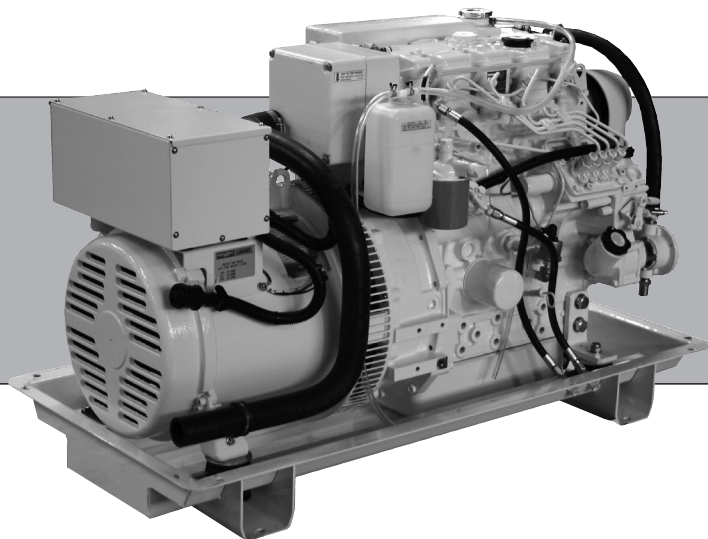




# PARTS MANUAL

## P844-3

For Models: L844D, M844W3, M844LW3,  
NL844W3, NL844LW and M20CRW3



[www.northern-lights.com](http://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](http://www.P65warnings.ca.gov/diesel).**

**Northern Lights**  
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PART NO.: P844-3 5/20



# PARTS MANUAL

## for Models L844D, M844W3, M844LW3, NL844W3, NL844LW3, AND M20CRW3

*Please read thoroughly before attempting to use this manual:*

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## MODEL DESIGNATION

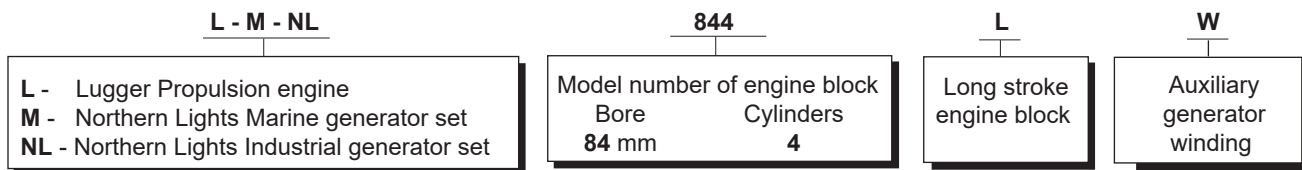
### MODELS INCLUDED

This manual covers the parts and components used in:

**L844D, M844W3, M844LW3, M20CRW3, NL844W3, and NL844LW3.**

### Model Numbers

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



**L 844D** = Luger Propulsion engine with an 844 base engine, Tier III.

**M 20CRW3** = Northern Lights 20 kW commercial grade marine diesel generator with a generator with a special winding, Tier III.

**M 844W3** = Northern Lights marine diesel generator set with an 844 engine and a generator with a special winding, Tier III.

**NL 844LW3** = Northern Lights industrial diesel generator set with an 844L engine and a radiator, Tier III.

**M 844LW3** = Northern Lights marine diesel generator with an 844 engine, long stroke, special winding generator, 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 drawings 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.

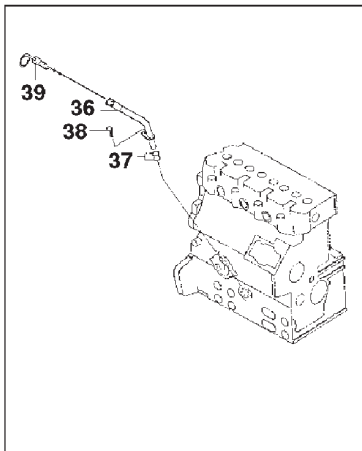
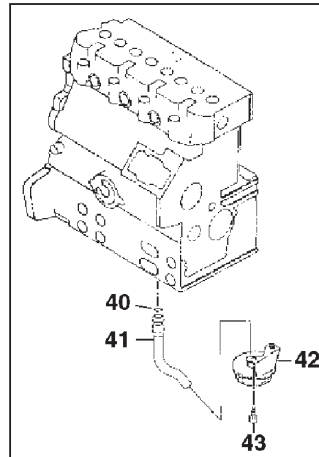
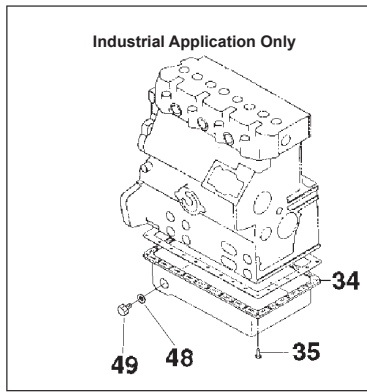
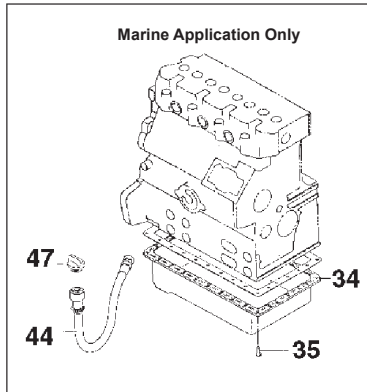
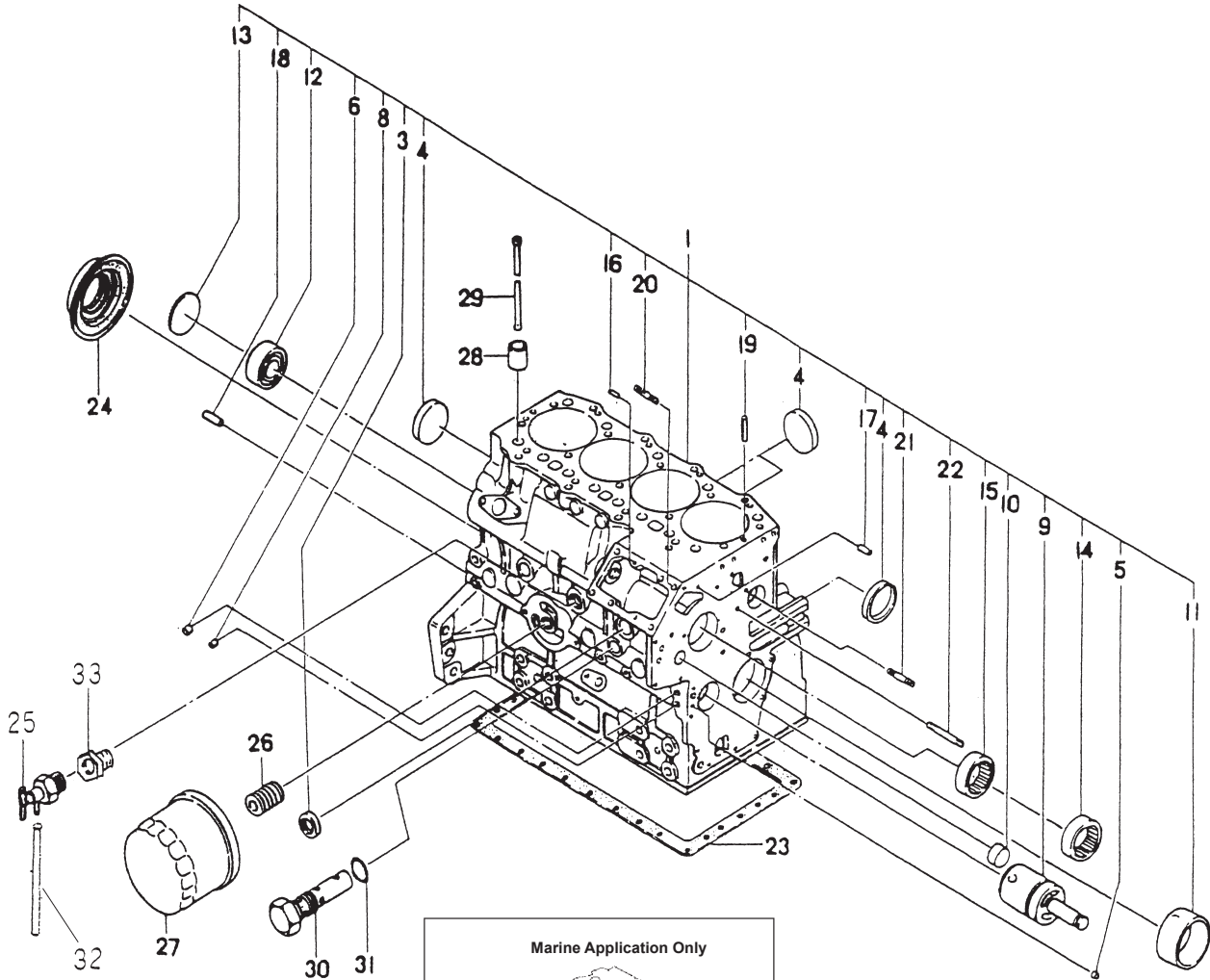
KEY	PART NUMBER	QTY.	DESCRIPTION	SERIALNUMBER
0	185046210	1	Alternator Assembly	-
1	185446219	1	Flywheel, complete	-
2	185446217	1	Plate, complete	-
3	185716200	1	Plate	-
4	185446218	1	Stator, complete	-
5	040126210	2	Bearing	-
6	020210010	1	Nut	-
7	027100010	1	Spring washer	-
8	026100010	1	Washer	-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

### 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 844



844cylblock

## Cylinder Block Assembly 844

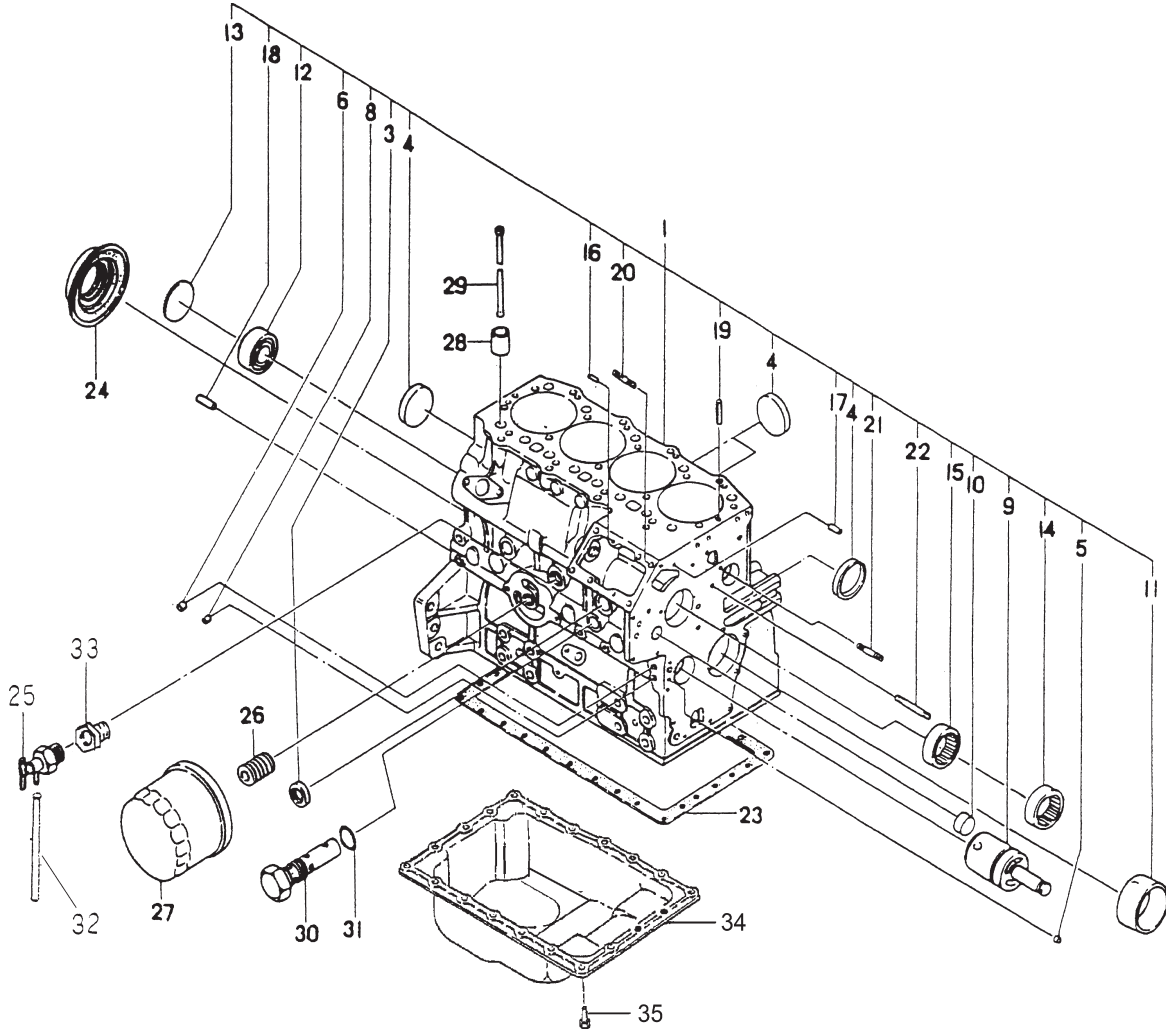
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110101480	1	Cylinder Block Assembly - Marine (includes keys #2-22)	-
	110101470	1	Cylinder Block Assembly - Industrial (includes keys #2-22)	-
3	064210025	2	Expansion Plug 25 mm	-
4	064209055	5	Expansion Plug 40 mm	-
5	198466010	3	Plug	-
6	198466020	2	Plug	-
8	198466030	4	Plug	-
9	165296260	1	Idle Gear Shaft Assembly	-
10	198466020	2	Plug	-
11	198517222	1	Bush; Standard	-
	198517226	1	Bush; Undersize 0.25 mm	-
	198517229	1	Bush; Undersize 0.50 mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug, 45 mm	-
14	042309018	1	Needle Bearing	-
15	042309017	1	Needle Bearing	-
16	030500612	2	Dowel Pin	-
17	030500616	2	Dowel Pin	-
18	030501025	2	Dowel Pin	-
19	030309005	2	Spring Pin	-
20	012110820	3	Stud M8 x 1.25 x 20 mm	-
21	13-00709	1	Stud M6 x 1.0 x 35 mm	-
22	012110660	1	Stud M6 x 1.0 x 60 mm	-
23	110996860	1	Gasket	-
24	198636170	1	Oil Seal	-
	00-02004	**	Wear Sleeve; Repair Type	-
25	198736050	1	Drain Cock	-
26	140546020	1	Filter Joint	-
27	24-02002	1	Oil Filter (Former # 24-03100)	-
28	120116160	8	Tappet	-
29	120456311	8	Push Rod	-
30	140036220	1	Relief Valve Assembly	-
31	052109078	1	O-ring	-
32	068105250	1	Tube	-
33	198486770	1	Bushing	-
34	110707731	1	Oil Pan - Marine	up to s/n xxxx-47026C
	110701300	1	Oil Pan - Marine (former # 36-72013)	from s/n xxxx-47027C
	110707751	1	Oil Pan - Industrial	-
35	010109235	30	Bolt	-
36	110756070	1	Dipstick Tube	-
37	052109113	2	O-ring	-
38	011310612	1	Bolt	-
39	198416320	1	Dipstick	-
40	052109076	1	O-ring	-
41	140986630	1	Oil Pipe	-
42	140406360	1	Suction Filter	-
43	011310612	2	Bolt	-
44	18-72004	1	Drain Hose* }	up to s/n xxxx-47026C
47	21-00003	1	Cap*	-
48	025100012	2	Seal Washer - Industrial	-
49	010411212	2	Plug M12 x 1.25 - Industrial	-

\*Marine Application Only - See Oil Drain used from serial number xxxx-47027C

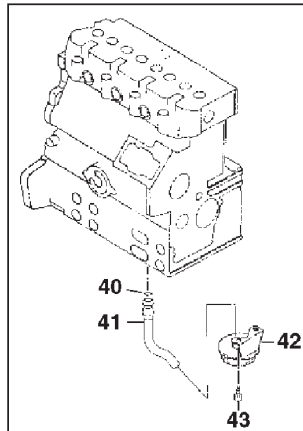
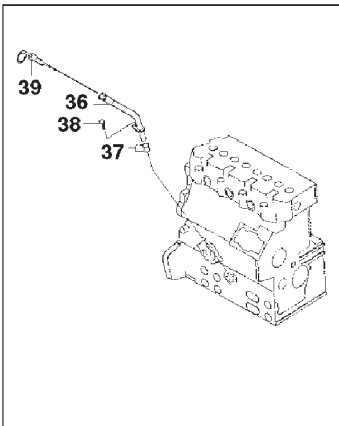
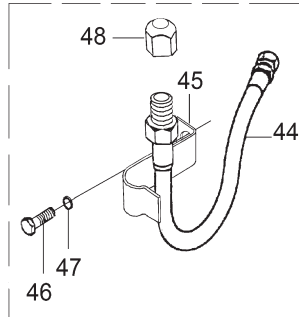
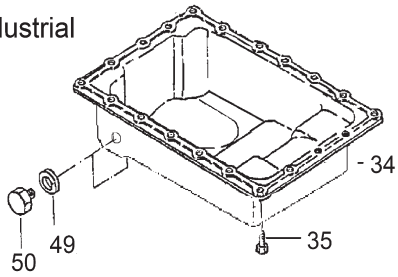
\*\*As required

GROUP 1 - ENGINE

Cylinder Block Assembly 844L, M20CRW



Industrial



844cylblock

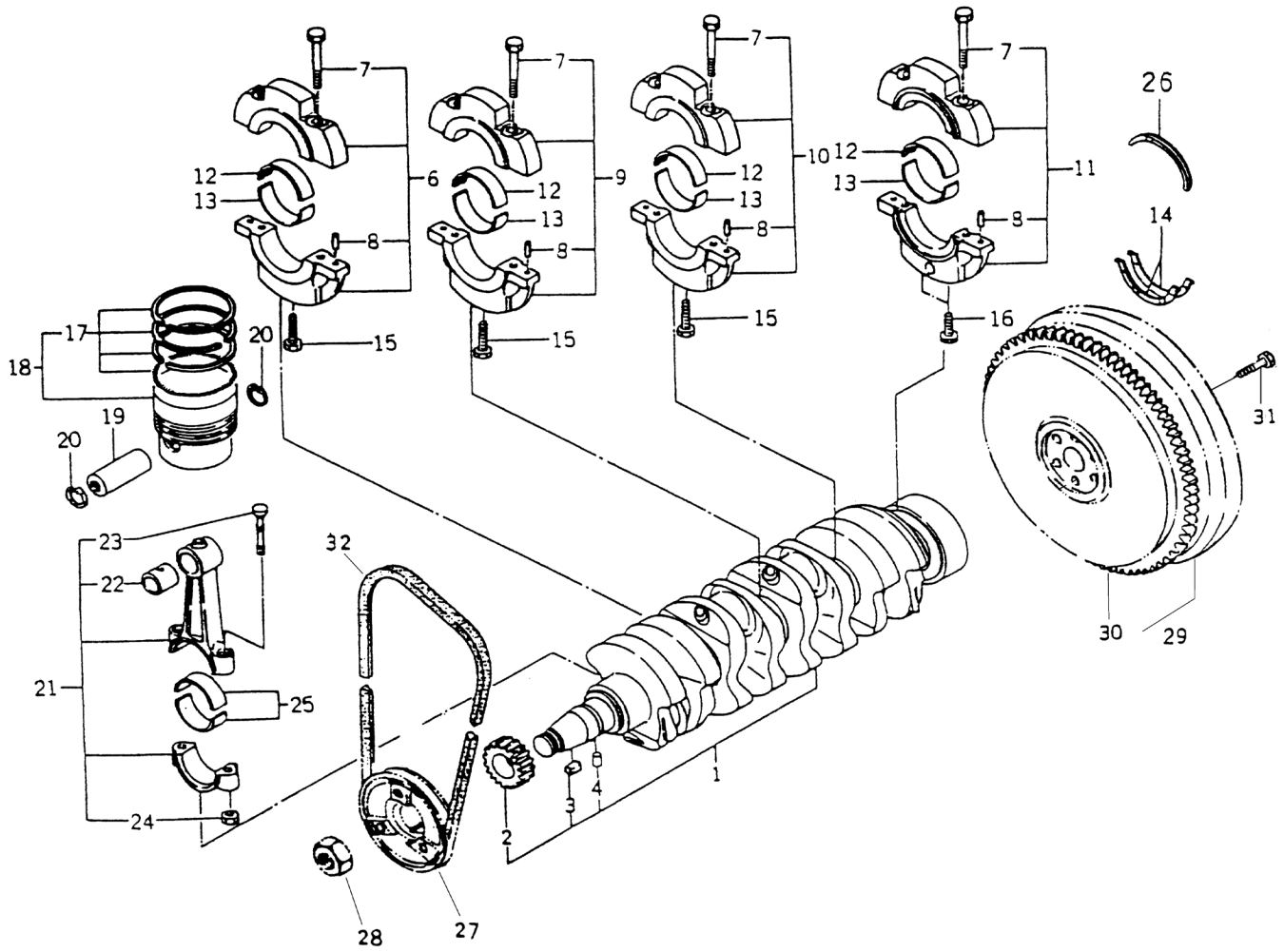


## Cylinder Block Assembly 844L, M20CRW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110101300	1	Cylinder Block Assembly - Marine (includes keys #2-22)	-
	110101320	1	Cylinder Block Assembly - Industrial (includes keys #2-22)	-
	110101460	1	Cylinder Block Assembly - Commercial (includes keys #2-22)	-
3	064210025	2	Expansion Plug 25 mm	-
4	064209055	5	Expansion Plug 40 mm	-
5	198466010	3	Plug	-
6	198466020	2	Plug	-
8	198466030	4	Plug	-
9	165296260	1	Idle Gear Shaft Assembly	-
10	198466920	2	Plug - Marine & Industrial	-
	198466020	2	Plug - Commercial	-
11	198517222	1	Bush; Standard	-
	198517226	1	Bush; Undersize 0.25 mm	-
	198517229	1	Bush; Undersize 0.50 mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug	-
14	042309018	1	Needle Bearing	-
15	042309017	1	Needle Bearing	-
16	030500612	2	Dowel Pin	-
17	030500616	2	Dowel Pin	-
18	030501025	2	Dowel Pin	-
19	030309005	2	Spring Pin	-
20	13-00709	3	Stud M8 x 1.25 x 20 mm	-
21	012110635	1	Stud M6 x 1.0 x 35 mm	-
22	012110660	1	Stud M6 x 1.0 x 60 mm	-
23	110996860	1	Gasket	-
24	050209083	1	Oil Seal	-
25	198736050	1	Drain Cock	-
26	140546020	1	Filter Joint	-
27	24-02002	1	Oil Filter (Former # 24-03100)	-
28	120116160	8	Tappet	-
29	120456311	8	Push Rod	-
30	140036220	1	Relief Valve Assembly	-
31	052109078	1	O-ring	-
32	068105250	1	Tube	-
33	198486770	1	Bushing	-
34	110707731	1	Oil Pan - Commercial (Marine only) up to s/n	xxxx-92308
	110701300	1	Oil Pan- Marine (former # 36-72013) from s/n	xxxx-92309
	110707751	1	Oil Pan - Industrial	-
	36-72014	1	Oil Pan with 3/8 NPT & M12 x 1.25 Ports	-
35	010109235	30	Bolt	-
36	110756070	1	Dipstick Tube	-
37	052109113	2	O-ring	-
38	011310612	1	Bolt	-
39	198416320	1	Dipstick	-
40	052109076	1	O-ring	-
41	140607330	1	Oil Pipe up to s/n	xxxx-92308
42	140406360	1	Suction Filter	-
43	011310612	2	Bolt	-
44	18-81004	1	Oil Drain Hose*	-
45	23-72003	1	Bracket *	-
46	12-11002	1	Capscrew, Hex Head 3/8 - 16 x 3/4" S/S *	-
47	15-00342	1	Lock Washer 3/8" S/S *	-
48	21-00003	1	Cap*	-
49	025100012	2	Seal Washer - Industrial	-
50	010411212	2	Plug M12 x 1.25 - Industrial	-

\*Marine Application Only - See Oil Drain used from serial number xxxx-47168C

# Crankshaft Assembly 844

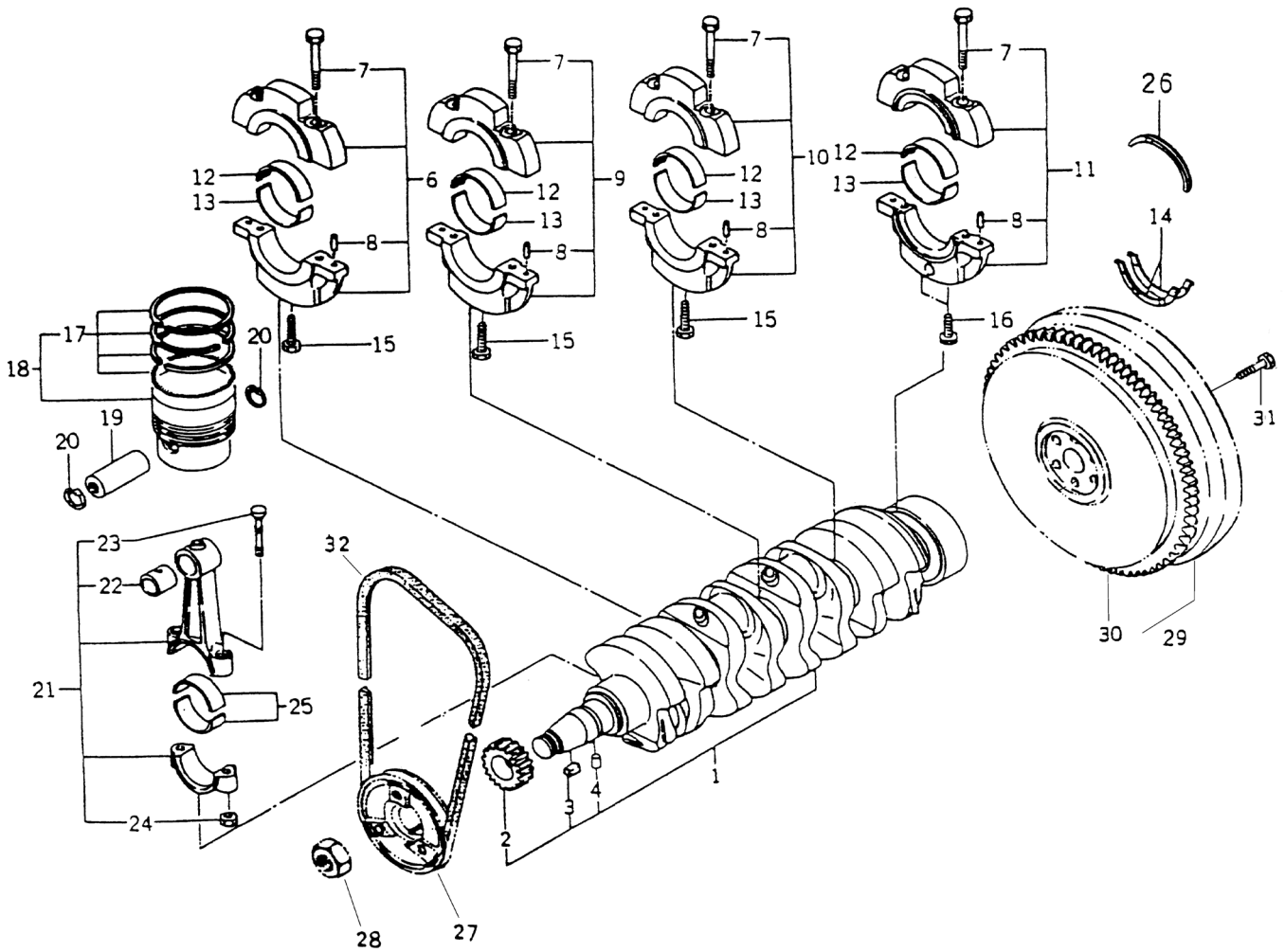


844crankshaft

## Crankshaft Assembly 844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256751	1	Crankshaft Assembly (includes keys #2 - 5)	-
2	115276270	1	Gear	-
3	034100508	1	Key	-
4	030509020	1	Dowel Pin	-
6	110156250	1	Bearing Holder Assembly (includes keys #7 - 8)	-
7	010109406	8	Bolt	-
8	030500612	8	Dowel Pin	-
9	110156171	1	Bearing Holder Assembly (includes keys #7 - 8)	-
10	110156181	1	Bearing Holder Assembly (includes keys #7 - 8)	-
11	110156191	1	Bearing Holder Assembly (includes keys #7 - 8)	-
12	198517232	4	Bearing; Standard	-
	198517236	4	Bearing; Undersize 0.25 mm	-
	198517239	4	Bearing; Undersize 0.50 mm	-
13	198517242	4	Bearing; Standard	-
	198517246	4	Bearing; Undersize 0.25 mm	-
	198517249	4	Bearing; Undersize 0.50 mm	-
14	199266200	2	Thrust Washer	-
15	010109667	3	Bolt	-
16	010700865	2	Bolt	-
17	115107970	4	Ring Kit; Standard	-
18	115017491	4	Piston Kit; Standard	-
19	115326220	4	Piston Pin	-
20	036500028	8	Snap Ring	-
21	115026330	4	Connecting Rod Assembly (includes keys #22 - 24)	-
22	198517265	4	Bushing	-
23	115176140	8	Connecting Rod Bolt	-
24	020109120	8	Nut	-
25	198517650	8	Bearing; Standard	-
	198517256	8	Bearing; Undersize 0.25 mm	-
	198517259	8	Bearing; Undersize 0.50 mm	-
26	199266210	1	Thrust Washer	-
27	115397620	1	Pulley (Marine)	-
	115396870	1	Pulley (Industrial)	-
28	020109086	1	Nut	-
29	115357050	1	Flywheel Assembly (includes key #30) SAE #7-1/2	-
30	115376040	1	Ring Gear (109 Teeth)	-
31	010109341	6	Bolt	-
32	40-02003	1	Drive Belt (see 12V/40A & 24V/24A alternators)	-
	40-02005	1	Drive Belt (see 12V/ 51A , 24V/ 35A, and 24V/ 40A alternators)	-

# Crankshaft Assembly 844L & M20CRW3



844crankshaft

## Crankshaft Assembly 844L &amp; M20CRW3

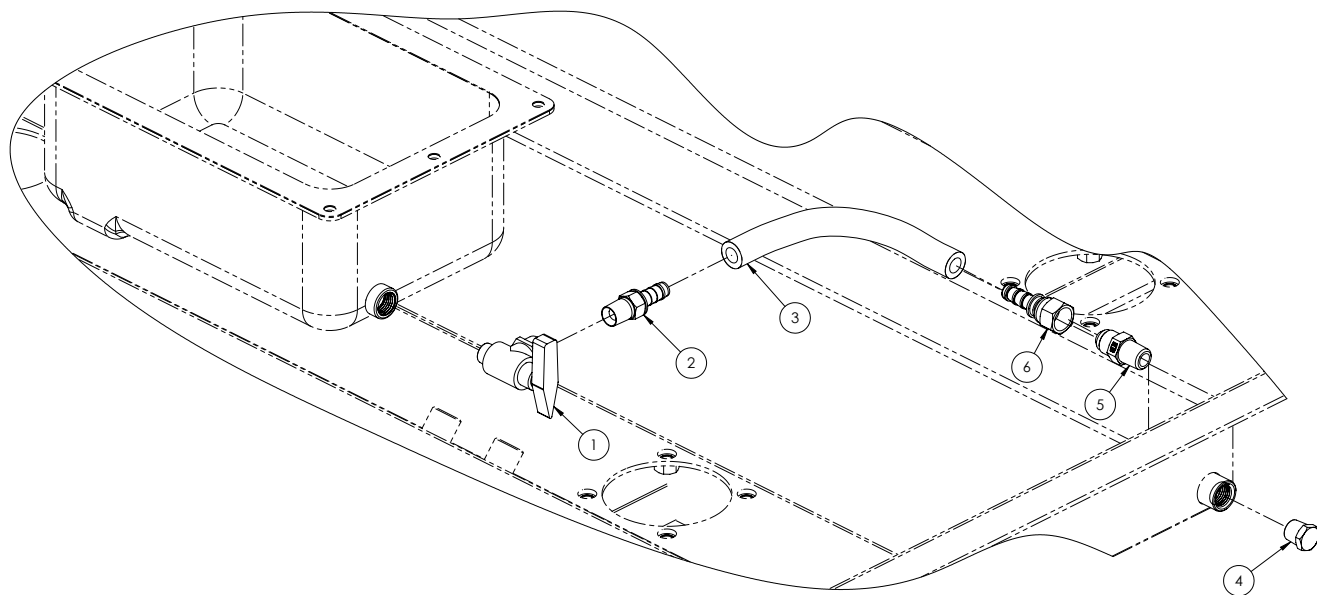
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256751	1	Crankshaft Assembly (includes keys #2 - 4)	-
2	115276200	1	Gear	-
3	034100508	1	Key	-
4	030509020	1	Dowel Pin	-
6	110156360	1	Bearing Holder Assembly (includes keys #7 - 8)	-
7	010109406	8	Bolt	-
8	030500612	8	Dowel Pin	-
9	110156370	1	Bearing Holder Assembly (includes keys #7 - 8)	-
10	110156380	1	Bearing Holder Assembly (includes keys #7 - 8)	-
11	110156390	1	Bearing Holder Assembly (includes keys #7 - 8)	-
12	198517232	4	Bearing; Standard	-
	198517236	4	Bearing; Undersize 0.25 mm	-
	198517239	4	Bearing; Undersize 0.50 mm	-
13	198517242	4	Bearing; Standard	-
	198517246	4	Bearing; Undersize 0.25 mm	-
	198517249	4	Bearing; Undersize 0.50 mm	-
14	199266200	2	Thrust Washer	-
15	011511075	3	Bolt	-
	010109667	3	Bolt	-
16	010700860	2	Bolt	-
17	115107970	4	Ring Kit; Standard	-
18	115017491	4	Piston Kit; Standard (includes key #17)	-
19	115326220	4	Piston Pin	-
20	036500028	8	Snap Ring	-
21	115026330	4	Connecting Rod Assembly (includes keys #22 - 24)	-
22	198517265	4	Bushing	-
23	115176140	8	Connecting Rod Bolt	-
24	020109120	8	Nut	-
25	198517650	8	Bearing; Standard	-
	198517256	8	Bearing; Undersize 0.25 mm	-
	198517259	8	Bearing; Undersize 0.50 mm	-
26	199266210	1	Thrust Washer	-
27	115397620	1	Pulley (Marine)	-
	115396870	1	Pulley (Industrial)	-
	115396860	1	Pulley (Commercial)	-
28	020109086	1	Nut	-
29	115357470	1	Flywheel Assembly (includes key #30) SAE #7-1/2	-
30	115376160	1	Ring Gear (126 Teeth)	-
31	010109341	6	Bolt	-
32	40-08401	1	Drive Belt (see 12V/40A & 24V/24A alternators)	-
	40-74501	1	Drive Belt (see 12V/ 51A, 24V/ 35A, and 24V/ 40A alternators)	-

GROUP 1 – ENGINE

**Kit, Oil Drain and Valve**

M844 From S/N xxxx-47027C

M844L From S/N xxxx-47168C



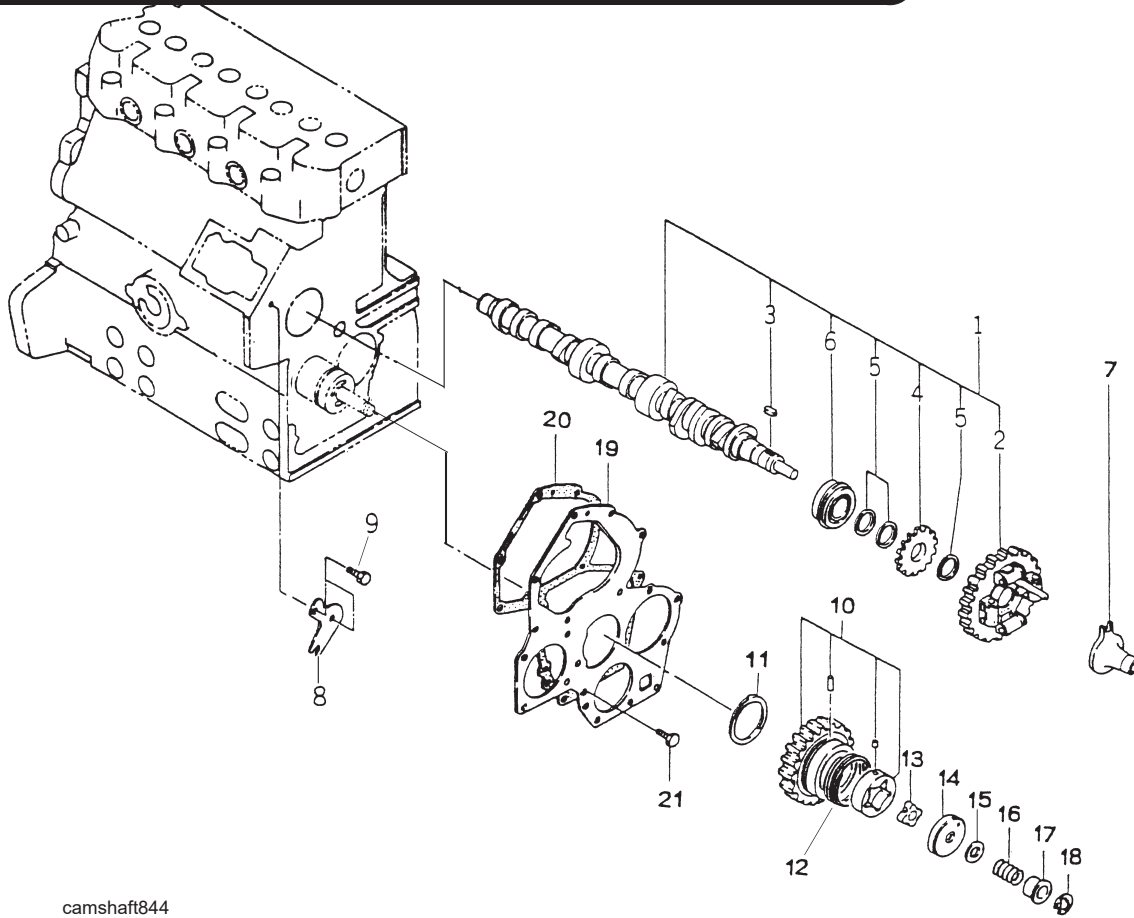
B-9826

KEY	PART NUMBER	QTY	DESCRIPTION	S/N
1	36-72012	1	Ball valve, Brass 90 Deg 1/4NPT Male X 1/4NPT Female	-
2	21-71203	1	Male Connector Brass 1/4NPT X 3/8HB Push-On	-
3	18-71207	1	Hose 3/8"ID X 7" Push-On	-
4	21-31624	1	Plug, Hex Head, Brass 1/4NPT	-
5	21-00612	1	Male Connector, Stl. 1/4NPT X 3/8-37T	-
6	21-71034	1	Female Swivel, Brass. 3/8HB X 3/8-37T Push-On	-



GROUP 1 – ENGINE

Camshaft & Oil Pump

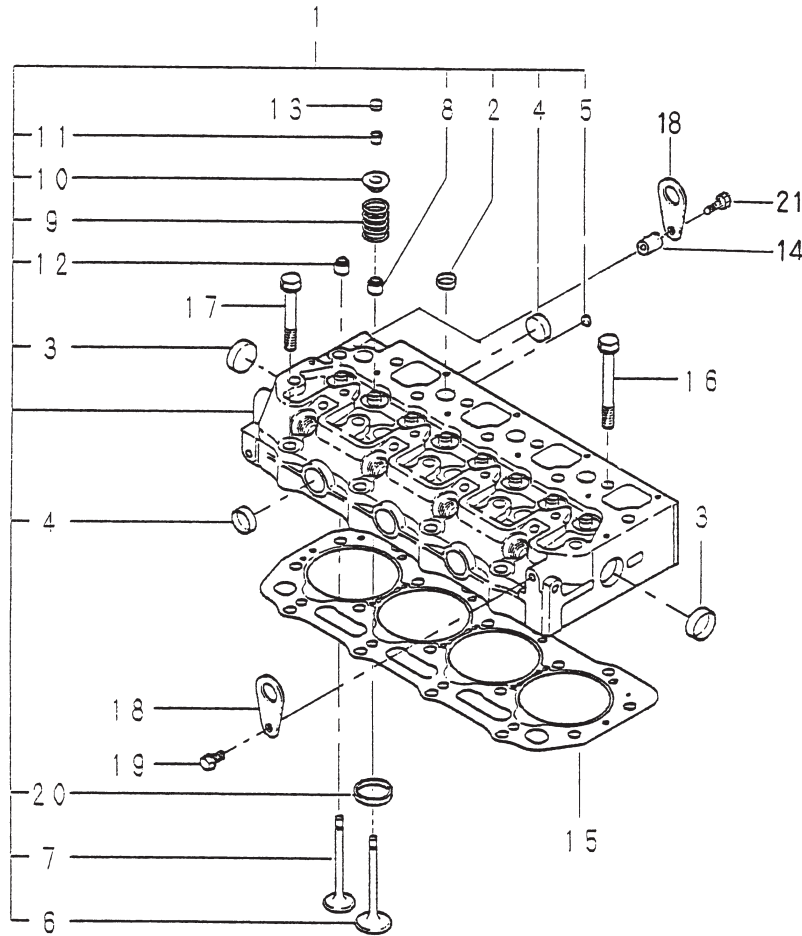


camshaft844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120026320	1	Camshaft Assembly (includes keys #2 - 6)	-
2	120016050	1	Cam Gear	-
3	034100508	1	Key	-
4	120736081	1	Gear	-
5	199216230	3	Spacer	-
6	040109057	1	Bearing	-
7	125256120	1	Slider	-
8	199566750	1	Plate	-
9	011310612	2	Bolt	-
10	165026400	1	Idler Gear Assembly (includes key #12)	-
11	199266270	1	Thrust Washer	-
12	198217760	1	Spring	-
13	140166380	1	Rotor	-
14	140116220	1	Oil Pump Cover	-
15	199286150	1	Shim, t=0.10	-
	199286160	1	Shim, t=0.15	-
	199286170	1	Shim, t=0.20	-
	199286180	1	Shim, t=0.50	-
16	198216720	1	Spring	-
17	199236540	1	Collar	-
18	036800010	1	Snap Ring	-
19	165166640	1	Front Plate (844 & 844L Marine & Propulsion)	-
	165166630	1	Front Plate (844 & 844L Industrial)	-
	165166650	1	Front Plate (844L Commercial)	-
20	165996540	1	Gasket	-
21	011310612	2	Bolt	-



**Cylinder Head 844**

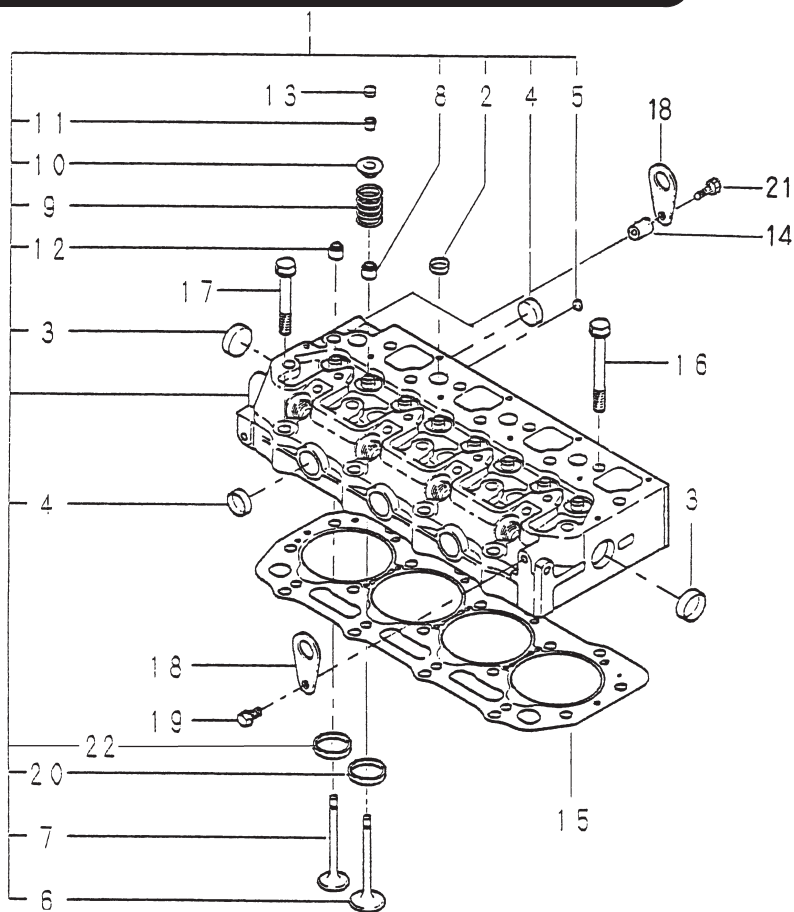


cylhead844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL #
1	111011430	1	Cylinder Head Assembly (Marine & Propulsion, includes keys #2 -12, & 20)	-
	111011420	1	Cylinder Head Assembly (Industrial, includes keys #2-12, & 20)	-
2	064210018	7	Expansion Plug, 18 mm	-
3	064210030	2	Expansion Plug, 30 mm	-
4	064210025	6	Expansion Plug, 25 mm	-
5	064210010	3	Expansion Plug, 10 mm	-
6	120166380	4	Intake Valve (former # 120166350)	-
7	120176380	4	Exhaust Valve (former # 120176360)	-
8	120406070	4	Valve Guide Seal - Intake	-
9	198216700	8	Spring	-
10	120186080	8	Retainer	-
11	120226070	16	Keeper	-
12	120406050	4	Valve Guide Seal - Exhaust	-
13	120216041	8	Cap	-
14	199236680	1	Spacer (Marine)	-
15	111147510	1	Head Gasket; t = 1.2 mm	-
	111147520	1	Head Gasket; t = 1.3 mm	-
16	111136480	14	Head Bolt	-
17	111136490	4	Head Bolt	-
18	195816540	2	Lifting Eye (Marine & Propulsion)	-
	195816030	1	Lifting Eye (Industrial)	-
19	011510816	1	Bolt	-
20	110136400	4	Valve Seat, Intake	-
21	011510830	1	Bolt (Marine & Propulsion)	-

GROUP 1 – ENGINE

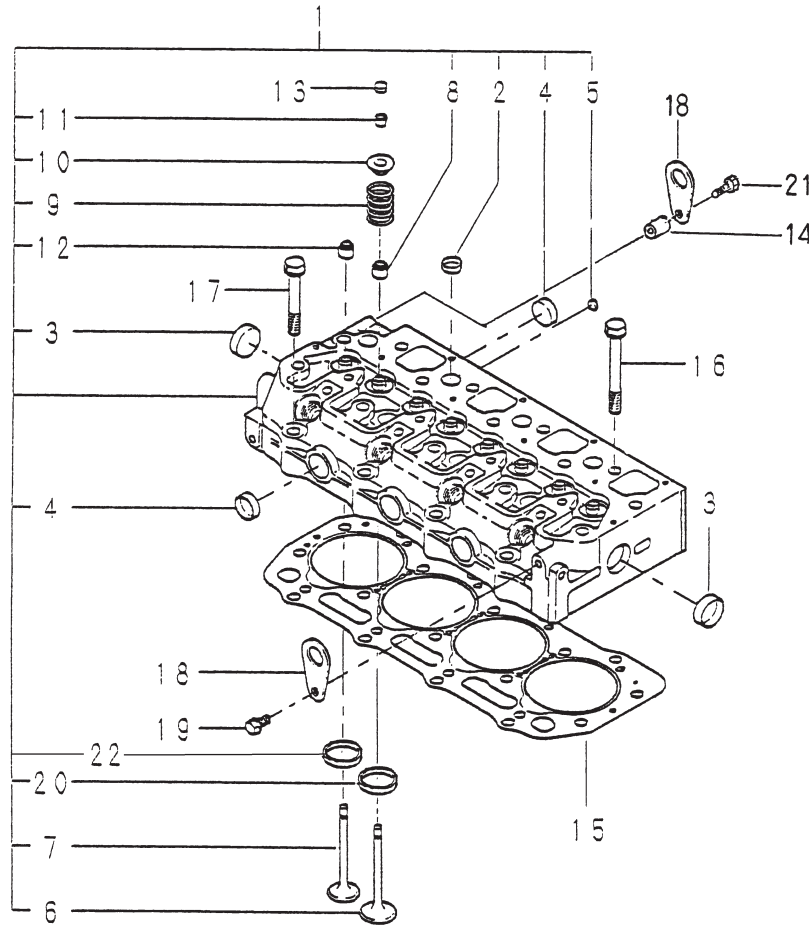
**Cylinder Head 844L**



cylhead844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL #
1	111011270	1	Cylinder Head Assembly (Marine, includes keys #2 -12, 20, & 22)	-
	111011290	1	Cylinder Head Assembly (Industrial, includes keys #2-12, 20, & 22)	-
2	064210018	7	Expansion Plug, 18 mm	-
3	064210030	2	Expansion Plug, 30 mm	-
4	064210025	6	Expansion Plug, 25 mm	-
5	064210010	3	Expansion Plug, 10 mm	-
6	120166380	4	Intake Valve (former # 120166350)	-
7	120176380	4	Exhaust Valve (former # 120176360)	-
8	120406070	4	Valve Guide Seal - Intake	-
9	198216700	8	Spring	-
10	120186080	8	Retainer	-
11	120226070	16	Keeper	-
12	120406050	4	Valve Guide Seal - Exhaust	-
13	120216041	8	Cap	-
14	199236680	1	Spacer (Marine)	-
15	111147751	1	Head Gasket; t = 1.1 mm	-
	111147761	1	Head Gasket; t = 1.2 mm	-
	111147771	1	Head Gasket; t = 1.3 mm	-
16	111136480	14	Head Bolt	-
17	111136490	4	Head Bolt	-
18	195816540	2	Lifting Eye (Marine)	-
	195816030	1	Lifting Eye (Industrial)	-
19	011510816	1	Bolt	-
20	110136400	4	Valve Seat, Intake	-
21	011510830	1	Bolt (Marine)	-
22	110136435	4	Valve Seat, Exhaust	-

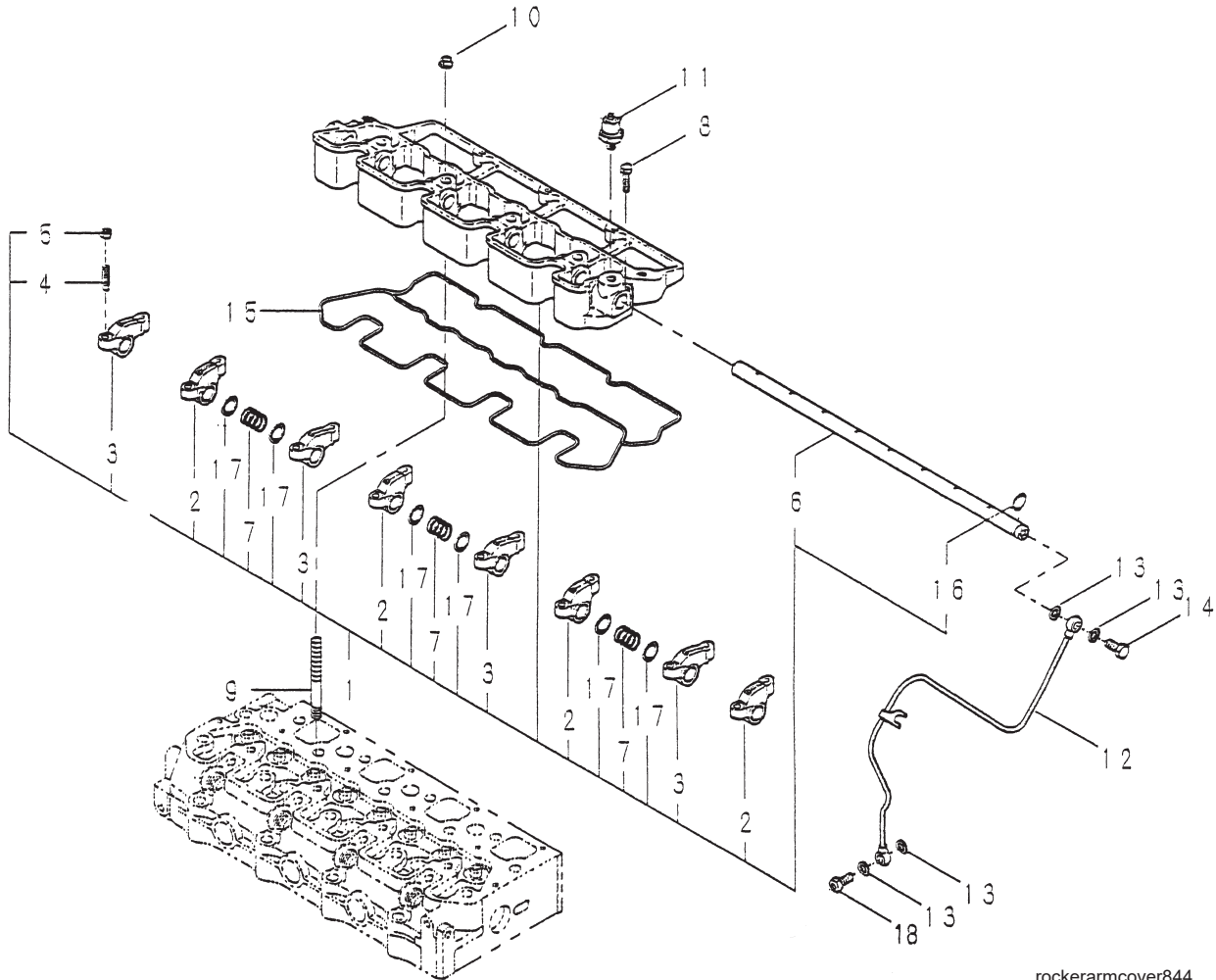
**Cylinder Head M20CRW3**



cylhead844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL #
1	111011520	1	Cylinder Head Assembly (Marine, includes keys #2 -12, 20, & 22)	-
2	064210018	7	Expansion Plug, 18 mm	-
3	064210030	2	Expansion Plug, 30 mm	-
4	064210025	6	Expansion Plug, 25 mm	-
5	064210010	3	Expansion Plug, 10 mm	-
6	120166380	4	Intake Valve (former # 120166350)	-
7	120176380	4	Exhaust Valve (former # 120176360)	-
8	120406070	4	Valve Guide Seal - Intake	-
9	198216700	8	Spring	-
10	120186080	8	Retainer	-
11	120226070	16	Keeper	-
12	120406050	4	Valve Guide Seal - Exhaust	-
13	120216041	8	Cap	-
15	111147751	1	Head Gasket; t = 1.1 mm	-
	111147761	1	Head Gasket; t = 1.2 mm	-
	111147771	1	Head Gasket; t = 1.3 mm	-
16	111136480	14	Head Bolt	-
17	111136490	4	Head Bolt	-
18	195816200	2	Lifting Eye	-
19	011510816	1	Bolt	-
20	110136400	4	Valve Seat, Intake	-
22	110136435	4	Valve Seat, Exhaust	-

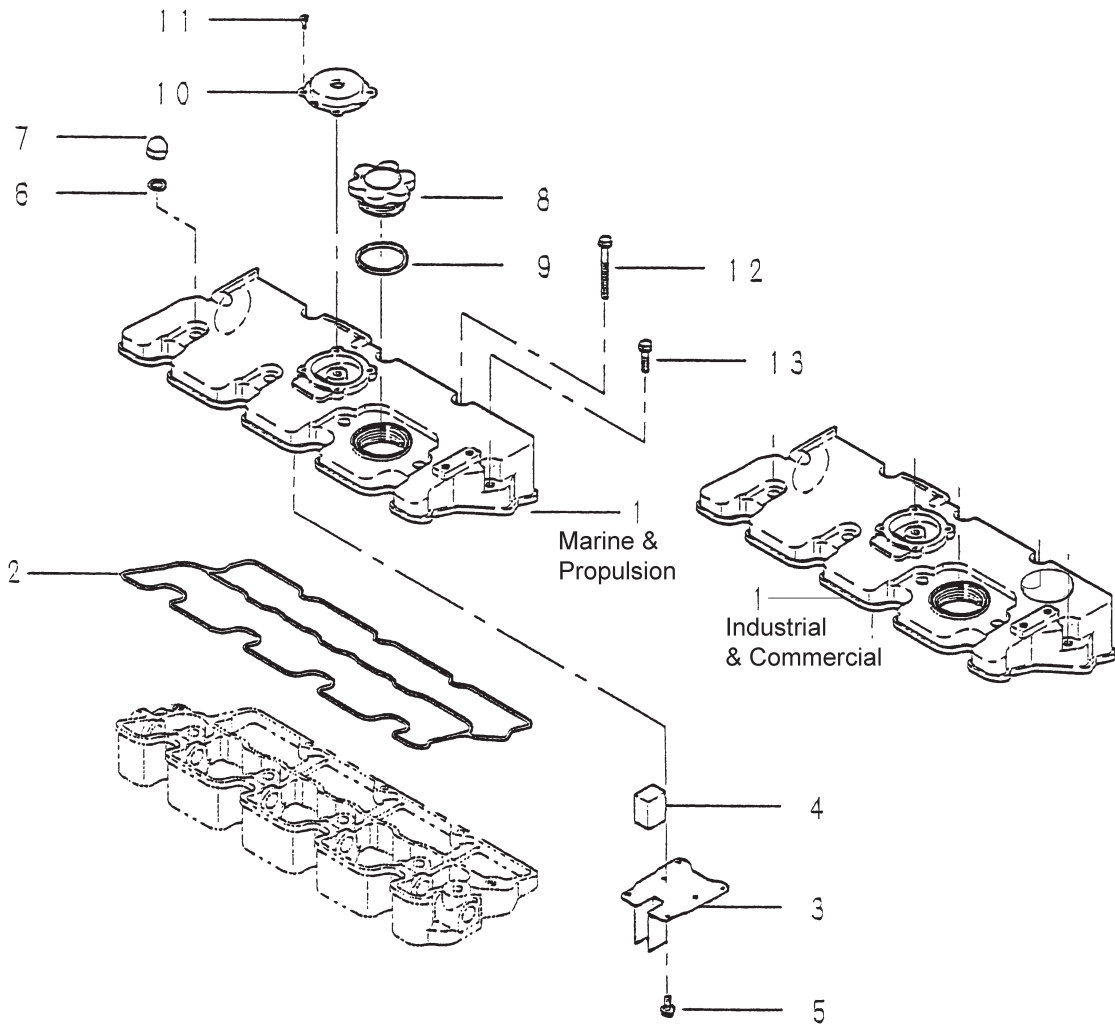
# Rocker Arm Assembly



rockerarmcover844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120036950	1	Rocker Arm Assembly (Marine & Propulsion, includes keys 2-7, 16, & 17)	-
	120036960	1	Rocker Arm Assembly (Industrial, includes keys 2-7, 16, & 17)	-
	120036830	1	Rocker Arm Assembly (Commercial, includes keys 2-7, 16, & 17)	-
2	120356131	4	Rocker Arm - Intake	-
3	120356141	4	Rocker Arm - Exhaust	-
4	199486220	8	Screw	-
5	020109076	8	Nut	-
6	120316201	1	Rocker Arm Shaft	-
7	198217170	3	Spring	-
8	011310635	2	Bolt	-
9	012109044	4	Stud Bolt	-
10	023100010	4	Nut	-
11		1	Oil Pressure Switch (see Electrical)	-
12	140606720	1	Oil Pipe (844)	-
	140607020	1	Oil Pipe (844L & M20CRW3)	-
13	140996260	4	Gasket	-
14	198486780	1	Banjo Bolt	-
15	120996130	1	Gasket	-
16	052109076	1	O-ring	-
17	199280300	6	Shim	-
18	198487590	1	Banjo Bolt (tapped 1/8 NPT)	-

**Rocker Arm Cover**

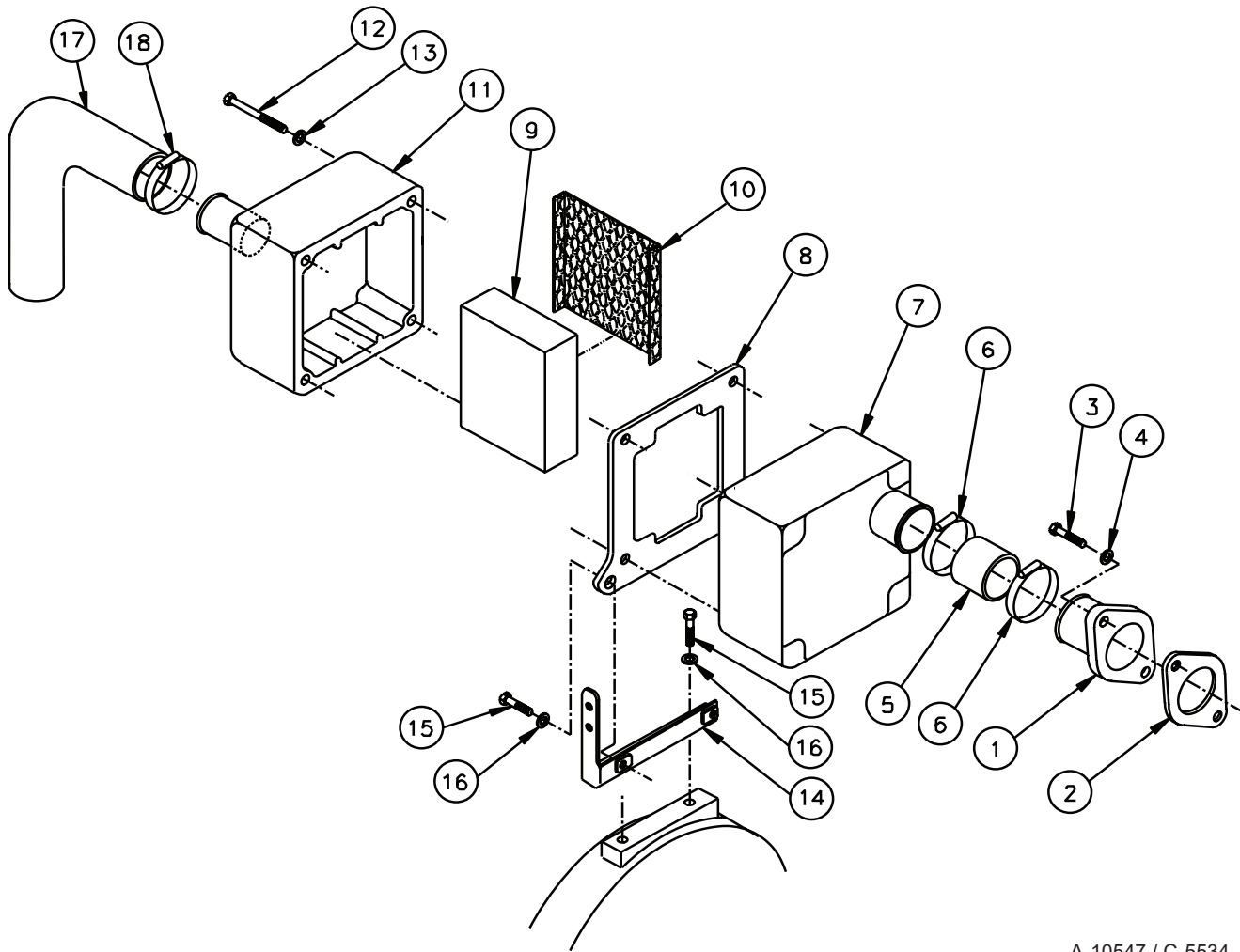


rockercover844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111217431	1	Rocker Arm Cover (844- 844L Marine & Propulsion)(former #111217650)	-
	111217710	1	Rocker Arm Cover (844 - 844L Industrial)	-
	111217620	1	Rocker Arm Cover (844L Commercial)	-
2	111996401	1	Gasket	-
3	110666210	1	Baffle	-
4	110666060	1	Breather Element	-
5	015600406	6	Screw	-
6	140996270	4	Gasket	-
7	024600010	4	Cap Nut	-
8	198436010	1	Cap	-
9	052100400	1	O-ring	-
10	110566080	1	Valve, Breather	-
11	011100408	4	Bolt	-
12	011310660	3	Bolt	-
13	011310640	2	Bolt	-

**Air Filter and Housing**

L844

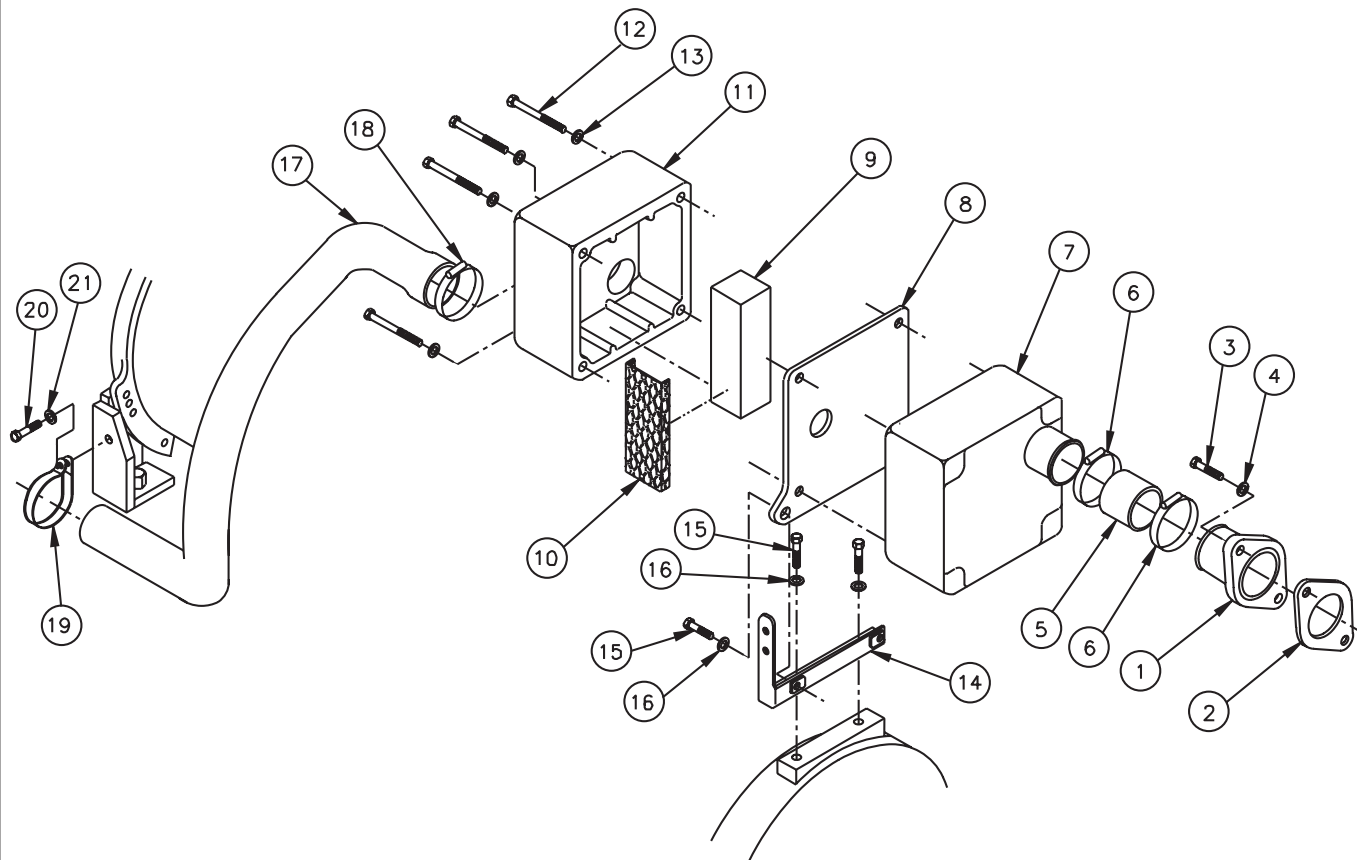


A-10547 / C-5534

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-28104	1	Connector, Air Inlet	-
2	135996951	1	Gasket, Air Intake Mounting	-
3	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
4	15-99131	2	Wave Washer M6 S/S	-
5	18-22002	1	Hose 1-3/4" ID x 2-1/4"	-
6	19-01028	2	Hose Clamp #28	-
7	10-28106	1	Front Cover, Air Filter Housing	-
8	28-28103	1	Plate, Housing Separater	-
9	24-28102	1	Element, Air Filter	-
10	24-28103	1	Screen, Air Filter Retaining	-
11	10-28103	1	Rear Cover, Air Filter Housing	-
12	12-09132	4	Capscrew, Hex Head M6 x 1.0 x 85 mm S/S	-
13	15-99131	4	Wave Washer M6 S/S	-
14	23-22001	1	Bracket, Air Filter Support	-
15	12-09751	4	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
16	15-99707	4	Wave Washer M8 S/S	-
17	18-28103	1	Hose, Air Intake	-
18	19-01028	1	Hose Clamp #28 Extended Band S/S	-

**Air Filter and Housing**

M844 & M844L

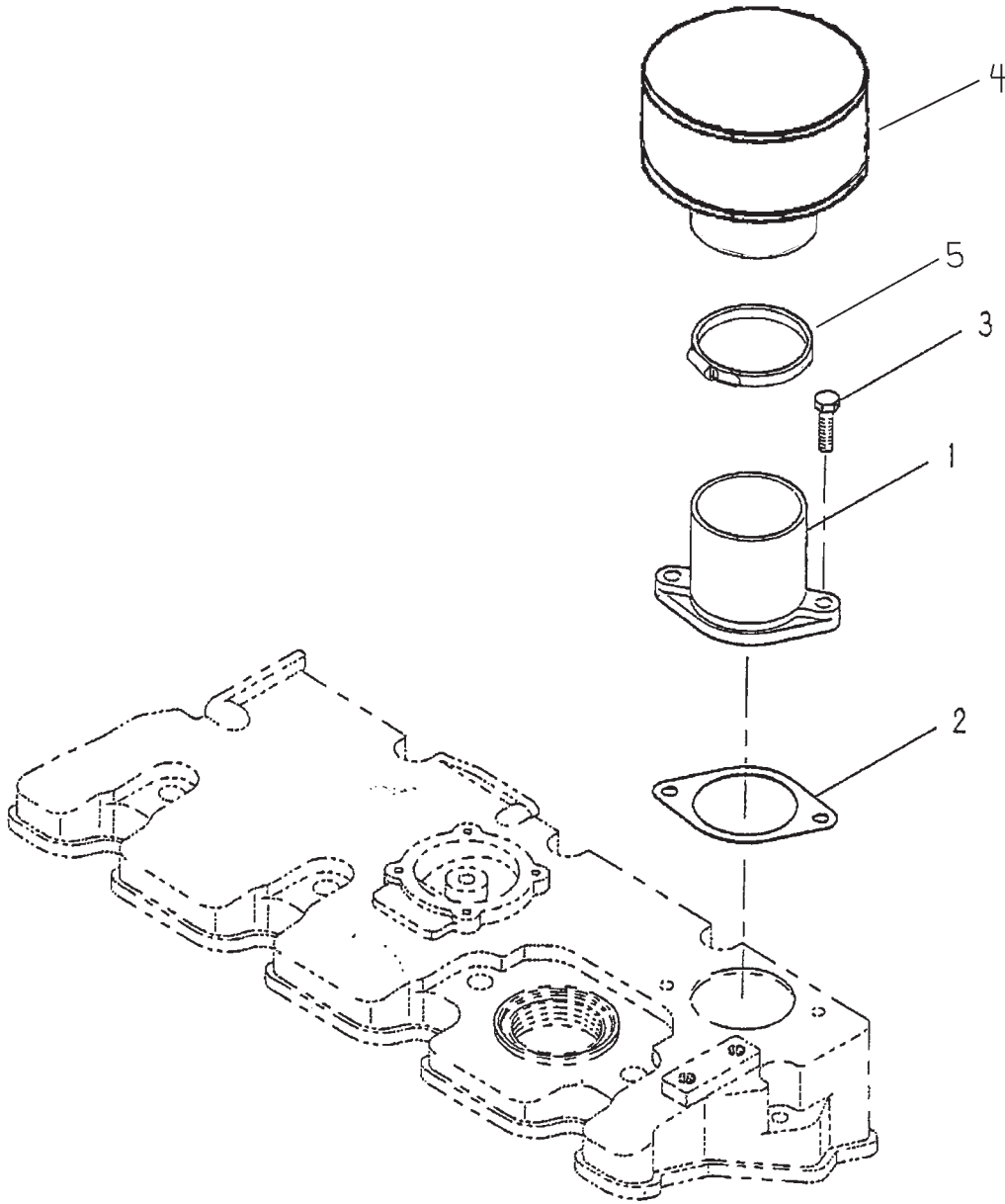


A-10262, A-10312 / C-5444

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-22004	1	Connector, Air Inlet	-
2	135996951	1	Gasket, Air Intake Mounting	-
3	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
4	15-99131	2	Wave Washer M6 S/S	-
5	18-22002	1	Hose 1-3/4" ID x 2-1/4"	-
6	19-01028	2	Hose Clamp #28	-
7	10-22006	1	Front Cover, Air Filter Housing	-
8	28-22001	1	Plate, Air Filter Baffle (844)	-
	28-28401	1	Plate, Air Filter Baffle (844L)	-
9	24-22009	1	Element, Air Filter	-
10	24-22011	1	Screen, Air Filter Retaining	-
11	10-22003	1	Rear Cover, Air Filter Housing	-
12	12-09132	4	Capscrew, Hex Head M6 x 1.0 x 85 mm S/S	-
13	15-99131	4	Wave Washer M6 S/S	-
14	23-22001	1	Bracket, Air Filter Support	-
15	12-09751	4	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
16	15-99707	4	Wave Washer M8 S/S	-
17	18-22001	1	Hose, Air Intake (Molded)	-
18	19-01028	1	Hose Clamp #28	-
19	19-70028	1	Cushion Clamp #28	-
20	12-01102	1	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
21	15-01134	1	Flat Washer, M6 S/S	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

**Air Intake & Filter M20CRW3, NL844, & NL844L**

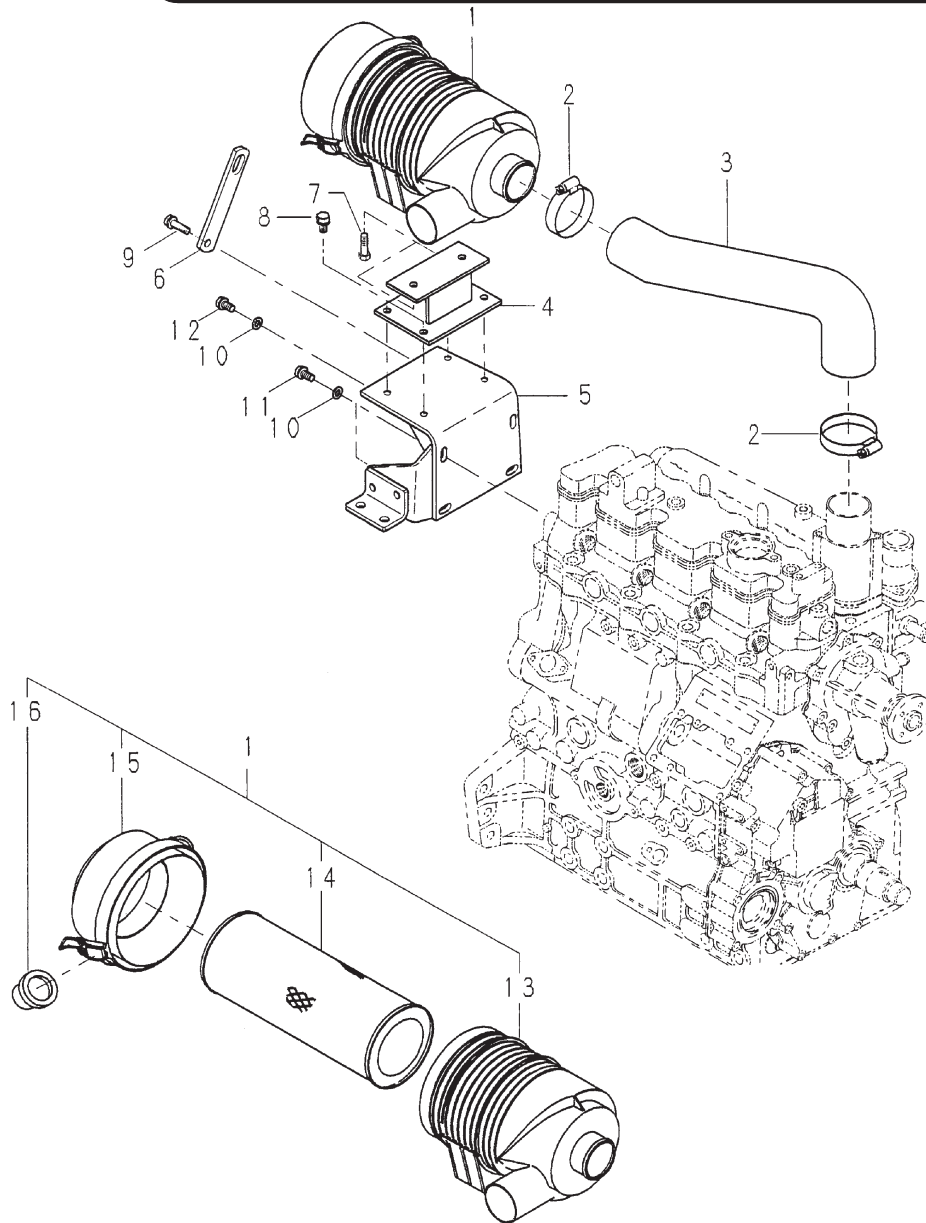


844K2airintake

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135566510	1	Intake Manifold (NL844, NL844L)	-
	135566470	1	Intake Manifold (M20CRW3)	-
2	135996951	1	Gasket	-
3	011310620	2	Bolt	-
4	24-28401	1	Air Filter (M20CRW3)	-
5	19-00036	1	Hose Clamp	-



**Air Filter & Mounting NL844 & 844L**



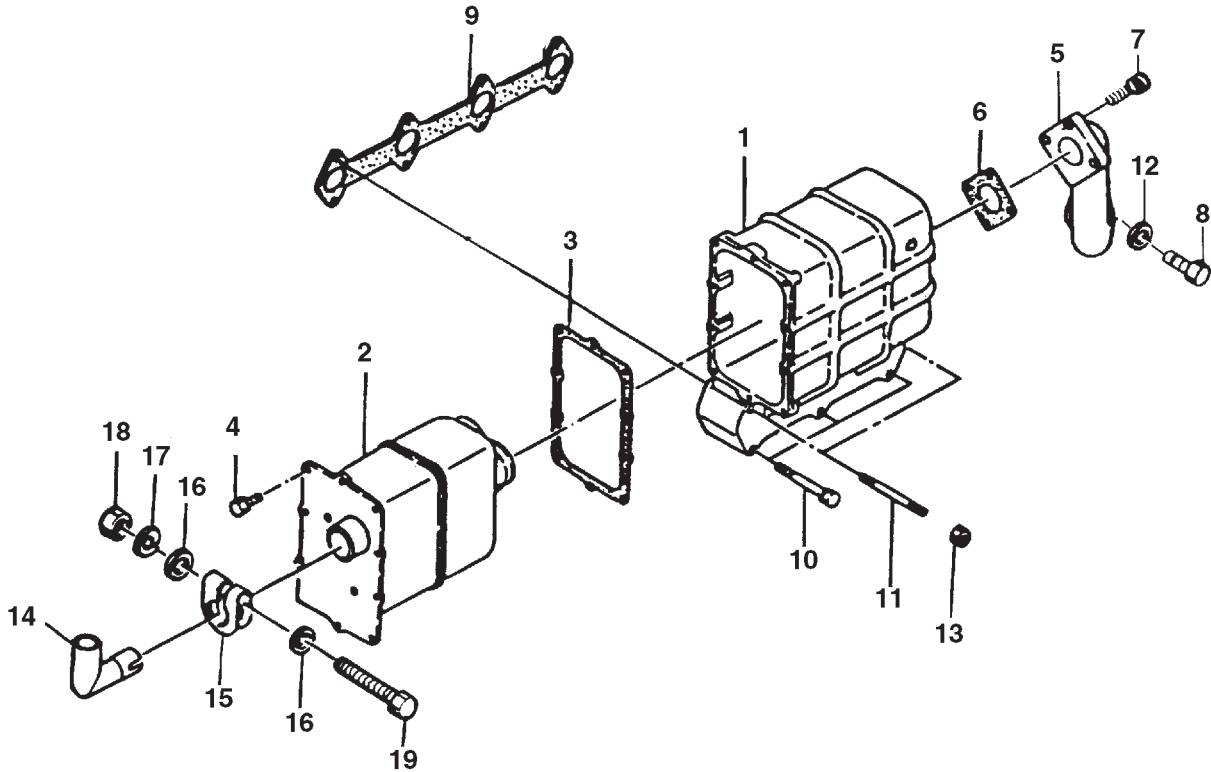
844aircleaner

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135016300	1	Air Cleaner Assembly (includes keys #13-16)	-
2	19-00036	2	Hose Clamp #36	-
3	135597830	1	Hose	-
4	135976600	1	Bracket	-
5	135976420	1	Bracket	-
6	195816100	1	Lifting Eye	-
7	011510820	2	Bolt	-
8	011510816	4	Bolt	-
9	011510825	1	Bolt	-
10	15-00701	3	Washer	-
11	011510825	2	Bolt	-
12	011510820	1	Bolt	-
13	135016300	1	Housing	-
14	24-27302	1	Element	-
15	135326199	1	Cover Assembly	-
16	314531163	1	Valve	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

**Exhaust Manifold & Muffler**

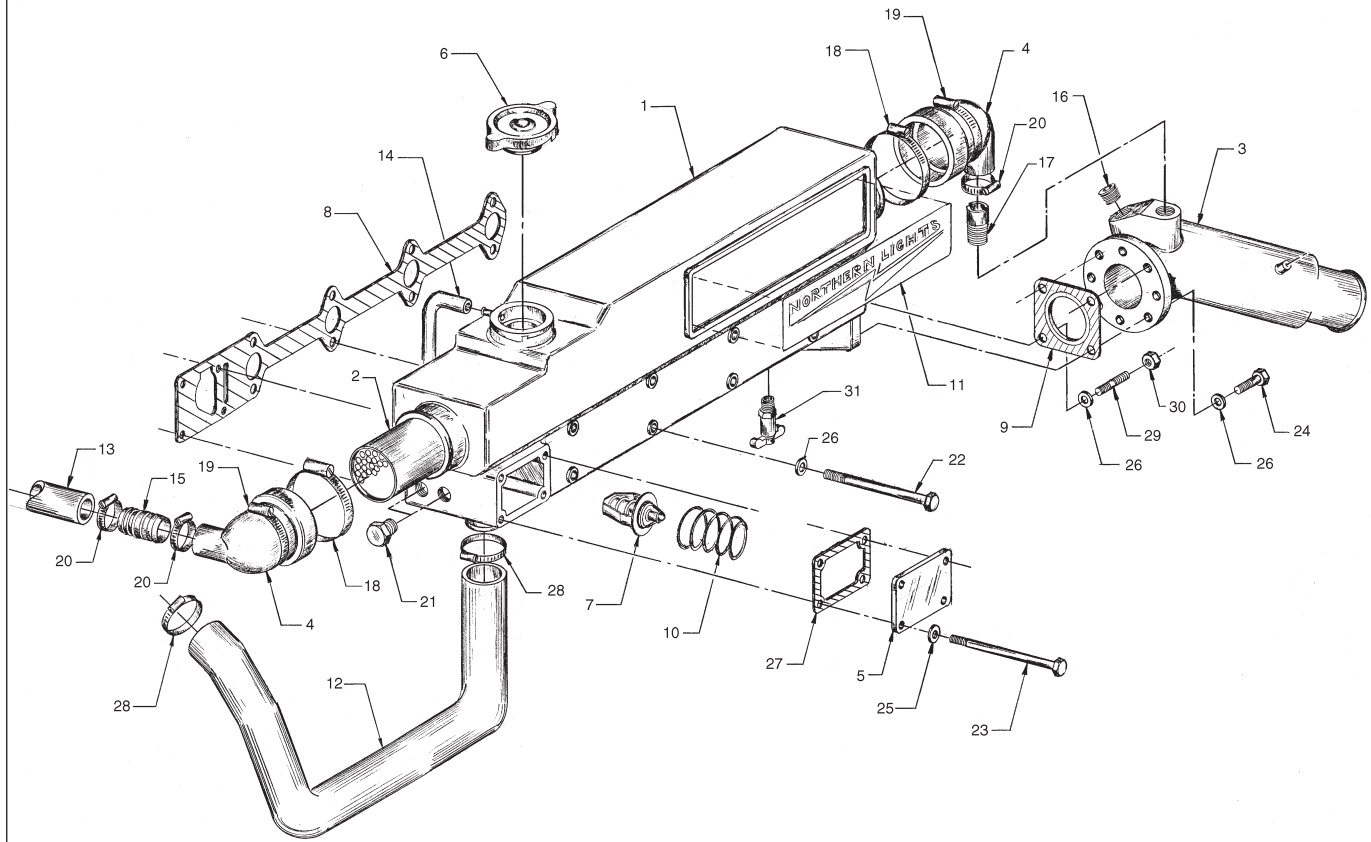
Industrial



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	135046320	1	Muffler Assembly (includes keys #1- 4)	-
1	135617500	1	Exhaust Manifold	-
2	135406230	1	Muffler Element	-
3	135996900	1	Gasket	-
4	011300612	10	Capscrew, Hex Head with Washer M6 x 1.0 x 12 mm	-
5	135656140	1	Exhaust Pipe	-
6	135996550	1	Gasket	-
7	011310625	3	Capscrew, Hex Head with Washer M6 x 1.0 x 25 mm	-
8	12-00056	2	Capscrew, Socket Head M8 x 1.25 x 25	-
9	135996780	1	Gasket	-
10	12-34801	**	Capscrew, Hex Head M8 x 1.25 x 70 mm	-
11	012110875	**	Stud M8 x 1.25 x 75 mm	-
12	15-00704	2	Lock Washer, Hi-Collar M8	-
13	14-00711	**	Hex Nut M8 x 1.25	-
14	27-33103	1	Exhaust Elbow 1-1/2 NPT, Female	-
	135606340	1	Exhaust Elbow, Plain	-
15	314410110	1	Clamp	-
16	15-00701	2	Flat Washer M8	-
17	15-00702	1	Lock Washer M8	-
18	14-00711	1	Hex Nut M8 x 1.25	-
19	12-00718	1	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
			**As required	



# Heat Exchanger & Exhaust Manifold



A-6256, A-6509 / D-2415

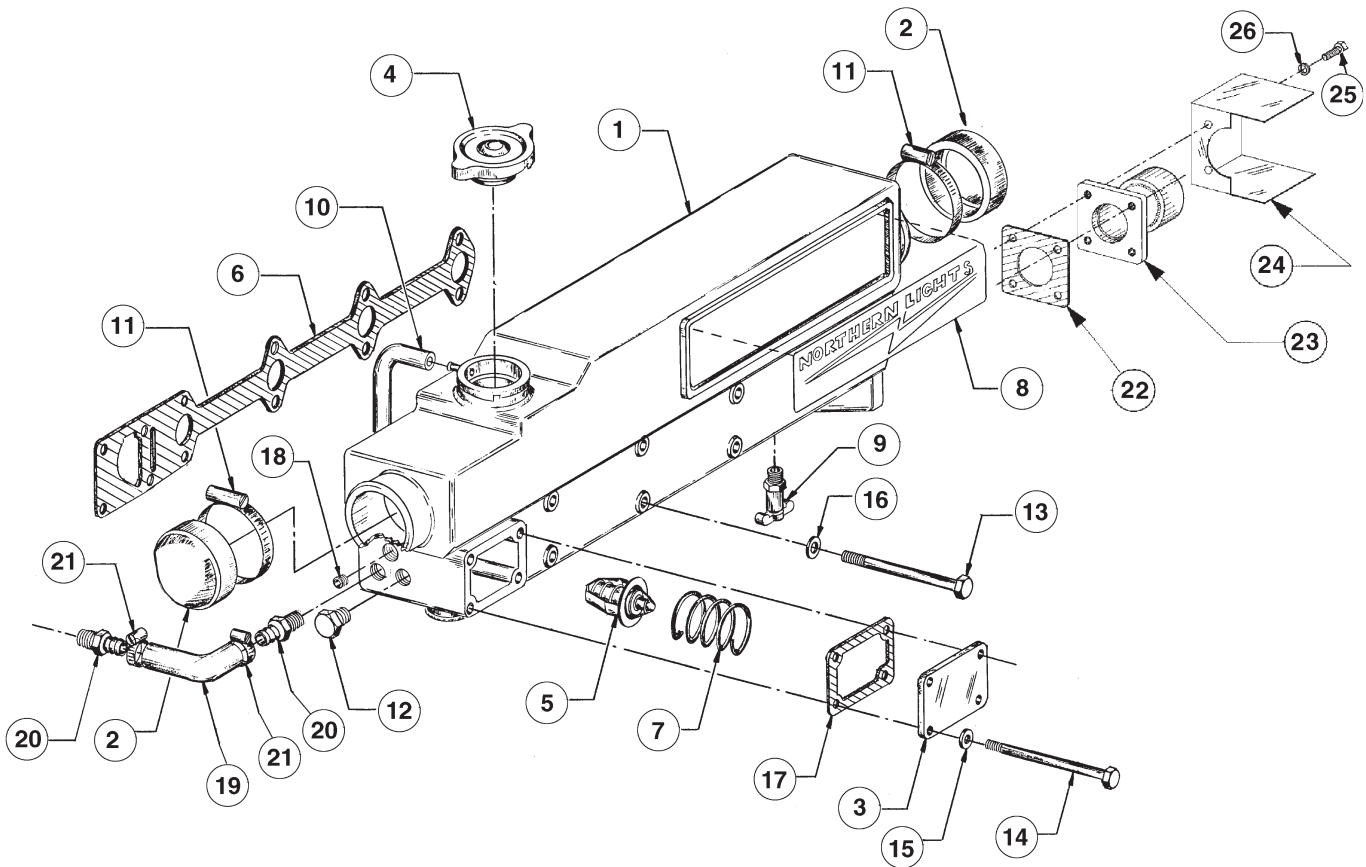
## Heat Exchanger &amp; Exhaust Manifold

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-38101	1	Exhaust Manifold/Expansion Tank	-
2	20-18101	1	Heat Exchanger Element	-
3	27-32014	1	Wet Exhaust Elbow (stainless steel)	-
4	145536370	2	End Cap	-
5	28-13101	1	Cover Plate	-
6	21-12013	1	Filler Cap (7 PSI)	-
7	145206022	1	Thermostat (82° C)	-
8	11-38101	1	Gasket	-
9	11-31902	1	Gasket	-
10	00-13101	1	Spring	-
11	00-71001	1	Nameplate, "Northern Lights"	-
	00-71000	1	Nameplate, "Lugger" (L844 only)	-
12	18-13107	1	Hose	-
13	18-13108	1	Hose 3/4" ID x 18-1/2"	-
14	18-13109	1	Hose 5/16" ID x 25"	-
15	21-13102	1	Union 3/4 Hose Barb x 3/4 Hose Barb	-
16	21-12012	1	Plug, Socket Head 1/2 NPT	-
17	145986150	1	Connector, Male 1/2 BSPT x 3/4 Hose Barb	-
18	19-00048	2	Hose Clamp #48	-
19	19-00040	2	Hose Clamp #40	-
20	19-00012	3	Hose Clamp #12	-
21	21-31003	**	Hex Head Plug 3/8 NPT	-
22	12-09701	8	Capscrew, Hex Head M8 x 1.25 x 110 mm S/S	-
23	12-09138	4	Capscrew, Hex Head M6 x 1.0 x 110 mm S/S	-
24	12-09712	3	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
25	15-01134	4	Flat Washer M6 S/S	-
26	15-00706	12	Flat Washer M8 S/S	-
27	11-13101	1	Gasket	-
28	19-00024	2	Hose Clamp #24	-
29	13-09710	1	Stud M8 x 1.25 x 20 x 25 mm (35 mm OAL) S/S	-
30	14-09711	1	Hex Nut M8 x 1.25 S/S	-
31	21-10002	1	Drain Cock 1/4 NPT	-
32	21-51098	1	Street Elbow, Brass 90° 1/4 NPT *	-
			* #32 Elbow fitting added to position #31 Drain Cock for side discharge.	
			**As required	

GROUP 3 - COOLING SYSTEM

Expansion Tank & Exhaust Manifold M844 - M844L - M20CRW

Keel & Radiator Cooled Applications



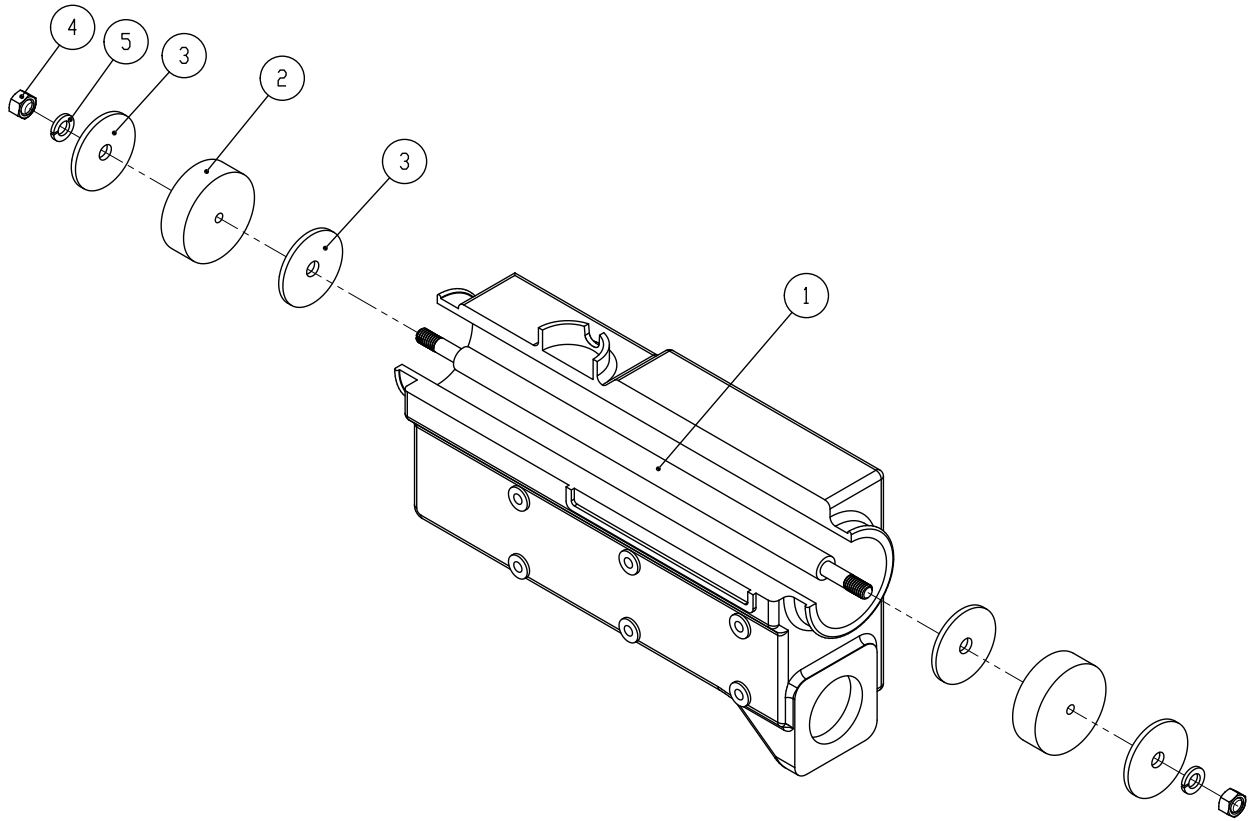
A-6420, A-6510 / D-2460

**Expansion Tank & Exhaust Manifold M844 - M844L - M20CRW****Keel & Radiator Cooled Applications**

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-38101	1	Exhaust Manifold/Expansion Tank	-
2	20-12019	2	End Cap	-
3	28-13101	1	Cover Plate	-
4	21-12013	1	Filler Cap (7 PSI)	-
5	145206022	1	Thermostat (82° C)	-
6	11-38101	1	Gasket	-
7	00-13101	1	Spring	-
8	00-71001	1	Decal, "Northern Lights"	-
9	21-10002	1	Drain Cock 1/4 NPT	-
10	18-13109	1	Hose, Overflow 5/16" ID x 25"	-
11	19-04048	2	Hose Clamp #48 (Formerly # 19-02044 NLA)	-
12	21-31003	**	Plug, Hex Head 3/8 NPT	-
13	12-09701	8	Capscrew, Hex Head M8 x 1.25 x 110 mm	-
14	12-09138	4	Capscrew, Hex Head M6 x 1.0 x 110 mm	-
15	15-01134	4	Flat Washer M6	-
16	15-00706	8	Flat Washer M8	-
17	11-13101	1	Gasket	-
18	21-51900	1	Plug, Socket Head 1/8 NPT	-
19	145536051	1	Hose	-
20	21-12014	2	Male Connector 3/8 NPT x 1/2 HB	-
21	19-00006	2	Hose Clamp #6	-
22	11-31902	1	Gasket	-
23	27-31921	**	Adapter, Dry Exhaust Straight 1-1/2 NPT (M20CRW only)	-
	27-32007	**	Elbow, Dry Exhaust	-
24	00-12000	1	Heat Shield (used with Straight Adapter - M20CW only)	-
	00-32008	1	Lagging (used with Dry Elbow)	-
25	12-09712	4	Capscrew, Hex Head M8 x 1.25 x 25mm S/S	-
26	15-00705	4	Lock Washer M8 S/S	-
			** As Required	

GROUP 3 – COOLING SYSTEM

Expansion Tank & Exhaust Manifold M844 - M844L - M20CRW



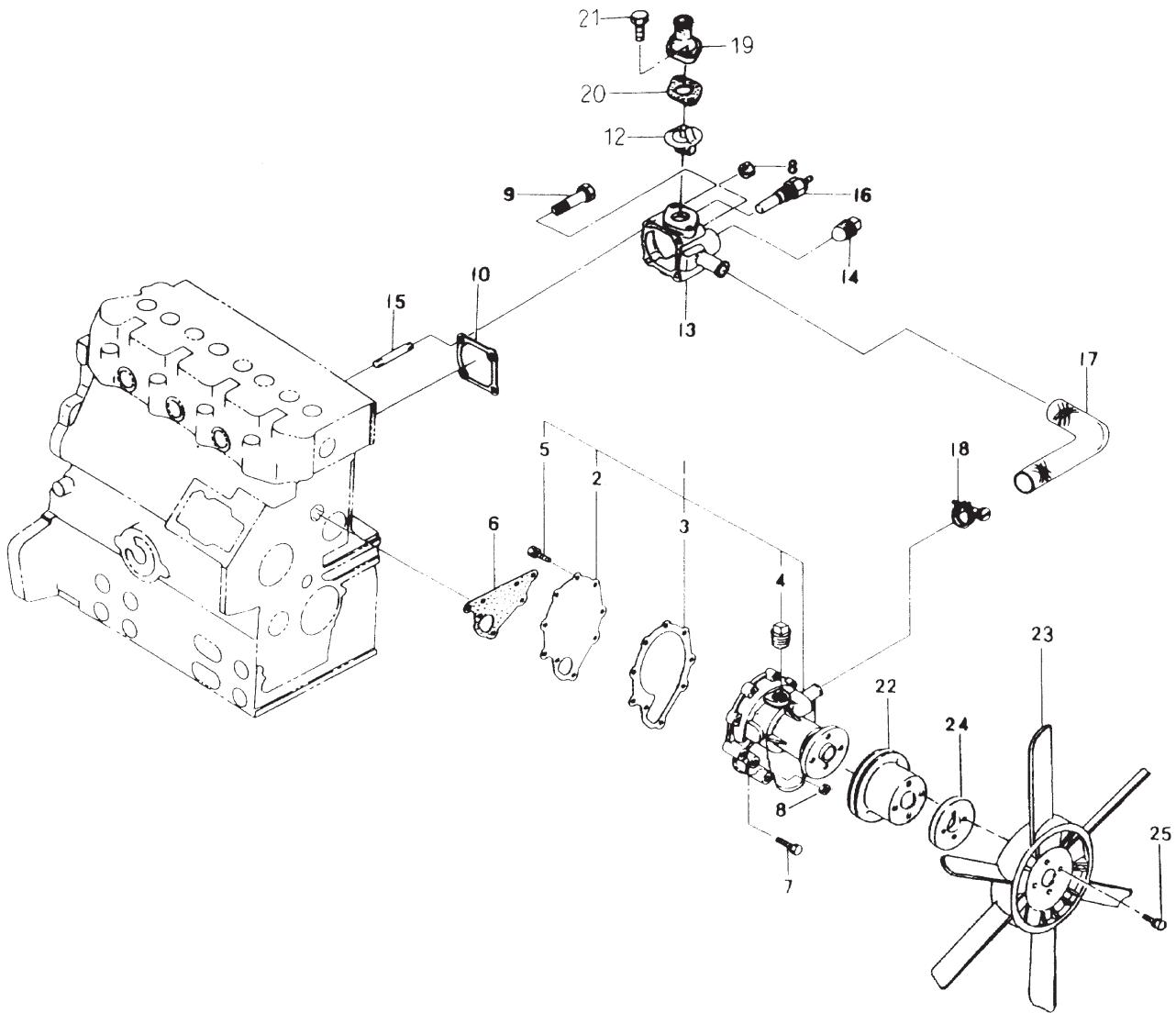
B-11087



**Expansion Tank & Exhaust Manifold M844 - M844L - M20CRW**

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-18102	1	Heat exchanger expansion plug connection rod (M844)	-
2	00-18202	2	Partial expansion plug (rubber component) 2-3/8 to 2-1/2	-
3	15-00039	4	Washer 3/8" size with 2" OD (0.1" thickness)	-
4	14-00311	2	Hex Nut 3/8-16	-
5	15-00302	2	Lock washer, helical 3/8"	-

Coolant Pump – Industrial Applications NL844 & 844L



P844waterpump

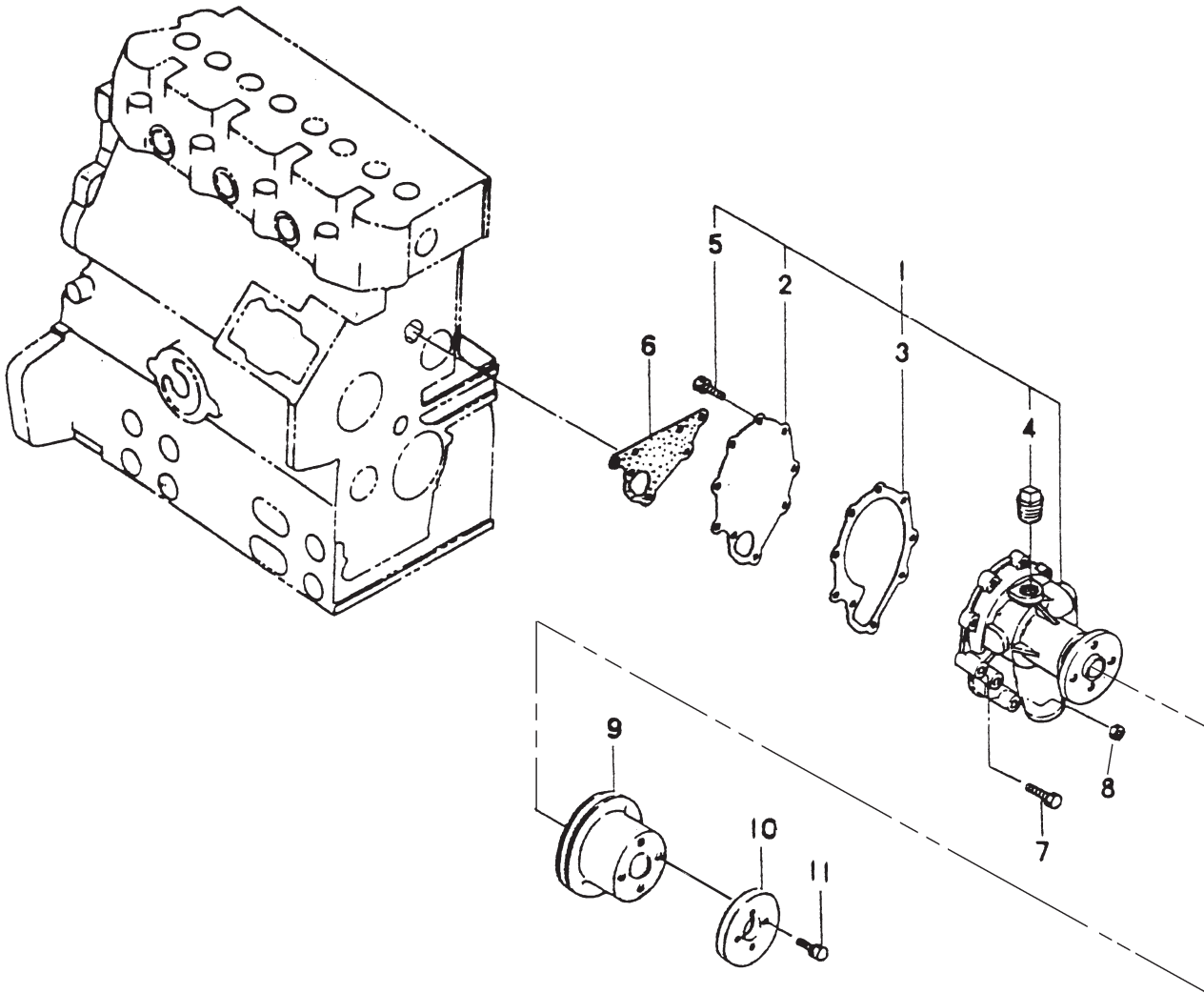
## Coolant Pump – Industrial Applications NL844 &amp; 844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145017730	1	Coolant Pump Assembly (includes keys #2 - 5)	-
2	145146320	1	Backing Plate	-
3	145996681	1	Gasket	-
4	064500030	**	Plug	-
5	015300614	5	Screw	-
6	145996670	1	Gasket	-
7	011310635	4	Bolt	-
8	023100006	3	Nut	-
9	12-01123	2	Bolt	-
10	145996710	1	Gasket	-
12	145206182	1	Thermostat 180°F/ 82°C	-
13	145216390	1	Thermostat Housing	-
14	064500030	1	Plug	-
15	012110645	2	Stud M6 x 1.0 x 45 mm	-
16	385720101	1	Temperature Switch (221°F/ 105°C)	-
17	145536051	1	Hose	-
18	19-00006	2	Hose Clamp #6	-
19	145226330	1	Thermostat Cover	-
20	145996051	1	Gasket	-
21	011510820	2	Bolt	-
22	145336620	1	Pulley	-
23	145306550	1	Cooling Fan	-
24	145386920	1	Spacer	-
25	011310635	4	Bolt, M6 x 1.0 x 35 mm	-

\*\*As required

GROUP 3 – COOLING SYSTEM

Coolant Pump, Marine & Commercial

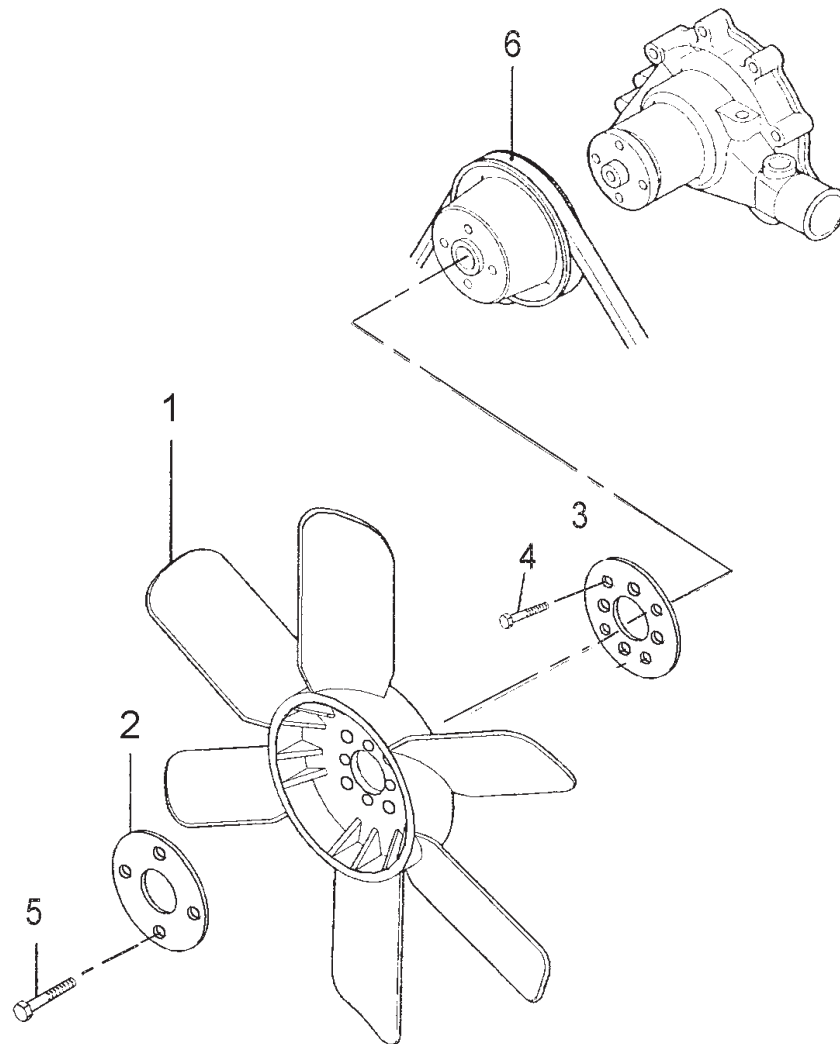


coolantpump844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145017800	1	Coolant Pump Assembly (Marine - White)	-
	145017820	1	Coolant Pump Assembly (Commercial - Grey)	-
2	145146320	1	Backing Plate	-
3	145996681	1	Gasket	-
4	064500030	**	Plug	-
5	015300614	3	Screw	-
6	145996670	1	Gasket	-
7	011310635	4	Bolt	-
8	023100006	1	Nut	-
9	145336620	1	Pulley	-
10	145386390	1	Spacer	-
11	011310620	4	Bolt	-
			**As required.	

**Cooling Fan - Marine Models with Radiator Cooling**

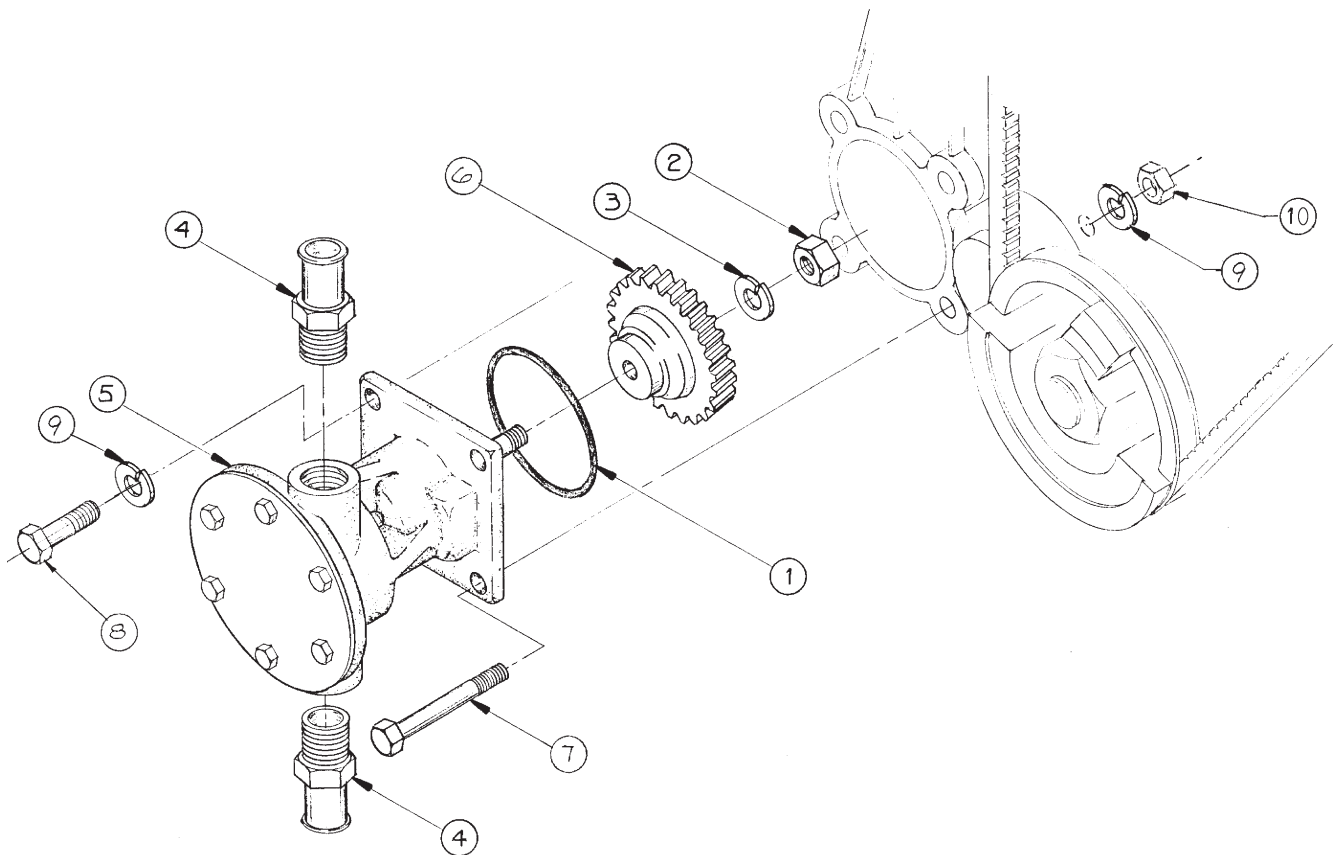
M844LW3



32B4816D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3444844200	1	Fan (Blower) 440 mm OD	-
2	32A4805100	1	Fan Plate	-
3	31-14801	1	Spacer	-
4	12-20811	4	Capscrew, Socket Head M10 x 1.5 x 20mm	-
5	01435-00820	4	Capscrew, Hex Heas Flanged M8 x 1.25 x 20mm	-
6	40-08401	1	Belt	-
7	21-18401	**	Spacer Ring	-
			** As Required	

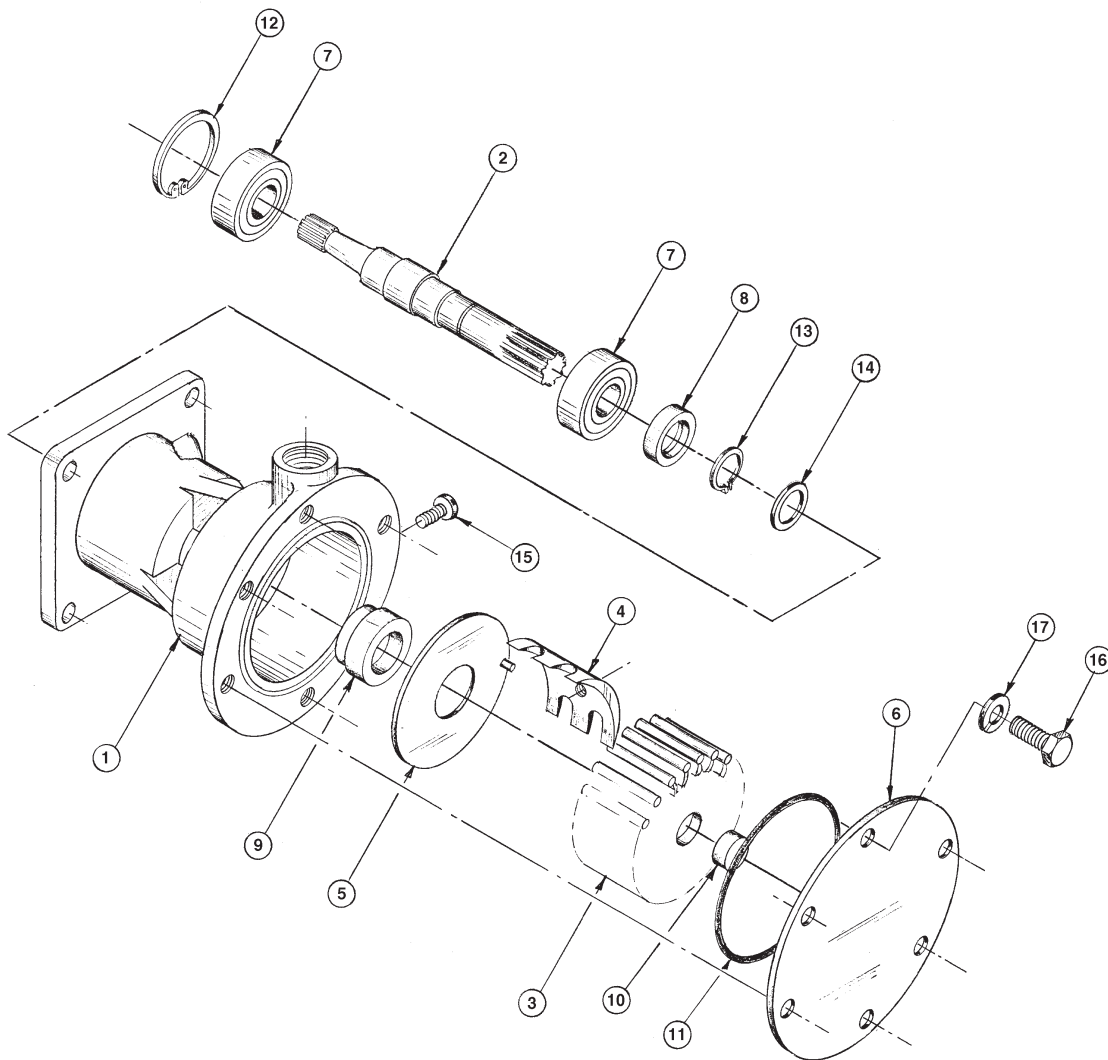
**Raw Water Pump & Mounting – Marine Applications**



A-4779 / B-3842

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	16-13101	1	O-ring	-
2	14-00811	1	Nut M10 x 1.5	-
3	15-00802	1	Lock Washer M10	-
4	21-00129	2	Fitting 1/2 NPT x 3/4 HB	-
5	25-12057	1	Raw Water Pump (see parts detail)	-
6	340460141	1	Drive Gear	-
7	12-00718	3	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
8	12-00717	1	Capscrew, Hex Head M8 x 1.25 x 60 mm	-
9	15-00702	4	Lock Washer, Helical M8	-
10	14-00711	3	Hex Nut M8 x 1.25	-

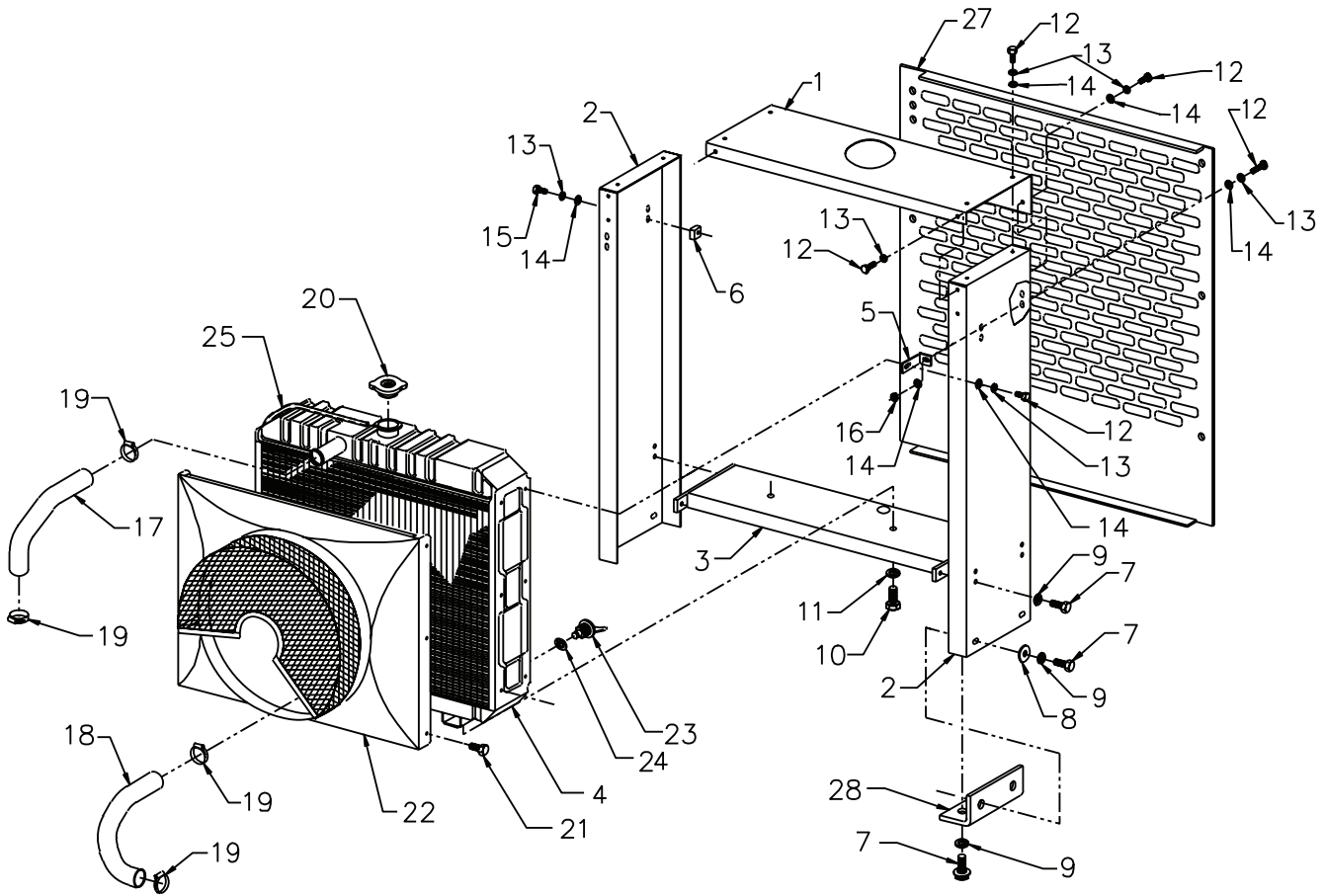
Raw Water Pump Assembly



A-3706 / C-2204

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	25-12057	1	Raw Water Pump Assembly (includes keys #1 - 17)	-
•	25-12004	1	Repair Kit (includes keys #3 - 9 & 11)	-
1	25-12057	1	Housing	-
2	25-12059	1	Shaft	-
3	25-12060	1	Impeller	-
4	25-12061	1	Cam	-
5	25-12062	1	Wear Plate	-
6	25-12063	1	End Cover	-
7	25-12064	1	Bearing	-
8	25-12065	1	Lip Seal	-
9	25-12066	1	Mechanical Seal	-
10	25-12017	1	Spline Seal	-
11	25-12067	1	O-ring	-
12	25-12068	1	Retaining Ring	-
13	25-12069	1	Retaining Ring	-
14	25-12070	1	Washer	-
15	25-12071	1	Pan Head Screw #10-32 x 3/8"	-
16	25-12072	6	Hex Head Screw #10-32 x 3/8"	-
17	25-12073	6	Lock Washer #10	-

Radiator & Guard –Aluminum NL844 & 844L



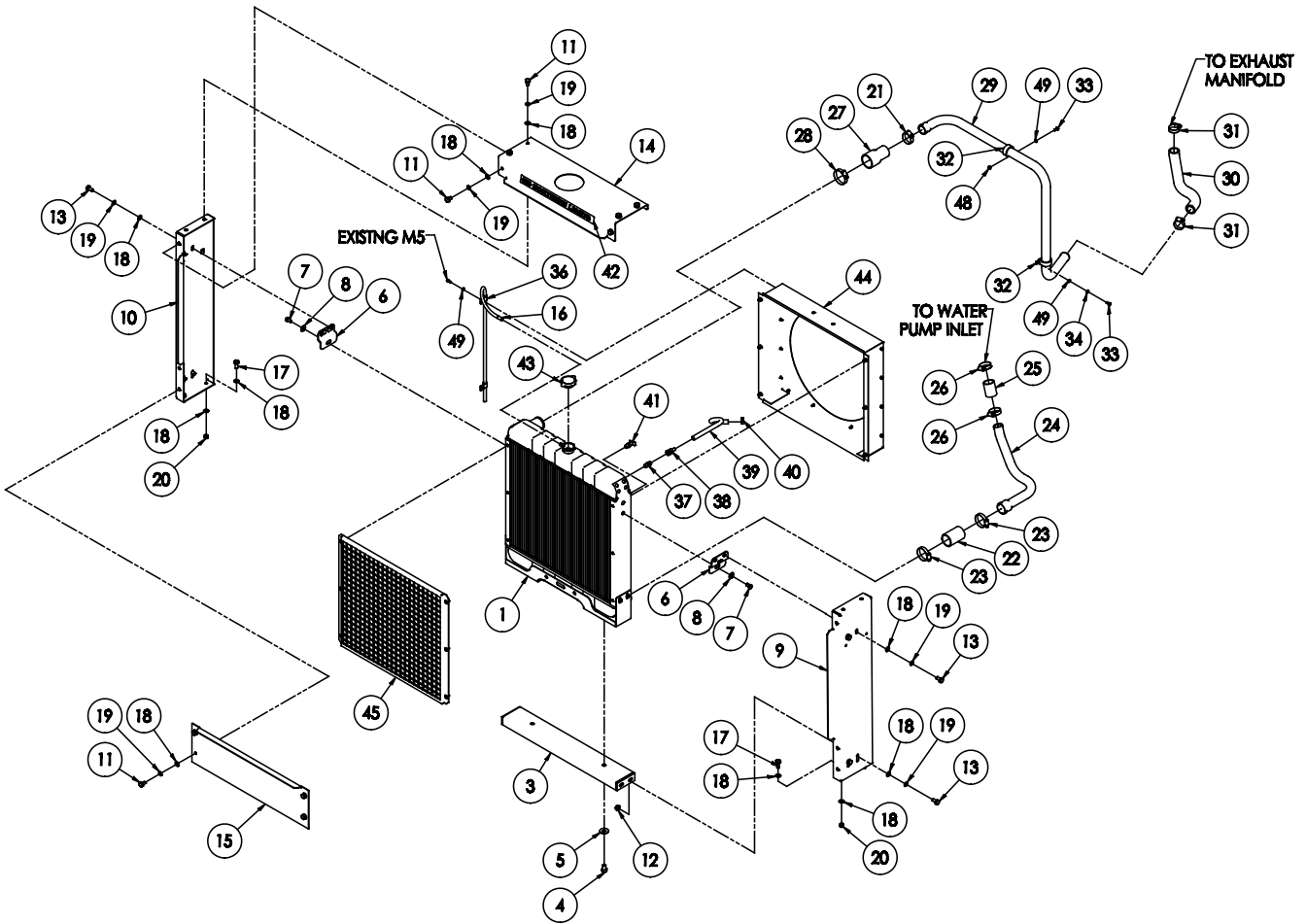
A-6306 / D-2457B



### Radiator & Guard –Aluminum NL844 & 844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-18103	1	Top Panel	-
2	39-18102	2	Side Panel	-
3	39-18104	1	Radiator Support	-
4	145506630	1	Radiator Assembly, Aluminum (includes keys #20- 26)	-
	20-12021	1	Radiator Assembly (Heresite Coated)	-
5	23-18101	1	Bracket, Upper Radiator Support	-
6	21-18101	1	Spacer, Radiator Support	-
7	12-00711	12	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
8	15-00701	8	Flat Washer M8	-
9	15-00702	12	Lock Washer M8	-
10	12-00805	2	Capscrew, Hex Head M10 x 1.5 x 20 mm	-
11	15-00802	2	Lock Washer M10	-
12	12-00030	15	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
13	15-01132	16	Lock Washer M6	-
14	15-00008	15	Flat Washer M6	-
15	12-01131	1	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
16	14-04803	1	Hex Nut M6 x 1.0	-
17	145537260	1	Hose, Radiator Inlet	-
18	145537270	1	Hose, Radiator Outlet	-
19	19-00020	4	Hose Clamp #20	-
20	310110200	1	Radiator Cap	-
21	011150610	6	Bolt	-
22	145546880	1	Shroud with Fan Guard	-
23	21-12016	1	Drain Cock	-
24	310190477	1	O-ring	-
25	18-11906	1	Hose	-
26	00-70079	1	Label "Northern Lights" (not shown)	-
27	39-18106	**	Grille	-
	31-18101	**	Air Duct Adapter (optional - not shown)	-
28	23-18402	2	Bracket, Radiator Mounting	-
			** As required	

### Radiator & Modular Guard - M844L & MCA



### Radiator & Modular Guard - M844L & MCA

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-11203	1	Radiator	-
3	39-11203	1	Cross Member, Radiator Support	-
4	12-00511	2	Capscrew, Hex Head 1/2-13 x 3/4"	-
5	15-00501	2	Flat Washer 1/2"	-
6	23-11203	2	Bracket, Radiator Upper Support	-
7	12-00308	2	Capscrew, Hex Head 3/8-16 x 5/8"	-
8	15-00301	2	Flat washer 3/8"	-
9	39-11201	1	Side Panel L.H. Radiator Guard	-
10	39-11202	1	Side Panel R.H. Radiator Guard	-
11	12-04400	10	Capscrew, Hex Head M10 x 1.5 x 16 mm	-
12	14-00808	4	Lock Nut, Flanged M10 x 1.5	-
13	12-00805	8	Capscrew, Hex Head M10 x 1.5 x 20 mm	-
14	39-11204	1	Top Panel, Radiator Guard	-
15	39-11206	1	Lower Valence	-
16	41-01013	1	Hose, polyvinyl 5/16" ID x 7/16" OD	-
17	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
18	15-00805	26	Flat Washer M10	-
19	15-00802	18	Lock Washer M10	-
20	14-00812	4	Hex Nut M10 x 1.5	-
21	19-01028	1	Hose Clamp	-
22	41-01091	1	Hose	-
23	19-01028	2	Hose Clamp	-
24	27-18408	1	Tube, Radiator Outlet	-
25	41-01081	1	Hose	-
26	19-01028	2	Hose Clamp	-
27	18-18411	1	Reducing Hose	-
28	19-01032	1	Hose Clamp	-
29	27-18407	1	Tube, Radiator Inlet	-
30	18-18409	1	Hose, Expansion Tank Coolant Outlet	-
31	19-01020	2	Hose Clamp	-
32	19-70022	2	Cushion Clamp	-
33	12-09129	2	Capscrew, Hex Head M6 x 1.0 14 mm	-
34	15-00610	1	Lock Washer M6	-
36	19-43201	2	Adelle Clamp 1/2" ID	-
37	21-50046	1	Connector	-
38	21-71056	1	Swivel	-
39	41-01012	1	Hose	-
40	19-50113	1	Hose Clamp	-
41	21-10002	1	Drain Cock	-
42	00-70079	1	Label, "Northern Lights"	-
43	21-12013	1	Filler Cap	-
44	89100276	1	Fan Shroud	-
45	79700064	1	Stone Guard	-
48	14-01133	1	Hex Nut M6	-
49	15-01134	4	Flat Washer M6	-

## GROUP 3 – COOLING SYSTEM

**Belt Guard Kit - M844L & MCA**

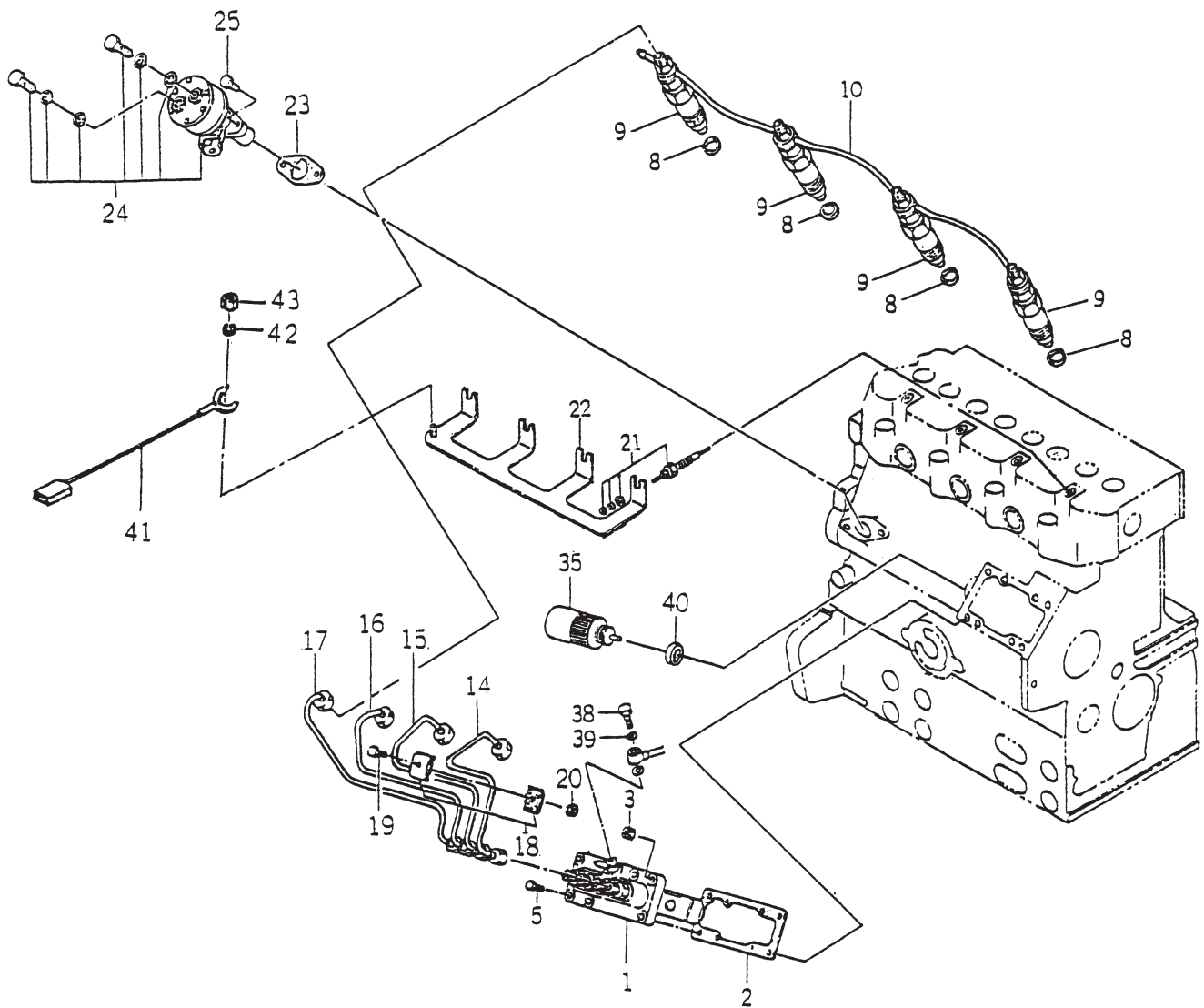
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
	39-18404	1	Belt Guard, Upper	-
	39-18406	1	Belt Guard, Lower	-
	12-00707	2	Capscrew, Hex Head M8 x 1.25 x 14 mm	-
	12-09097	3	Capscrew, Hex Head M6 x 1.0 x 12 mm	-
	12-09129	1	Capscrew, Hex Head M6 x 1.0 x 14 mm	-
	14-01133	4	Hex Nut, M6	-
	19-70022	3	Cushion Clamp	-

C-7312

**Notes**

Blank area for notes.

General Arrangement L844

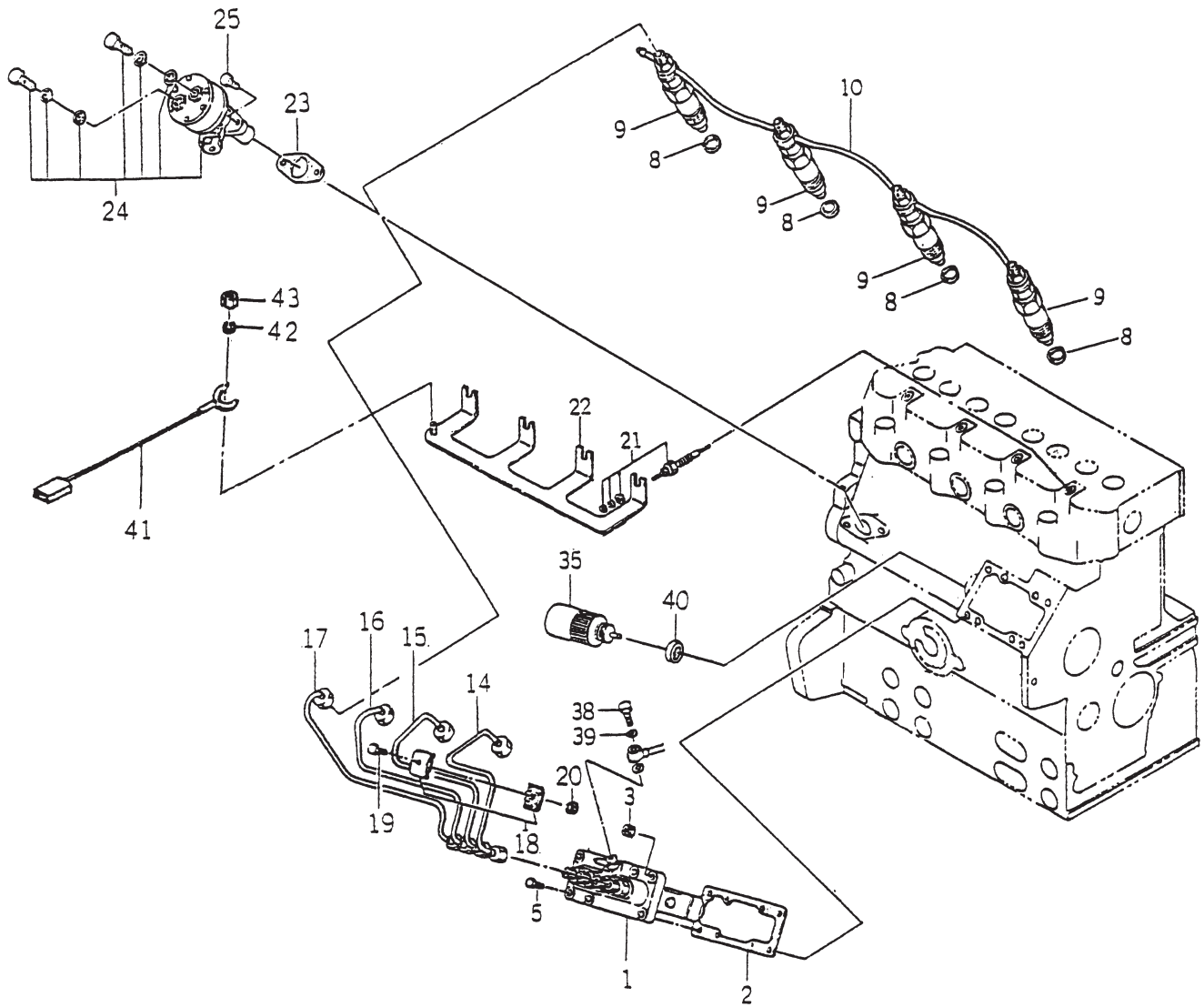


injectors844

## General Arrangement L844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017801	1	Injection Pump Assembly	-
2	131426321	1	Shim Set (formerly #131426320)	-
3	023100008	3	Nut	-
5	19M7866	3	Bolt	-
8	131426200	4	Gasket	-
9	131406360	4	Fuel Injector (see parts detail page)	-
10	131606620	1	Return Line	-
14	131507601	1	Injection Line #1	-
15	131507611	1	Injection Line #2	-
16	131507621	1	Injection Line #3	-
17	131507631	1	Injection Line #4	-
18	199106021	6	Clamp	-
19	010110625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug 12 Volt*	-
	185366100	4	Glow Plug 24 Volt*	-
22	185376150	1	Connector	-
23	130996130	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011140614	2	Bolt	-
35	185206085	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
	185206192	1	Stop Solenoid - 12 Volt (Isolated Ground)*	-
	185206203	1	Stop Solenoid - 24 Volt (Isolated Ground)*	-
38	198487450	1	Screw	-
39	025100008	2	Seal Washer	-
40	025100016	1	Seal Washer	-
41	185606170	1	Wire Harness	-
42	027100004	1	Spring Washer	-
43	020100004	1	Nut	-
			*Note: See Electrical System	

General Arrangement M - NL844



injectors844

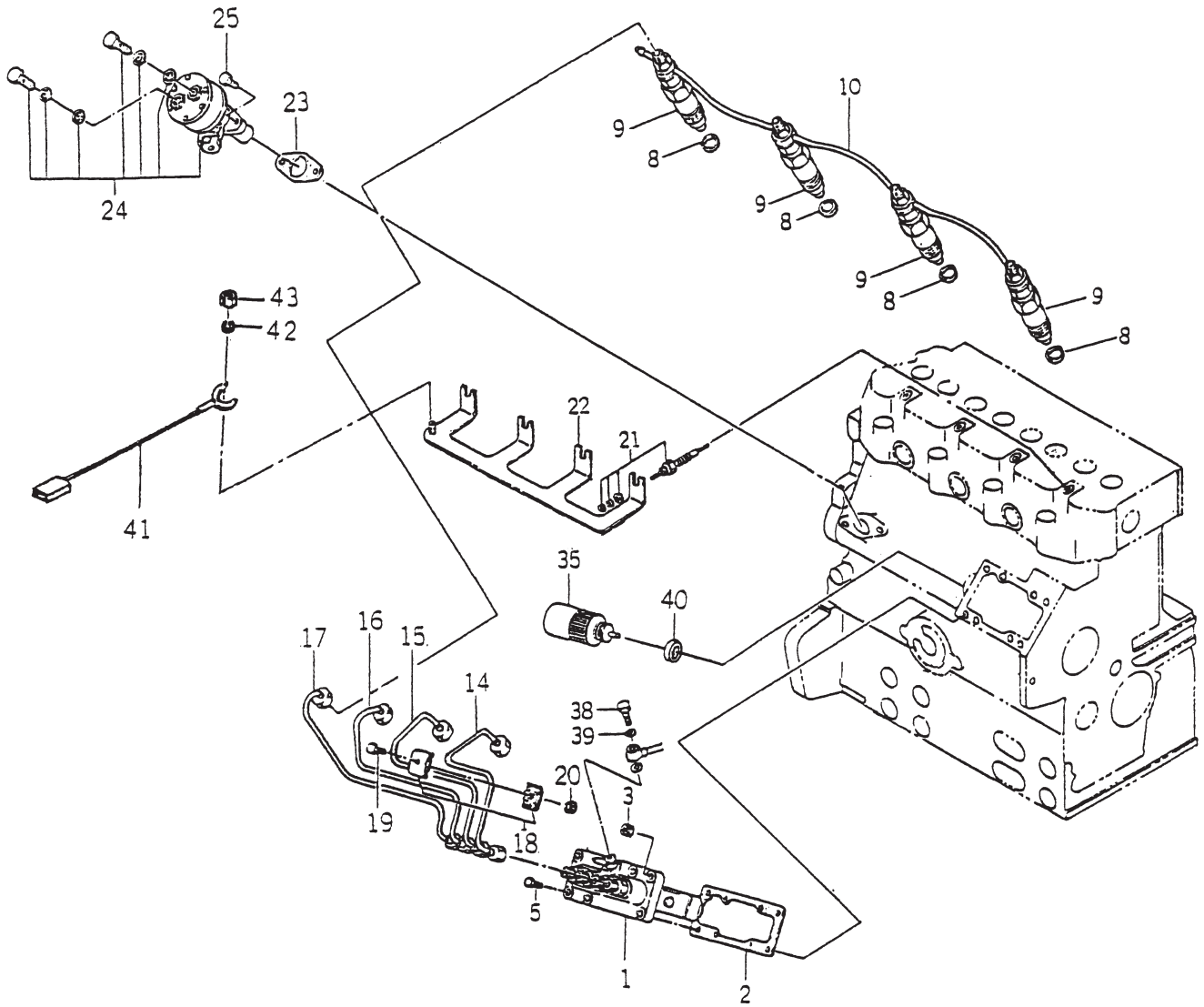


## General Arrangement M - NL844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017602	1	Injection Pump Assembly	-
2	131426321	1	Shim Set (formerly #131426320)	-
3	023100008	3	Nut	-
5	19M7866	3	Bolt	-
8	131426200	4	Gasket	-
9	131406360	4	Fuel Injector (see parts detail page)	-
10	131606620	1	Return Line	-
14	131507450	1	Injection Line #1	-
15	131507460	1	Injection Line #2	-
16	131507470	1	Injection Line #3	-
17	131507480	1	Injection Line #4	-
18	199106021	6	Clamp	-
19	010101625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug 12 Volt*	-
	185366100	4	Glow Plug 24 Volt*	-
22	185376150	1	Connector	-
23	130996130	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011140616	2	Bolt	-
35	185206085	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
	185206192	1	Stop Solenoid - 12 Volt (Isolated Ground)*	-
	185206203	1	Stop Solenoid - 24 Volt (Isolated Ground)*	-
38	198487450	1	Screw	-
39	025100008	2	Seal Washer	-
40	025100016	1	Seal Washer	-
41	185606170	1	Wire Harness	-
42	027100004	1	Spring Washer	-
43	020100004	1	Nut	-

\*Note  
See Electrical System

General Arrangement M - NL844L

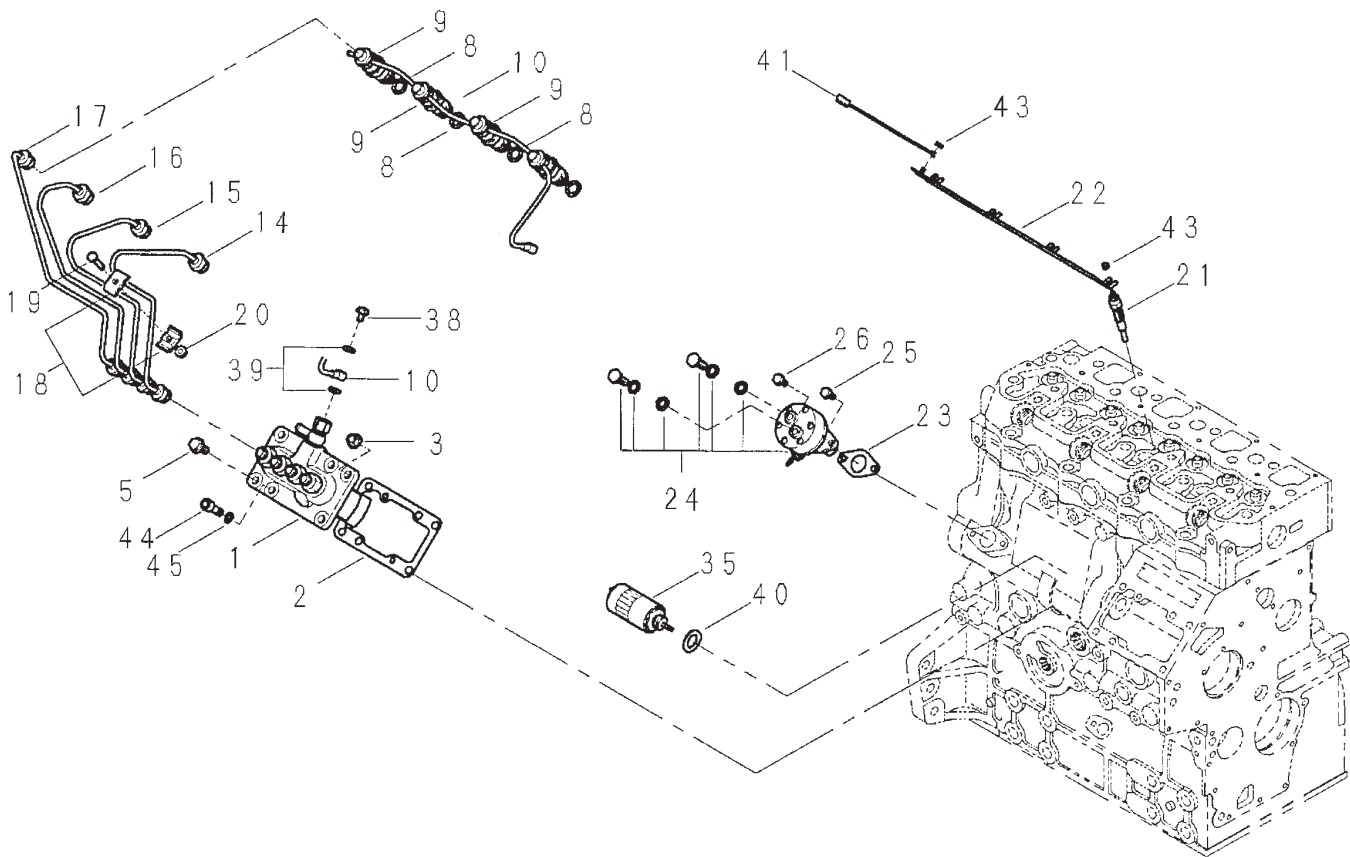


injectors844

## General Arrangement M - NL844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017602	1	Injection Pump Assembly	-
2	131426321	1	Shim Set (formerly #131426320)	-
3	023100008	3	Nut	-
5	19M7866	3	Bolt	-
8	131426200	4	Gasket	-
9	131406360	4	Fuel Injector (see parts detail page)	-
10	131606560	1	Return Line	-
14	131507520	1	Injection Line #1	-
15	131507530	1	Injection Line #2	-
16	131507540	1	Injection Line #3	-
17	131507550	1	Injection Line #4	-
18	199106021	6	Clamp	-
19	010110625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug 12 Volt*	-
	185366100	4	Glow Plug 24 Volt*	-
22	185376150	1	Connector	-
23	130996130	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011140614	2	Bolt	-
35	185206085	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
	185206192	1	Stop Solenoid - 12 Volt (Isolated Ground)*	-
	185206202	1	Stop Solenoid - 24 Volt (Isolated Ground)*	-
38	189206203	1	Screw	-
39	025100008	2	Seal Washer	-
40	025100016	1	Seal Washer	-
41	185606170	1	Wire Harness	-
42	027100004	1	Spring Washer	-
43	020100004	1	Nut	-
			*Note: See Electrical System	

General Arrangement M20CRW3



M20CRWfuelsystem

## General Arrangement M20CRW3

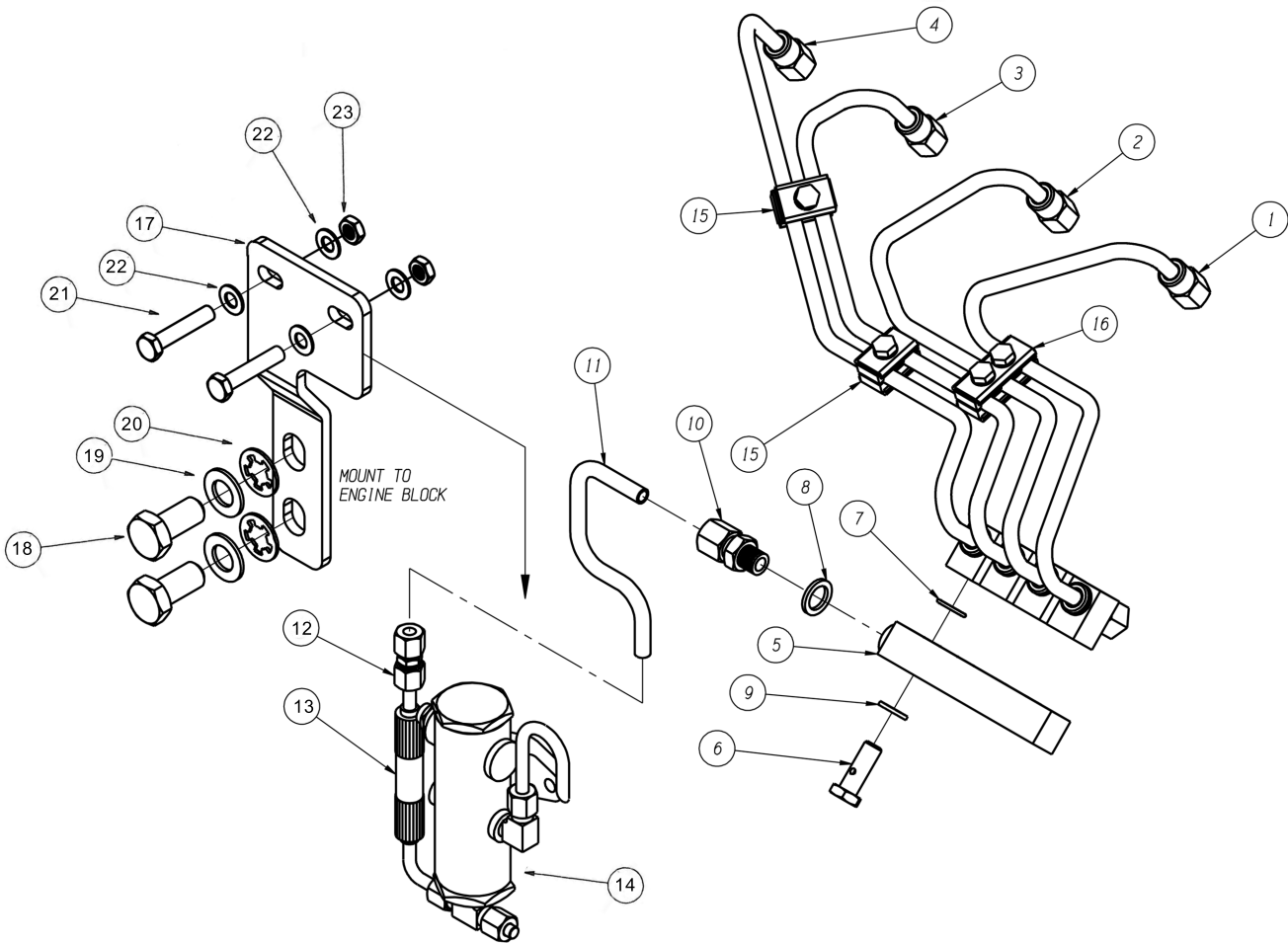
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017602	1	Injection Pump Assembly	-
2	131426321	1	Shim	-
3	023100008	3	Nut	-
5	19M7866	2	Bolt	-
8	131426200	4	Gasket	-
9	131406360	4	Fuel Injector (see parts detail page)	-
10	131606560	1	Return Line	-
14	131507520	1	Injection Line #1	-
15	131507530	1	Injection Line #2	-
16	131507540	1	Injection Line #3	-
17	131507550	1	Injection Line #4	-
18	199106021	6	Clamp	-
19	010110625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug 12 Volt*	-
22	185376150	1	Connector	-
23	130996130	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011140614	2	Bolt	-
35	185206085	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
38	198487450	1	Screw	-
39	025100008	2	Seal Washer	-
40	025100016	1	Seal Washer	-
41	185606170	1	Wire Harness	-
43	020100004	5	Nut	-
44	010700820	1	Bolt	-
45	15-00702	1	Washer	-

\*Note:  
See Electrical System

GROUP 4 – FUEL SYSTEM

Double Wall Injecton Lines Alarm Tank

M844LW3

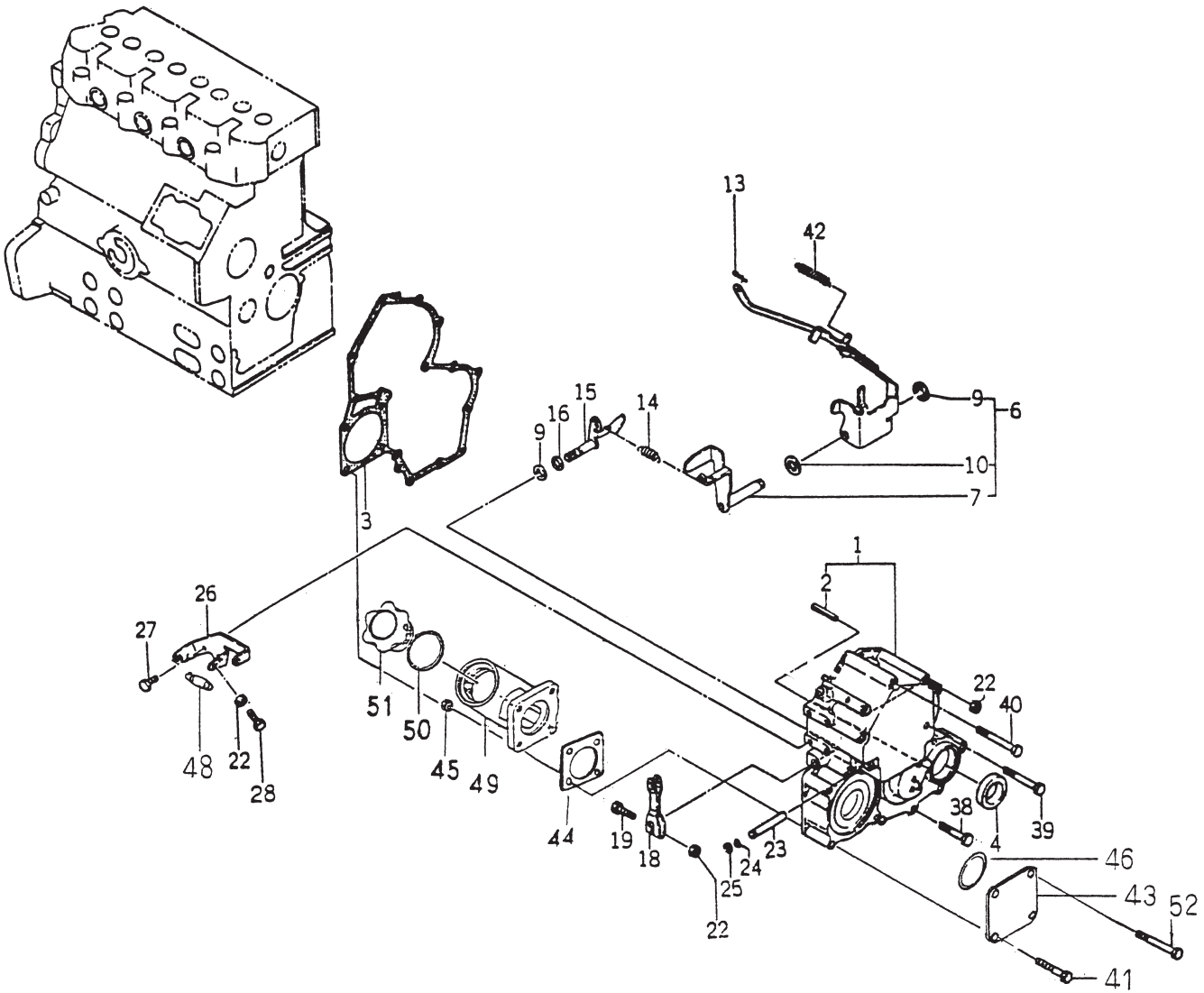


### Double Wall Injecton Lines Alarm Tank

M844LW3

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-58401	1	Injection Line #1 Double Wall (Marked #1)	-
2	27-58402	1	Injection Line #2 Double Wall (Marked #2)	-
3	27-58403	1	Injection Line #3 Double Wall (Marked #3)	-
4	27-58404	1	Injection Line #4 Double Wall (Marked #4)	-
5	10-58402	1	Manifold, Injection Lines Leak-Off	-
6	21-58402	4	Banjo Bolt	-
7	16-55701	4	O-Ring	-
8	15-00042	4	Sealing Washer, Bonded 1/4 BSPP	-
9	15-50001	4	Sealing Washer 1/8 BSPP	-
10	21-55702	1	Male Connector, Steel, 1/4 BSPP x 8mm COMP	-
11	27-58406	1	Tube, Leak-Off Manifold Outlet	-
12	21-55703	1	Compression Union, Steel 8mm	-
13	18-51604	1	Hose Assembly 1/4" ID x 9-1/2" S/S - TFE	-
14	10-50002	1	Alarm Tank Assembly	-
15	19-55002	2	Clamp Assembly, 2-Lines	-
16	19-55001	1	Clamp Assembly, 3-Lines	-
17	23-58403	1	Bracket	-
18	12-59100	2	Capscrew, Hex Head M14 x 1.5 x 30mm S/S	-
19	15-09402	2	Lock Washer, Helical M14 S/S	-
20	15-09401	2	Flat Washer M14 S/S	-
21	12-09753	2	Capscrew, Hex Head M8 x 1.25 x 30mm S/S	-
22	15-00706	4	Flat Washer M8 S/S	-
23	14-09712	2	Hex Nut, Nylock M8 x 1.25 S/S	-

Governor & Timing Gear Case



timinggear844



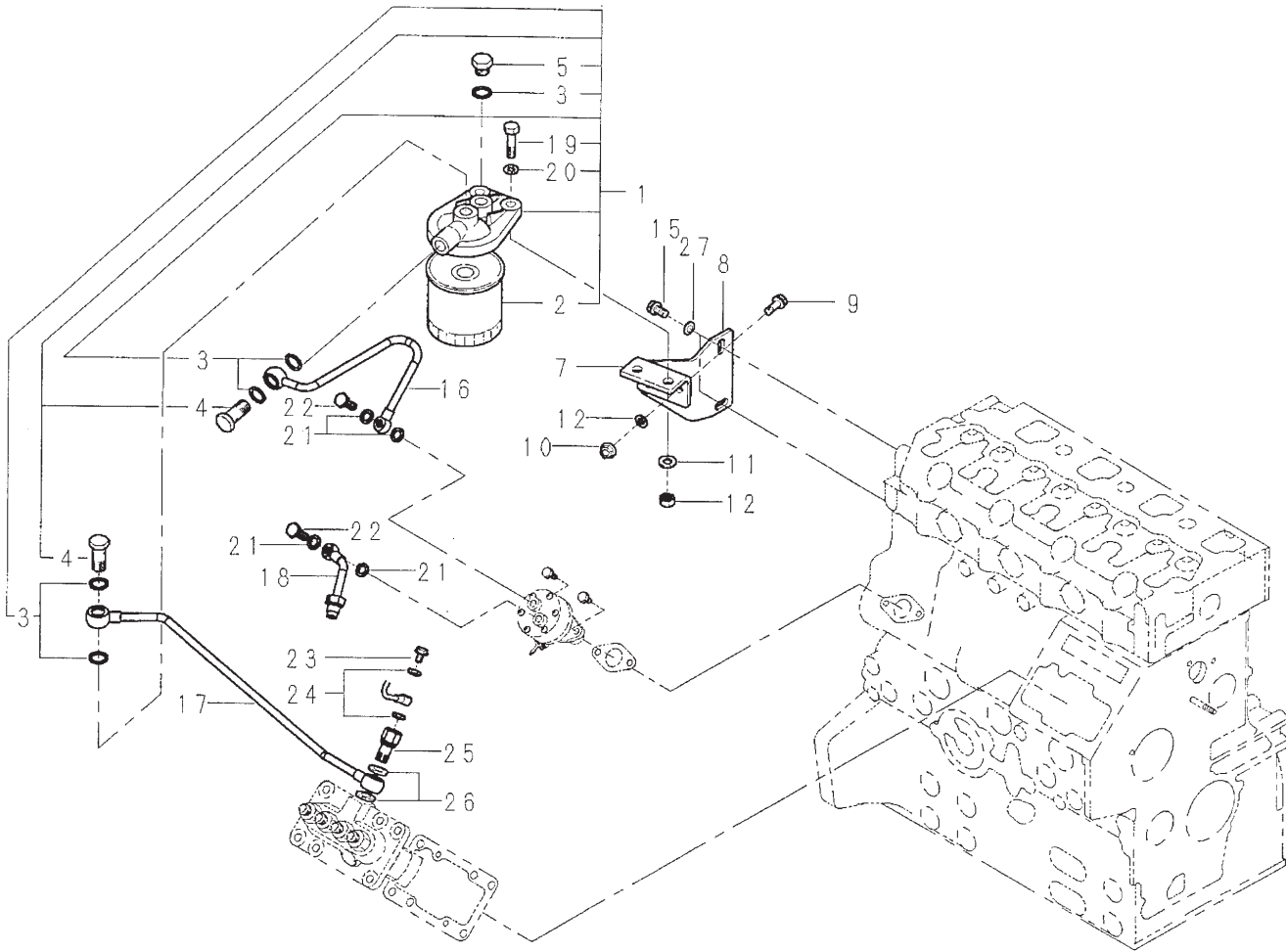
## Governor &amp; Timing Gear Case

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165106810	1	Timing Gear Case Complete (Marine, includes key #2)	-
	165106800	1	Timing Gear Case Complete (Industrial, includes key #2)	-
	165106850	1	Timing Gear Case Complete (Commercial, includes key #2)	-
2	030300410	1	Spring Pin	-
3	165996550	1	Gasket	-
4	198636160	1	Oil Seal	-
6	125046170	1	Governor Lever Assembly (includes keys #7 - #10)	-
7	125406080	1	Tension Lever	-
9	036800008	2	Snap Ring	-
10	026200010	1	Washer	-
13	031100004	1	Snap Pin	-
14	198217650	1	Governor Spring	-
15	125156250	1	Arm	-
16	052109110	1	O-ring	-
18	125416020	1	Governor Lever	-
19	010110630	1	Bolt	-
22	023100006	3	Nut	-
23	125116141	1	Shaft	-
24	052109108	1	O-ring	-
25	036800005	1	Snap Ring	-
26	125976120	1	Bracket	-
27	011310614	2	Bolt	-
28	012810640	1	Bolt	-
38	011310645	7	Bolt	-
39	011310660	3	Bolt	-
40	011310680	2	Bolt	-
41	010310865	3	Bolt	-
42	198217820	1	Start Spring	-
43	165206320	1	Cover (Marine)	-
	165206150	2	Cover (Industrial)	-
	165206010	1	Cover (Commercial)	-
44	11-12005	1	Gasket (former #165996610)	-
45	023100008	**	Hex Nut	-
46	052300700	1	O-ring	-
48	398210070	1	Spring	-
49	110766200	1	Oil Fill Elbow (Marine & Commercial)	-
50	052300400	1	O-ring (Marine & Commercial)	-
51	198436010	1	Cap (Marine & Commercial)	-
52	011510860	**	Bolt (Marine & Commercial)	-
	010310865	4	Bolt (Industrial)	-

\*No longer available separately.

\*\*As required

Fuel Filter & Piping



844fuelfiltercomm

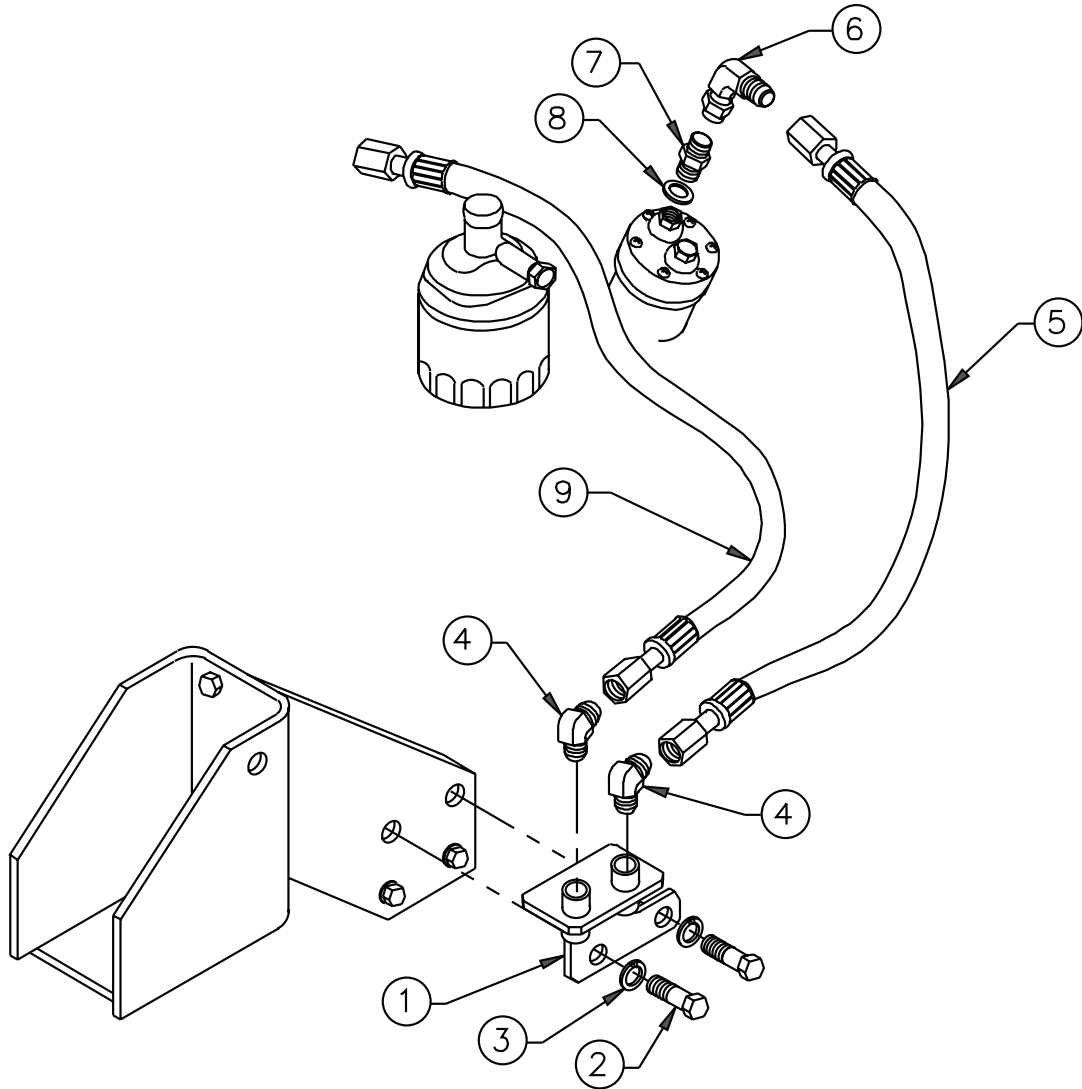
## Fuel Filter &amp; Piping

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130306190	1	Fuel Filter Assembly (includes keys #2 - 5)	-
2	24-52020	1	Fuel Filter Cartridge	-
3	130326051	5	Gasket	-
4	130436011	2	Banjo Bolt	-
5	130396030	1	Plug	-
7	130976470	1	Bracket (Marine)	-
	130976450	1	Bracket (Industrial)	-
	130976260	1	Bracket (Commercial)	-
8	130976460	1	Bracket (Marine)	-
	130976440	1	Bracket (Industrial)	-
	130976250	1	Bracket (Commercial)	-
9	010310820	2	Bolt	-
10	023100008	2	Nut	-
11	15-00802	2	Spring Washer	-
12	020900010	2	Nut	-
15	011510816	2	Bolt (Marine & Commercial)	-
	011510825	2	Bolt (Industrial)	-
16	130556690	1	Pipe (L-M-NL844)	-
	130556760	1	Pipe (L-M-NL844L & Commercial)	-
17	130556750	1	Pipe	-
18	130556681	1	Pipe	-
19	010311035	2	Bolt	-
20	026200010	2	Washer	-
21	130516069	4	Gasket	-
22	130516092	2	Banjo Bolt	-
23	198487450	1	Banjo Bolt	-
24	025100008	2	Gasket	-
25	131246170	1	Banjo Bolt	-
26	131296255	2	Gasket	-
27	15-00701	2	Washer	-

GROUP 4 – FUEL SYSTEM

**Fuel Line Connection L844**

USCG A-1 - SAE J1527 - ISO 7840

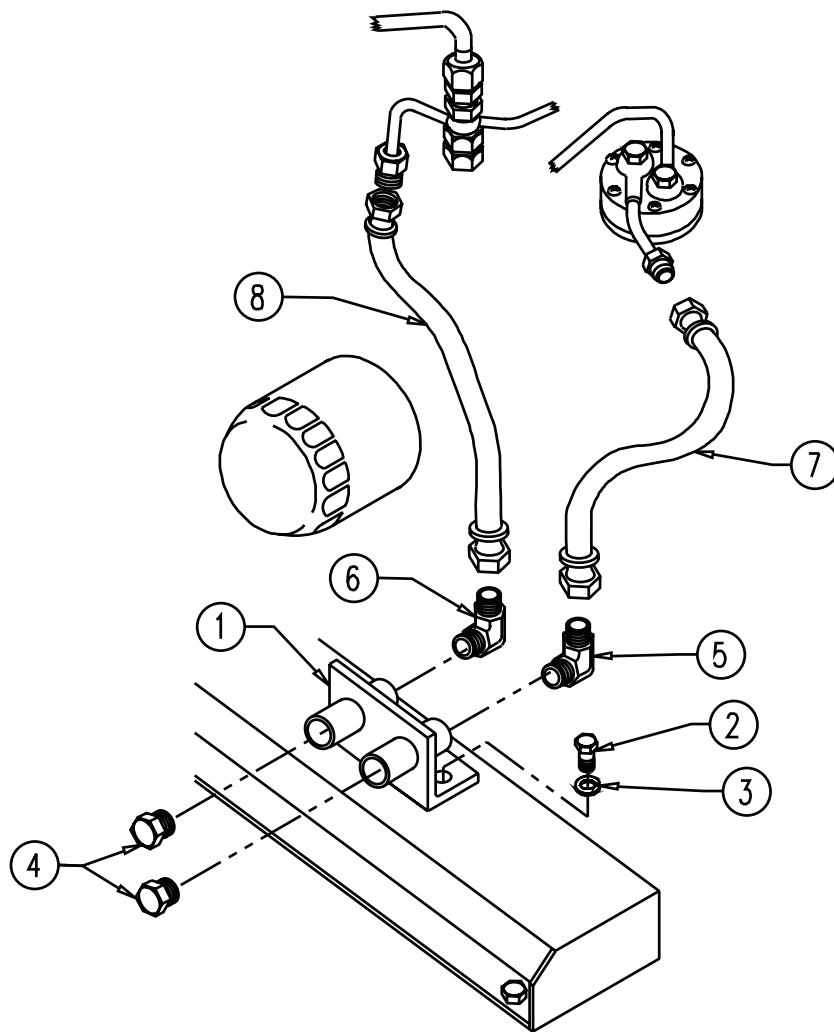


A-11854/ B-9374

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-58401	1	Fuel Manifold 1/4 NPT	-
2	12-00314	2	Capscrew, Hex Head 3/8- 16 x 1- 1/2"	-
3	15-00302	2	Lock Washer, 3/8	-
4	21-50054	2	Male Elbow 45° Brass 1/4 NPT x 1/4- 45T	-
5	18-58104	1	Hose Assembly 1/4" I.D. x 8" 1/4 FMS	-
6	21-52214	1	Elbow 90° Swivel Steel 1/4- 37T	-
7	21-52017	1	Male Connector Steel 1/4- 37T x M8 x 1.25	-
8	025100008	1	Sealing Washer, Bonded M8	-
9	18-58103	1	Hose Assembly 1/4" I.D. x 14" 1/4 FMS	-

**USCG A-1 SAE J1527 ISO 7840 Fuel Lines**

M844 up to s/n xxxx-47026C  
M844L up to s/n xxxx-47167C  
NL844 & NL844L All



A-11855/ B-9278

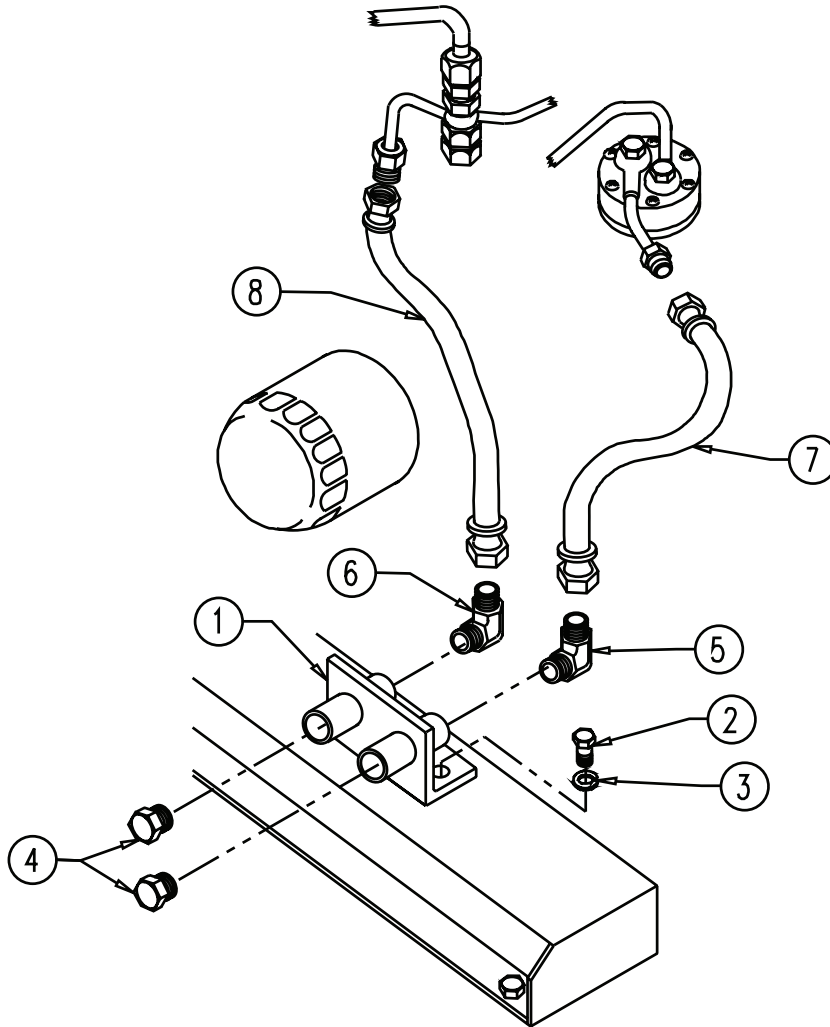
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Fuel Manifold 1/4 NPT	-
2	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
3	15-00610	2	Lock Washer, Helical M6 S/S	-
4	21-31624	2	Plug, Hex Head Brass 1/4 NPT	-
5	21-52245	1	Male Elbow 90°, Brass 1/4 NPT x 5/16-45T	-
6	21-71044	1	Male Elbow 90°, Brass 1/4 NPT x 1/4-45T	-
7	18-58404	1	Hose Assembly 1/4" ID x 17"	-
8	18-58405	1	Hose Assembly 1/4" ID x 24"	-

GROUP 4 – FUEL SYSTEM

**USCG A-1 SAE J1942 ABS Fuel Lines**

M844 from s/n xxxx-47027C

M844 from s/n xxxx-47168C

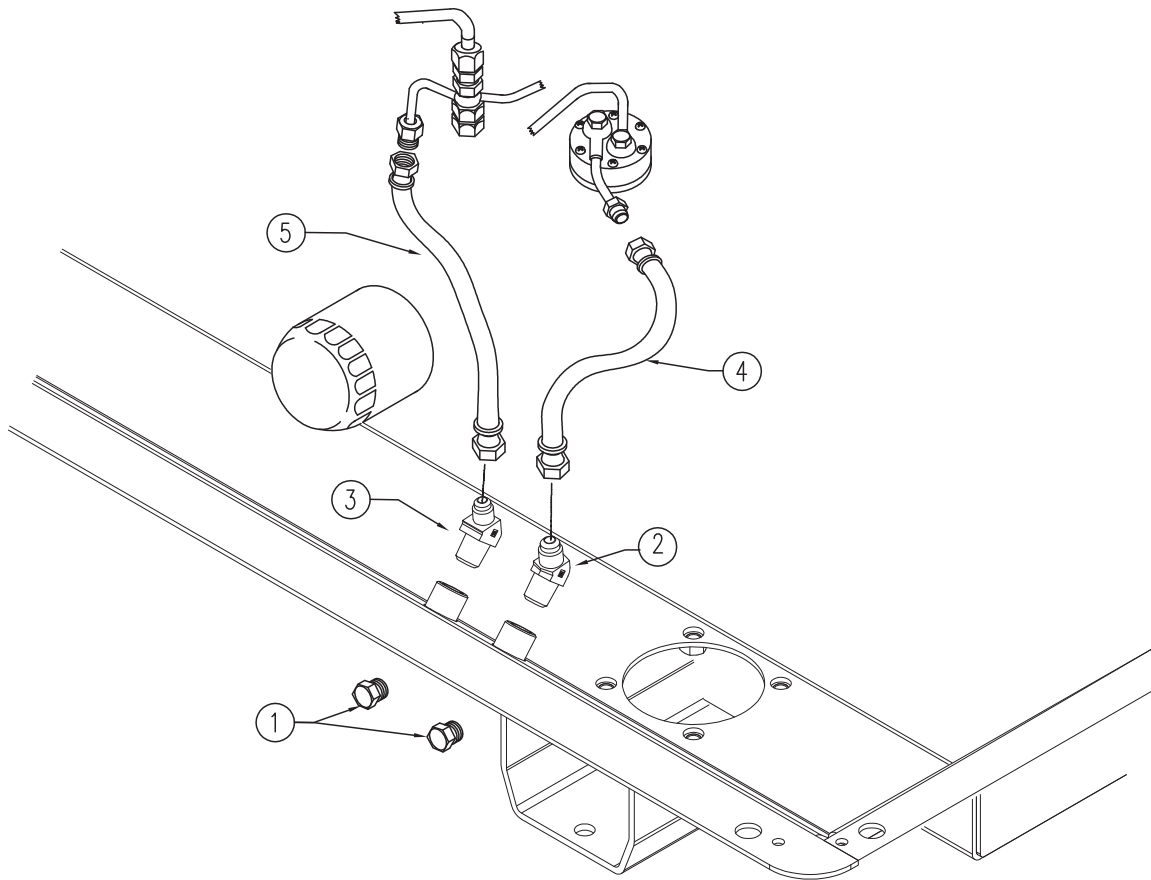


A-6684/ B-9278

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Fuel Manifold 1/4 NPT	-
2	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
3	15-00610	2	Lock Washer, Helical M6 S/S	-
4	21-31624	2	Plug, Hex Head Brass 1/4 NPT	-
5	21-52245	1	Male Elbow 90°, Brass 1/4 NPT x 5/16-45T	-
6	21-71044	1	Male Elbow 90°, Brass 1/4 NPT x 1/4-45T	-
7	18-58105	1	Hose Assembly 1/4" ID x 17"	-
8	18-58106	1	Hose Assembly 1/4" ID x 25"	-

**USCG A-1 SAE J1527 ISO 7840 Fuel Lines**

M844 from s/n xxxx-47027C  
 M844L from s/n xxxx-47168C



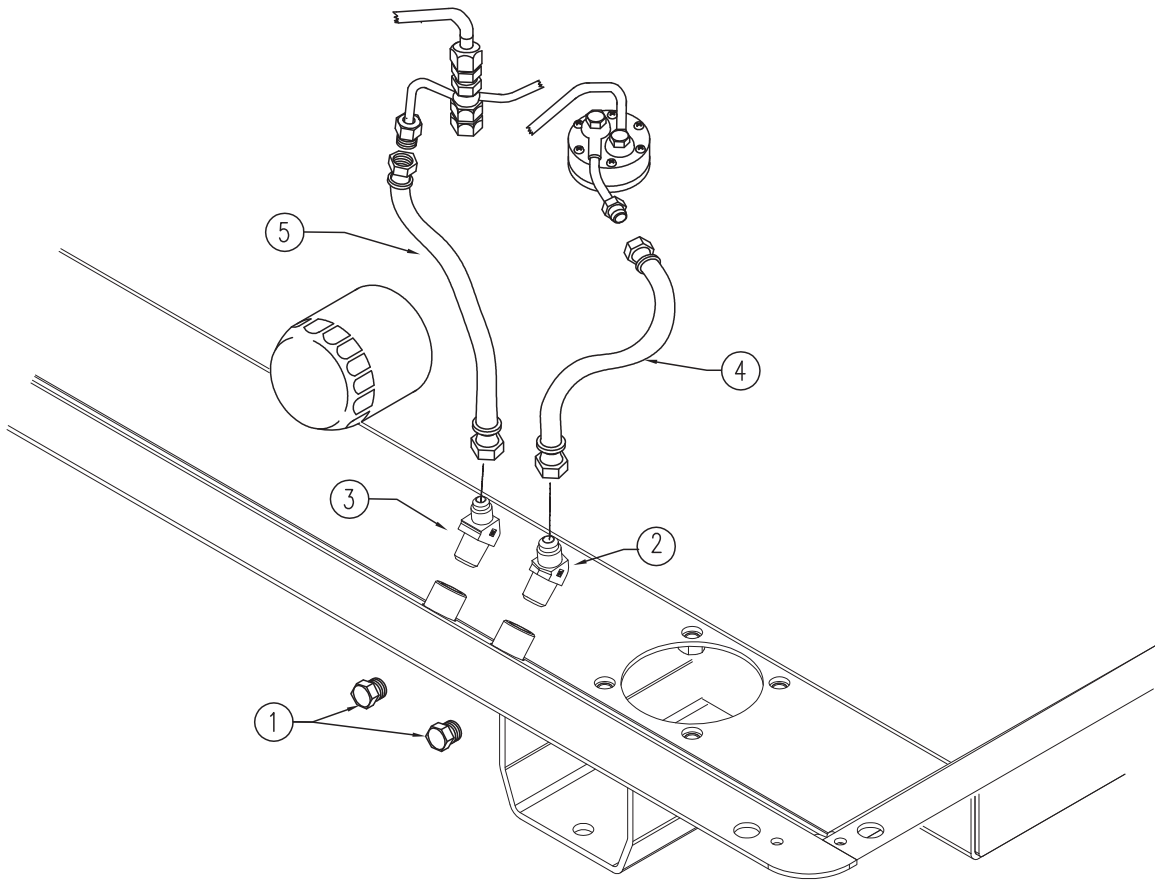
B-9827

Key	Part Number	Qty	Description	Serial Number
1	21-31624	2	Plug, Hex Head Brass 1/4 NPT	-
2	21-51204	1	Male Elbow, 45°, Steel 1/4NPT X 5/16-37T	-
3	21-50054	1	Male Elbow, 45°, Steel 1/4NPT X 1/4-37T	-
4	18-58404	1	Hose Assembly 1/4" ID x 17"	-
5	18-58405	1	Hose Assembly 3/16" ID x 24"	-

GROUP 4 – FUEL SYSTEM

**USCG A-1 SAE J1942 ABS Fuel Lines**

M844 from s/n xxxx-47027C  
 M844L from s/n xxxx-47168C

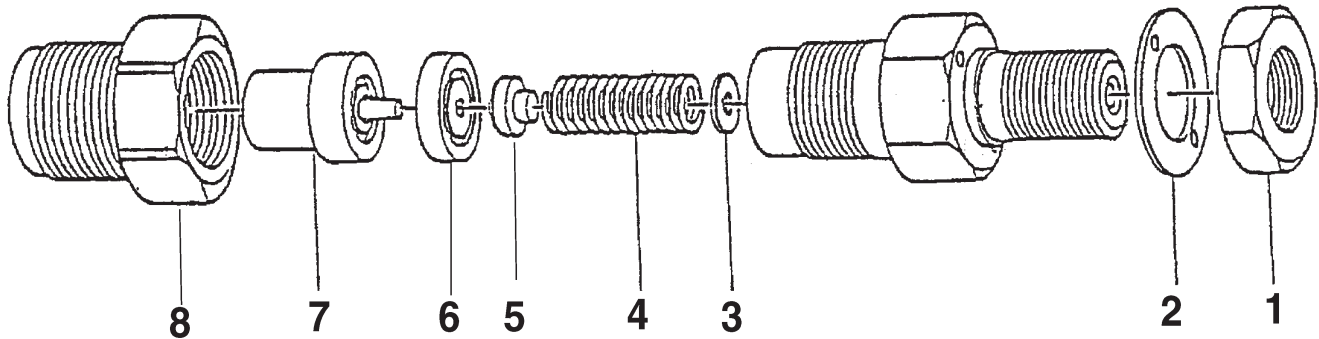


B-9827

Key	Part Number	Qty	Description	Serial Number
1	21-31624	2	Plug, Hex Head Brass 1/4 NPT	-
2	21-00600	1	Male Elbow, 45°, Steel 1/4NPT X 5/16-37T	-
3	21-05404	1	Male Elbow, 45°, Steel 1/4NPT X 1/4-37T	-
4	18-58105	1	Hose Assembly 1/4" ID x 17"	-
5	18-58106	1	Hose Assembly 3/16" ID x 25"	-



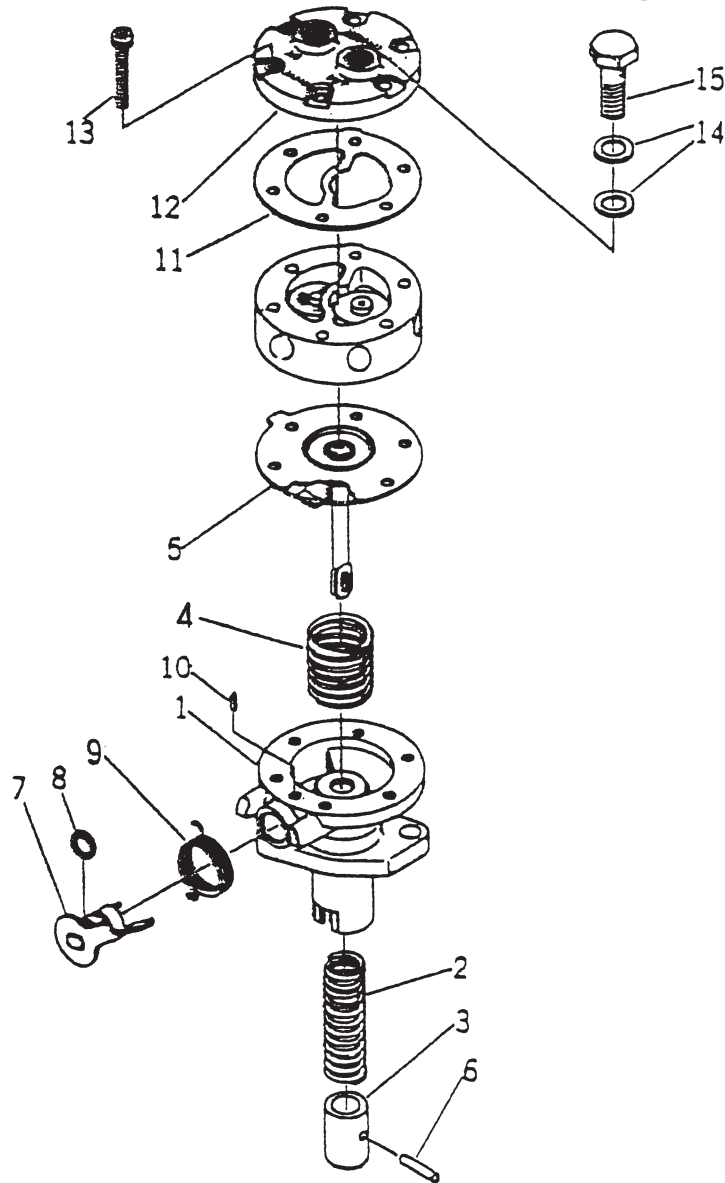
Fuel Injector



injector844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131406360	1	Injector Assembly (includes keys #1 - 8)	-
1	131446006	1	Nut	-
2	131426230	1	Gasket	-
3	131437360	3	Shim	-
4	131446074	1	Spring	-
5	131446075	1	Spring seat	-
6	131446976	1	Spacer	-
7	131416170	1	Nozzle	-
8	131446077	1	Nut	-

**Fuel Feed Pump**

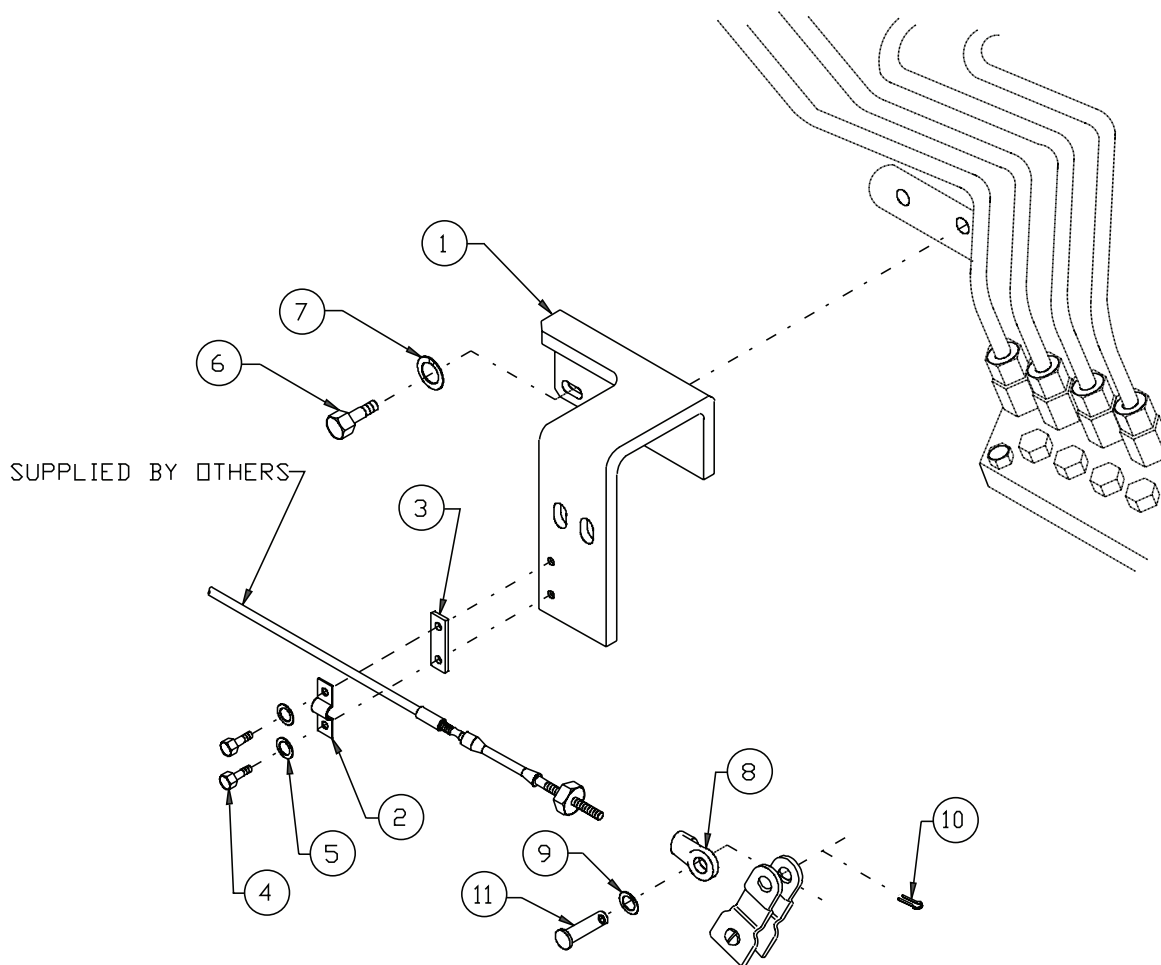


feedpump844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
●●	130506140	1	Feed Pump Assembly (includes keys #1 - 15)	-
1	130516080	1	Housing*	-
2	130516081	1	Spring	-
3	130516082	1	Piston	-
4	130516083	1	Spring	-
5	130516084	1	Diaphragm	-
6	130516085	1	Pin	-
7	130516086	1	Lever	-
8	131226180	1	O-ring	-
9	130516087	1	Spring	-
10	130516088	1	Guide*	-
11	130516101	1	Gasket	-
12	130516090	1	Cap*	-
13	130516091	6	Screw	-
14	130516069	4	Gasket	-
15	130516092	2	Banjo Bolt	-

\*No longer available separately.

**Throttle Assembly**

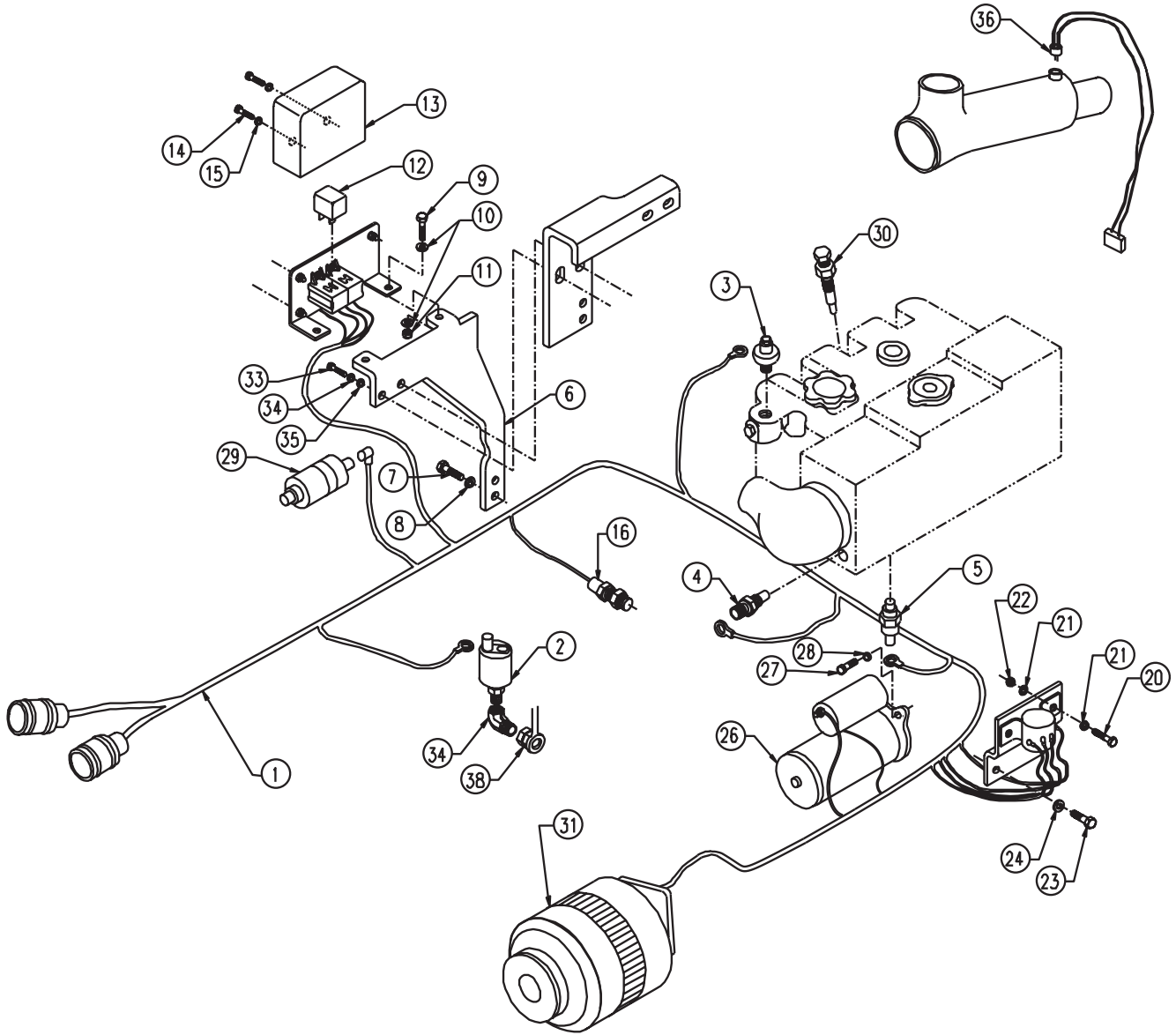


A-10414/ B-8411

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	23-98401	1	Throttle Bracket	-
2	23-91001	1	Cable Clamp	-
3	23-91002	1	Clamp Shim	-
4	12-54800	2	Capscrew, Hex Head M5 x 0.8 x 14 mm	-
5	15-04400	2	Lock Washer, Helical M5	-
6	12-00030	1	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
7	15-01132	1	Lock Washer, Helical M6	-
8	23-91020	1	Throttle Pivot	-
9	15-00706	1	Flat Washer, M8 S/S	-
10	32-00001	1	Cotter Pin, Brass 5/64" x 1"	-
11	32-50001	1	Clevis Pin, S/S	-

# Engine Electrical 12 Volt Standard Ground

Propulsion Units



### Engine Electrical 12 Volt Standard Ground

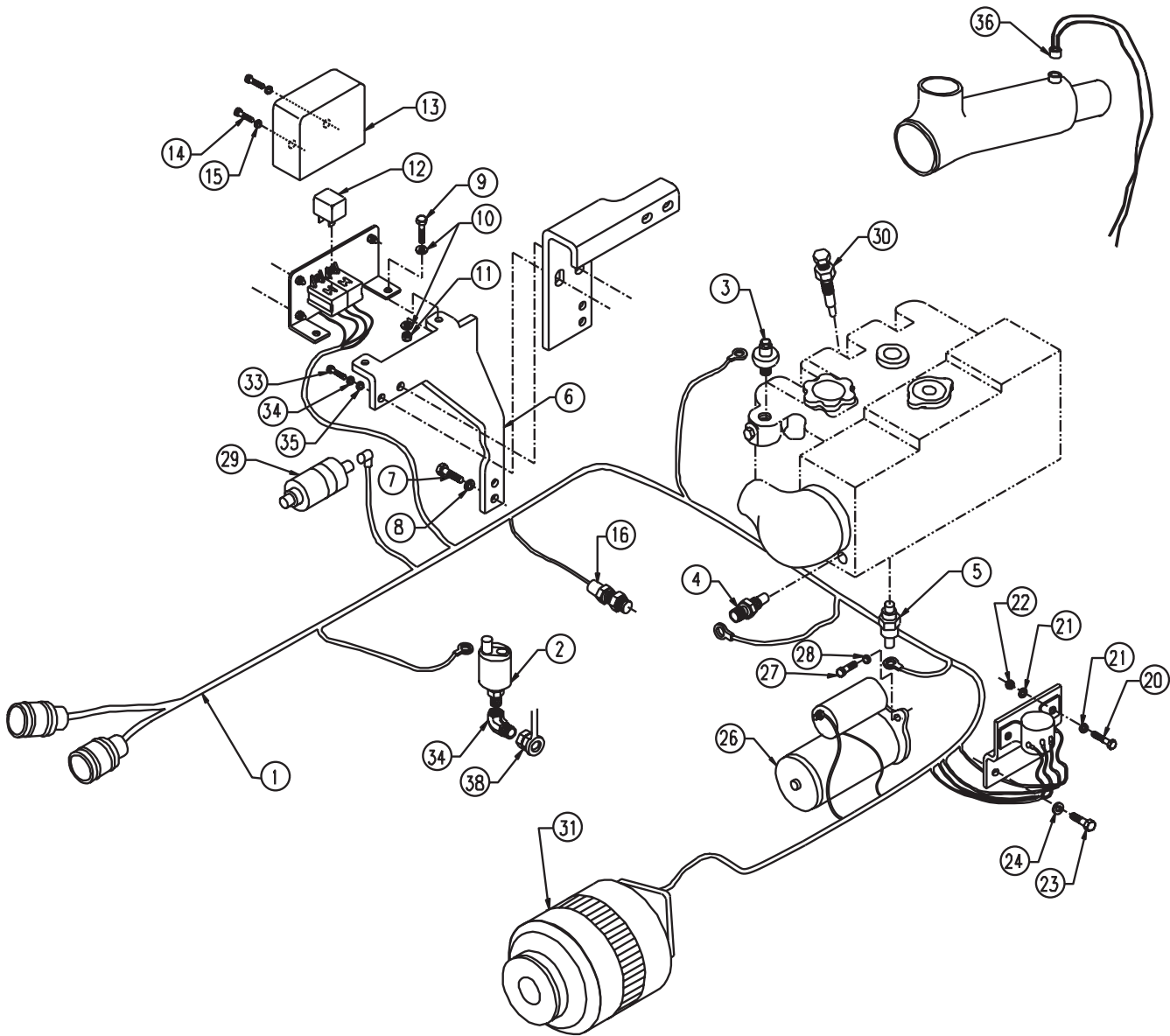
Propulsion Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48404	1	Engine Wire Harness	-
2	22-41016	1	Oil Pressure Sender 0-80 PSI, Standard Ground	-
3	185246011	1	Oil Pressure Switch, Standard Ground 14.2 PSI	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground	-
5	385720110	1	Temperature Switch 95°C	-
6	23-08401	1	Bracket, Circuit Breaker and Relays	-
7	12-59100	2	Capscrew, M14 x 1.5 x 30 S/S	-
8	15-09401	2	Flat Washer, M14 S/S	-
9	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
10	15-00008	4	Flat Washer M6	-
11	14-01131	2	Hex Nut M6 x 1.0	-
12	22-42047	2	Relay 12 Volt 50 Amp	-
13	00-44801	1	Cover, Circuit Breaker and Relays	-
14	12-00094	2	Machine Screw, BH Slotted #10- 32 x 3/8" S/S	-
15	15-70002	2	Flat Washer #10 S/S	-
16	22-40450	1	Magnetic Pick-up, M18 x 1.5 x 58 mm	-
17	22-41002	1	20' Wire Harness Extension (not shown)	-
18	22-41080	1	Solenoid 12 VDC 65 Amp	-
19	23-48605	1	Bracket, Relay Mounting	-
20	12-00030	2	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
21	15-00008	4	Flat Washer M6	-
22	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
23	12-59100	2	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
24	15-09402	2	Lock Washer, M14 S/S	-
25	22-98120	1	Control Panel 12 Volt (not shown, see parts detail)	-
26	185086551	1	Starter 12 Volt (see parts detail)	-
27	12-00832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
28	15-00804	2	Wave Washer M10	-
29	185206085	1	Stop Solenoid 12 Volt	-
30	185366060	4	Glow Plug 12 Volt	-
31	185046320	1	Alternator 12V/ 40 Amp	-
32	21-04801	1	Street Elbow, 90° 1/8 NPT	-
33	12-01102	2	Capscrew, M6 x 1.0 x 16 mm S/S	-
34	34-00610	2	Lock Washer	-
35	15-01134	2	Flat Washer M6	-
36	22-42070	1	Exhaust Temperature Switch 205°F	-
37	22-40482	**	Harness Assembly, High Exhaust Temperature (not shown)	-
38	198487590	1	Banjo Bolt	-

\*\*As required

# Engine Electrical 24 Volt Standard Ground

Propulsion Units



## Engine Electrical 24 Volt Standard Ground

Propulsion Units

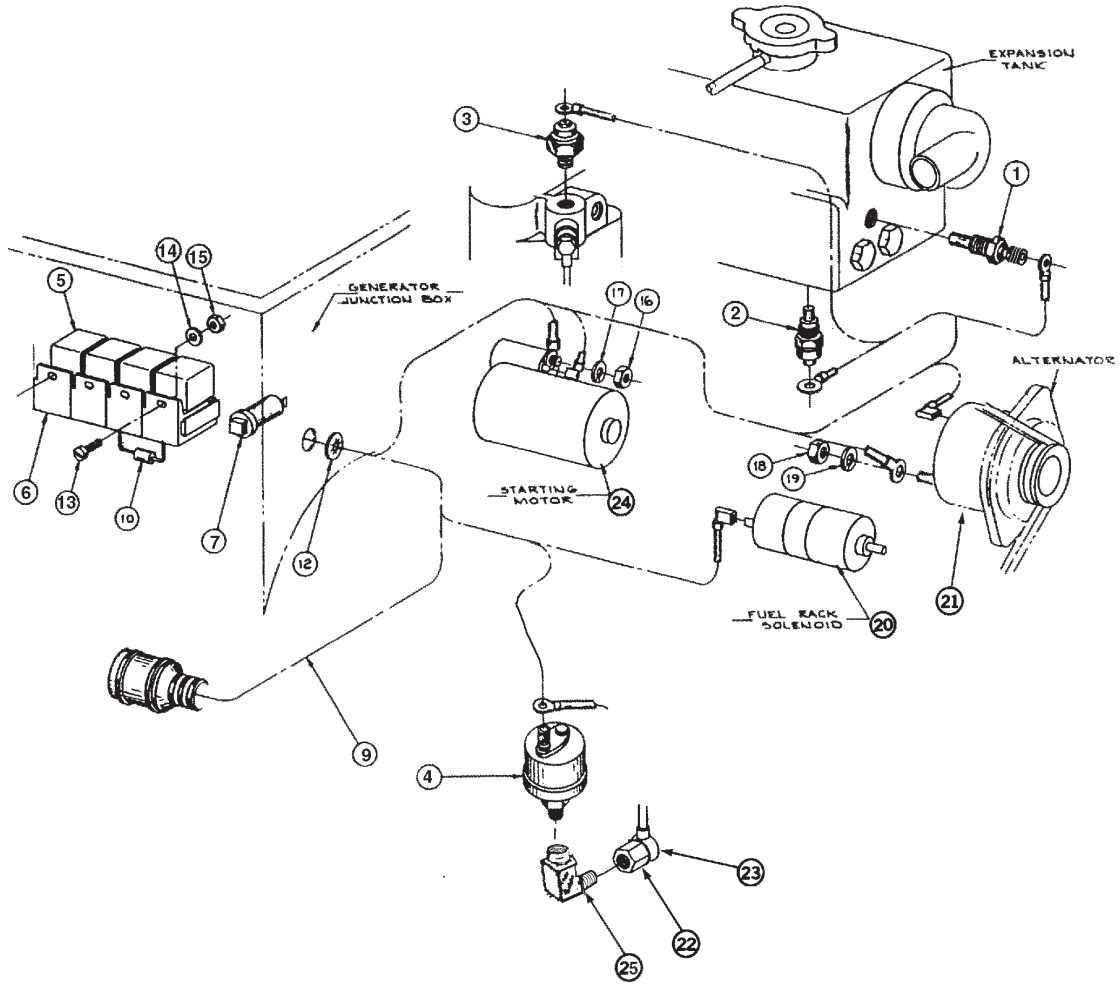
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48404	1	Engine Wire Harness	-
2	22-41016	1	Oil Pressure Sender 0-80 PSI, Standard Ground	-
3	185246011	1	Oil Pressure Switch, Standard Ground 14.2 PSI	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground	-
5	385720110	1	Temperature Switch 95°C	-
6	23-08401	1	Bracket, Circuit Breaker and Relays	-
7	12-59100	2	Capscrew, M14 x 1.5 x 30 S/S	-
8	15-09401	2	Flat Washer, M14 S/S	-
9	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
10	15-00008	4	Flat Washer M6	-
11	14-01131	2	Hex Nut M6 x 1.0	-
12	22-40710	2	Relay 24 Volt 20 Amp	-
13	00-44801	1	Cover, Circuit Breaker and Relays	-
14	12-00094	2	Machine Screw, BH Slotted #10- 32 x 3/8" S/S	-
15	15-70002	2	Flat Washer #10 S/S	-
16	22-40450	1	Magnetic Pick-up, M18 x 1.5 x 58 mm	-
17	22-41002	1	20' Wire Harness Extension (not shown)	-
18	22-41079	1	Solenoid 24 VDC 65 Amp	-
19	23-48605	1	Bracket, Relay Mounting	-
20	12-00030	2	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
21	15-00008	4	Flat Washer M6	-
22	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
23	12-59100	2	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
24	15-09402	2	Lock Washer, Helical M14 S/S	-
25	22-98125	1	Main Instrument Panel 24 Volt (not shown - see parts detail)	-
26	22-42121	1	Starter 24 Volt (see parts detail)	-
27	12-00832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
28	15-00804	2	Wave Washer M10	-
29	185206203	1	Stop Solenoid 24 Volt	-
30	185366100	4	Glow Plug 24 Volt	-
31	22-72020	1	Alternator 24V/ 40 Amp	-
32	21-04801	1	Street Elbow, 90° 1/8 NPT	-
33	12-01102	2	Capscrew, M6 x 1.0 x 16 mm S/S	-
34	15-00610	2	Lock Washer	-
35	15-01134	2	Flat Washer M6	-
36	22-42070	1	Exhaust Temperature Switch, 205°F	-
37	22-40482	**	Harness Assembly, High Exhaust Temperature (not shown)	-
38	198487590	1	Banjo Bolt	-

\*\*As required

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical 12 Volt Standard Ground

Marine Units





## Engine Electrical 12 Volt Standard Ground

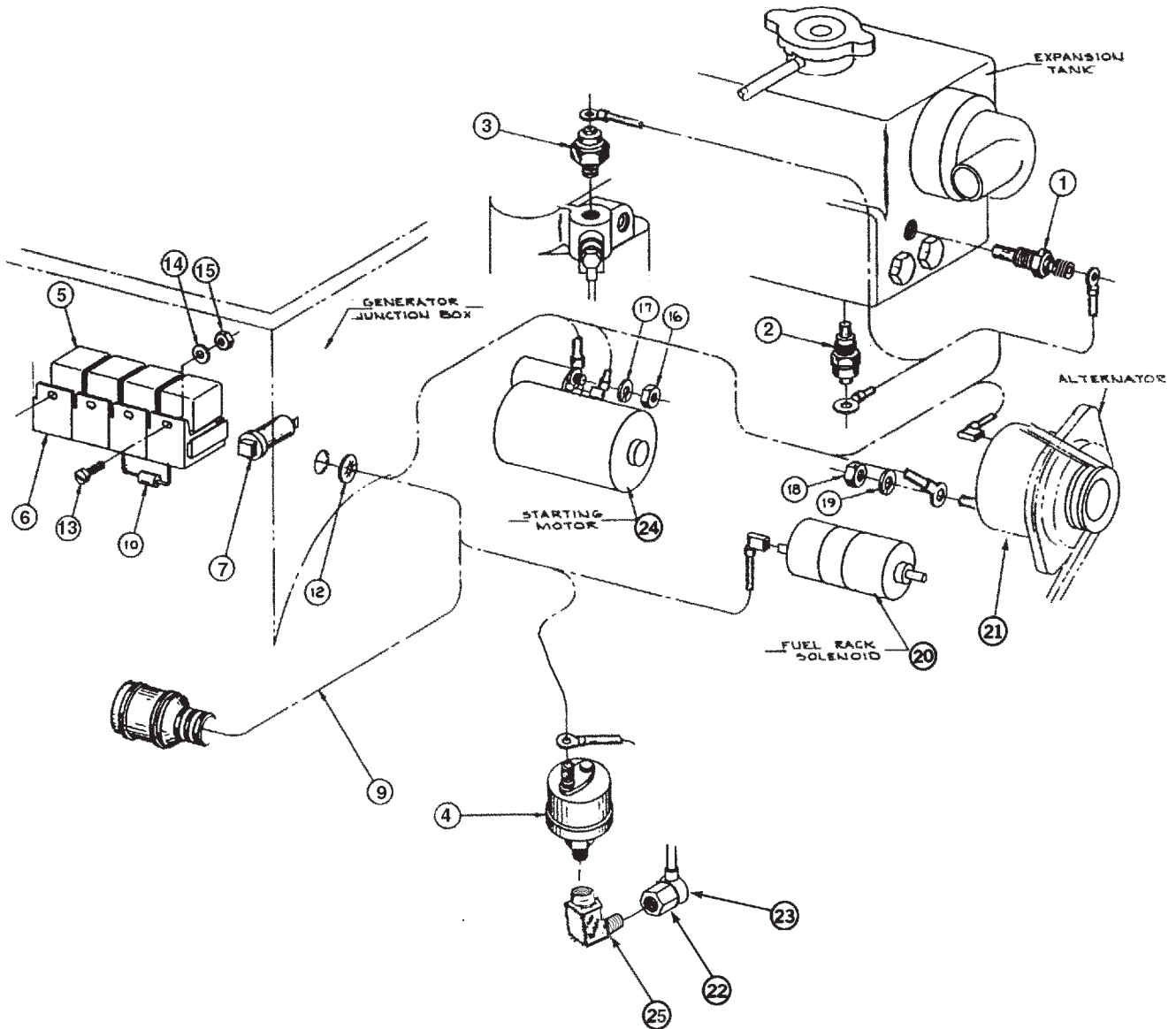
Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F (former #22-40352)	-
	21-55201	1	Bushing, Brass 3/8NPT x 1/8 NPT (for sender 22-70226)	-
2	385720110	1	Temperature Switch 95°C M16 x 1.5	-
3	185246011	1	Oil Pressure Switch 1/8 NPT	-
4	22-41016	1	Oil Pressure Sender 1/8 NPT	-
	22-71016	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-42047	4	Relay, 12 Volt SPDT	-
6	22-40393	4	Terminal Retainer	-
	22-40391	4	Relay Base	-
7	22-42043	1	Circuit Breaker, DC 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker DC 15 Amp - Screw Mount Type	-
8	22-92120	1	Control Panel, S1-B (see detail)	-
9	22-48101	1	Engine Wire Harness - Round Merc Plug Connector	-
10	22-41060	2	Diode, 6 Amp 50 Volt PIV	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10-32 x 3/8" s/s	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10-32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206085	1	Stop Solenoid 12 Volt (see also Fuel System)	-
21	185046320	1	Alternator 12 Volt 40 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	185086551	1	Starter 12 Volt (see mounting detail)	-
25	21-04801	1	Street 90° Steel 1/8 NPT x 1/8 NPT (not shown)	-

GROUP 5 - ELECTRICAL SYSTEM

Engine Electrical 12 Volt Standard Ground

B+ System Marine Units



A-6258 / C-2490AA

## Engine Electrical 12 Volt Standard Ground

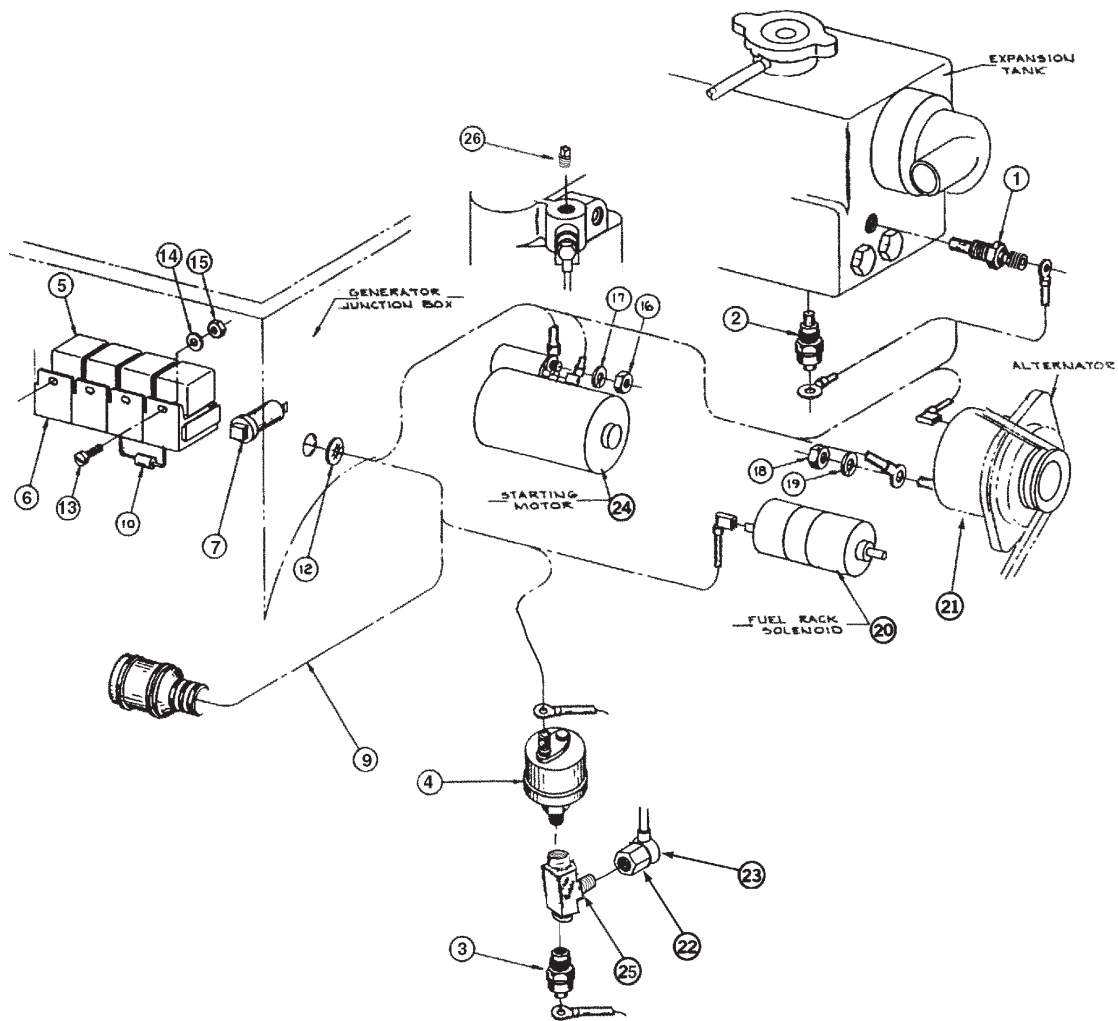
B+ System Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F 1/8 NPT	-
	21-55201	1	Bushing, Brass 3/8NPT x 1/8 NPT (for sender 22-70226)	-
2	385720110	1	Temperature Switch 95°C M16 x 1.5	-
3	185246011	1	Oil Pressure Switch 1/8 NPT	-
4	22-41016	1	Oil Pressure Sender 1/8 NPT	-
	22-71016	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-42047	4	Relay, 12 Volt SPDT	-
6	22-40393	4	Terminal Retainer	-
	22-40391	4	Relay Base	-
7	22-40018	1	Circuit Breaker DC 10 Amp - Screw Mount Type	-
8	22-95605	1	Control Panel, S1-B (see detail)	-
9	22-48417	1	Engine Wire Harness - Square Deutsch Plug Connector	-
10	22-40299	2	Diode, 1 Amp 200 Volt	-
11	22-45620	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10-32 x 3/8" s/s	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10-32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206085	1	Stop Solenoid 12 Volt (see also Fuel System)	-
21	185046320	1	Alternator 12 Volt 40 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	185086551	1	Starter 12 Volt (see mounting detail)	-
25	21-04801	1	Street 90° Steel 1/8 NPT x 1/8 NPT (not shown)	-

GROUP 5 - ELECTRICAL SYSTEM

Engine Electrical 12 Volt Isolated Ground

Marine Units



A-6398, A-6402 / C-2490C

## Engine Electrical 12 Volt Isolated Ground

Marine Units

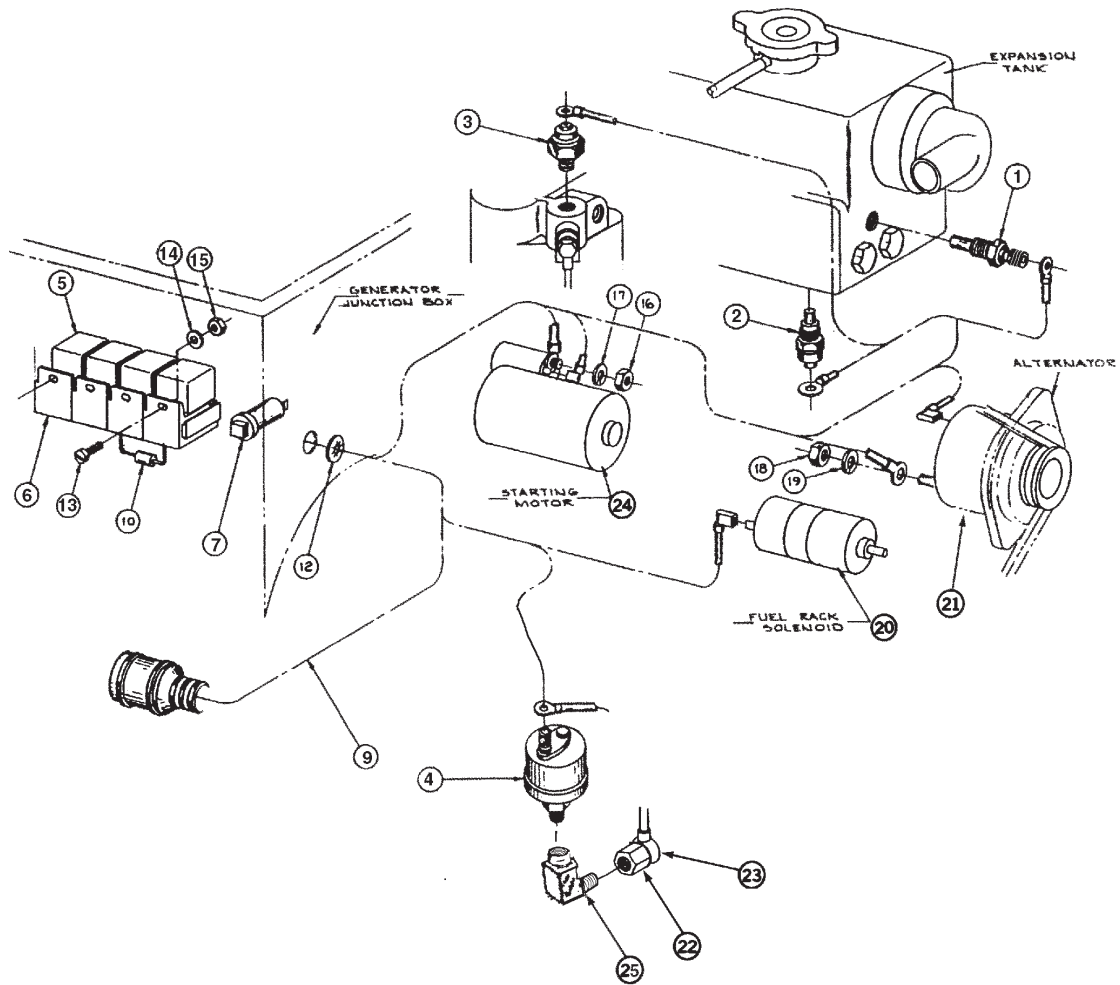
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-44810	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F (former # 22-40353) *	-
2	22-40358	1	Temperature Switch 95°C M16 x 1.5	-
3	22-40236	1	Oil Pressure Switch 1/8 NPT	-
4	22-42803	1	Oil Pressure Sender 1/8 NPT	-
	22-74803	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-42047	5	Relay, 12 Volt SPDT	-
6	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
7	22-42043	1	Circuit Breaker, 15 Amp - Snap-In Type	-
	22-40674	4	Circuit Breaker, 15 AMP - Screw Mount Type	-
8	22-92120	1	Control Panel, S1-B (see detail)	-
9	22-48101	1	Engine Wire Harness - Round Merc Plug Connector	-
	22-78101	1	Ground Harness Addition	-
10	22-41060	2	Diode, 6 Amp 50 Volt PIV	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10- 32 x 3/8" S/S	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10- 32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206192	1	Stop Solenoid 12 Volt (see also Fuel System)	-
21	22-42032	1	Alternator 12 Volt 40 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42124	1	Starter 12 Volt (see mounting detail)	-
25	21-21001	1	Branch Tee Steel 1/8 NPT x 1/8 NPT (not shown)	-
26	21-00050	1	Plug 1/8BSPT	-
27	21-51094	1	Bushing 3/8 NPT x 1/4 NPT *	-

\* Bushing 21-51099 required  
with replacement sender 22-74802

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical 12 Volt Isolated Ground

B+ System Marine Units



A-6398, A-6402 / C-2490C

## Engine Electrical 12 Volt Isolated Ground

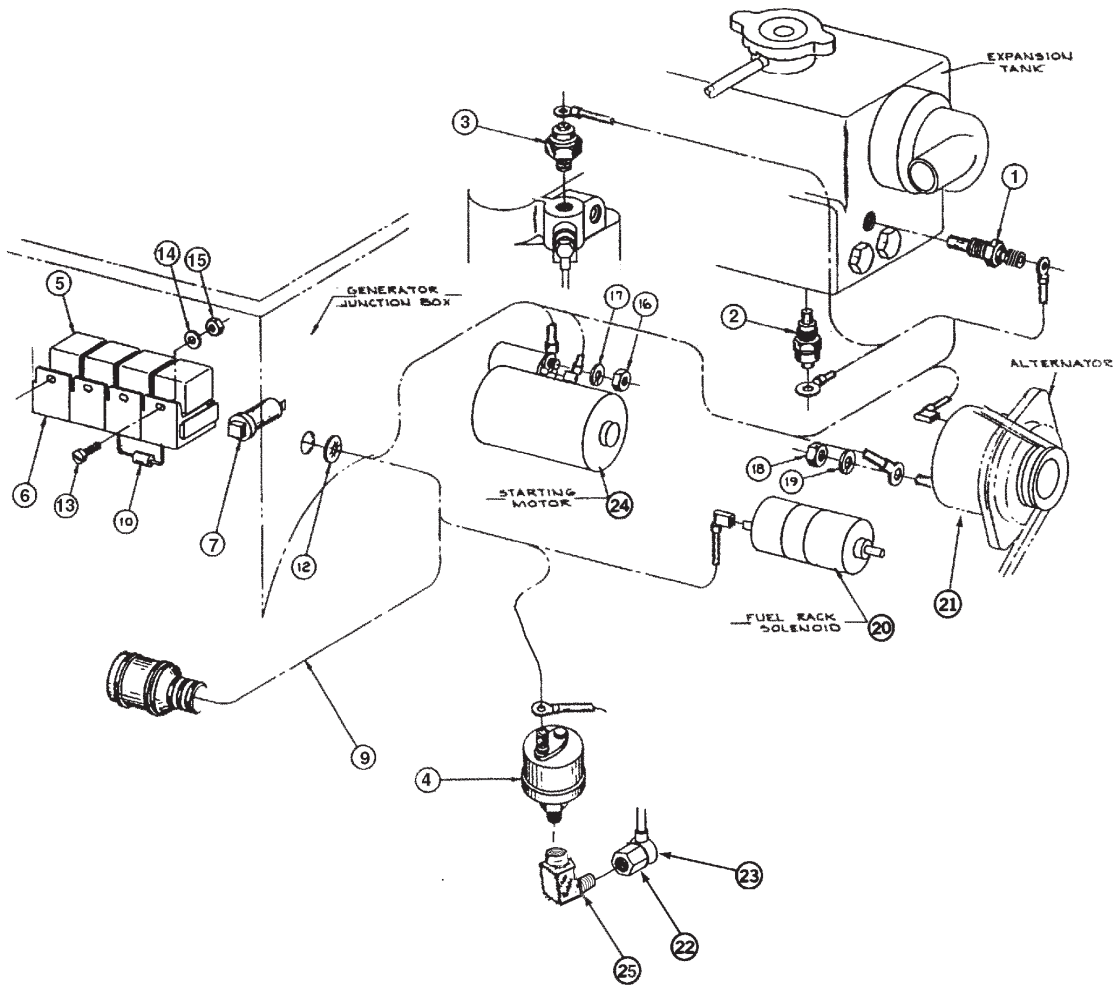
B+ System Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-44810	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F 1/4 NPT *	-
2	22-40358	1	Temperature Switch 95°C M16 x 1.5	-
3	22-40236	1	Oil Pressure Switch 1/8 NPT	-
4	22-42803	1	Oil Pressure Sender 1/8 NPT	-
	22-74803	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-42047	5	Relay, 12 Volt SPDT	-
6	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
7	22-40018	4	Circuit Breaker, 10 AMP - Screw Mount Type	-
8	22-95605	1	Control Panel, S1-B (see detail)	-
9	22-48417	1	Engine Wire Harness - Square Deutsch Plug Connector	-
	22-78101	1	Ground Harness Addition	-
10	22-40299	2	Diode, 1 Amp 200 Volt	-
11	22-45620	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10- 32 x 3/8" S/S	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10- 32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206192	1	Stop Solenoid 12 Volt (see also Fuel System)	-
21	22-42032	1	Alternator 12 Volt 40 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42129	1	Starter 12 Volt (see mounting detail)	-
25	21-21001	1	Branch Tee Steel 1/8 NPT x 1/8 NPT (not shown)	-
26	21-00050	1	Plug 1/8BSPT	-
27	21-51094	1	Bushing 3/8 NPT x 1/4 NPT *	-
			* Bushing 21-51099 required with sender 22-74802	

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical 24 Volt Standard Ground

Marine Units



A-6258 / C-2490AA



## Engine Electrical 24 Volt Standard Ground

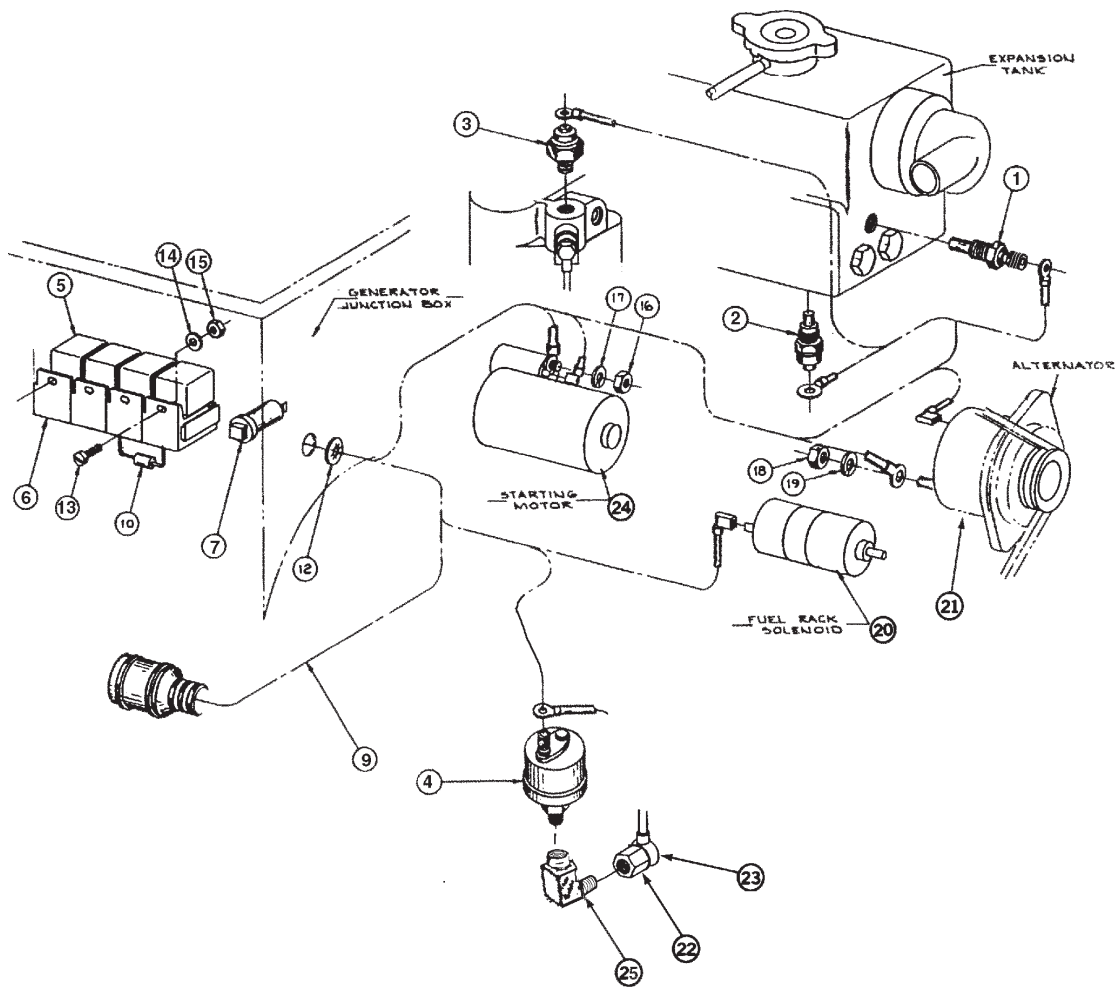
Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender 250°F 3.8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F (former #22-40352)	-
	22-55201	1	Bushing, Brass 3/8NPT x 1/8 NPT (for sender 22-70226)	-
2	385720110	1	Temperature Switch 95°C M16 x 1.5	-
3	185246011	1	Oil Pressure Switch 1/8 NPT	-
4	22-41016	1	Oil Pressure Sender 1/8 NPT	-
	22-71016	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-40710	4	Relay, 24 Volt SPDT	-
6	22-40391	4	Relay Base	-
	22-40393	4	Terminal Retainer	-
7	22-42043	1	Circuit Breaker, 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
8	22-92125	1	Control Panel, S1-B (see detail)	-
9	22-48101	1	Engine Wire Harness - Round Merc Plug Connector	-
10	22-41060	2	Diode, 6 Amp 50 Volt PIV	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10-32 x 3/8" s/s	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10-32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206203	1	Stop Solenoid 24 Volt (see also Fuel System)	-
21	22-40278	1	Alternator 24 Volt 40 AMP	up to S/N xxxx-47026C (844)
		1	Alternator 24 Volt 40 AMP	up to S/N xxxx-47167C (844L)
	22-42088	1	Alternator 24 Volt 25 AMP	from S/N xxxx-47027C (844)
		1	Alternator 24 Volt 25 AMP	from S/N xxxx-47168C (844L)
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42121	1	Starter 24 Volt (see mounting detail) (former #22-42081)	-
25	21-04801	1	Street 90° Steel 1/8 NPT x 1/8 NPT (not shown)	-

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical 24 Volt Standard Ground

B+ System Marine Units



A-6258 / C-2490AA

## Engine Electrical 24 Volt Standard Ground

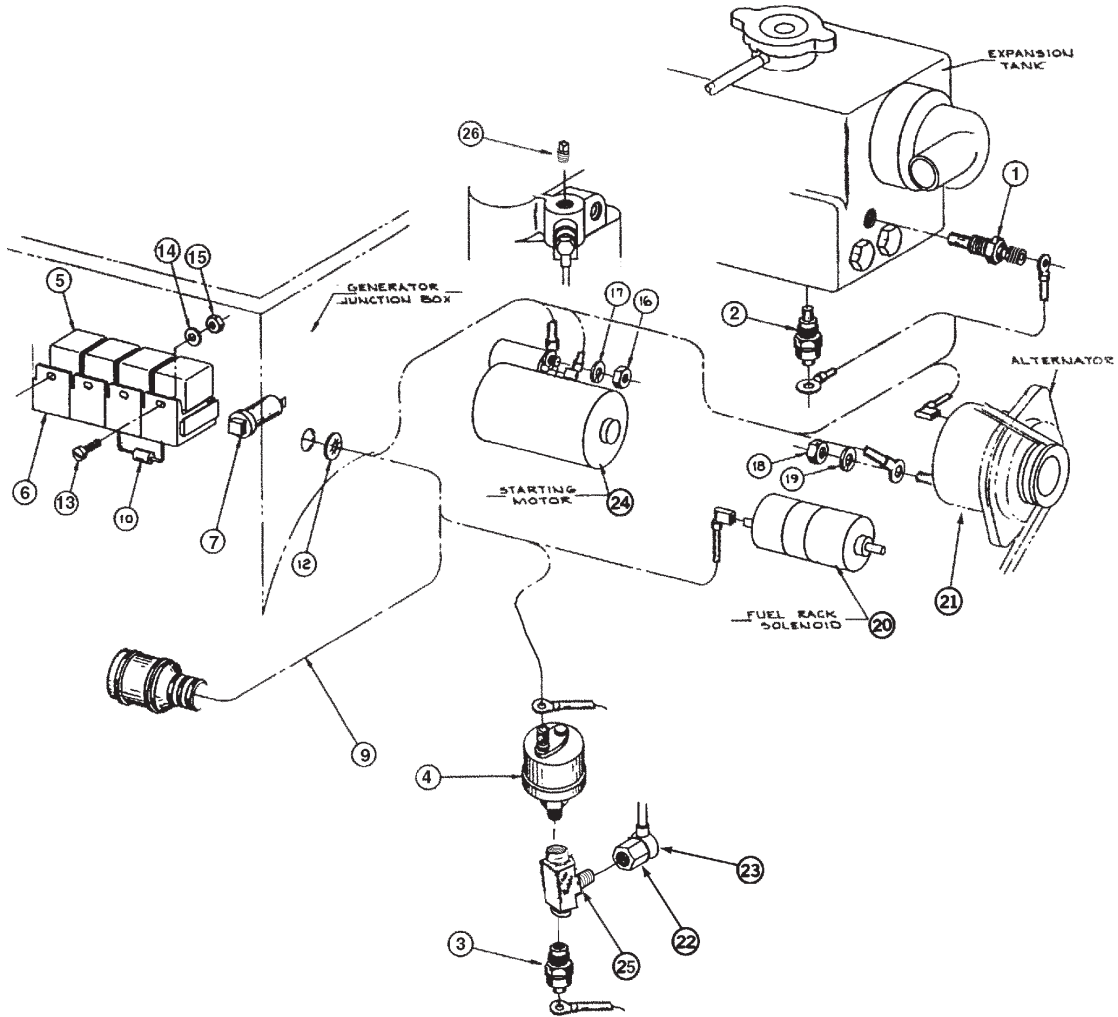
B+ System Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender 250°F 3.8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F 1/4 NPT	-
	21-55201	1	Bushing, Brass 3/8NPT x 1/8 NPT (for sender 22-70226)	-
2	385720110	1	Temperature Switch 95°C M16 x 1.5	-
3	185246011	1	Oil Pressure Switch 1/8 NPT	-
4	22-41016	1	Oil Pressure Sender 1/8 NPT	-
	22-71016	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-40710	4	Relay, 24 Volt SPDT	-
6	22-40391	4	Relay Base	-
	22-40393	4	Terminal Retainer	-
7	22-40018	1	Circuit Breaker 10 Amp - Screw Mount Type	-
8	22-95605	1	Control Panel, S1-B (see detail)	-
9	22-48417	1	Engine Wire Harness - Square Deutsch Plug Connector	-
10	22-40299	2	Diode, 1 Amp 200 Volt	-
11	22-45620	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10-32 x 3/8" s/s	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10-32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206203	1	Stop Solenoid 24 Volt (see also Fuel System)	-
21	22-42088	1	Alternator 24 Volt 25 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.25 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42121	1	Starter 24 Volt (see mounting detail)	-
25	21-04801	1	Street 90° Steel 1/8 NPT x 1/8 NPT (not shown)	-

GROUP 5 – ELECTRICAL SYSTEM

Engine Electrical 24 Volt Isolated Ground

Marine Units



A-6398, A-6402 / C-2490C

## Engine Electrical 24 Volt Isolated Ground

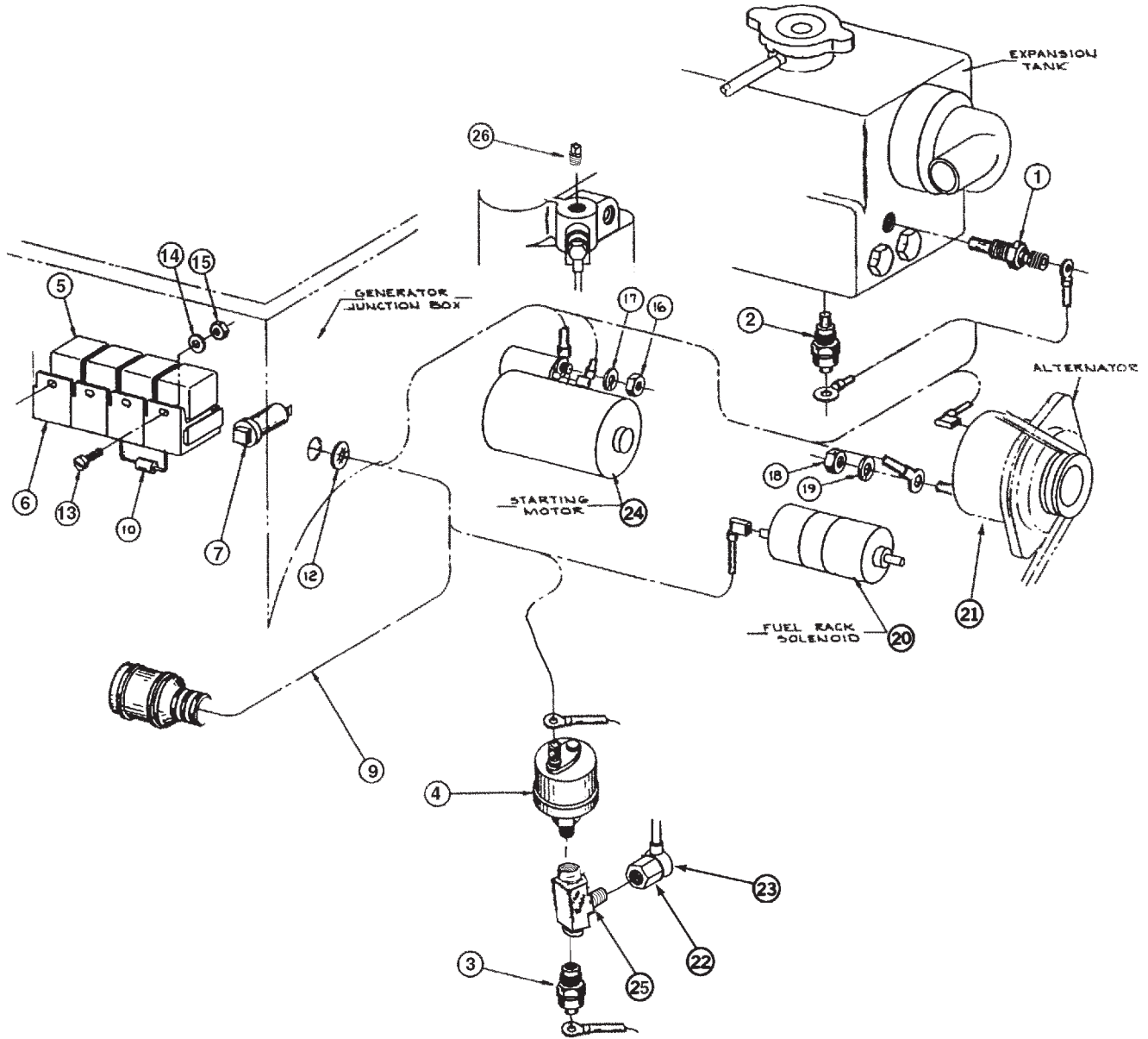
Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-44810	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F 1/4 NPT (former #22-40353)*	-
2	22-40358	1	Temperature Switch 95°C M16 x 1.5	-
3	22-40236	1	Oil Pressure Switch 1/8 NPT	-
4	22-42803	1	Oil Pressure Sender 1/8 NPT	-
	22-74803	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-40710	5	Relay, 24 Volt SPDT	-
6	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
7	22-42043	1	Circuit Breaker, 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
8	22-92125	1	Control Panel, S1-B (see detail)	-
9	22-48101	1	Engine Wire Harness - Round Merc Plug Connector	-
	22-78101	1	Ground Harness Addition	-
10	22-41060	2	Diode, 6 Amp 50 Volt PIV	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10- 32 x 3/8" S/S	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10- 32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206203	1	Stop Solenoid 24 Volt (see also Fuel System)	-
21	22-40763	1	Alternator 24 Volt 35 AMP	up to S/N xxxx-47026C (844)
		1	Alternator 24 Volt 35 AMP	up to S/N xxxx-47167C (844L)
	22-42089	1	Alternator 24 Volt 25 AMP	from S/N xxxx-47027C (844)
		1	Alternator 24 Volt 25 AMP	from S/N xxxx-47168C (844L)
22	198487590	1	Banjo Bolt M8 x 1.5 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42122	1	Starter 24 Volt (see mounting detail) (former #22-42082)	-
25	21-21001	1	Branch Tee Steel 1/8 NPT x 1/8 NPT (not shown)	-
26	21-00050	1	Plug 1/8BSPT	-

\* Bushing 21-51099 required  
with replacement sender 22-74802

# Engine Electrical 24 Volt Isolated Ground

B+ System Marine Units



A-6398, A-6402 / C-2490C

## Engine Electrical 24 Volt Isolated Ground

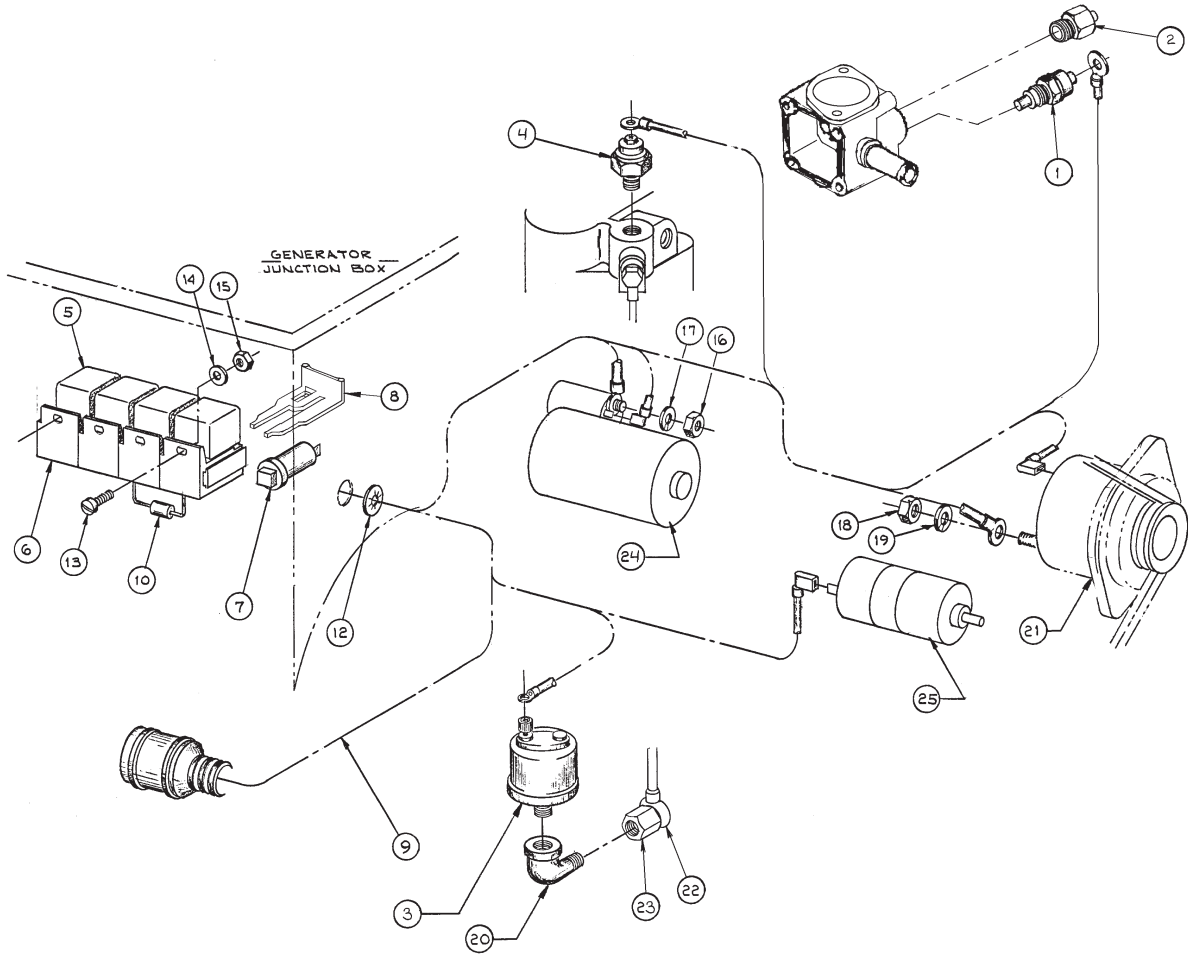
B+ System Marine Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-44810	1	Temperature Sender 250°F 3/8 NPT	-
	22-74802	1	Dual Station Temperature Sender 250°F 1/4 NPT *	-
2	22-40358	1	Temperature Switch 95°C M16 x 1.5	-
3	22-40236	1	Oil Pressure Switch 1/8 NPT	-
4	22-42803	1	Oil Pressure Sender 1/8 NPT	-
	22-74803	1	Dual Station Oil Pressure Sender 1/8 NPT	-
5	22-40710	5	Relay, 24 Volt SPDT	-
6	22-40391	5	Relay Base	-
	22-40393	5	Terminal Retainer	-
7	22-40018	1	Circuit Breaker - 10 Amp, Screw Mount Type	-
8	22-95605	1	Control Panel, S1-B (see detail)	-
9	22-48417	1	Engine Wire Harness - Square Deutsch Plug Connector	-
	22-78101	1	Ground Harness Addition	-
10	22-40299	2	Diode, 1 Amp 200 Volt	-
11	22-45620	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10- 32 x 3/8" S/S	-
14	15-00032	2	Flat Washer #10	-
15	14-00006	2	Hex Nut, Nylock #10- 32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	185206203	1	Stop Solenoid 24 Volt (see also Fuel System)	-
21	22-42089	1	Alternator 24 Volt 25 AMP	-
22	198487590	1	Banjo Bolt M8 x 1.5 x 18mm (Tapped 1/8 NPT)	-
23	140606701	1	Oil Line	-
24	22-42122	1	Starter 24 Volt (see mounting detail)	-
25	21-21001	1	Branch Tee Steel 1/8 NPT x 1/8 NPT (not shown)	-
26	21-00050	1	Plug 1/8BSPT	-

\* Bushing 21-51099 required  
with replacement sender 22-74802

# Engine Electrical - 12 Volt Standard Ground

Industrial Units





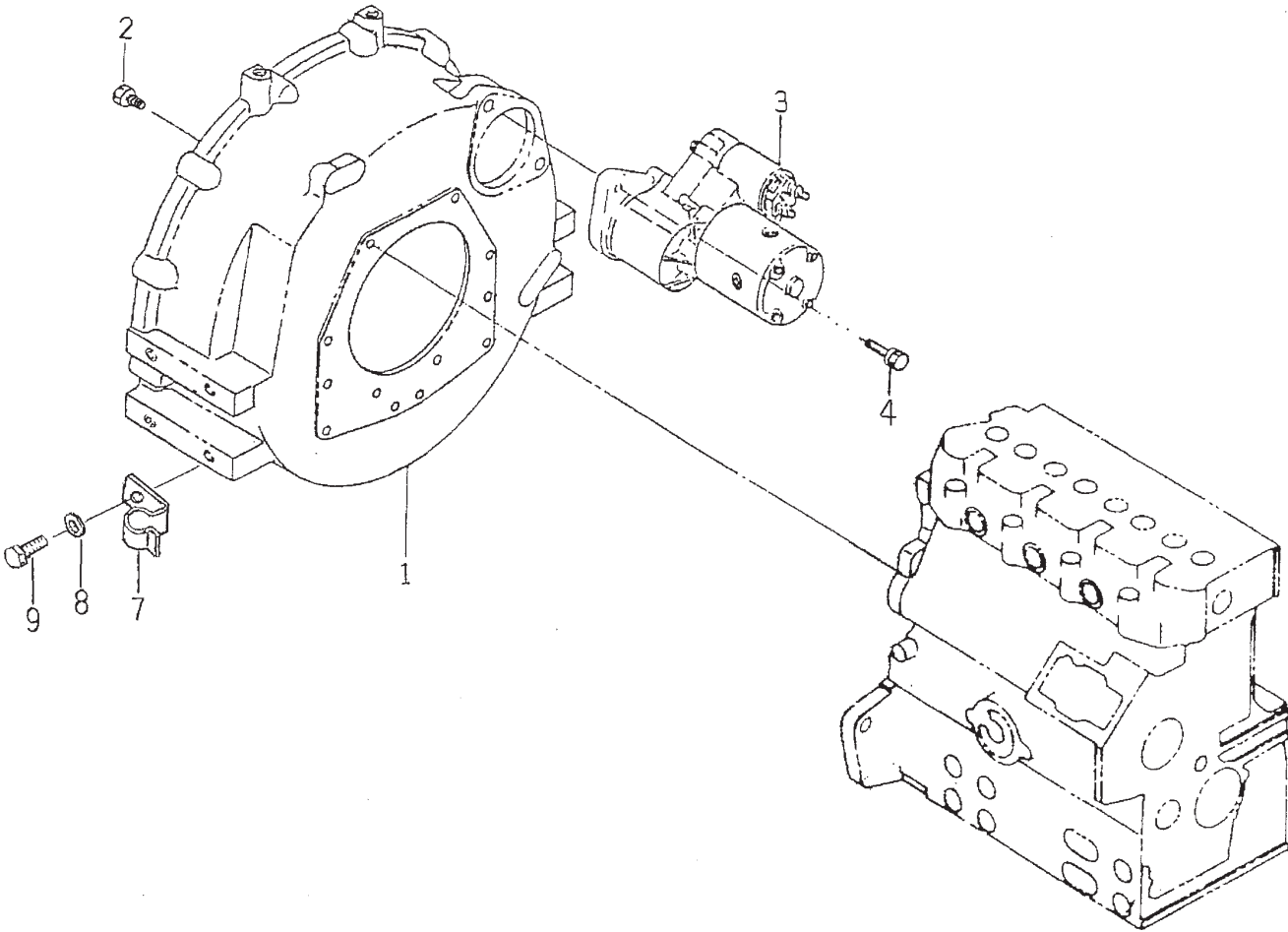
## Engine Electrical - 12 Volt Standard Ground

Industrial Units

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender, 0-250°F Single Station 3/8 NPT	-
2	385720101	1	Temperature Switch 221°F/ 105°C	-
3	22-41016	1	Oil Pressure Sender 0-80 PSI, Single Station 1/8 NPT	-
4	185246011	1	Oil Pressure Switch	-
5	22-42047	4	Relay, 12 Volt SPDT	-
6	22-40391	4	Relay Base	-
7	22-42043	1	Circuit Breaker 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
8	22-40393	4	Terminal Retainer	-
9	22-43121	1	Engine Wire Harness (includes key #10)	-
10	22-41060	2	Diode, 6 Amp 50 Volt	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-40028	1	Grommet	-
13	12-00094	2	Machine Screw #10-32 x 3/8" Stainless Steel	-
14	15-00032	2	Flat Washer #10	-
15	14-00001	2	Hex Nut, #10-32	-
16	14-00711	1	Hex Nut, M8 x 1.25	-
17	15-00702	1	Lock Washer M8	-
18	14-04401	1	Hex Nut, M5 x 0.8	-
19	15-04400	1	Lock Washer M5	-
20	21-04801	1	Street Elbow 90°, 1/8 NPT Steel	-
21	185046320	1	Alternator 12 Volt (see parts detail)	-
22	140607941	1	Oil Line	-
23	198487590	1	Banjo Bolt (Tapped 1/8 NPT Female)	-
24	185086551	1	Starter 12 Volt (see parts detail)	-
25	185206084	1	Fuel Solenoid 12 Volt	-

GROUP 5 – ELECTRICAL SYSTEM

**Starter & Flywheel Housing L - M - NL844**

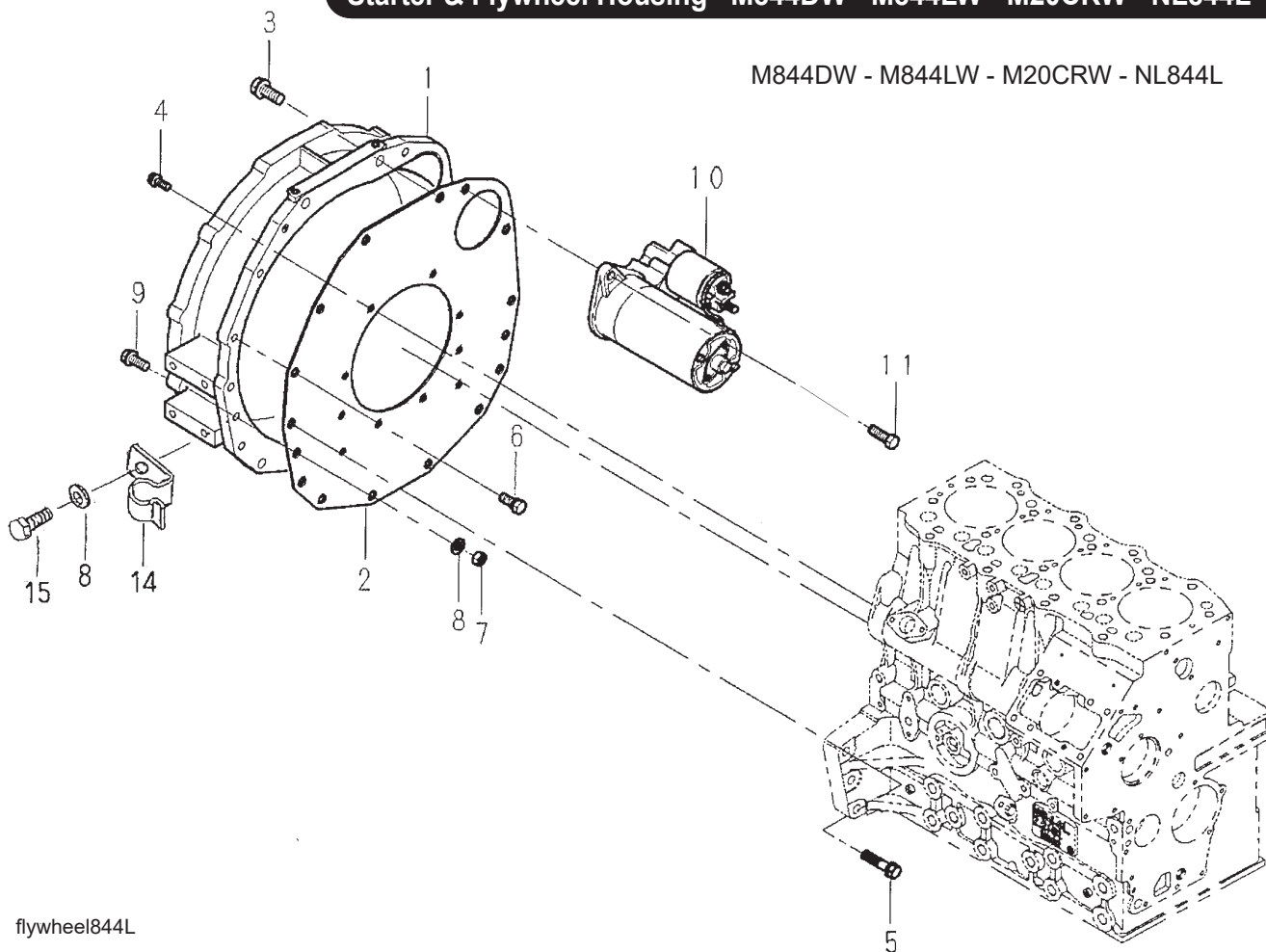


flywheel844

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110446890	1	Flywheel Housing - Marine SAE #4	-
	110446880	1	Flywheel Housing - Industrial SAE #4	-
2	011510820	10	Bolt	-
3	185086551	1	Starter - 12 Volt - Standard Ground (marked M001T66081)*	-
	22-42059	1	Starter - 12 Volt - Isolated Ground	-
	22-42121	1	Starter - 24 Volt - Standard Ground (Former #22-42081)	-
	22-42122	1	Starter - 24 Volt - Isolated Ground (Former #22-42082)	-
4	01435-01025	2	Capscrew, Hex Head M10 x 1.5 x 25 mm (12 Volt Starters)	-
	01435-01030	2	Capscrew, Hex Head M10 x 1.5 x 30 mm (24 Volt Starters)	-
7	23-72003	1	Bracket	-
8	15-0080	1	Lock Washer	-
9	199436350	2	Bolt	-
			} for marine and propulsion units only	
			*See parts detail.	

**Starter & Flywheel Housing M844DW - M844LW - M20CRW - NL844L**

M844DW - M844LW - M20CRW - NL844L



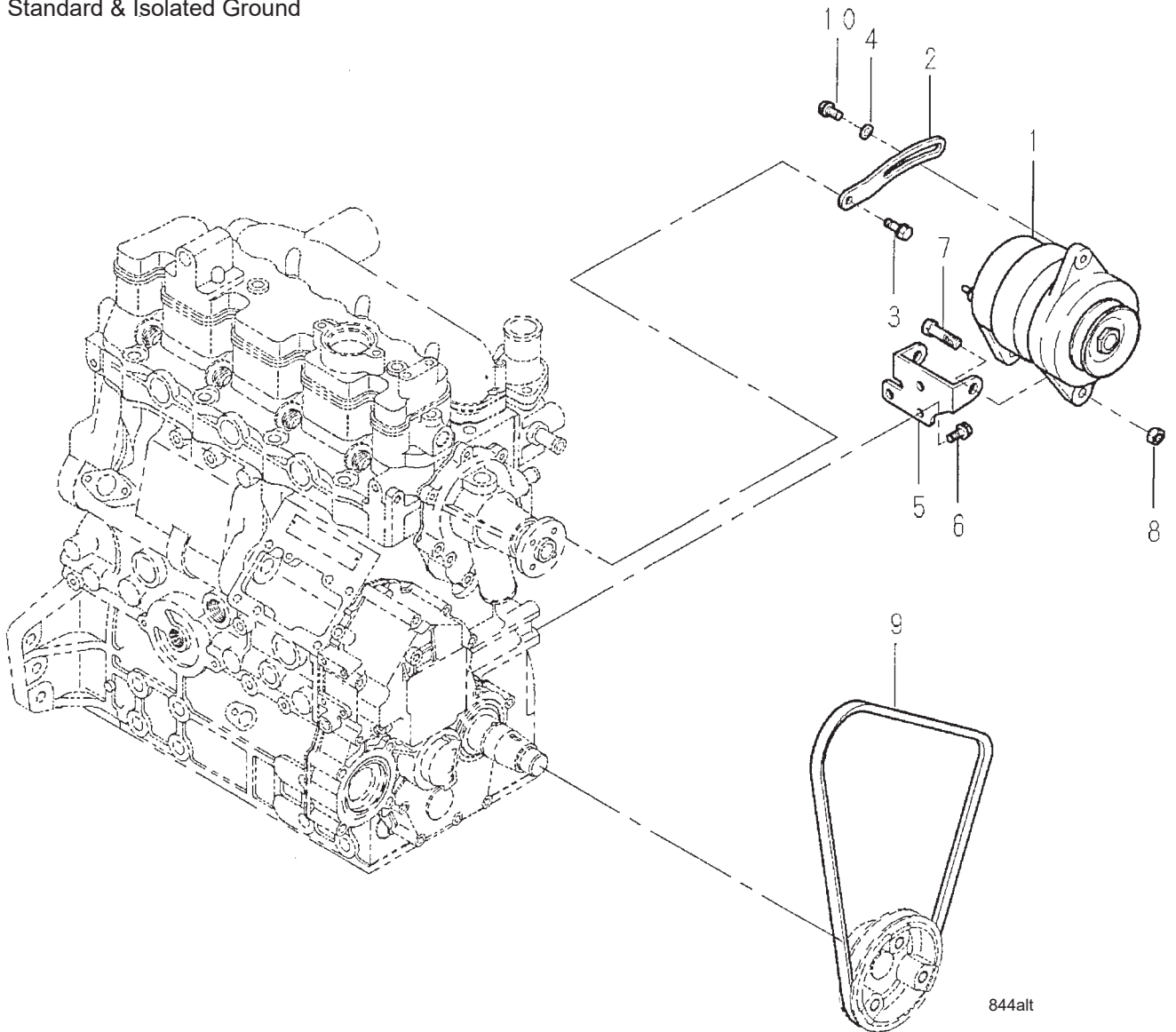
flywheel844L

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL #
1	110446991	1	Flywheel Housing - Marine SAE #4	-
	110447000	1	Flywheel Housing - Industrial SAE #4	-
	110446960	1	Flywheel Housing - Commercial SAE #4	-
2	110367590	1	Back Plate - Marine	-
	110367610	1	Back Plate - Industrial	-
	110367580	1	Back Plate - Commercial	-
3	011511235	2	Bolt	-
4	011510816	10	Bolt	-
5	011511045	6	Bolt	-
6	011511020	2	Bolt	-
7	020900010	4	Nut	-
8	15-00802	5	Spring Washer	-
9	010211030	4	Bolt	-
10	185086551	1	Starter - 12 Volt - Standard Ground (marked M001T66081)	-
	22-42059	1	Starter - 12 Volt - Isolated Ground	-
	22-42121	1	Starter - 24 Volt - Standard Ground (former #22-42081)	-
	22-42122	1	Starter - 24 Volt - Isolated Ground (former #22-42082)	-
11	01435-01025	2	Capscrew, Hex Head M10 x 1.5 x 25 mm (12 Volt Starters)	-
	01435-01030	2	Capscrew, Hex Head M10 x 1.5 x 30 mm (24 Volt Starters)	-
15	199436350	1	Bolt (Marine only)	up to s/n xxxx-92308
15	199436350	1	Bolt (Marine only)	up to s/n xxxx-92308

**GROUP 5 – ELECTRICAL SYSTEM**

**Small Frame Alternators & Mounting**

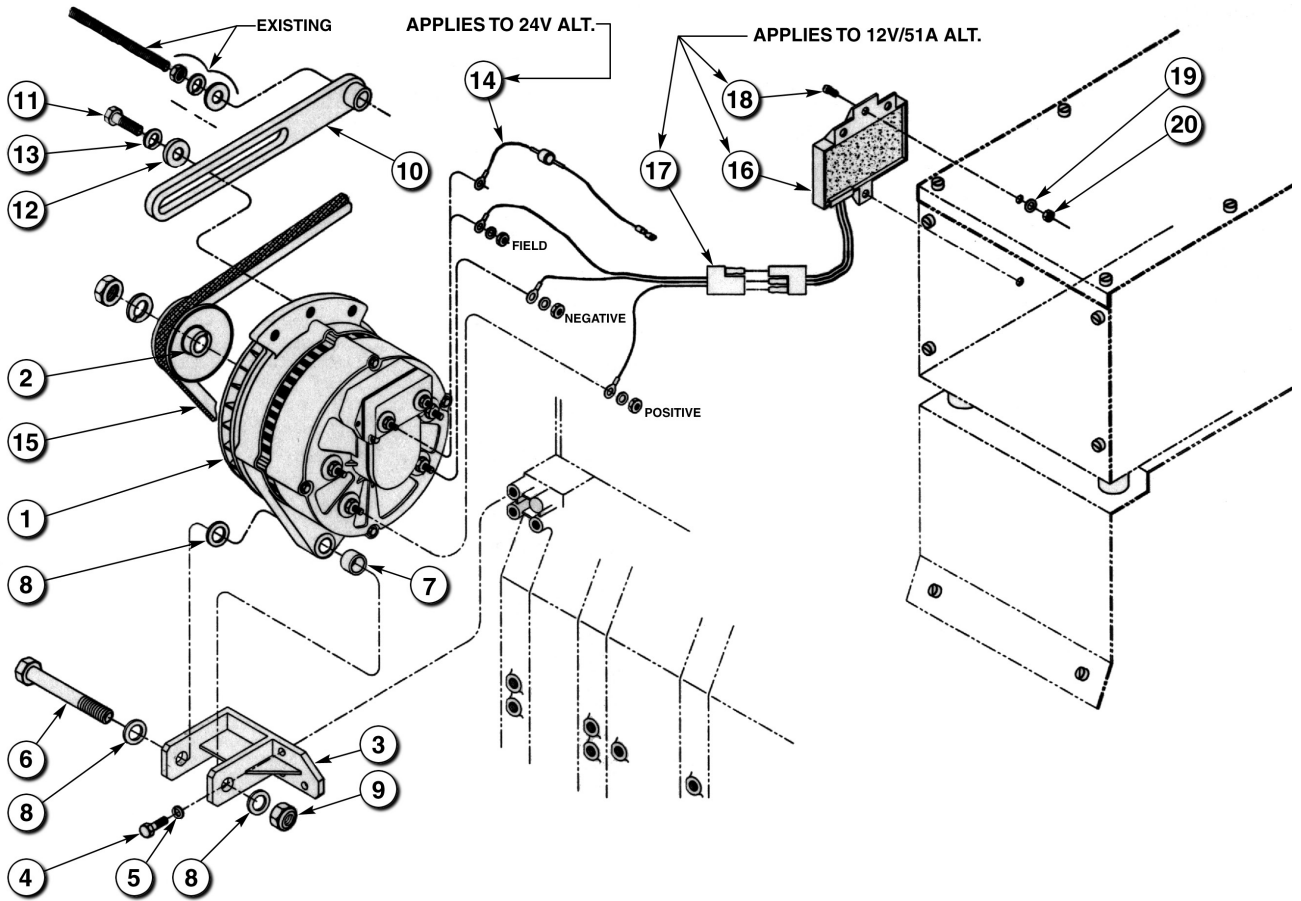
Standard & Isolated Ground



844alt

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185046320	1	Alternator 12 Volt/ 40 Amp Standard Ground (see parts detail)	-
	22-42032	1	Alternator 12 Volt/ 40 Amp Isolated Ground	-
	22-42088	1	Alternator 24 Volt/ 25 Amp Standard Ground	} from s/n xxxx-47027C (M844) } from s/n xxxx-47168C (M844L)
	22-42089	1	Alternator 24 Volt/ 25 Amp Isolated Ground	
2	185727000	1	Tensioner	-
3	011510820	1	Bolt	-
4	026109017	1	Washer	-
5	185976510	1	Bracket	-
6	011510816	3	Bolt	-
7	010301035	2	Bolt	-
8	023100010	2	Nut	-
9	40-02003	1	Drive Belt L844D - M-NL844W	-
	40-08401	1	Drive Belt M844DW - M-NL844LW - M20CRW	-
10	011510825	1	Bolt	-

Medium Frame Alternator Options 12V/51 Amp & 24V/35 & 40 Amp

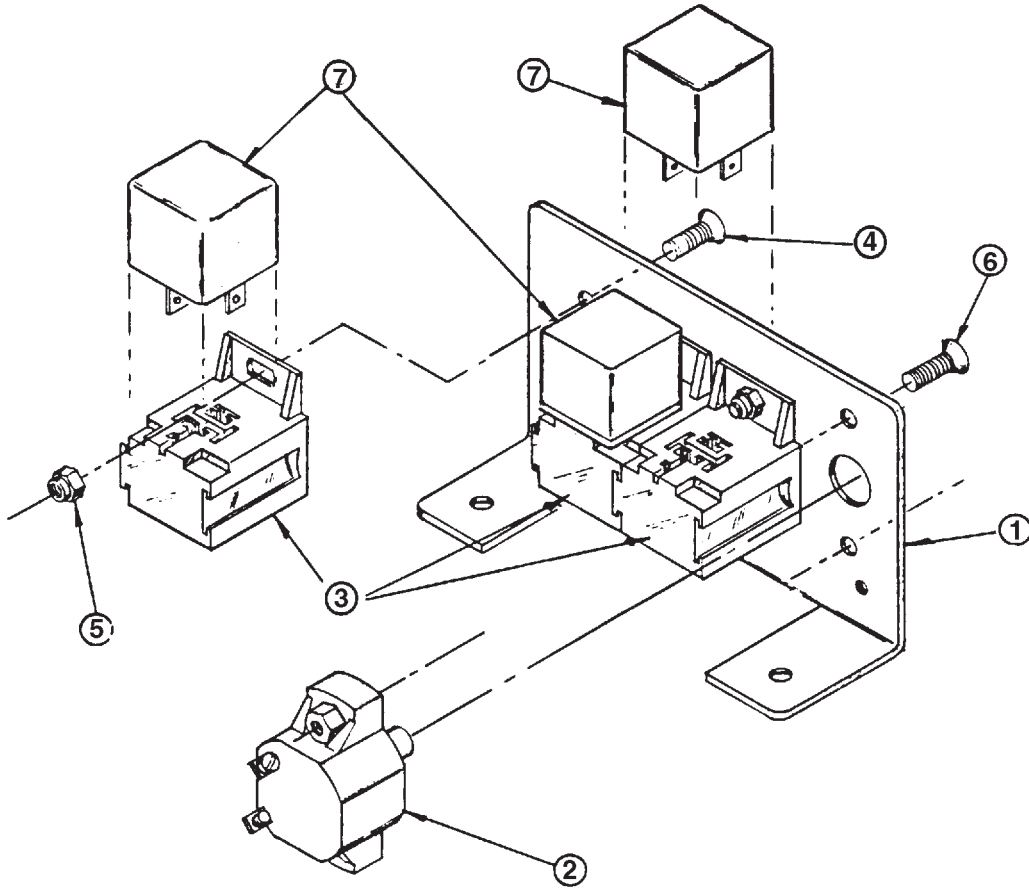


A-7631, A-7632, A-7633, A-7634, A-7635, A-7636 & D-2926

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40523	1	Alternator 12 Volt/51 Amp Isolated Ground	-
	22-40278	1	Alternator 24 Volt/40 Amp Standard Ground	-
	22-40763	1	Alternator 24 Volt/35 Amp Isolated Ground	-
2	34-42001	1	Pulley 1-A x 2-1/2" x 5/8" ID	-
3	23-43107	1	Bracket, Alternator Mounting	-
4	12-00711	3	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
5	15-00702	3	Lock Washer, Helical M8	-
6	12-00519	1	Capscrew, Hex Head 1/2-13 x 2-3/4"	-
7	21-42206	1	Spacer	-
8	15-00504	**	Flat Washer, 1/2 SAE	-
9	14-00512	1	Hex Nut, Nylock 1/2-13	-
10	23-43100	1	Tensioning Arm (used with 24 Volt/35 Amp Alternator)	-
	23-42006	1	Tensioning Arm (used with 12 Volt/51 Amp & 24 Volt/40 Amp Alternators)	-
11	12-00212	1	Capscrew, Hex Head 5/16-18 x 1"	-
12	15-00201	1	Stud Washer 5/16	-
13	15-00202	1	Lock Washer, Helical 5/16	-
14	22-70048	1	Diode Harness Addition	-
15	40-02005	1	Drive Belt (844)	-
	40-74501	1	Drive Belt (844L & M20CR, CRW)	-
16	22-40226	1	D.C. Voltage Regulator, 12V, Adjustable	-
17	16-1	1	Wire Harness 36"	-
18	12-00001	2	Machine Screw #10-32 x 3/4" s/s	} 12 Volt / 51 Amp Alternator Only
19	15-70002	2	Flat Washer #10 s/s	
20	14-00032	2	Hex Nut, Nylock #10 s/s	
			**As required	

GROUP 5 – ELECTRICAL SYSTEM

Wire Harness, Circuit Breaker, & Relay Panel L844

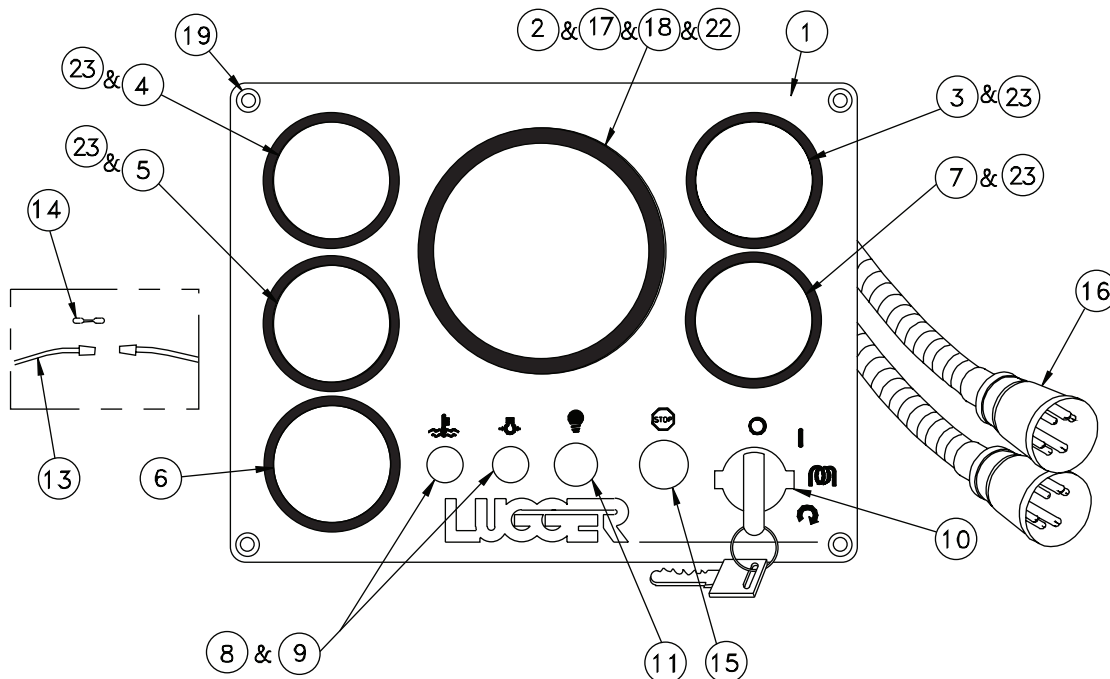


B-3139

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-48404	1	Wire Harness Assembly (includes keys #1-6)	-
1	23-40010	1	Bracket	-
2	22-41070	1	40 AMP Circuit Breaker	-
3	22-40391	2	Relay Base	-
	22-40393	2	Terminal Retainer (not shown)	-
4	12-03010	3	Machine Screw, Flathead Countersunk #10 - 32 x 3/8"	-
5	14-00001	5	Hex Nut, #10 - 32	-
6	12-03011	2	Machine Screw, Flathead Countersunk #10 - 32 x 1"	-
7	22-42047	2	Relay, 12 Volt SPST	-
	22-40710	2	Relay, 24 Volt SPST	-

**Main Instrument Panel 12 Volt with VDO Oceanline Guages**

L844



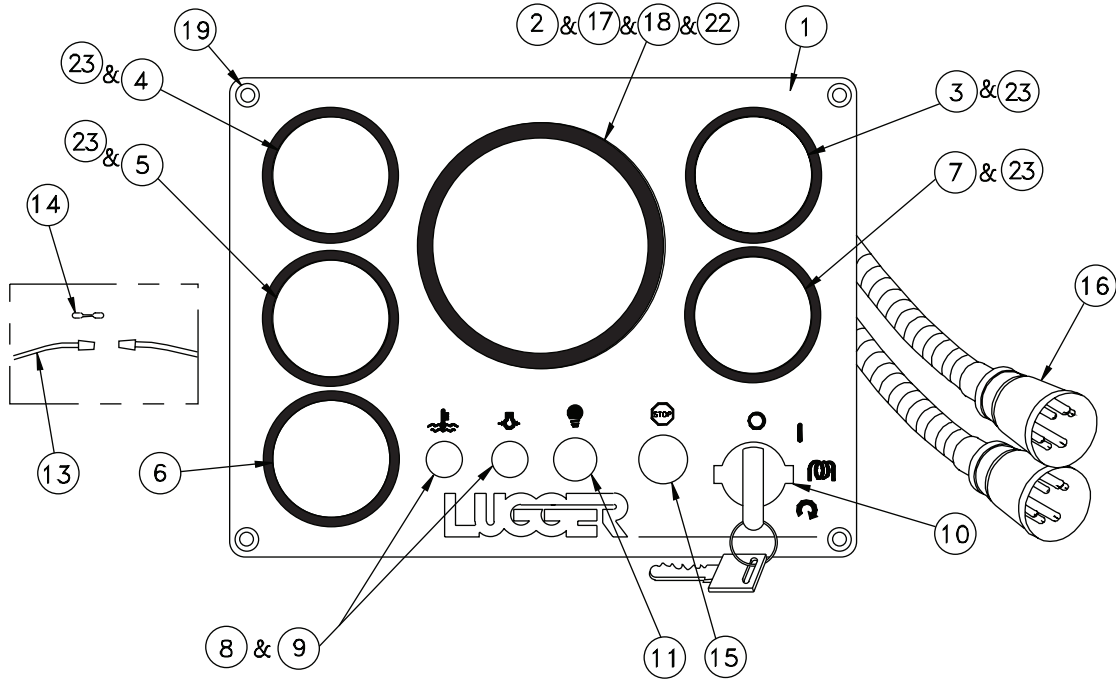
A-11651, A-11521 / B-4734-2changed.1

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-98120	1	Main Instrument Panel, 12 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90069	1	Tachometer 0 -3500 RPM 12/24 Volt *Replaced by 37-90106	-
	37-90406	1	Tachometer 0-4000 RPM	-
3	37-90072-1	1	Voltmeter 8 -16 VDC	-
4	37-90075-1	1	Temperature Gauge 250°F 12 Volt	-
5	37-90081-1	1	Oil Pressure Gauge 0 -80 PSI 12 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 Volt	-
7	37-90074-1	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44852	2	Bulb, Clear 12 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	22-44861	2	Bulb Diffuser, Red (use with Tachometer 37-90069)	-
	22-40415	1	Bulb Diffuser, Red (use with Tachometer 37-90106)	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	00-00013	1	Label, "12 Volt" (not shown)	-
22	22-40507	2	Bulb, Clear 12 Volt (use with Tachometer 37-90069)	-
	22-40277	1	Bulb, Clear 12 Volt (use with Tachometer 37-90106)	-
23	37-41004	4	Bulb, Red 12 Volt	-

GROUP 5 – ELECTRICAL SYSTEM

Main Instrument Panel 24 Volt with VDO Oceanline Guages

L844



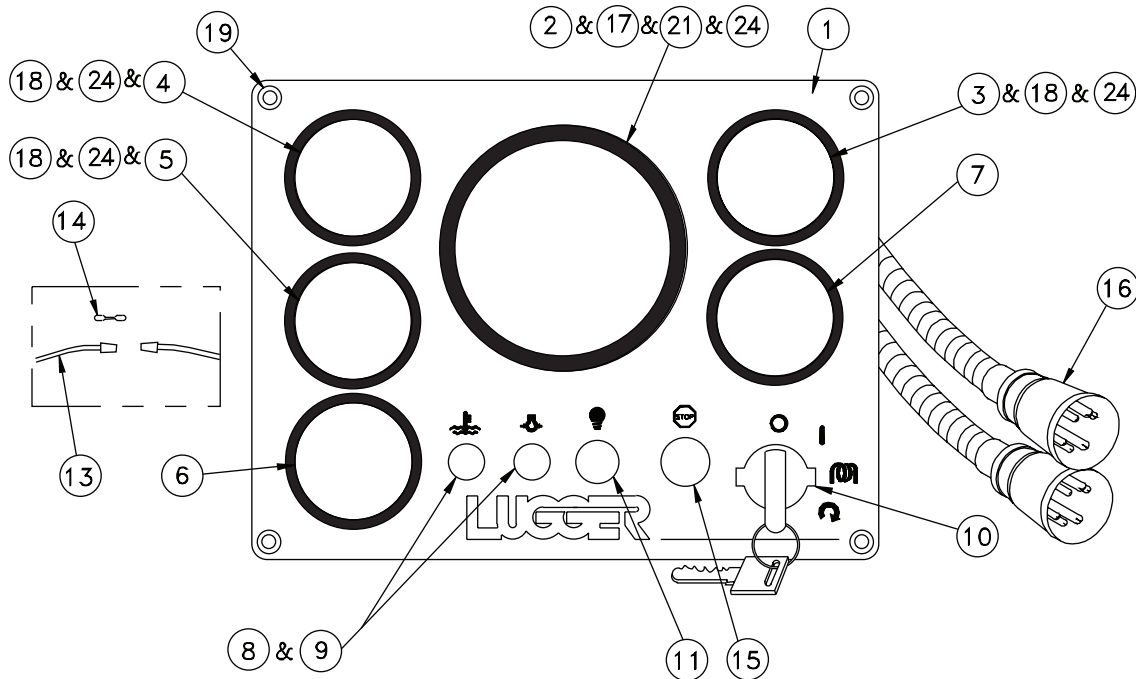
A-11651, A-11521 / B-4734-2changed.1

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-98120	1	Main Instrument Panel, 24 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90069	1	Tachometer 0 -3500 RPM 12/24 Volt *Replaced by 37-90106	-
	37-90406	1	Tachometer 0-4000 RPM	-
3	37-90072-1	1	Voltmeter 8 -16 VDC	-
4	37-90075-1	1	Temperature Gauge 250°F 24 Volt	-
5	37-90081-1	1	Oil Pressure Gauge 0 -80 PSI 24 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 Volt	-
7	37-90074-1	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44852	2	Bulb, Clear 24 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	22-44861	2	Bulb Diffuser, Red (use with Tachometer 37-90069)	-
	22-40415	1	Bulb Diffuser, Red (use with Tachometer 37-90106)	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	00-00013	1	Label, "24 Volt" (not shown)	-
22	22-40507	2	Bulb, Clear 24 Volt (use with Tachometer 37-90069)	-
	22-40277	1	Bulb, Clear 24 Volt (use with Tachometer 37-90106)	-
23	37-41004	4	Bulb, Red 24 Volt	-



**Main Instrument Panel 12 Volt with SAE Black Bezel Gauges**

L844



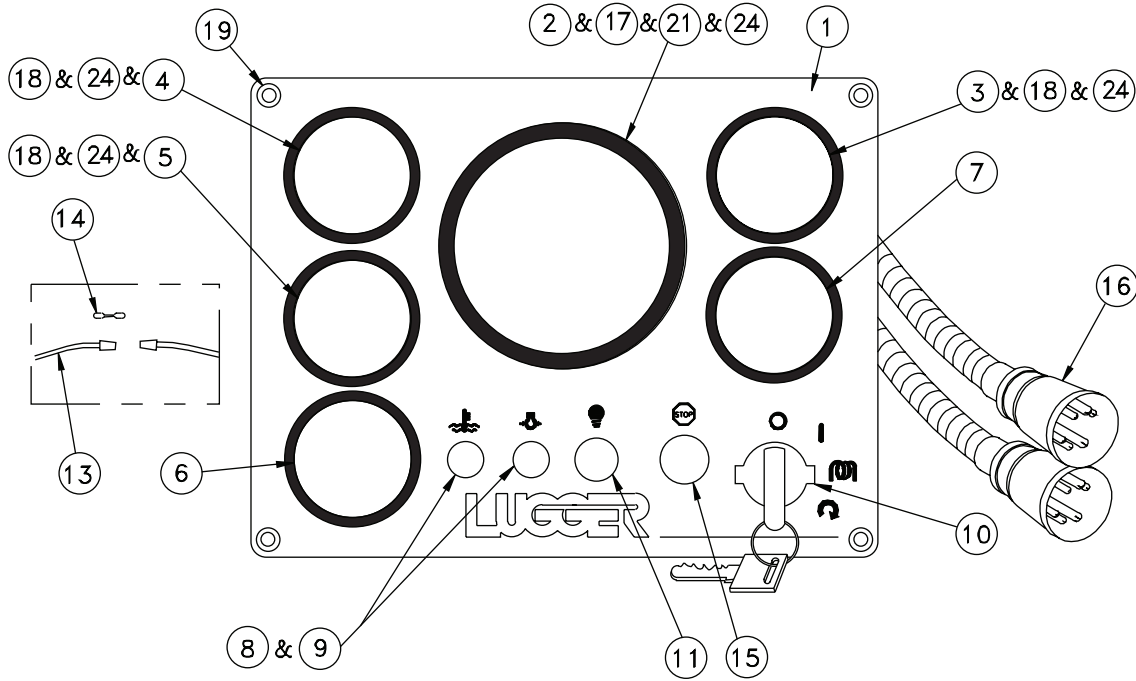
B-4734-2changed.2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-98120	1	Main Instrument Panel, 12 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90106	1	Tachometer 0 -4000 RPM 12/24 Volt	-
3	37-40032	1	Voltmeter 8 -16 VDC	-
4	37-40031	1	Temperature Gauge 250°F 12 Volt	-
5	37-40030	1	Oil Pressure Gauge 0 -80 PSI 12 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 Volt	-
7	37-40020	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44852	2	Bulb, Clear 12 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	16-01001	3	O-ring	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	22-40415	4	Bulb Diffuser, Red	-
22	00-00013	1	Label, "12 Volt" (not shown)	-
23	44-40003	10	Male Disconnect 90° 1/4" (used on all guages)	-
24	22-40272	4	Bulb, Clear	-

GROUP 5 – ELECTRICAL ASYSTEM

**Main Instrument Panel 24 Volt with SAE Black Bezel Gauges**

L844

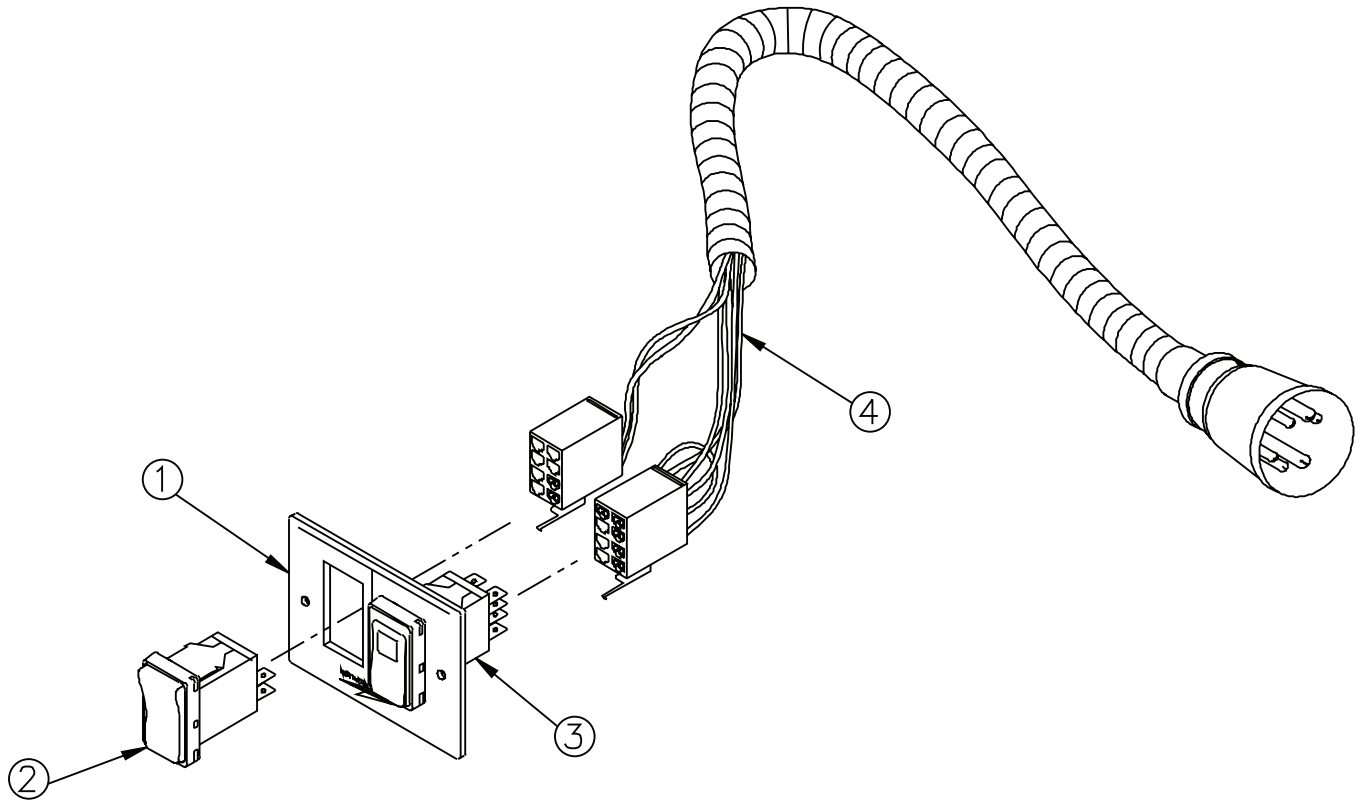


B-4734-2changed.2

B-4734-2changed.2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-98125	1	Main Instrument Panel, 24 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90106	1	Tachometer 0 -4000 RPM 12/24 Volt	-
3	37-40034	1	Voltmeter 8 -16 VDC	-
4	37-40037	1	Temperature Gauge 250°F 24 Volt	-
5	37-40036	1	Oil Pressure Gauge 0 -80 PSI 24 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 Volt	-
7	37-40020	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44852	2	Bulb, Clear 24 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	16-01001	3	O-ring	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	22-40415	4	Bulb Diffuser, Red	-
22	00-00014	1	Label, "24 Volt" (not shown)	-
23	44-40003	10	Male Disconnect 90° 1/4" (used on all guages)	-
24	22-40286	4	Bulb, Clear	-

S-1 Control Panel 12 & 24 Volt



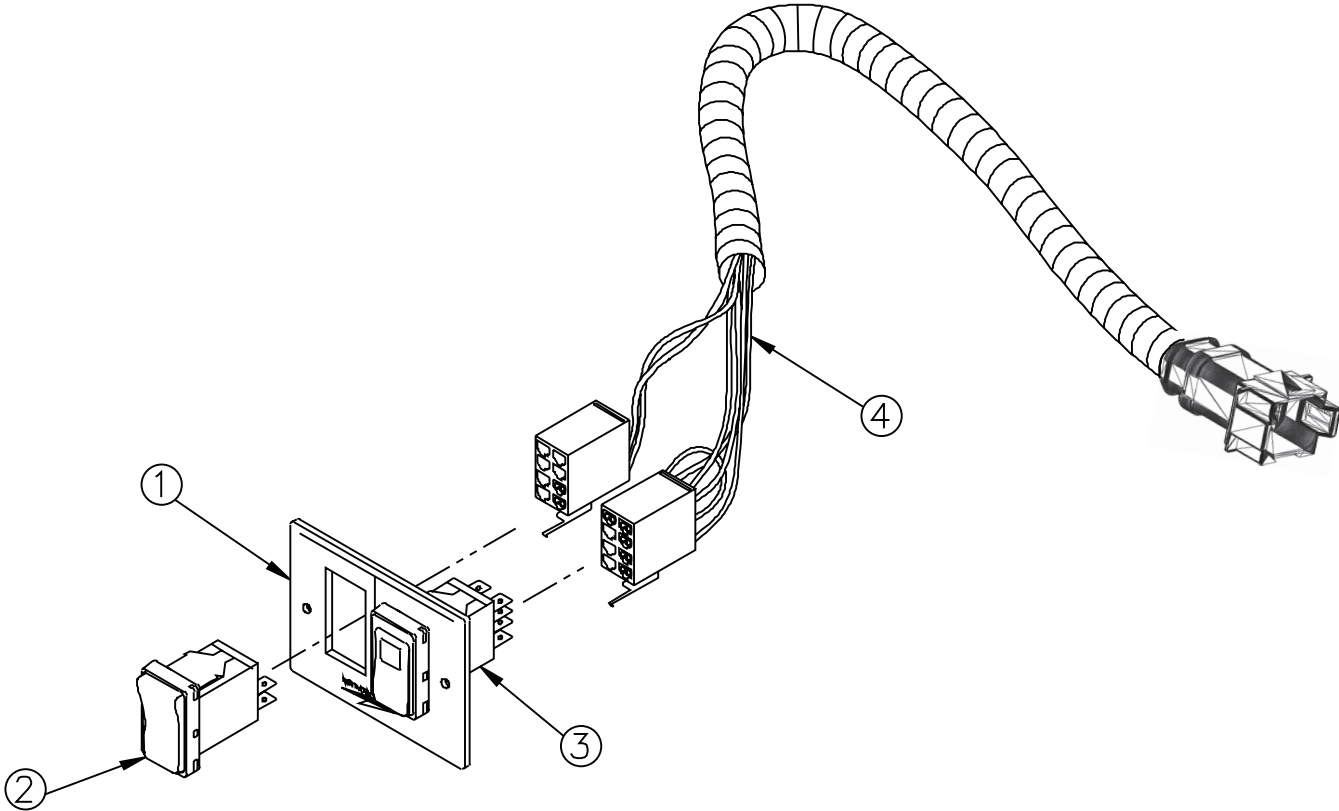
A-8551, A-8552 / B-5970

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92110	1	S-1 Start/Stop Control Panel, 12/24Volt (includes all keys)	-
1	00-40013	1	Plate, S-1 Control Panel	-
2	22-90167	1	Rocker Switch	-
3	22-90362	1	Rocker Switch	-
4	22-42063	1	Wire Harness, 12 Volt	-
	22-42067	1	Wire Harness, 24 Volt	-
5	00-00013	1	Label "12 Volt" *	-
	00-00014	1	Label "24 Volt" *	-
6	22-40012	1	Resistor, 200 Ohm, 3 Watt (24 Volt Panel only) *	-
			*Not shown	

GROUP 5 – ELECTRICAL SYSTEM

**S-1 Control Panel 12 & 24 Volt**

B+ Electrical Systems

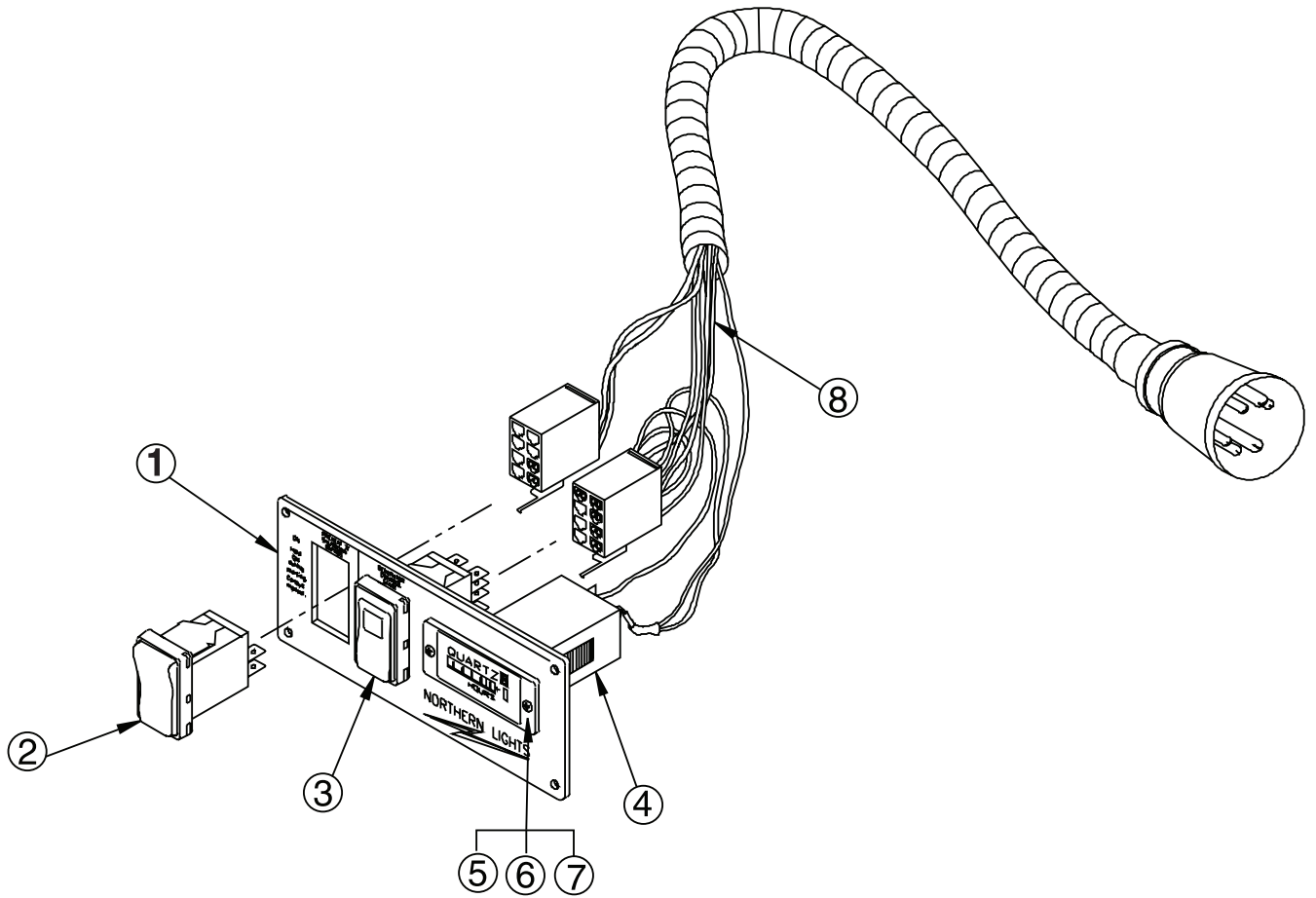


A-8551, A-8552 / B-5970

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95600	1	S-1 Start/Stop Control Panel (includes all keys)	-
1	00-40013	1	Plate, S-1 Control Panel	-
2	22-90167	1	Rocker Switch, Momentary (On)-Off	-
3	22-90362	1	Rocker Switch, Momentary (On)-Off-(On) Green Lamp	-
4	22-45602	1	Wire Harness	-
5	00-00048	1	Label "12-24 Volt" (Not Shown)	-

**Series 1-B Start-Stop Control Panel**

12 and 24 Volts, Late Production



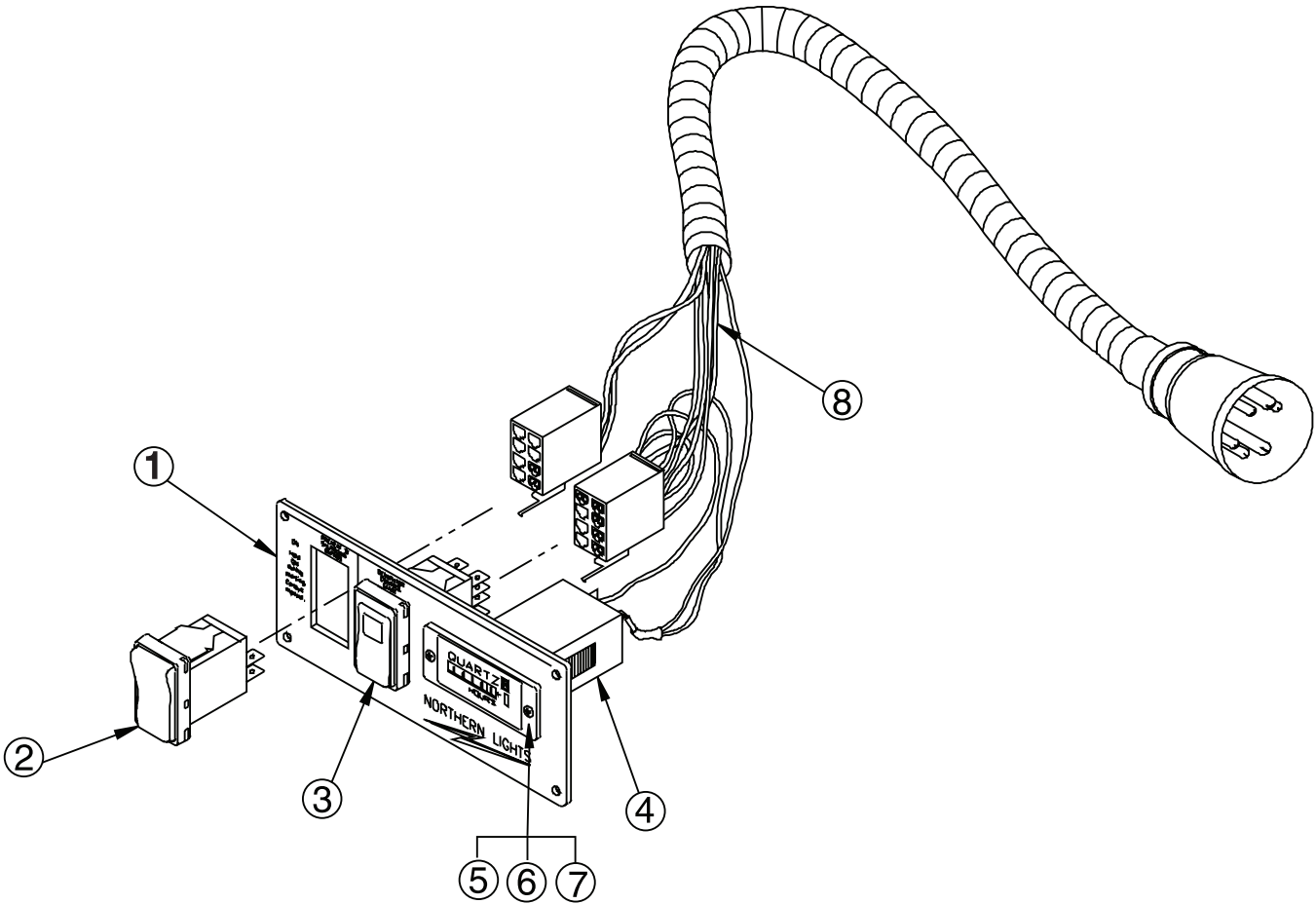
A-8553/ B-5971

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92120	1	S 1-B Start/Stop Control Panel - 12 Volt (includes all keys)	-
••	22-92125	1	S 1-B Start/Stop Control Panel - 24 Volt (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 Philips #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 - 12 Volt Panels	-
	22-42064	1	Wire Harness - 24 Volt Panels	-

GROUP 5 – ELECTRICAL SYSTEM

**Series 1-B Start/Stop Control Panel**

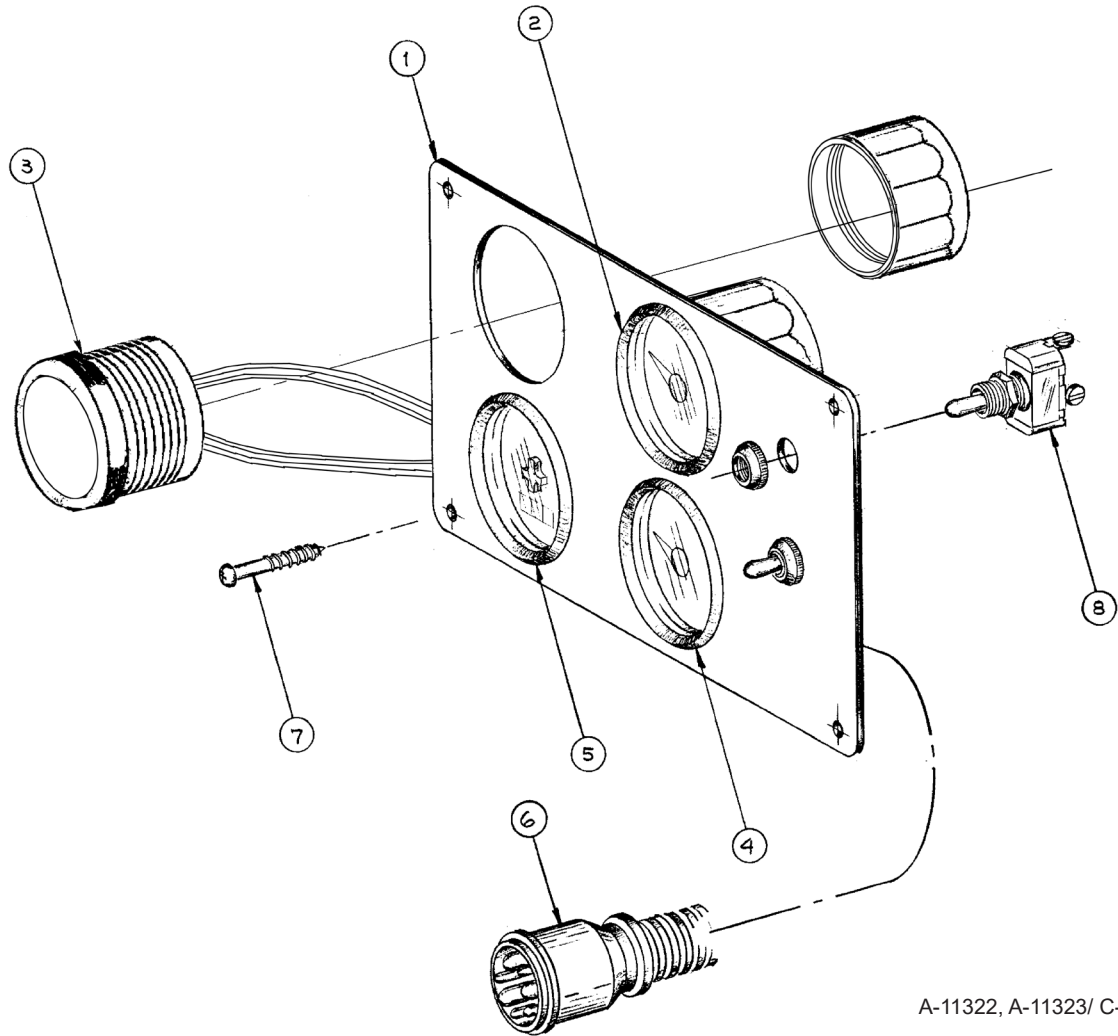
B+ Electrical Systems



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 & 24 Volt**

VDO Ocean Line Black Bezel Gauges



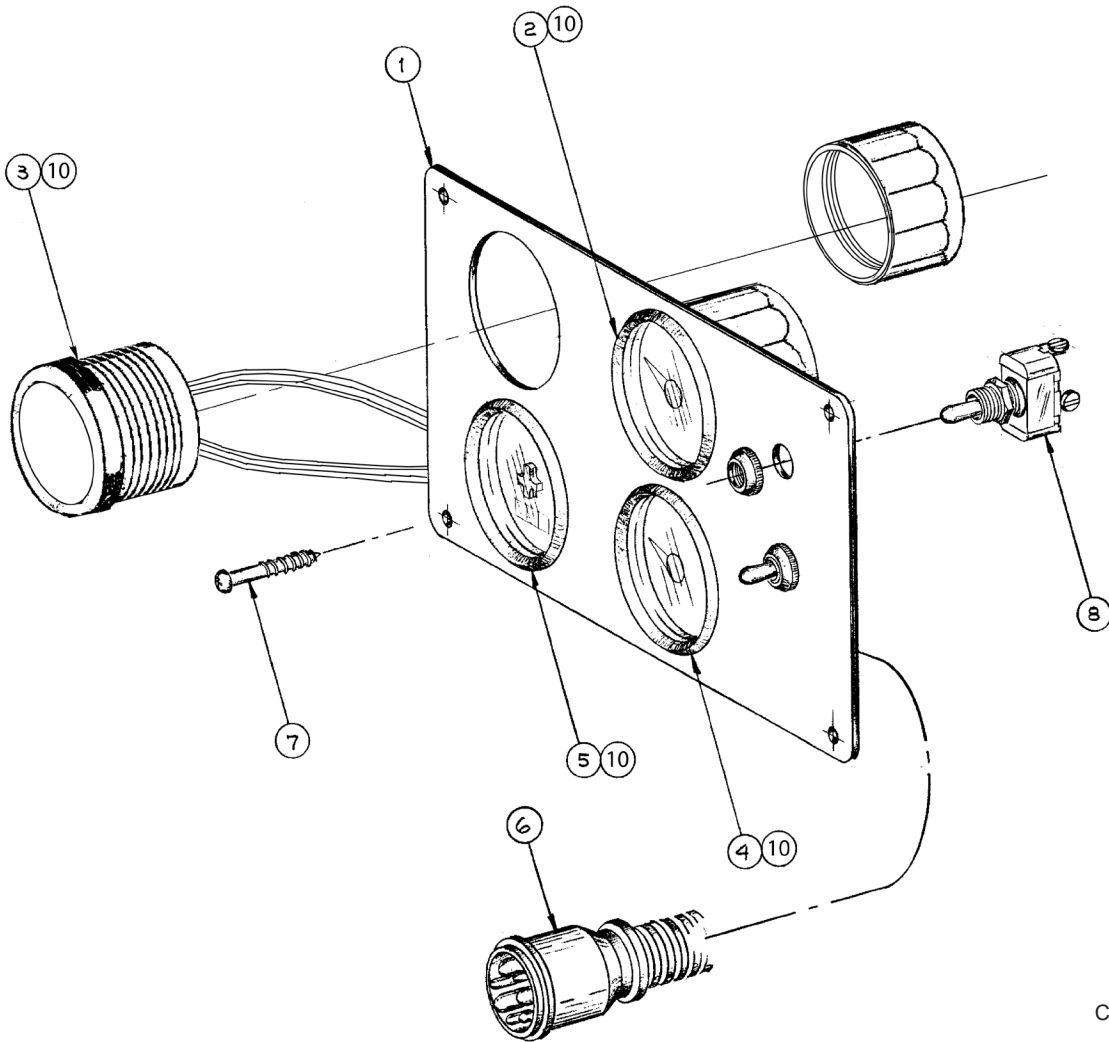
A-11322, A-11323/ C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91216	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91217	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
	37-90082-1	1	Oil Pressure Gauge, 0-80 PSI 24 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
	37-90076-1	1	Temperature Gauge, 0- 250°F 24 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
	37-90073-1	1	DC Voltmeter, 18- 32 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)	-
	00-00014	1	Label 24 Volt (not shown)	-
10	37-41004	**	12 Volt Bulb (not shown)	-
	37-41003	**	24 Volt Bulb (not shown)	-
			**As required	

**GROUP 5 – ELECTRICAL SYSTEM**

**S-3C Control Panel 12 Volt**

VDO Viewline Black Bezel Gauges



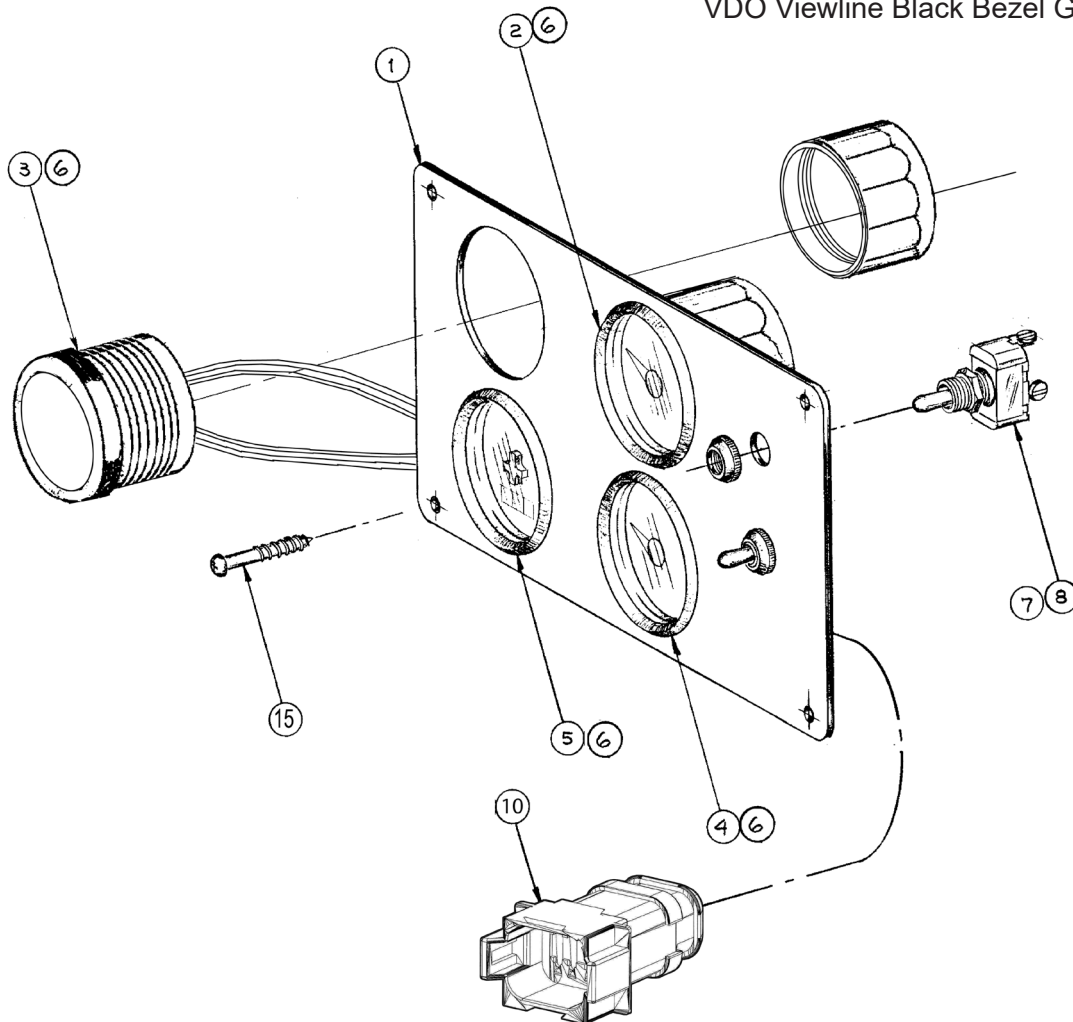
C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91216	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91217	1	S-3C Control Panel, 24 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 *	-
	37-91071-1	1	Voltmeter 18 - 32 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	



**S-3C Control Panel 12 - 24 Volt B+ Systems**

VDO Viewline Black Bezel Gauges

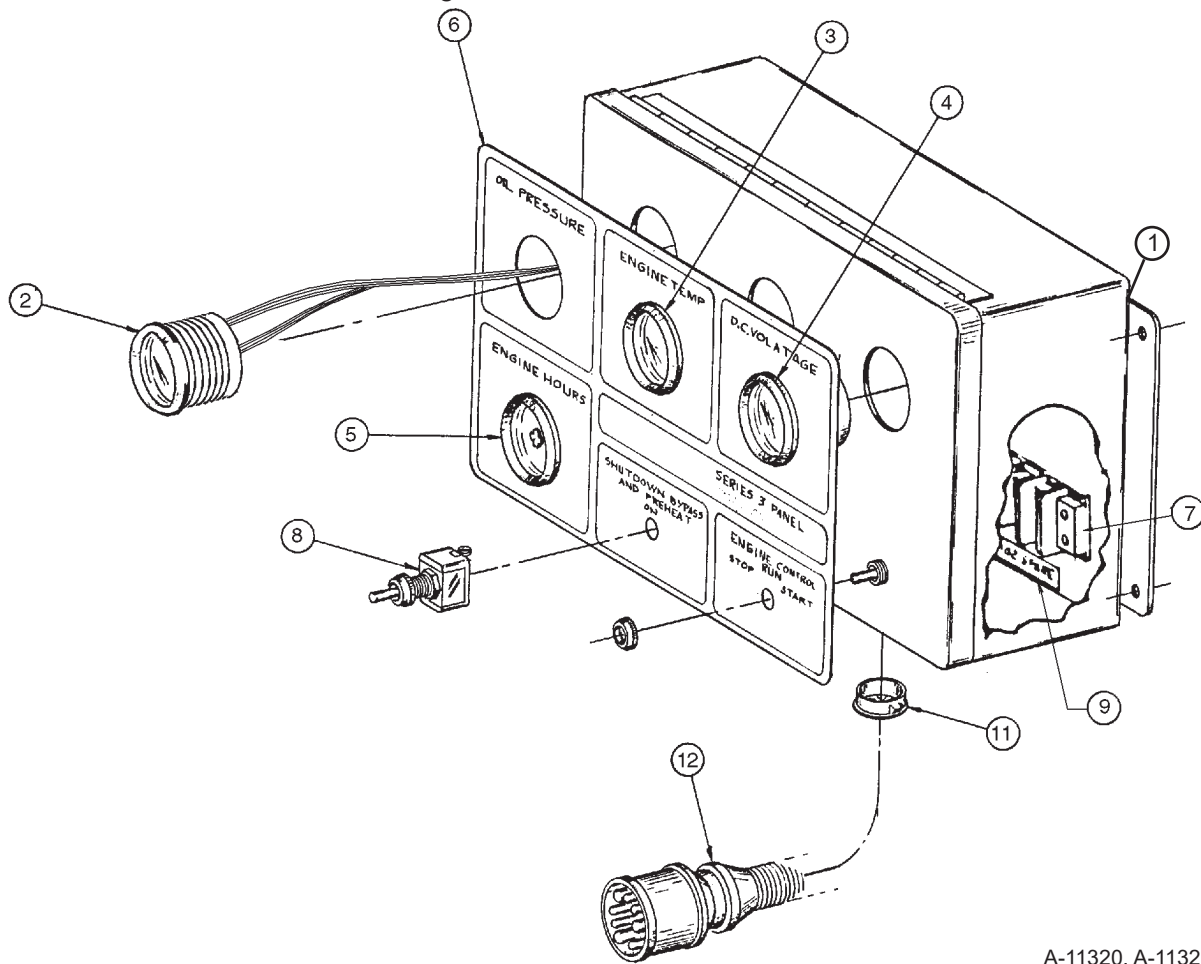


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95611	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-95612	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	DC Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 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	-
	22-40710	**	Relay 24 Volt	-
14	00-00013	**	Label 12 Volt (not shown)	-
	00-00014	**	Label 24 Volt (not shown)	-
15	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
			** As Required	

GROUP 5 – ELECTRICAL SYSTEM

**S-3B Control Panel 12 & 24 Volt**

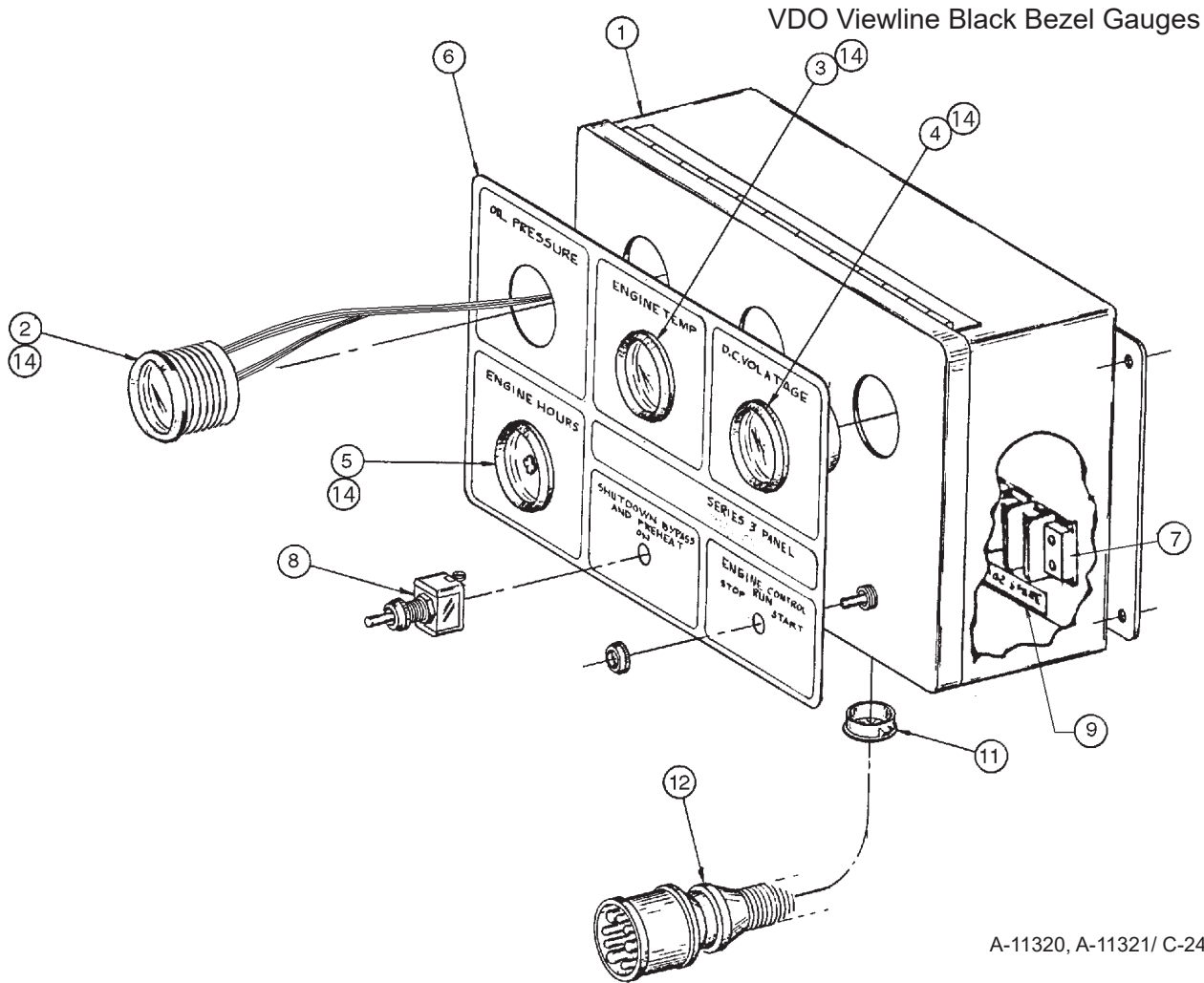
VDO Ocean Line Black Bezel Gauges



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) (replaced by 22-91203)	-
••	22-91204	1	S-3C Control Panel, 24 Volt (includes all keys) (replaced by 22-91204)	-
1	39-40008	1	Enclosure	-
	39-41003	1	Back Panel	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
	37-90082-1	1	Oil Pressure Gauge, 0-80 PSI 24 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
	37-90076-1	1	Temperature Gauge, 0- 250°F 24 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
	37-90073-1	1	DC Voltmeter, 18- 32 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	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
14	37-41004	**	12 Volt Bulb (not shown)	-
	37-41003	**	24 Volt Bulb (not shown)	-
			**As required	

**S-3B Control Panel 12 Volt**



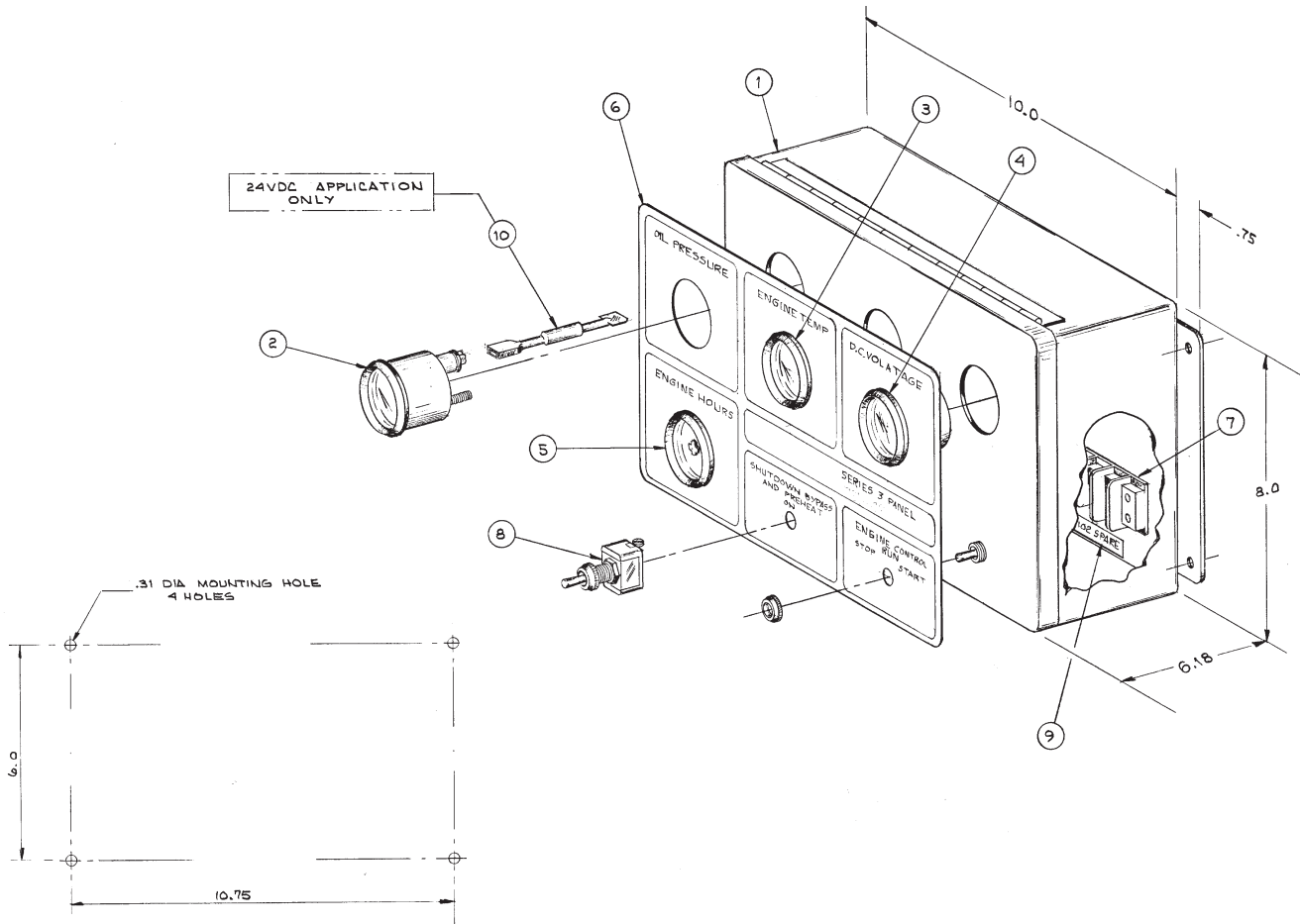
A-11320, A-11321/ C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91203	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91204	1	S-3C Control Panel, 24 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 *	-
	37-91071-1	1	Voltmeter 18 - 32 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)	-
	00-00014	1	Label 24 Volt (not shown)	-
14	37-00014	4	Bezel	-
			* Note Bezel 37-00014 supplied separately	

GROUP 5 - ELECTRICAL SYSTEM

S-3B Control Panel 12 - 24 Volt B+ Systems

VDO Viewline Black Bezel Gauges



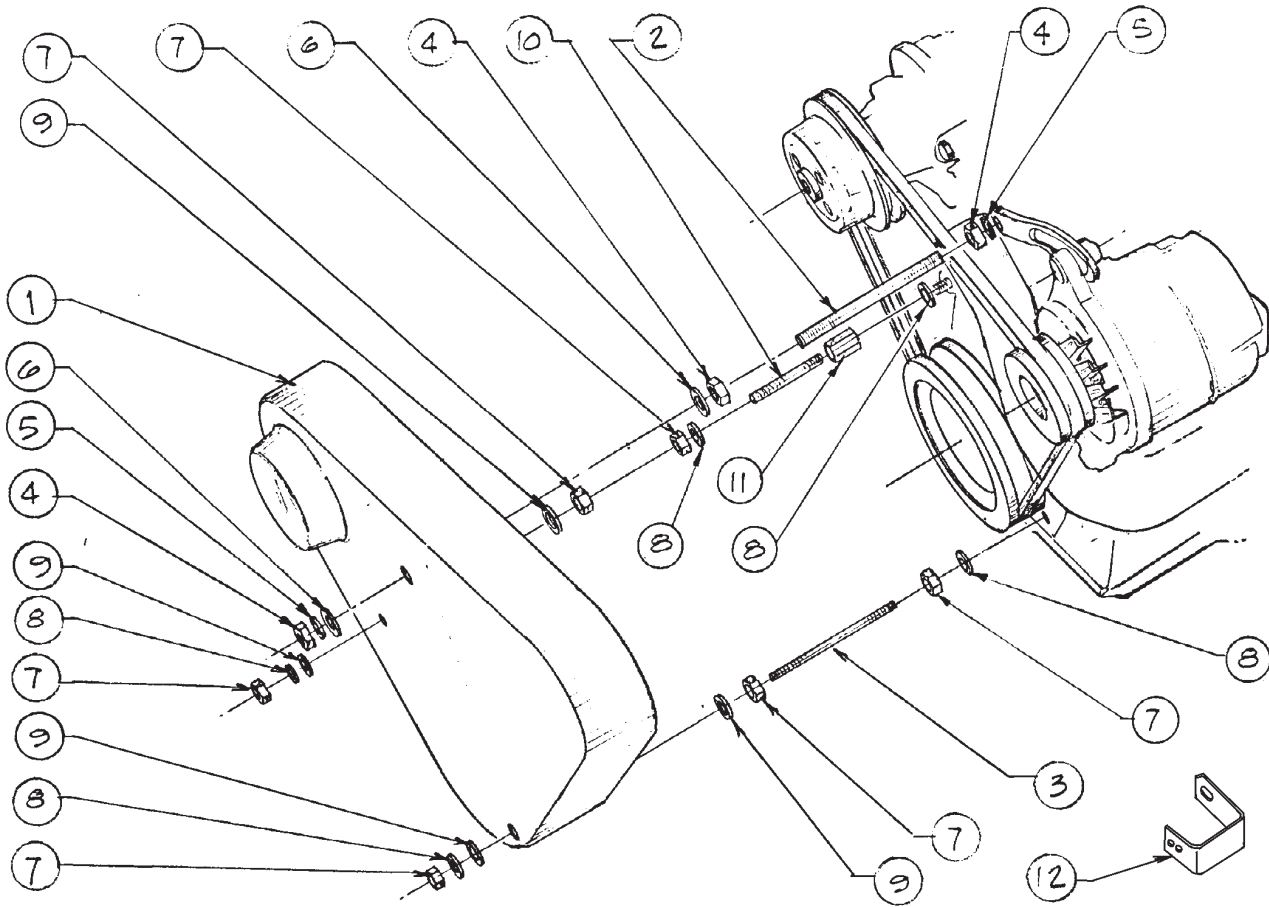
**S-3B Control Panel 12 - 24 Volt B+ Systems**

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	12-00006	1	Machine Screw, Phillips #8-32 x 1/2" S/S	-
16	15-00035	1	Star Washer #8 S/S	-
17	22-42047	**	Relay 12 Volt	-
	22-40710	**	Relay 24 Volt	-
18	22-42027	1	Connection Harness	-
19	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
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

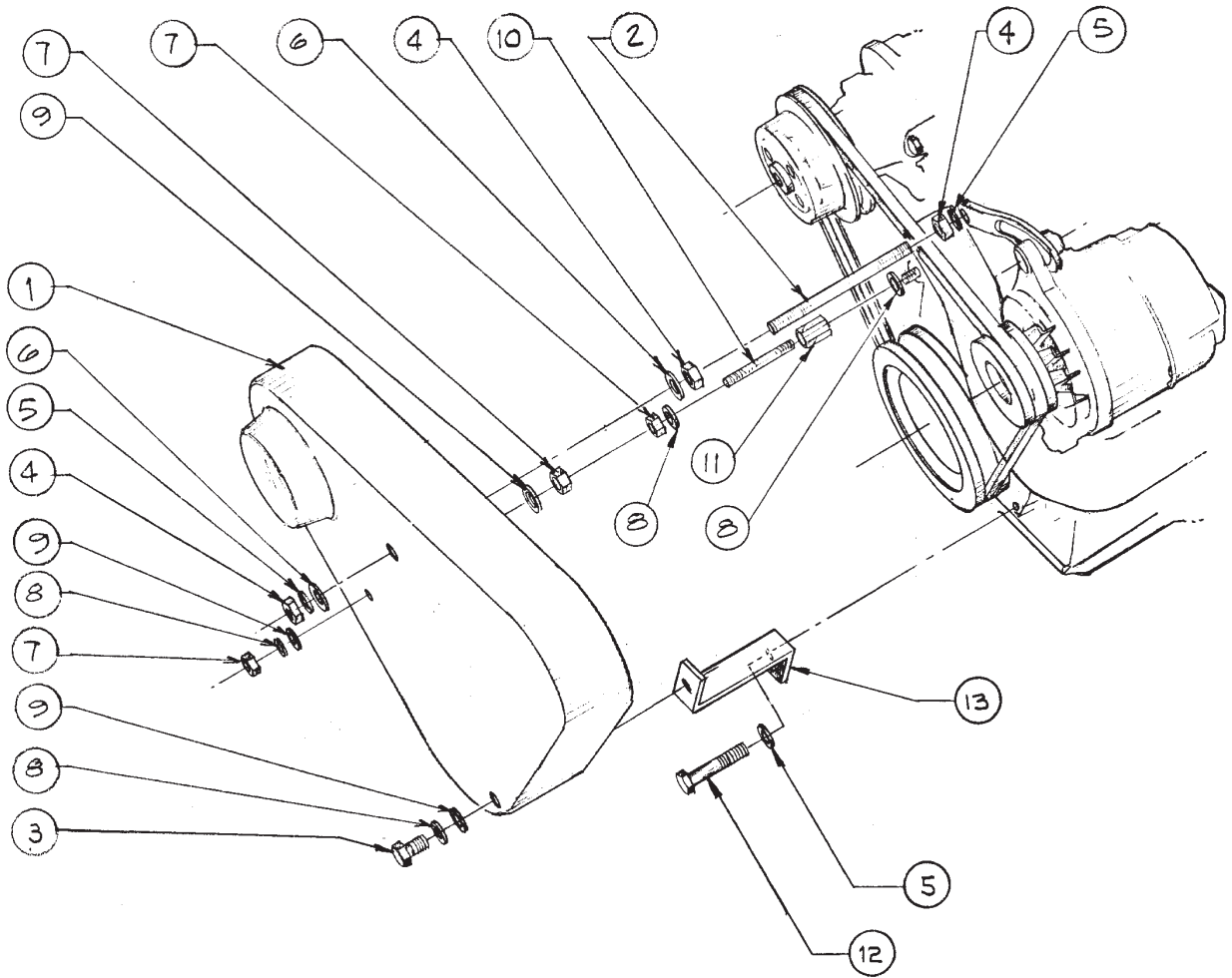
**Belt Guard Assembly L844 - M844W**



A-5004 / B-3986

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-73143	1	Belt Guard, Small Frame Alternators (without PTO)	-
	00-73148	1	Belt Guard, Small Frame Alternators (with PTO)	-
	00-08402	1	Belt Guard, Medium Frame Alternators (without PTO)	-
	00-08401	1	Belt Guard, Medium Frame Alternators (with PTO)	-
2	13-03101	1	Stud, All Thread M8 x 1.25 x 110 mm	-
3	13-03102	1	Stud, All Thread M6 x 1.0 x 140 mm	-
4	14-00711	3	Hex Nut M8 x 1.25	-
5	15-00702	2	Lock Washer M8	-
6	15-00701	2	Flat Washer M8	-
7	14-01131	6	Hex Nut M6 x 1.0	-
8	15-01132	5	Lock Washer M6	-
9	15-00008	4	Flat Washer M6	-
10	13-03103	1	Stud, All Thread M6 x 1.0 x 70 mm	-
11	14-73100	1	Hex Nut, X-L M6 x 1.0 x 19 mm	-
12	23-78403	**	Bracket (used with 00-73148 only)	-
	23-78402	**	Bracket (used with 00-08401 and 00-08402 only)	-
13	00-73147	1	PTO Guard (not shown)	-
**As required				

**Belt Guard Assembly M844DW - M844LW - M20CRW**



A-6321 / B-4533

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-73143	1	Belt Guard, Small Frame Alternators (without PTO)	-
	00-73148	1	Belt Guard, Small Frame Alternators (with PTO)	-
	00-08402	1	Belt Guard, Medium Frame Alternators (without PTO)	-
	00-08401	1	Belt Guard, Medium Frame Alternators (with PTO)	-
2	13-03101	1	Stud, All Thread M8 x 1.25 x 110 mm	-
3	12-00062	1	Capscrew, Hex Head M8 x 1.25 x 10 mm	-
4	14-00711	2	Hex Nut M8 x 1.25	-
5	15-00702	2	Lock Washer M8	-
6	15-00701	2	Flat Washer M8	-
7	14-01131	3	Hex Nut M6 x 1.0	-
8	15-01132	5	Lock Washer M6	-
9	15-00008	3	Flat Washer M6	-
10	13-03103	1	Stud, All Thread M6 x 1.0 x 70 mm	-
11	14-73100	1	Hex Nut, X-L M6 x 1.0 x 19 mm	-
12	12-01124	1	Capscrew, Hex Head M6 x 1.0 x 50 mm	-
13	23-78401	1	Bracket (not used with PTO applications)	-
14	23-78403	**	Bracket (used with 00-73148 only – not shown)	-
	23-78402	**	Bracket (used with 00-08401 and 00-08402 only – not shown)	-
15	00-73147	1	PTO Guard (not shown)	-
			**As required	

## GROUP 6 – GASKET SETS

## Gasket Sets M844W3 and NL844W3

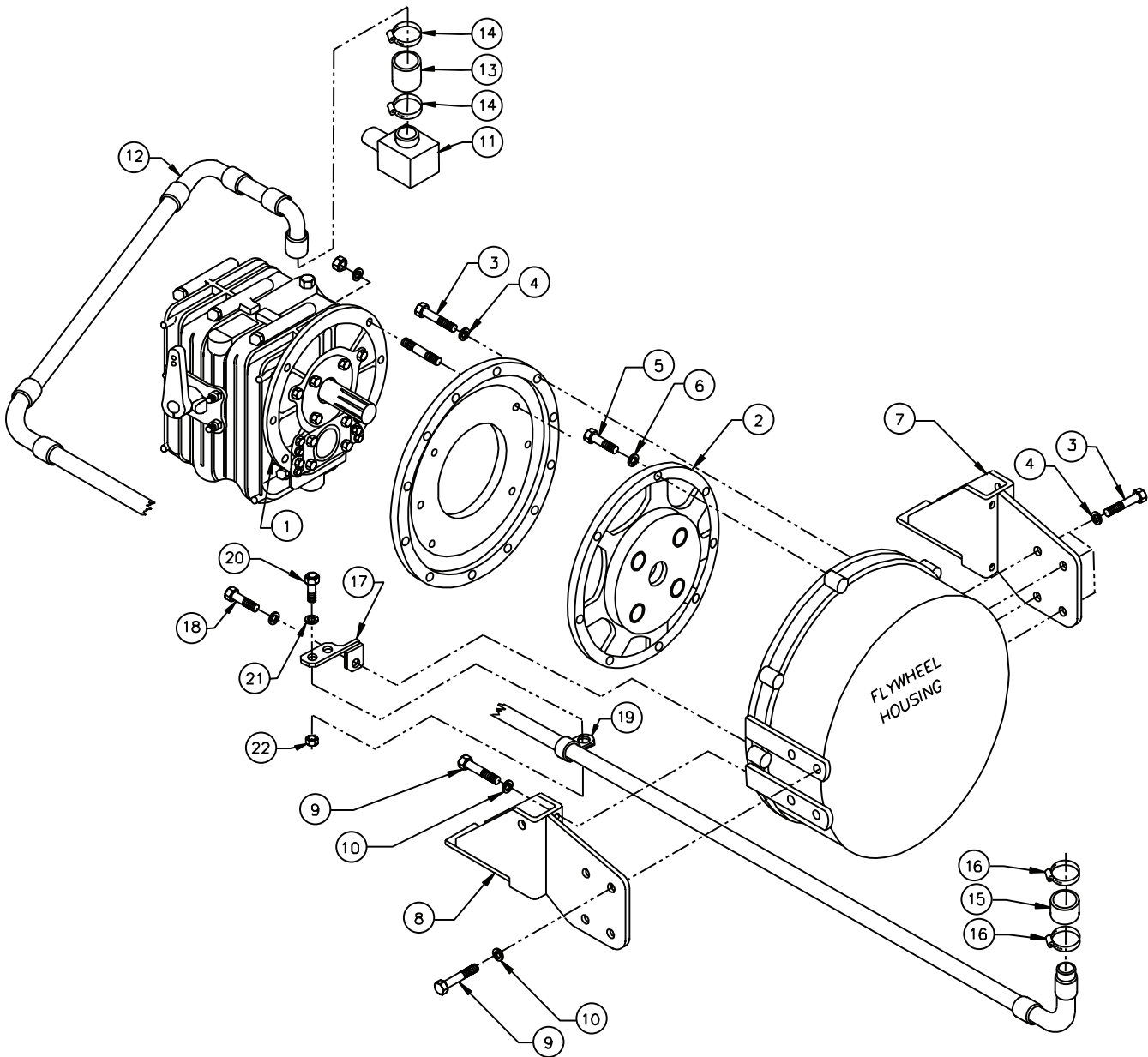
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-08102	1	Gasket Set – Marine (includes all keys)	-
••	195907480	1	Gasket Set – Industrial (includes keys #1 - #39)	-
1	198636170	1	Oil Seal, Rear	-
2	052109076	1	O-ring	-
3	110996860	1	Gasket, Oil Pan	-
4	025100012	2	Seal Washer, Oil Pan Drain	-
5	165996540	1	Gasket, Front Plate	-
6	052109108	2	O-ring, Governor Shaft	-
7	052109110	1	O-ring	-
8	165996550	1	Gasket, Timing Gear Case	-
9	198636160	1	Oil Seal, Front	-
10	165996610	1	Gasket, Gear Case Cover	-
11	131426321	1	Adjusting Shim Set, Injection Pump	-
12	025100008	2	Seal Washer, Air Bleed Screw	-
13	140996260	4	Gasket, Banjo Bolt	-
14	111147520	1	Gasket, Head t=1.3	-
15	120406050	4	Valve Guide Seal, Exhaust	-
16	120406070	4	Valve Guide Seal, Intake	-
17	131426200	4	Gasket	-
18	131426230	4	Gasket	-
19	052109076	1	O-ring	-
20	120996130	1	Gasket, Rocker Arm Bracket	-
21	111996401	1	Gasket, Head Cover	-
22	140996270	4	Gasket, Head Cover	-
23	052100400	2	O-ring, Oil Filler Cap	-
24	135996951	1	Gasket, Air Intake	-
25	145996681	1	Gasket, Coolant Pump Set Plate	-
26	145996670	1	Gasket, Coolant Pump	-
27	145996710	1	Gasket, Thermostat Housing	-
28	145996051	1	Gasket, Thermostat Cover	-
29	130516069	4	Gasket, Joint Bolt	-
30	130996130	1	Gasket, Feed Pump	-
31	052109113	2	O-ring, Dipstick Tube	-
32	025100016	1	Seal Washer, Solenoid	-
33	052109078	1	O-ring, Relief Valve	-
34	130326051	5	Gasket, Joint	-
35	135996900	1	Gasket	-
36	135996550	1	Gasket	-
37	135996780	1	Gasket, Exhaust Manifold	-
38	11-31902	1	Gasket, Elbow	-
39	052300700	1	O-ring, Gear Case Cover	-
40	11-28101	1	Air Intake Cover Gasket	-
41	11-38101	1	Exhaust Manifold Gasket	-
42	11-13101	1	Thermostat Cover Gasket	-
43	16-13101	1	O-ring	-



## Gasket Sets M844LW3, NL844LW3, and M20CRW3

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-08402	1	Gasket Set – Marine (includes all keys)	-
••	195907490	1	Gasket Set – Industrial (includes keys #1 - #39)	-
1	050209083	1	Oil Seal, Rear	-
2	052109076	1	O-ring	-
3	110996860	1	Gasket, Oil Pan	-
4	025100012	2	Seal Washer, Oil Pan Drain	-
5	165996540	1	Gasket, Front Plate	-
6	052109108	2	O-ring, Governor Shaft	-
7	052109110	1	O-ring	-
8	165996550	1	Gasket, Timing Gear Case	-
9	198636160	1	Oil Seal, Front	-
10	165996610	1	Gasket, Gear Case Cover	-
11	131426321	1	Adjusting Shim Set, Injection Pump	-
12	025100008	2	Seal Washer, Air Bleed Screw	-
13	140996260	4	Gasket, Banjo Bolt	-
14	111147771	1	Gasket, Head t=1.3	-
15	120406050	4	Valve Guide Seal, Exhaust	-
16	120406070	4	Valve Guide Seal, Intake	-
17	131426200	4	Gasket, Injector Lower	-
18	131426230	4	Gasket, Injector Upper	-
19	052109076	1	O-ring, Rocker Arm Shaft	-
20	120996130	1	Gasket, Rocker Arm Bracket	-
21	111996401	1	Gasket, Head Cover	-
22	140996270	4	Gasket, Head Cover	-
23	052100400	2	O-ring, Oil Filler Cap	-
24	135996951	1	Gasket, Air Intake	-
25	145996681	1	Gasket, Coolant Pump Set Plate	-
26	145996670	1	Gasket, Coolant Pump	-
27	145996710	1	Gasket, Thermostat Housing	-
28	145996051	1	Gasket, Thermostat Cover	-
29	130516069	4	Gasket, Joint Bolt	-
30	130996130	1	Gasket, Feed Pump	-
31	052109113	2	O-ring, Dipstick Tube	-
32	025100016	1	Seal Washer, Solenoid	-
33	052109078	1	O-ring, Relief Valve	-
34	130326051	5	Gasket, Joint	-
35	135996900	1	Gasket	-
36	135996550	1	Gasket	-
37	135996780	1	Gasket, Exhaust Manifold	-
38	11-31902	1	Gasket, Elbow	-
39	052300700	1	O-ring, Gear Case Cover	-
40	11-28101	1	Air Intake Cover Gasket	-
41	11-38101	1	Exhaust Manifold Gasket	-
42	11-13101	1	Thermostat Cover Gasket	-
43	16-13101	1	O-ring	-

**Gear Attaching Parts ZF15MIV**



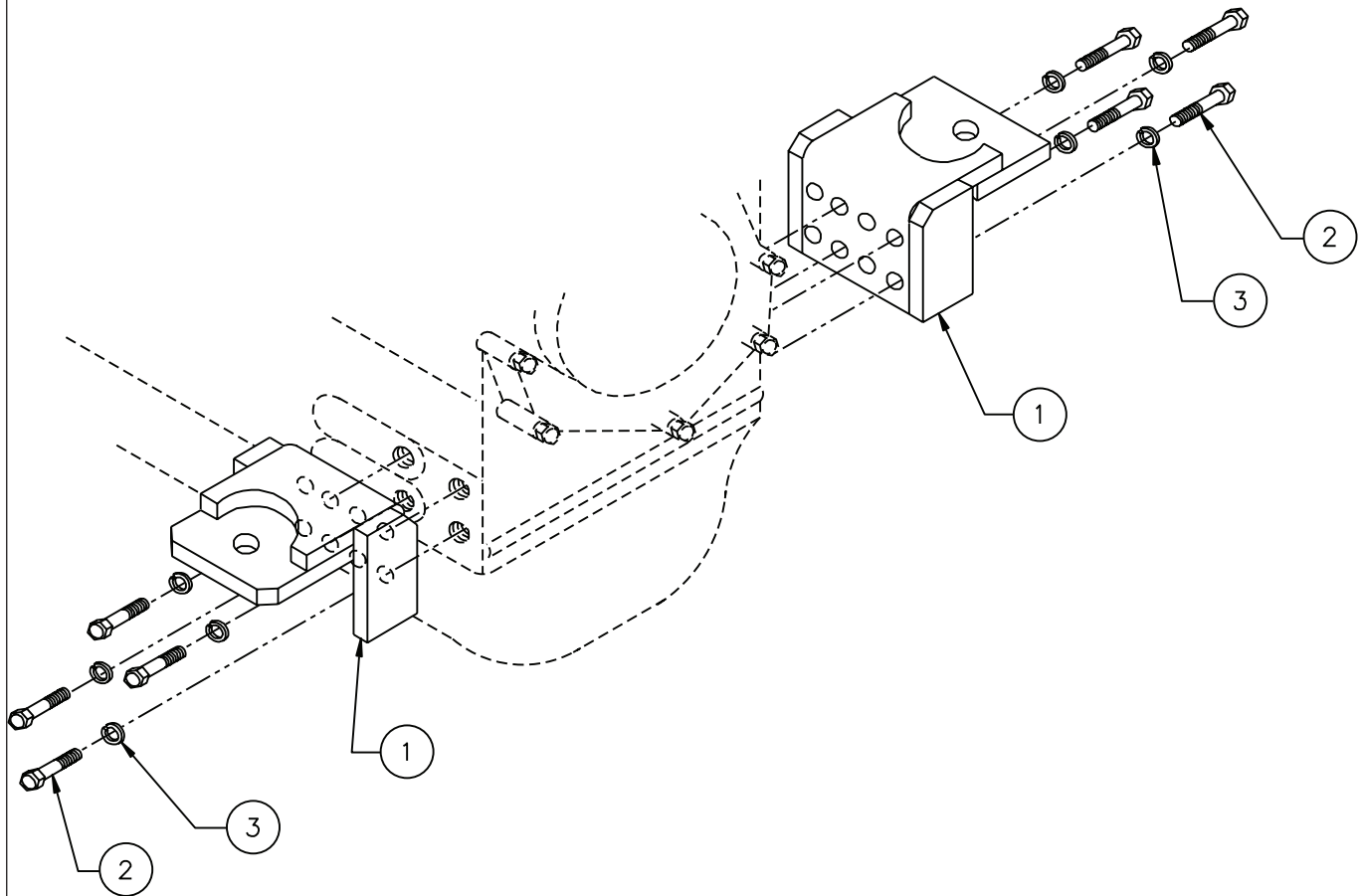
A-10413 / C-5611

## Gear Attaching Parts ZF15MIV

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3306116008	1	Adapter SAE #4	-
2	34-68106	1	Drive Damper, Dual Element	-
3	12-00313	14	Capscrew, Hex Head 3/8- 16 x 1- 1/4"	-
4	15-00302	14	Lock Washer, Helical 3/8"	-
5	12-00212	8	Capscrew, Hex Head 5/16- 18 x 1"	-
6	15-00221	8	Flat Washer 5/16" SAE	-
7	23-88403	1	Bracket, Rear Engine Mounting, Left hand	-
8	23-88404	1	Bracket, Rear Engine Mounting, Right hand	-
9	12-00314	6	Capscrew, Hex Head 3/8- 16 x 1- 1/2"	-
10	15-00302	6	Lock Washer, Helical 3/8	-
11	3306107001	1	Gear Cooler	-
12	27-68102	1	Tube, Gear Oil Cooler Outlet	-
13	41-01051	2	Hose, 3/4" I.D. 3 Ply Silicone	-
14	19-01010	2	Hose Clamp, #10 Extended Band S/S	-
15	41-01062	3	Hose, 1-1/8" I.D. 3 Ply Silicone	-
16	19-01016	2	Hose Clamp #16 Extended Band S/S	-
17	23-62506	1	Bracket, Plumbing Support	-
18	12-30314	1	Capscrew, Hex Head 3/8- 16 x 1- 1/2" S/S	-
19	19-71030	1	Adelle Clamp 1- 1/8" I.D. x 1/2" Stud	-
20	12-09832	1	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
21	15-09805	2	Flat Washer M10 S/S	-
22	14-09812	1	Hex Nut, Nylock M10 x 1.5 S/S	-

**Front Engine Mounting**

L844

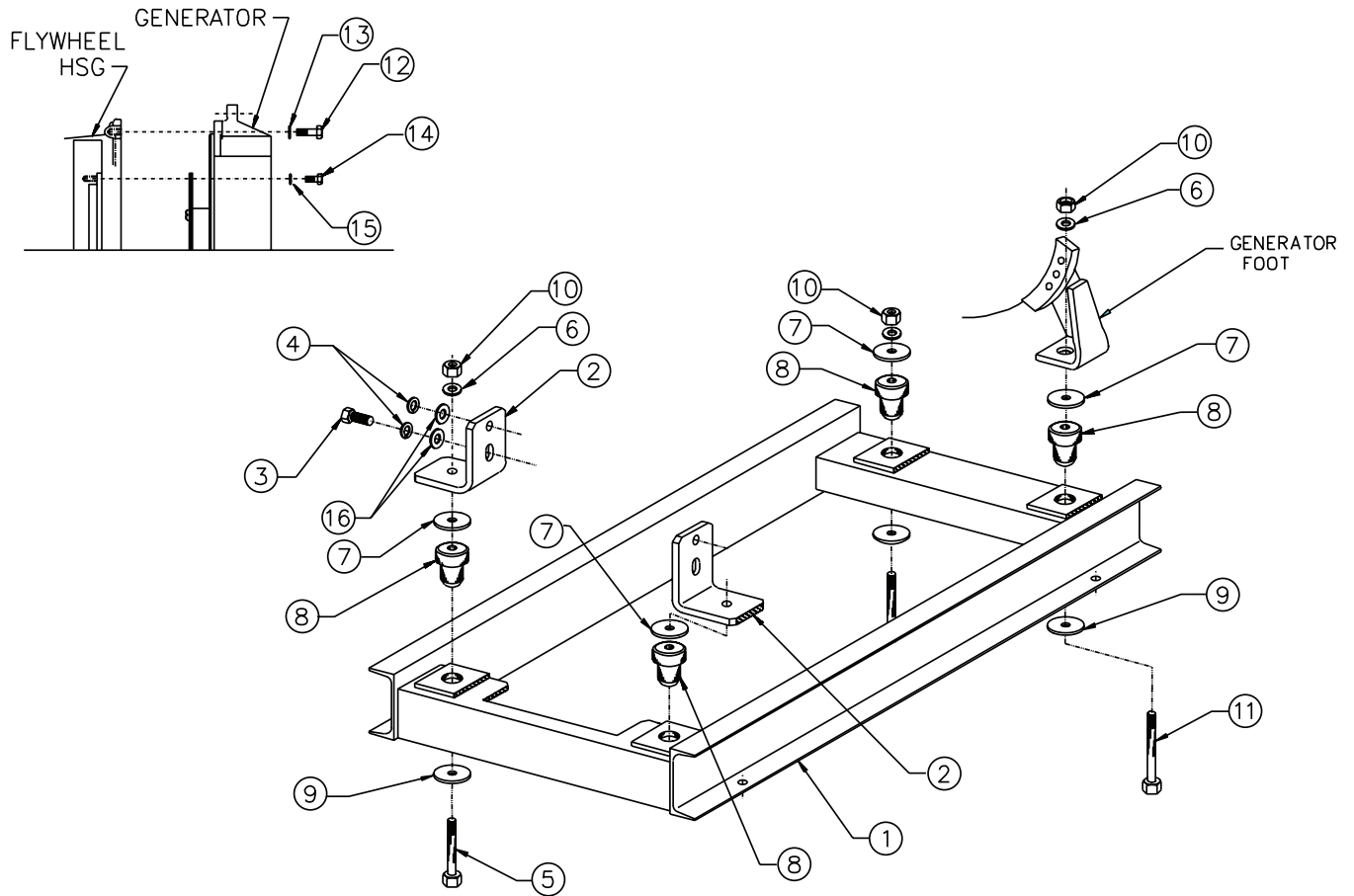


A-10412 / B-8401

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	23-88402	2	Bracket, Front Engine Mounting	-
2	12-01100	8	Cap screw, Hex Head M14 x 1.5 x 30 mm	-
3	15-01402	8	Lock Washer, Helical M14	-

**Base Frame Assembly with Centerbonded Mount**

M20CRW3 / PX-320C2



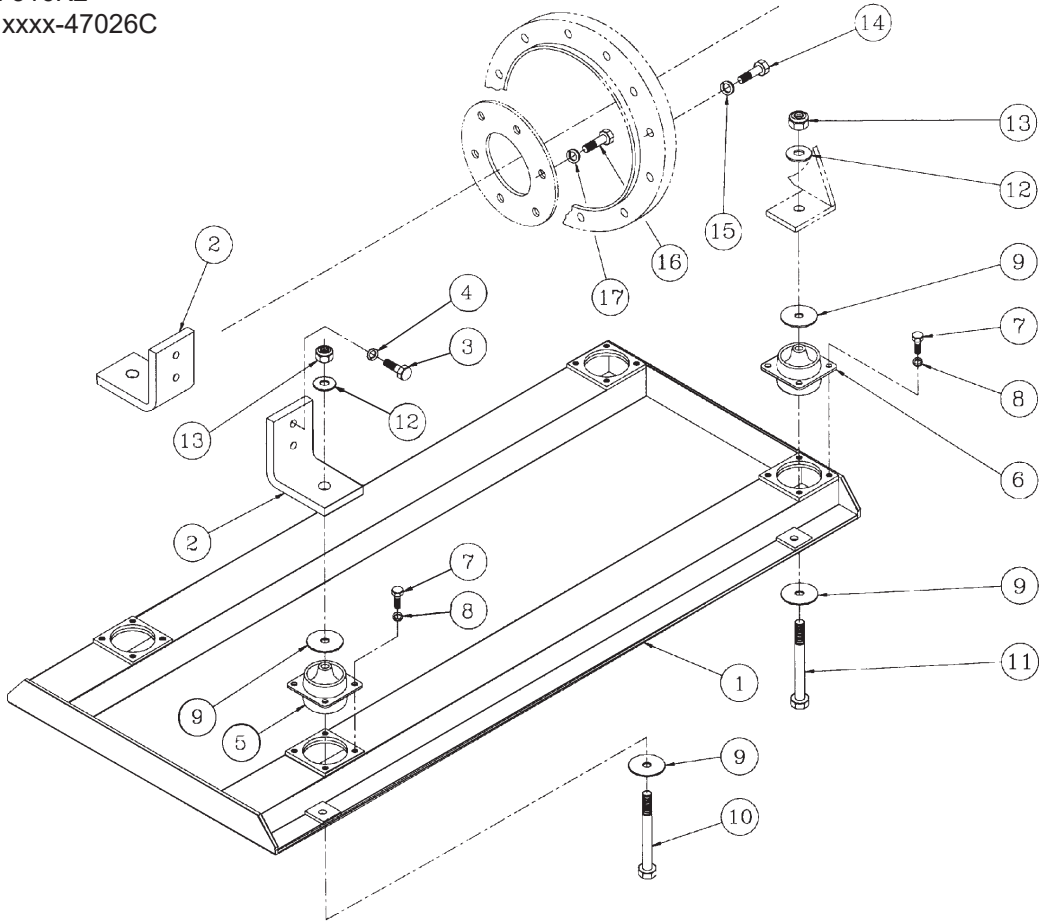
A-9412 / D-3649

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88408	1	Base Frame	-
2	23-88104	2	Bracket	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer M14 S/S	-
5	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S	-
6	15-09007	4	Flat Washer M12 S/S	-
7	15-00016	4	Head Washer	-
8	33-82254	4	Mount, Centerbonded 300 lbs. *	-
9	15-00026	4	Tail Washer	-
10	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4	-
13	15-00302	8	Lock Washer 3/8	-
14	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
15	15-00202	8	Lock Washer 5/16	-
16	15-09401	4	Flat Washer M14	-
* All with or without PTO / Electric Clutch				

**GROUP 8 – FRAME AND MOUNTING**

**Base Frame Assembly**

M844/PX-316K2  
up to s/n xxxx-47026C

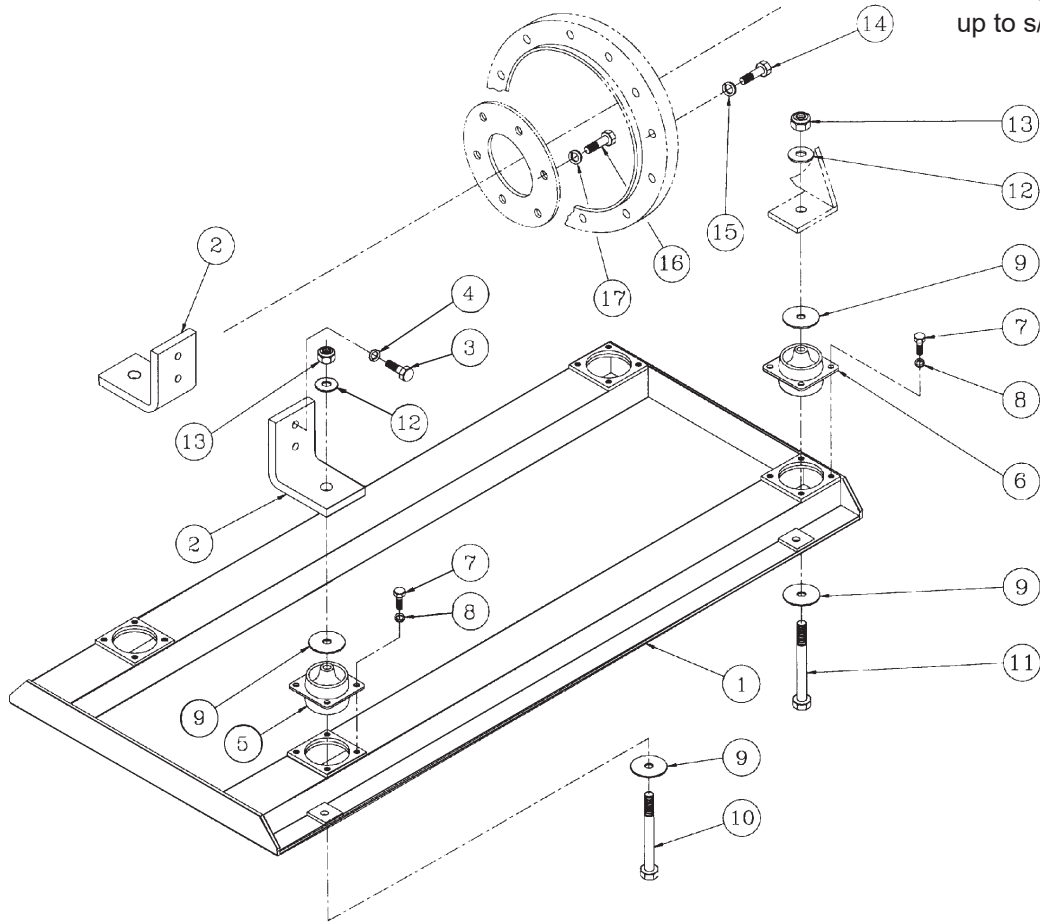


A-7894 / D-3012

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88108	1	Base Frame, Steel	-
	39-88113	1	Base Frame, Aluminum	-
2	23-88104	2	Bracket	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer, Helical M14 S/S	-
5	33-85402	2	Platform Mount, 220 lb.	-
6	33-85402	2	Platform Mount, 220 lb.	-
7	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20 mm, S/S	-
8	12-00705	16	Lock Washer, Helical M8, S/S	-
9	15-00040	8	Snubbing Washer	-
10	12-09967	2	Capscrew, Hex Head M12 x 1.75 x 80 mm S/S	-
	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S (with PTO)	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	15-09007	4	Flat Washer M12 S/S	-
13	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
14	12-00313	12	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
15	15-00302	12	Lock Washer, Helical 3/8	-
16	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
17	15-00202	8	Lock Washer, Helical 5/16	-

**Base Frame Assembly**

M844L/PX-320K2  
up to s/n xxxx-47167C



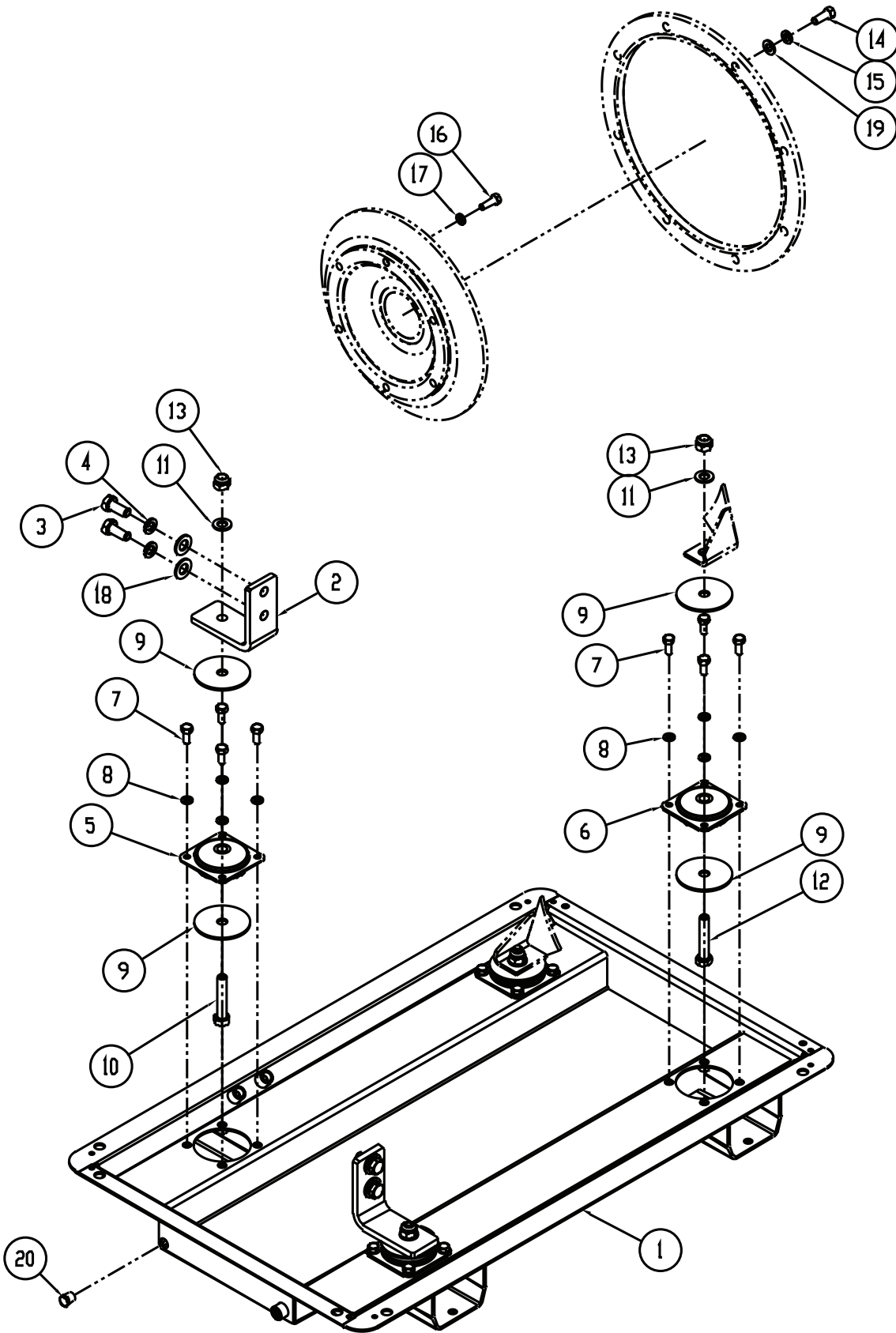
A-7895 / D-3012

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88109	1	Base Frame, Steel	-
	39-88407	1	Base Frame, Aluminum	-
2	23-88104	2	Bracket	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer, Helical M14 S/S	-
5	33-83106	2	Platform Mount, 310 lb.	-
6	33-83106	2	Platform Mount, 310 lb.	-
7	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20 mm, S/S	-
8	12-00705	16	Lock Washer, Helical M8, S/S	-
9	15-00040	8	Snubbing Washer	-
10	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S	-
	12-09926	2	Capscrew, Hex Head M12 x 1.75 x 110 mm (with PTO)	-
11	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S	-
12	15-09007	4	Flat Washer M12 S/S	-
13	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
14	12-00313	12	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
15	15-00302	12	Lock Washer, Helical 3/8	-
16	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2	-
17	15-00202	8	Lock Washer, Helical 5/16	-

GROUP 8 – FRAME AND MOUNTING

Steel Base Pan with Platform Mounting

M844 / PX316K2 from s/n xxxx-47027C



D-4470B



### Kit, Steel Base Pan with Plateform Mounting

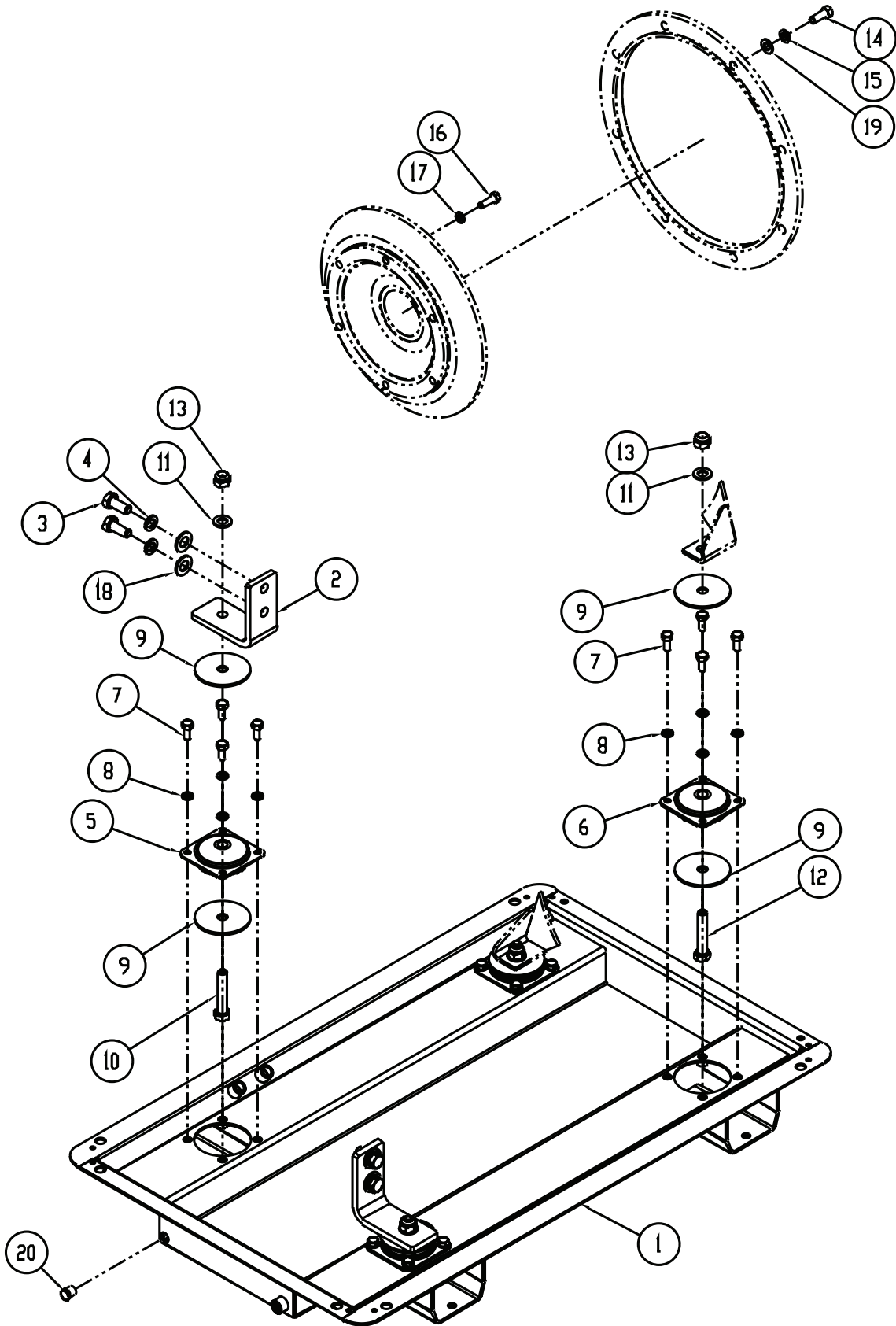
M844 / PX316K2 from s/n xxxx-47027C

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88117	1	Base Pan, Steel	-
2	23-88104	2	Bracket, Front Engine Mtg	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer S/S	-
5	33-85402	2	Mount, Pateform 220 Lb	-
6	33-85402	2	Mount, Pateform 220 Lb	-
7	12-09751	16	Capscrew, Hex Head M8x1.25 X 16 mm S/S (316)	-
8	15-00705	16	Lock Washer, Helical M8 S/S (316)	-
9	15-00040	8	Snubbing Washer	-
10	12-09967	2	Capscrew, Hex Head M12x1.75 X 80mm S/S	-
	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm (with PTO)	-
11	15-09007	4	Flat Washer M12 S/S (316)	-
12	12-95501	2	Capscrew, Hex Head M12x1.75 X 75mm S/S	-
13	14-09830	4	Hex Nut, Nylock M12x1.75 S/S (316)	-
14	12-00313	12	Capscrew, Hex Head 3/8-16 X 1-1/4"	-
15	15-00302	12	Lock Washer, Helical 3/8"	-
16	12-00214	8	Capscrew, Hex Head 5/16-18 X 1- 1/2"	-
17	15-00202	8	Lock Washer, Helical 5/16	-
18	15-09401	4	Flat Washer M14 S/S	-
19	15-00805	12	Flat Washer M10	-
20	21-31624	1	Plug, Hex Head, Brass, 1/4 NPT	-

GROUP 8 – FRAME AND MOUNTING

Steel Base Pan with Platform Mounting

M844L / PX320K2 from s/n xxxx-47168C



D-4470B

### Kit, Steel Base Pan with Plateform Mounting

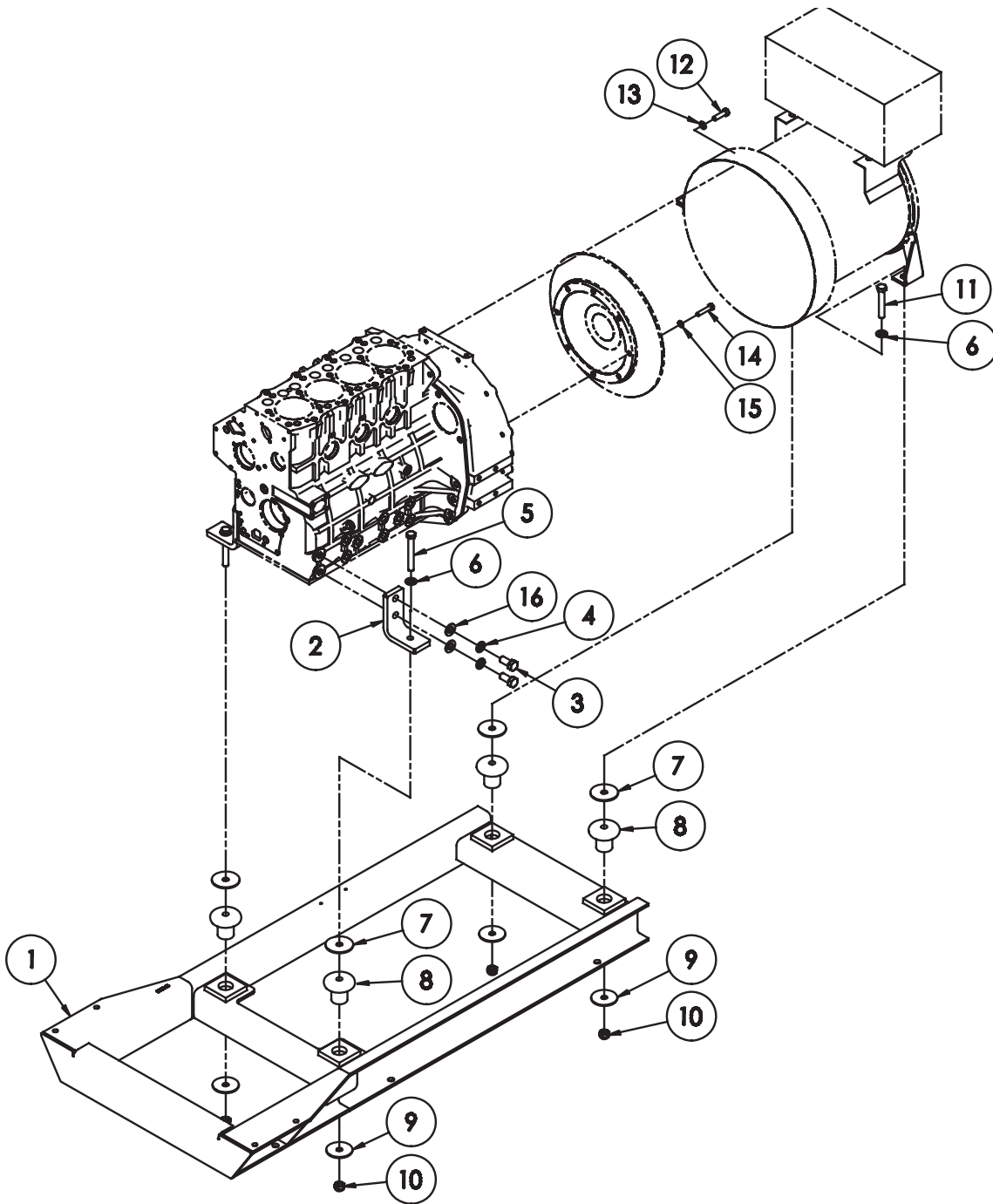
M844L / PX320K2 from s/n xxxx-47168C

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88417	1	Base Pan, Steel	-
2	23-88104	2	Bracket, Front Engine Mtg	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer S/S	-
5	33-83106	2	Mount, Pateform 310 Lb	-
6	33-83106	2	Mount, Pateform 310 Lb	-
7	12-09751	16	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S (316)	-
8	15-00705	16	Lock Washer, Helical M8 S/S (316)	-
9	15-00040	8	Snubbing Washer	-
10	12-09967	2	Capscrew, Hex Head M12 x 1.75 x 80 mm S/S	-
	12-09926	2	Capscrew, Hex Head M12 x 1.75 x 110 mm (with PTO)	-
11	15-09007	4	Flat Washer M12 S/S (316)	-
12	12-95501	2	Capscrew, Hex Head M12 x 1.75 X 75 mm S/S	-
13	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S (316)	-
14	12-00313	12	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
15	15-00302	12	Lock Washer, Helical 3/8"	-
16	12-00214	8	Capscrew, Hex Head 5/16-18 x 1- 1/2"	-
17	15-00202	8	Lock Washer, Helical 5/16	-
18	15-09401	4	Flat Washer M14 S/S	-
19	15-00805	12	Flat Washer M10	-
20	21-31624	1	Plug, Hex Head, Brass, 1/4 NPT	-

GROUP 8 – FRAME AND MOUNTING

**Steel Base Pan with Centerbonded Mounts**

M844L Radiator Cooled & MCA / PX - 320K2



D-4470B

## Steel Base Pan with Centerbonded Mounts

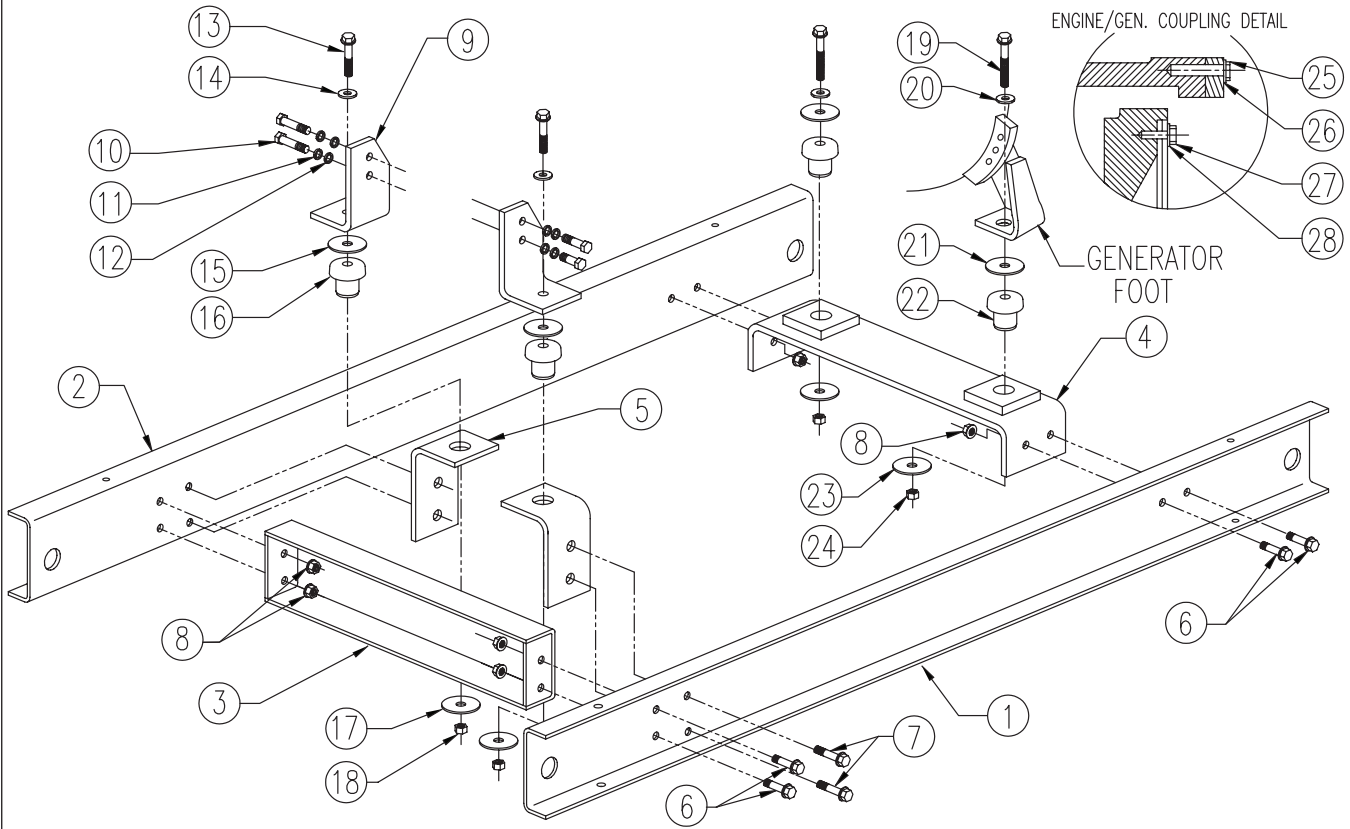
M844L Radiator Cooled &amp; MCA / PX - 320K2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	38-88421	1	Base Frame, Centerbonded Mounting	-
2	23-88104	2	Bracket, Front End Mounting	-
3	12-59100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm S/S	-
4	15-09402	4	Lock Washer, Helical M14 S/S	-
5	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S	-
6	15-09007	4	Flat Washer M12 S/S	-
7	15-00016	4	Head Washer	-
8	22-82254	4	Mount, Centerbonded 300 Lb	-
9	15-00026	4	Tail Washer	-
10	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	12-00313	12	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
13	15-00302	12	Lock Washer, Helical 3/8"	-
14	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2" Grade 5	-
15	15-00202	8	Lock Washerm Helical 5/16"	-
16	15-09401	4	Flat Washer M14 S/S	-

GROUP 8 – FRAME & MOUNTING

Base Frame Assembly

Industrial Application - NL844W



A-7932A/D-3653A

## Base Frame Assembly

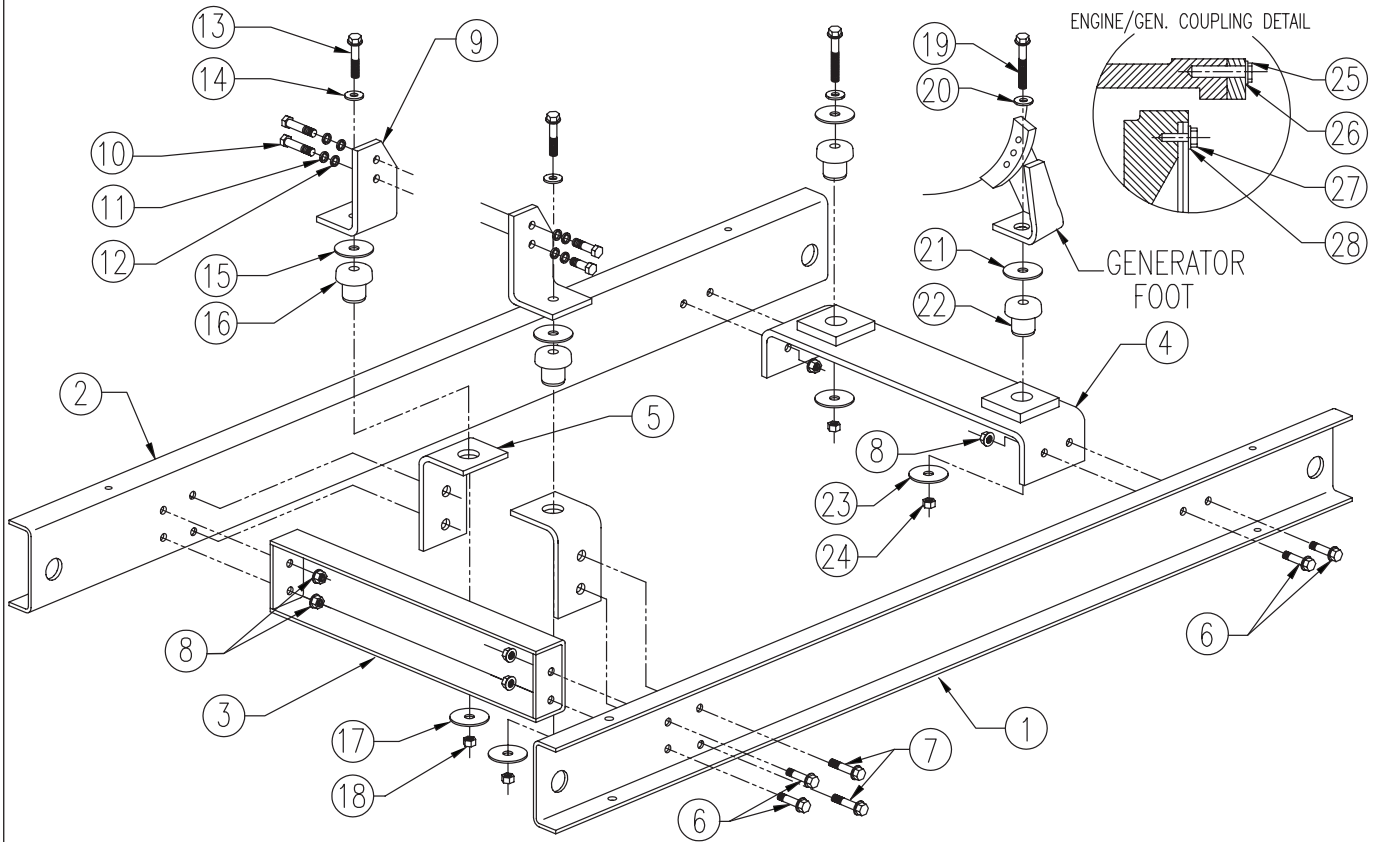
Industrial Application NL844W

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88114	1	Side Rail, Left Hand (NL844W)	-
2	39-88116	1	Side Rail, Right Hand (NL844W)	-
3	39-88413	1	Cross Member Forward	-
4	39-68406	1	Generator Support	-
5	23-88406	2	Bracket, Lower Engine Support	-
6	01435-01025	8	Capscrew, Hex Head Flanged M10 x 1.5 x 25 mm Grade 10.9	-
7	01435-01030	4	Capscrew, Hex Head Flanged M10 x 1.5 x 30 mm Grade 10.9	-
8	14-00815	12	Lock Nut, Flanged M10 x 1.5	-
9	23-88104	2	Bracket, Front Engine Mounting	-
10	12-01100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm	-
11	15-01402	4	Lock Washer, Helical M14	-
12	15-01401	4	Flat Washer, M14	-
13	12-00843	2	Capscrew, Hex Head M10 x 1.5 x 65 mm	-
14	15-00809	2	Flat Washer, M10 x 3/8" Special, Hardened	-
15	15-00014	2	Head/ Tail Washer Hardened	-
16	33-83151	2	Mount, Centerbonded 200 lb.	-
17	15-00014	2	Head/ Tail Washer Hardened	-
18	14-00812	2	Hex Nut, Nylock M10 x 1.5	-
19	12-00964	2	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
20	01643-31232	2	Flat Washer, M12 x 25 mm OD x 3.2 mm Hardened	-
21	15-00016	2	Head Washer	-
22	33-82254	2	Mount, Centerbonded 300 lb.	-
23	15-00026	2	Tail Washer	-
24	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
25	12-00313	12	Capscrew, Hex Head 3/8- 16 x 1- 1/4"	-
26	15-00302	12	Lock Washer, Helical 3/8"	-
27	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
28	15-00202	8	Lock Washer, Helical 5/16	-

GROUP 8 – FRAME & MOUNTING

Base Frame Assembly

Industrial Application - NL844LW



A-7932A/ D-3653A



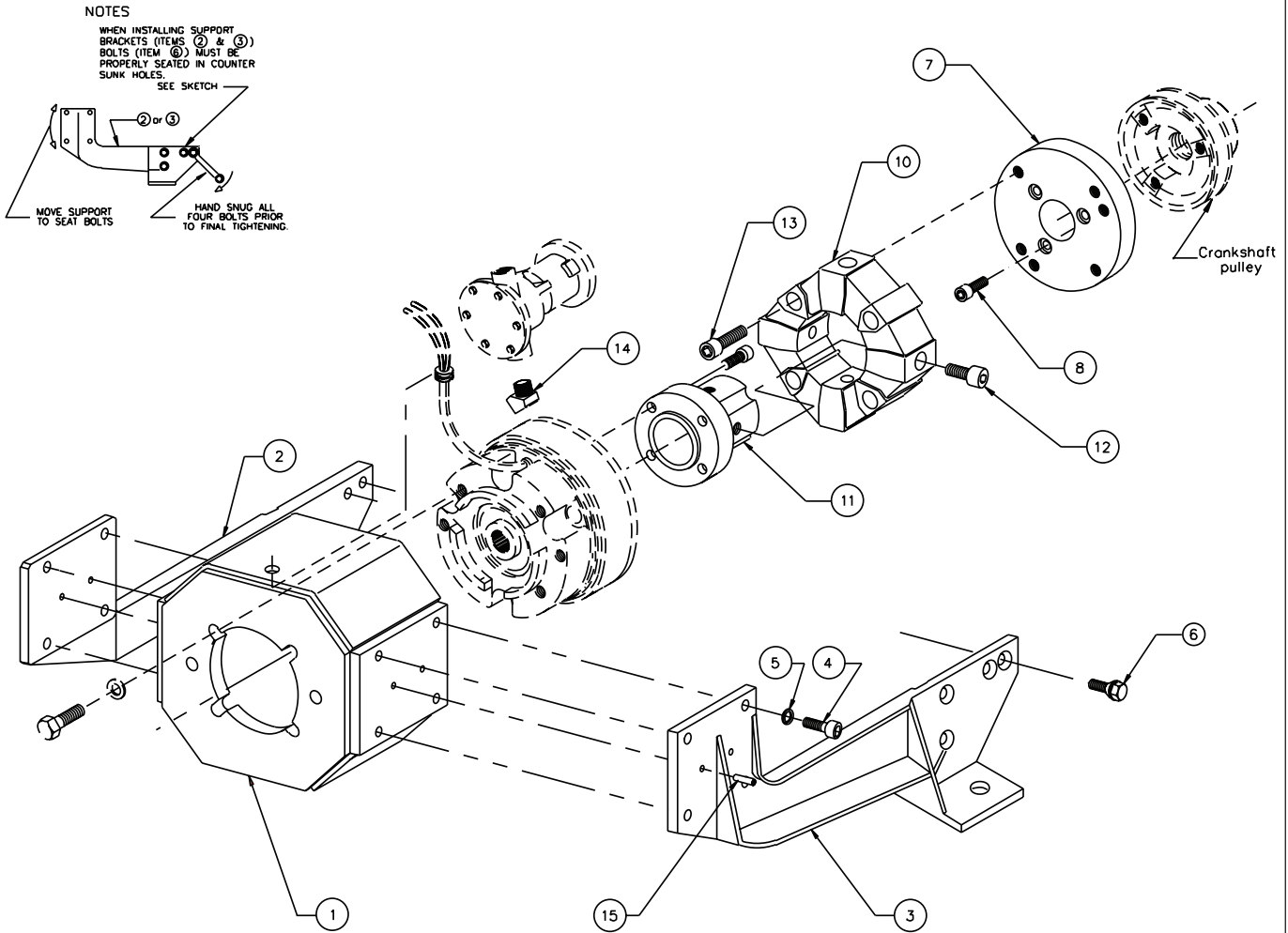
## Base Frame Assembly

Industrial Application NL844LW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88411	1	Side Rail, Left Hand (NL844LW)	-
2	39-88412	1	Side Rail, Right Hand (NL844LW)	-
3	39-88413	1	Cross Member Forward	-
4	39-68406	1	Generator Support	-
5	23-88406	2	Bracket, Lower Engine Support	-
6	01435-01025	8	Capscrew, Hex Head Flanged M10 x 1.5 x 25 mm Grade 10.9	-
7	01435-01030	4	Capscrew, Hex Head Flanged M10 x 1.5 x 30 mm Grade 10.9	-
8	14-00815	12	Lock Nut, Flanged M10 x 1.5	-
9	23-88104	2	Bracket, Front Engine Mounting	-
10	12-01100	4	Capscrew, Hex Head M14 x 1.5 x 30 mm	-
11	15-01402	4	Lock Washer, Helical M14	-
12	15-01401	4	Flat Washer, M12 x5 mm OD x 32 mm Hardened	-
13	12-00843	2	Capscrew, Hex Head M10 x 1.5 x 65 mm	-
14	15-00809	2	Flat Washer, M10 x 3/8" Special, Hardened	-
15	15-00014	2	Head Washer	-
16	33-83151	2	Mount, Centerbonded 200 lb.	-
17	15-00026	2	Tail Washer	-
18	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
19	12-00964	2	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
20	01643-31232	2	Flat Washer, M12 x 25 mm OD x 3.2 mm Hardened	-
21	15-00016	2	Head Washer	-
22	33-82254	2	Mount, Centerbonded 300 lb.	-
23	15-00026	2	Tail Washer	-
24	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
25	12-00313	12	Capscrew, Hex Head 3/8- 16 x 1- 1/4"	-
26	15-00302	12	Lock Washer, Helical 3/8"	-
27	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
28	15-00202	8	Lock Washer, Helical 5/16	-

GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT

PTO Adapter Parts M844 - 844L



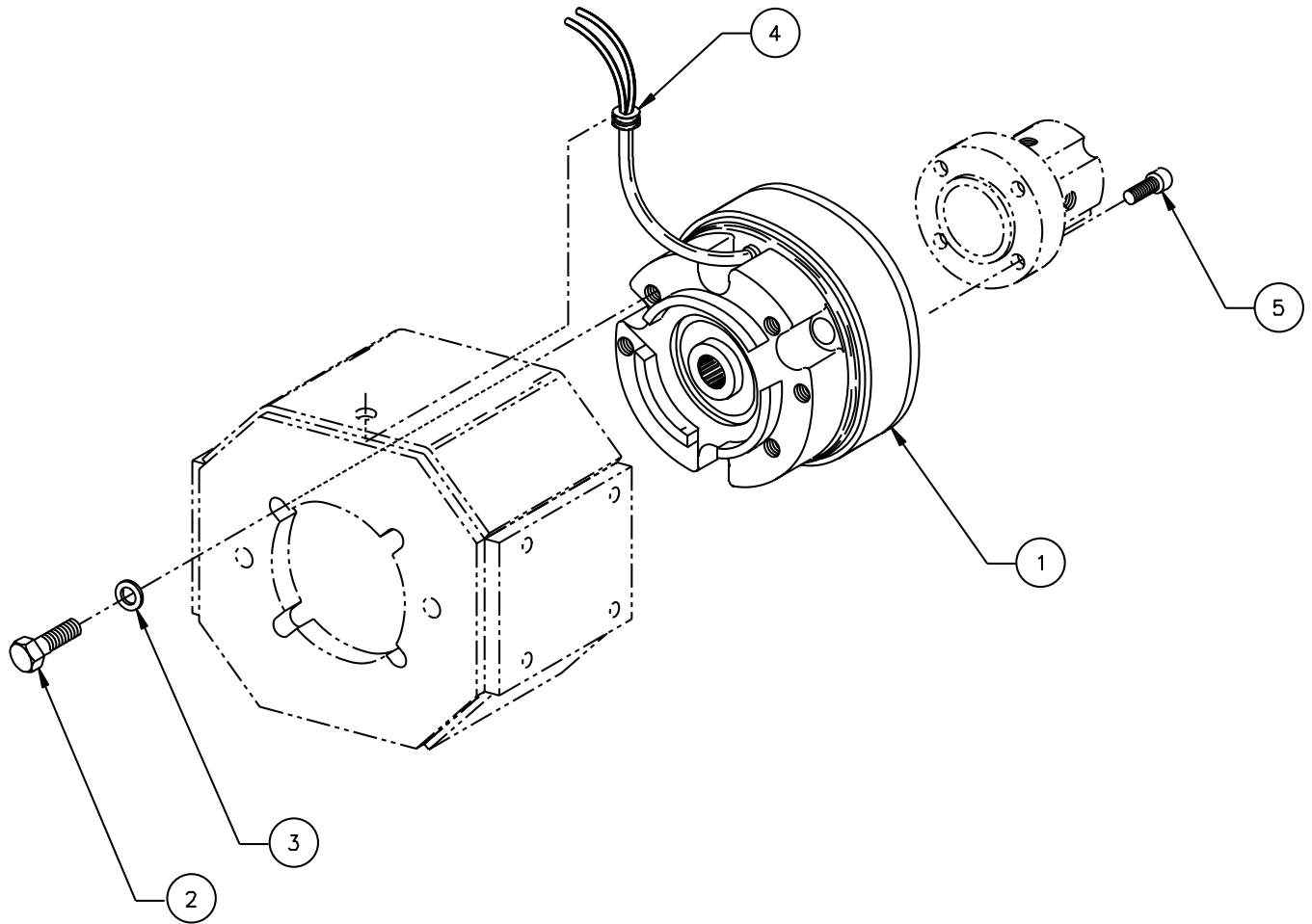
See PTO guard & related items on pages for Belt Guard Assembly

A-6560C / D-3154

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-65401	1	PTO Clutch Housing	-
2	23-68101	1	PTO Support Bracket, Right Hand	-
3	23-68102	1	PTO Support Bracket, Left Hand	-
4	01435-01025	8	Capscrew, Hex Head Flanged M10 x 1.5 x 25 mm	-
5	15-00804	8	Wave Washer M10	-
6	12-68101	6	Capscrew, Hex Head with Tapered Seat M14 x 1.5 x 30 mm	-
7	31-68101	1	PTO Drive Adapter	-
8	12-20912	3	Capscrew, Socket Head M12 x 1.75 x 25 mm	-
10	34-65406	1	Coupling Assembly	-
11	34-65407	1	Hub	-
12	12-20920	4	Capscrew, Socket Head M12 x 1.75 x 40 mm	-
13	12-20914	4	Capscrew, Socket Head M12 x 1.75 x 35 mm	-
14	21-00128	1	Street Elbow, Brass 1/2 NPT x 1/2 NPT	-
15	32-60001	4	Taper Pin #4 x 1"	-

**Electric Clutch**

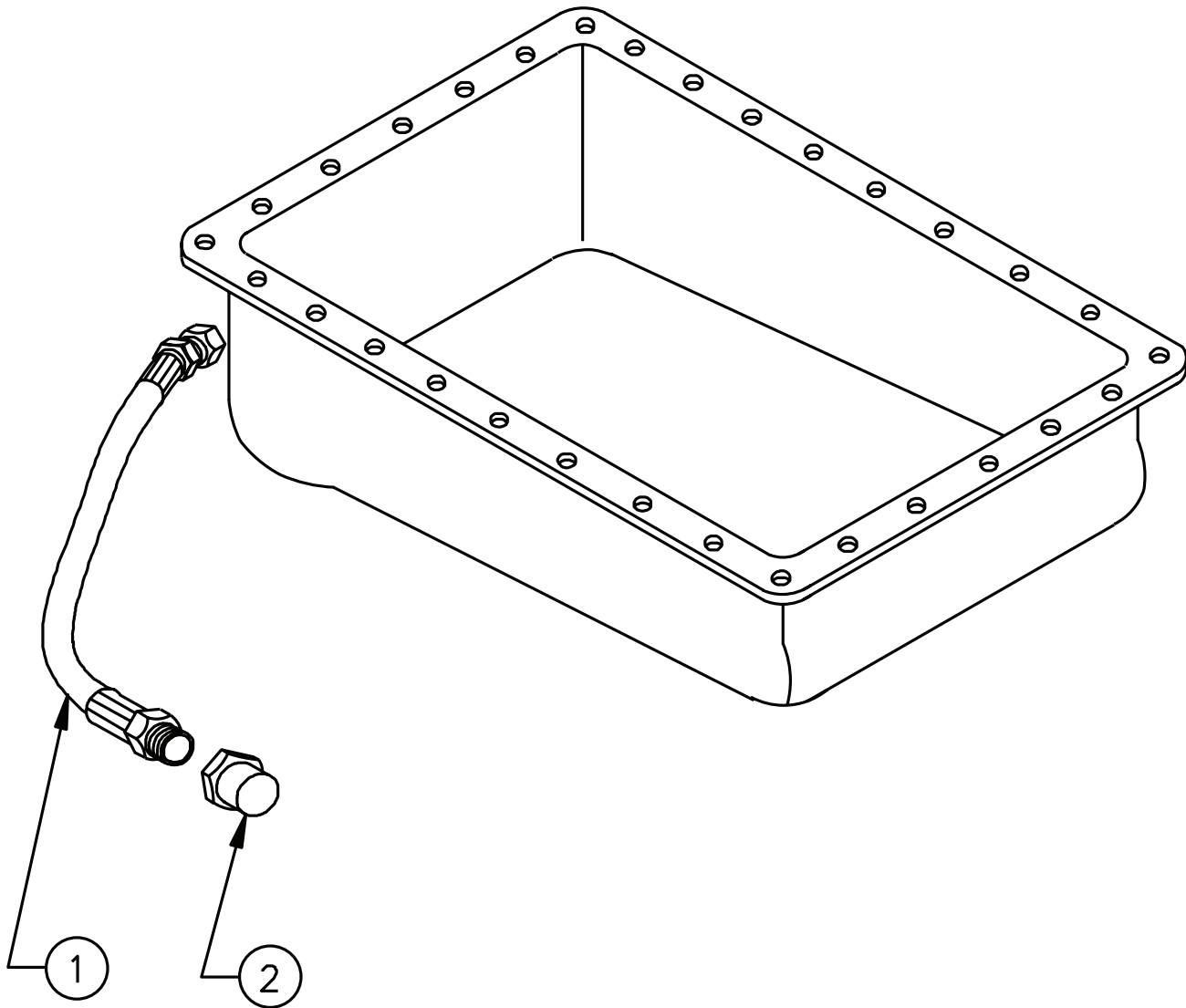
H-28 B-Spline 12 & 24 Volt



A-6291, A-6346 / C-3020

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	34-60091	1	Electric Clutch Assembly (12 Volt)	-
	34-60092	1	Electric Clutch Assembly (24 Volt)	-
2	12-00513	4	Capscrew, Hex Head 1/2-13 x 1-1/4	-
3	15-00007	4	Flat Washer M12	-
4	00-61003	1	Grommet	-
5	12-63800	4	Capscrew, Socket Head 3/8-24 x 3/4	-

**Oil Drain Kit L844**

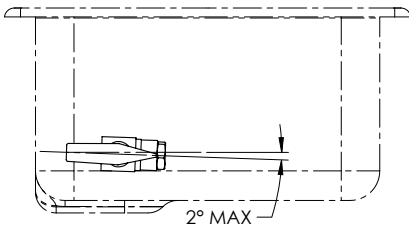
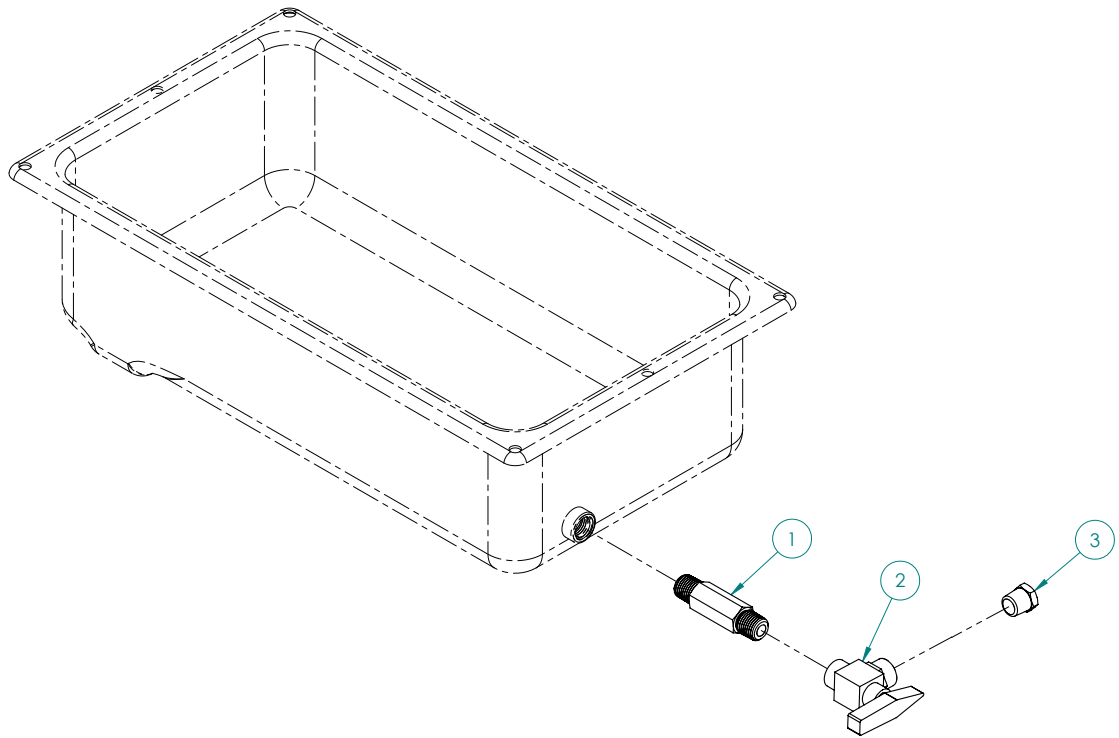


A-10619/ B-8409

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	18-72004	1	Hose Assembly 1/2" ID x 13-1/2"	-
2	21-00003	1	Cap, Hex Head Brass 1/2 NPT	-

**Oil Drain Kit M20CRW3**

From S/N 8442-58857



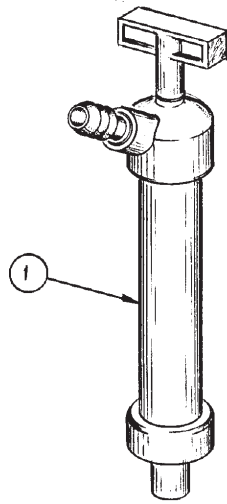
DRAIN VALVE ORIENTATION

B-11753

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	36-08402	1	Pipe nipple (straight connector), Hex 1/4 NPT Male 2-1/2" long	-
2	36-08401	1	Ball valve, brass 90° 1/4 NPT female x 1/4 NPT female	-
3	21-31624	1	Plug, HX HD, brass 1/4 NPT	-

**GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT**

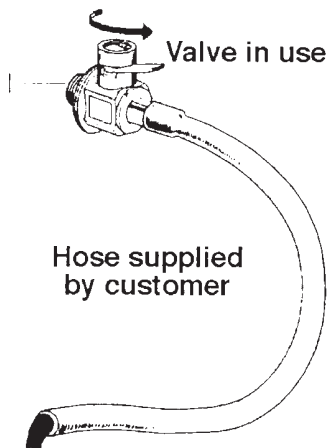
**Oil Drain Kit M844, M844L, M20CRW3**



A-5024/ B-3990

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	36-70010		Oil Drain Pump Kit (with hose & connectors)	-
1	36-72002	1	Hand Pump	-

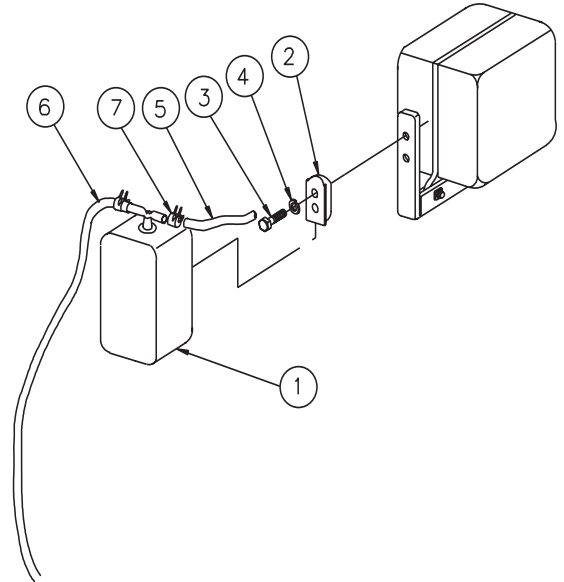
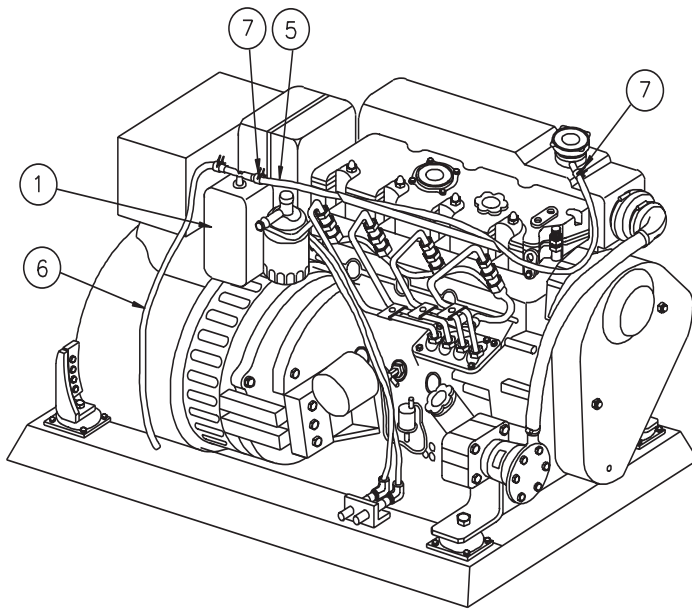
**Oil Drain Kit NL844**



A-6480

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

Coolant Recovery Tank

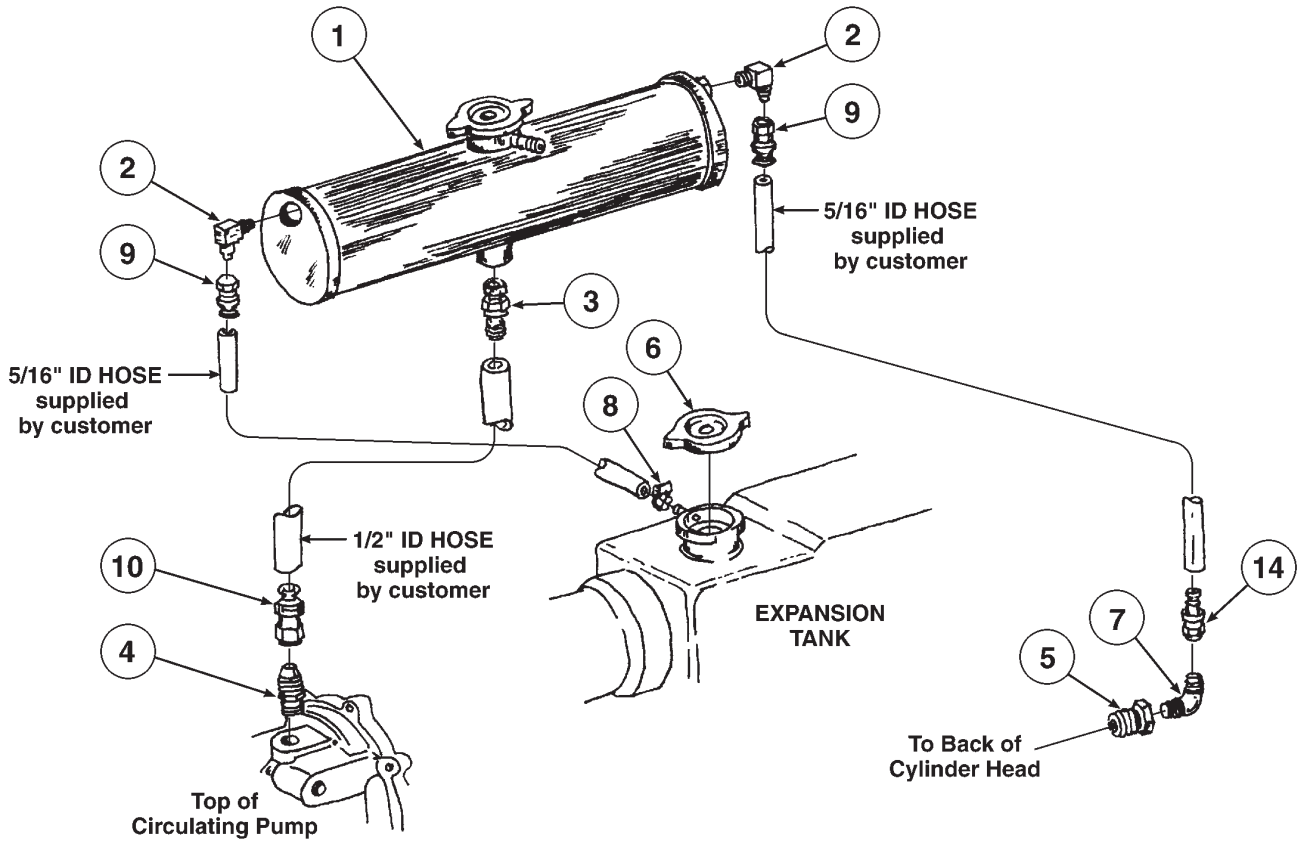


A-10343 / B-8022

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	310550180	1	Tank, Coolant Recovery	-
2	222300090	1	Bracket, Coolant Recovery Tank Mounting	-
3	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
4	15-00610	2	Lock Washer, Helical M6 S/S	-
5	27-12004	1	Tube 5/16" ID x 30" Polyurethane	-
6	18-12006	1	Hose 5/16" ID x 26" Polyvinyl	-
7	19-18602	3	Hose Clamp	-

GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT

**Remote Expansion Tank**

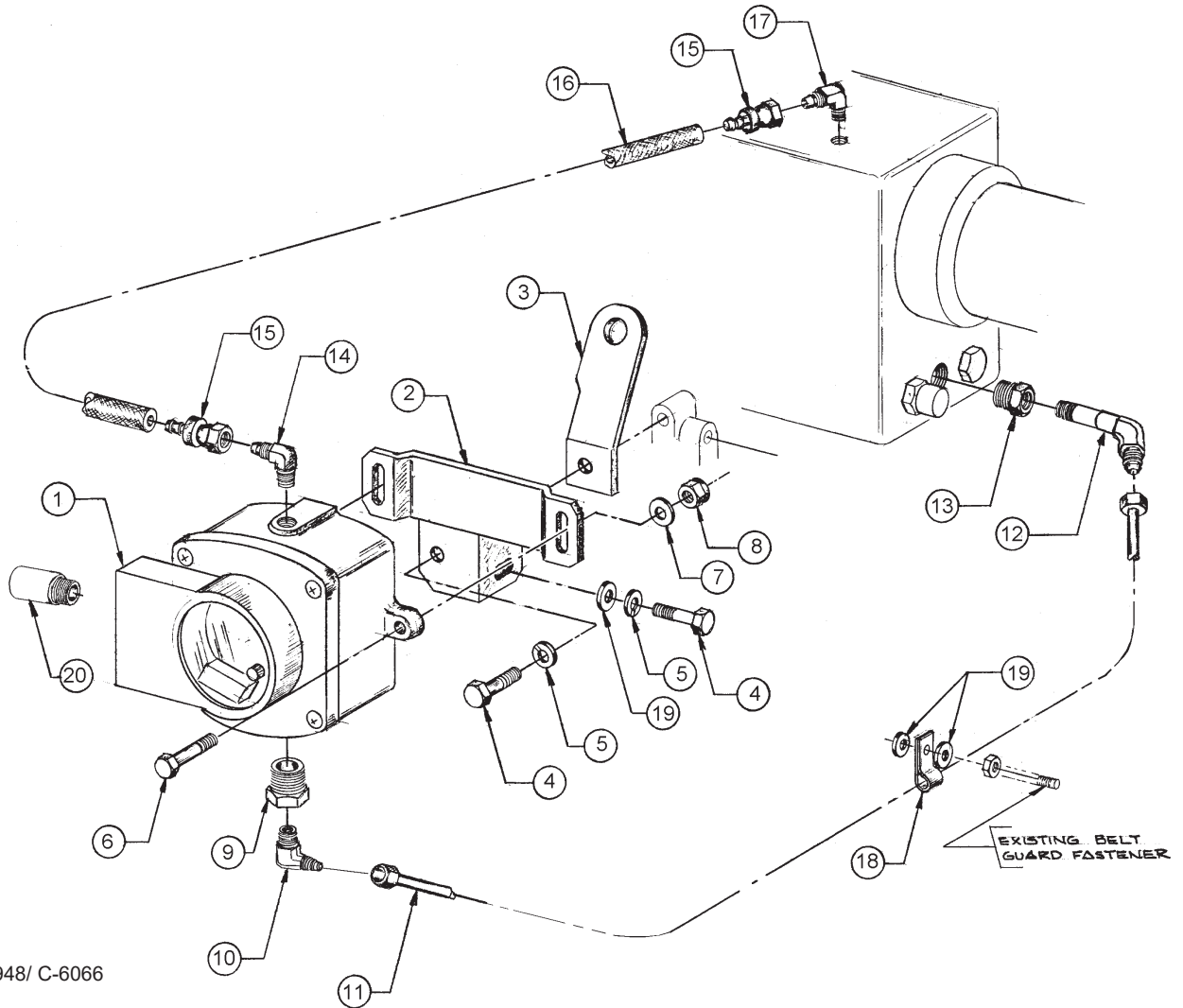


A-7463

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-12002	1	Tank Assembly (includes keys #11 - #12)	-
2	21-52245	2	Male Elbow, 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 HB	-
5	31-12001	1	Port Adapter (requires #13)	-
6	21-12008	1	Filler Cap	-
7	21-10030	1	Male Elbow, 90° Brass 3/8 Port x 5/16-37T	-
8	19-01004	1	Hose Clamp #4	-
9	21-71056	2	Female Swivel, Brass 5/16 HB x 5/16-45T	-
10	21-71042	1	Female Swivel, Brass 1/2 HB x 1/2-45T	-
11	23-75404	2	Bracket, Tank Mtg. (not shown)	-
12	19-00064	2	Hose Clamp #64 (not shown)	-
13	16-15010	1	O-ring (not shown)	-
14	21-70007	1	Female Swivel, Brass 5/16 HB x 5/16-37T	-



Low Coolant Level Switch/ Gauge



A-10948/ C-6066

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10003	1	Coolant Level Switch/ Gauge	-
2	23-73106	1	Bracket, Coolant Level Switch/ Gauge	-
3	00-73146	1	Lifting Eye, Front	-
4	12-00712	2	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
5	15-00702	2	Lock Washer, Helical M8	-
6	12-00031	2	Capscrew, Hex Head M6 x 1.0 x 25 mm	-
7	15-00008	1	Flat Washer M6	-
8	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
9	21-00135	1	Bushing, Brass 1/2 NPT x 1/4 NPT	-
10	21-71049	1	Male Elbow 90° Steel 1/4 NPT x 1/4- 37T	-
11	18-15408	1	Hose Assembly 1/4" ID x 15"	-
12	21-15710	1	Male Elbow 90° Steel 1/8 NPT x 1/4- 37T	-
13	21-55201	1	Bushing Brass 3/8 NPT x 1/8 NPT	-
14	21-71044	1	Male Elbow 90° Brass 1/4 NPT x 1/4- 45T	-
15	21-71045	2	Female Swivel Brass 1/4 HB x 1/4- 45T	-
16	18-52205	1	Hose 1/4" ID x 13" Push-on	-
17	21-71053	1	Male Elbow 90° Steel 1/8 NPT x 1/4- 37T	-
18	19-72252	1	Adelle Clamp 3/8" ID x 3/8" Stud	-
19	15-00701	3	Flat Washer M8	-
20	00-40016	1	Strain Relief Connection 1/2 NPT	-







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