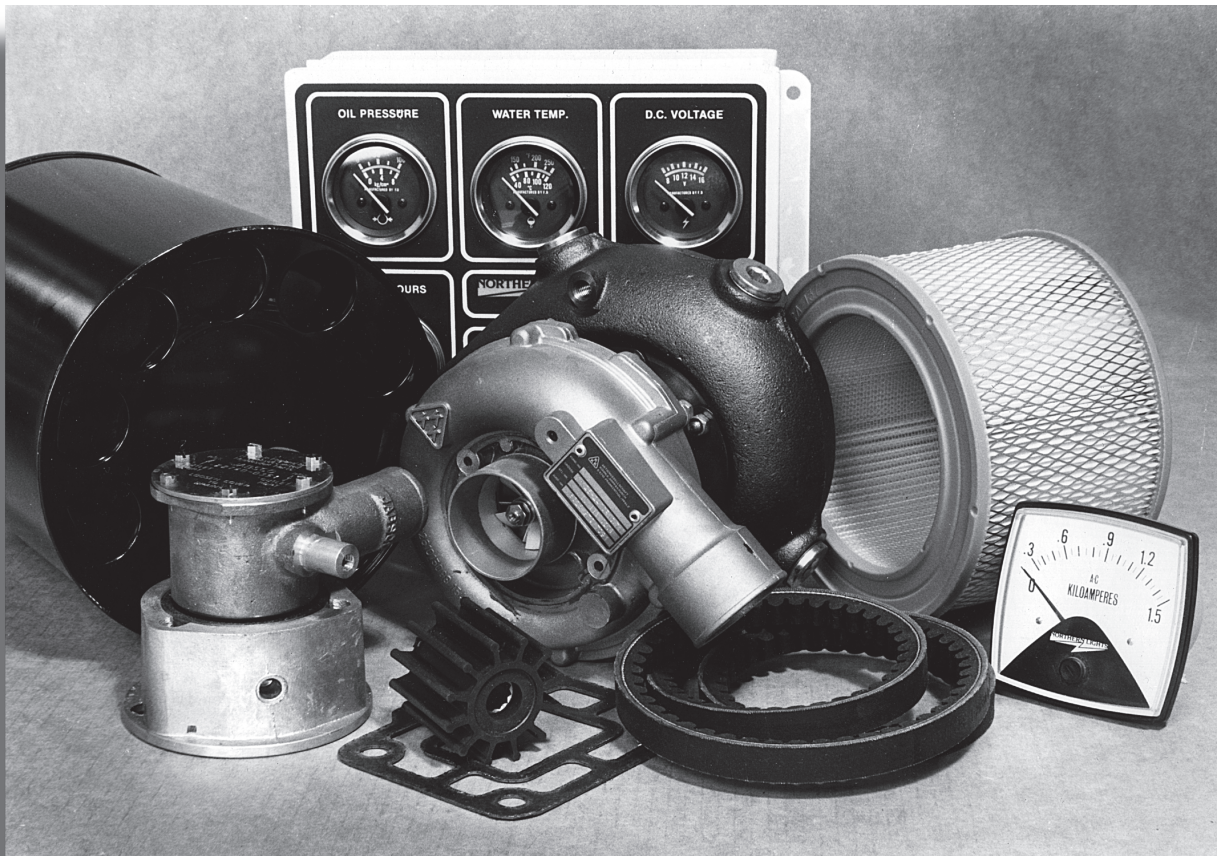


PARTS CATALOG

P498K

for Model NL498K



NORTHERN LIGHTS
®



— CALIFORNIA —
Proposition 65 Warning:

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



ALASKA DIESEL ELECTRIC, INC.
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PARTS CATALOG

for Model
NL498K

Please read thoroughly before attempting to use this manual:

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Reading a Parts Page	III

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INTRODUCTION

MODEL DESIGNATION

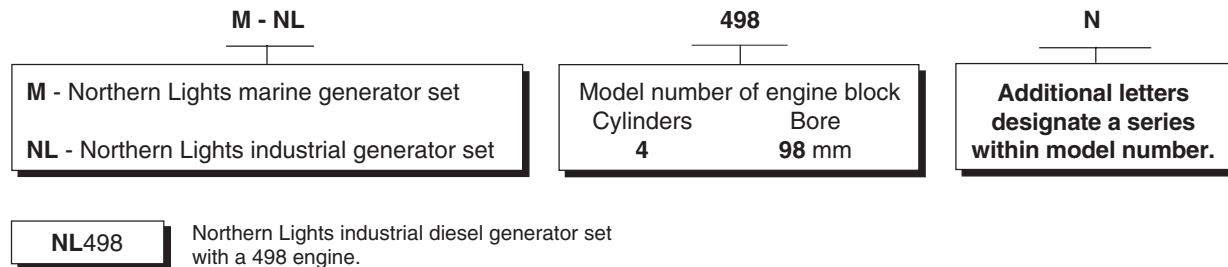
MODELS INCLUDED

This manual covers the operating instructions for:

NL498, which uses the Yanmar model 4TNE98-AD engine.

MODEL NUMBERS

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

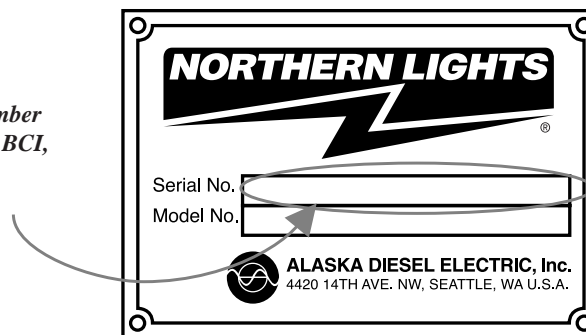


SERIAL NUMBERS

NORTHERN LIGHTS

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.

*Generator Set Serial Number
for units with PXG, PXX, BCI,
and PSL generators*



READING A PARTS PAGE

IMPORTANT:

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

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

REFERENCES:

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

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

Cylinder Block

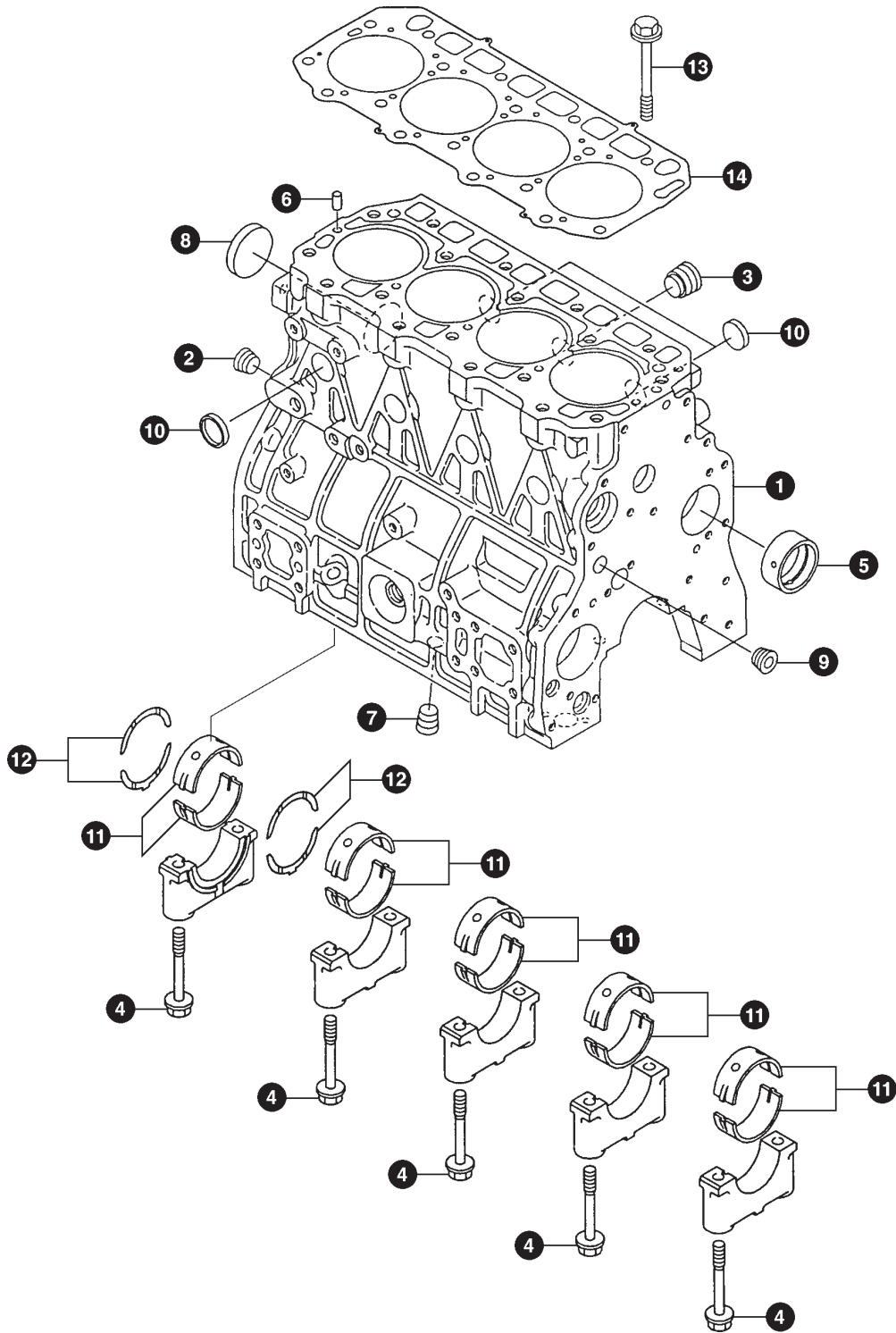


Figure 1

Cylinder Block

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	729902-01560	1	Cylinder Block Assembly (Includes Keys #2 - #12)	-
2	23871-030000	1	Plug, 3/8 BSPT	-
3	171051-01921	1	Plug	-
4	129900-02020	10	Main Cap Bolt	-
5	129900-02410	1	Camshaft Bush	-
6	22351-060012	2	Spring Pin	-
7	23871-030000	1	Plug, 3/8 BSPT	-
8	27231-550000	1	Expansion Plug, 55 mm	-
9	23871-030000	1	Plug	-
10	27241-300000	8	Expansion Plug, 30 mm	-
11	129900-02800	5	Main Bearing, Standard	-
	129900-02340	5	Main Bearing, Under-sized 0.25 mm	-
12	129900-02930	2	Thrust Bearing, Standard	-
	129900-02940	2	Thrust Bearing, Over-sized 0.25 mm	-
13	129900-01200	18	Head Bolt	-
14	129902-01330	1	Head Gasket	-

Flywheel Housing and Oil Sump

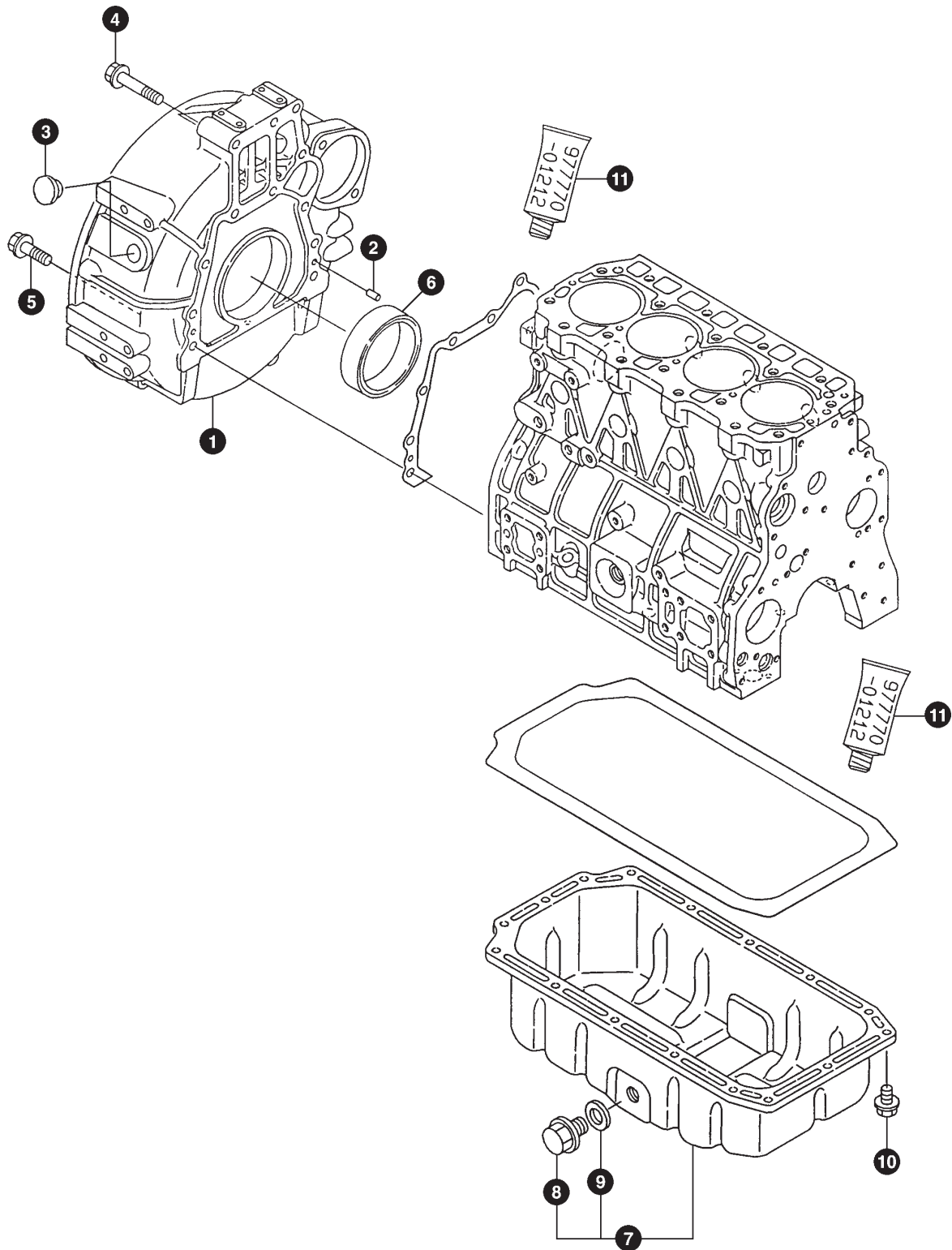


Figure 2

Flywheel Housing and Oil Sump

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129955-01600	1	Flywheel Housing	-
2	129100-01580	2	Parallel Pin	-
3	119620-01750	1	Plug	-
4	26206-100702	3	Bolt, M10 x 70 Plated	-
5	26206-100352	9	Bolt, M10 x 35 Plated	-
6	124411-01780	1	Seal	-
7	129902-01710	1	Oil Sump Assembly	-
8	119640-01640	1	Drain Plug, M22 x 1.5	-
	36-77300	1	Oil Drain Valve with 5/8" Hose Barb (optional - not shown)	-
9	22190-220002	1	Seal Washer	-
10	26106-080122	21	Bolt, M8 x 12 Plated	-
11	977770-01212	1	Liquid Gasket	-

Crankshaft and Piston

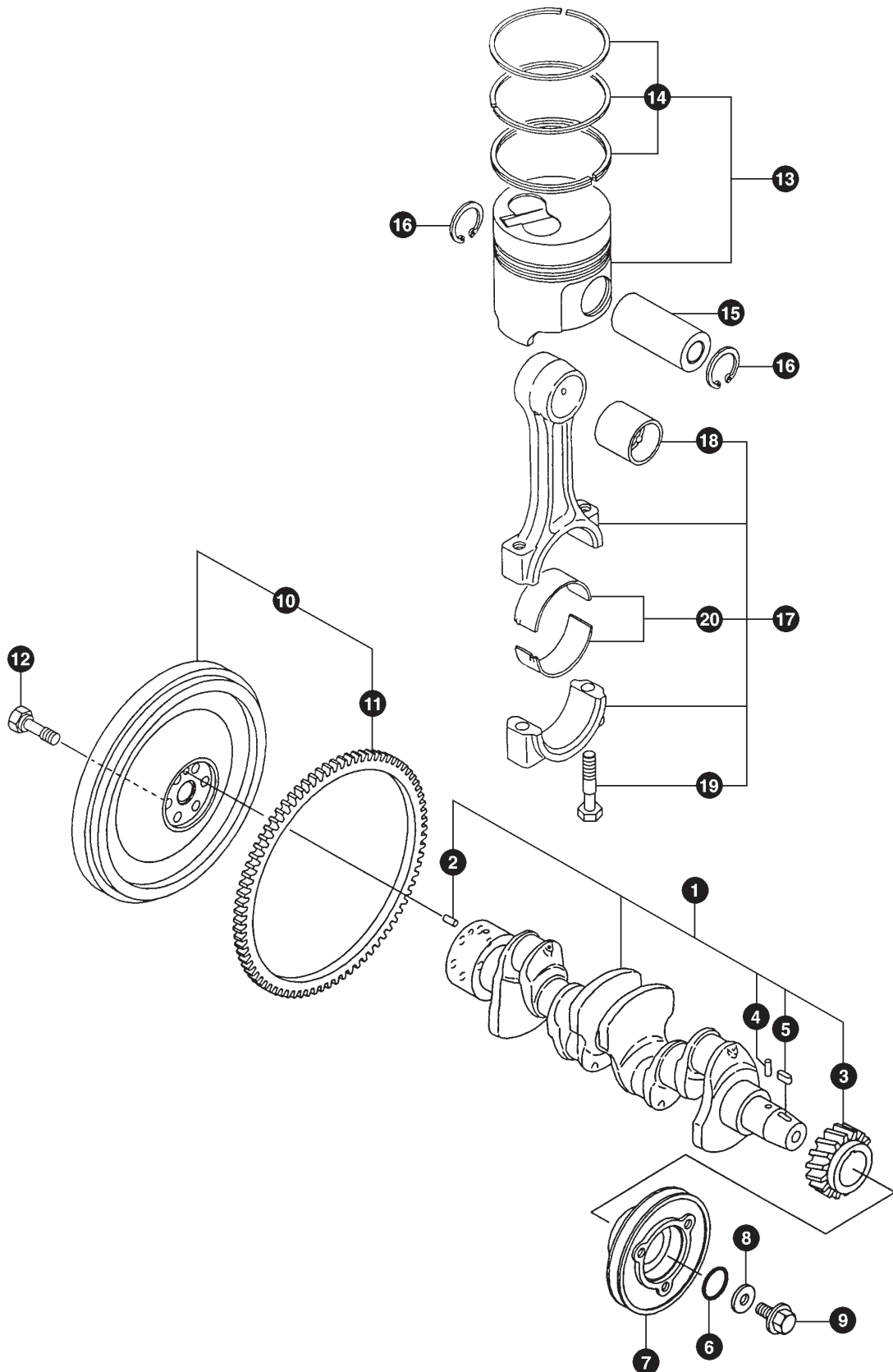


Figure 3

Crankshaft and Piston

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129902-21000	1	Crankshaft Assembly (Includes Keys #2 - #5)	-
2	121850-21920	1	Parallel Pin	-
3	129900-21200	1	Crankshaft Gear	-
4	121850-21290	1	Parallel Pin	-
5	22512-070140	1	Key	-
6	24341-000530	1	O-Ring	-
7	129900-21670	1	Crankshaft Pulley	-
8	129960-21640	1	Washer	-
9	121850-21680	1	Bolt	-
10	129955-21590	1	Flywheel Assembly (Includes Key #11)	-
11	129900-21600	1	Ring Gear	-
12	121850-21130	6	Bolt	-
13	129902-22080	4	Piston with Rings, Standard	-
	129902-22900	4	Piston with Rings, Over-sized 0.25 mm	-
14	129903-22050	4	Piston Ring Set, Standard	-
	129903-22950	4	Piston Ring Set, Over-sized 0.25 mm	-
15	120130-22301	4	Piston Pin	-
16	22252-000300	8	Snap Ring	-
17	129900-23000	4	Connecting Rod Assembly (Includes Keys #18 - #20)	-
18	129900-23910	4	Piston Pin Bush	-
19	129900-23200	8	Connecting Rod Bolt	-
20	129900-23600	4	Bearing, Standard	-
	129900-23610	4	Bearing, Under-sized 0.25 mm	-

Camshaft and Driving Gear

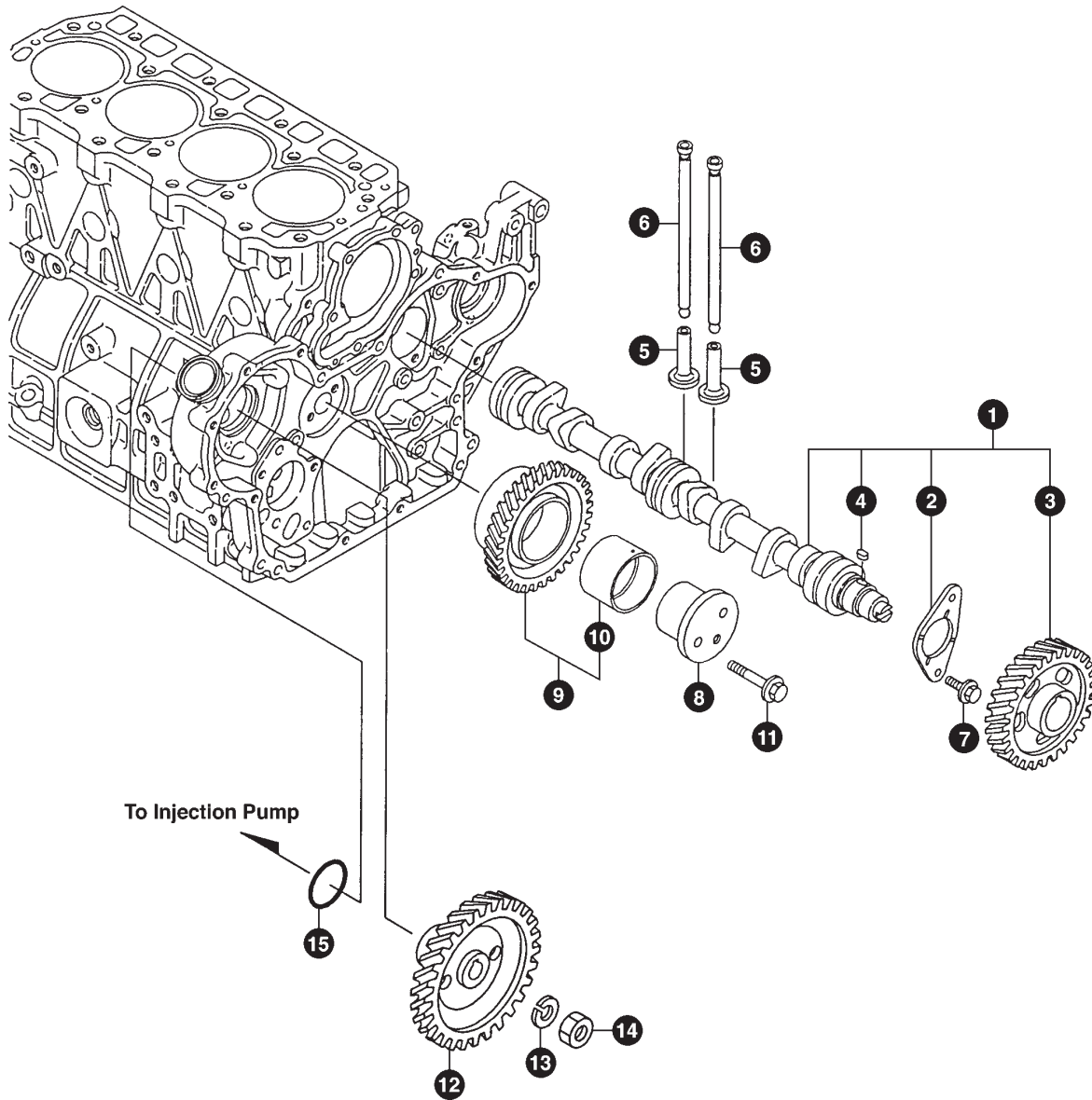


Figure 4

Camshaft and Driving Gear

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129900-14580	1	Camshaft Assembly (Includes Keys #2 - #4)	-
2	129150-02450	1	Thrust Plate	-
3	129900-14100	1	Camshaft Gear	-
4	22512-070140	1	Key	-
5	129150-14200	8	Tappet	-
6	129900-14400	8	Push Rod	-
7	26106-080162	2	Bolt, M8 x 16 Plated	-
8	129900-25060	1	Idler Shaft	-
9	129900-25100	1	Idle Gear Assembly (Includes Key #10)	-
10	129150-25920	1	Bushing	-
11	26106-080552	2	Bolt, M8 x 55 Plated	-
12	129900-25900	1	Injection Pump Drive Gear	-
13		1	Lock Washer	-
14		1	Hex Nut	-
15		1	O-Ring	-

Timing Gear Housing

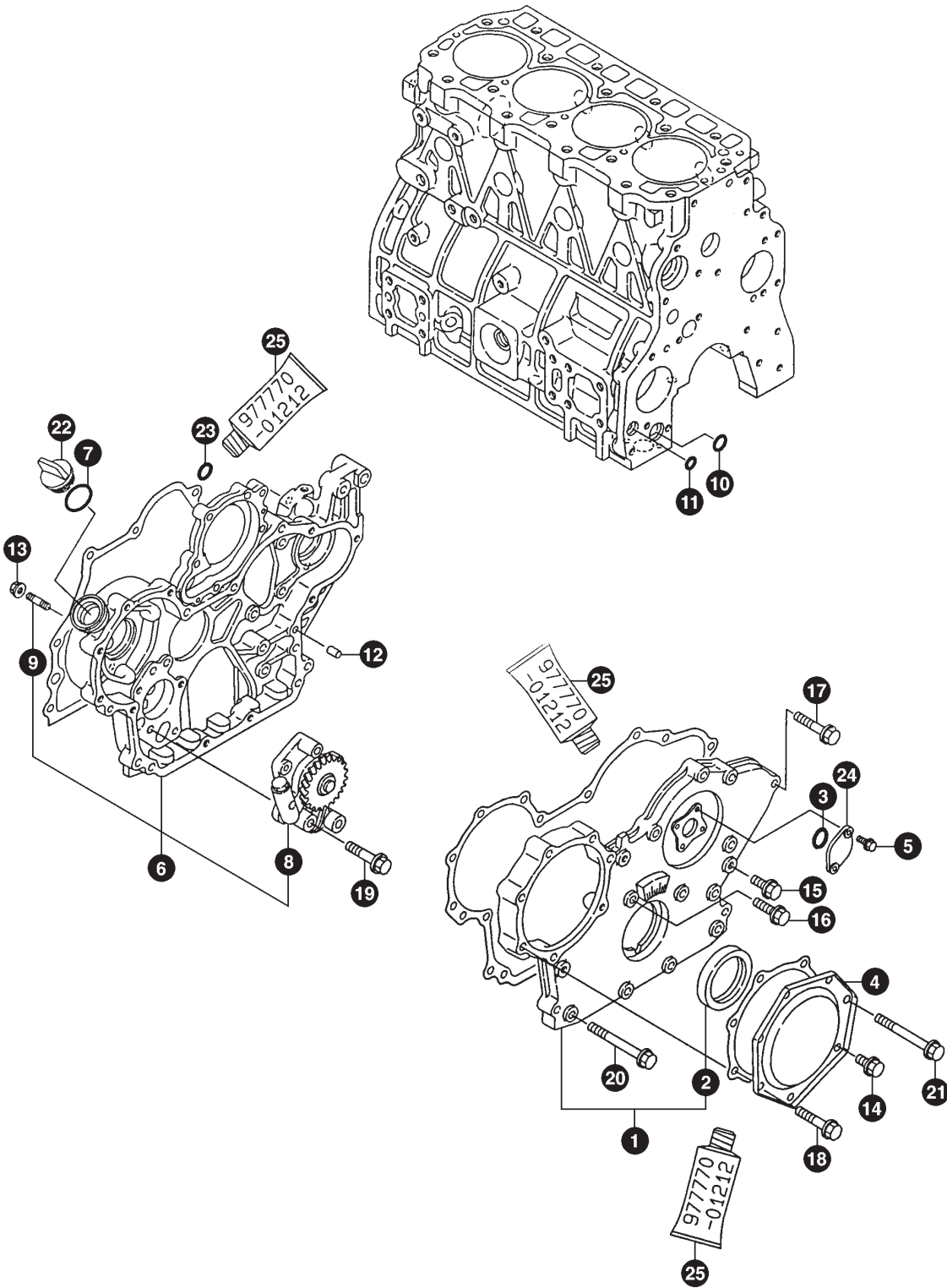


Figure 5

Timing Gear Housing

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	729900-01570	1	Timing Cover Assembly (Includes Key #2)	-
2	129900-01780	1	Oil Seal	-
3	24341-000240	1	O-Ring	-
4	129900-01740	1	Cover	-
5	26106-060162	2	Bolt, M6 x 16 Plated	-
6	129900-01820	1	Timing Gear Housing Assembly (Includes Keys #8 - #9)	-
7	24311-000320	1	O-Ring	-
8	129900-32000	1	Oil Pump Assembly (Parts not available separately)	-
9	26216-100302	4	Stud	-
10	129900-32030	1	O-Ring	-
11	129900-32040	1	O-Ring	-
12	22312-080160	4	Parallel Pin	-
13	26366-100002	4	Nut, M10	-
14	26106-080162	1	Bolt, M8 x 16 Plated	-
15	26106-080202	3	Bolt, M8 x 20 Plated	-
16	26106-080302	1	Bolt, M8 x 30 Plated	-
17	26106-080402	5	Bolt, M8 x 40 Plated	-
18	26106-080402	5	Bolt, M8 x 40 Plated	-
19	26106-080452	3	Bolt, M8 x 45 Plated	-
20	129001-91810	6	Bolt, M8 x 70 Plated	-
21	129001-91810	1	Bolt, M8 x 70 Plated	-
22	124160-01751	1	Oil Filler Cap	-
23	24311-000070	1	O-Ring	-
24	121023-01550	1	Cover	-
25	977770-01212	1	Liquid Gasket	-

Lubricating System

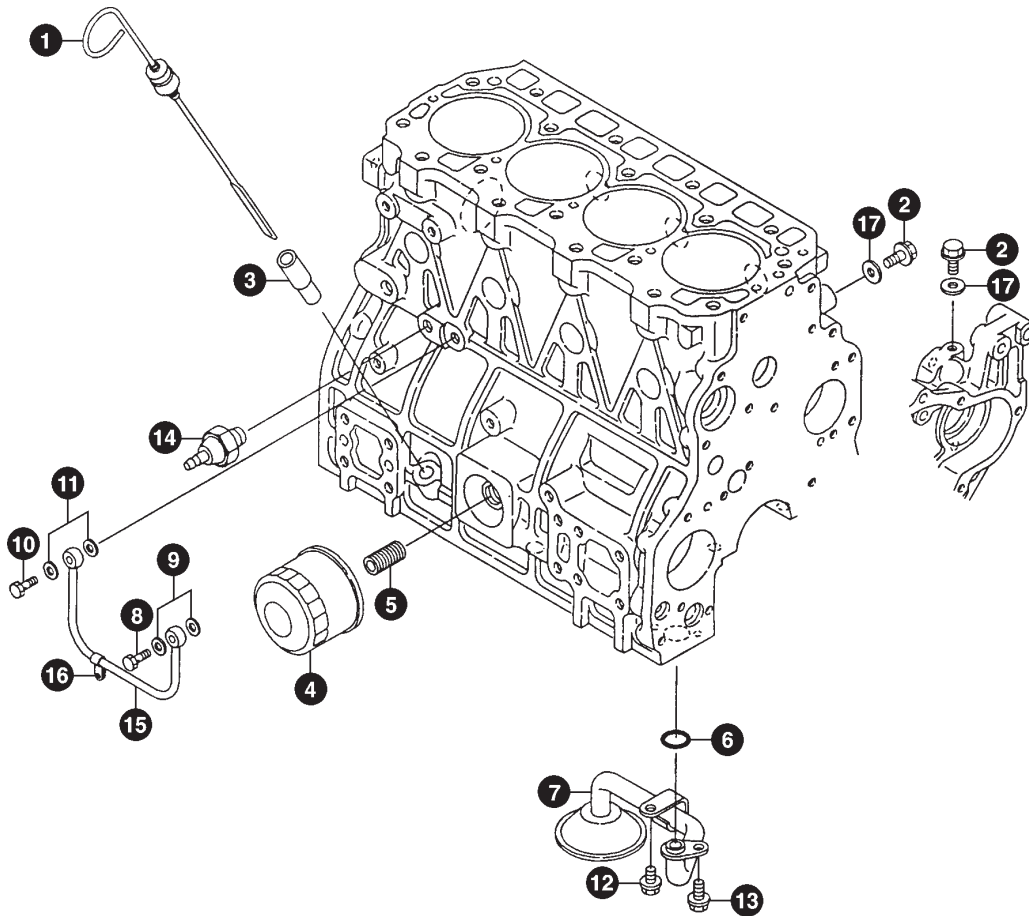


Figure 6

Lubricating System

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129900-34800	1	Dipstick	-
2	26106-080122	1	Bolt, M8 x 12 Plated	-
3	121520-34810	1	Dipstick Tube	-
4	24-07301	1	Oil Filter	-
5	119000-35140	1	Stub Mounting	-
6	129900-32030	1	O-Ring	-
7	129900-35000	1	Oil Pickup	-
8	029731-0120	1	Banjo Bolt	-
9	026510-1340	2	Sealing Washer	-
10	23857-030000	1	Banjo Bolt	-
11	23414-080000	2	Sealing Washer	-
12	26106-080122	1	Bolt, M8 x 12 Plated	-
13	26106-080162	1	Bolt, M8 x 16 Plated	-
14	22-40233	1	Oil Pressure Switch (See Electrical System)	-
15	129900-39350	1	Injection Pump Oil Supply Tube	-
16	23297-060081	1	Retainer	-
17	22190-080002	2	Seal Washer	-

Cylinder Head and Rocker Arm Cover

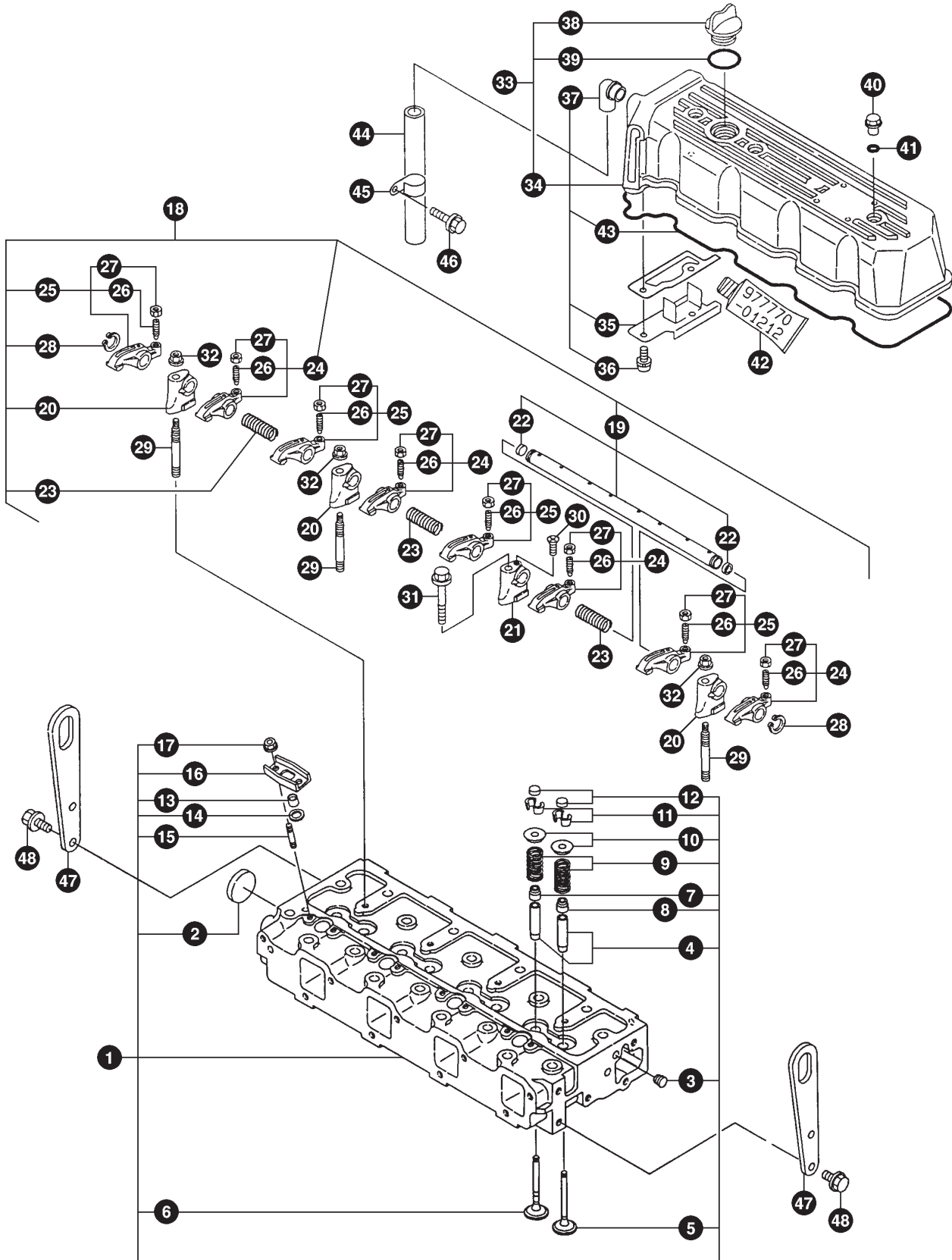


Figure 7

Cylinder Head and Rocker Arm Cover

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	729900-11100	1	Cylinder Head Assembly (Includes Keys #2 - #17)	-
2	27241-400000	1	Expansion Plug	-
3	23871-005000	1	Plug	-
4	129150-11810	8	Valve Guide	-
5	129900-11100	4	Intake Valve	-
6	129900-11110	4	Exhaust Valve	-
7	121400-11340	4	Valve Stem Seal	-
8	124460-11340	4	Valve Stem Seal	-
9	129900-11120	8	Valve Spring	-
10	129795-11180	8	Spring Retainer	-
11	27310-080000	16	Cotter	-
12	129150-11370	8	Valve Cap	-
13	119625-11870	4	Nozzle Protector	-
14	119625-11880	4	Nozzle Seat	-
15	26216-060202	8	Stud, M6 x 20 Plated	-
16	119625-11900	4	Retainer	-
17	26366-060002	8	Nut, M6	-
18	129900-11200	1	Rocker Arm Shaft Assembly (Includes Keys #19 - #28 & #30)	-
19	129900-11240	1	Shaft Assembly (Includes Key #22)	-
20	129900-11510	3	Support	-
21	129900-11520	1	Support	-
22	27241-100000	2	Plug	-
23	129900-11280	3	Spring	-
24	129900-11650	4	Rocker Arm Assembly, Intake	-
25	129900-11660	4	Rocker Arm Assembly, Exhaust	-
26	129150-11230	8	Adjustment Screw	-
27	129150-11750	8	Nut, M8 x P1.0	-
28	22242-000180	2	Snap Ring	-
29	129900-11530	3	Stud	-
30	26577-040162	1	Screw, M4 x 16	-
31	26106-100652	1	Bolt, M10 x 65 Plated	-
32	26366-100002	3	Nut, M10	-
33	129920-11310	1	Rocker Arm Cover Assembly (Includes Keys #34 - #39 & #43)	-
34	129900-11350	1	Rocker Arm Cover Assembly (Includes Keys #35 - #37 & #43)	-
35	129900-11600	1	Plate	-
36	22857-500100	2	Tapping Screw, 5 x 10	-
37	119100-11330	1	Elbow, Breather Outlet	-
38	124160-01751	1	Oil Cap	-
39	24311-000320	1	O-Ring	-
40	124160-11360	3	Knob	-
41	24311-000120	3	O-Ring	-
42	977770-01212	1	Liquid Gasket	-
43	129900-11310	1	Gasket	-
44	23065-160800	1	Vent Hose	-
45	129150-03100	1	Retainer	-
46	26106-080122	1	Bolt, M8 x 12 Plated	-
47	129900-07900	2	Lifting Eye	-
48	26106-080162	4	Bolt, M8 x 16 Plated	-

Intake Manifold and Air Cleaner

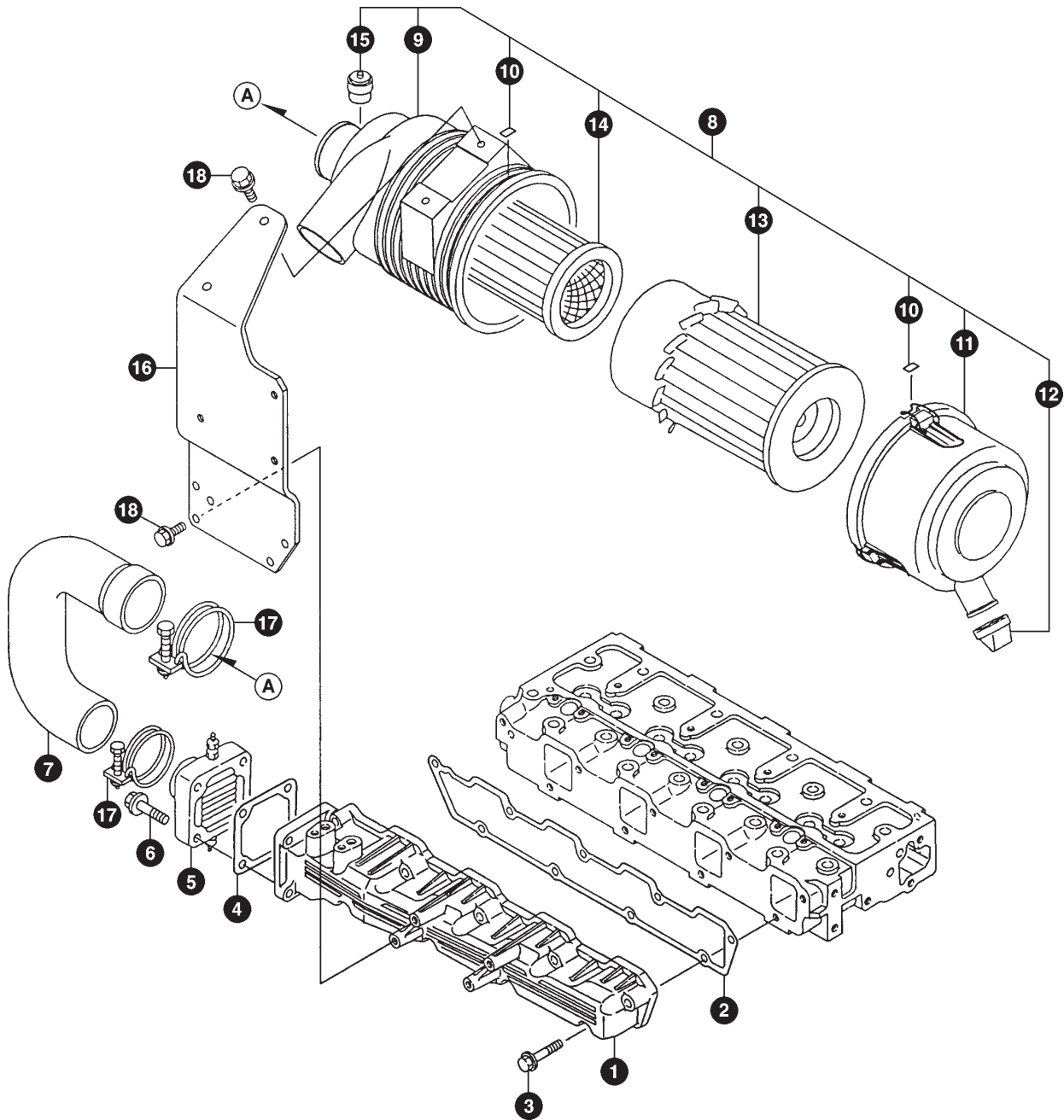


Figure 8

Intake Manifold and Air Filter

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129900-12000	1	Intake Manifold	-
2	129900-12050	1	Gasket	-
3	26106-080452	9	Bolt, M8 x 45 Plated	-
4	121850-77021	1	Gasket	-
	119129-77020	1	Gasket, Copper (use with optional heater)	-
5	129915-77050	1	Air Heater	-
	119005-77050	1	Air Heater (optional)	-
6	26106-080352	4	Bolt, M8 x 35 Plated	-
7	129955-12210	1	Intake Hose	-
8	129609-12510	1	Air Filter Assembly (Includes Keys #9 - #15)	-
9	129609-12520	1	Housing	-
10	129418-12530	2	Label	-
11	129900-12530	1	Cover Assembly	-
12	119808-12540	1	Drain Valve	-
13	24-28501	1	Element, Outer	-
14	24-28502	1	Element, Inner	-
15	126650-12680	1	Restriction Indicator	-
16	129955-12550	1	Bracket	-
17	23000-080000	2	Hose Clamp	-
18	26106-080202	6	Bolt, M8 x 20 Plated	-

Exhaust Manifold and Muffler

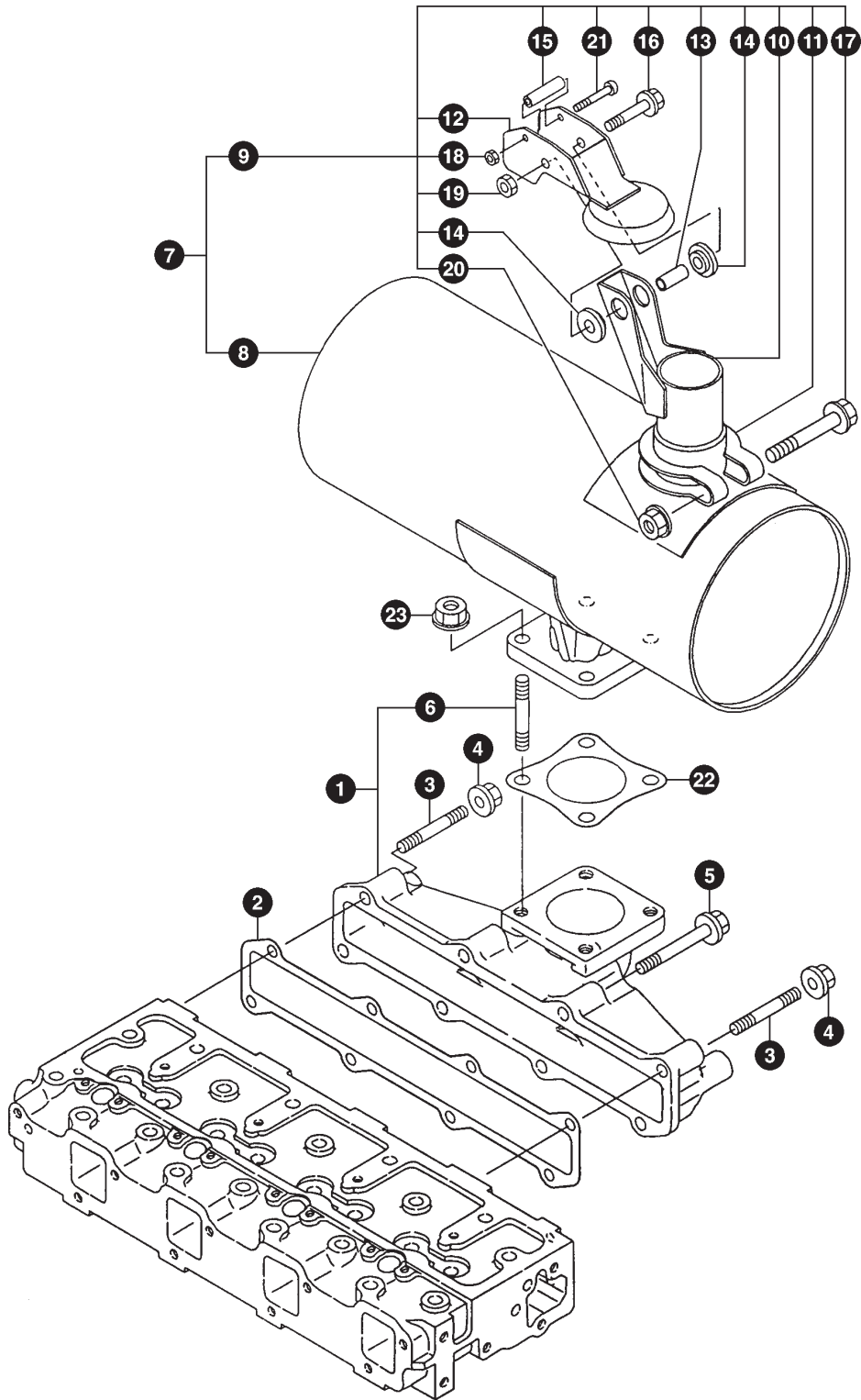


Figure 9

Exhaust Manifold and Muffler

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129955-13300	1	Exhaust Manifold	-
2	129900-13251	1	Gasket	-
3	26216-080802	2	Stud, M8 x 80 Plated	-
4	26366-080002	2	Nut, M8	-
5	26106-080802	6	Bolt, M8 x 80 Plated	-
6	119131-18320	4	Stud, M8 x 22	-
7	129420-13501	1	Muffler Assembly (Includes Keys #8 - #21)	-
8	129420-13530	1	Muffler Body Assembly	-
9	129420-13540	1	Exhaust Rain Cap Assembly (Includes Keys #10 - #21)	-
10	129420-13550	1	Exhaust Pipe	-
11	121850-13580	1	Clamp	-
12	128300-13640	1	Rain Cap	-
13	121855-13821	1	Spacer	-
14	121855-13830	2	Spacer Washer	-
15	123500-13840	1	Spacer	-
16	26106-060402	1	Bolt, M6 x 40 Plated	-
17	26106-100602	1	Bolt, M10 x 60 Plated	-
18	26347-040002	1	U-Nut, M4	-
19	26347-060002	1	U-Nut, M6	-
20	26366-100002	1	Nut, M10	-
21	26557-040352	1	Screw, M4 x 35	-
22	129400-13201	1	Gasket	-
23	26366-080002	4	Nut, M8	-

Cooling System - General Arrangement

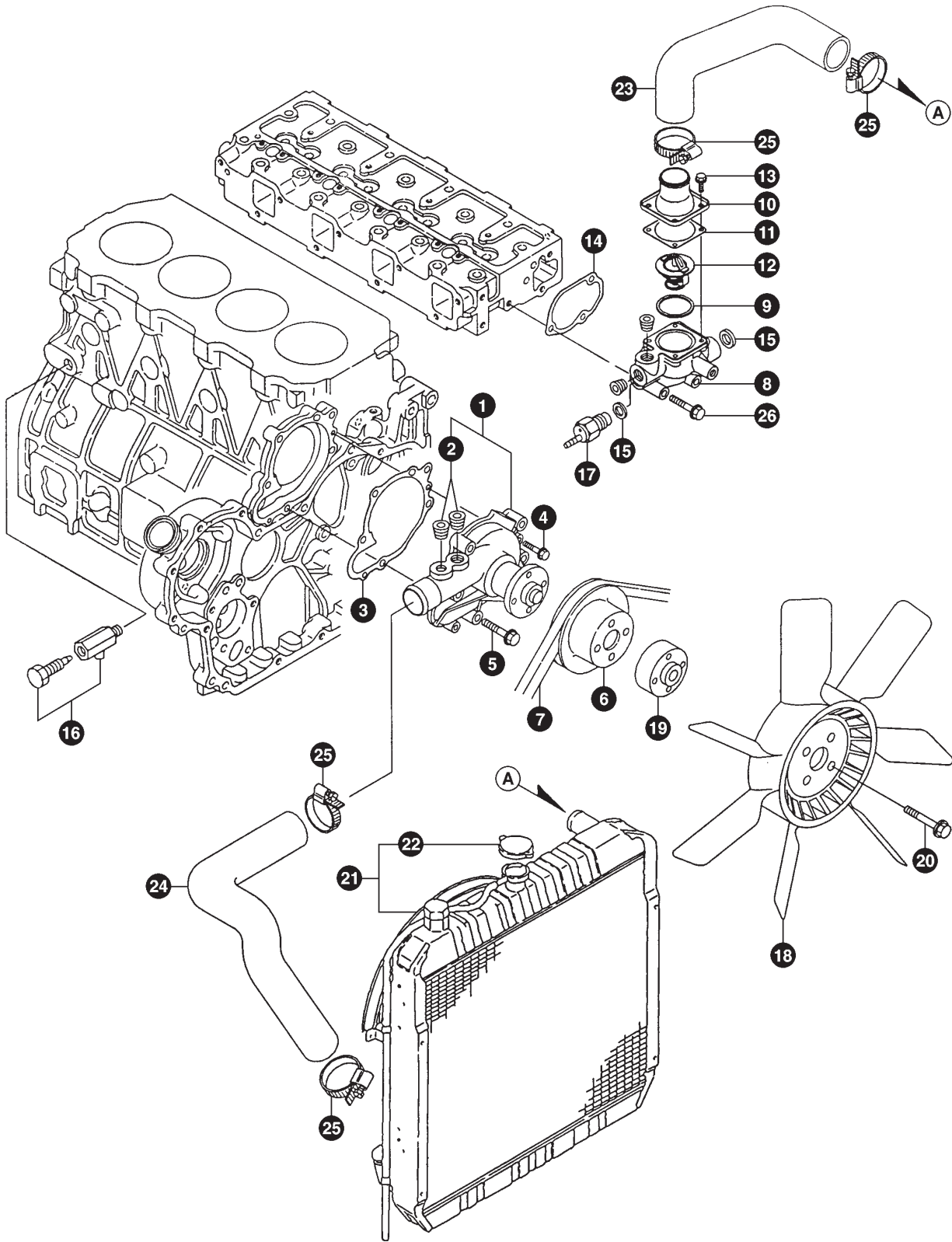


Figure 10

Cooling System - General Arrangement

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129900-42001	1	Coolant Pump (Includes Key #2 - Parts not available separately)	-
2	23871-030000	4	Plug, 3/8 BPST	-
3	129900-42020	1	Gasket, CW-P	-
4	26106-060302	2	Bolt, M6 x 30 Plated	-
5	26106-080552	5	Bolt, M8 x 55 Plated	-
6	129900-42461	1	Pulley	-
7	25132-004100	1	Drive Belt	-
8	129900-49860	1	Thermostat Housing	-
9	121850-49550	1	Gasket	-
10	121850-49530	1	Thermostat Cover	-
11	121850-49540	1	Gasket	-
12	121850-49810	1	Thermostat	-
13	26106-060142	4	Bolt, M6 x 14 Plated	-
14	129900-49870	1	Gasket	-
15	15-01001	2	Sealing Washer	-
16	119620-49290	1	Drain Cock	-
17	22-40366	1	Temperature Switch (110° C)	-
18	129900-44700	1	Fan	-
19	119005-44761	1	Spacer	-
20	26014-080502	4	Bolt, M8 x 50	-
21	171093-44500	1	Radiator	-
22	119259-44570	1	Filler Cap	-
23	129915-49010	1	Hose, Radiator Inlet	-
24	129911-49020	1	Hose, Radiator Outlet	-
25	19-00028	4	Hose Clamp #28	-

Radiator and Modular Guard

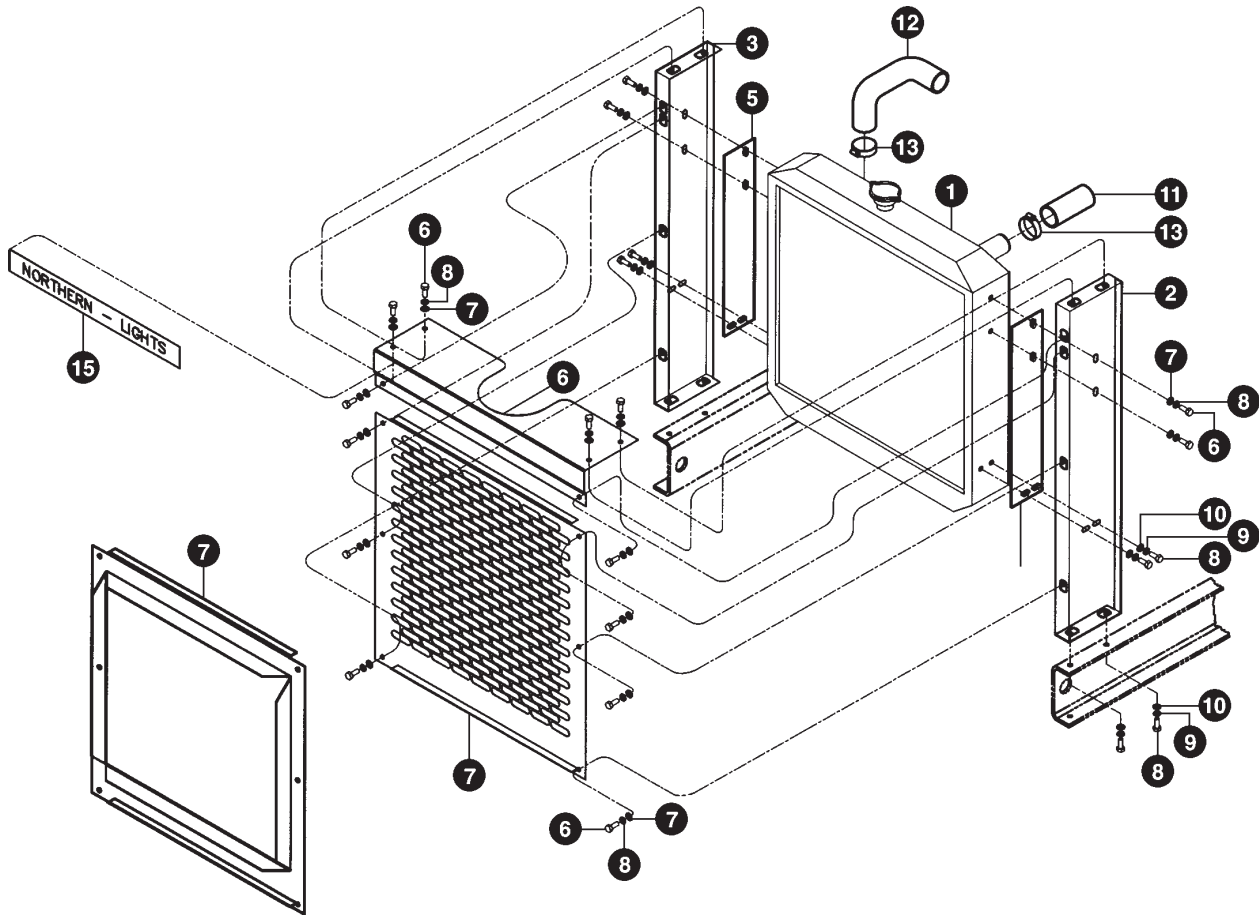


Figure 11: A-8222/D-3100

Radiator and Modular Guard

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	171093-44500	1	Radiator	-
2	39-18506	1	Right Side Panel	-
3	39-18505	1	Left Side Panel	-
4	28-18502	1	Left Plate	-
5	28-18503	1	Right Plate	-
6	39-18507	1	Top Panel	-
7	39-18508	1	Grille	-
8	12-00711	24	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
9	15-00702	24	Lock Washer, Helical M8	-
10	15-00701	24	Flat Washer, M8	-
11	129915-49010	1	Radiator Inlet Hose	-
12	129911-49020	1	Radiator Outlet Hose	-
13	19-00028	4	Hose Clamp #28	-
14	00-70075	1	Label	-

Fuel Injection Pump, Injectors and Lines

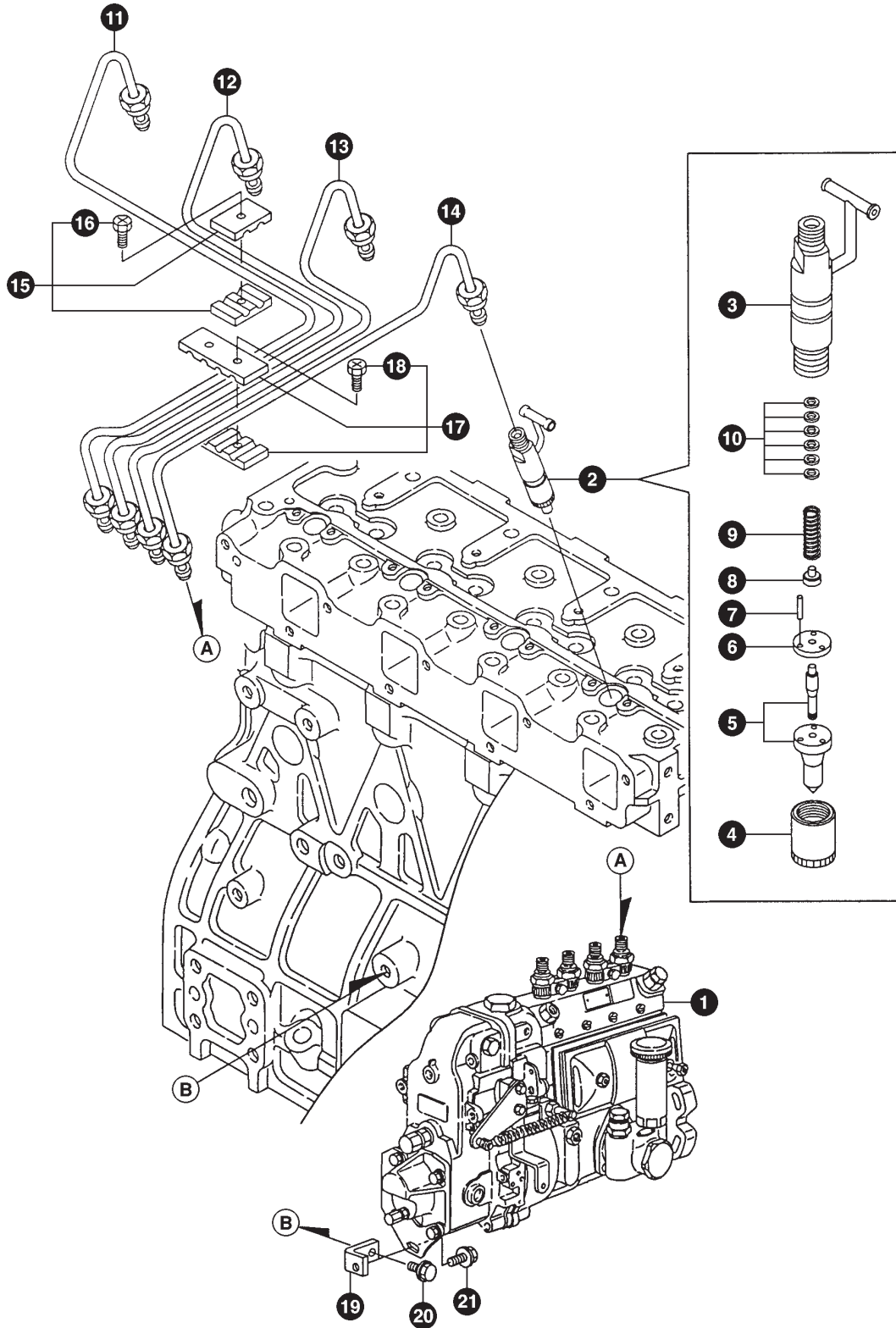


Figure 12

Fuel Injection Pump, Injectors and Lines

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129955-51040	1	Injection Pump Assembly	-
2	729982-53100	4	Fuel Injector (Includes Keys #3 - #10)	-
3	129100-53100	1	Nozzle Holder Assembly*	-
4	114250-53080	1	Nozzle Case Nut*	-
5	129982-53000	1	Nozzle*	-
6	114250-53140	1	Stop Plate*	-
7	114250-53210	2	Pin*	-
8	114250-53130	1	Nozzle Spring Seat*	-
9	114250-53120	1	Nozzle Spring*	-
10	114250-53400	1	Shim Pack*	-
11	129902-59810	1	Injection Line #1	-
12	129902-59820	1	Injection Line #2	-
13	129902-59830	1	Injection Line #3	-
14	129902-59840	1	Injection Line #4	-
15	119305-59120	2	Retainer	-
16	129150-59131	2	Bolt, M4 x 14	-
17	129550-59120	1	Retainer	-
18	129150-59131	2	Bolt, M4 x 14	-
19	129900-01950	1	Bracket	-
20	26106-080202	1	Bolt, M8 x 20 Plated	-
21	26106-100142	1	Bolt, M10 x 14 Plated	-

***NOTE:**

Quantities listed are for each injector assembly.

Fuel Filter and Supply and Return Lines

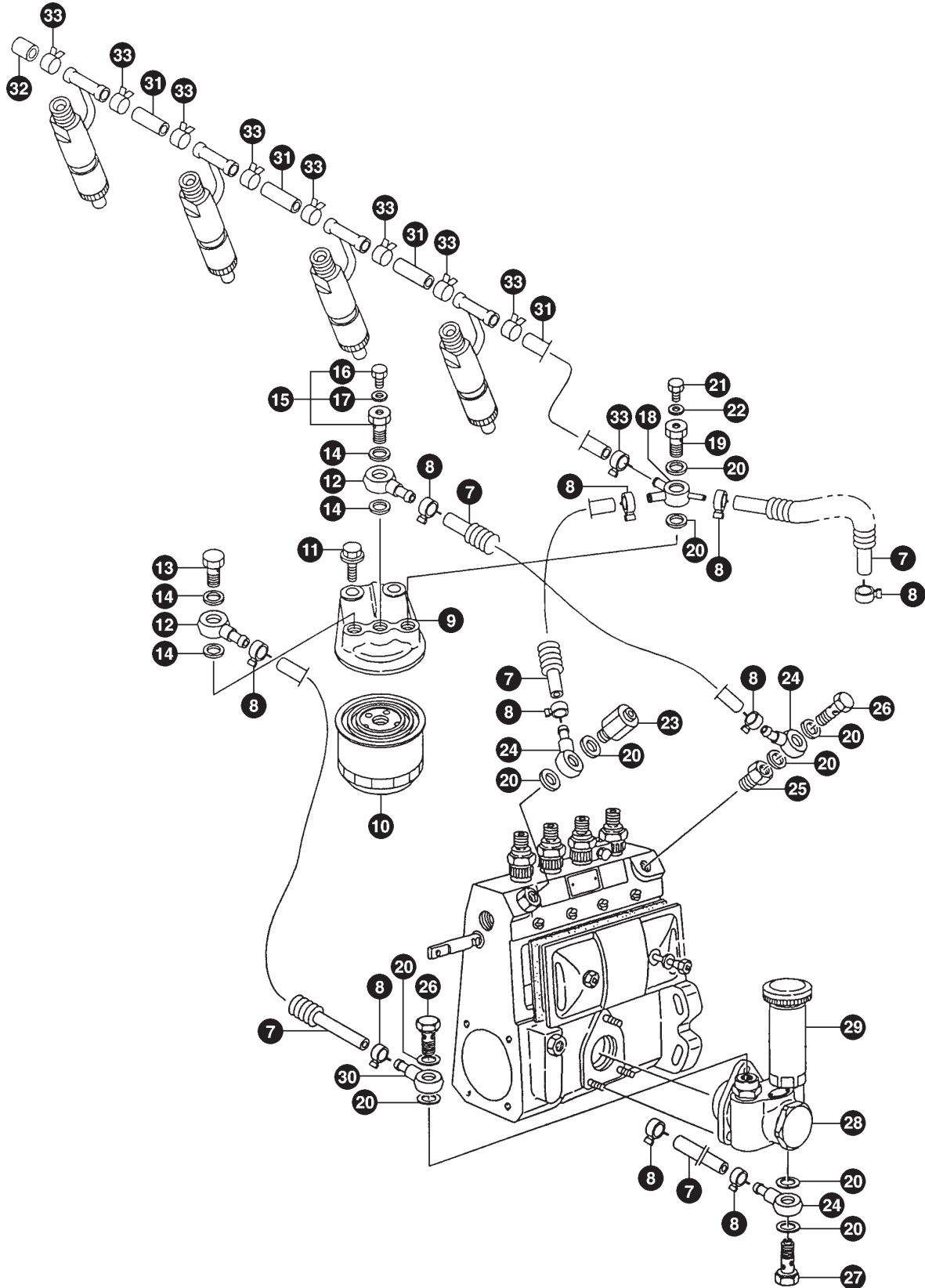


Figure 13

Fuel Filter and Supply and Return Lines

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold	-
2	12-00031	2	Capscrew, Hex Head M6 x 1.0 x 25 mm	-
3	15-00008	4	Flat Washer, M6	-
4	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
5	21-51098	2	Street Elbow 90°, Brass 1/4 NPT	-
6	21-52016	2	Male Connector, Brass 1/4 NPT x 5/16 Hose Barb	-
7	41-01012	**	Hose 5/16" ID (sold per inch, as required)	-
8	19-00004	10	Hose Clamp #4	-
9	129470-55610	1	Fuel Filter Body	-
10	24-58501	1	Fuel Filter	-
11	26106-100252	2	Bolt, M10 x 25 Plated	-
12	101304-59020	2	Joint	-
13	23857-060000	1	Joint Bolt	-
14	22190-120002	4	Seal Washer	-
15	103854-59191	1	Bolt with Plug and Seal	-
16	124060-59380	1	Plug	-
17	22190-060002	1	Seal Washer	-
18	129980-59530	1	Fuel Return Pipe Joint	-
19	129495-59300	1	Pipe Joint Bolt	-
20	22190-140002	8	Seal Washer	-
21	26106-080102	1	Bolt, M8 x 10 Plated	-
22	23414-080000	1	Gasket	-
23	128300-59910	1	Overflow Valve Assembly	-
24	121855-59880	3	Joint	-
25	131002-2000	1	Fitting	-
26	029731-4680	2	Banjo Bolt	-
27	152300-5920	1	Banjo Bolt	-
28	105220-7170	1	Fuel Feed Pump (Includes Key #29)	-
29	152200-6720	1	Primer Pump	-
30	121250-49110	1	Pipe Joint	-
31	41-01001	**	Hose 3/16" ID (sold per inch, as required)	-
32	129150-59580	1	Cap	-
33	124066-59100	9	Clamp	-

NOTE:

Fuel manifold & fittings (Keys #1 - #6, mounted to base frame) not shown.

**As Required.

Engine Electrical - 12 Volt

**DRAWING
NOT YET
AVAILABLE**

Engine Electrical - 12 Volt

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-48501	1	Wire Harness Assembly	-
2	21-00139	1	Adapter, 1/8 BSPT x 1/8 NPT	-
3	21-05400	1	Street Tee, 1/8 NPT	-
4	22-41016	1	Pressure Sender 0 - 80 PSI Standard Ground	-
5	22-40233	1	Pressure Switch	-
6	22-45201	1	Temperature Sender 250°F Standard Ground	-
7	22-40366	1	Temperature Switch 110°C	-
8	15-01001	2	Sealing Washer	-
9	129900-77010	1	Starter (See parts detail)	-
10	119836-77200	1	Alternator (See parts detail)	-
11	22-41032	4	Relay Base	-
12	22-42047	4	Relay, 12 Volt	-

Stop Solenoid - 12 Volt

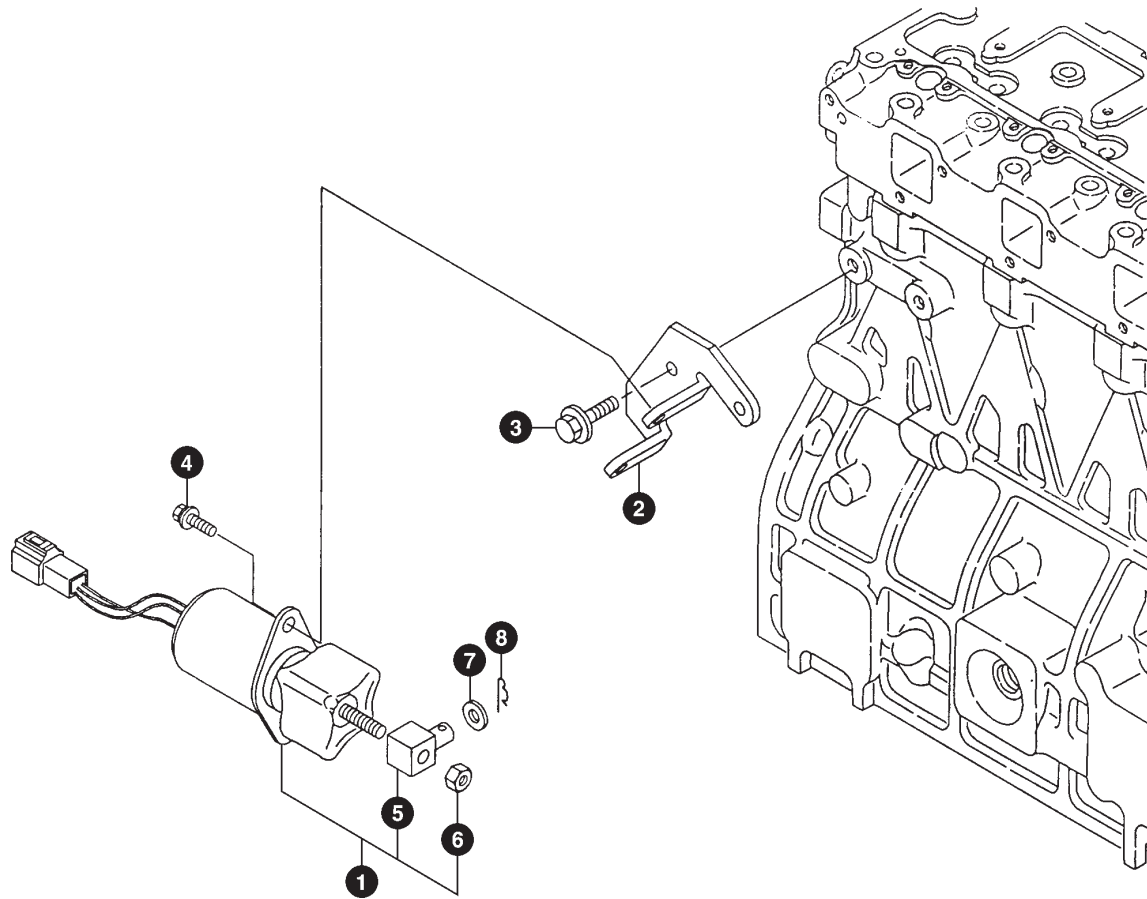


Figure 15

Stop Solenoid - 12 Volt

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129953-77811	1	Stop Solenoid Assembly (Includes Keys #5 - #6)	-
2	129915-66810	1	Bracket	-
3	26106-080162	2	Bolt, M8 x 16 Plated	-
4	26106-060102	2	Bolt, M6 x 10 Plated	-
5	119620-66820	1	Pivot	-
6	26716-060002	1	Nut M6	-
7	22117-060000	1	Washer M6	-
8	22360-060000	1	Snap Pin	-

Alternator - 12 Volt / 40 Amp

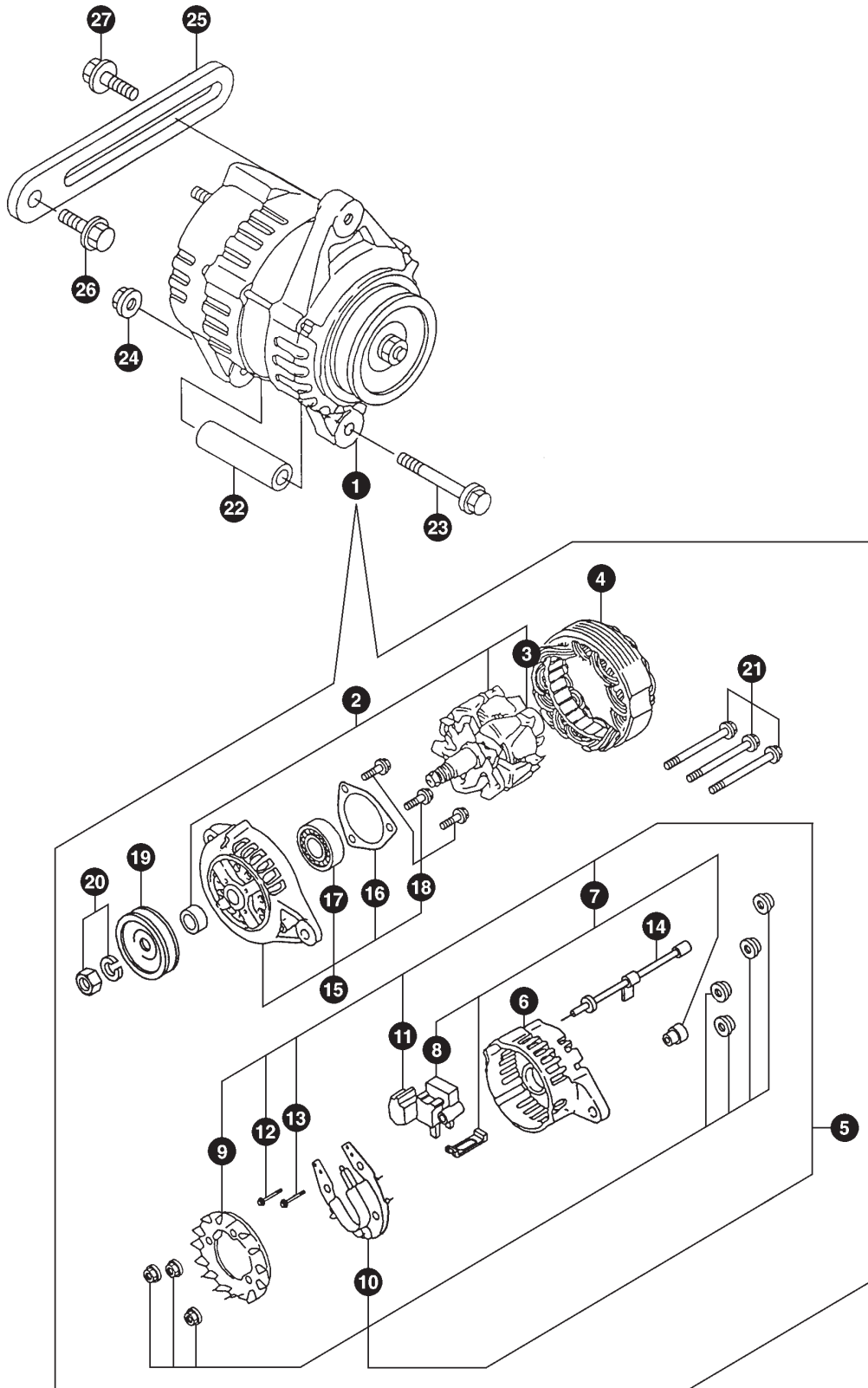


Figure 16

Alternator - 12 Volt / 40 Amp

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	119836-77200	1	Alternator, 12 Volt/40 Amp (Includes Keys #2 - #21)	-
2	119836-77700	1	Rotor Assembly (Includes Key #3)	-
3	119836-77850	1	Ball Bearing	-
4	119836-77710	1	Stator Assembly	-
5	119836-77721	1	Rear Cover Assembly (Includes Keys #6 - #14)	-
6	119836-77730	1	Rear Cover	-
7	119836-77741	1	Regulator Brush Assembly (Includes Key #8)	-
8	119836-77750	1	Brush Assembly	-
9	119836-77760	1	Guide	-
10	119836-77770	1	Diode Assembly	-
11	119836-77780	1	Condenser	-
12	119836-77871	1	Bolt	-
13	119836-77880	1	Bolt	-
14	119836-77890	1	Lead Wire Assembly	-
15	119836-77790	1	Front Cover Assembly (Includes Keys #16 - #18)	-
16	119836-77800	1	Bearing Retainer	-
17	119836-77840	1	Ball Bearing	-
18	119836-77860	1	Screw Kit	-
19	119836-77810	1	Pulley	-
20	119836-77820	1	Nut Assembly	-
21	119836-77830	1	Though Bolt	-
22	129150-77340	1	Spacer	-
23	129136-77251	1	Bolt, M8 x 110	-
24	129612-77260	1	Nut	-
25	129900-77330	1	Tensioning Arm	-
26	26014-080252	1	Bolt, M8 x 25	-
27	119810-77340	1	Bolt	-

Starting Motor - 12 Volt

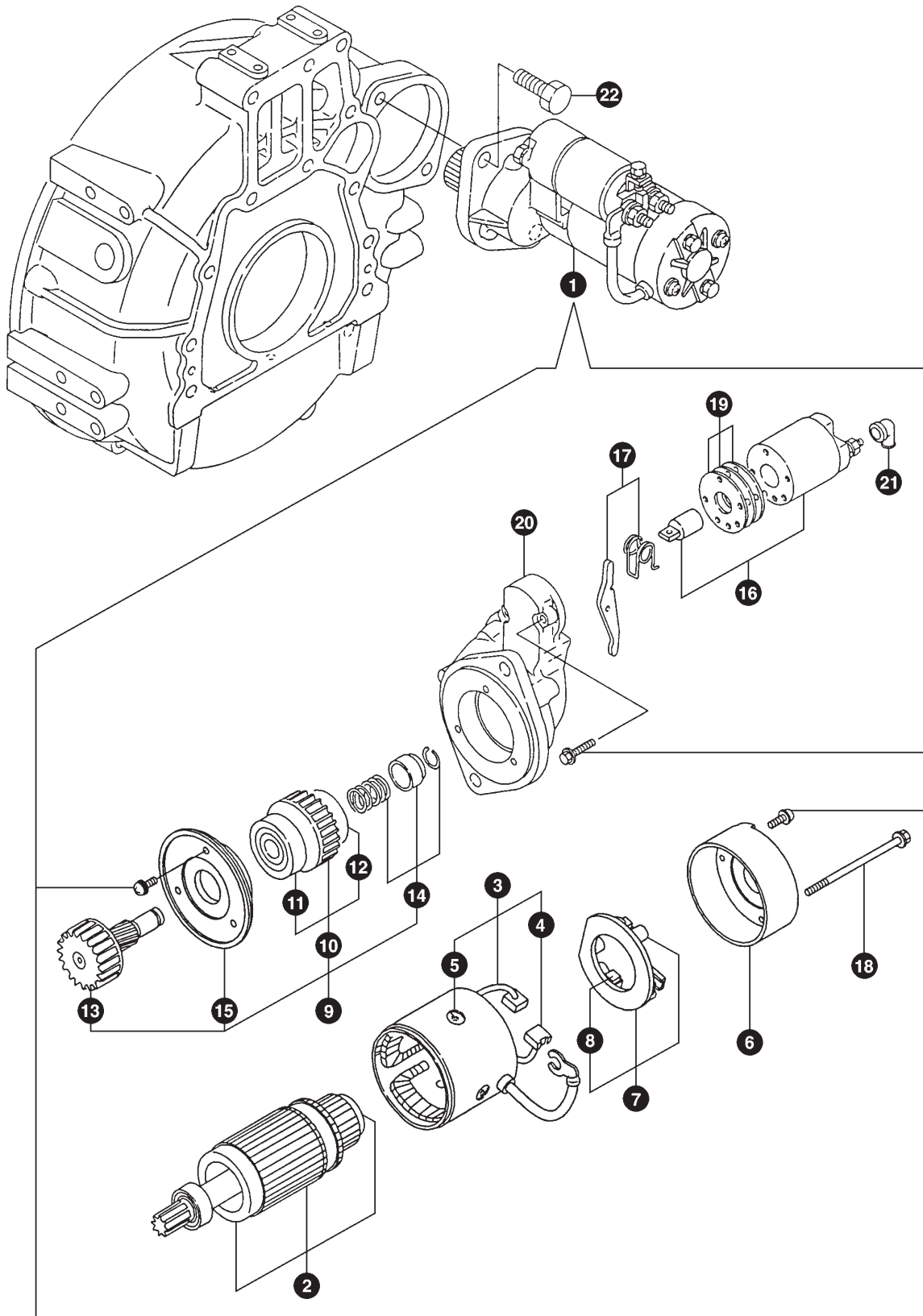


Figure 17

Starting Motor - 12 Volt

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	129900-77010	1	Starter (2.3 kW) (Includes Keys #2 - #21)	-
2	129900-77400	1	Armature Assembly	-
3	129900-77440	1	Field Coil Assembly (Includes Keys #4 - #5)	-
4	129900-77450	2	Brush (+)	-
5	171008-77450	4	Screw	-
6	129900-77460	1	Rear Cover	-
7	129900-77480	1	Brush Holder Assembly (Includes Key #8)	-
8	129900-77500	2	Brush (-)	-
9	129900-77510	1	Pinion Assembly (Includes Keys #10 - #15)	-
10	129900-77520	1	Clutch Assembly (Includes Keys #11 - #12)	-
11	171008-77730	1	Ball Bearing	-
12	171008-77740	1	Ball Bearing	-
13	129900-77540	1	Pinion Shaft	-
14	129900-77550	1	Stopper Set	-
15	129900-77610	1	Bearing Retainer	-
16	129900-77591	1	Switch Assembly	-
17	129900-77620	1	Shift Lever Set	-
18	129900-77640	2	Through Bolt	-
19	129900-77650	1	Dust Cover Assembly	-
20	129900-77710	1	Gear Housing	-
21	171008-77750	1	Terminal Cover	-
22	26116-120302	2	Bolt, M12 x 30 Plated	-

Series 1-B Control Panel

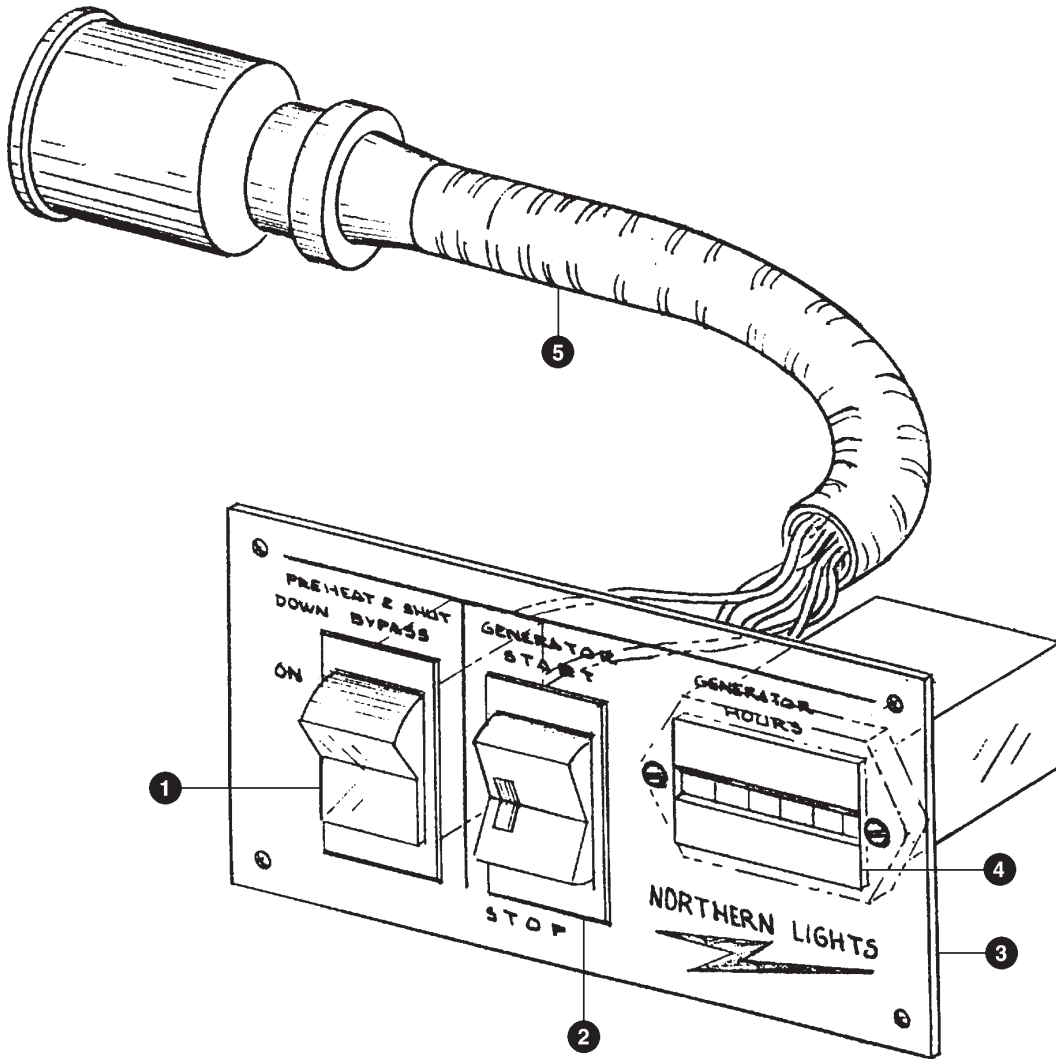


Figure 18: A-4791, A-3171/C-1911

Series 1-B Control Panel

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-90006	1	Complete Series 1-B 12 Volt Control Panel	-
1	22-90007	1	Preheat/Shutdown-Bypass Switch	-
2	22-90008	1	Engine Control Switch	-
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	200 Ohm Resistor, 24 Volt only (not shown)	-

Series 3-B Control Panel

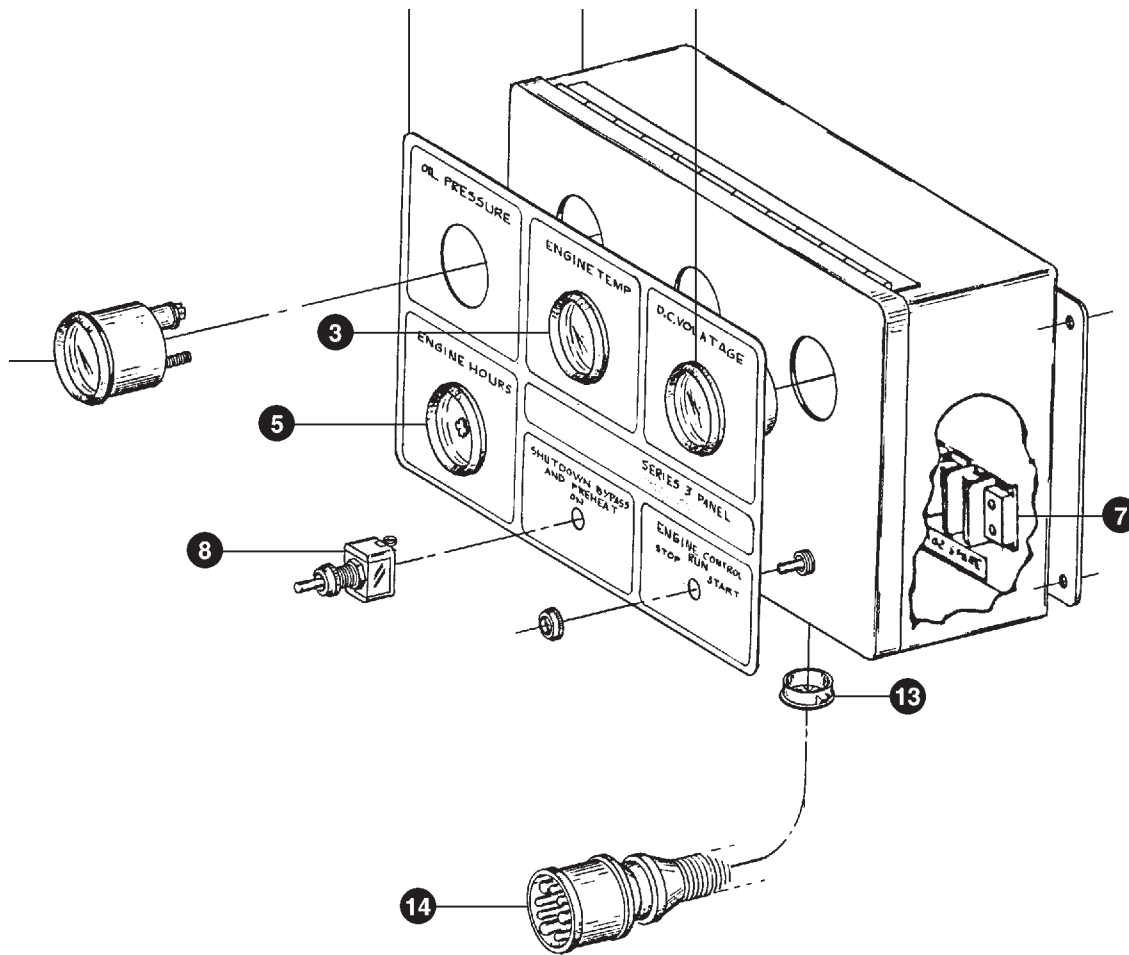


Figure 19: A-4721, A-4695, A-4722, A-4723/C-2470

Series 3-B Control Panel

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92031	1	S-3B Control Panel, 12 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	-
5	37-40013	1	Hourmeter	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Board	-
8	22-41051	2	Toggle Switch (not shown)	-
9	22-00052	1	Number Strip (not shown)	-
10	22-40004	2	Resistor Kit (24 volt panel only)	-
11	22-44852	**	12 Volt Bulb (not shown)	-
12	22-40257	1	Wire Harness (not shown)	-
13	00-41015	1	Plastic Bushing	-
14	22-40062	1	Connection Harness	-
			**As Required.	

Gasket Set

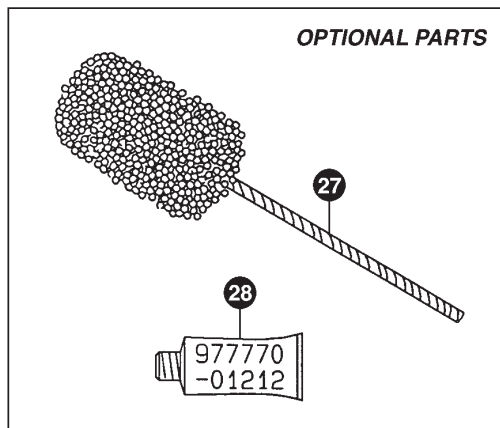
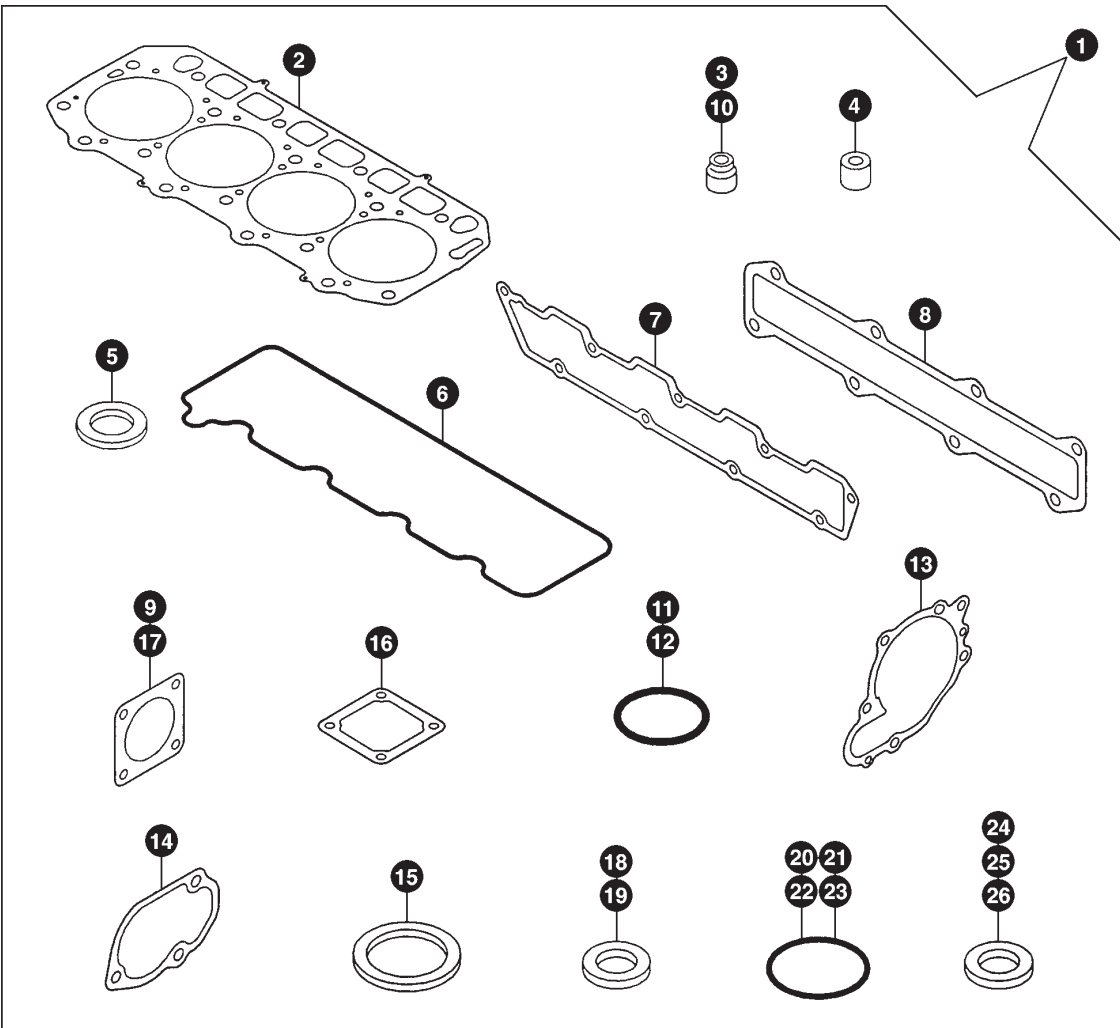


Figure 20

Gasket Set

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	729902-92640	1	Gasket Set (Includes Keys #2 - #26)	-
2	129902-01330	1	Cylinder Head Gasket	-
3	124460-11340	4	Valve Stem Seal	-
4	119625-11870	4	Nozzle Protector	-
5	119625-11880	4	Nozzle Seat	-
6	129900-11310	1	Rocker Cover Gasket	-
7	129900-12050	1	Intake Manifold Gasket	-
8	129900-13251	1	Gasket	-
9	129400-13201	1	Gasket	-
10	121400-11340	4	Valve Stem Seal	-
11	129900-32030	2	O-Ring	-
12	129900-32040	1	O-Ring	-
13	129900-42020	1	Coolant Pump Gasket	-
14	129900-49870	1	Gasket	-
15	121850-49550	1	Thermostat Gasket	-
16	121850-77021	1	Gasket	-
17	121850-49540	1	Thermostat Gasket	-
18	23414-080000	3	Gasket	-
19	15-01001	2	Sealing Washer	-
20	24311-000070	1	O-Ring	-
21	24311-000120	3	O-Ring	-
22	24341-000240	1	O-Ring	-
23	24311-000320	2	O-Ring	-
24	22190-080002	2	Seal Washer	-
25	22190-120002	4	Seal Washer	-
26	22190-140002	4	Seal Washer	-
27	129400-92440	1	Flex Hone	-
28	977770-01212	1	Liquid Gasket	-

Base Frame Assembly

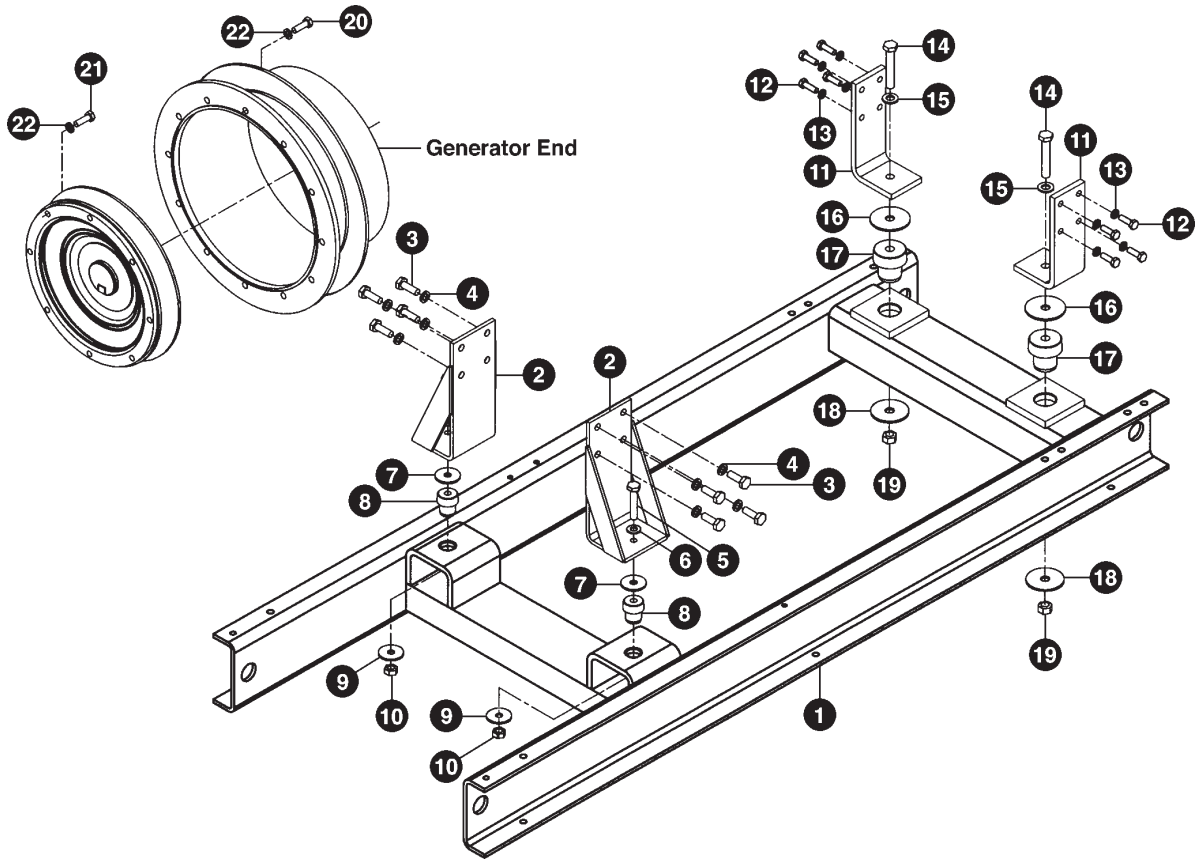


Figure 21: A-8213/D-3099

Base Frame Assembly

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-88504	1	Base Frame	-
2	23-88501	2	Front Engine Mounting Bracket	-
3	12-00805	8	Capscrew, Hex Head M10 x 1.5 x 20 mm	-
4	15-00802	8	Lock Washer, Helical M10	-
5	12-00817	2	Capscrew, Hex Head M10 x 1.5 x 55 mm	-
6	15-00805	2	Flat Washer, M10	-
7	15-00014	2	Head/Tail Washer	-
8	33-83151	2	Centerbonded 200 lb. Mount	-
9	15-00014	2	Head/Tail Washer	-
10	14-00812	2	Hex Nut, Nylock M10 x 1.5	-
11	23-68501	2	Generator Mounting Bracket	-
12	12-00712	8	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
13	15-00702	8	Lock Washer, Helical M8	-
14	12-00964	2	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
15	15-00007	2	Flat Washer, M12	-
16	15-00016	2	Head Washer	-
17	33-82254	2	Centerbonded 300 lb. Mount	-
18	15-00026	2	Tail Washer	-
19	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
20	12-00831	12	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
21	12-00831	8	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
22	15-00802	20	Lock Washer, Helical	-

Notes