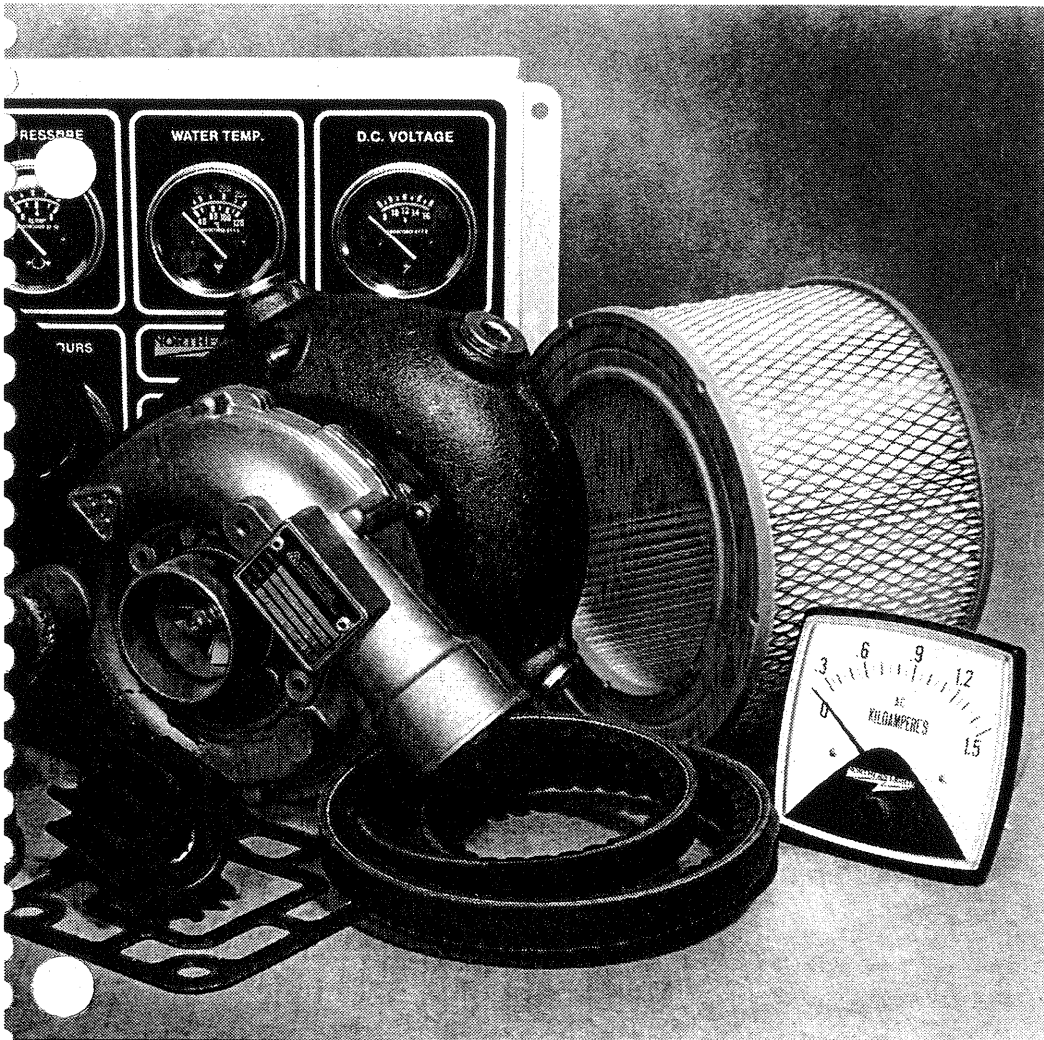


# PARTS CATALOG

P844

for Models M844, M844L, M16c,  
M20cL, NL844 & NL844L





# PARTS CATALOG

for Models M844, M844L, M16C, M20CL, NL844 & NL844L

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

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#### Proprietary Information

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## Model Designation

### MODELS INCLUDED

This manual covers the operating instructions for:

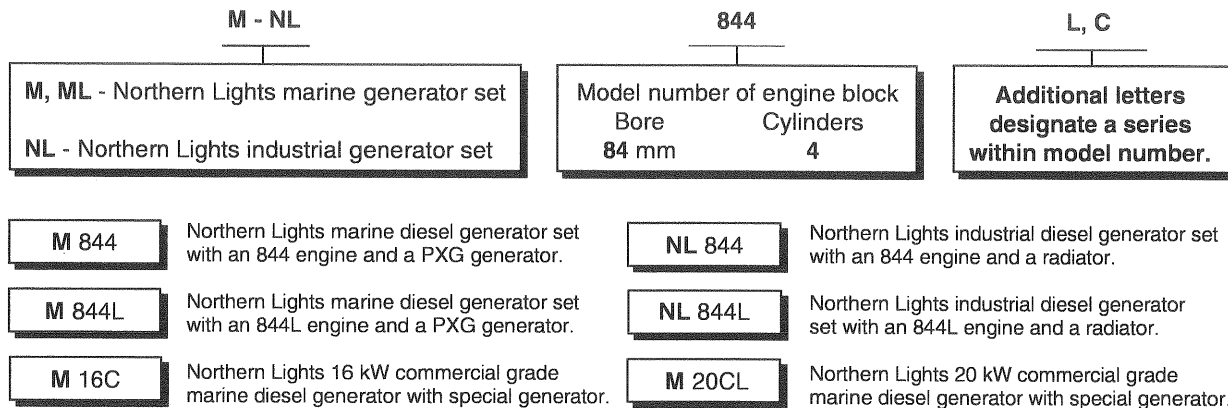
**M-844, M-16C & NL-844** which use the 844 engine;

**M-844L, M-20CL & NL-844L** which use the 844L engine.

**Note:** There are two versions of the 844 engine. The standard engine is designated 844. The long stroke engine is designated 844L. You will need to know which engine you have to use this manual and to order parts.

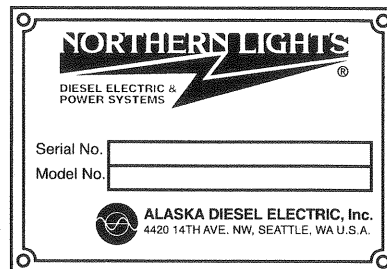
## Model Numbers

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



## Serial Numbers

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





## Reading a Parts Page

### IMPORTANT:

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

**ALTERNATOR ASSEMBLY: M - NL844**

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

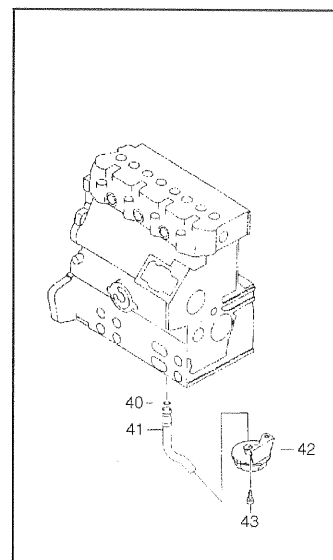
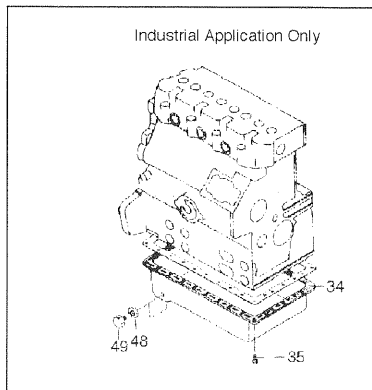
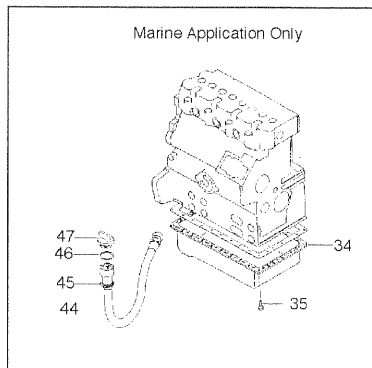
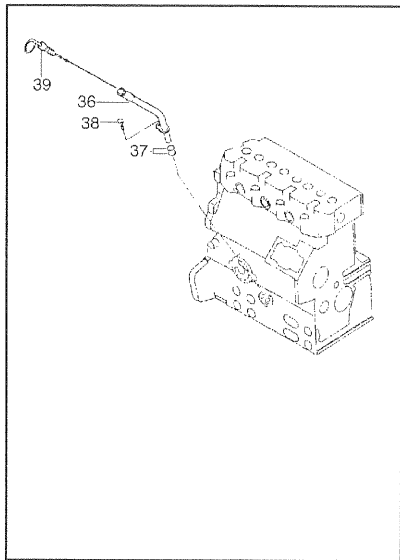
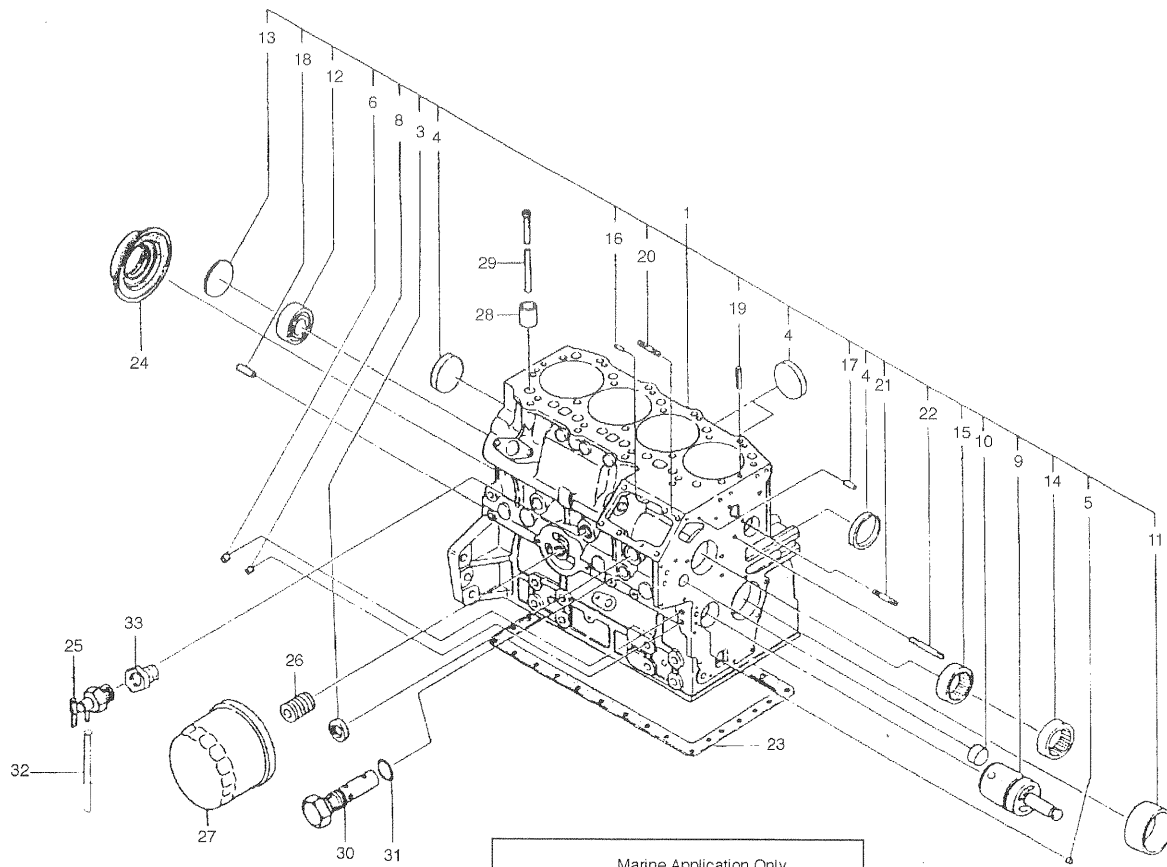
13 — P844 06/96 — 14  
11 — 5-2 — 12

### REFERENCES:

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Grouping section title.</li> <li>2. Model designation of equipment that uses parts listed on this page.</li> <li>3. Title and description of assembly.</li> <li>4. Drawing numbers that correspond to key column numbers for parts identification.</li> <li>5. Key column for locating parts shown on drawing.</li> <li>6. Part number.</li> </ol> | <ol style="list-style-type: none"> <li>7. Quantity of parts used.</li> <li>8. Description of each component part.</li> <li>9. Serial number of unit the part fits.</li> <li>10. Assembly or kit designated by Key 0 or **/*.</li> <li>11. Grouping index number.</li> <li>12. Page number within the grouping index.</li> <li>13. Manual title.</li> <li>14. Page publication date.</li> </ol> |
|--|--|

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

# Cylinder Block Assembly: 844 & 16C



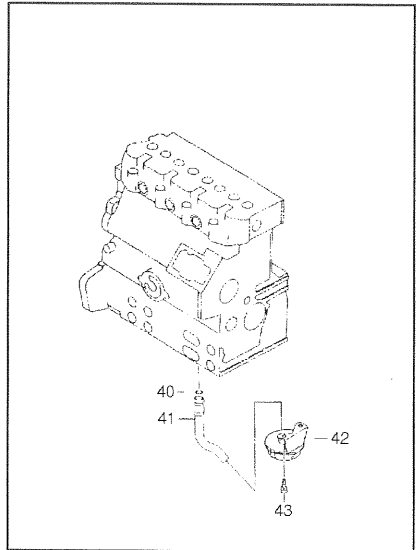
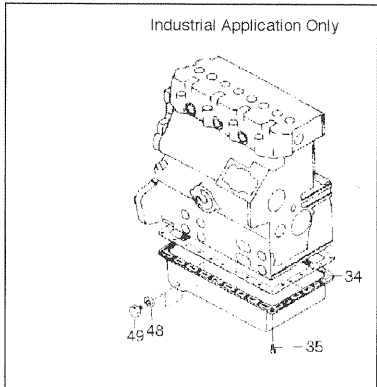
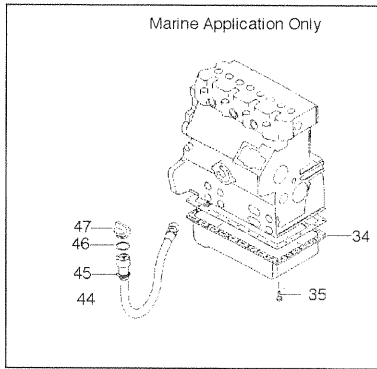
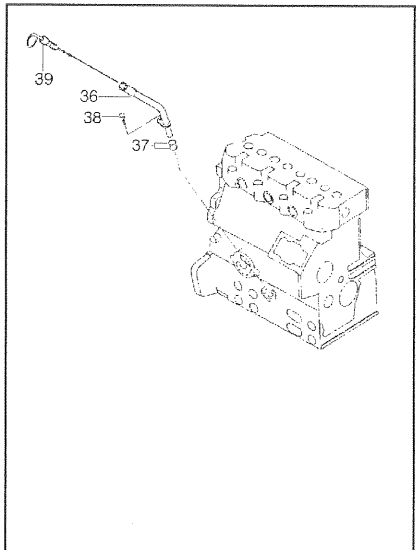
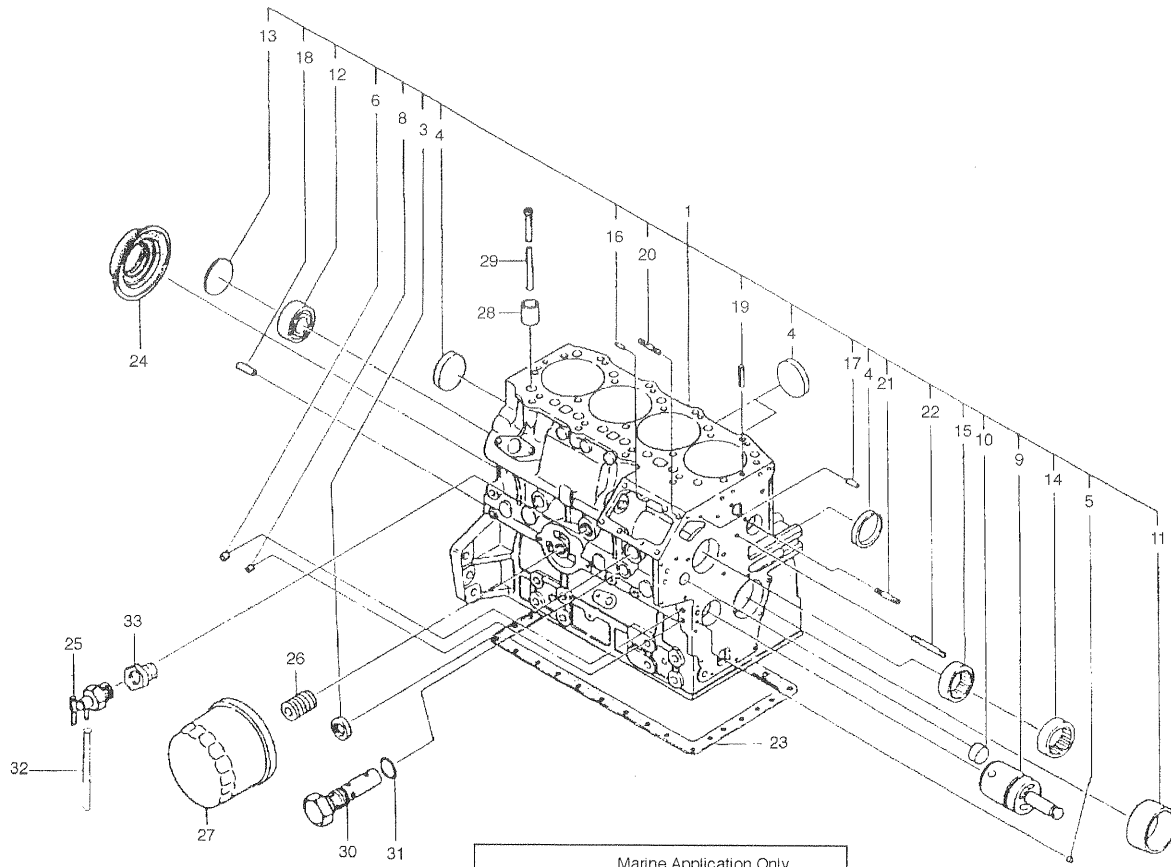
### Cylinder Block Assembly: 844 & 16C

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110107860	1	Cylinder Block Assembly - Marine (includes Keys 2-21)	-
	110107420	1	Cylinder Block Assembly - Industrial (includes Keys 2-21)	-
3	064200025	2	Expansion Plug 25mm	-
4	064200040	5	Expansion Plug 40mm	-
5	198466010	3	Plug	-
6	198466020	4	Plug	-
8	198466070	4	Plug	-
9	165296130	1	Idle Gear Shaft Assembly	-
10	198466060	4	Plug	-
11	198517220	1	Bush; Standard	-
	198517224	1	Bush; Undersize 0.25mm	-
	198517227	1	Bush; Undersize 0.50mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug 45mm	-
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	012100820	1	Stud Bolt M8 x 1.25 x 20mm	-
21	012100635	1	Stud M6 x 1.0 x 35mm	-
22	012100660	1	Stud M6 x 1.0 x 60mm	-
23	110996600	1	Gasket	-
24	198636170	1	Oil Seal	-
	00-02004	**	Wear Sleeve; Repair Type	-
25	198736050	1	Drain Cock - Marine	-
	198736120	1	Drain Cock - Industrial	-
26	140546020	1	Joint	-
27	24-03100	1	Oil Filter	-
28	120116160	8	Tappet	-
29	120456250	8	Push Rod	-
30	140036120	1	Relief Valve Assembly	-
31	052100150	1	O-Ring	-
32	068115250	1	Tube	-
33	198486770	1	Bushing - Marine Only	-
34	110707730	1	Oil Pan - Marine (formerly #110707730)	-
	110707751	1	Oil Pan - Industrial (formerly #110707750)	-
35	010109235	30	Bolt	-
36	110756070	1	Dipstick Tube	-
37	052100100	2	O-Ring	-
38	011300612	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	140606710	1	Drain Hose*	-
45	198756200	1	Hose Clamp*	-
46	054109013	1	Gasket*	-
47	398430560	1	Cap* (formerly #398430080)	-
48	025100012	2	Seal Washer - Industrial	-
49	010401212	2	Plug M12 x 1.25 - Industrial	-

\*Marine Application Only.

\*\*As required.

# Cylinder Block Assembly: 844L & 20CL



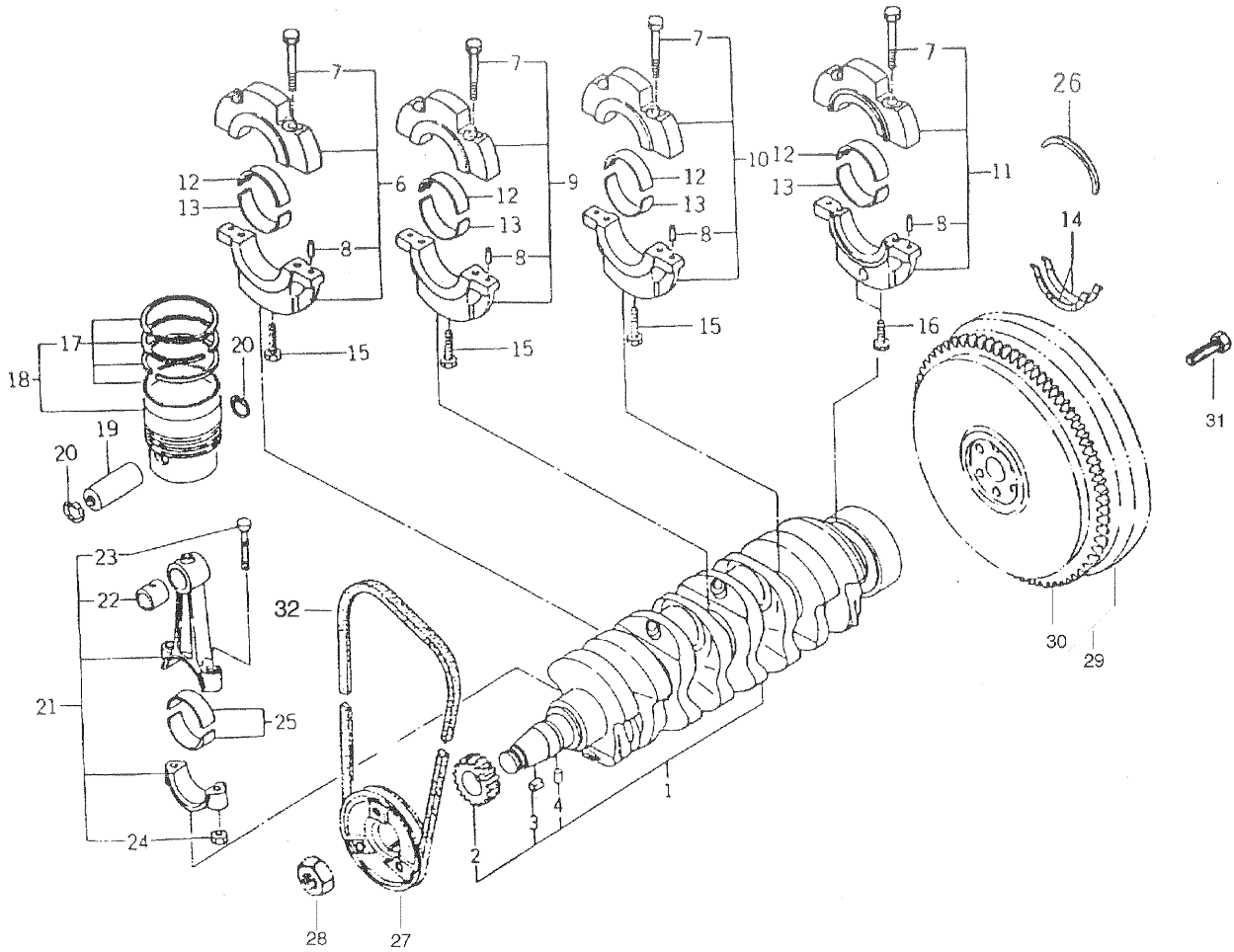
### Cylinder Block Assembly: 844L & 20CL

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110107810	1	Cylinder Block Assembly - Marine (includes Keys 2-21)	-
	110107840	1	Cylinder Block Assembly - Industrial (includes Keys 2-21)	-
3	064200025	2	Expansion Plug 25mm	-
4	064200040	5	Expansion Plug 40mm	-
5	198466010	3	Plug	-
6	198466020	4	Plug	-
8	198466070	4	Plug	-
9	165296130	1	Idle Gear Shaft Assembly	-
10	198466060	4	Plug	-
11	198517220	1	Bush; Standard	-
	198517224	1	Bush; Undersize 0.25mm	-
	198517227	1	Bush; Undersize 0.50mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug 45mm	-
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	012100820	1	Stud M8 x 1.25 x 20mm	-
21	012100635	1	Stud M6 x 1.0 x 35mm	-
22	012100660	1	Stud M6 x 1.0 x 60mm	-
23	110996600	1	Gasket	-
24	050209083	1	Oil Seal	-
	00-02004	**	Wear Sleeve; Repair Type	-
25	198736050	1	Drain Cock - Marine	-
	198736120	1	Drain Cock - Industrial	-
26	140546020	1	Joint	-
27	24-03100	1	Oil Filter	-
28	120116160	8	Tappet	-
29	120456310	8	Push Rod	-
30	140036220	1	Relief Valve Assembly	-
31	052100150	1	O-Ring	-
32	068115250	1	Tube	-
33	198486770	1	Bushing - Marine Only	-
34	110707731	1	Oil Pan - Marine (formerly #110707730)	-
	110707751	1	Oil Pan - Industrial (formerly #110707750)	-
35	010109235	30	Bolt	-
36	110756070	1	Dipstick Tube	-
37	052100100	2	O-Ring	-
38	011300612	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	140606710	1	Drain Hose*	-
45	198756200	1	Hose Clamp*	-
46	054109013	1	Gasket*	-
47	398430560	1	Cap* (formerly #398430080)	-
48	025100012	2	Seal Washer - Industrial	-
49	010401212	2	Plug M12 x 1.25 Industrial	-

\*Marine Application Only.

\*\*As required.

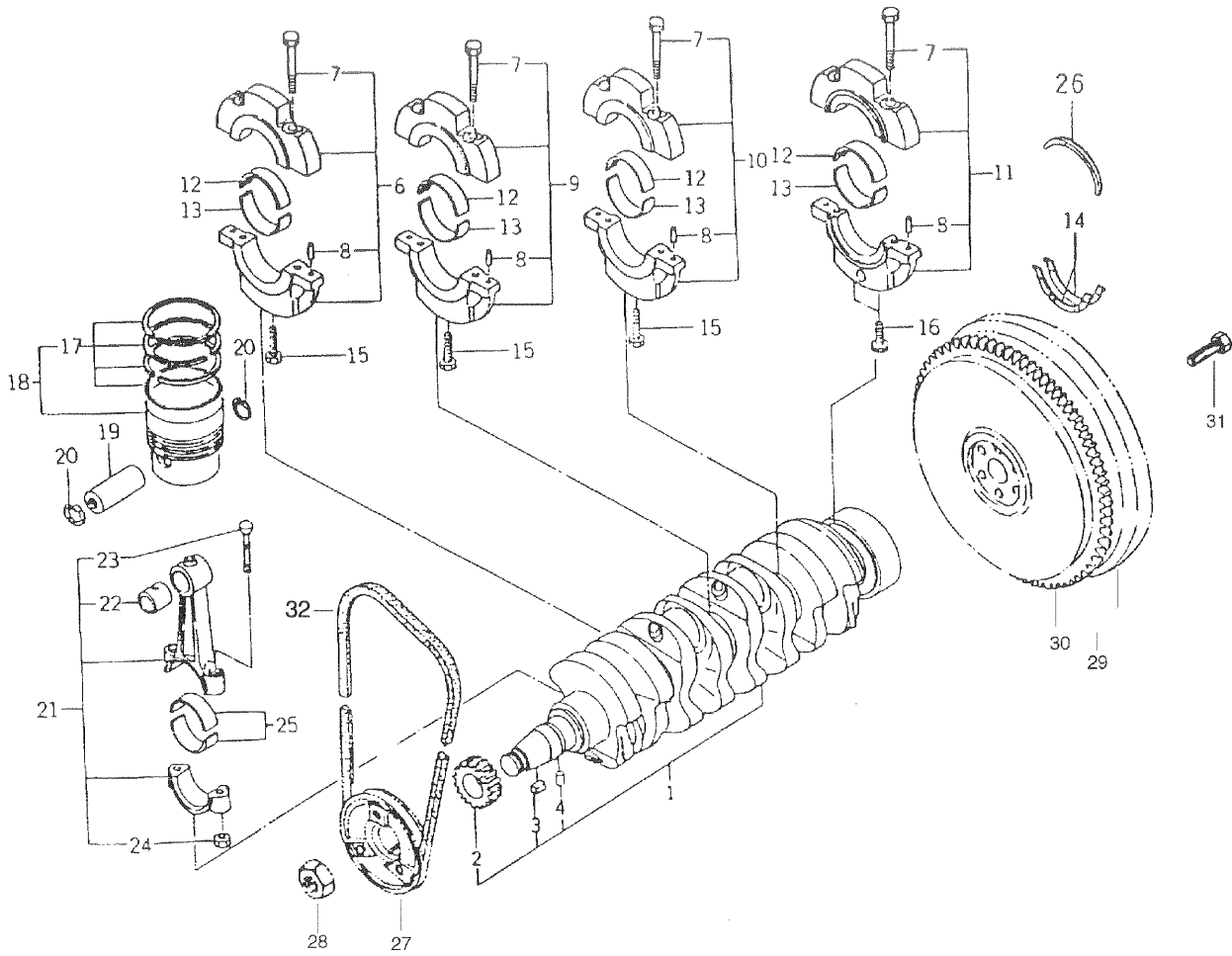
# Crankshaft Assembly: 844 & 16C



## Crankshaft Assembly: 844 &amp; 16C

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256630	1	Crankshaft Assembly (includes Keys 2-5)	-
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	198517230	4	Bearing; Standard	-
	198517234	4	Bearing; Undersize 0.25mm	-
	198517237	4	Bearing; Undersize 0.50mm	-
13	198517240	4	Bearing; Standard	-
	198517244	4	Bearing; Undersize 0.25mm	-
	198517247	4	Bearing; Undersize 0.50mm	-
14	199266200	2	Thrust Washer	-
15	011511075	3	Bolt	-
16	010700865	2	Bolt	-
17	115107290	4	Ring Kit; Standard	-
	115107293	4	Ring Kit; Oversize 0.50mm	-
	115107295	4	Ring Kit; Oversize 1.00mm	-
18	115016810	4	Piston Kit; Standard (includes Key 17)	-
	115016814	4	Piston Kit; Oversize 0.50mm (includes Key 17)	-
	115016817	4	Piston Kit; Oversize 1.00mm (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	198517250	8	Bearing; Standard	-
	198517254	8	Bearing; Undersize 0.25mm	-
	198517257	6	Bearing; Undersize 0.50mm	-
26	199266210	1	Thrust Washer	-
27	115397620	1	Pulley	-
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 (with 12V/35A alternator)	-
	40-02004	1	Drive Belt (with 24V/35A alternator) Formerly #40-74500	up to S/N xxxx-xxxx
	40-02005	1	Drive Belt (with 12V/51A and 24V/35A alternators)	from S/N xxxx-xxxx

### Crankshaft Assembly: 844L & 20CL





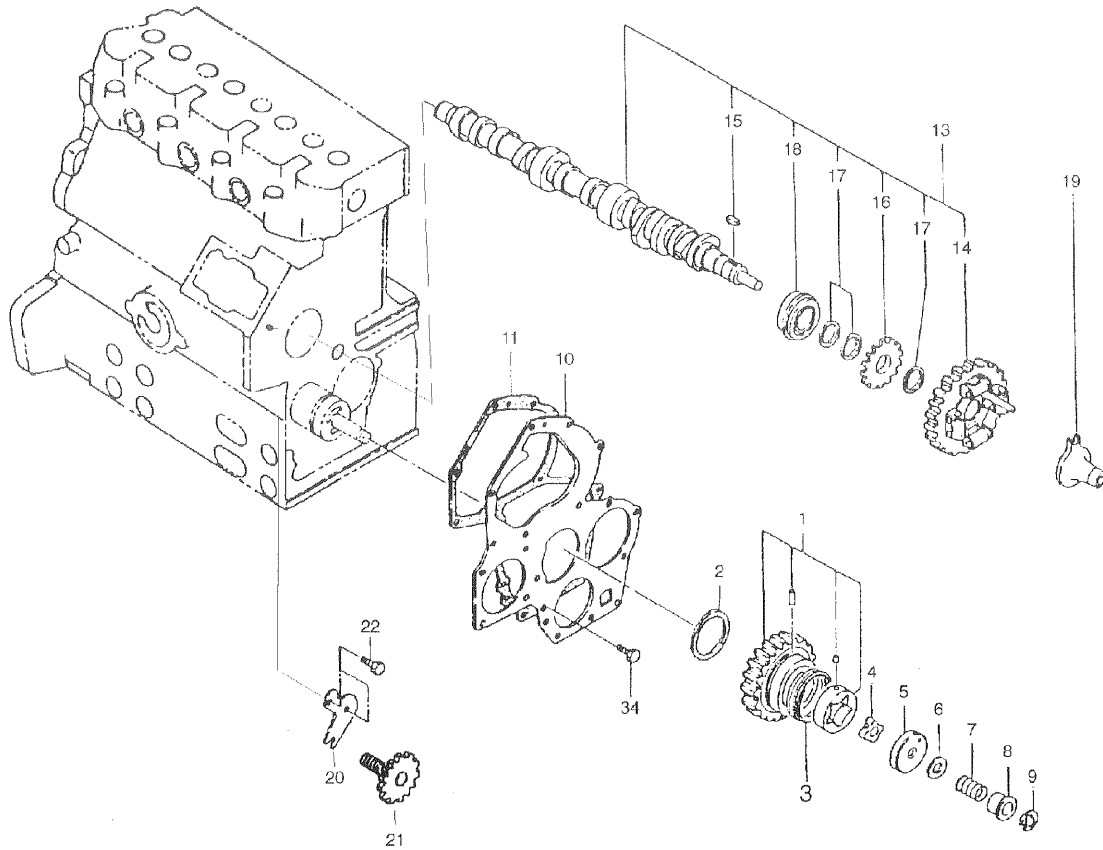
## Crankshaft Assembly: 844L &amp; 20CL

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256750	1	Crankshaft Assembly (includes Keys 2-5)	-
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	198517230	4	Bearing; Standard	-
	198517234	4	Bearing; Undersize 0.25mm	-
	198517237	4	Bearing; Undersize 0.50mm	-
13	198517240	4	Bearing; Standard	-
	198517244	4	Bearing; Undersize 0.25mm	-
	198517247	4	Bearing; Undersize 0.50mm	-
14	199266200	2	Thrust Washer	-
15	011511075	3	Bolt	-
16	010700865	2	Bolt	-
17	115107290	4	Ring Kit; Standard	-
	115107293	4	Ring Kit; Oversize 0.50mm	-
	115107295	4	Ring Kit; Oversize 1.00mm	-
18	115016810	4	Piston Kit; Standard (includes Key 17). Replaced by #115017310	up to S/N xxxxx-13662*
	115016814	4	Piston Kit; Oversize 0.50mm (includes Key 17). Replaced by #115017320	up to S/N xxxxx-13662*
	115016817	4	Piston Kit; Oversize 1.00mm (includes Key 17)	up to S/N xxxxx-13662*
	115017310	4	Piston Kit; Standard	from S/N xxxxx-13633*
	115017320	4	Piston Kit; Oversize 0.50mm (includes Key 17)	from S/N xxxxx-13663*
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	198517250	8	Bearing; Standard	-
	198517254	8	Bearing; Undersize 0.25mm	-
	198517257	6	Bearing; Undersize 0.50mm	-
26	199266210	1	Thrust Washer	-
27	115397620	1	Pulley - Marine	-
	115396870	1	Pulley - Industrial	-
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 (with 12V/35A alternator)	-
	40-08404	1	Drive Belt (with 24V/35A alterantor)	-
	40-08405	1	Drive Belt (with 24V/35A alternator: Bertram spec)	-

**\*NOTE:**

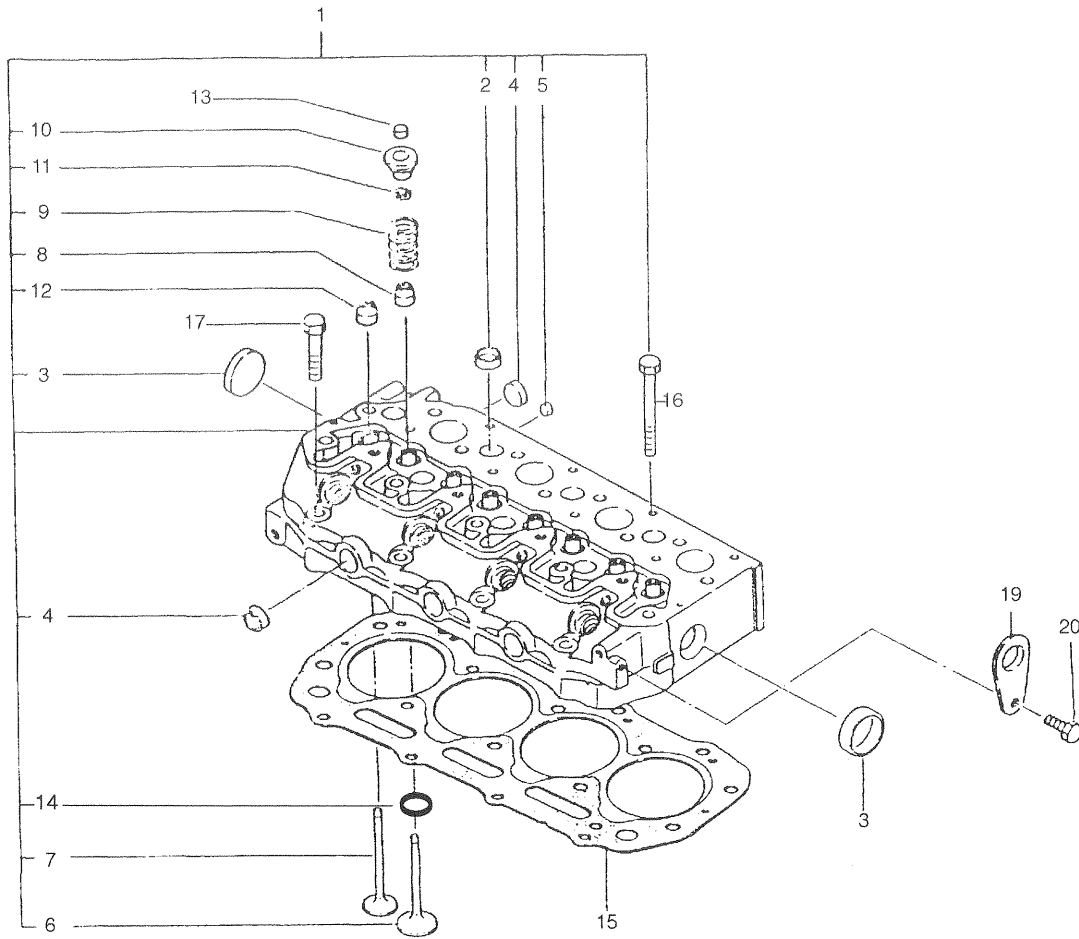
Earlier design pistons may not be substituted for new pattern items.

**Camshaft & Oil Pump**



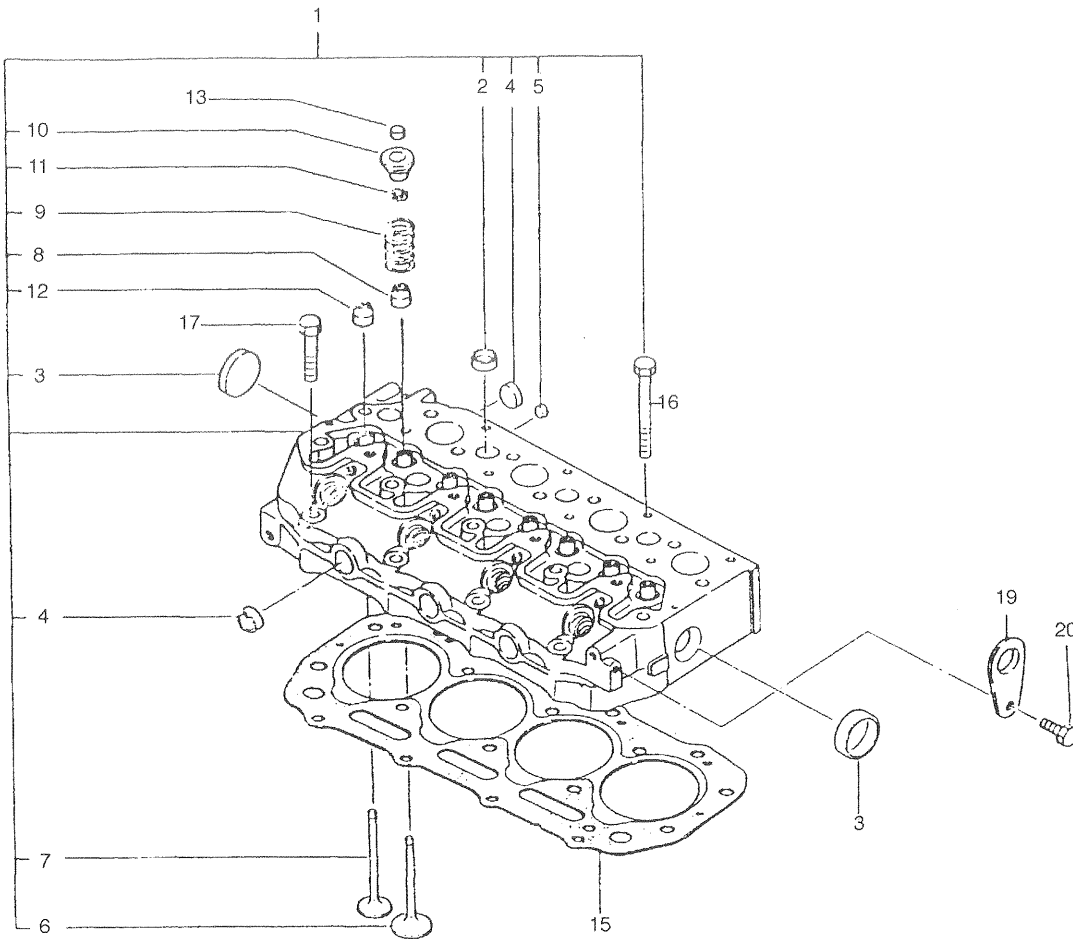
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165026120	1	Idle Gear Assembly (includes Key 3)	-
2	199266180	1	Thrust Washer	-
3	198216821	1	Spring	-
4	140166140	1	Rotor	-
5	140116140	1	Oil Pump Cover	-
6	199286150	1	Shim; t = 0.10	-
	199286160	1	Shim; t = 0.15	-
	199286170	1	Shim; t = 0.20	-
	199286180	1	Shim; t = 0.50	-
7	198216720	1	Spring	-
8	199236540	1	Collar	-
9	036800010	1	Snap Ring	-
10	165166450	1	Front Plate - Marine	-
	165166290	1	Front Plate - Industrial	-
11	165996361	1	Gasket	-
12	011300612	2	Bolt	-
13	120026320	1	Camshaft Assembly (includes Keys 14-18)	-
14	120016050	1	Cam Gear	-
15	034100508	1	Key	-
16	120736081	1	Gear	-
17	199216230	3	Spacer	-
18	040109057	1	Bearing	-
19	125256120	1	Slider	-
20	199566750	1	Plate	-
22	011310612	2	Bolt	-

Cylinder Head: 844 & 16C



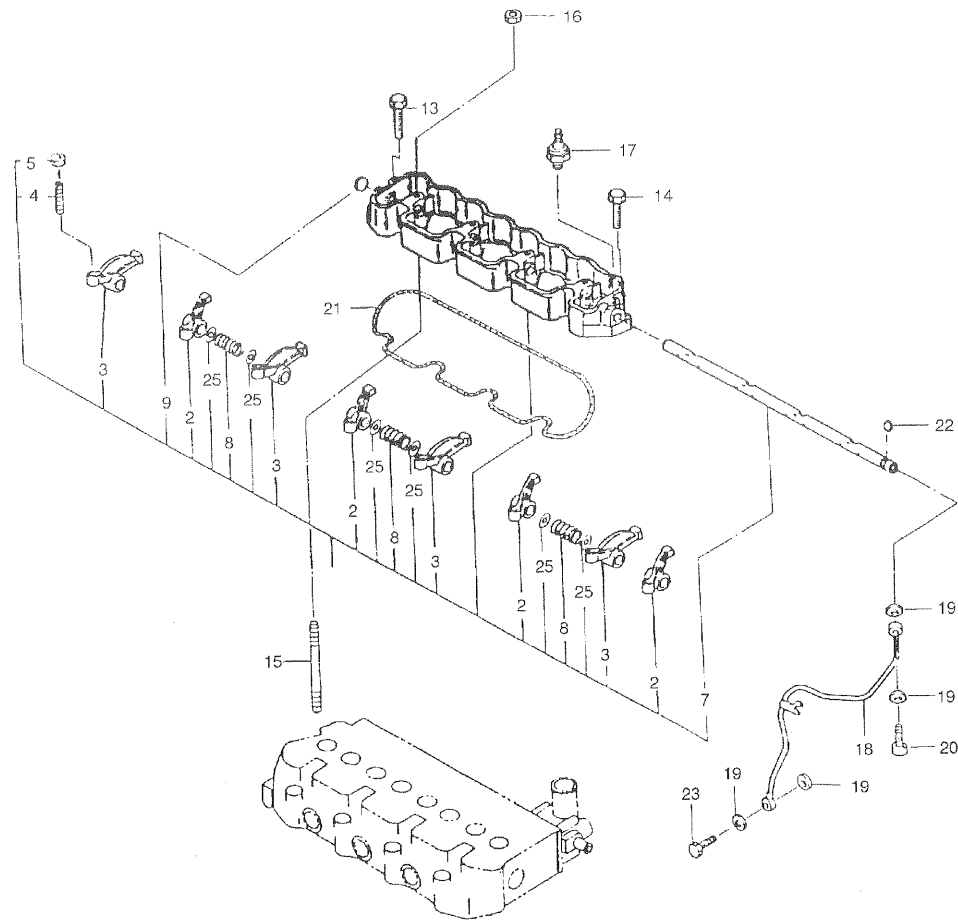
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111017450	1	Cylinder Head Assembly - Marine (includes Keys 2-14)	-
	111017530	1	Cylinder Head Assembly - Industrial (includes Keys 2-14)	-
2	064200018	7	Expansion Plug 18mm	-
3	064200030	2	Expansion Plug 30mm	-
4	064200025	6	Expansion Plug 25mm	-
5	064200010	3	Expansion Plug 10mm	-
6	120166290	4	Intake Valve	-
7	120176300	4	Exhaust Valve	-
8	120406070	4	Valve Gude Seal - Intake	-
9	198216700	8	Spring	-
10	120186080	8	Retainer	-
11	120226070	16	Keeper	-
12	120406050	4	Valve Gude Seal - Exhaust	-
13	120216040	8	Cap	-
14	110136400	4	Valve Seat - Intake	-
15	111147520	1	Head Gasket; t = 1.4mm (formerly #111147200)	-
16	111136360	14	Head Bolt (17mm Hex)	-
	111136480	14	Head Bolt (14mm Hex)	-
17	111136370	4	Head Bolt (17mm Hex)	-
	111136490	4	Head Bolt (14mm Hex)	-
19	195816540	2	Lifting Eye	-
20	011510816	2	Bolt	-

**Cylinder Head: 844L & 20CL**



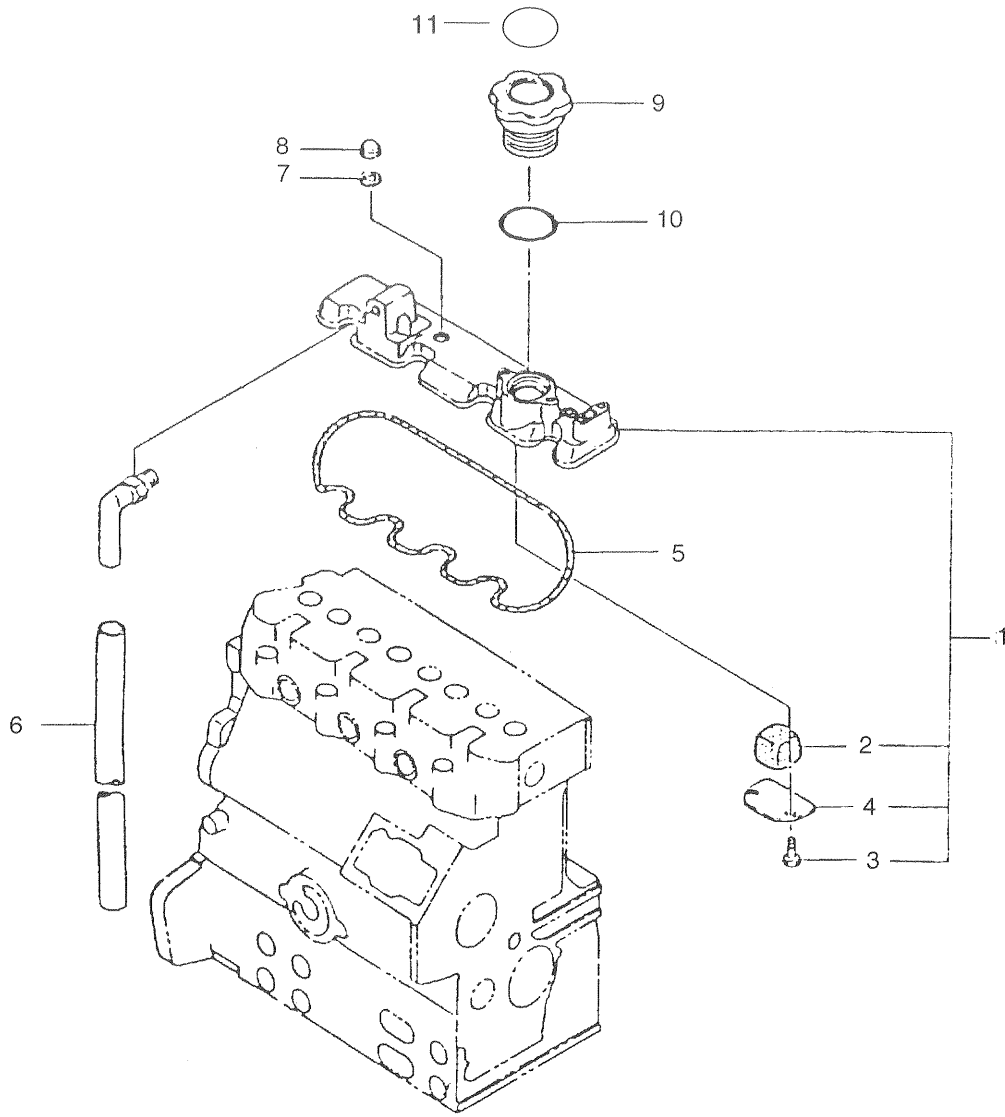
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111017430	1	Cylinder Head Assembly - Marine (includes Keys 2-14)	-
	111017440	1	Cylinder Head Assembly - Industrial (includes Keys 2-14)	-
2	064200018	7	Expansion Plug 18mm	-
3	064200030	2	Expansion Plug 30mm	-
4	064200025	6	Expansion Plug 25mm	-
5	064200010	3	Expansion Plug 10mm	-
6	120166350	4	Intake Valve	-
7	120176360	4	Exhaust Valve	-
8	120406070	4	Valve Gude Seal - Intake	-
9	198216700	8	Spring	-
10	120186080	8	Retainer	-
11	120226070	16	Keeper	-
12	120406050	4	Valve Gude Seal - Exhaust	-
13	120216040	8	Cap	-
15	111147460	1	Head Gasket; t = 0.5mm	-
16	111136360	14	Head Bolt (17mm Hex)	-
	111136480	14	Head Bolt (14mm Hex)	-
17	111136370	4	Head Bolt (17mm Hex)	-
16	111136490	4	Head Bolt (14mm Hex)	-
19	195816540	2	Lifting Eye	-
20	011 310816	2	Bolt	-

**Rocker Arm Assembly**



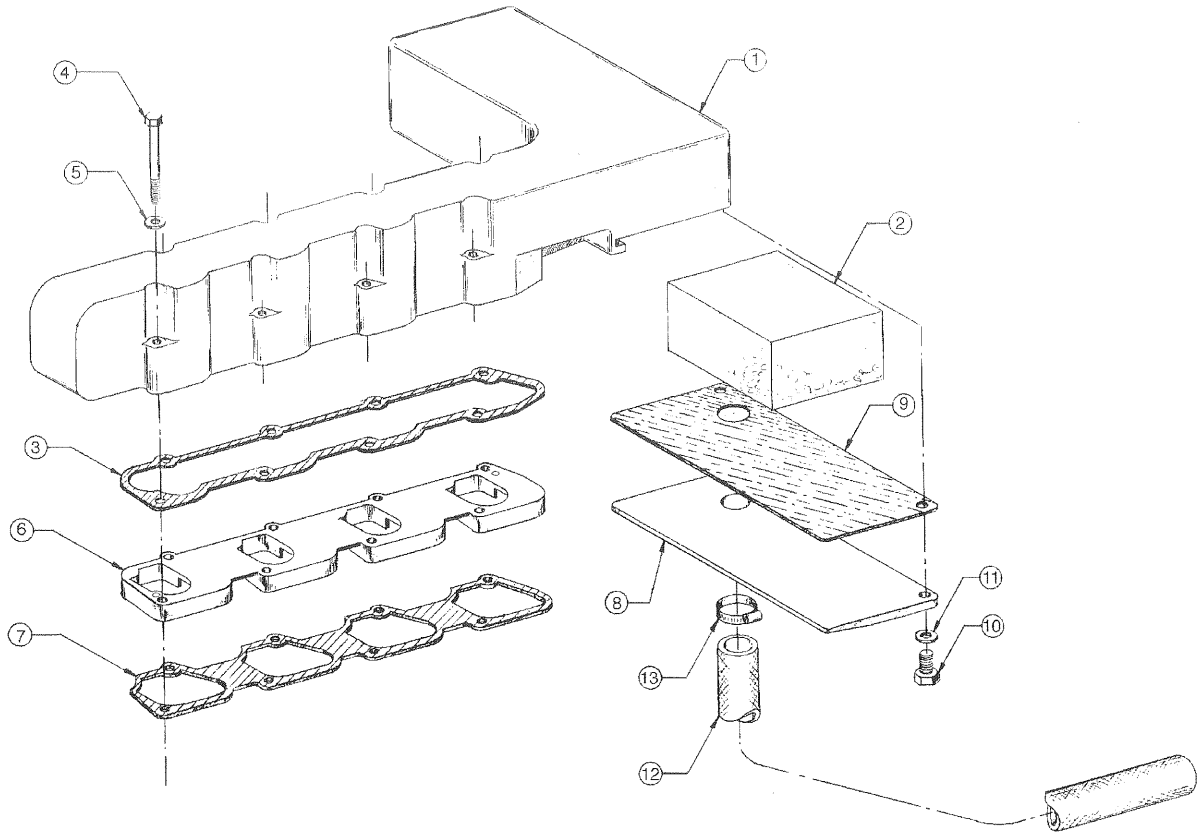
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120036661	1	Rocker Arm Assembly - Marine (includes Keys 2-9)	-
	120036402	1	Rocker Arm Assembly - Industrial (includes Keys 2-9)	-
2	120356131	4	Rocker Arm - Intake	-
3	120356141	4	Rocker Arm - Exhaust	-
4	199486220	8	Screw	-
5	020109076	8	Nut	-
7	120316200	1	Rocker Arm Shaft	-
8	198217170	2	Spring	-
9	064200015	**	Expansion Plug 15mm	-
13	011300650	1	Bolt	-
14	011300625	4	Bolt	-
15	012109044	1	Stud M10 x 1.25 x 80mm	-
16	14-00814	4	Hex Nut M10 x 1.25	-
17	185246011	1	Oil Pressure Switch	-
18	140606720	1	Oil Pipe (844 & 16C)	-
	140607020	1	Oil Pipe (844L & 20CL)	-
19	198996060	4	Gasket	-
20	198486780	1	Banjo Bolt	-
21	052109074	1	Gasket	-
22	052109076	1	O-Ring	-
23	198487590	1	Banjo Bolt	-
25	199280300	6	Shim	-
			**As Required.	

**Rocker Arm Cover**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111026920	1	Rocker Arm Cover - Marine (includes Keys 2-4)	-
	111026840	1	Rocker Arm Cover - Industrial (includes Keys 2-4)	-
2	110666090	1	Filter	-
3	011300612	2	Bolt	-
4	110666050	1	Oil Stopper	-
5	052109072	1	O-Ring	-
6	068109036	1	Tube	-
7	198996071	4	Gasket	-
8	024600010	4	Cap Nut	-
9	198436010	1	Filler Cap	-
10	052100400	1	O-Ring	-
11	190197400	1	Caution Label	-

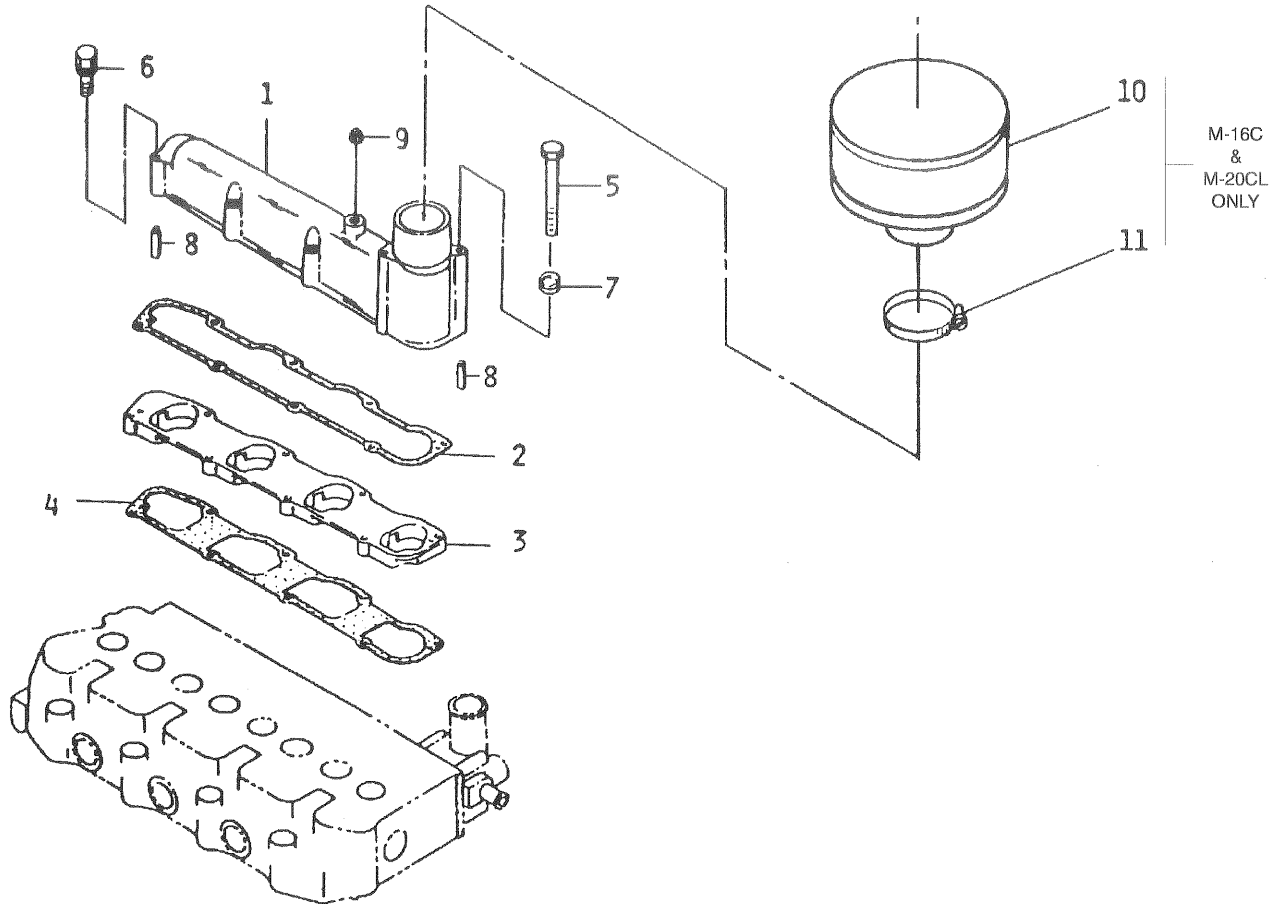
**Air Intake & Filter: M844 & M844L**



A-6257 / D2442

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-28101	1	Air Intake Manifold	-
2	24-28101	1	Air Filter Element	-
3	135996480	1	Gasket	-
4	12-01125	8	Capscrew, Hex Head M6 x 1.0 x 65 mm	-
5	12-00008	8	Flat Washer M6	-
6	135597340	1	Spacer	-
7	135996600	1	Gasket	-
8	28-28102	1	Air Intake Cover*	-
9	11-28101	1	Gasket	-
10	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20mm	-
11	15-00701	2	Flat Washer M8	-
12	18-28102	1	Air Intake Hose*	-
13	19-00024	1	Hose Clamp #24*	-
<p><b>*NOTE:</b> Items marked replace earlier Cover #28-28101, Hose #18-28101 &amp; Clamp #19-00020.</p>				

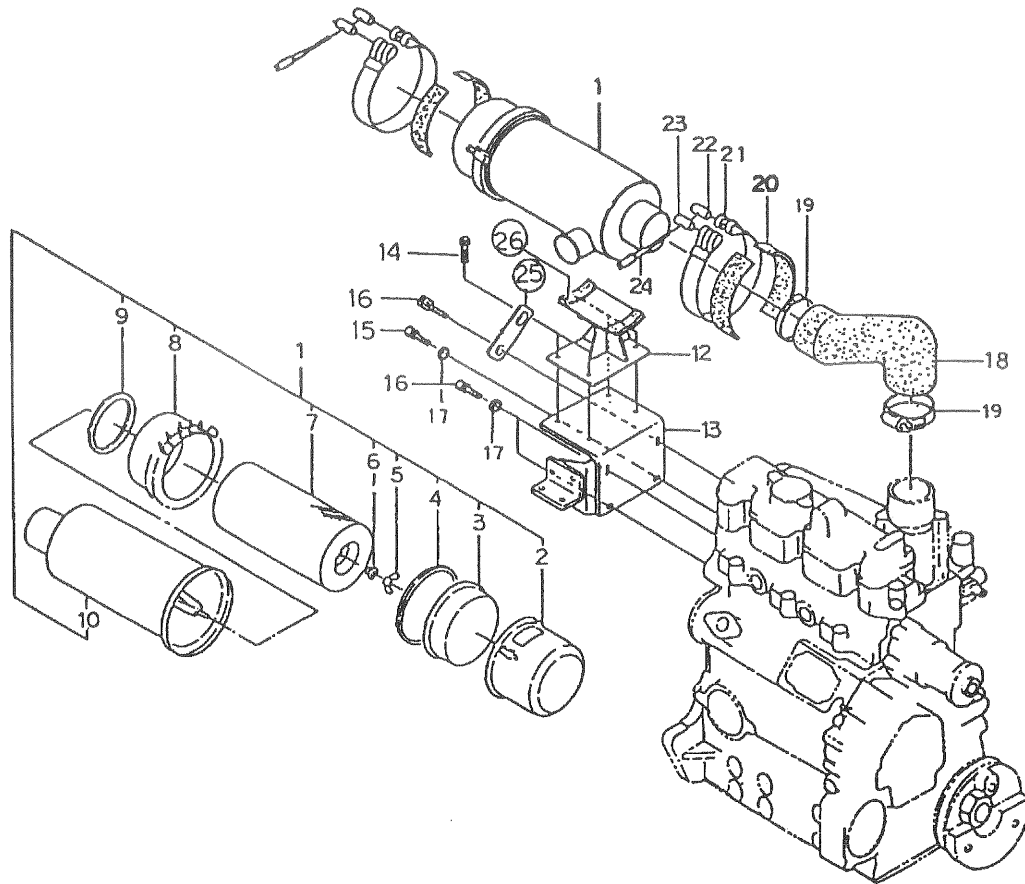
**Air Intake & Filter: M16C, M20CL & NL844**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135596710	1	Intake Manifold (M-16C & M-20CL)	-
	135596720	1	Intake Manifold (NL-844 & 844L)	-
2	135996480	1	Gasket	-
3	135597340	1	Spacer (M-16C & M-20CL)	-
1	135596930	1	Spacer (NL-844 & 844L)	-
4	135996600	1	Gasket	-
5	12-01137	2	Capscrew, Hex Head M6 x 1.0 x 105mm	-
6	12-01133	6	Capscrew, Hex Head M6 x 1.0 x 60mm	-
7	15-00008	8	Flat Washer M6	-
8	030300410	2	Spring Pin	-
9	064500010	1	Plug 1/8 BSPT	-
10	24-28401	1	Air Filter (M-16C & M-20CL)	-
11	19-00036	1	Hose Clamp #36	-

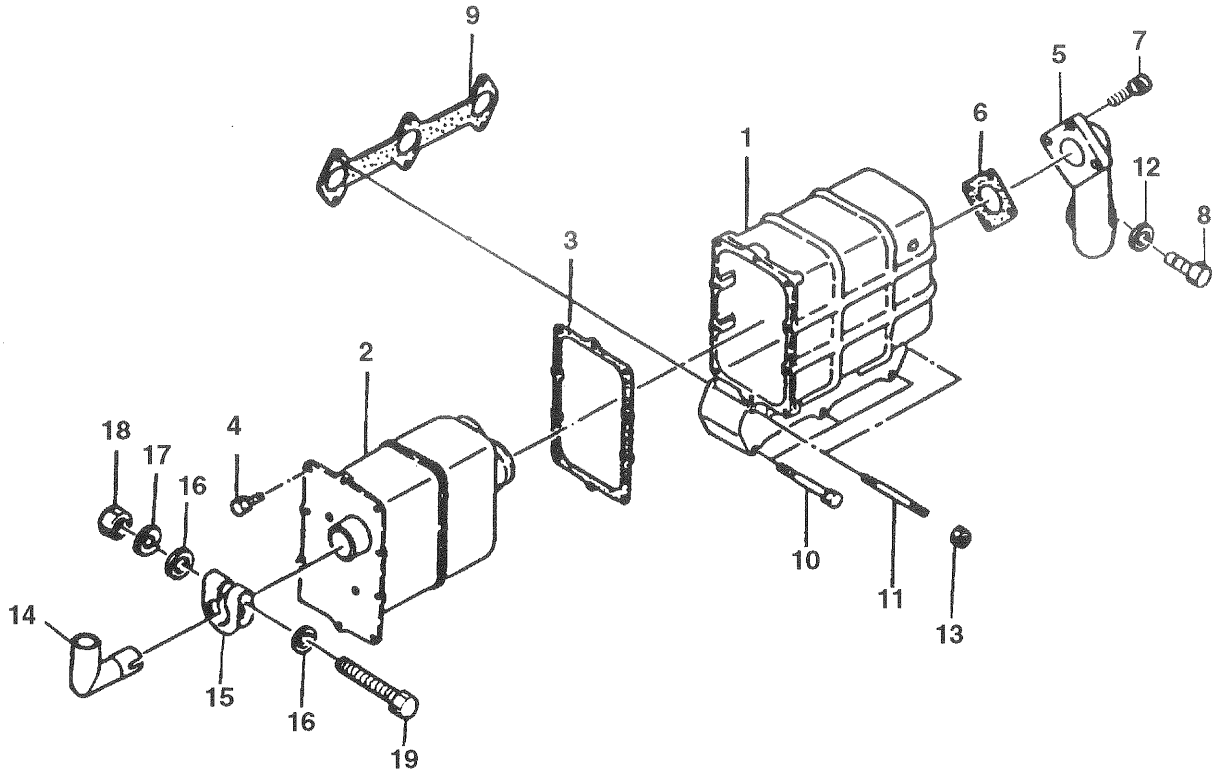


**Air Filter & Mounting: NL844 & 844L**



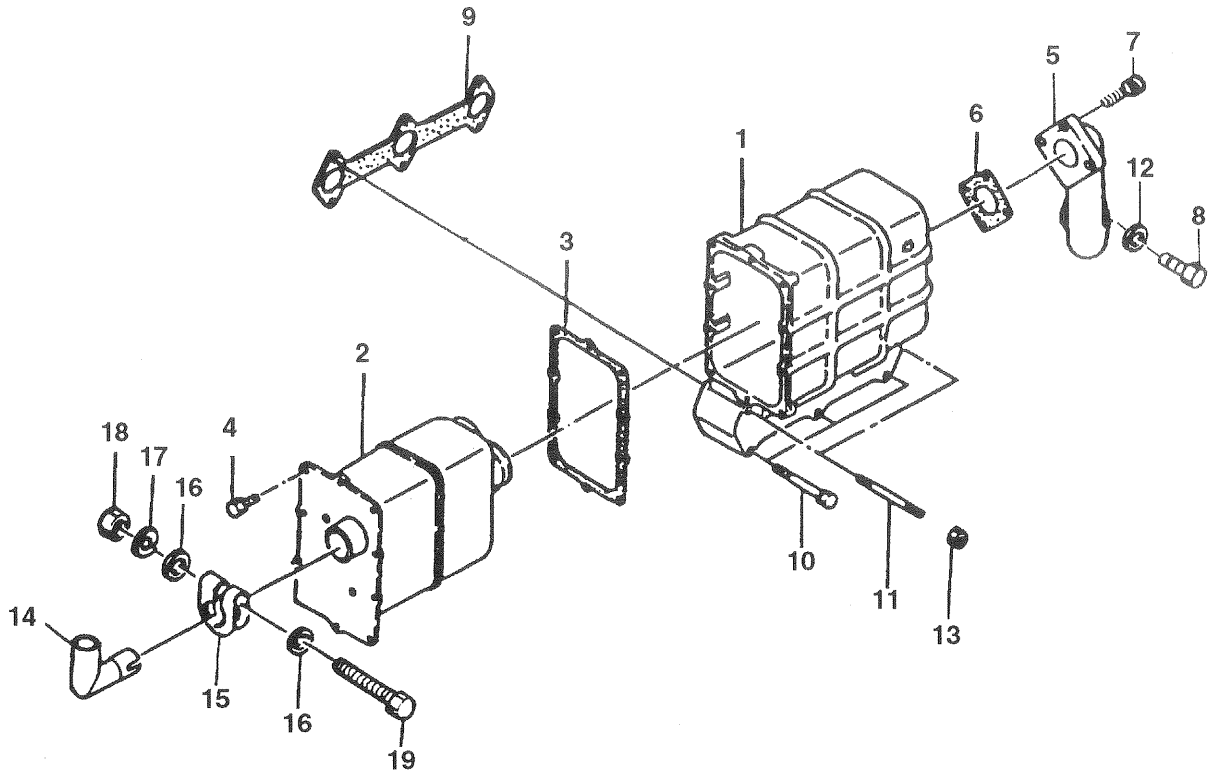
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	314500371	1	Air Cleaner Assembly (includes Keys 2-10)	-
2	314531104	1	Casing Assembly	-
3	314531062	1	Dust Cap	-
4	314531061	1	Gasket	-
5	024100008	1	Wing Nut	-
6	314531125	1	Seal Washer	-
7	314531127	1	Element (marked #314531065)	-
8	314531058	1	Wing	-
9	314531057	1	Gasket	-
10	314531105	1	Cap Assembly	-
12	135976430	1	Bracket	-
13	135976420	1	Bracket	-
14	011310816	4	Bolt	-
15	011310820	1	Bolt	-
16	011310825	3	Bolt	-
17	026100008	3	Washer	-
18	135597330	1	Intake Hose	-
19	19-00036	2	Hose Clamp #36	-
20	398113190	4	Rubber Cushion	-
21	314630020	2	Clamp	-
22	399610110	2	Pin	-
23	399610100	2	Pin	-
24	399480070	2	Screw	-
25	195816100	1	Lifting Eye	-
26	398117800	2	Rubber Cushion	-

**Exhaust Manifold & Muffler: NL844**



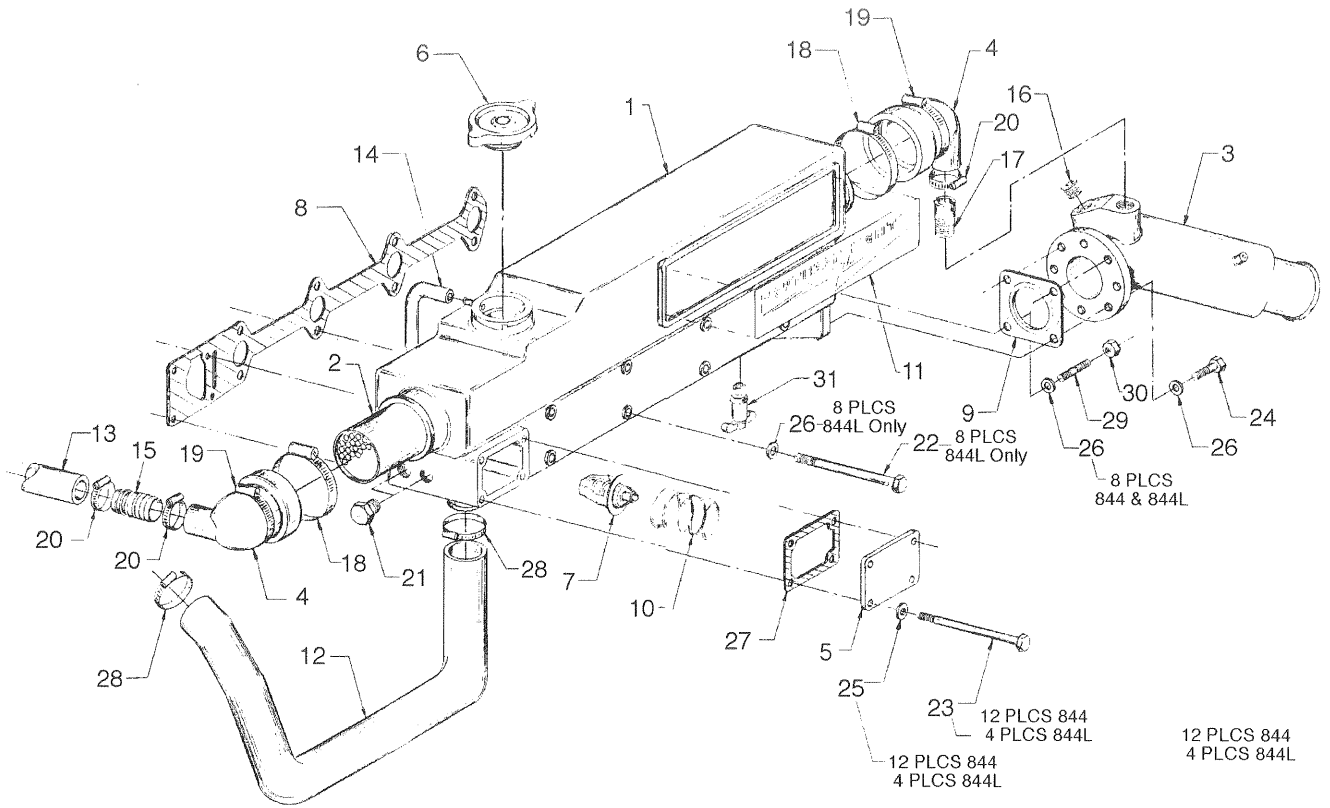
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135616700	1	Exhaust Manifold	-
2	135406230	1	Muffler Element	-
3	135996530	1	Gasket	-
4	011300612	10	Capscrew, Hex Head with Washer M6 x 1.0 x 12mm	-
5	135656130	1	Exhaust Pipe	-
6	135996550	1	Gasket	-
7	011310625	3	Capscrew, Hex Head with Washer M6 x 1.0 x 25mm	-
8	12-00031	2	Hex Nut M6 x 1.0 x 25mm	-
9	135996720	1	Gasket	-
10	12-00063	4	Capscrew, Hex Head M6 x 1.0 x 70mm	-
11	012110670	2	Stud M6 x 1.0 x 70mm	-
12	15-01132	1	Lock Washer M8	-
13	14-01131	2	Hex Nut M6 x 1.0	-
14	27-33102	1	Exhaust Elbow 1-1/2 NPT	-
15	314410020	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	2	Capscrew, Hex Head M8 x 1.25 x 65mm	-

**Exhaust Manifold & Muffler: NL844L**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135617170	1	Exhaust Manifold	-
2	135406230	1	Muffler Element	-
3	135996530	1	Gasket	-
4	011300612	10	Capscrew, Hex Head with Washer M6 x 1.0 x 12mm	-
5	135656140	1	Exhaust Pipe	-
6	135996550	1	Gasket	-
7	011310625	3	Capscrew, Hex Head with Washer M6 x 1.0 x 25mm	-
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 70mm	-
11	012100870	**	Stud M8 x 1.25 x 70mm	-
12	15-00704	2	Lock Washer, Hi-Collar M8	-
13	14-00711	**	Hex Nut M8 x 1.25	-
14	135606340	1	Exhaust Elbow	-
	27-33103	1	Exhaust Elbow 1-1/2 NPT	-
15	314410020	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 65mm	-
			**As Required.	

# Heat Exchanger & Exhaust Manifold



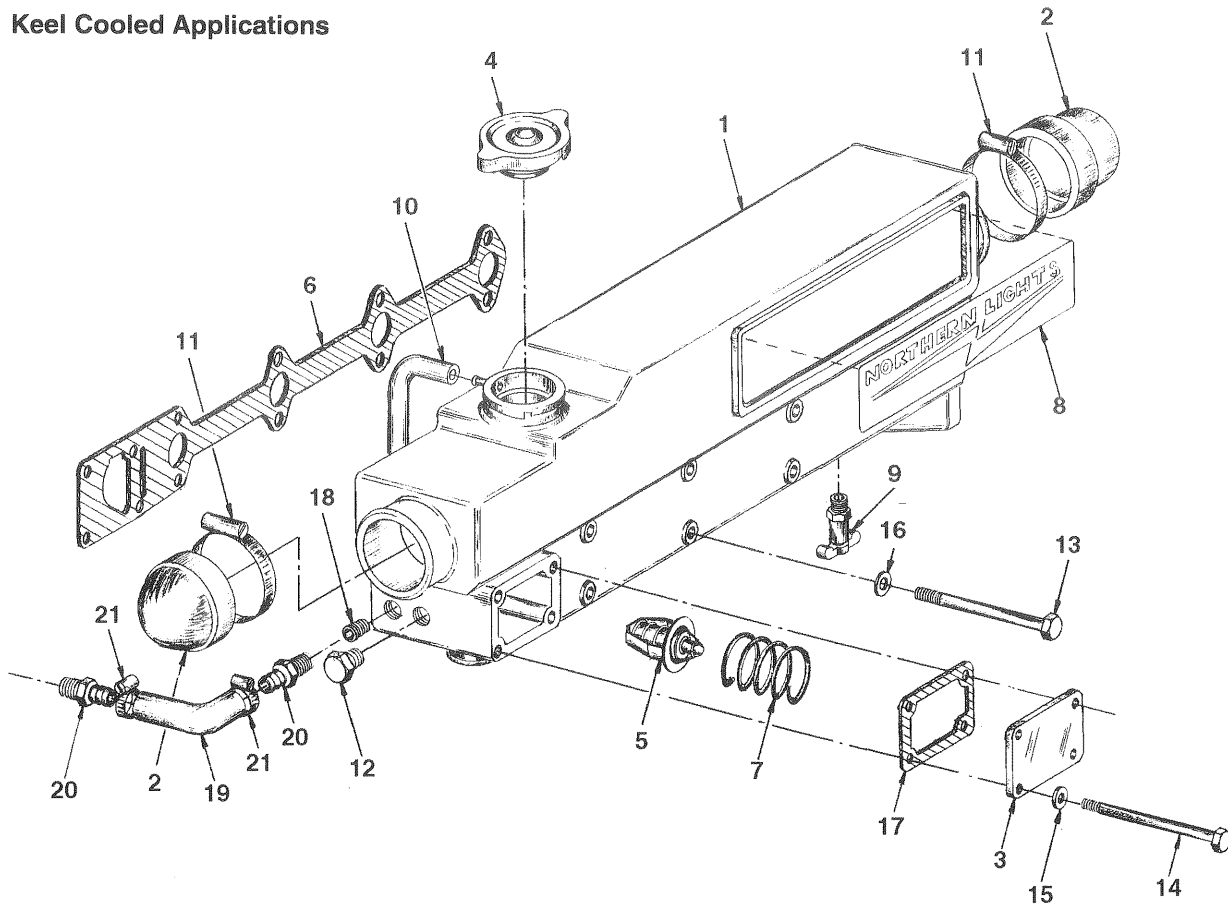
## Heat Exchanger &amp; Exhaust Manifold

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-38101	1	Exhaust Manifold/Expansion Tank	-
2	20-18101	1	Heat Exchanger Element (formerly #145506480)	-
3	27-32003	1	Wet Exhaust Elbow (bronze)	-
	135616233	1	Wet Exhaust Elbow (cast iron)	-
4	145536370	2	End Cap	-
5	28-13101	1	Cover Plate	-
6	21-12007	1	Filler Cap (7 PSI)	-
7	145206022	1	Thermostat (82° C)	-
8	11-38101	1	Gasket	-
9	314990030	1	Gasket	-
10	00-13101	1	Spring	-
11	00-71001	1	Decal, "Northern Lights"	-
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	198436140	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	12-00701	8	Capscrew, Hex Head M8 x 1.25 x 110mm (M-844L)	-
23	12-01138	12	Capscrew, Hex Head M6 x 1.0 x 110mm (M-844)	-
	12-01138	4	Capscrew, Hex Head M6 x 1.0 x 110mm (M-844L)	-
24	12-00712	3	Capscrew, Hex Head M8 x 1.25 x 25mm	-
25	15-00008	12	Flat Washer M6 (M-844)	-
	15-00008	4	Flat Washer M6 (M-844L)	-
26	15-00701	4	Flat Washer M8 (M-844)	-
	15-00701	12	Flat Washer M8 (M-844L)	-
27	11-13101	1	Gasket	-
28	19-00024	2	Hose Clamp #24	-
29	13-00710	1	Stud M8 x 1.25 x 20 x 25mm (35mm OAL)	-
30	14-00711	1	Hex Nut M8 x 1.25	-
31	21-10002	1	Drain Cock 1/4 NPT	-
			**As Required.	

GROUP 3 – COOLING SYSTEM

**Expansion Tank & Exhaust Manifold: M844 & M844L**

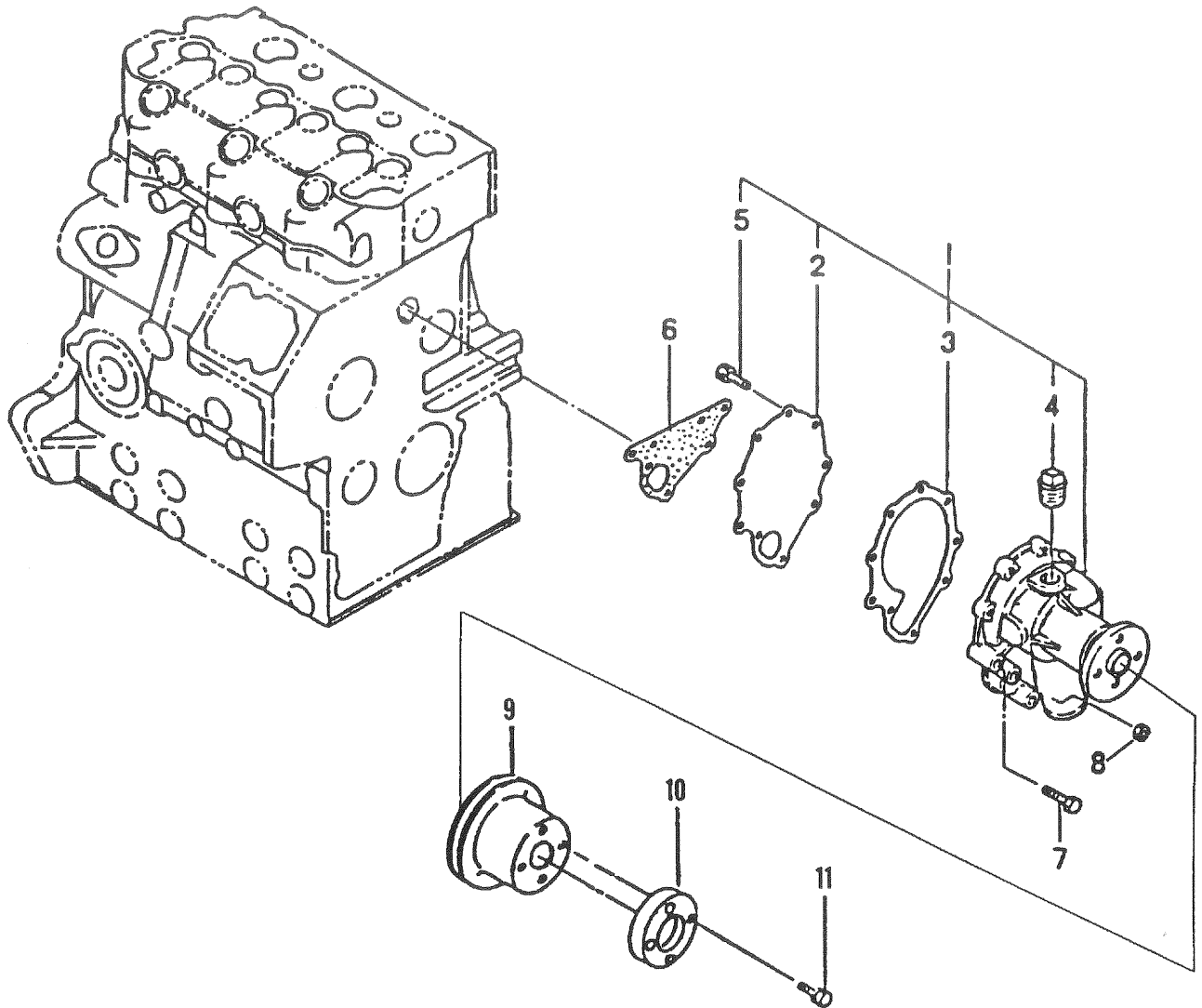
Keel Cooled Applications



A-6420, A-6510 / D-2460

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-38101	1	Exhaust Manifold/Expansion Tank	-
2	20-11904	2	End Cap	-
3	28-13101	1	Cover Plate	-
4	21-12007	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	19-00048	2	Hose Clamp #48	-
12	21-31003	1	Plug, Hex Head 3/8 NPT	-
13	12-00701	8	Capscrew, Hex Head M8 x 1.25 x 110mm (M-844L & M-20CL)	-
14	12-01138	12	Capscrew, Hex Head M6 x 1.0 x 110mm (M-844)	-
	12-01138	4	Capscrew, Hex Head M6 x 1.0 x 110 mm (M-844L & M-20CL)	-
15	15-00008	12	Flat Washer M6 (M-844)	-
	15-00008	4	Flat Washer M6 (M-844L & M-20CL)	-
16	15-00701	8	Flat Washer M8	-
17	11-13101	1	Gasket	-
18	21-51900	1	Plug, Socket Head 1/8 NPT	-
19	145536050	1	Hose	-
20	21-12205	2	Male Connector 3/8 NPT x 1/2 HB	-
21	19-00006	2	Hose Clamp #6	-

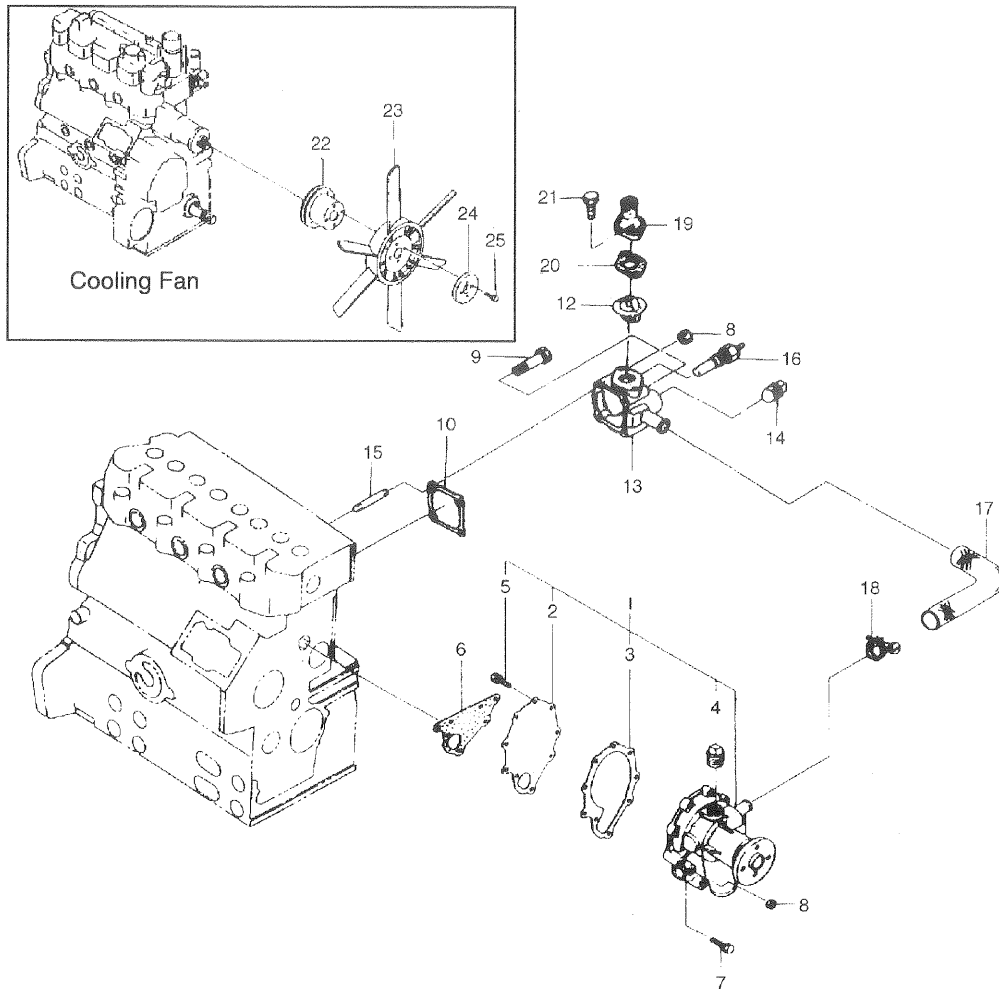
**Coolant Pump – All Marine Applications**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145017350	1	Coolant Pump Assembly (includes Keys 2-5)	-
2	145146320	1	Backing Plate	-
3	145996680	1	Gasket (formerly #145996460)	-
4	064500030	**	Plug	-
5	015300614	5	Screw	-
6	145996370	1	Gasket	-
7	011300635	4	Bolt	-
8	023100006	1	Nut	-
9	145336620	1	Pulley	-
10	145386390	1	Spacer	-
11	011310616	4	Bolt (844)	-
	011310620	4	Bolt (844L)	-
			**As Required.	

GROUP 3 – COOLING SYSTEM

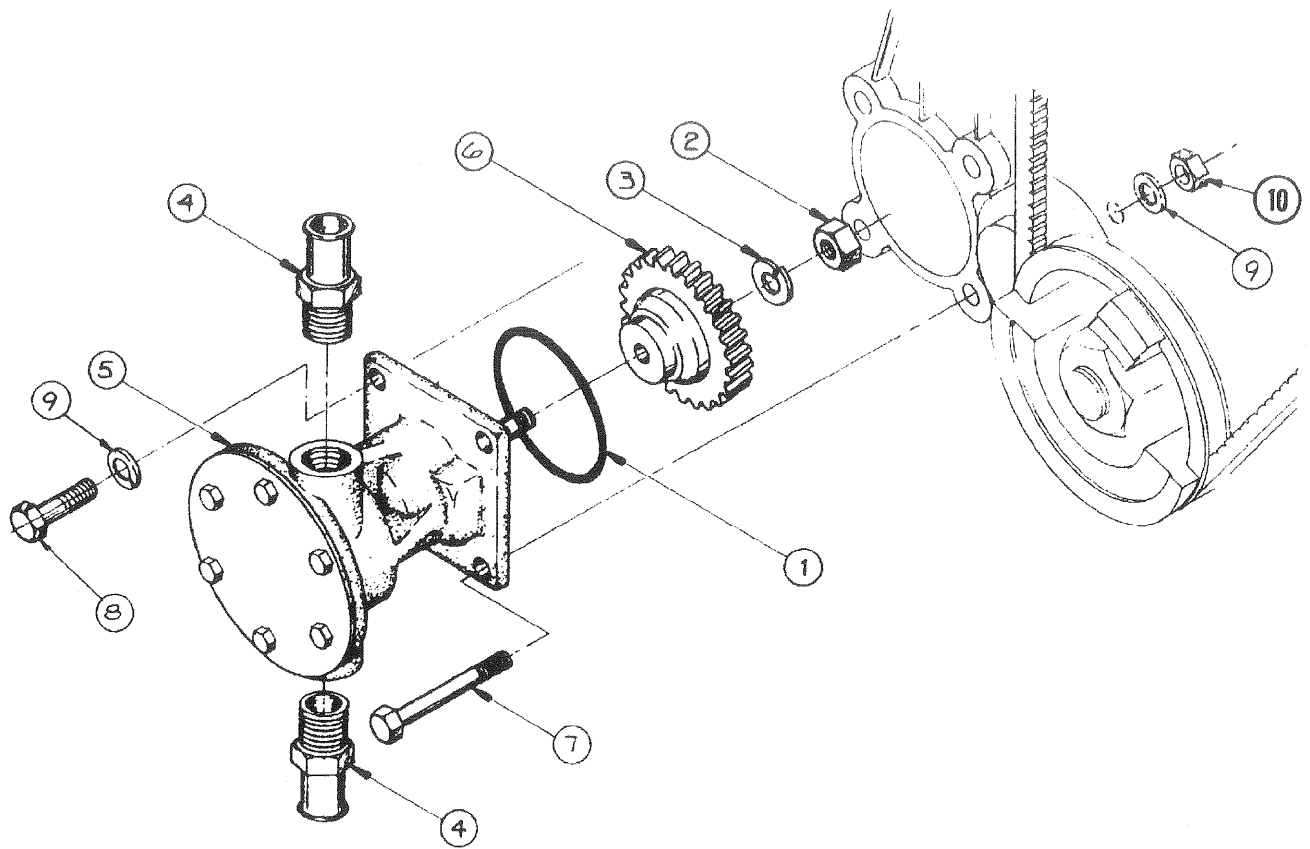
**Coolant Pump – Industrial Applications: NL844 & 844L**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145016891	1	Coolant Pump Assembly (includes Keys 2-5) (formerly #145016890)	-
2	145146320	1	Backing Plate	-
3	145996680	1	Gasket (formerly #145996460)	-
4	064500030	**	Plug	-
5	015300614	5	Screw	-
6	145996370	1	Gasket	-
7	011300635	4	Bolt	-
8	023100006	3	Nut	-
9	011300645	2	Bolt	-
10	145996360	1	Gasket	-
12	145206180	1	Thermostat 82°	-
13	145216390	1	Thermostat Housing	-
14	064500030	1	Plug	-
15	012100645	2	Stud M6 x 1.0 x 45mm	-
16	385720230	1	Temperature Switch (212° F)	-
17	145536050	1	Hose	-
18	19-00006	2	Hose Clamp #6	-
19	145226330	1	Thermostat Cover	-
20	145996050	1	Gasket	-
21	011500820	2	Bolt	-
22	145336620	1	Pulley	-
23	145306550	1	Cooling Fan	-
24	145386390	1	Plate	-
25	011310620	4	Bolt	-
			**As Required.	



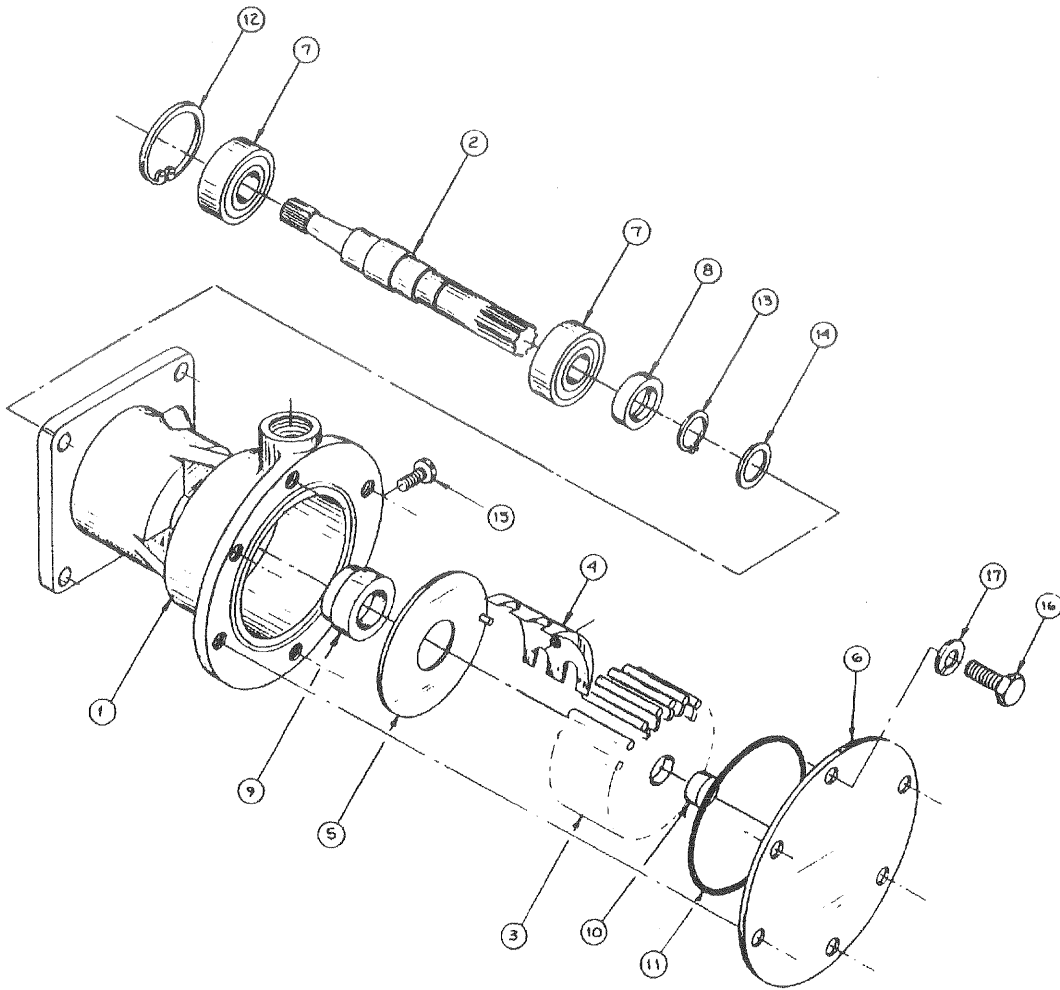
**Raw Water Pump & Mounting – All Marine Applications**



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 65mm	-
8	12-00717	1	Capscrew, Hex Head M8 x 1.25 x 60mm	-
9	15-00702	4	Lock Washer, Helical M8	-
10	14-00711	3	Hex Nut M8 x 1.25	-

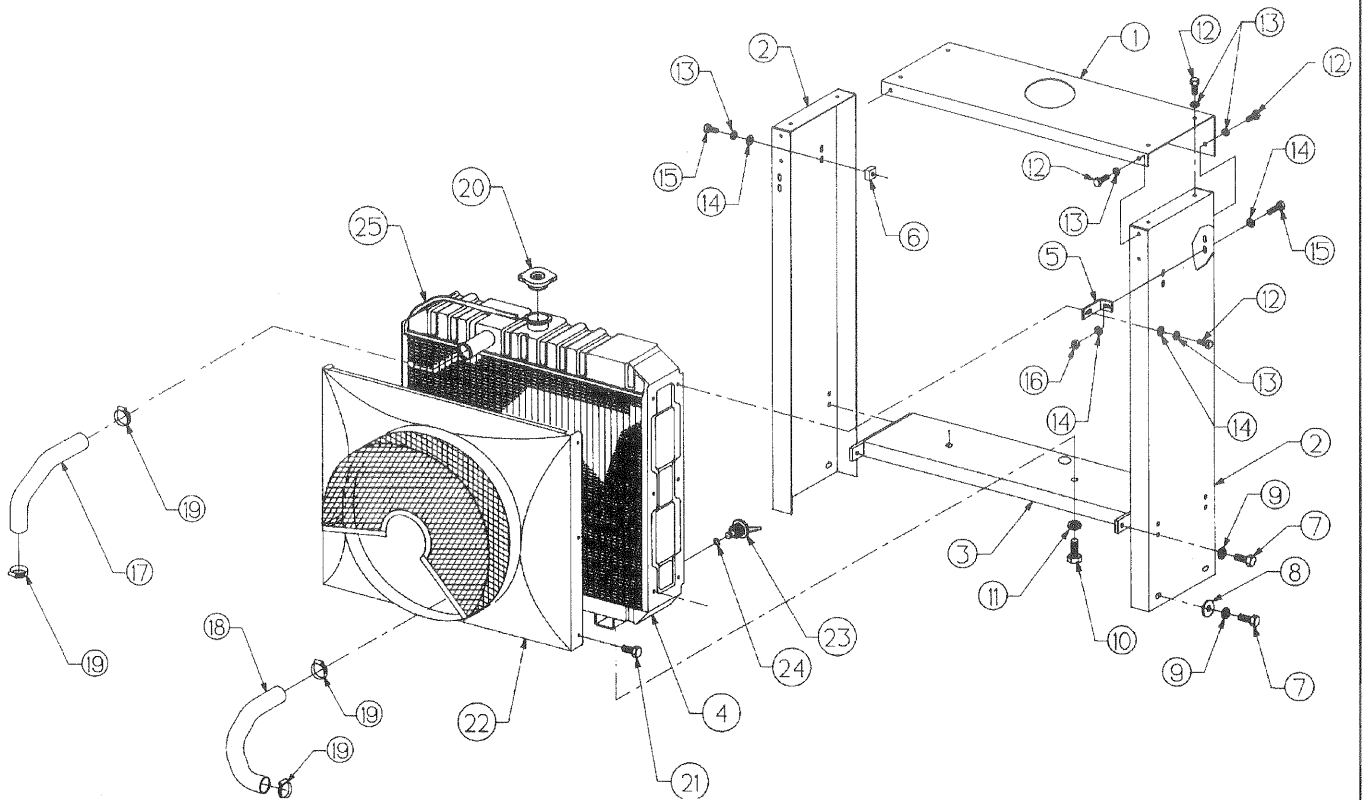
## Raw Water Pump Assembly



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, 4, 5, 6, 7, 8, 9, 11)	-
1	25-12058	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	1	Lock Washer #10	-

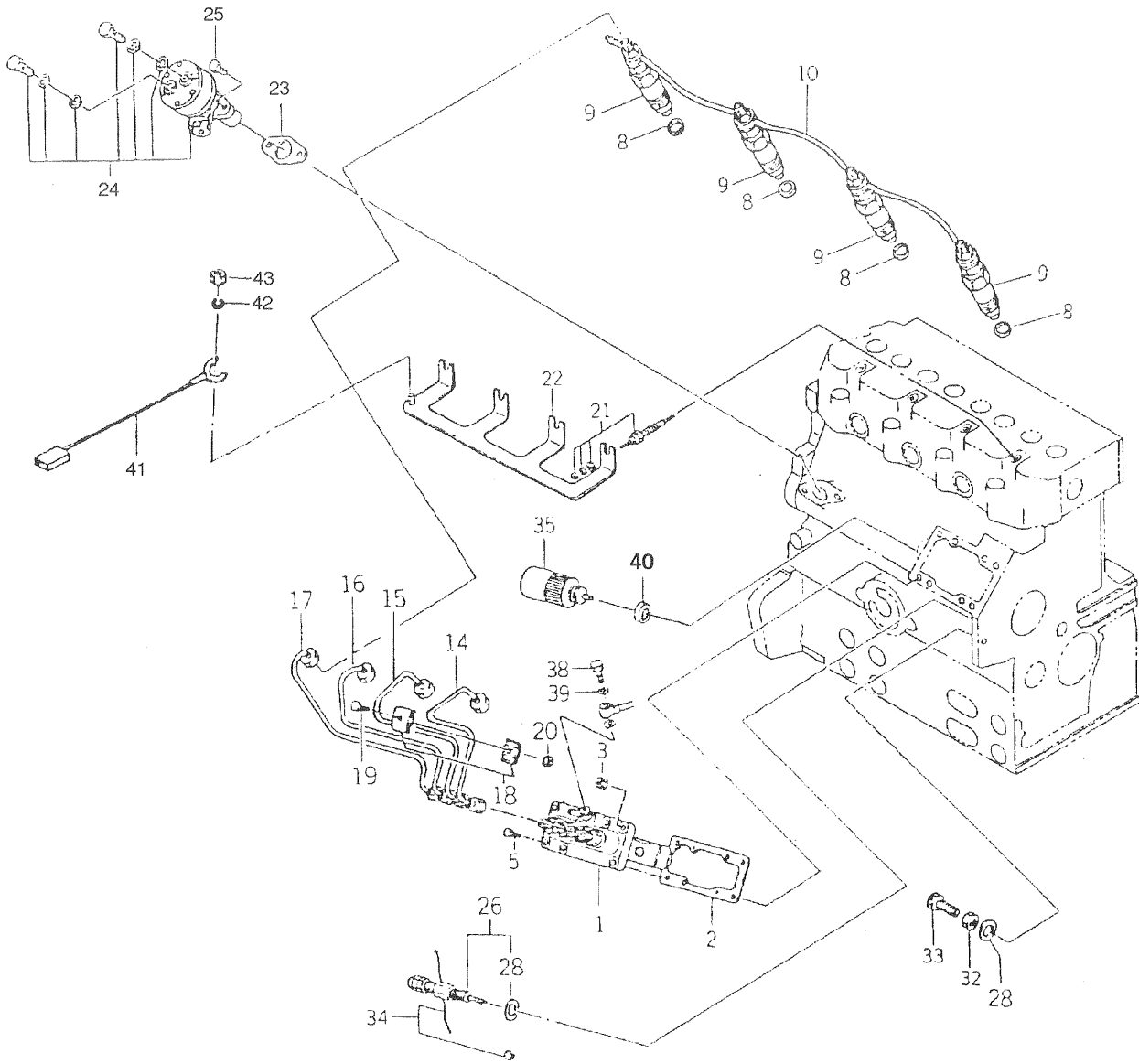
**Radiator & Guard – Industrial Applications: NL844 & 844L**



A-6306 / D2457

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	145506320	1	Radiator Assembly (includes Keys 20-26)	-
5	23-18101	1	Bracket, Upper Radiator Support	-
6	21-18101	2	Spacer, Radiator Support	-
7	12-00711	8	Capscrew, Hex Head M8 x 1.25 x 20mm	-
8	15-00701	8	Flat Washer M8	-
9	15-00702	8	Lock Washer M8	-
10	12-00805	2	Capscrew, Hex Head M10 x 1.5 x 20mm	-
11	15-00802	2	Lock Washer M10	-
12	12-00097	9	Capscrew, Hex Head M6 x 1.0 x 12mm	-
13	15-01132	10	Lockwasher M6	-
14	15-00008	3	Flat Washer M6	-
15	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20mm	-
16	14-04803	1	Hex Nut M6 x 1.0	-
17	145536870	1	Hose, Radiator Inlet	-
18	145536640	1	Hose, Radiator Outlet	-
19	067100046	4	Hose Clamp	-
20	310110010	1	Radiator Cap	-
21	011150610	6	Bolt	-
22	145546470	1	Shroud with Fan Guard	-
23	408130010	1	Drain Cock	-
24	052100070	1	O-Ring	-
25	145546510	1	Hose	-
26	00-70021	1	Decal "Northern Lights" (not shown)	-
27	31-18101	1	Air Duct Adapter (optional - not shown)	-

General Arrangement: M - NL844 & M16C

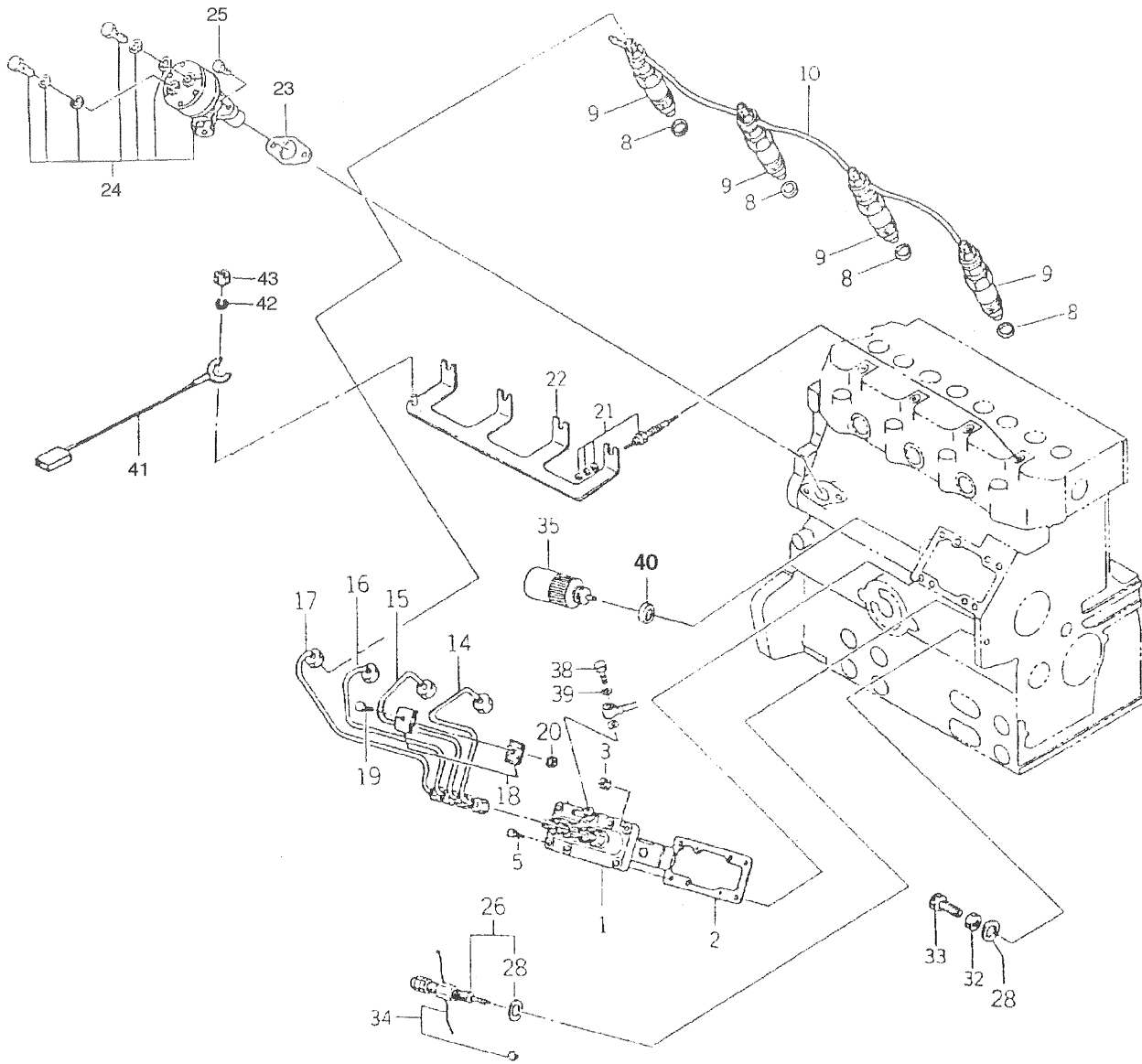


## General Arrangement: M - NL844 &amp; M16C

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017600	1	Injection Pump Assembly (see parts detail page)	-
2	131426320	1	Shim	-
3	023100008	3	Nut	-
5	010800820	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	199106020	6	Clamp	-
19	010100625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug - 12 Volt*	-
	185366100	4	Glow Plug - 24 Volt*	-
22	185376150	1	Connector	-
23	130996070	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011300616	2	Bolt	-
26	131046160	1	Smoke Set	-
28	025100010	2	Seal Washer	-
32	023109002	1	Nut	-
33	010109271	1	Bolt	-
34	198236030	1	Lock Wire	-
35	185206082	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
	185206190	1	Stop Solenoid - 12 Volt (Isolated Ground)*	-
	185206200	1	Stop Solenoid - 24 Volt (Isolated Ground)*	-
38	131136420	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 & M20CL

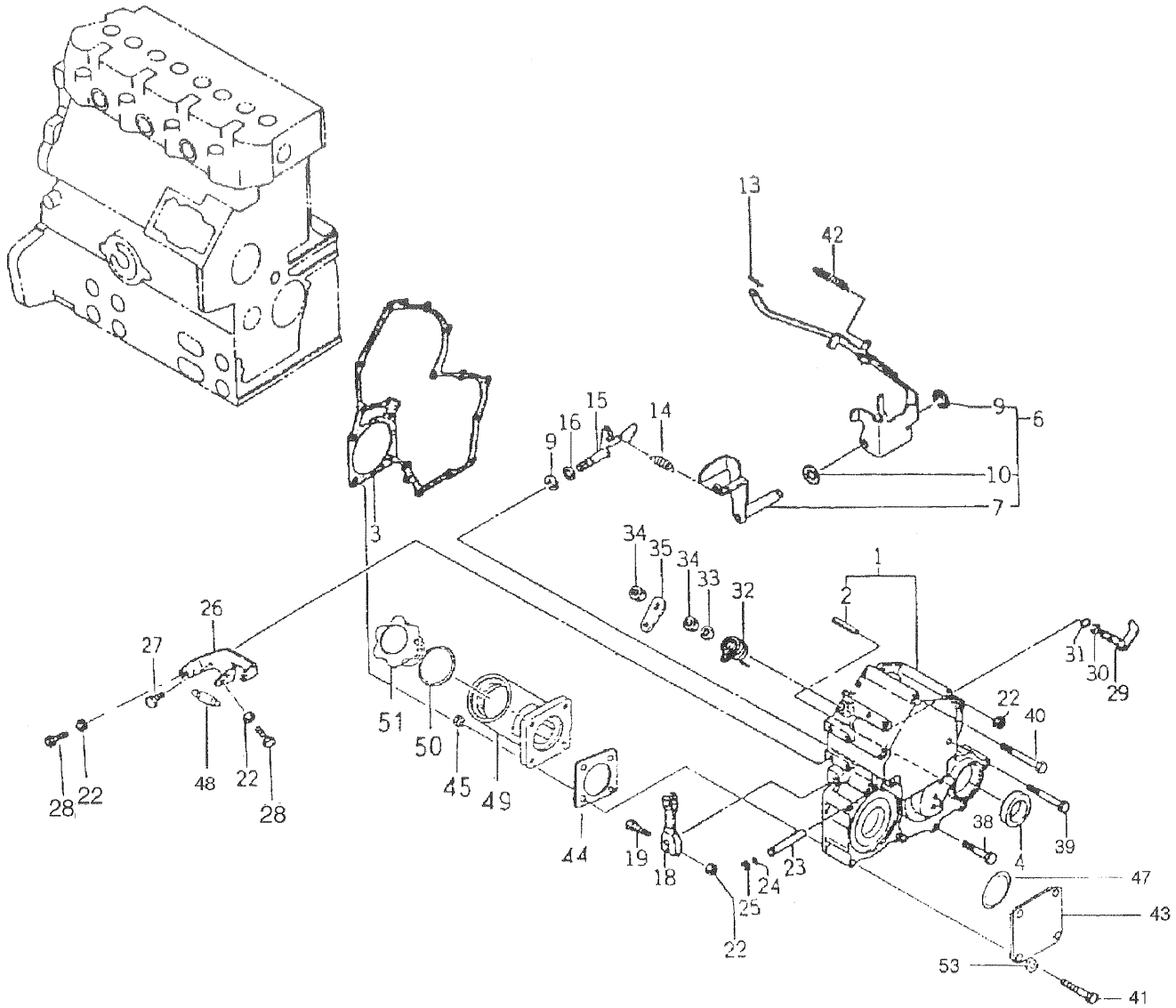


## General Arrangement: M - NL844L &amp; M20CL

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017600	1	Injection Pump Assembly (see parts detail page)	-
2	131426320	1	Shim	-
3	023100008	3	Nut	-
5	010800820	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	199106020	6	Clamp	-
19	010100625	3	Bolt	-
20	023100006	3	Nut	-
21	185366060	4	Glow Plug - 12 Volt*	-
	185366100	4	Glow Plug - 24 Volt*	-
22	185376150	1	Connector	-
23	130996070	1	Gasket	-
24	130506140	1	Feed Pump Assembly (see parts detail page)	-
25	011300616	2	Bolt	-
26	131046160	1	Smoke Set	-
28	025100010	2	Seal Washer	-
32	023109002	1	Nut	-
33	010109271	1	Bolt	-
34	198236030	1	Lock Wire	-
35	185206082	1	Stop Solenoid - 12 Volt (Standard Ground)*	-
	185206190	1	Stop Solenoid - 12 Volt (Isolated Ground)*	-
	185206200	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.

**Governor & Timing Gear Case**



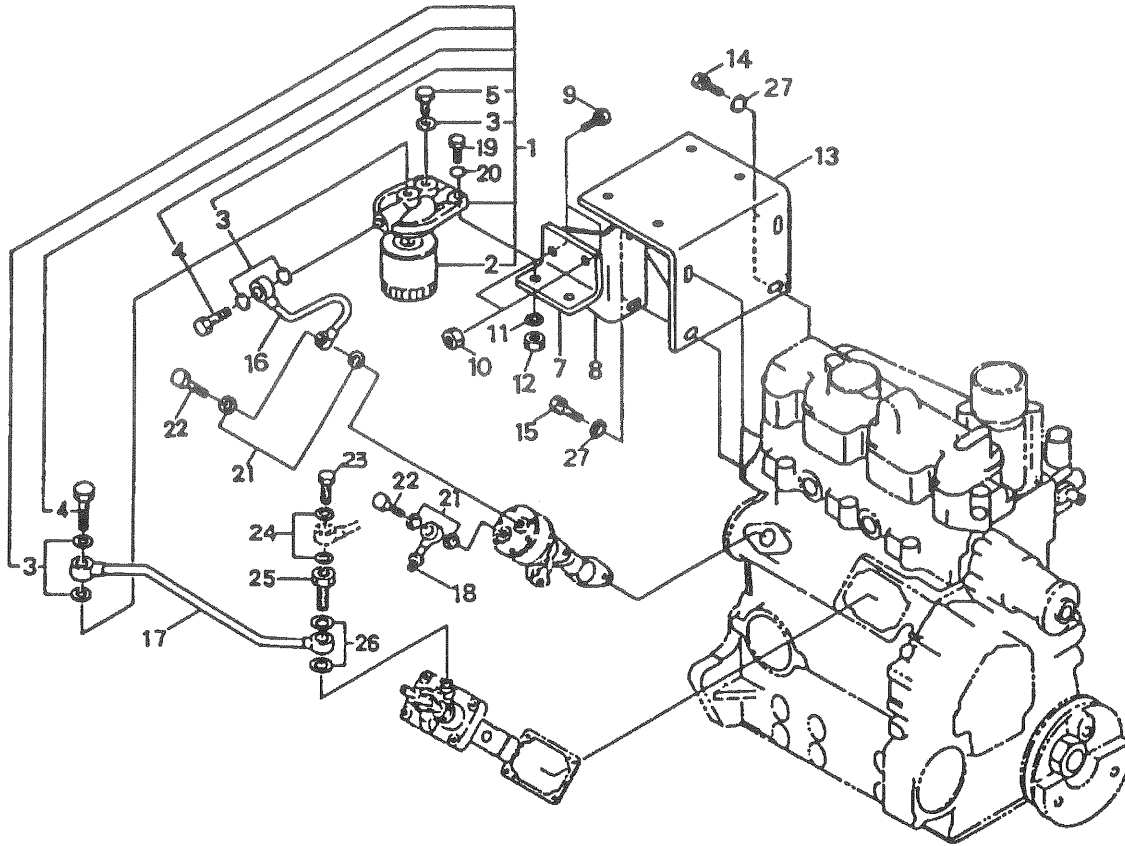


## Governor &amp; Timing Gear Case

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165106400	1	Timing Gear Case Complete - Marine	-
	165106380	1	Timing Gear Case Complete - Industrial } (includes Key 2)	-
2	030300414	1	Spring Pin	-
3	165996351	1	Gasket	-
4	198636160	1	Oil Seal	-
	00-02003	**	Wear Sleeve; Repair Type	-
6	125046170	1	Governor Lever Assembly (includes Keys 7-10). Formerly #125046280	-
7	125406080	1	Tension Lever	-
9	036800008	2	Snap Ring	-
10	026200010	1	Washer	-
13	031100004	1	Snap Pin	-
14	198217040	1	Spring	-
15	125156250	1	Arm	-
16	052100070	1	O-Ring	-
18	125416020	1	Governor Lever	-
19	010110630	1	Bolt	-
22	023100006	4	Nut	-
23	125116140	1	Shaft	-
24	052100030	1	O-Ring	-
25	036800005	1	Snap Ring	-
26	125976120	1	Bracket	-
27	011300616	2	Bolt	-
28	010109264	1	Bolt	-
29	125156180	1	Arm	-
30	036800006	1	Snap Ring	-
31	052100050	1	O-Ring	-
32	198216760	1	Spring	-
33	026200008	1	Washer	-
34	020300008	2	Nut	-
35	125176080	1	Stop Lever	-
38	011300645	6	Bolt	-
39	011300660	5	Bolt	-
40	011300680	2	Bolt	-
41	12-00717	1	Capscrew, Hex Head M8 x 1.25 x 60mm - Marine	-
	12-00718	3	Capscrew, Hex Head M8 x 1.25 x 65mm - Marine	-
	12-00718	4	Capscrew, Hex Head M8 x 1.25 x 65mm - Industrial	-
42	198216731	1	Start Spring	-
43	165206320	1	Cover - keel cooled Marine only	-
	165206150	2	Cover - Industrial only	-
44	165996110	1	Gasket	-
45	14-00711	3	Hex Nut M8 x 1.25 - Marine	-
	14-00711	4	Hex Nut M8 x 1.25 - Industrial	-
46	398210070	1	Spring	-
47	16-13101	1	O-Ring	-
49	110766200	1	Oil Fill Elbow	-
50	052300400	1	O-Ring	-
51	198436010	1	Cap	-
52	190197400	1	Caution Label	-
53	15-00702	3	Lock Washer M8	-
			**As Required.	

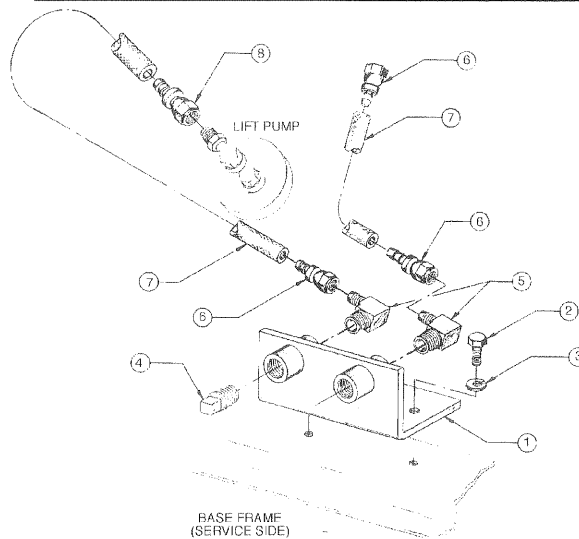
GROUP 4 – FUEL SYSTEM

**Fuel Filter & Piping**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130306190	1	Fuel Filter Assembly (includes Keys 1-6 & 19-20)	-
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	-
8	130976460	1	Bracket - Marine	-
	130976440	1	Bracket - Industrial	-
9	011500820	2	Bolt	-
10	023100008	2	Nut	-
11	027100010	2	Spring Washer	-
12	020900010	2	Nut	-
13	135976420	1	Bracket - Industrial	-
14	12-00751	1	Capscrew, Hex Head M8 x 1.25 x 16mm - Industrial	-
15	12-00751	2	Capscrew, Hex Head M8 x 1.25 x 16mm - Marine	-
	12-00711	3	Capscrew, Hex Head M8 x 1.25 x 20mm - Industrial	-
16	130556760	1	Pipe	-
17	130556750	1	Pipe	-
18	130556680	1	Fuel Fitting	-
19	011301030	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	026100008	4	Washer	-

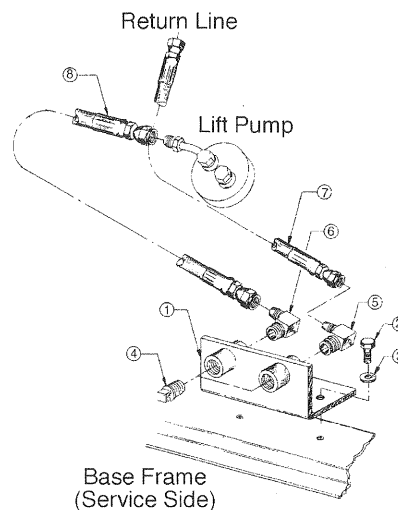
**Fuel Line Connection**



A-6426 / C-2920

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold	-
2	12-00031	2	Capscrew, Hex Head M6 x 1.0 x 20mm	-
3	15-01132	2	Lock Washer M6	-
4	21-00046	2	Plug, 1/4 NPT (for shipping)	-
5	21-71044	2	Male Elbow 90°, brass 1/4 NPT x 1/4-45T	-
6	21-71045	3	Female Swivel, brass 1/4 HB x 1/4-45T	-
7	18-52007	2	Hose 1/4" ID x 26"	-
8	21-71048	1	Female Swivel, brass 1/4 HB x 5/16-45T	-

**U.S. Coast Guard Approved Fuel Lines**

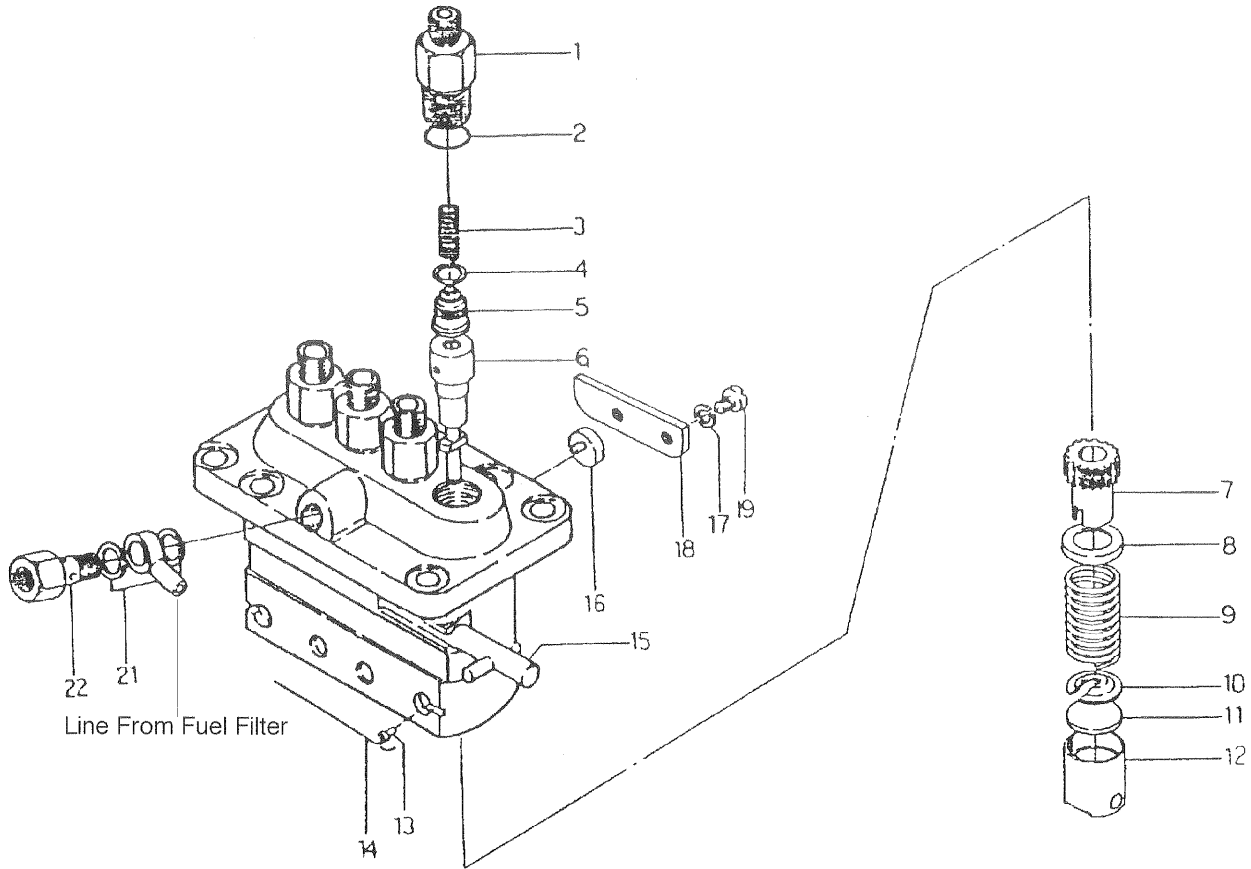


A-6684  
A-6495 / C-2936

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold	-
2	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
3	15-01132	2	Lock Washer M6	-
4	21-31624	2	Plug, Hex Head Brass 1/4 NPT (for shipping)	-
5	21-71049	1	Male Elbow 90°, steel 1/4 NPT x 1/4-37T	-
6	21-74411	1	Male Elbow 90°, steel 1/4 NPT x 5/16-37T	-
7	18-52113	1	Hose Assembly 1/4" ID x 26-1/2"	-
8	18-58401	1	Hose Assembly 1/4" ID x 26" (844L)	-
	18-58101	1	Hose Assembly 1/4" ID x 17" (844)	-

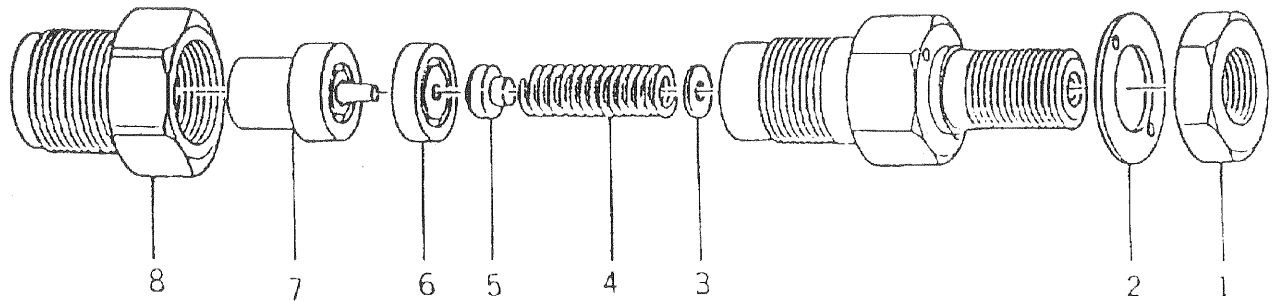
GROUP 4 – FUEL SYSTEM

**Fuel Injection Pump**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131017600	1	Injection Pump Assembly (includes Keys 1-24)	-
1	131196200	4	Delivery Valve Holder	-
2	131226130	4	O-Ring	-
3	131176510	4	Delivery Valve Spring	-
4	131186110	4	Gasket	-
5	131156260	4	Valve Sub Assembly	-
6	131116550	4	Element Sub Assembly	-
7	131296647	4	Sleeve Sub Assembly	-
8	131296532	4	Upper Spring Seat	-
9	131176320	4	Plunger Spring	-
10	131296531	4	Lower Spring Seat	-
11	131296530	4	Shim	-
12	131256110	4	Tappet Sub Assembly	-
13	131296645	4	Pin	-
14	131296957	1	Wire	-
15	131296958	1	Control Rack	-
16	131227240	8	O-Ring	-
17	131296953	3	Sleeve Flange	-
18	131136430	8	Bolt	-
19	131296956	1	Screw	-
21	131296255	2	Gasket	-
22	131246170	1	Eye Bolt	-
23	131426160	1	Gasket	-
24	131136450	1	Bolt	-

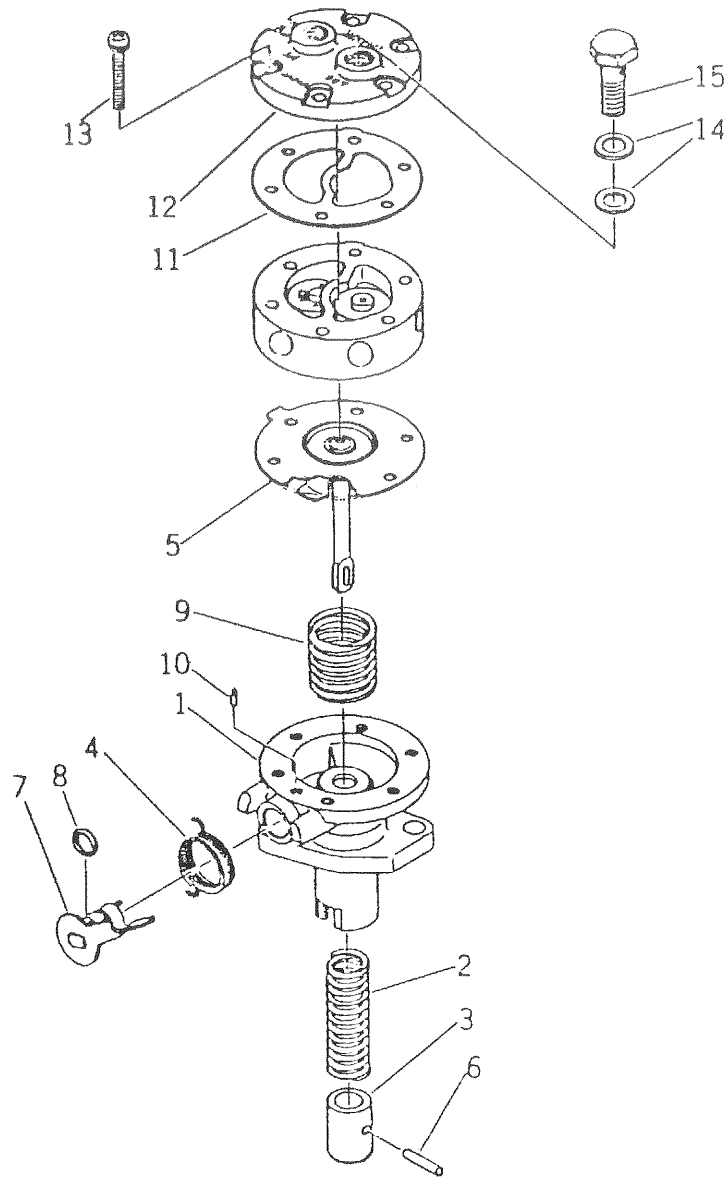
**Fuel Injector**



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	131446076	1	Spacer	-
7	131416170	1	Nozzle	-
8	131446077	1	Nut	-

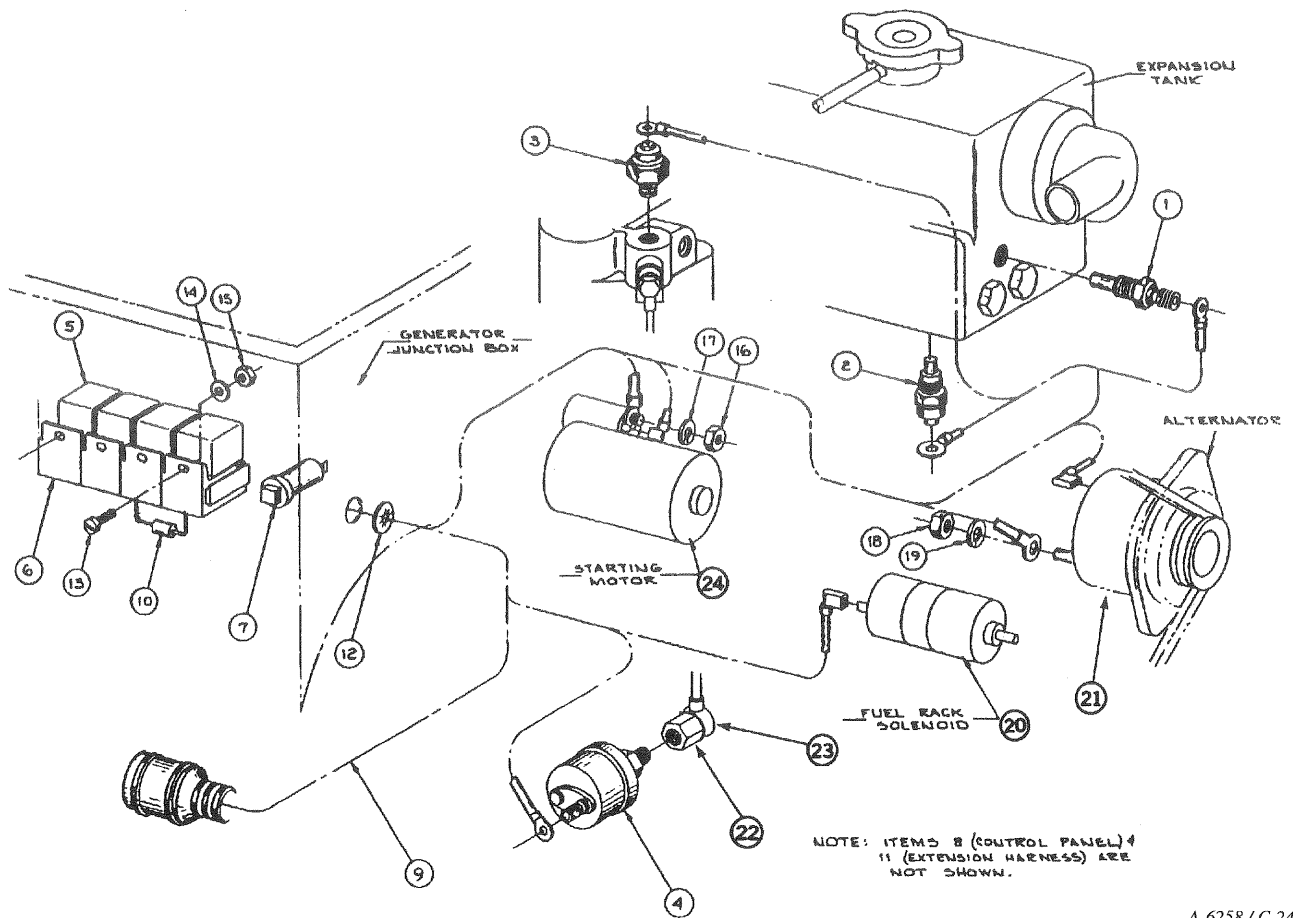
GROUP 4 – FUEL SYSTEM

**Fuel Feed Pump**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	130506140	1	Feed Pump Assembly (includes Keys 1-15)	-
1	130516080	1	Body	-
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	130516089	1	Gasket	-
12	130516090	1	Cap	-
13	130516091	6	Screw	-
14	130516069	4	Gasket	-
15	130516092	2	Banjo Bolt	-

**12 Volt Engine - Marine: 282/283 & 306/307 Frame Generators**



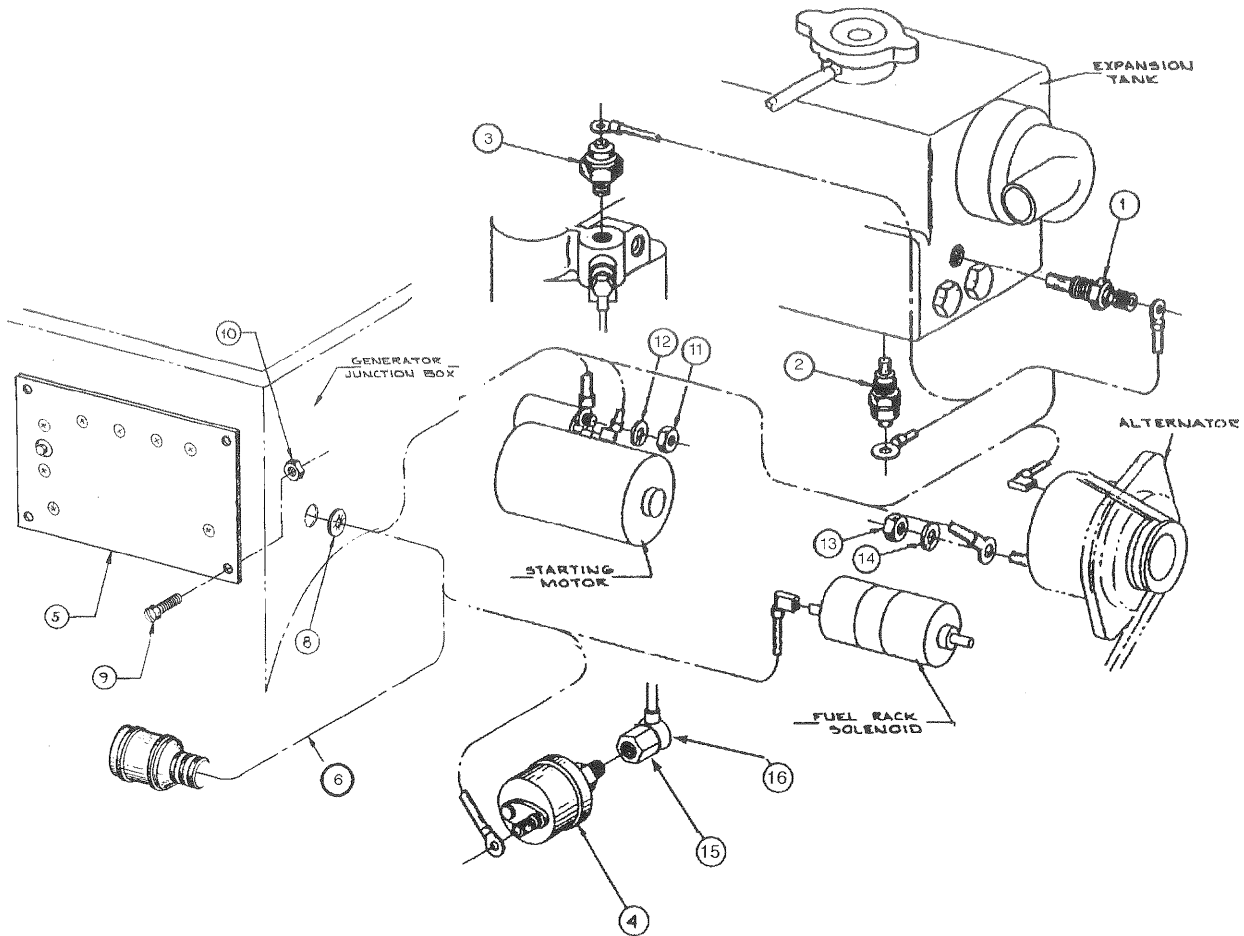
A-6258 / C-2490A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Engine Temperature Sender	-
2	385720110	1	Engine Temperature Switch 95° C	-
3	185246011	1	Oil Pressure Switch	-
4	22-41016	1	Oil Pressure Sender	-
5	22-42047	4	Relay, 12 Volt SPDT	-
6	22-41032	4	Relay Base	-
7	22-42043	1	Circuit Breaker, DC 15 Amp	-
8	22-90006	1	Control Panel, S1-B (see detail)	-
9	22-48101	1	Engine Wire Harness	-
10	22-41060	2	Diode, 6 Amp 50 Volt PIV	-
11	22-40930	1	Wire Harness Extension 20' (not shown)	-
12	00-41015	1	Universal Bushing, Plastic	-
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	185206082	1	Stop Solenoid 12 Volt (see also Fuel System)	-
21		1	Alternator 12 Volt (see mounting detail)	-
22	198487590	1	Banjo Bolt (formerly #198486870) - Used with #25 only	-
23	140606701	1	Oil Line	-
24		1	Starter 12 Volt (see mounting detail)	-
25	21-42001	**	Elbow 90° Steel 1/8 BSPT X 1/8 NPT (not shown)	-

\*\*As Required.

GROUP 5 – ELECTRICAL SYSTEM

12 Volt Engine - Marine & Industrial: 184 Frame Generators

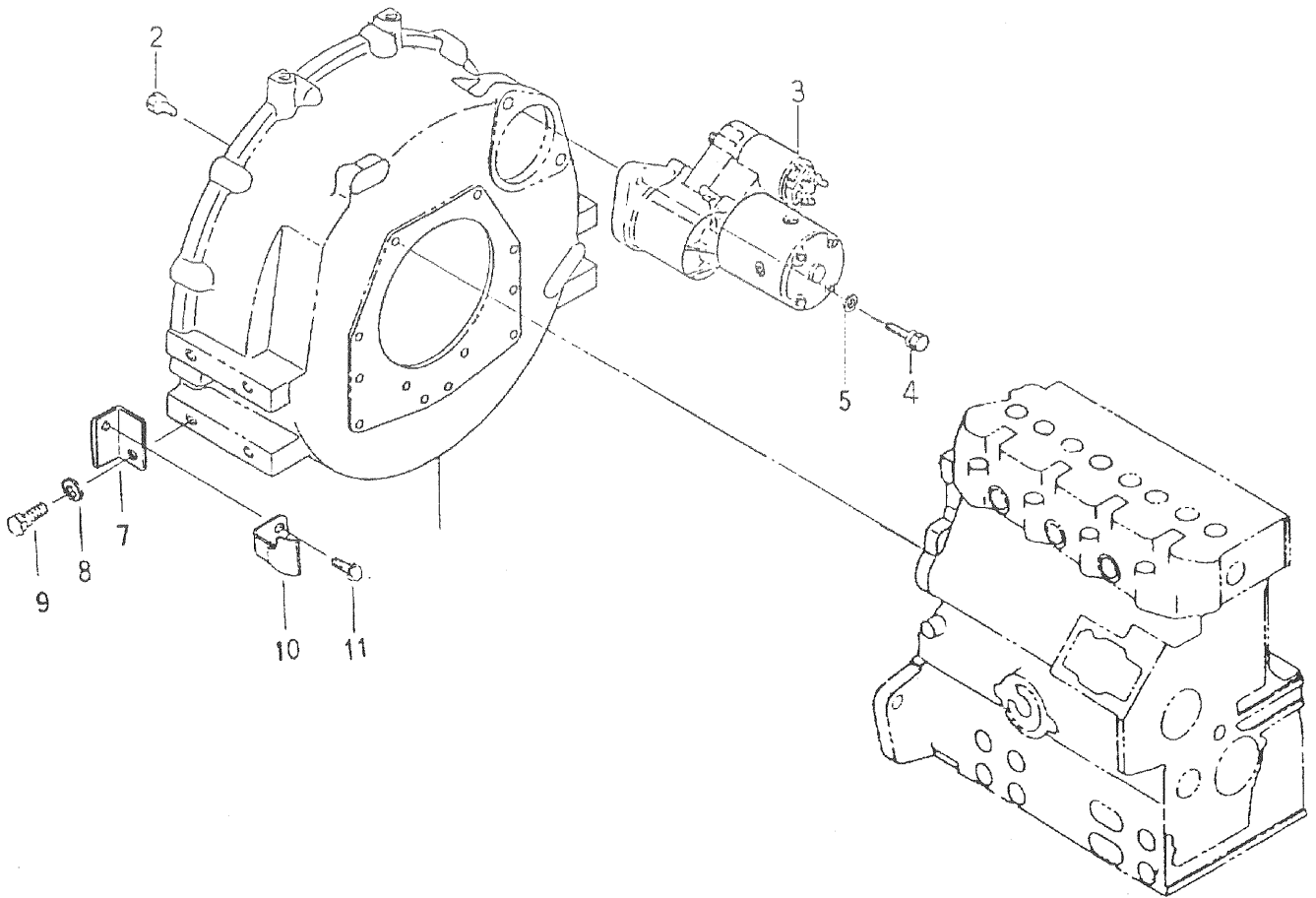


A-6431, A-6477 / C2882

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-71026	1	Engine Temperature Sender - Dual Station	-
	22-42055	1	Engine Temperature Sender - Single Station	-
2	385720110	1	Temperature Switch 203° F - Marine	-
	385720230	1	Temperature Switch 212° F - Industrial	-
3	185246011	1	Oil Pressure Switch	-
4	22-71016	1	Oil Pressure Sender - Dual Station	-
	22-41016	1	Oil Pressure Sender - Single Station	-
5	22-92007	1	Relay Board/Side Cover 12Volt - Marine	-
	22-98405	1	Relay Board/Control Panel 12Volt - Industrial	-
6	22-48104	1	Engine Wire Harness	-
7	22-40930	1	Wire Harness Extension 20'	-
8	00-41015	1	Universal Bushing	-
9	12-00000	4	Machine Screw #10-32 x 1/2"	-
10	14-00006	4	Hex Nut, Nylock #10-32	-
11	14-00711	1	Hex Nut M8 x 1.25	-
12	15-00702	1	Lock Washer M8	-
13	14-04401	1	Hex Nut M5 x 0.8	-
14	15-04400	1	Lock Washer M5	-
15	198487590	1	Banjo Bolt (formerly #198486870)	-
16	140606701	1	Oil Line	-



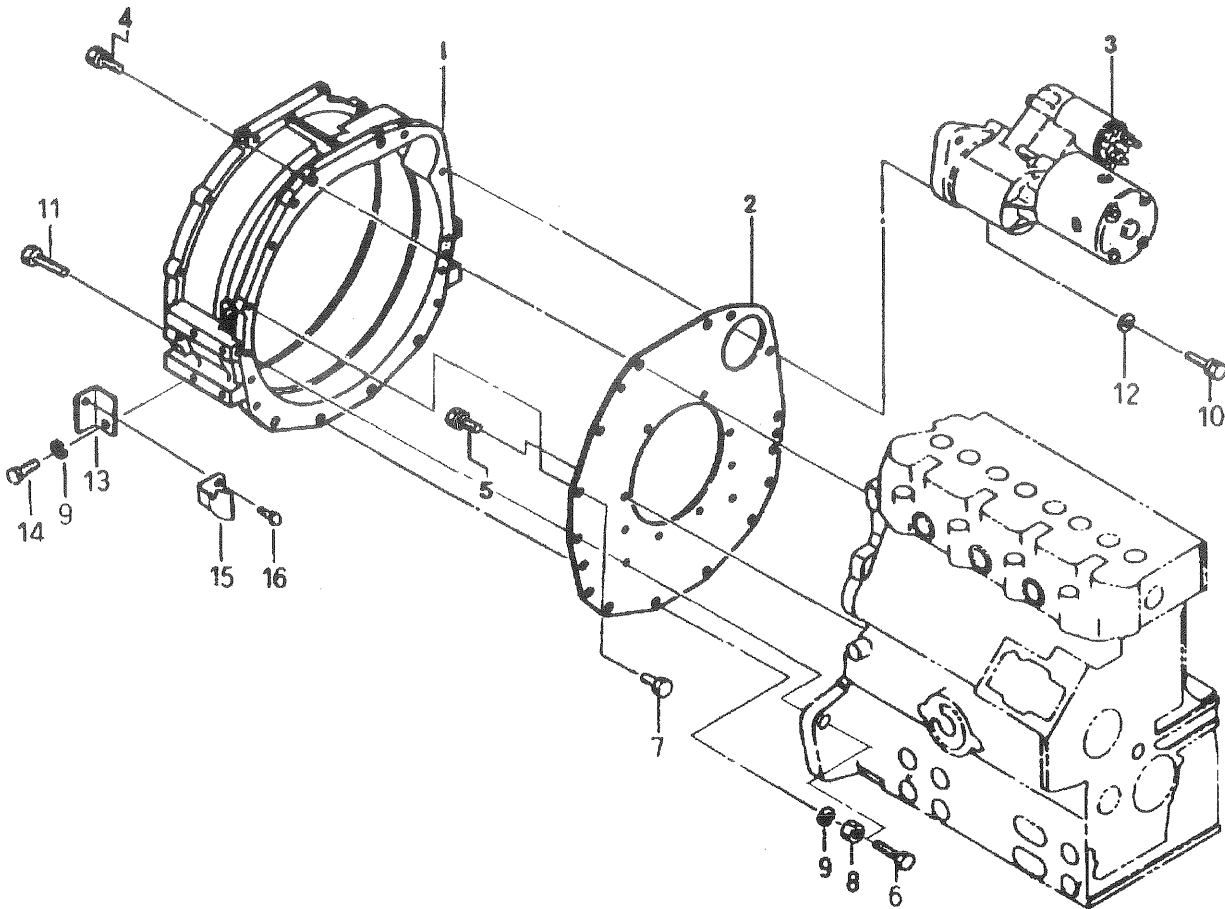
### Starter & Flywheel Housing: M844 - NL844 & M16C



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110446890	1	Flywheel Housing - Marine SAE #4	-
	110446880	1	Flywheel Housing - Industrial SAE #4	-
2	011500820	10	Bolt	-
3	185086410	1	Starter - 12 Volt - Standard Ground (marked M2T54091)*	-
	185086500	1	Starter - 12 Volt - Standard Ground (marked M2T58981)*	-
	185086550	1	Starter - 12 Volt - Standard Ground (marked M001T55081)*	-
	22-48102	1	Starter - 12 Volt - Isolated Ground	-
4	22-43108	1	Starter - 24 Volt - Standard Ground	-
	22-48103	1	Starter - 24 Volt - Isolated Ground	-
	011501030	2	Bolt	-
5	026200010	2	Washer	-
7	130976310	1	Bracket	-
8	027100010	1	Lock Washer	-
9	199436350	2	Bolt	-
10	140976040	1	Bracket, Drain Hose Support	-
11	011500812	1	Bolt	-
12	31-48101	1	Spacer (used with 24 Volt starters only)	-

\*See parts detail.

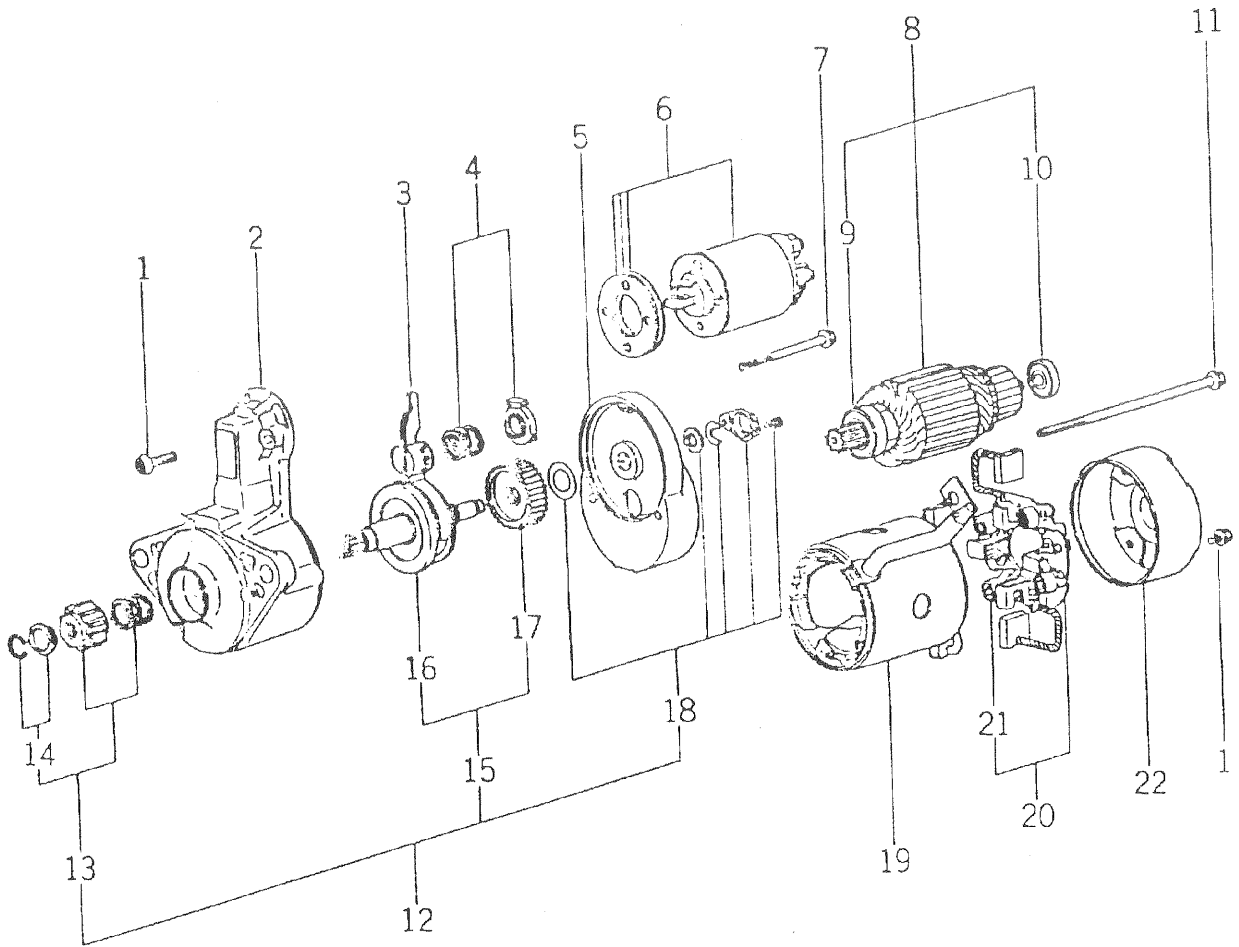
**Starter & Flywheel Housing: M - NL844L & M20CL**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	31-68401	1	Flywheel Housing - Marine SAE #4 (used with 24 Volt starters only)	-
	110446991	1	Flywheel Housing - Marine SAE #4	-
	110447000	1	Flywheel Housing - Industrial	-
2	110367590	1	Back Plate - Marine	-
	110367610	1	Back Plate - Industrial	-
3	185086410	1	Starter - 12 Volt - Standard Ground (marked M2T54091)**	-
	185086500	1	Starter - 12 Volt - Standard Ground (marked M2T58981)**	-
	185086550	1	Starter - 12 Volt - Standard Ground (marked M001T55081)**	-
	22-48106	1	Starter - 12 Volt - Isolated Ground (formerly #22-48102)	-
	22-43108	1	Starter - 24 Volt - Standard Ground	-
	22-48103	1	Starter - 24 Volt - Isolated Ground	-
	4	011501235	2	Bolt
5	011500816	10	Bolt	-
6	011501050	6	Bolt	-
7	011501020	2	Bolt	-
8	020100010	4	Nut	-
9	027100010	4	Lock Washer	-
10	011501030	2	Bolt	-
11	010301030	4	Bolt	-
12	026200010	2	Washer	-
13	130976310	1	Bracket, Drain Hose Support*	-
14	199436350	1	Bolt*	-
15	140976040	1	Bracket*	-
16	011500812	1	Bolt*	-
17	31-48101	1	Spacer (used with 24 Volt starters only)	-
18	00-68401	1	Cover (for 31-68401)	-

\*NOTE: #13-16 Marine application only. \*\*See parts detail

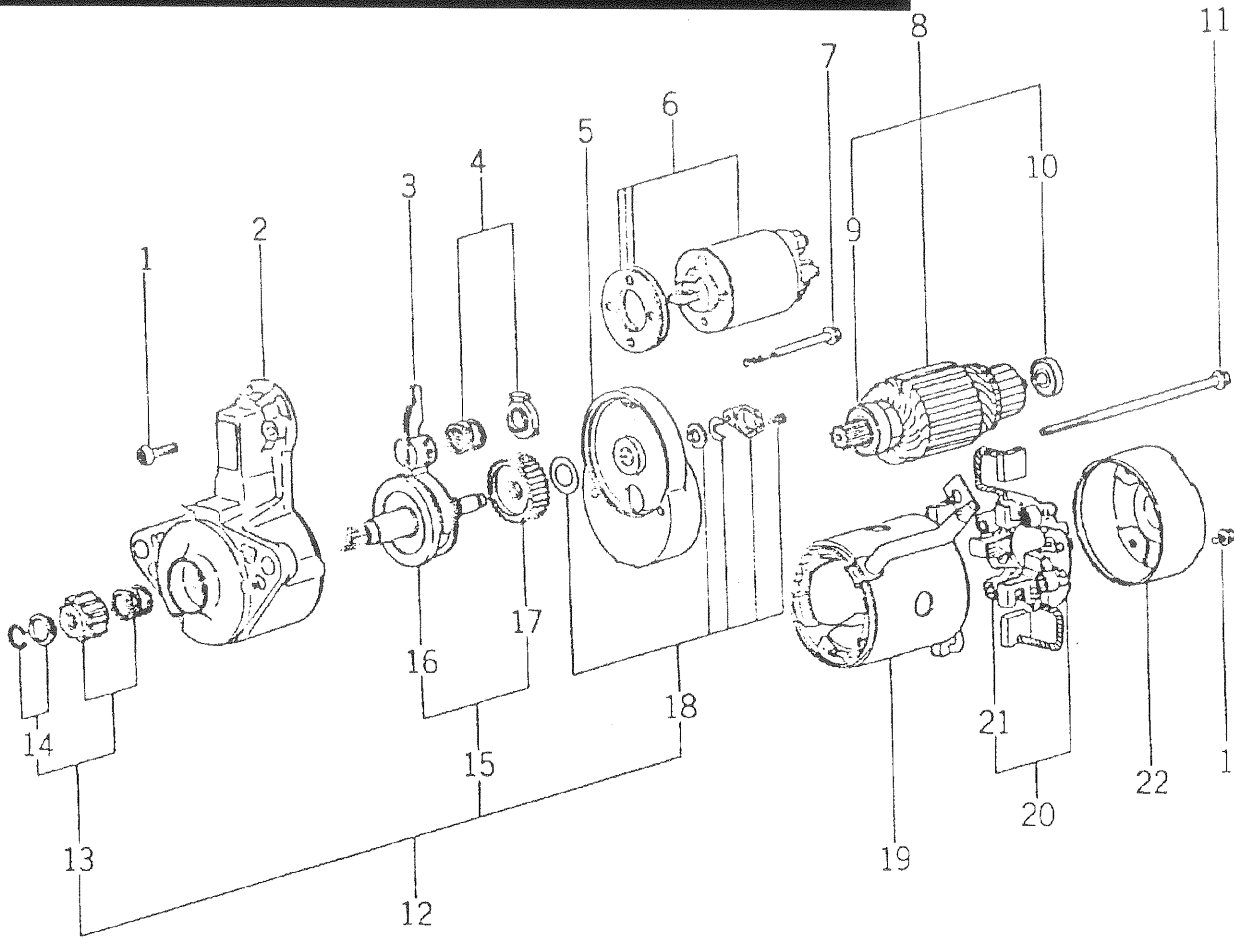
**Starter - 12 Volt Standard Ground**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	185086500	1	Starter (includes all Keys - marked M2T58981)	-
1	185846317	1	Set Screw	-
2	185846530	1	Bracket Assembly	-
3	185846319	1	Lever Assembly	-
4	185846320	1	Spring Set	-
5	185846321	1	Center Bracket Assembly	-
6	185816120	1	Switch Assembly	-
7	185846322	1	Bolt	-
8	185846529	1	Armature Set (includes Keys 9-10)	-
9	185846324	1	Bearing	-
10	185846325	1	Bearing	-
11	185846363	2	Bolt	-
12	185866180	1	Clutch Shaft Assembly (includes Keys 13-18)	-
13	185846406	1	Pinion Set	-
14	185846327	1	Stopper Set	-
15	185846328	1	Gear Set	-
16	185866130	1	Piston Shaft Assembly	-
17	185846329	1	Gear	-
18	185846330	1	Cover Set	-
19	185846364	1	Housing & Field Coil Assembly	-
20	185846360	1	Brush Holder Assembly (includes Key 21)	-
21	185846361	4	Spring Brush	-
22	185846362	1	Rear Bracket	-

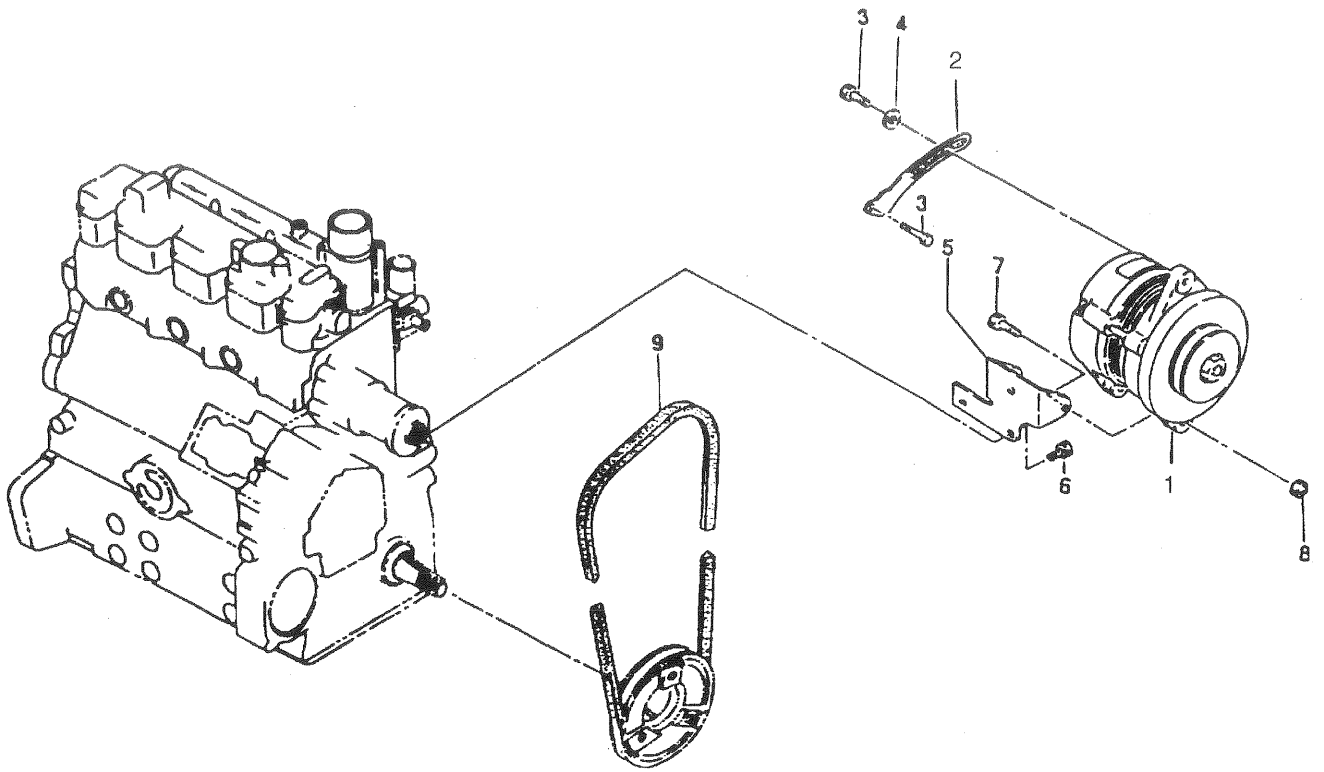
GROUP 5 - ELECTRICAL SYSTEM

**Starter - 12 Volt Standard Ground**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
**	185086410	1	Starter (includes Keys 1-22 - Marked M2T54091)	-
1	185846317	1	Screw Set	-
2	185846493	1	Front Cover	-
3	185846494	1	Lever Assembly	-
4	185846495	1	Spring Set	-
5	185846496	1	Center Housing	-
6	185816240	1	Solenoid Assembly	-
7	185846322	1	Bolt	-
8	185846357	1	Armature Set (includes Keys 9-10)	-
9	185846324	1	Bearing	-
10	185846325	1	Bearing	-
11	185846363	2	Bolt	-
12	185866270	1	Clutch Shaft Assembly (includes Keys 13-18)	-
13	185846497	1	Pinion Set (includes Key 14)	-
14	185846327	1	Stopper Set	-
15	185846498	1	Gear Set (includes Keys 16 & 17)	-
16	185866280	1	Pinion Shaft Assembly	-
17	185846329	1	Gear	-
18	185846499	1	Cover Set	-
19	185846364	1	Housing & Field Coil Assembly	-
20	185846360	1	Brush Holder Assembly (includes Key 21)	-
21	185846361	4	Brush Spring	-
22	185846362	1	Rear Cover	-

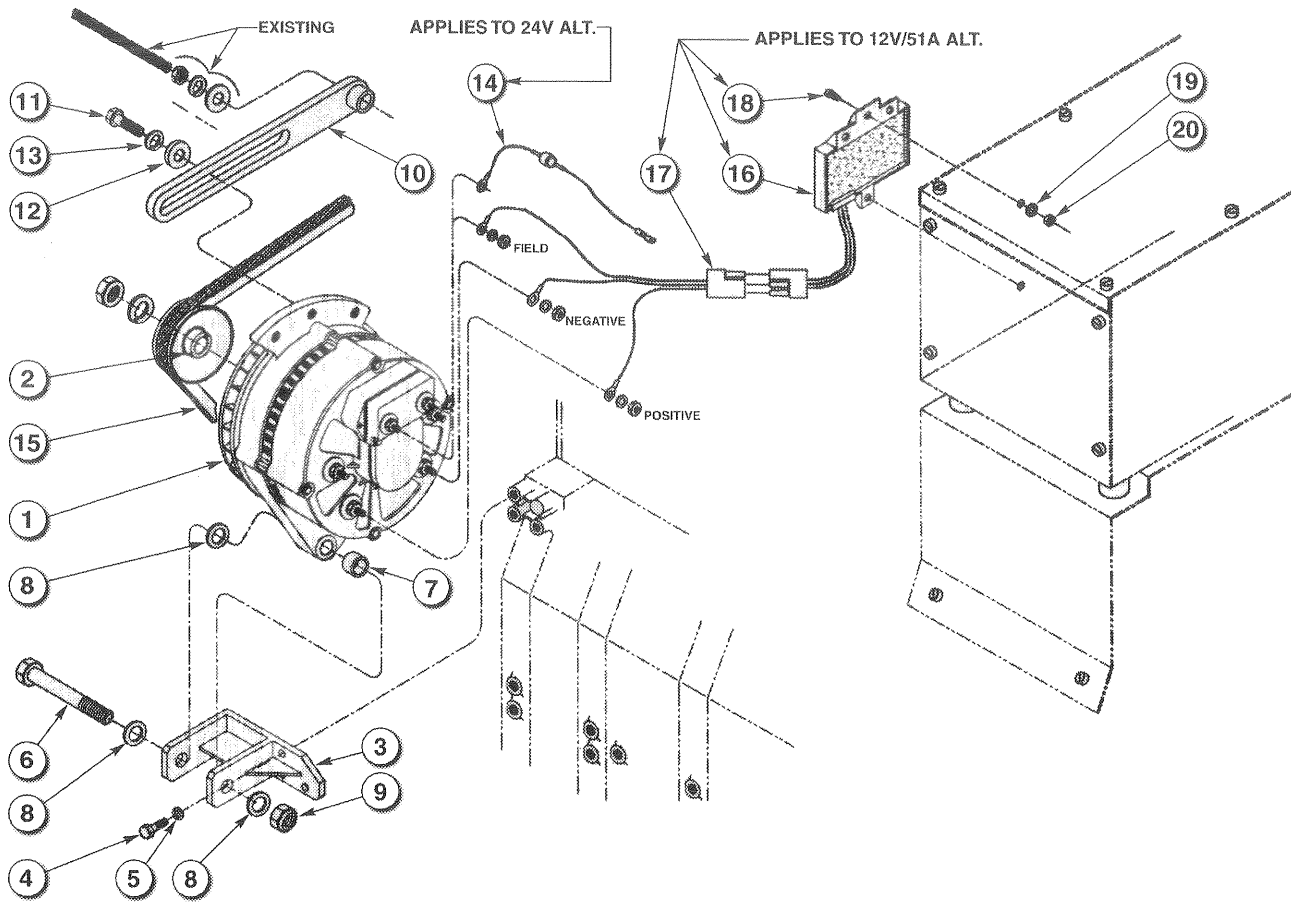
**Alternator Mounting - 12 Volt/35 Amp: Standard & Isolated Ground**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185046201	1	Alternator - 12 Volt/35 Amp - Standard Ground (see parts detail)	up to S/N xxxx-15589
	185046320	1	Alternator - 12 Volt/40 Amp - Standard Ground (see parts detail)	from S/N xxxx-15590
	22-43109	1	Alternator - 12 Volt/35 Amp - Isolated Ground	-
2	185727000	1	Tensioner	-
3	011500820	2	Bolt	-
4	026109017	1	Washer	-
5	185976510	1	Bracket	-
6	011500816	3	Bolt	-
7	010301035	2	Bolt	-
8	023100010	2	Nut	-
9	40-02003	1	Drive Belt (M-844 & M-16C) (formerly #080109061)	-
	40-08403	1	Drive Belt (M-844L & M-20CL) (formerly #080109080)	-

GROUP 5 – ELECTRICAL SYSTEM

**Alternator Options: 12Volt / 51Amp and 24Volt / 35 & 40Amp**



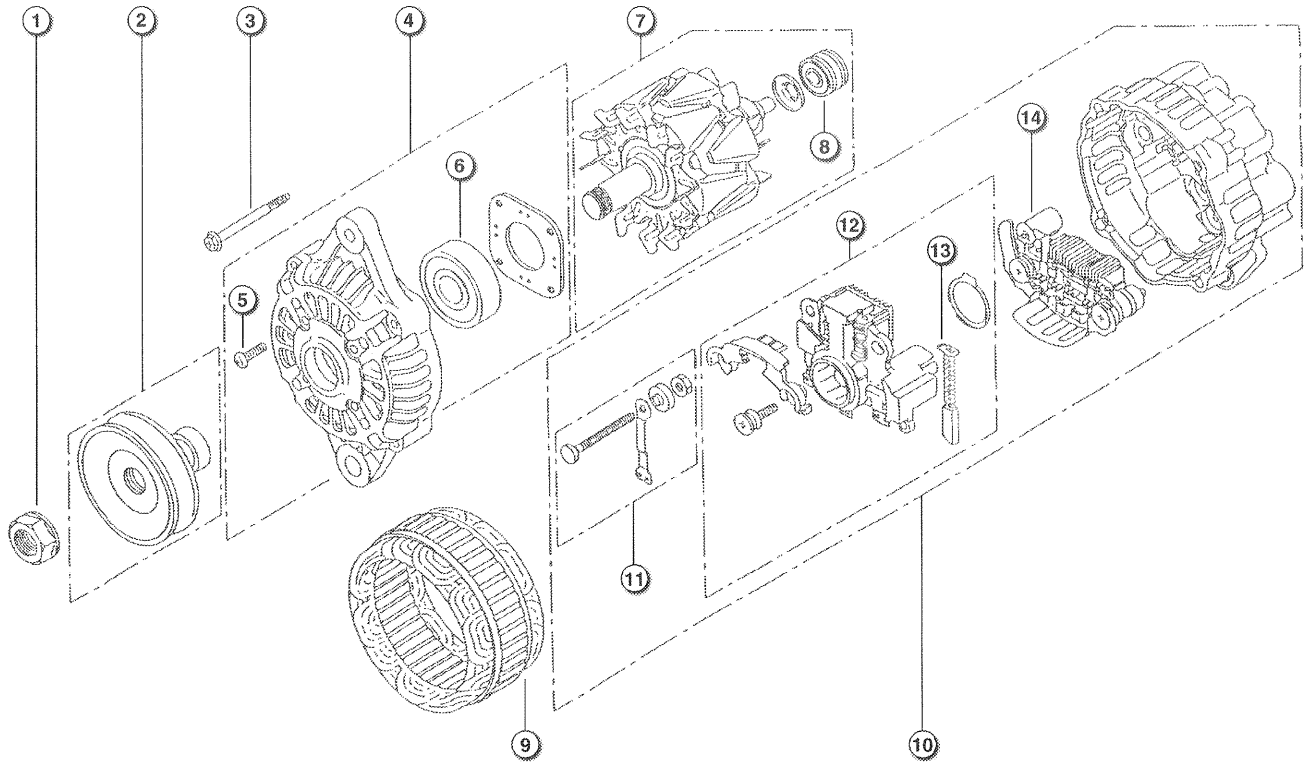
A-7631, A-7632, A-7633, A-7634, A-7635, A-7636 & D-2926

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40333	1	Alternator 12 Volt/51 Amp Isolated Ground	-
	22-40278	1	Alternator 24 Volt/40 Amp Standard Ground	-
	22-71052	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 20mm	-
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	23-42005	1	Tensioning Arm	-
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)	-
	40-08404	1	Drive Belt (844L)	-
16	22-40334	1	D.C. Voltage Regulator, 12V, Adjustable	-
17	16-1	1	Wire Harness 36" (844)	-
18	12-00001	2	Machine Screw #10-32 x 3/4" S/S	-
19	15-70002	2	Flat Washer #10 S/S	-
20	14-00032	2	Hex Nut, Nylock #10 S/S	-

12 Volt / 51 Amp  
Alternator Only

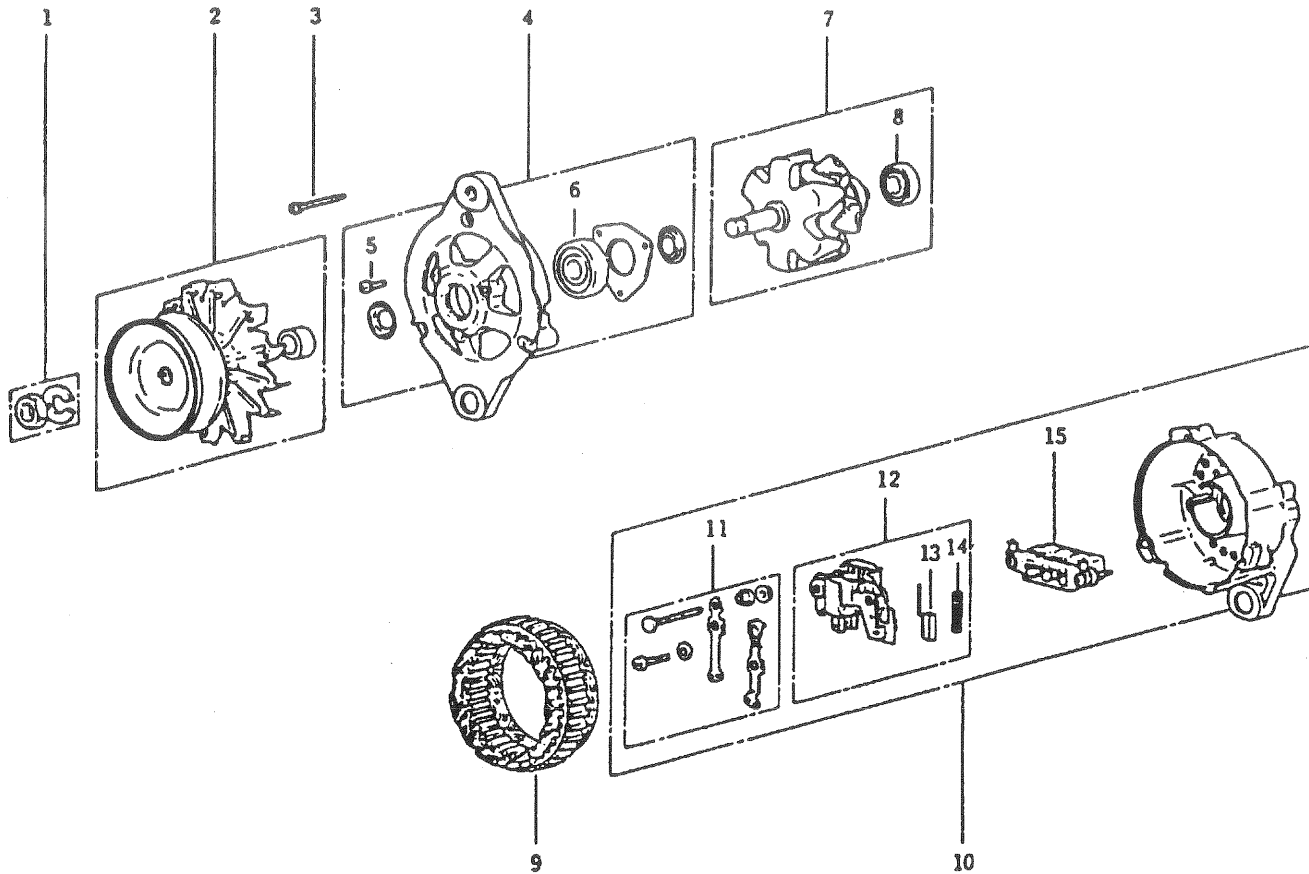
\*\*As Required.

**Alternator Assembly - 12 Volt/35 Amp: Standard Ground**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	185046320	1	Alternator Assembly	-
1	185446269	1	Nut	-
2	185436180	1	Pulley Assembly	-
3	185446270	1	Screw Set	-
4	185426210	1	Front Cover Assembly	-
5	185446271	1	Screw Set	-
6	185446272	1	Ball Bearing	-
7	185446273	1	Rotor Assembly	-
8	185446274	1	Ball Bearing	-
9	185446275	1	Stator Assembly	-
10	185426220	1	Rear Cover Assembly	-
11	185446278	1	Terminal Set	-
12	185446277	1	Regulator Assembly	-
13	185416480	2	Brush	-
14	185446276	1	Rectifier Assembly	-

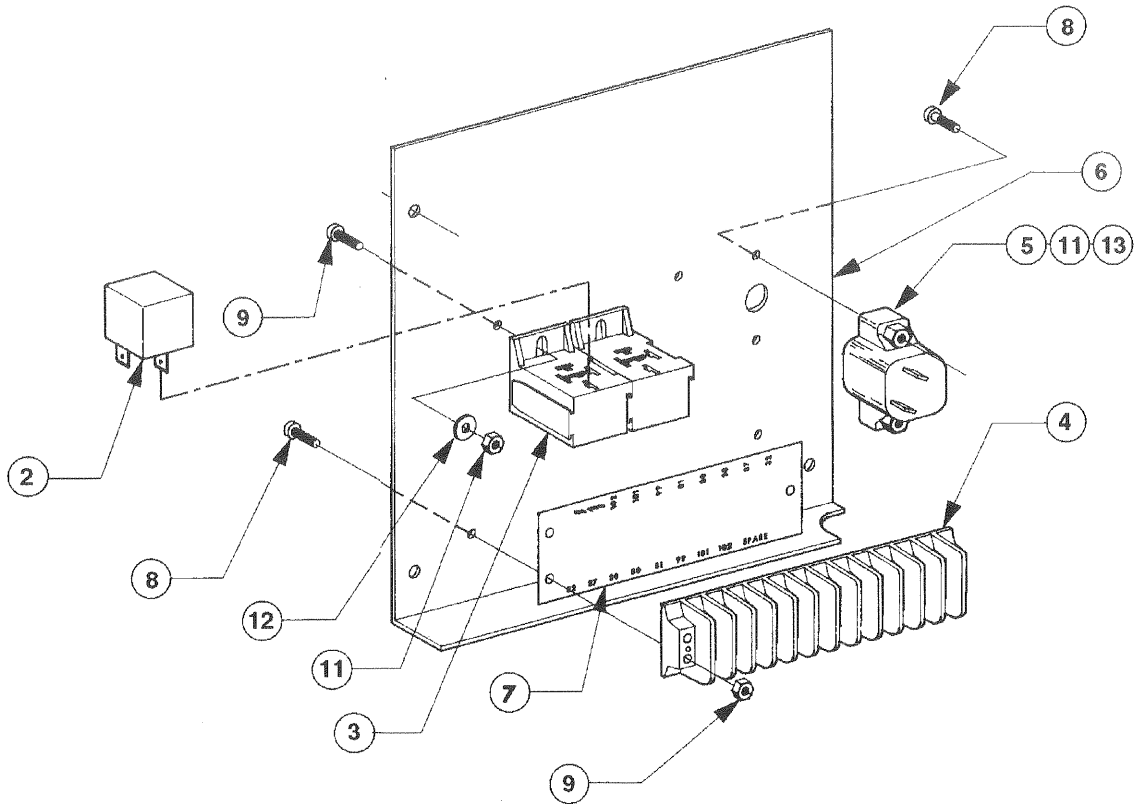
**Alternator Assembly - 12 Volt/35 Amp: Standard Ground**



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	185046201	1	Alternator Assembly (includes Keys 1-15)	-
1	185446175	1	Nut	-
2	185436120	1	Pulley Assembly	-
3	185446158	1	Screw Set	-
4	185426130	1	Front Cover Assembly (includes Keys 5-6)	-
5	185446182	1	Screw Set	-
6	185446246	1	Ball Bearing	-
7	185446252	1	Rotor Assembly (includes Key 8)	-
8	185446251	1	Ball Bearing	-
9	185446162	1	Stator Assembly	-
10	185426200	1	Rear Cover Assembly (includes Keys 11-15)	-
11	185446188	1	Terminal Set	-
12	185446187	1	Regulator Assembly (includes Keys 13-14)	-
13	185416300	2	Brush	-
14	185446165	2	Spring	-
15	185446253	1	Rectifier Assembly	-



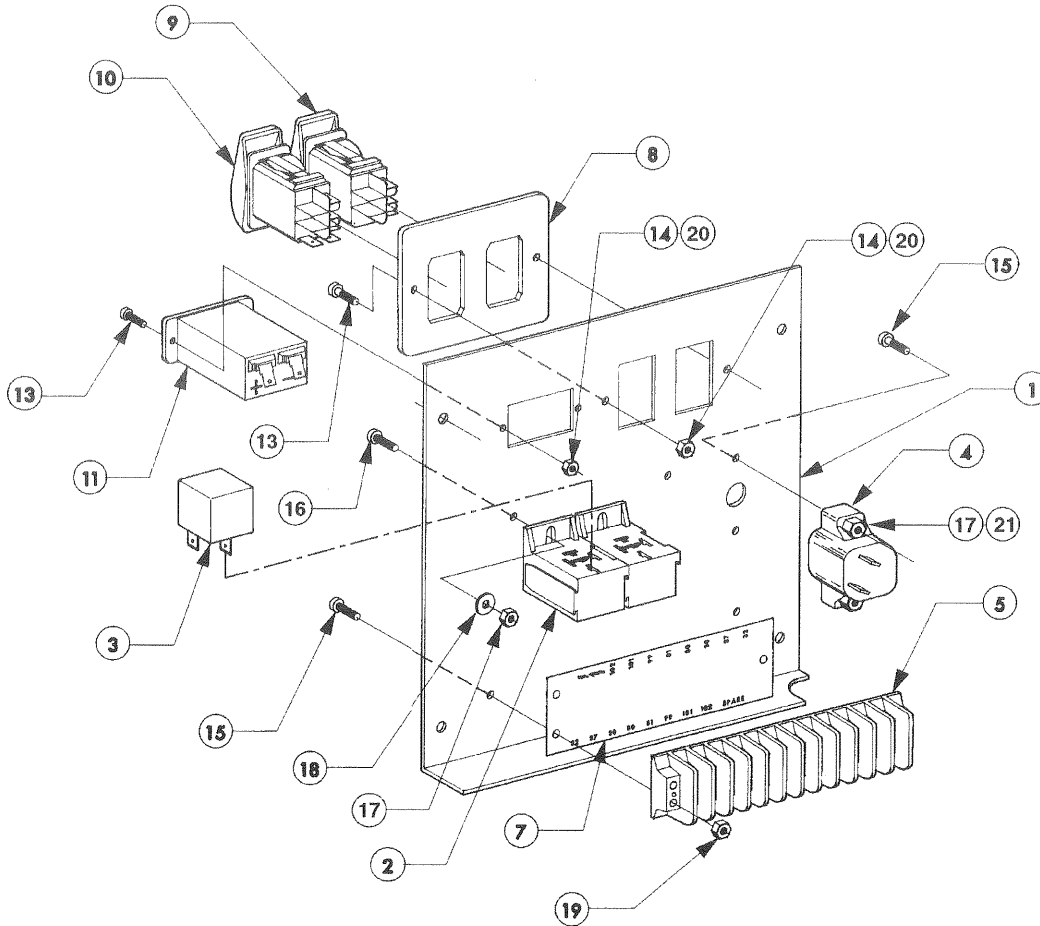
**Relay Board/J-Box Side Cover - 12 Volt: 184 Frame Generator**



A-6476 / B-4619

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92007	1	Relay Board/J-Box Side Cover Assembly (includes all keys)	-
1	22-41060	2	Diode, 6 Amp 1000 PIV (not shown)	-
2	22-42047	4	Relay, 12 Volt SPDT	-
3	22-41032	4	Relay Base	-
4	22-40193	1	Terminal Board, 12 Connection 600 VAC	-
5	22-40018	1	Circuit Breaker 10 Amp	-
6	28-90006	1	Mounting Plate	-
7	22-00063	1	Number Strip	-
8	12-00005	2	Machine Screw, Binding Head, Phillips #8 - 32 x 3/4"	-
9	12-00004	2	Machine Screw, Binding Head, Phillips #8 - 32 x 3/8"	-
10	14-00003	2	Hex Nut, Nylock #8-32	-
11	14-00000	4	Hex Nut #8-32	-
12	15-00001	2	Flat Washer #8	-
13	15-00000	2	Lock Washer #8	-

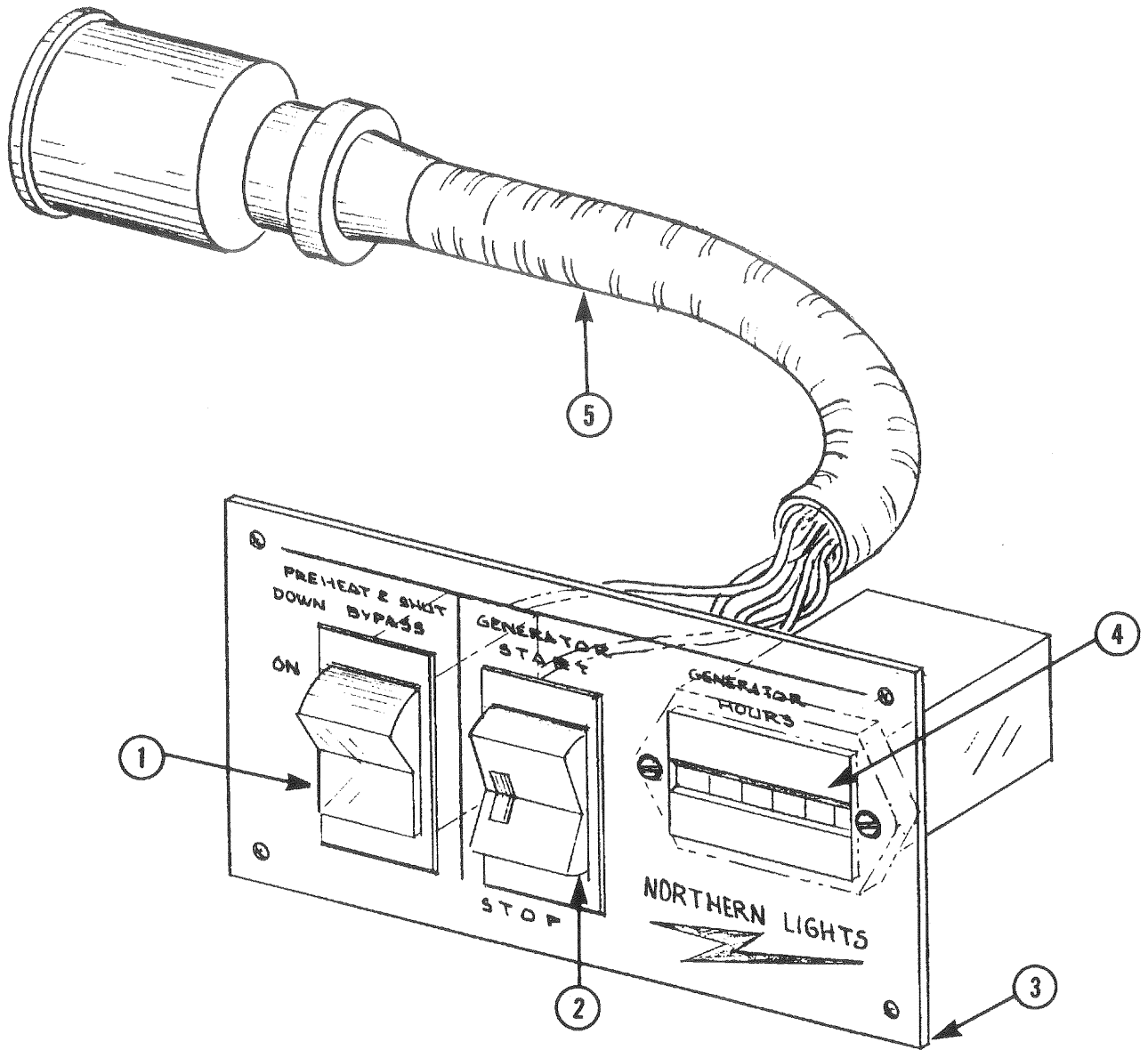
**Control Panel / Relay Board: Industrial Application**



A-6432 / C-2911

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-98405	1	Control Panel / Relay Board (includes all Keys)	-
1	28-90004	1	Plate	-
2	22-41032	4	Relay Base	-
3	22-42047	4	Relay, SPDT	-
4	22-40018	1	Circuit Breaker 10 Amp	-
5	22-40193	1	Terminal Board	-
6	28-41060	1	Diode	-
7	22-00063	1	Number Strip	-
8	00-40013	1	Label	-
9	22-90007	1	Preheat / Shutdown - Bypass Switch	-
10	22-90008	1	Engine Control Switch	-
11	22-90009	1	Hour Meter	-
12	22-40019	1	Wire Harness	-
13	12-00093	2	Machine Screw, Round Head, Phillips #6-32 x 1/2"	-
14	14-00002	4	Hex Nut #6-32	-
15	12-00005	4	Machine Screw, Binding Head, Slotted #8-32 x 3/4"	-
16	12-00004	2	Machine Screw, Binding Head, Slotted #8-32 x 3/8"	-
17	14-00000	4	Hex Nut #8-32	-
18	15-00001	2	Flat Washer #8	-
19	14-00003	2	Hex Nut, Nylock #8-32	-
20	15-00009	4	Lock Washer #6	-
21	15-00000	2	Lock Washer #8	-

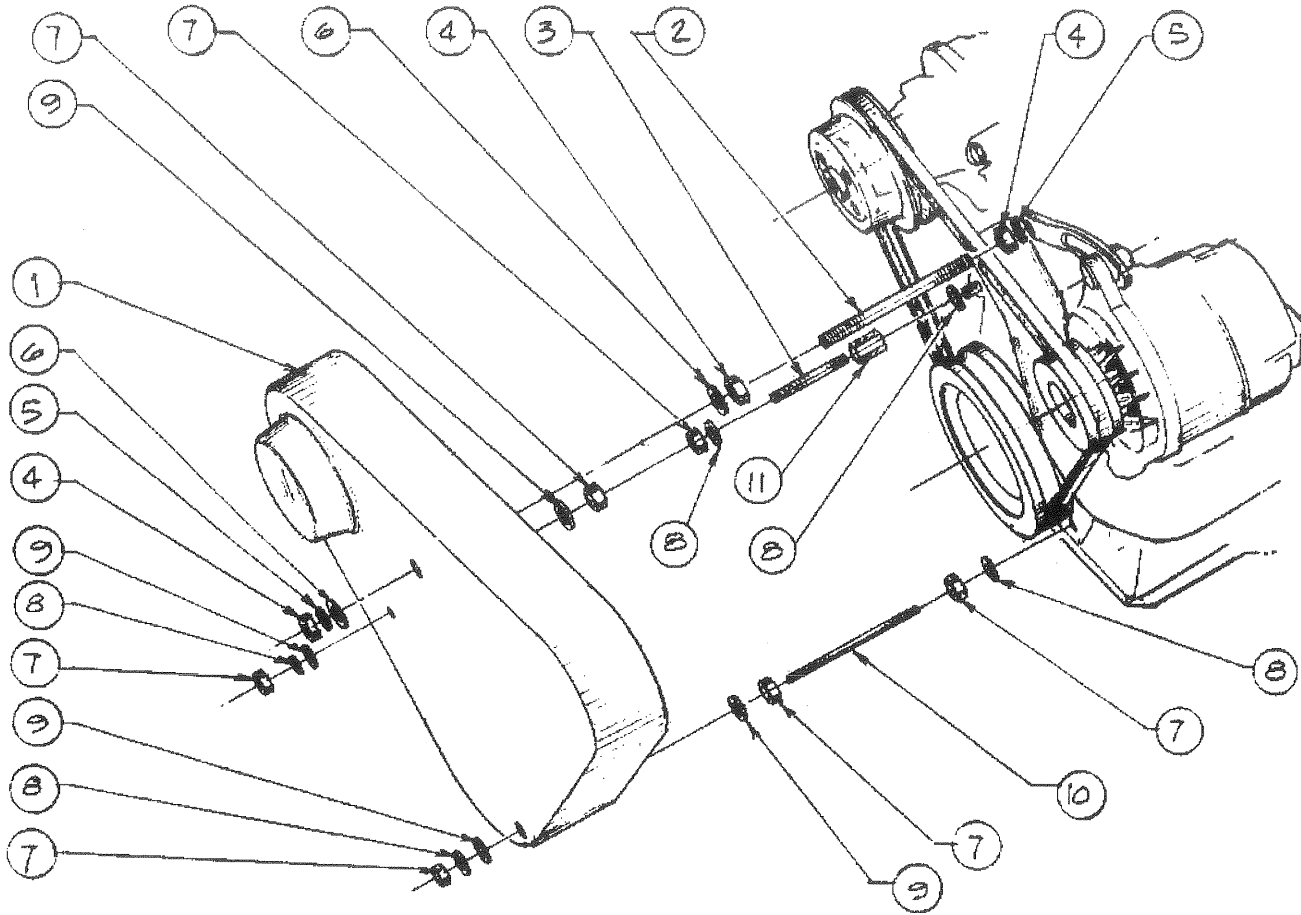
**Series 1-B Control Panel: 12 & 24 Volt**



A-4791, A-3171 / C-1911

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-90006	1	Series 1-B Control Panel - 12 Volt	} Includes all keys -
••	22-95430	1	Series 1-B Control Panel - 24 Volt	
1	22-90007	1	Preheat / Shutdown - Bypass Switch	-
2	22-90008	1	Engine Control Switch with Lamp 12 Volt	-
3	28-90003	1	Series 1-B Face Plate	-
4	22-90009	1	Hour Meter	-
5	22-40019	1	Wire Harness	-
6	22-40012	1	Resistor 200 Ohm, 24 Volt Only (not shown)	-

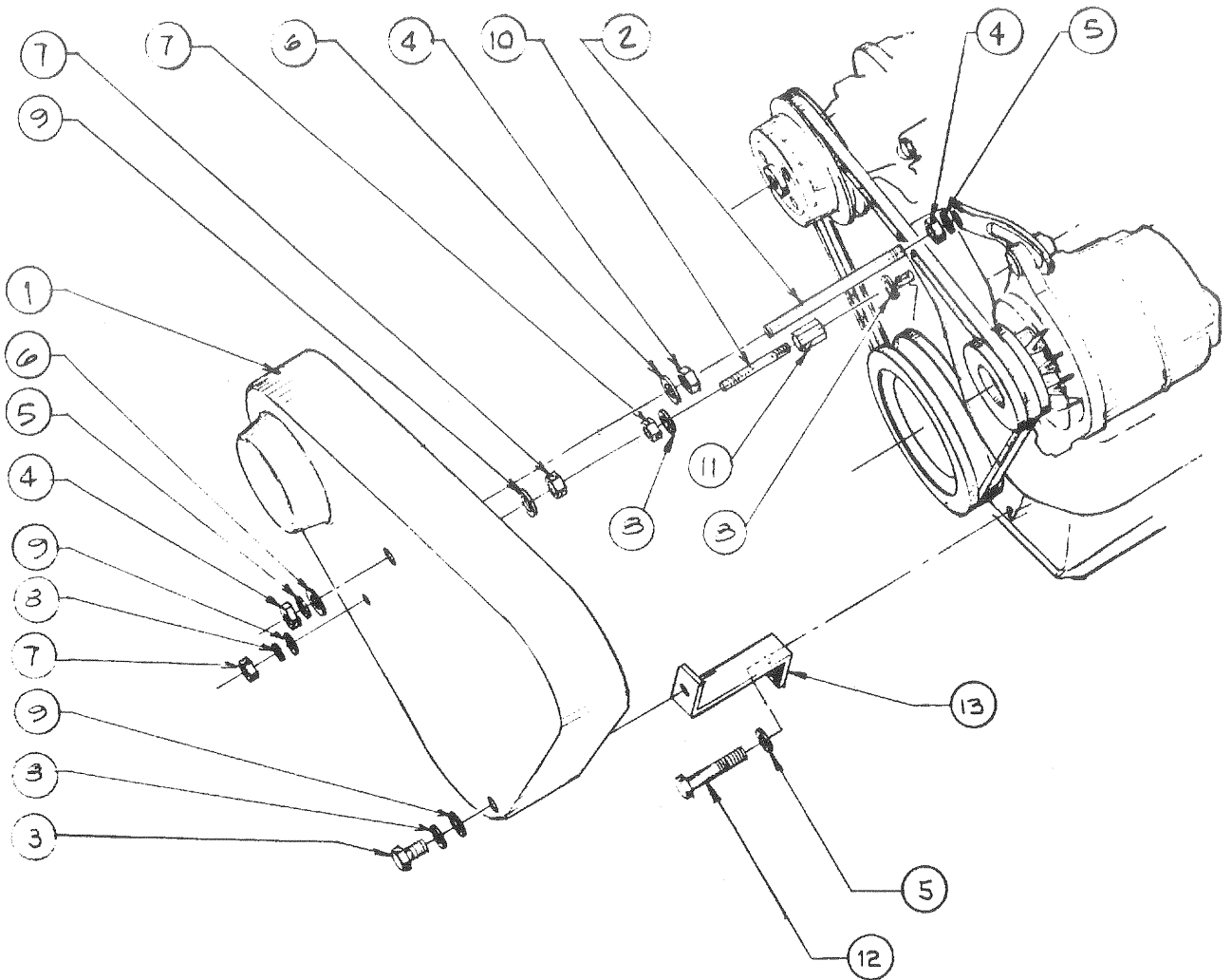
**Belt Guard Assembly: M844 & M16C**



A-5004 / B-3986

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-73143	1	Belt Guard (vacuu-formed plastic)	-
2	13-03101	1	Stud, All Thread M8 x 1.25 x 110mm	-
3	13-03102	1	Stud, All Thread M6 x 1.0 x 140mm	-
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 70mm	-
11	14-73100	1	Hex Nut, X-L M6 x 1.0 x 19mm	-
12	23-78403	**	Bracket - Standard Alternator (not shown)	-
	23-78402	**	Bracket - Optional Large Frame Alternator (not shown)	-
**As Required.				

**Belt Guard Assembly: M844L & M20CL**



A-6321 / B-4533

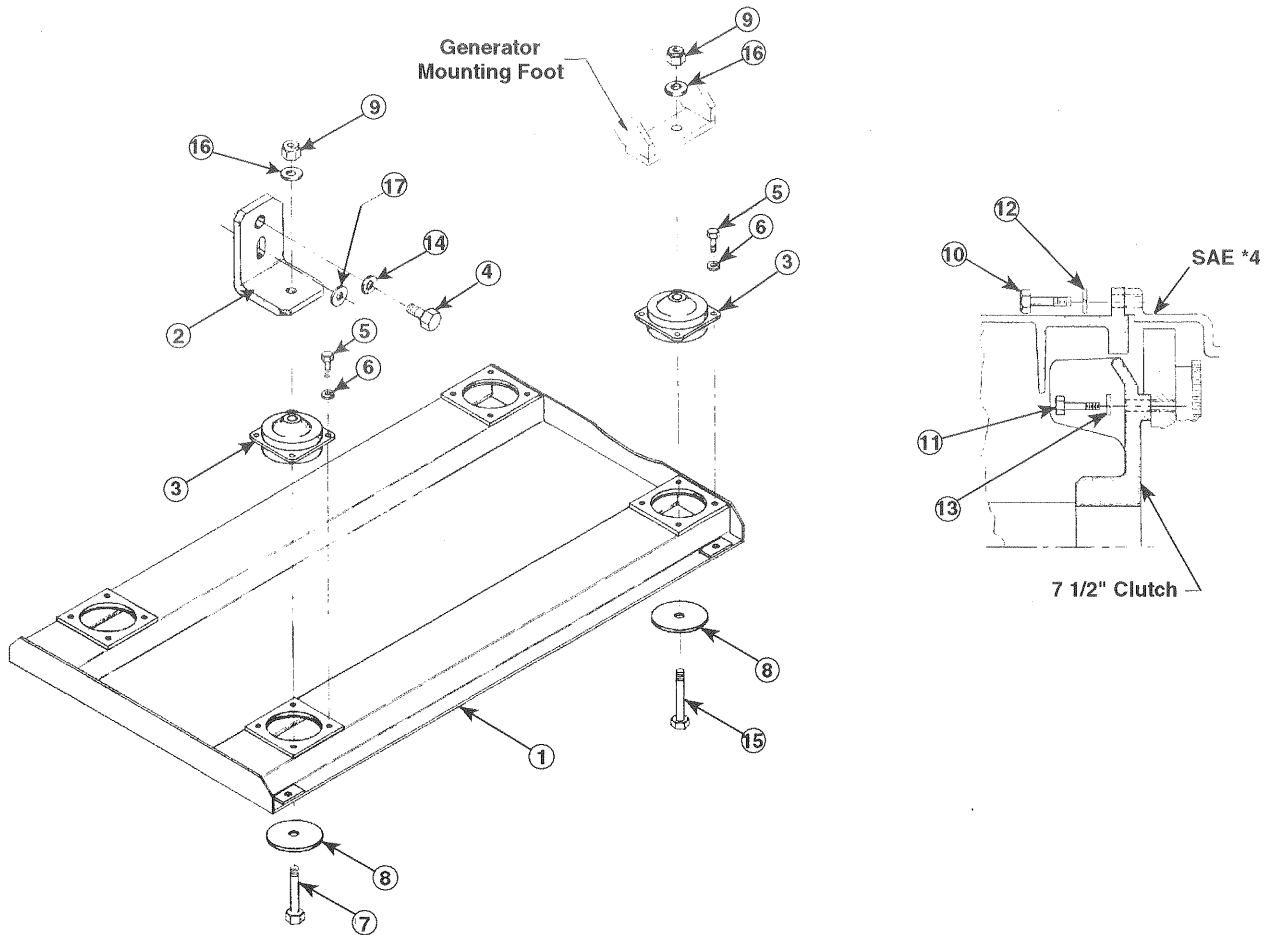
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-73143	1	Belt Guard (vacuu-formed plastic)	-
2	13-03101	1	Stud, All Thread M8 x 1.25 x 110mm	-
3	12-00062	1	CapscREW, Hex Head M8 x 1.25	-
4	14-00711	2	Hex Nut M8 x 1.25	-
5	15-00702	2	Lock Washer M8	-
6	15-00701	2	Flat Washer M8	-
7	14-01131	3	Hex Nut 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 70mm	-
11	14-73100	1	Hex Nut, X-L M6 x 1.0 x 19mm	-
12	12-01124	1	CapscREW, Hex Head M6 x 1.0 x 50mm	-
13	23-78401	1	Bracket	-
14	23-78403	**	Bracket - Standard Alternator (not shown)	-
	23-78402	**	Bracket - Optional Large Frame Alternator (not shown)	-
			**As Required.	

GROUP 6 – GASKET SETS

<b>Gasket Sets</b>				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
**	29-08100	1	Gasket Set – Marine (includes all keys)	-
**	195906940	1	Gasket Set – Industrial (includes keys 1-45)	-
1	052100400	1	O-Ring	-
2	052109072	1	O-Ring	-
3	052109076	2	O-Ring	-
4	052109074	1	O-Ring	-
5	198996060	7	Gasket	-
6	135996480	1	Gasket	-
7	135996600	1	Gasket	-
8	198636170	1	Oil Seal	-
9	050209083	1	Oil Seal	-
10	052100100	2	O-Ring	-
11	052100150	1	O-Ring	-
12	025100012	2	Seal Washer	-
13	131426200	4	Gasket	-
14	130326051	5	Gasket	-
15	130516069	4	Gasket	-
16	131296255	2	Gasket	-
17	025100008	2	Seal Washer	-
18	025100016	1	Seal Washer	-
19	130996070	1	Gasket	-
20	131426320	1	Shim Set	-
21	025100010	2	Seal Washer	-
22	145996360	1	Gasket	-
23	145996370	1	Gasket	-
24	145996460	1	Gasket	-
25	165996361	1	Gasket	-
26	165996351	1	Gasket	-
27	052100070	1	O-Ring	-
28	052100050	1	O-Ring	-
29	198636160	1	Oil Seal	-
30	052300600	1	O-Ring	-
31	052300700	1	O-Ring	-
32	052100030	1	O-Ring	-
33	165996110	1	Gasket	-
34	135996720	1	Gasket	-
35	135996780	1	Gasket	-
36	135996550	1	Gasket	-
37	135996530	1	Gasket	-
38	120406050	4	Valve Guide Seal (Ex)	-
39	120406070	4	Valve Guide Seal (In)	-
40	111147200	1	Head Gasket	-
41	111147460	1	Head Gasket	-
42	054109013	1	Gasket	-
43	052300400	1	O-Ring	-
44	110996600	1	Gasket	-
45	145996050	1	Gasket	-
46	11-28101	1	Air Intake Cover Gasket	-
47	11-38101	1	Exhaust Manifold Gasket	-
48	11-13101	1	Thermostat Cover Gasket	-
49	16-13101	1	O-Ring	-

**Base Frame Assembly: M - ML844 & 844L**

282/283 & 306/307 Frame Generators

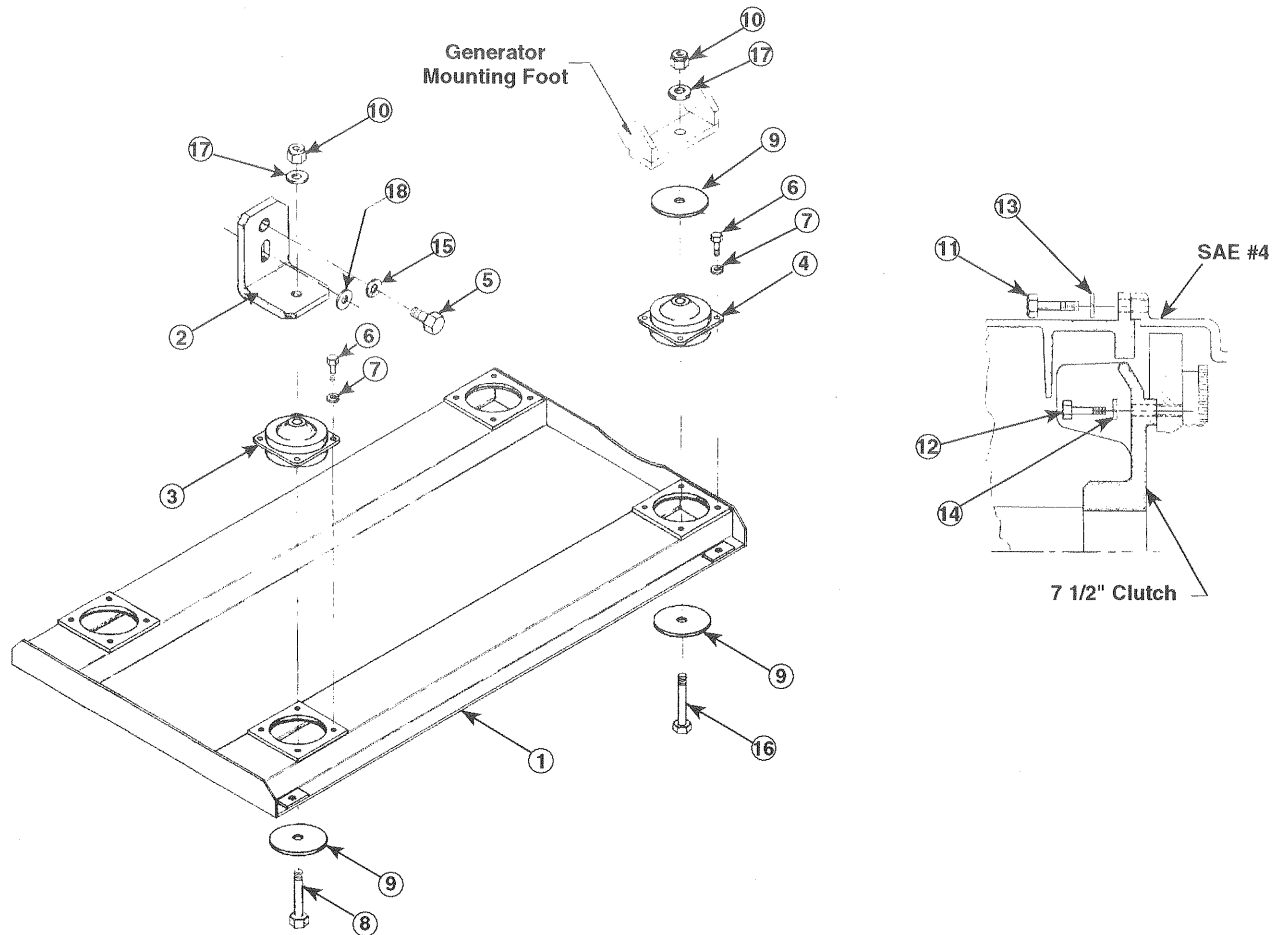


A-6660 & A-6255 / C-2885A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88401	1	Base Frame, Steel	-
	39-88402	1	Base Frame, Aluminum	-
2	23-88103	2	Bracket	-
3	33-82205	4	Platform Mount (without PTO – front & rear)	-
	33-83106	2	Platform Mount (with PTO – front only)	-
4	12-01100	4	Cap screw, Hex Head M14 x 1.5 x 30mm	-
5	12-00776	16	Cap screw, Hex Head M8 x 1.25 x 20mm Stainless Steel	-
6	12-00705	16	Lock Washer M8, Stainless Steel	-
7	12-00502	2	Cap screw, Hex Head 1/2-13 x 3-1/2" Stainless Steel (without PTO)	-
	12-00503	2	Cap screw, Hex Head 1/2-13 x 3-3/4" Stainless Steel (with PTO)	-
8	15-00020	4	Snubbing Washer	-
9	14-00501	4	Hex Nut, Nylock 1/2-13 Stainless Steel	-
10	12-00313	12	Cap screw, Hex Head 3/8-16 x 1-1/4" (306/307 Frame Generators)	-
	12-00314	12	Cap screw, Hex Head 3/8-16 x 1-1/2" (282/283 Frame Generators)	-
11	12-00214	8	Cap screw, Hex Head 5/16-18 x 1-1/2" (306/307 Frame Generators)	-
	12-00209	8	Cap screw, Hex Head 5/16-18 x 3/4" (282/283 Frame Generators)	-
12	15-00302	12	Lock Washer 3/8	-
13	15-00202	8	Lock Washer 5/16	-
14	15-01402	4	Lock Washer M14	-
15	12-00503	2	Cap screw, Hex Head 1/2-13 x 3-3/4" Stainless Steel	-
16	15-00505	4	Flat Washer 1/2 Stainless Steel	-
17	15-01401	2	Flat Washer M14	-

**Base Frame Assembly: MY844 & 844L**

**184 Frame Generators**



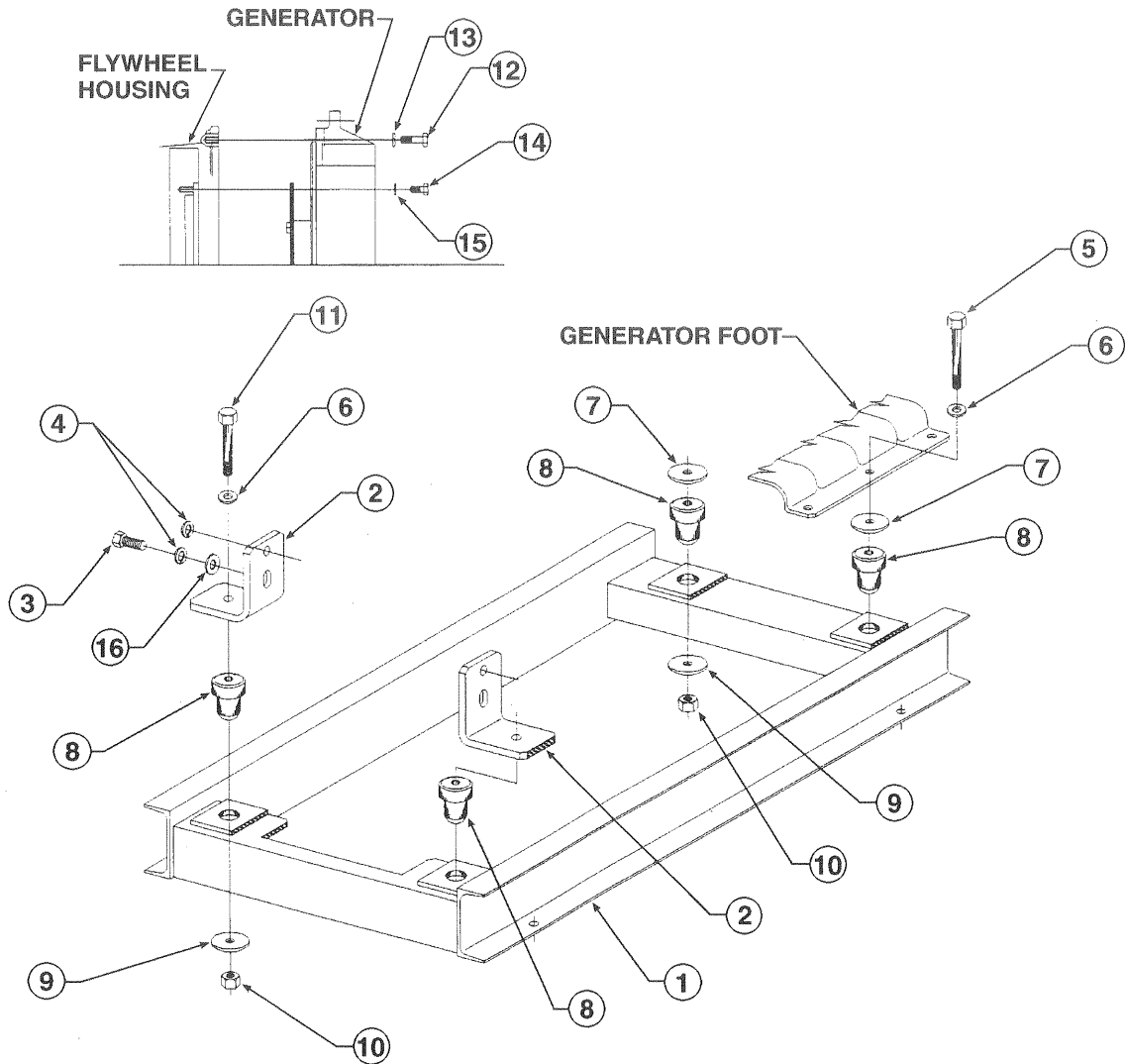
A-6719 & A-6678

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88403	1	Base Frame, Steel	-
	39-88404	1	Base Frame, Aluminum	-
2	23-88103	2	Bracket	-
3	33-82205	2	Platform Mount (without PTO)	-
	33-83106	2	Platform Mount (with PTO)	-
4	33-82206	2	Platform Mount	-
5	12-01100	4	Capscrew, Hex Head M14 x 1.5 x 30mm	-
6	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20mm Stainless Steel	-
7	12-00705	16	Lock Washer M8, Stainless Steel	-
8	12-00502	2	Capscrew, Hex Head 1/2-13 x 3-1/2" Stainless Steel	-
	12-00503	2	Capscrew, Hex Head 1/2-13 x 3-3/4" Stainless Steel	-
9	15-00020	6	Snubbing Washer	-
10	14-00501	4	Hex Nut, Nylock 1/2-13 Stainless Steel	-
11	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
12	12-00214	8	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
13	15-00302	8	Lock Washer 3/8	-
14	15-00202	8	Lock Washer 5/16	-
15	15-01402	4	Lock Washer M14	-
16	12-00503	2	Capscrew, Hex Head 1/2-13 x 3-1/2" Stainless Steel	-
17	15-00505	4	Flat Washer 1/2 Stainless	-
18	15-01401	2	Flat Washer M14	-
19	00-71614	2	Grommet 1-5/8"ID x 2-1/4"OD	-



**Base Frame Assembly: M16C & M20CL**

184 Frame Generators

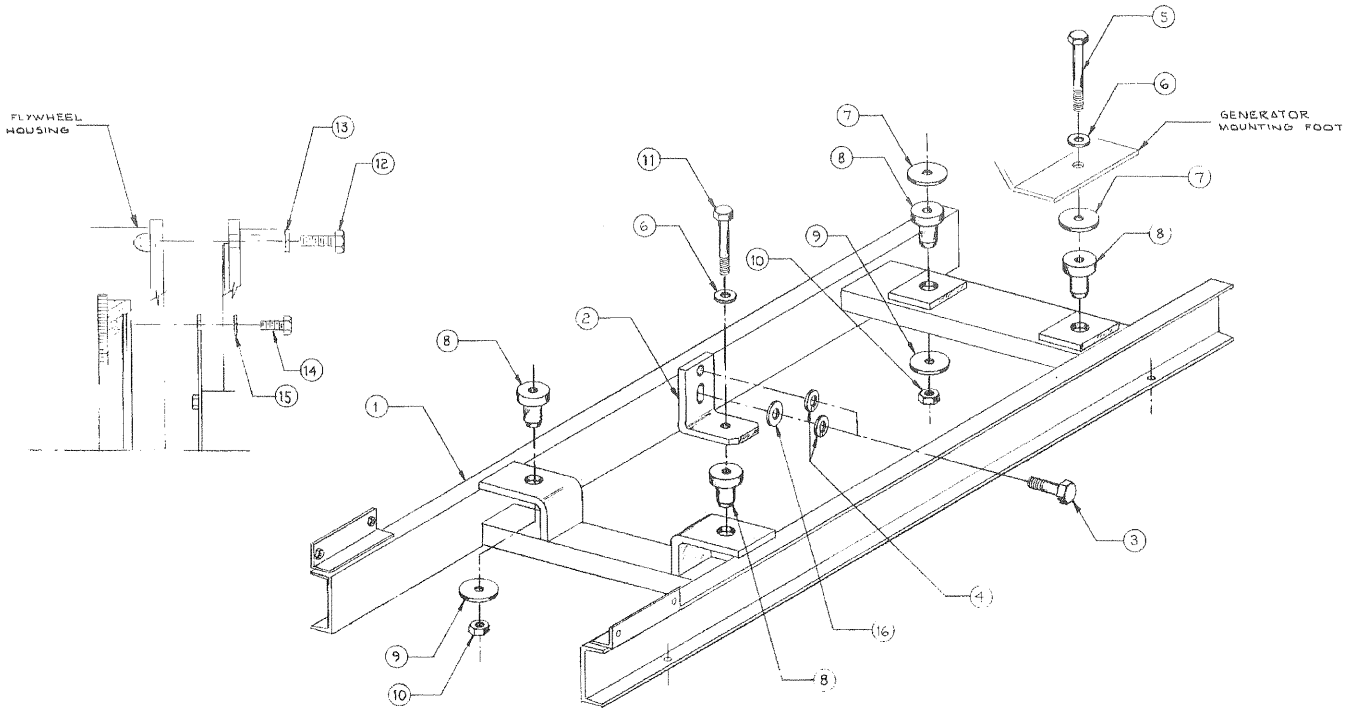


A-6427 / D-2458

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88106	1	Base Frame	-
2	23-88103	2	Bracket	-
3	12-01100	4	Capscrew, Hex Head M14 x 1.5 x 30mm	-
4	15-01402	4	Lock Washer M14	-
5	12-00552	2	Capscrew, Hex Head 1/2-13 x 3-1/2"	-
6	15-00504	4	Flat Washer 1/2 SAE	-
7	15-00016	2	Head Washer	-
8	33-82254	4	Mount	-
9	15-00026	4	Tail Washer	-
10	14-00512	4	Hex Nut, Nylock 1/2-13	-
11	12-00550	2	Capscrew, Hex Head 1/2-13 x 3	-
12	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4	-
13	15-00302	8	Lock Washer M3/8	-
14	12-00209	8	Capscrew, Hex Head 5/16-18 x 3/4	-
15	15-00202	8	Lock Washer 5/16	-
16	15-01410	2	Flat Washer M14	-

**Base Frame Assembly: NL844 & NL844L**

184 & UC Frame Generators

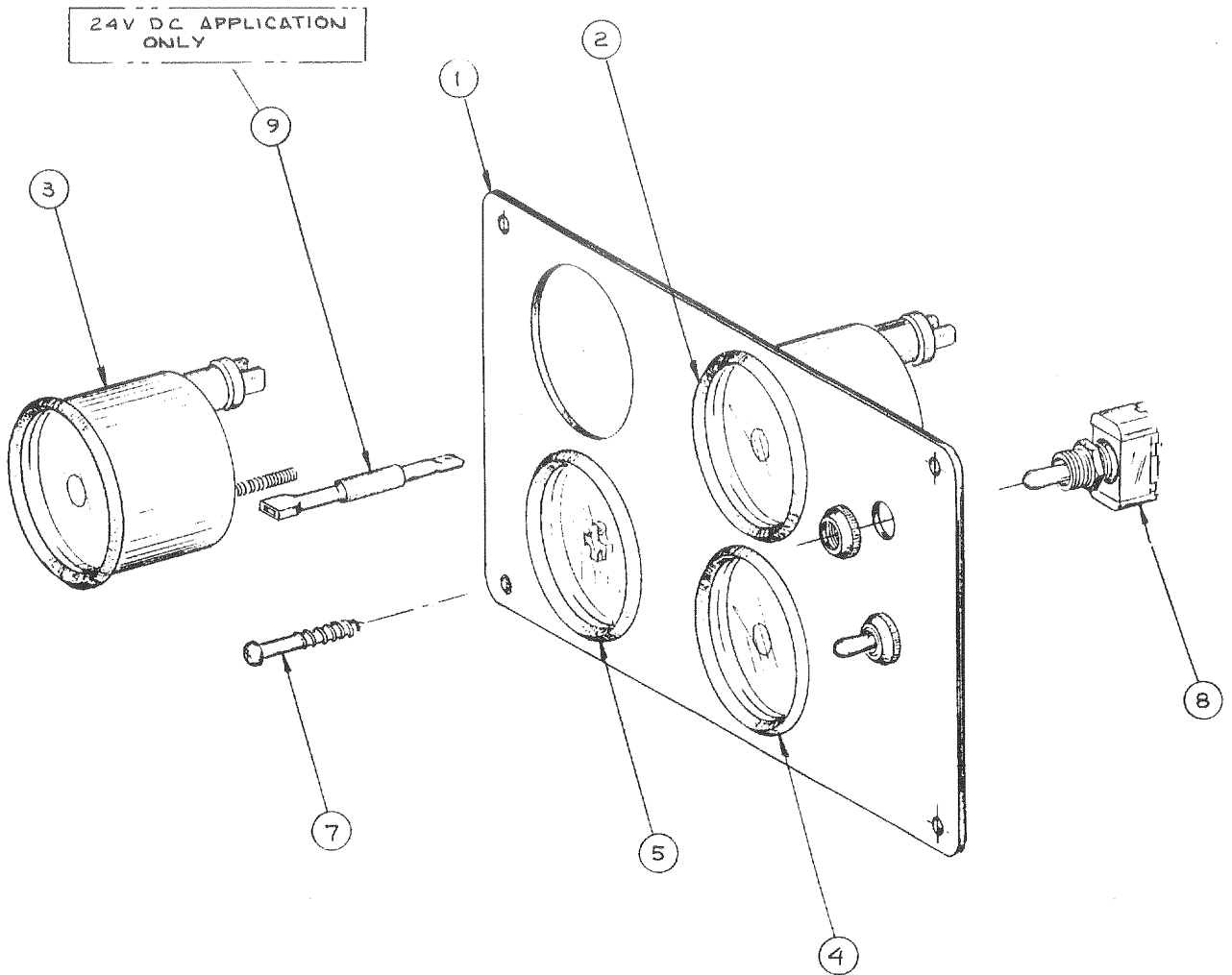


A-6383, A-6307 / D2452

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88104	1	Base Frame (BC184 frame generator)	-
	39-88103	1	Base Frame (UC184 frame generator)	-
2	23-88103	2	Bracket	-
3	12-01100	4	Capscrew, Hex Head M14 x 1.5 x 30mm	-
4	15-01402	4	Lock Washer M14	-
5	12-00552	2	Capscrew, Hex Head 1/2-13 x 3-1/2"	-
6	15-00504	4	Flat Washer 1/2" SAE	-
7	15-00016	2	Head Washer	-
8	33-82254	4	Mount	-
9	15-00026	4	Tail Washer	-
10	14-00512	4	Hex Nut, Nylock 1/2-13	-
11	12-00550	2	Capscrew, Hex Head 1/2-13 x 3"	-
12	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
13	15-00302	8	Lock Washer 3/8	-
14	12-00209	8	Capscrew, Hex Head 5/16-18 x 3/4"	-
15	15-00202	8	Lock Washer 5/16	-
16	15-01401	2	Flat Washer M14	-

**Flush Mount Dual Station Control Panel 12 & 24 Volt**

VDO Standard Line Black Bezel Gauges



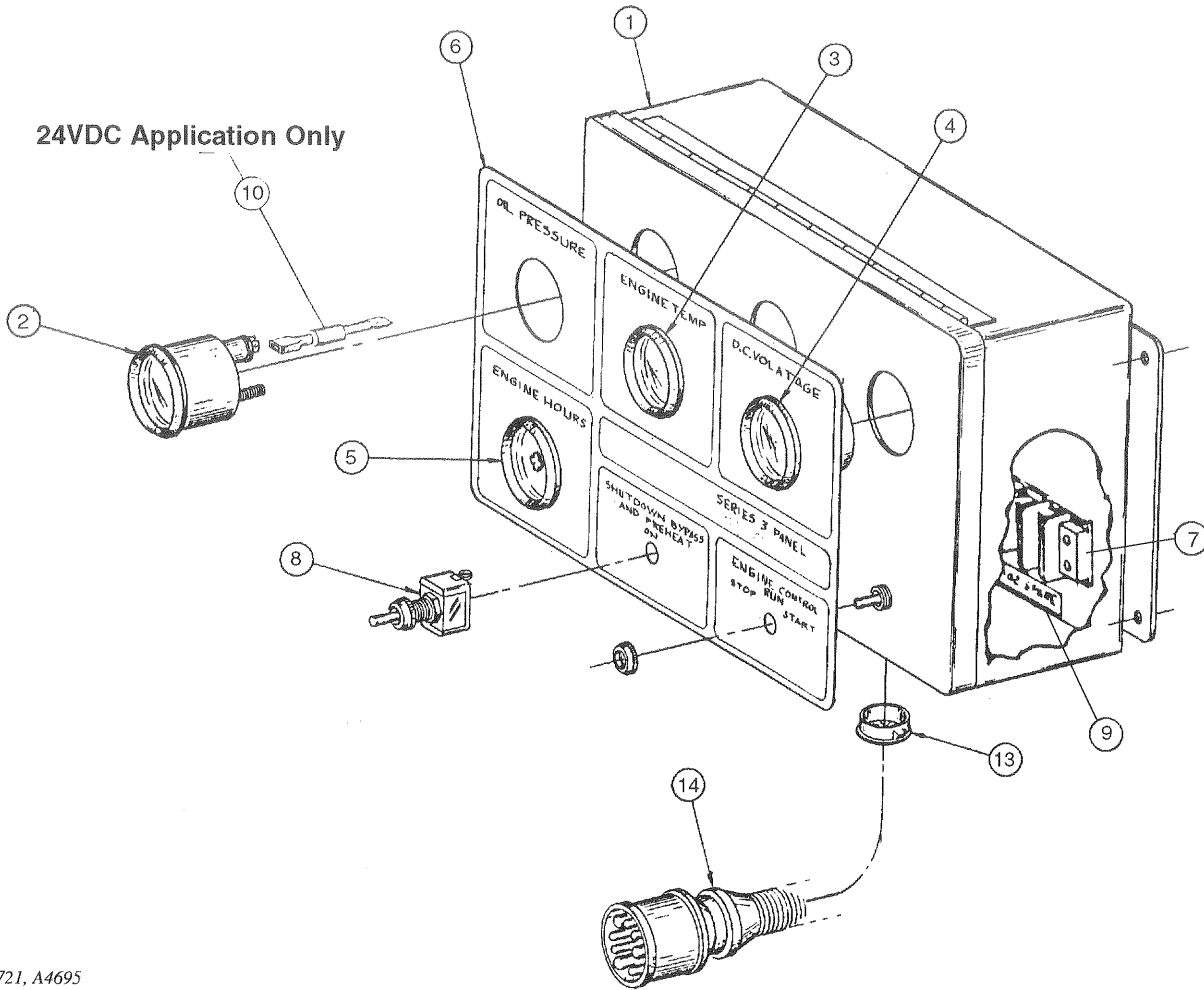
A-4732, A-4597 / C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
**	22-92015	1	S-3C Control Panel, 12 Volt	-
**	22-92014	1	S-3C Control Panel, 24 Volt	-
1	28-90010	1	Panel Plate	-
2	37-40010	1	Oil Pressure Gauge, 0-80 PSI	-
3	37-40011	1	Engine Temperature Gauge, 0-250° F	-
4	37-40012	1	DC Voltmeter, 12 Volt	-
	37-40014	1	DC Voltmeter, 24 Volt	-
5	37-40013	1	Hourmeter	-
6	22-42024	1	Panel Wire Harness (not shown)	-
7	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch	-
9	22-40004	2	Resistor Kit (24 volt panel only)	-
10	22-44852	**	12 Volt Bulb	-
	22-44853	**	24 Volt Bulb	-
			**As Required.	

GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT

**Surface Mount Dual Station Control Panel 12 & 24 Volt**

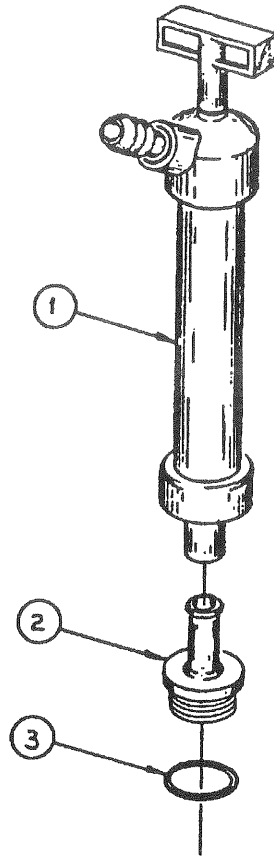
VDO Standard Line Black Bezel Gauges



A4721, A4695  
A4722, A4723 / C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
**	22-92031	1	S-3B Control Panel, 12 Volt	-
**	22-95420	1	S-3B Control Panel, 24 Volt	-
			} (includes all Keys)	
1	39-40008	1	Enclosure	-
2	37-40010	1	Oil Pressure Gauge, 0-80 PSI	-
3	37-40011	1	Engine Temperature Gauge, 0-250° F	-
4	37-40012	1	DC Voltmeter, 12 Volt	-
	37-40014	1	DC Voltmeter, 24 Volt	-
5	37-40013	1	Hourmeter	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Board	-
8	22-41051	2	Toggle Switch	-
9	22-00052	1	Number Strip	-
			} (not shown)	
10	22-40004	2	Resistor Kit (24 volt panel only)	-
11	22-44852	**	12 Volt Bulb	-
	22-44853	**	24 Volt Bulb	-
			} (not shown)	
12	22-40257	1	Wire Harness	-
13	00-41015	1	Plastic Bushing	-
14	22-40062	1	Connection Harness	-
			**As Required.	

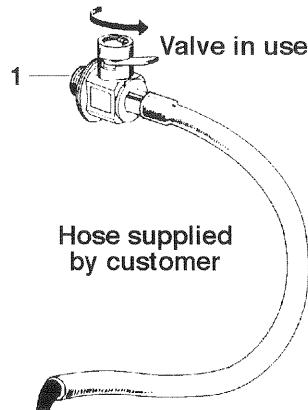
**Oil Drain Kit: M844, M844L & M20CL**



A-5024 / B-3990

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	34-70010		Oil Drain Kit Complete (includes all Keys)	-
1	36-72002	1	Hand Pump	-
2	31-70001	1	Adapter, Oil Drain	-
3	16-70001	1	O-Ring	-

**Oil Drain Kit: NL844L**

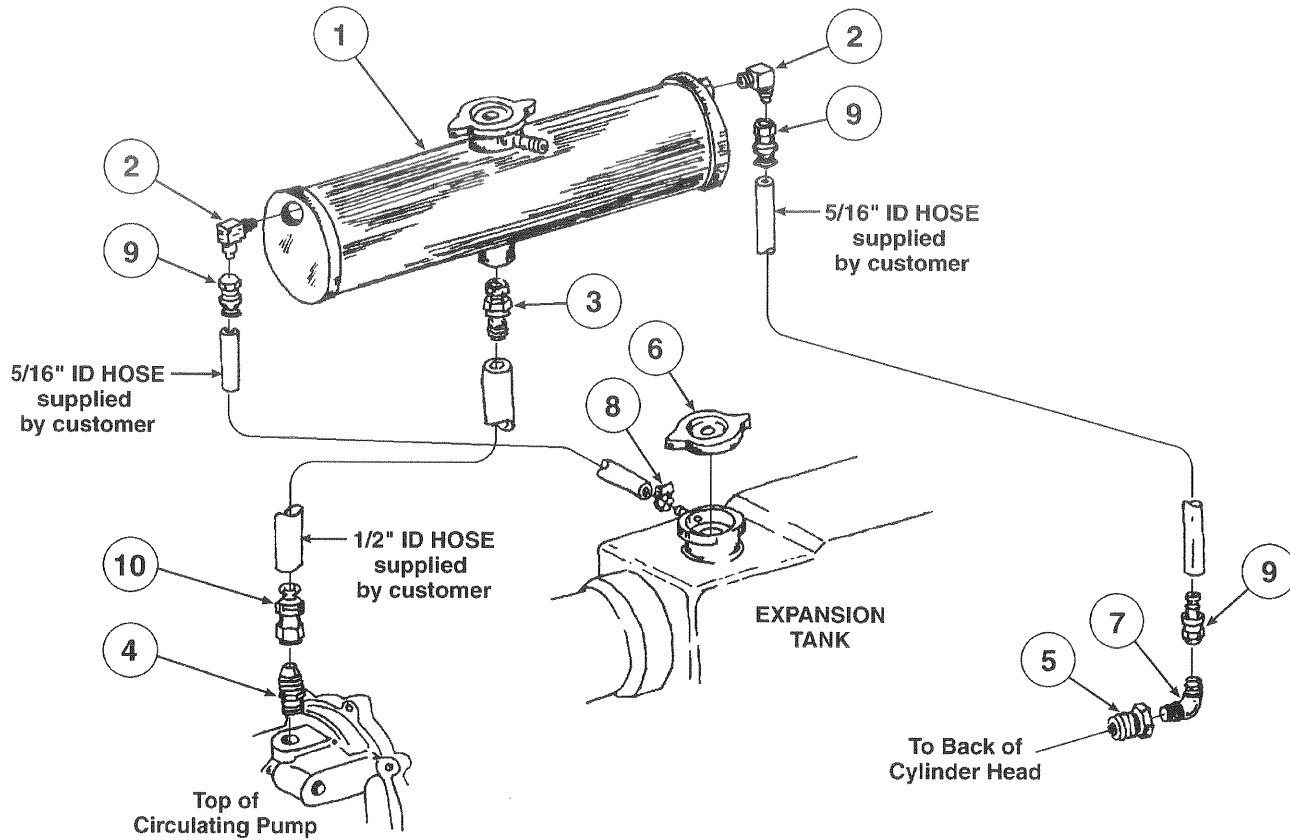


A-6480

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

## Remote Expansion Tank

Early Production

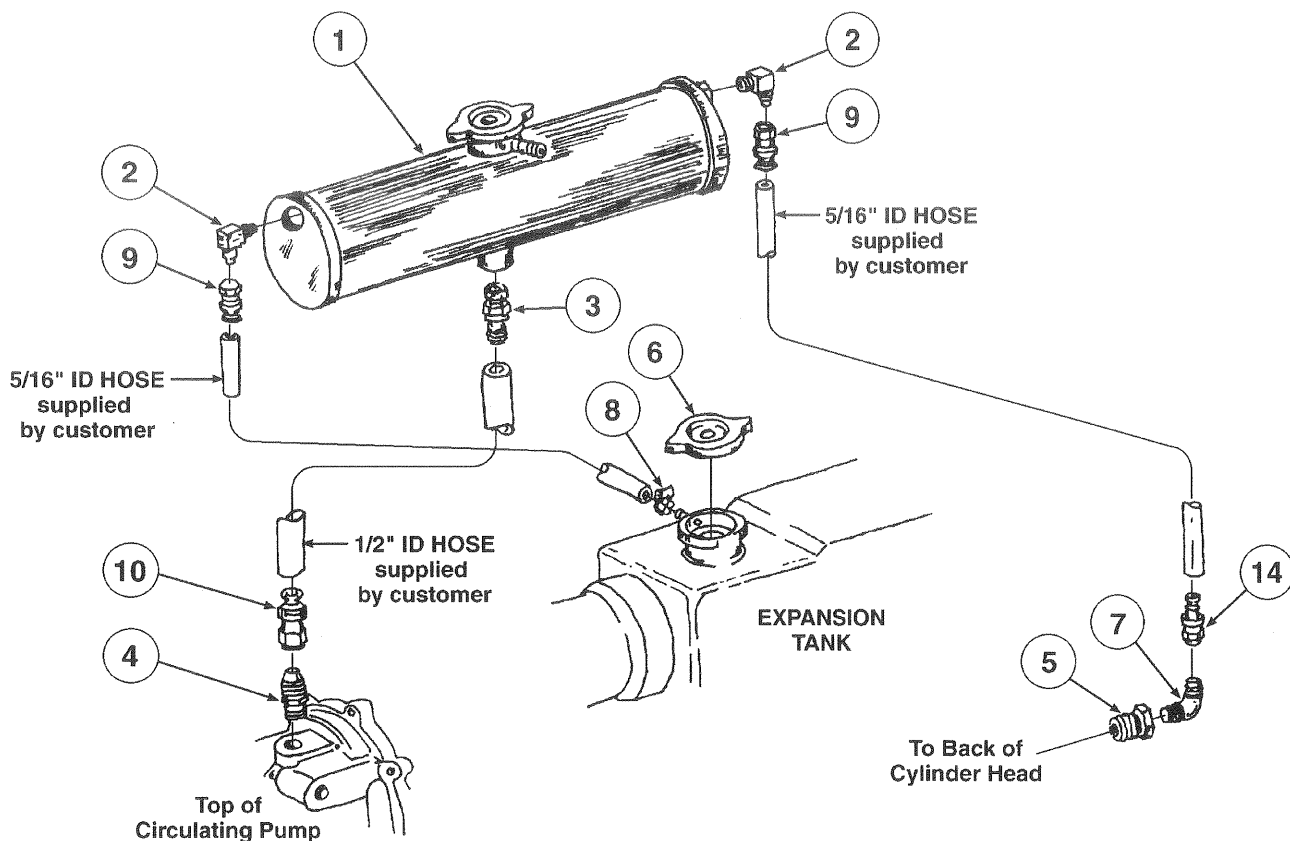


A-5931A / D-2345

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	21-65005	1	Bushing, Steel 1" NPT x 3/8 NPT	-
6	21-12008	1	Filler Cap	-
7	21-01013	1	Male Elbow, 90° Brass 3/8 NPT x 5/16-45T	-
8	19-00004	1	Hose Clamp #4	-
9	21-71056	3	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.	-
12	19-00064	2	Hose Clamp	-

**Remote Expansion Tank**

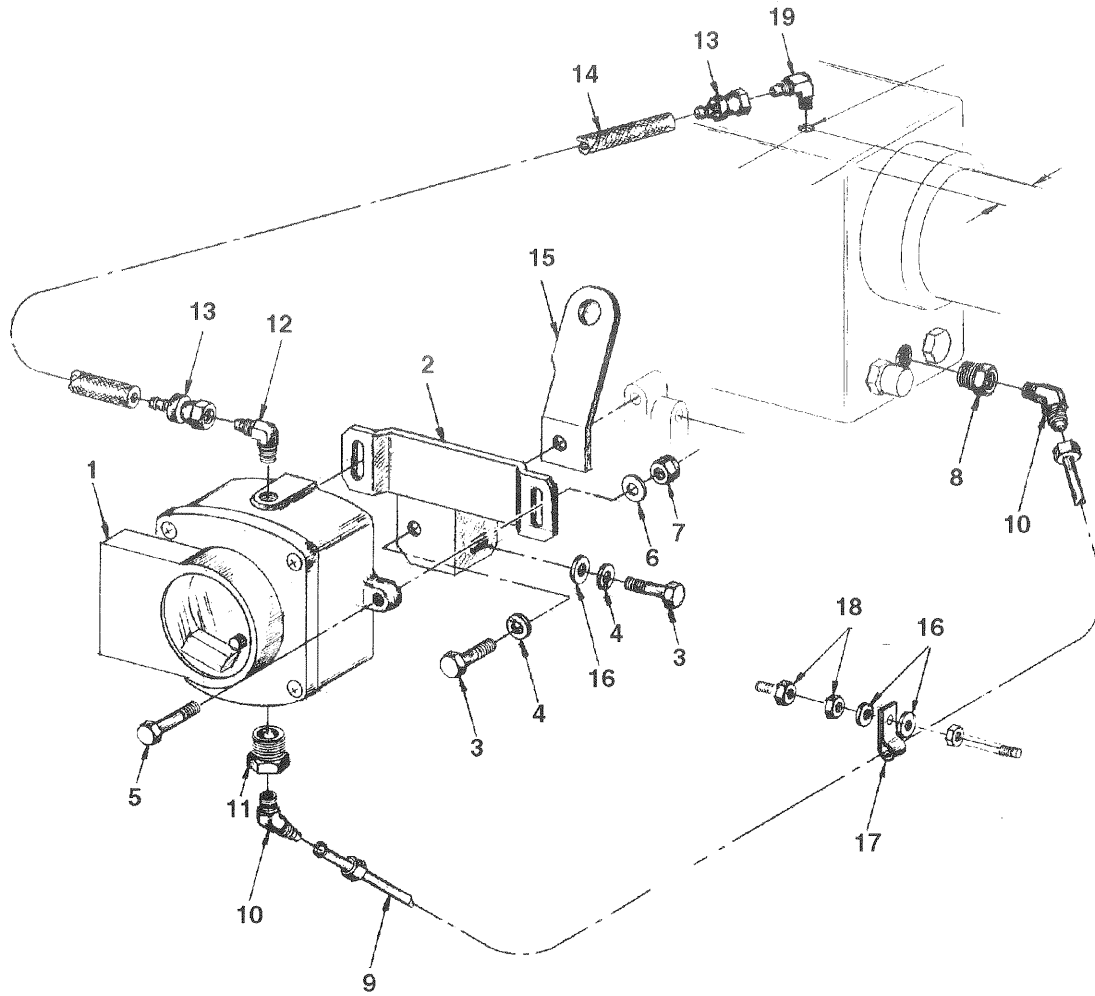
Late Production



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	19-00004	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.	-
12	19-00064	2	Hose Clamp #64	-
13	16-15010	1	O-Ring	-
14	21-70007	1	Female Swivel, Brass 5/16 HB x 5/16-37T	-

**Low Water Level Switch/Gauge**



A-5847 / C-2837

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10003	1	Water Level Switch / Gauge, Isolated Ground	-
2	23-73106	1	Bracket	-
3	12-00712	2	Capscrew, Hex Head M8 x 1.25 x 25mm	-
4	15-00702	2	Lock Washer, Helical M8	-
5	12-00031	2	Capscrew, Hex Head M6 x 1.0 x 25mm	-
6	15-00008	2	Flat Washer M6	-
7	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
8	21-00010	1	Bushing, Steel 3/8NPT x 1/4NPT	-
9	27-13101	1	Tube Assembly	-
10	21-05404	1	Male Elbow, 45° Steel 1/4NPT x 1/4-37T	-
11	21-00135	1	Bushing, Brass 1/2NPT x 1/4NPT	-
12	21-71049	1	Male Elbow, 90° Steel 1/4NPT x 1/4-37T	-
13	31-80002	2	Female Swivel, 1/4HB x 1/4-37T	-
14	18-52205	1	Hose 1/4"ID x 13"	-
15	00-73146	1	Lifting Eye	-
16	15-00701	3	Flat Washer M8	-
17	19-72251	1	Adelle Clamp	-
18	14-00711	2	Hex Nut M8 x 1.25	-
19	21-71053	1	Male Elbow 90° Steel 1/8NPT x 1/4-37T	-



**Notes:**

[Empty rectangular area for notes]

**GROUP 9 – ACCESSORIES & OPTIONAL EQUIPMENT**

**Notes:**



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