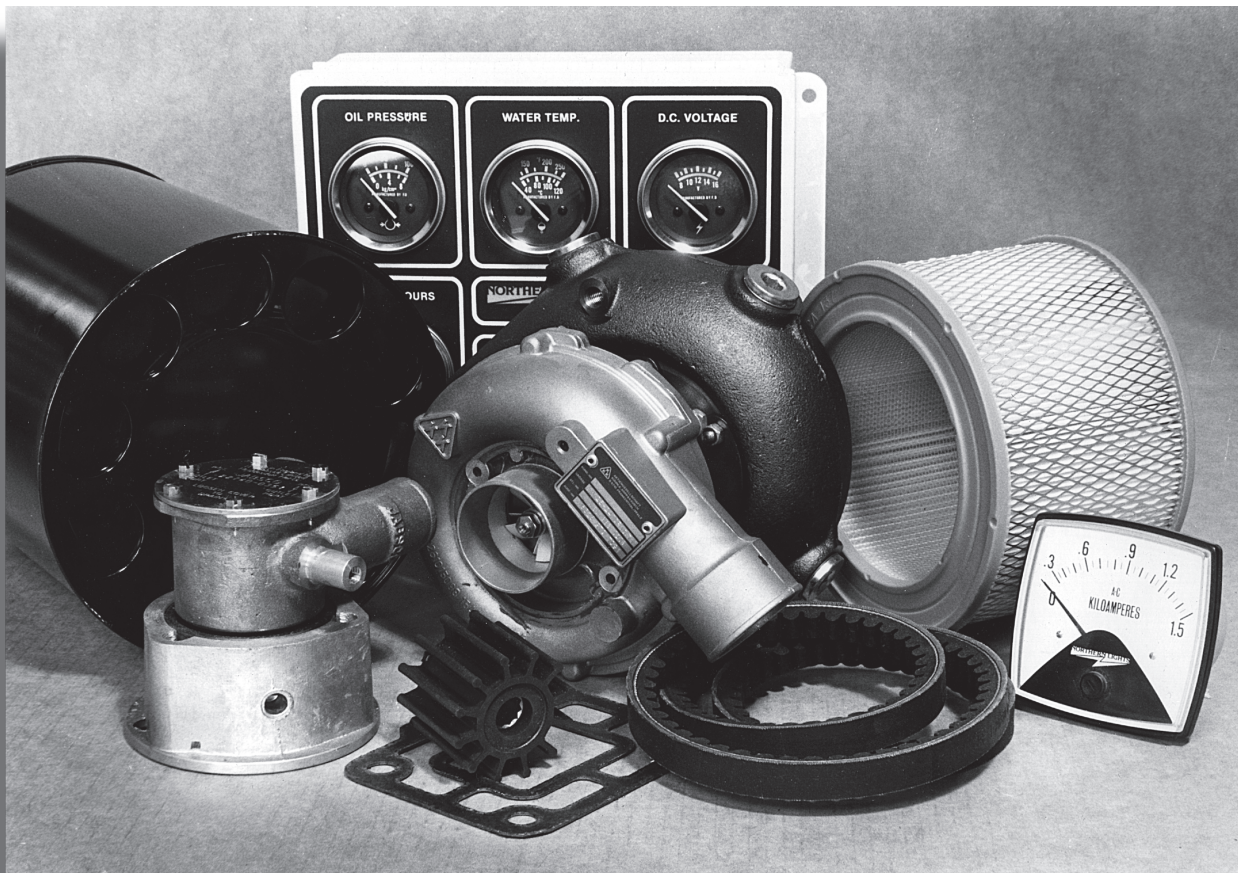


PARTS CATALOG

Publication #P673L for models:
M673L and NL673L



NORTHERN LIGHTS
®



— CALIFORNIA —
Proposition 65 Warning:

*Diesel engine exhaust and some of its constituents
are known to the State of California to cause
cancer, birth defects, and other reproductive harm.*



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PARTS CATALOG

for Models M673L & NL673L

Please read thoroughly before attempting to use this manual:

Table of Contents	I
Model Designation & Serial Numbers	II
Reading a Parts Page	III

Table of Contents

GROUP 1 - ENGINE

Cylinder Block Assembly	0 - 1
Crankshaft & Piston	2 - 3
Oil Pump & Strainer	4
Camshaft	5
Cylinder Head & Rocker Arm Assembly	6 - 7
Rocker Arm Cover	8

GROUP 2 - AIR INTAKE SYSTEM

Air Intake & Rocker Arm Cover	1
Air Filter	2 - 4
Muffler	5

GROUP 3 - COOLING SYSTEM & EXHAUST

Exhaust Manifold / Expansion Tank	0 - 2
Thermostat & Housing	3
Coolant Pump	4 - 5
Raw Water Pump	6
Radiator & Mounting	7

GROUP 4 - FUEL SYSTEM

General Arrangement	0 - 1
Governor & Timing Gear Case	2 - 3
Fuel Filter & Mounting	4
Injector Assembly	5
Injection Pump Assembly	6

GROUP 5 - ELECTRICAL SYSTEM

12 Volt Engine	0 - 1
Flywheel Housing & Starter Mounting	2
Alternator & Mounting	3
Alternator Assembly	4
Starter Motor Assembly	5
Series 1B Start/Stop Control Panel	6
Belt Guard	7

GROUP 6 - GASKET SETS

Gasket Sets	0 - 1
-------------------	-------

GROUP 7 - GENERATOR

Generator Components	0 - 3
----------------------------	-------

GROUP 8 - FRAME & MOUNTING

Base Frame Assemblies	0 - 1
-----------------------------	-------

GROUP 9 - ACCESSORIES

& OPTIONAL EQUIPMENT

Standard Line - Series 3C, Flush Mount, 12V	0
Standard Line - Series 3B, Control Panel, 12V ...	1
Oil Drain Kit	2
Remote Expansion Tank	3
Coolant Recovery Tank	4
Sound Enclosure	6 - 7

Proprietary Information

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Model Designation

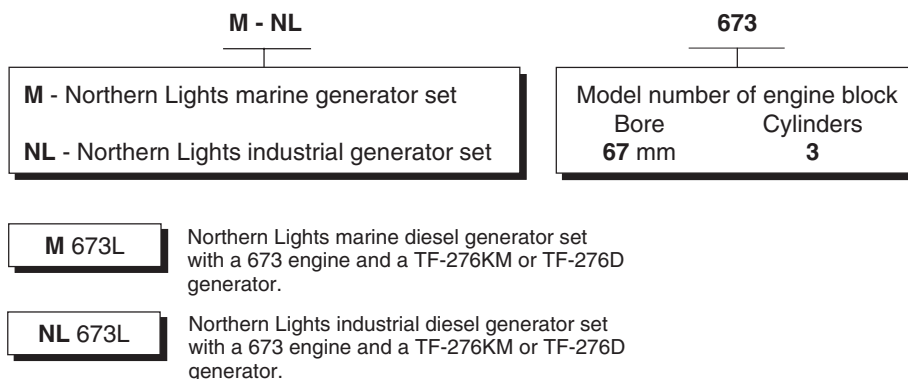
MODELS INCLUDED

This manual covers the operating instructions for:

M673L and NL673L, which both use the 673 engine.

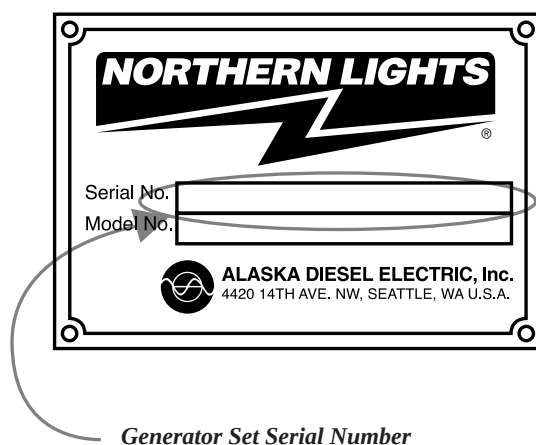
Model Numbers

Model numbers give the unit's application, block model, aspiration, and RPM:



Serial Numbers

Your set has three serial numbers: ① an engine number stamped on the block, ② a generator plate, and ③ a generator set plate. Use the serial number on the generator set plate when ordering parts or in correspondence. The generator set plate is found on the service side of the generator and resembles the drawing below.



Reading a Parts Page

IMPORTANT:

Before selecting parts, be sure that you are choosing parts from the correct page.
Check the model designation at the page top.
Do not use this illustration for parts purchasing.

1 — ELECTRICAL SYSTEM

ALTERNATOR ASSEMBLY: M - NL673

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIALNUMBER
0	185046210	1	Alternator Assembly	-
1	185446219	1	Flywheel, complete	-
2	185446217	1	Plate, complete	-
3	185716200	1	Plate	-
4	185446218	1	Stator, complete	-
5	040126210	2	Bearing	-
6	020210010	1	Nut	-
7	027100010	1	Spring washer	-
8	026100010	1	Washer	-
9	185446220	1	Clamp	-
10	015140408	1	Screw	-
11	015140425	2	Screw	-
12	199236510	1	Collar	-

13 — P673 06/96 **14**

11 — 5-2 **12**

REFERENCES:

1. Grouping section title.
2. Model designation of equipment that uses parts listed on this page.
3. Title and description of assembly.
4. Drawing numbers that correspond to key column numbers for parts identification.
5. Key column for locating parts shown on drawing.
6. Part number.
7. Quantity of parts used.
8. Description of each component part.
9. Serial number of unit the part fits.
10. Assembly or kit designated by Key 0 or ••/•.
11. Grouping index number.
12. Page number within the grouping index.
13. Manual title.
14. Page publication date.

NOTE: ➡ Arrows always point toward the front of the engine.

Cylinder Block Assembly

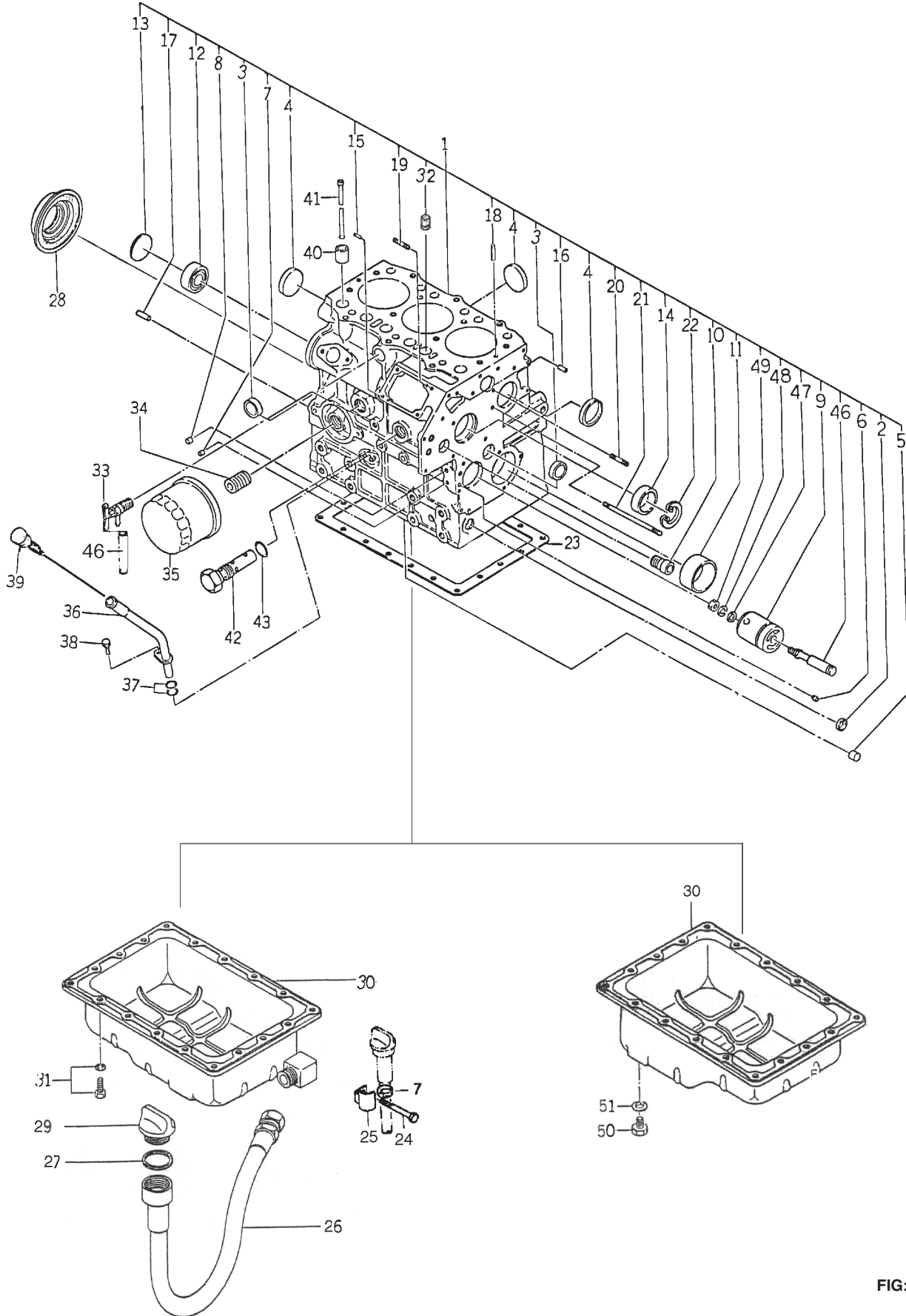


FIG: 1-0

Cylinder Block Assembly

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110103510	1	Cylinder Block - Industrial Application	-
	110103490	1	Cylinder Block - Marine Application	-
2	064200015	1	Expansion Plug 15 mm	-
3	064200018	2	Expansion Plug 18 mm	-
4	064200035	4	Expansion Plug 35 mm	-
5	198466030	5	Blank Plug	-
6	198466050	1	Blank Plug	-
7	19-00010	1	Hose Clamp #10 (Marine application only)	-
8	198466010	4	Blank Plug	-
9	165296162	1	Idle Gear Shaft	-
10	198466060	1	Sealing Cap	-
11	198517301	1	Bushing, standard	-
	198517305	1	Bushing, undersize 0.25 mm (formerly #198517304)	-
	198517308	1	Bushing, undersize 0.50 mm (formerly #198517307)	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug	-
14	042303015	1	Bearing	-
15	030500512	1	Dowel Pin	-
16	030500616	2	Dowel Pin	-
17	030500820	2	Dowel Pin	-
18	030309005	2	Lock Pin	-
19	012110620	2	Stud M6 x 1.0 x 20 mm	-
20	012100635	1	Stud M6 x 1.0 x 35 mm	-
21	012100660	1	Stud M6 x 1.0 x 60 mm	-
22	036509005	1	Retaining Ring	-
23	110996590	1	Gasket	-
24	011500860	1	Bolt (Marine application only)	-
25	140976040	1	Bracket (Marine application only)	-
26	140606710	1	Drain Hose (Marine application only)	-
27	052100280	1	Gasket (Marine application only, formerly #054109013)	-
28	198636080	1	Oil Seal	-
29	398430560	1	Cap (Marine application only)	-
30	110706770	1	Oil Pan - Marine Application	-
	110706691	1	Oil Pan - Industrial Application	-
31	010109235	18	Capscrew, Hex Head Phillips M6 x 1.0 x 14 mm	-
32	120116180	1	Tappet	-
33	198736050	1	Drain Cock	-
34	140546020	1	Adapter	-
35	24-08001	1	Oil Filter	-
36	110756070	1	Dipstick Tube	-
37	052100100	2	O-Ring	-
38	011300612	1	Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm	-
39	198416350	1	Dipstick	-
40	120116100	6	Tappet	-
41	120456320	6	Push Rod	-
42	140036220	1	Relief Valve Assembly	-
43	052109078	1	O-Ring	-
46	068115200	1	Hose	-
47	15-00701	1	Flat Washer M8	-
48	15-00702	1	Lock Washer M8	-
49	14-00711	1	Nut M8 x 1.25	-
50	010401212	**	Plug, Hex Head M12x1.25 (**As required)	-
51	025100012	**	Sealing Washer (**As required)	-

Crankshaft and Pistons

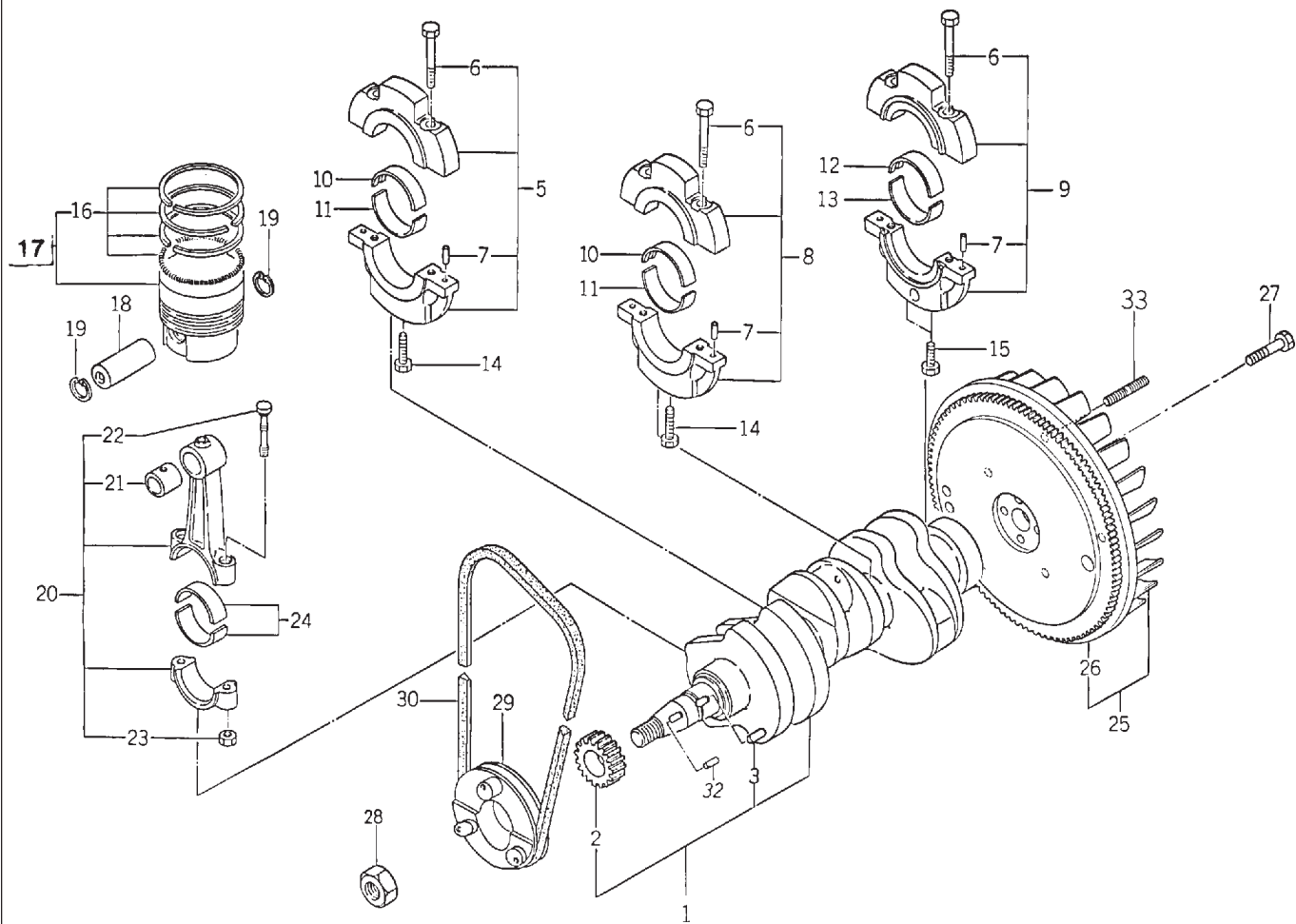


FIG: 1-2

Crankshaft and Pistons

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256890	1	Crankshaft (includes keys #2, #3, #32)	-
2	115276210	1	Crankshaft Gear	-
3	030509020	1	Dowel Pin	-
5	110156440	1	Bearing Holder Assembly (includes keys #6 & #7)	-
6	010810845	6	Bolt	-
7	030500612	6	Dowel Pin	-
8	110156450	1	Bearing Holder Assembly (includes keys #6 & #7)	-
9	110156460	1	Bearing Holder Assembly (includes keys #6 & #7)	-
10	198517331	2	Bearing, standard	-
	198517335	2	Bearing, undersize 0.25 mm (formerly #198517334)	-
	198517338	2	Bearing, undersize 0.50 mm (formerly #198517337)	-
11	198517341	2	Bearing, standard	-
	198517345	2	Bearing, undersize 0.25 mm (formerly #198517344)	-
	198517348	2	Bearing, undersize 0.50 mm (formerly #198517347)	-
12	198517102	1	Bearing, standard	-
	198517106	1	Bearing, undersize 0.25 mm (formerly #198517105)	-
	198517109	1	Bearing, undersize 0.50 mm (formerly #198517108)	-
13	198517111	1	Bearing, standard	-
	198517115	1	Bearing, undersize 0.25 mm (formerly #198517114)	-
	198517118	1	Bearing, undersize 0.50 mm (formerly #198517117)	-
14	011510850	2	Bolt	-
15	010700845	3	Bolt	-
16	115107400	3	Ring Kit, standard	-
	115107410	3	Ring Kit, oversize 0.50 mm	-
17	115016960	3	Piston, standard (includes key #16)	-
	115016970	3	Piston, oversize 0.50 mm (includes key #16)	-
18	115326260	3	Piston Pin	-
19	036500019	6	Snap Ring	-
20	115026350	3	Connecting Rod Assembly (includes keys #21 - #23)	-
21	198517325	3	Bushing	-
22	115176130	6	Connecting Rod Bolt	-
23	020109103	6	Nut	-
24	198517311	6	Bearing, standard	-
	198517315	6	Bearing, undersize 0.25 mm (formerly #198517314)	-
	198517318	6	Bearing, undersize 0.50 mm (formerly #198517317)	-
25	115356930	1	Flywheel, complete	-
26	115376040	1	Ring Gear (includes key #26)	-
27	010109330	4	Bolt	-
28	020800018	1	Nut	-
29	115396780	1	Crankshaft Pulley (Marine)	-
	115396751	1	Crankshaft Pulley (Industrial)	-
30	40-02002	1	Drive Belt (formerly #080109048)	-
32	034100508	1	Key	-
33	012111025	4	Stud M10 x 1.5 x 25 mm	-

Oil Pump and Strainer

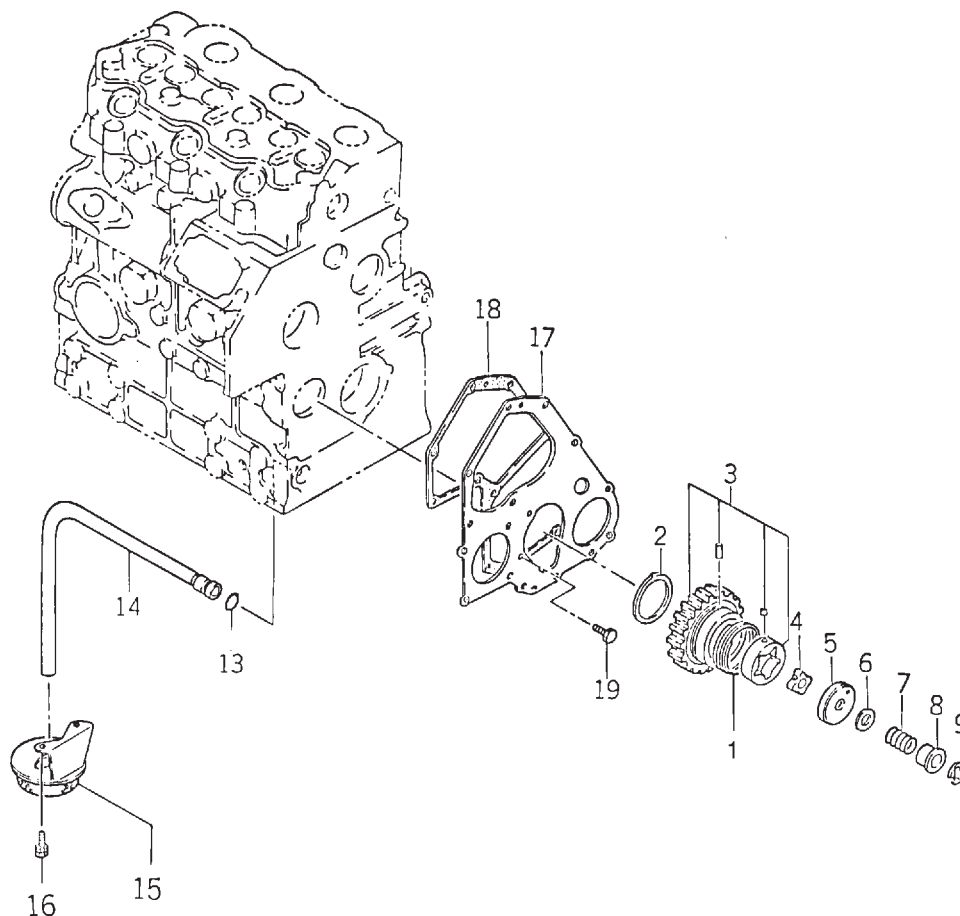


FIG: 1-4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	198216821	1	Spring	-
2	199266180	1	Thrust Washer	-
3	165026110	1	Idle Gear Assembly	-
4	140166130	1	Rotor	-
5	140116140	1	Oil Pump Cover	-
6	199286340	1	Shim Set	-
7	199216720	1	Spring	-
8	199236540	1	Collar	-
9	036800010	1	Snap Ring	-
13	052109076	1	O-ring	-
14	140986590	1	Oil Pipe	-
15	140406310	1	Suction Filter	-
16	011310612	2	Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm	-
17	165166280	1	Front Plate (Marine)	-
	165166270	1	Front Plate (Industrial)	-
18	165996490	1	Gasket	-
19	011300612	3	Capscrew, Hex Head Phillips M6 x 1.0 x 12 mm	-

Camshaft

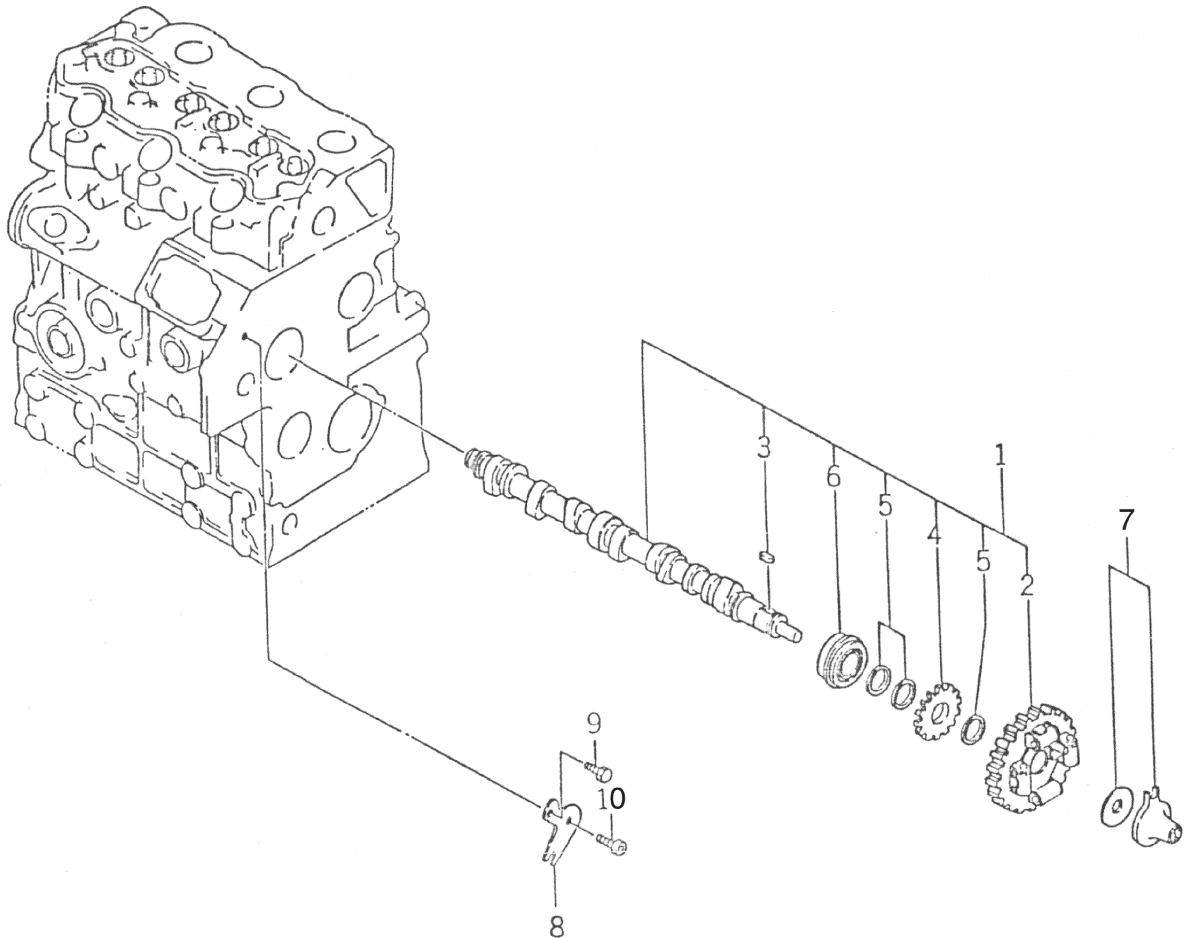


FIG: 1-5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120026172	1	Camshaft Assembly (includes keys #1 - #10)	-
2	120016060	1	Cam Gear	-
3	034100508	1	Key	-
4	120736081	1	Gear	-
5	199261230	3	Spacer	-
6	040109048	1	Bearing	-
7	125256120	1	Slider	-
8	199566651	1	Plate	-
9	011310612	1	Bolt	-
10	010700610	1	Bolt	-

Cylinder Head and Rocker Arm Assembly

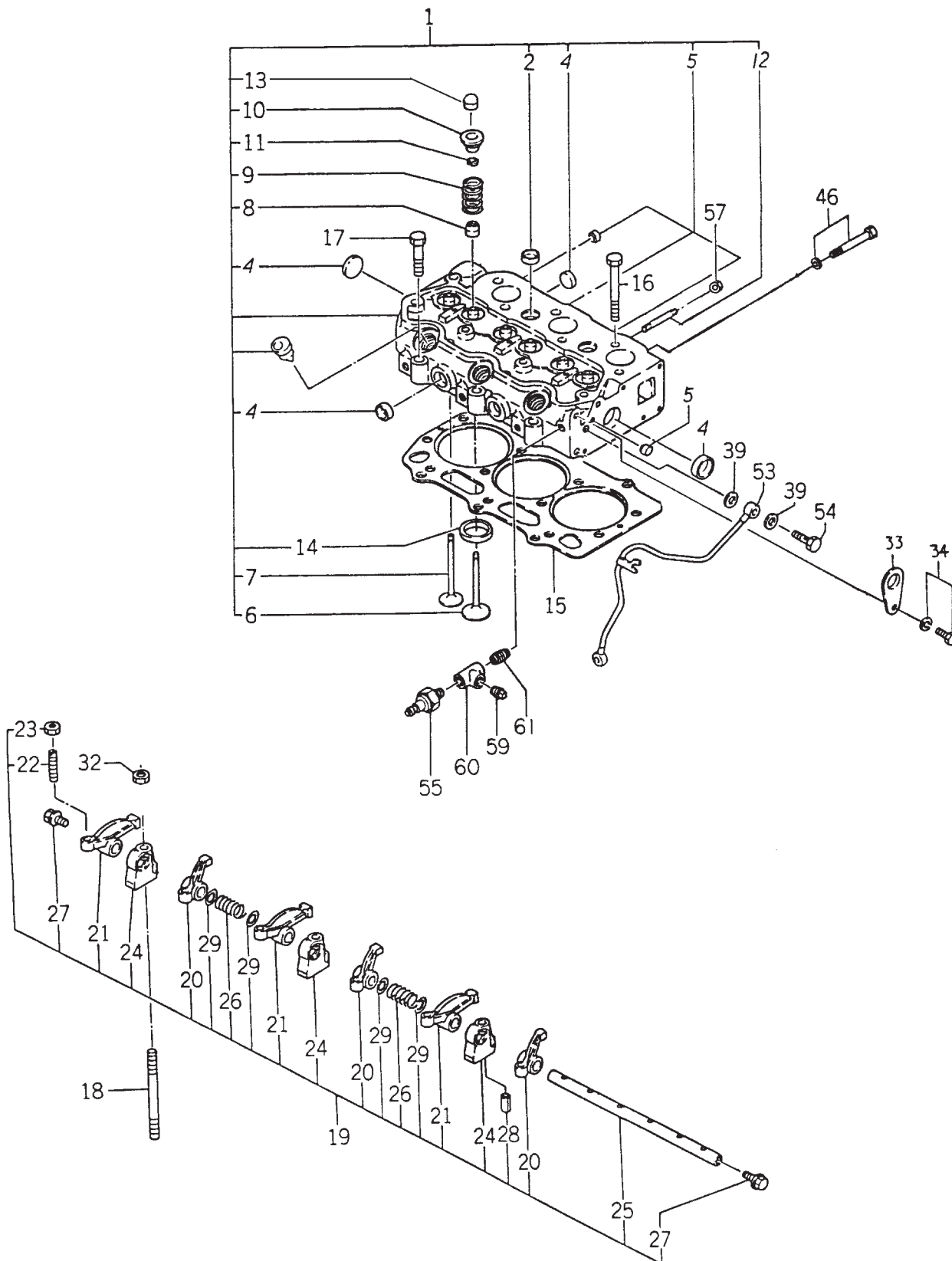


FIG: 1-6

Cylinder Head and Rocker Arm Assembly

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111017980	1	Cylinder Head Assembly (Industrial)	-
	111017960	1	Cylinder Head Assembly (Marine)	-
2	064200018	2	Expansion Plug, 18 mm	-
4	064200022	6	Expansion Plug, 22 mm	-
5	198466070	4	Blank Plug	-
6	120166280	3	Intake Valve	-
7	120176290	3	Exhaust Valve	-
8	120406080	6	Valve Guide Seal	-
9	198217070	6	Spring	-
10	120186100	6	Retainer	-
11	120226080	12	Valve Keeper	-
12	012110650	1	Stud, M6 x 1.0 x 50 mm	-
13	120216130	6	Valve Cap	-
14	110136290	3	Intake Valve Seat	-
15	111147400	1	Head Gasket, Thickness = 0.5 mm	-
16	111136460	11	Head Bolt, 10 mm Hex	-
17	111136470	3	Head Bolt, 10 mm Hex	-
18	012109177	3	Stud Bolt	-
19	120036701	1	Rocker Arm Assembly (includes keys #20 - #32)	-
20	120356200	3	Rocker Arm - Intake	-
21	120356210	3	Rocker Arm - Exhaust	-
22	199486220	6	Screw	-
23	020109076	6	Nut	-
24	120346171	3	Rocker Arm Bracket	-
25	120316190	1	Rocker Arm Shaft	-
26	198217080	2	Spring	-
27	064609006	2	Plug	-
28	030300325	1	Spring Pin	-
29	199280280	4	Shim	-
32	023100008	3	Hex Nut M8 x 1.25 Flanged	-
33	198516340	1	Lifting Eye	-
34	011510816	1	Bolt	-
39	140996260	7	Sealing Washer	-
46	011310650	5	Capscrew	-
51	195816390	1	Lifting Eye (Industrial)	-
52	011510820	1	Bolt	-
53	140607290	1	Oil Pipe	-
54	198486780	2	Bolt	-
55		1	Oil Pressure Switch (see Electrical System)	-
57	023100006	1	Hex Nut M6 x 1.0, Flanged	-
59	21-00139	1	Adapter 1/8 BSPT x 1/8 NPT (with Oil Pressure Sender)	-
	064500010	1	Plug 1/8 BSPT (without Oil Pressure Sender)	-
60	198486720	1	Female Tee, 1/8 BSPT	-
61	198486380	**	Hex Nipple, 1/8 BSPT	-
62	120216130	6	Valve Cap – Late Production	-
			**As required	

Rocker Arm Cover

Industrial Application

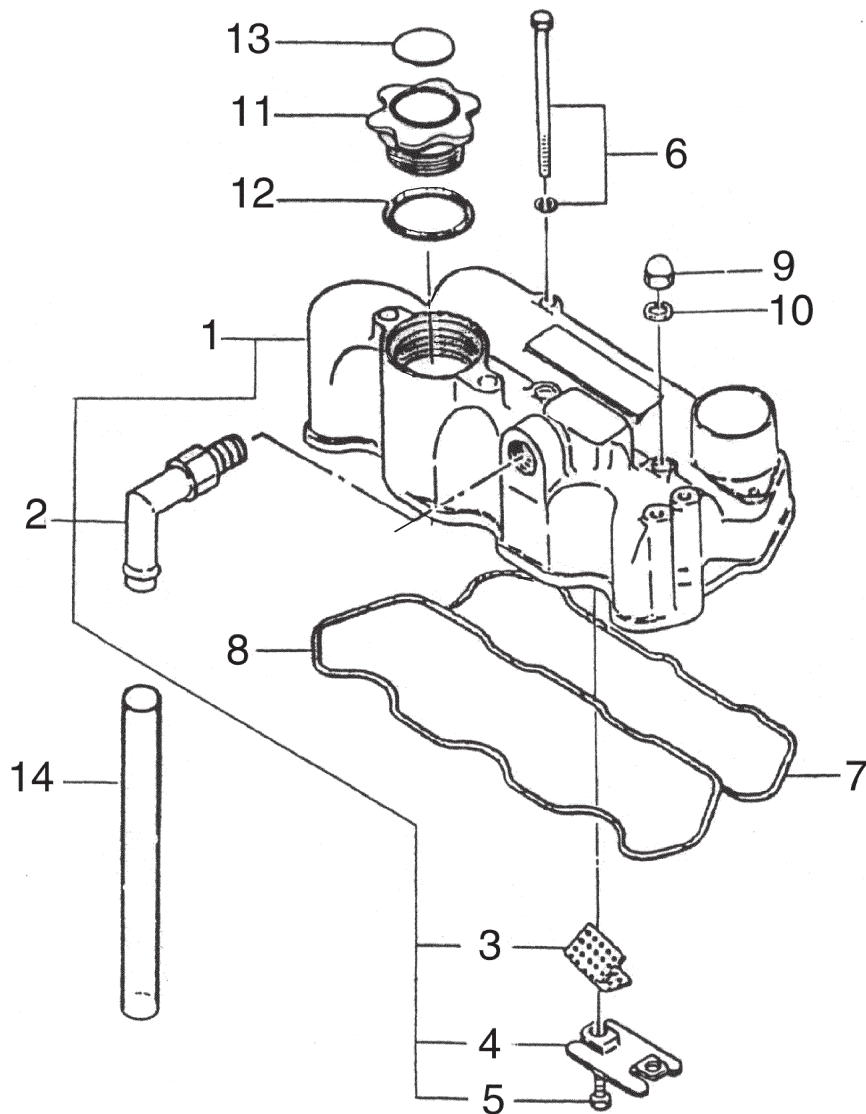


FIG. 1-8

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111026180	1	Rocker Arm Cover	-
2	110986500	1	Pipe	-
3	110666120	1	Filter	-
4	110666110	1	Oil Stopper	-
5	010100610	2	Bolt	-
6	011310650	2	Bolt	-
7	111996330	1	Gasket	-
8	111996060	1	Gasket	-
9	024560008	3	Nut	-
10	140996260	3	Sealing Washer	-
11	198436010	1	Cap	-
12	052100400	1	O-ring	-
13	190196340	1	Caution Label	-
14	068122560	1	Vent Tube	-

Air Intake and Rocker Arm Cover

Marine Application

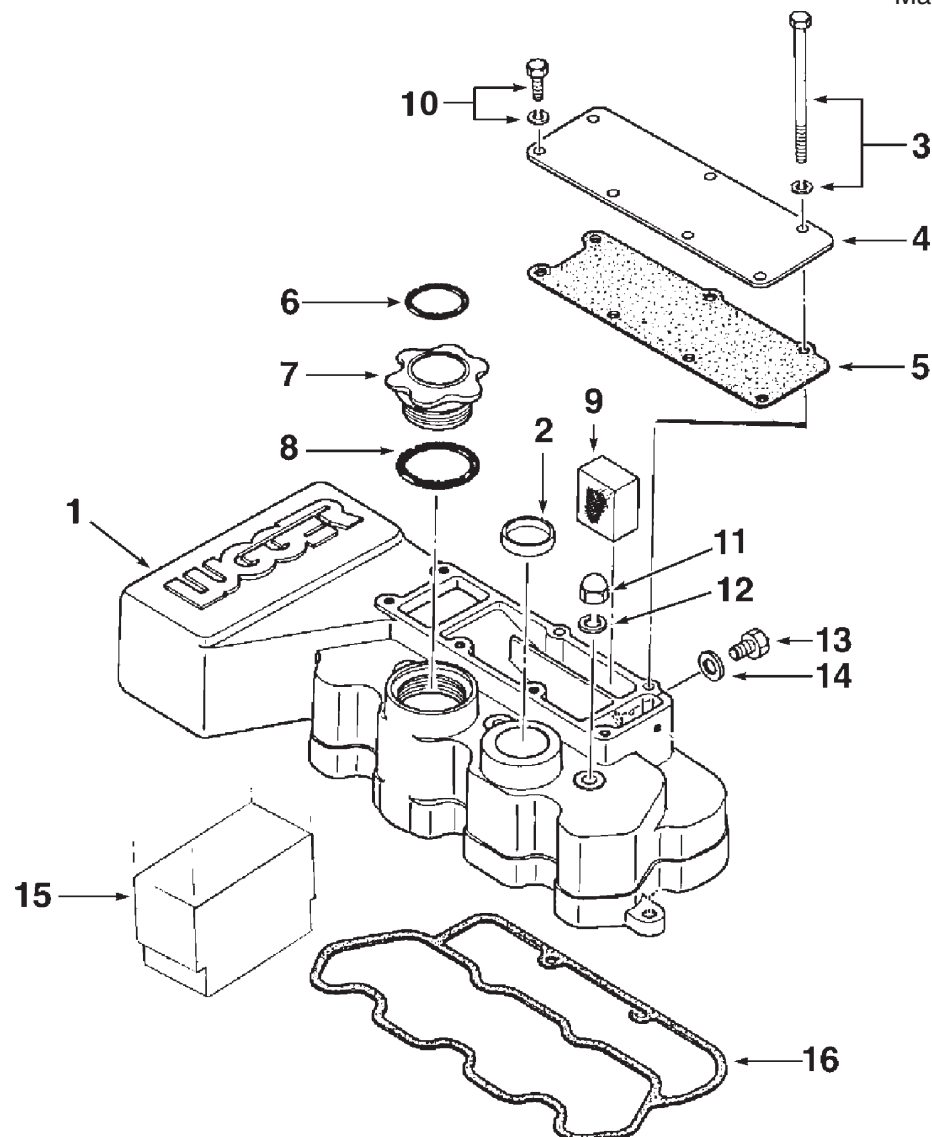


FIG. 2-1

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111206270	1	Rocker Arm Cover/Air Intake (includes key #2)	-
2	064200030	1	Plug	-
3	010110690	2	Bolt	-
4	135176030	1	Plate	-
5	135996560	1	Gaslet	-
6	190196340	1	Caution Label	-
7	198436010	1	Cap	-
8	052100400	1	O-ring	-
9	110666090	2	Filter	-
10	011510812	5	Bolt	-
11	024600008	3	Nut	-
12	140996260	3	Sealing Washer	-
13	010300810	1	Bolt	-
14	025100008	1	Sealing Washer	-
15	24-28300	1	Air Filter	-
16	111996340	1	Gasket	-

Air Filter

Industrial Application, Early Application

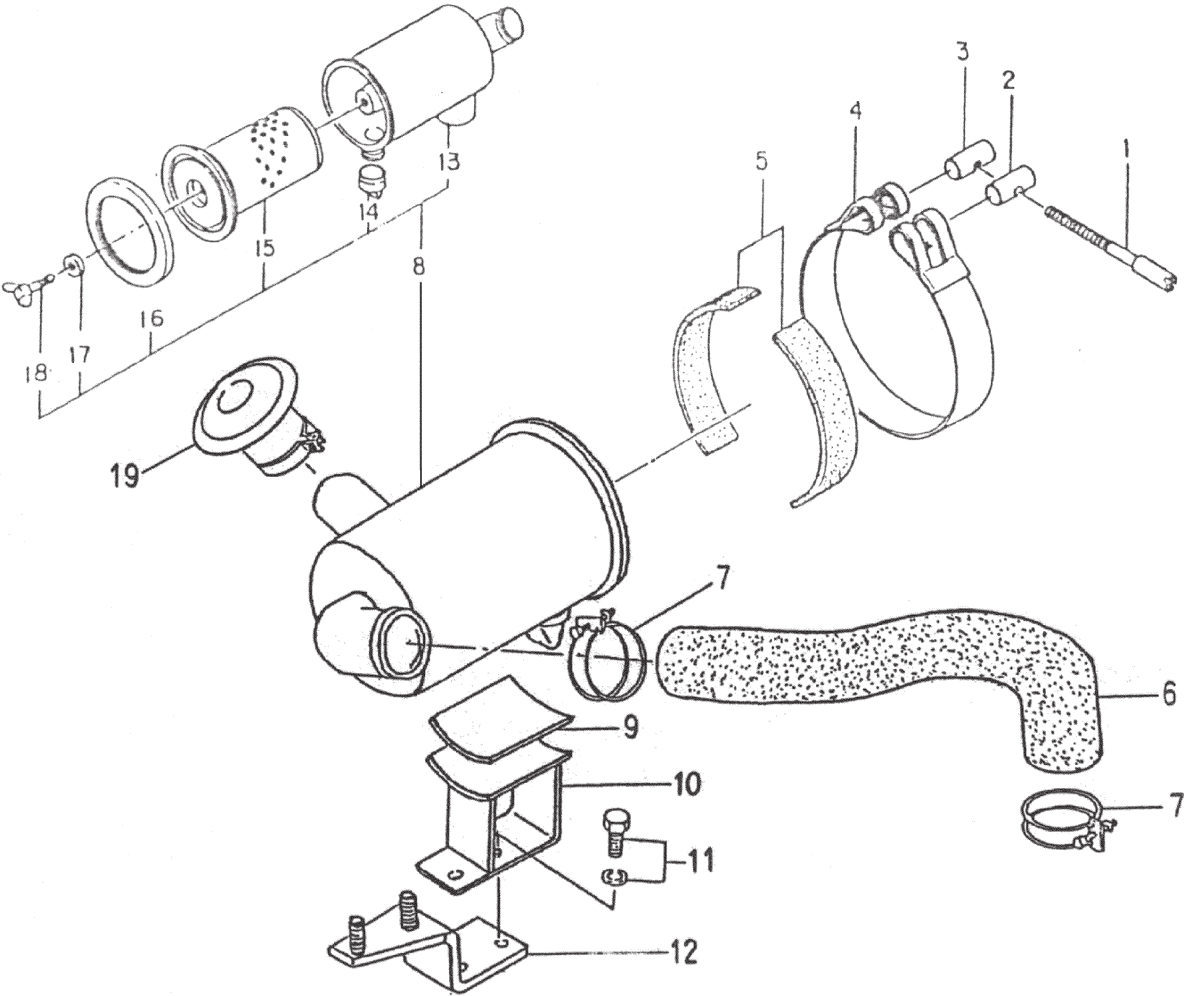


FIG. 2-2

Air Filter

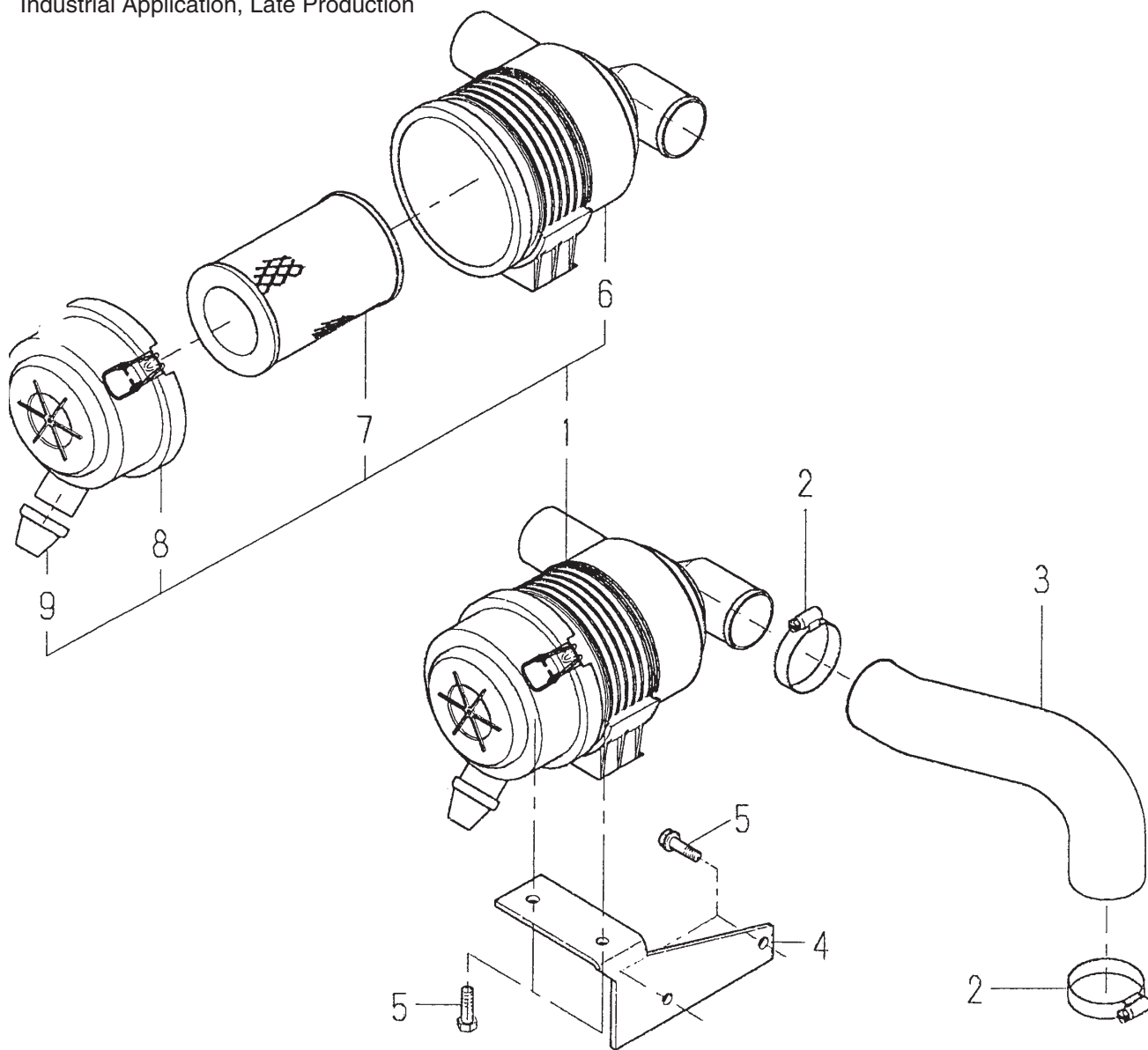
Industrial Application, Early Application

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	399480070	1	Screw	-
2	399610100	1	Pin	-
3	399610110	1	Pin	-
4	314630030	1	Clamp	-
5	398113190	2	Rubber	-
6	135597480	1	Air Intake Hose	-
7	198756130	2	Hose Clamp	-
8	408060010	1	Air Filter Assembly (includes keys 13-18)	-
9	198116380	1	Rubber Cushion	-
10	135976570	1	Bracket	-
11	011510820	2	Bolt	-
12	135976120	1	Bracket	-
13	135156100	1	Filter Housing	-
14	408620004	1	Valve	-
15	408620002	1	Element	-
16	408620005	1	Packing	-
17	408620006	1	Packing	-
18	014100620	1	Wing Bolt	-
19	135326060	1	Rain Cap with Clamp	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

Air Filter

Industrial Application, Late Production

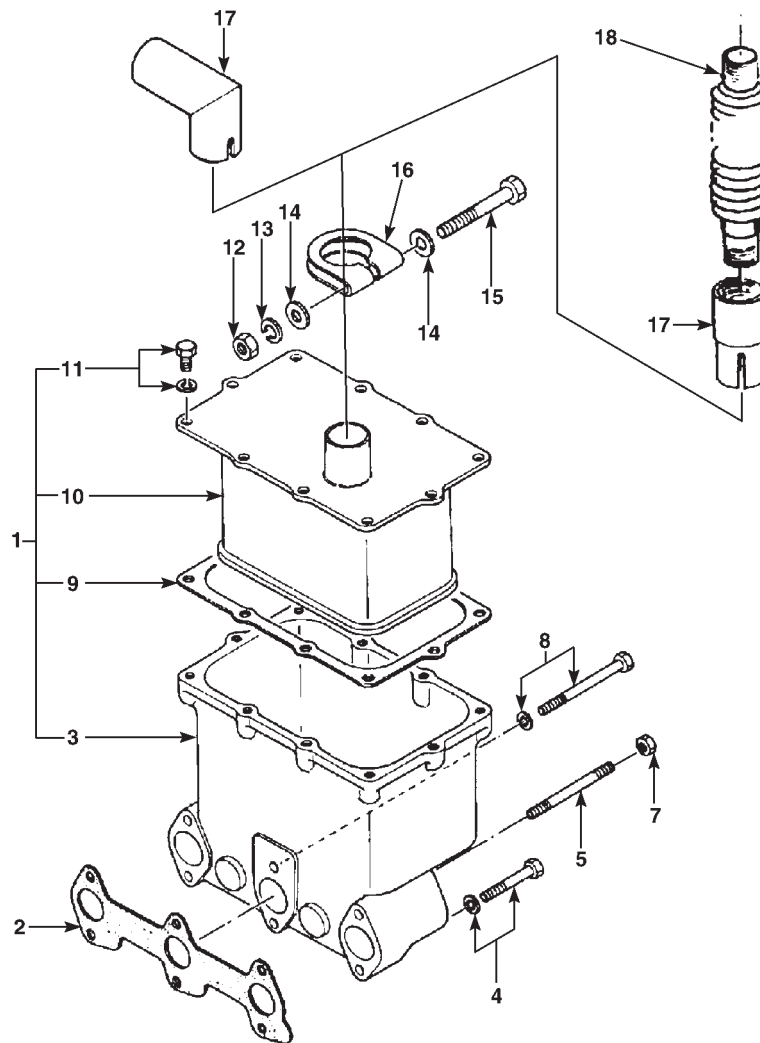


673 AIR CLEANER

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135016360	1	Air Filter Assembly (includes keys #6, #7, #8, & #9)	-
2	198756130	2	Hose Clamp	-
3	135597840	1	Hose	-
4	135976650	1	Bracket	-
5	011510816	4	Bolt	-
6	135326207	1	Housing	-
7	24-27301	1	Element	-
8	135326208	1	Cover Assembly	-
9	135326196	1	Valve	-

Muffler

Industrial Application



673 MUFFLER

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135046100	1	Muffler Assembly (includes keys #3, #9, #10, & #11)	-
2	135996521	1	Gasket	-
3	135616551	1	Exhaust Manifold	-
4	011310640	3	Bolt	-
5	012110670	2	Stud	-
7	023100006	2	Nut	-
8	011310670	1	Bolt	-
9	135996900	1	Gasket	-
10	135406170	1	Muffler	-
11	011310612	10	Bolt	-
12	020900008	1	Nut	-
13	027100008	1	Spring Washer	-
14	026100008	2	Washer	-
15	010310860	1	Bolt	-
16	408330010	1	Clamp	-
17	135606150	1	Exhaust Adapter, 90°	-
	31-38300	1	Exhaust Adapter, straight 1-1/4 NPT	-
18	27-38302	1	Stainless Steel Exhaust Flex 1-1/4 NPT x 18"	-

Exhaust Manifold / Expansion Tank

Heat Exchanger Cooling Components

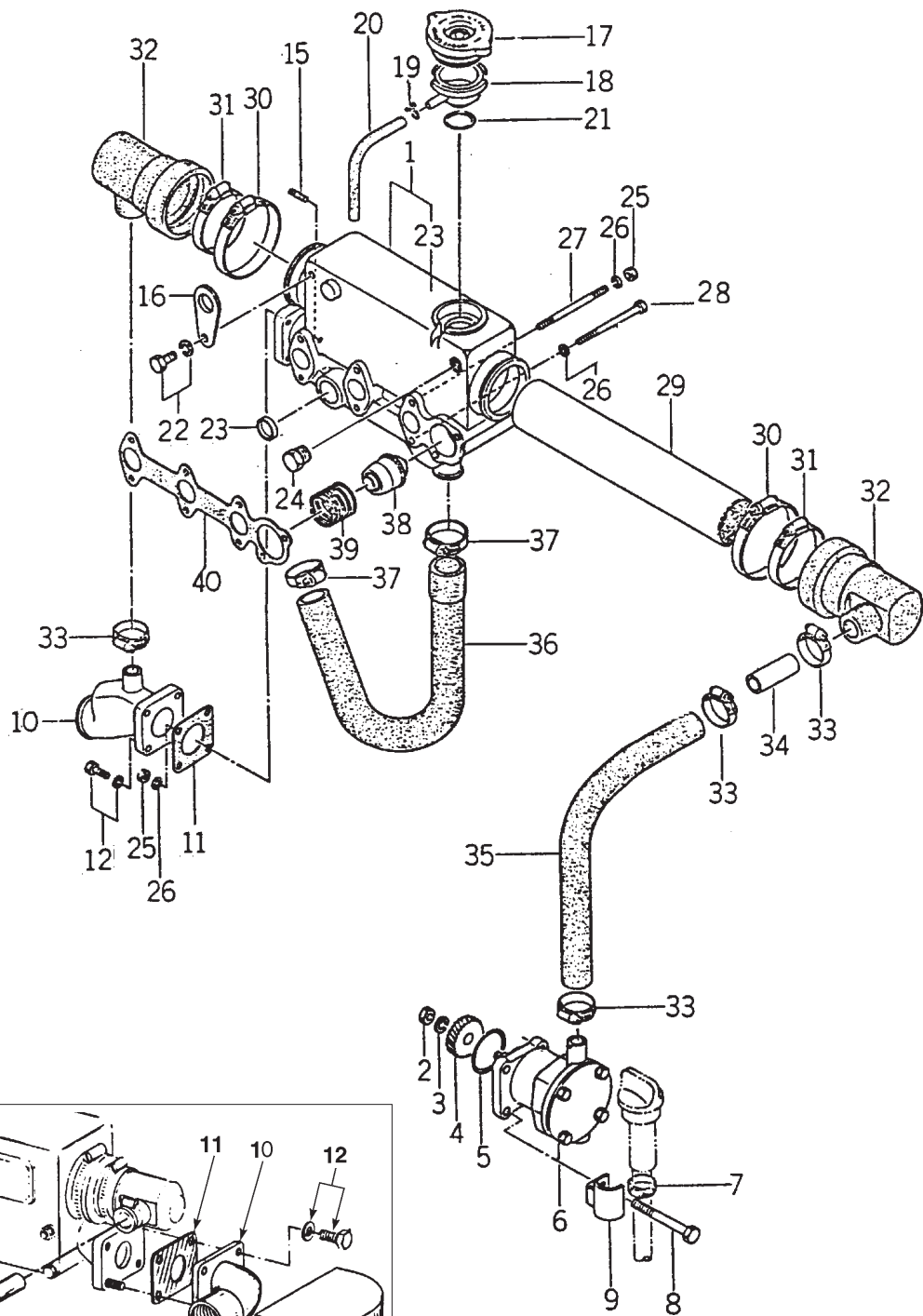
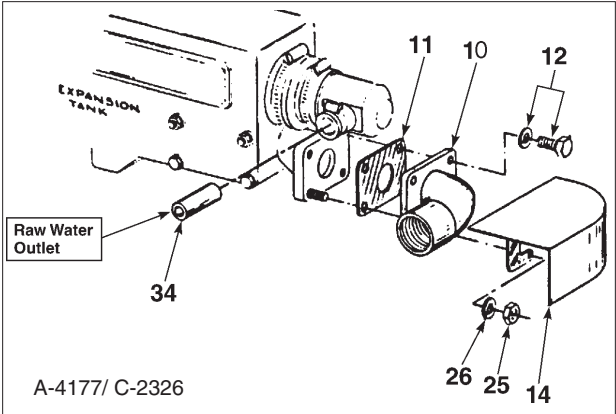


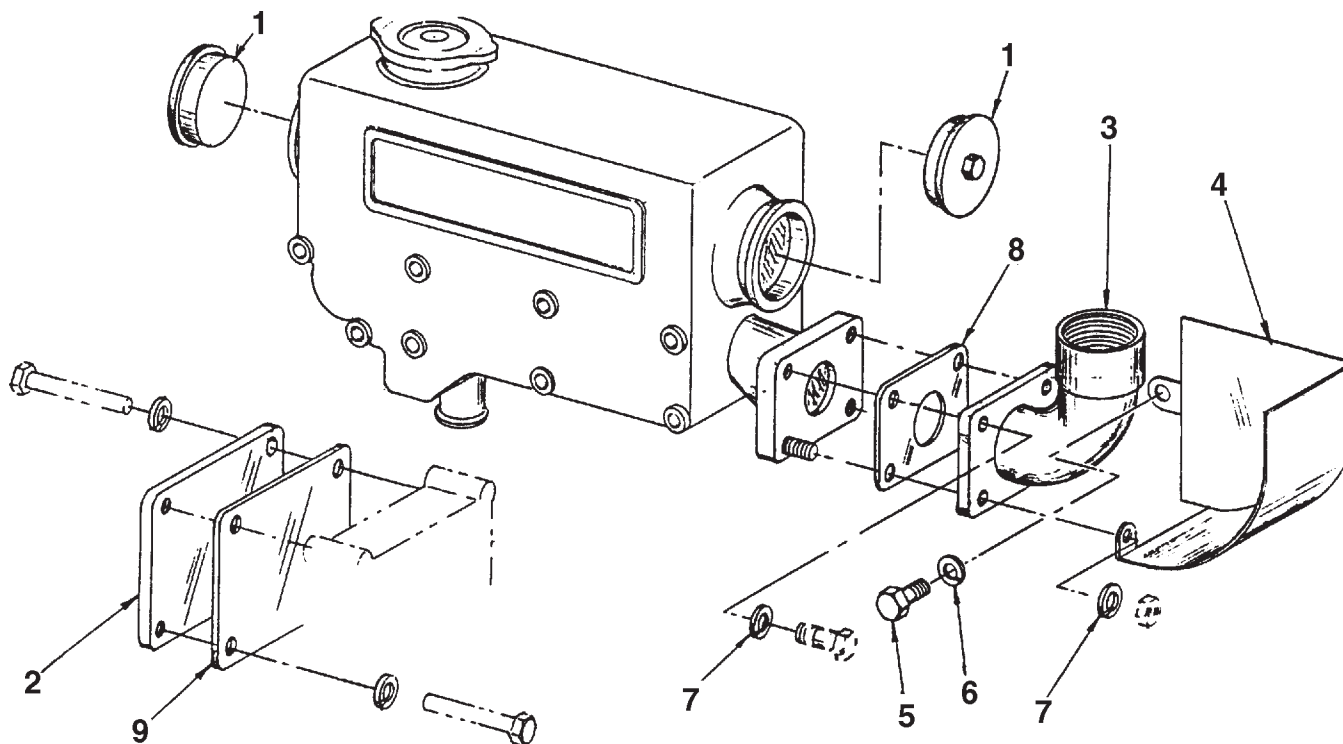
FIG: 3-0



Exhaust Manifold / Expansion Tank				
Heat Exchanger Cooling Components				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135606160	1	Exhaust Manifold/ Expansion Tank (includes keys #18, 21, & 23)	
2	14-00711	1	Hex Nut M8 x 1.25	-
3	15-00702	1	Lock Washer	-
4	340460170	1	Gear	-
5	052400400	1	O-Ring	-
6	25-12007		Raw Water Pump (see parts detail)	-
7	19-00010	1	Hose Clamp #10	-
8	12-00717	3	Capscrew, Hex Head M8 x 1.25 x 60 mm	-
	12-00701	1	Capscrew, Hex Head M8 x 1.25 x 110 mm	-
9	140976040	1	Bracket	-
10	135616570	1	Wet Exhaust Elbow	-
	27-38300	1	Dry Exhaust Elbow	-
11	135996550	1	Gasket	-
12	011310620	3	Bolt	-
13	00-08301	1	Decal "Northern Lights" (not shown)	-
14	00-38301	1	Heat Shield	-
15	012100620	1	Stud, M6 x 1.0 x 20 mm	-
16	195816340	1	Lifting Eye	-
17	21-12007	1	Filler Cap	-
18	145546430	1	Filler Neck	-
19	067200100	1	Clamp	-
20	068106500	1	Overflow Tube	-
21	052400330	1	O-Ring	-
22	011510816	1	Bolt	-
23	064200022	1	Plug	-
24	198436200	1	Plug	-
25	14-01131	4	Hex Nut M6 x 1.0	-
26	15-01132	12	Lock Washer M6	-
27	012110690	3	Stud M6 x 1.0 x 90 mm	-
28	12-01136	5	Capscrew, Hex Head M6 x 1.0 x 90 mm	-
29	20-12003	1	Heat Exchanger Element	-
30	19-00040	2	Hose Clamp #40	-
31	19-00036	2	Hose Clamp #36	-
32	145536440	2	End Cap	-
33	19-00012	5	Hose Clamp #12	-
34	145986170	1	Pipe	-
35	145536461	1	Hose	-
36	145537110	1	Hose	-
37	19-00016	2	Hose Clamp #16	-
38	145206062	1	Thermostat	-
39	198217410	1	Spring	-
40	135996730	1	Gasket	-
41	22-42014	1	Switch, High Exhaust Temperature	up to S/N xxxx-31832C
	22-42070	1	Switch, High Exhaust Temperature & Harness Assembly	from S/N xxxx-31833C
42	22-40482	1	Harness, Exhaust Temperature Switch	from S/N xxxx-31833C

Exhaust Manifold / Expansion Tank

Keel Cooling Components



A-3279E/ C-1997

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-18301	2	End Cap	-
2	28-18300	1	Plate	-
3	27-38300	1	Dry Exhaust Elbow 1-1/4	-
4	00-38301	1	Heat Shield	-
5	12-00751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
6	15-00702	1	Lock Washer M8	-
7	15-01132	4	Lock Washer M6	-
8	11-78301	1	Gasket	-
9	135996550	1	Gasket	-
Note: See Heat Exchanger Cooling for parts not shown here.				

Thermostat & Housing, Industrial

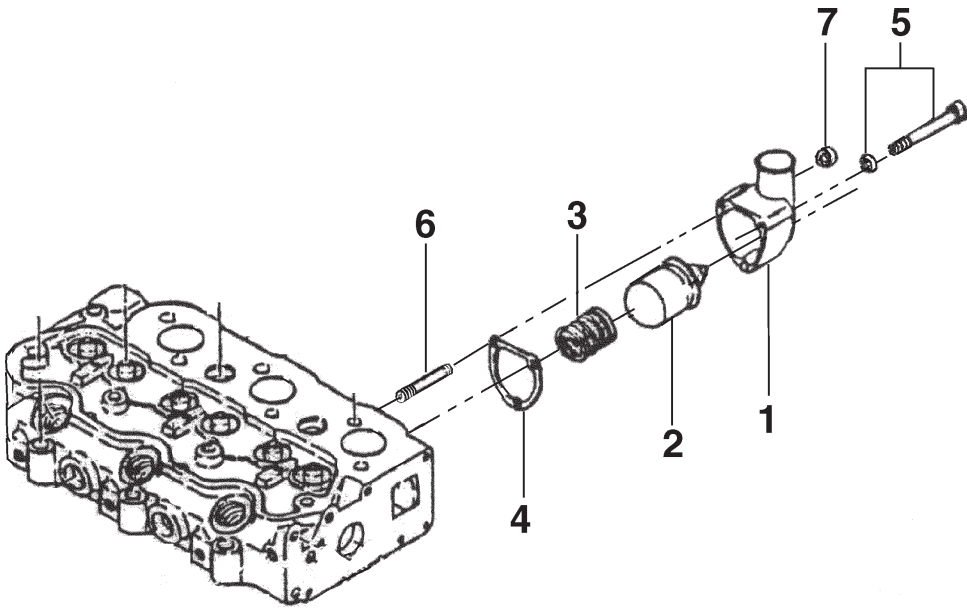


FIG. 3-3

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145216171	1	Thermostat Housing	-
2	145206062	1	Thermostat	-
3	198217410	1	Spring	-
4	145996740	1	Gasket	-
5	011310650	2	Bolt	-
6	012110650	1	Stud	-
7	023100006	1	Nut	-

Coolant Pump - Marine

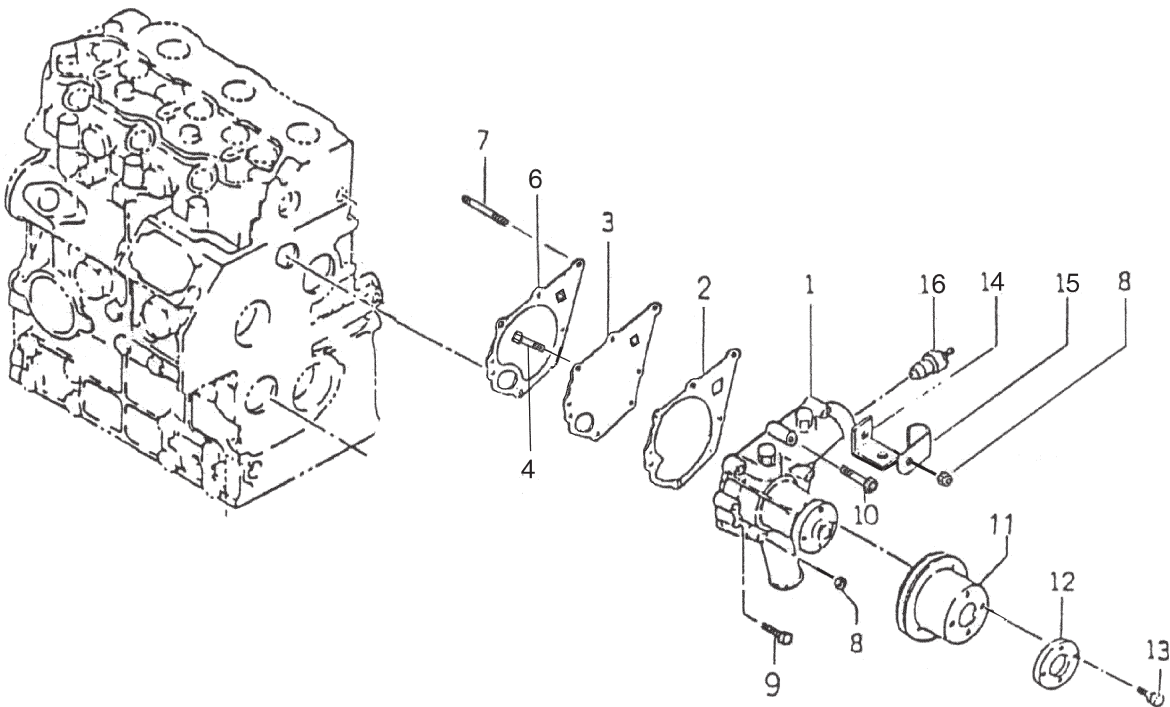


FIG. 3-4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145016860	1	Coolant Pump Assembly (Parts not available separately)	-
2	145996640	1	Gasket	-
3	145146620	1	Backing Plate	-
4	015300650	1	Screw	-
6	145996940	1	Gasket	-
7	012100655	1	Stud	-
8	023100006	3	Nut	-
9	011310635	3	Bolt	-
10	011310650	2	Bolt	-
11	145336490	1	Pulley	-
12	145386520	1	Plate	-
13	011310614	4	Bolt	-
14	140976060	1	Bracket	-
15	199116370	1	Clamp	-
16		1	Temperature Switch (see Electrical System)	-

Coolant Pump - Industrial

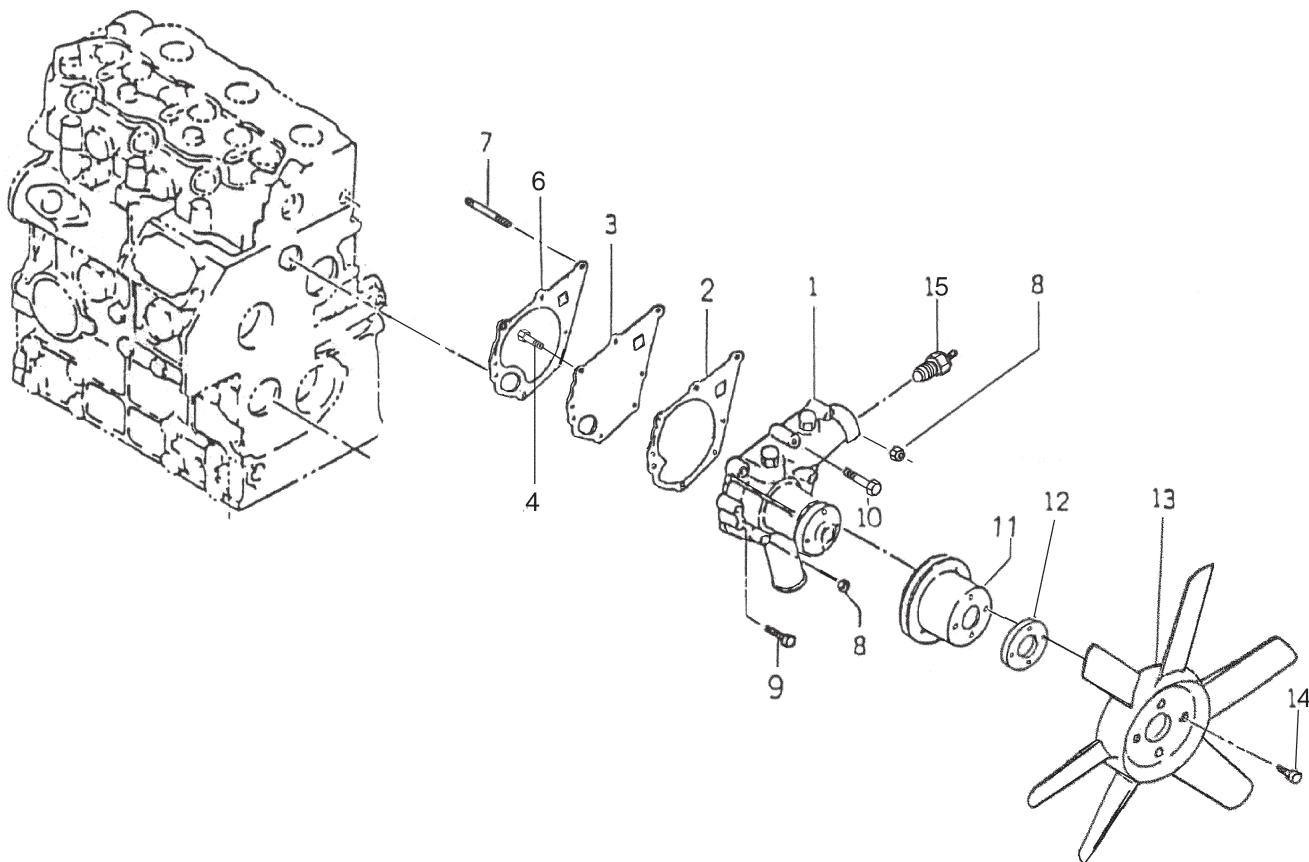
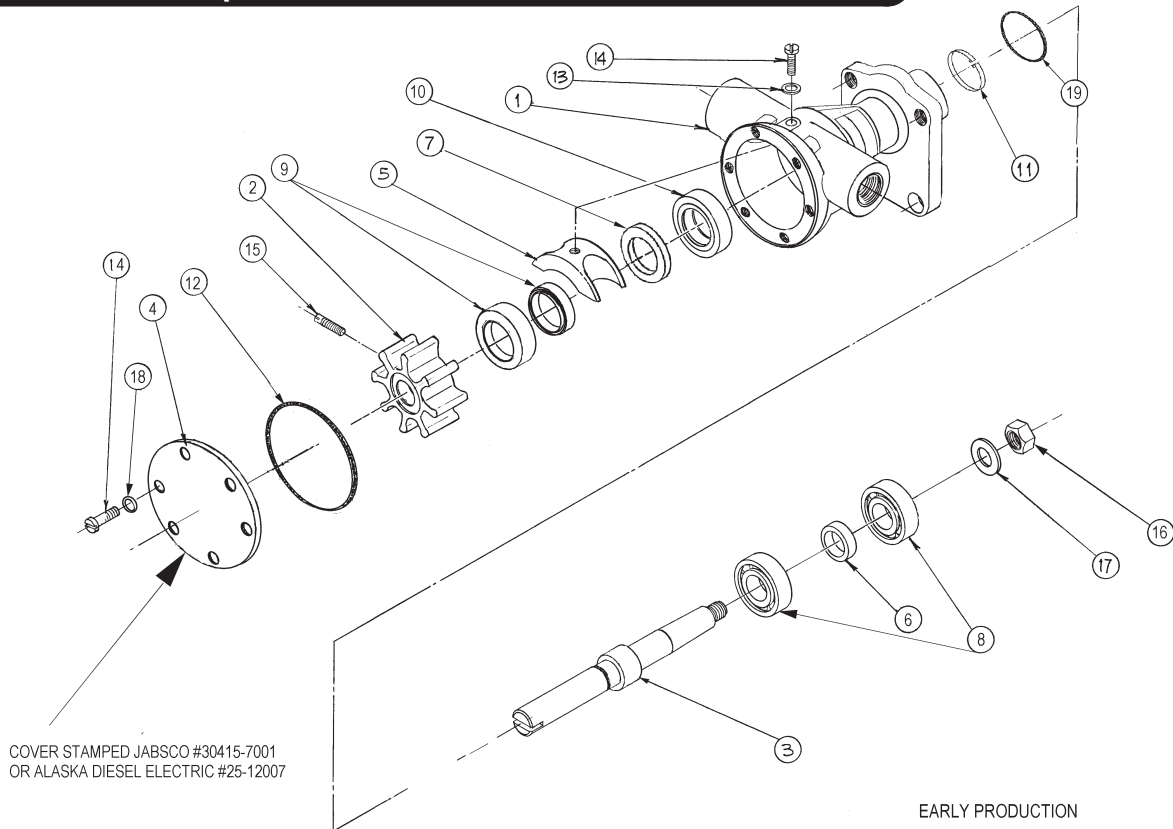


FIG. 3-5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145016850	1	Coolant Pump Assembly (Parts not available separately)	-
2	145996640	1	Gasket	-
3	145146620	1	Backing Plate	-
4	015300650	1	Screw	-
6	145996940	1	Gasket	-
7	012100655	1	Stud	-
8	023100006	3	Nut	-
9	011310635	3	Bolt	-
10	011310650	2	Bolt	-
11	145336490	1	Pulley	-
12	145386920	1	Spacer	-
13	145306600	1	Fan (Blower)	-
14	011310635	4	Bolt	-
15		1	Temperature Switch (see Electrical System)	-

Raw Water Pump



A-7540/ D-3257B

EARLY PRODUCTION

LIP TYPE WATER SEAL



NOW USE MECHANICAL
TYPE (DIRECT REPLACEMENT)
ITEM # 9

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	25-12007	1	Raw Water Pump (includes all keys)	
1	25-12008	1	Housing	-
2	25-12009	1	Impeller (includes key #15)	-
3	25-12011	1	Shaft	-
4	25-12013	1	End Cover	-
5	25-12023	1	Cam	-
6	25-12024	1	Spacer	-
7	25-12026	1	Spacer	-
8	25-12027	2	Bearing	-
9	25-12066	1	Mechanical Seal	-
10	25-12028	1	Seal, Lip Type	-
11	25-12029	1	Snap Ring	-
12	25-12031	1	O-ring	-
13	25-12032	1	O-ring	-
14	25-12033	7	Capscrew, Hex Head M4 x 0.7 x 10 mm S/S	-
15			Set Screw #10-32 x 1" *	-
16	14-00711	1	Hex Nut M8 x 1.25	-
17	15-00702	1	Lock Washer, Helical M8	-
18	15-00023	6	Lock Washer, Helical M4	-
19	052400400	1	O-ring (Pump mounting)	-
*Not available separately				



3 - 7

General Arrangement

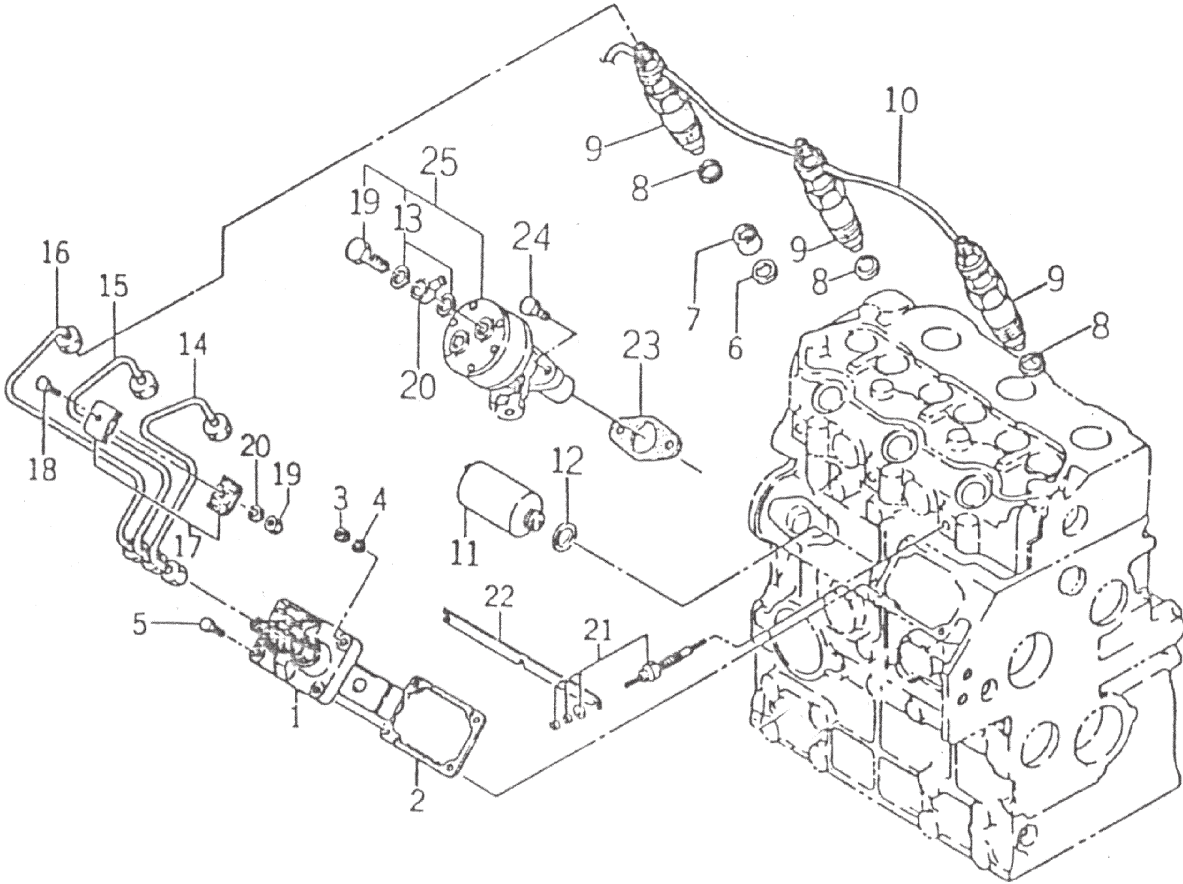


FIG. 4-0

General Arrangement

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017610	1	Injection Pump Assembly (see detail page)	-
2	131426300	1	Shim Set	-
	131437590	**	Shim, 0.2 mm	-
	131437600	**	Shim, 0.3 mm	-
	131437610	**	Shim, 0.4 mm	-
	131437620	**	Shim, 0.5 mm	-
3	023100006	4	Hex Nut, Flanged M6 x 1.0	-
5	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
6	198996090	3	Gasket	-
7	111316280	3	Insert	-
8	131426200	3	Gasket	-
9	131406350	3	Fuel Injector (see detail page)	-
10	131606850	1	Return Line	-
11	185206082	1	Stop Solenoid, 12 Volt - Standard Ground	-
	185206190	1	Stop Solenoid, 12 Volt - Isolated Ground	-
12	025100016	1	Seal Washer	-
13	130516069	4	Gasket	-
14	131507830	1	Injection Line #1	-
15	131507840	1	Injection Line #2	-
16	131507850	1	Injection Line #3	-
17	199106020	4	Clamp Assembly	-
18	12-00031	2	Capscrew, Hex Head M6 x 1.0 x 25 mm	-
19	130516092	2	Joint Bolt	-
20	198486840	1	Connector	-
21	185366060	3	Glow Plug, 12 Volt	-
22	185376170	1	Connector	-
23	130996130	1	Gasket	-
24	011140614	2	Capscrew, Hex Head Phillips M6 x 1.0 x 14 mm	-
25	130506140	1	Fuel Feed Pump Assembly (see detail page)	-
			**As required	

Governor and Timing Gear Case

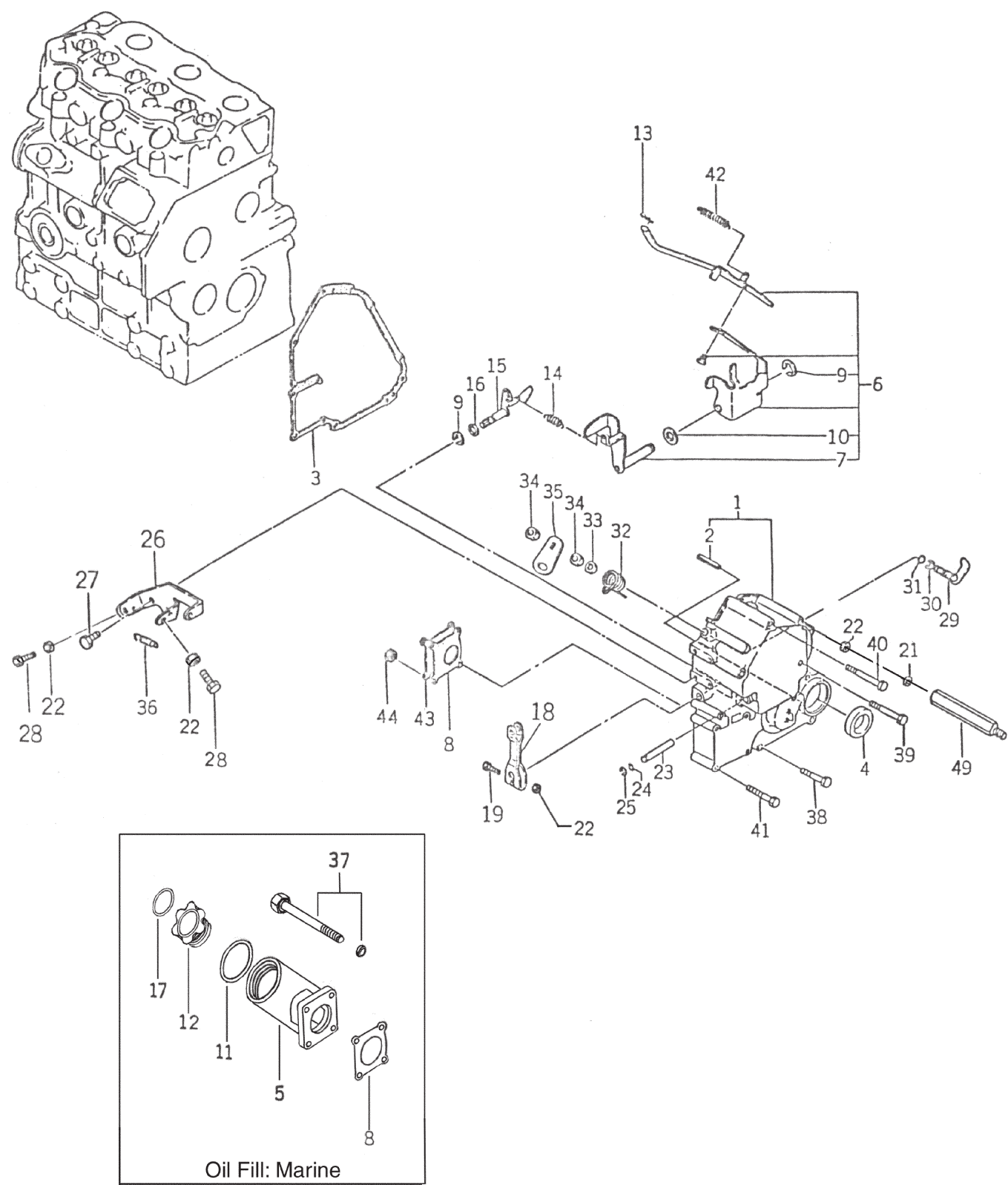


FIG. 4-2

Governor and Timing Gear Case

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165106151	1	Timing Gear Case (Marine, includes key #2)	-
	165106141	1	Timing Gear Case (Industrial, includes key #2)	-
2	030300414	1	Spring Pin	-
3	165996500	1	Gasket	-
4	198636090	1	Oil Seal	-
5	110766210	1	Oil Filler (Marine)	-
6	125046250	1	Governor Lever Assembly (includes keys #7, #9, and #10)	-
7	125406071	1	Tension Lever	-
8	165996420	1	Gasket	-
9	036800008	2	Snap Ring	-
10	026200010	1	Washer	-
11	052100400	1	O-ring	-
12	198436010	1	Cap	-
13	031100004	1	Snap Pin	-
14	198217390	1	Spring	-
15	125156250	1	Arm	-
16	052100070	1	O-ring	-
17	190196340	1	Decal	-
18	125416020	1	Governor Lever	-
19	010110630	1	Bolt	-
21	027100006	1	Spring Washer	-
22	023100006	3	Nut	-
23	125116131	1	Shaft	-
24	052100030	1	O-ring	-
25	036800005	1	Snap Ring	-
26	125976120	1	Bracket	-
27	011310616	2	Bolt	-
28	010109264	1	Bolt	-
29	125156180	1	Arm	-
30	036800006	1	Snap Ring	-
31	052100050	1	O-ring	-
32	198216760	1	Spring	-
33	026200008	1	Washer	-
34	020700008	2	Nut	-
35	125176080	1	Stop Lever	-
36	398210070	1	Spring	-
37	010109123	2	Bolt	-
38	011310640	4	Bolt	-
39	011310660	2	Bolt	-
40	011310680	2	Bolt	-
41	010310850	4	Bolt (Industrial)	-
42	198216731	1	Start Spring	-
43	165206370	1	Cover (Industrial)	-
44	023100008	4	Nut (Industrial)	-
47	020100008	1	Nut	-
48	027100008	1	Spring Washer	-
49	199436340	1	Bolt, Belt Guard Support (Marine, see electrical section)	-

Fuel Filter and Mounting

Marine & late Industrial Units
with Spin-on Filter

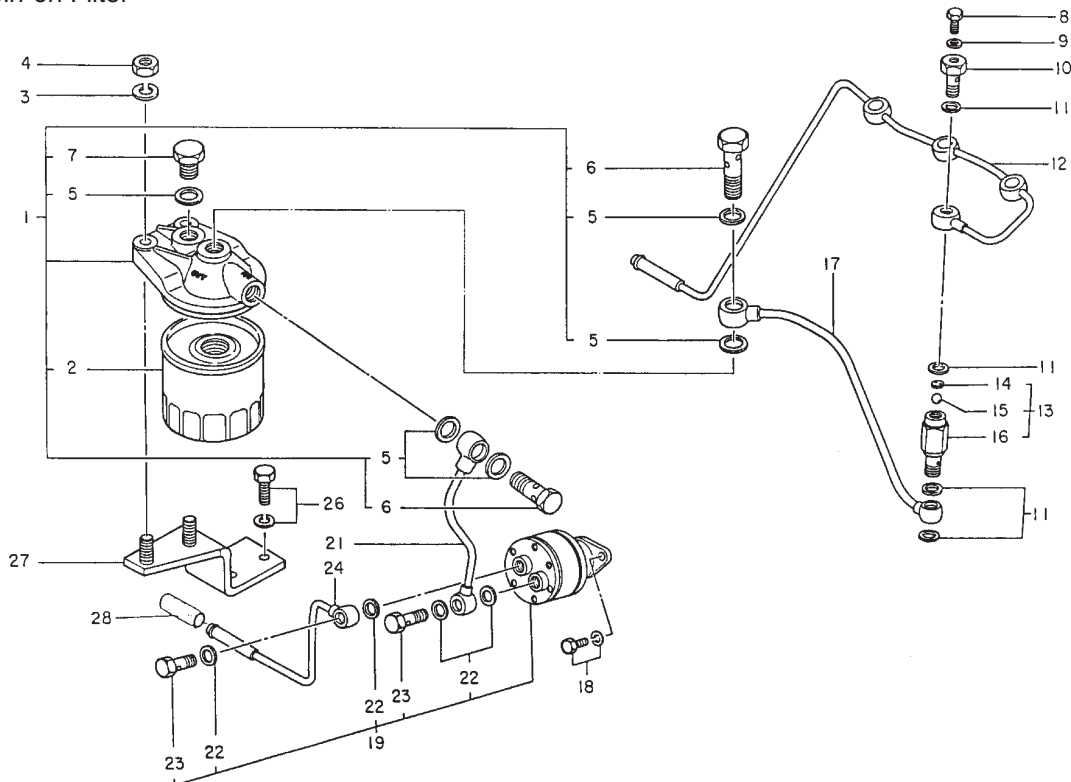


FIG. 4-4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130306190	1	Fuel Filter Assembly (includes keys #1, #2, #5, #6, and #7)	-
2	24-52020	1	Fuel Filter	-
3	15-00702	2	Lock Washer M8	-
4	14-00711	2	Hex Nut M8 x 1.25	-
5	130326051	5	Gasket	-
6	130436011	2	Banjo Bolt	-
7	130396030	1	Plug	-
8	131236280	1	Screw	-
9	025100006	1	Sealing Washer	-
10	131236190	1	Bolt	-
11	131246180	4	Washer	-
12	131606850	1	Return Pipe	-
13	140036141	1	Valve Assembly (includes keys #14 - #16)	-
14	198116230	1	Rubber	-
15	048100010	1	Ball	-
16	198487002	1	Connector	-
17	130556340	1	Pipe	-
18	011140614	2	Capscrew, Hex Head Phillips M6 x 1.0 x 14 mm	-
19	130506140	1	Feed Pump (includes keys #22 & #23 – see detail page)	-
21	130556350	1	Pipe	-
22	130516069	4	Gasket	-
23	130516092	2	Joint Bolt	-
24	130556361	1	Pipe (formerly #130556360)	-
26	011300816	2	Bolt	-
27	131976040	1	Mounting Bracket	-
28	398113230	2	Rubber Grommet	-

Injector Assembly

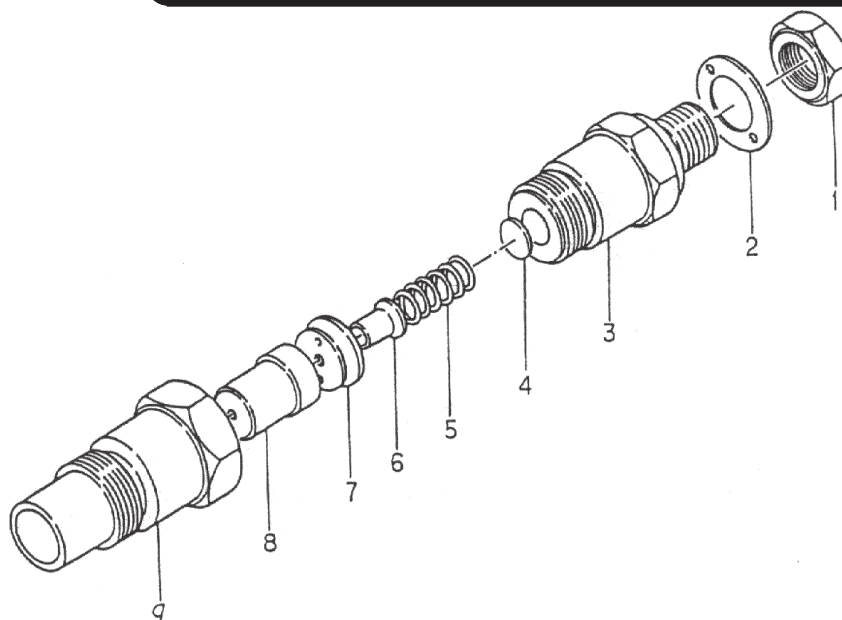


FIG. 4-6

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131406350	1	Injector Assembly	-
1	131446069	1	Nut	-
2	131426220	1	Washer	-
3	131446073	1	Body Sub-assembly	-
4	131437250	**	Washer: Thickness = 0.90 mm	-
	131437251	**	Washer: Thickness = 0.925 mm	-
	131437252	**	Washer: Thickness = 0.95 mm	-
	131437253	**	Washer: Thickness = 0.975 mm	-
	131437254	**	Washer: Thickness = 1.00 mm	-
	131437255	**	Washer: Thickness = 1.025 mm	-
	131437256	**	Washer: Thickness = 1.05 mm	-
	131437257	**	Washer: Thickness = 1.075 mm	-
	131437258	**	Washer: Thickness = 1.10 mm	-
	131437259	**	Washer: Thickness = 1.125 mm	-
	131437260	**	Washer: Thickness = 1.15 mm	-
	131437261	**	Washer: Thickness = 1.175 mm	-
	131437262	**	Washer: Thickness = 1.20 mm	-
	131437263	**	Washer: Thickness = 1.225 mm	-
	131437264	**	Washer: Thickness = 1.250 mm	-
	131437265	**	Washer: Thickness = 1.275 mm	-
	131437266	**	Washer: Thickness = 1.30 mm	-
	131437267	**	Washer: Thickness = 1.325 mm	-
	131437268	**	Washer: Thickness = 1.35 mm	-
	131437269	**	Washer: Thickness = 1.375 mm	-
	131437270	**	Washer: Thickness = 1.40 mm	-
	131437271	**	Washer: Thickness = 1.425 mm	-
	131437272	**	Washer: Thickness = 1.45 mm	-
5	131446066	1	Spring	-
6	131446070	1	Pin	-
7	131446068	1	Spacer	-
8	131416160	1	Nozzle Assembly	-
9	131446067	1	Nut	-
			**As required	

Injection Pump Assembly

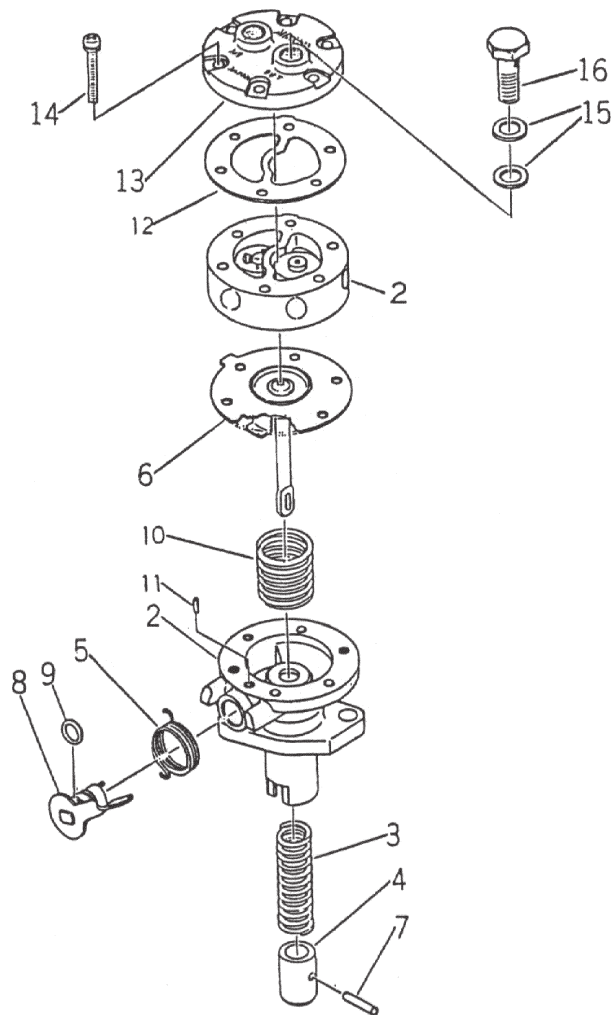
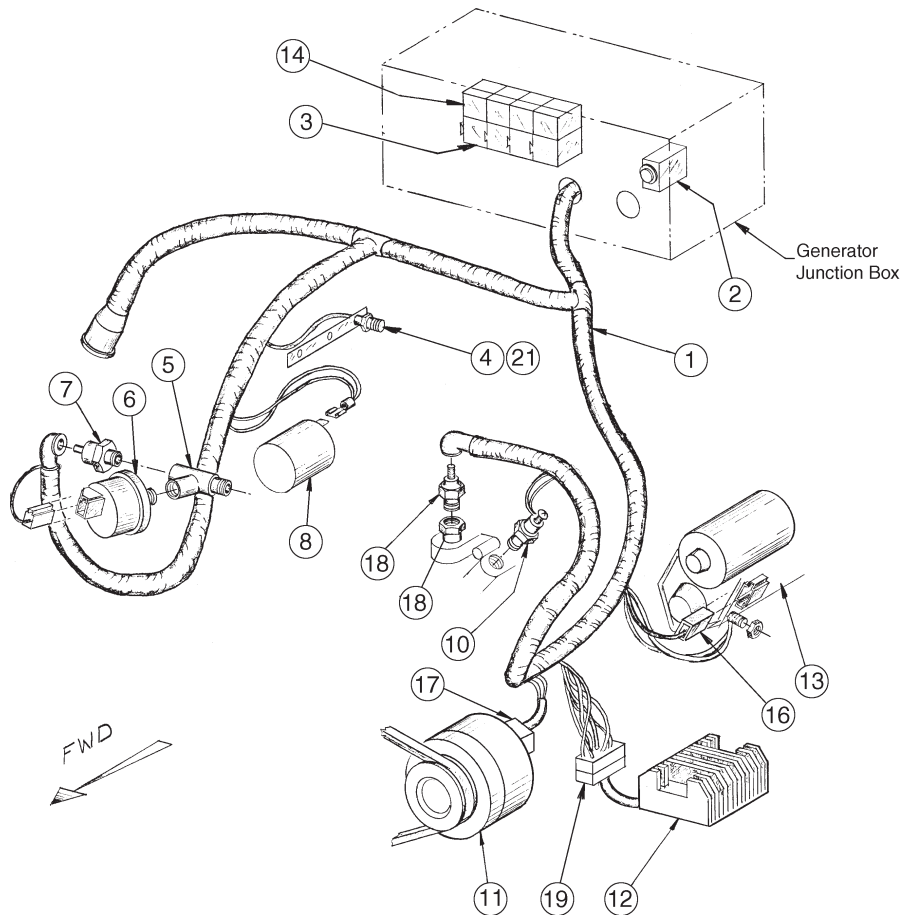


FIG. 4-7

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130506140	1	Feed Pump Assembly	-
2	130516080	1	Body	-
3	130516081	1	Spring	-
4	130516082	1	Piston	-
5	130516083	1	Spring	-
6	130516084	1	Diaphragm	-
7	130516085	1	Pin	-
8	130516086	1	Lever	-
9	131226180	1	O-ring	-
10	130516087	1	Spring	-
11	130516088	1	Guide	-
12	130516089	1	Gasket	-
13	130516090	1	Cap	-
14	130516091	6	Screw	-
15	130516069	4	Gasket	-
16	130516092	2	Joint Bolt	-

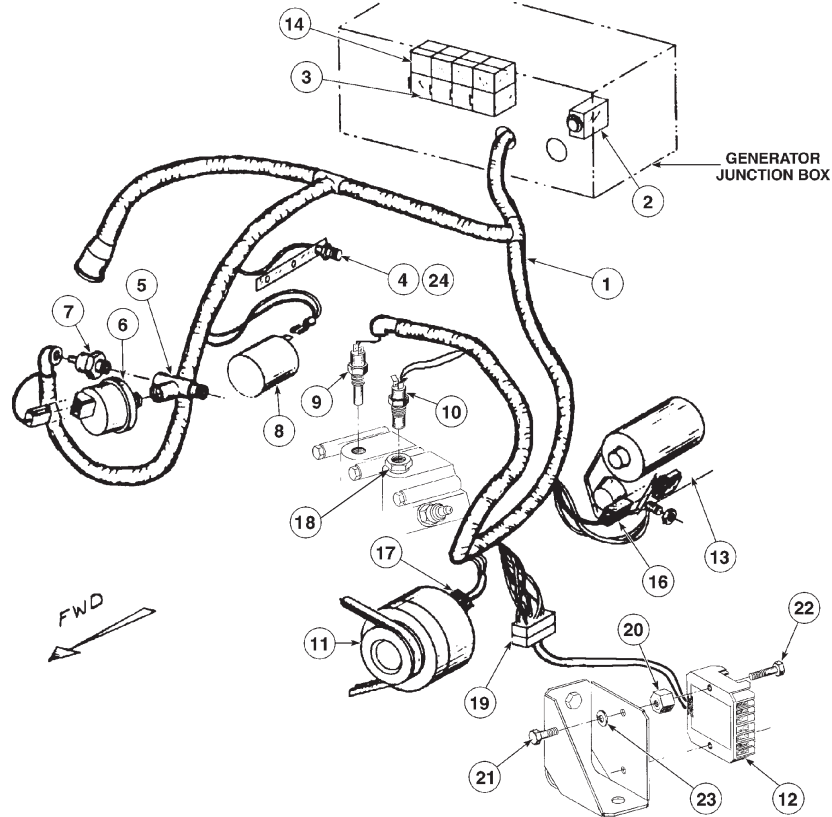
Engine Electrical - 12 Volt Standard Ground



A-3203A/ C-1925

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48006	1	Wire Harness	-
2	22-42043	1	Circuit Breaker	-
3	22-40391	4	Relay Base	-
	22-40393	4	Terminal Retainer	-
4	185366060	3	Glow Plug	-
5	198486720	1	Female Tee 1/8 BSPT	-
6	22-41016	1	Sender, Oil Pressure - Single Station	-
	22-71016	1	Sender, Oil Pressure - Dual Station	-
7	185246011	1	Switch, Oil Pressure	-
8	185206082	1	Stop Solenoid, 12 volt	-
9	22-42055	1	Sender, Water Temperature - Single Station	-
	22-71026	1	Sender, Water Temperature - Dual Station	-
10	385720110	1	Switch, Water Temperature 95°C (Marine)	-
	385720030	1	Switch, Water Temperature 110°C (Industrial)	-
11	185046210	1	Alternator, 12 volt (see Mounting detail)	-
12	185516061	1	DC Voltage Regulator	-
13	185086440	1	Starter (see Mounting & Parts details)	-
14	22-42047	4	Relay, 12 Volt	-
15	385620010	1	Regulator Connector	-
16	385620150	1	Starter Connector	-
17	385620280	1	Alternator Connector	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620010	1	Plug Assembly	-
20	23-48303	1	Bracket, Regulator Mounting (Industrial only – not shown)	-
21	385620230	1	Terminal - Glow Plug Circuit	-

Engine Electrical - 12 Volt Isolated Ground



A-6157

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48006	1	Wire Harness	-
	22-48304	1	Grounding Harness Addition	-
2	22-42043	1	Circuit Breaker	-
3	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
4	185366060	3	Glow Plug	-
5	198486720	1	Female Tee 1/8 BSPT	-
6	22-42803	1	Sender, Oil Pressure - Single Station	-
	22-74803	1	Sender, Oil Pressure - Dual Station	-
7	22-40236	1	Switch, Oil Pressure	-
8	185206191	1	Stop Solenoid, 12 volt	-
9	22-44810	1	Sender, Water Temperature - Single Station	-
	22-74802	1	Sender, Water Temperature - Dual Station	-
10	22-40358	1	Switch, Water Temperature 95°C	-
11	185046210	1	Alternator, 12 volt (see Mounting detail)	-
12	185516061	1	DC Voltage Regulator	-
13	22-42023	1	Starter (see Mounting detail)	-
14	22-42047	5	Relay, 12 Volt	-
15	385620010	1	Regulator Connector	-
16	385620150	1	Starter Connector	-
17	385620280	1	Alternator Connector	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620010	1	Plug Assembly	-
20	33-40001	2	Insulator	-
21	12-00100	2	Capscrew, Hex Head 1/4-20 x 1/2"	-
22	12-00113	2	Capscrew, Hex Head 1/4-20 x 1-1/4"	-
23	15-00103	4	Lock Washer 1/4	-
24	385620230	1	Terminal - Glow Plug Circuit	-

Flywheel Housing & Starting Mounting

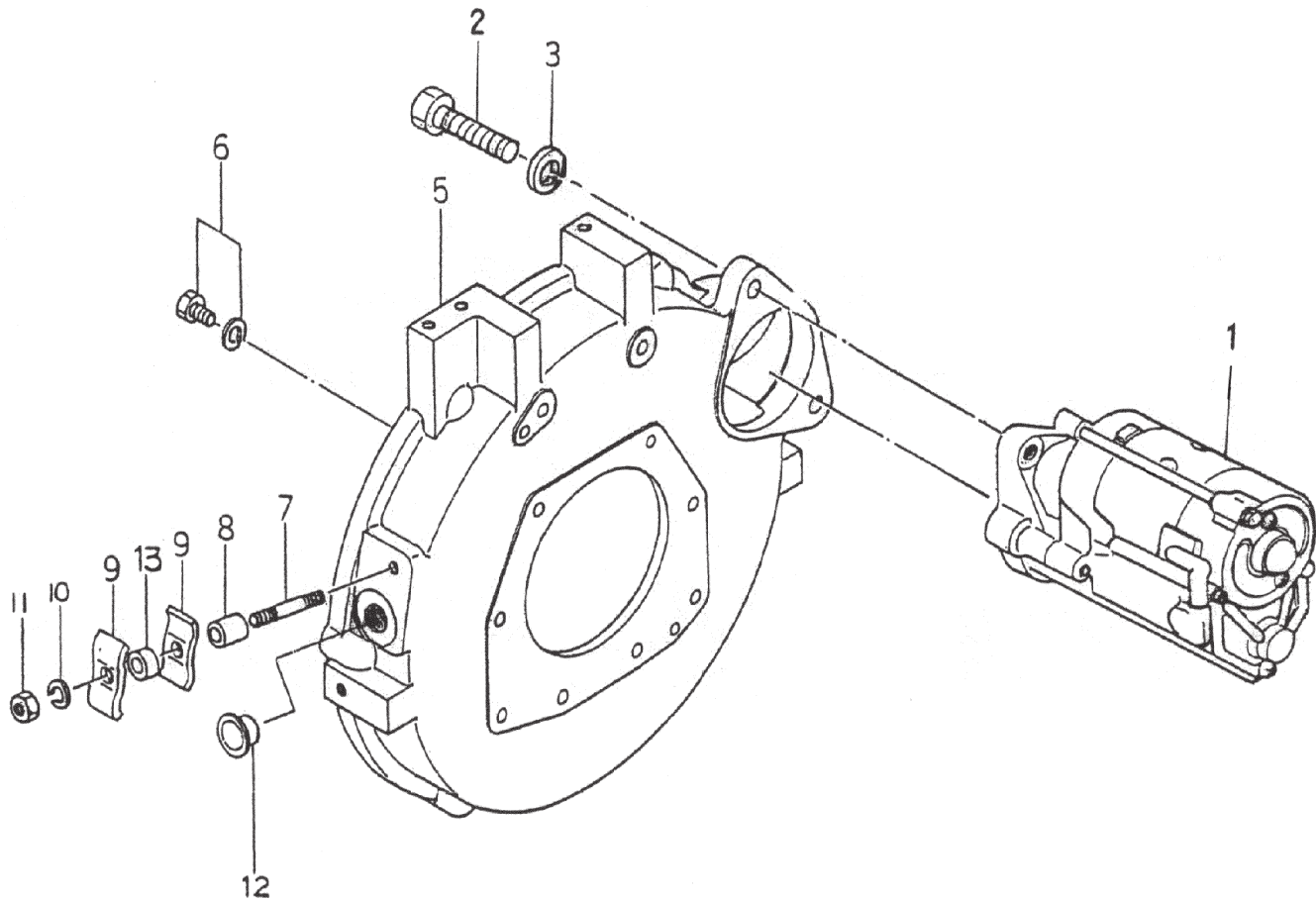


FIG. 5-2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185086440	1	Starter, Standard Ground	-
	22-42023	1	Starter, Isolated Ground	-
2	010401035	2	Bolt	-
3	027100010	2	Lock Washer M10	-
5	110446470	1	Flywheel Housing	-
	110446480	1	Flywheel Housing	-
6	011300820	10	Capscrew, Hex Head w/Washer M8 x 1.25 x 20 mm	-
7	012100845	1	Stud M8 x 1.25 x 50 mm	-
8	199236690	1	Collar	-
9	399110160	2	Clamp	-
10	027100008	1	Lock Washer M8	-
11	020900008	1	Hex Nut M8 x 1.25	-
12	398460091	1	Plug	-
13	399233250	1	Collar	-

Alternator and Mounting

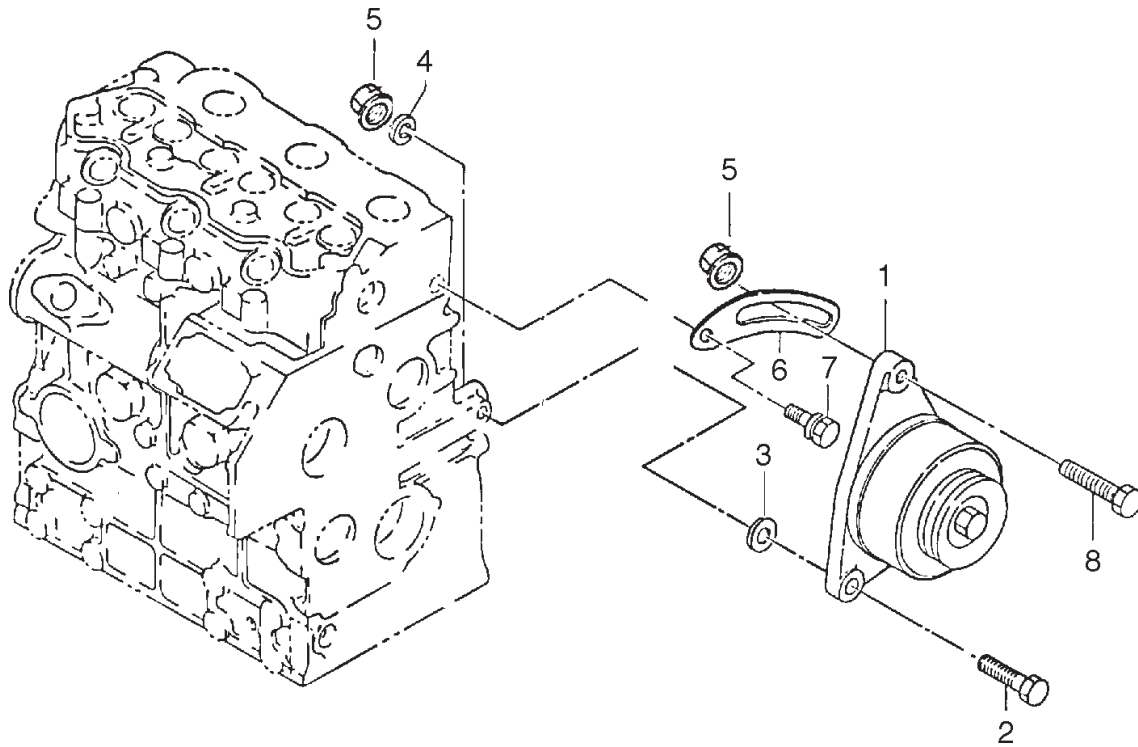


FIG. 5-3

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185046210	1	Alternator Assembly (see part detail)	-
2	010310850	1	Capscrew, Hex Head M8 x 1.25 x 50 mm	-
3	026109011	1	Washer	-
4	027100008	1	Lock Washer M8	-
5	023100008	2	Hex Nut, Flanged M8 x 1.25	-
6	185727010	1	Tensioner	-
7	011510816	1	Capscrew, Hex Head w/Washer M8 x 1.25 x 16 mm	-
8	013100830	1	Capscrew, Hex Head M8 x 1.25 x 30 mm	-

Alternator Assembly

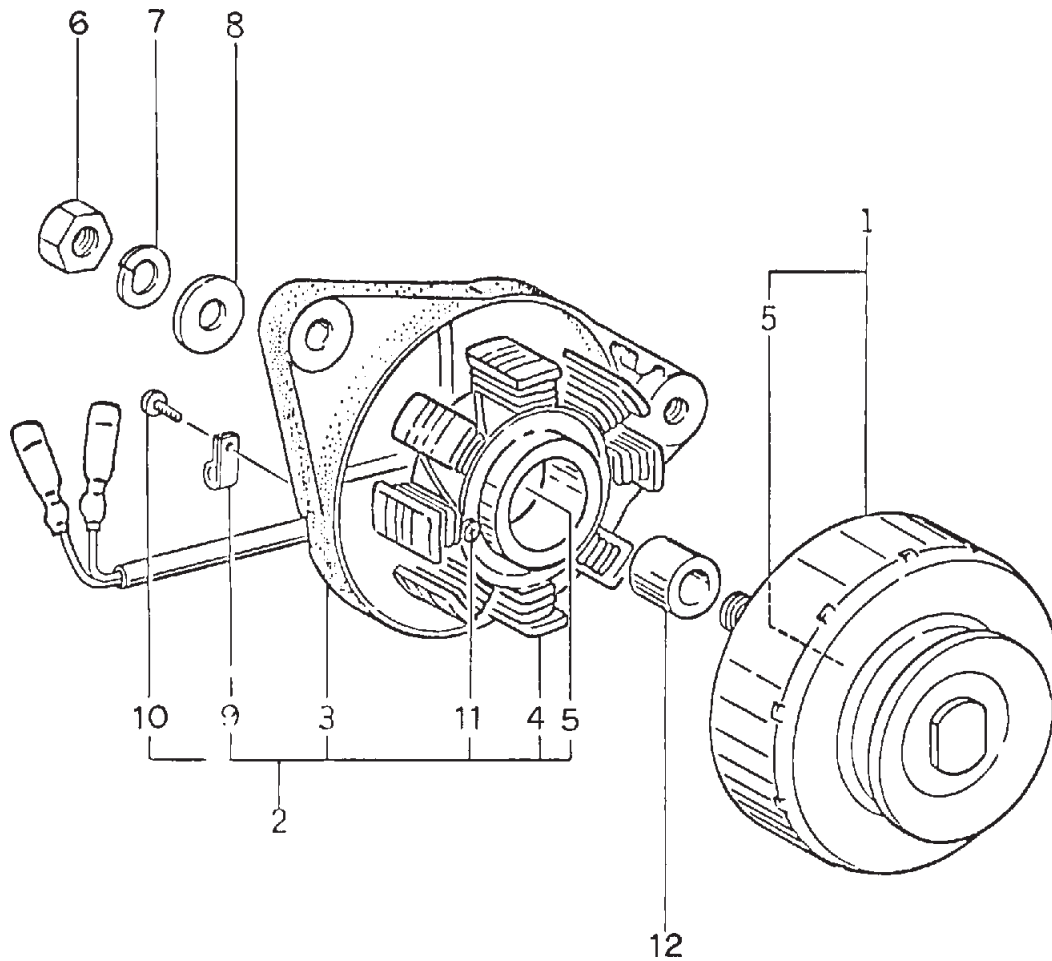


FIG. 5-4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	185046210	1	Alternator Assembly (includes all keys)	-
1	185446219	1	Rotor/Pulley Assembly (includes key #5)	-
2	185446217	1	Stator Assembly (includes keys #3 - #5, #9 - #10)	-
3	185716200	1	Plate	-
4	185446218	1	Stator	-
5	040126201	2	Bearing	-
6	020210010	1	Nut	-
7	027100010	1	Spring Washer	-
8	026100010	1	Washer	-
9	185446220	1	Clamp	-
10	015140408	1	Screw	-
11	015140425	2	Screw	-
12	199236510	1	Collar	-

Starter Motor Assembly

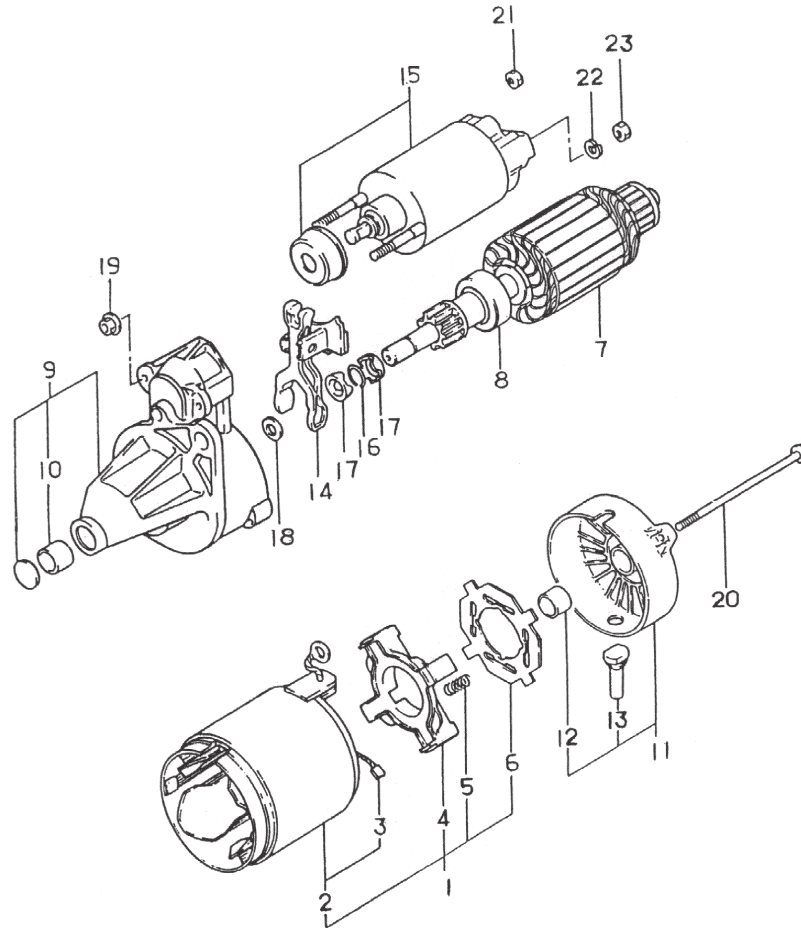
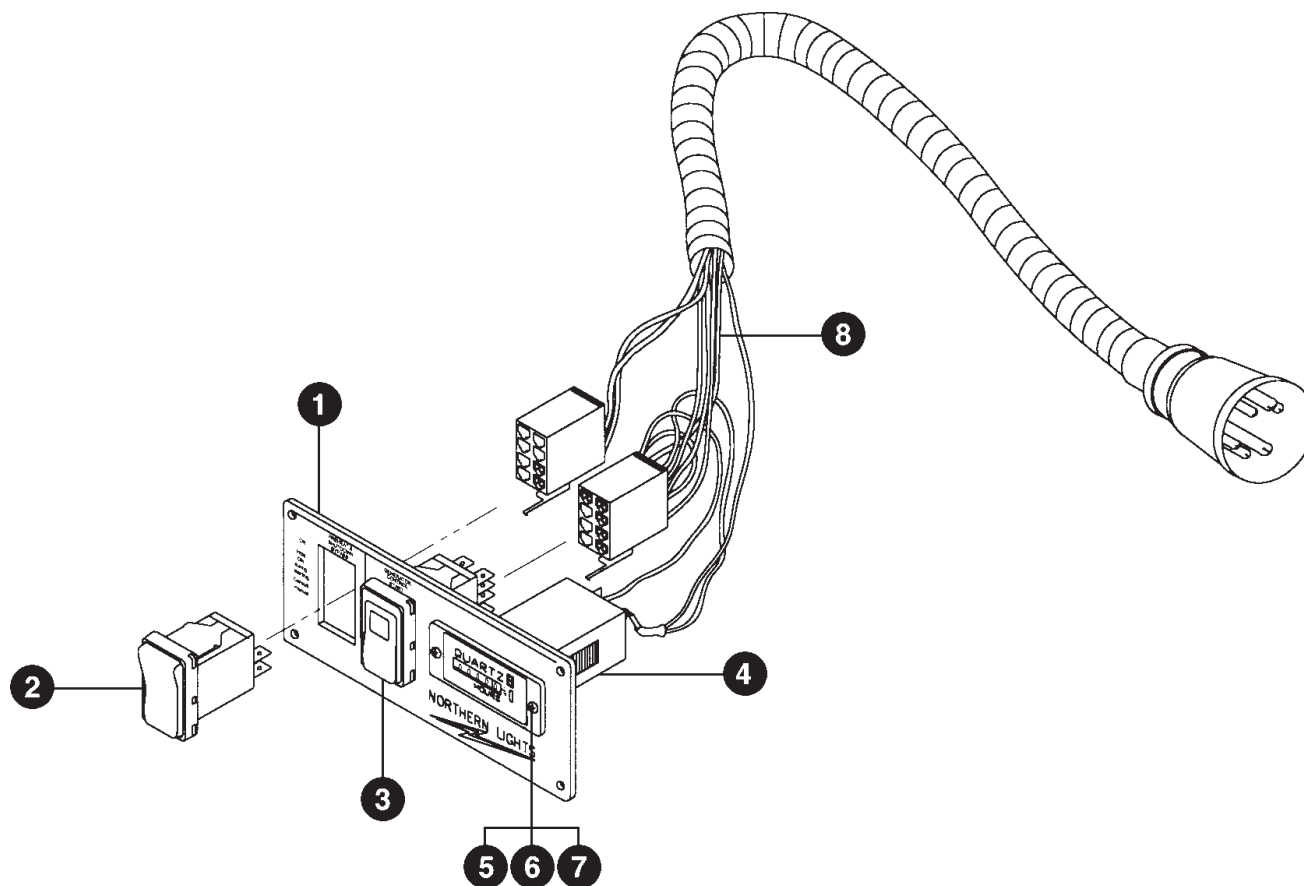


FIG. 5-5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	185086440	1	Starter Assembly (includes all keys)	-
1	185846510	1	Field Coil Assembly (includes keys #2 - #6)	-
2	185846511	1	Field Coil (includes key #3)	-
3	185846512	4	Brush	-
4	185416470	1	Brush Holder	-
5	185846513	4	Spring	-
6	185846514	1	Insulator	-
7	185846515	1	Armature Assembly	-
8	185846516	1	Clutch Sub-assembly	-
9	185846517	1	Housing Sub-assembly (includes key #10)	-
10	185846518	1	Bearing	-
11	185846519	1	Frame Assembly (includes keys #12 - #13)	-
12	185846520	1	Bearing	-
13	185846521	1	Cover	-
14	185846522	1	Lever, Starter Drive	-
15	185816300	1	Solenoid	-
16	185846523	1	Snap Ring	-
17	185846524	2	Nut, Pinion Stop	-
18	185846525	1	Washer	-
19	185846447	2	Nut	-
20	185846526	2	Bolt	-
21	185846527	1	Nut	-
22	027100008	1	Lock Washer M8	-
23	020100008	1	Hex Nut M8 x 1.25	-

Series 1-B Start/Stop Control Panel

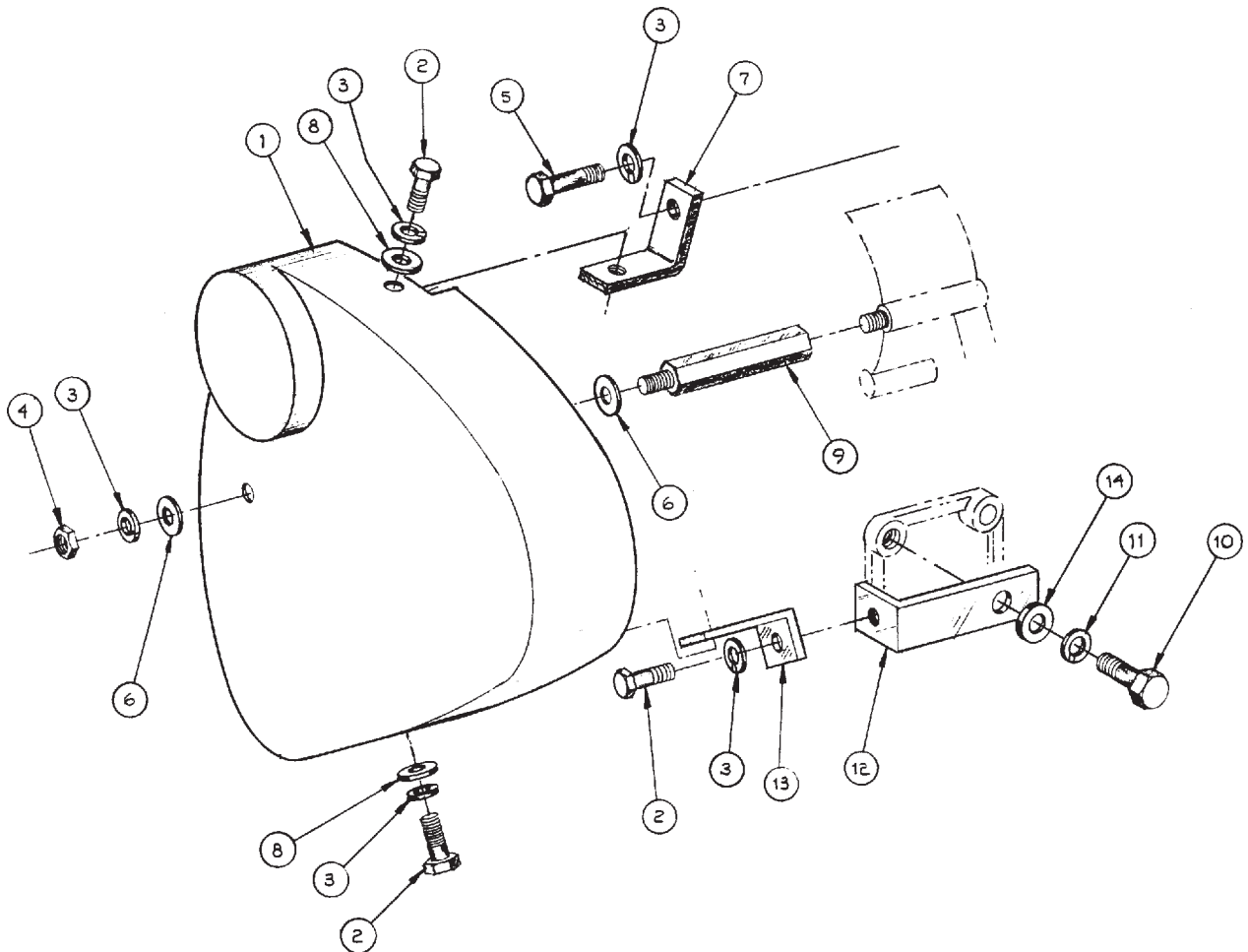


A-8553/B-5971

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92120	1	Complete Series 1-B Start/Stop Control Panel (includes all keys)	-
1	28-90003	1	Plate	-
2	22-90167	1	Rocker Switch	-
3	22-90168	1	Rocker Switch	-
4	22-90009	1	Hour Meter	-
5	12-00093	2	Machine Screw, Round Head Phillips #6 - 32 x 1/2"	-
6	15-00030	2	Star Washer, Internal #6, Stainless Steel	-
7	14-00015	2	Hex Nut #6 - 32, Stainless Steel	-
8	22-42063	1	Wire harness	-

Belt Guard

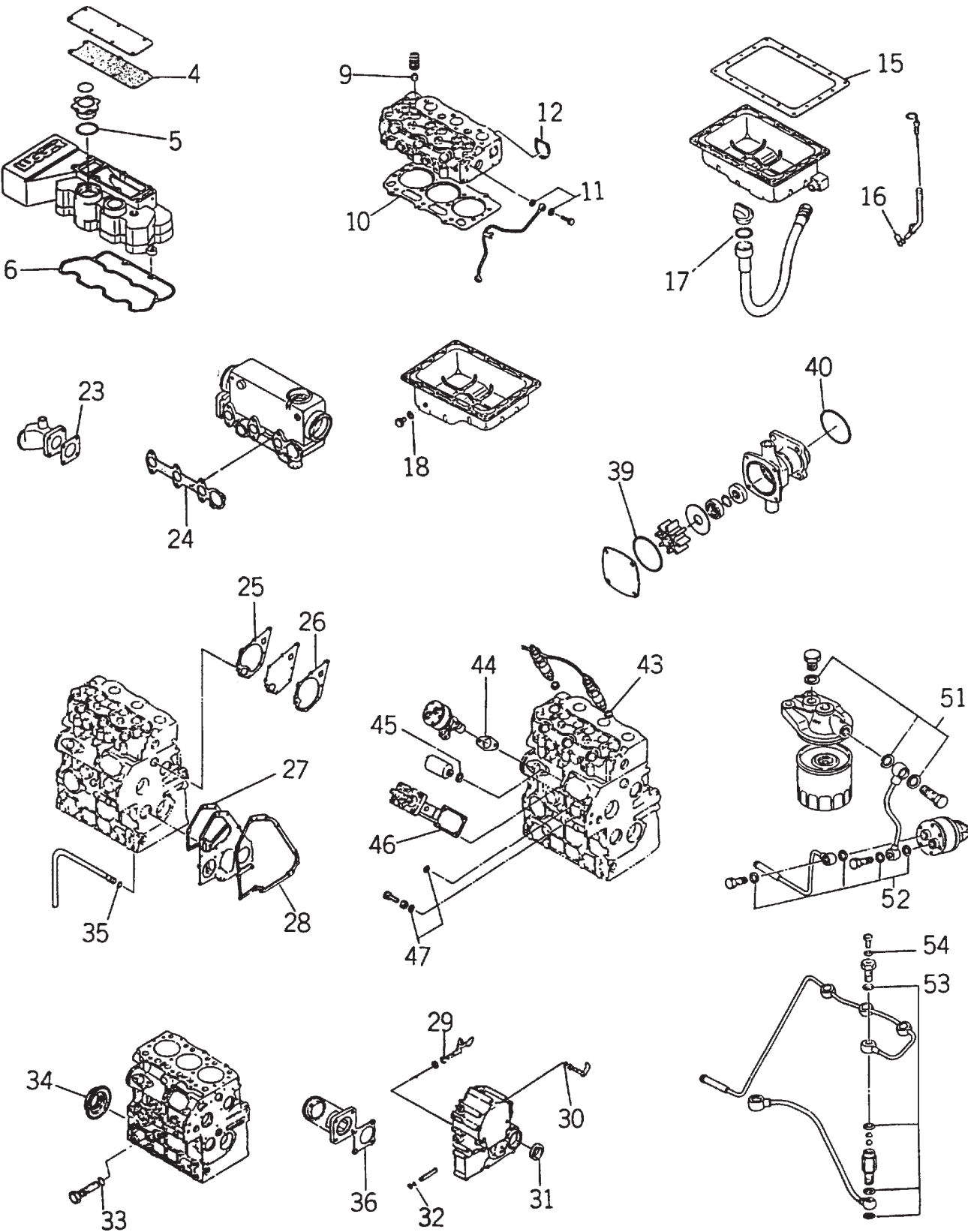
Marine Application



A-3208/ C-1931A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18301	1	Belt Guard	-
2	12-01131	3	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
3	15-01132	5	Lock Washer, M6	-
4	14-01131	1	Hex Nut M6 x 1.0	-
5	12-01133	1	Capscrew, Hex Head M6 x 1.0 x 60 mm	-
6	15-00019	2	Snubbing Washer	-
7	140976060	1	Bracket	-
8	15-00008	3	Flat Washer M6	-
9	199436340	1	Capscrew, Hex Head M6 x 1.0 x 15 mm (65 mm OAL)	-
10	12-00805	1	Capscrew, Hex Head M10 x 1.5 x 20 mm	-
11	15-00802	1	Lock Washer, M10	-
12	23-08302	1	Bracket	-
13	23-08303	1	Bracket	-
14	15-00805	1	Flat Washer, M10	-

Gasket Sets



P673: 6-0

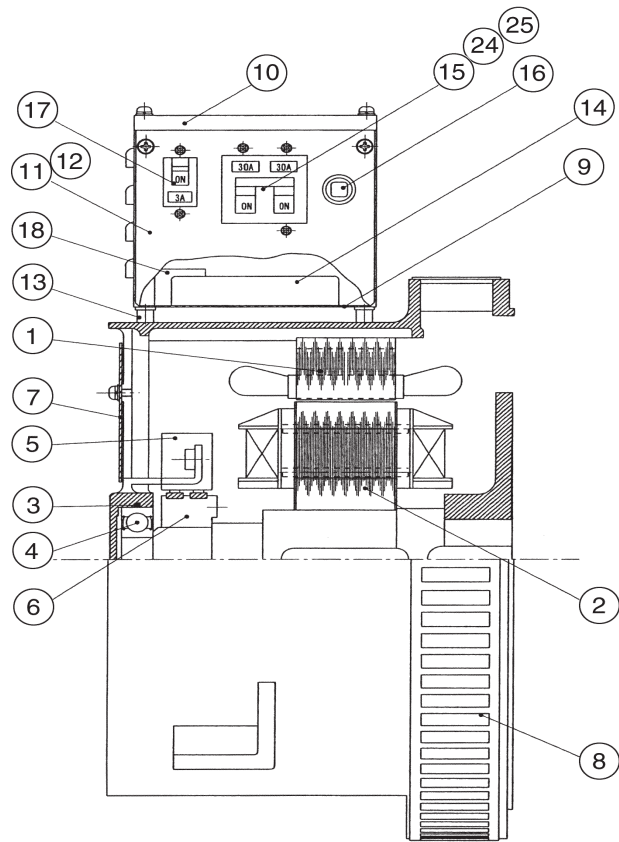
Gasket Sets

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	195906591	1	Gasket Kit (includes all keys)	-
4	135996560	1	Gasket	-
5	052100400	2	O-ring	-
6	111996340	1	Gasket	-
9	120406080	6	Valve Guide Seal	-
10	111147400	1	Head Gasket 0.5 mm	-
11	198996060	4	Gasket	-
15	110996590	1	Gasket	-
16	052100100	2	O-ring	-
17	054109013	1	Gasket	-
23	135996550	1	Gasket	-
24	135996730	1	Gasket	-
25	145996420	1	Gasket	-
26	145996430	1	Gasket	-
27	165996400	1	Gasket	-
28	165996410	1	Gasket	-
29	052100070	1	O-ring	-
30	052100050	1	O-ring	-
31	198636090	1	Oil Seal	-
32	052100030	1	O-ring	-
33	052100150	1	O-ring	-
34	198636080	1	Oil Seal	-
35	052109076	1	O-ring	-
36	165886420	1	Gasket	-
39	052300550	1	O-ring	-
40	052400400	1	O-ring	-
43	131426200	3	Gasket	-
44	130996070	1	Gasket	-
45	025100016	1	Seal Washer	-
46	131426300	1	Shim Set	-
47	025100010	2	Seal Washer	-
51	130326051	5	Gasket	-
52	130516089	4	Gasket	-
53	131426180	4	Washer	-
54	131426190	1	Washer	-

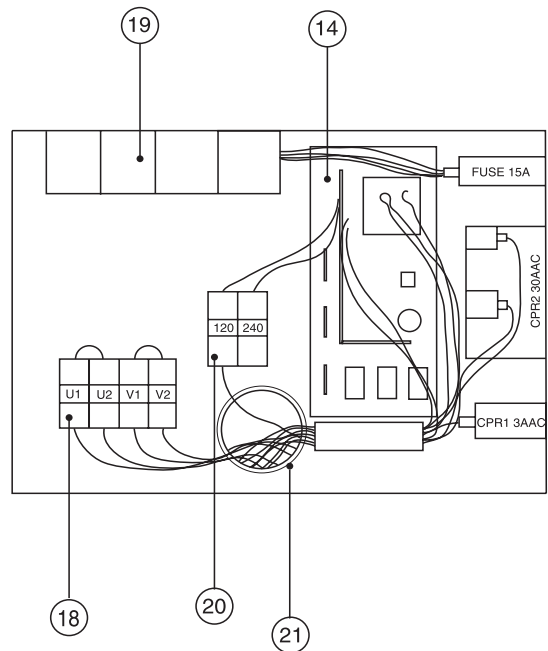
Generator Components

TF-276KM

GENERATOR COMPONENTS:



GENERATOR JUNCTION BOX:



P673: 7-0A/7-0B

Generator Components

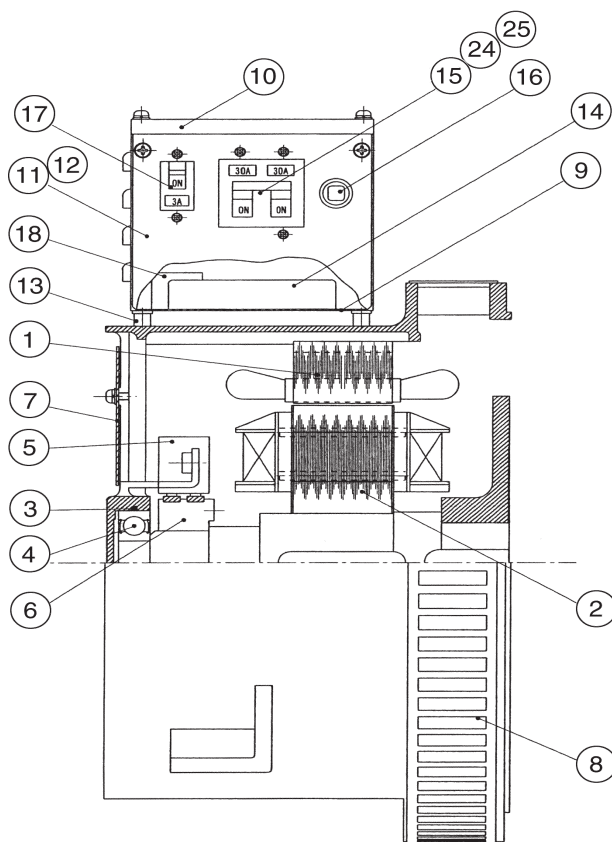
TF-276KM

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	WKC-00050-ST	1	Stator Assembly, Single Phase	-
2	3T201-077	1	Rotor Assembly	-
3	1BG60	1	O-ring	-
4	6305ZZ	1	Ball Bearing	-
5	22-68304	1	Brush Assembly	-
6	GM408032	1	Slip Ring	-
7	4T301-893	1	End Cover	-
8	3T301-618	1	Ventilation Cover - Marine	-
	3T301-567	1	Ventilation Cover - Industrial	-
9	3T301-813-2	1	Terminal Box - Marine	-
	3T301-826-2	1	Terminal Box - Industrial	-
10	4T302-248	1	Terminal Box (Top)	-
11	4T301-814	1	Terminal Box (Side) - Marine	-
	4T302-247	1	Terminal Box (Side) - Industrial	-
12	4T301-815-1	1	Terminal Box (Side)	-
13	33-4000-2	1	Rubber Mount	-
14	22-68006	1	A.C. Voltage Regulator	-
15	22-68007	1	Circuit Protector (Generator)	-
16	22-42043	1	Circuit Protector (Engine)	-
17	22-68004	1	Circuit Protector (A.C. Regulator)	-
18	S30051	1	Terminal Block (Output)	-
19	22-42047	4	Relay	-
20	TS-615-2P	1	Terminal Block	-
21	NG-R	1	Grommet	-
22	GM406467	2	Grommet (not shown)	-
24	23-68001	1	Bracket, Circuit Protector Mounting	-
25	23-68002	1	Bracket, Circuit Protector Mounting (Aux. Contact Side)	-

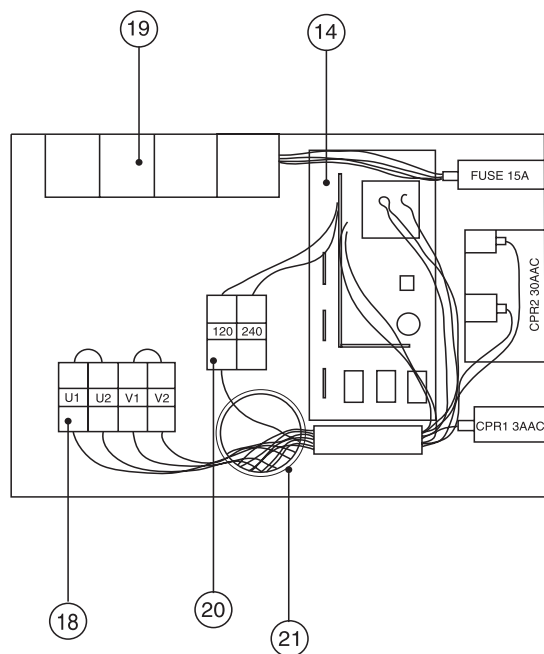
Generator Components

TF-276D

GENERATOR COMPONENTS:



GENERATOR JUNCTION BOX:

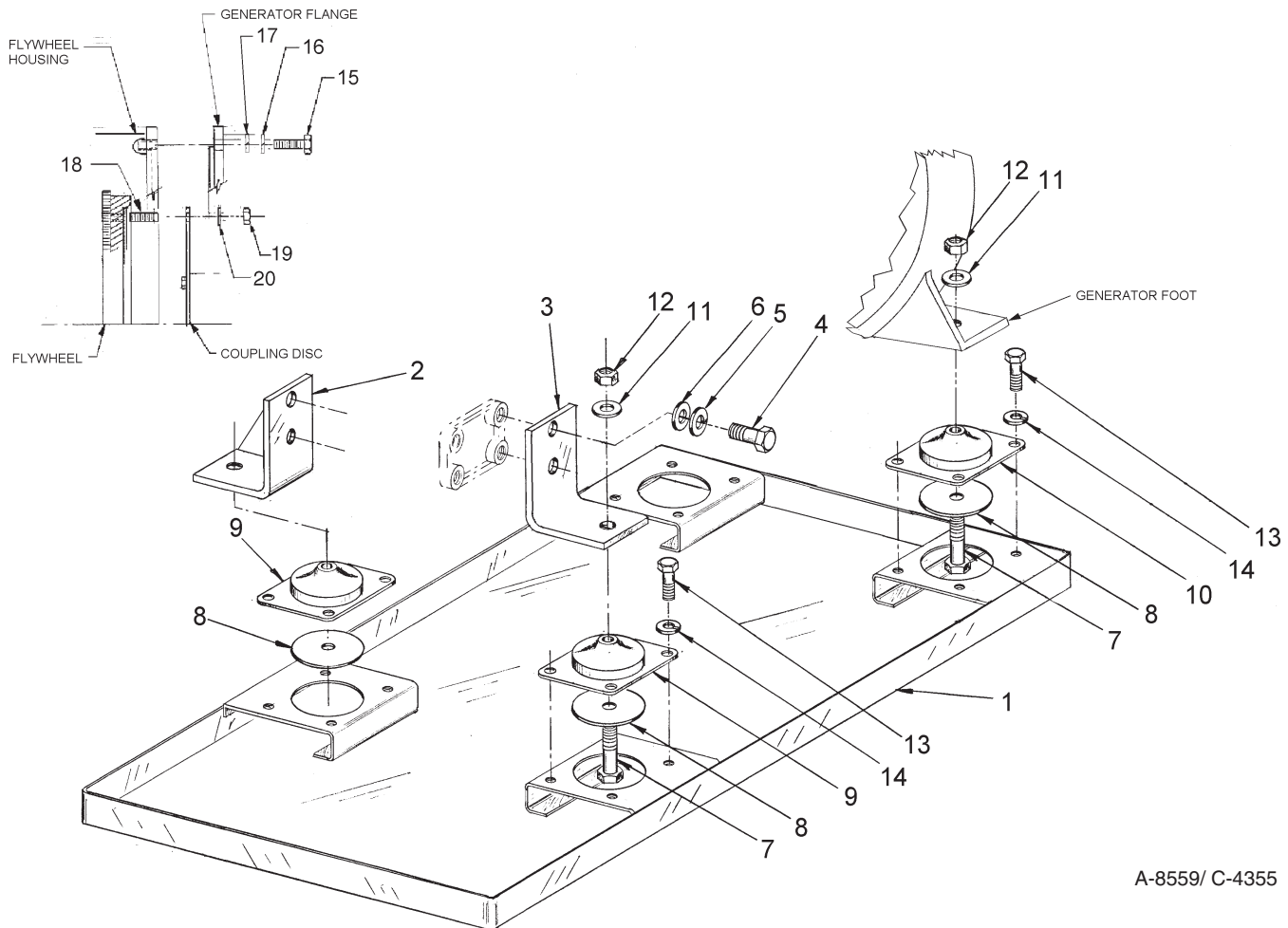


P673: 7-0A/7-0B

Generator Components				
TF-276D				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	WKC-00079-ST	1	Stator Assembly, Single Phase	-
2	WKC-00079-RT	1	Rotor Assembly	-
3	1BG60	1	O-ring	-
4	6305ZZ	1	Ball Bearing	-
5	22-68304	1	Brush Assembly	-
6	GM408032	1	Slip Ring	-
7	4T301-893	1	End Cover	-
8	3T301-618	1	Ventilation Cover - Marine	-
	3T301-567	1	Ventilation Cover - Industrial	-
9	3T302-440	1	Terminal Box - Marine	-
	3T301-826-3	1	Terminal Box - Industrial	-
10	4T302-248	1	Terminal Box (Top)	-
11	4T301-814	1	Terminal Box (Side) - Marine	-
	4T302-247	1	Terminal Box (Side) - Industrial	-
12	4T301-815-1	1	Terminal Box (Side)	-
13	33-40007	1	Rubber Mount (formerly #33-40002)	-
14	22-68006	1	A.C. Voltage Regulator	-
15	22-68007	1	Circuit Protector (Generator)	-
16	22-42043	1	Circuit Protector (Engine)	-
17	22-68004	1	Circuit Protector (A.C. Regulator)	-
18	TE-K14-4	1	Terminal Block (Output)	-
19	22-42047	4	Relay	-
20	TS-615-2P	1	Terminal Block	-
21	NG-R	1	Grommet	-
22	GM406467	2	Grommet (not shown)	-
24	23-68001	1	Bracket, Circuit Protector Mounting	-
25	23-68002	1	Bracket, Circuit Protector Mounting (Aux. Contact Side)	-

Base Frame

Marine Units with TF276K, M, & D Generators



A-8559/ C-4355

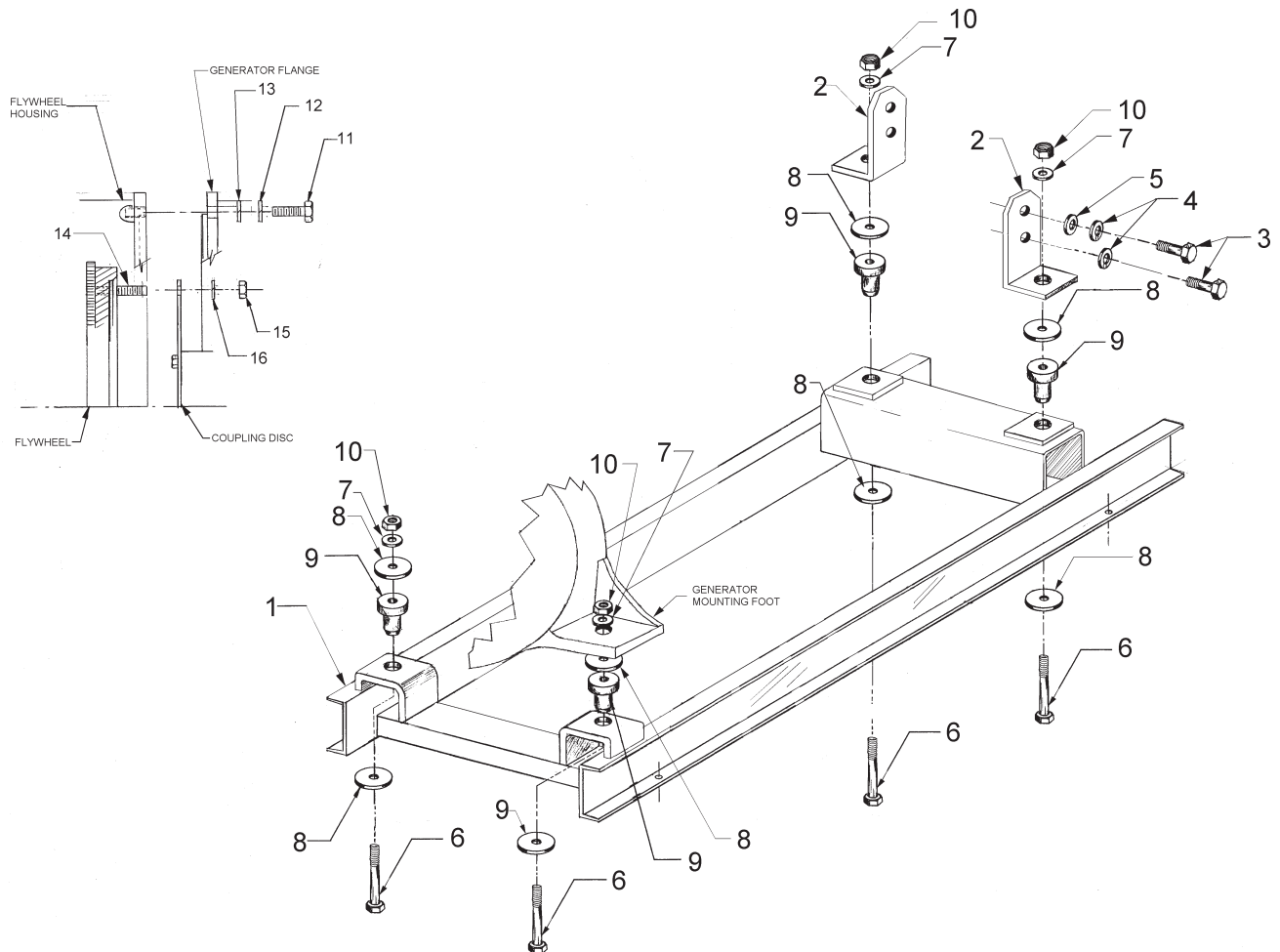
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88001	1	Base Frame	-
2	23-88001	1	Bracket, Right hand	-
3	23-88002	1	Bracket, Left hand	-
4	12-09832	4	Capscrew, Hex Head M10 x 1.5 x 30 mm, S/S	-
5	15-00808	4	Lock Washer, Helical M10, S/S	-
6	15-09805	4	Flat Washer, M10, S/S	-
7	12-09956	4	Capscrew, Hex Head M12 x 1.75 x 65 mm, S/S	-
8	15-00020	**	Snubbing Washer	-
9	33-83105	2	Plateform Mount, 120 lb.	-
10	33-83105	2	Plateform Mount, 120 lb. *	-
11	15-09007	4	Flat Washer, M12, S/S	-
12	14-09830	4	Hex Nut, Nylock M12 x 1.75, S/S	-
13	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20 mm, S/S	-
14	15-00705	16	Lock Washer, Helical M8 S/S	-
15	12-09753	6	Capscrew, Hex Head M8 x 1.25 x 30 mm, S/S	-
16	15-00705	6	Lock Washer, Helical M8, S/S	-
17	15-00706	6	Flat Washer, M8, S/S	-
18	012110025	4	Stud M10 x 1.25 x 25 mm	-
19	14-00814	4	Hex Nut M10 x 1.25	-
20	15-00802	4	Lock Washer, Helical M10	-
*Note: Replace earlier 33-88001 in pairs.				
**As required				

GENERATOR
TO FLYWHEEL
HOUSING

COUPLING

Base Frame

Industrial Units with TF276K, M, & D Generators

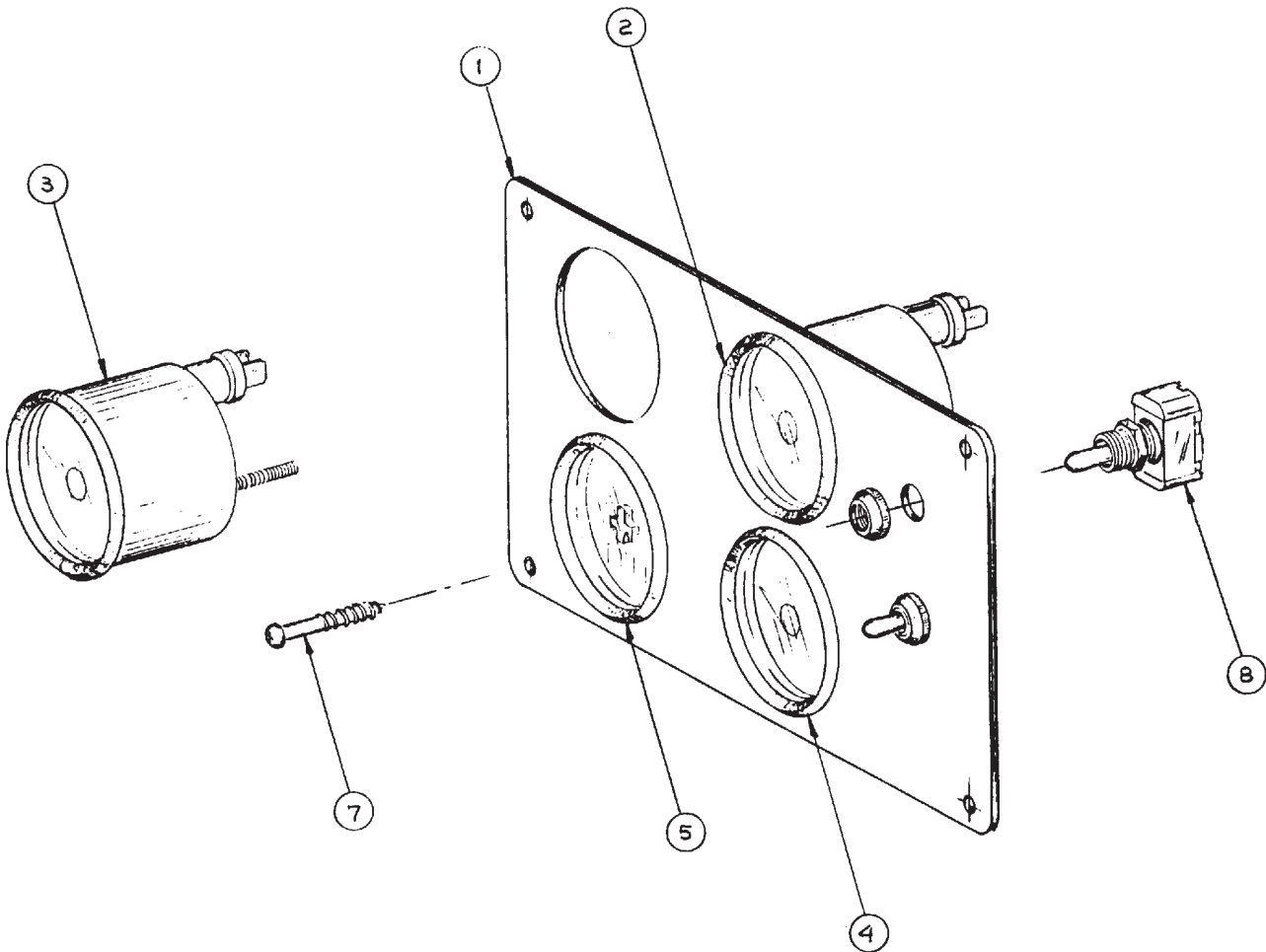


A-8649/ D-4322

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88002	1	Base Frame	-
2	23-88003	2	Bracket	-
3	12-00832	4	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
4	15-00802	4	Lock Washer, Helical M10	-
5	15-00805	4	Flat Washer, M10	-
6	12-00048	4	Capscrew, Hex Head M10 x 1.5 x 60 mm	-
7	15-00805	4	Flat Washer, M10	-
8	15-00014	8	Head/Tail Washer	-
9	33-83100	4	Centerbonded Mount, 100 lb.	-
10	14-00812	4	Hex Nut, Nylock M10 x 1.5	-
11	12-00753	6	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
12	15-00702	6	Lock Washer, Helical M8	-
13	15-00701	6	Flat Washer, M8	-
14	012110025	4	Stud, M10 x 1.25 x 25 mm	-
15	14-00814	4	Hex Nut, M10 x 1.25	-
16	15-00802	4	Lock Washer, Helical M10	-

Standard Line, Flush Mount, Compact Control Panel

12 Volt

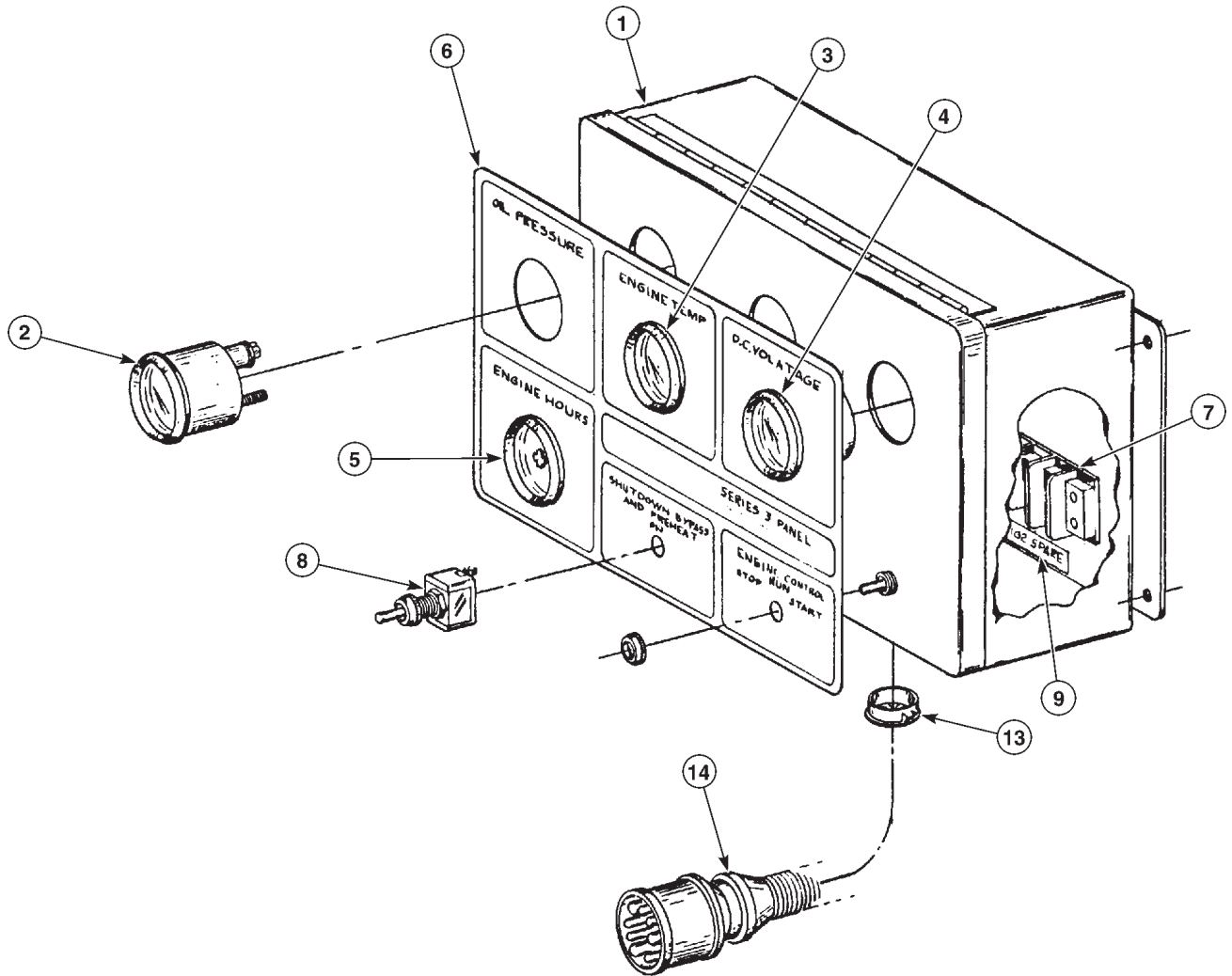


A-4596/ C-2465

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92015	1	S-3C Control Panel 12 Volt (includes all keys)	-
1	28-90010	1	Series 3 Control Panel Plate	-
2	37-40010	1	Oil Pressure Gauge, Standard Line	-
3	37-40011	1	Engine Temperature Gauge, Standard Line	-
4	37-40012	1	D.C. Voltmeter, Standard Line	-
5	27-40013	1	Hourmeter, Standard Line	-
6	22-42024	1	Panel Wire Harness (not shown)	-
7	12-90001	**	Self Tapping Screw, Round Head Phillips #6 x 1"	-
	12-90007	**	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch SPDT Momentary	-
9	22-44852	**	12 Volt Bulb (not shown)	-
**As required				

Standard Line, Surface Mount, Dual Station Control Panel

12 Volt

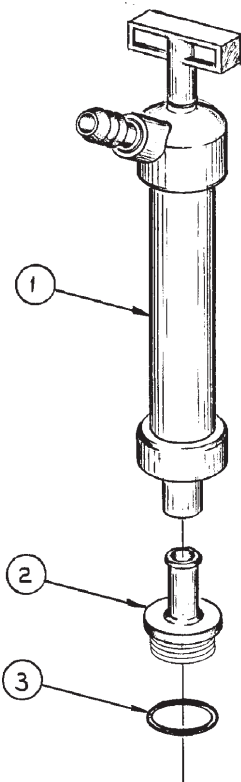


A-6967 + A-4722/ C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92031	1	S-3B Control Panel - 12 Volt (Includes all keys)	-
1	39-42005	1	Enclosure 10" x 8" x 4" (white)	-
2	37-40010	1	Oil Pressure Gauge, Standard Line 0 - 80 PSI	-
3	37-40011	1	Engine Temperature Gauge, Standard Line 0 - 250°	-
4	37-40012	1	DC Voltmeter, 12 Volt, Standard Line	-
5	37-40013	1	Hourmeter, Standard Line	-
6	00-91018	1	Series 3 Control Panel Decal	-
7	22-41077	1	Terminal Board	-
8	22-41051	2	Toggle Switch, Momentary SPDT	-
9	22-00052	1	Number Strip	-
11	22-44852	**	Clear Bulb, 12 Volt (not shown)	-
12	22-40257	1	Wire Harness (not shown)	-
13	00-41015	1	Plastic Bushing	-
14	22-42027	1	Connection Harness	-
			**As required	

Oil Drain Kit

Marine Application

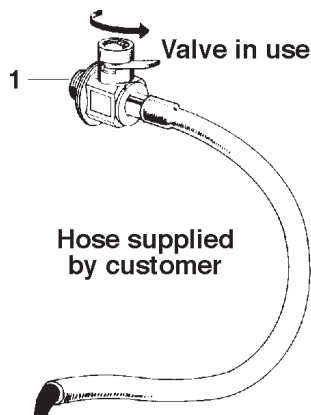


A-5024/ B-3990

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	36-70010		Oil Drain Kit Complete (includes all keys)	-
1	36-72002	1	Hand Pump	-
2	31-70001	1	Adapter, Oil Drain	-
3	16-70001	1	O-Ring	-

Oil Drain Kit

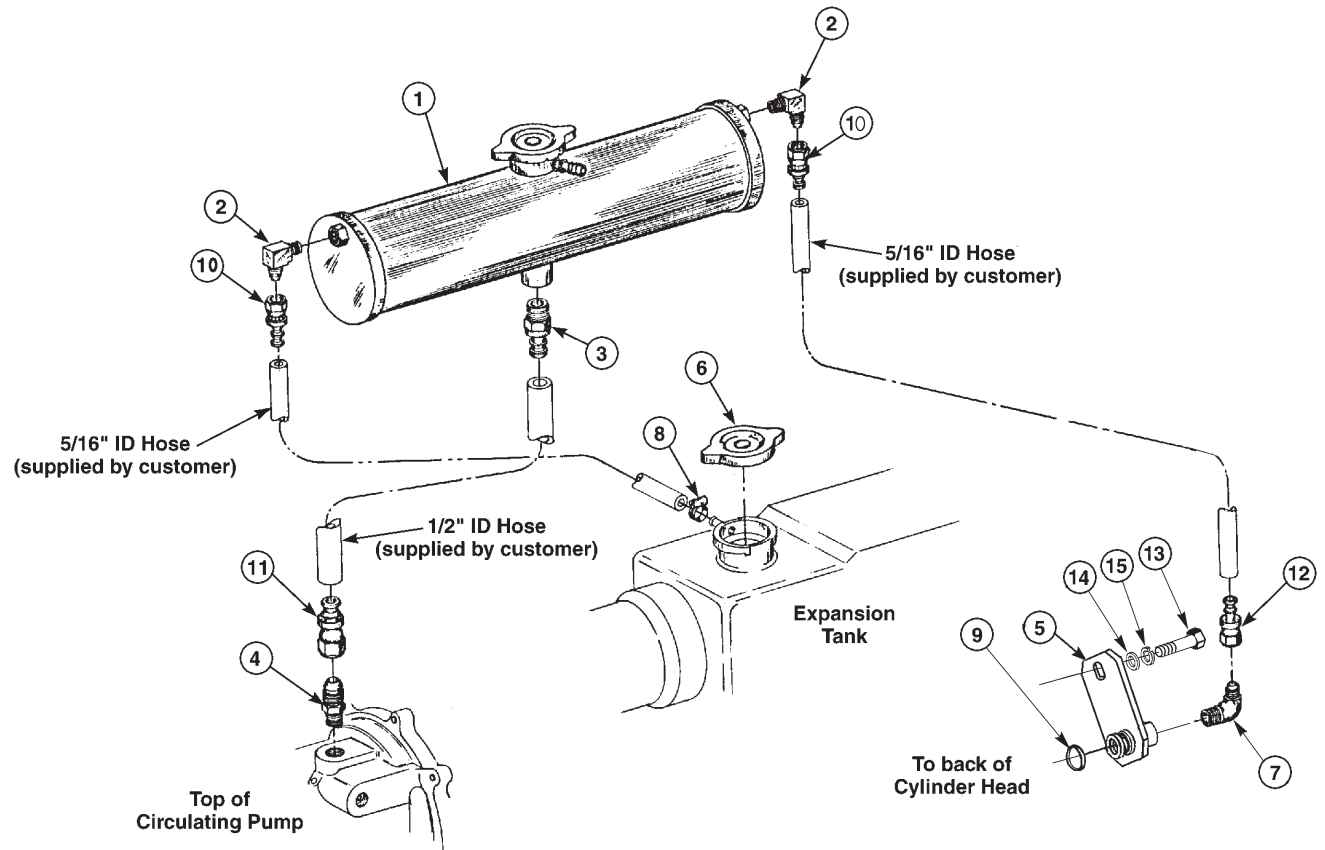
Industrial Application



A-6480

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	36-72003	1	Drain Valve	-

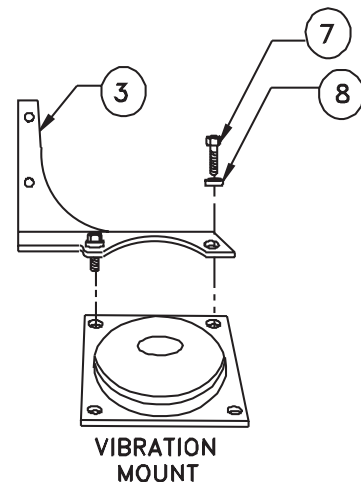
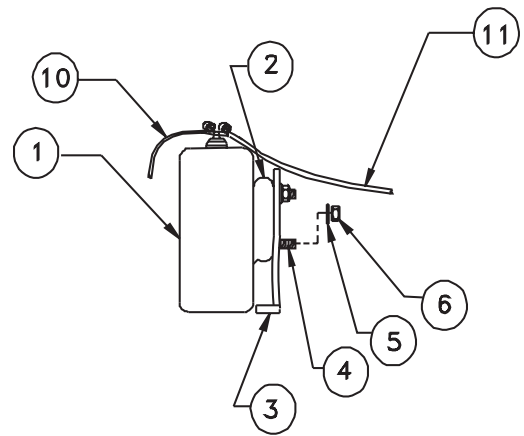
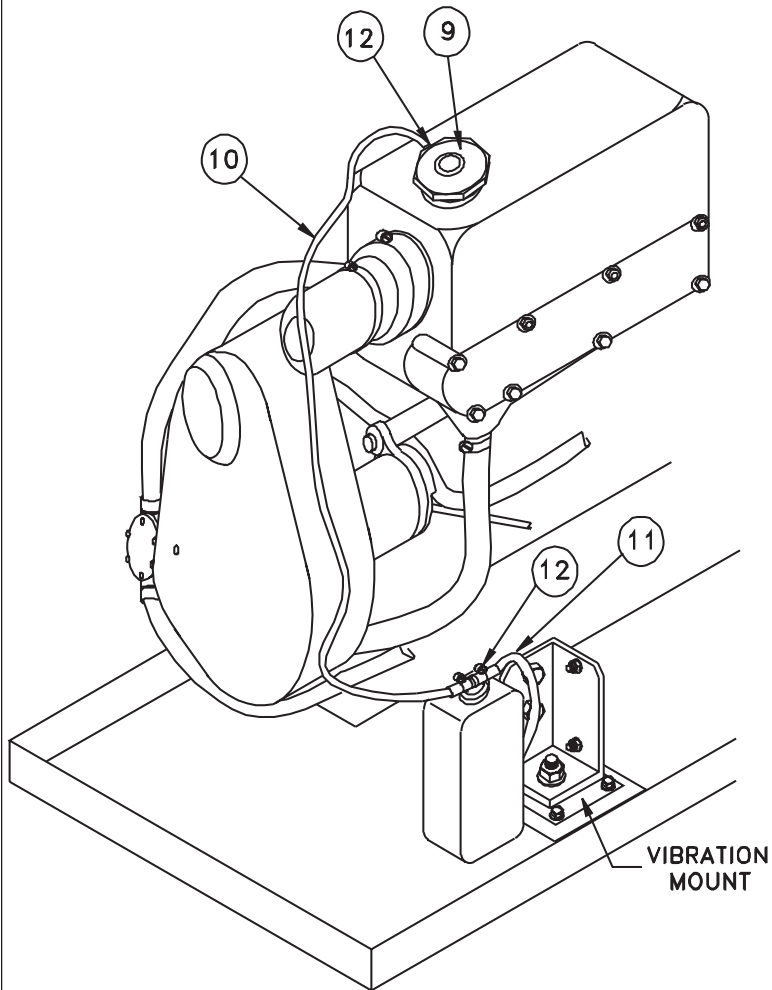
Remote Expansion Tank



A-7461/ D-2345

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-12002	1	Remote Expansion Tank (Includes key #16)	-
2	21-52245	2	Male Elbow, 90°, Brass 1/4 NPT x 5/16-45T	-
3	21-51093	1	Male Connector, Brass 1/2 NPT x 1/2 HB	-
4	21-71093	1	Male Connector, Brass 3/8 NPT x 1/2-45T	-
5	31-12002	1	Port Adapter	-
6	21-12008	1	Filler Cap	-
7	21-10030	1	Male Elbow, 90°, 3/8 O-R Port x 5/16-37T	-
8	19-00004	1	Hose Clamp #4	-
9	16-18001	1	O-ring	-
10	21-71056	2	Female Swivel, Brass 5/16 HB x 5/16-45T	-
11	21-71042	1	Female Swivel, Brass 1/2 HB x 1/2-45T	-
12	21-70007	1	Female Swivel, Brass 5/16 HB x 5/16-37T	-
13	12-00751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
14	15-00701	1	Flat Washer M8	-
15	15-00702	1	Lock Washer M8	-
16	23-75404	2	Bracket, Tank Support (not shown)	-

Coolant Recovery Tank

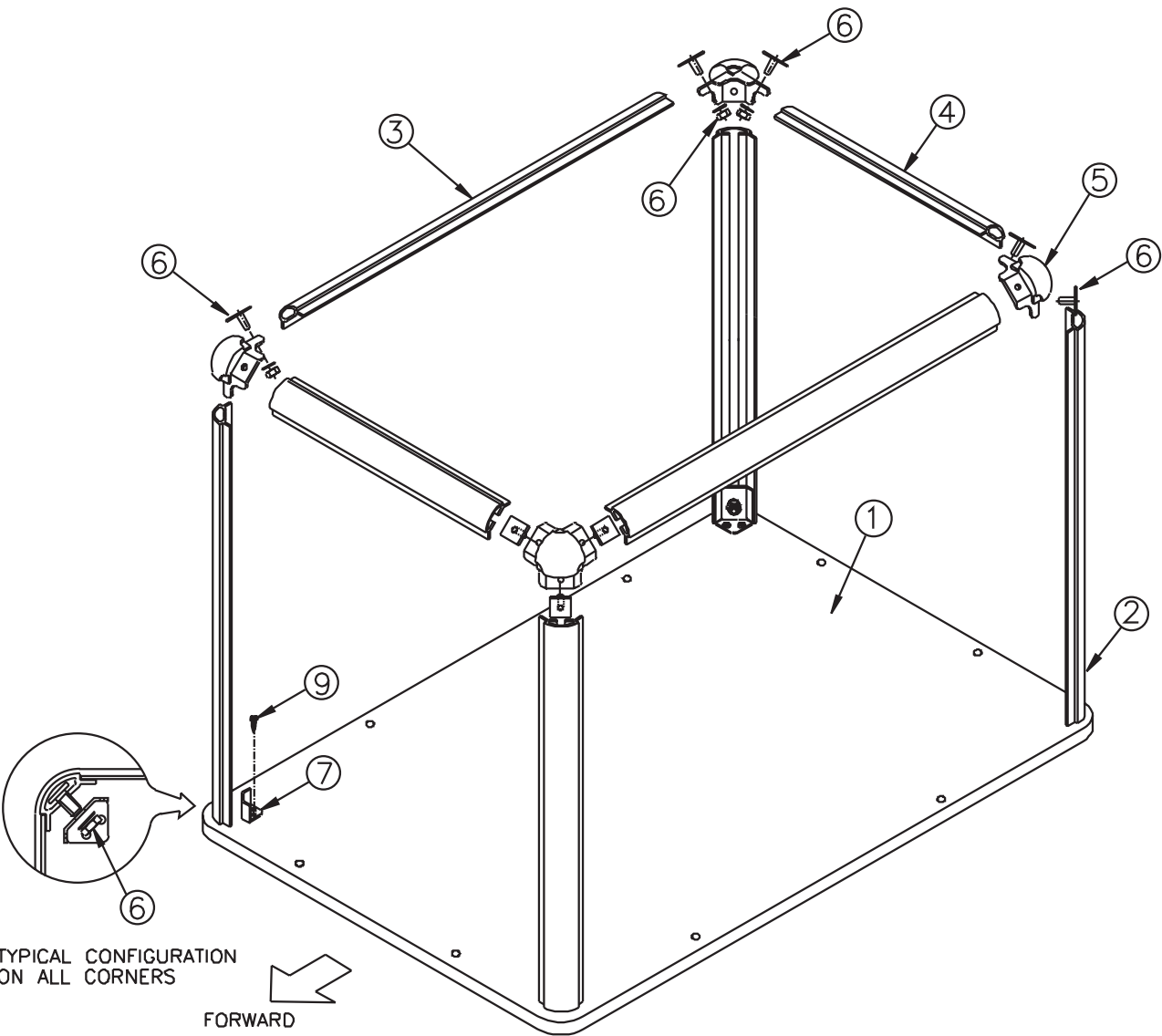


A-9146 / B-6398

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	310550130	1	Coolant Recovery Tank	-
2	222300090	1	Bracket, Coolant Recovery Tank Mtg.	-
3	23-18001	1	Bracket, Coolant Recovery Tank Mtg.	-
4	12-00097	2	Capscrew, Hex Head M6 x 1.0 x 12 mm	-
5	15-00008	2	Flat Washer	-
6	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
7	12-09712	2	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
8	15-00705	2	Lock Washer S/S	-
9	21-12013	1	Filler Cap	-
10	41-01013	18	Hose, 5/16" ID	-
11	41-01013	10	Hose, 5/16" ID	-
12	19-00002	3	Hose Clamp #2	-

Notes

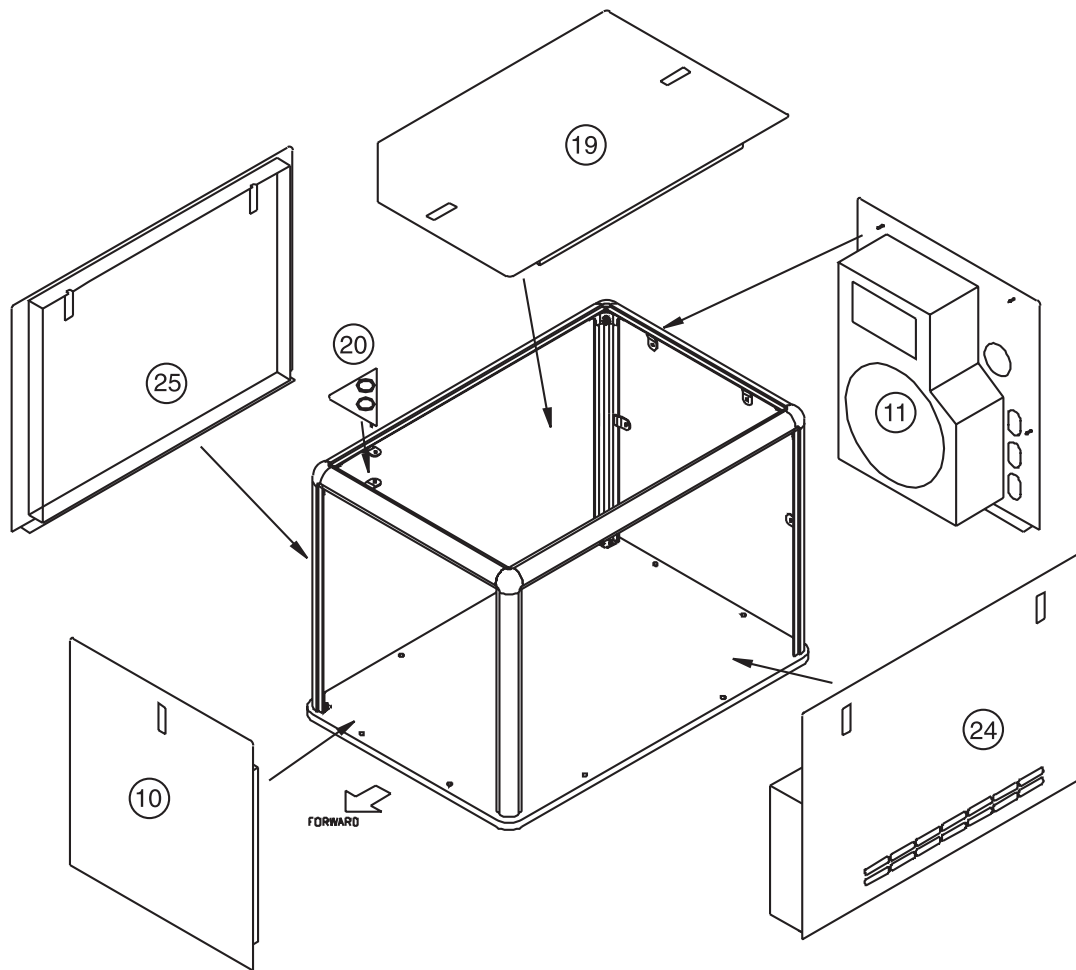
Sound Enclosure Assembly



A-9337A / B-6576B

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	05-78000	1	Sound Enclosure Assembly (includes all keys)	-
1	39-78014	1	Base Board, PVC Foam	-
2	39-78016	4	Extrusion, Vertical Corner	-
3	39-78017	2	Extrusion, Top Side Corner	-
4	39-78024	2	Extrusion, Top End Corner	-
5	05-70001	4	Corner Casting	-
6	00-75714	12	Bolting Assembly	-
7	23-70034	4	Toe Bracket	-
9	12-72002	8	Sheet Metal Screw, PH Phillips #10 5/8" Type A S/S	-

Sound Enclosure Assembly



B-6575B

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
10	39-78004	1	Front Panel Assembly (includes 2 of key 30)	-
11	39-78006	1	Rear Panel Assembly (includes keys 12-19)	-
12	00-70083	1	Grommet 1" ID	-
13	00-73109	5	Grommet 1-1/2" ID	-
14	44-70002	88"	Continuous Grommet	-
15	55-78038	1	Gasket, Intake Box	-
16	14-00112	4	Hex Nut, Nylock 1/4-20	-
17	21-22002	1	Male Elbow 90° (Air Inlet)	-
18	23-70036	4	Bracket, Panel Retainer	-
19	39-78007	1	Top Panel Assembly (includes 2 ea. of key 30)	-
20	39-78008	1	Penetration Panel Assembly (includes keys 22-24)	-
21	14-00112	2	Hex Nut, Nylock 1/2-20	-
22	00-78215	2	Grommet 1-1/8" ID	-
23	23-70036	2	Bracket, Panel Retainer	-
24	39-78009	1	Side Panel Assembly, Left Hand (includes 2 ea. of key 30)	-
25	39-78011	1	Side Panel Assembly, Right Hand (includes 2 ea. of key 30)	-
26	00-00021	**	Trigger Grip Latch	-
**As required				