

**OWNERS**

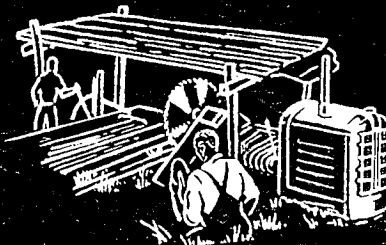
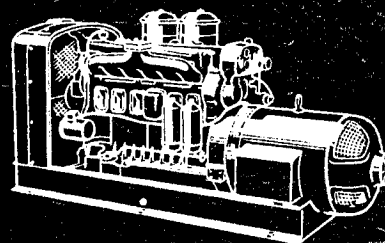
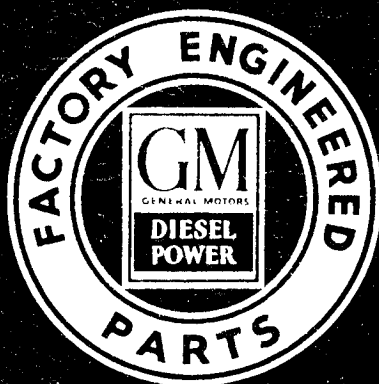
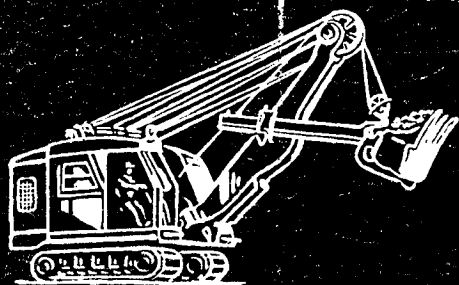
# **PARTS BOOK**

for

*General Motors Diesel*

**SERIES 71**

# **INDUSTRIAL MODELS**



**DETROIT DIESEL ENGINE DIVISION  
GENERAL MOTORS CORPORATION  
DETROIT • 28 • MICHIGAN**

*General Motors Diesel*

**OWNERS  
PARTS BOOK**

**for**

**SERIES 71**

**INDUSTRIAL MODELS**

**Including Fan to Flywheel, Power Take-off,  
Torque Converter and Generator Units.**

**DETROIT DIESEL ENGINE DIVISION  
GENERAL MOTORS CORPORATION  
DETROIT 28, MICHIGAN**

### Options and Accessories Plate Record

UNIT No. .... CUSTOMER'S NAME .....

MODEL No. .... ADDRESS .....

APPLICATION .... ENGINE LOCATION .....

EQUIPMENT	TYPE	EQUIPMENT	TYPE	EQUIPMENT	TYPE
Accessory Drive.....		Fuel Tank.....		Power Take-off.....	
Air Cleaner.....		Gear Box.....		Radiator.....	
Air Compressor.....		Generator—Battery Charging.....		Raw Water Pump.....	
Air Heater.....		Generator—Power.....		Rocker Cover.....	
Air Inlet Housing.....		Governor.....		Shutoff or Alarm.....	
Air Silencer.....		Heat Ex. or Keel Cooling.....		Starter.....	
Battery Cables.....		Hood—Engine.....		Tachometer Drive.....	
Bilge Pump.....		Injector.....		Thermostat.....	
Control Cabinet.....		Injector Controls.....		Throttle Control.....	
Crankshaft Cover.....		Instruments.....		Torque Converter.....	
Crankshaft Pulley.....		Marine Gear.....		Torque Converter Lines.....	
Crankshaft Pulley Belt.....		Mountings—Engine.....		Ventilating System.....	
Damper—Vibration.....		Muffler & Connections.....		Water Bypass Tube.....	
Exhaust Manifold.....		Oil Cooler.....		Water Connections.....	
Fan.....		Oil Distribution System.....		Water Pump Cover.....	
Fan Shroud.....		Oil Filler Tube.....		Wiring Harness.....	
Flywheel.....		Oil Filter.....			
Flywheel Housing.....		Oil Filter Lines.....			
Flywheel Housing Adaptor.....		Oil Level Dipstick.....			
Fuel Filter.....		Oil Pan.....			
Fuel Lines.....		Oil Pump.....			

UNIT No. .... CUSTOMER'S NAME .....

MODEL No. .... ADDRESS .....

APPLICATION .... ENGINE LOCATION .....

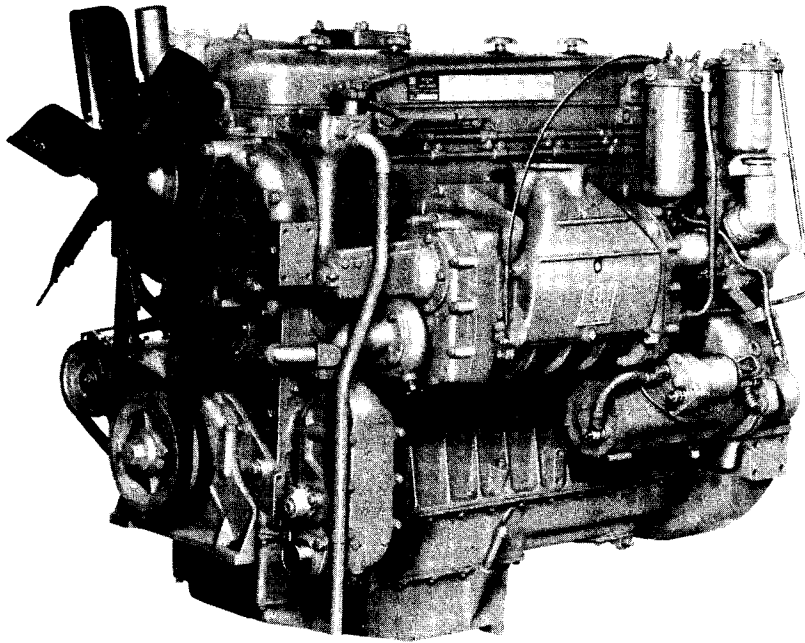
EQUIPMENT	TYPE	EQUIPMENT	TYPE	EQUIPMENT	TYPE
Accessory Drive.....		Fuel Tank.....		Power Take-off.....	
Air Cleaner.....		Gear Box.....		Radiator.....	
Air Compressor.....		Generator—Battery Charging.....		Raw Water Pump.....	
Air Heater.....		Generator—Power.....		Rocker Cover.....	
Air Inlet Housing.....		Governor.....		Shutoff or Alarm.....	
Air Silencer.....		Heat Ex. or Keel Cooling.....		Starter.....	
Battery Cables.....		Hood—Engine.....		Tachometer Drive.....	
Bilge Pump.....		Injector.....		Thermostat.....	
Control Cabinet.....		Injector Controls.....		Throttle Control.....	
Crankshaft Cover.....		Instruments.....		Torque Converter.....	
Crankshaft Pulley.....		Marine Gear.....		Torque Converter Lines.....	
Crankshaft Pulley Belt.....		Mountings—Engine.....		Ventilating System.....	
Damper—Vibration.....		Muffler & Connections.....		Water Bypass Tube.....	
Exhaust Manifold.....		Oil Cooler.....		Water Connections.....	
Fan.....		Oil Distribution System.....		Water Pump Cover.....	
Fan Shroud.....		Oil Filler Tube.....		Wiring Harness.....	
Flywheel.....		Oil Filter.....			
Flywheel Housing.....		Oil Filter Lines.....			
Flywheel Housing Adaptor.....		Oil Level Dipstick.....			
Fuel Filter.....		Oil Pan.....			
Fuel Lines.....		Oil Pump.....			

# **F O R E W O R D**

Your General Motors series 71 Diesel engine was manufactured by Detroit Diesel Engine Division. The finest quality of material selected through years of research and experience have been combined with precision workmanship and careful inspection to provide you with many hours of dependable trouble-free operation.

This parts book has been prepared as an aid to you in determining parts which may be required in the maintenance of your engine. All parts listed herein are "Factory Engineered Parts" and are manufactured to the same precision standards as the original equipment.

For your own protection, always insist on G.M. Diesel "Factory Engineered Parts" for your engine.



Typical 6 Cylinder Industrial Engine

### **HOW TO LOCATE PARTS**

Parts may be located readily in this book by the following method. Refer to the Group Index on page 5 and determine the group in which the desired part appears and the page on which the group is shown. Numerous illustrations are included in this publication to further aid you in identifying parts.

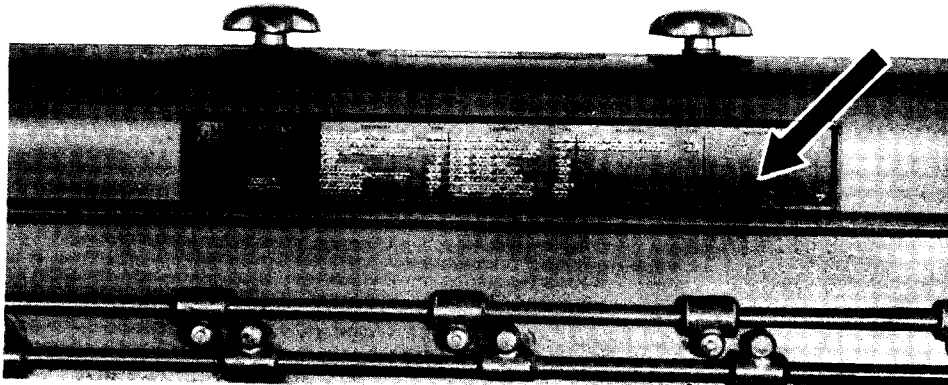
The Alphabetical Index on page 87 lists all major parts alphabetically, by noun name, and the page on which the part is shown. This may be used as an alternate to the above method.

### **HOW TO ORDER PARTS**

All parts orders should be placed with your nearest G.M. Diesel distributor or dealer. Do not place orders directly with the factory.

Always give the model and unit (serial) number of your engine. This is stamped on the Options and Accessories plate on the valve rocker cover of your engine; if a type number is shown covering the equipment required, be sure to include this number on your order. The model and unit number also appear on a plate attached to the flywheel housing on the starter side.

The Options and Accessories plate (shown below) on your engine is an exclusive G.M. Diesel feature. It lists any special equipment which may be on your engine and facilitates locating the required replacement part for your engine. Record the Engine Options and Accessories plate information on page 2 for handy reference. Your G.M. Diesel distributor or dealer has a record of this information and by furnishing him with the type number shown he can properly interpret your requirements.



## GROUP INDEX

ACCESSORY DRIVE .....	20	FUEL MANIFOLD .....	27
AIR BOX DRAINS .....	10	FUEL PUMP .....	25
AIR CLEANER .....	39	FUEL PUMP DRAIN .....	26
AIR COMPRESSOR .....	83	GOVERNOR-HYDRAULIC .....	31
AIR HEATER .....	68	GOVERNOR-MECHANICAL .....	28
AIR INLET HOUSING .....	41	HEAT EXCHANGER .....	59
BALANCE WEIGHT COVER .....	19	HYDRAULIC GOVERNOR SOLENOID ...	69
BATTERY CABLES .....	64	HYDRAULIC PUMP .....	84
BATTERY CHARGING GENERATOR ...	64	INJECTOR CONTROL TUBE .....	33
BLOWER .....	42	INSTRUMENT PANEL .....	65
BLOWER DRIVE SHAFT .....	45	OIL COOLER .....	50
CAMSHAFT AND GEAR TRAIN .....	18	OIL DISTRIBUTION SYSTEM .....	46
CLUTCH AND/OR POWER TAKE-OFF ..	70	OIL FILLER TUBE .....	52
COLD WEATHER STARTING AID KIT ...	85	OIL FILTER .....	49
CONNECTING ROD AND PISTON .....	17	OIL FILTER LINES .....	50
CONTROL CABINET .....	68	OIL PAN .....	53
CRANKSHAFT .....	12	OIL PRESSURE REGULATOR .....	48
CRANKSHAFT FRONT COVER .....	13	OIL PUMP .....	45
CRANKSHAFT PULLEY .....	15	POWER GENERATOR .....	68
CRANKSHAFT PULLEY BELT .....	15	RADIATOR .....	56
CYLINDER BLOCK .....	9	RAW WATER PUMP .....	60
CYLINDER HEAD .....	10	ROCKER COVER .....	23
DIPSTICK .....	52	SHUTOFF OR ALARM SYSTEM .....	67
ENGINE HOOD .....	80	STARTING MOTOR .....	65
ENGINE LIFTER BRACKET .....	12	SUPPLIES .....	85
ENGINE MOUNTING AND BASE .....	82	TACHOMETER DRIVE .....	66
EXHAUST MANIFOLD .....	61	THERMOSTAT .....	56
EXHAUST MUFFLER .....	62	THROTTLE CONTROLS .....	34
FAN .....	57	TORQUE CONVERTER .....	74
FAN SHROUD .....	59	TORQUE CONVERTER LINES .....	79
FLYWHEEL .....	15	VALVE OPERATING MECHANISM ....	21
FLYWHEEL HOUSING .....	16	VENTILATING SYSTEM .....	53
FLYWHEEL HOUSING ADAPTOR .....	17	VIBRATION DAMPER .....	14
FRESH WATER PUMP AND COVER ...	54	WATER BY-PASS TUBE .....	56
FUEL FILTER .....	26	WATER CONNECTIONS .....	57
FUEL INJECTOR .....	23	WATER OUTLET MANIFOLD .....	55
FUEL LINES .....	27	WIRING HARNESS .....	68

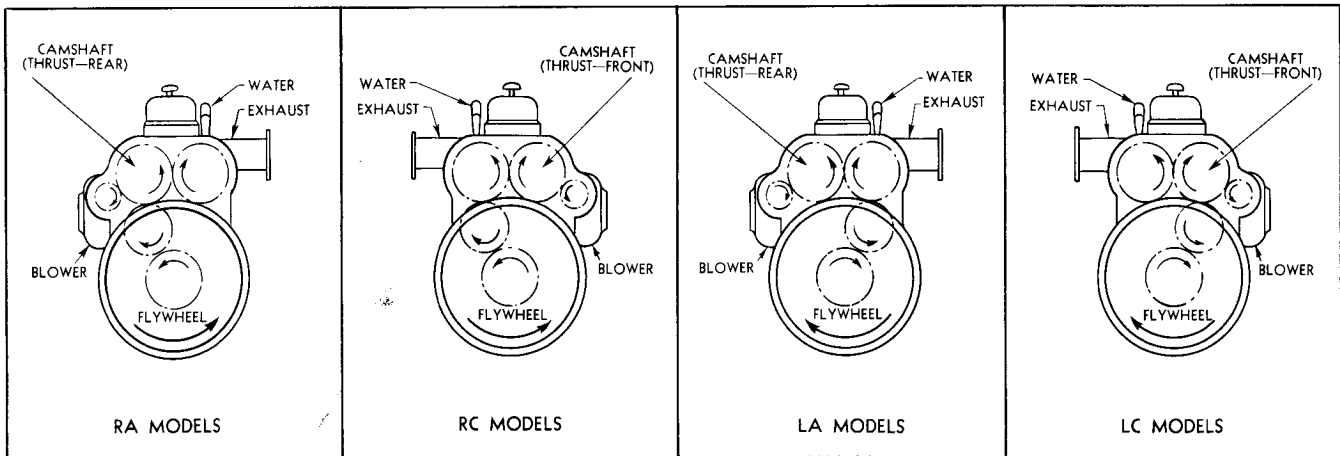
# ABBREVIATIONS

adj. .... adjustable  
 amp. .... ampere  
 Assy. .... assembly  
 bal. .... balancer  
 batt. .... battery  
 B. C. .... bolt circle  
 br. .... brass  
 brg. .... bearing  
 CCW. .... counter clockwise  
 CFM. .... cubic feet per minute  
 com. .... commercial  
 comp. .... compressor  
 ctsk. .... countersunk  
 CW. .... clockwise  
 cyl. .... cylinder  
 D. C. .... direct current  
 dev. .... developed  
 dia. .... diameter  
 eng. .... engine  
 exh. .... exhaust  
 expan. .... expansion  
 fl. .... flared or flat  
 flex. .... flexible

Fig. .... figure  
 fil. .... fillister  
 gen. .... generator  
 G. M. .... General Motors  
 gov. .... governor  
 hd. .... head  
 hdls. .... headless  
 hex. .... hexagon  
 HP. .... horsepower  
 hyd. .... hydraulic  
 I. D. .... inside diameter  
 inj. .... injector  
 int. .... internal  
 inv. .... inverted  
 L. .... length  
 lb. .... pound  
 L. H. .... left hand  
 lim. .... limiting  
 man. .... manifold  
 max. .... maximum  
 mech. .... mechanical  
 mod. .... moderate  
 mtd. .... mounted

no. .... number  
 O. D. .... outside diameter  
 O. S. .... oversize  
 press. .... pressure  
 pt. .... point  
 P. T. .... pipe thread  
 PTO. .... power take-off  
 rad. .... radiator  
 rd. .... round  
 red. .... reducing or reduction  
 R. H. .... right hand  
 RPM. .... revolutions per minute  
 sl. .... slotted  
 sm. .... small  
 spd. .... speed  
 std. .... standard  
 tach. .... tachometer  
 T/C. .... torque converter  
 temp. .... temperature  
 thd. .... thread  
 V. .... volt  
 Vari. .... variable  
 W. .... watt

## BASIC ENGINE ARRANGEMENTS



ALL VIEWS FROM FLYWHEEL (REAR) END OF ENGINE.  
 ENGINE ROTATION DETERMINED BY VIEWING ENGINE FROM BALANCE WEIGHT COVER (FRONT) END.

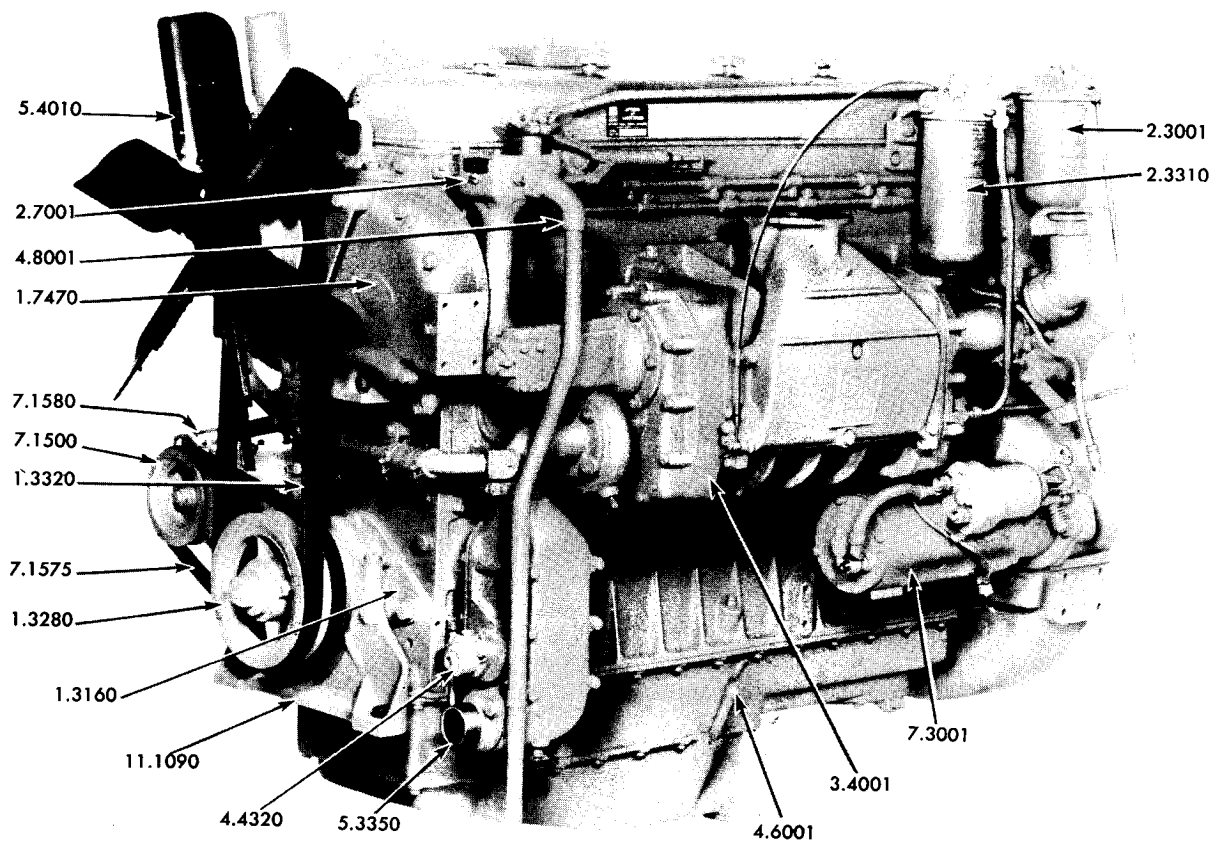


Fig. 1—Typical Fan to Flywheel Unit

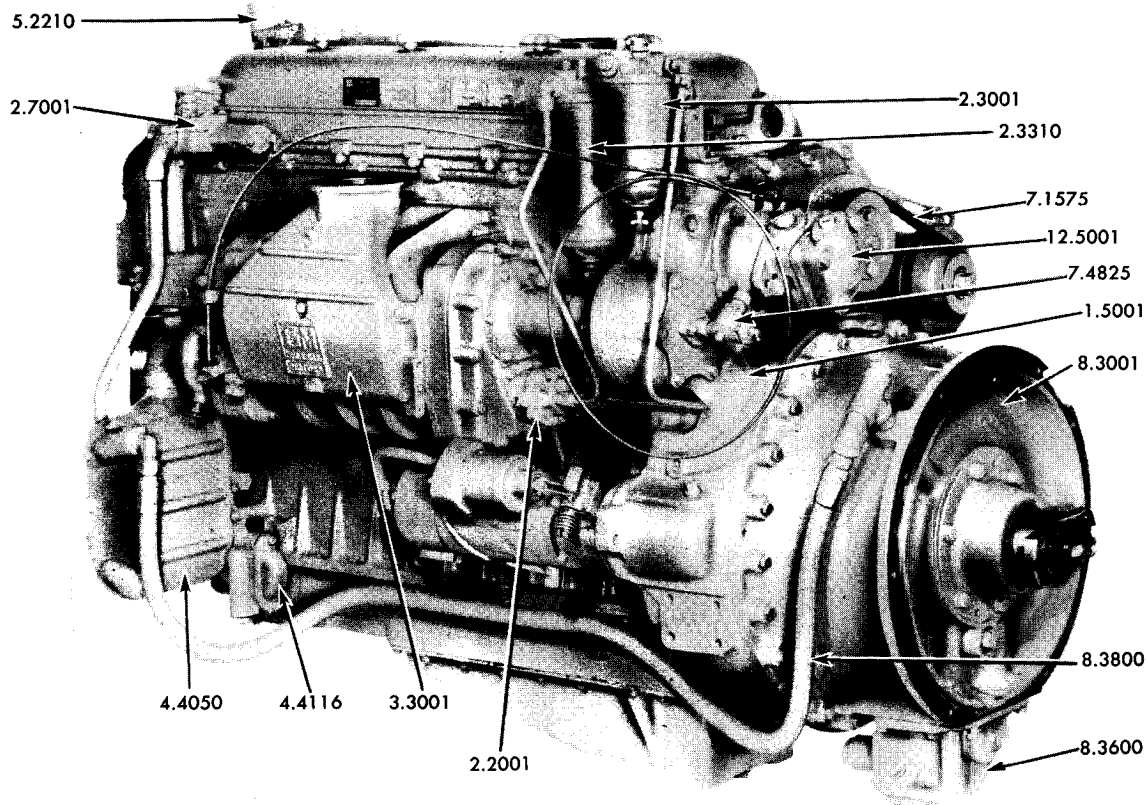


Fig. 2—Typical Torque Converter Unit



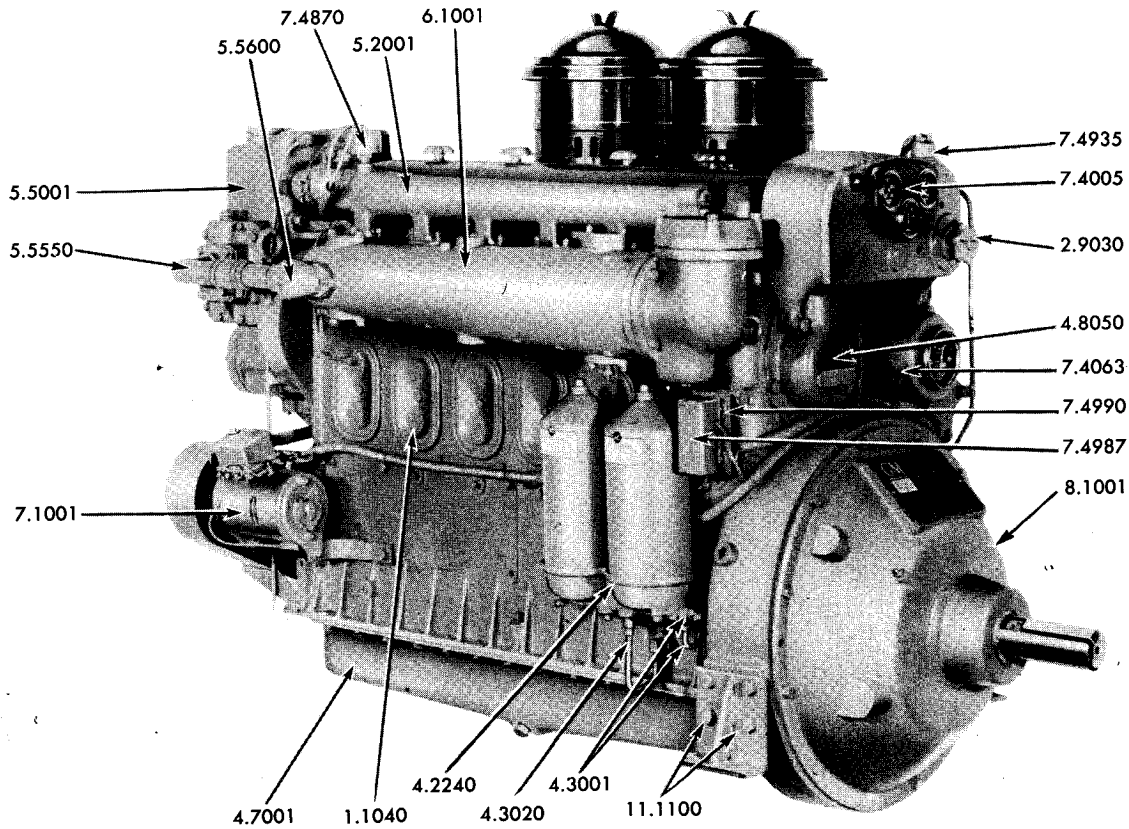


Fig. 3—Typical Power Take-Off Unit (Heat Exchanger Cooled)

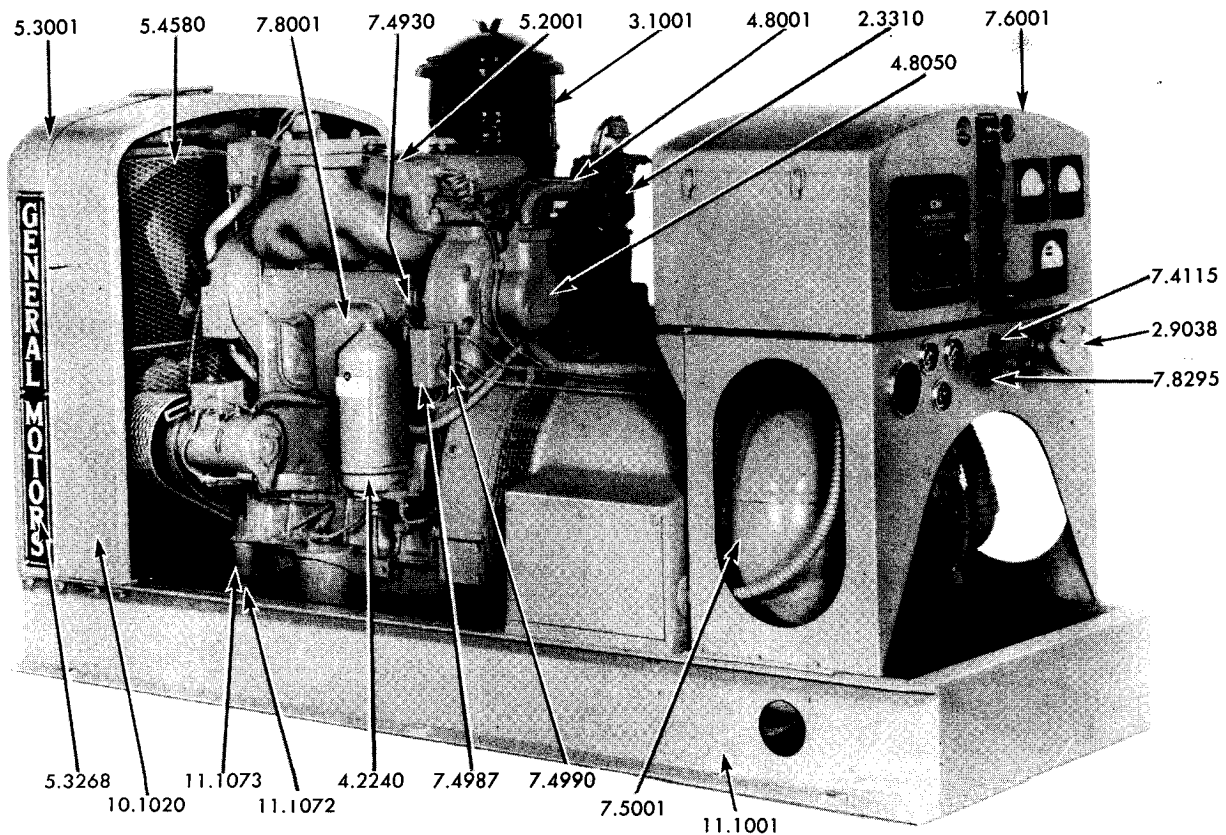


Fig. 4—Typical Power Generator Set

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>CYLINDER BLOCK</b>						
5	1.1001	5193107	Block Assy., cylinder	1		
5	1.1001	5193108	Block Assy., cylinder		1	
5	1.1001	5193109	Block Assy., cylinder			1
-	-	103877	Plug, 1/8" pipe	2	2	2
-	-	5182578	Plug, 1/8" allen head pipe	4	5	7
-	-	103878	Plug, 1/4" pipe	5	6	10
-	-	5182579	Plug, 1/4" allen head pipe	4	4	4
-	-	5182580	Plug, 3/8" allen head pipe	1	1	1
-	-	5182581	Plug, 1/2" allen head pipe	4	4	4
-	-	144015	Plug, 3/4" pipe	1	2	2
-	-	144016	Plug, 1" pipe	4	6	10
-	-	5150014	Plug, 1 1/4" (core hole)	2	2	2
-	-	5178998	Plug, 1 3/4"-16 (core hole)	4	4	4
-	-	5178997	Gasket, plug	4	4	4
5	1.1001	5151576	Dowel, cylinder block to flywheel housing and front cover	4	4	4
-	-	5193113	Gasket Kit, basic engine overhaul	*		
-	-	5193114	Gasket Kit, basic engine overhaul		*	
-	-	5193115	Gasket Kit, basic engine overhaul			*
5	1.1010	5152878	Plate, cylinder block front end	1	1	1
5	1.1020	5150060	Plate, cylinder block rear end	1	1	1
5	1.1010	179882	Bolt, 1/2"-13x1 1/8" hex. hd. (front end only)	2	2	2
5	1.1020	179839	Bolt, 3/8"-16x1" hex. hd.	12	12	12
-	-	103323	Lockwasher, 1/2" (front end only)	2	2	2
-	-	103321	Lockwasher, 3/8"	12	12	12
5	1.1030	5177798	Gasket, cylinder block end plate	2	2	2
5	1.1040	5153117	Cover, cylinder block hand hole (plain)	3	4	8
5	1.1040	5164052 †	Cover, cylinder block hand hole (1/8" tapped hole)	*	*	*
78	1.1040	5184726#	Cover, cylinder block hand hole (3/4" tapped hole)		*	*
5	1.1040	5153139	Bolt, hand hole cover	3	4	8
-	-	103341	Washer, 3/8" flat	3	4	8
5	1.1040	105451	Gasket, 3/8" copper	3	4	8
5,67	1.1050	5150020	Gasket, cylinder block hand hole cover	3	4	8
5	1.1080	5150023	Cover, cylinder block water hole (plain)	1	1	1

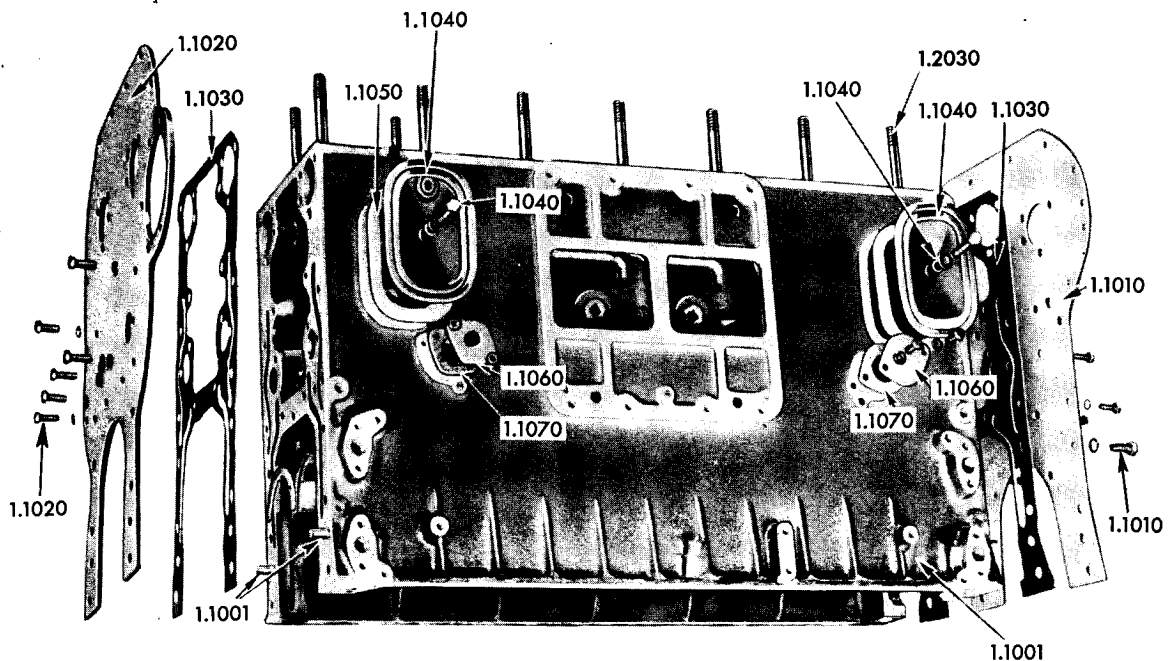


Fig. 5—Cylinder Block

\* As required. † Use with flywheel housing breather. # Use with air compressor.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
5	1.1060	5164190	Cover, cylinder block water hole (7/16" tapped hole) .....	*	*	*
-	-	5161358	Valve (with cover 5164190) .....	*	*	*
-	-	179816	Bolt, 5/16"-18x3/4" hex. hd. ....	2	2	2
-	-	186625	Bolt, 5/16"-18x7/8" hex. hd. (with cover 5164190) .....	2	2	2
-	-	103320	Lockwasher, 5/16" .....	2	2	2
5	1.1070	5150024	Gasket, cylinder block water hole cover .....	1	1	1
<b>AIR BOX DRAINS</b>						
6	1.1100	5158825	Tube Assy., air box drain (dev. L. 4 1/4") .....	2	2	2
6	1.1100	5171500	Tube Assy., air box drain (front) (dev. L. 13 7/8") .....	1	1	1
6	1.1100	5171500	Tube Assy., air box drain (rear) (dev. L. 13 7/8") .....	1		
6	1.1100	5171501	Tube Assy., air box drain (rear) (dev. L. 19 1/2") .....		1	
6	1.1100	5171502	Tube Assy., air box drain (rear) (dev. L. 31") .....			1

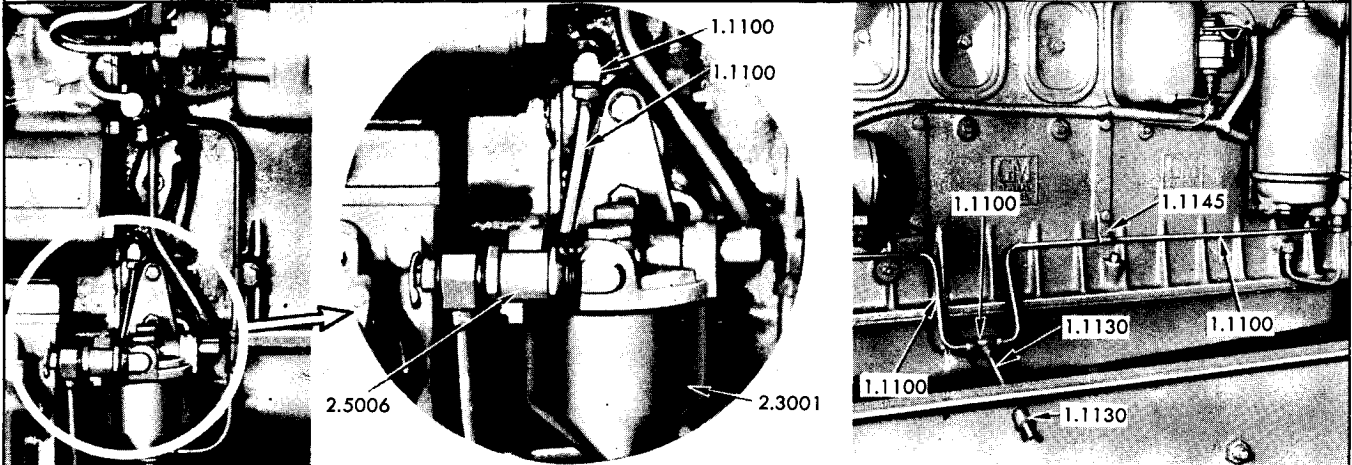


Fig. 6—Air Box Drains

6	1.1100	137422	Elbow, 5/16" tube 90° inv. fl. ....	2	2	2
6	1.1130	5176836	Tube, air box drain tube extension .....	1	1	1
6	1.1130	5176835	Bushing, air box drain extension tube .....	1	1	1
6	1.1145	3291486	Clip, air box drain tube .....	1	1	1
<b>CYLINDER HEAD</b>						
-	-	5193632	Head Assy., cylinder (complete) .....	1		
-	-	5193633	Head Assy., cylinder (complete) .....		1	
-	-	5193634	Head Assy., cylinder (complete) .....			1
7	1.2001	5185342	Head Assy., cylinder .....	1		
7	1.2001	5185343	Head Assy., cylinder .....		1	
7	1.2001	5185344	Head Assy., cylinder .....			1
7	1.2001	5182580	Plug, 3/8" hex. socket head pipe (oil gallery) .....	2	2	2
7	1.2001	5154453	Plug, 3/8"-16 slotted headless .....	4	4	4
7	1.2001	114015	Plug, 3/4" pipe .....	4	4	4
-	-	5193116	Gasket Kit, cylinder head .....	*		
-	-	5193117	Gasket Kit, cylinder head .....		*	
-	-	5193118	Gasket Kit, cylinder head .....			*
7	1.2005	5172874	Nozzle, cylinder head water (single outlet) .....	4	4	4
7	1.2005	5172875	Nozzle, cylinder head water (double outlet) .....	4	6	10
7	1.2010	5183330	Gasket, cylinder liner compression .....	3	4	6
7	1.2020	5183948	Ring, cylinder head oil seal .....	1		
7	1.2020	5183476	Ring, cylinder head oil seal .....		1	

\* As required. † Includes plugs, nozzles, valve and injector rocker arms, rocker shaft, rocker bracket, push rod covers, push rod springs, upper and lower push rod seats, push rod retainers, cam follower, valve guides, valve inserts, valve spring locks, injector clamps and studs, injector hole tubes and seal rings, upper and lower fuel manifold, fuel pipes and connections and manifold studs. # Includes plugs, nozzles, valve guides, valve inserts, injector clamp studs, injector hole tubes and seal rings and manifold studs.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
7	1.2020	5183306	Ring, cylinder head oil seal .....			1
7	1.2020	5186579	Ring, cylinder head water hole seal .....	4	6	10
7	1.2020	5186577	Ring, cylinder head end water hole seal .....	2	2	2
7	1.2022	5183305	Gasket, cylinder head water and oil .....	2	2	2
5	1.2030	5183329	Stud, cylinder head .....	8	10	14
7	1.2040	5150013	Nut, cylinder head .....	8	10	14

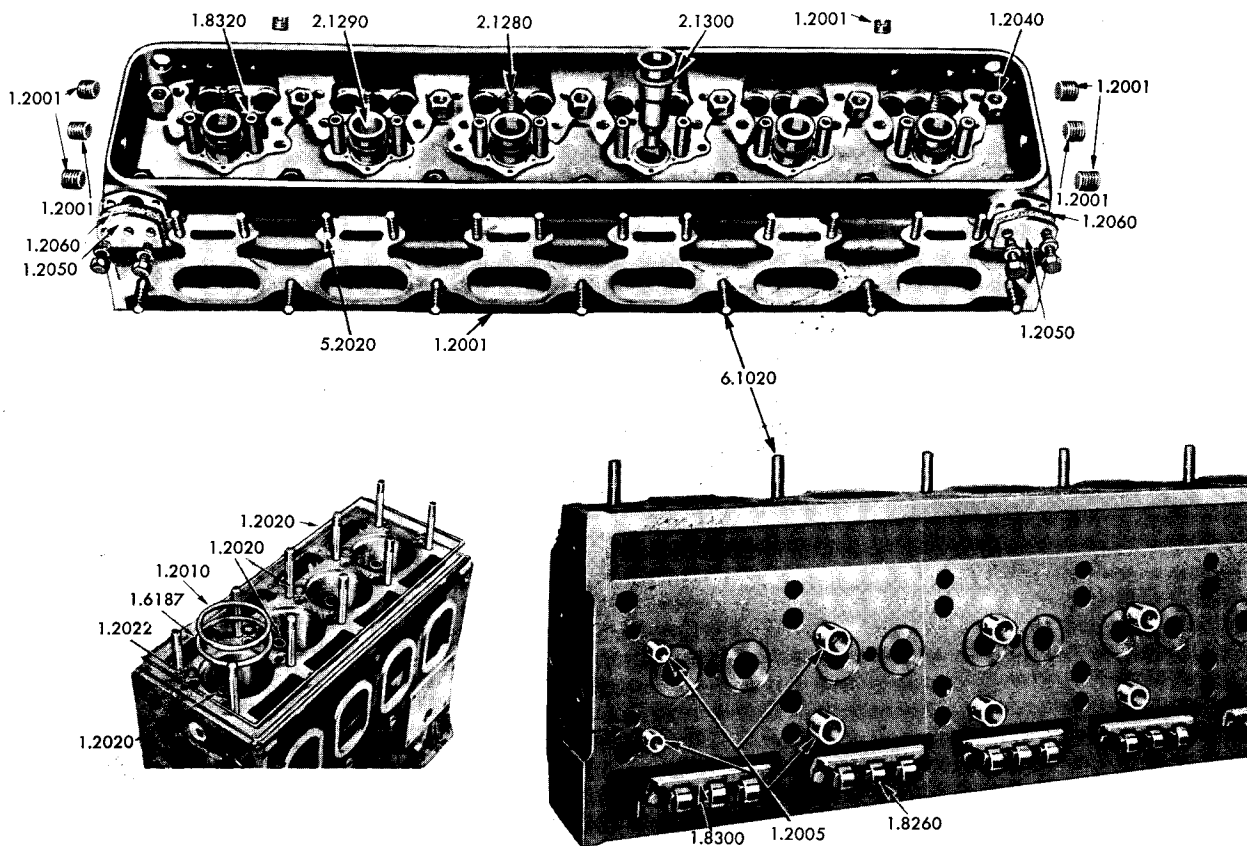


Fig. 7—Cylinder Head

7	1.2050	5150268	Cover, cylinder head governor hole (plain) .....	3	3	3
7	1.2050	5164062	Cover, cylinder head governor hole (tapped) .....	1	1	1
-	-	180016	Bolt, 1/4"-20x1/2" hex. hd. ....	6	6	6
-	-	186630	Bolt, 1/4"-20x5/8" hex. hd. ....	2	2	2
-	-	103319	Lockwasher, 1/4" .....	6	6	6
7	1.2060	5150269	Gasket, cylinder head governor hole cover .....	4	4	4

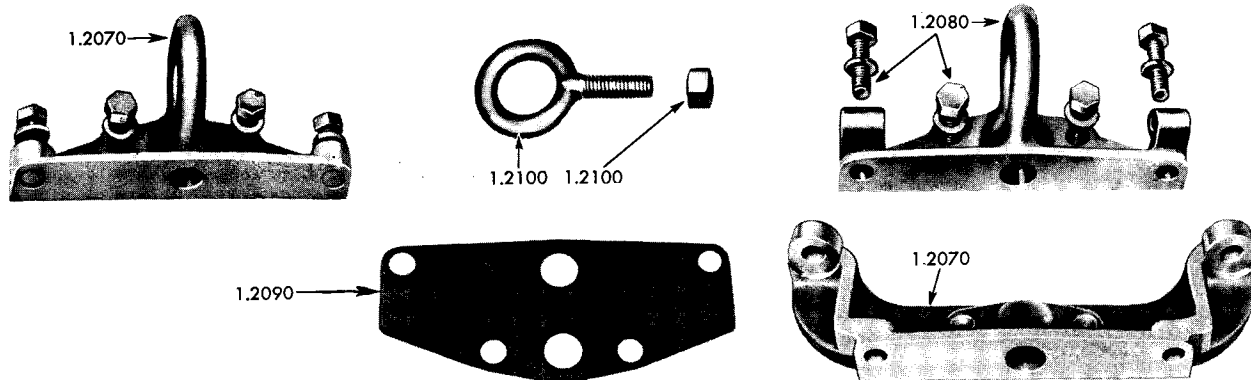


Fig. 8—Engine Lifter Bracket

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>ENGINE LIFTER BRACKET</b>						
8	1.2070	5167776	Vent (front bracket) (less lifting eye) .....	1	1	1
8	1.2070	5150050	Bracket, engine lifter - front .....	1	1	1
8	1.2080	5150051	Bracket, engine lifter - rear .....	1	1	1
8	1.2080	179862	Bolt, 7/16"-14x1 1/2" hex. hd. ....	8	8	8
-	-	186725	Bolt, 1/2"-13x1 1/2" hex. hd. (to expansion tank) .....	2	2	2
-	-	103322	Lockwasher, 7/16" .....	8	8	8
-	-	103323	Lockwasher, 1/2" .....	2	2	2
8	1.2090	5150052	Gasket, engine lifter bracket .....	2	2	2
8	1.2100	5151476	Bolt, eye .....	2	2	2
8	1.2100	123550	Nut, 1/2"-13 hex. thin .....	2	2	2
<b>CRANKSHAFT</b>						
9	1.3001	5184215	Crankshaft Assy. } .....	1	1	1
9	1.3001	5182941	Crankshaft Assy. } (includes dowel) .....			
9	1.3001	5179068	Crankshaft Assy. } .....			
-	-	103878#	Plug, 1/4" pipe .....	1	1	1
9	1.3001	5173048\$	Plug, crankshaft .....	1	1	1
9	1.3001	5177528	Dowel, crankshaft .....	2	2	2
9	1.3010	5159331	Baffle, oil (hole for wick) .....	1	1	1
9	1.3010	5155661	Baffle, grease (no hole) .....	1	1	1
9	1.3020	5176721	Wick Assy., clutch pilot bearing oil .....	1	1	1
9	1.3030	5175777	Washer, oil wick (felt) .....	6	6	6
9,10	1.3040	5151392	Seal, crankshaft oil (front) .....	1	1	1

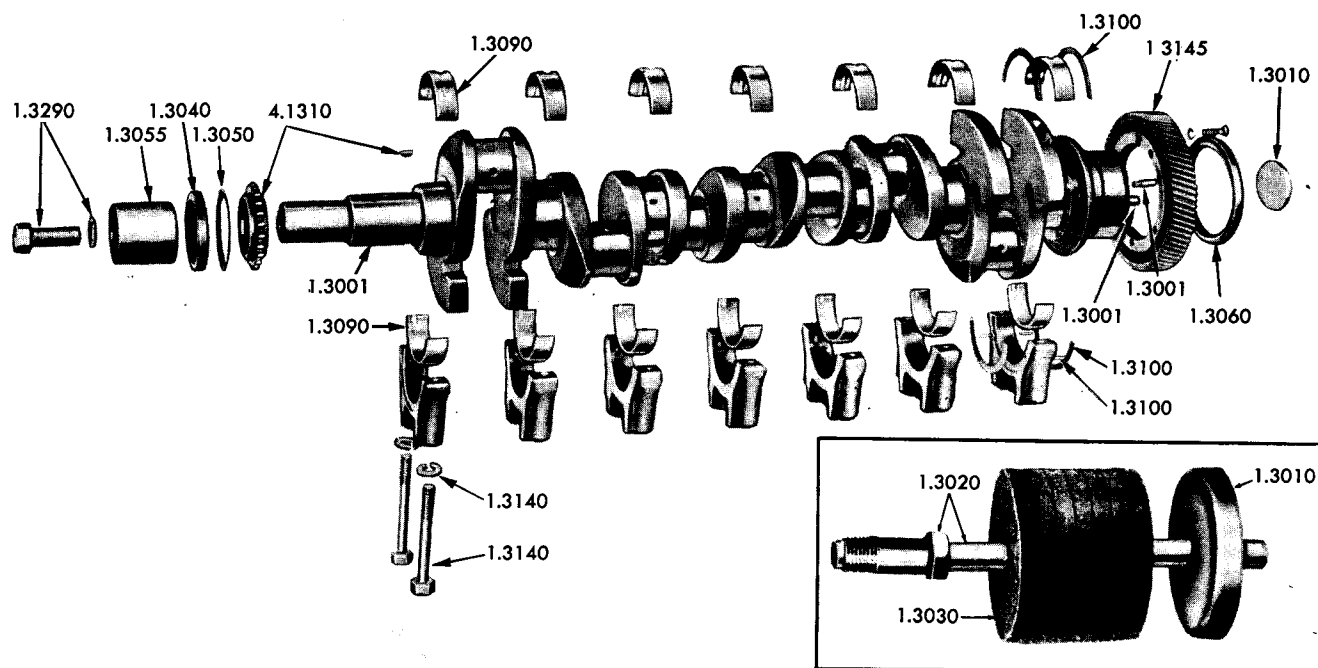


Fig. 9—Crankshaft

\* Used when no baffle or oil wick Assy. is used. \$ Used with grease baffle.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
9	1.3050	5150175	Slinger, crankshaft oil (front) .....	1		
9	1.3050	5150174	Slinger, crankshaft oil (front) .....		1	1
9	1.3055	5151475	Spacer, crankshaft front oil seal (7/8" long) .....	1		
9	1.3055	5151420	Spacer, crankshaft front oil seal (2 13/16" long) .....		1	1
-	-	5160380%	Washer, crankshaft cap retainer (front) .....	1	1	1
-	-	5153623%	Bolt, crankshaft cap .....	1	1	1
-	-	5160302%	Cap, crankshaft (front) .....	1	1	1
9	1.3060	5178989	Seal, crankshaft oil - rear .....	1	1	1
9	1.3060	5192776	Seal, crankshaft oil - rear (oversize, use with sleeve 5193413) .....	*	*	*
-	-	5193413	Sleeve, crankshaft rear oil seal (use with oversize oil seal 5192776) ..	*	*	*
9	1.3090	5192874	Shell Set, main bearing (standard) .....	4	5	7
9	1.3090	5192875	Shell Set, main bearing (.002" U.S.) .....	*	*	*
9	1.3090	5192876	Shell Set, main bearing (.010" U.S.) .....	*	*	*
9	1.3090	5192877	Shell Set, main bearing (.020" U.S.) .....	*	*	*
9	1.3090	5192878	Shell Set, main bearing (.030" U.S.) .....	*	*	*
9	1.3100	5159353	Washer, crankshaft main bearing thrust (standard) .....	4	4	4
9	1.3100	5160542	Washer, crankshaft main bearing thrust (.005" O.S.) .....	*	*	*
9	1.3100	5192111	Washer, crankshaft main bearing thrust (.010" O.S.) .....	*	*	*
9	1.3100	141346	Pin, 3/16"x1/2" dowel .....	4	4	4
9	1.3140	5152149	Bolt, crankshaft main bearing cap .....	8	10	14
9	1.3140	103334	Lockwasher, 5/8" .....	8	10	14
9	1.3145	5173329	Gear, crankshaft timing (L.H. helix) (LA-LB-LC-LD eng.) .....	1	1	1
9	1.3145	5173330	Gear, crankshaft timing (R.H. helix) (RA-RB-RC-RD eng.) .....	1	1	1
-	-	5150271	Bolt, crankshaft gear .....	6	6	6
-	-	103321	Lockwasher, 3/8" .....	6	6	6
<b>CRANKSHAFT FRONT COVER</b>						
10	1.3160	5175933	Cover Assy., crankshaft front (stationary mounting) } (includes oil	1	1	1
1,10	1.3160	5175935	Cover Assy., crankshaft front (trunnion mounting) } seal) ....	1	1	1
10	1.3160	181360	Bolt, 3/8"-24x3/4" hex. hd. (stationary mounting) .....	3	3	3
10	1.3160	181361	Bolt, 1/2"-13x2 1/4" hex. hd. (stationary mounting) .....	2	2	2
-	-	186659	Bolt, 1/2"-13x3 3/4" hex. hd. (stationary mounting) .....	2	2	2
-	-	181365	Bolt, 3/8"-24x1 1/8" hex. hd. (trunnion mounting) .....	3	3	3
-	-	181631	Bolt, 1/2"-13x2 1/4" hex. hd. (trunnion mounting) .....	4	4	4
-	-	103321	Lockwasher, 3/8" .....	3	3	3
-	-	103323	Lockwasher, 1/2" .....	4	4	4
10	1.3170	5150181	Gasket, crankshaft front cover .....	1	1	1

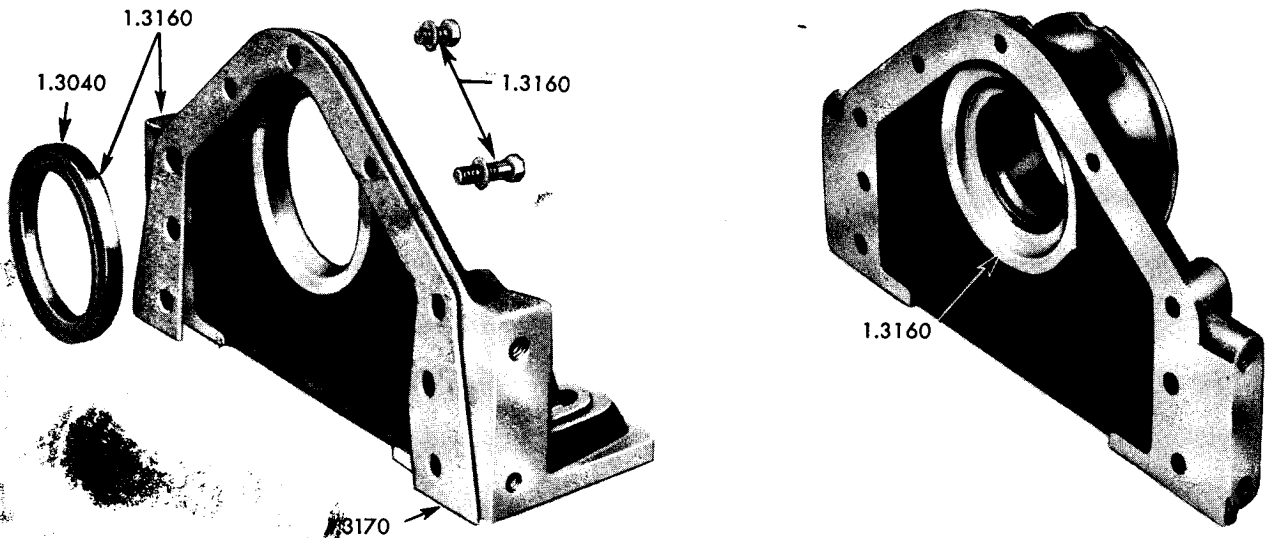


Fig. 10—Crankshaft Front Cover

\*As required. % Used only when crankshaft pulley is not used.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>VIBRATION DAMPER</b>						
11	1.3210	5156286	Damper, light vibration (rubber) .....		1	
11	1.3210	5156285	Damper, heavy vibration (rubber) .....			1
11	-	5176767	Damper, light vibration (rubber) .....			1
-	-	5177763	Damper, light vibration (Houde) .....		1	1
-	-	5177764	Damper, heavy vibration (Houde) .....		1	1
-	-	181394	Bolt, 7/16"-20x7/8" hex. hd. (single damper) .....		6	6
-	-	181396	Bolt, 7/16"-20x1 1/8" hex. hd. (double damper) .....		6	6
-	-	103322	Lockwasher, 7/16" .....		6	6
11	1.3230	5156296	Hub Assy., vibration damper (rubber) } (includes dowel) ....		1	1
11	1.3230	5179243	Hub Assy., vibration damper (Houde) }		1	1
11	1.3230	5156295	Dowel, vibration damper hub assy. ....		2	2
-	-	5177550	Clip, vibration damper ground .....			1
-	-	9409217	Bolt, 3/8"-24x3/4" hex. hd. ....			2
-	-	103341	Washer, 3/8" flat .....			1
11	1.3240	5158641	Cone, vibration damper - front (17/32" long) .....		1	1
11	1.3240	5151344	Cone, vibration damper - front (13/16" long) .....		1	1
11	1.3250	5158640	Cone, vibration damper - rear (2 1/8" long) .....		1	1
11	1.3250	5153144	Cone, vibration damper - rear (1 13/32" long) .....		1	1
-	-	5179588	Spacer, vibration damper (Houde) .....		1	

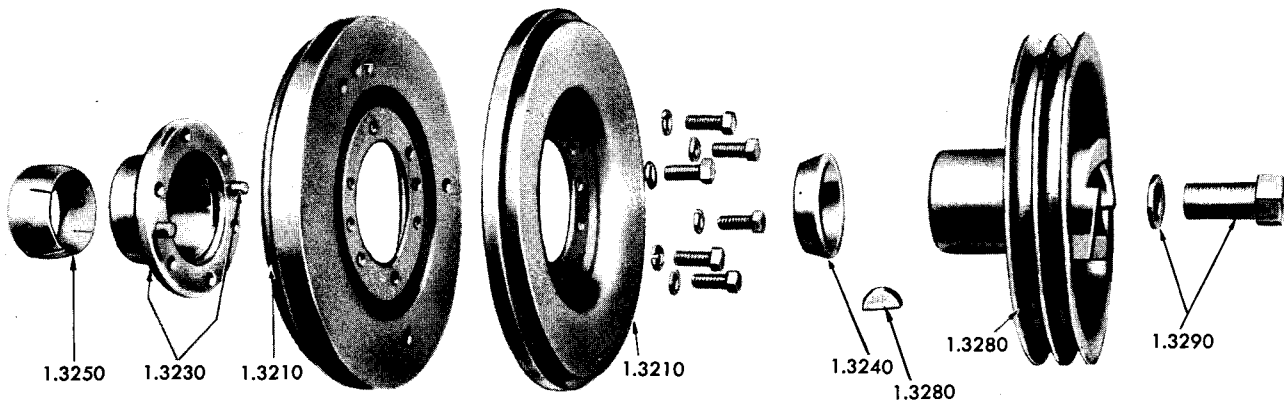


Fig. 11—Vibration Damper

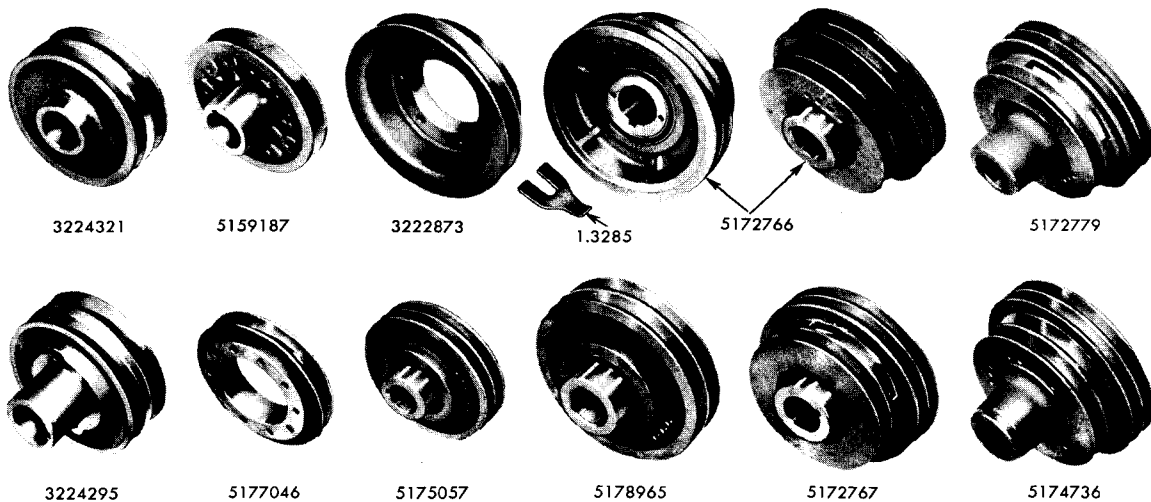
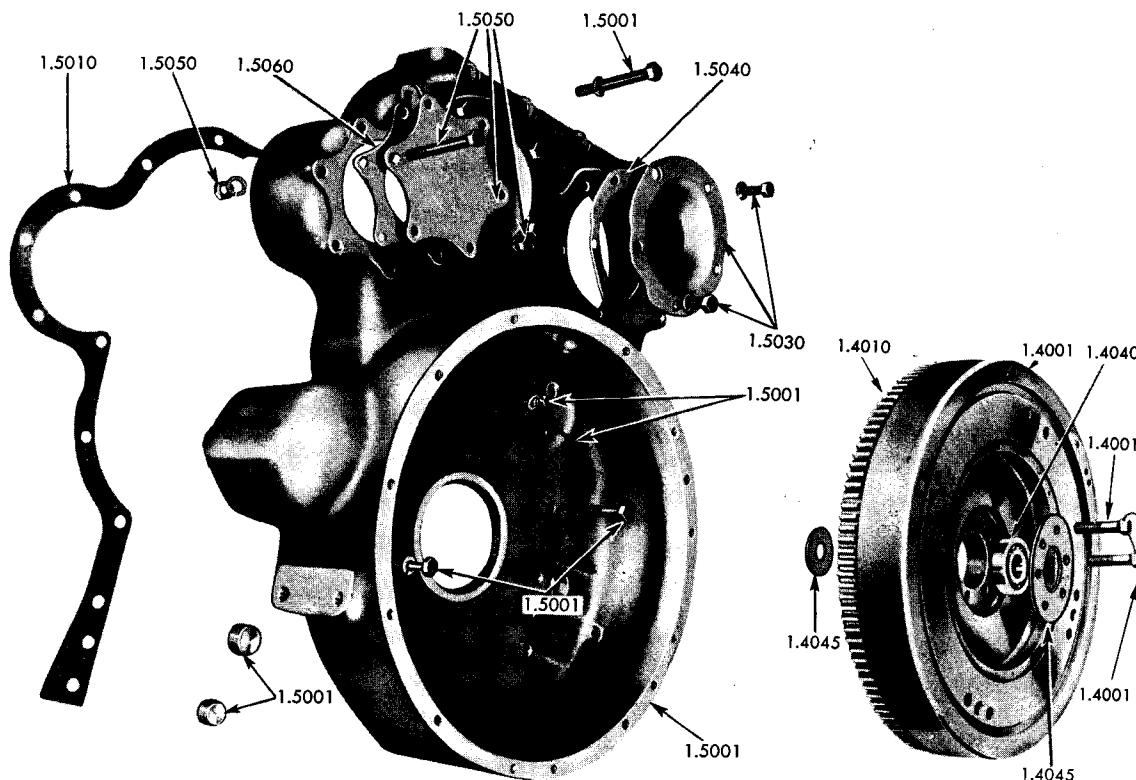


Fig. 12—Crankshaft Pulley (Item 1.3280)

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>CRANKSHAFT PULLEY</b>						
1,12	1.3280	3224321	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide and 1 groove, 7 1/2" dia., 1" wide)	1	1	1
12	1.3280	5159187	Pulley, crankshaft (1 groove, 7 1/2" dia., 1" wide)	1	1	1
12	1.3280	3224295	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide and 1 groove, 7 1/2" dia., 1" wide)	1	1	1
12	1.3280	5177046	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide)			1
12	1.3280	5172766	Pulley, crankshaft (2 grooves, 7 1/2" dia., 13/16" wide and 2 grooves, 9" dia., 21/32" wide)		1	1
12	1.3280	5174736	Pulley, crankshaft (2 grooves, 7 1/2" dia., 13/16" wide and 2 grooves, 9" dia., 21/32" wide)	1		
12	1.3280	5175057	Pulley, crankshaft (2 grooves, 9" dia., 21/32" wide)	1	1	1
12	1.3280	5178965	Pulley, crankshaft (2 grooves, 9" dia., 13/16" wide)			1
12	1.3280	5172767	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide and 2 grooves, 9" dia., 21/32" wide)		1	1
12	1.3280	5172779	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide and 2 grooves, 9" dia., 21/32" wide)	1		
12	1.3280	3222873	Pulley, crankshaft (1 groove, 7 1/2" dia., 13/16" wide and 1 groove, 9" dia., 15/16" wide)	1	1	1
11	1.3280	117982	Key, 3/8"x1 1/4" woodruff	2	2	2
12	1.3285	5176178	Clip, crankshaft pulley grounding (forked)		1	1
-	-	5177550	Clip, crankshaft pulley grounding (angle)	1	1	1
9,11	1.3290	5157930	Retainer, crankshaft pulley	1	1	1
9,11	1.3290	5153623	Bolt, crankshaft pulley retainer	1	1	1
<b>CRANKSHAFT PULLEY BELT</b>						
1	1.3320	3224368	Belt, crankshaft pulley drive (55 3/4" L., 1.024" W.)	1	1	1
1	1.3320	5184450	Belt, crankshaft pulley drive (55 13/16" L., 1.024" W.)			1
1	1.3320	5185173	Belt, crankshaft pulley drive (70 11/32" L., 1.004" W.)	1		
1	1.3320	3224451	Belt, crankshaft pulley drive (70 1/2" L., 1.004" W.)	1	1	1
1	1.3320	3222892	Belt, crankshaft pulley drive (58 1/2" L., .976" W.)	1	1	1
1	1.3320	5170972	Belt Set, crankshaft pulley drive (2 belts) (46" L., .663" W.)	1	1	1
1	1.3320	5175105	Belt Set, crankshaft pulley drive (2 belts) (74 1/2" L., .726" W.)	1	1	1
1	1.3320	5183117	Belt Set, crankshaft pulley drive (2 belts) (60 1/2" L., .879" W.)			1
1	1.3320	5184494	Belt Set, crankshaft pulley drive (2 belts) (46 1/8" L., .663" W.)			1
1	1.3320	5176420	Belt Set, crankshaft pulley drive (2 belts) (59" L., .654" W.)	1	1	1
1	1.3320	5177684	Belt Set, crankshaft pulley drive (2 belts) (58 1/2" L., .879" W.)			1
1	1.3320	5177290	Belt Set, crankshaft pulley drive (2 belts) (46 1/8" L., .663" W.)		1	
<b>FLYWHEEL</b>						
The proper flywheel assy. for your engine can be interpreted by the identifying type number indicated on the Options and Accessories plate on your engine. Your nearest G.M. Diesel dealer or distributor will interpret the flywheel type number into the part number.						
13	1.4001	-	Flywheel Assy. (includes ring gear)	1	1	1
13	1.4001	5176322	Flywheel Assy. (power generator sets only) (includes ring gear)	1	1	1
13	1.4001	5150267	Bolt, flywheel (2 11/16" L.)	6	6	6
13	1.4001	5150458	Bolt, flywheel (2 1/4" L.)	6	6	6
13	1.4001	5150454	Bolt, flywheel (2 7/8" L.)	6	6	6
13	1.4001	5171934	Bolt, flywheel (2" L.)	6	6	6
13	1.4001	5151241	Lockwire, flywheel bolt	3	3	3
13	1.4010	5152615	Gear, flywheel ring (SAE #1-118 teeth)	1	1	1
13	1.4010	5153779	Gear, flywheel ring (SAE #2-102 teeth)	1	1	1
13	1.4010	5152614	Gear, flywheel ring (SAE #2-103 teeth)	1	1	1
13	1.4010	5166664	Gear, flywheel ring (part of 5176322 flywheel assy.)	1	1	1
13	1.4040	954421	Bearing, clutch pilot (0.9843 I.D.x2.4409 O.D.x0.6693)	1	1	1
13	1.4040	954422	Bearing, clutch pilot (1.1811 I.D.x2.8346 O.D.x0.7480)	1	1	1
13	1.4040	954411	Bearing, clutch pilot (1.1811 I.D.x2.4409 O.D.x0.6299)	1	1	1
13	1.4040	954410	Bearing, clutch pilot (0.9843 I.D.x2.0472 O.D.x0.5906)	1	1	1



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
13	1.4040	954427	Bearing, clutch pilot (1.1811 I.D.x2.8346 O.D.x1.1875) .....	1	1	1
13	1.4040	954472	Bearing, clutch pilot (1.3780 I.D.x2.8346 O.D.x1.0625) .....	1	1	1
13	1.4040	954420	Bearing, clutch pilot (1.3780 I.D.x2.8346 O.D.x0.6693) .....	1	1	1
13	1.4045	5176427	Retainer, clutch pilot bearing (1 15/16" I.D., 3" O.D.) .....	1	1	1
13	1.4045	3224297	Retainer, flywheel dowel (2 3/4" I.D., 5" O.D.) .....	1	1	1



-Fig. 13—Flywheel and Flywheel Housing

### FLYWHEEL HOUSING

The proper flywheel housing assy. for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model and type number, if shown, on the Options and Accessories plate on your engine.

13	1.5001	-	Housing Assy., flywheel (includes oil seal) .....	1	1	1
-	-	103880	Plug, 1/2" pipe .....	*	*	*
-	-	144015	Plug, 3/4" pipe .....	*	*	*
13	1.5001	144016	Plug, 1" pipe .....	*	*	*
13	-	144017	Plug, 1 1/4" pipe .....	*	*	*
13	1.5001	5177709	Bolt, flywheel housing .....	6	6	6
-	-	179839	Bolt, 3/8"-16x1" hex. hd. ....	2	2	2
13	1.5001	186309	Bolt, 3/8"-24x3 1/4" hex. hd. ....	*	*	*
-	-	186310	Bolt, 3/8"-24x3 1/2" hex. hd. ....	*	*	*
-	-	186312	Bolt, 3/8"-24x4" hex. hd. ....	1	1	1
-	-	186314	Bolt, 3/8"-24x4 1/4" hex. hd. ....	3	3	3
-	-	188146	Bolt, 3/8"-24x4 5/8" hex. hd. ....	1	1	1
13	1.5001	190770	Bolt, 1/2"-13x3/4" hex. hd. ....	6	6	6
-	-	103320	Lockwasher, 1/2" .....	6	6	6
-	-	103321	Lockwasher, 3/8" .....	10	10	10
-	-	103341	Washer, 3/8" flat .....	6	6	6

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
13	1.5001	5159493	Lockwire, flywheel housing bolt	2	2	2
-	-	117049	Nut, 3/8"-24 hex.	5	5	5
13	1.5010	5150054	Gasket, flywheel housing	1	1	1
13	1.5030	5159469	Cover, flywheel housing large hole	2	2	2
13	1.5030	179857	Bolt, 7/16"-14x7/8"	2	2	2
13	1.5030	179882	Bolt, 1/2"-13x1 1/8" hex. hd.	8	8	8
-	-	103322	Lockwasher, 7/16"	2	2	2
-	-	103323	Lockwasher, 1/2"	8	8	8
13,17	1.5040	5150059	Gasket, flywheel housing large hole cover	2	2	2
13	1.5050	5154669	Cover, flywheel housing small hole	1	1	1
-	-	5173465#	Cover, flywheel housing small hole		1	1
13	1.5050	179838	Bolt, 3/8"-16x7/8" hex. hd.	2	2	2
13	1.5050	186317	Bolt, 3/8"-24x5" hex. hd.	4	4	4
-	-	103321	Lockwasher, 3/8"	6	6	6
13	1.5050	117049	Nut, 3/8"-24 hex.	4	4	4
13	1.5060	5150057	Gasket, flywheel housing small hole cover	1	1	1

### FLYWHEEL HOUSING ADAPTOR

-	-	3224296	Adaptor, flywheel housing (No. 1 to No. 2 SAE, flush)	1	1	1
-	-	5174313	Adaptor, flywheel housing (No. 1 to No. 3 SAE, flush)	1	1	1
-	-	3229281	Adaptor, flywheel housing (No. 1 to No. 2 SAE, 1/4" offset)	1	1	1
-	-	5173389	Adaptor, flywheel housing (No. 1 to No. 3 SAE, 5/16" offset)	1	1	1
-	-	186619	Bolt, 3/8"-16x1 1/8" hex. hd.	12	12	12
-	-	103321	Lockwasher, 3/8"	12	12	12

### CONNECTING ROD AND PISTON

14	1.6001	5154332	Rod Assy., connecting (includes cap which is not sold separately, plus indented items)	3	4	6
14	1.6001	5150094	Bolt, connecting rod	6	8	12
14	1.6001	5150095	Nut, connecting rod	6	8	12
14	1.6001	103373	Pin, 3/32"x3/4" cotter	6	8	12
14	1.6010	5150140	Nozzle, connecting rod spray	3	4	6
-	-	5154360	Orifice, connecting rod spray	3	4	6
14	1.6040	5151350	Bushing, connecting rod piston pin	6	8	12

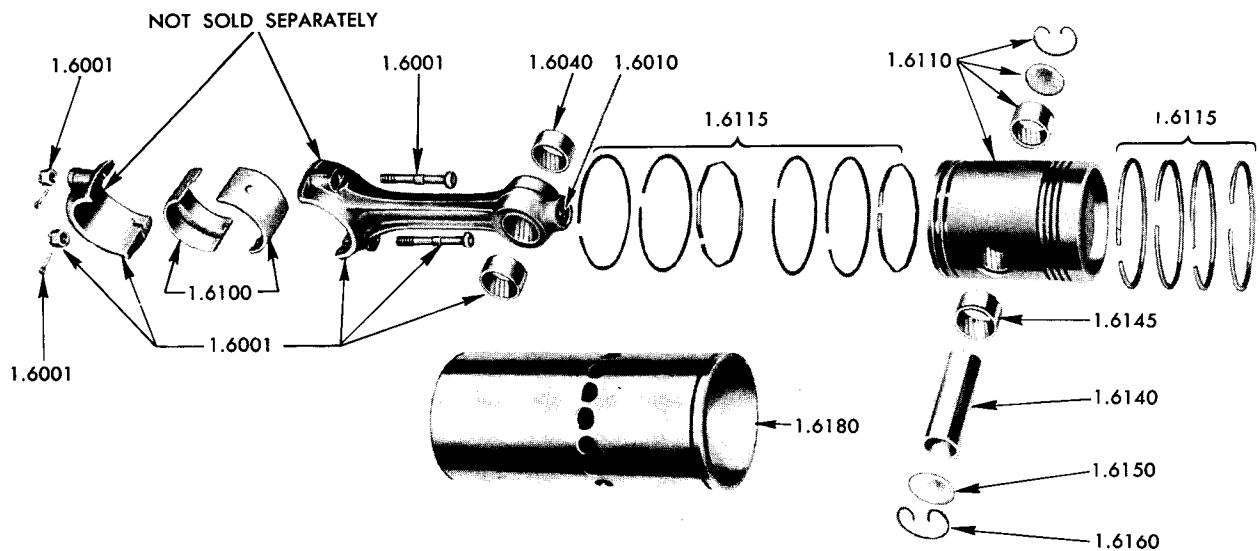


Fig. 14—Connecting Rod and Piston

\* As required. # Used in conjunction with air compressor.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
14	1.6100	5192895	Shell Set, connecting rod bearing (standard)	3	4	6
14	1.6100	5192896	Shell Set, connecting rod bearing (.002" U.S.)	*	*	*
14	1.6100	5192897	Shell Set, connecting rod bearing (.010" U.S.)	*	*	*
14	1.6100	5192898	Shell Set, connecting rod bearing (.020" U.S.)	*	*	*
14	1.6100	5192899	Shell Set, connecting rod bearing (.030" U.S.)	*	*	*
14	1.6110	5171524	Piston Assy. (standard)	3	4	6
14	1.6100	5192189	Piston Assy. (.010" O.S.)	*	*	*
14	1.6110	5192192	Piston Assy. (.020" O.S.)	*	*	*
14	1.6110	5192195	Piston Assy. (.030" O.S.)	*	*	*
14	1.6115	5193477	Ring Set, piston (standard, chrome)	3	4	6
14	1.6115	5192861	Ring Set, piston (.010" O.S.)chrome	*	*	*
14	1.6115	5192862	Ring Set, piston (.020" O.S. chrome)	*	*	*
14	1.6115	5182863	Ring Set, piston (.030" O.S. chrome)	*	*	*
14	1.6140	5153590	Pin, piston (standard)	3	4	6
14	1.6140	5190940	Pin, piston (.010" O.S.)	*	*	*
14	1.6145	5155839	Bushing, piston pin	6	8	12
14	1.6150	5153592	Retainer, piston pin (standard)	6	8	12
14	1.6150	5192497	Retainer, piston pin (.010" O.S.)	*	*	*
14	1.6160	5153562	Ring, piston pin lock	6	8	12
14	1.6180	5186590	Liner, cylinder (standard)	3	4	6
14	1.6180	5186595	Liner, cylinder (.005" O.D., O.S.)	*	*	*
14	1.6180	5186596	Liner, cylinder (.010" O.D., O.S.)	*	*	*
14	1.6180	5192470	Liner, cylinder (.020" O.D., O.S.)	*	*	*
14	1.6180	5186598	Liner, cylinder (.030" O.D., O.S.)	*	*	*
-	-	5193609	Cylinder Kit (contains one 5186590 liner, one 5171524 piston assy., one 5153590 piston pin and one 5193477 ring set)	*	*	*
7	1.6187	5184484	Insert, cylinder liner (standard and .005" O.S. liner)	3	4	6
7	1.6187	5193316	Insert, cylinder liner (.010" to .030" O.S. liner)	*	*	*
<b>CAMSHAFT AND GEAR TRAIN</b>						
15	1.7001	5185745	Camshaft (LA-LD-RB-RC eng.) (stamped 5185746)	1		
15	1.7001	5183954	Camshaft (LB-LC-RA-RD eng.) (stamped 5183936)	1		
15	1.7001	5179961	Camshaft (LA-LB-LC-LD eng.) (stamped 5179959)		1	
15	1.7001	5179951	Camshaft (RA-RB-RC-RD eng.) (stamped 5179950)		1	
15	1.7001	5179962	Camshaft (LA-LB-LC-LD eng.) (stamped 5179960)			1
15	1.7001	5179963	Camshaft (RA-RB-RC-RD eng.) (stamped 5169136)			1
15	1.7010	5158922	Bearing, cam and balancer shaft end (standard)	4	4	4
15	1.7010	5192589	Bearing, cam and balancer shaft end (.010" U.S.)	*	*	*
15	1.7010	5192590	Bearing, cam and balancer shaft end (.020" U.S.)	*	*	*
15	1.7010	186622	Bolt, 3/8"-16x1 1/4" hex. hd.	12	12	12
-	-	103321	Lockwasher, 3/8"	12	12	12
15	1.7030	5158917	Washer, cam and balancer shaft end bearing thrust (standard)	4	4	4
15	1.7030	5192231	Washer, cam and balancer shaft end bearing thrust (.005" O.S.)	*	*	*
15	1.7030	5192232	Washer, cam and balancer shaft end bearing thrust (.010" O.S.)	*	*	*
15	1.7040	5193125 #	Bearing Set, camshaft intermediate (standard)	2	3	5
15	1.7040	5193127 #	Bearing Set, camshaft intermediate (.010" O.S. on O.D.)	*	*	*
15	1.7040	5184171 #	Bearing Set, camshaft intermediate (.010" O.S. on I.D.)	*	*	*
15	1.7040	5184172 #	Bearing Set, camshaft intermediate (.020" O.S. on I.D.)	*	*	*
15	1.7050	5150026	Ring, camshaft intermediate bearing lock	4	6	10
15	1.7050	5183584	Bolt, camshaft intermediate bearing lock	2	3	5
15	1.7080	5158671	Shaft, balancer	1		
15	1.7080	5158672	Shaft, balancer		1	
15	1.7080	5158673	Shaft, balancer			1
-	-	5153000	Weight, front balancer	2		
-	-	5153001	Weight, front balancer		2	
15	1.7140	5150074	Weight Assy., front balancer			2
15	1.7140	5153914	Key, 1/4"x1" woodruff	2	2	2
-	-	5177769	Lockwasher, 1 1/8"	2	2	2
15	1.7140	5150087	Nut, 1 1/8"-18	2	2	2
-	-	5172346	Weight, rear balancer		2	
15	1.7190	5172347	Weight, rear balancer			2

\* As required. # A bearing set consists of one (1) upper and one (1) lower bearing.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
15	1.7190	181374	Bolt, 3/8"-24x1 1/2" hex. hd.		4	4
15	1.7200	5176458	Gear, camshaft (LA-LD-RA-RD engines)	1	1	1
15	1.7200	5176457	Gear, camshaft (LB-LC-RB-RC engines)	1	1	1
15	1.7200	5176457	Gear, balancer shaft (LA-LD-RA-RD engines)	1	1	1
15	1.7200	5176458	Gear, balancer shaft (LB-LC-RB-RC engines)	1	1	1
15	1.7200	5153914	Key, 1/4"x1" woodruff	2	2	2
15	1.7200	5150087	Nut, 1 1/8"-18	2	2	2
15	1.7207	5172734	Retainer, cam and balancer shaft gear nut	2	2	2
15	1.7207	186627 †	Bolt, 3/8"-24x1" hex. hd.	8	8	8
-	-	103321 †	Lockwasher, 3/8"	8	8	8
15	1.7222	5176994	Gear, idler R.H. helix (LA-LB-LC-ID eng.)	1	1	1
15	1.7222	5176995	Gear, idler L.H. helix (RA-RB-RC-RD eng.)	1	1	1
15	1.7225	7450205	Bearing Assy., idler gear	1	1	1
15	1.7227	5176998	Retainer, idler gear bearing	1	1	1
15	1.7227	5176999	Lock, bolt	3	3	3
15	1.7227	446072	Bolt, 5/16"-24x1/2" hex. hd.	6	6	6
15	1.7250	5176996	Hub Assy., idler gear (includes dowel)	1	1	1
15	1.7250	5151444	Dowel, idler gear hub	1	1	1
15	1.7250	186689	Bolt, 1/2"-13x2" hex. hd.	1	1	1
15	1.7250	5167714	Washer, idler gear hub	1	1	1
15	1.7260	5192568	Spacer Assy., idler gear hole (includes dowel)	1	1	1
-	1.7260	5151444	Dowel, idler gear hole spacer	1	1	1
15	1.7260	186689	Bolt, 1/2"-13x2" hex. hd.	1	1	1
15	1.7260	5167714	Washer, idler gear hole spacer	1	1	1

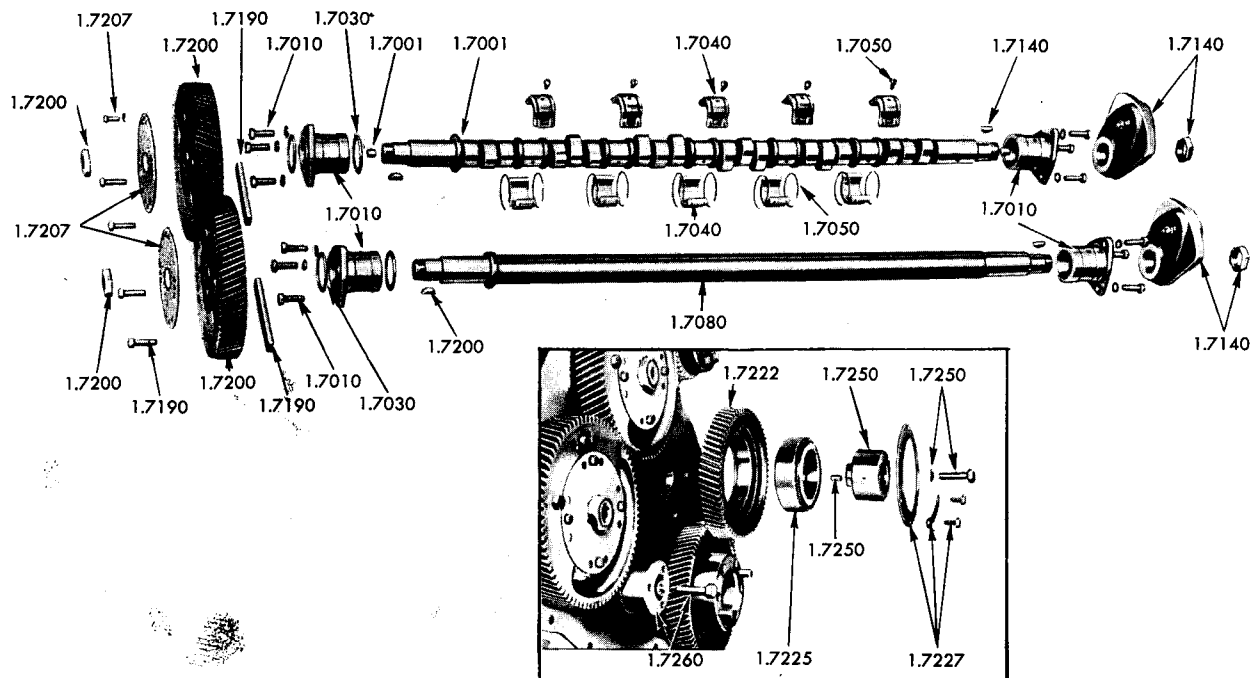


Fig. 15—Camshaft and Gear Train

<b>BALANCE WEIGHT COVER</b>						
1	1.7470	5187201	Cover, balance weight (fan cooled units, no drive holes)	1	1	1
16	1.7470	5166804	Cover Assy., balance weight (includes indented items) (fan cooled units)	1	1	1
-	-	5159440	Cover, balance weight (heat exchanger cooled units)	1	1	1
-	-	179846	Bolt, 3/8"-16x1 7/8" hex. hd.	2	2	2
-	-	186283	Bolt, 3/8"-16x3 1/2" hex. hd.	2	2	2
-	-	181374	Bolt, 3/8"-24x1 1/2" hex. hd.	1	1	1

† Reduce quantity by 4 when equipment is driven off cam or balancer shaft.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	187234	Bolt, 3/8"-24x2 7/8" hex. hd. ....	10	10	10
-	-	186309	Bolt, 3/8"-24x3 1/4" hex. hd. ....	2	2	2
-	-	103321	Lockwasher, 3/8" ....	15	15	15
16	1.7480	5150071	Gasket, balance weight cover ....	1	1	1
16	1.7490	5155815	Cover, balance weight cover hole ....	2	2	2
-	-	103320	Lockwasher, 5/16" ....	4	4	4
16	1.7490	121917	Nut, 5/16"-24 hex. ....	4	4	4
16	1.7500	5155816	Gasket, balance weight cover hole cover ....	2	2	2
16	1.7510	5155831	Stud, balance weight cover hole cover ....	4	4	4

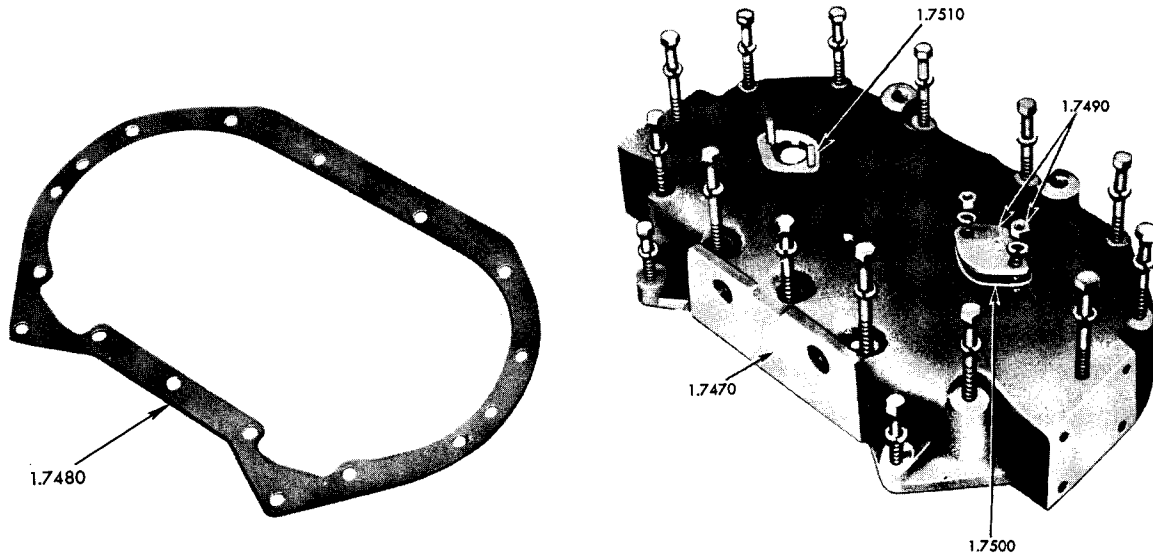


Fig. 16—Balance Weight Cover

<b>ACCESSORY DRIVE</b>						
18	1.7605	5164291	Pulley, accessory drive (5 1/2" dia., single groove) ....	1	1	1
17	1.7605	5168696	Pulley, accessory drive (5 1/2" dia., double groove) ....	1	1	1
18	1.7605	124548	Key, 5/32"x3/4" woodruff ....	1	1	1
17	1.7605	106751	Key, 3/16"x3/4" woodruff ....	1	1	1
18	1.7605	5174186	Bolt, accessory drive pulley ....	1	1	1

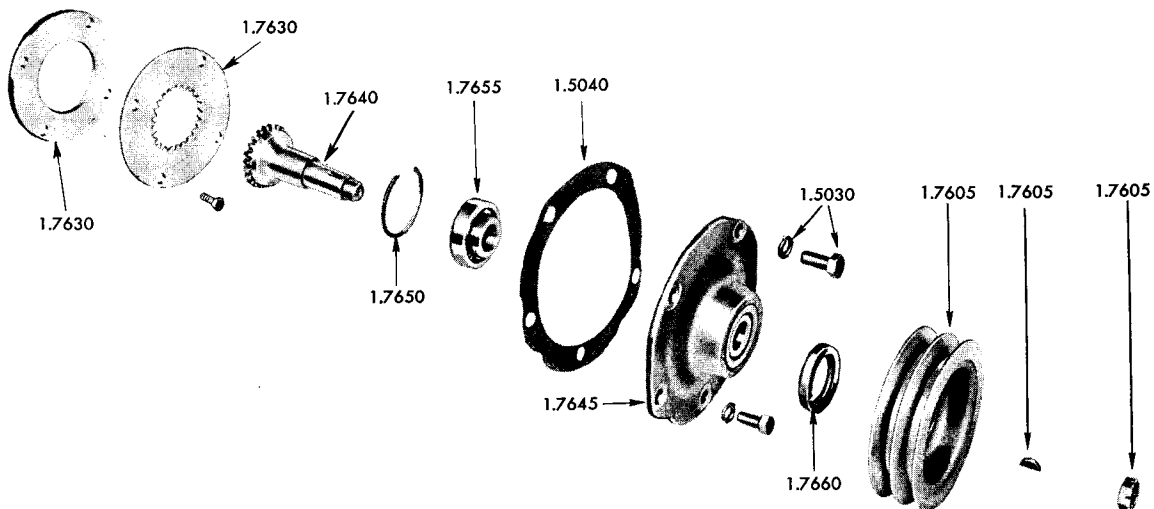


Fig. 17—Accessory Drive

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
17	1.7605	145015	Nut, 3/4"-16 hex. lock .....	1	1	1
18	1.7605	5164292	Washer, accessory drive pulley .....	1	1	1
-	-	103322	Lockwasher, 7/16" .....	1	1	1
18	1.7610	5164286	Hub, accessory drive pulley .....	1	1	1
18	1.7610	5176474	Bolt, accessory drive pulley hub .....	4	4	4
18	1.7615	5165779	Retainer Assy., drive pulley hub oil seal (includes seal) .....	1	1	1
18	1.7620	5155445	Seal, drive pulley hub oil .....	1	1	1
17,19	1.7630	5153449	Plate, accessory drive .....	1	1	1
17,19	1.7630	5177026	Spacer, accessory drive plate .....	1	1	1
19	1.7630	5176474	Bolt, accessory drive plate .....	4	4	4
19	1.7635	3292492	Coupling, accessory drive .....	1	1	1
17	1.7640	5168697	Shaft, accessory drive .....	1	1	1
17	1.7645	5168699	Retainer Assy., accessory drive (includes indented items) .....	1	1	1
17	1.7650	5155783	Lockring, accessory drive .....	1	1	1
17	1.7655	954469	Bearing, accessory drive .....	1	1	1
17	1.7660	5155462	Seal, accessory drive oil .....	1	1	1

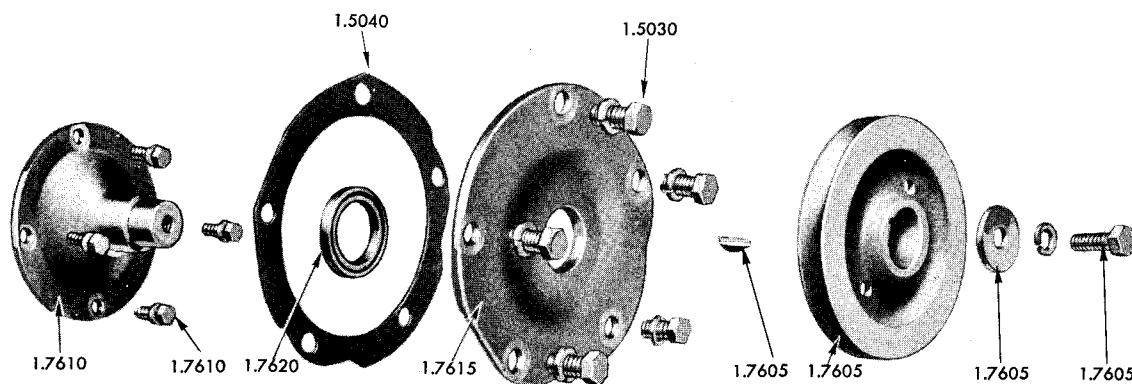


Fig. 18—Accessory Drive

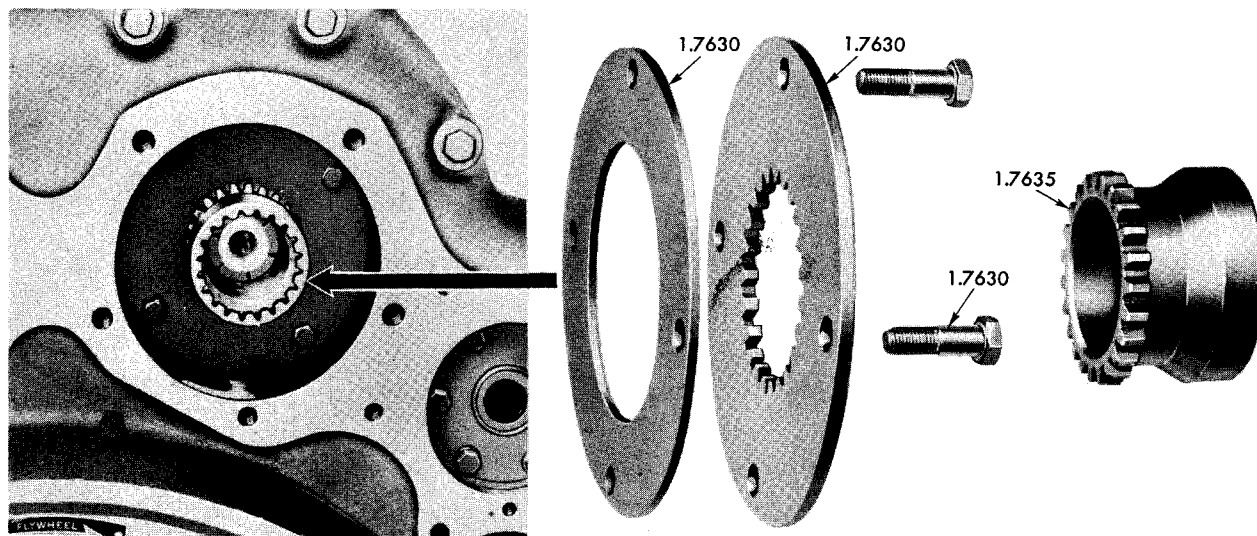


Fig. 19—Accessory Drive

### VALVE OPERATING MECHANISM

20	1.8060	5150304	Arm Assy., exhaust valve rocker (left) (item 1)	} (includes bushings, clevis and clevis pins)	3	4	6
20	1.8060	5150305	Arm Assy., exhaust valve rocker (right) (item 2)		3	4	6
20	1.8080	5179954	Arm Assy., injector rocker		3	4	6
20	1.8100	5150310	Bushing, exhaust valve rocker arm-large .....		6	8	12

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
20	1.8110	5150318	Bushing, injector rocker arm - large .....	3	4	6
20	1.8120	5150311	Bushing, injector and exhaust valve rocker arm - small .....	9	12	18
20	1.8130	5150312	Clevis, injector and exhaust valve rocker arm .....	9	12	18
20	1.8140	5150313	Bushing, injector and exhaust valve rocker arm clevis .....	9	12	18
20	1.8150	5150314	Pin, injector and exhaust valve rocker arm clevis .....	9	12	18
20	1.8160	5150322	Shaft Assy., rocker arm (includes plug) .....	3	4	6
20	1.8160	5151272	Plug, rocker arm shaft assy. ....	3	4	6
20	1.8170	5150324	Bracket, rocker shaft .....	6	8	12
20	1.8170	5150325	Bolt, rocker shaft bracket .....	6	8	12
20	1.8180	5150299	Rod, push .....	9	12	18
20	1.8180	5151601	Locknut, push rod .....	9	12	18
20	1.8190	5150301	Spring, push rod .....	9	12	18
20	1.8200	5150302	Seat, push rod spring - upper .....	9	12	18
20	1.8210	5150300	Seat, push rod spring - lower .....	9	12	18
20	1.8250	5150303	Retainer, push rod (snap ring) .....	9	12	18
7,20	1.8260	5159837	Follower Assy., cam .....	9	12	18
-	-	5190348	Roller Set, cam follower (includes roller with bushing and pin) .....	9	12	18
7,20	1.8300	5150298	Guide, cam follower .....	3	4	6
20	1.8300	443603	Bolt, 1/4"-20x3/4" hex. hd. ....	6	8	12
-	-	103319	Lockwasher, 1/4" .....	6	8	12

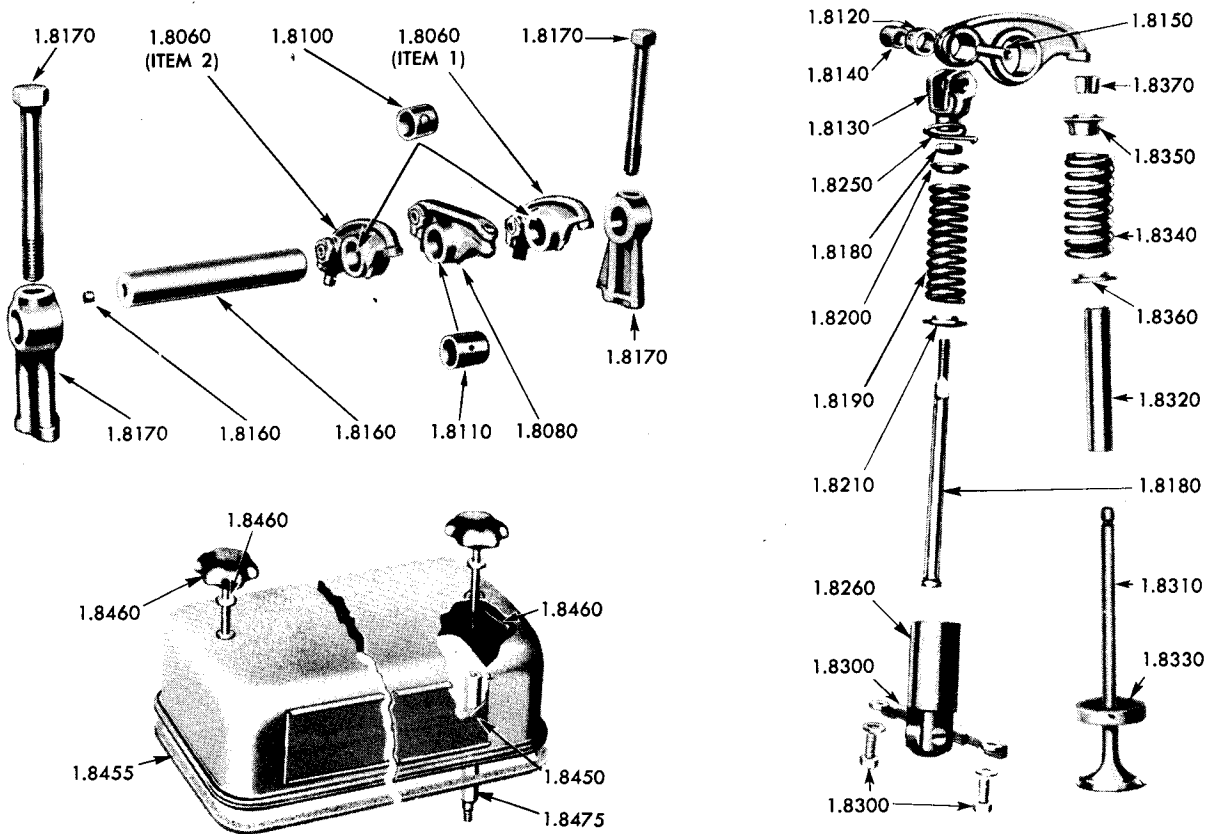


Fig. 20—Valve Operating Mechanism and Rocker Cover

20	1.8310	5193197	Valve, exhaust (includes locks) (plain) .....	6	8	12
20	1.8310	5193198	Valve, exhaust (includes locks) (faced) .....	6	8	12
20	1.8310	5193666	Valve, exhaust (includes locks) (jet blade material) .....	6	8	12
7,20	1.8320	5178590	Guide, exhaust valve (standard) .....	6	8	12
7,20	1.8320	5192717	Guide, exhaust valve (.016" O.S. on O.D.) .....	*	*	*
20	1.8330	5185326	Insert, exhaust valve (standard) .....	6	8	12
20	1.8330	5193215	Insert, exhaust valve (.010" O.S.) .....	*	*	*
20	1.8340	5150289	Spring, exhaust valve .....	6	8	12
20	1.8350	5150291	Cap, exhaust valve spring .....	6	8	12

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
20	1.8360	5150292	Seat, exhaust valve spring .....	6	8	12
20	1.8370	838029	Lock, exhaust valve spring (halves) .....	12	16	24
<b>ROCKER COVER</b>						
20	1.8450	5178381	Cover Assy., rocker (plain) .....	1		
20,50	1.8450	5178541	Cover Assy., rocker (breather hole) .....	1		
20	1.8450	5178382	Cover Assy., rocker (plain) .....		1	
20,50	1.8450	5178542	Cover Assy., rocker (breather hole) .....		1	
20	1.8450	5178383	Cover Assy., rocker (plain) .....			1
20,50	1.8450	5178543	Cover Assy., rocker (breather hole) .....			1
20	1.8455	5150327	Gasket, rocker cover .....	1		
20	1.8455	5150328	Gasket, rocker cover .....		1	
20	1.8455	5150329	Gasket, rocker cover .....			1
20	1.8460	5157194	Bolt, rocker cover .....	2	2	4
20	1.8460	5150333	Washer, rocker cover bolt .....	2	2	4
20	1.8460	103385	Pin, 1/8"x1" cotter .....	2	2	4
20	1.8475	5157192	Stud, rocker cover .....	2	2	4
<b>FUEL INJECTOR</b>						
21	2.1001	5228310	Injector Assy. (HV6) } (includes indented items) .....	3	4	6
21	2.1001	5228305	Injector Assy. (HV7) } .....	3	4	6
-	-	5193221 #	Overhaul Kit, injector .....	*	*	*
-	-	5228332 †	Conversion Kit, injector (60) .....	*	*	*
-	-	5228333 †	Conversion Kit, injector (70) .....	*	*	*
21	2.1020	5227931	Body Assy., injector (includes dowel) .....	3	4	6
21	2.1020	5226416	Dowel, injector body .....	3	4	6
21	2.1020	5228298	Tag, injector number (HV6) .....	3	4	6
21	2.1020	5228299	Tag, injector number (HV7) .....	3	4	6
21	2.1030	5228102	Nut, injector valve (HV6, HV7) .....	3	4	6
21	2.1040	5226564	Ring, injector seal .....	3	4	6
21	2.1050	5228109	Deflector, injector spill (HV6, HV7) (1 1/16" L.) .....	3	4	6
-	-	5226565	Deflector, injector spill (60, 70) (1 1/4" L.) .....	3	4	6
21	2.1060	5228104	Follower, injector .....	3	4	6
21	2.1080	5228292	Spring, injector plunger .....	3	4	6
21	2.1100	5226717	Pin, injector stop .....	3	4	6
21	2.1110	5228013	Element, injector filter .....	6	8	12
21	2.1120	5226415	Spring, injector filter .....	6	8	12
21	2.1130	5226413	Cap, injector filter .....	6	8	12
21	2.1140	5226186	Gasket, injector filter cap .....	6	8	12
-	-	5226414	Cap, injector shipping .....	*	*	*
21	2.1160	5228306	Plunger and Bushing Assy., injector (HV6) .....	3	4	6
-	-	5228326	Plunger, Bushing and Spacer Assy., injector (60) .....	3	4	6
21	2.1160	5228304	Plunger and Bushing Assy., injector (HV7) .....	3	4	6
-	-	5228327	Plunger, Bushing and Spacer Assy., injector (70) .....	3	4	6
-	2.1165	5226393	Pin, plunger and bushing guide .....	3	4	6
21	2.1170	5226719	Rack Assy., injector .....	3	4	6
21	2.1180	5226400	Gear, injector .....	3	4	6
21	2.1190	5226567	Retainer, injector gear .....	3	4	6
21	2.1200	5226411	Valve, injector check .....	3	4	6
21	2.1220	5228301	Tip Kit, injector spray (HV6) .....	3	4	6
-	-	5227324	Tip Kit, injector spray (60) } (includes tip, valve assy., spring and stop) .....	3	4	6
21	2.1220	5228312	Tip Kit, injector spray (HV7) } .....	3	4	6
-	-	5227325	Tip Kit, injector spray (70) } .....	3	4	6
21	2.1230	5228296	Tip, injector spray (HV6) .....	3	4	6
21	2.1230	5228293	Tip, injector spray (HV7) .....	3	4	6
-	2.1238	5228313	Valve Kit, injector (includes valve assy. and spring) .....	*	*	*
21	2.1240	5228316	Valve Assy., injector (HV6, HV7) } (includes valve and seat) ...	3	4	6
-	-	5227323	Valve Assy., injector (60, 70) } .....	3	4	6

\* As required. # Consists of one seal ring, two filter cap gaskets, two filter elements and two shipping caps. † Consists of parts required to convert old design injectors to new high valve (HV) design.



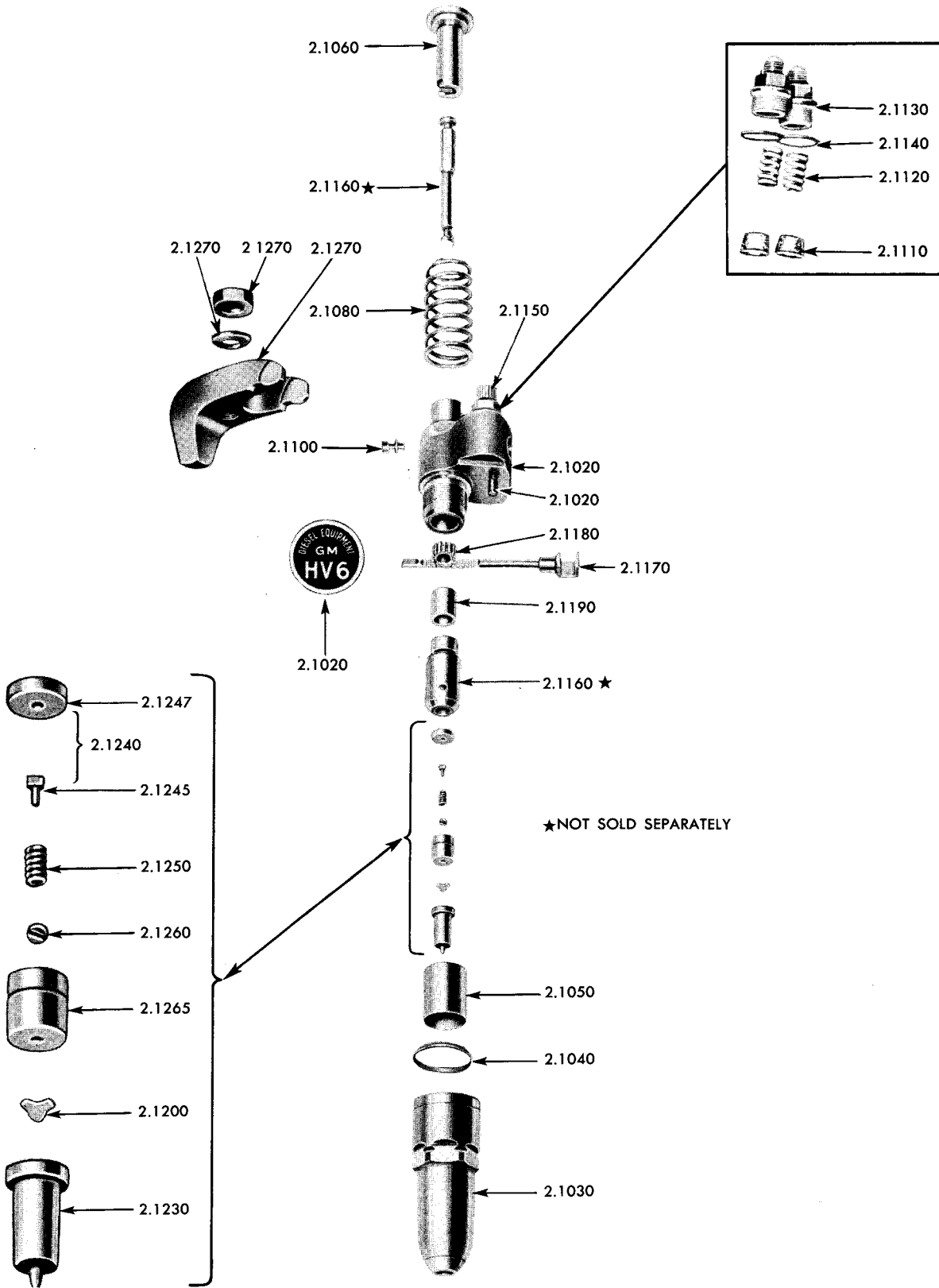


Fig. 21—Fuel Injector

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
21	2.1245	5228308	Valve, injector .....	3	4	6
21	2.1247	5228106	Seat, injector valve .....	3	4	6
21	2.1250	5227210	Spring, injector valve .....	3	4	6
21	2.1260	5227318	Stop, injector valve .....	3	4	6
-	2.1265	5228294	Cage, injector valve .....	3	4	6
21	2.1270	5150249	Clamp, injector .....	3	4	6
21	2.1270	5150250	Washer, injector clamp .....	3	4	6
21	2.1270	117049	Nut, 3/8"-24 hex. ....	3	4	6
7	2.1280	5150251	Stud, injector clamp .....	3	4	6
7	2.1290	5150041	Tube, injector hole .....	3	4	6
7	2.1300	5160037	Ring, injector hole tube seal .....	3	4	6
<b>FUEL PUMP</b>						
21,25	2.2001	5184532	Pump Assy., fuel (LC-LD-RC-RD eng.)	1	1	1
21,25	2.2001	5184531	Pump Assy., fuel (LA-LB-RA-RB eng.)			
-	-	5171159	Bolt (with seal-washer) .....	3	3	3
22	2.2007	5150193	Gasket, fuel pump to blower .....	1	1	1
22	2.2070	5230007	Seal, fuel pump oil .....	2	2	2
22	2.2087	5174975	Gear, fuel pump drive .....	2	2	2
22	2.2087	147481	Ball, 1/8" dia. steel .....	2	2	2
22	2.2089	5174970	Shaft, fuel pump driven .....	1	1	1
22	2.2093	5178700	Shaft, fuel pump drive .....	1	1	1
22	2.2130	5174973	Valve, fuel pump .....	1	1	1
22	2.2130	103709	Pin, 5/32"x1" straight .....	1	1	1
22	2.2160	5184530	Spring, fuel pump valve retaining .....	1	1	1
22	2.2170	5174971	Plug, fuel pump valve .....	1	1	1
22	2.2180	5161003	Gasket, fuel pump valve plug .....	1	1	1
22	2.2220	5150199	Fork, fuel pump coupling .....	1	1	1

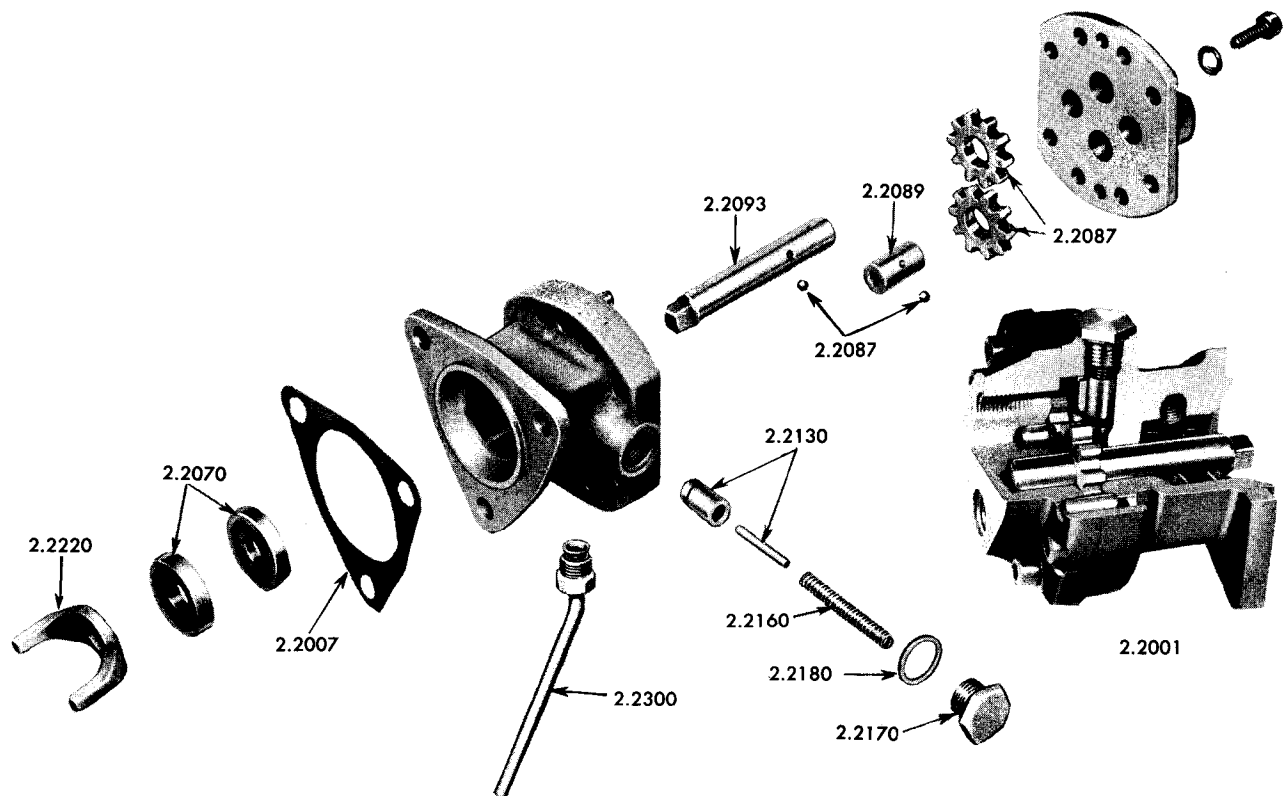


Fig. 22—Fuel Pump and Drain

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>FUEL PUMP DRAIN</b>						
22	2.2300	5158825	Tube Assy., fuel pump drain (dev. L. 4 1/4") .....	1	1	1
-	-	137406	Connector, 5/16" inv. fl. tube .....	1	1	1
<b>FUEL FILTER</b>						
25	2.3001	5182041	Strainer Assy., fuel (6") (includes indented items) .....	1	1	1
23	2.3001	103878	Plug, 1/4" pipe .....	1	1	1
23	2.3010	5192854	Element, fuel strainer (6") (includes gasket) .....	1	1	1
23	2.3050	5192916	Shell, fuel strainer .....	1	1	1
23	2.3050	141615	Draincock, 1/4" .....	1	1	1
23	2.3090	5192801	Gasket, fuel strainer cover .....	1	1	1
23	2.3120	5192913	Nut, fuel strainer cover .....	1	1	1
23	2.3130	2243465	Gasket, fuel strainer cover screw .....	1	1	1

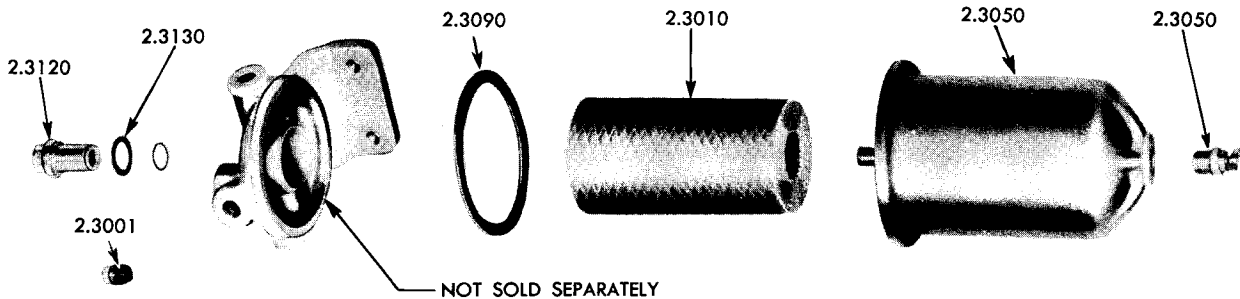


Fig. 23—Fuel Strainer

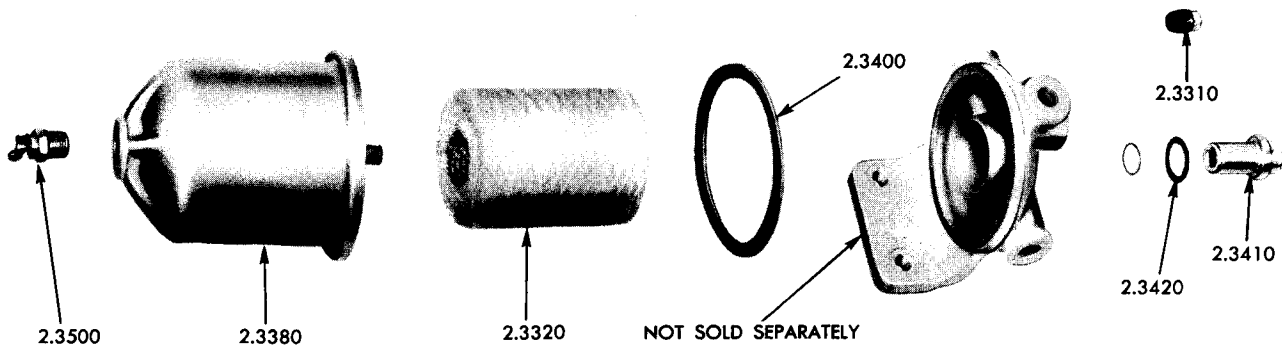


Fig. 24—Fuel Filter

4	2.3310	5179109	Filter Assy., fuel (4") (includes indented items) .....	1	1	
25	2.3310	5179839	Filter Assy., fuel (8") (includes indented items) .....			1
24	2.3310	103878	Plug, 1/4" pipe .....	1	1	1
24	2.3320	5178982	Element, fuel filter (4") (includes gasket) .....	1	1	1
24	2.3310	5192855	Element, fuel filter (8") (includes gasket) .....			1
24	2.3380	5192914	Shell, fuel filter (4") .....	1	1	
24	2.3380	5192915	Shell, fuel filter (8") .....			1
24	2.3400	5192801	Gasket, fuel filter cover shell .....	1	1	1
24	2.3410	5192913	Nut, fuel filter cover .....	1	1	1
24	2.3420	2243465	Gasket, fuel filter cover nut .....	1	1	1
24	2.3500	141615	Draincock, 1/4" .....	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>FUEL MANIFOLD</b>						
25	2.4001	5150557	Manifold Assy., fuel (lower) .....	1		
25	2.4001	5150559	Manifold Assy., fuel (lower) .....		1	
25	2.4001	5150561	Manifold Assy., fuel (lower) .....			1
25	2.4001	103878	Plug, 1/4" pipe .....	1	1	1
25	2.4001	137407	Connector, 3/8" inv. fl. tube br. ....	1	1	1
25	2.4010	5150558	Manifold Assy., fuel (upper) .....	1		
25	2.4010	5150560	Manifold Assy., fuel (upper) .....		1	
25	2.4010	5150562	Manifold Assy., fuel (upper) .....			1
25	2.4010	103878	Plug, 1/4" pipe .....	1	1	1
25	2.4010	5157992	Elbow, restriction (stamped "R") .....	1	1	1
25	2.4020	5151121	Pipe Assy., fuel (inlet and outlet) .....	6	8	12
25	2.4030	5150566	Connector Assy., fuel pipe (includes indented items) .....	6	8	12
25	2.4030	5150563	Connector, fuel pipe .....	6	8	12
25	2.4040	447174	Nut, fuel pipe connector .....	6	8	12

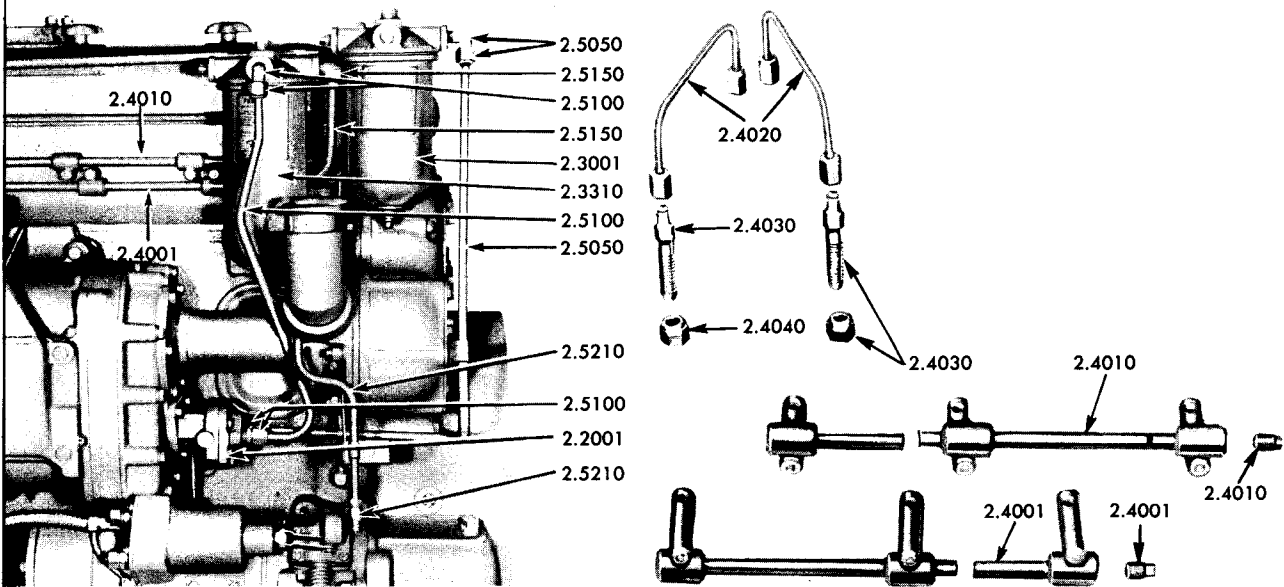


Fig. 25—Fuel Manifold and Fuel Lines

<b>FUEL LINES</b>						
The part number of the fuel lines components which are not listed may be obtained from your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model, unit number and type number (if shown) on the Options and Accessories plate of your engine.						
6	2.5006	5174924	Valve, fuel supply check .....	1	1	1
25	2.5050	-	Tube, strainer to fuel pump .....	1	1	1
25	2.5050	5179969	Elbow, 3/8" tube (sealastic) .....	1	1	1
-	-	5179936	Connector, 3/8" tube (sealastic) .....	1	1	1
-	-	5179938	Seal Ring, 3/8" tube (sealastic) .....	2	2	2
25	2.5050	5179937	Nut, 3/8" tube (sealastic) .....	2	2	2
25	2.5100	-	Tube, fuel pump to filter .....	1	1	1
25	2.5100	5179969	Elbow, 3/8" tube (sealastic) .....	1	1	1
25	2.5100	5179936	Connector, 3/8" tube (sealastic) .....	1	1	1
-	-	5179938	Seal Ring, 3/8" tube (sealastic) .....	2	2	2
25	2.5100	5179937	Nut, 3/8" tube (sealastic) .....	2	2	2
25	2.5150	-	Tube Assy., fuel filter to manifold .....	1	1	1

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
25	2.5150	137423	Elbow, 3/8" inv. fl. tube 90° .....	1	1	1
25	2.5210	-	Tube Assy., fuel drain (non-flex.) .....	1	1	1
25	2.5210	187343	Connector, 5/16" inv. fl. tube .....	1	1	1
-	-	137414	Union, 5/16" inv. fl. tube .....	1	1	1
<b>GOVERNOR-MECHANICAL</b>						
1,26	2.7001	5174437	Governor Assy., variable speed (A eng.) .....	1		
1,26	2.7001	5174438	Governor Assy., variable speed (C eng.) .....	1		
1,26	2.7001	5174439	Governor Assy., variable speed (A eng.) .....		1	
1,26	2.7001	5174440	Governor Assy., variable speed (C eng.) .....		1	
1,26	2.7001	5174441	Governor Assy., variable speed (A eng.) .....			1
1,26	2.7001	5174442	Governor Assy., variable speed (C eng.) .....			1
2,26	2.7001	5182563	Governor Assy., limiting speed (A eng.) .....	1		
2,26	2.7001	5182564	Governor Assy., limiting speed (C eng.) .....	1		
2,26	2.7001	5182565	Governor Assy., limiting speed (A eng.) .....		1	
2,26	2.7001	5182566	Governor Assy., limiting speed (C eng.) .....		1	
2,26	2.7001	5182567	Governor Assy., limiting speed (A eng.) .....			1
2,26	2.7001	5182568	Governor Assy., limiting speed (C eng.) .....			1
26	2.7001	5171159	Bolt (with seal - washer) .....	6	6	6
26	2.7001	443603	Bolt, 1/4"-20x3/4" hex. hd. ....	2	2	2
-	-	103319	Lockwasher, 1/4" .....	2	2	2
26	2.7010	5150246	Gasket, governor to blower .....	1	1	1
26	2.7020	5150269	Gasket, governor to cylinder head .....	1	1	1
<i>START OF GOVERNOR ASSEMBLY</i>						
-	-	5174401	Cover Assy., variable speed governor (A eng.)	1	1	1
-	-	5174402	Cover Assy., variable speed governor (C eng.)	1	1	1
-	-	5174403	Cover Assy., limiting speed governor (A eng.)	1	1	1
-	-	5174404	Cover Assy., limiting speed governor (C eng.)	1	1	1
26	2.7045	132264	Screw, 1/4"-20x3/4" fil. hd. sl. ....	4	4	4
26	2.7050	5174411	Cover Assy., governor (variable, A eng.)	1	1	1
26	2.7050	5174412	Cover Assy., governor (variable, C eng.)	1	1	1
26	2.7050	5174415	Cover Assy., governor (limiting, A eng.)	1	1	1
26	2.7050	5174416	Cover Assy., governor (limiting, C eng.)	1	1	1
26	2.7051	5150889	Gasket, governor cover .....	1	1	1
26	2.7095	5174425	Shaft Assy., governor throttle (variable)	1	1	1
26	2.7095	5174431	Shaft Assy., governor throttle (limiting, A eng.)	1	1	1
26	2.7095	5174432	Shaft Assy., governor throttle (limiting, C eng.)	1	1	1
26	2.7100	148402	Bearing, governor throttle shaft .....	2	2	2
26	2.7140	5176557	Seal, governor throttle shaft .....	1	1	1
26	2.7150	5153060	Retainer, throttle shaft packing .....	2	2	2
26	2.7170	5158432	Lever, governor throttle shaft .....	1	1	1
26	2.7175	5159003	Cam, governor cover (limiting, A eng.)	1	1	1
26	2.7175	5159004	Cam, governor cover (limiting, C eng.)	1	1	1
26	2.7175	5150946	Washer, governor cover cam (limiting speed governor)	1	1	1
26	2.7175	142583	Retainer, 13/64" spring (limiting speed governor)	1	1	1
26	2.7178	5151737	Spring, governor cam control (limiting speed governor)	1	1	
26	2.7178	5160880	Spring, governor cam control (limiting speed governor)			1
-	-	5158904	Housing Assy., governor control (C eng.)	1	1	1
-	-	5158903	Housing Assy., governor control (A eng.)	1	1	1
26	2.7230	103892	Plug, 3/4" expansion .....	1	1	1
26	2.7230	103274	Screw, 5/16"-24x3/8" rd. hd. sl. ....	1	1	1
26	2.7230	114622	Gasket, 5/16" copper .....	1	1	1
-	-	5154438	Shaft Assy., governor operating (C eng.)	1	1	1
-	-	5154437	Shaft Assy., governor operating (A eng.)	1	1	1
26	2.7255	5154435	Shaft, governor operating .....	1	1	1
26	2.7260	5150949	Bearing, governor operating shaft (upper)	1	1	1
26	2.7260	5159080	Washer, governor upper shaft bearing	1	1	1
26	2.7260	113903	Screw, #10-24x7/16" rd. hd. sl. ....	1	1	1
26	2.7260	120391	Washer, #10 flat .....	1	1	1
26	2.7270	148403	Bearing, governor operating shaft (lower)	1	1	1
26	2.7280	5154403	Lever, governor upper operating shaft (A eng.)	1	1	1
26	2.7280	5154422	Lever, governor lower operating shaft (C eng.)	1	1	1

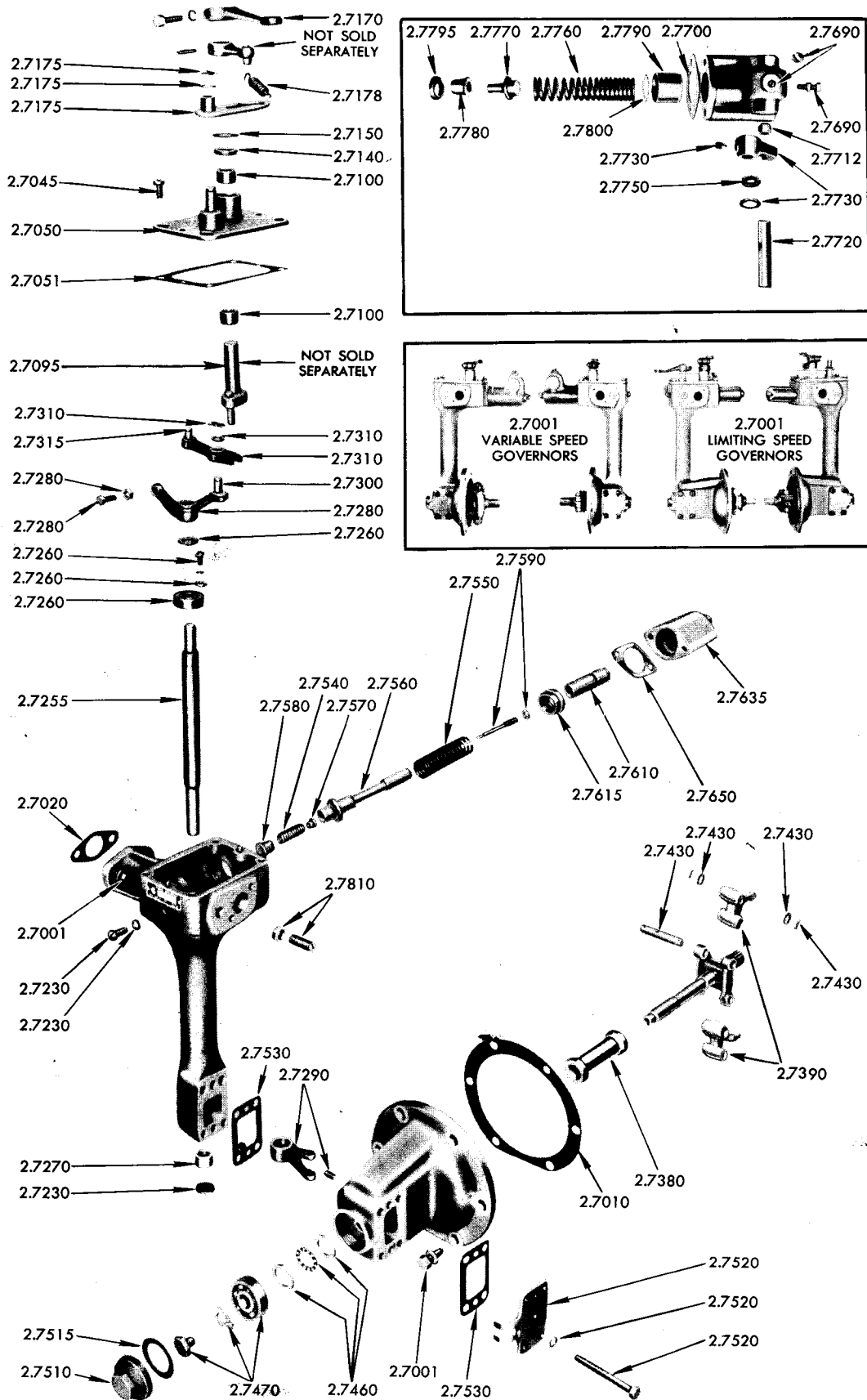


Fig. 26—Governor—Mechanical

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
26	2.7280	5150898	Screw, (gap adjusting) .....	1	1	1
26	2.7280	122161	Nut, 1/4"-28 hex. ....	1	1	1
26	2.7290	5185605	Fork, governor operating shaft (lower) .....	1	1	1
26	2.7290	139013	Screw, 1/4"-28x1/2" set .....	1	1	1
26	2.7300	5150943	Pin, governor operating shaft lever .....	1	1	1
26	2.7310	5150394	Lever Assy., governor differential .....	1	1	1
26	2.7310	5150941	Washer, governor differential lever .....	1	1	1
26	2.7310	142583	Retainer, 13/64" spring .....	1	1	1
26	2.7315	5150894	Pin, governor differential lever .....	1	1	1
-	-	5174443	Housing and Weight Assy., governor	1		
-	-	5174444	Housing and Weight Assy., governor } (includes indented items)		1	
-	-	5174445	Housing and Weight Assy., governor }			1
-	-	5150942	Pin, weight housing to control housing .....	2	2	2
-	-	5174447	Carrier and Weight Assy., governor	1		
-	-	5174448	Carrier and Weight Assy., governor } (includes shaft) ....		1	
-	-	5174449	Carrier and Weight Assy., governor }			1
26	2.7380	5154501	Riser, governor .....	1		
26	2.7380	5154502	Riser, governor .....		1	
26	2.7380	5154503	Riser, governor .....			1
26	2.7390	5174455	Weight Assy., governor (includes bearing) .....	2	2	2
26	2.7430	5185154	Pin, governor weight .....	2	2	2
26	2.7430	5151487	Washer, governor weight pin .....	8	8	8
26	2.7430	5178581	Ring, governor weight pin retainer .....	4	4	4
-	-	447196	Bearing, governor weight .....	4	4	4
26	2.7460	451905	Bearing, governor weight riser thrust .....	1	1	1
26	2.7470	954716	Bearing, governor weight shaft end .....	1	1	1
26	2.7470	5150884	Screw, bearing retainer .....	1	1	1
26	2.7470	5150897	Lockwasher, bearing retainer .....	1	1	1
26	2.7510	5183268	Cap, governor weight housing .....	1	1	1
26	2.7515	5165221	Gasket, governor weight housing cap .....	1	1	1
26	2.7520	5163514	Cover, governor weight housing (plain) .....	1	1	1
26,54	2.7520	5176837	Cover, governor weight housing (tapped) .....	1	1	1
26	2.7520	190910	Bolt, 1/4"-20x2 3/8" hex. hd. ....	4	4	4
26	2.7520	103319	Lockwasher, 1/4" .....	4	4	4
26	2.7530	5150890	Gasket, governor weight housing cover .....	2	2	2
26	2.7540	5183704	Spring, low speed (limiting speed governor) .....	1	1	1
26	2.7550	5182560	Spring, high speed (limiting speed governor) .....	1	1	1
26	2.7560	5182555	Plunger, limiting speed governor low speed spring .....	1	1	1
26	2.7570	5150892	Seat, limiting speed governor low speed spring .....	1	1	1
26	2.7580	5150899	Cap, limiting speed governor low speed spring .....	1	1	1
26	2.7590	5182556	Screw, limiting speed governor low speed spring adjusting .....	1	1	1
26	2.7590	122161	Nut, 1/4"-28 hex. ....	1	1	1
26	2.7610	5182557	Retainer, limiting speed governor high speed spring .....	1	1	1
26	2.7615	5182558	Locknut, limiting speed governor spring retainer adjusting screw ....	1	1	1
26	2.7635	5182559	Housing, limiting speed governor spring adjusting screw .....	1	1	1
-	-	445520	Bolt, 5/16"-18x3 1/2" hex. hd. ....	2	2	2
-	-	103320	Lockwasher, 5/16" .....	2	2	2
26	2.7650	5152944	Gasket, governor spring housing .....	1	1	1
-	-	5172555	Housing Assy., gov. vari. speed spring (A eng.) } (includes in-	1	1	1
-	-	5172556	Housing Assy., gov. vari. speed spring (C eng.) } dented items)	1	1	1
-	-	445520	Bolt, 5/16"-18x3 1/2" hex. hd. ....	2	2	2
-	-	103320	Lockwasher, 5/16" .....	2	2	2
26	2.7690	5179613	Bolt (idler speed adjusting screw) (variable speed governor) ....	1	1	1
-	-	123390	Nut, 1/4"-20 hex. ....	1	1	1
26	2.7690	103892	Plug, 3/4" expansion .....	1	1	1
26	2.7690	5167552	Plug, 1/4" pipe .....	1	1	1
26	2.7700	5152944	Gasket, governor spring housing .....	1	1	1
26	2.7712	148402	Bearing, governor variable speed spring lever .....	2	2	2
26	2.7720	5173964	Shaft, governor variable speed spring .....	1	1	1
26	2.7730	5176629	Lever, governor variable speed spring (pallet) .....	1	1	1
-	-	5179102 #	Lever Assy., governor variable speed spring (includes roller) .....	1	1	1
26	2.7730	5152932	Washer, spring lever .....	1	1	1
26	2.7730	223065	Screw, 5/16"-24x1/4" hex. socket hd. set .....	1	1	1

# May be used in place of pallet type lever.

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
26	2.7750	5153007	Packing, variable speed governor lever shaft .....	1	1	1
26	2.7760	5152940	Spring, governor variable speed (yellow stripe) .....	1	1	1
26	2.7770	5152938	Plunger, governor variable speed spring .....	1	1	1
26	2.7780	5152939	Guide, variable speed spring plunger .....	1	1	1
26	2.7790	5152941	Retainer, variable speed spring .....	1	1	1
26	2.7795	5171784 #	Stop, variable speed spring retainer .....	1	1	1
26	2.7795	5174430 #	Stop, variable speed spring retainer .....	1	1	1
26	2.7800	5152962	Shim, variable speed spring (.015") .....	*	*	*
26	2.7800	5153904	Shim, variable speed spring (.078") .....	*	*	*
26	2.7810	5177083	Screw Assy., governor buffer (with spring) .....	1	1	1
<i>END OF GOVERNOR ASSEMBLY</i>						
54	2.7890	5183994	Tube Assy., governor bearing lubrication .....	1	1	1
-	-	5177752	Elbow, lubrication tube .....	1	1	1
-	-	5166265	Elbow, lubrication tube restriction (stamped "R") .....	1	1	1
-	-	137405	Connector, 1/4" inv. fl. tube .....	1	1	1
<b>GOVERNOR-HYDRAULIC</b>						
27	2.8030	5178938	Governor Assy., hydraulic (A eng.) } (includes indented items)	1	1	1
27	2.8030	5178936	Governor Assy., hydraulic (C eng.) }	1	1	1
27	2.8020	5171159	Bolt, governor to blower (with seal-washer) .....	4	6	6
27	2.8020	179826	Bolt, 5/16"-18x2" hex. hd. (governor to blower) .....	2		
-	-	5155596	Washer, governor to blower bolt seal .....	2		
27	2.8020	186647	Bolt, 1/4"-20x1" hex. hd. (governor to head) .....	2	2	2
-	-	103319	Lockwasher, 1/4" .....	2	2	2
27	2.8035	5150246	Gasket, governor to blower .....	1	1	1
27	2.8036	5150269	Gasket, governor to cylinder head .....	1	1	1
27	2.8040	453141	Screw, #10-32x1 3/8" hex. socket hd. (governor cover) .....	3	3	3
-	-	115545	Lockwasher, #10 int. tooth .....	3	3	3
27	2.8045	3249110	Gasket, governor cover .....	1	1	1
27	2.8060	3249114	Bushing, governor sub-cap .....	1	1	1
27	2.8070	3291725	Rod, governor fuel (C eng.) .....	1	1	1
27	2.8070	3291724	Rod, governor fuel (A eng.) .....	1	1	1
27	2.8080	120614	Nut, #10-32 hex. (governor fuel rod) .....	1	1	1
-	-	5193462	Gasket, governor fuel rod (at nut) .....	1	1	1
27	2.8090	3249112	Seal, governor fuel rod .....	1	1	1
27	2.8100	3249165	Spacer, governor fuel rod .....	1	1	1
27	2.8110	3249166	Disc, governor fuel rod spring .....	1	1	1
27	2.8120	3249117	Spring, governor fuel rod (short) .....	1	1	1
27	2.8130	3249116	Spring, governor fuel rod (long) .....	1	1	1
27	2.8160	3249173	Collar, governor fuel rod spring .....	1	1	1
27	2.8165	3249144	Plug, governor sub-cap .....	1	1	1
27	2.8170	3292009	Knob, governor fuel rod .....	1	1	1
27	2.8180	3249155	Screw, governor load limit .....	1	1	1
27	2.8180	121902	Nut, 1/4"-28 hex. .....	1	1	1
27	2.8200	3292039	Plug, governor housing dummy hole .....	1	1	1
27	2.8210	5156913	Gasket, governor housing dummy hole plug .....	1	1	1
27	2.8260	3249110	Gasket, governor cover to sub-cap .....	1	1	1
27	2.8280	5190627	Shaft, governor speed adjusting (A eng.) .....	1	1	1
27	2.8280	3249134	Shaft, governor speed adjusting (C eng.) .....	1	1	1
-	-	107762	Pin, 3/32"x5/8" cotter .....	1	1	1
27	2.8350	3249111	Seal, governor speed adjusting shaft oil .....	2	2	2
27	2.8360	3304158	Sleeve Assy., governor speed adjusting shaft (includes bushing) ....	1	1	1
27	2.8363	5156913	Gasket, governor speed adjusting shaft sleeve .....	2	2	2
-	-	3304052	Bushing, governor speed adjusting shaft sleeve .....	2	2	2
27	2.8365	3249149	Cap, governor speed adjusting shaft spacer .....	1	1	1
27	2.8410	3249139	Lever, governor speed adjusting floating .....	1	1	1
27	2.8420	5193206	Lever, governor speed adjusting .....	1	1	1
27	2.8420	3249137	Pin, governor speed adjusting lever .....	2	2	2
27	2.8435	3249145	Fork, governor adjusting linkage spring .....	1	1	1
-	-	3249154	Lockwire, governor adjusting linkage spring .....	1	1	1

\* As required. # 1200-1425 RPM use stop 5171784 and 5174430 with shims up to .325"; 1426-1825 RPM use stop 5171784 with shims up to .325"; 1826-2000 RPM use shims only.



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
27	2.8440	3249133	Bracket, governor speed adjusting lever .....	1	1	1
27	2.8450	3249153	Lever, governor speed adjusting terminal .....	1	1	1
27	2.8470	3249157	Shaft, governor speed adjusting terminal .....	2	2	2
27	2.8480	3304152	Sleeve Assy., governor speed adjusting terminal (includes bushing) .....	2	2	2
-	-	3304052	Bushing, governor speed adjusting terminal sleeve .....	2	2	2
27	2.8485	3249167	Plug, governor speed adjusting terminal sleeve (cup) .....	2	2	2
27	2.8510	3291732	Piston, governor servo-meter .....	1	1	1
27	2.8520	3304053	Screw, governor hi-speed stop .....	1	1	1
-	-	120614	Nut, #10-32 hex. ....	1	1	1
27	2.8530	3291738	Spring, governor speeder .....	1	1	1
27	2.8560	5192785	Ball Head Assy., governor .....	1	1	1
27	2.8600	3304155	Plunger Assy., governor pilot valve .....	1	1	1

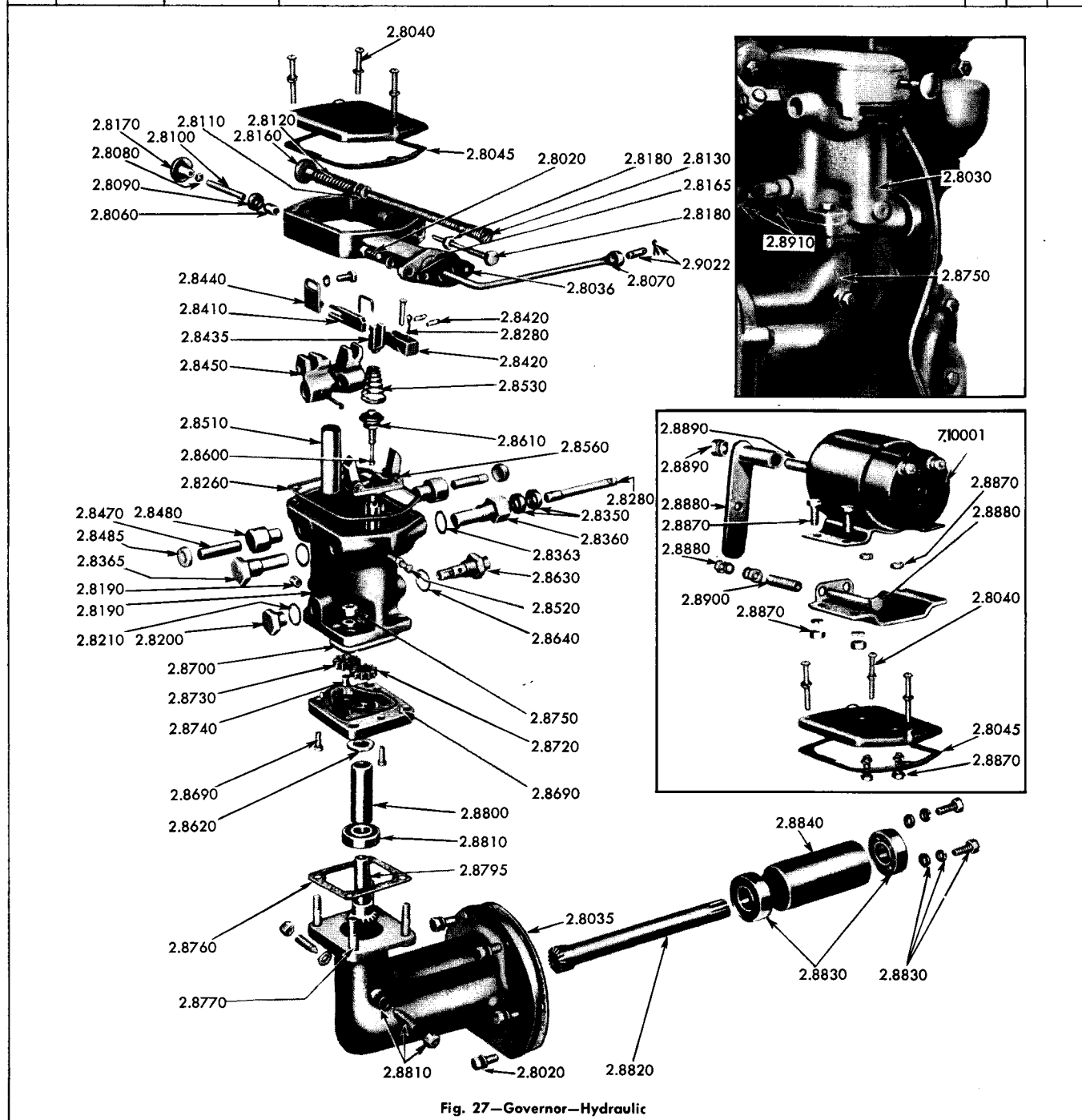


Fig. 27—Governor—Hydraulic

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
27	2.8610	5157328	Bearing, governor pilot valve plunger thrust .....	1	1	1
27	2.8620	5192787	Ring, governor drive shaft .....	1	1	1
27	2.8630	3304159	Valve Assy., governor relief .....	1	1	1
27	2.8640	5156913	Gasket, governor relief valve .....	1	1	1
27	2.8690	110743	Pin, 3/16"x11/16" straight .....	2	2	2
27	2.8690	132188	Screw, #12-24x1/2" fil. hd. (governor base) .....	3	3	3
27	2.8700	3307753	Ring, governor oil pump housing seal .....	1	1	1
27	2.8720	3249119	Gear, governor oil pump drive .....	1	1	1
27	2.8730	3249118	Gear, governor oil pump driven .....	1	1	1
27	2.8740	3249147	Stud, governor oil pump drive gear to base .....	1	1	1
27	2.8750	3290175	Drive Assy., governor	1	1	1
27	2.8750	3290176	Drive Assy., governor			
27	2.8750	3290177	Drive Assy., governor } (includes indented items) .....			
-	-	103320	Lockwasher, 5/16" (drive to governor) .....	4	4	4
27	2.8750	121917	Nut, 5/16"-24 hex. (drive to governor) .....	4	4	4
27	2.8760	3224773	Gasket, drive to governor .....	1	1	1
27	2.8770	3224130	Stud, governor drive to governor .....	4	4	4
27	2.8795	3224084	Shaft, governor driven .....	1	1	1
27	2.8800	3224085	Sleeve, governor driven shaft .....	1	1	1
27	2.8810	954498	Bearing, governor driven shaft .....	1	1	1
27	2.8810	5169864	Screw, governor driven shaft spacer set .....	2	2	2
27	2.8810	5169865	Nut, governor driven shaft spacer set screw .....	2	2	2
27	2.8810	5169866	Gasket, governor driven shaft spacer set screw nut .....	2	2	2
27	2.8820	3222490	Shaft, governor drive .....	1		
27	2.8820	3222893	Shaft, governor drive .....		1	
27	2.8820	3222844	Shaft, governor drive .....			1
27	2.8830	954499	Bearing, governor drive thrust .....	1	1	2
27	2.8830	120228	Bolt, 5/16"-18x5/8" hex. hd. .....	2	2	2
27	2.8830	5171344	Washer, governor drive thrust bearing .....	2	2	2
27	2.8830	103320	Lockwasher, 5/16" .....	2	2	2
27	2.8840	3222845	Spacer, governor drive shaft bearing .....			1
27	2.8870	123435	Bolt, 1/4"-28x5/8" hex. hd. (solenoid to governor) .....	6	6	6
27	2.8870	103319	Lockwasher, 1/4" .....	6	6	6
27	2.8870	121902	Nut, 1/4"-28 hex. .....	6	6	6
27	2.8880	3292242	Link, governor starting solenoid .....	1	1	1
27	2.8880	3292243	Bolt, governor starting solenoid link .....	1	1	1
-	-	103319	Lockwasher, 1/4" .....	2	2	2
27	2.8880	121902	Nut, 1/4"-28 hex. .....	2	2	2
27	2.8890	5167491	Stud, governor starting solenoid .....	1	1	1
-	-	103321	Lockwasher, 3/8" .....	1	1	1
27	2.8890	117049	Nut, 3/8"-24 hex. .....	1	1	1
27	2.8900	3291909	Spring, governor starting solenoid .....	1	1	1
27	2.8910	5166411	Tube Assy., governor operating (A eng.) .....	1		
27	2.8910	3229477	Tube Assy., governor operating (C eng.) .....	1		
27	2.8910	3223112	Tube Assy., governor operating (C eng.) .....		1	1
27	2.8910	3224751	Tube Assy., governor operating (A eng.) .....		1	1
-	-	143343	Elbow, 5/16"x90° inv. fl. tube 1/4" P.T. .....	1	1	1
27	2.8910	137422	Elbow, 5/16"x90° inv. fl. tube 1/8" P.T. .....	1	1	1
32,33	2.8920	5155879	Bracket, governor (C eng.) } (between governor and cylinder	1	1	1
32,33	2.8920	5155880	Bracket, governor (A eng.) } head; includes bushing) .....	1	1	1
-	-	3222765	Bushing, governor bracket .....	1	1	1
<b>INJECTOR CONTROL TUBE</b>						
28	2.9001	5190539	Tube Assy., injector control (A eng.)	1	1	1
28	2.9001	5190542	Tube Assy., injector control (C eng.)			
28	2.9001	5190540	Tube Assy., injector control (A eng.)			
28	2.9001	5190543	Tube Assy., injector control (C eng.)			
28	2.9001	5190541	Tube Assy., injector control (A eng.)			
28	2.9001	5190544	Tube Assy., injector control (C eng.)			
28	2.9003	5161677	Bracket, injector control tube .....	2	2	2
28	2.9003	186630	Bolt, 1/4"-20x5/8" hex. hd. .....	4	4	4
-	-	103319	Lockwasher, 1/4" .....	4	4	4

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
28	2.9007	5150259	Pin, injector control tube end .....	1	1	1
28	2.9009	5150263	Lever, injector control tube .....	1	1	1
28	2.9009	142486	Pin, 1/8"x3/4" groove .....	1	1	1
28	2.9012	5150994	Spring, injector control tube .....	1	1	1

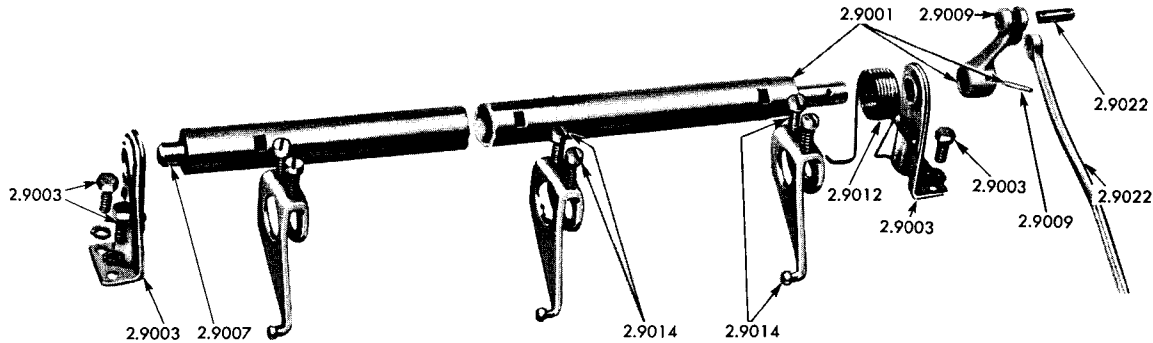


Fig. 28—Injector Control Tube

28	2.9014	5150260	Lever Assy., injector control (includes screw) .....	3	4	6
28	2.9014	5153618	Screw, injector control lever .....	6	8	12
28	2.9022	5150990	Link, injector control tube to governor (mech. gov.) .....	1	1	1
28	2.9022	5150265	Pin, injector control tube link .....	1	1	1
-	-	103361	Pin, 1/16"x1/2" cotter .....	2	2	2
27,28	2.9022	3291724#	Rod, hydraulic governor fuel (LA-RA eng.) .....	1	1	1
27,28	2.9022	3291725#	Rod, hydraulic governor fuel (LC-RC eng.) .....	1	1	1

### THROTTLE CONTROLS (Variable Speed Mechanical Governor)

29,30	2.9030	5174103	Knob, throttle control .....	1	1	1
29,30	2.9030	5171125	Lever, throttle control .....	1	1	1
30	2.9033	3222756	Washer, throttle control tube brake .....	1	1	1
30	2.9034	5173992	Shaft, throttle control knob (4 1/2" L.) .....	1	1	1
30	2.9034	5174104	Shaft, throttle control knob (5-25/32" L.) .....	1	1	1
-	-	5175079	Collar, throttle control knob shaft .....	1	1	1
30	2.9034	443136	Pin, 1/8"x1 1/4" groove .....	1	1	1
-	-	139009	Screw, 1/4"-28x1/4" hex. socket cup pt. set .....	1	1	1
30	2.9035	5174105	Spring, throttle control shaft tension (2" L.) .....	1	1	1
-	-	5175073	Bracket Assy., throttle control knob shaft (includes bushing) .....	1	1	1
-	-	3222765	Bushing, throttle control knob shaft bracket .....	2	2	2
30	2.9170	5168685	Plate, throttle control indicator .....	1	1	1
-	-	101247	Screw, #12-24x3/4" oval hd. sl. .....	3	3	3
-	-	121391	Washer, 3/16" flat .....	3	3	3
-	-	103089	Nut, #12-24 hex. .....	3	3	3
29	2.9240	5173993	Bracket Assy., throttle control shaft to flywheel housing (includes bshg.) .....	1	1	1
-	-	3222765	Bushing, throttle control shaft to flywheel housing bracket .....	2	2	2
29	2.9280	5173995	Rod, throttle control (5 1/4" L.) .....	1	1	1
-	-	5175086	Rod, throttle control (link) (2 13/16" L.) .....	1	1	1
29	2.9280	5172547	Rod (stud), throttle control (1 1/4" L.) .....	1	1	1
29	2.9280	109408	Joint, 5/16"-24 ball .....	2	2	2
-	-	103495	Pin, 5/16" clevis .....	2	2	2
-	-	103362	Pin, 1/16"x3/4" cotter .....	2	2	2
-	-	122193	Nut, 5/16"-24 hex. .....	4	4	4
29	2.9290	5171125	Lever, throttle control rod (lower) (2 1/4" L., 7/16" shaft) .....	1	1	1
29	2.9310	5175083	Shaft, throttle control cross (15 5/8" L.) .....	1	1	1
29	2.9310	3290823	Shaft, throttle control cross (8 5/8" L.) .....	1	1	1
29	2.9310	5171324	Shaft, throttle control cross (10" L.) .....	1	1	1
29	2.9330	5164320	Collar, throttle control cross shaft .....	*	*	*
-	-	139009	Screw, 1/4"-28x1/4" hex. socket cup pt. set .....	*	*	*

\* As required. # Part of hydraulic governor assy. listed here for reference only.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
29	2.9340	5164318	Lever, throttle control cross shaft (4" L., 1/2" shaft)	2	2	2
-	-	5151519	Lever, throttle control cross shaft (2 1/4" L. 1/2" shaft)	2	2	2
29	2.9344	5174110	Bracket, throttle booster spring	1		
29	2.9344	5172501	Bracket, throttle booster spring		1	1
-	-	179835	Bolt, 3/8"-16x5/8" hex. hd.		2	2
-	-	103321	Lockwasher, 3/8"		2	2
29	2.9347	5173038	Spring, throttle booster	1		
29	2.9347	5172499	Spring, throttle booster		1	1
29	2.9348	5173036	Eye, throttle booster adjusting	1		
29	2.9348	5172502	Eye, throttle booster adjusting		1	1
-	-	123179	Nut, 1/4"-20 hex.	2	2	2
-	-	5186749	Nut, throttle control booster support (spring hanger)	1	1	1
-	-	5171045	Bolt, throttle control booster support	1	1	1

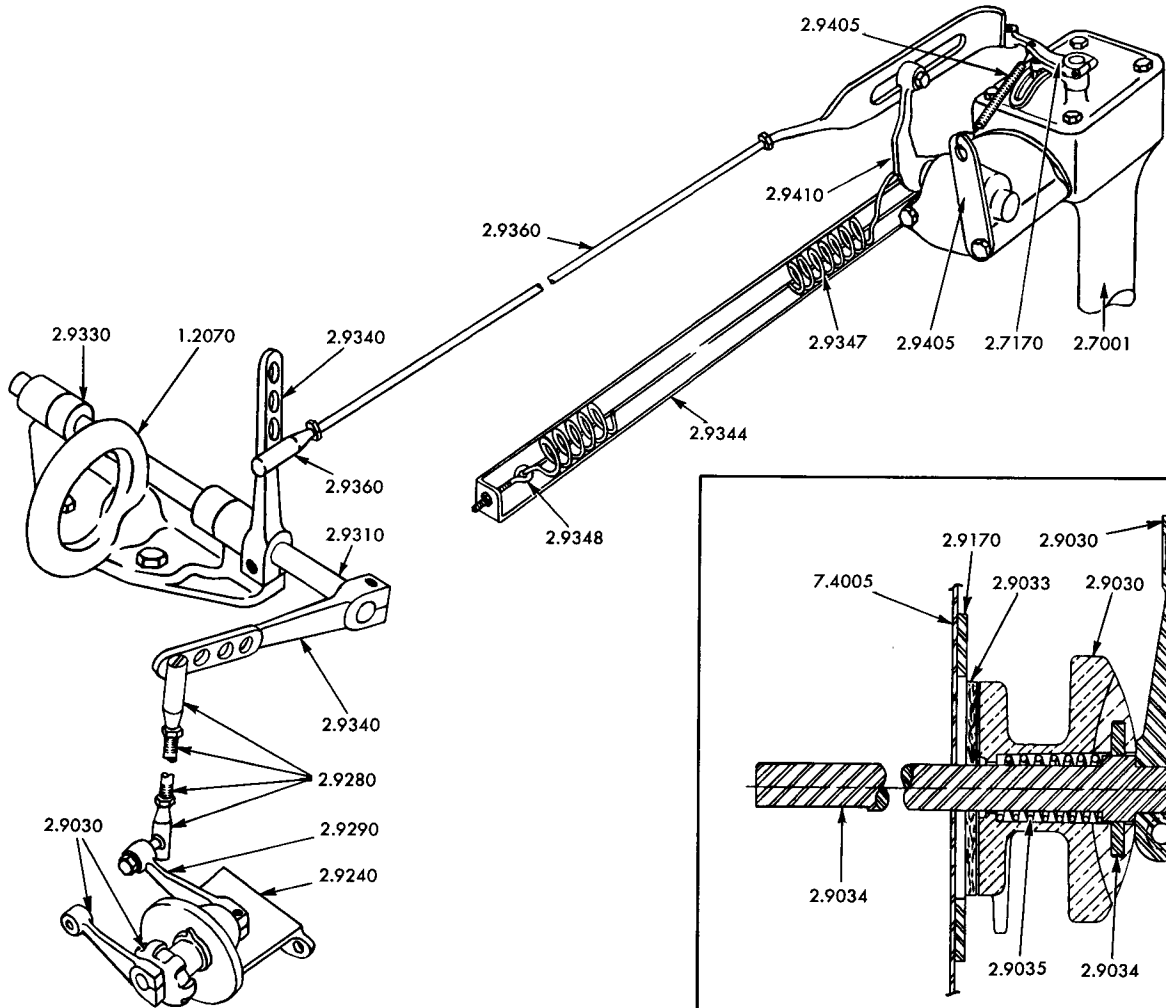


Fig. 29—Throttle Controls (Variable Speed Governor)

Fig. 30—Throttle Control Knob

-	-	5175085	Shaft, throttle control (7 7/16" L.)	1	1	1
29	2.9360	5174122	Shaft, throttle control (link end) (10 7/8" L.)	1		
-	-	5175087	Shaft, throttle control (10" centers)	1	1	1
29	2.9360	5166960	Shaft, throttle control (clevis ends) (12 3/4" L.)	1		
29	2.9360	5174123	Shaft, throttle control (link end) (16 9/16" L.)		1	
29	2.9360	5166961	Shaft, throttle control (clevis end) (18 1/2" L.)		1	
29	2.9360	5174124	Shaft, throttle control (link end) (27 15/16" L.)			1
29	2.9360	5166962	Shaft, throttle control (clevis end) (30" L.)			1
29	2.9360	5172654	Link, throttle control shaft to lever	1	1	1
-	-	5169258	Bolt, link	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	116535	Clevis, 5/16"-24 .....	1	1	1
-	-	103495	Pin, 5/16"x31/32" clevis .....	1	1	1
-	-	103372	Pin, 3/32"x1/2" cotter .....	1	1	1
29	2.9360	109408	Joint, 5/16"-24 ball .....	1	1	1
-	-	121917	Nut, 5/16"-24 hex. ....	3	3	3
-	-	122193	Nut, 5/16"-24 hex. thin .....	3	3	3
-	-	121928	Nut, 5/16"-24 hex. L.H. thd. (link end shaft) .....	1	1	1
29	2.9405	5169253	Spring, governor lever retracting .....	1	1	1
29	2.9405	5169235	Clip, retracting spring .....	1	1	1
29	2.9410	5172503	Lever, governor control .....	1	1	1
29	2.9410	5172504	Lever, governor control .....	1	1	1
-	-	1990665	Wire Assy., governor control (50") .....	1	1	1
-	-	1990666	Wire Assy., governor control (90") .....	1	1	1
-	-	5166957	Tube, governor control wire (11 11/16" L.) .....	1		
-	-	5166958	Tube, governor control wire (20 9/16" L.) .....		1	
-	-	5166959	Tube, governor control wire (32 1/16" L.) .....			1
-	-	5161464	Pin, governor control wire swivel .....	1	1	1
-	-	5150941	Washer, swivel pin .....	1	1	1
-	-	142583	Retainer, 13/64" (spring) .....	1	1	1
-	-	100659	Screw, #10-32x3/8" fil. hd. ....	1	1	1
<b>THROTTLE CONTROLS</b>						
<b>(Limiting Speed Mechanical Governor)</b>						
29,30	2.9030	5174103	Knob, throttle control .....	1	1	1
29,30	2.9030	5171125	Lever, throttle control .....	1	1	1
30	2.9033	3222756	Washer, throttle control tube brake .....	1	1	1
30	2.9034	5174104	Shaft, throttle control knob (5 25/32" L.) .....	1	1	1
30	2.9034	5173992	Shaft, throttle control knob (4 1/2" L.) .....	1	1	1
30	2.9034	443136	Pin, 1/8"x1 1/4" groove .....	1	1	1
30	2.9035	5174105	Spring, throttle control shaft tension (2" L.) .....	1	1	1
30	2.9170	5168685	Plate, throttle control indicator .....	1	1	1
-	-	101247	Screw, #12-24x3/4" oval hd. sl. ....	3	3	3

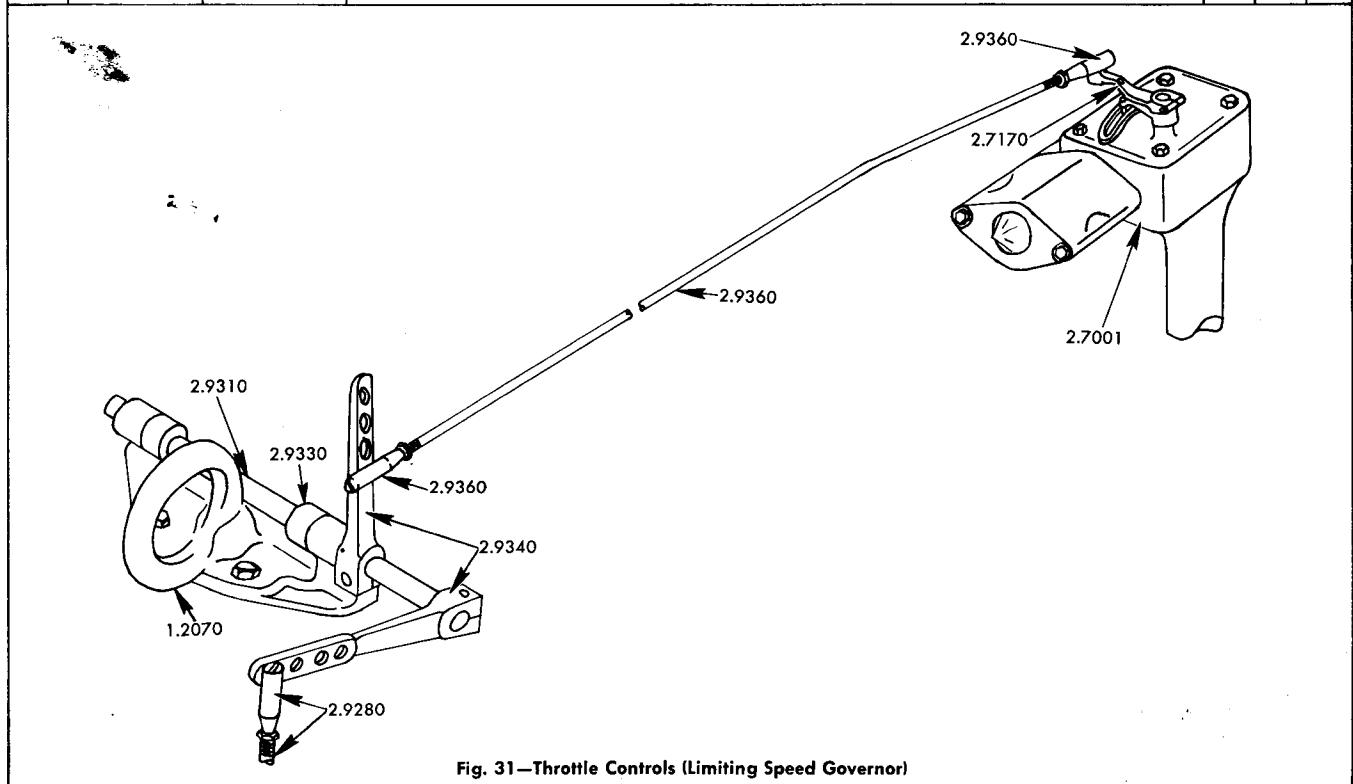


Fig. 31—Throttle Controls (Limiting Speed Governor)

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	120391	Washer, 3/16" flat	3	3	3
-	-	103089	Nut, #12-24 hex.	3	3	3
29	2.9240	5173993	Bracket Assy., throttle control shaft to flywhl. hsg. (includes bushing)	1	1	1
-	-	3222765	Bushing, throttle control shaft to flywheel housing bracket	2	2	2
29,31	2.9280	5173995	Rod, throttle control (5 1/4" L.)	1	1	1
29,31	2.9280	5172547	Rod (stud), throttle control (1 1/4" L.)	1	1	1
29,31	2.9280	109408	Joint, 5/16"-24 ball	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	122193	Nut, 5/16"-24 hex.	4	4	4
29	2.9290	5171125	Lever, throttle control rod (lower)	1	1	1
31	2.9310	3290823	Shaft, throttle control cross (8 5/8" L.)	1	1	1
31	2.9310	5171324	Shaft, throttle control cross (10" L.)	1	1	1
31	2.9330	5164320	Collar, throttle control cross shaft	1	1	1
-	-	139009	Screw, 1/4"-28x1/4" hex. socket cup pt. set	1	1	1
31	2.9340	5164318	Lever, throttle control cross shaft	2	2	2
31	2.9360	3290825	Shaft, throttle control (16 1/8" L.)	1		
31	2.9360	3290826	Shaft, throttle control (21 7/8" L.)		1	
31	2.9360	3290828	Shaft, throttle control (33 3/8" L.)			1
31	2.9360	109408	Joint, 5/16"-24 ball	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	121917	Nut, 5/16"-24 hex.	4	4	4
<b>THROTTLE CONTROLS (Hydraulic Governor)</b>						
30,32	2.9030	5174103	Knob, throttle control	1	1	1
30,32	2.9030	5171125	Lever, throttle control	1	1	1
30	2.9033	3222756	Washer, throttle control tube brake	1	1	1
30,32	2.9034	5174104	Shaft, throttle control knob (5 25/32" L.)	1	1	1
30	2.9034	5173992	Shaft, throttle control knob (4 1/2" L.)	1	1	1
30	2.9034	443136	Pin, 1/8"x1 1/4" groove	1	1	1
30	2.9035	5174105	Spring, throttle control shaft tension (2" L.)	1	1	1
4	2.9038	3292337	Control Assy., vernier throttle (includes indented items)	1	1	1
34	2.9040	3224408	Knob, vernier throttle control	1	1	1
34	2.9070	3291979	Spring, vernier throttle control lock	1	1	1
34	2.9070	112871	Screw, #6-32x5/16" rd. hd. sl.	2	2	2
34	2.9080	3224425	Worm, vernier throttle control	1	1	1
34	2.9085	3224405	Shaft, vernier throttle control	1	1	1
34	2.9090	3224410	Gear, vernier throttle control worm	1	1	1
34	2.9090	106958	Key, 1/16"x1/2" woodruff	1	1	1
34	2.9100	3224409	Bushing, vernier throttle control worm	1	1	1
34	2.9100	106498	Lockwasher, #12	1	1	1
34	2.9100	103089	Nut, #12-24 hex.	1	1	1
34	2.9110	3224407	Button, vernier throttle control lock	1	1	1
34	2.9120	3224406	Pin, vernier throttle control lock button	1	1	1
34	2.9130	3224413	Spring, vernier throttle control lock button pin	1	1	1
34	2.9140	3292336	Cover, vernier throttle control	1	1	1
-	-	3292274	Plate, throttle control indicator (with vernier control)	1	1	1
-	-	5190450	Lock, throttle control indicator plate	2	2	2
-	-	133046	Bolt, 1/4"-20x7/8" rd. hd. sl.	3	3	3
-	-	103319	Lockwasher, 1/4"	3	3	3
-	-	123179	Nut, 1/4"-20 hex.	3	3	3
30	2.9170	5168685	Plate, throttle control indicator	1	1	1
-	-	101247	Screw, #12-24x3/4" oval hd. sl.	3	3	3
-	-	120391	Washer, 3/16" flat	3	3	3
-	-	103089	Nut, #12-24 hex.	3	3	3
32	2.9190	5166494	Coupling, control shaft to knob shaft	1	1	1
-	-	139013	Screw, 1/4"-28x1/2" set	4	4	4
32,33	2.9220	5171039	Bracket Assy., governor control shaft (includes bushing)	1	1	1
32,33	2.9220	179839	Bolt, 3/8"-16x1" hex. hd.	2	2	2
-	-	3222765	Bushing, control shaft bracket	1	1	1
29	2.9240	5173993	Bracket Assy., control shaft to flywheel housing (includes bushing)	1	1	1
-	-	3222765	Bushing, bracket	2	2	2

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
29,33	2.9280	5173995	Rod (stud), throttle control (5 1/4" L.) .....	1	1	1
29,33	2.9280	109408	Joint, 5/16" ball .....	2	2	2
-	-	103320	Lockwasher, 5/16" .....	2	2	2
-	-	121917	Nut, 5/16"-24 hex. ....	4	4	4
29	2.9290	5171125	Lever, throttle control rod (lower) .....	1	1	1
33	2.9300	5171125	Lever, throttle control (rear) .....	1	1	1
32,33	2.9360	5171571	Shaft, throttle control (22 3/8" L.) .....	1		
32,33	2.9360	5166493	Shaft, throttle control (21 9/16" L.) .....	1		
33	2.9360	5171510	Shaft, throttle control (22 7/8" L.) .....	1		
32,33	2.9360	5171572	Shaft, throttle control (28 1/8" L.) .....		1	
32,33	2.9360	5168465	Shaft, throttle control (27 5/16" L.) .....		1	
33	2.9360	3290477	Shaft, throttle control (25 1/8" L.) .....		1	
33	2.9360	5171511	Shaft, throttle control (28 5/8" L.) .....		1	

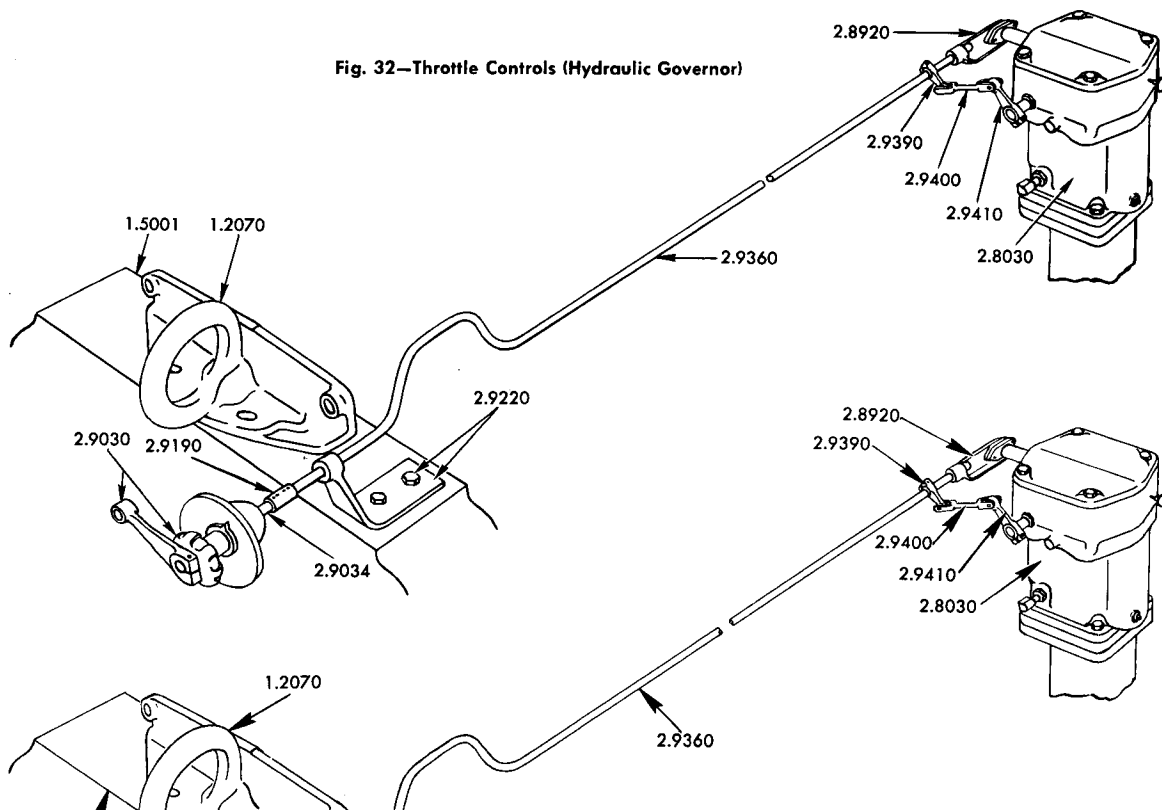


Fig. 32—Throttle Controls (Hydraulic Governor)

Fig. 33—Throttle Controls (Hydraulic Governor)

32,33	2.9360	5174023	Shaft, throttle control (39 5/8" L.) .....			1
32,33	2.9360	5167287	Shaft, throttle control (38 13/16" L.) .....			1
32	2.9360	5168687	Shaft, throttle control (37 1/8" L.) .....			1
33	2.9360	5171512	Shaft, throttle control (40 1/8" L.) .....			1
32,33	2.9390	3222760	Lever, throttle control shaft .....	1	1	1
-	-	106276	Bolt, 1/4"-28x1 1/8" hex. hd. ....	1	1	1
-	-	103319	Lockwasher, 1/4" .....	1	1	1
-	-	121902	Nut, 1/4"-28 hex. ....	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
32,33	2.9400	3224744	Link, throttle control shaft lever .....	1	1	1
-	-	114783	Pin, 1/4" clevis .....	2	2	2
-	-	103361	Pin, 1/16"x1/2" cotter .....	2	2	2
-	-	5156530	Spring, governor lever retracting .....		1	1
32,33	2.9410	3249132	Lever, governor control .....	1	1	1
-	-	106276	Bolt, 1/4"-28x1 1/8" hex. hd. ....	1	1	1
-	-	103319	Lockwasher, 1/4" .....	1	1	1
-	-	121902	Nut, 1/4"-28 hex. ....	1	1	1

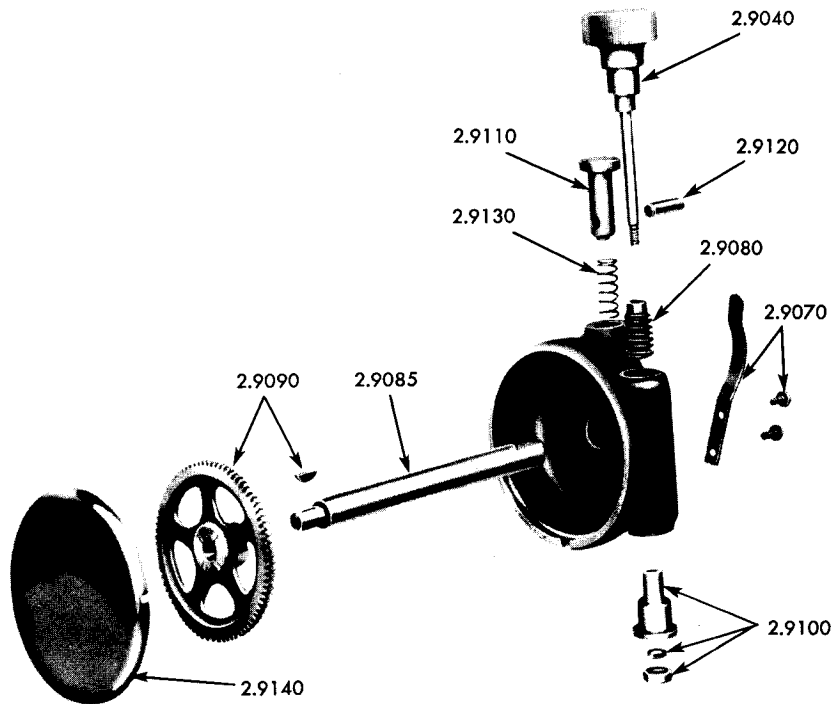


Fig. 34—Vernier Throttle Control Knob

<b>AIR CLEANER</b>						
4	3.1001	5183248	Air Cleaner Assy., light duty	1	1	2
35	3.1001	5183228	Air Cleaner Assy., 10" dia. heavy duty	1		
35	3.1001	5183231	Air Cleaner Assy., 12" dia. heavy duty		1	
35	3.1001	5183233	Air Cleaner Assy., 14" dia. heavy duty			1
-	-	5193590	Air Cleaner Assy., 10" dia. (after)	1		
-	-	5183858	Air Cleaner Assy., 12" dia. (after)		1	
-	-	5183859	Air Cleaner Assy., 14" dia. (after)			1
36	3.1010	5193152	Cup Assy., light duty air cleaner .....	1	1	2
35	3.1010	5193164	Cup Assy., 10" dia. heavy duty air cleaner .....	1		
35	3.1010	5193156	Cup Assy., 12" dia. heavy duty air cleaner .....		1	
35	3.1010	5193160	Cup Assy., 14" dia. heavy duty air cleaner .....			1
35	3.1040	5193163	Screen, 10" dia. heavy duty air cleaner .....	1		
35	3.1040	5193492	Screen, 12" dia. heavy duty air cleaner .....		1	
35	3.1040	5193494	Screen, 14" dia. heavy duty air cleaner .....			1
36	3.1045	5193150	Baffle, light duty air cleaner .....	1	1	2
36	3.1045	5193149	Ring, light duty air cleaner baffle snap .....	1	1	2
35	3.1055	5193157	Gasket, 12" dia. heavy duty air cleaner element .....		1	
35	3.1055	5193159	Gasket, 14" dia. air cleaner cup assy. ....			1
36	3.1070	5193669	Bolt, light duty air cleaner .....	1	1	2
-	-	5193165	Clamp Assy., 10" heavy duty air cleaner oil cup retaining .....	1		
35	3.1070	5192412	Rod Assy., 12" and 14" heavy duty air cleaner side .....		2	2
35	3.1100	5183230	Hood, air cleaner air inlet .....	1		
35	3.1100	5183232	Hood, air cleaner air inlet .....		1	



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
35	3.1100	5187131	Hood, air cleaner air inlet .....			1
35	3.1200	5174842	Elbow, air inlet .....	1	1	
35	3.1200	5174844	Elbow, air inlet .....			1
35	3.1200	186619	Bolt, 3/8"-16x1 1/8" hex. hd. ....	4	4	
35	3.1200	179859	Bolt, 7/16"-14x1 1/8" hex. hd. ....			4
35	3.1220	5183229	Strap, air cleaner mounting (10" cleaner) .....	2		
35	3.1220	5185800	Strap, air cleaner mounting (12" cleaner) .....		2	
35	3.1220	5185801	Strap, air cleaner mounting (14" cleaner) .....			2

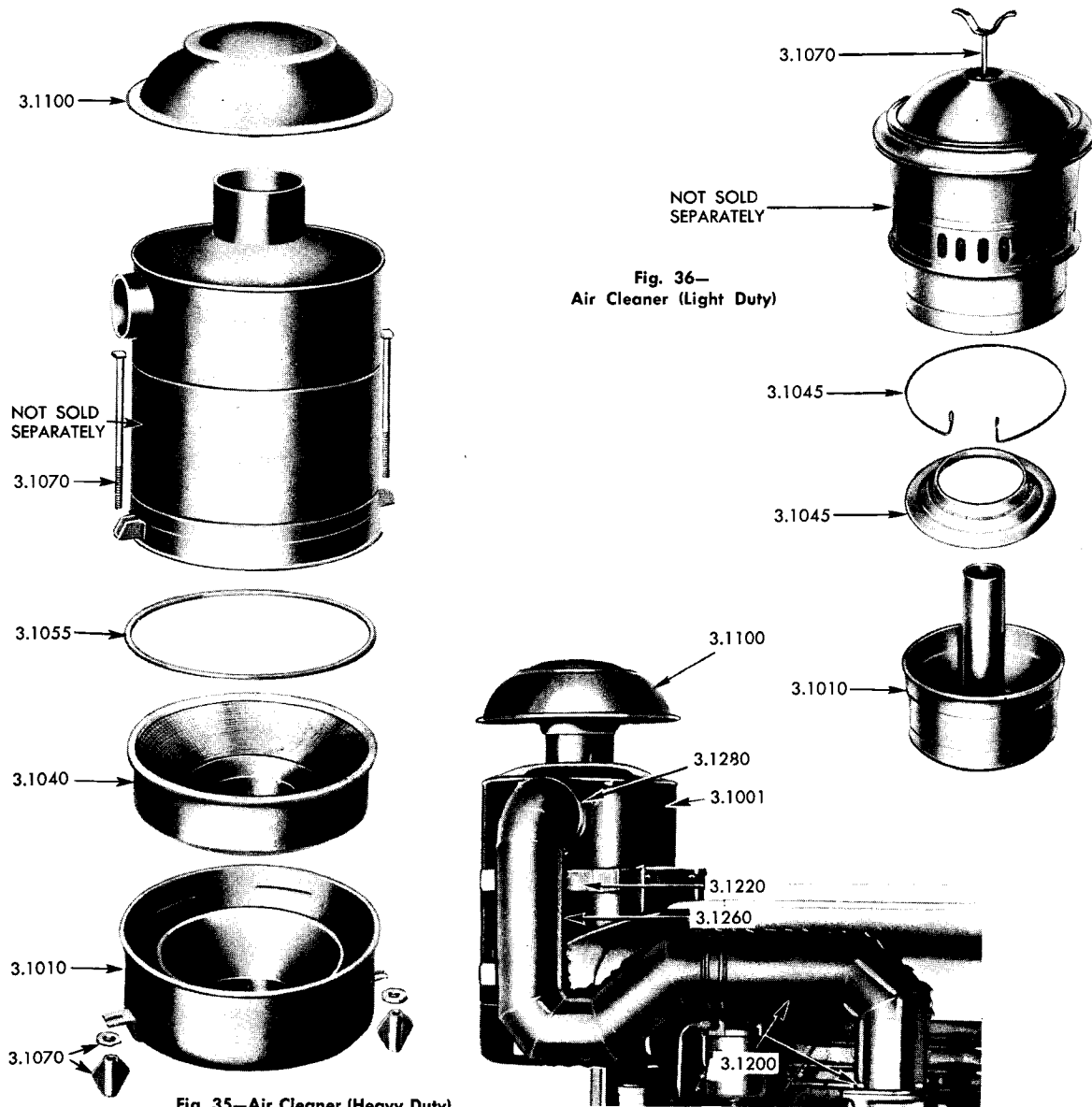


Fig. 35—Air Cleaner (Heavy Duty)

Fig. 36—  
Air Cleaner (Light Duty)

36	3.1260	5174854	Pipe, air cleaner to inlet housing (open units) .....	1		
36	3.1260	5183872	Pipe, air cleaner to inlet housing (units with hoods) .....	1		
36	3.1260	5174855	Pipe, air cleaner to inlet housing (open units) .....		1	
36	3.1260	5183873	Pipe, air cleaner to inlet housing (units with hoods) .....		1	
36	3.1260	5174856	Pipe, air cleaner to inlet housing (open units) .....			1
36	3.1260	5183874	Pipe, air cleaner to inlet housing (units with hoods) .....			1
-	-	5183904	Hose, air cleaner inlet pipe (4 1/2"x4" I.D.) .....	*	*	*
36	3.1280	5173575	Clamp, air cleaner inlet pipe hose .....	*	*	*

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>AIR INLET HOUSING</b>						
2	3.3001	5166894	Housing Assy., air inlet	1		
2	3.3001	5166893	Housing Assy., air inlet		1	
2	3.3001	5166773	Housing Assy., air inlet (single inlet)			1
2	3.3001	5166951	Housing Assy., air inlet (dual inlet)			1
37	3.3001	179844	Bolt, 3/8"-16x1 5/8" hex. hd. ....	4	4	4
37	3.3001	179847	Bolt, 3/8"-16x2" hex. hd. ....			1
37	3.3001	179848	Bolt, 3/8"-16x2 1/4" hex. hd. ....			1
-	-	103321	Lockwasher, 3/8" ....	4	4	6
37	3.3003	5166713	Housing, air inlet ....	1		
37	3.3003	5166742	Housing, air inlet ....		1	
37	3.3003	5166763	Housing, air inlet (single inlet) ....			1
37	3.3003	5163202	Housing, air inlet (dual inlet) ....			1
37	3.3005	5158616	Tube, air cleaner mounting ....	1		2
37	3.3005	5166913	Tube, air cleaner mounting ....		1	
-	-	5166716	Gasket, air inlet housing flange ....	1	1	
-	-	5166770	Gasket, air inlet housing flange ....			1
37	3.3020	3290576	Plate, air inlet housing striker ....	1		
37	3.3020	3290611	Plate, air inlet housing striker ....		1	
37	3.3020	3290399	Plate, air inlet housing striker ....			1
37	3.3030	3290577	Gasket, air inlet housing striker plate ....	1		
37	3.3030	3290612	Gasket, air inlet housing striker plate ....		1	
37	3.3030	3290572	Gasket, air inlet housing striker plate ....			1
37	3.3040	5172029	Valve, air inlet housing shutdown ....	1		

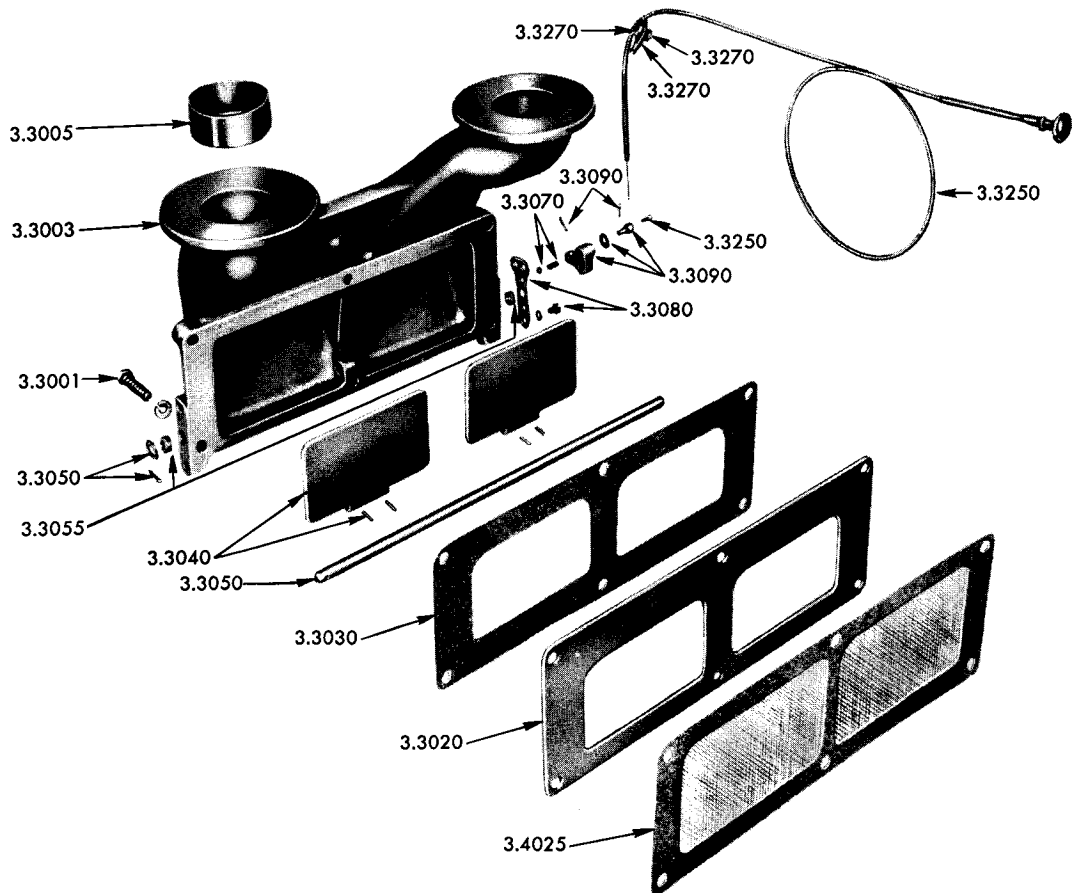


Fig. 37—Air Inlet Housing

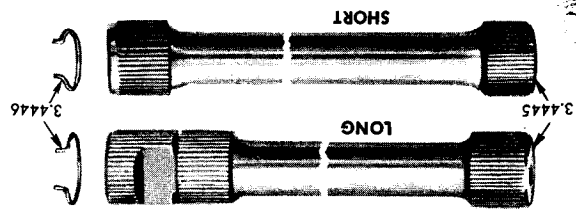
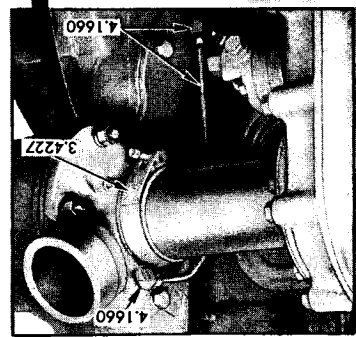
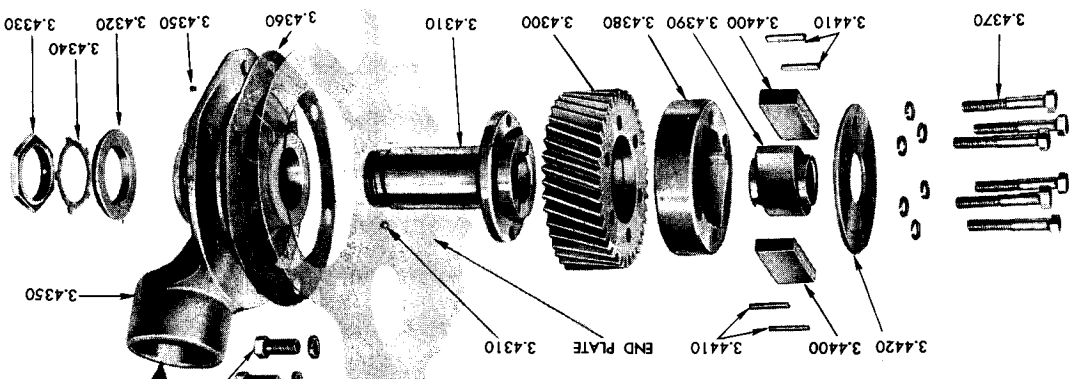
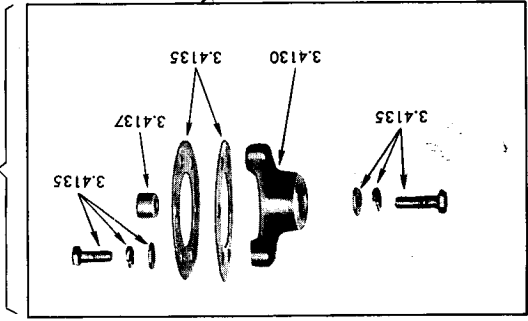
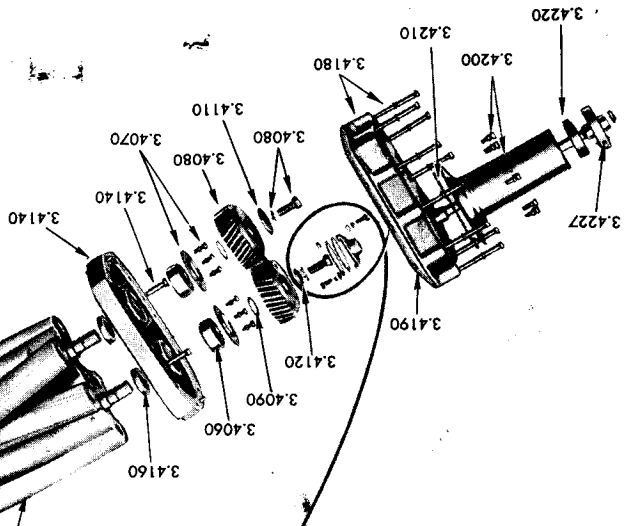
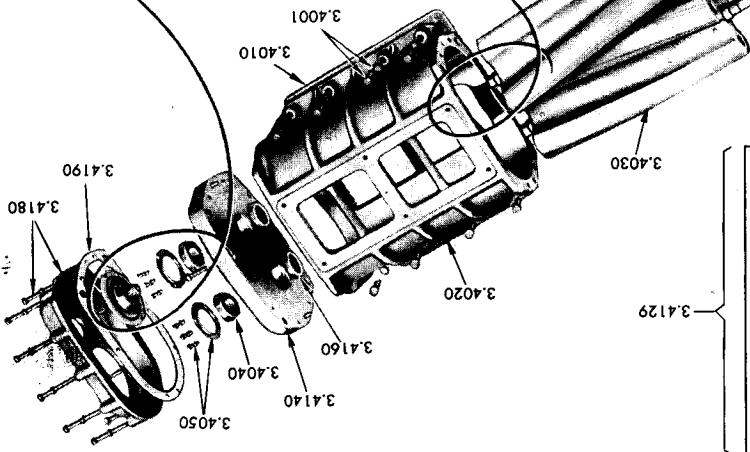
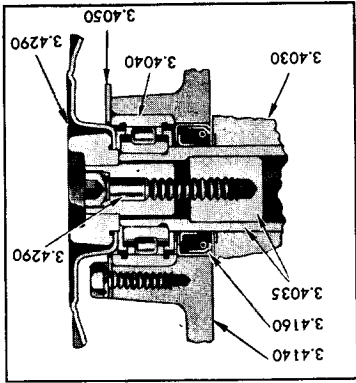
# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
37	3.3040	5172030	Valve, air inlet housing shutdown		1	
37	3.3040	5172031	Valve, air inlet housing shutdown			2
37	3.3040	142485	Pin, 1/8"x5/8" groove	2	2	4
37	3.3050	3290578	Shaft, air inlet housing shutdown valve	1		
37	3.3050	3290613	Shaft, air inlet housing shutdown valve		1	
37	3.3050	3290567	Shaft, air inlet housing shutdown valve			1
37	3.3050	103341	Washer, 3/8" flat	1	1	1
37	3.3050	107762	Pin, 3/32"x5/8" cotter	1	1	1
37	3.3055	5182977	Seal Ring, air inlet housing shutdown valve shaft	2	2	2
37	3.3070	3291796	Spring, air inlet housing shutdown valve tension	1	1	1
37	3.3070	104919	Ball, 5/16" dia. steel	1	1	1
37	3.3080	5168276	Lockplate, air inlet housing shutdown	1	1	1
37	3.3080	180016	Bolt, 1/4"-20x1/2" hex. hd.	2	2	2
-	-	103319	Lockwasher, 1/4"	2	2	2
37	3.3090	3290624	Lever, air inlet housing shutdown valve	1	1	1
37	3.3090	5168374	Nut	1	1	1
37	3.3090	103361	Pin, 1/16"x1/2" cotter	1	1	1
37	3.3090	142485	Pin, 1/8"x5/8" groove	1	1	1
37	3.3090	120392	Washer, 1/4" flat	1	1	1
37	3.3250	1990665	Wire Assy., air inlet housing shutdown control (L. 50")	1	1	1
37	3.3250	1990666	Wire Assy., air inlet housing shutdown control (L. 90")	1	1	1
37	3.3250	100659	Screw, #10-32x3/8" fil. hd.	1	1	1
-	-	110730	Lockwasher, 3/8"	1	1	1
-	-	122236	Nut, 3/8"-24 hex.	1	1	1
-	-	5186687	Plate, air inlet housing shutdown control	1	1	1
37	3.3270	3290569	Clip, air inlet housing shutdown control wire	1	1	1
37	3.3270	123298	Bolt, 1/4"-28x3/8" hex. hd.	1	1	1
-	-	103319	Lockwasher, 1/4"	1	1	1
37	3.3270	121902	Nut, 1/4"-28 hex.	1	1	1
<b>BLOWER</b>						
1	3.4001	5158145	Blower Assy. (C eng.)	1		
1	3.4001	5158147	Blower Assy. (A eng.)	1		
1	3.4001	5158146	Blower Assy. (C eng.)		1	
1	3.4001	5158148	Blower Assy. (A eng.)		1	
1	3.4001	5157396	Blower Assy. (C eng.)			1
1	3.4001	5157393	Blower Assy. (A eng.)			1
38	3.4001	179866	Bolt, 7/16"-14x2" hex. hd.	4	4	8
38	3.4001	5150238	Washer, blower attaching bolt	4	4	8
-	-	5192752	Blower Kit, installation	*		
-	-	5192753	Blower Kit, installation		*	
-	-	5192754	Blower Kit, installation			*
-	-	5192796 #	Blower Kit, repair	*	*	*
38	3.4010	5150235	Gasket, blower	1		
38	3.4010	5150236	Gasket, blower		1	
38	3.4010	5150237	Gasket, blower			1
38	3.4020	5155865	Housing, blower	1		
38	3.4020	5157199	Housing, blower		1	
38	3.4020	5155866	Housing, blower			1
37	3.4025	5150779	Screen, blower	1		
37	3.4025	5150780	Screen, blower		1	
37	3.4025	5150988	Screen, blower			1
-	-	5192793	Rotor Set, blower	*		
-	-	5192794	Rotor Set, blower		*	
-	-	5192795	Rotor Set, blower			*
38	3.4030	5179047	Rotor Assy., blower (L.H. helix, lower)	1		
38	3.4030	5158142	Rotor Assy., blower (R.H. helix, upper)	1		
38	3.4030	5179048	Rotor Assy., blower (L.H. helix, lower)		1	
38	3.4030	5158144	Rotor Assy., blower (R.H. helix, upper)		1	
38	3.4030	5179049	Rotor Assy., blower (L.H. helix, lower)			1
38	3.4030	5157232	Rotor Assy., blower (R.H. helix, upper)			1

\* As required. # A blower kit includes items 3.4040, 3.4060, 3.4090, 3.4160 and 3.4190.

Fig. 38-Blower



# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5165289	Plug, blower rotor	1	1	1
-	-	142522	Pin, 1/4"x1 3/4" groove	1	1	1
38	3.4035	5179046	Shaft and Plug, blower rotor (sold only as an assy.)	1	1	1
38	3.4040	7450168	Bearing, blower rotor front	2	2	2
38	3.4050	5179017	Retainer, blower rotor front bearing	2	2	2
38	3.4050	443603	Bolt, 1/4"-20x3/4" hex. hd.	6	6	6
-	-	103319	Lockwasher, 1/4"	6	6	6
38	3.4060	954418	Bearing, blower rotor rear (N.D. 205BL)	2	2	2
38	3.4070	5179017	Retainer, blower rotor rear bearing	2	2	2
38	3.4070	443603	Bolt, 1/4"-20x3/4" hex. hd.	6	6	6
-	-	103319	Lockwasher, 1/4"	6	6	6
38	3.4080	5192234	Gear Set, blower rotor	1	1	1
38	3.4080	5154399	Bolt, blower rotor gear	2	2	2
38	3.4080	5154398	Lockwasher, blower rotor gear	2	2	2
38	3.4090	5150372	Shim, blower rotor gear (.002")	*	*	*
38	3.4090	5153938	Shim, blower rotor gear (.003")	*	*	*
38	3.4090	5150855	Shim, blower rotor gear (.005")	*	*	*
38	3.4090	5150856	Shim, blower rotor gear (.010")	*	*	*
38	3.4110	5154401	Disc, blower rotor fuel pump coupling	1	1	1
38	3.4120	5154400	Washer, blower rotor gear retaining	1	1	1
38	3.4130	5173366	Hub, blower rotor gear	1	1	1
38	3.4135	5173365	Plate, blower rotor gear hub	1	2	2
38	3.4135	5173362	Bolt (plate to hub)	3	3	3
38	3.4135	5173363	Bolt (plate to gear)	3	3	3
38	3.4135	103320	Lockwasher, 5/16"	6	6	6
38	3.4135	120393	Washer, 5/16" flat	6	6	6
38	3.4137	5173364	Spacer, blower rotor gear hub	3	3	3
38	3.4140	5150218	Plate Assy., blower housing end (includes dowels and oil seals)	2	2	2
-	-	5150542	Pin (dowel)	4	4	4
38	3.4140	117296	Bolt, 5/16"-18x1 1/2" fil. hd.	4	4	4
38	3.4160	5150220	Seal, blower housing end plate	4	4	4
-	-	5192438	Seal, (for use with spacer 5192439)	*	*	*
-	-	5192439	Spacer, blower rotor oil seal (wear ring, use with seal 5192438)	*	*	*
38	3.4180	5150233	Cover, blower housing end plate	2	2	2
38	3.4180	186270	Bolt, 5/16"-18x3 1/2" hex. hd.	20	20	20
-	-	103320	Lockwasher, 5/16"	20	20	20
38	3.4190	5150234	Gasket, blower housing end plate cover	2	2	2
38	3.4200	5172867	Cover Assy., blower drive	1		
38	3.4200	5172868	Cover Assy., blower drive		1	
38	3.4200	5172869	Cover Assy., blower drive			1
38	3.4200	5171159	Bolt (with seal-washer)	6	6	6
38	3.4210	5150246	Gasket, blower drive cover	1	1	1
38	3.4220	5172865	Seal, blower drive cover	1	1	1
38	3.4227	5173695	Clamp, blower drive cover packing	1	1	1
38,52	3.4290	5179605	Coupling, blower to water pump inter. drive	1	1	1
38	3.4290	138234	Bolt, 5/16"-24x1 1/2" hex. socket hd.	1	1	1
38	3.4300	5173320	Gear, blower drive (R.H. helix) (LC-LD-RC-RD eng.)	1	1	1
38	3.4300	5173319	Gear, blower drive (L.H. helix) (LA-LB-RA-RB eng.)	1	1	1
38	3.4310	5150279	Hub, blower drive gear	1	1	1
38	3.4310	169067	Ball, 7/32" dia. steel	1	1	1
38	3.4320	5158901	Washer, blower drive gear hub thrust	1	1	1
38	3.4330	5152804	Nut, blower drive gear hub	1	1	1
38	3.4340	5150281	Lockwasher, blower drive gear	1	1	1
38	3.4350	5172871 #	Support Assy., blower drive gear hub	1	1	1
38	3.4350	5172870 @	Support Assy., blower drive gear hub (includes bearing)	1	1	1
38	3.4350	5153347	Bolt, blower drive gear hub support	2	2	2
-	-	103321	Lockwasher, 3/8"	2	2	2
38	3.4350	5167553	Plug (1/8")	1	1	1
-	-	5150285	Bearing, blower drive gear hub support	2	2	2
38	3.4360	5150286	Gasket, blower drive gear hub support	1	1	1
-	-	5150344	Coupling Assy., blower drive (includes indented items)	1	1	1
38	3.4370	5150350	Bolt, blower drive coupling	6	6	6
-	-	103320	Lockwasher, 5/16"	6	6	6

\* As required. # Has provision for oil filler tube. @ Has no provision for oil filler tube.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER
				3-71
				4-71
				6-71

38	3.4380	5150345	Support, blower drive coupling	1
38	3.4390	5150348	Cam, blower drive coupling	1
38	3.4400	5150347	Spring, blower drive coupling	42
38	3.4410	5150346	Seat, blower drive coupling spring	4
38	3.4420	5150349	Retainer, blower drive coupling	1
38	3.4445	5154638	Shaft, blower drive (short) (6 3/16" L.)	1
38	3.4445	5154639	Shaft, blower drive (short) (7 13/16" L.)	1
38	3.4445	5154640	Shaft, blower drive (short) (11 1/16" L.)	1
38	3.4445	5168129 #	Shaft, blower drive (long) (6 7/32" L.)	1
38	3.4445	5168130 #	Shaft, blower drive (long) (7 27/32" L.)	1
38	3.4445	5168131 #	Shaft, blower drive (long) (11 3/32" L.)	1
38	3.4446	5167727	Ring, blower drive shaft	1
39	-	5175985	Pump Assy., oil (L.H. eng. rotation)	1
39	-	5175986	Pump Assy., oil (R.H. eng. rotation)	1
39	-	5177349 †	Pump Assy., oil (R.H. eng. rotation)	1
39	-	5175988 †	Pump Assy., oil (R.H. eng. rotation)	1
39	-	5175980	Pump Assy., oil (R.H. eng. rotation)	1
39	-	5175979	Pump Assy., oil (L.H. eng. rotation)	1
39	4.1001	186627	Bolt, 3/8"-24x1" hex. hd.	4
-	-	103321	Lockwasher, 3/8"	4
-	-	5192106	Gasket Kit, oil pump overhaul	4
-	-	5192107	Gasket Kit, oil pump overhaul	4
-	-	5192108	Gasket Kit, oil pump overhaul	4
-	-	5176119	Shim, oil pump (.005")	4
-	-	5153147	Bushing, oil pump body	4
-	-	5153154 †	Bushing, oil pump body	4
-	-	5153257 †	Spacer, oil pump body	4
39	4.1070	5153309	Shaft, oil pump drive (8 31/32" L.)	1
39	4.1070	5153258 †	Shaft, oil pump drive (10 29/32" L.)	1

**OIL PUMP**

**BLOWER DRIVE SHAFT**

(includes indented items)

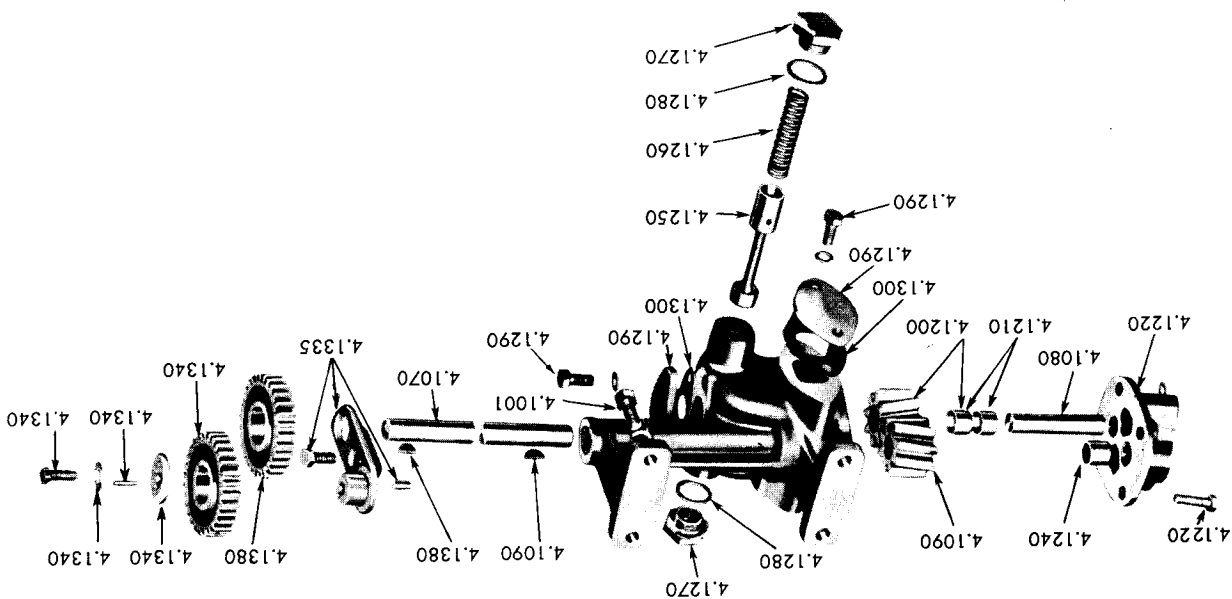


Fig. 39-Oil Pump

\* As required. # Used only when equipment is driven off the blower drive gear. † With scavenging unit. @ With pump Assy. 5175988 or 5177349 only.

@With pump assy. 5175988 or 5177349 only.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER
39	4.1080	5153310	Shaft, oil pump driven gear (3 7/32" L.)	1
39	4.1080	5153146 @	Shaft, oil pump driven gear (5 5/32" L.)	1
39	4.1090	5166650	Gear, oil pump drive (1 1/4" wide)	1
39	4.1090	5153260	Gear, oil pump drive (1 3/4" wide)	1
39	4.1090	5153260 @	Gear, oil pump drive (1 3/4" wide)	1
39	4.1090	103905	Key, 1/8"x5/8" woodruff	1
39	4.1090	103905 @	Key, 1/8"x5/8" woodruff	1
39	4.1200	5166449	Gear Assy., oil pump driven (1 1/4" wide)	1
39	4.1200	5153617 @	Gear Assy., oil pump driven (1 3/4" wide)	1
39	4.1200	5153617 @	Gear Assy., oil pump driven (1 3/4" wide)	1
39	4.1210	5166840	Gear Assy., oil pump driven (9/16" wide)	1
39	4.1210	5153154	Bushing, oil pump driven gear (11/16" wide)	2
39	4.1210	5153154 @	Bushing, oil pump driven gear (11/16" wide)	2
39	4.1210	5153154 @	Bushing, oil pump driven gear (11/16" wide)	2
39	4.1220	5154252	Cover Assy., oil pump (R.H.)	2
39	4.1220	5154251	Cover Assy., oil pump (L.H.)	2
39	4.1220	186624	(Includes bushings)	1
39	4.1220	103320	Lockwasher, 5/16"	4
39	4.1240	5153154	Bushing, oil pump cover	4
39	4.1250	5153247	Valve, oil pump relief	1
39	4.1260	5155765	Spring, oil pump relief valve	1
39	4.1270	5152613	Plug, oil pump relief valve	1
39	4.1280	105456	Gasket, oil pump relief valve	2
39	4.1290	5153311	Cover, oil pump pad (2 1/8" bolt center)	2
39	4.1290	5156955	Cover, oil pump pad (1 7/8" bolt center)	1
39	4.1290	179816	Bolt, 5/16"-18x3/4" hex. hd.	4
39	4.1300	103320	Lockwasher, 5/16"	4
39	4.1300	5151370	Gasket, oil pump pad cover (outlet, 1 7/8" bolt center)	4
39	4.1300	5153313	Gasket, oil pump pad cover (inlet, 2 1/8" bolt center)	4
9	4.1310	5166821	Gear, oil pump drive (on crankshaft)	1
9	4.1310	5166532	Gear, oil pump drive (on crankshaft)	1
9	4.1310	106751	Key, 3/16"x3/4" woodruff	1
39	4.1335	5169195	Support, oil pump idler gear	1
39	4.1335	5176035	Dowel, oil pump idler gear support	1
39	4.1335	192279	Bolt, 3/8"-16x7/8" hex. hd.	1
39	4.1340	5156683	Gear Assy., oil pump idler (includes bushing)	1
39	4.1340	5169197	Washer (large)	1
39	4.1340	5175944	Washer (small)	1
39	4.1340	186625	Bolt, 5/16"-18x7/8" hex. hd.	1
39	4.1340	443230	Pin, 1/8"x3/8" groove	1
39	4.1380	5156521	Bushing, oil pump idler gear	1
39	4.1380	5156528	Gear, oil pump drive (on pump)	1
39	4.1380	103905	Key, 1/8"x5/8" woodruff	1
40	4.1510	5166871	Pipe, oil pump inlet (piece 1)	1
40	4.1510	5166848	Pipe, oil pump inlet (piece 2)	1
40	4.1510	5166847	Pipe, oil pump inlet (piece 3)	1
40	4.1510	5174129	Pipe, oil pump inlet (piece 4)	1
40	4.1510	5159408	Pipe, oil pump inlet (piece 5)	1
40	4.1510	5174987	Pipe, oil pump inlet (piece 6)	1
40	4.1510	5174988	Pipe, oil pump inlet (piece 7)	1
40	4.1510	5153943	Pipe, oil pump inlet (piece 8)	1
40	4.1510	5153643	Pipe, oil pump inlet (piece 9)	1
40	4.1510	5177346	Pipe, oil pump inlet (piece 10)	1
40	4.1510	5177842	Pipe, oil pump inlet (piece 11)	1
40	4.1510	5153828	Pipe, oil pump inlet (piece 12)	1
40	4.1510	5153815	Pipe, oil pump inlet (scavenging) (piece 13)	1
40	4.1510	5159413	Pipe, oil pump inlet (scavenging) (piece 14)	1
40	4.1510	5159415	Pipe, oil pump inlet (scavenging) (piece 15)	1
40	4.1510	5154509	Support (piece 16)	1
40	4.1510	5177344	Pipe, oil pump inlet (scavenging)	1

**OIL DISTRIBUTION SYSTEM**

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	186629	Bolt, 5/16"-18x1" hex. hd. (to pump)	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	5153627	Gasket, oil pump inlet (at pump) (1 3/16" slotted hole)	1	1	
-	-	5153902	Gasket, oil pump inlet (at pump) (1 1/16" hole)			2
-	-	5153313	Gasket, oil pump inlet (at pump) (1 1/16" sq. hole)			2
40	4.1530	5153286	Screen, oil pump inlet (6 3/4" dia.) (piece 31)	1	1	1
40	4.1530	5155830	Screen, oil pump inlet (4 1/2" dia.) (piece 32)			1
40	4.1530	5154457	Screen, oil pump inlet (3 3/4" dia.) (piece 33)		1	
-	-	5164754	Screen, oil pump inlet (4 3/8" dia.)	1	1	
40	4.1540	5166935	Bracket, oil pump screen support (piece 17)		1	
40	4.1540	5166868	Bracket, oil pump screen support (piece 18)	2	2	
40	4.1540	5174125	Bracket, oil pump screen support (piece 19)		2	
40	4.1540	5153829	Bracket, oil pump screen support (piece 20)			1
40	4.1540	5159398	Bracket, oil pump screen support (piece 21)			1

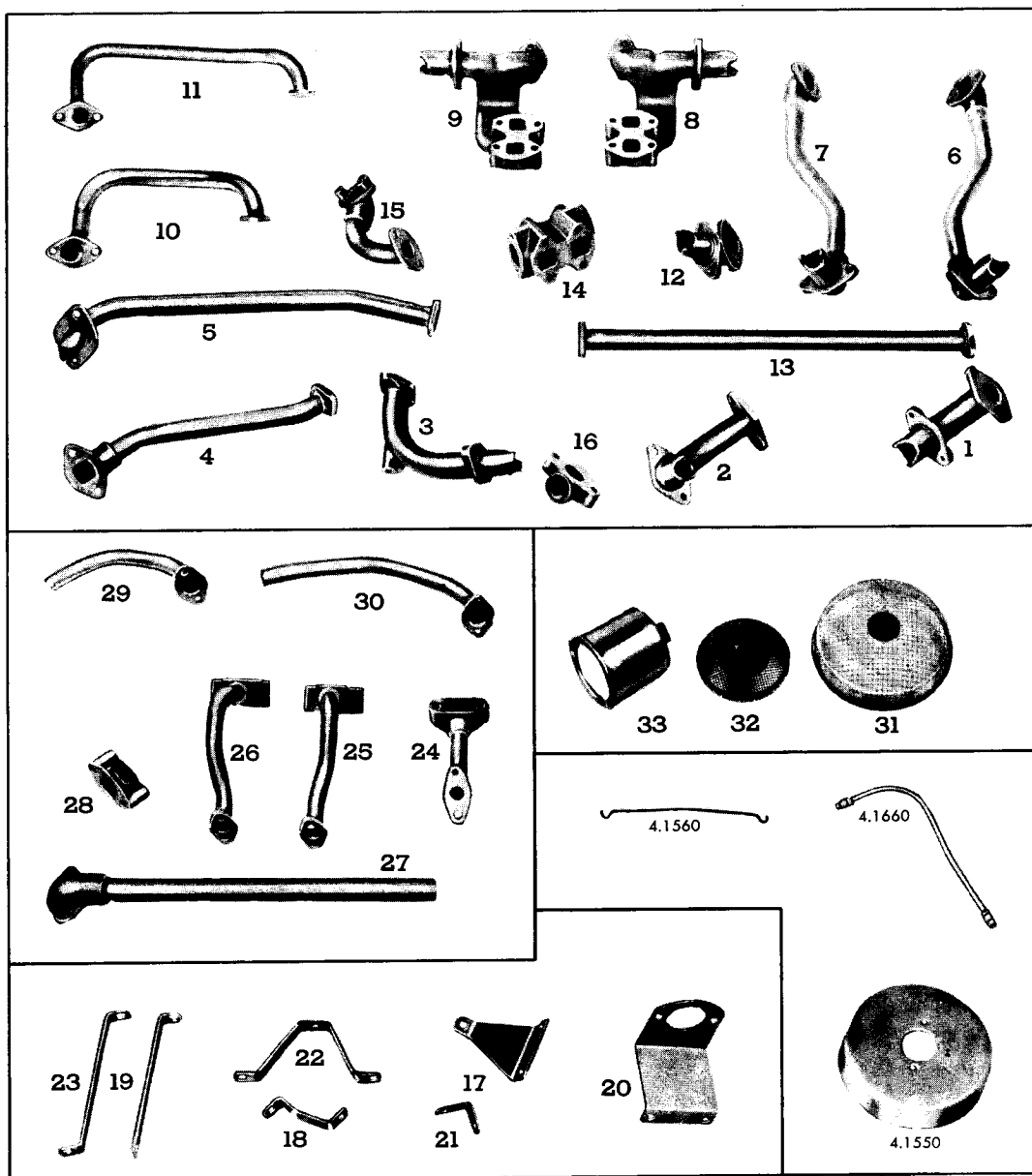


Fig. 40—Oil Distribution System



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
40	4.1540	5153317	Bracket, oil pump screen support (piece 22)			2
40	4.1540	5159396	Bracket, oil pump screen support (piece 23)			2
-	-	5177336	Bracket, oil pump screen support	1		
-	-	5177843	Bracket, oil pump screen support		1	
40	4.1550	5153285	Cover, oil pump inlet screen (with screen 5153286)	1	1	1
-	-	5177338	Cover, oil pump inlet screen (with screen 5164754)	1	1	
-	-	5155710	Bolt, cover (5/16"-24x1 1/8")			2
-	-	5155605	Bolt, cover (5/16"-18x11/16")	2	2	2
-	-	225712	Bolt, 5/16"-24x1" hex. hd.	2	2	2
-	-	5151241	Lockwire	1	1	1
-	-	122712	Nut, 5/16"-24 hex. sl.	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	103373	Pin, 3/32"x3/4" cotter	2	2	2
-	-	120293	Washer, 5/16" flat	2	2	2
40	4.1560	5153284	Retainer, oil pump inlet screen (7 5/16" L.)	1	1	1
-	-	5163124	Retainer, oil pump inlet screen (4 3/4" L.)	1	1	
40	4.1580	5159268	Pipe, oil pump outlet (LC or RA engines) (piece 24)	1	1	1
40	4.1580	5159388	Pipe, oil pump outlet (RC engines) (piece 25)	1	1	1
40	4.1580	5159387	Pipe, oil pump outlet (LA engines) (piece 26)	1	1	1
40	4.1580	5159399	Pipe, oil pump outlet (scavenging) (piece 27)			1
40	4.1580	5156994	Pipe, oil pump outlet (scavenging) (piece 28)			1
40	4.1580	5177342	Pipe, oil pump outlet (scavenging) (piece 29)	1		
40	4.1580	5177840	Pipe, oil pump outlet (scavenging) (piece 30)		1	
-	-	179816	Bolt, 5/16"-18x3/4" hex. hd.	2	2	2
-	-	179824	Bolt, 5/16"-18x1 3/4" hex. hd.	2	2	2
-	-	103320	Lockwasher, 5/16"	4	4	4
-	-	5151370	Gasket, oil pump outlet (3/4" hole)	1	1	1
-	-	5153313	Gasket, oil pump outlet (1 1/16" sq. hole)	1	1	1
38,34	4.1660	5150433	Pipe, blower drive bearing oil	1	1	1
-	-	5167220	Tee (1/4" P.T., at block)	1	1	1
38	4.1660	137421	Elbow, 1/4"x90° inv. fl. tube	1	1	1
38	4.1660	143342	Elbow, 1/4"x90° inv. fl. tube, 1/4" P.T.	1	1	1
<b>OIL PRESSURE REGULATOR</b>						
-	-	5159384	Regulator Assy., oil pressure (C eng.)	1	1	1
-	-	5159383	Regulator Assy., oil pressure (A eng.)			
41	4.1670	186629	Bolt, 5/16"-18x1" hex. hd.	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
41	4.1690	5156815	Spring, oil pressure regulator	1	1	1
41	4.1700	5156819	Valve, oil pressure regulator	1	1	1
41	4.1710	5156816	Plug, oil pressure regulator	1	1	1
41	4.1730	5154199	Gasket, oil pressure regulator body	1	1	1

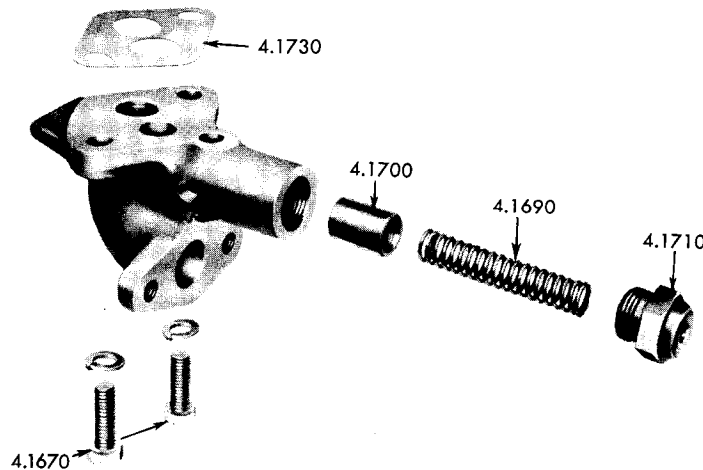


Fig. 41—Oil Pressure Regulator

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>OIL FILTER</b>						
4	4.2240	5572941	Filter Assy., lube oil (single element by-pass, bracket mounted)	1	1	1
3	4.2240	5572940	Filter Assy., lube oil (dual element by-pass, bracket mounted)			
-	-	5572942	Filter Assy., lube oil (by-pass strap mounted)	1	1	2
-	-	179838	Bolt, 3/8"-16x7/8" hex. hd.	4	4	4
42	4.2250	5572425	Element, oil filter (by-pass, P-117)	1	1	2
43	4.2250	5573014	Element, oil filter (full flow, PF-132)			
-	-	5572668	Spacer, oil filter element (strap mounted filter)	1	1	2
42,43	4.2280	5571745	Shell, oil filter (bracket mounted by-pass or full flow)	1	1	2
-	-	1595646	Shell, oil filter (strap mounted)	1	1	2
42	4.2290	103878	Plug, 1/4" pipe	1	1	2
42	4.2290	112578	Plug, 1/4" br. pipe	1	1	2
-	-	5570485	Cover, oil filter (strap mounted)	1	1	2
42,43	4.2300	5571024	Gasket, oil filter cover (by-pass or full flow)	1	1	2
42	4.2310	1503518	Spring, oil filter (bracket mounted by-pass)	1	1	2
-	-	5570486	Spring, oil filter (strap mounted by-pass)	1	1	2
43	4.2310	5187308	Spring, oil filter (full flow)	1	1	1
43	4.2315	5187309	Retainer, oil filter spring (full flow)	1	1	1

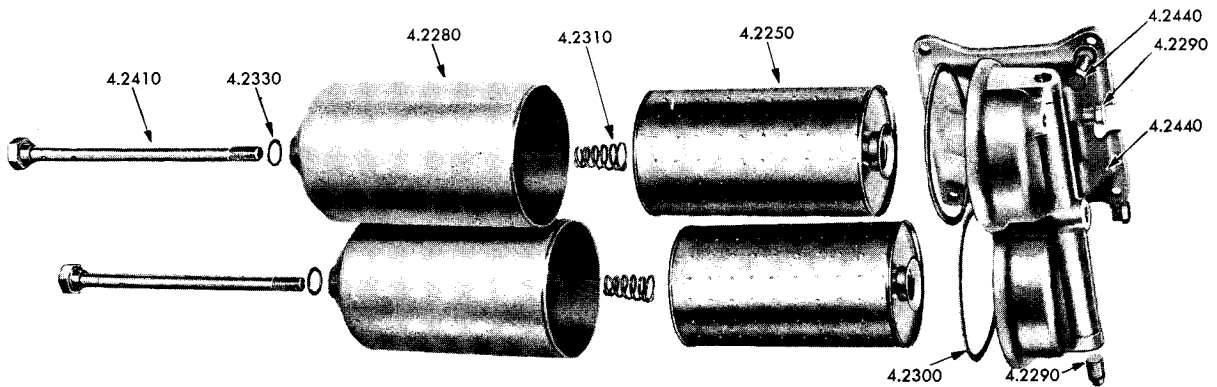


Fig. 42—Oil Filter—By-pass

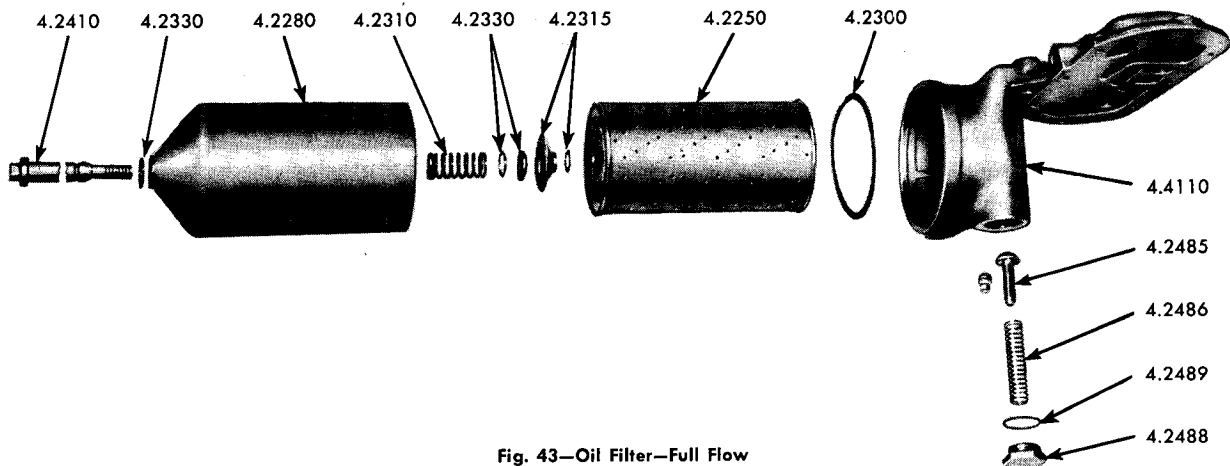


Fig. 43—Oil Filter—Full Flow

43	4.2315	5187311	Ring, oil filter spring retainer snap (full flow)	1	1	1
-	-	5570478	Nut, oil filter cover (strap mounted)	1	1	2
42,43	4.2330	1503517	Gasket, oil filter cover nut (by-pass or full flow)	1	1	2
43	4.2330	5187310	Gasket, filter spring retainer (full flow)	1	1	1
43	4.2330	5154538	Washer, filter spring (full flow)	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
42	4.2410	1595893	Stud, oil filter center (bracket mounted by-pass)	1	1	2
43	4.2410	5187307	Stud, oil filter center (full flow)	1	1	1
42	4.2440	5170291	Bracket, oil filter mounting (to filter)	1	1	1
42	4.2440	179856	Bolt, 7/16"-14x3/4" hex. hd.	4	4	4
43	4.2485	5187315	Valve, oil filter pressure regulator (full flow)	1	1	1
43	4.2486	5187314	Spring, oil filter pressure regulator (full flow)	1	1	1
43	4.2488	5187313	Plug, oil filter pressure regulator (full flow)	1	1	1
43	4.2489	5187316	Gasket, oil filter pressure regulator plug (full flow)	1	1	1
<b>OIL FILTER LINES</b>						
3	4.3001	5166569	Tube Assy., oil filter inlet (dev. L. 10")	1	1	1
3	4.3001	1595836	Valve, shut-off	1	1	1
-	-	143343	Elbow, 5/16"x90° inv. fl. tube 1/4" P.T.	1	1	1
3	4.3020	5166550	Tube Assy., oil filter outlet (dev. L. 9 5/16")	1	1	1
-	-	144343	Elbow, 5/16"x90° inv. fl. tube 1/4" P.T.	1	1	1
-	-	187343	Connector, 5/16" inv. fl. tube	1	1	1
<b>OIL COOLER</b>						
<p>The proper oil cooler housing or adaptor for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model unit number and type number shown on the Options and Accessories plate on your engine.</p>						
44,45	4.4001	8501328	Core Assy., oil cooler (6 plate)	1	1	1
44,45	4.4001	8501329	Core Assy., oil cooler (8 plate)	1	1	1
44,45	4.4001	8514600	Core Assy., oil cooler (12 plate)			1
44,45	4.4030	5150155	Gasket, oil cooler inner	1	1	1
44,45	4.4040	5154215	Gasket, oil cooler outer	1	1	1
44	4.4050	-	Housing, oil cooler	1	1	1
45	4.4060	5167775#	Cover, oil cooler housing	1	1	1
54	4.4060	5176362¢	Cover, oil cooler housing	1	1	1
45	4.4060	179822#	Bolt, 5/16"-18x1 1/2" hex. hd.	8	8-	8
-	-	446597¢	Bolt, 5/16"-18x6 1/2" hex. hd.	6	6	
-	-	445601¢	Bolt, 5/16"-18x7 1/2" hex. hd.			6
-	-	103320	Lockwasher, 5/16"	*	*	*
45	4.4085	5167743#	Baffle, oil cooler	1		
45	4.4085	5167744#	Baffle, oil cooler		1	
-	-	5167748#	Bolt, oil cooler baffle	4	4	
-	-	5167749#	Lockwire, oil cooler baffle bolt	2	2	
43,44	4.4110	-	Adaptor, oil cooler	1	1	1
44	4.4115	5150154	Gasket, oil cooler adaptor to block	2	2	2
44	4.4115	5152904	Gasket, oil cooler adaptor to block	1	1	1
2	4.4116	5177923	Cover, oil cooler adaptor (for remote mounted full flow filter)	1	1	1

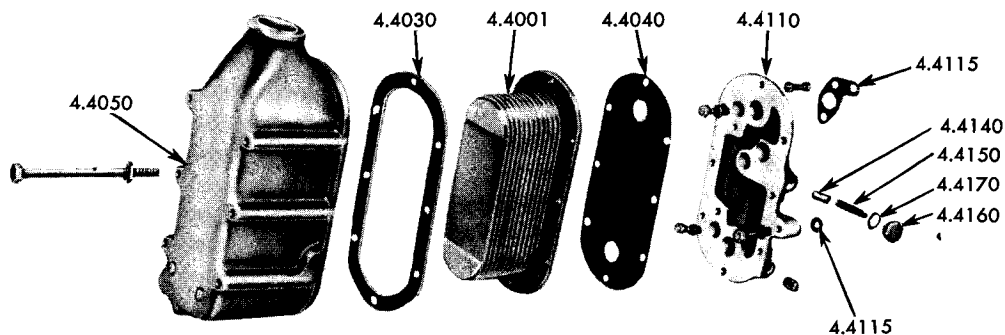


Fig. 44—Oil Cooler

\* As required. # Heat exchanger units only. ¢ Torque converter units only.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	5177924	Gasket, oil cooler adaptor cover	1	1	1
45	4.4120	5159505#	Valve Assy., oil cooler by-pass (A eng.)	1	1	1
45	4.4120	5159506#	Valve Assy., oil cooler by-pass (C eng.)			
45	4.4120	179822	Bolt, 5/16"-18x1 1/2" hex. hd.	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
44	4.4140	5177777	Plunger, oil cooler by-pass valve	1	1	1
45	4.4140	5156769#	Plunger, oil cooler by-pass valve	1	1	1
44	4.4150	5177778	Spring, oil cooler by-pass valve	1	1	1
45	4.4150	5152381#	Spring, oil cooler by-pass valve	1	1	1
44	4.4160	5177772	Plug, oil cooler by-pass valve	1	1	1
45	4.4160	5156782#	Plug, oil cooler by-pass valve	1	1	1
44	4.4170	5177773	Gasket, oil cooler by-pass valve plug	1	1	1
45	4.4170	5156768#	Gasket, oil cooler by-pass valve plug	1	1	1
45	4.4180	5159430#	Gasket, oil cooler by-pass valve	1	1	1
45	4.4190	5167649#	Tube Assy., oil cooler inlet and outlet oil (A eng.)	1	1	1
45	4.4190	5167650#	Tube Assy., oil cooler inlet and outlet oil (C eng.)	1	1	1
45	4.4190	5157244#	Bolt, oil cooler inlet and outlet oil tube	4	4	4
-	-	179822#	Bolt, 5/16"-18x1 1/2" hex. hd.	2	2	2
-	-	103320#	Lockwasher, 5/16"	2	2	2
-	-	103321#	Lockwasher, 3/8"	4	4	4
45	4.4200	5159447#	Gasket, oil cooler inlet and outlet tube (upper)	1	1	1
45	4.4200	5150157#	Gasket, oil cooler inlet and outlet tube (lower)	2	2	2
45	4.4220	5167770#	Elbow, oil cooler water outlet (at cooler housing)	1	1	1
45	4.4220	5167735#	Elbow, oil cooler water outlet	1	1	1
-	-	186619#	Bolt, 3/8"-16x1 1/8" hex. hd.	4	4	4
-	-	103321#	Lockwasher, 3/8"	4	4	4
45	4.4230	5167762#	Gasket, oil cooler water outlet elbow	1	1	1
45	4.4240	5167747#	Hose, oil cooler water outlet (2 1/4" I.D.x2 5/8")	2	1	1
45	4.4240	5167754#	Hose, oil cooler water outlet (2 1/4" I.D.x4 1/4")	1		
45	4.4240	5167755#	Hose, oil cooler water outlet (2 1/4" I.D.x7 1/2")			1
45	4.4250	5182453#	Clamp, oil cooler water outlet hose	4	4	4
45	4.4260	5167763#	Tube, oil cooler water outlet hose support			1

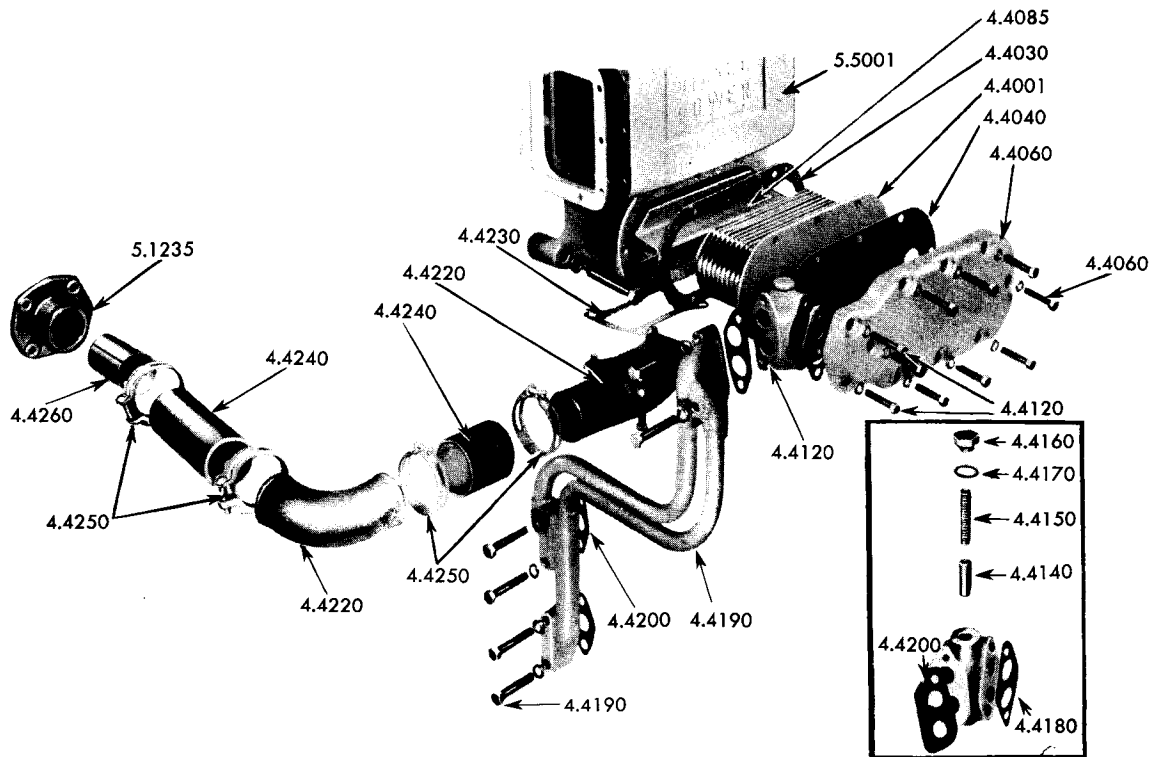


Fig. 45—Oil Cooler

# Heat exchanger units only.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
1	4.4320	5177241	Flange, oil cooler water hole .....	1	1	1
-	-	186629	Bolt, 5/16"-18x1" hex. hd. ....	2	2	2
-	-	103320	Lockwasher, 5/16" .....	2	2	2
-	-	5153902	Gasket, oil cooler water hole flange .....	1	1	1
<b>OIL FILLER TUBE</b>						
46	4.5001	5178638	Tube, oil filler .....	1	1	1
78	4.5005	5171227@	Adaptor Assy., oil filler tube (includes indented items) .....		1	1
-	-	5150042	Plug, oil filler tube adaptor .....		1	1
78	4.5005	179862	Bolt, 7/16"-14x1 1/2" hex. hd. ....		4	4
-	-	103342	Washer, 7/16" flat .....		4	4
-	-	103322	Lockwasher, 7/16" .....		4	4
-	-	5173482	Gasket, oil filler tube adaptor .....		1	1
46,78	4.5010	1543853	Cap, oil filler tube .....	1	1	1
-	-	1543857	Gasket, oil filler tube .....	1	1	1
46	4.5020	5150147	Strainer, oil filler tube. ....	1	1	1

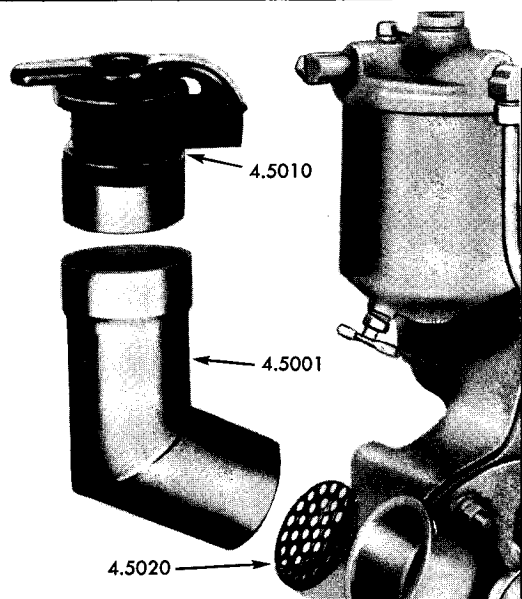


Fig. 46—Oil Filler Tube

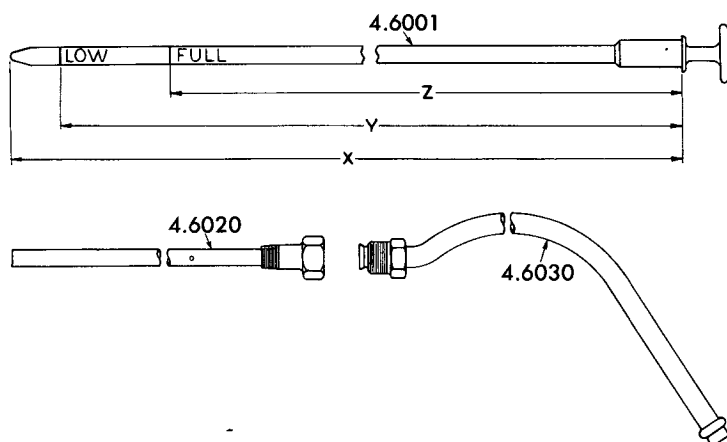


Fig. 47—Dipstick

<b>DIPSTICK</b>						
47	4.6001	5176826	Dipstick (X-17 1/4", Y-17 1/16", Z-15 7/8") .....	1	1	
47	4.6001	5177339	Dipstick (X-8 1/8", Y-7 3/16", Z-6 1/8") .....	1		
47	4.6001	5166680	Dipstick (X-8 11/16", Y-8 9/16", Z-7 5/16") .....	1	1	
47	4.6001	5174984	Dipstick (X-8 1/4", Y-5 7/16", Z-4 13/16") .....	1	1	1
47	4.6001	5177481	Dipstick (X-27 1/2", Y-26 1/4", Z-25 1/2") .....		1	
47	4.6001	5174691	Dipstick (X-23 5/8", Y-22 13/16", Z-21 1/16") .....			1
47	4.6001	3292525	Dipstick (X-4 7/8", Y-2 3/4", Z-1 1/4") .....			1
-	-	5150475	Gasket, dipstick .....	1	1	1
47	4.6020	5150473	Guide, dipstick (with dipstick 5177339) .....	1		
47	4.6020	5176827	Guide, dipstick (with dipstick 5176826) .....	1	1	
47	4.6020	5151777	Guide, dipstick (with dipstick 5156680 or 5174984) .....	1	1	1
47	4.6020	5151430	Guide, dipstick (with dipstick 5174691 or 5177481) .....		1	1
47	4.6020	5159422	Guide, dipstick (with dipstick 3292525) .....			1
47	4.6030	5176782	Adaptor, dipstick (with dipstick 5174691 or 5177481, vehicle units) ..		1	1
47	4.6030	5179144	Adaptor, dipstick (with dipstick 5176826) .....	1	1	1
47	4.6030	5171938	Adaptor, dipstick (with dipstick 5174691 PTO units) .....			1

@ Used in conjunction with blower drive support assy. 5172870.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>OIL PAN</b>						
49	4.7001	5190901	Pan Assy., oil (stamped, no baffles) (includes plug and gasket) .....	1		
49	4.7001	5177337	Pan, oil (stamped, single baffle) .....	1		
-	4.7001	5167809	Pan, oil (cast) .....	1		
49	4.7001	5190900	Pan Assy., oil (stamped dual baffles) (includes plug and gasket) ....		1	
49	4.7001	5177837	Pan, oil (stamped, single baffle) .....		1	
-	4.7001	5167810	Pan, oil (cast) .....		1	
-	4.7001	5174150	Pan, oil (cast, deep sump) .....		1	
49	4.7001	5174986	Pan, oil (stamped, shallow) .....			1
49	4.7001	189691	Bolt, 5/16"-18x3/4" hex. hd. (with lockwasher) (stamped pan) .....	22	26	34
48	4.7001	189697	Bolt, 5/16"-18x1" hex. hd. (with lockwasher) (cast pan) .....	22	26	34
48	4.7010	5153942	Pan, oil upper .....			1
48	4.7020	5153153	Pan, oil lower .....			1
48	4.7020	5167552	Plug, 1/4" pipe (dipstick hole) .....			1
48	4.7020	189697	Bolt, 5/16"-18x1" hex. hd. (with lockwasher) (lower pan attaching) ..			22
48,49	4.7030	5150115	Gasket, oil pan to block .....	1		
48,49	4.7030	5150116	Gasket, oil pan to block .....		1	
48,49	4.7030	5150117	Gasket, oil pan to block .....			1
48	4.7040	5153256	Gasket, lower oil pan .....			1
49	4.7080	5158868	Plug, oil pan drain (18 mm.) .....	1	1	1
49	4.7080	53688	Plug, oil pan drain (18 mm. magnetic) .....	1	1	1
48	4.7080	103879	Plug, 3/8" pipe .....	1	1	1
48	4.7080	103869	Plug, 3/4" pipe .....	1	1	1
49	4.7090	840277	Gasket, drain plug (single plug) .....	1	1	1

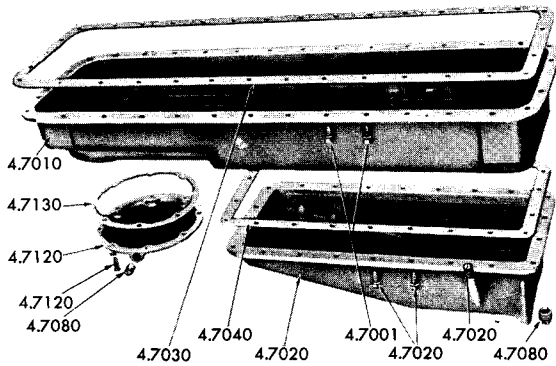


Fig. 48—Oil Pan—Deep

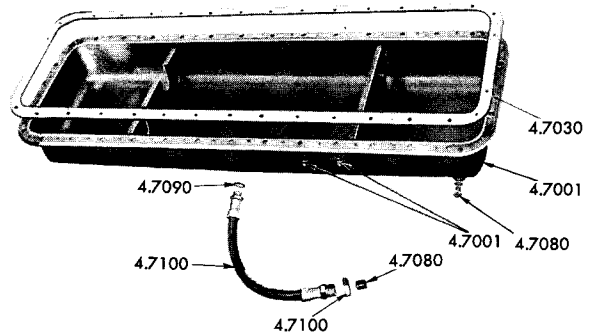


Fig. 49—Oil Pan—Shallow

49	4.7100	5175082	Tube Assy., oil pan drain .....	1	1	1
49	4.7100	122432	Nut, 7/8"-14 hex. ....	1	1	1
-	-	5154506	Cover, oil pan rear .....		1	
-	-	5173764	Cover, oil pan side .....		1	
48	4.7120	5171165	Cover, oil pan bottom (side drain) .....	1	1	1
48	4.7120	5153787	Cover, oil pan bottom (center drain) .....	1	1	1
-	-	189700	Bolt, 5/16"-18x1 1/4" hex. hd. with lockwasher (cover 5154506) ..		8	
48	4.7120	189697	Bolt, 5/16"-18x1" hex. hd. with lockwasher (cover 5171165 or 5153787)	8	8	8
-	-	186622	Bolt, 3/8"-16x1 1/4" hex. hd. (cover 5173764) .....		2	
-	-	5154507	Gasket, oil pan cover (cover 5154306) .....		1	
-	-	5168176	Gasket, oil pan cover (cover 5173764) .....		1	
48	4.7130	5153788	Gasket, oil pan cover (cover 5171165 or 5153787) .....	1	1	1

### VENTILATING SYSTEM

The proper breather pipe for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model number shown on the Options and Accessories plate on your engine.

1,4	4.8001	-	Pipe, breather .....	1	1	1
50	4.8001	5167298	Breather, rocker cover .....	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
50	4.8001	5168435	Spacer, rocker cover breather	2	2	2
50	4.8001	186624	Bolt, 5/16"-18x1 1/4" hex. hd.	2	2	2
-	-	110493	Screw, #10-24x1 1/4" fil. hd.	2	2	2
-	-	103320	Lockwasher, 5/16"	2	2	2
-	-	120217	Lockwasher, #10	2	2	2
50	4.8020	5165228	Gasket, rocker cover breather	1	1	1
-	-	5150900	Gasket, breather pipe (at governor)	1	1	1
51	4.8020	5163299	Gasket, breather pipe (at flywheel housing)	1	1	1
50	4.8025	5168434	Baffle, rocker cover breather	1	1	1
3,51	4.8050	5163908	Separator Assy., breather oil (no provision for tachometer drive) (includes indented items)	1	1	1
51	4.8050	5176047	Separator Assy., breather oil (provision for tachometer drive) (includes indented items)	1	1	1
51	4.8050	3222765	Bushing, breather oil separator (with 5163908)	1	1	1
-	-	5176043	Washer, breather separator (felt) (with 5176047)	1	1	1
-	-	5176046	Ring, breather separator (with 5176047)	1	1	1
-	-	100146	Bolt, 7/16"-14x1" hex. hd.	1	1	1
51	4.8050	179882	Bolt, 1/2"-13x1 1/8" hex. hd.	4	4	4
-	-	103322	Lockwasher, 7/16"	1	1	1
51	4.8050	103323	Lockwasher, 1/2"	4	4	4
51	4.8060	5190344	Filter Unit (pads) (with 5163908)	1	1	1
51	4.8060	5163918	Filter (pad) (with 5176047)	2	2	2
51	4.8070	5163910	Gasket, breather oil separator (with 5163908)	1	1	1
51	4.8070	5175260	Gasket, breather oil separator (with 5176047)	1	1	1
51	4.8120	5164051	Tube Assy., cylinder head air inlet	1	1	1
51	4.8120	137420	Elbow, 3/16"x90° inv. fl. tube	1	1	1
51	4.8120	137404	Connector, 3/16" inv. fl. tube	1	1	1

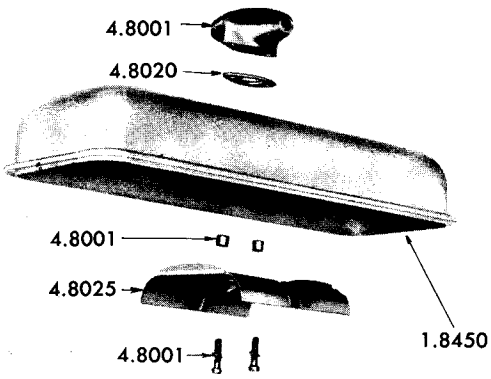


Fig. 50—Breather—Rocker Cover

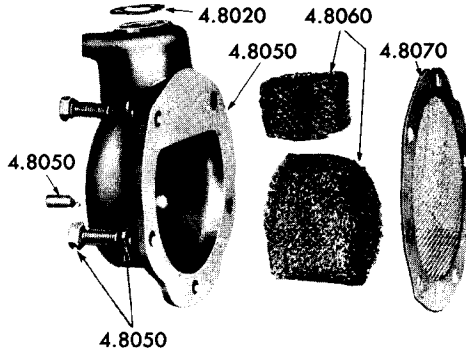
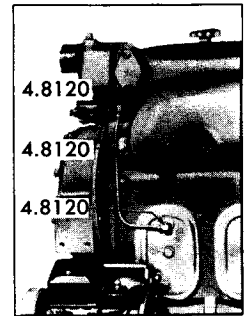


Fig. 51—Breather—Flywheel Housing



FRESH WATER PUMP and COVER								
54	5.1001	5159059	Pump Assy., fresh water (A eng.)	}	(includes indented items) ...	1	1	1
54	5.1001	5159060	Pump Assy., fresh water (C eng.)			1	1	1
54	5.1001	5182060@	Pump Assy., fresh water (C eng.)			1	1	1
52	5.1001	5171159	Bolt (with seal-washer)			3	3	3
-	-	5190970#	Reconditioning Kit, water pump			*	*	*
52	5.1010	5150193	Gasket, water pump			1	1	1
-	-	5178319	Insert, water pump body			1	1	1
52	5.1030	141615	Draincock, 1/4"			1	1	1
52	5.1040	5150182	Stud, water pump body			4	4	4
52	5.1050	5172818	Shaft Assy., water pump (includes slinger)			1	1	1
52	5.1090	508816	Slinger, water pump shaft			1	1	1
52	5.1110	445667	Pin, 3/16"x7/8" groove			1	1	1
52	5.1110	5172820¢	Impeller and Seal Assy., water pump			1	1	1

\* As required. @ High capacity pump. # Includes pump and cover gaskets, shaft assy., impeller and seal assy., thrower assy., and packing; applicable to pump 5159059 or 5159060 only. ¢ With pump 5159059 or 5159060 only.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
52	5.1110	5182046 #	Impeller and Seal Assy., water pump .....			1
-	-	5193239	Replacement Kit, water pump seal (includes parts necessary to replace seal) .....	*	*	*
52	5.1210	5153682	Thrower Assy., water pump .....	1	1	1
52	5.1220	5150191	Packing, water pump outlet .....	1	1	1
52	5.1230	5173730 †	Flange, water pump outlet packing (1 5/8" bore) .....	1	1	1
52	5.1230	5178274 #	Flange, water pump outlet packing (1 3/4" bore) .....			1
52	5.1230	179819	Bolt, 5/16"-18x1 1/8" hex. hd. ....	2	2	2

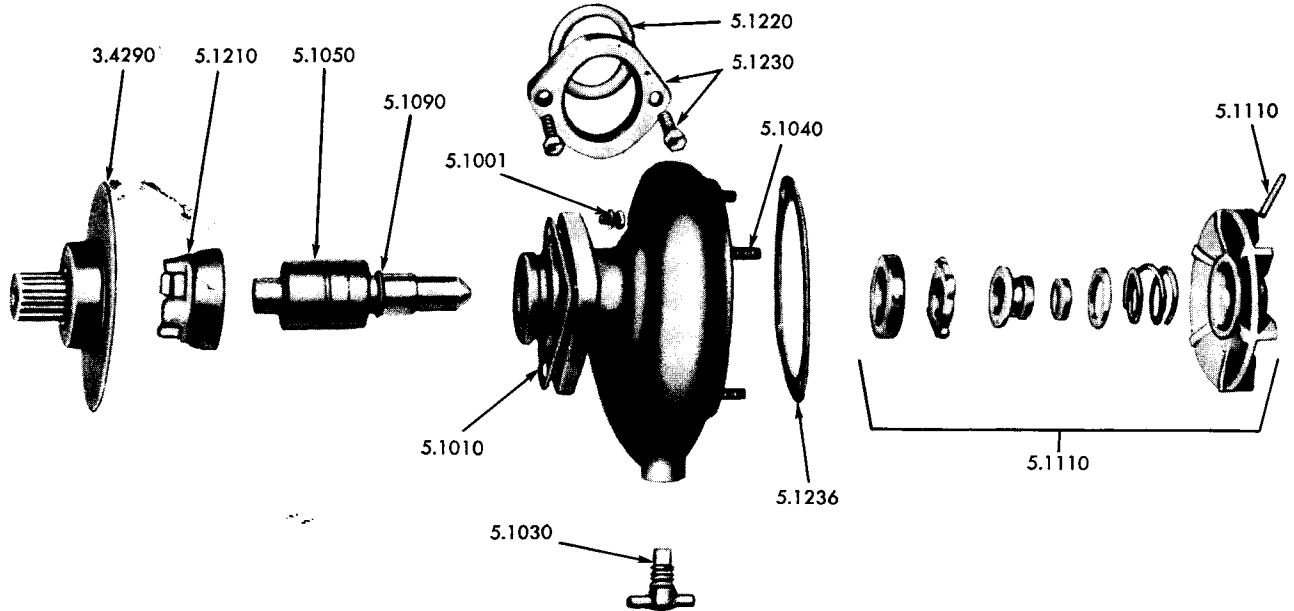


Fig. 52—Fresh Water Pump

53	5.1235	5175679 †	Cover, water pump .....	1		
53	5.1235	5175678 †	Cover, water pump .....		1	
54	5.1235	5177244 †	Cover, water pump (A eng.) .....			1
54	5.1235	5177220 †	Cover, water pump (C eng.) .....			1
54	5.1235	5179386 #	Cover, water pump .....			1
45	5.1235	5160466 †	Cover, water pump (heat exchanger cooling) .....	1	1	1
-	-	5177218	Connector, water pump cover .....	1		
-	-	5175683	Connector, water pump cover .....		1	
-	-	121902	Nut, 1/4"-28 hex. ....	4	4	4
52	5.1236	5150188 †	Gasket, water pump cover .....	1	1	1
52	5.1236	5178273 #	Gasket, water pump cover .....			1
54	5.1250	5156770	Seal, water pump inlet (2 3/4" O.D.) .....			1
53	5.1250	5159457	Seal, water pump inlet (2 1/2" O.D.) .....	1	1	
54	5.1250	111628	Clamp, water pump inlet seal (2 3/4" dia.) .....			1
53	5.1250	111626	Clamp, water pump inlet seal (2 1/2" dia.) .....	1	1	
54	5.1270	5177217	Hose, water pump seal .....	1	1	1
-	-	111612	Clamp, water pump inlet seal (1 3/8" dia.) .....	2	2	2
<b>WATER OUTLET MANIFOLD</b>						
4	5.2001	5169556	Manifold, water outlet (radiator cooling) .....	1		
4	5.2001	5169555	Manifold, water outlet (radiator cooling) .....		1	
24,78	5.2001	5169485	Manifold, water outlet (radiator cooling) .....			1
3	5.2001	5166351	Manifold, water outlet (heat exchanger cooling) .....	1		
3	5.2001	5167488	Manifold, water outlet (heat exchanger cooling) .....		1	
3	5.2001	5167294	Manifold, water outlet (heat exchanger cooling) .....			1
-	-	5150361	Gasket, water outlet manifold .....	3	4	6
7	5.2020	5150362	Stud, water outlet manifold .....	6	8	12
57	5.2043	5156770	Seal, water outlet manifold (heat exchanger cooling) .....	1	1	1
57	5.2043	111628	Clamp, 2 3/4" dia. (heat exchanger cooling) .....	1	1	1

\* As required. # With pump 5182060 only. † With pump 5159059 or 5159060 only.



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>THERMOSTAT</b>						
57	5.2050	5172141	Thermostat Assy. ....	1	1	1
-	-	5178833	Thermostat Assy. (with water pump assy. 5182060) ....			1
57	5.2110	5167761	Gasket, thermostat housing ....	1	1	1
<b>WATER BY-PASS TUBE</b>						
54	5.2160	5186203	Tube Assy., water by-pass C eng.)	1	1	1
54	5.2160	5186204	Tube Assy., water by-pass A eng.)	1	1	1
54	5.2160	5186211 $\phi$	Tube Assy., water by-pass C eng.)			1
-	-	141615	Draincock, 1/4" ....	1	1	1
-	-	5169478	Gasket, water by-pass tube ....	2	2	2
54	5.2190	5157702	Clip, water by-pass tube ....	1	1	1
54	5.2190	5160425	Spacer, water by-pass tube clip ....	1	1	1
-	-	179846	Bolt, 3/8"-16x1 7/8" hex. hd. ....	1	1	1
54	5.2210	5186205	Elbow, water outlet manifold by-pass tube (vertical outlet, 2" O.D.)	1	1	1
-	-	5186261	Elbow, water outlet manifold by-pass tube (horizontal outlet, A eng.)	1	1	1
-	-	5186206	Elbow, water outlet manifold by-pass tube (vertical outlet, 2 1/4" O.D.)	1	1	1
54	5.2210	5166260	Elbow, water outlet manifold by-pass tube (horizontal outlet, C eng.)	1	1	1
-	-	179828	Bolt, 5/16"-18x2 1/2" hex. hd. ....	4	4	4
<b>RADIATOR</b>						
53	5.3001	3118864	Radiator Assy. ....	1	1	1
53	5.3001	3125617	Radiator Assy. (greater cooling surface) ....			1
-	-	186629	Bolt, 5/16"-18x1" hex. hd. ....	10	10	10
-	-	120393	Washer, 5/16" flat ....	10	10	10
-	-	103320	Lockwasher, 5/16" ....	10	10	10

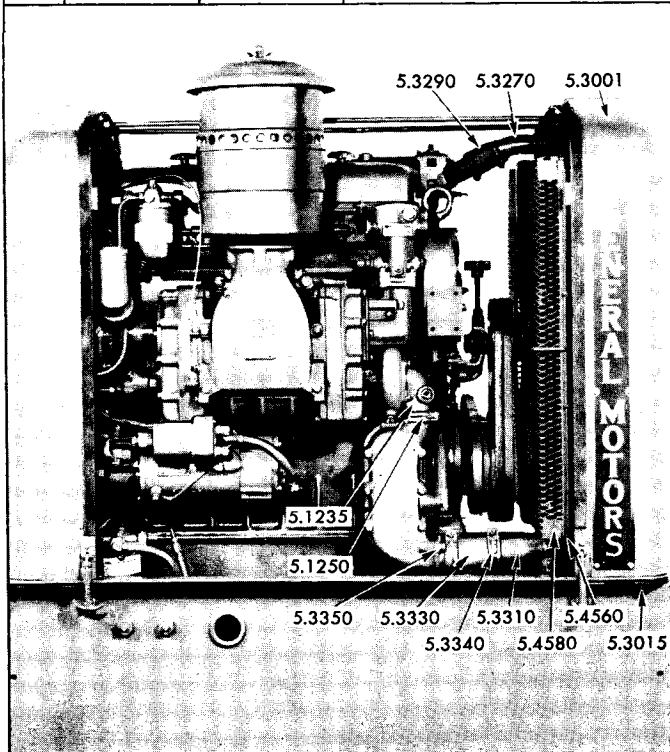


Fig. 53—Cooling System—Power Take-Off Unit

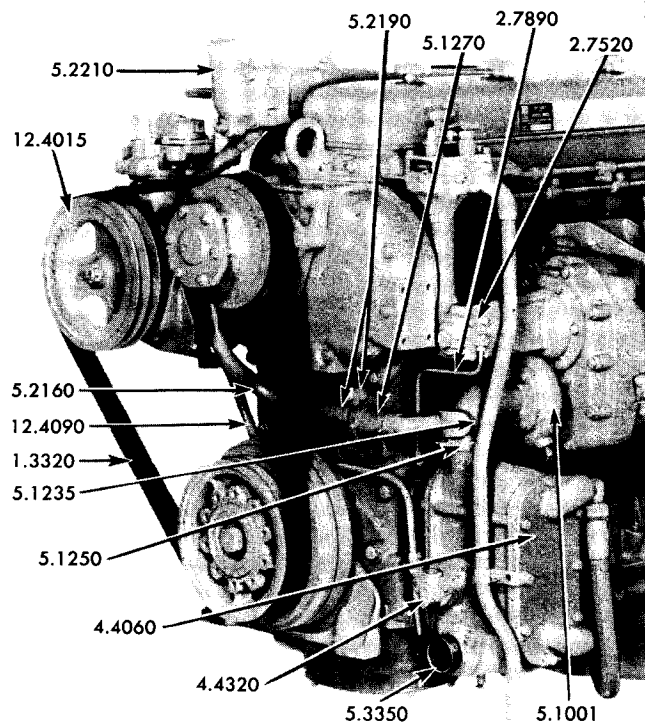


Fig. 54—Cooling System—Fan to Flywheel Unit

$\phi$  For use with water pump assy. 5182060.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5192418	Shell Assy., radiator (includes grille and name plate)	1	1	1
-	-	181374	Bolt, 3/8"-24x1 1/2" hex. hd.	4	4	4
-	-	103341	Washer, 3/8" flat	4	4	4
-	-	103321	Lockwasher, 3/8"	4	4	4
53	5.3015	117049	Nut, 3/8"-24 hex.	4	4	4
-	-	850573	Cap, radiator filler (includes gasket)	1	1	1
-	-	846732	Gasket, radiator filler cap	1	1	1
-	-	5169383	Hose, radiator overflow pipe	1	1	1
4	5.3268	5174098	Plate, radiator name (GENERAL MOTORS)	2	2	2
-	-	162991	Screw, 1/4"-14x1/2" tapping	12	12	12
<b>WATER CONNECTIONS</b>						
53	5.3270	5182811	Tube, radiator inlet	1	1	1
-	5.3290	5170738	Hose, radiator inlet (1 3/4" I.D.x3 1/4")	2	2	2
-	-	111622	Clamp, 2 1/8" dia. hose (radiator inlet hose)	4	4	4
-	5.3310	5170684	Tube, radiator outlet (straight, 7 5/16" L.)	1	1	1
-	-	5173449	Tube, radiator outlet (cross-over, dev. L. 28 5/8")	1	1	1
-	5.3310	5184367	Tube, radiator outlet (cross-over, dev. L. 29 3/4")	1	1	1
-	5.3330	5163815	Hose, radiator outlet (2" I.D.x4 1/2")	2	2	2
-	-	5173450	Hose, radiator outlet (2" I.D.x2 1/2")	2	2	2
-	5.3340	111625	Clamp, 2 3/8" dia. hose (radiator outlet hose)	4	4	4
54	5.3350	5170697	Connection, oil cooler radiator outlet (2 7/8" bolt center)	1	1	
54	5.3350	5170685	Connection, oil cooler radiator outlet (3 3/8" bolt center)	1	1	1
-	-	186622	Bolt, 3/8"-16x1 1/4" hex. hd.	2	2	
-	-	179860	Bolt, 7/16"-14x1 1/4" hex. hd.	2	2	2
-	-	2206783	Gasket, oil cooler radiator outlet connection (2 7/8" bolt center)	1	1	
-	-	5163760	Gasket, oil cooler radiator outlet connection (3 3/8" bolt center)	1	1	1
<b>FAN</b>						
<p>The proper fan blade, mounting bracket, pulley, cap and spacer for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model number and type number shown on the Options and Accessories plate on your engine.</p>						
55,56	5.4010	-	Blade, fan	1	1	1
55	5.4010	103320	Lockwasher, 5/16"	6	6	6
55	5.4010	121917	Nut, 5/16"-24 hex.	6	6	6

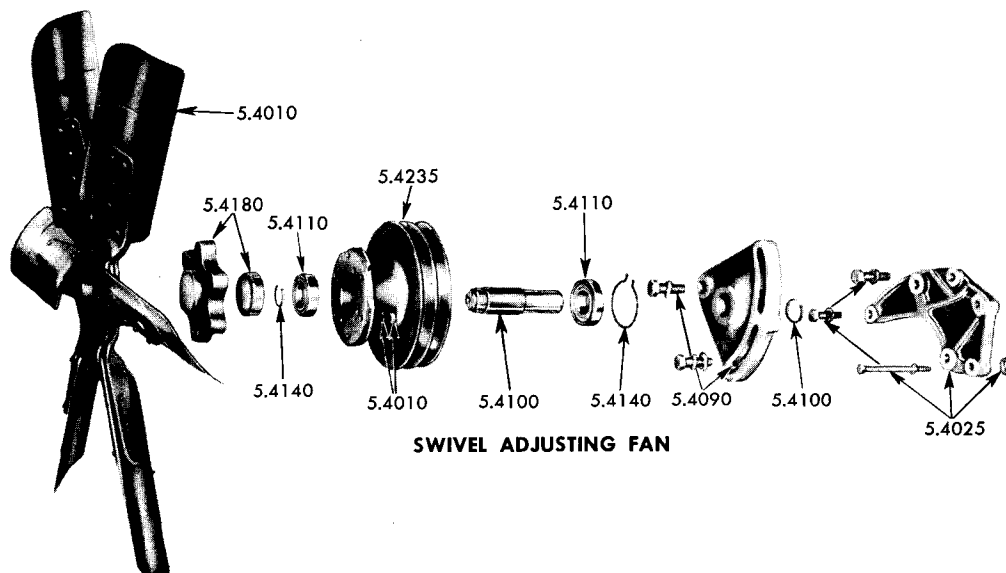


Fig. 55—Fan

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	63565	Gasket, fan blade (screw adjusting fan)	1	1	1
55,56	5.4025	-	Bracket, fan mounting	1	1	1
55	5.4090	5176202	Bracket, fan shaft (swivel adj. fan)	1	1	1
55	5.4090	186646	Bolt, 1/2"-13x1 3/4" hex. hd. (swivel adj. fan)	2	2	2
55	5.4090	179928	Bolt, 5/8"-11x1 5/8" hex. hd. (swivel adj. fan)	1	1	1
56	5.4100	5158348	Shaft, fan (screw adj. fan)	1	1	1
55	5.4100	5176208	Shaft, fan (swivel adj. fan)	1	1	1
55	5.4100	5176212	Snap Ring (swivel adj. fan)	1	1	1
56	5.4100	5158349	Washer, fan shaft (screw adj. fan)	2	2	2
56	5.4100	2035201	Nut, fan shaft (front) (screw adj. fan)	1	1	1
56	5.4100	122432	Nut, 7/8"-14 hex. (screw adj. fan)	1	1	1
56	5.4100	137171	Pin, 3/32"x1" cotter (screw adj. fan)	1	1	1
56	5.4110	954423	Bearing, fan shaft outer (screw adj. fan)	1	1	1
56	5.4110	903205	Bearing, fan shaft inner (screw adj. fan)	1	1	1
55	5.4110	7450079	Bearing, fan shaft outer (swivel adj. fan)	1	1	1
55	5.4110	954160	Bearing, fan shaft inner (swivel adj. fan)	1	1	1
56	5.4140	308993	Retainer, fan bearing outer (screw adj. fan)	1	1	1
56	5.4140	5158359	Retainer, fan bearing inner (screw adj. fan)	1	1	1
55	5.4140	5176905	Snap Ring, fan bearing outer (swivel adj. fan)	1	1	1
55	5.4140	5176211	Snap Ring, fan bearing inner (swivel adj. fan)	1	1	1
56	5.4150	714149	Seal, fan shaft (screw adj. fan)	1	1	1
56	5.4170	5158358	Spacer, fan shaft bearing (screw adj. fan)	1	1	1
55	5.4180	-	Cap and Spacer Assy., fan hub (swivel adj. fan)	1	1	1
55	5.4180	-	Cap, fan hub (swivel adj. fan)	1	1	1
-	-	714728	Gasket, fan shaft bearing (screw adj. fan)	1	1	1
56	5.4230	714725	Retainer, fan shaft bearing seal (small) (screw adj. fan)	1	1	1
56	5.4230	714726	Retainer, fan shaft bearing seal (large) (screw adj. fan)	1	1	1
55,56	5.4235	-	Pulley, fan	1	1	1
56	5.4235	714727	Lockring, fan pulley (screw adj. fan)	1	1	1
56	5.4235	173102	Fitting, 1/8"x45° lube (screw adj. fan)	1	1	1
56	5.4290	5158351	Screw, fan bracket adjusting	1	1	1
56	5.4290	117051	Nut, 1/2"-20 hex.	1	1	1

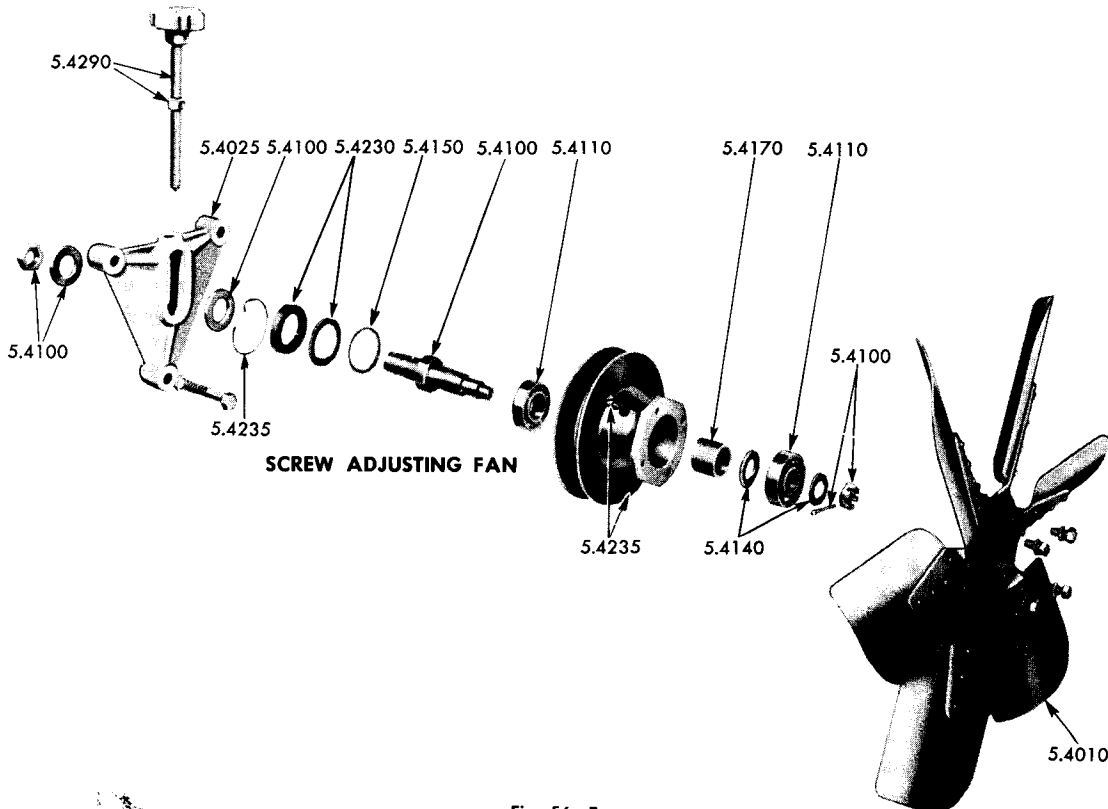


Fig. 56—Fan

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>FAN SHROUD</b>						
53	5.4560	5170973	Shroud, fan .....	1	1	1
53	5.4580	5173706	Guard, fan (R.H.) .....	1	1	1
53	5.4580	5173705	Guard, fan (L.H.) .....	1	1	1
-	-	149501	Screw, #14-10x5/8" self tapping .....	12	12	12
-	-	5170058	Nut, fan guard attaching .....	12	12	12
<b>HEAT EXCHANGER</b>						
57	5.5001	5167777	Tank Assy., expansion (includes plugs 144015, 144016) .....	1	1	1
57	5.5001	854012	Draincock, 1/8" .....	1	1	1
-	-	144015	Plug, 3/4" pipe .....	2	2	2
-	-	144016	Plug, 1" pipe .....	1	1	1
57	5.5001	179893	Bolt, 1/2"-13x3" hex. hd. ....	2	2	2
-	-	103323	Lockwasher, 1/2" .....	2	2	2
57	5.5003	8509553	Core, heat exchanger .....	1	1	1
-	-	5192637	Gasket Kit, heat exchanger overhaul (includes one each of 5150155, 5154215, 5156728, 5158741, 5158747, 5159430, 5159447, 5167745, 5167762; two each of 5150157, 5167746, three of 5167764) .....	*	*	*
57	5.5010	8515850	Electrode Assy. (includes 3 3/8" electrode) .....	1	1	1
-	-	8515841	Electrode Assy. (includes 2 1/8" electrode) .....	1	1	1
-	-	8515851	Electrode (3 3/8" L.) .....	1	1	1
-	-	8515842	Electrode (2 1/8" L.) .....	1	1	1
57	5.5025	5167766	Retainer, heat exchanger seal .....	1	1	1
57	5.5026	5167746	Seal, heat exchanger .....	2	2	2
57	5.5027	5167745	Gland, heat exchanger seal retainer .....	1	1	1

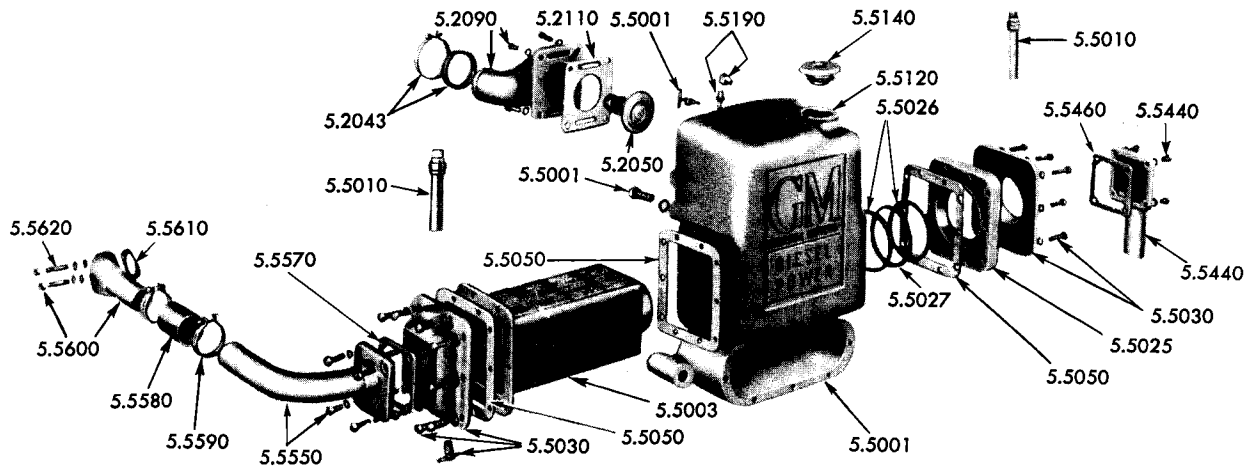


Fig. 57—Heat Exchanger

57	5.5030	5167768	Cover, heat exchanger (inlet) .....	1	1	1
57	5.5030	5167741	Cover, heat exchanger (outlet) .....	1	1	1
57	5.5030	141615	Draincock, 1/4" .....	1	1	1
-	-	113177	Plug, 3/4" brass pipe .....	1	1	1
57	5.5030	186624	Bolt, 5/16"-18x1 1/4" hex. hd. ....	10	10	10
57	5.5030	186643	Bolt, 5/16"-18x2 1/16" hex. hd. ....	10	10	10
57	5.5030	103320	Lockwasher, 5/16" .....	20	20	20
57	5.5050	5167764	Gasket, heat exchanger .....	3	3	3
57	5.5140	850573	Cap, expansion tank (includes gasket) .....	1	1	1
-	-	846732	Gasket, expansion tank cap .....	1	1	1

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
57	5.5190	5168826	Tube Assy., expansion tank overflow .....	1	1	1
57	5.5190	143343	Elbow, 5/16"x90° inv. fl. tube .....	1	1	1
-	-	137398	Nut, 5/16" inv. fl. tube .....	1	1	1
-	5.5377	5186345	Tube Assy., raw water pump inlet .....	1	1	1
-	-	113177	Plug, 3/4" brass pipe .....	1	1	1
-	-	179847	Bolt, 3/8"-16x2" hex. hd. ....	2	2	2
-	-	116093	Washer, 3/8" flat .....	2	2	2
-	-	5158741	Gasket, water flange .....	1	1	1
-	5.5380	5185442	Tube Assy., raw water pump outlet .....	1	1	1
-	-	179839	Bolt, 3/8"-16x1" hex. hd. ....	2	2	2
-	-	116093	Washer, 3/8" flat .....	2	2	2
-	-	5158741	Gasket, raw water flange .....	1	1	1
-	-	5186526	Tube Assy., heat exchanger water inlet (intermediate) (PTO units) ..	1		
-	-	5175818	Tube Assy., heat exchanger water inlet (intermediate) (PTO units) ..		1	
-	-	5174535	Tube Assy., heat exchanger water inlet (intermediate) (PTO units) ..			1
-	5.5430	5187458	Tube Assy., heat exchanger water inlet (intermediate) (generator sets)	1		
-	5.5430	5187459	Tube Assy., heat exchanger water inlet (intermediate) (generator sets)		1	
-	5.5430	5187460	Tube Assy., heat exchanger water inlet (intermediate) (generator sets)			1
57	5.5440	5175866	Tube Assy., heat exchanger water inlet .....	1	1	1
-	-	5159444#	Elbow, heat exchanger water inlet .....	1	1	1
57	5.5440	186629	Bolt, 5/16"-18x1" hex. hd. ....	4	4	4
-	-	103320	Lockwasher, 5/16" .....	4	4	4
57	5.5460	5158747	Gasket, heat exchanger water inlet tube .....	1	1	1
-	-	3222708	Hose (1 1/2"x2 3/4") .....	2	2	2
-	-	111619	Clamp, 1 7/8" dia. ....	4	4	4
3,57	5.5550	5167753	Tube Assy., heat exchanger water outlet .....	1	1	1
57	5.5550	186629	Bolt, 5/16"-18x1" hex. hd. ....	4	4	4
-	-	103320	Lockwasher, 5/16" .....	4	4	4
57	5.5570	5158747	Gasket, heat exchanger water outlet tube .....	1	1	1
57	5.5580	3222708	Hose, heat exchanger water outlet tube (1 1/2"x2 3/4") .....	1	1	1
57	5.5580	111619	Clamp, 1 7/8" dia. hose .....	2	2	2
3,57	5.5600	5164407	Tube Assy., exhaust manifold water inlet .....	1	1	1
-	-	5163834	Washer, exhaust manifold water inlet tube .....	2	2	2
57	5.5600	123197	Nut, 5/16"-18 hex. ....	2	2	2
57	5.5610	5156319	Gasket, exhaust manifold flange .....	1	1	1
57	5.5620	5164199	Stud, exhaust manifold water inlet tube (2 7/8") .....	1	1	1
57	5.5620	5163867	Stud, exhaust manifold water inlet tube (1 7/32") .....	1	1	1
<b>RAW WATER PUMP</b>						
58	5.6001	5186250	Pump Assy., raw water (includes indented items) .....	1	1	1
-	-	179857	Bolt, 7/16"-14x7/8" hex. hd. (to engine) .....	1	1	1
-	-	179882	Bolt, 1/2"-13x1 1/8" hex. hd. (to engine) .....	4	4	4
-	-	103322	Lockwasher, 7/16" .....	1	1	1
-	-	103323	Lockwasher, 1/2" .....	4	4	4
58	5.6010	5193551	Adaptor, raw water pump drive .....	1	1	1
58	5.6020	5193550	Body, raw water pump .....	1	1	1
58	5.6020	5193556	Plate, raw water pump body wear .....	1	1	1
-	-	141343	Pin, 3/16"x5/16" dowel .....	1	1	1
58	5.6020	120233	Bolt, 3/8"-16x1" hex. hd. (to adaptor) .....	6	6	6
-	-	120382	Lockwasher, 3/8" .....	6	6	6
58	5.6035	5193554	Cam, raw water pump body offset .....	1	1	1
58	5.6035	114366	Screw, 1/4"-20x1/2" fil. hd. (cam) .....	1	1	1
58	5.6090	5193555	Cover, raw water pump .....	1	1	1
58	5.6090	114366	Screw, 1/4"-20x1/2" fil. hd. (cover) .....	5	5	5
58	5.6100	5193562	Gasket, raw water pump cover .....	1	1	1
58	5.6120	5193552	Shaft, raw water pump .....	1	1	1
58	5.6130	954799	Bearing, raw water pump .....	1	1	1
58	5.6140	5193569	Ring, raw water pump bearing retainer (small) .....	1	1	1
58	5.6140	5179222	Ring, raw water pump bearing retainer (large) .....	1	1	1
58	5.6160	5193561	Seal, raw water pump bearing (1 1/16" I.D.) .....	1	1	1
58	5.6160	5193559	Seal, raw water pump bearing (1 11/32" I.D.) .....	1	1	1

# Used when raw water pump is not furnished.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
58	5.6160	5193560	Washer, raw water pump bearing seal felt (15/16" I. D.)	1	1	1
58	5.6160	5193558	Washer, raw water pump bearing seal felt (1 5/16" I. D.)	1	1	1
58	5.6170	5193557	Seal Assy., raw water pump shaft (includes next 7 items)	1	1	1
58	5.6173	5193565	Seat, raw water pump shaft seal	1	1	1
58	5.6173	5193668	Ferrule, raw water pump shaft seal	1	1	1
58	5.6173	5193667	Washer, raw water pump shaft seal	1	1	1
58	5.6175	5193564	Seal, raw water pump shaft (carbon)	1	1	1
58	5.6176	5193567	Ring, raw water pump shaft seal ("O" section)	1	1	1
58	5.6176	5193566	Ring, raw water pump shaft seal ("□" section)	1	1	1
58	5.6178	5193563	Washer, raw water pump shaft seal spring (marcel)	1	1	1
58	5.6200	5193676	Slinger, raw water pump shaft	1	1	1
58	5.6230	5193553	Impeller, raw water pump	1	1	1
58	5.6320	5161021	Gear, raw water pump drive	1	1	1
58	5.6320	5161024	Key, raw water pump drive gear	1	1	1
58	5.6320	103325	Lockwasher, 5/8"	1	1	1
58	5.6320	451078	Nut, 5/8"-18 hex. lock (to shaft)	1	1	1

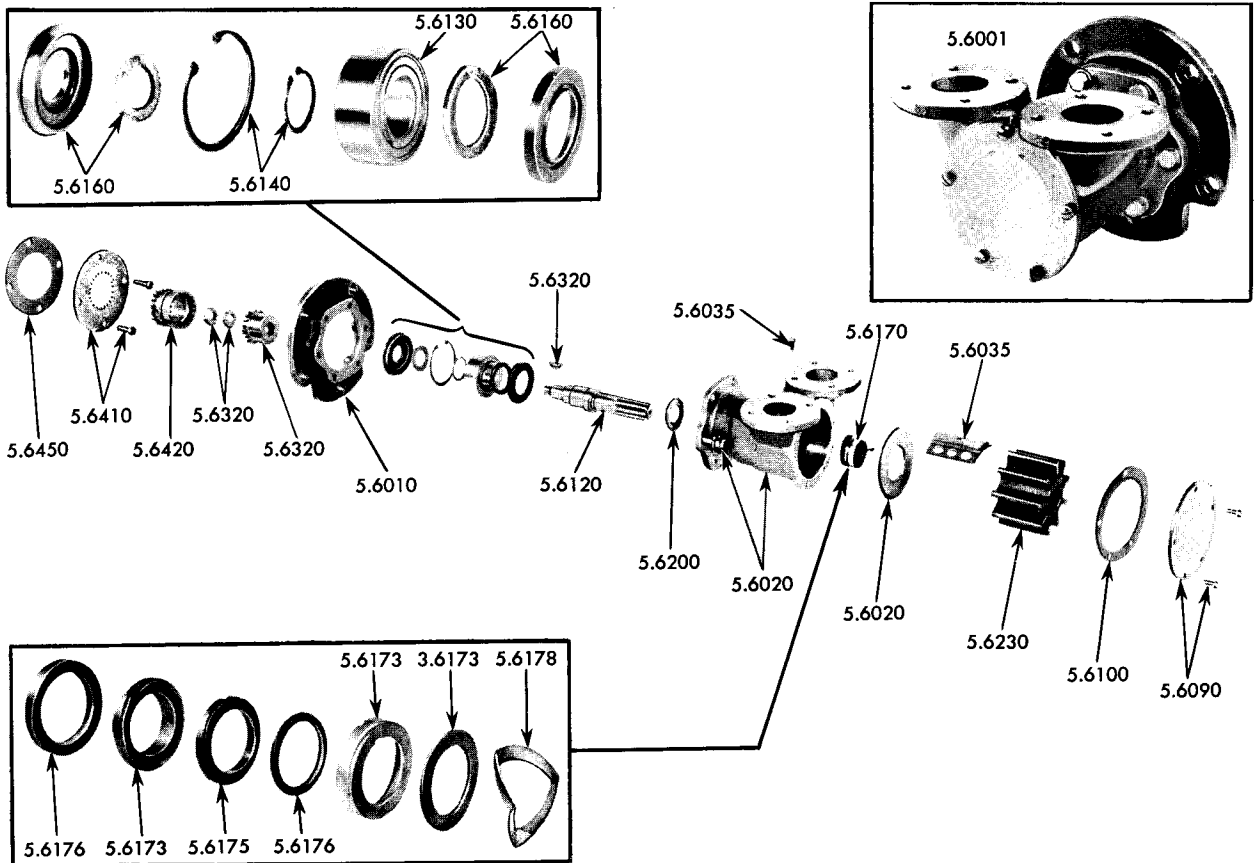


Fig. 58—Raw Water Pump

-	-	5150059	Gasket, raw water pump	1	1	1
19,58	5.6410	5153449	Plate, raw water pump drive	1	1	1
19,58	5.6410	5176474	Bolt, raw water pump drive	4	4	4
19,58	5.6420	3292492	Coupling, raw water pump drive	1	1	1
19,58	5.6450	5177026	Spacer, raw water pump drive	1	1	1
<b>EXHAUST MANIFOLD</b>						
60	6.1001	3221861	Manifold, exhaust (dry)	1		
59	6.1001	5166485	Manifold, exhaust (water cooled)	1		
60	6.1001	3221866	Manifold, exhaust (dry)		1	
59	6.1001	5163809	Manifold, exhaust (water cooled)		1	
60,78	6.1001	5167184	Manifold, exhaust (dry)			1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
3,59	6.1001	5168773	Manifold Assy., exhaust (water cooled) (includes plug)			1
60	6.1001	5150198	Washer, exhaust manifold (dry manifold)	4	5	7
59	6.1001	5164360	Washer, exhaust manifold (water cooled manifold)	4	5	7
-	-	113175	Plug, 1/8" br. pipe	1	1	1
59	6.1001	143969	Plug, 1" pipe			4
59,60	6.1001	114544	Nut, 7/16"-20 hex. br.	4	5	7
60	6.1010	5150194	Gasket, exhaust manifold	1		
59	6.1010	5150195	Gasket, exhaust manifold (end)		2	2
59	6.1010	5150196	Gasket, exhaust manifold (intermediate)			1
7	6.1020	5150197	Stud, exhaust manifold to head	4	5	7
59	6.1100	5173645	Plate, exhaust manifold cover (plain)	2	2	2
59	6.1100	5173576	Plate, exhaust manifold cover (tapped)	1	1	1

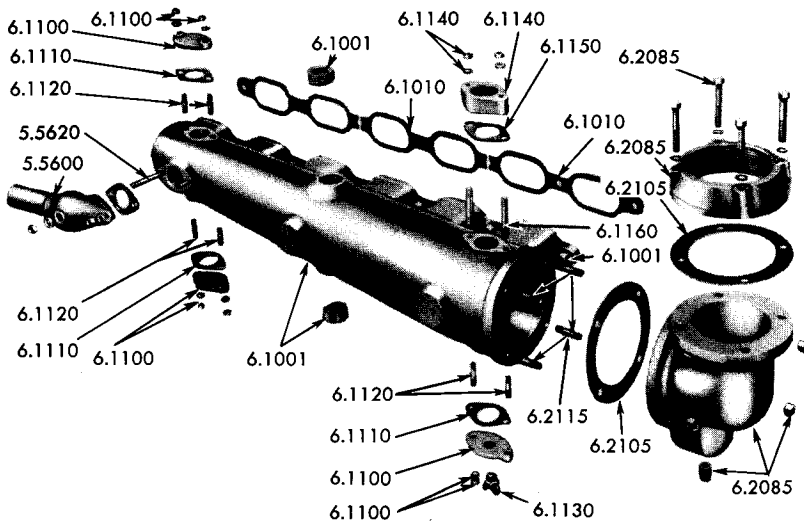


Fig. 59—Exhaust Manifold—Water Cooled

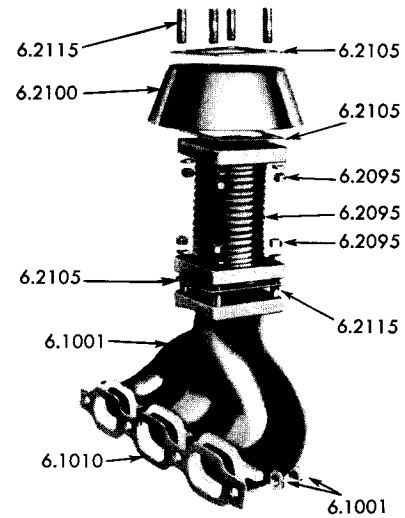


Fig. 60—Exhaust Manifold—Dry

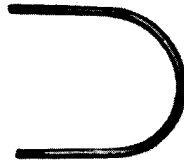
59	6.1100	5163834	Washer, exhaust manifold cover plate	6	6	6
59	6.1100	123197	Nut, 5/16"-18 hex.	6	6	6
59	6.1110	5156319	Gasket, exhaust manifold cover plate	3	3	3
59	6.1120	5163867	Sutd, exhaust manifold cover plate (1 7/32")	6	6	6
59	6.1130	141615	Draincock, 1/4"	1	1	1
59	6.1140	5190688	Flange, exhaust manifold water outlet	1	1	1
59	6.1140	5163834	Washer, exhaust manifold water outlet flange	2	2	2
59	6.1140	123197	Nut, 5/16"-18 hex.	2	2	2
59	6.1150	5156319	Gasket, exhaust manifold water outlet flange	1	1	1
59	6.1160	5167325	Stud, exhaust manifold water outlet flange	2	2	2
<b>EXHAUST MUFFLER</b>						
-	-	5167069	Muffler (commercial silencing, 1200-1600 RPM)	1		
-	-	5167127	Muffler (commercial silencing, 1600-2000 RPM on 3-71, 1200-1600 RPM on 4-71)	1	1	
-	-	5167128	Muffler (commercial silencing, 1600-2000 RPM on 4-71, 1200-1600 RPM on 6-71)		1	1
-	-	5167129	Muffler (commercial silencing, 1600-2000 RPM)			1
-	-	5179206	Muffler (moderate silencing)	1	1	
-	-	5179058	Muffler (moderate silencing)			1
-	-	5167143	Muffler (high degree silencing, 1200-1600 RPM)	1		
-	-	5165732	Muffler (high degree silencing, 1600-2000 RPM on 3-71, 1200-1600 RPM on 4-71)	1	1	
-	-	5167144	Muffler (high degree silencing, 1600-2000 RPM on 4-71, 1200-1600 RPM on 6-71)			1
-	-	5165733	Muffler (high degree silencing, 1600-2000 RPM)		1	1
61	6.2005	218873	Bushing, 3 1/2"x3" red.	1	1	



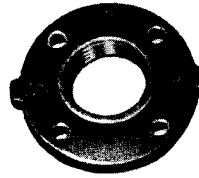
**6.2005**  
218895—5" x 4"  
218885—4" x 3"  
218873—3½" x 3"  
218866—3" x 2½"



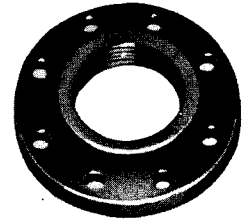
**6.2005**  
443877—4" x 3"  
443876—4" x 2½"



**6.2035**  
5174144



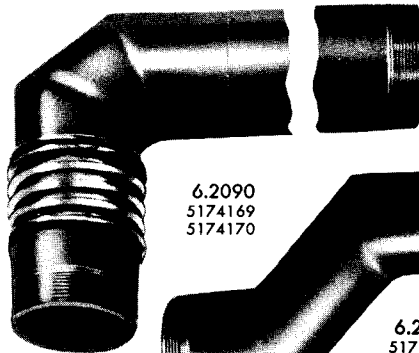
**6.2060**  
3291138  
3"



**6.2060**  
5168609  
4"

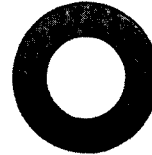


**6.2080-6.2090**  
5169514—2½" x 12"  
3291139—3" x 8"  
5174930—4" x 2½"  
5174929—4" x 6"  
5168606—4" x 8"  
5174928—4" x 8½"

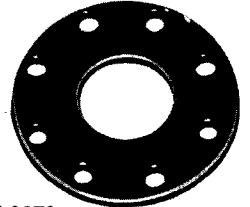


**6.2090**  
5174169  
5174170

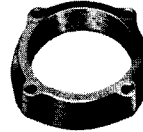
**6.2090**  
5176085



**6.2070**  
3291140  
3"



**6.2070**  
5168908  
4"



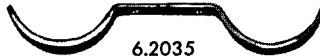
**6.2085**  
5168319—3" P.T.—4¾" B.C.  
5168870—3" P.T.—5¾" B.C.  
5164146—4" P.T.—5¾" B.C.



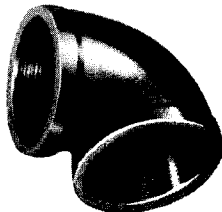
**6.2085**  
3291893—2½" P.T.—4¼" B.C.  
3222532—3" P.T.—3¼" Sq.  
5167624—3" P.T.—4¼" Sq.  
5155859—3" P.T.—3¼" Sq.  
5167173—4" P.T.—4¼" Sq.



**6.2085**  
5157384  
2½" P.T.—4" B.C.



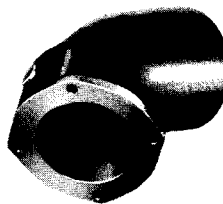
**6.2035**  
5176462



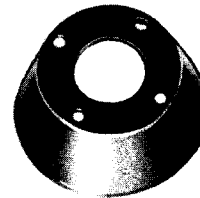
**6.2085**  
3291350—3" P.T. x 90°  
217974—4" P.T. x 90°



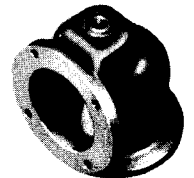
**6.2085**  
5166474—3" P.T.—4¾" x 90°



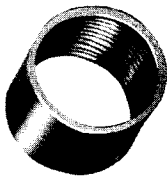
**6.2085**  
5168678—3" P.T.—4¾" B.C. x 45°  
5168800—4" P.T.—5¾" B.C. x 45°



**6.2100**  
5168506—3" x 4¼" B.C.  
3291134—3" x 4¾" B.C.  
5168607—4"



**6.2085**  
5167288—5¾" B.C. x 90°



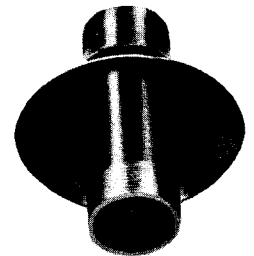
**6.2090**  
220245—3"  
220255—4"



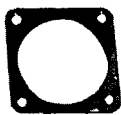
**6.2095**  
5168510—2½" I.D. x 9¾"—4¼" B.C.  
3291141—3" I.D. x 7¾"—3½" Sq.  
5168608—4" I.D. x 7¾"—4¼" Sq.



**6.2095**  
5168927—2½" P.T.—18"  
3290853—3" P.T.—18½"  
3290854—3" P.T.—47½"  
5167174—4" P.T.—18½"  
5167177—4" P.T.—47½"



**6.2100**  
5167998—3" x 9¾"



**6.2105**  
3291894—3¼"—4¼" B.C.  
5175860—3¼"—3¼" Sq.  
3221863—3¼"—3¼" Sq.  
5167181—4¼"—4¼" Sq.



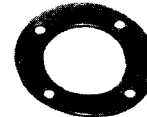
**6.2112**  
5156319—1¾"



**6.2110**  
5168740—1" P.T.



**6.2093**  
5185785—3" O.D. pipe  
5185786—3½" O.D. pipe  
5185787—4½" O.D. pipe  
5185789—2" to 2½" O.D. pipe  
5187815—4¾" O.D. pipe  
5187816—5½" O.D. pipe



**6.2105**  
5157374—2½"—4" B.C.  
5166486—3¼"—5¾" B.C.  
5163811—4¾"—5¾" B.C.



**6.2090**  
5174149—4" P.T.—19¾"

Fig. 61—Exhaust Muffler Connections



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
61	6.2005	218885	Bushing, 4"x3" red.	1	1	
61	6.2005	218895	Bushing, 5"x4" red.			1
60,61	6.2085	3222532	Flange, exhaust (3" P.T.)	1	1	
61	6.2085	5167173	Flange, exhaust (4" P.T.)			1
61	6.2085	5168870	Flange, exhaust (3" P.T., 5 3/8" B.C.)		1	
59,61	6.2085	5164146	Flange, exhaust (4" P.T., 5 3/8" B.C.)			1
61	6.2085	5166474	Elbow, exhaust (90°)	1		
59,61	6.2085	5167288	Elbow, exhaust (90°)		1	1
-	-	113175	Plug, 1/8" pipe	1	1	1
59	6.2085	144012	Plug, 3/8" pipe	1	1	1
59	6.2085	5164362	Nut, 3/8"-16 hex. br.	4		
59	6.2085	125913	Nut, 3/8"-24 hex.		4	4
59	6.2085	114544	Nut, 7/16"-20 hex. br.	4	4	4
-	-	103321	Lockwasher, 3/8"		4	4
-	-	103322	Lockwasher, 7/16"	4	4	4
59	6.2085	179848	Bolt, 3/8"-16x2 1/4" hex. hd.		4	4
61	6.2093	5185786	Cap, exhaust pipe rain (3 1/2" O.D. pipe)	1	1	
61	6.2093	5185887	Cap, exhaust pipe rain (4 1/2" O.D. pipe)			1
61	6.2095	3290853	Connection, flexible exhaust (3" P.T., 18" L.)	1	1	
61	6.2095	3290854	Connection, flexible exhaust (3" P.T., 48" L.)	1	1	
61	6.2095	5167174	Connection, flexible exhaust (4" P.T., 18" L.)			1
61	6.2095	5167177	Connection, flexible exhaust (4" P.T., 48" L.)			1
60,61	6.2105	3221863	Gasket, exhaust outlet (3 1/4" dia. opening)	1	1	
61	6.2105	5167181	Gasket, exhaust outlet (4 1/4" dia. opening)			1
61	6.2105	5166486	Gasket, exhaust outlet (3 1/8" dia. opening)	1		
59,61	6.2105	5163811	Gasket, exhaust outlet (4 3/8" dia. opening)		2	2
60	6.2115	3222533	Stud, 7/16"-14-20x2 1/2"	4	4	4
59	6.2115	5165519	Stud, 3/8"-16x1 7/8"	2		
59	6.2115	5166543	Stud, 3/8"-16x5 5/8"	2		
59	6.2115	5150362	Stud, 3/8"-16-24x1 11/16"		4	4
<b>BATTERY CHARGING GENERATOR</b>						
<p>Because of the variety of electrical equipment available, it is practical to list only the items shown below, which are most commonly used. In all cases it is advisable to furnish your nearest G.M. Diesel dealer or distributor with the model, unit number and identifying type number shown on the Options and Accessories plate on your engine when ordering parts.</p>						
3,78	7.1001	-	Generator Assy., battery charging	1	1	1
1,78	7.1500	5164285	Pulley, generator (3 1/4" dia., 21/32" groove)	1	1	1
1,78	7.1500	5170771	Pulley, generator (4" dia., 51/64" groove)	1	1	1
1,78	7.1500	5170153	Pulley, generator (4 3/8" dia., 13/16" groove)	1	1	1
1	7.1500	5166785	Pulley, generator (5" dia., 13/16" groove)	1	1	1
78	7.1505	5164291	Pulley, generator drive (5 1/2" dia., 21/32" groove)	1	1	1
18	1.7620	5155445	Seal, generator drive oil (1 1/2" I.D.)	1	1	1
78	7.1575	2068846	Belt, generator drive (34 5/8" O.D., .688" w.)	1	1	1
1	7.1575	3224367	Belt, generator drive (39 7/8" O.D., .860" w.)	1	1	1
78	7.1575	5164293	Belt, generator drive (32 5/8" O.D., .654" w.)	1	1	1
1	7.1575	5155911	Belt, generator drive (40 1/2" O.D., .774" w.)	1	1	1
78	7.1580	5177564	Strap, generator adjusting (9 3/32" L., straight, offset)	1	1	1
1	7.1580	5167980	Strap, generator adjusting (10 1/2" L. straight, offset)	1	1	1
1,78	7.1580	5164295	Strap, generator adjusting (7 3/8" L., curved)	1	1	1
1,78	7.1580	5173658	Strap, generator adjusting (7 3/4" L., straight offset)	1	1	1
1,78	7.1580	5171695	Strap, generator adjusting (11 7/16" L., curved, offset)	1	1	1
1,78	7.1580	5173659	Strap, generator adjusting (9 7/8" L., curved, offset)	1	1	1
1,78	7.1580	5177042	Strap, generator adjusting (13 5/16" L., straight offset)	1	1	1
<b>BATTERY CABLES</b>						
-	-	5274839	Cable, battery (positive, 72" long)	1	1	1
-	-	5274840	Cable, battery (negative, 72" long)	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>STARTING MOTOR</b>						
Owing to the variety of electrical equipment furnished on industrial engines it is practical to list part numbers for the attaching parts only. By furnishing your nearest G. M. Diesel dealer or distributor with the identifying type number on the Options and Accessories plate on your engine he can properly intrepert your requirements.						
1	7.3001	-	Motor Assy., starting	1	1	1
-	-	179927	Bolt, 5/8"-11x1 1/2" hex. hd.	3	3	3
-	-	103325	Lockwasher, 5/8"	3	3	3
<b>INSTRUMENT PANEL</b>						
62,73	7.4005	1582507	Panel, instrument mounting (less instruments)	1	1	1
-	-	5193755	Mounting Assy., instrument panel (anti-vibration)	3	3	3
62	7.4015	1501170	Ammeter, battery charging (50 amp.)	1	1	1
-	-	857408	Clamp, ammeter	1	1	1
-	-	120217	Lockwasher, #10 instrument attaching	#	#	#
-	-	120614	Nut, #10-32 hex. instrument attaching	#	#	#
62	7.4060	1536865	Tachometer (C. W. rotation)	1	1	1
62	7.4060	1536866	Tachometer (C. C. W. rotation)	1	1	1
62	7.4061	5178019	Adaptor, tachometer mounting	1	1	1
-	-	5176051	Adaptor, tachometer mounting (D. C. generator sets)	1	1	1
-	-	122408	Bolt, 1/2"-13x1" hex. hd.	4	4	4
-	-	179857	Bolt, 7/16"-14x7/8" hex. hd.	1	1	1
-	-	103323	Lockwasher, 1/2"	4	4	4
-	-	103322	Lockwasher, 7/16"	1	1	1
3,62	7.4063	5171189	Retainer Assy., tachometer (includes mounting assy.)	1	1	1
-	-	5193754	Mounting Assy., tachometer (anti-vibration)	3	3	3
-	-	1535062	Clamp, tachometer	1	1	1
62	7.4070	1507358	Gage, oil pressure (engine)	1	1	1
-	-	118748	Connector, 1/4" fl. tube	1	1	1
62	7.4071	1507512	Gage, oil pressure (torque converter)	1	1	1
-	-	1505244	Clamp, pressure or temperature gage	2	2	2
62	7.4077	1512257	Gage, oil temperature (torque converter) (3 foot capillary)	1	1	1
62	7.4077	1512351	Gage, oil temperature (torque converter) (15 foot capillary)	1	1	1

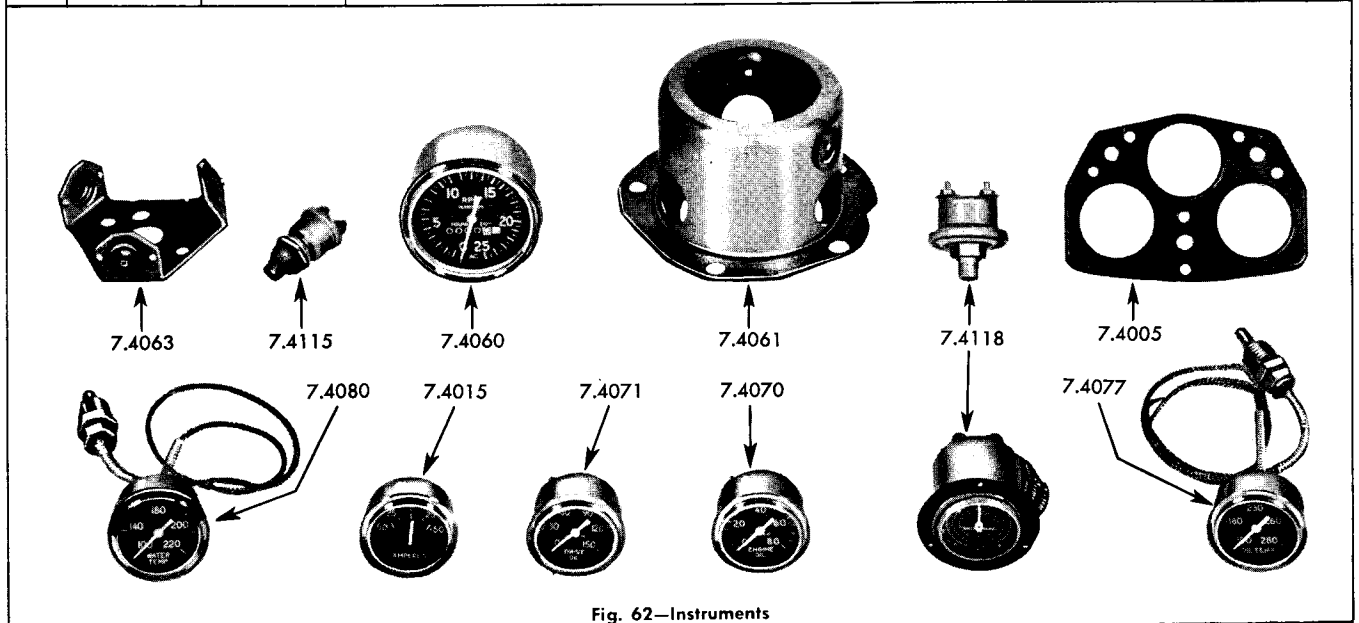


Fig. 62—Instruments

# Used in a quantity of 2 per instrument.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
62	7. 4080	1512137	Gage, water temperature (25 1/2" capillary)	1	1	1
62	7. 4080	1512138	Gage, water temperature (6 foot capillary)	1	1	1
62	7. 4080	1512134	Gage, water temperature (15 foot capillary)	1	1	1
62	7. 4115	1996027	Switch, engine starting	1	1	1
62	7. 4118	5169914	Hour Meter	1	1	1
62	7. 4118	1507359	Switch, hour meter pressure	1	1	1
<b>TACHOMETER DRIVE</b>						
65	7. 4815	1536033	Shaft Assy., tachometer drive flex. (3 3/4")	1	1	1
-	-	1569666	Shaft Assy., tachometer drive flex. (40")			1
-	-	845384	Shaft Assy., tachometer drive flex. (47 1/2")	1	1	1
63	7. 4825	1580202	Adaptor, tach. drive cable (90° L. H. .500:1)	1	1	1
63	7. 4825	1536706	Adaptor, tach. drive cable (90° R. H. .500:1)	1	1	1
63	7. 4825	1536703	Adaptor, tach. drive cable (90° L. H. .250:1)	1	1	1
63	7. 4825	1536702	Adaptor, tach. drive cable (90° R. H. .250:1)	1	1	1
63	7. 4825	1536705	Adaptor, tach. drive cable (90° R. H. 1:1)	1	1	1
63	7. 4825	1561509	Key (adaptor to tachometer)	1	1	1
63	7. 4830	5168558	Shaft Assy., tach. drive (off of blower gear) (includes slinger)	1	1	1
64	7. 4830	3224992	Shaft, tachometer drive (off of cam or balancer shaft)	1	1	1
-	-	5176050	Shaft, tachometer drive (D. C. generator sets)	1	1	1
63	7. 4832	5155818	Slinger, tachometer drive shaft oil	1	1	1
64	7. 4835	3290416	Cover Assy., tachometer drive (cam or balancer shaft-threaded hole) (includes seal)	1	1	1
65	7. 4835	3290413	Cover Assy., tachometer drive (cam or balancer shaft) (includes seal)	1	1	1
63	7. 4835	5168555	Cover Assy., tachometer drive (blower drive) (includes stud)	1	1	1
63	7. 4835	5155854	Stud, tachometer drive cover	2	2	2

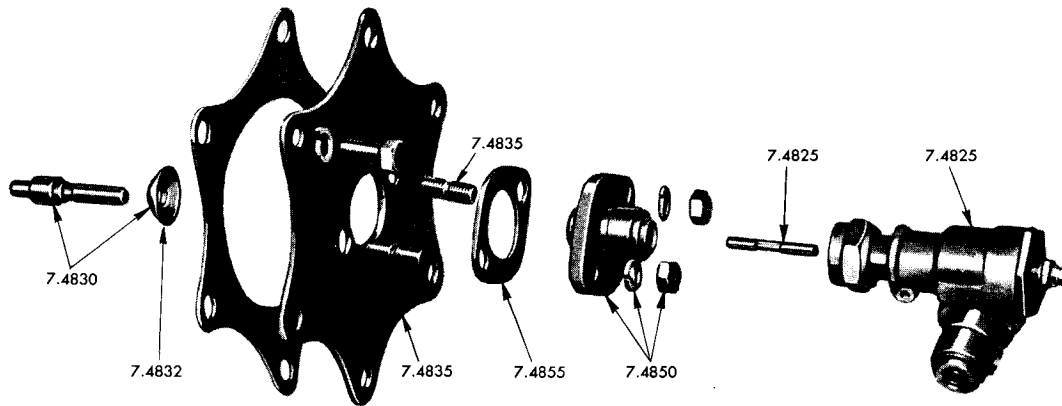


Fig. 63—Tachometer Drive

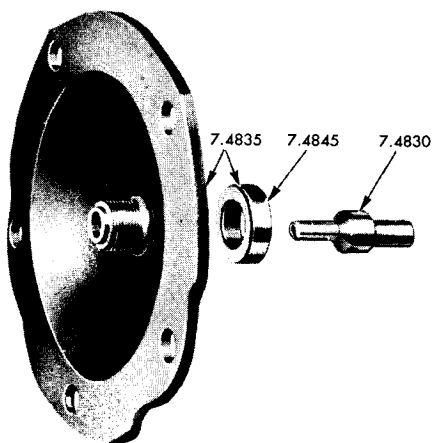


Fig. 64—Tachometer Drive

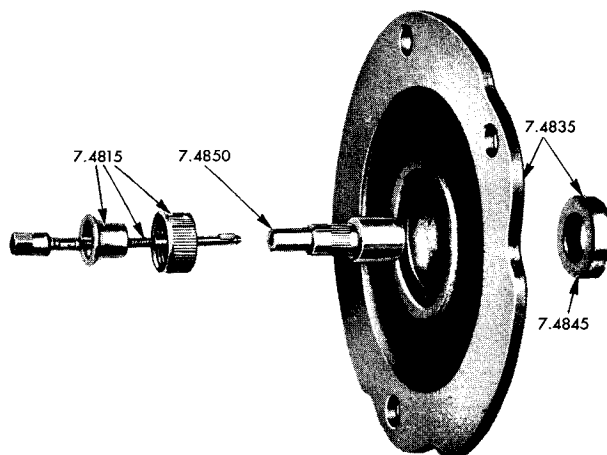


Fig. 65—Tachometer Drive

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
64,65	7.4845	3202615	Seal, tachometer drive cover oil	1	1	1
65	7.4850	5158289	Adaptor, tachometer drive (with cover 3290413)	1	1	1
63	7.4850	5155819	Adaptor, tachometer drive (with cover 5168555)	1	1	1
-	-	179816	Bolt, 5/16"-18x3/4" hex. hd.	2	2	2
63	7.4850	103320	Lockwasher, 5/16"	2	2	2
63	7.4850	121917	Nut, 5/16"-24 hex.	2	2	2
63	7.4855	5155816	Gasket, tachometer drive adaptor	1	1	1
<b>SHUT-OFF OR ALARM SYSTEM</b>						
3,66	7.4870	5173018	Alarmstat (thermo switch)	1	1	1
66	7.4880	3291184	Bell, alarm system	1	1	1
66	7.4882	5177779	Relay, alarm bell	1	1	1
66	7.4885	1118128	Solenoid, air shut-off (12 volt)	1	1	1
66	7.4885	1118191	Solenoid, air shut-off (24-32 volt)	1	1	1
-	-	180016	Bolt, 1/4"-20x1/2" hex. hd.	4	4	4
-	-	103319	Lockwasher, 1/4"	4	4	4
66	7.4890	5168929	Bracket, air shut-off solenoid	1	1	1
66	7.4890	179848	Bolt, 3/8"-16x2 1/4" hex. hd.	2	2	2
-	-	103321	Lockwasher, 3/8"	2	2	2
66	7.4895	5168909	Rod, air shut-off solenoid control	1	1	1
-	-	114783	Pin, 1/4" clevis	1	1	1
-	-	103361	Pin, 1/16"x1/2" cotter	1	1	1
-	-	122161	Nut, 1/4"-28 hex.	1	1	1
66	7.4915	5177648	Lamp Assy., warning (12V., includes bulb)	1	1	1
66	7.4925	142450	Bulb, warning (12V.)	1	1	1
4,66	7.4930	1507289	Switch, oil pressure (BREAK)	1	1	1
-	-	2101825	Elbow, 1/8" pipe	1	1	1
-	-	3231135	Tee, 1/4" inv.	1	1	1
-	-	5160768	Plug, 1/4" fl. tube nut	1	1	1
3,66	7.4935	1507290	Switch, alarm shut-off (fuel pressure) (MAKE)	1	1	1
-	-	112877	Bushing, 1/4"x1/8" red.	1	1	1

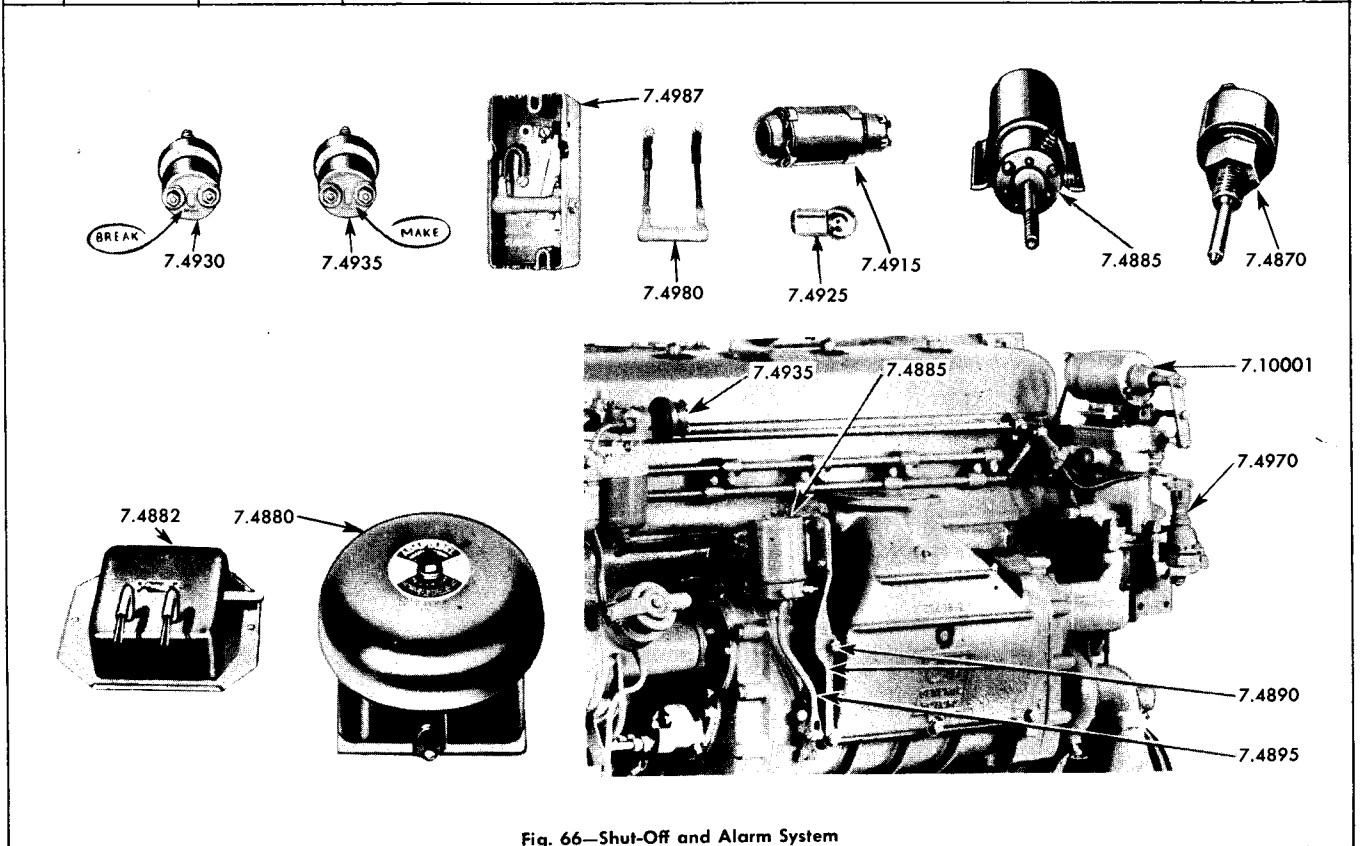


Fig. 66—Shut-Off and Alarm System

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5179718	Governor Assy., overspeed (includes indented items)	1	1	1
-	-	5178211	Switch, overspeed trip governor	1	1	1
-	-	107742	Screw, #6-32x1" rd. hd. sl.	2	2	2
-	-	114601	Lockwasher, #6 external tooth	2	2	2
-	-	134530	Nut, #6-32 hex.	2	2	2
-	-	5179209	Housing, overspeed trip governor switch	1	1	1
-	-	5179208	Cap, overspeed trip governor switch housing	1	1	1
4,66	7.4987	5182525	Relay Assy., time delay (12 volt)	1	1	1
4,66	7.4987	5182526	Relay Assy., time delay (24 volt)	1	1	1
4,66	7.4987	5182527	Relay Assy., time delay (32 volt)	1	1	1
-	-	132788	Screw, #8-32x1 3/4" rd. hd.	2	2	2
-	-	446143	Washer, #8 flat	2	2	2
-	-	121841	Lockwasher, #8	2	2	2
66	7.4988	5182787	Resistor Assy., time delay relay (12 volt)	1	1	1
66	7.4988	5182788	Resistor Assy., time delay relay (24 volt)	1	1	1
66	7.4988	5182789	Resistor Assy., time delay relay (32 volt)	1	1	1
-	-	132796	Screw, #8-32x2 1/4" rd. hd.	1	1	1
-	-	446143	Washer, #8 flat	1	1	1
-	-	121841	Lockwasher, #8	1	1	1
-	-	120622	Nut, #8-32 hex.	1	1	1
-	-	5182531	Plate, time delay relay mounting	1	1	1
4	7.4990	5182530	Bracket Assy., time delay relay mounting (includes anti-vibration mounts)	1	1	1
-	-	1580295	Mounting Assy., time delay relay (anti-vibration)	4	4	4
-	-	5182532	Insulator, time delay relay	1	1	1
66	7.4970	5183142	Valve, automatic shutdown solenoid	1	1	1
<b>POWER GENERATOR</b>						
<p>The variety of power generators available makes it impractical to list part numbers. By furnishing your nearest G.M. Diesel dealer or distributor with the model, unit number and identifying type number shown on the Options and Accessories plate on your set he can properly interpret your requirements.</p>						
4	7.5001	-	Generator Assy., power	1	1	1
<b>CONTROL CABINET</b>						
<p>The variety of control cabinets available for generator sets makes it impractical to list part numbers. By furnishing your nearest G.M. Diesel dealer or distributor with the model, unit number and identifying type number shown on the Options and Accessories plate on your set he can properly interpret your requirements.</p>						
4	7.6001	-	Cabinet Assy., control	1	1	1
<b>WIRING HARNESS</b>						
<p>The proper wiring harness for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model number and type number (if shown) on the Options and Accessories plate on your engine.</p>						
<b>AIR HEATER</b>						
4	7.8001	5170792	Air Heater Assy. (includes indented items)	1	1	1
-	-	5158702	Tee (to body)	1	1	1
67	7.8030	137420	Elbow, 3/16" inv. fl. tube 90°	1	1	1
67	7.8050	5076204	Nozzle, air heater spray	1	1	1
67	7.8050	5151921	Washer, air heater spray nozzle	1	1	1
67	7.8055	5077487	Body, air heater strainer	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
67	7.8060	5077489	Screen air heater strainer .....	1	1	1
67	7.8080	1115485	Coil Assy., air heater .....	1	1	1
67	7.8090	114354	Bolt, 1/4"-20x5/8" fil. hd. ....	2	2	2
-	-	103319	Lockwasher, 1/4" .....	2	2	2
67	7.8100	5152779	Lead, air heater coil ground .....	1	1	1
67	7.8110	5154125	Lead, air heater coil high tension .....	1	1	1
67	7.8120	5153390	Electrode, air heater .....	1	1	1
-	-	103319	Lockwasher, 1/4" .....	1	1	1
67	7.8130	1556410	Insulator, air heater .....	1	1	1
67	7.8130	841843	Nut, terminal .....	1	1	1
67	7.8140	5158594	Gasket, air heater insulator .....	1	1	1
67	7.8150	5153395	Nut, air heater insulator .....	1	1	1
67	7.8160	5175017	Cover, air heater .....	1	1	1
67	7.8160	117957	Grommet, air heater cover .....	1	1	1
-	-	114354	Bolt, 1/4"-20x5/8" fil. hd. ....	1	1	1
67	7.8160	123956	Bolt, 5/16"-18x2 7/8" hex. hd. ....	2	2	2
-	-	103319	Lockwasher, 1/4" .....	1	1	1
-	-	103320	Lockwasher, 5/16" .....	2	2	2
-	-	123179	Nut, 1/4"-20 hex. ....	1	1	1
67	7.8170	5154066	Gasket, air heater cover .....	1	1	1

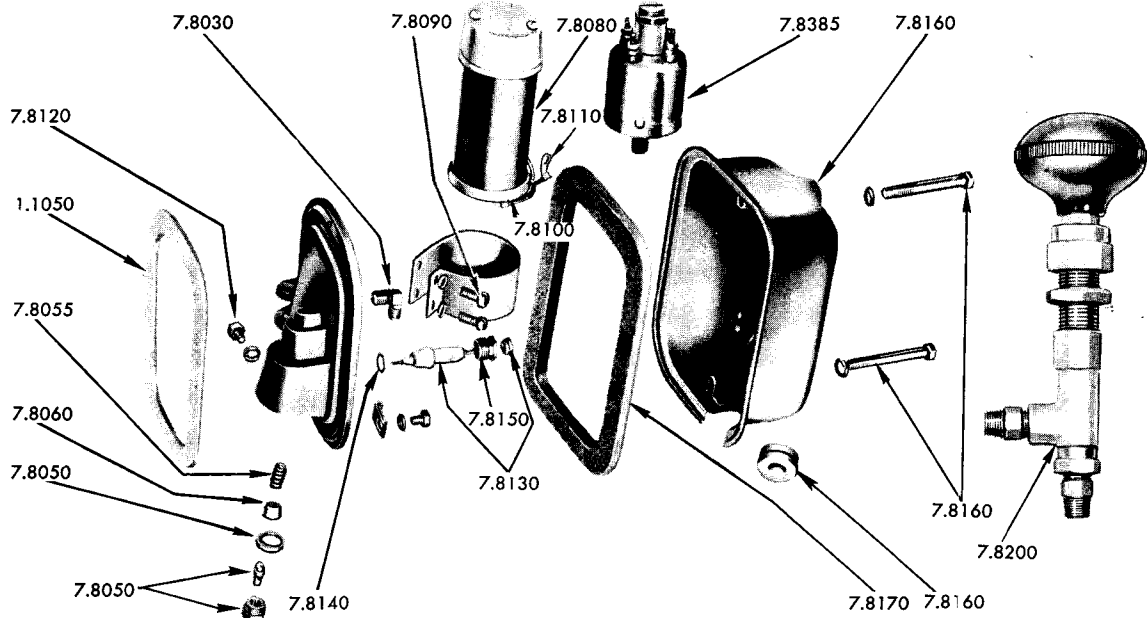


Fig. 67—Air Heater

67	7.8200	5230535	Pump Assy., air heater (includes indented items) .....	1	1	1
-	-	5230543	Seal Ring, air heater pump plunger .....	2	2	2
-	-	122366	Nut, 5/8"-18 hex. ....	1	1	1
-	-	5230544	Valve, air heater pump inlet (1/2 lb.) .....	1	1	1
-	-	5153358	Valve, air heater pump outlet (30 lb.) .....	1	1	1
4	7.8295	5171387	Valve, air heater supply shut-off .....	1	1	1
-	-	5174659	Tube Assy., air heater to pressure switch .....	1	1	1
-	-	137404	Connector, 3/16" inv. fl. tube .....	1	1	1
67	7.8385	5175018	Switch, air heater pump pressure .....	1	1	1
-	-	5183574	Resistor, air heater (24V.) .....	1	1	1
-	-	5183575	Resistor, air heater (32V.) .....	1	1	1

### HYDRAULIC GOVERNOR SOLENOID

27,66	7.10001	1118088	Solenoid Assy., governor starting (24V. or 32V.) .....	1	1	1
27,66	7.10001	1118040	Solenoid Assy., governor starting (12V.) .....	1	1	1
-	-	1507289	Switch, oil pressure .....	1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>CLUTCH and/or POWER TAKE-OFF</b>						
3	8.1001	5185571 #	Power Take-off Assy. (11 1/2" clutch, short shaft, PTA11126) . . .	1	1	
3	8.1001	5170848 #	Power Take-off Assy. (14" clutch, short shaft, PTA11413) . . . . .	1	1	1
3	8.1001	5185572 #	Power Take-off Assy. (11 1/2" clutch, long shaft, PTA11127) . . .	1	1	
3	8.1001	5171481 #	Power Take-off Assy. (14" clutch, long shaft, PTA11414) . . . . .			1
3	8.1001	5171519 #	Power Take-off Assy. (direct drive, short shaft, PTA-ISD-50) . . .	1	1	1
-	-	5173548 #	Power Take-off Assy. (14" clutch, 1.76:1 red., counter engine rotation, GRA1142) . . . . .	1	1	1
68	8.1001	5192156	Key, PTO pulley (5/8"x5/8"x5 1/4") (with 5185571) . . . . .	1	1	
68	8.1001	5192127	Key, PTO pulley (3/4"x3/4"x7 1/2") (with 5170848) . . . . .	1	1	1
68	8.1001	5192217	Key, PTO pulley (5/8"x5/8"x9 1/4") (with 5185572) . . . . .	1	1	
68	8.1001	5192312	Key, PTO pulley (3/4"x3/4"x13 1/2") (with 5171481) . . . . .			1
68	8.1001	5192218	Key, PTO pulley (5/8"x5/8"x4 1/2") (with 5171419) . . . . .	1	1	1
69	8.1001	5192341	Key, PTO pulley (3/4"x3/4"x5") (with 5173548) . . . . .	1	1	1
68	8.1001	186622	Bolt, 3/8"-16x1 1/4" hex. hd. (to flywheel housing) . . . . .	12	12	12
68	8.1001	103321	Lockwasher, 3/8" . . . . .	12	12	12
-	-	186628	Bolt, 3/8"-16x1 1/2" hex. hd. (to flywheel) . . . . .	8	8	
69	8.1001	179884	Bolt, 1/2"-13x1 3/8" hex. hd. (to flywheel) . . . . .	8	8	8
-	-	179837	Bolt, 3/8"-16x3/4" hex. hd. (to flywheel) . . . . .	8	8	8
-	-	103321	Lockwasher, 3/8" . . . . .	8	8	8
-	-	103323	Lockwasher, 1/2" . . . . .	8	8	8
-	-	5194136	Clutch Assy. (11 1/2") (with 5185571, 5185572) . . . . .	1	1	
-	-	5192123	Clutch Assy. (14") (with 5170848, 5171481, 5173548) . . . . .	1	1	1
-	-	756185	Clutch Assy. (T/C disconnect) . . . . .	1	1	1
68	8.1017	5193450	Key, clutch to shaft (3/8"x1/2"x2 1/4") (with 5185571 and 5185572)	1	1	
69	8.1017	5192126	Key, clutch to shaft (1/2"x3/4"x3 1/2") (with 5170848 and 5173548)	1	1	1

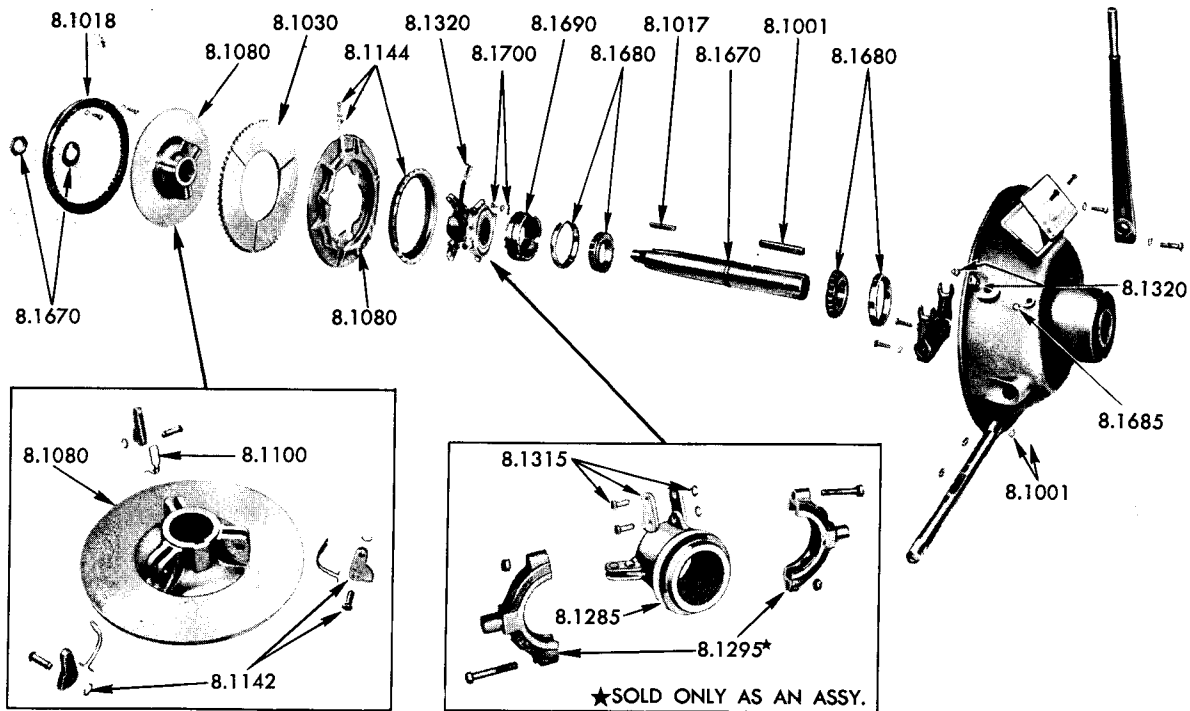


Fig. 68—Power Take-Off

# Includes indented items.

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
69	8.1017	5192313	Key, clutch to shaft (3 1/2" lg.) (with 5171481)			1
70	8.1017	186643	Bolt, 5/16"-18x2 1/16" hex. hd. (to flywheel)	12	12	12
-	-	103320	Lockwasher, 5/16" (to flywheel)	12	12	12
68	8.1018	5192163	Ring, clutch driving (11 1/2" clutch)	1	1	
69	8.1018	5192128	Ring, clutch driving (14" clutch)	1	1	1
70	8.1020	5175290 #	Disc Assy., torque converter clutch	1	1	
70	8.1020	5171968 †	Disc Assy., torque converter clutch			1
68	8.1030	5192165	Facing, clutch (3 segments, 11 1/2" clutch)	1	1	
69	8.1030	5192129	Facing, clutch (3 segments, 14" clutch)	1	1	1
-	-	2257211	Spring, disc (long) (T/C clutch)	6	6	
-	-	5192725	Spring, disc (short) (T/C clutch)	6	6	
-	-	2007110	Spring, disc			12
68	8.1080	5193433	Plate, clutch pressure (inner) (11 1/2" clutch)	1	1	
68	8.1080	5194141	Plate, clutch pressure (outer) (11 1/2" clutch)	1	1	
69	8.1080	5192824	Plate, clutch pressure (inner) (14" clutch)	1	1	1
69	8.1080	5192825	Plate, clutch pressure (outer) (14" clutch)	1	1	1
70	8.1080	755079	Plate, clutch pressure (T/C clutch)	1	1	1
-	-	5194138	Spring, clutch pressure plate holdback (11 1/2" clutch)	1	1	
68	8.1100	5192136	Spring, clutch pressure plate holdback (14" clutch)	4	4	4

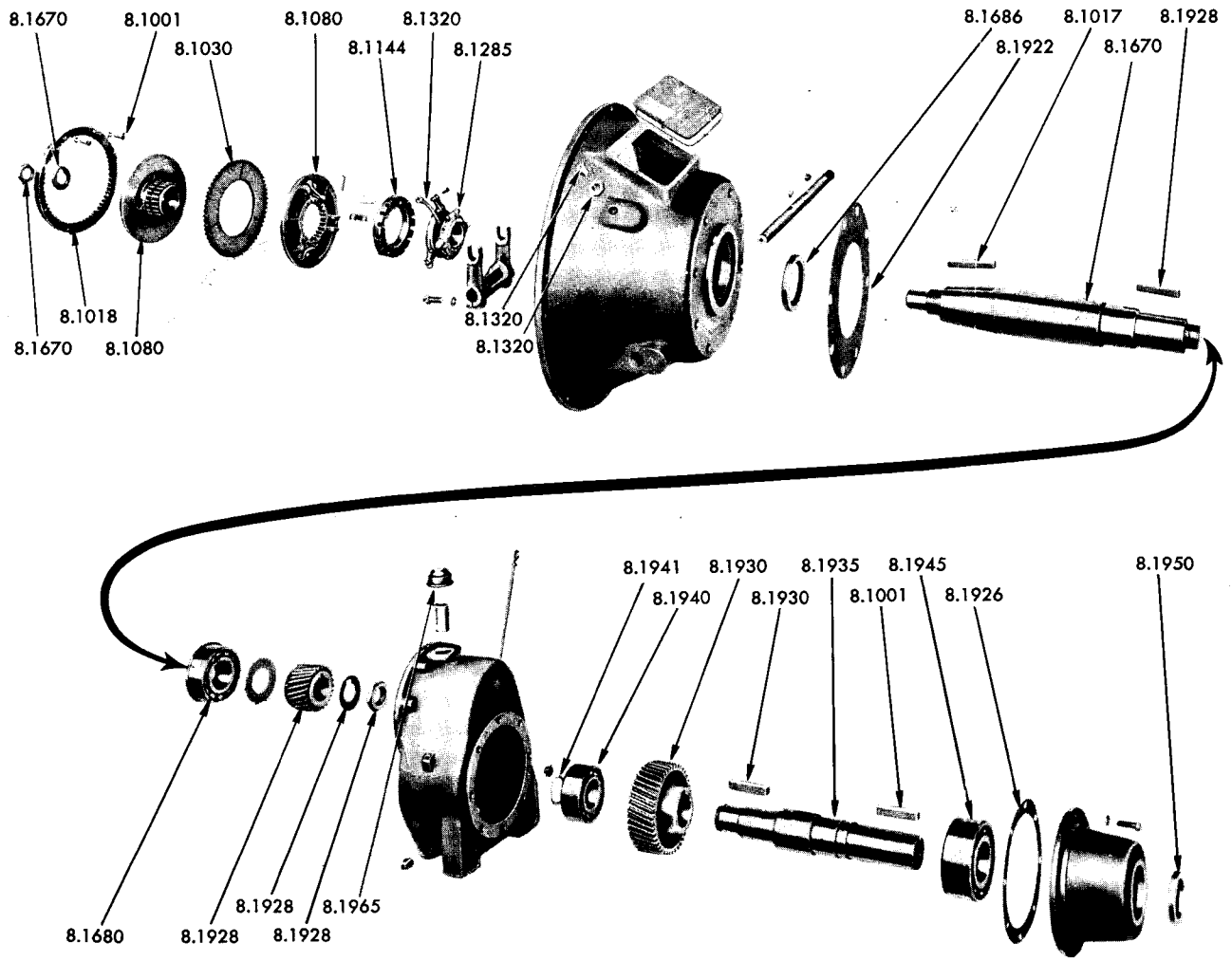


Fig. 69—Power Take-Off

# Includes springs 2257211 and 5192725. † Includes spring 2007110.



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5193431	Spring, clutch pressure plate release (11 1/2" clutch)	3	3	
70	8.1135	755093	Spring, clutch pressure plate release (T/C clutch)	3	3	3
70	8.1135	755415	Bolt, release spring (T/C clutch)	3	3	3
70	8.1136	755405	Spacer, release spring (T/C clutch)	3	3	3
68	8.1142	5194140	Lever, clutch release (toggle) (11 1/2" clutch)	3	3	
68	8.1142	5192823	Lever, clutch release (toggle) (14" clutch)	4	4	4
68	8.1142	5193422	Pin, clutch release lever (11 1/2" clutch)	3	3	
68	8.1142	5192134	Pin, clutch release lever (14" clutch)	4	4	4
68	8.1142	5192142	Ring, retaining (pin) (11 1/2" clutch)	3	3	
68	8.1142	5192135	Ring, retaining (pin) (14" clutch)	4	4	4
68	8.1144	5193430	Nut, clutch adjusting (11 1/2" clutch)	1	1	
69	8.1144	5192225	Nut, clutch adjusting (14" clutch)	1	1	1
-	-	5193423	Spring, adjusting ring lock	1	1	
-	-	114351	Screw, 1/4"-20x3/8" fil. hd. sl.	1	1	
-	-	114604	Lockwasher, 1/4" ext. tooth	1	1	
68	8.1285	5193432	Sleeve, clutch release (11 1/2" clutch)	1	1	
69	8.1285	5192139	Sleeve, clutch release (14" clutch)	1	1	1
70	8.1290	903017	Bearing, clutch release (T/C clutch)	1	1	1
68	8.1295	5192177	Collar Assy., clutch release (11 1/2" clutch) (sold only as an assy.)	1	1	
68	8.1295	5192143	Collar Assy., clutch release (14" clutch) (sold only as an assy.)	1	1	1
70	8.1300	755126	Lockwasher, clutch release bearing (T/C clutch)	1	1	1
70	8.1310	755090	Nut, clutch release bearing lock (T/C clutch)	1	1	1
68	8.1315	5193421	Link, release bearing lock (11 1/2" clutch)	6	6	
68	8.1315	5192140	Link, release bearing lock (14" clutch)	8	8	8
68	8.1315	5193420	Pin, release bearing lock link (11 1/2" clutch)	6	6	
68	8.1315	5192141	Pin, release bearing lock link (14" clutch)	8	8	8

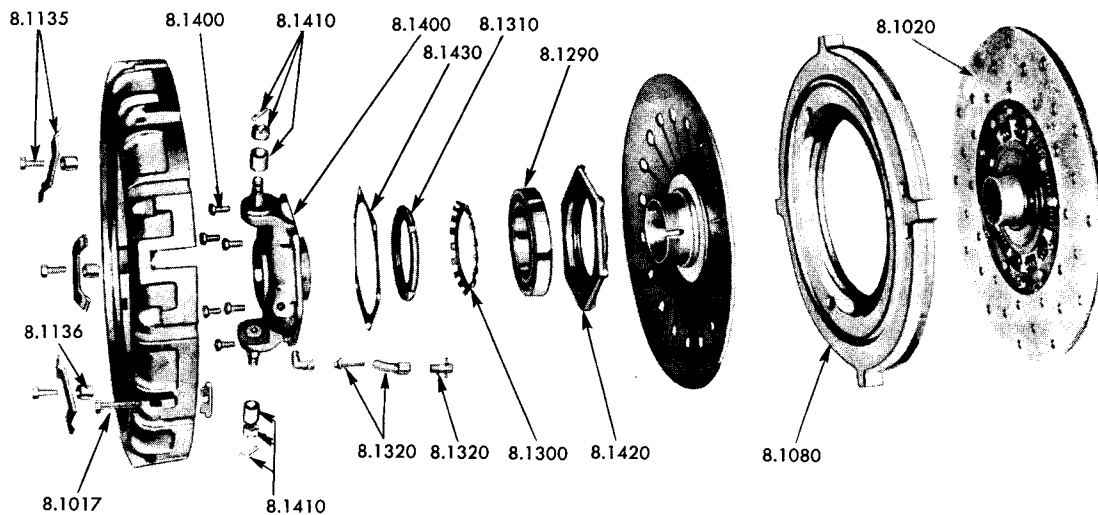


Fig. 70—Disconnect Clutch—Torque Converter

68	8.1315	5192176	Ring, retaining (11 1/2" clutch)	6	6	
68	8.1315	5192142	Ring, retaining (14" clutch)	8	8	8
68	8.1320	5192295	Hose, release bearing lube (11 1/2" clutch)	1	1	
69	8.1320	5192296	Hose, release bearing lube (14" clutch)	1	1	1
70	8.1320	5161543	Hose, release bearing lube (T/C clutch)	2	2	2
68,69	8.1320	122366	Nut, 5/8"-18 hex. thin	1	1	1
68,69	8.1320	119512	Fitting, 1/8" P. T. lubrication	1	1	1
71B	8.1380	6750656	Guide, clutch release bearing (T/C clutch)	1	1	1
71B	8.1380	179838	Bolt, 3/8"-16x7/8" hex. hd.	6	6	6
-	-	103321	Lockwasher, 3/8"	6	6	6
70	8.1400	755099	Sleeve Assy., clutch release bearing (T/C clutch)	1	1	1
70	8.1400	186625	Bolt, 5/16"-8x7/8" hex. hd.	6	6	6
-	-	103320	Lockwasher, 5/16"	6	6	6

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
70	8.1410	2078921	Bushing, release bearing sleeve (T/C clutch)	2	2	2
70	8.1410	117051	Nut, 1/2"-20 hex.	2	2	2
70	8.1410	108630	Pin, 1/8"x7/8" cotter	2	2	2
70	8.1420	755085	Cover, clutch release bearing sleeve (T/C clutch)	1	1	1
70	8.1430	755088	Gasket, clutch release bearing sleeve cover (T/C clutch)	1	1	1
-	-	148418	Bearing, clutch shiftershaft (T/C clutch)	3	3	3
-	-	5178308	Seal, clutch shifter shaft (T/C clutch)	4	4	4
-	-	5157751	Washer, shifter shaft thrust (T/C clutch)	1	1	1
68	8.1670	5192148	Shaft, clutch drive (19 5/8" L.) (with 5185571)	1	1	
68	8.1670	5192114	Shaft, clutch drive (24 1/2" L.) (with 5170848)	1	1	1
68	8.1670	5192211	Shaft, clutch drive (34 13/16" L.) (with 5185572)	1	1	
68	8.1670	5192212	Shaft, clutch drive (40 3/4" L.) (with 5171481)			1
68	8.1670	5192214	Shaft, clutch drive (18 7/8" L.) (with 5171519)	1	1	1
69	8.1670	5192331	Shaft, clutch drive (20 51/64" L.) (with 5173548)	1	1	1
71B	8.1670	6750658	Shaft, clutch drive (with T/C disconnect clutch)	1	1	1
68	8.1670	5192153	Nut, clutch shaft (with 5185571 and 5185572)	1	1	
69	8.1670	5192124	Nut, clutch shaft (with 5170848), 5171481 and 5173548)	1	1	1
68	8.1670	5192154	Lockwasher, clutch shaft (with 5185571 and 5185572)	1	1	
69	8.1670	5192125	Lockwasher, clutch shaft (with 5170848 and 5171481)	1	1	1
69	8.1670	5192378	Lockwasher, clutch shaft (with 5173548)	1	1	1
68	8.1680	142224	Cup, clutch drive shaft bearing (with 5185571, 5185572 and 5171519)	2	2	2
68	8.1680	441294	Cone, clutch drive shaft bearing (with 5185571, 5185572 and 5171519)	2	2	2
68	8.1680	187313	Cup, drive shaft bearing (with 5170848 and 5171481)	2	2	2
68	8.1680	441295	Cone, drive shaft bearing (with 5170848 and 5171481)	2	2	2
69	8.1680	954353	Bearing (with snap ring), clutch drive shaft (with 5173548)	1	1	1
71B	8.1680	907516	Bearing, clutch drive shaft (with T/C disconnect clutch)	1	1	1
68	8.1685	119512	Fitting, 1/8" P. T. lubrication	1	1	1
69	8.1686	5191189	Seal, clutch drive shaft bearing oil	1	1	1
68	8.1690	5192149	Retainer, drive shaft bearing (with 5185571, 5185572 and 5171519)	1	1	1
68	8.1690	5192115	Retainer, drive shaft bearing (with 5170848 and 5171481)	1	1	1
68	8.1700	3223379	Lock, drive shaft bearing retainer	1	1	1
68	8.1700	106973	Bolt, 5/16"-18x1/2" hex. hd.	1	1	1
-	-	103320	Lockwasher, 5/16"	1	1	1
77	8.1730	5174184	Pillow Block Unit (bearing)	1	1	1
77	8.1730	100080	Bolt, 5/8"-18x3" hex. hd.	2	2	2
-	-	103345	Washer, 5/8" flat	2	2	2
-	-	103325	Lockwasher, 5/8"	2	2	2
-	-	117053	Nut, 5/8"-18 hex.	2	2	2
-	-	3222037	Shim, pillow block to support (.031")	*	*	*
-	-	3222038	Shim, pillow block to support (.010")	*	*	*
-	-	5158076	Shim, pillow block to support (.005")	*	*	*
77	8.1830	5168156	Support, pillow block	1	1	1
77	8.1830	186707	Bolt, 5/8"-18x5 1/4" hex. hd.	2	2	2
-	-	103325	Lockwasher, 5/8"	2	2	2
77	8.1830	117053	Nut, 5/8"-18 hex.	2	2	2
-	-	3211145	Dowel, support to pillow block	2	2	2
-	-	3222173	Dowel, support to base	1	1	1
-	-	117051	Nut, 1/2"-20 hex.	1	1	1
69	8.1922	5192335	Gasket, reduction gear housing (with 5173548)	1	1	1
69	8.1926	5192333	Gasket, reduction gear cover plate (with 5173548)	1	1	1
69	8.1928	5193322	Gear, reduction gear drive (25 teeth) (with 5173548)	1	1	1
69	8.1928	5190721	Key, reduction gear drive gear (1/2"x1/2"x3") (with 5173548)	1	1	1
69	8.1928	5192124	Nut, reduction gear drive gear (with 5173548)	1	1	1
69	8.1928	5192125	Lockwasher, reduction gear drive gear (with 5173548)	1	1	1
69	8.1930	5193323	Gear, reduction gear driven (44 teeth) (with 5173548)	1	1	1
69	8.1930	5192342	Key, reduction gear driven gear (3/4"x3/4"x4") (with 5173548)	1	1	1
69	8.1935	5192328	Shaft, reduction gear (with 5173548)	1	1	1
69	8.1940	905312	Bearing, reduction gear shaft pilot (with 5173548)	1	1	1
69	8.1941	5192337	Ring, reduction gear shaft pilot (with 5173548)	1	1	1
69	8.1945	905316	Bearing, reduction gear shaft outer (with 5173548)	1	1	1
69	8.1950	5191600	Seal, reduction gear shaft oil (with 5173548)	1	1	1
69	8.1965	1528732	Cap, reduction gear breather (with 5173548)	1	1	1

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
<b>TORQUE CONVERTER</b>						
<p>The G.M. torque converter is offered in a wide variety of models to fit its many applications. While part numbers for these converters are not shown they may be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with model number and type number on the Options and Accessories plate on your engine.</p> <p style="text-align: center;"><b>MODEL DESIGNATION CODE</b></p> <p style="text-align: center;">TC - basic torque converter, D - disconnect clutch, L - lockup clutch, A - accessory shaft.</p>						
2	8.3001	-	Converter Assy., torque .....	1	1	1
71	8.3001	179848	Bolt, 3/8"-16x2 1/4" hex. hd. (to flywheel housing) .....	12	12	12
-	-	225608	Bolt, 9/16"-18x1 3/4" hex. hd. (to crankshaft) .....	6	6	6
-	-	103321	Lockwasher, 3/8" .....	12	12	12
-	-	5151241	Lockwire .....	3	3	3
71	8.3020	6751744	Sleeve, T/C ground .....	1	1	1
71	8.3020	6751377	Key, T/C ground sleeve .....	1	1	1
71	8.3020	141202	Pin, 1/4"x1 1/8" dowel .....	1	1	1
71	8.3030	6752372	Seal, T/C ground sleeve retainer oil .....	1	1	1
71C	8.3045	6750949	Shaft, torque converter drive (TC, TCD - flange shaft) .....	1	1	1
71	8.3045	6750389	Shaft, torque converter drive (TC, TCD - industrial shaft) .....	1	1	1
71D	8.3045	6752625	Shaft, torque converter drive (TCA, TCDA) .....	1	1	1
71D	8.3045	6752807	Shaft, torque converter drive (TCLA) .....	1	1	1
71	8.3045	6703152	Key, torque converter drive shaft (3/4"x3/4"x4") .....	1	1	1
71	8.3047	6703135	Ring, T/C drive shaft to converter housing piston (2 3/4" O.D.) ...	2	2	2
71C	8.3050	903312	Bearing, T/C drive shaft main .....	1	1	1
71	8.3050	187313	Cup, T/C drive shaft main bearing .....	2	2	2
71	8.3050	441295	Cone, T/C drive shaft main bearing .....	2	2	2
71C	8.3055	6703154	Seal, T/C drive shaft main bearing oil (3" I.D.) .....	1	1	1
71D	8.3055	6750415	Seal, T/C drive shaft main bearing oil (3 1/2" I.D.) .....	1	1	1
71D	8.3055	6750434	Sleeve, torque converter oil seal .....	1	1	1
71D	8.3057	6753204	Spacer, torque converter drive shaft main bearing .....	1	1	1
-	-	6750634	Retainer Assy., T/C drive shaft main bearing (includes seal) .....	1	1	1
-	-	6750203	Retainer, T/C drive shaft main bearing .....	1	1	1
-	-	186622	Bolt, 3/8"-16x1 1/4" hex. hd. .....	8	8	8
-	-	179885	Bolt, 1/2"-13x1 1/2" hex. hd. .....	6	6	6
-	-	103321	Lockwasher, 3/8" .....	8	8	8
-	-	103323	Lockwasher, 1/2" .....	6	6	6
-	-	6750507	Shim, T/C main bearing retainer (.003") .....	*	*	*
-	-	6750546	Shim, T/C main bearing retainer (.010") .....	*	*	*
-	-	6750547	Shim, T/C main bearing retainer (.031") .....	*	*	*
71C	8.3070	6750413	Yoke, T/C drive shaft .....	1	1	1
-	-	6750544	Flange, T/C drive shaft .....	1	1	1
71C	8.3070	181507	Bolt, 3/4"-16x1 3/4" hex. hd. .....	1	1	1
-	-	103326	Lockwasher, 3/4" .....	1	1	1
71C	8.3071	6750451	Retainer, T/C drive shaft flange .....	1	1	1
-	-	6753202	Gasket, T/C bearing housing .....	1	1	1
71D	8.3080	6752617	Gear, T/C governor drive .....	1	1	1
71D	8.3085	6752615	Shaft, T/C governor drive .....	1	1	1
71D	8.3087	6752614	Bushing, T/C governor drive shaft .....	1	1	1
71D	8.3090	954498	Bearing, T/C governor drive shaft .....	1	1	1
-	-	6760998	Ring, T/C governor drive shaft bearing snap .....	1	1	1
71D	8.3092	3224085	Sleeve, T/C governor drive .....	1	1	1
71D	8.3095	6751524	Spacer, T/C governor drive shaft bearing .....	1	1	1
-	-	3224773	Gasket, T/C governor drive shaft adaptor .....	1	1	1
-	-	6752428	Pump and Hub Assy., torque converter } (includes indented items)	1	1	
-	-	6751522	Pump and Hub Assy., torque converter } (includes indented items)			1
71	8.3102	6752152	Pump Assy., torque converter } (includes seal ring and bolt)	1	1	
71	8.3102	6752301	Pump Assy., torque converter } (includes seal ring and bolt)			1

\* As required.

# General Motors Diesel

## SERIES 71 ENGINES

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
71	8.3102	9409037	Bolt, 3/8"-24x1 1/4" hex. hd. ....	36	36	36
-	-	6752895	Seal Ring, T/C oil drain plug (3/8" I.D.) ....	2	2	2
71	8.3103	9409026	Bolt, 3/8"-16x1/2" hex. hd. ....	2	2	2
71	8.3110	6752810	Hub Assy., T/C pump (.050" O.S.) (includes bushing) ....	1	1	1
71	8.3115	6750219	Bushing, T/C pump hub ....	1	1	1
71	8.3120	6764780	Seal Ring, T/C hub to pump (4 1/4" I.D.) ....	1	1	1
71	8.3125	6750220	Ring, T/C pump to hub retaining snap ....	1	1	1
71	8.3130	6703012	Ring, T/C ground sleeve to pump piston (4 3/16" O.D.) ....	2	2	2
71	8.3140	6750213	Washer, T/C stator (plain) ....	2	2	2
71	8.3140	6703014	Washer, T/C stator (thrust) ....	3	3	3
71	8.3150	6750751	Stator Assy., torque converter second } (includes bushings) ...	1	1	
71	8.3150	6750986	Stator Assy., torque converter second } (includes bushings) ...			1
71	8.3155	6750614	Bushing, T/C stator hub (7/16" wide, stator hub) ....	2	2	2
71	8.3155	6753228	Bushing, T/C stator hub (9/32" wide, side plate) ....	2	2	2
71	8.3165	6703021	Roller, T/C freewheel ....	16	16	16
-	-	6750638	Spring, T/C freewheel roller ....	16	16	16
-	-	6703040	Cup, T/C freewheel roller ....	16	16	16
71	8.3180	6750752	Stator Assy., torque converter first } (includes bushings) ....	1	1	
71	8.3180	6750985	Stator Assy., torque converter first } (includes bushings) ....			1
71	8.3180	6751307#	Stator Assy., torque converter first } (includes bushings) ....			1
71	8.3190	6750337	Ring, T/C stator to converter sleeve snap ....	1	1	1
71	8.3195	6703059	Ring, T/C turbine hub to drive shaft retaining snap ....	1	1	1
71B	8.3200	6750497	Turbine, torque converter (except TCL) ....	1	1	
71	8.3200	6750987	Turbine, torque converter (except TCL) ....			1
71	8.3200	6751066	Turbine, torque converter (TCL) ....	1	1	
71	8.3200	6751064	Turbine, torque converter (TCL) ....			1
71	8.3205	6752422	Bearing, T/C drive shaft pilot ....	1	1	1
71	8.3210	6750427	Plate, T/C pilot bearing retainer ....	1	1	1
71	8.3210	9409038	Bolt, 3/8"-24x1 1/2" hex. hd. ....	6	6	6
71	8.3215	6751496	Washer, T/C pilot bearing retainer ....	1	1	1
71	8.3215	6752557	Washer, T/C pilot bearing retainer lock ....	1	1	1
71A	8.3215	6751478	Bolt, T/C pilot bearing retainer ....	1	1	1
71A	8.3215	6751479	Washer, T/C pilot bearing retainer ....	1	1	1
71A	8.3215	6750456	Ring, T/C pilot bearing (piston) (1 3/4" O.D.) ....	1	1	1
71	8.3215	141217	Pin, 5/16"x5/8" dowel ....	1	1	1
71A	8.3215	112017	Pin, 1/8"x1 5/8" straight ....	1	1	1
71	8.3215	181507	Bolt, 3/4"-16x1 3/4" hex. hd. ....	1	1	1
71	8.3220	6703141	Seal Ring, T/C pump to flywheel (17 1/2" I.D.) ....	1	1	1
71	8.3230	6752895	Seal Ring T/C flywheel bolt (3/8" I.D.) ....	6	6	6
71A	8.3230	141282	Pin, 1/2"x15/16" dowel ....	2	2	2
71A	8.3238	6703145	Piston, T/C lockup clutch ....	1	1	1
71A	8.3239	6752848	Seal, T/C lockup clutch piston outer (15 5/8" I.D.) ....	1	1	1
71A	8.3239	6752849	Seal, T/C lockup clutch piston inner (5" I.D.) ....	1	1	1
71A	8.3240	6750270	Plate, T/C lockup clutch ....	1	1	1
71A	8.3241	6704228	Spring, T/C lockup clutch piston release ....	1	1	1
71A	8.3242	6703144	Plate, T/C lockup clutch reaction ....	1	1	1
71A	8.3242	147489	Ball, 3/8" dia. steel ....	1	1	1
-	-	6750468	Disc, T/C flexible coupling ....	5	5	5
71	8.3247	6750468	Disc, T/C flexible coupling ....	4	4	4
-	-	6751516	Disc Assy., T/C flexible coupling ....	1	1	1
71	8.3247	9409056	Bolt, 1/2"-20x7/8" hex. hd. ....	24	24	24
71	8.3250	6750467	Hub, T/C flexible coupling ....	1	1	1
71	8.3252	6750466	Plate, T/C flexible coupling ....	1	1	1
71	8.3260	6703138	Cover, torque converter housing ....	1	1	1
71	8.3260	179837	Bolt, 3/8"-16x3/4" hex. hd. ....	2	2	2
-	-	103321	Lockwasher, 3/8" ....	2	2	2
-	-	6750186	Gasket, torque converter housing cover ....	1	1	1
73	8.3270	5183025	Support, torque converter rear ....	1	1	1
71	8.3600	6752444	Pump Assy., converter pressure (TC, TCA, TCDA) } (includes	1	1	1
71	8.3600	6752442	Pump Assy., converter pressure (TC, TCD) } indented items)	1	1	1
71	8.3600	6752456	Pump Assy., converter pressure (TCLRD) } (includes	1	1	1
71	8.3600	6752448	Pump Assy., converter pressure (TC) } indented items)			1
72	8.3610	6751733	Gasket, torque converter pressure pump ....	1	1	1

# 2.8 ratio.

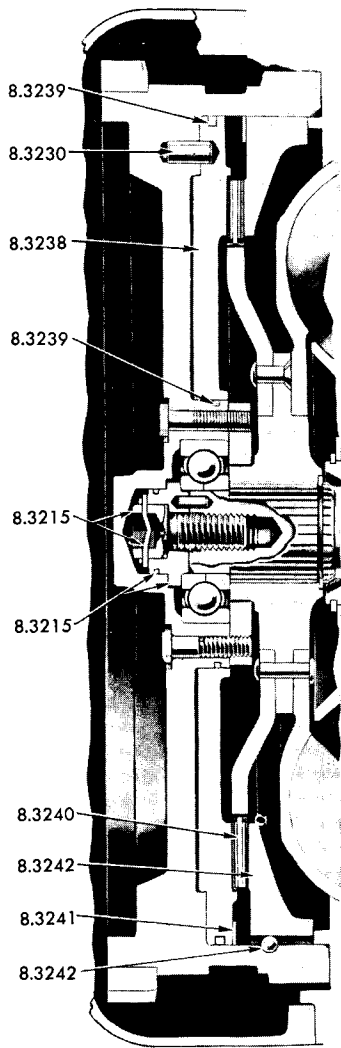


Fig. 71A—Torque Converter with Lockup Clutch  
Model Designation—TCL

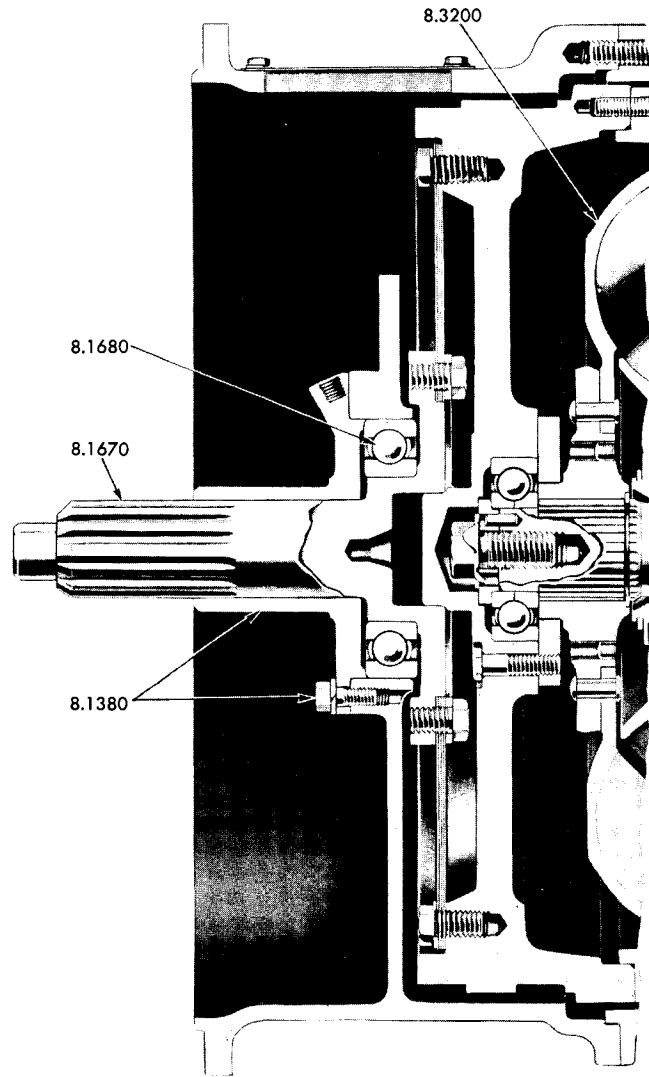


Fig. 71B—Torque Converter with Disconnect Clutch  
Model Designation—TCD

Fig. 71C—Torque Converter with Flange Shaft

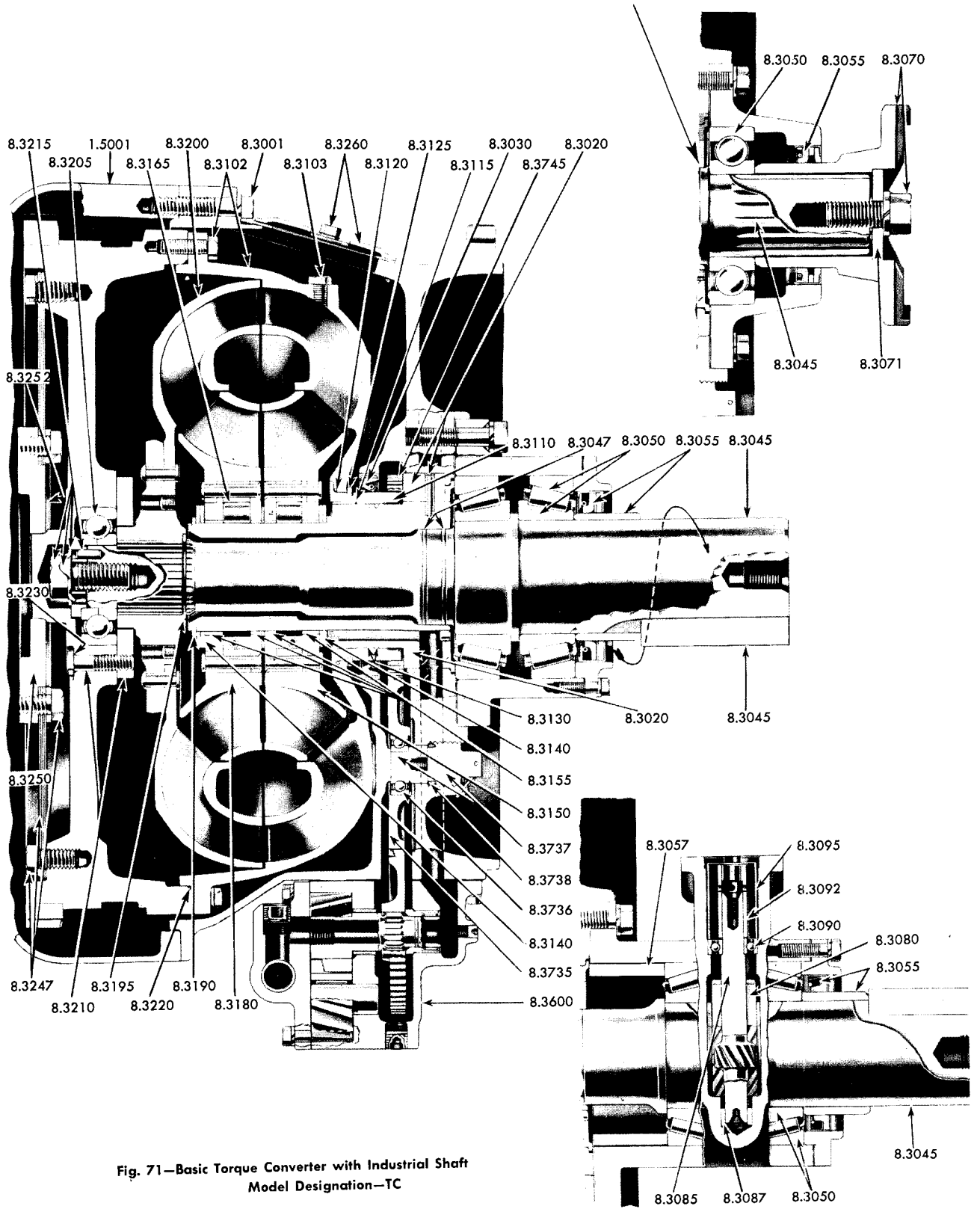


Fig. 71—Basic Torque Converter with Industrial Shaft  
Model Designation—TC

Fig. 71D—Torque Converter with Accessory Drive Shaft  
Model Designation—TCA

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
72	8.3620	6750877	Valve, T/C pressure pump .....	1	1	1
72	8.3625	6751410	Cap, T/C pressure pump relief valve .....	1	1	1
72	8.3630	6752354	Spring, T/C pressure pump relief valve (130# yellow) .....	1	1	1
72	8.3630	6752404	Spring, T/C pressure pump relief valve (100# green) .....	1	1	1
72	8.3635	142756	Gasket, 1 1/4" copper .....	1	1	1
72	8.3655	1331511	Ring, T/C pressure pump shaft seal .....	1	1	1
72	8.3658	6751722	Sleeve, T/C pressure pump bearing .....	1	1	1
-	-	6751723	Bearing, T/C pressure pump outer .....	1	1	1
72	8.3665	6751382	Bearing, T/C pressure pump inner .....	1	1	1
72	8.3670	6751728	Shaft, T/C pressure pump (with 6752442, 6752444 and 6752456 pumps) .....	1	1	1
72	8.3670	6751415	Shaft, T/C pressure pump (with 6752448 pump) .....			1
-	-	6754379	Seal, T/C pressure pump body .....	1	1	1
72	8.3678	6751729	Gear, T/C pressure pump driven (with 6752442, 6752444 and 6752456 pumps) .....	1	1	1
72	8.3678	6751383	Gear, T/C pressure pump driven (with 6752448 pump) .....			1
72	8.3678	6751189	Bearing, T/C pressure pump driven gear .....	1	1	1
72	8.3685	6751379	Shaft, T/C pressure pump driven gear .....	1	1	1
-	-	6752630	Valve, T/C pressure pump selector (lockup clutch) .....		1	1
-	-	5171417	Spring, T/C pressure pump selector valve .....		1	1
-	-	145657	Ball, 1/2" dia. steel .....		1	1
-	-	6752416	Lever, T/C pressure pump selector valve .....		1	1
-	-	179838	Bolt, 3/8"-16x7/8" hex. hd. ....		1	1
-	-	103321	Lockwasher, 3/8" .....		1	1
-	-	6702955	Seal, T/C pressure pump selector valve oil .....		1	1
72	8.3715	6751732	Gasket, T/C pressure pump cover .....	1	1	1

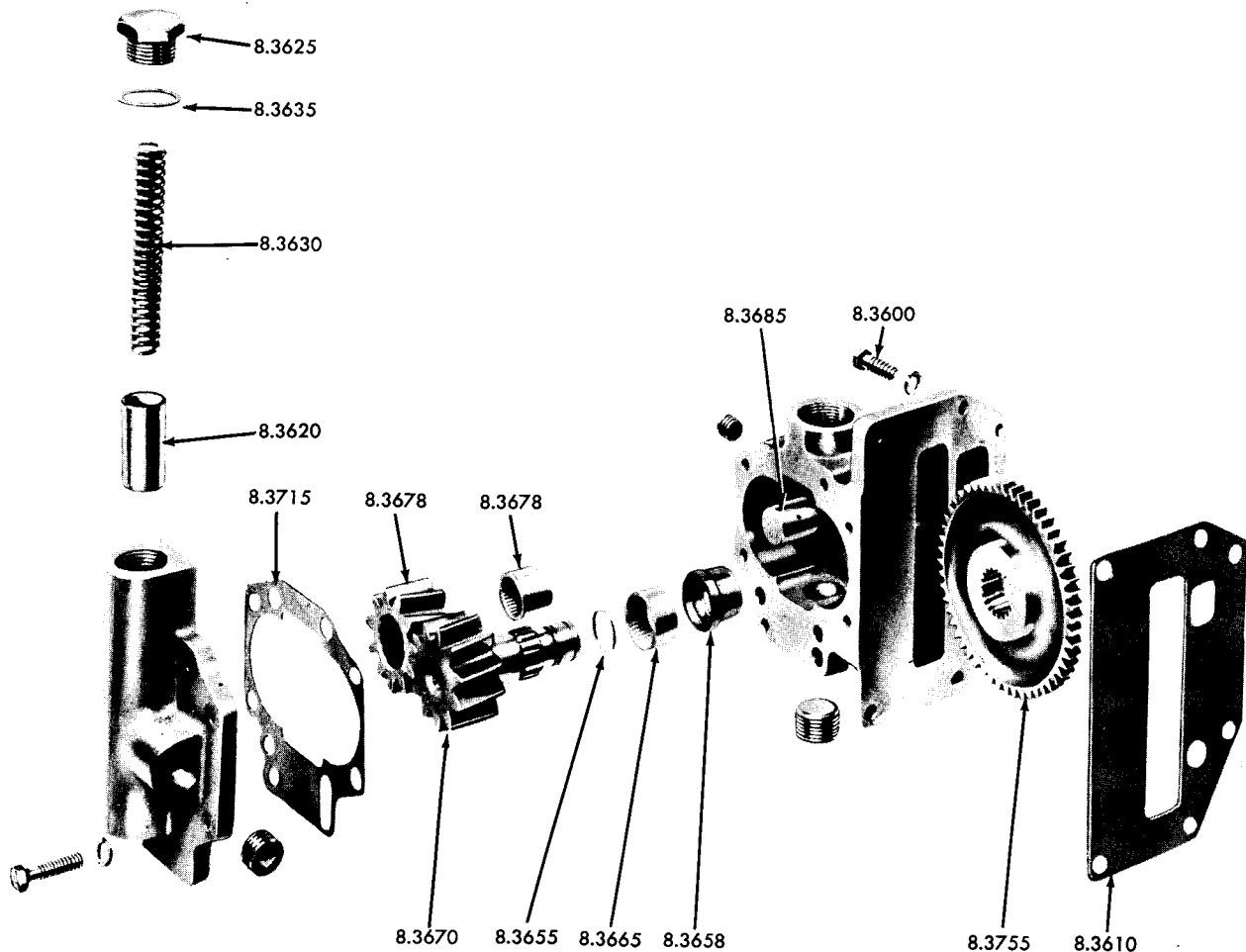


Fig. 72—Torque Converter Pressure Pump

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
71	8.3735	6752561	Gear Assy., T/C pressure pump idler (includes bearing) .....	1	1	1
71	8.3736	903304	Bearing, T/C pressure pump idler gear .....	1	1	1
71	8.3737	6752423	Shaft, T/C pressure pump idler gear .....	1	1	1
71	8.3737	6752414	Plug, T/C pressure pump idler gear shaft .....	1	1	1
71	8.3738	6752415	Ring, T/C pressure pump idler gear shaft seal (1.10" I.D.) .....	1	1	1
71	8.3745	6751502	Gear, T/C pressure pump driven .....	1	1	1
72	8.3755	6751385	Gear, T/C pressure pump driving .....	1	1	1
<b>TORQUE CONVERTER LINES</b>						
<p>The proper torque converter lines for your engine can be interpreted by your nearest G.M. Diesel dealer or distributor. It is necessary to furnish him with the model number and type number (if shown) on the Options and Accessories plate on your engine.</p>						
73	8.3800	5182894	Tube, torque converter to oil cooler (flex. 39") .....	1		
-	-	5182888	Tube, torque converter to oil cooler (flex. 50") .....	1		
73	8.3800	5177665	Tube, torque converter to oil cooler (flex. 56 1/4") .....		1	
73	8.3800	5184110	Tube, torque converter to oil cooler (flex. 68") .....		1	1
-	-	5184080	Tube, torque converter to oil cooler (flex. 76 1/2") .....		1	1
-	-	5184112	Tube, torque converter to oil cooler (flex. 78 1/2") .....			1
-	-	5179493	Tube, torque converter to oil cooler (flex. 85") .....			1
-	-	144034	Bushing, 3/4"x1/2" red. pipe .....	1	1	1
73	8.3800	5176705	Elbow, torque converter to oil cooler tube .....	1	1	1
73	8.3800	144086	Tee, 3/4" pipe .....	1	1	1
-	-	190717	Nipple, 3/4"x2" pipe .....	1	1	1
-	-	140798	Elbow, 3/4"x45° street .....	1	1	1
73	8.3820	5177297	Tube, torque converter tank to pump (flex. 49 9/16") .....	1		
73	8.3820	5184118	Tube, torque converter tank to pump (flex. 50") .....		1	
73	8.3820	5184084	Tube, torque converter tank to pump (flex. 61 1/2") .....		1	1
73	8.3820	108687	Elbow, 1"x90° street .....	1	1	1

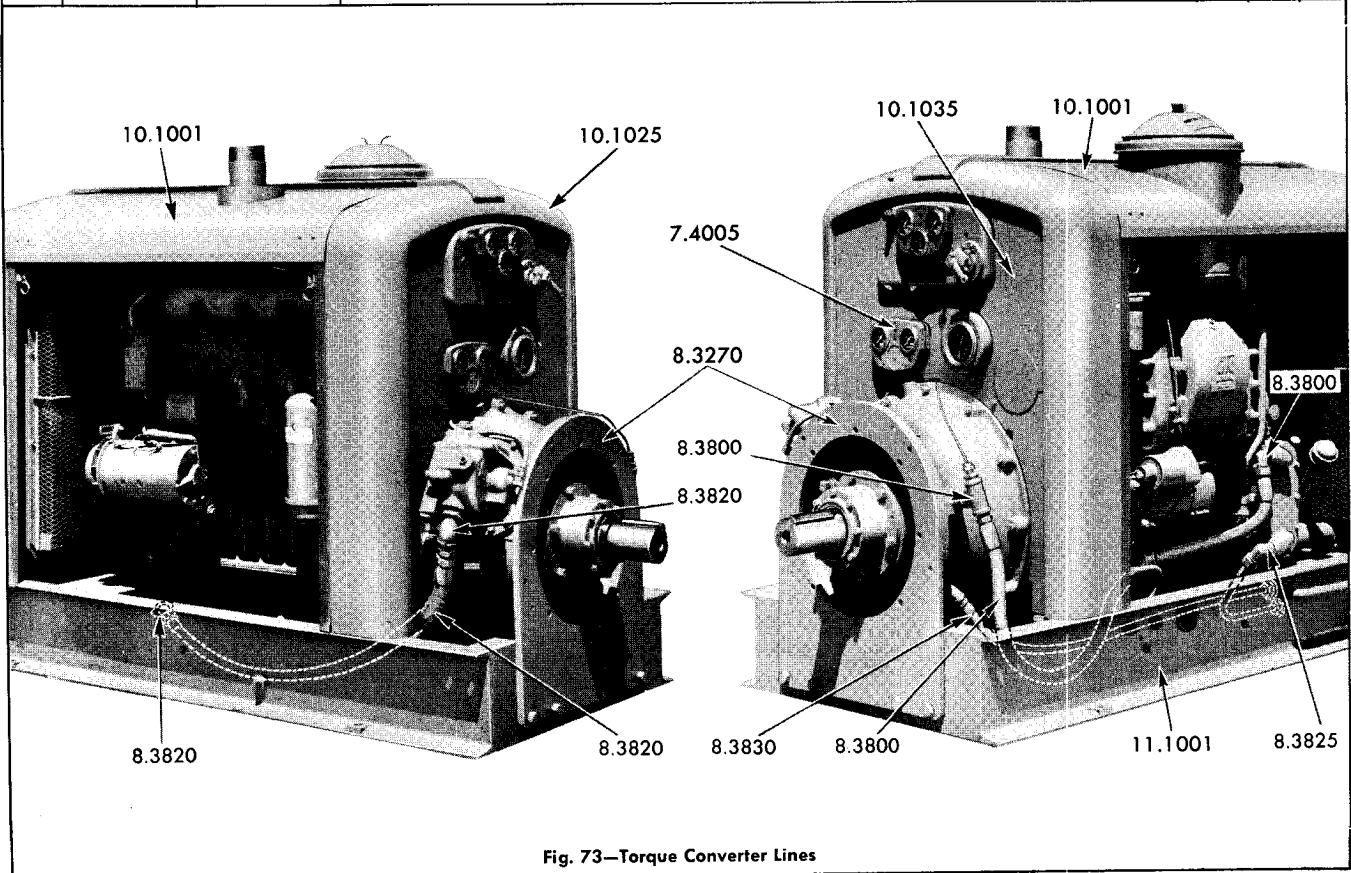


Fig. 73—Torque Converter Lines



FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
73	8.3820	144116	Elbow, 1"x45° street	1	1	1
-	-	5183079	Adaptor, torque converter tank to pump tube	1	1	1
-	-	125915	Bushing, 1 1/4"x1" red. pipe	1	1	1
-	-	5184291	Clip, torque converter tank to pump tube	1	2	2
-	-	5170276	Spacer, torque converter tank to pump tube		1	1
-	-	5178633	Tube, oil cooler to torque converter tank (dev. L. 10 7/16")	1		
-	-	5177632	Tube, oil cooler to torque converter tank (dev. L. 12")		1	
-	-	5177211	Tube, oil cooler to torque converter tank (dev. L. 13 1/4")		1	1
-	-	5176525	Connector, 3/4" tube sealastic	1	1	1
-	-	5176527	Nut, 3/4" tube sealastic	2	2	2
-	-	5176528	Seal Ring, 3/4" tube sealastic	2	2	2
73	8.3830	5185392	Tube, torque converter to tank (flex. 46")	1	1	
73	8.3830	5185389	Tube, torque converter to tank (flex. 57 1/2")		1	1
-	-	120702	Elbow, 3/8"x45° street	1	1	1
-	-	5182298	Adaptor, torque converter to tank tube	1	1	1
-	-	5151189	Clip, torque converter to tank tube	2	2	2
<b>ENGINE HOOD</b>						
73,76	10.1001	5170784	Hood Assy., engine (exhaust side)	1		
-	-	5171245	Hood Assy., engine (blower side) (heavy duty air cleaner)	1		
73	10.1001	5170786	Hood Assy., engine (blower side) (light duty air cleaner)	1		
73,76	10.1001	5170788	Hood Assy., engine (exhaust side)		1	
-	-	5171246	Hood Assy., engine (blower side) (heavy duty air cleaner)		1	
73	10.1001	5170790	Hood Assy., engine (blower side) (light duty air cleaner)		1	
73,76	10.1001	5170735	Hood Assy., engine (exhaust side)			1
-	-	5171247	Hood Assy., engine (blower side) (heavy duty air cleaner)			1
73	10.1001	5170725	Hood Assy., engine (blower side) (light duty air cleaner)			1
77	10.1020	5170958	Hood Assy., radiator (short)	1	1	1
77	10.1020	133094	Screw, 5/16"-18x3/4" rd. hd.	11	11	11
-	-	181374	Bolt, 3/8"-24x1 1/2" hex. hd.	4	4	4
-	-	123197	Nut, 5/16"-18 hex.	11	11	11
77	10.1020	117049	Nut, 3/8"-24 hex.	4	4	4
73,76	10.1025	5170724	Support, engine rear hood	1	1	1
-	-	5171256	Support, rear hood (generator sets, rear of unit)	1	1	1
-	-	181374	Bolt, 3/8"-24x1 1/2" hex. hd.	4	4	4
-	-	3290602	Hood Assy., generator	1	1	
-	-	5170965	Hood Assy., generator (includes clamps)			1
76	10.1025	117049	Nut, 3/8"-24 hex.	4	4	4
-	-	5170691	Panel Assy., rear hood support (PTO engines with rear mounted instrument panel)	1	1	1
-	-	5174005	Panel Assy., rear hood support (PTO engines with side mounted instrument panel)	1	1	1
73	10.1035	5176630	Panel Assy., rear hood support (T/C engines with rear mounted instrument panel)	1	1	1
-	-	5177436	Panel Assy., rear hood support (T/C engines with side mounted instrument panel)	1	1	1
-	-	5176631	Panel Section (use with 5176630 and 5177436)	1	1	1
-	-	113698	Bolt, 1/4"-28x1/2" hex. hd.	1	1	1
-	-	123179	Nut, 1/4"-20 hex.	11	11	11
-	-	121902	Nut, 1/4"-28 hex.	1	1	1
-	-	5175916	Cover, rear hood support panel tachometer hole	1	1	1
76	10.1040	3222728	Clamp, engine hood hold down (except generator sets)	4	4	4
76	10.1040	3222728	Clamp, engine and generator hood hold down (generator sets)	8	8	8
-	-	5175917	Cover, rear hood panel hole	1	1	1
-	-	3222748	Catch, engine hood hole down clamp (90°)	4	4	4
-	-	3291664	Catch, generator hood hold down clamp (105°)	4	4	4
-	-	113991	Screw, 1/4"-20x3/4" flat hd.	*	*	*
-	-	123179	Nut, 1/4"-20 hex.	*	*	*
76	10.1057	5171531	Clamp, engine hood side panel	4	4	4
76	10.1057	186630	Bolt, 1/4"-20x5/8" hex. hd.	8	8	8
-	-	123179	Nut, 1/4"-20 hex.	8	8	8

\* As required.

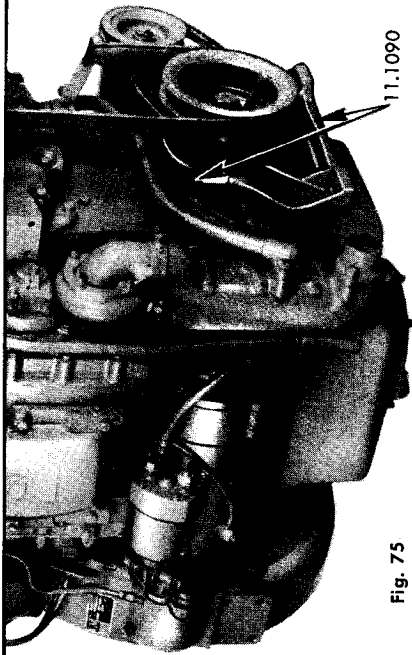


Fig. 75

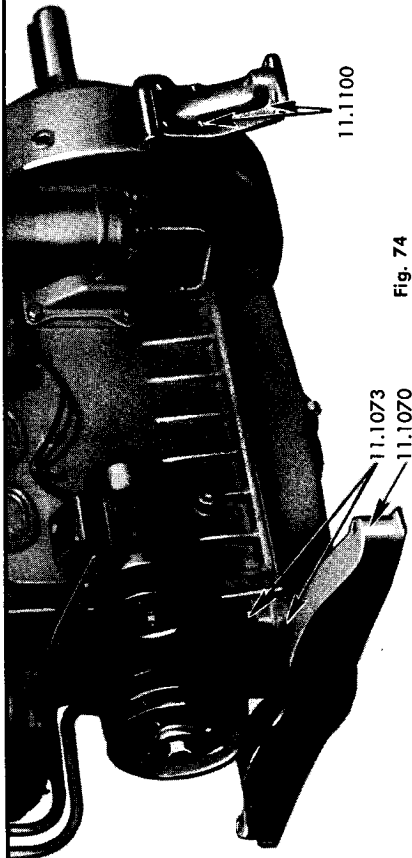


Fig. 74

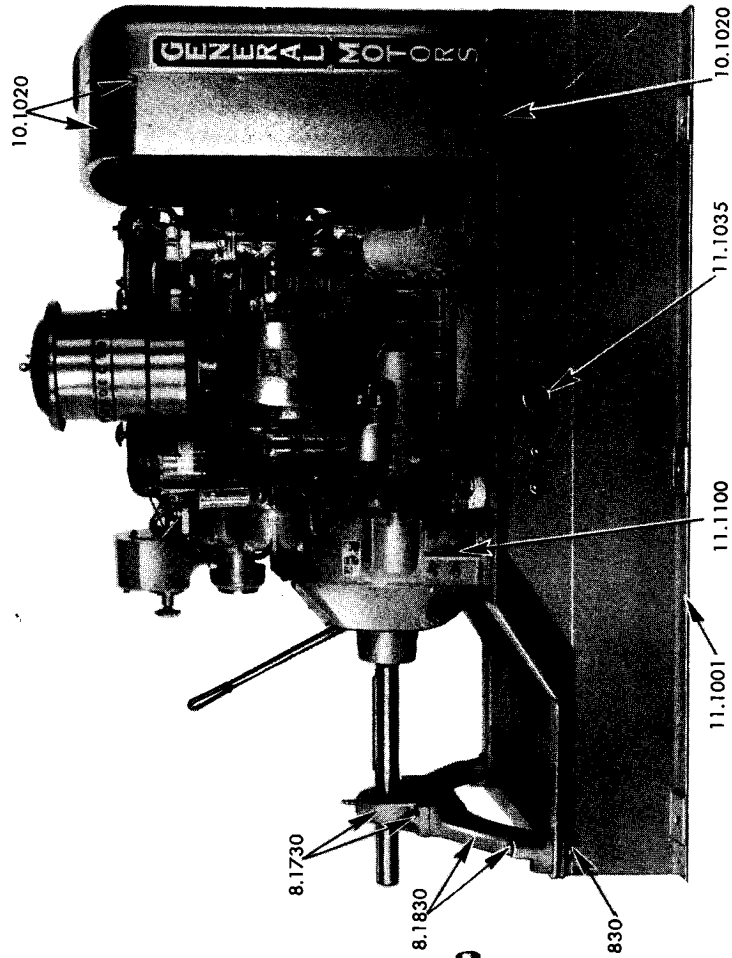


Fig. 77

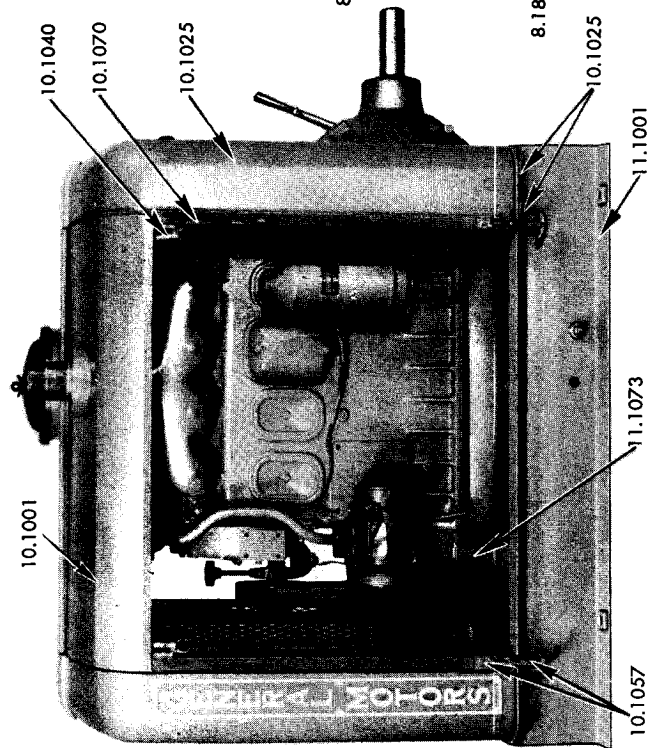


Fig. 76

Figs. 74, 75, 76, 77—Engine Hoods, Mountings and Base

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5171145	Support, engine and generator hood center .....	1	1	1
76	10.1070	5156500	Anti-squeak, engine hood .....	2	2	2
-	-	5156500	Anti-squeak, short radiator hood .....	1	1	1
-	-	3222531	Rod, engine hood tie (right side front) .....	1		
-	-	5172035	Rod, engine hood tie (left side front) .....	1		
-	-	3222549	Rod, engine hood tie (right side front) .....		1	
-	-	5172036	Rod, engine hood tie (left side front) .....		1	
-	-	3222550	Rod, engine hood tie (right side front) .....			1
-	-	5172037	Rod, engine hood tie (left side front) .....			1
-	-	117064	Nut, 1/2"-13 hex. ....	*	*	*
-	-	3222531	Rod, generator hood tie .....	2	2	
-	-	3222549	Rod, generator hood tie .....			2
-	-	105608	Nut, 1/2"-13 square .....	4	4	4
-	-	123550	Nut, 1/2"-13 hex. ....	4	4	4
-	-	5170944	Panel, engine hood side .....	2		
-	-	5170926	Panel, engine hood side .....		2	
-	-	5170914	Panel, engine hood side .....			2
-	-	5170944	Panel, generator hood side .....	2	2	
-	-	5170926	Panel, generator hood side .....			2
<b>ENGINE MOUNTING AND BASE</b>						
77	11.1001	5172640	Base, engine (PTO engines, long shaft) .....	1		
76	11.1001	5170536	Base, engine (PTO engines, short shaft) .....	1		
4	11.1001	5170883	Base, engine (generator set, radiator, control cabinet) .....	1		
-	-	5170955	Base, engine (generator set, radiator, no control cabinet) .....	1		
-	-	5170129	Base, engine (generator set, heat exchanger) .....	1		
73	11.1001	5178201	Base, engine (T/C engines) .....	1		
77	11.1001	5184129	Base, engine (PTO engines, long shaft) .....		1	
76	11.1001	5170537	Base, engine (PTO engines, short shaft) .....		1	
4	11.1001	5170884	Base, engine (generator set, radiator, control cabinet) .....		1	
-	-	5170956	Base, engine (generator set, radiator, no control cabinet) .....		1	
-	-	5170130	Base, engine (generator set, heat exchanger) .....		1	
73	11.1001	5177157	Base, engine (T/C engines) .....		1	
77	11.1001	5172642	Base, engine (PTO engines, long shaft) .....			1
76	11.1001	5170535	Base, engine (PTO engines, short shaft) .....			1
4	11.1001	5170885	Base, engine (generator set, radiator, control cabinet) .....			1
-	-	5170957	Base, engine (generator set, radiator, no control cabinet) .....			1
-	-	5170131	Base, engine (generator set, heat exchanger) .....			1
73	11.1001	5175788	Base, engine (T/C engines) .....			1
-	-	5170971	Washer, bevel (3/8" bolt hole) .....	8	8	8
-	-	5167615	Washer, bevel (1/2" bolt hole) .....	4	4	4
-	-	5167232	Cap, fuel tank .....	1	1	1
-	-	5192602	Gage, fuel .....	1	1	1
-	-	5192603	Screen, fuel tank filler .....	1	1	1
-	-	444789	Plug, 1/2" pipe .....	1	1	1
-	-	103878	Plug, 1/4" pipe .....	4	4	4
-	-	3291207	Cushion, generator set mounting .....	4	4	6
-	-	3291208	Cup, generator set mounting cushion .....	4	4	6
-	-	3291209	Cover, generator set mounting cushion .....	4	4	6
77	11.1035	5166891	Bushing, starting motor cable insulating (thru base) .....	1	1	1
-	-	5169559	Nut, starting motor cable insulation bushing .....	1	1	1
74	11.1070	5161734	Support, engine front (cross member) .....	1	1	1
4	11.1072	5155374	Cushion, engine front support elastic .....	2	2	2
-	-	3290041	Washer, elastic cushion .....	2	2	2
-	-	453649	Bolt, 1/2"-20x5 1/4" hex. hd. ....	2	2	2
-	-	436437	Bolt, 1/2"-20x5 3/4" hex. hd. ....	2	2	2
-	-	122761	Nut, 1/2"-20 hex. slotted .....	2	2	2
74	11.1073	5167449	Spacer, engine front support (11/32" L.) (with 5161734) .....	2	2	2
4,76	11.1073	5170127	Spacer, engine front support (2 7/32" L.) .....	2	2	2
-	-	5163858	Spacer, engine front support (17/32" L.) .....	2	2	2
-	-	5170680	Spacer, engine front support (1 23/32" L.) .....	2	2	2

\* As required.

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5167615	Washer, bevel (1/2" bolt hole)	2	2	2
74	11.1073	181443	Bolt, 1/2"-20x3 1/4" hex. hd.	2	2	2
-	-	117051	Nut, 1/2"-20 hex.	2	2	2
-	-	186340	Bolt, 1/2"-20x5 1/2" hex. hd.	2	2	2
-	-	117051	Nut, 1/2"-20 hex.	2	2	2
1,75	11.1090	5191477	Support and Cap Assy., front trunnion mounting	1	1	1
75	11.1090	179867	Bolt, 7/16"-14x2 1/2" hex. hd.	2	2	2
-	-	5166864	Ring, trunnion mounting support cushion	1	1	1
74	11.1100	3222025	Support, engine rear (4 1/4" wide x 6 6/8" high)	2	2	2
3,77	11.1100	5170527	Support, engine rear (5" wide x 5 1/4" high)	2	2	2
-	-	3224422	Block, engine rear mounting (cushion)		2	
74	11.1100	186725	Bolt, 1/2"-13x1 1/2" hex. hd. (with 3222025)	8	8	8
3	11.1100	179884	Bolt, 1/2"-13x1 3/8" hex. hd. (with 5170527)	8	8	8
-	-	181433	Bolt, 1/2"-13x1 3/4" hex. hd. (with 5170527) (to base)	4	4	4
-	-	117050	Nut, 7/16"-20 hex. (with 3224422)		4	
-	-	5171178	Insulator, generator rubber	2	2	2
-	-	5171180	Bushing, generator rubber insulator	4	4	4
-	-	215906	Bolt, 9/16"-18x2 3/4" hex. hd.	4	4	4
-	-	5171177	Spacer, generator rubber insulator	4	4	4
-	-	5171179	Washer, generator rubber insulator	4	4	4
<b>AIR COMPRESSOR</b>						
78	12.4001	5173937	Compressor Assy., air (7 1/4 CFM) (belt driven)		1	1
-	-	5184201	Compressor Assy., air (12 CFM) (flange mounted) (with oil drain to blower side of eng.)			1
-	-	5184202	Compressor Assy., air (12 CFM) (flange mounted) (with oil drain to manifold side of eng.)			1
-	-	179862	Bolt, 7/16"-14x1 1/2" hex. hd. (with 5184201 or 5184202)			1
78	12.4001	100040	Bolt, 7/16"-20x1 1/2" hex. hd. (with 5173937)	4		4
-	-	186725	Bolt, 1/2"-13x1 1/2" hex. hd. (with 5184201 or 5184202)			4
-	-	103322	Lockwasher, 7/16"	4		4
78	12.4001	117050	Nut, 7/16"-20 hex.	4		4
-	-	2067767	Gasket, air compressor	1		1
78	12.4010	3229254	Bracket, air compressor mounting	1		1
-	-	179837	Bolt, 3/8"-16x3/4" hex. hd.	4		4
-	-	103321	Lockwasher, 3/8"	4		4
-	-	5170754	Pulley, air compressor (7 1/2")	1		1
78	12.4015	5174767	Pulley, air compressor (9")	1		1
-	-	2136944	Plate, air compressor drive	1		1
-	-	5176475	Bolt, air compressor drive	4		4
-	-	2136946	Coupling, air compressor drive	1		1
-	-	2136945	Hub, air compressor drive	1		1
-	-	5173437	Tube Assy., air compressor oil supply			1
78	12.4065	5173442	Tube Assy., air compressor oil supply (with 5173937)	1		1
-	-	137421	Elbow, 1/4" inv. fl. tube 90° (with 5173437)			2
-	-	143342	Elbow, 1/4" inv. fl. tube 90° 1/4" P.T. (with 5173442)	2		2
78	12.4070	5173728	Tube Assy., air compressor oil drain (with 5173937)	1		1
-	-	5186066	Tube Assy., air compressor oil drain (with 5184201)			1
-	-	5173460	Tube Assy., air compressor oil drain (with 5184202)			1
-	-	137425	Elbow, 1/2" inv. fl. tube 90° 3/8" P.T.	1		1
-	-	188947	Elbow, 1/2" inv. fl. tube 90° 1/4" P.T.	1		1
-	-	142269	Bushing, 1/2"x3/8" red. pipe	1		1
-	-	137409	Connector, 1/2" inv. fl. tube	1		1
-	-	137410	Connector, 5/8" inv. fl. tube			1
-	-	5158730	Clip, air compressor oil tube (supply)			1
-	-	5184137	Tube Assy., air compressor water inlet (dev. L 43")			1
78	12.4085	5172051	Tube Assy., air compressor water inlet (with 5173937)	1		1
-	-	137425	Elbow, 1/2" inv. fl. tube 90°	1		1
-	-	143340	Elbow, 1/2" inv. fl. tube 45°	1		1
-	-	137409	Connector, 1/2" inv. fl. tube	1		1
78	12.4090	5177269	Tube Assy., air compressor water outlet	1		1
-	-	5164303	Nipple, 5/8" I.D. hose (one in a compressor and one in reducing bushing to water manifold)			2

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	137425	Elbow, 1/2" inv. fl. tube 90° .....		1	1
-	-	137409	Connector, 1/2" inv. fl. tube .....		1	1
-	-	142269	Bushing, 1/2"x3/8" red. pipe .....			1
-	-	5151108	Clip, air compressor water inlet tube (1/2" bolt hole) .....			1
-	-	5153473	Clip, air compressor water outlet tube (3/8" bolt hole) .....		1	1
-	-	5173483	Hose, air compressor tube to water outlet manifold .....			1
-	-	111607	Clamp, air compressor water tube hose .....			2
-	-	5184125	Tube Assy., air compressor booster inlet (with compressor 5184201 or 5184202) .....			1
78	12.4375	5175190	Tube Assy., air compressor booster inlet (with compressor 5173937) .....	1		1
-	-	5176528	Seal Ring, 3/4" tube sealastic .....		1	1
78	12.4375	5176527	Nut, 3/4" tube sealastic .....		1	1
-	-	5176525	Connector, 3/4" tube sealastic .....		1	1
-	-	443603	Bolt, 1/4"-20x3/4" hex. hd. ....			2
-	-	103319	Lockwasher, 1/4" .....			2
-	-	189837	Connector, 3/4" inv. fl. tube .....			1
-	-	5151191	Gasket, air booster inlet tube to air compressor .....			1

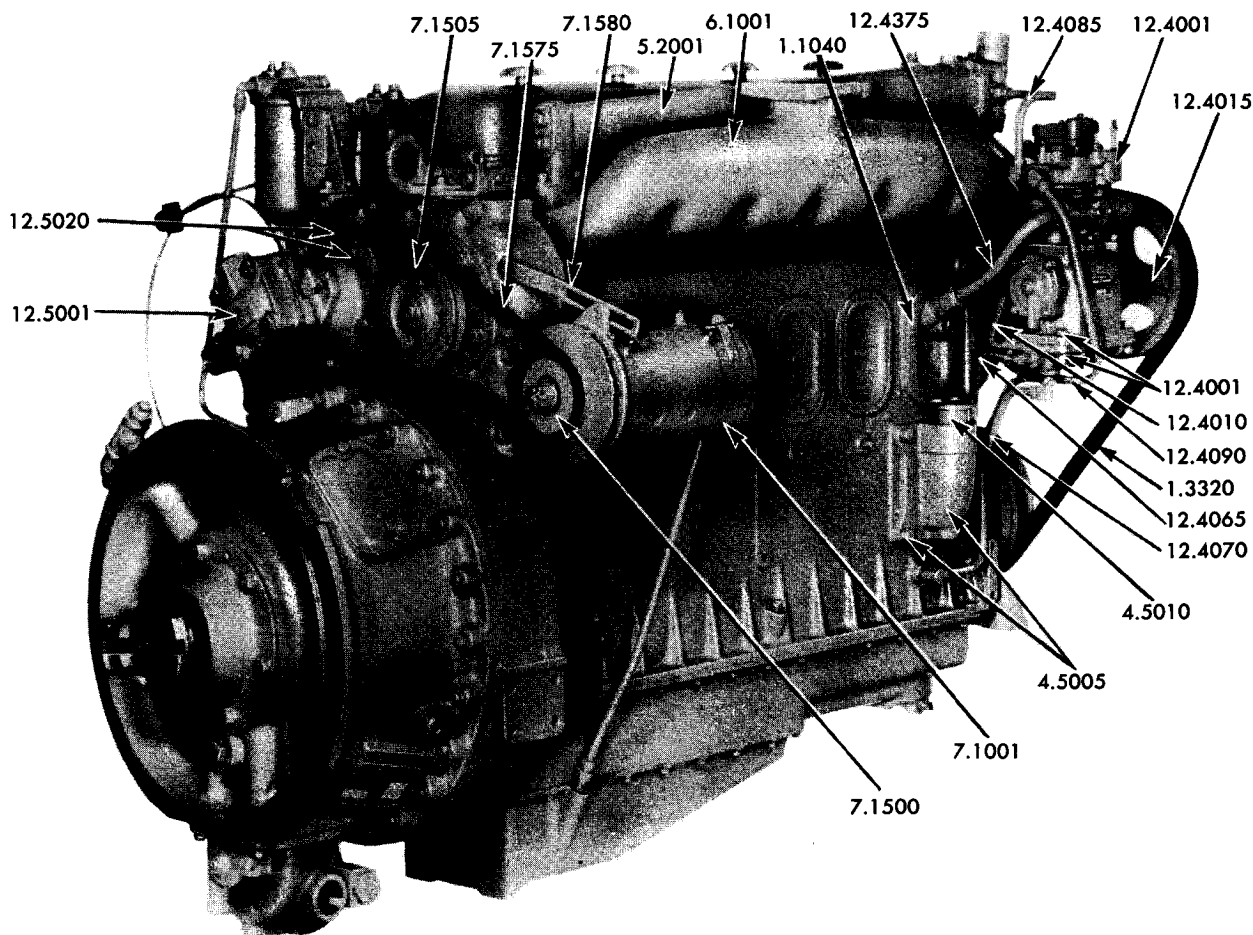


Fig. 78—Air Compressor and Hydraulic Pump

### HYDRAULIC PUMP

2,78	12.5001	5184292	Pump Assy., hydraulic (drives off: camshaft on A eng., balancer shaft on C eng.) .....			
2,78	12.5001	5184293	Pump Assy., hydraulic (drives off: camshaft on C eng., balancer shaft on A eng.) .....	1	1	1
				1	1	1

FIG. NO.	ITEM NO.	PART NO.	NAME AND DESCRIPTION	QUANTITY PER		
				3-71	4-71	6-71
-	-	5168852	Gasket, hydraulic pump (between pump assy. and adaptor) .....	1	1	1
19	1.7635	3292492	Coupling, hydraulic pump drive .....	1	1	1
17,19	1.7630	5153449	Plate, hydraulic pump drive .....	1	1	1
17,19	1.7630	5177026	Spacer, hydraulic pump drive .....	1	1	1
19	1.7630	5176474	Bolt, hydraulic pump drive .....	4	4	4
78	12.5020	5168667	Adaptor, hydraulic pump .....	1	1	1
78	12.5020	179839	Bolt, 3/8"-16x1" hex. hd. ....	6	6	6
-	-	103321	Lockwasher, 3/8" .....	6	6	6
-	-	5168688	Gear, hydraulic pump drive .....	1	1	1
-	-	103907	Key, 3/16"x7/8" woodruff .....	1	1	1
<b>COLD WEATHER STARTING AID KIT</b>						
-	-	5193474	Starting Aid Kit, cold weather (capsule type) (includes items below) .....	1	1	1
67	7.8200	5230535	Pump Assy., starting aid kit (includes indented items) .....	1	1	1
-	-	5230543	Seal Ring, starting aid kit pump plunger .....	2	2	2
-	-	122366	Nut, 5/8"-18 hex. ....	1	1	1
-	-	5230544	Valve, starting aid kit pump inlet (1/2 lb.) .....	1	1	1
-	-	5153358	Valve, starting aid kit pump outlet (30 lb.) .....	1	1	1
-	-	5174649	Tube, starting aid pump to nozzle (1/8" dia.x7') .....	1	1	1
-	-	140323	Elbow, 1/8" ball sleeve tube 90° .....	2	2	2
-	-	121322	Sleeve, 1/8" ball tube .....	3	3	3
-	-	121220	Nut, 1/8" ball sleeve tube .....	3	3	3
-	-	5174648	Nozzle, starting aid pump tube .....	1	1	1
-	-	5186071	Puncturing Tool, starting fluid capsule (includes indented items) ..	1	1	1
-	-	5192816	Strainer Assy., starting fluid (includes next 2 items) .....	1	1	1
-	-	5192818	Strainer, starting fluid .....	1	1	1
-	-	142858	Screw, 1/4"-20x1/4" rd. hd. sl. ....	1	1	1
-	-	5192819	Gasket, starting fluid strainer .....	1	1	1
-	-	5192817	Plug, starting fluid strainer .....	1	1	1
<b>SUPPLIES</b>						
-	-	5191726	Paint, engine touch-up (1 gallon) .....	*	*	*
-	-	5166164	Wire, injector spray tip cleaning (5' length) .....	*	*	*

\* As required.

*General Motors Diesel*

**SERIES 71 ENGINES**

---



## ALPHABETICAL INDEX

PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>A</b>			
ADAPTOR, dipstick .....	52	BRACKET, fan shaft .....	58
ADAPTOR, flywheel housing .....	17	BRACKET, governor .....	33
ADAPTOR, hydraulic pump .....	85	BRACKET, governor speed adjusting lever .....	32
ADAPTOR, oil cooler .....	50	BRACKET, injector control tube .....	33
ADAPTOR, raw water pump drive .....	60	BRACKET, oil filter mounting .....	50
ADAPTOR, tachometer drive .....	67	BRACKET, oil pump screen support .....	47
ADAPTOR, tachometer drive cable .....	66	BRACKET, rocker shaft .....	22
ADAPTOR, tachometer mounting .....	65	BRACKET, throttle booster spring .....	35
ADAPTOR ASSY., oil filler tube .....	52	BRACKET ASSY., governor control shaft .....	37
AIR CLEANER ASSY. ....	39	BRACKET ASSY., throttle control knob shaft .....	34
AIR HEATER ASSY. ....	68	BRACKET ASSY., throttle control shaft to flywheel housing .....	34,37
ALARMSTAT (thermo switch) .....	67	BRACKET ASSY., time delay relay mounting .....	68
AMMETER, battery charging .....	65	BREATHER, rocker cover .....	53
ARM ASSY., exhaust valve rocker .....	21	BULB, warning .....	67
ARM ASSY., injector rocker .....	21	BUSHING, connecting rod piston pin .....	17
<b>B</b>			
BAFFLE, air cleaner .....	39	BUSHING, generator rubber insulator .....	83
BAFFLE, oil cooler .....	50	BUSHING, governor speed adjusting shaft sleeve .....	31
BAFFLE, rocker cover breather .....	54	BUSHING, governor speed adjusting terminal sleeve .....	32
BALL HEAD ASSY., governor .....	32	BUSHING, governor sub-cap .....	31
BASE, engine .....	82	BUSHING, oil pump cover .....	46
BEARING, accessory drive .....	21	BUSHING, oil pump driven gear .....	46
BEARING, blower drive gear hub support .....	44	BUSHING, oil pump idler gear .....	46
BEARING, blower rotor .....	44	BUSHING, piston pin .....	18
BEARING, clutch drive shaft .....	73	BUSHING, starter cable insulating .....	82
BEARING, clutch pilot .....	15	BUSHING, T/C governor drive shaft .....	74
BEARING, clutch shifter shaft .....	73	BUSHING, T/C pump hub .....	75
BEARING, fan shaft .....	58	BUSHING, T/C stator hub .....	75
BEARING, governor drive thrust .....	33	BUTTON, vernier throttle control lock .....	37
BEARING, governor driven shaft .....	33	<b>C</b>	
BEARING, governor operating shaft .....	28	CABINET ASSY., control .....	68
BEARING, governor pilot valve plunger thrust .....	33	CABLE, battery .....	64
BEARING, governor throttle shaft .....	28	CAGE, injector valve .....	25
BEARING, governor variable speed spring lever .....	30	CAM, blower drive coupling .....	45
BEARING, governor weight .....	30	CAM, governor cover .....	28
BEARING, governor weight riser thrust .....	30	CAM, raw water pump body offset .....	60
BEARING, governor weight shaft end .....	30	CAMSHAFT .....	18
BEARING, raw water pump .....	60	CAP, crankshaft .....	13
BEARING, reduction gear shaft .....	73	CAP, exhaust pipe rain .....	64
BEARING, T/C drive shaft main .....	74	CAP, exhaust valve spring .....	22
BEARING, T/C drive shaft pilot .....	75	CAP, expansion tank .....	59
BEARING, T/C governor drive shaft .....	74	CAP, fan hub .....	58
BEARING, T/C pressure pump .....	78	CAP, fuel tank .....	82
BEARING, T/C pressure pump idler gear .....	79	CAP, governor speed adjusting shaft spacer .....	31
BEARING, T/C pressure pump driven gear .....	78	CAP, governor weight housing .....	30
BEARING ASSY., idler gear .....	19	CAP, injector filter .....	23
BEARING SET, camshaft intermediate .....	18	CAP, injector shipping .....	23
BELL, alarm system .....	67	CAP, limiting speed governor low speed spring .....	30
BELT, crankshaft pulley .....	15	CAP, oil filler tube .....	52
BELT, generator drive .....	64	CAP, overspeed trip governor switch housing .....	68
BLADE, fan .....	57	CAP, radiator filler .....	57
BLOCK, engine rear mounting .....	83	CAP AND SPACER ASSY., fan hub .....	58
BLOCK ASSY., cylinder .....	9	CARRIER AND WEIGHT ASSY., governor .....	30
BLOWER ASSY. ....	42	CATCH, hood hold down clamp .....	80
BLOWER KIT, installation .....	42	CLAMP, air cleaner inlet pipe hose .....	40
BLOWER KIT, repair .....	42	CLAMP, blower drive cover packing .....	44
BODY, air heater strainer .....	68	CLAMP, fresh water pump inlet seal .....	55
BODY, raw water pump .....	60	CLAMP, hood hold down .....	80
BODY ASSY., injector .....	23	CLAMP, hood side panel .....	80
BOLT, air cleaner .....	39	CLAMP, injector .....	25
BOLT, crankshaft main bearing cap .....	13	CLAMP ASSY., air cleaner oil cup retaining .....	39
BOLT, crankshaft pulley retainer .....	15	CLIP, water by-pass tube .....	56
BOLT, rocker cover .....	23	CLUTCH ASSY. ....	70
BOLT, throttle control booster support .....	35	COIL ASSY., air heater .....	69
BRACKET, air compressor mounting .....	83	COLLAR, governor fuel rod spring .....	31
BRACKET, air shut-off solenoid .....	67	COLLAR, throttle control cross shaft .....	34,37
BRACKET, engine lifter .....	12	COLLAR, throttle control knob shaft .....	34
BRACKET, fan mounting .....	58	COLLAR ASSY., clutch release .....	72
		COMPRESSOR ASSY., air .....	83
		CONE, clutch drive shaft bearing .....	73
		CONE, T/C drive shaft main bearing .....	74
		CONE, vibration damper .....	14
		CONNECTION, flexible exhaust .....	64



PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>C (Cont'd)</b>			
CONNECTION, oil cooler radiator outlet .....	57	ELEMENT, fuel filter .....	26
CONNECTOR, fresh water pump cover .....	55	ELEMENT, fuel strainer .....	26
CONNECTOR, fuel pipe .....	27	ELEMENT, injector filter .....	23
CONTROL ASSY., vernier throttle .....	37	ELEMENT, oil filter .....	49
CONVERSION KIT, injector .....	23	EYE, throttle booster adjusting .....	35
CONVERTER ASSY., torque .....	74	<b>F</b>	
CORE, heat exchanger .....	59	FACING, clutch .....	71
CORE ASSY., oil cooler .....	50	FILTER ASSY., fuel .....	26
COUPLING, accessory drive .....	21	FILTER ASSY., lube oil .....	49
COUPLING, air compressor drive .....	83	FLANGE, exhaust .....	64
COUPLING, blower to water pump drive .....	44	FLANGE, exhaust manifold water outlet .....	62
COUPLING, hydraulic pump drive .....	85	FLANGE, fresh water pump outlet packing .....	55
COUPLING, raw water pump drive .....	61	FLANGE, oil cooler water hole .....	52
COUPLING, throttle control shaft to knob shaft .....	37	FLANGE, T/C drive shaft .....	74
COUPLING ASSY., blower drive .....	44	FLYWHEEL ASSY. ....	15
COVER, air heater .....	69	FOLLOWER, injector .....	23
COVER, balance weight .....	19	FOLLOWER ASSY., cam .....	22
COVER, blower housing end plate .....	44	FORK, fuel pump coupling .....	25
COVER, clutch release bearing sleeve .....	73	FORK, governor adjusting linkage spring .....	31
COVER, cylinder block hand hole .....	9	FORK, governor operating shaft .....	30
COVER, cylinder block water hole .....	9	<b>G</b>	
COVER, cylinder head governor hole .....	11	GAGE, fuel .....	82
COVER, flywheel housing hole .....	17	GAGE, oil pressure .....	65
COVER, fresh water pump .....	55	GAGE, oil temperature .....	65
COVER, generator set mounting cushion .....	82	GAGE, water temperature .....	66
COVER, governor weight housing .....	30	GASKET, air cleaner element .....	39
COVER, heat exchanger .....	59	GASKET, air compressor .....	83
COVER, oil cooler adaptor .....	50	GASKET, air heater cover .....	69
COVER, oil cooler housing .....	50	GASKET, air heater insulator .....	69
COVER, oil filter .....	49	GASKET, air inlet housing flange .....	41
COVER, oil pan .....	53	GASKET, air inlet housing striker plate .....	41
COVER, oil pump inlet screen .....	48	GASKET, balance weight cover .....	20
COVER, oil pump pad .....	46	GASKET, blower .....	42
COVER, raw water pump .....	60	GASKET, blower drive cover .....	44
COVER, T/C housing .....	75	GASKET, blower drive gear hub support .....	44
COVER, vernier throttle control .....	37	GASKET, breather oil separator .....	54
COVER ASSY., blower drive .....	44	GASKET, breather pipe .....	54
COVER ASSY., crankshaft front .....	13	GASKET, clutch release bearing sleeve cover .....	73
COVER ASSY., governor .....	28	GASKET, crankshaft front cover .....	13
COVER ASSY., oil pump .....	46	GASKET, cylinder block end plate .....	9
COVER ASSY., rocker .....	23	GASKET, cylinder block hand hole cover .....	9
COVER ASSY., tachometer drive .....	66	GASKET, cylinder block water hole cover .....	10
CRANKSHAFT ASSY. ....	12	GASKET, cylinder head governor hole cover .....	11
CUP, clutch drive shaft bearing .....	73	GASKET, cylinder head water and oil .....	11
CUP, generator set mounting cushion .....	82	GASKET, cylinder liner compression .....	10
CUP, T/C drive shaft main bearing .....	74	GASKET, dipstick .....	52
CUP, T/C freewheel roller .....	75	GASKET, engine lifter bracket .....	12
CUP ASSY., air cleaner .....	39	GASKET, exhaust manifold .....	62
CUSHION, engine front support elastic .....	82	GASKET, exhaust manifold cover plate .....	62
CUSHION, generator set mounting .....	82	GASKET, exhaust manifold flange .....	60
CYLINDER KIT .....	18	GASKET, exhaust outlet .....	64
<b>D</b>		GASKET, expansion tank cap .....	59
DAMPER, vibration .....	14	GASKET, fan shaft bearing .....	58
DEFLECTOR, injector spill .....	23	GASKET, flywheel housing .....	17
DIPSTICK .....	52	GASKET, flywheel housing hole cover .....	17
DISC, blower rotor fuel pump coupling .....	44	GASKET, fresh water pump .....	54
DISC, governor fuel rod spring .....	31	GASKET, fresh water pump cover .....	55
DISC, T/C flexible coupling .....	75	GASKET, fuel filter cover nut .....	26
DISC Assy., T/C clutch .....	71	GASKET, fuel filter cover shell .....	26
DOWEL, cylinder block .....	9	GASKET, fuel pump to blower .....	25
DOWEL, oil pump idler gear support .....	46	GASKET, fuel strainer cover .....	26
DRIVE ASSY., hydraulic governor .....	33	GASKET, fuel strainer cover screw .....	26
<b>E</b>		GASKET, governor cover .....	28,31
ELBOW, air inlet .....	40	GASKET, governor drive to governor .....	33
ELBOW, exhaust .....	64	GASKET, governor driven shaft spacer set screw .....	33
ELBOW, heat exchanger water inlet .....	60	GASKET, governor fuel rod .....	31
ELBOW, oil cooler water outlet .....	51	GASKET, governor housing dummy hole plug .....	31
ELBOW, water outlet manifold by-pass tube .....	56	GASKET, governor relief valve .....	33
ELECTRODE, air heater .....	69	GASKET, governor speed adjusting shaft sleeve .....	31
ELECTRODE, raw water system .....	59	GASKET, governor spring housing .....	30
		GASKET, governor to blower .....	28,31
		GASKET, governor to cylinder head .....	28,31
		GASKET, governor weight housing cap .....	30
		GASKET, governor weight housing cover .....	30

PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>G (Cont'd)</b>			
GASKET, heat exchanger .....	59	GUARD, fan .....	59
GASKET, heat exchanger water tube .....	60	GUIDE, cam follower .....	22
GASKET, hydraulic pump .....	85	GUIDE, clutch release bearing .....	72
GASKET, injector filter cap .....	23	GUIDE, dipstick .....	52
GASKET, oil cooler .....	50	GUIDE, exhaust valve .....	22
GASKET, oil cooler adaptor cover .....	51	GUIDE, variable speed spring plunger .....	31
GASKET, oil cooler adaptor to block .....	50		
GASKET, oil cooler by-pass valve .....	51	<b>H</b>	
GASKET, oil cooler by-pass valve plug .....	51	HARNESSESS, wiring .....	68
GASKET, oil cooler inlet and outlet tube .....	51	HEAD ASSY., cylinder .....	10
GASKET, oil cooler radiator outlet connection .....	57	HOOD, air cleaner air inlet .....	39
GASKET, oil cooler water hole flange .....	52	HOOD ASSY., engine .....	80
GASKET, oil cooler water outlet elbow .....	51	HOOD ASSY., generator .....	80
GASKET, oil filler tube .....	52	HOOD ASSY., radiator .....	80
GASKET, oil filler tube adaptor .....	52	HOSE, air cleaner inlet pipe .....	40
GASKET, oil filter cover .....	49	HOSE, fresh water pump seal .....	55
GASKET, oil filter cover nut .....	49	HOSE, heat exchanger water outlet tube .....	60
GASKET, oil filter pressure regulator plug .....	50	HOSE, oil cooler water outlet .....	51
GASKET, oil pan .....	53	HOSE, radiator inlet .....	57
GASKET, oil pan cover .....	53	HOSE, radiator outlet .....	57
GASKET, oil pan drain plug .....	53	HOSE, radiator overflow pipe .....	57
GASKET, oil pressure regulator body .....	48	HOSE, radiator inlet .....	57
GASKET, oil pump inlet .....	47	HOSE, radiator outlet .....	57
GASKET, oil pump outlet .....	48	HOSE, radiator overflow pipe .....	57
GASKET, oil pump pad cover .....	46	HOUR METER .....	66
GASKET, oil pump relief valve .....	46	HOUSING, air inlet .....	41
GASKET, radiator filler cap .....	57	HOUSING, blower .....	42
GASKET, raw water pump .....	61	HOUSING, limiting speed governor spring adjusting screw .....	30
GASKET, raw water pump cover .....	60	HOUSING, oil cooler .....	50
GASKET, reduction gear cover plate .....	73	HOUSING, overspeed trip governor switch .....	68
GASKET, reduction gear housing .....	73	HOUSING ASSY., flywheel .....	16
GASKET, rocker cover .....	23	HOUSING ASSY., governor control .....	28
GASKET, rocker cover breather .....	54	HOUSING ASSY., governor variable speed spring .....	30
GASKET, starting fluid strainer .....	85	HOUSING AND WEIGHT ASSY., governor .....	30
GASKET, tachometer drive adaptor .....	67	HUB, accessory drive pulley .....	21
GASKET, thermostat housing .....	56	HUB, air compressor drive .....	83
GASKET, T/C bearing housing .....	74	HUB, blower drive gear .....	44
GASKET, T/C governor drive shaft adaptor .....	74	HUB, blower rotor gear .....	44
GASKET, T/C housing cover .....	75	HUB, T/C flexible coupling .....	75
GASKET, T/C pressure pump .....	75	HUB ASSY., idler gear .....	19
GASKET, T/C pressure pump cover .....	78	HUB ASSY., T/C pump .....	75
GASKET, water by-pass tube .....	56	HUB ASSY., vibration damper .....	14
GASKET, water flange .....	60		
GASKET, water outlet manifold .....	55	<b>I</b>	
GASKET KIT, basic engine overhaul .....	9	IMPELLER, raw water pump .....	61
GASKET KIT, cylinder head .....	10	IMPELLER AND SEAL ASSY., water pump .....	54
GASKET KIT, heat exchanger overhaul .....	59	INJECTOR ASSY. ....	23
GASKET KIT, oil pump overhaul .....	45	INSERT, cylinder liner .....	18
GEAR, balancer shaft .....	19	INSERT, exhaust valve .....	22
GEAR, blower drive .....	44	INSERT, water pump body .....	54
GEAR, camshaft .....	19	INSULATOR, air heater .....	69
GEAR, crankshaft timing .....	13	INSULATOR, generator rubber .....	83
GEAR, flywheel ring .....	15	INSULATOR, time delay relay .....	68
GEAR, fuel pump .....	25		
GEAR, governor oil pump .....	33	<b>K</b>	
GEAR, hydraulic pump drive .....	85	KEY, clutch .....	70
GEAR, idler .....	19	KEY, PTO pulley .....	70
GEAR, injector .....	23	KEY, T/C drive shaft .....	74
GEAR, oil pump drive .....	46	KEY, T/C ground sleeve .....	74
GEAR, raw water pump drive .....	61	KNOB, governor fuel rod .....	31
GEAR, reduction gear drive .....	73	KNOB, throttle control .....	34,36,37
GEAR, reduction gear driven .....	73	KNOB, vernier throttle control .....	37
GEAR, T/C governor drive .....	74		
GEAR, T/C pressure pump .....	79	<b>L</b>	
GEAR, T/C pressure pump driven .....	78	LAMP ASSY., warning .....	67
GEAR, vernier throttle control worm .....	37	LEAD, air heater coil .....	69
GEAR ASSY., oil pump driven .....	46	LEVER, air inlet housing shutdown valve .....	42
GEAR ASSY., oil pump idler .....	46	LEVER, clutch release (toggle) .....	72
GEAR ASSY., T/C pressure pump idler .....	79	LEVER, governor control .....	36,39
GEAR SET, blower rotor .....	44	LEVER, governor throttle shaft .....	28
GENERATOR ASSY., battery charging .....	64	LEVER, governor speed adjusting .....	31
GENERATOR ASSY., power .....	68	LEVER, governor speed adjusting floating .....	31
GLAND, heat exchanger seal retainer .....	59	LEVER, governor speed adjusting terminal .....	32
GOVERNOR ASSY., hydraulic .....	31	LEVER, governor upper operating shaft .....	28
GOVERNOR ASSY., mechanical .....	28	LEVER, governor variable speed spring .....	30
GOVERNOR ASSY., overspeed .....	68		

PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>L (Cont'd)</b>			
LEVER, injector control tube .....	34	PISTON, governor servo-meter .....	32
LEVER, throttle control .....	34,36,37	PISTON, T/C lockup clutch .....	75
LEVER, throttle control cross shaft .....	35,37	PISTON ASSY. ....	18
LEVER, throttle control rod .....	34,37,38	PLATE, accessory drive .....	21
LEVER, throttle control shaft .....	38	PLATE, air compressor drive .....	83
LEVER, T/C pressure pump selector valve .....	78	PLATE, air inlet housing shutdown control .....	42
LEVER ASSY., governor differential .....	30	PLATE, air inlet housing striker .....	41
LEVER ASSY., injector control .....	34	PLATE, blower rotor gear hub .....	44
LINER, cylinder .....	18	PLATE, clutch pressure .....	71
LINK, governor starting solenoid .....	33	PLATE, cylinder block end .....	9
LINK, injector control tube to governor .....	34	PLATE, exhaust manifold cover .....	62
LINK, throttle control shaft lever .....	39	PLATE, hydraulic pump drive .....	85
LOCK, exhaust valve spring .....	23	PLATE, raw water pump body wear .....	60
LOCKNUT, lim. speed gov. spring retainer adjusting screw .....	30	PLATE, raw water pump drive .....	61
LOCKPLATE, air inlet housing shutdown .....	42	PLATE, throttle control indicator .....	34,36,37
LOCKRING, fan pulley .....	58	PLATE, time delay relay mounting .....	68
<b>M</b>		PLATE, T/C flexible coupling .....	75
MANIFOLD, exhaust .....	61	PLATE, T/C lockup clutch .....	75
MANIFOLD, water outlet .....	55	PLATE, T/C lockup clutch reaction .....	75
MANIFOLD ASSY., fuel .....	27	PLATE, T/C pilot bearing retainer .....	75
MOTOR ASSY., starting .....	65	PLATE ASSY., blower housing end .....	44
MOUNTING ASSY., instrument panel (anti-vibration) .....	65	PLUG, oil cooler by-pass valve .....	51
MOUNTING ASSY., time delay relay (anti-vibration) .....	68	PLUG, oil filter pressure regulator .....	50
MUFFLER, exhaust .....	62	PLUG, oil pump relief valve .....	46
<b>N</b>		PLUG, oil pressure regulator .....	48
NOZZLE, air heater spray .....	68	PLUNGER, governor variable speed spring .....	31
NOZZLE, connecting rod spray .....	17	PLUNGER, limiting speed governor low speed spring .....	30
NOZZLE, cylinder head water .....	10	PLUNGER, oil cooler by-pass valve .....	51
NOZZLE, starting aid kit .....	85	PLUNGER ASSY., governor pilot valve .....	32
NUT, blower drive gear hub .....	44	PLUNGER AND BUSHING ASSY., injector .....	23
NUT, clutch adjusting .....	72	POWER TAKE-OFF ASSY. ....	70
NUT, clutch release bearing lock .....	72	PULLEY, accessory drive .....	20
NUT, cylinder head .....	11	PULLEY, air compressor .....	83
NUT, fuel filter cover .....	26	PULLEY, crankshaft .....	15
NUT, fuel strainer cover .....	26	PULLEY, fan .....	58
NUT, injector valve .....	23	PULLEY, generator .....	64
NUT, throttle control booster support .....	35	PUMP ASSY., air heater .....	69
<b>O</b>		PUMP ASSY., fresh water .....	54
ORIFICE, connecting rod spray .....	17	PUMP ASSY., fuel .....	25
OVERHAUL KIT, injector .....	23	PUMP ASSY., hydraulic .....	84
<b>P</b>		PUMP ASSY., oil .....	45
PACKING, fresh water pump outlet .....	55	PUMP ASSY., raw water .....	60
PACKING, variable speed governor lever shaft .....	31	PUMP ASSY., starting aid kit .....	85
PAINT, engine touch-up .....	85	PUMP ASSY., torque converter .....	74
PAN, oil .....	53	PUMP ASSY., T/C pressure .....	75
PANEL, hood side .....	82	PUNCTURING TOOL, starting fluid capsule .....	85
PANEL, instrument mounting .....	65	<b>R</b>	
PANEL ASSY., rear hood support .....	80	RACK ASSY., injector .....	23
PILLOW BLOCK UNIT (bearing) .....	73	RADIATOR ASSY. ....	56
PIN, governor differential lever .....	30	RECONDITING KIT, water pump .....	54
PIN, governor operating shaft lever .....	30	REGULATOR ASSY., oil pressure .....	48
PIN, governor speed adjusting lever .....	31	RELAY, alarm bell .....	67
PIN, governor weight .....	30	RELAY ASSY., time delay .....	68
PIN, injector control tube end .....	34	REPLACEMENT KIT, fresh water pump seal .....	55
PIN, injector control tube link .....	34	RESISTOR, air heater .....	69
PIN, injector stop .....	23	RESISTOR ASSY., time delay relay .....	68
PIN, piston .....	18	RETAINER, blower drive coupling .....	45
PIN, vernier throttle control lock button .....	37	RETAINER, blower rotor bearing .....	44
PIPE, air cleaner to inlet housing .....	40	RETAINER, cam and balancer shaft gear nut .....	19
PIPE, blower drive bearing oil .....	48	RETAINER, clutch drive shaft bearing .....	73
PIPE, breather .....	53	RETAINER, crankshaft pulley .....	15
PIPE, oil pump inlet .....	46	RETAINER, fan bearing .....	58
PIPE, oil pump outlet .....	48	RETAINER, fan shaft bearing seal .....	58
PIPE ASSY., fuel .....	27	RETAINER, heat exchanger seal .....	59
		RETAINER, idler gear bearing .....	19
		RETAINER, injector gear .....	23
		RETAINER, limiting speed governor high speed spring .....	30
		RETAINER, oil pump inlet screen .....	48
		RETAINER, piston pin .....	18
		RETAINER, push rod .....	22
		RETAINER, throttle shaft packing .....	28
		RETAINER, T/C drive shaft flange .....	74
		RETAINER, T/C drive shaft main bearing .....	74
		RETAINER, variable speed spring .....	31
		RETAINER ASSY., accessory drive .....	21
		RETAINER ASSY., drive pulley hub oil seal .....	21
		RETAINER ASSY., tachometer .....	65

PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>R (Cont'd)</b>			
RING, air cleaner baffle snap .....	39	SEAL RING, T/C pump to flywheel .....	75
RING, blower drive shaft .....	45	SEAL RING, starting aid kit pump plunger .....	85
RING, camshaft intermediate bearing lock .....	18	SEAT, blower drive coupling spring .....	45
RING, clutch driving .....	71	SEAT, exhaust valve spring .....	23
RING, cylinder head oil seal .....	10	SEAT, injector valve .....	25
RING, cylinder head water hole seal .....	11	SEAT, limiting speed governor low speed spring .....	30
RING, governor drive shaft .....	33	SEAT, push rod spring .....	22
RING, governor oil pump housing seal .....	33	SEPARATOR ASSY., breather oil .....	54
RING, injector hole tube seal .....	25	SHAFT, accessory drive .....	21
RING, injector seal .....	23	SHAFT, air inlet housing shutdown valve .....	42
RING, piston pin lock .....	18	SHAFT, balancer .....	18
RING, raw water pump bearing retainer .....	60	SHAFT, blower drive .....	45
RING, T/C drive shaft to converter housing piston .....	74	SHAFT, clutch drive .....	73
RING, T/C governor drive shaft bearing snap .....	74	SHAFT, fan .....	58
RING, T/C ground sleeve to pump piston .....	75	SHAFT, fuel pump .....	25
RING, T/C pressure pump idler gear shaft seal .....	79	SHAFT, governor drive .....	33
RING, T/C pressure pump shaft seal .....	78	SHAFT, governor driven .....	33
RING, T/C pump to hub snap .....	75	SHAFT, governor operating .....	28
RING, trunnion mounting support cushion .....	83	SHAFT, governor speed adjusting .....	31
RING SET, piston .....	18	SHAFT, governor speed adjusting terminal .....	32
RISER, governor .....	30	SHAFT, governor variable speed spring .....	30
ROD, air shut-off solenoid control .....	67	SHAFT, oil pump drive .....	45
ROD, governor fuel .....	31,34	SHAFT, oil pump driven gear .....	46
ROD, hood tie .....	82	SHAFT, raw water pump .....	60
ROD, push .....	22	SHAFT, reduction gear .....	73
ROD, throttle control .....	34,37,38	SHAFT, tachometer drive .....	66
ROD ASSY., air cleaner side .....	39	SHAFT, throttle control .....	35,37,38
ROD ASSY., connecting .....	17	SHAFT, throttle control cross .....	34,37
ROLLER, T/C freewheel .....	75	SHAFT, throttle control knob .....	34,36,37
ROLLER SET, cam follower .....	22	SHAFT, T/C drive .....	74
ROTOR ASSY., blower .....	42	SHAFT, T/C governor drive .....	74
ROTOR SET, blower .....	42	SHAFT, T/C pressure pump .....	78
<b>S</b>		SHAFT, T/C pressure pump driven gear .....	78
SCREEN, air cleaner .....	39	SHAFT, T/C pressure pump idler gear .....	79
SCREEN, air heater strainer .....	69	SHAFT, vernier throttle control .....	37
SCREEN, blower .....	42	SHAFT ASSY., governor throttle .....	28
SCREEN, fuel tank filler .....	82	SHAFT ASSY., rocker arm .....	22
SCREEN, oil pump inlet .....	47	SHAFT ASSY., tachometer drive flexible .....	66
SCREW, governor hi-speed stop .....	32	SHAFT ASSY., water pump .....	54
SCREW, governor load limit .....	31	SHAFT AND PLUG, blower rotor .....	44
SCREW, governor low speed spring adjusting .....	30	SHELL, fuel filter .....	26
SCREW ASSY., governor buffer .....	31	SHELL, fuel strainer .....	26
SEAL, accessory drive oil .....	21	SHELL, oil filter .....	49
SEAL, blower drive cover .....	44	SHELL ASSY., radiator .....	57
SEAL, blower housing end plate .....	44	SHELL SET, connecting rod bearing .....	18
SEAL, clutch drive shaft bearing oil .....	73	SHELL SET, main bearing .....	13
SEAL, clutch shifter shaft .....	73	SHIM, blower rotor gear .....	44
SEAL, crankshaft oil (front) .....	12	SHIM, oil pump .....	45
SEAL, crankshaft oil (rear) .....	13	SHIM, pillow block .....	73
SEAL, drive pulley hub oil .....	21	SHIM, T/C main bearing retainer .....	74
SEAL, fan shaft .....	58	SHIM, variable speed governor spring .....	31
SEAL, fresh water pump inlet .....	55	SHROUD, fan .....	59
SEAL, fuel pump oil .....	25	SLEEVE, clutch release .....	72
SEAL, generator drive oil .....	64	SLEEVE, governor driven shaft .....	33
SEAL, governor fuel rod .....	31	SLEEVE, T/C governor drive .....	74
SEAL, governor speed adjusting shaft oil .....	31	SLEEVE, T/C ground .....	74
SEAL, governor throttle shaft .....	28	SLEEVE, T/C oil seal .....	74
SEAL, heat exchanger .....	59	SLEEVE, T/C pressure pump bearing .....	78
SEAL, raw water pump bearing .....	60	SLEEVE ASSY., clutch release bearing .....	72
SEAL, reduction gear shaft oil .....	73	SLEEVE ASSY., governor speed adjusting shaft .....	31
SEAL, tachometer drive cover oil .....	67	SLEEVE ASSY., governor speed adjusting terminal .....	32
SEAL, T/C drive shaft main bearing oil .....	74	SLINGER, crankshaft oil .....	13
SEAL, T/C ground sleeve retainer oil .....	74	SLINGER, fresh water pump shaft .....	54
SEAL, T/C lockup clutch piston .....	75	SLINGER, raw water pump shaft .....	61
SEAL, T/C pressure pump body .....	78	SOLENOID, air shut-off .....	67
SEAL, T/C pressure pump selector valve oil .....	78	SOLENOID, governor starting .....	69
SEAL, water outlet manifold .....	55	SPACER, accessory drive plate .....	21
SEAL ASSY., raw water pump shaft .....	61	SPACER, blower rotor gear hub .....	44
SEAL RING, air heater pump plunger .....	69	SPACER, crankshaft front oil seal .....	13
SEAL RING, air inlet housing shutdown valve shaft .....	42	SPACER, engine front support .....	82
SEAL RING, flywheel bolt .....	75	SPACER, fan shaft bearing .....	58
SEAL RING, T/C hub to pump .....	75	SPACER, generator rubber insulator .....	83
SEAL RING, T/C oil drain plug .....	75	SPACER, governor drive shaft bearing .....	33
		SPACER, governor fuel rod .....	31
		SPACER, governor low speed spring .....	85
		SPACER, hydraulic pump drive .....	54
		SPACER, rocker cover breather .....	74
		SPACER, T/C drive shaft main bearing .....	74
		SPACER, T/C governor drive shaft bearing .....	74
		SPACER ASSY., idler gear hole .....	19
		SPRING, air inlet housing shutdown valve .....	42

PART NAME	PAGE NO.	PART NAME	PAGE NO.
<b>S (Cont'd)</b>			
SPRING, blower drive coupling	45	TUBE, fuel drain	28
SPRING, clutch pressure plate	71	TUBE, fuel filter to manifold	27
SPRING, exhaust valve	22	TUBE, fuel pump to fuel filter	27
SPRING, fuel pump valve retaining	25	TUBE, fuel strainer to fuel pump	27
SPRING, governor cam control	28	TUBE, governor control wire	36
SPRING, governor fuel rod	31	TUBE, injector hole	25
SPRING, governor lever retracting	36	TUBE, oil cooler to torque converter tank	80
SPRING, governor low speed	30	TUBE, oil cooler water outlet hose support	51
SPRING, governor speeder	32	TUBE, oil filler	52
SPRING, governor starting solenoid	33	TUBE, radiator inlet	57
SPRING, governor variable speed	31	TUBE, radiator outlet	57
SPRING, injector control tube	34	TUBE, torque converter tank to pump	79
SPRING, injector filter	23	TUBE, torque converter to oil cooler	79
SPRING, injector plunger	23	TUBE, torque converter to tank	80
SPRING, injector valve	25	TUBE ASSY., air box drain	10
SPRING, oil cooler by-pass valve	51	TUBE ASSY., air compressor booster inlet	84
SPRING, oil filter	49	TUBE ASSY., air compressor oil drain	83
SPRING, oil filter pressure regulator	50	TUBE ASSY., air compressor oil supply	83
SPRING, oil pressure regulator	48	TUBE ASSY., air compressor water inlet	83
SPRING, oil pump relief valve	46	TUBE ASSY., air compressor water outlet	83
SPRING, push rod	22	TUBE ASSY., air heater to pressure switch	69
SPRING, throttle booster	35	TUBE ASSY., cylinder head air inlet	54
SPRING, throttle control shaft tension	34,36,37	TUBE ASSY., exhaust manifold water inlet	60
SPRING, T/C freewheel roller	75	TUBE ASSY., expansion tank overflow	60
SPRING, T/C lockup clutch piston release	75	TUBE ASSY., fuel pump drain	26
SPRING, T/C pressure pump relief valve	78	TUBE ASSY., governor bearing lubrication	31
SPRING, T/C pressure pump selector valve	78	TUBE ASSY., governor operating oil	33
SPRING, vernier throttle control lock	37	TUBE ASSY., heat exchanger water inlet	60
SPRING, vernier throttle control lock button pin	37	TUBE ASSY., heat exchanger water outlet	60
STARTING AID KIT, cold weather	85	TUBE ASSY., injector control	33
STATOR ASSY., torque converter	75	TUBE ASSY., oil cooler inlet and outlet	51
STOP, injector valve	25	TUBE ASSY., oil filter inlet	50
STOP, variable speed spring retainer	31	TUBE ASSY., oil filter outlet	50
STRAINER, oil filler tube	52	TUBE ASSY., oil pan drain	53
STRAINER ASSY., fuel	26	TUBE ASSY., raw water pump inlet	60
STRAINER ASSY., starting fluid	85	TUBE ASSY., raw water pump outlet	60
STRAP, air cleaner mounting	40	TUBE ASSY., water by-pass	56
STRAP, generator adjusting	64	TURBINE, torque converter	75
STUD, cylinder head	11		
STUD, exhaust manifold	62	<b>V</b>	
STUD, governor drive to governor	33	VALVE, air heater pump	69
STUD, governor oil pump gear to base	33	VALVE, air heater supply shut-off	69
STUD, governor starting solenoid	33	VALVE, air inlet housing shutdown	41
STUD, injector clamp	25	VALVE, automatic shutdown solenoid	68
STUD, oil filter center	50	VALVE, exhaust	22
STUD, rocker cover	23	VALVE, fuel pump	25
STUD, water outlet manifold	55	VALVE, fuel supply check	27
STUD, water pump body	54	VALVE, injector	25
SUPPORT, blower drive coupling	45	VALVE, injector check	23
SUPPORT, engine and generator hood center	82	VALVE, oil filter pressure regulator	50
SUPPORT, engine front	82	VALVE, oil pressure regulator	48
SUPPORT, engine rear	83	VALVE, oil pump relief	46
SUPPORT, engine rear hood	80	VALVE, starting aid kit pump	85
SUPPORT, oil pump idler gear	46	VALVE, T/C pressure pump	78
SUPPORT, pillow block	73	VALVE, T/C pressure pump selector	78
SUPPORT, T/C rear	75	VALVE ASSY., governor relief	33
SUPPORT ASSY., blower drive gear hub	44	VALVE ASSY., injector	23
SUPPORT AND CAP ASSY., front trunnion mounting	83	VALVE ASSY., oil cooler by-pass	51
SWITCH, air heater pump pressure	69		
SWITCH, alarm shut-off	67	<b>W</b>	
SWITCH, engine starting	66	WASHER, blower drive gear hub thrust	44
SWITCH, hour meter pressure	66	WASHER, blower rotor gear retaining	44
SWITCH, oil pressure	67	WASHER, cam and balancer shaft end bearing thrust	18
SWITCH, overspeed trip governor	68	WASHER, crankshaft main bearing thrust	13
		WASHER, governor drive thrust bearing	33
<b>T</b>		WASHER, raw water pump bearing seal felt	61
TACHOMETER	65	WASHER, throttle control tube brake	34,36,37
TAG, injector number	23	WEIGHT, balancer	18
TANK ASSY., expansion	59	WEIGHT ASSY., governor	30
THERMOSTAT ASSY.	56	WICK ASSY., clutch pilot bearing oil	12
THROWER ASSY., fresh water pump	55	WIRE, injector spray tip cleaning	85
TIP, injector spray	23	WIRE ASSY., air inlet housing shutdown control	42
TIP KIT, injector spray	23	WIRE ASSY., governor control	36
TUBE, air box drain extension	10	WORM, vernier throttle control	37
TUBE, air cleaner mounting	41		
		<b>Y</b>	
		YOKE, T/C drive shaft	74

— NOTES —