



**Parts List  
M-25  
M-25 XP**

Part number 200142  
Edition 1  
October, 1990





CONTENTS

PAGE

Alternator Group .....	44 - 47
Bell Housing Group .....	52 - 53
Camshaft Group .....	18 - 19
Control Panels .....	60 - 62
Couplings .....	64
Crankcase Group .....	2-3
Cylinder Head Group .....	6 - 7
Engine Stop Lever Group .....	20 - 21
Flywheel Group .....	24 - 25
Fuel Camshaft Group .....	34 - 35
Fuel Filter Group .....	38 - 39
Gear Case Group .....	8 - 9
Governor Group .....	30 - 31
Head Cover Group .....	12 - 13
Heat Exchanger Group - New .....	48 - 49
Heat Exchanger Group - Old .....	50 - 51
Inlet Manifold Group .....	14 - 15
Main Bearing Case Group .....	10 - 11
Name Plate Group .....	42 - 43
Nozzle Holder .....	40 - 41
Nozzle Holder Group .....	26 - 27
Oil Pan Group .....	4 - 5
Orberdorfer Water Pump .....	57
Piston Crankshaft Group .....	22 - 23
Sherwood Water Pump .....	56
New Sherwood Water Pump .....	58
Spare Parts & Gaskets Sets .....	63
Speed Control Plate Group .....	28 - 29

Throttle Bracket Group .....	54 - 55
Valve Rocker Arm Group .....	16 - 17
Water Flange Group .....	32 - 33
Water Pump Group .....	36 - 37
Wiring Diagram .....	59

## **HOW TO ORDER PARTS**

### **WHEN ORDERING PARTS, SPECIFY MODEL AND SERIAL NUMBER OF ENGINE.**

This information is absolutely essential for the correct execution of your order. We do not hold ourselves responsible for errors or delays where this is lacking.

### **SERIAL NUMBER LOCATIONS**

Stamped on upper left hand corner of block - ignition side - facing flywheel end (front of engine).

Stamped in block directly above flywheel housing, under front oil filler.

On engine nameplate located on reverse gear housing cover.

On engine nameplate located on engine manifold.

### **RETURNED PARTS**

Parts may be returned for credit subject to authorization by the factory, factory inspection and acceptance upon receipt, and a 15% Re-Stocking charge.

A return goods authorization number must be requested from the factory prior to returning the parts.

All return shipments must be fully PREPAID and clearly marked with shipper's name and address.

### **LOSS OR DAMAGE IN TRANSIT**

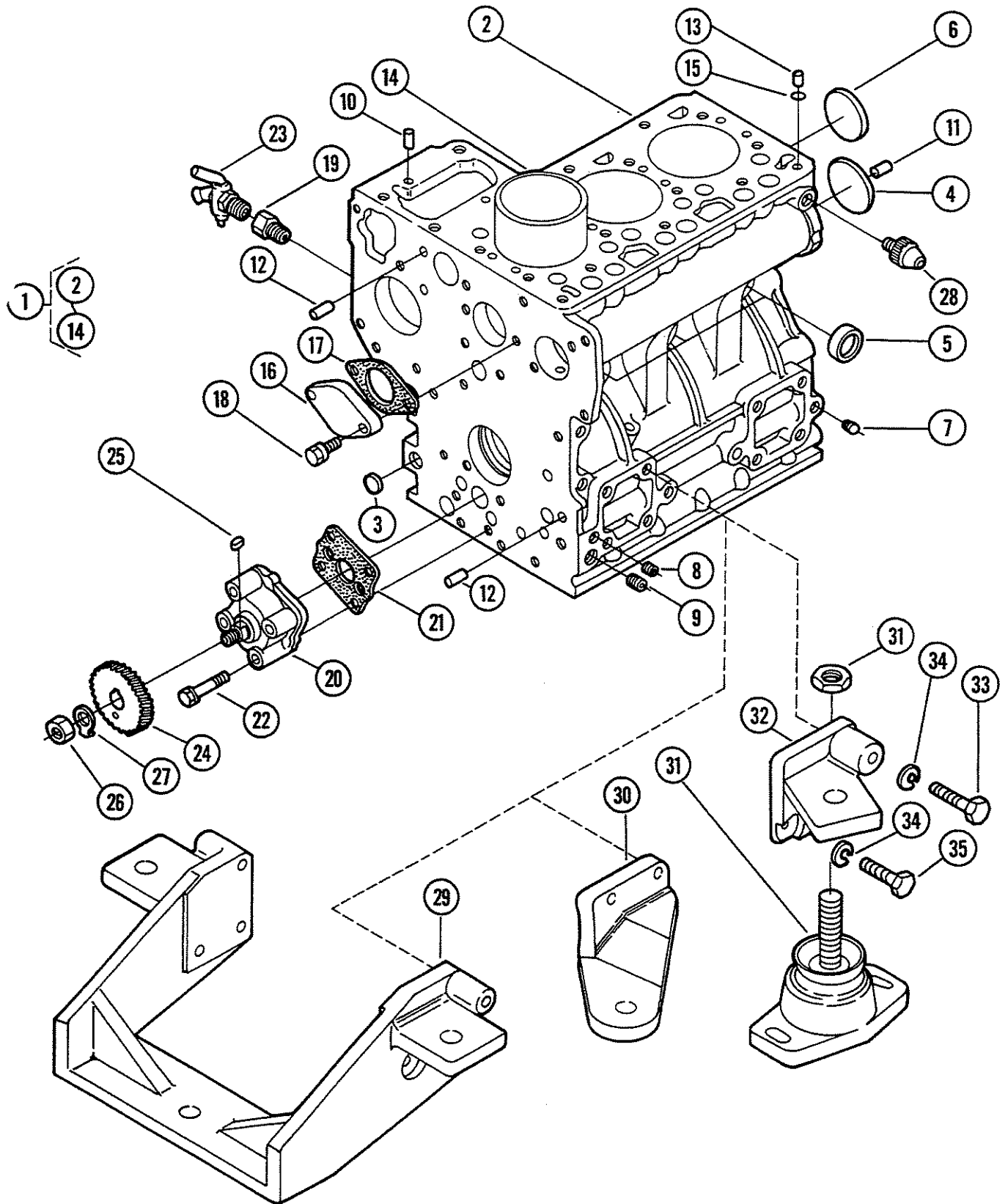
Our responsibility ceases upon delivery of shipments to the common carrier. Any claims for loss or damage in transit must be filed with the transportation company.

### **SHORTAGE CLAIMS**

All claims for shortage must be filed within ten (10) days after receipt of shipment and must be accompanied by packing list.

**ALL ORDERS FOR REPAIR PARTS MUST BE PLACED THROUGH OUR DISTRIBUTOR/DEALER IN YOUR AREA.**

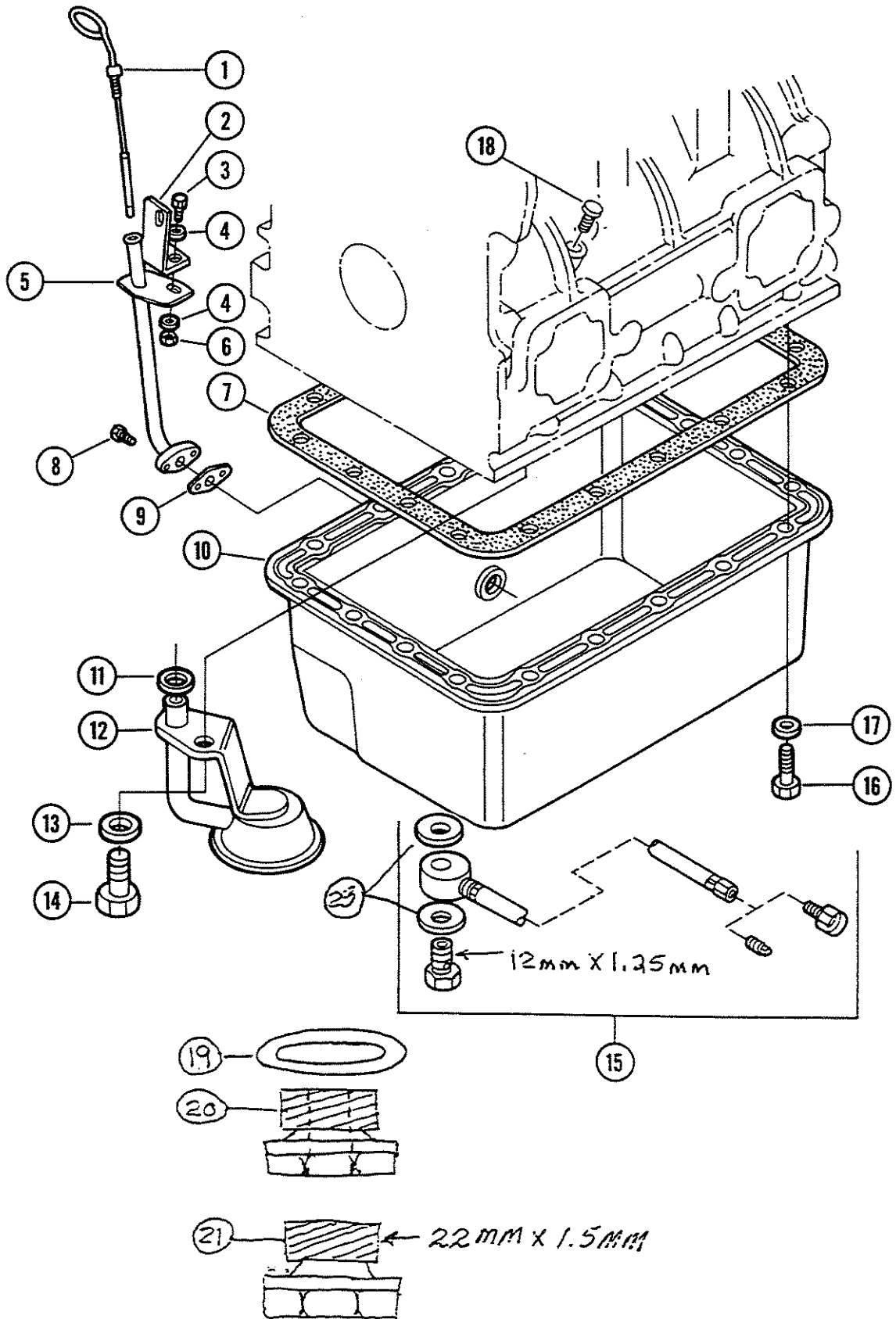
# CRANKCASE GROUP



## CRANKCASE GROUP

Item	Part No.	Unit	Description
1	300129	1	Complete Crankcase
1A	302182		Complete Block M-25XP
2			Order by Item No. 1
3	299352	3	Expansion Plug
4	299353	1	Expansion Plug
5	299354	5	Sealing Cap
6	299355	1	Sealing Cap
7	299356	6	Plug
8	299357	3	Plug
9	299358	1	Plug
10	299359	2	Straight Pin
11	299360	2	Straight Pin
12	301484	2	Pipe Pin
13	301485	1	Pipe Pin
14	300130	3	Cylinder Liner
14A	302272		Cylinder Liner M-25XP
15	299362	1	O-Ring
16	299363	1	Water Cover
17	299364	1	Water Cover Gasket
18	299462	2	Bolt
19	301486	1	Drain Cock Plug
20	299405	1	Oil Pump Assembly
21	299406	1	Oil Pump Packing
22	300143	4	Bolt
23	301487	1	Drain Cock
24	299407	1	Oil Pump Drive Gear
25	299408	1	Feather Key
26	299409	1	Nut
27	299413	1	Claw Washer
28	299964	1	Oil Switch
29	301057	1	3 & 4 Point Combination Mount
30	300284	1	Front Mount Port Side
	300286	1	Front Mount Starboard Side
31	300514	4	Flexible Mount & Nut
32	300961	1	Front Mount Port Side
	300736	1	Front Mount Starboard Side
33	298617	2	Hex Head Cap Screw
34	298463	6	Washer Split Lock
35	299510	4	Screw Hex Head Cap

# OIL PAN GROUP

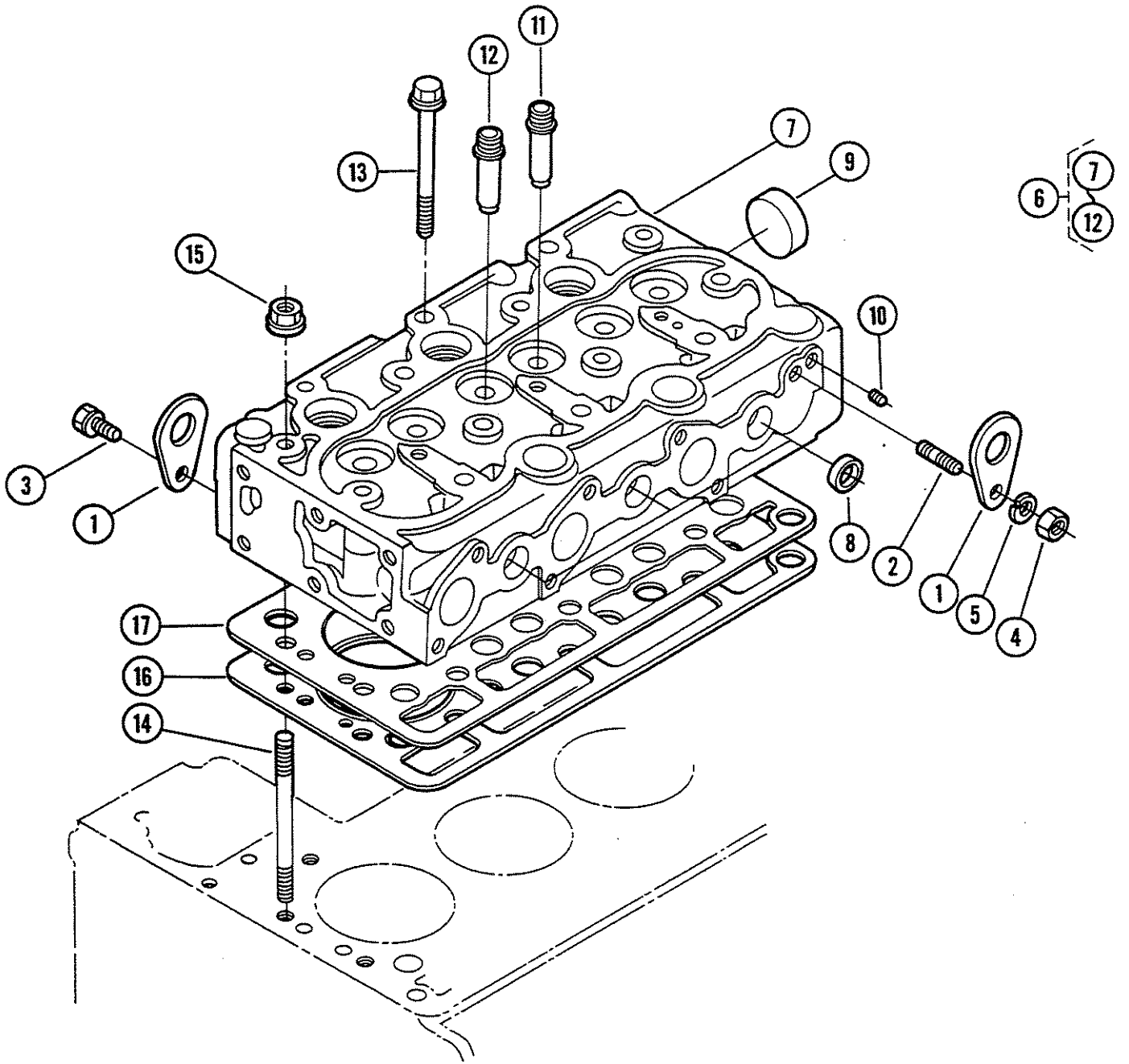




## OIL PAN GROUP

Item	Part No.	Unit	Description
1	300134	1	Gauge Oil
2	301488	1	Bracket
3	300206	1	Bolt
4	300031	2	Washer Plain
5	300720	1	Gauge Oil Guide
6	300208	1	Nut
7	300132	1	Gasket Oil Pan
8	299462	2	Bolt
9	302237	1	Gasket Oil Gauge
10	300131	1	Oil Pan
11	299373	1	O-Ring
12	300133	1	Filter Oil
13	301497	1	Split Washer
14	300008	1	Bolt
15	300724	1	Drain Kit
16	299368	18	Bolt
17	299369	18	Washer Spring
18	300207	1	Plug
19	300612	1	Oil Drain Plug Gasket
20	301023	1	Drain Plug Adapter (For Hose Kit)
21	300151	1	Drain Plug Only
22	301877	1	Dip Stick (For Block Mtg) GEN'S
23	301431	2	Washer Oil Drain Kit 50°

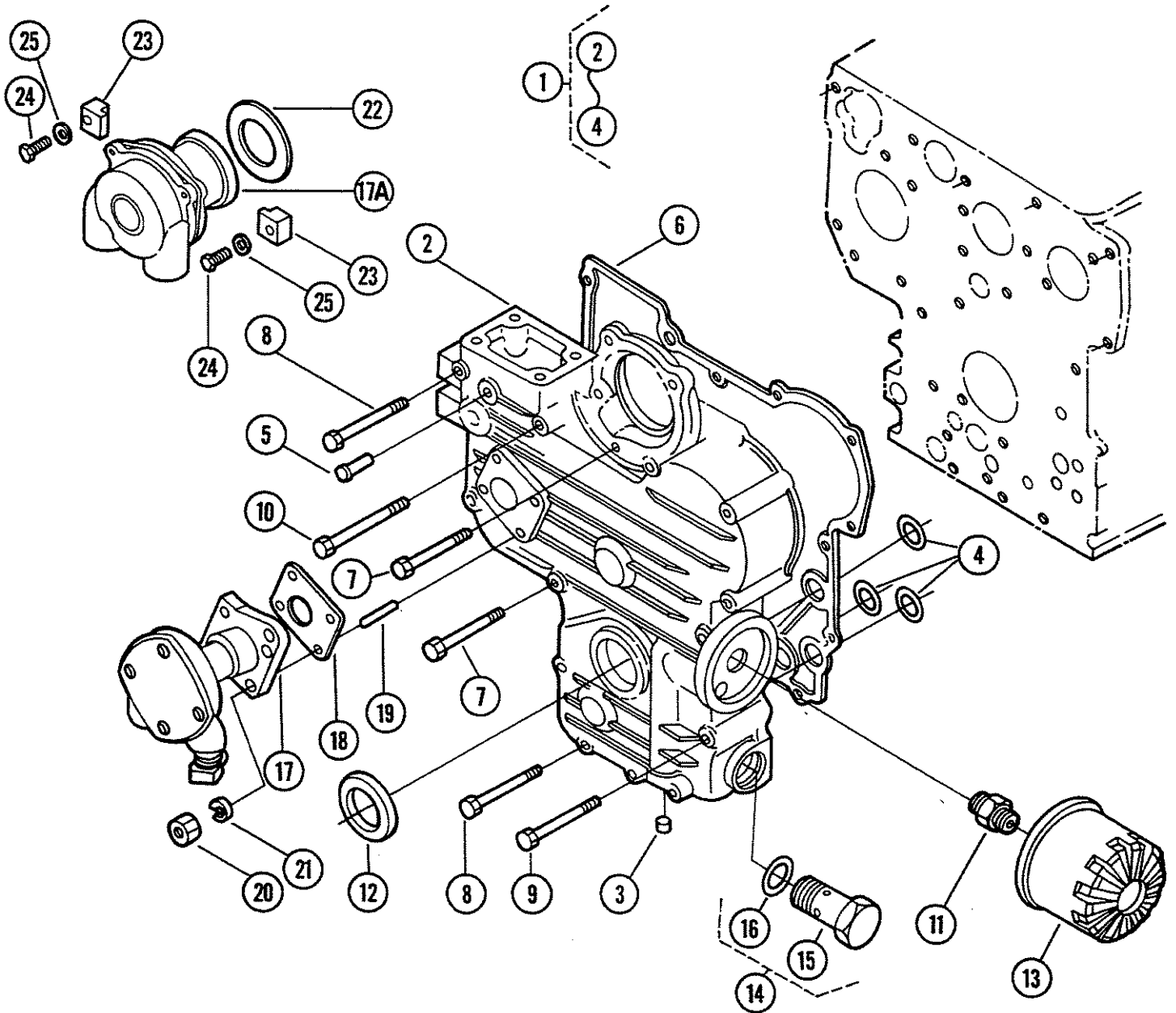
# CYLINDER HEAD GROUP



## CYLINDER HEAD GROUP

Item	Part No.	Unit	Description
1	298666	2	Engine Hook
2	300135	1	Stud
3	300008	1	Bolt
4	299529	1	Nut
5	299515	2	Spring Washer
6	300136	1	Cylinder Head Assembly
6A	302183		Cylinder Head Assembly M-25XP
7			Order by Item No. 6
8	299905	5	Sealing Cap
9	299906	1	Sealing Cap
10	299356	2	Plug
11	299386	3	Inlet Valve Guide
12	299394	3	Exhaust Valve Guide
13	300137	12	Cylinder Head Bolt
14	300138	2	Cylinder Head Stud
15	300139	2	Cylinder Head Nut
16	300141	1	Cylinder Head Gasket
16A	302184		Cylinder Head Gasket M-25XP
17	300142	AR	Cylinder Head Gasket Shim
17A	302185		Cylinder Head Gasket Shim M-25XP

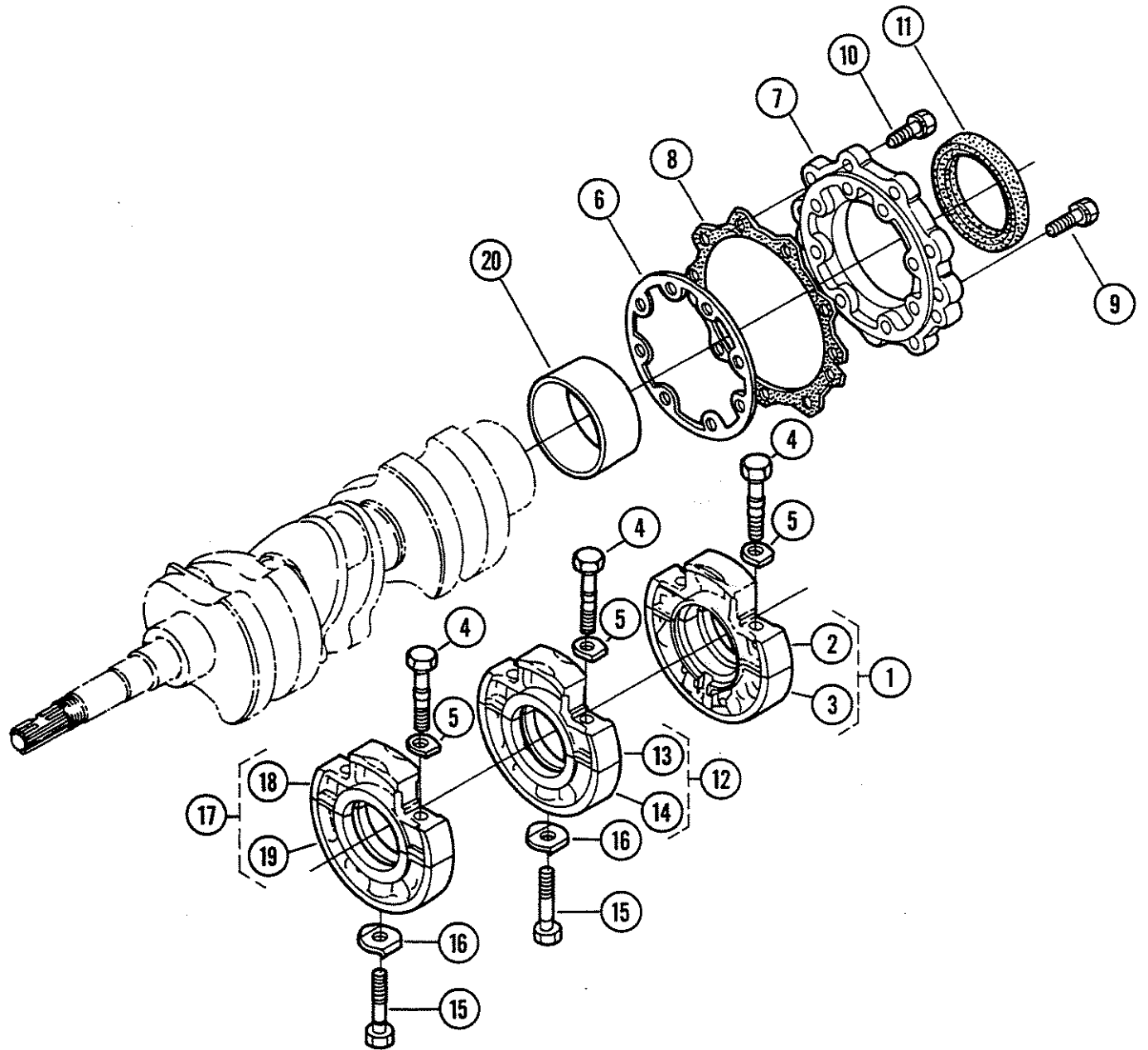
# GEAR CASE GROUP



## GEAR CASE GROUP

Item	Part No.	Unit	Description
1	300140	1	Gear Case Assembly
2			Order by Item No. 1
3	299395	2	Plug
4	300160	3	O-Ring
5	301489	1	Start Spring Pin
6	300180	1	Gear Case Gasket
7	299399	7	Bolt
8	299400	5	Bolt
9	299401	1	Bolt
10	299402	1	Bolt
11	301490	1	Joint Pipe
12	299404	1	Oil Seal
13	300209	1	Oil Filter
14	299374	1	Relief Valve Assembly
15			Order by Item No. 14
16	299376	1	O-Ring
17	301357	1	Water Pump, Oberdorfer
17A	302648	1PC	New Sherwood Water Pump
18	298485	1	Gasket W.P. MTG.
19	300096	4	Stud
20	298684	4	Nut
21	299403	4	Spring Washer
22	302678	1	Gasket
23	302679	2	Clamp
24	299032	2	Bolt
25	299033	2	Washer

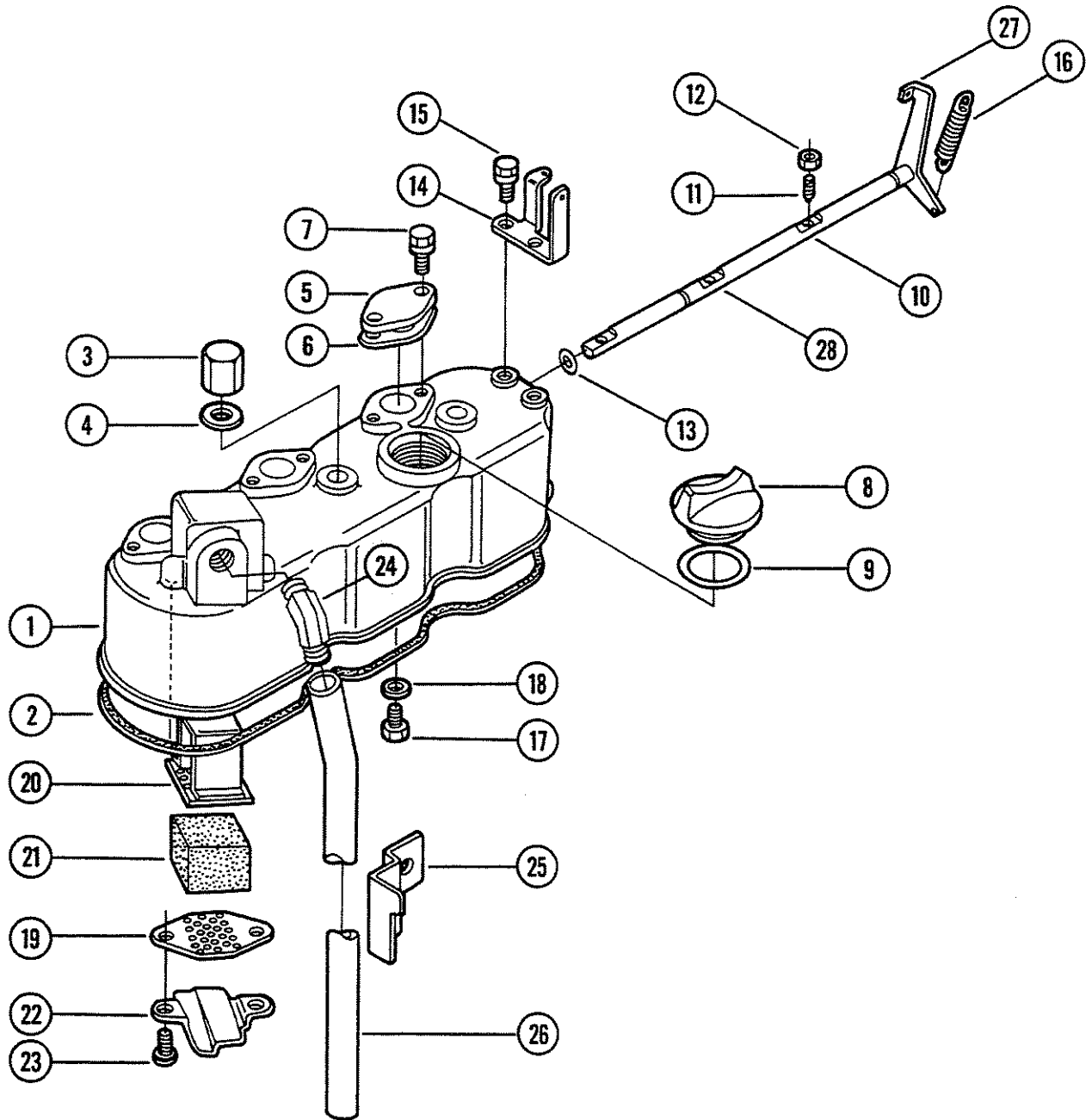
# MAIN BEARING CASE GROUP



## MAIN BEARING CASE GROUP

Item	Part No.	Unit	Description
1	299414	1	Main Bearing Case Assembly
2			Order by Item No. 1
3			Order by Item No. 1
4	299415	6	Bearing Case Bolt
5	299416	6	Bearing Case Washer
6	299417	1	Bearing Case Gasket
7	300144	1	Bearing Case Cover
	300815	1	Bearing Case Cover, Oversize
8	299418	1	Bearing Case Cover Gasket
9	299432	9	Bolt
10	299432	8	Bolt
11	299419	1	Oil Seal
	301085	1	Oil Seal, Oversize
12	299420	1	Main Bearing 2 Case Assembly
13			Order by Item No. 12
14			Order by Item No. 12
15	300145	2	Bearing Case Bolt
16	299421	2	Bearing Case Washer
17	300146	1	Main Bearing 3 Case Assembly
18			Order by Item No. 17
19			Order by Item No. 17
20	300813	1	Sheeve Wear Ring

# HEAD COVER GROUP

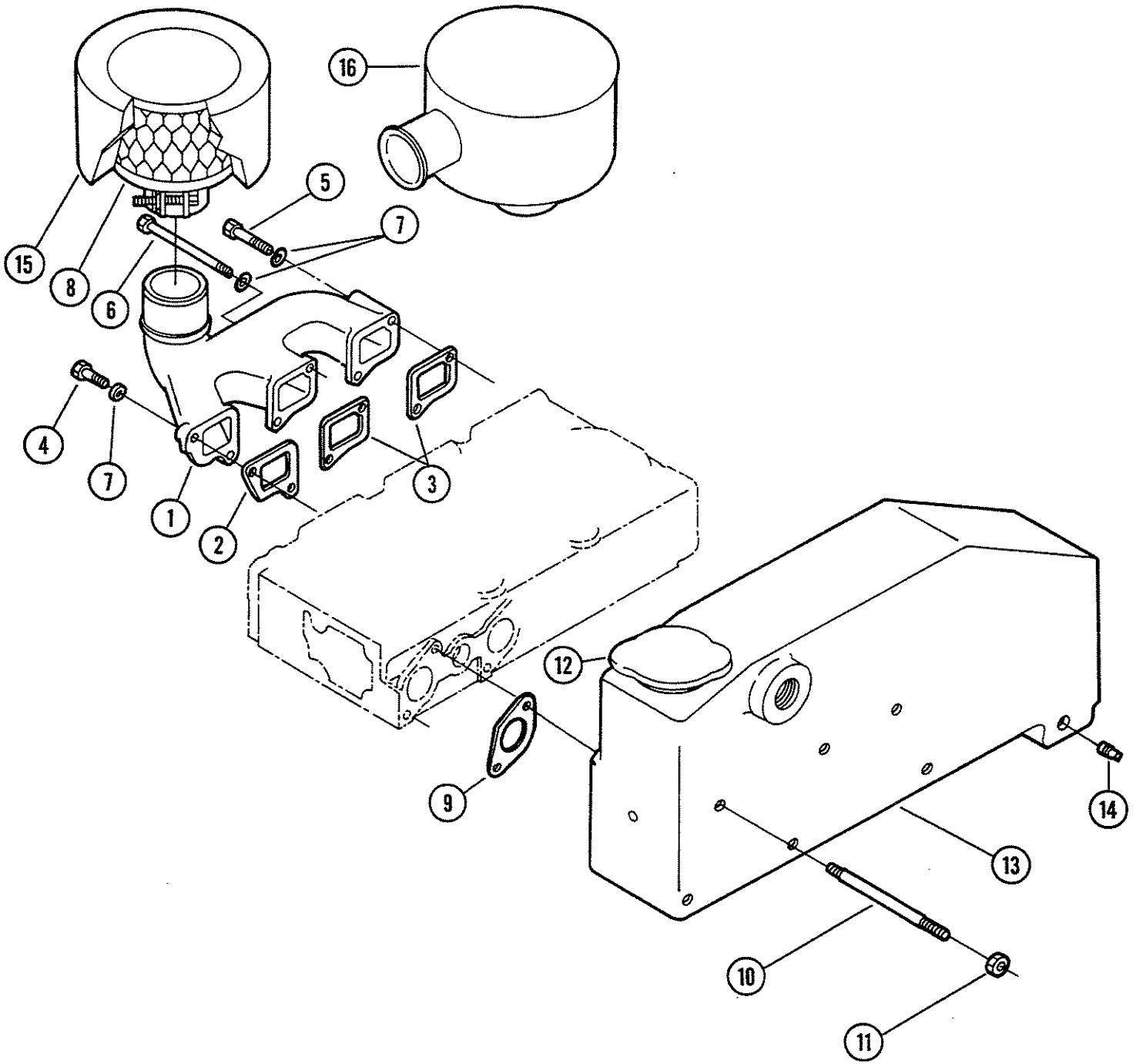




## HEAD COVER GROUP

Item	Part No.	Unit	Description
1	300157	1	Cylinder Head Cover
2	300158	1	Head Cover Gasket
3	239457	3	Cap Nut
4	299459	3	Gasket
5	299460	3	Decompression Hole Cover
6	299461	3	Cover Gasket
7	299462	6	Bolt
8	299464	1	Oil Filler Plug
9	299465	1	O-Ring
10	300159	1	Decompression Shaft
11	299467	3	Compression Bolt
12	299468	3	Nut
13	299469	1	O-Ring
14	299470	1	Decompression Wire Holder
15	299462	2	Bolt
16	299471	1	Decompression Spring
17	298835	1	Bolt
18	299369	3	Spring Washer
19	301391	1	Breather Element 1 Plate
20	301392	1	Breather Element 2 Plate
21	300148	1	Breather Element
22	301393	1	Breather Oil Shield
23	301399	2	Screw
24	299854	1	Breather Elbow
25	301491	1	Pipe Clamp - Hose
26	301396	1	Breather Hose
27	301395	1	Lever
28	301394	1	Shaft

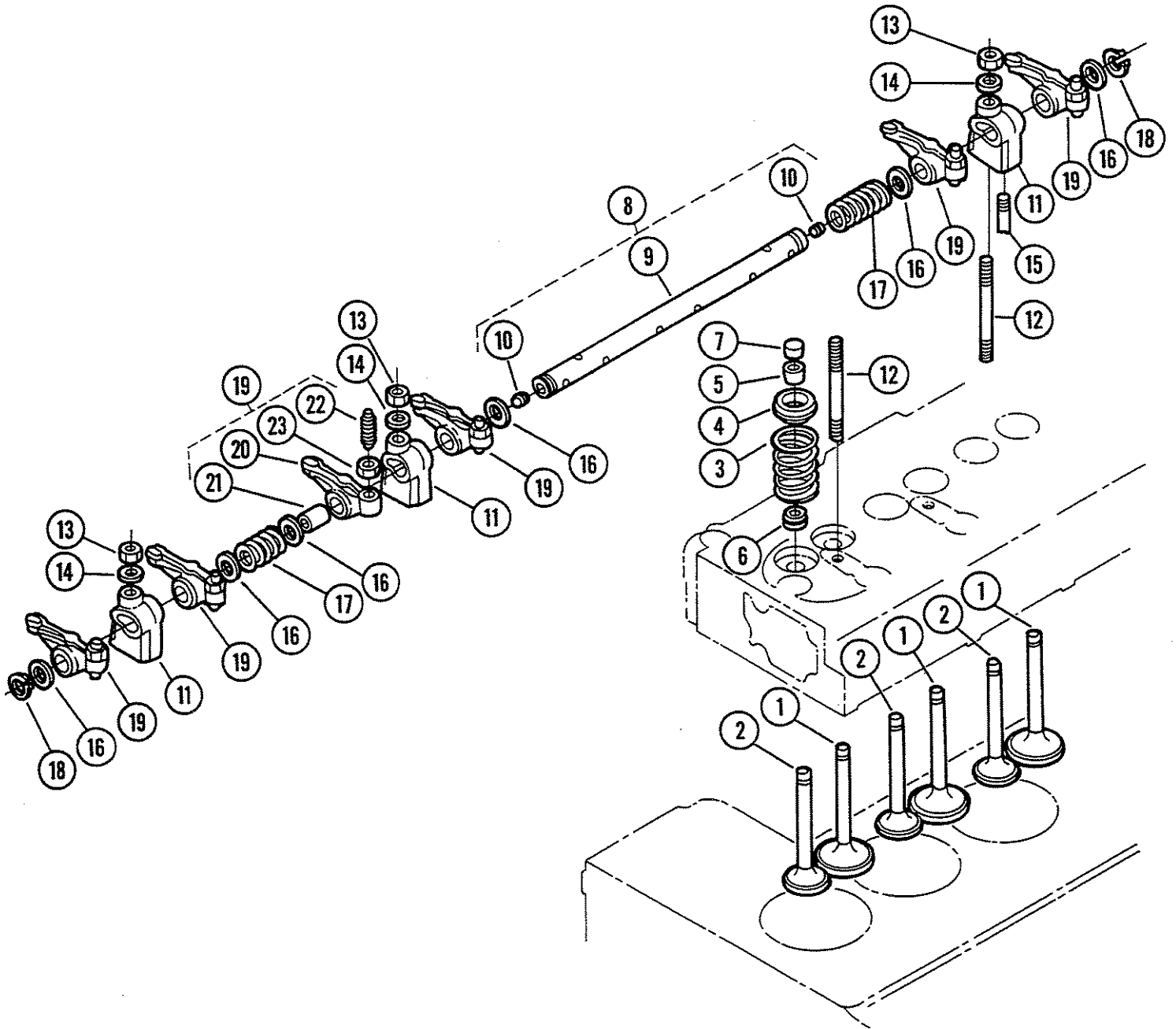
# INLET MANIFOLD GROUP



## INLET MANIFOLD GROUP

Item	Part No.	Unit	Description
1	300149	1	Inlet Manifold
2	299430	1	Gasket Inlet Manifold 1
3	299431	2	Gasket Inlet Manifold 2
4	299432	4	Bolt
5	299399	1	Bolt
6	300150	1	Bolt
7	299363	2	Washer Spring
8	300263	1	Filter Intake Air - Old Style - NLA
9	299435	3	Gasket Exhaust Manifold
10	300095	6	Studs Manifold
11	298684	6	Nut
12	299956	1	Radiator Cap - 14 P.S.I.
13	301014	1	Manifold - Exhaust
14	239136	1	Plug Pipe 1/8-27
15	301049	1	Filter Element
16	301138	1	Filter Air, New Style
17	302181	1	Filter Air, Alum Honeycomb

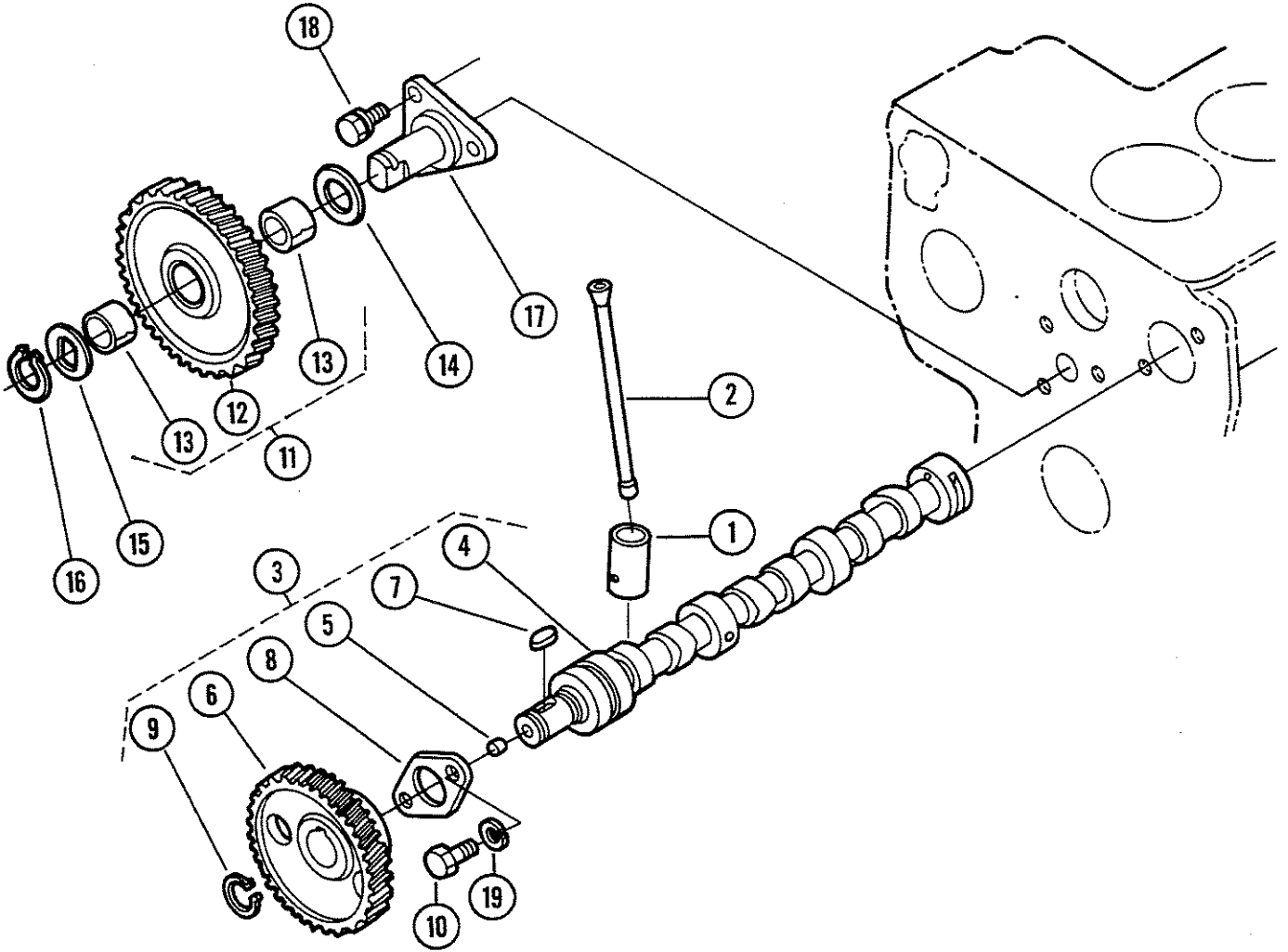
# VALVE ROCKER ARM GROUP



## VALVE ROCKER ARM GROUP

Item	Part No.	Unit	Description
1	300152	3	Inlet Valve
2	300153	3	Exhaust Valve
3	299438	6	Valve Spring
4	299439	6	Valve Spring Retainer
5	299440	12	Valve Spring Collet
6	299441	6	Valve Stem Seal
7	299442	6	Valve Cap
8	300154	1	Rocker Arm Shaft Assembly
9			Order by Item No. 8
10	300155	2	Set Screw
11	299444	3	Rocker Arm Bracket
12	299445	3	Stud
13	299446	3	Nut
14	300156	3	Plain Washer
15	299447	1	Set Screw
16	299448	6	Rocker Arm Washer
17	299449	2	Rocker Arm Spring
18	299450	2	External Cir-Clip
19	300227	6	Rocker Arm Assembly
20			Order by Item No. 19
21	300228	6	Rocker Arm Bushing
22	299453	6	Adjusting Screw
23	299454	6	Nut

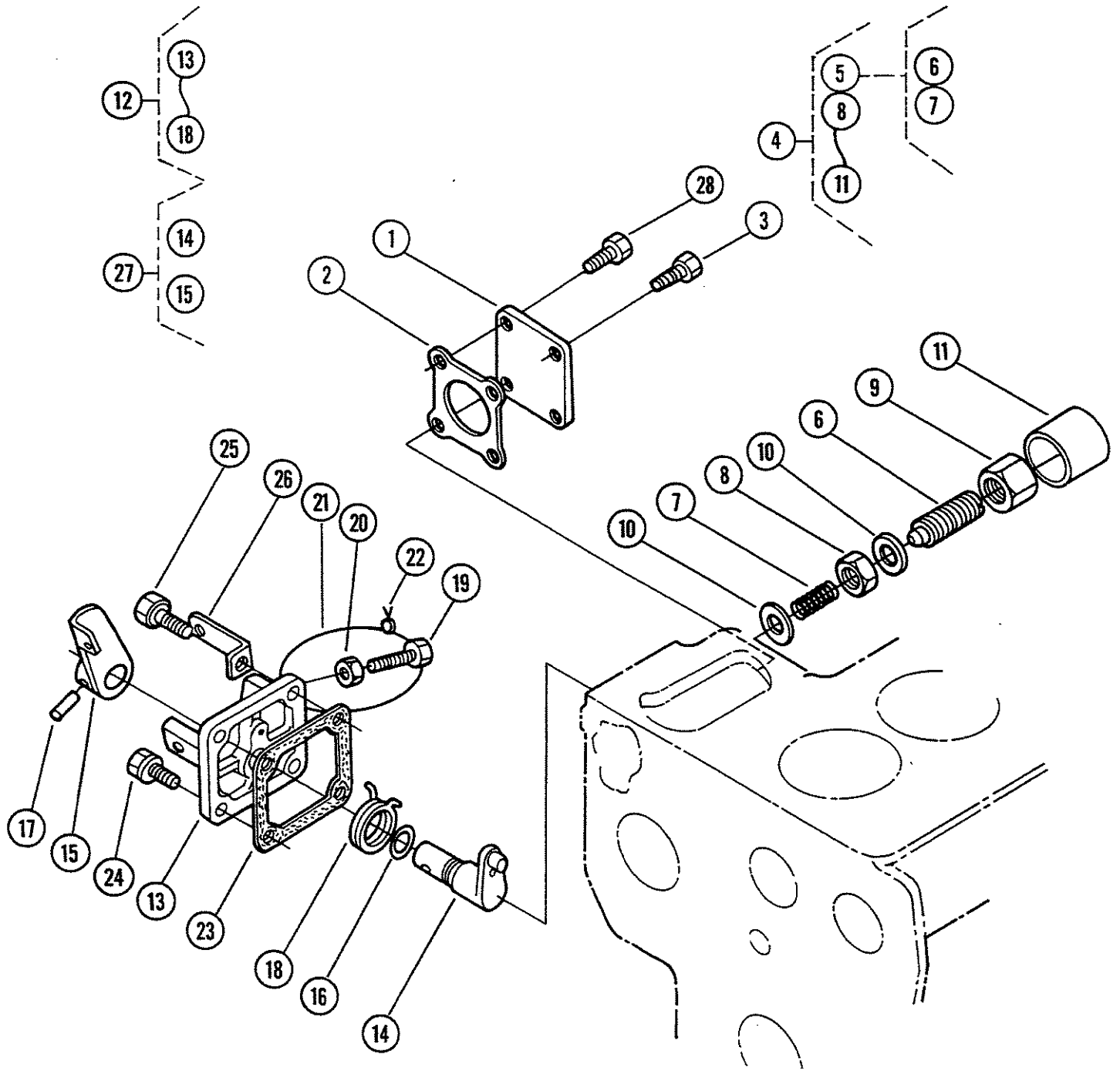
# CAMSHAFT GROUP



## CAMSHAFT GROUP

Item	Part No.	Unit	Description
1	299472	6	Tappet
2	299473	6	Push Rod
3	300161	1	Camshaft Assembly
4			Camshaft Order by Item No. 3
5	300162	2	Blind Plug
6	299475	1	Camshaft Gear
7	299476	1	Feather Key
8	299477	1	Camshaft Stopper
9	299535	1	External Cir-Clip
10	299462	2	Bolt
11	299478	1	Idler Gear Assembly
12			Order by Item No. 11
13	300163	2	Idler Gear Bushing
14	299480	1	Idler Gear Collar 1
15	299481	1	Idler Gear Collar 2
16	299482	1	External Cir-Clip
17	299483	1	Idler Gear Shaft
18	299462	3	Bolt
19	299369	2	Spring Washer

# ENGINE STOP LEVER GROUP

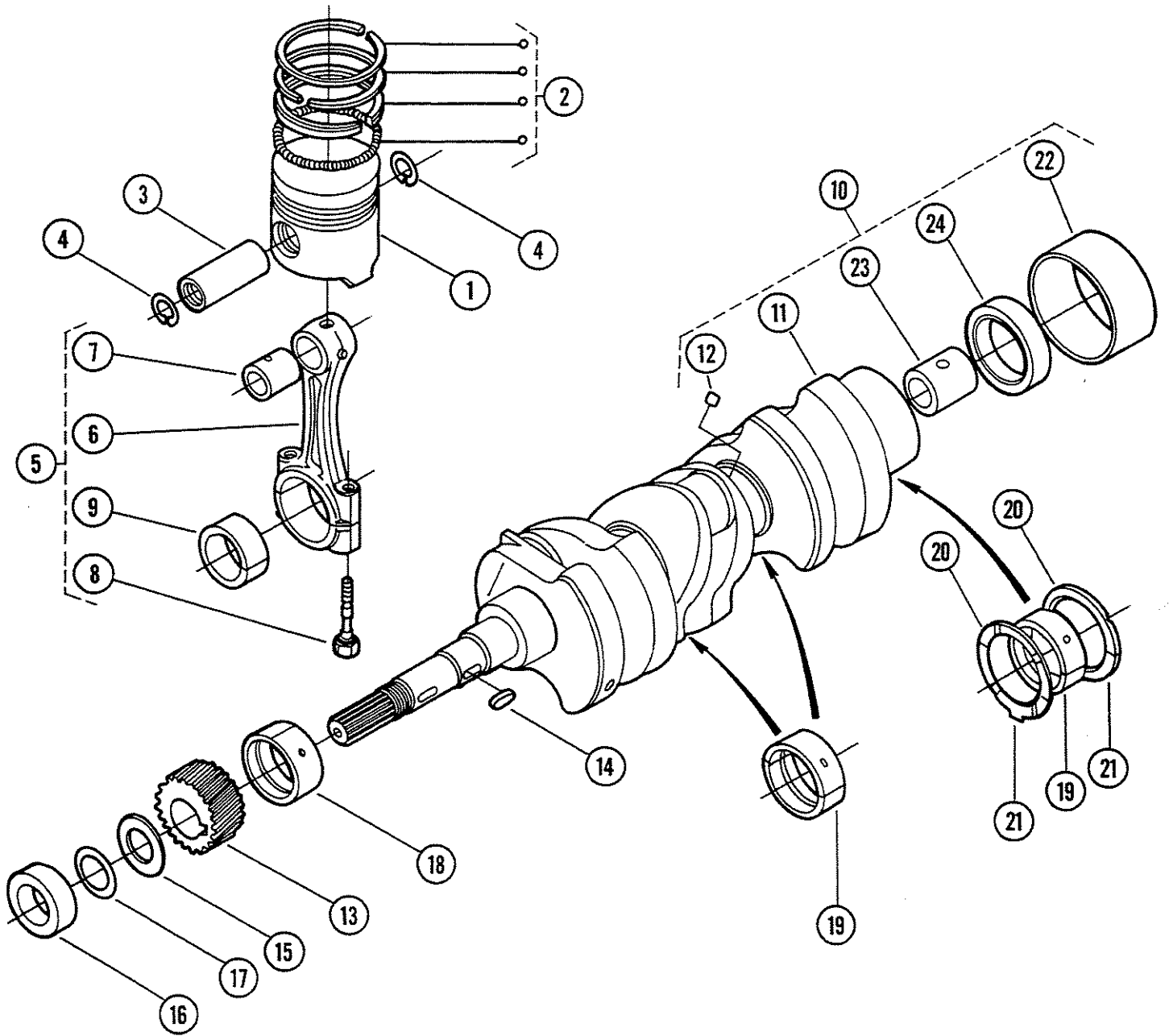




## ENGINE STOP LEVER GROUP

Item	Part No.	Unit	Description
1	299486	1	Cover
2	299484	1	Pump Gasket
3	299527	3	Bolt
4	300164	1	Idling Apparatus Assembly
5	301492	1	Adjusting Bolt Assembly
6			Order by Item No. 5 - Adjusting Bolt
7			Order by Item No. 5 - Spring
8	301493	1	Nut
9	301494	1	Cap Nut
10	301495	2	Gasket
11	301417	1	Cap
12	300229	1	Engine Stop Lever Assembly
13	300173	1	Injection Pump Cover
14			Order by Item No. 27 - Shaft Lever
15			Order by Item No. 27 - Engine Stop Lever
16	301496	1	O-Ring
17	301498	1	Spring Pin
18	301499	1	Spring
19	298826	1	Stopper
20	299041	1	Nut
21			Non Sale Wire
22			Non Sale Lead Sealing
23	300230	1	Breather Gasket
24	299462	3	Bolt
25	299432	1	Bolt
26	301398	1	Wire Holder
27	301500	1	Lever Shaft Assembly
28	300008	1	Bolt

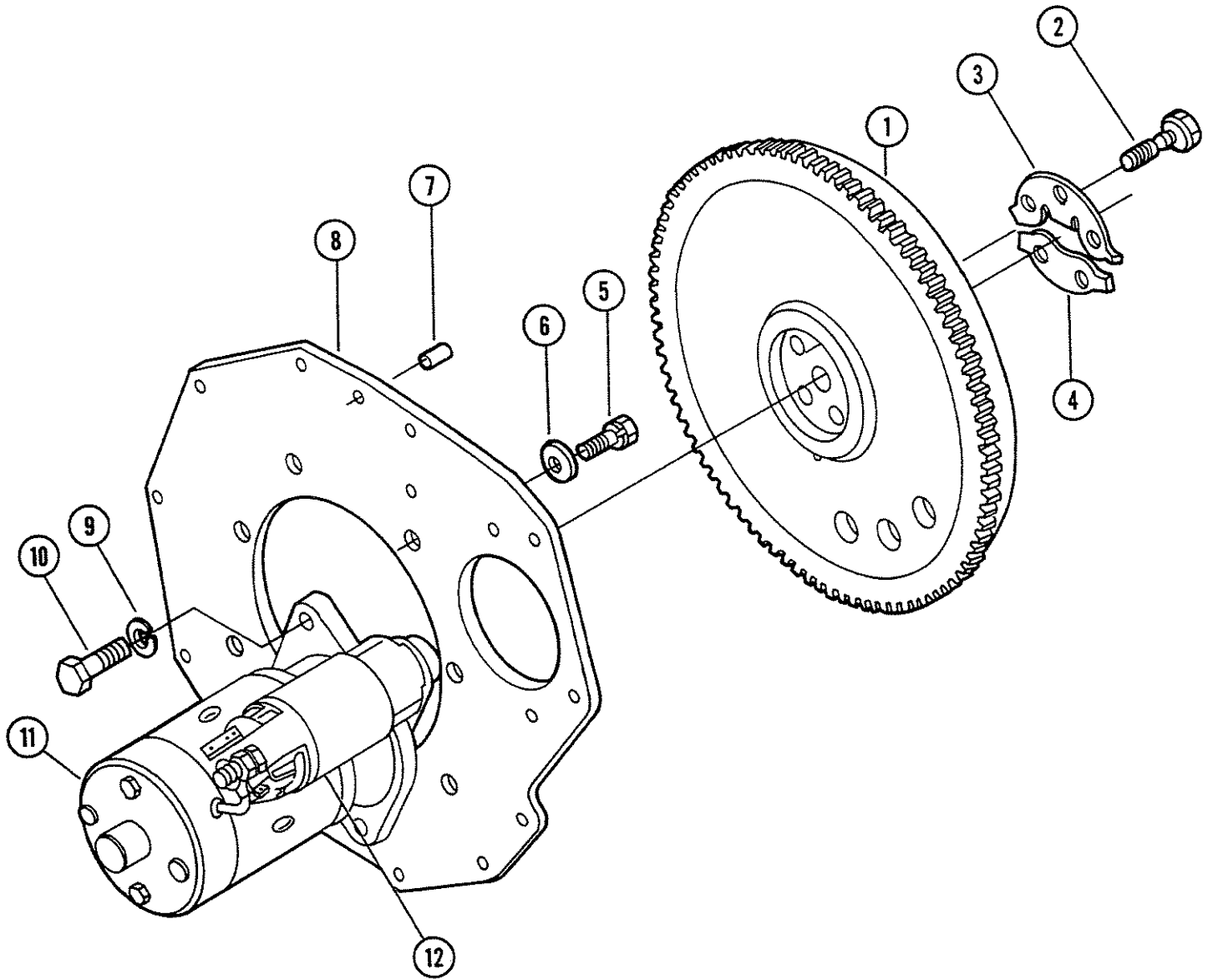
# PISTON, CRANKSHAFT GROUP



## PISTON, CRANKSHAFT GROUP

Item	Part No.	Unit	Description
1	300165	3	Piston, Std.
1A	302186		Piston Standard M-25XP
	301520	3	Piston, + .05
2A	302187		Piston Ring Assembly M-25XP
	301521	3	Piston Ring Assembly, + .05
3	299489	3	Piston Pin
4	299490	6	Piston Pin Cir-Clip
5	299491	3	Connecting Rod Assembly
6			Order by Item No. 5
7	301154	3	Piston Pin Bushing
8	299493	6	Connecting Rod Bolt
9	299494	6	Rod Bearing Std.
	300779	6	Rod Bearings, .2 mm
	300780	6	Rod Bearings, .4 mm
10	300167	1	Crankshaft Assembly
10A	302188		Crankshaft Assembly M-25XP
11			Order by Item No. 10
12	299385	3	Pin Plug
13	300168	1	Crankshaft Gear
14	299496	1	Feather Key
15	299497	1	Crankshaft Oil Slinger
16	299498	1	Crankshaft Collar
17	299499	1	O-Ring
18	299500	1	Bearing
	300752		Bearing .02 mm Oversize
	300753		Bearing .04 mm Oversize
19	299501	2	Bearing Metal 2
	300754	2	Main Bearing 1, .2 mm
	300755	2	Main Bearing 1, .4 mm
20	299502	2	Side Metal 1
21	299503	2	Side Metal 2
22	300813	1	Crankshaft Sleeve
23	299950	1	Bearing
24	299949	1	Oil Seal

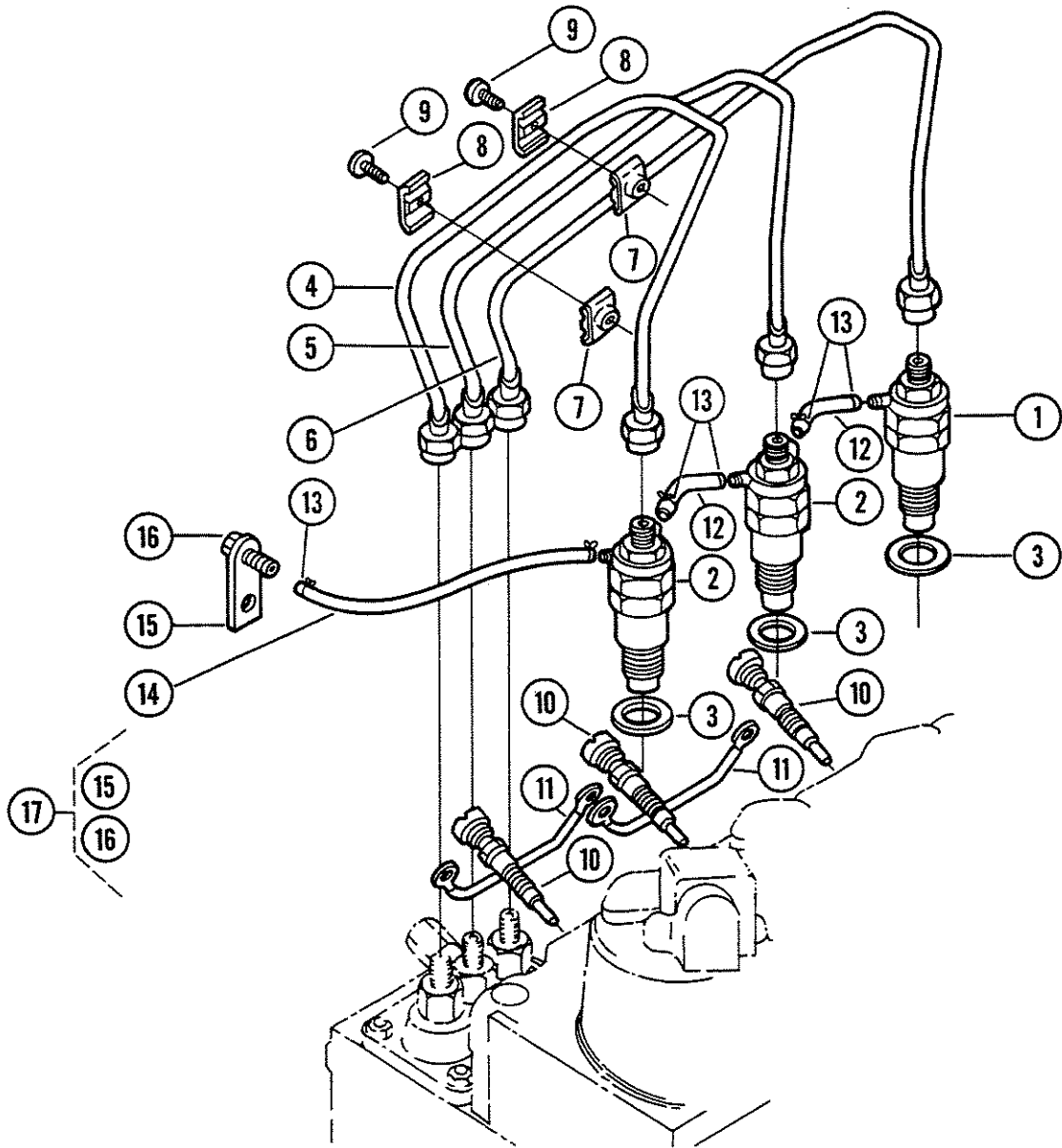
# FLYWHEEL GROUP



## FLYWHEEL GROUP

Item	Part No.	Unit	Description
1	300169	1	Assembly Flywheel
2	299506	5	Bolt Flywheel
3	300170	1	Washer Flywheel
4	300171	1	Washer 2 Flywheel
5	300172	8	Bolt
6	299511	8	Spring Washer
7	299509	1	Pin Straight
8	299508	1	Rear End Plate
9	299515	2	Washer Spring
10	298539	2	Bolt
11	299512	1	Assembly Starter
12	300538	1	Solenoid w/studs
12A	299771	1	Solenoid w/screws

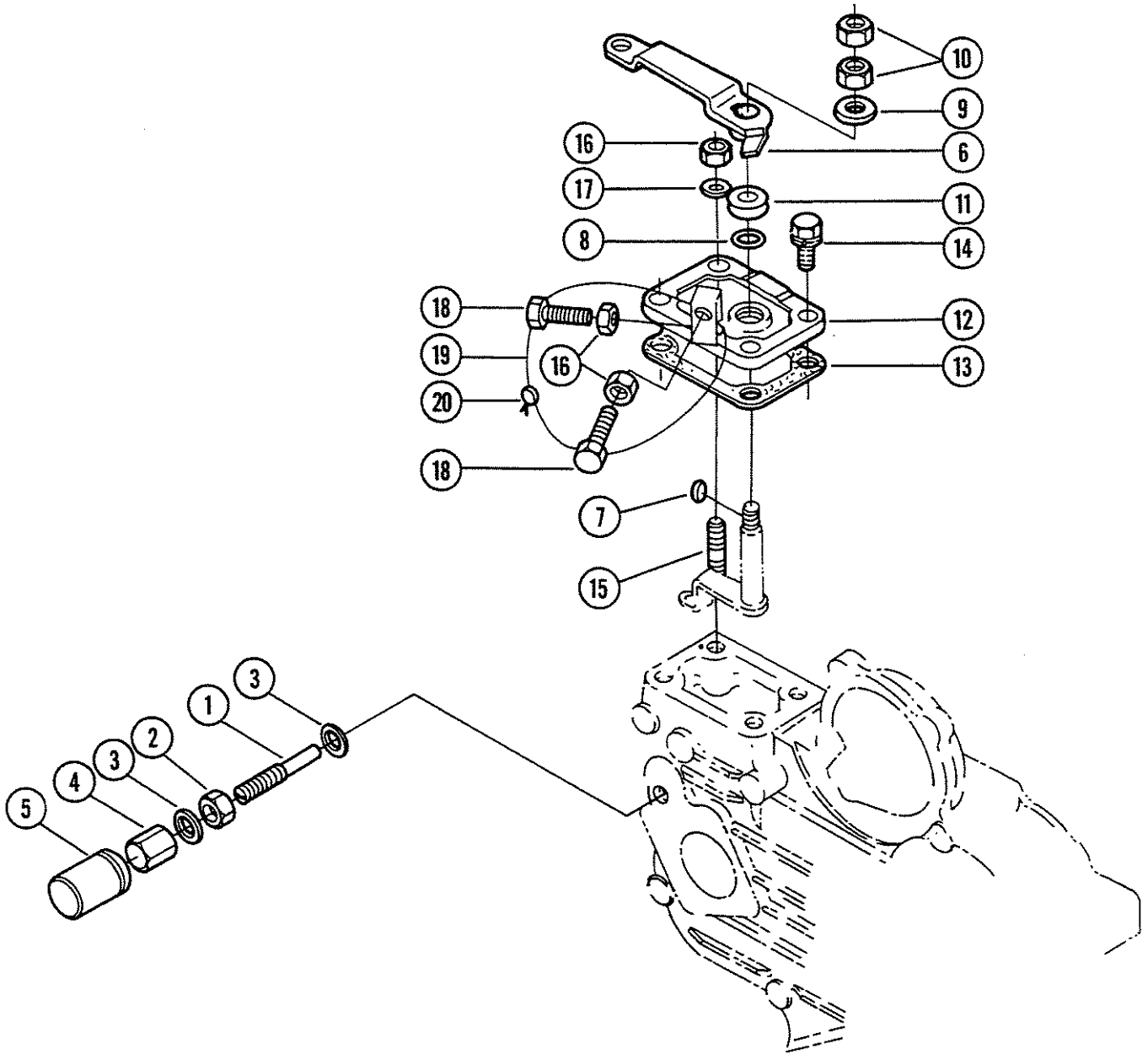
# NOZZLE HOLDER GROUP



## NOZZLE HOLDER GROUP

Item	Part No.	Unit	Description
1	298787	1	Nozzle Holder Assembly No. 1
2	298788	2	Nozzle Holder Assembly No. 2
3	299519	3	Gasket
4	299521	1	Injection Pipe No. 1
5	299522	1	Injection Pipe No. 2
6	300174	1	Injection Pipe No. 3
7	298792	2	Pipe Clamp No. 1
8	298793	2	Pipe Clamp No. 2
9	298794	2	Screw, with Washer
10	299685	3	Glow Plug
11	299523	2	Glow Plug Code
12	299520	2	Fuel Overflow Hose
12A	302923	1	Fuel Return Assy-Metal
13	302269	6	Pipe Clip
14	299831	1	Fuel Return Hose
15	299828	1	Mounting Bracket
16	299829	1	Fuel Return Connector
17	256747	1	Fuel Return Kit

# SPEED CONTROL PLATE GROUP

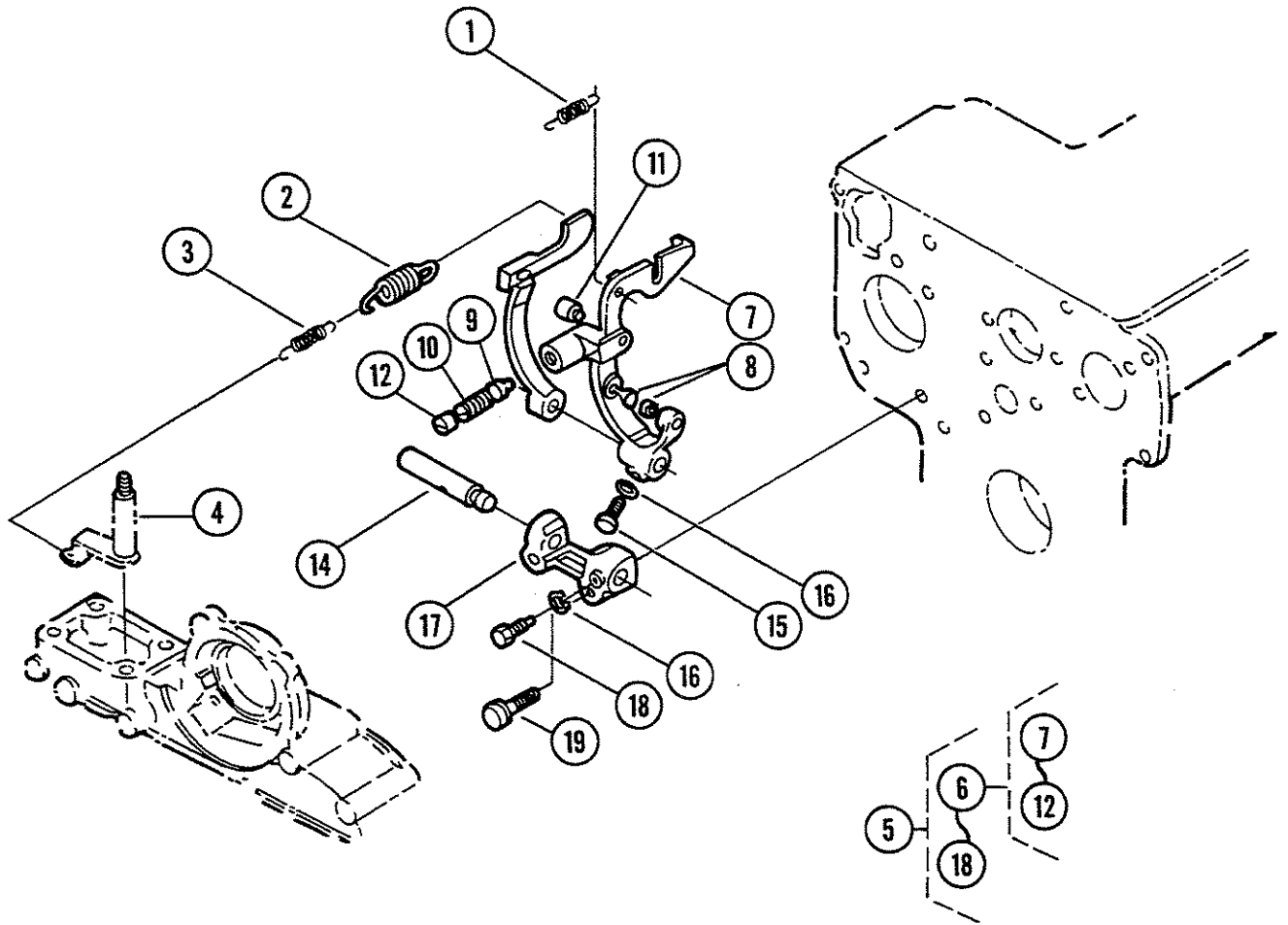




## SPEED CONTROL PLATE GROUP

Item	Part No.	Unit	Description
1	301501	1	Adjusting Bolt
2	301502	1	Nut
3	301503	2	Gasket
4	301504	1	Cap Nut
5	301505	1	Cap
6	300178	1	Speed Control Lever
7	299540	1	Feather Key
8	299541	1	O-Ring
9	299542	1	Plain Washer
10	299543	2	Nut
11	299544	1	Friction Plate
12	300179	1	Speed Control Plate
13	299545	1	Control Plate Gasket
14	299432	3	Bolt
15	300096	1	Stud
16	298684	3	Nut
17	299369	1	Spring Washer
18	298826	2	Stopper
19	Non Sale		Wire
20	Non Sale		Lead Sealing

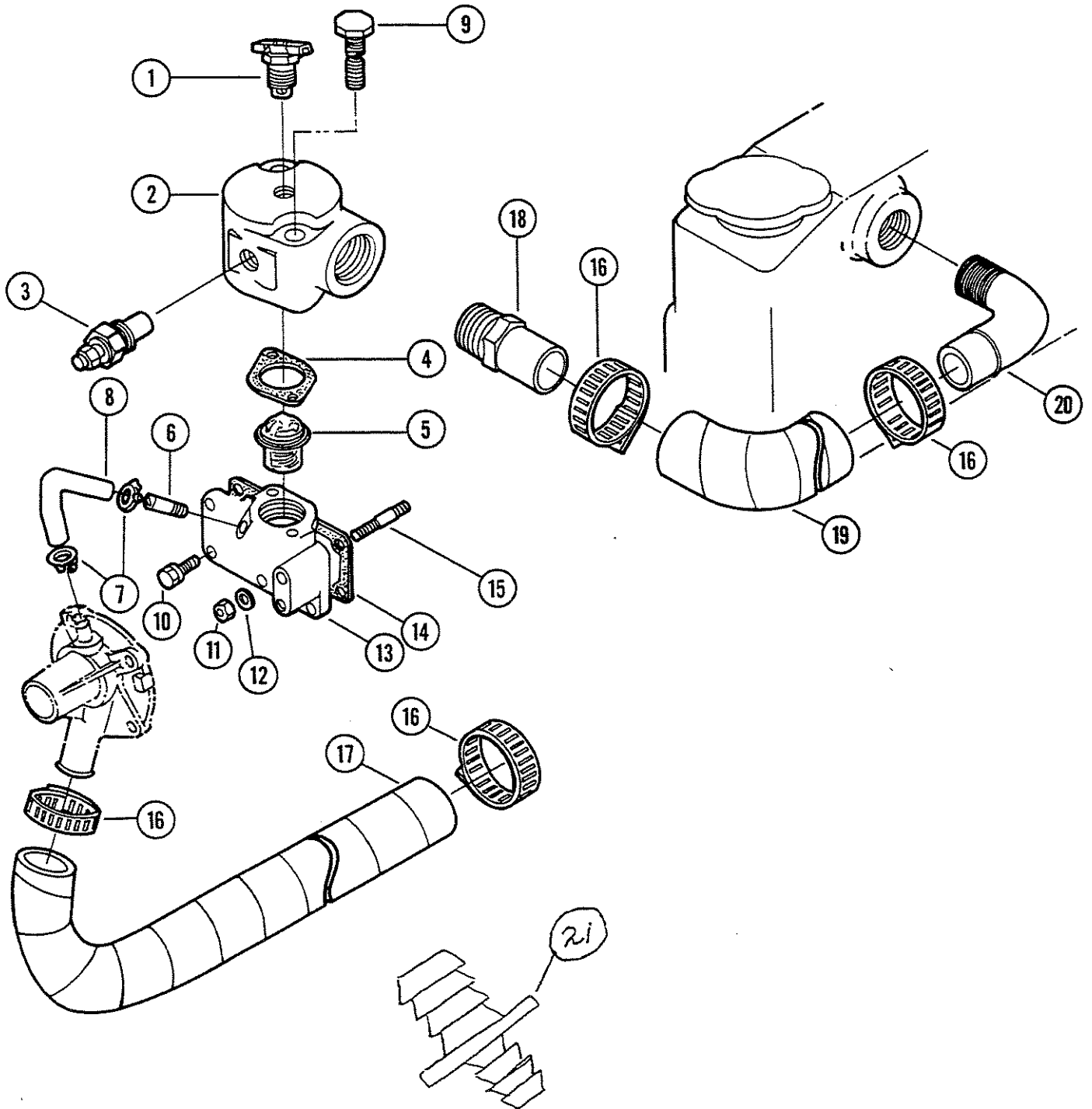
# GOVERNOR GROUP



## GOVERNOR GROUP

Item	Part No.	Unit	Description
1	298828	1	Start Spring
2	300028	1	Governor Spring 1
3	300029	1	Governor Spring 2
4	300691	1	Governor Lever Assembly
5	300182	1	Fork Lever Assembly
6	300183	1	Fork Comp Lever
7	300184	1	Fork Lever
8			Order by Item No. 6
9			Order by Item No. 6
10			Order by Item No. 6
11			Order by Item No. 6
12			Order by Item No. 6
13		1	Fork Lever 2
14	300185	1	Fork Lever Shaft
15	300186	1	Bolt
16	300187	2	Spring Washer
17	300188	1	Fork Lever Holder
18	300189	1	Bolt
19	299432	2	Bolt

# WATER FLANGE GROUP

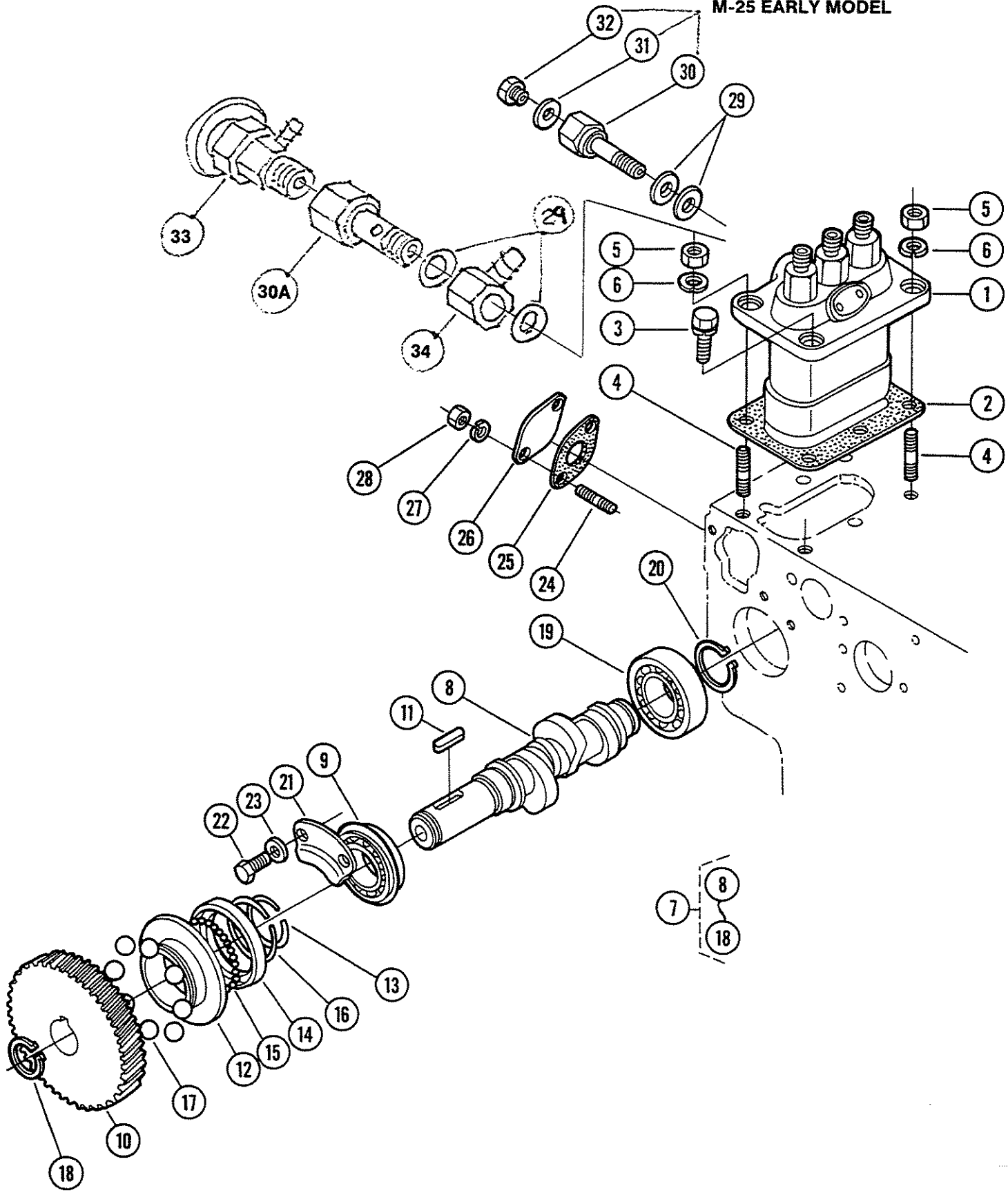


## WATER FLANGE GROUP

Item	Part No.	Unit	Description
1	239138	1	Drain Cock 1/8 MPT
2	300099	1	Thermostat Housing
3	299066	1	Temperature Sender
4	300237	1	Gasket Thermostat Housing
5	301358	1	Thermostat 160°
6	300235	1	Pipe
7	301397	2	Hose Clamp (USA)
8	300236	1	Hose
9	300330	2	Thermostat Mounting Bolts (6mm x 50mm)
10	299462	3	Bolt
11	298684	1	Nut
12	299369	1	Spring Washer
13	300233	1	Flange Water
14	300234	1	Gasket Water Flange
15	301506	1	Stud
16	298648	4	Hose Clamp No. 12
17	300102	1	Wire Flex Hose 7/8 I.D. x 27-1/2 Lg.
18	286075	1	Hose Connector 3/4 MPT to 7/8 I.D. Hose
19	300101	1	Wire Flex Hose 7/8 I.D. x 7" Lg.
20	298644	1	Hose Connector EL-90 3/4 MPT to 7/8 Hose
21	302391	2	3/8 x 5/8 Hose Adapter (Heater By Pass)

# FUEL CAMSHAFT GROUP

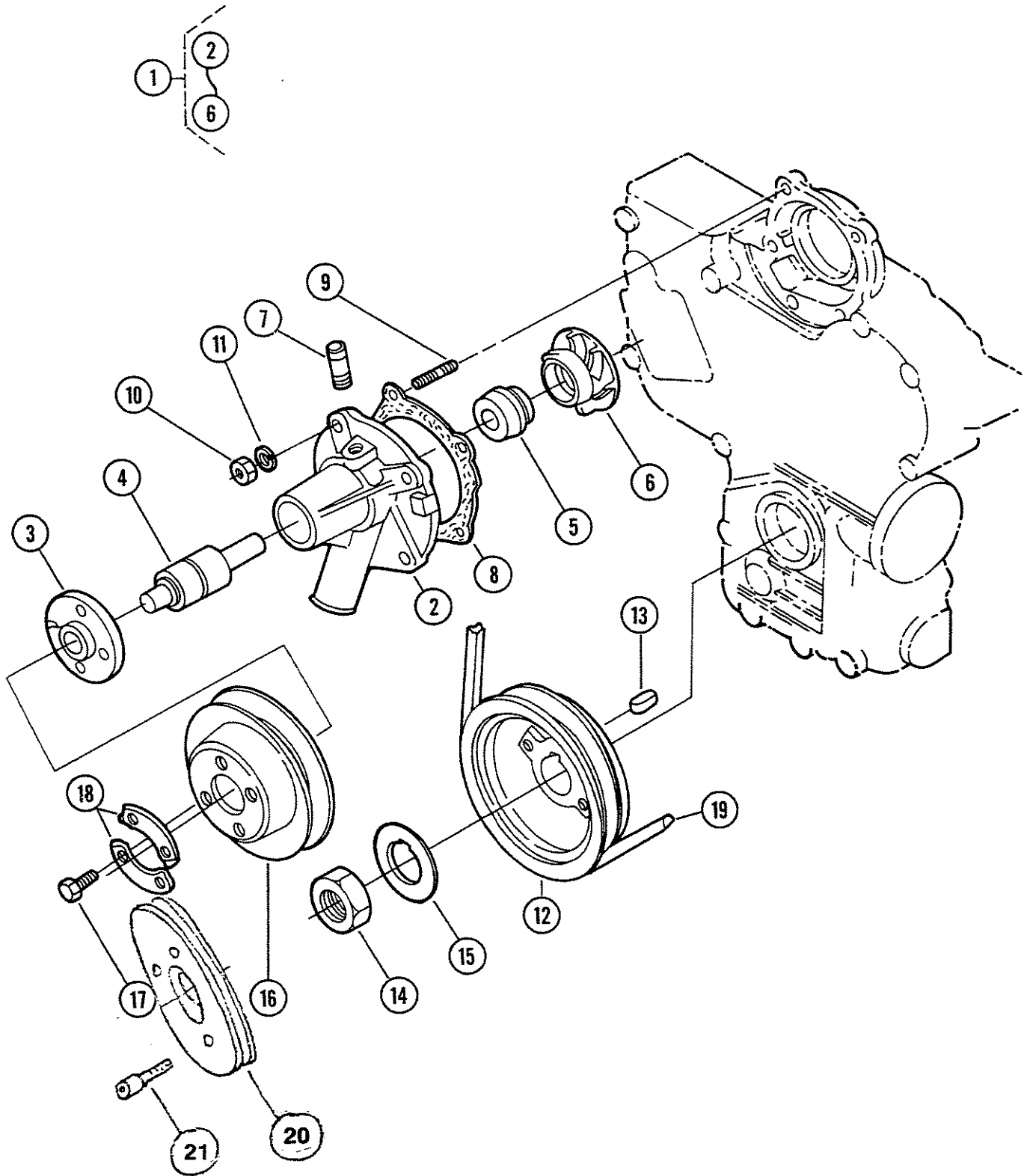
M-25 EARLY MODEL



## FUEL CAMSHAFT GROUP

Item	Part No.	Unit	Description
1	300191	1	Pump Injection
2	300192	1	Shim Pump Injection
3	299527	2	Bolt
4	300231	2	Stud
5	299529	2	Nut
6	299583	2	Washer Spring
7	300193	1	Camshaft Fuel
8	300194	1	Camshaft Fuel
9	300195	1	Bearing Ball
10	300196	1	Gear Injection
11	299531	1	Key Feather
12	300197	1	Sleeve Governor
13	300198	1	Cir-Clip
14	299532	1	Case Governor Ball
15	299533	30	Ball
16	300199	1	Cir-Clip
17	299534	8	Ball
18	299535	1	Cir-Clip External
19	299536	1	Bearing Ball
20	299537	1	Cir-Clip External
21	300200	1	Stopper Fuel Camshaft
22	299462	2	Bolt
23	299380	2	Lock Washer
24	301509	2	Stud
25	297872	1	Packing Fuel Pump
26	299822	1	Cover
27	299542	2	Washer Spring
28	298684	2	Nut
29	300202	2	Gasket Bleed Screw
30	301163	1	Bleed Screw
30A	301936	1	Bleed Screw Adaptor (M-25XP)
31	301164	1	Gasket
32	299748	1	Screw
33	300050	1	Bleed Valve Assy.
34	299428	1	Fuel Inlet Joint

# WATER PUMP GROUP

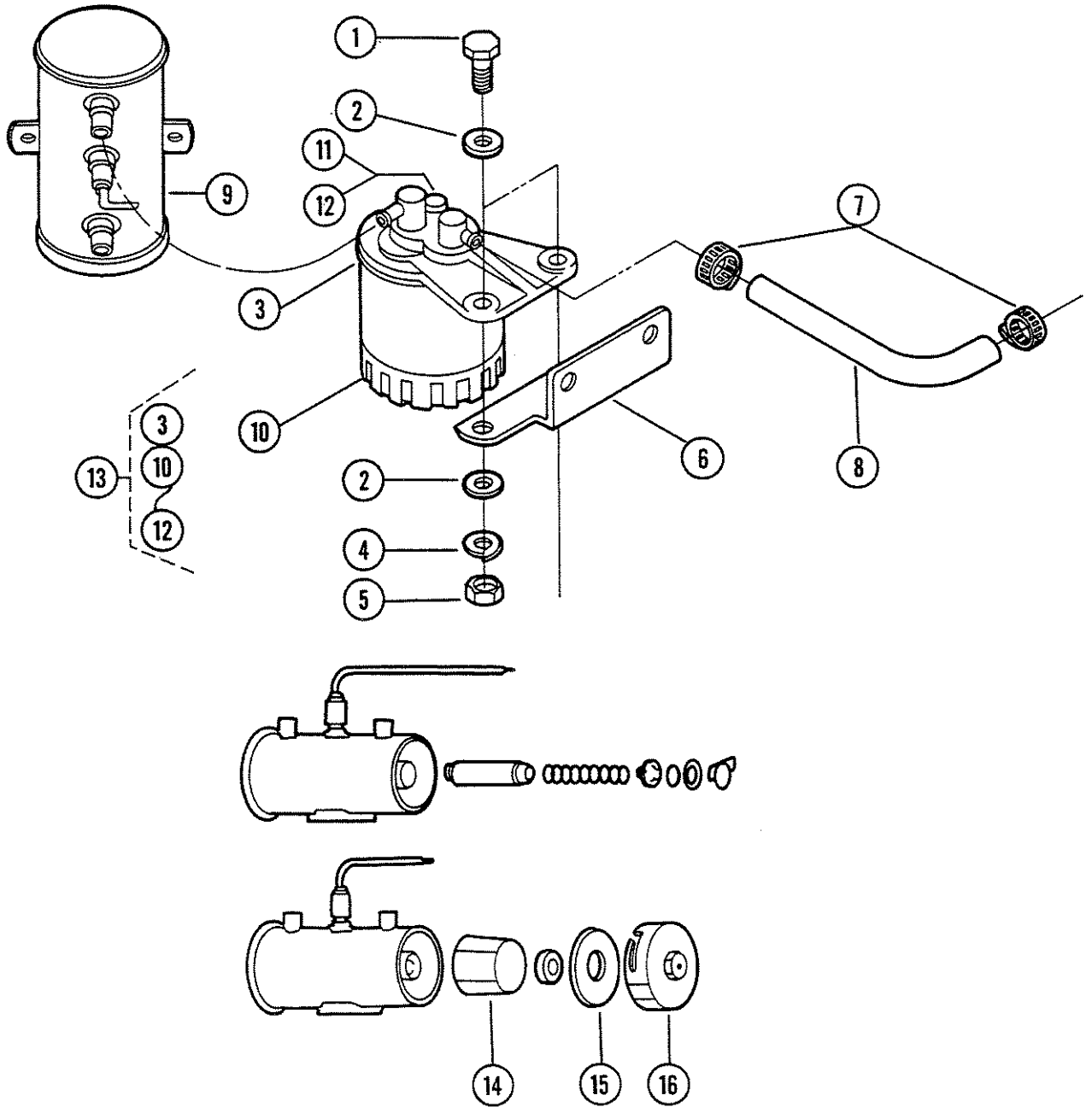




## WATER PUMP GROUP

Item	Part No.	Unit	Description
1	300203	1	Water Pump Assembly
2			Order by Item No. 1
3	301518	1	Water Pump Glange
4	301158	1	Bearing
5	301159	1	Mechanical Seal Assembly
6	301160	1	Water Pump Impeller
7	301519	1	Water Return Pipe 1
	300204	1	Water Pump Gasket
	300205	4	Stud
10	298684	4	Nut
11	299369	4	Spring Washer
12	300190	1	Fan Drive Pulley
13	299549	1	Feather Key
14	299550	1	Crankshaft Nut
15	300232	1	Crankshaft Washer
16	301515	1	Pulley Fan M-25 — Use 302189
16A	302189	0	Pulley Fan M-25XP
17	301516	4	Bolt
18	301517	2	Fan Washer
19	300805	1	Belt
19A	300817		Belt M-25XP
19B	302190		Belt M-25 with Conversion Kit
20	302159	1	P.T.O Pulley & 8 DP cM — 35
21	302046	3	8 mm x 30 mm See Head Cap

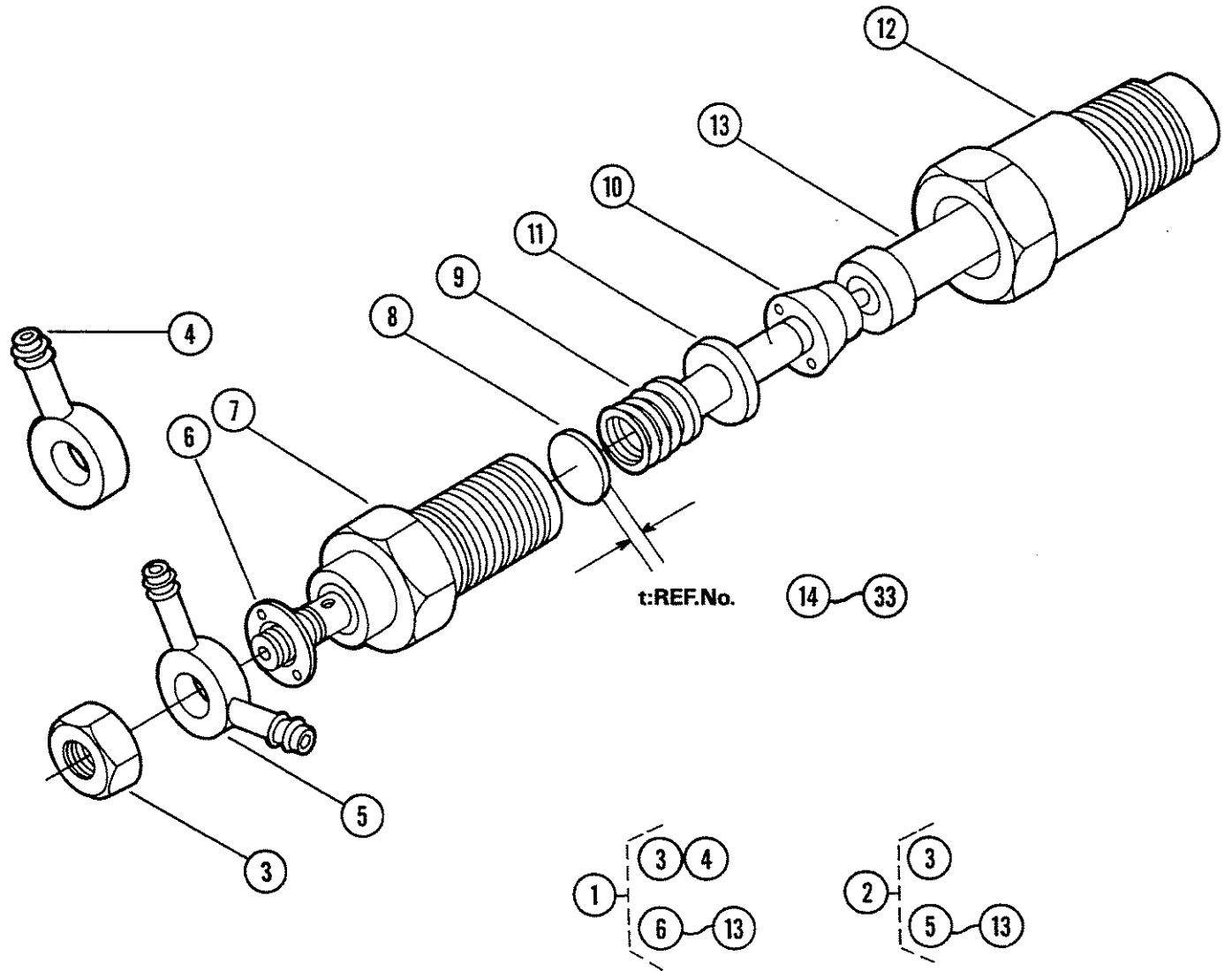
# FUEL FILTER GROUP



## FUEL FILTER GROUP

Item	Part No.	Unit	Description
1	231059	2	Cap Screw
2	231875	4	Flat Washer
3	301602	1	Fuel Filter Cover
4	231906	2	Washer Lock
5	230141	2	Nut
6	300103	1	Bracket Fuel Filter
7	298605	2	Clamp Adjustable
8	298567	1	Fuel Hose
9	301385	1	Electric Fuel Pump
10	298854	1	Fuel Filter Element
11	299855	1	Bleed Screw
12	299856	1	O-Ring
13	298853	1	Fuel Filter Assembly
14	300128	1	Filter & Gskt.
15	299639	1	Gasket
16	299803	1	Cap

# NOZZLE HOLDER

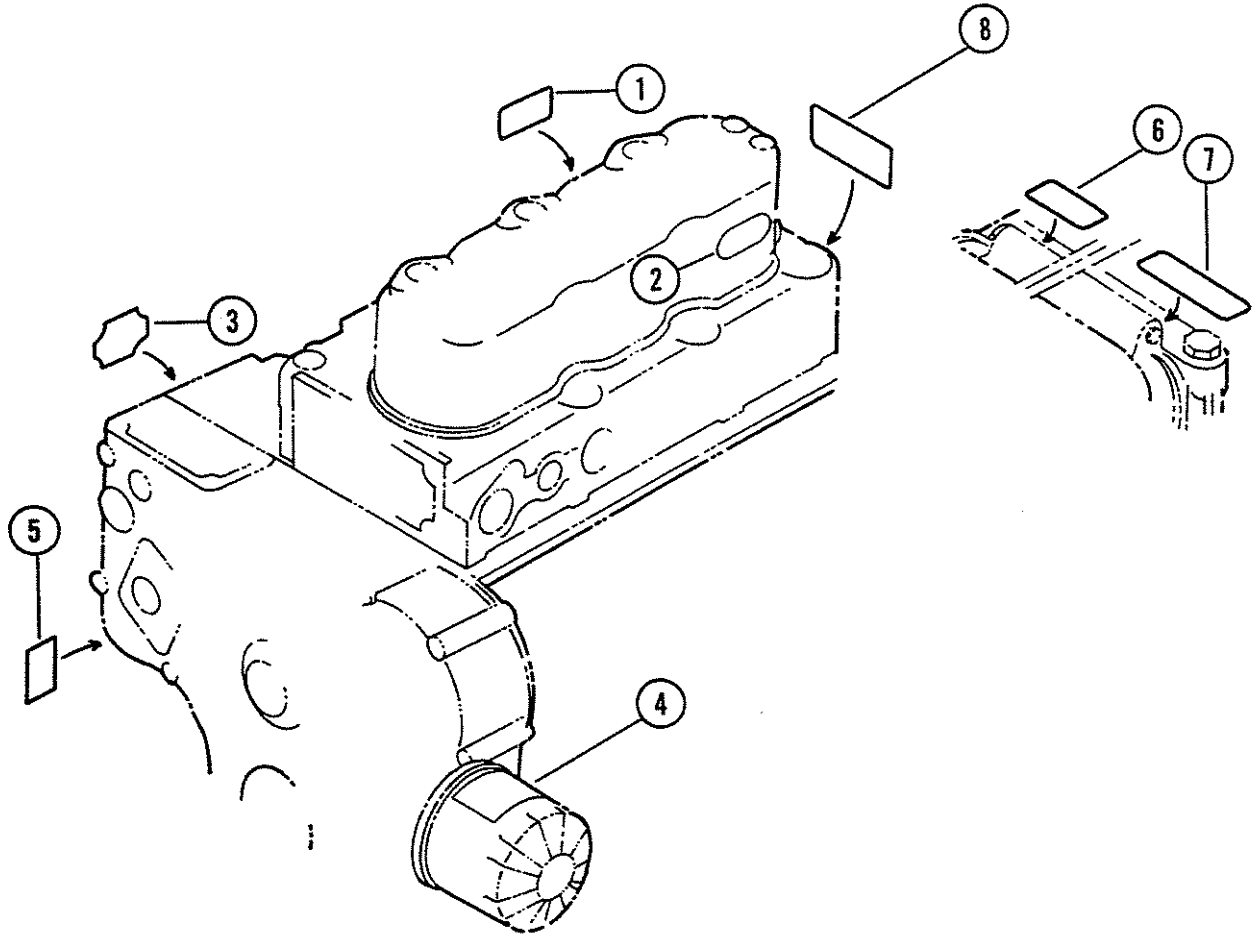


## NOZZLE HOLDER

Item	Part No.	Unit	Description
1	298787	1	Nozzle Holder Assembly 1
2	298788	2	Nozzle Holder Assembly 2
3	301508	1	Nut
4	301161	1	Eye Joint 1
5	301162	1	Eye Joint 2
6	301137	1	Plain Washer
7			Order by Item No. 2
8	301509	1	Adjusting Washer
9	301510	1	Nozzle Spring
10	301511	1	Distance Piece
11	301512	1	Push Rod
12	301513	1	Nozzle Nut
13	301514	1	Nozzle Piece

**NOTE:** Item No's. 14-33 Available in Sizes from 1.00 to 1.95 in .05 Increments.

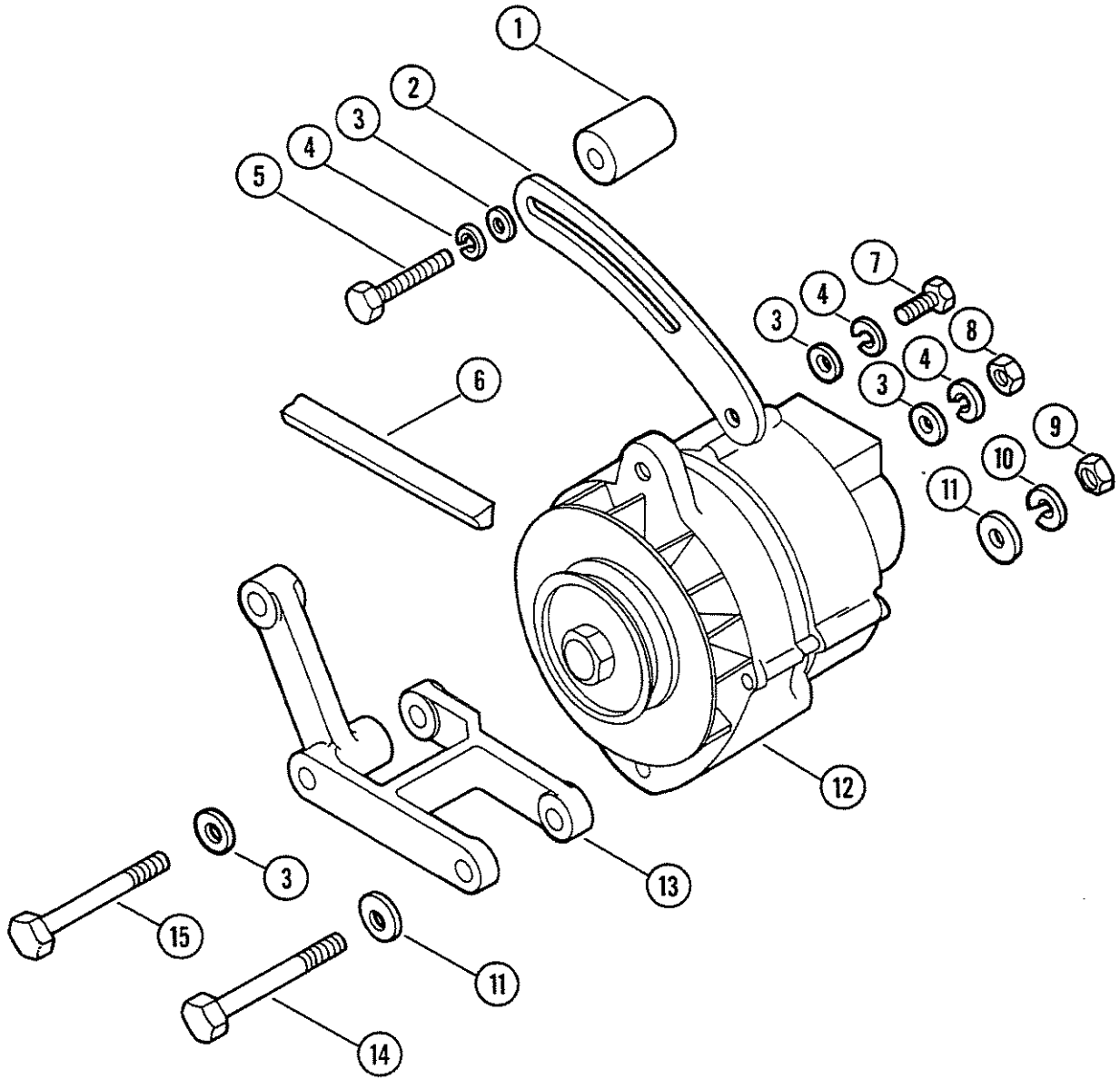
# NAME PLATE GROUP



## NAME PLATE GROUP

Item	Part No.	Unit	Description
1	298851	1	Glow Plug Label
2	299609	1	Oil Label
3	298850	1	Instruction Label
4	298849	1	Instruction Label
5	298847	1	Drainage Label
6	298627	1	Hurth Rev. Gear Date Plate
7	299158	1	Hurth Rev. Gear Cube Date Plate
8	300268	1	Engine Serial and Model Plate

# ALTERNATOR GROUP

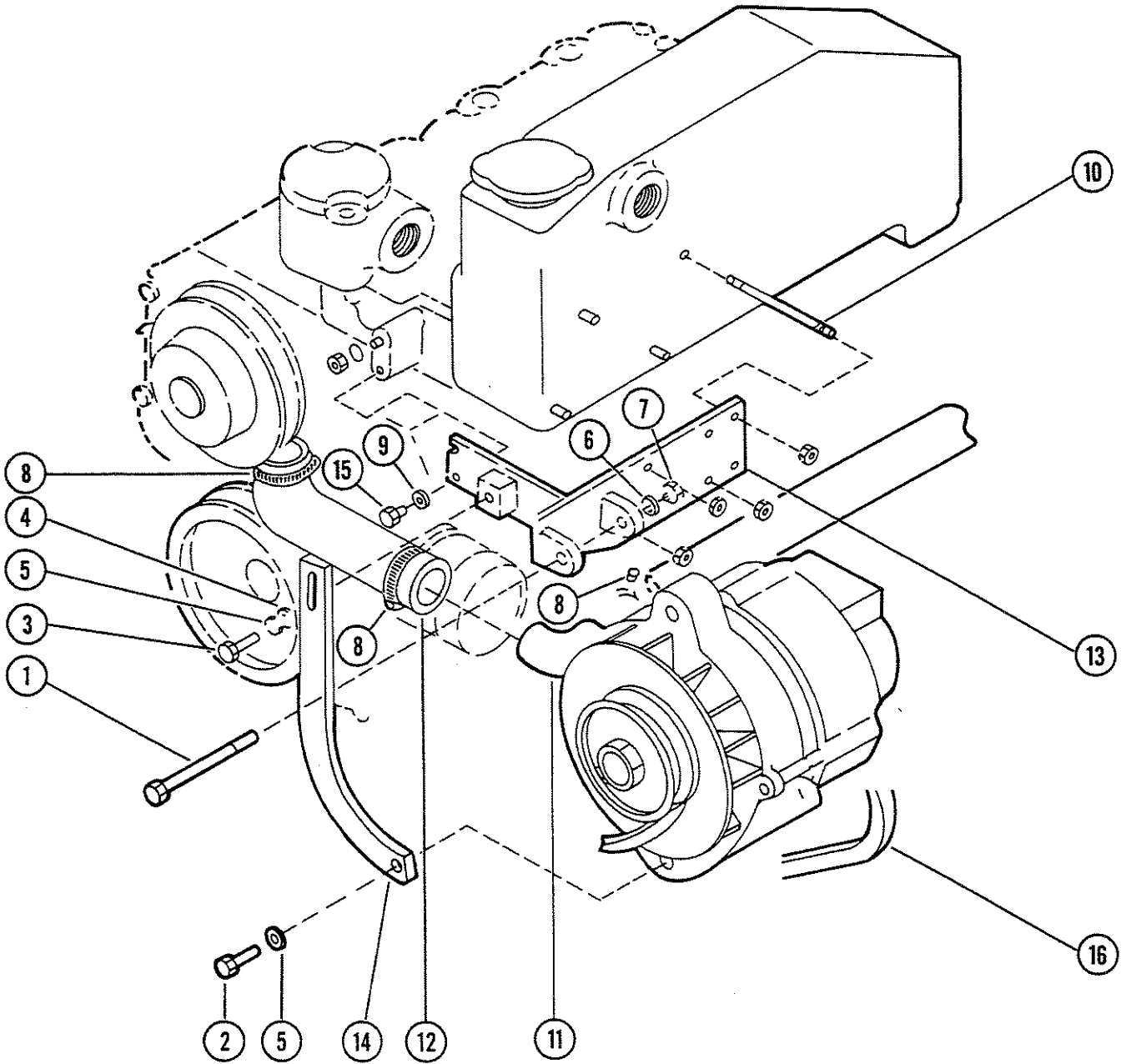




## ALTERNATOR GROUP

Item	Part No.	Unit	Description
1	300105	1	Spacer - Alternator Arm
2	299809	1	Alternator Adjusting Arm
3	231875	4	Washer - 5/16 Plain
4	231891	3	Washer - Spring Lock 5/16
5	301019	1	Screw - Hex Head 5/16-18 x 3-1/4
6	300805	1	V-Belt
7	231057	1	Hex Head Cap Screw 5/16-18 x 3/4
8	230141	1	Hex Nut 5/16-18
9	230144	1	Hex Nut 3/8-16
10	231895	1	Washer - 3/8 Spring Lock
11	231876	2	Washer - 3/8 SAE
12	302280	1	Alternator 51 AMP
12A	300746	1	12V 72AMP Alt. w/AC TAB Larger Bolt Hole 1" MTG. & Spacer 1"
13	300950	1	Bracket - Alt. Mounting Assembly
14	231093	1	Hex Head Cap Screw 3/8-16 x 3-3/4
15	243061	1	Hex Head Cap Screw 5/16-18 x 4-1/2

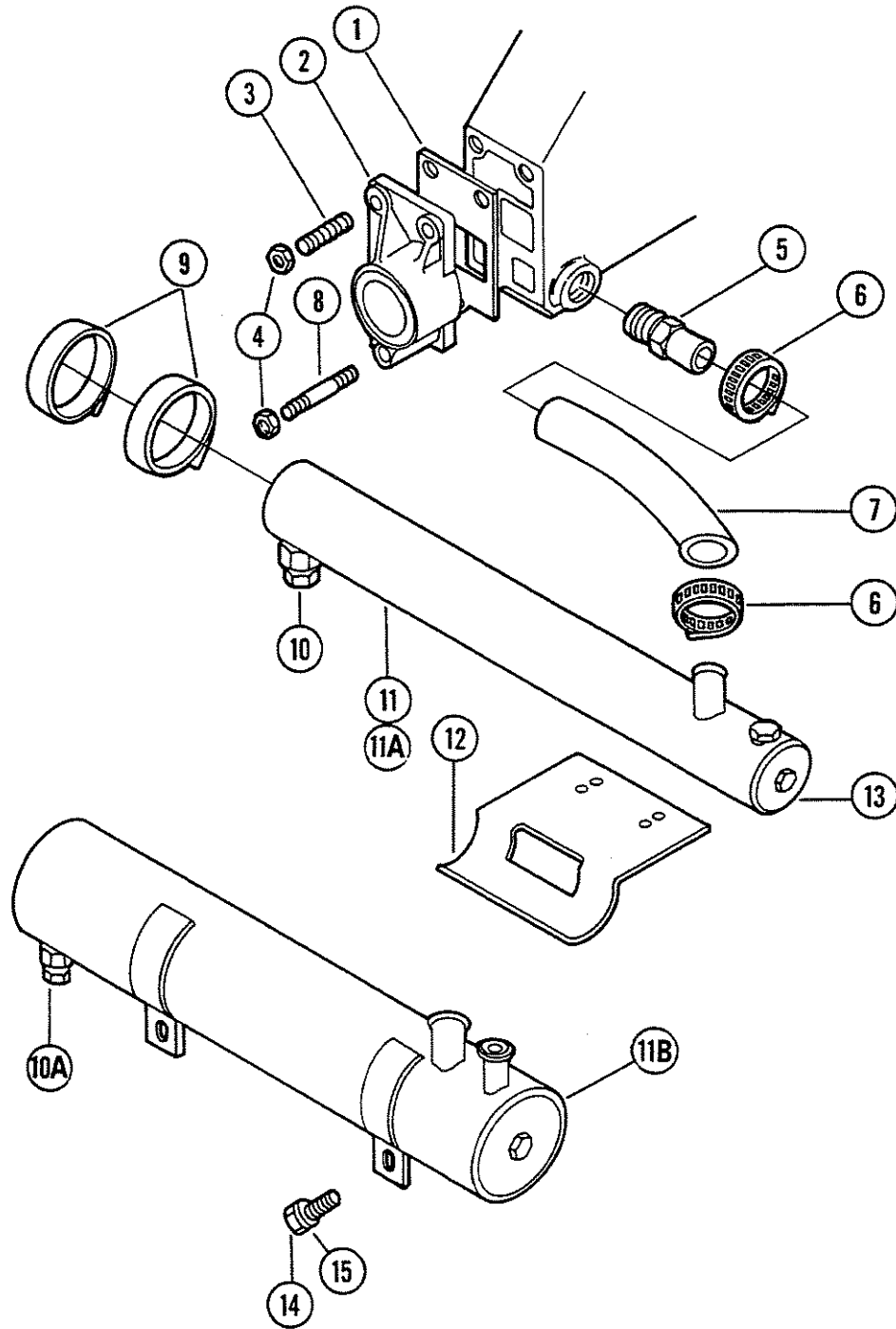
# M-25 AND M-25XP ALTERNATOR MOUNT CONVERSION KIT



## M-25 AND M-25XP ALTERNATOR MOUNT CONVERSION KIT

Item	Part No.	Unit	Description
1	010377	1	3/8-16 x 3-1/2 Hex HD Cap Screw
2	015250	1	5/16-18 x 3/4 Hex HD Cap Screw
3	015251	1	5/16-18 x 1 Hex HD Cap Screw
4	015386	1	5/16 FLT Washer
5	015395	2	5/16 Med SPR Lock Washer
6	015396	1	3/8 Med SPR Lock Washer
7	015419	1	3/8-16 Hex Nut
8	298643	3	Hose Clamp
9	299033	1	6.1 MM ID x 11.8 MM OD x 1/6 MM SPR Lock Washer
10	300095	4	6 MM DIA x 97 MM LG Stud
11	302150	1	Elbow 90° 3/4
12	302086	1	1" ID x 90° Model Hose
13	302087	1	Alternator Mount M-25XP
14	302088	1	Alternator ADJ Arm M-25XP
15	302039	1	6 MM x 1 MM x 20 MM LF Hex HD Cap Screw
16	302190	1	V-Belt M25
16A	300817	1	V-Belt 25XP

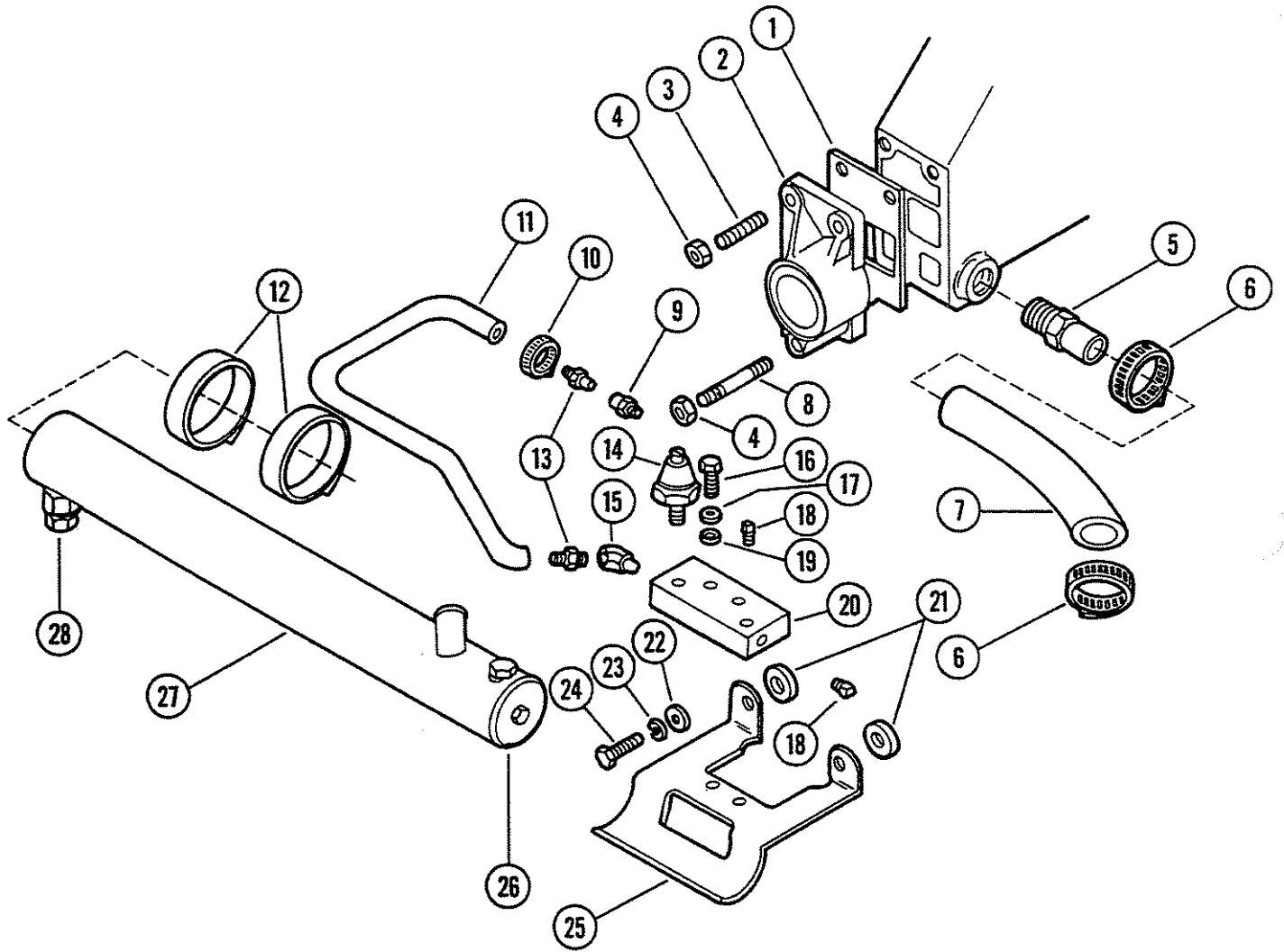
# HEAT EXCHANGER GROUP - NEW STYLE



## HEAT EXCHANGER GROUP - NEW STYLE

Item	Part No.	Unit	Description
1	298600	1	Gasket - Exhaust Flange
2	298599	1	Exhaust Flange
3	276440	2	Stud 3/8-16 & 24 x 1-7/16
4	230147	3	Hex Nut 3/8-24
5	286075	1	Hose Connector 3/4 MPT
6	298648	2	Hose Clamp No. 2
7	299079		Wire Flex Hose 7/8 I.D. & 10-3/4 Lg.
8	298974	1	Stud 3/8-16 & 24 x 2-5/8
9	303070	2	Hose Clamp No. 28
10	301069	1	Zinc Drain Plug 1/8 NPT x 1-7/8 x 3/16 DIA
10A	301068		Zinc Drain Plug M-25XP 3/8 NPT x 1-1/2 x 1/2 D.
11	299049	1	Heat Exchanger 2" x 16"
11A	299835	1 PC	Heat Exchanger M-25XP 3"
11B	302631	1 PC	New Style Heat Exchanger w/MTG. BRKTS. 3"x13"
12	301142	1	(New) Heat Exchanger Bracket
13	299838	1	Cover Plate & Gasket
14	321056	2	Bolt
15	015395	2	Lock Washer

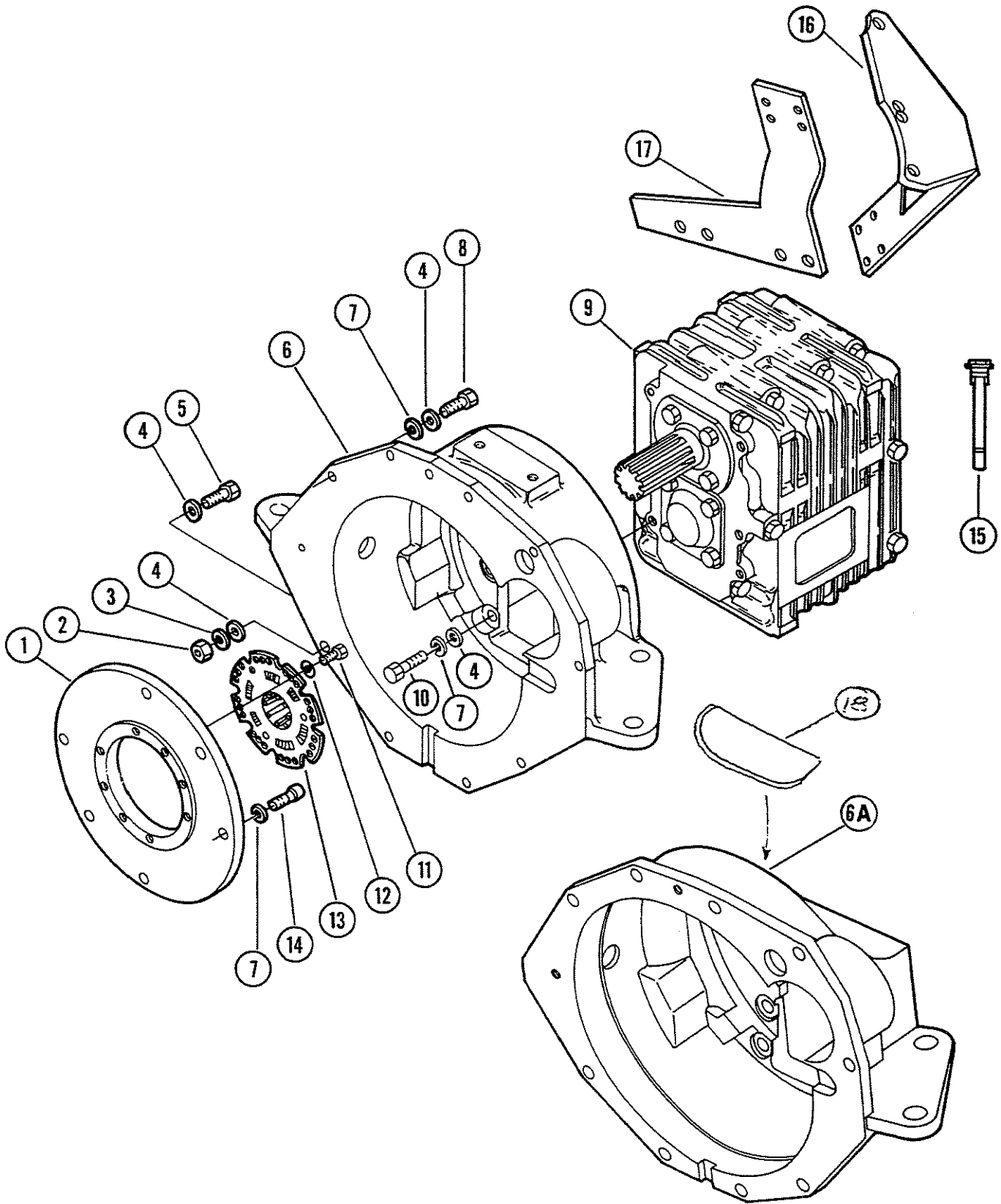
# HEAT EXCHANGER GROUP - OLD STYLE



## HEAT EXCHANGER GROUP - OLD STYLE

Item	Part No.	Unit	Description
1	298600	1	Gasket - Exhaust Flange
2	298599	1	Exhaust Flange
3	276440	2	Stud 3/8-16 & 24 x 1-7/16
4	230147	3	Hex Nut 3/8-24
5	286075	1	Hose Connector 3/4 MPT
6	298648	2	Hose Clamp No. 2
7	299079		Wire Flex Hose 7/8 I.D. x 10-3/4 Lg.
8	298974	1	Stud 3/8-16 & 24 x 2-5/8
9	299726	1	Adapter 1/8-28 x 1/8-27 FPT
10	298605	1	Clamp - Hose 1/2" Hose
11	299745	1	Hose 1/4 I.D. x 6-1/2 Lg.
12	303070	2	Hose Clamp No. 28
13	299342	2	Connector 1/8-27 x 1/4 Hose
14	299964	1	Oil Switch
15	299271	1	Elbow 45°
16	231037	2	Screw Hex Head Cap 1/4-20 x 1"
17	231907	2	Washer - Int. Lock
18	239136	2	Pipe Plug 1/8 Brass
19	231874	2	Washer - Plain 1/4
20	299700	1	Oil Manifold
21	231059	4	Heat Exchanger Bracket Spacer
22	231875	2	Washer - Plain 8mm
23	298461	2	Split Lock 8mm
24	299189	2	Hex Head Cap Screw 8mm x 35mm
25	300273	1	Heat Exchanger Bracket Old Style (5421 HSG.)
26	299838	1	Cover Plate & Gasket
27	299049	1	Heat Exchanger 2" x 16"
28	301069	1	Zinc Drain Plug

# BELL HOUSING GROUP

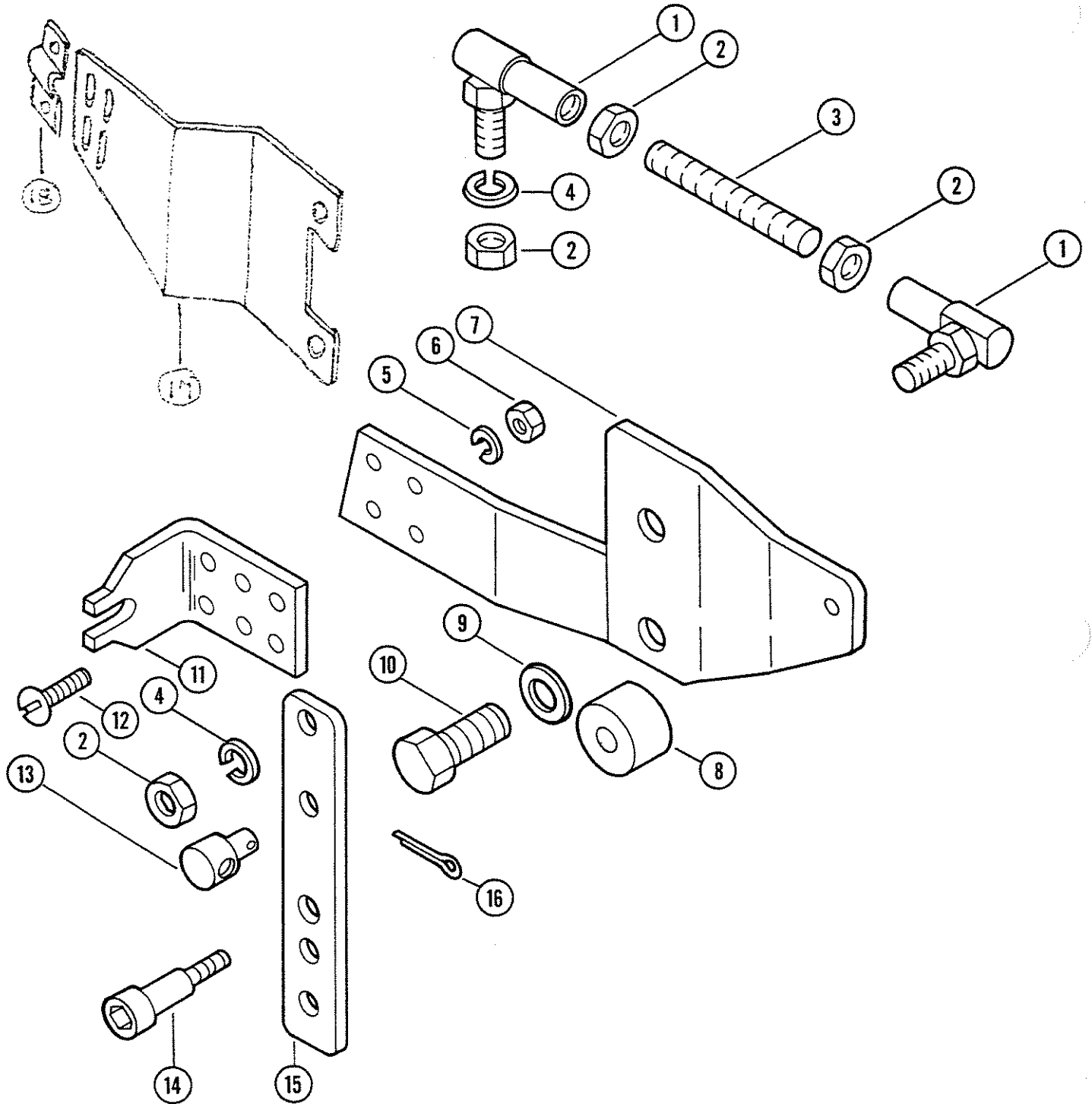




## BELL HOUSING GROUP

Item	Part No.	Unit	Description
1	300315	1	Plate - Damper Mounting
2	230141	1	Hex Nut 5/16-18
3	231891	1	Washer - 5/16 Lock
4	231875	14	Washer - 5/16 Plain
5	231061	1	Hex Head Cap Screw 5/16-18 x 1-1/2
6	300945	1	Bell Housing Eably (No Radius)
6A	302414	1PC	New Style Bell Housing —
7	298461		Dir. Mt. H. Ex. 3" Radius
8	298539		Washer - 8mm Lock
9	300115	6	Hex Head Cap Screw 8mm x 28mm
	299942	1	Standard Transmission
10	298468	1	'V' Drive Transmission
11	298458	6	Hex Head Cap Screw 8mm x 25mm
12	298459	8	Hex Head Cap Screw 5mm x 12mm
13	299156	8	Washer - Split Lock
14	298460	1	Damper - Reverse Gear
		6	Socket Head Cap Screw 8mm x 25mm
15	298939	1	Dipstick
16	300427	1	Shift Bracket
17	300244	1	Vertical Shift Bracket
18	303147	1	Pad Rubber H.E. Backing

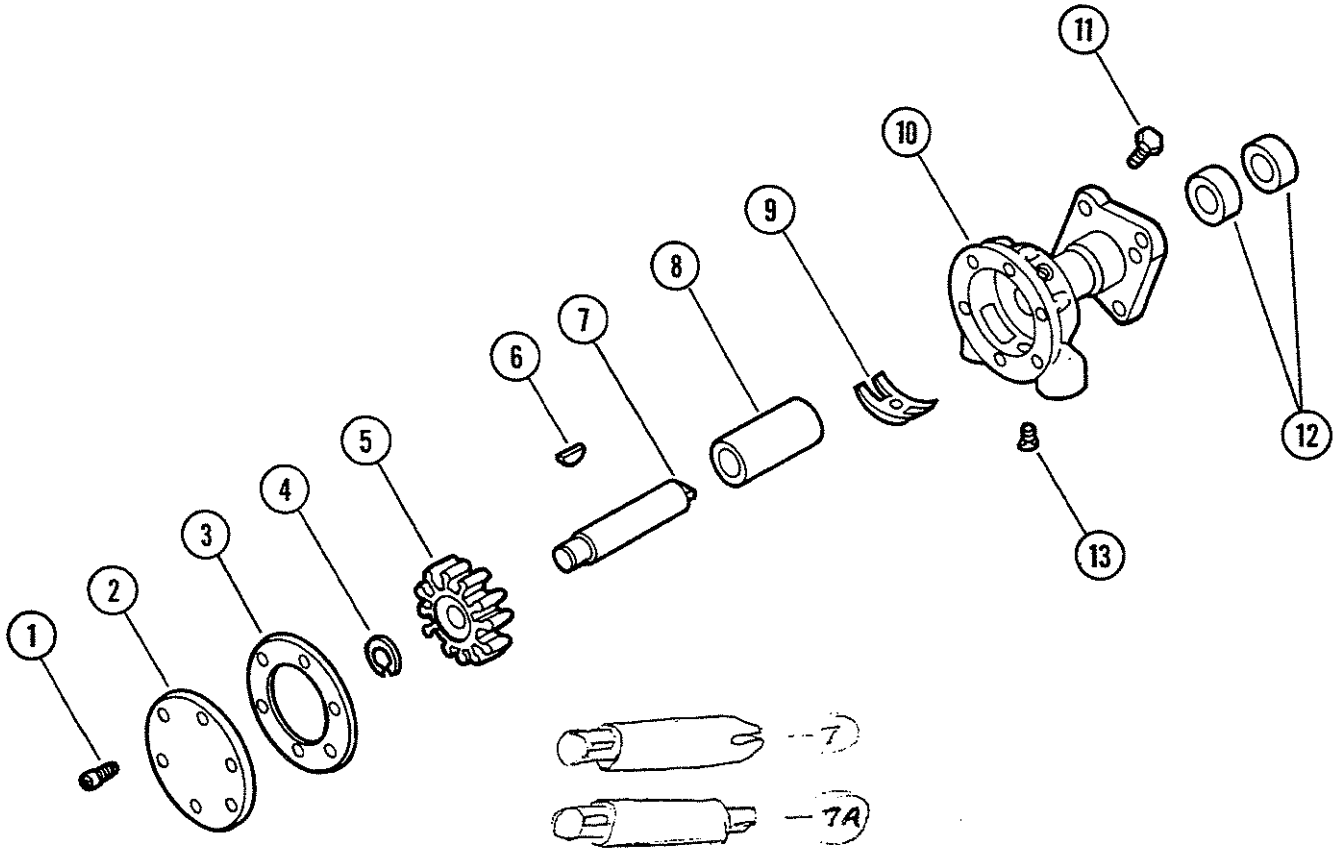
# THROTTLE BRACKET GROUP



**THROTTLE BRACKET GROUP  
256773 THROTTLE ASSEMBLY**

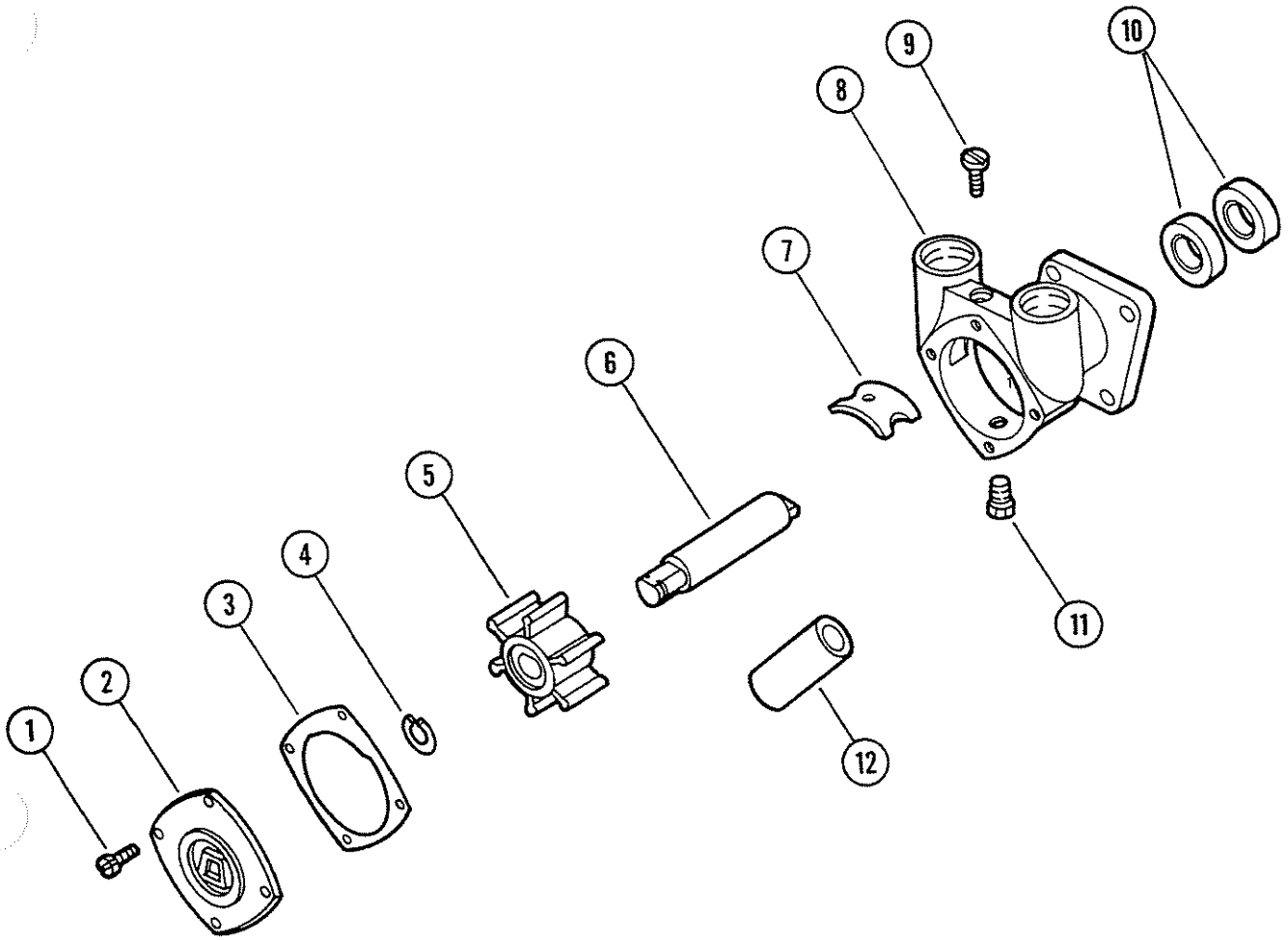
Item	Part No.	Unit	Description
1	299767-A	2	Ball Joint
2	230184	4	Hex Jam Nut 1/4-28
3	299792-A	1	Adjustment Rod
4	231907	2	Lock Washer 1/4
5	231890	2	Medium Spring Lock Washer No. 10
6	294581	3	Machine Screw Nut No. 10-24
7	300958	1	Throttle Bracket
8	300090-A	1	Spacer - Lever
9	231906	2	Lock Washer 5/16
10	299290-A	2	Hex Head Cap Screw 8mm x .787
11	298630-A	1	Cable Clip
12	231211	2	Round Head Machine Screw No. 10-24 x 5/8
13	299019-A	1	Pivot - Throttle Cable
14	231452	1	Socket Head Shoulder Screw No. 10-24 x 1/4
15	300826-A	1	Lever - Throttle
16	230281	1	Cotter Pin
17	302002	1	Stop Cable Brkt

**SHERWOOD WATER PUMP  
300986**



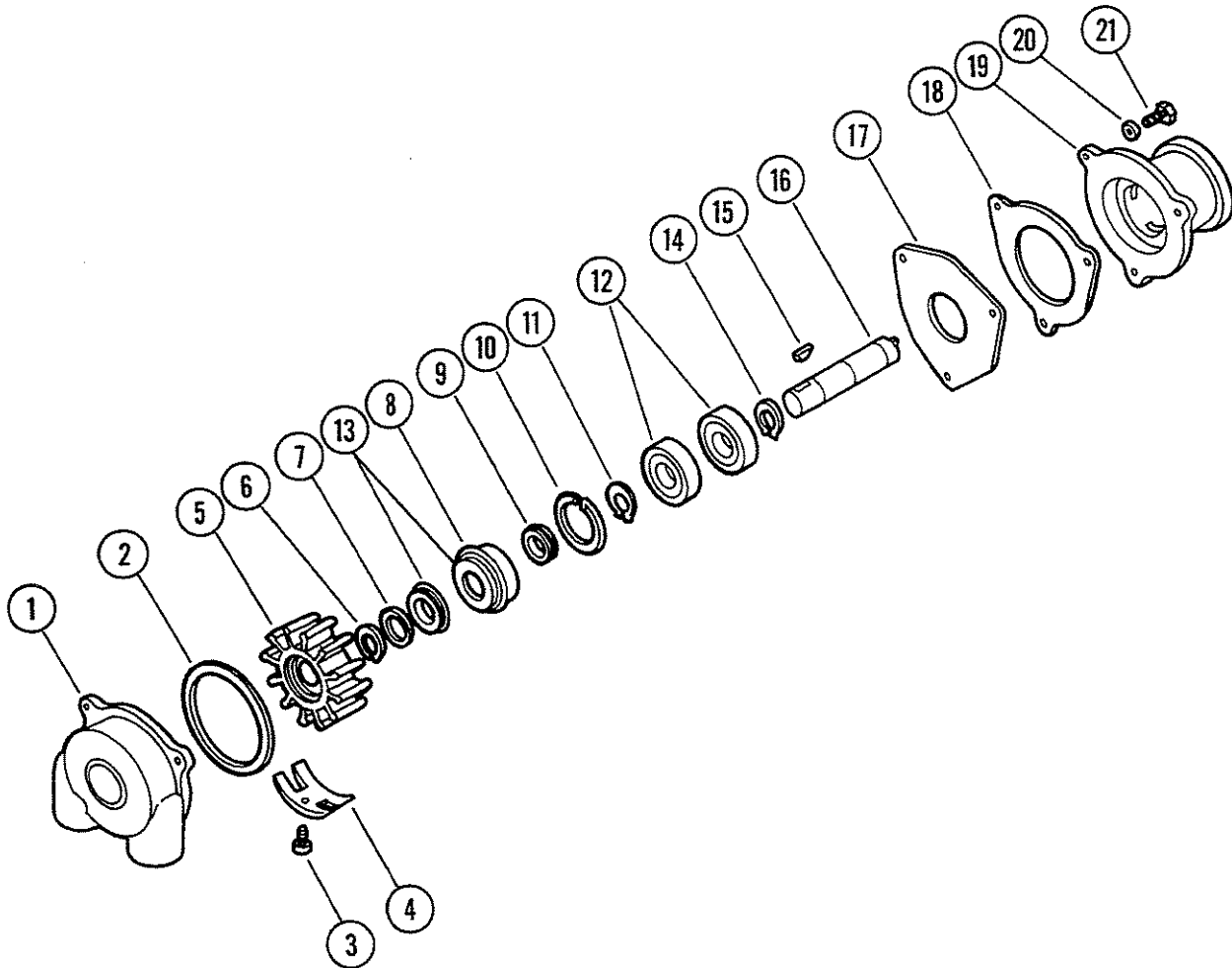
Item	Part No.	Unit	Description
1	299895	6	Cover Screws
2	299891	1	Pump Cover
3	295745	1	Cover Gasket
4	299893	1	Impeller Snap Ring
5	287439	1	Impeller
6	299896	1	Key
7	299888	1	Pump Shaft Old Style
7A	301787		Pump Shaft New Style
8	299889	1	Water Seal
9	299894	1	Cam
10	299890	1	Pump Body
11	299895	1	Cam Locking Screw
12	262286	2	Oil Seal
13	239136	1	Drain Plug

**OBERDORFER WATER PUMP  
301357**



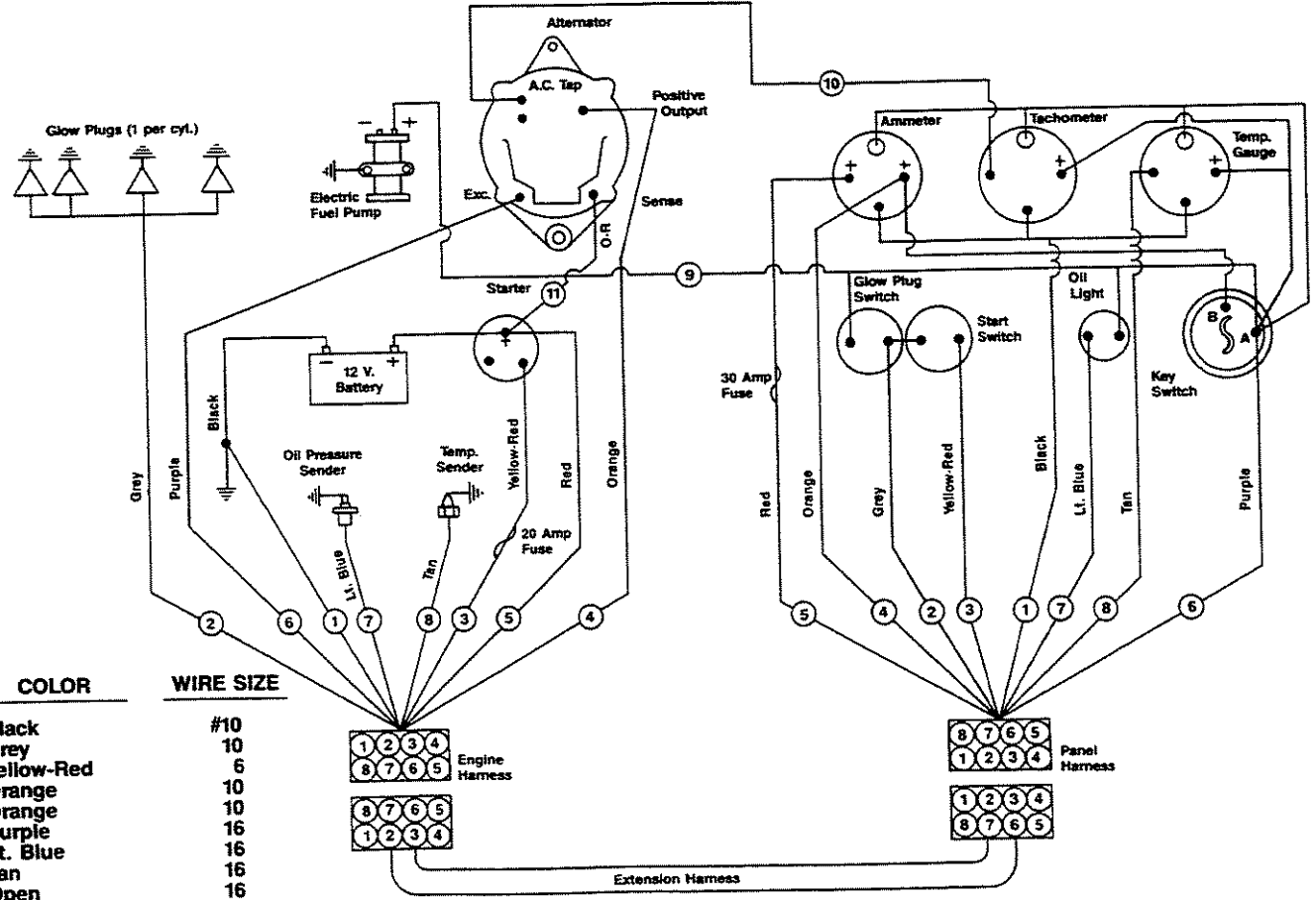
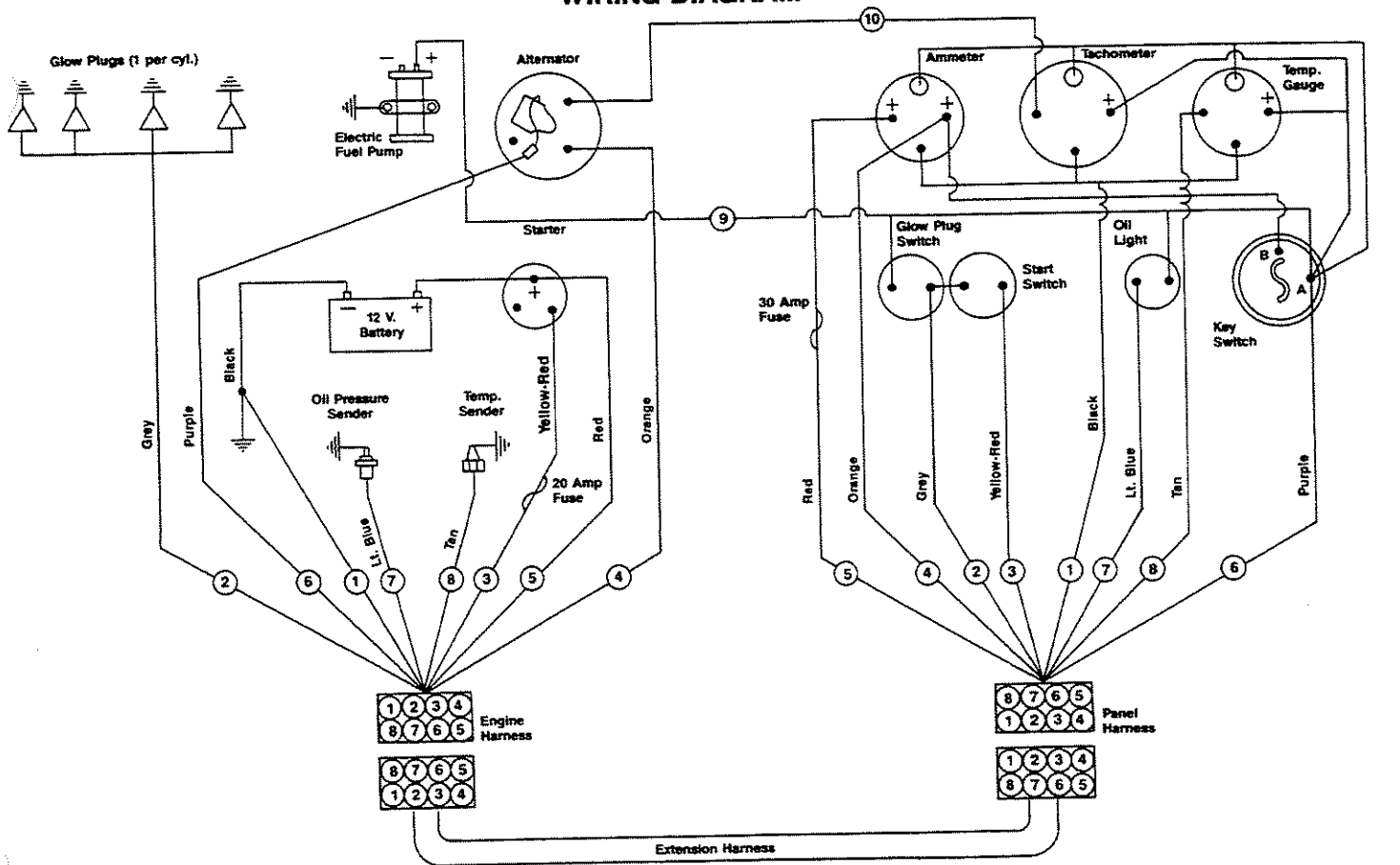
Item	Part No.	Unit	Description
1	296580	4	Cover Screws
2	296578	1	Pump Cover
3	295626	1	Cover Gasket
4	295629	1	Impeller Snap Ring
5	295628	1	Impeller
6	296575	1	Pump Shaft Old Style
6A	301788		Pump Shaft New Style
7	298889	1	Cam
8		1	Pump Body
9	296580	1	Cam Locking Screw
10	295627	2	Oil Seal
11	296576	1	Drain Plug
12	302322	1	Carbon Bushing

SHERWOOD WATER PUMP NO. 302648



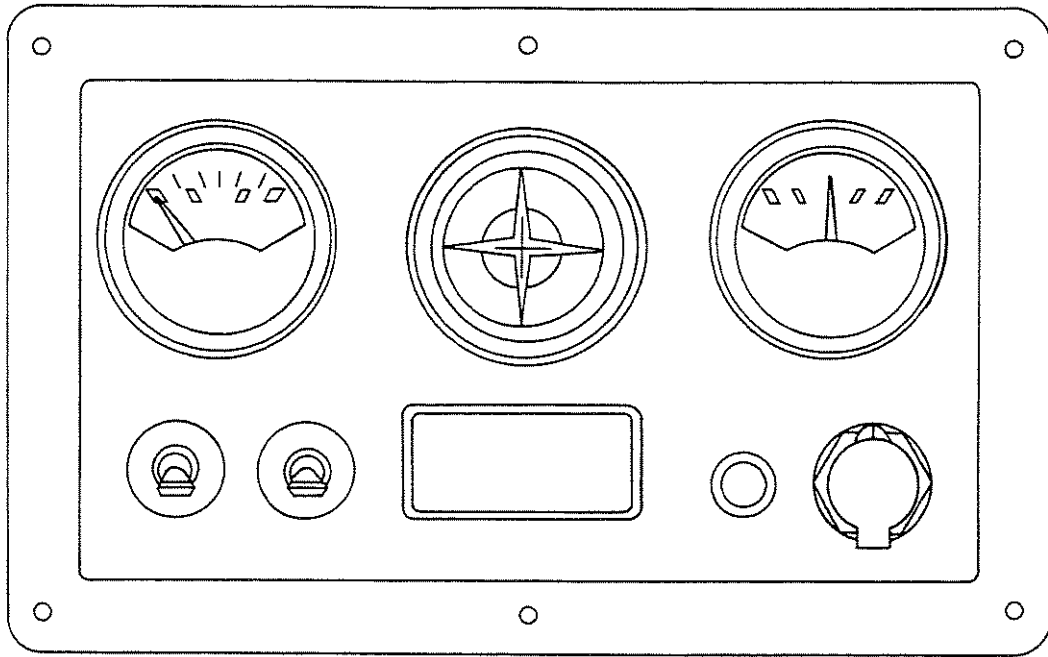
Item	Part No.	Unit	Description
1	302873	1	Impeller Housing
2	302877	1	O-Ring
3	302871	1	Cam Screw
4	302872	1	Cam
5	302875	1	Impeller
6	302867	1	Cir-Clip
7	302876	1	Flat Washer
8	302880	1	Seal Seat
9			Not Available order #13
10	302868	1	Cir-Clip Internal
11	302867	1	Cir-Clip External
12	302824	2	Ball Bearing
13	302885	1	Seal & Seat Assembly
14	302867	1	Cir-Clip External
15	302874	1	Key
16	302685	1	Shaft
17	302878	1	End Plate
18	302879	1	Gasket
19	302882	1	Pump Body
20	302870	3	Lock Washer
21	302869	3	Bolt

# WIRING DIAGRAM

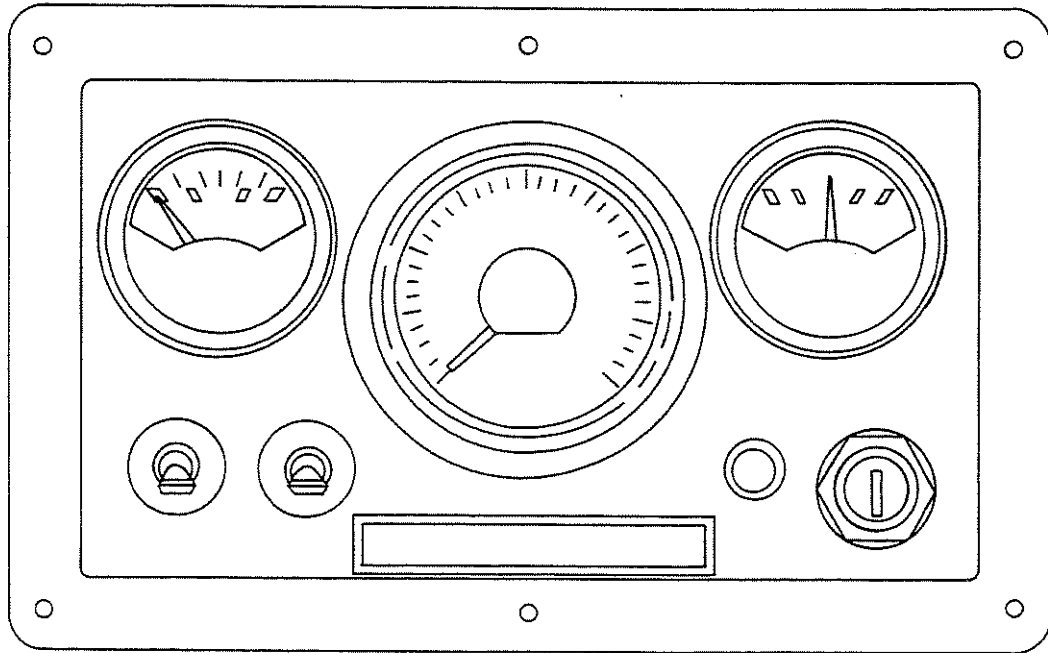


WIRE NO.	COLOR	WIRE SIZE
1	Black	#10
2	Grey	10
3	Yellow-Red	6
4	Orange	10
5	Orange	10
6	Purple	16
7	Lt. Blue	16
8	Tan	16
9	Open	16
10	Grey	16
11	Orange-Red	14

**MEDALLION PANELS  
No Long Available)**



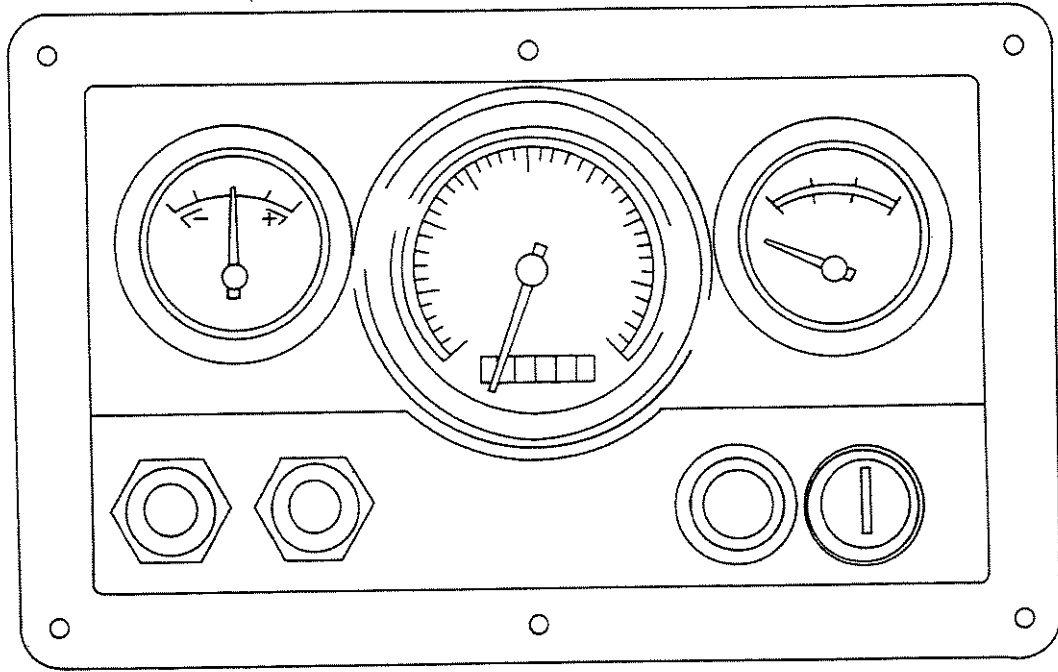
**299626 STANDARD PANEL**



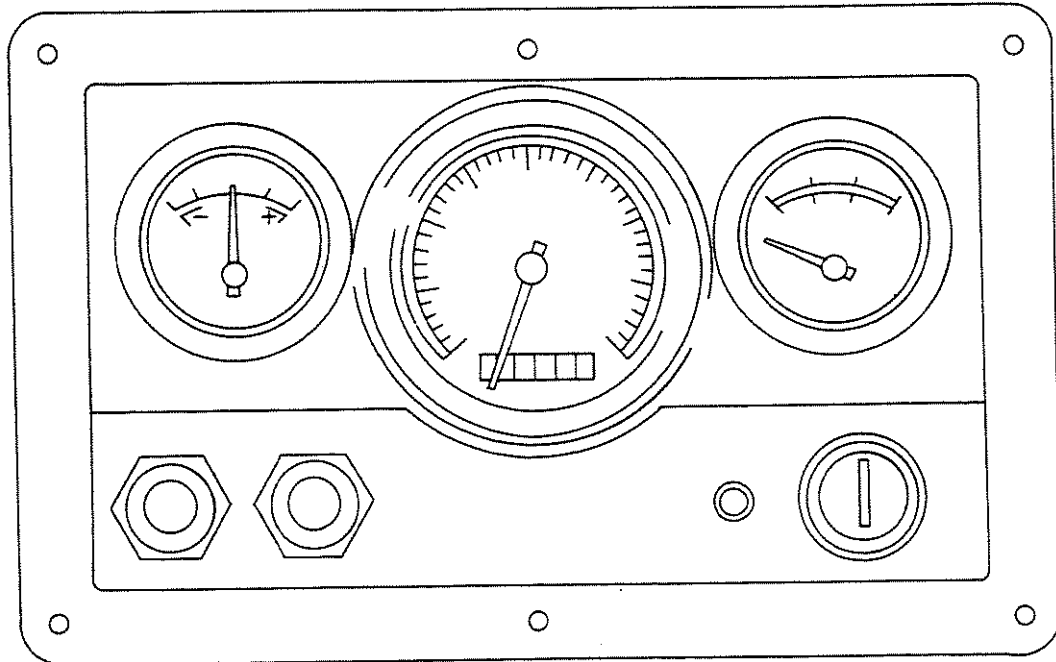
**299683 DELUXE PANEL**



**NOVATRON PANELS**

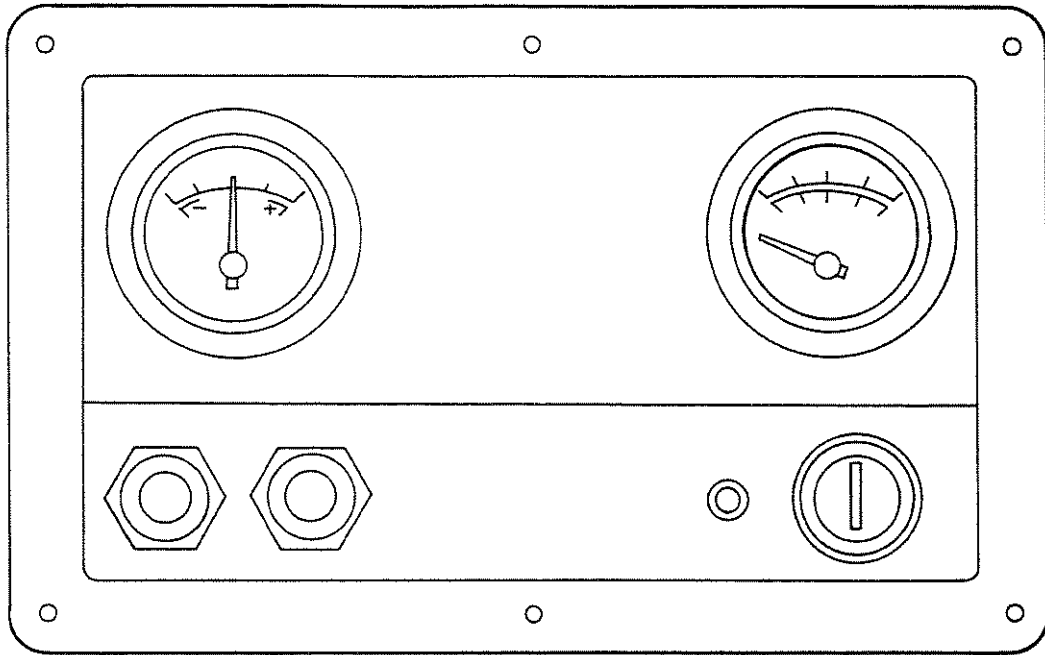


**300690 CUSTOM PANEL**  
**(With Tachometer - Hour Meter and Alarms)**



**300685 DELUXE PANEL**  
**(With Tachometer)**

## NOVATRON PANELS



**300680 STANDARD PANEL  
(No Tachometer)**

Part No.	Unit	Description
300690	Optional	Special Deluxe Panel-Tachometer w/Hourmeter w/Warning Light and Buzzer
301101	Optional	Blank Panel w/Holes
300685	Optional	Deluxe Panel - w/Tachometer
301100	1	Blank Panel w/Holes
300680	1	Standard Panel
301099	1	Blank Panel w/Holes
300668	1	Ammeter
300669	1	Oil Light
300670	1	Temperature Gauge
300671	1	Ignition Switch
300672	2	Glow and Start Button
300673	1	35 Amp Circuit Breaker
300674	1	10 Amp Circuit Breaker
300675	1	10 Foot Extension Harness
300676	1	Panel Harness Assembly
300684	Optional	Tachometer for 300685 Panel
300687	Optional	Tachometer w/Hourmeter for 300690 Panel
300688	Optional	Buzz Light for 300690 Panel
300689	Optional	Tachometer Wire for 300690 Panel
300708	Optional	5 Foot Extension Harness
298586	Optional	Engine Harness

**256802**  
**"B" SPARE PARTS KIT M-25 - M25XP**

**256912**  
**"A" SPARE PARTS KIT M-25 - M-25XP**

<b>Top Gasket Set</b> M-25 256836
<b>Complete Gasket Set</b> M-25 256808
<b>Top Gasket Set</b> M-25XP 256921
<b>Complete Gasket Set</b> M-25XP 256930

<b>STANDARD COUPLING KITS</b>		
	<b>Rigid</b>	<b>Flex</b>
3/4"	256741	298568
7/8"	256742	298569
1"	256743	298484
1-1/8"	256744	298570
1-1/4"	256745	299300

<b>V-DRIVE COUPLING KITS</b>		
	<b>Rigid</b>	<b>Flex</b>
3/4"	256775	256780
7/8"	256776	256781
1"	256777	256782
1-1/8"	256778	256783
1-1/4"	256779	N/A

# UNIVERSAL DIESEL FAST MOVING PARTS

**Model:** M-25XP      **Number of cylinders:** 3      **Mfg. Years:** 1986-CURRENT  
**Cubic Inches:** 57      **Horsepower:** 23      **Weight:** 285

Air Filter - 302181 Air Filter Element - 301049 Alternator - 302280 Ammeter - 300668 Belt - 300817 Dipstick - 300134 Exhaust Manifold - 301014 (A) Exhaust Manifold Gasket - 299435 Filter, Lube Oil - 300209 Filter, Fuel Oil - 298854 Filter, Electric Lift - 300128 Gasket, Head - 302184 Gasket, Oil Pan - 300132 Gasket Set, Upper - 256921 Gasket Set, Complete - 256930 Glow Plug - 301754 Harness, 5 FT. EXT. - 300708 Harness, 10 FT. EXT. - 300675 Harness, Engine - 298586 (B) Heat Exchanger - SEE BELOW (C) Heat Exchanger End Cap - SEE BELOW Heat Exchanger Gasket - SEE BELOW (D) Injector - SEE BELOW Injection Pump - 300191 Injection Hardware Kit - N/A Injector Nozzle - 301514 Injector Return Line - 302923 Isolators - 300514 Ignition Switch - 300671 Manuals, Operators - 200157 Manuals, Parts - 200142 Manuals, Technical - 200155 Oil Drain Washer Kit - 301431 Oil Pump - 299405	Oil Pressure Switch - 299964 Panel, Standard - 300680 Panel, Deluxe - 300685 Panel, Custom - 300690 Pump, Fresh Water - 300203 Pump, Mounting Gasket - 300204 Pump, Rebuild Kit - N/A Pump, Sea Water - 302648 (E) Pump Mounting Gasket - 302678 Pump, Impeller - 302875 Pump, Repair Kit - N/A Pump, Seal - 302885 Pump Conversion Kit (includes pump) - 302837 Pump Conversion Kit (excludes pump) - 302838 PTO Pulley Kit - 302159 (F) Pump, Fuel Lift - 301385 Shim, Cylinder Head - 302185 Spare Parts Kit A - 256912 Spare Parts Kit B - 256802 Starter - 299512 Starter Solenoid - SEE BELOW (G) Tachometer - 300684 Tachometer with Hour Meter - 300687 Tank, Coolant Recovery - 300238 Thermostat Element - 301358 (H) Thermostat Element Gasket - N/A Thermostat MTG Gasket - 300237 Valve Cover Gasket - 300158 Water Temp Meter - 300670 Water Temp Sender - 299066 Water Injected Elbow - N/A Zinc - 301068 (I)
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**Notes:**

- A.) QTY-3 EXHAUST MANIFOLD GASKETS REQUIRED PER ENGINE.
- B.) 299049 (2" DIAMETER X 16"), 299835 (3" DIAMETER X 13"-SAT ON A BRACKET AND WAS CLAMPED ON), 302631 (3" DIAMETER X 13" - BOLTS ON BY TWO MTG BRACKETS THAT ARE ATTACHED TO HEAT EXCHANGER - MOST RECENT)
- C.) P/N 299838 CONSISTS OF END CAP, GASKET, & BOLT (USED ON 2" DIAMETER H.E.)  
P/N 301457 CONSISTS OF END CAP, GASKET, & BOLT (USED ON 3" DIA. H.E.)
- D.) QTY-1 298787 & QTY-2 298788 INJECTORS USED PER ENGINE.
- E.) NEW STYLE SHERWOOD PUMP - DOES NOT HAVE END COVER PLATE.  
(INFORMATION ON OLD STYLE SHERWOOD & OBERDORFER IN PARTS LIST)
- F.) THIS IS PULLEY ONLY. YOU ALSO REQUIRE QTY-3 CAPSCREWS - P/N 302046.
- G.) P/N 300538 WITH STUDS OR P/N 299771 WITH SCREWS.
- H.) THERMOSTAT IS 160°.
- I.) 301069 FOR 2" DIAMETER EXCHANGER OR 301068 FOR 3" DIAMETER EXCHANGER.



# UNIVERSAL ENGINE DATA

Model	Cubic Inches	Horsepower	# Cylinders	Weight	Block Model	Years	Approx. Qty. Sold
M-12	24.4	10	2	175	Z-400	83-88	1200
** M2-12	26	11	2	175	Z-430	87-Current	320
M-15	31	11	2	245	Z-500	82-83	2400
M-18	34.8	14	2	255	Z-600	83-88	230
M-20	45	16	2	365	Z-751	82-83	230
** M3-20	38.9	18	3	235	D-640	88-Current	525
M-25	52	21	3	285	D-850	81-86	3650
M-25XP	57	23	3	285	D-950	86-Current	3100
M-30	68	24	3	425	D-1101&1102	83-87	400
** M4-30	52	25	4	270	Y-850	88-Current	470
M-35	75.5	30	4	335	V-1200	87-Current	280
M-40	91	32	4	545	V-1502	82-Current	360
M-50	115	44	4	545	V-1902	82-Current	520
* 5411(M15)	31	11	2	245	Z-500	77-82	2900
* 5416(M20)	45	16	2	365	Z-751	76-82	1000
* 5421(M25)	52	21	3	285	D-850	78-81	1000
* 5424(M30)	68	24	3	425	D-1101	77-83	1050
* 5432(M40)	91	32	4	490	V-1501	78-82	650
* 5444(M50)	115	44	4	545	V-1902	80-82	280

\* These models have been discontinued. The models that replace them are in parenthesis.

\*\* Mini series.



# UNIVERSAL DIESEL FAST MOVING PARTS

Model: 5421/M-25      Number of cylinders: 3      Mfg. Years: 1978-1981 : 5421  
1981-1986 : M-25

Cubic Inches: 52      Horsepower: 21      Weight: 285

Air Filter	-	302181	Oil Pressure Switch	-	299964	
Air Filter Element	-	301049	Panel, Standard	-	300680	
Alternator	-	302280	Panel, Deluxe	-	300685	
Ammeter	-	300668	Panel, Custom	-	300690	
Belt	-	300805	Pump, Fresh Water	-	300203	
Dipstick	-	300134	Pump, Mounting Gasket	-	300204	
Exhaust Manifold	-	301014	Pump, Rebuild Kit	-	N/A	
(A) Exhaust Manifold Gasket	-	299435	Pump, Sea Water	-	302648	(E)
Filter, Lube Oil	-	300209	Pump Mounting Gasket	-	302678	
Filter, Fuel Oil	-	298854	Pump, Impeller	-	302875	
Filter, Electric Lift	-	300128	Pump, Repair Kit	-	N/A	
Gasket, Head	-	300141	Pump, Seal	-	302885	
Gasket, Oil Pan	-	300132	Pump Conversion Kit			
Gasket Set, Upper	-	256836	(includes pump)	-	302837	
Gasket Set, Complete	-	256808	Pump Conversion Kit			
Glow Plug	-	299685	(excludes pump)	-	302838	
Harness, 5 FT. EXT.	-	300708	PTO Pulley Kit	-	302159	(F)
Harness, 10 FT. EXT.	-	300675	Pump, Fuel Lift	-	301385	
Harness, Engine	-	298586	Shim, Cylinder Head	-	300142	
(B) Heat Exchanger	-	299049	Spare Parts Kit A	-	256912	
(C) Heat Exchanger End Cap	-	299838	Spare Parts Kit B	-	256802	
Heat Exchanger Gasket	-	299838	Starter	-	299512	
(D) Injector	-	SEE BELOW	Starter Solenoid	-	SEE BELOW	(G)
Injection Pump	-	300191	Tachometer	-	300684	
Injection Hardware Kit	-	N/A	Tachometer with Hour Meter	-	300687	
Injector Nozzle	-	301514	Tank, Coolant Recovery	-	300238	
Injector Return Line	-	302923	Thermostat Element	-	301358	(H)
Isolators	-	300514	Thermostat Element Gasket	-	N/A	
Ignition Switch	-	300671	Thermostat MTG Gasket	-	300237	
Manuals, Operators	-	200157	Valve Cover Gasket	-	300158	
Manuals, Parts	-	200142	Water Temp Meter	-	300670	
Manuals, Technical	-	200151	Water Temp Sender	-	299066	
Oil Drain Washer Kit	-	301431	Water Injected Elbow	-	N/A	
Oil Pump	-	299405	Zinc	-	301069	(I)

### Notes:

- A.) QTY-3 EXHAUST MANIFOLD GASKETS REQUIRED PER ENGINE.  
 B.) 299049 IS 2" DIAMETER X 16" LONG)  
 C.) 299838 CONSISTS OF END CAP, GASKET, & BOLT.  
 D.) QTY-1 298787 & QTY-2 298788 INJECTORS ARE USED PER ENGINE.  
 E.) NEW STYLE SHERWOOD PUMP - DOES NOT HAVE END COVER PLATE.  
 (INFORMATION ON OLD STYLE SHERWOOD & OBERDORFER IN PARTS LIST).  
 F.) THIS IS PULLEY ONLY. ALSO REQUIRED ARE QTY-3 CAPSCREWS-P/N 302046.  
 G.) P/N 300538 WITH STUDS OR P/N 299771 WITH SCREWS.  
 H.) THERMOSTAT IS 160°.  
 I.) 301069 ZINC IS USED ON 2" DIAMETER HEAT EXCHANGERS.

