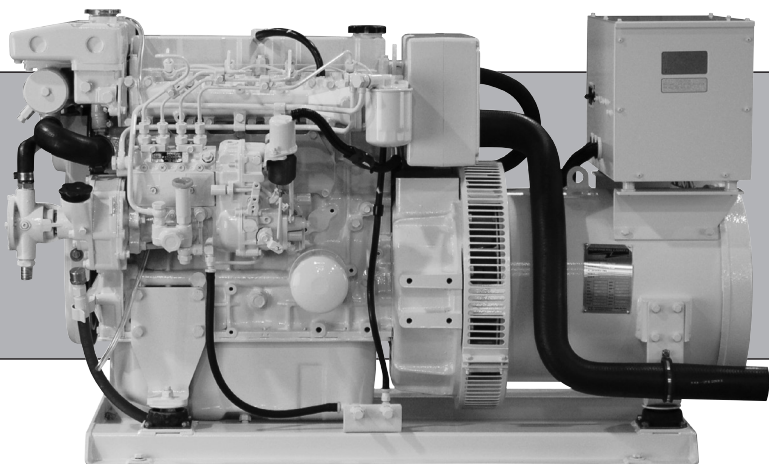




PARTS MANUAL

P944

For Models: L944D, M944W, NL944D2, M30CW,
M944T, NL944T2 and M38CR2



www.northern-lights.com



— 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.

Northern Lights

4420 14th Avenue N.W.

Seattle, WA 98107

Tel: (206) 789-3880

Fax: (206) 782-5455

Copyright ©2016 Northern Lights, Inc.
All rights reserved. Northern Lights™, and
the Northern Lights logo are trademarks of
Northern Lights, Inc.

Printed in U.S.A.
PART NO.: P944 10/16



PARTS CATALOG

for Models L944D, M944W, NL944D2, M30CW, M944T, NL944T2, and M38CR2

Please read thoroughly before attempting to use this manual:

Table of Contents	I
Model Designation & Serial Numbers	II
Reading a Parts Page	III

Table of Contents

GROUP 1 - ENGINE

Cylinder Block	0 - 1
Flywheel Housing	2 - 3
Crankshaft, Pulley, and Flywheel	4 - 5
Main Bearing	6
Piston & Connecting Rod	8 - 9
Timing Gear & Cover	10 - 13
Camshaft	14
Oil Pump & Pick-up	15
Side Cover & Relief Valve	16 - 17
Oil Filter	18
Oil Pan & Dipstick	19
Oil Drain Hose	20 - 21
Cylinder Head	22
Valve Train	24 - 27
Rocker Arm Cover & Crankcase Breather	28

GROUP 2 - INTAKE & EXHAUST SYSTEM

Intake Manifold	1 - 3
Air Filter & Mounting	4 - 5, 7-9
Air Filter & Connector	6
Exhaust Manifold	12 - 14
Turbocharger & Mtg.	15 - 19
Turbocharger Assembly	20 - 21
Turbocharger Detail	22 - 23
Wet Exhaust Elbow	24 - 25
Dry Exhaust Elbow	26 - 27

GROUP 3 - COOLING

Expansion Tank & Thermostat Housing	0 - 1
Heat Exchanger & Mounting	2
Heat Exchanger Assembly	3
Thermostat Housing	4
Coolant Pump	5 - 6
Raw Water Pump & Mounting	7 - 8
Raw Water Pump Detail	9
Oil Cooler	10
Pump Adapter Parts & Oil Filter	11
Keel Cooling Outlet	12
Fan	13
Radiator & Mounting	14 - 15

GROUP 4 - FUEL SYSTEM

Fuel System Assembly	0 - 9
Injection Pump	10 - 11
Double Wall Fuel Lines	12 - 13

Fuel Filter	15
Fuel Lines	16
USCG Fuel Lines	17 - 18, 20 - 23
Push-on Fuel Lines	19
Fuel Feed Pump	24 - 27
Fuel Injector	28 - 31
Throttle	32

GROUP 5 - ELECTRICAL SYSTEM

Engine	0 - 49
Air Intake Heater Sub Assembly	50
Small Frame Alternator & Mounting	51 - 53
Medium Frame Alternator & Mounting	54 - 55
Stop Solenoid & Mounting	56
Harness Assembly	57
12-24 V Relay Logic Board	58 - 59
Drive Belt Application	60
Belt Guard	61 - 68
Main Instrument Panel	69 - 70
Control Panels	71 - 92

GROUP 6 - GASKET SETS

Gasket Sets	0 - 7
-------------------	-------

GROUP 7 - GEAR & ADAPTER PARTS

Gear Attaching Parts	0 - 1
----------------------------	-------

GROUP 8 - FRAME & MOUNTING

Engine Lifting Eye	0
Front Engine Mounting Brackets	1 - 2
Base Frame	3 - 8

GROUP 9 - ACCESSORIES

& OPTIONAL EQUIPMENT

PTO Adapter	0 - 2
Electric Clutch	3
Oil Filter Right Hand Mtg M944W	4 - 5
Oil Filter Relocation, Right Hand Mounting M944T	6 - 7
Fuel Filter Relocation Right Hand Mtg M944W	8 - 9
Fuel Filter Relocation Right Hand Mtg M944T	10 - 11
Low Oil Level Switch/ Gauge	12 - 14
Low Coolant Level Switch/ Gauge	15 - 16
Raw Water Flow Switch	17

Proprietary Information

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

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

© Northern Lights, Inc. 2017. All rights reserved. Litho U.S.A. Publication number: P944 10/16

Model Designation

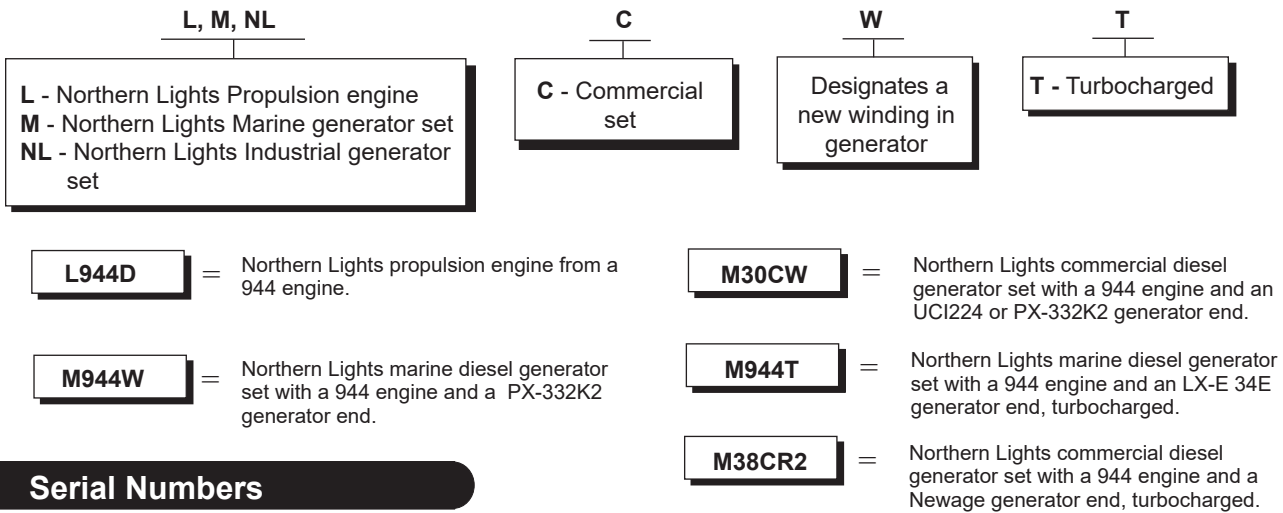
MODELS INCLUDED

This manual covers the operating instructions for:

L944D, M944W, NL944D2, M30CW, M944T, NL944T2, and M38CR2

Model Numbers

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



Serial Numbers

NORTHERN LIGHTS

Northern Lights generator sets have two serial numbers. One serial number is for the generator end, and it is found on the Generator End Data Plate. One is for the generator set and it looks like the below (figure 1). Please have your generator set serial number ready when you call in for service or parts.

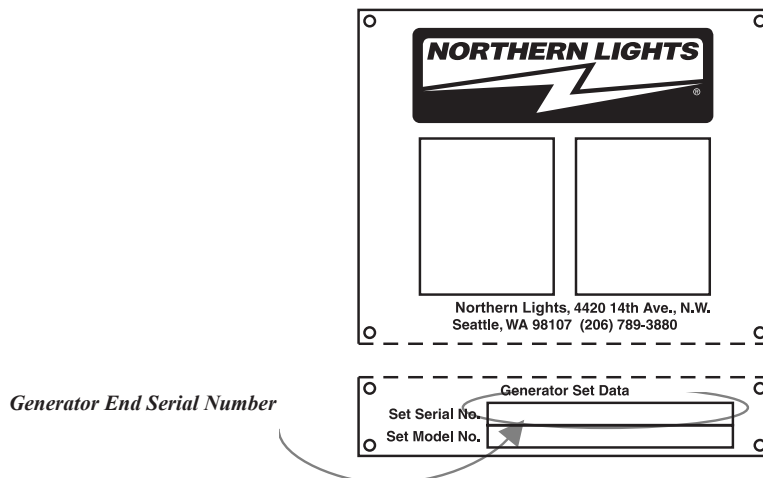


Figure 1. Generator Set Serial Number Plate

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	-

P844 06/96
5 - 2

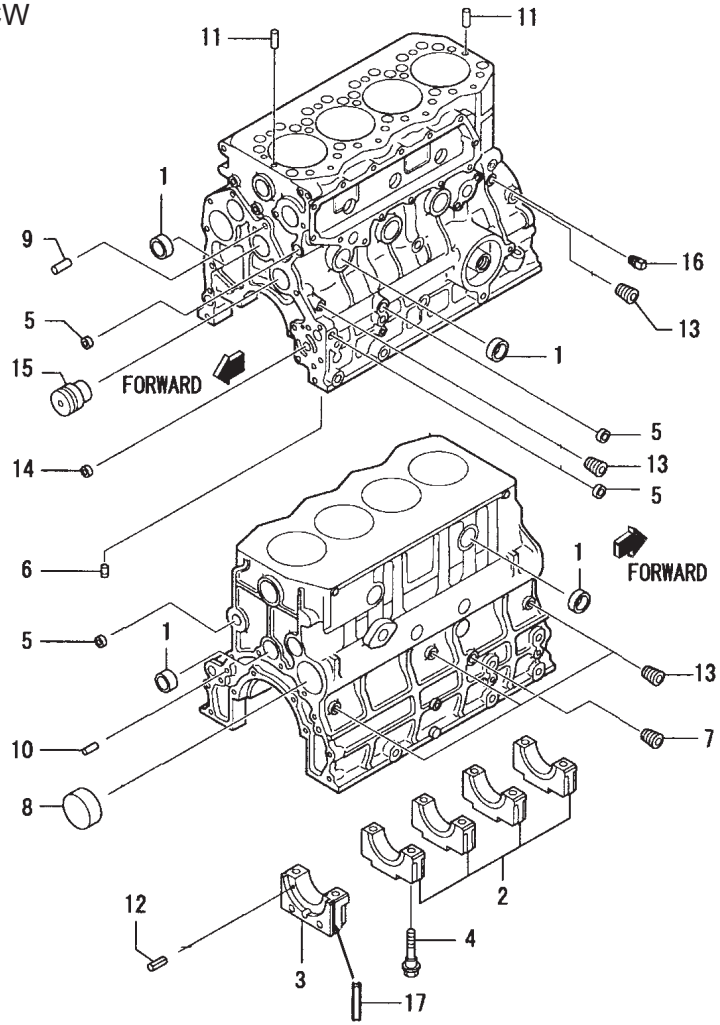
REFERENCES:

- | | |
|--|--|
| 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 Key 0 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

L-M-NL944, M30CW

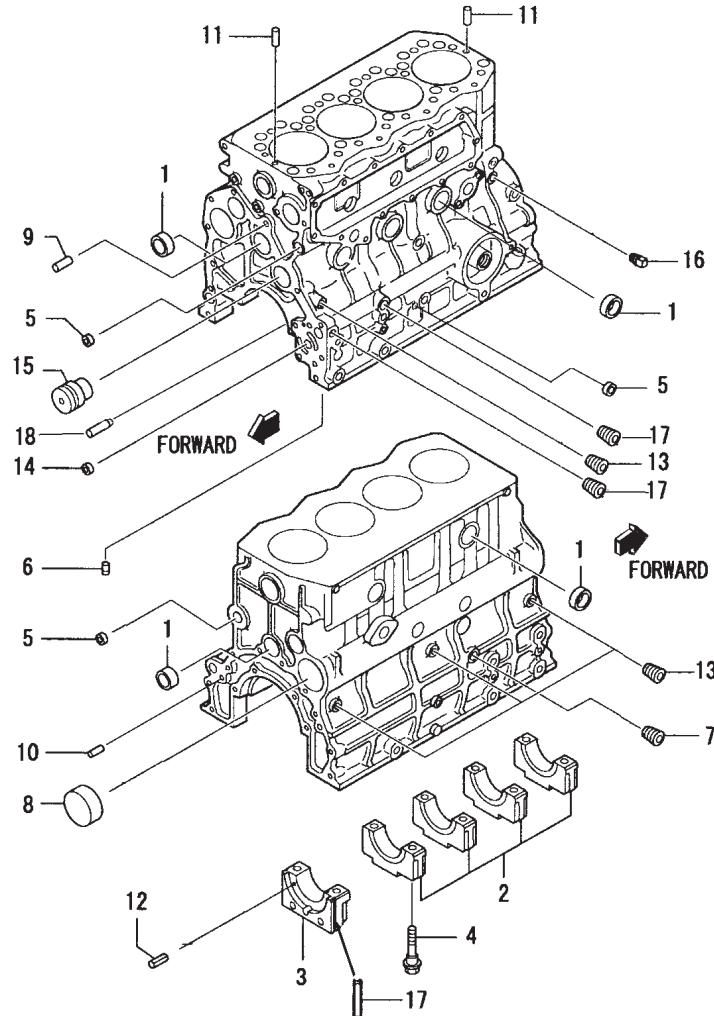


Dwg. #32B0710

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	32A0721010	1	Cylinder Block Assembly (includes keys 1- 16)	-
1	0482623500	10	Expansion Plug	-
2		4	Bearing Cap*	-
3		1	Bearing Cap, Rear*	-
4	32A0702600	10	Bolt, Bearing Cap	-
5	0482621800	6	Expansion Plug	-
6		3	Plug*	-
7	MS661142	1	Plug, Tapered	-
8	3430702100	1	Plug, Cam	-
9	32A0701501	2	Dowel Pin	-
10	F284612000	2	Dowel Pin	-
11	F284605000	2	Dowel Pin	-
12	F285004008	6	Spring Pin	-
13	MS661140	6	Plug, Tapered	-
14	0560501410	1	Bushing	-
15	32A2303500	1	Idler Shaft	-
16	MD000269	1	Plug, Tapered	-
17	32A0711700	2	Side Seal	-
			*Part unavailable separately	

Cylinder Block

M-NL944T, M38CR2

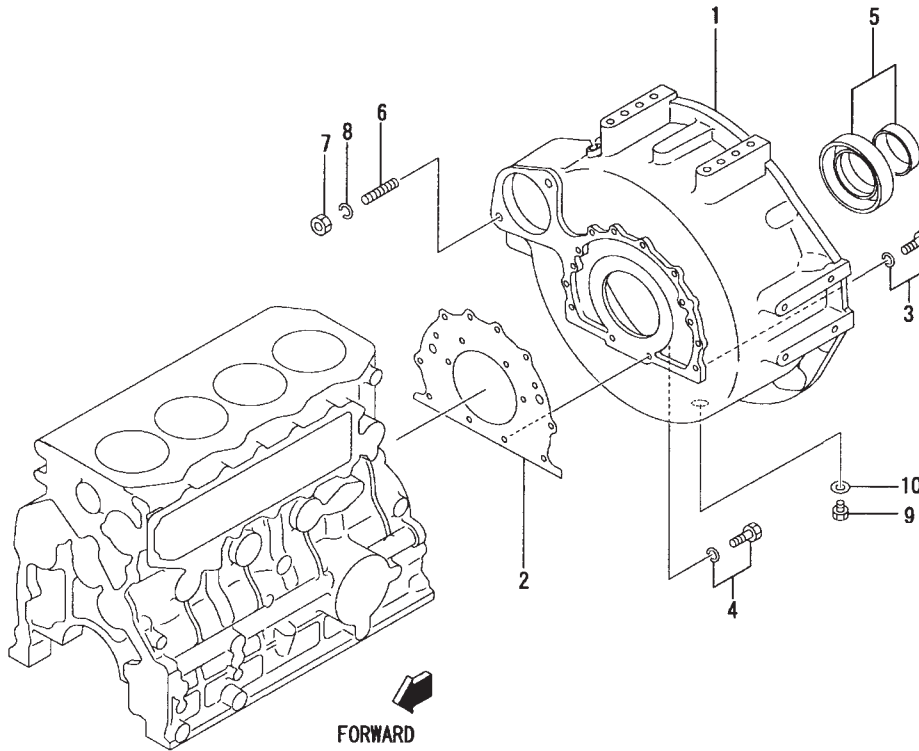


Dwg. #32B0710a

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	32A0744010	1	Cylinder Block Assembly (includes keys 1- 16)	-
1	0482623500	10	Expansion Plug	-
2		4	Bearing Cap*	-
3		1	Bearing Cap, Rear*	-
4	32A0702600	10	Bolt, Bearing Cap	-
5	0482621800	5	Expansion Plug	-
6		3	Plug*	-
7	MS661142	1	Plug, Tapered	-
8	3430702100	1	Plug, Cam	-
9	32A0701500	2	Dowel Pin	-
10	MF472446	2	Dowel Pin	-
11	F284605000	2	Dowel Pin	-
12	F285004008	6	Spring Pin	-
13	MS661140	7	Plug, Tapered	-
14	0560501410	1	Bushing	-
15	32A2303500	1	Idler Shaft	-
16	MD000269	1	Plug, Tapered	-
17	0482790170	2	Plug, Tapered	-
18	32A0701800	4	Check Valve	-
			*Part unavailable separately	

Flywheel Housing SAE #4

L-M944, M30CW

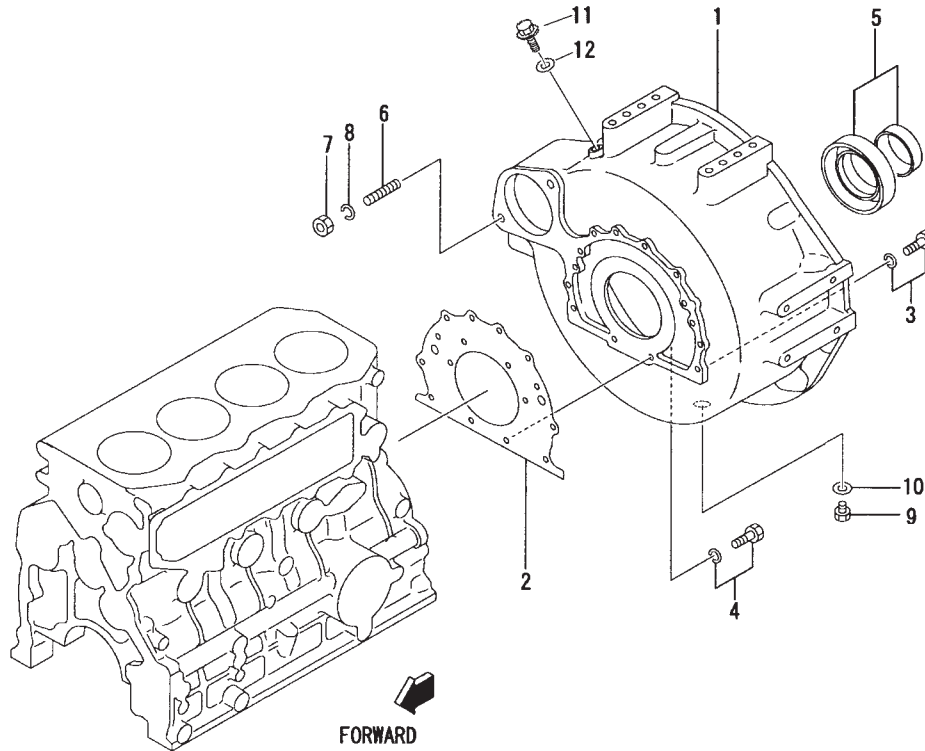


Dwg. #32B1209

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A1200100	1	Flywheel Housing SAE #4	-
2	32A0714201	1	Rear Gasket	-
3	F180510025	10	Bolt with washer	-
4	F180510030	2	Bolt with washer	-
5	3440711090	1	Rear Main Seal (Repair type)	-
	3440703700	1	Rear Main Seal	-
6	13-05001	2	Stud, M10 x 1.5 x 25 mm (37 mm LOA)	-
7	14-00811	2	Nut, M10 x 1.5	-
8	15-00802	2	Lock Washer M10	-
9	MD001404	1	Drain Plug	-
10	MD00312	1	Gasket	-

Flywheel Housing SAE #3

M944T, NL944D2, NL944T, & M38CR2



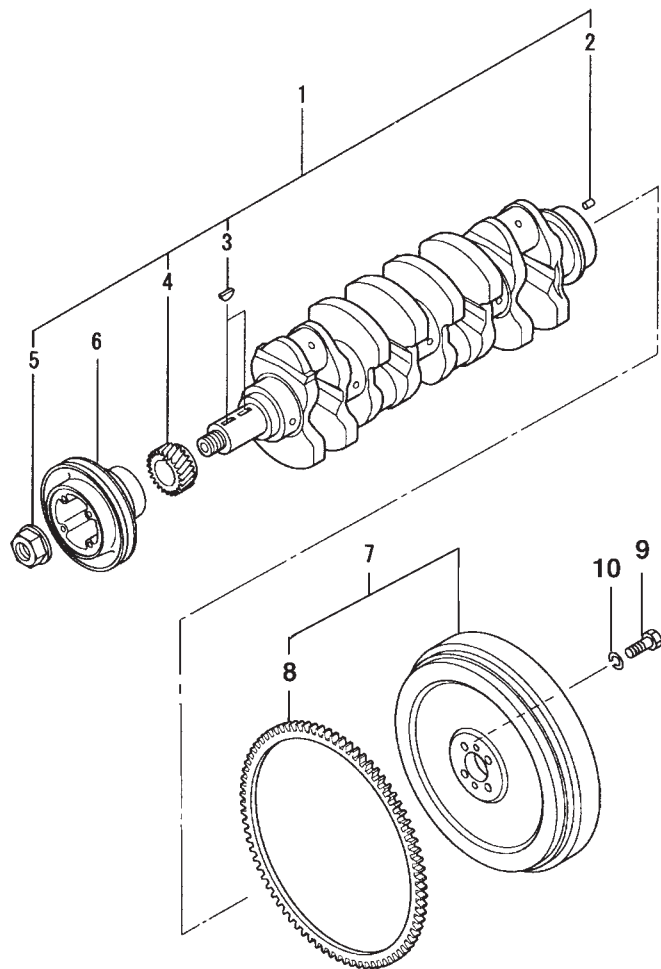
Dwg. #32B1209a

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32B1200301	1	Flywheel Housing SAE #3	-
2	32A0714201	1	Gasket	-
3	MF241282	10	Bolt with washer	-
4	MF241284	2	Bolt with washer	-
5	3440711090	1	Rear Main Seal	-
6	13-05001	2	Stud, M10 x 1.5 x 25 mm (37 mm LOA)	-
7	14-00811	2	Nut, M10 x 1.5	-
8	15-00802	2	Lock Washer M10	-
9	MD001404	1	Drain Plug	-
10	MD000312	1	Gasket	-
11	MM316248	1	Drain Plug	-
12	3063625901	1	Gasket	-

GROUP 1 - ENGINE

Crankshaft, Pulley, and Flywheel

L944D - M944 - M30CW - NL944D

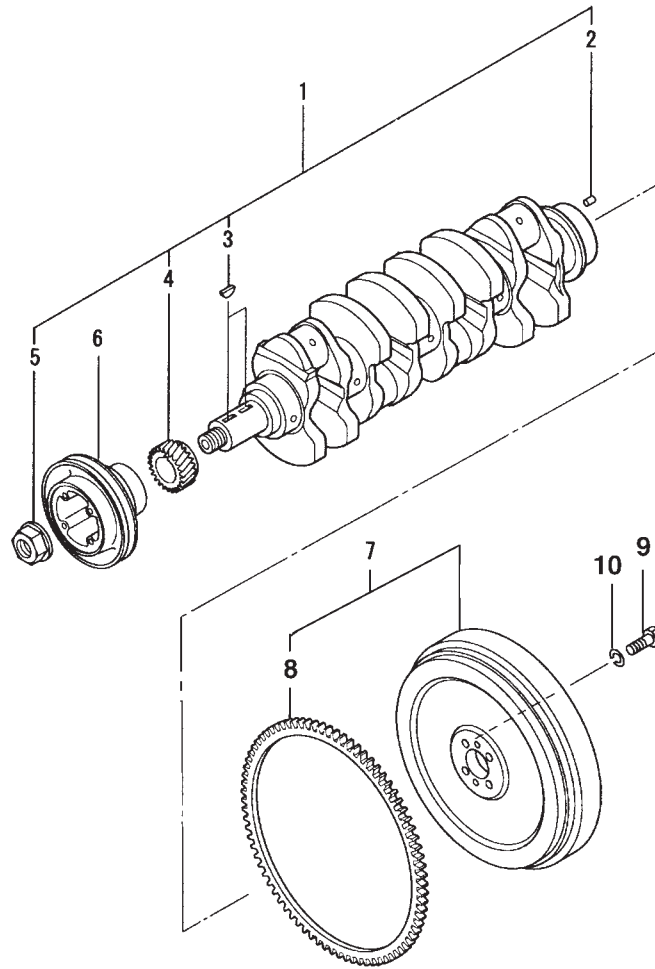


Dwg. #32B2016, 32B2111

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A2000014	1	Crankshaft Assembly (includes keys 2-5)	-
2	F284610000	2	Dowel Pin	-
3	F287007022	2	Woodruff Key	-
4	32A2300101	1	Gear	-
5	32A2002901	1	Nut	-
6	32A2002101	1	Pulley	-
7	32A2104050	1	Flywheel Assembly SAE #10, L-M944, M30CW (includes key 8) former # 32A2111011	-
	32A2100051	1	Flywheel Assembly SAE #11-1/2, NL944D2 (includes key 8)	-
8	32A2100900	1	Ring Gear (#11-1/2 Flywheel - 122 Teeth)	-
	3062161300	1	Ring Gear (#10 Flywheel - 113 Teeth)	-
9	F103512035	4	Bolt	-
10	F251512000	4	Lock Washer	-

Crankshaft, Pulley, and Flywheel

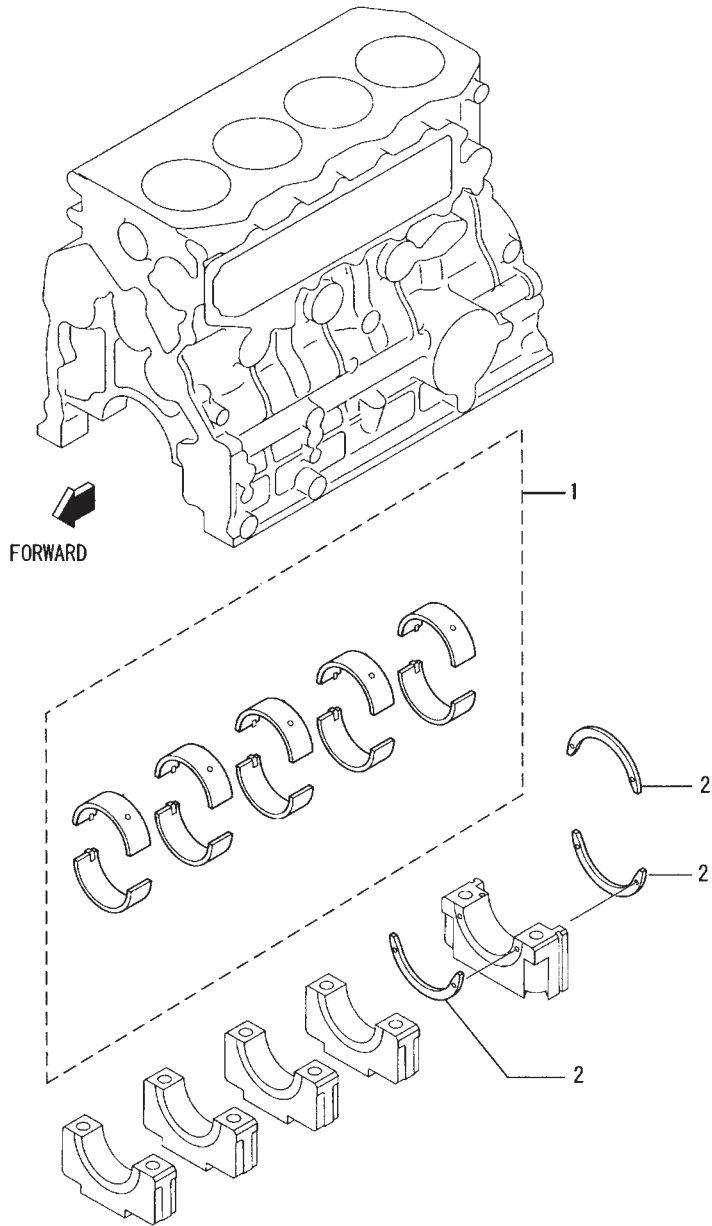
M-NL944T, M38CR2



Dwg. #32B2016, 32B2111

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A2000052	1	Crankshaft Assembly (includes keys 2-5)	-
2	F284610000	2	Dowel Pin	-
3	F287007022	2	Woodruff Key	-
4	32A2300301	1	Gear	-
5	32A2002901	1	Nut	-
6	32A2002203	1	Pulley	-
7	32A2100051	1	Flywheel Assembly SAE #11-1/2 (includes key 8)	-
8	32A2100900	1	Ring Gear (122 Teeth)	-
9	F103512035	4	Bolt	-
10	F251512000	4	Lock Washer	-

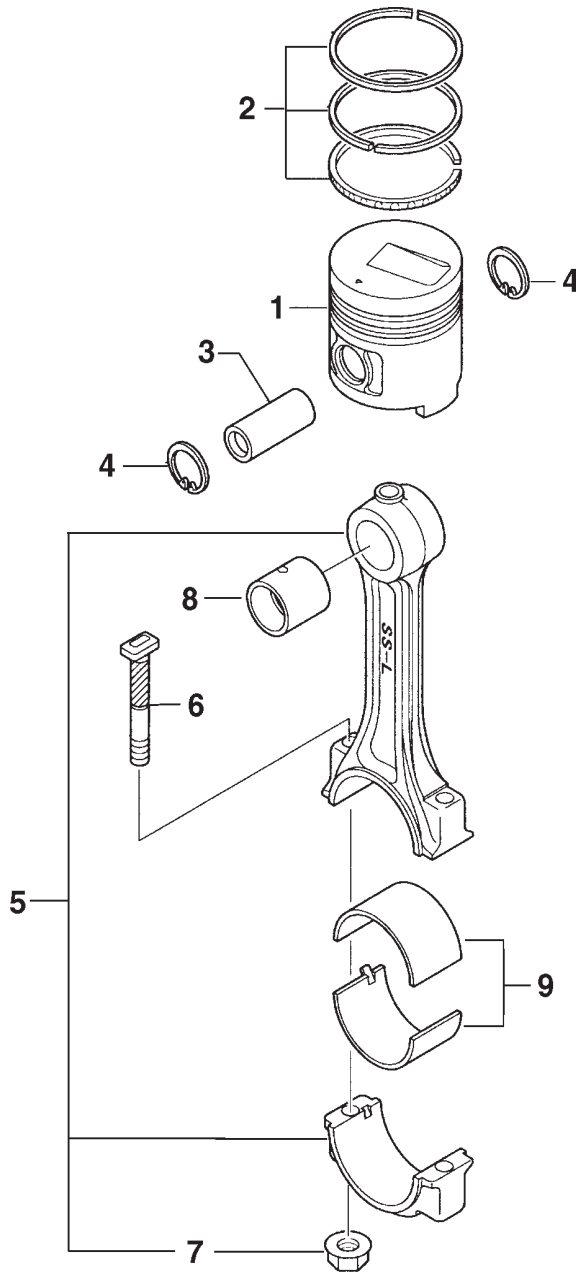
Main Bearing



Dwg. #32B0903

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A09-00010	1	Main Bearing Set, Standard	-
	32A09-00020	1	Main Bearing Set, Undersize 0.25 mm	-
	32A09-00030	1	Main Bearing Set, Undersize 0.50 mm	-
	32A09-00040	1	Main Bearing Set, Undersize 0.75 mm	-
2	32B09-08101	3	Thrust Bearing, Standard	-
	32B09-08201	3	Thrust Bearing, Oversize 0.15 mm	-
	32B09-08301	3	Thrust Bearing, Oversize 0.30 mm	-

Piston & Connecting Rod



Dwgs. 32B1905 & 32B1718

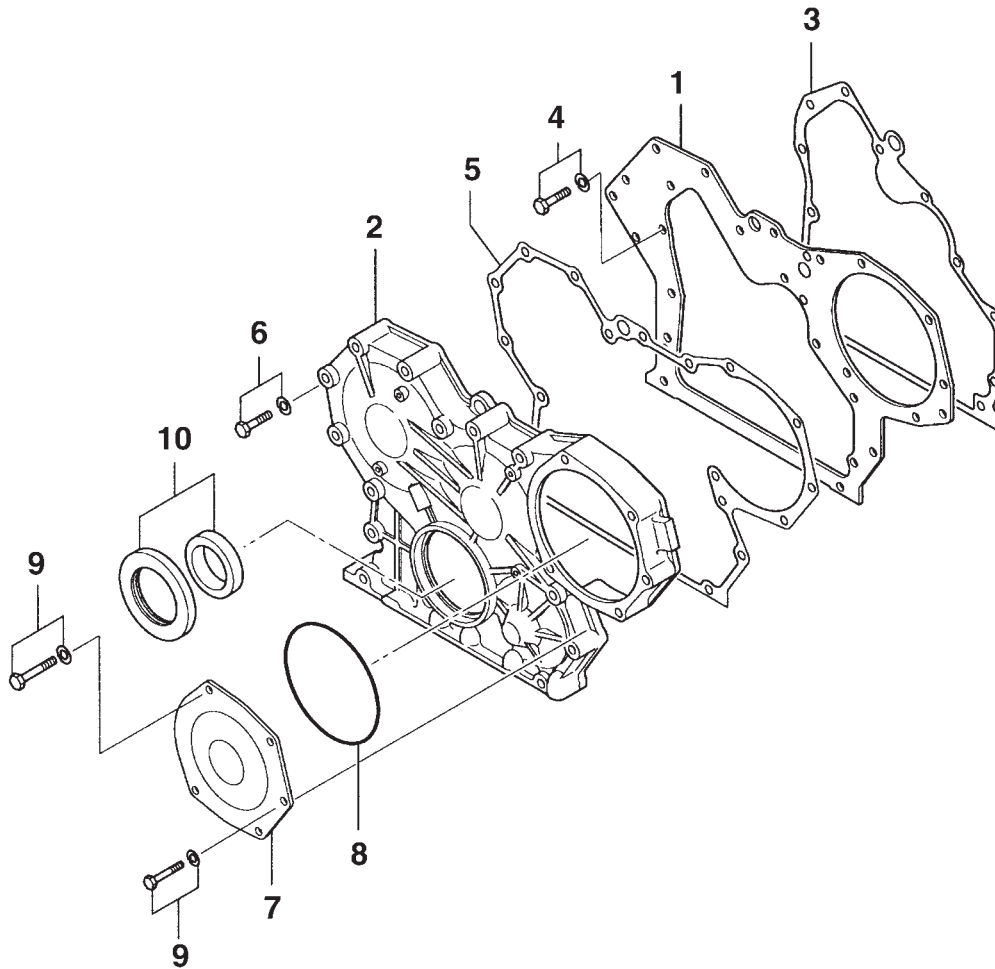
Piston & Connecting Rod

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A1710100	4	Piston, Standard L-NL944D, M944, & M30CW	-
	32A1710200	4	Piston, Oversize 0.25 mm L-NL944D, M944, & M30CW	-
	32A1710300	4	Piston, Oversize 0.50 mm L-NL944D, M944, & M30CW	-
	32A1704500	4	Piston, Standard M-NL944T, M38CR2	-
	32A1704600	4	Piston, Oversize 0.25 mm M-NL944T, M38CR2	-
	32A1704700	4	Piston, Oversize 0.50 mm M-NL944T, M38CR2	-
	2	32A1702010	4	Ring Set, Piston, Standard
32A1702020		4	Ring Set, Piston, Oversize 0.25 mm	-
32A1702030		4	Ring Set, Piston, Oversize 0.50 mm	-
3	32A1708300	4	Piston Pin	-
4	F320203000	8	Snap Ring	-
5	32A1900012	4	Connecting Rod Assembly (includes keys 6- 8)	-
6	32A1900400	8	Bolt	-
7	3061910501	8	Nut	-
8	32A1900501	4	Bushing	-
9	32A1909011	1	Bearing Set, Standard	-
	32A1909021	1	Bearing Set, Undersize 0.25	-
	32A1909031	1	Bearing Set, Undersize 0.50	-
	32A1909041	1	Bearing Set, Undersize 0.75	-

GROUP 1 – ENGINE

Timing Gear Cover

L-M-NL944, M30CW

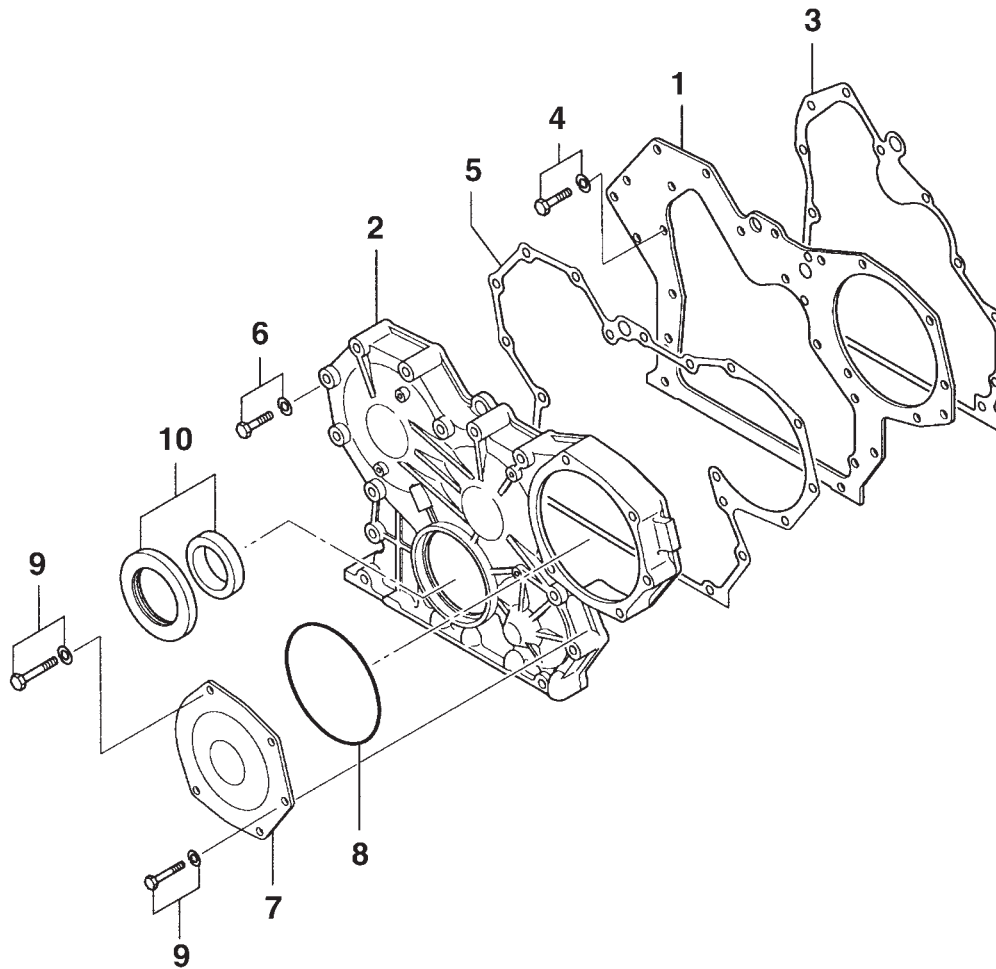


Dwg. #32B1107

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A1103100	1	Front Plate	-
2	32A1100105	1	Timing Gear Cover	-
3	32A0704100	1	Gasket	-
4	F180508016	5	Bolt with Washer	-
5	32A1100200	1	Gasket	-
6	F180508055	13	Bolt with Washer	-
7	32A1101100	1	Cover (M30CW & NL944D)	-
8	0601613140	1	O-ring	-
9	F180508065	4	Bolt with Washer	-
10	32A1104010	1	Seal Assembly	-

Timing Gear Cover

M-NL944T, M38CR2



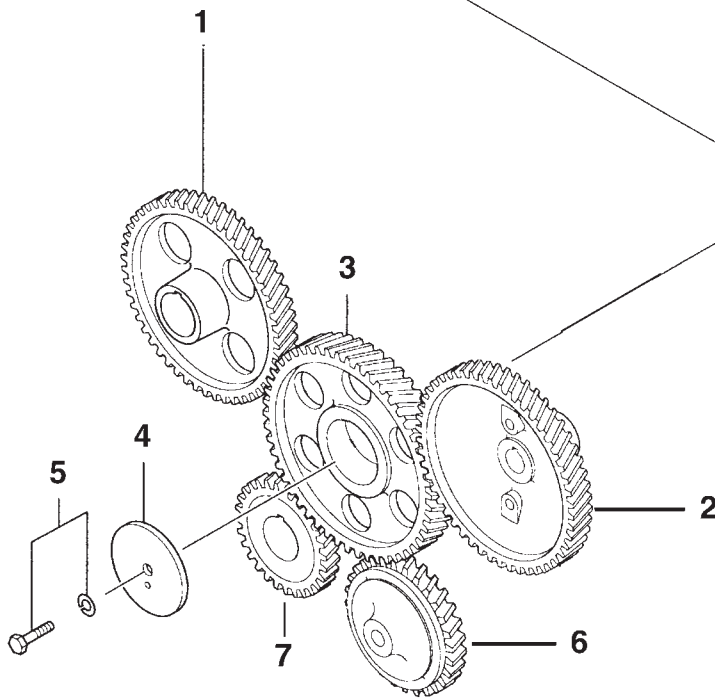
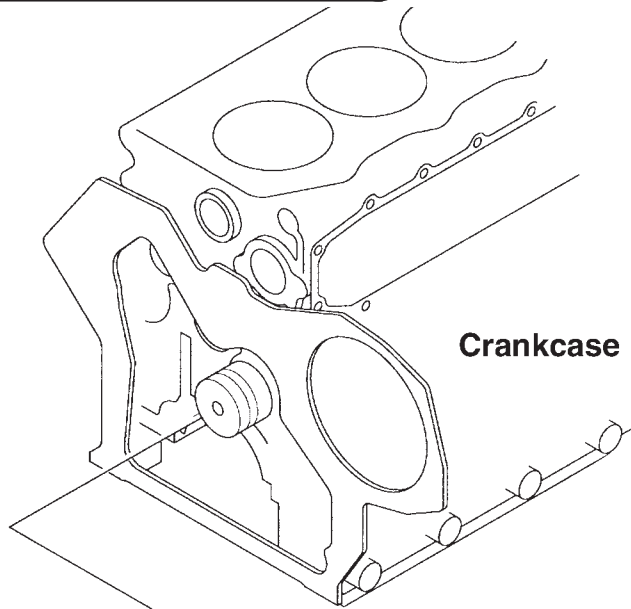
Dwg. #32B1107

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A1113100	1	Front Plate	-
2	32A1110100	1	Timing Gear Cover	-
3	32A0704100	1	Gasket	-
4	MF241251	5	Bolt with Washer	-
5	32A1100200	1	Gasket	-
6	MF241264	13	Bolt with Washer	-
7	32A1101100	1	Cover (M38CR2 & NL944T)	-
8	0601613140	1	O-ring	-
9	MF241266	5	Bolt with Washer	-
10	32A1104010	1	Seal Assembly	-

GROUP 1 – ENGINE

Timing Gear

L-M-NL944, M30CW

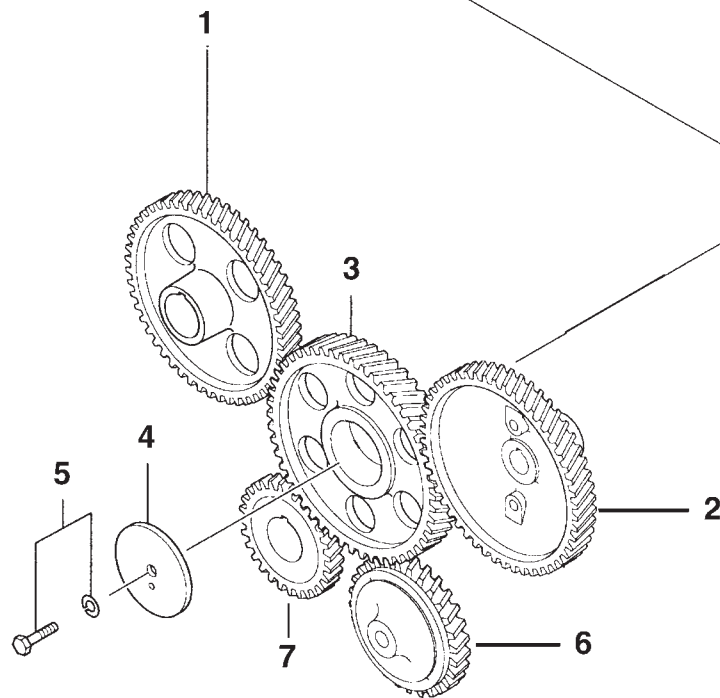
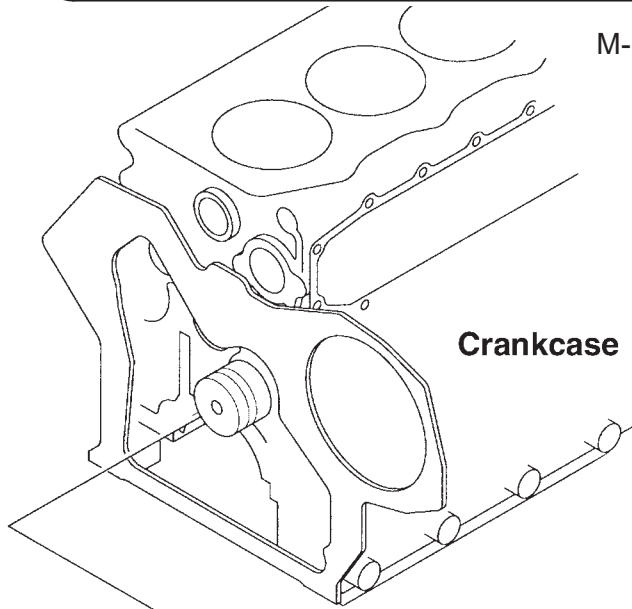


Dwg. #32B2304

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A2301100	1	Camshaft Gear	-
2	32A2312301	1	Injection Pump Gear	-
3	32A2303010	1	Idler Gear Assembly	-
4	3432300801	1	Thrust Plate	-
5	F180510020	1	Bolt with Washer	-
6	32A3512101	1	Oil Pump Gear	-
7	32A2300101	1	Crankshaft Gear	-
8	9490502450	**	Nut *	-
9	9490150500	**	Lock Washer*	-
* For injection pump drive gear - see raw water pump				

Timing Gear

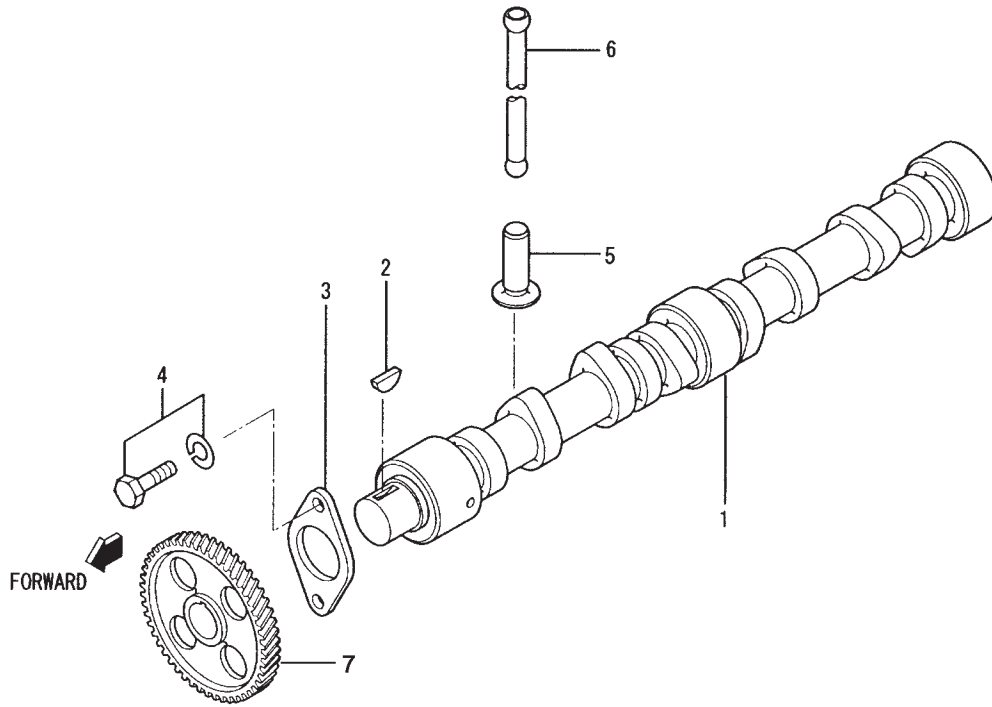
M-NL944T, M38CR2



Dwg. #32B2304

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A2301101	1	Camshaft Gear	-
2	32A2305200	1	Injection Pump Gear	-
3	32A2303040	1	Idler Gear Assembly	-
4	3432300801	1	Thrust Plate	-
5	MF241280	1	Bolt with Washer	-
6	32A3512101	1	Oil Pump Gear	-
7	32A2300301	1	Crankshaft Gear	-

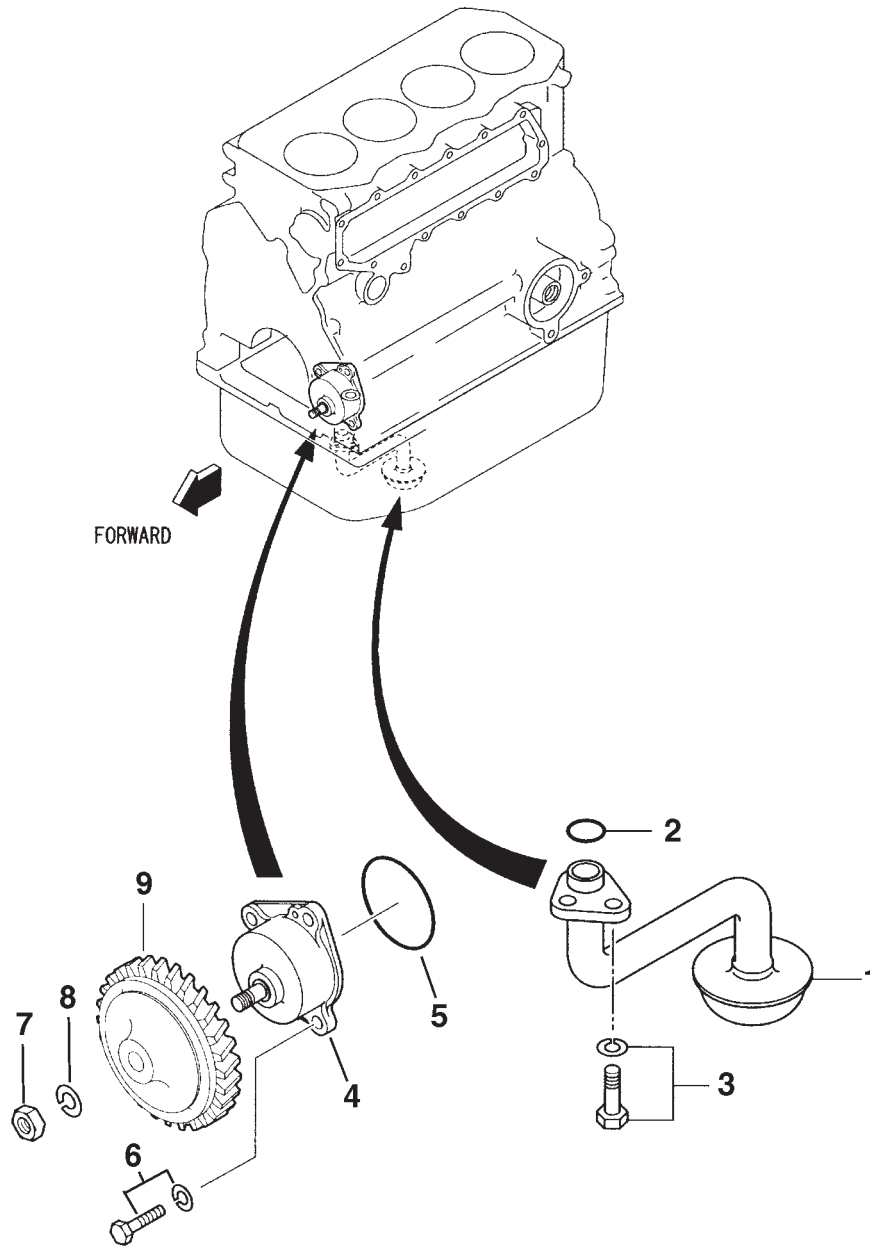
Camshaft



Dwg. #32B0504

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A0500101	1	Camshaft L-M-NL944, M30CW	-
	32A0505101	1	Camshaft M-NL944T, M38CR2	-
2	F287007022	1	Woodruff Key	-
3	3040531403	1	Thrust Plate	-
4	F180508016	2	Bolt with Washer L-M-NL944, M30CW	-
	MF241251	2	Bolt with Washer L-M-NL944T, M38CR2	-
5	32A0502101	8	Tappet	-
6	32A0513100	8	Push Rod	-
7	32A2301100	1	Camshaft Gear L-M-NL944, M30CW	-
	32A2301101	1	Camshaft Gear L-M-NL944T, M38CR2	-

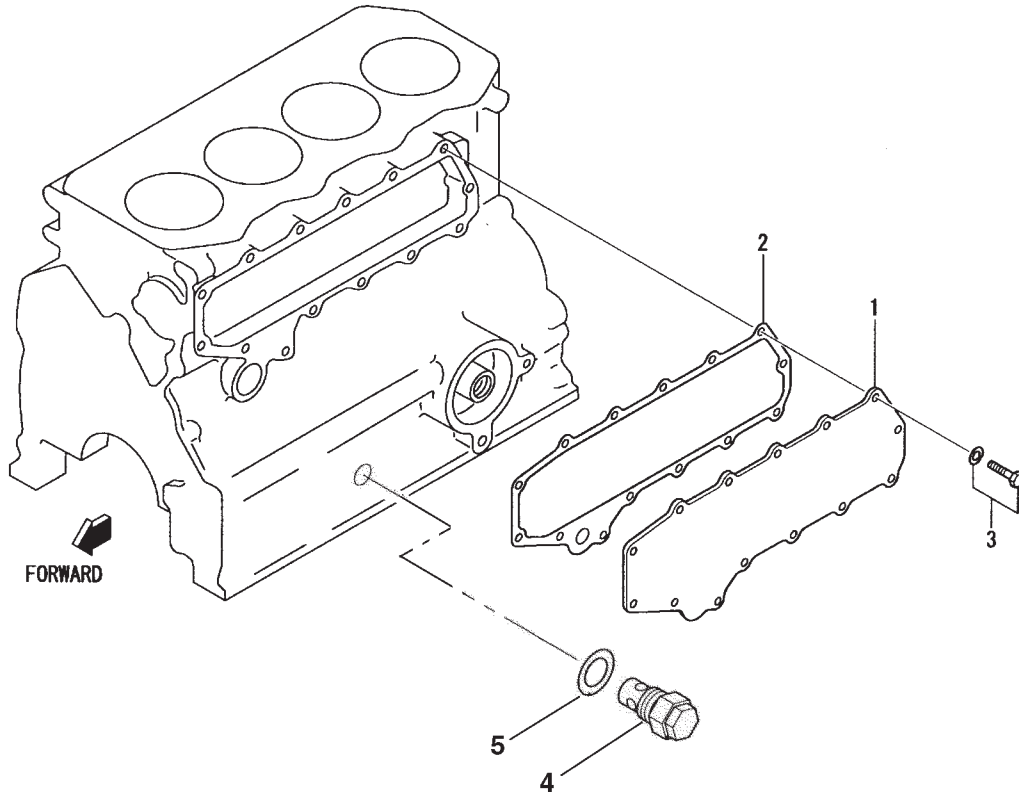
Oil Pump and Pick-up



Dwg. #32B3503 & 32B3504

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3516101	1	Oil Pick-up	-
2	F315002000	1	O-ring	-
3	F180508016	2	Bolt with washer	-
	MF241251	2	Bolt with washer (M944T)	-
4	32A3510012	1	Oil Pump Assembly	-
5	32A3500600	1	O-ring	-
6	F180508020	4	Bolt with washer	-
	MF240053	4	Bolt with washer (M944T)	-
7	F232010000	1	Jam Nut	-
8	F251510000	1	Spring Washer	-
9	32A3512101	1	Oil Pump Gear	-

Side Cover and Relief Valve

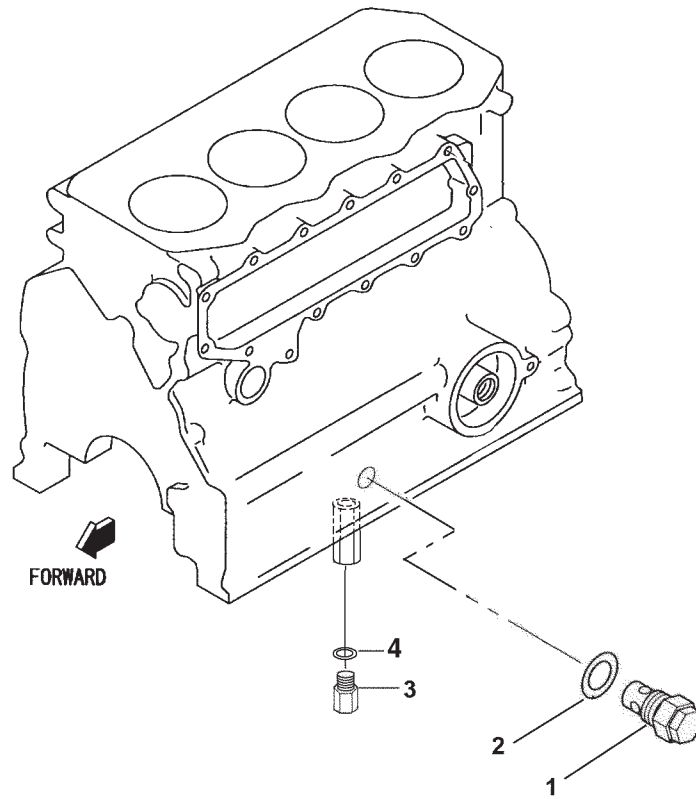


Dwgs. # 32B3906 & 32B3606

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3901100	1	Cover	-
2	32A3911200	1	Gasket	-
3	F180508016	14	Bolt with washer	-
4	32A3605012	1	Relief Valve Assembly	-
5	3434000700	1	Gasket	-

Relief Valve

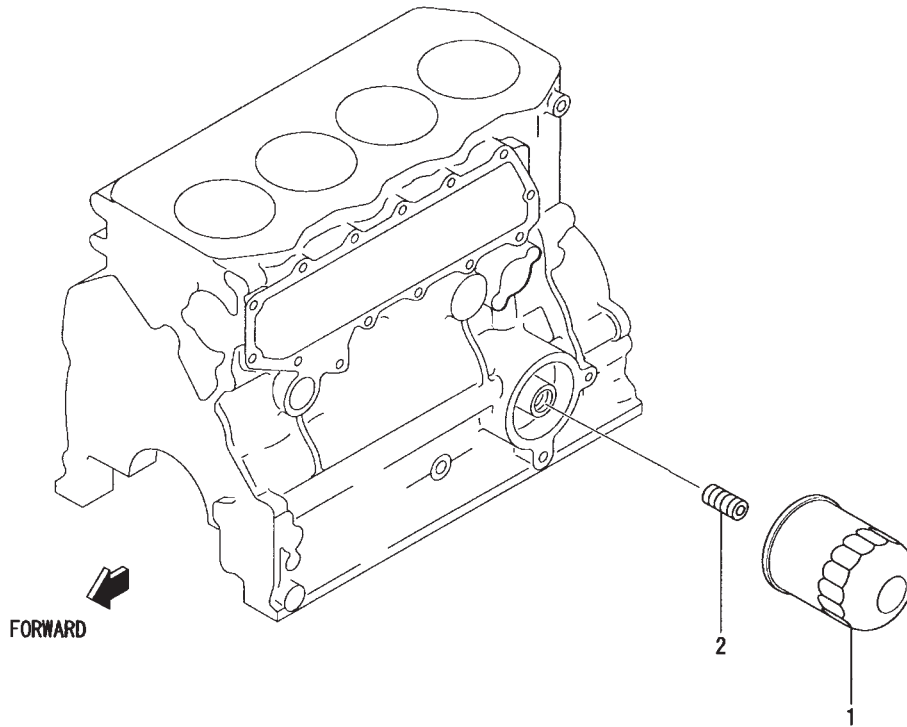
M-NL944T, M38CR2



Dwgs. # 32B3906a

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3605012	1	Relief Valve Assembly	-
2	3434000700	1	Gasket	-
3	32A3610010	1	Safety Valve Assembly	-
4	F420218000	1	Gasket	-

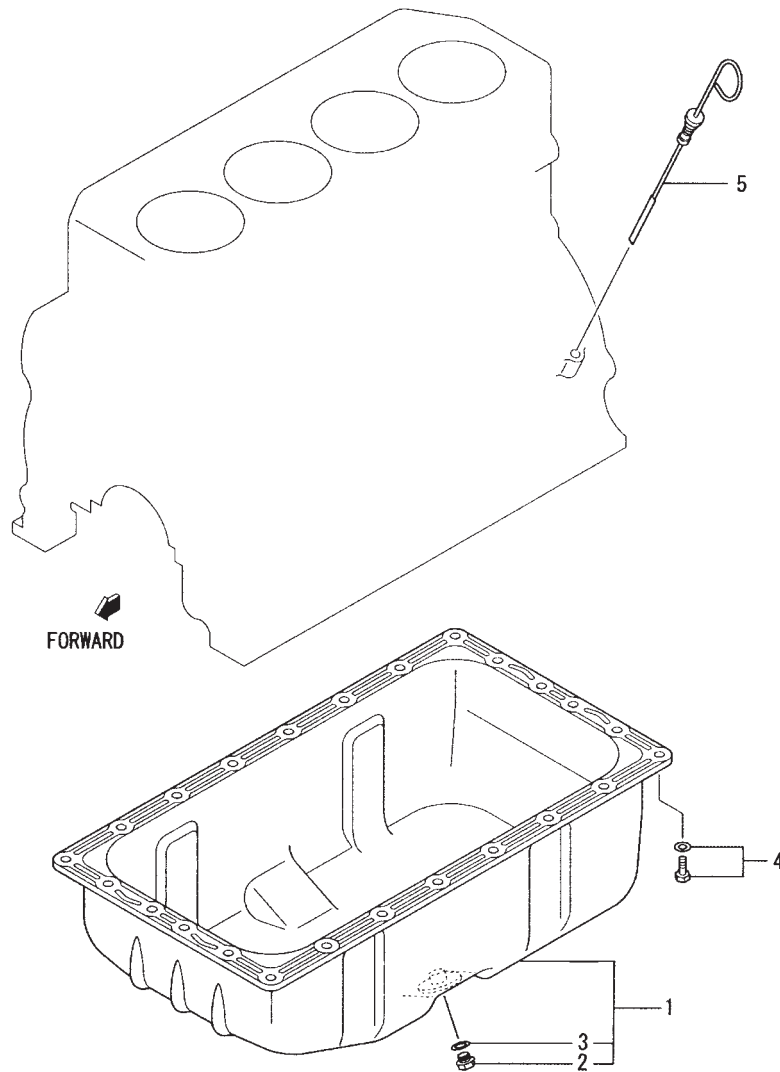
Oil Filter



32B4006

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-01201	1	Oil Filter	-
2	32A4001100	1	Union L-M-NL944, M30CW	-
	32A4001101	1	Union L-M-NL944T, M38CR2	-

Oil Pan and Dipstick

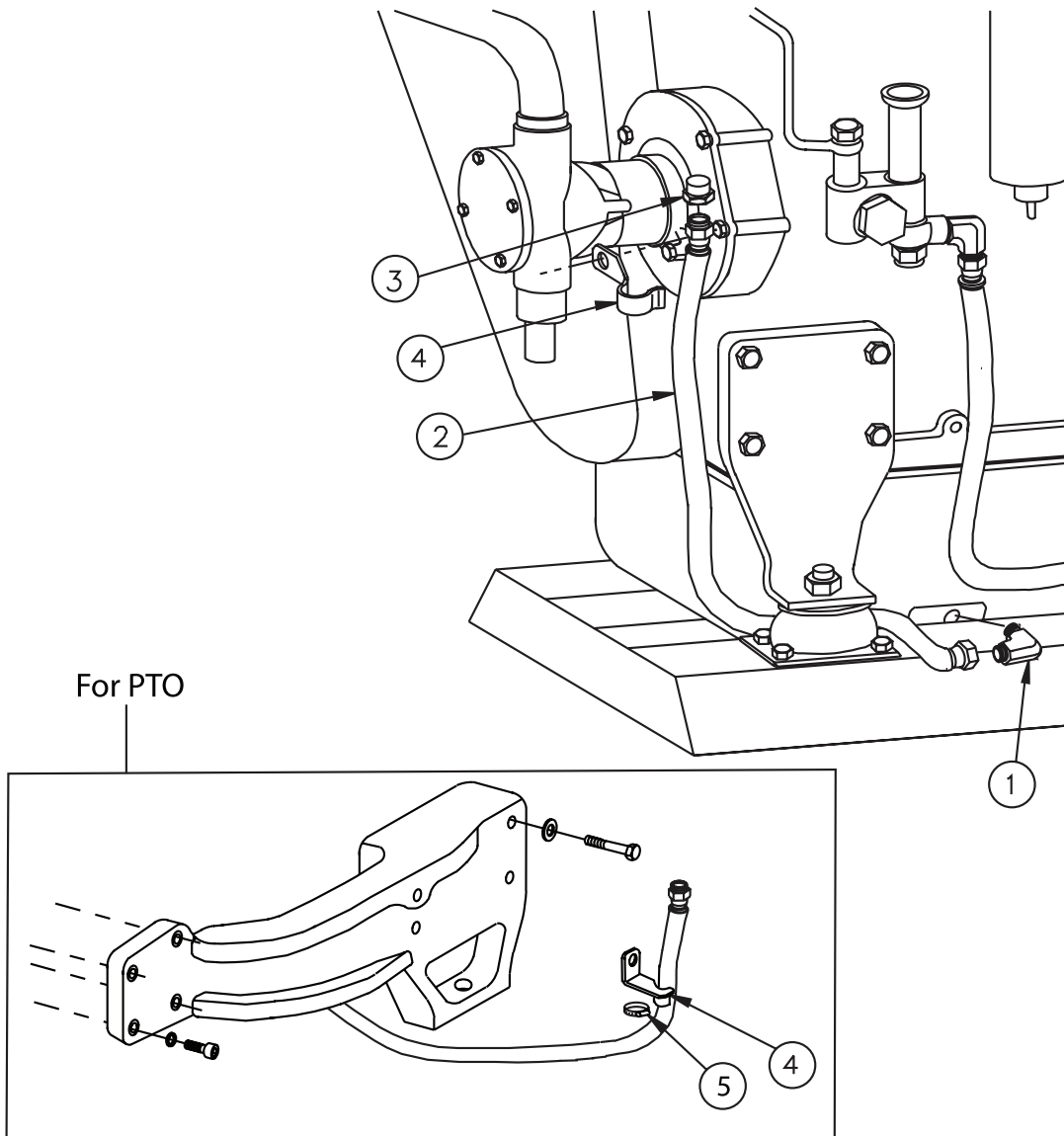


Dwg. #: 32B1306

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A1300011	1	Oil Pan (includes keys 2 & 3)	-
2	MD050316	**	Plug, M14 x 1.5	-
3	MD050317	**	Gasket	-
4	F180508016	24	Bolt with washer	-
	MF240051	24	Bolt with washer (M944T)	-
5	32A4205100	1	Dipstick	-
			**As required	

GROUP 1 – ENGINE

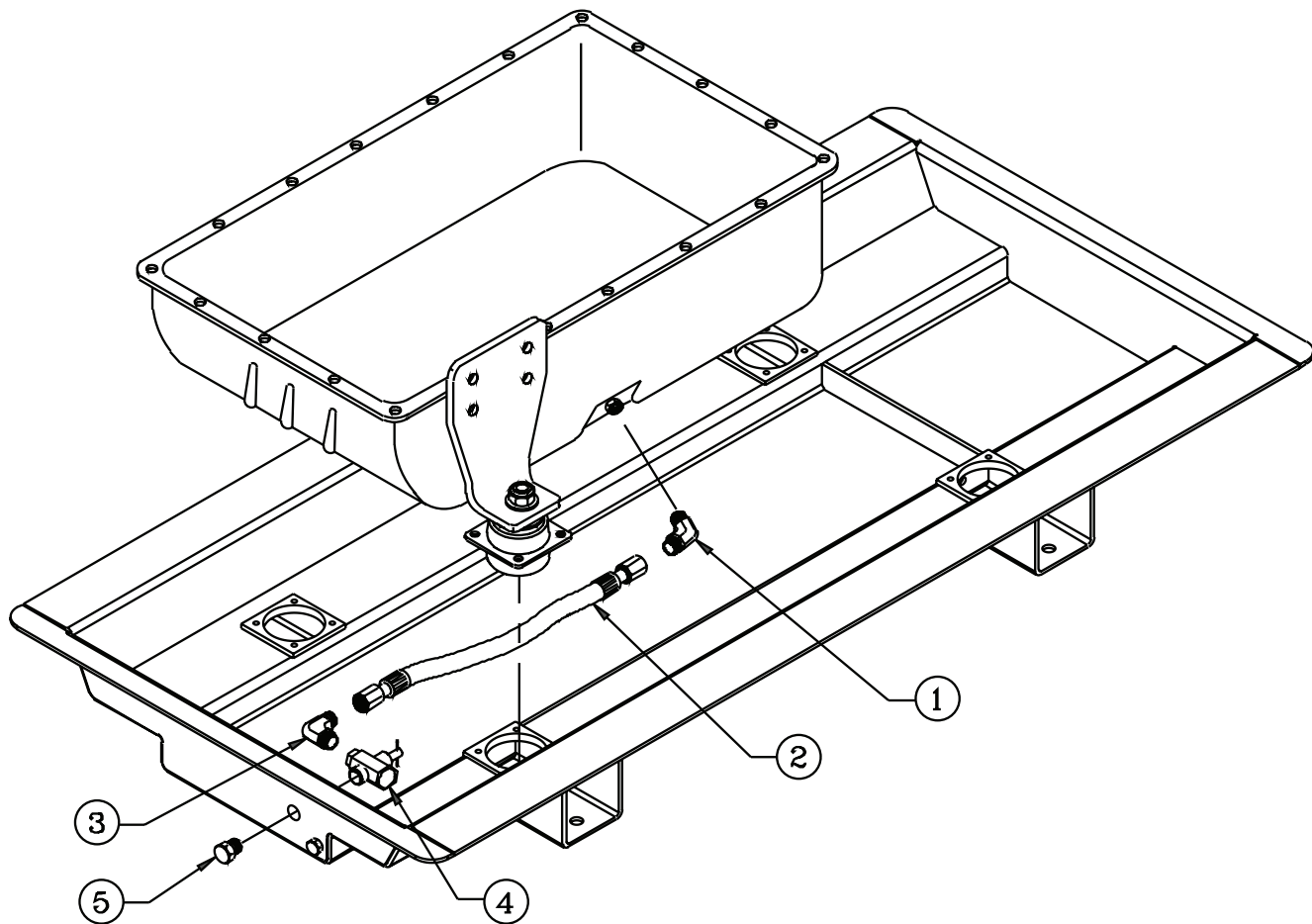
Oil Drain Hose M944W



A-11229 / B-9066

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	21-71212	1	Male Elbow, 90° Steel M14 x 1.5 x 3/8- 37T (former # 21-54901)	-
2	18-71201	1	Hose Assembly 1/2" I.D. x 19- 1/2"	-
3	21-00003	1	Cap, Hex Head Brass 1/2 NPT	-
4	23-72003	1	Bracket, Oil Drain Hose Support (without PTO)	-
	23-75415	1	Bracket, Oil Drain Hose Support (with PTO)	-
5	19-00010	1	Hose Clamp (with PTO)	-

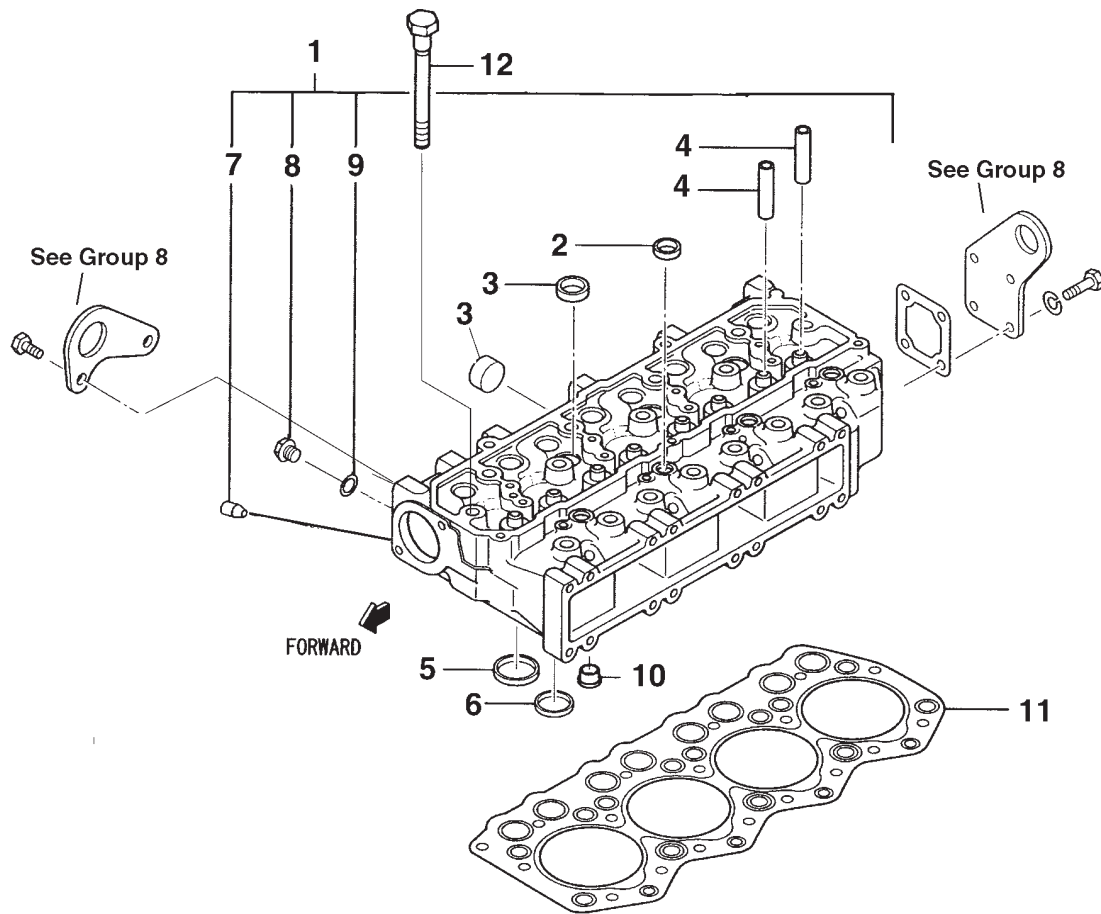
Oil Drain Hose M944T



A-12291 / B-9525

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	21-71212	1	Male Elbow, 90° Steel M14 x 1.5 x 3/8- 37T (former # 21-54901)	-
2	18-71204	1	Hose Assembly 3/8" I.D. x 14"	-
3	21-00606	1	Male Elbow 90° Steel 3/8 NPT x 3/8- 37T	-
4	36-71201	1	Shut-off Ball Valve, Brass 3/8 NPT	-
5	21-31003	1	Plug, Hex Head Brass 3/8 NPT	-

Cylinder Head

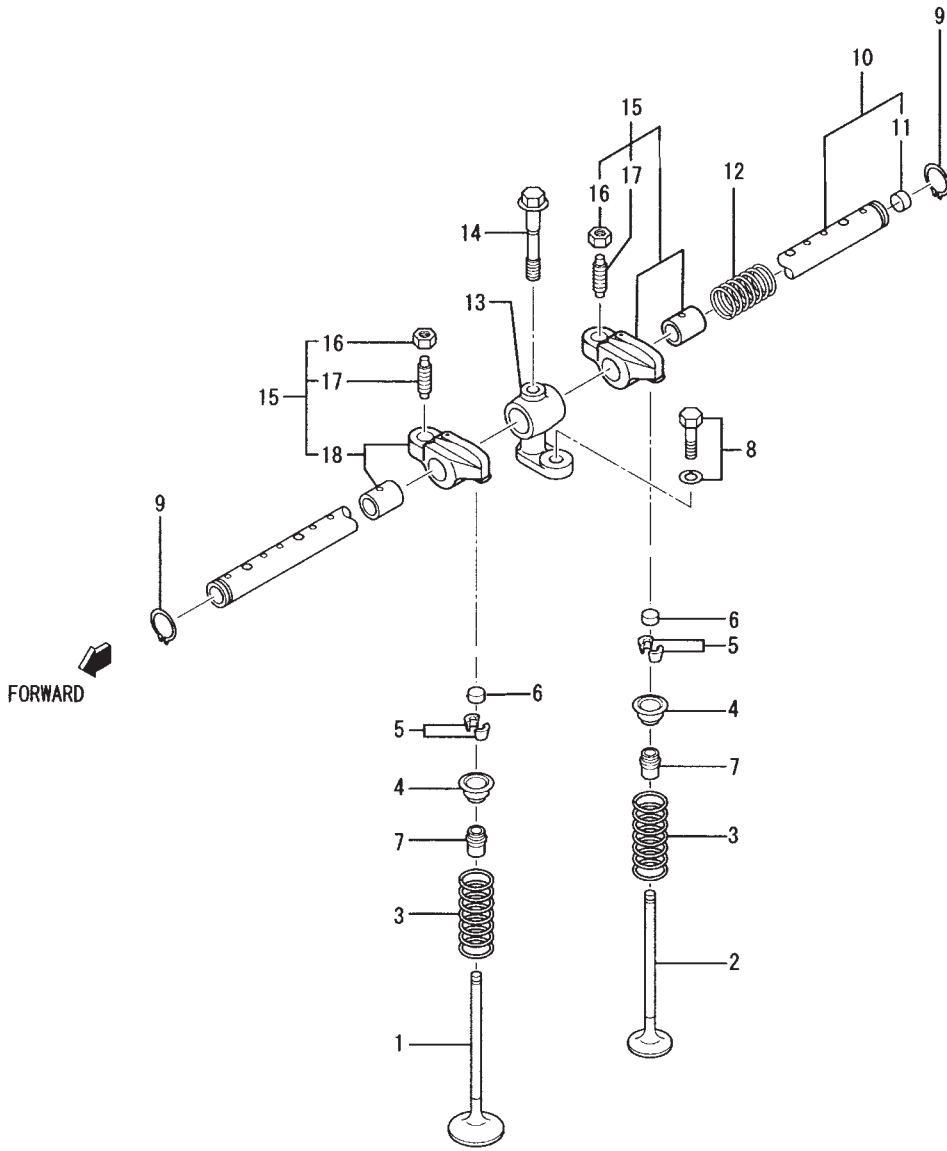


32B0106

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A0111020	1	Cylinder Head Assembly (without turbocharger, includes keys 2-10)	-
	32A0126020	1	Cylinder Head Assembly (with turbocharger, includes keys 2-10)	-
2	0482622000	12	Expansion Plug	-
3	0482622500	7	Expansion Plug	-
4	32A0101600	8	Valve Guide	-
5	32A0103100	4	Valve Seat, Intake	-
6	32A0103200	4	Valve Seat, Exhaust	-
7		1	Plug (Not available separately)	-
8	MM316248	1	Plug, M16 x 1.5	-
9	15-01001	1	Sealing Washer, Copper M16	-
10	32A0301100	4	Combustion Chamber (without turbocharger)	-
11	32A0102204	1	Head Gasket (without turbocharger)	-
	32A0112300	1	Head Gasket (with turbocharger)	-
12	32A0101400	17	Head Bolt	-

Valve Train

L-M944, M30CW



32B0410

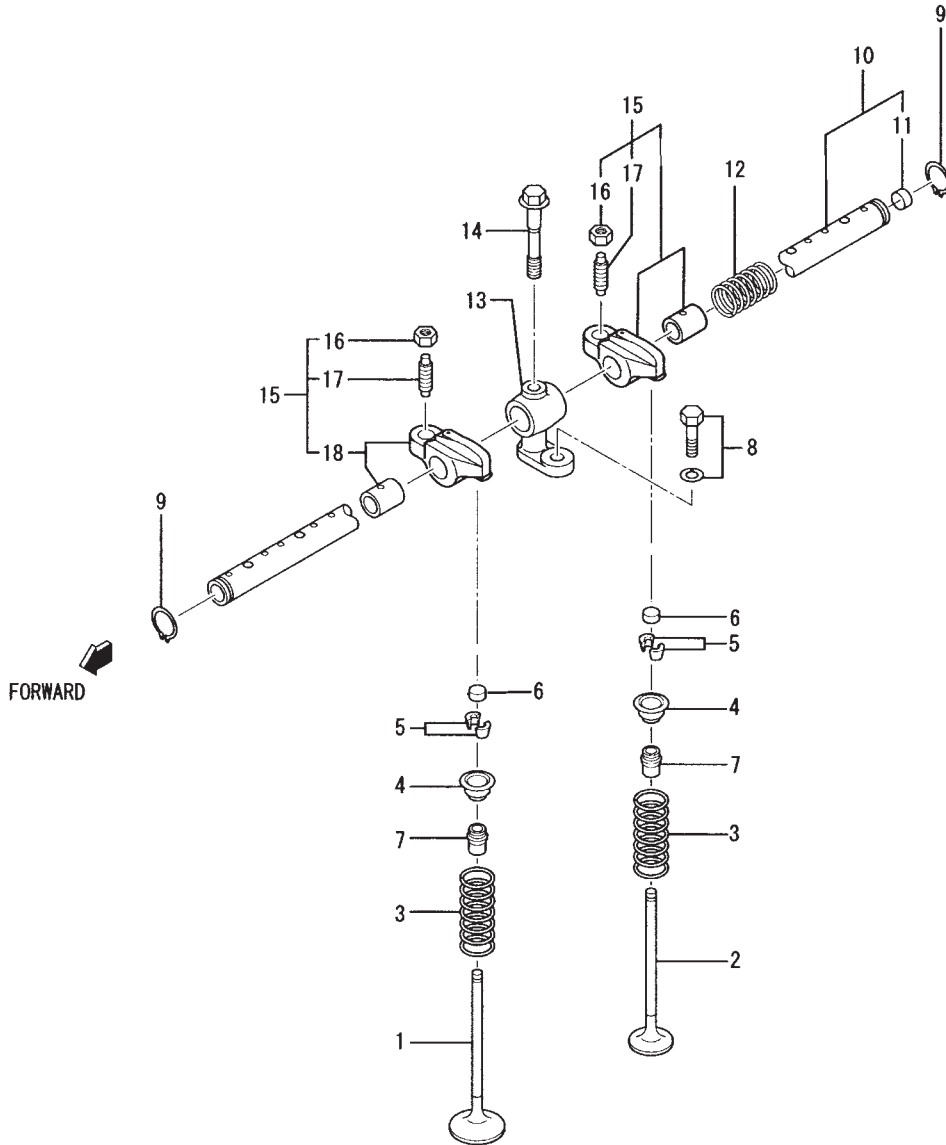
Valve Train

L-M944, M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A0400202	4	Intake Valve	-
2	32A0401202	4	Exhaust Valve	-
3	3060421402	8	Valve Spring	-
4	3060431601	8	Upper Retainer	-
5	3440402901	16	Valve Cotter	-
6	3130411700	8	Cap	-
7	32A0402801	8	Valve Stem Seal	-
8	F180508025	4	Bolt with washer	-
9	MF522010	2	Snap Ring	-
10	32A0404011	1	Rocker Shaft Assembly (includes key 11)	-
11	0482621200	2	Sealing Cap	-
12	32CO404501	3	Spring	-
13	32A0404701	4	Rocker Stand	-
14	32A0404801	4	Bolt	-
15	32A0422010	8	Rocker Arm Assembly (includes keys 16-18)	-
16	F232508000	8	Jam Nut	-
17	32A0402401	8	Adjusting Screw	-

Valve Train

M-NL944T, M38CR2



32B0410

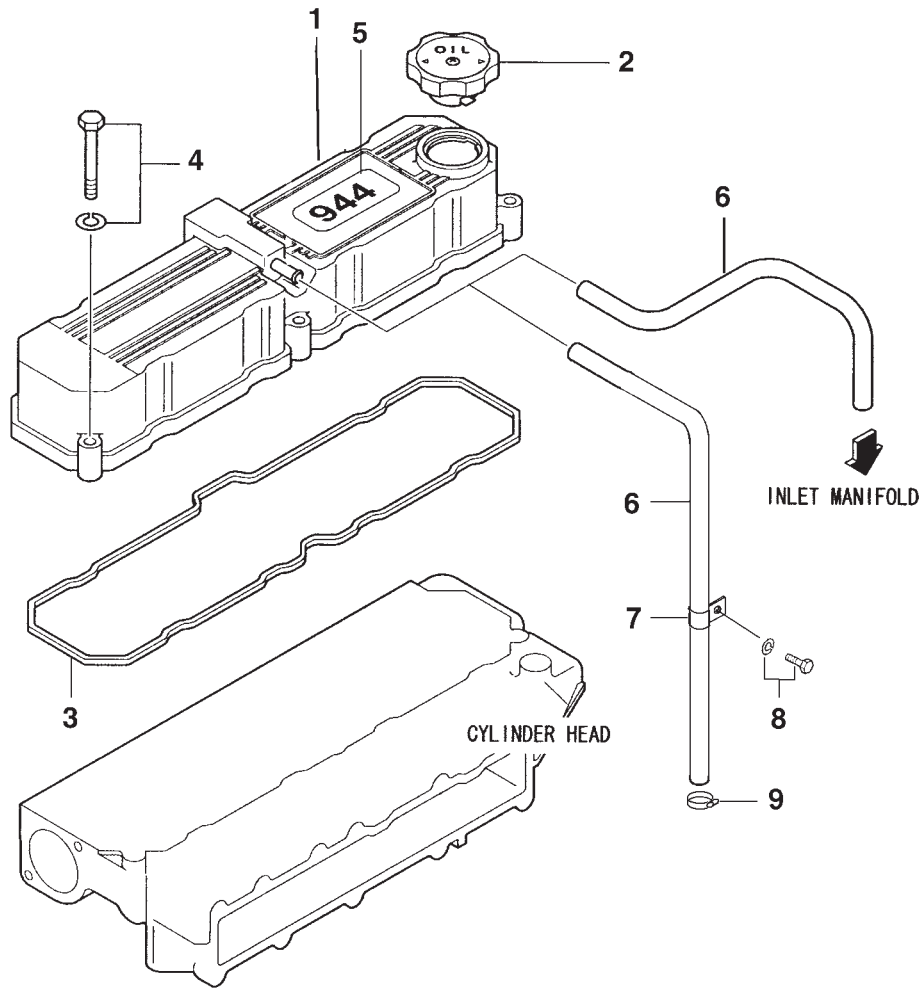
Valve Train

M-NL944T, M38CR2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A0420100	4	Intake Valve	-
2	32A0421100	4	Exhaust Valve	-
3	3060421402	8	Valve Spring	-
4	3060431601	8	Retainer	-
5	3440402901	16	Keeper	-
6	3130411700	8	Cap	-
7	32A0402801	8	Valve Guide Seal	-
8	MF241255	4	Bolt with washer	-
9	MF522010	2	Snap Ring	-
10	32A0404011	1	Rocker Shaft Assembly (includes key 11)	-
11	0482621200	2	Sealing Cap	-
12	32CO404501	3	Spring	-
13	32A0404701	4	Rocker Stand	-
14	32A0404801	4	Bolt	-
15	32A0422010	8	Rocker Arm Assembly (includes keys 16-18)	-
16	F232508000	8	Jam Nut	-
17	32A0402401	8	Adjusting Screw	-

GROUP 1 – ENGINE

Rocker Arm Cover

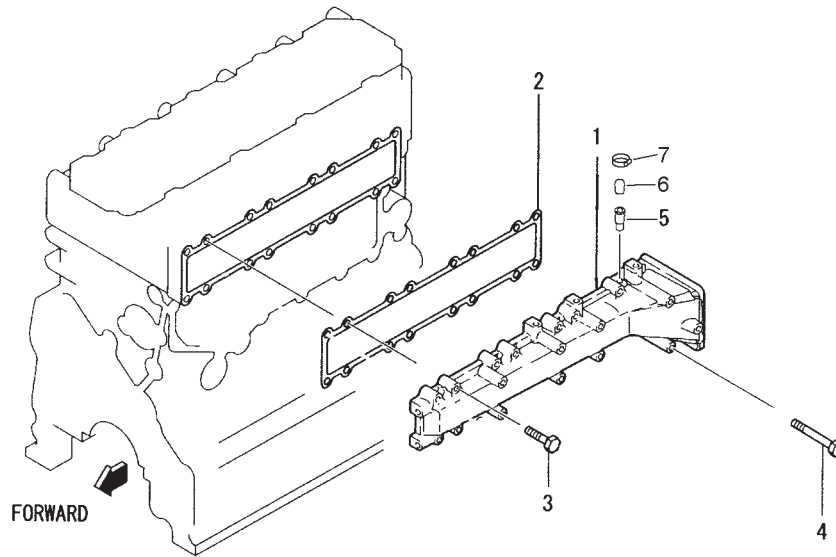


32B4302, 32B0411

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A0413012	1	Rocker Cover	-
2	MD008784	1	Cap, Oil Filler	-
3	32A0413200	1	Gasket	-
4	F180508040	5	Bolt with washer	-
	MF241261	5	Bolt with washer (M944T, NL944T2, M38CR2)	-
5	00-01203	1	Label "944"	-
6	41-01020	9"	Hose 3/8" I.D., sold per inch (M944W, NL944D2, M30CW)	-
	41-01020	20"	Hose 3/8" I.D., sold per inch (M944T, M38CR2)	-
	41-01020	40"	Hose 3/8" I.D., sold per inch (NL944T2)	-
7	5170301000	1	Clip	-
8	MF240049	1	Bolt with Washer	-
9	32A4300900	1	Hose Clip	-
10		1	Emissions Label (not available separately)	-

Intake Manifold

L-M944, M30CW, M944T, and M38CR2



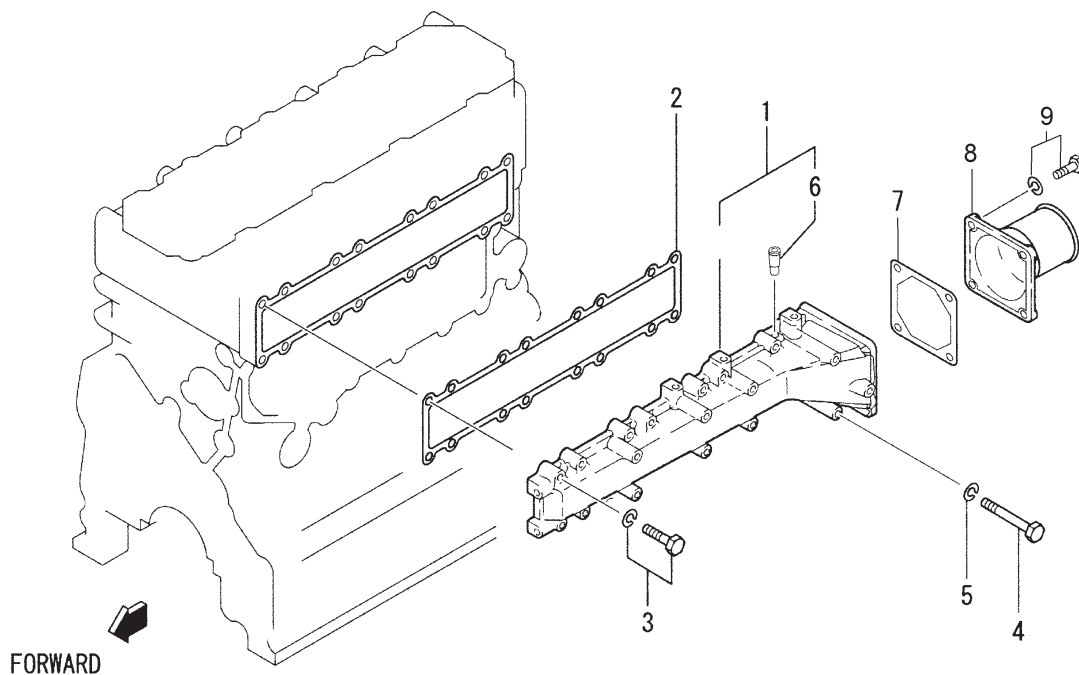
32B3006

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-21203	1	Intake Manifold (includes key 6) (former # 32A3016012)	-
2	11-21203	1	Gasket (former # 32A3000201)	-
3	01435-00840	12	Capscrew, Hex Head Flanged M8 x 1.25 mm x 40 mm	-
4	01435-00885	2	Capscrew, Hex Head Flanged M8 x 1.25 mm x 85 mm	-
5		1	Pipe*	-
	21-00027	**	Plug 1/8 NPT - use with manifold 10-21203	-
	21-21206	**	Elbow 1/8 NPT x 3/8" Hose Barb (M944 non-turbo)	-
6	21-21202-1	1	Cap (M944T - M38CR2)	-
7	19-50115	1	Hose Clamp (M944T - M38CR2)	-
*Tube not available separately - Only used on manifold 32A301012				

GROUP 2 – INTAKE & EXHAUST SYSTEM

Intake Manifold

NL944 Non-turbo

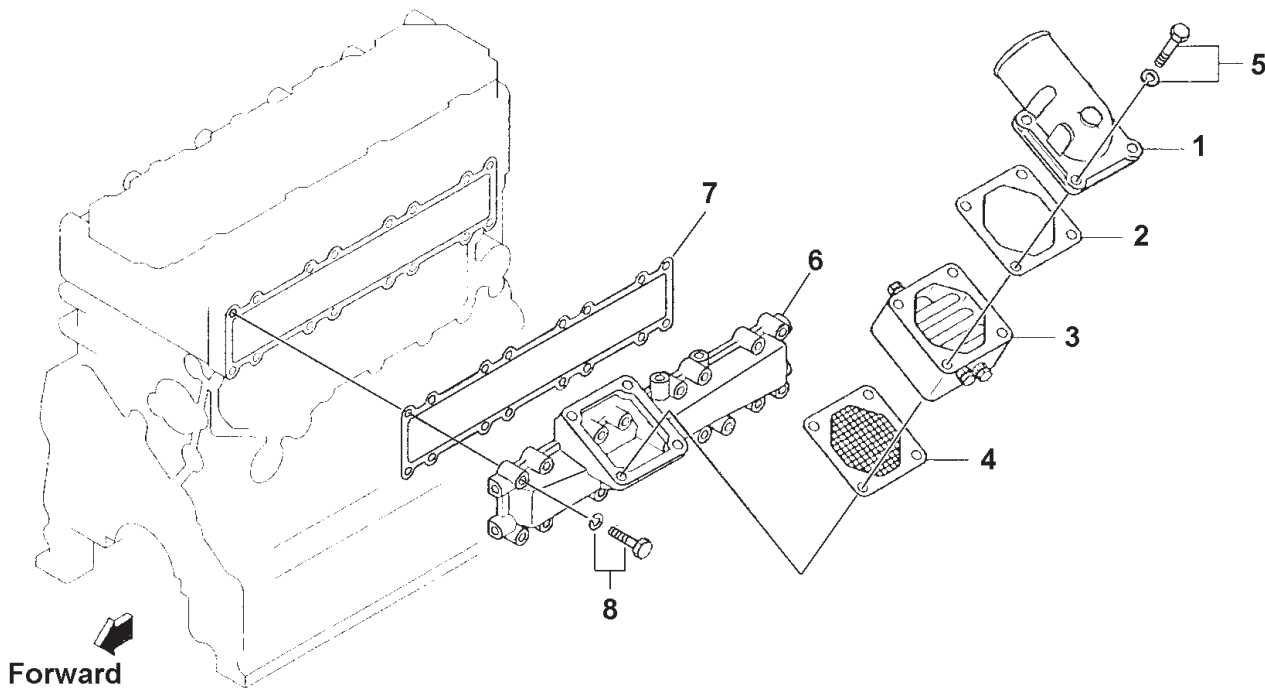


32B3006a

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3016012	1	Intake Manifold (includes key 6)	-
2	32A3000201	1	Gasket	-
3	F180508040	14	Bolt w/ washer	-
4	F103508090	2	Bolt	-
5	F251508000	2	Spring Washer	-
6		1	Pipe (not available separately)	-
7	3433004300	1	Gasket	-
8	3673001101	1	Inlet Tube	-
9	F180508022	4	Bolt with washer	-

Intake Manifold

NL944T2

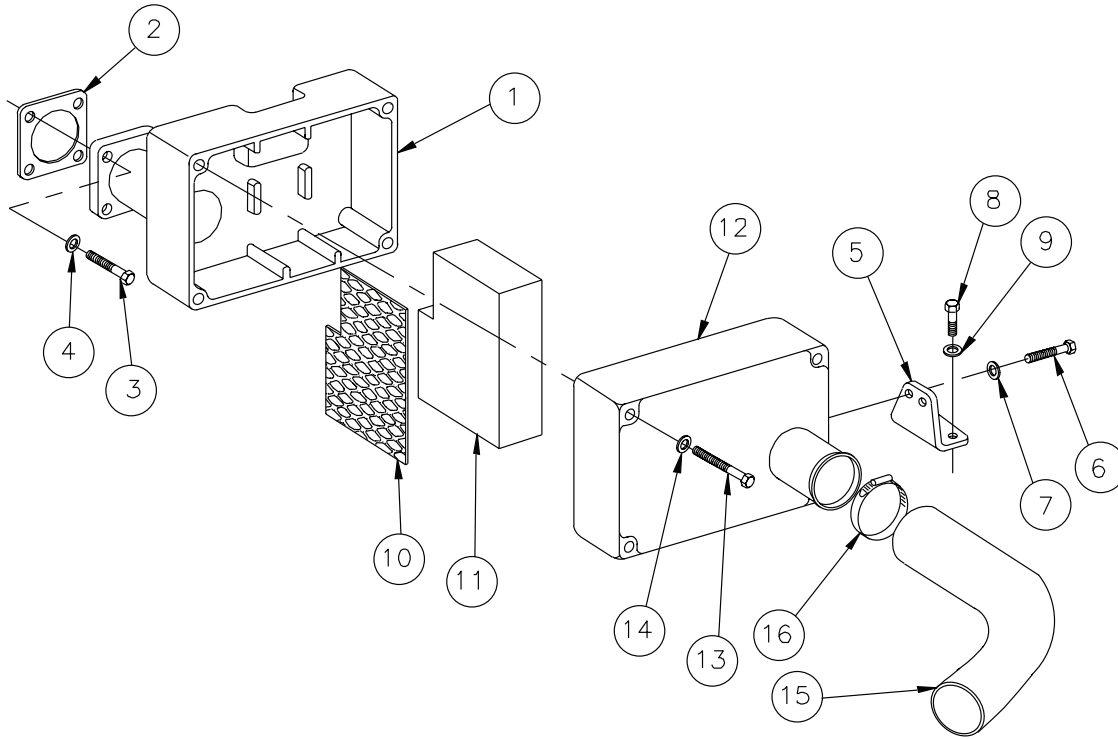


32B3041D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3673021304	1	Inlet Elbow	-
2	3433004300	1	Gasket	-
3	32B6606100	1	Air Heater Assembly	-
4	3433004200	1	Gasket	-
5	MF241266	4	Bolt with washer	-
6	32A3000301	1	Intake Manifold	-
7	32A3000201	1	Gasket	-
8	MF241261	16	Bolt with washer	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

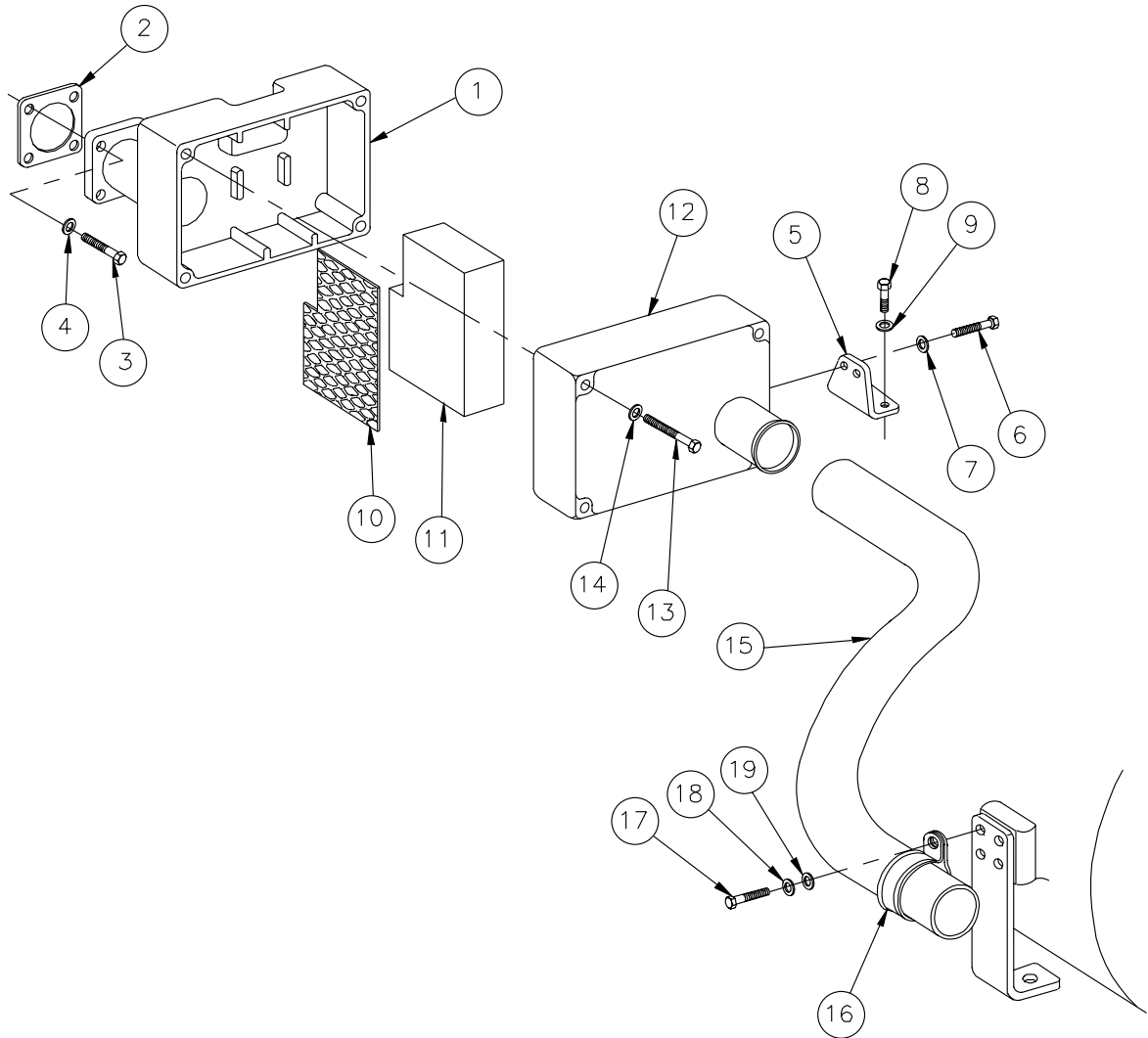
Air Filter and Mounting L944



A-11218/ B-8916lugger

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-21201	1	Housing, Air Filter	-
2	3433004300	1	Gasket	-
3	12-09712	4	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
4	15-99707	4	Wave Washer M8 S/S	-
5	23-21201	1	Bracket	-
6	12-00776	2	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
7	15-99707	2	Wave Washer M8 S/S	-
8	12-00821	2	Capscrew, Hex Head M10 x 1.5 x 20 mm S/S	-
9	15-00808	2	Lock Washer, Helical M10 S/S	-
10	24-21201	1	Screen	-
11	24-21202	1	Element	-
12	10-21202	1	Cover	-
13	12-09801	4	Capscrew, Hex Head M8 x 1.25 x 70 mm S/S	-
14	15-99707	4	Wave Washer M8 S/S	-
15	18-21202	1	Hose, Air Intake	-
16	19-00044	1	Hose Clamp #44	-

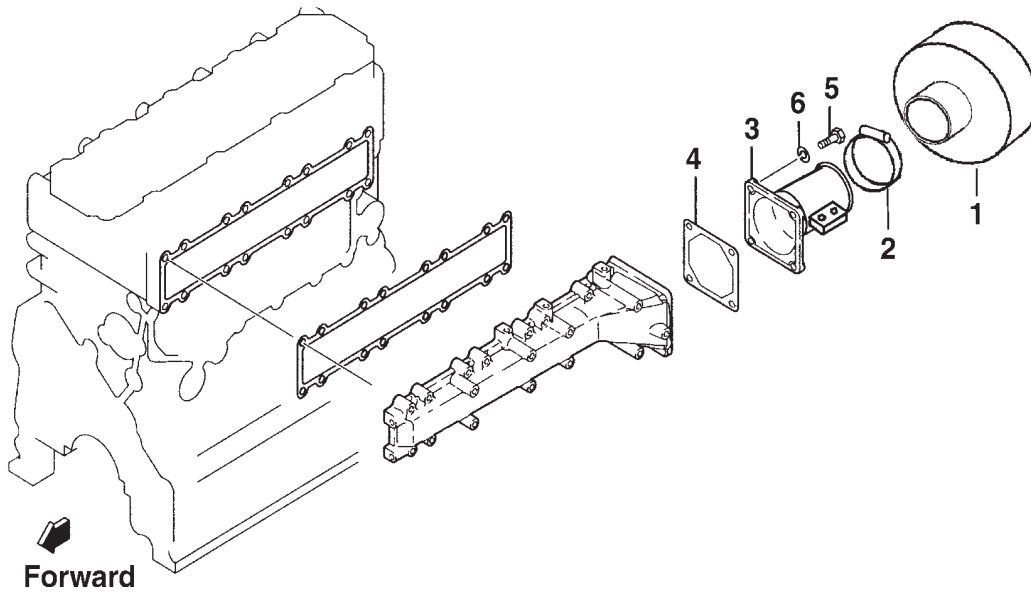
Air Filter and Mounting M944



A-11218/ B-8916

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-21201	1	Housing, Air Filter	-
2	3433004300	1	Gasket	-
3	12-09712	4	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
4	15-99707	4	Wave Washer M8 S/S	-
5	23-21201	1	Bracket	-
6	12-00776	2	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
7	15-99707	2	Wave Washer M8 S/S	-
8	12-00821	2	Capscrew, Hex Head M10 x 1.5 x 20 mm S/S	-
9	15-00808	2	Lock Washer, Helical M10 S/S	-
10	24-21201	1	Screen	-
11	24-21202	1	Element	-
12	10-21202	1	Cover	-
13	12-09801	4	Capscrew, Hex Head M8 x 1.25 x 70 mm S/S	-
14	15-99707	4	Wave Washer M8 S/S	-
15	18-21201	1	Hose, Air Intake	-
16	19-70040	1	Cushion Clamp #40	-
17	12-01102	1	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
18	15-00610	1	Lock Washer, Helical M6 S/S	-
19	15-01134	1	Flat Washer M6 S/S	-

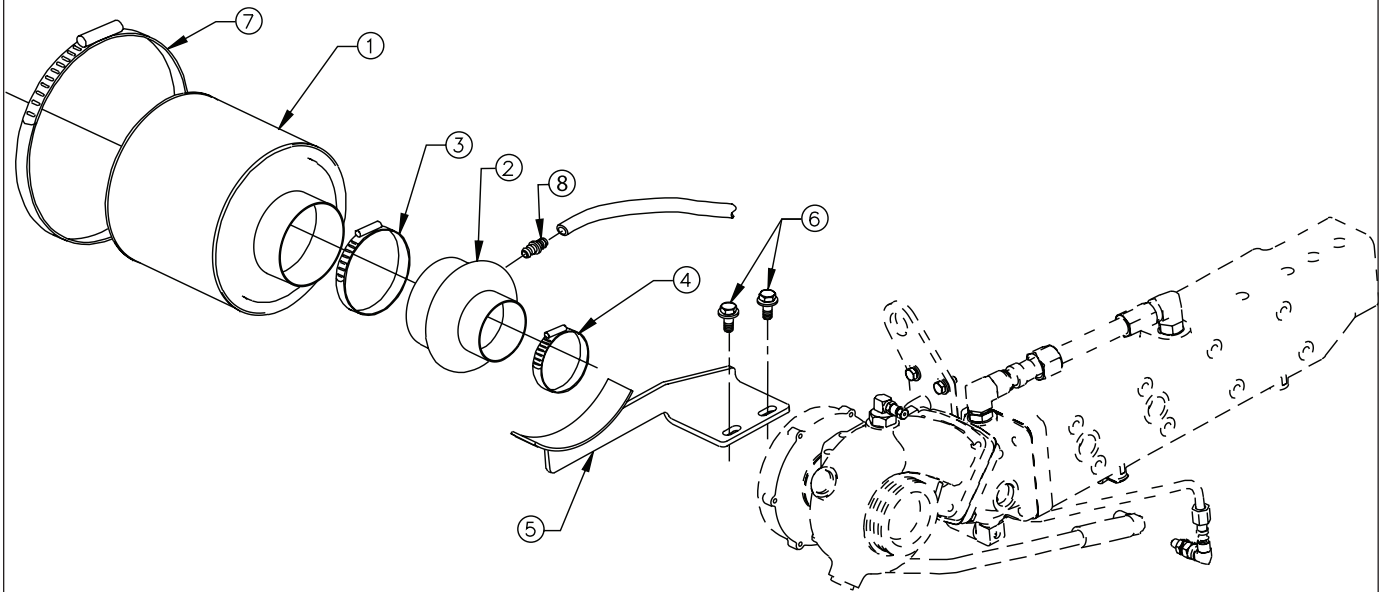
Air Filter and Connector M30CW



944airinlet

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-20001	1	Air Filter	-
2	19-00040	1	Hose Clamp #40	-
3	27-21201	1	Connector, Air Inlet	-
4	3433004300	1	Gasket	-
5	12-09712	1	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
6	15-00705	1	Lock Washer M8 S/S	-

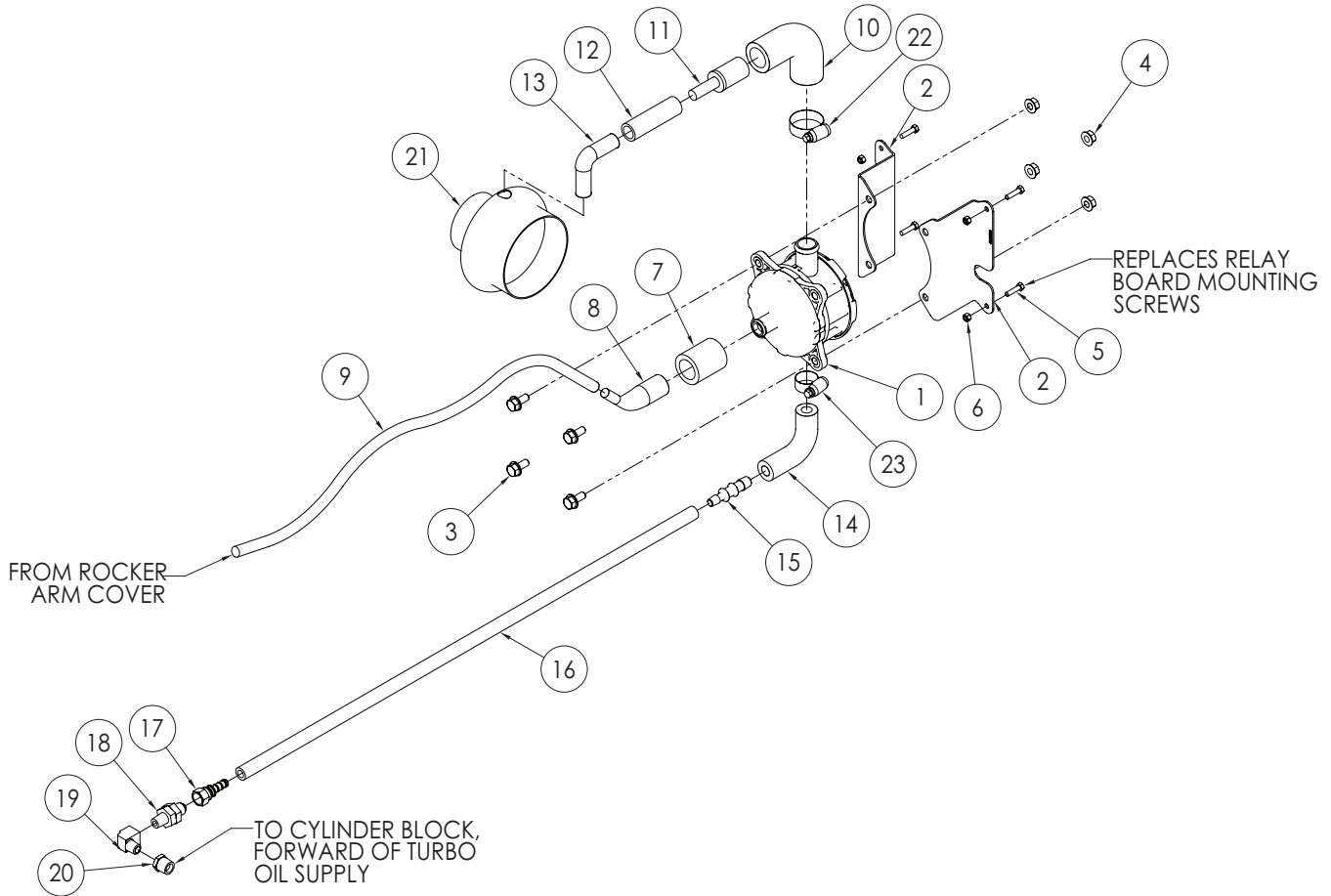
Air Filter and Mounting M944T



A-11947/ A-12189

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-21003	1	Air Filter	-
2	18-21203	1	Hump Hose, 4-1/8" ID x 2" ID x 4-3/4" LOA 1/4" vent hole *	-
	18-21001	1	Hump Host 4-1/8" ID x 2" ID x 4-3/4 " LOA with 1/2" vent hole **	-
3	19-00072	1	Hose Clamp #72	-
4	19-00036	1	Hose Clamp #36	-
5	23-21202	1	Bracket	-
6	19M7784	2	Capscrew, Hex Head Flange M10 x 1.5 x 20 mm Grade 10.9	-
7	19-00128	1	Hose Clamp #128	-
8	21-21201	1	Union, Brass 3/8" Hose Barb	-
			* Units without crankcase breather filter	
			** Units with crankcase breather filter	

Crankcase Breather Filter M944T

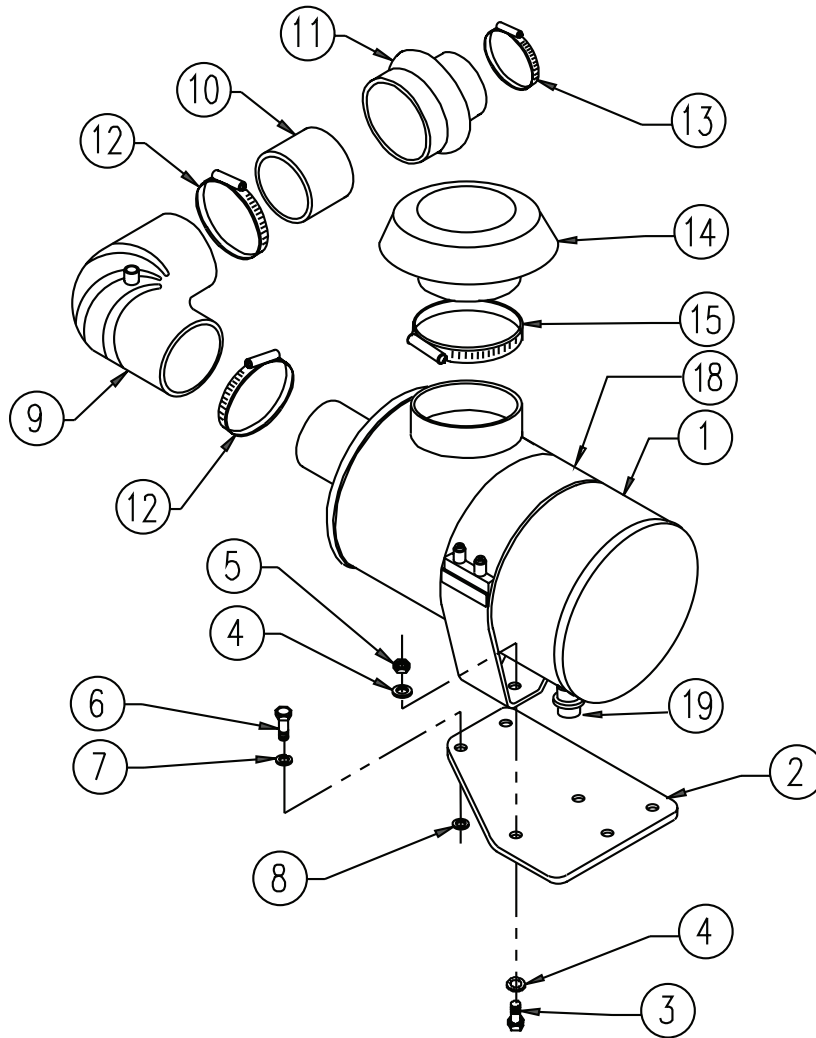


Crankcase Breather Filter M944T

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	RE522766	1	Crankcase Breather Assembly	-
2	23-21204	2	Bracket, Crankcase Breather Filter Support	-
3	19M7867	4	Capscrew, Hex Head Flanged M8 x 1.25 x 25 mm Grade 10.9	-
4	14M7298	4	Hex Nut, Flanged M8 x 1.25 Property Class 8 DIN Code 6923 (13 mm Hex)	-
5	12-92003	4	MSCR, RD HD Phillips with Washers M5 x 0.8 X 16mm	-
6	14-04401	4	Hex Nut M5 x 0.8	-
7	18-21209	1	Hose, Crankcase Breather Inlet 1" ID Molded	-
8	21-21203	1	EL.45, COP. 1" HB c 3/8 HB	-
9	18-21210	1	Hose 5/8" ID x 24"	-
10	18-21208	1	Hose, Crankcase Breather Outlet 1" ID Molded	-
11	21-21204	1	Reducing Hose Barb Union 1" x 1/2"	-
12	18-31201	1	Hose, 5/8" ID x 24"	-
13	21-21205	1	M. Union 90, ABS 1/2 HB x 1/2 HB	-
14	145536051	1	Hose, 90 degree 1/2" ID Molded	-
15	R519465	1	Hose Barb Reducer 1/2" x 3/8"	-
16	18-53702	1	Hose 3/8" ID x 27" Push-On	-
17	21-71034	1	F. Swivel, Brs. 3/8" HB x 3/8-37T Push-On	-
18	21-20002	1	One Way Valve, Brs. 1/4 NPT x 3/8-37 T	-
19	21-51098	1	Street El. 90, Brs. 1/4 NPT	-
20	21-51099	1	Bushing, Brs. 3/8 NPT x 1/4 NPT	-
21	18-21001	1	Hump Hose 4-1/8" ID x 2" ID x 4-3/4" LOA With 1/2" Vent Hole	-
22	19-00016	1	Hose Clamp #16 S/S	-
23	19-00008	2	Hose Clamp #8 S/S	-
24	15-00027	4	Flat Washer M5	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

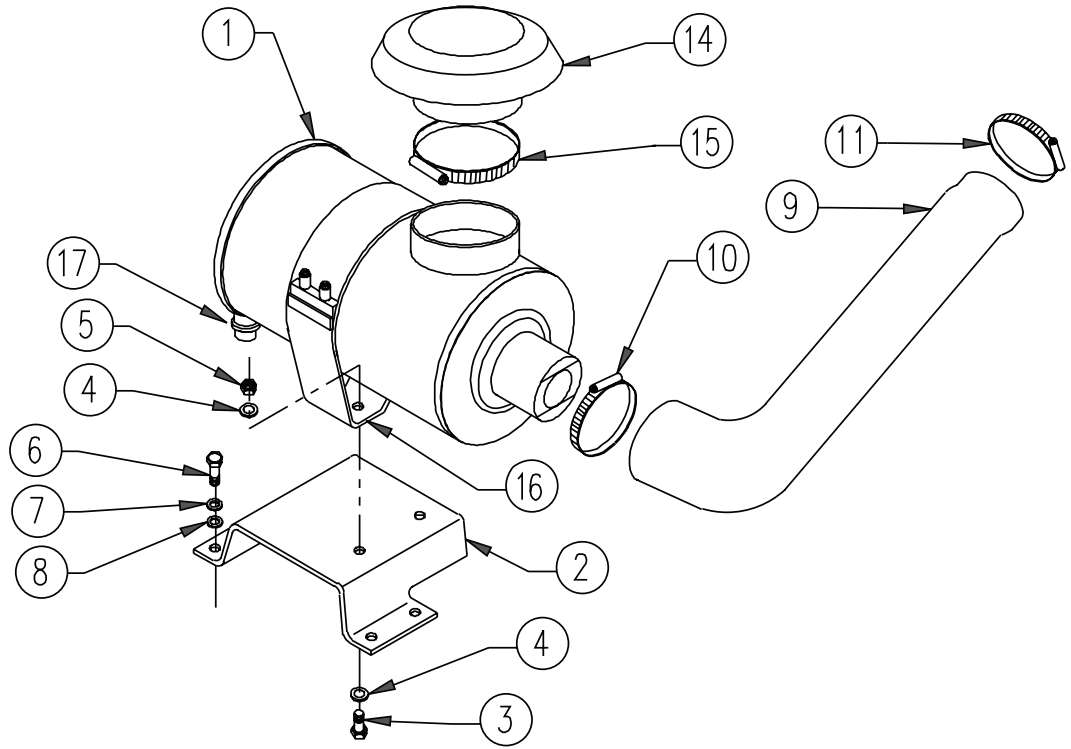
Air Cleaner and Mounting NL944D2



B-9527

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-21206	1	Air Cleaner Assembly (includes key #16 & 18-19)	-
2	23-21203	1	Bracket	-
3	12-00712	2	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
4	15-00701	4	Flat Washer, M8	-
5	14-04802	2	Hex Nut, Nylock M8 x 1.25	-
6	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
7	15-00804	4	Wave Washer, Helical M10	-
8	15-00807	4	Stud Washer, M10	-
9	18-21206	1	Hose, 90° Rubber Elbow, 3" ID (includes 2 ea of key #12)	-
10	31-25702	1	Tube 3" OD x 2-1/2" Long	-
11	18-21207	1	Hump Hose, 3" ID x 2-3/8" ID x 3-1/2" LOA	-
12	19-00040	3	Hose Clamp, #40	-
13	19-00032	1	Hose Clamp, #32	-
14	24-21208	1	Rain Cap	-
15	19-00044	1	Hose Clamp, #44	-
16	24-21203	1	Air Filter Element - Primary (not shown)	-
17	24-21204	1	Air Filter Element - Safety (not shown, optional)	-
18	23-21213	1	Mounting Clamp	-
19	24-21224	1	Condensate Valve	-

Air Cleaner and Mounting NL944T2

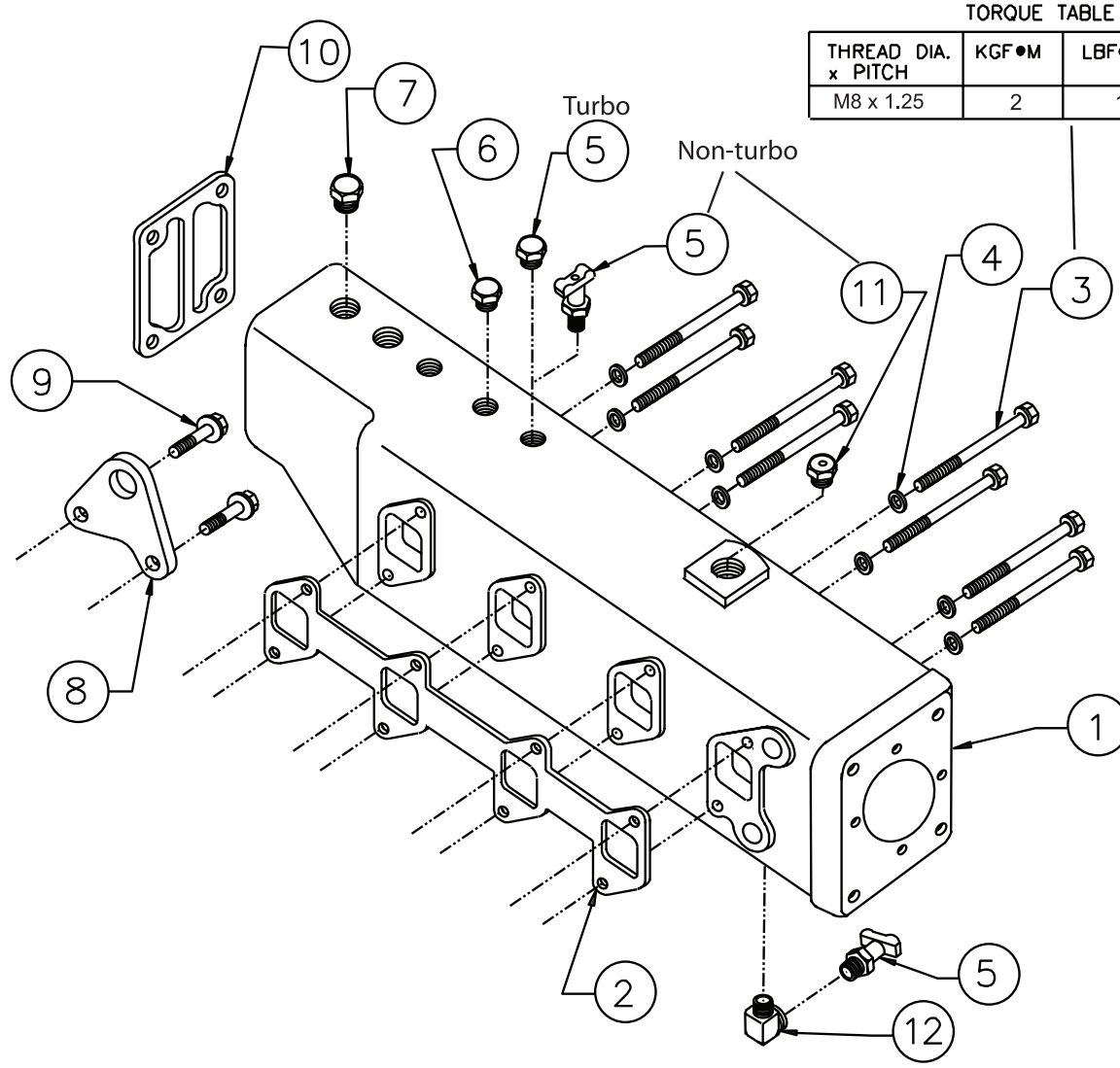


B-9469

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	24-21207	1	Air Cleaner Assembly (includes keys #12-13)	-
2	D030052	1	Bracket	-
3	12-00712	2	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
4	15-00701	4	Flat Washer, M8	-
5	14-04802	2	Hex Nut, Nylock M8 x 1.25	-
6	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
7	15-00802	4	Lock Washer, Helical M10	-
8	15-00805	4	Flat Washer, M10	-
9	32A3004400	1	Hose	-
10	19-00040	1	Hose Clamp, #40	-
11	19-00052	1	Hose Clamp, #52	-
12	24-21203	1	Air Filter Element - Primary (not shown)	-
13	24-21204	1	Air Filter Element - Safety (not shown)	-
14	24-21208	1	Rain Cap	-
15	19-00044	1	Clamp, #44	-
16	23-21213	1	Mounting Clamp	-
17	24-21224	1	Condensate Valve	-

Exhaust Manifold

M944 all



TORQUE TABLE (4T)

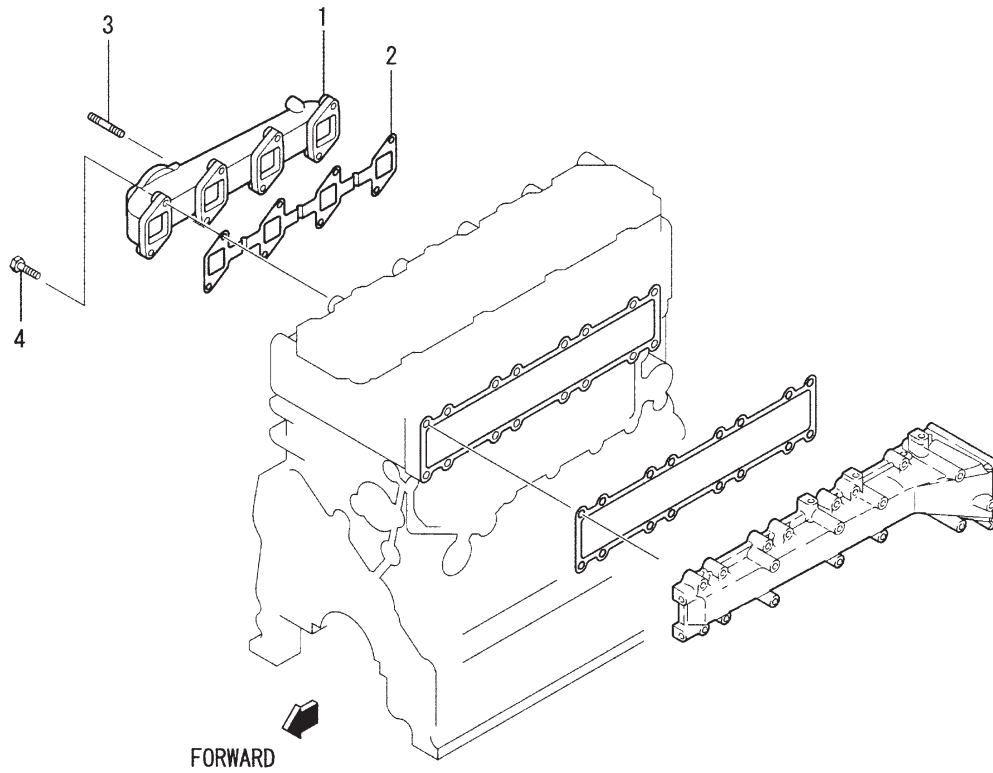
THREAD DIA. x PITCH	KGf•M	LBF•FT	N•M
M8 x 1.25	2	15	20

A-11219/ B-8957

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-31203	1	Exhaust Manifold (formerly #10-31201 & 10-31202)	-
2	32A3200200	1	Gasket, Exhaust Manifold Mounting	-
3	12-09723	8	Capscrew, Hex Head M8 x 1.25 x 115 mm S/S (formerly socket head)	-
4	15-00706	8	Flat Washer M8 S/S	-
5	21-10002	**	Drain Cock, Brass 1/4 NPT	-
	21-10021	**	Drain Cock, Brass 3/8 NPT	-
	21-31624	**	Plug, Hex Head Brass 1/4 NPT	-
6	21-31003	2	Plug, Hex Head Brass 3/8 NPT	-
7	21-00530	2	Plug, Hex Head Brass 1/2 NPT	-
8	00-71201	1	Lifting Eye, Front	-
9	12-89751	2	Capscrew, Hex Head Flanged M8 x 1.25 x 16 mm S/S	-
10	11-11202	**	Gasket	-
11	21-09507	**	Plug, Socket Head	-
12	21-51098	1	Street Elbow, Brass 1/4 NPT	-
			**As required	

Exhaust Manifold

NL944 Non-turbo

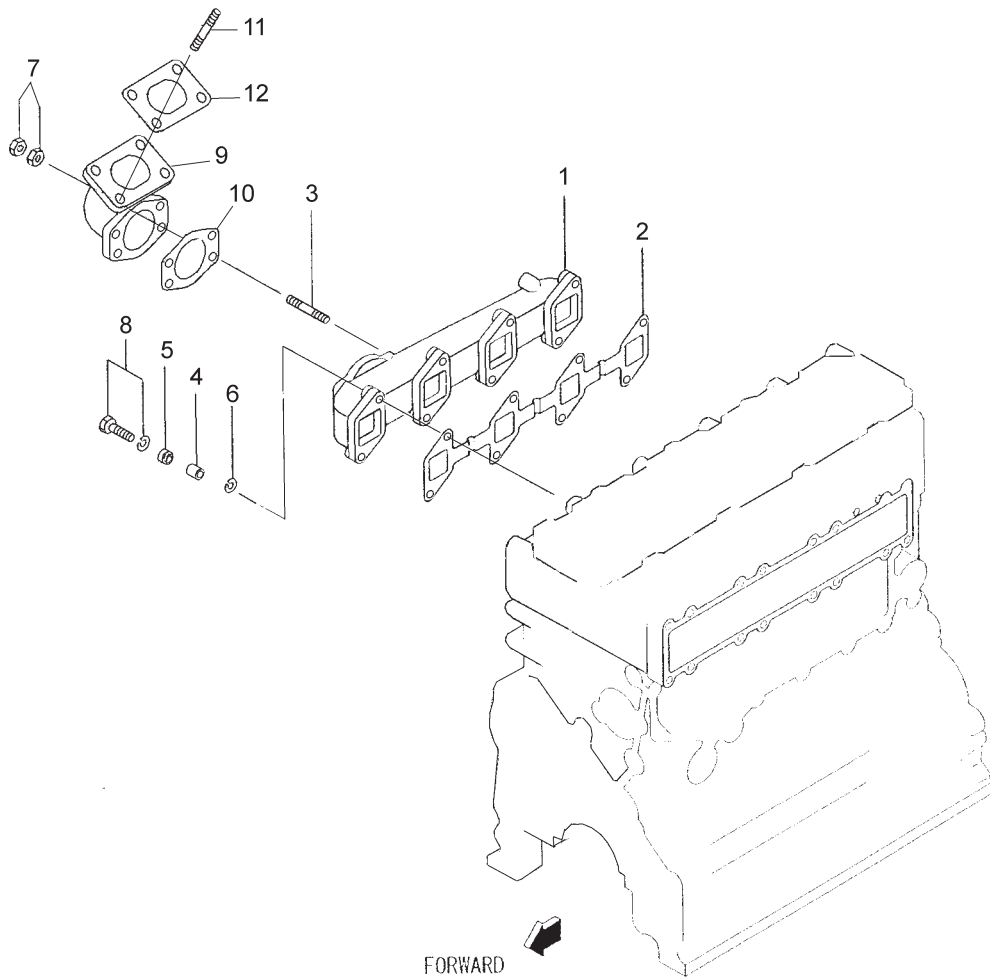


32B3205a

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3200600	1	Exhaust Manifold	-
2	32A3200200	1	Gasket, Exhaust Manifold Mounting	-
3	3423208300	4	Stud	-
4	F103508020	8	Bolt	-

Exhaust Manifold

NL944 Turbo

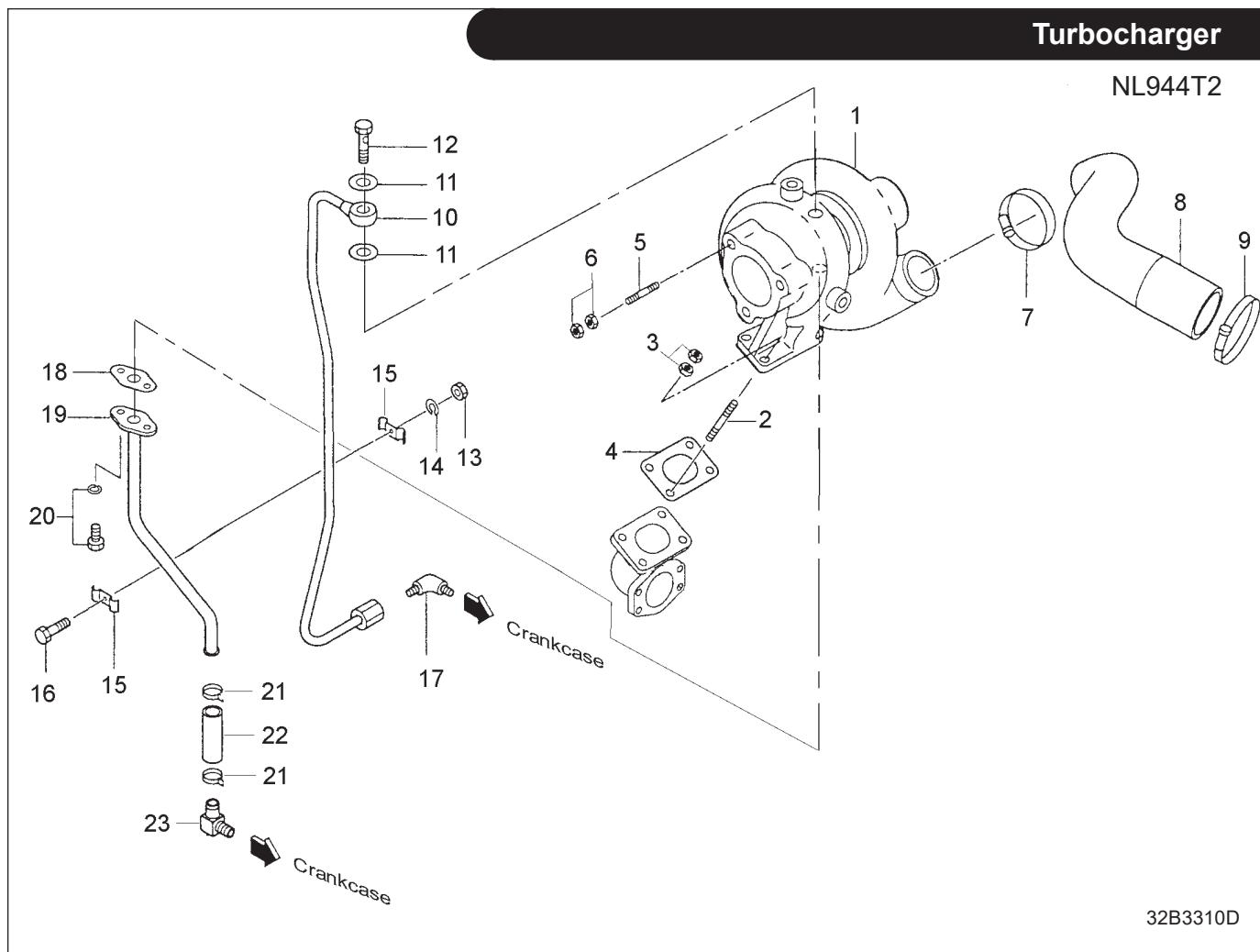


32C3214D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3221100	1	Exhaust Manifold	-
2	32A3200200	1	Gasket	-
3	3423208200	4	Stud	-
4	32B3200901	8	Spacer	-
5	3433231301	8	Washer	-
6	F251508000	8	Spring Washer	-
7	F230008000	8	Lock Nut	-
8	MF241263	8	Bolt w/ washer	-
9	32A3201300	1	Exhaust Elbow	-
10	32A3201400	1	Gasket	-
11	MF407008	4	Stud	-
12	3423200300	1	Gasket	-

Turbocharger

NL944T2

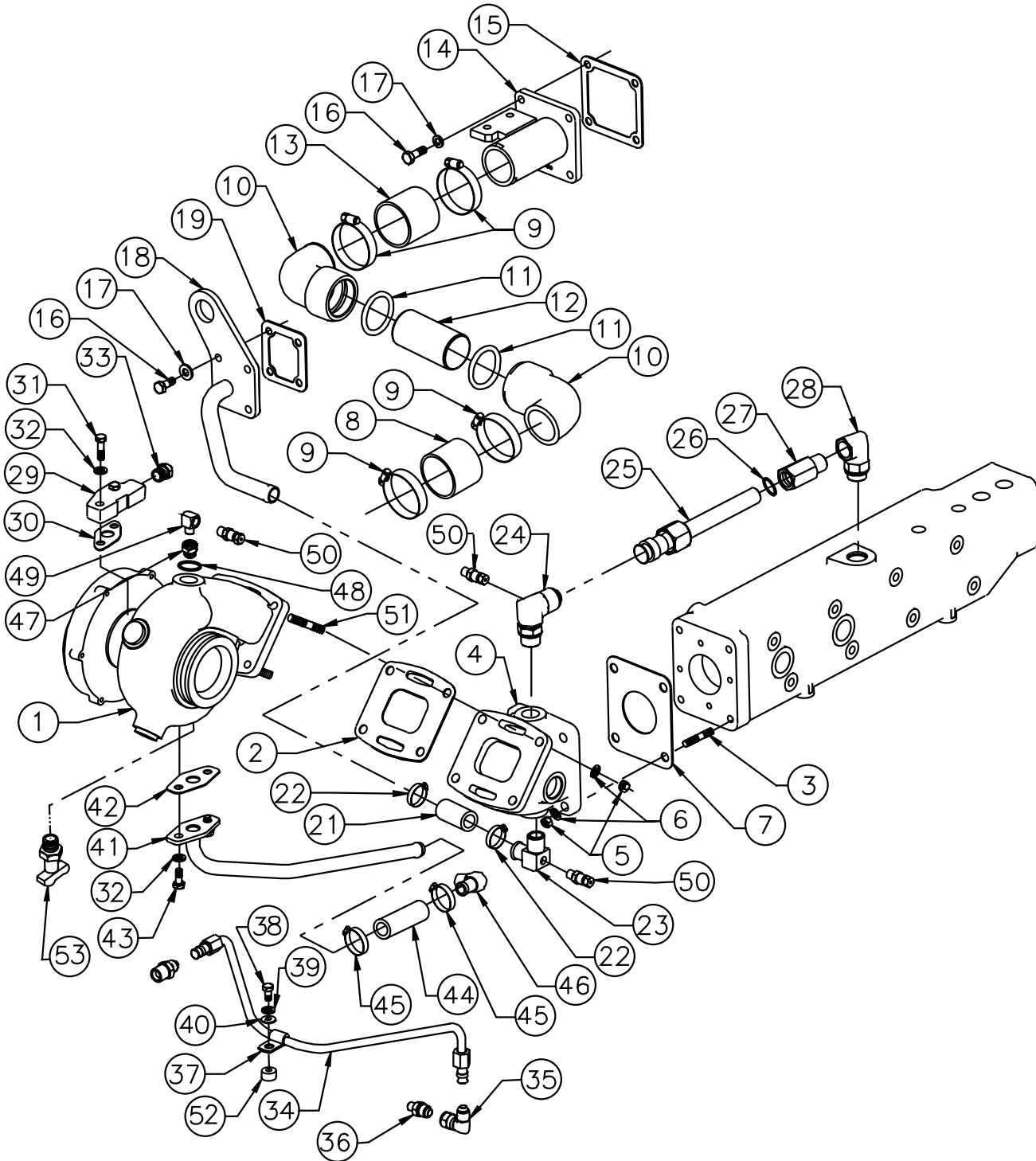


32B3310D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	4918902410	1	Turbocharger TD04HL (see parts detail)	-
2	MF407008	4	Stud	-
3	3233200801	8	Lock Nut	-
4	3423200300	1	Gasket	-
5	0597710030	3	Stud	-
6	3233200801	6	Lock Nut	-
7	0531750701	1	Hose Clamp	-
8	32A3003800	1	Air Hose	-
9	0531750801	1	Hose Clamp	-
10	32A3604300	1	Oil Line	-
11	131426180	2	Sealing Washer	-
12	3043653501	1	Banjo Bolt	-
13	F230006000	1	Lock Nut	-
14	F251506000	1	Wave Washer	-
15	3043652900	2	Clamp	-
16	F103506020	1	Bolt	-
17	F465606000	1	Elbow	-
18	11-31012	1	Gasket	-
19	32A3604200	1	Oil Drain Line	-
20	MF241225	2	Bolt with Washer	-
21	F430002500	2	Hose Clamp	-
22	3433301401	1	Hose	-
23	3440712601	1	Elbow	-

Turbocharger & Mounting

M944T/ M38CR2, without Air Intake Heater



Turbocharger & Mounting

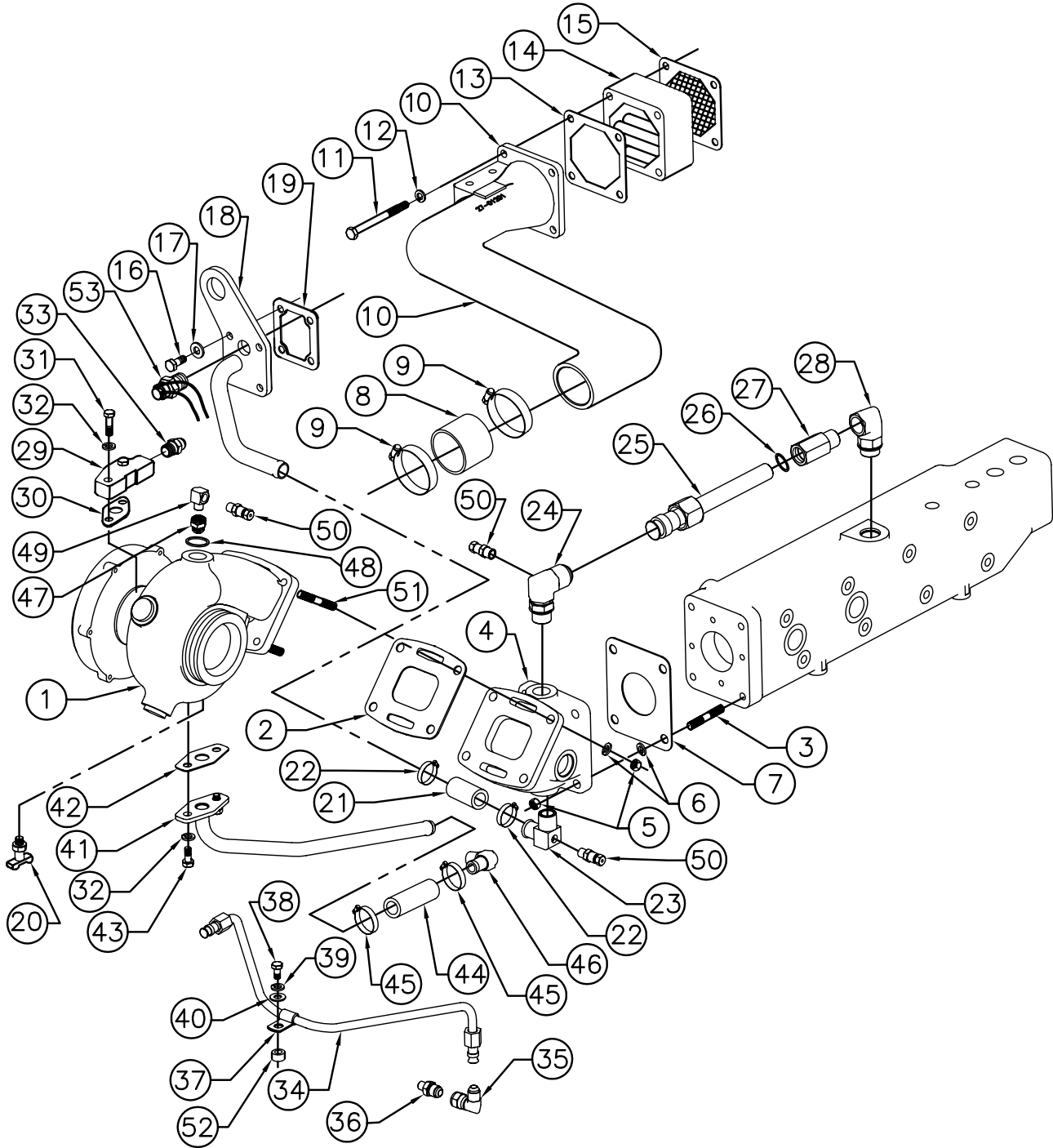
M944T/ M38CR2, without Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	30-39400	1	Turbocharger K26 (see parts detail, includes key #51)	-
2	11-31401	1	Gasket, Turbo Mtg.	-
3	13-05001	4	Stud, M10 x 1.5 x 25 mm (37 mm LOA) Grade 8.8	-
4	31-31203	1	Wet Adapter	-
5	14-00810	8	Hex Nut, M10 x 1.5	-
6	15-00801	8	Lock Washer, Hi-collar M10 S/S	-
7	11-31201	1	Gasket	-
8	18-21204	1	Hose, 2" I.D. x 2" 4 Ply Silicone	-
9	19-01028	4	Hose Clamp #28 Extended Band S/S	-
10	27-21001	2	Elbow, Air Intake	-
11	16-21001	2	O-ring	-
12	27-21204	1	Tube, Air Intake	-
13	18-21204	1	Hose, 2" I.D. x 2" 4 Ply Silicone	-
14	27-21203	1	Connector, Air Inlet	-
15	3433004300	1	Gasket	-
16	12-00711	8	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
17	15-00702	8	Lock Washer, Helical M8	-
18	27-11201	1	Tube, Turbo Coolant Supply	-
19	11-11204	1	Gasket	-
21	18-00753	1	Hose, 3/4" I.D. x 2-1/4" 3 Ply Silicone	-
22	19-01012	2	Hose Clamp, #12 Extended Band S/S	-
23	21-11202	1	Male Elbow, 90° Brass 1/2 NPT x 3/4 HB Tapped 1/8 NPT	-
24	21-35003	1	Male Elbow, 90° Steel 5/8 O-ring port x 3/4-37T Tapped 1/8 NPT	-
25	27-11202	1	Tube Assembly, Turbo Coolant Return	-
26	16-01000	1	O-ring	-
27	R41285	1	Adapter	-
28	21-03459	1	Female Elbow, 90° Steel 5/8, O-ring port x 1/2 NPT	-
29	R43928	1	Adapter, Turbo Oil Supply	-
30	11-31012	1	Gasket	-
31	12-00714	2	Capscrew, Hex Head M8 x 1.25 x 40 mm	-
32	15-00702	4	Lock Washer, Helical M8	-
33	21-52800	1	Male Connector, Steel 3/8 NPT x 3/8-37T	-
34	27-31238	1	Tube Assembly, Turbo Oil Supply	-
35	21-52213	1	Elbow, 90° Swivel Steel 3/8-37T	-
36	21-52220	1	Male Connector, Steel 1/8 BSPT x 3/8-37T	-
37	19-72252	1	Adelle Clamp 3/8" I.D. x 3/8" Stud	-
38	12-09831	1	Capscrew, Hex Head M10 x 1.5 x 25 mm S/S	-
39	15-00808	1	Lock Washer, M10 S/S	-
40	15-70006	1	Snubbing Washer	-
41	27-31239	1	Tube, Turbo Oil Return	-
42	11-31031	1	Gasket	-
43	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
44	18-31201	1	Hose, 5/8" I.D. x 3"	-
45	19-01010	2	Hose Clamp #10 Extended Band S/S	-
46	3440712601	1	Male Elbow 90° Steel, 3/8 BSPT x 5/8 Hose Barb	-
47	21-00077	1	Female Adapter, Steel 1/8 NPT x M22 x 1.5	-
48	15-09501	1	Sealing Washer, Copper M22	-
49	21-72044	1	Street Elbow 90° Brass 1/8 NPT	-
50	21-10001	3	Drain Cock, Brass 1/8 NPT	-
51	13-05001	4	Stud, M10 x 1.5 x 25 mm (37 mm LOA) Grade 8.8	-
52	21-49502	1	Spacer	-
53	21-10002	1	Drain Cock 1/4 NPT	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

Turbocharger & Mounting

M944T/ M38CR2, with Air Intake Heater



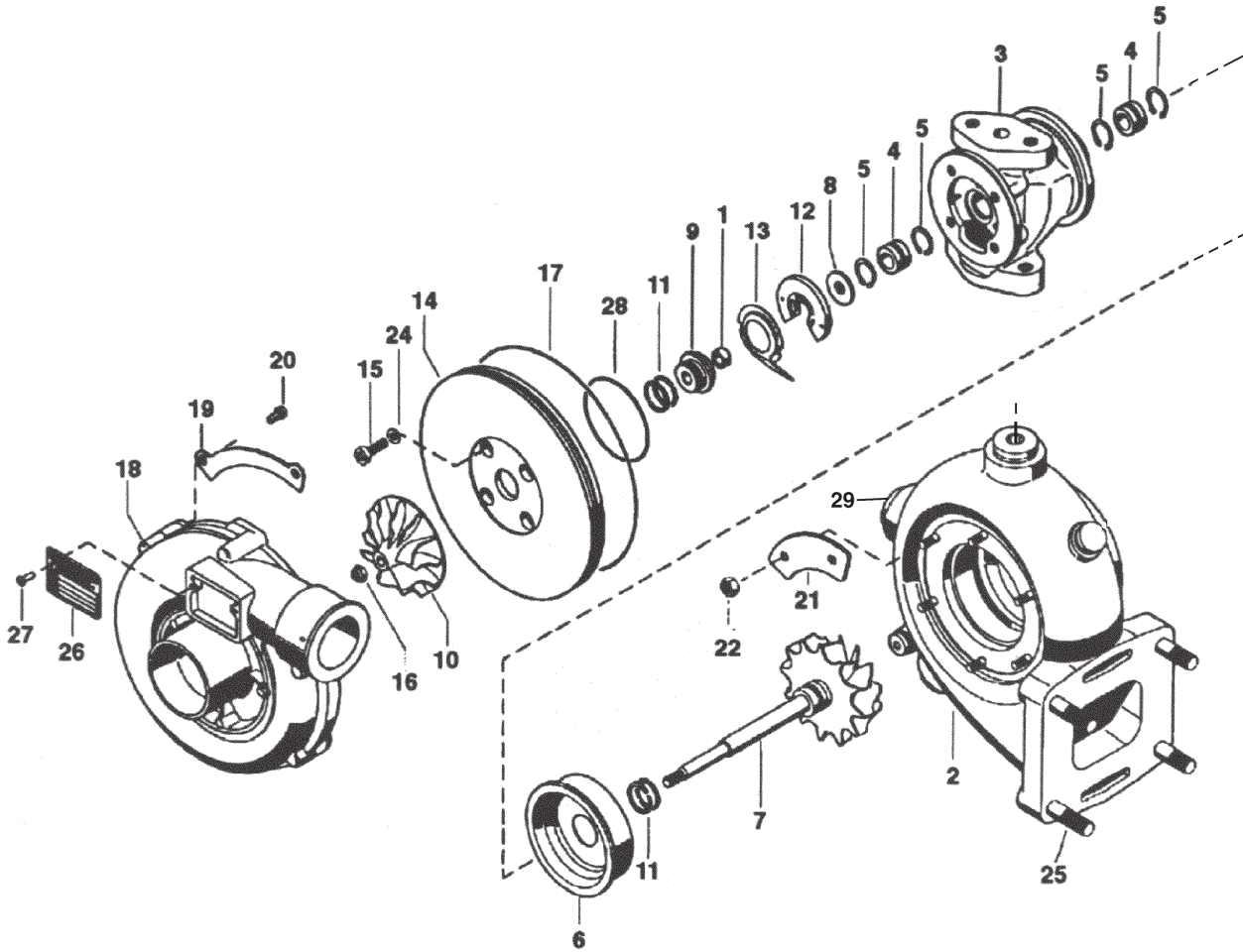
A-12500/ A-12528

Turbocharger & Mounting

M944T/ M38CR2, with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	30-39400	1	Turbocharger K26 (see parts detail, includes key #51)	-
2	11-31401	1	Gasket, Turbo Mtg.	-
3	13-05001	4	Stud, M10 x 1.5 x 25 mm (37 mm LOA) Grade 8.8	-
4	31-31203	1	Wet Adapter	-
5	14-00810	8	Hex Nut, M10 x 1.5	-
6	15-00801	8	Lock Washer, Hi-collar M10 S/S	-
7	11-31201	1	Gasket	-
8	18-21204	1	Hose, 2" I.D. x 2" 4 Ply Silicone	-
9	19-01028	2	Hose Clamp #28 Extended Band S/S	-
10	27-01201	1	Air Intake Tube & Fuel Filter Mtg.	-
11	12-00718	4	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
12	15-00701	4	Flat Washer M8	-
13	3433004300	1	Gasket, Air Inlet	-
14		1	Intake Air Heater (see Electrical System Parts Details)	-
15	3433004200	1	Gasket/ Screen	-
16	12-00711	4	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
17	15-00702	4	Lock Washer, Helical M8	-
18	27-11201	1	Tube, Turbo Coolant Supply	-
19	11-11204	1	Gasket	-
20	21-10002	1	Drain Cock 1/4 NPT	-
21	18-00753	1	Hose, 3/4" I.D. x 2-1/4" 3 Ply Silicone	-
22	19-01012	2	Hose Clamp, #12 Extended Band S/S	-
23	21-11202	1	Male Elbow, 90° Brass 1/2 NPT x 3/4 HB Tapped 1/8 NPT	-
24	21-35003	1	Male Elbow, 90° Steel 5/8 O-ring port x 3/4-37T Tapped 1/8 NPT	-
25	27-11202	1	Tube Assembly, Turbo Coolant Return	-
26	16-01000	1	O-ring	-
27	R41285	1	Adapter	-
28	21-03459	1	Female Elbow, 90° Steel 5/8, O-ring port x 1/2 NPT	-
29	R43928	1	Adapter, Turbo Oil Supply	-
30	11-31012	1	Gasket	-
31	12-00714	2	Capscrew, Hex Head M8 x 1.25 x 40 mm	-
32	15-00702	4	Lock Washer, Helical M8	-
33	21-52800	1	Male Connector, Steel 3/8 NPT x 3/8-37T	-
34	27-31238	1	Tube Assembly, Turbo Oil Supply	-
35	21-52213	1	Elbow, 90° Swivel Steel 3/8-37T	-
36	21-52220	1	Male Connector, Steel 1/8 BSPT x 3/8-37T	-
37	19-72252	1	Adelle Clamp 3/8" I.D. x 3/8" Stud	-
38	12-09831	1	Capscrew, Hex Head M10 x 1.5 x 25 mm S/S	-
39	15-00808	1	Lock Washer, M10 S/S	-
40	15-70006	1	Snubbing Washer	-
41	27-31239	1	Tube, Turbo Oil Return	-
42	11-31031	1	Gasket	-
43	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
44	18-31201	1	Hose, 5/8" I.D. x 3"	-
45	19-01010	2	Hose Clamp #10 Extended Band S/S	-
46	3440712601	1	Male Elbow 90° Steel, 3/8 BSPT x 5/8 Hose Barb	-
47	21-00077	1	Female Adapter, Steel 1/8 NPT x M22 x 1.5	-
48	15-09501	1	Sealing Washer, Copper M22	-
49	21-72044	1	Street Elbow 90° Brass 1/8 NPT	-
50	21-10001	3	Drain Cock, Brass 1/8 NPT	-
51	13-05001	4	Stud, M10 x 1.5 x 25 mm (37 mm LOA) Grade 8.8	-
52	21-49502	1	Spacer	-
53	22-40939	1	Temperature Switch (see electrical system)	-

K26 Turbocharger Assembly

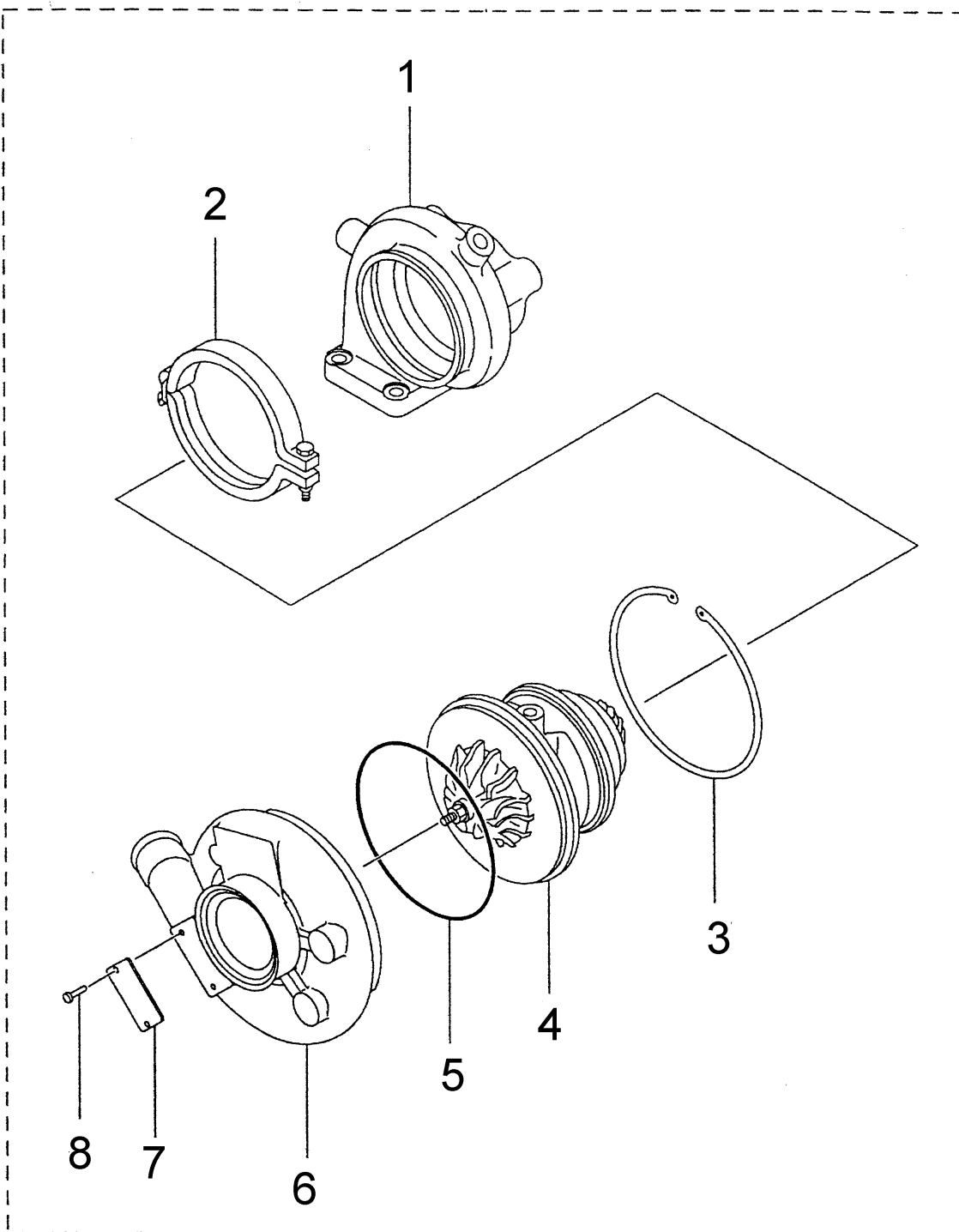


K26 Turbocharger Assembly

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	30-39400	1	Turbocharger Assembly (ID Tag #5326 988 60 86 - includes all keys)	-
•	30-31430	1	Repair Kit (includes keys 4,5, 11-17, 19-22, 24, & 28)	-
1	30-31662	1	Spacer Sleeve	-
2	30-39401	1	Turbine Housing	-
3	30-31433	1	Bearing Housing	-
4	30-31434	2	Bushing	-
5	30-31435	4	Snap Ring	-
6	30-31436	1	Heat Shield	-
7	30-31437	1	Shaft & Turbine Wheel Assembly	-
8	30-31438	1	Thrust Ring	-
9	30-31439	1	Flinger Sleeve	-
10	30-39403	1	Compressor Wheel	-
11	30-31441	4	Piston Ring	-
12	30-31442	1	Thrust Bearing	-
13	30-31443	1	Oil Deflector	-
14	30-31444	1	Backing Plate	-
15	30-31445	4	Capscrew, Socket & Head, M6 x 1.0 x 16 mm Grade 10.9	-
16	30-39611	1	Lock Nut, M7 x 1 (Left hand)	-
17	30-31447	1	O-ring	-
18	30-39402	1	Compressor Housing	-
19	30-31448	3	Clamp Plate (compressor side)	-
20	30-39614	6	Capscrew, Socket Head M6 x 1.0 x 14 mm	-
21	30-31450	3	Clamp Plate (turbine side)	-
22	14-01131	6	Hex Nut M6 x 1.0	-
23	30-31452	6	Stud, M6 x 1.0	-
24	30-31453	4	Flat Washer, M6	-
25	13-00814	4	Stud, M10 x 1.5 x 30 mm	-
26	30-31454	1	Name Plate	-
27	30-31455	2	Rivet	-
28	30-31428	1	O-ring	-
29	30-31631	2	Plug, Socket Head, Steel M22 x 1.5	-

GROUP 2 – INTAKE & EXHAUST SYSTEM

TURBOCHARGER (MODEL TD04HL)



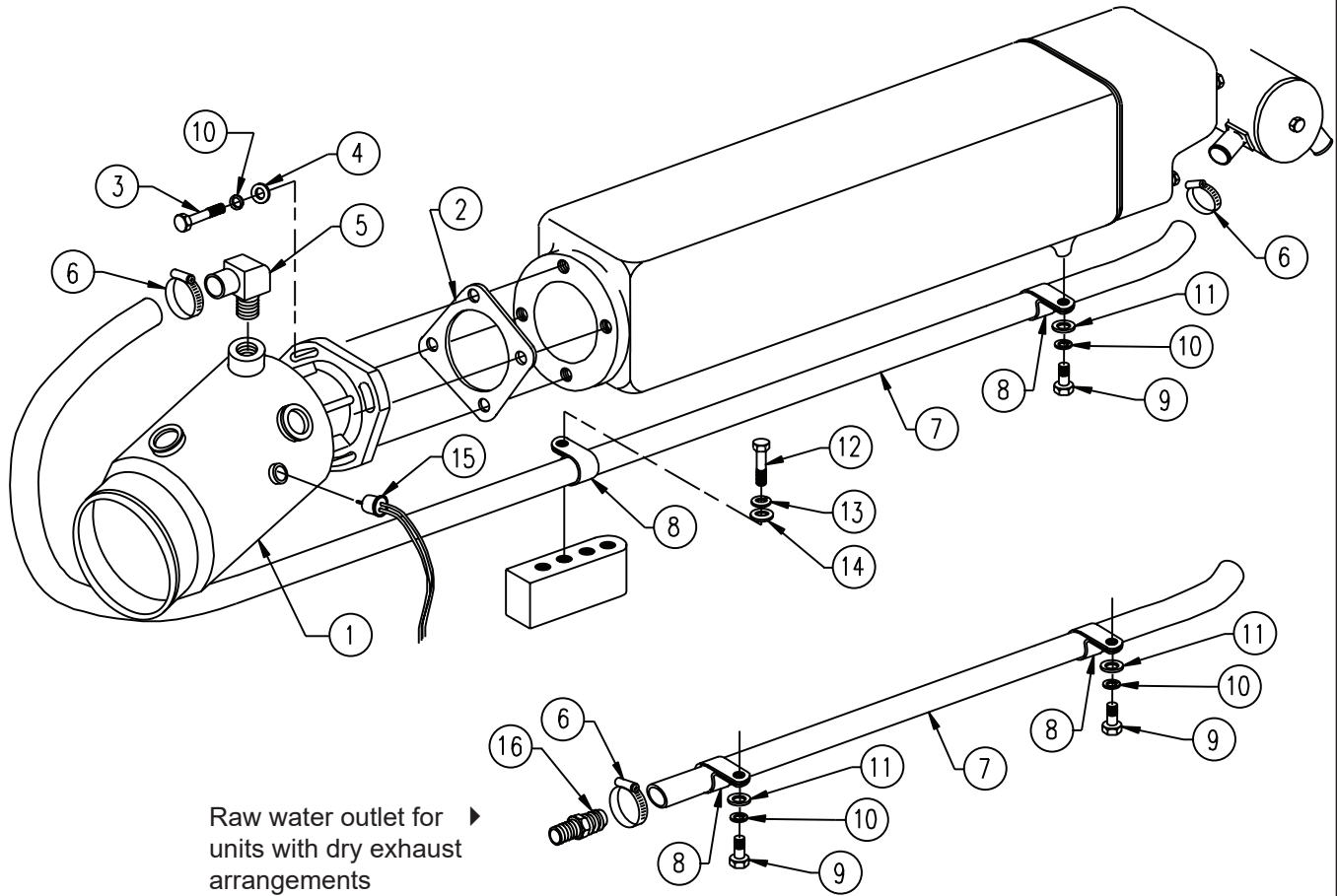
TURBOCHARGER (MODEL TD04HL)

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	4918902410	1	Turbocharger TD04HL (Includes all keys)	-
1		1	Turbine Housing *	-
2	4918314000	1	Coupling Assembly	-
3	4916023100	1	Snap Ring	-
4	4918908110	1	Cartridge Assembly	-
5	4917722100	1	O-Ring	-
6	4918953291	1	Comperssor Cover	-
7		1	Data Plate *	-
8	1166502048	2	Rivet	-
			* Not Available Separately	

GROUP 2 – INTAKE & EXHAUST SYSTEM

Wet Exhaust Elbow

M944W & M30CW

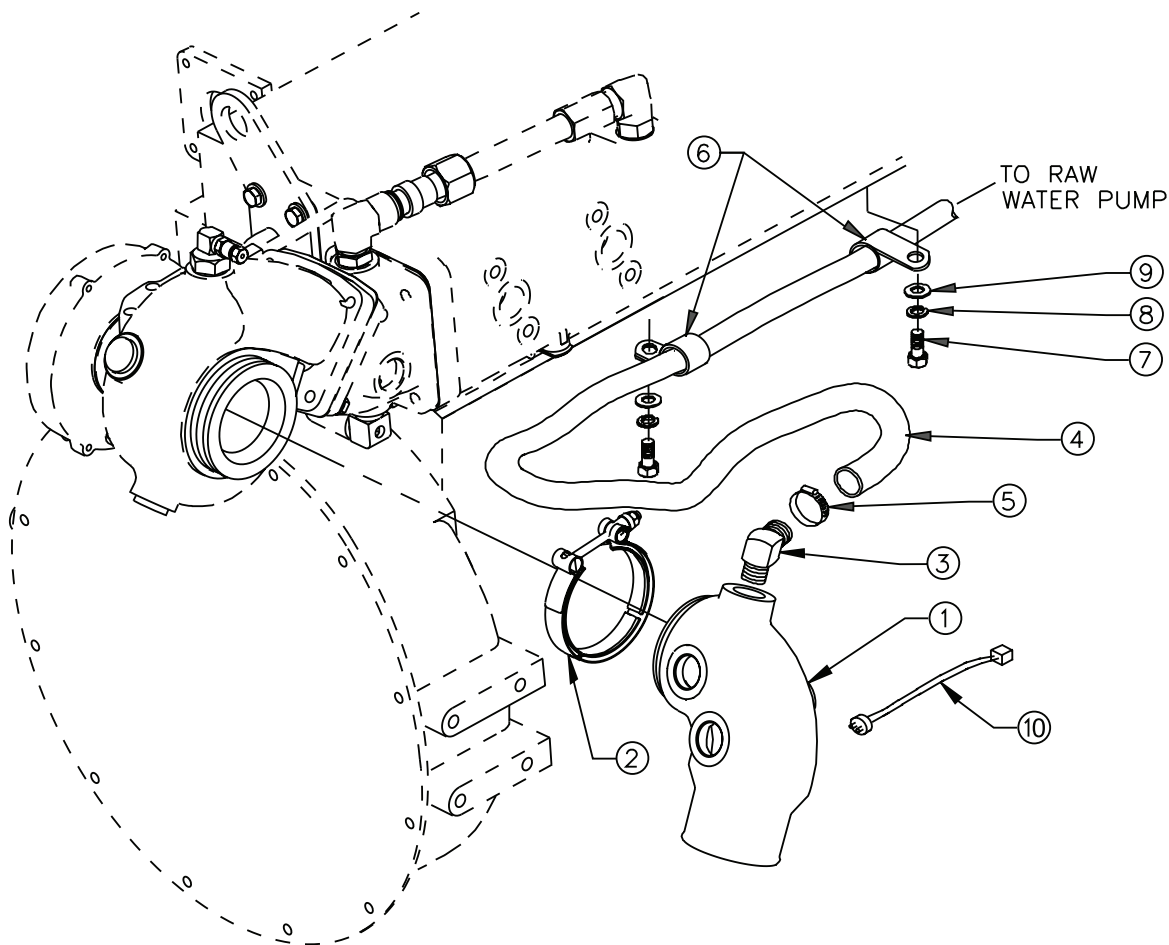


A-11281/ B-8962

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-35400	**	Elbow, Wet Exhaust 3" (Cast Iron)	-
	27-35413	**	Elbow, Wet Exhaust 3" (Cast S/S)	-
2	11-35401	1	Gasket, Exhaust Elbow Mtg.	-
3	12-09753	4	Capscrew, Hex Head M8 x 1.25 x 30 mm S/S	-
4	15-00706	4	Flat Washer, M8 S/S	-
5	21-31902	1	Male Elbow 90°, Brass 1/2 NPT x 3/4 HB	-
6	19-00010	2	Hose Clamp #10	-
7	18-11204	1	Hose, 3/4" I.D. x 44" Wire Reinforced	-
	18-23100	1	Hose, 3/4" I.D. x 26" Wire Reinforced (for dry exhaust elbow)	-
8	19-71031	**	Adelle Clamp 1-1/4" I.D. x 1/2" Stud	-
9	12-09751	**	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
10	15-00705	**	Lock Washer, Helical M8 S/S	-
11	15-70004	**	Snubbing Washer	-
12	12-00821	1	Capscrew, Hex Head M10 x 1.5 x 20 mm S/S	-
13	15-00808	1	Lock Washer M10 S/S	-
14	15-09805	1	Flat Washer M10 S/S	-
15	22-42070	1	Switch, High Exhaust Temperature	-
16	21-13102	1	Union, 3/4" Hose Barb (for dry exhaust elbow)	-
			**As required	

Wet Exhaust Elbow

M944T



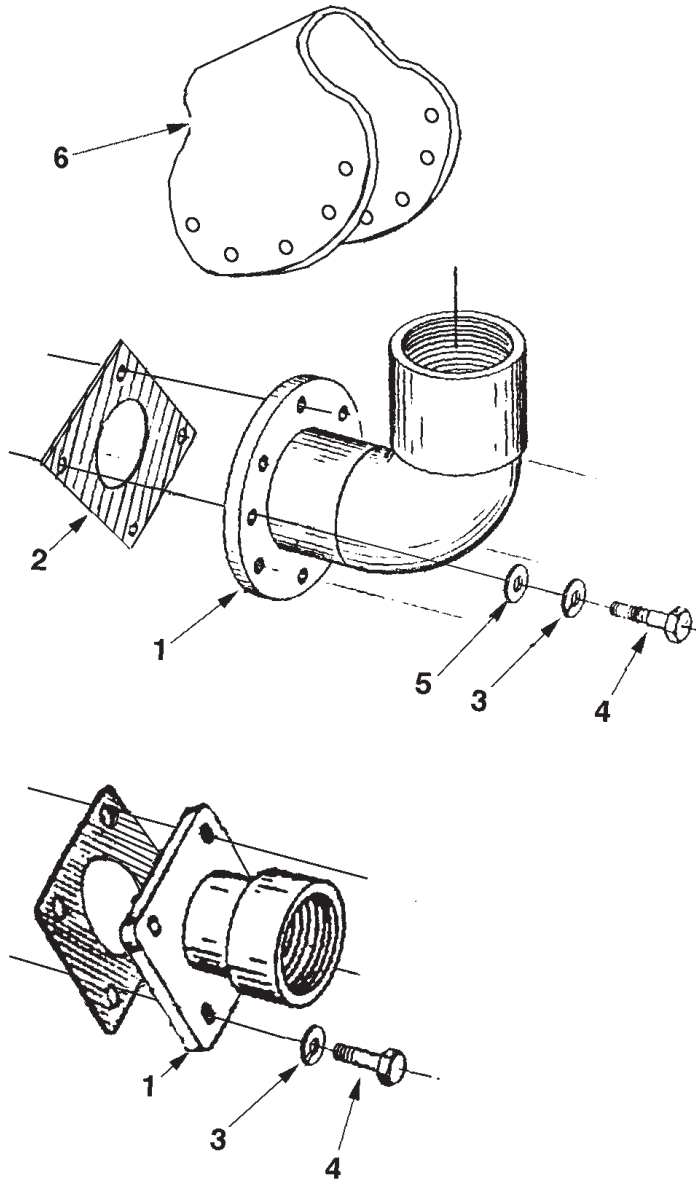
A-12074/ A-12178

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-31237	**	Wet Exhaust Elbow 3" (Cast Iron)	-
	27-31247	**	Wet Exhaust Elbow 3" (Cast S/S)	-
2	19-31401	1	V-clamp	-
3	21-12809	1	Male Elbow, 90° Brass 3/4 NPT x 3/4 HB	-
4	18-15406	1	Hose, 3/4" I.D. x 35", Wire Reinforced	-
5	19-00010	2	Hose Clamp, #10	-
6	19-71031	2	Adelle Clamp, 1-1/4" I.D. x 1/2" Stud	-
7	12-09751	2	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
8	15-00705	2	Lock Washer, Helical M8 S/S	-
9	15-70004	2	Snubbing Washer, S/S	-
10	22-42070	1	High Exhaust Temperature Switch (see Electrical System)	-
			**As required	

GROUP 2 – INTAKE & EXHAUST SYSTEM

Dry Exhaust Elbow

M944W & M30CW

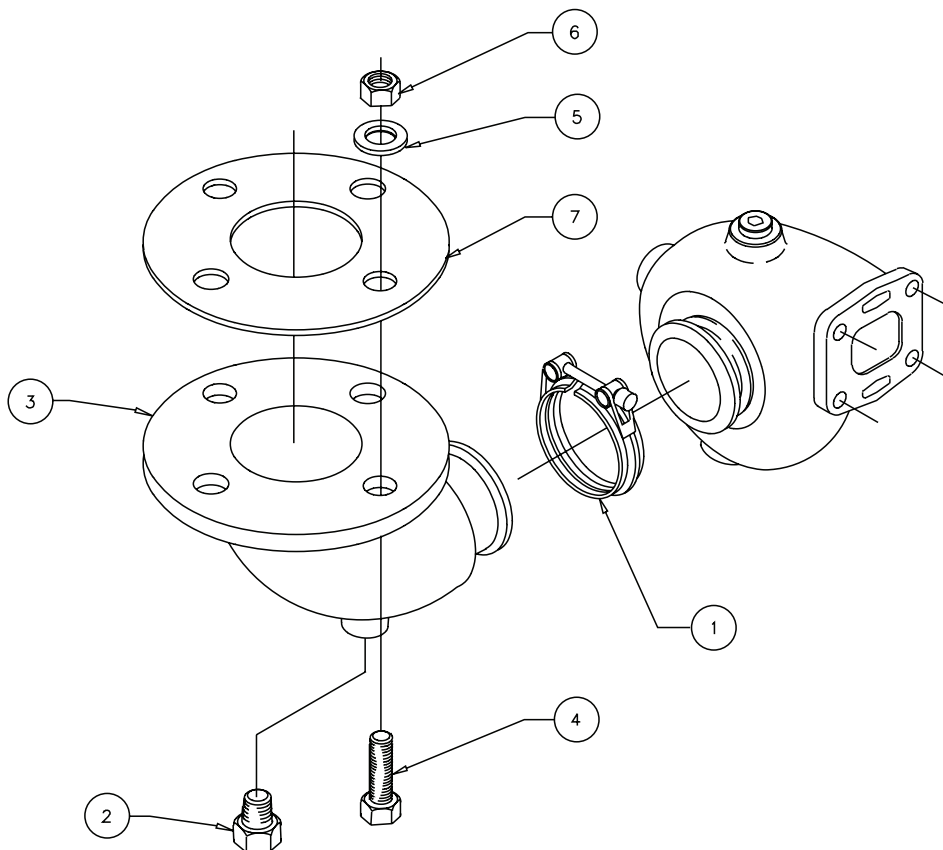


A-4267/ B-3632A

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-35405	1	Dry Exhaust Elbow 2" NPT Female x 5" Height	-
	31-35401	1	Dry Exhaust Adapter 2" NPT Female	-
	27-31233	1	Dry Exhaust Elbow 2" x 11" 2" Flange (Sound Enclosure Applications)	-
2	11-35401	1	Exhaust Elbow Gasket	-
3	15-00705	4	Lock Washer, Helical M8 S/S	-
4	12-00776	4	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
5	15-00706	4	Flat Washer M8 S/S	-
6	00-35409	1	Lagging (for exhaust elbow 22-35405)	-
	00-31201	1	Lagging (for exhaust elbow 27-31233)	-
	00-35405	1	Lagging Collar (for exhaust elbow 27-31233)	-

Dry Exhaust Elbow

M944T & M38CR2

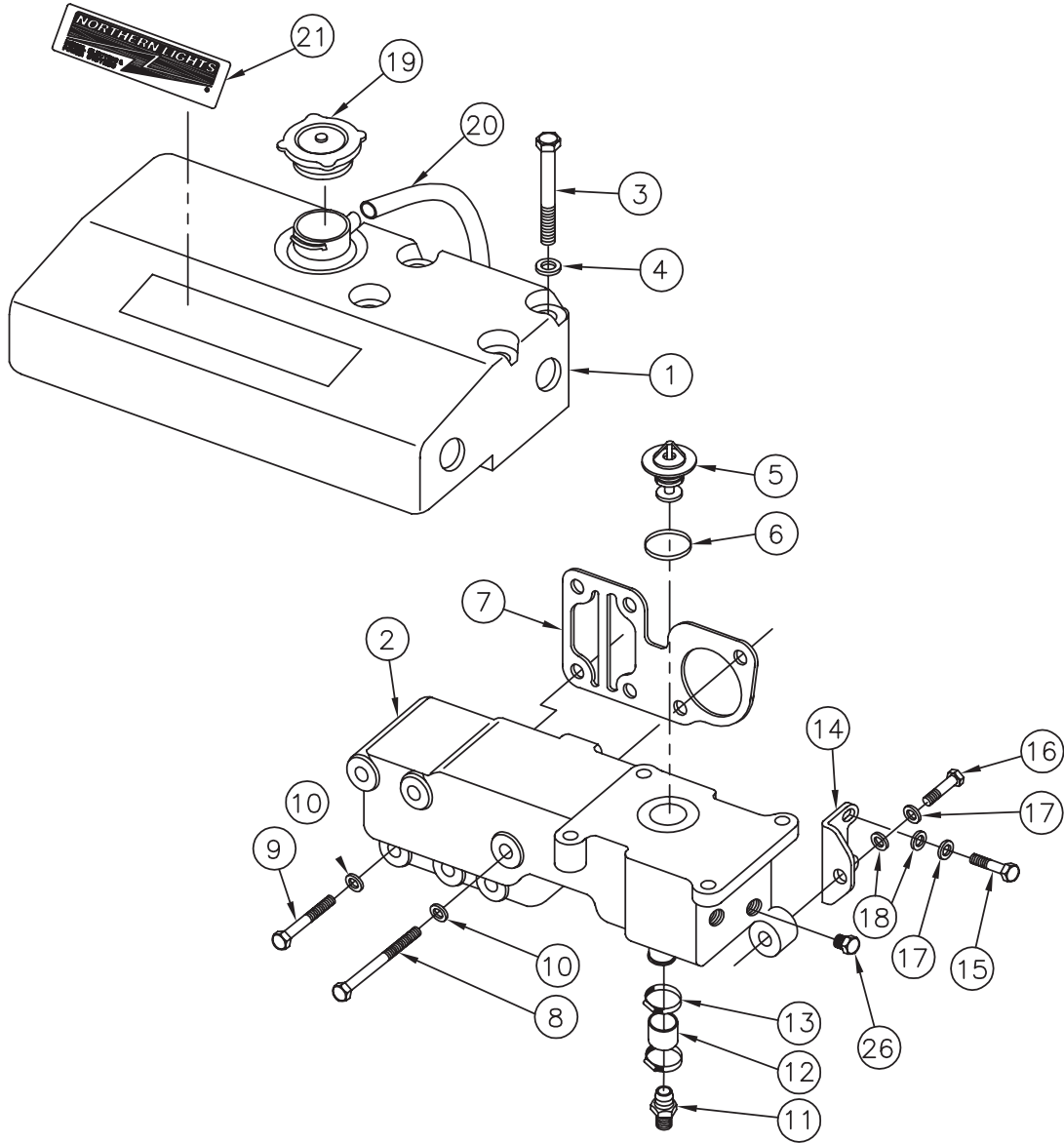


A-912/ B-9447

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	19-31401	1	V-clamp	-
2	21-31002	1	Plug, Square Head Brass 3/8 NPT (solid only)	-
3	27-31243	1	Elbow, Dry Exhaust 3" x 8.78"	-
	27-31415	1	Elbow, Dry Exhaust 3" x 4-7/8" (M38CR2 only)	-
4	12-00914	4	Capscrew, Hex Head 5/8-11 x 1-3/4"	-
5	15-00902	4	Lock Washer, Helical 5/8"	-
6	14-00911	4	Hex Nut 5/8-11	-
7	11-31094	1	Gasket	-
8	00-31202	1	Lagging (for elbow 27-31243 - not shown)	-

GROUP 3 – COOLING SYSTEM

Expansion Tank and Thermostat Housing

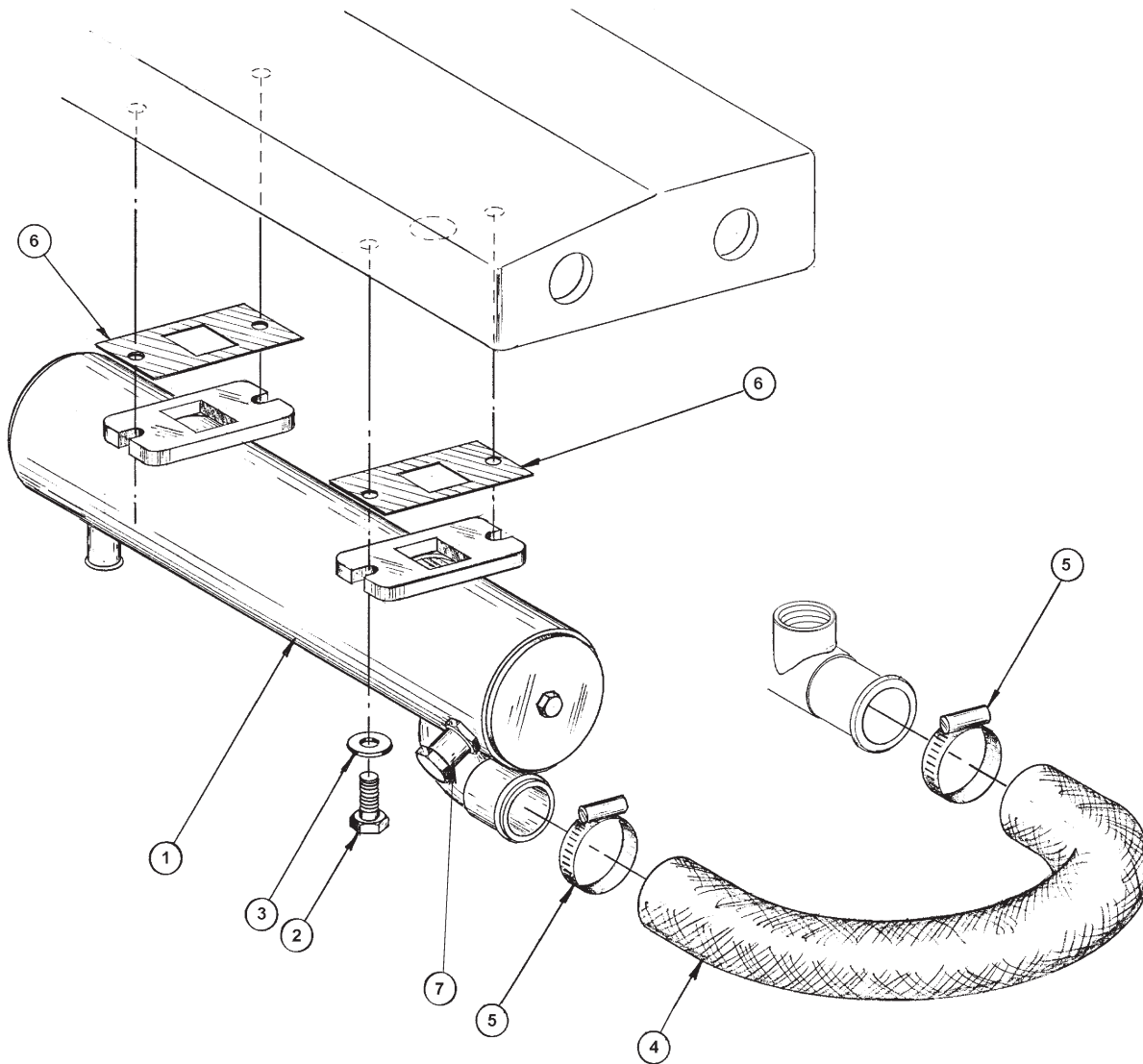


A-11220/ B-8970

Expansion Tank and Thermostat Housing

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-12205	1	Expansion Tank	-
2	10-11202	1	Thermostat Housing (formerly #10-11201)	-
3	12-09819	4	Capscrew, Hex Head M10 x 1.5 x 75 mm S/S	-
4	15-09805	4	Flat Washer M10 S/S	-
5	35-11000	1	Thermostat 180°F/ 82°C	-
6	11-10015	1	Thermostat Seal Ring	-
7	11-11201	1	Gasket, Thermostat Housing	-
8	12-09710	3	Capscrew, Hex Head M8 x 1.25 x 90 mm S/S	-
9	12-09715	3	Capscrew, Hex Head M8 x 1.25 x 50 mm S/S	-
10	15-00706	6	Flat Washer M8 S/S	-
11	21-11201	1	Male Connector, Brass 3/8 NPT x 3/4 HB*	-
	21-17304	1	Male Connector, Brass 3/8 NPT x 5/8 HB**	-
12	18-11202	1	Hose 3/4" I.D. x 1- 3/4" Silicone*	-
	18-11205	1	Hose 5/8" ID x 1-3/4" Silicone**	-
13	19-01010	2	Hose Clamp #10 Extended Band S/S*	-
	19-01008	2	Hose Clamp #8 Extended Band S/S**	-
14	23-11201	1	Bracket, Thermostat Housing Support	-
15	12-09708	2	Capscrew, Hex Head M8 x 1.25 x 45 mm	-
16	12-09712	1	Capscrew, Hex Head M8 x 1.25 x 25 mm S/S	-
17	15-00705	3	Lock Washer, Helical M8 S/S	-
18	15-00706	3	Flat Washer M8 S/S	-
19	21-12013	1	Filler Cap 7 PSI S/S	-
20	18-00130	1	Hose, 5/16" ID x 30" Polyvinyl	-
21	00-00006	1	Nameplate, "Northern Lights"	-
	00-71000	1	Nameplate, "Lugger"	-
22	20-17301	1	Cap 3/8" ID Rubber	-
23	19-11206	1	Hose Clamp #6/ 8 Type "M" S/S } see Coolant Pump	-
24	21-51901	2	Plug, Socket Head Brass 1/4 NPT (not shown)	-
25	21-00012	2	Plug, Hex Head Brass 1/8 NPT (not shown)	-
26	21-31003	2	Plug, Hex Head Brass 3/8 NPT	-
			*Used with Housing # 10-11201	
			**Used with Housing #10-11202	

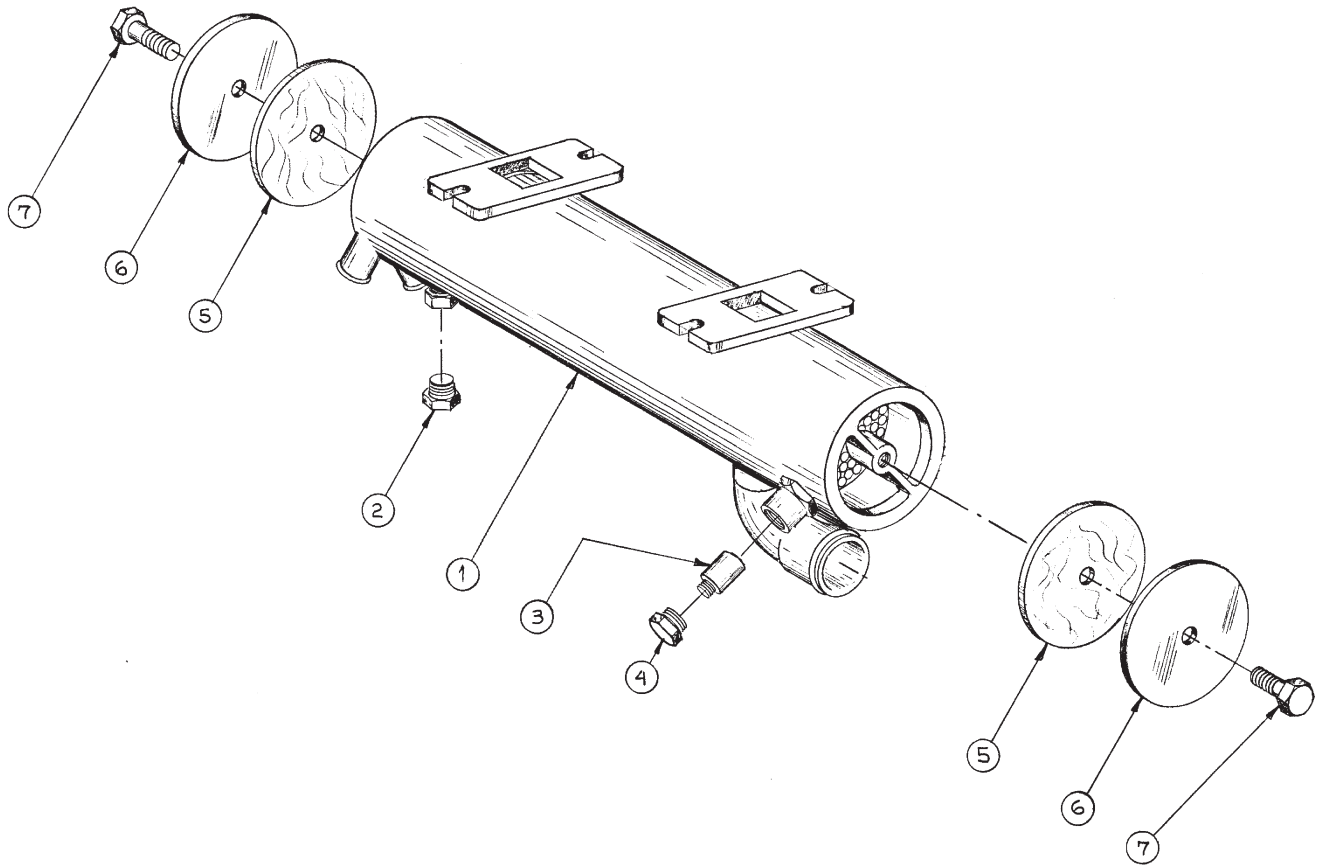
Heat Exchanger & Mounting



A-11221/ C-6124

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	20-11202	1	Heat Exchanger Assembly (see parts detail)	-
2	12-09212	4	Capscrew, Hex Head 5/16- 18 x 1" S/S	-
3	15-11000	4	Flat Washer 5/16" S/S	-
4	18-11201	1	Hose, Heat Exchanger Outlet 1-1/2" I.D.	-
5	19-00024	2	Hose Clamp #24	-
6	11-12203	2	Gasket	-
7	00-10003	1	Label "Zinc"	-

Heat Exchanger Assembly



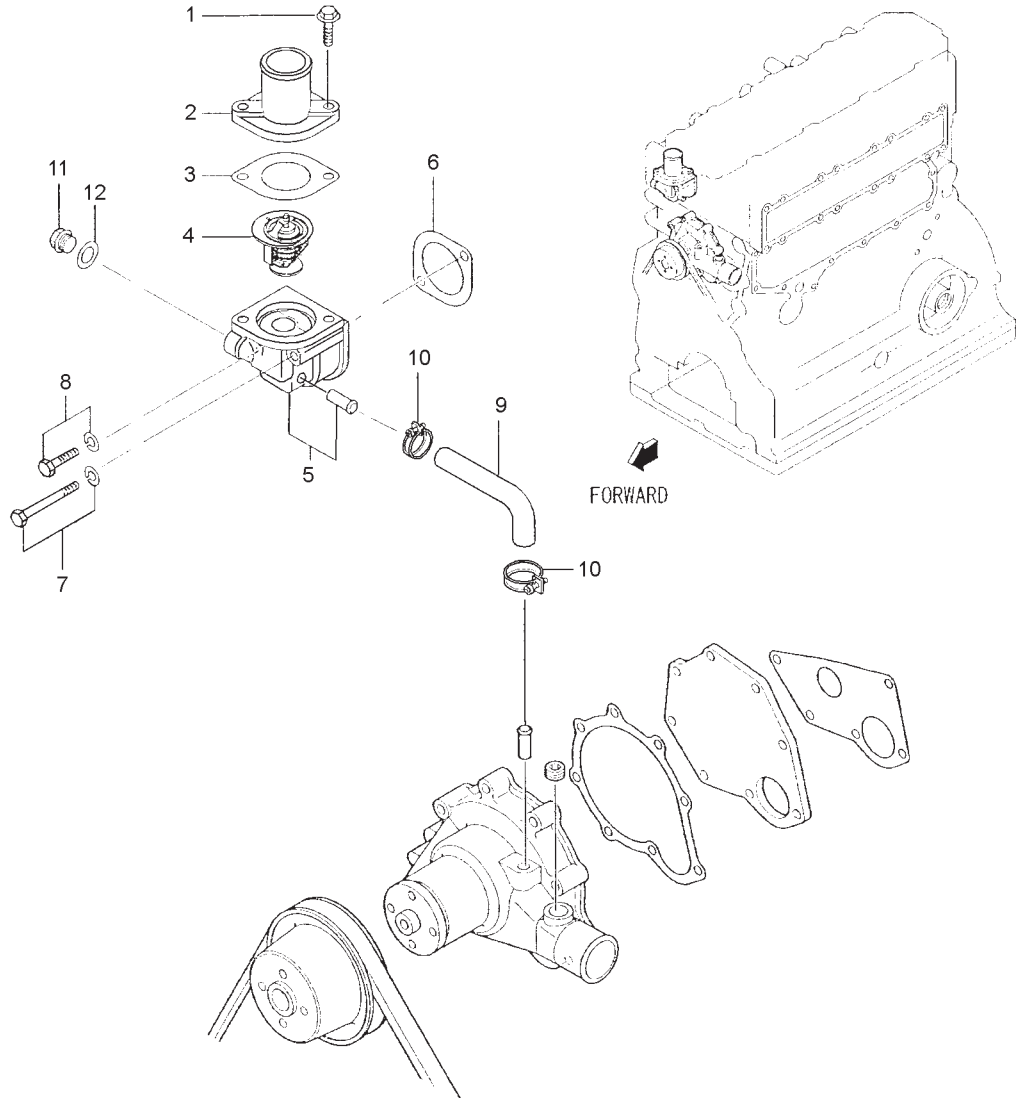
/ C-5846

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	20-11202	1	Heat Exchanger Assembly, CU-NI (includes all keys)	-
1	20-11201	1	Heat Exchanger	-
2	21-31624	1	Plug, Hex Head Brass 1/4 NPT	-
3	21-12010	1	Zinc Anode 11/32" O.D. x 1-3/4"	-
4	21-12000	1	Plug, Hex Head Brass 1/4 NPT x 5/16- 18	-
5	20-12012	2	Gasket, Rubber 3"	-
6	28-12201	2	End Plate 3" O.D. x 1/8"	-
7	12-11002	2	Capscrew, Hex Head 3/8- 16 x 3/4" S/S	-

GROUP 3 – COOLING SYSTEM

Thermostat Housing

NL944D2 & NL944T2

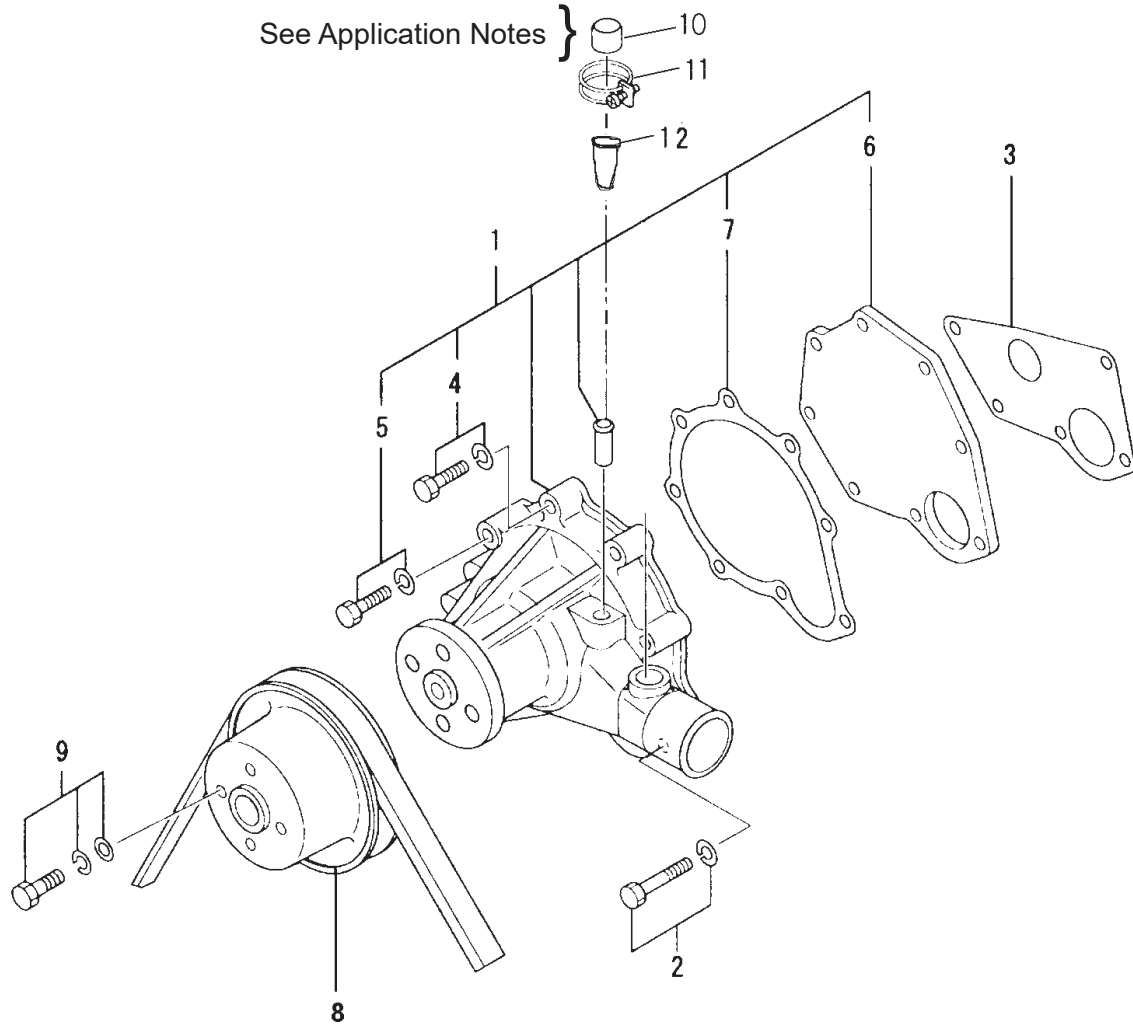


32AB46080

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	MF140227	2	Flange Bolt	-
2	32A4601101	1	Thermostat Cover	-
3	32A4601400	1	Gasket	-
4	32A4602100	1	Thermostat	-
5	32A4610030	1	Thermostat Housing	-
6	3444605300	1	Gasket	-
7	MF241268	1	Bolt with washer	-
8	MF240062	1	Bolt with washer	-
9	32A4600900	1	Bypass Hose	-
10	32A4603100	2	Hose Clamp	-
11	MM316248	**	Plug M16 x 1.5	-
12	3033625901	2	Gasket	-
			** As Required	

Coolant Pump

L-M944, M30CW, and NL944D2



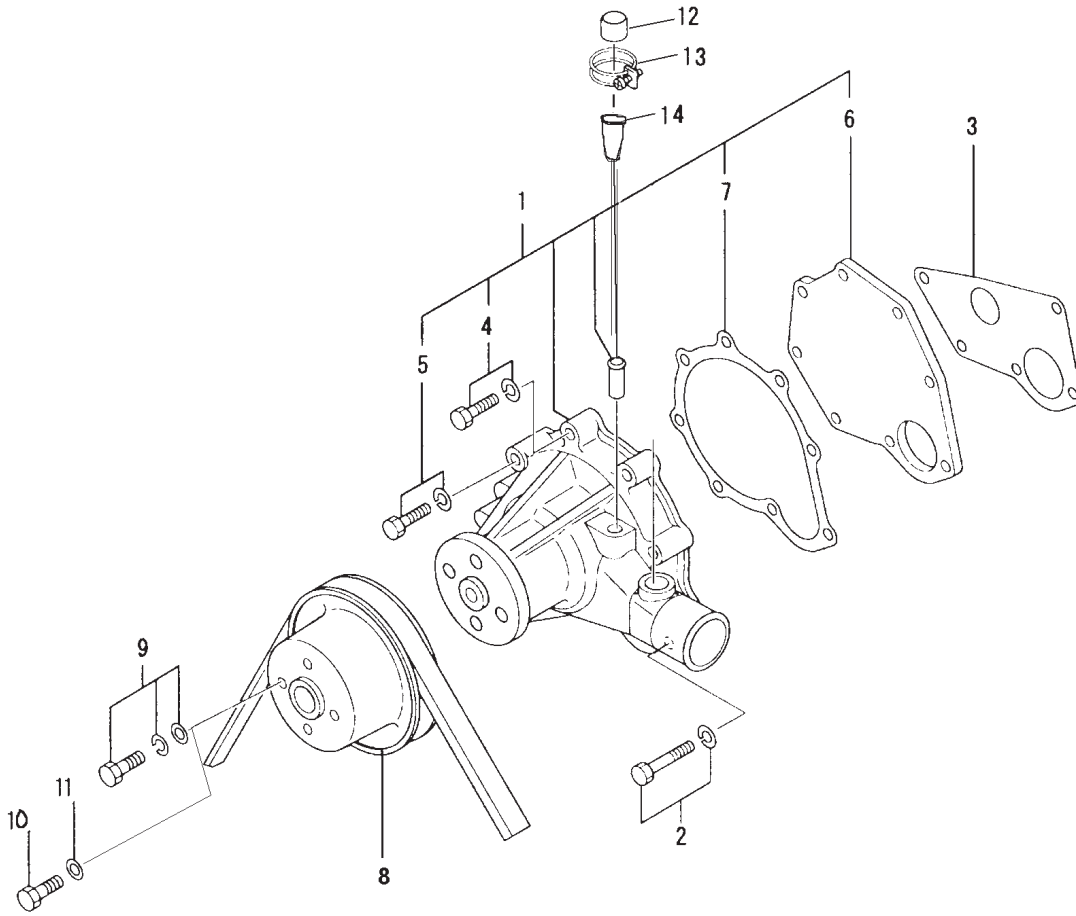
32B4511

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A4500023	1	Coolant Pump Assembly (includes keys 4-7) NL944D2	-
	25-11217	1	Coolant Pump Assembly (includes keys 4-7+10-12) M30CW	-
2	MF241262	5	Bolt with Washer	-
3	32A4500500	1	Gasket	-
4	MF140227	2	Flange Bolt	-
5	MF140231	1	Flange Bolt	-
6	32A4500300	1	Cover	-
7	32A4500400	1	Gasket	-
8	32A4502100	1	Pulley	-
9	MF243648	4	Bolt with Washer	-
10	21-21201-1	1	Cap	-
11	19-50115	1	Hose Clamp { Not Required with pump 25-11215	-
12	21-11204	1	Taper Plug 3/8" x 1/4" x 3/4" LOA	-

GROUP 3 – COOLING SYSTEM

Coolant Pump

M944T, M38CR2, and NL944T2

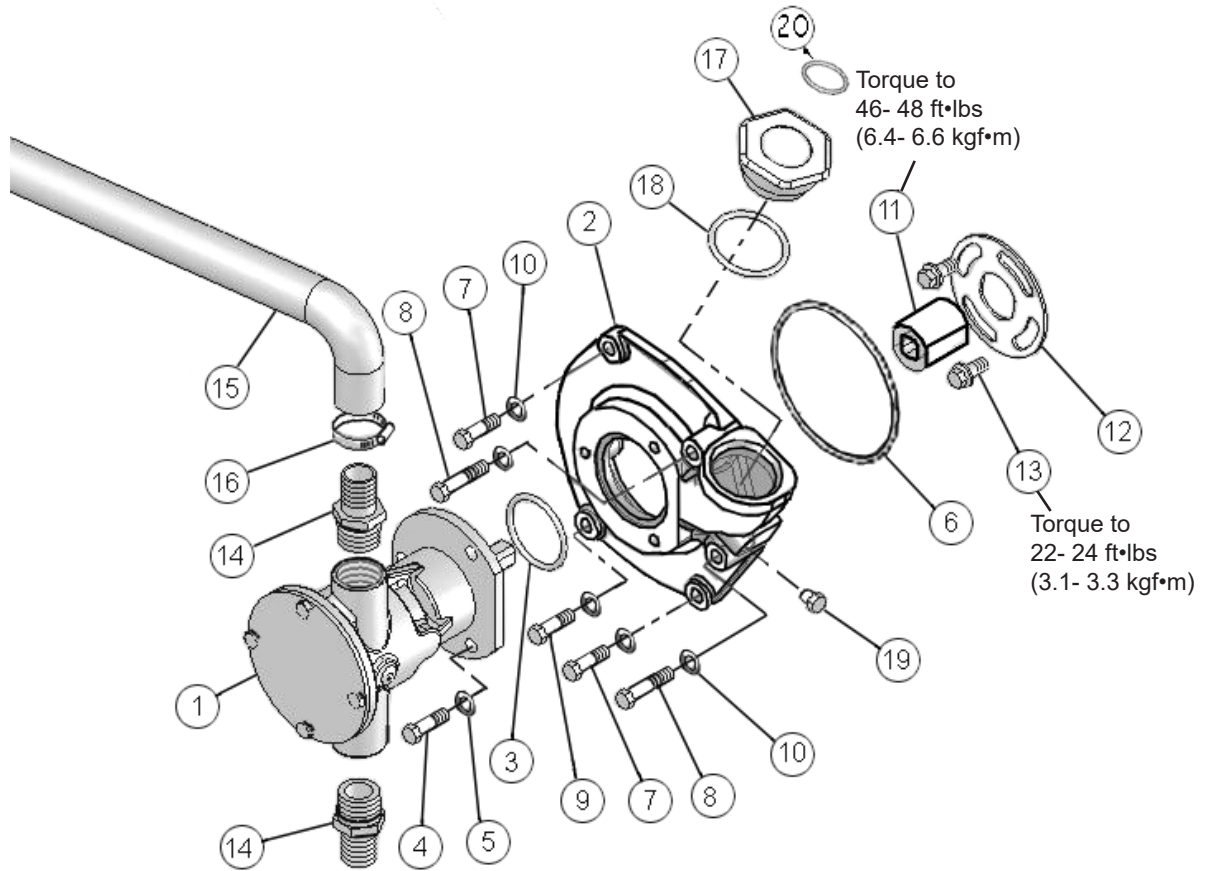


32B4511

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32B4510032	1	Coolant Pump Assembly (includes keys 4-7)	-
	25-11218	1	Coolant Pump Assembly (includes keys 2-7 & 12-14)	-
2	MF241262	5	Bolt with Washer	-
3	32A4510500	1	Gasket	-
4	F180508025	2	Bolt with Washer	-
5	F180508035	1	Bolt with Washer	-
6	32A4500300	1	Cover	-
7	32A4510400	1	Gasket	-
8	32B4502101	1	Pulley	-
9	MF241254	4	Bolt with Washer (NL944D3, NL944T3)	-
10	12-00776	4	Capscrew, Hex Head M8 x 1.25 - 20 S/S	-
11	15-00705	4	Capscrew, Hex Head M8 Lockwasher S/S	-
12	21-21201-1	1	Cap	-
13	19-50115	1	Clamp	-
14	21-11204	1	Taper Plug 3/8" x 1/4" x 3/4" LOA	-

Raw Water Pump & Mounting

L944D - M944



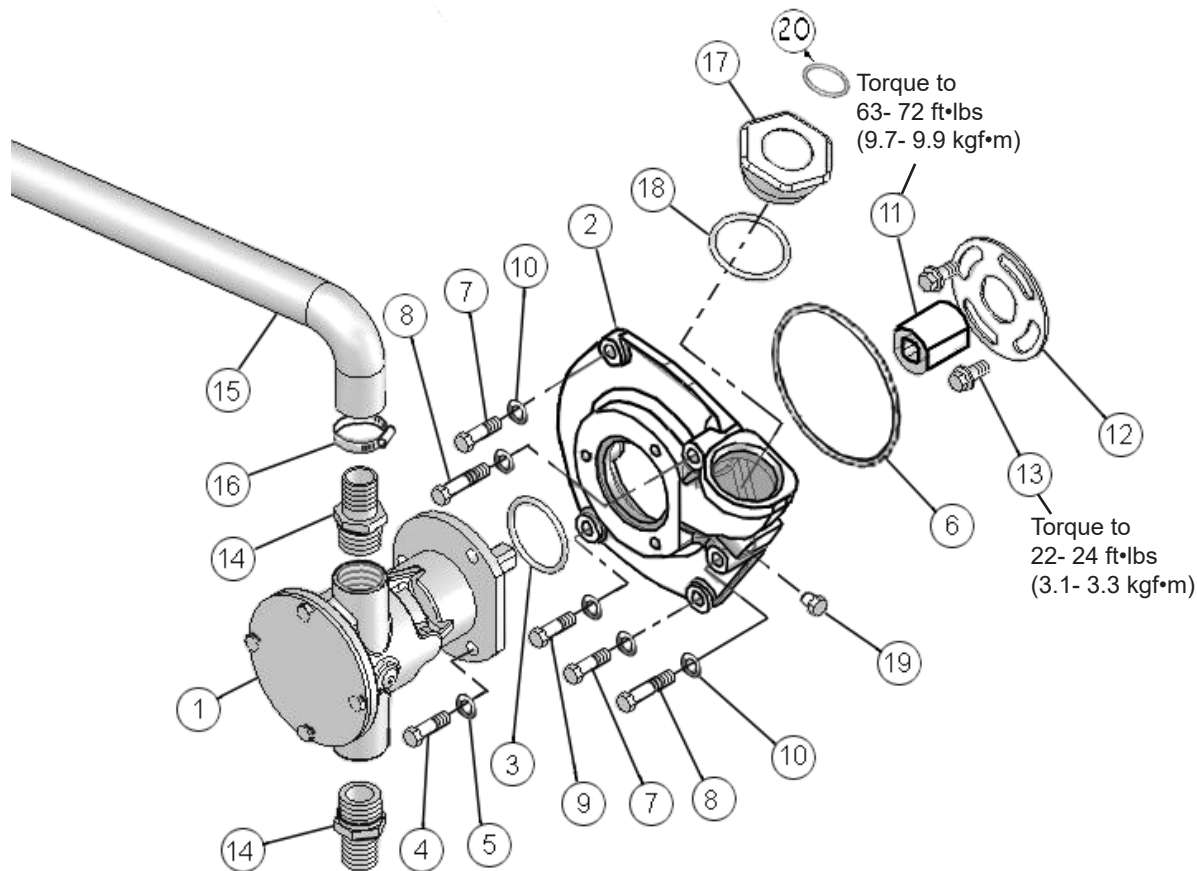
A-11222/ B-9951

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	25-11202	1	Raw Water Pump (see parts detail)	-
2	31-11201	1	Adapter, Raw Water Pump Mtg.	-
3	25-19517	1	O-ring	-
4	12-00776	3	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
5	15-00705	3	Lock Washer, Helical M8 S/S	-
6	16-11201	1	O-ring	-
7	12-09801	2	Capscrew, Hex Head M8 x 1.25 x 70 mm S/S	-
8	12-09710	2	Capscrew, Hex Head M8 x 1.25 x 90 mm S/S	-
9	12-09719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm S/S	-
10	15-00706	4	Flat Washer M8 S/S	-
11	14-01201	1	Nut, Raw Water Pump Drive	-
12	28-11201	1	Plate, Drive Nut Retaining	-
13	12-80709	2	Capscrew, Hex Head Flanged M8 x 1.25 x 12 mm	-
14	21-11902	2	Male Connector Brass 3/4 NPT x 3/4 HB	-
15	18-11203	1	Hose, Raw Water Pump Outlet	-
16	19-00010	2	Hose Clamp #10	-
17	198436010	1	Cap, Oil Fill	-
18	052300400	1	O-ring	-
19	21-00012	1	Plug, Hex Head Brass 1/8 NPT	-

GROUP 3 – COOLING SYSTEM

Raw Water Pump & Mounting

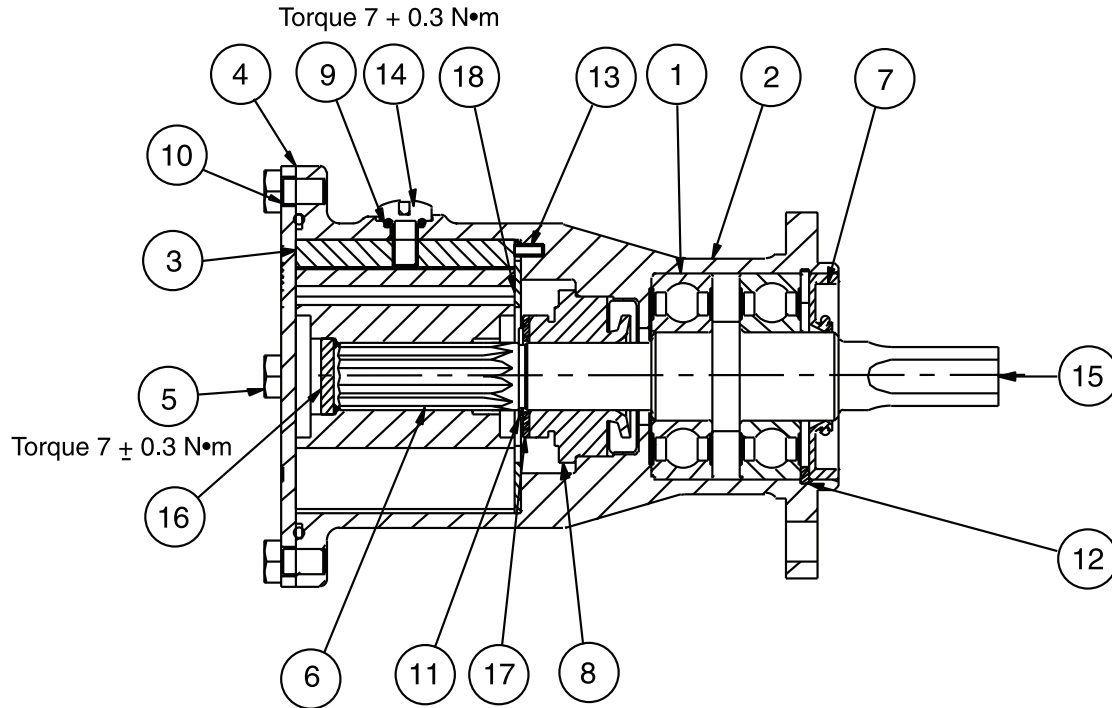
M944T & M38CR2



A-11945 / B-9952

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	25-11202	1	Raw Water Pump (see parts detail)	-
2	31-11202	1	Adapter, Raw Water Pump Mtg.	-
3	25-19517	1	O-ring	-
4	12-00776	3	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
5	15-00705	3	Lock Washer, Helical M8 S/S	-
6	16-11201	1	O-ring	-
7	12-09801	2	Capscrew, Hex Head M8 x 1.25 x 70 mm S/S	-
8	12-09710	2	Capscrew, Hex Head M8 x 1.25 x 90 mm S/S	-
9	12-09719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm S/S	-
10	15-00706	4	Flat Washer M8 S/S	-
11	14-01202	1	Nut, Raw Water Pump Drive	-
12	28-11201	1	Plate, Drive Nut Retaining	-
13	12-80709	2	Capscrew, Hex Head Flanged M8 x 1.25 x 12 mm	-
14	21-11902	2	Male Connector Brass 3/4 NPT x 3/4 HB	-
15	18-11203	1	Hose, Raw Water Pump Outlet	-
16	19-00010	2	Hose Clamp #10	-
17	198436010	1	Cap, Oil Fill	-
18	052300400	1	O-ring	-
19	21-00012	1	Plug, Hex Head Brass 1/8 NPT	-

Raw Water Pump



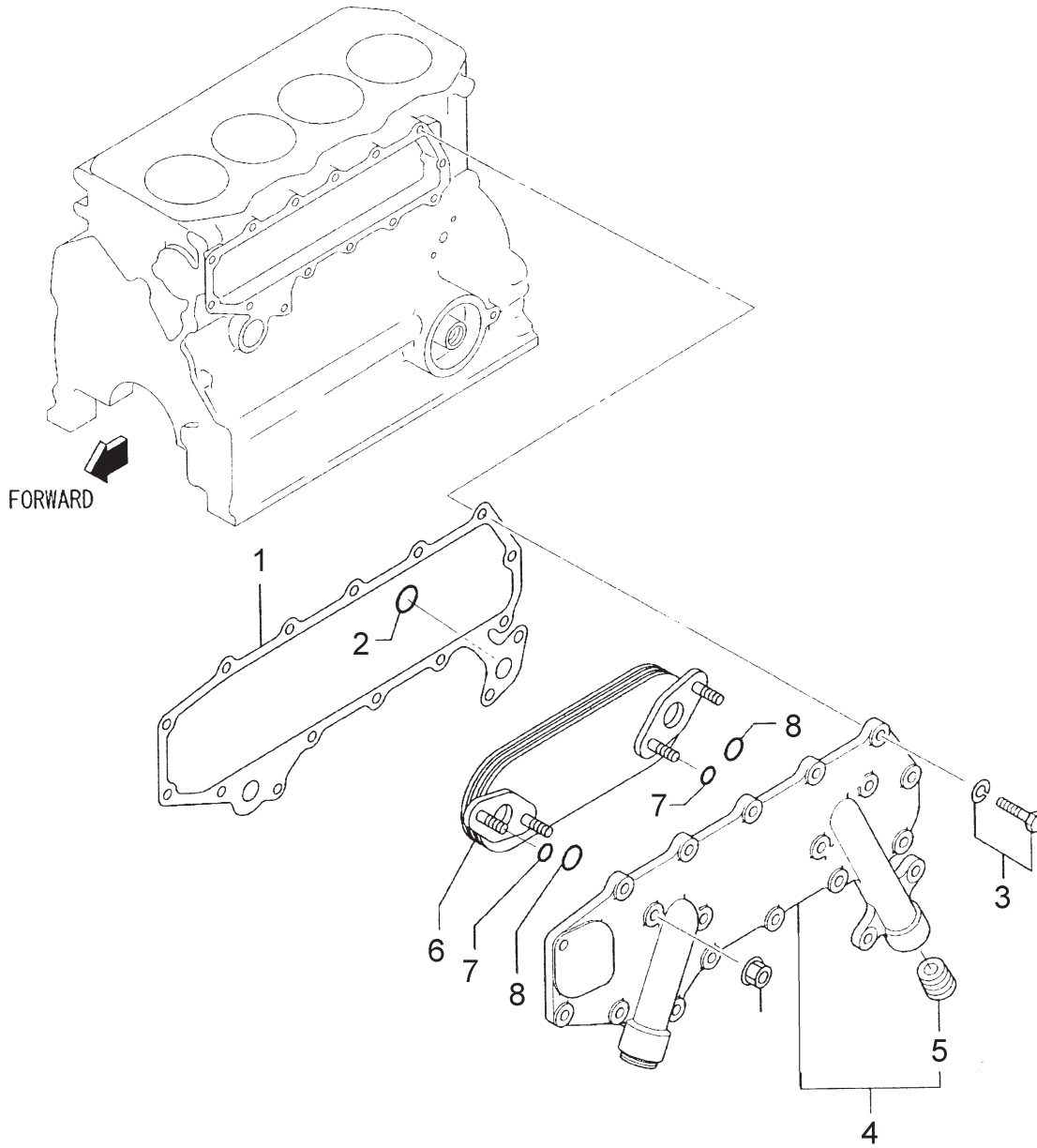
A-11209/ 50550-2001jabsco

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	25-11202	1	Raw Water Pump (includes all keys)	-
•	25-11216	1	Repair Kit (includes keys #1,3,4,6,7,8,9, & 18)	-
1	25-15708	2	Bearing	-
2	25-11203	1	Housing	-
3	25-11204	1	Cam	-
4	25-11206	1	Cover	-
5	25-11207	4	Capscrew Hex Head M6 x 1.0 x 10 mm S/S	-
6	25-11011	1	Impeller (includes keys #10 & #16)	-
7	25-11208	1	Lip Seal	-
8	25-19508	1	Mechanical/ Carbon Seal	-
9	25-11209	1	O-ring	-
10	25-11211	1	O-ring	-
11	25-12069	1	Snap Ring	-
12	25-11212	1	Snap Ring	-
13	25-11213	1	Roll Pin	-
14	25-11214	1	Screw	-
15	25-11201	1	Shaft	-
16	25-12017	1	Spline Seal	-
17	25-19509	1	Support Washer	-
18	25-19511	1	Wear Plate	-

GROUP 3 – COOLING SYSTEM

Oil Cooler

M944T, NL944T2, & M38CR2

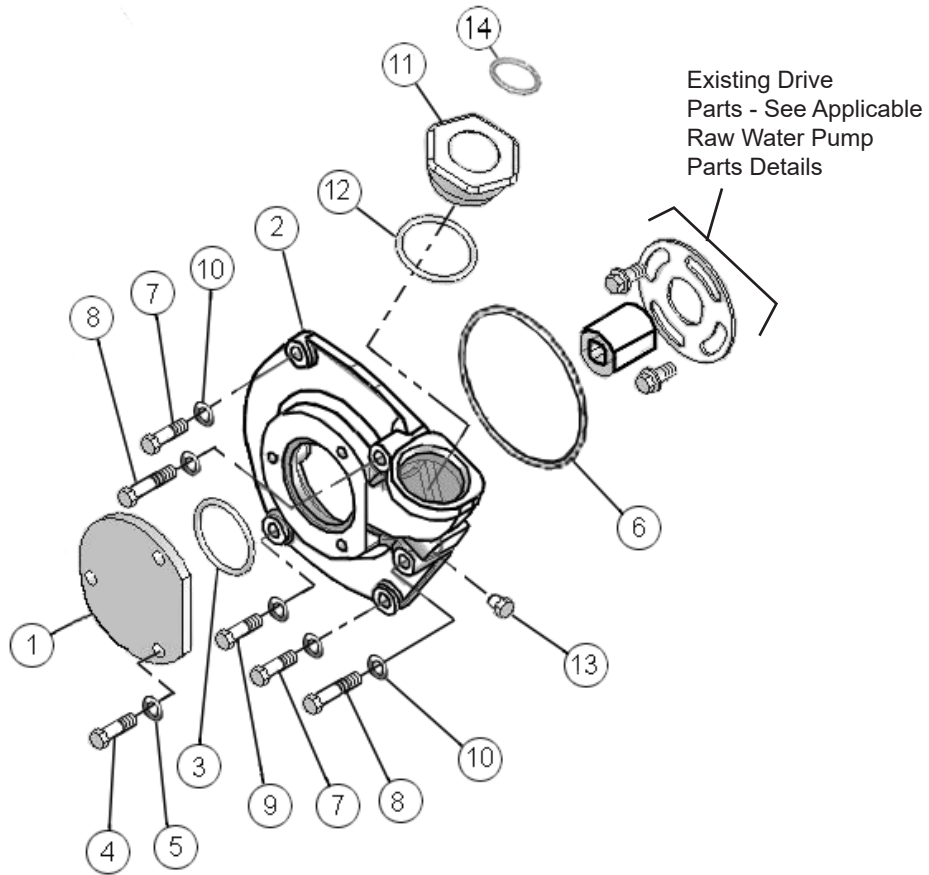


32B3915

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A3904100	1	Gasket, Side Cover	-
2	F315002000	2	O-ring	-
3	MF241254	16	Bolt with washer	-
4	32A3903101	1	Case Assembly	-
5	0482772100	2	Plug, Tapered	-
6	32A3903300	1	Oil Cooler Element	-
7	0550700090	4	O-ring	-
8	0550700280	2	O-ring	-
9	0563330800	4	Nut, Hex Head Flange	-

PUMP ADAPTER PARTS & OIL FILL

L-M944 All with Keel Cooling Conversion

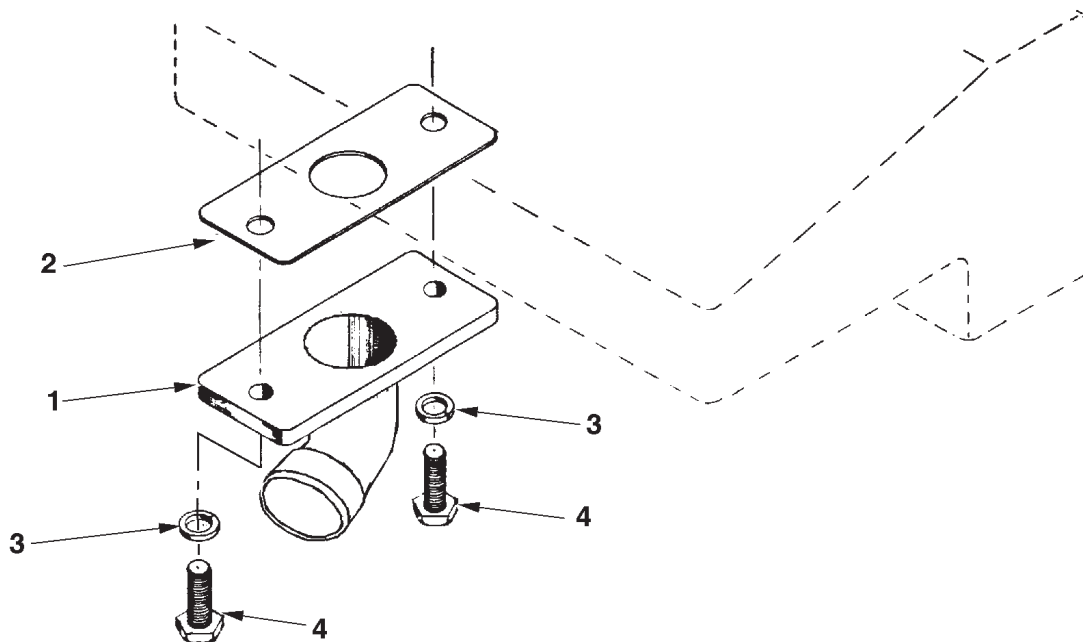


A-11945

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	28-11202	1	Plate	-
2	31-11202	1	Adapter, Raw Water Pump Mtg.	-
3	11-11203	1	Gasket	-
4	12-00776	3	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
5	15-00705	3	Lock Washer, Helical M8 S/S	-
6	16-11201	1	O-ring	-
7	12-09801	2	Capscrew, Hex Head M8 x 1.25 x 70 mm S/S	-
8	12-09710	2	Capscrew, Hex Head M8 x 1.25 x 90 mm S/S	-
9	12-09719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm S/S	-
10	15-00706	4	Flat Washer M8 S/S	-
11	198436010	1	Cap, Oil Fill	-
12	052300400	1	O-ring	-
13	21-00012	1	Plug, Hex Head Brass 1/8 NPT	-
14	00-00035	1	Label - "Oil Fill"	-

GROUP 3 – COOLING SYSTEM

Keel Cooling Outlet

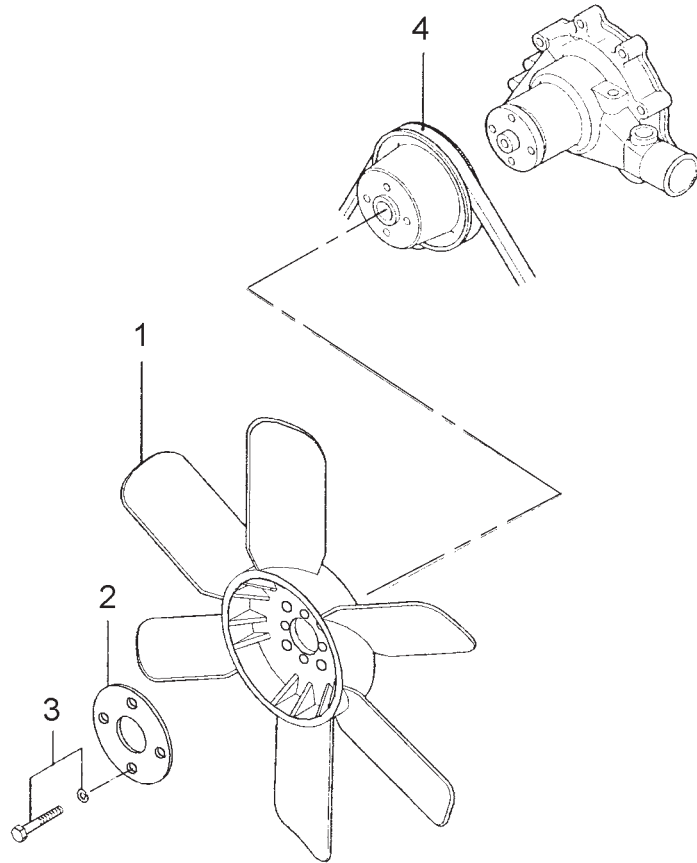


A-4400/ B-1700

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	31-15402	1	Keel Cooling Adapter	-
2	11-12203	1	Gasket	-
3	15-00222	2	Lock Washer, 5/16" S/S	-
4	12-09212	2	Capscrew, 5/16- 18 x 1" S/S	-

Cooling Fan

NL944 All



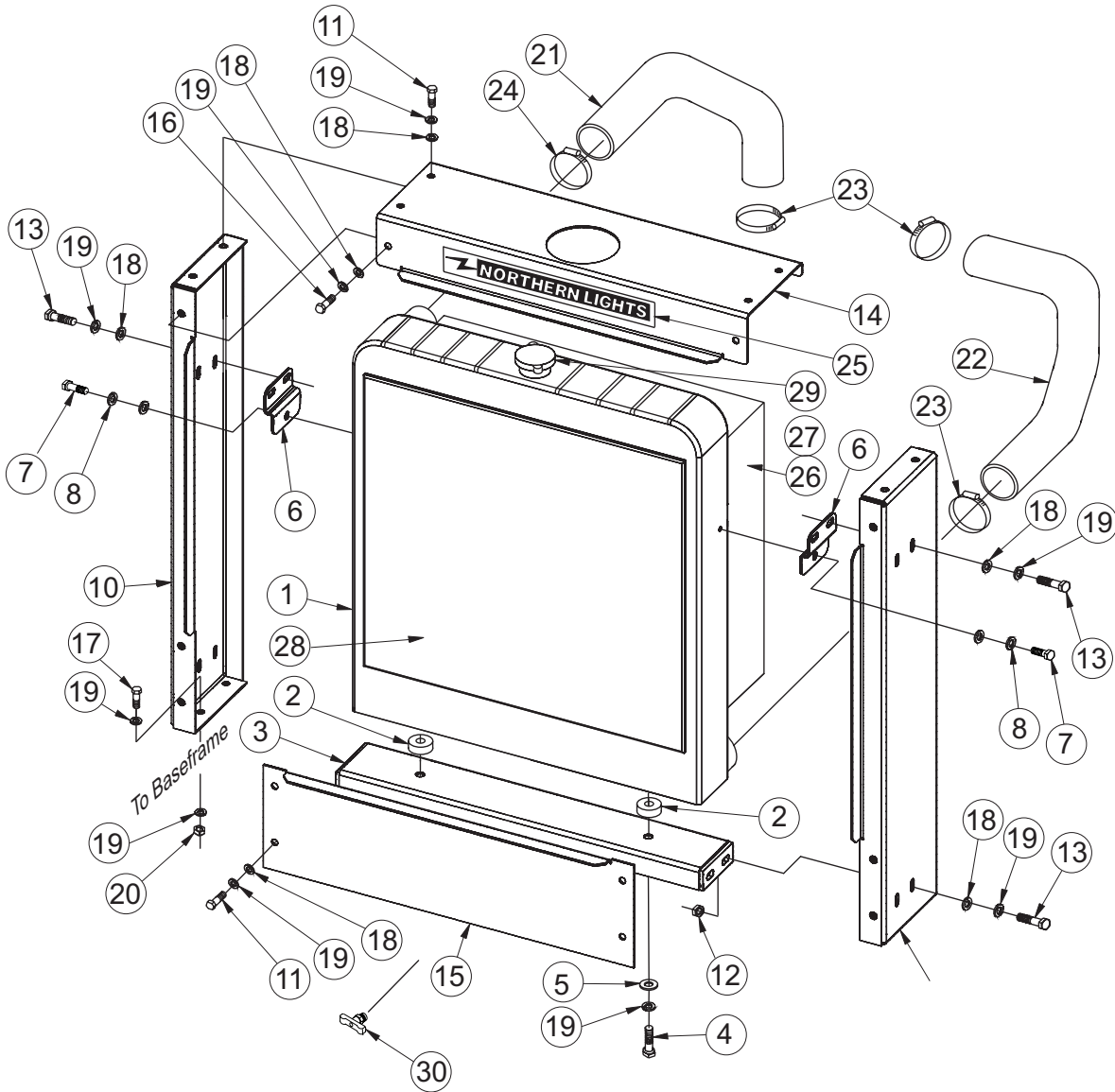
32B4816D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A4800400	1	Fan	-
2	3134512100	1	Fan Plate	-
3	MF241254	4	Bolt with washer	-
4	0591020045	1	Belt	-

GROUP 3 - COOLING SYSTEM

Radiator & Mounting

NL944D3 & NL944T3



A-12083/ B-9446

Radiator

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	79000478	1	Radiator	-
2	21-19601	2	Spacer	-
3	39-11203	1	Cross Member, Radiator Support	-
4	12-00513	2	Capscrew, Hex Head 1/2-13 x 1-1/4"	-
5	15-00501	2	Flat Washer, 1/2"	-
6	23-11203	2	Bracket	-
7	12-00308	2	Capscrew, Hex Head 3/8-16 x 5/8"	-
8	15-00301	2	Flat Washer, 3/8"	-
9	39-11201	1	Side Panel, Left hand	-
10	39-11202	1	Side Panel, Right hand	-
11	12-04400	4	Capscrew, Hex Head M10 x 1.5 x 16 mm	-
12	14-00808	2	Lock Nut, Flanged M10 x 1.5	-
13	12-00805	8	Capscrew, Hex Head M10 x 1.5 x 20 mm	-
14	39-11204	1	Top Panel	-
15	39-11206	1	Lower Valence	-
16	12-00822	10	Capscrew, Hex Head M10 x 1.5 x 14 mm	-
17	12-00831	4	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
18	15-00805	22	Flat Washer, M10	-
19	15-00802	22	Lock Washer, Helical M10	-
20	14-00811	4	Hex Nut, M10 x 1.5	-
21	68900392	1	Hose, Radiator Inlet	-
22	68900391	1	Hose, Radiator Outlet	-
23	19-00028	3	Hose Clamp #28	-
24	19-00032	1	Hose Clamp #32	-
25	00-70079	1	Label "Northern Lights"	-
26	89100276	1	Fan Shroud	-
27	89600163	1	Fan Guard	-
28	79700064	1	Stone Guard	-
29	69300001	1	Filler Cap 13 PSI	-
30	21-10002	1	Drain Cock	-

Fuel System

L - M944 Non-Turbo

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	MDO68353	4	Nut	-
2	MDO68355	4	Gasket, Fuel Return	-
3	MDO70717	4	Gasket	-
4	32B6102100	1	Injection Line No. 1	-
5	32B6102200	1	Injection Line No. 2	-
6	32B6102300	1	Injection Line No. 3	-
7	32B6102400	1	Injection Line No. 4	-
8	MM430703	3	Clamp	-
9	MM430614	3	Clamp	-
10	F182506025	3	Bolt with washer	-
11	32A6104100	1	Fuel Leak-off Tube	-
12	32C6106000	1	Injector	-
13	3446200011	1	Fuel Filter Head Assembly (see Assembly detail)	-
14	12-09832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
15	15-99804	2	Wave Washer M10 S/S	-
16	27-51201	1	Tube, Fuel Filter Inlet	-
17	27-51202	1	Tube, Fuel Filter Outlet	-
18	07005-01412	8	Sealing Washer Bonded M14	-
19	19-72252	2	Adelle Clamp 3/8" I.D. x 3/8"	-
20	12-09751	2	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
21	15-00705	2	Lock Washer, Helical M8 S/S	-
22	15-00706	2	Flat Washer M8 S/S	-
23	8526500078	1	Banjo Bolt	-
24	9491800310	1	Banjo Bolt	-
25	MH037087	2	Banjo Bolt	-

Fuel System

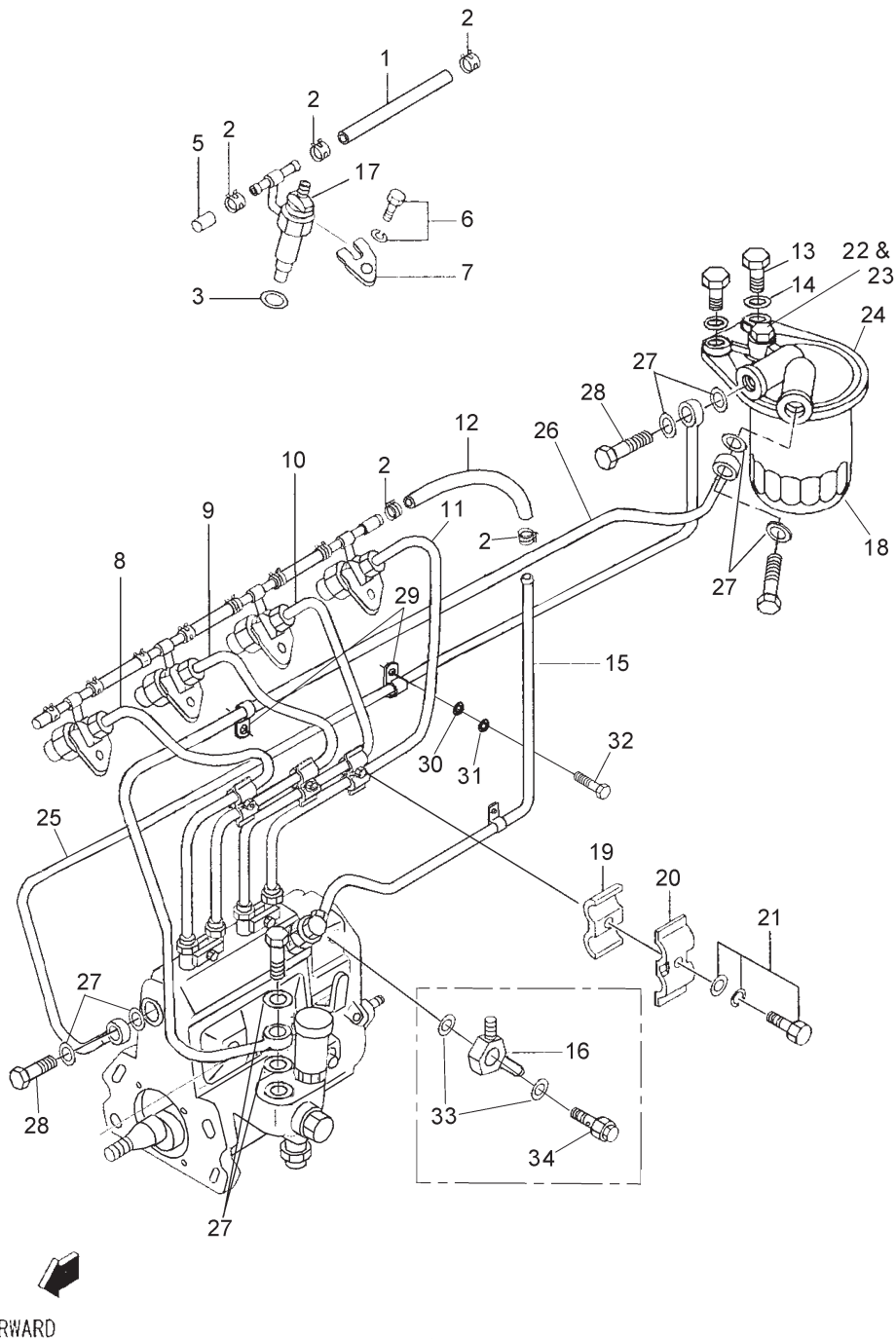
NL944D2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	3446200011	1	Fuel Filter Head Assembly (see Assembly detail, includes keys 14-15)	-
1	MDO68353	4	Nut	-
2	MDO68355	4	Gasket, Fuel Return	-
3	MDO70717	4	Gasket	-
4	32B6102100	1	Injection Line No. 1	-
5	32B6102200	1	Injection Line No. 2	-
6	32B6102300	1	Injection Line No. 3	-
7	32B6102400	1	Injection Line No. 4	-
8	MM430703	3	Clamp	-
9	MM430614	3	Clamp	-
10	MF243628	3	Bolt with washer	-
11	32A6104100	1	Fuel Leak-off Tube	-
12	32C6106000	4	Injector	-
13	3446200201	1	Adapter Head	-
14	MH037084	1	Plug	-
15	0594600801	1	Sealing Washer	-
16	24-51201	1	Element	-
17	23-51204	1	Bracket, Fuel Filter Support	-
18	21-75005	2	Spacer	-
19	12-00701	2	Capscrew, Hex Head M8 x 1.25 x 110 mm	-
20	15-00701	2	Flat Washer M8	-
21	12-00814	2	Capscrew, Hex Head M10 x 1.5 x 35 mm	-
22	15-00805	2	Flat Washer, M10	-
23	15-00802	2	Lock Washer, Helical M10	-
24	14-00811	2	Hex Nut, M10 x 1.5	-
25	21-56802	1	Male Connector, Steel 3/8-37T x M14 x 1.5	-
26	21-71034	1	Female Swivel, Brass 3/8 HB x 3/8-37T (Push-on)	-
27	07005-01412	7	Sealing Washer, Bonded M14	-
28	MH037087	3	Banjo Bolt	-
29	41-01020	42"	Hose 3/8" I.D. -40 to +212°F Push-on	-
30	21-51209	3	Banjo Fitting, Steel M14 x 3/8 HB Push-on	-
31	19-50003	2	Clamp, Double Tie-wrap	-

GROUP 4 – FUEL SYSTEM

Fuel System

M944T & M38CR2 units without Intake Air Heater



32B6138&32B6116

Fuel System

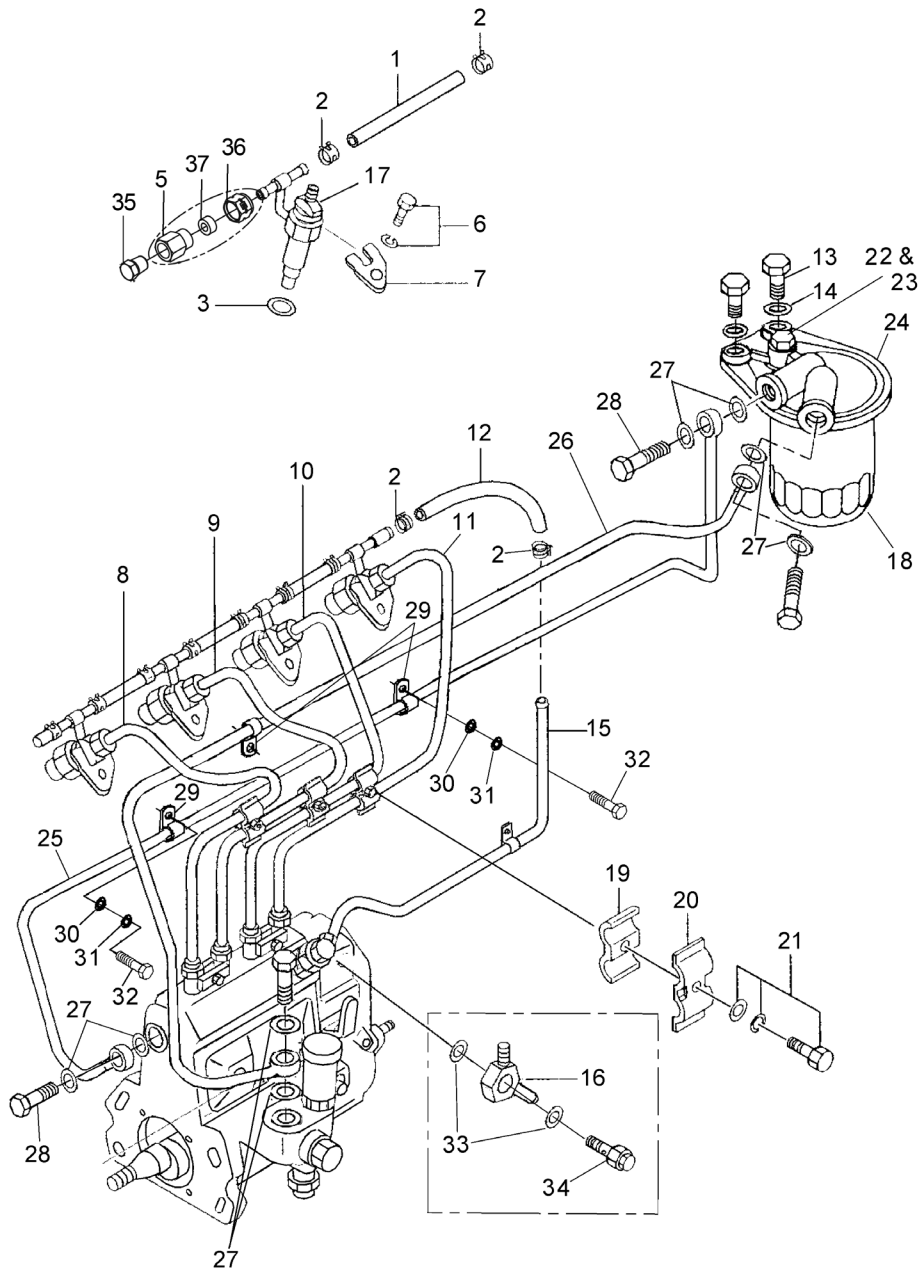
M944T & M38CR2 units without Intake Air Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	18-51208	3	Hose, 1/4" x I.D. x 4"	-
2	19-50113	9	Hose Clamp #13 Mini Extended Band S/S	-
3	MM432045	4	Gasket	-
5	ME016571	1	Cap	-
6	MF241257	4	Bolt with washer	-
7	MM43713701	4	Nozzle Support	-
8	32A6115101	1	Injection Line No. 1	-
9	32A6115200	1	Injection Line No. 2	-
10	32A6115300	1	Injection Line No. 3	-
11	32A6115400	1	Injection Line No. 4	-
12	18-51209	1	Hose, 1/4" I.D. x 5- 1/2"	-
13	12-09832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
14	15-99804	2	Wave Washer, M10 S/S	-
15	32A6105600	1	Fuel Return Line	-
16	3676100901	1	Banjo Connector	-
17	32B6107020	1	Injection Nozzle	-
18	24-51201	1	Filter Element	-
19	MM430614	3	Clamp	-
20	MM430703	3	Clamp	-
21	MF243628	3	Bolt with washer	-
22	MH037084	1	Plug	-
23	0594600801	1	Washer	-
24	3446200201	1	Fuel Filter Head Assembly (see assembly detail)	-
25	27-51202	1	Tube, Fuel Filter Outlet	-
26	27-51201	1	Tube, Fuel Filter Inlet	-
27	07005-01412	8	Sealing Washer	-
28	MH037087	2	Banjo Bolt	-
29	19-72252	2	Adelle Clamp 3/8" I.D. x 3/8"	-
30	15-00705	2	Lock Washer, M8 S/S Helical	-
31	15-00706	2	Flat Washer, M8 S/S	-
32	12-09751	2	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
33	07005-01212	2	Sealing Washer, Bonded M12	-
34	0903100130	1	Banjo Bolt & Valve Assembly M12	-

GROUP 4 – FUEL SYSTEM

Fuel System

M944T & M38CR2 (Units with Intake Air Heater)



FORWARD

32B6138&32B6116a

Fuel System

M944T & M38CR2 (Units with Intake Air Heater)

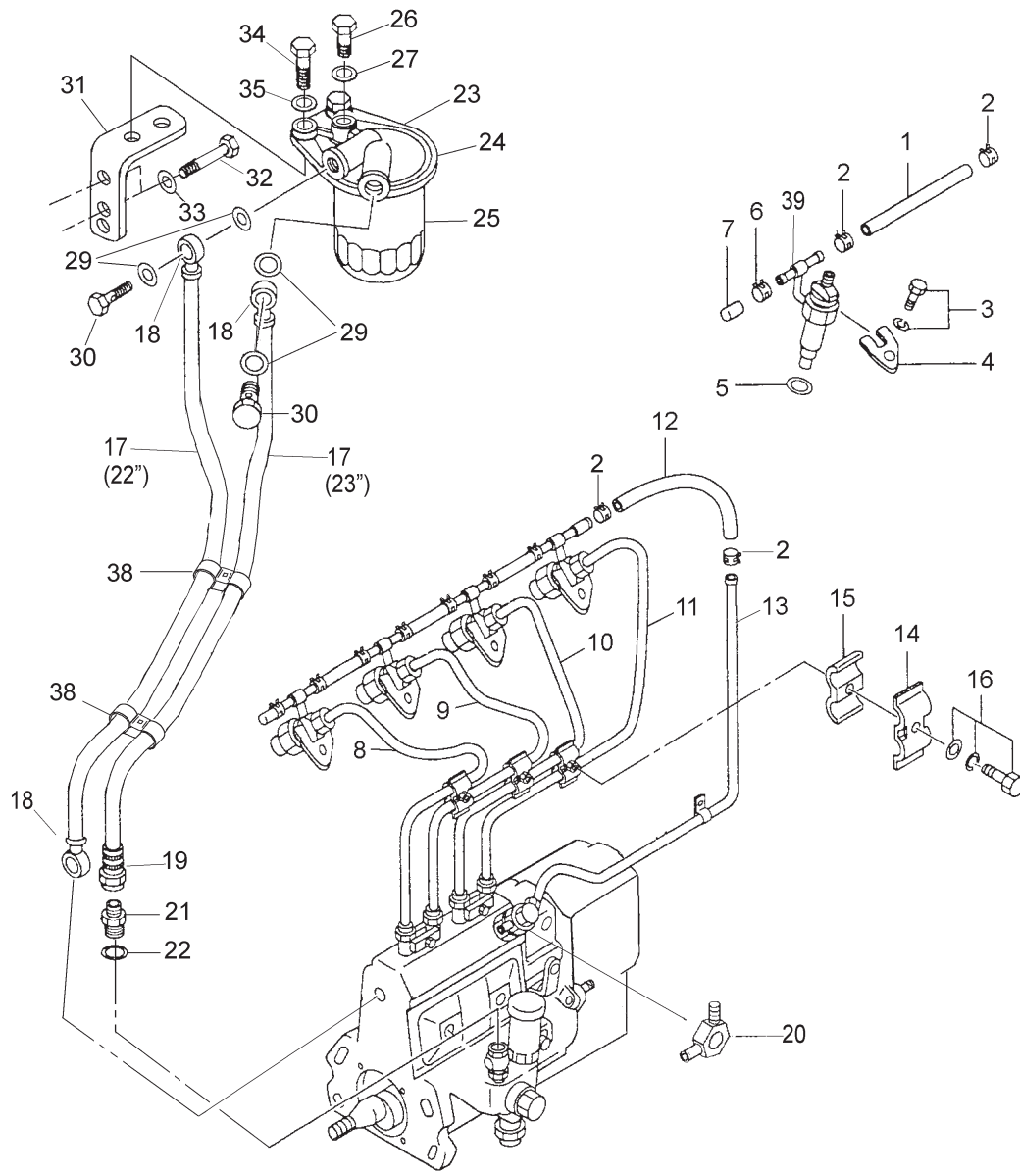
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	18-51208	3	Hose, 1/4" x I.D. x 4"	-
2	19-50113	8	Hose Clamp #13 Mini Extended Band S/S	-
3	MM432045	4	Gasket	-
5	21-51207	1	Female Connector 1/8 NPT x 1/4" Compression *	-
6	MF241257	4	Bolt with washer	-
7	MM43713701	4	Nozzle Support	-
8	32A6115101	1	Injection Line No. 1	-
9	32A6115200	1	Injection Line No. 2	-
10	32A6115300	1	Injection Line No. 3	-
11	32A6115400	1	Injection Line No. 4	-
12	18-51209	1	Hose, 1/4" I.D. x 5- 1/2"	-
13	12-09832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
14	15-99804	2	Wave Washer, M10 S/S	-
15	32A6105600	1	Fuel Return Line	-
16	3676100901	1	Banjo Connector	-
17	32B6107020	1	Injection Nozzle	-
18	24-51201	1	Filter Element	-
19	MM430614	3	Clamp	-
20	MM430703	3	Clamp	-
21	MF243628	3	Bolt with washer	-
22	MH037084	1	Plug	-
23	0594600801	1	Washer	-
24	3446200011	1	Fuel Filter Head Assembly (see assembly detail)	-
25	27-51205	1	Tube, Fuel Filter Outlet	-
26	27-51204	1	Tube, Fuel Filter Inlet	-
27	07005-01412	8	Sealing Washer	-
28	MH037087	2	Banjo Bolt	-
29	19-72252	3	Adelle Clamp 3/8" I.D. x 3/8"	-
30	15-00705	3	Lock Washer, M8 S/S Helical	-
31	15-00706	3	Flat Washer, M8 S/S	-
32	12-09751	3	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
33	07005-01212	2	Sealing Washer, Bonded M12	-
34	0903100130	1	Banjo Bolt & Valve Assembly M12	-
35	21-00012	1	Plug 1/8 NPT *	-
36	21-51206	1	Tube Nut *	-
37	21-55710	1	Sealing Sleeve *	-

* Available as assembly with #35 plug 21-51200

GROUP 4 – FUEL SYSTEM

Fuel System

NL944T2



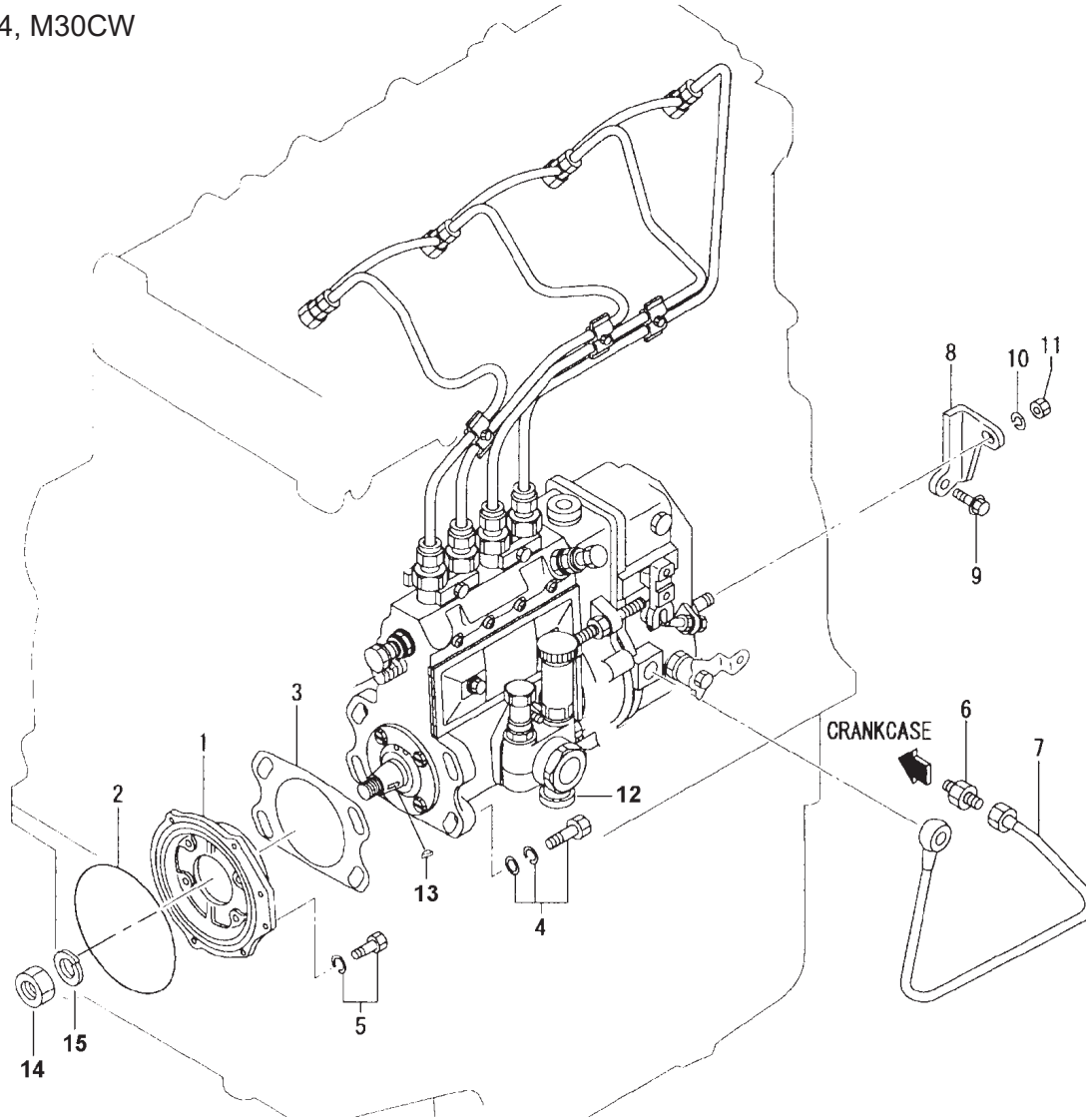
FORWARD

32B6138DAfuelsystem

Fuel System				
NL944T2				
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	MS602011	3	Hose	-
2	MS660163	9	Hose Clamp	-
3	MF241257	4	Bolt with washer	-
4	MM43713701	4	Nozzle Support	-
5	MM432045	4	Nozzle Gasket	-
6	MS660163	1	Hose Clamp	-
7	ME016571	1	Cap	-
8	32A6115101	1	Injection Line No. 1	-
9	32A6115200	1	Injection Line No. 2	-
10	32A6115300	1	Injection Line No. 3	-
11	32A6115400	1	Injection Line No. 4	-
12	MS602901	1	Hose	-
13	32A6105600	1	Fuel Return Line	-
14	MM430703	3	1/2 Clamp	-
15	MM430614	3	1/2 Clamp	-
16	MF243628	3	Bolt with Washer	-
17	41-01020	45"	Hose 3/8" ID (Bulk - Order per inch)	-
18	21-51209	3	Banjo Fitting, Steel M14 x 3/8" Hose Barb (Push-on)	-
19	21-71034	1	Female Swivel, Brass 3/8" Hose Barb x 3/8-37T (Push-on)	-
20	3676100901	1	Banjo Connector	-
21	21-56802	1	Connector	-
22	07005-01412	1	Sealing Washer M14	-
23	3446200011	1	Fuel Filter Assembly (includes keys 24-27, 29)	-
24	3446200201	1	Adapter Head	-
25	24-51201	1	Element	-
26	MH037084	1	Plug	-
27	0594600801	1	Sealing Washer	-
28	F180510025	2	Bolt with washer	-
29	07005-01412	4	Sealing Washer M14	-
30	MH037087	2	Banjo Bolt	-
31	23-51204	1	Bracket, Fuel Filter Support	-
32	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
33	15-00701	2	Flat Washer M8	-
34	12-00814	2	Capscrew, Hex Head M10 x 1.5 x 35 mm	-
35	15-00805	2	Flat Washer M10	-
36	15-00802	2	Lock Washer M10	-
37	14-00811	2	Hex Nut M10 x 1.5	-
38	19-50003	2	Clamp, Double Tie-wrap	-
39	32B6107020	4	Injection Nozzle	-

Injection Pump

L-M944, M30CW

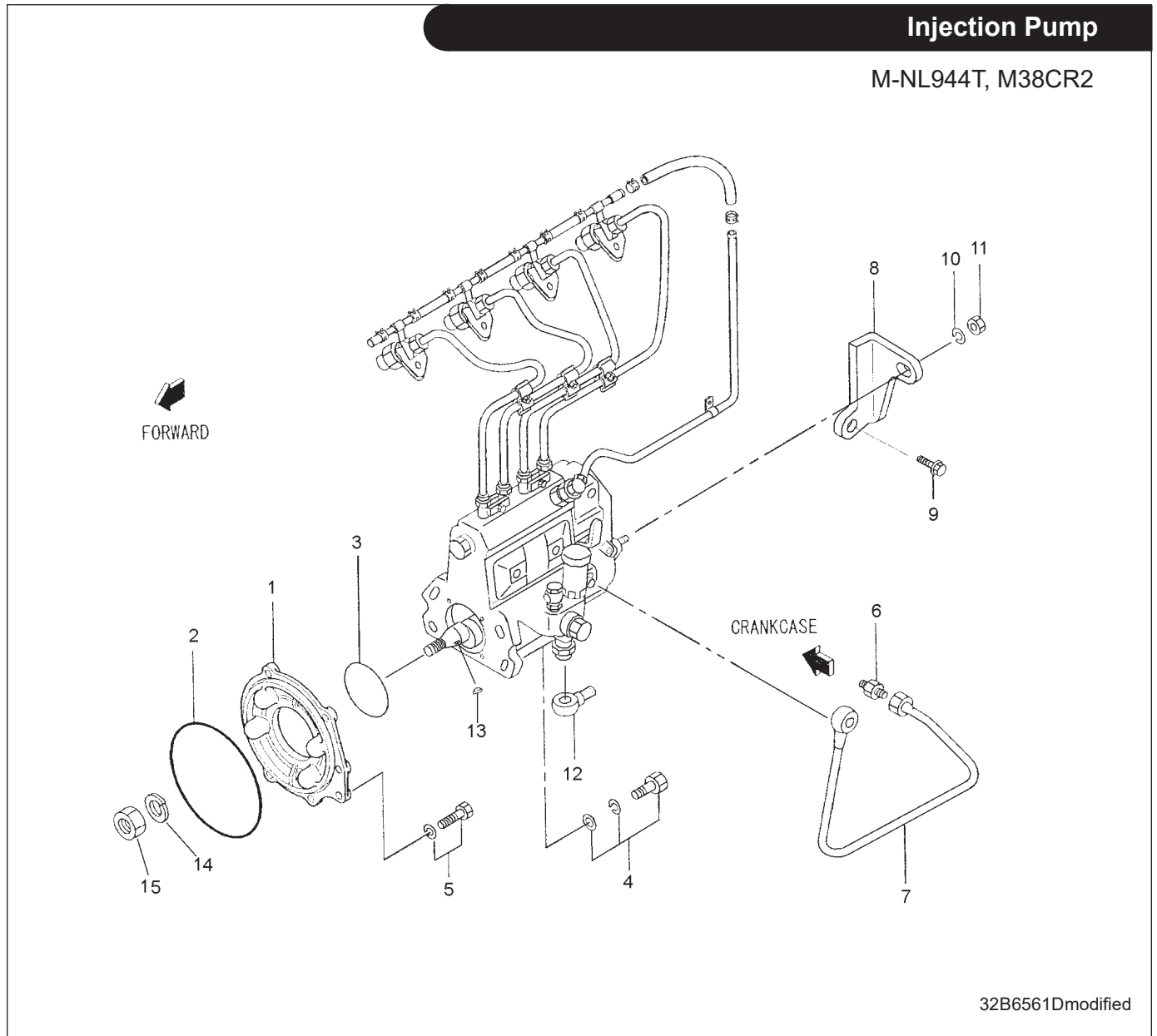


32B6541

KEY	PART NUMBER	QTY	DESCRIPTION	S/N
••	32A6501730	1	Injection Pump Assembly, 1500/ 1800 RPM (M944, includes keys 12, 14-15)	-
••	32A6501720	1	Injection Pump Assembly, 1500/ 1800 RPM (NL944, includes keys 12, 14-15)	-
••	26-51201	1	Injection Pump Assembly, VS 65 Amp #2500 RPM (L944D, includes keys 12,14-15)	-
1	32A6101201	1	Flange	-
2	0601613140	1	O-ring	-
3	3066151300	1	Gasket	-
4	F201510035	4	Bolt with Washer	-
5	F180508020	1	Bolt with Washer	-
6	F444006300	1	Connector	-
7	32A3630100	1	Oil Pipe	-
8	32A6100900	1	Bracket	-
9	32A1302700	1	Flange Bolt	-
10	F251508000	1	Spring Washer	-
11	F230008000	1	Lock Nut	-
12	3446109050	1	Feed Pump Assembly (see parts detail)	-
13	9491300190	1	Key	-
14	9490502450	1	Hex Nut	-
15	9490150500	1	Spring Washer	-

Injection Pump

M-NL944T, M38CR2



32B6561Dmodified

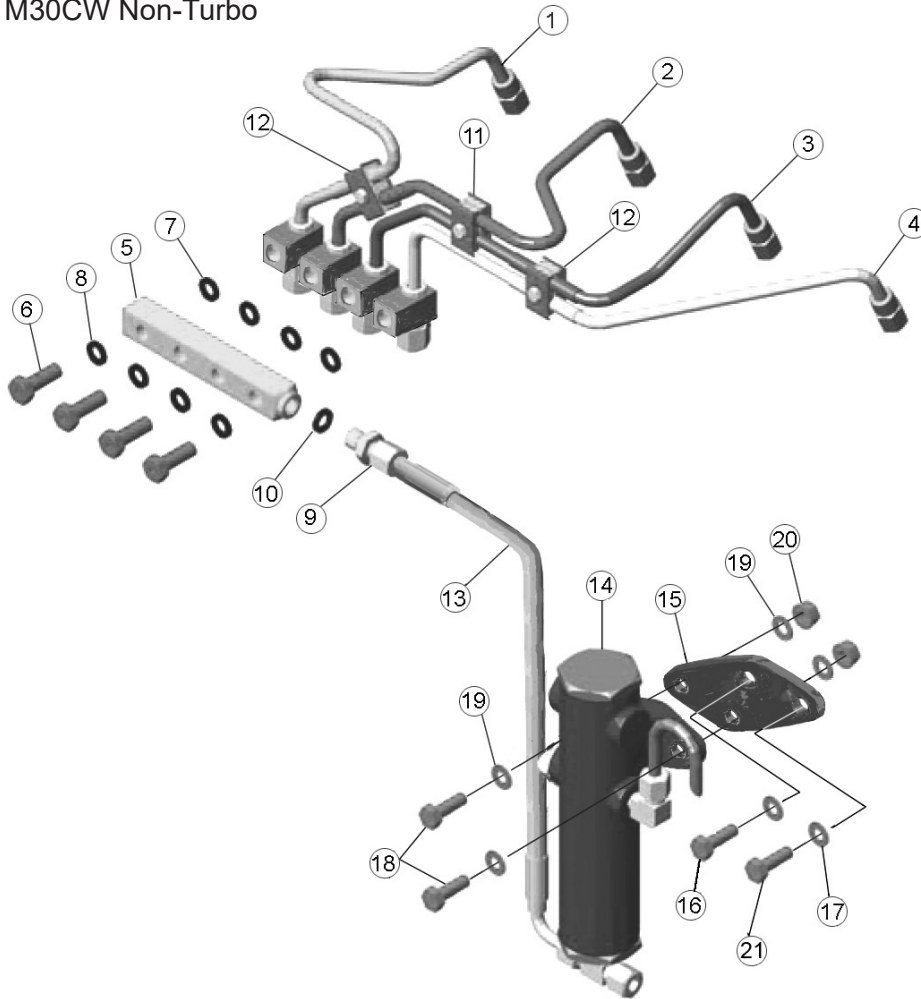
KEY	PART NUMBER	QTY	DESCRIPTION	S/N
●●	32A6504320	1	Injection Pump Assembly	-
1	32A6101301	1	Flange	-
2	0601613140	1	O-ring	-
3	0601613075	1	Gasket	-
4	F201510035	4	Bolt with washer	-
5	MF241253	1	Bolt with washer	-
6	F444006300	1	Connector	-
7	32A3630100	1	Oil Pipe	-
8	32A6100900	1	Bracket	-
9	F103508020	1	Bolt	-
10	F251508000	1	Lock Washer	-
11	F230008000	1	Lock Nut	-
12	MM409125	1	Union	-
13	9491300190	1	Key	-
14	9490150500	1	Spring Washer	-
15	9490502450	1	Hex Nut	-

} keel cooled only - see raw water pump assembly

GROUP 4 – FUEL SYSTEM

Double Wall Injection Lines & Alarm Tank

M944 & M30CW Non-Turbo

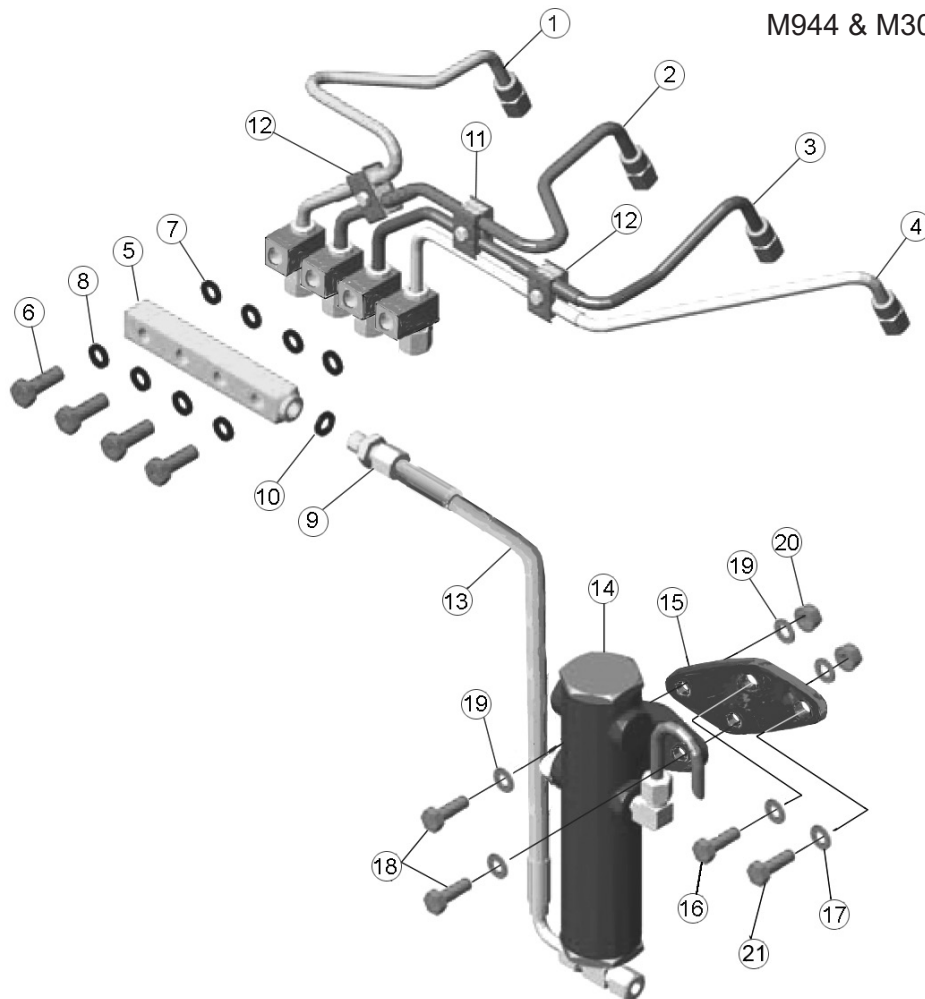


A-11493/ ST15033-1

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-51211	1	Injection Line #1 Double Wall	-
2	27-51212	1	Injection Line #2 Double Wall	-
3	27-51213	1	Injection Line #3 Double Wall	-
4	27-51214	1	Injection Line #4 Double Wall	-
5	10-58701	1	Manifold, Fuel Alarm	-
6	21-55707	4	Banjo Bolt, Leak Indicator Type	-
7	16-55701	4	O-ring	-
8	15-55701	4	Banjo Washer	-
9	21-55702	1	Male Connector Steel	-
10	15-00042	1	Sealing Washer	-
11	19-55002	1	Clamp Assembly, 2 Lines	-
12	19-51201	2	Clamp Assembly, 2 Lines	-
13	18-51203	1	Hose Assembly 1/4" I.D. x 25-1/2"	-
14	10-50002	1	Alarm Tank Assembly	-
15	23-51201	1	Bracket	-
16	12-00953	1	Capscrew, Hex Head M12 x 1.75 x 30 mm	-
17	15-00912	2	Lock Washer, Helical M12	-
18	12-00753	2	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
19	15-00701	4	Flat Washer M8	-
20	14-04802	2	Hex Nut, Nylock M8 x 1.25	-
21	12-00954	1	Capscrew, Hex Head M12 x 1.75 x 35mm	-

Double Wall Injection Lines & Alarm Tank

M944 & M30CW Turbocharged

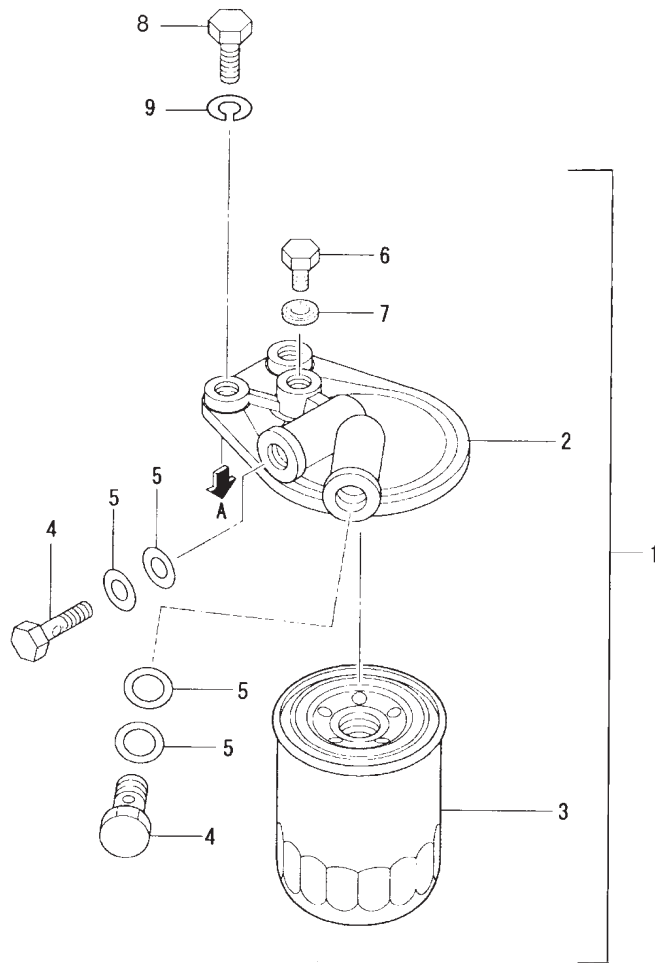


A-11493/ ST15033-1

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-51221	1	Injection Line #1 Double Wall	-
2	27-51222	1	Injection Line #2 Double Wall	-
3	27-51223	1	Injection Line #3 Double Wall	-
4	27-51224	1	Injection Line #4 Double Wall	-
5	10-58701	1	Manifold, Fuel Alarm	-
6	21-55707	4	Banjo Bolt, Leak Indicator Type	-
7	16-55701	4	O-ring	-
8	15-55701	4	Banjo Washer	-
9	21-55702	1	Male Connector Steel	-
10	15-00042	1	Sealing Washer	-
11	19-55002	1	Clamp Assembly, 2 Lines	-
12	19-51201	2	Clamp Assembly, 2 Lines	-
13	18-51221	1	Hose Assembly 1/4" I.D. x 23"	-
14	10-50002	1	Alarm Tank Assembly	-
15	23-51201	1	Bracket	-
16	12-00953	1	Capscrew, Hex Head M12 x 1.75 x 30 mm	-
17	15-00912	2	Lock Washer, Helical M12	-
18	12-00753	2	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
19	15-00701	4	Flat Washer M8	-
20	14-04802	2	Hex Nut, Nylock M8 x 1.25	-
21	12-00954	1	Capscrew, Hex Head M12 x 1.75 x 35mm	-

Notes

Fuel Filter

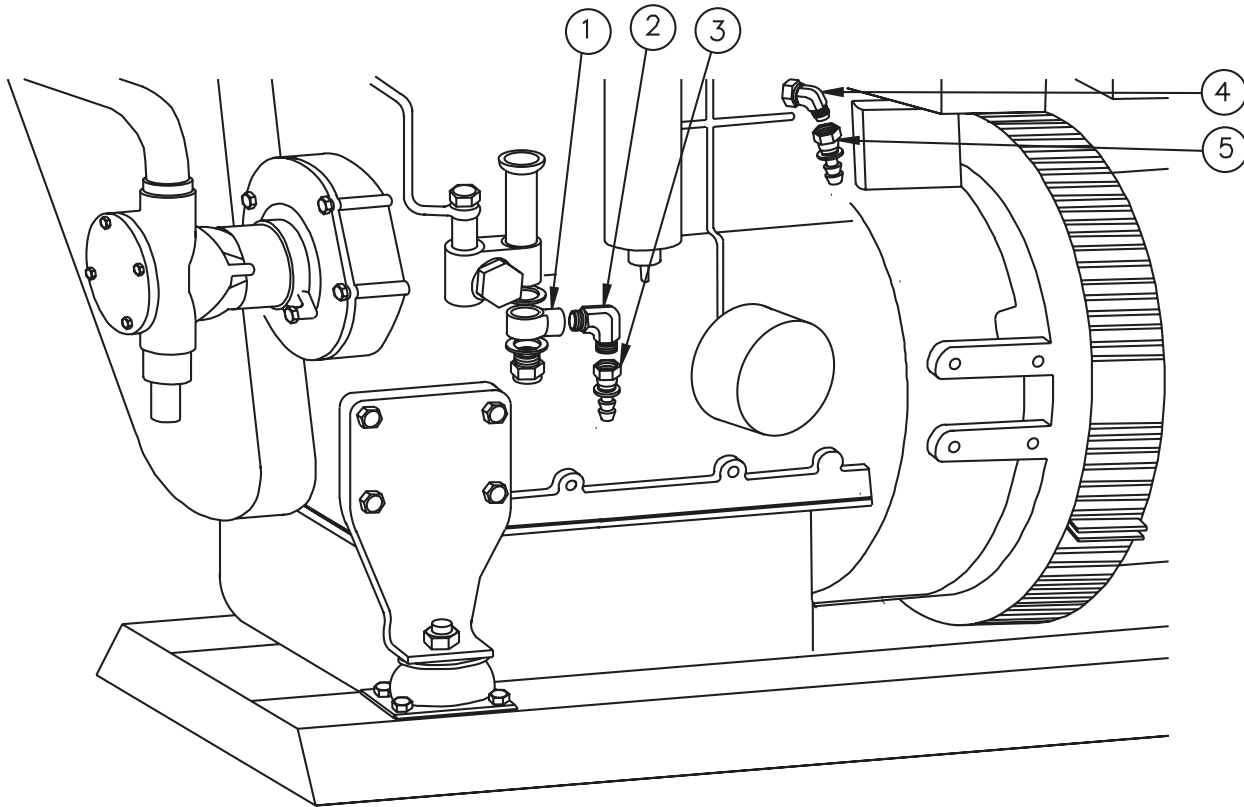


32B6205

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3446200011	1	Fuel Filter Assembly (includes keys 2- 6)	-
2	3446200201	1	Bracket	-
3	24-51201	1	Element	-
4	MH037087	2	Eye Bolt	-
5	0594601401	4	Sealing Washer	-
6	MH037084	1	Plug	-
7	0594600801	1	Sealing Washer	-
8	12-09832	2	Capscrew, Hex Head M10 x 1.5 x 30 mm S/S	-
9	15-99804	2	Wave Washer, M10 S/S	-

Fuel Line Connections

Propulsion & C-Series Gen-set, Non Turbo

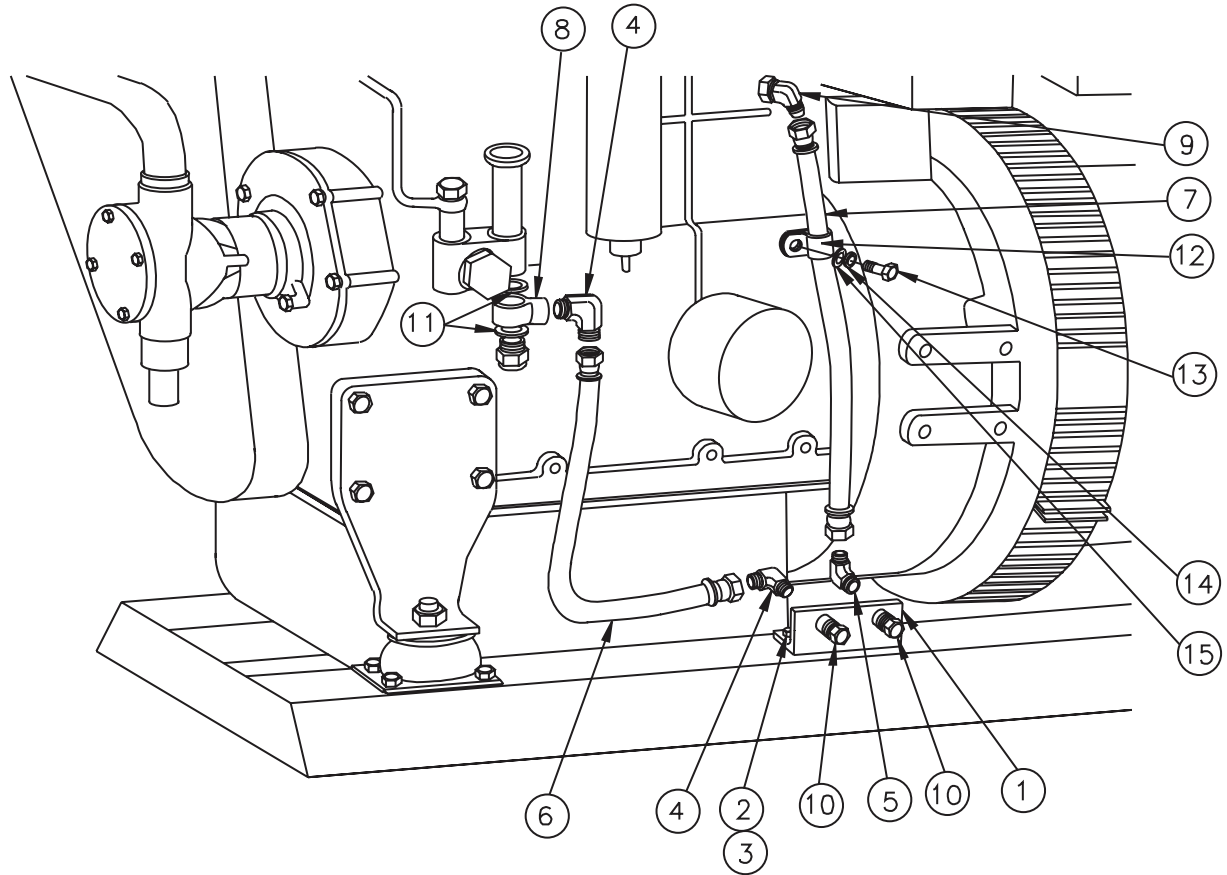


A-11439/ B-9049shortened

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	21-52203	1	Banjo Fitting, Steel 14 mm x 1/4 NPT	-
2	21-52245	1	Male Elbow, 90° Brass 1/4 NPT x 5/16- 45T	-
3	21-71056	1	Female Swivel, Brass 5/16 HB x 5/16- 45 T	-
4	21-51201	1	Male Elbow, 45° Swivel Steel 1/4- 37T x M10	-
5	21-71045	1	Female Swivel, Brass 1/4 HB x 1/4- 45T	-
6	21-52011	1	Cap, Hex Head Steel 5/16- 37T	-
7	21-59502	1	Cap, Hex Head Steel 1/4- 37T } for shipping, not shown	-

USCG Fuel Lines

USCG - A-1 SAE J1527 - ISO7840
M944 Non Turbo

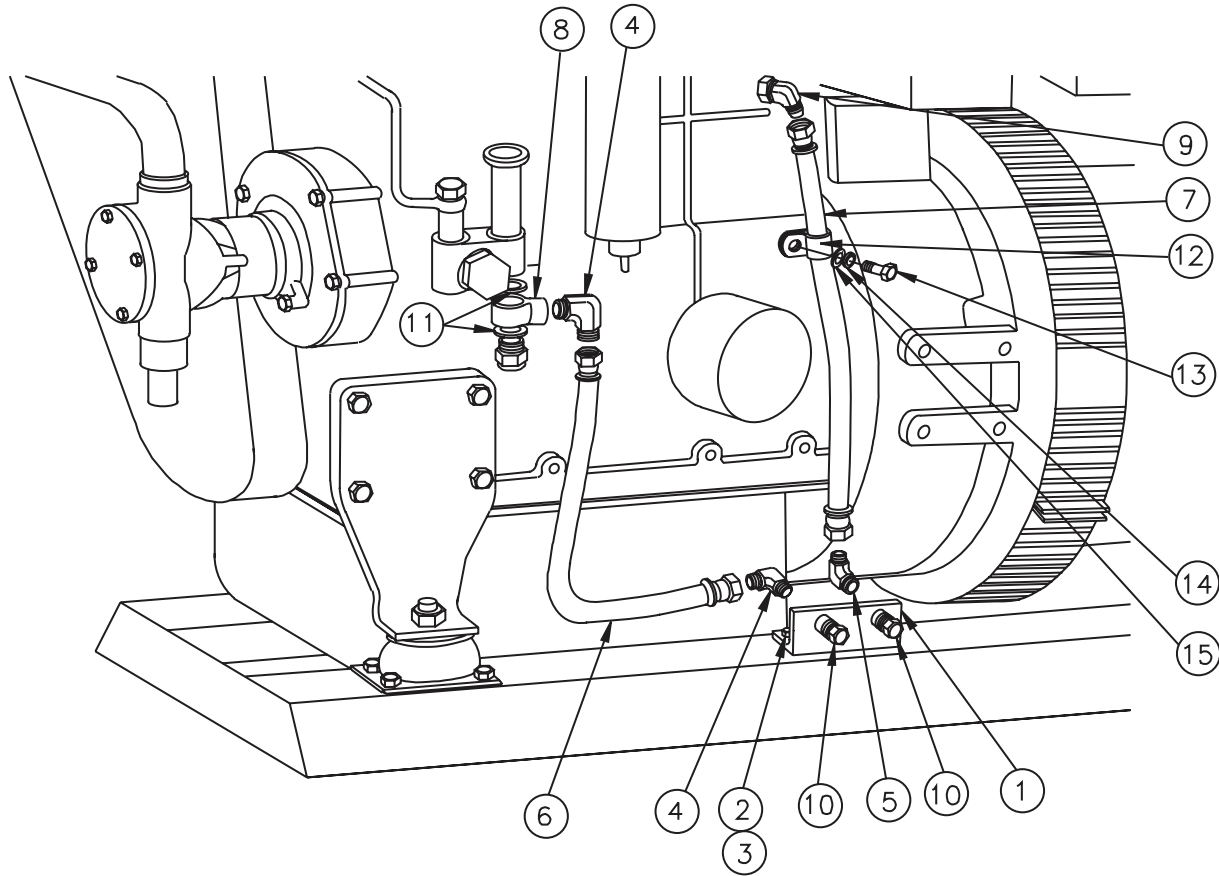


A-11857/ B-9081

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
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	21-52245	2	Male Elbow, 90° Brass 1/4 NPT x 5/16- 45T	-
5	21-71044	1	Male Elbow, 90° Brass 1/4 NPT x 1/4- 45T	-
6	18-51204	1	Hose Assembly 5/16" I.D. x 19"	-
7	18-51205	1	Hose Assembly 1/4" I.D. x 23"	-
8	21-52203	1	Banjo Fitting, Steel M14 x 1/4 NPT	-
9	21-51201	1	Male Elbow, 45° Swivel Steel 1/4- 37T x M10	-
10	21-31624	2	Plug, Hex Head Brass (for shipping)	-
11	07005-01412	2	Sealing Washer	-
12	19-43201	1	Adelle Clamp, 1/2" I.D. x 3/8" Stud	-
13	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
14	15-00705	1	Lock Washer, Helical M8 S/S	-
15	15-00706	1	Flat Washer, M8 S/S	-

USCG Fuel Lines

USCG - SAE J1942 - ABS
M944 Non Turbo

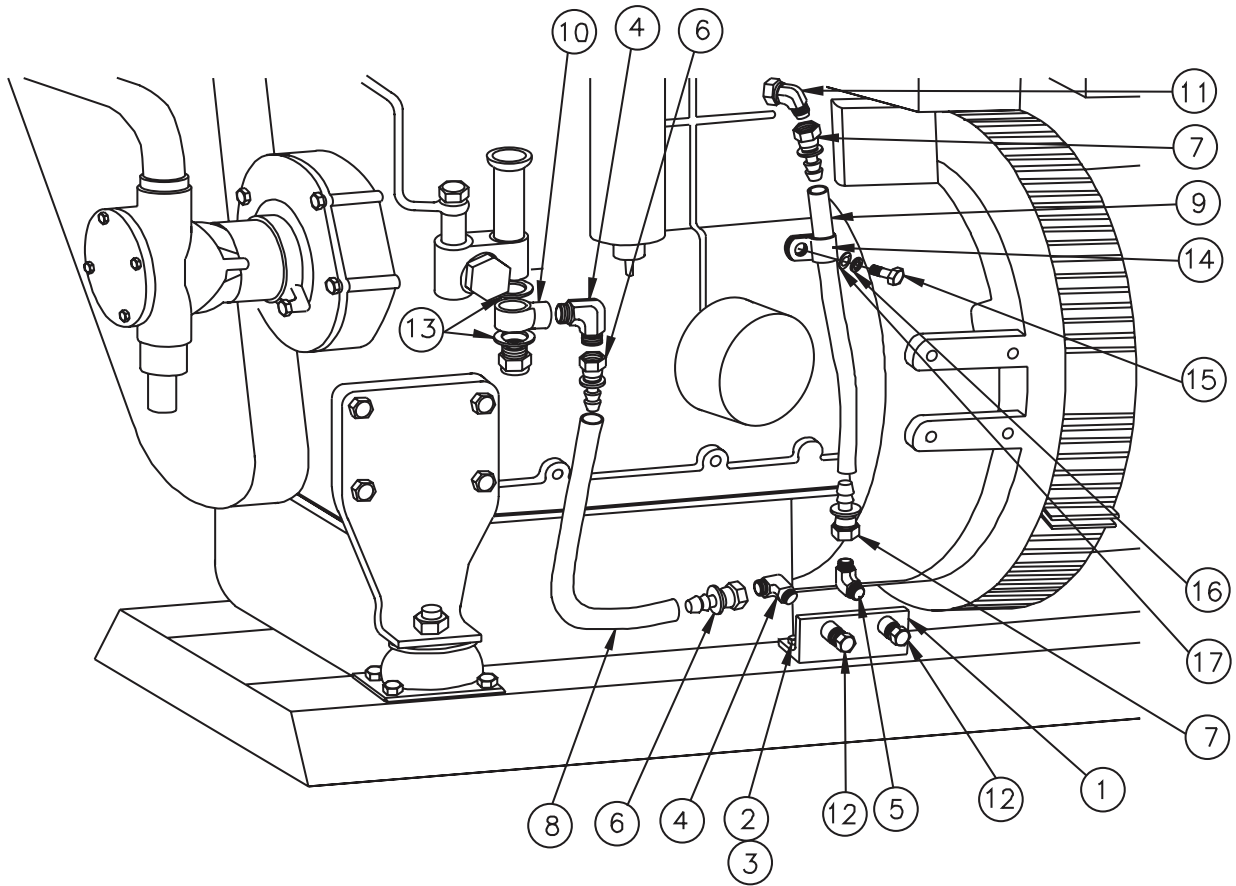


A-11326/ B-9081

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
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	21-74411	2	Male Elbow, 90° Steel 1/4 NPT x 5/16- 37T	-
5	21-71049	1	Male Elbow, 90° Brass 1/4 NPT x 1/4- 37T	-
6	18-51210	1	Hose Assembly 1/4" I.D. x 19" (formerly #18-58403)	-
7	18-51211	1	Hose Assembly 1/4" I.D. x 23" (formerly #18-53110)	-
8	21-52203	1	Banjo Fitting Steel M14 x 1/4 NPT	-
9	21-51201	1	Male Elbow, Swivel Steel 1/4- 37T x M10	-
10	21-31624	2	Plug, Hex Head Brass	-
11	07005-01412	2	Sealing Washer	-
12	19-43201	1	Adelle Clamp 1/2" I.D. x 3/8" Stud	-
13	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
14	15-00705	1	Lock Washer, Helical M8 S/S	-
15	15-00706	1	Flat Washer, M8 S/S	-

Push-on Fuel Lines

M944 Non Turbo



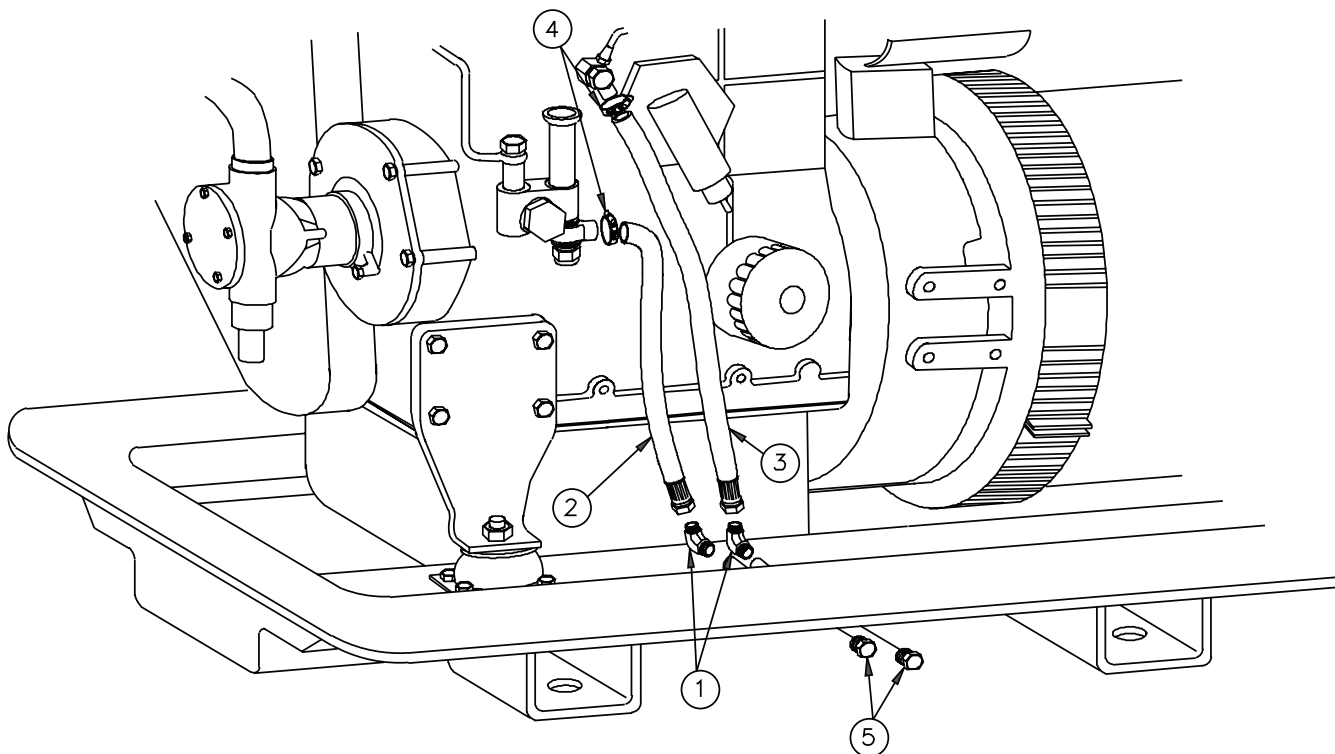
A-11224/ B-9049

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
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	21-52245	2	Male Elbow, 90° Brass 1/4 NPT x 5/16- 45T	-
5	21-71044	1	Male Elbow, 90° Brass 1/4 NPT x 1/4- 45T	-
6	21-71056	2	Female Swivel, Brass 5/16 HB x 5/16- 45T	-
7	21-71045	2	Female Swivel, Brass 1/4 HB x 1/4- 45T	-
8	41-01012	1	Hose, 5/16" I.D. Push-on	-
9	41-01011	1	Hose, 1/4" I.D. Push-on	-
10	21-52203	1	Banjo Fitting, Steel M14 x 1/4 NPT	-
11	21-51201	1	Male Elbow, Swivel Steel 1/4- 37T x M10	-
12	21-31624	2	Plug, Hex Head Brass	-
13	0700501412	2	Sealing Washer	-
14	19-43201	1	Adelle Clamp 1/2" I.D. x 3/8" Stud	-
15	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
16	15-00705	1	Lock Washer, Helical M8 S/S	-
17	15-00706	1	Flat Washer, M8 S/S	-

GROUP 4 – FUEL SYSTEM

Fuel Lines, USCG A-1 SAE J1527 ISO 7840

M944 Turbocharged

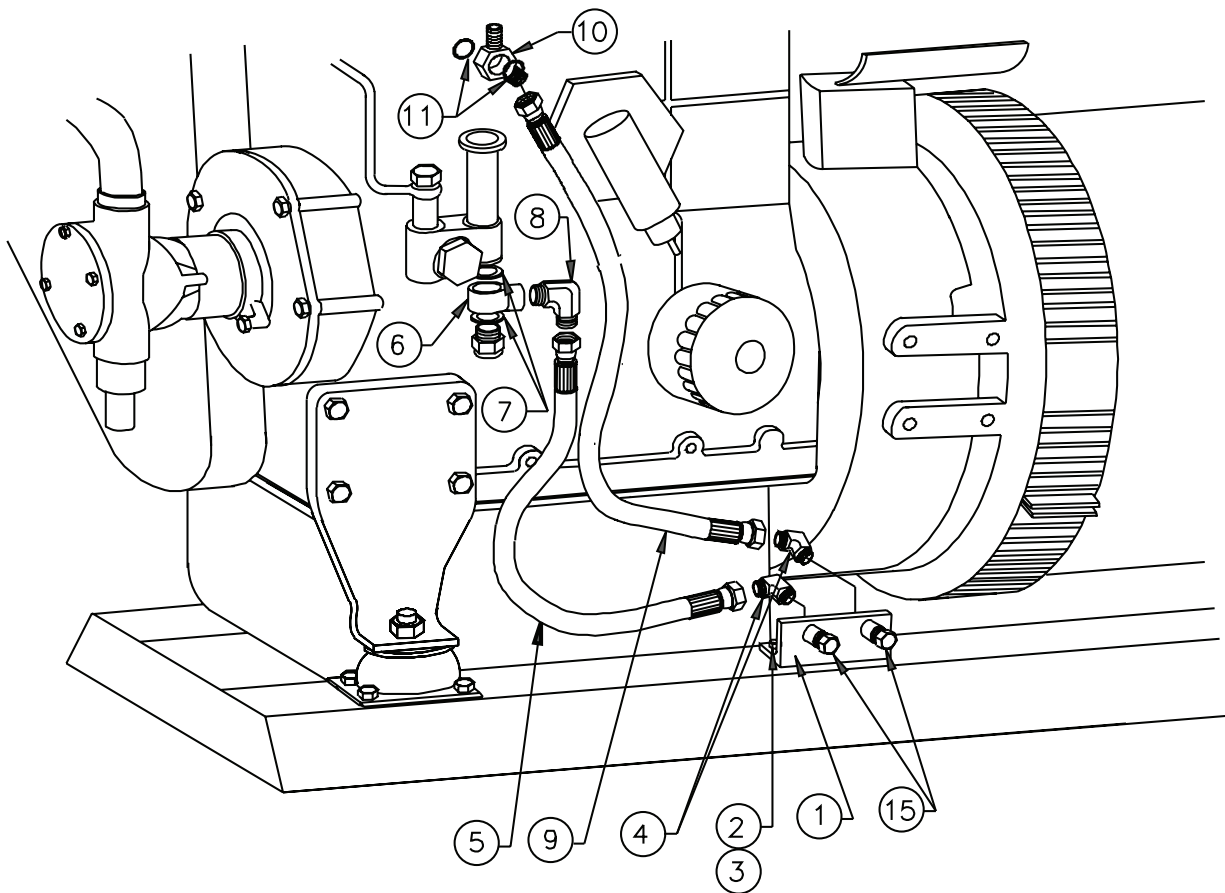


A-12032/ B-9501

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	21-52245	2	Male Elbow, 90° Brass 1/4 NPT x 5/16-45T	-
2	18-51206	1	Hose Assembly, 5/16" I.D. x 13-1/2"	-
3	18-51207	1	Hose Assembly, 5/16" I.D. x 19"	-
4	19-01004	2	Hose Clamp, #4 Extended Band S/S	-
5	21-31624	2	Plug, Hex Head Brass 1/4 NPT Solid	-

Fuel Lines, USCG A-1 SAE J1942 ABS

M38CR2



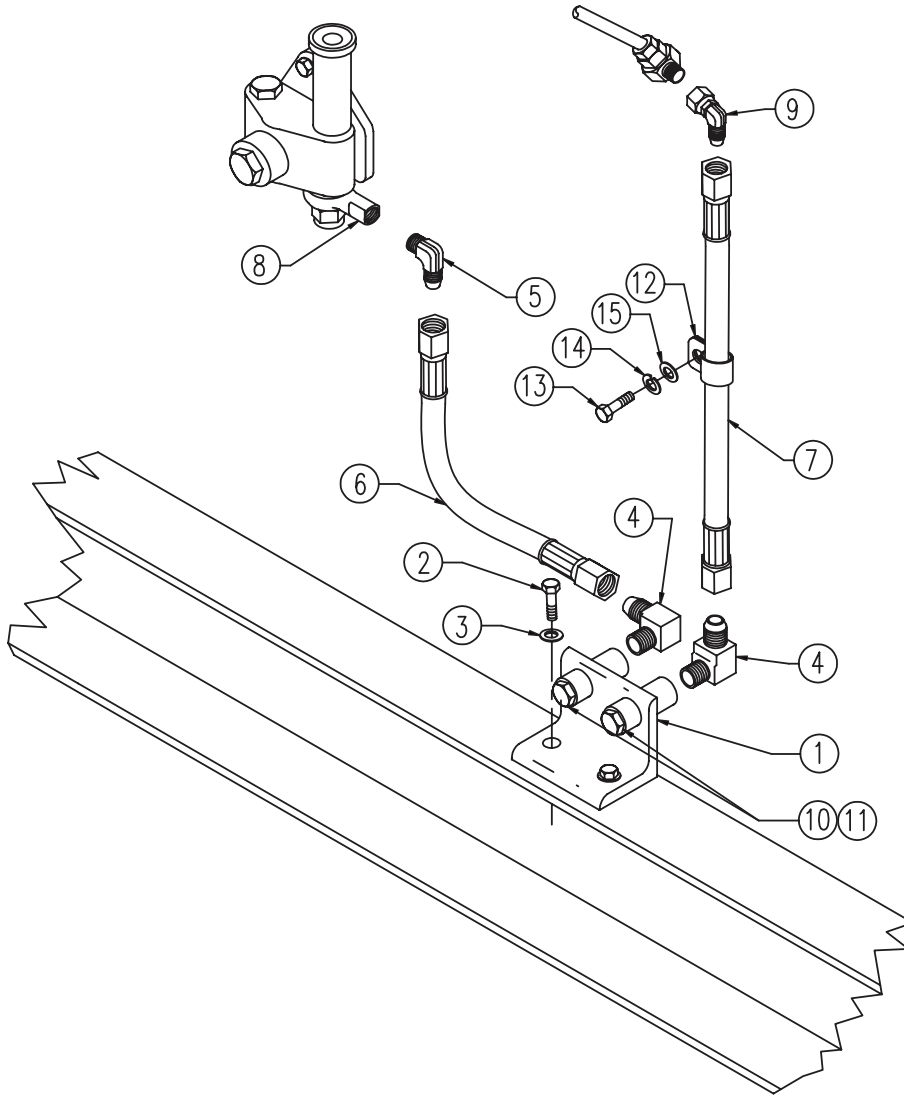
A-12273/ B-9503

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
2	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm	-
3	15-00610	2	Lock Washer, Helical M6 S/S	-
4	21-74411	2	Male Elbow, 90° Steel 1/4 NPT x 5/16-37T	-
5	18-51210	1	Hose Assembly 1/4" I.D. x 19" 5/16 FMS	-
6	21-52203	1	Banjo Fitting, Steel 14 mm x 1/4 NPT	-
7	07005-01412	2	Sealing Washer, Bonded M14	-
8	21-74411	1	Male Elbow, 90° Steel 1/4 NPT x 5/16-37T	-
9	18-51202	1	Hose Assembly 1/4" I.D. x 24" 5/16 FMS	-
10	21-51203	1	Banjo Union M12 x M10 x 1.25 x 5/16-37T	-
11	07005-01212	2	Sealing Washer, Bonded M12	-
15	21-31624	2	Plug, Hex Head Brass 1/4 NPT Solid	-

GROUP 4 – FUEL SYSTEM

USCG A-1 ISO 7840 Fuel Lines

NL944D2



A-12084/ B-9693

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
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	21-52245	2	Male Elbow, 90° Brass 1/4 NPT x 5/16-45T	-
5	21-71044	1	Male Elbow, 90° Brass 1/4 NPT x 1/4-45T	-
6	18-53114	1	Hose Assembly 1/4" ID x 14-1/2" 5/16 FMS	-
7	18-53115	1	Hose Assembly 1/4" ID x 22" 1/4 FMS (former #18-59401)	-
8	21-52203	1	Banjo Fitting, Steel 14 mm x 1/4 NPT Female	-
9	21-51201	1	Male Elbow 45° Swivel Steel 1/4-37T x M10	-
10	21-31624	2	Plug, Hex Head Brass 1/4 NPT	-
11	07005-01412	2	Sealing Washer, Bonded M14	-
12	19-43201	1	Adelle Clamp 1/2" ID x 3/8" Stud	-
13	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm	-
14	15-00705	1	Lock Washer, Helical M8 S/S	-
15	15-00706	1	Flat Washer M8 S/S	-

USCG A-1 ISO 7840 Fuel Lines

NL944T2

Artwork Not Yet Available

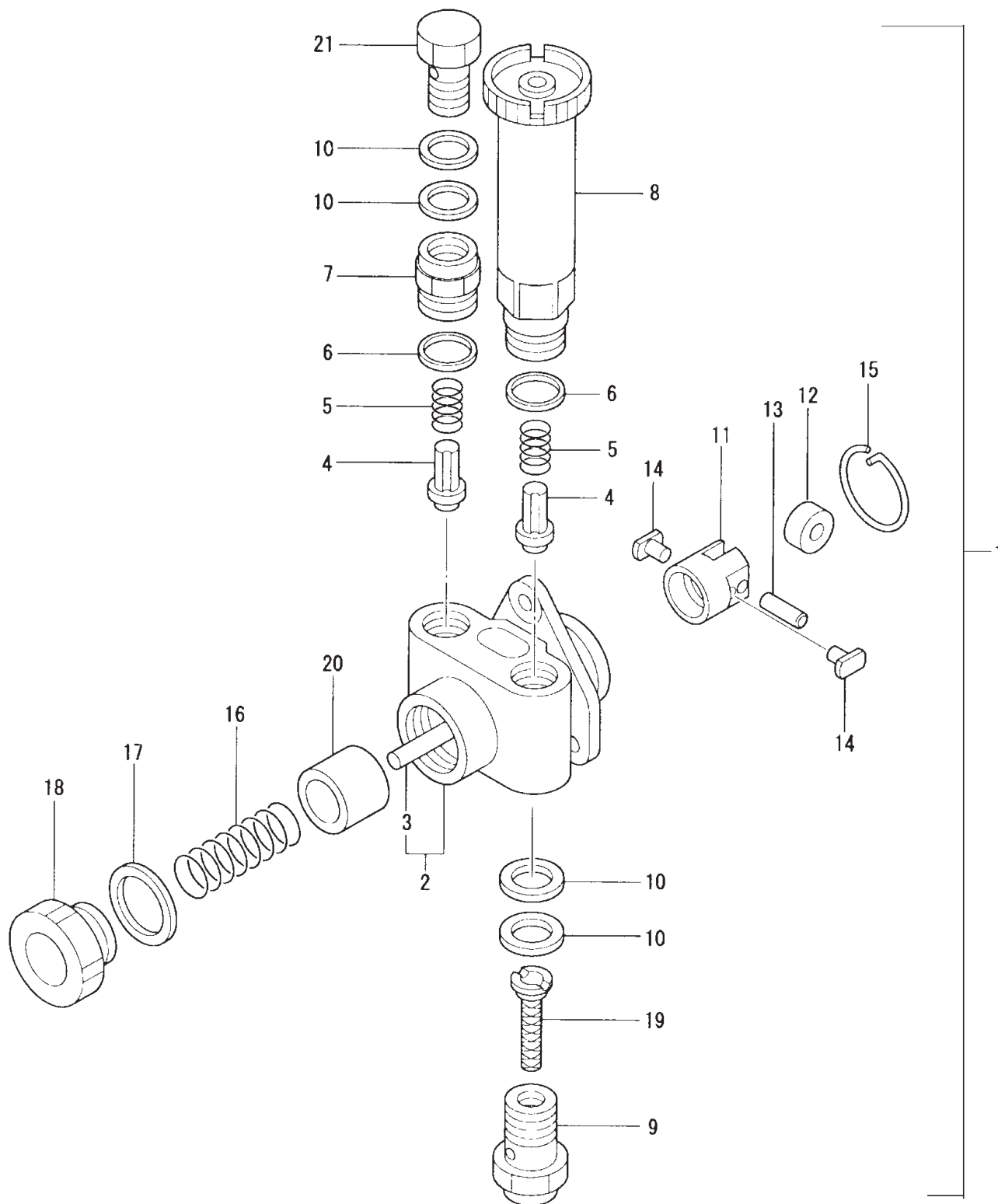
A-12439

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Manifold, Fuel Line Connection	-
2	12-00032	2	Capscrew, Hex Head M6 x 1.0 x 30 mm	-
3	15-00008	4	Flat Washer M6	-
4	14-04803	2	Hex Nut, Nylock M6x1.0	-
5	21-52245	2	Male Elbow, 90° Brass 1/4 NPT x 5/16-45T	-
6	18-58705	1	Hose Assembly 5/16" ID x 12-1/2" 5/16 FMS (Single End)	-
7	18-51207	1	Hose Assembly 5/16" ID x 19" 5/16 FMS (Single End)	-
8	19-01004	2	Hose Clamp #4	-
9	07005-01212	2	Sealing Washer, Bonded M12	-

GROUP 4 – FUEL SYSTEM

Fuel Feed Pump

L-M944, M30CW



32B6544

Fuel Feed Pump

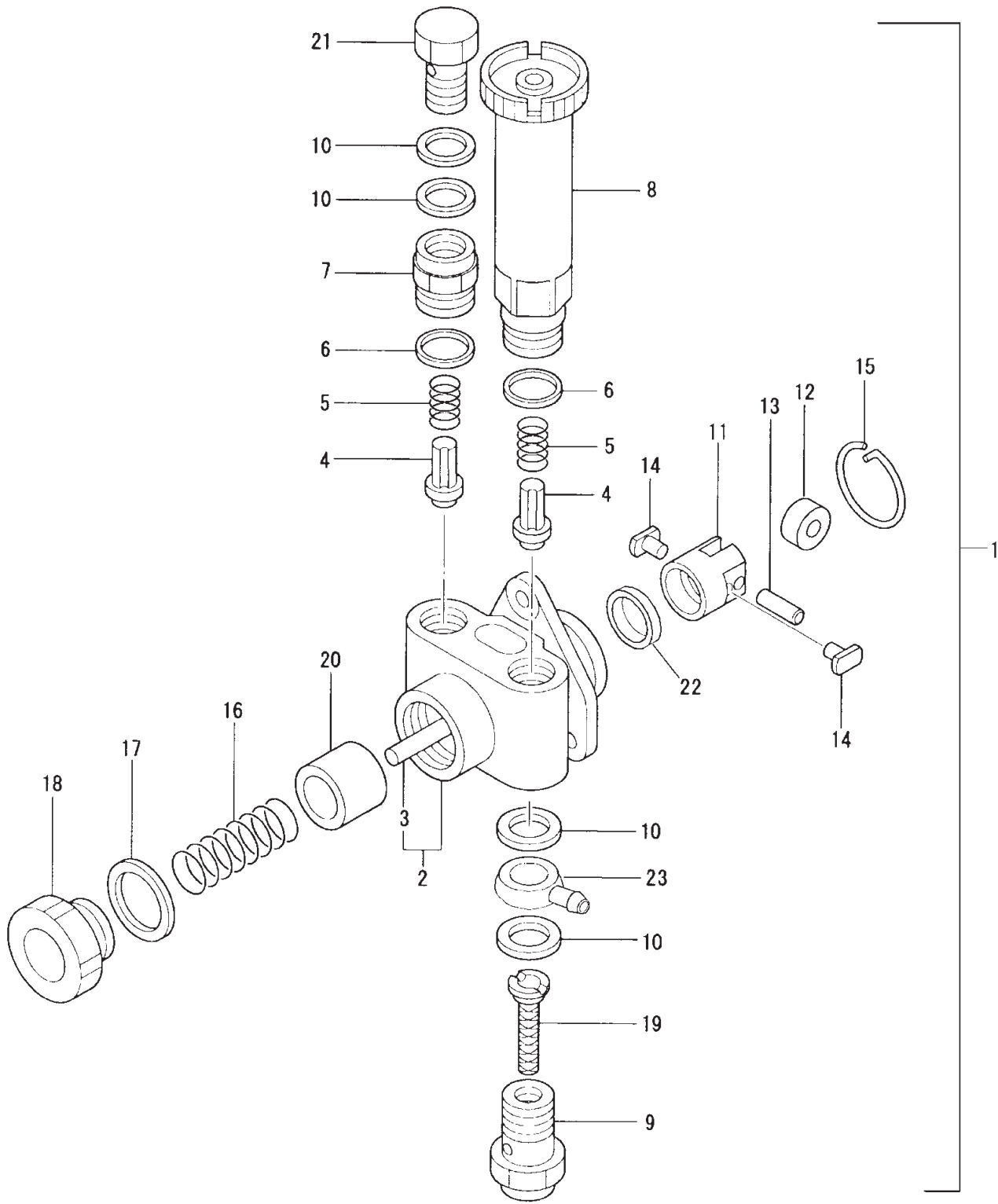
L-M944, M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	ND092100-9050	1	Fuel Feed Pump Assembly (includes all keys) (former # 344610-9050)	-
2	ND092120-0161	1	Housing	-
3	ND092168-0150	1	Push Rod	-
4	ND092121-0011	2	Check Valve	-
5	ND092124-0010	2	Valve Check Spring	-
6	ND092125-0010	2	Gasket	-
7	ND092127-0010	1	Support Valve	-
8	ND092130-0220	1	Priming Pump	-
9	ND092223-0070	1	Banjo Bolt	-
10	ND852650-0079	4	Washer	-
11	ND092174-0030	1	Tappet	-
12	ND092176-0010	1	Tappet Roller	-
13	ND092178-0010	1	Pin	-
14	ND092179-0050	2	Tappet Sliding Block	-
15	ND949072-0940	1	Snap Ring	-
16	ND092182-0020	1	Spring	-
17	ND949018-1240	1	Washer, Copper Plate	-
18	ND092184-0021	1	Plug	-
19	ND092220-0040	1	Filter	-
20	ND092171-0011	1	Piston	-
21	8526500078	1	Banjo Bolt	-

GROUP 4 – FUEL SYSTEM

Fuel Feed Pump

M-NL944T, M38CR2



32B6544a

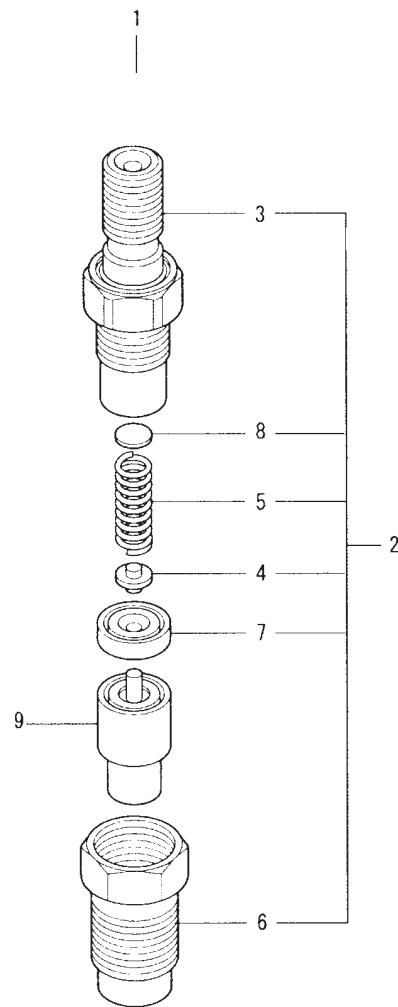
Fuel Feed Pump

M-NL944T, M38CR2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	ND092100-1291	1	Fuel Feed Pump Assembly (includes all keys) (Former # 3446109060)	-
2	ND092120-0161	1	Housing	-
3	ND092168-0150	1	Push Rod	-
4	ND092121-0011	2	Check Valve	-
5	ND092124-0010	2	Valve Check Spring	-
6	ND092125-0010	2	Gasket	-
7	ND092127-0010	1	Support Valve	-
8	ND092130-0220	1	Priming Pump	-
9	ND092223-0070	1	Banjo Bolt	-
10	ND090222-0070	4	Washer	-
11	ND092174-0030	1	Tappet	-
12	ND092176-0010	1	Tappet Roller	-
13	ND092178-0010	1	Pin	-
14	ND092179-0050	2	Tappet Sliding Block	-
15	ND949072-0940	1	Snap Ring	-
16	ND092182-0020	1	Spring	-
17	ND949018-1240	1	Washer, Copper Plate	-
18	ND092184-0021	1	Plug	-
19	ND092220-0040	1	Filter	-
20	ND092171-0011	1	Piston	-
21	ND949180-0310	1	Banjo Bolt	-
22	ND949150-2700	1	Oil Seal	-
23	ND949181-0160	1	Swivel	-

Injector

L-M944, M30CW



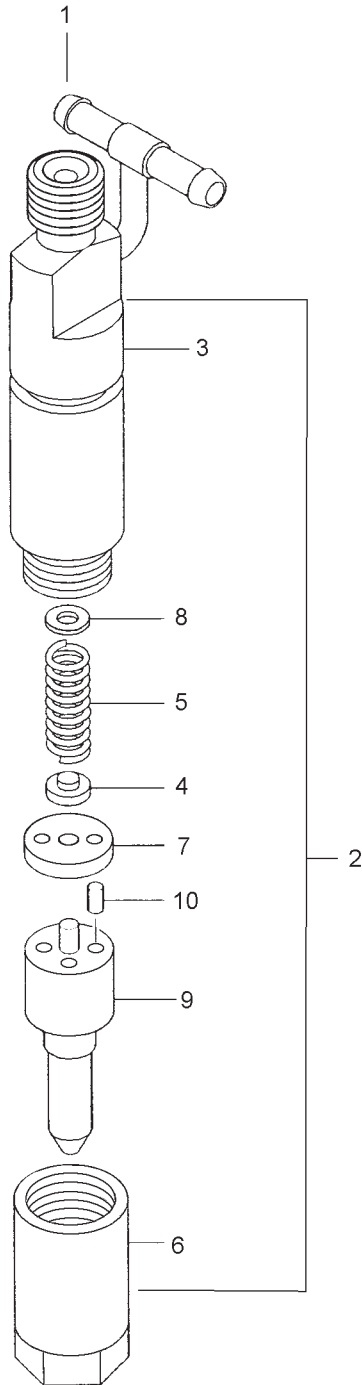
Injector

L-M944, M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32C6106000	4	Injector Assembly (includes all keys)	-
2	32C6106010	4	Injector Holder	-
3	0931105480	4	Housing	-
4	0931210380	4	Pin	-
5	0931270360	4	Spring	-
6	0931641351	4	Nozzle Retaining Nut	-
7	0931740070	4	Spacer	-
8	0931751670	**	Washer, T=0.90	-
	0931751680	**	Washer, T=0.925	-
	0931751690	**	Washer, T=0.950	-
	0931751700	**	Washer, T=0.975	-
	0931751710	**	Washer, T=1.0	-
	0931751720	**	Washer, T=1.025	-
	0931751730	**	Washer, T=1.050	-
	0931751740	**	Washer, T=1.075	-
	0931751750	**	Washer, T=1.10	-
	0931751760	**	Washer, T=1.125	-
	0931751770	**	Washer, T=1.150	-
	0931751780	**	Washer, T=1.175	-
	0931751790	**	Washer, T=1.20	-
	0931751800	**	Washer, T=1.225	-
	0931751810	**	Washer, T=1.250	-
	0931751820	**	Washer, T=1.275	-
	0931751830	**	Washer, T=1.30	-
	0931751840	**	Washer, T=1.325	-
	0931751850	**	Washer, T=1.350	-
	0931751860	**	Washer, T=1.375	-
	0931751870	**	Washer, T=1.40	-
	0931751880	**	Washer, T=1.425	-
	0931751890	**	Washer, T=1.450	-
	0931751900	**	Washer, T=1.475	-
	0931751910	**	Washer, T=1.50	-
	0931751920	**	Washer, T=1.525	-
	0931751930	**	Washer, T=1.550	-
	0931751940	**	Washer, T=1.575	-
	0931751950	**	Washer, T=1.60	-
	0931751960	**	Washer, T=1.625	-
	0931751970	**	Washer, T=1.650	-
	0931751980	**	Washer, T=1.675	-
	0931751990	**	Washer, T=1.70	-
	0931752000	**	Washer, T=1.725	-
	0931752010	**	Washer, T=1.750	-
	0931752020	**	Washer, T=1.775	-
	0931752030	**	Washer, T=1.80	-
	0931752040	**	Washer, T=1.825	-
	0931752050	**	Washer, T=1.850	-
	0931752060	**	Washer, T=1.875	-
	0931752070	**	Washer, T=1.90	-
	0931752080	**	Washer, T=1.925	-
	0931752090	**	Washer, T=1.950	-
9	3466102000	4	Tip Assembly	-

Injector

M-NL944T, M38CR2



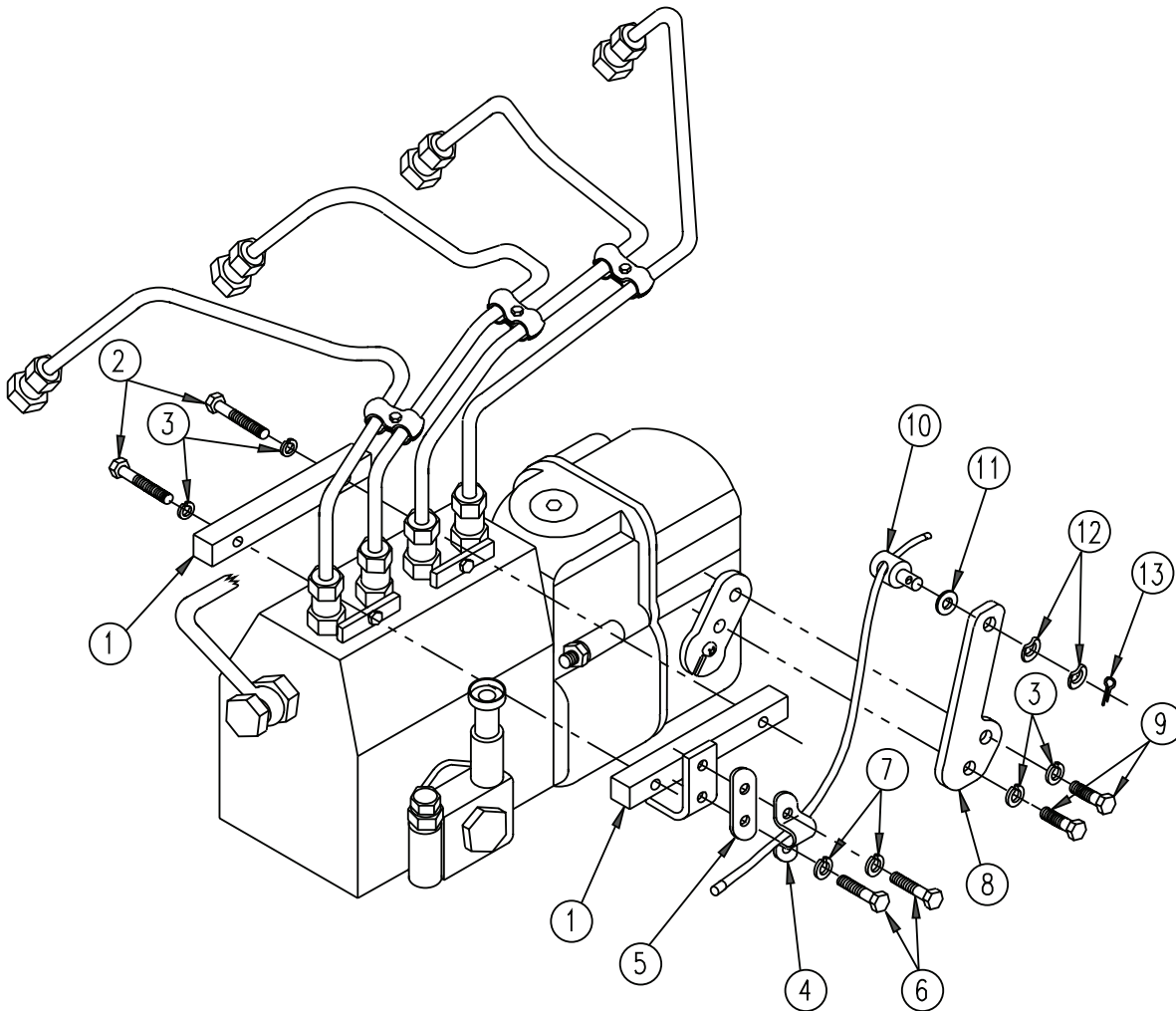
32B6140modified

Injector

M-NL944T, M38CR2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32B6107020	4	Injector Assembly (includes all keys)	-
2	32B6107600	4	Injector Holder	-
3	0931107600	4	Housing	-
4	0931210480	4	Pin	-
5	0931270410	4	Spring	-
6	0931641020	4	Nozzle Retaining Nut	-
7	0932210150	4	Packing Seal	-
8	0931752180	**	Washer, T=1.000	-
	0931752190	**	Washer, T=1.050	-
	0931752200	**	Washer, T=1.100	-
	0931752210	**	Washer, T=1.150	-
	0931752220	**	Washer, T=1.200	-
	0931752230	**	Washer, T=1.250	-
	0931752240	**	Washer, T=1.300	-
	0931752250	**	Washer, T=1.350	-
	0931752260	**	Washer, T=1.400	-
	0931752270	**	Washer, T=1.450	-
	0931752280	**	Washer, T=1.500	-
	0931752290	**	Washer, T=1.550	-
	0931752300	**	Washer, T=1.600	-
	0931752310	**	Washer, T=1.650	-
	0931752320	**	Washer, T=1.700	-
	0931752330	**	Washer, T=1.750	-
	0931752340	**	Washer, T=1.800	-
	0931752420	**	Washer, T=1.275	-
	0931752430	**	Washer, T=1.325	-
	0931752440	**	Washer, T=1.375	-
	0931752450	**	Washer, T=1.425	-
	0931752460	**	Washer, T=1.475	-
	0931752530	**	Washer, T=0.950	-
	0931752560	**	Washer, T=0.700	-
	0931752570	**	Washer, T=0.750	-
	0931752580	**	Washer, T=0.800	-
	0931752590	**	Washer, T=0.850	-
	0931752600	**	Washer, T=0.900	-
	0931752610	**	Washer, T=0.975	-
	0931752620	**	Washer, T=1.025	-
	0931752630	**	Washer, T=1.075	-
	0931752640	**	Washer, T=1.125	-
	0931752650	**	Washer, T=1.175	-
	0931752660	**	Washer, T=1.225	-
9	32B6107200	4	Tip Assembly	-
10	9490823160	8	Pin	-

Throttle Assembly

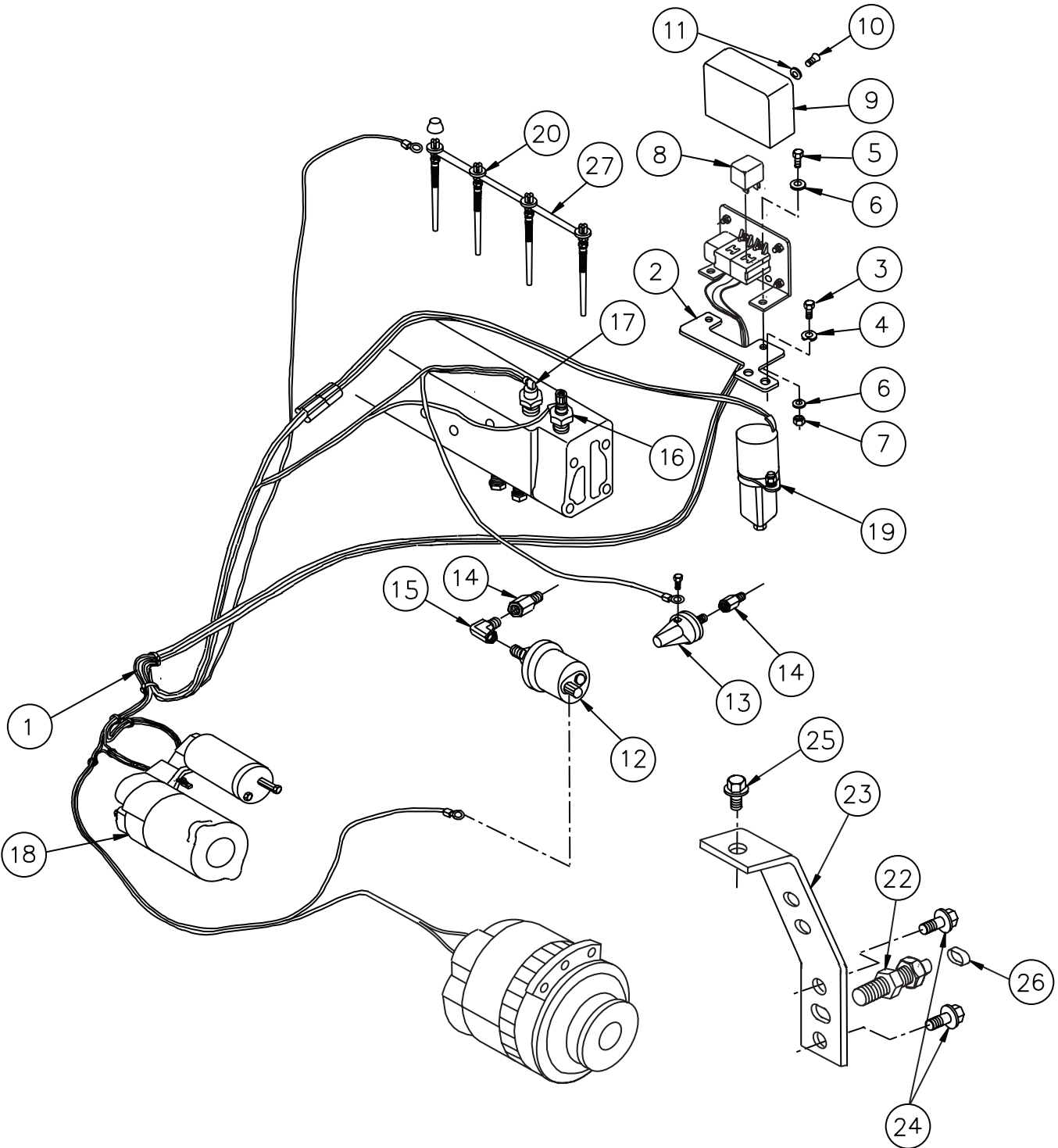


A-11648/ B-9332

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	26-91200	1	Throttle Assembly (includes all keys)	-
1	23-91201	1	Bracket, Throttle Connection	-
2	12-01152	2	Capscrew, Hex Head M6 x 1.0 x 40 mm Grade 8.8	-
3	15-01132	4	Lock Washer, Helical M6	-
4	23-91001	1	Cable Clamp	-
5	23-91002	1	Clamp Shim	-
6	12-04406	2	Capscrew, Hex Head M5 x .8 x 12 mm	-
7	15-04400	2	Lock Washer, Helical M5	-
8	23-91202	1	Throttle Lever	-
9	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
10	23-91003	1	Throttle Pivot 1/4" O.D. Stem	-
11	15-01134	1	Flat Washer M6 S/S	-
12	15-99131	2	Wave Washer M6 S/S	-
13	00-54801	1	Cotter Pin, Brass 3/32 x 1/2	-

Electrical System 12 Volt Standard Ground

L944



A-11649/ C-4985propulsion

Electrical System 12 Volt Standard Ground

L944

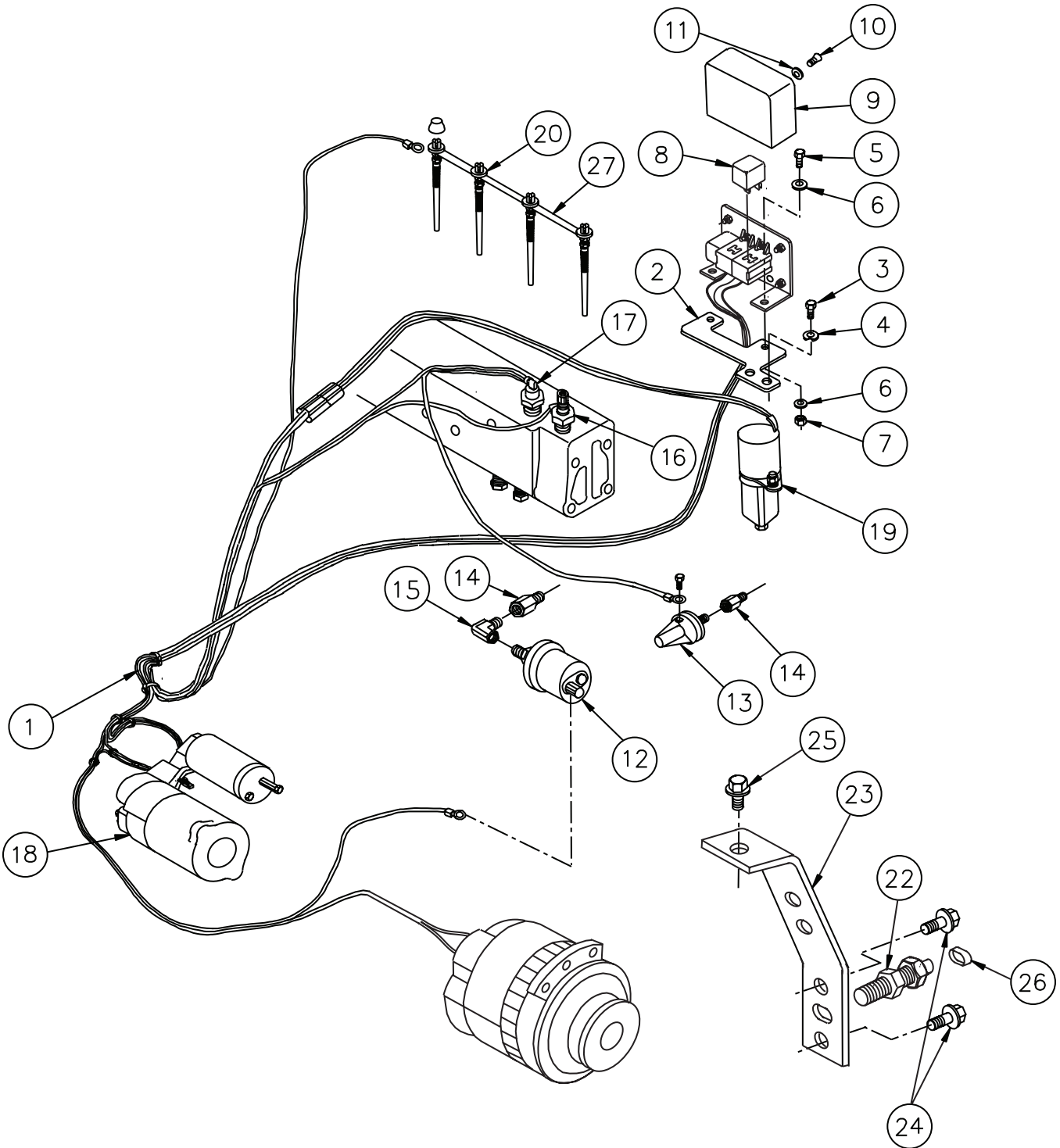
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-41203	1	Wire Harness Assembly	-
2	23-41204	1	Bracket, Circuit Breaker & Relay	-
3	12-00812	2	Capscrew, Hex Head M10 x 1.5 x 40 mm	-
4	15-00804	2	Wave Washer, M10	-
5	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
6	15-00008	4	Flat Washer M6	-
7	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
8	22-42047	2	Relay, SPDT 12 VDC 50 Amp	-
9	00-44801	1	Cover, Circuit Breaker & Relays	-
10	12-00094	2	Machine Screw, Phillips #10- 32 x 3/8" S/S	-
11	15-70002	2	Flat Washer #10 S/S	-
12	22-41016	1	Pressure Sender 0-80 PSI	-
13	22-40233	1	Switch, Oil Pressure 15 PSI	-
14	21-00139	2	Female Adapter, Steel 1/8 NPT x 1/8 BST	-
15	21-04801	1	Street Elbow, 90° Steel 1/8 NPT	-
16	22-42055	1	Temperature Sender 250°F	-
17	22-41025	1	Switch, Water Temperature 210°F	-
18	32A6611100	1	Starter, 12V Standard Ground	-
19	32A8705900	1	Stop Solenoid 12V	-
20	32A6603100	4	Glow Plug 12V	-
21	22-91200	1	Main Instrument Panel 12V SAE #10	-
22	22-42551	1	Magnetic Pick-up 3/4- 16 x 4.37"	-
23	23-41203	1	Bracket, Magnetic Pick-up Mtg.*	-
24	19M7788	2	Capscrew, Hex Head Flanged M12 x 1.75 x 25 mm*	-
25	19M7784	1	Capscrew, Hex Head Flanged M10 x 1.5 x 20 mm*	-
26	22-44813	1	Boot	-
27	32A6604101	1	Connection Strip	-

*Note:

Not used on units with V-drive Transmissions - Mounting
Bracket includes provision for Magnetic Pick-up.

Electrical System 24 Volt Standard Ground

L944



A-119290/ C-4985propulsion

Electrical System 24 Volt Standard Ground

L944

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-41203	1	Wire Harness Assembly	-
2	23-41204	1	Bracket, Circuit Breaker & Relay	-
3	12-00812	2	Capscrew, Hex Head M10 x 1.5 x 40 mm	-
4	15-00804	2	Wave Washer, M10	-
5	12-01131	2	Capscrew, Hex Head M6 x 1.0 x 20 mm	-
6	15-00008	4	Flat Washer M6	-
7	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
8	22-40085	2	Relay, SPDT 24 VDC 20 Amp	-
9	00-44801	1	Cover, Circuit Breaker & Relays	-
10	12-00094	2	Machine Screw, Phillips #10- 32 x 3/8" S/S	-
11	15-70002	2	Flat Washer #10 S/S	-
12	22-41016	1	Pressure Sender 0-80 PSI	-
13	22-40233	1	Switch, Oil Pressure 15 PSI	-
14	21-00139	2	Female Adapter, Steel 1/8 NPT x 1/8 BST	-
15	21-04801	1	Street Elbow, 90° Steel 1/8 NPT	-
16	22-42055	1	Temperature Sender 250°F	-
17	22-41025	1	Switch, Water Temperature 210°F	-
18	32A6601200	1	Starter, 24V Standard Ground	-
19	22-51201	1	Stop Solenoid 24V	-
20	3446631302	4	Glow Plug 24V	-
21	22-91205	1	Main Instrument Panel 24V	-
22	22-42551	1	Magnetic Pick-up 3/4- 16 x 4.37"	-
23	23-41203	1	Bracket, Magnetic Pick-up Mtg.*	-
24	19M7788	2	Capscrew, Hex Head Flanged M12 x 1.75 x 25 mm*	-
25	19M7784	1	Capscrew, Hex Head Flanged M10 x 1.5 x 20 mm*	-
26	22-44813	1	Boot	-
27	32A6604101	1	Connection Strip	-

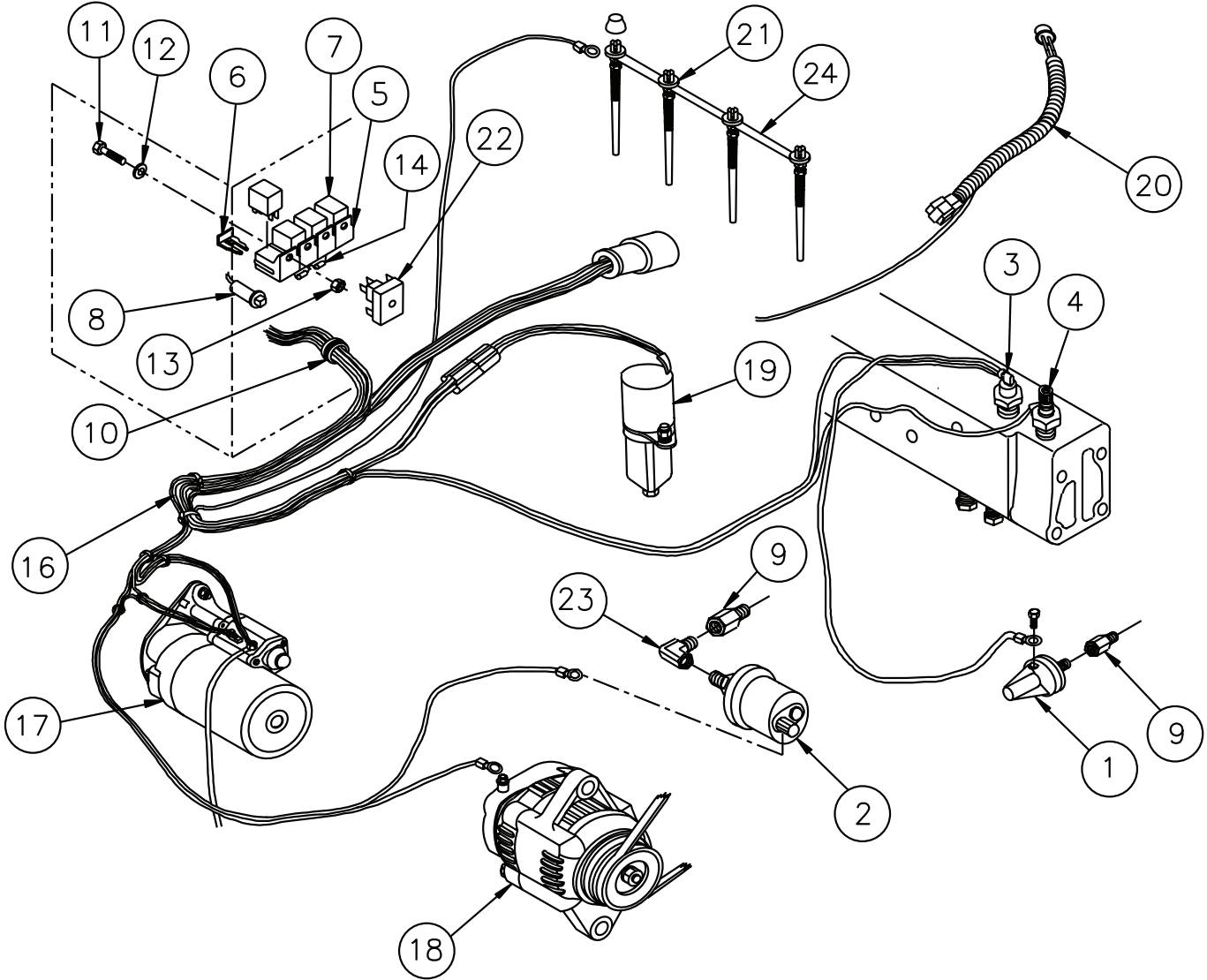
*Note:

Not used on units with V-drive Transmissions - Mounting
Bracket includes provision for Magnetic Pick-up

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Standard Ground

M944 & M30CW



A-11225/ C-4985

Electrical System 12 Volt Standard Ground

M944 & M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F (replaces 22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground	-
5	22-40391	4	Relay Base without Retainer	-
6	22-40393	4	Terminal Retainer	-
7	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
8	22-42043	1	Circuit Breaker 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
9	21-00139	2	Female Adapter Steel, 1/8 NPT	-
10	NG-79-R	1	Grommet	-
11	12-00094	2	Machine Screw, BH Slotted #10-32 x 3/8" S/S	-
12	15-00032	2	Flat Washer #10	-
13	14-00001	2	Hex Nut #10- 32	-
14	22-41060	2	Diode 6 Amp 50 Volt	-
15	22-40930	1	20' Wire Harness Extension (not shown)	-
16	22-41201	1	Engine Wire Harness with Round "Merc" Connector	-
17	32A6611100	1	Starter 12 Volt Standard Ground (see Assembly Detail)	-
18	32A6800302	1	12V/ 50 Amp Alternator, Standard Ground (See Parts Detail)	-
19	32A8707050	1	Stop Solenoid 12 Volt (See Assembly Detail)	-
20	22-42070	1	Switch, High Exhaust Temperature	-
21	32A6603100	4	Glow Plug 12 Volt	-
22	22-40407	1	Timer Module 12 VDC 20 Amp	-
23	21-04801	1	Street Elbow 90° Steel 1/8 NPT	-
24	32A6604101	1	Connection Plate	-
25	22-40682	1	Quick Disconnect Adapter (Use with Switch 22-40944)	-

Electrical System 12 Volt Isolated Ground

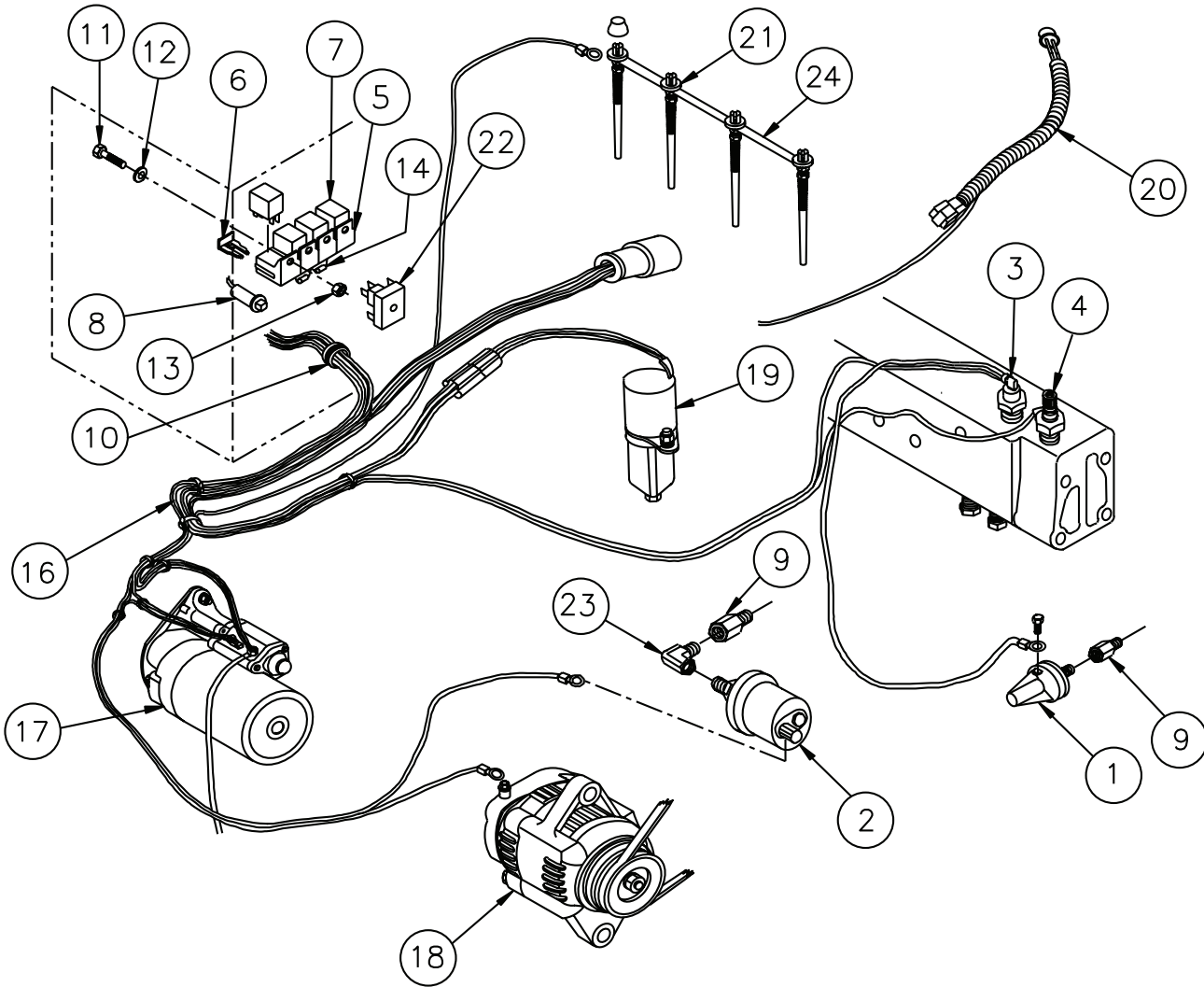
M944 & M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F (formerly #22-40906)	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground	-
5	22-40391	5	Relay Base without Retainer	-
6	22-40393	5	Terminal Retainer	-
7	22-42047	5	Relay, SPDT 12 VDC 50 Amp	-
8	22-42043	1	Circuit Breaker 15 Amp - Snap - In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
9	21-00139	2	Female Adapter Steel, 1/8 NPT x 1/8 BSPT	-
10	NG-79-R	1	Grommet	-
11	12-00094	2	Machine Screw, PH Phillips #10-32 x 3/8" S/S	-
12	15-00032	2	Flat Washer #10	-
13	14-00001	2	Hex Nut #10- 32	-
14	22-41060	2	Diode 6 Amp 50 Volt	-
15	22-40930	1	20' Wire Harness Extension (not shown)	-
16	22-41201	1	Engine Wire Harness with Round "Merc" Connector	-
	22-71213	1	Ground Harness Addition (includes 1 ea. Relay Base 22-40391 and Retainer 22-40393)	-
17	22-41208	1	Starter 12 Volt Isolated Ground (see Assembly Detail)	-
18	22-40332	1	Alternator, 12 Volt/ 90 Amp Isolated Ground (see Assembly Detail)	-
19	32A8707050	1	Stop Solenoid 12 Volt (see Assembly Detail)	-
20	22-42070	1	Switch, High Exhaust Temperature	-
21	32A6603100	4	Glow Plug 12 Volt	-
22	22-40407	1	Timer Module 12 VDC 20 Amp	-
23	21-04801	1	Street Elbow 90° Steel 1/8 NPT	-
24	32A6604101	1	Connection Plate	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Standard Ground

M944 & M30CW



Electrical System 24 Volt Standard Ground

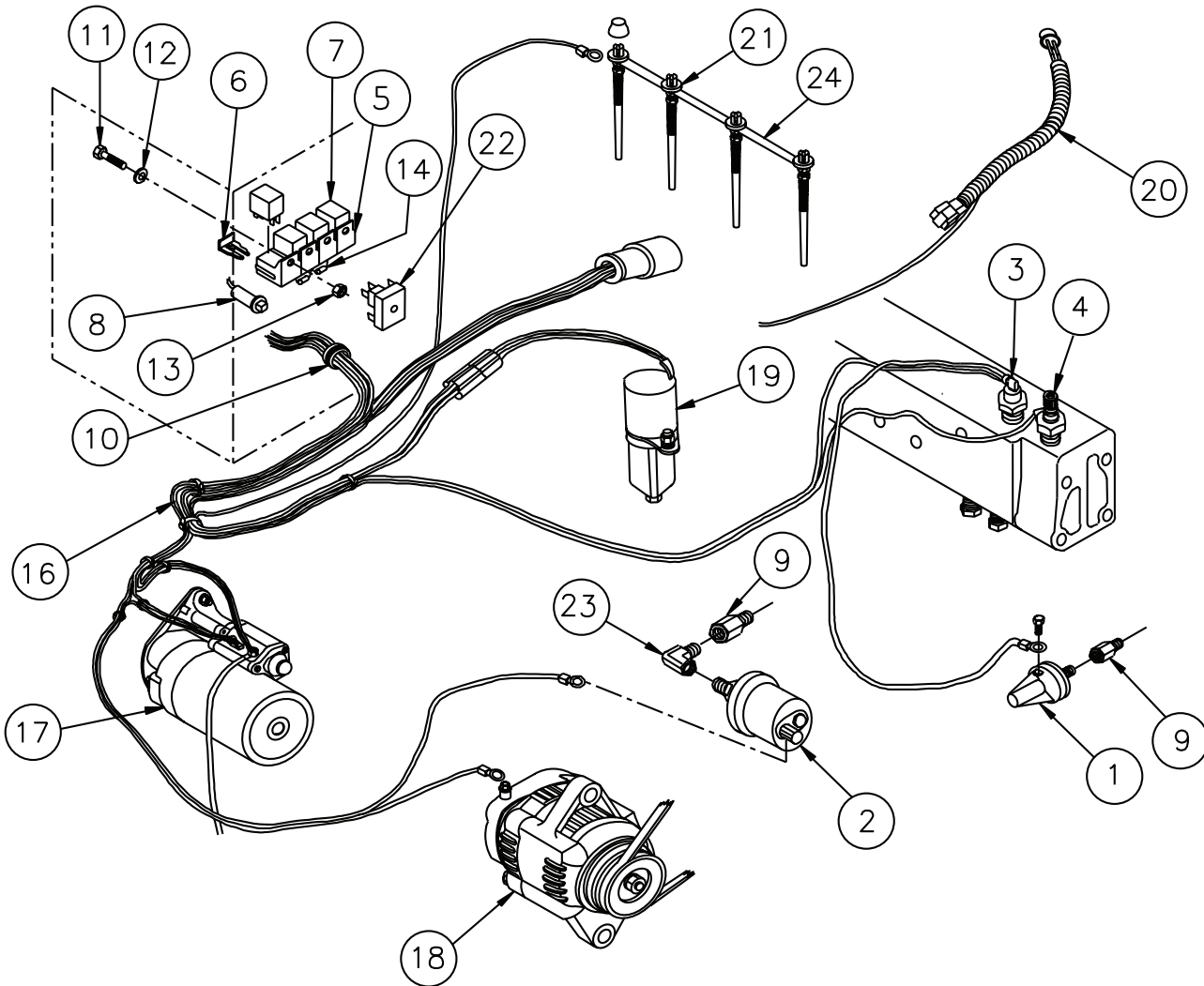
M944 & M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F (former # 22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground	-
5	22-40391	4	Relay Base	-
6	22-40393	4	Terminal Retainer	-
7	22-40085	4	Relay, SPDT 24 VDC 20 Amp	-
8	22-42043	1	Circuit Breaker 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
9	21-00139	2	Female Adapter Steel, 1/8 NPT x 1/8 BSPT	-
10	00-40028	1	Grommet	-
11	12-00094	2	Machine Screw, PH Phillips #10-32 x 3/8" S/S	-
12	15-00032	2	Flat Washer #10	-
13	14-00001	2	Hex Nut #10- 32	-
14	22-41060	2	Diode 6 Amp 50 Volt	-
15	22-40930	1	20' Wire Harness Extension (not shown)	-
16	22-41201	1	Engine Wire Harness with Round "Merc" Connector	-
17	32A6601200	1	Starter 24 Volt Standard Ground (see Assembly Detail)	-
18	22-40278	1	Alternator, 24 Volt/ 40 Amp Standard Ground (see Assembly Detail)	-
19	32A8705200	1	Stop Solenoid 24 Volt (see Assembly Detail)	-
20	22-42070	1	Switch, High Exhaust Temperature	-
21	3446631303	4	Glow Plug 24 Volt (former # 3446631302)	-
22	22-40408	1	Timer Module 24 VDC 20 Amp	-
23	21-04801	1	Street Elbow 90° Steel 1/8 NPT	-
24	32A6604101	1	Connection Plate	-
25	22-40682	1	Quick Disconnect Adaptor (use with Switch 22-40944)	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Isolated Ground

M944 & M30CW



A-11336/ C-4985

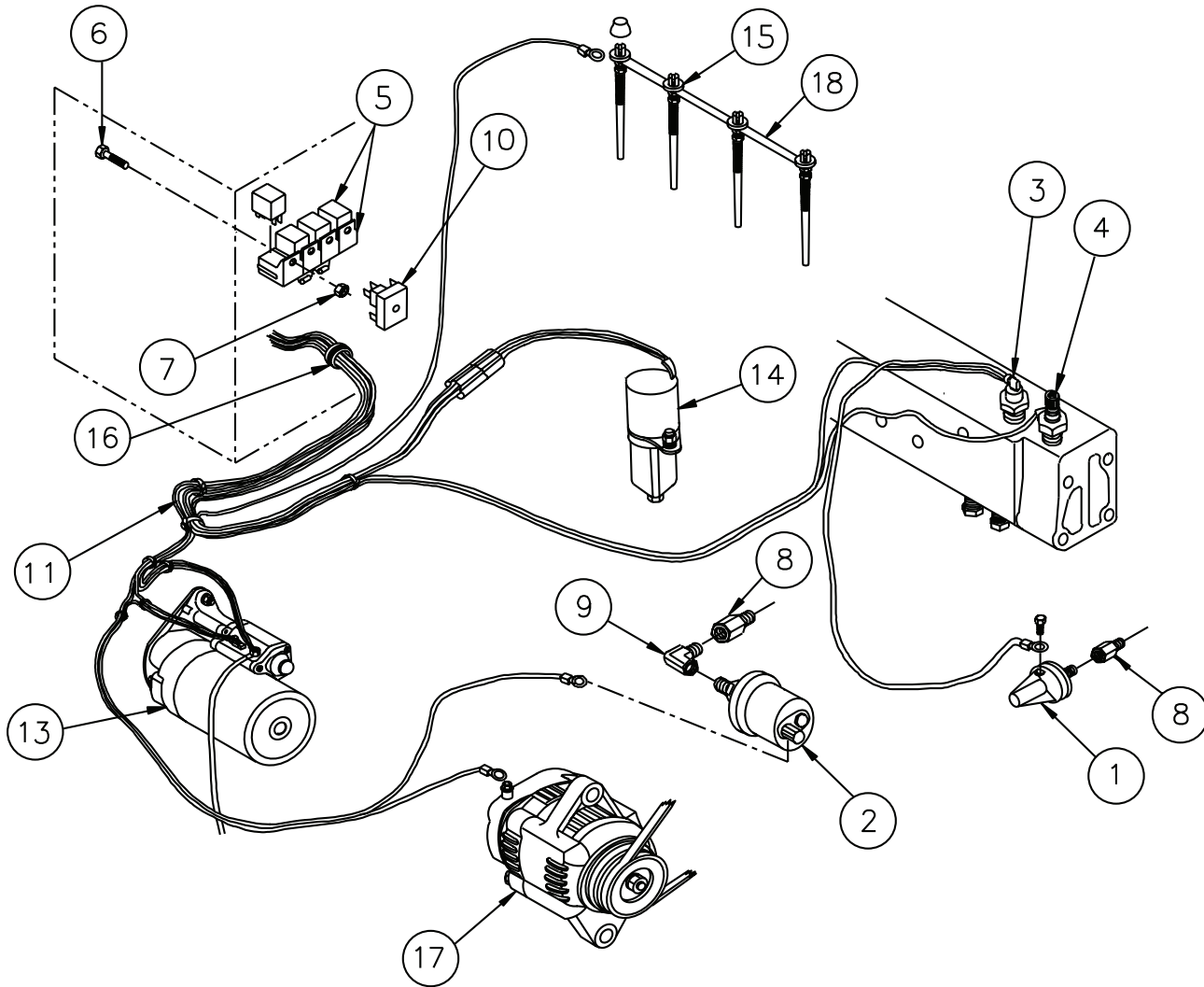
Electrical System 24 Volt Isolated Ground

M944 & M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F (formerly #22-40906)	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground	-
5	22-40391	5	Relay Base without Retainer	-
6	22-40393	5	Terminal Retainer	-
7	22-40085	5	Relay, SPDT 24 VDC 20 Amp	-
8	22-42043	1	Circuit Breaker 15 Amp - Snap-In Type	-
	22-40674	1	Circuit Breaker 15 Amp - Screw Mount Type	-
9	21-00139	2	Female Adapter Steel, 1/8 NPT x 1/8 BSPT	-
10	00-40028	1	Grommet	-
11	12-00094	2	Machine Screw, PH Phillips #10-32 x 3/8" S/S	-
12	15-00032	2	Flat Washer #10	-
13	14-00001	2	Hex Nut #10- 32	-
14	22-41060	2	Diode 6 Amp 50 Volt	-
15	22-40930	1	20' Wire Harness Extension (not shown)	-
16	22-41201	1	Engine Wire Harness with Round "Merc" Connector	-
	22-71213	1	Ground Harness Addition (includes 1 ea. Relay Base 22-40391 and Retainer 22-40393)	-
17	22-41209	1	Starter 24 Volt Isolated Ground (see Assembly Detail)	-
18	22-71052	1	Alternator, 24 Volt/ 35 Amp Isolated Ground (see Assembly Detail)	-
19	32A8705200	1	Stop Solenoid 24 Volt (see Assembly Detail)	-
20	22-42070	1	Switch, High Exhaust Temperature	-
21	3446631303	4	Glow Plug 24 Volt (former # 3446631302)	-
22	22-40408	1	Timer Module 24 VDC 20 Amp	-
23	21-04801	1	Street Elbow 90° Steel 1/8 NPT	-
24	32A6604101	1	Connecting Plate	-

Electrical System 12 Volt Standard Ground

M30CW with Relay Board



A-11474/ C-4985comm

Electrical System 12 Volt Standard Ground

M30CW with Relay Board

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-41025	1	Switch, Water Temperature 210°F	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground	-
5	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-00001	4	Machine Screw, Phillips #10- 32 x 3/4" S/S	-
7	14-00032	4	Hex Nut, Nylock #10- 32 S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BST	-
9	21-04801	1	Street Elbow 90° Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness	-
12	22-40930	1	20' Wire Harness Extension	-
13	32A6611100	1	Starter, 12 Volt Standard Ground (see parts detail)	-
14	32A8707050	1	Stop Solenoid 12 Volt (see assembly detail)	-
15	32A6603100	4	Glow Plug 12 V	-
16	00-40028	1	Grommet 7/8" I.D. x 1- 1/2" O.D.	-
17	32A6800302	1	Alternator 12V/ 50 Amp Standard Ground (see parts detail)	-
18	32A6604101	1	Connection Strip	-

Electrical System 12 Volt Standard Ground

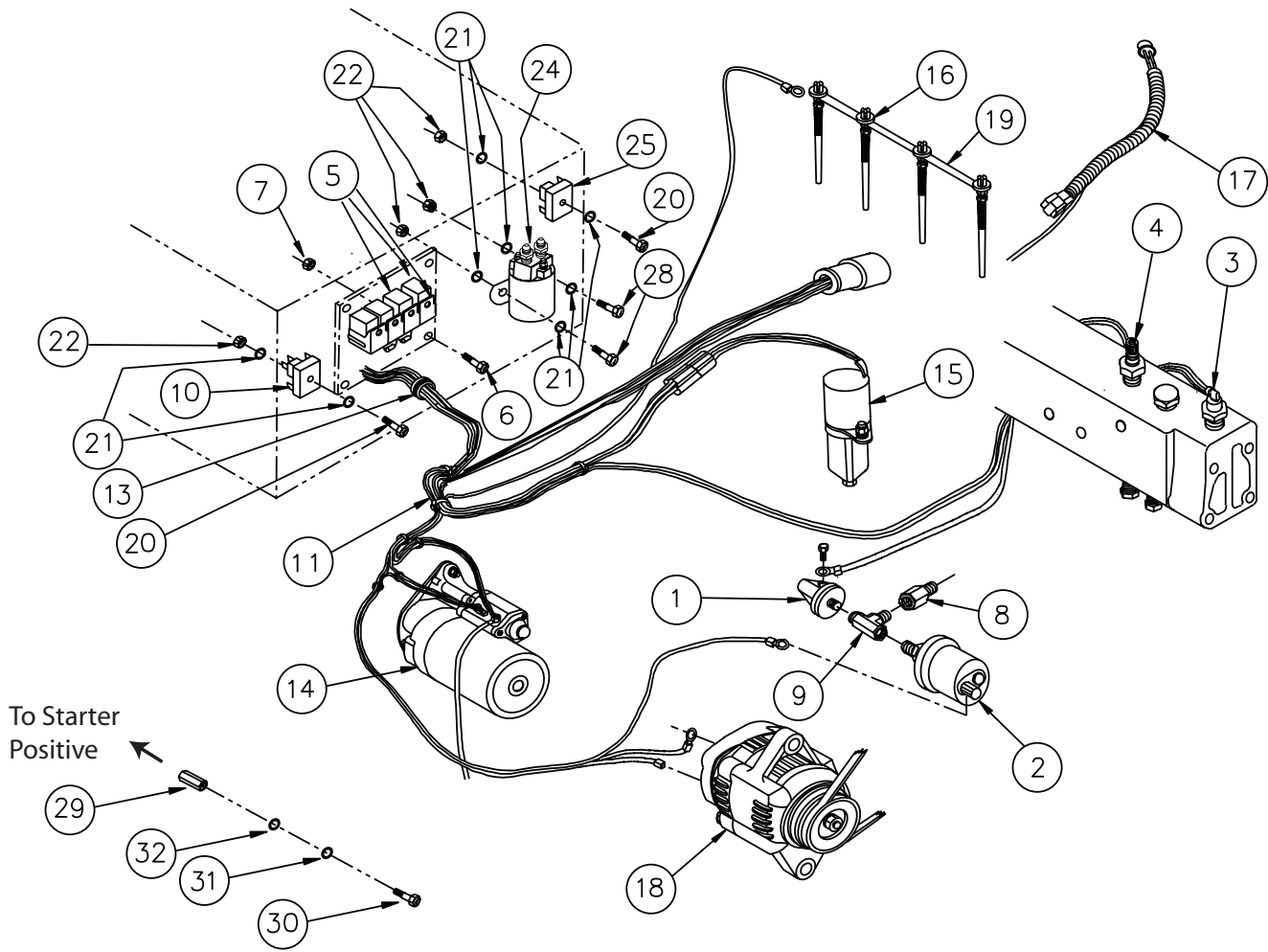
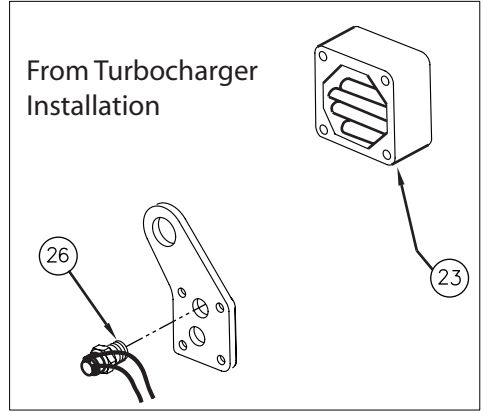
M944T & M38CR2 without Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT (former # 22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness With Round "MerC" Connector	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	32A6610101	1	Starter, 12 Volt Standard Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 V	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	32A6806600	1	Alternator 12V/ 75 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-00032	1	Capscrew, M6 x 30 mm	-
21	15-00008	1	Flat Washer, M6	-
22	14-04803	1	Hex Nut, Nylock M6	-
23	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Standard Ground

M944T & M38CR2 with Air Intake Heater



A-12030/ C-4985units2

Electrical System 12 Volt Standard Ground

M944T & M38CR2 with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT (former # 22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail) (former # 22-70083-1)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc" Connector	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	32A6610101	1	Starter, 12 Volt Standard Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	32A6806600	1	Alternator 12V/ 75 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	32B6606100	1	Intake Heater	-
24	22-41131	1	Solenoid 12 volt 100 Amp	-
25	22-70071	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-
33	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

Electrical System 12 Volt Standard Ground

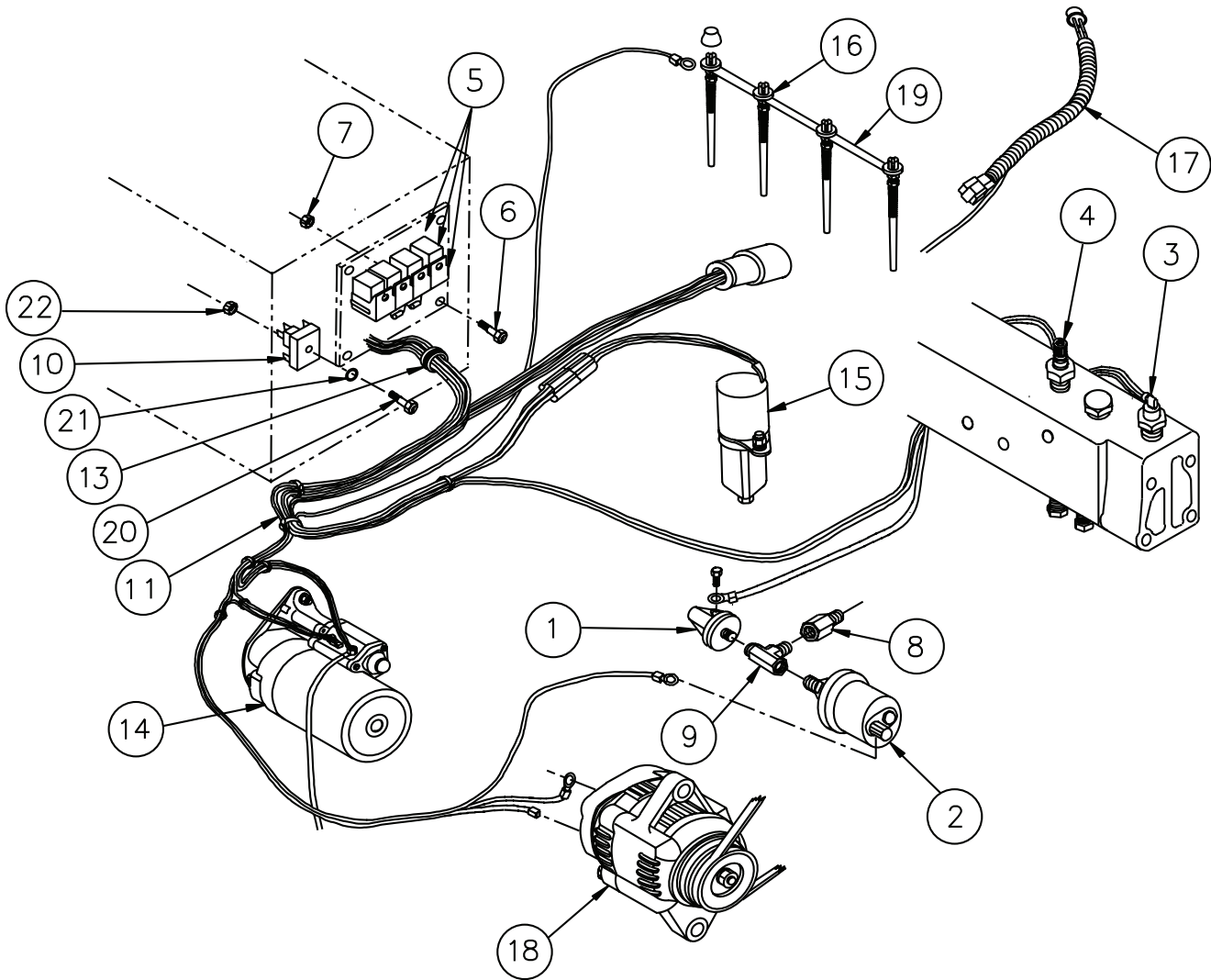
B+ Electrical Systems
M944T with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
	22-71263-1	1	Relay Board Sub-Assembly (see parts detail) (former # 22-70083-1)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41238	1	Engine Wire Harness with Round "Merc" Connector	-
12	22-45620	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	32A6610101	1	Starter, 12 Volt Standard Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	32A6806600	1	Alternator 12V/ 75 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	32B6606100	1	Intake Heater	-
24	22-41131	1	Solenoid 12 volt 100 Amp	-
25	22-70071	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-
33	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Isolated Ground

M944T & M38CR2 without Air Intake Heater



A-12108/ C-4985units

Electrical System 12 Volt Isolated Ground

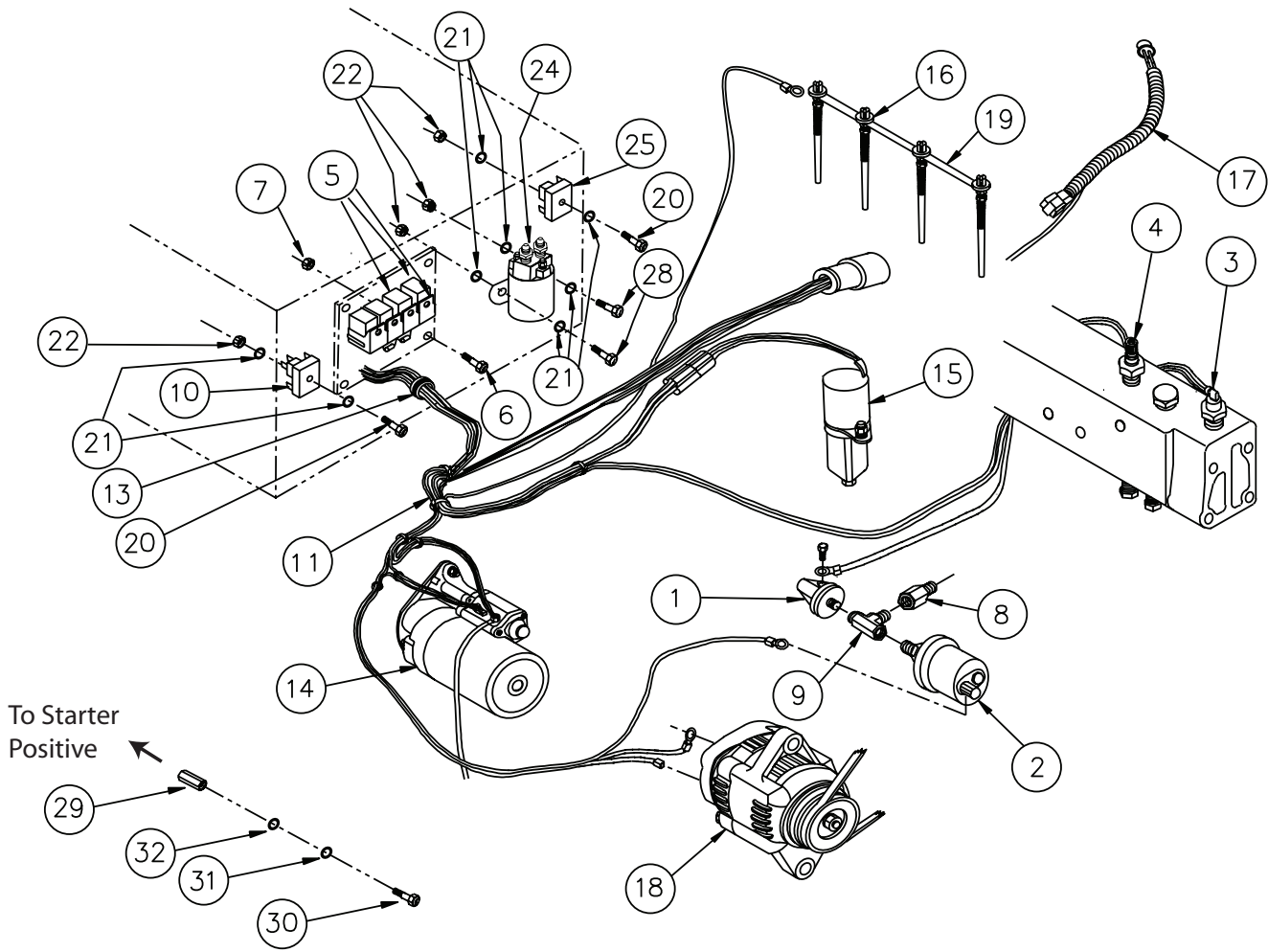
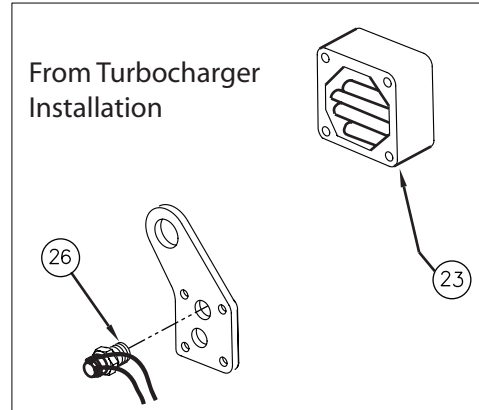
M944T & M38CR2 without Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-42047	5	Relay, SPDT 12 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc: Connector	-
	22-71213	1	Harness Addition, Isolated Ground	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	22-41208	1	Starter, 12 Volt Isolated Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 V	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40332	1	Alternator 12V/ 90 Amp Isolated Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-00032	1	Capscrew, M6 x 30 mm	-
21	15-00008	1	Flat Washer, M6	-
22	14-04803	1	Hex Nut, Nylock M6	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Isolated Ground

M944T & M38CR2 with Air Intake Heater



A-12030/ C-4985units2

Electrical System 12 Volt Isolated Ground

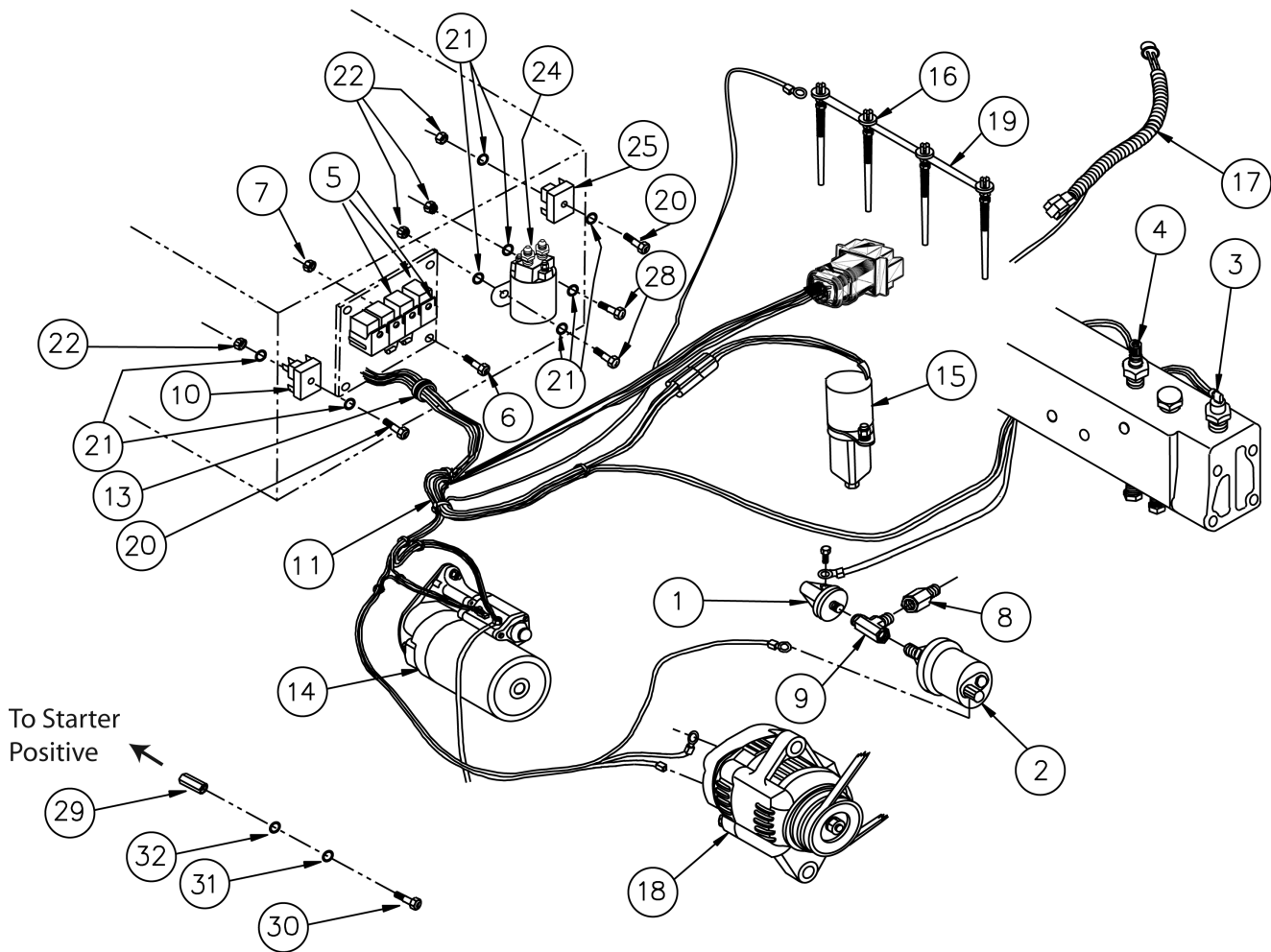
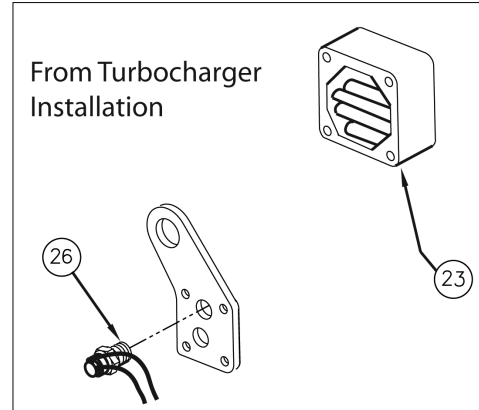
M944T & M38CR2 with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-42047	5	Relay, SPDT 12 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc" Connector	-
	22-71223	1	Harness Addition, Isolated Ground	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	22-41208	1	Starter, 12 Volt Isolated Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40332	1	Alternator 12V/ 90 Amp Isolated Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21201	1	Intake Heater	-
24	22-41131	1	Solenoid 12 volt 100 Amp	-
25	22-70071	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Isolated Ground

B+ Electrical System
M944T with Air Intake Heater



A-12030/ C-4985units2

Electrical System 12 Volt Isolated Ground

B+ Electrical System
M944T with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-42047	5	Relay, SPDT 12 VDC 50 Amp	-
	22-71263-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41238	1	Engine Wire Harness with Square "Deutsch" Connector	-
	22-71223	1	Harness Addition, Isolated Ground	-
12	22-45620	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	22-41208	1	Starter, 12 Volt Isolated Ground (see assembly detail)	-
15	32A8705900	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 12 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40332	1	Alternator 12V/ 90 Amp Isolated Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21201	1	Intake Heater	-
24	22-41131	1	Solenoid 12 volt 100 Amp	-
25	22-70071	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-

Electrical System 24 Volt Standard Ground

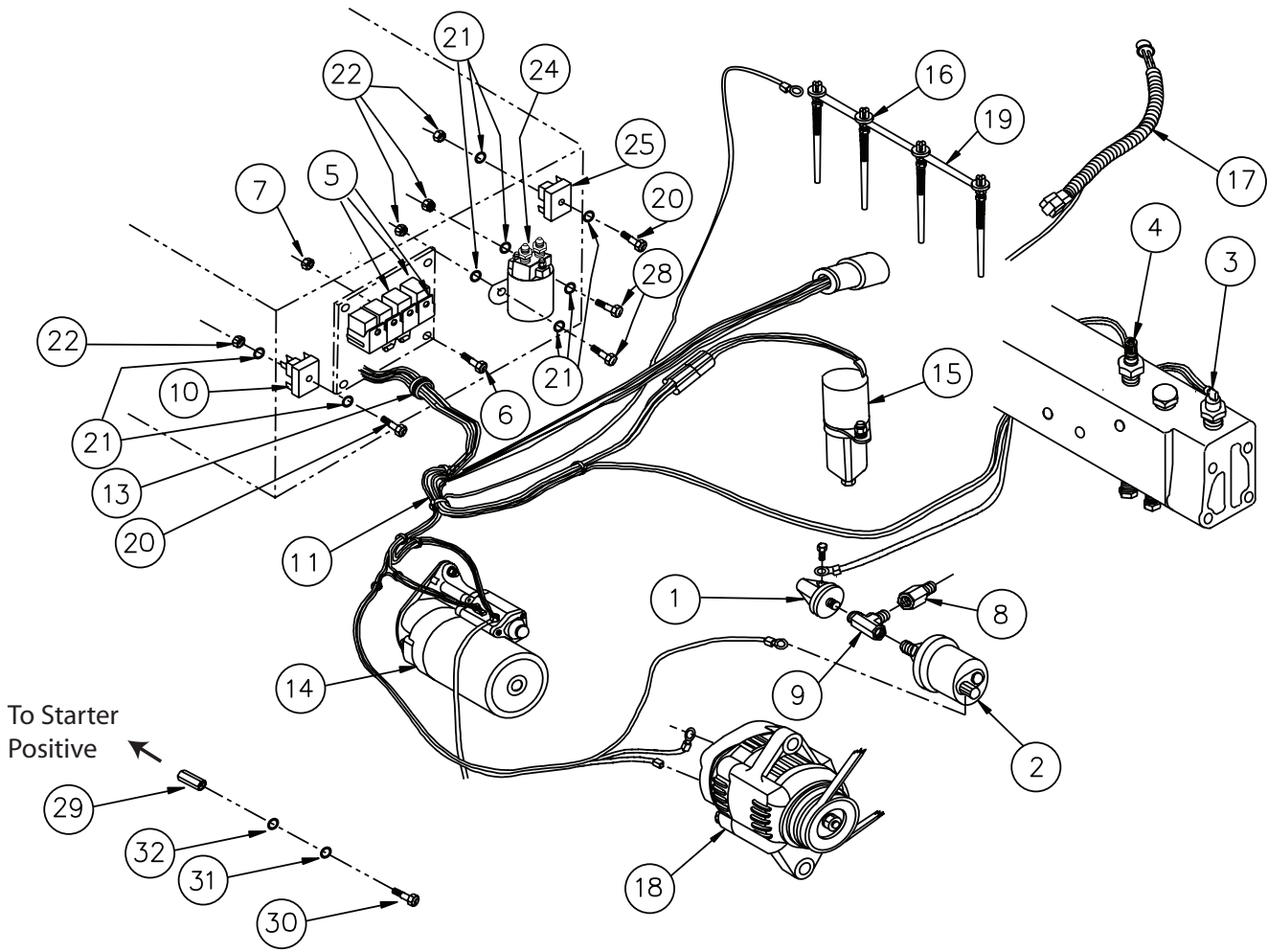
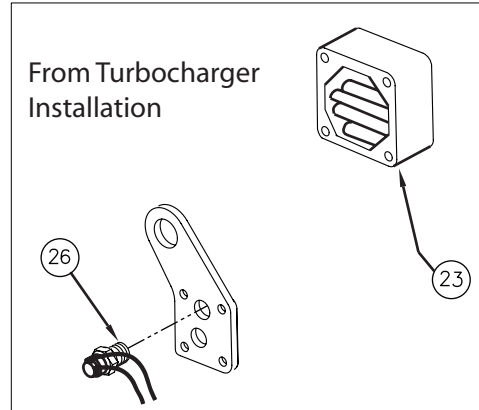
M944T & M38CR2 without Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT (former # 22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-40085	4	Relay, SPDT 12 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc" Connector	-
12	22-40930	1	20' Wire Harness Extension	-
13	00-40028	1	Grommet	-
14	32A6601200	1	Starter, 24 Volt Standard Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 12 Volt (see assembly detail)	-
16	32A6607021	4	Glow Plug 24 V	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40278	1	Alternator 24 Volt 40 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-00032	1	Capscrew, M6 x 30 mm	-
21	15-00008	1	Flat Washer, M6	-
22	14-04803	1	Hex Nut, Nylock M6	-
23	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Standard Ground

M944T & M38CR2 with Air Intake Heater



Electrical System 24 Volt Standard Ground

M944T & M38CR2 with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT (former #22-41025)	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-40085	4	Relay, SPDT 24 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc" Connector	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	32A6601200	1	Starter, 24 Volt Standard Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 24 Volt (see assembly detail)	-
16	32A6607021	4	Glow Plug 24 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40278	1	Alternator 24V/ 40 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21210	1	Intake Heater Sub-Assembly (see Parts detail)	-
24	22-41132	1	Solenoid 24 volt 100 Amp	-
25	22-70072	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-
23	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

Electrical System 24 Volt Standard Ground

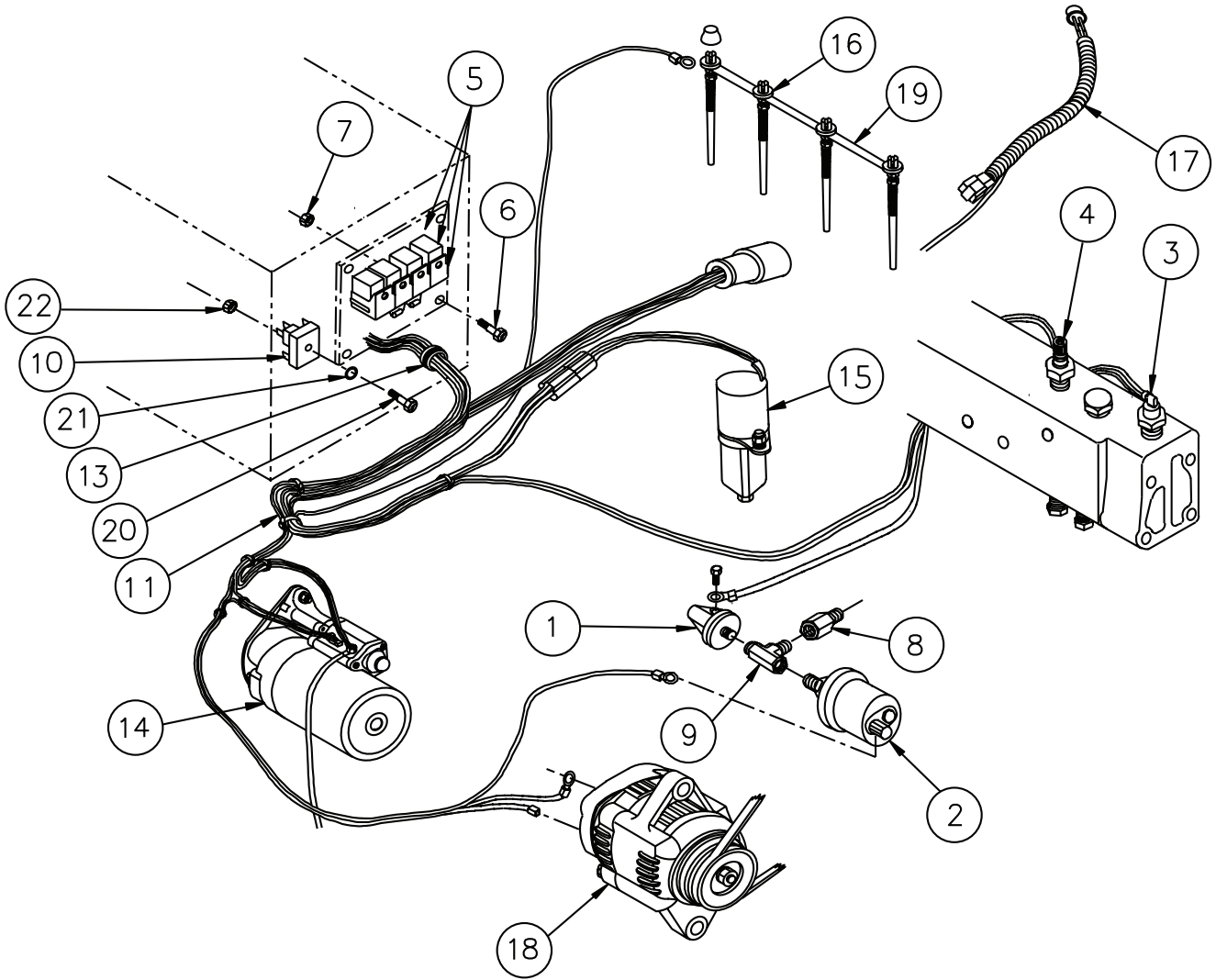
B+ System
M944T with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Switch, Oil Pressure 15 PSI	-
2	22-41016	1	Pressure Sender 0- 80 PSI, Standard Ground	-
3	22-40944	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-42055	1	Temperature Sender 250°F, Standard Ground 3/8 NPT	-
5	22-40085	4	Relay, SPDT 24 VDC 50 Amp	-
	22-71263-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41238	1	Engine Wire Harness with Square "Deutsch" Connector	-
12	22-40930	1	20' Wire Harness Extension (not shown)	-
13	00-40028	1	Grommet	-
14	32A6601200	1	Starter, 24 Volt Standard Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 24 Volt (see assembly detail)	-
16	32A6607021	4	Glow Plug 24 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-40278	1	Alternator 24V/ 40 Amp Standard Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21210	1	Intake Heater Sub-Assembly (see Parts detail)	-
24	22-41132	1	Solenoid 24 volt 100 Amp	-
25	22-70072	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-
33	22-40682	1	Quick Disconnect Adapter (use with switch 22-40944)	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Isolated Ground

M944T & M38CR2 without Air Intake Heater



A-12132/ C-4985units

Electrical System 24 Volt Isolated Ground

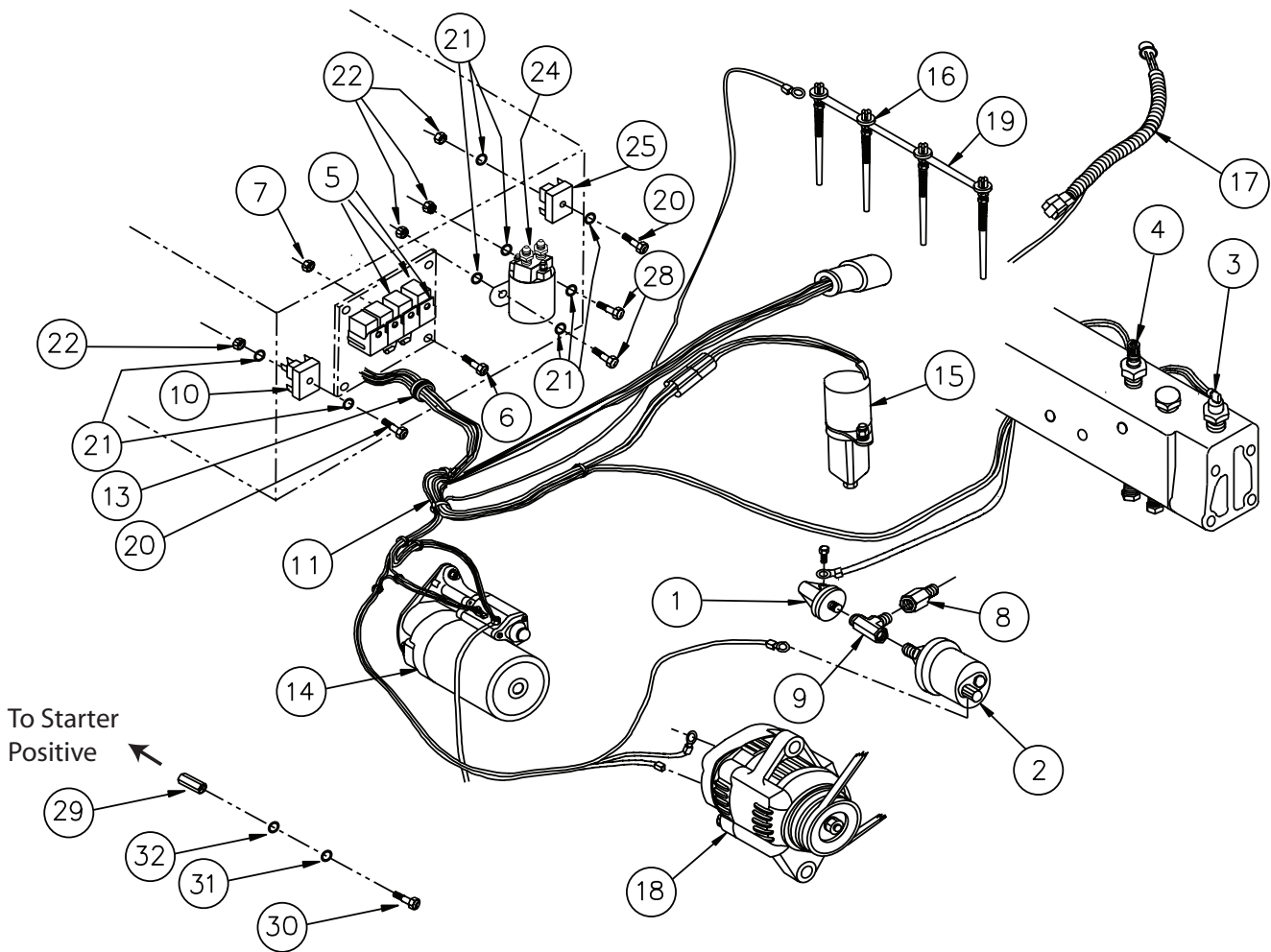
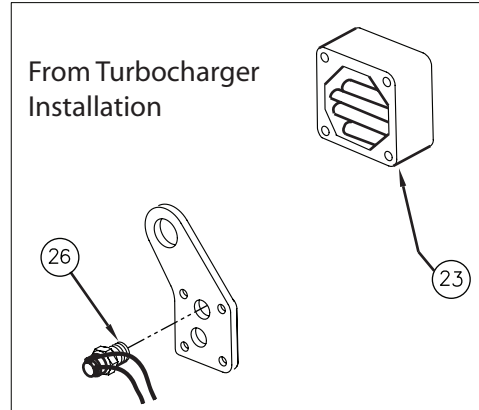
M944T & M38CR2 without Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-40085	4	Relay, SPDT 24 VDC 20 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness	-
	22-71213	1	Harness Addition, Isolated Ground	-
12	22-40930	1	20' Wire Harness Extension	-
13	00-40028	1	Grommet	-
14	22-41209	1	Starter, 24 Volt Isolated Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 24 Volt (see assembly detail)	-
16	32A6607011	4	Glow Plug 24 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-71052	1	Alternator 24V/ 35 Amp Isolated Ground (see parts detail)	-
19	32A6604101	1	Connection Strip	-
20	12-00032	1	Capscrew, M6 x 30 mm	-
21	15-00008	1	Flat Washer, M6	-
22	14-04803	1	Hex Nut, Nylock M6	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Isolated Ground

M944T & M38CR2 with Air Intake Heater



A-12030/ C-4985tunits2

Electrical System 24 Volt Isolated Ground

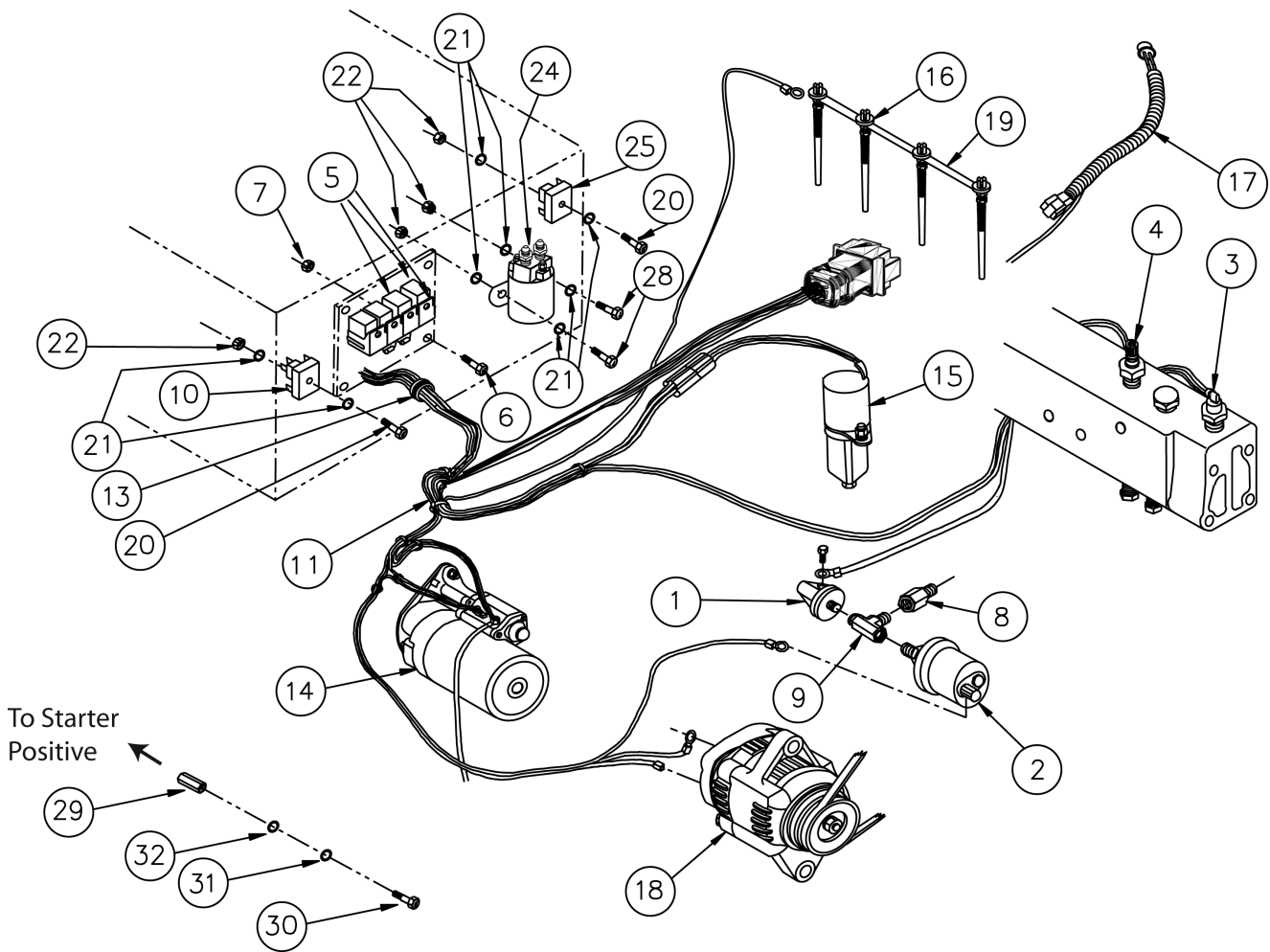
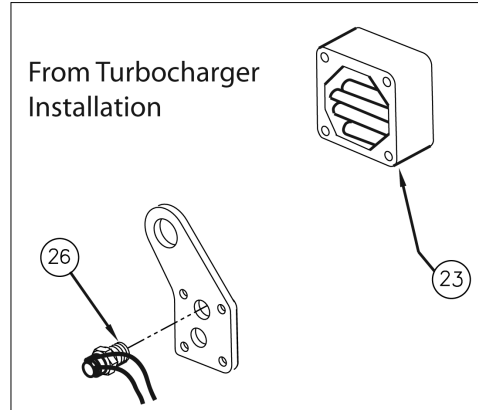
M944T & M38CR2 with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-40085	5	Relay, SPDT 24 VDC 50 Amp	-
	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness with Round "Merc" Connector	-
	22-71223	1	Harness Addition, Isolated Ground	-
12	22-40930	1	20' Wire Harness Extension	-
13	00-40028	1	Grommet	-
14	22-41209	1	Starter, 24 Volt Isolated Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 24 Volt (see assembly detail)	-
16	32A6607021	4	Glow Plug 24 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-71052	1	Alternator 24V/ 35 Amp Isolated Ground (see parts & assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21210	1	Intake Heater Sub-Assembly (see parts detail)	-
24	22-41132	1	Solenoid 24 volt 100 Amp	-
25	22-70072	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 24 Volt Isolated Ground

B+ Electrical System
M944T with Air Intake Heater



Electrical System 24 Volt Isolated Ground

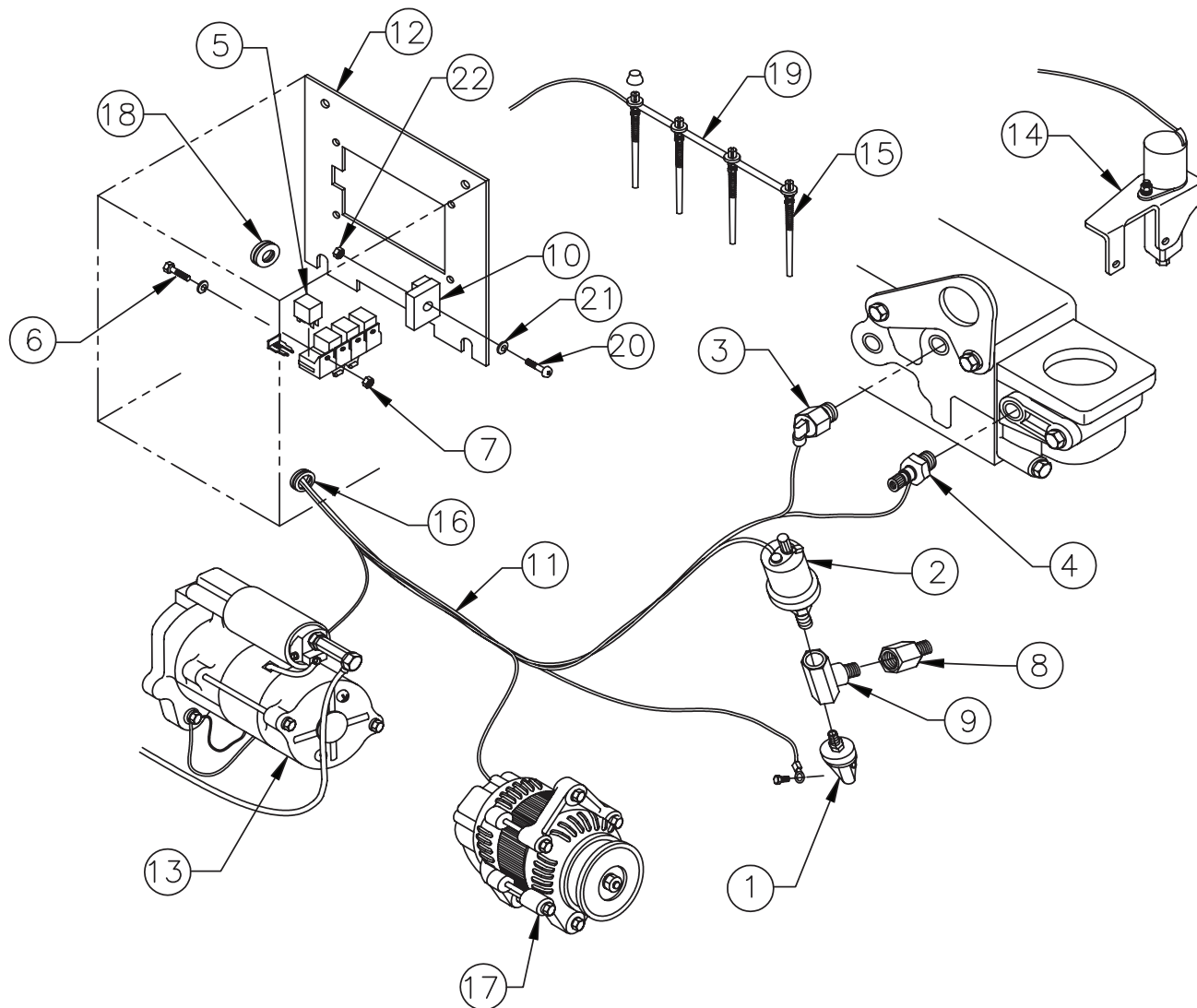
B+ Electrical System
M944T with Air Intake Heater

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40236	1	Switch, Oil Pressure 15 PSI	-
2	22-42803	1	Pressure Sender 0- 80 PSI, Isolated Ground	-
3	22-40938	1	Switch, Water Temperature 210°F 1/2 NPT	-
4	22-44810	1	Temperature Sender 250°F, Isolated Ground 3/8 NPT	-
5	22-40085	5	Relay, SPDT 24 VDC 50 Amp	-
	22-71263-1	1	Relay Board Sub-Assembly (see parts detail)	-
6	12-09406	4	Capscrew, Hex Head M5 x 0.8 x 12 mm S/S	-
7	14-04404	4	Hex Nut, M5 Nylock S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT	-
10	22-40408	1	Timer Module 24 VDC 20 Amp	-
11	22-41238	1	Engine Wire Harness with Square "Deutsch" Connector	-
	22-71223	1	Harness Addition, Isolated Ground	-
12	22-45620	1	20' Wire Harness Extension	-
13	00-40028	1	Grommet	-
14	22-41209	1	Starter, 24 Volt Isolated Ground (see assembly detail)	-
15	22-51201	1	Stop Solenoid 24 Volt (see assembly detail)	-
16	32A6607021	4	Glow Plug 24 Volt	-
17	22-42070	1	High Exhaust Temperature Switch and Harness Assembly (see wet exhaust elbow assembly detail)	-
18	22-71052	1	Alternator 24V/ 35 Amp Isolated Ground (see assembly detail)	-
19	32A6604101	1	Connection Strip	-
20	12-09032	2	Capscrew, M6 x 30 mm S/S	-
21	15-01134	8	Flat Washer, M6 S/S	-
22	14-01133	4	Hex Nut, Nylock M6 S/S	-
23	22-21210	1	Intake Heater Sub-Assembly (see parts detail)	-
24	22-41132	1	Solenoid 24 volt 100 Amp	-
25	22-70072	1	Timer	-
26	22-40939	1	Temperature Switch 130°F 3/8 NPT	-
28	12-01102	2	Capscrew, Hex Head M6 x 1.0 x 16 mm S/S	-
29	14-08720	1	Coupling Nut M8 x 1.25	-
30	12-09751	1	Capscrew, Hex Head M8 x 1.25 x 16 mm S/S	-
31	15-00705	1	Lock Washer M8 S/S	-
32	15-00706	1	Flat Washer M8 S/S	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System 12 Volt Standard Ground

NL944D2



A-12466/ B-9679

Electrical System 12 Volt Standard Ground

NL944D2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Oil Pressure Switch 15 PSI	-
2	22-41016	1	Pressure Sender 0-80 PSI, Standard Ground	-
3	MC880900	1	Temperature Switch, 100°C/ 212°F	-
4	22-45201	1	Temperature Sender 250°F, Standard Ground	-
	15-01001	1	Sealing Washer, M16	-
5	22-71256-1	1	Relay Board Sub-Assembly (see parts detail)	-
	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
6	12-00001	4	Machine Screw, PH Phillips #10-32 x 3/4" S/S	-
7	14-00032	4	Hex Nut, Nylock #10-32 S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT x 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness	-
12	28-68502	1	Plate, J-box Access & S-1B Panel Mtg.	-
13	32A6610101	1	Starter, 2.2 kW (see assembly detail)	-
14	32A8707060	1	Stop Solenoid Assembly 12 Volt	-
15	32A6603100	4	Glow Plug 12 Volt	-
16	00-40028	1	Grommet	-
17	32A6800401	1	Alternator, 12V/ 50 Amp Standard Ground (see parts detail)	-
18	00-70051	1	Grommet,	-
19	32A6604101	1	Connection Strip	-
20	12-00032	1	Capscrew, Hex Head M6 x 1.0 x 30 mm	-
21	15-00008	1	Flat Washer M6	-
22	14-04803	1	Nylock Nut M6 x 1.0	-

Electrical System 12 Volt Standard Ground

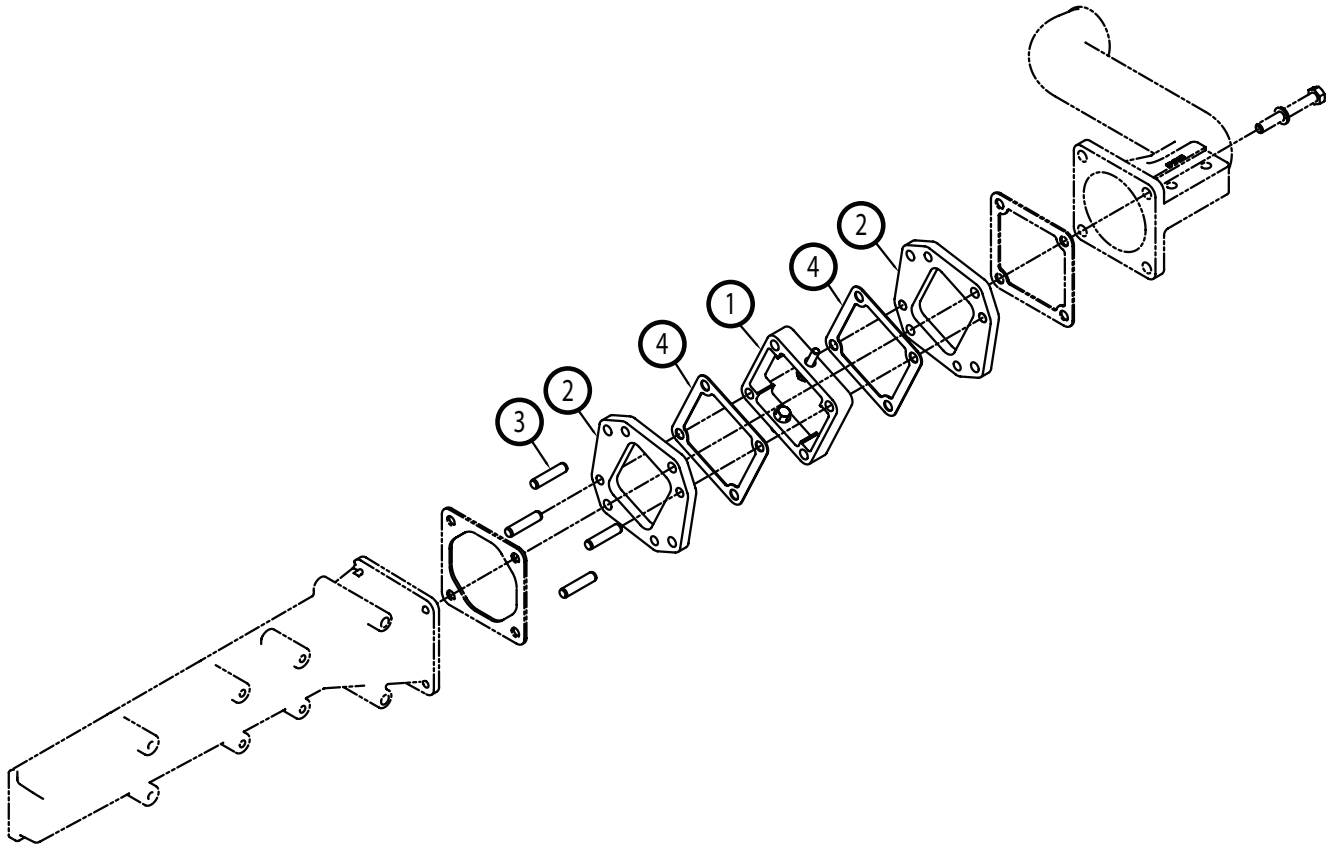
NL944T2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40233	1	Oil Pressure Switch	-
2	22-41016	1	Pressure Sender, 0-80 PSI, Standard Ground	-
3	MC880900	1	Temperature Switch 100°C/ 212°F	-
4	22-45201	1	Temperature Sender, 250°F Standard Ground	-
	15-01001	1	Sealing Washer, Copper M16	-
5	22-71256-1	1	Dual Station Relay Board Sub-Assembly (see parts detail)	-
	22-42047	4	Relay, SPDT 12 VDC 50 Amp	-
6	12-00001	4	Machine Screw, PH Phillips #10-32 x 3/4" S/S	-
7	14-00032	4	Hex Nut, Nylock #10-32 S/S	-
8	21-00139	1	Female Adapter, Steel 1/8 NPT x 1/8 BSPT	-
9	21-21001	1	Male Branch Tee, Steel 1/8 NPT x 1/8 NPT	-
10	22-40407	1	Timer Module 12 VDC 20 Amp	-
11	22-41202	1	Engine Wire Harness	-
12	22-41131	1	Solenoid 12 VDC 100 Amp N.O. Isolated Ground	-
13	32A6610101	1	Starter 2.2 kW (see assembly detail)	-
14	32A8707050	1	Stop Solenoid 12 Volt (see assembly detail)	-
15	32A6607011	4	Glow Plug 12 Volt	-
16	00-40028	1	Grommet	-
17	32A6806600	1	Alternator 12V/ 75 Amp (see assembly detail)	-
18	00-70051	1	Grommet	-
19	32B6606500	1	Controller, Air Inlet Heater 12 Volt	-
20	22-41211	1	Temperature Sensor, Air Heater	-
21	12-00032	1	Capscrew, Hex Head M6 x 1.0 x 30 mm	-
22	15-00008	1	Flat Washer M6	-
23	14-04803	1	Nylock Nut M6 x 1.0	-
24	28-68502	1	Plate, S-1B Panel Mounting	-
25	32A6604101	1	Connection Strip	-

GROUP 5 – ELECTRICAL SYSTEM

Electrical System Air Intake Heater Sub-Assembly

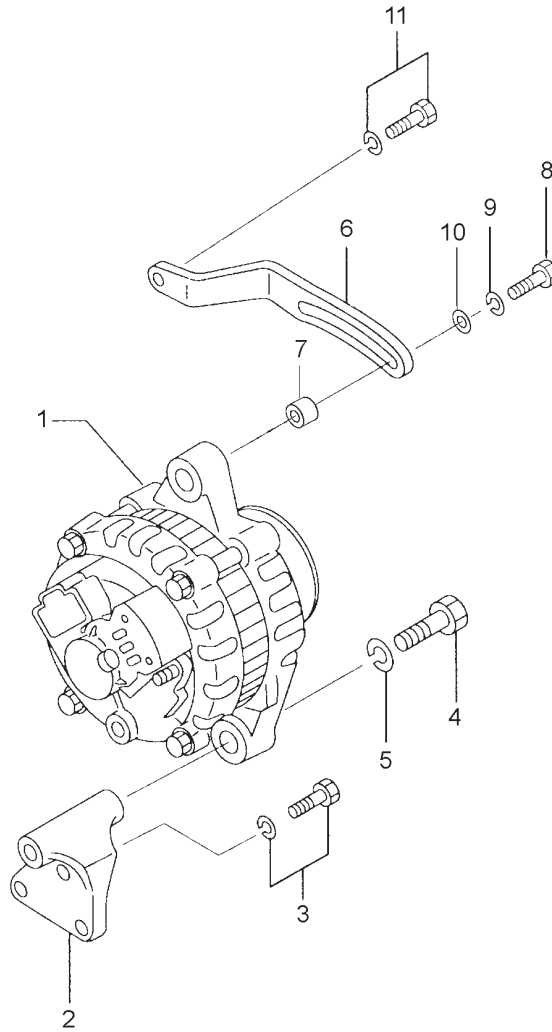
M944T3 - M40C3



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1		1	Intake Air Heater 1200 Watt 24 Volt 55 Amp Standard Ground	-
	22-21206	1	Intake Air Heater 1200 Watt 24 Volt 55 Amp Isolated Ground	-
2	28-21201	2	Plate	-
3	32-21201	4	Dowel Pin 8mmOD X 36mm S/S	-
4	121850-77021	2	Gasket	-
			*Note: Replaced by isolated ground type 22-21206	

Small Frame Alternator and Mounting

12 Volt/ 50 Amp
L944D -M944 - M30CW



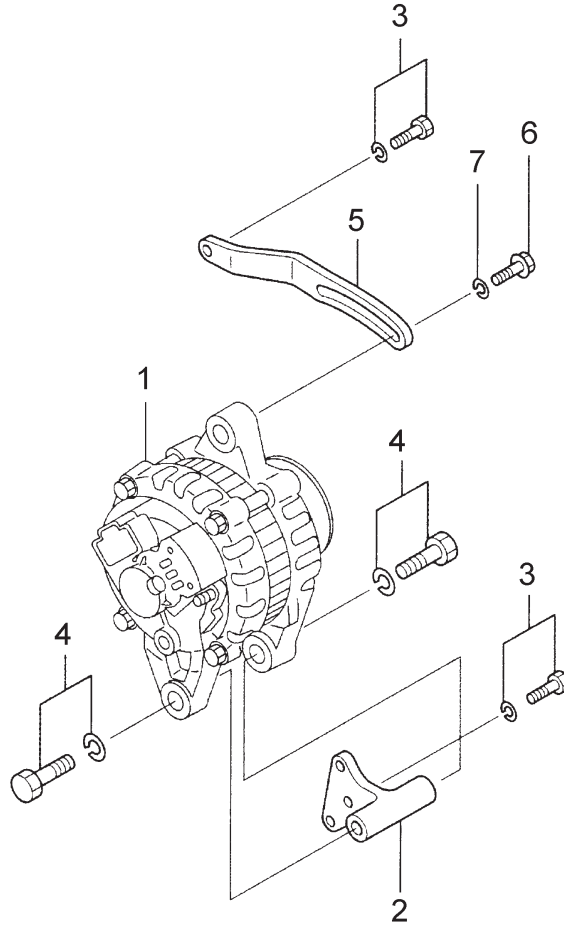
32B6826

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A6800302	1	Alternator 12 Volt/ 50 Amp (see Parts Detail)	-
2	32A6801201	1	Bracket	-
3	F180508020	1	Bolt with Washer	-
4	F103510040	1	Bolt	-
5	F251510000	1	Spring Washer	-
6	23-41201	1	Adjusting Plate	-
7	21-13110	1	Spacer	-
8	12-09714	1	Flange Bolt	-
9	15-00705	1	Washer	-
10	15-70004	1	Snubbing Washer S/S	-
11	12-00717	1	Capscrew, Hex Head M8 x 1.25 x 60 mm	-
12	40-05404	1	Drive Belt 31/64" x 46- 3/8" (not shown)	-

GROUP 5 – ELECTRICAL SYSTEM

Small Frame Alternator and Mounting

NL944D2
 12 Volt/ 50 Amp
 NL944T2
 12 Volt/ 75 Amp

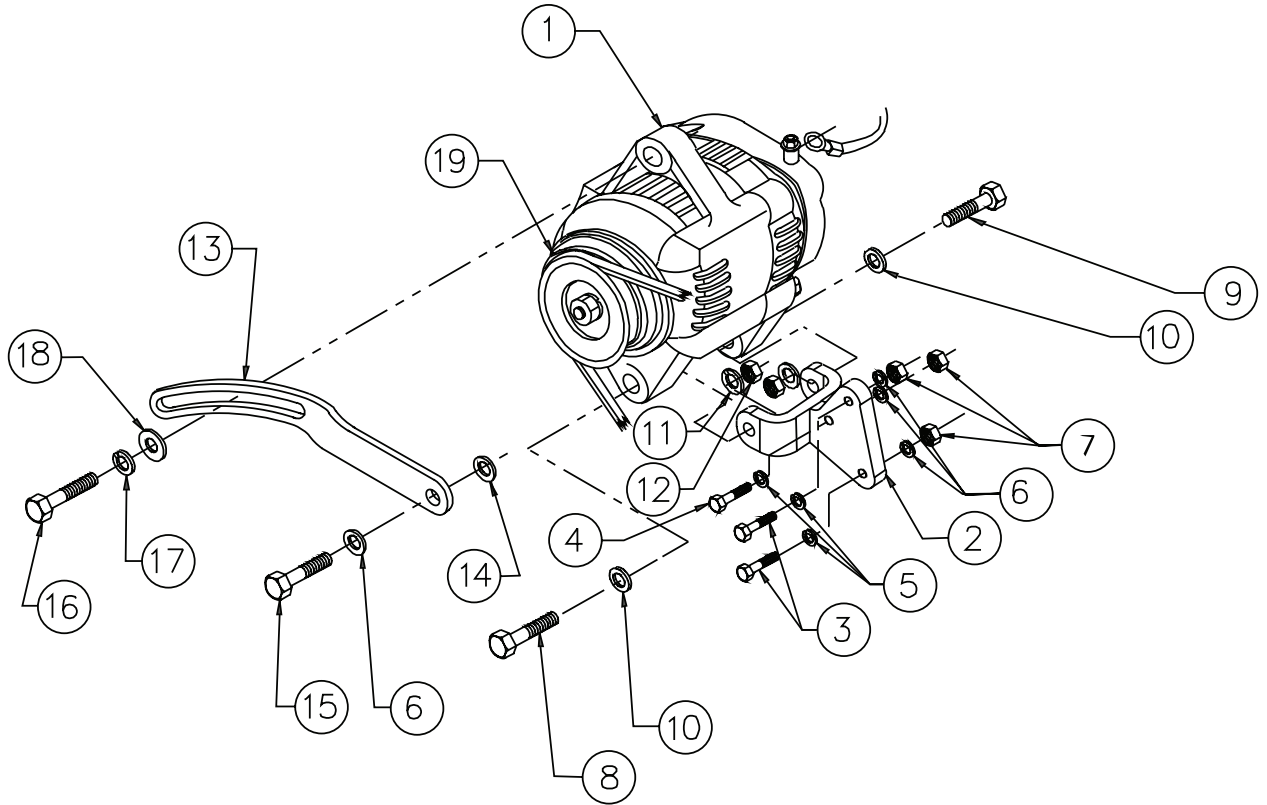


32B6813

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A6800401	1	Alternator 12 Volt/ 50 Amp (NL944D2, see Parts Detail)	-
	32A6806600	1	Alternator 12 Volt/ 75 Amp (NL944T2, see Parts Detail)	-
2	32A6801103	1	Bracket	-
3	32A1302700	2	Bolt with Washer (NL944T2)	-
	F180508020	2	Bolt with Washer (NL944D2)	-
4	MF241284	2	Bolt with Washer (NL944T2)	-
	F180510030	2	Bolt with Washer (NL944D2)	-
5	32A6811601	1	Adjusting Plate	-
6	MF140026	1	Bolt, Flange Head	-
7	MD001521	1	Washer	-

Small Frame Alternator and Mounting

12 Volt/ 75 Amp
M944T - M38CR2



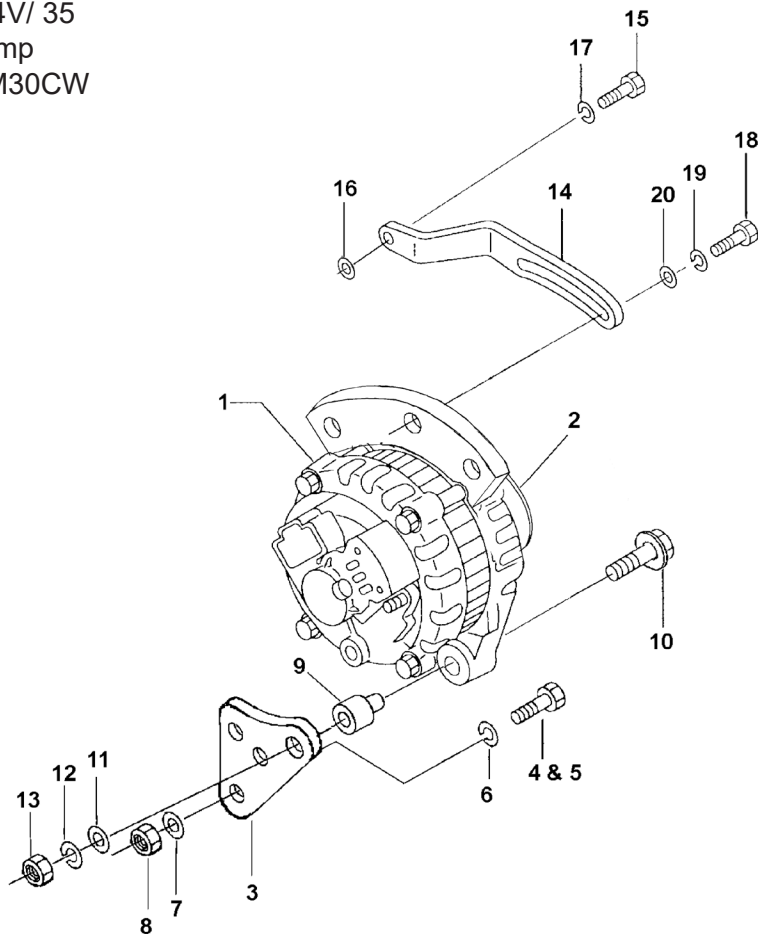
A-12257

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	32A6806600	1	Alternator 12 Volt/ 75 Amp (see Parts Detail)	-
2	23-41205	1	Bracket	-
3	12-00718	2	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
4	12-00753	1	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
5	15-00701	3	Flat Washer, M8	-
6	15-00702	4	Lock Washer, Helical M8	-
7	14-00711	3	Hex Nut, M8 x 1.25	-
8	12-00814	1	Capscrew, Hex Head M10 x 1.5 x 35 mm	-
9	12-00812	1	Capscrew, Hex Head M10 x 1.5 x 40 mm	-
10	15-00805	2	Flat Washer, M10	-
11	15-00802	2	Lock Washer, Helical M10	-
12	14-00811	2	Hex Nut, M10 x 1.5	-
13	23-41206	1	Bracket, Tensioning Arm	-
14	15-00708	1	Stud Washer, 8.4 mm I.D. x 21 mm O.D. x 4 mm	-
15	12-00718	1	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
16	12-09712	1	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
17	15-00705	1	Lock Washer, Helical M8 S/S	-
18	15-70004	1	Snubbing Washer S/S 0.35" I.D. x 0.94	-
19	40-45401	1	Drive Belt, 11/16 x 48"	-

GROUP 5 – ELECTRICAL SYSTEM

Medium Frame Alternator and Mounting

12V/ 90 Amp - 24V/ 35
 Amp - 24V/ 40 Amp
 L944D- M944 - M30CW

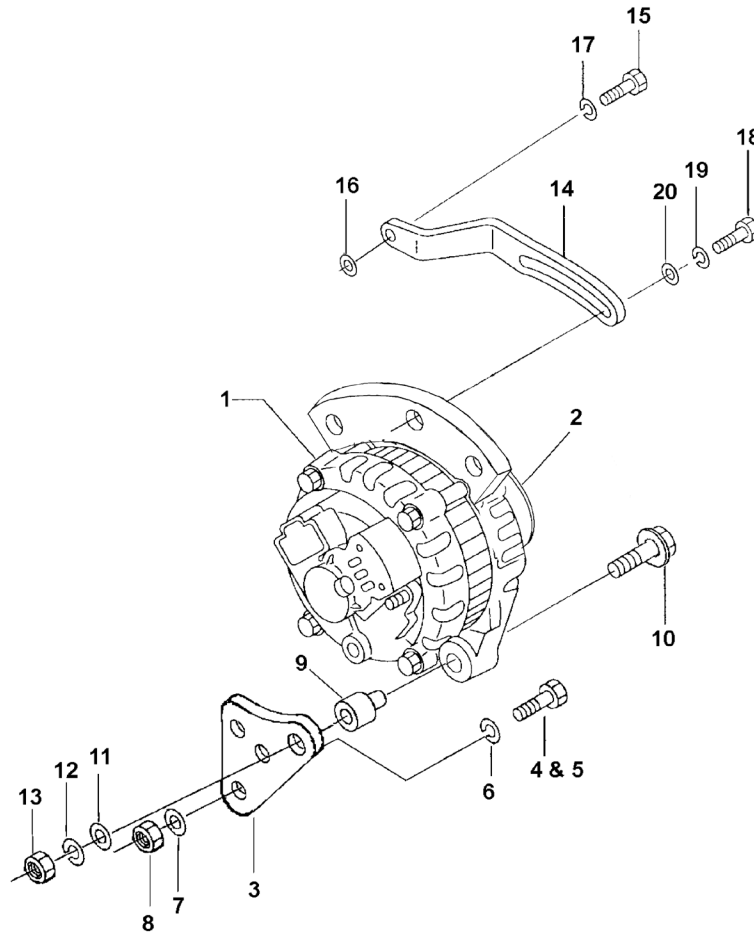


32B6826withadditions

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40332	1	Alternator 12 Volt/ 90 Amp Isolated Ground	-
	22-71052	1	Alternator 24 Volt/ 35 Amp Isolated Ground	-
	22-40278	1	Alternator 24 Volt/ 40 Amp Standard Ground	-
2	34-41000	1	Pulley 1- A/B x 2- 1/2" x 5/8" I.D.	-
3	23-41202	1	Bracket, Medium Frame Alternator	-
4	12-00718	2	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
5	12-00753	1	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
6	15-00701	3	Flat Washer M8	-
7	15-00702	3	Lock Washer, Helical M8	-
8	14-00711	3	Hex Nut M8 x 1.25	-
9	31-49501	1	Adapter	-
10	01435-01075	1	Capscrew, Hex Head Flanged M10 x 1.5 x 75 mm	-
11	15-00805	1	Flat Washer M10	-
12	15-00802	1	Lock Washer, Helical M10	-
13	14-00811	1	Hex Nut M10 x 1.5	-
14	23-41206	1	Tensioning Arm Former # 23-41201	-
15	12-00717	1	Capscrew, Hex Head M8 x 1.25 x 60 mm	-
16	15-00701	1	Flat Washer M8	-
17	15-00702	1	Lock Washer Helical M8	-
18	12-00212	1	Capscrew, Hex Head 5/16- 18 x 1"	-
19	15-00202	1	Lock Washer Helical 5/16	-
20	15-70004	1	Snubbing Washer S/S	-
21	40-05404	1	Drive Belt 31/64" x 46- 3/8" (not shown)	-
22	22-70048	1	Diode Harness Addition (24V/35A & 24V/40A alternators only)	-

Medium Frame Alternator and Mounting

12V/ 90 Amp - 24V/ 35
Amp - 24V/ 40 Amp
M944T - M38CR2

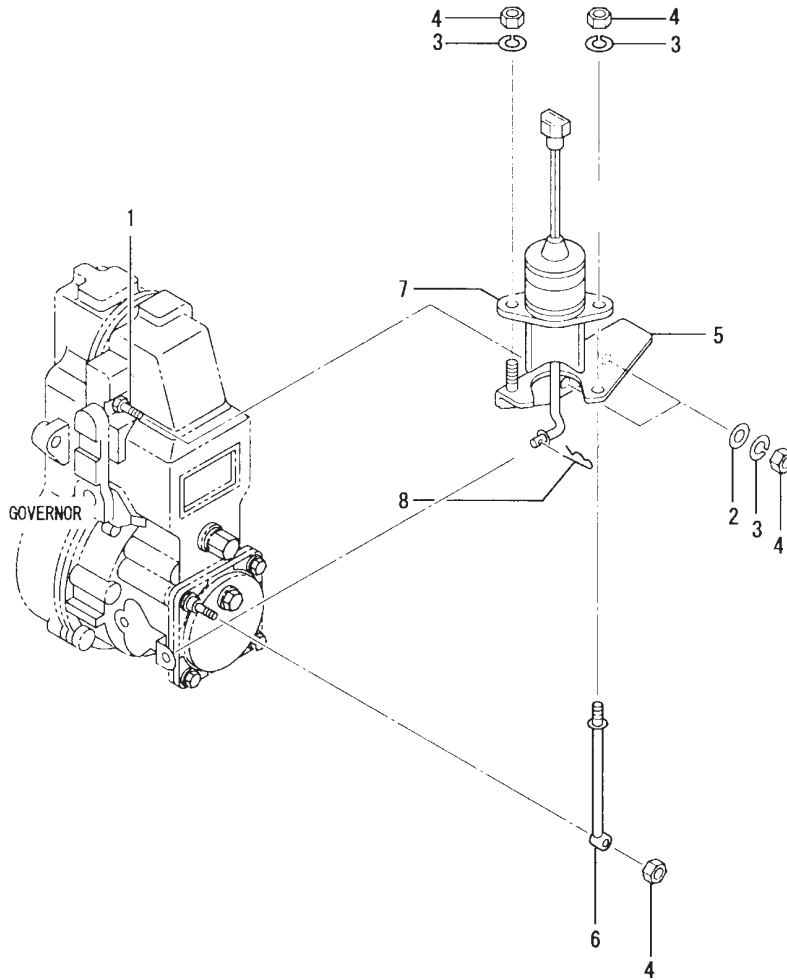


32B6826withadditions

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40332	1	Alternator 12 Volt/ 90 Amp Isolated Ground	-
	22-71052	1	Alternator 24 Volt/ 35 Amp Isolated Ground	-
	22-40278	1	Alternator 24 Volt/ 40 Amp Standard Ground	-
2	34-41000	1	Pulley 1- A/B x 2- 1/2" x 5/8" I.D.	-
3	23-41202	1	Bracket, Medium Frame Alternator	-
4	12-00718	2	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
5	12-00753	1	Capscrew, Hex Head M8 x 1.25 x 30 mm	-
6	15-00701	3	Flat Washer M8	-
7	15-00702	3	Lock Washer, Helical M8	-
8	14-00711	3	Hex Nut M8 x 1.25	-
9	31-41200	1	Adapter	-
10	01435-01075	1	Capscrew, Hex Head Flanged M10 x 1.5 x 75 mm	-
11	15-00805	1	Flat Washer M10	-
12	15-00802	1	Lock Washer, Helical M10	-
13	14-00811	1	Hex Nut M10 x 1.5	-
14	23-41206	1	Tensioning Arm Former # 23-41201	-
15	12-00718	1	Capscrew, Hex Head M8 x 1.25 x 65 mm	-
16	21-42208	1	Spacer	-
17	15-00702	1	Lock Washer Helical M8	-
18	12-00212	1	Capscrew, Hex Head 5/16- 18 x 1"	-
19	15-00202	1	Lock Washer Helical 5/16	-
20	15-70004	1	Snubbing Washer S/S	-
21	40-01201	1	Drive Belt 11/16" x 47" (not shown) (former 40-05404)	-
22	22-70048	1	Diode Harness Addition (24V/35A & 24V/40A alternators only)	-

GROUP 5 – ELECTRICAL SYSTEM

Stop Solenoid

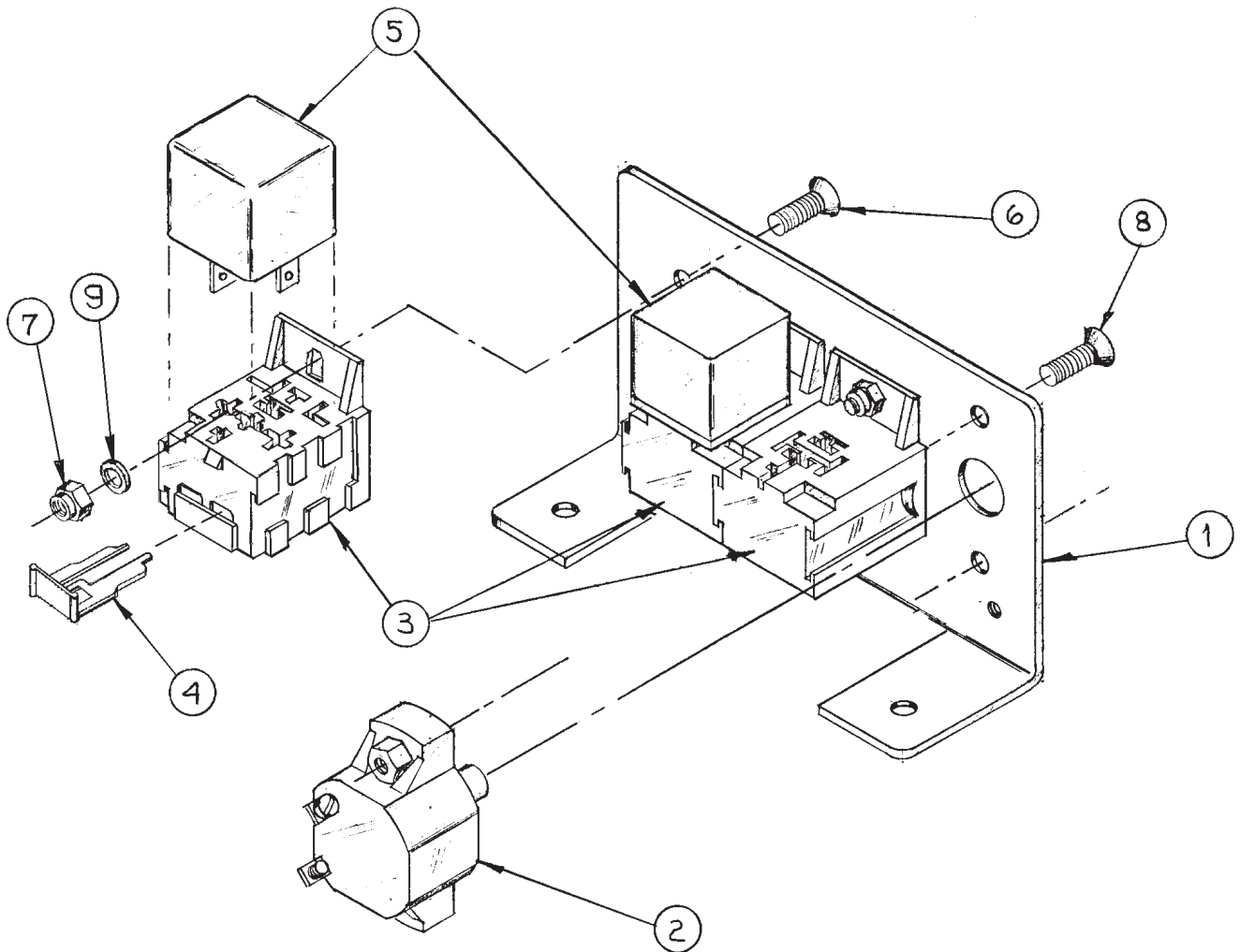


32B8705

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3428702602	2	Rod	-
	3428702603	2	Rod	-
2	F250006000	2	Washer	-
3	F251506000	4	Spring Washer	-
4	F230006000	5	Lock Nut	-
5	32A8705300	1	Bracket	-
6	32A8705400	1	Support Rod	-
7	32A8705900	1	Solenoid 12 Volt	-
	22-51201	1	Solenoid 24 Volt (formerly #32A8705200)	-
8	32A8705500	1	Clip	-

Harness Assembly with Circuit Breaker & Relay Panel

L944



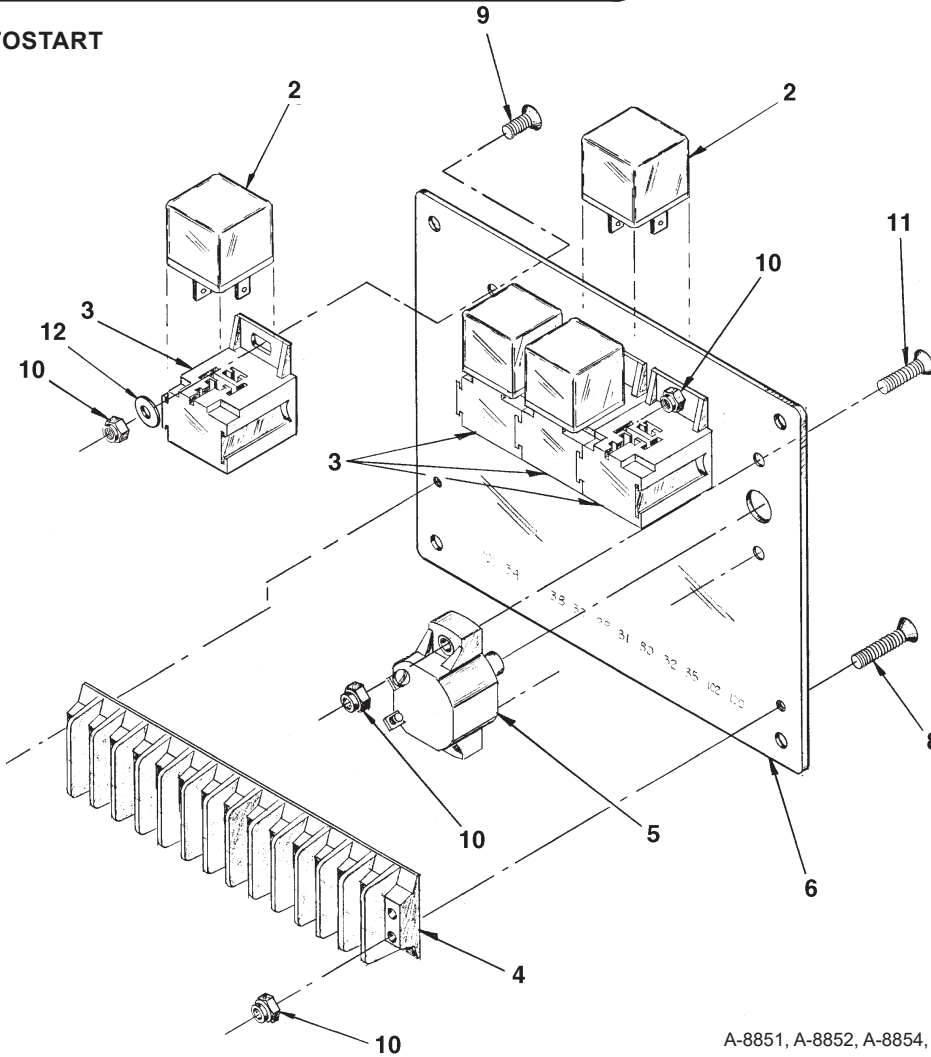
A-8804 / B-3139z

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
●●	22-41203	1	Wire Harness Assembly with Relay Bases (w/o Relays)	-
1	23-40019	1	Bracket	-
2	22-41070	1	40 Amp Circuit Breaker	-
3	22-40391	2	Relay Base	-
4	22-40393	2	Terminal Retainer	-
5	22-42047	2	12 Volt Start Relay	-
	22-40085	2	24 Volt Start Relay	-
6	12-03010	2	Machine Screw, 10 -32 x 3/8", 100°	-
7	14-00001	4	Hex Nut, 10 -32	-
8	12-03011	2	Counter Machine Screw, 10 -32 x 3/4" 100° Flathead	-
9	15-00032	2	Flat Washer #10	-

GROUP 5 - ELECTRICAL SYSTEMS

12 & 24 Volt Relay Logic Board M944T, NL944D2-T2

MANUAL & AUTOSTART

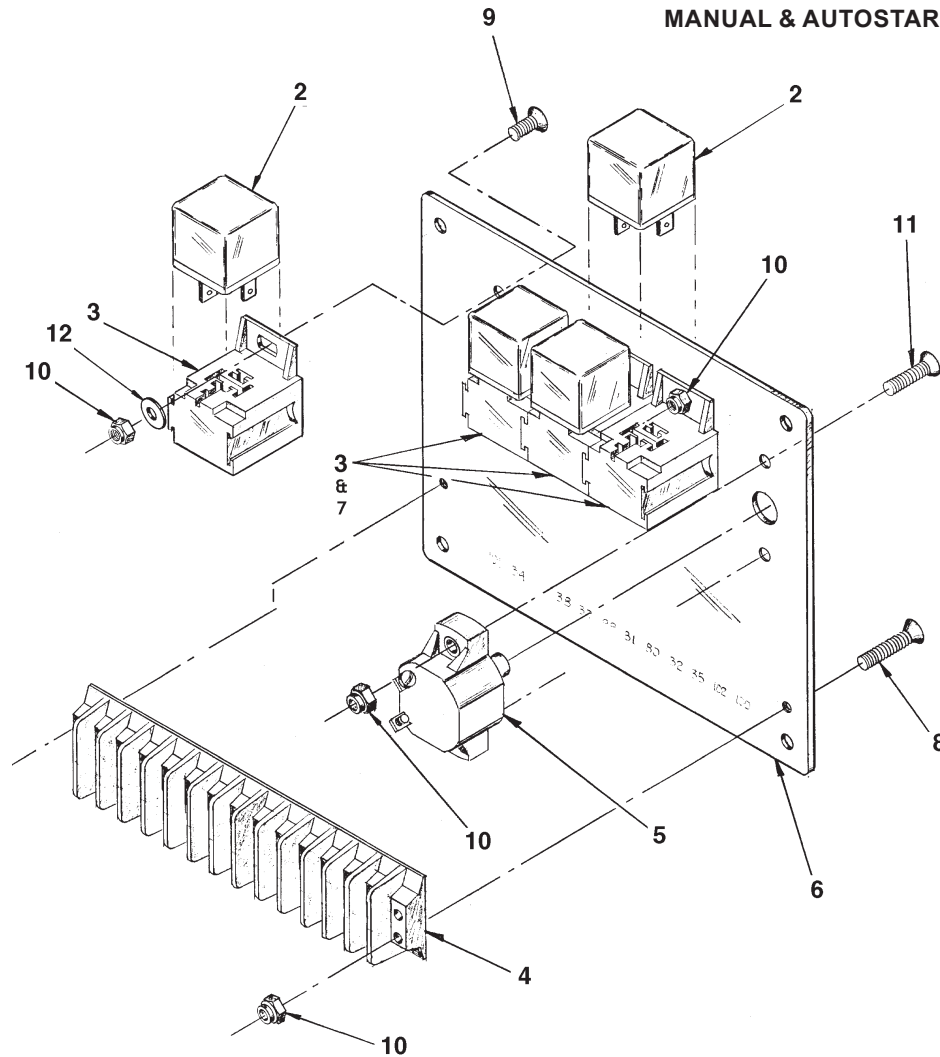


A-8851, A-8852, A-8854, A-8855/ C-2041

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-71256	1	12V Relay Logic Board, Manual Start (Includes all keys)	-
••	22-71257	1	24V Relay Logic Board, Manual Start (Includes all keys)	-
••	22-71258	1	12V Relay Logic Board, Autostart (Includes all keys)	-
••	22-71259	1	24V Relay Logic Board, Autostart (Includes all keys)	-
1	22-40299	2	1 Amp Diode (not shown)	-
2	22-42047	4	12V Relay SPDT	-
	22-40085	4	24V Relay SPDT	-
3	22-40391	4	Relay Base	-
	22-40393	4	Clip	-
4	22-40193	1	12 Connection Terminal Strip	-
5	22-40018	1	10 Amp Circuit Breaker	-
6	28-40001	1	Mounting Plate - Manual Start Relay Board	-
	28-90018	1	Mounting Plate - Autostart Relay Board	-
7	22-40393	4	Terminal Retainer Clip (not shown)	-
8	12-00083	2	Machine Screw, Flat Head Countersunk #8-32 x 3/4"	-
9	12-00082	4	Machine Screw, Flat Head Countersunk #8-32 x 3/8"	-
10	14-00003	4	Hex Nut, Nylock, #8 x 32	-
11	12-43205	2	Machine Screw, Flat Head Countersunk, #8-32 x 7/8"	-
12	15-00001	4	Flat Washer, #8	-
13	22-41222	1	Wire Harness, Manual Start	-
	22-41223	1	Wire Harness, Autostart	-
			} Not shown	-

12 & 24 Volt Relay Logic Board M944T3

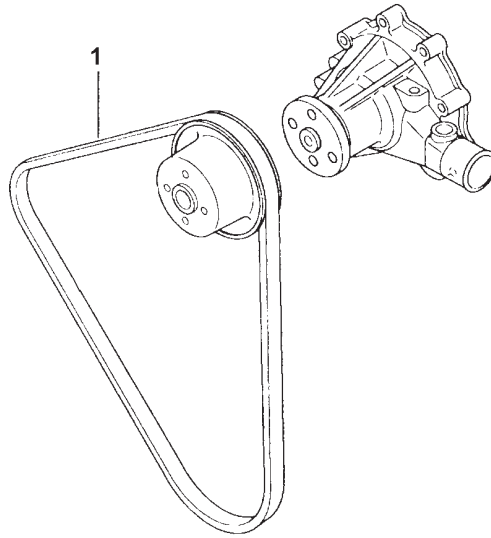
MANUAL & AUTOSTART B+ SYSTEMS



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-71263	1	12V Relay Logic Board, Manual Start & Autostart B+ (Includes all keys)	-
••	22-71264	1	24V Relay Logic Board, Manual Start & Autostart B+ (Includes all keys)	-
•	22-71263-1		Relay Logic Board Sub-Assembly - without relays	-
1	22-40299	2	6 amp Diode (not shown)	-
2	22-42047	4	12V Relay SPDT	-
	22-40085	4	24V Relay SPDT	-
3	22-40391	4	Relay Base	-
4	22-40193	1	Terminal Strip 12 Connection	-
5	22-40018	1	Circuit Breaker 10 Amp	-
6	28-40001	1	Mounting Plate	-
7	22-40393	4	Terminal Retainer Clip (not shown)	-
8	12-00083	2	Machine Screw, Flat Head Countersunk #8-32 x 3/4"	-
9	12-00082	4	Machine Screw, Flat Head Countersunk #8-32 x 3/8"	-
10	14-00003	4	Hex Nut, Nylock, #8 x 32	-
11	12-43205	2	Machine Screw, Flat Head Countersunk, #8-32 x 7/8"	-
12	15-00001	4	Flat Washer, #8	-
13	22-41243	1	Wire Harness, (Includes Key 1)	-

GROUP 5 – ELECTRICAL SYSTEM

Drive Belt Applications

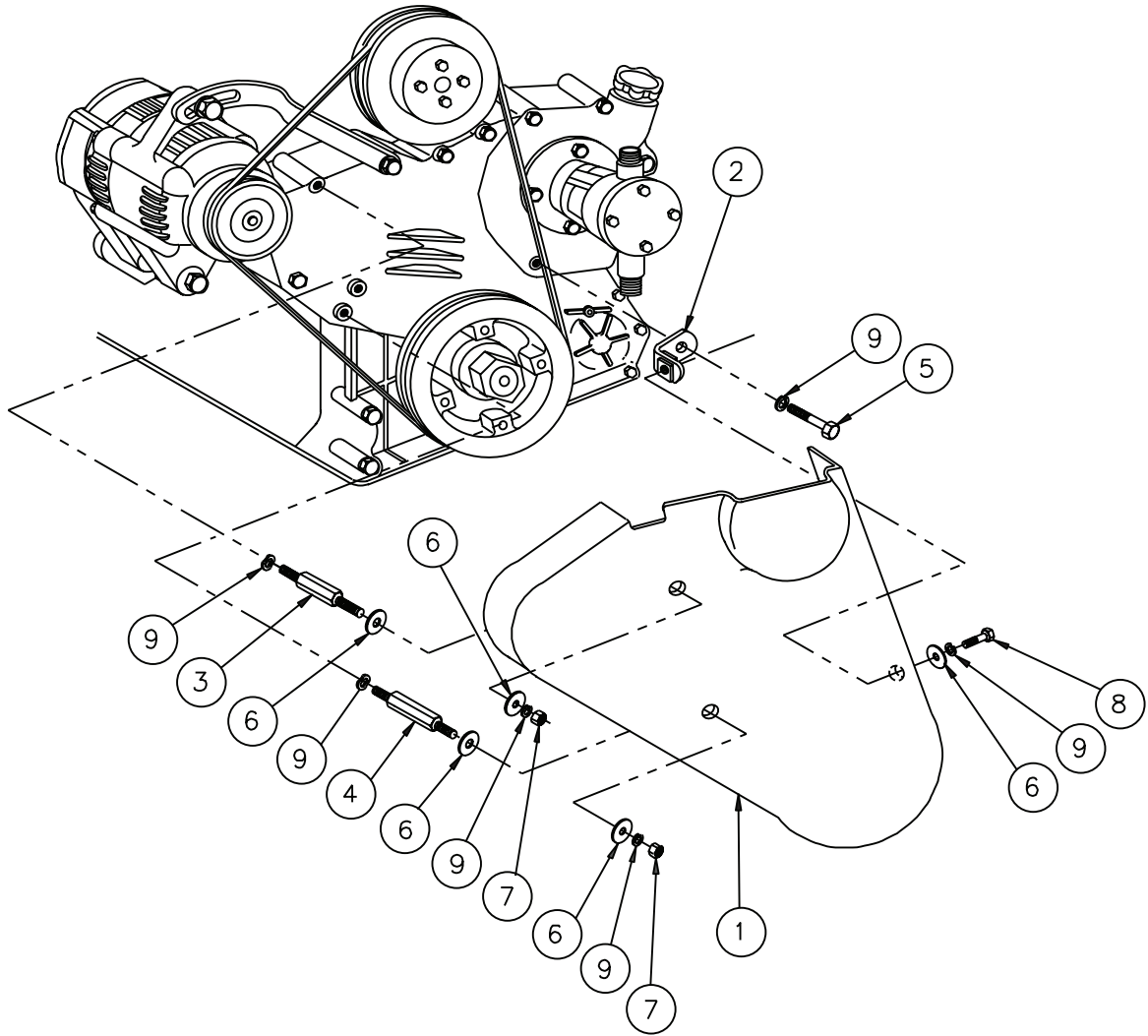


32B4812

PART NUMBER	QTY	DESCRIPTION
40-05404	1	L944D - M944W3 - M30CW3 Drive Belt Standard Small or Optional Medium Frame Size Alternators 12 V/ 50 Amp, 12 V/ 90 Amp, 24 V/ 35 Amp, 24 V/ 40 Amp
40-45401	1	M944T3 - M40C3 Drive Belt Standard 12V/ 75 Amp Alternator Optional Idler Assembly
40-01201	1	Drive Belt Optional 12V/ 90 Amp, 24V/ 35 Amp, and 24V/ 40 Amp Note: Units with Front PTO require 2 belts (1 ea. as spare)
40-15001	1	NL944D2 Standard 12 V / 50 A Small Frame Alternator
40-15001	1	NL944T2 Standard 12 V / 75 A Small Frame Alternator

Belt Guard M944

Heat Exchanged, No PTO

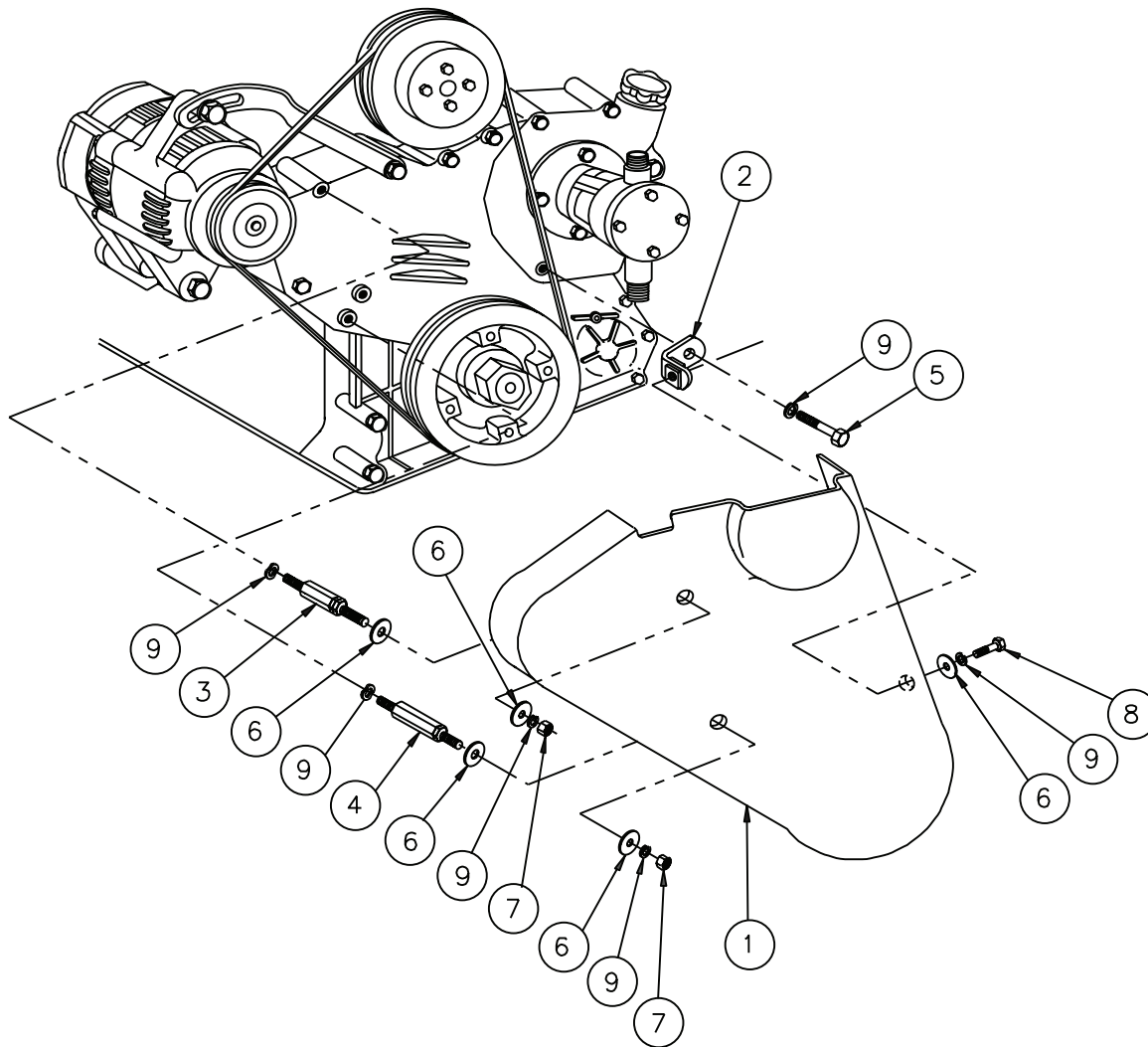


A-11400, A-11404/ B-9071

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01207	1	Belt Guard, Small Frame 12V/ 50 Amp Alternator	-
	00-01204	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01201	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01202	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-

Belt Guard M944T

Heat Exchanged, No PTO

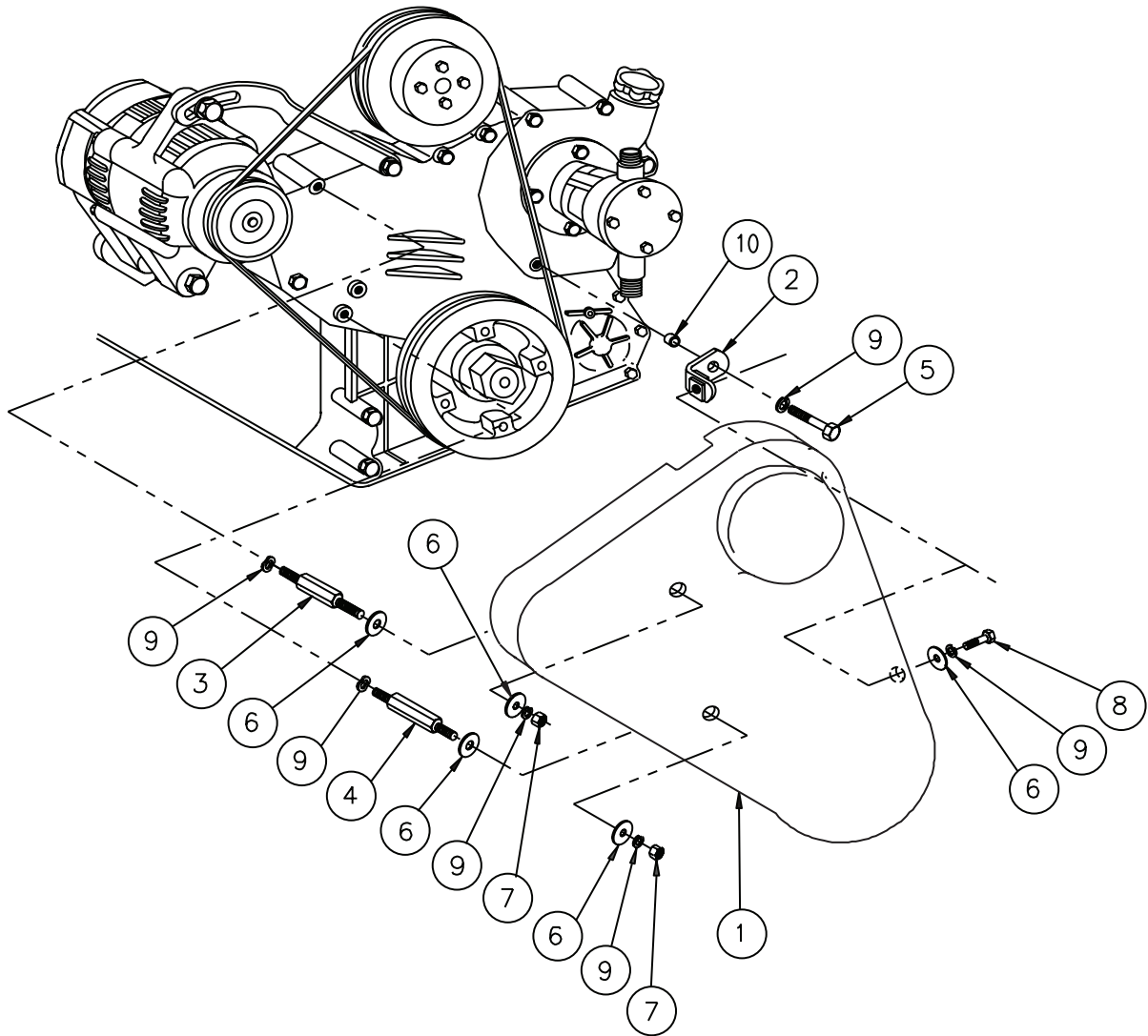


A-12181, A-12194/ B-9071z

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01212	1	Belt Guard, Small Frame 12V/ 75 Amp Alternator	-
	00-01217	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01203	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01204	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-

Belt Guard M944

Keel Cooled, No PTO

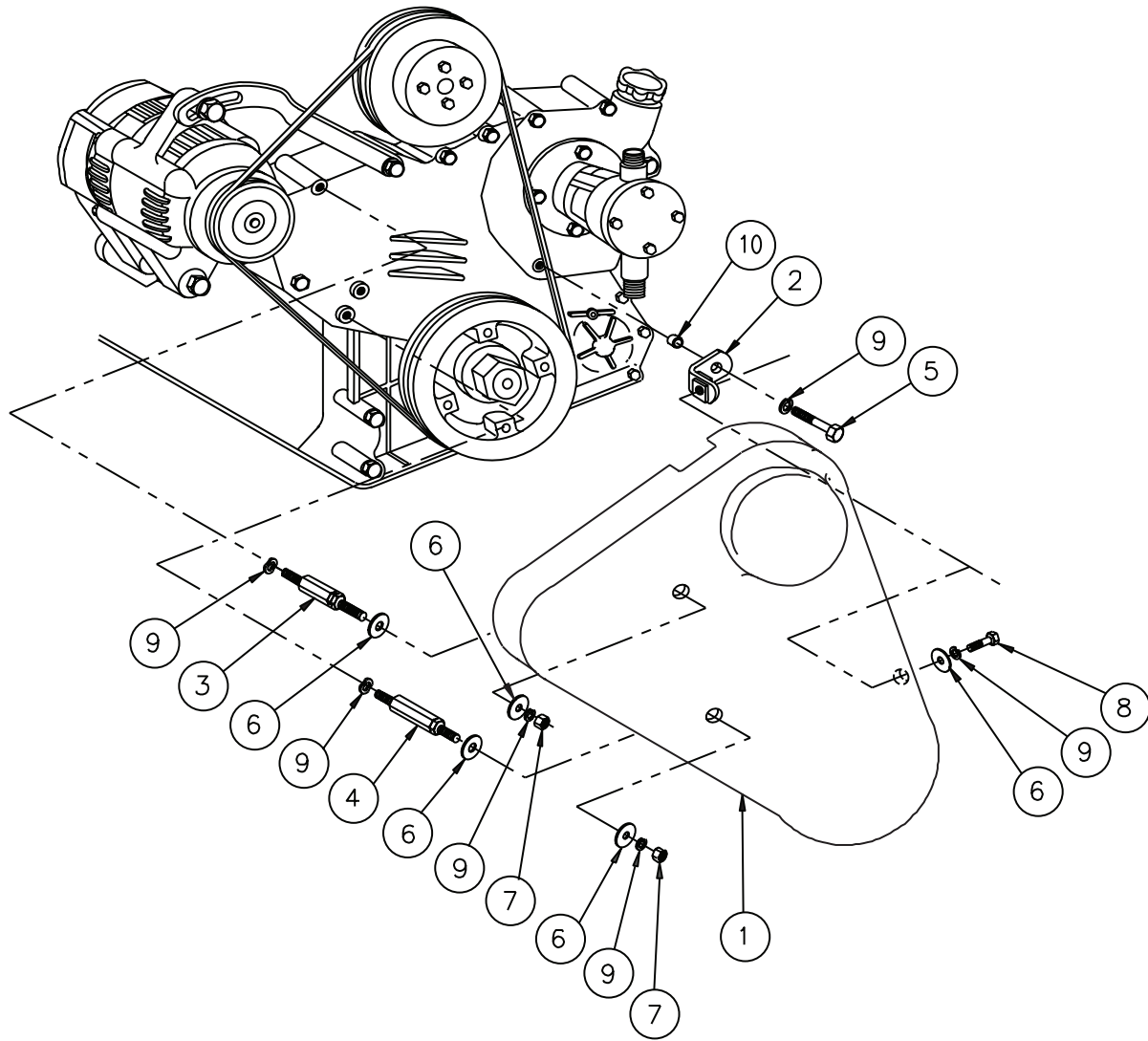


A-11227, A-11403/ B-9070

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01201	1	Belt Guard, Small Frame 12V/ 50 Amp Alternator	-
	00-01202	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01201	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01202	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	21-41103	1	Spacer (without front oil fill only)	-

Belt Guard M944T

Keel Cooled, No PTO

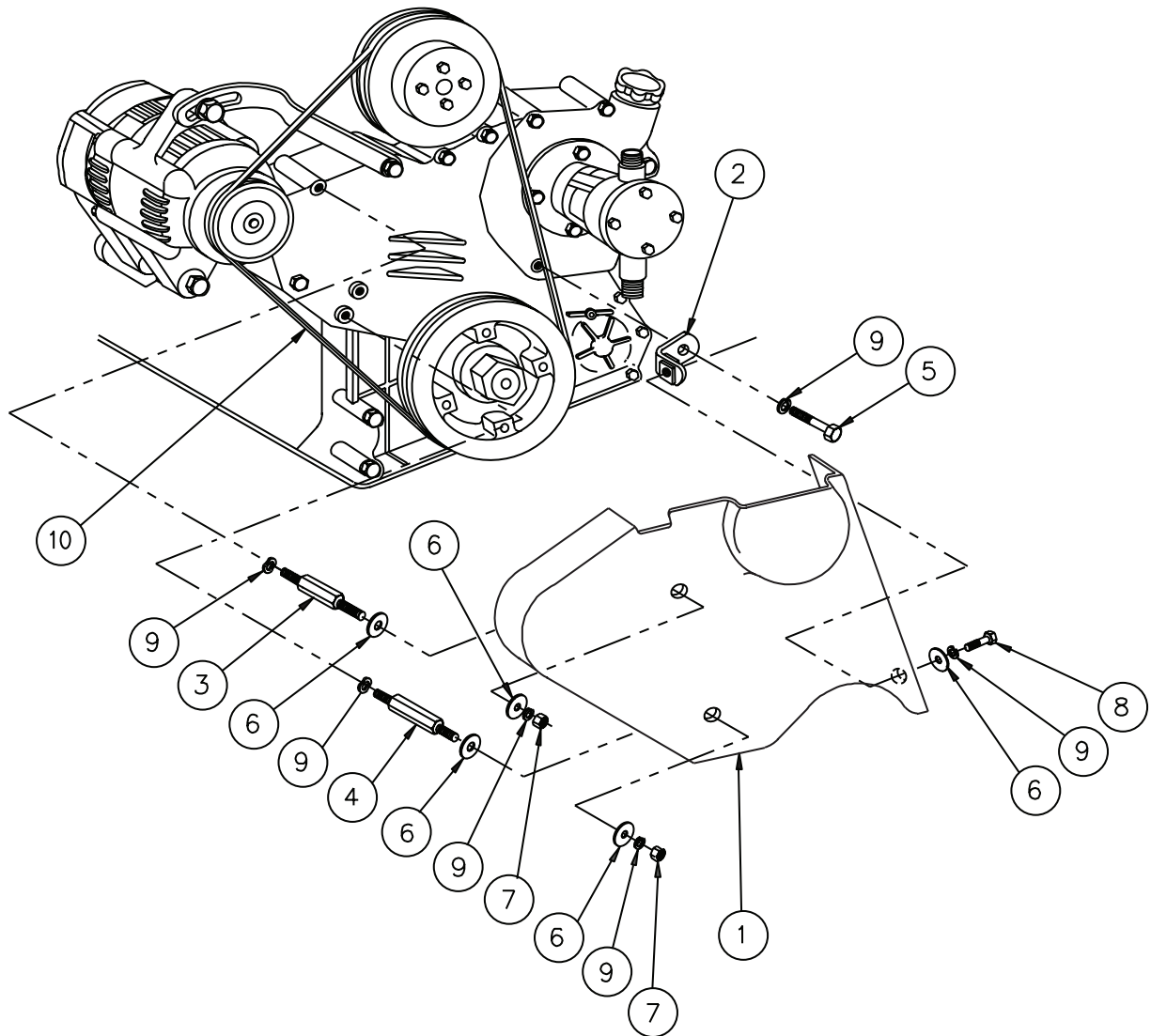


A-11227, A-11403/ B-9070z

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01213	1	Belt Guard, Small Frame 12V/ 75 Amp Alternator	-
	00-01218	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01203	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01204	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	21-41103	1	Spacer (without front oil fill only)	-

Belt Guard M944

Heat Exchanged and PTO

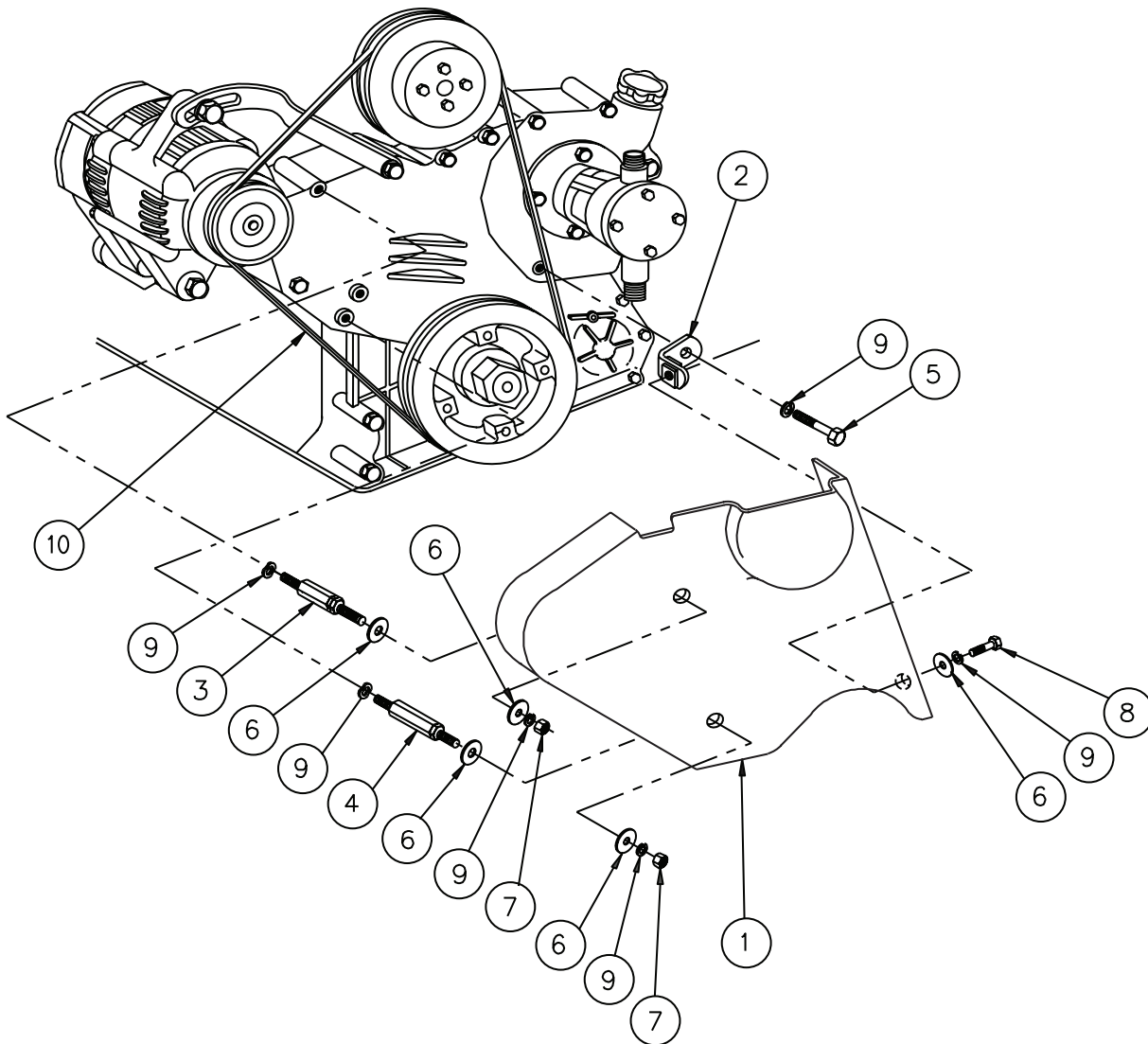


A-11402, A-11406/ B-9072

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01211	1	Belt Guard, Small Frame 12V/ 50 Amp Alternator	-
	00-01208	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01201	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01202	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	40-05404	2	Drive Belt	-

Belt Guard M944T

Heat Exchanged and PTO

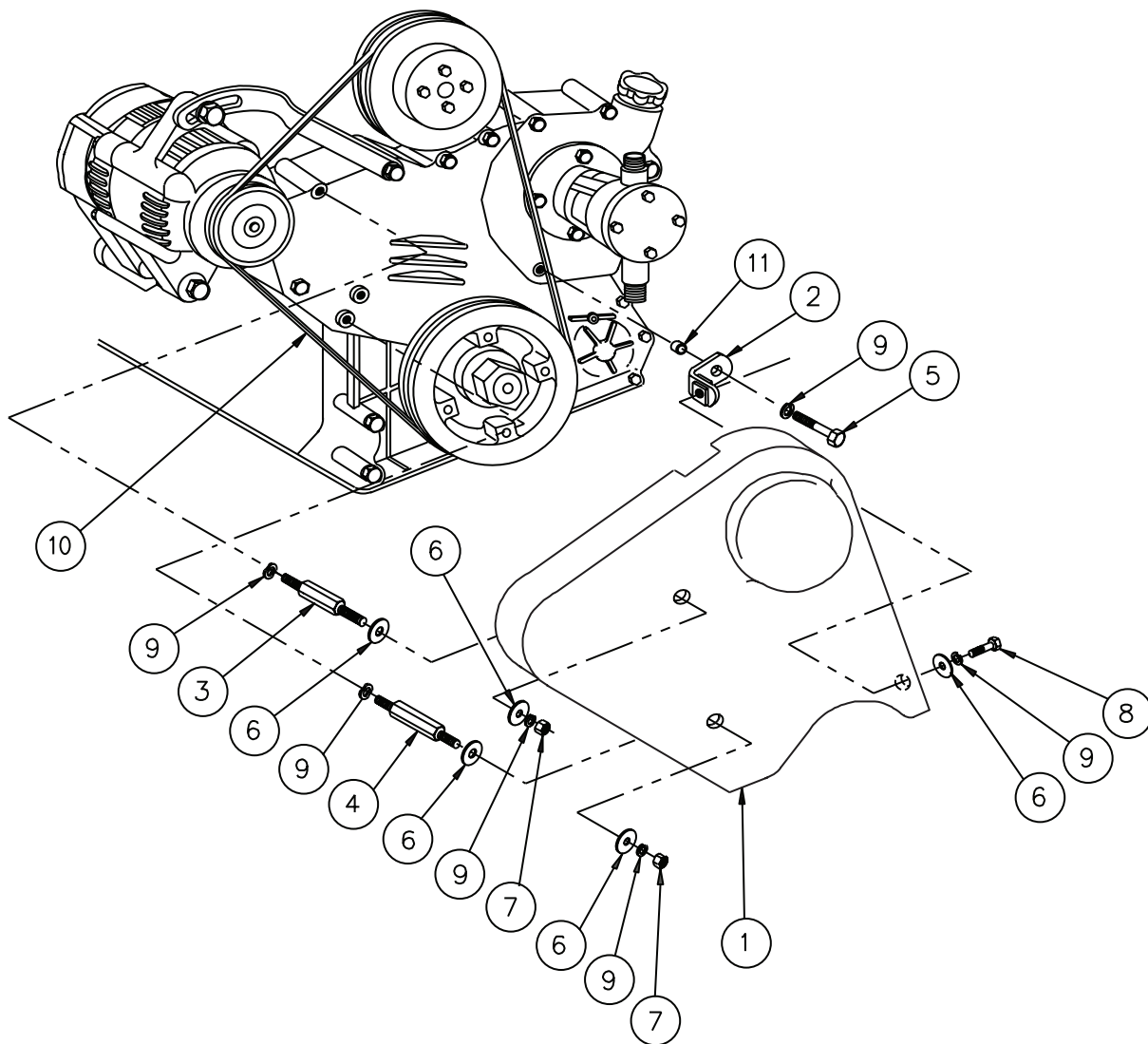


A-12192, A-12196/ B-9072z

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01214	1	Belt Guard, Small Frame 12V/ 75 Amp Alternator	-
	00-01219	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01203	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01204	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	40-	2	Drive Belt	-

Belt Guard M944

Keel Cooled and PTO

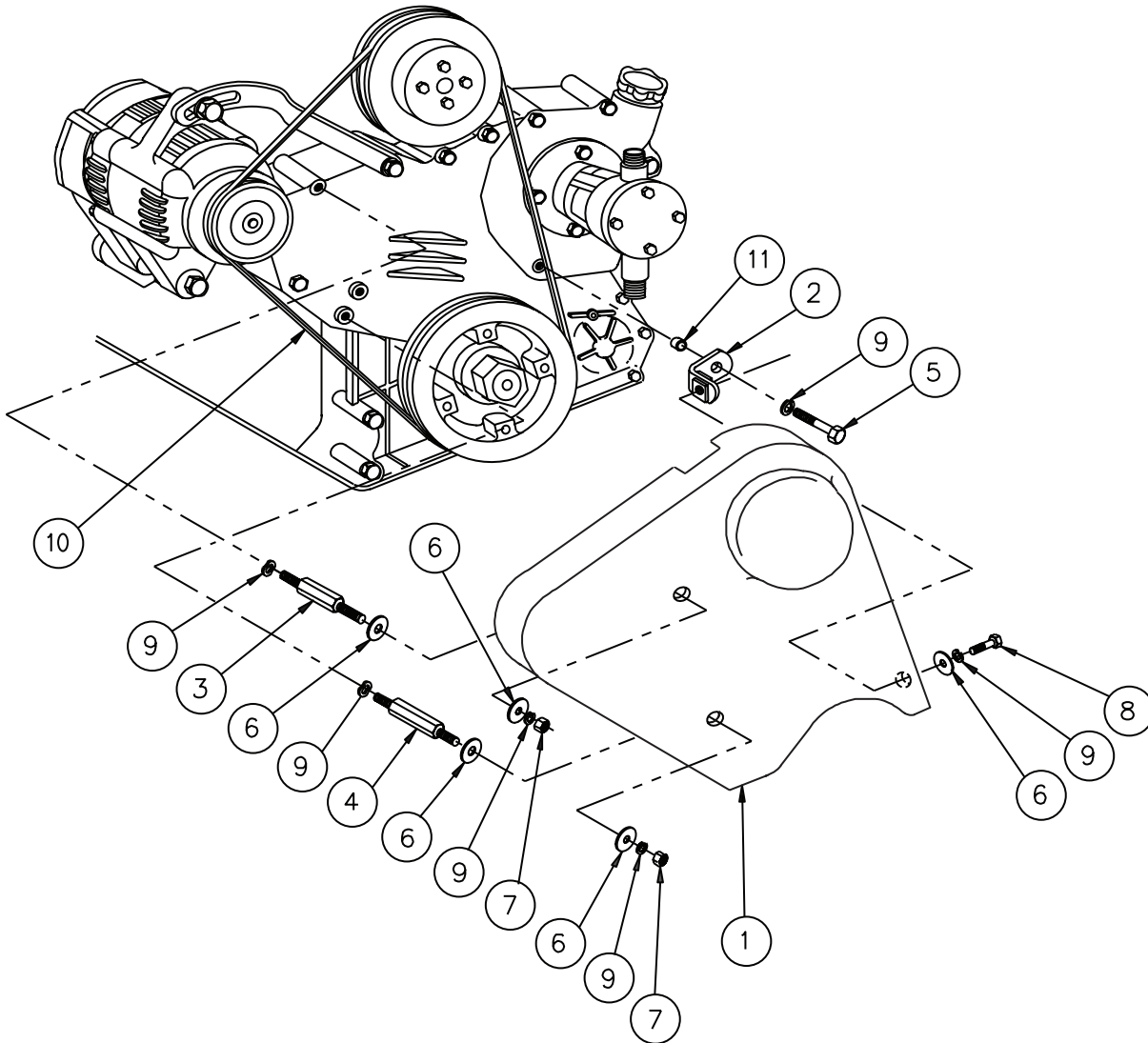


A-11401, A-11405/ B-9073

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01209	1	Belt Guard, Small Frame 12V/ 50 Amp Alternator	-
	00-01206	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01201	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01202	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	40-05404	2	Drive Belt	-
11	21-41103	1	Spacer (without front oil fill only)	-

Belt Guard M944T

Keel Cooled and PTO

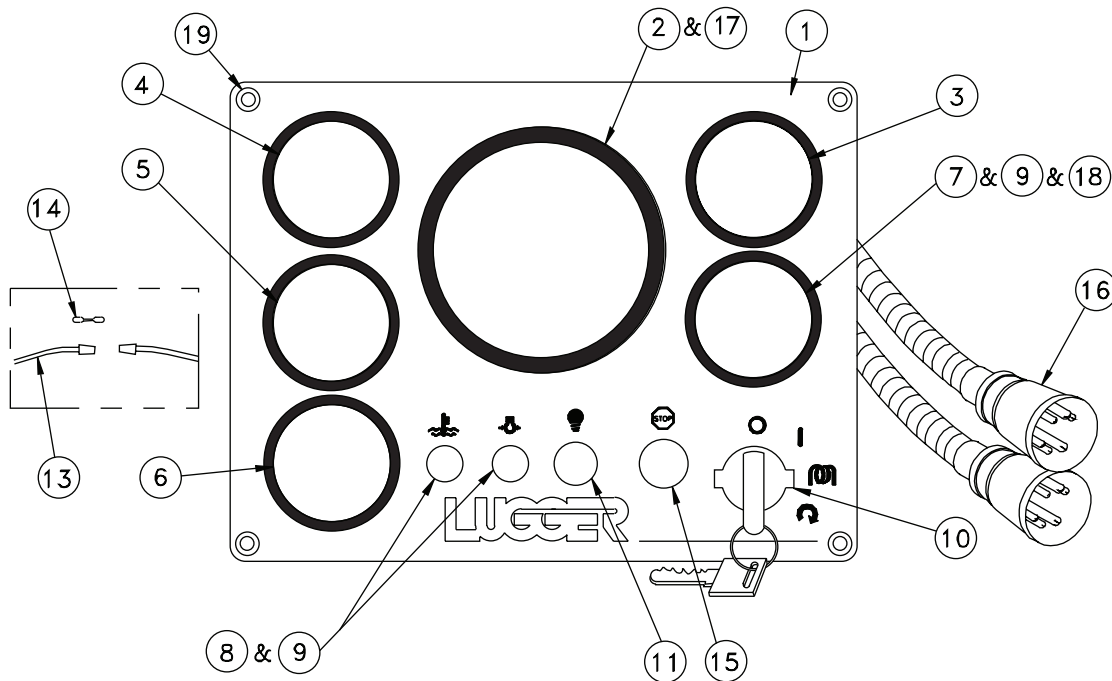


A-12193, A-12197/ B-9073z

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-01216	1	Belt Guard, Small Frame 12V/ 75 Amp Alternator	-
	00-01221	1	Belt Guard, Medium Frame Alternators	-
2	23-01201	1	Bracket	-
3	13-01203	1	Stud, Belt Guard Mtg. Upper Right	-
4	13-01204	1	Stud, Belt Guard Mtg. Lower Right	-
5	12-00719	1	Capscrew, Hex Head M8 x 1.25 x 75 mm	-
6	15-70004	5	Snubbing Washer S/S	-
7	14-09711	2	Hex Nut M8 x 1.25 S/S	-
8	12-00776	1	Capscrew, Hex Head M8 x 1.25 x 20 mm S/S	-
9	15-00705	6	Lock Washer, Helical M8 S/S	-
10	40-05404	2	Drive Belt	-
11	21-41103	1	Spacer (without front oil fill only)	-

Main Instrument Panel 12 Volt

L944



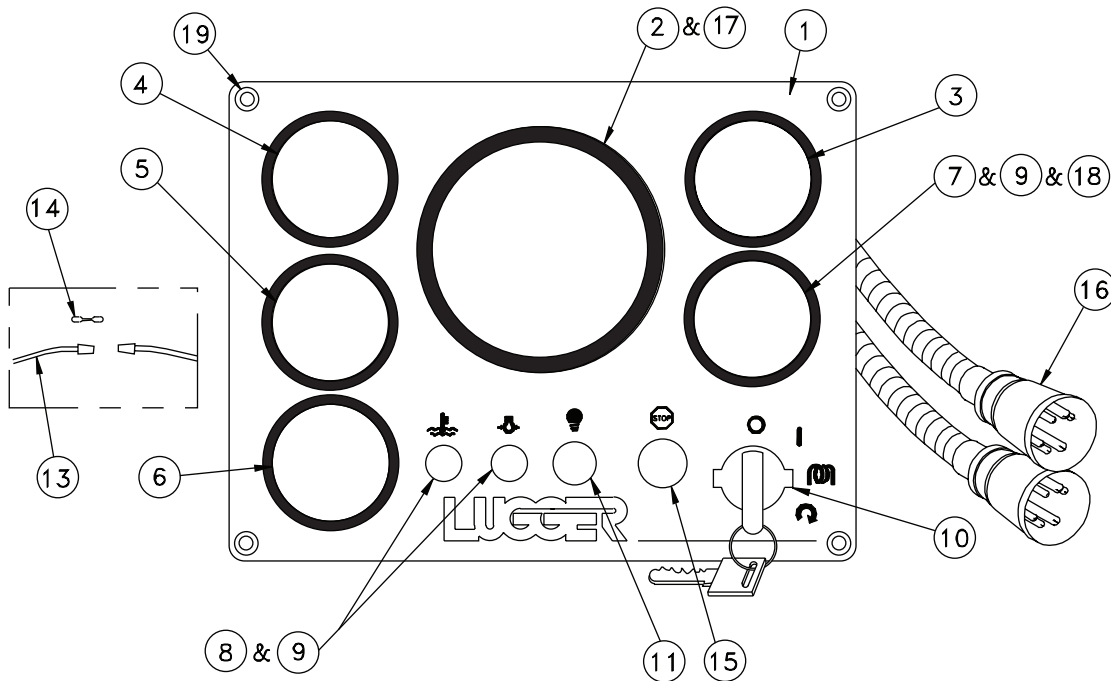
A-11651, A-11521 / B-4734-2changed

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91200	1	Main Instrument Panel, 12 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90069	1	Tachometer 0 -3500 RPM 12/24 Volt	-
3	37-90072-1	1	Voltmeter 8 -16 VDC	-
4	37-90075-1	1	Temperature Gauge 250°F 12 Volt	-
5	37-90081-1	1	Oil Pressure Gauge 0 -80 PSI 12 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 Volt	-
7	37-90074-1	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44852	2	Bulb, Clear 12 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	22-44861	2	Bulb Diffuser, Red	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	00-00013	1	Label, "12 Volt" (not shown)	-

GROUP 5 – ELECTRICAL SYSTEM

Main Instrument Panel 24 Volt

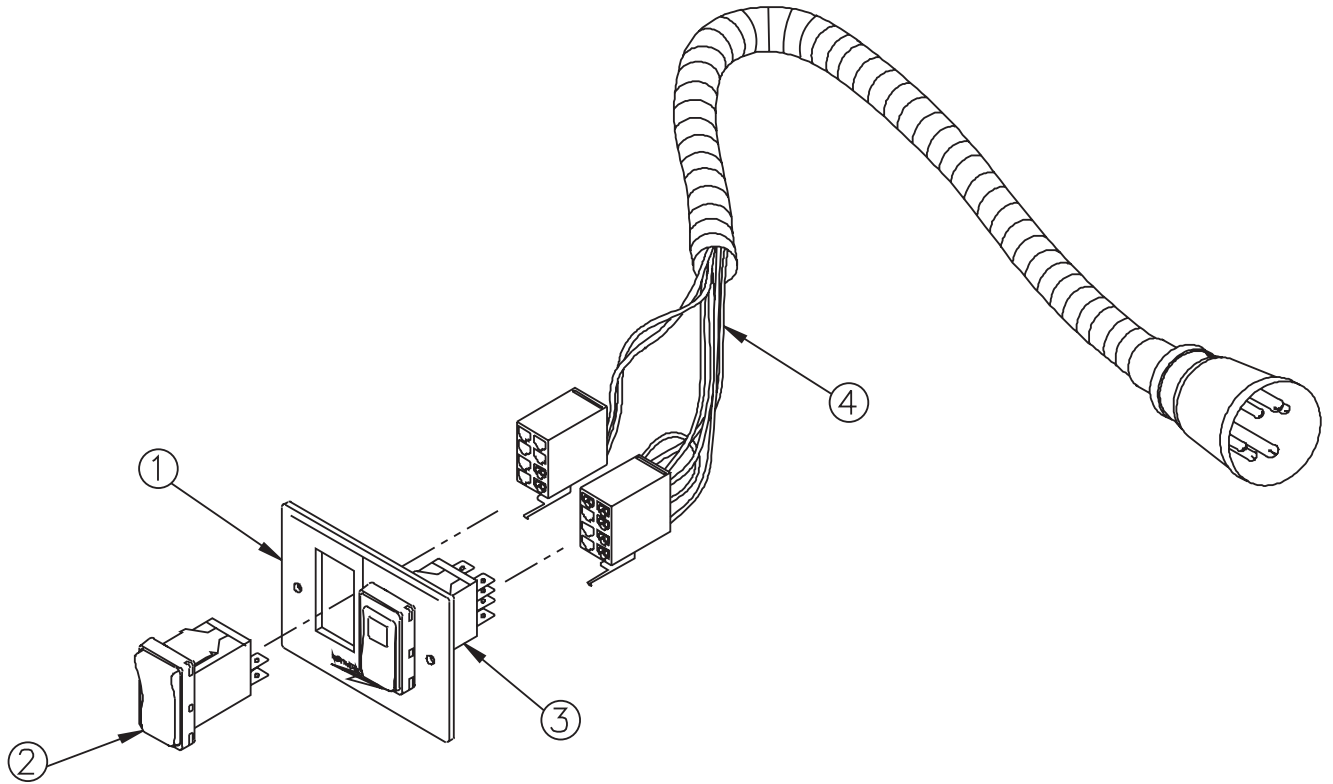
L944



A-119300, A-11522 / B-4734-2changed

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91205	1	Main Instrument Panel, 24 Volt (includes all keys)	-
1	28-90031	1	Plate, Main Instrument Panel	-
2	37-90069	1	Tachometer 0 -3500 RPM 12/24 Volt	-
3	37-90073-1	1	Voltmeter 18 -32 VDC	-
4	37-90076-1	1	Temperature Gauge 250°F 24 Volt	-
5	37-90082-1	1	Oil Pressure Gauge 0 -80 PSI 24 Volt	-
6	22-40263-1	1	Alarm Horn 12/ 24 VDC	-
7	37-90074-1	1	Hourmeter 12/ 24 Volt	-
8	22-44851	2	Lamp Holder, Amber Lens	-
9	22-44853	2	Bulb, Clear 24 Volt	-
10	37-94803	1	Key Switch	-
11	22-40247	1	Toggle Switch, SPST maintained	-
12	22-41060	2	Diode 6 Amp 50 Volt (not shown)	-
13	22-00044	1	Fuse Holder, In-line 15 Amp 32 Volt	-
14	22-41008	1	Fuse 7- 1/2 Amp 240 VAC/DC	-
15	00-40008	1	Plug, 5/8" O.D., Black Nylon	-
16	22-44859	1	Wire Harness	-
17	16-01002	1	O-ring	-
18	22-44861	2	Bulb Diffuser, Red	-
19	12-90002	4	Self-tapping Screw	-
20	00-90043	1	Label, Panel Electrical Load Warning (not shown)	-
21	00-00014	1	Label, "24 Volt" (not shown)	-

S-1 Control Panel 12 & 24 Volt



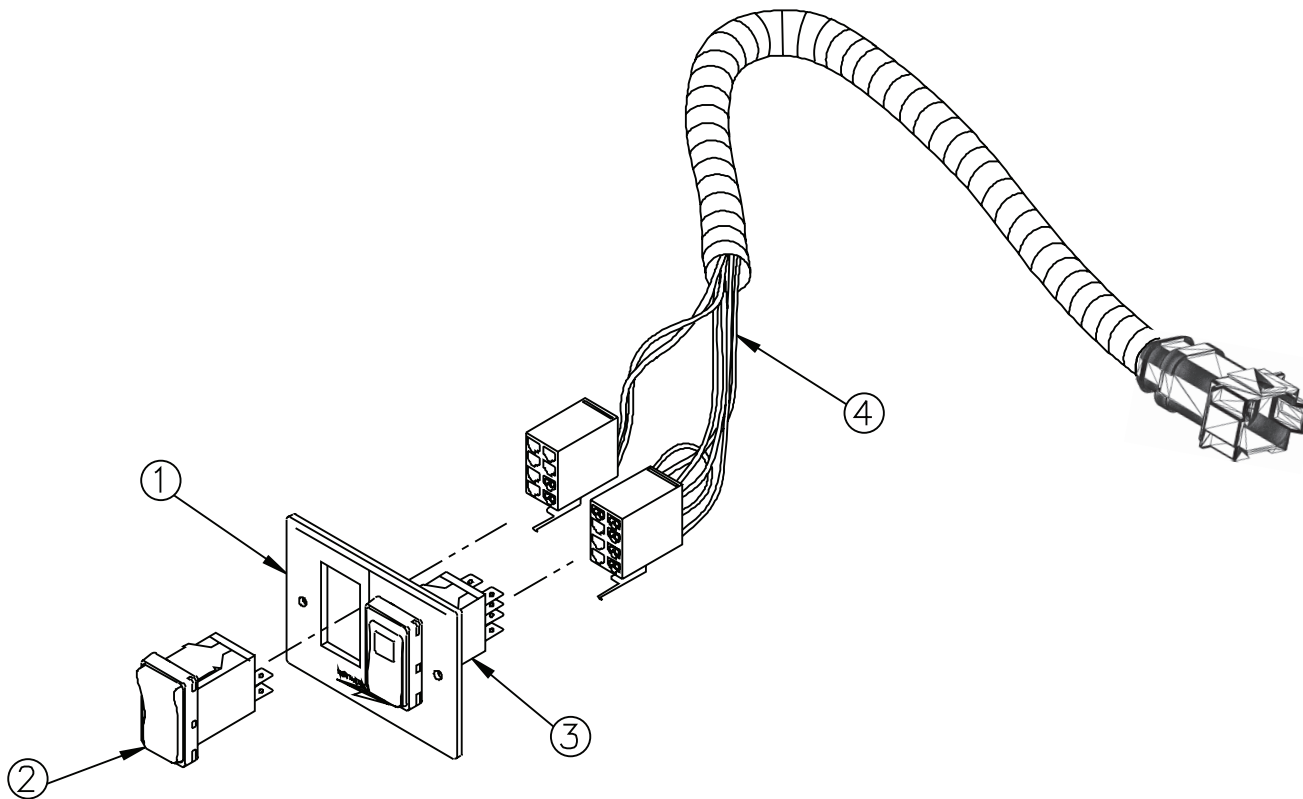
A-8551, A-8552 / B-5970

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92110	1	S-1 Start/Stop Control Panel, 12 Volt (includes all keys)	-
••	22-92115	1	S-1 Start/Stop Control Panel, 24 Volt (includes all keys)	-
1	00-40013	1	Plate, S-1 Control Panel	-
2	22-90167	1	Rocker Switch	-
3	22-90168	1	Rocker Switch	-
4	22-42066	1	Wire Harness, 12 Volt	-
	22-42067	1	Wire Harness, 24 Volt	-
5	00-00013	1	Label "12 Volt" *	-
	00-00014	1	Label "24 Volt" *	-
6	22-40012	1	Resistor, 200 Ohm, 3 Watt (24 Volt Panel only) *	-
			*Not shown	

GROUP 5 – ELECTRICAL SYSTEM

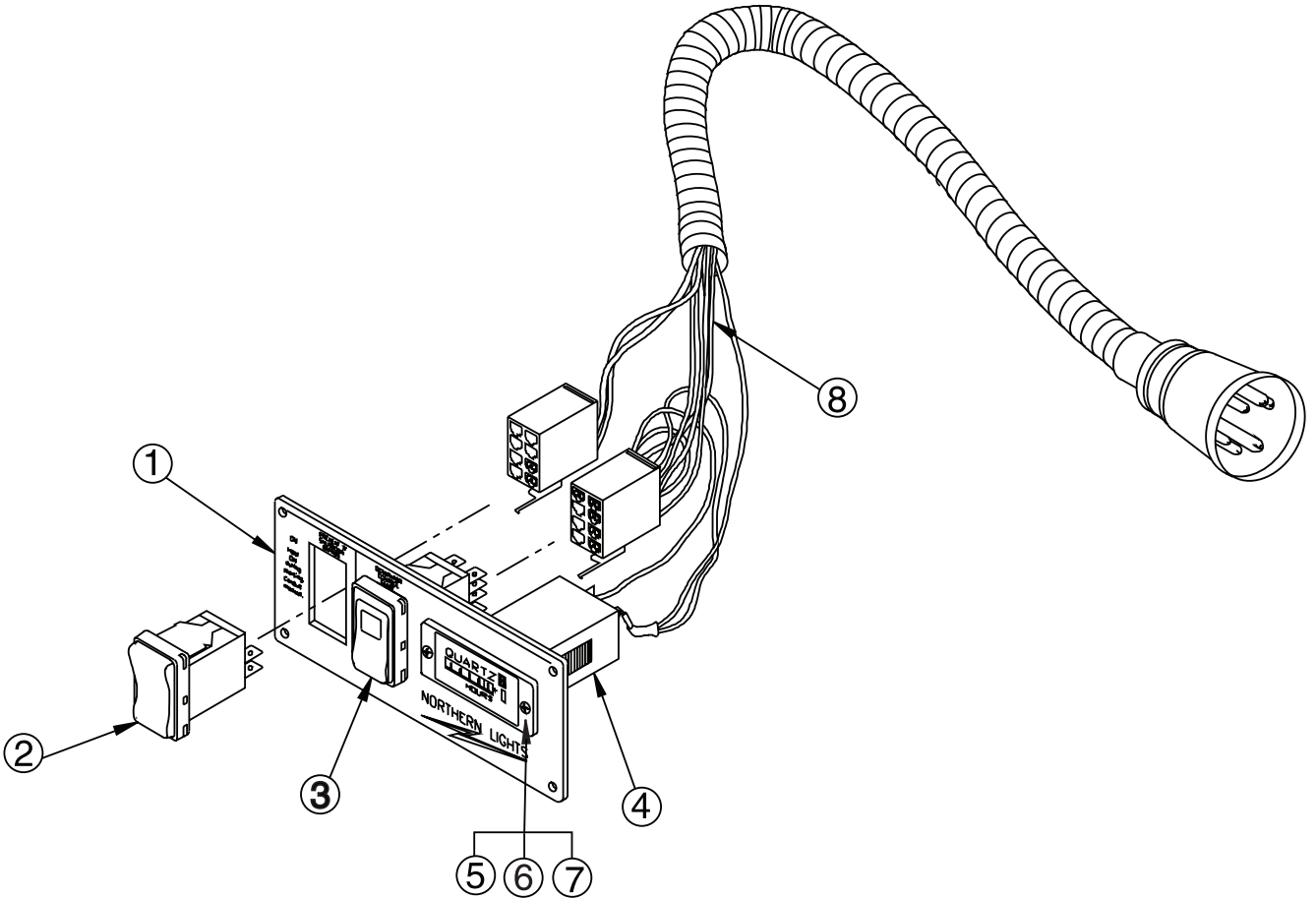
S-1 Control Panel 12 & 24 Volt

B+ Electrical Systems



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

Series 1-B Start-Stop Control Panel



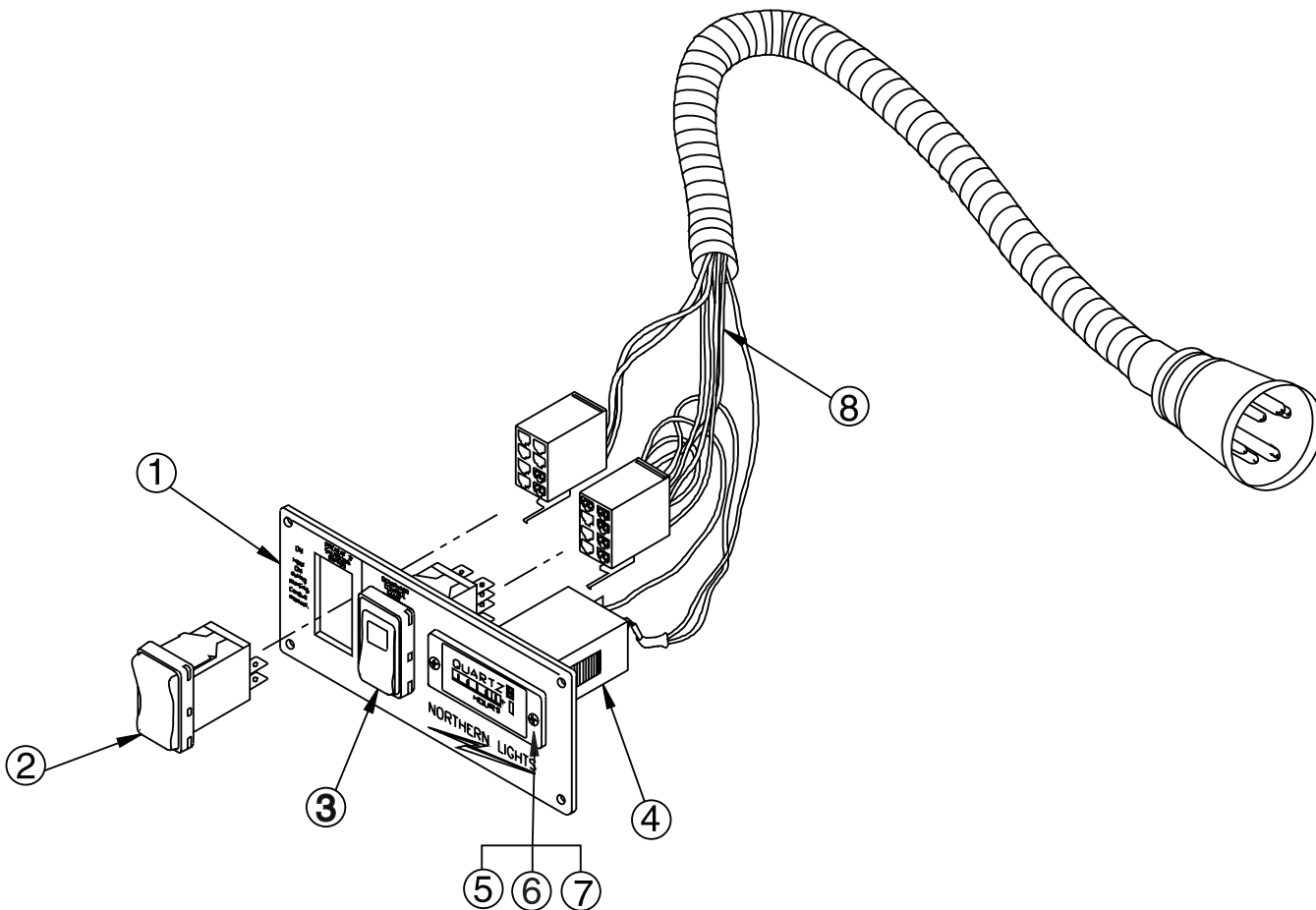
A-8553/ B-5971

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-92120	1	S 1-B Start/Stop Control Panel - 12 Volt (includes all keys)	-
••	22-92125	1	S 1-B Start/Stop Control Panel - 24 Volt (includes all keys)	-
1	28-90003	1	Plate	-
2	22-90167	1	Rocker Switch	-
3	22-90168	1	Rocker Switch	-
4	22-90009	1	Hour Meter	-
5	12-00093	2	Machine Screw, Round Head Phillips #6 - 32 x 1/2"	-
6	15-00030	2	Star Washer, Internal #6, Stainless Steel	-
7	14-00015	2	Hex Nut #6 - 32, Stainless Steel	-
8	22-42063	1	Wire Harness - 12 Volt Panels	-
	22-42064	1	Wire Harness - 24 Volt Panels	-

GROUP 5 – ELECTRICAL SYSTEM

Series 1-B Start/Stop Control Panel

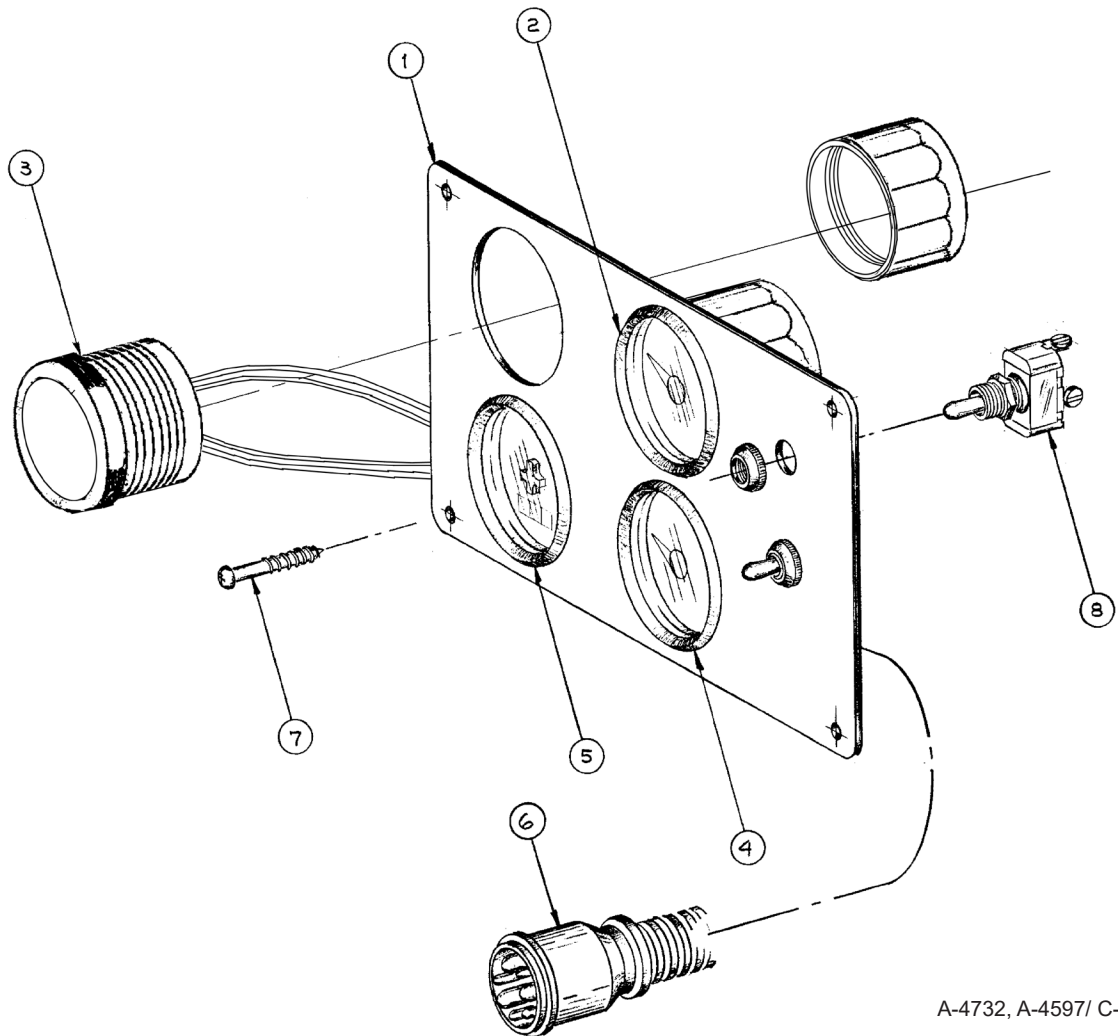
B+ Electrical Systems



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

S-3C Control Panel 12 & 24 Volt

VDO Ocean Line Black Bezel Gauges



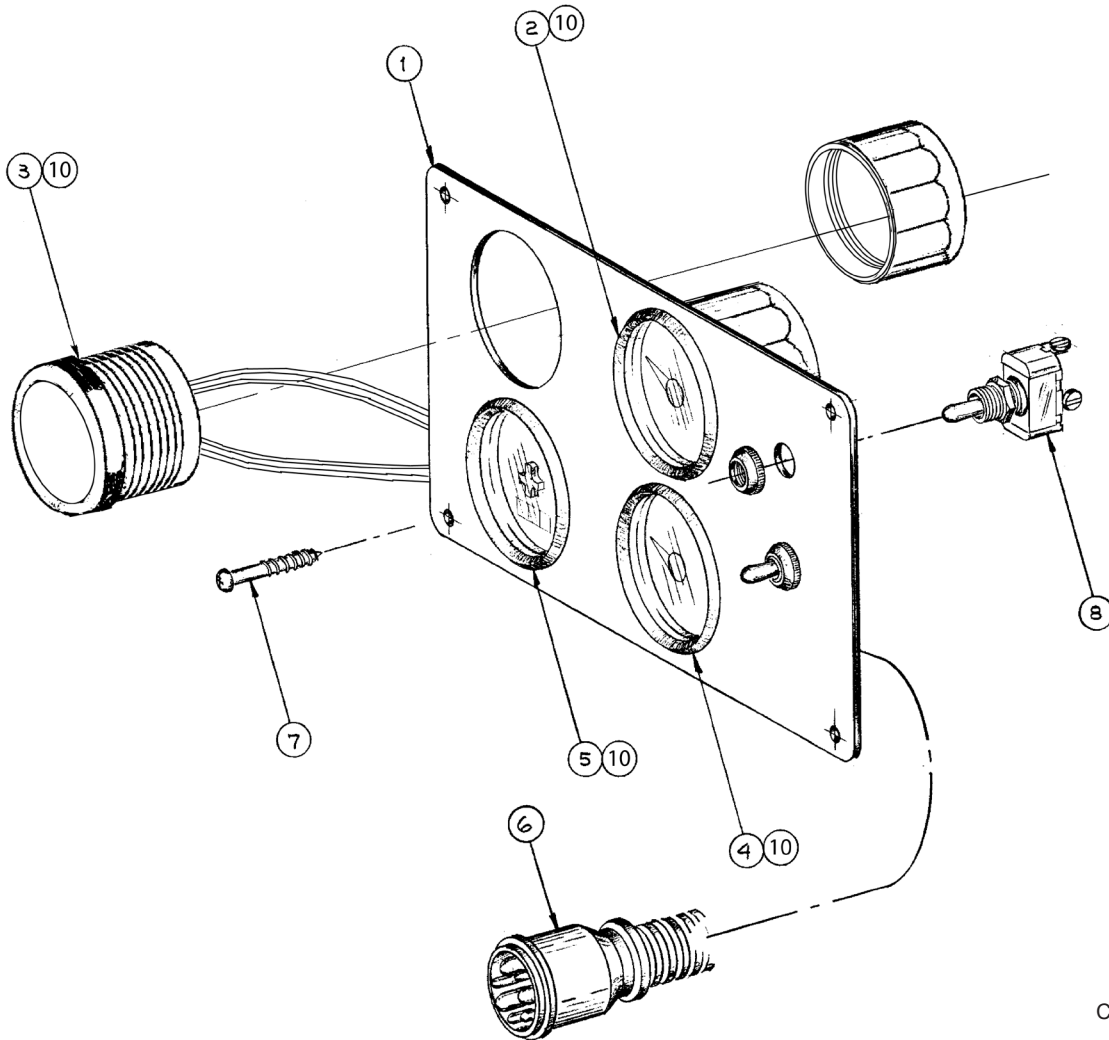
A-4732, A-4597/ C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91211	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91212	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
	37-90082-1	1	Oil Pressure Gauge, 0-80 PSI 24 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
	37-90076-1	1	Temperature Gauge, 0- 250°F 24 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
	37-90073-1	1	DC Voltmeter, 18- 32 VDC	-
5	37-90074-1	1	Hourmeter 12/ 24 Volt	-
6	22-42024	1	Panel Wire Harness	-
7	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch	-
9	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
10	37-41004	**	12 Volt Bulb (not shown)	-
	37-41003	**	24 Volt Bulb (not shown)	-
			**As required	

GROUP 5 – ELECTRICAL SYSTEM

S-3C Control Panel 12 Volt

VDO Viewline Black Bezel Gauges

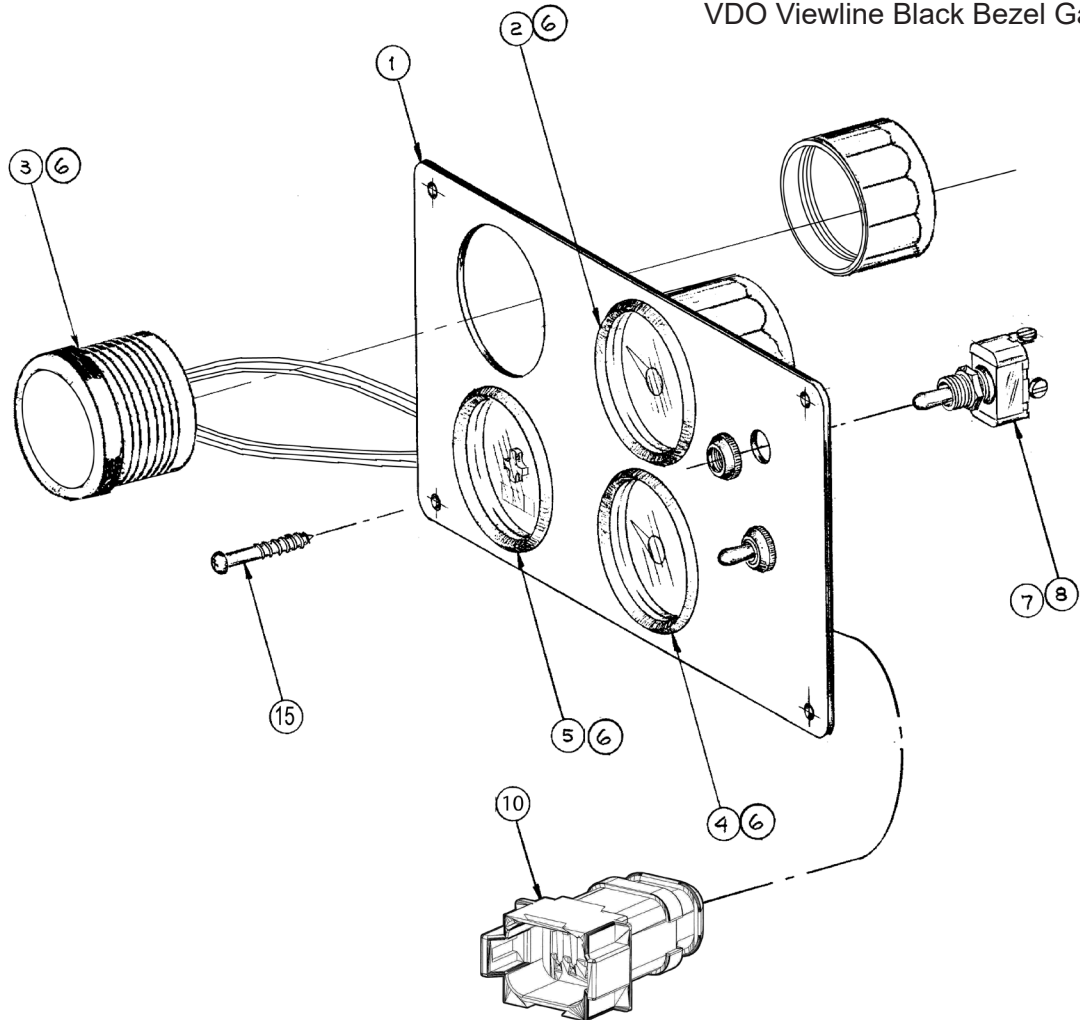


C-2441

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91216	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91217	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	DC Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt	-
6	22-42096	1	Panel Wire Harness	-
7	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
8	22-41051	2	Toggle Switch	-
9	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
10	37-00014	4	Bezel	-
			* Note Bezel 37-00014 supplied separately	

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

VDO Viewline Black Bezel Gauges

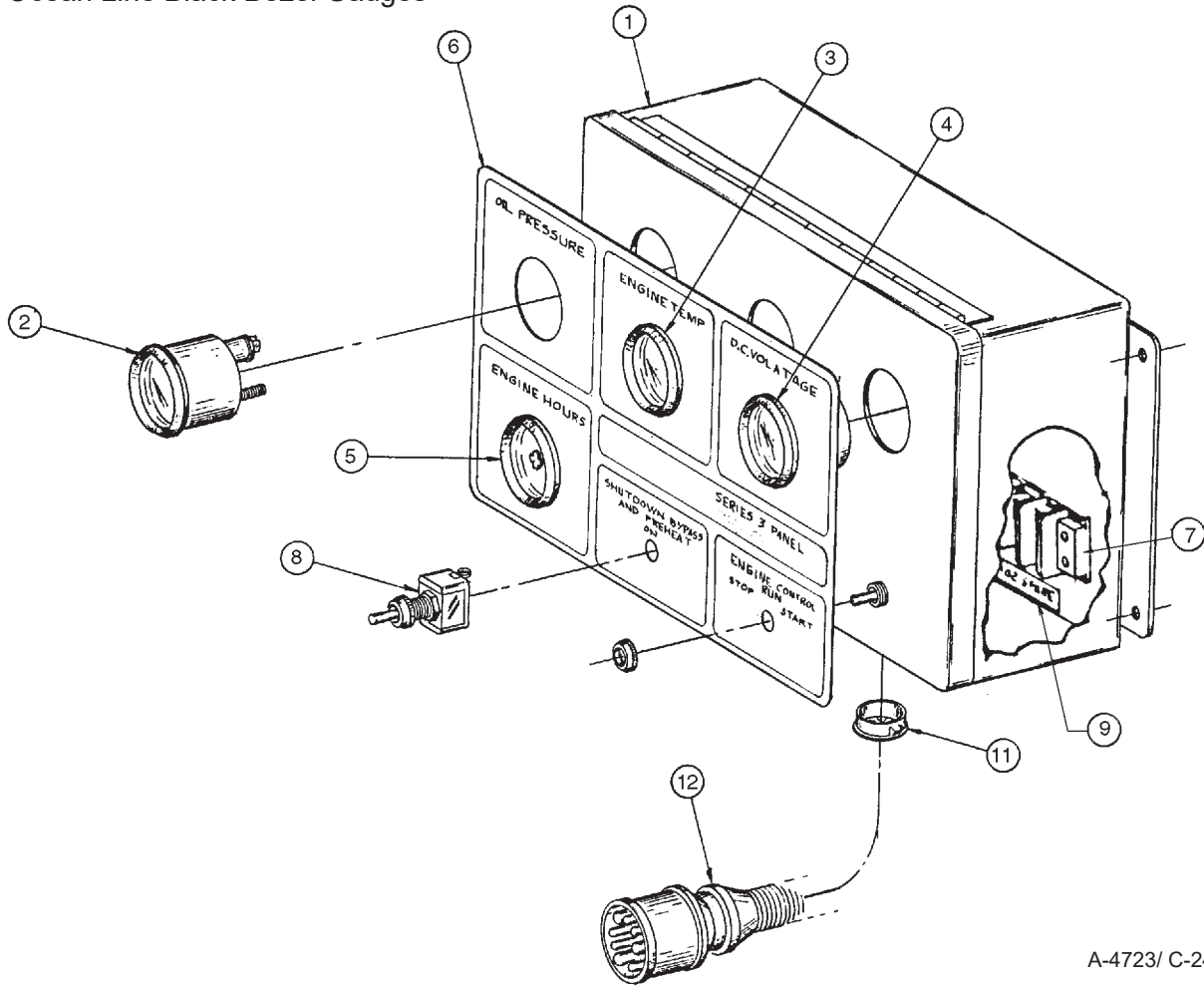


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95611	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-95612	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	28-90010	1	Panel Plate	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	DC Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt *	-
6	37-00014	4	Bezel	-
8	22-41051	1	Toggle Switch	-
	22-40335	1	Toggle Switch	-
9	23-95601	1	Bracket, Relay Base Mounting	-
10	22-45606	1	Panel Wire Harness	-
11	12-42400	1	Machine Screw #8-32 x 1/4"	-
12	15-00035	1	Star Washer #8	-
13	22-42047	**	Relay 12 Volt	-
	22-40085	**	Relay 24 Volt	-
14	00-00013	**	Label 12 Volt (not shown)	-
	00-00014	**	Label 24 Volt (not shown)	-
15	12-90007	4	Self Tapping Screw, Oval Head Phillips #6 x 3/4"	-
			** As Required	

GROUP 5 – ELECTRICAL SYSTEM

S-3B Control Panel 12 & 24 Volt

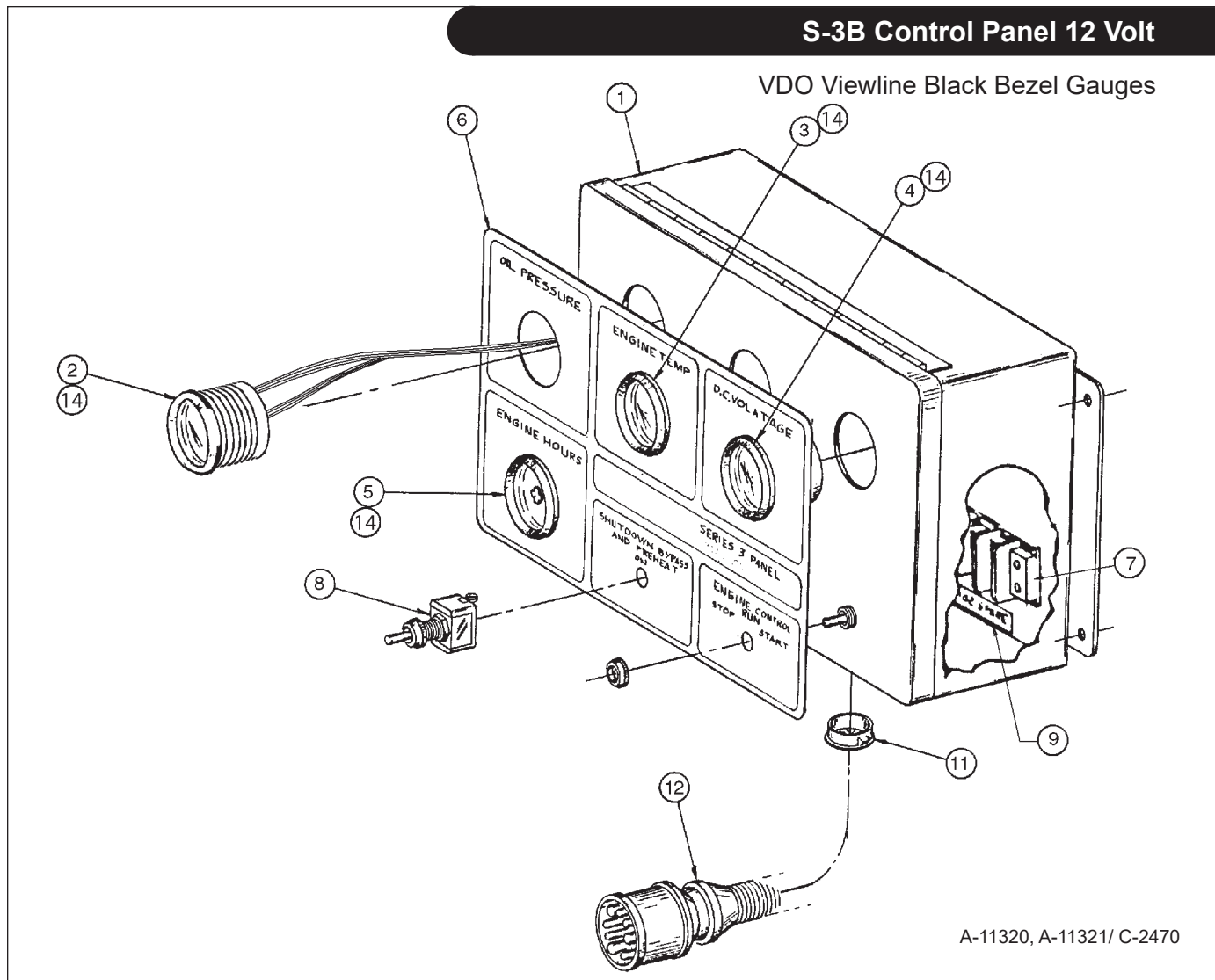
VDO Ocean Line Black Bezel Gauges



A-4723/ C-2470

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91201	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91202	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	39-40008	1	Enclosure	-
2	37-90081-1	1	Oil Pressure Gauge, 0-80 PSI 12 Volt	-
	37-90082-1	1	Oil Pressure Gauge, 0-80 PSI 24 Volt	-
3	37-90075-1	1	Temperature Gauge, 0- 250°F 12 Volt	-
	37-90076-1	1	Temperature Gauge, 0- 250°F 24 Volt	-
4	37-90072-1	1	DC Voltmeter, 8 - 16 VDC	-
	37-90073-1	1	DC Voltmeter, 18- 32 VDC	-
5	37-90074-1	1	Hourmeter 12/ 24 Volt	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Strip	-
8	22-41051	2	Toggle Switch	-
9	22-00052	1	Number Strip	-
10	22-40257	1	Wire Harness (not shown)	-
11	00-40028	1	Grommet	-
12	22-42027	1	Connection Harness	-
13	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
14	37-41004	**	12 Volt Bulb (not shown)	-
	37-41003	**	24 Volt Bulb (not shown)	-
			**As required	

S-3B Control Panel 12 Volt

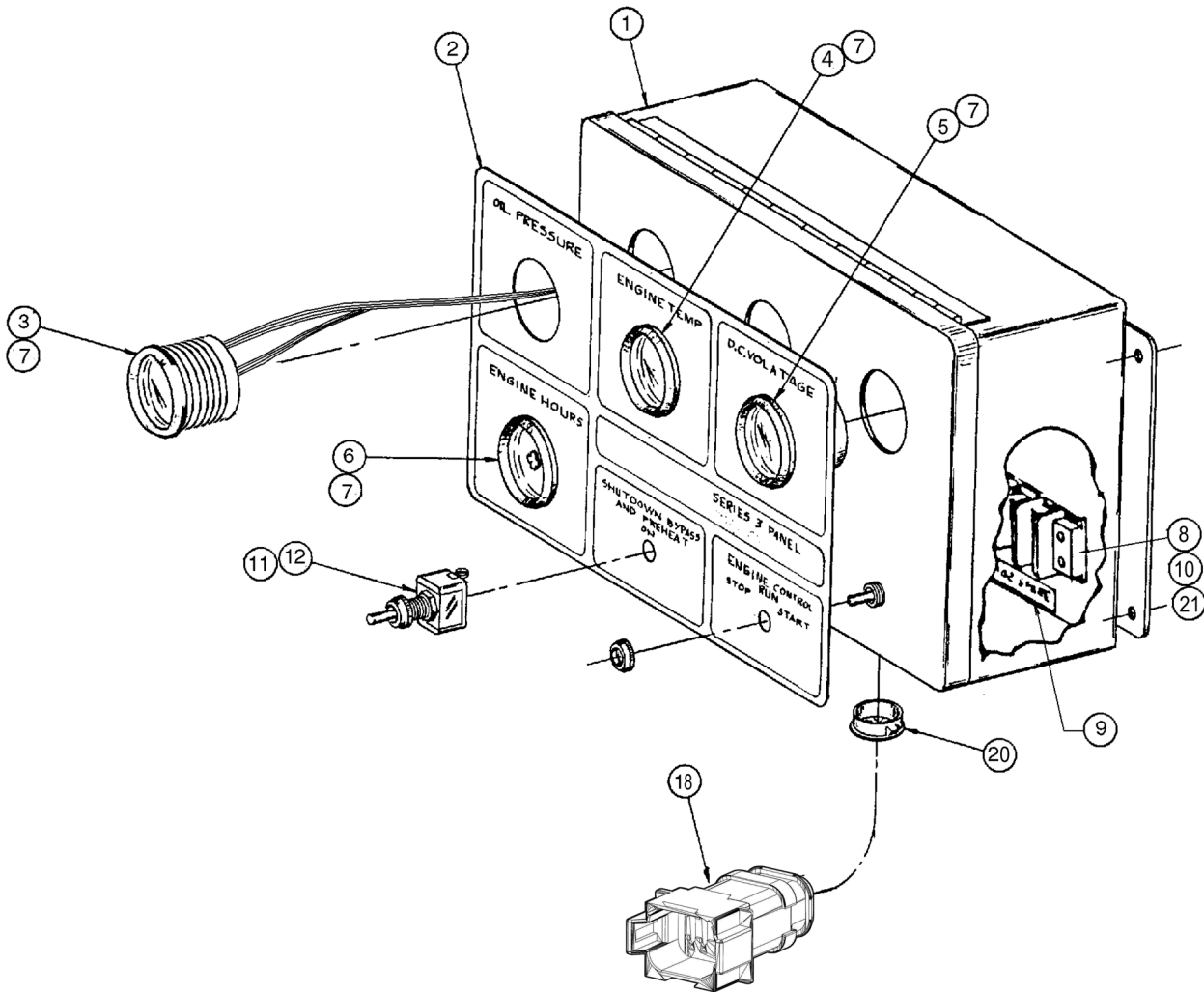


KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-91203	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-91204	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	39-40027	1	Enclosure	-
2	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
3	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
4	37-91070-1	1	Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 VDC *	-
5	37-91072-1	1	Hourmeter 12/ 24 Volt	-
6	00-91018	1	Panel Decal	-
7	22-41077	1	Terminal Strip	-
8	22-41051	2	Toggle Switch	-
9	22-00052	1	Number Strip	-
10	22-40648	1	Wire Harness (not shown)	-
11	00-40028	1	Grommet	-
12	22-42027	1	Connection Harness	-
13	00-00013	1	Label 12 Volt (not shown)	-
	00-00014	1	Label 24 Volt (not shown)	-
14	37-00014	4	Bezel	-
			* Note Bezel 37-00014 supplied separately	

GROUP 5 – ELECTRICAL SYSTEM

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

VDO Viewline Black Bezel Gauges



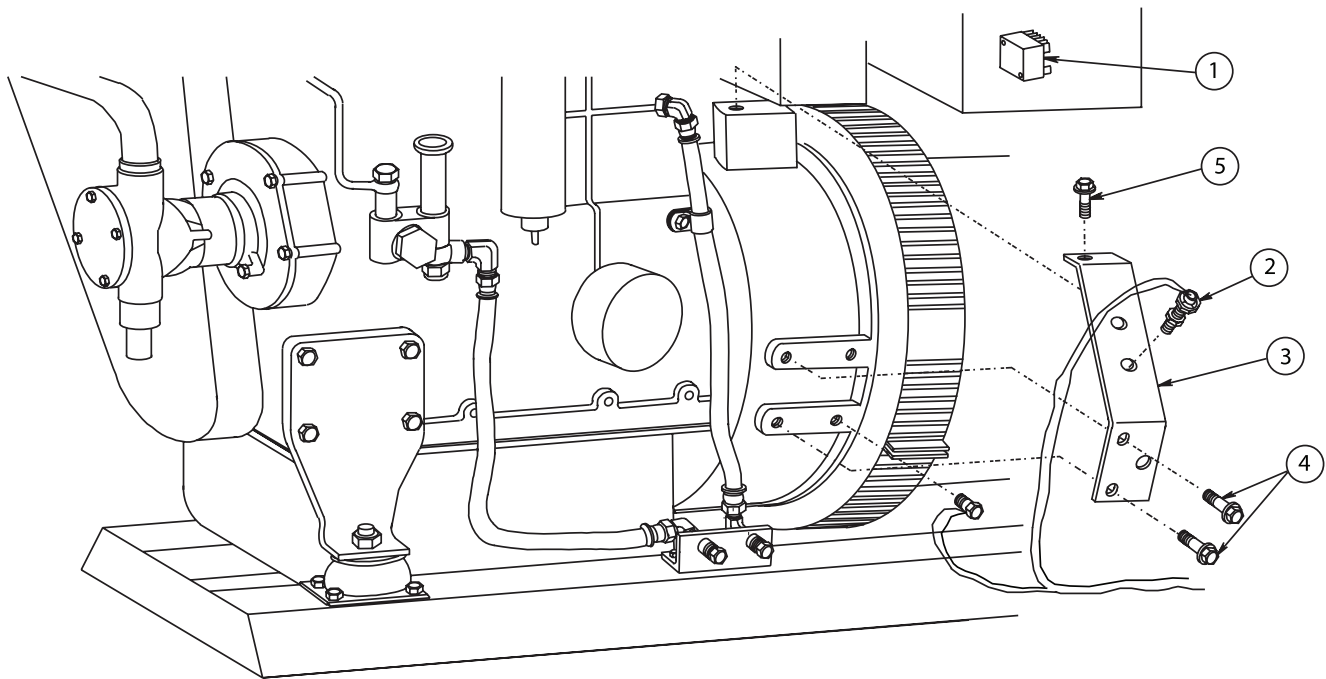
S-3B Control Panel 12 - 24 Volt B+ Systems

VDO Viewline Black Bezel Gauges

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	22-95601	1	S-3C Control Panel, 12 Volt (includes all keys)	-
••	22-95602	1	S-3C Control Panel, 24 Volt (includes all keys)	-
1	39-40027	1	Enclosure	-
2	00-91018	1	Decal	-
3	37-91075-1	1	Oil Pressure Gauge, 0-80 PSI 12/24 Volt *	-
4	37-91074-1	1	Temperature Gauge, 0- 250°F 12/24 Volt *	-
5	37-91070-1	1	Voltmeter, 8 - 16 VDC *	-
	37-91071-1	1	Voltmeter 18 - 32 VDC *	-
6	37-91072-1	1	Hourmeter 12/ 24 Volt	-
7	37-00014	4	Bezel	-
8	22-41077	1	Terminal Strip	-
9	22-00052	1	Number Strip	-
10	14-09021	2	Jam Nut, Nylock #8-32 S/S	-
11	22-41051	1	Toggle Switch	-
12	22-40335	1	Toggle Switch	-
13	23-95602	1	Bracket, Relay Mounting	-
14	22-45604	1	Wire Harness (not shown) (Includes keys 22-23)	-
15	12-42400	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	-
	22-40085	**	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	

Speed Switch and Magnetic Pick-up

M944 Non-turbo

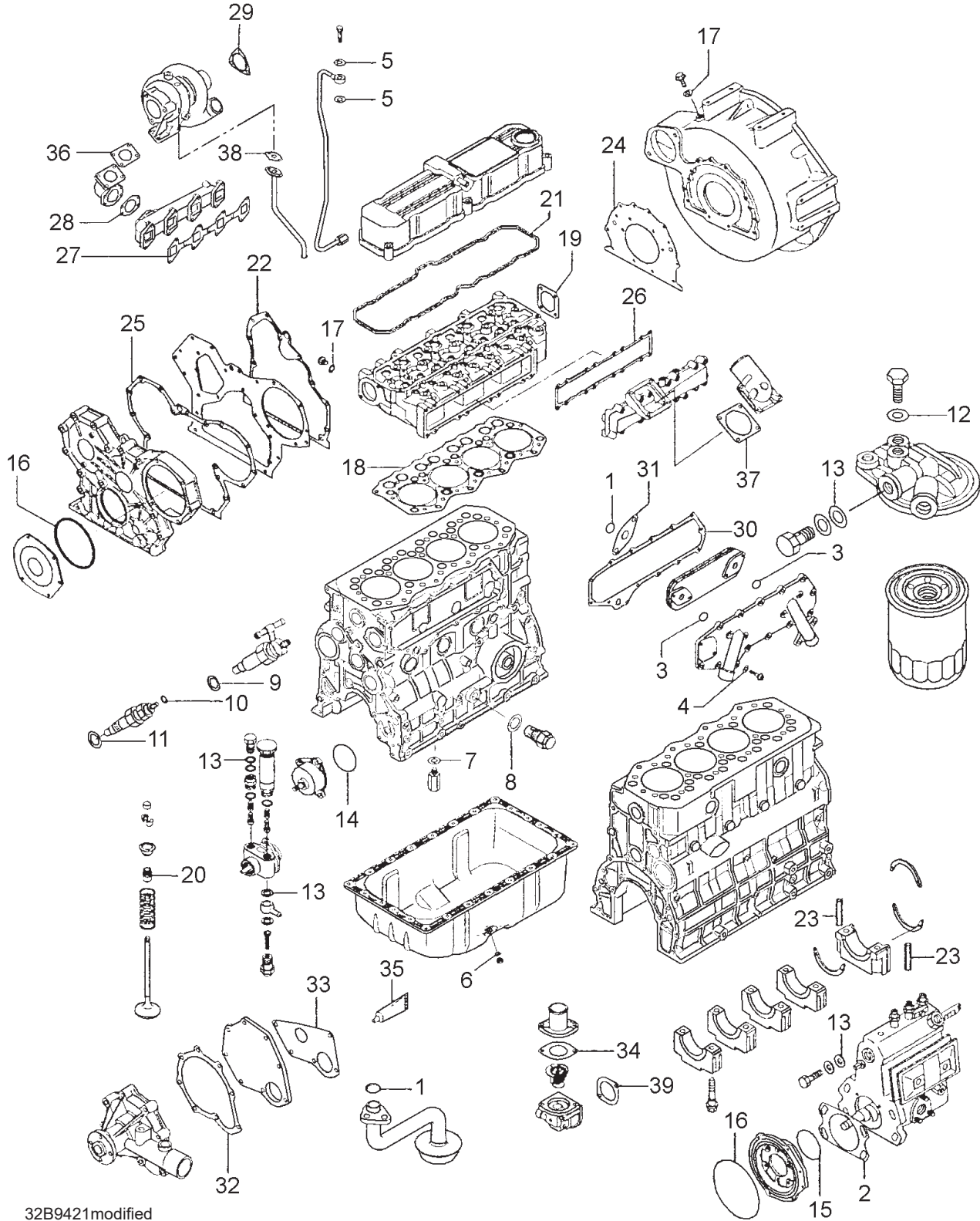


A-11510, A-11509 / B-9091

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-40438	1	Speed Switch, 2 Pt. Electric SS40	-
	22-40274	1	Speed Switch, 1 Pt. Electric SS18	-
2	22-40440	**	Magnetic Pick-up	-
3	23-41203	1	Bracket, Magnetic Pick-up Mtg.	-
4	19M7788	2	Capscrew, Hex Head Flanged M12 x 1.75 x 25 mm	-
5	19M7784	1	Capscrew, Hex Head Flanged M10 x 1.5 x 20 mm	-
**As required				

GROUP 6 – GASKET SETS

Gaskets L-M944 & M30CW



32B9421modified

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-01200	1	Gasket Set, Engine Overhaul (includes all keys)	-
1	F315002000	3	O-ring	-
2	3066151300	1	Gasket	-
3	F315602500	2	O-ring	-

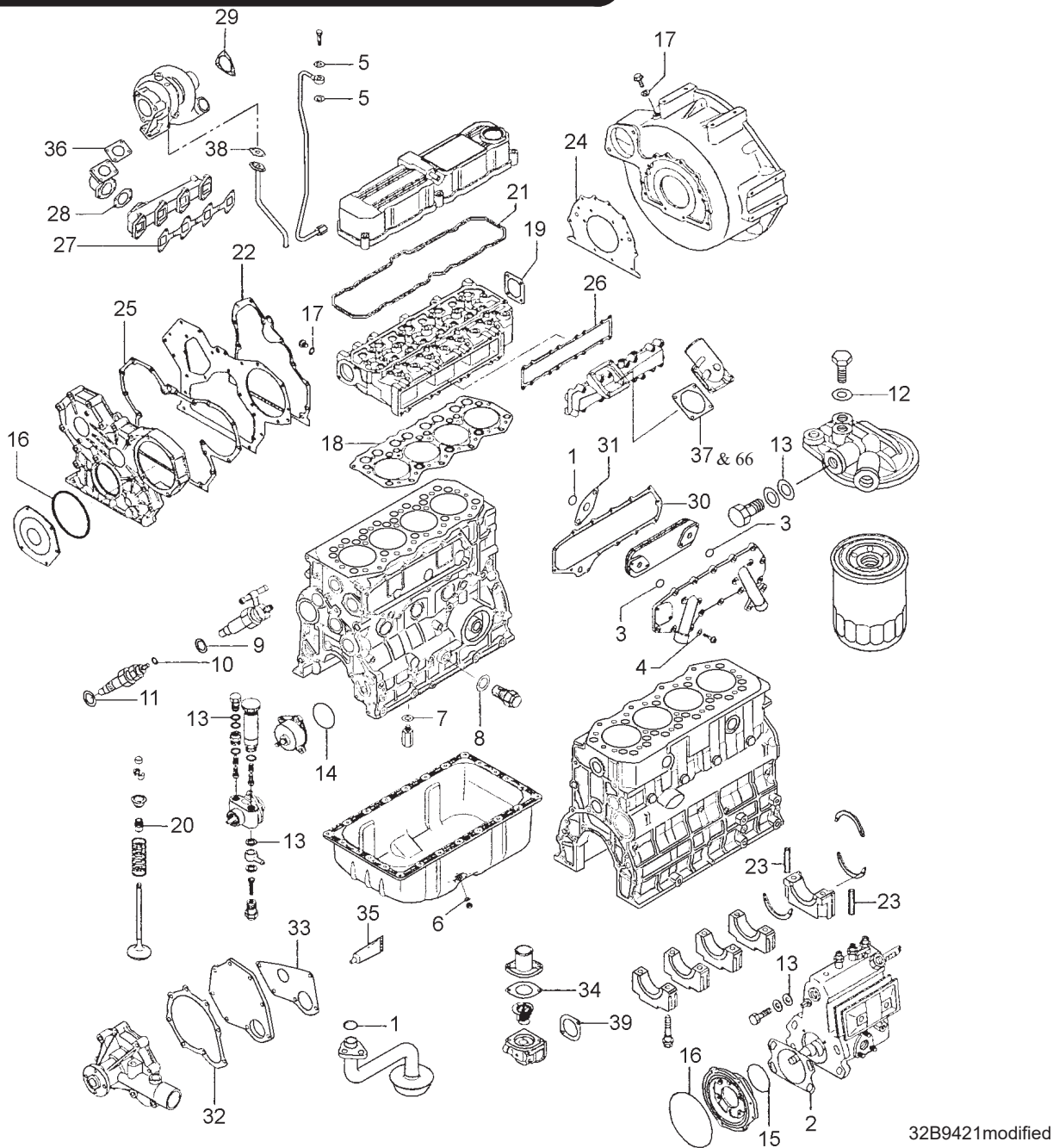
Gaskets L-M944 & M30CW

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
4	F420208000	4	Gasket	-
5	F420210000	2	Gasket	-
6	F420214000	1	Gasket	-
7	F420218000	2	Gasket	-
8	3434000700	1	Gasket	-
9	MM432045	4	Gasket, Nozzle Holder	-
10	MD068355	4	Gasket, Fuel Return	-
11	MD070717	4	Gasket	-
12	0594600801	1	Sealing Washer	-
13	0594601401	10	Sealing Washer	-
14	32A3500600	1	O-ring	-
15	0601613075	1	O-ring	-
16	0601613140	2	O-ring	-
17	3063625901	2	Gasket	-
18	32A0102204	1	Gasket, Cylinder Head	-
19	32A0102501	1	Gasket, Rear Head	-
20	32A0402801	8	Seal, Valve Stem	-
21	32A0413200	1	Gasket, Rocker Cover	-
22	32A0704100	1	Gasket, Front Plate	-
23	32A0711700	2	Side Seal	-
24	32A0714201	1	Gasket, Rear	-
25	32A1100200	1	Gasket, Gear Case	-
26	32A3000201	1	Gasket, Intake Manifold	-
27	32A3200200	1	Gasket, Exhaust Manifold	-
28	32A3201400	1	Gasket, Exhaust	-
29	32A3203300	1	Gasket	-
30	32A3911200	1	Gasket, Side Cover	-
31	32A3901401	1	Gasket	-
32	32A4500400	1	Gasket, Pump Cover	-
33	32A4500500	1	Gasket, Water Pump	-
34	32A4601400	1	Gasket, Thermostat	-
35	32A9105100	1	Liquid Gasket	-
36	3423200300	1	Gasket, Exhaust	-
37	3433004300	1	Gasket, Air Inlet	-
38	3433604100	1	Gasket, Oil Line	-
39	3444605300	1	Gasket	-
40	0550710110	1	O-ring*	-
41	0594601001	2	Sealing Washer*	-
42	32A3911400	1	Gasket*	-
43	0594600601	8	Sealing Washer*	-
44	0594601201	2	Sealing Washer*	-
45	32A9013600	1	Gasket*	-
46	MM433993	1	O-ring*	-
47	32A6156900	4	Gasket*	-
48	32A0704500	1	Gasket*	-
49	11-35401	1	Gasket, Exhaust Elbow Mtg.	-
50	11-10015	1	Thermostat Seal Ring	-
51	11-11201	1	Gasket, Thermostat Housing	-
52	11-12203	2	Gasket, Keel Cooling Outlet	-
53	16-11201	1	O-ring	-
54	25-19517	1	O-ring	-
55	052300400	1	O-ring	-
56	3440711090	1	Seal, Rear Main	-
57	32A1104010	1	Front Seal	-

*Not shown

GROUP 6 – GASKET SETS

Gaskets M944T & M38CR2



32B9421modified

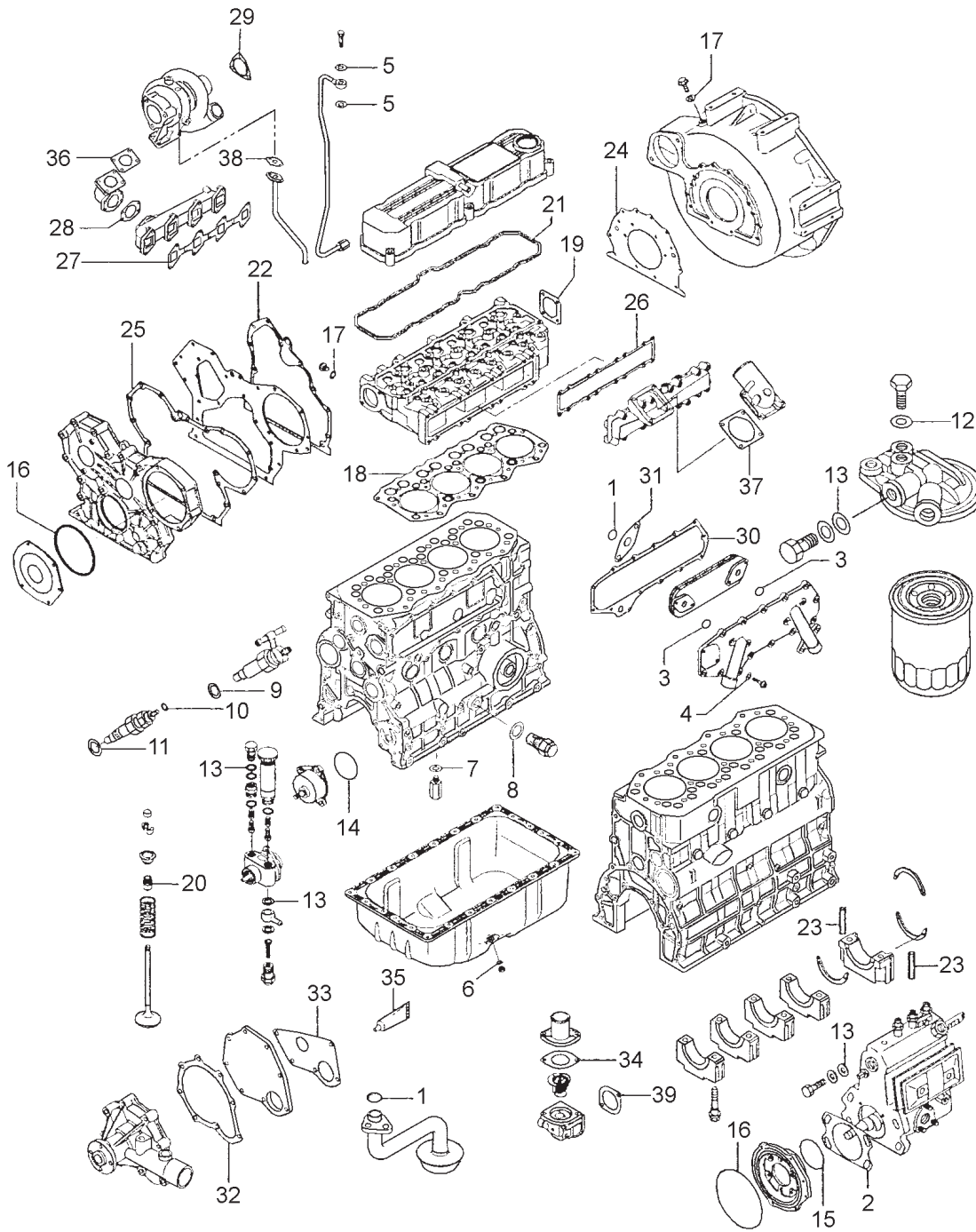
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
●●	29-01201	1	Gasket Set, Engine Overhaul (includes all keys)	-
1	F315002000	3	O-ring	-
2	3066151300	1	Gasket	-
3	F315602500	2	O-ring	-
4	F420208000	4	Gasket	-
5	F420210000	2	Gasket	-
6	F420214000	1	Gasket	-
7	F420218000	2	Gasket	-
8	3434000700	1	Gasket	-
9	MM432045	4	Gasket, Nozzle Holder	-
10	MD068355	4	Gasket, Fuel Return	-
11	MD070717	4	Gasket	-

Gaskets M944T & M38CR2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
12	0594600801	1	Sealing Washer	-
13	0594601401	10	Sealing Washer	-
14	32A3500600	1	O-ring	-
15	0601613075	1	O-ring	-
16	0601613140	2	O-ring	-
17	3063625901	2	Gasket	-
18	32A0112300	1	Gasket, Cylinder Head	-
19	32A0102501	1	Gasket, Rear Head	-
20	32A0402801	8	Seal, Valve Stem	-
21	32A0413200	1	Gasket, Rocker Cover	-
22	32A0704100	1	Gasket, Front Plate	-
23	32A0711700	2	Side Seal	-
24	32A0714201	1	Gasket, Rear	-
25	32A1100200	1	Gasket, Gear Case	-
26	32A3000201	1	Gasket, Intake Manifold	-
27	32A3200200	1	Gasket, Exhaust Manifold	-
28	32A3201400	1	Gasket, Exhaust	-
29	32A3203300	1	Gasket	-
30	32A3911200	1	Gasket, Side Cover	-
31	32A3901401	1	Gasket	-
32	32A4500400	1	Gasket, Pump Cover	-
33	32A4500500	1	Gasket, Water Pump	-
34	32A4601400	1	Gasket, Thermostat	-
35	32A9105100	1	Liquid Gasket	-
36	3423200300	1	Gasket, Exhaust	-
37	3433004300	1	Gasket, Air Inlet	-
38	3433604100	1	Gasket, Oil Line	-
39	3444605300	1	Gasket	-
40	0550710110	1	O-ring*	-
41	0594601001	2	Sealing Washer*	-
42	32A3911400	1	Gasket*	-
43	0594600601	8	Sealing Washer*	-
44	0594601201	2	Sealing Washer*	*Not shown
45	32A9013600	1	Gasket*	-
46	MM433993	1	O-ring*	-
47	32A6156900	4	Gasket*	-
48	32A0704500	1	Gasket*	-
49	11-35401	1	Gasket, Exhaust Elbow Mtg.	-
50	11-10015	1	Thermostat Seal Ring	-
51	11-11201	1	Gasket, Thermostat Housing	-
52	11-12203	2	Gasket, Keel Cooling Outlet	-
53	16-11201	1	O-ring	-
54	25-19517	1	O-ring	-
55	052300400	1	O-ring	-
56	11-31201	1	Gasket, Wet Adapter Mtg.	-
57	11-31401	1	Gasket, K26 Turbo Mtg.	-
58	11-11204	1	Gasket, Turbo Coolant Supply Tube	-
59	11-31012	1	Gasket	-
60	11-31031	1	Gasket, Turbo Oil Return	-
62	16-01000	1	O-ring	-
63	16-21001	2	O-ring	-
64	3440711090	1	Seal, Rear Main	-
65	32A1104010	1	Front Seal	-
66	3433004200	1	Gasket with Screen	-

GROUP 6 – GASKET SETS

Gaskets NL944D2



32B9421modified

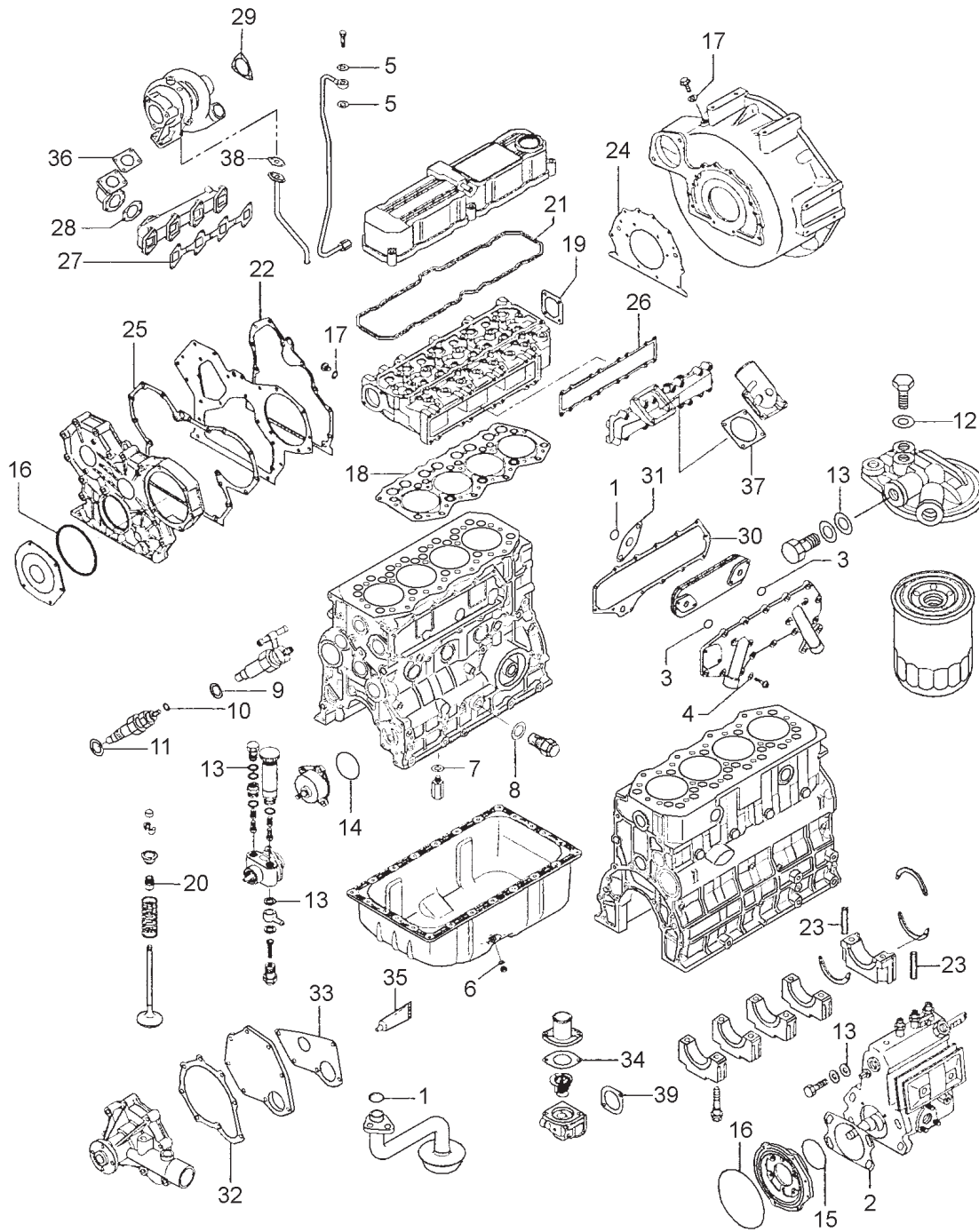
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-01202	1	Gasket Set, Engine Overhaul (includes all keys)	-
1	F315002000	3	O-ring	-
2	3066151300	1	Gasket	-
3	F315602500	2	O-ring	-
4	F420208000	4	Gasket	-
5	F420210000	2	Gasket	-

Gaskets NL944D2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
5	F420210000	2	Gasket	-
6	F420214000	1	Gasket	-
7	F420218000	2	Gasket	-
8	3434000700	1	Gasket	-
9	MM432045	4	Gasket, Nozzle Holder	-
10	MD068355	4	Gasket, Fuel Return	-
11	MD070717	4	Gasket	-
12	0594600801	1	Sealing Washer	-
13	0594601401	10	Sealing Washer	-
14	32A3500600	1	O-ring	-
15	0601613075	1	O-ring	-
16	0601613140	2	O-ring	-
17	3063625901	2	Gasket	-
18	32A0102204	1	Gasket, Cylinder Head	-
19	32A0102501	1	Gasket, Rear Head	-
20	32A0402801	8	Seal, Valve Stem	-
21	32A0413200	1	Gasket, Rocker Cover	-
22	32A0704100	1	Gasket, Front Plate	-
23	32A0711700	2	Side Seal	-
24	32A0714201	1	Gasket, Rear	-
25	32A1100200	1	Gasket, Gear Case	-
26	32A3000201	1	Gasket, Intake Manifold	-
27	32A3200200	1	Gasket, Exhaust Manifold	-
28	32A3201400	1	Gasket, Exhaust	-
29	32A3203300	1	Gasket	-
30	32A3911200	1	Gasket, Side Cover	-
31	32A3901401	1	Gasket	-
32	32A4500400	1	Gasket, Pump Cover	-
33	32A4500500	1	Gasket, Water Pump	-
34	32A4601400	1	Gasket, Thermostat	-
35	32A9105100	1	Liquid Gasket	-
36	3423200300	1	Gasket, Exhaust	-
37	3433004300	1	Gasket, Air Inlet	-
38	3433604100	1	Gasket, Oil Line	-
39	3444605300	1	Gasket	-
40	0550710110	1	O-ring*	-
41	0594601001	2	Sealing Washer*	-
42	32A3911400	1	Gasket*	-
43	0594600601	8	Sealing Washer*	-
44	0594601201	2	Sealing Washer*	-
45	32A9013600	1	Gasket*	-
46	MM433993	1	O-ring*	-
47	32A6156900	4	Gasket*	-
48	32A0704500	1	Gasket*	-
49	3440711090	1	Rear Main Seal *	-
50	32A1104010	1	Front Seal *	-
			*Not shown	

GROUP 6 – GASKET SETS

Gaskets NL944T2



32B9421modified

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
••	29-01203	1	Gasket Set, Engine Overhaul (includes all keys)	-
1	F315002000	3	O-ring	-
2	3066151300	1	Gasket	-
3	F315602500	2	O-ring	-
4	F420208000	4	Gasket	-
5	F420210000	2	Gasket	-

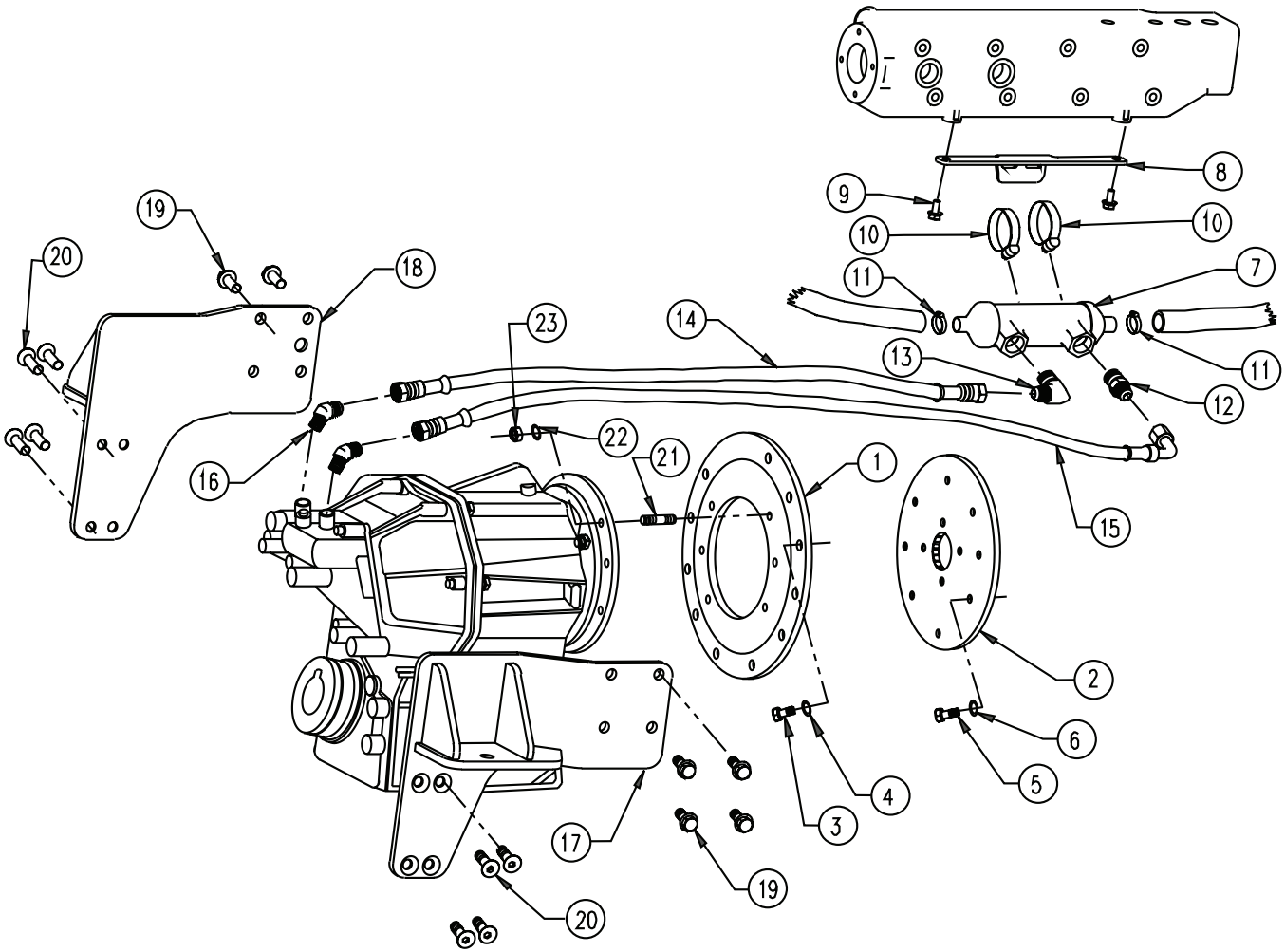
Gaskets NL944T2

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
5	F420210000	2	Gasket	-
6	F420214000	1	Gasket	-
7	F420218000	2	Gasket	-
8	3434000700	1	Gasket	-
9	MM432045	4	Gasket, Nozzle Holder	-
10	MD068355	4	Gasket, Fuel Return	-
11	MD070717	4	Gasket	-
12	0594600801	1	Sealing Washer	-
13	0594601401	10	Sealing Washer	-
14	32A3500600	1	O-ring	-
15	0601613075	1	O-ring	-
16	0601613140	2	O-ring	-
17	3063625901	2	Gasket	-
18	32A0112300	1	Gasket, Cylinder Head	-
19	32A0102501	1	Gasket, Rear Head	-
20	32A0402801	8	Seal, Valve Stem	-
21	32A0413200	1	Gasket, Rocker Cover	-
22	32A0704100	1	Gasket, Front Plate	-
23	32A0711700	2	Side Seal	-
24	32A0714201	1	Gasket, Rear	-
25	32A1100200	1	Gasket, Gear Case	-
26	32A3000201	1	Gasket, Intake Manifold	-
27	32A3200200	1	Gasket, Exhaust Manifold	-
28	32A3201400	1	Gasket, Exhaust	-
29	32A3203300	1	Gasket	-
30	32A3911200	1	Gasket, Side Cover	-
31	32A3901401	1	Gasket	-
32	32A4500400	1	Gasket, Pump Cover	-
33	32A4500500	1	Gasket, Water Pump	-
34	32A4601400	1	Gasket, Thermostat	-
35	32A9105100	1	Liquid Gasket	-
36	3423200300	1	Gasket, Exhaust	-
37	3433004300	1	Gasket, Air Inlet	-
38	3433604100	1	Gasket, Oil Line	-
39	3444605300	1	Gasket	-
40	0550710110	1	O-ring*	-
41	0594601001	2	Sealing Washer*	-
42	32A3911400	1	Gasket*	-
43	0594600601	8	Sealing Washer*	-
44	0594601201	2	Sealing Washer*	-
45	32A9013600	1	Gasket*	-
46	MM433993	1	O-ring*	-
47	32A6156900	4	Gasket*	-
48	32A0704500	1	Gasket*	-
49	3440711090	1	Rear Main Seal *	-
50	32A1104010	1	Front Seal *	-

*Not shown

ZF63IV Gear Attaching Parts

L944D



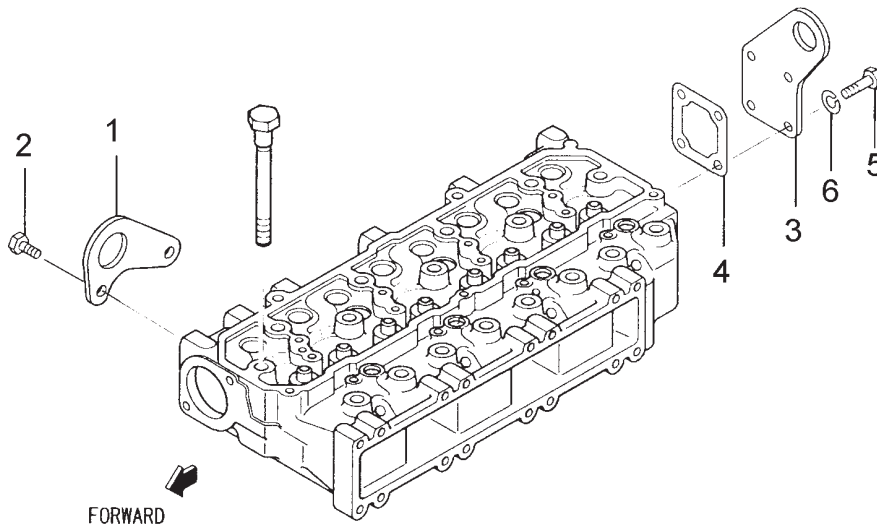
A-11937/ B-9345

ZF63IV Gear Attaching Parts

L944D

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	3312116002	1	Adapter Assembly SAE #4	-
2	34-60068	1	Drive DamperType "R" SAE #10	-
3	12-00832	12	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
4	15-00802	12	Lock Washer, Helical M10	-
5	12-00831	8	Capscrew, Hex Head M10 x 1.5 x 25 mm	-
6	01643-31032	8	Flat Washer M10 x 22 mm OD Hardened	-
7	20-65401	1	Gear Oil Cooler	-
8	23-61206	1	Bracket, Gear Cooler Mounting	-
9	19M7865	2	Capscrew, Hex Head Flanged M8 x 1.25 x 16 mm	-
10	19-00032	2	Hose Clamp #32	-
11	19-00020	2	Hose Clamp #20	-
12	21-05405	1	Male Connector, Steel 1/2 NPT x 1/2- 37T	-
13	21-40588	1	Male Elbow, 90° Steel 1/2 NPT x 1/2- 37T	-
14	18-61603	1	Hose Assembly 1/2" ID x 25"	-
15	18-61419	1	Hose Assembly 1/2" ID x 29"	-
16	21-71009	2	Male Elbow, 45° Steel 3/8 NPT x 1/2- 37T	-
17	23-61207	1	Bracket, Engine/ Gear Mounting Right hand	-
18	23-61208	1	Bracket, Engine/ Gear Mounting Left hand	-
19	19M7789	8	Capscrew, Hex Head Flanged M12 x 1.75 x 30 mm	-
20	12-10914	8	Capscrew, Flat Head Socket M12 x 1.75 x 35 mm	-
21	13-05001	6	Stud, 25 mm	-
22	15-00804	6	Wave Washer, 10 mm	-
23	14-00811	6	Nut, Hex Head M10 x 1.5	-

Lifting Eye

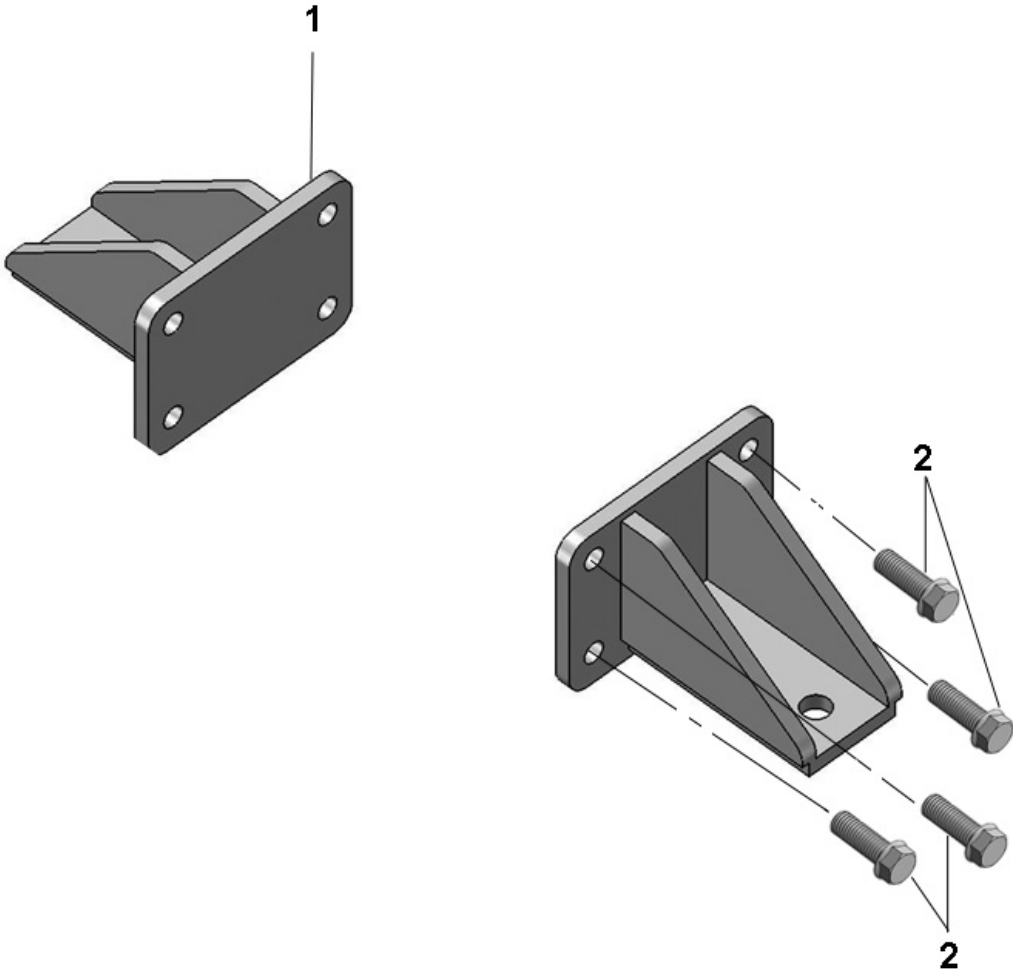


32B0107

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	00-71201	1	Front Lifting Eye (M944 - M30CW - M944T - M38CR2)	-
	32A0102700	1	Front Lifting Eye (NL944D2 - NL944T)	-
2	12-89751	2	Capscrew, Hex Head Flanged M8 x 1.25 x 16 mm	-
3	32A0102800	1	Rear Lifting Eye (M944 - M30CW - NL944D2 - NL944T)	-
4	11-11204	1	Gasket, Head Rear	-
5	12-00753	4	Capscrew, Hex Head Flanged M8 x 1.25 x 20 mm	-
6	15-00702	4	Lock Washer, M8	-

Front Engine Mounting

L944

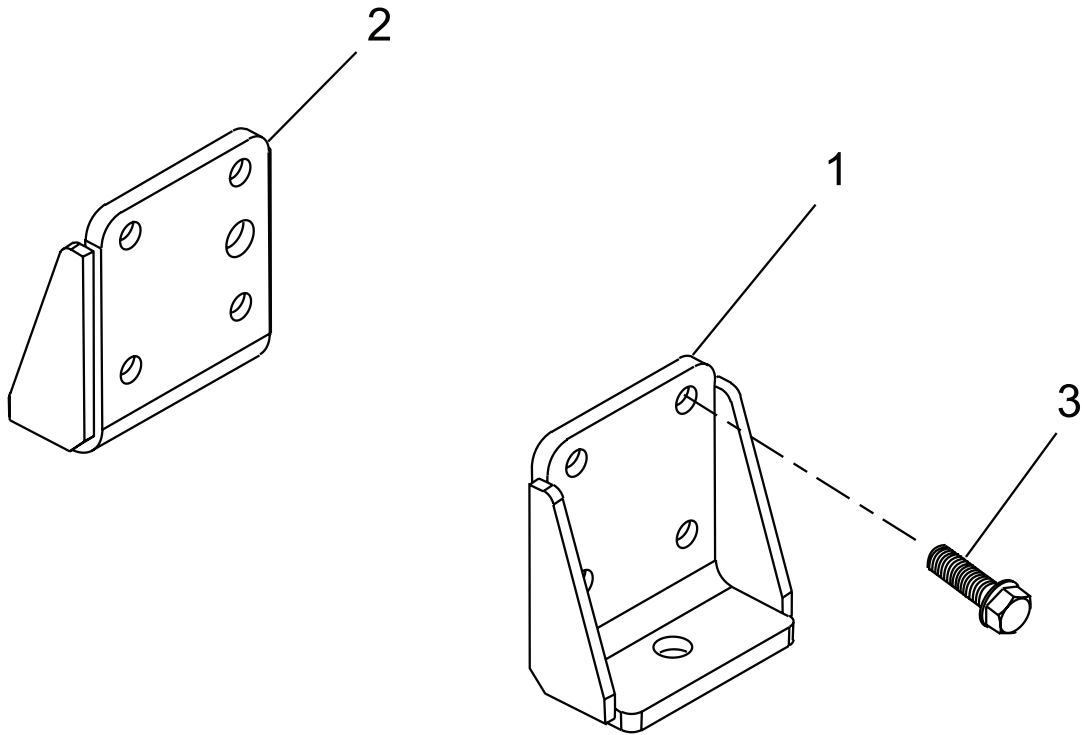


A-11650/ B-9291

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	23-81206	2	Engine Mounting Bracket	-
2	19M7789	8	Capscrew, Hex Head Flanged M12 x 1.75 x 30 mm	-

Rear Engine Mounting

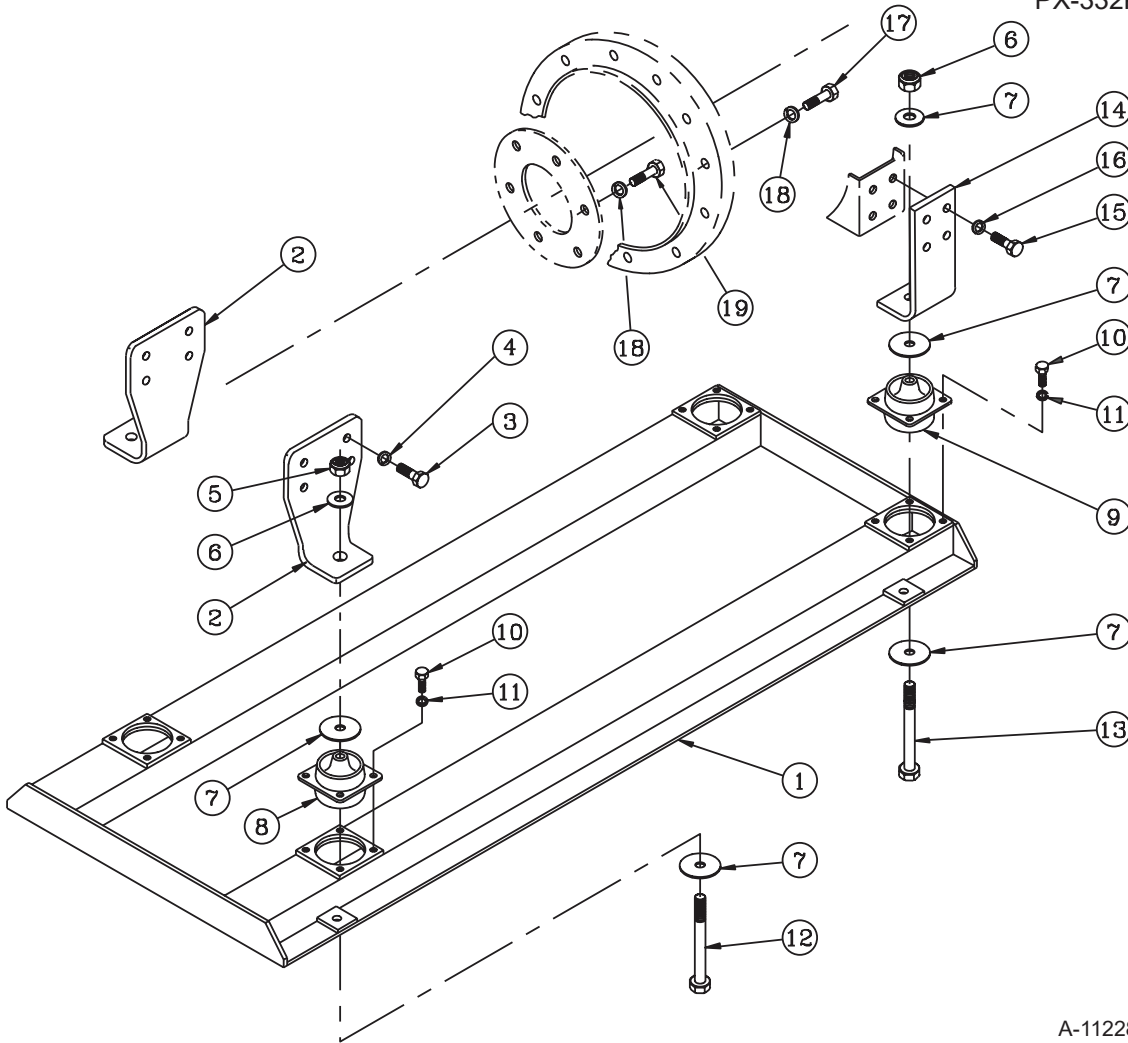
L944



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	23-81201	1	Engine Mounting Bracket, Rear Right hand	-
2	23-81204	1	Engine Mounting Bracket, Rear Left hand	-
3	19M7789	4	Capscrew, Hex Head Flanged M12 x 1.75 x 30 mm	-

Base Frame

PX-332K2 Generator



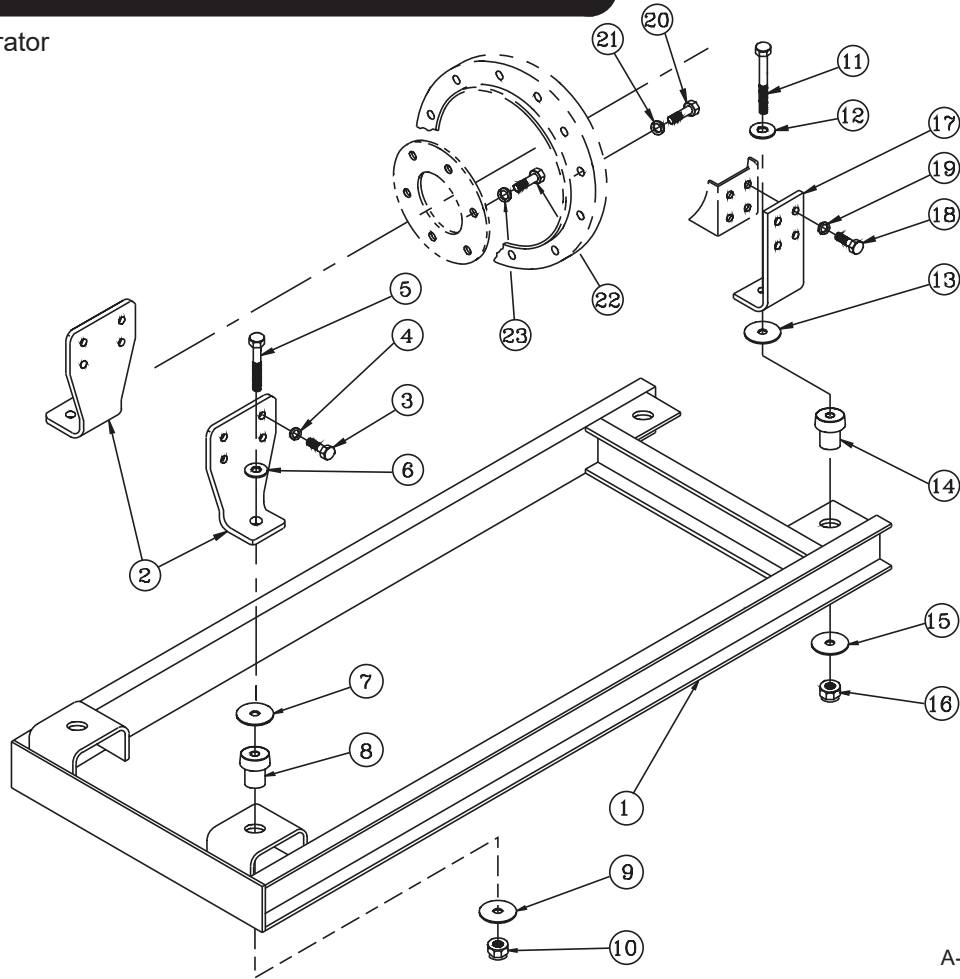
A-11228, A-11437/ B-9075

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81201	1	Base Frame, Steel, Platform Mounts	-
	39-81202	1	Base Frame, Aluminum, Platform Mounts	-
2	23-81202	1	Mounting Bracket	-
3	12-09912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-09012	8	Lock Washer, Helical M12	-
5	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
6	15-09007	4	Flat Washer M12 S/S	-
7	15-00020	8	Snubbing Washer	-
8	33-85406	2	Platform Mount, 400 lb.	-
9	33-83106	2	Platform Mount, 310 lb.	-
10	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
11	15-00705	16	Lock Washer, Helical M8 S/S	-
12	12-09924	2	Capscrew, Hex Head M12 x 1.75 x 100 mm S/S	-
13	12-09924	2	Capscrew, Hex Head M12 x 1.75 x 100 mm S/S	-
14	23-61201	2	Generator Support Bracket	-
15	12-09753	8	Capscrew, Hex Head M8 x 1.25 x 30 mm S/S	-
16	15-00705	8	Lock Washer, Helical M8 S/S	-
17	12-00832	12	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
18	15-00804	20	Wave Washer M10	-
19	12-00832	8	Capscrew, Hex Head M10 x 1.5 x 30 mm	-

GROUP 8 - BASE FRAMES

Base Frame M30CW

PX-332K2 Generator

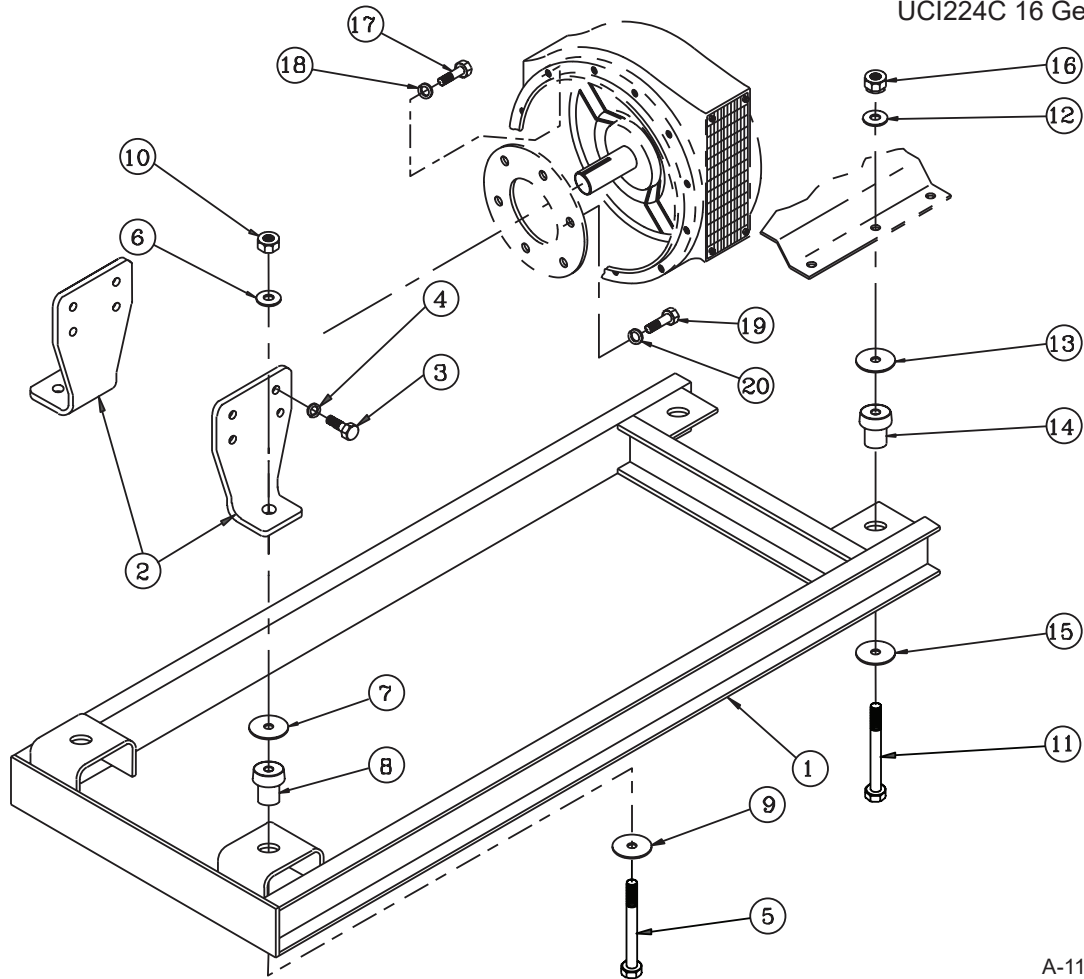


A-11208/ B-9078

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81203	1	Base Frame, Steel, Centerbonded Mounts	-
2	23-81202	2	Front Engine Mounting Bracket	-
3	12-09912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-09012	8	Lock Washer, Helical M12 S/S	-
5	14-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
6	15-09007	2	Flat Washer M12 S/S	-
7	15-00016	2	Head Washer	-
8	33-82254	2	Centerbonded Mount, 300 lb. (without PTO)	-
	33-81054	2	Centerbonded Mount, 400 lb. (with PTO)	-
9	15-00026	2	Tail Washer	-
10	14-09830	2	Hex Nut, Nylock M12 x 1.75 S/S	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	15-09007	2	Flat Washer M12 S/S	-
13	15-00016	2	Head Washer	-
14	33-82254	2	Centerbonded Mount, 300 lb.	-
15	15-00026	2	Tail Washer	-
16	14-09830	2	Hex Nut, Nylock M12 x 1.75	-
17	23-61201	2	Bracket, Generator Support LH/RH	-
18	12-09753	8	Capscrew, Hex Head M8 x 1.25 x 30 mm S/S	-
19	15-00705	8	Lock Washer, Helical M8	-
20	12-00832	12	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
21	15-00804	12	Wave Washer, Helical M10	-
22	12-00832	8	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
23	15-00804	8	Wave Washer, M10	-

Base Frame M30C

UCI224C 16 Generator



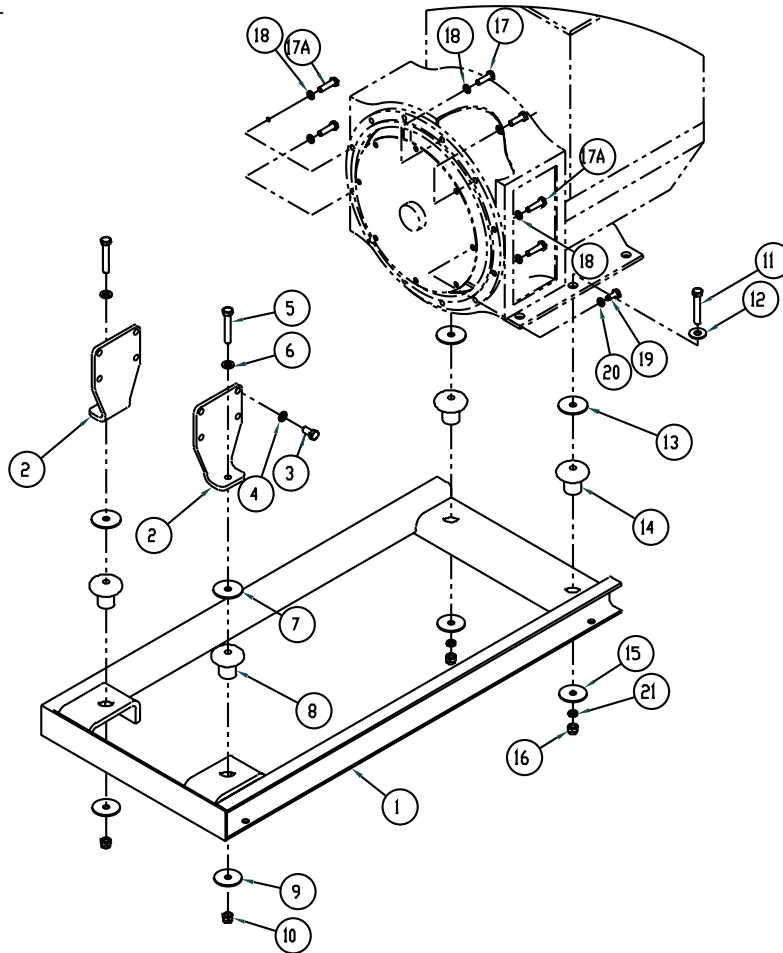
A-11475/ B-9076

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81206	1	Aluminum Base Frame, Centerbonded Mounts	-
	39-81204	1	Steel Base Frame, Centerbonded Mounts	-
2	23-81202	2	Front Engine Mounting Bracket	-
3	12-09912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-09012	8	Lock Washer, Helical M12	-
5	14-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
6	15-09007	2	Flat Washer M12 S/S	-
7	15-00016	2	Head Washer	-
8	33-82254	2	Centerbonded Mount, 300 lb. (without PTO)	-
	33-81054	2	Centerbonded Mount, 400 lb. (with PTO)	-
9	15-00026	2	Tail Washer	-
10	14-09830	2	Hex Nut, Nylock M12 x 1.75	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	15-09007	2	Flat Washer M12	-
13	15-00016	2	Head Washer	-
14	33-82254	2	Centerbonded Mount, 300 lb.	-
15	15-00026	2	Tail Washer	-
16	14-09830	2	Hex Nut, Nylock M12 x 1.75	-
17	12-00832	12	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
18	15-00802	12	Lock Washer, Helical M10	-
19	12-00805	8	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
20	15-00307	8	Flat Washer M10 Hardened	-

GROUP 8 - BASE FRAMES

Base Frame M38CR2

UCI224E 16 Generator

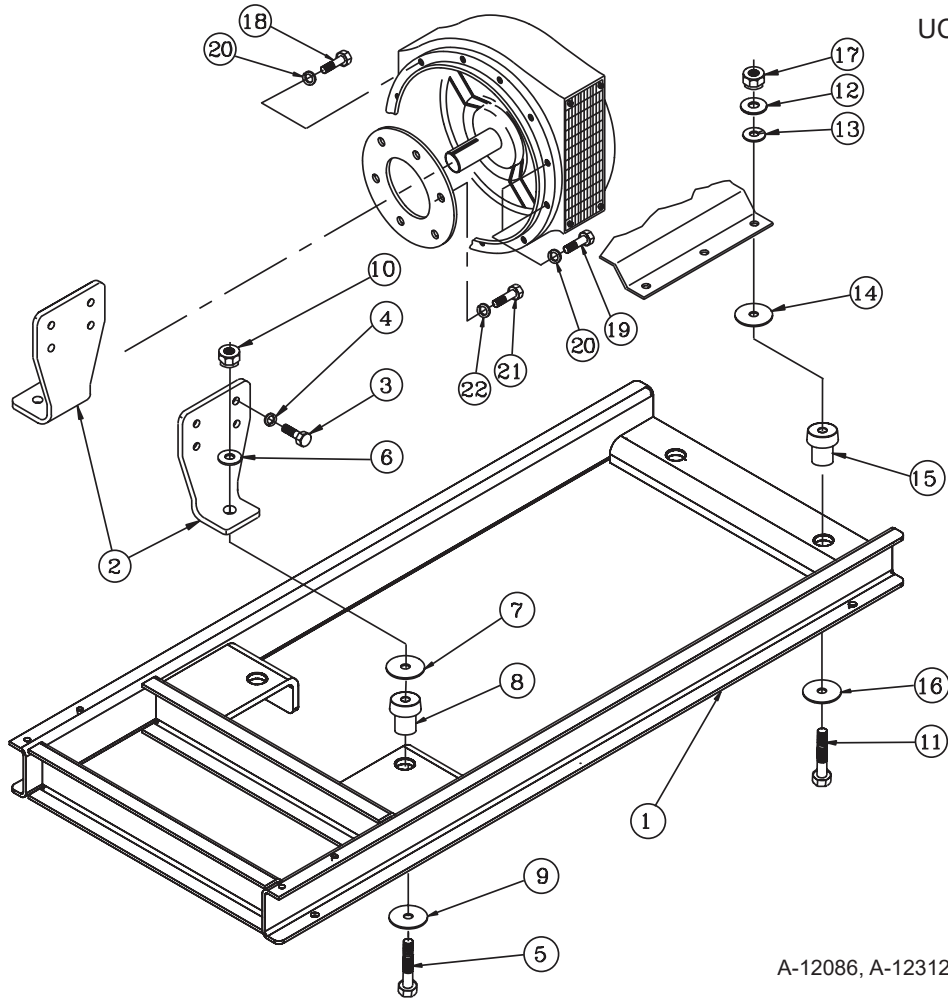


A-11475/ B-9782

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81206	1	Aluminum Base Frame, Centerbonded Mounts	-
	39-81204	1	Steel Base Frame, Centerbonded Mounts	-
2	23-81202	2	Front Engine Mounting Bracket	-
3	12-09912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-09012	8	Lock Washer, Helical M12	-
5	14-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S (w/o PTO)	--
	12-09922	2	Capscrew, Hex Head M12 x 1.75 x 90 mm S/S (with PTO)	-
6	15-09007	2	Flat Washer M12 S/S	-
7	15-00016	2	Head Washer	-
8	33-81054	2	Centerbonded Mount, 400 lb.	-
9	15-00026	2	Tail Washer	-
10	14-09830	2	Hex Nut, Nylock M12 x 1.75	-
11	12-95501	2	Capscrew, Hex Head M12 x 1.75 x 75 mm S/S	-
12	15-00505	2	Flat Washer 1/2" USS S/S	-
13	15-00016	2	Head Washer	-
14	33-81054	2	Centerbonded Mount, 400 lb.	-
15	15-00026	2	Tail Washer	-
16	14-09830	2	Hex Nut, Nylock M12 x 1.75	-
17	12-00814	8	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
17A	12-00812	4	Capscrew, Hex Head M10 x 1.5 x 40 mm	-
18	15-00802	12	Lock Washer, Helical M10	-
19	12-00805	8	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
20	15-00307	8	Flat Washer M10 Hardened	-
21	15-00510	2	Lock Washer, Hi-collar 1/2"	-

Base Frame NL944D-T

UCI224 Generators



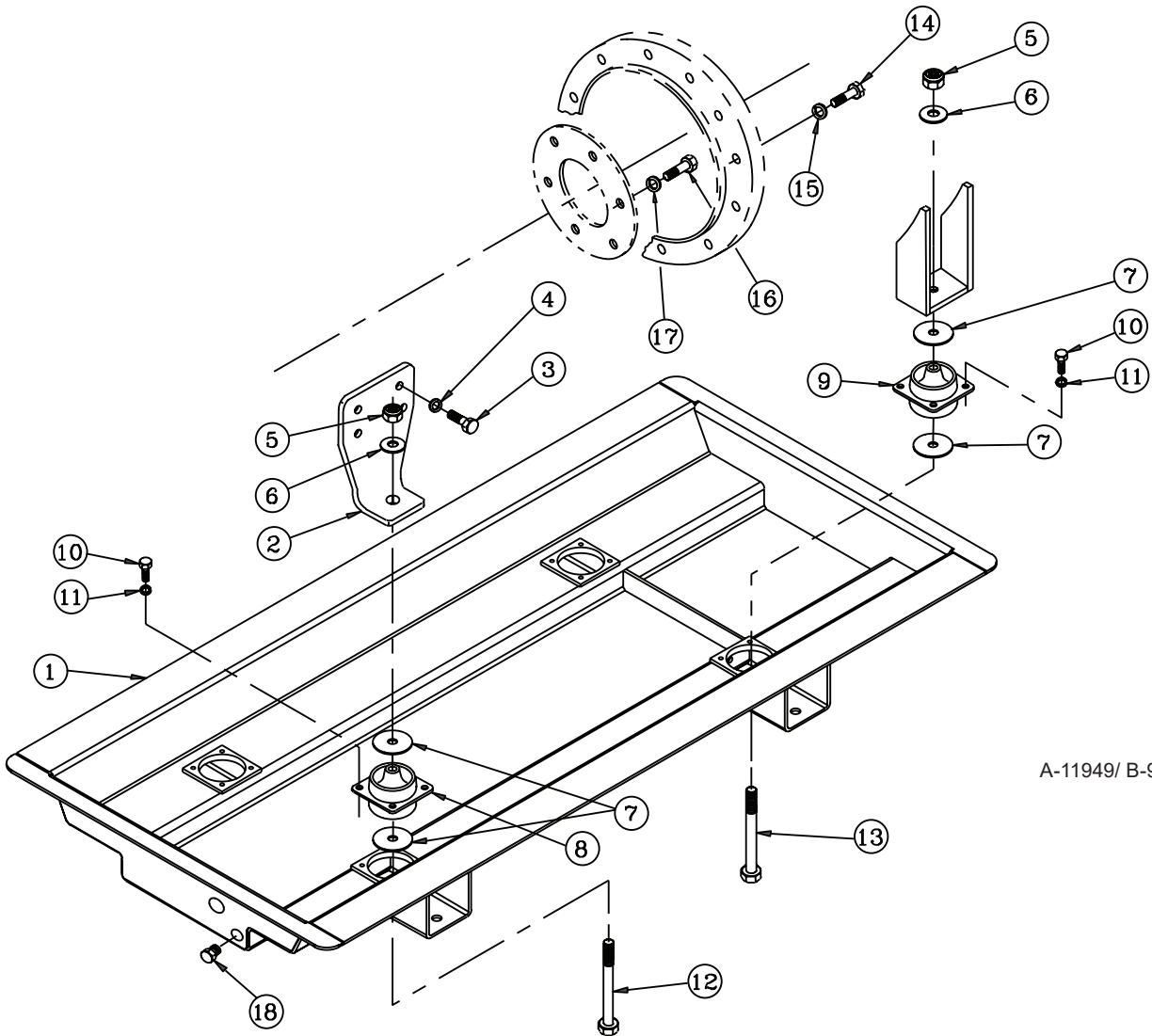
A-12086, A-12312/ B-9078forNL944D-T

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81207	1	Base Frame, Steel, Centerbonded Mounts	-
2	23-81202	2	Front Engine Mounting Bracket	-
3	12-00912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-00912	8	Lock Washer, Helical M12	-
5	12-00964	2	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
6	15-00007	2	Flat Washer M12	-
7	15-00016	2	Head Washer	-
8	33-82254	2	Centerbonded Mount, 300 lb.	-
9	15-00026	2	Tail Washer	-
10	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
11	12-00964	2	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
12	15-00501	2	Flat Washer 1/2"	-
13	15-00510	2	Lock Washer, Hi-collar 1/2"	-
14	15-00016	2	Head Washer	-
15	33-82254	2	Centerbonded Mount, 300 lb. (for UCI224C gen end, 3 phase)	-
	33-81054	2	Centerbonded Mount, 400 lb. (for UCI224E gen end, 1 phase)	-
16	15-00026	2	Tail Washer	-
17	14-00830	2	Hex Nut, Nylock M12 x 1.75	-
18	12-00814	8	Capscrew, Hex Head M10 x 1.5 x 35 mm	-
19	12-00812	4	Capscrew, Hex Head M10 x 1.5 x 40 mm	-
20	15-00802	12	Lock Washer, Helical M10	-
21	01437-01020	8	Capscrew, 12 PT M10 x 1.5 x 20 mm	-
22	15-00307	8	Flat Washer, 3/8" x M10 Hardened	-

GROUP 8 - BASE FRAMES

Base Pan

LX-E 34E Generator



A-11949/ B-9488

Base Pan

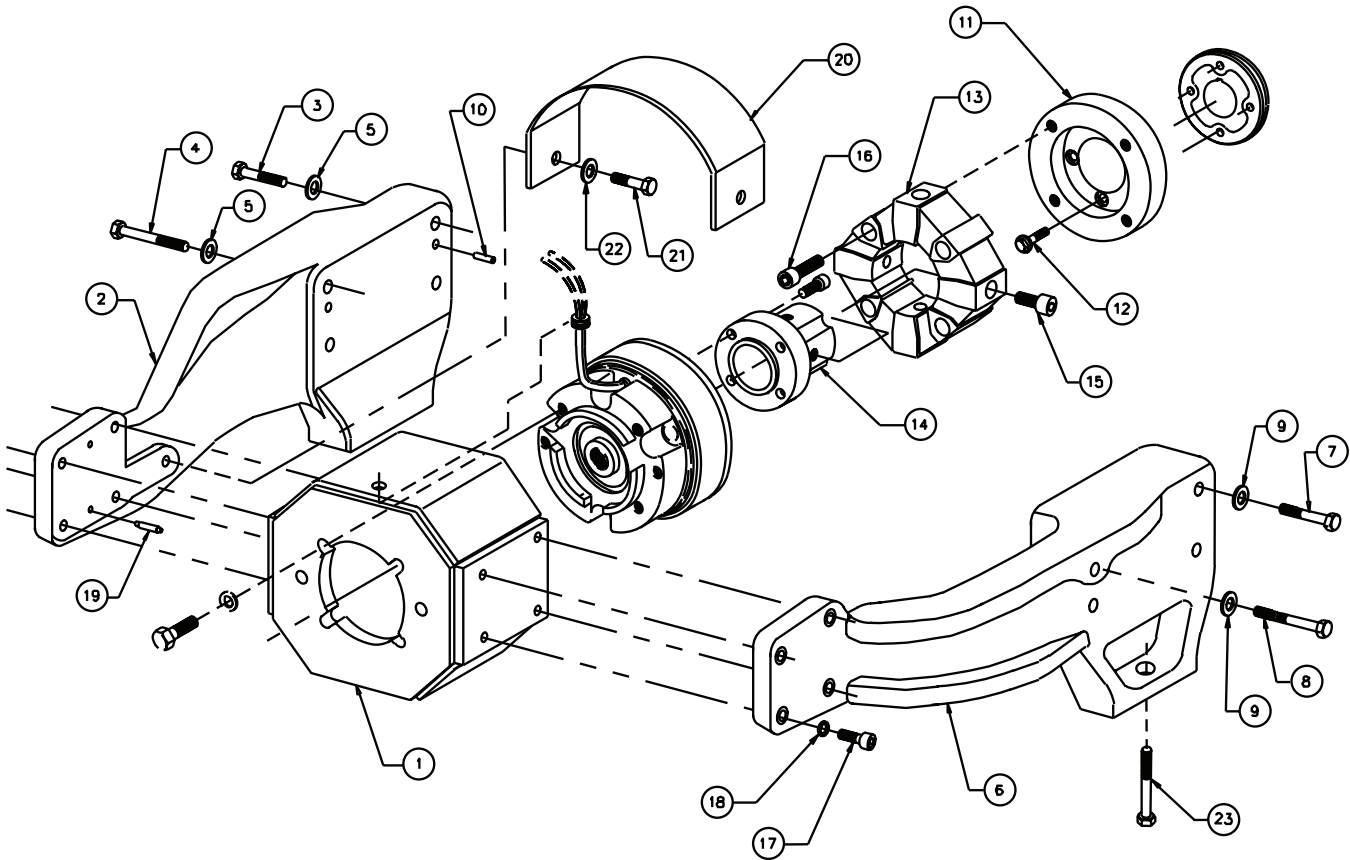
LX-E 34E Generator

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	39-81208	1	Steel Base Pan, Platform Mounts	-
2	23-81208	1	Mounting Bracket	-
3	12-09912	8	Capscrew, Hex Head M12 x 1.75 x 25 mm	-
4	15-09012	8	Lock Washer, Helical M12	-
5	14-09830	4	Hex Nut, Nylock M12 x 1.75 S/S	-
6	15-09007	4	Flat Washer M12 S/S	-
7	15-00020	8	Snubbing Washer	-
8	33-83106	2	Platform Mount, 310 lb. (without PTO)	-
	33-85406	2	Platform Mount, 400 lb. (with PTO)	-
9	33-85406	2	Platform Mount, 400 lb.	-
10	12-00776	16	Capscrew, Hex Head M8 x 1.25 x 20 mm	-
11	15-00705	16	Lock Washer, Helical M8 S/S	-
12	12-09924	2	Capscrew, Hex Head M12 x 1.75 x 100 mm S/S	-
13	12-09926	2	Capscrew, Hex Head M12 x 1.75 x 110 mm S/S	-
14	12-00832	12	Capscrew, Hex Head M10 x 1.5 x 30 mm	-
15	15-00804	12	Wave Washer M10	-
16	12-70808	8	Capscrew, 12 Point M10 x 1.5 x 20 mm Grade 12.9*	-
17	15-00307	8	Hardened Flat Washer *	-
18	21-31624	1	Plug, Hex Head Brass 1/4 NPT	-
			* Note: Replace Hex Head Capscrews and Lock washers (if installed) with new fasteners shown)	

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

PTO Adapter

M944 & M30CW without Turbo

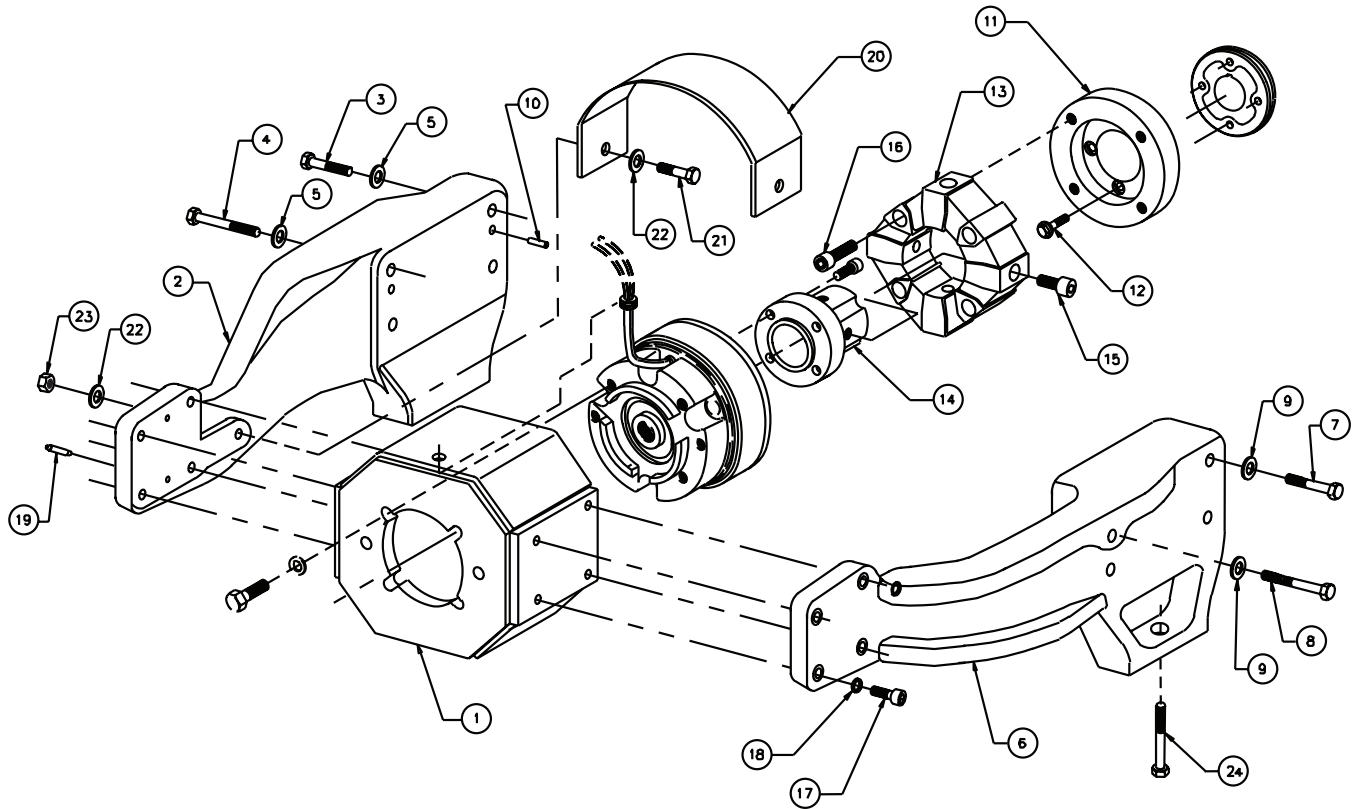


A-11327/ B-8938

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-65401	1	Housing, PTO Clutch H-28 B-Pad	-
2	23-61202	1	Bracket, Engine/PTO Support, Right hand	-
3	12-00037	3	Capscrew, Hex Head M12 x 1.75 x 45 mm	-
4	12-00955	1	Capscrew, Hex Head M12 x 1.75 x 60 mm	-
5	15-00007	4	Flat Washer M12	-
6	23-61203	1	Bracket, Engine/PTO Support, Left hand	-
7	12-00964	3	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
8	12-00922	1	Capscrew, Hex Head M12 x 1.75 x 90 mm	-
9	15-00007	4	Flat Washer M12	-
10	32-61201	4	Dowel Pin 8 mm OD	-
11	31-61201	1	Adapter, PTO Drive	-
12	19M7867	4	Capscrew, Hex Head Flanged M8 x 1.25 x 25 mm	-
13	34-65406	1	Coupling Assembly Size 22	-
14	34-65407	1	Hub	-
15	12-20920	4	Capscrew, Socket Head M12 x 1.75 x 40 mm	-
16	12-20914	4	Capscrew, Socket Head M12 x 1.75 x 35 mm	-
17	12-34803	8	Capscrew, Socket Head M10 x 1.5 x 25 mm	-
18	15-00805	8	Flat Washer, M10	-
19	32-60001	4	Taper Pin #4 x 1"	-
20	00-61201	1	Guard, PTO Coupling	-
21	12-00831	2	Capscrew, M10 x 1.5 x 25 mm	-
22	15-00802	2	Lock Washer, Helical M10	-
23	12-09926	2	Capscrew, Hex Head M12 x 1.75 x 110 mm S/S	-

PTO Adapter

M944T & M38CR2 with Turbo



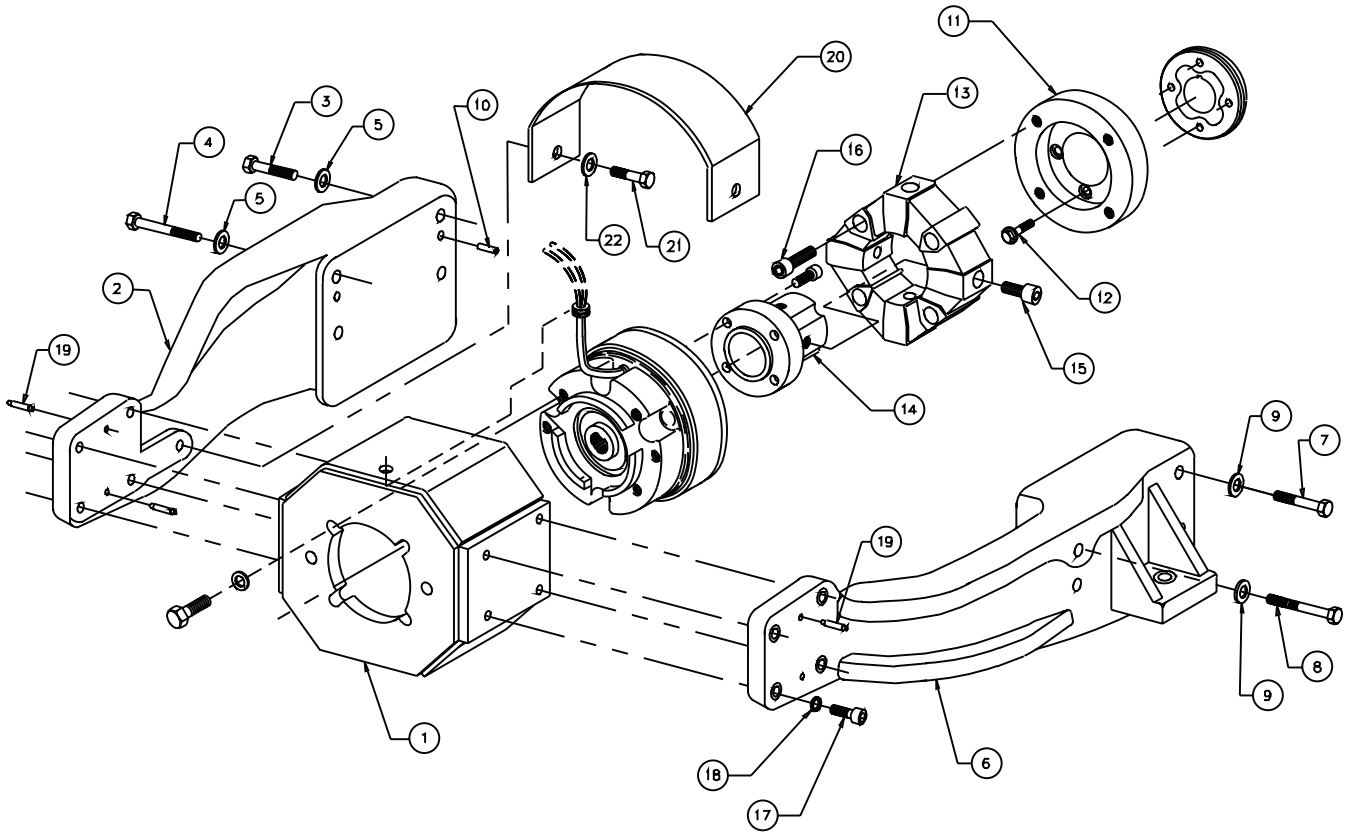
A-11327/ B-8938

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-65401	1	Housing, PTO Clutch	-
2	23-61209	1	Bracket, Engine/PTO Support, Right hand	-
3	12-00037	3	Capscrew, Hex Head M12 x 1.75 x 45 mm	-
4	12-00955	1	Capscrew, Hex Head M12 x 1.75 x 60 mm	-
5	15-00007	4	Flat Washer M12	-
6	23-61210	1	Bracket, Engine/PTO Support, Left hand	-
7	12-00964	3	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
8	12-00922	1	Capscrew, Hex Head M12 x 1.75 x 90 mm	-
9	15-00007	4	Flat Washer M12	-
10	32-61201	4	Dowel Pin 8 mm OD	-
11	31-61201	1	Adapter, PTO Drive	-
12	19M7867	4	Capscrew, Hex Head Flanged M8 x 1.25 x 25 mm	-
13	34-65406	1	Coupling Assembly	-
14	34-65407	1	Hub	-
15	12-20920	4	Capscrew, Socket Head M12 x 1.75 x 40 mm	-
16	12-20914	4	Capscrew, Socket Head M12 x 1.75 x 35 mm	-
17	12-34802	8	Capscrew, Socket Head M10 x 1.5 x 30 mm	-
18	15-00805	8	Flat Washer, M10	-
19	32-60003	4	Taper Pin #4 x 1-1/2"	-
20	00-61201	1	Guard, PTO Coupling	-
21	12-09819	2	Capscrew, M10 x 1.5 x 75 mm S/S	-
22	15-09805	2	Flat Washer M10 S/S	-
23	14-09812	2	Hex Nut, Nylock M10 x 1.5 S/S	-
24	12-09926	2	Capscrew, Hex Head M12 x 1.75 x 110 mm S/S	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

PTO Adapter

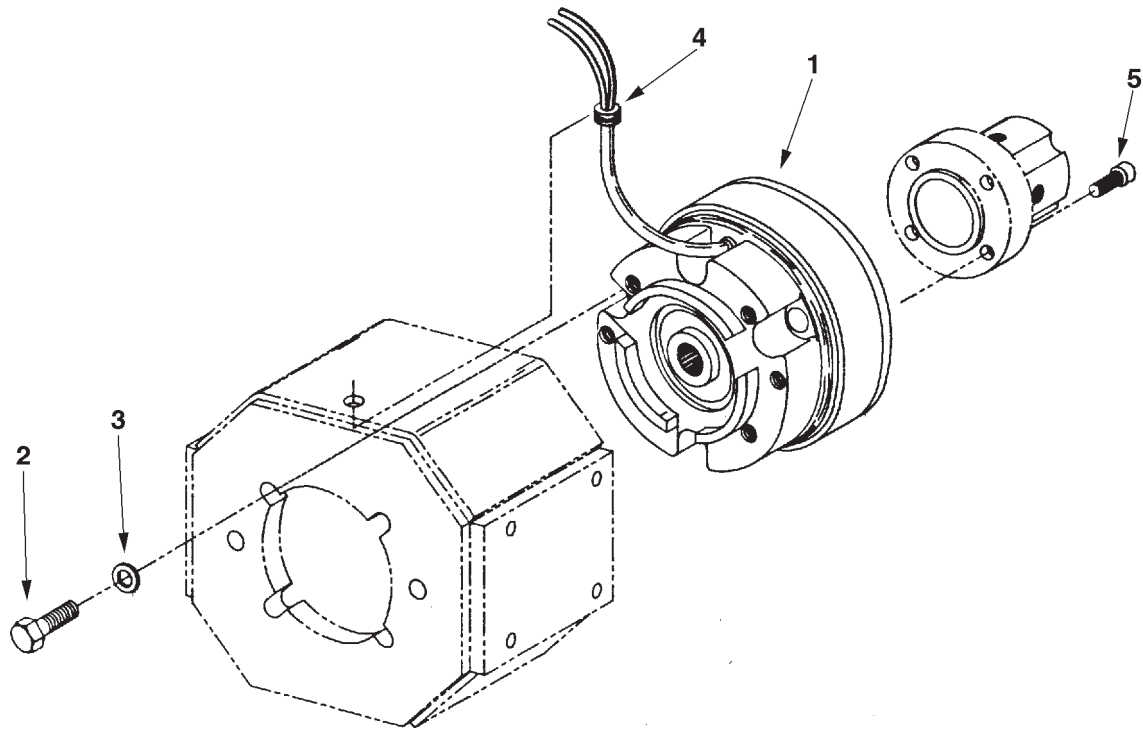
L944



A-11931/ B-9337

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	10-65401	1	Housing, PTO Clutch H-28 B-Pad	-
2	23-61204	1	Bracket, Engine/PTO Support, Right hand	-
3	12-00037	3	Capscrew, Hex Head M12 x 1.75 x 45 mm	-
4	12-00955	1	Capscrew, Hex Head M12 x 1.75 x 60 mm	-
5	15-00007	4	Flat Washer M12	-
6	23-61205	1	Bracket, Engine/PTO Support, Left hand	-
7	12-00964	3	Capscrew, Hex Head M12 x 1.75 x 75 mm	-
8	12-00922	1	Capscrew, Hex Head M12 x 1.75 x 90 mm	-
9	15-00007	4	Flat Washer M12	-
10	32-61201	4	Dowel Pin 8 mm OD	-
11	31-61201	1	Adapter, PTO Drive	-
12	19M7867	4	Capscrew, Hex Head Flanged M8 x 1.25 x 25 mm	-
13	34-65406	1	Coupling Assembly	-
14	34-65407	1	Hub	-
15	12-20920	4	Capscrew, Socket Head M12 x 1.75 x 40 mm	-
16	12-20914	4	Capscrew, Socket Head M12 x 1.75 x 35 mm	-
17	12-34803	8	Capscrew, Socket Head M10 x 1.5 x 25 mm	-
18	15-00805	8	Flat Washer, M10	-
19	32-60001	4	Taper Pin #4 x 1"	-
20	00-61201	1	Guard, PTO Coupling	-
21	12-00831	2	Capscrew, M10 x 1.5 x 25 mm	-
22	15-00802	2	Lock Washer, Helical M10	-

Electric Clutch



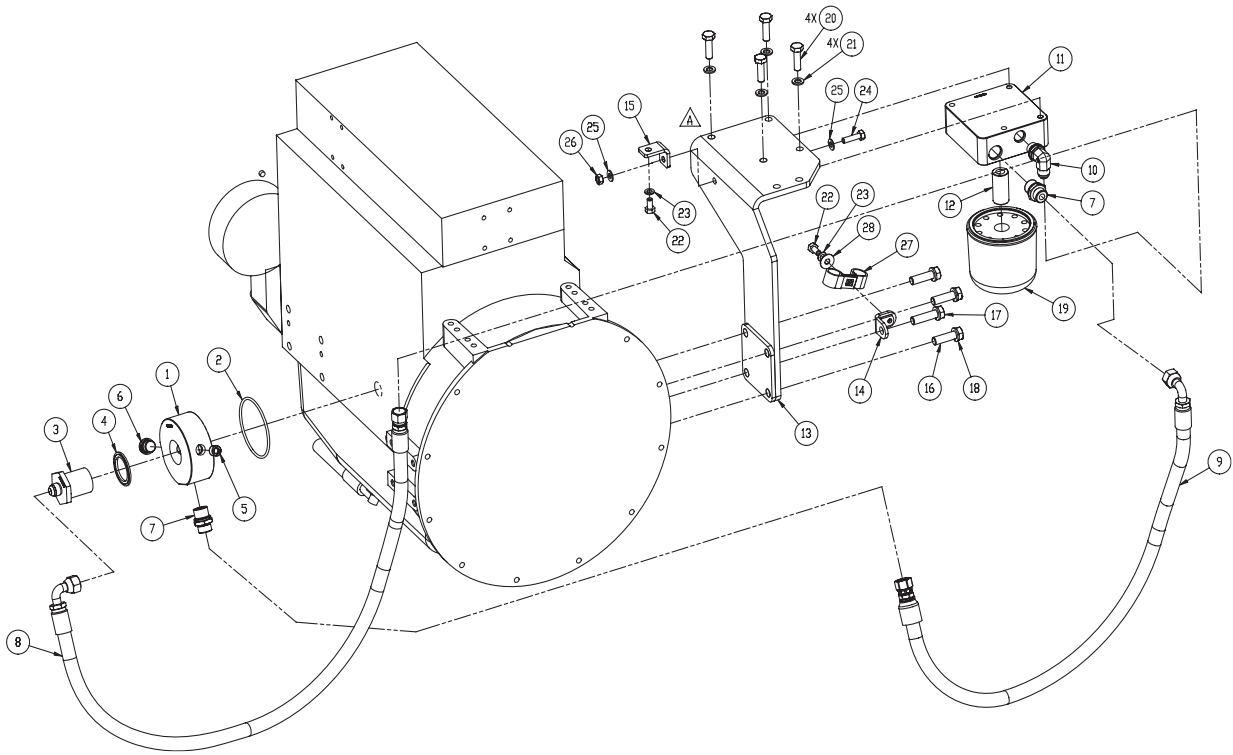
A-6291 + A-6346 / C-302

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	34-60031	1	Electric Clutch Assembly (12 volt)	-
	34-60032	1	Electric Clutch Assembly (24 volt)	-
2	12-00513	4	Capscrew, Hex Head 1/2-13 x 1-1/4	-
3	15-00007	4	Flat Washer M12	-
4	00-61003	1	Grommet	-
5	12-63800	4	Capscrew, Socket Head 3/8-24 x 3/4	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Oil Filter, Right Hand Mounting

M944W



D-4436

Oil Filter, Right Hand Mounting

M944W

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	31-01202	1	Adapter, Remote Oil Filter - Engine Side	-
2	16-01201	1	O-Ring	-
3	21-01203	1	Union Fitting	-
4	15-00048	1	Sealing Washer, Bonded 1-1/4 BSPP	-
5	21-10055	1	Plug, Skt Hd, Brass 3/8NPT	-
6	21-01204	1	Plug, Skt Hd, Steel, M18 x 1.5	-
7	21-01205	2	Male Connector, Steel, M22 x 1.5 x 1/2 O-R Face Seal	-
8	18-01201	1	Hose Assembly 1/2" ID x 42" 1/2 FMS90 x 1/2FMS	-
9	18-01202	1	Hose Assembly 1/2" ID x 36" 1/2 O-R Face Seal 90 x 1/2 O-R Face Seal	-
10	21-70022	1	Male Elbow, 90, Steel M18 x 1.5 x 1/2-37T	-
11	31-01203	1	Adapter	-
12	32A4001101	1	Adapter Union	-
13	23-71205	1	Bracket	-
14	23-09702	1	Bracket	-
15	23-71209	1	Bracket	-
16	12-04802	3	Capscrew, Hex Head M12 x 1.75 x 40mm	-
16	24-01201	1	Oil Filter	-
17	12-00037	1	Capscrew, Hex Head M12 x 1.75 x 45 mm	-
18	15-00712	4	Lock Washer, Helical M12	-
19	24-01201	1	Oil Filter	-
20	12-00814	4	Capscrew, Hex Head M10 x 1.5 x 35mm	-
21	15-00802	4	Lock Washer, Helical M10	-
22	12-00751	2	Capscrew, Hex Head M8 x 1.25 x 16mm	-
23	15-00702	2	Lock Washer, Helical M8	-
24	12-00753	1	Capscrew, Hex Head M8 x 1.25 x 30mm	-
25	12-00701	2	Flat Washer M8	-
26	14-04802	1	Hex Nut, Nylock M8 x 1.25	-
27	19-71036	2	Adelle Clamp 7/8" ID x 3/8" Stud	-
28	15-70004	1	Snubbing Washer S/S	-

Oil Filter Relocation, Right Hand Mounting

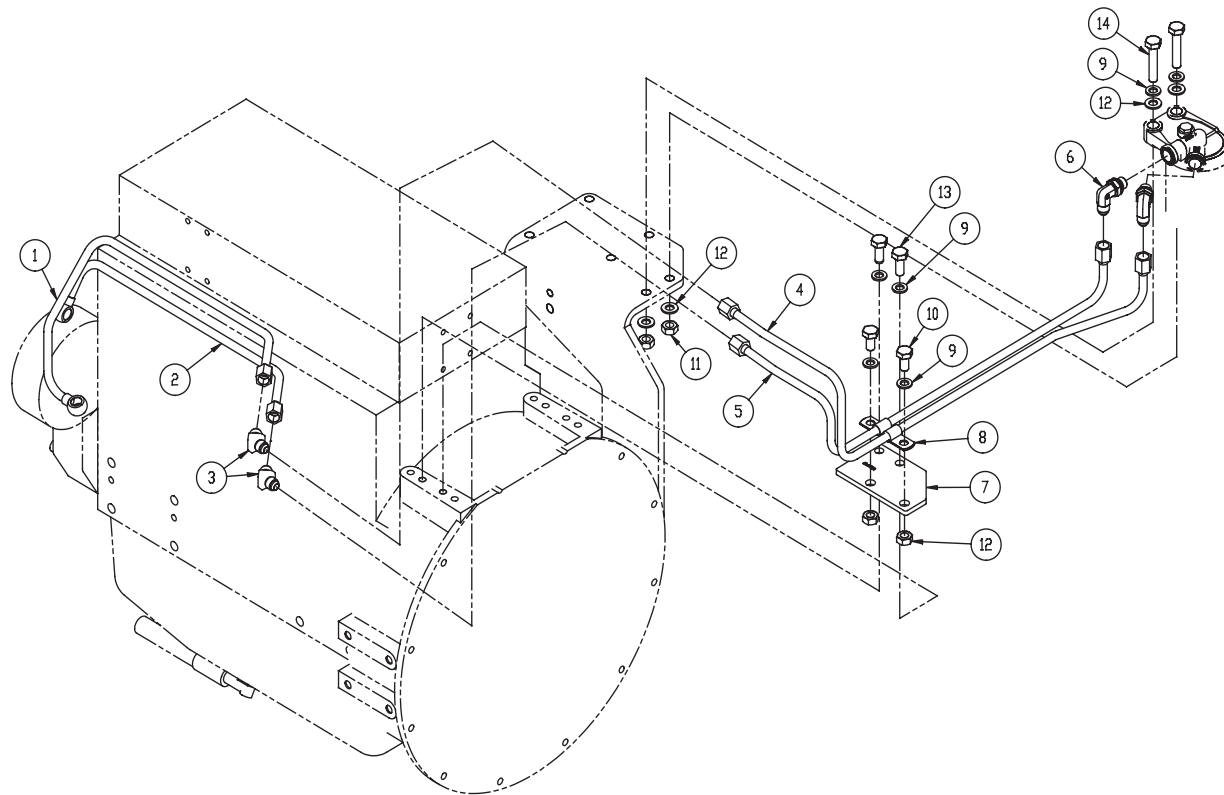
M944T

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	31-01202	1	Adapter, Remote Oil Filter - Engine Side	-
2	16-01201	1	O-Ring	-
3	21-01203	1	Union Fitting	-
4	15-00048	1	Sealing Washer, Bonded 1-1/4 BSPP	-
5	21-10055	1	Plug, Skt Hd, Brass 3/8NPT	-
6	21-01204	1	Plug, Skt Hd, Steel, M18 x 1.5	-
7	21-01205	2	Male Connector, Steel, M22 x 1.5 x 1/2 O-R Face Seal	-
8	18-01203	1	Hose Assembly 1/2" ID x 43-1/2" 1/2 FMS	-
9	18-01204	1	Hose Assembly 1/2" ID x 39" 1/2 O-R Face Seal 90 x 1/2 O-R Face Seal	-
10	21-70022	1	Male Elbow, 90, Steel M18 x 1.5 x 1/2-37T	-
11	31-01203	1	Adapter	-
12	32A4001101	1	Adapter Union	-
13	23-71212	1	Bracket	-
14	23-71213	1	Bracket	-
15	01435-01230	4	Capscrew, Hex Head M12 x 1.75 x 30mm Grade 10.9	-
16	24-01201	1	Oil Filter	-
17	01435-01030	4	Capscrew, Hex Head M10 x 1.5 x 30 mm Grade 10.9	-
18	21-71214	1	Spacer	-
19	01435-01030	1	Capscrew, Hex Head M10 x 1.5 x 30mm Grade 10.9	-
20	01435-01025	2	Capscrew, Hex Head Flanged M10 x 1.5 x 25mm Grade 10.9	-
21	01584-01008	2	Hex Nut, Flanged M10 x 1.5	-
22	19-71031	1	Adelle Clamp 1-1/4" ID x 1/2" Stud	-
23	44-00012	36	Spiral Abrasion Wrap 3/4" ID (Black)	-
			* Note: Fasteners simplified from previous assembly.	

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Fuel Filter Relocation, Right Hand Mounting

M944W



D-4440

Fuel Filter Relocation, Right Hand Mounting

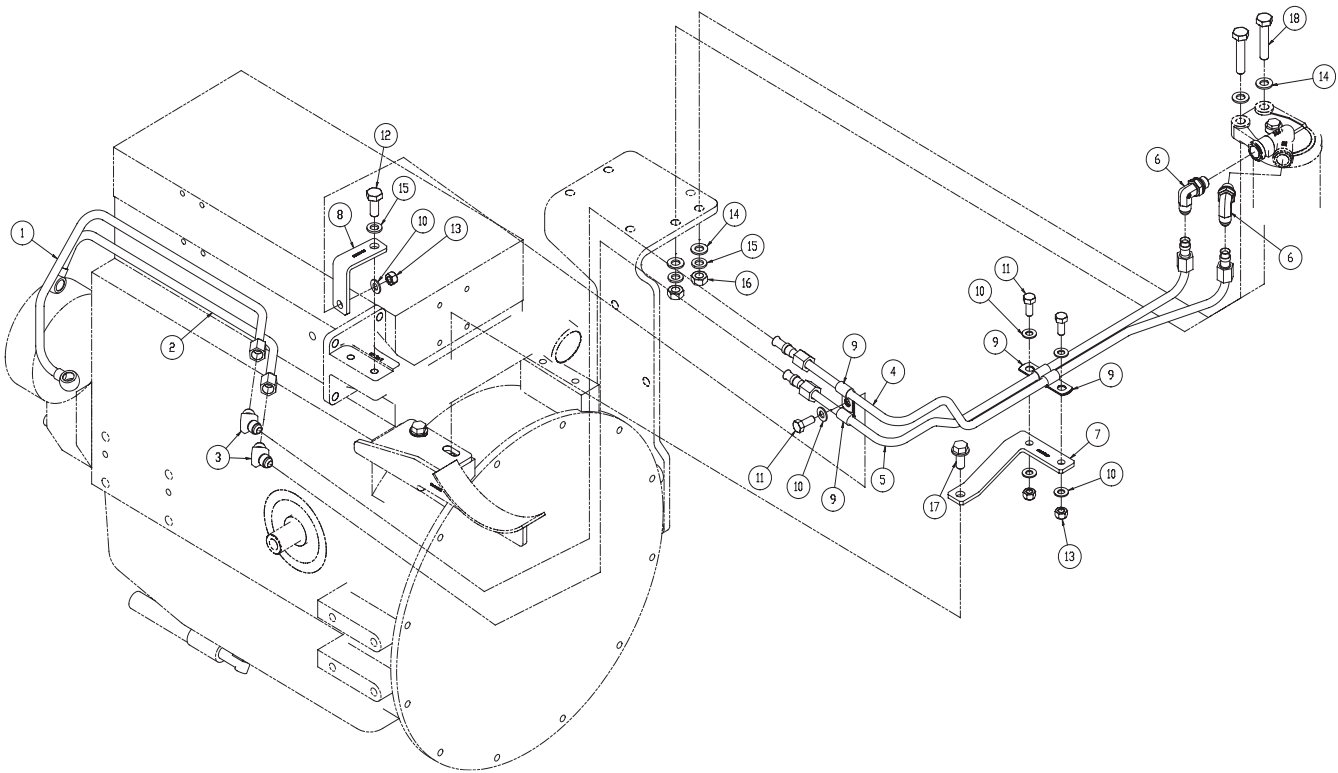
M944W

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-51206	1	Tube Assembly, Fuel Lift Pump Outlet	-
2	27-51207	1	Tube Assembly, Injection Pump Inlet	-
3	21-59601	2	Union Elbow, 45, Steel, 3/8-37T	-
4	27-51208	1	Tube Assembly, Fuel Filter Inlet	-
5	27-51209	1	Tube Assembly, Fuel Filter Outlet	-
6	21-54901	2	Male Elbow, 90, Steel M14 x 1.5 x 3/8-37T	-
7	23-51205	1	Bracket	-
8	19-72252	2	Adelle Clamp 3/8" Stud	-
9	15-00802	6	Lock Washer, Helical M10	-
10	12-00805	2	Capscrew, Hex Head M10 x 1.5 x 20mm	-
11	15-00805	4	Flat Washer M10	-
12	14-00811	4	Hex Nut M10 x 1.5	-
13	12-00831	2	Capscrew, Hex Head M10 x 1.5 x 25mm	-
14	12-00816	2	Capscrew, Hex Head M10 x 1.5 x 50mm	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Fuel Filter Relocation, Right Hand Mounting

M944T



D-4503

Fuel Filter Relocation, Right Hand Mounting

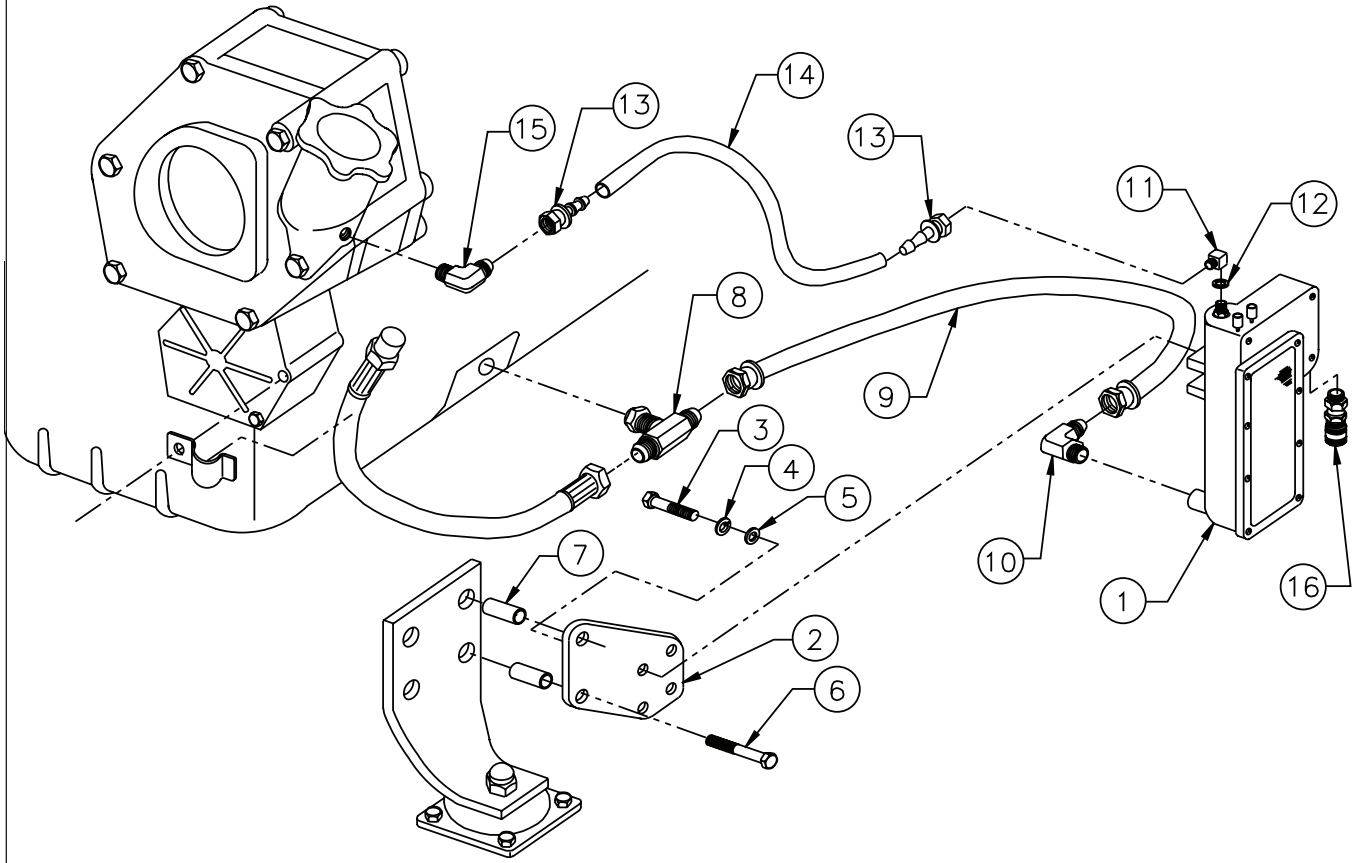
M944T

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	27-51206	1	Tube Assembly, Fuel Lift Pump Outlet	-
2	27-51207	1	Tube Assembly, Injection Pump Inlet	-
3	21-59601	2	Union Elbow, 45, Steel, 3/8-37T	-
4	27-51215	1	Tube Assembly, Fuel Filter Inlet	-
5	27-51216	1	Tube Assembly, Fuel Filter Outlet	-
6	21-54901	2	Male Elbow, 90, Steel M14 x 1.5 x 3/8-37T	-
7	23-51207	1	Bracket	-
8	23-51208	1	Bracket	-
9	19-72252	6	Adelle Clamp 3/8" Stud	-
10	15-00701	6	Falt Washer M8	-
11	12-00711	2	Capscrew, Hex Head M8 x 1.25 x 20mm	-
12	12-00831	1	Capscrew, Hex Head M10 x 1.5 x 25mm	-
13	14-04802	3	Hex Nut, Nylock M8 x 1.25	-
14	15-00805	4	Flat Washer M10	-
15	15-00802	6	Lock Washer, Helical M10	-
16	14-00811	4	Hex Nut M10 x 1.5	-
17	19M7785	1	Capscrew, Hex Head, Flanged M10 x 1.5 x 25mm Grade 10.9	-
18	12-00816	2	Capscrew, Hex Head M10 x 1.5 x 50mm	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Low Oil Level Switch/ Gauge

M944 & M30CW

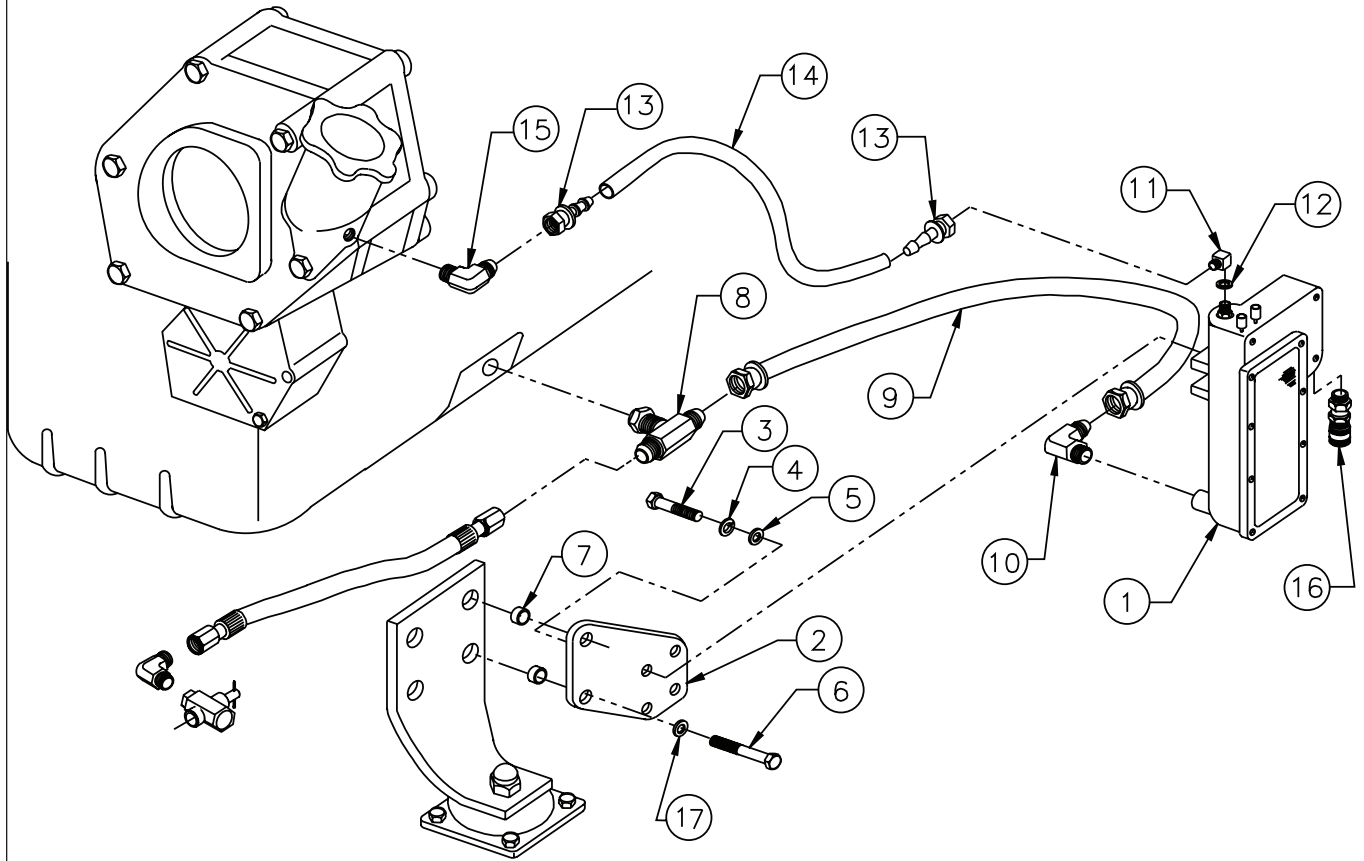


A-11392/ B-9160

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10004	1	Oil Level Switch/ Gauge	-
2	23-71202	1	Bracket	-
3	12-00111	4	Capscrew, Hex Head 1/2- 20 x 3/4"	-
4	15-00102	4	Lock Washer Helical 1/4"	-
5	15-00111	4	Flat Washer 1/4"	-
6	12-00967	2	Capscrew, Hex Head M12 x 1.75 x 80 mm	-
7	21-15403	2	Spacer	-
8	21-71201	1	Male Branch Tee, Steel M14 x 1.5 x 3/8- 37	-
9	18-15003	1	Hose Assembly, 3/8" I.D. x 9"	-
10	21-70011	1	Male Elbow, 90° Steel 1/2 NPT x 3/8- 37T	-
11	21-92200	1	Female Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
12	15-09805	1	Flat Washer M10 S/S	-
13	21-71045	2	Female Swivel, Brass 1/4 HB x 1/4- 45T Push-on	-
14	41-01011	9"	Hose, 1/4" I.D. Push-on	-
15	21-71043	1	Male Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
16	00-40016	1	Strain Relief Connection 1/2 NPT	-

Low Oil Level Switch/ Gauge

M944T Without PTO



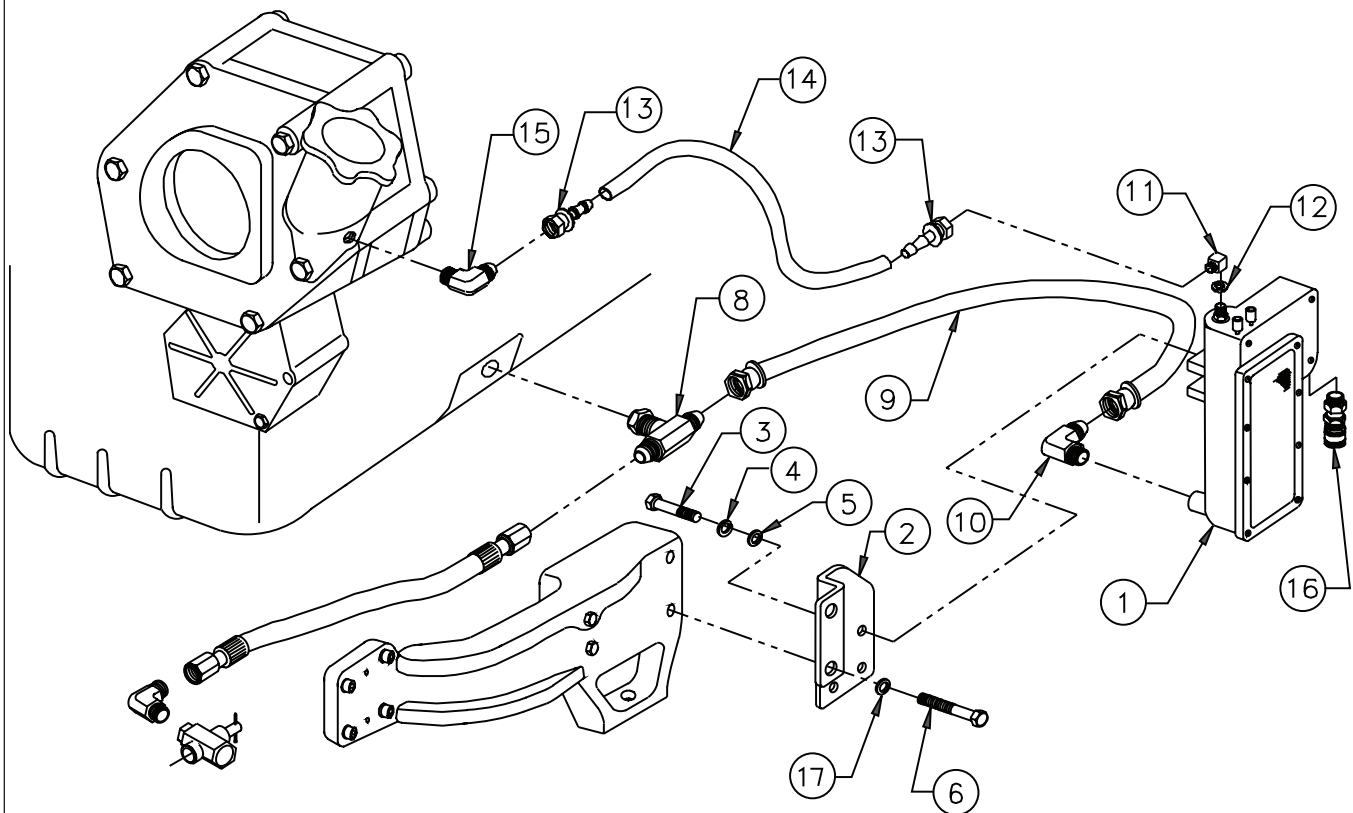
A-11392/ B-9160turbo

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10004	1	Oil Level Switch/ Gauge	-
2	23-71203	1	Bracket	-
3	12-00111	4	Capscrew, Hex Head 1/2- 20 x 3/4"	-
4	15-00102	4	Lock Washer Helical 1/4"	-
5	15-00111	4	Flat Washer 1/4"	-
6	12-09954	2	Capscrew, Hex Head M12 x 1.75 x 35 mm S/S	-
7	21-75401	2	Spacer	-
8	21-71201	1	Male Branch Tee, Steel M14 x 1.5 x 3/8- 37	-
9	18-15003	1	Hose Assembly, 3/8" I.D. x 9"	-
10	21-70011	1	Male Elbow, 90° Steel 1/2 NPT x 3/8- 37T	-
11	21-92200	1	Female Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
12	15-09805	1	Flat Washer M10 S/S	-
13	21-71045	2	Female Swivel, Brass 1/4 HB x 1/4- 45T Push-on	-
14	41-01011	10"	Hose, 1/4" I.D. Push-on	-
15	21-71043	1	Male Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
16	00-40016	1	Strain Relief Connection 1/2 NPT	-
17	15-09012	2	Lock Washer, Helical M12 S/S	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

Low Oil Level Switch/ Gauge

M944T With PTO

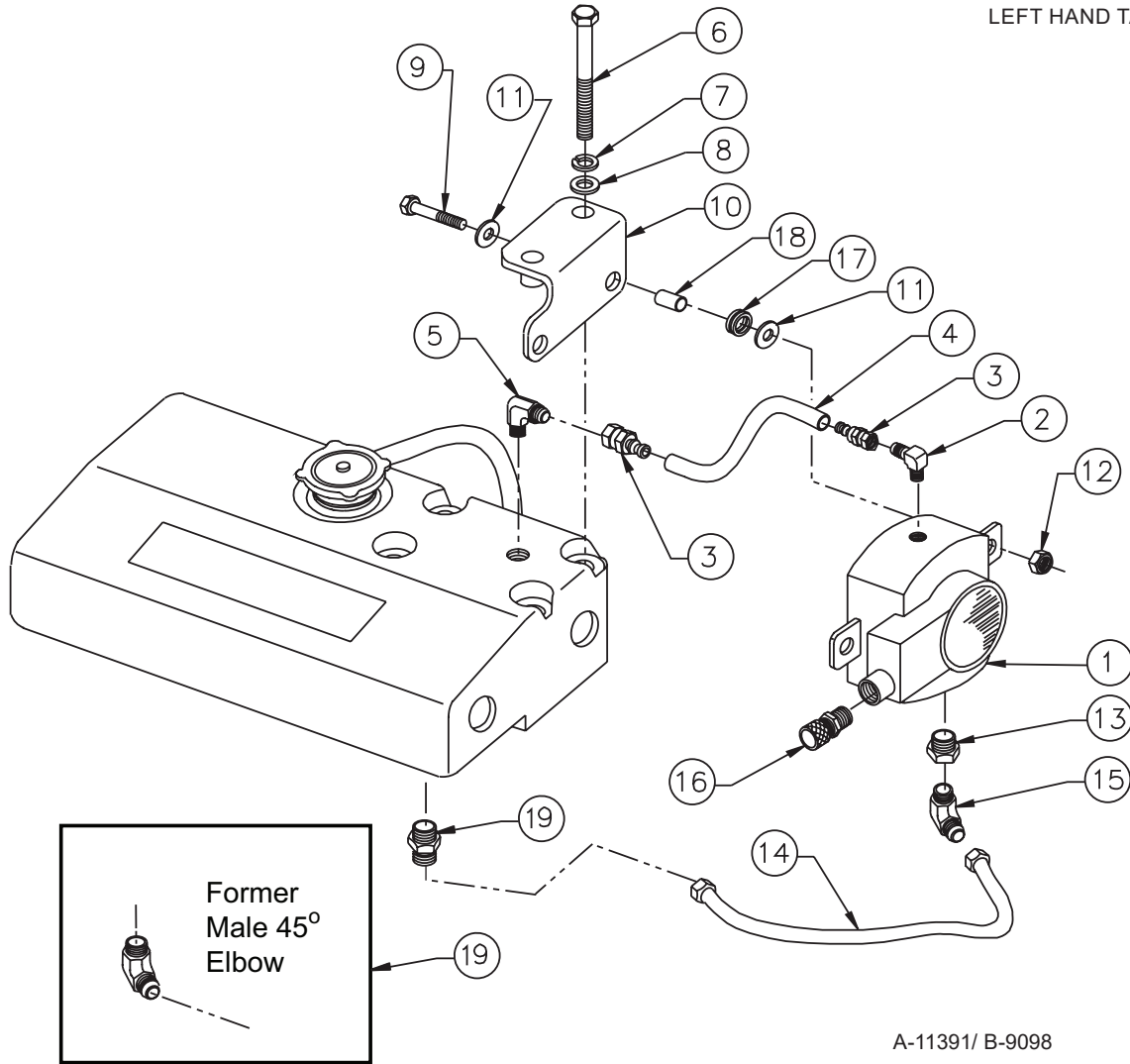


A-12427/ B-9604

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10004	1	Oil Level Switch/ Gauge	-
2	23-71204	1	Bracket	-
3	12-00111	4	Capscrew, Hex Head 1/2- 20 x 3/4"	-
4	15-00102	4	Lock Washer Helical 1/4"	-
5	15-00111	4	Flat Washer 1/4"	-
6	12-00967	2	Capscrew, Hex Head M12 x 1.75 x 80 mm	-
8	21-71201	1	Male Branch Tee, Steel M14 x 1.5 x 3/8- 37	-
9	18-15003	1	Hose Assembly, 3/8" I.D. x 9"	-
10	21-70011	1	Male Elbow, 90° Steel 1/2 NPT x 3/8- 37T	-
11	21-92200	1	Female Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
12	15-09805	1	Flat Washer M10 S/S	-
13	21-71045	2	Female Swivel, Brass 1/4 HB x 1/4- 45T Push-on	-
14	41-01011	10"	Hose, 1/4" I.D. Push-on	-
15	21-71043	1	Male Elbow, 90° Brass 1/8 NPT x 1/4- 45T	-
16	00-40016	1	Strain Relief Connection 1/2 NPT	-
17	15-09012	2	Lock Washer, Helical M12 S/S	-

Low Coolant Level Switch/ Gauge

LEFT HAND TANK MTG.



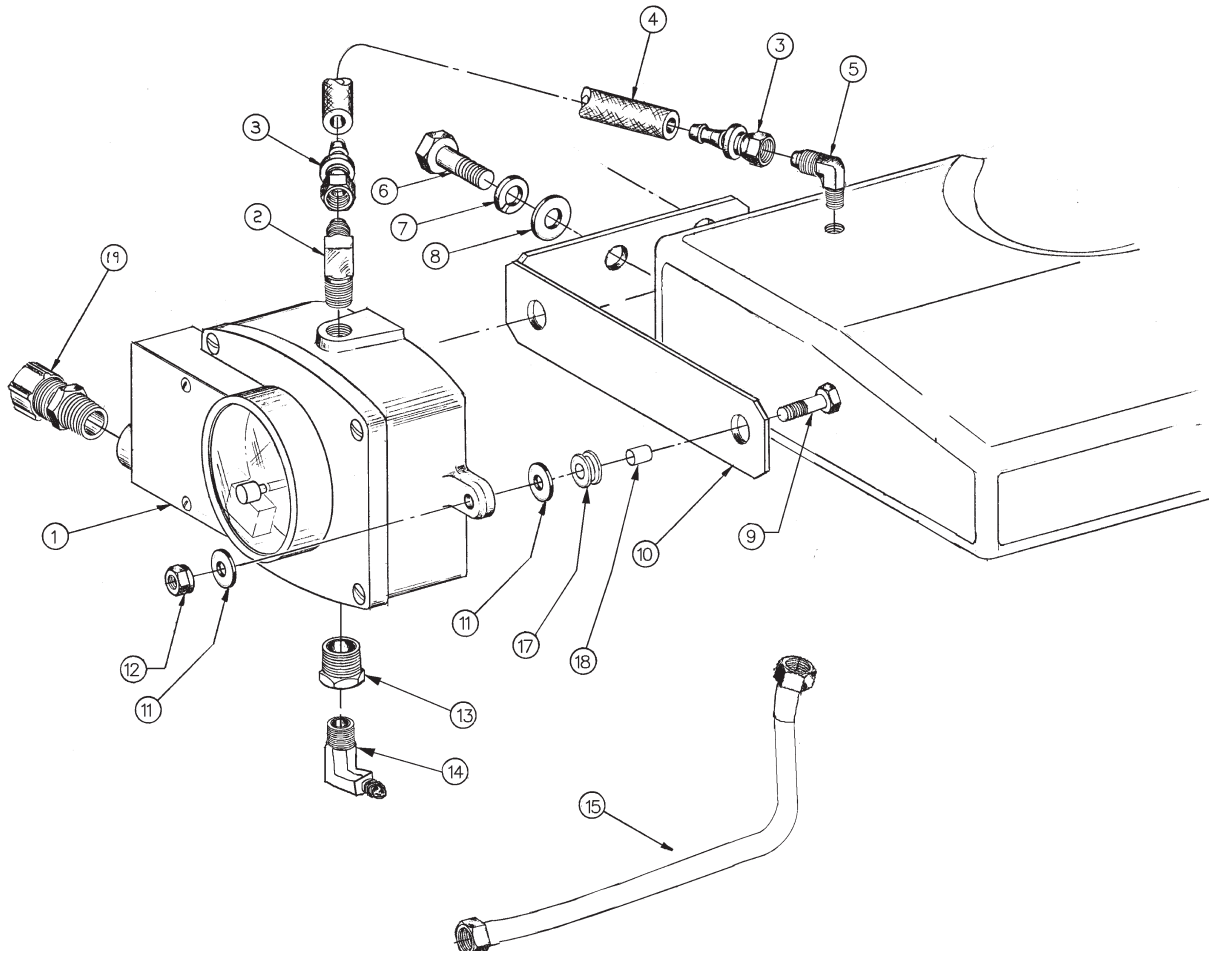
A-11391/ B-9098

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10003	1	Coolant Level Switch/ Gauge, Isolated Ground	-
2	21-71044	1	Male Elbow 90° Brass 1/4 NPT x 1/4- 45T	-
3	21-71045	2	Female Swivel Brass 1/4 HB x 1/4- 45T	-
4	18-51007	1	Hose, 1/4" I.D. x 8" Push-on	-
5	21-71043	1	Male Elbow 90° Brass 1/8 NPT x 1/4- 45T	-
6	12-00051	2	Capscrew, Hex Head M10 x 1.5 x 90 mm	-
7	15-00802	2	Lock Washer Helical M10"	-
8	15-00805	2	Flat Washer M10	-
9	12-00032	2	Capscrew, Hex Head M6 x 1.0 x 30 mm	-
10	23-71201	1	Bracket	-
11	15-70003	4	Snubbing Washer S/S	-
12	14-04803	2	Hex Nut, Nylock M6 x 1.0	-
13	21-00135	1	Bushing, Brass 1/2 NPT x 1/4 NPT	-
14	18-15001	1	Hose Assembly 1/4" I.D. x 7-3/4" (former # 18-15408)	-
15	21-71049	1	Male Elbow 90° Steel 1/4 NPT x 1/4- 37T (former # 21-05404)	-
16	00-40016	1	Strain Relief Connection 1/2 NPT	-
17	00-41074	2	Grommet	-
18	21-15014	2	Spacer	-
19	21-74406	1	Male Connector, Steel 1/4NPT x 1/4-37T (former # 19-43201)	-

GROUP 9 - ACCESSORIES & OPTIONAL EQUIPMENT

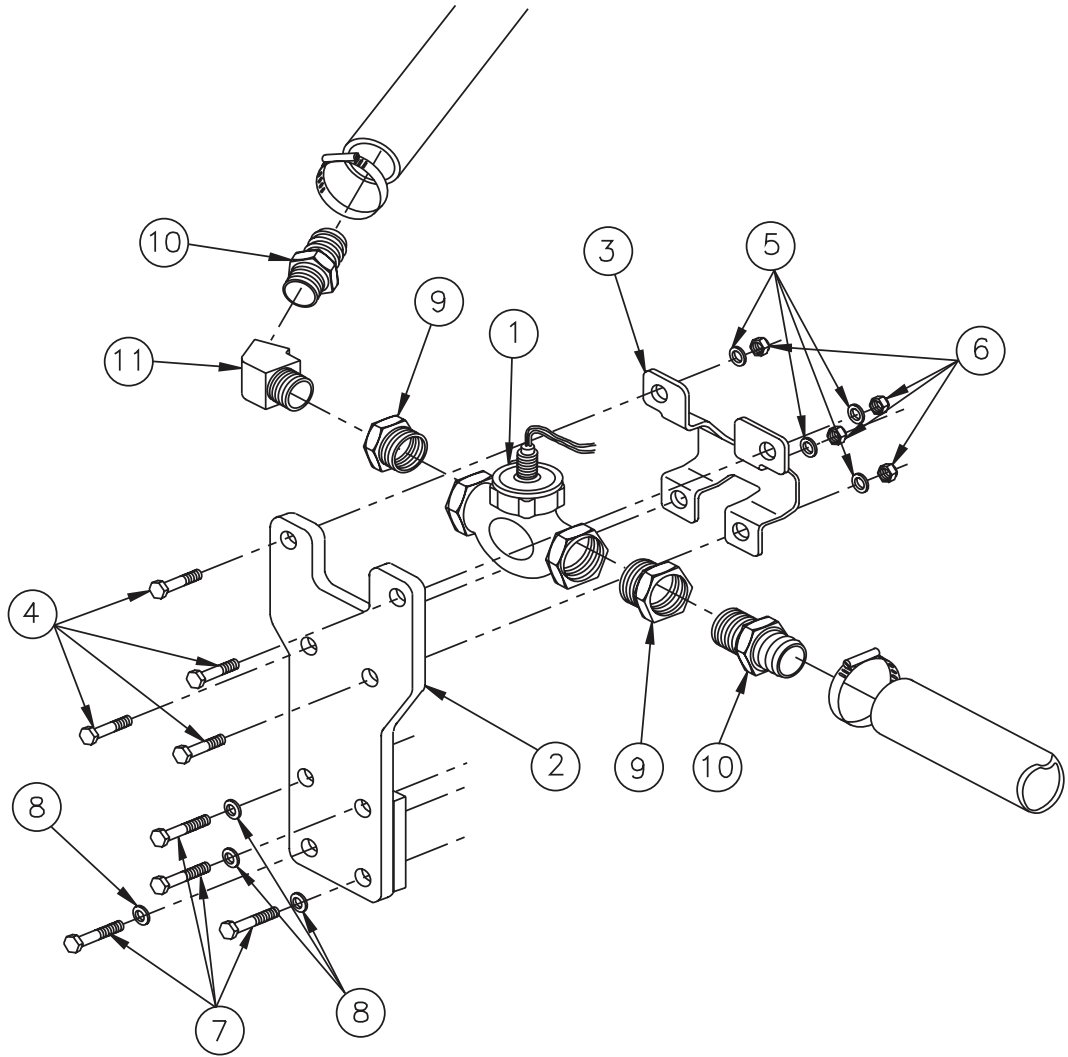
Low Coolant Level Switch/Gauge

RIGHT HAND TANK MTG.



KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	22-10003	1	Coolant Level Switch Gauge, Isolated Ground	-
2	21-71044	1	Male Elbow, 90° Brass 1/4 NPT x 1/4-45T	-
3	21-71045	2	Female Swivel, Brass 1/4-45T x 1/4 HB	-
4	18-51007	1	Hose, 1/4" ID x 8" Push-On	-
5	21-71043	1	Male Elbow, 90° Brass 1/8 NPT x 1/4-45T	-
6	12-00311	2	Capscrew, Hex Head 3/8 - 16 x 3/4"	-
7	15-00302	2	Lock Washer, Helical 3/8	-
8	15-00301	2	Flat Washer 3/8	-
9	12-00032	2	Capscrew, Hex Head M6 x 1.0 x 30mm	-
10	23-75409	1	Bracket, Switch Gauge Mounting	-
11	15-70003	4	Snubbing Washer	-
12	14-04803	2	Nylock Hex Nut, M6 x 1.0	-
13	21-00135	1	Bushing, Brass 1/2 NPT x 1/4 NPT	-
14	21-71049	1	Male Elbow, 90° Steel 1/4 NPT x 1/4 - 37T	-
15	18-55404	1	Hose Assembly 1/4" ID x 6-3/4"	-
16	21-74406	1	Male Connector, Steel, 1/4 NPT x 1/4-37T	-
17	00-41074	2	Grommet	-
18	21-15014	2	Sleeve	-
19	00-40016	1	Strain Relief Connection	-

Raw Water Flow Switch



A-11491/ B-9099

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	37-15401	1	Flow Switch, Bronze 8 GPM	-
2	23-11202	1	Bracket	-
3	23-18703	1	Clamp	-
4	12-00712	4	Capscrew, Hex Head M8 x 1.25 x 25 mm	-
5	15-00701	4	Flat Washer M8	-
6	14-04802	4	Hex Nut, Nylock M8 x 1.25	-
7	12-00953	4	Capscrew, Hex Head M12 x 1.75 x 30 mm	-
8	15-00912	4	Lock Washer, Helical M12	-
9	21-41101	2	Bushing	-
10	21-00129	2	Male Connector, Brass 1/2 NPT x 3/4 HB	-
11	21-00128	1	Street Elbow 45° Brass 1/2 NPT	-



4420 14th Ave. NW., Seattle WA 98107

Tel: (206) 789-3880 • 1-800-762-0165 • Fax: (206) 782-5455

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

© 2018 All rights reserved. Litho USA.