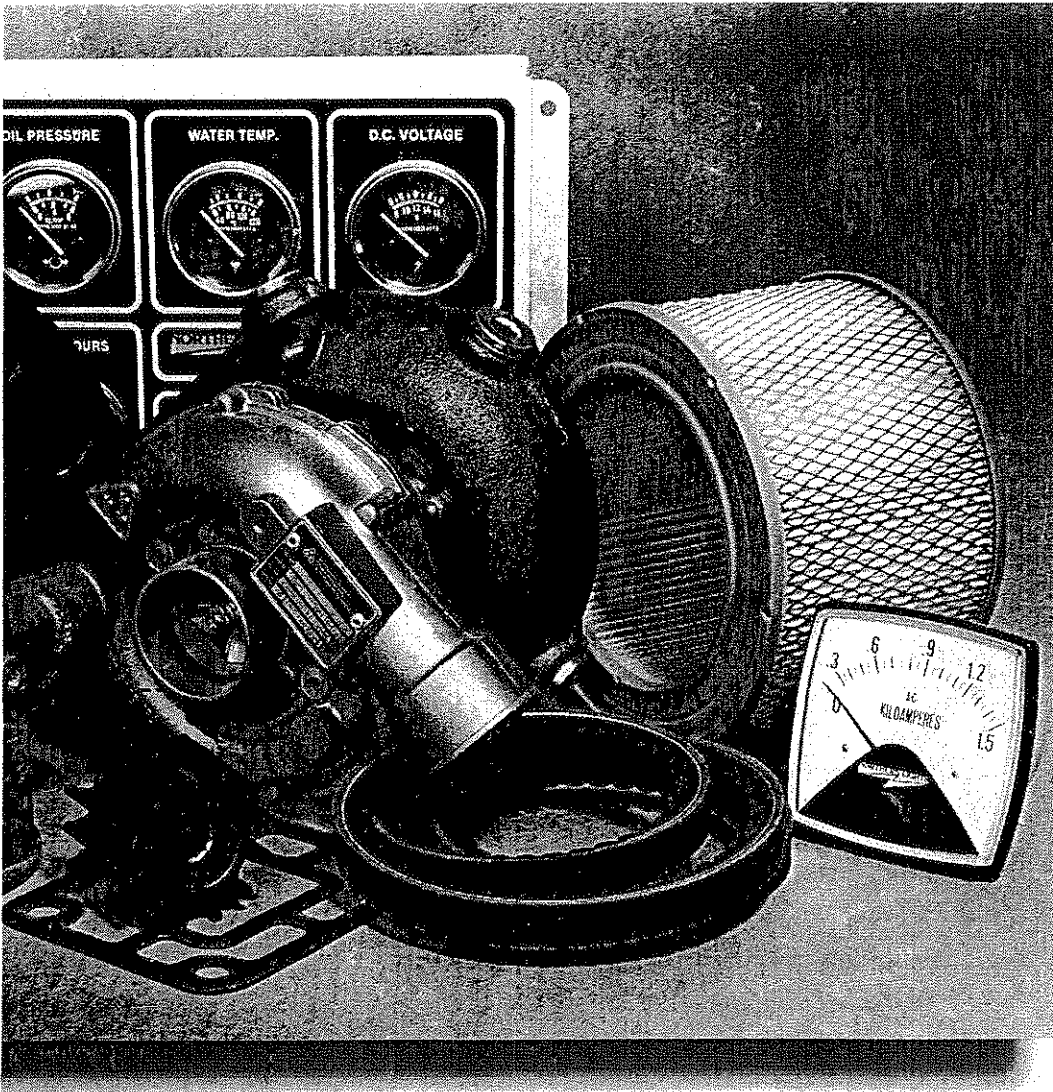


PARTS CATALOG

445



442

MODEL P445 PARTS MANUAL**- - TABLE OF CONTENTS - -***Please read thoroughly before attempting to use this manual.*

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INTRODUCTION

MODEL DESIGNATION

Refer to the category designations below to find the correct parts pages for your model.

M - NL

M- Northern Lights marine generator set
NL- Northern Lights industrial generator set

445

Base Model #
(Deere 4045 Series engine block)

D - T

Aspiration
D Natural
T Turbo-charged

Q

Q 1200 RPM Generator Set

65C-4

C-Series
kW for Commercial Application. (Deere 4045 engine block)

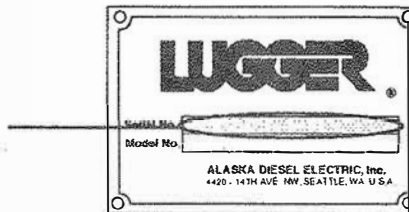
M 445 D	Northern Lights naturally aspirated 1800 rpm marine diesel generator set. John Deere 4045 T engine.
M 445 T	Northern Lights turbocharged 1800 rpm marine diesel generator set. John Deere 4045 T engine.
M 445 Q	Northern Lights naturally aspirated 1200 rpm marine diesel generator set. John Deere 4045 T engine.
M 65C-4	Northern Lights turbocharged 1800 rpm C-SERIES commercial marine diesel generator set. John Deere 4045 T engine.
NL445 T	Northern Lights turbocharged 1800 rpm marine diesel generator set. Radiator cooling. John Deere 4045 T engine.

* When no suffix appears data will be applicable to all models

It is Alaska Diesel Electric's policy to build all 4045 series models on Deere engines intended for turbocharging. This is important when internal components are required. Check also John Deere ID plate on side of block to verify. Every effort to note correct base engine will be made in parts text. All model numbers in parentheses will indicate John Deere base engine. All variations requiring serial numbers for proper identification will be noted as ADE or John Deere.

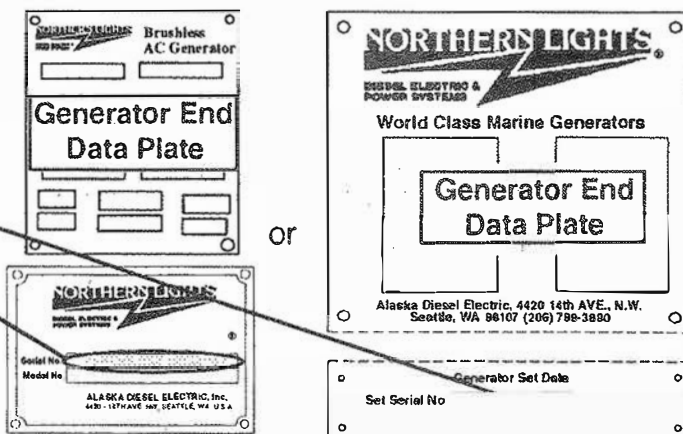
SERIAL NUMBERS

When ordering Luggers parts, refer to this serial number located on flywheel housing. Serial numbers for all Luggers and Northern Lights are eight digits, e.g. 1234-5678.



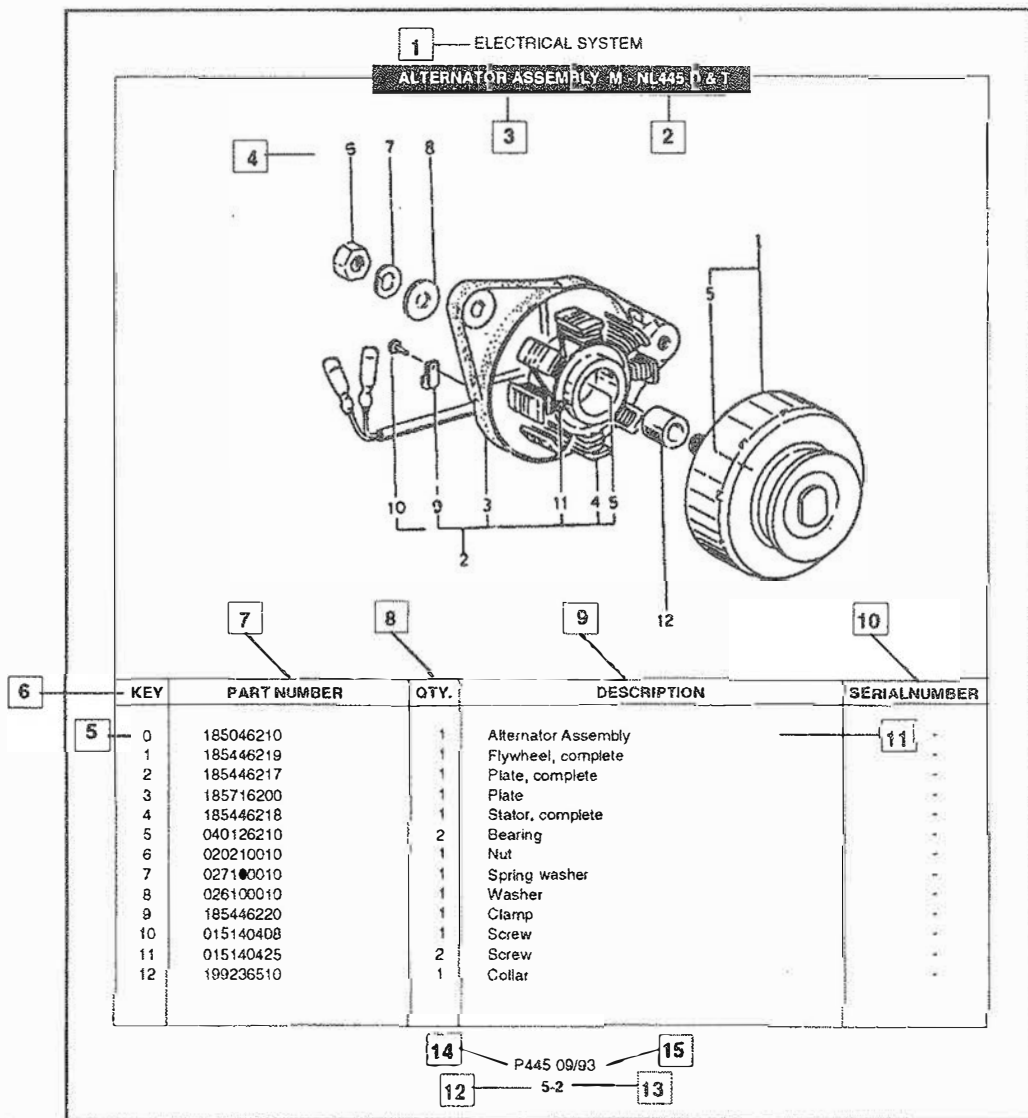
When ordering Northern Lights parts, refer to the serial number, highlighted here from the generator set data.

Every Northern Lights generator set has two data plates and two serial numbers, which may cause some confusion. One Serial number is for the generator end, and it is found on the Generator End Data Plate. The other serial number, found with the Generator Set Data Plate, should be used when ordering parts.



READING A PARTS PAGE

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



REFERENCES

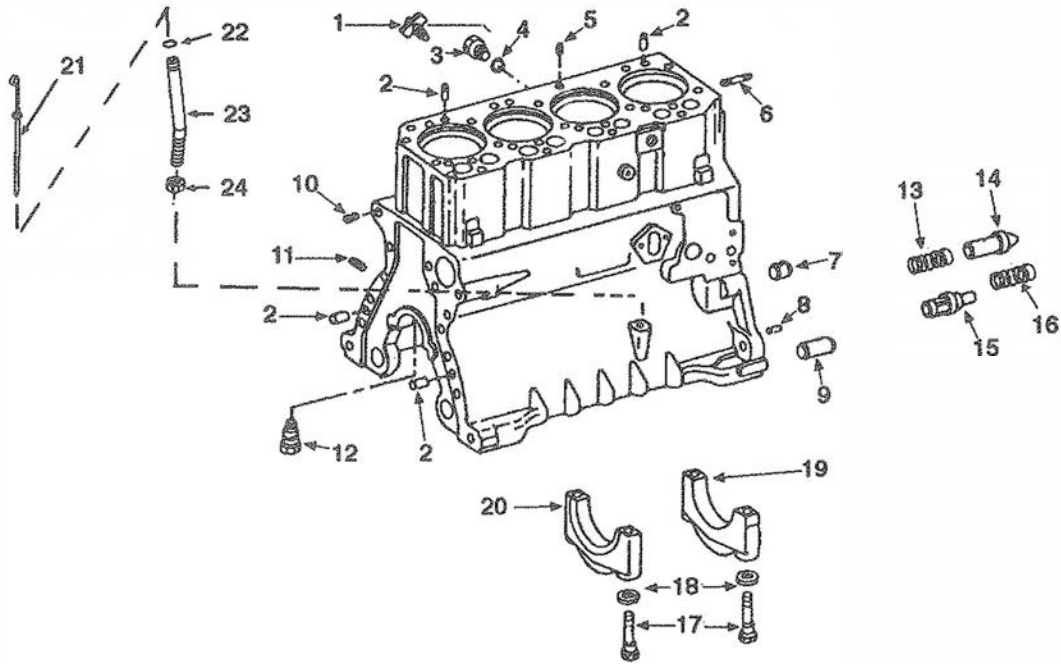
- Grouping section title.
- Model designation of equipment that use parts listed on this page
- Title and description of assembly.
- Drawing numbers that correspond to key.
- Denotes assembly or kit.
- Key column for locating parts shown on drawing.
- Part number.
- Quantity of parts used.
- Description of each component part.
- Part is used on units between these serial numbers. Check your unit's serial number before ordering parts (refer to "SERIAL NUMBERS," page 2.)
- Assembly description and keys included.
- Grouping index number.
- Page number within the grouping index.
- Manual title.
- Page publication date. Books may include pages with different publication dates.

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

NOTES

ENGINE

CYLINDER BLOCK ASSEMBLY

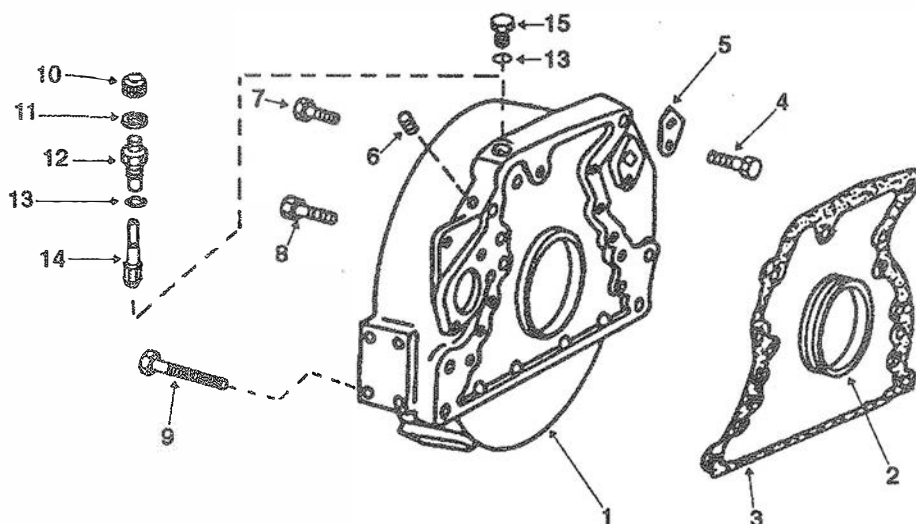


KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
..	RE50671	1	Cylinder Block (marked R108755 - includes Keys 1-13 & 17-20, also requires R83169, T27658, R111135, R111137 & R112867)*	-
1	21-10002	1	Drain Cock 1/4NPT	-
2	R48685	4	Dowel Pin	-
3	R39741	1	Drain Plug	-
4	U13639	1	O-Ring	-
5	21-11003	1	Plug, Socket Head 1/2NPT	-
6	T25701	1	Stud	-
	T33279	2	Stud	-
7	T18891	2	Expansion Plug 5/8"	Up to 362468
	R26493	1	Bushing	From 362469
8	R26650	2	Dowel Pin	-
9	R57160	6	Bushing, Standard	-
	R91708	6	Bushing .078" oversize	-
10	21-51905	**	Plug, Socket Head 1"NPT	-
11	21-51900	**	Plug, Socket Head 1/8"NPT	-
12	R54802	4	Orifice	-
13	T27658	1	Spring	-
14	R83169	1	Valve, Oil Pressure Regulating	-
15	R111135	1	Valve, Oil Bypass	-
16	R111137	1	Spring	-
17	T23474	10	Capscrew	-
18	T20168	10	Washer	-
19	R65215	4	Main Bearing Cap #1-4	-
20	R79089	1	Main Bearing Cap #5	-
21	AT21535	1	Dipstick	-
22	R10093	1	O-Ring	-
23	R86819	1	Dipstick Tube	-
24	14H826	1	Nut 1/2-13	-

*Replaces earlier pre-Common Lube Block.
 **As required.

ENGINE

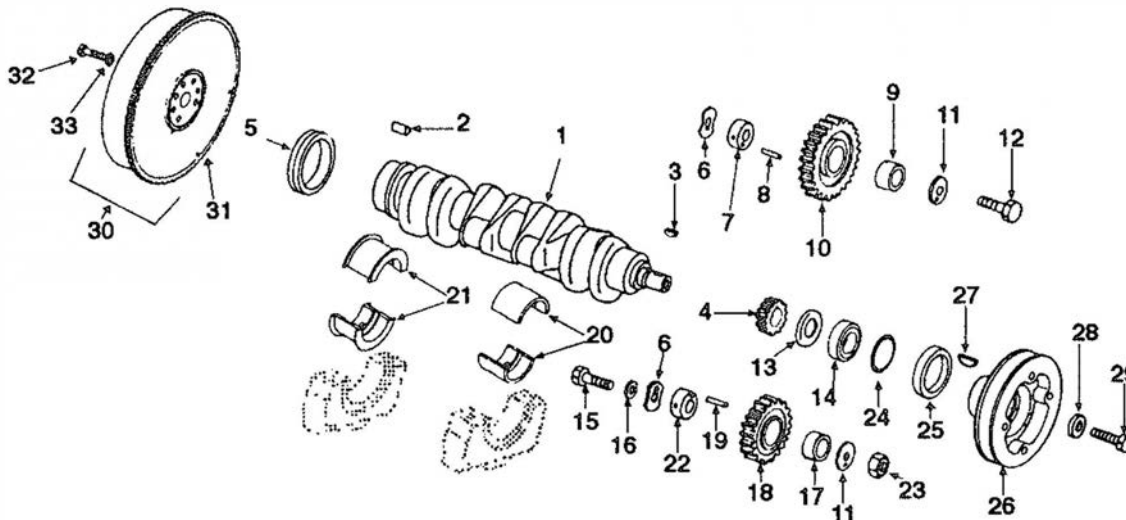
FLYWHEEL HOUSING SAE 4



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R98777	1	Flywheel Housing SAE #4	-
2	RE44574	1	Seal	-
3	R97351	1	Gasket	-
4	19H2351	1	Capscrew, Hex Head 1/2-13 x 1/2"	-
5	T20089	1	Cover	-
6	21-00012	**	Plug, Hex Head 1/8NPT	-
7	12-01318	2	Capscrew, Hex Head 5/8-11 x 2-1/2"	-
8	12-00314	8	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
9	12-01330	2	Capscrew, Hex Head 5/8-11 x 5-1/2"	-
10	B3362R	1	Cap (M445)	-
11	B3285R	1	Washer	-
12	T22537	1	Fitting (M445)	-
13	T13213	1	Washer	-
14	T22536	1	Gear (M445)	-
15	M1746T	1	Drain Plug	-

ENGINE

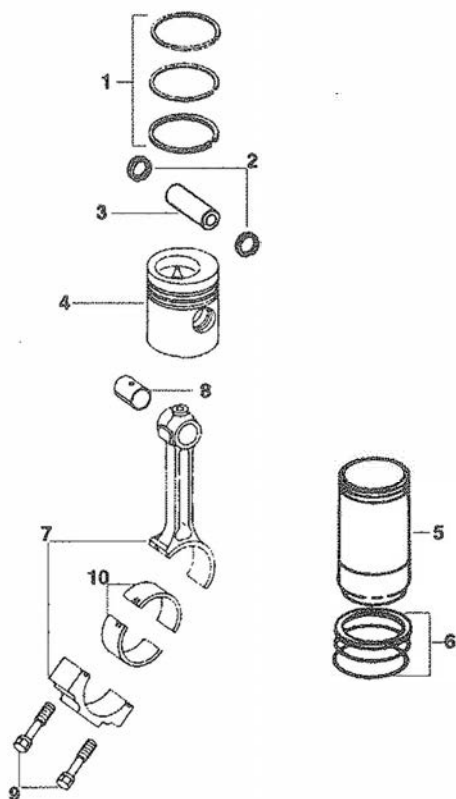
CRANKSHAFT, IDLER GEARS and MAIN BEARINGS



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE30341	1	Crankshaft (marked R54501 – includes Keys 2–4)	-
2	R48685	1	Dowel Pin	-
3	26H72	1	Shaft Key	-
4	T20094	1	Gear 24 teeth	-
5	RE44574	1	Rear Main Seal	-
6	T26324	2	Thrust Washer	-
7	R89824	1	Shaft	-
8	34H283	1	Spring Pin 3/16 x 1-1/8"	-
9	T20034	1	Bushing	-
10	AR91660	1	Gear 55 teeth (marked R70182)	-
11	T26326	2	Thrust Washer	-
12	T26327	1	Screw	-
13	T20046	1	Oil Slinger	-
14	AR67942	1	Seal	-
15	19H3183	1	Capscrew, Hex Head 1/2-13 x 2-1/8" Grade 8	-
16	R100105	1	Washer	-
17	T26321	1	Bushing	-
18	AT24252	1	Gear 45 teeth (marked T26322)	-
19	34H286	1	Spring Pin 3/16 x 1-1/2"	-
20	AT21140	4	Bearing: Standard	-
	AT21110	4	Bearing: .010" Undersize	-
	AT21112	4	Bearing: .020" Undersize	-
	AT21114	4	Bearing: .030" Undersize	-
21	AT21130	1	Bearing: Standard	-
	AT21132	1	Bearing: .010" Undersize	-
	AT21134	1	Bearing: .020" Undersize	-
	AT21136	1	Bearing: .030" Undersize	-
22	R89824	1	Pin	-
23	E69392	1	Nut	-
24	H35244	1	O-Ring	-
25	R81989	1	Sleeve	-
26	R85391	1	Crankshaft Pulley 2 Groove	-
27	26H27	1	Key 5/16" x 1-1/8"	-
28	R109086	1	Spacer (former #CD16045)	-
29	R84978	1	Capscrew	-
30	RE51452	1	Flywheel SAE #10 (includes Key 31)	up to S/N
	RE58574	1	Flywheel Assembly SAE #10	from S/N
31	R114282	1	Ring Gear - 142 Teeth (former #T20088)	-
32	19H2993	4	Capscrew, Hex Head 1/2-13 x 1-1/2" Grade 8	-
34	T23891	1	Flatwasher 1/2 (special)	-

ENGINE

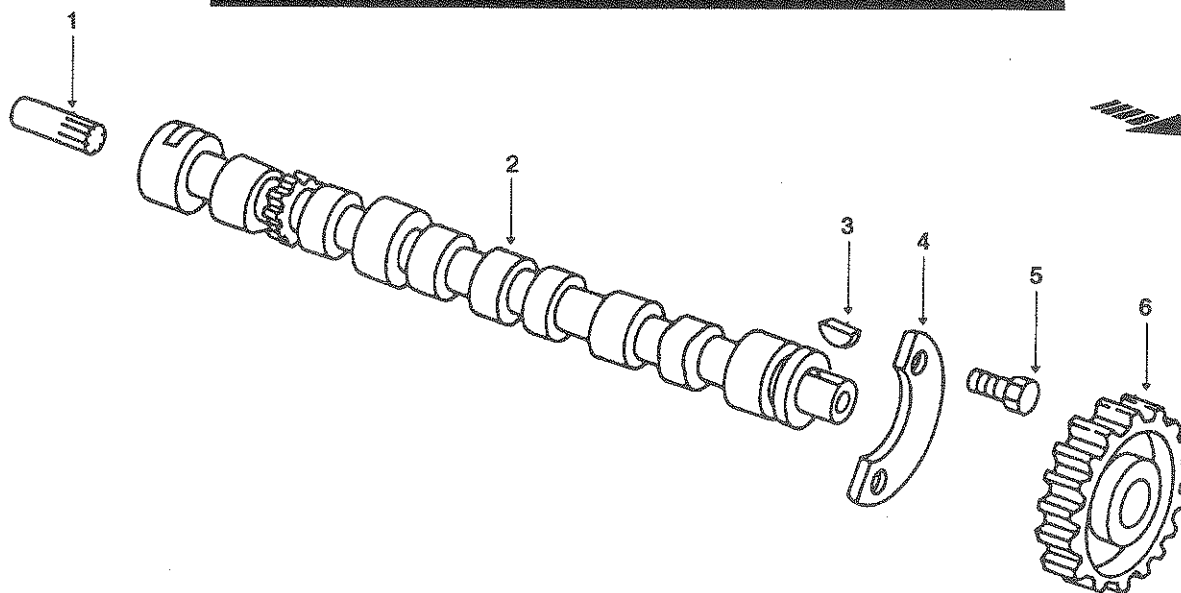
CYLINDER LINER ASSEMBLY and CONNECTING ROD



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	RE53073	4	Cylinder Liner Kit (includes Keys 1-6)	-
1	RE48818	4	Piston Ring Kit	-
2	R54114	8	Snap Ring	-
3	R124230	4	Piston Pin (former #R56188)	-
4		4	Piston (not available separately – included in Cylinder Liner Kit)	-
5	R80500	4	Cylinder Liner	-
6	AR65507	4	O-Ring Seal Kit	-
7	AR66400	4	Connecting Rod Assembly (marked R56187 – includes Keys 8 & 9)	-
8	R57451	4	Bushing	-
9	R74195	8	Rod Bolt	-
10	AR97517	4	Bearing - Standard	-
	AR97653	4	Bearing .010" undersize	-
	AR97654	4	Bearing .020" undersize	-
	AR97655	4	Bearing .030" undersize	-
			Note: Cylinder Liner Shims .002" #CD15466 .004" #R65833 Refer to Workshop Manual CTM8 for application instructions.	

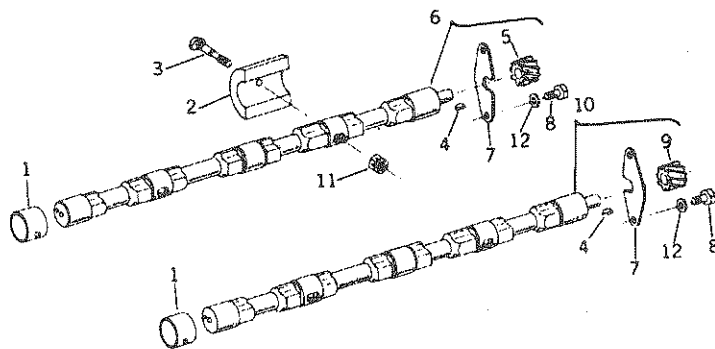
ENGINE

CAMSHAFT



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R81514	**	Gear 12 Teeth	-
	R81515	**	Gear 12 Teeth	-
2	R82820	1	Camshaft	-
3	T28041	1	Shaft Key	-
4	T20072	1	Plate	-
5	12-00312	2	Capscrew, Hex Head 3/8-16 x 1"	-
6	T20070	1	Gear 48 Teeth	-
			** As Required	

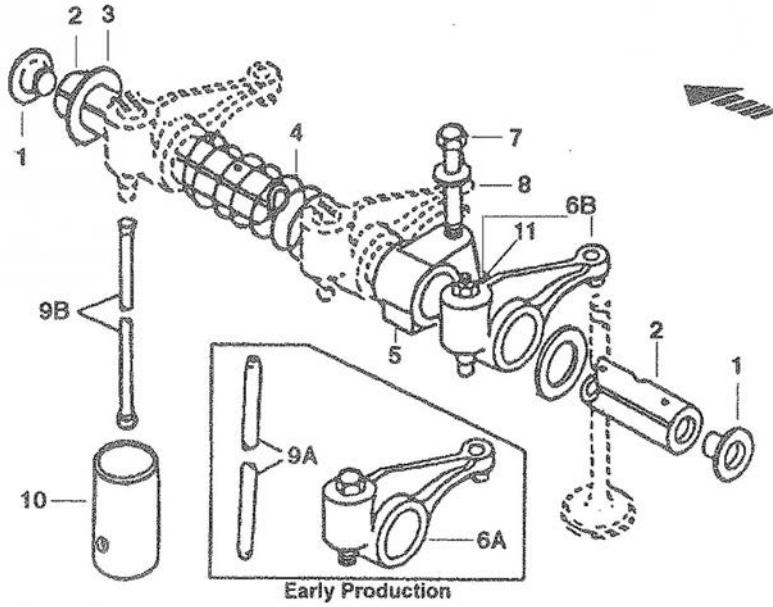
BALANCE SHAFT ASSEMBLY



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R57160	6	Bushing	-
2	R54635	4	Balance Shaft Weight	-
3	T28745	4	Bolt*	-
4	T28041	2	Woodruff Key	-
5	T20133	1	Gear, Left Hand 12 Teeth	-
6	AR69711	1	Balancer Shaft with Gear, Left Hand (marked R54634)	-
7	R58007	2	Thrust Plate	-
8	19H2021	4	Cap Screw, Hex Head 3/8-16 x 5/8"	-
9	T20130	1	Gear, Right Hand 12 Teeth	-
10	AR69710	1	Balancer Shaft with Gear, Right Hand (marked R54634)	-
11	T15634	4	Special Nut*	-
12	15-00302	4	Lock Washer 3/8"	-
			*Note: Do not Re-use. See Service Manual CTM8	

ENGINE

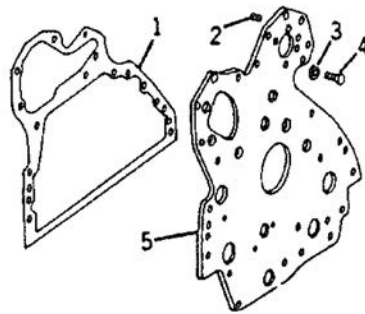
VALVE TRAIN COMPONENTS



TP42714

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R54565	2	Plug	-
2	R54987	1	Shaft	-
3	T20316	2	Washer	-
4	T20314	3	Spring	-
5	T20315	4	Support	-
6A	RE31973	8	Rocker Arm	Up to 379968
6B	RE62148	8	Rocker Arm Assembly (includes Key 11) (former #RE43384)	From 379969
7	12-00318	4	Capscrew, Hex Head 3/8-16 x 2-1/2"	-
8	R42729	4	Washer	-
9A	R83429	8	Push Rod (former #R82896)	Up to 379968
9B	R107731	8	Push Rod (former #R107732)	From 379969
10	T20073	8	Tappet	-
11	R119314	4	Lock Nut 3/8-24 Grade 8	From 379969

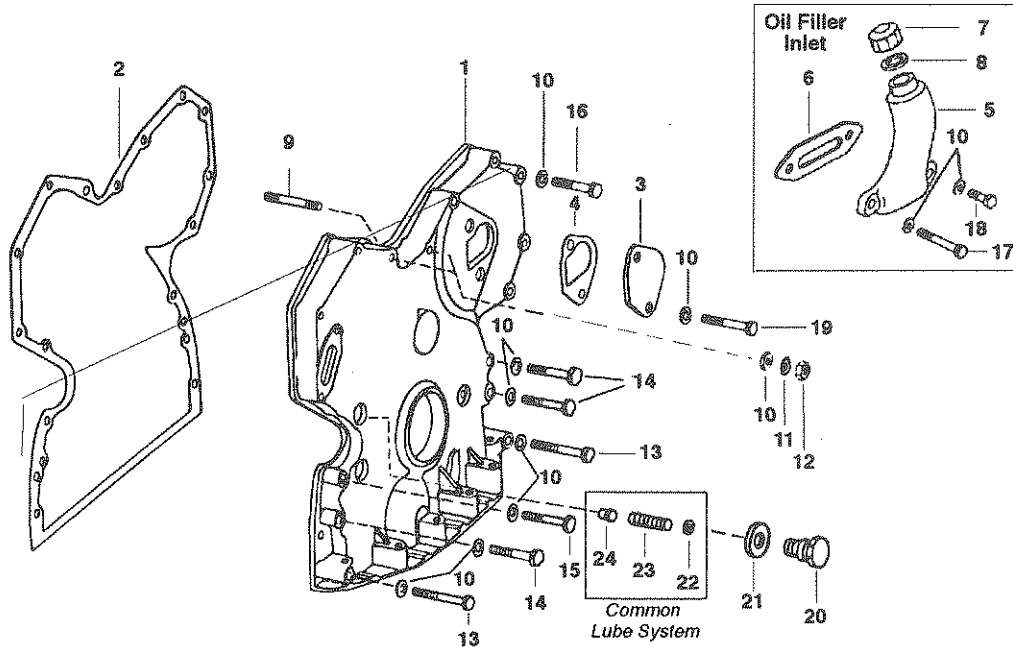
FRONT PLATE



		QTY.	DESCRIPTION	SERIAL NUMBER
1	R90648	1	Gasket	-
2	AT21191	2	Special Set Screw	-
	AT22919	2	Special Set Screw	-
3	12H324	5	Star Washer, External Tooth 3/8"	-
4	T20166	5	Capscrew, Flat Hex Head 3/8-16 x 7/8"	-
5	RE16149	1	Front Plate-Order (5) AT21191 set screws & (2) AT22919 set screws	-

ENGINE

TIMING GEAR COVER

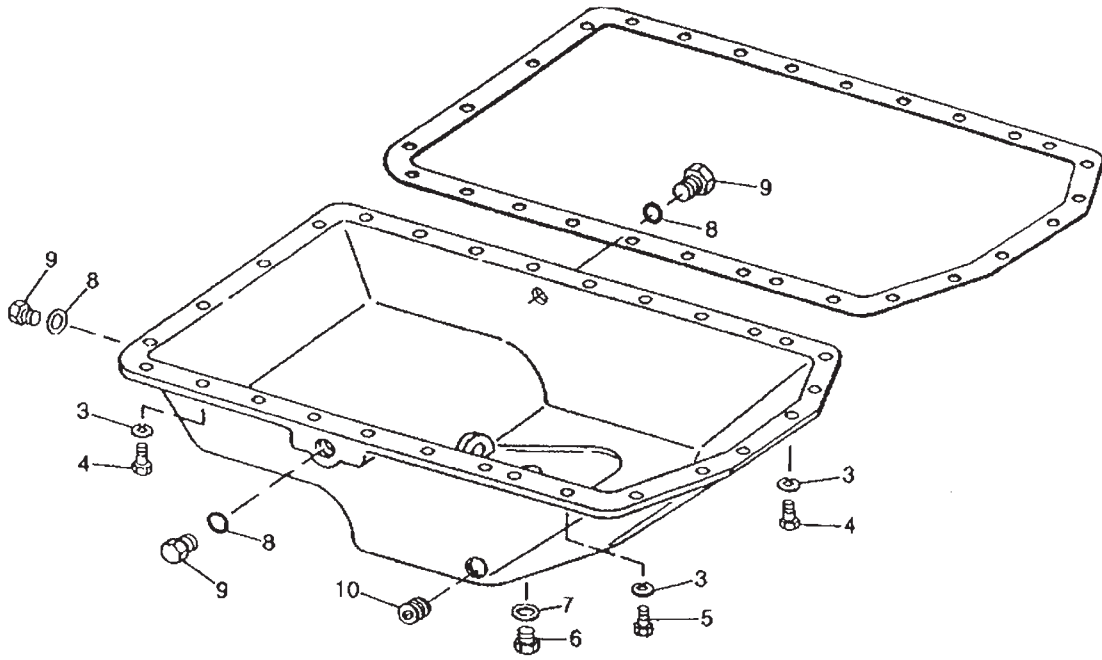


TP25609

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE39252	1	Timing Cover	-
2	R119269	2	Gasket	-
3	T20362	1	Cover	-
4	R97773	1	Gasket	-
5	RE25648	1	Filler Neck	-
6	R87259	1	Gasket (includes Key 6)	-
7	R90788	1	Cap	-
8	T20328	1	Gasket	-
9	T33279	2	Stud	-
10	15-00300	18	Flat Washer	-
11	15-00302	2	Lock Washer 3/8"	-
12	14-00311	2	Hex Nut 3/8-16	-
13	12-00318	2	Capscrew, Hex Head 3/8-16 x 2-1/2"	-
14	12-00315	4	Capscrew, Hex Head 3/8-16 x 1-3/4"	-
15	12-00317	1	Capscrew, Hex Head 3/8-16 x 2-1/4"	-
16	12-00301	5	Capscrew, Hex Head 3/8-16 x 1-3/8"	-
17	12-00310	3	Capscrew, Hex Head 3/8-16 x 3"	-
18	19H2665	1	Capscrew, Hex Head 3/8-16 x 1-5/8"	-
19	19H2284	2	Capscrew Hex Head 3/8-16 x 7/8"	-
20	T27657	1	Fitting Plug	-
21	A4827R	1	Washer	-
22	24H1290	**	Washer 21/64" x 3/4" x 0.035"	-
23	T27658	1	Spring	-
24	R83169	1	Valve	-

ENGINE

Oil Pan

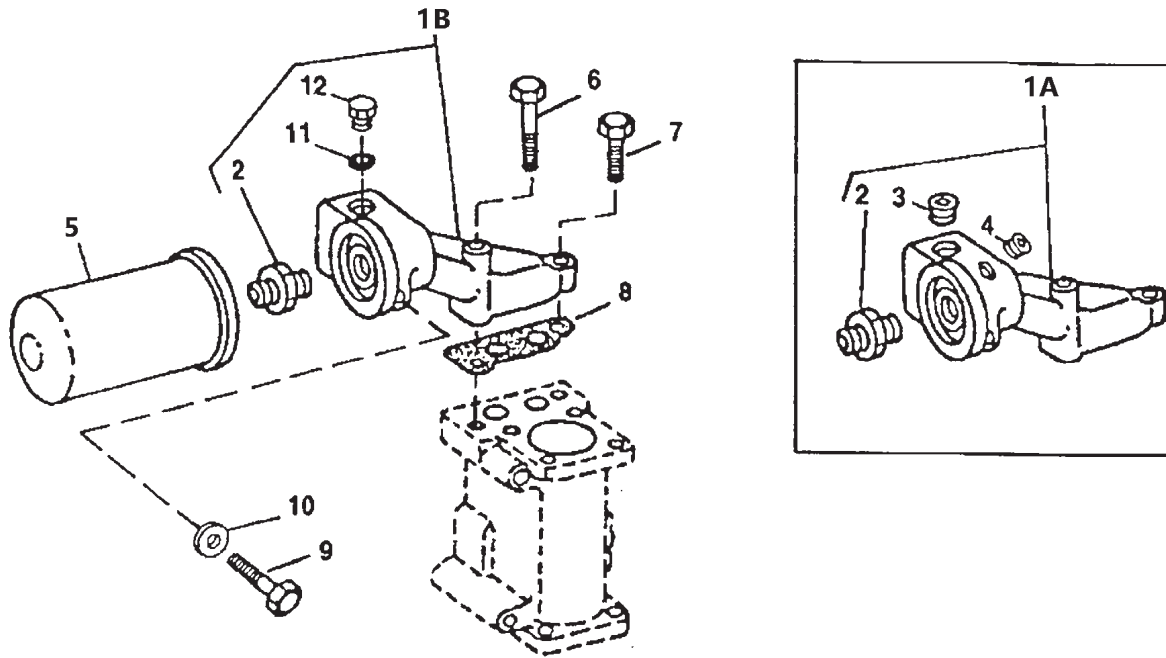


TP28399 o de 1908

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	R105383	1	Oil Pan	-
2	R97342	1	Gasket	-
3	12H304	28	Lock Washer 3/8"	-
4	19H3411	20	Cap Screw 3/8 x -1/8"	-
5	19H3065	8	Cap Screw 3/8 x 2"	-
6	M1746T	1	Drain Plug 7/8 - 14	-
7	T13213	1	Washer	-
8	R47151	3	O-Ring	-
9	R27474	3	Drain Plug, 5/8 O-Ring Port	-
10	21-11004	1	Pipe Plug 3/4" NPT	-

ENGINE

Oil Filter & Horizontal Adapter

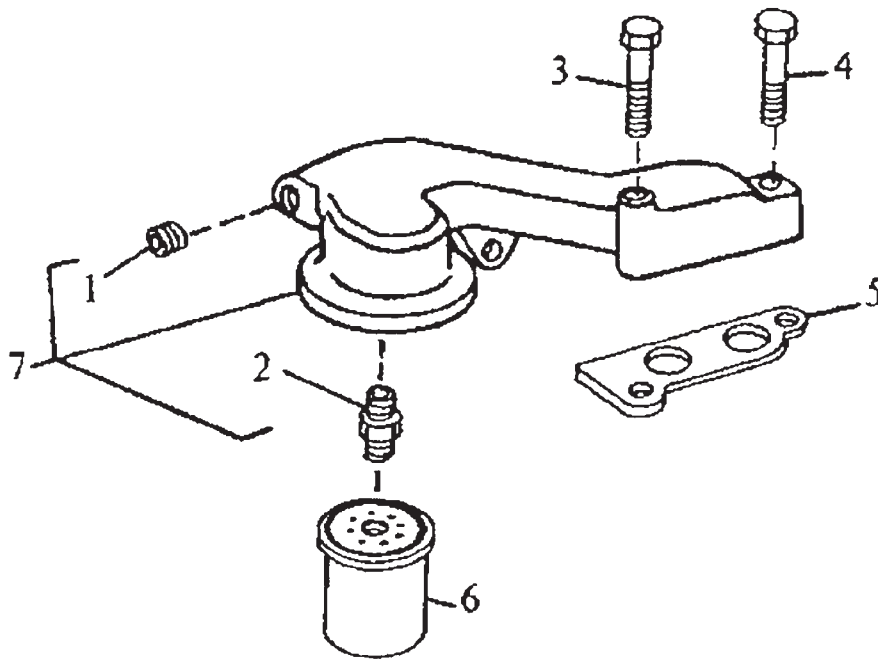


TP55120 CODE 5901

KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1a	RE31299	1	Adapter (no longer available. Replaced by RE70979) (also order 38H1045, R63548 & R26448 as required.) (marked R91597)	-
1B	RE70979	1	Adapter (Marked R131238)	-
2	R54823	1	Adapter Fitting	-
3	15H666	**	Pipe Plug 3/8" (use with RE31299)	-
4	15H275	**	Pipe Plug 1/4" (use with RE31299)	-
5	T19044	1	Oil Filter	-
6	19H2732	1	Cap screw 3/8" x 2-3/4"	-
7	19H3751	1	Screw 3/8" x 1-3/8"	-
8	R98488	1	Gasket	-
9	19H1925	1	Cap screw 3/8" x 4-1/4"	-
10	24M7106	1	Washer 10 x 18 x 2.500 mm	-
11	R26448	1	O-Ring (use with RE70979)	-
12	R27218	1	Fitting Plug (use with RE70979)	-
			** as required	

ENGINE

Oil Filter & Vertical Adapter



TP42733 CODE 5902

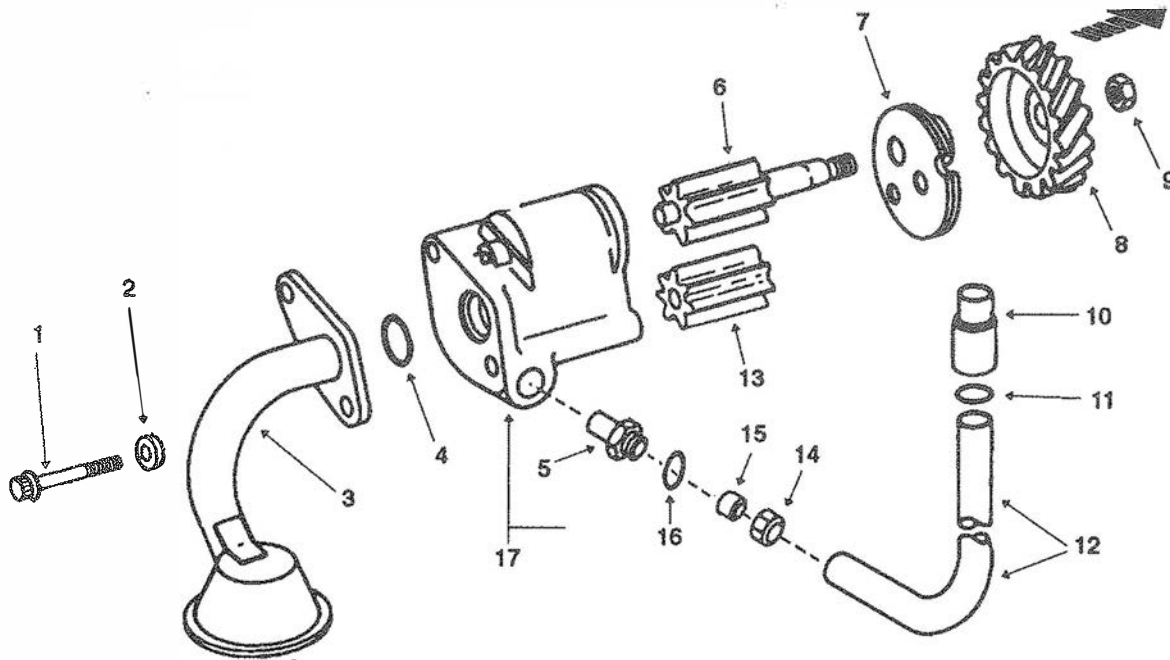
KEY	PART NUMBER	QTY	DESCRIPTION	SERIAL NUMBER
1	15H666	1	Pipe Plug 3/8"	-
2	R54823	1	Adapter Ring	-
3	19H2732	1	Capscrew 3/8" x 2-3/4"	-
4	19H2732	1	Capscrew 3/8" x 2"	-
5	R98488	1	Gasket	-
6	T19044	1	Oil Filter	-
7	RE52179	1	Adapter Fitting (marked R113646)	-

ENGINE

ENGINE OIL PUMP

Early Production

Up To Serial Number -XXXXX-427006



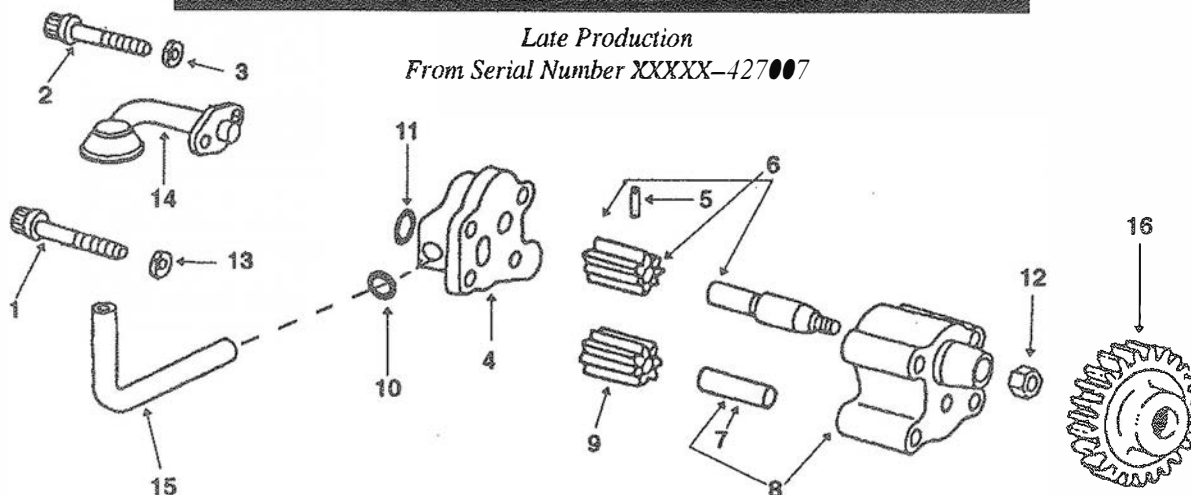
TP21298 code 5001

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
..	AR79463	1	Oil Pump Assembly (includes keys 1-7, 13 & 16)	-
1	R116424	2	Capscrew	-
2	R74553	2	Washer	-
3	RE19651	1	Oil Pickup	-
4	R61871	1	O-Ring	-
5	R79560	1	Adapter	-
6	AR85788	1	Gear and Shaft Assembly (also requires R66177)	-
7	R54632	1	Cover	-
8	T20298	1	Gear 33 teeth	-
9	14H826	1	Hex Nut 1/2-13 (Thin)	-
10	R54815	1	Fitting	-
	R115390	1	Bushing (use with Cylinder Block marked R108755)	-
11	R80632	**	O-Ring (Former # R77052)	-
	R97185	1	O-Ring (use with Cylinder Block marked R108755)	-
12	R79561	1	Oil Tube	-
	R112867	1	Oil Tube (use with Cylinder Block marked R108755)	-
13	R66177	1	Gear (also requires AR85788)	-
14	R79562	1	Fitting	-
15	R79363	1	Sleeve	-
16	R80632	1	O-Ring	-
17	RE15490	1	Housing (includes Key 5)	-
			**As Required	-

ENGINE

OIL PUMP

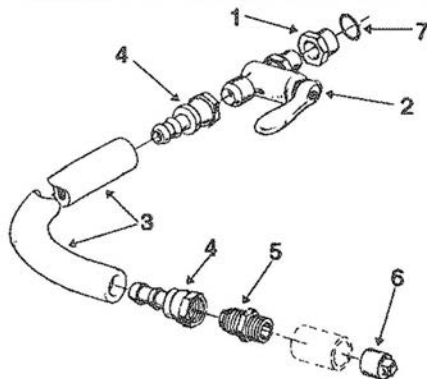
Late Production
From Serial Number XXXXX-427007



TP43829 code 5001

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
∞	RE55343	1	Oil Pump Assembly (includes Keys 4-12)	-
1	R57059	2	Capscrew	-
2	R74552	2	Capscrew	-
3	R74553	2	Washer 0.394 x 0.630 x 0.120"	-
4		1	Cover (not available separately - included in Oil Pump Assembly)	-
5	M3853T	1	Groove Pin	-
6	AR62978	1	Gear and Shaft Assembly (includes Key 5 - also requires R54614)	-
7	T20091	1	Dowel Pin	-
8		1	Housing (marked R54615 - not available separately - included in Oil Pump Assembly)	-
9	R54614	1	Gear (also requires AR62978)	-
10	R74354	1	O-Ring	-
11	R61871	1	O-Ring	-
12	14H826	1	Nut 1/2-13	-
13	R74553	2	Washer	-
14	RE36425	1	Oil Pickup	-
15	R113752	1	Tube	-
16	T20298	1	Gear 33 Teeth	-

OIL DRAIN

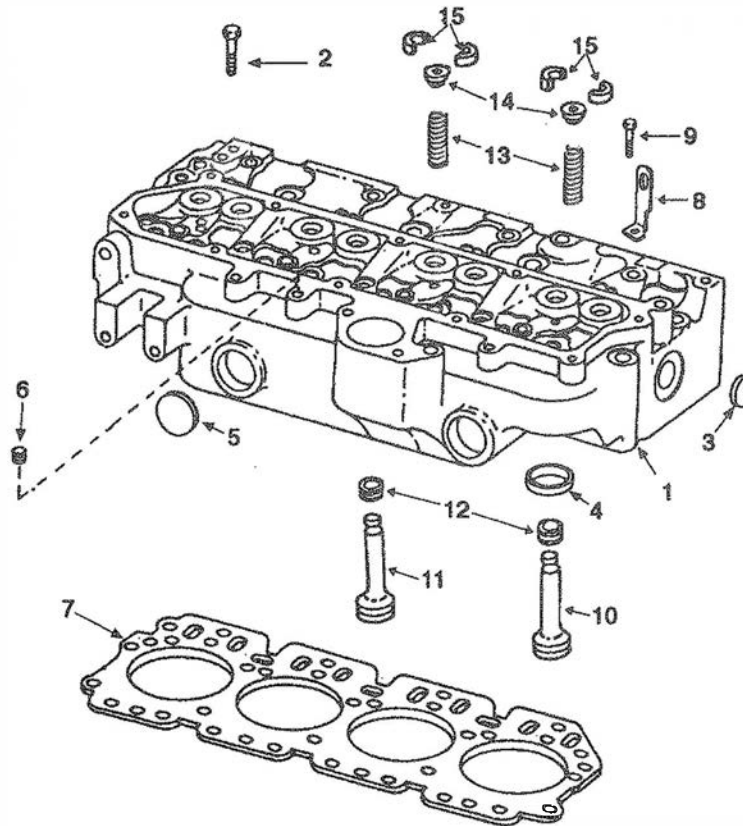


A605/B-1907

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	36-71003	1	Drain Fitting	-
2	35-71002	1	Shut Off Valve	-
3	18-71035	1	Hose 1/2"ID x 18"	-
4	21-71042	2	Female Swivel, Brass 1/2 Hose Barb x 1/2-45T	-
5	21-71040	1	Male Connector, Brass 1/2NPT x 1/4-45T	-
6	21-10005	1	Plug, Hex Head Steel 1/2NPT	-
7	T13213	1	Washer	-

ENGINE

CYLINDER HEAD

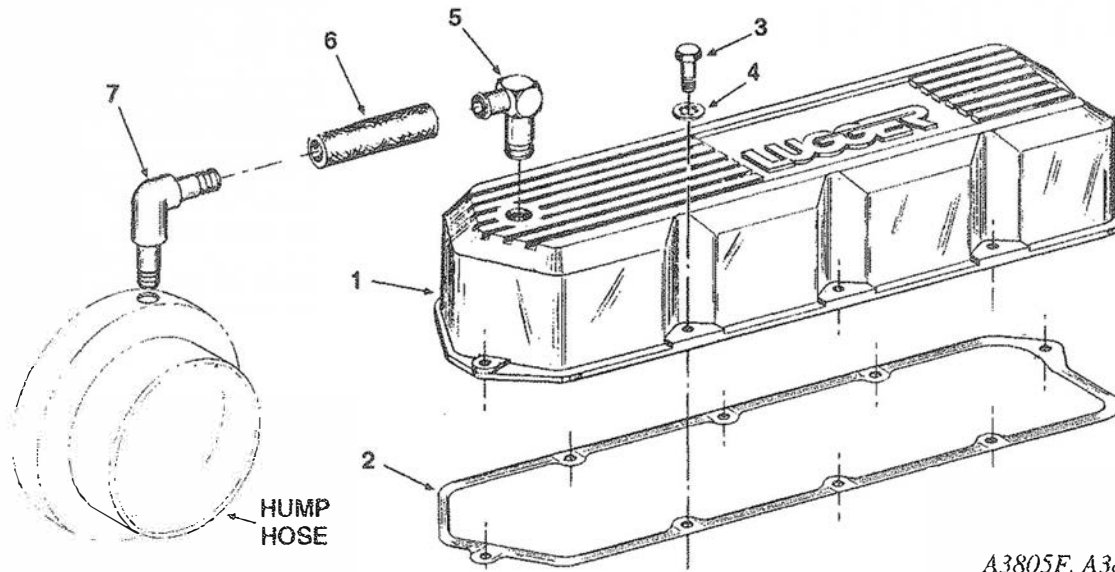


TP42629

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	RE48615	1	Cylinder Head Assembly (includes Keys 3-5 & 10-15)	-
1	RE48616	1	Cylinder Head (marked R97628 - includes Keys 5-7)	-
2	R85363	18	Capscrew (marked E112)*	-
3	A3910R	2	Expansion Plug	-
4	R98063	4	Valve Seat Insert - (Standard size intake valve)	-
	R98335	4	Valve Seat Insert - (Oversized intake valve)	-
	R85687	4	Valve Seat Insert - (Standard size exhaust valve)	-
	R93910	4	Valve Seat Insert - (Oversized exhaust valve)	-
5	R43409	2	Expansion Plug	-
6	21-51900	1	Plug 1/8NPT	-
7	R125863	1	Gasket (former #R92425)	-
8	R91903	1	Lifting Bracket	-
9	12-00512	1	Capscrew, Hex Head 1/2-13 x 1"	-
10	R90692	4	Exhaust Valve Standard	-
	R97492	4	Exhaust Valve .015" Oversize	-
	R97493	4	Exhaust Valve .030" Oversize	-
11	R98062	4	Intake Valve Standard	-
	R97490	4	Intake Valve .015" Oversize	-
	R97491	4	Intake Valve .030" Oversize	-
12	RE31617	8	Seal	-
13	R26125	8	Spring	-
14	RE31323	8	Rotator	-
15	R91889	18	Keeper	-
			* Note: Replace all capscrews marked M112 with those marked E112.	

ENGINE

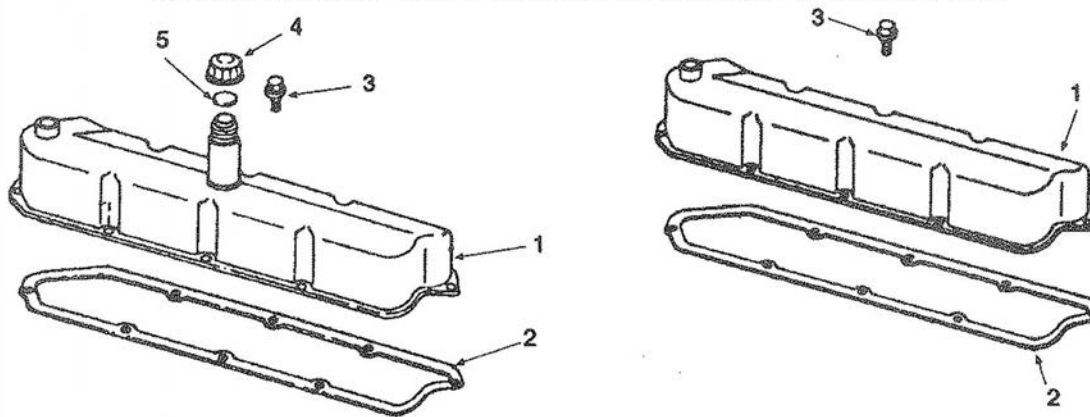
ROCKER COVER - MARINE APPLICATION



A3805F, A3819D/C-2220C

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-71009	1	Rocker Arm Cover	-
2	R73521	1	Gasket	-
3	12-00112	8	Capscrew, Hex Head 1/4-20 x 1"	-
4	15-00121	8	Flat Washer 1/4 SAE	-
5	R92154	1	Elbow (former #AT25192) (order also O-ring R56463)	-
6	18-00011	1	Hose 3/4" ID x 4" (w/o Turbo)	-
	18-72509	1	Hose 3/4" ID x 9-1/2" (w Turbo)	-
7	21-00025	1	PVC Elbow 90°, 3/4 HB x 3/4 HB	-
8	R56463	1	O-Ring (used with elbow R92154)	-

ROCKER COVER - INDUSTRIAL & C-Series

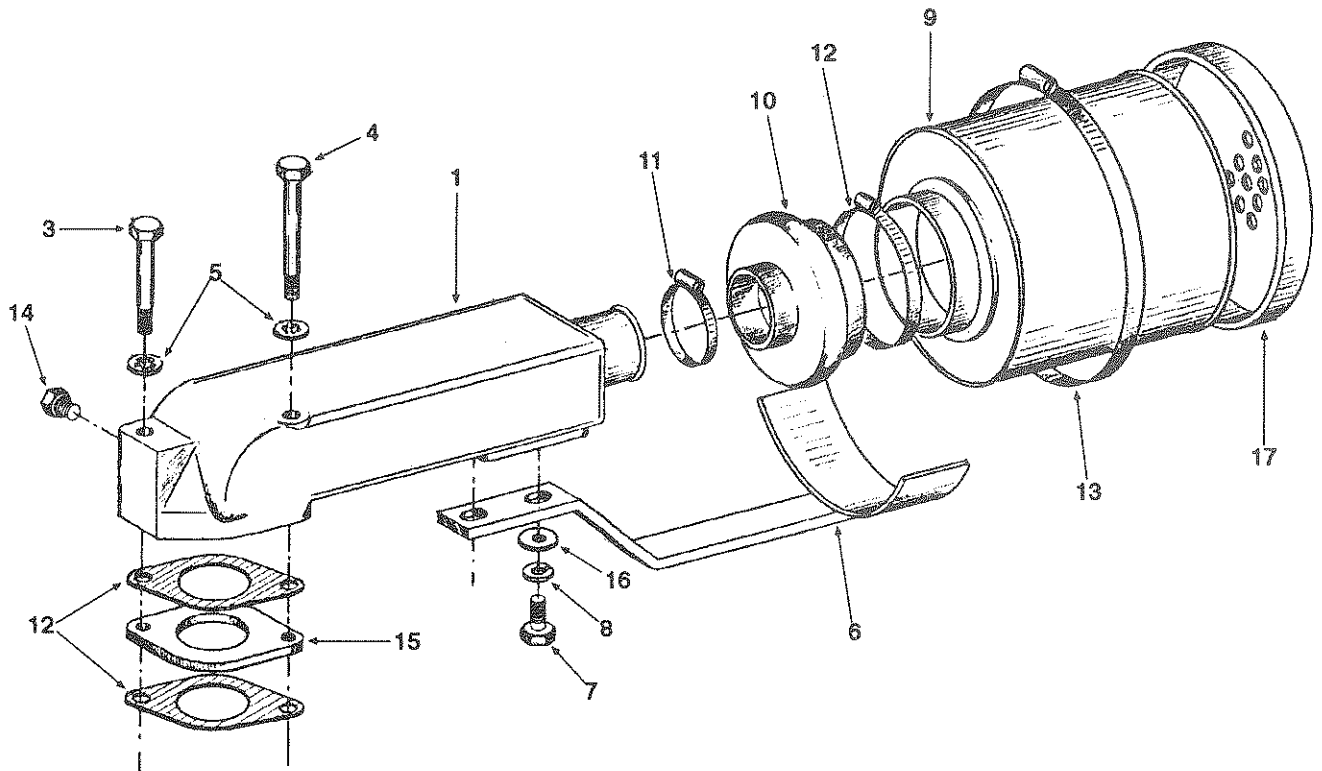


KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	AT18015	1	Rocker Arm Cover (no fill - Industrial & C-Series)	-
	AT22843	1	Rocker Arm Cover (center fill - Industrial only)	-
2	R73521	1	Gasket	-
3	AR100124	8	Screw with Washer	-
4	T20294	1	Cap	-
5	T20327	1	Gasket	-
6	R92154	1	Elbow, Breather Outlet (order also O-Ring R56463)*	-
7	R56463	1	O-Ring (used with elbow R92154)*	-

* See upper parts illustration

INTAKE & EXHAUST SYSTEM

INTAKE MANIFOLD and AIR FILTER M445D & Q

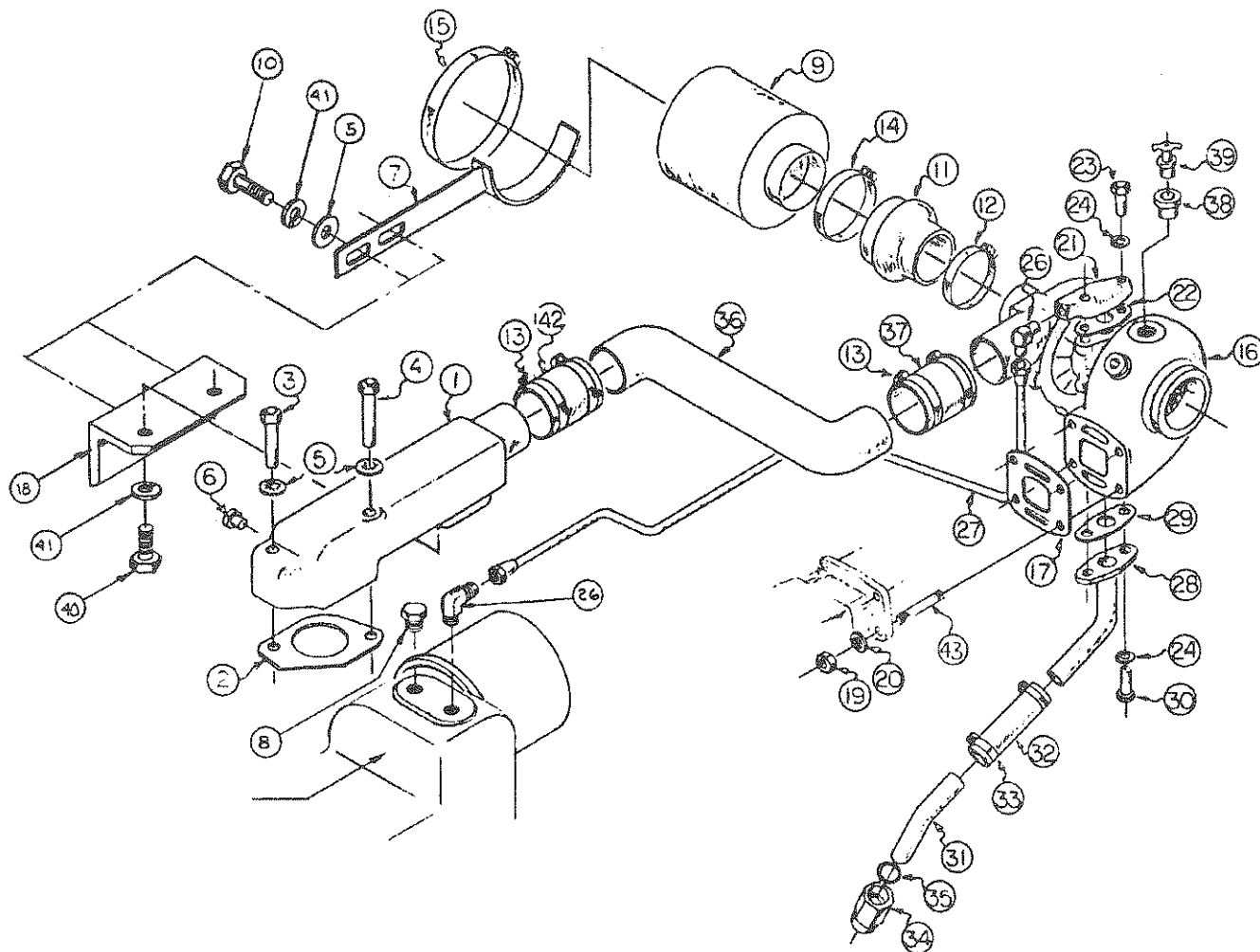


A3821/B-1731B

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-21400	1	Intake Manifold	-
2	11-21011	2	Gasket	-
3	12-00310	1	Capscrew, Hex Head 3/8-16 x 3"	-
4	12-00354	1	Capscrew, Hex Head 3/8-16 x 3-3/4"	-
5	15-00300	2	Star Washer, Internal 3/8	-
6	23-21610	1	Bracket	-
7	12-00311	2	Capscrew, Hex Head 3/8-16 x 3/4"	-
8	15-00302	2	Lock Washer 3/8"	-
9	24-21000	1	Air Filter	-
10	18-21004	1	Hump Hose	-
11	19-00036	1	Hose Clamp #36	-
12	19-00072	1	Hose Clamp #72	-
13	19-00128	1	Hose Clamp #128	-
14	21-00012	1	Hex Plug 1/8 NPT	-
15	28-21001	1	Spacer Plate	-
16	15-00301	2	Flat Washer 3/8	-
17	24-21001	1	Silencer Cover (1200 RPM units where applicable)	-

INTAKE & EXHAUST SYSTEM

INTAKE and TURBOCHARGER M445T & C-Series



A2041G/C-1281C

INTAKE & EXHAUST SYSTEM

INTAKE and TURBOCHARGER M445T & C-Series

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-21400	1	Intake Manifold	-
2	11-21011	1	Gasket	-
3	12-00319	1	Capscrew, Hex Head 3/8-16 x 2-3/4" Capscrew, Hex Head	-
4	12-00300	1	3/8-16 x 3-1/2"	-
5	15-00301	2	Flat Washer 3/8"	-
6	21-00012	1	Plug, 1/8 NPT	-
7	23-21000	1	Bracket	-
8	21-10003	1	Hex Plug 1/4NPT	-
9	24-21000	1	Air Filter	-
10	12-00312	2	Capscrew, Hex Head 3/8-16 x 1"	-
11	18-21004	1	Hump Hose (with vent hole M445T)	-
	18-21020	1	Hump Hose (w/o vent hole - C-Series)	-
12	19-00036	1	Hose Clamp #36	-
13	19-00032	4	Hose Clamp #32	-
14	19-00072	1	Hose Clamp #72	-
15	19-00128	1	Hose Clamp #128	-
16	30-21400	1	Turbocharger (includes Key 43 -- see parts detail)	-
17	11-31401	1	Gasket	-
18	23-21101	1	Bracket	-
19	14-00817	4	Hex Nut M10 x 1.5 Stainless Steel	-
20	15-00804	4	Wave Washer M10	-
21	R43928	1	Adapter, Turbo Oil Feed (can use 31-31048)	-
22	11-31012	1	Gasket	-
23	12-00714	2	Capscrew, Hex Head M8 x 1.25 x 40mm	-
24	15-00702	4	Lock Washer M8	-
26	21-00606	1	Male Elbow 90° Steel 3/8NPT x 3/8-37T (horizontal oil filter)	-
	21-52800	1	Male Connector, Steel 3/8 NPT x 3/8-37 T (vertical oil filter)	-
27	27-31406	1	Tube Assembly, Turbo Oil Supply (horizontal oil filter)	-
	27-01401	1	Tube Assy, Turbo Oil Supply (vertical oil filter)	-
28	27-31602	1	Oil Return Pipe, Upper Half	-
		1	Gasket	-
29	11-31031	1	Capscrew, Hex Head 8 x 25mm	-
30	12-00712	2	Oil Return Pipe, Lower Half	-
31	27-31402	1	Hose, 3/4" ID x 4-1/4" silicon	-
32	18-11010	1	Hose Clamp #12	-
33	19-00012	2	Adapter, O-Ring Seal x 1/2NPT	-
34	R41285	1	O-Ring	-
35	16-01000	1	Intake Tube Assembly (former # 27-21072)	-
36	27-21010	1	Hose, 2" ID x 2"	-
37	18-21016	2	Bushing 7/8-14 x 1/4NPTF	-
38	21-49999	1	Drain Cock 1/4NPT	-
39	21-10002	1	Capscrew, Hex Head 3/8-16 x 3/4"	-
40	12-00311	2	Lock Washer 3/8	-
41	15-00302	2	Hose, 2"ID x 2-3/8"	-
42	18-21014	1	Stud, M10 x 1.5 x 40mm	-
43	13-00814	4		-

INTAKE & EXHAUST SYSTEM

INTAKE and FILTER NL445D & Q

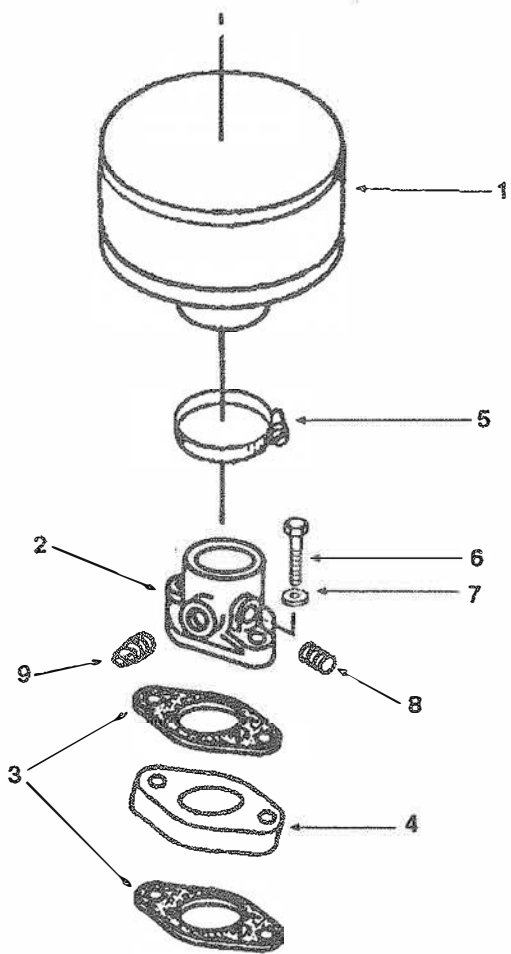


Figure "A"

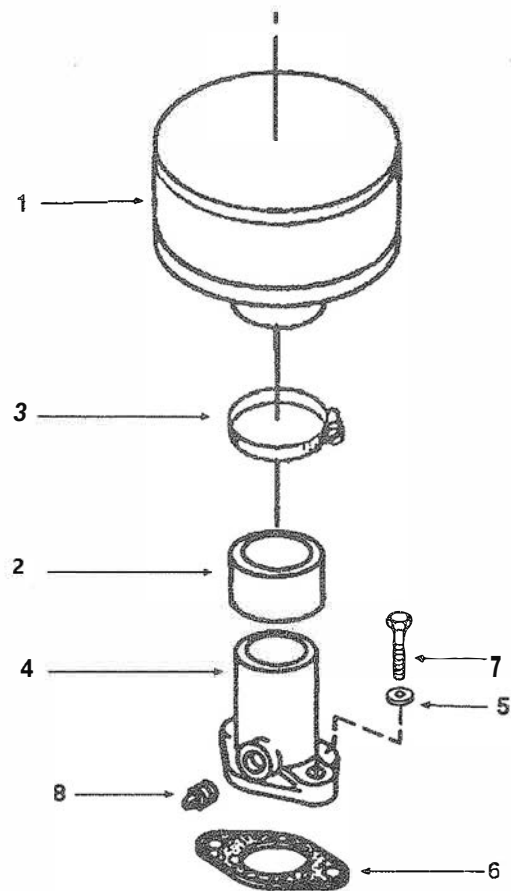


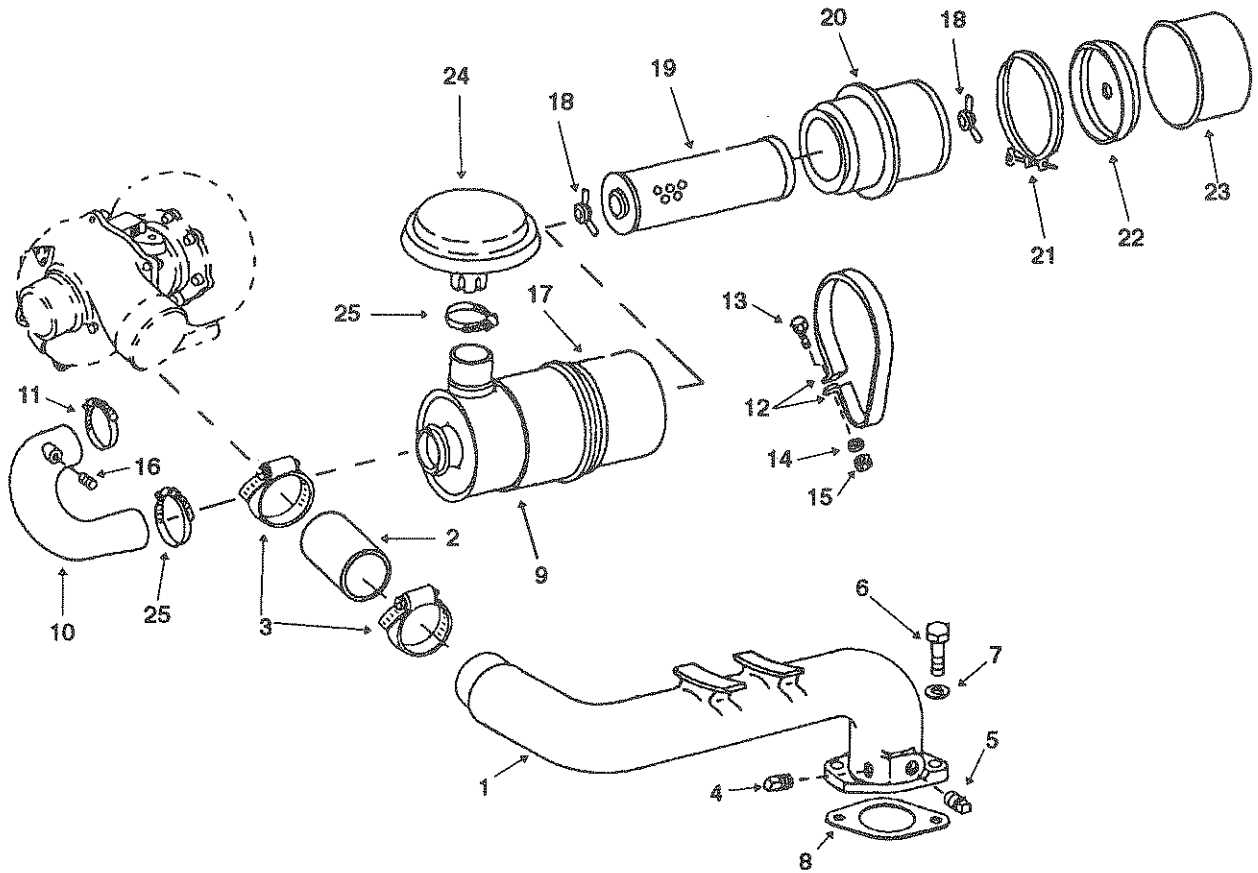
Figure "B"

A6511 & A5550

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
<i>Figure "A" Aluminum Air Inlet</i>				
1	24-20001	1	Air Filter	-
2	T31948	1	Air Inlet	-
3	11-21011	1	Gasket	-
4	28-21001	1	Spacer Plate	-
5	19-00044	1	Hose Clamp #44	-
6	12-00315	2	Capscrew, Hex Head 3/8-16 x 1-3/4"	-
7	15-00302	2	Lock Washer, Helical 3/8	-
8	21-00012	1	Plug, Hex Head, Brass 1/8NPT	-
9	21-31003	1	Plug, Hex Head, Brass 3/8NPT	-
<i>Figure "B" Cast Iron Air Inlet</i>				
1	24-20001	1	Air Filter	-
2	18-21005	1	Hose 2-1/4"ID x 1-1/2"	-
3	19-00044	1	Hose Clamp #44	-
4	T25829	1	Air Inlet	-
5	21-31003	1	Plug, Hex Head Brass 3/8NPT	-
6	11-21011	1	Gasket	-
7	12-00313	2	Cap Screw, Hex Head 3/8-16 x 1-1/4"	-
8	15-00302	2	Lock Washer, Helical 3/8	-

INTAKE & EXHAUST SYSTEM

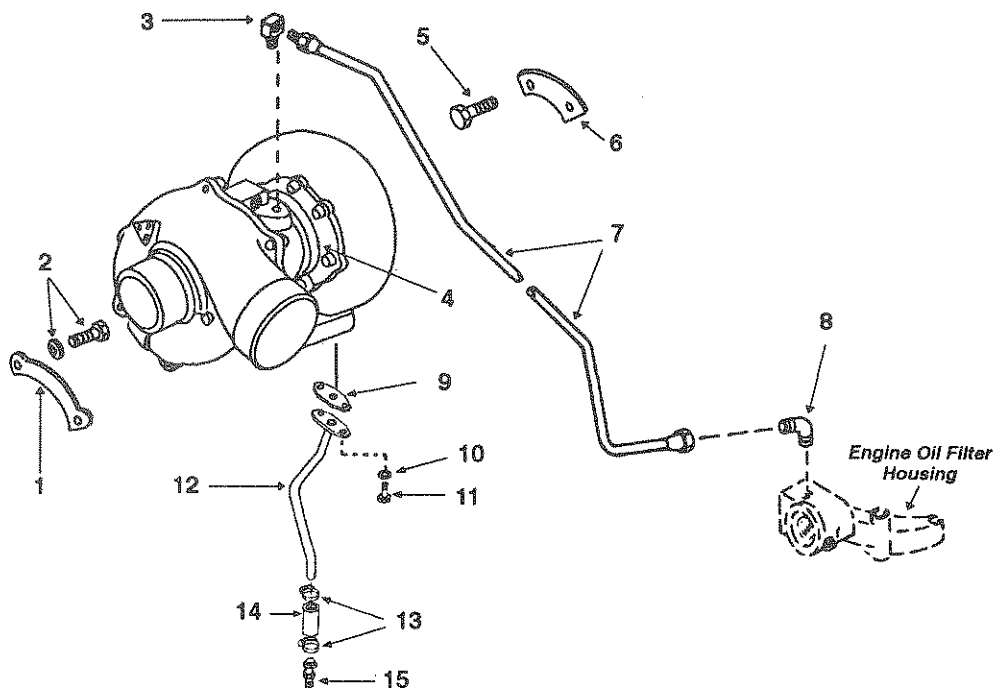
AIR INTAKE and AIR CLEANER NL445T



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE48364	1	Air Inlet Connector (former #R80152)	-
2	R56551	1	Hose 2" ID x 2-1/2"	-
3	19-00032	2	Hose Clamp #32	-
4	21-00012	1	Plug, Hex Head, Brass 1/8 NPT	-
5	21-31003	1	Plug, Hex Head, Brass 3/8 NPT	-
6	12-00313	2	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
7	15-00302	2	Lock Washer, Helical 3/8	-
8	11-21011	1	Gasket, Intake Port	-
9	AR94139	1	Air Filter Assembly (includes keys 9-25)	-
10	AT114597	1	Hose	-
11	19-00044	1	Hose Clamp #44	-
12	T53057	2	Clamp	-
13	12-00316	2	Capscrew, Hex Head 3/8-16 x 2"	-
14	15-00302	2	Lock Washer 3/8	-
15	14-00311	2	Hex Nut 3/8-16	-
16	R104592	1	Pipe Plug	-
17		1	Housing (not available separately)	-
18	AH20849	2	Wing Nut	-
19	AT44378	1	Filter Element	-
20	AT44377	1	Filter	-
21		2	Clamp (not available separately)	-
22	AH20858	1	Isolator	-
23	AT54179	1	Bowl	-
24	AR72336	1	Cap	-
25	AR21999	2	Clamp	-
26	T27986	1	Fitting (not used with R80152 - not shown)	-

INTAKE & EXHAUST SYSTEM

TURBOCHARGER and OIL LINES NL445 T

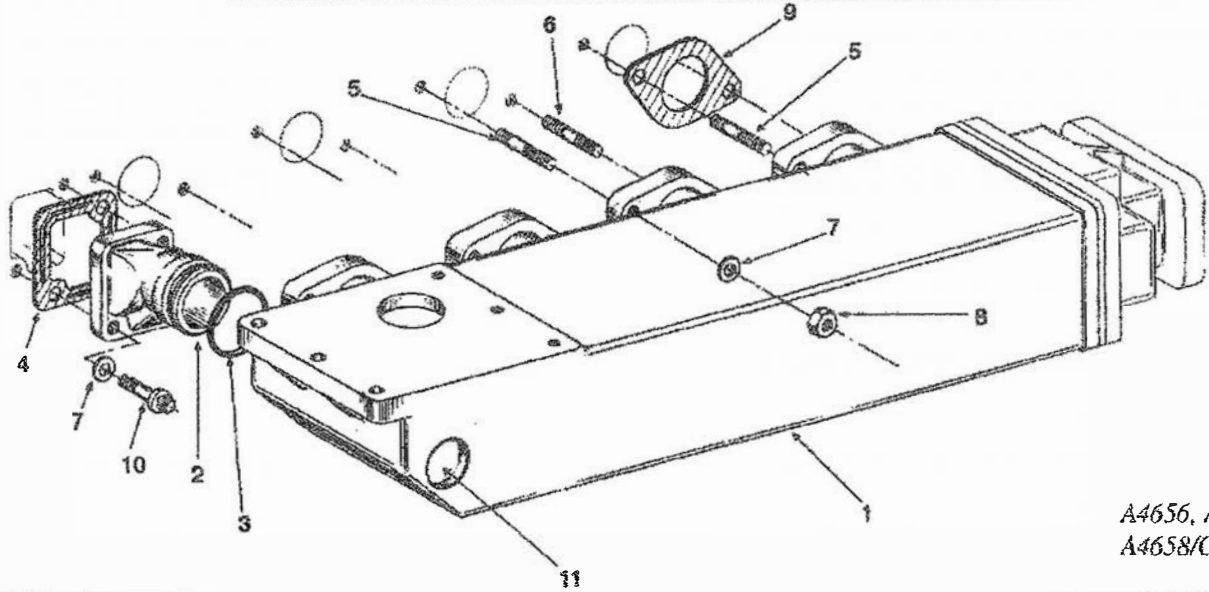


KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	RE49451	1	Turbocharger (new – includes Keys 1–6)	-
**	RE26342	1	Turbocharger (remanufactured – includes Keys 1–6)	-
1	R74235	3	Plate	-
2	RE11349	6	Capscrew	-
3	T11180	1	Elbow, 90° Brass 1/4NPT x 3/8-45T Inverted Flare	-
4	RE26343	1	Center Section & Rotating Assembly *	-
5	R74234	6	Capscrew	-
6	R74236	3	Plate	-
7	RE29430	1	Hose Assembly, Turbo Oil Supply	-
8	21-00035	1	Male Elbow, 45° Steel 1/4NPT x 3/8-37T	-
9	11-31031	1	Gasket	-
10	15-00302	2	Lock Washer 3/8"	-
11	12-00311	2	Capscrew, Hex Head 3/8-16 x 3/4"	-
12	RE19265	1	Tube, Turbo Oil Return (can use AR71578)	-
13	19-00012	2	Hose Clamp #12	-
14	18-11010	1	Hose 3/4"ID x 4-1/4" Silicon	-
15	R39503	1	Male Connector, Steel 1/2NPT x 3/4HB	-

*Note: #4 to be used with existing compressor & turbine housings.
Also requires Keys 1–2 & 5–6.

INTAKE & EXHAUST SYSTEM

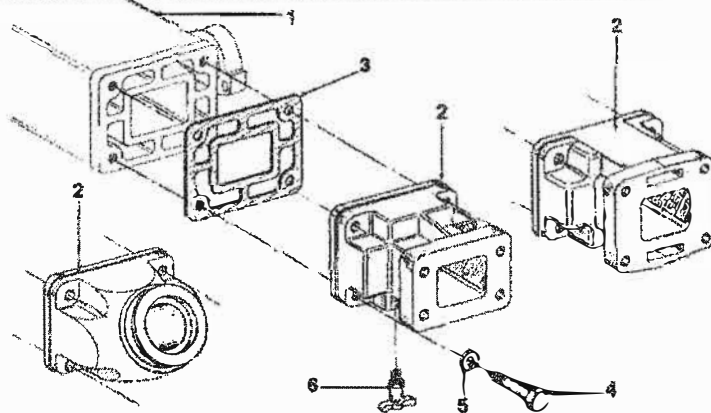
EXHAUST MANIFOLD – MARINE APPLICATION



A4656, A4657,
A4658/C2632

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-31000	1	Exhaust Manifold Assembly w/ Dry Flange *	-
	10-31001	1	Exhaust Manifold Assembly w/ Wet Flange *	-
	10-31002	1	Exhaust Manifold Assembly w/ Wet Elbow Adapter *	-
2	27-11101	1	Coolant Connector	-
3	16-31000	1	O-Ring	-
4	R54641	1	Gasket	-
5	13-00337	5	Stud 3/8-24 x 3/8-16 x 2" (special)	-
6	13-00336	3	Stud 3/8-24 x 3/8-16 x 2"	-
7	15-00300	10	Washer 3/8 (special)	-
8	14-00321	8	Hex Nut 3/8-24	-
9	11-31011	4	Gasket	-
10	12-00325	2	Capscrew, 12 point 3/8-16 x 1"	-
11	17-10001	1	Expansion Plug	-
* See Exhaust Manifold & Adapter Detail for components				-

EXHAUST MANIFOLD and ADAPTER – MARINE APPLICATION



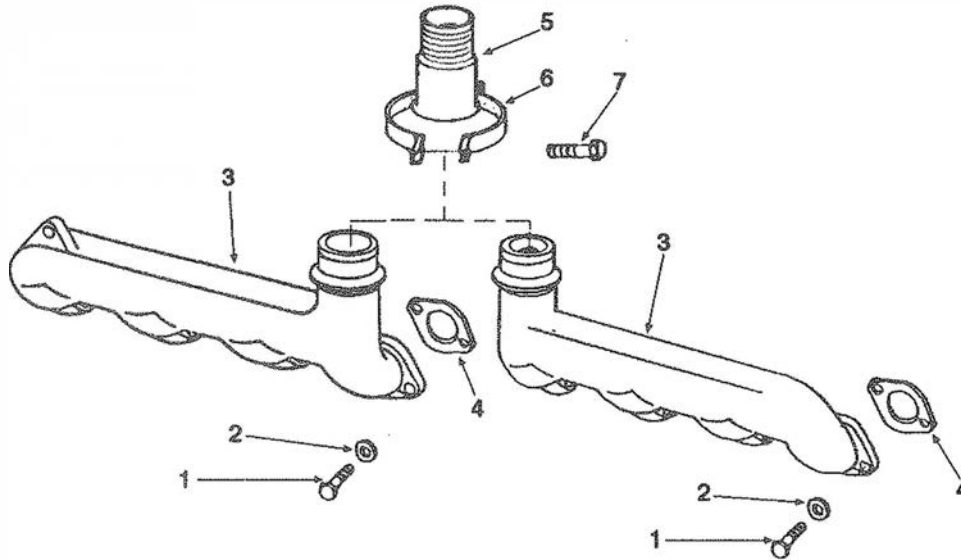
A4653, A4654,
A4655/C-2648

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-31504	1	Exhaust Manifold	-
2	10-31513	1	Dry Exhaust Flange Adapter	-
	10-31506	1	Wet Exhaust Flange for Turbo Mounting	-
	31-31012	1	Wet Exhaust Elbow Adapter	-
3	11-30013	1	Gasket	-
4	12-00414	4	Capscrew, Hex Head 7/16-14 x 1-1/2"	-
5	15-00402	4	Lock Washer 7/16	-
6	21-10001	1	Drain Cock 1/8NPT	-

INTAKE & EXHAUST SYSTEM

EXHAUST MANIFOLD ASSEMBLY – NL445D & Q

Front and Rear Outlet

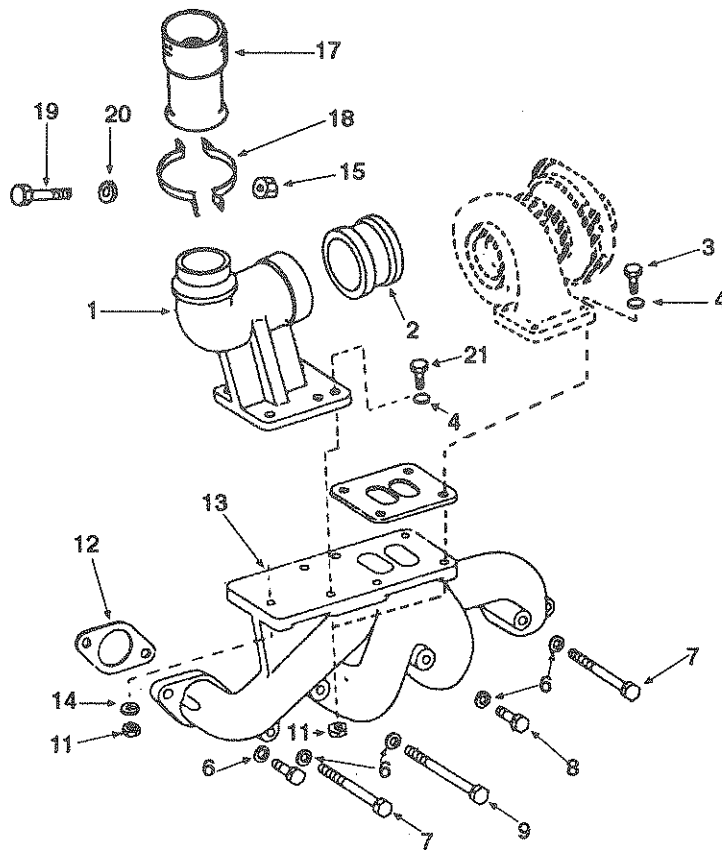


A213C, A6297,
A6295/B-1532B

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
2	24H1304	8	Flat Washer, Special	-
3	T20200	1	Exhaust Manifold, Rear Outlet	-
	T20249	1	Exhaust Manifold, Front Outlet	-
4	R90658	4	Gasket	-
5	31-31310	1	Exhaust Adapter 2" NPT	-
	31-31003	1	Exhaust Adapter 3" NPT	-
	31-31008	1	Exhaust Adapter, S/S 18" x 4" Flange	-
6	AT63813	2	Half Clamp with Integral Nut	-
7	12-00214	2	Capscrew, Hex Head 5/16-18 x 1-1/2"	-

INTAKE & EXHAUST SYSTEM

EXHAUST SYSTEM NL445T

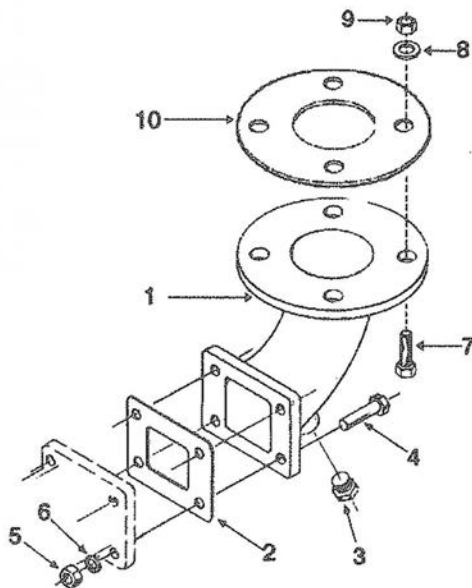


A228C/A-227

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R57270	1	Exhaust Elbow 90°	-
2	R43734	1	Connector	-
3	12-00314	3	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
4	15-00321	7	Flat Washer 3/8 SAE	-
5	R89879	1	Gasket	-
6	15-00300	8	Flat Washer, Special	-
7	12-00356	2	Capscrew, Hex Head 3/8-16 x 4-1/4"	-
8	12-00340	1	Capscrew, Hex Head 3/8-16 x 4"	-
9	12-00359	2	Capscrew, Hex Head 3/8-16 x 5"	-
10	12-00313	3	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
11	14-00311	7	Nut 3/8-16	-
12	11-31011	4	Gasket	-
13	R52819	1	Exhaust Manifold	-
14	15-00302	7	Lock Washer 3/8	-
15	14-00311	2	Nut 3/8-16	-
17	31-31067	1	Exhaust Adapter 4" NPT	-
	31-31066	1	Exhaust Adapter 4" Flanged	-
18	AT27164	2	1/2 Clamp	-
19	12-00310	2	Capscrew, Hex Head 3/8-16 x 3"	-
20	15-00321	2	Flat Washer 3/8"	-
21	12-00315	4	Capscrew, Hex Head 3/8-16 x 1-3/4"	-

INTAKE & EXHAUST SYSTEM

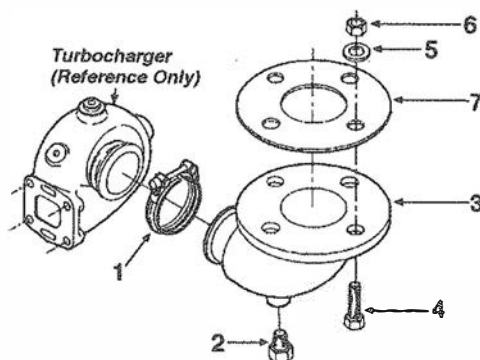
DRY EXHAUST ELBOW M445D & Q and C-Series



A457D/B-1725

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	27-31011	1	Dry Exhaust Elbow	-
2	11-31615	1	Gasket	-
3	21-31002	1	Plug, Brass 3/8 NPT	-
4	12-00315	4	Capscrew, Hex Head 3/8-16 x 1-3/4"	-
5	14-00311	4	Hex Nut, 3/8-16	-
6	15-00302	4	Lock Washer, 3/8	-
7	12-00916	4	Capscrew, Hex Head 5/8-11 x 2"	-
8	15-00902	4	Lock Washer 5/8	-
9	14-00911	4	Hex Nut 5/8-11	-
10	11-31094	1	Gasket	-

DRY EXHAUST ELBOW M445T & and C-Series

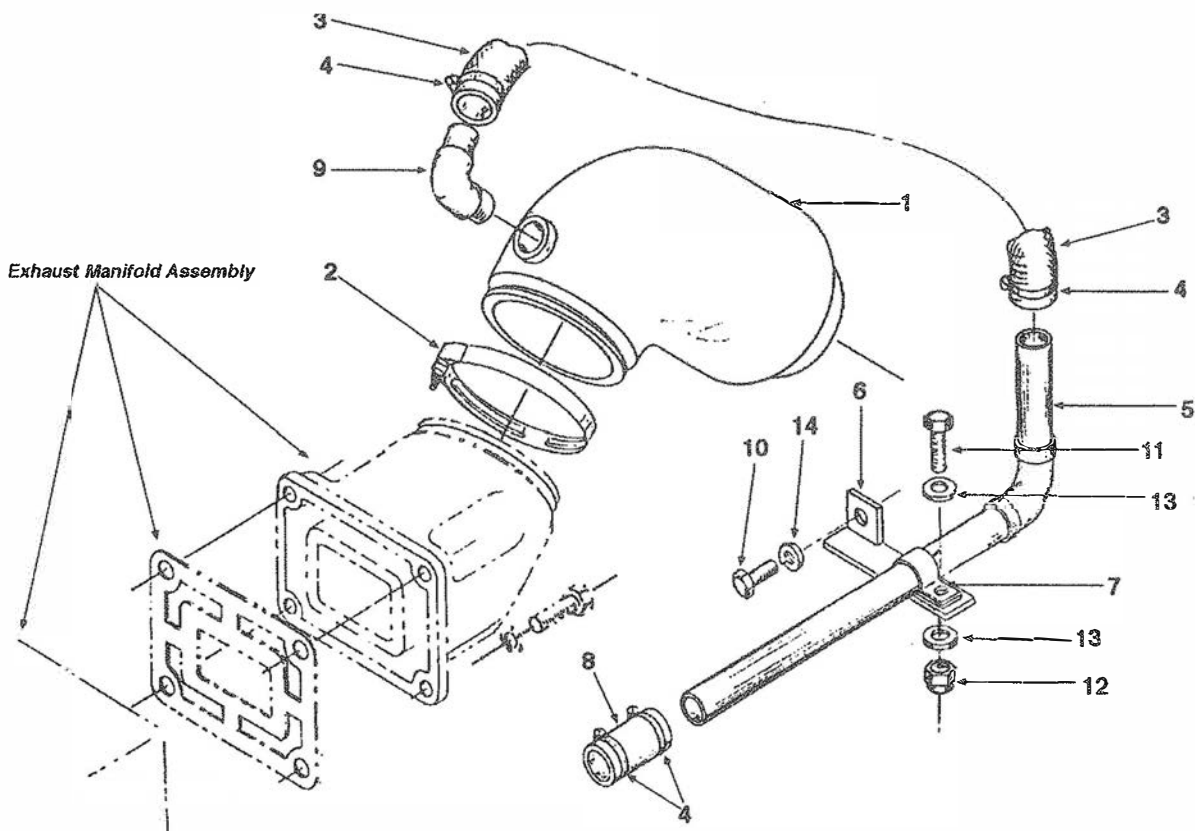


A912D/B-2910

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	19-31401	1	V-Clamp	-
2	21-31002	1	Plug, Brass 3/8 NPT	-
3	27-31415	1	Dry Exhaust Elbow	-
4	12-00916	4	Capscrew, Hex Head 5/8-11 x 2"	-
5	15-00902	4	Lock Washer, 5/8	-
6	14-00911	4	Hex Nut, 5/8-11	-
7	11-31094	1	Gasket	-

INTAKE & EXHAUST SYSTEM

4" WET EXHAUST ELBOW M445D & Q and C-Series

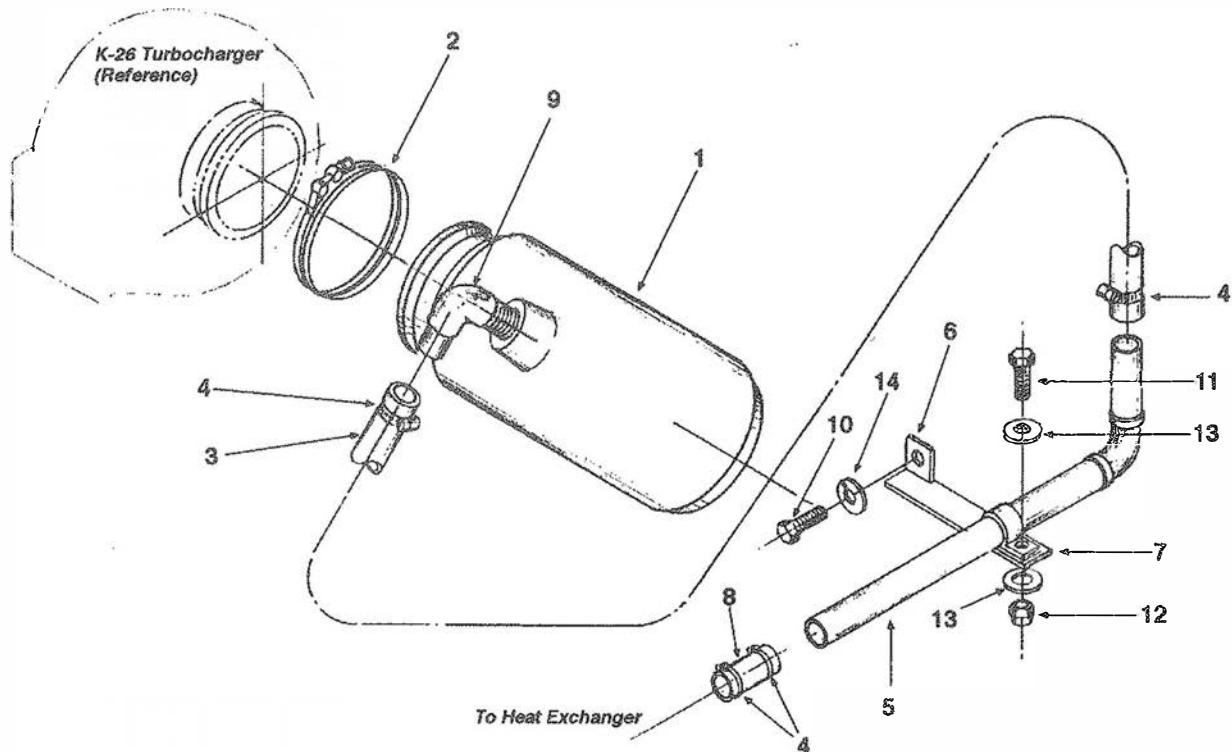


A458J/B-1728C

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	27-31412	1	Wet Exhaust Elbow 4"	-
2	19-31401	1	V-Clamp	-
3	18-11601	1	Hose 1-1/8"ID x 20"	-
4	19-00016	4	Hose Clamp #16	-
5	27-11000	1	Tube	-
6	23-62516	1	Bracket	-
7	19-71031	1	Adelle Clamp	-
8	18-11607	1	Hose 1-1/8"ID x 2-1/2"	-
9	21-31006	1	Male Elbow 90°, 1" NPT x 1-1/8 HB	-
10	12-11003	1	Capscrew, Hex Head 5/16-18 x 7/8"	-
11	12-00312	1	Capscrew, Hex Head 3/8-16 x 1"	-
12	14-00312	1	Nylock Nut 3/8-16	-
13	15-00301	2	Flat Washer 3/8"	-
14	15-00202	1	Lock Washer 5/16"	-

INTAKE & EXHAUST SYSTEM

4" WET EXHAUST ELBOW M445T & C-Series

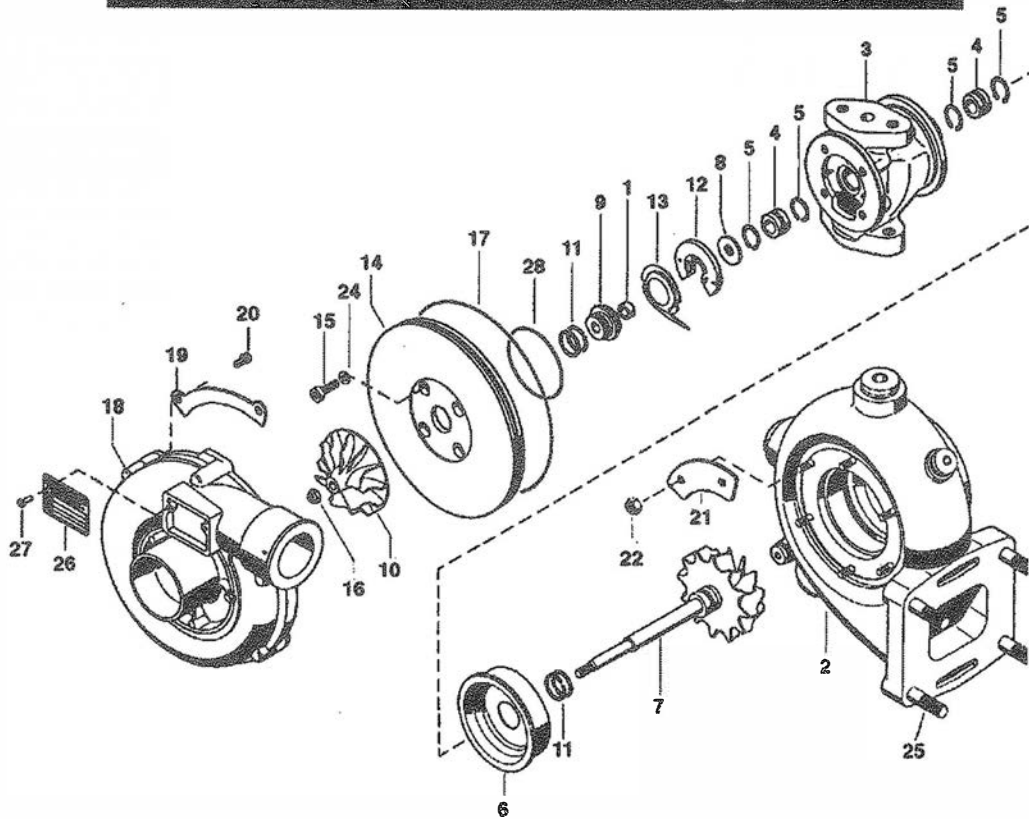


A913E/B-2888

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	27-31412	1	Wet Exhaust Elbow 4"	-
2	19-31401	1	V-Clamp	-
3	18-11601	1	Hose 1-1/8 ID x 20"	-
4	19-00016	4	Hose Clamp #16	-
5	27-11000	1	Tube	-
6	23-62516	1	Bracket	-
7	19-71031	1	Adelle Clamp	-
8	18-11607	1	Hose 1-1/8" ID x 2-1/2"	-
9	21-31006	1	Male Elbow 90°, 1" NPT x 1-1/8 HB	-
10	12-11003	1	Capscrew, Hex Head 5/16-18 x 7/8"	-
11	12-00312	1	Capscrew, Hex Head 3/8-16 x 1" Nylock	-
12	14-00312	1	Nut 3/8-16	-
13	15-00301	1	Flat Washer 3/8"	-
14	15-00211	1	Flat Washer 5/16"	-
15	15-00202	1	Lock Washer 5/16"	-

INTAKE & EXHAUST SYSTEM

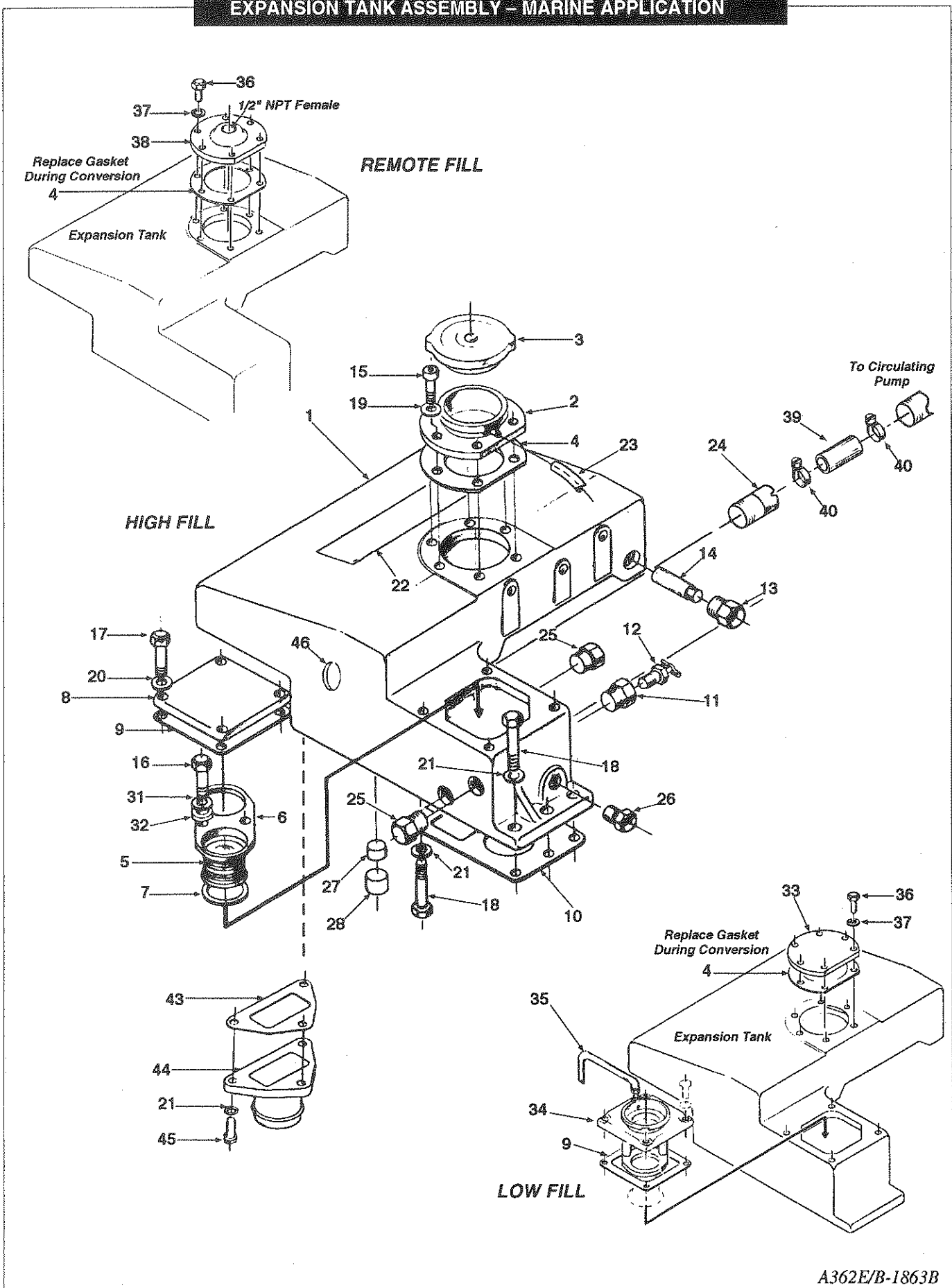
TURBOCHARGER ASSEMBLY M445T & C-Series



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
∞	30-21400	1	Turbocharger Assembly (ID Tag #5326 970 60 90 - includes all Keys)	-
•	30-31430	1	Repair Kit (includes Keys 4, 5, 11-17, 19-22, 24 & 28)	-
1	30-31429	1	Spacer Sleeve	-
2	30-31431	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	30-21401	1	Compressor Wheel	-
11	30-31441	4	Piston Ring	-
12	30-31442	1	Thrust Plate	-
13	30-31443	1	Oil Deflector	-
14	30-31444	1	Backing Plate	-
15	30-31445	4	Screw	-
16	30-31446	1	Nut	-
17	30-31447	1	O-Ring	-
18	30-21402	1	Compressor Housing	-
19	30-31448	3	Clamp Plate	-
20	30-31449	6	Capscrew, Socket Head M6 x 1.0 x 14mm	-
21	30-31450	3	Clamp Plate	-
22	14-01131	6	Hex Nut M6 x 1.0	-
23	30-31452	6	Stud M6 x 1.0	-
24	30-31453	4	Lock Washer M6	-
25	13-00814	4	Stud M10 x 1.5 x 30mm	-
26	30-31454	1	Plate	-
27	30-31455	2	Rivet	-
28	30-31428	1	O-Ring	-

COOLING SYSTEM

EXPANSION TANK ASSEMBLY - MARINE APPLICATION



A362E/B-1863B

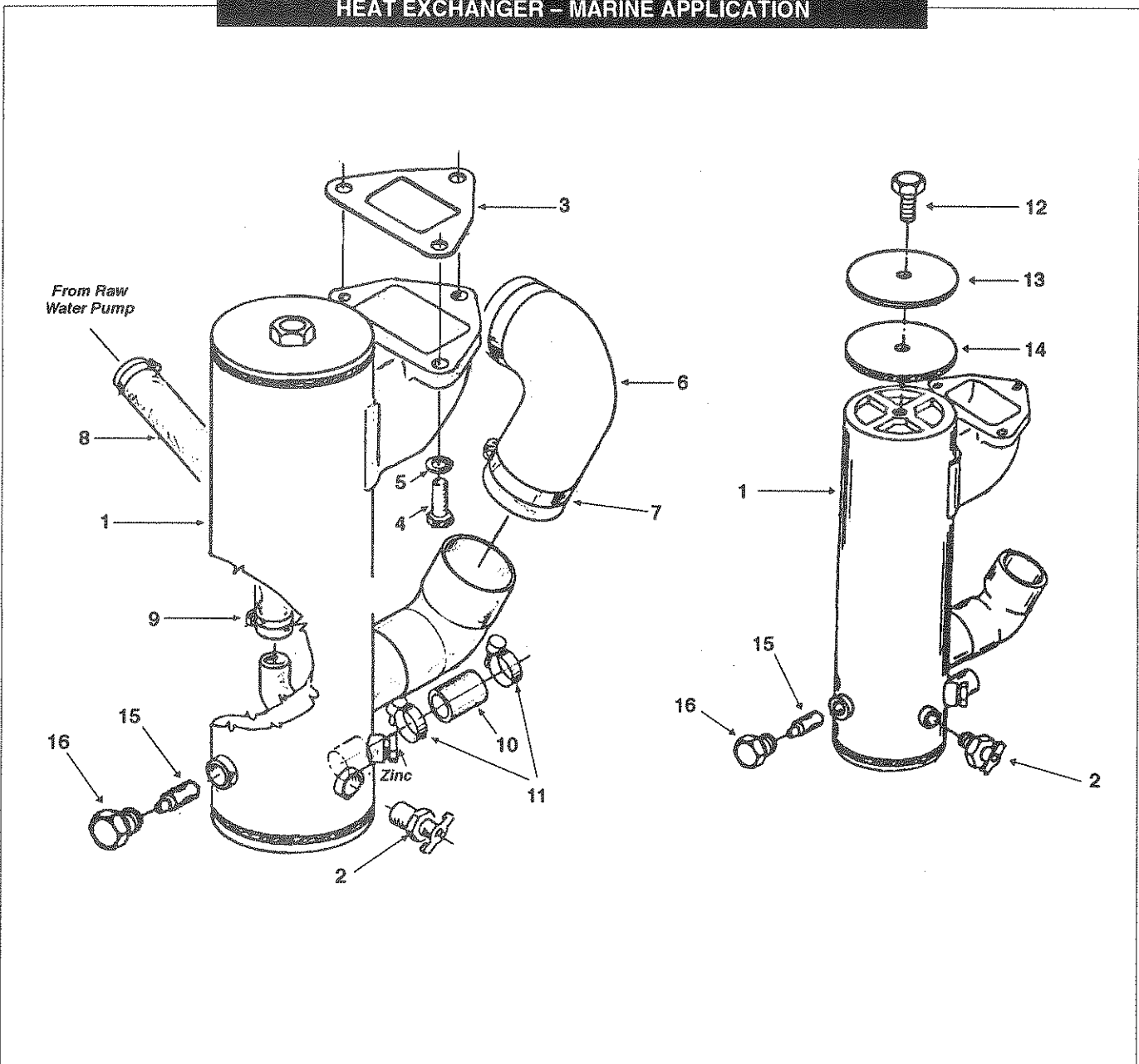
COOLING SYSTEM

EXPANSION TANK ASSEMBLY - MARINE APPLICATION

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-11022	1	Expansion Tank	-
2	10-11023	1	Filler Neck (Hi & Low Fill)	-
3	21-10007	1	Filler Cap 7 lb.	-
4	11-11022	1	Filler Neck Gasket (Hi & Low Fill)	-
5	35-11000	2	Thermostat	-
6	35-11004	1	Thermostat Retainer	-
7	11-10015	2	Gasket	-
8	10-11024	1	Thermostat Cover	-
9	11-11013	1	Gasket	-
10	11-11023	1	Manifold to Expansion Tank Gasket	-
11	21-00135	1	Brass Bushing 1/2 NPT x 1/4 NPT	-
12	21-10002	1	Drain Cock 1/4 NPT	-
13	21-10000	1	Plug 1/2 NPT x 7/16-14	-
14	21-10010	1	Zinc	-
15	12-20111	6	Capscrew, Socket Head 1/4-20 x 3/4"	-
16	12-00223	2	Capscrew, Hex Head 5/16-18 x 3/4" (Stainless Steel)	-
17	12-00212	4	Capscrew, Hex Head 5/16-18 x 1"	-
18	12-00313	6	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
19	15-00018	6	Lock Washer, High Collar 1/4	-
20	15-00202	4	Lock Washer 5/16"	-
21	15-00302	6	Lock Washer 3/8"	-
22	00-00006	1	Nameplate "Northern Lights"	-
23	18-12102	1	Overflow Hose 3/8" x 30"	-
24	21-31031	1	Special Nipple 3/4 NPT x 1-1/2"	-
25	21-00530	**	Brass Hex Plug 1/2 NPT	-
26	21-31008	1	Hex Plug 3/8 NPT	-
27	21-11003	1	Plug, Socket Head 1/2 NPT	-
28	21-11004	1	Plug, Socket Head 3/4 NPT	-
31	15-00222	2	Lock Washer, Stainless Steel 5/16	-
32	15-11000	2	Flat Washer, Stainless Steel 5/16	-
33	10-11025	1	Blocking Plate (low fill)	-
34	10-11031	1	Thermostat Cover (low fill)	-
35	18-00130	1	Hose 1/4" x 30" (low fill)	-
36	12-00111	6	Capscrew, Hex Head 1/4-20 x 3/4" (low fill)	-
37	15-00102	6	Lock Washer 1/4" (low fill, remote fill)	-
38	31-01002	1	Expansion tank adapter (remote fill)	-
39	18-11606	1	Hose	-
40	19-00020	2	Hose Clamp	-
41	12-00312	2	Capscrew, Hex Head 3/8-16 x 1"	-
42	23-11401	1	Bracket	-
43	11-11043	1	Gasket	-
44	10-11006	1	Keel Cooling Connector (Keel Cooled Application Only)	-
45	12-00313	2	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
46	17-10001	4	Expansion Plug, Brass	-

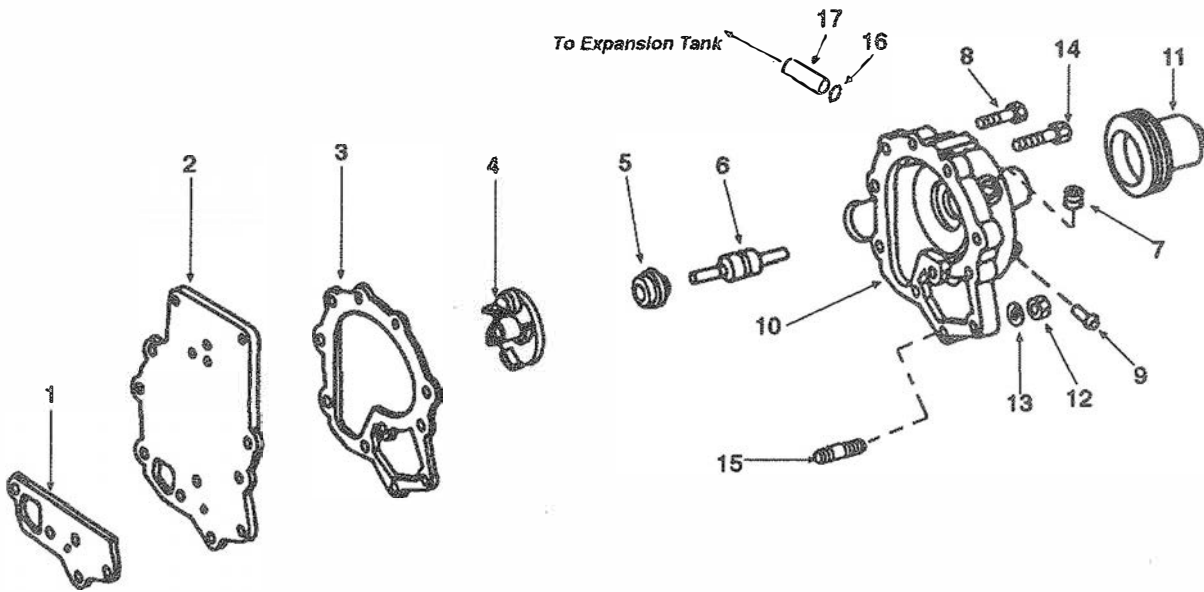
COOLING SYSTEM

HEAT EXCHANGER - MARINE APPLICATION



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	20-11023	1	Heat Exchanger (includes keys 2, 12-16)	-
2	21-10002	1	Drain Cock 1/4 NPT	-
3	11-11043	1	Gasket	-
4	12-00313	3	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
5	15-00302	3	Lock Washer 3/8	-
6	18-11025	1	Hose (molded)	-
7	19-00036	2	Hose Clamp #36	-
8	18-11907	1	Hose 1-1/4"ID x 15"	-
9	19-00012	2	Hose Clamp #12	-
10	18-11607	1	Hose 1-1/8"ID x 2-1/2"	-
11	19-00016	2	Hose Clamp #16	-
12	12-11002	2	Capscrew, Hex Head 3/8-16 x 3/4" (Stainless Steel)	-
13	28-11401	2	End Cover	-
14	20-11028	2	Gasket	-
15	21-10010	2	Zinc	-
16	21-10000	2	Hex Plug 1/2 NPT (Zinc Holder)	-

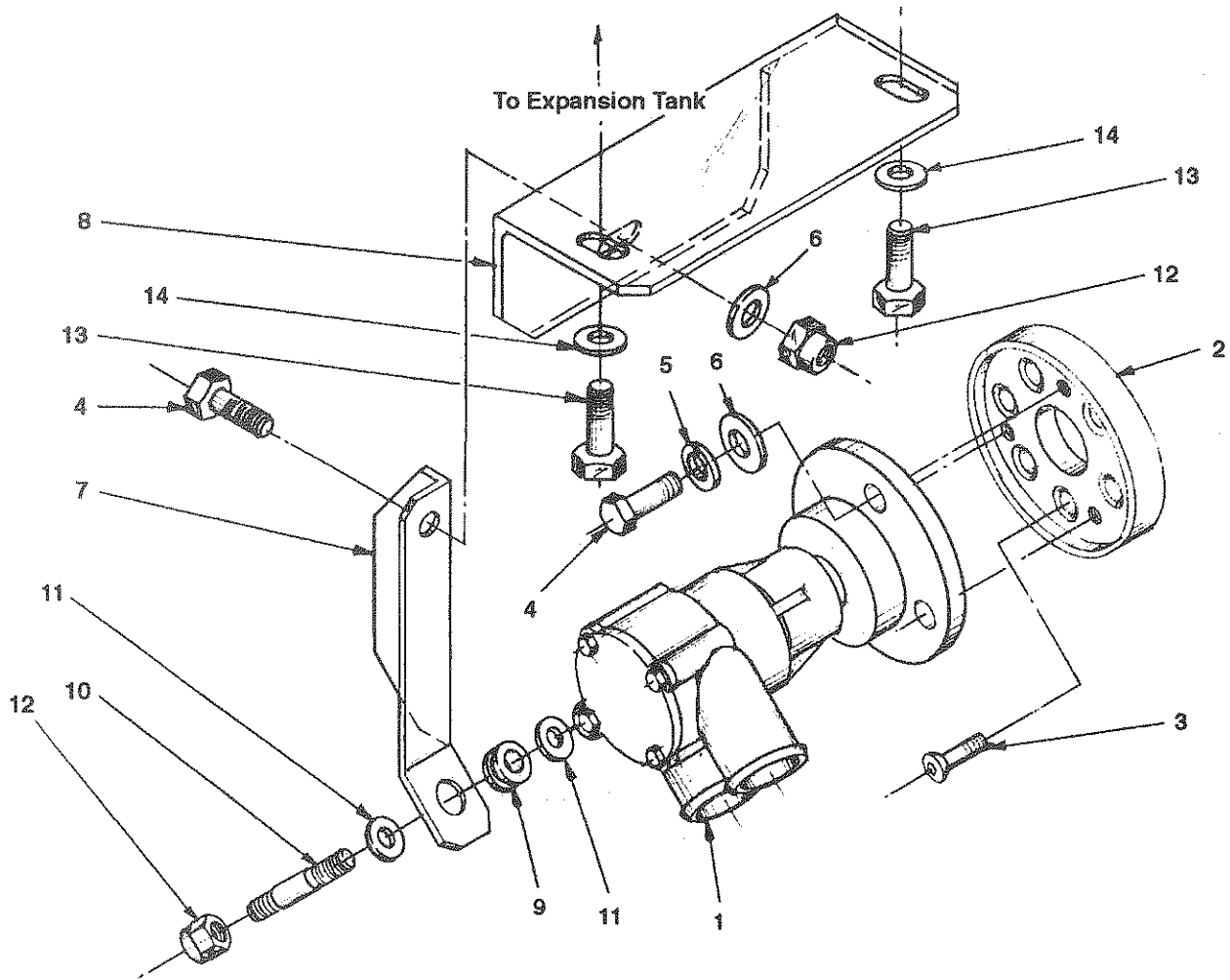
COOLANT PUMP ASSEMBLY



TP26804

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
AR77142	1	1	Circulating Pump Assembly (includes Keys 2-11 & 14)	-
1	T20243	1	Gasket	-
2	R56070	1	Cover	-
3	R56809	1	Gasket	-
4	R56812	1	Impeller	-
5	AR101549	1	Seal Kit	-
6	JD8643	1	Bearing & Shaft Assembly	-
7	21-00531	1	Plug, Square Head 1/2NPT	-
8	12-00314	5	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
	12-00317	1	Capscrew, Hex Head 3/8-16 x 2-1/4"	-
	12-00312	1	Capscrew, Hex Head 3/8-16 x 1"	-
9	R34985	1	Line	-
10	AR80116	1	Housing (marked R90784 or R104648)	-
11	R56810	1	Pulley	-
12	14-00311	1	Hex Nut 3/8-16	-
13	15-00302	1	Lock Washer 3/8	-
14	12-00315	1	Capscrew, Hex Head 3/8-16 x 1-3/4"	-
	12-00318	1	Capscrew, Hex Head 3/8-16 x 2-1/2"	-
	12-00310	1	Capscrew, Hex Head 3/8-16 x 3"	-
15	T25701	1	Stud	-
16	R56461	1	O-Ring	-
17	R55967	1	Bypass Tube	-

RAW WATER PUMP and MOUNTING – M445 & C-Series



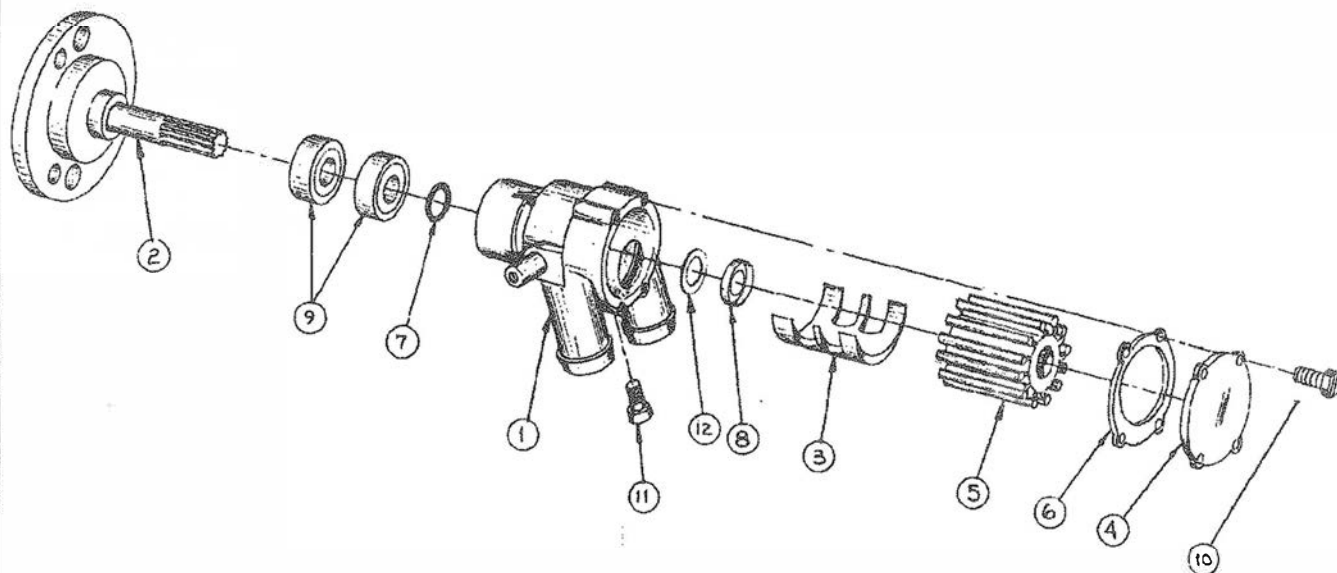
A5571/B4179

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	25-11063	1	Raw Water Pump - (FORMER #'s 25-11030 & 25-11047 - SEE PARTS DETAILS)	-
2	31-11005	1	Adapter Plate 25-11054	-
3	12-03310	2	Machine Screw, Flat Head Socket 3/8-16 x 3/4"	-
4	12-11003	3	Capscrew, Hex Head 5/16-18 x 7/8"	-
5	15-00202	3	Lock Washer 5/16	-
6	15-00221	3	Flat Washer 5/16 SAE	-
7	23-11609	1	Restraint	-
8	23-11007	1	Bracket	-
9	00-70052	1	Resilient Grommet	-
10	13-11001	1	Stud 5/16-18 x 5/16-18 x 1-1/2"	-
11	15-00211	2	Flat Washer 5/16	-
12	14-00212	2	Nylock Nut 5/16-18	-
13	12-00311	2	Capscrew, Hex Head 3/8-16 x 3/4"	-
14	15-00302	2	Lock Washer 3/8	-

COOLING SYSTEM

RAW WATER PUMP ASSEMBLY – M445 & C-Series

(Johnson)

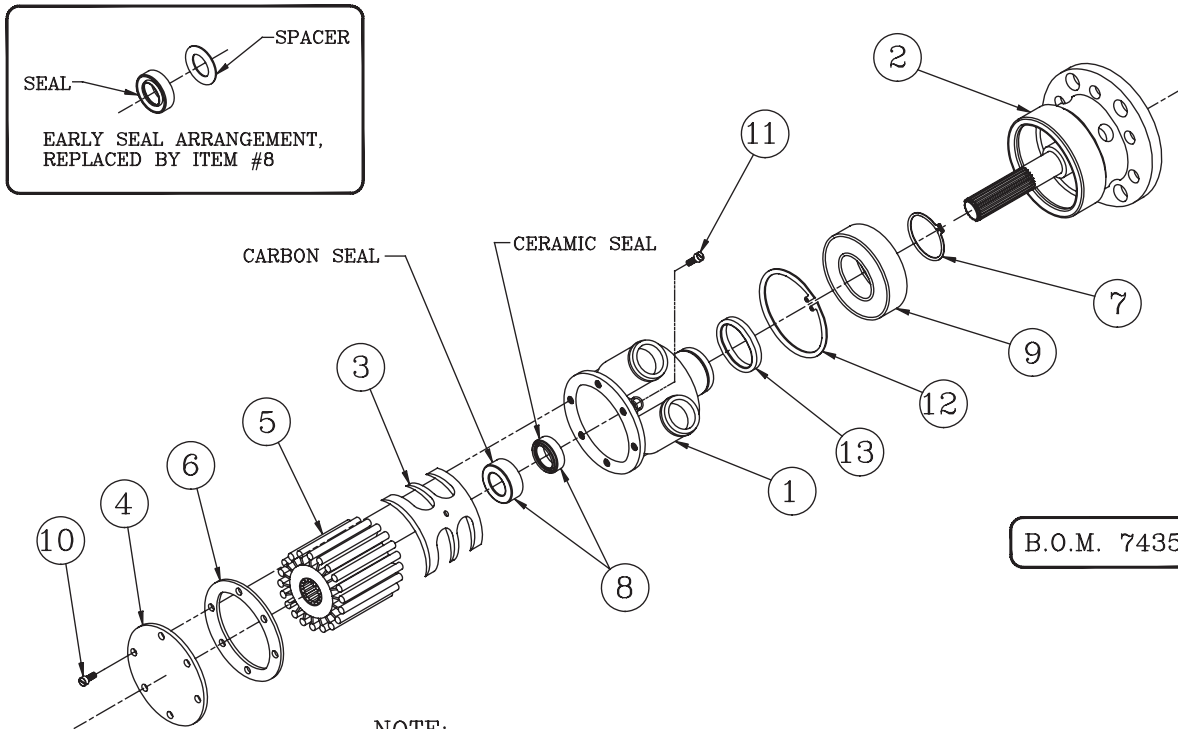


C-2016A

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	25-11030	1	Raw Water Pump (includes all Keys)	-
1	25-11045	1	Housing	-
2	25-11040	1	Carrier Assembly (includes Key #9)	-
3	25-11037	1	Cam	-
4	25-11041	1	Cover	-
5	25-11031	1	Impeller	-
6	25-11032	1	Gasket	-
7	25-11024	1	O-Ring	-
8	25-11033	1	Seal	-
9	25-11034	2	Bearing	-
10	25-11035	4	Screw	-
11	25-11036	1	Screw	-
12	25-11044	1	Washer	-

COOLING SYSTEM

Raw Water Pump, Jabsco



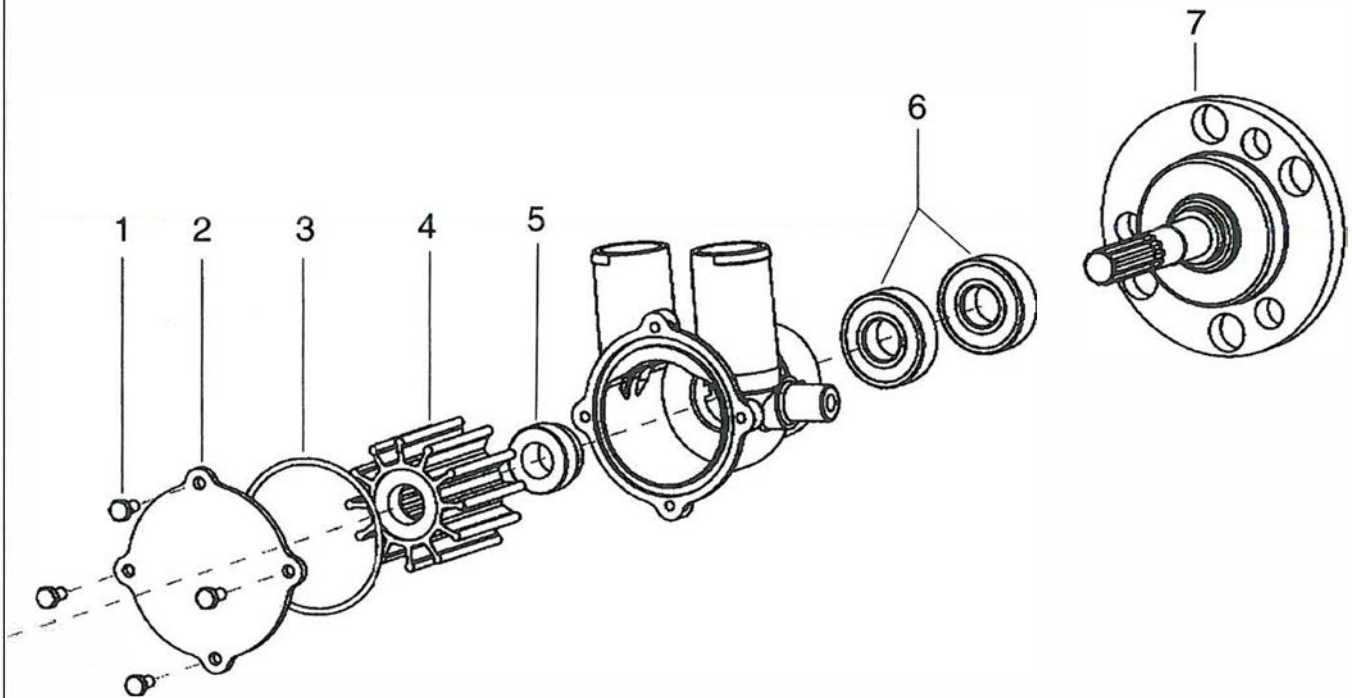
NOTE:
 ITEM #1 & #13 NOT AVAILABLE SEPARATELY.
 BEARING HOUSING INCLUDES ITEMS #7, #9 & #12

Key	Part Number	Qty	Description	Serial Number
1		1	Pump Housing *	-
2	25-11051	1	Bearing Housing Assembly For 25-11047 Raw Water Pump	-
3	25-11006	1	Cam	-
4	25-11005	1	End Cover "Lugger / Northern Lights" (76Mmod 6-Hole)	-
5	25-11002	1	Impeller Kit With Cover Gasket & O-Ring	-
6	25-11003	1	Gasket	-
7	25-11007	1	Snap Ring, Beaded External	-
8	25-12066	1	Mechanical Seal	-
9	25-11053	1	Ball Bearing	-
10	25-11013	6	MSCR Filler Head #8-32 x 1/4" Bras	-
11	25-11048	1	MSCR, Filler Head #12-24 X 5/16" Bras	-
12	25-11052	1	Snap Ring, Internal	-
13	Note	1	Note Description (For Miscellaneous Parts Sales Only)	-

* Not available separately

COOLING SYSTEM

RAW WATER PUMP ASSEMBLY

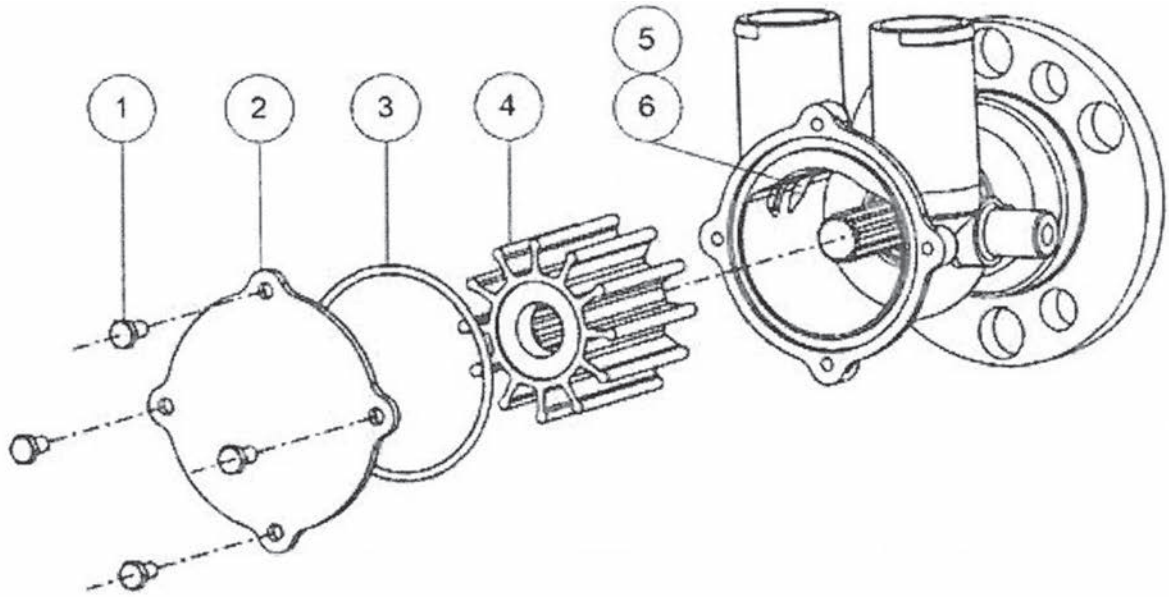


A-9495/ A-9496

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	25-11054	1	Raw Water Pump (includes all keys)*	-
1	25-11056	4	Cover Screw	-
2	25-11057	1	End Cover	-
3	25-11058	1	O-ring	-
4	25-11002	1	Impeller with Gasket	-
5	25-12066	1	Mechanical Seal, Raw Water Pump	-
6	25-11059	2	Bearing	-
7	25-11061	1	Shaft and Flange Assembly	-
<p>*Note: Replaces pumps 25-11030 and 25-11047.</p>				

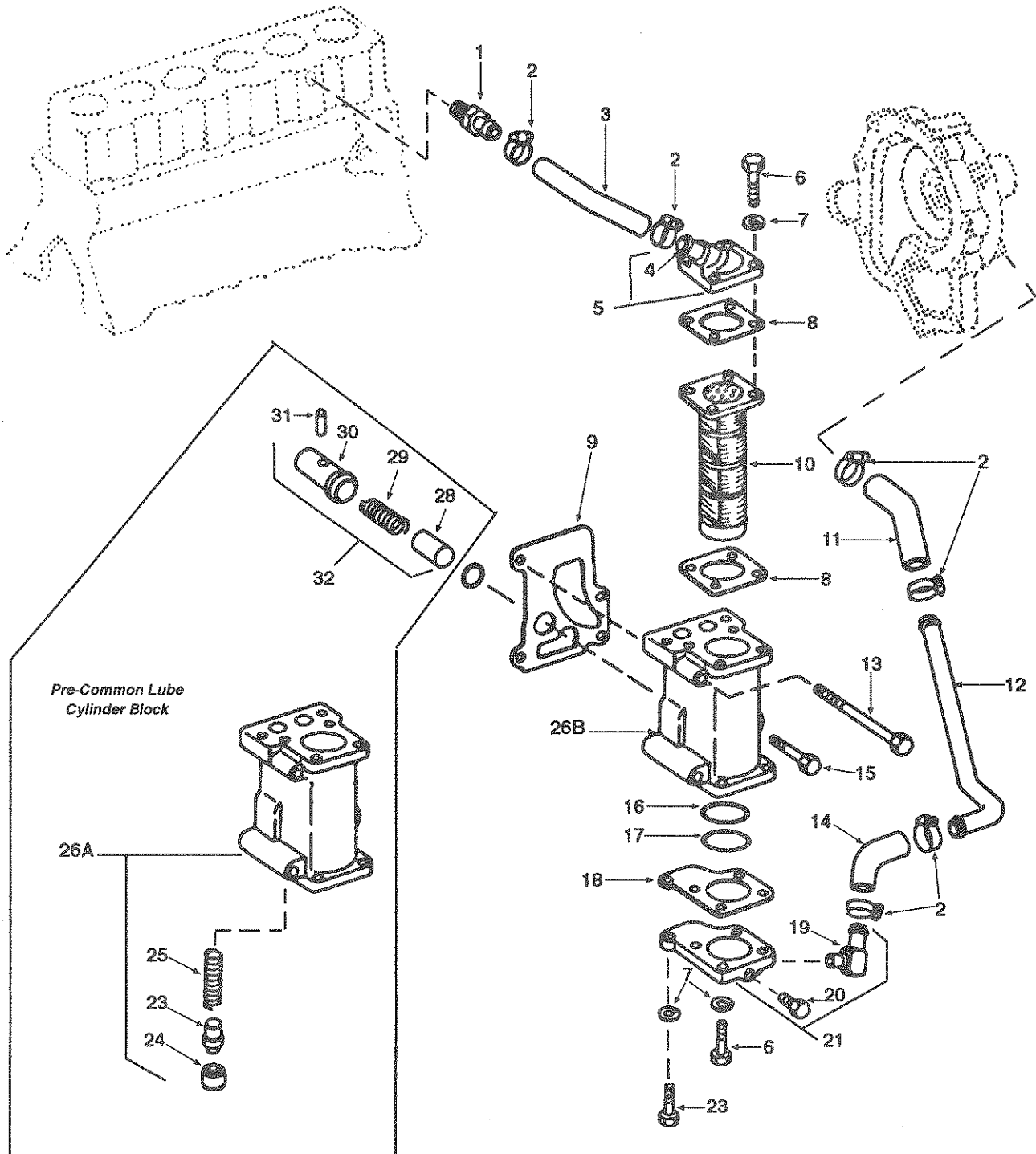
COOLING SYSTEM

Raw Water Pump Assembly, Jabsco



Key	Part Number	Qty	Description	Serial Number
•	25-11063	1	Pump - includes all parts	-
1	25-11066	4	End Cover Screws	-
2	25-11057	1	End Cover	-
3	25-11058	1	O-Ring	-
4	25-11002	1	Impeller	-
5	25-11064	1	Cam	-
6	25-11067	1	Cam Screw	-

LUBRICATING OIL COOLER - SMALL



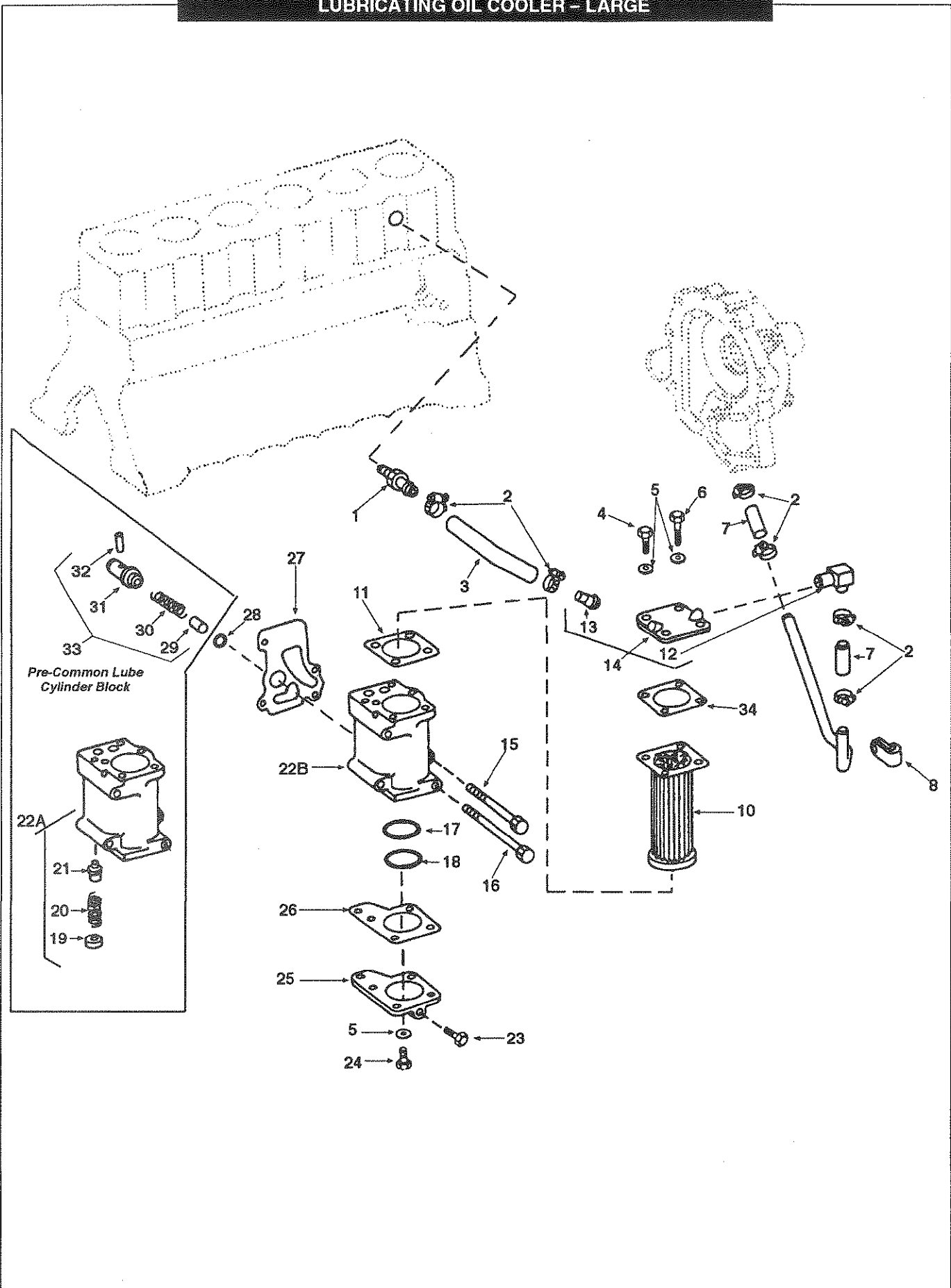
COOLING SYSTEM

LUBRICATING OIL COOLER – SMALL

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R39503	1	Hose Fitting	-
2	19-00020	6	Hose Clamp #20	-
3	R54826	1	Hose	-
4	R34985	1	Tube	-
5	AR70464	1	Cover (marked R58632 – includes Key 4)	-
6	12-00213	1	Capscrew, Hex Head 5/16-18 x 1-1/4"	-
7	15-00202	9	Lock Washer 5/16"	-
8	R98486	2	Gasket	-
9	R98489	1	Gasket	-
10	RE31089	1	Oil Cooler Element	-
11	R26905	1	Hose	-
12	R54830	1	Tube	-
13	12-00356	3	Capscrew, Hex Head 3/8" x 4-1/4"	-
14	R54829	1	Hose	-
15	12-00316	2	Capscrew, Hex Head 3/8-16 x 2"	-
16	R56814	1	O-Ring (inner)	-
17	R56815	1	O-Ring (outer)	-
18	R98487	1	Gasket	-
19	AR26732	1	Elbow Fitting	-
20	21-00012	1	Plug, Hex Head 1/8NPT	-
21	AR63356	1	Cover (marked R54828)	-
22	12-00212	1	Capscrew, Hex Head 5/16-18 x 1"	-
23			Valve Seat Insert (not available separately – order Key 26A)	Up to 362468
24	R73189	1	Valve, Oil Bypass	Up to 362468
25	R46625	1	Spring	Up to 362468
26A	AR103165	1	Housing (marked R76241)	Up to 362468
26B	R110562	1	Housing	From 362469
27	R61871	1	O-Ring	-
28		1	Valve (not available separately – order Key 32)	Up to 362468
29	R46625	1	Spring	Up to 362468
30		1	Housing (not available separately – order Key 32)	Up to 362468
31	34H184	1	Spring Pin 1/8 x 1-1/8"	Up to 362468
32	AR63351	1	Valve Assembly, Pressure Regulating (includes Keys 23 - 25)	Up to 362468

NOTE: Engines may be equipped with Large or Small Oil Coolers.
 For easy identification, check coolant connections:
 Small Cooler – Bottom Inlet, Top Outlet
 Large Cooler – Top Inlet and Outlet

LUBRICATING OIL COOLER - LARGE



COOLING SYSTEM

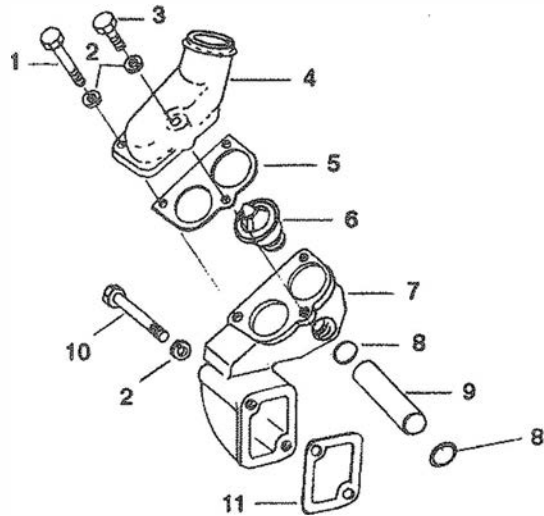
LUBRICATING OIL COOLER – LARGE

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	R39503	1	Hose Fitting	-
2	19-00020	6	Hose Clamp #20	-
3	R54826	1	Hose	-
4	12-00314	3	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
5	1500302	11	Lock Washer 3/8"	-
6	12-00316	1	Capscrew, Hex Heax 3/8-16 x 2"	-
7	R26905	2	Hose 3/4"ID x 2-1/2"	-
8	T38959	1	Clamp	-
9	R60961	1	Tube	-
10	RE31286	1	Oil Cooler Element	-
11	R98404	1	Gasket	-
12	AR26732	1	Elbow Fitting	-
13	R34985	1	Tube	-
14	AR66406	1	Cover (market R56195 – includes Keys 12 - 13)	-
15	12-00359	2	Capscrew, Hex Head 3/8-16 x 5"	-
16	12-00022	2	Capscrew, Hex Head 3/8-16 x 5-3/4"	-
17	R56192	1	O-Ring	-
18	R56193	1	O-Ring	-
19		1	Valve Seat (not available separately – order Key 22A)	-
20	R46625	1	Spring	-
21	R73139	1	Valve, Oil Bypass	-
22A	AR103164	1	Housing (includes Keys 9 - 21)	Up to 362468
22B	BR110563	1	Housing	From 362469
23	21-00012	1	Plug, Hex Head 1/8NPT	-
24	19H3483	5	Capscrew, Hex Head 3/8-16 x 1-1/8"	-
25	R56197	1	Cover	-
26	R98485	1	Gasket	-
27	R98489	1	Gasket	-
28	A4830R	1	O-Ring	-
29		1	Valve (not available separately – order Key 33)	Up to 362468
30	R46625	1	Spring	Up to 362468
31		1	Housing (not available separately – order Key 33)	Up to 362468
32	34H184	1	Spring Pin 1/8" x 1-1/8"	Up to 362468
33	AR63351	1	Valve Assembly, Pressure Regulating (includes Keys 29 – 32)	Up to 362468
34	R98471	1	Gasket	-
			<p>NOTE: Engines may be equipped with Large or Small Oil Coolers. For easy identification, check coolant connections: Small Cooler – Bottom Inlet, Top Outlet Large Cooler – Top Inlet and Outlet</p>	

COOLING SYSTEM

THERMOSTAT HOUSING

(Industrial Application)

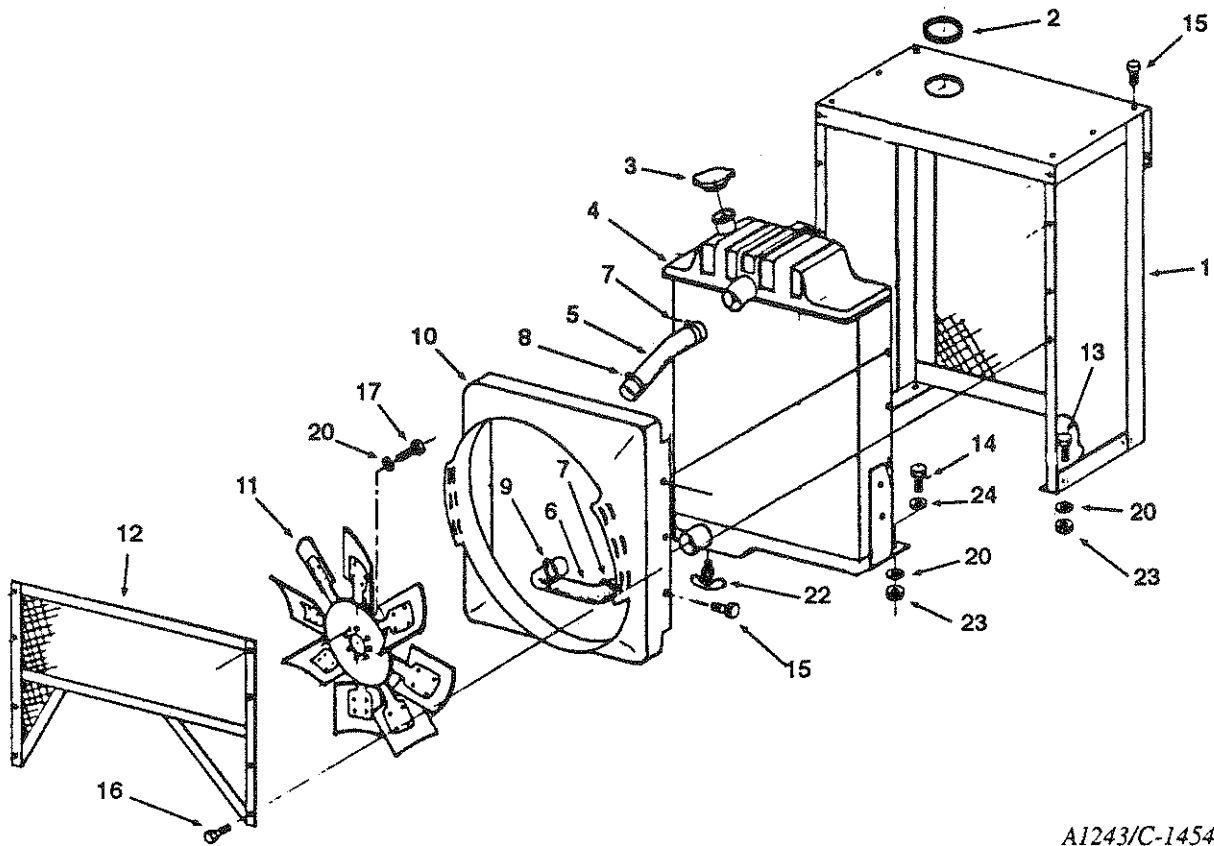


A221/B-1543B

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	12-00316	2	Capscrew, Hex Head 3/8-16 x 2"	-
2	15-00302	5	Lock Washer, Helical 3/8	-
3	12-00312	1	Capscrew, Hex Head 3/8-16 x 1"	-
4	R54639	1	Cover	-
5	R54638	1	Gasket	-
6	AR48675	2	Thermostat 180°F	-
7	R54637	1	Housing	-
8	R56461	2	O-Ring	-
9	R55967	1	Tube	-
10	12-00354	2	Capscrew, Hex Head 3/8-16 x 3-3/4"	-
11	R54641	1	Gasket	-

COOLING SYSTEM

RADIATOR and MOUNTING NL445T

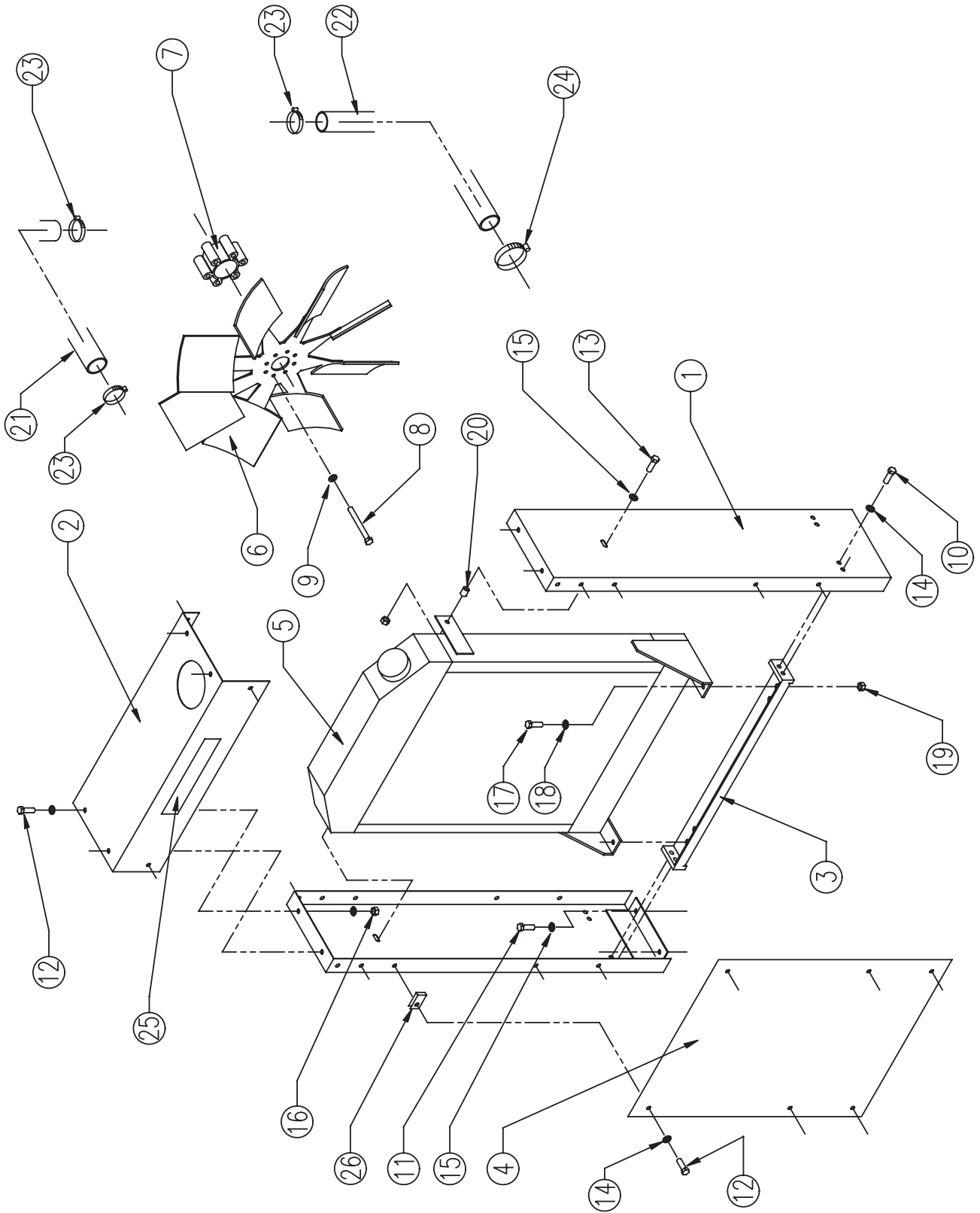


A1243/C-1454

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-11601	1	Radiator Guard	-
2	00-41077	1	Continuous Grommet	-
3	21-12007	1	Radiator Fill Cap, 7 lbs.	-
4	AR61880	1	Radiator	-
5	R54534	1	Upper Radiator Hose	-
6	R53550	1	Lower Radiator Hose	-
7	19-00032	2	Hose Clamp #32	-
8	19-00036	1	Hose Clamp #36	-
9	19-00040	1	Hose Clamp #40	-
10	R72856	1	Radiator Shroud	-
11	AT31819	1	Radiator Fan, Blower	-
12	39-11615	1	Fan Guard	-
13	12-00314	4	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
14	12-00316	2	Capscrew, Hex Head 3/8-16 x 2"	-
15	12-00140	12	Self-Tapping Screw 1/4-20 x 1/2"	-
16	12-00141	8	Self-Tapping Screw 1/4-20 x 3/4"	-
17	12-00312	4	Capscrew, Hex Head 3/8-16 x 1"	-
20	15-00303	4	Lock Washer 3/8"	-
22	21-10002	1	Drain Cock 1/4 NPT	-
23	14-00311	6	Nut 3/8-16	-
24	15-00301	2	Flat Washer 3/8"	-

COOLING SYSTEM

Radiator Kit Assembly



C-3100

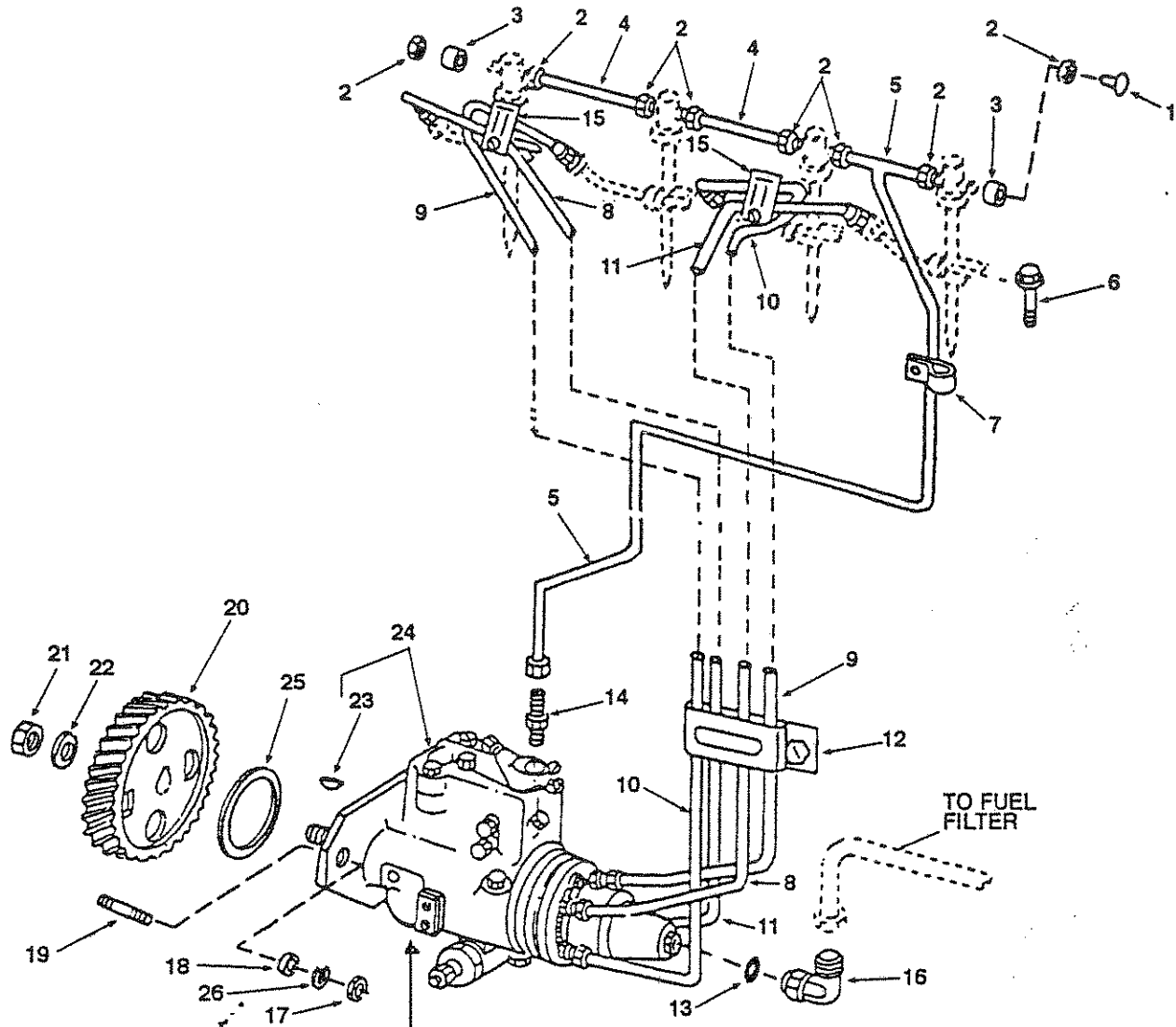
COOLING SYSTEM

Radiator Kit Assembly

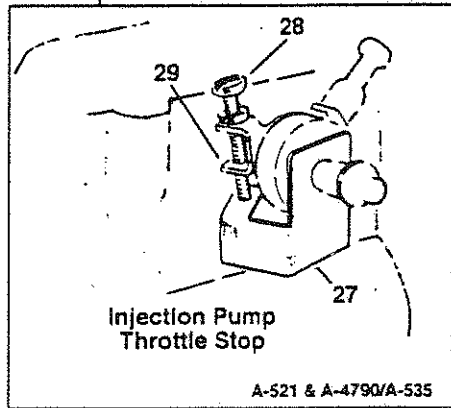
Key	Part Number	Qty	Description	Serial Number
1	39-11002	2	Side Panel,Modular Radiator Guard	-
2	39-11005	1	Top Panel,Modular Radiator Guard	-
3	39-11006	1	Radiator Support,Modular Radiator Guard	-
4	39-11004	1	Grille,Modular Radiator Guard	-
5	Re57695	1	Radiator Assembly W/Shroud & Fan Guard	-
6	At24834	1	Fan 23" (Blower)	-
7	R81911	1	Spacer,Fan Mtg.	-
8	12-00300	4	Cap Screw, Hex Head 3/8-16 X 3-1/2" Grade 5	-
9	15-00302	4	Lock Washer,Helical 3/8"	-
10	12-00313	4	Cap Screw, Hex Head 3/8-16 X 1-1/4" Grade 5	-
11	12-00362	4	Cap Screw, Hex Head 3/8-16 X 1/2"	-
12	12-00311	14	Cap Screw, Hex Head 3/8-16 X 3/4" Grade 5	-
13	12-00314	2	Cap Screw, Hex Head 3/8-16 X 1-1/2" Grade 5	-
14	15-00302	10	Lock Washer,Helical 3/8"	-
15	15-00301	6	Flat Washer 3/8" Us Zinc Plated Anis Type A	-
16	14-00312	14	Hex Nut,Nylon 3/8-16	-
17	12-01312	2	Cap Screw, Hex Head 5/8-11 X 1"	-
18	15-01330	2	Flat Washer 5/8" Sae Zinc Plated Anis Type A	-
19	14-00912	2	Hex Nut,Nylon 5/8-11	-
20	21-21004	2	Spacer,Bp. 1/2 Sbd 40 X 13/16"	-
21	R81912	1	Hoop,Radiator Inlet	-
22	R61433	1	Hoop,Radiator Outlet	-
23	19-00036	3	Hoop Clamp #36 S/S	-
24	19-00040	1	Hoop Clamp #40 S/S	-
25	00-70082	1	Label,"Northern Lights 2" X 22"	-
26	14-00301	6	U-Nut 3/8-16	-

FUEL SYSTEM

INJECTION PUMP and FUEL LINES



TO FUEL FILTER



TP41899

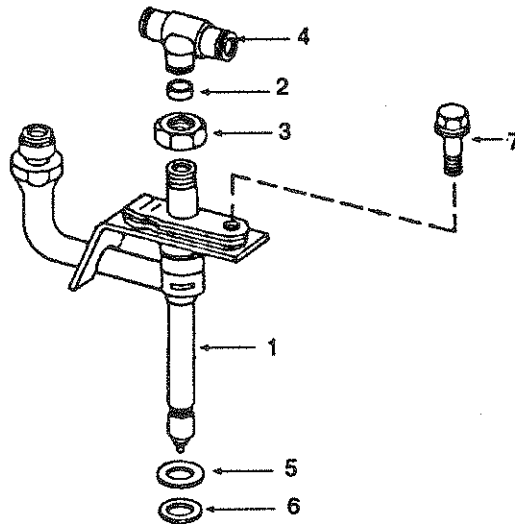
FUEL SYSTEM

INJECTION PUMP and FUEL LINES

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	16H658	1	Plug 1/4 x 5/8"	-
2	R51937	7	Tube Nut	-
3	R51936	7	Packing	-
4	R66090	2	Tube	-
5	AR85615	1	Fuel Return Line (NL445)	-
	27-51004	1	Fuel Return Line (M445)	-
6	R101201	4	Capscrew	-
7	T29969	1	Clamp	-
8	RE20989	1	Fuel Line #1	Up to 349266
	RE43289	1	Fuel Line #1	349267-383726
	RE53868	1	Fuel Line #1	From 383727
9	RE20990	1	Fuel Line #2	Up to 349266
	RE43290	1	Fuel Line #2	349267-383726
	RE53869	1	Fuel Line #2	From 383727
10	RE20991	1	Fuel Line #3	Up to 349266
	RE43291	1	Fuel Line #3	349267-383726
	RE53870	1	Fuel Line #3	From 383727
11	RE20992	1	Fuel Line #4	Up to 349266
	RE43292	1	Fuel Line #4	349267-383726
	RE53871	1	Fuel Line #4	From 383727
12	RE19799	1	Clamp	-
13	R26286	1	O-Ring	-
14	21-71053	1	Male Elbow, 90° Steel 1/8NPT x 1/4-37T (M445)	-
	21-52204	1	Male Connection, Brass 1/8NPT x 1/4-45T (NL445)	-
15	RE19797	2	Clamp	-
16	AT32333	1	Elbow, 90° Steel 5/16 O-Ring Port x 5/16-37T	-
17	14-00213	3	Nut 5/16-18	-
18	T27860	3	Washer 11/32 x 11/16 x 0.065"	-
19	T23442	3	Stud	-
20	R104907	1	Gear 48 teeth	-
21	R91360	1	Nut	-
22	R48600	1	Lock Washer	-
23	26H10	1	Shaft Key	-
24	26-51410	1	Fuel Injection Pump 1500/1800RPM (M-NL445D & C-Series)	Up to 352184
	26-51412	1	Fuel Injection Pump 1500/1800RPM (M-NL445D & C-Series)	From 352185
	26-51406	1	Fuel Injection Pump 1200RPM (M-NL445Q)	Up to 352184
	26-51411	1	Fuel Injection Pump 1200RPM (M-NL445Q)	From 352185
	26-51404	1	Fuel Injection Pump 1500/1800RPM (M-NL445T)	Up to 352184
	RE48156	1	Fuel Injection Pump 1500/1800RPM (M-NL445T)	From 352185
25	R89944	1	O-Ring	-
26	15-00202	3	Lock Washer 5/16"	-
27	23-91008	1	Throttle Stop 60Hz & Governor Equipped Gen Sets	-
	23-91016	1	Throttle Stop 50Hz Equipped Gen Sets	-
28	12-00002	1	Machine Screw, Binding Head Slotted #10-32 x 1-3/4"	-
29	14-00001	1	Hex Nut #10-32	-

FUEL SYSTEM

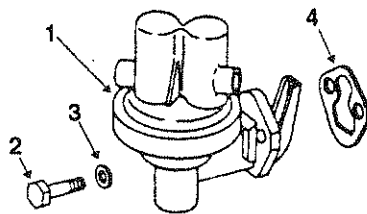
FUEL INJECTOR



TP26812

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE38087	1	Injector (includes Keys 5-6)	-
2	R79605	1	Sealing Sleeve	-
3	R79604	1	Nut	-
4	R79606	1	Tee Fitting	-
5	R92352	1	Sealing Washer	-
6	R48000	1	Seal	-
7	R101201	1	Retaining Capscrew - Special	-

FUEL TRANSFER PUMP

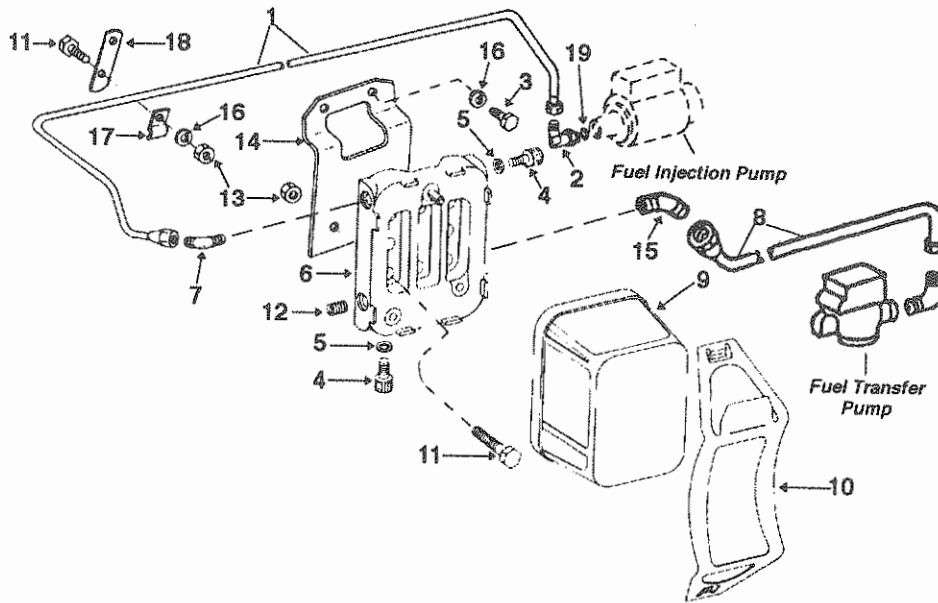


KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE42211	1	Fuel Transfer Pump (former # RE27667)	-
2	12-00213	2	Capscrew, Hex Head 5/16-18 x 1-1/4"	-
3	T27860	2	Washer, Aluminum	-
4	R97350	1	Gasket (former #R27285)	-

FUEL SYSTEM

FUEL FILTER and LINES

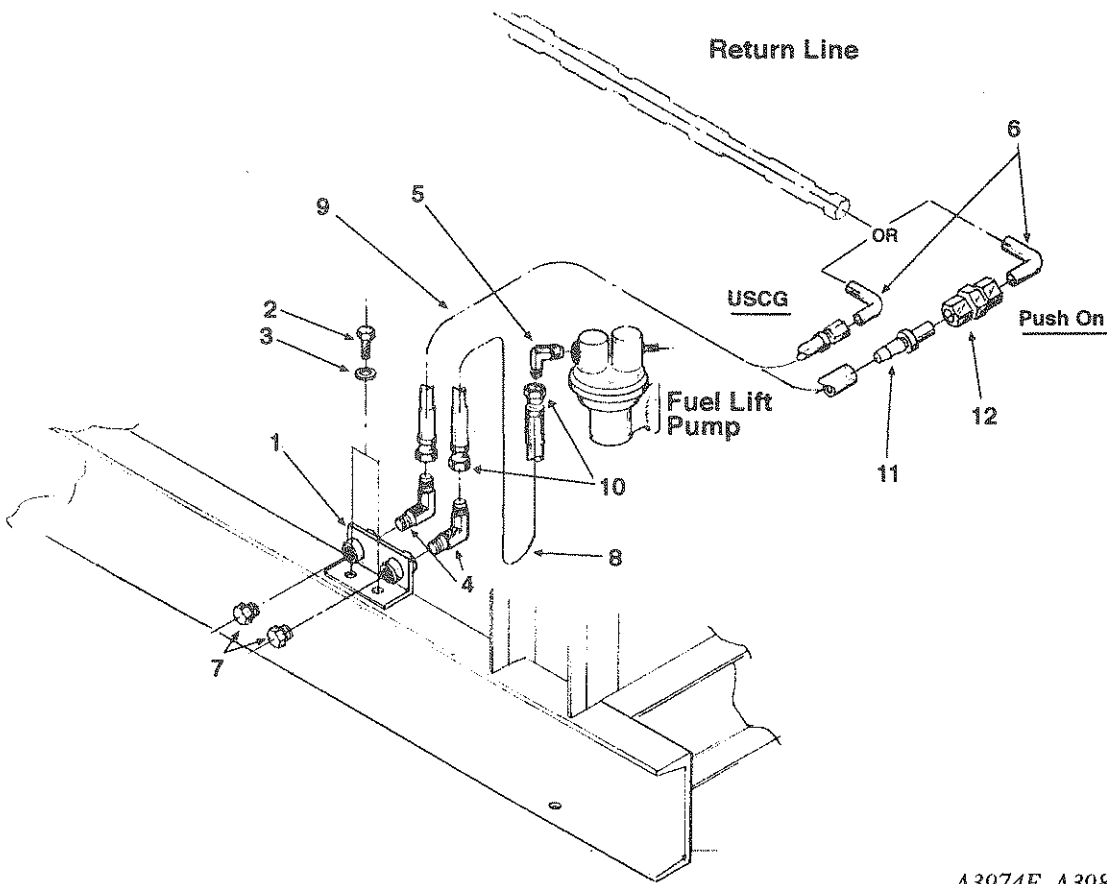
Clamp-on Type



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE42102	1	Fuel Line – Filter to Injection Pump	-
2	AT32333	1	Elbow 90° Steel 5/16 O-Ring Port x 5/16-37T	-
3	12-00311	2	Capscrew, Hex Head 3/8-16 x 3/4" (used with Key 14)	-
4	R48071	2	Drain Plug	-
5	R34447	2	Packing	-
6	24-52255	1	Filter Base	-
7	21-51103	1	Male Elbow, 45° Steel 1/8NPT x 5/16-37T	-
8	RE36550	1	Fuel Line —Transfer pump to filter	-
9	24-52259	1	Fuel Filter—Metal case	-
10	24-52256	1	Clamp	-
11	19H2284	3	Capscrew, Hex Head 3/8-16 x 7/8" (2ea used with Key 14)	-
	12-00312	2	Capscrew, Hex Head 3/8-16 x 1" (used with #6 for direct mounting to Cylinder Head)	-
12	21-51900	1	Plug, Socket Head, Steel 1/8 NPT	-
13	14-00311	3	Hex Nut 3/8-16 (2ea used with Key 14)	-
14	R53214	**	Fuel Filter Bracket	-
15	R82131	2	Male Elbow 90° Brass 1/8NPT x 5/16-45T (can use T30738)	-
16	15-00302	3	Lock Washer 3/8"	-
17	R109872	1	Clamp	-
18	R56588	1	Strap Required	-
19	R26286	1	O-Ring	-

FUEL SYSTEM

FUEL LINES—PUSH-ON and U.S.C.G.

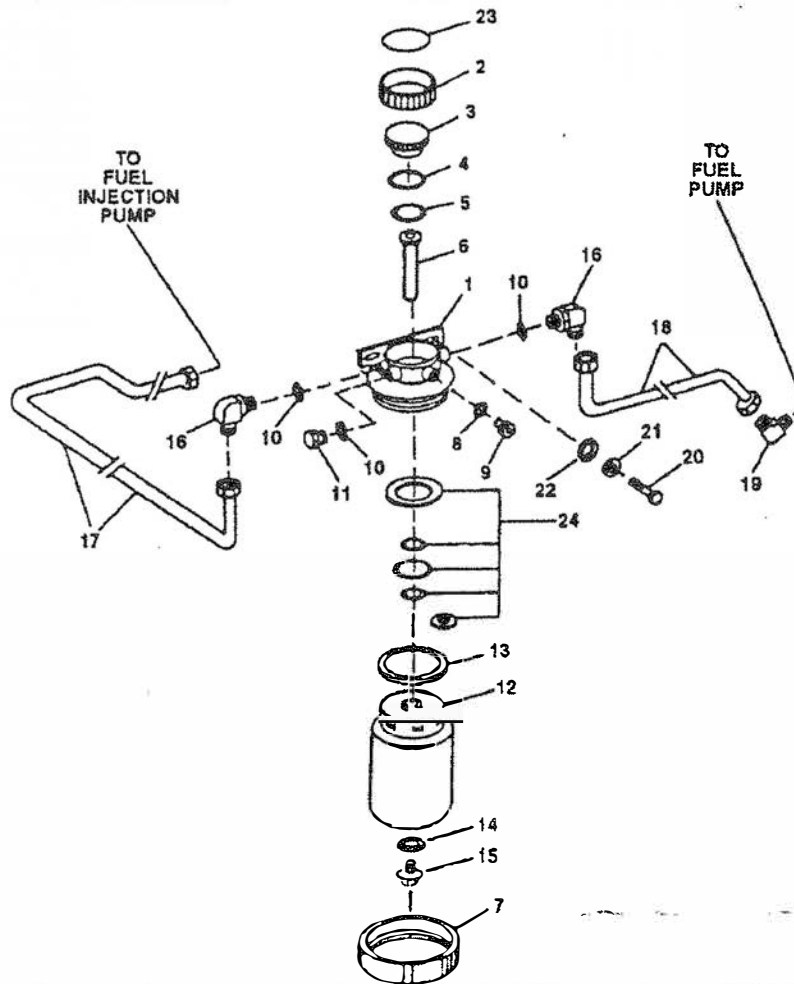


A3974E, A3987C, A3988E
A3989F/B-3507B

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-51099	1	Fuel Manifold 1/4 NPT	-
2	12-00112	2	Capscrew, Hex Head 1/4-20 x 1"	-
3	15-00102	2	Lock Washer 1/4	-
4	21-71044	2	Male Elbow 90° Brass 1/4 NPT x 1/4-45T (Push-on Lines)	-
	21-71049	2	Male Elbow 90° Steel 1/4NPT x 1/4-37T (USCG Lines)	-
5	21-71053	1	Male Elbow 90° Steel 1/8 NPT x 1/4-37T	-
6	27-50004	1	Tube	-
7	21-10003	2	Plug 1/4 NPT (for shipping)	-
8	18-51902	1	Hose 1/4" ID x 15" Push-on (Std. Mounts)	-
	18-52005	1	Hose 1/4" ID x 20" Push-on (Hyd. Mounts)	-
	18-52115	1	Hose Assembly 1/4" ID x 15 U.S.C.G. (Std. Mounts)	-
	18-52217	1	Hose Assembly 1/4" ID x 21-1/2" U.S.C.G. (Hyd. Mounts)	-
9	18-52568	1	Hose 1/4" ID x 36" Push-on (Std. Mounts)	-
	18-51006	1	Hose 1/4" ID x 39-1/2" Push-on (Hyd. Mounts)	-
	18-51009	1	Hose Assembly 1/4" ID x 35" U.S.C.G. (Std. Mounts)	-
	18-50001	1	Hose Assembly 1/4" ID x 42" U.S.C.G. (Hyd. Mounts)	-
10	21-71045	3	Swivel Fitting 1/4 Hose Barb x 1/4-45T (Push-on only)	-
11	21-51045	1	Fitting 1/4" Hose Barb x 1/4" Compression (Push-on only)	-
12	21-51004	1	Compression Tube Union 1/4" (Push-on only)	-

FUEL SYSTEM

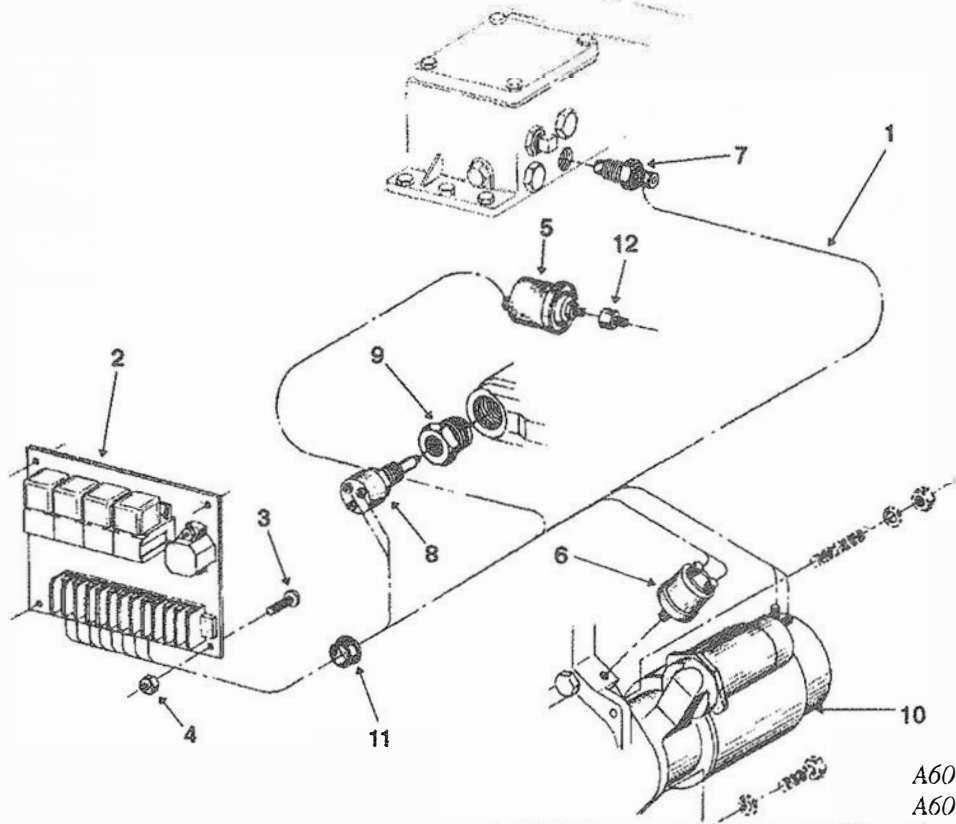
FUEL FILTER & MOUNTING - RING CLAMP STYLE



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
∞	RE51649	1	Repair Kit (includes keys # 2,3,6,&9)	
1	RE63181	1	Filter Head (replaces RE55762)	
2	N/A separately	1	Retainer (included in Repair Kit RE51649)	
3	N/A separately	1	Cap (included in Repair Kit RE51649)	
4	N/A separately	1	Packing (included in Seal Kit RE50752)	
5	N/A separately	1	O-Ring (included in Seal Kit RE50752)	
6	N/A separately	1	Valve (included in Repair Kit RE51649)	
7	N/A separately	1	Clamp Ring (included in Repair Kit RE51649)	
8	R113562	1	O-Ring	
9	R113563	1	Vent Plug	
10	R26286	4	O-Ring	
11	R27094	2	Plug	
12	24-51005	1	Filter Element (includes keys #13, 14, 15)	
13	R113565	1	Packing	
14	15-51001	1	Sealing Washer	
15	21-51005	1	Drain Plug	
16	AT32333	1	Male Elbow 90° Steel, 5/16 o-ring port x 5/16-37T	
17	RE54757	1	Tube Assembly, Filter Outlet	
18	RE36550	1	Tube Assembly, Filter Inlet	
19	21-00048	1	Male Elbow 90° Brass, 1/8 NPT x 5/16 - 45T	
20	12-00312	2	Cap Screw, Hex Head, 3/8-16 x 1" M445D & NL445T	
	12-00314	2	Cap Screw, Hex Head, 3/8-16 x 1-1/2" M445T & C-Series	
21	15-00302	2	Lock Washer 3/8	
22	15-00301	2	Flat Washer 3/8	
23	00-51001	1	Warning Label	
24	RE50752	1	Seal Kit (includes keys # 4,5,8 & 13)	

ELECTRICAL SYSTEM

12 & 24 VOLT STANDARD and ISOLATED GROUND

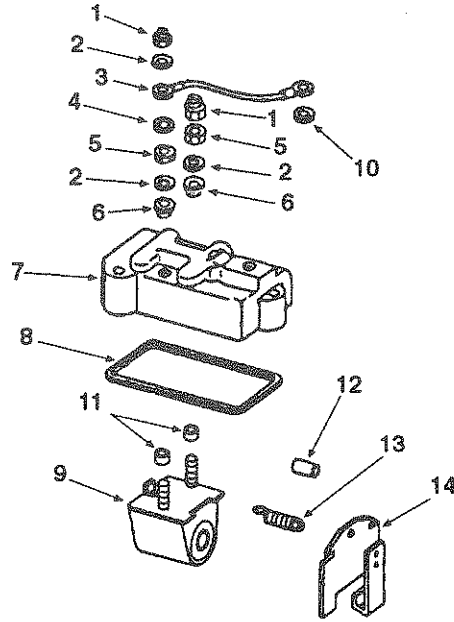


A6070, A6071, A6072
A6073/D-2132

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	22-41110	1	Wire Harness, Standard Ground	-
	22-41115	1	Wire Harness, Isolated Ground	-
2	22-70007	1	Dual Station Relay Board 12Volt (see parts detail)	-
	22-70018	1	Dual Station Relay Board 24Volt (see parts detail)	-
3	12-00001	4	Machine Screw, Binding Head #10-32 x 3/4"	-
4	14-00032	4	Nylock Hex Nut #10-32	-
5	22-40915	1	Oil Pressure Switch 15 PSI 1/8 NPT	-
6	22-41016	1	Oil Pressure Sender, Standard Ground 1/8 NPT	-
	22-71016	1	Oil Pressure Sender, Dual Gauge Standard Ground 1/8 NPT	-
	22-42803	1	Oil Pressure Sender, Isolated Ground 1/8 NPT	-
	22-74803	1	Oil Pressure Sender, Dual Gauge Isolated Ground 1/8 NPT	-
7	22-41026	1	Temperature Sender, Standard Ground 1/8 NPT	-
	22-71026	1	Temperature Sender, Dual Gauge Standard Ground 1/8 NPT	-
	22-42802	1	Temperature Sender, Isolated Ground 1/8 NPT	-
	22-74802	1	Temperature Sender, Dual Gauge Isolated Ground 1/8 NPT	-
8	22-40925	1	Temperature Switch 215° F 1/8 NPT(Marine)	-
	22-40923	1	Temperature Switch 225° F (Industrial)	-
9	21-41101	1	Brass Bushing 1" NPT x 1/2 NPT	-
10	RE68470	1	Starter 12Volt Standard Ground (see mounting detail-former #RE19275)	-
	22-41078	1	Starter 12Volt Isolated Ground (see mounting detail - former #22-41406)	-
	RE52120	1	Starter 24Volt Standard Ground (see mounting detail - former #RE19737) *	-
	22-41414	1	Starter 24Volt Standard or Isolated Ground (see mounting detail - former #22-41407, 22-41088 & 22-41411)	-
11	00-41015	1	Bushing	-
12	21-00023	1	Adapter 1/8 NPT x 1/8 NPT	-
13	22-40402	**	Ground Wire #8 AWG x 16" (not shown)	-
14	RE31694	1	Alternator 12Volt/78AMP Std Ground (not shown-see mounting detail)	-
	10-134	1	Alternator 12Volt/72AMP ISO Ground (not shown-see mounting detail)	-
	22-71051	1	Alternator 24Volt/42AMP Std Ground (not shown-see mounting detail)	-
	22-71052	1	Alternator 24Volt/35AMP ISO Ground (not shown-see mounting detail)	-
				* Alternate for 22-41411 in Standard Ground application.
			** As Required	

ELECTRICAL SYSTEM

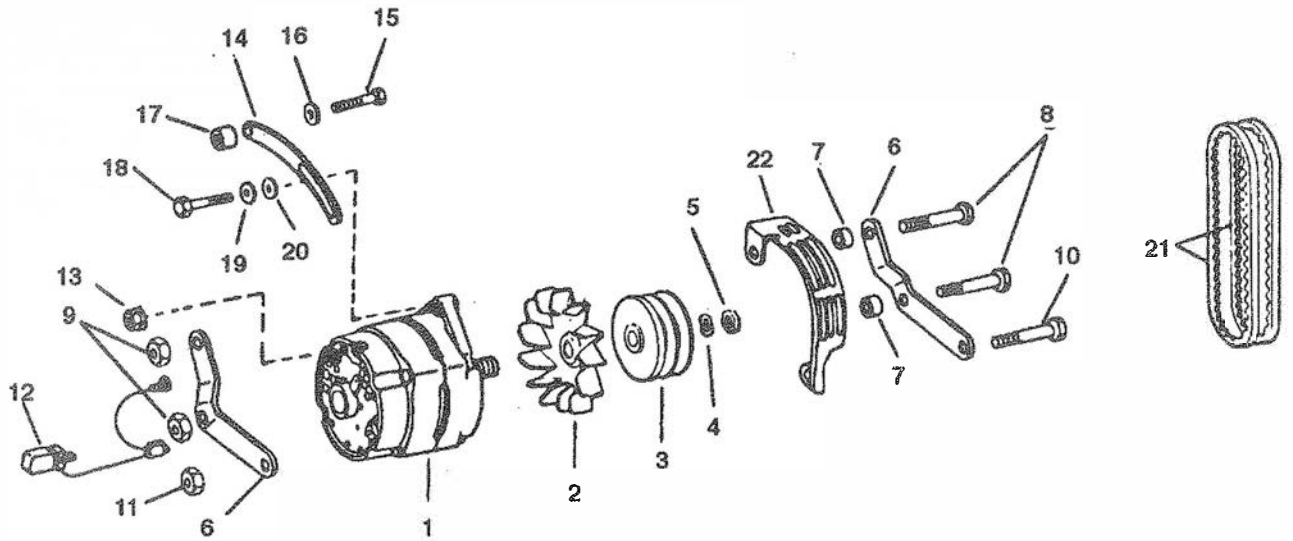
STOP SOLENOID 12 and 24 VOLT (INJECTION PUMP MOUNTED)



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
∞	RE37091	1	Hardware Kit includes keys 1-6 & 10	-
1	M63431	2	Lock Nut	-
2		3	Washer (not available separately)	-
3	AR50874	1	Strap	-
4	R47077	1	Lock Washer	-
5		2	Nut (not available separately)	-
6		2	Washer (not available separately)	-
7	T11919	1	Cover	-
8	T11918	1	Gasket	-
9	RE37089	1	Solenoid Assy. 12Volt "High Force" (long body with molded plastic covering) includes keys 11-14.	-
	22-51000	1	Solenoid Assy. 24Volt "High Force" (long body with molded plastic covering) includes keys 11-14.	-
10	12H295	1	Internal Star Washer #10	-
11	T11937	2	Insulator	-
12	R48795	1	Sleeve	-
13	T11935	1	Spring	-
14		1	Shut-off Lever (not available separately)	-

ELECTRICAL SYSTEM

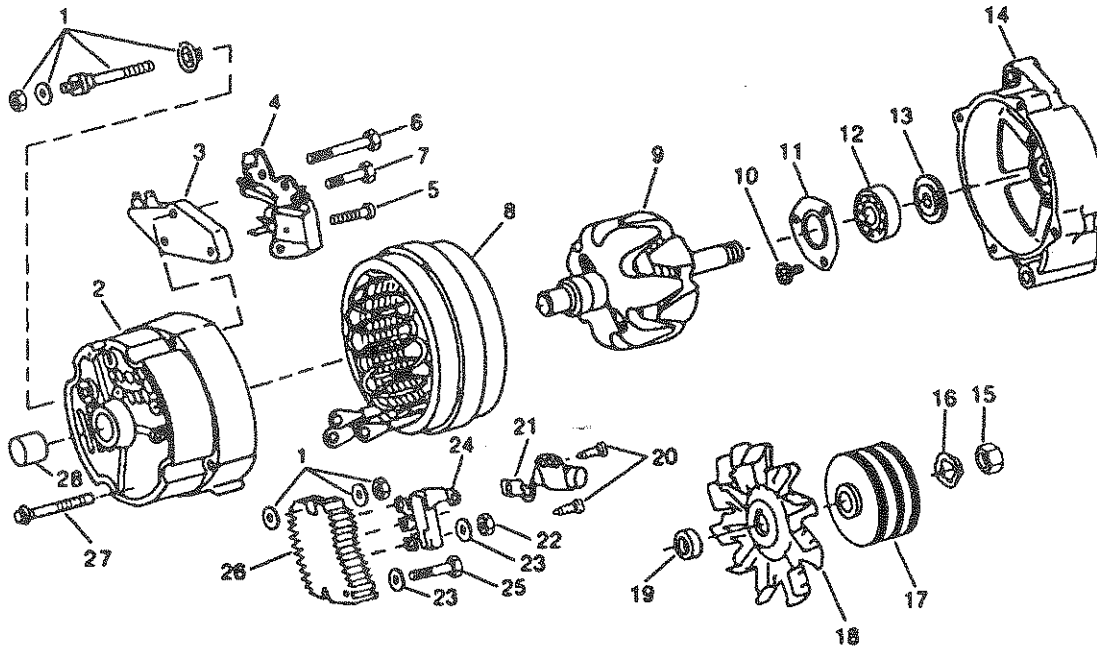
12 VOLT/78 AMP ALTERNATOR and MOUNTING



KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	RE31694	1	Alternator (includes Keys 4-5 & 23 – see parts detail)	-
2	R87764	1	Fan	-
3	T42171	1	Pulley 1800 RPM	-
	34-41016	1	Pulley 1200 RPM	-
4	T10745	1	Washer	-
5	R11049	1	Hex Nut	-
6	R57260	2	Mounting Bracket	-
7	28H862	2	Spacer	-
8	12-00310	2	Capscrew, Hex Head 3/8-1 x 3"	-
9	14-00311	2	Hex Nut 3/8-16	-
10	12-00049	1	Capscrew, Hex Head M10 x 1.5 x 80mm	-
11	14-00812	1	Nylock Nut M10 x 1.5	-
12	AR55283	1	Wire Harness	-
13	14-04803	1	Nylock Nut M6 x 1.0	-
14	R108404	1	Tensioner	-
15	12-00316	1	Capscrew, Hex Head 3/8-16 x 2"	-
16	15-00300	3	Flat Washer 3/8 (special)	-
17	28H1518	1	Spacer	-
18	12-00712	1	Capscrew, Hex Head M8 x 1.25 x 25mm	-
19	15-00702	1	Lock Washer M8	-
20	15-00201	1	Stud Washer	-
21	RE51551	1	Belt Set 1800 RPM	-
	AT24833	1	Belt Set 1200 RPM	-
22	R122848	**	Guard	-
23	R69645	1	Fan Spacer (not shown)	-
			**As Required	

ELECTRICAL SYSTEM

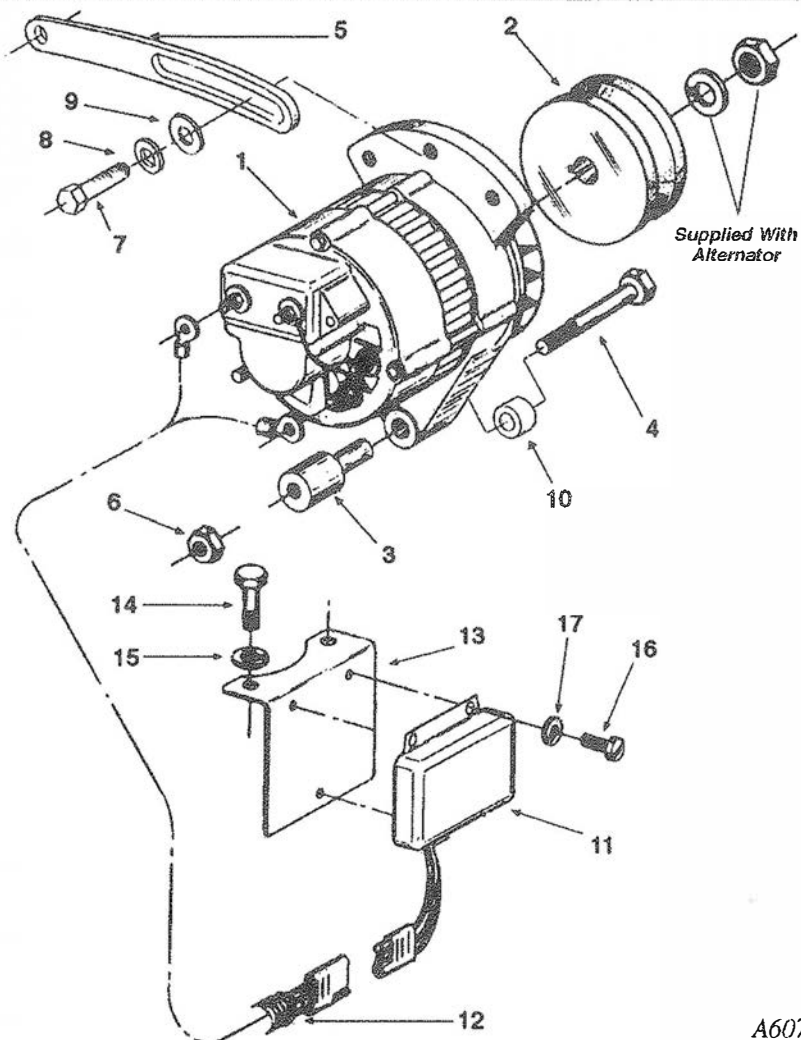
ALTERNATOR 12 VOLT 78AMP



TP26835, T59439

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	RE31694	1	Alternator Assembly	-
1	AR93945	1	Nut	-
2	R71400	1	Housing	-
3	AR55827	1	Voltage Regulator-	-
4	AR85941	1	Brush Holder	-
5	R66302	1	Screw	-
6	R76186	1	Screw	-
7	R51530	2	Screw	-
9	RE13801	1	Rotor	-
10	21H1301	3	Screw	-
11	R78755	1	Retainer	-
12	JD9449	1	Ball Bearing	-
13	R51534	1	Shim	-
14	R71399	1	Housing	-
15	R11049	1	Nut	-
16	T10745	1	Washer	-
17	T42171	1	Pulley	-
18	R87764	1	Fan	-
19	R69645	1	Washer	-
20	37H2	2	Screw	-
21	AR55835	1	Capacitor	-
22	14H605	3	Nut	-
23	12H290	3	Washer #8	-
24	RE13798	1	Diode	-
25	21H1319	1	Screw	-
26	AR55832	1	Rectifier	-
27	R51535	4	Bolt	-
28	AR77851	1	Roller Bearing	-

OPTIONAL ALTERNATORS and MOUNTING



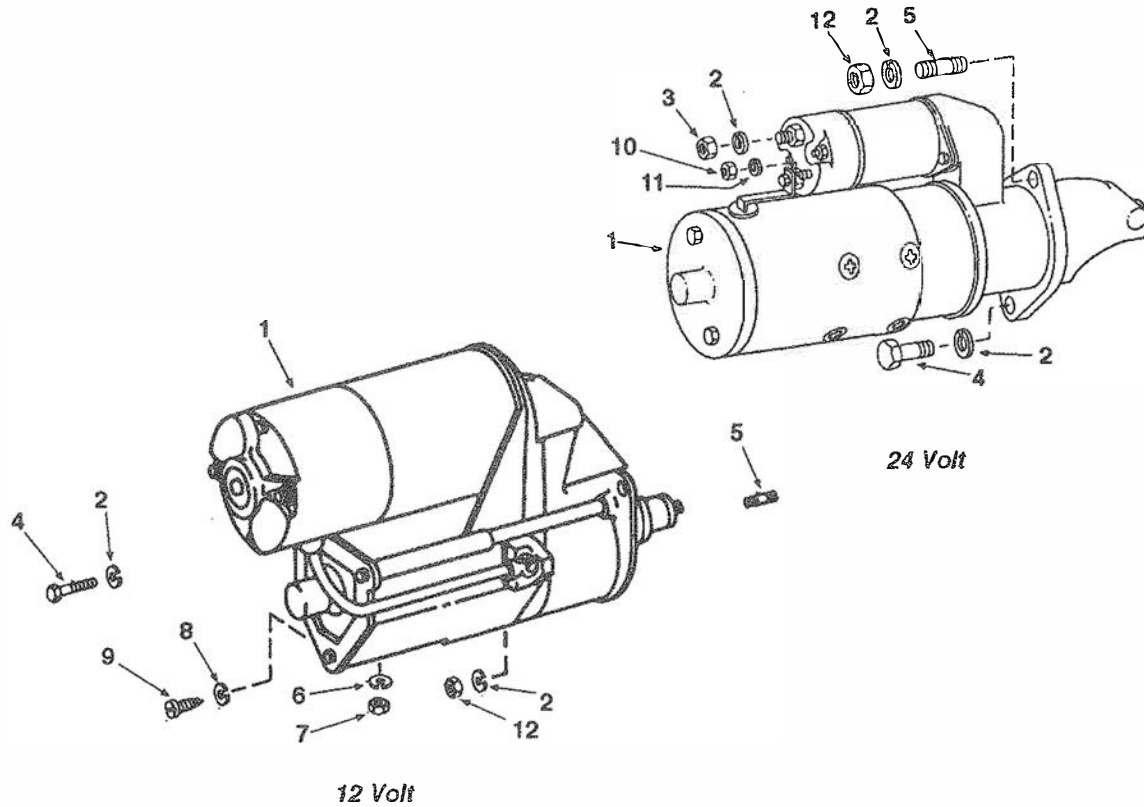
A6079, A6080, A6081/C-2968

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-134	1	Alternator – 12Volt 72Amp, Isolated Ground	-
	22-71051	1	Alternator – 24Volt 42Amp, Standard Ground	-
	22-71052	1	Alternator – 24Volt 35Amp, Isolated Ground	-
2	34-41019	1	Pulley, 2 Groove	-
3	31-71101	1	Adapter	-
	12-00819	1	Capscrew, Hex Head M10 x 1.5 x 75mm	-
5	R108404	1	Tensioning Arm (24 Volt)	-
	23-41006	1	Tensioning Arm (12 Volt)	-
6	14-00812	1	Hex Nut, Nylock M10 x 1.5mm	-
	12-00312	1	Capscrew, Hex Head 3/8-16 x 1" (12Volt)	-
7	12-00212	1	Capscrew, Hex Head 5/16-18 x 1" (24Volt)	-
	15-00302	1	Lock Washer, Helical 3/8 (12Volt)	-
8	15-00202	1	Lock Washer, Helical 5/16 (24Volt)	-
	15-00012	1	Stud Washer 3/8 (12Volt)	-
9	15-00201	1	Stud Washer 5/16 (24Volt)	-
	21-41103	1	Spacer 25mm OD x 10mm ID x 8.5mm	-
10	21-41103	1	D.C. Voltage Regulator*	-
11	5-141	1	Wire Harness*	-
12	16-1	1	Bracket*	-
13	23-41005	1	Bracket*	-
14	12-00214	1	Capscrew, Hex Head 5/16-18 x 1-1/2**	-
15	15-00202	2	Lock Washer, Helical 5/16*	-
	15-00033	3	Lock Washer, Helical #10*	-
16	15-00033	3	Lock Washer, Helical #10*	-
17	12-00015	1	Machine Screw, BH Phillips #10-32 x 3/8**	-
18		1	Belt Set (not shown – see Belts and Guards selection chart)	-

*For 12Volt 72Amp Alternator only.

ELECTRICAL SYSTEM

12 & 24 VOLT STARTER and MOUNTING

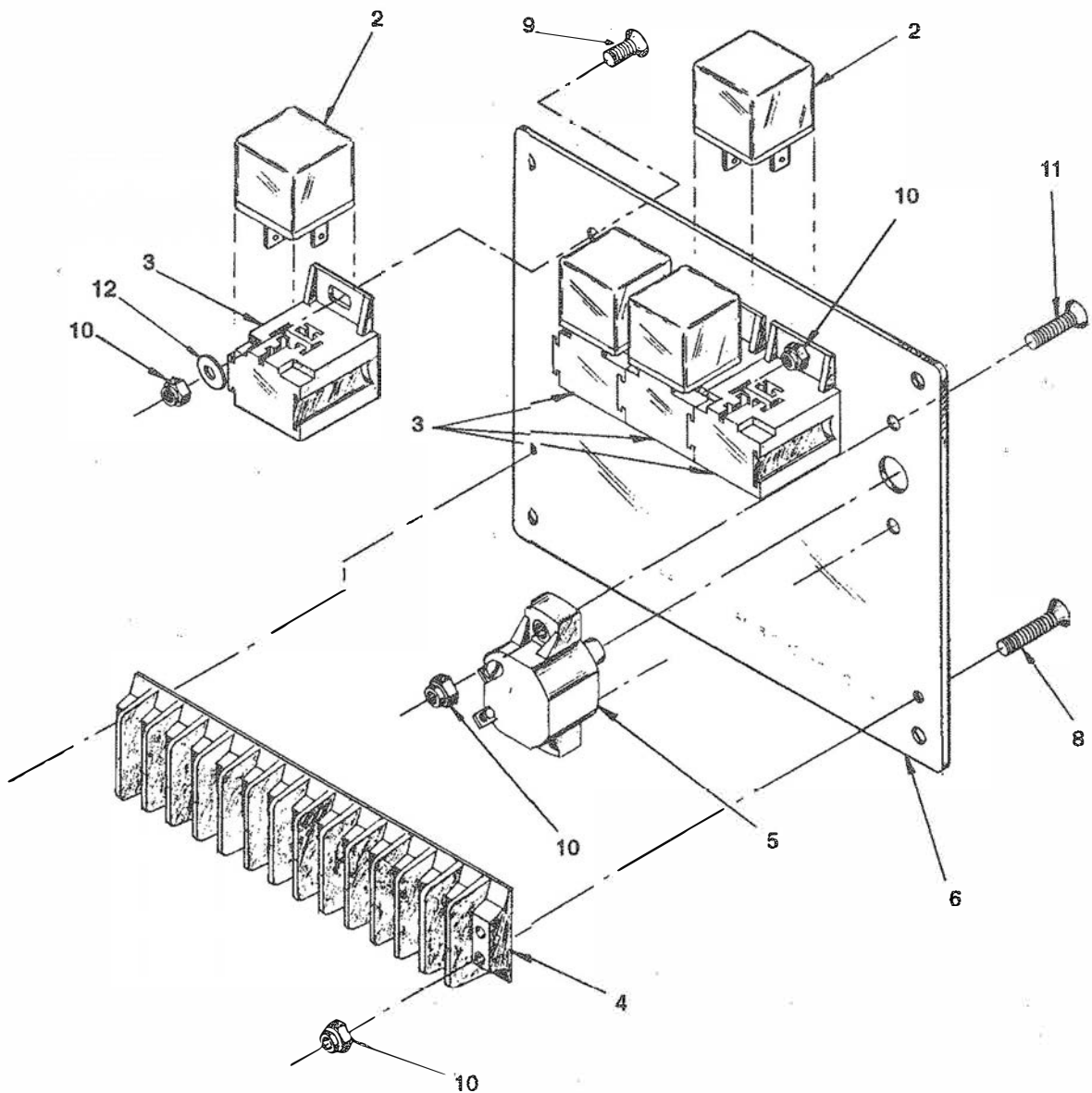


KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER	
1	22-41078	1	Starter 12 Volt ISO Ground	-	
	22-41414	1	Starter 24 Volt ISO Ground	-	
	RE19275	1	Starter 12Volt Standard Ground *	-	
	22-41406	1	Starter 12Volt Isolated Ground *	-	
	RE52120	1	Starter 24Volt Standard Ground *	-	
	22-41407	1	Starter (former #RE19737)	-	
	22-41088	3	24Volt Isolated Ground * Starter 24Volt Isolated Ground*	-	
	22-41411	1	Starter 24Volt Isolated Ground*	-	
	2	15-00302	1	Lock Washer 3/8	-
	3	14-00311	1	Hex Nut 3/8-16	-
	4	12-00312	1	Capscrew, Hex Head 3/8-16 x 1"	-
5	13-00336	1	Stud 3/8-16 x 3/8-24 x 2"	-	
6	15-00802	1	Lock Washer M10	-	
7	14-00811	1	Hex Nut M10 x 1.5	-	
8	15-04400	1	Lock Washer M5	-	
9	12-04406	1	Capscrew, Hex Head M5 x 0.8 x 10 mm	-	
10	14-00001	1	Hex Nut #10-32	-	
11	15-00033	1	Lock Washer #10	-	
		1	* Solenoid or Switch Assemblies for above starters:	-	
	RE23379	1	Switch Assembly for RE19275	-	
	22-41409	1	Solenoid for 22-41406	-	
	RE22244	1	Solenoid for RE19737	-	
	22-41408	1	Solenoid for 41088 & 41411	-	
	22-41408	1	Solenoid for 22-41407/22-41088/22-41411	-	
	22-41410	1	Solenoid for 22-41078	-	
	22-41421	1	Solenoid for 22-41414	-	
12	14-00321	1	Hex Nut 3/8-24	-	

Note: Starters 22-41406 & 22-41407 will be discontinued when stock depleted. Current starters which are direct replacements will then be supplied. 22-41088 NLA, Order 22-41411.

ELECTRICAL SYSTEM

12 & 24 VOLT RELAY LOGIC BOARD



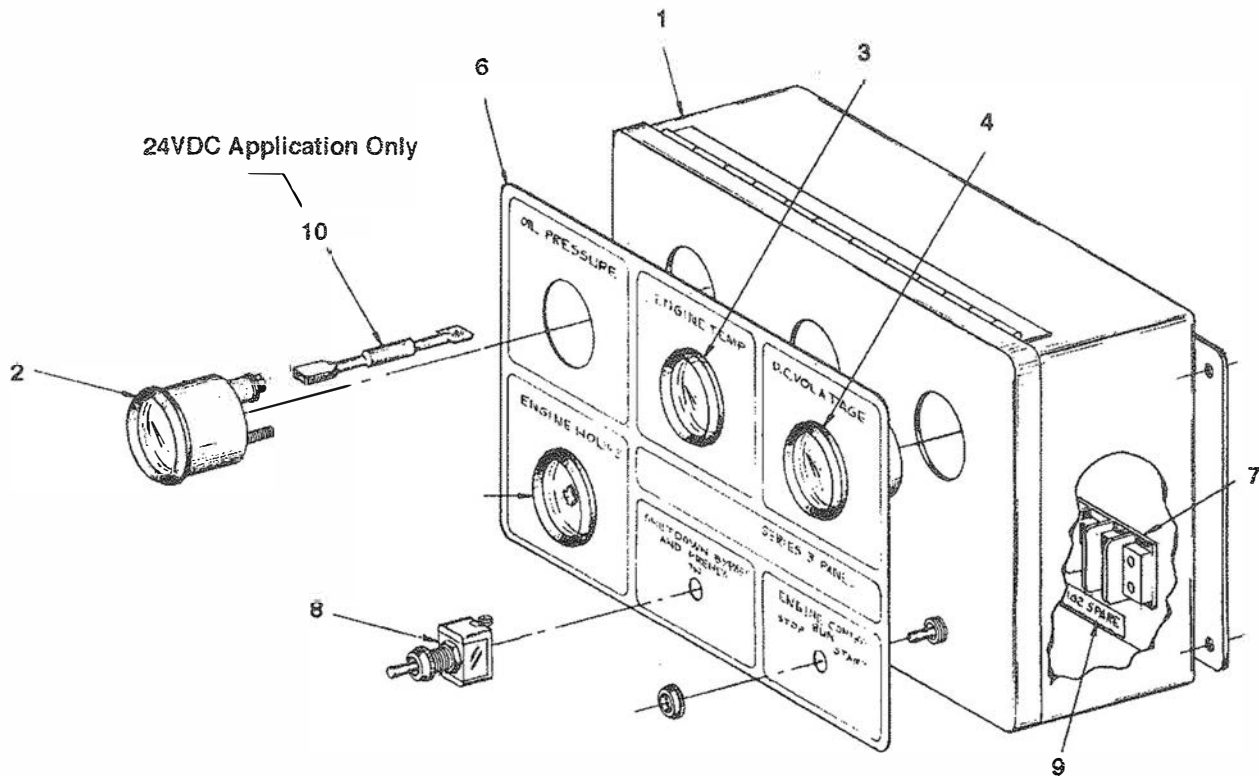
A-3122 & A-2931/C-2041B

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
..	22-70007	1	12V Relay Logic Board, complete (includes all keys)	-
..	22-70018	1	24V Relay Logic Board, complete (includes all keys)	-
1	22-41060	2	6AMP Diode (not shown)	-
2	22-42047	4	12Volt Relay SPDT	-
	22-40085	4	24Volt Relay SPDT	-
3	22-41032	4	Relay Base	-
4	22-40193	1	12 Connection Terminal Board, 600 VAC	-
5	22-40018	1	10AMP Circuit Breaker	-
6	28-40001	1	Relay Board Mounting Plate	-
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	Nylock Hex Nut #8 x 32	-
11	12-00089	2	Machine Screw, Flat Head Countersunk #8-32 x 1"	-
12	15-00001	4	Flat Washer #8	-

ELECTRICAL SYSTEM

S-3B CONTROL PANEL 12 & 24 VOLT

Marine and Industrial Generators Sets



A4722, A4723/C-2470

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
∞	22-91065	1	S-3B Control Panel 12 Volt (includes all Keys)	
∞	22-91066	1	S-3B Control Panel 24 Volt (includes all Keys)	
1	39-40008	1	Enclosure	-
2	37-40010	1	Oil Pressure Gauge	-
3	37-40011	1	Engine Temperature Gauge	-
4	37-40012	1	D.C. Volt Meter, 12Volt	-
	37-40014	1	D.C. Volt Meter, 24Volt	-
5	37-40013	1	Hour Meter	-
6	00-91018	1	Decal	-
7	22-41077	1	Terminal Board	-
8	22-41051	2	Switch	-
9	22-00052	1	Number Strip	-
10	22-40004	2	Resistor Kit (24Volt panel only)	-
11	22-44852	**	Bulb, 12Volt (not shown)	-
	22-44853	**	Bulb, 24Vott (not shown)	-
12	22-40257	1	Wiring Harness (not shown)	
			** As required	

DRIVE BELTS and BELT GUARD APPLICATION CHART**Heat Exchanged & Keel Cooled****Alternators**

12 Volt 72 Amp
 12 Volt 78 Amp
 24 Volt 35 Amp
 24 Volt 42 Amp

Drive Belts	M – NL445 & C-Series
RE51551	1500 – 1800 RPM
AT24833	1200 RPM (12Volt 78Amp Alternator only)
Belt Guard	M445 only
00-71698	Standard or 4-Groove Pulley (all RPM's)
00-71695	With PTO (all RPM's)

Alternator

12 Volt 130 AMP

Drive Belt	M – NL445 & C-Series
AR54592	1500 – 1800 RPM only
Belt Guard	M445 only
00-71038	Standard or 4-Groove Pulley (all RPM's)
00-71039	With PTO (all RPM's)

ENGINE OVERHAUL M445 & C-Series

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	29-11401	1	Gasket Kit for Engine Overhaul (includes all Keys)	-
1	RE37715	1	Gasket Kit (John Deere components)	-
2	11-11013	1	Gasket, Thermostat Cover	-
3	11-11043	1	Gasket, Heat Exchanger to Expansion Tank	-
4	11-11023	1	Gasket, Exhaust Manifold to Expansion Tank	-
5	11-30013	1	Gasket, Exhaust Flange	-
6	11-10015	2	Gasket, Thermostat Seal	-
7	11-31012	1	Gasket, Oil Supply to Turbocharger	-
8	11-31031	1	Gasket, Oil Return from Turbcharger	-
9	11-31401	1	Gasket, Turbocharger Mounting	-
10	16-01000	1	O-Ring	-
11	20-11028	2	Gasket, Heat Exchanger End Cover	-
12	16-11001	1	O-Ring	-
13	25-11032	1	Gasket, Raw Water Pump Cover	-
14	16-31000	1	O-Ring	-
15	11-31011	4	Gasket, Exhaust Port	-
16	11-21011	2	Gasket, Intake Port	-
19	11-11022	1	Gasket, Filler Neck Mounting	-
20	AR67942	1	Crankshaft Seal, Front	-
21	RE44574	1	Crankshaft Seal, Rear	-
			Note: Also order, as required	
		4	AR65507 Cylinder Liner Seal Kit	
		4	RE32011 Injector Packing Kit	
		4	R48000 Injector Tip Seal	

GASKET SETS

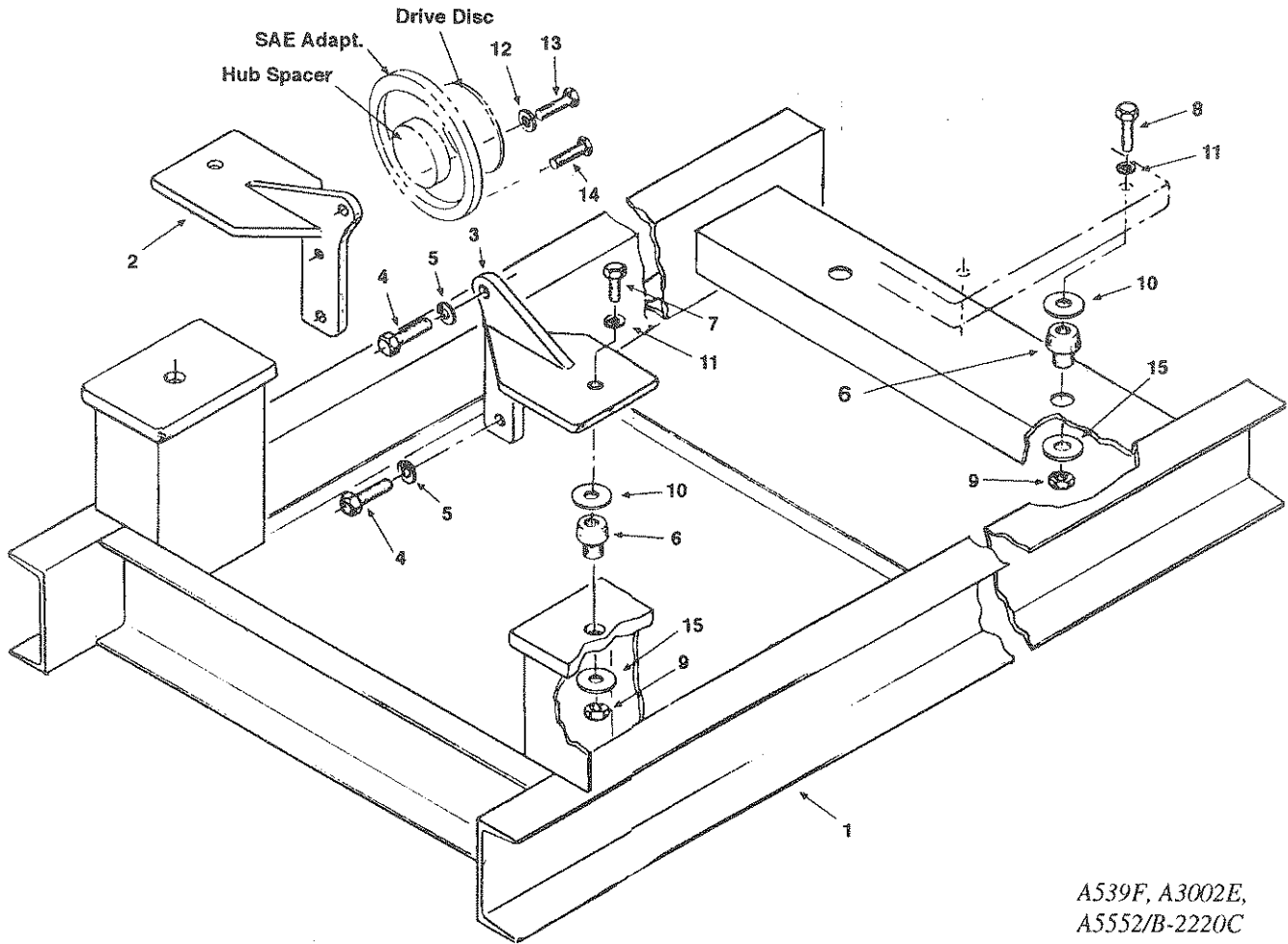
ENGINE OVERHAUL NL445

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	RE37715	1	Gasket Kit for Engine Overhaul (includes all Keys)	-
1	R90648	1	Gasket Gasket, Cylinder Block Plate	-
2	R98489	1	Gasket, Oil Cooler	-
3	R98488	1	Gasket, Oil Filter Adapter	-
4	R97351	1	Gasket, Flywheel Housing	-
5	T20328	1	Gasket, Oil Filler Cap	-
6	R56463	1	O-Ring, Vent Tube	-
7	T13213	1	Washer, Oil Drain Plug	-
8	R73521	1	Gasket, Rocker Arm Cover	-
9	R92425	1	Gasket, Cylinder Head	-
10	R98487	1	Gasket, Lower Oil Cooler Cover	-
11	R97348	1	Gasket, Turbocharger Inlet	-
12	R54638	1	Gasket, Thermostat Cover	-
13	R87627	8	O-Ring, Valve Stem	-
14	R80632	2	O-Ring, Oil Pump Tube	-
15	R61871	1	O-Ring, Oil Pump Intake	-
16	R98486	2	Gasket, Oil Cooler	-
17	R54641	1	Gasket, Thermostat Housing	-
18	R81275	1	Gasket, Air Inlet	-
19	R119269	1	Gasket, Timing Gear Cover	-
20	R97342	1	Gasket, Oil Pan	-
21	R97773	1	Gasket, Timing Gear Cover, Opening Cover	-
22	R90658	4	Gasket, Exhaust Manifold	-
23	R97352	1	Gasket, Timing Gear Cover Opening Cover	-
24	R97350	1	Gasket, Fuel Pump	-
25	U13639	1	O-Ring, Coolant Heater Plug	-
26	R56461	2	O-Ring, Thermostat/Water Pump Bypass Tube	-
27	T20273	1	Gasket, Timing Gear Cover Plate	-
28	T20243	1	Gasket, Water Pump Cover	-
29	R89879	1	Gasket, Turbocharger Mounting	-
30	R56814	1	O-Ring, Oil Cooler, Inner	-
31	R56815	1	O-Ring, Oil Cooler, Outer	-
32	R105346	1	Gasket, Turbocharger Outlet	-
33	T20304	1	Washer, Tachometer Drive Shaft	-
			Note: Also order, as required	
		1	AR67942 Crankshaft Seal, Front	
		1	RE44574 Crankshaft Seal, Rear	
		4	AR65507 Cylinder Liner Seal Kit	
		4	RE32011 Injector Packing Kit	
		4	RE48000 Injector Tip Seal	

FRAME & MOUNTING

BASE FRAME ASSEMBLY with CENTERBONDED MOUNTS

360 Frame Generators, Steel and Aluminum



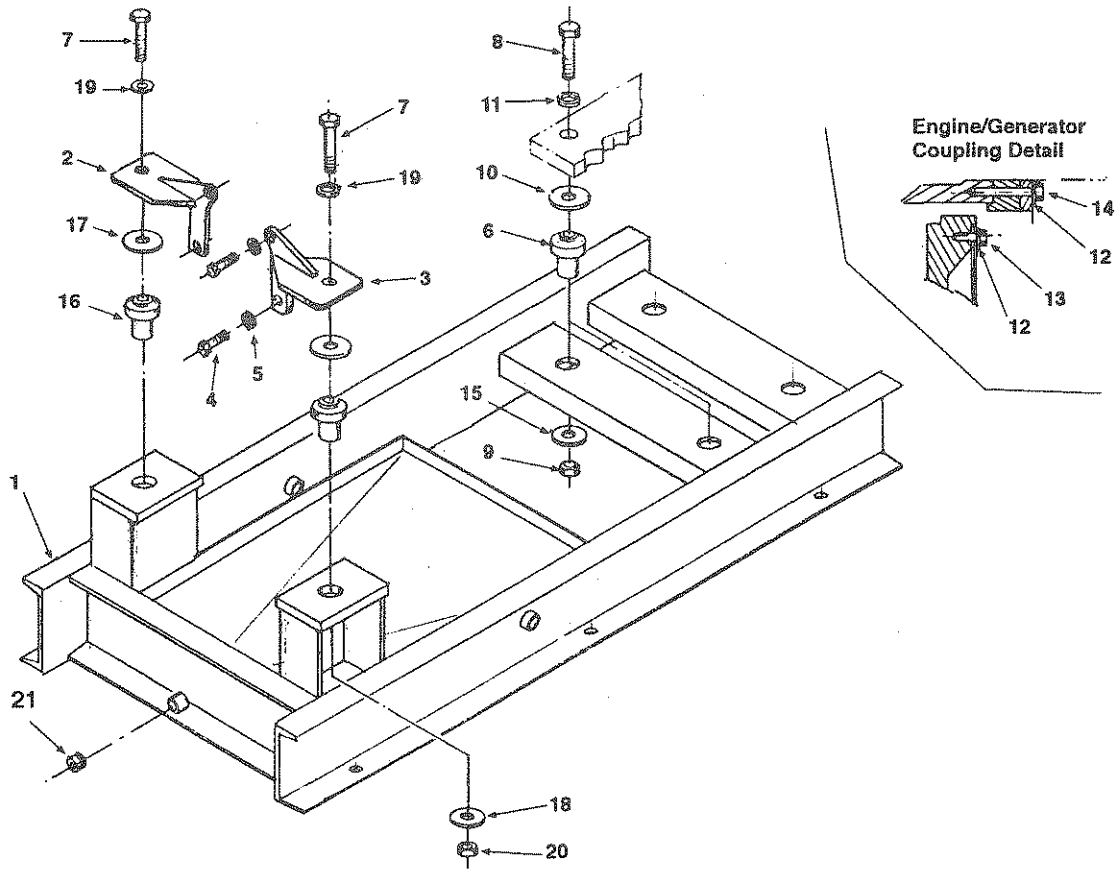
A539F, A3002E,
A5552/B-2220C

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-81006	1	Base Frame, Steel	-
	39-81026	1	Base Frame, Aluminum	-
	39-81010	1	Base Frame, Steel (C - Series)	-
2	23-81001	1	Bracket, Right Front Engine Mount	-
3	23-81002	1	Bracket, Left Front Engine Mount	-
4	12-00913	4	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
5	15-00902	4	Lock Washer 5/8"	-
6	33-81054	4	Mount, Centerbonded	-
7	12-00550	2	Capscrew, Hex Head 1/2-13 x 3"	-
8	12-00551	2	Capscrew, Hex Head 1/2-13 x 3-1/4"	-
9	14-00512	4	Nylock Nut 1/2-13"	-
10	15-00016	4	Head Washer	-
11	15-00501	4	Flat Washer 1/2"	-
12	15-00302	8	Lock Washer 3/8"	-
13	12-00311	8	Capscrew, Hex Head 3/8-16 x 3/4"	-
14	12-20312	12	Capscrew, Socket Head 3/8-16 x 1"	-
15	15-00026	4	Tail Washer	-

FRAME & MOUNTING

BASE FRAME ASSEMBLY with CENTERBONDED MOUNTS

440 Frame Generators, Aluminum and Steel

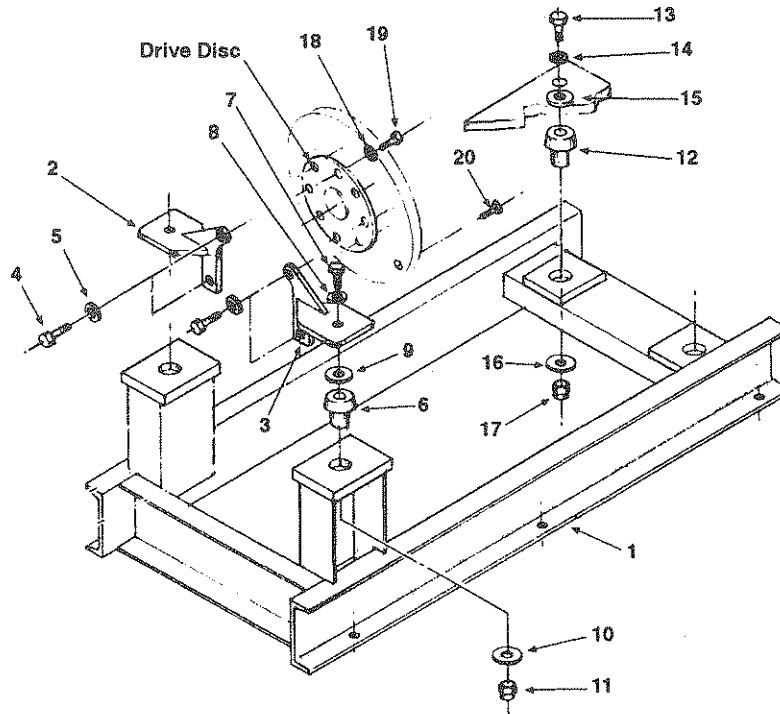


A2350, A3522/B-4148

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-81440	1	Base Frame, Aluminum	-
	39-81427	1	Base Frame, Steel	-
2	23-81001	1	Bracket, Right Front Engine Mounting	-
3	23-81002	1	Bracket, Left Front Engine Mounting	-
4	12-00913	4	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
5	15-00902	4	Lock Washer, Helical 5/8	-
6	33-81054	4	Mount, Centerbonded	-
7	12-00034	2	Capscrew, Hex Head 5/8-11 x 3-1/2"	-
8	15-00551	4	Capscrew, Hex Head 1/2-13 x 3-1/4"	-
9	14-00512	4	Hex Nut, Nylock 1/2-13	-
10	15-00016	4	Head Washer	-
11	15-00504	4	Flat Washer SAE 1/2"	-
12	15-00302	20	Lock Washer, Helical 3/8	-
13	12-00312	8	Capscrew, Hex Head 3/8-16 x 1"	-
14	12-00314	12	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
15	15-00026	4	Tail Washer	-
16	33-81002	2	Mount, Centerbonded	-
17	14-00015	2	Head Washer	-
18	15-00025	2	Tail Washer	-
19	15-01330	2	Flat Washer 5/8 SAE	-
20	14-00912	2	Hex Nut, Nylock 5/8-11	-
21	21-00530	1	Plug, Hex Head, Brass 1/2NPT	-

BASE FRAME ASSEMBLY C-Series

UC1224G Generator

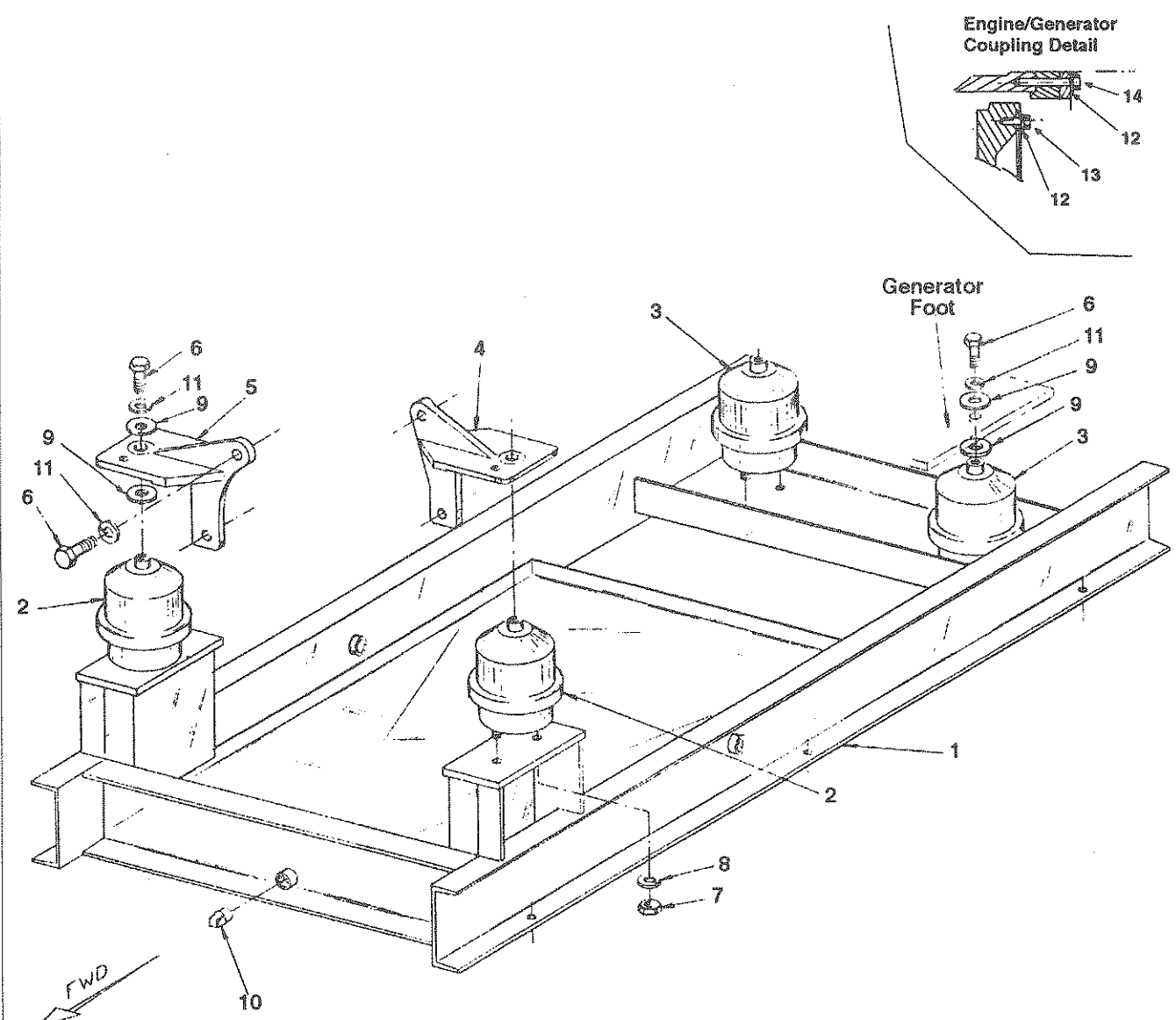


A6520/B-4203

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-81013	1	Base Frame	-
2	23-81001	1	Bracket, Right Front Engine Mounting	-
3	23-81002	1	Bracket, Left Front Engine Mounting	-
4	12-00913	4	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
5	15-00902	4	Lock Washer, Helical 5/8	-
6	33-81054	2	Mount, Centerbonded	-
7	12-00550	2	Capscrew, Hex Head 1/2-13 x 3"	-
8	15-00504	2	Flat Washer, SAE 1/2"	-
9	15-00016	2	Head Washer	-
10	15-00026	2	Tail Washer	-
11	14-00512	2	Hex Nut, Nylock 1/2-13	-
12	33-81054	4	Mount, Centerbonded	-
13	12-00551	4	Capscrew, Hex Head 1/2-13 x 3-1/4"	-
14	15-00504	4	Flat Washer, SAE 1/2"	-
15	15-00016	4	Head Washer	-
16	15-00026	4	Tail Washer	-
17	14-00512	4	Hex Nut, Nylock 1/2-13	-
18	15-00302	20	Lock Washer, Helical 3/8	-
19	12-00311	8	Capscrew, Hex Head 3/8-16 x 3/4"	-
20	12-00313	12	Capscrew, Hex Head 3/8-16 x 1-1/4"	-

BASE FRAME ASSEMBLY with HYDROLASTIC MOUNTS

360 Frame Generators, Aluminum and Steel

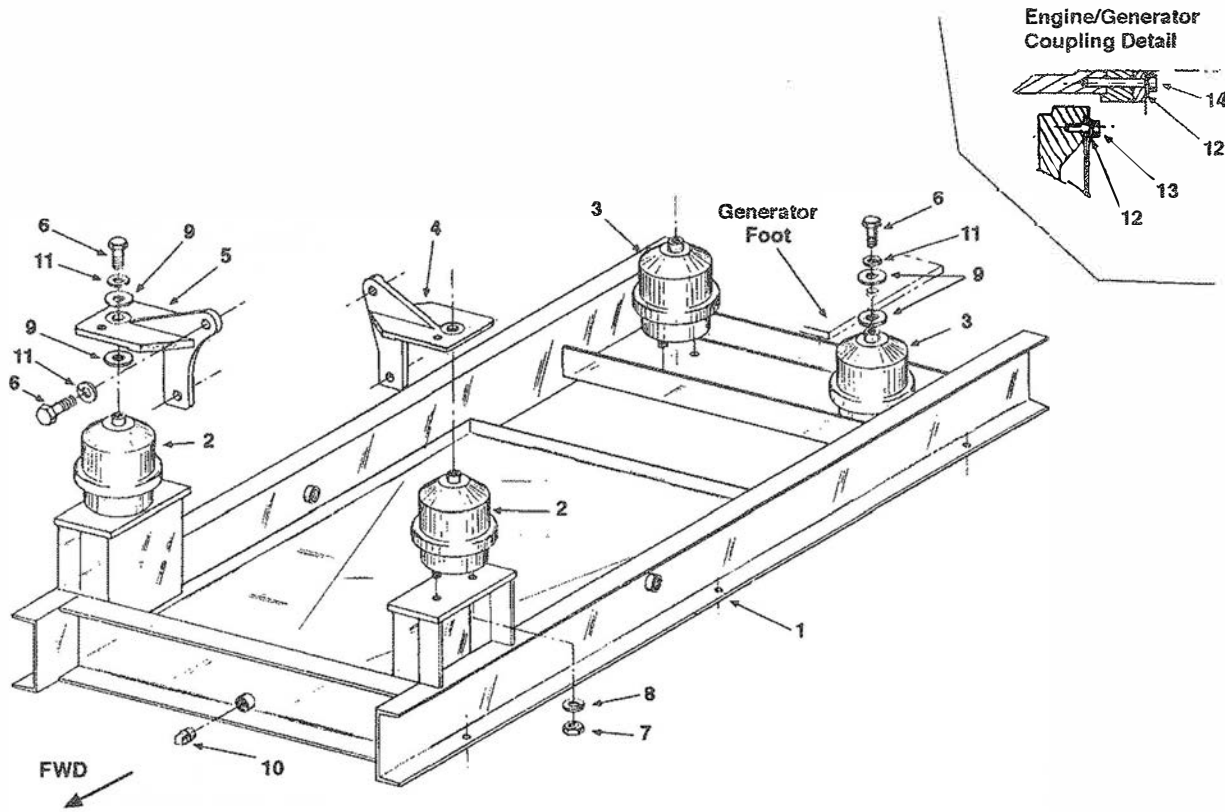


A3299A, A3387A/C-2026

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-81426	1	Base Frame, Aluminum	-
	39-81425	1	Base Frame, Steel	-
2	39-81013	2	Hydrolastic Mounts, Front	-
3	33-81012	2	Hydrolastic Mount, Rear	-
4	23-81002	1	Bracket, Left Front Engine Mount	-
5	23-81001	1	Bracket, Right Front Engine Mount	-
6	12-00913	8	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
7	14-00511	8	Hex Nut 1/2-13	-
8	15-00502	8	Lock Washer 1/2	-
9	15-00901	8	Flat Washer 5/8	-
10	21-00530	2	Plug 1/2 NPT	-
11	15-00902	4	Lock Washer 5/8	-
12	15-00302	8	Lock Washer 3/8	-
13	12-00311	8	Capscrew, Hex Head 3/8-16 x 3/4"	-
14	12-20312	12	Capscrew, Socket Head 3/8-16 x 1"	-

BASE FRAME ASSEMBLY with HYDROLASTIC MOUNTS

440 Frame Generators, Aluminum and Steel



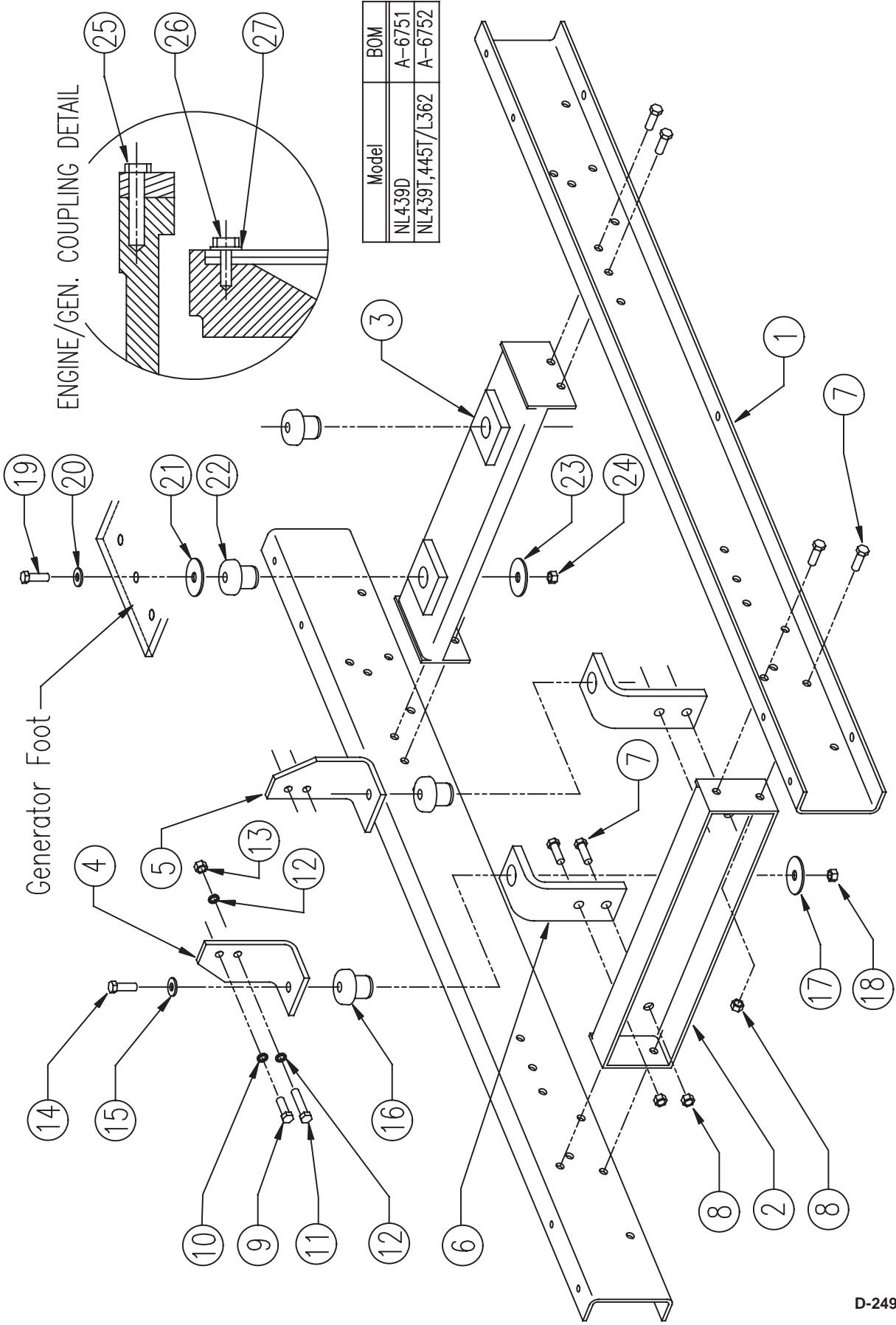
A3383B, A3390/C-2234A

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	39-81431	1	Base Frame, Aluminum	-
	39-81430	1	Base Frame, Steel	-
2	39-81014	2	Hydrolastic Mounts, Front	-
3	33-81015	2	Hydrolastic Mount, Rear	-
4	23-81002	1	Bracket, Left Front Engine Mount	-
5	23-81001	1	Bracket, Right Front Engine Mount	-
6	12-00913	8	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
7	14-00511	8	Hex Nut 1/2-13	-
8	15-00502	8	Lock Washer 1/2	-
9	15-00901	8	Flat Washer 5/8	-
10	21-00530	2	Plug 1/2 NPT	-
11	15-00902	4	Lock Washer 5/8	-
12	15-00302	20	Lock Washer 3/8	-
13	12-00312	8	Capscrew, Hex Head 3/8-16 x 1"	-
14	12-00314	12	Capscrew, Hex Head 3/8-16 x 1-1/2"	-

added 11-7-17

FRAME & MOUNTING

Base Frame NL439T-445T L360-362



D-2495A

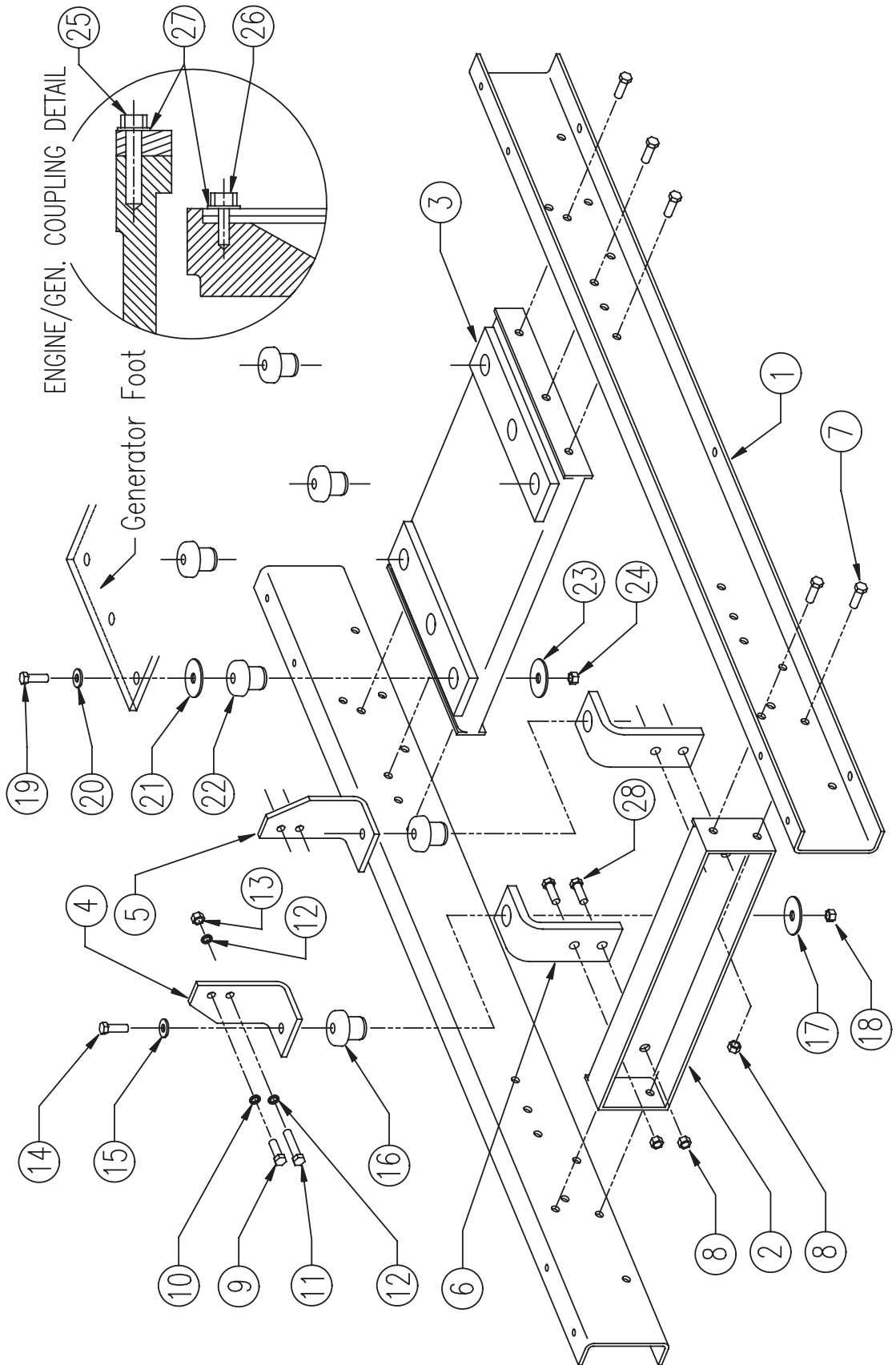
FRAME & MOUNTING

Base Frame NL439T-445T L360-362

Key	Part Number	Qty	Description	Serial Number
1	39-81002	2	Side Rail,Modular Base Frame	-
2	39-81014	1	Engine Support,Modular Base Frame	-
3	39-81004	1	Generator Support,Modular Base Frame M360 / Utc 224	-
4	23-81035	1	Bracket,Front Engine Mtg R.h.	-
5	23-81036	1	Bracket,Front Engine Mtg L.h.	-
6	23-81037	1	Bracket,Engine Support,Modular Base Frame	-
7	12-80513	8	Cap screw, Hex Head Serrated Flange 1/2-13 X 1-1/4" Grade 5 Zinc Plated * ("Whiz Lock")	-
8	14-00502	12	Lock Nut,Plain Flanged 1/2-13 Grade F Plated	-
9	12-00913	2	Cap screw, Hex Head 5/8-11 X 1-1/2"	-
10	15-00902	2	Lock Washer,Helia 1 5/8"	-
11	12-01318	2	Cap screw, Hex Head 5/8-11 X 2-1/2"	-
12	15-01330	4	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
13	14-00912	2	Hex Nut,Nylock 5/8-11	-
14	12-00034	2	Cap screw, Hex Head 5/8-11 X 3-1/2"	-
15	15-01330	2	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
16	33-81002	2	Mount,Centerbonded 500 Lb 42-48 Durometer (No Color Code Marking)	-
17	15-00025	2	Tail Washer 2.50" X 0.64" X 0.125"	-
18	14-00912	2	Hex Nut,Nylock 5/8-11	-
19	12-00034	2	Cap screw, Hex Head 5/8-11 X 3-1/2"	-
20	15-01330	2	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
21	15-00015	2	Head Washer 2.75" X 0.64" X 0.125"	-
22	33-81008	2	Mount,Centerbonded 650 Lbs 47-53 Durometer (White Or Orange Color Code Marking)	-
23	15-00025	2	Tail Washer 2.50" X 0.64" X 0.125"	-
24	14-00912	2	Hex Nut,Nylock 5/8-11	-
25	12-20312	12	Cap screw,Sk Hd 3/8-16 X 1" Zinc Plated As m A574	-
26	12-00311	8	Cap screw, Hex Head 3/8-16 X 3/4" Grade 5	-
27	15-00302	8	Lock Washer,Helia 1 3/8"	-
28	12-80514	4	Cap screw, Hex Head Serrated Flange 1/2-13 X 1-1/2" Grade 5 Zinc Plated * ("Whiz Lock")	-

FRAME & MOUNTING

Base Frame NL445T/L440



D-2500A

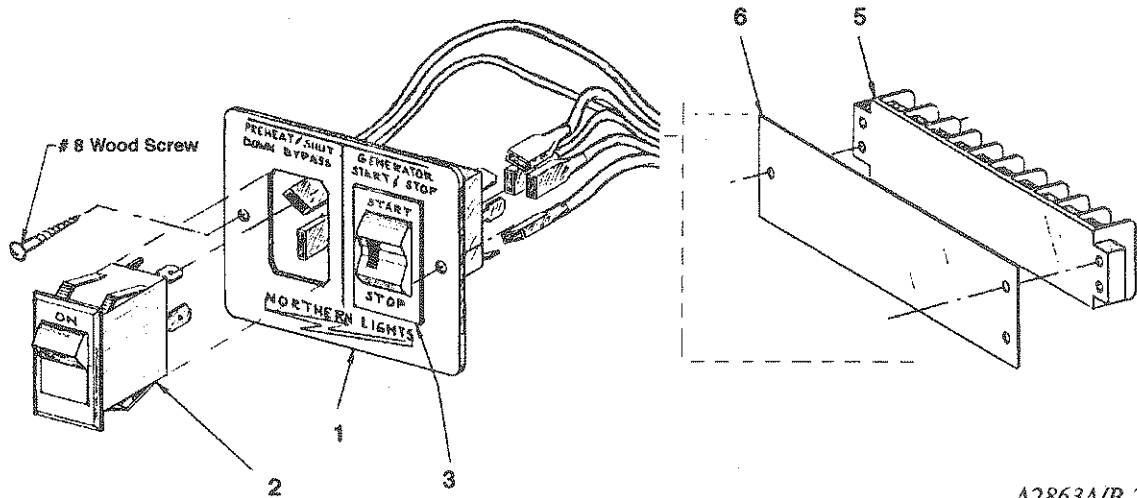
FRAME & MOUNTING

Base Frame NL445T/L440

Key	Part Number	Qty	Description	Serial Number
1	39-81002	2	Side Rail,Modular Base Frame	-
2	39-81014	1	440-430 Generator Support,Modular Base Frame	-
3	39-81003	1	Generator Support,Modular Base Frame M360 / Utc 224	-
4	23-81035	1	Bracket,Front Engine Mtg R.h.	-
5	23-81036	1	Bracket,Front Engine Mtg L.h.	-
6	23-81037	1	Bracket,Engine Support,Modular Base Frame	-
7	12-80513	8	Cap screw, Hex Head Serrated Flange 1/2-13 X 1-1/4" Grade 5 Zinc Plated * ("Whiz Lock")	-
8	14-00502	12	Lock Nut,Plain Flanged 1/2-13 Grade F Plated	-
9	12-00913	2	Cap screw, Hex Head 5/8-11 X 1-1/2"	-
10	15-00902	2	Lock Washer,Helia 1 5/8"	-
11	12-01318	2	Cap screw, Hex Head 5/8-11 X 2-1/2"	-
12	15-01330	4	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
13	14-00912	2	Hex Nut,Nylock 5/8-11	-
14	12-00034	2	Cap screw, Hex Head 5/8-11 X 3-1/2"	-
15	15-01330	2	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
16	33-81002	2	Mount,Centerbonded 500 Lb 42-48 Durometer (No Color Code Marking)	-
17	15-00025	2	Tail Washer 2.50" X 0.64" X 0.125"	-
18	14-00912	2	Hex Nut,Nylock 5/8-11	-
19	12-00034	4	Cap screw, Hex Head 5/8-11 X 3-1/2"	-
20	15-01330	4	Flat Washer 5/8" Sae Zinc Plated Anis Type A (Narrow)	-
21	15-00015	4	Head Washer 2.75" X 0.64" X 0.125"	-
22	33-81002	4	Mount,Centerbonded 500 Lb 42-48 Durometer (No Color Code Marking)	-
23	15-00025	4	Tail Washer 2.50" X 0.64" X 0.125"	-
24	14-00912	4	Hex Nut,Nylock 5/8-11	-
25	12-20314	12	Cap screw, Hex Head 3/8-16 X 1-1/2" Grade 5	-
26	12-00312	8	Cap screw, Hex Head 3/8-16 X 1" Grade 5	-
27	15-00302	8	Lock Washer,Helia 1 3/8"	-
28	12-80514	4	Cap screw, Hex Head Serrated Flange 1/2-13 X 1-1/2" Grade 5 Zinc Plated * ("Whiz Lock")	-

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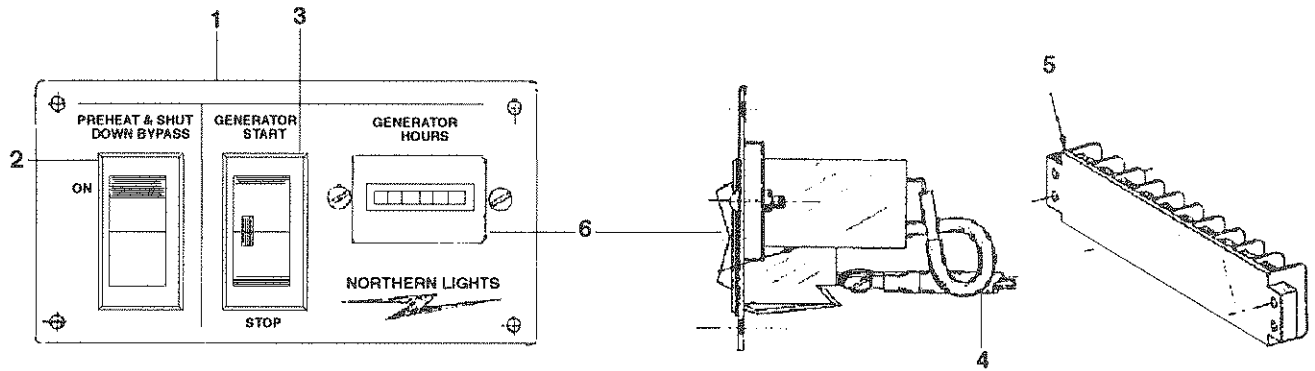
SERIES 1 CONTROL PANEL



A2863A/B-2873A

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	22-90005	1	Series 1 Control Panel 12 Volt (includes all Keys)	-
**	22-95435	1	Series 1 Control Panel 24 Volt (includes all Keys)	-
1	00-40013	1	Plate	-
2	22-90007	1	Rocker Switch (Shut Down/By Pass)	-
3	22-90008	1	Rocker Switch (Start/Stop)	-
4	22-40019	1	Wire Harness 18"	-
5	22-41077	1	Terminal Strip	-
6	22-00052	1	Number Strip	-
7	22-40012	1	Resistor (24 Volt Only - not shown)	-

SERIES 1B CONTROL PANEL

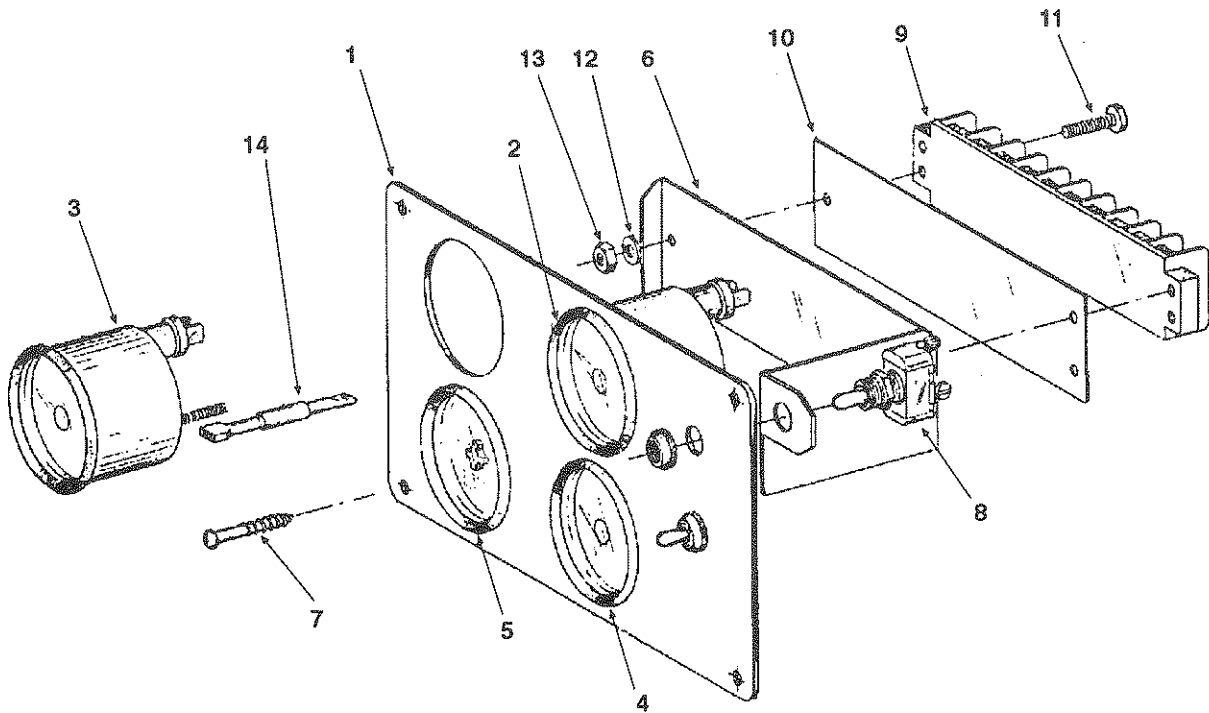


A3171C/B-2986A

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	22-90006	1	Series 1B Control Panel 12 Volt (includes all Keys)	-
**	22-95430	1	Series 1B Control Panel 24 Volt (includes all Keys)	-
1	22-90003	1	Plate, Series 1 Control Panel	-
2	22-90007	1	Rocker Switch (Shut Down/By Pass)	-
3	22-90008	1	Rocker Switch (Start/Stop)	-
4	22-40019	1	Wire Harness 18"	-
5	22-41077	1	Terminal Strip	-
6	22-90009	1	Hour Meter	-
7	22-40012	1	Resistor (24 Volt Only - not shown)	-

ACCESSORIES & OPTIONAL EQUIPMENT

SERIES S-3C FLUSH CONTROL PANEL



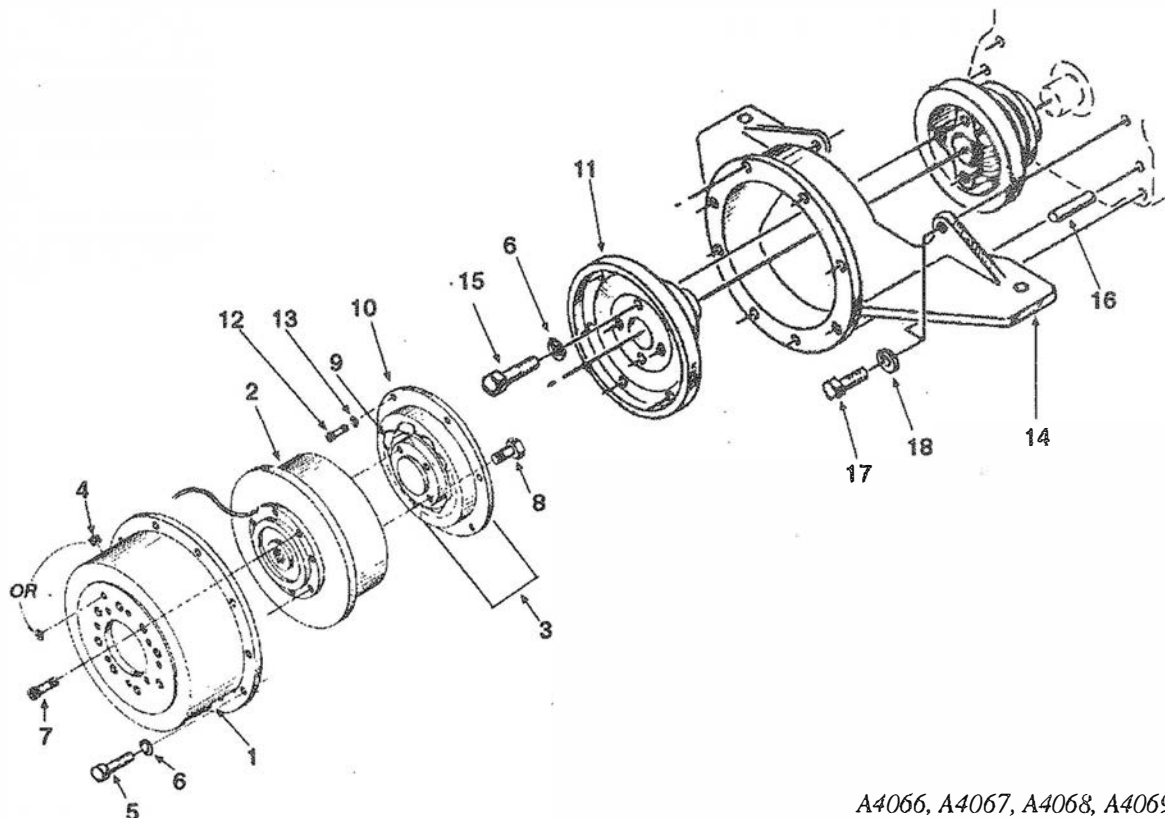
A4735, A4734/C-2465

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
**	22-91070	1	S-3C Flush Control Panel 12Volt (includes all Keys)	-
**	22-91071	1	S-3C Flush Control Panel 24Volt (includes all Keys)	-
1	28-90010	1	Plate	-
2	37-40010	1	Oil Pressure Gauge 0-80 PSI	-
3	37-40011	1	Engine Temperature Gauge 250°	-
4	37-40012	1	D.C. Voltmeter 12Volt	-
	37-40014	1	D.C. Voltmeter 24Volt	-
5	37-40013	1	Engine Hour Meter	-
6	23-91019	1	Bracket	-
7	12-90001	4	Screw, Philips Round Head #6 x 1" Black	-
8	22-41051	2	Switch, Toggle	-
9	22-41077	1	Terminal Board	-
10	22-00052	1	Number Strip	-
11	12-00005	2	Machine Screw #8-32 x 3/4"	-
12	15-00000	2	Lock Washer, Helical #8	-
13	14-00000	2	Hex Nut, Steel #8-32	-
14	22-40004	2	Resistor Kit (24Volt Panel only)	-
15	22-44852	**	Bulb 12Volt (not shown)	-
	22-44853	**	Bulb 24Volt (not shown)	-
			**As Required	

ACCESSORIES & OPTIONAL EQUIPMENT

ELECTRIC CLUTCH and PTO ASSEMBLY M445 & C-Series

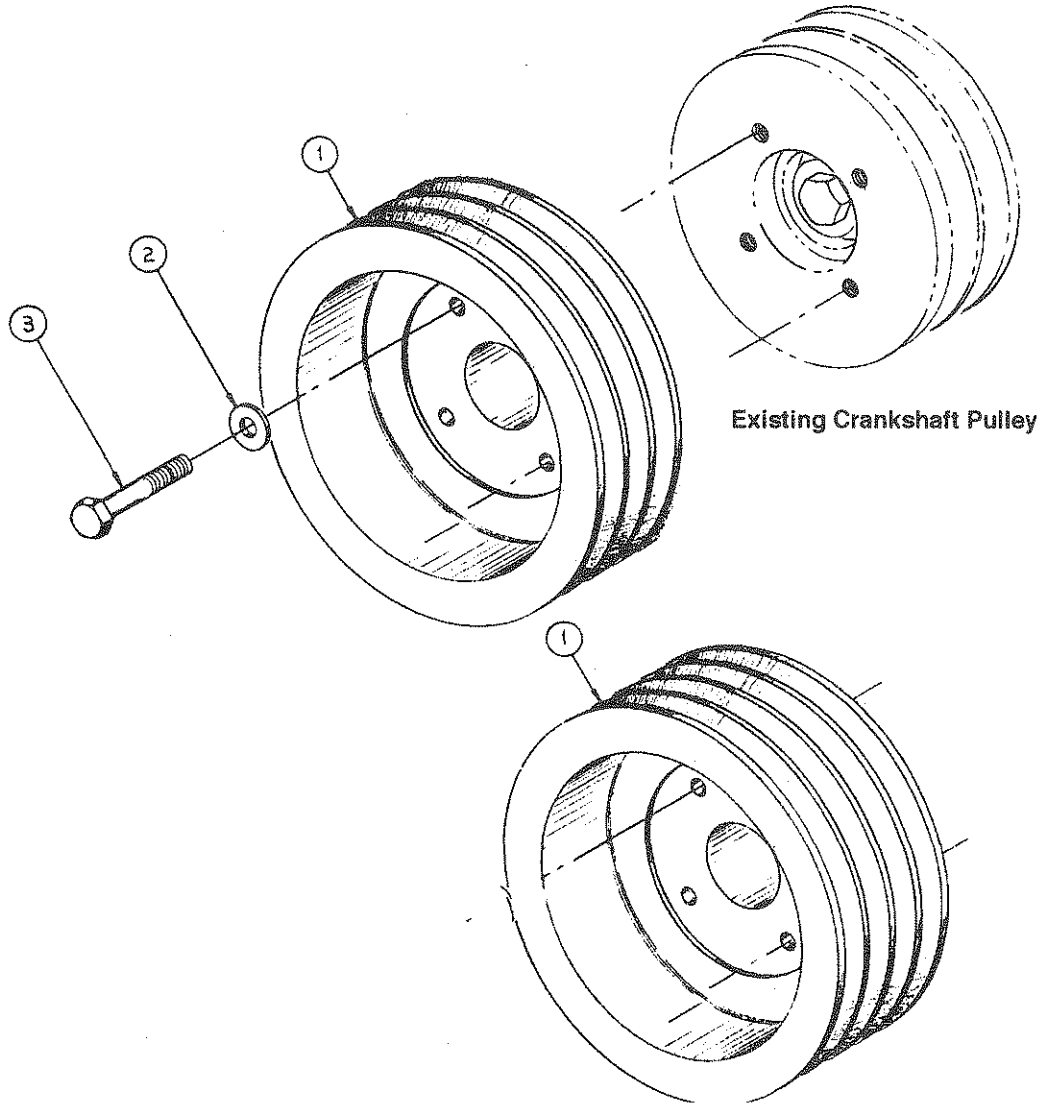
SAE 5/C-108



A4066, A4067, A4068, A4069,
A4054, A4055, A3856, A3857B,
A4438/C-2235, C-2309, C-2394

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	10-60004	1	Housing, B-Pad	-
	10-60003	1	Housing, C-Pad	-
2	34-60020	1	Electric Clutch, H-36 B-Spline 12 Volt	-
	34-60018	1	Electric Clutch, H-36 C-Spline 12 Volt	-
	34-60028	1	Electric Clutch, H-36 B-Spline 24 Volt	-
	34-60027	1	Electric Clutch, H-36 C-Spline 24 Volt	-
3	34-61455	1	Drive Assembly (includes Keys 9 & 10)	-
4	00-61003	1	Grommet	-
5	12-00313	8	Capscrew, Hex Head 3/8-16 x 1-1/4"	-
6	15-00321	12	Fiat Washer 3/8 SAE	-
7	12-00035	8	Capscrew, Socket Head 3/8-16 x 3/4"	-
8	12-60001	4	Capscrew Hex Head 7/16-20 x 1-3/4"	-
9	00-61001	**	Drive Block	-
10	34-60053	1	Drive Ring	-
	34-60054	1	Drive Spider	-
	34-60056	1	Drive Hub	-
11	34-61411	1	PTO Carrier SAE #8	-
12	12-00312	6	Capscrew, Hex Head 3/8-16 x 1"	-
13	15-00301	6	Fiat Washer 3/8	-
14	23-71001	1	Bracket SAE #5	-
15	12-00314	4	Capscrew, Hex Head 3/8-16 x 1-1/2"	-
16	32-81001	2	Dowel Pin .625 x 1.5"	-
17	12-00913	4	Capscrew, Hex Head 5/8-11 x 1-1/2"	-
18	15-00902	4	Lock Washer, Helical 5/8	-
			** As required	

CRANKSHAFT PULLEY



A4447/B-3732

KEY	PART NUMBER	QTY.	DESCRIPTION	SERIAL NUMBER
1	34-61041	1	Crankshaft Pulley 3 A-B x 8"	-
	34-61039	1	Crankshaft Pulley 4A x 8"	-
2	15-00321	4	Flatwasher 3/8 SAE	-
3	12-00316	4	Capscrew, Hex Head 3/8-16 x 2"	-

ACCESSORIES & OPTIONAL EQUIPMENT

Water Level Switch/ Gauge Assembly

Key	Part Number	Qty	Description	Serial Number
1	22-10003	1	Water Level Switch / Gauge, ISO Ground	-
2	12-00111	4	Capscrew, Hex Head 1/4-20 x 3/4"	-
3	15-00111	6	Flat Washer 1/4"	-
4	15-00121	2	Flat Washer 1/4 SAE	-
5	14-00112	4	Hex Nut, Nylock 1/4-20	-
6	21-70000	1	Blind Hole Connector 1/4 Tube, Compression	-
7	21-51045	1	Comp. Tube Ftg. 1/4 HB x 1/4 Comp.	-
8	21-52207	1	Street Tee, Brass 1/4 NPT	-
9	21-52208	1	Male Connector, Brass 1/4 NPT x 18/4-45T	-
10	21-71045	1	Female Swivel, Brass 1/4 HB x 1/4-45T	-
11	19-53200	2	Adelle Clamp 1/2" ID x 1/4 Stud	-
12	41-01011	1	Hose 1/4" ID Push-On	-



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