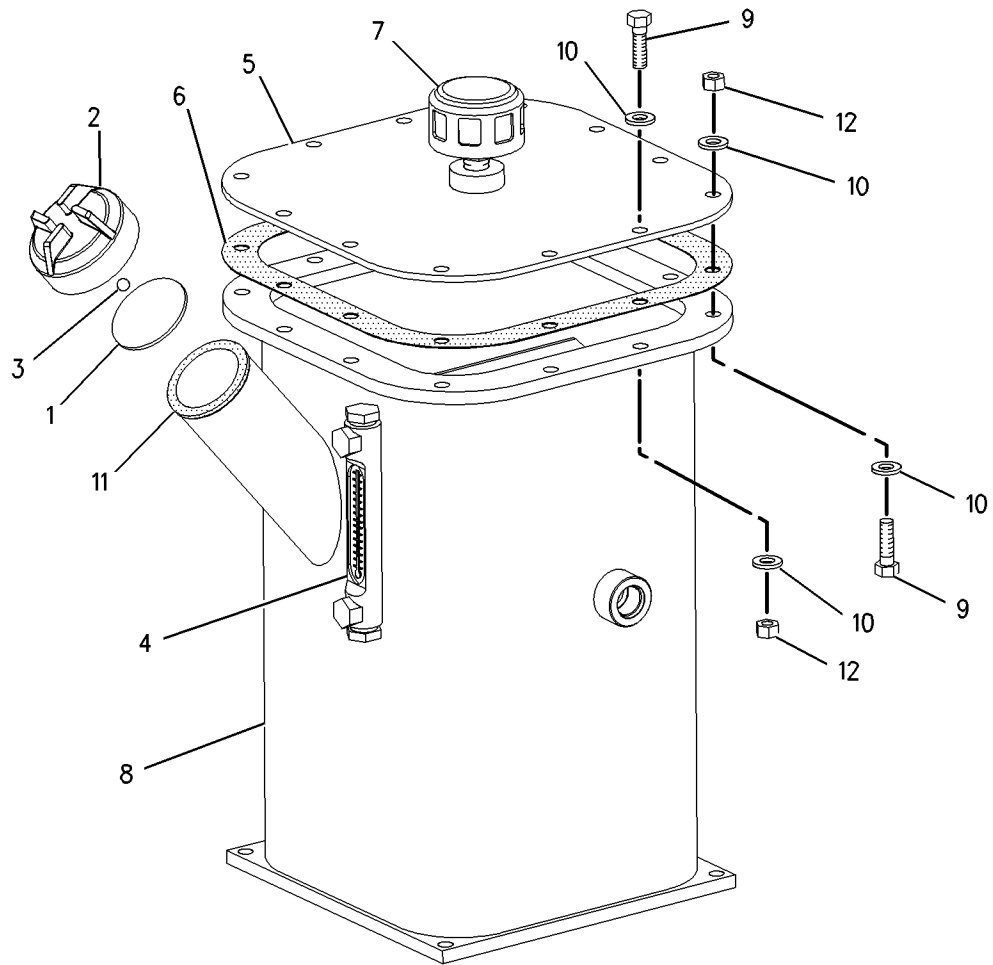
# FUEL SYSTEM

## 143-4770 TANK GP-HYDRAULIC (CHG -00 THRU -04) PART OF 117-3195 TANK & MTG GP-HYDRAULIC

SMCS-5056

i02030163

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2D-4202	1	PLATE						
	2	1	7H-1447	1	CAP-FILLER (HYDRAULIC TANK)						
	3	1	8T-2275	1	BALL						
	4	1	125-3896	1	THERMOMETER						
	5	1	143-4772	1	COVER AS						
	6	1	143-4774	1	GASKET						
	7	1	143-4880	1	BREATHER (HYDRAULIC TANK)						
	8	1	176-3584	1	TANK AS-HYDRAULIC						
	9	1	OS-1588	12	BOLT (3/8-16X1.25-IN)						
	10	1	3V-2431	24	WASHER (10.2X16.0X2.0-MM THK)						
	11	1	9H-6454	1	GASKET						
	12	1	9S-8752	12	NUT-FULL (3/8-16-THD)						



GRAPHIC #1

<END>

g00752774



# ELECTRICAL AND STARTING SYSTEM

## 197-0064 BOX AS-JUNCTION (CHG -00, -01) PART OF 195-6244 BOX GP-CONTROL PANEL

SMCS-7426

i02169176

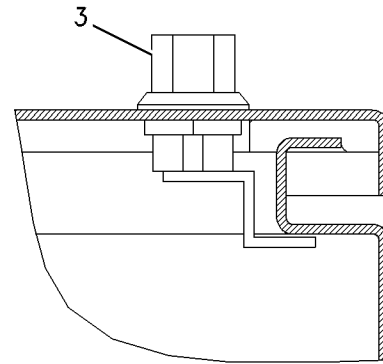
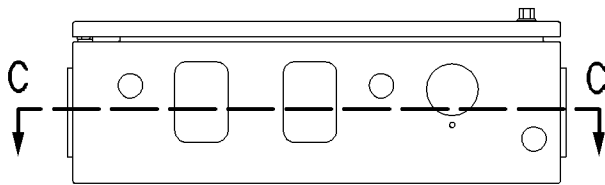
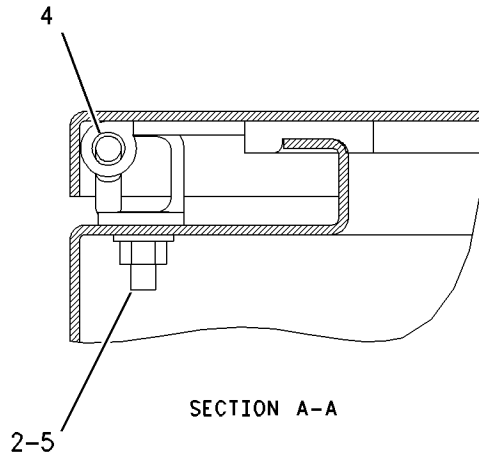
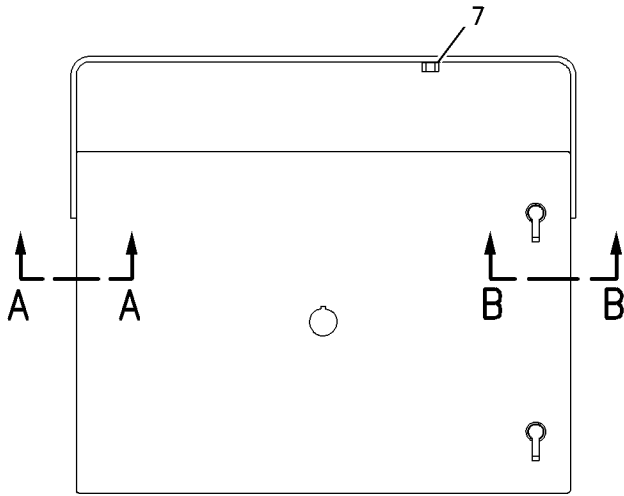
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
BD	1	1	<b>6V-1392</b>		SEAL						
M	2	1	<b>6R-7943</b>	4	SCREW (M5X15.5-MM)						
	3	1	<b>151-1315</b>	2	LATCH AS						
	4	1	<b>153-3723</b>	2	HINGE AS						
					(EACH INCLUDES)						
		1	<b>8T-5447</b>	1	RING-RETAINING						
M	5	1	<b>5C-2874</b>	4	NUT (M5X0.8-THD)						
	6	1	<b>7T-1099</b>	2	LINK						
	7	1	<b>1F-0750</b>	1	NUT-WELD (3/8-16-THD)						

B-USE AS REQUIRED  
D-ORDER BY THE METER  
M-METRIC PART

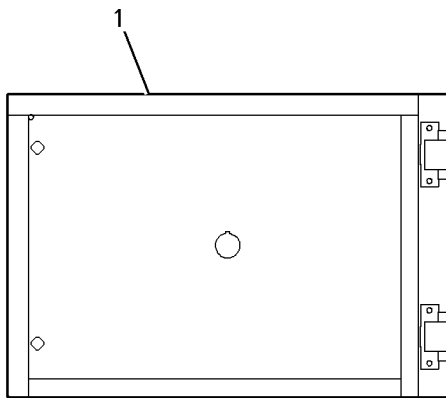
# ELECTRICAL AND STARTING SYSTEM

197-0064 BOX AS-JUNCTION (contd.)

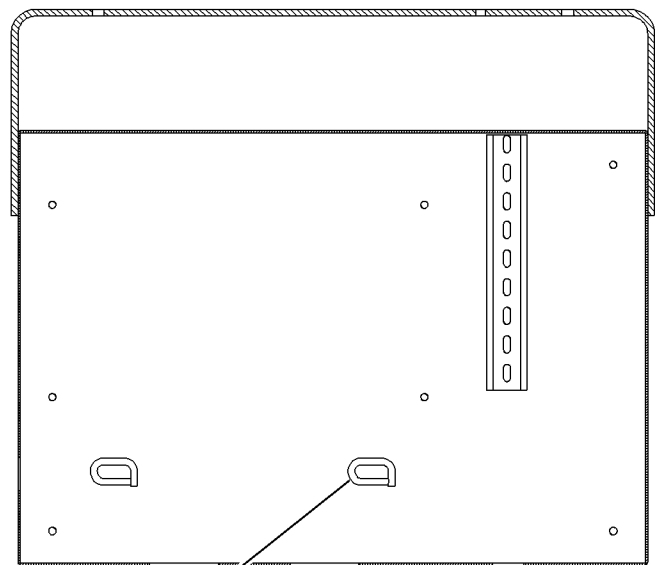
i02169176



SECTION B-B



VIEW OF DOOR



SECTION C-C

GRAPHIC #1

<END>

g00925198

# ELECTRICAL AND STARTING SYSTEM

## 210-9470 CONTROL GP-ENGINE ELECTRONIC (CHG -01, -02)

GAS

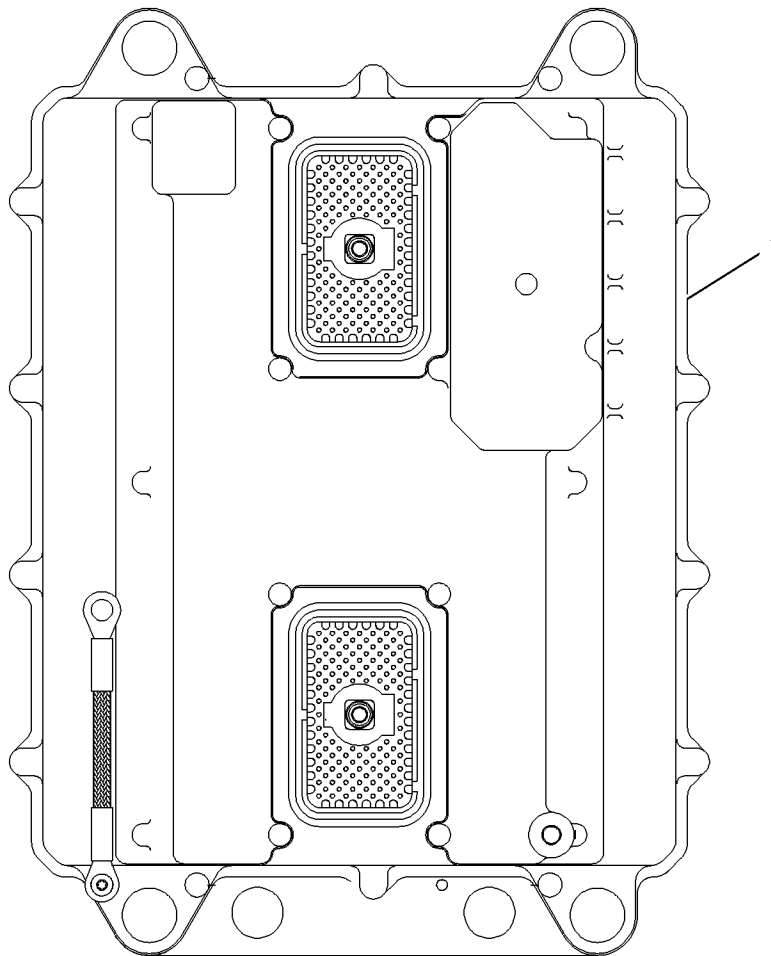
PART OF 195-6244 BOX GP-CONTROL PANEL

SMCS-1901

i01874048

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	211-5228	1	CONTROL GP-UNPROGRAMMED						149

Y-SEPARATE ILLUSTRATION



FRONT VIEW

GRAPHIC #1

<END>

g00959928

# ELECTRICAL AND STARTING SYSTEM

## 162-7289 CONTROL GP-GAS PRESSURE (CHG -02 THRU -04)

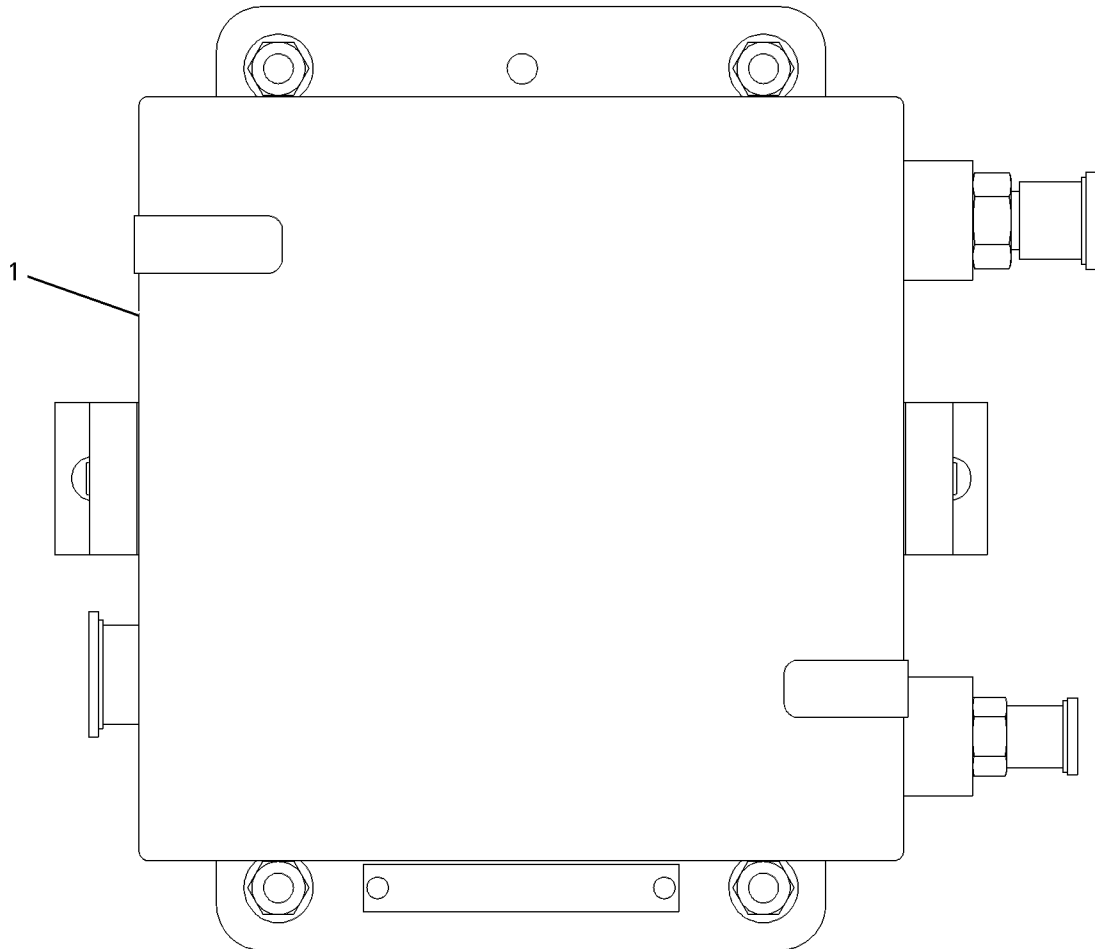
GAS HIGH PRESSURE MODULE  
PART OF 195-6247 WIRING GP-ENGINE

SMCS-1901

i01740412

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
CY	1	1	211-6713	1	CONTROL GP-GAS PRESSURE						148

C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00528473

# ELECTRICAL AND STARTING SYSTEM

## 162-7292 CONTROL GP-GAS PRESSURE (CHG -00 THRU -02)

GAS HIGH PRESSURE MODULE

PART OF 211-6713 CONTROL GP-GAS PRESSURE

SMCS-1901

i01985447

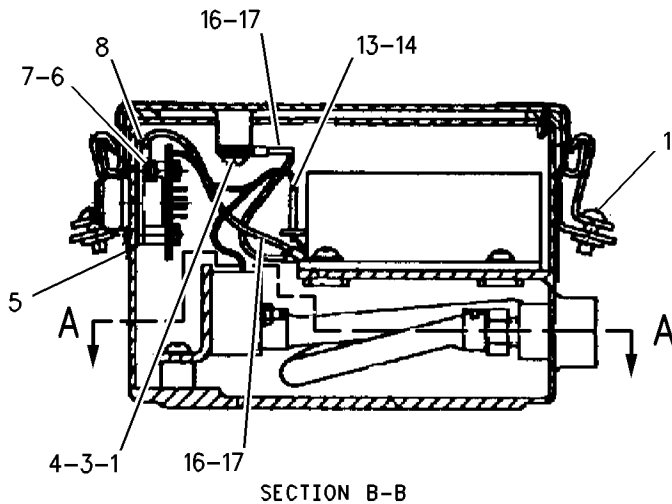
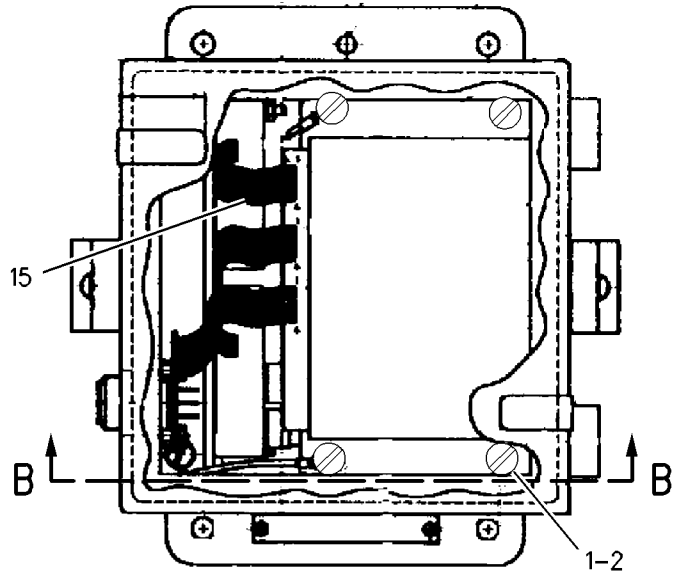
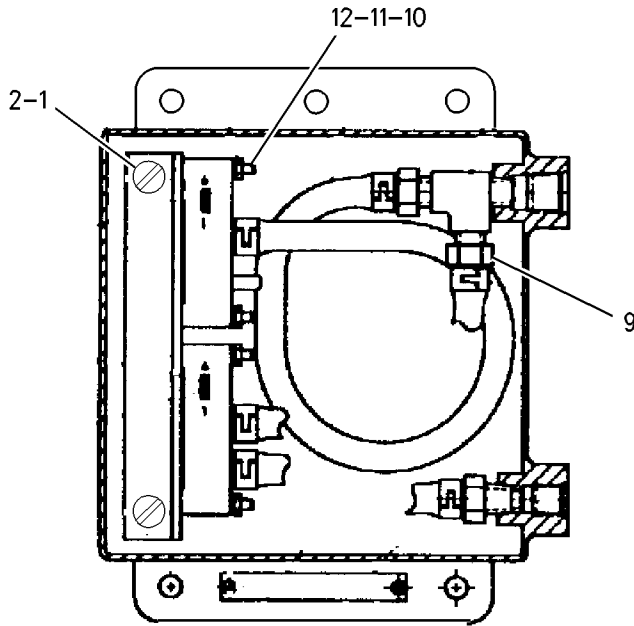
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME	SEE PAGE
					1 2 3 4 5 6 (PRODUCT LEVEL)	
	1	1	<b>4B-1237</b>	9	SCREW-MACHINE (10-32X12.7-MM)	
	2	1	<b>8C-7507</b>	6	LOCKWASHER	
	3	1	<b>4B-4274</b>	2	WASHER (5.5X13X1.2-MM THK)	
	4	1	<b>8F-1434</b>	2	LOCKWASHER	
	5	1	<b>4P-4251</b>	1	GASKET	
	6	1	<b>5S-4246</b>	1	LOCKWASHER	
	7	1	<b>6B-4540</b>	1	NUT (4-40-THD)	
	8	1	<b>3N-3691</b>	1	TERMINAL	
	9	1	<b>8T-3993</b>	6	CLAMP-HOSE	
	10	1	<b>4B-2041</b>	4	NUT (6-32-THD)	
	11	1	<b>4B-5324</b>	4	WASHER (3.9X9.6X1.2-MM THK)	
	12	1	<b>3L-8187</b>	4	LOCKWASHER	
BE	13	1	<b>8T-6342</b>		TUBE-HEAT SHRINK (27CM)	
	14	1	<b>7T-4577</b>	18	PIN-CONNECTOR	
BD	15	1	<b>6V-2689</b>		TUBE-HEAT SHRINK	
BD	16	1	<b>5P-5623</b>		WIRE-ELECTRICAL (16-GA)	
	17	1	<b>2L-8076</b>	3	TERMINAL (14-GA TO 16-GA)	

B-USE AS REQUIRED  
D-ORDER BY THE METER  
E-ORDER BY THE CENTIMETER

# ELECTRICAL AND STARTING SYSTEM

162-7292 CONTROL GP-GAS PRESSURE (contd.)

i01985447



GRAPHIC #1

<END>

g00643649

# ELECTRICAL AND STARTING SYSTEM

## 211-6713 CONTROL GP-GAS PRESSURE (CHG -00)

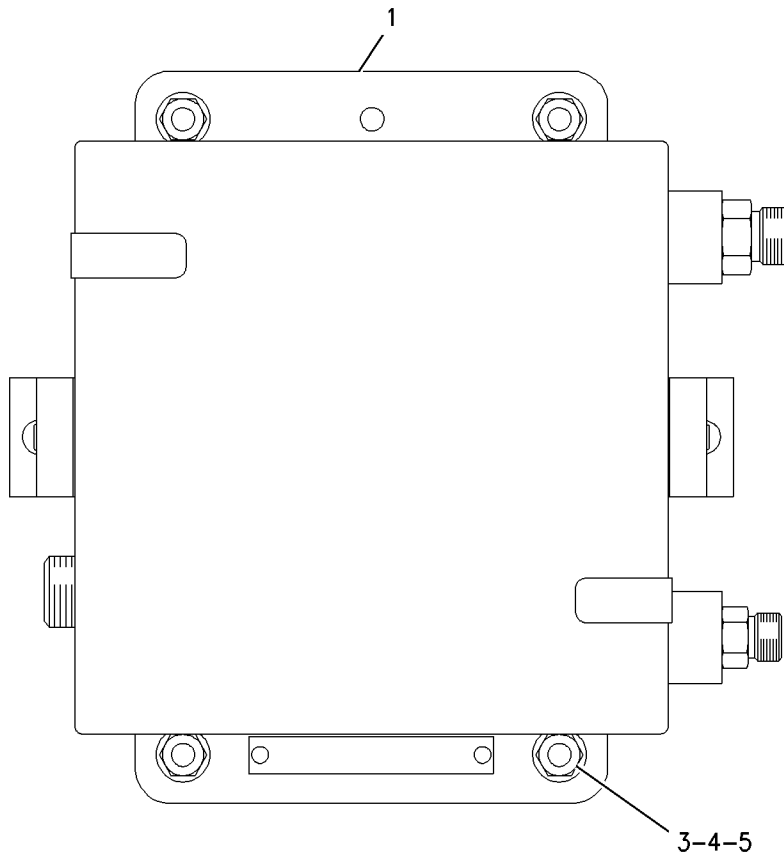
PART OF 162-7289 CONTROL GP-GAS PRESSURE

SMCS-1901

i01741424

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	162-7292	1	CONTROL GP-GAS PRESSURE						146
	3	1	6V-8185	4	NUT (1/4-20 THD)						
	4	1	4B-4674	4	WASHER (6.4X14.5X1.6MM THK)						
	5	1	3N-1968	4	MOUNT-SHOCK						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00891717

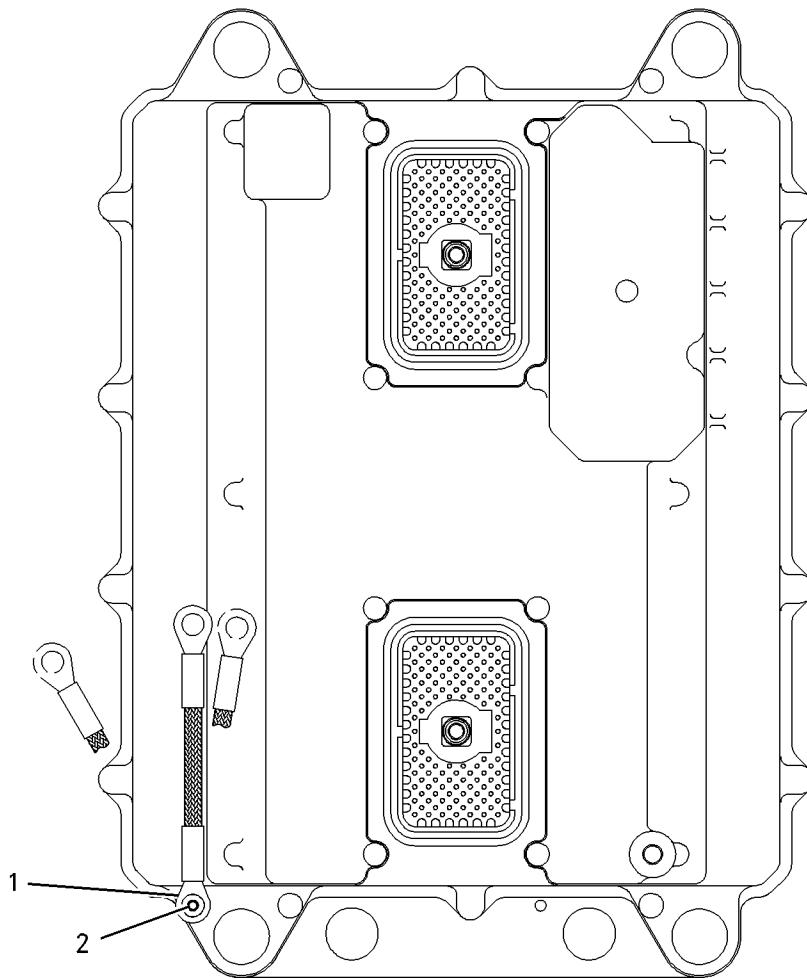
# ELECTRICAL AND STARTING SYSTEM

## 211-5228 CONTROL GP-UNPROGRAMMED (CHG -00 THRU -02) PART OF 210-9470 CONTROL GP-ENGINE ELECTRONIC

SMCS-7610

i01857883

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7X-6315	1	STRAP AS-GROUND						
	2	1	184-2472	1	SCREW-PAN HEAD (LUBRICATED)						



GRAPHIC #1

<END>

g00948724



# ELECTRICAL AND STARTING SYSTEM

## 206-6544 HARNESS AS-INTERCONNECT (CHG -00, -01)

SMCS-1408

i02030167

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	9X-4187	1	PLUG AS-CONNECTOR						
	213-4749	1	ADAPTER (CONDUIT)						
E	8T-6342		TUBE (3.18-MM ID) (8CM)						

E-ORDER BY THE CENTIMETER

<END>

## 195-6053 HARNESS AS-ENGINE (CHG -00 THRU -02)

LEFT SIDE

PART OF 195-6247 WIRING GP-ENGINE

SMCS-1408

i01596040

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	176-2943	1	KIT-PLUG						
			(KIT INCLUDES WEDGE AND PLUG AS)						
	8T-9605	1	PLUG AS-CONNECTOR						
	147-1443	1	PLUG AS-CONNECTOR						
	159-9322	1	SEAL-O-RING						

<END>

## 207-5399 HARNESS AS-PANEL (CHG -00, -01)

PART OF 195-6244 BOX GP-CONTROL PANEL

SMCS-1408, 7451

i01590749

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	147-1443	1	PLUG AS-CONNECTOR (70-PIN)						
	159-9322	1	SEAL-O-RING						
	160-7689	1	PLUG AS-CONNECTOR (70-PIN)						
	159-9322	1	SEAL-O-RING						
	160-7690	1	PLUG AS-CONNECTOR (70-PIN)						
	159-9322	1	SEAL-O-RING						
	9D-5421	1	RECEPTACLE AS-CONNECTOR (10-PIN)						

<END>

# ELECTRICAL AND STARTING SYSTEM

## 195-6246 IGNITION GP-GAS ENGINE (CHG -00 THRU -02)

SMCS - 1550

i02001531

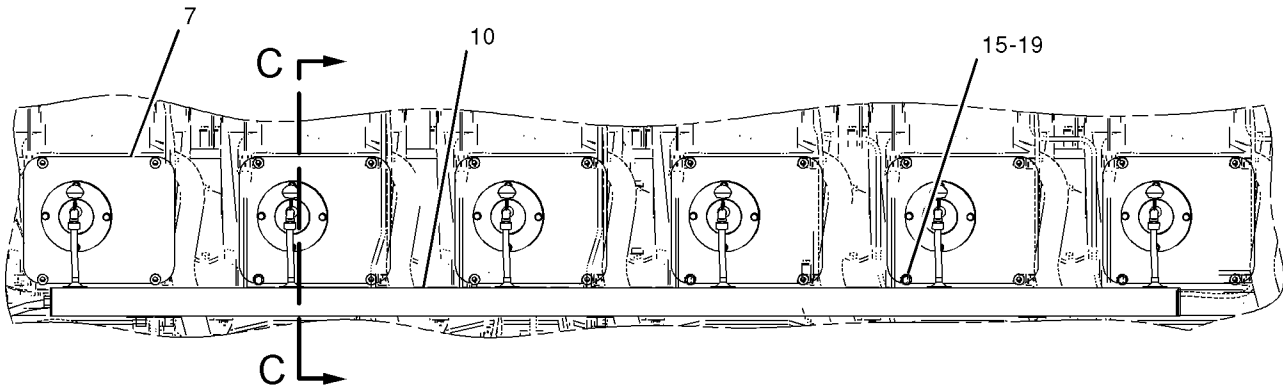
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	2	<b>1B-4971</b>	1	SPACER (0.4062X1X1-IN THK)						
	2	2	<b>4B-3388</b>	48	BOLT (5/16-18X1.125-IN)						
	3	2	<b>9M-1974</b>	48	WASHER-HARD (8.8X16X2-MM THK)						
	4	1	<b>9X-6772</b>	2	STRAP-CABLE						
	5	1	<b>9X-7688</b>	12	SEAL-O-RING						
	6	2	<b>127-0594</b>	2	WIRE AS-GROUND						
	7	1	<b>145-8634</b>	12	COVER (LIFTER GUIDE)						
	8	1	<b>150-2050</b>	12	EXTENSION AS						
					(EACH INCLUDES)						
		1	<b>122-0355</b>	1	TERMINAL AS						
		1	<b>187-3875</b>	1	SEAL-O-RING						
	9	1	<b>166-3796</b>	12	TUBE AS						
	10	1	<b>191-5007</b>	1	HARNESS AS (ENGINE IGNITION)(RH SIDE)						
		1	<b>4G-2544</b>	6	CONNECTOR-PLUG						
		1	<b>186-3736</b>	12	SOCKET-CONNECTOR						
		1	<b>9X-4813</b>	3	RECEPTACLE (3-PIN)						
		1	<b>9X-4814</b>	1	RECEPTACLE (6-PIN)						
		1	<b>207-4554</b>	6	CONDUIT AS						
		1	<b>207-4555</b>	1	CONDUIT AS						
	11	2	<b>191-5008</b>	1	HARNESS AS (ENGINE IGNITION)(LH SIDE)						
		2	<b>4G-2544</b>	6	CONNECTOR-PLUG						
		2	<b>186-3736</b>	12	SOCKET-CONNECTOR						
		2	<b>9X-4813</b>	3	RECEPTACLE (3-PIN)						
		2	<b>9X-4814</b>	1	RECEPTACLE (6-PIN)						
		2	<b>207-4554</b>	6	CONDUIT AS						
		2	<b>207-4555</b>	1	CONDUIT AS						
	12	1,2	<b>191-9346</b>	12	TRANSFORMER AS						
	13	2	<b>0L-2070</b>	1	BOLT (3/8-16X2.25-IN)						
	14	2	<b>0S-0509</b>	2	BOLT (3/8-16X0.75-IN)						
	15	1	<b>0S-1571</b>	47	BOLT (3/8-16X1.75-IN)						
	16	2	<b>0S-1594</b>	10	BOLT (3/8-16X1-IN)						
	17	1	<b>194-8518</b>	12	SPARK PLUG (ENGINE IGNITION)						
					(EACH INCLUDES)						
		1	<b>9Y-6792</b>	1	GASKET-SPARK PLUG						
	18	1	<b>3P-0650</b>	12	SEAL-O-RING						
	19	1,2	<b>3V-3308</b>	60	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	20	1	<b>6V-3830</b>	12	SEAL-O-RING						
	21	1	<b>6V-3834</b>	12	SEAL-O-RING						
	22	2	<b>8T-7529</b>	1	CLIP						

# ELECTRICAL AND STARTING SYSTEM

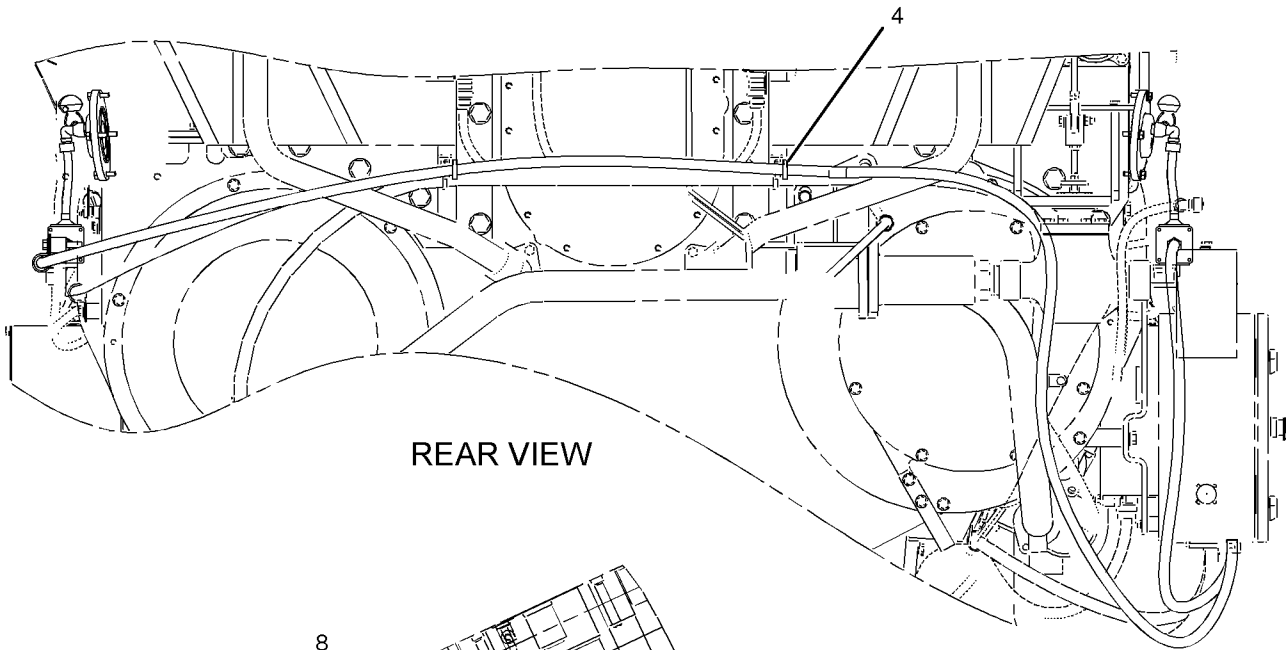
195-6246 IGNITION GP-GAS ENGINE (contd.)

i02001531

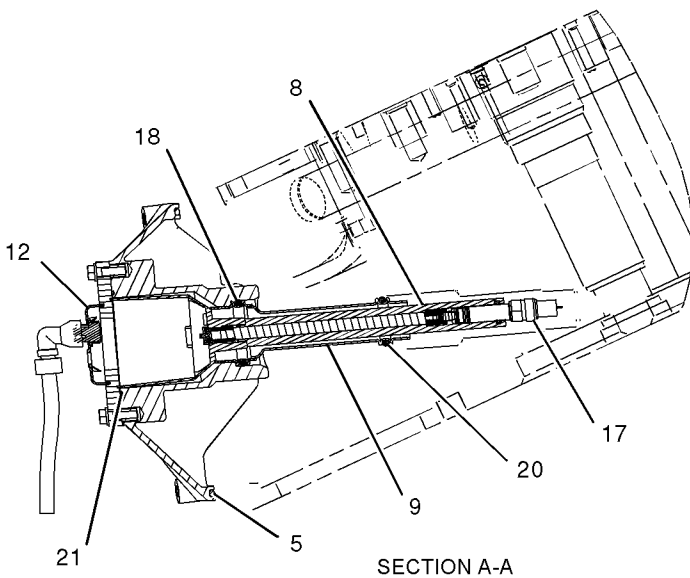
REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



RIGHT SIDE VIEW



REAR VIEW



SECTION A-A

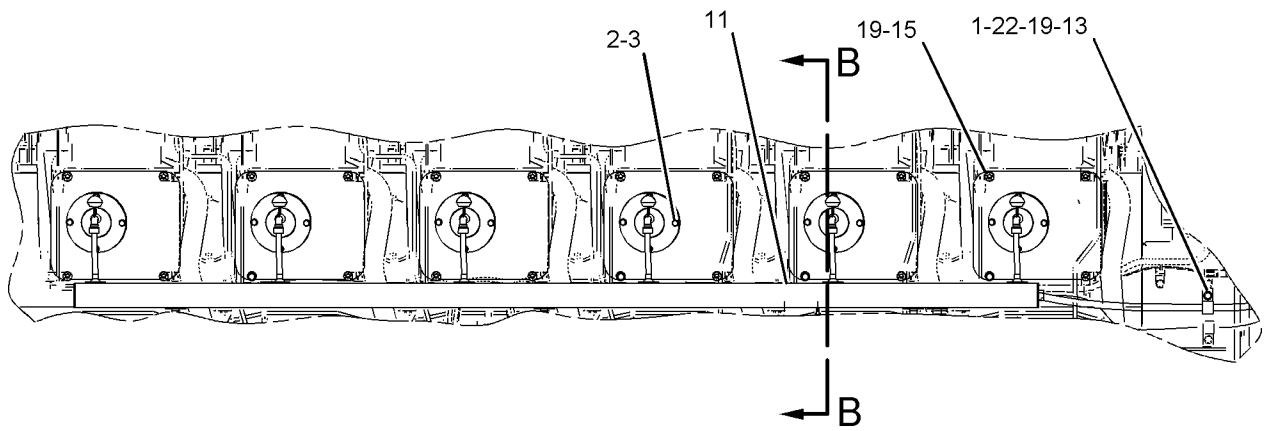
GRAPHIC #1

g01037445

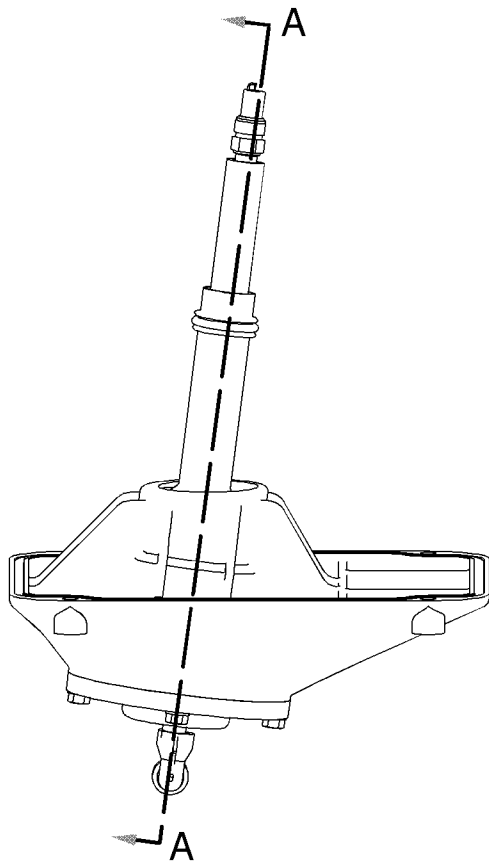
# ELECTRICAL AND STARTING SYSTEM

195-6246 IGNITION GP-GAS ENGINE (contd.)

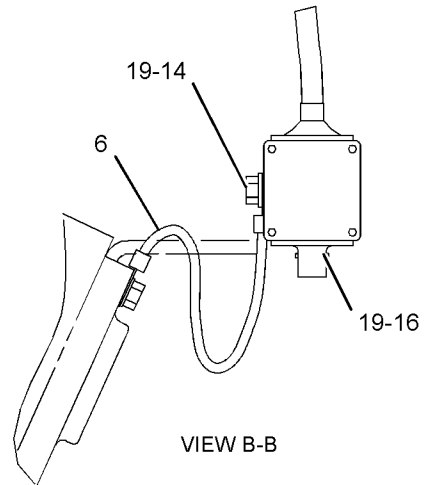
i02001531



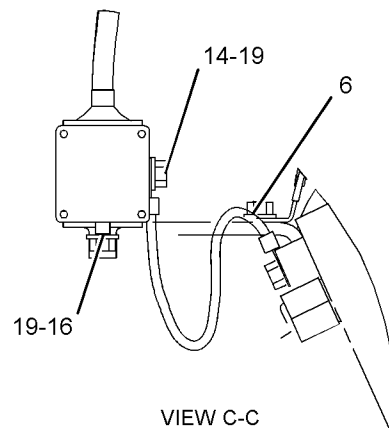
LEFT SIDE VIEW



TOP VIEW



VIEW B-B



VIEW C-C

GRAPHIC #2

<END>

g01037446

# ELECTRICAL AND STARTING SYSTEM

## 149-3992 LINES GP-AIR STARTING (CHG -03, -04) VANE STARTERS

SMCS-1451

i01943289

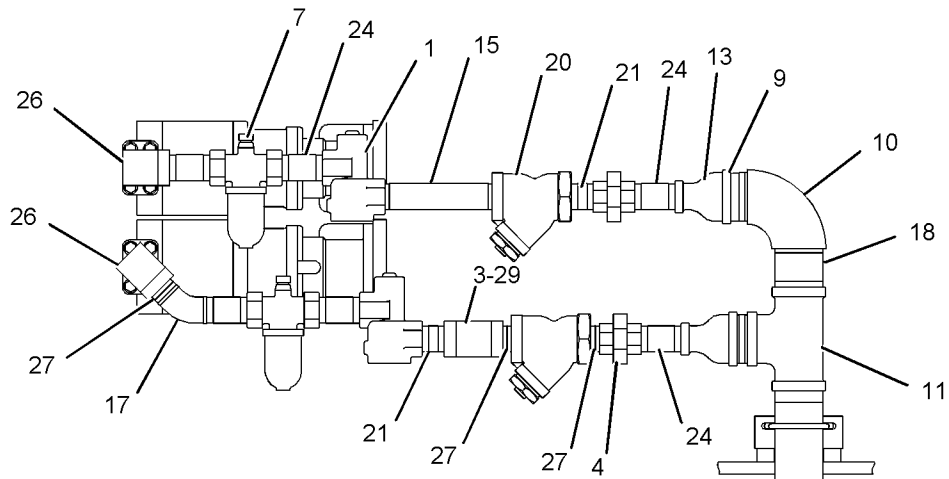
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
J	1	1	4N-3411	2	VALVE (AIR STARTER RELAY)						
	2	1	5H-0255	2	BOSS (1/2-13X1.0IN OAL)						
	3	1	6F-7701	1	TEE-PIPE						
	4	1	6V-8252	2	UNION-PIPE						
	5	1	8N-8451	2	GASKET						
	6	1	110-5282	2	FLANGE						
Y	7	1	119-6284	2	LUBRICATOR GP-AIR MOTOR						161
	8	1	140-0366	1	VALVE						
	9	1	140-5978	2	FITTING						
	10	1	140-5979	1	ELBOW						
	11	1	140-5980	1	TEE-PIPE						
	12	1	142-2872	1	BRACKET						
	13	1	143-0419	2	COUPLING						
	14	1	149-3995	2	NIPPLE-PIPE						
	15	1	149-3996	1	NIPPLE-PIPE						
	16	1	149-4009	1	NIPPLE-PIPE						
	17	1	160-7086	1	ELBOW						
	18	1	162-7255	1	FITTING-PIPE						
	19	1	162-7604	1	HOSE AS						
C	20	1	229-5867	2	STRAINER GP-AIR LINES						
C	21	1	229-9325	2	FITTING-PIPE						
	22	1	0S-1587	8	BOLT (1/2-13X1.75 IN)						
	23	1	2D-0032	1	U-BOLT						
	24	1	3L-1258	6	NIPPLE-PIPE						
	25	1	5P-8245	10	WASHER-HARD (13.5X25.5X3MM THK)						
	26	1	6F-8856	2	ELBOW						
C	27	1	6F-8858	3	FITTING						
	28	1	6H-1717	2	BOLT (1/2-13X1.125 IN)						
	29	1	7B-9665	1	PLUG						
	30	1	9L-9132	2	WASHER (10.2X25.5X2.5MM THK)						
	31	1	9S-8752	2	NUT-FULL (3/8-16 THD)						
AVAILABLE REPAIR KIT(S):											
J			7C-5105	1	KIT-VALVE SEAL (INCLUDES SEALS, RETAINER AND BUMPER)						

C-CHANGE FROM PREVIOUS TYPE  
 J-REPAIR KIT(S) AVAILABLE FOR PART(S) MARKED J  
 Y-SEPARATE ILLUSTRATION

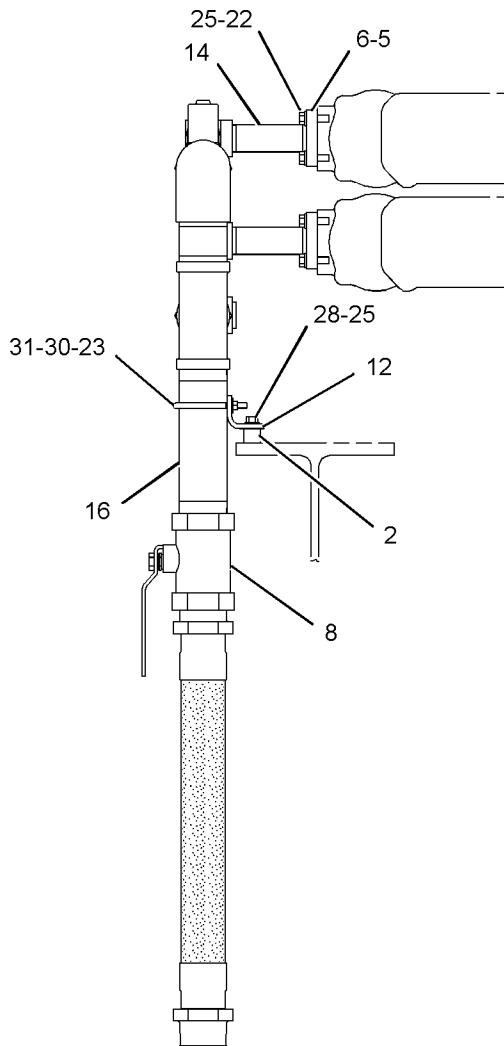
# ELECTRICAL AND STARTING SYSTEM

149-3992 LINES GP-AIR STARTING (contd.)

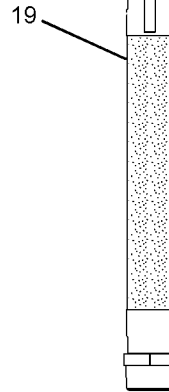
i01943289



LEFT SIDE VIEW



REAR VIEW



GRAPHIC #1

<END>

g01012669

# ELECTRICAL AND STARTING SYSTEM

## 217-3856 LINES GP-AIR STARTING (CHG -00, -00D1) 24-VDC

SMCS-1451

i02093750

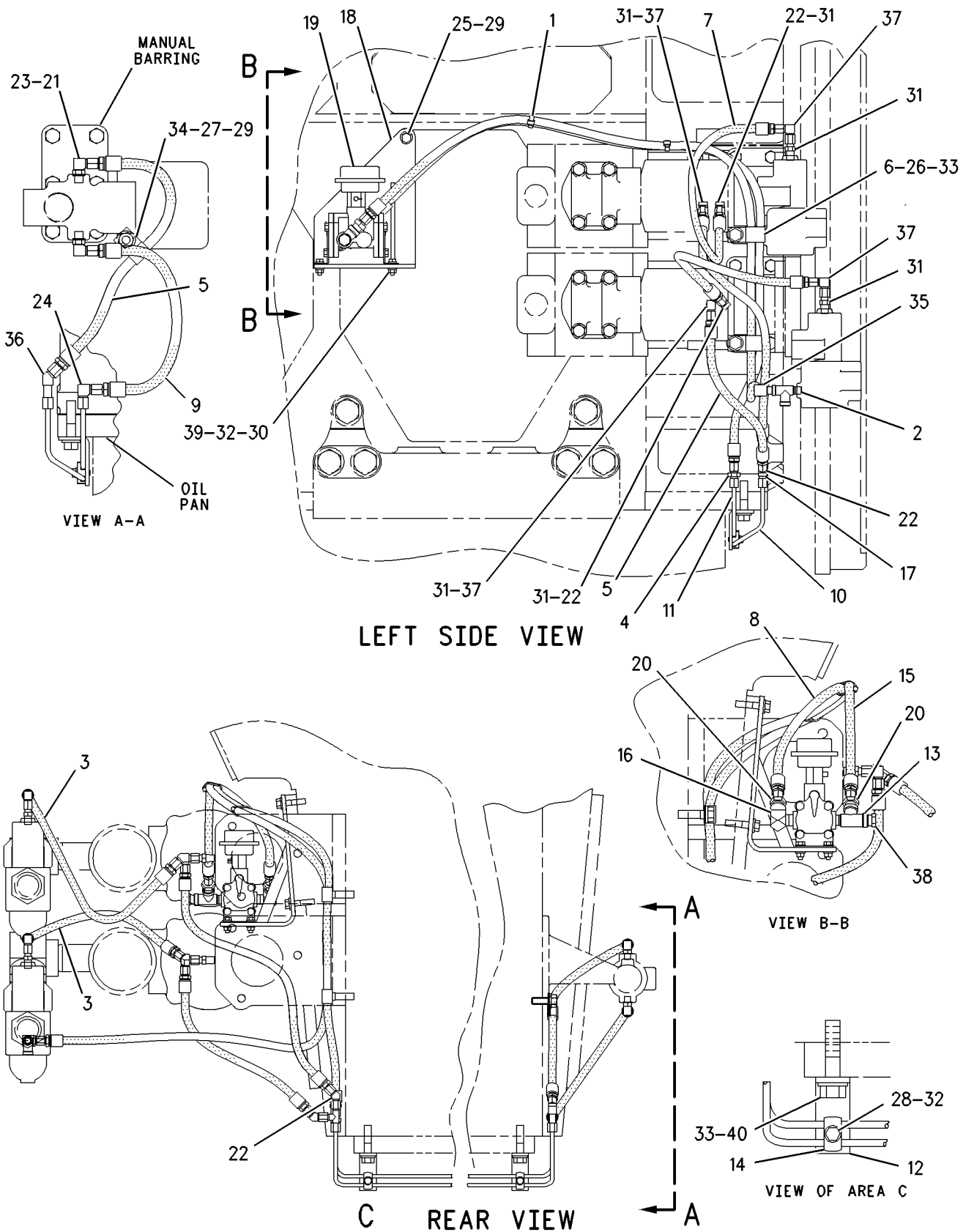
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3S-2093</b>	2	STRAP-CABLE						
	2	1	<b>2D-7325</b>	1	TEE-PIPE						
I	3	1	<b>2V-5956</b>	2	HOSE AS						
	4	1	<b>3J-7355</b>	1	UNION-FLARED						
I	5	1	<b>3V-6153</b>	2	HOSE AS						
	6	1	<b>4D-6988</b>	2	CLIP						
I	7	1	<b>4W-4905</b>	1	HOSE AS						
I	8	1	<b>5T-5760</b>	1	HOSE AS						
I	9	1	<b>6N-8659</b>	1	HOSE AS						
	10	1	<b>7C-0370</b>	1	TUBE AS						
	11	1	<b>7C-0371</b>	1	TUBE AS						
	12	1	<b>7C-0372</b>	2	BRACKET						
	13	1	<b>8L-6005</b>	1	TEE-PIPE						
	14	1	<b>8N-8471</b>	2	CLAMP-TUBE						
I	15	1	<b>8P-4955</b>	1	HOSE AS						
	16	1	<b>003-2143</b>	1	ELBOW						
	17	1	<b>005-5421</b>	1	TEE-UNION						
	18	1	<b>142-2868</b>	1	BRACKET AS						
Y	19	1	<i>164-0717</i>	1	VALVE GP-SOLENOID						181
	20	1	<b>001-6449</b>	2	CONNECTOR (FLARED)						
	21	1	<b>030-7946</b>	2	ELBOW						
	22	1	<b>030-7961</b>	4	ELBOW						
	23	1	<b>061-7538</b>	2	SEAL-O-RING						
	24	1	<b>067-6495</b>	1	ELBOW-FLARED						
	25	1	<b>0S-1571</b>	2	BOLT (3/8-16X1.75-IN)						
	26	1	<b>0S-1587</b>	2	BOLT (1/2-13X1.75-IN)						
	27	1	<b>0S-1594</b>	1	BOLT (3/8-16X1-IN)						
	28	1	<b>0S-1615</b>	2	BOLT (1/4-20X0.75-IN)						
	29	1	<b>3V-3308</b>	3	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	30	1	<b>4F-7957</b>	4	BOLT (1/4-20X0.875-IN)						
	31	1	<b>4S-6399</b>	6	CONNECTOR						
	32	1	<b>5P-0537</b>	10	WASHER-HARD (7.2X14.5X2-MM THK)						
M	33	1	<b>5P-8245</b>	4	WASHER-HARD (13.5X25.5X3-MM THK)						
	34	1	<b>6D-3479</b>	1	CLIP						
	35	1	<b>6K-1972</b>	1	ELBOW (90-DEG)						
	36	1	<b>7K-6462</b>	1	ELBOW						
	37	1	<b>7K-9197</b>	4	ELBOW						
	38	1	<b>8T-6767</b>	1	PLUG-PIPE						
	39	1	<b>9S-8750</b>	4	NUT-FULL (1/4-20-THD)						
	40	1	<b>9X-8873</b>	2	BOLT (1/2-13X2.25-IN)						

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

# ELECTRICAL AND STARTING SYSTEM

217-3856 LINES GP-AIR STARTING (contd.)

i02093750



GRAPHIC #1

<END>

g00873559



# ELECTRICAL AND STARTING SYSTEM

## 7W-0522 LUBRICATOR GP-AIR MOTOR (CHG -02)

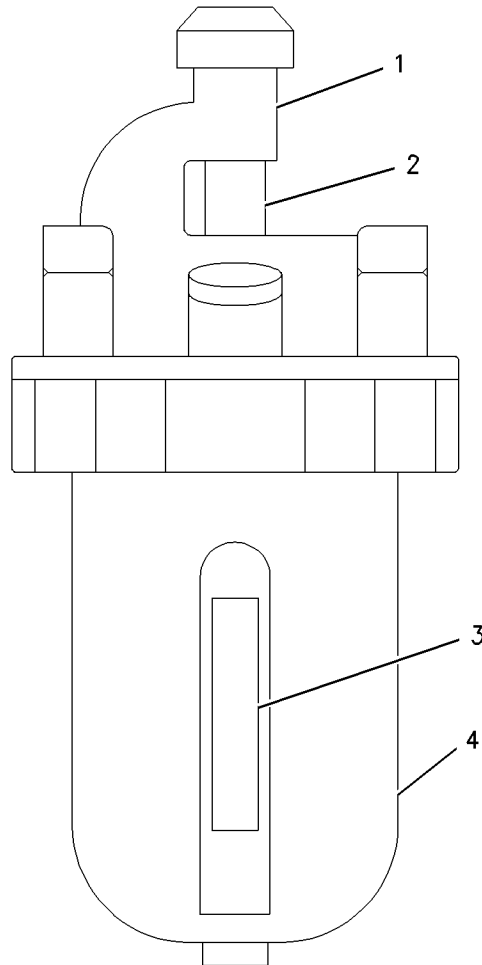
PART OF 216-8696 LINES GP-AIR

SMCS-1451

i01863158

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
C	1	1	158-6245	1	VALVE-NEEDLE						
C	2	1	158-6247	1	TUBE-GLASS						
C	3	1	158-6246	1	GAUGE-SIGHT (AIR START MOTOR)						
C	4	1	158-6248	1	BOWL						

C-CHANGE FROM PREVIOUS TYPE



GRAPHIC #1

<END>

g00726267

# ELECTRICAL AND STARTING SYSTEM

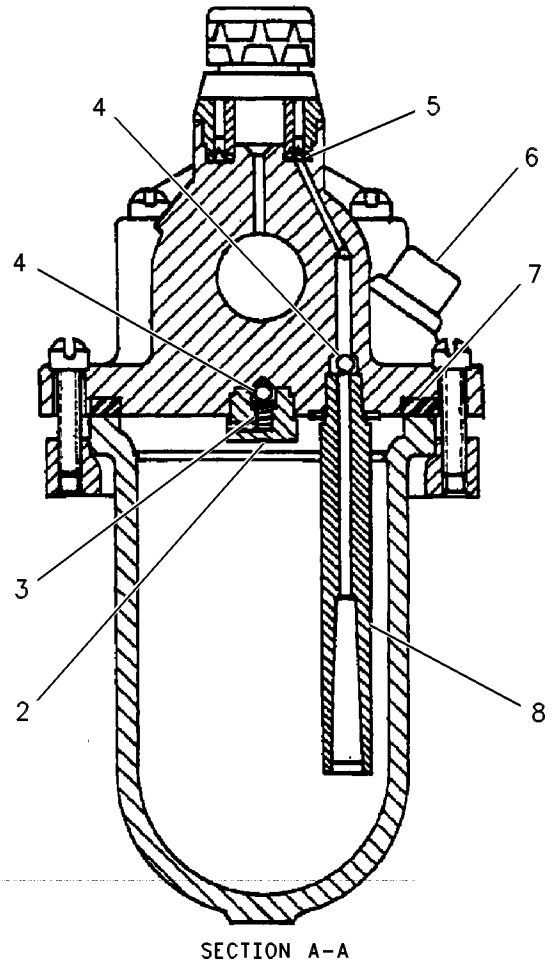
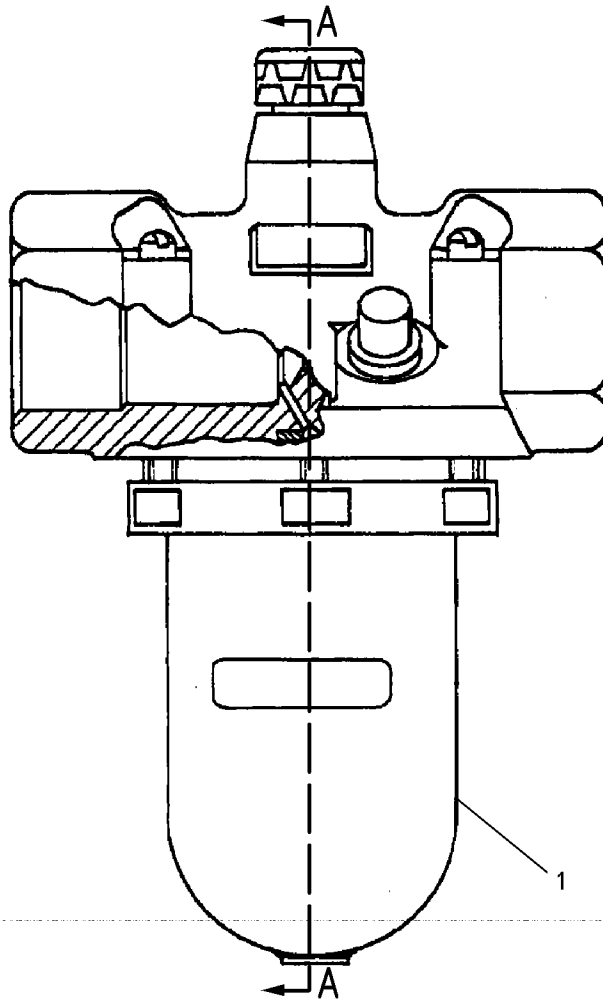
## 119-6282 LUBRICATOR GP-AIR MOTOR (CHG -00)

PART OF 119-6284 LUBRICATOR GP-AIR MOTOR  
FIELD REPLACEMENT ORDER 119-6284—PAGE 161

SMCS-1451

i01889307

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6N-2192	1	BOWL						
	2	1	6N-2191	1	SEAT						
	3	1	6N-2190	1	SPRING						
	4	1	6N-2188	2	BALL						
	5	1	7C-4429	1	SEAL						
	6	1	6N-2185	2	PLUG-FILLER						
	7	1	6N-2184	1	GASKET						
	8	1	6N-2193	1	TUBE-SIPHON						



GRAPHIC #1

<END>

g00103878

# ELECTRICAL AND STARTING SYSTEM

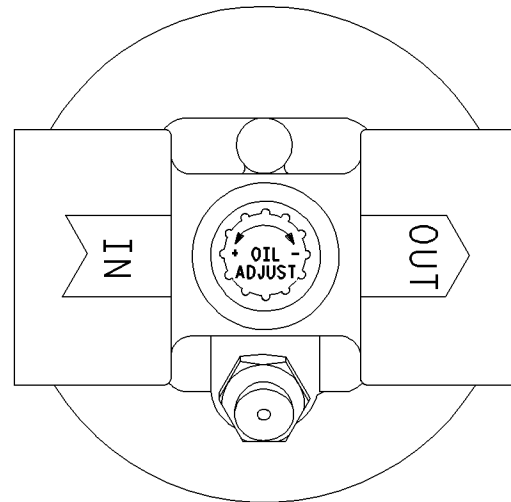
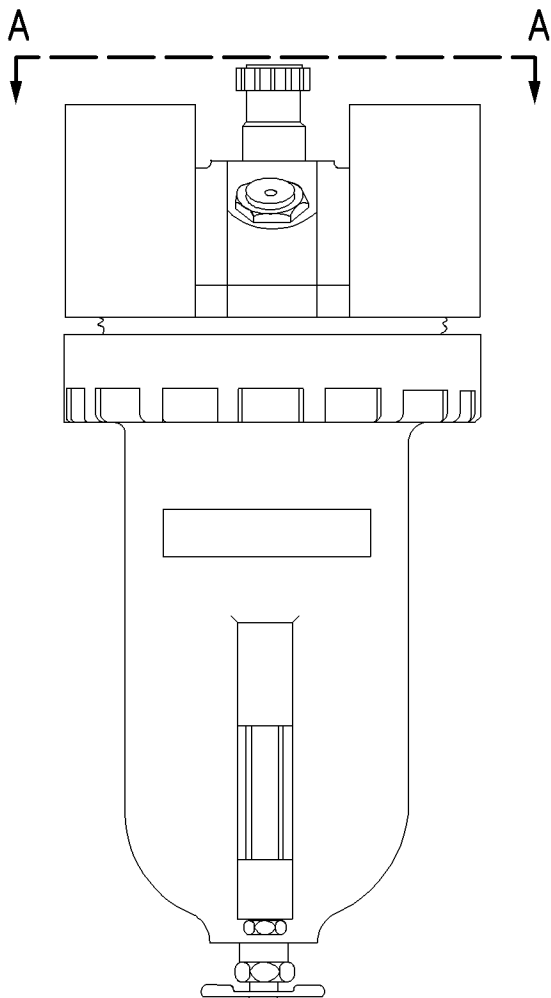
## 119-6283 LUBRICATOR GP-AIR MOTOR (CHG -00)

PART OF 119-6284 LUBRICATOR GP-AIR MOTOR  
FIELD REPLACEMENT ORDER 119-6284-PAGE 161

SMCS-1451

i01491135

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>

g00774411

# ELECTRICAL AND STARTING SYSTEM

## 119-6284 LUBRICATOR GP-AIR MOTOR (CHG -00, -01)

PART OF 149-3992 LINES GP-AIR STARTING

FIELD REPLACEMENT FOR 119-6282-PAGE 159: FOR 119-6283-PAGE 160

SMCS-1451

i01168549

NOTE	PART NUMBER	QTY	PART NAME	SEE PAGE
			1 2 3 4 5 6 (PRODUCT LEVEL)	
Y	119-6282	1	LUBRICATOR GP-AIR MOTOR	159
			-OR-	
Y	119-6283	1	LUBRICATOR GP-AIR MOTOR	160
Y-SEPARATE ILLUSTRATION				

<END>

# ELECTRICAL AND STARTING SYSTEM

## 195-6245 SENSOR GP-COMBUSTION (CHG -03, -04)

SMCS-1563

i02106383

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1,2	4S-5719	4	SPACER (10.31X25X12.7-MM THK)						
	2	1,2	7H-3937	4	LOCKWASHER						
	3	3	7W-6333	1	SPACER (10.5X20X10.7-MM THK)						
	4	2,3,4	9X-3495	12	CLIP AS						
	5	1,2,3,4	9X-6772	71	STRAP-CABLE						
	6	1	116-0118	2	CLIP						
Y	7	1,3	116-2649	4	SENSOR GP-TEMPERATURE (THERMOCOUPLE) (THERMOCOUPLE)						170
	8	1,2	127-0594	2	WIRE AS-GROUND						
	9	3	128-8831	1	BRACKET						
	10	3	136-4605	12	EXTENSION AS (EACH INCLUDES)						
		3	226-4813	1	KIT-FASTENER						
		3	226-4814	10	SPRING						
		3	226-4815	10	CLIP						
	11	1,2	141-6380	8	MOUNT-FLEXIBLE						
Y	12	2,4	152-0807	12	SENSOR GP-TEMPERATURE (THERMOCOUPLE)						172
	13	3	159-3219	12	SENSOR-COMBUSTION						
C	14	1,2	242-8988	2	MODULE GP-ELECTRONIC (INTEGRATED COMBUSTION SENSING)						
	15	3	188-4926	12	CONNECTOR AS						
	16	4	192-4329	10	BRACKET						
	17	2,4	194-6862	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		2,4	6I-0755	1	PLUG AS-CONNECTOR						
18		2,3	194-6863	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		2,3	6I-0755	1	PLUG AS-CONNECTOR						
19		2,3	194-6864	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		2,3	6I-0755	1	PLUG AS-CONNECTOR						
20		1,4	194-6866	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		1,4	6I-0755	1	PLUG AS-CONNECTOR						
21		1,4	194-6867	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		1,4	6I-0755	1	PLUG AS-CONNECTOR						
22		1,4	194-6868	2	HARNESS AS-SENSOR (COMBUSTION) (EACH INCLUDES)						
		1,4	6I-0755	1	PLUG AS-CONNECTOR						
23		2	195-6054	1	HARNESS AS-SENSOR (COMBUSTION, RH) (ISCM RH)						
		2	176-2943	1	KIT-PLUG (2-PIN) (KIT INCLUDES PLUG AS AND WEDGE)						
24		1	195-6055	1	HARNESS AS-SENSOR (COMBUSTION, LH) (ISCM LH)						
		1	176-2943	1	KIT-PLUG (2-PIN) (KIT INCLUDES PLUG AS AND WEDGE)						
25		1,2	198-0112	2	BRACKET AS (EACH INCLUDES)						
		1,2	4K-9097	2	NUT-WELD (5/16-18-THD)						
26		1,2	198-0113	2	BRACKET AS (EACH INCLUDES)						
		1,2	9F-6445	4	NUT-WELD (1/4-24-THD)						
27		1,2	198-0114	2	PLATE						
28		1,2	0L-2070	4	BOLT (3/8-16X2.25-IN)						
29		1,2,4	0S-1571	51	BOLT (3/8-16X1.75-IN)						
30		3	0S-1590	1	BOLT (3/8-16X2-IN)						
31		1,4	0S-1594	12	BOLT (3/8-16X1-IN)						
32		1,2	0S-1614	8	BOLT (1/4-20X0.5-IN)						

# ELECTRICAL AND STARTING SYSTEM

195-6245 SENSOR GP-COMBUSTION (contd.)

i02106383

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	33	1,2	<b>0S-1617</b>	4	BOLT (5/16-18X0.75-IN)						
	34	3	<b>0S-1620</b>	2	BOLT (1/2-13X0.75-IN)						
	35	3	<b>125-5356</b>	24	DISC-INSULATOR						
	36	1,2,4	<b>3V-3308</b>	71	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	37	3	<b>4F-4879</b>	1	BOLT (3/8-16X.5-IN)						
	38	3	<b>4P-7428</b>	2	CLIP						
	39	1,2,4	<b>4P-7581</b>	61	CLIP						
	40	1,2	<b>5P-0537</b>	8	WASHER-HARD (7.2X14.5X2-MM THK)						
M	41	3	<b>5P-8245</b>	2	WASHER-HARD (13.5X25.5X3-MM THK)						
	42	1,2,3,4	<b>5P-9297</b>	12	CLIP						
	43	1,2	<b>5S-0003</b>	16	NUT (5/16-18-THD)						
	44	1,3	<b>6B-5072</b>	2	BUSHING-TERMINAL						
	45	2,3	<b>6K-8179</b>	12	CLIP						
	46	3	<b>6V-5050</b>	12	SEAL-O-RING						
	47	4	<b>9L-9132</b>	10	WASHER (10.2X25.5X2.5-MM THK)						
	48	1,2	<b>9M-1974</b>	20	WASHER-HARD (8.8X16X2-MM THK)						
	49	1,2	<b>1S-9593</b>	4	STRAP-CABLE						
	50	1,2	<b>234-5895</b>	4	CAP						

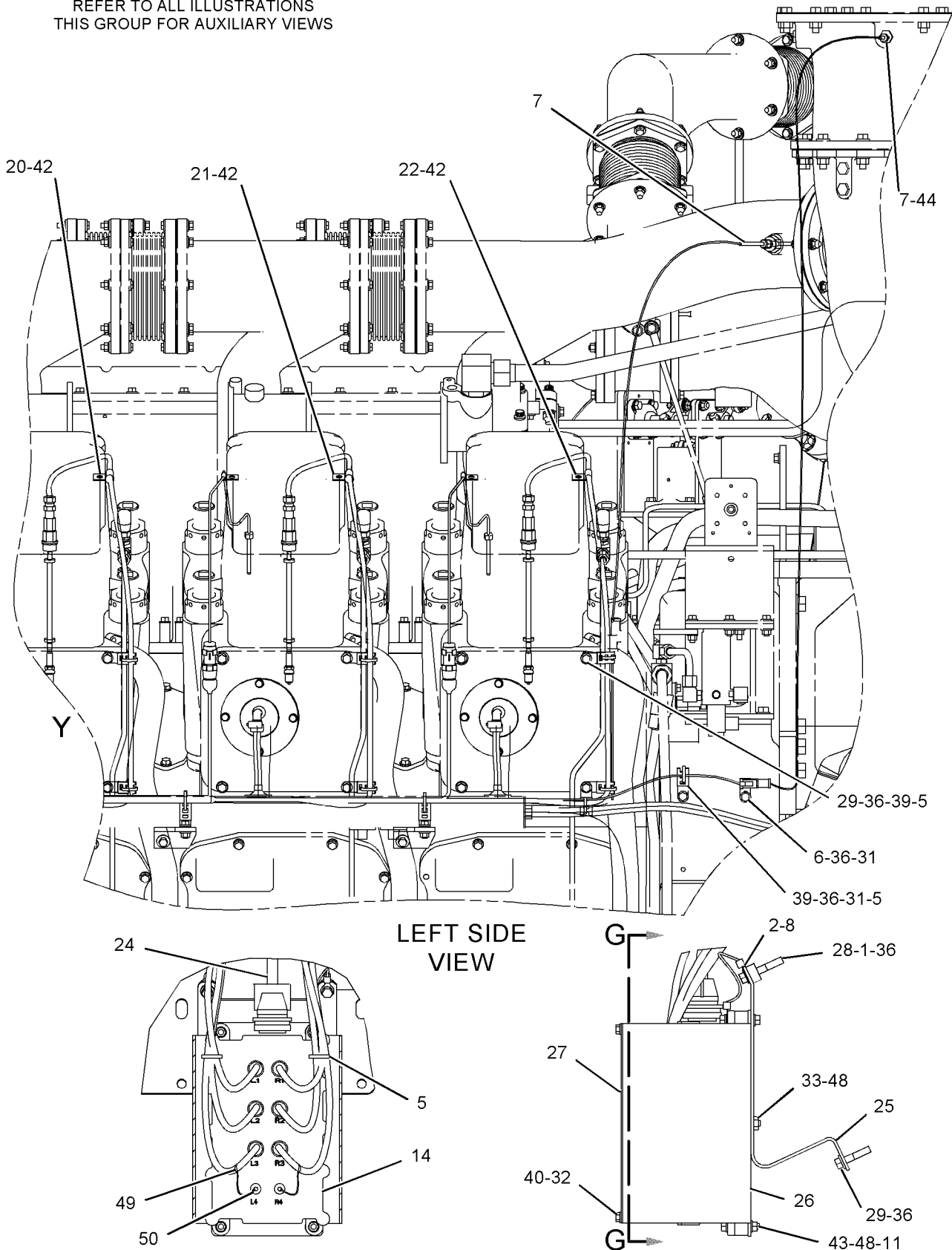
C-CHANGE FROM PREVIOUS TYPE  
M-METRIC PART  
Y-SEPARATE ILLUSTRATION

# ELECTRICAL AND STARTING SYSTEM

195-6245 SENSOR GP-COMBUSTION (contd.)

i02106383

REFER TO ALL ILLUSTRATIONS  
THIS GROUP FOR AUXILIARY VIEWS



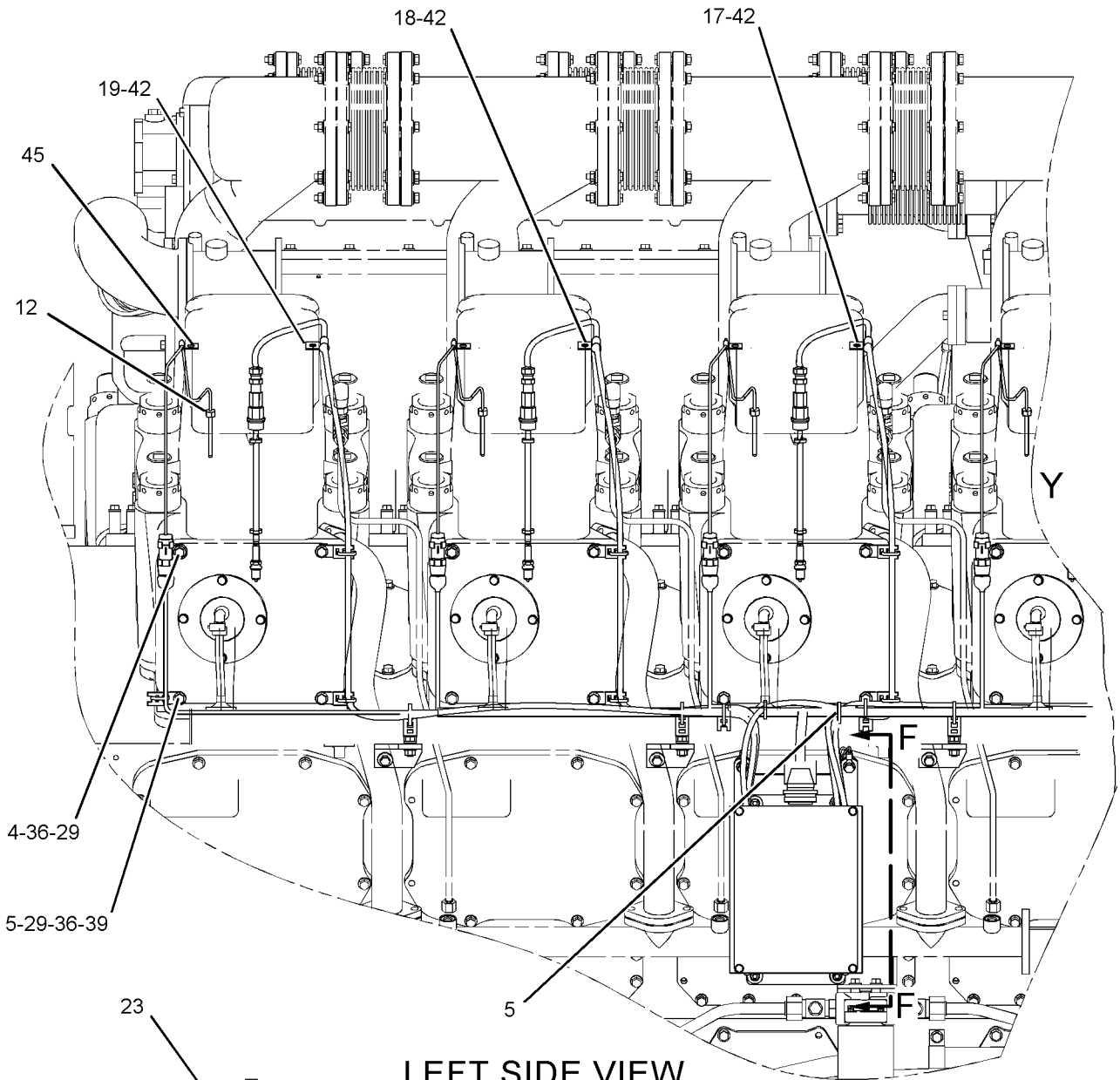
GRAPHIC #1

g01075663

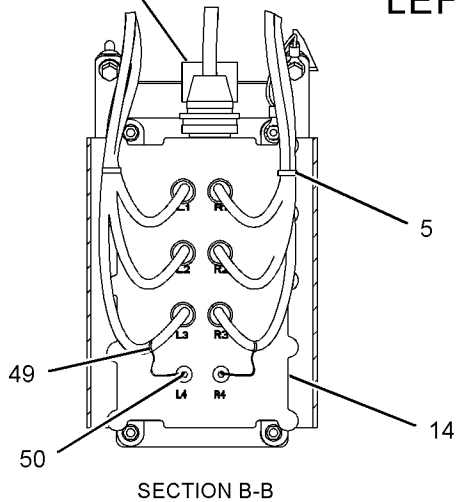
# ELECTRICAL AND STARTING SYSTEM

195-6245 SENSOR GP-COMBUSTION (contd.)

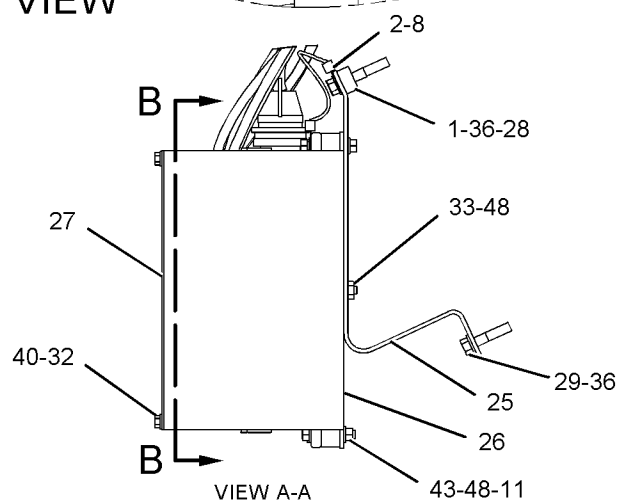
i02106383



LEFT SIDE VIEW



SECTION B-B



VIEW A-A

GRAPHIC #2

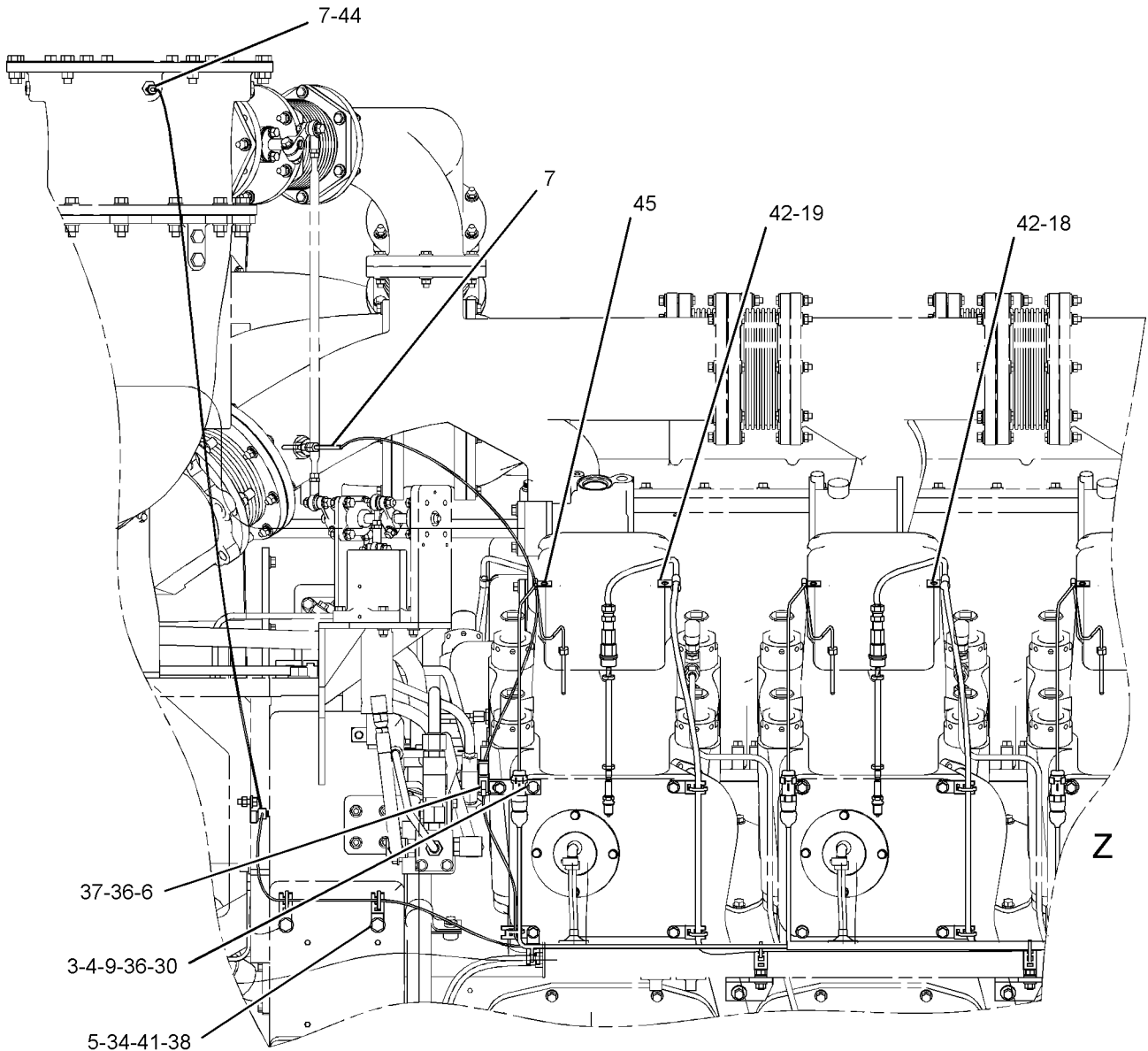
g01075661



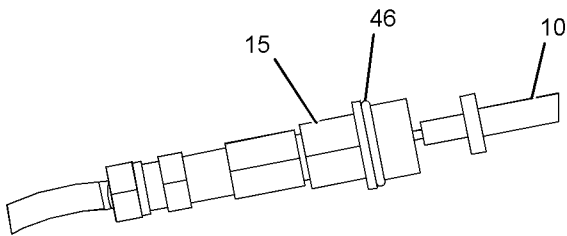
# ELECTRICAL AND STARTING SYSTEM

195-6245 SENSOR GP-COMBUSTION (contd.)

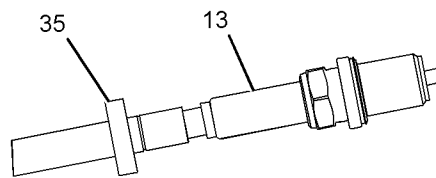
i02106383



RIGHT SIDE VIEW



VIEW OF AREA E



VIEW OF AREA H

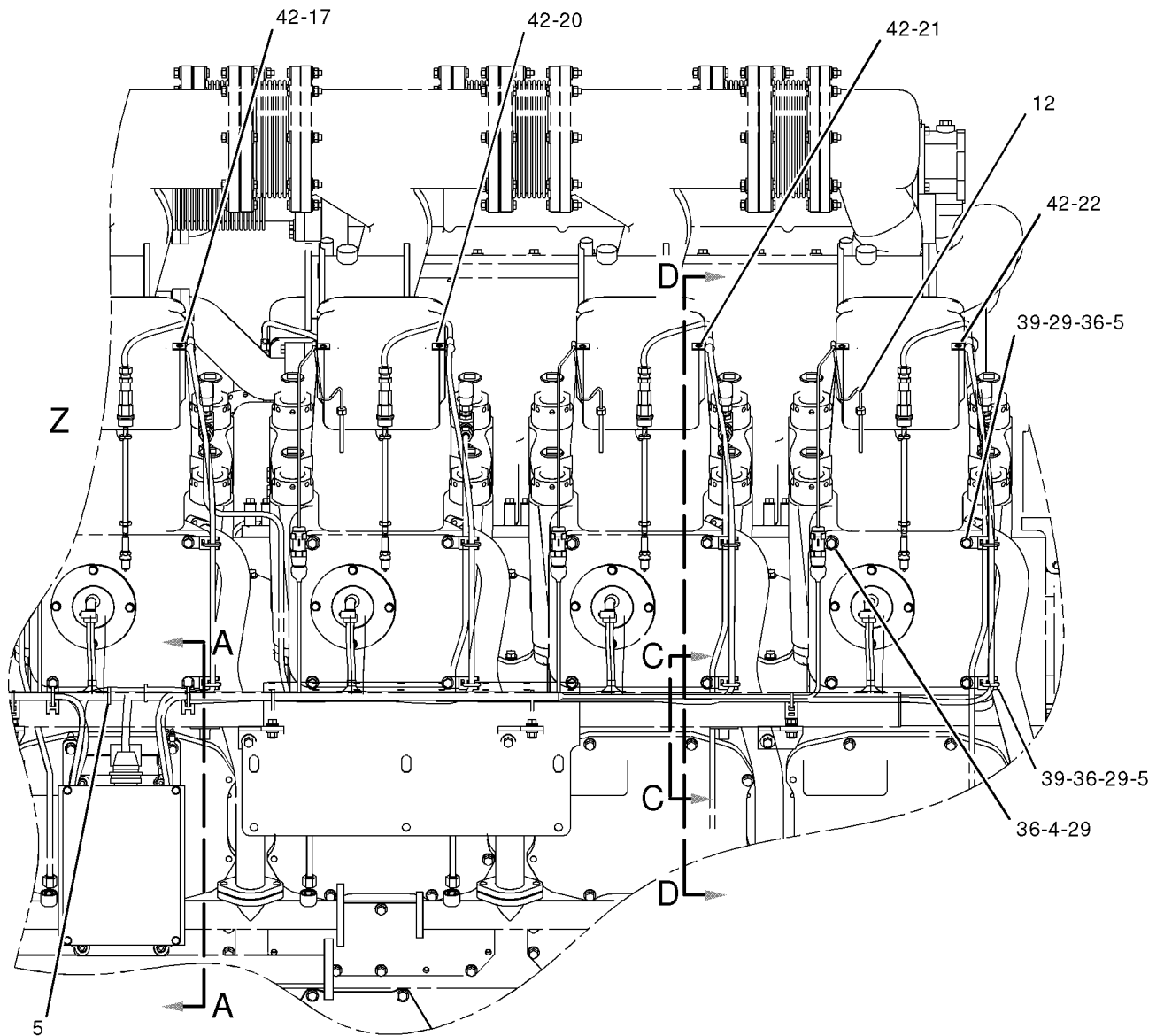
GRAPHIC #3

g01075662

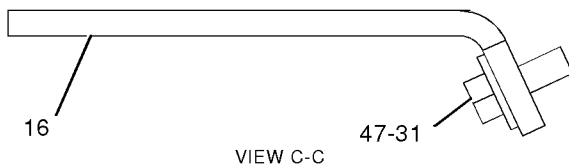
# ELECTRICAL AND STARTING SYSTEM

195-6245 SENSOR GP-COMBUSTION (contd.)

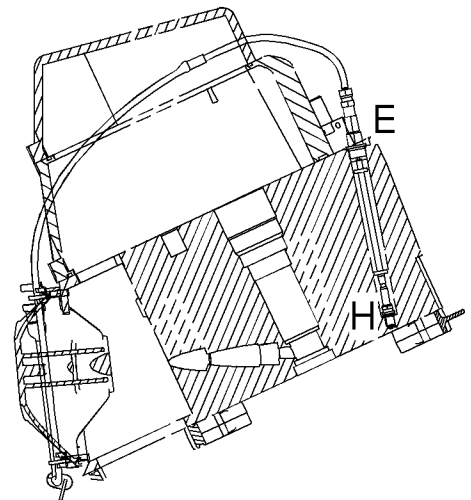
i02106383



RIGHT SIDE VIEW



VIEW C-C



SECTION D-D

GRAPHIC #4

<END>

g01075871

# ELECTRICAL AND STARTING SYSTEM

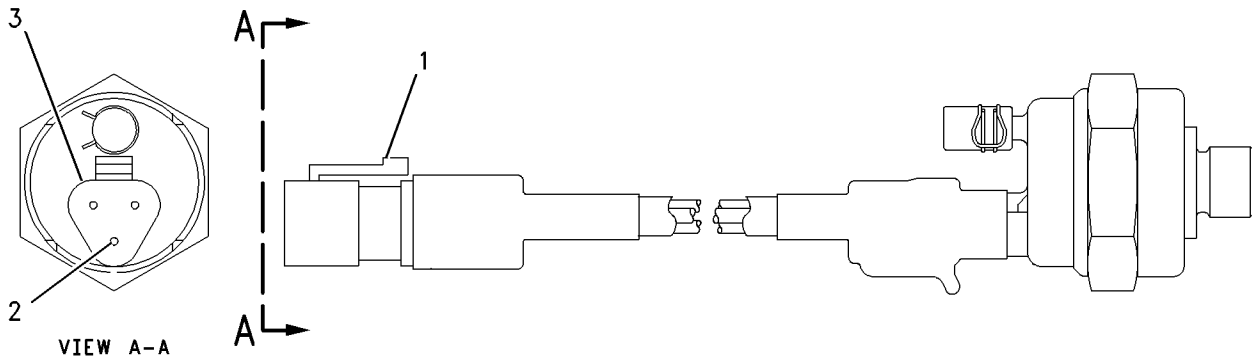
## 207-6859 SENSOR GP-PRESSURE (CHG -00, -01)

PART OF 195-6247 WIRING GP-ENGINE

SMCS-1718, 1916, 1917, 1923, 1924, 1925

i01707299

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	155-2260	1	KIT-CONNECTING PLUG (3-PIN)						
					(KIT INCLUDES PLUG AS AND WEDGE)						
		1	155-2276	1	WEDGE-PLUG LOCK (3-PIN)						
	2	1	186-3736	3	SOCKET-CONNECTOR						
	3	1	155-2276	1	WEDGE-PLUG LOCK (3-PIN)						



GRAPHIC #1

<END>

g00884318

# ELECTRICAL AND STARTING SYSTEM

## 7C-1897 SENSOR GP-SPEED (CHG -00 THRU -04)

MAGNETIC, LOW OUTPUT

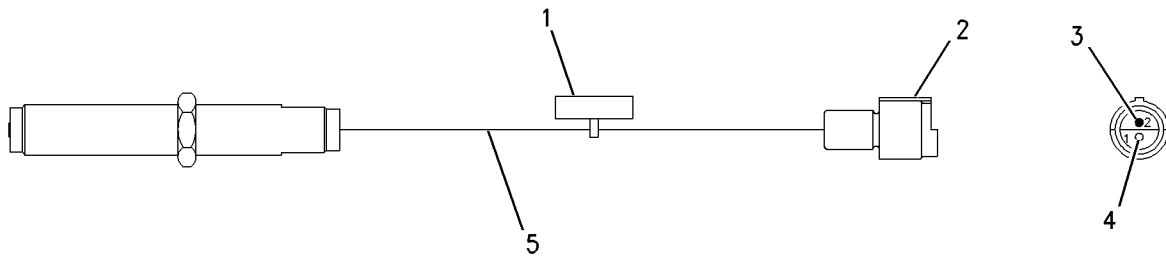
PART OF 134-8347 HOUSING GP-FRONT

SMCS-1907

i01636657

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	STRAP-MARKER						
	2	1	7N-9738	1	HOUSING-RECEPTACLE						
	3	1	7N-7780	1	PIN-CONNECTOR						
	4	1	7N-7779	1	SOCKET-CONNECTOR						
E	5	1	9X-1386		SLEEVE (14CM)						

E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00845691

# ELECTRICAL AND STARTING SYSTEM

## 116-2649 SENSOR GP-TEMPERATURE (CHG -00 THRU -02) THERMOCOUPLE

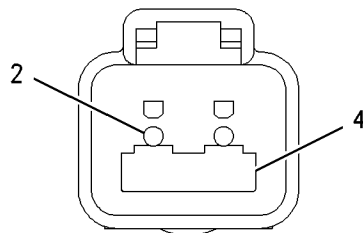
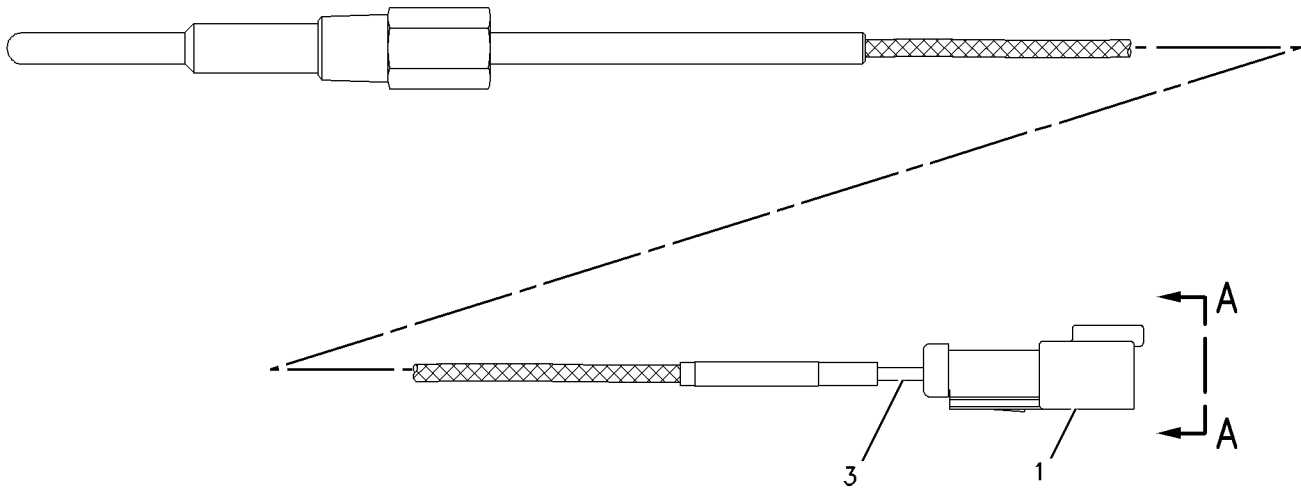
PART OF 195-6245 SENSOR GP-COMBUSTION

SMCS-1906, 1919, 1921, 1922, 1928, 1929

i01671880

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) (KIT INCLUDES RECEPTACLE AS. AND WEDGE)						
	2	1	8T-8729	2	PIN-CONNECTOR						
E	3	1	8T-6342		TUBE (3.18MM ID) (10CM)						
	4	1	3E-3365	1	WEDGE-RECEPTACLE LOCK (2 PIN)						

E-ORDER BY THE CENTIMETER



SECTION A-A

GRAPHIC #1

<END>

g00730811

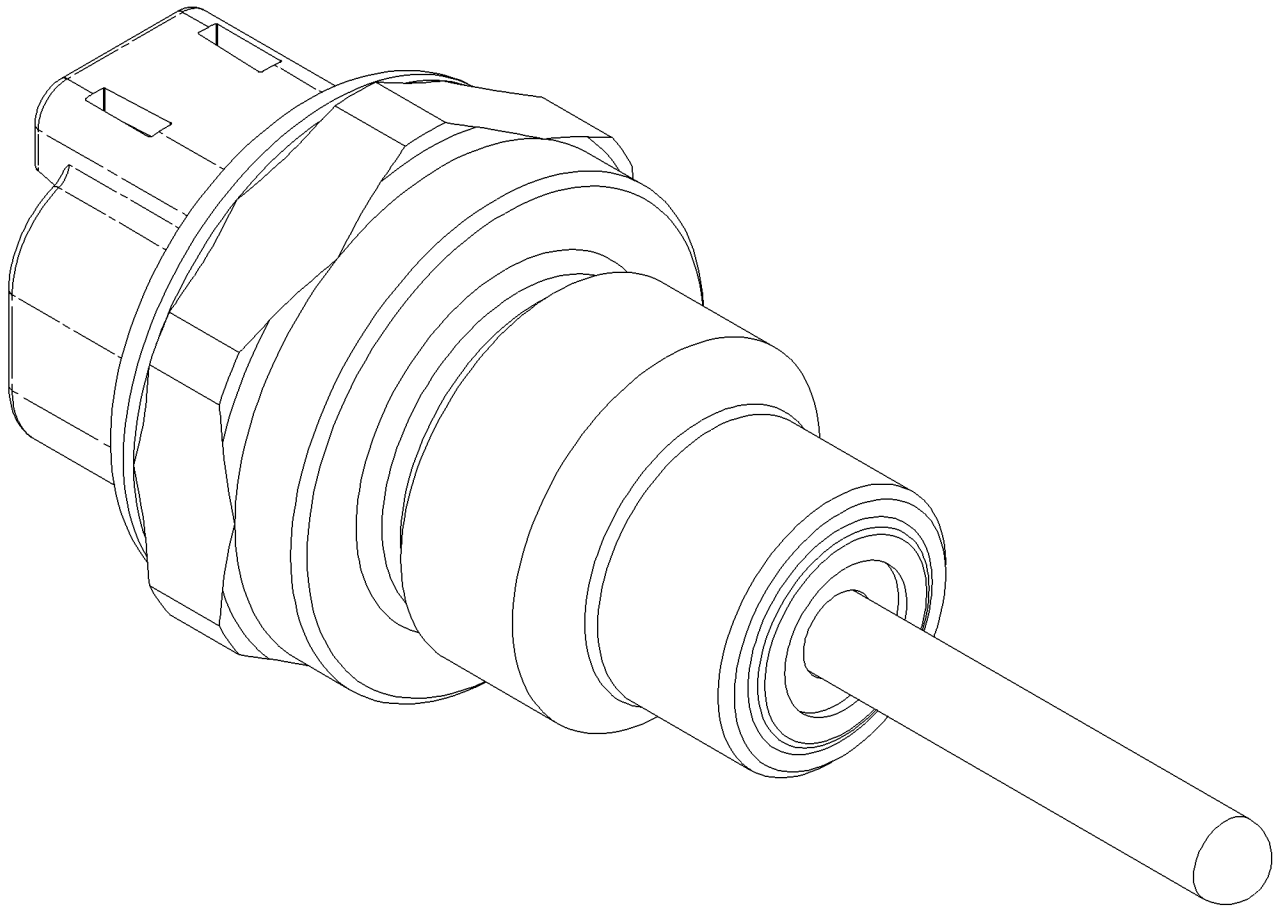
# ELECTRICAL AND STARTING SYSTEM

## 130-9811 SENSOR GP-TEMPERATURE (CHG -00 THRU -05) PART OF 195-6247 WIRING GP-ENGINE

SMCS-1906, 1919, 1921, 1922, 1928, 1929

i01849255

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>

g00945099

# ELECTRICAL AND STARTING SYSTEM

## 152-0807 SENSOR GP-TEMPERATURE-THERMOCOUPLE

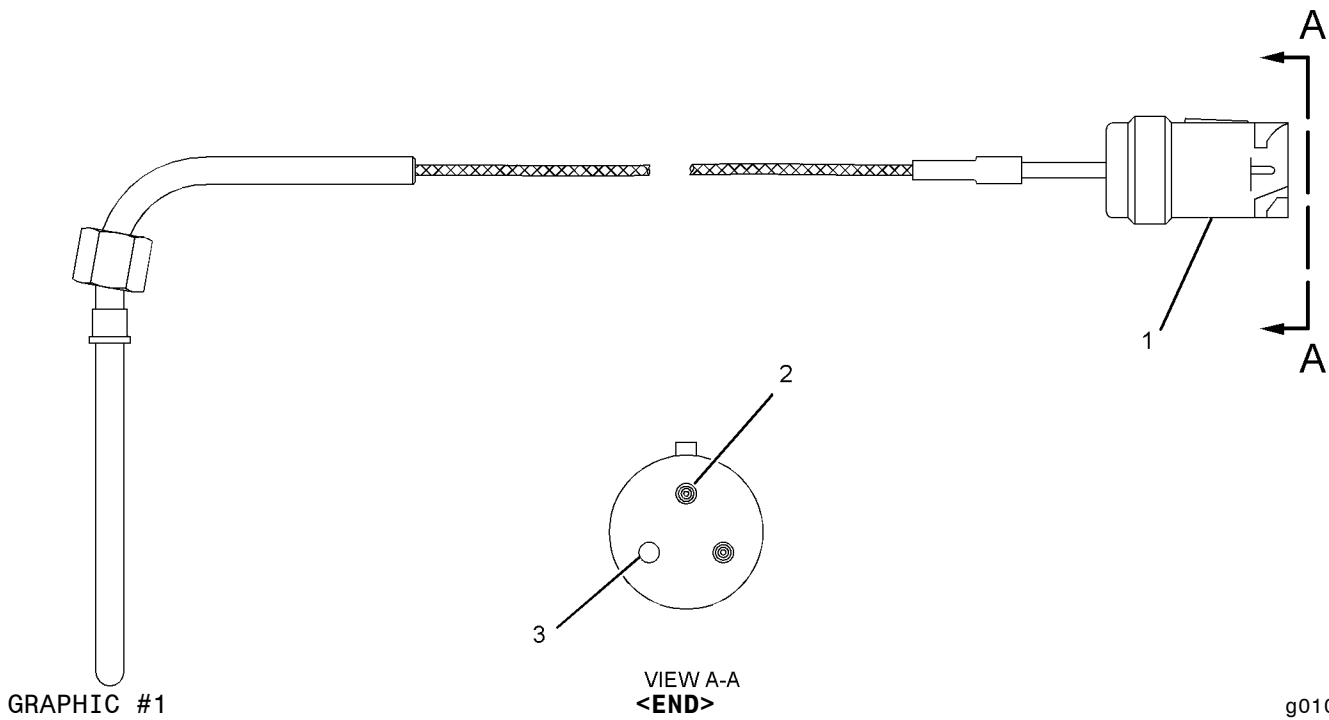
(CHG -00 THRU -04)

PART OF 195-6245 SENSOR GP-COMBUSTION

SMCS-1906, 1919, 1921, 1922, 1928, 1929

i02085906

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8T-8732	1	RECEPTACLE (3-PIN)						
	2	1	186-3735	2	PIN-CONNECTOR						
	3	1	8T-8737	1	PLUG-SEAL						



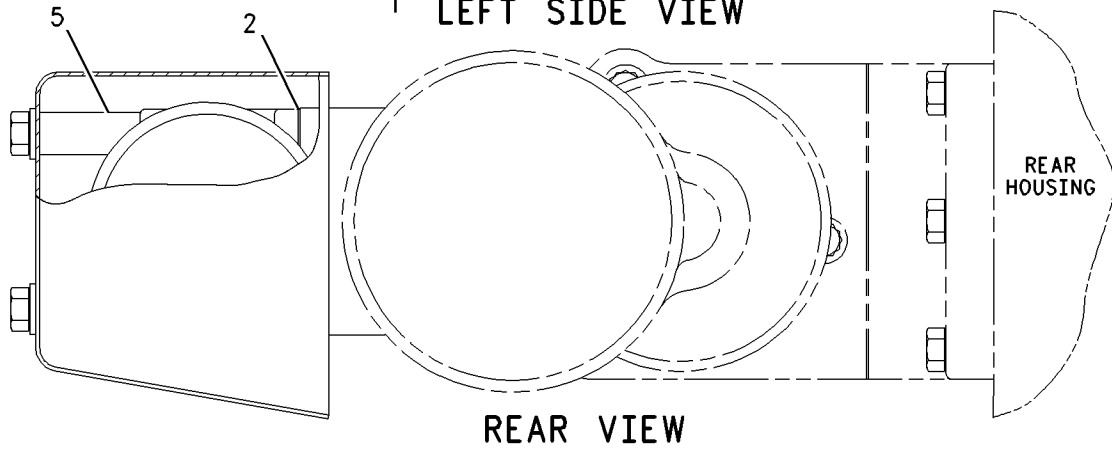
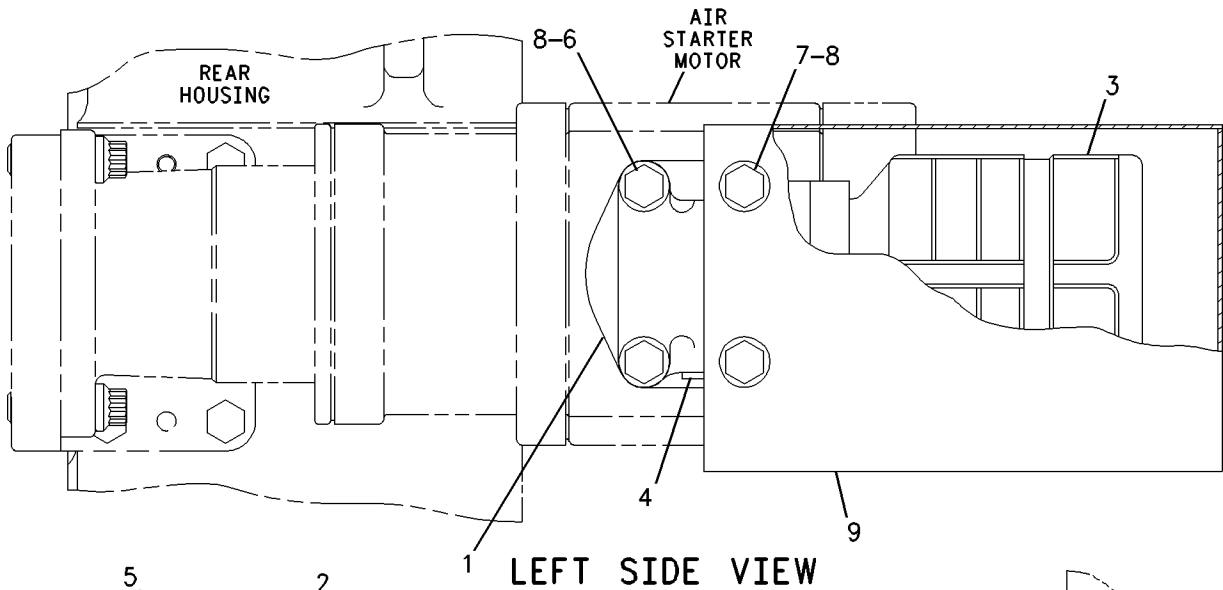
# ELECTRICAL AND STARTING SYSTEM

## 116-3767 SILENCER GP-AIR STARTING (CHG -00 THRU -02) CANNOT BE USED WITH TURBINE STARTERS

SMCS-1468

i01437246

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	8N-8447	1	ELBOW						
	2	1	8N-8452	1	GASKET						
	3	1	8N-8488	1	SILENCER-AIR STARTING						
	4	1	8T-6762	1	PLUG-PIPE						
	5	1	8S-5107	2	SPACER (2 IN THK)						
	6	1	9X-8875	2	BOLT (1/2-13X3.5IN)						
	7	1	2A-1531	2	BOLT (1/2-13X6.5IN)						
	8	1	5P-8245	4	WASHER-HARD (13.5X25.5X3MM THK)						
	9	1	190-0399	1	DEFLECTOR AS						



GRAPHIC #1

<END>

g00752627



# ELECTRICAL AND STARTING SYSTEM

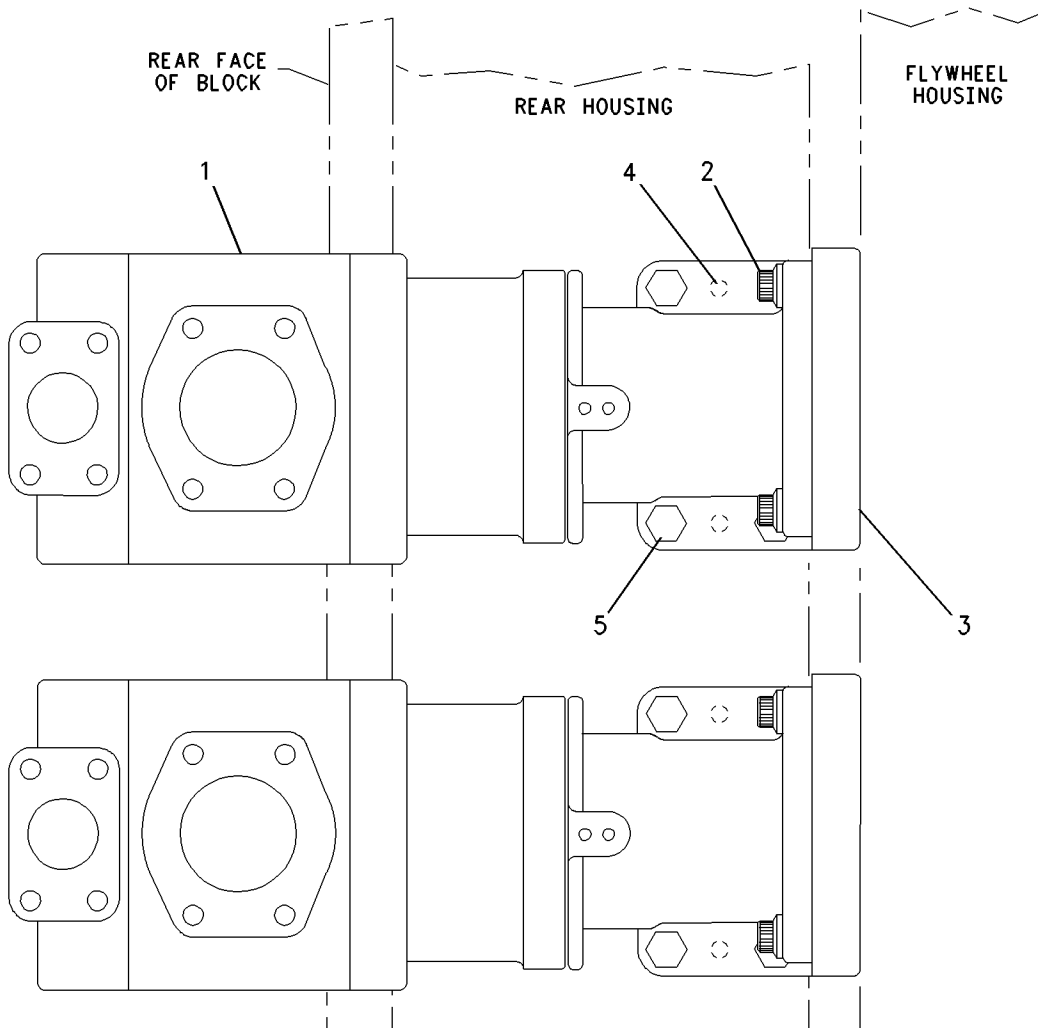
## 7W-0014 STARTING MOTOR GP-AIR (CHG -00 THRU -02) STANDARD ROTATION

SMCS-1451

i01564518

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
YR	1	1	<b>7W-0016</b>	2	STARTING MOTOR GP-AIR						175
	2	1	<b>8S-2332</b>	6	BOLT-12 POINT HEAD (5/8-11X1.75 IN)						
	3	1	<b>4W-6273</b>	2	SUPPORT AS-MOTOR (EACH INCLUDES)						
	4	1	<b>6V-3538</b>	2	DOWEL						
	5	1	<b>0S-1587</b>	12	BOLT (1/2-13X1.75 IN)						

R-REMFG PART MAY BE AVAILABLE  
Y-SEPARATE ILLUSTRATION



# ELECTRICAL AND STARTING SYSTEM

## 7W-0016 STARTING MOTOR GP-AIR\*R (CHG -00)

STANDARD ROTATION

PART OF 7W-0014 STARTING MOTOR GP-AIR

SMCS-1451

i01981876

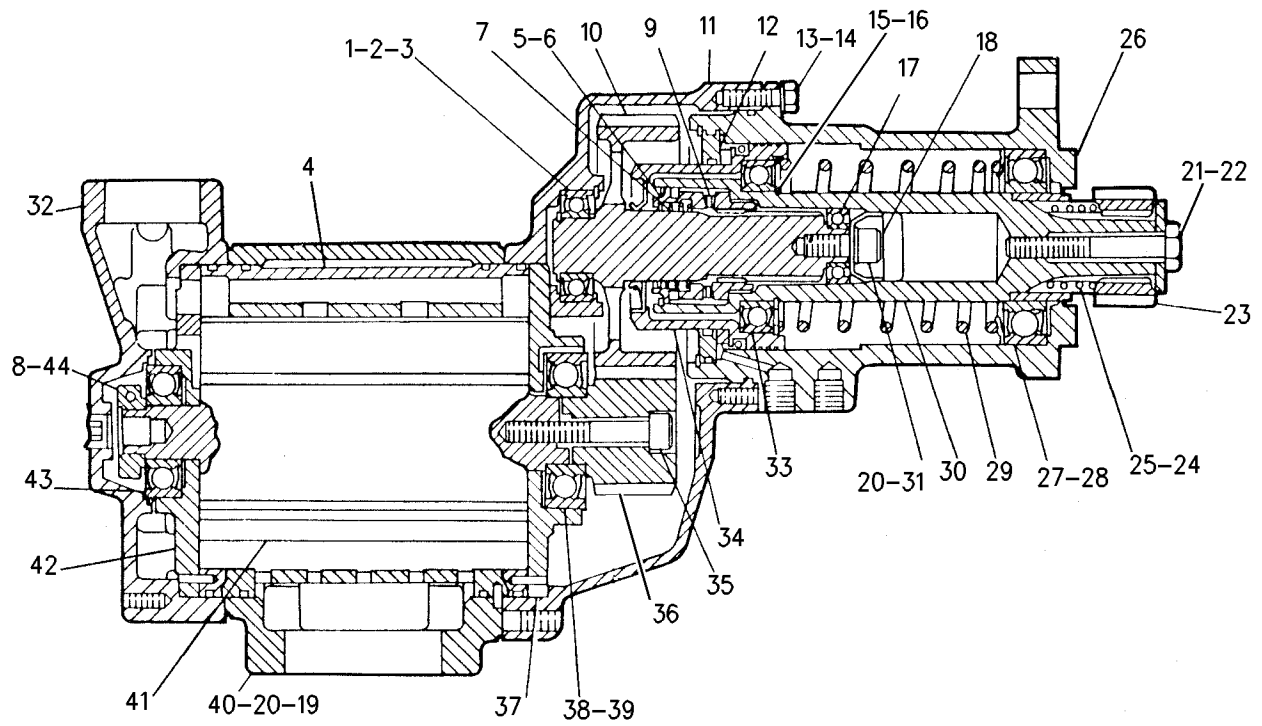
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6V-3916	1	BALL BEARING						
	2	1	1L-8497	1	RING-SNAP (SMALL)						
	3	1	6J-7855	1	RING-LOCK (LARGE)						
	4	1	5N-8383	1	CYLINDER						
	5	1	5N-8375	1	CUP-SPRING						
	6	1	6V-3935	1	RING-RETAINING						
	7	1	5N-8381	1	SPRING-CLUTCH						
M	8	1	6V-3937	1	BOLT (M5X0.8X20-MM)						
	9	1	5N-9574	1	JAW AS-CLUTCH (DRIVEN)						
	10	1	2W-6084	1	GEAR AS-DRIVE (24 & 38 TEETH)						
	11	1	5N-8387	1	CASE-GEAR						
	12	1	5N-8424	1	BULKHEAD						
M	13	1	6V-3940	8	BOLT (M8X1.25X25-MM)						
	14	1	3B-4505	8	LOCKWASHER						
	15	1	3J-7719	1	RING-RETAINING (INNER)						
	16	1	6V-3971	1	RING-RETAINING (OUTER)						
	17	1	7F-8671	1	BALL BEARING						
	18	1	5N-8428	1	WASHER-GEAR (10.1X34X15.5-MM THK)						
M	19	1	5N-8427	4	BOLT-MOTOR (M10X1.5X180-MM)						
	20	1	6V-3959	5	LOCKWASHER						
M	21	1	5N-8403	1	SCREW-PINION (M12X1.25X70-MM)						
	22	1	5N-8425	1	WASHER (12.2X41.5X4.5-MM THK)						
	23	1	7W-1650	1	PINION-DRIVE (11 TEETH)						
	24	1	5N-8374	1	SLEEVE-SPRING						
	25	1	5N-8380	1	SPRING-PINION						
	26	1	2W-6082	1	KIT-DRIVE HOUSING						
	27	1	8B-7624	1	BALL BEARING						
	28	1	5N-8379	1	SEAT-SPRING						
	29	1	5N-8372	1	SPRING-RETURN						
	30	1	5N-8384	1	SHAFT-DRIVE						
M	31	1	6V-3938	1	BOLT (M10X1.5X20-MM)						
	32	1	5N-8363	1	COVER AS						
		1	4D-3118	3	PLUG-PIPE						
	33	1	5N-8377	1	BEARING-DRIVE SHAFT						
	34	1	5N-8373	1	PISTON						
M	35	1	6V-3939	1	BOLT (M12X1.75X60-MM)						
	36	1	7W-1649	1	PINION-ROTOR (15 TEETH)						
	37	1	5N-8365	1	PLATE-FRONT END						
	38	1	6V-1394	1	BALL BEARING						
	39	1	039-4317	2	WASHER-SPRING						
	40	1	5N-8364	1	HOUSING-MOTOR						
	41	1	7W-4154	1	ROTOR						
	42	1	5N-8367	1	PLATE-REAR END						
	43	1	5P-9514	1	BALL BEARING						
	44	1	5N-8378	1	NUT-ROTOR CLAMP (M5X0.8-THD)						
					AVAILABLE REPAIR KIT(S):						
			5N-8390	1	KIT-SEAL & VANE (AIR STARTING MOTOR)						

M-METRIC PART

# ELECTRICAL AND STARTING SYSTEM

7W-0016 STARTING MOTOR GP-AIR (contd.)

i01981876



GRAPHIC #1

<END>

g00811200

# ELECTRICAL AND STARTING SYSTEM

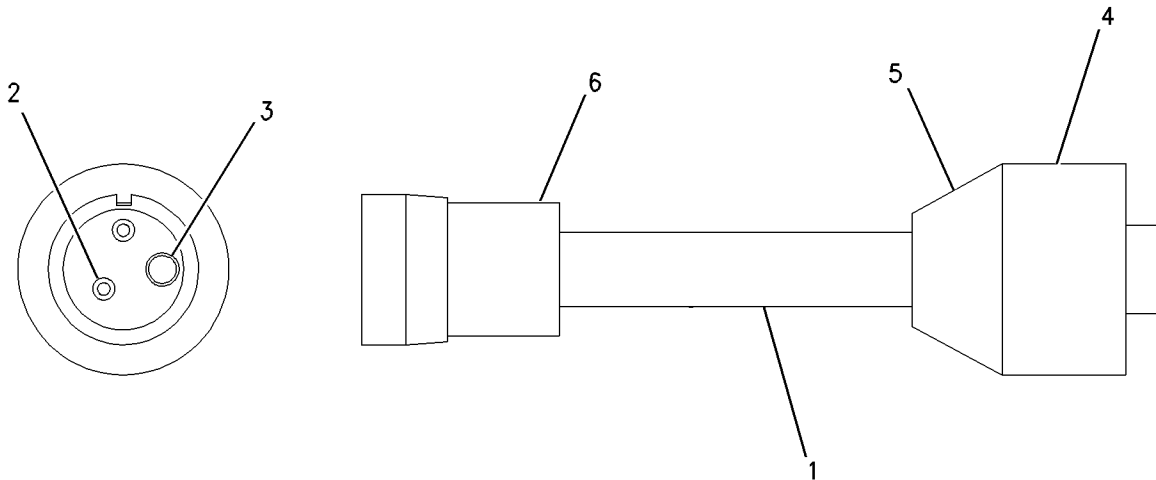
## 211-3504 SWITCH AS-PRESSURE (CHG -00, -01) PART OF 195-6247 WIRING GP-ENGINE

SMCS-7400

i02093758

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 (8-CM)						
	2	1	<b>186-3736</b>	2	SOCKET-CONNECTOR						
	3	1	<b>8T-8737</b>	1	PLUG-SEAL						
	4	1	<b>162-6209</b>	1	COVER						
	5	1	<b>202-2569</b>	1	SWITCH AS (PRESSURE)						
	6	1	<b>8T-8731</b>	1	PLUG-CONNECTOR						

E-ORDER BY THE CENTIMETER



GRAPHIC #1

<END>

g00880214

# ELECTRICAL AND STARTING SYSTEM

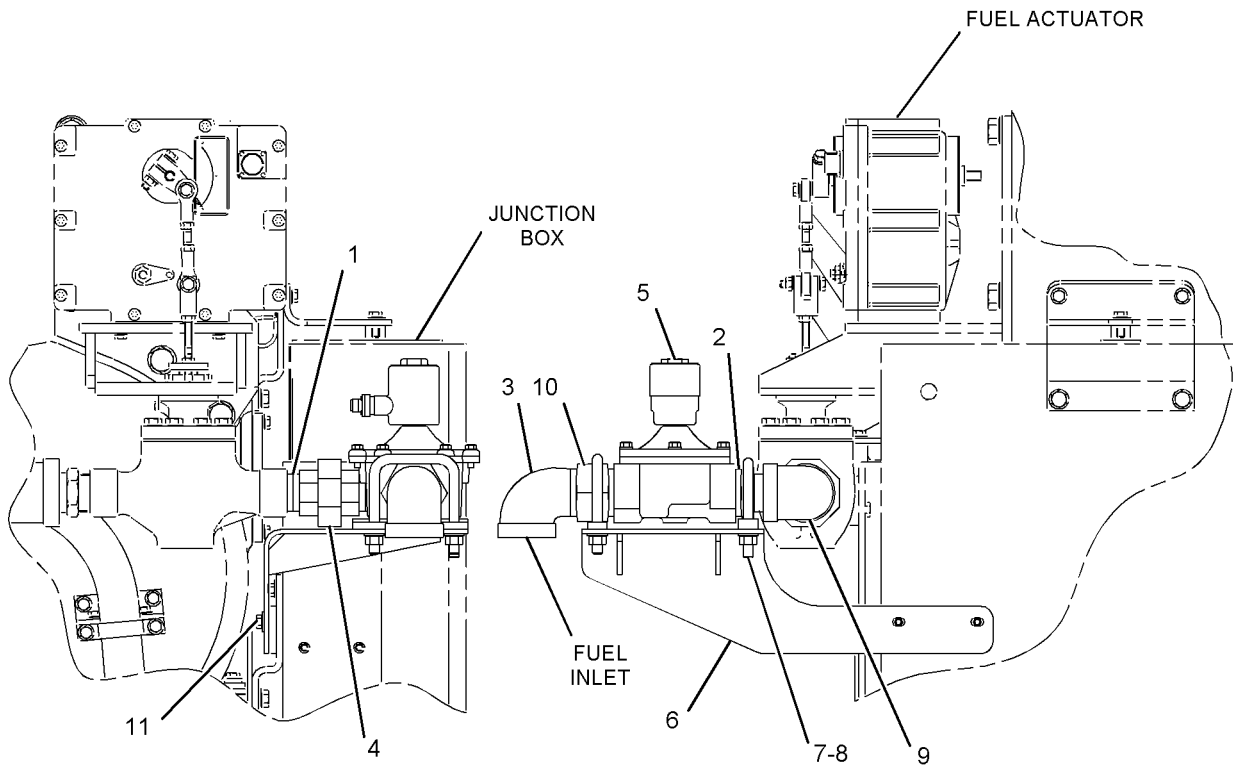
## 4P-3760 VALVE GP-SOLENOID (CHG -01 THRU -07) GAS SHUTOFF

SMCS-5479

i02093807

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	6F-8858	2	FITTING						
	2	1	3E-2315	1	ADAPTER-PIPE						
	3	1	7B-7138	1	ELBOW						
	4	1	109-9866	1	UNION						
Y	5	1	9Y-6992	1	VALVE GP-SOLENOID						179
	6	1	4P-4709	1	BRACKET AS						
	7	1	107-8480	2	U-BOLT						
M	8	1	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
		1	1F-7958	4	NUT-FULL (1/2-13-THD)						
	9	1	6F-8856	1	ELBOW						
	10	1	9D-9658	1	ADAPTER						
	11	1	0S-1594	2	BOLT (3/8-16X1-IN)						
		1	9L-9132	2	WASHER (10.2X25.5X2.5-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



REAR VIEW

RIGHT SIDE VIEW

GRAPHIC #1

<END>

g01067578

# ELECTRICAL AND STARTING SYSTEM

## 9Y-6992 VALVE GP-SOLENOID (CHG -03 THRU -05)

GAS SHUTOFF

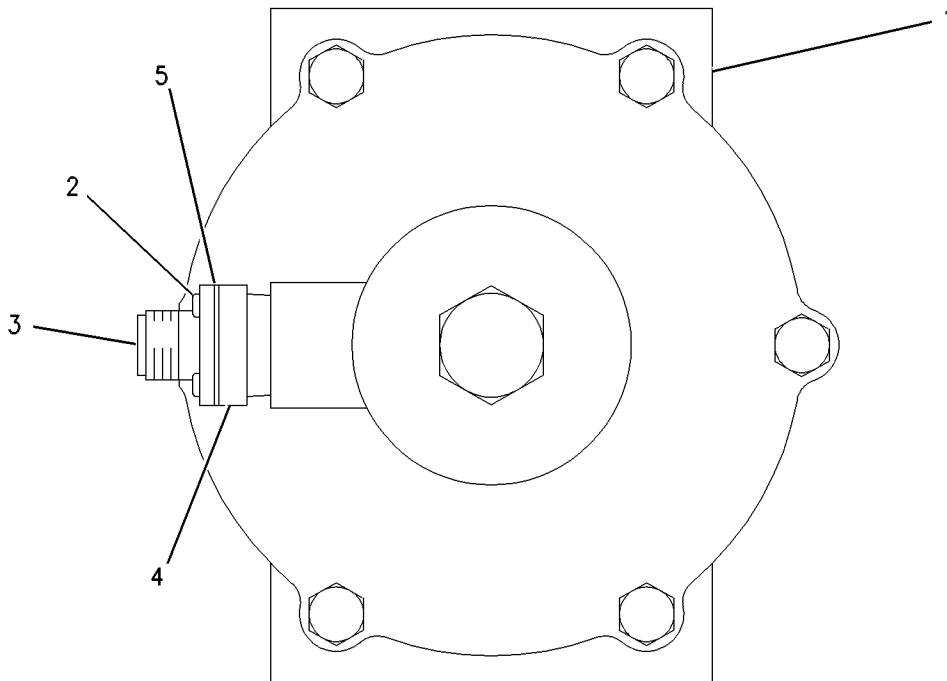
PART OF 4P-3760 VALVE GP-SOLENOID

SMCS-5479

i01749527

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
Y	1	1	103-0692	1	VALVE GP-SOLENOID						180
	2	1	9X-8917	4	SCREW-MACHINE (4-40X9.52MM)						
	3	1	9X-3406	1	RECEPTACLE AS						
	4	1	9Y-6993	1	ADAPTER						
	5	1	4P-9477	1	GASKET						

Y-SEPARATE ILLUSTRATION



GRAPHIC #1

<END>

g00562912

# ELECTRICAL AND STARTING SYSTEM

## 103-0692 VALVE GP-SOLENOID (CHG -00 THRU -07)

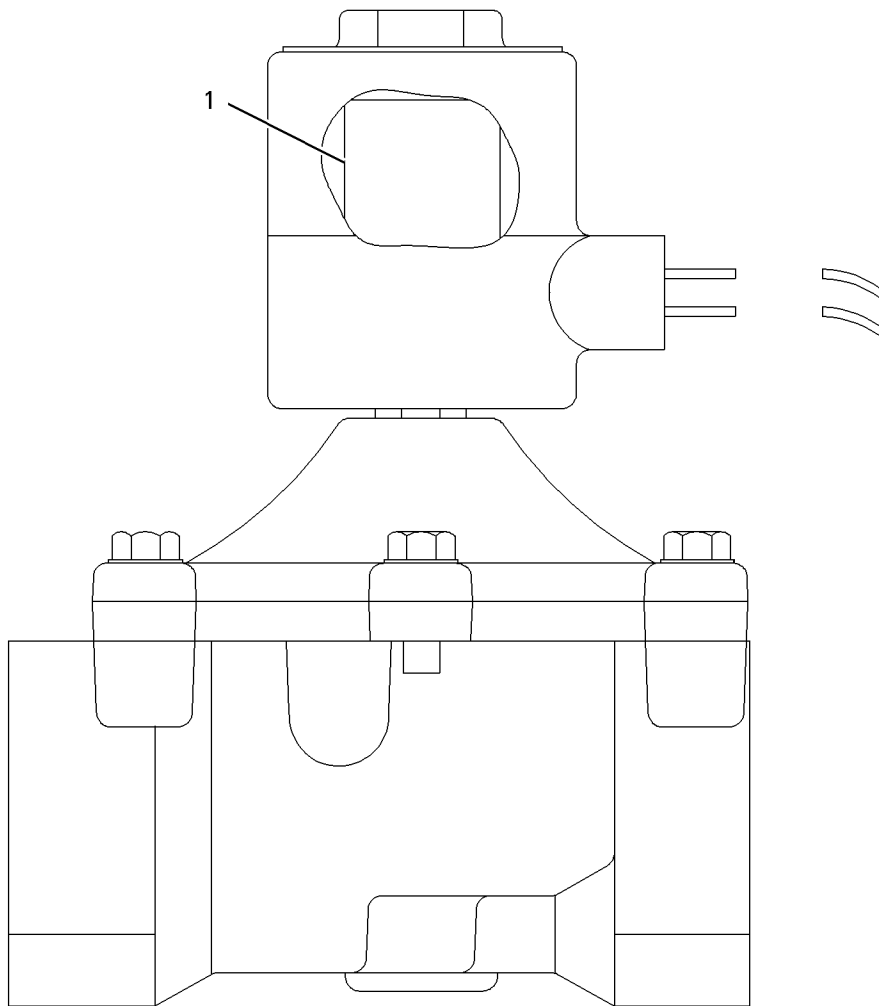
24-VOLT DC

PART OF 9Y-6992 VALVE GP-SOLENOID

SMCS-5479

i01380853

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	7X-1678	1	COIL AS						



GRAPHIC #1

<END>

g00730432

# ELECTRICAL AND STARTING SYSTEM

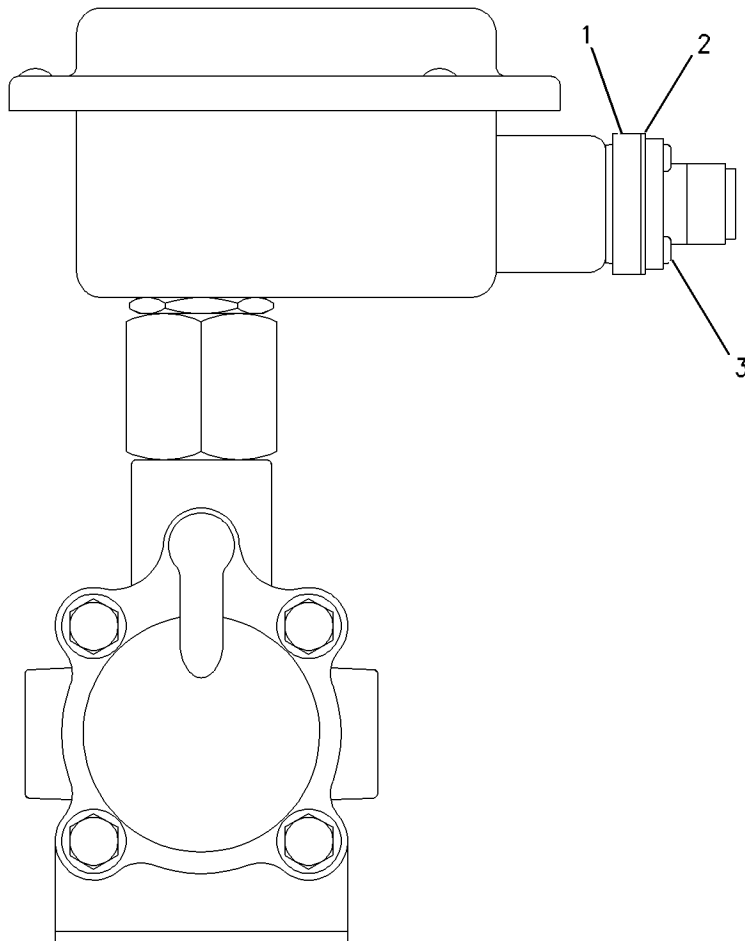
## 164-0717 VALVE GP-SOLENOID (CHG -00 THRU -02) 24 VDC

PART OF 216-8696 LINES GP-AIR, 217-3856 LINES GP-AIR STARTING

SMCS-5479

i02193913

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	9Y-6993	1	ADAPTER						
	2	1	4P-9477	1	GASKET						
	3	1	9X-8917	4	SCREW-MACHINE (4-40X9.52-MM)						



GRAPHIC #1

<END>

g00861068



# ELECTRICAL AND STARTING SYSTEM

## 195-6247 WIRING GP-ENGINE (CHG -01 THRU -04)

SMCS-1000, 1408

i02141950

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	6	3P-0764	1	PLUG						
	2	5	3S-2093	6	STRAP-CABLE						
	3	6	4N-5756	1	BRACKET						
	4	5	5L-3233	2	FITTING						
C	5	2	5P-3501	1	ADAPTER						
I	6	5	5T-4375	2	HOSE AS						
	7	6	8T-3285	1	ADAPTER						
	8	2,4,5,6	9X-3495	9	CLIP AS						
C	9	2,3,4,6	9X-6772	40	STRAP-CABLE						
	10	6	100-7870	1	ADAPTER-O-RING						
	11	5	102-1594	1	BRACKET AS						
	12	2	110-1168	1	SWITCH AS-PRESSURE (JACKET WATER INLET)						
		2	186-3736	3	SOCKET-CONNECTOR						
		2	8T-8731	1	PLUG-CONNECTOR						
BE		2	9X-1813		SLEEVE						
	13	2	116-0118	2	CLIP						
	14	6	130-8299	1	SENSOR GP-TEMPERATURE (OIL)						
		6	186-3735	3	PIN-CONNECTOR						
		6	8T-8732	1	RECEPTACLE (3-PIN)						
BE		6	9X-1813		SLEEVE						
	14A	5	130-8299	1	SENSOR GP-TEMPERATURE (MANIFOLD AIR)						
		5	186-3735	3	PIN-CONNECTOR						
		5	8T-8732	1	RECEPTACLE (3-PIN)						
BE		5	9X-1813		SLEEVE						
	14B	4	130-8299	1	SENSOR GP-TEMPERATURE (FUEL)						
		4	186-3735	3	PIN-CONNECTOR						
		4	8T-8732	1	RECEPTACLE (3-PIN)						
BE		4	9X-1813		SLEEVE						
	15	6	130-9811	1	SENSOR GP-TEMPERATURE (JACKET WATER)						
	16	2	140-9669	1	SWITCH AS (HYDRAX PRESSURE)						
		2	8T-8730	3	SOCKET-CONNECTOR						
		2	8T-8731	1	PLUG-CONNECTOR						
BE		2	9X-1813		SLEEVE						
	17	6	149-5150	1	SENSOR GP-PRESSURE (JACKET WATER OUTLET)						
		6	186-3736	3	SOCKET-CONNECTOR						
		6	8T-8731	1	PLUG-CONNECTOR						
BE		6	9X-1813		SLEEVE						
	18	6	152-1959	1	SWITCH AS-PRESSURE (PRELUBE OIL)						
		6	186-3735	2	PIN-CONNECTOR						
		6	8T-8732	1	RECEPTACLE (3-PIN)						
		6	9G-3695	1	PLUG (GROMMET SEALING)						
	19	5	156-5222	1	TUBE AS						
CY	20	5	162-7289	1	CONTROL GP-GAS PRESSURE						145
	21	1	163-8523	1	SENSOR GP-PRESSURE (FILTERED OIL)						
		1	8T-8731	1	PLUG-CONNECTOR						
BE		1	9X-1813		SLEEVE						
		1	194-5226	3	WIRE AS-HARNESS (16-GA TO 18-GA)						
	21A	6	163-8523	1	SENSOR GP-PRESSURE (UNFILTERED OIL)						
		6	8T-8731	1	PLUG-CONNECTOR						
BE		6	9X-1813		SLEEVE						
		6	194-5226	3	WIRE AS-HARNESS (16-GA TO 18-GA)						
	22	6	170-3528	1	ADAPTER						
	23	3	191-8305	1	SENSOR GP-SPEED (TIMING)						
	24	5	195-2431	6	SENSOR GP-KNOCK (DETONATION SENSORS)						
					(EACH INCLUDES)						
		5	186-3736	3	SOCKET-CONNECTOR						

# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

i02141950

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
		5	8T-8731	1	PLUG-CONNECTOR						
BE		5	9X-1813		SLEEVE						
	25	2	195-6051	1	HARNESS AS-WIRING (RIGHT SIDE)						
		2	102-8803	1	KIT-RECEPTACLE (3-PIN) (INCLUDES RECEPTACLE AND WEDGE)						
		2	102-8804	1	KIT-RECEPTACLE (4-PIN) (INCLUDES RECEPTACLE AND WEDGE)						
		2	4P-3857	2	PLUG AS-CONNECTOR						
		2	6D-5234	1	RECEPTACLE AS						
		2	155-2271	1	KIT-CONNECTING PLUG (4-PIN) (INCLUDES PLUG AND WEDGE)						
		2	160-7690	1	PLUG AS-CONNECTOR (70-PIN)						
		2	176-2943	1	KIT-PLUG (2-PIN) (INCLUDES PLUG AND WEDGE)						
Y	26	4	195-6053	1	HARNESS AS-ENGINE (LEFT SIDE)						150
	27	5	200-1919	1	TUBE AS						
	28	5	201-0624	2	ADAPTER						
Y	29	2	207-6859	1	SENSOR GP-PRESSURE (CRANKCASE)						168
Y	30	3	211-3504	2	SWITCH AS-PRESSURE (LH,RH INLET AIR RESTRICTION)						177
	31	5	030-8188	1	CONNECTOR						
C	32	2	0S-0509	2	BOLT (3/8-16X0.75-IN)						
	33	6	0S-1588	2	BOLT (3/8-16X1.25-IN)						
C	34	4,5	0S-1591	3	BOLT (3/8-16X1.5-IN)						
C	35	4,6	0S-1594	3	BOLT (3/8-16X1-IN)						
	36	3	0S-1617	1	BOLT (5/16-18X0.75-IN)						
C	37	4	0S-1620	2	BOLT (1/2-13X0.75-IN)						
	38	3	117-1385	1	SEAL-O-RING						
C	39	5	2N-8037	2	ELBOW						
	40	5	2P-1314	1	CONNECTOR						
	41	6	3J-7354	1	SEAL-O-RING						
	42	2,6	3K-0360	3	SEAL-O-RING						
C	43	1,2,4,5,6	3V-3308	14	WASHER-HARD (10.2X20.5X2.5-MM THK)						
C	44	2,4,6	4P-7428	7	CLIP						
C	45	2,3,4,5	4P-7581	26	CLIP						
C	46	2,3,4,6	4P-8134	13	CLIP						
	47	1	5B-9603	2	BOLT (3/8-16X5-IN)						
	48	5	5D-9231	2	CONNECTOR						
	49	6	5N-2840	1	CLIP						
	50	5	5P-5008	2	REDUCER						
CM	51	4,6	5P-8245	4	WASHER-HARD (13.5X25.5X3-MM THK)						
C	52	2,5	5P-9297	4	CLIP						
	53	5	6K-9194	1	ELBOW						
	54	6	6V-4589	1	SEAL-O-RING						
	55	1,2,6	6V-5048	3	SEAL-O-RING						
C	56	1,2,5,6	6V-5049	8	SEAL-O-RING						
	57	6	6V-8647	2	CONNECTOR						
	58	1	6V-9872	1	CONNECTOR						
	59	5	7K-9197	1	ELBOW						
	60	1	8L-2779	1	SEAL-O-RING						
	61	4,5	8L-2786	3	SEAL-O-RING						
	62	1	8T-0788	1	ELBOW						
	63	2	8T-2353	1	ADAPTER						
	64	3	9M-1974	1	WASHER-HARD (8.8X16X2-MM THK)						
	65	1	9S-4191	1	PLUG						
	66	6	9S-8752	1	NUT-FULL (3/8-16-THD)						

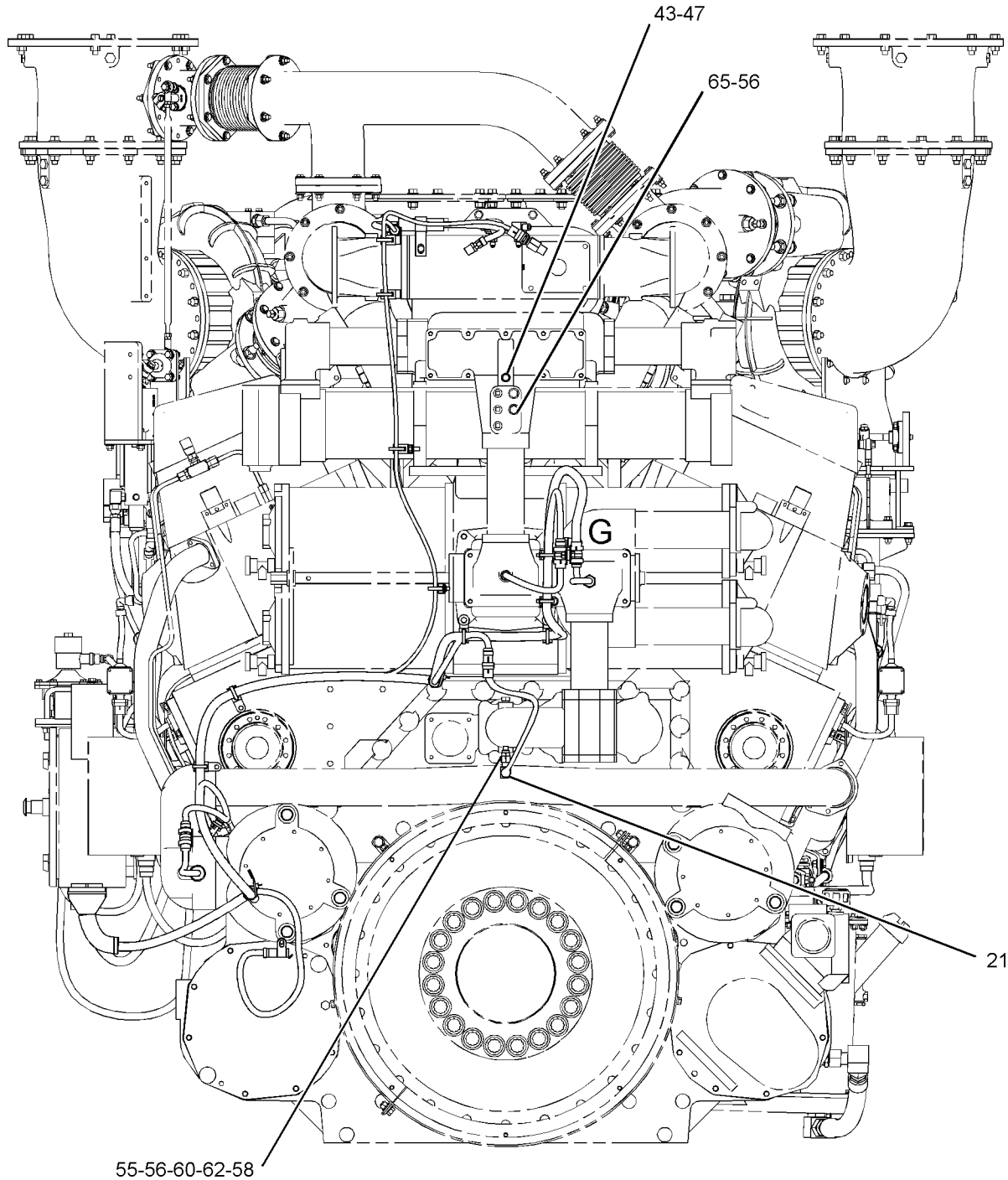
# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

i02141950

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

REFER TO ALL ILLUSTRATIONS OF  
THIS GROUP FOR AUXILIARY VIEWS



FRONT VIEW

GRAPHIC #1

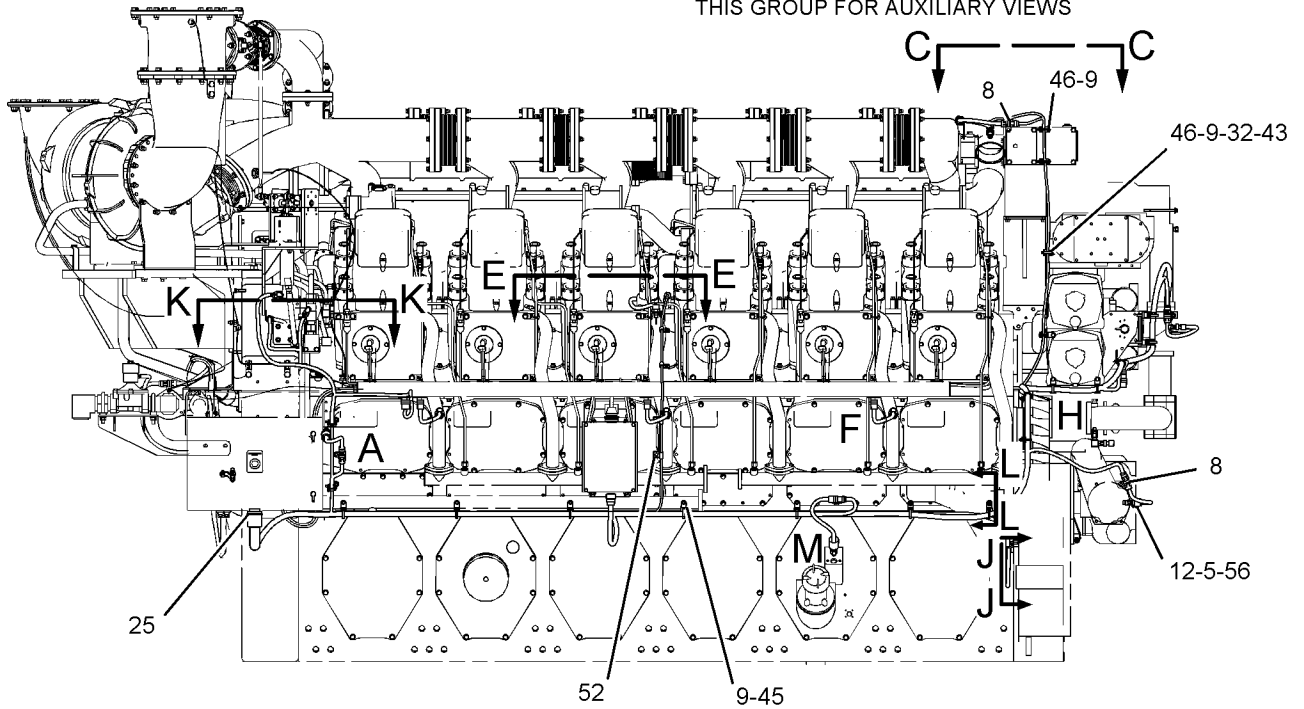
g01089438

# ELECTRICAL AND STARTING SYSTEM

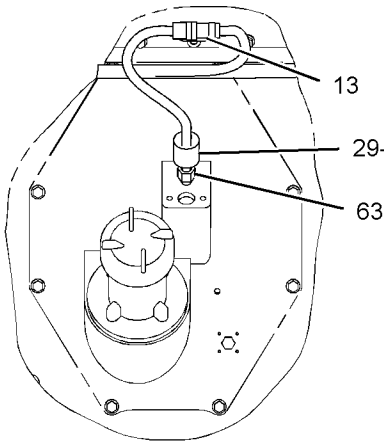
195-6247 WIRING GP-ENGINE (contd.)

i02141950

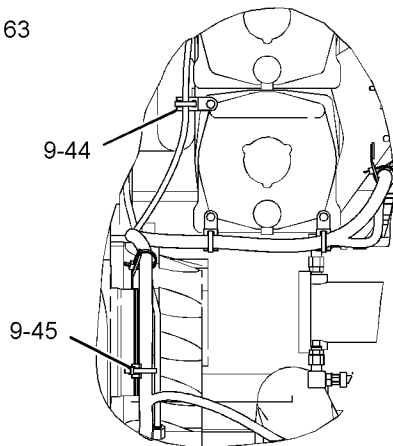
REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



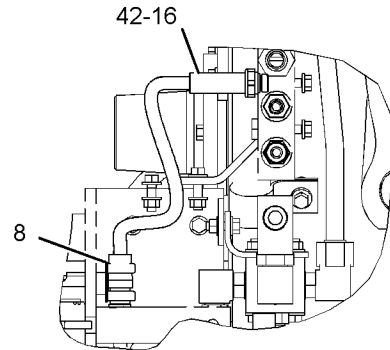
RIGHT SIDE VIEW



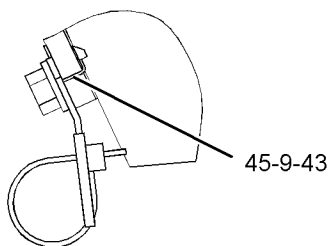
VIEW OF AREA M



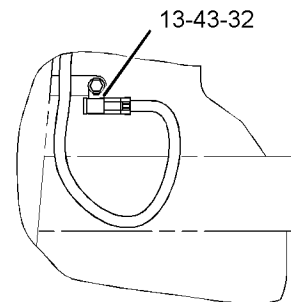
VIEW OF AREA H



VIEW K-K



SECTION L-L



VIEW J-J

GRAPHIC #2

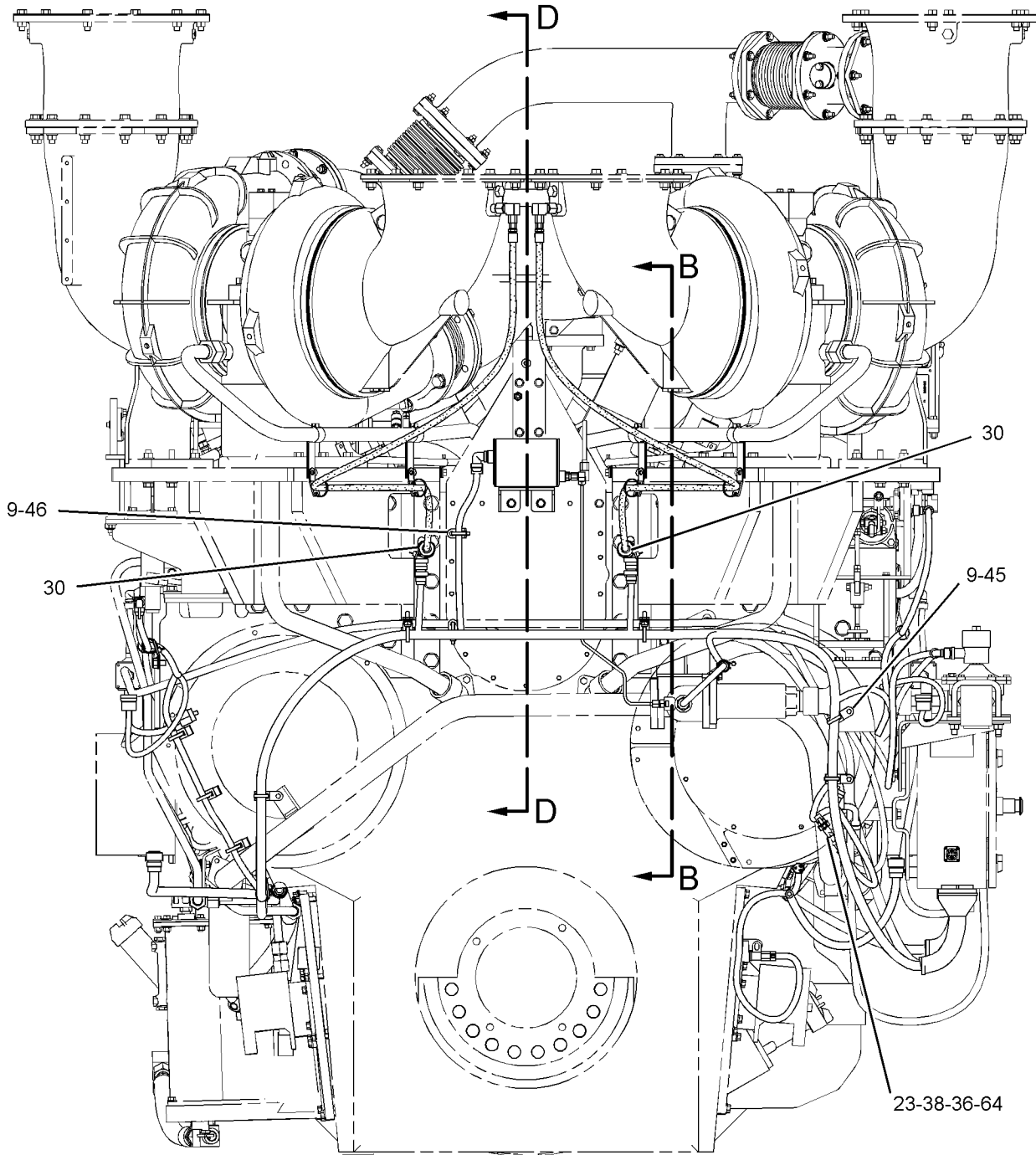
g01089439

# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

i02141950

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS



REAR VIEW

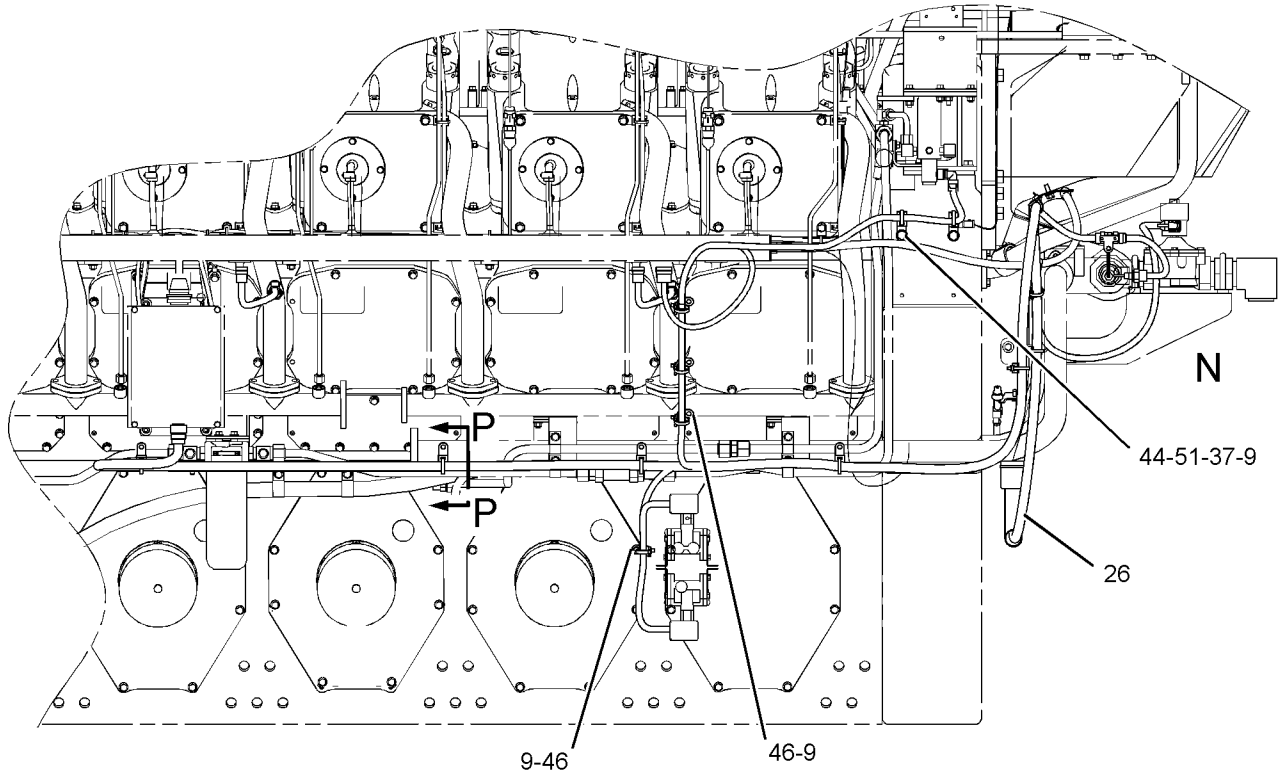
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g01089437

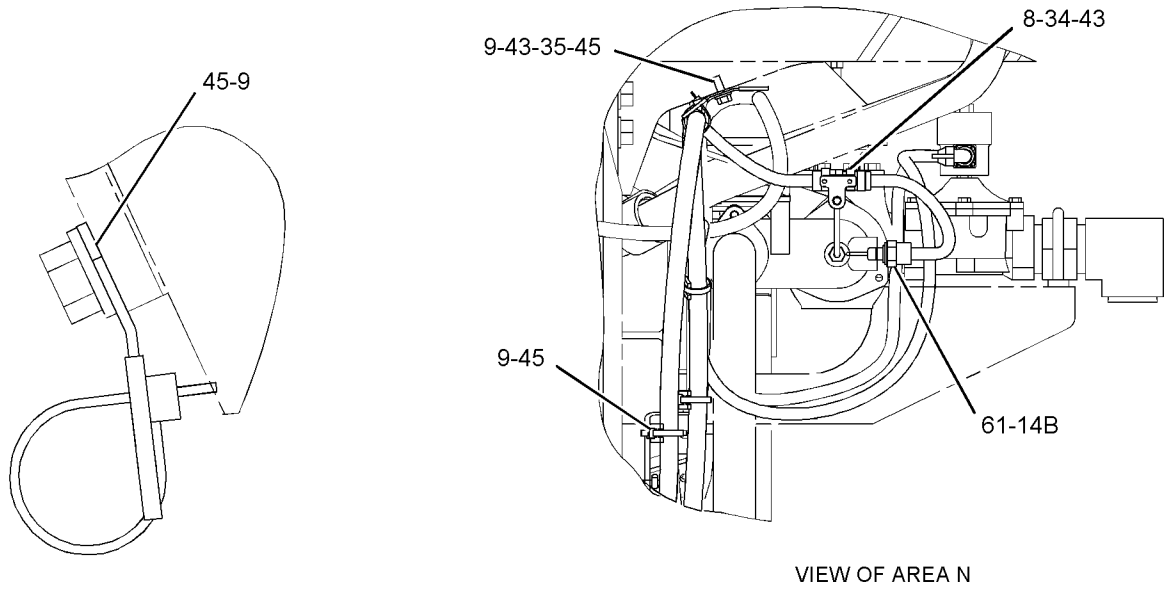
# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

i02141950



LEFT SIDE VIEW



VIEW P-P

VIEW OF AREA N

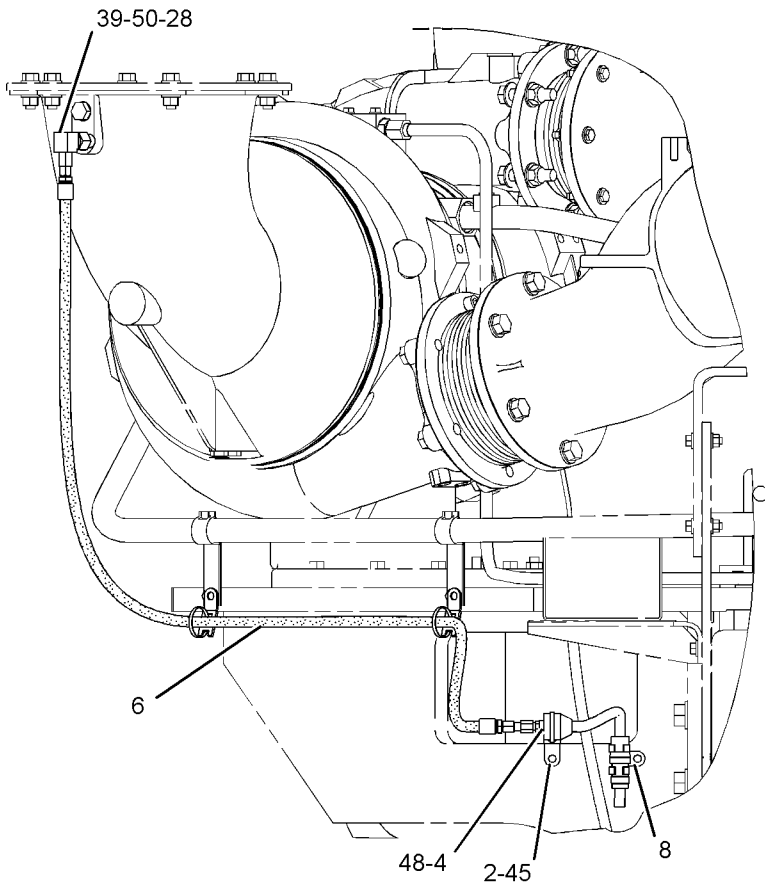
GRAPHIC #4

g01089441

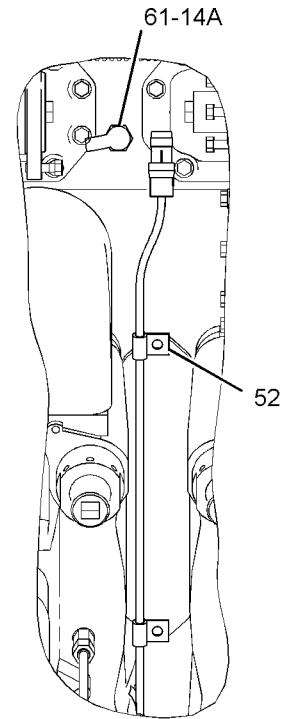
# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

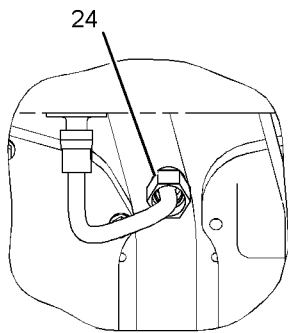
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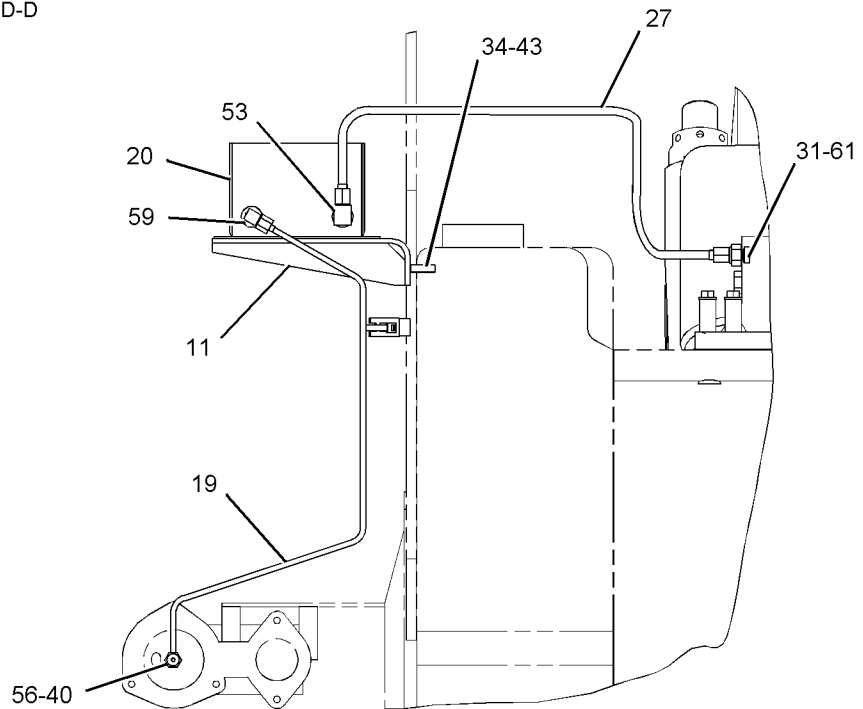
VIEW D-D



VIEW E-E



VIEW OF AREA F



VIEW B-B

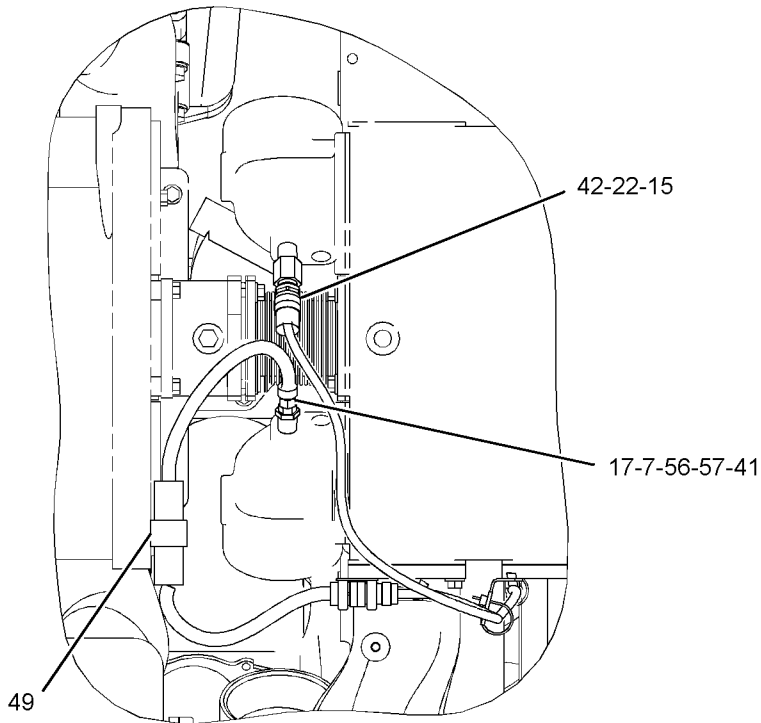
GRAPHIC #5

g01089443

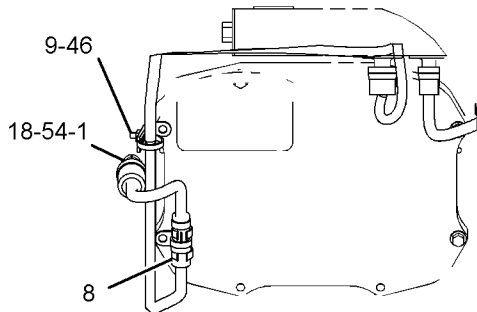
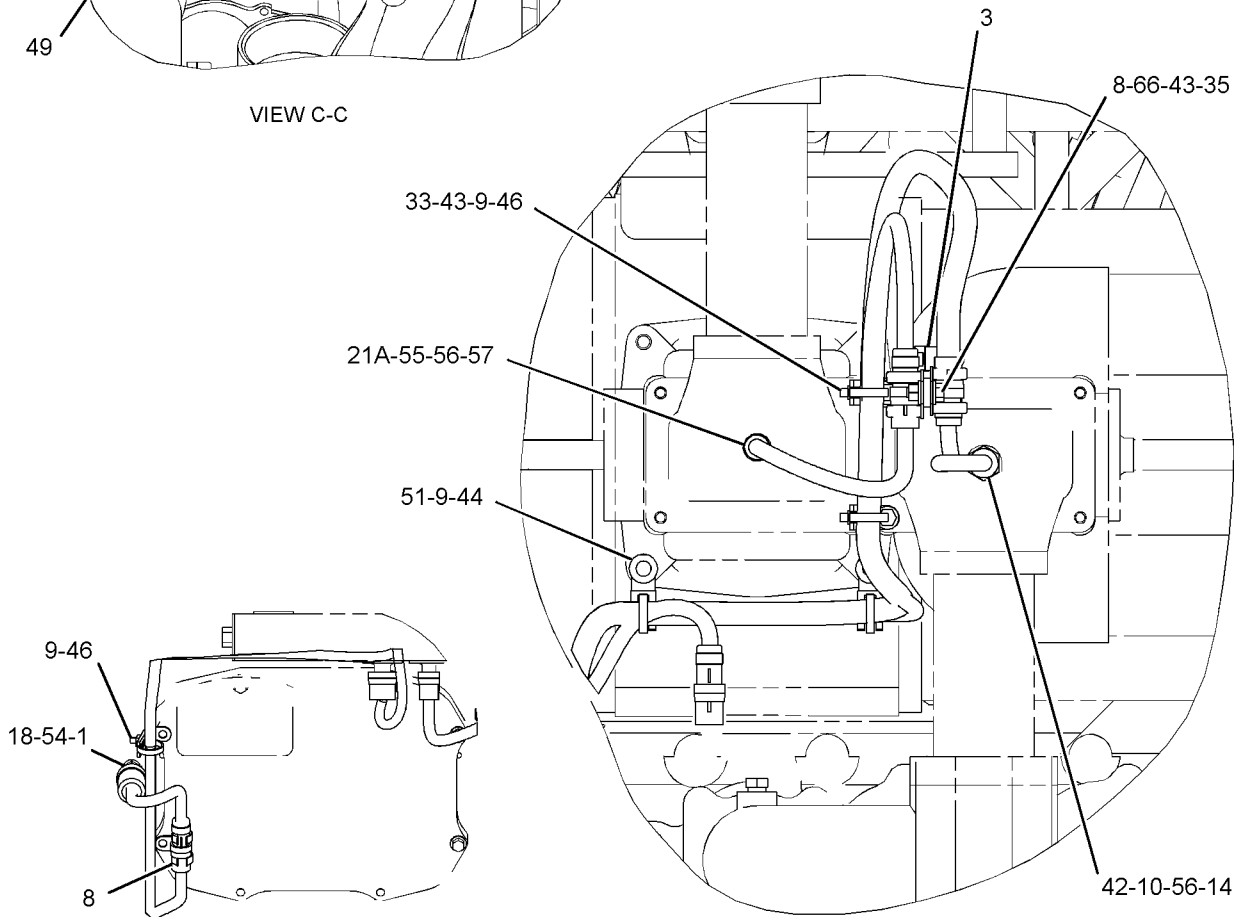
# ELECTRICAL AND STARTING SYSTEM

195-6247 WIRING GP-ENGINE (contd.)

i02141950



VIEW C-C



VIEW OF AREA A

VIEW OF AREA G

GRAPHIC #6

<END>

g01090042



# OPERATOR STATION

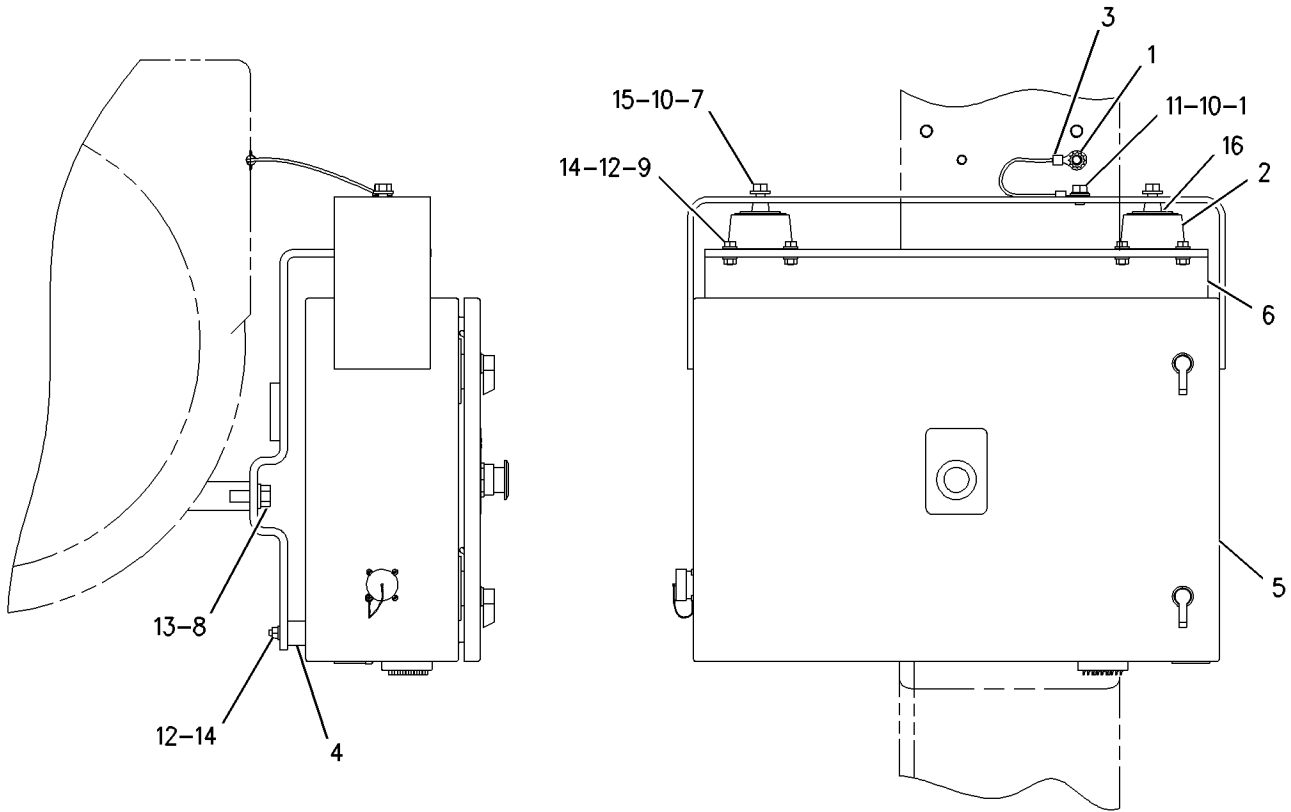
## 195-6243 BOX GP-CONTROL PANEL (CHG -00, -01)

SMCS-4490, 7451

i02061218

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	4D-1326	2	LOCKWASHER						
	2	1	9Y-9480	2	MOUNT-FLEXIBLE						
	3	1	127-0594	1	WIRE AS-GROUND						
	4	1	167-9430	2	ISOLATOR						
Y	5	1	195-6244	1	BOX GP-CONTROL PANEL						191
	6	1	196-9484	1	BRACKET AS						
	7	1	0L-2070	2	BOLT (3/8-16X2.25-IN)						
	8	1	0S-1595	2	BOLT (1/2-13X1.25-IN)						
	9	1	0S-1615	8	BOLT (1/4-20X0.75-IN)						
	10	1	3V-3308	3	WASHER-HARD (10.2X20.5X2.5-MM THK)						
	11	1	0S-0509	1	BOLT (3/8-16X0.75-IN)						
	12	1	5P-0537	20	WASHER-HARD (7.2X14.5X2-MM THK)						
M	13	1	5P-8245	2	WASHER-HARD (13.5X25.5X3-MM THK)						
	14	1	9S-8750	12	NUT-FULL (1/4-20-THD)						
	15	1	9S-8752	2	NUT-FULL (3/8-16-THD)						
	16	1	9Y-9481	4	WASHER (9.9X47.8X1.5-MM THK)						

M-METRIC PART  
Y-SEPARATE ILLUSTRATION



LEFT SIDE VIEW

FRONT VIEW

GRAPHIC #1

<END>

g00838206

# OPERATOR STATION

## 195-6244 BOX GP-CONTROL PANEL (CHG -05) PART OF 195-6243 BOX GP-CONTROL PANEL

SMCS-4490, 7451

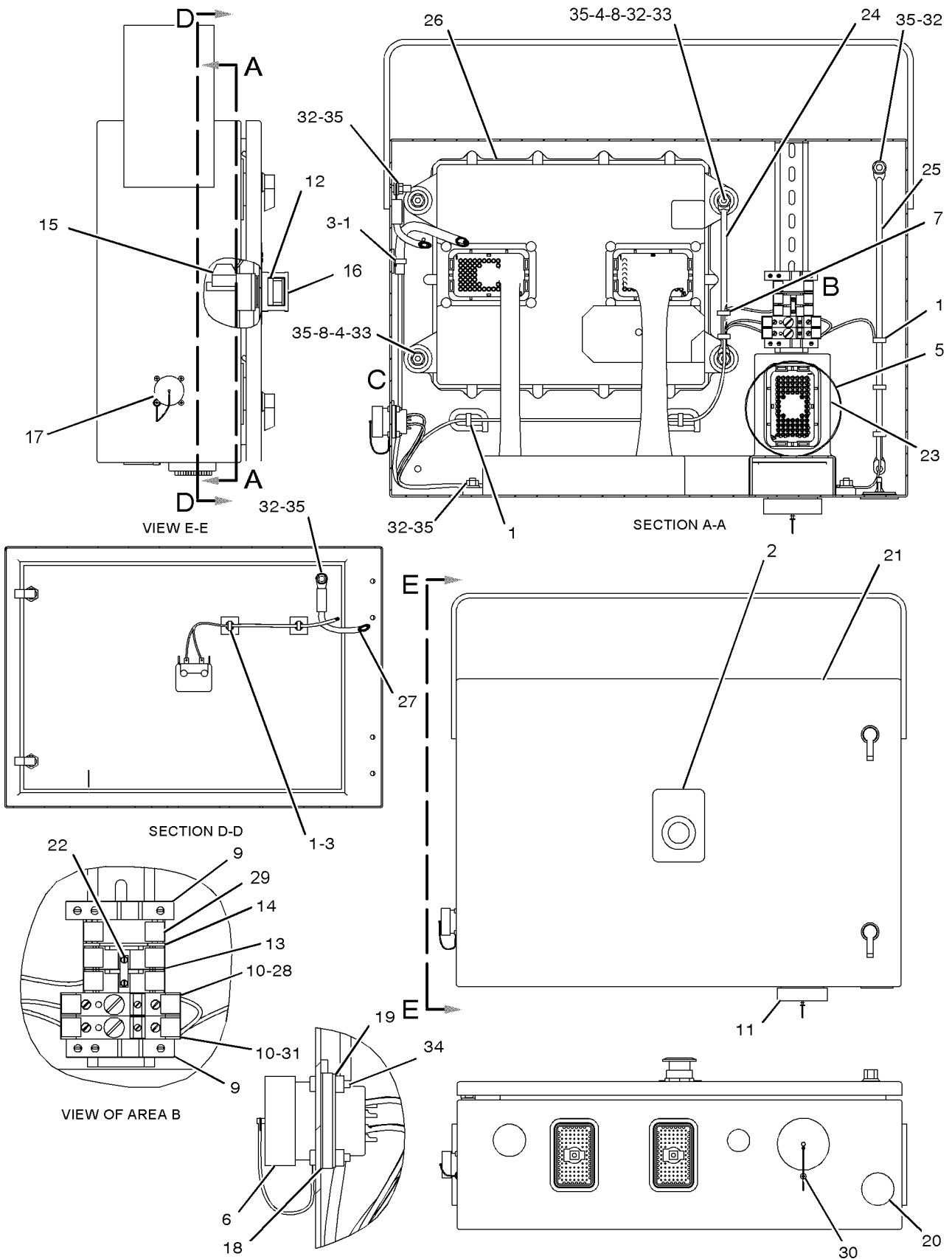
i02030196

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	1S-9593	11	STRAP-CABLE						
	2	1	2W-6090	1	PLATE-IDENTIFICATION (EMERGENCY STOP)						
	3	1	3E-0105	4	MOUNT						
	4	1	6I-1418	4	SPACER (8.2X12.7X28.7-MM THK)						
	5	1	7K-1181	1	STRAP-CABLE						
	6	1	7R-3029	1	CAP-DUST						
	7	1	8L-8413	2	STRAP-CABLE						
	8	1	8T-9655	8	MOUNT (ISOLATION)						
	9	1	9X-9675	2	BRACKET-END						
	10	1	105-7543	2	BLOCK-FUSE						
	11	1	105-9161	1	CAP-DUST						
	12	1	109-6507	1	SWITCH AS-PUSH BUTTON (EMERGENCY STOP)						
	13	1	110-3890	2	TERMINAL						
	14	1	110-3891	1	COVER-END						
	15	1	111-1324	1	BLOCK-CONTACT (NORMALLY CLOSED)						
	16	1	124-3176	1	COVER						
	17	1	131-2639	1	WASHER (3.2X9X0.5-MM THK)						
	18	1	131-4888	1	GASKET						
	19	1	132-8487	1	NUT-RING						
	20	1	183-3192	1	SEAL AS (CONDUIT HOLE)						
Y	21	1	197-0064	1	BOX AS-JUNCTION						142
	22	1	197-6949	1	STRIP-CONTACT						
Y	23	1	207-5399	1	HARNESS AS-PANEL						150
	24	1	207-5403	1	BAR-MOUNTING						
	25	1	210-3936	1	BAR-MOUNTING						
Y	26	1	210-9470	1	CONTROL GP-ENGINE ELECTRONIC						144
	27	1	221-2498	1	WIRE AS						
	28	1	233-8091	1	FUSE (6-AMPERE)						
	29	1	235-4861	1	TERMINAL-GROUND						
	30	1	9X-6258	1	SCREW-MACHINE (6-32X.50-IN)						
	31	1	036-5774	1	FUSE (15-AMPERE)						
	32	1	5P-0537	11	WASHER-HARD (7.2X14.5X2-MM THK)						
	33	1	5P-4115	4	WASHER-HARD (7.2X19X2-MM THK)						
	34	1	8C-8560	4	SCREW-LOCK (4-40X0.5-IN)						
	35	1	9S-8750	11	NUT-FULL (1/4-20-THD)						
Y-SEPARATE ILLUSTRATION											

# OPERATOR STATION

195-6244 BOX GP-CONTROL PANEL (contd.)

i02030196



GRAPHIC #1

<END>

g01038454

# OPERATOR STATION

## 204-6687 BOX GP-CONTROL PANEL (CHG -00, -01) PART OF 204-6689 BOX GP-CONTROL PANEL

SMCS-4490, 7451

i02140162

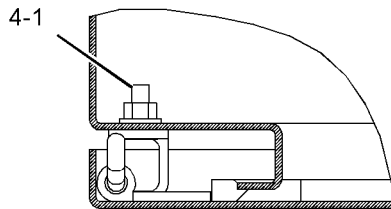
NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
M	1	1	<b>6R-7943</b>	4	SCREW (M5X15.5-MM)						
	2	1	<b>151-1315</b>	2	LATCH AS						
	3	1	<b>153-3723</b>	2	HINGE AS						
					(EACH INCLUDES)						
		1	<b>8T-5447</b>	1	RING-RETAINING						
M	4	1	<b>5C-2874</b>	4	NUT (M5X.8-THD)						
	5	1	<b>7T-1099</b>	14	LINK						
D	6	1	<b>6V-1392</b>		SEAL (1.9-M)						

D-ORDER BY THE METER  
M-METRIC PART

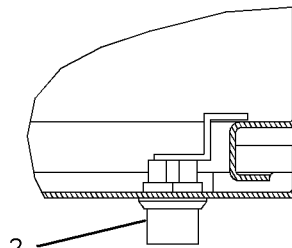
# OPERATOR STATION

204-6687 BOX GP-CONTROL PANEL (contd.)

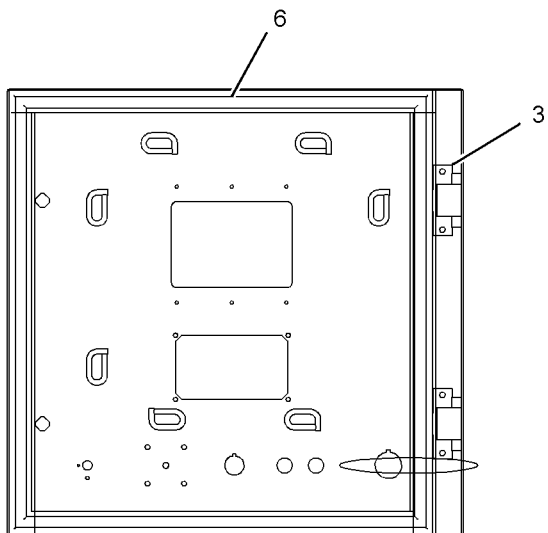
i02140162



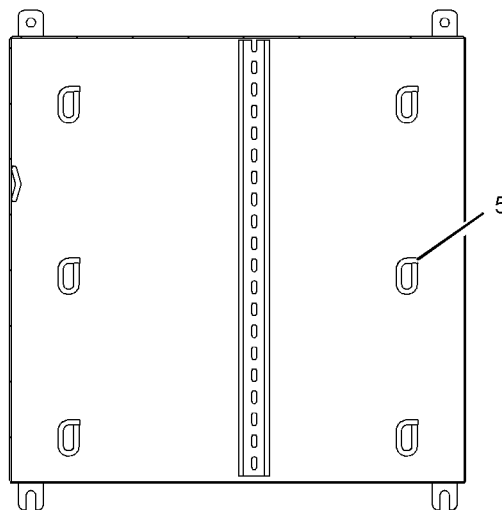
SECTION A-A



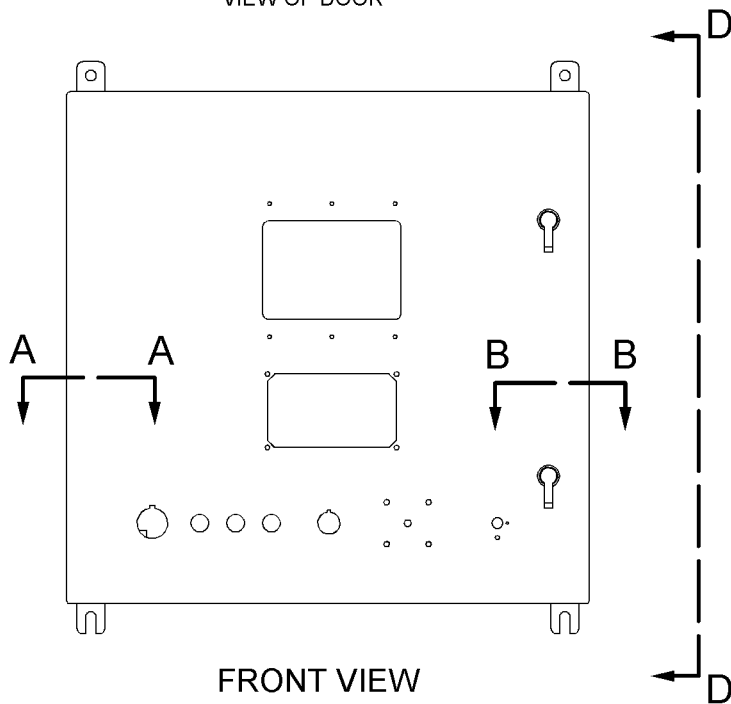
SECTION B-B



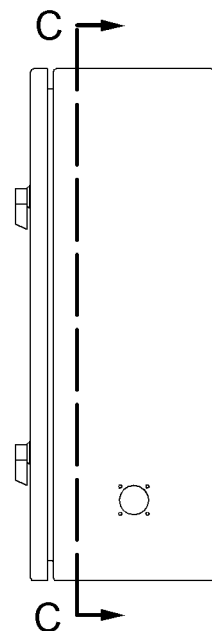
VIEW OF DOOR



SECTION C-C



FRONT VIEW



VIEW D-D

GRAPHIC #1

<END>

g01086698

# OPERATOR STATION

## 204-6689 BOX GP-CONTROL PANEL (CHG -01, -02)

FOR USE WITH ADEMIII CONTROLLER. CANNOT BE USED WITH ESS CONTROLLER

SMCS-4490, 7451

i02140631

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	2V-7088	1	LENS-RED						
	2	1	3E-1813	1	SWITCH AS-PUSH BUTTON (LIGHTED) (PRELUBRICATION)						
		1	3E-1814	1	LAMP (CLEAR)						
	3	2	3S-2093	8	STRAP-CABLE						
	4	1	7C-4910	1	SEAL						
	5	1	7E-0860	1	DIAL-CONCENTRIC						
	6	2	7R-3029	1	CAP-DUST						
	7	2	8L-8413	4	STRAP-CABLE						
	8	2	9X-9675	2	BRACKET-END						
	9	2	100-8254	6	BOLT-SOCKET HEAD						
	10	1	109-6507	1	SWITCH AS-PUSH BUTTON (EMERGENCY STOP)						
	11	2	110-3890	3	TERMINAL						
	12	2	110-3891	2	COVER-END						
	13	1	111-1324	1	BLOCK-CONTACT (NORMALLY CLOSED)						
	14	2	115-1322	55	TERMINAL (DOUBLE)						
	15	2	115-2538	13	COVER-END						
	16	1	116-5270	1	LAMP (24-VOLT)						
	17	1	124-3176	1	COVER						
	18	1	131-2639	1	WASHER (3.2X9X0.5-MM THK)						
	19	1	131-4888	1	GASKET						
	20	2	132-8487	1	NUT-RING						
	21	1	153-5040	1	LAMP (GREEN)						
	22	1	153-5042	1	LAMP-INDICATOR (AMBER)						
	23	1	156-0518	3	SOCKET AS (EACH INCLUDES)						
		1	6V-8367	1	LOCKWASHER						
		1	6V-8382	1	NUT-HEX (11/16-27-THD)						
	24	1	156-0519	1	LENS-AMBER						
	25	1	156-0520	1	LENS-GREEN						
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	28	2	197-6949	1	STRIP-CONTACT						
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	31	2	207-2391	1	HARNES AS-PANEL (CONTROL)						
		2	9D-5421	1	RECEPTACLE AS-CONNECTOR (10-PIN)						
		2	155-2255	1	KIT-CONNECTING PLUG (12-PIN) (KIT INCLUDES PLUG AS AND WEDGE)						
	32	1	208-1028	1	FILM (CONTROL PANEL)						
	33	2	208-3697	1	GASKET						
	34	2	208-6049	1	TAG						
	35	1	221-2304	1	SWITCH AS-ROTARY (ENGINE CONTROL)						
C	36	2	221-2498	1	WIRE AS						
	37	2	235-4861	1	TERMINAL-GROUND						
	38	2	4B-4863	4	WASHER (4.7X11X1.2-MM THK)						
	39	2	4B-5324	6	WASHER (3.9X9.6X1.2-MM THK)						
C	40	2	5P-0537	4	WASHER-HARD (7.2X14.5X2-MM THK)						
	41	2	6D-5801	4	NUT (8-32-THD)						
C	42	2	7D-6922	6	LOCKNUT (6-32-THD)						
	43	2	8C-8560	4	SCREW-LOCK (4-40X0.5-IN)						
	44	2	9S-8750	2	NUT-FULL (1/4-20-THD)						

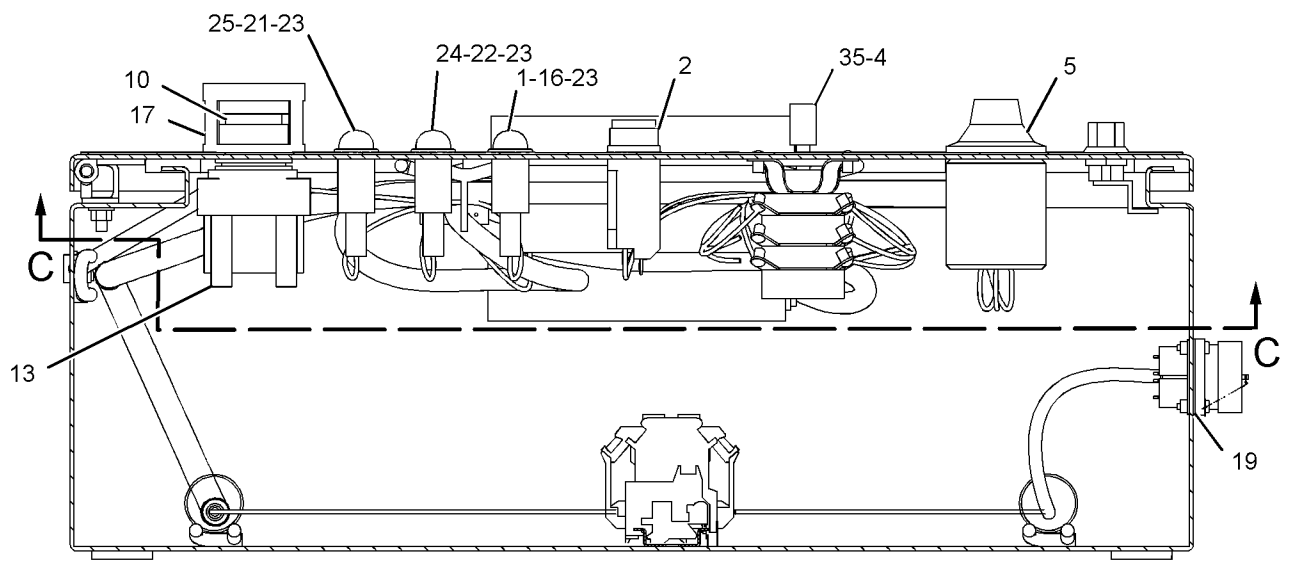
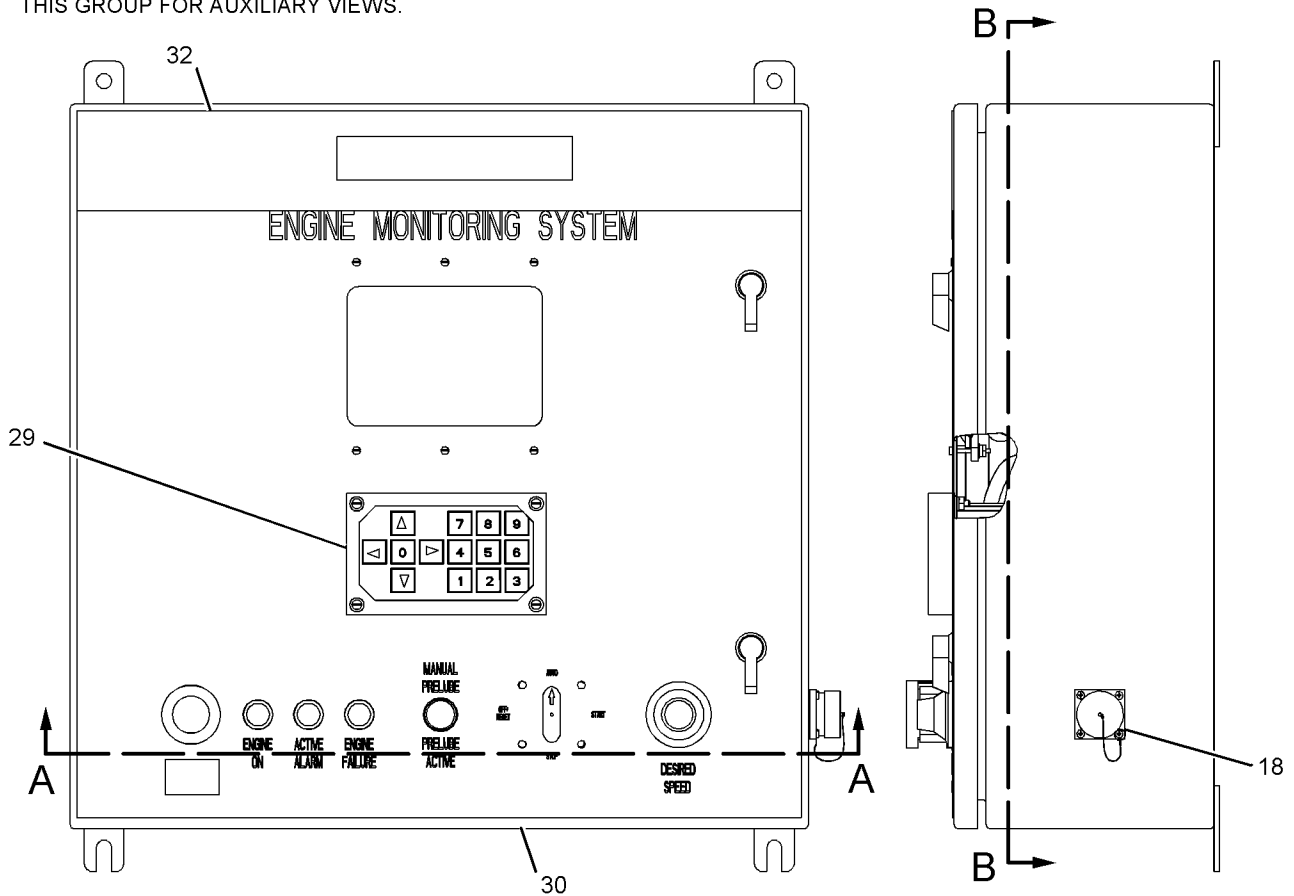
C-CHANGE FROM PREVIOUS TYPE  
Y-SEPARATE ILLUSTRATION

# OPERATOR STATION

204-6689 BOX GP-CONTROL PANEL (contd.)

i02140631

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS.



GRAPHIC #1

SECTION A-A

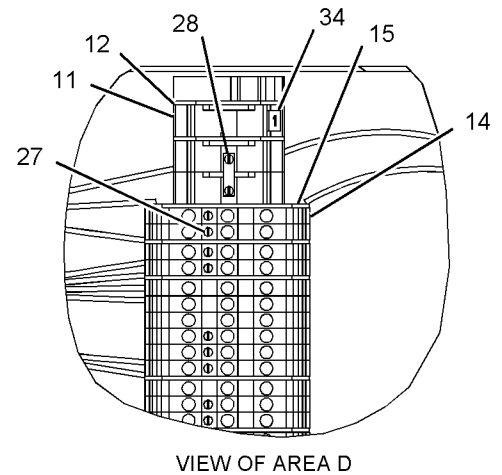
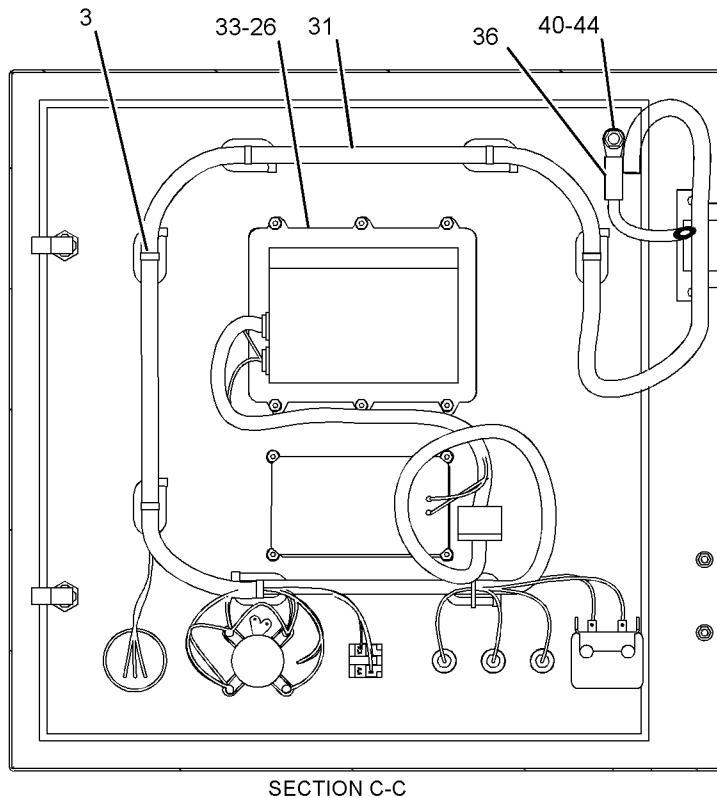
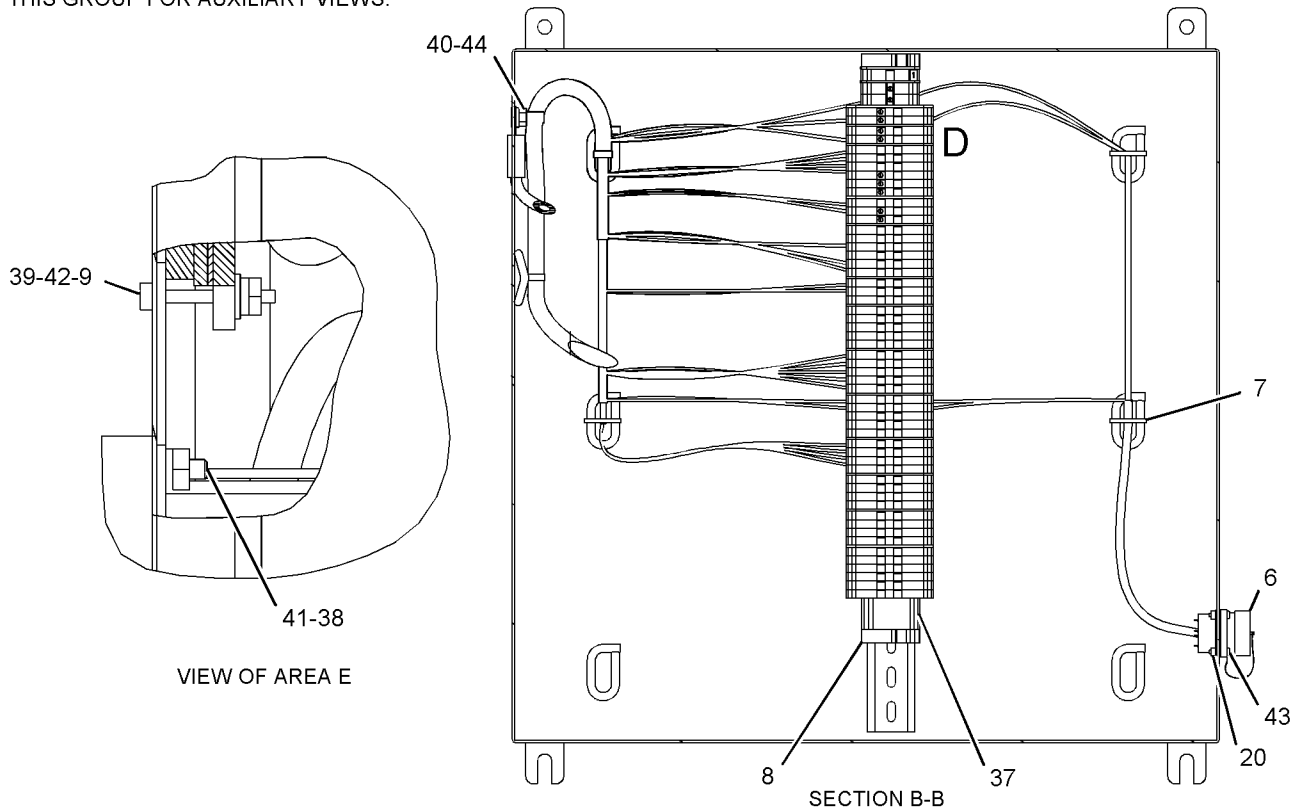
g01059353

# OPERATOR STATION

204-6689 BOX GP-CONTROL PANEL (contd.)

i02140631

REFER TO ALL ILLUSTRATIONS OF THIS GROUP FOR AUXILIARY VIEWS.



GRAPHIC #2

<END>

g01059354



# OPERATOR STATION

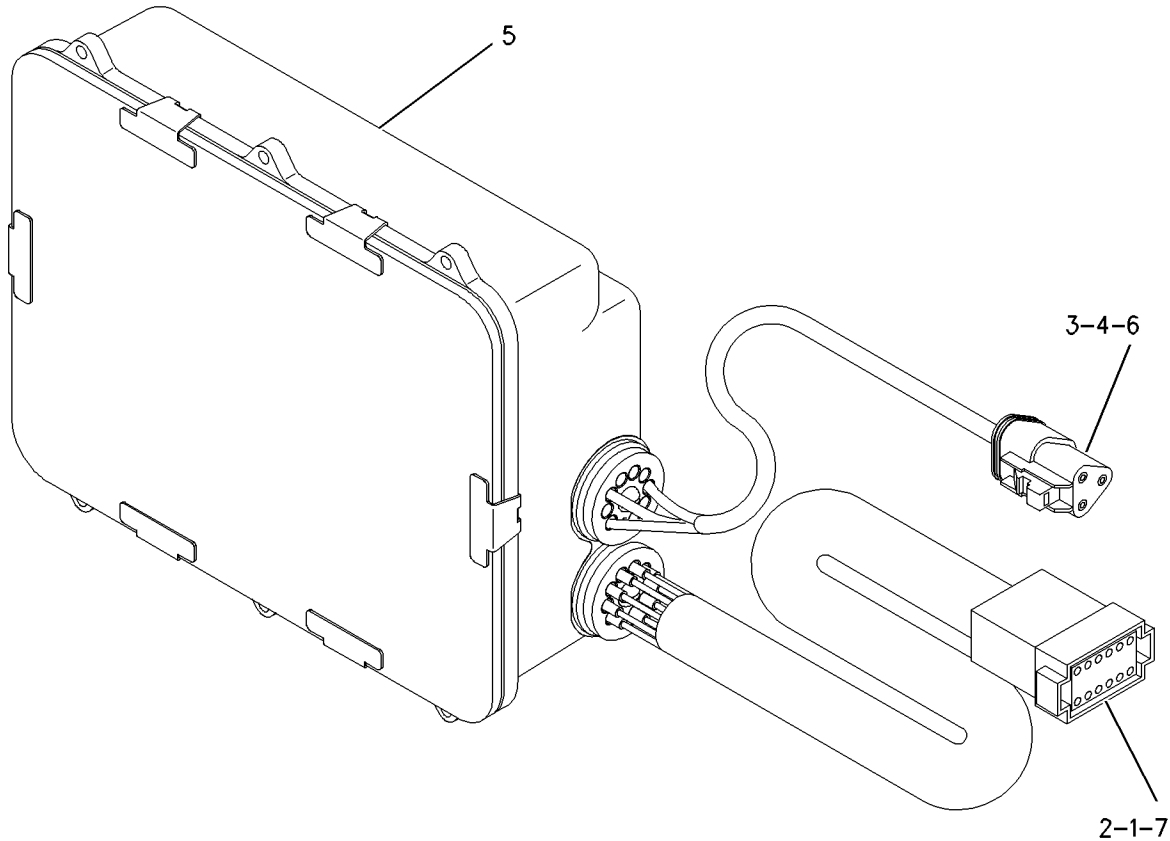
## 168-5274 MODULE GP-DISPLAY-TRACTOR MANAGEMENT CENTER (CHG -00 THRU -08) PART OF 204-6689 BOX GP-CONTROL PANEL

SMCS-7490

i02140218

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	<b>3E-5180</b>	1	WEDGE-RECEPTACLE LOCK (12-PIN)						
	2	1	<b>186-3735</b>	12	PIN-CONNECTOR						
	3	1	<b>186-3736</b>	3	SOCKET-CONNECTOR						
	4	1	<b>155-2276</b>	1	WEDGE-PLUG LOCK (3-PIN)						
Z	5	1		1	CONTROL AS-ELECTRONIC (TRACTOR MANAGEMENT CENTER)						
	6	1	<b>155-2260</b>	1	KIT-CONNECTING PLUG (3-PIN) (INCLUDES PLUG AS, WEDGE & INTERFACE SEAL)						
	7	1	<b>102-8801</b>	1	KIT-RECEPTACLE (12-PIN) (INCLUDES RECEPTACLE AS & WEDGE)						

Z-NOT SERVICED SEPARATELY



GRAPHIC #1

<END>

g00760413

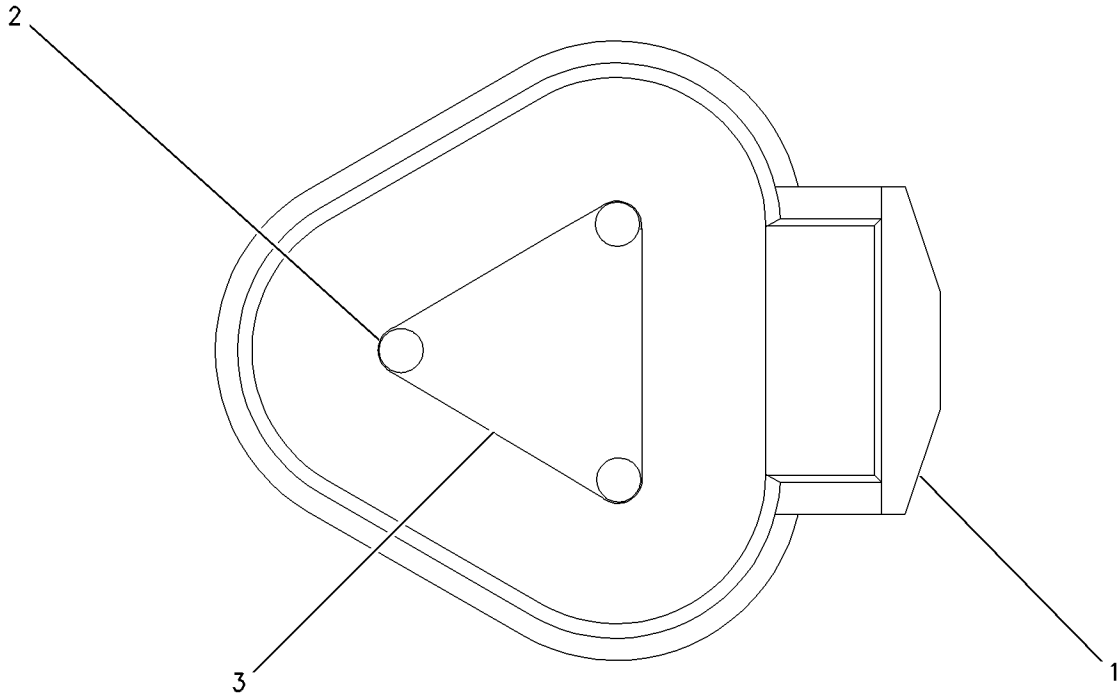
# OPERATOR STATION

## 200-6198 MODULE GP-KEYPAD (CHG -00, -01) PART OF 204-6689 BOX GP-CONTROL PANEL

SMCS-7490

i02030136

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 AND WEDGE)						
	2	1	186-3735	3	PIN-CONNECTOR						
	3	1	3E-3371	1	WEDGE-RECEPTACLE LOCK (3-PIN)						



GRAPHIC #1

<END>

g00926680

# OPERATOR STATION

## 188-3081 MODULE GP-SYSTEM COMMUNICATION-CUSTOMER (CHG -00, 188-3080-00 THRU 188-3080-02)

SMCS-1926

i02068618

NOTE	REF NO	GRAPHIC REF	PART NUMBER	QTY	PART NAME						SEE PAGE
					1	2	3	4	5	6 (PRODUCT LEVEL)	
	1	1	188-3080	1	MODULE GP-SYSTEM COMMUNICATION (CUSTOMER)						



GRAPHIC #1

<END>

g00535441

# SERVICE EQUIPMENT AND SUPPLIES

## 6L-4502 CHART-PLATE & FILM (CHG -539)

SMCS-7557

i01810242

NOTE	PART NUMBER	QTY	PART NAME						SEE PAGE
			1	2	3	4	5	6 (PRODUCT LEVEL)	
	<b>7E-7852</b>	6	FILM (PICTOGRAPH)						
			INSTALL 2 ON SIDE OF AIR CHOKE ACTUATORS TOP COVER						
			INSTALL 2 ON SIDE OF WASTE GATE ACTUATORS TOP COVER						
			INSTALL 2 ON SIDE OF FUEL ACTUATORS TOP COVER						
	<b>3E-2155</b>	1	FILM-IDENTIFICATION (CONTROL PANEL ESS-CMS)						
			INSTALL ON UPPER LH CORNER OF CONTROL PANEL DOOR						
	<b>3E-2156</b>	1	FILM-IDENTIFICATION (CONTROL PANEL ESS-STATUS)						
			INSTALL ON LOWER LH CORNER OF CONTROL PANEL DOOR						
	<b>3E-2157</b>	1	FILM-IDENTIFICATION (CONTROL PANEL ESS-VIEW)						
			INSTALL ON UPPER RH CORNER OF CONTROL PANEL DOOR						
	<b>9X-0379</b>	1	FILM-IDENTIFICATION (ENGINE CONTROL MODULE) (SI ENGINE)						
			INSTALL ON FRONT OF SI ENGINE CONTROL BOX						
	<b>7W-3055</b>	1	FILM-INFORMATION (LINES GROUPS)						
	<b>4P-6469</b>	12	FILM-NOTICE (SPARK PLUG DAMAGE)						
			INSTALL ONE ON OUTBOARD FACE OF UPPER VALVE COVER ON EACH CYLINDER HEAD						
	<b>7W-5890</b>	1	FILM-ROTATION (STANDARD ROTATION)						
			INSTALL ON TOP OF FLYWHEEL HOUSING						
	<b>1H-4950</b>	2	FILM-WARNING (CRANKCASE)						
			INSTALL ON UPPER PORTION OF 2ND RH REAR CRANKSHAFT COVER FROM REAR OF ENGINE						
			INSTALL ON 2ND LH CRANKCASE COVER FROM FRONT OF ENGINE						
	<b>7E-2681</b>	2	PLATE-IDENTIFICATION (CATERPILLAR)						
			INSTALL ON LH AND RH SIDE OF ENGINE ON 2ND CAMSHAFT COVER FROM REAR OF ENGINE						
	<b>159-8314</b>	1	PLATE-INFORMATION (GAS ENGINE)						
			INSTALL BETWEEN FIRST AND SECOND RH REAR CRANKCASE COVERS						
	<b>3N-3790</b>	1	PLATE-SERIAL NUMBER (ENGINE)						
			INSTALL ON LH SIDE OF CYLINDER BLOCK BETWEEN REAR TWO CRANKCASE COVERS						
	<b>4B-4158</b>	2	SCREW-DRIVE (3/16X0.25-IN)						
			FOR USE WITH SERIAL NUMBER PLATE						

**<END>**

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