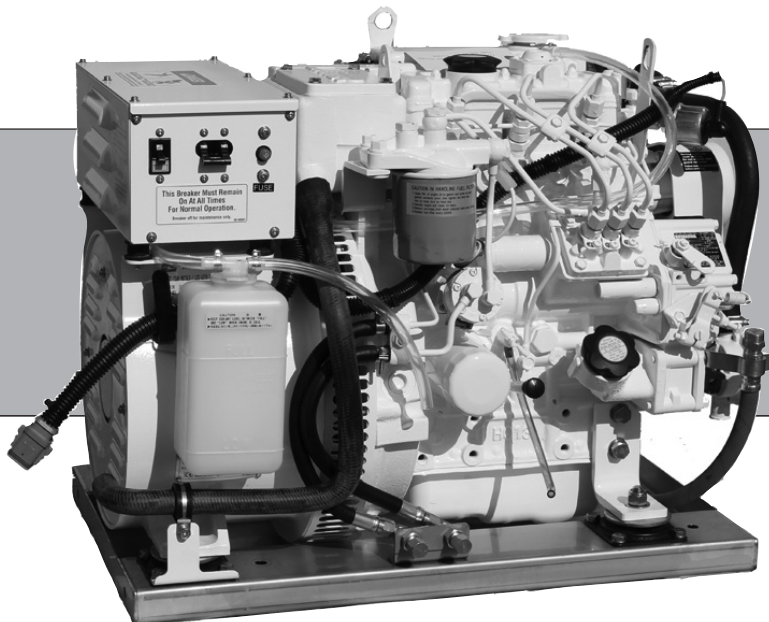




PARTS MANUAL

P673-2

For Models: M673L2, M673L3, M673L3G
M673LD2, M673LD3, M673LD3G
NL673L2 and NL673L3



www.northern-lights.com

**ULTRA LOW
SULFUR FUEL
ONLY**

RE529956

As of January 2011, U.S. EPA regulations require the application of a permanently applied label near the fuel tank fill port for diesel driven equipment. This label is to state:

ULTRA LOW SULFUR FUEL ONLY

Northern Lights is providing this label for application to the fuel inlet of the fuel supply tank for each engine or generator set. This is to be applied by the installer of the engine or gen set, or by the manufacturer of the equipment that the engine or gen set is installed in. The location of the label must be in clear site of personnel that refill the supply tank.



— CALIFORNIA —
Proposition 65 Warning:

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

- * Always start and operate the engine in a well-ventilated area.
- * If in an enclosed area, vent the exhaust to the outside.
- * Do not modify or tamper with the exhaust system.
- * Do not idle the engine except as necessary.

For more information, go to www.P65warnings.ca.gov/diesel.

Northern Lights

4420 14th Avenue NW
Seattle, WA 98107
Tel: (206) 789-3880
Fax: (206) 782-5455

Copyright ©2018 Northern Lights, Inc.
All rights reserved. Northern Lights™, and
the Northern Lights logo are trademarks of
Northern Lights, Inc.

Printed in U.S.A.
PART NO.: P673-2 03/20



PARTS MANUAL

for Models M673L2, M673L3, M673L3G, M673LD2,
M673LD3, M673LD3G, NL673L2, & NL673L3

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 - 9

GROUP 2 - AIR INTAKE SYSTEM

Air Filter & Mounting	0 - 1
Air Filter Assembly	2
Muffler	3

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 - 9
Coolant Recovery Tank	10

GROUP 4 - FUEL SYSTEM

Injection Pump & Lines	0 - 1
Governor & Timing Gear Case	2 - 3
Fuel Filter & Mounting	4
Fuel Line	5 - 6
Injector Assembly	7
Injection Pump Assembly	8

GROUP 5 - ELECTRICAL SYSTEM

12 Volt Engine	0 - 7
Flywheel Housing & Starter Mounting	8
Alternator & Mounting	9
Alternator Assembly	10
Starter Motor Assembly	11
Control Panels	10 - 18
Belt Guard	19 - 20

GROUP 6 - GASKET SETS

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

GROUP 7 - GENERATOR

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

GROUP 8 - FRAME & MOUNTING

Base Frame Assemblies	0 - 5
-----------------------------	-------

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Oil Drain Kit	0
---------------------	---

Proprietary Information

This publication is the sole property of Northern Lights, Inc.

It may not be reproduced in whole or part without the expressed written permission of Northern Lights, Inc.

© Northern Lights, Inc. 2012. All rights reserved. Litho U.S.A. Publication number: P673-2 3/20

Model Designation

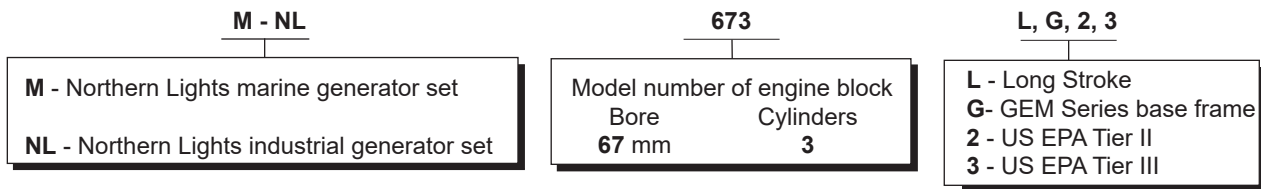
MODELS INCLUDED

This manual covers the parts and components used in:

M673L2, M673L3, M673L3G, M673LD2, M673LD3, M673LD3G, NL673L2, and NL673L3 which use the 673 engine.

Model Numbers

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



M 673L2 = Northern Lights marine diesel generator set with a 673 engine and a TF-276D generator, long stroke, Tier II.

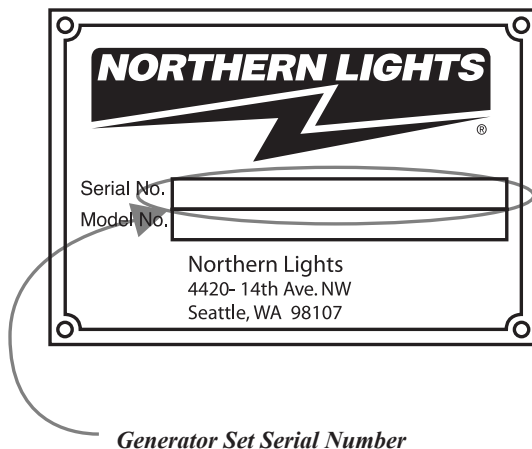
M 673L3 = Northern Lights marine diesel generator set with a 673 engine and a TF-276D generator, long stroke, Tier III.

NL 673L2 = Northern Lights industrial diesel generator set with a 673 engine and a TF-276D generator, long stroke, Tier II.

NL 673L3 = Northern Lights industrial diesel generator set with a 673 engine and a TF-276D generator, long stroke, Tier III.

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.



For Marine Units, an additional label with the set serial number is placed on the upper front corner of the generator junction box.

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.

15 Updated 3-31-16

1 ELECTRICAL SYSTEM

ALTERNATOR ASSEMBLY: M - NL673

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIALNUMBER
0	185046210	1	Alternator Assembly 10	-
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

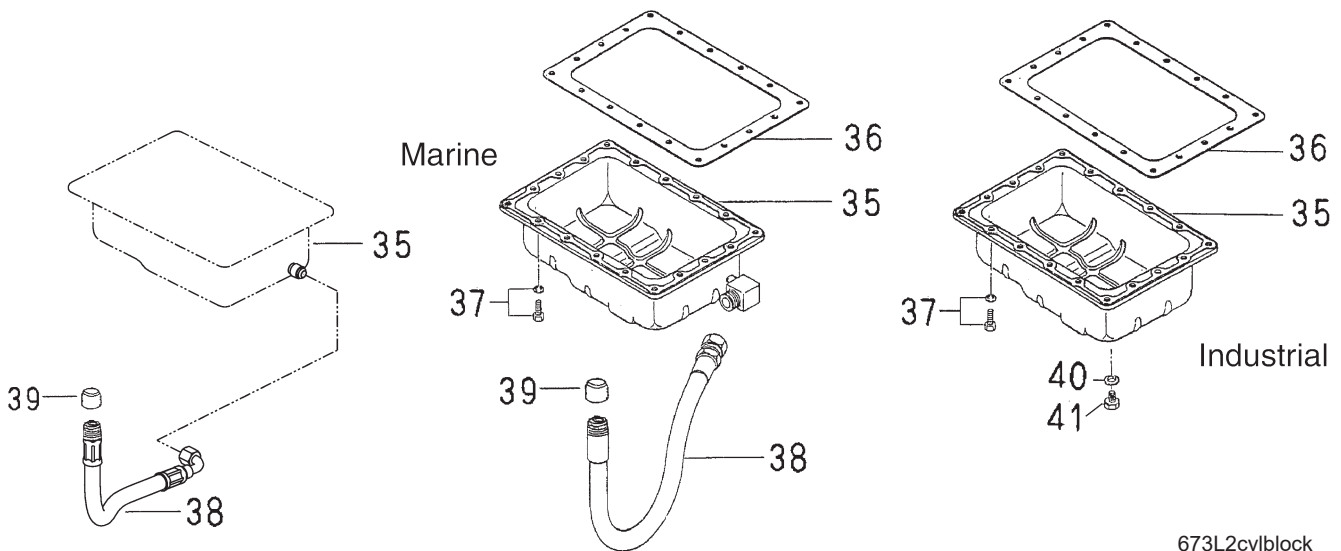
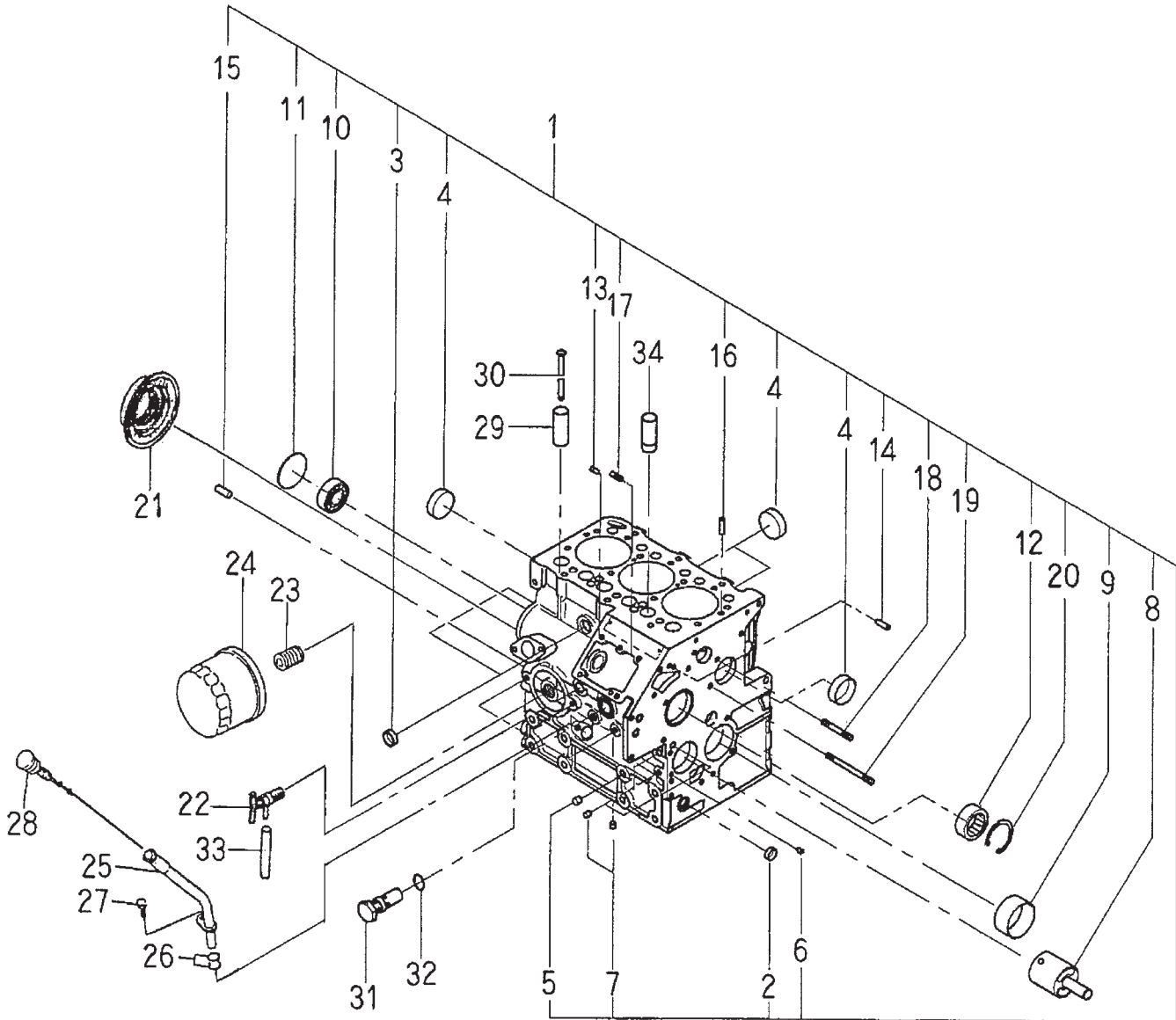
REFERENCES:

- | | |
|--|--|
| <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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. Manual publication date. 15. Date of most recent update |
|--|--|

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

GROUP 1 – ENGINE

Cylinder Block Assembly



673L2cylblock

Cylinder Block Assembly				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110100740	1	Cylinder Block - Marine Application (includes keys #2- 20)	-
	110100730	1	Cylinder Block - Industrial Application (includes keys #2- 20)	-
2	064210015	1	Expansion Plug 15 mm	-
3	064210018	2	Expansion Plug 18 mm	-
4	064210035	4	Expansion Plug 35 mm	-
5	198466030	5	Blank Plug	-
6	198466050	1	Blank Plug	-
7	198466010	4	Blank Plug	-
8	165296162	1	Idle Gear Shaft	-
9	198517302	1	Bushing, standard	-
	198517306	1	Bushing, undersize 0.25 mm	-
	198517309	1	Bushing, undersize 0.50 mm	-
10	040106203	1	Bearing	-
11	064100045	1	Expansion Plug	-
12	042303015	1	Bearing	-
13	030500512	2	Dowel Pin	-
14	030500616	2	Dowel Pin	-
15	030500820	2	Dowel Pin	-
16	030309005	2	Lock Pin	-
17	012110620	2	Stud M6 x 1.0 x 20 mm	-
18	012110635	1	Stud	-
19	012110660	1	Stud	-
20	036509005	1	Retaining Ring	-
21	198636080	1	Oil Seal	-
22	198736050	1	Drain Cock	-
23	140546020	1	Filter Joint	-
24	24-08001	1	Oil Filter	-
25	110756070	1	Dipstick Tube	-
26	052109113	2	O-ring	-
27	011310612	1	Bolt	-
28	198416350	1	Dipstick	-
29	120116100	5	Tappet	-
30	120456321	6	Push Rod	-
31	140036220	1	Relief Valve Assembly	-
32	052109078	1	O-ring	-
33	068115200	1	Tube	-
34	120116180	1	Tappet (#1 Exhaust only)	-
35	110706770	1	Oil Pan (Marine)	Up To S/N xxxx-45984C
	36-78006	1	Oil Pan (Marine)	From S/N xxxx-45985C
	110706691	1	Oil Pan (Industrial)	-
36	110996760	1	Gasket	-
37	010109235	18	Bolt	-
38	18-78009	1	Hose Assembly 3/8" x 15" (used with oil pan 36-78006)	From S/N xxxx-45984C
	18-72004	1	Hose Assembly 1/2" x 13 1/2" (used with oil pan 110706770)	Up To S/N xxxx-45985C
39	21-78004	1	Cap 3/8 NPT (used with hose 18-78009)	-
39	21-00003	1	Cap 1/2 NPT (used with hose 18-72004)	-
40	025100012	1	Seal Washer (Industrial only)	-
41	010411212	1	Plug M12 x 1.25 (Industrial only)	-

Crankshaft and Pistons

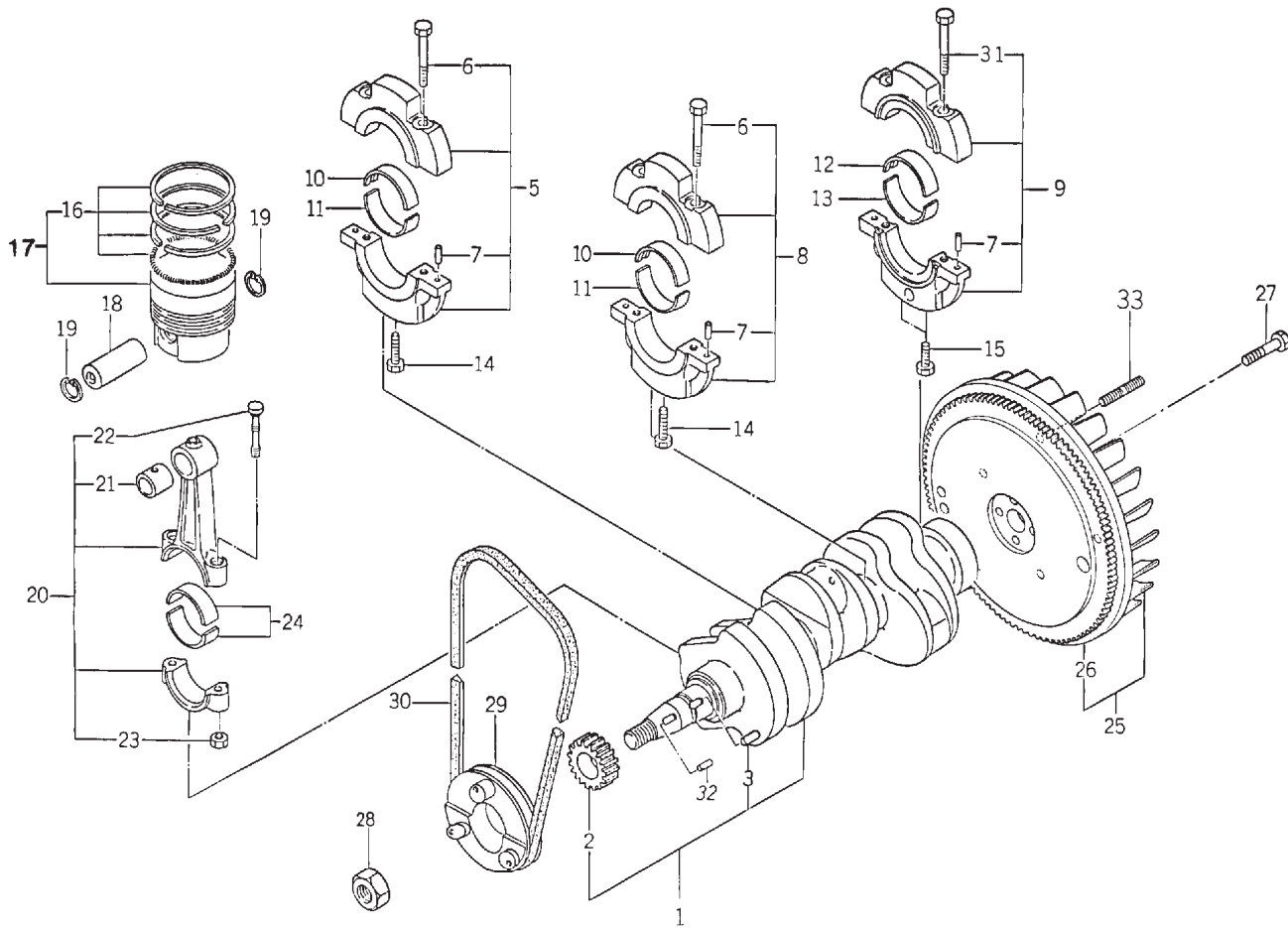


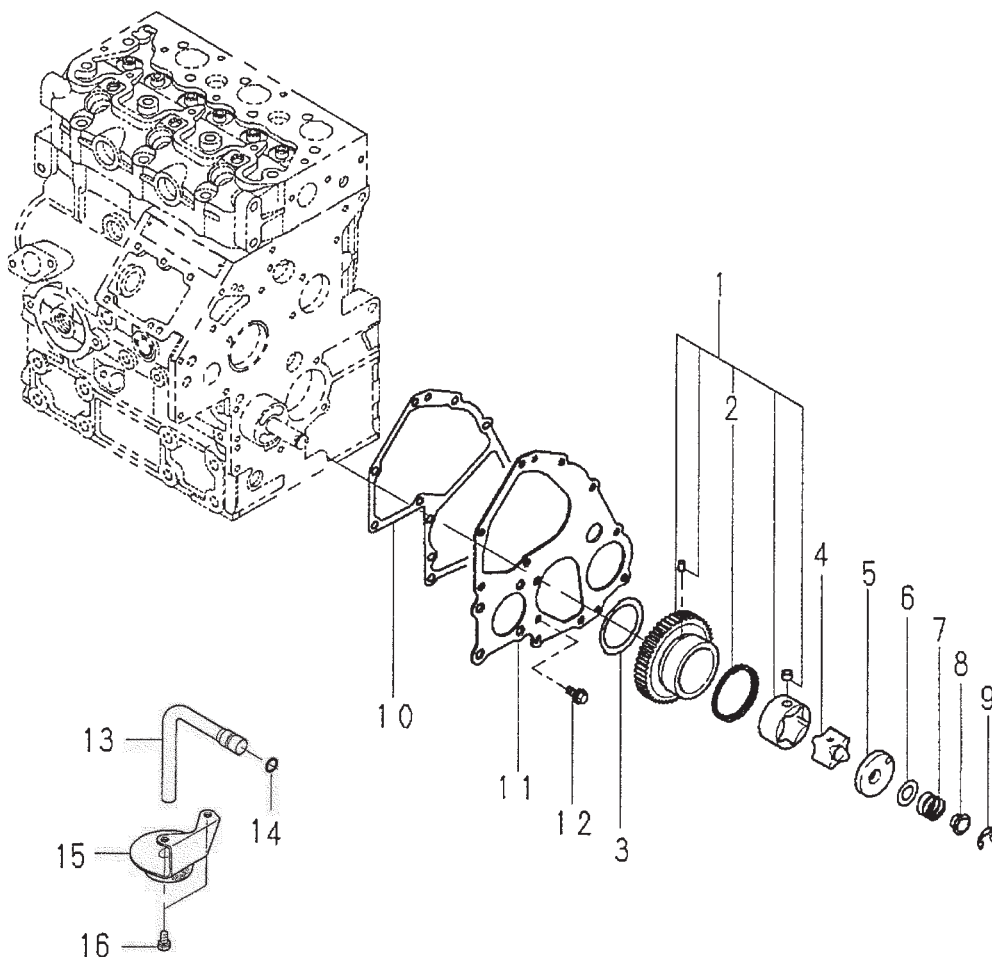
FIG: 1-2

Crankshaft and Pistons

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256890	1	Crankshaft (includes keys #2- 3)	-
2	115276210	1	Crankshaft Gear	-
3	030509020	1	Dowel Pin	-
5	110156440	1	Bearing Holder Assembly (includes keys #6- 7)	-
6	010810845	4	Bolt	-
7	030500612	6	Dowel Pin	-
8	110156450	1	Bearing Holder Assembly (includes keys #6- 7)	-
9	110156460	1	Bearing Holder Assembly (includes key #7 & 31)	-
10	198517332	2	Bearing, Standard Upper (formerly #198517331)	-
	198517336	2	Bearing, undersize 0.25 mm (formerly #198517335)	-
	198517339	2	Bearing, undersize 0.50 mm (formerly #198517338)	-
11	198517342	2	Bearing, Standard Lower (formerly #198517341)	-
	198517346	2	Bearing, undersize 0.25 mm (formerly #198517345)	-
	198517349	2	Bearing, undersize 0.50 mm (formerly #198517348)	-
12	198517103	1	Bearing, Standard Upper	-
	198517107	1	Bearing, undersize 0.25 mm (formerly #198517106)	-
	198517630	1	Bearing, undersize 0.50 mm (formerly #198517109)	-
13	198517112	1	Bearing, Standard Lower	-
	198517116	1	Bearing, undersize 0.25 mm (formerly #198517115)	-
	198517119	1	Bearing, undersize 0.50 mm (formerly #198517118)	-
14	011510850	2	Bolt	-
15	010700845	2	Bolt	-
16	115104050	3	Ring Kit, standard	-
17	115017630	3	Piston, standard (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	198517312	6	Bearing, standard (formerly #198517311)	-
	198517316	6	Bearing, undersize 0.25 mm (formerly #198517315)	-
	198517319	6	Bearing, undersize 0.50 mm (formerly #198517318)	-
25	115356930	1	Flywheel, complete	-
26	115376040	1	Ring Gear, 109 Teeth (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	-
31	010810850	1	Bolt	-
32	034100508	1	Key	-
33	012111025	4	Stud M10 x 1.5 x 25 mm (can use 13-05001)	-

GROUP 1 – ENGINE

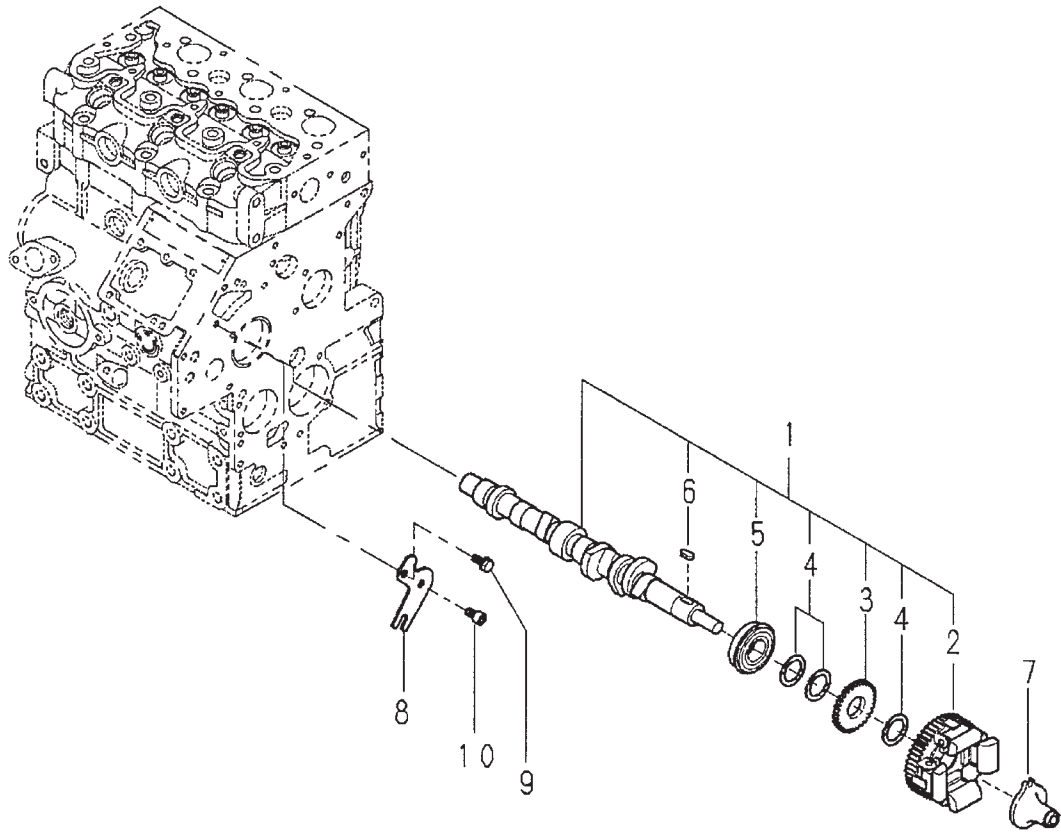
Oil Pump and Strainer



673L2oilpump

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165026380	1	Idle Gear Assembly (includes key #2)	-
2	198216821	1	Spring	-
3	199266180	1	Thrust Washer	-
4	140166400	1	Rotor	-
5	140116140	1	Oil Pump Cover	-
6	199286150	1	Shim Set, t=0.10	-
	199286160	1	Shim Set, t=0.15	-
	199286170	1	Shim Set, t=0.20	-
	199286180	1	Shim Set, t=0.50	-
7	198216720	1	Spring	-
8	199236540	1	Collar	-
9	036800010	1	Snap Ring	-
10	165166280	1	Front Plate (Marine)	-
	165166270	1	Front Plate (Industrial)	-
11	165996490	1	Gasket	-
12	011310612	3	Bolt	-
13	140986590	1	Oil Pipe	-
14	052109076	1	O-ring	-
15	140406570	1	Suction Filter	-
16	011310612	2	Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm	-

Camshaft

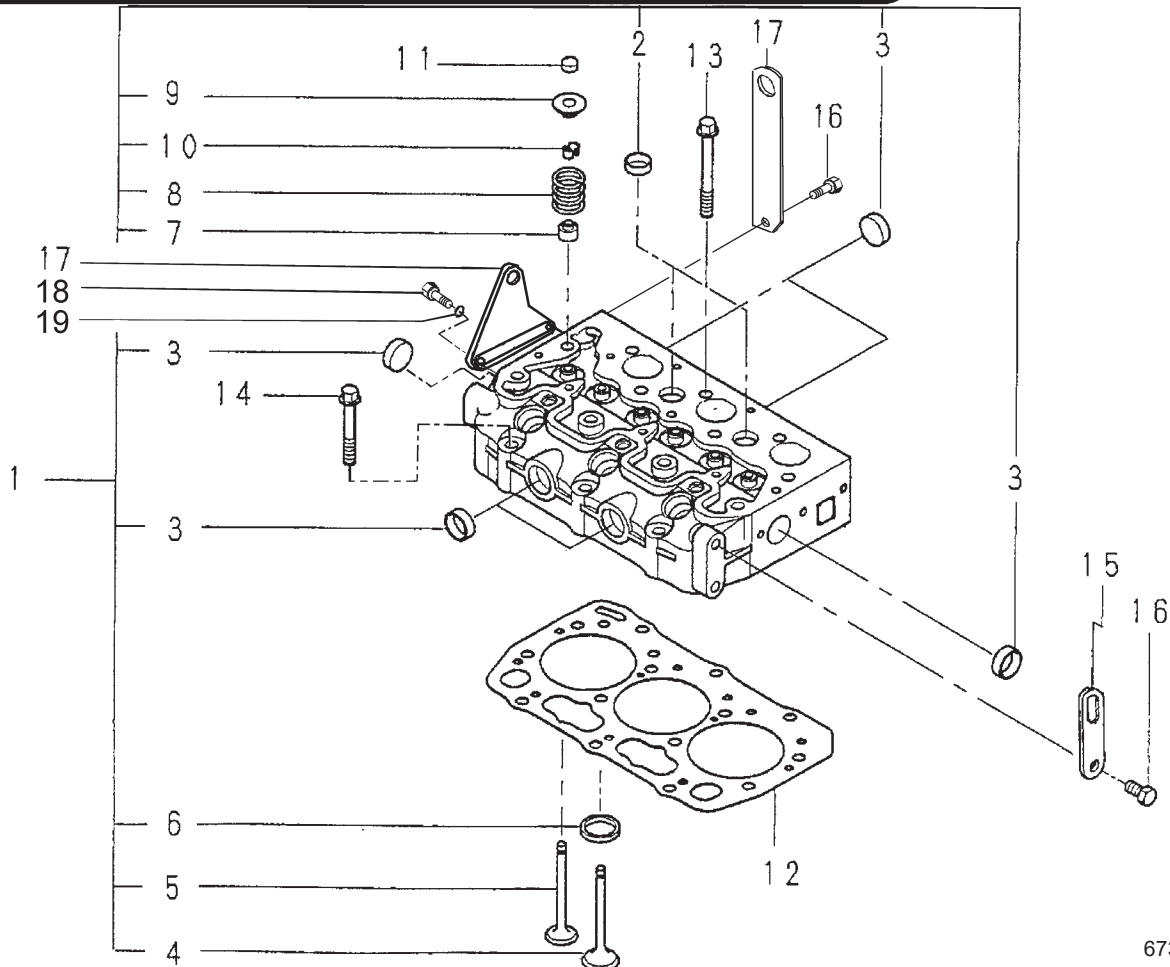


673L2camshaft

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120026810	1	Camshaft Assembly (includes keys #2 - 6)	-
2	120016060	1	Cam Gear	-
3	120736081	1	Gear	-
4	199261230	3	Spacer	-
5	56-60002	1	Bearing	-
6	034100508	1	Key	-
7	125256120	1	Slider Assembly	-
8	199566651	1	Plate	-
9	011310612	1	Bolt	-
10	010700610	1	Bolt	-

GROUP 1 – ENGINE

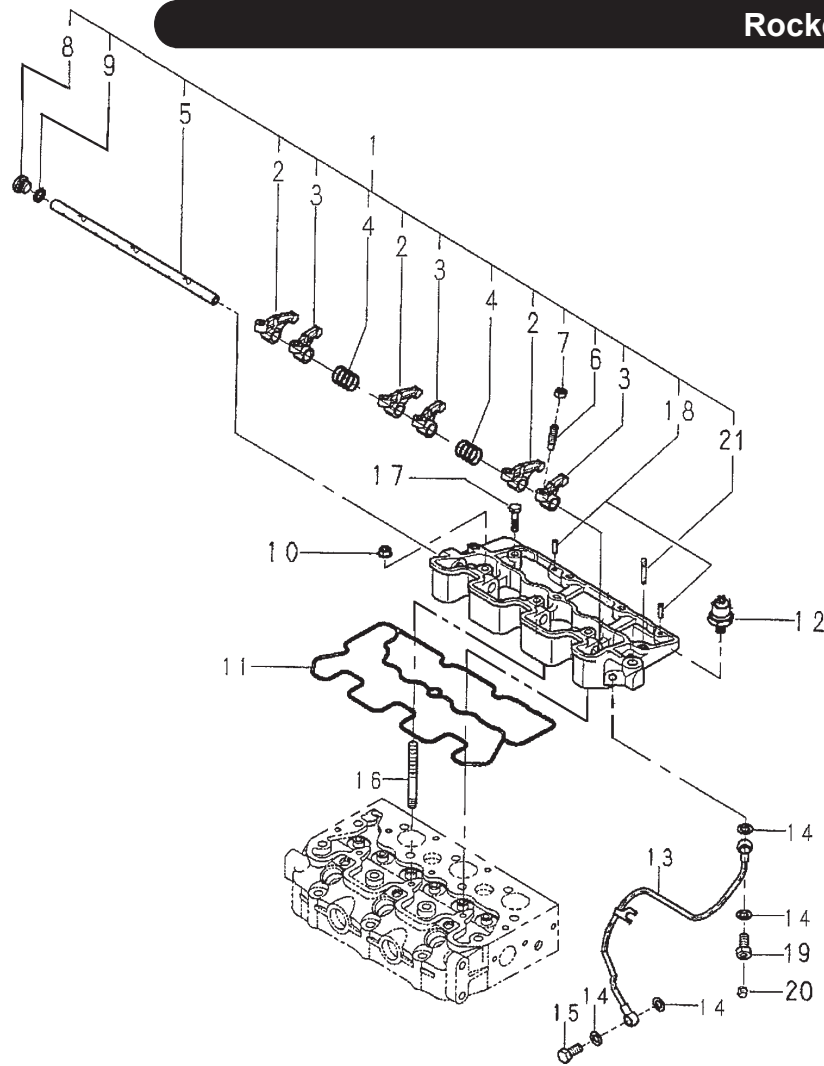
Cylinder Head



673L2cylhead

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111010710	1	Cylinder Head Assembly (Marine, includes keys #2-10)	-
	111010740	1	Cylinder Head Assembly (Industrial, includes keys #2-10)	-
2	064210018	2	Expansion Plug, 18 mm	-
3	064210022	6	Sealing Cap	-
4	120166370	3	Intake Valve	-
5	120176290	3	Exhaust Valve	-
6	110136445	3	Intake Valve Seat	-
7	120406080	6	Valve Guide Seal	-
8	198217070	6	Spring	-
9	120186100	6	Retainer	-
10	120226080	12	Valve Keeper	-
11	120216130	6	Valve Cap	-
12	111147650	1	Head Gasket, Thickness= 1.2 mm	-
	111147660	1	Head Gasket, Thickness= 1.3 mm	-
13	111136460	11	Head Bolt	-
14	111136470	3	Head Bolt	-
15	195816650	1	Lifting Eye (Marine)	-
	195816030	1	Lifting Eye (Industrial)	-
16	011510820	1	Bolt (Marine)	-
	011510816	1	Bolt (Industrial)	-
17	195816390	1	Lifting Eye (Industrial)	-
	23-08001	1	Lifting Eye (Marine)	-
18	12-00709	2	Cap screw, Socket Head M8 x 1.25 x 16mm	-
19	15-00704	2	Lock Washer, Hi-Collar M8	-

Rocker Arm Assembly

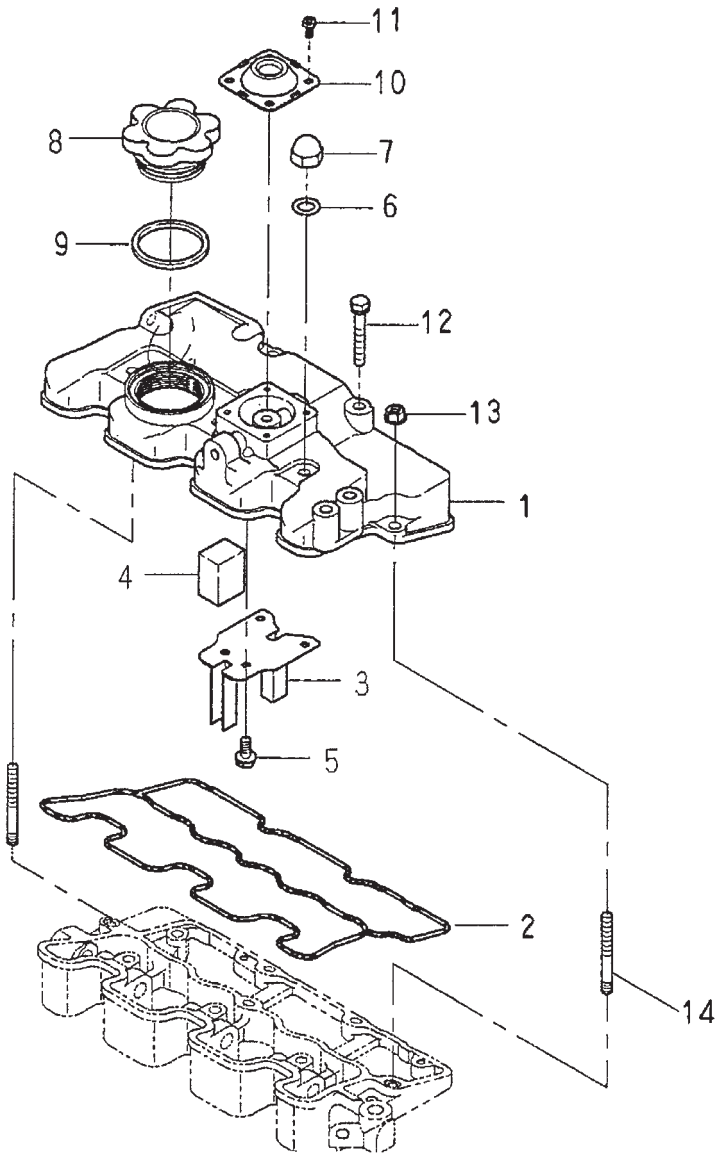


673L2rockerarm

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120037150	1	Rocker Arm Assembly (Marine, includes keys #2- 9,18, 21)	-
	120037180	1	Rocker Arm Assembly (Industrial, includes keys #2- 9,18, 21)	-
2	120366330	3	Rocker Arm, Exhaust	-
3	120366320	3	Rocker Arm, Intake	-
4	198217650	2	Spring	-
5	120316320	1	Rocker Arm Shaft	-
6	199486220	6	Screw	-
7	020109076	6	Nut	-
8	198436370	1	Plug	-
9	052100100	1	O-ring	-
10	023100006	3	Nut	-
11	120996200	1	Gasket	-
12		1	Oil Pressure Switch (see Electrical System)	-
13	140607410	1	Oil Pipe	-
14	140996260	4	Gasket	-
15	198486780	1	Banjo Bolt	-
16	012109259	3	Stud Bolt	-
17	011310625	3	Bolt	-
18	030300416	2	Spring Pin	-
19	198487590	1	Banjo Bolt (Tapped 1/8 NPT)	-
20	21-00050	1	Plug	-
21	012110620	2	Stud Bolt	-

Rocker Arm Cover

Marine Application

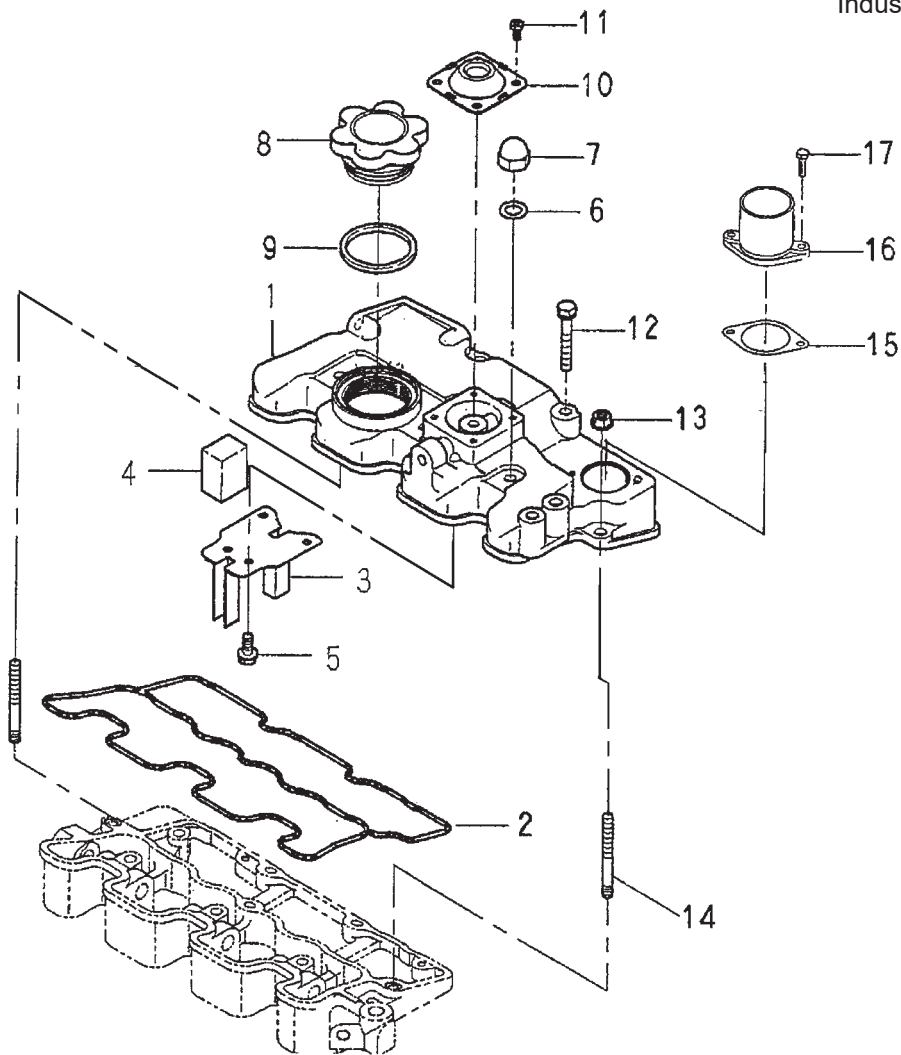


673L2rockerarmcovermarine

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111217980	1	Rocker Arm Cover	-
2	111996470	1	Gasket	-
3	110666240	1	Oil Stopper	-
4	110666250	1	Filter	-
5	015600406	4	Screw	-
6	140996380	3	Gasket	-
7	024600006	3	Cap Nut	-
8	198436010	1	Cap	-
9	052100400	1	O-ring	-
10	110566070	1	Breather Valve	-
11	011100408	4	Bolt	-
12	011310670	3	Bolt	-
13	023100006	2	Nut	-
14	012110620	2	Stud Bolt	-

Rocker Arm Cover

Industrial Application



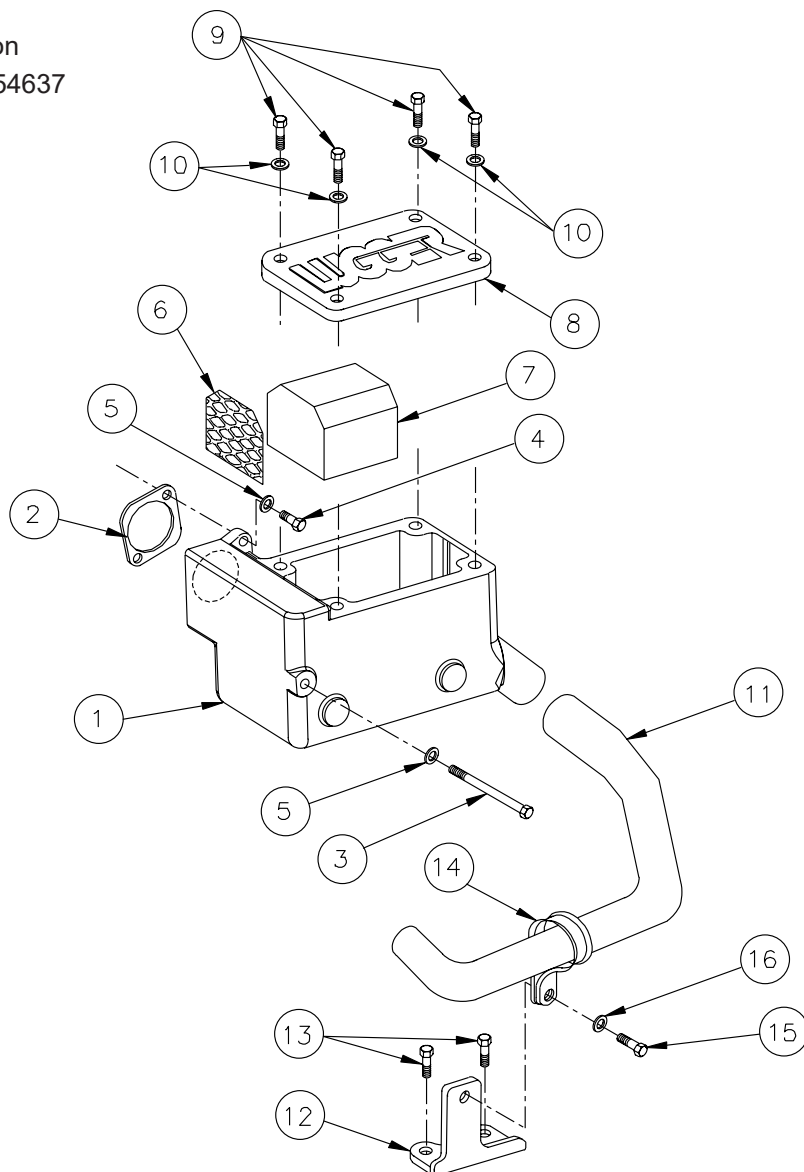
673L2rockerarmcover

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111210150	1	Rocker Arm Cover	-
2	111996470	1	Gasket	-
3	110666240	1	Oil Stopper	-
4	110666250	1	Filter	-
5	015600406	4	Screw	-
6	140996380	3	Gasket	-
7	024600006	3	Cap Nut	-
8	198436010	1	Cap	-
9	052100400	1	O-ring	-
10	110566070	1	Breather Valve	-
11	011100408	4	Bolt	-
12	011310670	3	Bolt	-
13	023100006	2	Nut	-
14	012110620	2	Stud Bolt	-
15	135996751	1	Gasket	-
16	135566630	1	Air Intake	-
17	011310620	2	Bolt	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

Air Filter Assembly and Mounting

Marine Application
Up To S/N xxxx-54637

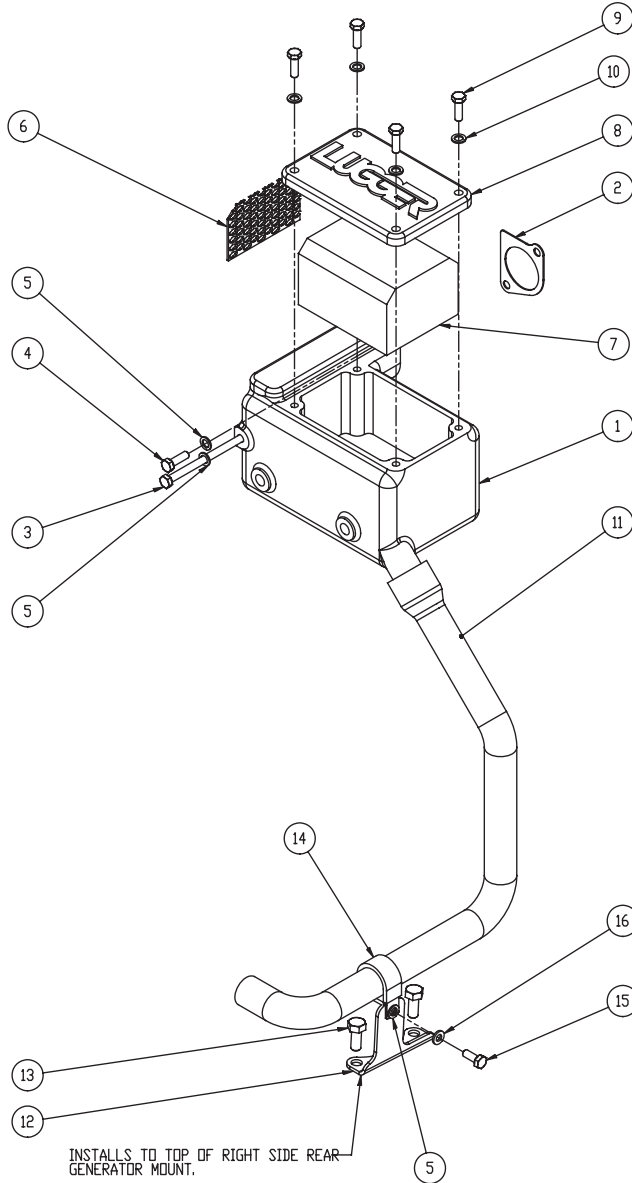


A-10916A/ C-5743

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-28002	1	Air Filter Housing	-
2	135996781	1	Gasket, Air Intake	-
3	12-09145	1	Capscrew, Hex Head M6 x 1.0 x 150 mm S/S	-
4	12-09131	1	Capscrew, Hex Head M6 x 1.0 x 20 mm S/S	-
5	15-01134	2	Flat Washer M6 S/S	-
6	24-28004	1	Screen, Air Filter Element	-
7	24-28003	1	Air Filter Element	-
8	10-28602	1	Cover, Air Filter Housing	-
9	12-09131	4	Capscrew, Hex Head M6 x 1.0 x 20 mm S/S	-
10	15-01134	4	Flat Washer M6 S/S	-
11	18-28002	1	Hose, Air Intake	-
12	23-28001	1	Bracket, Air Intake Hose Support	-
13	12-00776	2	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
14	19-70016	1	Cushion Clamp #16	-
15	12-01102	1	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
16	15-01134	1	Flat Washer M6 S/S	-

Air Filter Assembly and Mounting

“GEM Series” Marine Application
From S/N xxxx-54637



INSTALLS TO TOP OF RIGHT SIDE REAR GENERATOR MOUNT.

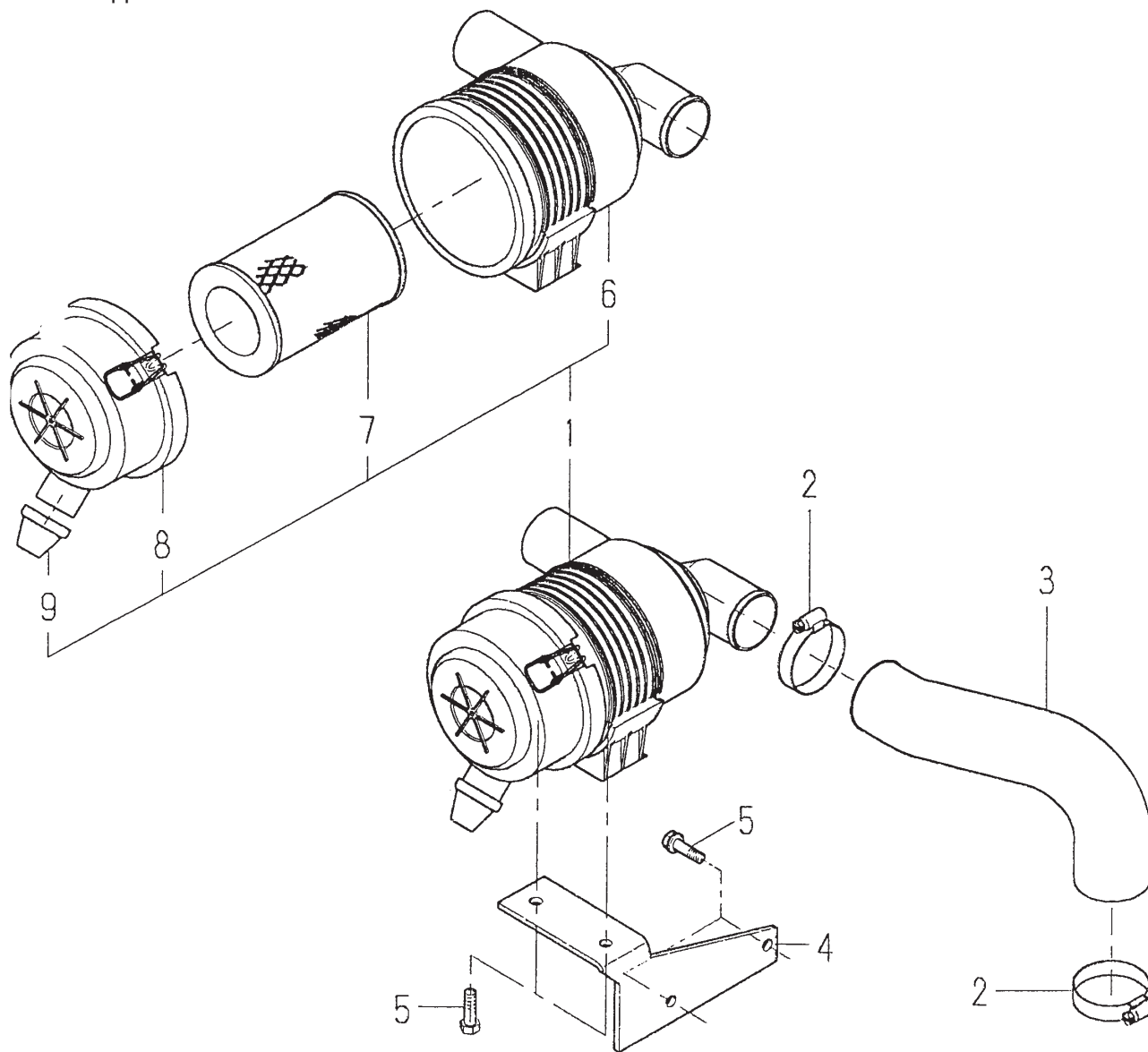
C-7376

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-28002	1	Housing, Air Filter	-
2	135996751	1	Gasket, Air Intake	-
3	12-09145	1	Capscrew, Hex Head M6x1.0 X 150mm S/S	-
4	12-09131	1	Capscrew, Hex Head M6x1.0 X 20mm S/S	-
5	15-01134	3	Flat Washer M6 S/S	-
6	24-28004	1	Screen,Air Filter Element Retainer	-
7	24-28003	1	Air Filter Element (Foam 10 PPI Reticulated Polyether)	-
8	10-28602	1	Cover,Air Filter Housing	-
9	12-09131	4	Capscrew, Hex Head M6x1.0 X 20mm S/S	-
10	15-01134	4	Flat Washer M6 S/S	-
11	18-28002	1	Hose,Air Intake	-
12	23-28001	1	Bracket,Air Intake Hose Support	-
13	12-00776	2	Capscrew, Hex Head M8x1.25 X 20mm S/S	-
14	19-70016	1	Cushion Clamp #16 S/S (1"ID X 1/2"W X 17/64" Stud)	-
15	12-01102	1	Capscrew, Hex Head M6x1.0 X 16mm S/S	-
16	15-00610	1	Lock Washer, Helical M6 S/S	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

Air Filter

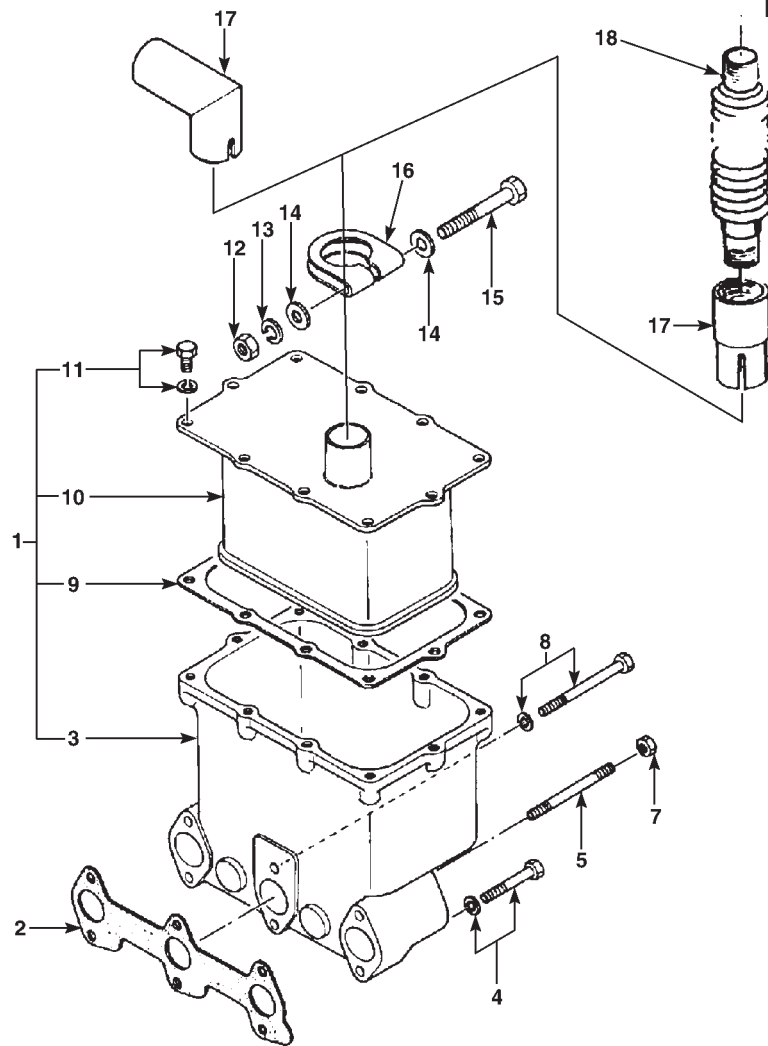
Industrial Application



673 AIR CLEANER

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135016360	1	Air Filter Assembly (includes keys #6- 9)	-
2	19-00032	2	Hose Clamp	-
3	135597910	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	314531163	1	Valve	-

Muffler



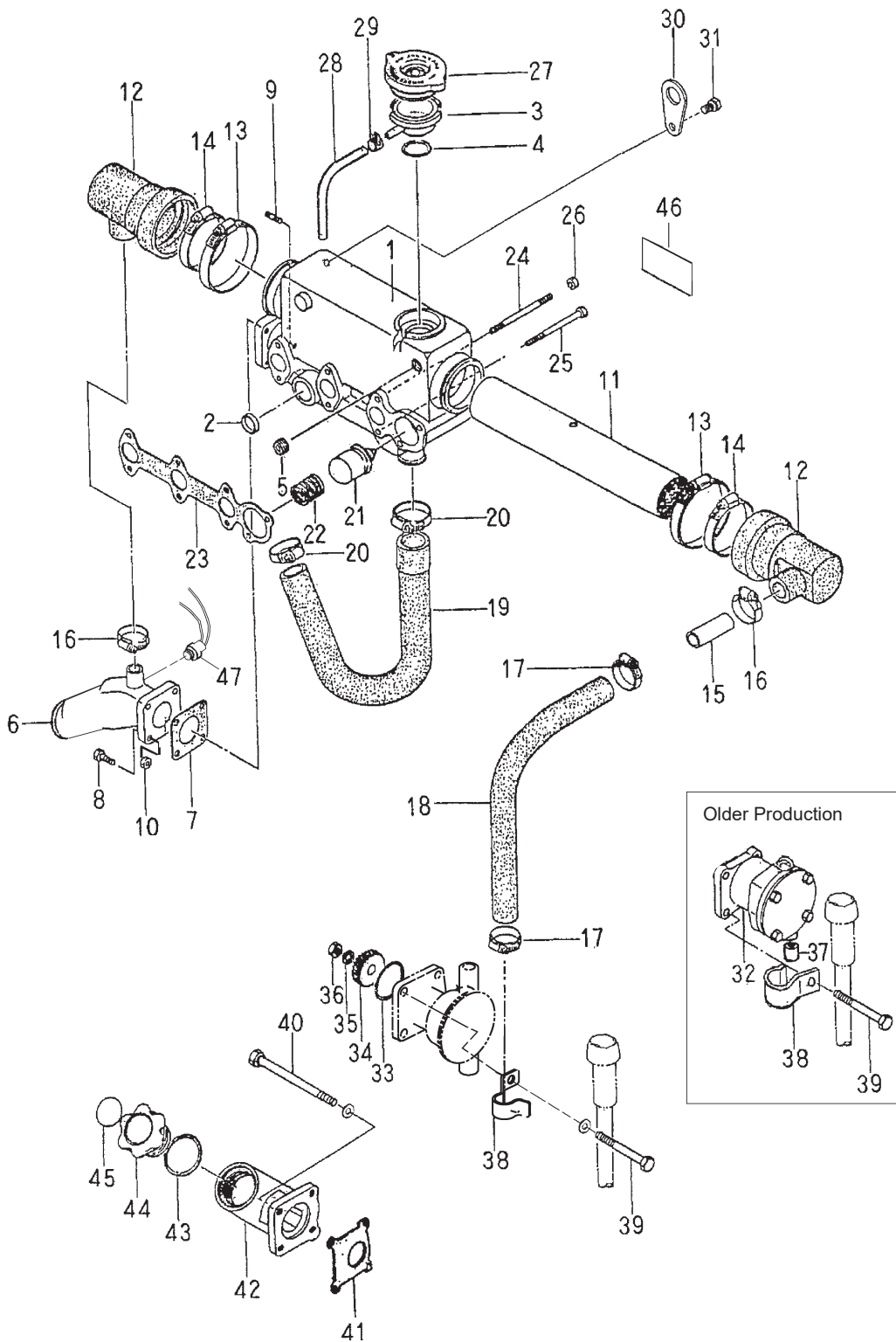
673 MUFFLER

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	15-00702	1	Spring Washer	-
14	15-00701	2	Washer	-
15	010310860	1	Bolt	-
16	408330011	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"	-

GROUP 3 – COOLING SYSTEM

Exhaust Manifold & Expansion Tank

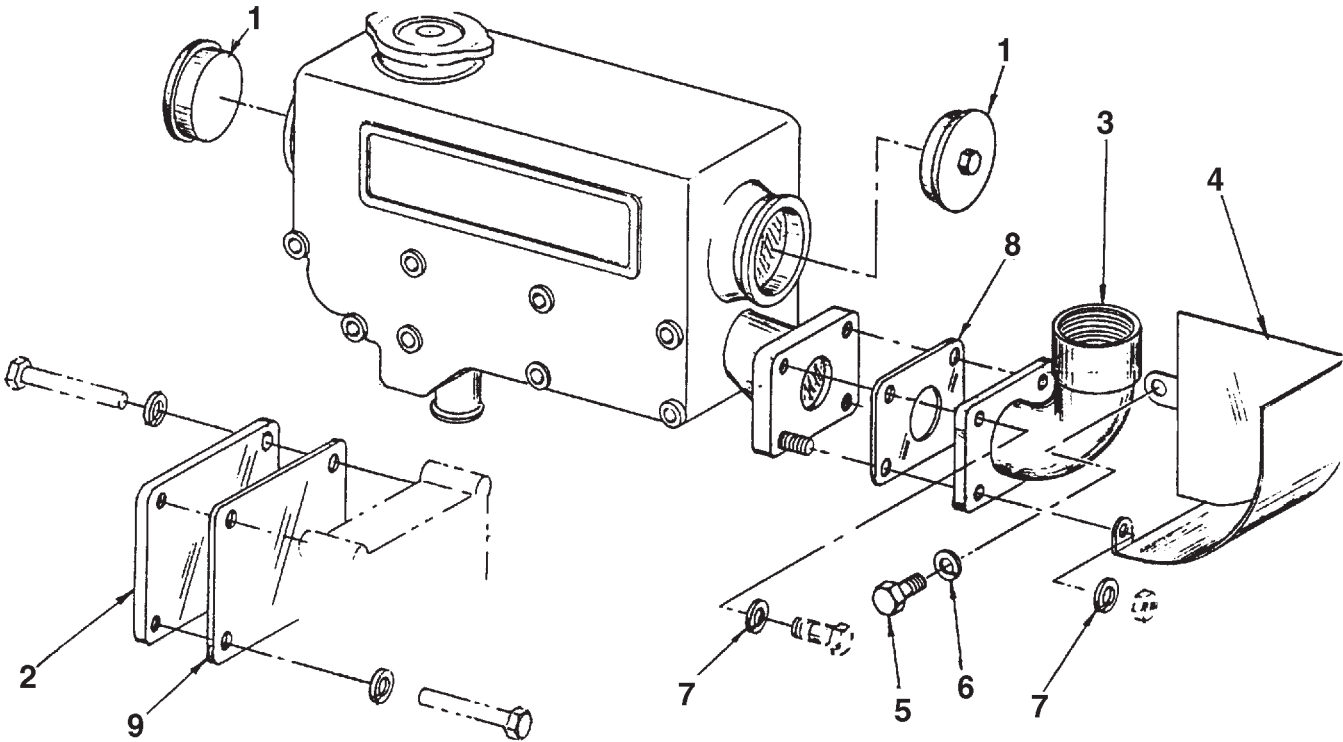
Heat Exchanger Cooling Components



Exhaust Manifold & Expansion Tank				
Heat Exchanger Cooling Components				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135606160	1	Exhaust Manifold/ Expansion Tank (includes keys #2- 4)	-
2	064210022	1	Sealing Cap	-
3	22-12207	1	Filler Neck (former # 145546430)	-
4		1	O-ring (no longer required with 22-12207)	-
5	064400030	1	Plug	-
6	27-38008	1	Elbow S/S (former # 135616570)	-
7	135996550	1	Gasket	-
8	011310620	3	Bolt	-
9	012110620	1	Stud Bolt	-
10	023100006	1	Nut	-
11	20-12003	1	Heat Exchanger	-
12	145536440	2	Joint	-
13	19-00040	2	Hose Clamp	-
14	19-00036	2	Hose Clamp	-
15	21-13102	1	Pipe	-
16	19-00012	2	Hose Clamp	-
17	19-00010	2	Hose Clamp	-
18	145537120	1	Hose	-
19	145537110	1	Hose	-
20	19-00016	2	Hose Clamp	-
21	145206320	1	Thermostat (former # 145206062)	-
22	198217410	1	Spring	-
23	135996731	1	Gasket	-
24	012110690	3	Stud Bolt	-
25	12-01136	5	Bolt	-
26	023100006	3	Nut	-
27	21-12013	1	Filler Cap (former # 310110220)	-
28	068108900	1	Tube, Coolant Vent (former # 068108500)	-
29	067200100	1	Hose Clamp	-
30	195816540	1	Hanger	-
31	12-89751	1	Capscrew, Hex Head Flanged S/S M8 x 1.25 x 16mm *	-
32	25-12007	1	Raw Water Pump	-
33	052400400	1	O-ring	-
34	340460170	1	Drive Gear	-
35	15-00702	1	Spring Washer M8	-
36	020900008	1	Nut M8 x 1.25	-
38	28-78009	1	Bracket (use with 3/8 hose 18-78009 - see Cylinder Block Assembly)	-
	23-78002	1	Bracket (use with 1/2 hose 18-72004 - see Cylinder Block Assembly)	-
39	011510860	3	Bolt with washer M8 x 1.25 x 60mm	-
40	12-00701	1	Bolt with washer M8 x 1.25 x 110mm	-
41	165996510	1	Gasket	-
42	110766210	1	Holder	-
43	052100400	1	O-ring	-
44	198436010	1	Cap	-
45	190196340	1	Caution Label	-
46	00-08301	1	"Northern Lights" Label	-
47	22-42070	1	Switch, High Exhaust Temperature & Harness Assembly	-
			* Substitute for original standard type fastener	

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	135996550	1	Gasket	-
9	11-78301	1	Gasket	-

Note: See Heat Exchanger Cooling for parts not shown here.

Thermostat & Housing, Industrial

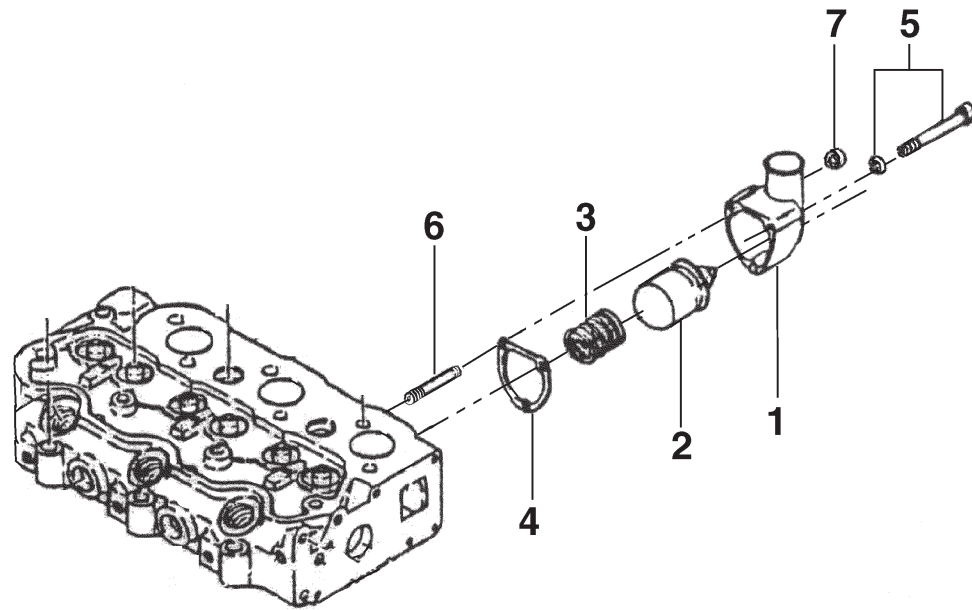
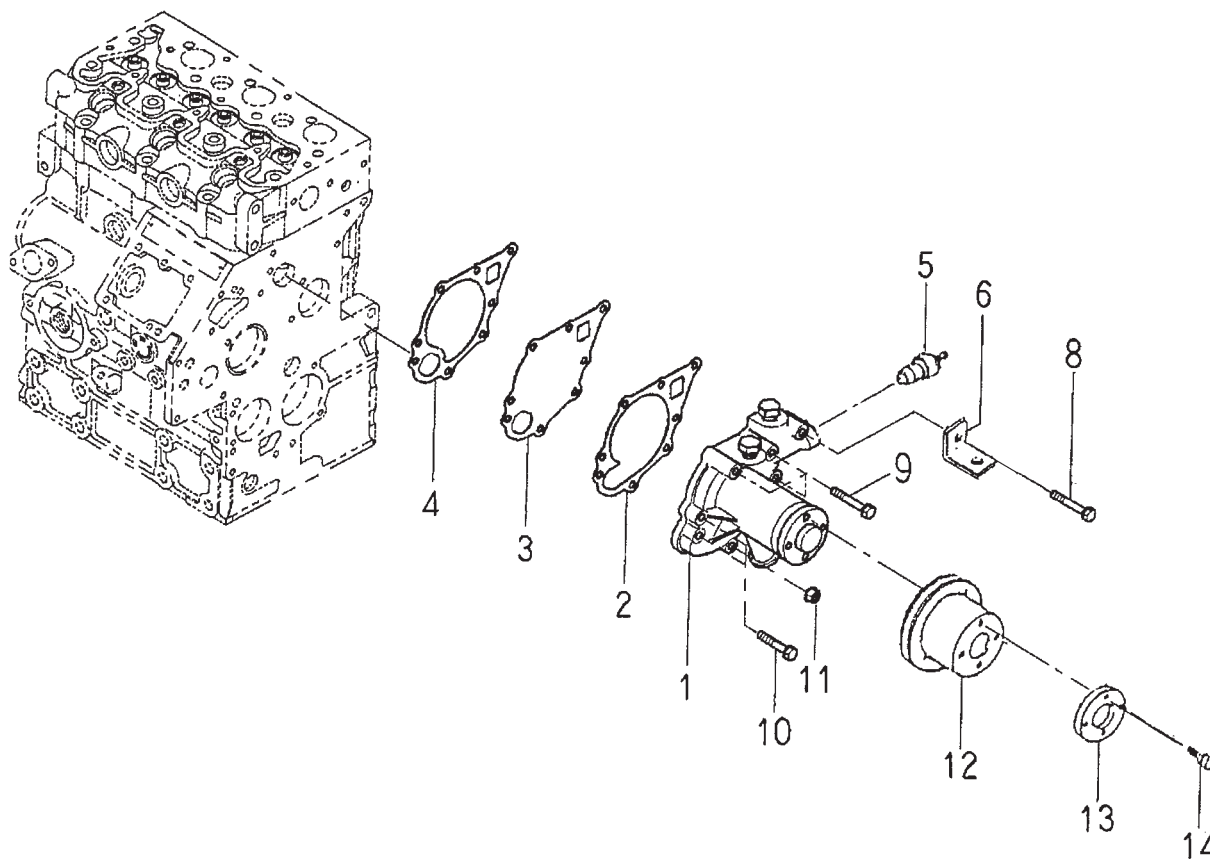


FIG. 3-3

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145216171	1	Thermostat Housing	-
2	145206320	1	Thermostat	-
3	198217410	1	Spring	-
4	145996740	1	Gasket	-
5	011310650	2	Bolt	-
6	012110650	1	Stud	-
7	023100006	1	Nut	-

GROUP 3 – COOLING SYSTEM

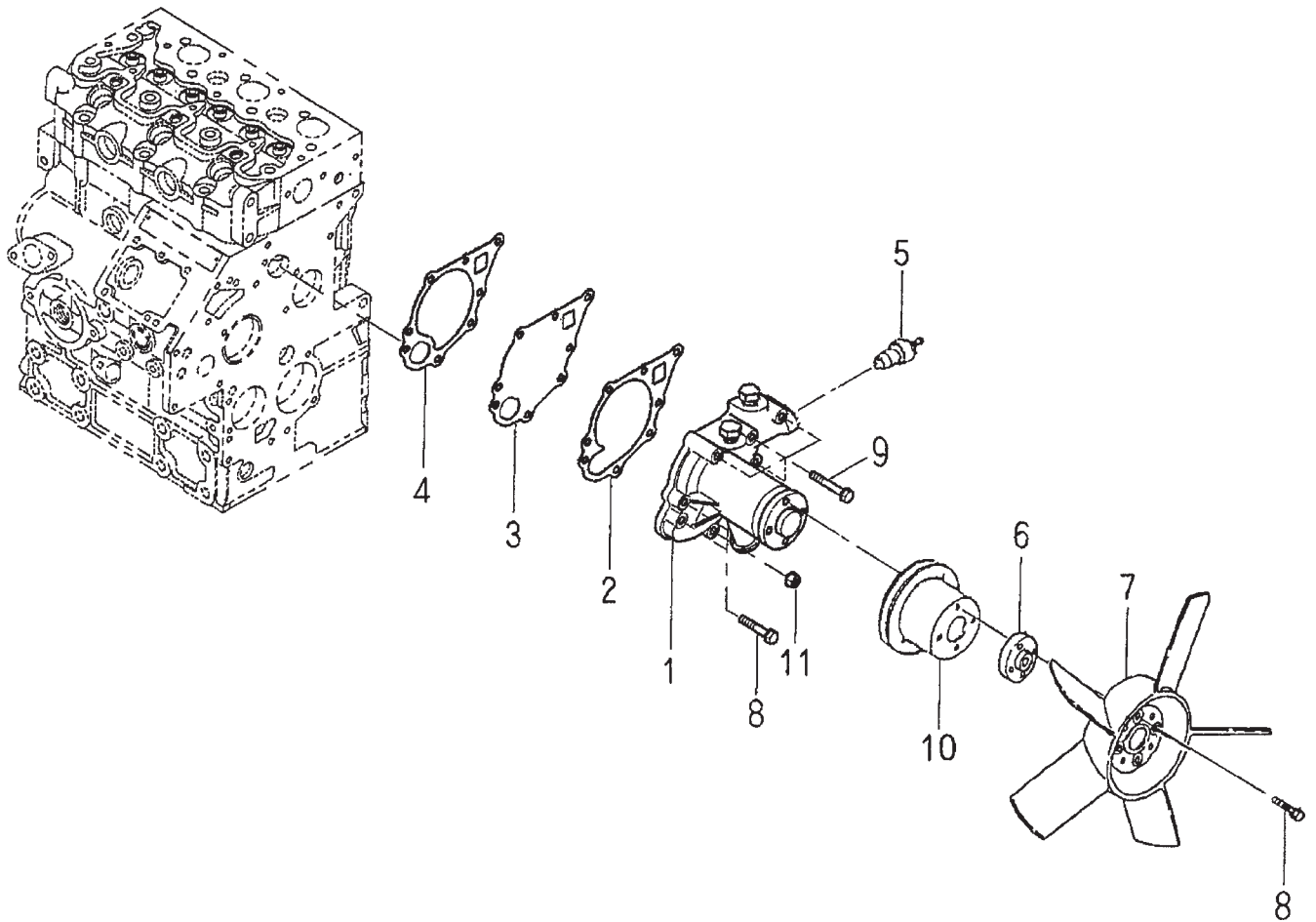
Coolant Pump - Marine



673L2coolantpump

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145016860	1	Coolant Pump Assembly	-
2	145996640	1	Gasket	-
3	145146490	1	Backing Plate	-
4	145996630	1	Gasket	-
5		1	Switch, Temperature (see Electrical System)	-
6	140976060	1	Bracket (see Belt Guard parts detail)	-
8	011310655	1	Bolt	-
9	011310650	3	Bolt	-
10	011310635	3	Bolt	-
11	023100006	1	Nut	-
12	145336490	1	Pulley	-
13	145386520	1	Spacer	-
14	011310614	4	Bolt	-

Coolant Pump - Industrial

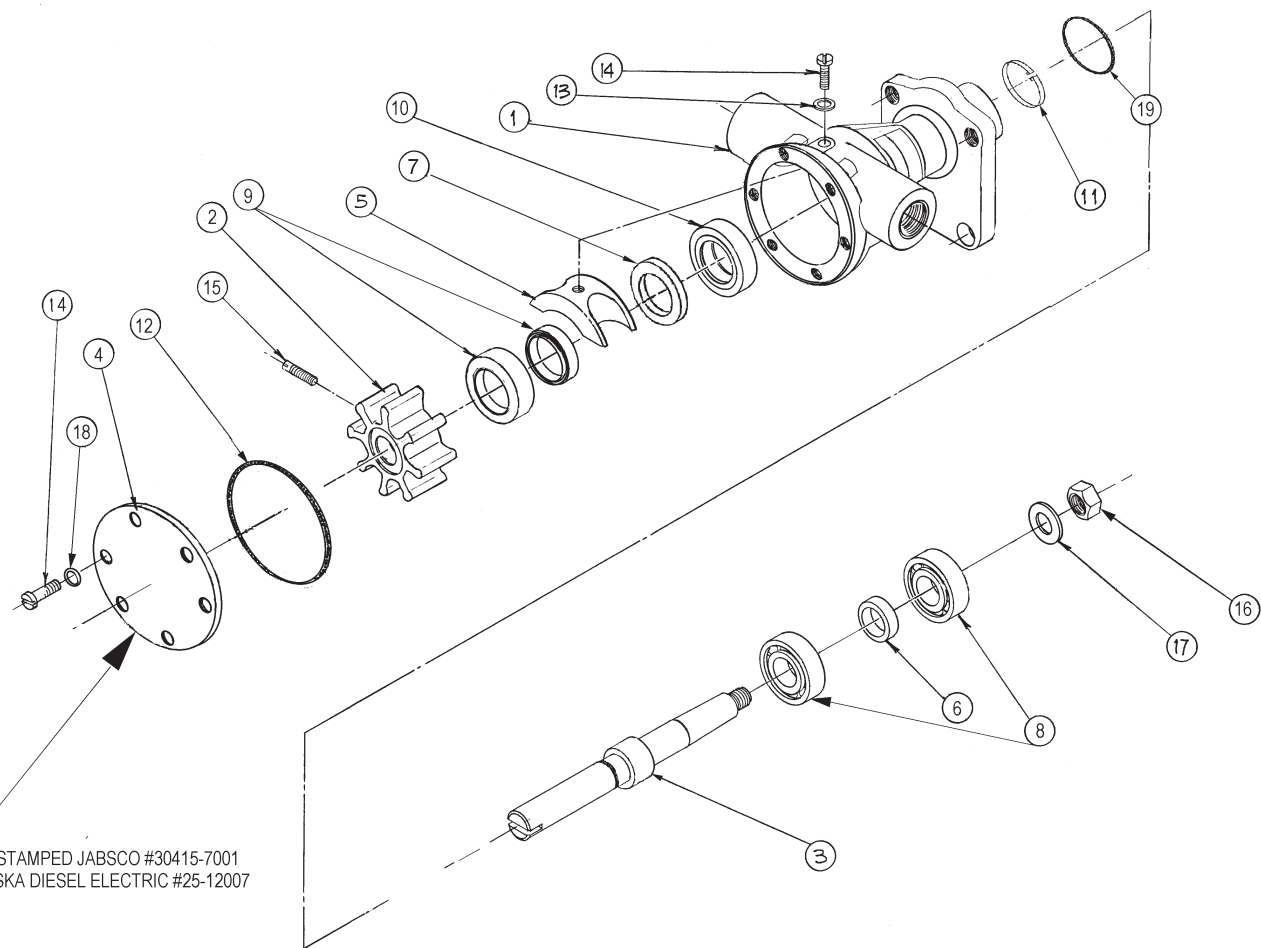


673L2coolantpumpind

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145016850	1	Coolant Pump Assembly	-
2	145996640	1	Gasket	-
3	145146490	1	Backing Plate	-
4	145996630	1	Gasket	-
5		1	Switch, Temperature (see Electrical System)	-
6	145386920	1	Fan Holder	-
7	145306600	1	Fan (Blower)	up to S/N from S/N
7	145306820	1	Fan, Hi-Flow (Blower)	xxxx-47812C xxxx-47813C
8	011310635	7	Bolt	-
9	011310650	4	Bolt	-
10	145336490	1	Pulley	-
11	023100006	1	Nut	-

GROUP 3 – COOLING SYSTEM

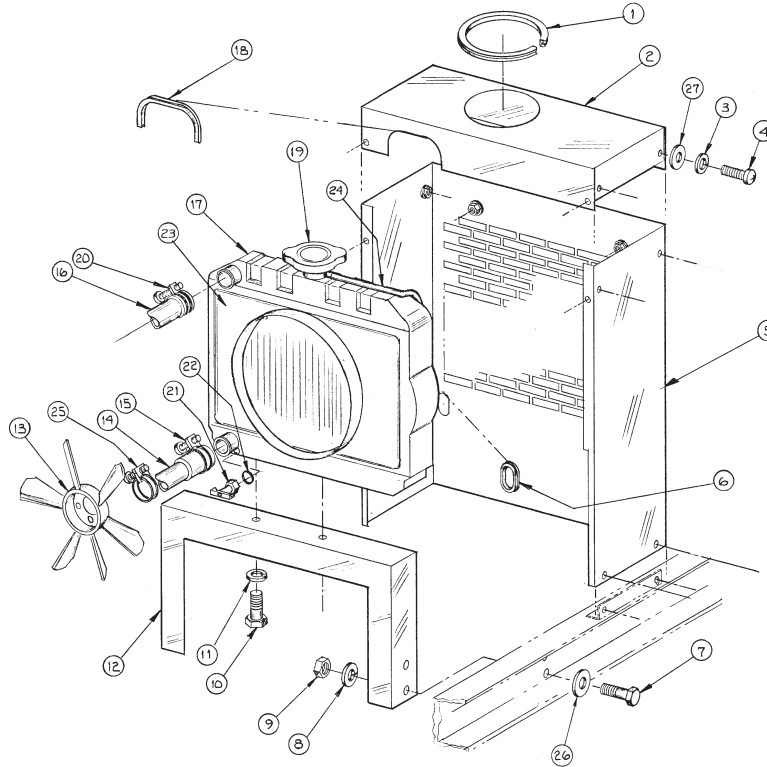
Raw Water Pump



A-7540/ D-3257B

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	25-12007	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	

Radiator (Copper) & Mounting



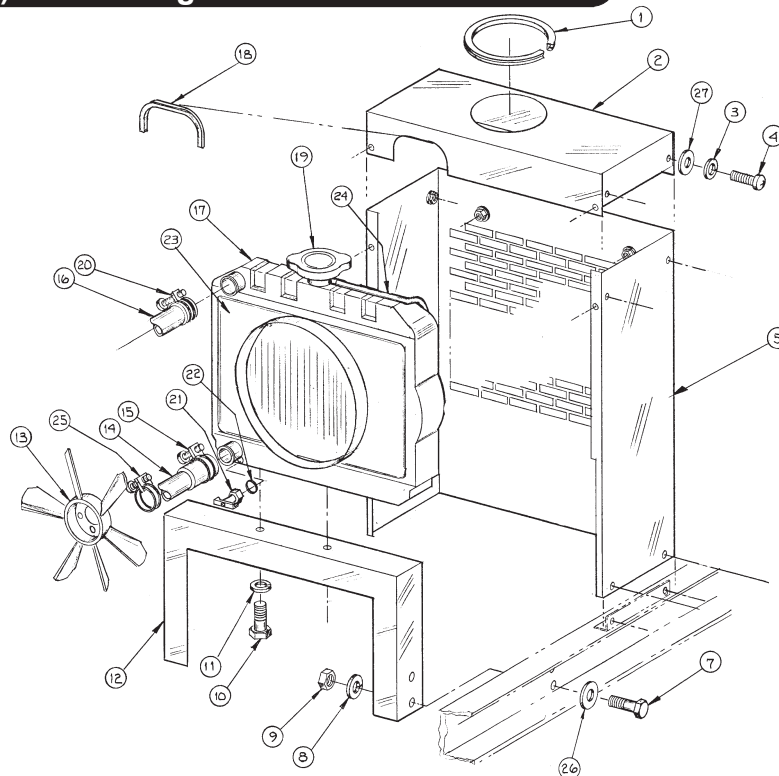
A-6671/ C-1930

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18302	1	Grommet	up to 6733-38006C ↓
2	39-18302	1	Shroud Cover	
3	15-01132	10	Lock Washer M6	
4	12-00097	10	Capscrew, Hex Head, M6 x 1.0 x 12 mm	
5	39-18301	1	Radiator Shroud	
6	00-18303	1	Grommet	
7	12-00711	4	Capscrew, Hex Head M8 x 1.25 x 20 mm	
8	15-00702	4	Lock Washer, M8	
9	14-00711	4	Nut M8 x 1.25	
10	12-00809	2	Capscrew, Hex Head M10 x 1.25 x 25 mm	
11	15-00802	2	Lock Washer, M10	
12	23-18301	1	Bracket, Radiator Support	
13	145306600	1	Fan, Blower	
14	145536520	1	Hose, Radiator Outlet	
15	19-00016	1	Hose Clamp #16	
16	145536510	1	Hose, Radiator Inlet	
17	145506600	1	Radiator Assembly (includes keys #19 & #21 - #24)	
18	00-18304	1	Grommet	
19	145546060	1	Radiator Cap	
20	19-00020	2	Hose Clamp #20	
21	408130010	1	Drain Cock	
22	052100070	1	O-ring	
23	145546450	1	Fan Shroud with Guard	
24	408120010	1	Overflow Hose	
25	19-00012	2	Hose Clamp #12	
26	15-00701	4	Flat Washer M8	
27	15-00008	10	Flat Washer M6	
28	145386920	1	Fan Spacer (not shown)	
29	011310635	4	Capscrew, Hex Head M6 x 1.0 x 35mm (for fan installation - not shown)	

GROUP 3 – COOLING SYSTEM

Radiator (Aluminum) & Mounting

Up to S/N 6733-47812C

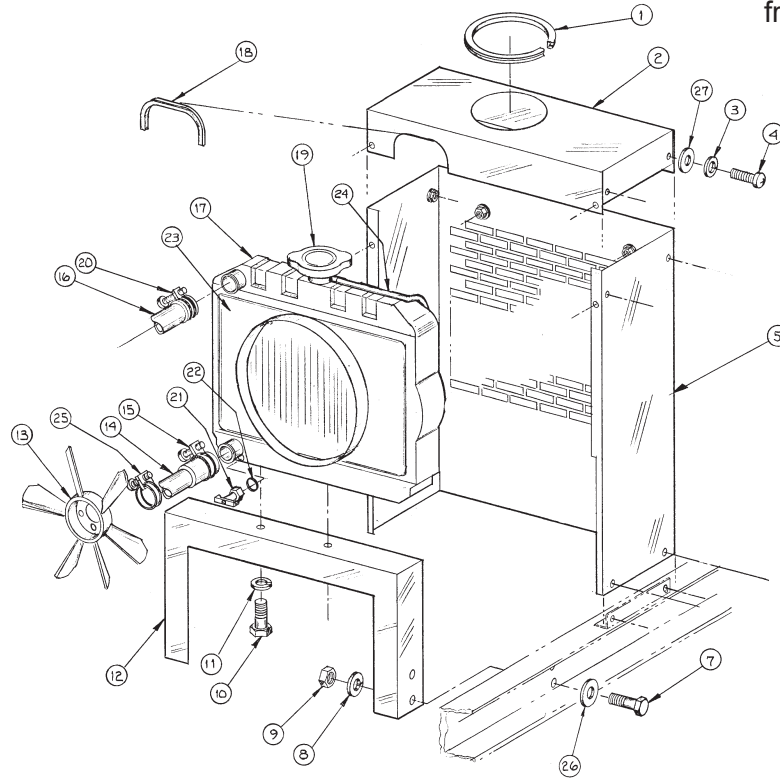


/ C-1930

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18302	1	Grommet	-
2	39-18302	1	Shroud Cover	-
3	15-01132	10	Lock Washer M6	-
4	12-00097	10	Capscrew, Hex Head, M6 x 1.0 x 12 mm	-
5	39-18001	1	Radiator Shroud	-
7	12-00711	4	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
8	15-00702	4	Lock Washer, M8	-
9	14-00711	4	Nut M8 x 1.25	-
10	12-00809	2	Capscrew, Hex Head M10 x 1.25 x 25 mm	-
11	15-00802	2	Lock Washer, M10	-
12	23-18004	1	Bracket, Radiator Support	-
13	145306600	1	Fan, Blower	-
14	145537190	1	Hose, Radiator Outlet	-
15	19-00016	1	Hose Clamp #16	-
16	145537200	1	Hose, Radiator Inlet	-
17	145506600	1	Radiator Assembly, Aluminum (includes keys #19 & #21 - #24)	-
	20-18003	1	Radiator Assembly, Heresite	-
18	00-18304	1	Grommet	-
19	310110200	1	Radiator Cap	-
20	19-00020	2	Hose Clamp #20	-
21	21-12016	1	Drain Cock	-
22	052100070	1	O-ring	-
23	145546910	1	Fan Shroud with Guard	-
24	408120010	1	Overflow Hose	-
25	19-00012	2	Hose Clamp #12	-
26	15-00701	4	Flat Washer M8	-
27	15-00008	10	Flat Washer M6	-
28	145386920	1	Fan Spacer (not shown)	-
29	011310635	4	Capscrew, Hex Head M6 x 1.0 x 35mm (for fan installation - not shown)	-

Radiator (Aluminum) & Mounting

from S/N 6733-47813C

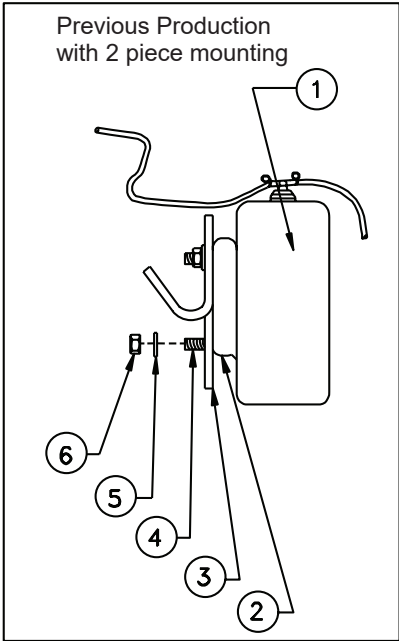
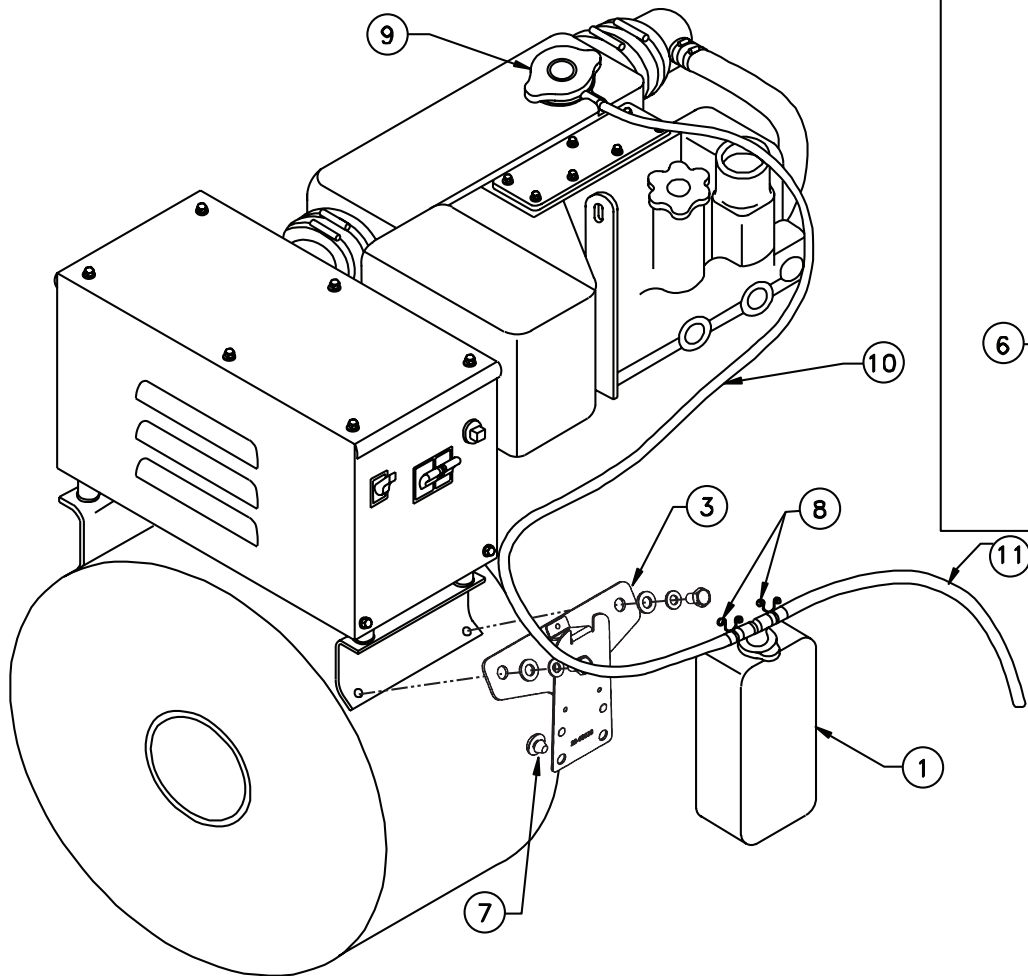


/ C-1930

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18302	1	Grommet	-
2	39-18302	1	Shroud Cover	-
3	15-01132	10	Lock Washer M6	-
4	12-00097	10	Capscrew, Hex Head, M6 x 1.0 x 12 mm	-
5	39-18001	1	Radiator Shroud	-
7	12-00711	4	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
8	15-00702	4	Lock Washer, M8	-
9	14-00711	4	Nut M8 x 1.25	-
10	12-00809	2	Capscrew, Hex Head M10 x 1.25 x 25 mm	-
11	15-00802	2	Lock Washer, M10	-
12	23-18004	1	Bracket, Radiator Support	-
13	145306820	1	Fan, Blower 275 mm OD Hi-Flow	-
14	145537190	1	Hose, Radiator Outlet	-
15	19-00016	1	Hose Clamp #16	-
16	145537200	1	Hose, Radiator Inlet	-
17	145506600	1	Radiator Assembly, Aluminum (includes keys #19 & #21 - #24)	-
	20-18003	1	Radiator Assembly, Heresite	-
18	00-18304	1	Grommet	-
19	310110200	1	Radiator Cap	-
20	19-00020	2	Hose Clamp #20	-
21	21-12016	1	Drain Cock	-
22	052100070	1	O-ring	-
23	145546910	1	Fan Shroud with Guard	-
24	408120010	1	Overflow Hose	-
25	19-00012	2	Hose Clamp #12	-
26	15-00701	4	Flat Washer M8	-
27	15-00008	10	Flat Washer M6	-
28	145386920	1	Fan Spacer (not shown)	-
29	011310635	4	Capscrew, Hex Head M6 x 1.0 x 35mm (for fan installation - not shown)	-

GROUP 3 – COOLING SYSTEM

Coolant Recovery Tank

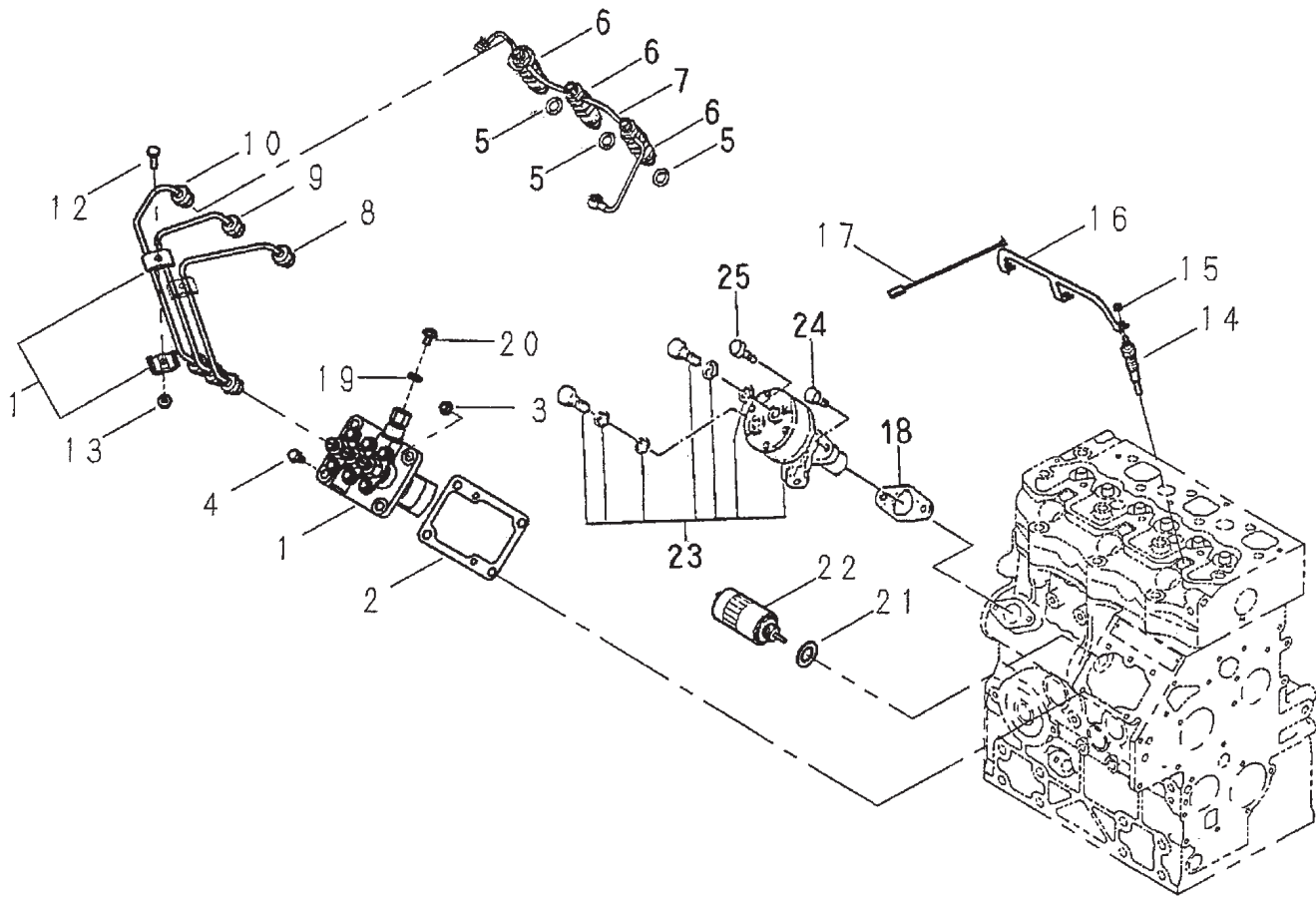


A-10106 / B-8772

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	310550130	1	Coolant Recovery Tank	-
2	222300090	1	Bracket, Coolant Recovery Tank Mtg. (not required with 23-18003)	-
3	23-18003	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 M6	-
6	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
7	33-18001	2	Grommet, Anti-vibration	-
8	19-01004	3	Hose Clamp #2	-
9	21-12013	1	Filler Cap	-
10	41-01013	37"	Hose, 5/16" ID	-
11	41-01013	10"	Hose, 5/16" ID	-

This Page Left Intentionally Blank

Injection Pump and Lines

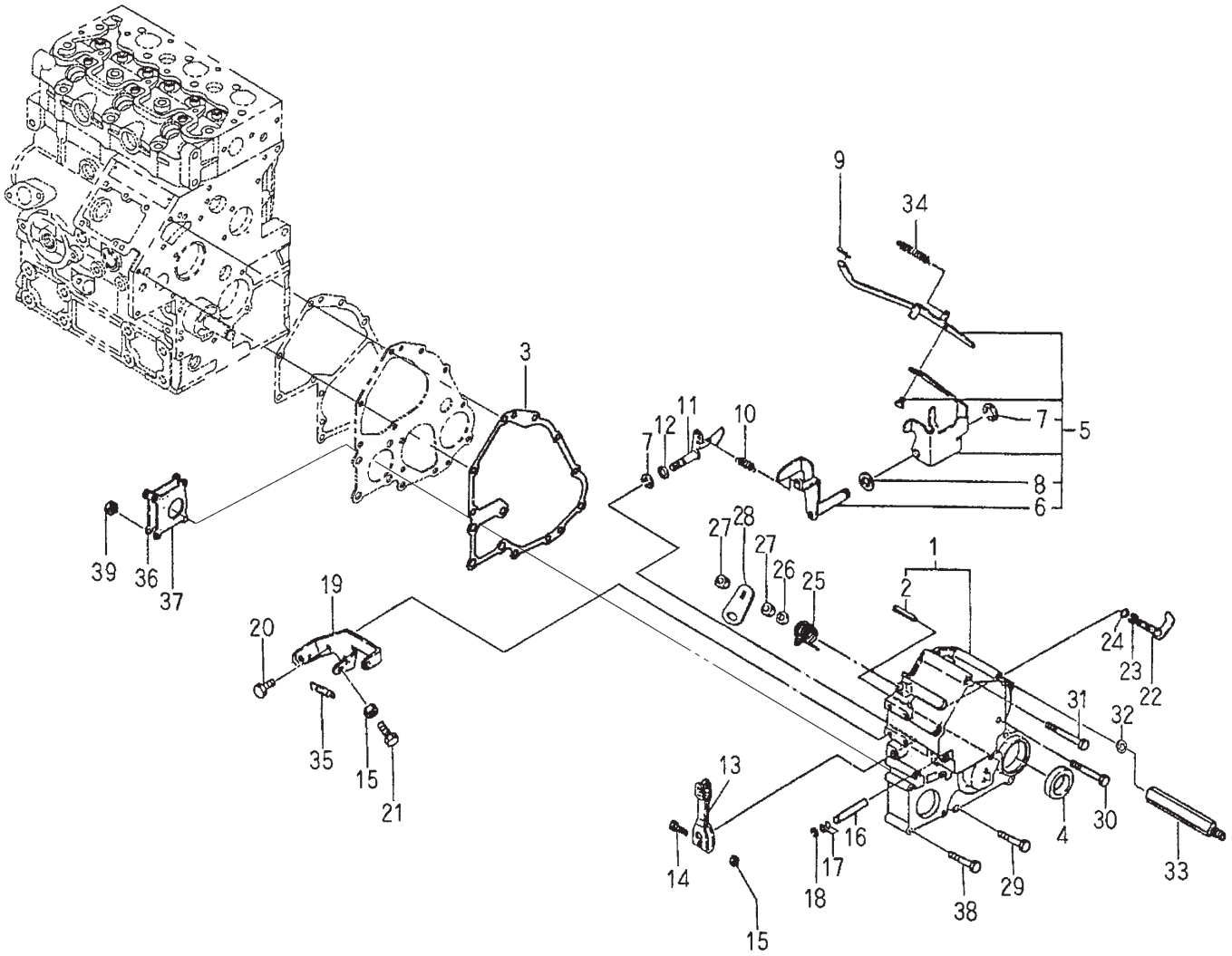


673L2inj pump

Injection Pump and Lines

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131010070	1	Injection Pump Assembly (see detail page)	-
2	131426300	1	Shim Set	-
3	023100006	2	Hex Nut, Flanged M6 x 1.0	-
4	011310620	2	Bolt	-
5	131426200	3	Gasket	-
6	131406480	3	Injector Assembly (see parts detail)	-
7	131607020	1	Return Line	-
8	131507920	1	Injection Line	-
9	131507930	1	Injection Line	-
10	131507940	1	Injection Line	-
11	199106021	4	Clamp	-
12	010110625	2	Bolt	-
13	023100006	2	Nut	-
14	185366220	3	Glow Plug	-
15	023100004	3	Nut	-
16	185376390	1	Connector	-
17	185606170	1	Wire Harness	-
18	130996130	1	Gasket	-
19	025100006	1	Seal Washer	-
20	131236280	1	Screw	-
21	025100016	1	Seal Washer	-
22	185206085	**	Solenoid, 12 Volt Standard Ground	-
	185206192	**	Solenoid, 12 Volt Isolated Ground	-
23	130506140	1	Feed Pump Assembly (see parts detail)	-
24	011140614	1	Bolt	-
25	011140616	1	Bolt	-
			**As required	

Governor and Timing Gear Case



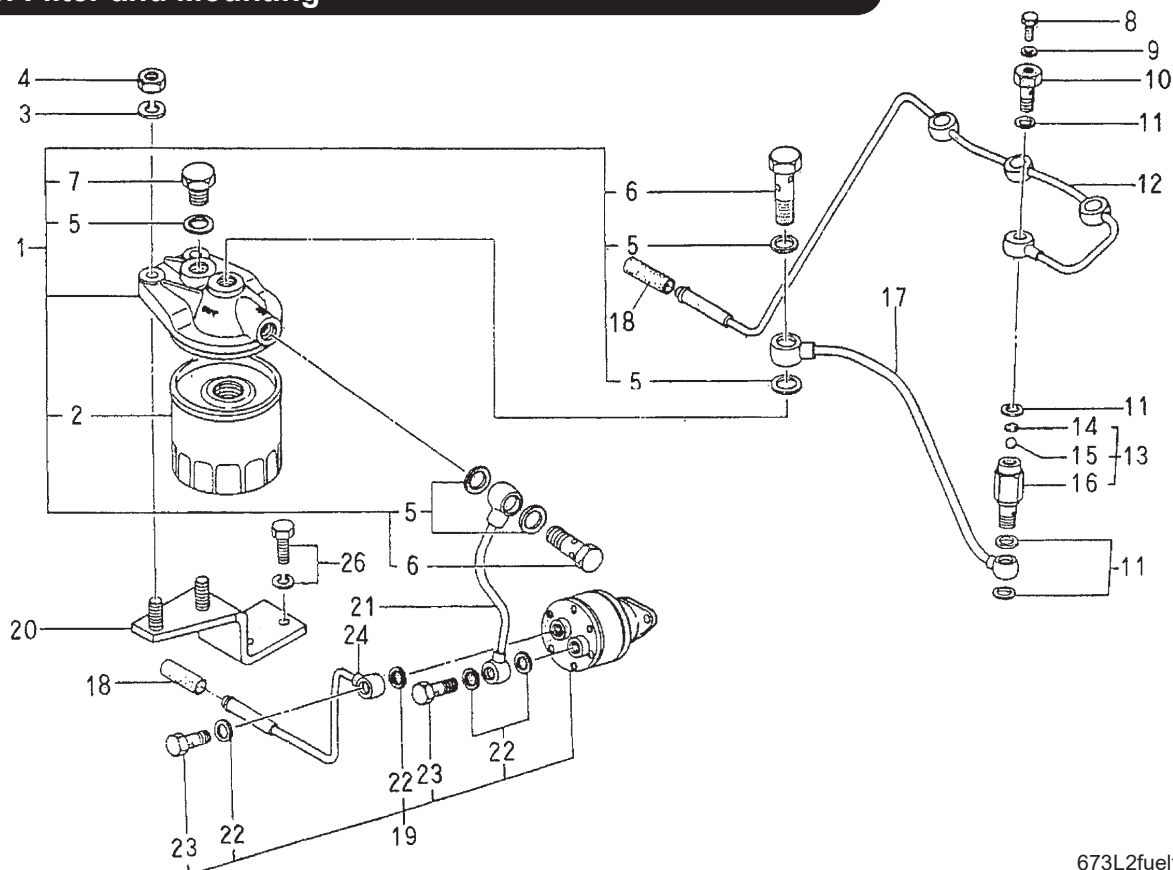
673L2governor

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	030300410	1	Spring Pin	-
3	165996500	1	Gasket	-
4	198636140	1	Oil Seal	-
5	125046250	1	Governor Lever Assembly (includes keys #6- 8)	-
6	125406071	1	Tension Lever	-
7	036800008	2	Snap Ring	-
8	026200010	1	Washer	-
9	031100004	1	Snap Pin	-
10	198217131	1	Main Spring	-
11	125156250	1	Governor Arm	-
12	052109110	1	O-ring	-
13	125416020	1	Governor Lever	-
14	010110630	1	Bolt	-
15	023100006	2	Nut	-
16	125116131	1	Shaft	-
17	051109108	2	O-ring	-
18	125416020	1	Snap Ring	-
19	125976120	1	Bracket	-
20	011310614	2	Bolt	-
21	010109264	1	Bolt	-
22	125156180	1	Governor Arm	-
23	036800006	1	Snap Ring	-
24	052109109	1	O-ring	-
25	198216760	1	Spring	-
26	026200008	1	Washer	-
27	020700008	2	Nut	-
28	125176080	1	Stop Lever	-
29	011310640	4	Bolt	-
30	011310660	2	Bolt	-
31	011310680	2	Bolt	-
32	15-01132	1	Spring Washer (Marine)	-
33	199436340	1	Bolt (Marine, see Belt Guard parts detail)	-
34	198217420	1	Start Spring	-
35	398210070	1	Spring	-
36	165206370	1	Cover (Industrial)	-
37	165996510	1	Gasket (Industrial)	-
38	010310850	4	Bolt (Industrial)	-
39	023100008	4	Nut (Industrial)	-

GROUP 4 – FUEL SYSTEM

Fuel Filter and Mounting

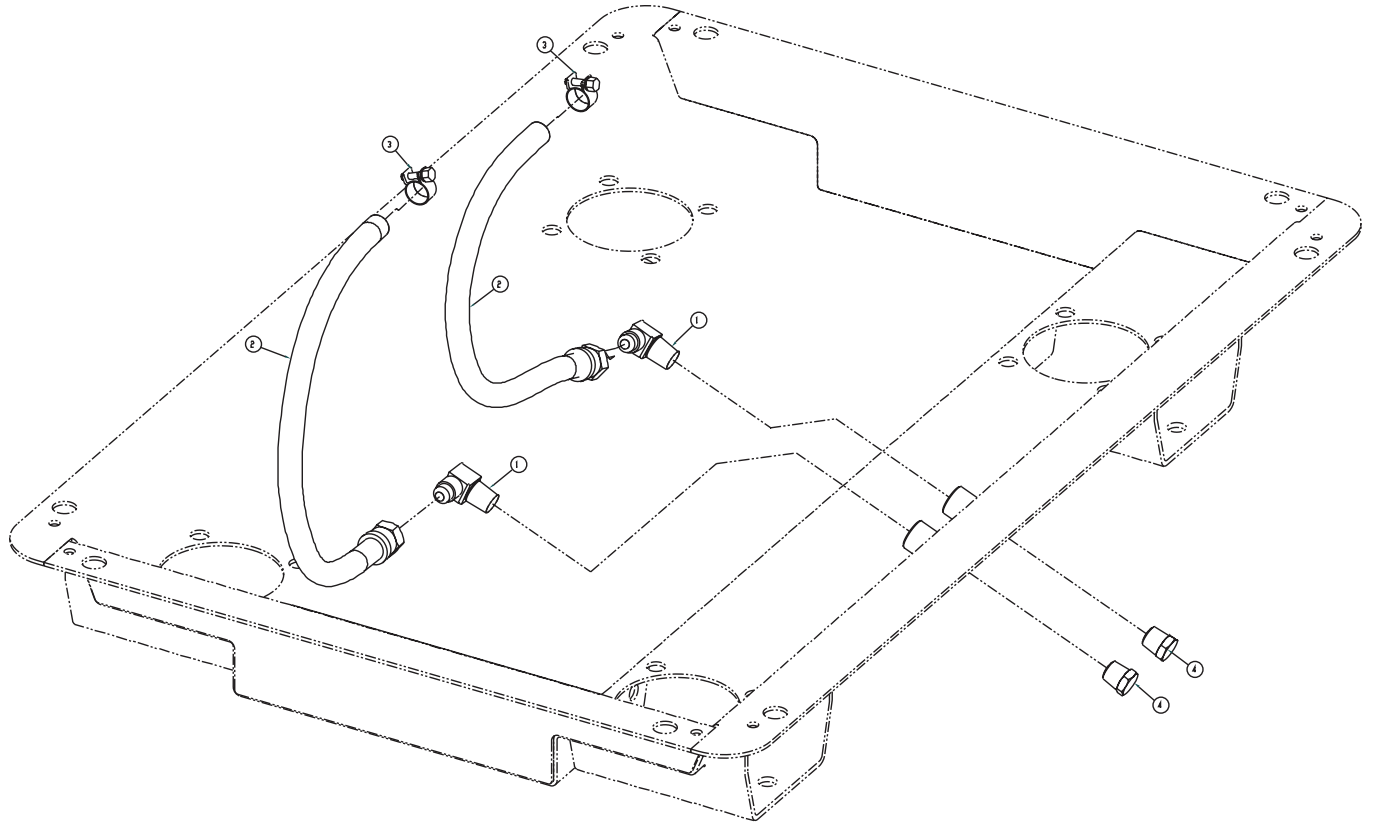


673L2fuelfilter

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	140996270	4	Gasket	-
12	131607020	1	Return Pipe	-
13	140036141	1	Valve Assembly (includes keys #14 - #16)	-
14	198116230	1	Rubber	-
15	048100010	1	Ball	-
16	140036141	1	Connector	-
17	130556340	1	Pipe	-
18	398113230	2	Rubber	-
19	130506140	1	Feed Pump (includes keys #22 & #23 – see detail page)	-
20	131976040	1	Mounting Bracket (Marine)	-
	131976120	1	Mounting Bracket (Industrial)	-
21	130556350	1	Pipe	-
22	130516069	4	Gasket	-
23	130516092	2	Joint Bolt	-
24	130556361	1	Pipe	-
26	011300816	2	Bolt	-

USCG A-1 ISO 7840 Fuel Lines

Up to S/N xxxx-54637



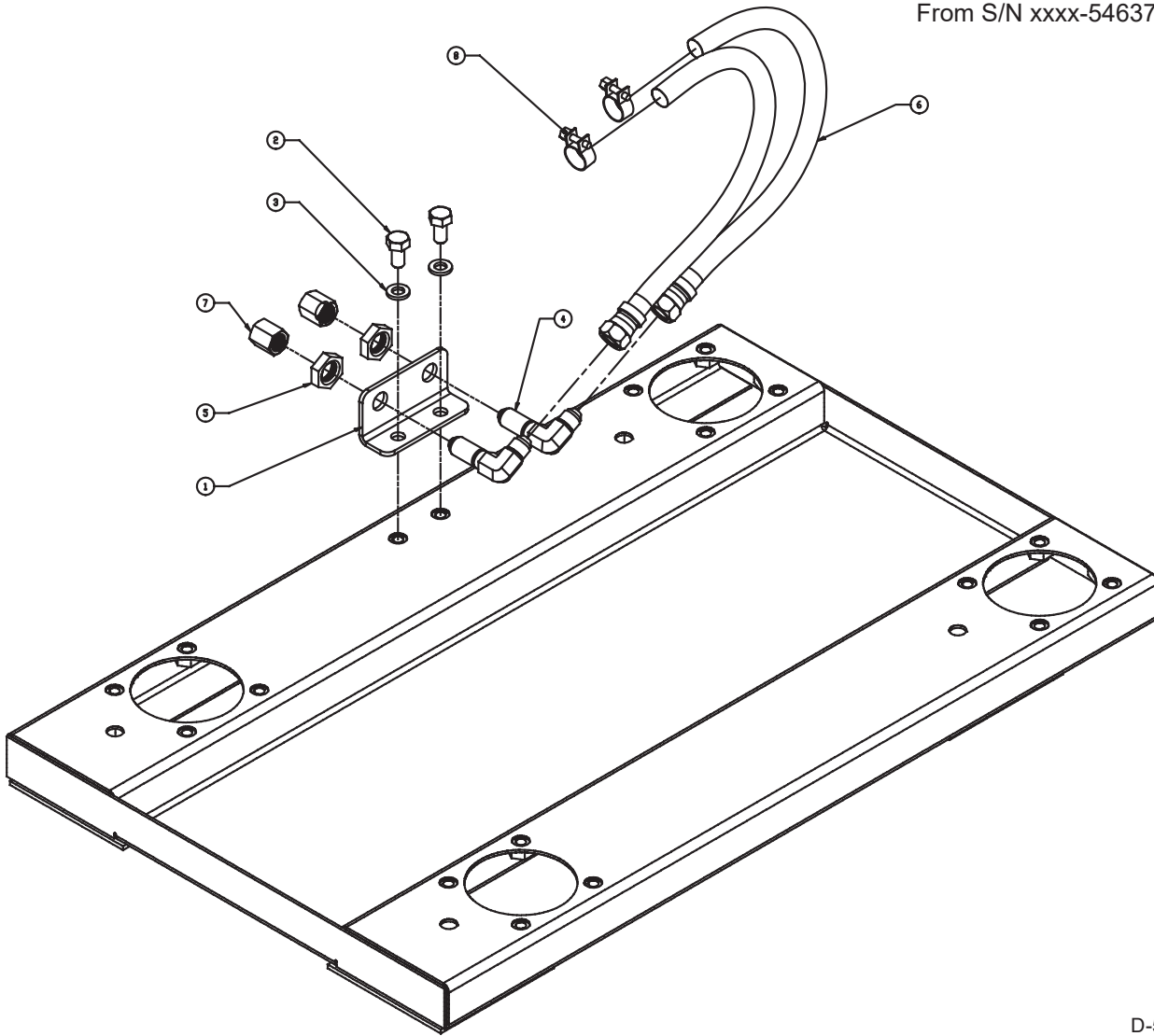
D-4441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	21-52245	2	Male Elbow 90°, Brass 1/4 NPT x 5/16-45T	-
2	18-58001	2	Hose Assembly 5/16" ID x 12"	-
3	19-50115	2	Hose Clamp #15 S/S	-
4	21-31624	2	Plug, Hex Head, Brass 1/4 NPT	-

GROUP 4 – FUEL SYSTEM

USCG A-1 SAE J1527 ISO 7840 Fuel Lines

“Gem Series” Marine Application
From S/N xxxx-54637



D-5046

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-52001	1	MANIFOLD, FUEL for 2x 5/16-37T union bulkhead elbow	-
2	12-09751	2	Capscrew, Hex Head M8x1.25 X 16mm S/S	-
3	15-00705	2	LOCK WASHER,HELICAL M8 S/S	-
4	21-52019	2	Bulkhead Union Elbow 90,STL. 5/16-37T (w/o Locking Nut)	-
6	18-58001	2	Hose Assy 5/16"ID X 12" 5/16FMS (Single Ended) SAE J1527 USCG A-1 ISO 7840	-
7	21-50071	2	Capscrew, Hex Head STL 5/16-37T JIC	-
8	19-50115	2	Hose Clamp #15 MINI S/S (304) 14.5mm to 16mm	-

Injector Assembly

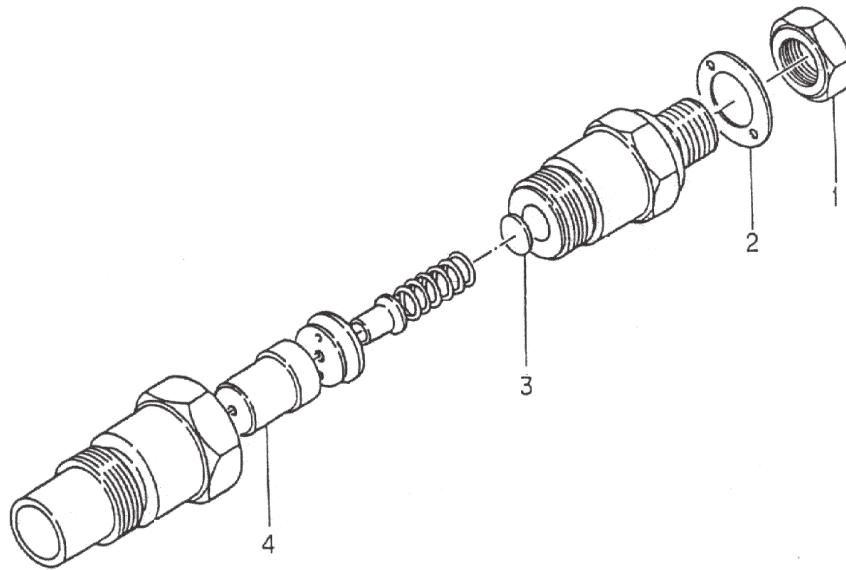
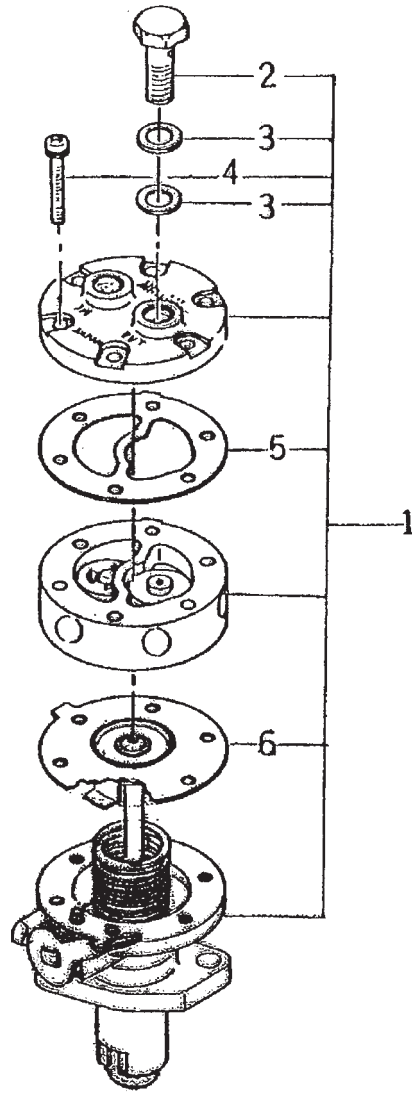


Fig: 4-6

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131406480	1	Injector Assembly	-
1	131446069	1	Nut	-
2	131426210	1	Gasket	-
3	131437640	1	Shim Kit	-
4	131416260	1	Nozzle Assembly	-

Injection Pump Assembly



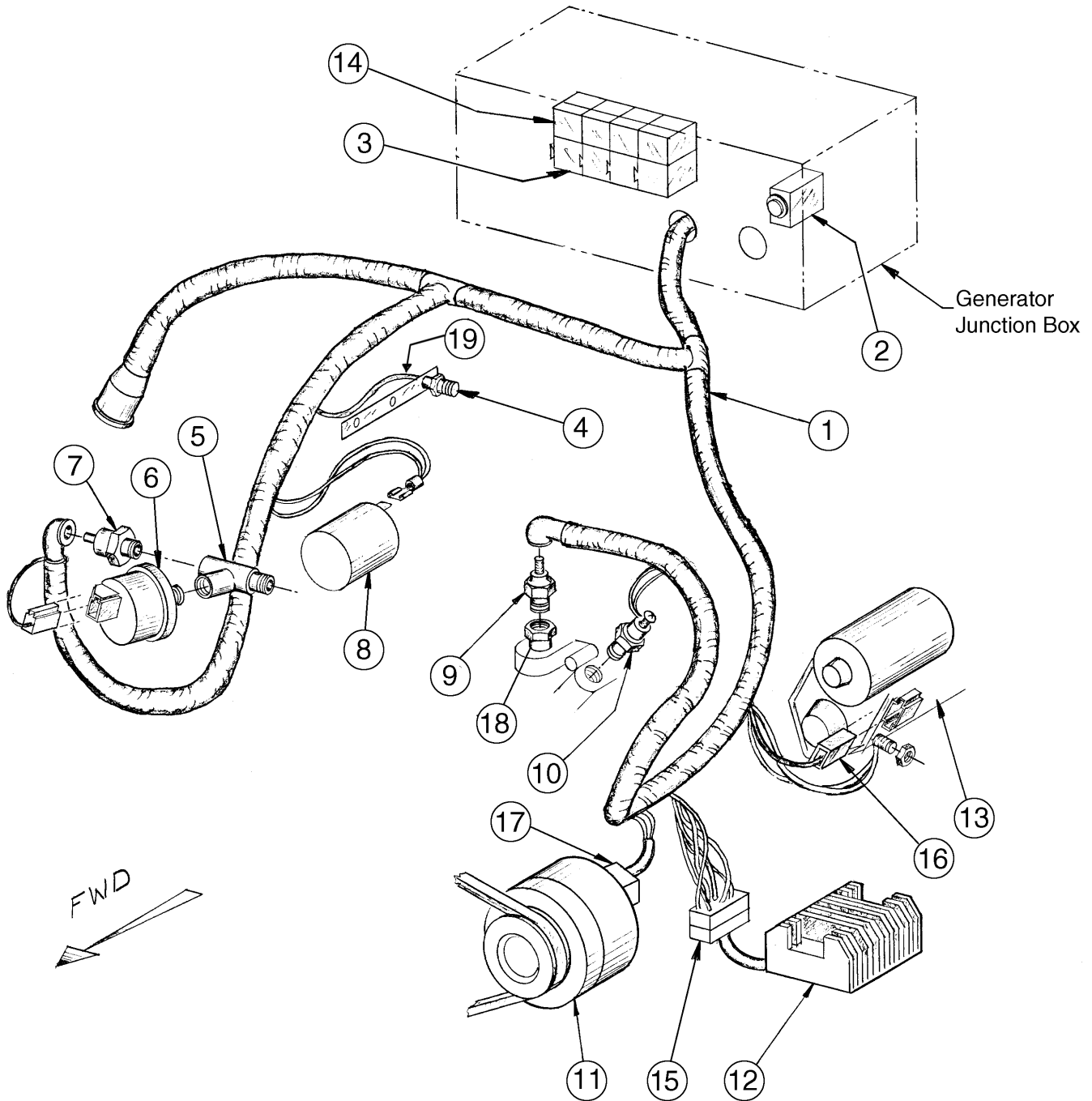
673L2injectionpump

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130506140	1	Feed Pump Assembly (includes all keys)	-
2	130516092	1	Joint Bolt	-
3	130516069	4	Gasket	-
4	130516091	6	Screw	-
5	130516101	1	Gasket	-
6	130516084	1	Diaphragm	-

This Page Left Intentionally Blank

Engine Electrical - 12 Volt Standard Ground

System with Round "Merc" Plug Equipped Harness



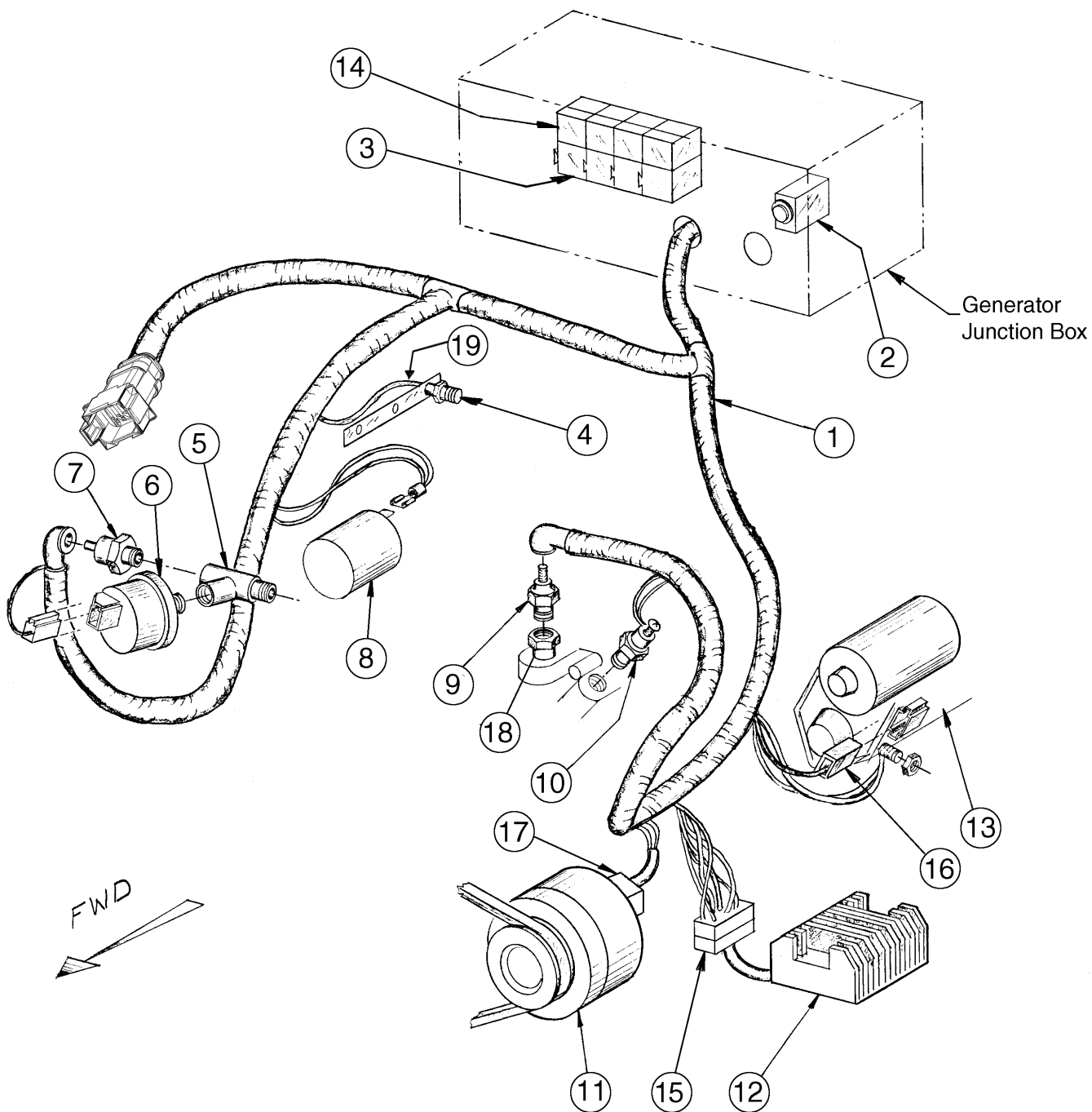
Engine Electrical - 12 Volt Standard Ground

System with Round “Merc” Plug Equipped Harness

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48006	1	Wire Harness Assembly with Round Merc Plug (includes keys 15- 17 & 19)	-
2	22-42043	1	Circuit Breaker 15 Amp (Snap-in Type)	-
	22-40674	1	Circuit Breaker 15 Amp (Screw Mount Type)	-
3	22-40391	4	Relay Base	-
	22-40393	4	Terminal Retainer	-
4	185366220	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	185206085	1	Stop Solenoid, 12 volt	-
9	22-42055	1	Sender, Water Temperature - Single Station (not shown)	-
	22-74802	1	Sender, Water Temperature - Dual Station	-
10	385720110	1	Switch, Water Temperature 95°C (Marine)	-
	22-40366	1	Switch, Water Temperature 110°C (Industrial)	-
11	185046210	1	Alternator, 12 volt (see Mounting detail)	-
12	185516061	1	DC Voltage Regulator	-
13	22-48008	1	Starter (see Mounting & Parts details)	-
14	22-42047	4	Relay, 12 Volt	-
15	385620010	1	Regulator Connector Assembly	-
16	385620300	1	Starter Connector Assembly	-
17	385620280	1	Alternator Connector Assembly	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620230	1	Connector Assembly Glow Plug Circuit	-
20	23-48303	1	Bracket, Regulator Mounting (Industrial only – not shown)	-

Engine Electrical - 12 Volt Standard Ground

B+ Electrical System



Engine Electrical - 12 Volt Standard Ground

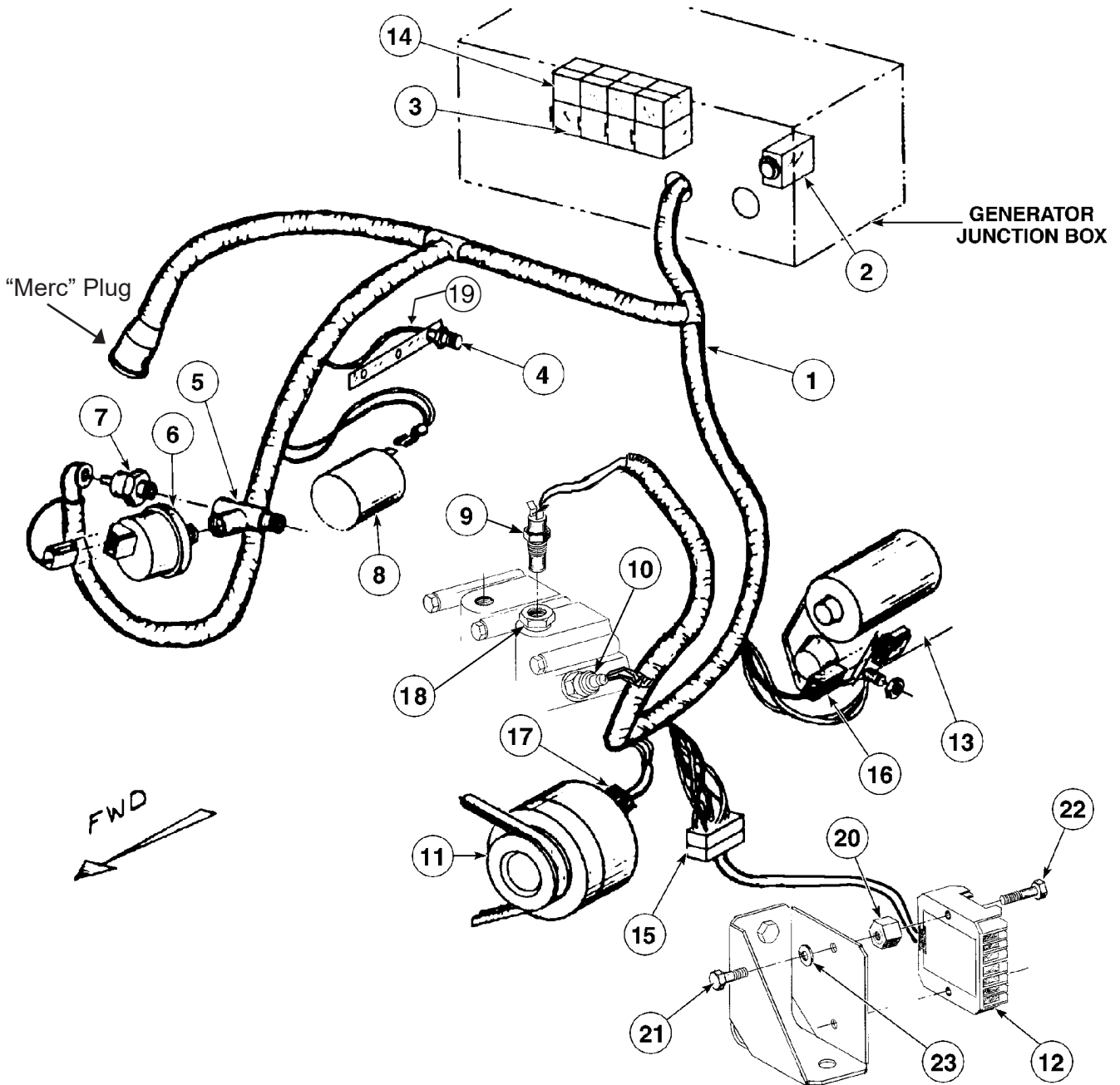
B+ Electrical System

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48018	1	Wire Harness Assembly with Square Deutsch Plug (includes keys 15-17 & 19)	-
2	22-40018	1	Circuit Breaker 10 Amp (Screw Mount Type)	-
3	22-40391	4	Relay Base	-
	22-40393	4	Terminal Retainer	-
4	185366220	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	185206085	1	Stop Solenoid, 12 volt	-
9	22-42055	1	Sender, Water Temperature - Single Station	-
	22-74802	1	Sender, Water Temperature - Dual Station	-
10	385720110	1	Switch, Water Temperature 95°C	-
11	185046210	1	Alternator, 12 volt (see Mounting detail)	-
12	185516061	1	DC Voltage Regulator with connector	-
13	22-48008	1	Starter (see Mounting & Parts details)	-
14	22-42047	4	Relay, 12 Volt	-
15	385620300	1	Regulator Connector Assembly	-
16	385620300	1	Starter Connector Assembly	-
17	385620280	1	Alternator Connector Assembly	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620230	1	Connector Assembly Glow Plug Circuit (See Fuel System)	-

GROUP 5 - ELECTRICAL SYSTEM

Engine Electrical - 12 Volt Isolated Ground

System with Round "Merc" Plug Equipped Harness



A-6157

Engine Electrical - 12 Volt Isolated Ground

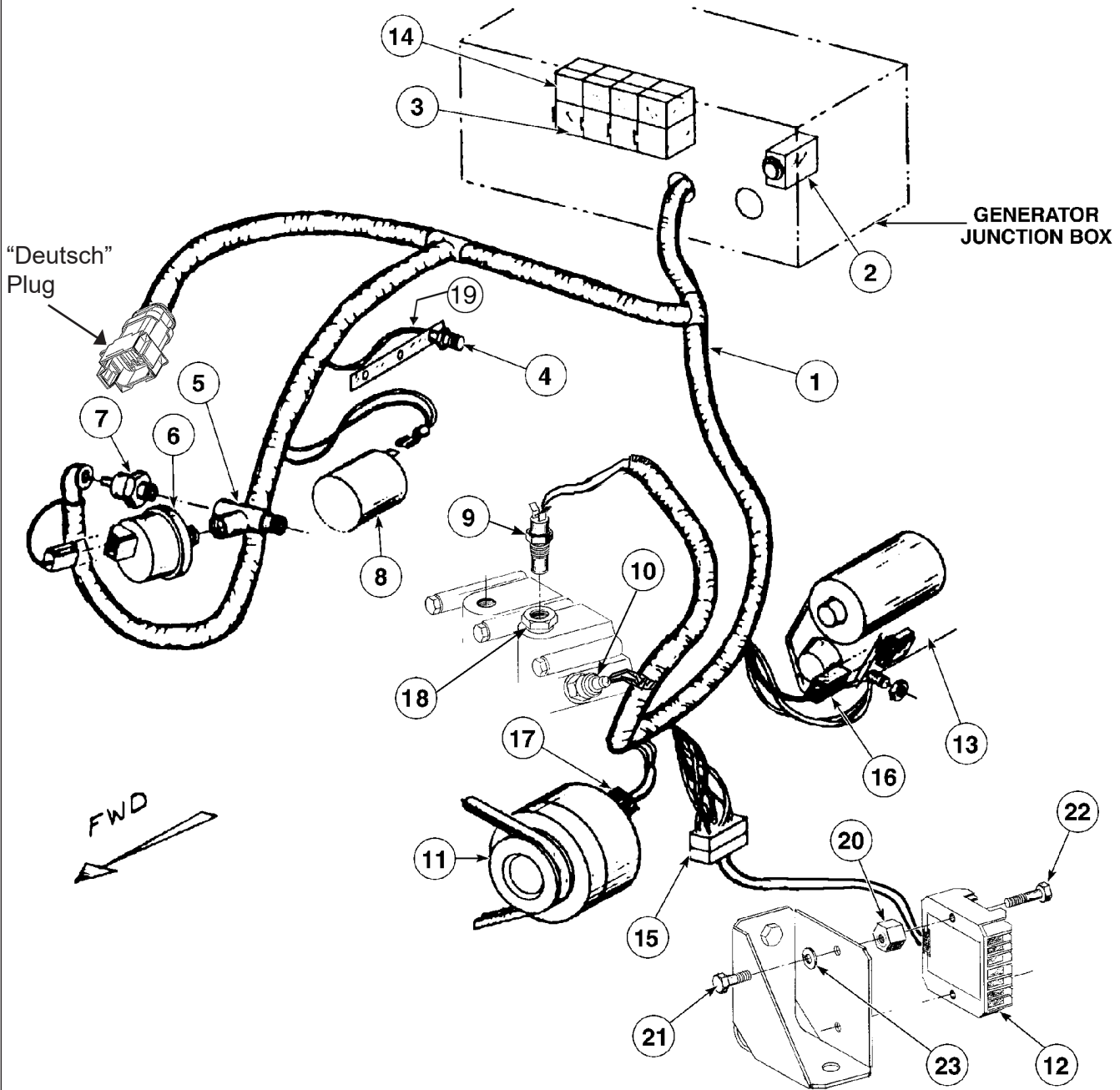
System with Round "Merc" Plug Equipped Harness

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48006	1	Wire Harness Assembly with Round Merc Plug (includes keys 15-17 & 19)	-
	22-48304	1	Grounding Harness Addition	-
2	22-42043	1	Circuit Breaker 15 Amp (Snap-In Type)	-
	22-40674	1	Circuit Breaker 15 Amp (Screw Mount Type)	-
3	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
4	185366220	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	185206192	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 Assembly	-
16	385620300	1	Starter Connector Assembly	-
17	385620280	1	Alternator Connector Assembly	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620230	1	Connector Assembly Glow Plug Circuit	-
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	-

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical - 12 Volt Isolated Ground

B+ Electrical System



A-6157

Engine Electrical - 12 Volt Isolated Ground

B+ Electrical System

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48018	1	Wire Harness Assembly with Square Deutsch Plug (includes keys 15-17 & 19)	-
	22-48304	1	Grounding Harness Addition	-
2	22-40018	1	Circuit Breaker 10 Amp (Screw Mount Type)	-
3	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
4	185366220	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	185206192	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 Assembly	-
16	385620300	1	Starter Connector Assembly	-
17	385620280	1	Alternator Connector Assembly	-
18	21-51099	1	Bushing, 3/8 NPT x 1/4 NPT (required w/Dual Station Sender #9)	-
19	385620230	1	Connector Assembly Glow Plug Circuit	-
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	-

GROUP 5 – ELECTRICAL SYSTEM

Flywheel Housing & Starter

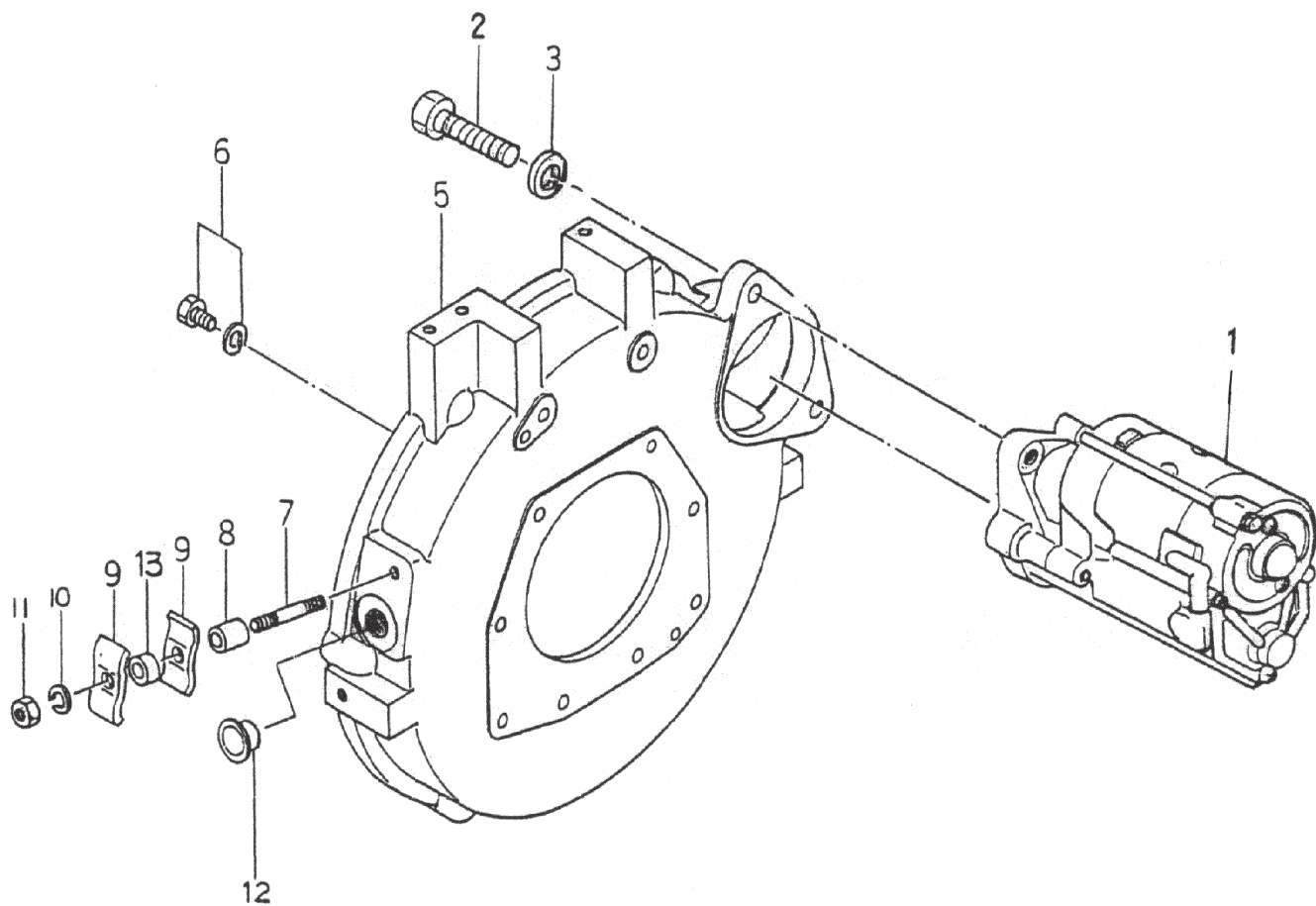
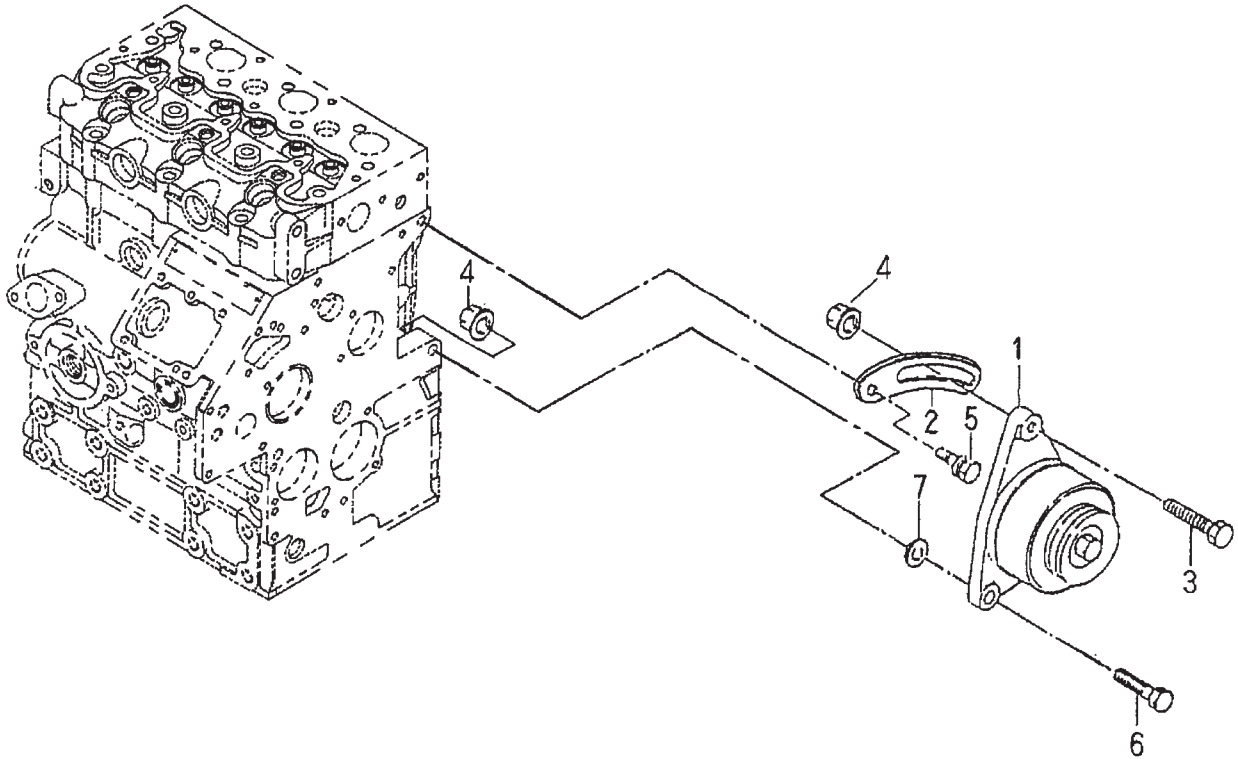


FIG. 5-2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48008	1	Starter, Standard Ground	-
	22-42023	1	Starter, Isolated Ground	-
2	010401035	2	Bolt	-
3	15-00802	2	Lock Washer M10	-
5	110446470	1	Flywheel Housing SAE #5 (Marine) - White	-
	110446480	1	Flywheel Housing SAE #5 (Industrial) - Blue	-
6	011510820	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	15-00702	1	Lock Washer M8	-
11	020900008	1	Hex Nut M8 x 1.25	-
12	398460090	1	Plug	-
13	399233250	1	Collar	-

Alternator and Mounting

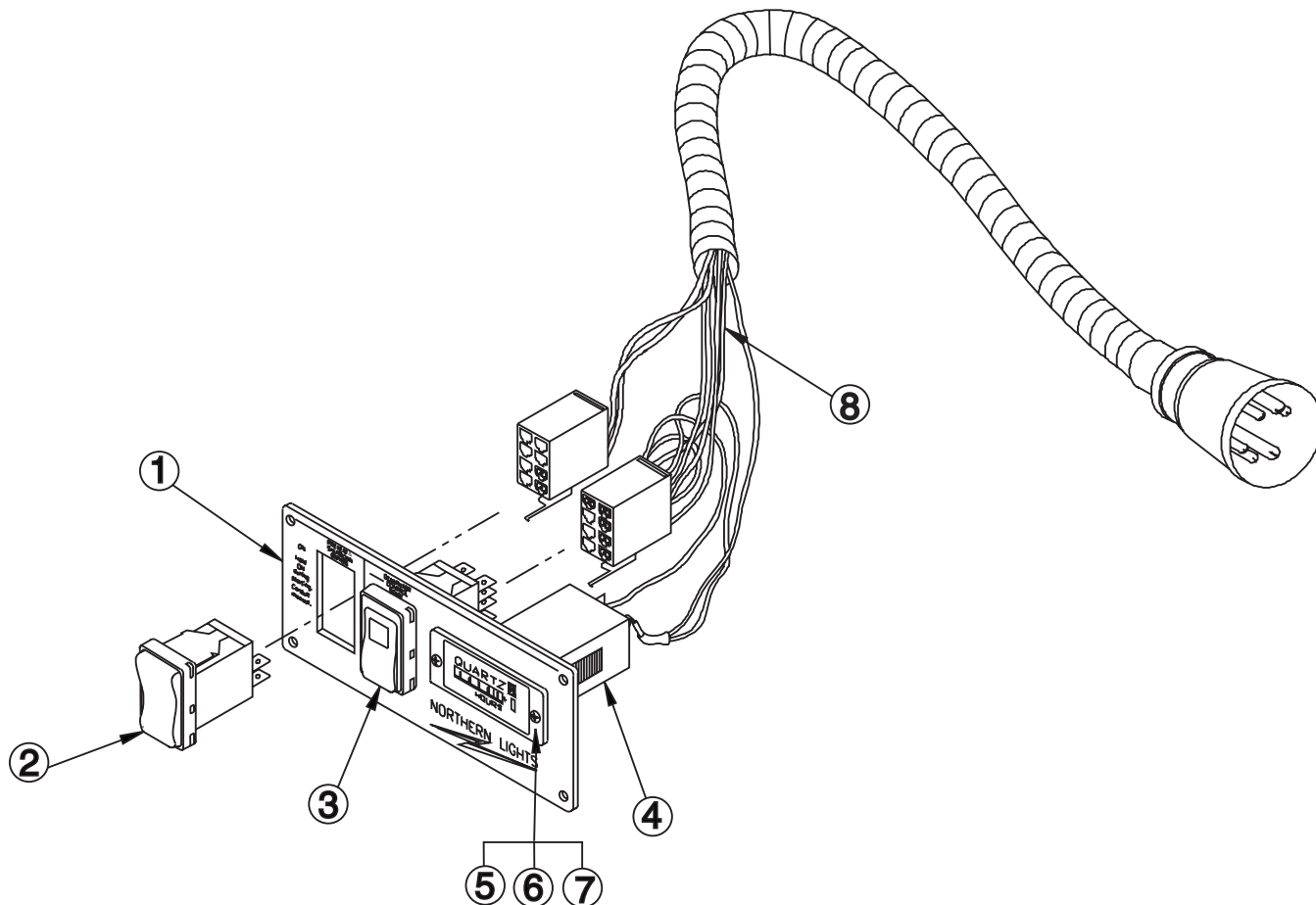


673L2altind

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185046210	1	Alternator Assembly, 12 Volt 14 Amp	-
2	185727010	1	Adjusting Plate	-
3	013100830	1	Bolt	-
4	023100008	2	Hex Nut, Flanged M8 x 1.25	-
5	011510816	1	Bolt	-
6	011510850	1	Bolt (Industrial)	-
	011510835	1	Bolt (Marine)	-
7	026109011	1	Washer	-

GROUP 5 – ELECTRICAL SYSTEM

Series 1-B Start/Stop Control Panel

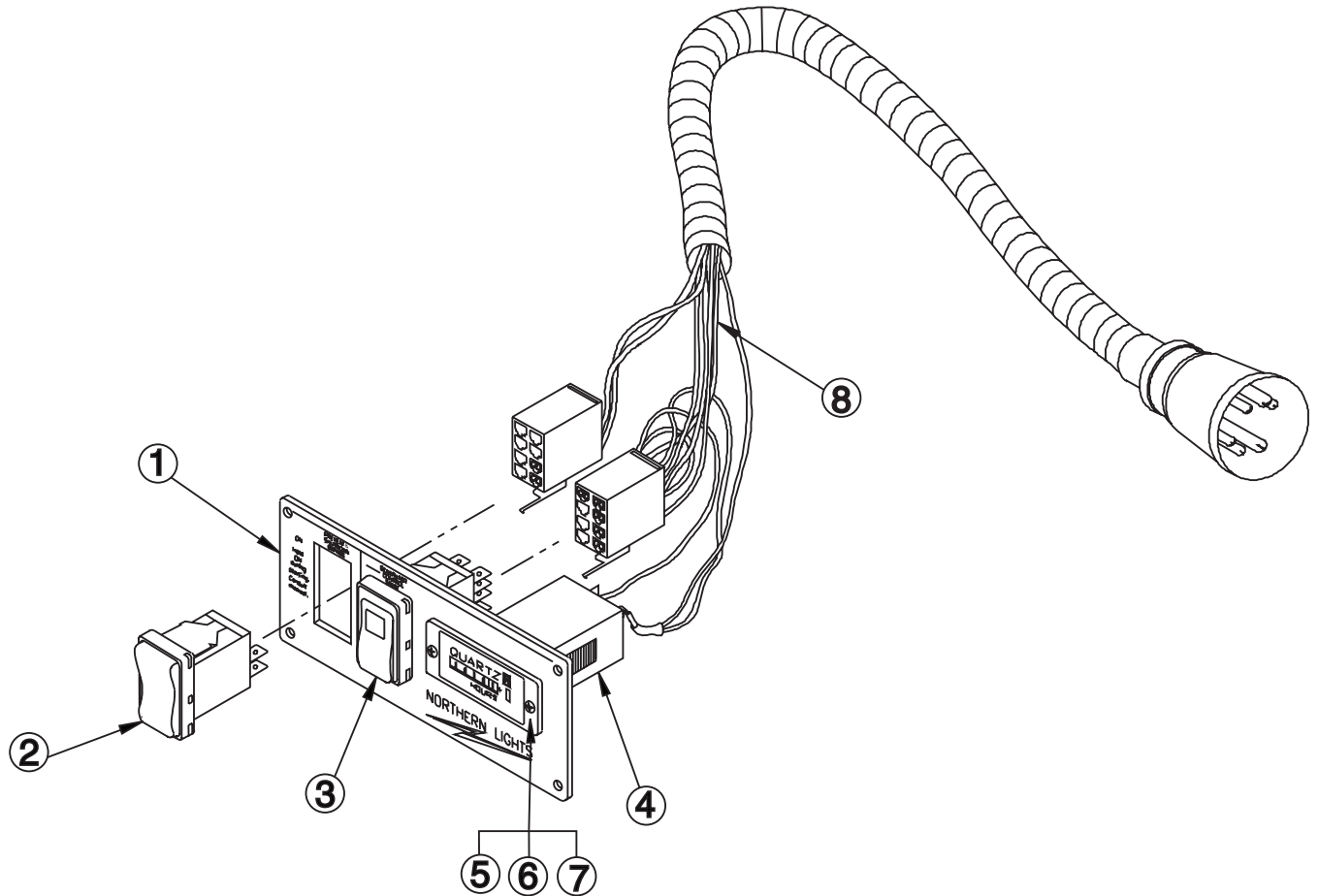


A-8553/ B-5971

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	22-90362	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	-

Series 1-B Start/Stop Control Panel

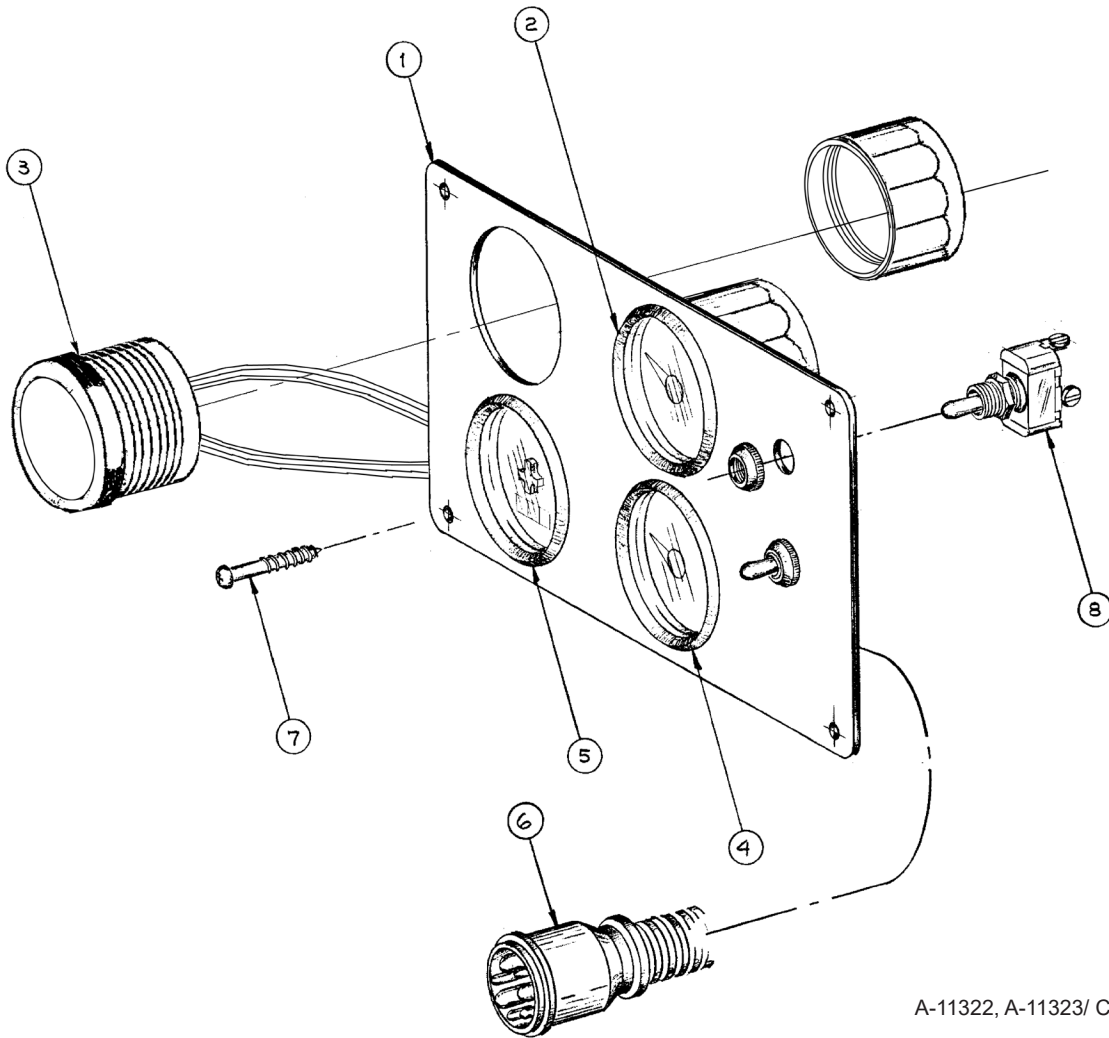
B+ Electrical Systems



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95605	1	Complete Series 1-B Start/Stop Control Panel (includes all keys)	-
1	28-90003	1	Plate	-
2	22-90167	1	Rocker Switch, Momentary (On)-Off	-
3	22-90362	1	Rocker Switch, Green LED (On)-Off-(On) Green Lamp	-
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	22-45603	1	Wire harness	-
9	00-00048	1	Label "12-24 Volts" (Not shown)	-

S-3C Control Panel 12 Volt

VDO Ocean Line Black Bezel Gauges

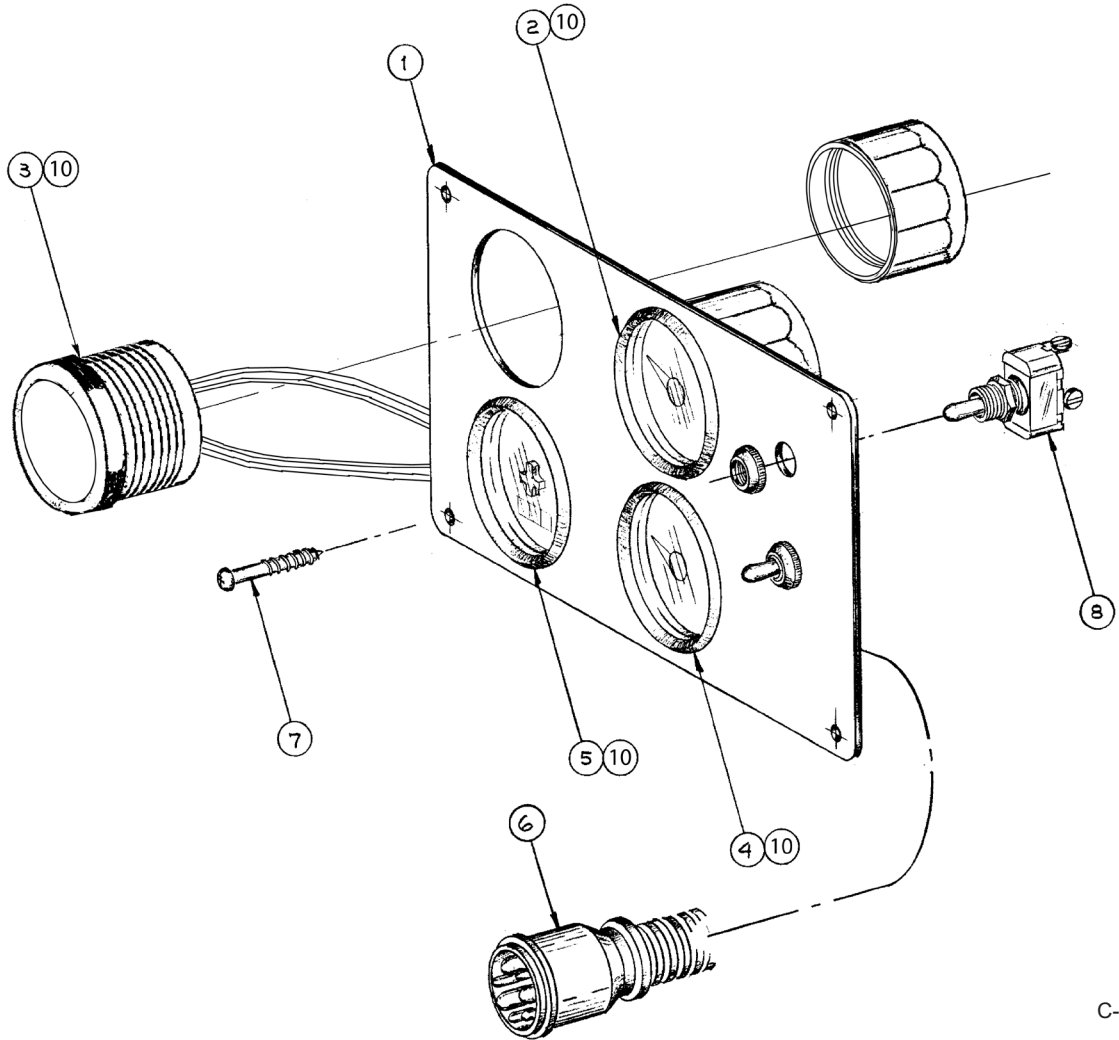


A-11322, A-11323/ C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91211	1	S-3C Control Panel, 12 Volt (includes all keys) (replaced by 22-91216)	-
1	28-90010	1	Panel Plate	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
5	37-90074-1	1	Hourmeter 12/ 24 Volt	-
6	22-42024	1	Panel Wire Harness	-
7	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch	-
9	00-00013	1	Label 12 Volt (not shown)	-
10	37-41004	**	12 Volt Bulb (not shown)	-
			**As required	

S-3C Control Panel 12 Volt

VDO Viewline Black Bezel Gauges



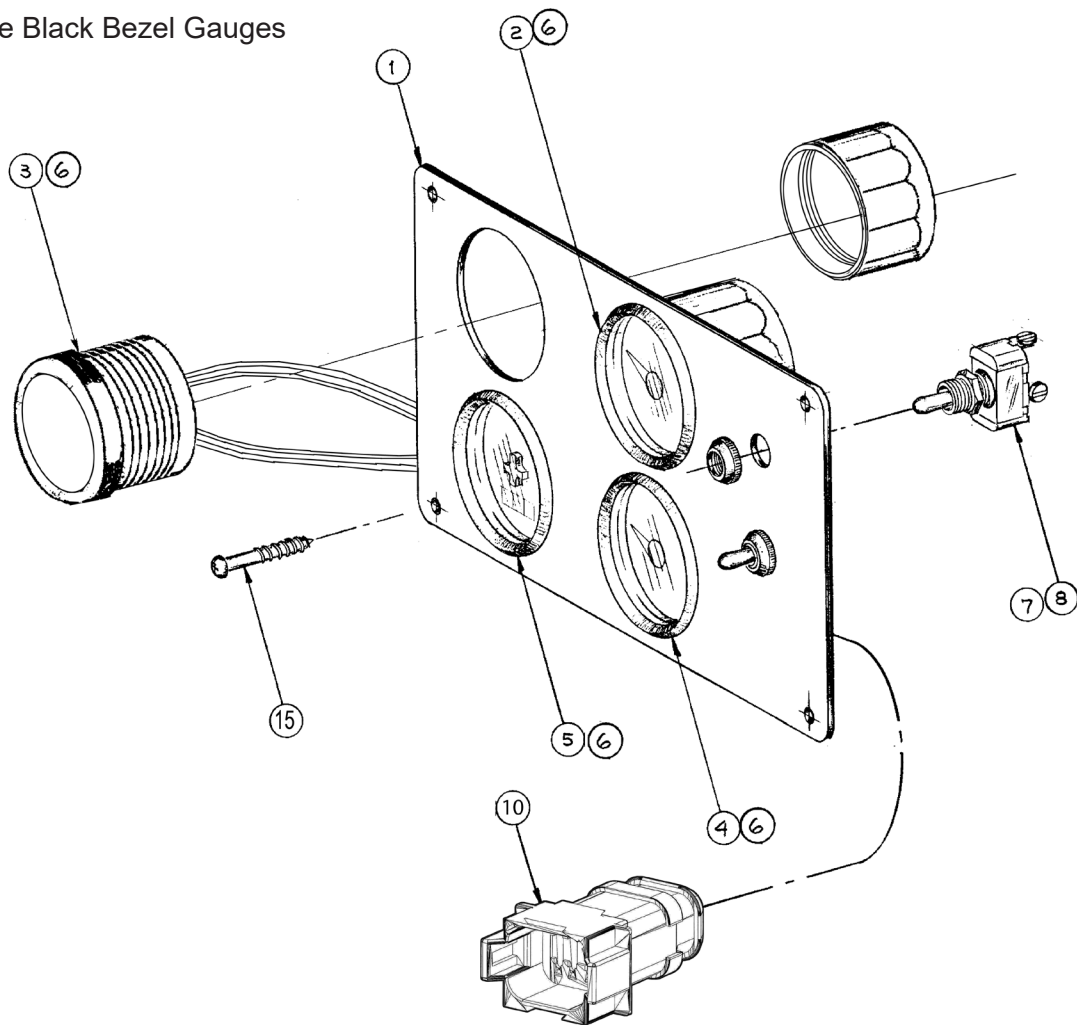
C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91216	1	S-3C Control Panel, 12 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	DC Voltmeter, 8 - 16 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt	-
6	22-42096	1	Panel Wire Harness	-
7	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch	-
9	00-00013	1	Label 12 Volt (not shown)	-
10	37-00014	4	Bezel	-
			* Note Bezel 37-00014 supplied separately	

GROUP 5 – ELECTRICAL SYSTEM

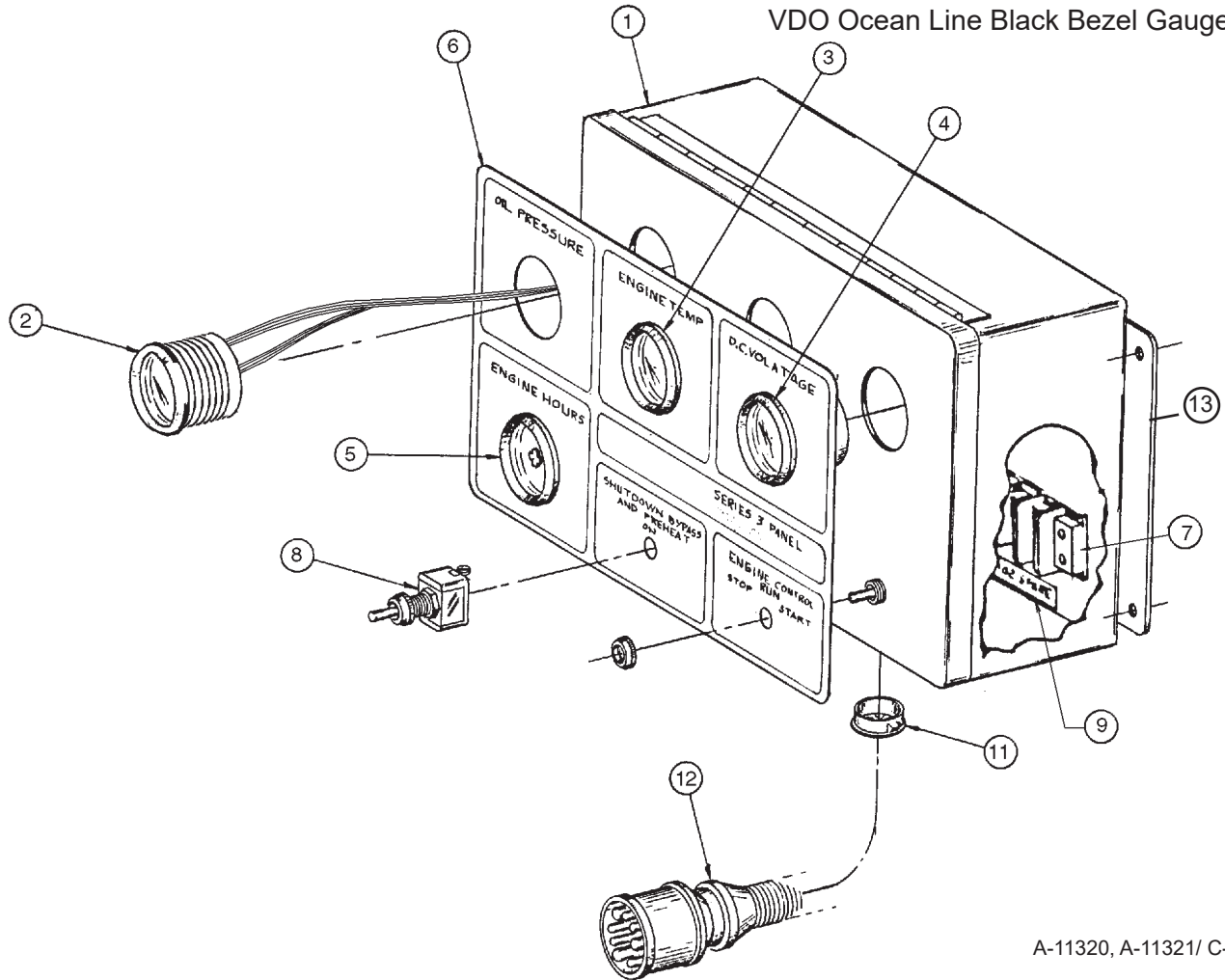
S-3C Control Panel 12 Volt B+ Systems

VDO Viewline Black Bezel Gauges



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95611	1	S-3C Control Panel, 12 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	DC Voltmeter, 8 - 16 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt *	-
6	37-00014	4	Bezel	-
8	22-41051	1	Toggle Switch	-
	22-40335	1	Toggle Switch	-
9	23-95601	1	Bracket, Relay Base Mounting	-
10	22-45606	1	Panel Wire Harness	-
11	12-00075	1	Machine Screw #8-32 x 1/4"	-
12	15-00035	1	Star Washer #8	-
13	22-42047	**	Relay 12 Volt	-
14	00-00013	**	Label 12 Volt (not shown)	-
15	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
			** As Required	

S-3B Control Panel 12 Volt



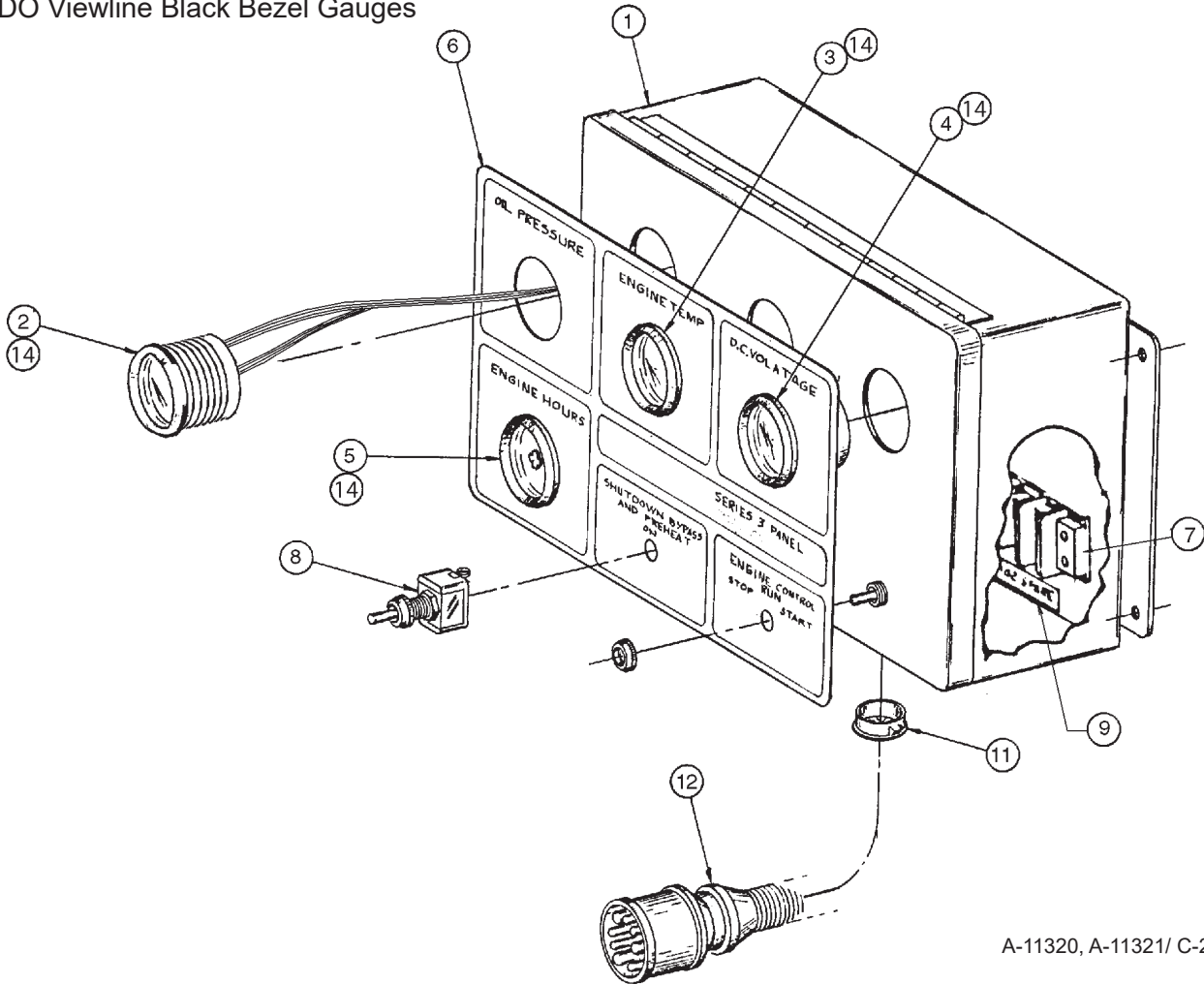
A-11320, A-11321/ C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91201	1	S-3C Control Panel, 12 Volt (includes all keys) (replaced by 22-91203)	-
1	39-40027	1	Enclosure	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
5	37-90074-1	1	Hourmeter 12/ 24 Volt	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Strip	-
8	22-41051	2	Toggle Switch	-
9	22-00052	1	Number Strip	-
10	22-40257	1	Wire Harness (not shown)	-
11	00-40028	1	Grommet	-
12	22-42027	1	Connection Harness	-
13	39-41003	1	Back plate	-
14	00-00013	1	Label 12 Volt (not shown)	-
15	37-41004	**	12 Volt Bulb (not shown)	-
			**As required	

GROUP 5 – ELECTRICAL SYSTEM

S-3B Control Panel 12 Volt

VDO Viewline Black Bezel Gauges



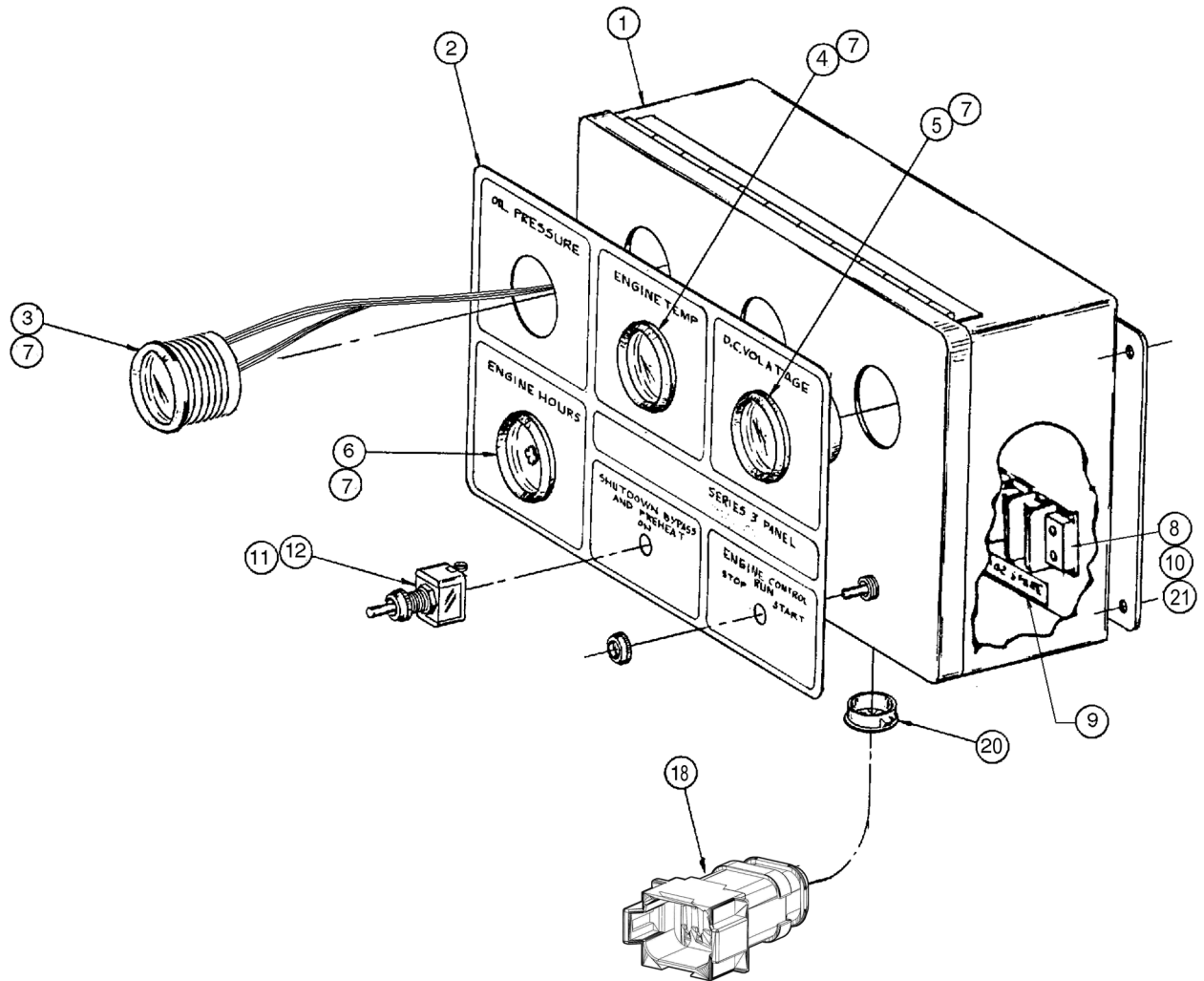
A-11320, A-11321/ C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91203	1	S-3C Control Panel, 12 Volt (includes all keys)	-
1	39-40027	1	Enclosure	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	Voltmeter, 8 - 16 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Strip	-
8	22-41051	2	Toggle Switch	-
9	22-00052	1	Number Strip	-
10	22-40648	1	Wire Harness (not shown)	-
11	00-40028	1	Grommet	-
12	22-42027	1	Connection Harness	-
13	00-00013	1	Label 12 Volt (not shown)	-
14	37-00014	4	Bezel	-
			* Note Bezel 37-00014 supplied separately	

This Page Left Intentionally Blank

S-3B Control Panel 12 Volt B+ Systems

VDO Viewline Black Bezel Gauges



S-3B Control Panel 12 Volt B+ Systems

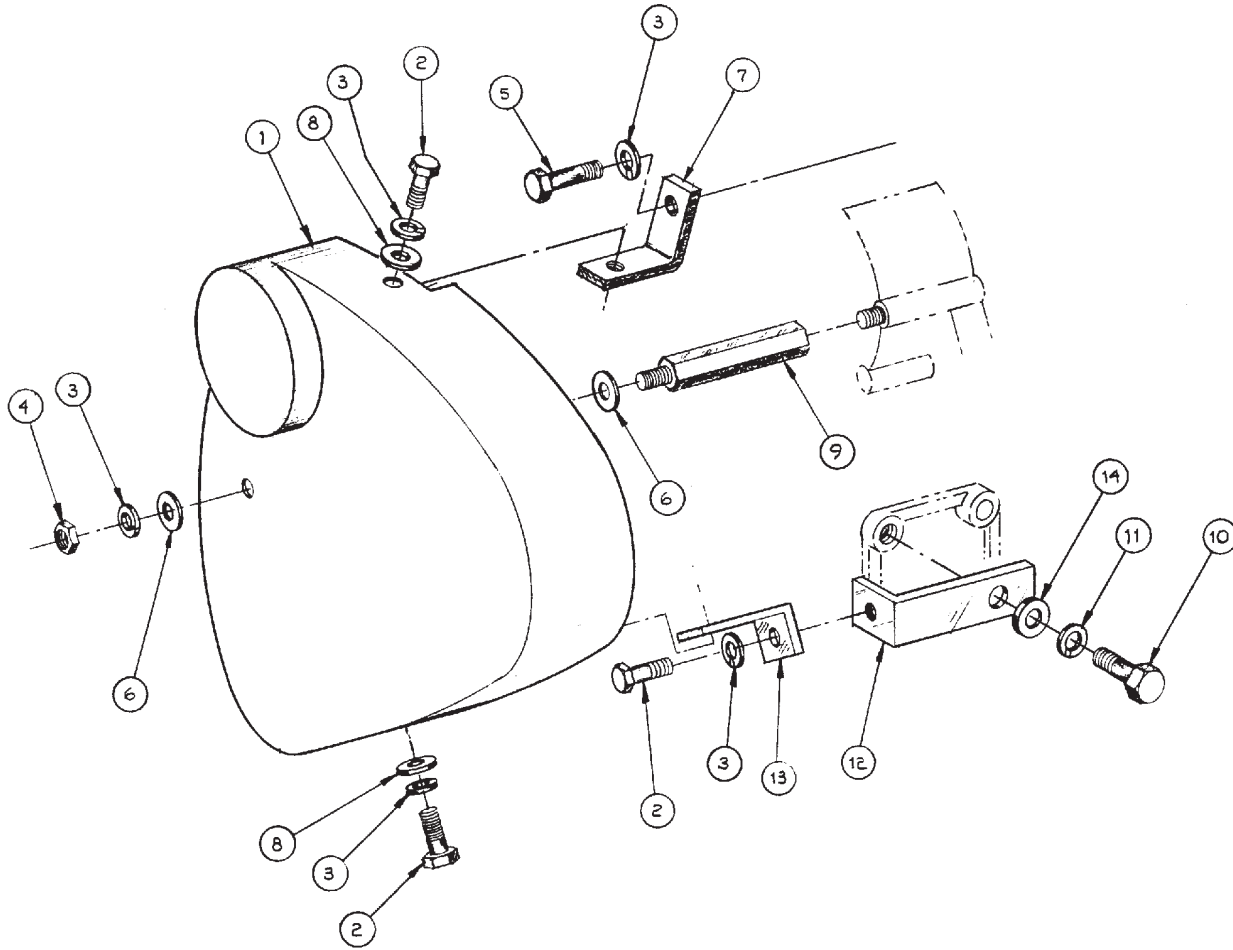
VDO Viewline Black Bezel Gauges

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95601	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-95602	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	39-40027	1	Enclosure	-
2	00-91018	1	Decal	-
3	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
4	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
5	37-91070-1	1	Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 VDC *	-
6	37-91072-1	1	Hourmeter 12/ 24 Volt	-
7	37-00014	4	Bezel	-
8	22-41077	1	Terminal Strip	-
9	22-00052	1	Number Strip	-
10	14-09021	2	Jam Nut, Nylock #8-32 S/S	-
11	22-41051	1	Toggle Switch	-
12	22-40335	1	Toggle Switch	-
13	23-95602	1	Bracket, Relay Mounting	-
14	22-45604	1	Wire Harness (not shown) (Includes keys 22-23)	-
15	12-00075	1	Machine Screw, Phillips #8-32 x 1/4" S/S	-
16	15-00035	1	Star Washer #8 S/S	-
17	22-42047	**	Relay 12 Volt	-
	22-40710	**	Relay 24 Volt	-
18	22-45607	1	Connection Harness	-
19	00-00013	**	Label 12 Volt (not shown)	-
	00-00014	**	Label 24 Volt	-
20	00-40028	1	Grommet	-
21	12-42103	2	Machine Screw, Pan Head, Phillips #8-32 x 5/8" S/S	-
22	22-40931	1	Relay Base	-
23	22-40393	1	Retainer	-
			* Note Bezel 37-00014 supplied separately	

GROUP 5 – ELECTRICAL SYSTEM

Belt Guard

Marine Application - units with engine supports installed on after pads

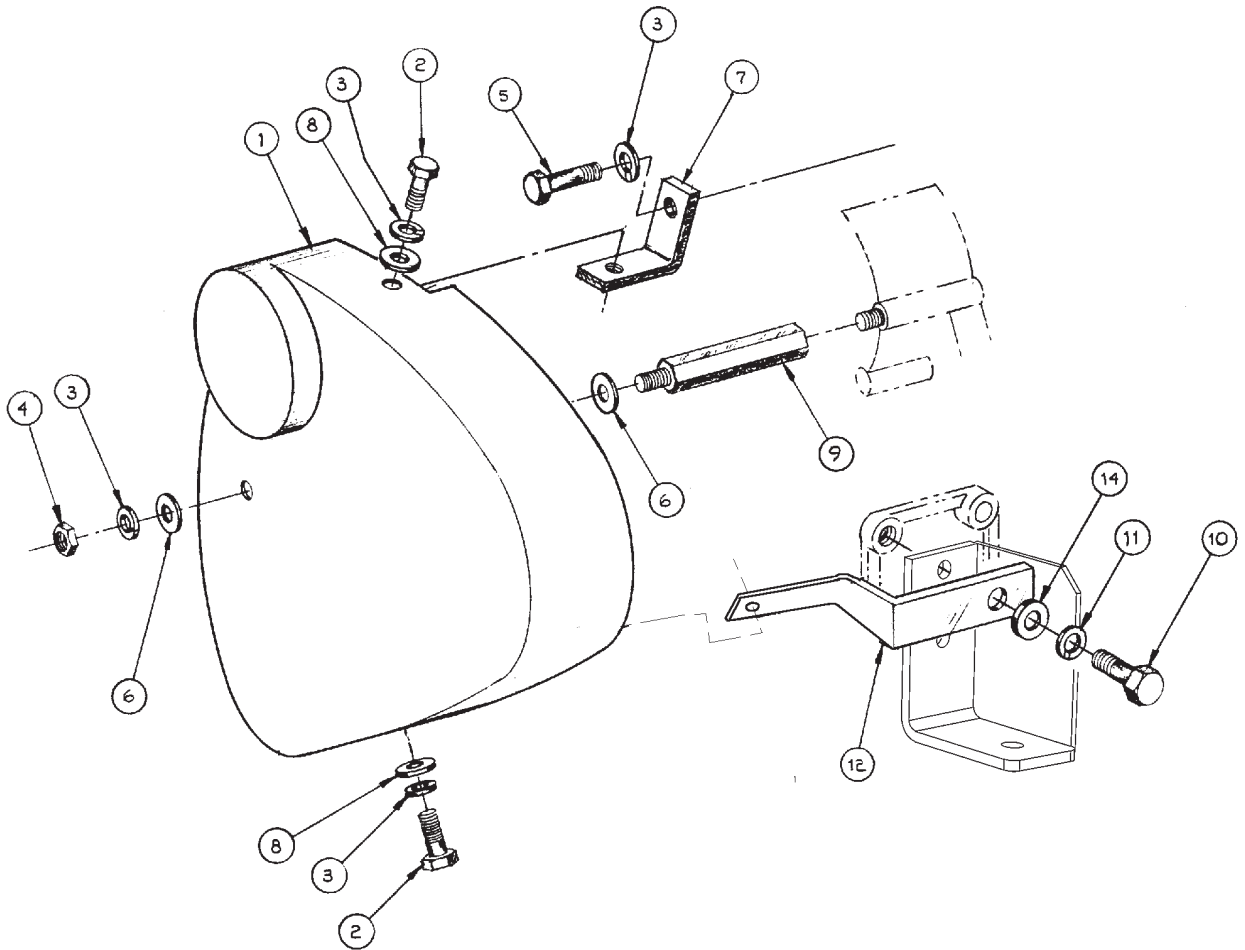


A-3208/ C-1931A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18301	1	Belt Guard	-
2	12-01102	3	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
3	15-00610	5	Lock Washer, M6 S/S	-
4	14-01132	1	Hex Nut M6 x 1.0 S/S	-
5	12-09133	1	Capscrew, Hex Head M6 x 1.0 x 60 mm S/S	-
6	15-70003	2	Snubbing Washer S/S	-
7	140976060	1	Bracket	-
8	15-01134	2	Flat Washer M6 S/S	-
9	199436340	1	Capscrew, Hex Head M6 x 1.0 x 15 mm (65 mm OAL)	-
10	12-09821	1	Capscrew, Hex Head M10 x 1.5 x 20 mm S/S	-
11	15-00808	1	Lock Washer, M10 S/S	-
12	23-08304	1	Bracket	-
13	23-08303	1	Bracket	-
14	15-09805	1	Flat Washer, M10 S/S	-

Belt Guard

Marine Application - units with engine supports installed on forward pads



A-3208/ C-1931A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-18301	1	Belt Guard	-
2	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
3	15-00610	4	Lock Washer, M6	-
4	14-01132	1	Hex Nut M6 x 1.0	-
5	12-09133	1	Capscrew, Hex Head M6 x 1.0 x 60 mm	-
6	15-70003	2	Snubbing Washer	-
7	140976060	1	Bracket	-
8	15-01134	2	Flat Washer M6 S/S	-
9	199436340	1	Capscrew, Hex Head M6 x 1.0 x 15 mm (65 mm OAL)	-
10	12-09832	1	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
11	15-00808	1	Lock Washer, M10 S/S	-
12	23-08002	1	Bracket (replaces brackets 23-08303 & 23-08304)	-
14	15-09805	1	Flat Washer, M10 S/S	-

GROUP 6 – GASKET SETS

Gasket Sets

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	195907370	1	Gasket Kit (includes all keys)	-
1	198636080	1	Rear Oil Seal	-
2	052109076	1	Oil Pipe	-
3	110996760	1	Gasket, Oil Pan	-
4	025100012	1	Seal Washer	-
5	165996490	1	Gasket, Front Plate	-
6	052109108	2	O-ring, Governor Shaft	-
7	052109110	1	O-ring	-
8	052109109	1	O-ring	-
9	198636140	1	Oil Seal	-
10	165996500	1	Gasket, Timing Gear Case	-
11	165996510	1	Gasket, Gear Case Cover	-
12	131426300	1	Adjusting Shim Set	-
13	140996260	4	Gasket	-
14	111147660	1	Head Gasket	-
15	120406080	6	Valve Guide Seal, Cylinder Head	-
16	131426200	3	Gasket, Injector Lower Side	-
17	131416210	3	Gasket, Injector Upper Side	-
18	052100100	1	O-ring, Rocker Arm Shaft	-
19	120996200	1	Gasket, Rocker Arm Bracket	-
20	111996470	1	Gasket, Head Cover	-
21	140996380	3	Gasket, Head Cover	-
22	052100400	2	O-ring, Oil Filler Cap	-
23	135996751	1	Gasket, Air Intake	-
24	145996640	1	Gasket, Coolant Pump Set Plate	-
25	145996630	1	Gasket, Coolant Pump	-
26	145996740	1	Gasket, Thermostat Housing	-
27	130516069	4	Gasket, Fuel Lift Pump Bolts	-
28	130996130	1	Gasket, Fuel Lift Pump	-
29	052109113	2	O-ring, Dipstick Guide	-
30	025100016	1	Seal Washer, Solenoid	-
31	052109078	1	O-ring, Relief Valve	-
32	130326051	5	Gasket	-
33	140996270	4	Gasket, Valve Assembly	-
34	025100006	1	Seal Washer, Air Bleed Screw	-
35	135996900	1	Gasket, Muffler Assembly	-
36	135996521	1	Gasket, Exhaust Manifold (Industrial)	-
37	135996731	1	Gasket, Exhaust Manifold (Marine)	-
38	135996550	1	Gasket, Exhaust Elbow (Marine)	-
39	052400400	1	O-ring, Raw Water Pump	-

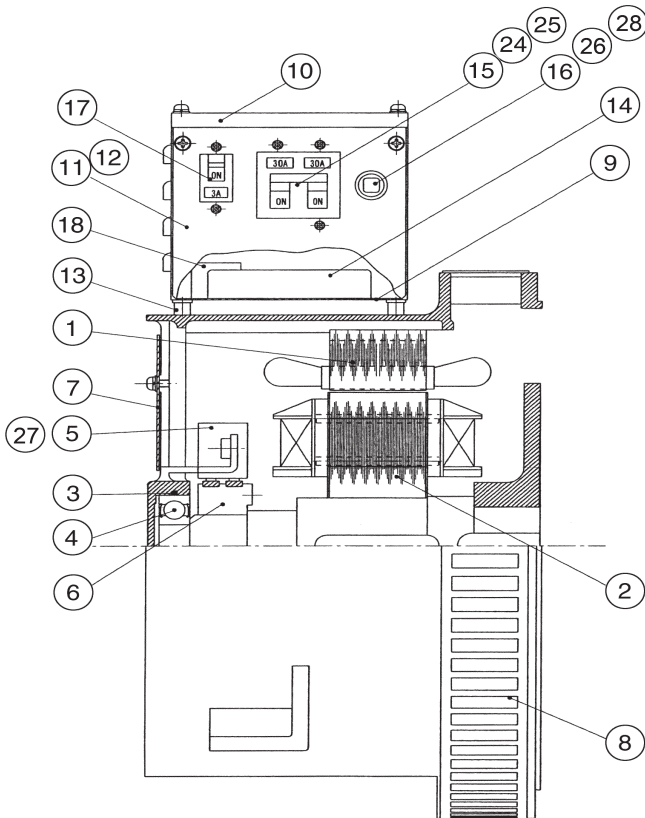
This Page Left Intentionally Blank

GROUP 7 – GENERATOR

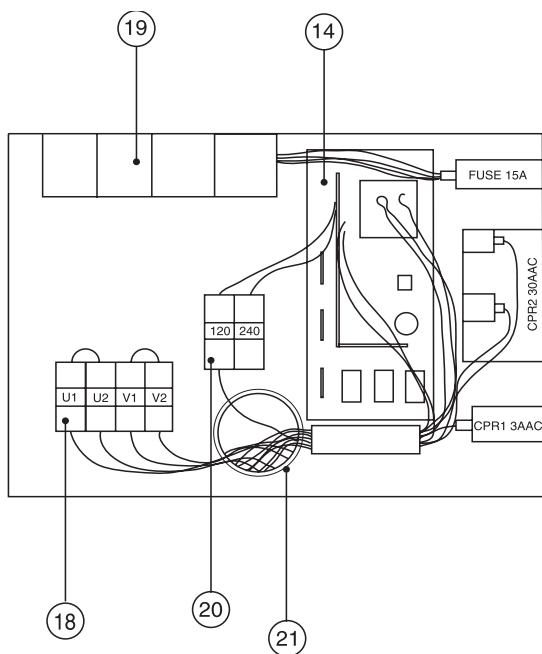
Generator Components

TF-276D { Marine - Up to S/N 6732-45984C
 Industrial - Up to S/N 6733-45822C

GENERATOR COMPONENTS:



GENERATOR JUNCTION BOX:



P673: 7-0A/7-0B

Generator Components

TF-276D { Marine - Up to S/N 6732-45984C
 Industrial - Up to S/N 6733-45822C

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	4T301-893-2	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	4T301-815-2	1	Terminal Box (Side) [formerly #4T301-815-1]	-
13	33-40007	1	Rubber Mount	-
14	22-68006	1	A.C. Voltage Regulator	-
15	22-68007	1	Circuit Protector (Generator, 30 Amp 240 VAC)	-
16	22-42043	1	Circuit Protector (Engine, 15 Amp)	-
17	22-68004	1	Circuit Protector (A.C. Regulator, 3 Amp 240 VAC)	-
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)	-
26	23-60002	1	Bracket, Circuit Protector Mounting	-
27	GM405900	1	Brush	-
28	22-40222	2	Terminal Adapter	-
29	3T302-431-2R	1	Bracket, J-Box Support, Right hand - Marine*	-
	3T302-864-2R	1	Bracket, J-Box Support, Right hand - Industrial*	-
30	3T302-431-2L	1	Bracket, J-Box Support, Left hand - Marine*	-
	3T302-864-2L	1	Bracket, J-Box Support, Left hand - Industrial*	-
			*Not shown	

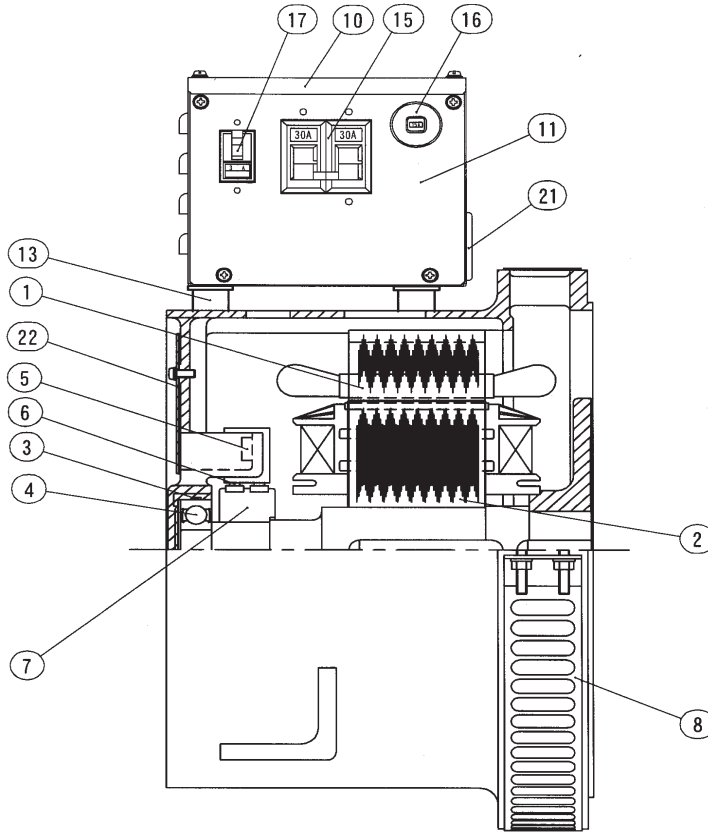
GROUP 7 – GENERATOR

Generator Components

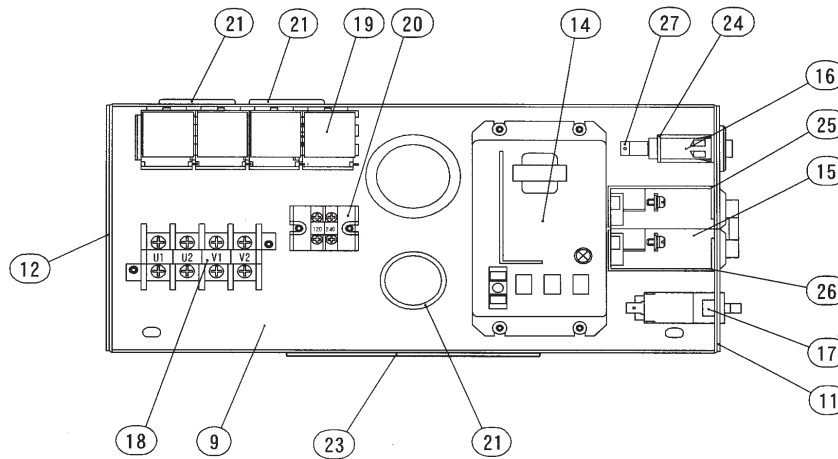
TF-276D - Marine - From S/N 6732-45985C

TF-276D-N - Industrial - From S/N 6733-45823C

GENERATOR COMPONENTS:



GENERATOR JUNCTION BOX:



Generator Components

TF-276D - Marine - From S/N 6732-45985C
TF-276D-N - Industrial - From S/N 6733-45823C

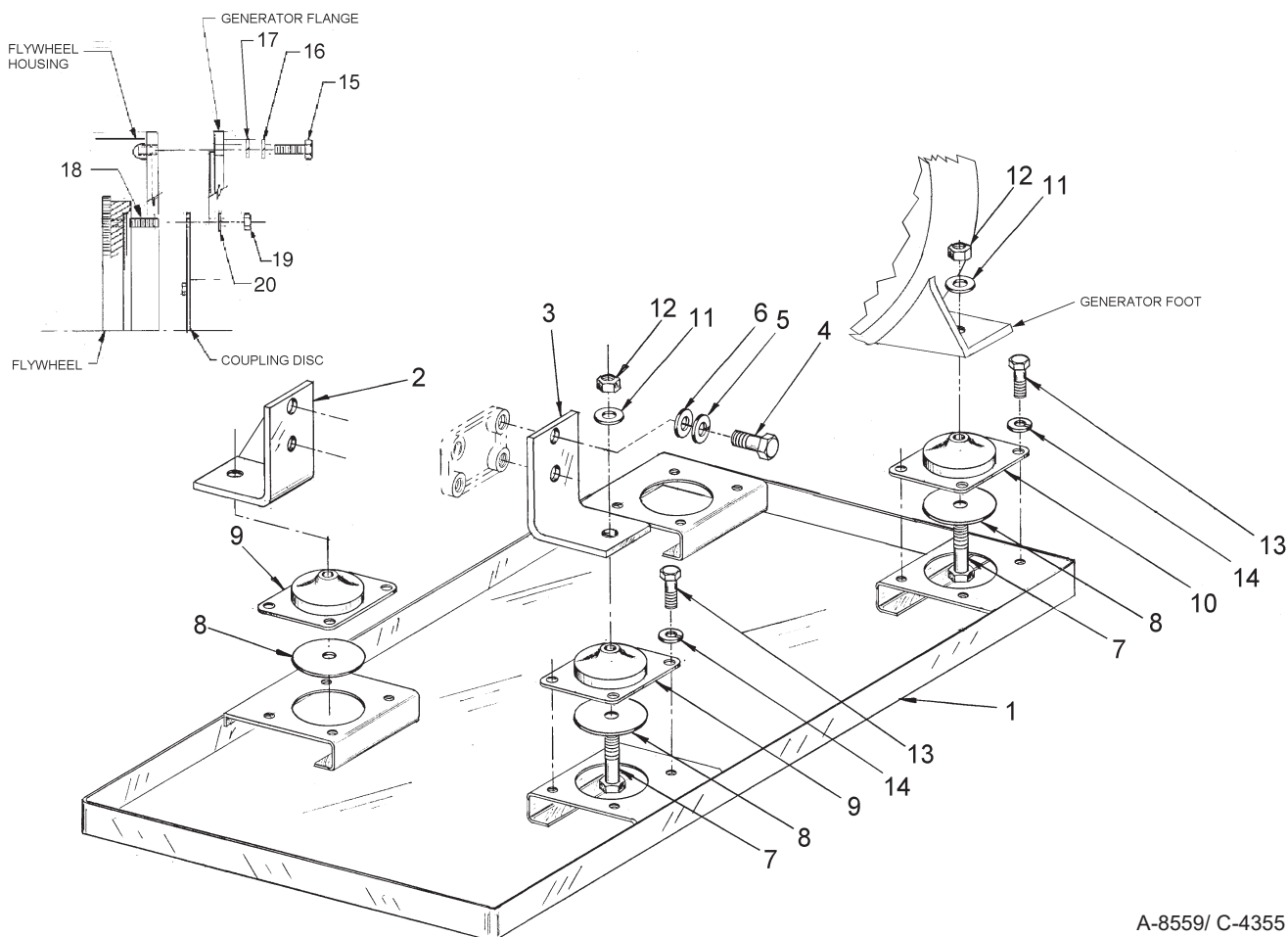
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	WKC-00079-ST	1	Stator Assembly, Single Phase	-
2	WKC-00079-RT	1	Rotor Assembly	-
3	1BG60	1	O-ring	-
4	6305ZZ	1	Ball Bearing	-
5	22-68304	1	Brush Assembly	-
6	GM405900	1	Brush	-
7	4T401-071-1	1	Slip Ring	-
8	3T301-618-2	1	Ventilation Cover - Marine	-
	3T301-567-1	1	Ventilation Cover - Industrial	-
9	3T302-440	1	Terminal Box - Marine	-
	3T303-709	1	Terminal Box - Industrial	-
10	4T302-248	1	Terminal Box (Top) - Marine	-
	4T301-108	1	Terminal Box (Top) - Industrial	-
11	4T301-815-2	1	Terminal Box (Side) [formerly #4T301-815-1] - Marine	-
	4T303-711	1	Terminal Box (Side) - Industrial	-
12	4T301-814	1	Terminal Box (Side) - Marine	-
	4T303-710	1	Terminal Box (Side) - Industrial	-
13	33-40007	1	Rubber Mount	-
14	22-68006	1	A.C. Voltage Regulator	-
15	22-68007	1	Circuit Protector (Generator, 30 Amp 240 VAC)	-
16	22-42043	1	Circuit Protector (Engine, 15 Amp)	-
17	22-68004	1	Circuit Protector (A.C. Regulator, 3 Amp 240 VAC)	-
18	TE-K14-4	1	Terminal Block (Output)	-
19	22-42047	4	Relay	-
20	TS-615-2P	1	Terminal Block	-
21	NG-79-R	3	Grommet	-
22	4T301-893-2	1	End Cover	-
23	4T303-712	1	Adaptor Plate S-1 B - Industrial	-
24	23-60002	1	Bracket, Circuit Protector Mounting (Aux Contact Side)	-
25	23-68001	1	Bracket, Circuit Protector Mounting	-
26	23-68002	1	Bracket, Circuit Protector Mounting	-
27	22-40222	2	Terminal Adapter	-
28	3T302-431-3R	1	Bracket, J-Box Support, Right hand - Marine*	-
	3T302-864-3R	1	Bracket, J-Box Support, Right hand - Industrial*	-
29	3T302-431-3L	1	Bracket, J-Box Support, Left hand - Marine*	-
	3T302-864-3L	1	Bracket, J-Box Support, Left hand - Industrial*	-
			*Not shown	

GROUP 8 – FRAME & MOUNTING

Base Frame

Marine Unit with TF-276D Generator

Up To S/N xxxx-45984C



A-8559/ C-4355

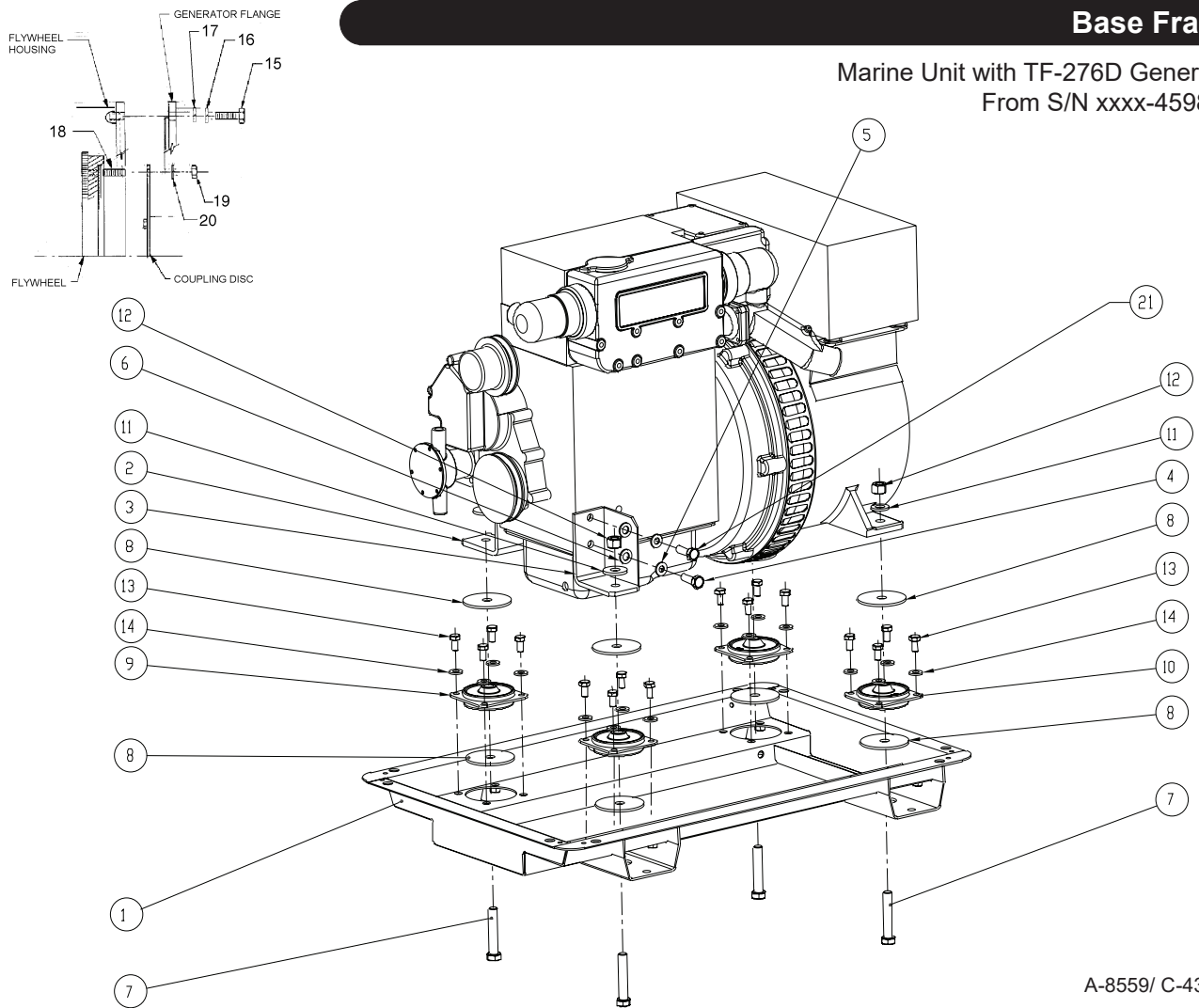
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88001	1	Base Frame	-
2	23-88001	1	Bracket, Right hand	-
3	23-88002	1	Bracket, Left hand	-
4	12-09831	4	Capscrew, Hex Head M10 x 1.5 x 25 mm, S/S	-
5	15-00808	4	Lock Washer, Helical M10, S/S	-
6	15-09805	4	Flat Washer, M10, S/S	-
7	12-09956	4	Capscrew, Hex Head M12 x 1.75 x 65 mm, S/S	-
8	15-88001	4	Snubbing Washer	-
9	33-83105	2	Platform Mount, 120 lb.	-
10	33-83105	2	Platform 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	12-09751	16	Capscrew, Hex Head M8 x 1.25 x 16 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	-

GENERATOR TO FLYWHEEL HOUSING

COUPLING

Base Frame

Marine Unit with TF-276D Generator
From S/N xxxx-45985C



A-8559/ C-4355

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88004	1	Base Frame	-
2	23-88001	1	Bracket, Right hand	-
3	23-88002	1	Bracket, Left hand	-
4	12-09831	3	Capscrew, Hex Head M10 x 1.5 x 25 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	15-88001	8	Snubbing Washer	-
9	33-83105	2	Platform Mount, 120 lb.	-
10	33-83105	2	Platform 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	12-09751	16	Capscrew, Hex Head M8 x 1.25 x 16 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	-
21	12-09831	1	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-

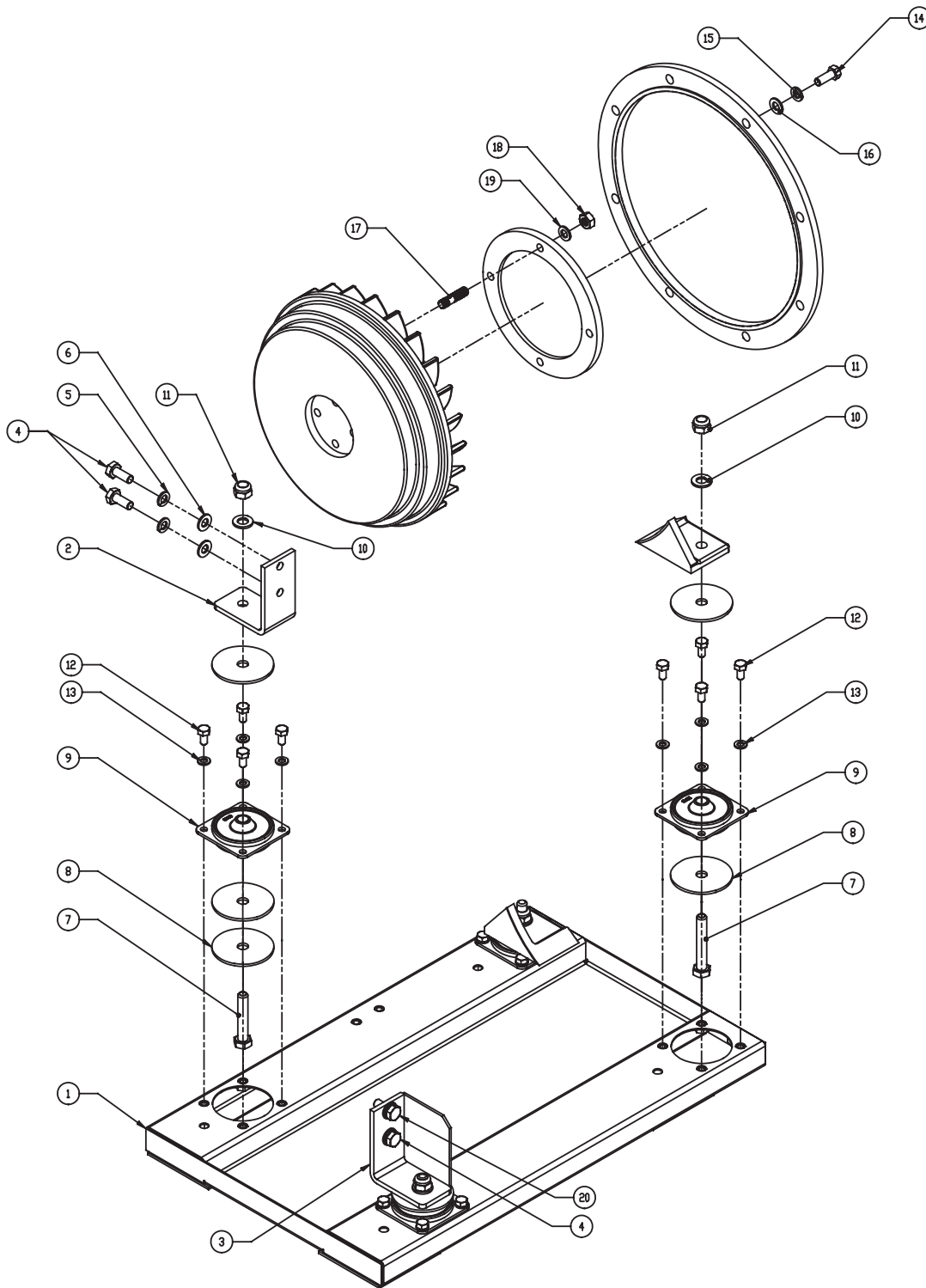
} GENERATOR TO FLYWHEEL HOUSING

} COUPLING

GROUP 8 – FRAME & MOUNTING

Base Frame

“Gem Series” Marine Unit From S/N xxxx-54637



D-5047

Base Frame

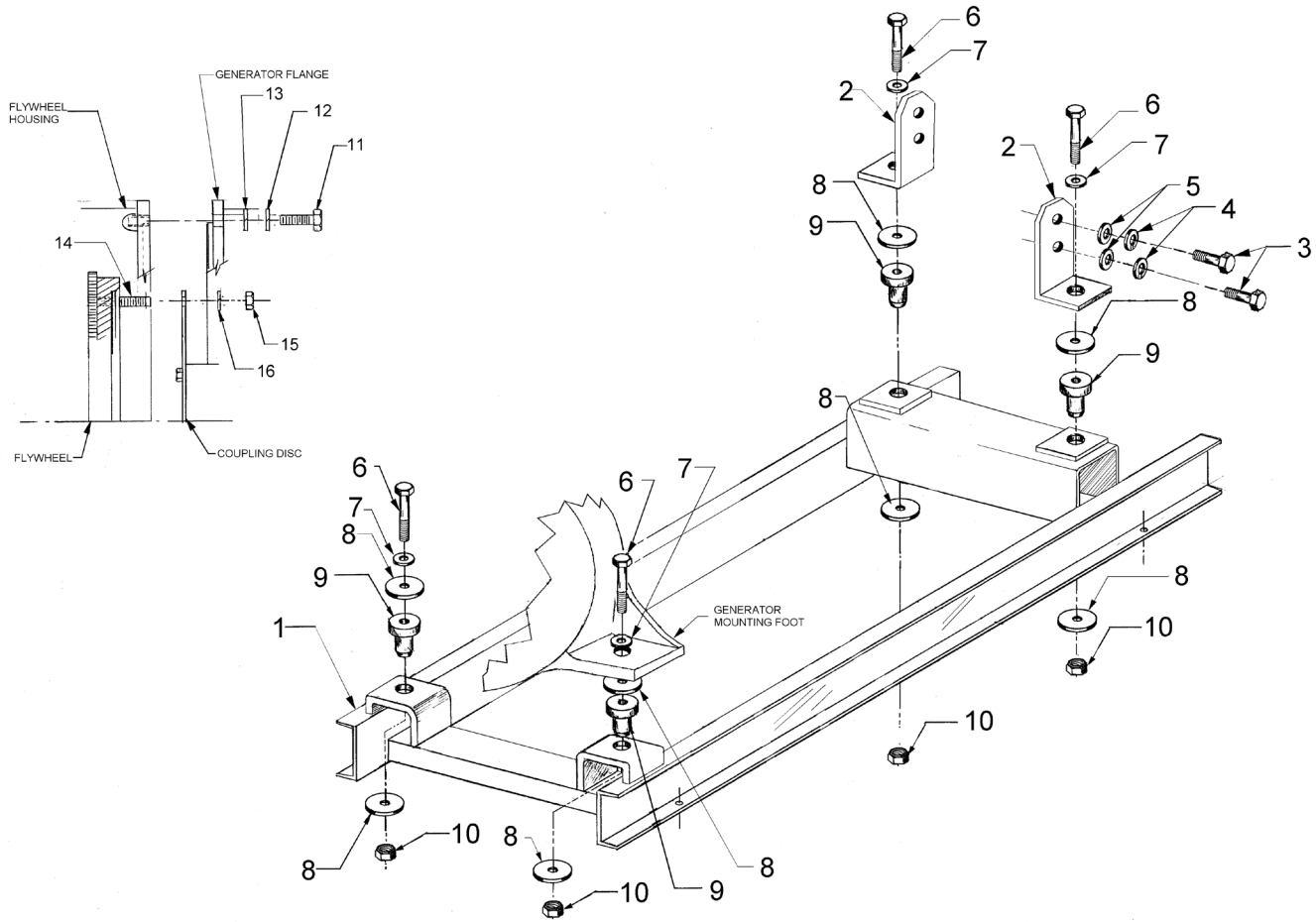
“Gem Series” Marine Unit From S/N xxxx-54637

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88008	1	Base Frame, Stainless Steel, Plateform Mtg (Gem Series)	-
2	23-88001	1	Bracket, Front Engine Mtg R.h.	-
3	23-88002	1	Bracket, Front Engine Mtg L.h. With Regulator Mtg Pad	-
4	12-09831	3	Capscrew, Hex Head M10x1.5 X 25mm 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, M12x1.75 X 65mm S/S	-
8	15-88002	10	Snubbing Washer, STL. 0.510"ID X 2.680"OD X 0.125"	-
9	33-83105	4	Flex Mount, Plateform 120 LB	-
10	15-09007	4	Flat Washer M12 S/S	-
11	14-09830	4	Hex Nut, Nylock M12x1.75 S/S	-
12	12-09751	16	Capscrew, Hex Head M8x1.25 X 16mm S/S	-
13	15-00705	16	LOCK WASHER, HELICAL M8 S/S	-
14	12-09753	6	Capscrew, Hex Head M8x1.25 X 30mm S/S	-
15	15-00705	6	LOCK WASHER, HELICAL M8 S/S	-
16	15-00706	6	Flat Washer M8 S/S	-
17	012110025	4	STUD M10x1.25 X 25mm (37mmLOA)	-
18	14-00814	4	Hex Nut M10x1.25 (17mm Hex) Property Class 8	-
19	15-00802	4	Lock Washer, Helical M10	-
20	12-09831	1	Capscrew, Hex Head M10x1.5 X 25mm	-

GROUP 8 – FRAME & MOUNTING

Base Frame

Industrial Unit with TF-276D Generator
Up to S/N #6733-47812C

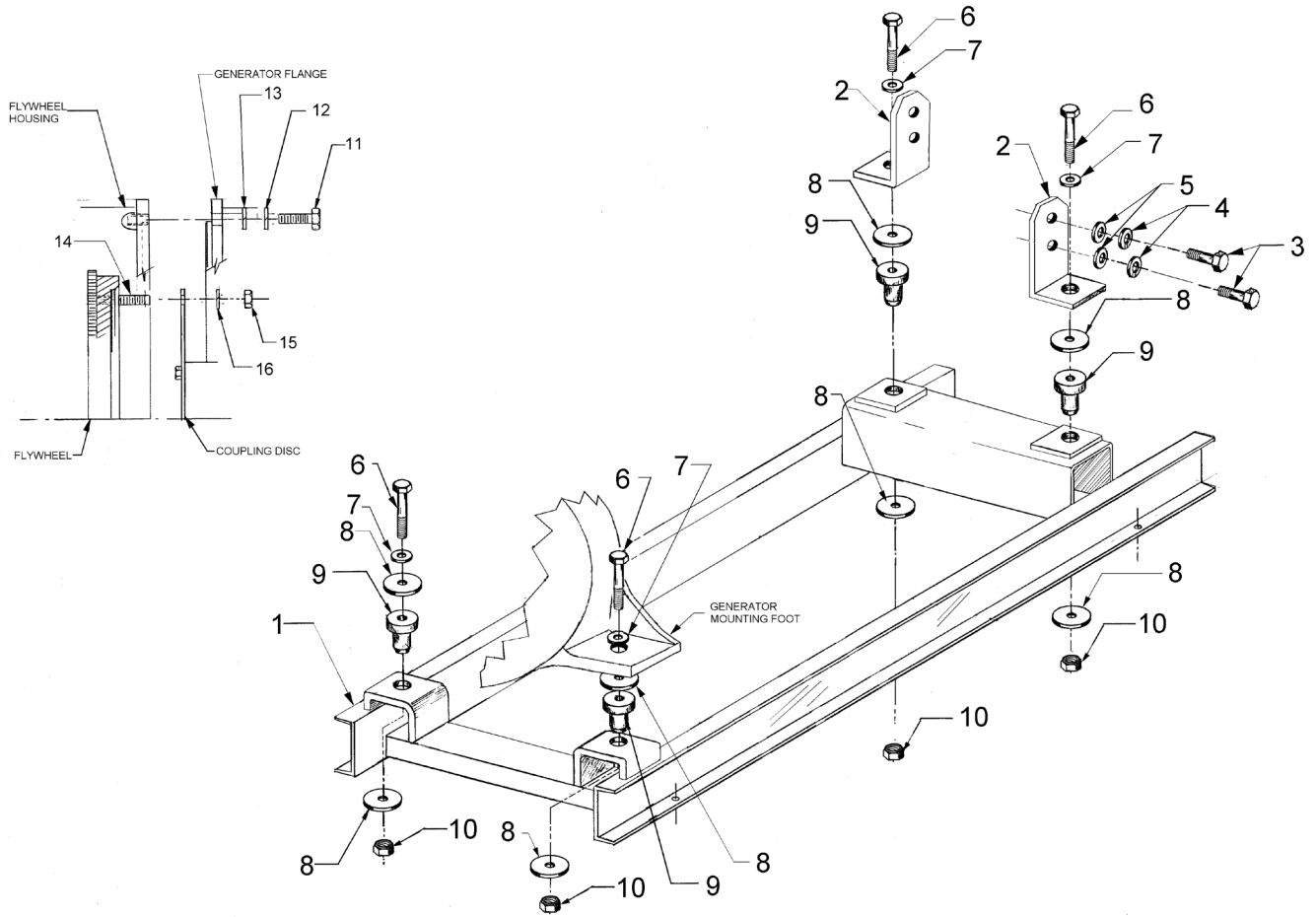


A-8649/ C-4322

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88002	1	Base Frame	-
2	23-88003	2	Bracket	-
3	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 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	15-00809	4	Flat Washer, M10 Hardened	-
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	-

Base Frame

Industrial Unit with TF-276D Generator
From S/N # 6733-47813C



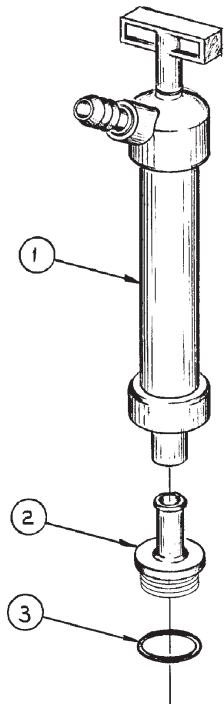
/ C-4322

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88002	1	Base Frame	-
2	23-88003	2	Bracket	-
3	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 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	15-00809	4	Flat Washer, M10 Hardened	-
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	-

GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT

Oil Drain Kit

Marine Application

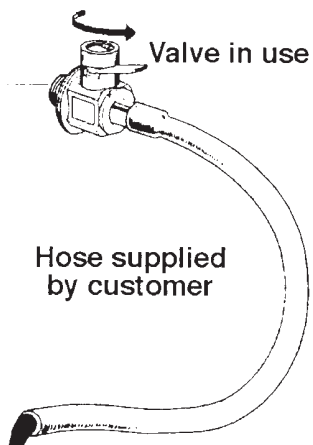


A-5024/ B-3990

••	36-70010		Oil Drain Kit Complete (includes all keys)	-
1	36-72002	1	Hand Pump	-
2	36-72030	1	Adapter Kit	-
	18-72000	1	Hose	-
	21-0003	1	Cap	-
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	-



4420 14th Ave. NW., Seattle WA 98107

Tel: (206) 789-3880 • 1-800-762-0165 • www.northern-lights.com

Northern Lights and Lugger are registered trademarks of Northern Lights, Inc.

© 2020 All rights reserved. Litho USA.