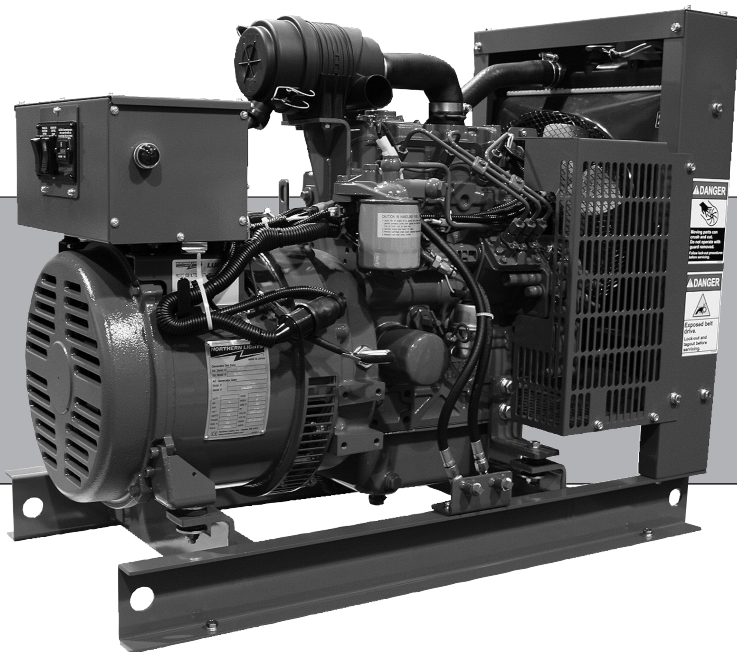




PARTS MANUAL

P773-4

For Models: NL773LW4 and NL773LW4E



www.northern-lights.com

**ULTRA LOW
SULFUR FUEL
ONLY**

RE529956

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

ULTRA LOW SULFUR FUEL ONLY

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



— CALIFORNIA —
Proposition 65 Warning:

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

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

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

Northern Lights

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PART NO.: P773-4 04/20



PARTS CATALOG

for Model

NL773LW4 & NL773LW4E

Please read thoroughly before attempting to use this manual:

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Proprietary Information

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Model Designation

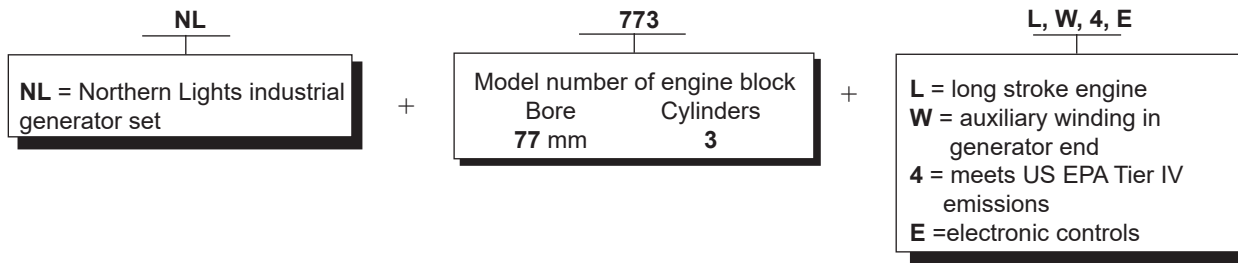
MODELS INCLUDED

This manual covers the parts and components used in:

NL773LW4 & NL773LW4E

Model Numbers

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



NL773LW4E = Northern Lights industrial diesel generator set with an 773 engine and a PX-309K2 Aux winding generator, Tier 4 & Electrical Control.

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.



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.

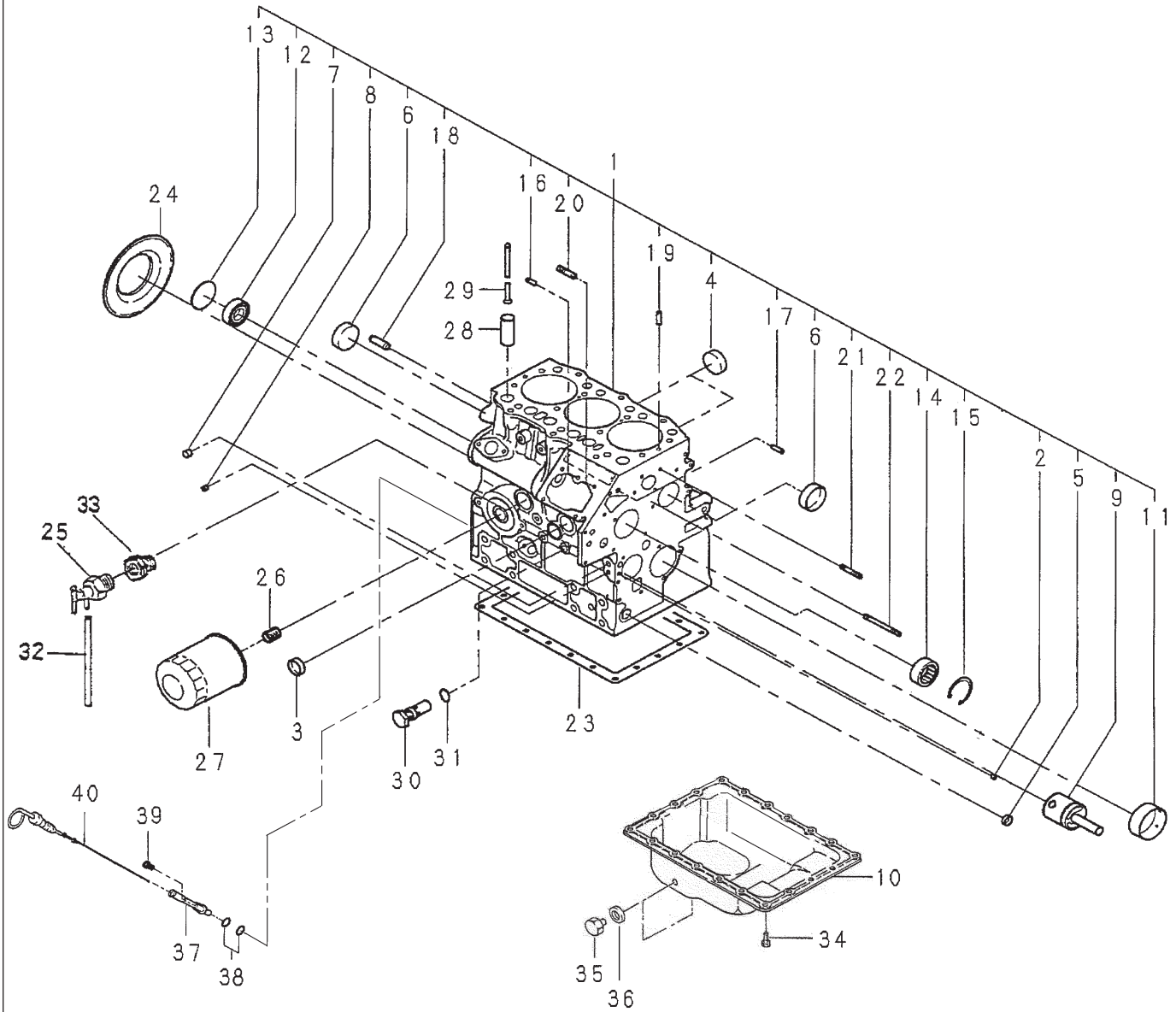
KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
0	185046210	1	Alternator Assembly	-
1	185446219	1	Flywheel, complete	-
2	185446217	1	Plate, complete	-
3	185716200	1	Plate	-
4	185446218	1	Stator, complete	-
5	040126210	2	Bearing	-
6	020210010	1	Nut	-
7	027100010	1	Spring washer	-
8	026100010	1	Washer	-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

REFERENCES:

- | | |
|--|--|
| 1. Grouping section title. | 7. Quantity of parts used. |
| 2. Model designation of equipment that uses parts listed on this page. | 8. Description of each component part. |
| 3. Title and description of assembly. | 9. Serial number of unit the part fits. |
| 4. Drawing numbers that correspond to key column numbers for parts identification. | 10. Assembly or kit designated by •• or •. |
| 5. Key column for locating parts shown on drawing. | 11. Grouping index number. |
| 6. Part 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 - NL773LW4

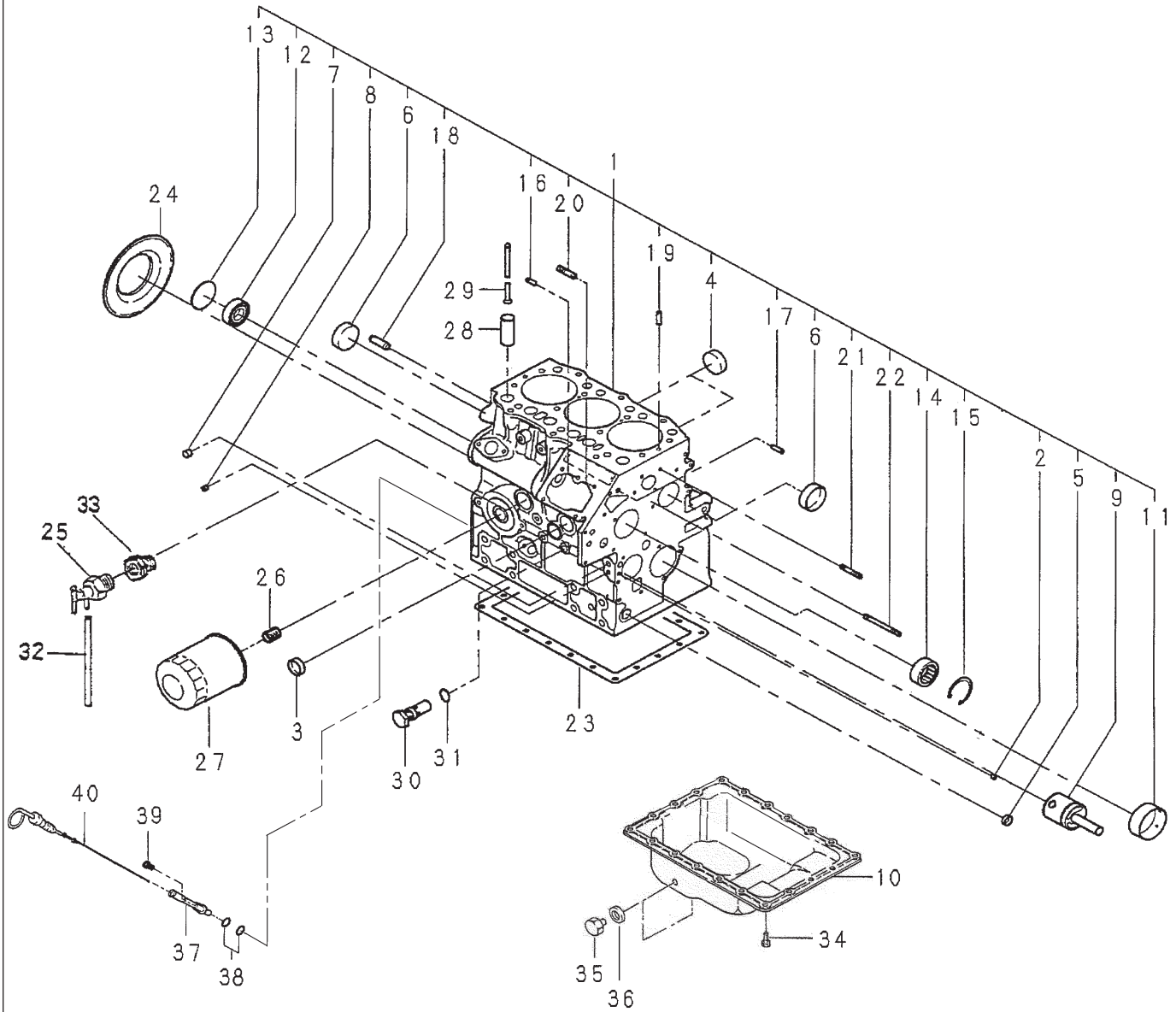


NL773cylblock

Cylinder Block Assembly - NL773LW4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110101520	1	Cylinder Block Assembly - (includes keys #2- 21)	-
2	198466050	1	Plug	-
3	064210025	1	Expansion Plug, 25 mm	-
4	064210035	2	Expansion Plug, 35 mm	-
5	064210015	1	Expansion Plug, 15 mm	-
6	064209055	2	Expansion Plug, 40 mm	-
7	198466010	4	Plug	-
8	198466030	4	Plug	-
9	165296142	1	Idle Gear Shaft	-
10	110701110	1	Oil Pan	-
11	198517592	1	Bushing, Standard	-
	198517596	1	Bushing, Undersize 0.25 mm	-
	198517599	1	Bushing, Undersize 0.50 mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug, 45 mm	-
14	042303015	1	Needle Bearing	-
15	036509005	1	Snap Ring	-
16	030500512	2	Dowel Pin	-
17	030500616	2	Dowel Pin	-
18	030501025	2	Dowel Pin	-
19	030309005	2	Spring Pin	-
20	012110620	2	Stud Bolt	-
21	012110635	1	Stud Bolt	-
22	012110660	1	Stud Bolt	-
23	110996800	1	Gasket	-
24	050209107	1	Oil Seal	-
25	198736050	1	Drain Cock	-
26	140546020	1	Filter Joint	-
27	24-02002	1	Oil Filter	-
28	120116160	6	Tappet	-
29	120456223	6	Push Rod	-
30	140036220	1	Relief Valve Assembly	-
31	052109078	1	O-ring	-
32	068115200	1	Tube	-
33	198486770	1	Bushing	-
34	010109235	20	Bolt	-
35	010109238	2	Plug	-
36	025100016	2	Seal Washer	-
37	110756490	1	Dipstick Tube	-
38	052109113	2	O-ring	-
39	011310612	1	Bolt	-
40	198416270	1	Dipstick	-

Cylinder Block Assembly - NL773LW4E

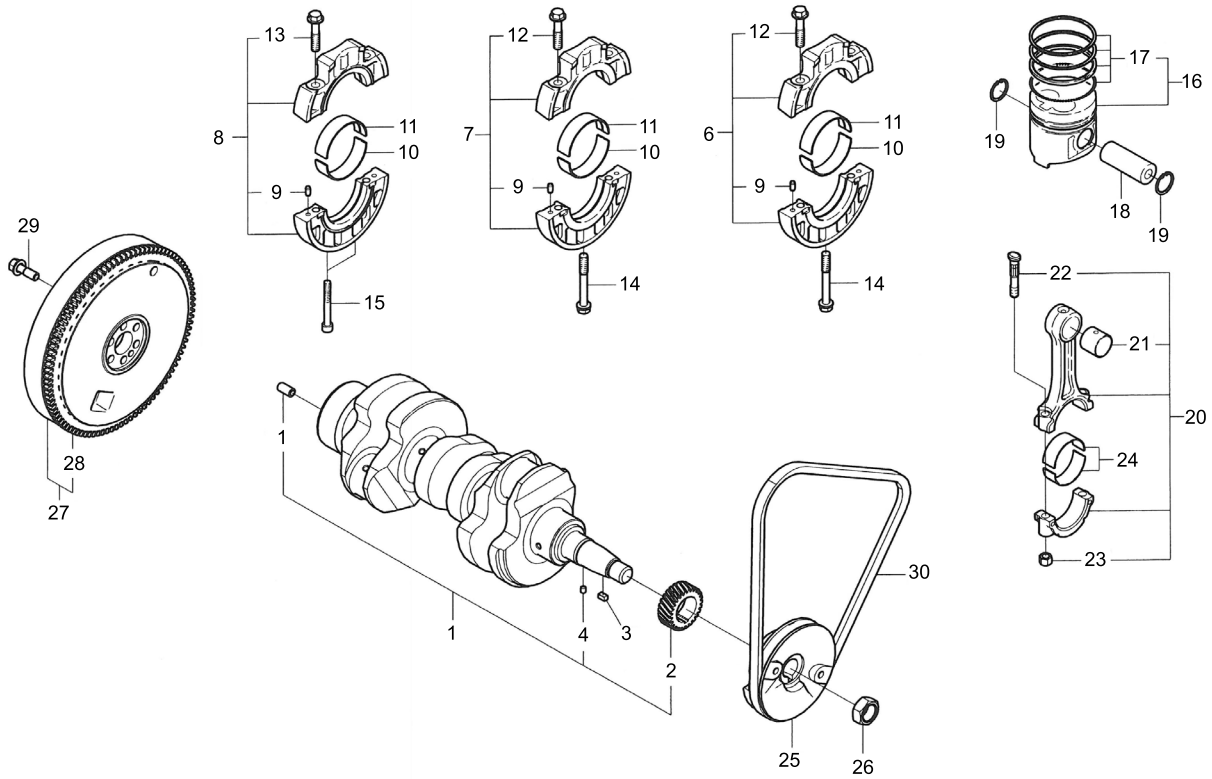


NL773cylblock

Cylinder Block Assembly - NL773LW4E

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	110101960	1	Cylinder Block Assembly - (includes keys #2- 21)	-
2	198466050	1	Plug	-
3	064210025	1	Expansion Plug, 25 mm	-
4	064210035	2	Expansion Plug, 35 mm	-
5	064210015	1	Expansion Plug, 15 mm	-
6	064210055	2	Expansion Plug, 40 mm	-
7	198466010	4	Plug	-
8	198466030	4	Plug	-
9	165296142	1	Idle Gear Shaft	-
10	110701110	1	Oil Pan	-
11	198517592	1	Bushing, Standard	-
	198517596	1	Bushing, Undersize 0.25 mm	-
	198517599	1	Bushing, Undersize 0.50 mm	-
12	040106203	1	Bearing	-
13	064100045	1	Expansion Plug, 45 mm	-
14	042303015	1	Needle Bearing	-
15	036509005	1	Snap Ring	-
16	030500512	2	Dowel Pin	-
17	030500616	2	Dowel Pin	-
18	030501025	2	Dowel Pin	-
19	030309005	2	Spring Pin	-
20	012110620	2	Stud Bolt	-
21	012110635	1	Stud Bolt	-
22	012110660	1	Stud Bolt	-
23	110996800	1	Gasket	-
24	050209107	1	Oil Seal	-
25	198736050	1	Drain Cock	-
26	140546020	1	Filter Joint	-
27	24-02002	1	Oil Filter	-
28	120116160	6	Tappet	-
29	120456223	6	Push Rod	-
30	140036220	1	Relief Valve Assembly	-
31	052109078	1	O-ring	-
32	068115200	1	Tube	-
33	198486770	1	Bushing	-
34	010109235	20	Bolt	-
35	010109238	2	Plug	-
36	025100016	3	Seal Washer	-
37	110756490	1	Dipstick Tube	-
38	052109113	2	O-ring	-
39	011310612	1	Bolt	-
40	198416270	1	Dipstick	-

Crankshaft Assembly



773crankshaft

Crankshaft Assembly

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	115256830	1	Crankshaft Assembly (includes keys #2 - 5)	-
2	115276180	1	Crankshaft Gear	-
3	034100508	1	Key	-
4	030509020	1	Dowel Pin	-
5	030300816	1	Spring Pin	-
6	110156400	1	Bearing Holder Assembly (includes keys #9 & 12)	-
7	110156410	1	Bearing Holder Assembly (includes keys #9 & 12)	-
8	110156420	1	Bearing Holder Assembly (includes keys #9 & 13)	-
9	030500612	6	Dowel Pin	-
10	198517582	3	Bearing; Lower S.T.D.	-
	198517586	3	Bearing; Lower U.S. 0.25 mm	-
	198517589	3	Bearing; Lower U.S. 0.50 mm	-
11	198517572	3	Bearing; Upper S.T.D.	-
	198517576	3	Bearing; Upper Undersized 0.25 mm	-
	198517579	3	Bearing; Upper Undersized 0.50 mm	-
12	010810840	4	Bolt	-
13	010810845	2	Bolt	-
14	011510840	2	Bolt NL773L4	-
	011510850	2	Bolt NL773L43E	-
15	010700845	2	Bolt NL773L4	-
	011510845	2	Bolt NL773L4E	-
16	115017461	3	Piston Kit; S.T.D.	-
17	115107901	3	Ring Kit; S.T.D.	-
18	115326231	3	Piston Pin	-
19	036500021	6	Snap Ring	-
20	115026340	3	Connecting Rod Assembly (includes keys #21 - 23)	-
21	198517120	3	Bushing	-
22	115176150	6	Connecting Rod Bolt	-
23	020109075	6	Nut	-
24	198517602	6	Bearing; S.T.D.	-
	198517606	6	Bearing; Undersized 0.25	-
	198517609	6	Bearing; Undersized 0.50	-
25	115396552	1	Crankshaft Pulley	-
26	020800018	1	Nut	-
27	115356720	1	Flywheel Assembly (includes key #28)	-
28	115376130	1	Ring Gear, 96 Teeth	-
29	010109340	6	Bolt	-

Oil Pump & Pick-up

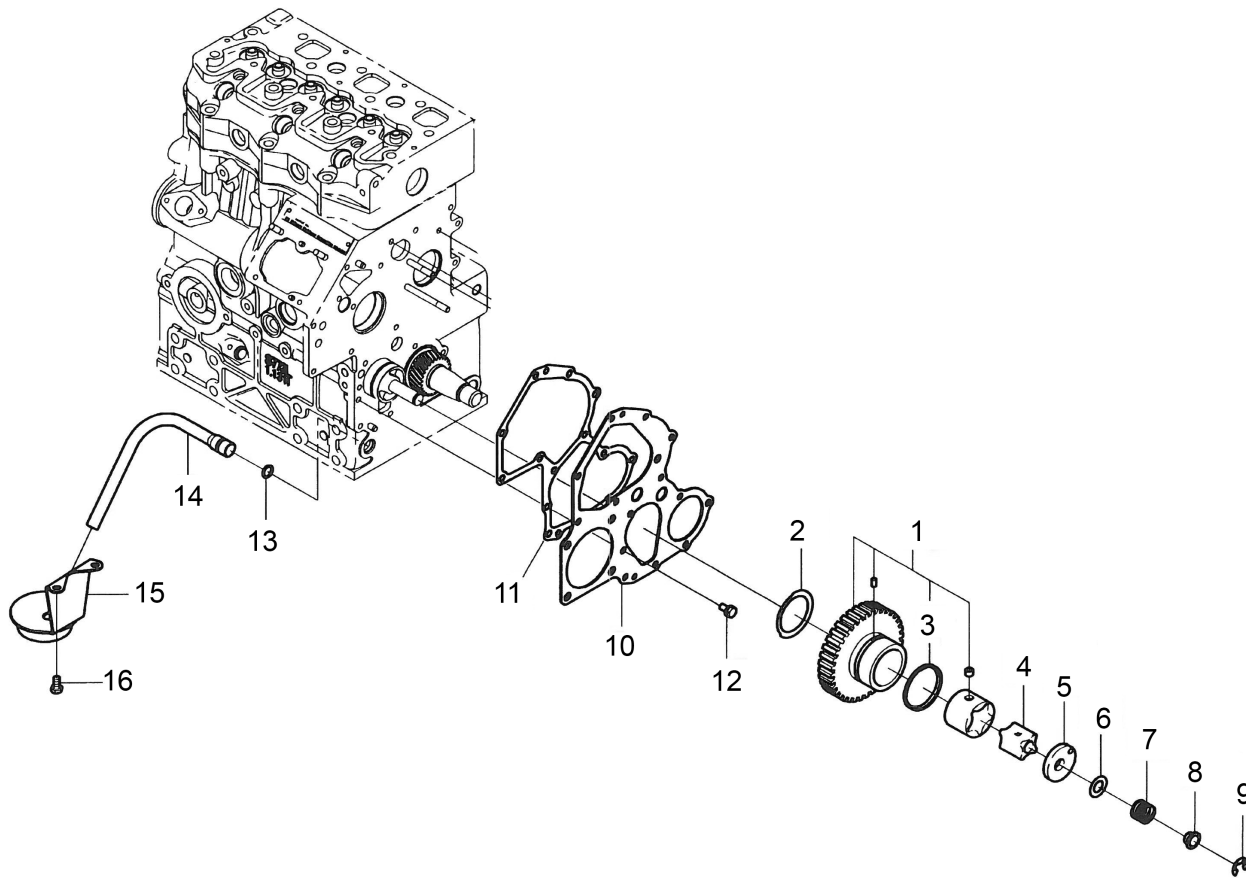


Fig. 1-4

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165026390	1	Idle Gear Assembly	-
2	199266180	1	Thrust Washer	-
3	198216821	1	Spring	-
4	140166400	1	Rotor	-
5	140116140	1	Oil Pump Cover	-
6	199286150	**	Shim, 0.1 mm	-
	199286160	**	Shim, 0.15 mm	-
	199286170	**	Shim, 0.2 mm	-
	199286180	**	Shim, 0.5 mm	-
7	198216720	1	Spring	-
8	199236540	1	Collar	-
9	036800010	1	Snap Ring	-
10	165166191	1	Front Plate	-
11	165996520	1	Gasket	-
12	011310612	3	Bolt	-
13	052109076	1	O-ring	-
14	140986830	1	Oil Pipe	-
15	140406500	1	Pick-up	-
16	011310612	2	Bolt	-
			**As required	

Camshaft

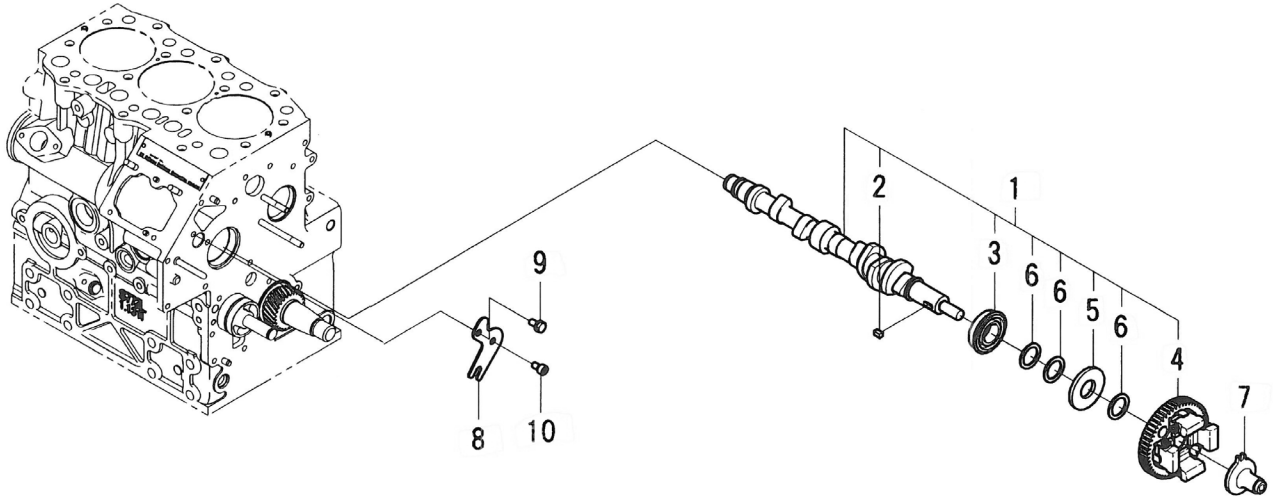
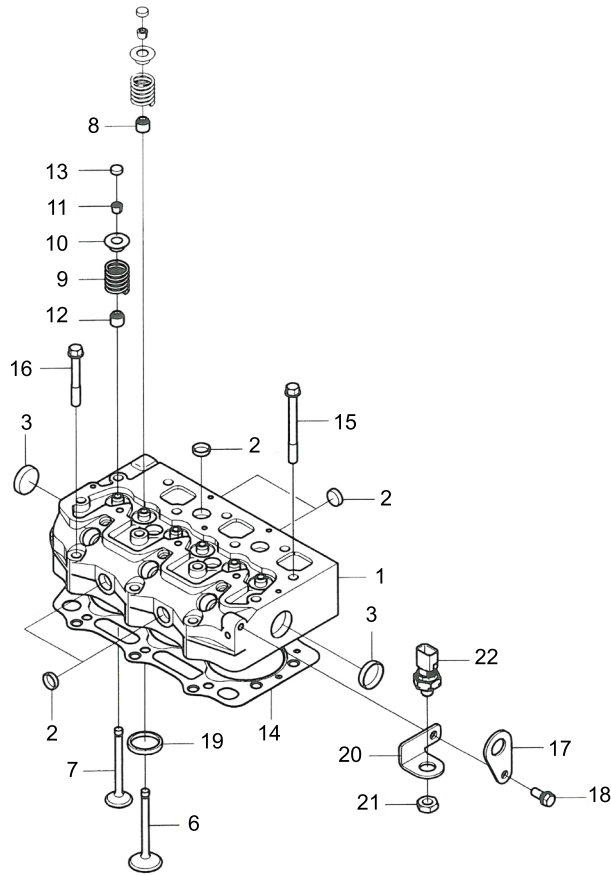


Fig. 1-5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120026830	1	Cam Shaft Assembly (includes keys #2- 6)	-
2	120016021	1	Cam Gear Assembly	-
3	034100508	1	Key	-
4	120736081	1	Gear	-
5	199216230	3	Spacer	-
6	56-60002	1	Bearing	-
7	125256120	1	Slider	-
8	199566651	1	Plate	-
9	010700610	1	Bolt	-
10	011310612	1	Bolt	-

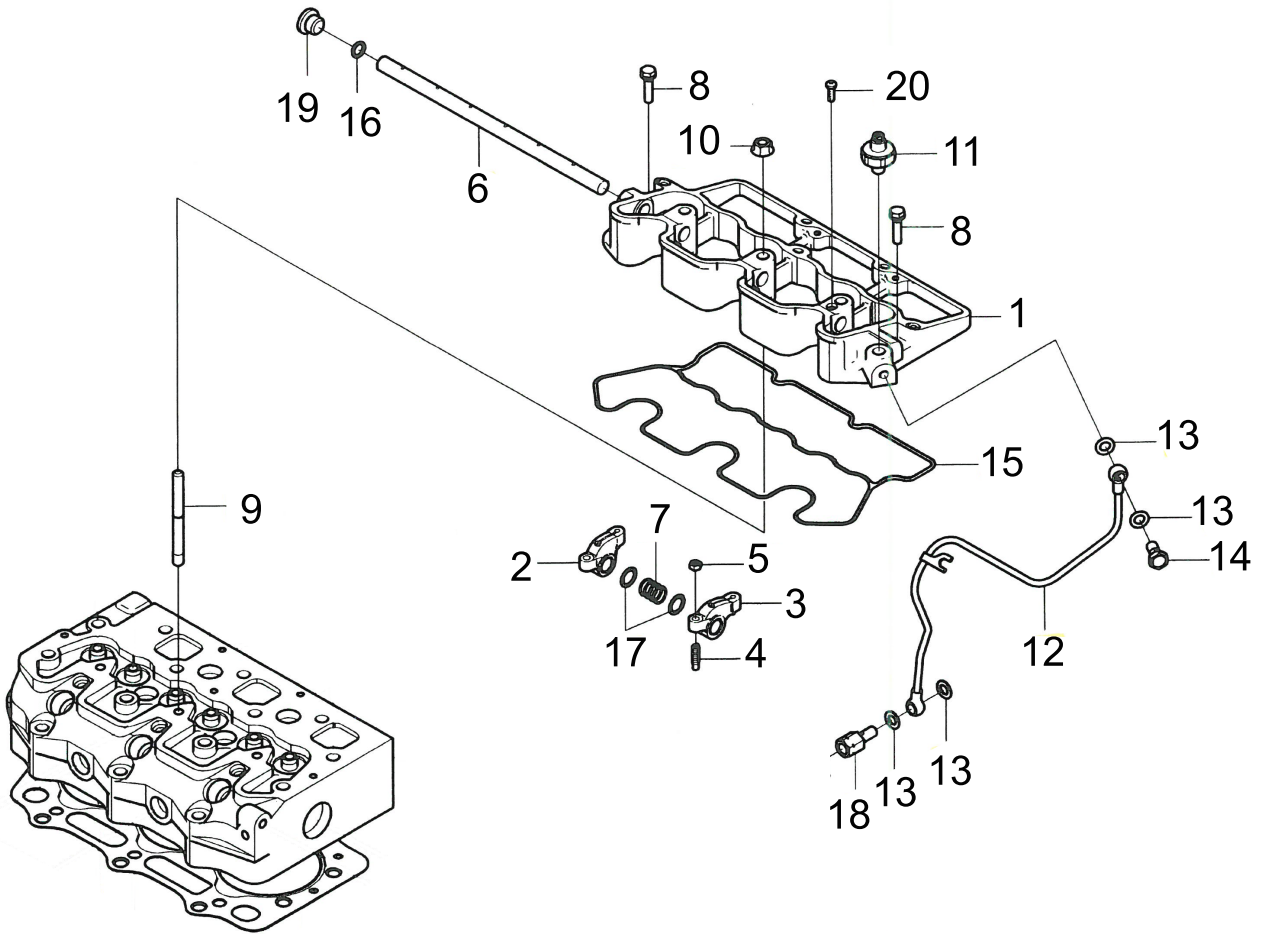
Cylinder Head



773cylhead

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111011630	1	Cylinder Head Assembly (includes keys #2 -3, 6-13, & 19)	-
2	064210018	8	Expansion Plug	-
3	064210030	2	Expansion Plug	-
6	120166360	3	Intake Valve	-
7	120176250	3	Exhaust Valve	-
8	120406070	3	Valve Guide Seal - Intake	-
9	198216700	6	Spring	-
10	120186080	6	Retainer	-
11	120226070	12	Cotter	-
12	120406050	3	Valve Guide Seal - Exhaust	-
13	120216041	6	Cap	-
14	111147560	1	Head Gasket, t=1.2 mm	-
	111147570	1	Head Gasket, t=1.3 mm	-
15	111136440	11	Head Bolt	-
16	111136450	3	Head Bolt	-
17	195816030	1	Lifting Eye	-
18	011510820	1	Bolt	-
19	110136435	3	Valve Seat - Intake	-
20	185977810	1	Bracket	-
21	020109048	1	Net	-
22	U85746210	1	Pressure Sensor	-

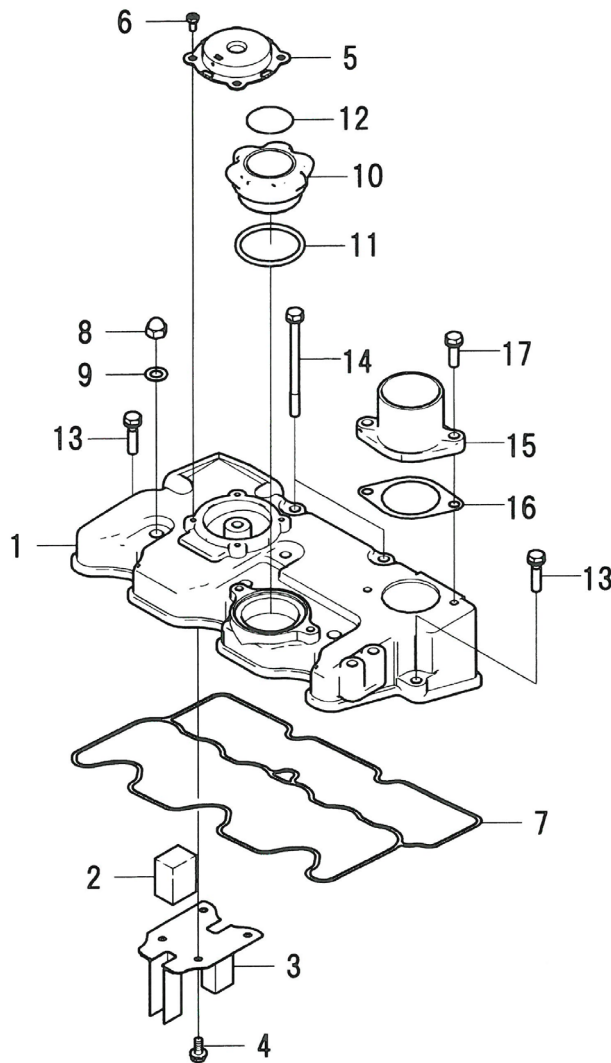
Rocker Arm Assembly



773rockercover

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	120037170	1	Rocker Arm Assembly (includes keys #2-7, 16,17,19, & 20)	-
2	120356200	3	Intake Rocker Arm	-
3	120356210	3	Exhaust Rocker Arm	-
4	199486220	6	Screw	-
5	020109076	6	Nut	-
6	120316300	1	Rocker Arm Shaft	-
7	198216780	2	Spring	-
8	011310625	2	Bolt	-
9	012109177	3	Stud Bolt	-
10	023100008	3	Nut	-
11		1	Oil Pressure Switch (see Electrical System)	-
12	140607270	1	Oil Pipe	-
13	140996260	4	Gasket	-
14	198486780	1	Eye Bolt	-
15	120996150	1	Gasket	-
16	052100120	1	O-ring	-
17	199280280	4	Shim	-
18	198487590	1	Banjo Bolt (Tapped 1/8 NPT Female)	-
19	198436150	1	Plug	-
20	015100410	1	Screw	-

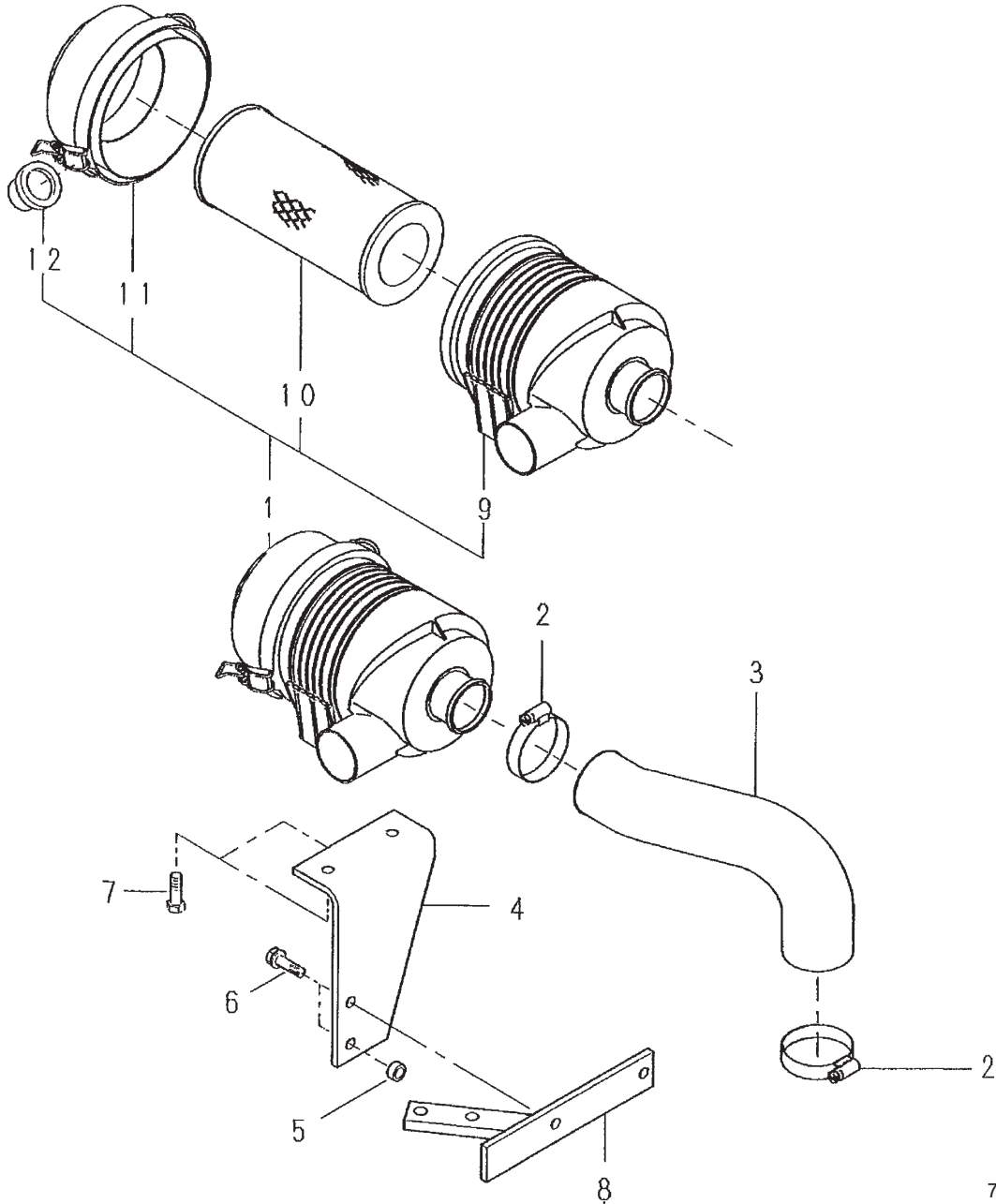
Rocker Arm Cover & Intake



rockerarmcover

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	111210140	1	Rocker Arm Cover	-
2	110666060	1	Breather Element	-
3	110666220	1	Baffle	-
4	015600406	4	Screw	-
5	110566080	1	Valve, Breather	-
6	011100408	4	Bolt	-
7	111996420	1	Gasket	-
8	024600008	3	Cap Nut	-
9	140996260	3	Sealing Washer M8	-
10	198436010	1	Cap	-
11	052100400	1	O-ring	-
12	00-00035	1	Label "Oil Fill"	-
13	011310625	2	Bolt	-
14	011310680	3	Bolt	-
15	135566630	1	Air Intake	-
16	135996751	1	Gasket	-
17	011310620	2	Bolt	-

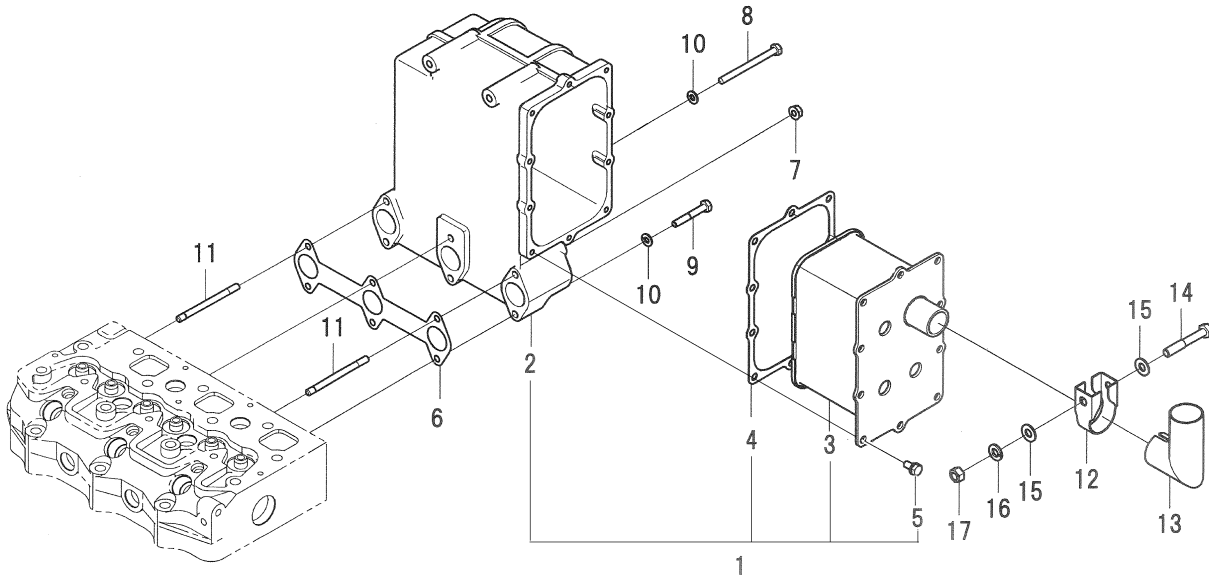
Air Filter and Housing



773aircleaner

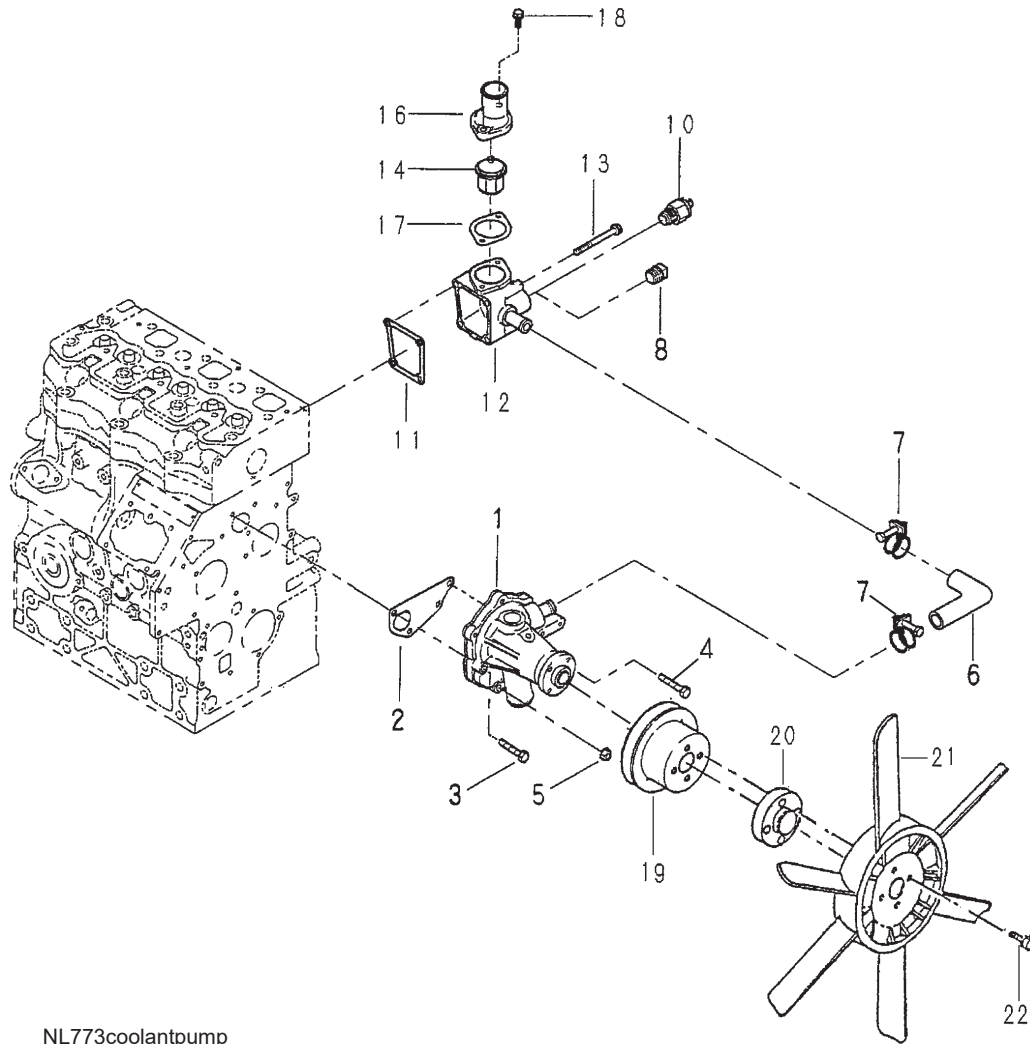
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135016310	1	Air Cleaner Assembly (includes keys #9-12)	-
2	19-00032	2	Hose Band	-
3	135597900	1	Hose	-
4	135976610	1	Bracket	-
5	199236730	1	Collar	-
6	011510825	2	Bolt	-
7	011510820	2	Bolt	-
8	131976050	1	Bracket	-
9	135326200	1	Filter Housing	-
10	24-27301	1	Element	-
11	135326201	1	Cover	-
12	314531163	1	Valve	-

Exhaust Manifold & Muffler



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	135046212	1	Exhaust Manifold/ Muffler Assembly (includes keys #2- 5)	-
2	135616832	1	Exhaust Manifold	-
3	135406170	1	Exhaust Muffler	-
4	135996900	1	Gasket	-
5	011310612	10	Bolt	-
6	135996541	1	Gasket, Exhaust Manifold	-
7	023100006	2	Nut	-
8	010109407	1	Bolt	-
9	010109381	3	Bolt	-
10	15-01132	4	Lock Washer	-
11	012109215	2	Stud Bolt	-
12	408330011	1	Band	-
13	165606150	1	Exhaust Elbow	-
	27-38200	1	Exhaust Elbow 1- 1/4 NPT (Optional)	-
14	010310850	1	Bolt	-
15	15-00701	2	Washer	-
16	15-00702	1	Lock Washer	-
17	02900008	1	Nut	-

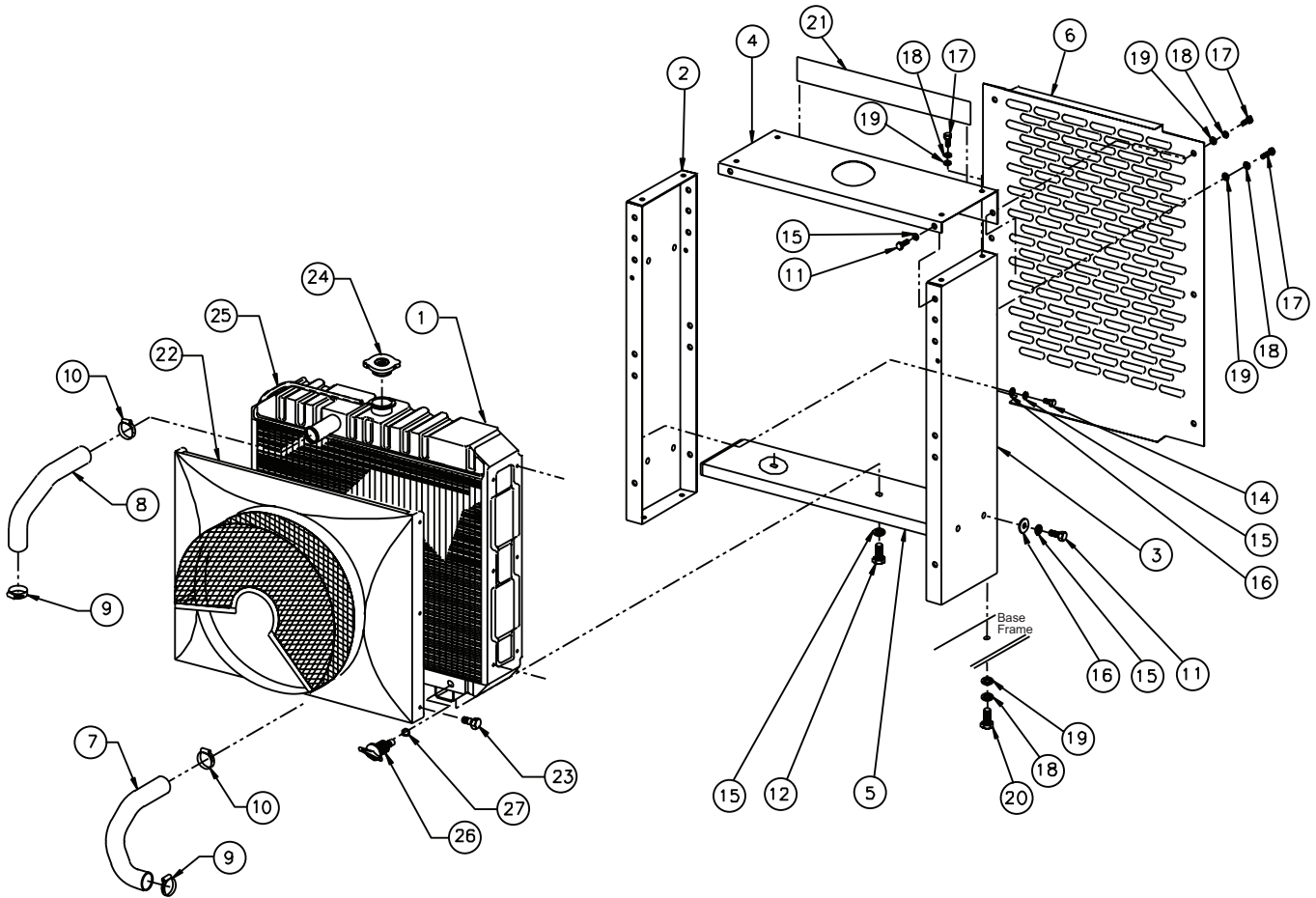
Coolant Pump & Thermostat Housing



NL773coolantpump

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145017870	1	Coolant Pump Assembly	-
2	145996830	1	Gasket	-
3	011310635	1	Bolt	-
4	011310630	2	Bolt	-
5	023100006	1	Nut	-
6	145536051	1	Hose	-
7	19-00006	2	Clamp #6	-
8	064500030	1	Plug	-
10	22-40366	1	Temperature Switch (see Electrical System)	-
11	145996840	1	Gasket	-
12	145216920	1	Thermostat Housing	-
13	011310660	4	Bolt	-
14	145206320	1	Thermostat	-
16	145226530	1	Thermostat Cover	-
17	145996850	1	Gasket	-
18	011310620	2	Bolt	-
19	145336490	1	Fan Pulley	-
20	145386920	1	Spacer	-
21	145306380	1	Cooling Fan (Blower)	-
22	011310635	4	Bolt	-

Radiator and Guard, Aluminum



A-11840/ D-3494z

Radiator and Guard, Aluminum

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	145506610	1	Radiator	-
2	39-18601	1	Side Panel, Left hand	-
3	39-18602	1	Side Panel, Right hand	-
4	39-18603	1	Top Panel	-
5	39-18604	1	Radiator Support	-
6	39-18209	1	Grille	-
7	145537220	1	Hose, Radiator Outlet	-
8	145537440	1	Hose, Radiator Inlet	-
9	19-00016	2	Hose Clamp #16	-
10	19-00020	2	Hose Clamp #20	-
11	12-00751	4	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
12	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
14	12-00753	2	Capscrew, Hex Head M8 x 1.25 x 30 mm (left hand side)	-
15	15-00702	6	Lock Washer, Helical M8	-
16	15-00701	8	Flat Washer M8	-
17	12-00030	14	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
18	15-01132	18	Lock Washer, Helical M6	-
19	15-00008	18	Flat Washer M6	-
20	12-01131	4	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
21	00-70078	1	Decal, "Northern Lights"	-
22	145546930	1	Shroud with Fan Guard	-
23	011150610	6	Bolt	-
24	310110200	1	Filler Cap	-
25	310120170	2	Overflow Hose	-
26	21-12016	1	Drain Cock	-
27	310190477	1	O-ring	-

Injection Pump and Lines

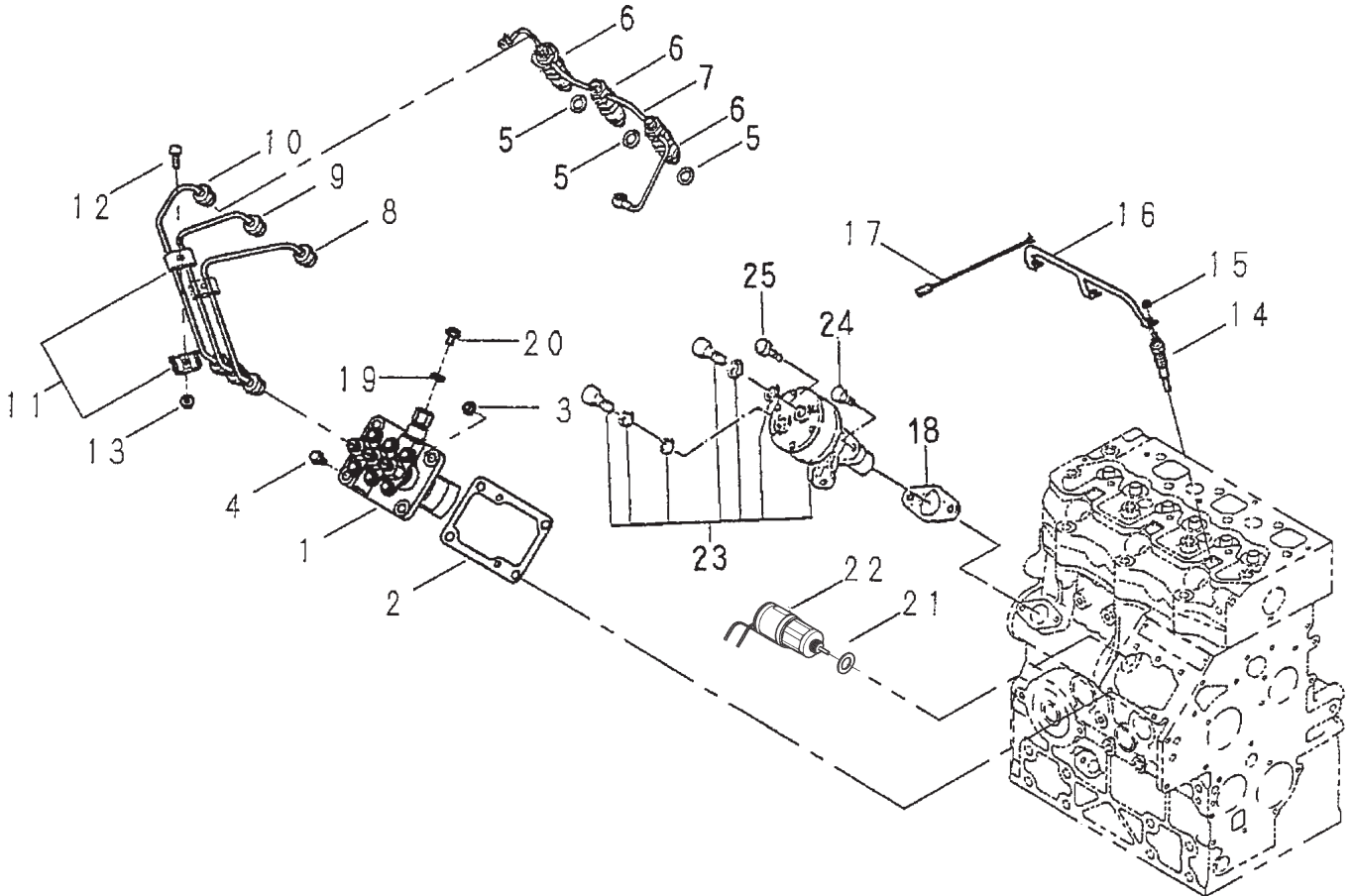
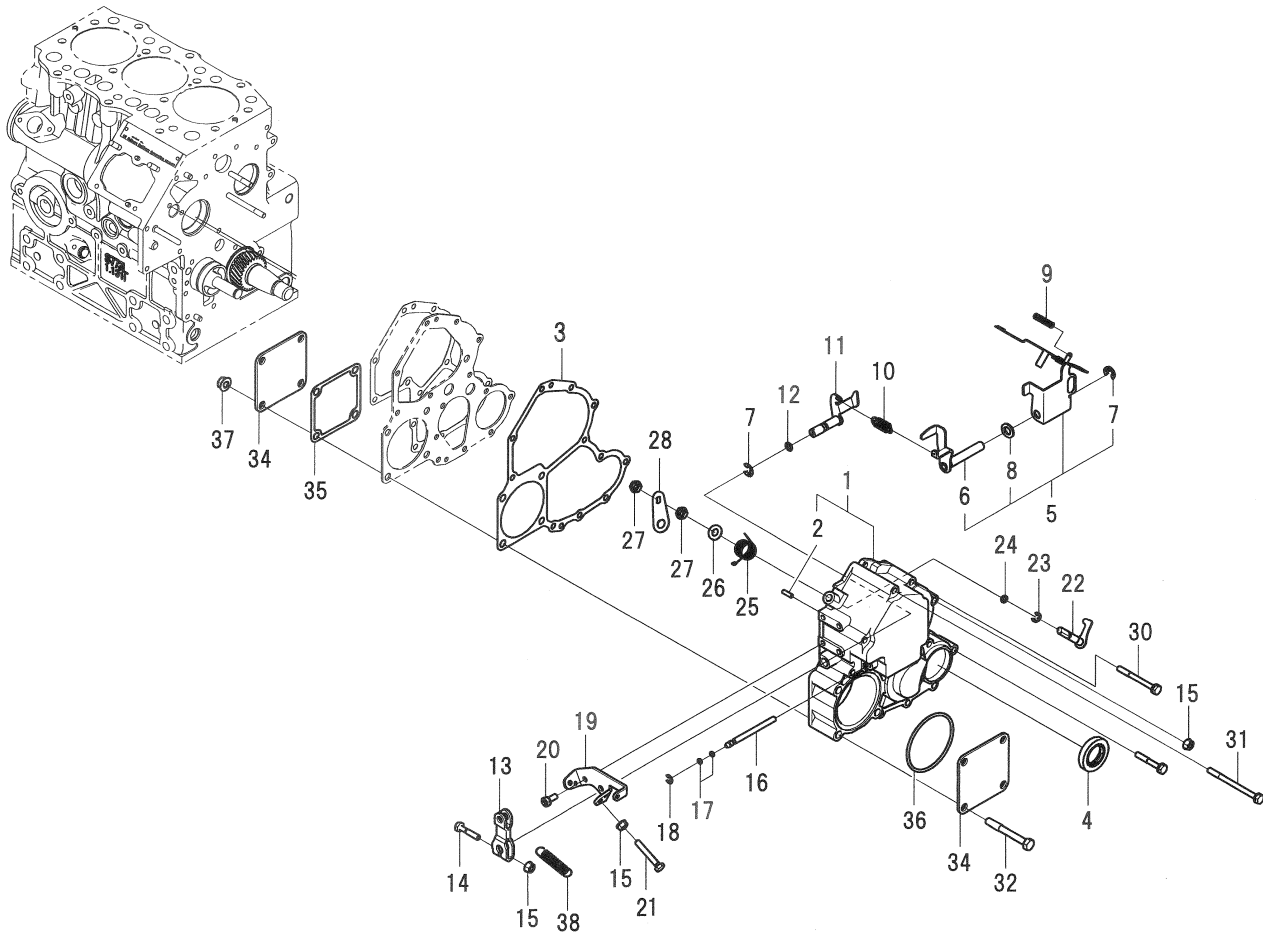


Fig. 4-00

Injection Pump and Lines

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	131017921	1	Injection Pump Assembly	-
2	131437590	**	Shim 0.2mm	-
	131437600	**	Shim 0.3mm	-
	131437610	**	Shim 0.4mm	-
	131437620	**	Shim 0.5mm	-
	131437630	**	Shim 0.6mm	-
3	023100006	2	Nut	-
4	011310620	2	Bolt	-
5	131426210	3	Gasket	-
6	131406350	3	Injector Assembly NL773LW4E	-
	131406470	3	Injector Assembly NL773LW4	-
7	131606880	1	Return Line	-
8	131507740	1	Injection Line #1	-
9	131507750	1	Injection Line #2	-
10	131507760	1	Injection Line #3	-
11	199106021	4	Clamp	-
12	010110625	2	Bolt	-
13	023100006	2	Nut	-
14	185366220	3	Glow Plug, 12 Volt	-
15	023100004	4	Nut	-
16	185376372	1	Connector	-
17	185606170	1	Wire Harness	-
18	130996130	1	Gasket	-
19	025100006	1	Seal Washer	-
20	131236280	1	Screw	-
21	025100016	1	Seal Washer	-
22	185206085	1	Solenoid, 12 Volt Standard Ground - NL773LW4	-
	185206530	1	Actuator - NL773LW4E	-
23	130506140	1	Feed Pump	-
24	011140614	2	Bolt	-
25	011140616	1	Bolt	-
26	031100004	1	Snap Pin (For injection pump - not shown)	-

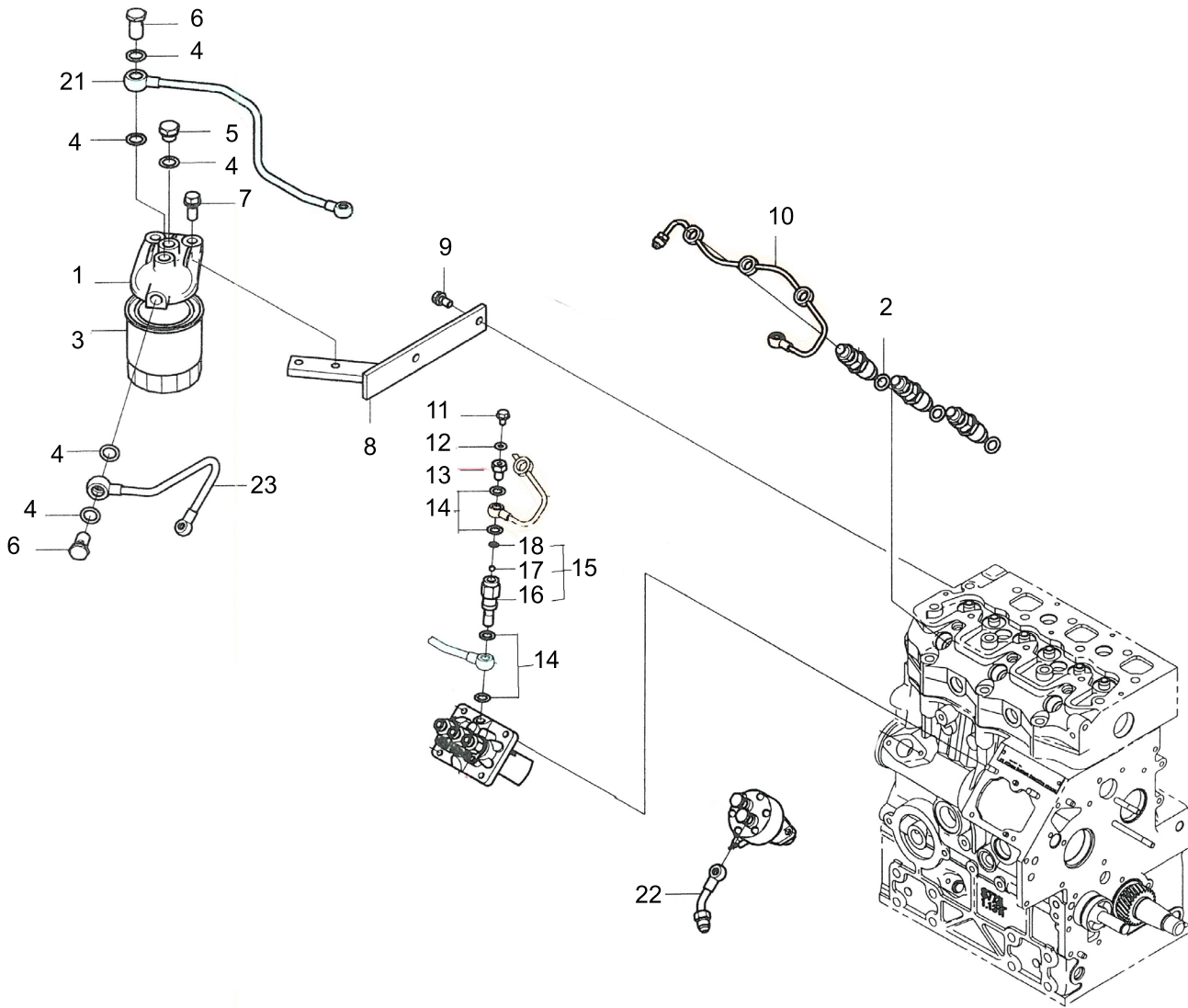
Governor Housing and Timing Gear Case



Governor Housing and Timing Gear Case

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	165106071	1	Timing Gear Case (includes key #2)	-
2	030300410	1	Spring Pin	-
3	165996530	1	Gasket	-
4	198636140	1	Oil Seal	-
5	125046260	1	Governor Lever Assembly (includes keys #6, 7, 8)	-
6	125406071	1	Tension Lever	-
7	036800008	2	Snap Ring	-
8	026200010	1	Washer	-
9	198217420	1	Spring	-
10	198217351	1	Spring	-
11	125156250	1	Armature	-
12	052109110	1	O-ring	-
13	125416020	1	Governor Lever	-
14	010110630	1	Bolt	-
15	023100006	3	Nut	-
16	125116131	1	Shaft	-
17	052109108	2	O-ring	-
18	036800005	1	Snap Ring	-
19	125976120	1	Bracket	-
20	011310614	2	Bolt	-
21	012810640	1	Bolt	-
22	125156180	1	Arm	-
23	036800006	1	Snap Ring	-
24	052109109	1	O-ring	-
25	198216760	1	Spring	-
26	026200008	1	Washer	-
27	020700008	2	Nut	-
28	125176080	1	Stop Lever	-
29	011310640	5	Bolt	-
30	011310660	4	Bolt	-
31	011310680	2	Bolt	-
32	010310865	4	Bolt	-
33	198217420	1	Spring	-
34	165206150	2	Cover	-
35	165996610	1	Gasket	-
36	052300700	1	O-ring	-
37	023100008	4	Nut	-
38	398210070	1	Spring	-

Fuel Filter and Piping

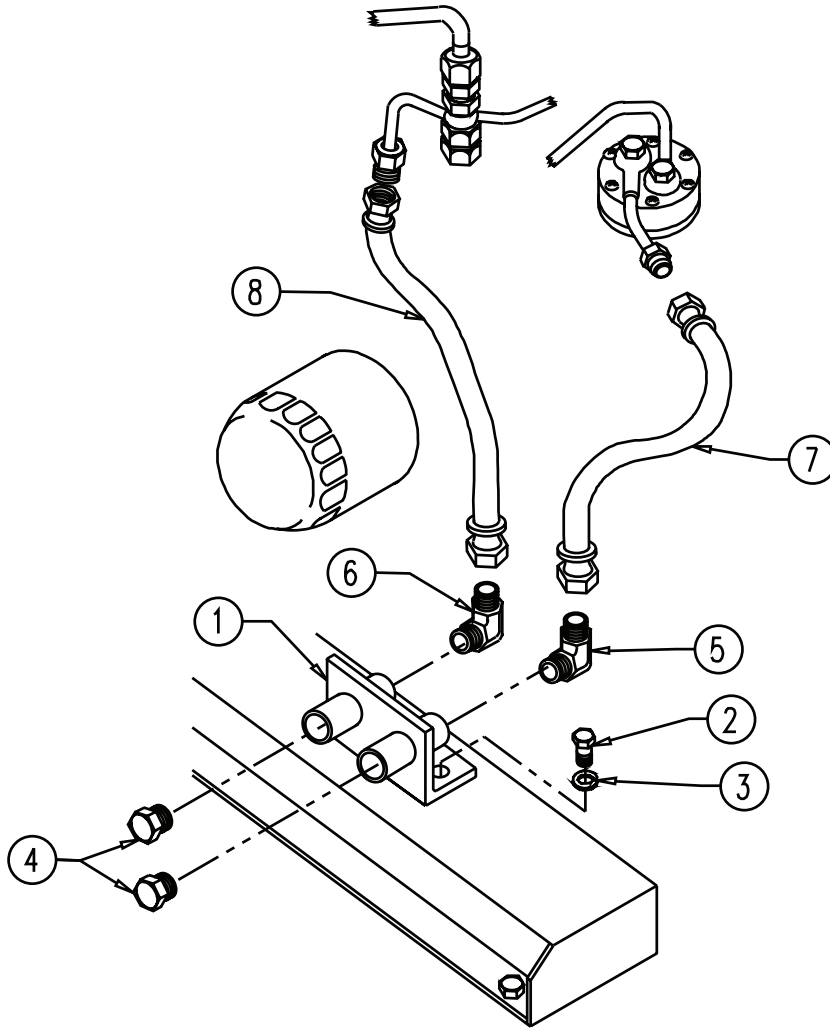


fuelfilter

Fuel Filter and Piping

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	130306190	1	Fuel Filter Assembly (includes keys #3 - 6)	-
2	131426210	3	Sealing Washer	-
3	24-52020	1	Fuel Filter	-
4	130326051	5	Gasket	-
5	130396030	1	Plug	-
6	130436011	2	Joint Bolt	-
7	011511025	2	Bolt	-
8	131976050	1	Bracket	-
9	010700820	4	Bolt	-
10	131606880	1	Return Pipe	-
11	131236280	1	Screw	-
12	025100006	1	Seal Washer	-
13	131236190	1	Bolt	-
14	140996270	4	Gasket	-
15	140036141	1	Valve Assembly (includes keys 16- 18)	-
16	198487002	1	Connector	-
17	048100010	1	Steel Ball	-
18	198116230	1	Rubber	-
19	130516092	2	Bolt	-
20	140996260	4	Gasket	-
21	130556960	1	Pipe	-
22	130556681	1	Pipe	-
23	130556970	1	Pipe	-

USCG SAE J1527 ISO 7840 Fuel Lines



A-118520/ 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	18-58602	1	Hose Assembly 1/4" ID x 12-1/2"	-
8	18-58603	1	Hose Assembly 1/4" ID x 19"	-

Fuel Injector - NL773LW4

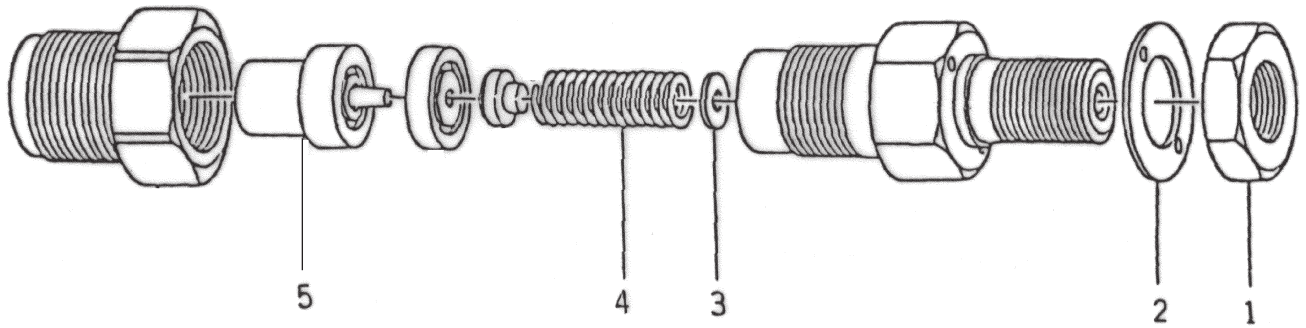


Fig. 4-10

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131406470	1	Injector Assembly (includes keys #1 - #5)	-
1	131446987	1	Nut	-
2	131426210	1	Gasket	-
3	131437640	1	Shim	-
4	131446986	1	Spring	-
5	131416250	1	Nozzle	-

Fuel Injector - NL773LW4E

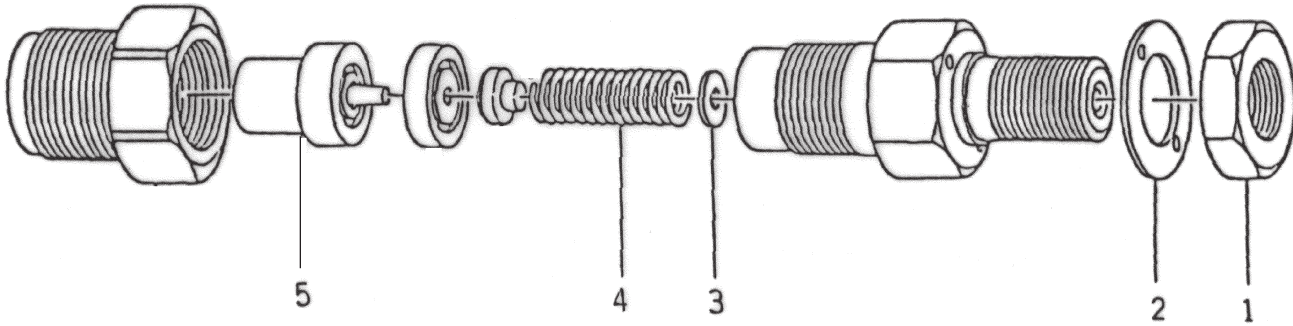


Fig. 4-10

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	131406350	1	Injector Assembly (includes keys #1 - #5)	-
1	131446987	1	Nut	-
2	131426210	1	Gasket	-
3	131437640	1	Shim	-
4	131446066	1	Spring	-
5	131416160	1	Nozzle	-

Fuel Feed Pump

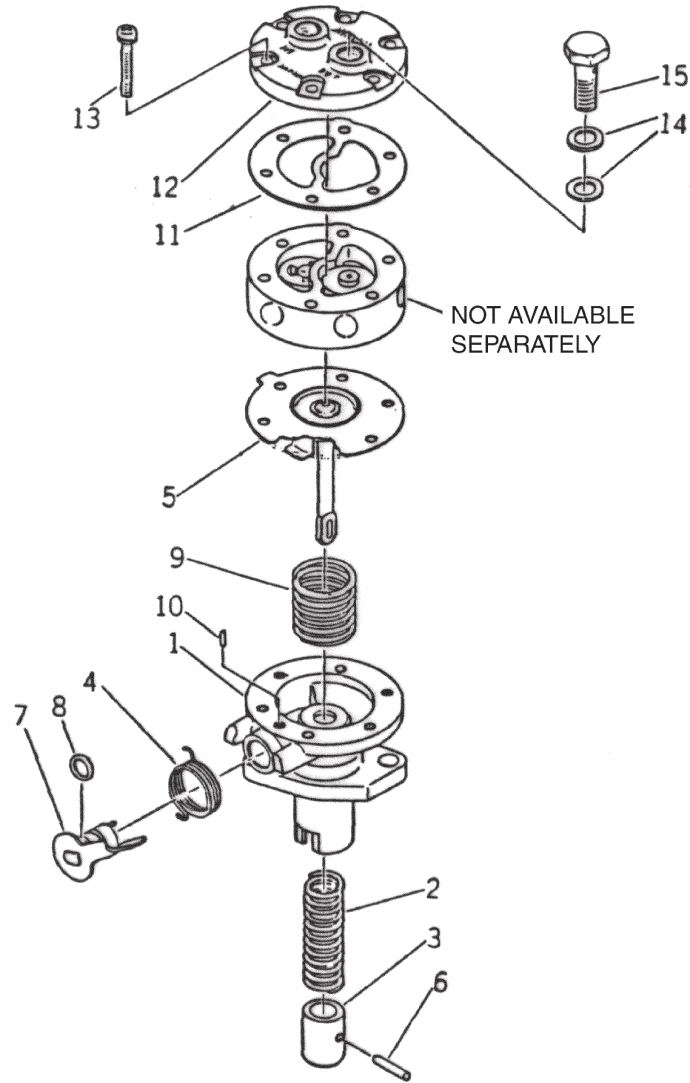


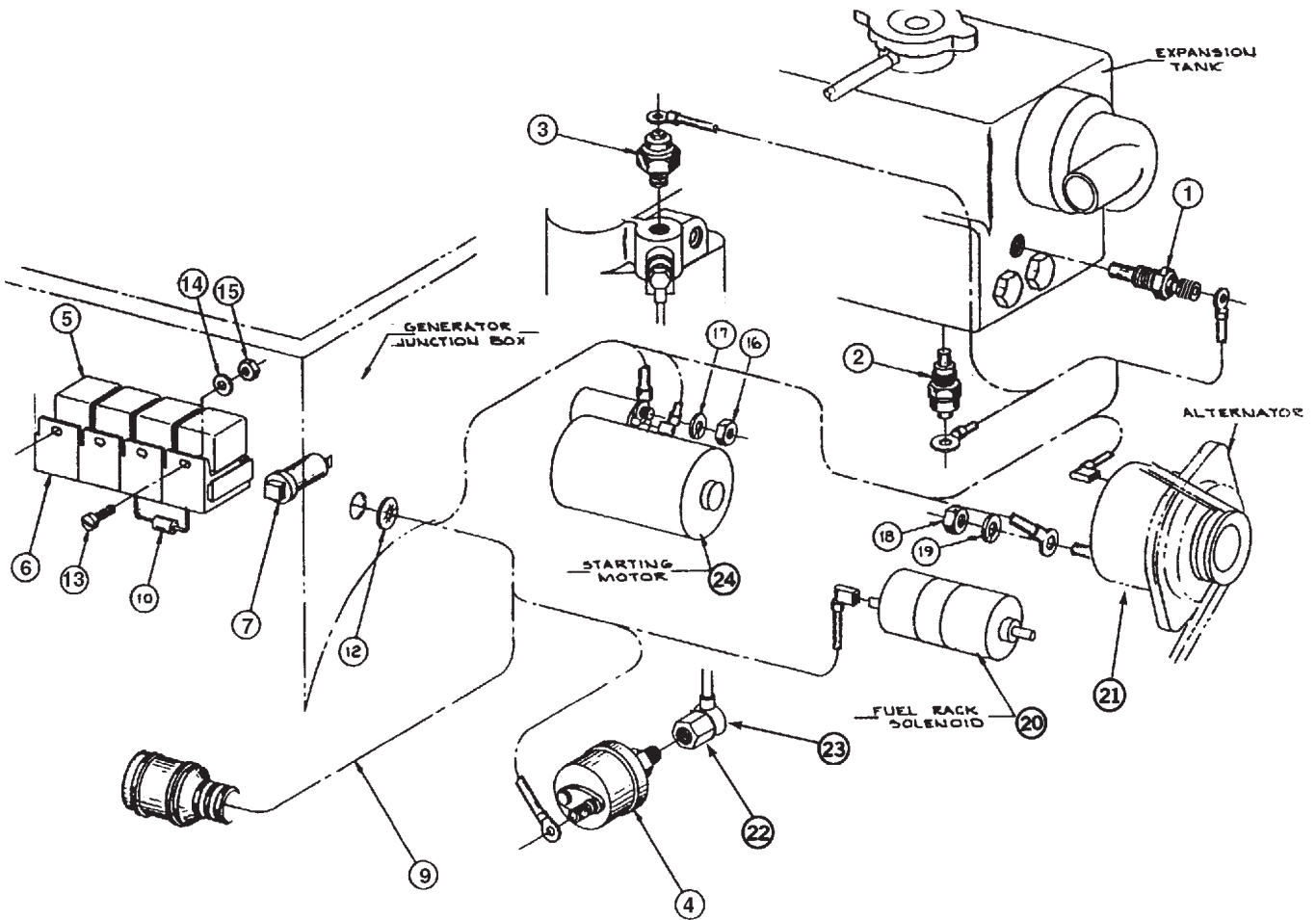
Fig. 4-11

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	Joint Bolt	-

*Not available separately

Engine Electrical - 12 Volt Standard Ground

NL773LW4



A-11841/ C-2490Bnl

Engine Electrical - 12 Volt Standard Ground

NL773LW4

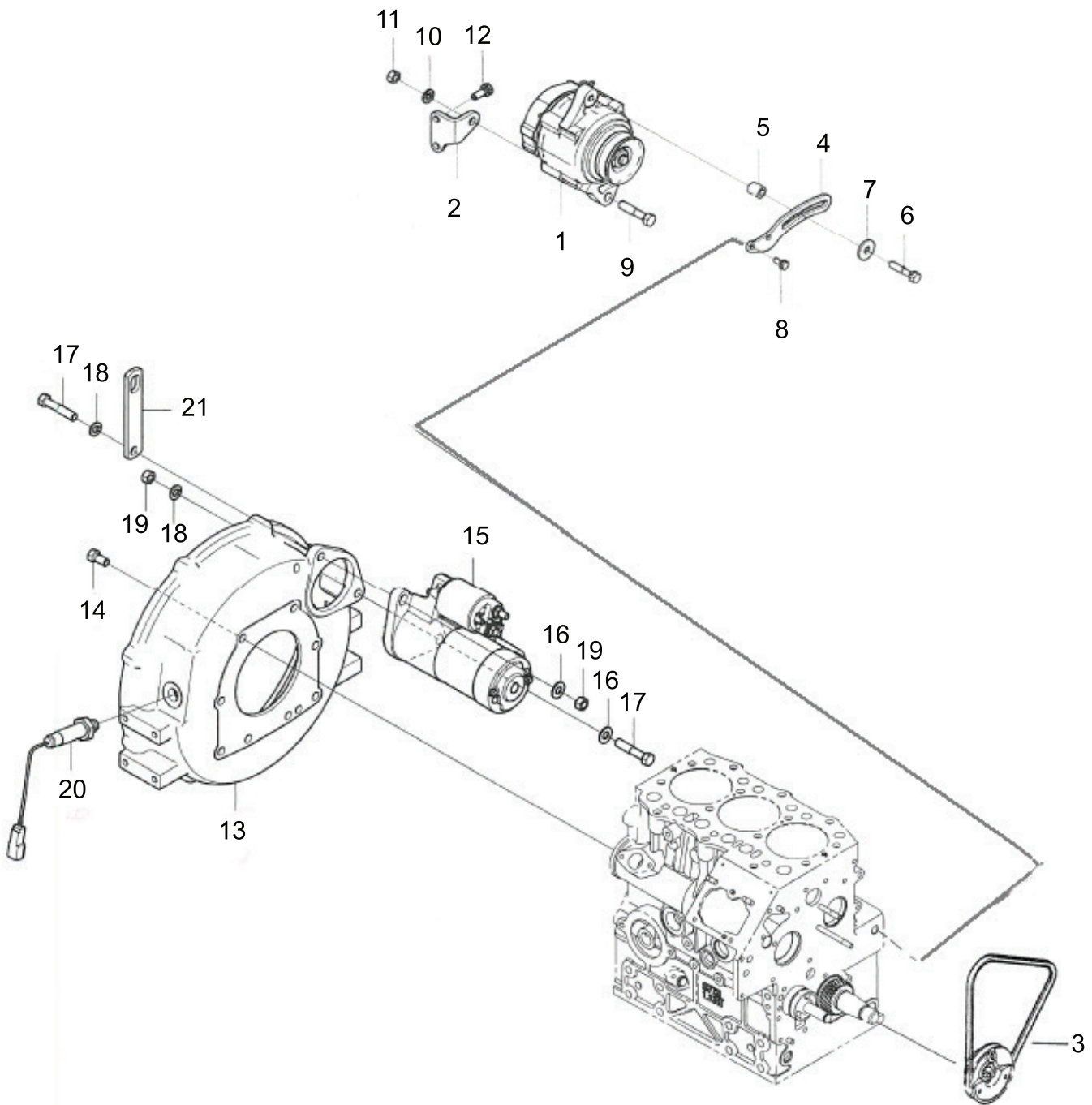
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender, 0-250°F Single Station 3/8 NPT	-
2	22-40366	1	Temperature Switch 110°F/ 230 M16 x 1.5°C	-
3	22-41016	1	Oil Pressure Sender 0-80 PSI, Single Station 1/8 NPT	-
4	185246011	1	Oil Pressure Switch	-
5	22-42047	4	Relay, 12 Volt SPDT	-
6	22-40391	4	Relay Base	-
7	22-42043	1	Circuit Breaker	-
8	22-40393	4	Terminal Retainer	-
9	22-48601	1	Engine Wire Harness (includes key #10)	-
10	22-41060	2	Diode, 6 Amp 50 Volt	-
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	185046220	1	Alternator 12 Volt 40 Amp	-
22	140607270	1	Oil Line	-
23	198487590	1	Banjo Bolt (Tapped 1/8 NPT Female)	-
24	185086551	1	Starter 12 Volt	-
25	185206085	1	Fuel Solenoid	-

Engine Electrical - 12 Volt Standard Ground

NL773LW4E

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-42055	1	Temperature Sender, 0-250°F Single Station 3/8 NPT	-
2	22-40366	1	Temperature Switch 110°F/ 230°C M16 x 1.5	-
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	-
8	22-40393	4	Terminal Retainer	-
9	22-48601	1	Engine Wire Harness (includes key #10)	-
10	22-48609	1	Wire Harness, Engine Control Unit	-
11	22-41060	2	Diode, 6 Amp 50 Volt	-
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	185046220	1	Alternator 12 Volt 40 Amp	-
22	140607270	1	Oil Line	-
23	198487590	1	Banjo Bolt (Tapped 1/8 NPT Female)	-
24	185086551	1	Starter 12 Volt	-
25	185206530	1	Actuator	-
26	23-92004	1	Bracket, Engine Control Unit Mounting	-
27	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20mm	-
28	15-00008	2	Flat Washer M6	-
29	15-01132	2	Lock Washer, Helical M6	-
30	14-01131	2	Hex Nut M6 x 1.0	-
31	12-04405	4	Capscrew, Hex Head M x 0.8 x 20 mm	-
32	15-00027	8	Flat Washer M5	-
33	15-04400	4	Lock Washer, Helical M5	-
34	14-04401	4	Hex Nut M5 x 0.8	-
35	18518620	1	Engine Control Unit	-
36	22-40514	1	Speed Sensor (not shown) former # U85746200	-
37	U85746210	1	Barometric Air Pressure Sensor	-
38	185977810	1	Bracket	-
39	020109248	1	Nut	-
40	011510820	1	Capscrew M8 x 20mm	-

Starter, Alternator, and Flywheel Housing SAE #5

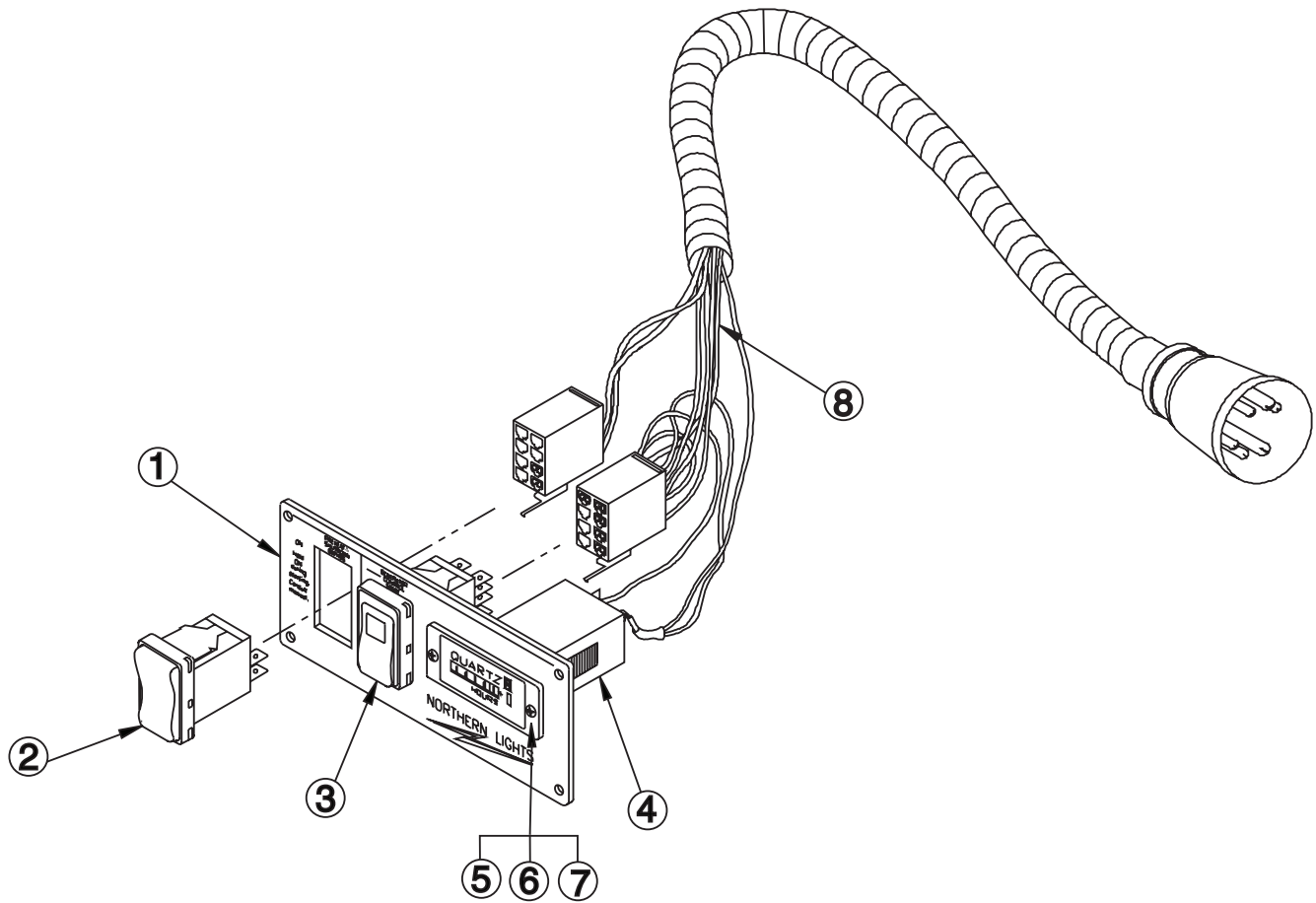


Starter, Alternator, and Flywheel Housing SAE #5

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	185046220	1	Alternator, 12 Volt 40 Amp	-
2	185976220	1	Bracket	-
3	40-08605	1	Drive Belt	-
4	185726971	1	Tensioning Arm	-
5	199236680	1	Collar	-
6	011510840	1	Bolt M8 x 40mm	-
7	026109017	1	Washer	-
8	011310614	2	Bolt M8 x 14mm	-
9	010311045	1	Bolt M8 x 45mm	-
10	15-00082	1	Spring Washer	-
11	020900010	1	Nut M10 x 1.5	-
12	011310820	2	Bolt M8 x 20mm	-
13	110446363	1	Flywheel Housing SAE #5	-
14	010311020	8	Bolt M10 x 20mm	-
15	185086551	1	Starting Motor 12 Volt	-
16	026100010	2	Flat Washer M10	-
17	010311050	2	Bolt M10 x 50mm	-
18	15-00802	2	Lock Washer M10	-
19	020900010	2	Nut M10 x 1.5	-
20	398460090	**	Plug	-
	22-80514	**	Special Sensor	-
21	195816100	1	Lifting Eye	-

Series 1-B Start-Stop Control Panel

12 Volts

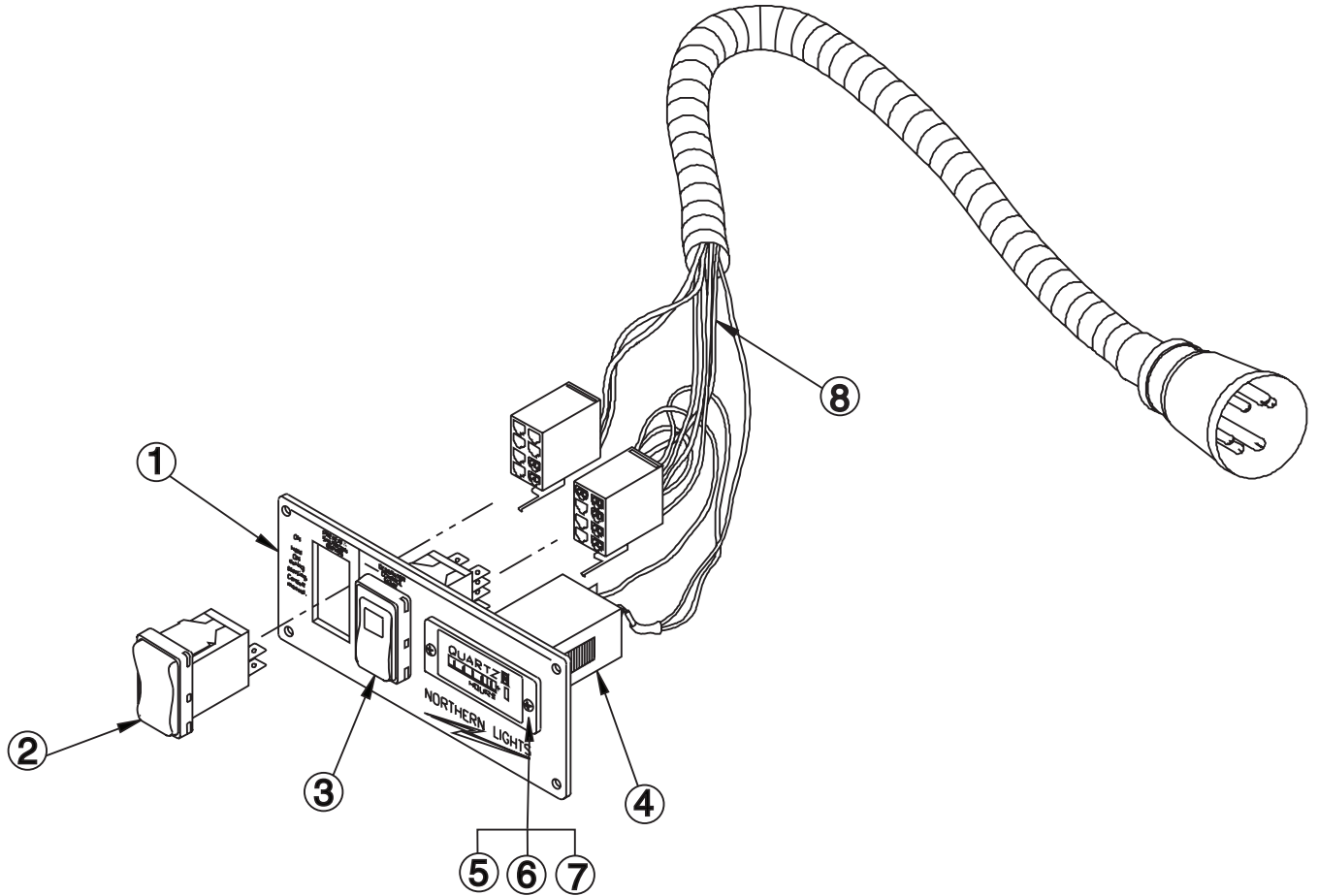


A-8553/ B-5971

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92120	1	S 1-B Start/Stop Control Panel - 12 Volt (includes all keys)	-
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	-

Series 1-B Start/Stop Control Panel

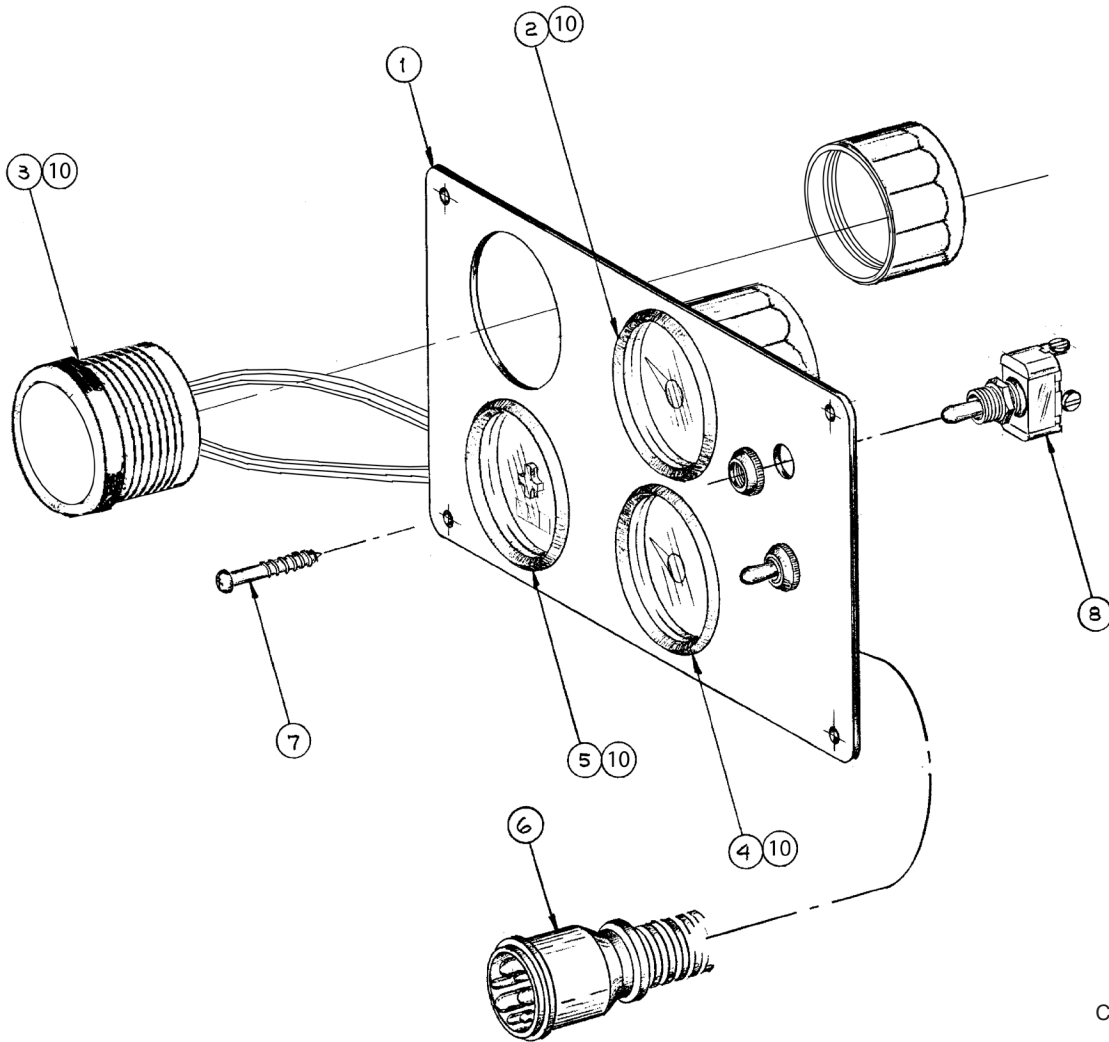
B+ Electrical Systems



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95605	1	Complete Series 1-B Start/Stop Control Panel (includes all keys)	-
1	28-90003	1	Plate	-
2	22-90167	1	Rocker Switch, Momentary (On)-Off	-
3	22-90362	1	Rocker Switch, Green LED (On)-Off-(On) Green Lamp	-
4	22-90009	1	Hour Meter	-
5	12-00093	2	Machine Screw, Round Head Phillips #6 - 32 x 1/2"	-
6	15-00030	2	Star Washer, Internal #6, Stainless Steel	-
7	14-00015	2	Hex Nut #6 - 32, Stainless Steel	-
8	22-45603	1	Wire harness	-
9	00-00048	1	Label "12-24 Volts" (Not shown)	-

S-3C Control Panel 12 Volt

VDO Viewline Black Bezel Gauges

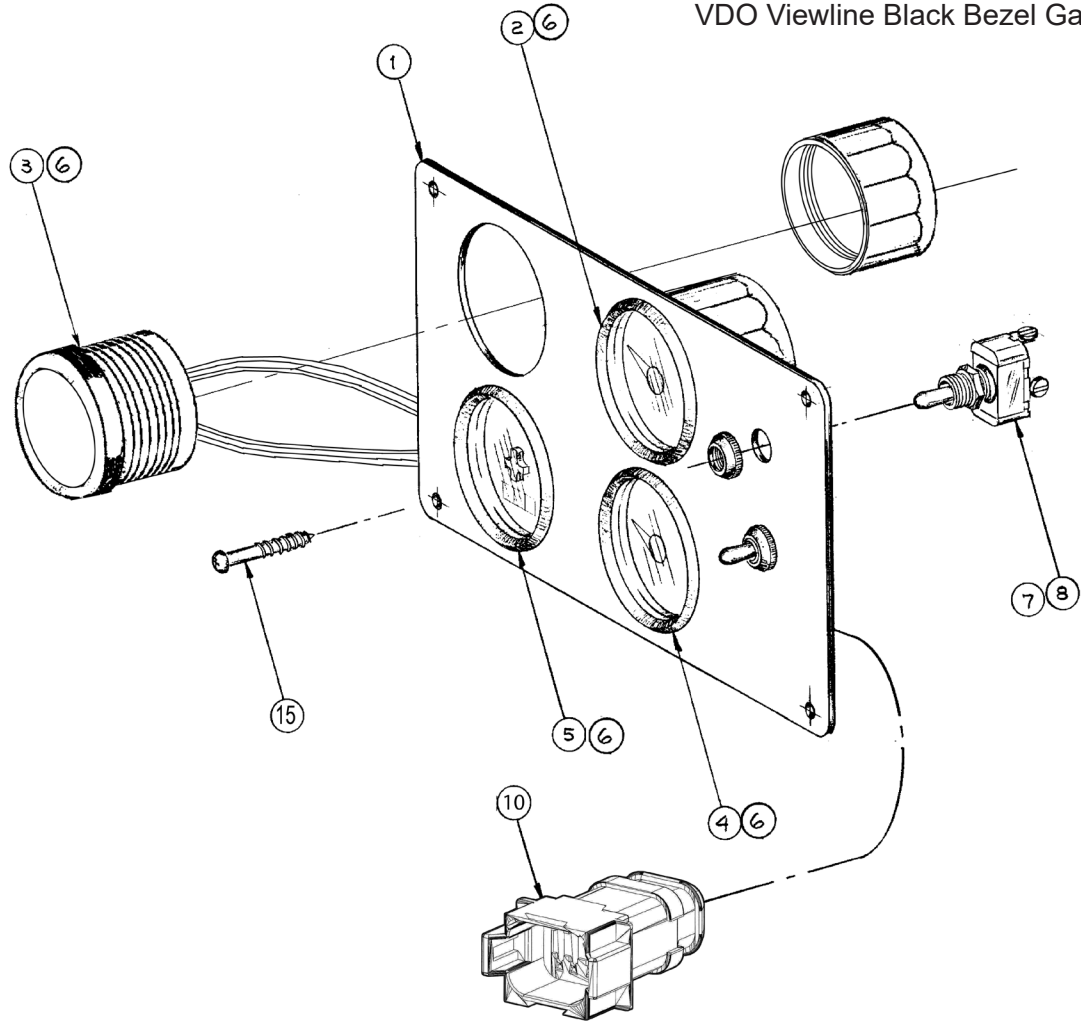


C-2441

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

S-3C Control Panel 12 Volt B+ Systems

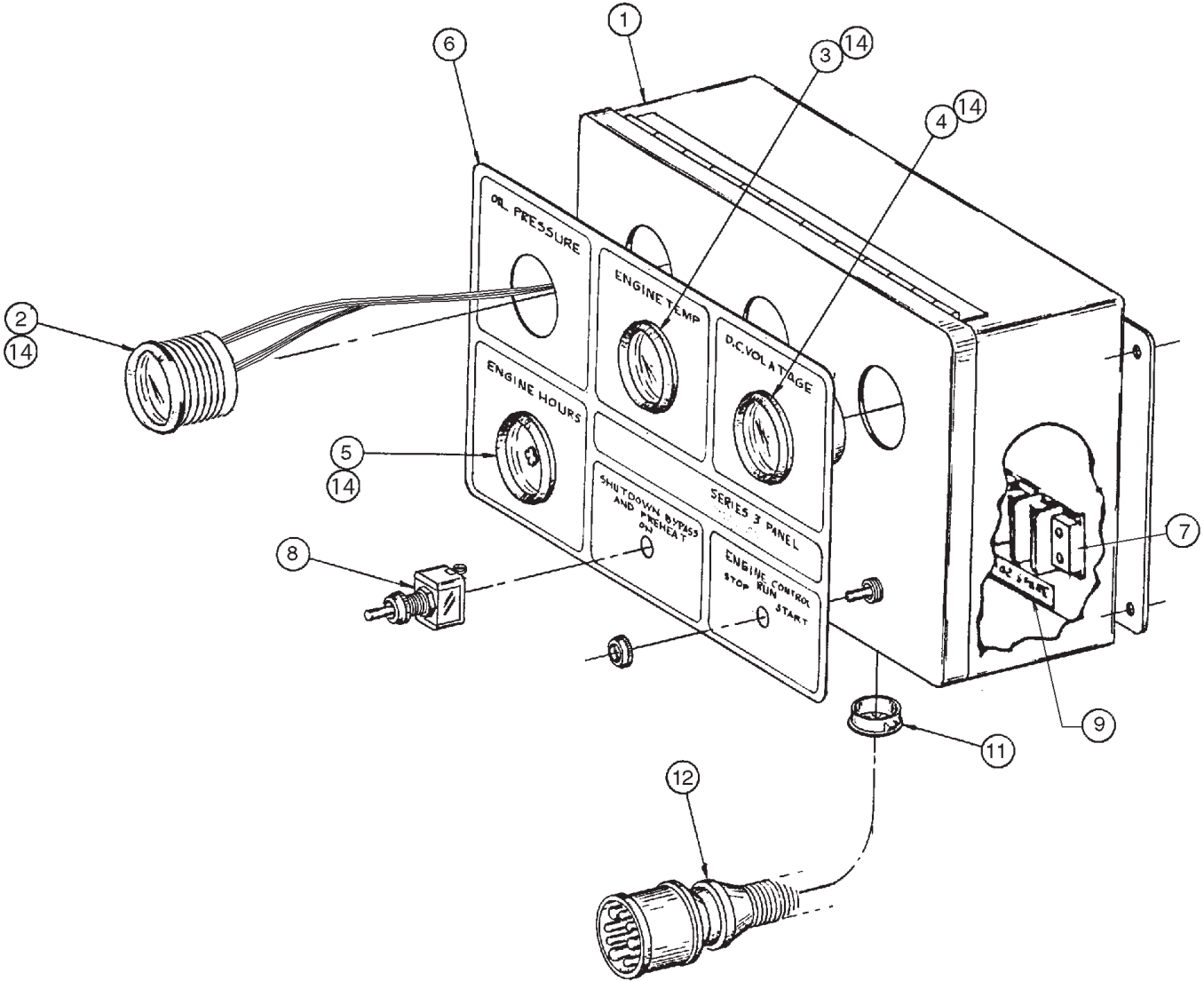
VDO Viewline Black Bezel Gauges



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

S-3B Control Panel 12 Volt B+ Systems

VDO Viewline Black Bezel Gauges



A-11320, A-11321/ C-2470

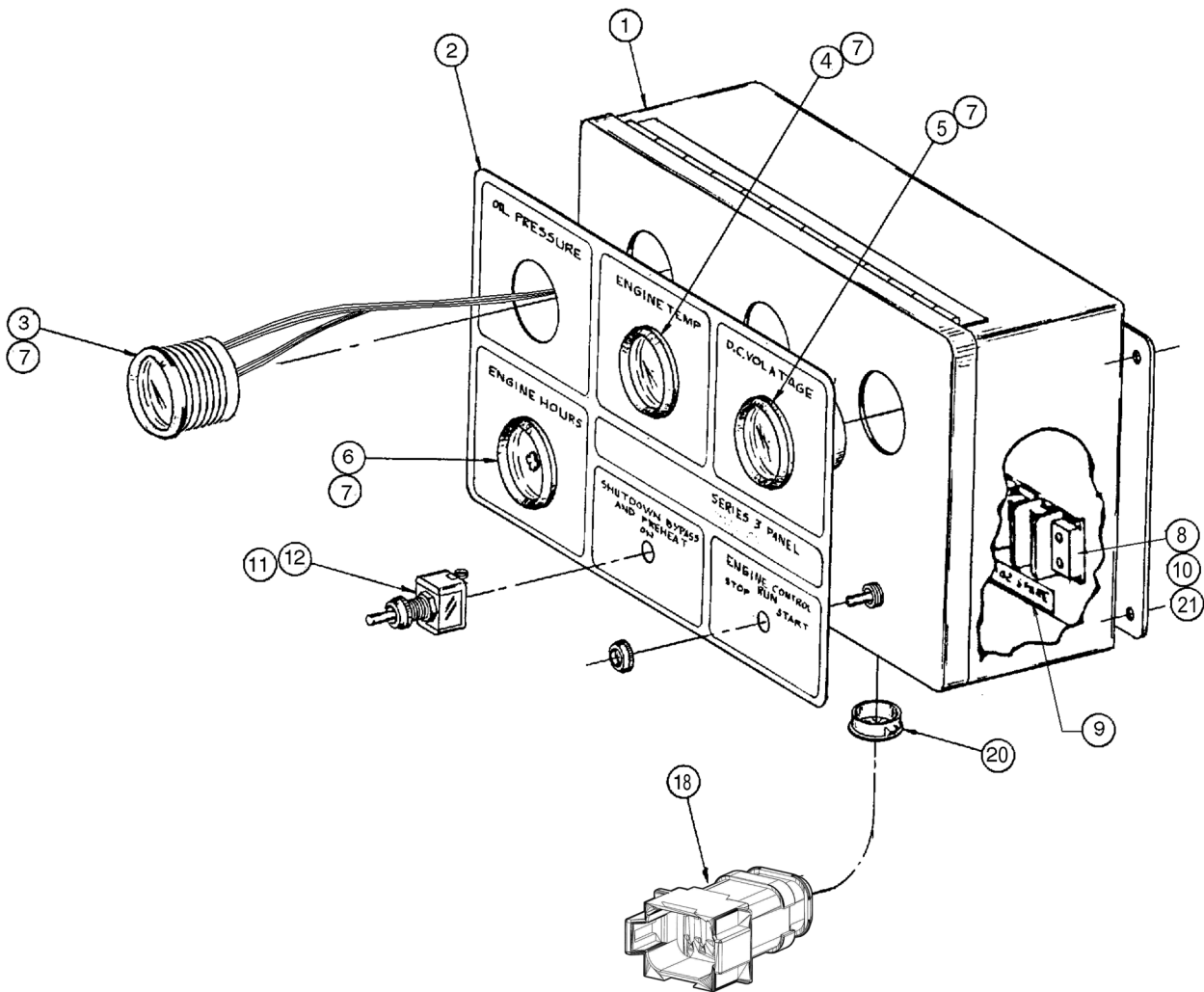
S-3B Control Panel 12 Volt B+ Systems

VDO Viewline Black Bezel Gauges

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

S-3B Control Panel 12 Volt

VDO Viewline Black Bezel Gauges



S-3B Control Panel 12 Volt B+ Systems

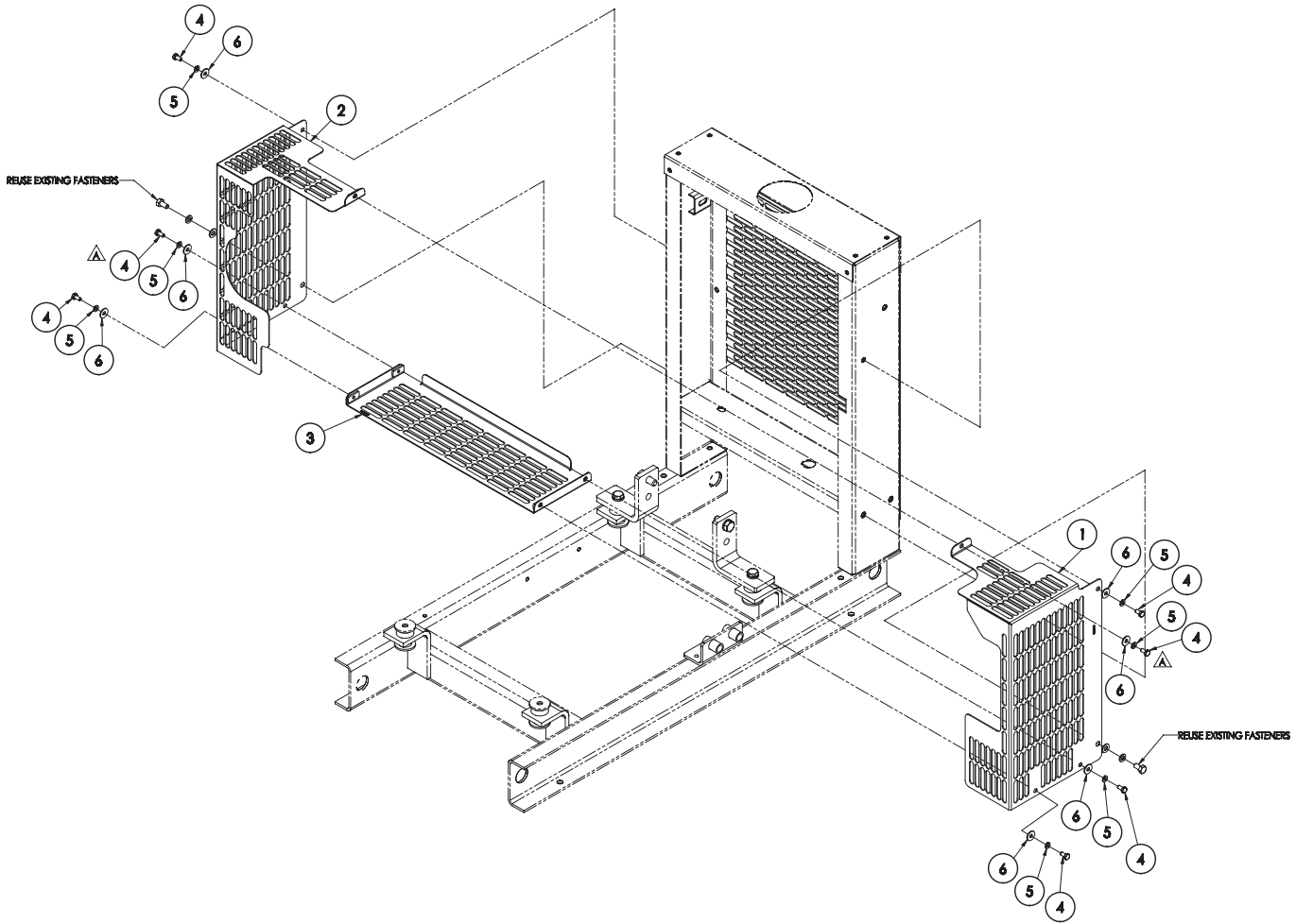
VDO Viewline Black Bezel Gauges

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

* Note Bezel 37-00014 supplied separately

Belt Guard Assembly

NL773LW4



D-4622A

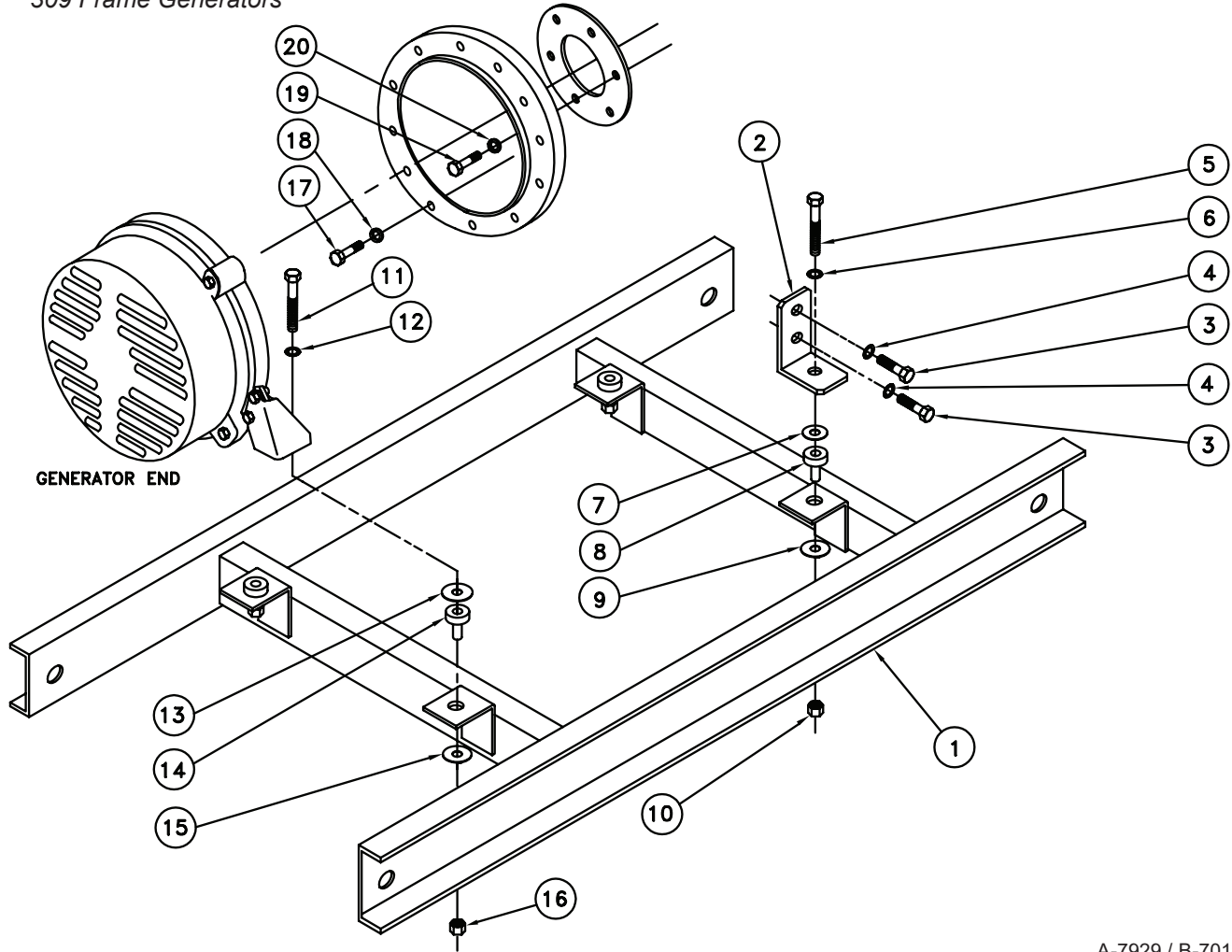
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-08606	1	Belt Guard, R.H.	-
2	00-08607	1	Belt Guard, L.H.	-
3	00-08608	1	Belt Guard, Lower	-
4	12-00097	7	Capscrew, Hex Head M6 x 1.0 x 12mm	-
5	15-01132	7	Lock Washer, Helical M6	-
6	15-00008	7	Flat Washer M6	-

Gasket Kits

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
•	195907460	1	Gasket Kit (includes keys 1-40)	-
1	050209107	1	Oil Seal, Rear	-
2	052109076	1	O-ring, Suction Oil Pipe	-
3	110996800	1	Gasket, Oil Pan	-
4	025100016	2	Seal Washer, Oil Pan Drain	-
5	165996520	1	Gasket, Front Plate	-
6	052109108	2	O-ring, Governor Shaft	-
7	052109110	1	O-ring, Rocker Arm	-
8	052109109	1	O-ring, Rocker Arm	-
9	165996530	1	Gasket, Timing Gear	-
10	198636140	1	Oil Seal, Front	-
11	165996610	1	Gasket, Gear Case Cover	-
12	131426300	1	Adjusting Shim Set, Injection Pump	-
13	025100006	1	Seal Washer, Air Bleed Screw	-
14	140996260	4	Gasket, Banjo Bolt	-
15	111147570	1	Head Gasket, t=1.3	-
16	120406050	3	Valve Guide Seal, Exhaust	-
17	120406070	3	Valve Guide Seal, Intake	-
18	131426200	3	Gasket, Injector Lower Side	-
19	131426210	3	Gasket, Injector Upper Side	-
20	052100120	1	O-ring, Rocker Arm Shaft	-
21	120996150	1	Gasket, Rocker Arm Bracket	-
22	111996420	1	Gasket, Rocker Arm Cover	-
23	140996260	3	Gasket, Rocker Arm Cover	-
24	052100400	2	O-ring, Oil Filler Cap	-
25	135996751	1	Gasket, Air Intake	-
26	145996830	1	Gasket, Coolant Pump	-
27	145996840	1	Gasket, Thermostat Housing	-
28	145996850	1	Gasket, Thermostat Cover	-
29	130516069	4	Gasket, Joint Bolt	-
30	130996130	1	Gasket, Fuel Pump	-
31	052109113	2	O-ring, Dipstick Guide	-
32	025100016	1	Seal Washer, Solenoid	-
33	052109078	1	O-ring, Relief Valve	-
34	130326051	5	Gasket, Joint Bolt	-
35	140996270	4	Gasket, Valve Assembly	-
36	135996900	1	Gasket	-
37	135996541	1	Gasket, Exhaust Manifold	-
38	314990013	1	Gasket	-
39	052300700	1	O-ring, Gear Case Cover	-
40	11-31902	1	Gasket, Elbow	-

Base Frame Assembly

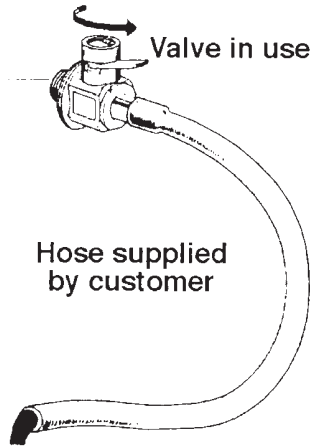
309 Frame Generators



A-7929 / B-7017

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88217	1	Base Frame	-
2	23-88208	2	Bracket, Front Engine Mount	-
3	12-00943	4	Capscrew, Hex Head M12 x 1.25 x 30 mm	-
4	15-00912	4	Lock Washer	-
5	12-00048	2	Capscrew, Hex Head M10 x 1.5 x 60 mm	-
6	15-00809	2	Flat Washer (Special)	-
7	15-00014	2	Head/Tail Washer	-
8	33-83100	2	Centerbonded Mount, 100 lb.	-
9	15-00014	2	Head/Tail Washer	-
10	14-00812	2	Hex Nut, Nylock	-
11	12-00817	2	Capscrew, Hex Head M10 x 1.5 x 55 mm	-
12	15-00809	2	Flat Washer (Special)	-
13	15-00014	2	Head/Tail Washer	-
14	33-83100	2	Centerbonded Mount, 100 lb.	-
15	15-00014	2	Head/Tail Washer	-
16	14-00812	2	Hex Nut, Nylock	-
17	12-00312	8	Capscrew, Hex Head 3/8-16 x 1"	-
18	15-00302	8	Lock Washer	-
19	12-00214	6	Capscrew, Hex Head 5/16-18 x 1-1/2"	-
20	15-00202	6	Lock Washer	-

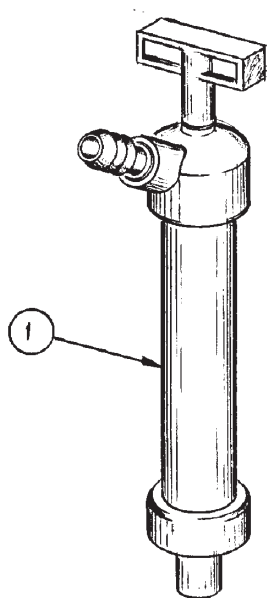
Drain Valve



A-6480

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	36-77400	1	Drain Valve ** Note: Also included in kit 36-78620 with hand pump & adapter hoses	-

Oil Drain Kit



A-5024/ B-3990

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	36-78620		Oil Drain Pump Kit with valve (includes #1 Pimp & Drain Valve 36-77400)	-
1	36-72002	1	Hand Pump	-



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