


Crusader[®]



MARINE

ILLUSTRATED

PARTS MANUAL

MODEL MP6.0L

2006 MY

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“TYPICAL VIEWS ARE SHOWN”

ENGINE ROTATION

Engine Rotation is identified as “RH” or “LH” with the engine model number. Rotation always is determined from the flywheel end looking toward the front of the engine. In some instances, propeller shaft rotation may be opposite to that of the engine.

When ordering a replacement engine, production block or parts for the engine, be certain to check engine rotation. **DO NOT rely on propeller rotation in order to determine engine rotation.**

LEFT-HAND ROTATION is STANDARD ROTATION.

(Flywheel turns counterclockwise when viewed from flywheel end of the engine.)

RIGHT-HAND ROTATION is OPPOSITE ROTATION.

(Flywheel turns clockwise when viewed from flywheel end of the engine.)

HOW TO READ THIS PARTS BOOK:

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RB001005I	1	Base Engine Assembly, 6.0L	

①
②
③
④
⑤

- ① ITEM NUMBER - This number corresponds with the number in the exploded view on the facing page.
- ② PART NUMBER - This is the designated part number for the particular component or assembly.
- ③ QUANTITY - This refers to the number of pieces used.
- ④ DESCRIPTION - This identifies what the component or assembly is.
- ⑤ MODEL ID - This identifies a component or assembly that is unique to a specific engine model.

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Symbols shown throughout parts list are defined here or on the bottom of the individual parts list page.

- AR = As Required
- OPT = Optional
- NSS = Not Serviced Separately
- NA = Not Available
- OS = Oversize
- US = Undersize
- TBD = To Be Determined
- NI = Not Illustrated

=====

REPLACEMENT PARTS:



WARNING:

Electrical, ignition and fuel system components on Crusader Engines are designed and manufactured to comply with U.S. Coast Guard rules and regulations to minimize risks of fire or explosion.

Use of replacement electrical, ignition and fuel system components which do not comply with these rules and regulations could result in a fire or explosion hazard and should be avoided.

MAINTENANCE ITEM PART NUMBERS:

Description	Part Number
Oil Filter	22679
Kit, Transmission Oil Filter (ZF)	RP077011
Fuel Filter, screen and gasket, pre-filter	RP077014
Fuel Filter, FCC	RP080026
Fuel Filter, element, Racor	47047
Spark Plugs	RP030011
Spark Plug Wire Set	RK120021A
Serpentine Drive Belt	R066027
Raw Water Pump Impeller Kit	RP061022
Thermostat (170°)	R026007
On-Board Spare Parts Kit (w/ FCC Fuel System)	RK173092-05
On-Board Spare Parts Kit (w/ Returnless Fuel System)	RK173092A-05

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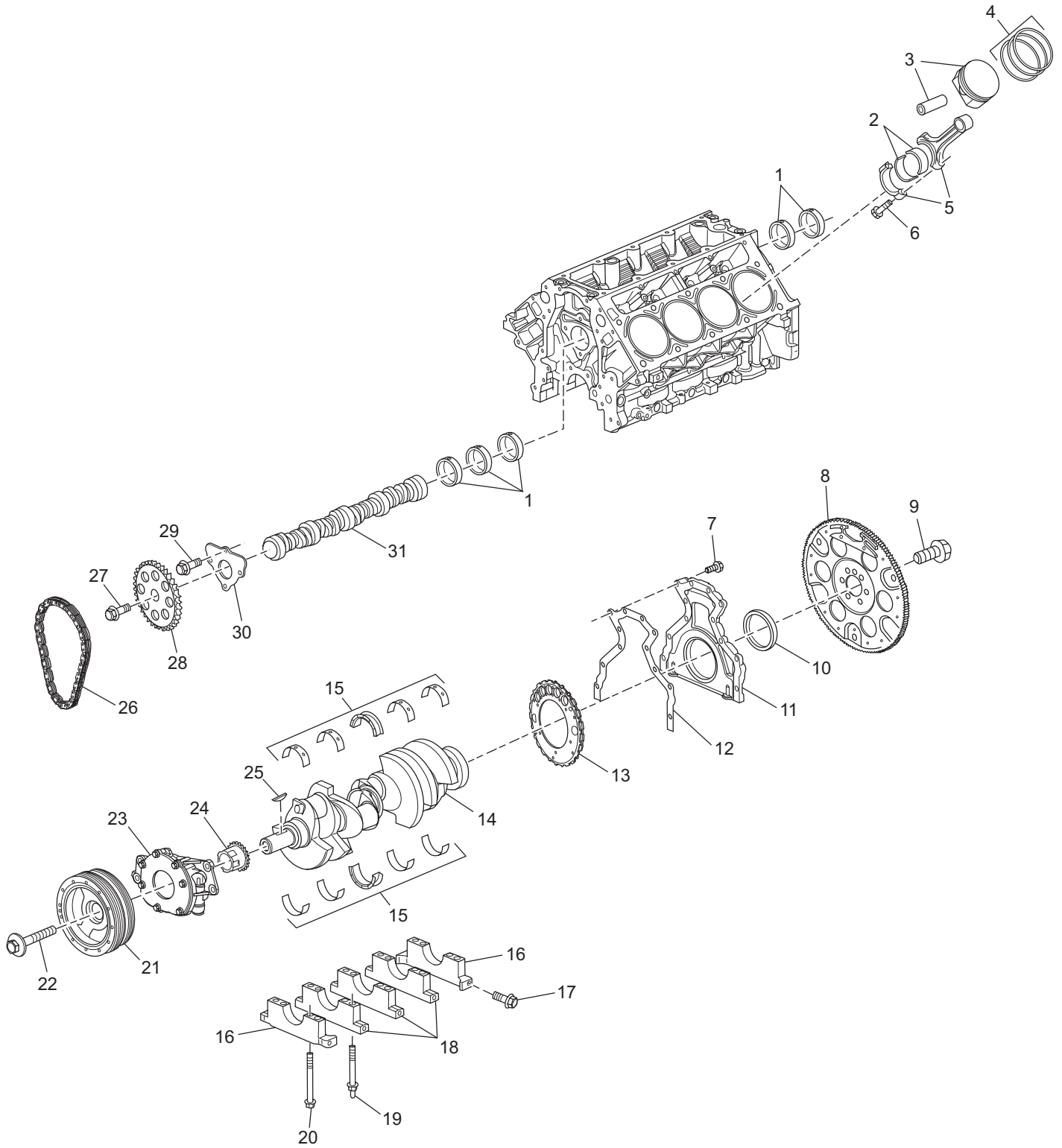
CHANGE NOTICE:

Change Pages	Date Updated
15	04/07
9, 25, 40-41, 55	05/07

MARINE TRANSMISSIONS:

Crusader Engines are equipped with Velvet Drive or Hurth Transmissions, standard or "V"-drive. If transmission parts are required, contact your dealer or closest Crusader Parts Distributor for required parts. Parts manuals and overhaul manuals are available through Crusader Distributors.

CYLINDER BLOCK ASSEMBLY - FIGURE 1

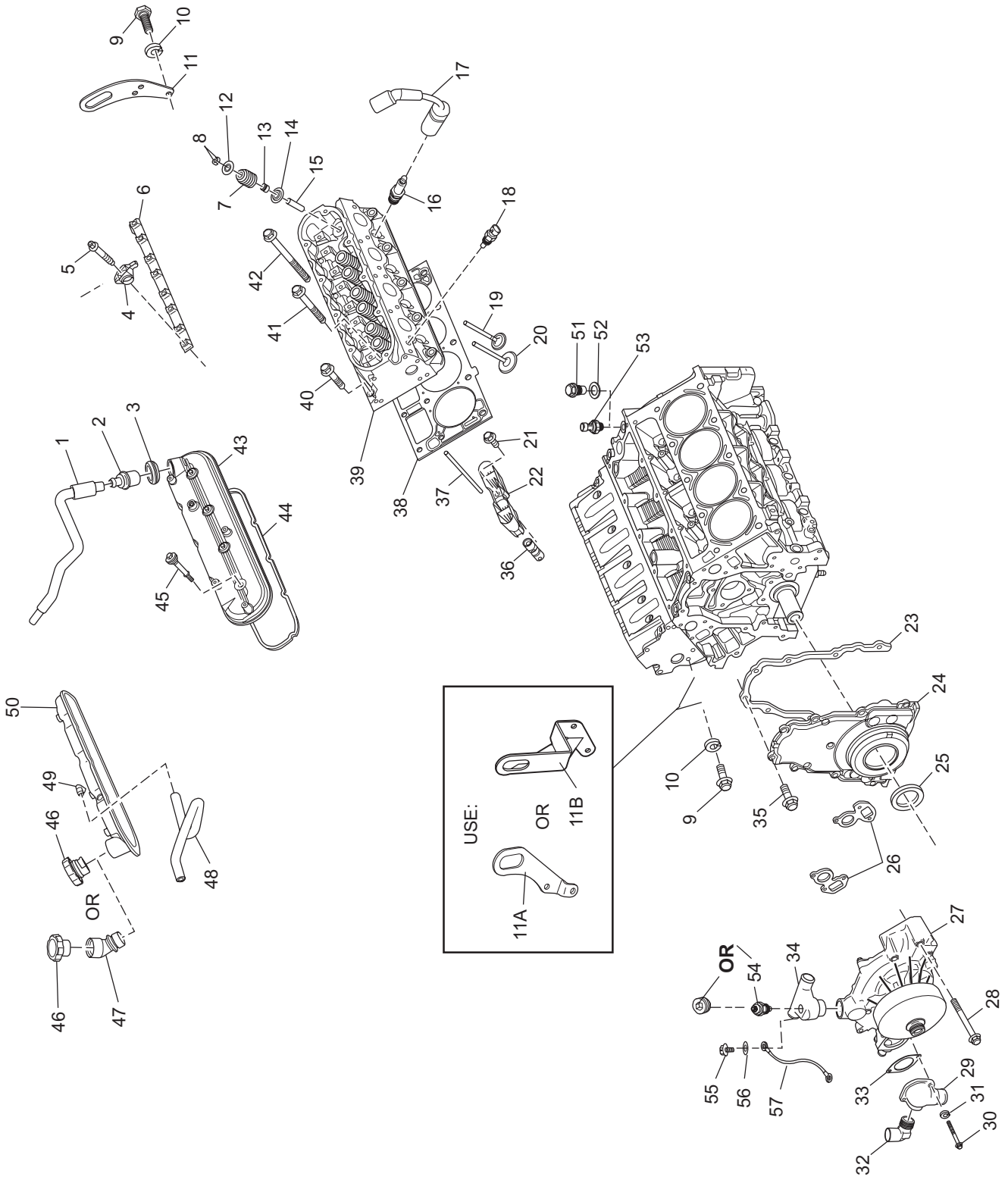


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CYLINDER BLOCK ASSEMBLY - FIGURE 1

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
*	RB001021		Base Engine Assembly	
1	TBD	1	Bearing Set , camshaft	
2	R007029	8	Bearing , for one connecting rod (STD)	
3	RA013018	8	Piston w/Pin , (STD)	
4	TBD	8	Ring Set , piston (STD)	
5	TBD	8	Connecting Rod (STD)	
6	TBD	16	Bolt , connecting rod cap	
7	TBD	12	Bolt , rear engine cover	
8	RA138016	1	Flywheel Assembly	
9	R009205	6	Bolt , flywheel attaching	
10	R047236	1	Seal , crankshaft rear oil	
11	TBD	1	Cover , rear engine	
12	TBD	1	Gasket , rear engine cover	
13	p/o item #14	1	Reluctor Ring , crankshaft	
14	TBD	1	Crankshaft Assembly	
15	TBD	1	Bearing Set , crankshaft	
16	TBD	2	Cap , crankshaft bearing #1 and #5	
17	TBD	10	Bolt , crankshaft bearing cap side	
18	TBD	3	Cap , crankshaft bearing #2 - #4	
19	TBD		Stud , crankshaft bearing cap attaching	
20	TBD		Bolt , crankshaft bearing cap attaching	
21	R064016	1	Balancer , crankshaft	
22	TBD	1	Bolt , crankshaft balancer	
23	TBD	1	Oil Pump Assembly	
24	TBD	1	Drive , oil pump	
25	TBD	1	Key , crankshaft	
26	TBD	1	Chain , timing	
27	TBD	1	Bolt , camshaft sprocket attaching	
28	TBD	1	Sprocket , camshaft	
29	TBD	3	Bolt , camshaft retainer attaching	
30	TBD	1	Retainer , camshaft	
31	TBD	1	Camshaft	

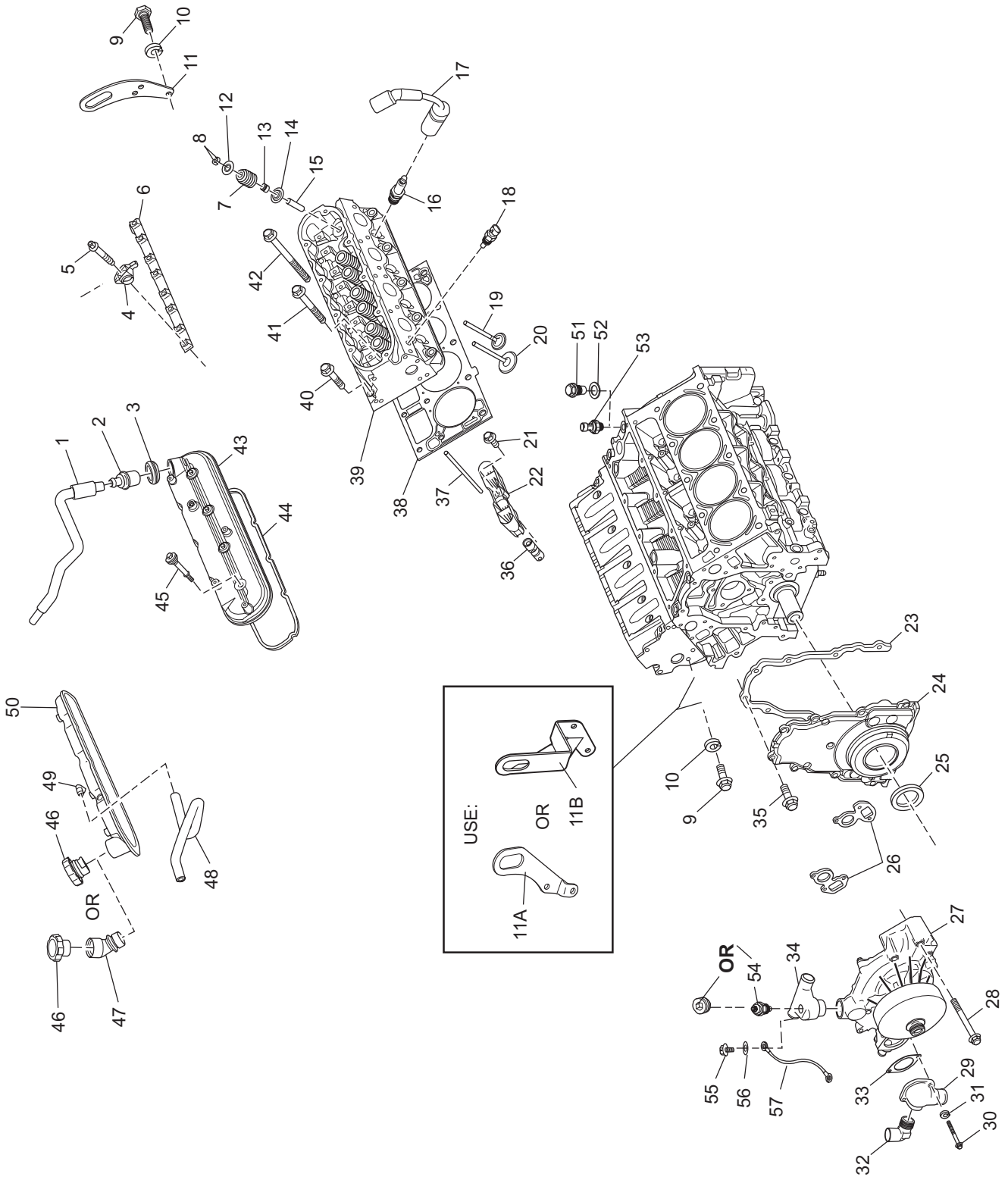
CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2



CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	TBD	1	Hose , PCV valve	
2	TBD	1	Valve , positive crankcase ventilation (PCV)	
3	TBD	1	Grommet , PCV valve	
4	TBD	16	Rocker Arm , valve	
5	TBD	16	Bolt , valve rocker arm attaching	
6	TBD	2	Guide , valve rocker arm	
7	TBD	16	Valve Spring Assembly	
8	TBD	32	Retainer , valve stem	
9	98443025	4	Bolt , lifting eye attaching	
10	93940000	4	Lockwasher , lifting eye attaching bolt	
11	R042012	1	Lifting Eye , rear, all	
11A	R042014	1	Lifting Eye , front, std. drive (replaces R042012)	
11B	R042016	1	Lifting Eye , front, v-drv (replaces R042012)	
12	TBD	16	Cap , valve spring	
13	TBD	16	Seal , valve stem	
14	TBD	32	Rotator , valve	
15	TBD	16	Guide , valve stem	
16	RP030011	8	Spark Plug	
17	RK120021A	1	Spark Plug Wire Set	
18	R020046	1	Engine Coolant Temperature (ECT) Sensor	
19	TBD	8	Valve , exhaust (STD)	
20	TBD	8	Valve , intake (STD)	
21	TBD	8	Bolt , valve lifter retainer attaching	
22	TBD	8	Retainer , valve lifter	
23	RM0280	1	Gasket , front engine cover	
24	TBD	1	Cover , front engine	
25	R047237	1	Seal , front engine cover oil	
26	RM0281	2	Gasket , water circulating pump	
27	RK057033C	1	Water Circulation Pump Assembly	
28	TBD	4	Bolt , water circulating pump attaching	
29	R025036	1	Housing , thermostat	
30	98223016	2	Bolt , thermostat housing attaching	
31	93920000	2	Washer , thermostat housing attaching	
32	727003	1	Fitting , 90 degree	
33	RM0275	2	Gasket , thermostat housing	
34	R025035A	1	Waterneck , tee, F/W outlet	
35	TBD	8	Bolt , front engine cover attaching	
NI	R069071	1	Cup , plug, SSTL, 29 MM, circ pump	

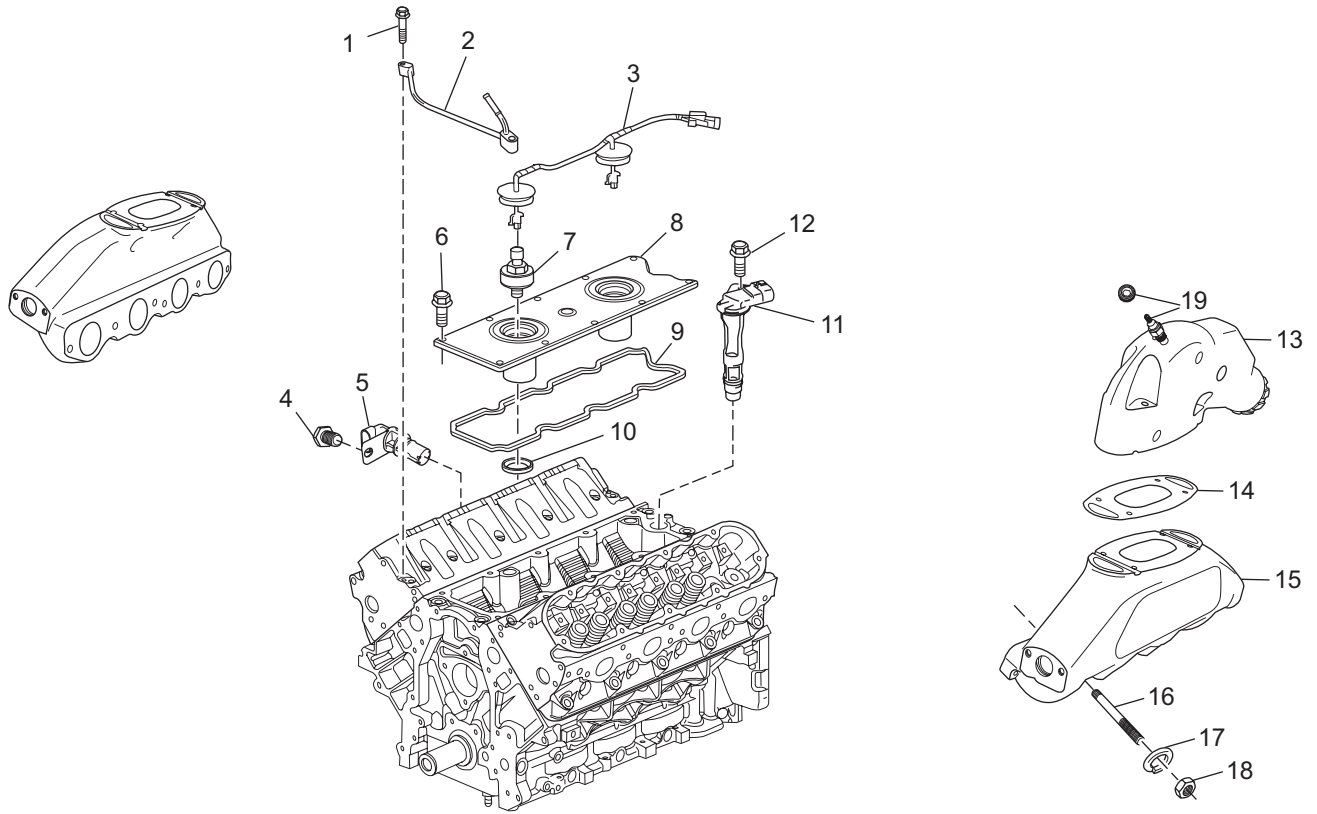
CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2 (cont'd)



CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2 (cont'd)

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
36	R040006	16	Lifter , valve	
37	TBD	16	Push Rod	
38	RM0278	2	Gasket , Cylinder Head	
39	R003016	2	Cylinder Head	
40	R009208	4	Bolt , cylinder head (short)	
41	R009209	10	Bolt , cylinder head (medium)	
42	R009207	16	Bolt , cylinder head (long)	
43	RA033016	1	Cover , rocker (LH)	
44	RM0282	2	Gasket , rocker cover	
45	R009210	8	Bolt , rocker cover attaching	
46	R034038B	1	Cap , oil fill tube	
47	R034049	1	Tube , oil fill	
48	TBD	1	Tube , breather	
49	TBD	1	Fitting , breather tube	
50	RA033017	1	Cover , rocker w/Oil Fill (RH)	
51	R069072	1	Bolt , oil galley	
52	p/o item #51	1	Seal , oil galley bolt	
53	R020048	1	Sensor , oil pressure	07-600V-01
54	R020002	1	Sensor , temperature	
54	RS3551	1	Plug , water neck tee	07-600V-01
55	RS5117	1	Screw , self tapping	
56	92100000	1	Washer , flat	
57	R101013A	1	Wire , grounding	

EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

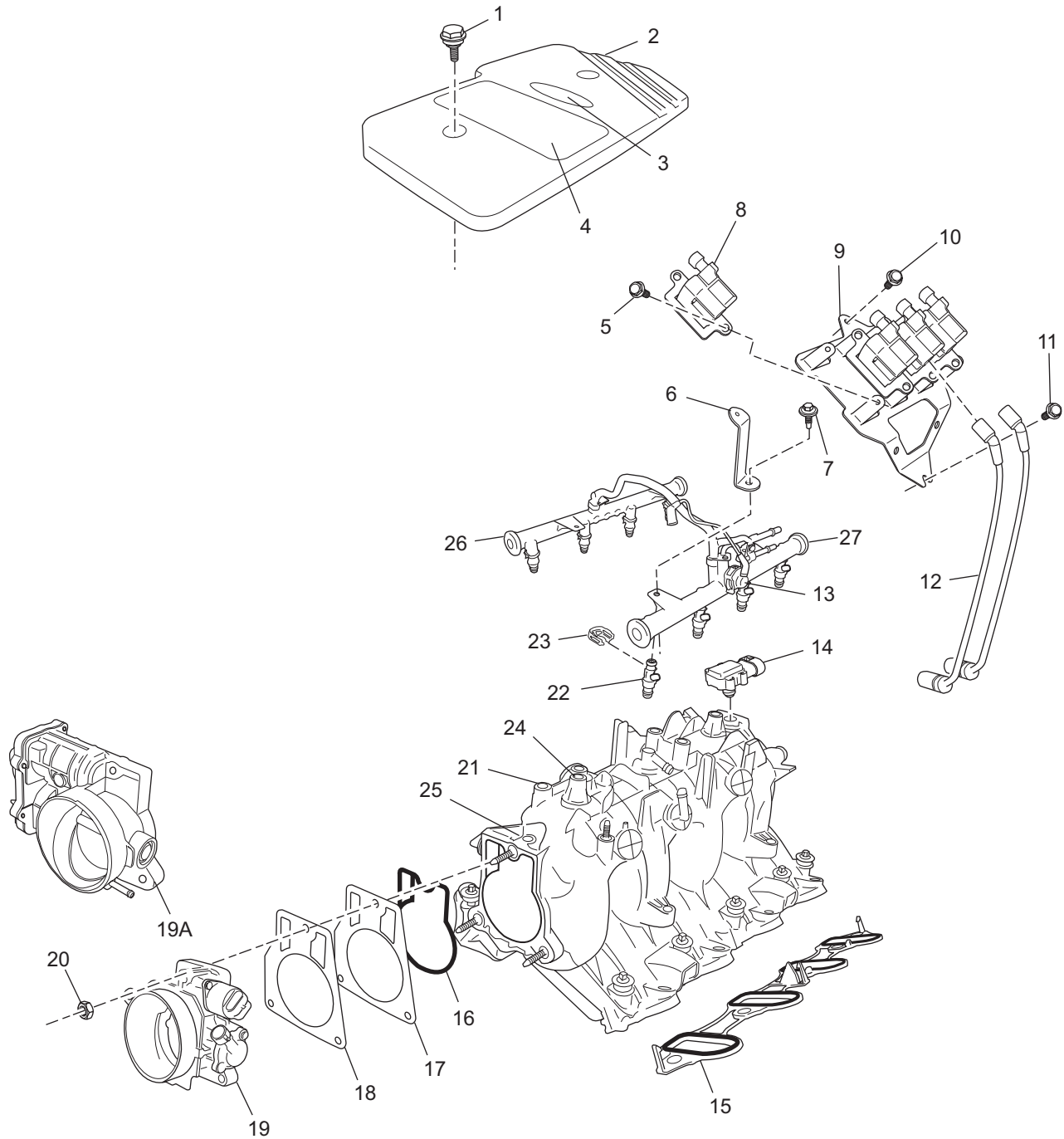


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EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	TBD	2	Bolt , coolant air bleed pipe attaching	07-600V-01
2	TBD	1	Pipe , coolant air bleed	
3	R121100	1	Harness , knock sensor	
4	TBD	1	Bolt , crankshaft position attaching	
5	R020044	1	Sensor , crankshaft position	
6	TBD	10	Bolt , valley cover attaching	
7	R020043	2	Sensor , knock	
8	TBD	1	Cover , valley	
9	TBD	1	Gasket , valley cover	
10	TBD	2	Seal , knock sensor oil	
11	R020045	1	Sensor , camshaft position	
12	TBD	1	Bolt , camshaft position attaching	
13	R029016	2	Elbow , exhaust	
14	RM0274	2	Gasket , exhaust elbow to manifold	
15	R028024	2	Manifold , exhaust	
16	R031035	12	Stud , exhaust manifold attaching	
17	93930000	12	Lockwasher , exhaust manifold stud attaching	
18	97330000	12	Nut , exhaust manifold stud attaching	
19	RS3539	2	Plug , exhaust elbow	
19	R020047	2	Switch , exhaust temperature (optional)	

INTAKE MANIFOLD COMPONENTS - FIGURE 4

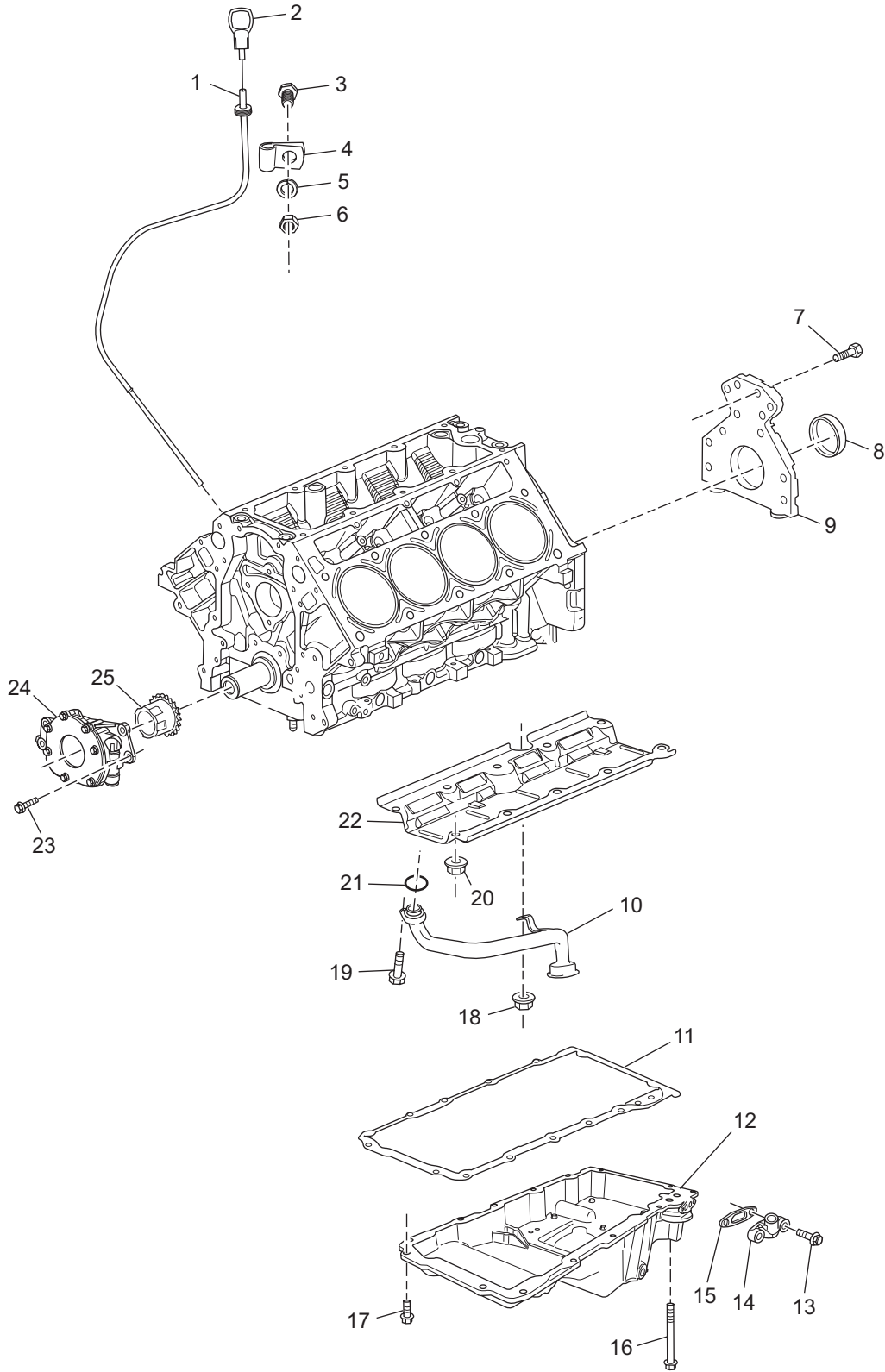


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INTAKE MANIFOLD COMPONENTS - FIGURE 4

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R009204	2	Knob , cover retention	
2	R060064	1	Cover , engine	
3	R143164	1	Decal , cover, oval, "6.0L MPI"	
4	R143130	1	Decal , cover, "Capatain's Choice"	
5	91107075	16	Screw , ignition coil attaching	
6	R090268	2	Bracket , coil support	
7	98222018	4	Bolt , fuel rail attaching	
8	R117013	8	Coil , ignition	
9	R090273	2	Bracket , ignition coil mounting	
10	RS5126	2	Bolt , coil bracket attaching, top	
11	98223016	2	Bolt , coil bracket attaching, bottom	
NI	93920000	2	Lockwasher , coil bracket attaching, bottom	
12	RK120021A	1	Spark Plug Wire Set	
13	R088003	1	Regulator , fuel pressure (returnless type fuel system Only)	20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01
14	R020036	1	Sensor , manifold absolute pressure (MAP)	
15	RM0277	1	Intake Manifold Gasket Set	
16	TBD	1	Seal , throttle body	
17	R062087	1	Plate , throttle body adapter	
17	R062087A	1	Plate , throttle body adapter (use w/item 19A)	07-600V-01
18	RM0251	1	Gasket , throttle body	
19	RA035036B	1	Throttle Body Assembly	
19A	RA035041	1	Throttle Body Assembly	07-600V-01
20	L00918	3	Nut , throttle body attaching	
21	R002025	1	Intake Manifold	
22	RA087008	8	Fuel Injector Assembly	
23	R127097	8	Retainer , fuel injector to rail	
24	R036007	8	Insert , threaded, intake	
25	RS3550	1	Plug , pipe, 1/4" NPT	
26	R086003	1	Fuel Rail , 6.0L, (right)	
27	R086004	1	Fuel Rail , 6.0L, w/regulator pocket (left)	20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01
27	R086004A	1	Fuel Rail , 6.0L, w/o regulator pocket (left)	

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

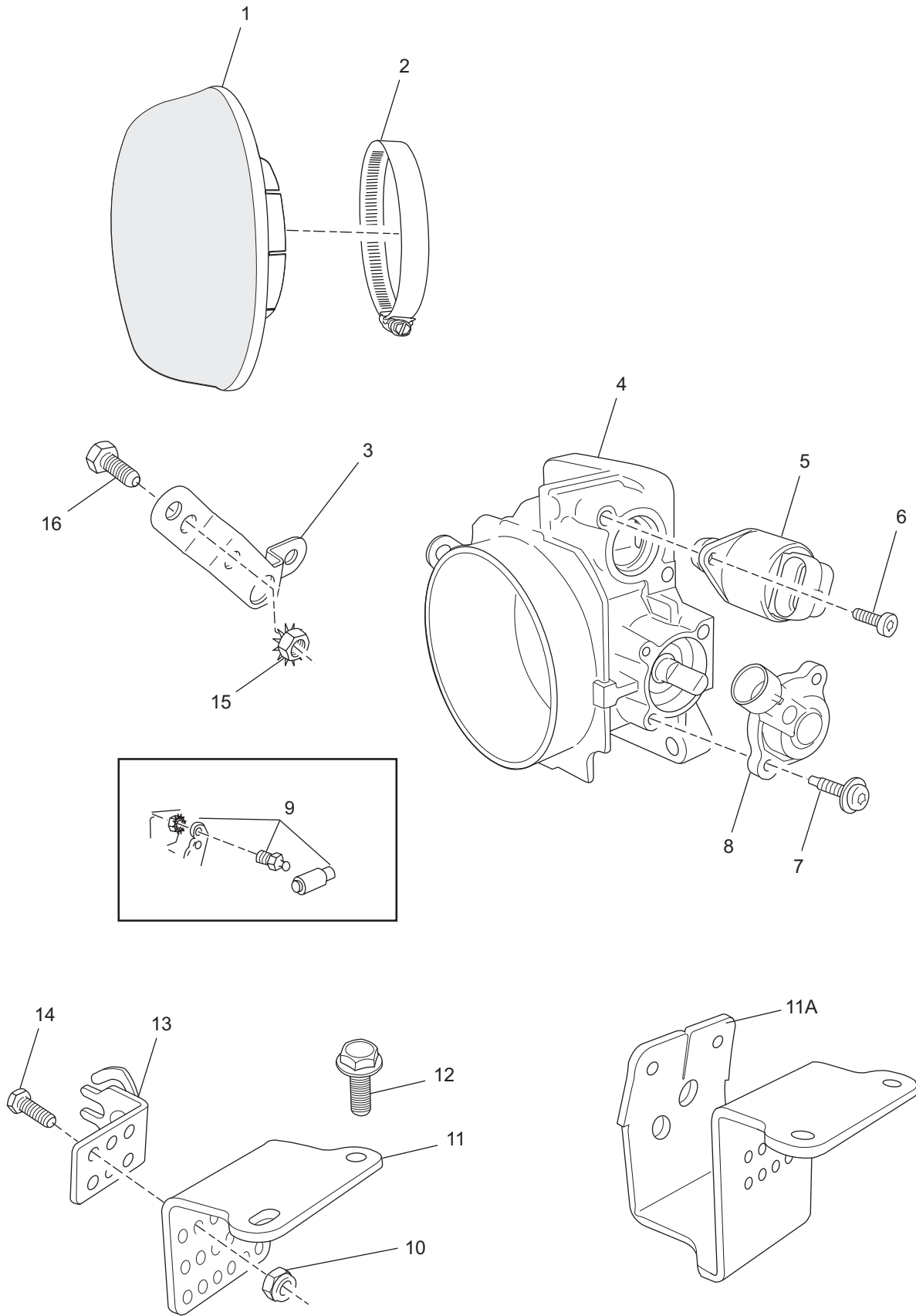


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OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R041079	1	Tube , oil dipstick	
2	R041080	AR	Dipstick , oil level (0 to 4 degree)	
2	R041081	AR	Dipstick , oil level (12 degree)	
3	RS0302	1	Bolt , oil dipstick tube attaching	
4	R127015	1	Clamp , oil dipstick tube attaching	
5	RS2180	1	Lockwasher , oil dipstick tube attaching	
6	RS1028	1	Nut , oil dipstick tube attaching	
7	TBD	1	Bolt , engine rear cover attaching	
8	R047236	1	Seal , engine rear cover oil	
9	TBD	1	Cover , engine rear	
10	R074030	1	Tube , oil pickup	
11	RM0279	1	Gasket , oil pan	
12	R005025	1	Oil Pan	
13	98222030	2	Bolt , oil sending unit adapter attaching	
14	R079071	1	Adapter , oil sending unit	
15	RM0284	1	Gasket , oil sending unit adapter	
16	TBD	2	Bolt , oil pan attaching (long)	
17	TBD	12	Bolt , oil pan attaching (short)	
18	TBD	1	Nut , oil pickup tube attaching	
19	TBD	1	Bolt , oil pickup tube attaching	
20	TBD	10	Nut , windage tray attaching	
21	TBD	1	O-ring , oil pickup tube	
22	R012027	1	Tray , windage	
23	TBD	4	Bolt , oil pump attaching	
24	RA070018	1	Oil Pump Assembly	
25	TBD	1	Drive , oil pump	

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

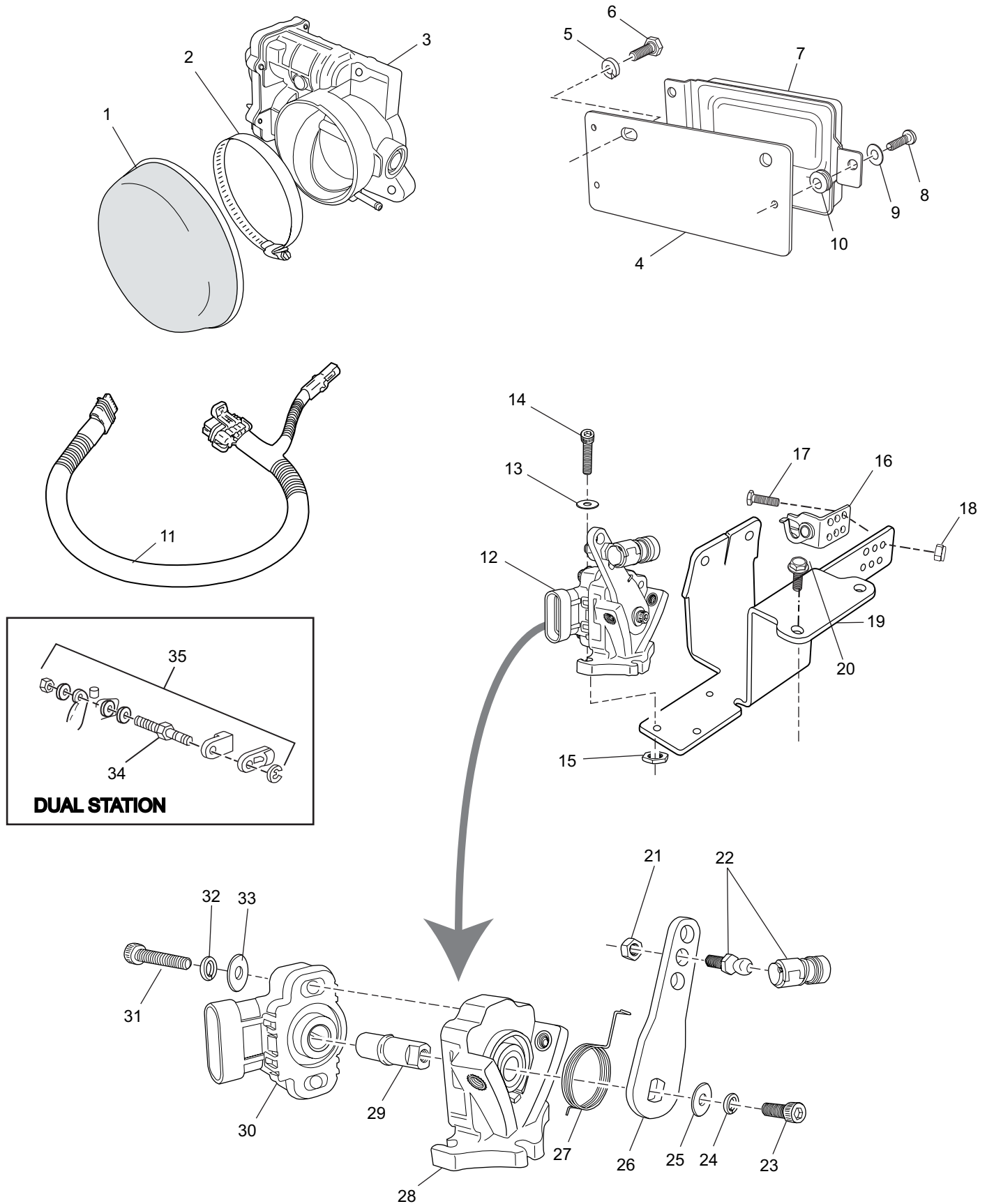


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THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R145026	1	Arrestor , flame	
2	RS3857	1	Clamp , flame arrestor	
3	R081008	1	Throttle Arm , throttle body	
4	RA035036B	1	Throttle Body Assembly	
5	R084003	1	Valve , idle air control	
6	TBD	2	Screw , IAC valve attaching	
7	TBD	2	Screw , TP sensor attaching	
8	R020041	1	Sensor , throttle position	
9	R178003	1	Ball Joint Assembly , cable attaching	
10	RS2055	2	Locking Nut , cable clip mounting bolt	
11	R090267	1	Throttle Bracket , intake	
11A	R090267A	1	Throttle/Degas Bottle Bracket , intake (V-Drive)	xx-600V-xx
12	98222018	2	Bolt , throttle cable bracket attaching	
13	R090086	1	Cable Clip , throttle attaching	
14	RS5122	2	Bolt , cable clip mounting	
15	RS1078	2	Nut , throttle arm attaching	
16	RS0251	2	Bolt , throttle arm attaching	

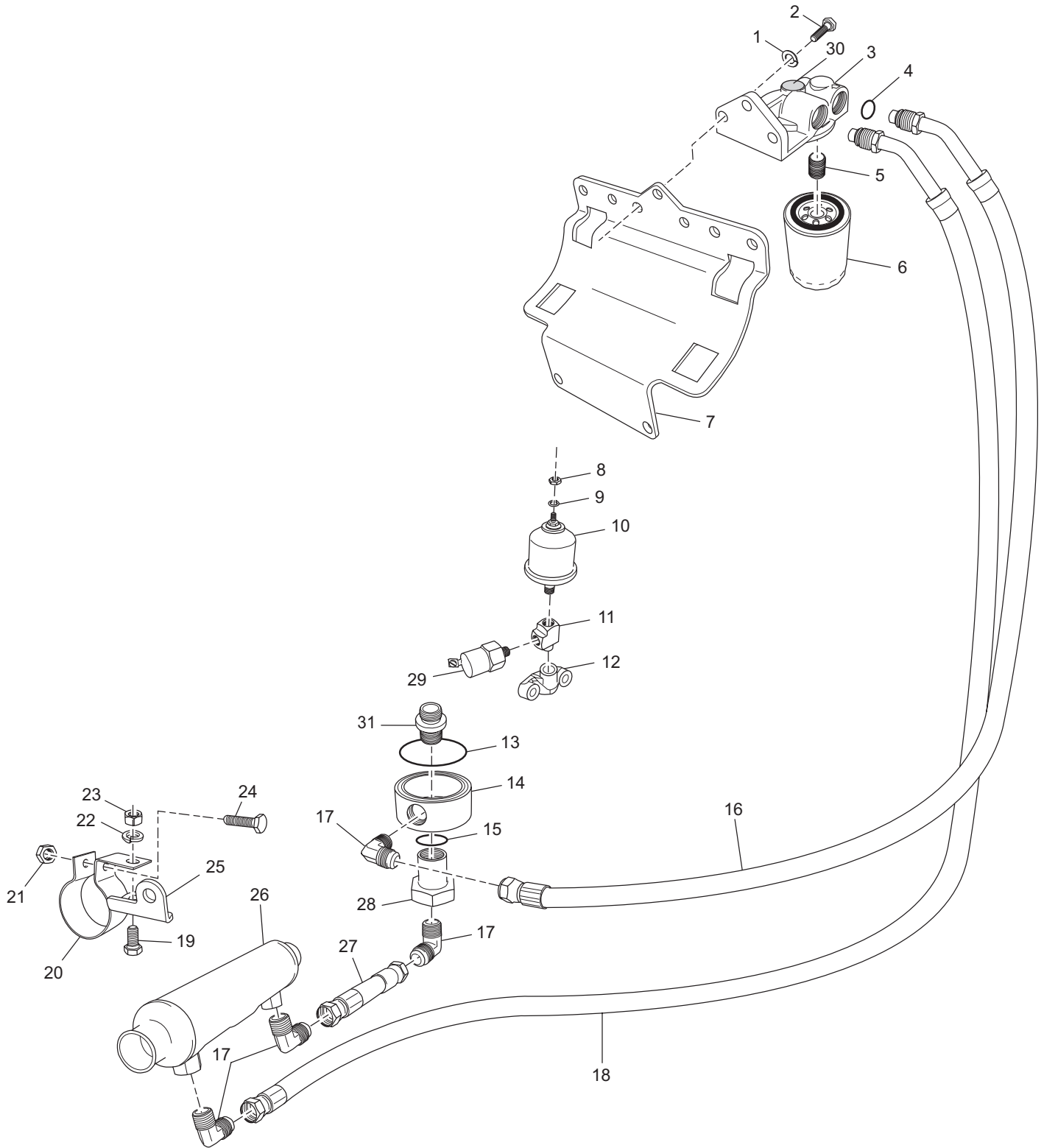
MODEL 07-600V-01 THROTTLE BODY and RELATED COMPONENTS - FIGURE 7



MODEL 07-600V-01 THROTTLE BODY and RELATED COMPONENTS - FIGURE 7

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R145026A	1	Arrestor , flame	07-600V-01
2	RS3857	1	Clamp , flame arrestor	07-600V-01
3	RA035041	1	Throttle Body Assembly , electronic	07-600V-01
4	R090321A	1	Bracket , TAC Module mounting	07-600V-01
5	RS2179	2	Lockwasher , TAC Module mounting bracket attaching	07-600V-01
6	98333020	2	Bolt , TAC Module mounting bracket attaching	07-600V-01
7	R116020	1	Throttle Actuator Control (TAC) Module	07-600V-01
8	91087050	3	Screw , self-tapping, TAC Module attaching	07-600V-01
9	R096142	3	Flatwasher , TAC Module attaching	07-600V-01
10	R094042	3	Grommet , TAC Module attaching	07-600V-01
11	R121086A	1	Harness , TCP Sensor to TAC Module	07-600V-01
12	RA119004	1	Throttle Control Position (TCP) Sensor Assembly	07-600V-01
13	92004000	3	Flatwasher , TCP assembly attaching	07-600V-01
14	91864075	3	Bolt , TCP assembly attaching	07-600V-01
15	RS2052	3	Locking Nut , TCP assembly attaching	07-600V-01
16	R090086	1	Cable Clip , throttle attaching (single station)	07-600V-01
17	RS2055	2	Locking Nut , cable clip attaching bolt	07-600V-01
18	RS5122	2	Bolt , cable clip attaching	07-600V-01
19	R090267B	1	Bracket , TCP Assembly/Degas bottle mounting	07-600V-01
20	98222018	2	Bolt , TCP Assembly/Degas bottle mounting bracket attaching	07-600V-01
21	RS1568	1	Nut , ball joint attaching	07-600V-01
22	R178003	1	Ball Joint Assembly	07-600V-01
23	91874050	1	Bolt , TCP Sensor arm attaching	07-600V-01
24	94854500	1	Lock Washer , TCP Sensor arm attaching	07-600V-01
25	94804000	1	Flat Washer , TCP Sensor arm attaching	07-600V-01
26	R081009	1	Arm , TCP Sensor	07-600V-01
27	R046051	1	Spring , TCP Sensor	07-600V-01
28	R109053	1	Plate Assembly , TCP Sensor	07-600V-01
29	R058070	1	Shaft , TCP Sensor	07-600V-01
30	R119004	1	TCP Sensor	07-600V-01
31	91064100	2	Bolt , TCP Sensor attaching	07-600V-01
32	93040000	2	Lock Washer , TCP Sensor attaching	07-600V-01
33	92004000	2	Flat Washer , TCP Sensor attaching	07-600V-01
34	22978	AR	Pivot Pin , cable attaching (dual station)	07-600V-01
35	23235	AR	Cable Attaching Kit , (dual station)	07-600V-01

REMOTE OIL FILTER COMPONENTS - FIGURE 8

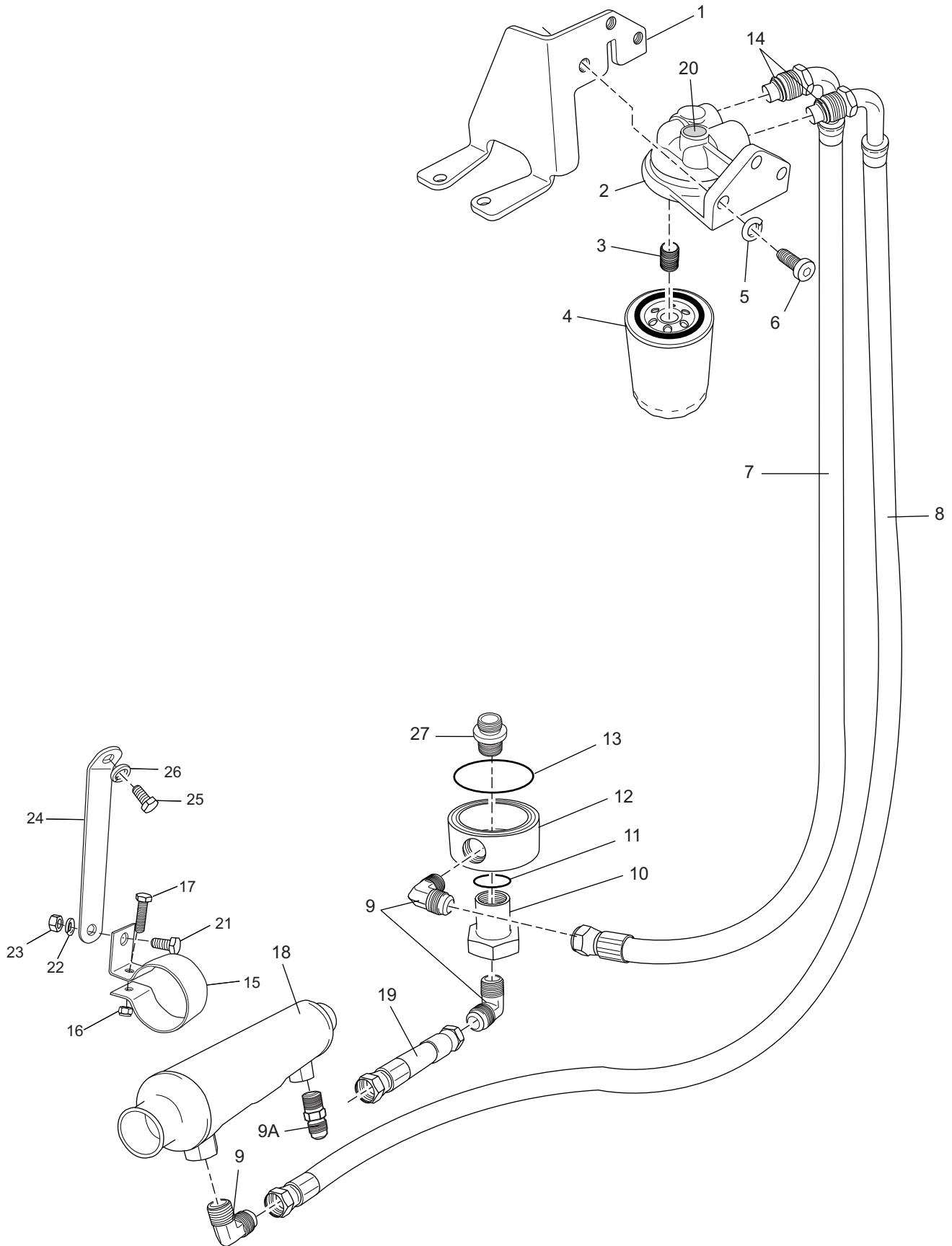


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REMOTE OIL FILTER COMPONENTS - FIGURE 8

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	93930000	3	Lockwasher , oil filter header mounting	
2	99333020	3	Bolt , oil filter header mounting	
3	R079066	1	Oil Filter Header	
4	R047245	2	O-Ring , oil line	
5	R024203	1	Nipple , header filter adapter	
6	22679	1	Filter , oil	
7	R090258	1	Bracket , heat exchanger	
8	95011000	1	Nut , sender terminal	
9	95300300	1	Lockwasher , sender terminal	
10	R020001	1	Sender , oil pressure	
11	R024145	1	Tee , sender attaching	
12	R079071	1	Adapter , oil sending unit	
13	R047240	1	O-ring , oil bypass adapter	
14	R079067	1	Adapter , oil bypass	
15	R047202	1	O-ring , oil bypass adapter attaching fitting	
16	RA045155	1	Hose , oil, adapter to remote oil filter	
17	R024184	4	Fitting , 90 degree	
18	RA045155A	1	Hose , oil, oil cooler to remote oil filter	
19	RS0302	1	Bolt , oil cooler strap attaching	
20	R090010	1	Strap , oil cooler	
21	RS2058	1	Nut , oil cooler strap	
22	RS2180	1	Washer , lock, oil cooler strap attaching	
23	95300000	1	Nut , oil cooler strap attaching	
24	RS0256	1	Bolt , oil cooler strap	
25	R090013A	1	Bracket , oil cooler	
26	R147049	1	Cooler , oil	
27	RA045103D	1	Hose , oil, oil cooler to adapter	
28	R079068	1	Nut , oil bypass adapter attaching	
29	R020015A	1	Switch , oil pressure	
30	R143175	1	Decal , "Caution Hot"	
31	R079074	1	Adapter , engine to oil bypass	

MODEL 07-600V-01 REMOTE OIL FILTER COMPONENTS - FIGURE 9



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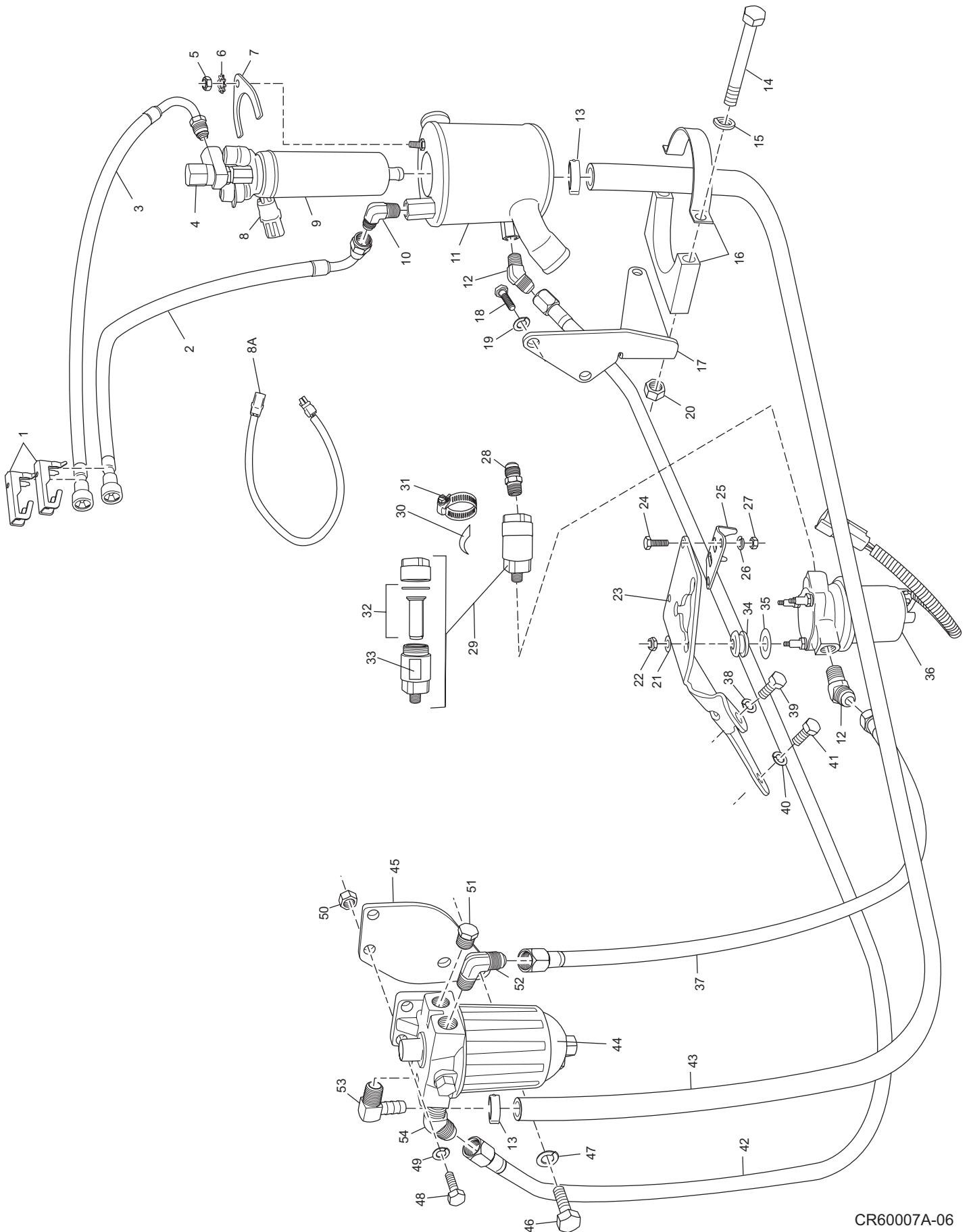
MODEL 07-600V-01 REMOTE OIL FILTER COMPONENTS - FIGURE 9

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R090275	1	Bracket , oil filter header mounting	07-600V-01
2	R079066	1	Oil Filter Header	07-600V-01
3	R024203	1	Nipple , header filter adapter	07-600V-01
4	22679	1	Filter , oil	07-600V-01
5	93930000	3	Lockwasher , oil filter header mounting	07-600V-01
6	99333020	3	Bolt , oil filter header mounting	07-600V-01
7	RA045120B	1	Hose Assembly , bypass adapter to filter header	07-600V-01
8	RA045120D	1	Hose Assembly , filter header to bypass adapter	07-600V-01
9	R024184	3	Fitting , 90 degree	07-600V-01
9A	R024183	3	Fitting , oil cooler	07-600V-01
10	R079068	1	Fitting , oil bypass adapter attaching	07-600V-01
11	R047202	1	O-ring , oil bypass adapter attaching fitting	07-600V-01
12	R079067	1	Adapter , oil bypass	07-600V-01
13	R047240	1	O-ring , oil bypass adapter	07-600V-01
14	R047245	2	O-Ring , oil line	07-600V-01
15	R090010	1	Strap , oil cooler	07-600V-01
16	RS2058	1	Nut , oil cooler strap	07-600V-01
17	RS0256	1	Bolt , oil cooler strap	07-600V-01
18	R147049	1	Cooler , oil	07-600V-01
19	RA045121A	1	Hose , oil, oil cooler to adapter	07-600V-01
20	R143175	1	Decal , "Caution Hot"	07-600V-01
21	90318275	1	Bolt , oil cooler clamp to bracket attaching	07-600V-01
22	9330000	1	Lockwasher , oil cooler clamp to bracket attaching	07-600V-01
23	95310300	1	Nut , oil cooler clamp to bracket attaching	07-600V-01
24	R090233A	1	Bracket , oil cooler attaching	07-600V-01
25	98443025	1	Bolt , bracket attaching	07-600V-01
26	93940000	1	Lockwasher , bracket attaching	07-600V-01
27	R079074	1	Adapter , engine to oil bypass	

FUEL CONTROL CELL (FCC) COMPONENTS - FIGURE 10

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RA080030A	1	Fuel Control Cell Assembly	
2	R121085A	1	Harness , 1-piece, FCC pass through (1-piece harness does not retro fit for 2-piece harness)	
2A	717204	1	Connector , W/P 2-way Female	
2B	R012030	1	Baffle , FCC used w/1-piece harness	
2C	91620025	2	Screw , self tapping, baffle/1-piece harness retaining	
3	R024175	1	Fitting , 1/4 NPT X SAE	
4	R024089	1	Fitting , 1/4 NPT to Hose (return to tank)	
4	R024076	1	Fitting , 1/4 NPT to SAE (return to tank)	
5	R024163	1	Fitting , 1/4 NPT X SAE (from LPFP)	
6	R088004	1	Regulator , fuel pressure (FCC System Only)	
7	R048070	1	Retainer , fuel pressure regulator	
8	R045098B	1	Hose , 5/16id X 1/2od X 2 1/2	
9	R127087	2	Clamp , Oetiker, 5/8	
10	RA080027	1	Pump , high pressure fuel	
11	R080026	1	Filter , fuel (FCC)	
NI	RP080026	1	Kit , FCC filter and O-rings	
12	R171010	1	Clamp , FCC	
13	R128002	1	Cover , T-bolt end	
14	R143112A	1	Decal , FCC	
15	RS3554	1	Plug , pipe, hex head, 1/8	
16A	RA121060	1	Harness , FCC Feed through	
16B	RA121061A	1	Harness , FCC internal	
17	R024219	1	Fitting , 1/8 NPT X 5/16 Barb	
18	R047241	1	O-Ring , FCC sealing	
19	RS3550	1	Plug , pipe, hex socket, 1/4	
20	R127100	1	Retainer , fuel line	
21	RA085090C	1	Hose Assembly , FCC to fuel rail (inlet)	
21	RA085090B	1	Hose Assembly , FCC to fuel rail (inlet), V-DRIVE	xx-600V-xx
22	90384075	3	Bolt , FCC attaching	
23	R090276	1	Bracket , FCC mounting	
23	R090277	1	Bracket , FCC mounting, V-DRIVE	xx-600V-xx
24	R096142	3	Washer , flat, mounting, upper	
25	RS1521L	3	Locking Nut , low-pressure fuel pump	
26	R090286	1	Bracket , low-pressure fuel pump mounting	
27	RS0251	2	Bolt , pre-filter bracket attaching	
28	R090272	1	Bracket , pre-filter mounting	
29	RS1078	2	Nut , w/lockwasher, pre-filter bracket attaching	
30	RS3858	1	Clamp , pre-filter 1 1/4"	
31	R094040	1	Isolator , rubber, w/ adhesive	
32	R143174	1	Decal , pre-filter	
33	RA077014	1	Fuel Pre-filter Assembly, 150 micron	
34	RP077014	1	Kit , fuel filter and seal	
35	RA080018	1	Fuel Pump , low-pressure	
36	RA085071	1	Hose Assembly , low-pressure pump to FCC	
37	R024197	1	Fitting , 45 degree	
37	R024163	1	Fitting , 90 degree, V-DRIVE	
38	R096141	3	Washer , fuel pump mounting, lower	
39	R094035A	3	Grommet , isolator	
40	98443025	1	Bolt , LPFP bracket attaching, block	
41	93940000	1	Lockwasher , LPFP bracket attaching, block	
42	98443030	1	Bolt , LPFP bracket attaching, mount	
43	93940000	1	Lockwasher , LPFP bracket attaching, mount	
44	98443025	2	Bolt , FCC mounting bracket	
45	93940000	2	Lockwasher , FCC mounting bracket	
46	30603	1	Fitting , fuel inlet, pre-filter, 3/8 NPT X 1/2 SAE	
46	R024218	1	Fitting , fuel inlet, pre-filter, 3/8 NPT X 1/2 hose barb	
NI	R143114	1	Decal , Warning, fuel leaks	

RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 11

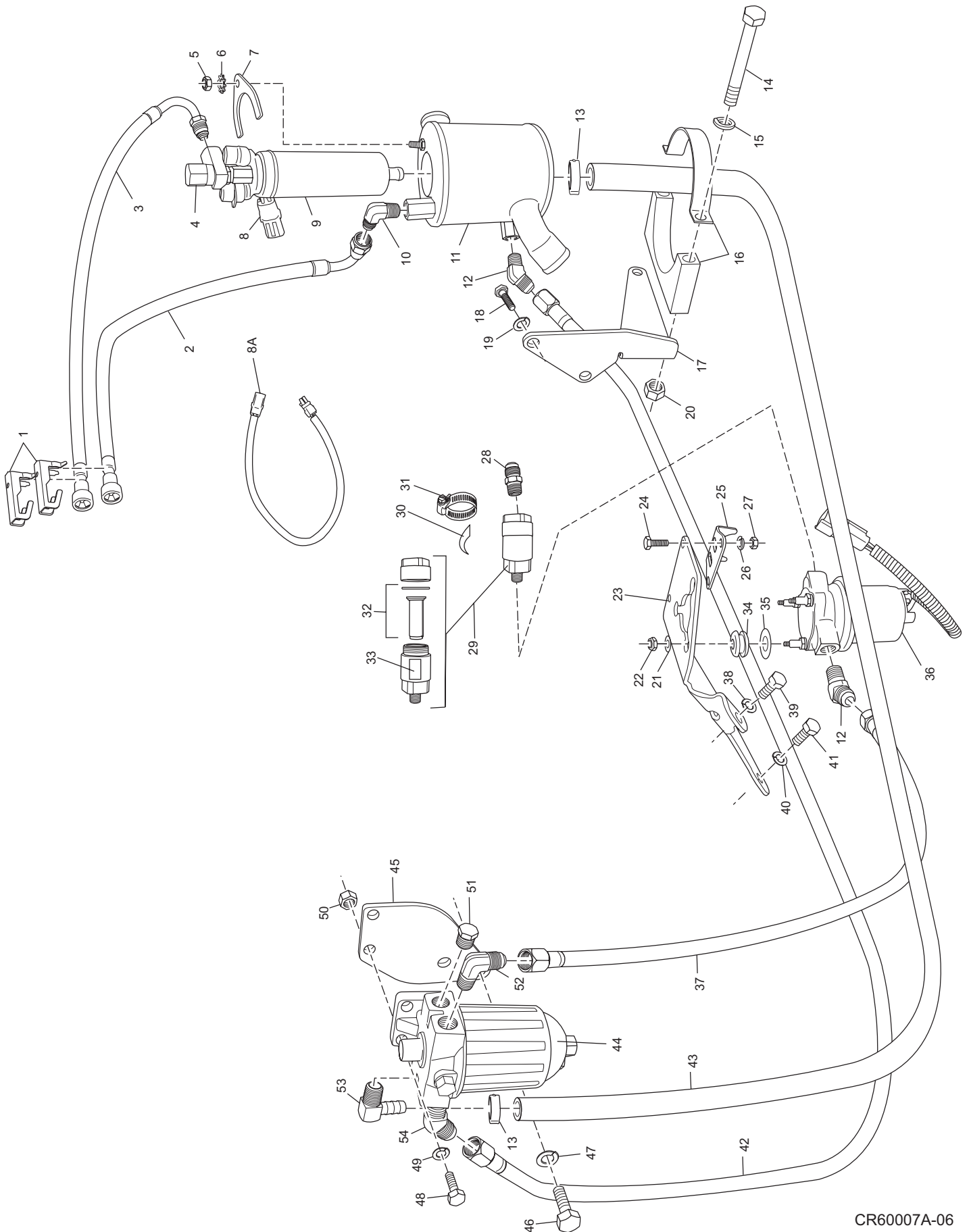


CR60007A-06
04-12-06

RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 11

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
				20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01
1	R127100	2	Locking Clip , fuel line	
2	RA085091B	1	Fuel Line Assembly , fuel rail to fuel cooler	
3	RA085099	1	Fuel Line Assembly , fuel pump to fuel rail	
4	98442	1	Nut , fitting to fuel pump	
NI	23516	1	O-ring , fuel fitting sealing	
NI	98440	1	Fitting , fuel line to fuel pump	
NI	23515	1	O-ring , fuel fitting sealing	
5	RS1078	1	Nut , w/lockwasher, fuel pump retainer attaching (RS1078 replaces items 5 and 6)	
6	NSS	1	Starwasher , retaining nut	
7	98642	1	Retainer , fuel pump	
8	49038	1	Harness , fuel pump	
8A	R121078	AR	Harness , extension, fuel pump (V-Drive)	
9	47039	1	Electric Fuel Pump Assembly	
10	R024204	3	Fitting , 90 degree	
11	RA147051	1	Fuel Cooler Assembly	
NI	23649	1	Decal , fuel Warning	
12	R024197	2	Fitting , 45 degree (use (1), V-DRIVE)	
12	R024163	1	Fitting , 90 degree, LPFP to filter, v-drive	
13	R127087E	2	Clamp , Oetiker 7/8"	
14	90318325	2	Bolt , fuel cooler attaching	
15	RS2180	2	Lockwasher , fuel cooler attaching	
16	23554	1	Retainer , fuel cooler attaching	
17	R090297	1	Bracket , fuel cooler mounting	
17	R090290	1	Bracket , fuel cooler mounting, V-DRIVE	
18	98443025	2	Bolt , fuel cooler bracket attaching	
19	93940000	2	Lockwasher , fuel cooler bracket attaching	
20	95310300	2	Nut , nylock, fuel cooler attaching	
21	R096142	3	Washer , flat, mounting, upper	
22	RS1521L	3	Locking Nut , low-pressure fuel pump	
23	R090286	1	Bracket , low-pressure fuel pump mounting	
24	RS0251	2	Bolt , pre-filter bracket attaching	
25	R090272	1	Bracket , pre-filter mounting	
26	93940000	2	Lockwasher , pre-filter bracket attaching	
27	RS1078	2	Nut , pre-filter bracket attaching	
28	30603	1	Fitting , fuel inlet, pre-filter	
29	R077012	1	Pre-filter , fuel	

RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 11 (cont'd)

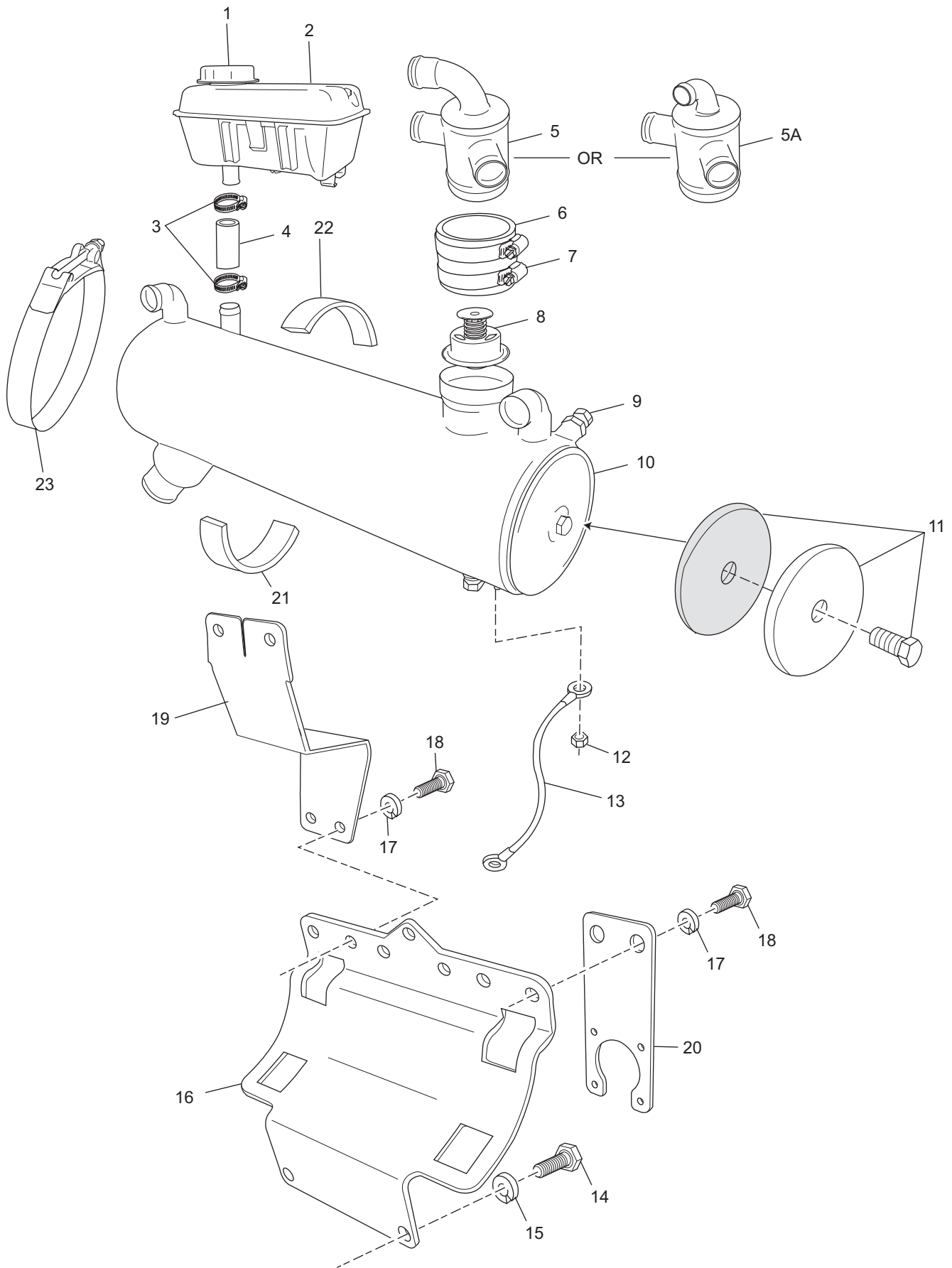


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04-12-06

RETURNLESS FUEL SYSTEM COMPONENTS - FIGURE 11(cont'd)

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
				20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01
30	R094040	1	Isolator , rubber, pre-filter	
31	RS3858	1	Clamp , pre-filter	
32	RP077014	1	Kit , fuel filter and seal	
33	R143174	1	Decal , pre-filter	
34	R094035A	3	Grommet , isolator	
35	R096141	3	Washer , fuel pump mounting, lower	
36	RA080018	1	Fuel Pump , low-pressure	
37	RA085071	1	Fuel Line Assembly , L.P. pump to racor filter	
38	93940000	1	Lockwasher , LPFP bracket attaching, mount	
39	98443030	1	Bolt , LPFP bracket attaching, mount	
40	93940000	1	Lockwasher , LPFP bracket attaching, block	
41	98443025	1	Bolt , LPFP pump bracket attaching, block	
42	RA085071B	1	Fuel Line Assembly , racor filter to cooler	
42	RA085071	1	Fuel Line Assembly , racor filter to cooler (V-DRIVE)	
43	98431	AR	Hose , fuel line, racor filter to H.P. pump	
44	47046	1	Fuel Filter , racor water separating	
NI	47047	1	Element , racor fuel filter (not shown)	
45	R090297	1	Bracket , racor filter mounting	
46	98443025	2	Bolt , racor filter bracket attaching	
47	93940000	2	Lockwasher , racor filter bracket attaching	
48	90205125	2	Bolt , racor filter mounting	
48	92200000	2	Washer , racor filter mounting	
50	RS2060	2	Nut , nylock, racor filter mounting	
51	RS3552	1	Fitting , plug 1/4" NPT	
52	R024163	1	Fitting , 90 degree, fuel in, Racor	
53	R024207	1	Fitting , 90 degree, 1/2" barb, fuel out, Racor	
54	R024197	1	Fitting , 45 degree, fuel return, Racor	

HEAT EXCHANGER and COMPONENTS - FIGURE 12

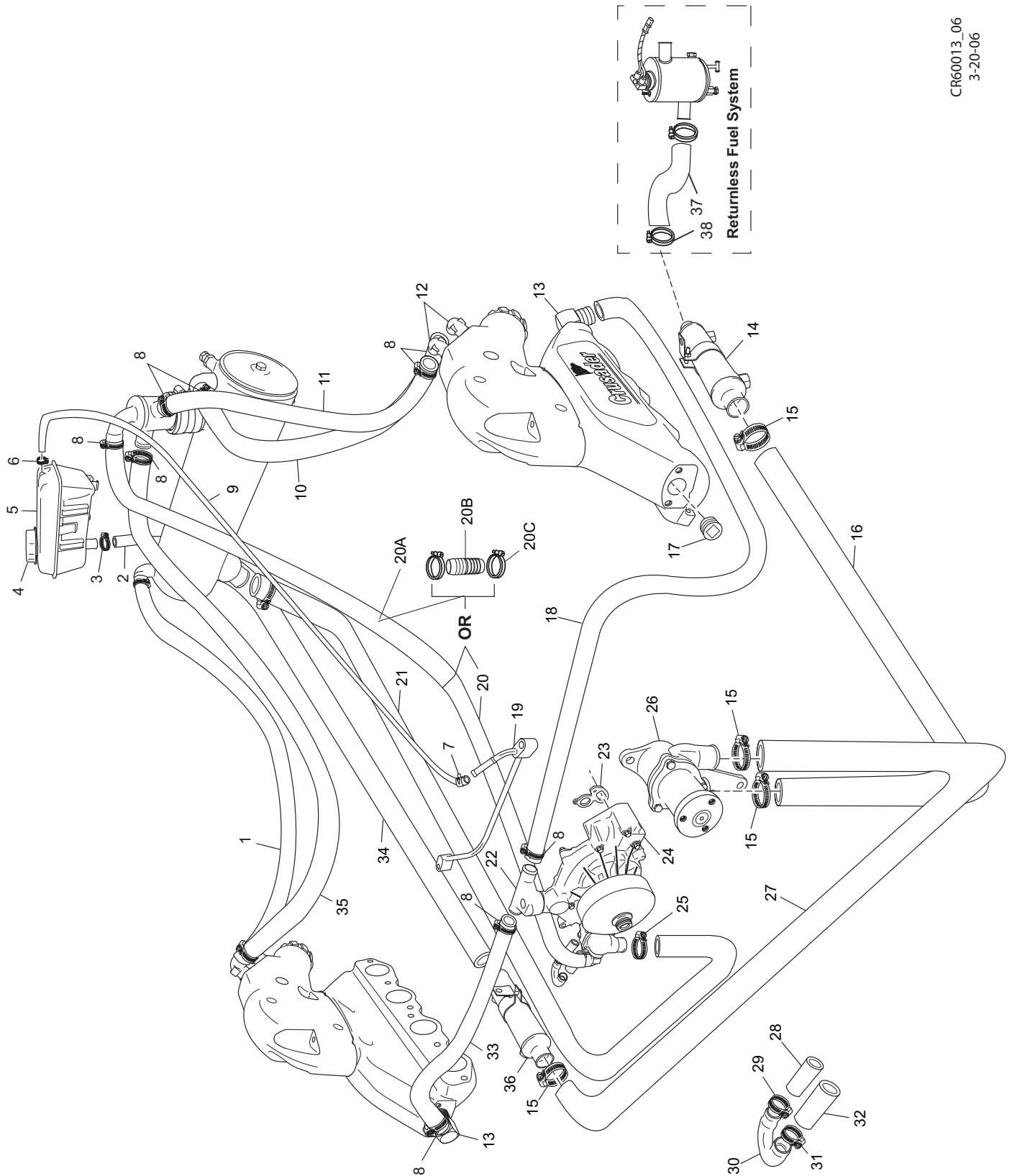


CR0005_05
10-15-04

HEAT EXCHANGER and COMPONENTS - FIGURE 12

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R034045	1	Cap , degas bottle	07-600V-01
2	R146001	1	Bottle , degas	
NI	R143152	1	Decal , specification, 6.0L	
NI	R143153	1	Decal , coolant fill	
3	RS3854	2	Clamp , hose	
4	R045153	AR	Hose , bulk 3/4" i.d., degas bottle to heat exchanger	
4	R045161	AR	Hose , degas bottle to heat exchanger (vdrv)	
5	R025038	1	Housing , tstat, heat exchanger	
5A	R025038A	1	Housing , tstat, heat exchanger	
6	98204	1	Hose , tstat housing	
7	RS3860	2	Clamp , tstat housing	
8	R026007	1	Thermostat , 170° F	
9	R168005	AR	Anode , sacrificial zinc	
10	RA147048	1	Heat Exchanger Assembly	
11	23540	AR	End Cap Kit , exchanger	
12	RS1078	1	Nut , ground wire stud	
13	R101013	1	Wire , grounding	
14	RS0304	2	Bolt , heat exchanger bracket attaching	
15	RS2180	2	Lockwasher , h.e. bracket attaching	
16	R090258	1	Bracket , heat exchanger	
17	RS2179	4	Lockwasher , degas bottle brkt. attaching	
18	RS0280	4	Bolt , degas bottle bracket attaching	
19	R090311	1	Bracket , degas bottle	
20	R090291	1	Bracket , 10-pin connector	
21	R094040	1	Isolator , rubber, adhesive, bottom	
22	R094041	2	Isolator , rubber, top	
23	R171009	2	Clamp , exchanger mounting	
NI	23627	1	Decal , Protective Anode	
NI	R143162A-06	1	Decal , 6.0 Emission (C.A.R.B.)	
NI	R143158	1	Decal , "Ultra Low Emission"	
NI	R143156	1	Decal , Raw Water Drain	
NI	R143157	1	Decal , Fresh Water Drain	

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 13

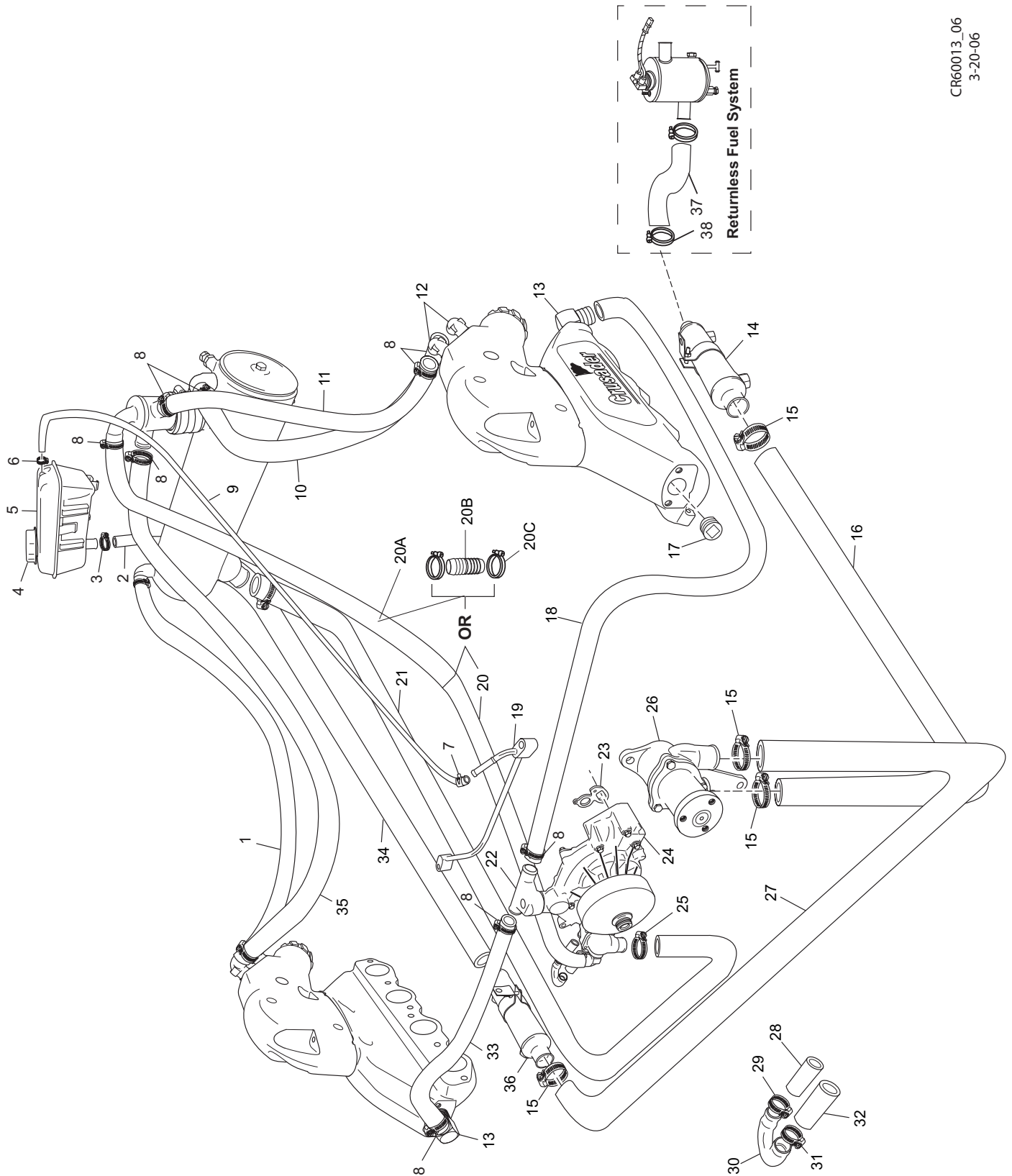


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3-20-06

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 13

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Starboard STD)	
1	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Starboard STD) (w/ 4" spacers)	
1	R045158	1	Hose , exchanger to exhaust manifold (Starboard V-DRIVE)	
1	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Starboard V-DRIVE) (w/ 4" spacers)	
2	R045153	AR	Hose , bulk 3/4" i.d., degas bottle to heat exchanger	
2	R045161	1	Hose , degas bottle to heat exchanger (V-DRIVE)	
3	RS3854	2	Clamp , hose, 3/4"	
4	R034045	1	Cap , degas bottle	
5	R146001	1	Bottle , degas	
6	R127087	1	Clamp , hose (Oetiker)	
7	RS3870	1	Clamp , hose, vent (1/4")	
8	RS3851	14	Clamp , hose (1")	
9	R045132	AR	Hose , bulk 1/4" i.d., vent to degas bottle	
10	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Port STD)	
10	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Port STD) (w/ 4" spacers)	
10	R045158	1	Hose , exchanger to exhaust manifold (Port V-DRIVE)	
10	R045107	AR	Hose , bulk 1" i.d., exchanger to exhaust manifold (Port V-DRIVE) (w/ 4" spacers)	
11	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat (Port STD)	
11	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat (Port STD) (w/ 4" spacers)	
11	R045158	1	Hose , F/W, elbow to tstat, port 1" (Port V-DRIVE)	
11	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat, (Port V-DRIVE) (w/ 4" spacers)	
12	727003	4	Fitting , 90 degree, bronze	
13	R024006A	2	Fitting , 90 degree, bronze	
14	R147049	1	Cooler , oil	
15	RS3858	6	Clamp , hose (1 1/4")	
16	R045152B	1	Hose , R/W, oil cooler to r/w pump 1 1/4" formed (cut-to-fit)	
16	R045173	1	Hose , R/W, oil cooler to r/w pump 1 1/4" formed	07-600V-01
17	113186	2	Plug , manifold	
18	R045156A	1	Hose , F/W inlet to exhaust manifold, (Port), 1" formed	
19	TBD	1	Tube , coolant air bleed	
20	R045107	AR	Hose , bulk 1" i.d., bypass, tstat to circulating pump	
20A	R045157A	1	Hose , bypass, tstat to circulating pump	07-600V-01
20B	R024229	1	Fitting , union, 1" hose, couple R045175A to R045107	07-600V-01
20C	RS3851	2	Clamp , hose (1")	07-600V-01
21	R045148	1	Hose , circulating pump to heat exchanger	
22	R025035A	1	Waterneck , tee, F/W outlet	
23	RM0281	2	Gasket , water pump to engine block	
24	RK057033C	1	Water Pump Assembly	
25	RS3868	2	Clamp , hose (1 1/2")	
26	RA057032	1	Raw Water Pump	
27	R045147	1	Hose , R/W pump to transmission cooler 1 1/4" formed, cut-to-fit	
27	R045172	1	Hose , R/W pump to transmission cooler 1 1/4" formed	07-600V-01

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 13 (cont'd)

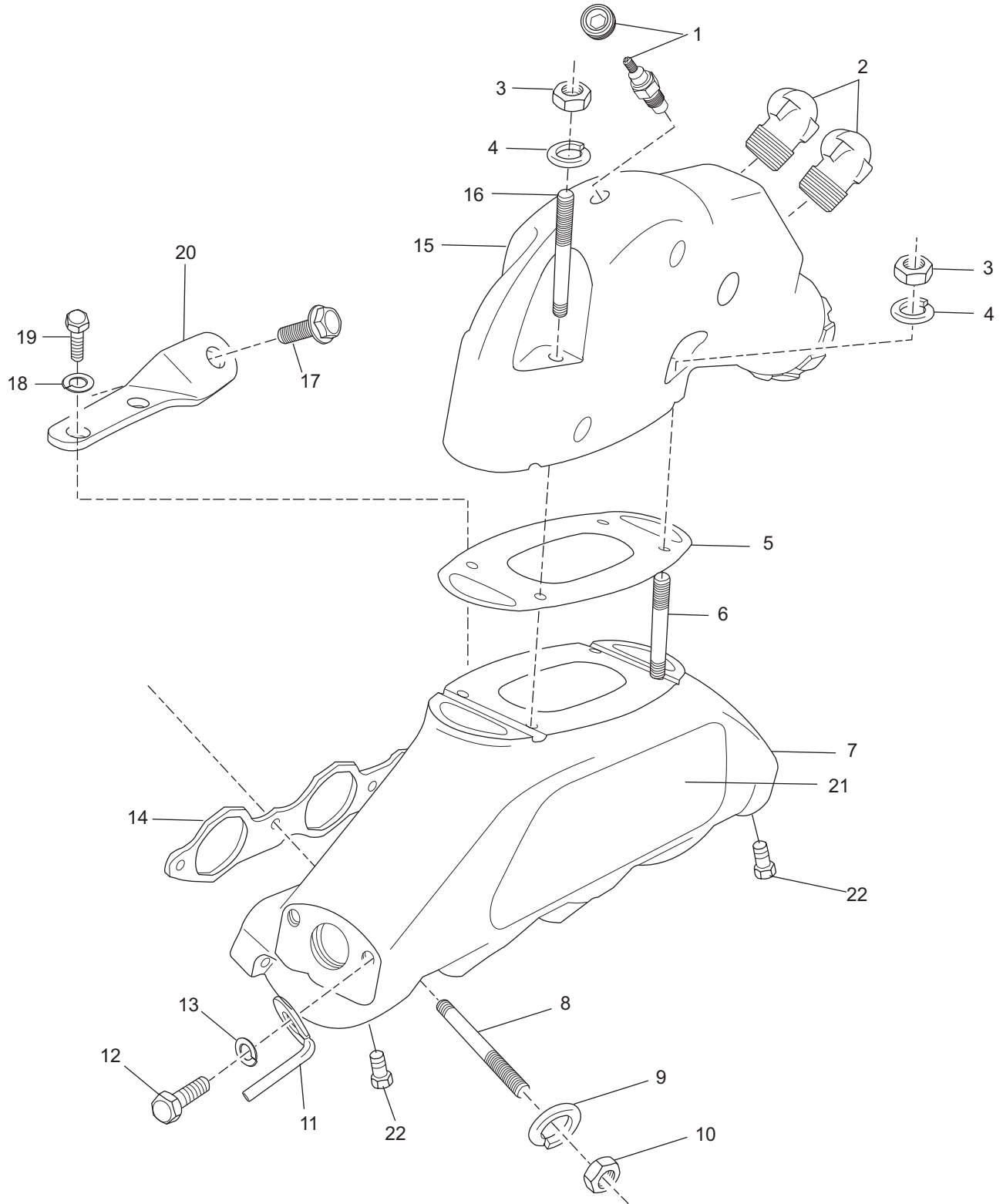


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3-20-06

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 13 (cont'd)

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
28	R045086	AR	Hose , bulk 5/8" i.d., U-tube, bypass	
29	R127087F	2	Clamp , U-tube, 5/8" hose (1" Oetiker)	
30	R024210	1	U-tube , heater bypass	
31	R127087G	2	Clamp , U-tube, 3/4" hose (1 1/16" Oetiker)	
32	R045153	AR	Hose , bulk 3/4" i.d., U-tube, bypass	
33	R045136B	1	Hose , F/W inlet to exhaust manifold (STBD) 1"	
34	R045147	1	Hose , R/W,transmission cooler to H.E. 1 1/4" formed, cut-to-fit	
34	R045144A	1	Hose , R/W,transmission cooler to H.E. 1 1/4" formed, cut-to-fit	07-600V-01
35	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat, (Stbd Standard)	
35	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat, (Stbd Standard) (w/ 4" spacer)	
35	R045157	1	Hose , F/W, elbow to tstat, (Stbd V-DRIVE)	
35	R045107	AR	Hose , bulk 1" i.d., F/W, elbow to tstat, (Stbd V-DRIVE) (w/ 4" spacer)	
36	R147006	1	Cooler , transmission oil	
37	R045122	1	Hose , fuel cooler to oil cooler	20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01
38	RS3858	2	Clamp , hose (1 1/4")	20-600-01, 20-600V-02, 25-600-02, 25-600-03, 29-600V-01, 30-600-01, 50-600-ALL, 50-600V-01

EXHAUST MANIFOLD and COMPONENTS - FIGURE 14

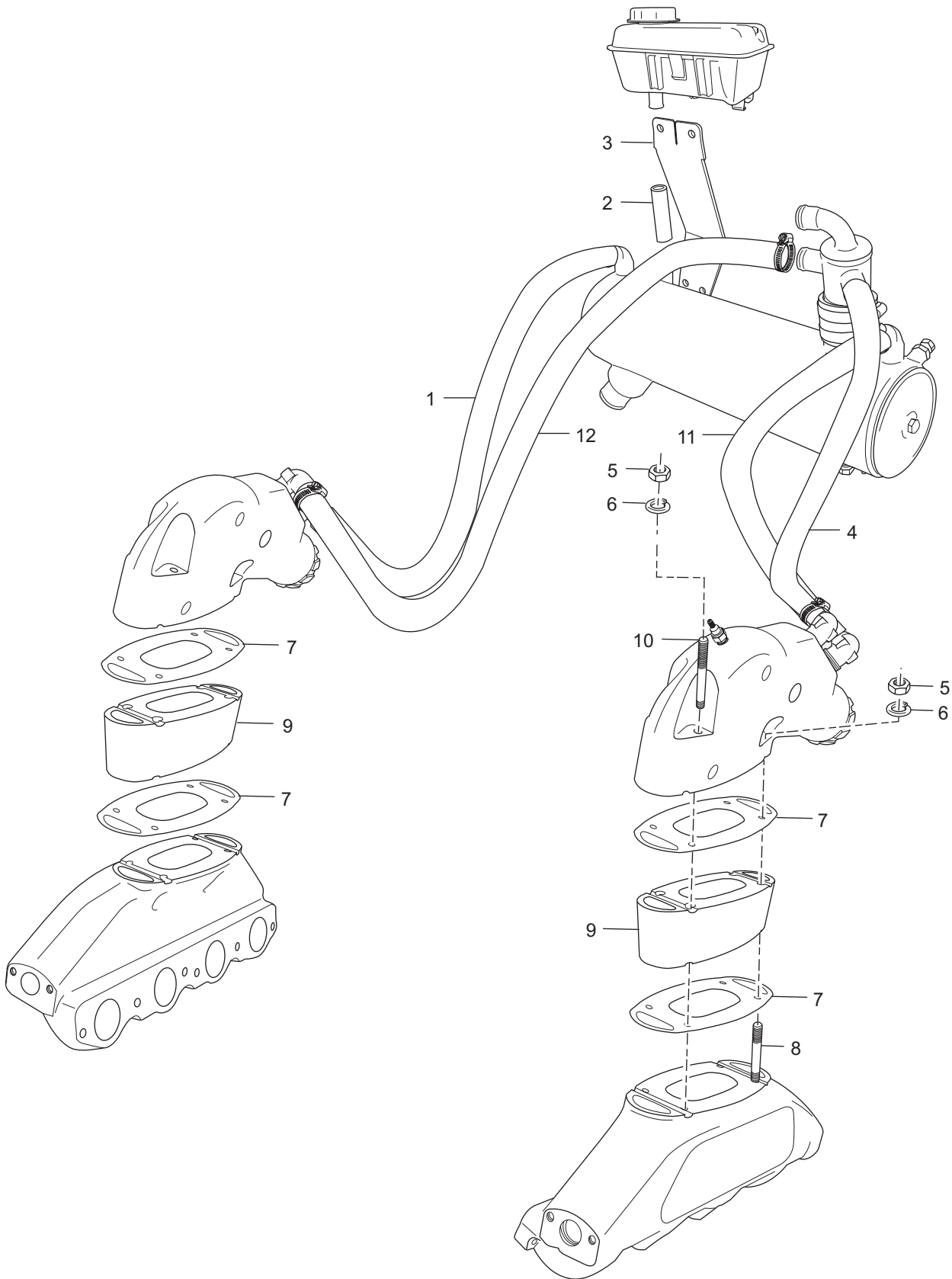


CR60008
12-9-03

EXHAUST MANIFOLD and COMPONENTS - FIGURE 14

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS3539	2	Plug , exhaust elbow	07-600V-01
1	R020047	2	Switch , exhaust temperature (optional)	
1	RS3539	2	Plug , Hex Socket, Brass 1/8" NPT	
2	727003	4	Fitting , 90 degree, bronze	
3	95310000	8	Nut , exhaust elbow attaching	
4	93300000	8	Lockwasher , exhaust elbow attaching	
5	RM0274	2	Gasket , manifold to exhaust elbow	
6	R031036	4	Stud , exhaust elbow attaching (short)	
6	R031039	AR	Stud , exhaust elbow attaching w/4" riser (short)	
7	R028024	2	Exhaust Manifold Assembly	
8	R031035	12	Stud , manifold to cylinder head attaching	
9	93930000	12	Lockwasher , manifold to cylinder head attaching	
10	97330000	12	Nut , manifold to cylinder head attaching	
11	R096144	2	Retainer , spark plug wire clip	
12	RS0280	2	Bolt , retainer attaching	
13	RS2179	2	Lockwasher , retainer attaching	
14	RM0276	2	Gasket , manifold to cylinder head	
15	R029016A	2	Exhaust Elbow Assembly	
16	R031037	4	Stud , exhaust elbow attaching (long)	
16	R031040	AR	Stud , exhaust elbow attaching w/4" riser (long)	
17	98222018	2	Bolt , bracket attaching	
18	93920000	4	Lockwasher , bracket attaching	
19	90165063	4	Bolt , bracket attaching	
20	R090305	2	Bracket , manifold support	
NI	922200020	2	Washer , retainer attaching	
NI	R127090	2	Clip , spark plug wires	
NI	RS3557	2	Fitting , plug, manifold drain	
21	R143002G	2	Decal , Exhaust Manifold	
22	RS3557	4	Plug , Hex Head, Brass 3/8" NPT	
<p>*NOTE: See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.</p>				

EXHAUST MANIFOLD 4" SPACER KIT COMPONENTS - FIGURE 15

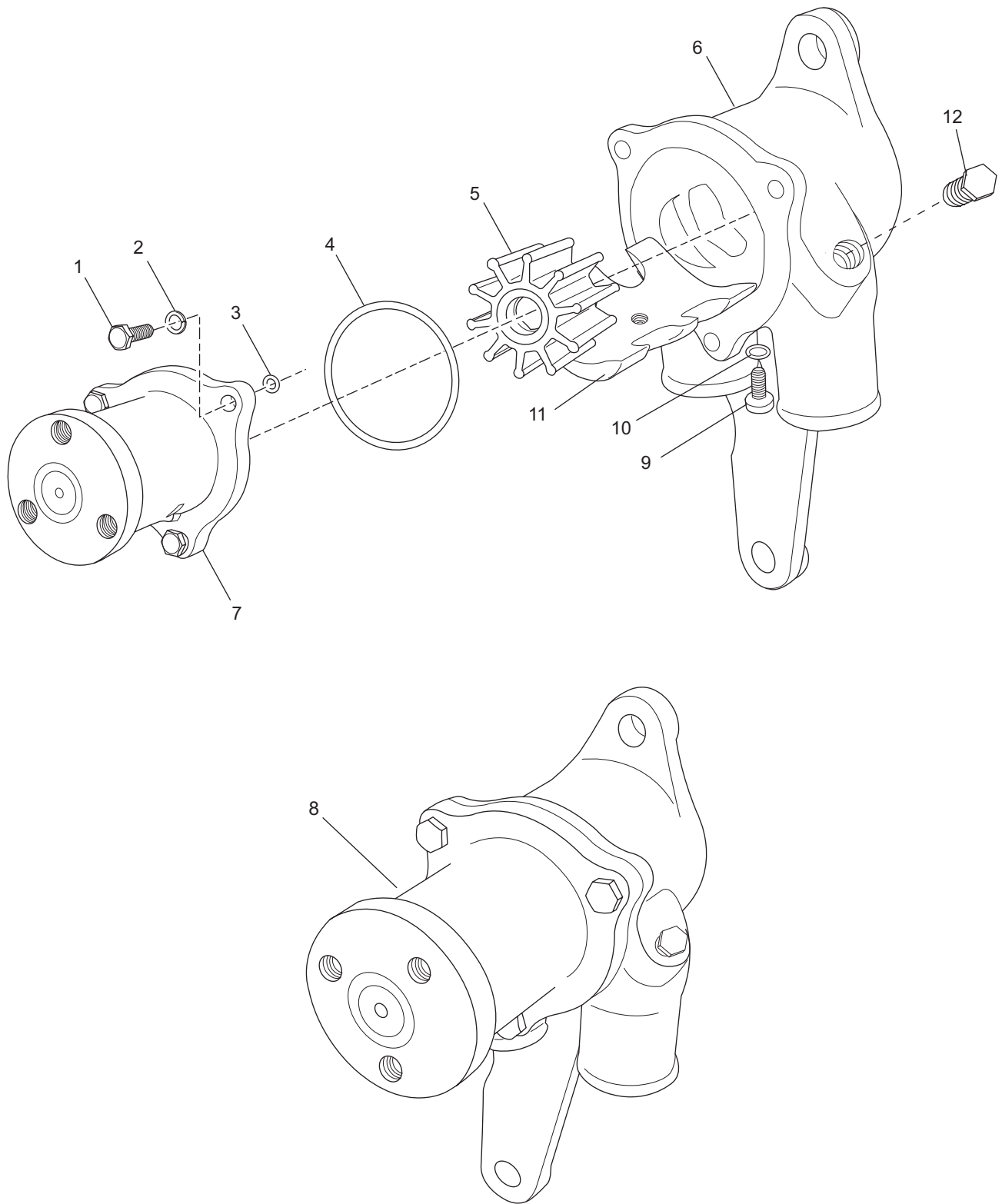


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12-10-03

EXHAUST MANIFOLD 4" SPACER KIT COMPONENTS - FIGURE 15

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R045107	AR	Hose , bulk 1" i.d., heat exchanger to elbow (Starboard STD)	
1	R045107	AR	Hose , bulk 1" i.d., heat exchanger to elbow (Stbd V-DRIVE)	
2	R045153	AR	Hose , bulk 3/4" i.d., 6" length (w/ 4" spacers)	
3	R090306	1	Bracket , degas bottle (w/ 4" spacers)	
4	R045107	AR	Hose , bulk 1" i.d., elbow to heat exchanger (Port STD)	
4	R045107	AR	Hose , bulk 1" i.d., elbow to heat exchanger (Port V-DRIVE)	
5	95310000	8	Nut , exhaust elbow attaching	
6	93300000	8	Lockwasher , exhaust elbow attaching	
7	RM0274	4	Gasket , manifold/spacer and spacer/elbow	
8	R031039	4	Stud , exhaust elbow attaching w/4" riser (short)	
9	R062086	2	Spacer , 4"	
10	R031040	4	Stud , exhaust elbow attaching w/4" riser (long)	
11	R045107	AR	Hose , bulk 1" i.d., heat exchanger to elbow (Port STD)	
11	R045107	AR	Hose , bulk 1" i.d., heat exchanger to elbow (Port V-DRIVE)	
12	R045107	AR	Hose , bulk 1" i.d., elbow to heat exchanger (Starboard STD)	
12	R045107	AR	Hose , bulk 1" i.d., elbow to heat exchanger (Stbd V-DRIVE)	
NI	RK062086	AR	Kit , riser	

RAW WATER COOLING PUMP - FIGURE 16

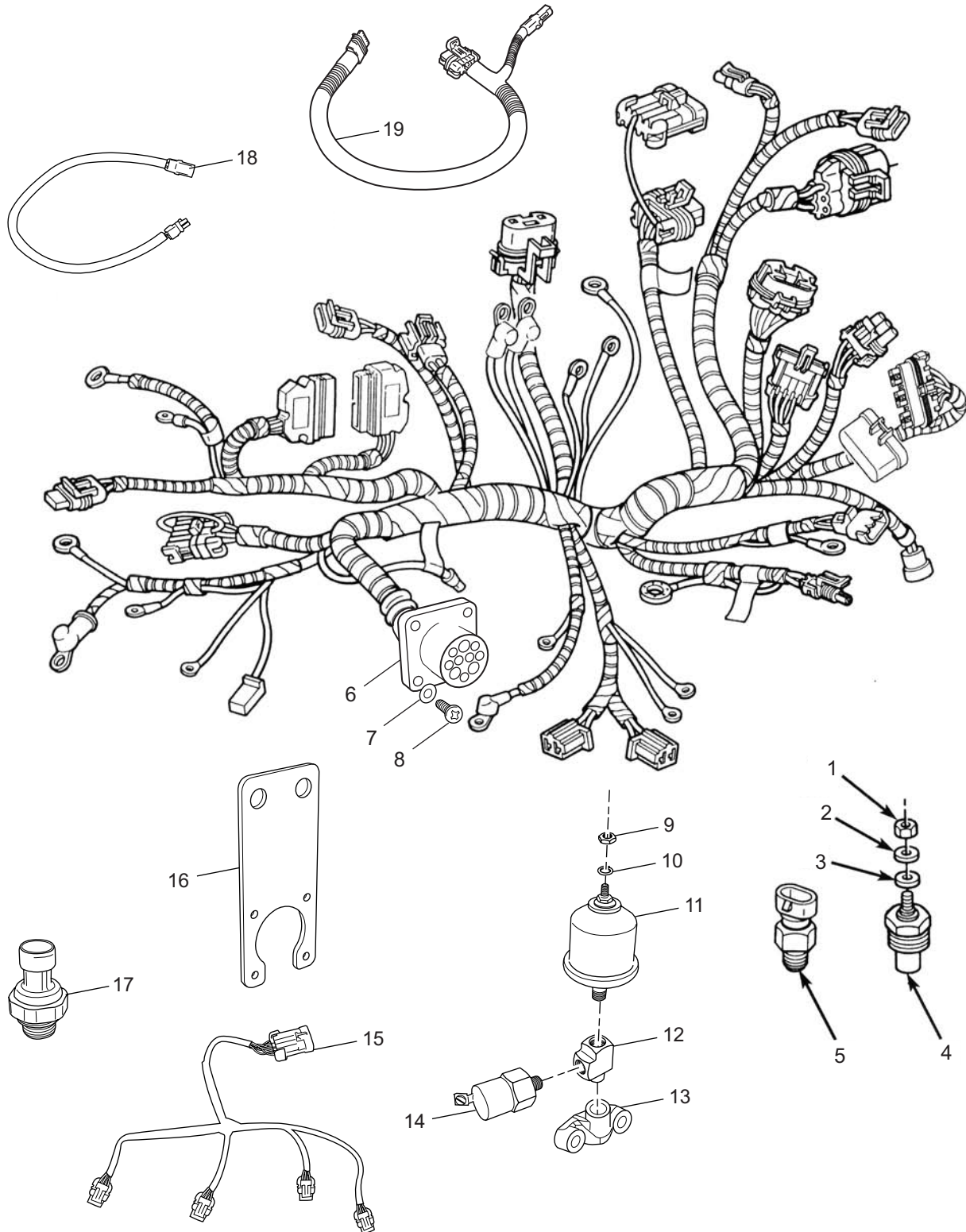


PC60P_022
05-23-07

RAW WATER COOLING PUMP - FIGURE 16

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	TBD	3	Bolt , bearing housing attaching	
2	TBD	3	Lockwasher , bearing housing attaching bolt	
3	R047243	3	O-ring , bearing housing attaching bolt	
4	R047242	1	O-ring , bearing housing attaching	
5	RP061022	1	Impeller Kit (includes O-rings and impeller)	
6	R057032	1	Housing , raw water pump	
7	RA134071	1	Bearing Housing Assembly	
8	RA057032	1	Raw Water Pump Assembly	
9	TBD	1	Bolt , raw water pump cam	
10	TBD	1	Lockwasher , raw water pump cam	
11	R161018	1	Cam , raw water pump	
12	RS3554	1	Plug , brass 1/8 NPT	

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 17

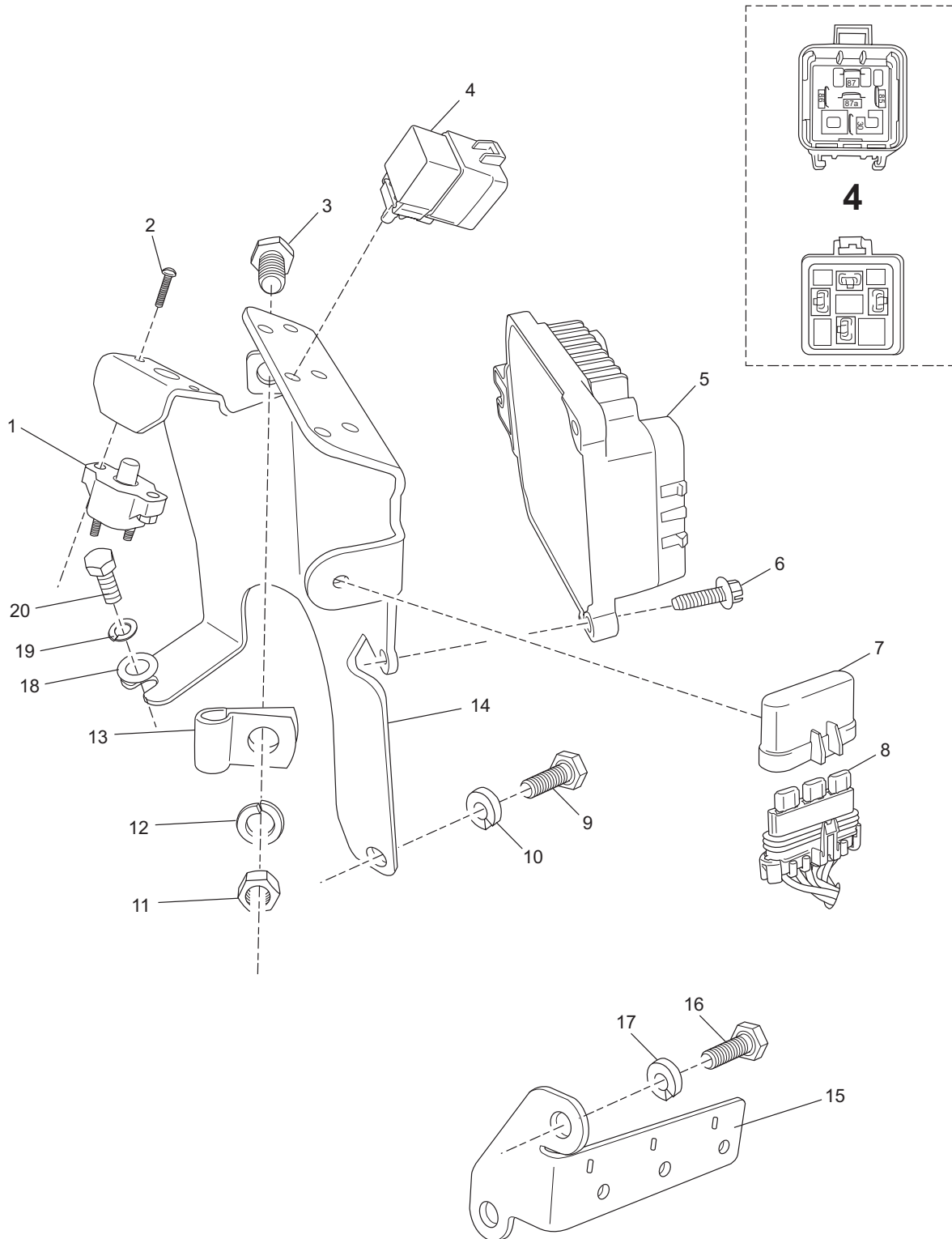


CR60009-06
3-21-06

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 17

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS1540	1	Nut , sender terminal	
2	RS2197	1	Lockwasher , sender terminal	
3	RS2746	1	Washer , sender terminal	
4	R020002	1	Sender , temperature	
5	R020046	1	Sensor , engine coolant temperature (ECT)	
6	RA121076B	1	Engine Wiring Harness Assembly w/10-Pin connector	
6	RA121083A	1	Engine Wiring Harness Assembly w/16-Pin connector	07-600V-01
7	R096142	4	Washer , main harness attaching	
8	RS5115	4	Screw , main harness attaching	
9	RS1540	1	Nut , sender terminal	
10	RS2197	1	Lockwasher , sender terminal	
11	R020001	1	Sender , oil pressure	
12	R024145	1	Tee , sender attaching	
13	R079071	1	Adapter , oil sending unit	
14	R020015A	1	Switch , oil pressure	
15	R121101	2	Harness , ignition coil	
16	R090291	1	Bracket , 10-pin mounting	
17	R020048	1	Sensor , CAN-Bus oil pressure	07-600V-01
18	R121078	AR	Harness , extension, fuel pump (V-Drive)	xx-600V-xx
18	RA121062D	AR	Harness , extension, fuel pump to engine harness	07-600V-01
19	R121086A	1	Harness , TCP Sensor to TAC Module	07-600V-01
NI	RS0280	2	Bolt , 10-pin brkt attaching	
NI	RS2179	2	Lockwasher , 10-pin brkt attaching	

ECM and RELAYS - FIGURE 18

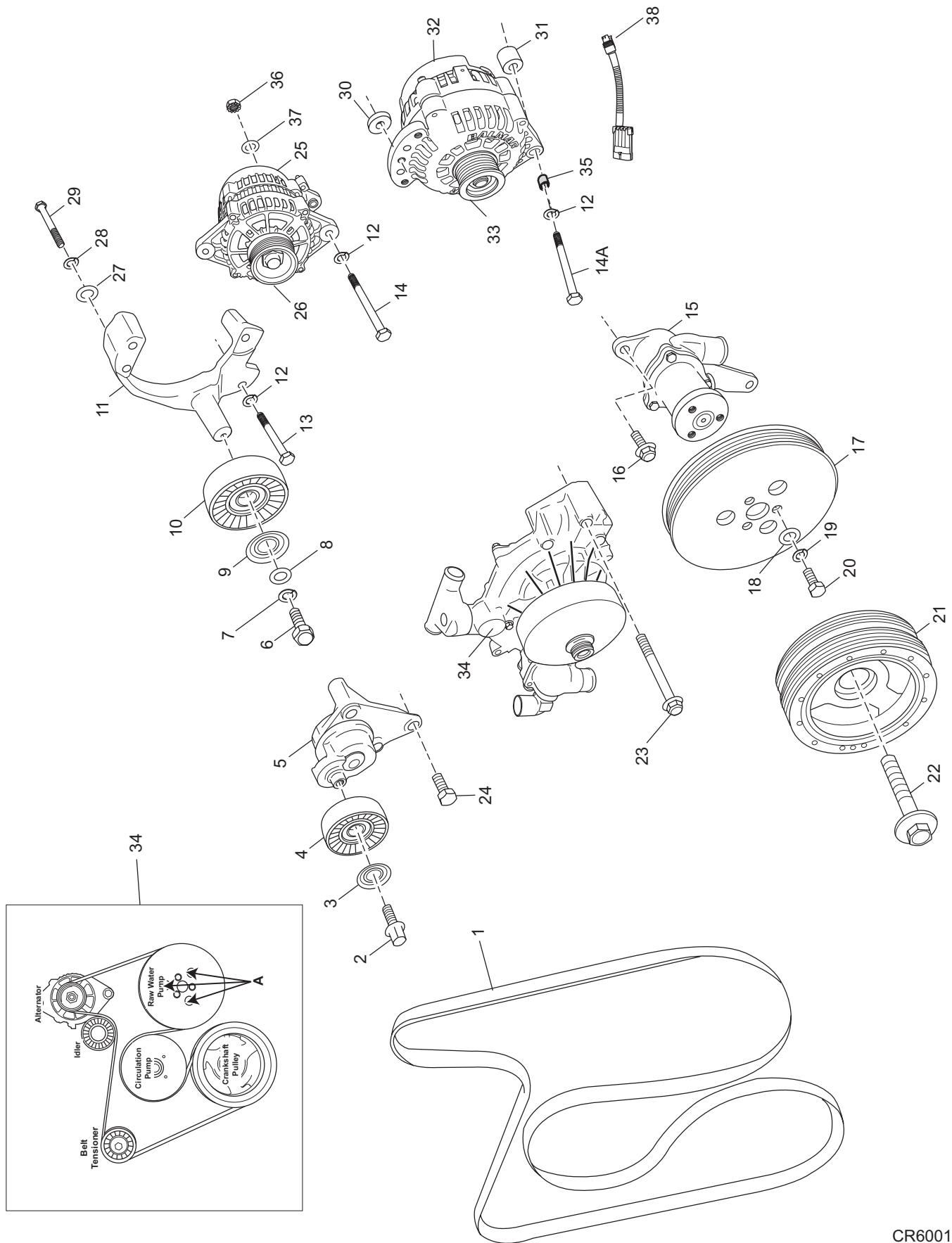


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ECM and RELAYS - FIGURE 18

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R153006C	1	Circuit Breaker Assembly (60 amp)	
NI	R143176	1	Decal , Fuse Block	
NI	R143177	1	Decal , Main Circuit Breaker	
2	RS5084	2	Bolt , circuit breaker mounting	
3	RS0302	1	Bolt , oil dipstick tube attaching	
4	R130011A	3	Relay , fuel pump, ignition, starter	
5	R116021Q	1	Engine Control Module , cksum - 30455 (76F7)	
5	R116021J	1	Engine Control Module , cksum - 38462 (963E)	07-600V-01
6	91107075	3	Bolt , ECM attaching	
7	R126014	1	Cover , fuse holder	
8	R153017B	3	Fuses , 20 amp	
9	RS0302	1	Bolt , bracket attaching	
10	RS2180	1	Lockwasher , bracket attaching bolt	
11	RS1028	1	Nut , oil dipstick tube attaching	
12	RS2180	1	Lockwasher , oil dipstick tube attaching	
13	R127015	1	Clamp , oil dipstick tube attaching	
14	R090283	1	Bracket , ECM/relay mounting	
15	R090315	1	Bracket , relay mounting, alternate location	07-600V-01
16	98443025	2	Bolt , relay bracket mounting	07-600V-01
17	93940000	2	Lockwasher , relay bracket mounting	07-600V-01
18	92200000	1	Washer , bracket attaching bolt	
19	RS2179	1	Lockwasher , bracket attaching bolt	
20	98333025	1	Bolt , bracket attaching	

ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 19



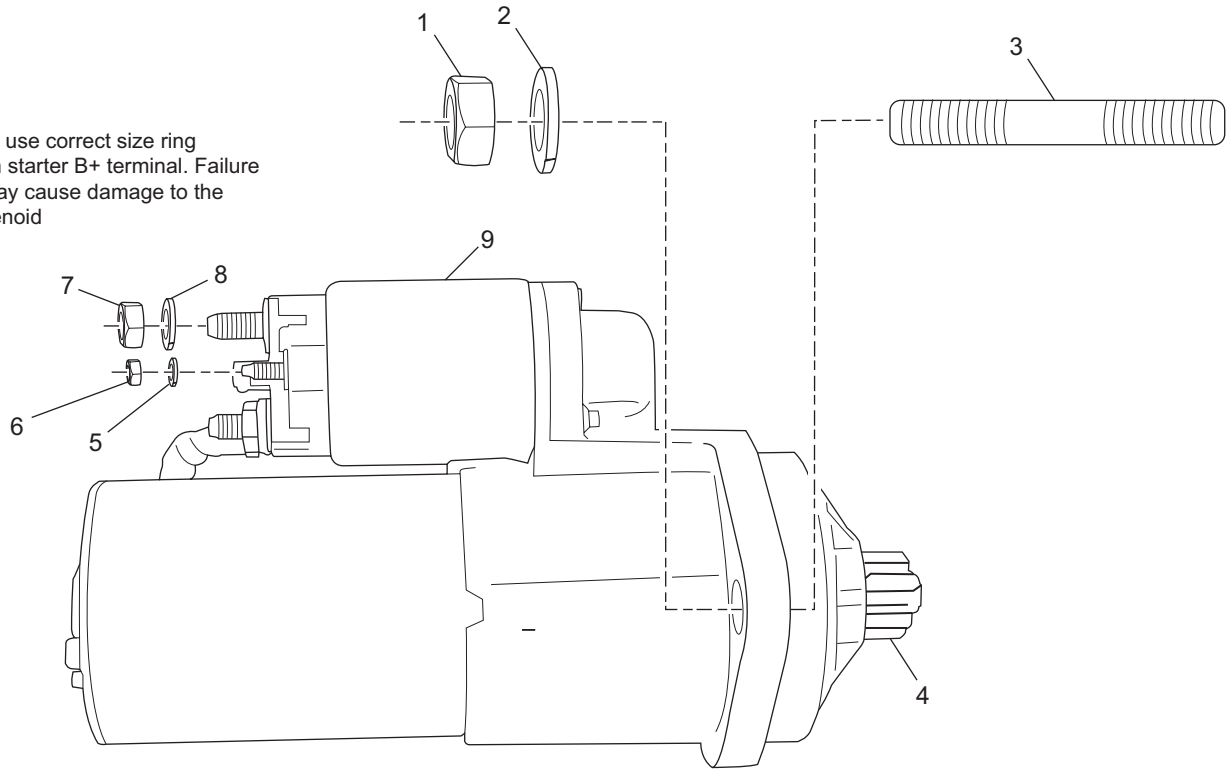
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ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 19

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R066027	1	Belt , serpentine drive	
2	part of item #5	1	Bolt , tensioner pulley attaching	
3	part of item #5	1	Washer , tensioner pulley attaching bolt	
4	part of item #5	1	Pulley , tensioner	
5	RA068002	1	Tensioner , belt	
6	RS6531	1	Bolt , idler pulley attaching	
7	RS2179	1	Lockwasher , idler pulley attaching bolt	
8	92940000	1	Washer , idler pulley attaching bolt (small)	
9	R096145	1	Washer , idler pulley attaching bolt (large)	
10	R065040	1	Pulley , idler	
11	R090269	1	Bracket , idler pulley mounting / alternator	
12	93940000	2	Lockwasher , idler pulley bracket attaching bolt	
13	98446070	1	Bolt , alternator/pulley bracket attaching, lower	
14	98443110	1	Bolt , alternator/bracket attaching, upper	
14A	98443120	1	Bolt , alternator/bracket attaching, upper	22-600-01
15	RA057032	1	Raw Water Pump Assembly	
16	98442030	2	Bolt , raw water pump mounting	
17	R065050	1	Pulley , raw water pump	
18	92934000	3	Washer , raw water pump pulley attaching	
19	93934000	3	Lockwasher , raw water pump pulley attaching bolt	
20	99335016	3	Bolt , raw water pump pulley attaching	
21	R064016	1	Balancer , crankshaft	
22	TBD	1	Bolt , crankshaft balancer	
23	TBD	6	Bolt , water circulation pump attaching	
24	TBD	3	Bolt , belt tensioner mounting	
25	RA097007C	1	Alternator Assembly (Delco 70 amp)	
26	R065055	1	Pulley , alternator (70 amp)	
27	92930000	1	Flatwasher , alternator mounting	
28	93930000	1	Lockwasher , alternator mounting	
29	98339070	1	Bolt , alternator mounting	
30	R062082	1	Spacer , upper	22-600-01
31	98183	1	Spacer , lower	22-600-01
32	RA097010A	1	Alternator Assembly (Balmar, 100 amp), (internal fan, internal regulator)	22-600-01
33	TBD	1	Pulley , alternator (100 amp)	22-600-01
34	R143147	1	Decal , belt routing	
35	R176023	1	Bushing , 100 Amp Alternator	22-600-01
36	97220060	1	Nut , KEPS 70A Alternator - BAT Terminal	
37	92920000	1	Flat Washer , 70A Alternator - BAT Terminal	
38	R121081	1	Harness , adapter 70A harness to 100A Alternator	22-600-01
NI	TBD	1	Wire , Ground, alternator	
NI	TBD	1	Wire , Charge, alternator	
NI	R153018A	1	Wire , Fused, starter to circuit breaker	

STARTER ASSEMBLY COMPONENTS - FIGURE 20

Note: Must use correct size ring terminal on starter B+ terminal. Failure to do so may cause damage to the starter solenoid

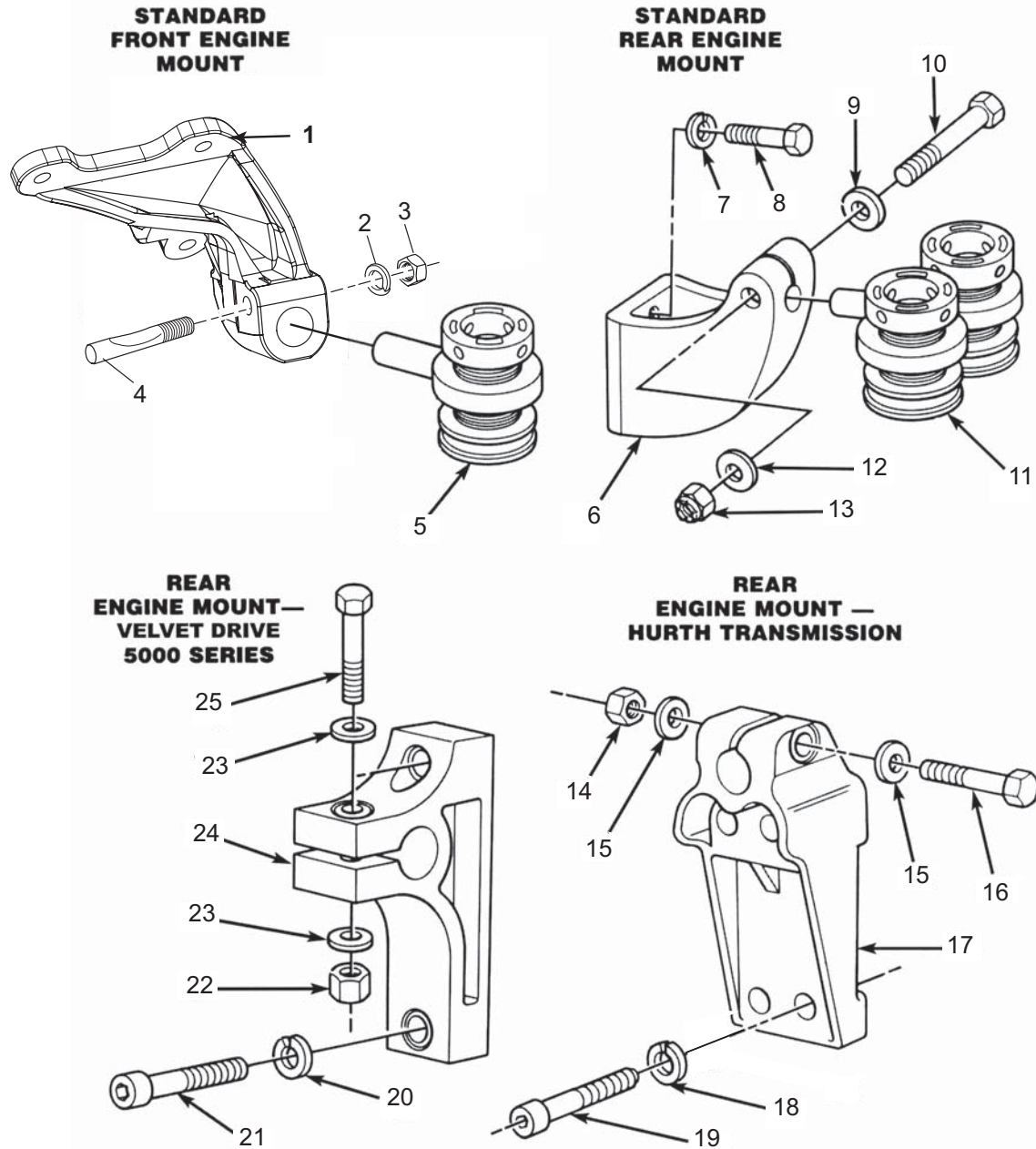


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STARTER ASSEMBLY COMPONENTS - FIGURE 20

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS1029	2	Nut , starter attaching	
2	RS2181	2	Lockwasher , starter attaching	
3	R031018	2	Stud , starter attaching	
4	RA122009	1	Starter Motor Assembly	
5	93003000	2	Lockwasher , solenoid terminal	
6	RS7036	2	Nut , solenoid terminal	
7	RS7018	1	Nut , solenoid terminal	
8	RS7080	1	Lockwasher , solenoid terminal	
9	RU0050B	1	Solenoid , starter	
NI	23631	1	Decal , Prop Rotation, Hurth	

ENGINE and TRANSMISSION MOUNTS - FIGURE 21

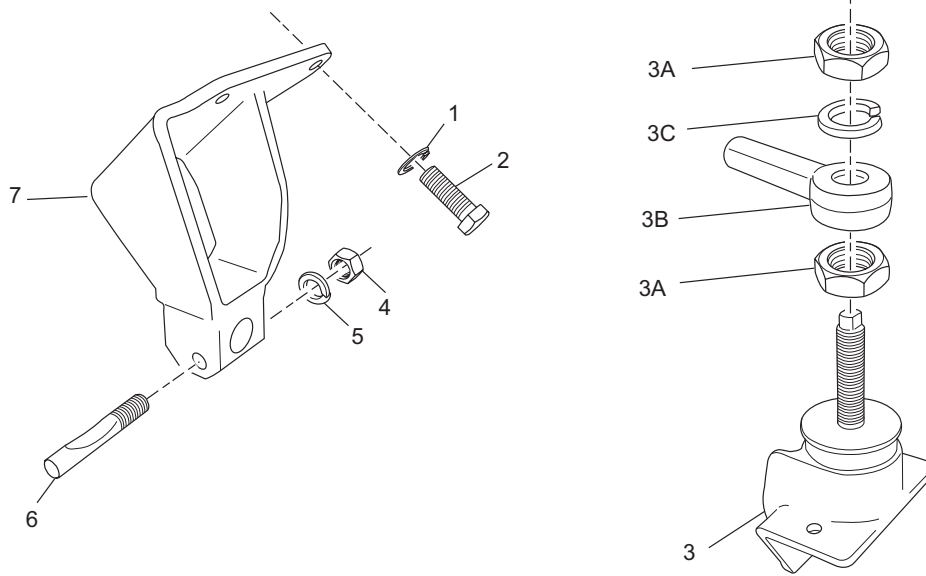


ENGINE and TRANSMISSION MOUNTS - FIGURE 21

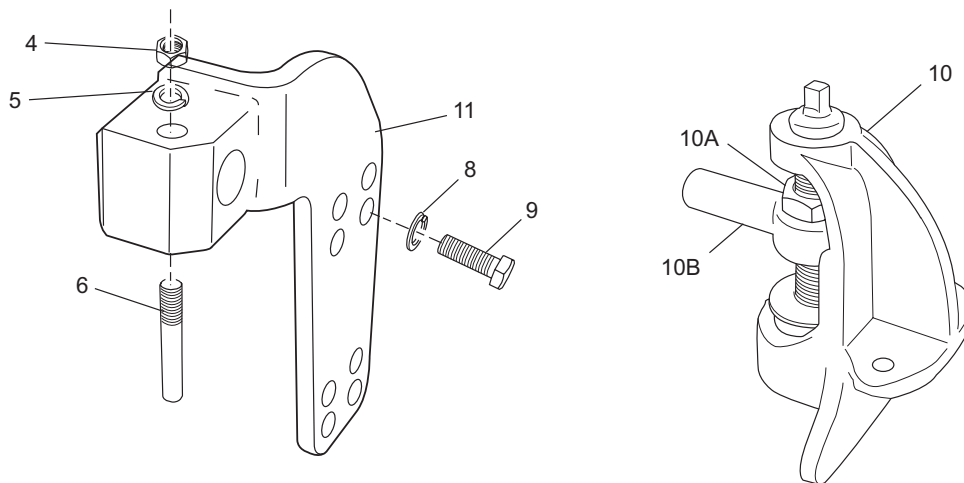
ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R090284	1	Bracket , engine mounting (front) (Left)	
1	R090285	1	Bracket , engine mounting (front) (Right)	
NI	93940000	6	Lockwasher , engine mount attaching bolt	
NI	98443030	4	Bolt , engine mount attaching, upper	
NI	98449055	2	Bolt , engine mount attaching, lower	
2	RS2181	2	Washer , trunnion bolt	
3	RS1529	2	Nut , trunnion bolt - locking	
4	R095020	2	Bolt , trunnion shaft	
5	97926	2	Mount , engine support (single front)	
6	97917	2	Bracket , engine mounting (Rear)	
7	RS2181	4	Lockwasher , bracket mounting bolt	
8	RS0328	4	Bolt , bracket to transmission (1 1/4")	
9	92300000	2	Washer , trunnion bolt	
10	90318325	2	Bolt , trunnion shaft (3 1/4")	
11	97905	2	Mount , engine support (dual rear)	
12	92300000	2	Washer , trunnion bolt	
13	95310300	2	Nut , trunnion bolt - locking	
14	95310300	2	Nut , trunnion bolt - locking	
15	92300000	4	Washer , trunnion bolt	
16	90318325	2	Bolt , trunnion shaft (3 1/4")	
17	R090174A	2	Bracket , engine mounting (rear)	
18	RS7071	8	Lockwasher (12 mm)	
19	RS6331	4	Bolt , bracket to transmission (12 mm x 35 mm)	
19	RS6336	4	Bolt , bracket to transmission (12 mm x 60 mm)	
20	RS7071	4	Lockwasher (12 mm)	
21	RS6336	4	Bolt , bracket to transmission (12 mm x 60 mm)	
22	95310300	2	Nut , trunnion bolt - locking	
23	92300000	4	Washer , trunnion bolt	
24	98224	1	Bracket , transmission mounting (Starboard)	
24	98225	1	Bracket , transmission mounting (Port)	
25	90318325	2	Bolt , trunnion shaft (3 1/4")	

MODEL 07-600V-01 ENGINE and TRANSMISSION MOUNTS - FIGURE 22

OPTIONAL FRONT MOUNT



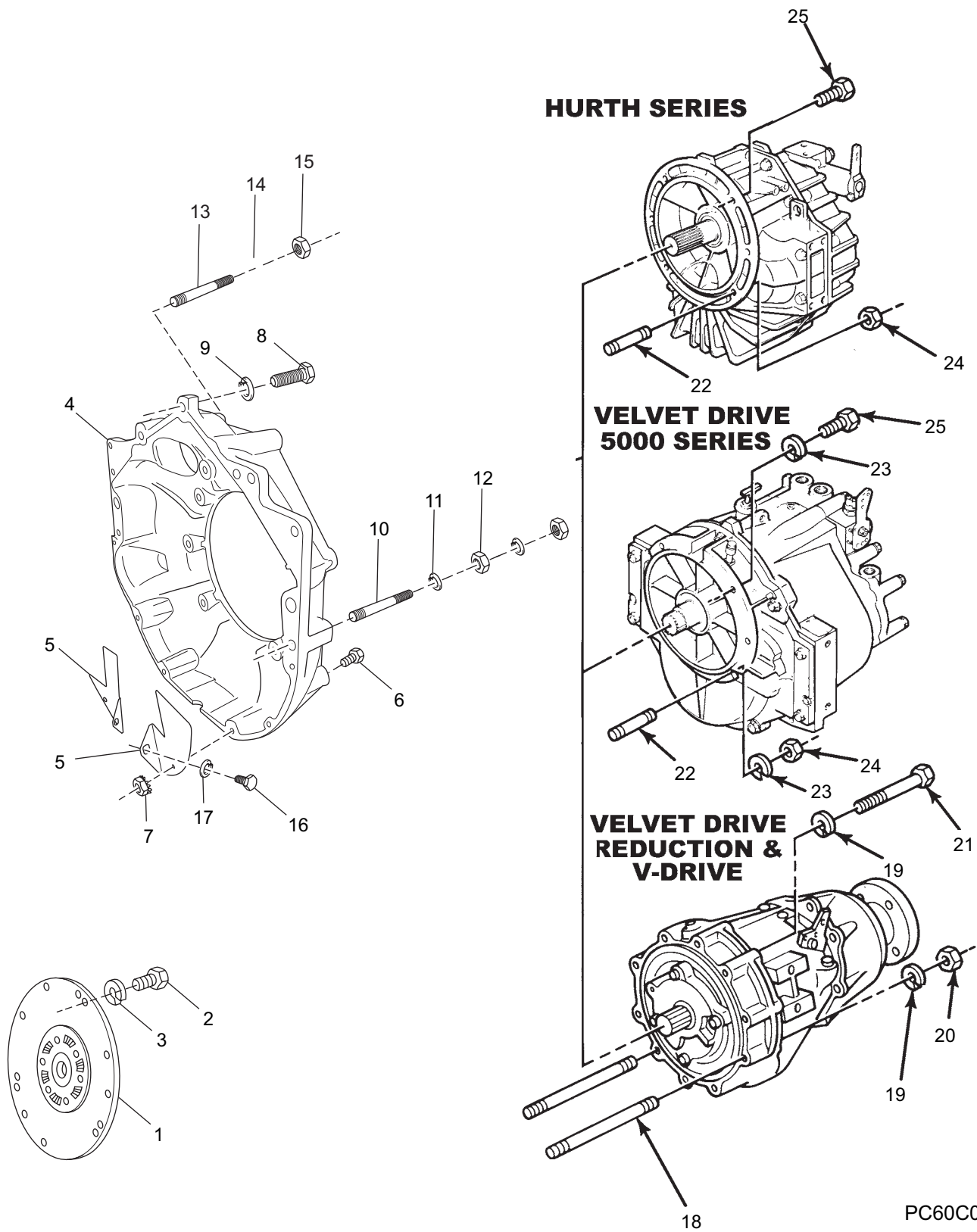
OPTIONAL REAR MOUNT - HURTH GEAR



MODEL 07-600V-01 ENGINE and TRANSMISSION MOUNTS - FIGURE 22

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS2180	6	Lockwasher , bracket mounting bolt	07-600V-01
2	RS0305	4	Bolt , socket head	07-600V-01
3	RC091001	2	Trunnion Assembly	07-600V-01
3A	RS1075	4	Nut , adjustment and lock	07-600V-01
3B	R091001	2	Trunnion, long	07-600V-01
3C	RS2186	2	Lockwasher , adjusting nut	07-600V-01
4	RS1529	2	Nut , trunnion bolt - locking	07-600V-01
5	RS2181	2	Lockwasher , trunnion bolt	07-600V-01
6	R095020	2	Bolt , trunnion shaft	07-600V-01
7	R090284B	1	Bracket , engine mounting (front, port)	07-600V-01
7	R090285B	1	Bracket , engine mounting (front, starboard)	07-600V-01
8	RS7071	8	Lockwasher (12 mm)	07-600V-01
9	RS6336	4	Bolt , bracket to transmission (12 mm x 60 mm)	07-600V-01
10	RA092011	2	Trunnion Assembly , tall	07-600V-01
10A	R091003	2	Trunnion , 2.5"	07-600V-01
10B	RS1075	2	Nut , adjustment and lock	07-600V-01
11	R090328	1	Bracket , engine mounting (rear - port)	07-600V-01
11	R090329	1	Bracket , engine mounting (rear - starboard)	07-600V-01

BELL HOUSING ASSEMBLY - FIGURE 23

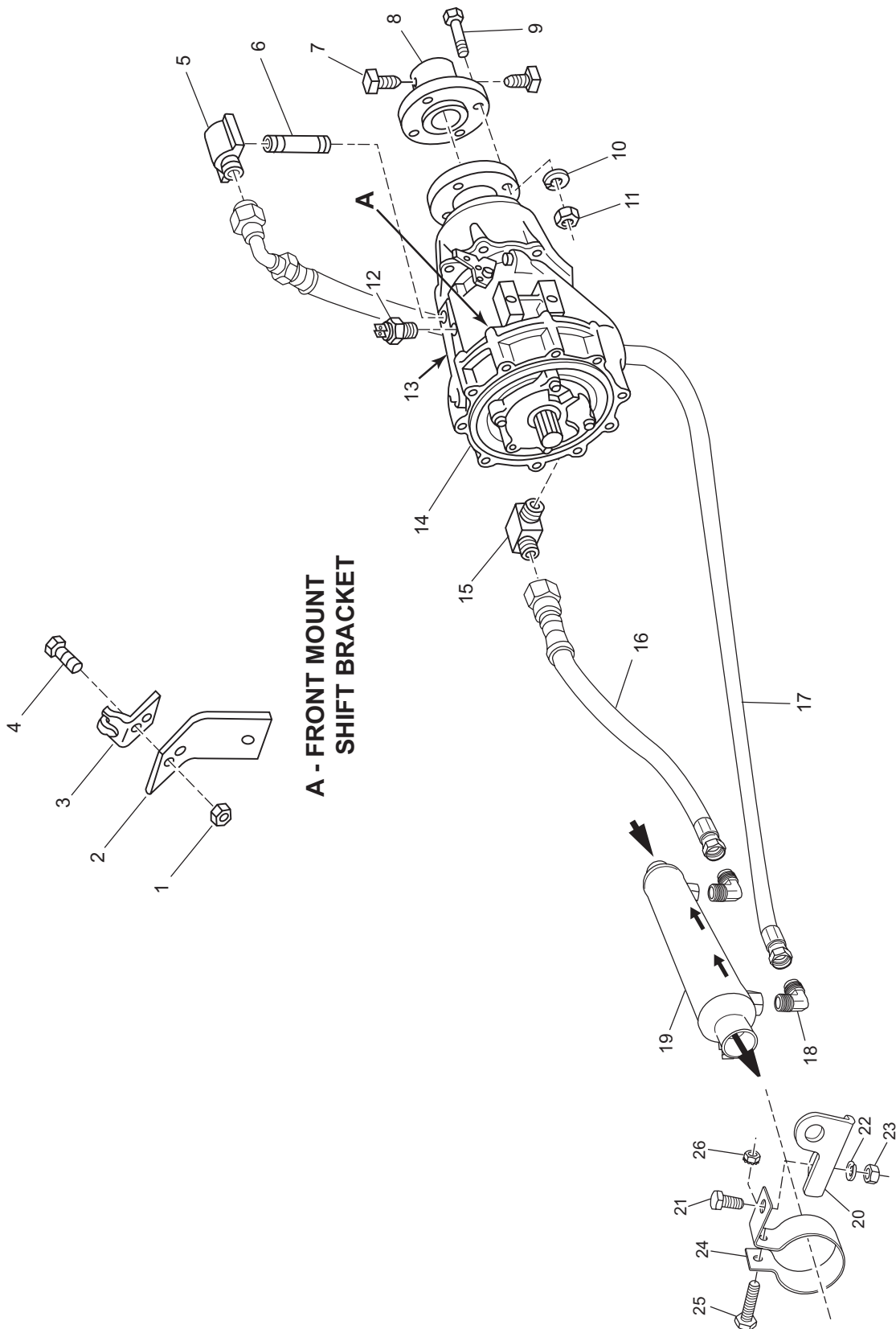


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BELL HOUSING ASSEMBLY - FIGURE 23

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	R140018	1	Drive Damper Assembly , (Hurth)	
1	98511	1	Drive Damper Assembly , (Standard Velvet Drive)	
2	98446030	6	Bolt , damper to flywheel (1")	
3	93940000	6	Lockwasher , damper bolt	
4	R142014A	1	Bellhousing , flywheel	
5	R019011	1	Cover , bellhousing, (stbd) (use w/bottom mount starter)	
5	R019011A	1	Cover , bellhousing, (stbd) (use w/top mount starter)	
5	R019012	1	Cover , bellhousing, (port)	
NI	R019010	1	Cover , top mount starter (used w/R019011)	
NI	RS0327	2	Bolt , dust cover attaching	
NI	RS2181	2	Lockwasher , dust cover attaching	
6	RS0256	5	Bolt , cover to bellhousing (1")	
6	90105125	1	Bolt , cover to bellhousing (1 1/4")	
7	RS1078	6	Nut , cover bolt	
8	98443050	2	Bolt , bellhousing to block	
8	99443030	1	Bolt , SHCS (behind starter)	
9	93940000	2	Lockwasher , bellhousing bolt	
10	R031034	2	Stud , bellhousing mounting	
11	93940000	4	Lockwasher , mounting stud	
12	97440000	4	Nut , mounting stud	
13	R031018	2	Stud , starter mounting (1 3/4")	
14	RS2181	2	Lockwasher , starter mounting stud	
15	RS1029	2	Nut , starter mounting stud	
16	RS6503	2	Bolt , dust cover attaching	
17	93920000	2	Lockwasher , dust cover attaching	
			Velvet Drive Reduction & "V"-Drive	
18	96541	2	Stud , transmission mounting (4")	
19	RS2181	6	Lockwasher , transmission mounting	
20	RS1029	2	Nut , transmission mounting stud	
21	RS0337	4	Bolt , transmission mounting	
			Velvet Drive 5000 & Hurth Gears	
22	R031018	2	Stud , transmission mounting (1 5/8")	
23	RS2180	6	Lockwasher , transmission mounting	
24	RS1029	2	Nut , transmission mounting stud	
25	RS0329	4	Bolt , transmission mounting	

TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE IN-LINE) - FIGURE 24

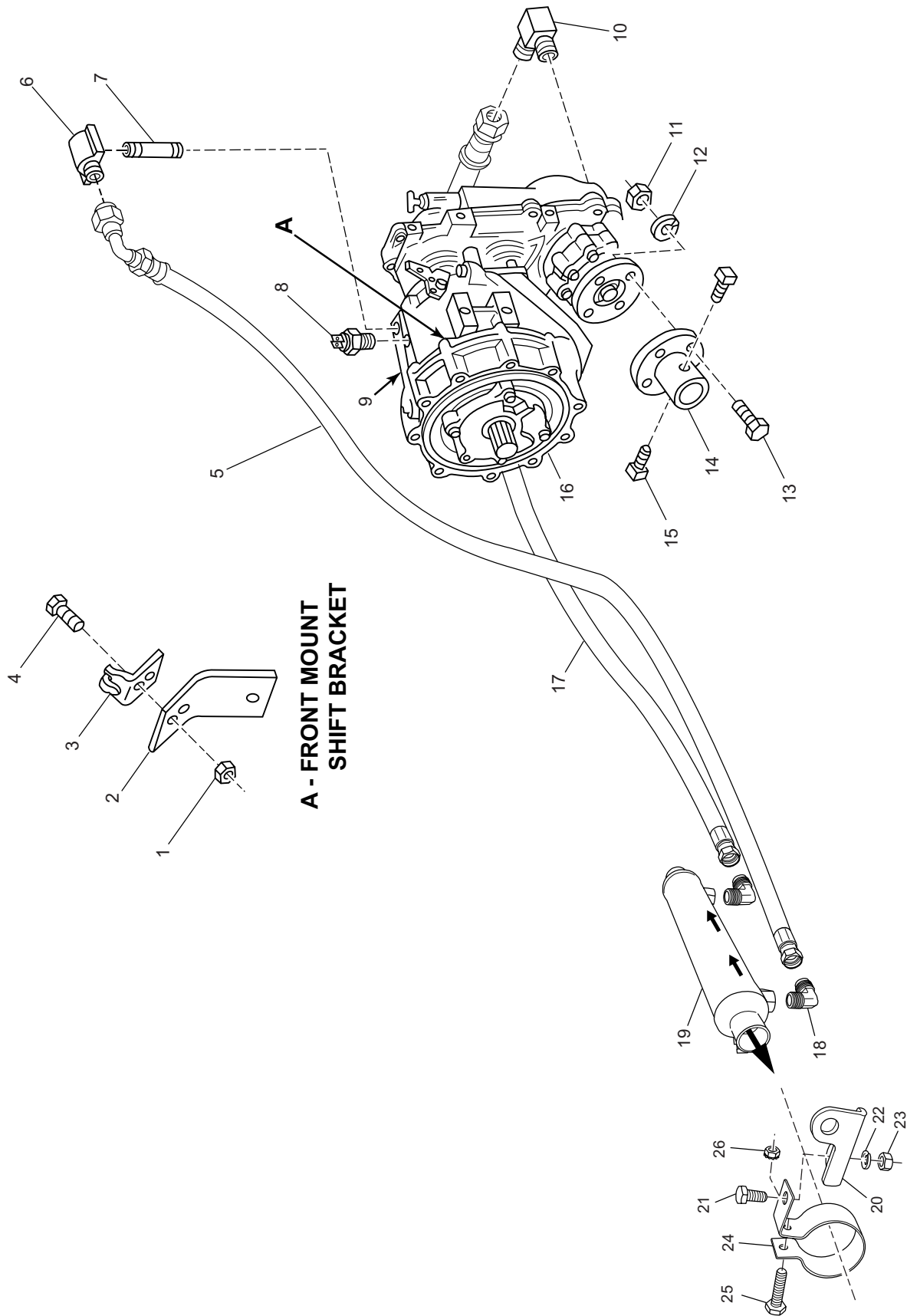


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TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE IN-LINE) - FIGURE 24

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS2055	2	Nut , attaching bolt	
2	96341	1	Shift Bracket (front mount)	
3	R090086	1	Cable Clip , single cable	
N.I.	22232	OPT	Cable Clip , dual cable clip (not shown)	
4	RS5122	2	Bolt , clip attaching (1/2")	
5	R024008	1	Elbow , hose - transmission (90 degree)	
6	RS4674	1	Nipple , pipe (3")	
7	2000090	2	Screw , set - coupler	
8	R148001	OPT	Coupler , prop shaft (1" shaft)	
8	R148002	OPT	Coupler , prop shaft (1 1/8" shaft)	
8	R148003	OPT	Coupler , prop shaft (1 1/4" shaft)	
8	R148004	OPT	Coupler , prop shaft (1 3/8" shaft)	
8	R148005	OPT	Coupler , prop shaft (1 1/2" shaft)	
8	R148007	OPT	Coupler , prop shaft (1 3/4" shaft)	
8	R148008	OPT	Coupler , prop shaft (2" shaft)	
9	22136	4	Bolt , coupling (1 1/2")	
10	RS2181	4	Lockwasher , coupling bolt	
11	RS1529	4	Nut , coupling bolt	
12	R020037	1	Sender , temperature alarm	
13	R153002	1	Switch Kit , neutral start (not shown)	
13A	25542	1	Switch & O-Ring Assembly (not shown)	
14	RA157003	1	Transmission (1:1 Direct Drive)	
14	RA157004	1	Transmission (1.52:1 Reduction)	
14	RA157004A	1	Transmission (1.88:1 Reduction)	
14	RA157004D	1	Transmission (2.57:1 Reduction)	
14	RA157004E	1	Transmission (2.91:1 Reduction)	
15	R024010	1	Elbow , hose - transmission (90 degree)	
16	RA045007P	1	Hose Assembly , cooler to transmission	
17	RA045007T	1	Hose Assembly , transmission to cooler	
18	R024010	2	Fitting , 90 degree	
19	R147006	1	Cooler Assembly , transmission oil	
20	R090013A	1	Bracket , cooler attaching	
21	RS0302	1	Bolt , cooler bracket attaching	
22	RS2180	1	Lockwasher , cooler bracket mounting	
23	RS2058	1	Nut , cooler bracket attaching	
24	R090010	1	Bracket , transmission cooler mounting	
25	RS0256	1	Bolt , cooler bracket attaching	
26	RS1028	1	Nut , cooler bracket attaching	

TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE "V"-DRIVE) - FIGURE 25



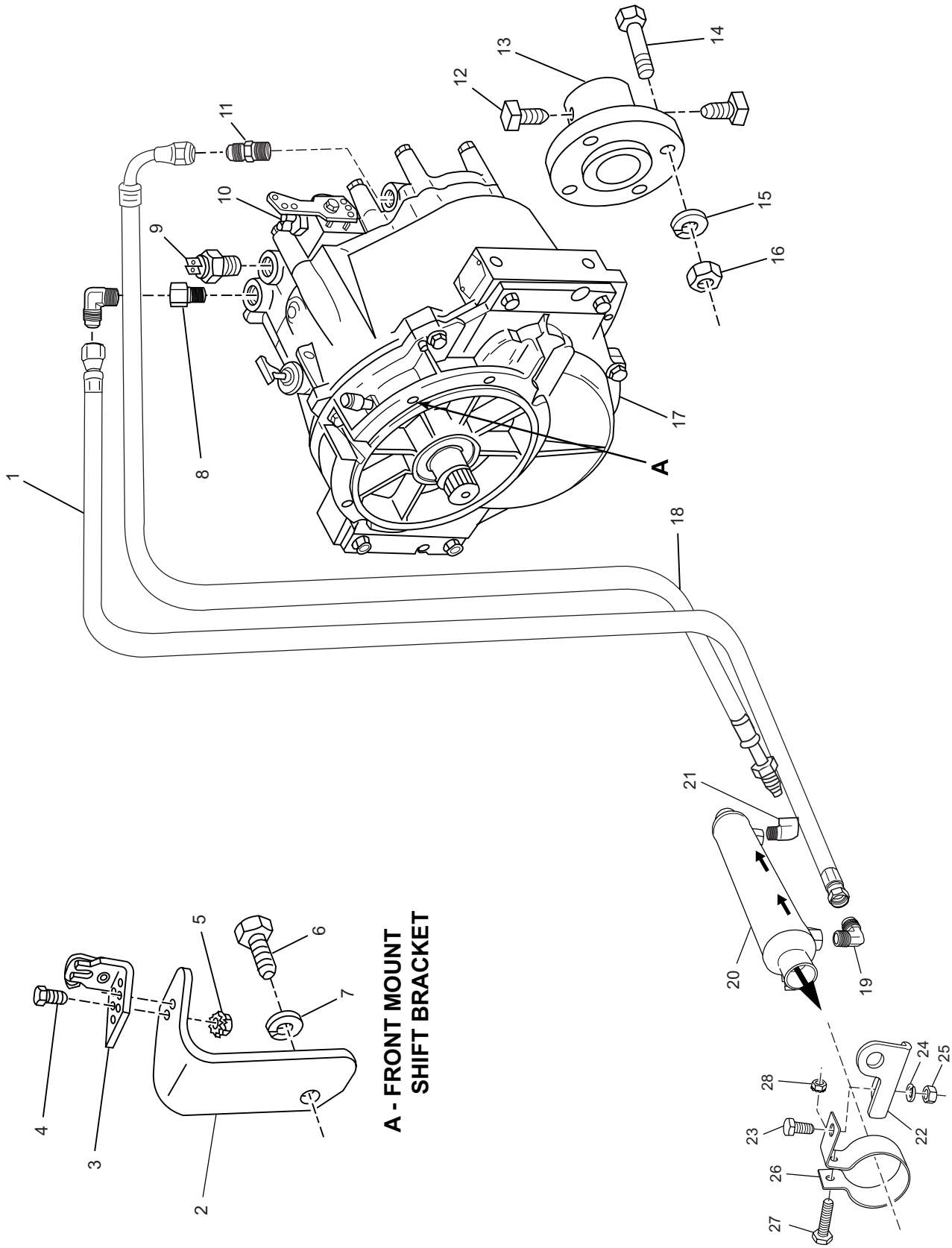
**A - FRONT MOUNT
SHIFT BRACKET**

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TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE "V"-DRIVE) - FIGURE 25

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS2055	2	Nut , attaching bolt	
2	96341	1	Shift Bracket (front mount)	
3	R090086	1	Cable Clip , single cable	
3	22232	OPT	Cable Clip , dual cable clip (not shown)	
4	RS5122	2	Bolt , clip attaching (1/2")	
5	RA045007T	1	Hose Assembly , transmission to cooler	
6	R024008	1	Elbow , hose - transmission (90 degree)	
7	RS4674	1	Nipple , pipe (3")	
8	R020037	1	Sender , temperature alarm	
9	R153002	1	Switch Kit , neutral start (not shown)	
N.I.	25542	1	Switch & O-Ring Assembly (not shown)	
10	R024010	1	Elbow , hose - transmission (90 degree)	
11	RS1529	4	Nut , coupling bolt	
12	RS2181	4	Lockwasher , coupling bolt	
13	22136	4	Bolt , coupling (1 1/2")	
14	R148001	OPT	Coupler , prop shaft (1" shaft)	
14	R148002	OPT	Coupler , prop shaft (1 1/8" shaft)	
14	R148003	OPT	Coupler , prop shaft (1 1/4" shaft)	
14	R148004	OPT	Coupler , prop shaft (1 3/8" shaft)	
14	R148005	OPT	Coupler , prop shaft (1 1/2" shaft)	
14	R148007	OPT	Coupler , prop shaft (1 3/4" shaft)	
14	R148008	OPT	Coupler , prop shaft (2" shaft)	
15	2000090	2	Screw , set - coupler	
16	RA156002B	1	Transmission (1.51:1 Reduction)	
16	RA156002D	1	Transmission (1.99:1 Reduction)	
16	RA156002E	1	Transmission (2.49:1 Reduction)	
17	RA045007P	1	Hose Assembly , cooler to transmission	
18	R024010	2	Fitting , 90 degree	
19	R147006	1	Cooler Assembly , transmission oil	
20	R090013A	1	Bracket , cooler attaching	
21	RS0302	1	Bolt , cooler bracket attaching	
22	RS2180	1	Lockwasher , cooler bracket mounting	
23	RS2058	1	Nut , cooler bracket attaching	
24	R090010	1	Bracket , transmission cooler mounting	
25	RS0256	1	Bolt , cooler bracket attaching	
26	RS1028	1	Nut , cooler bracket attaching	

TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE 5000) - FIGURE 26

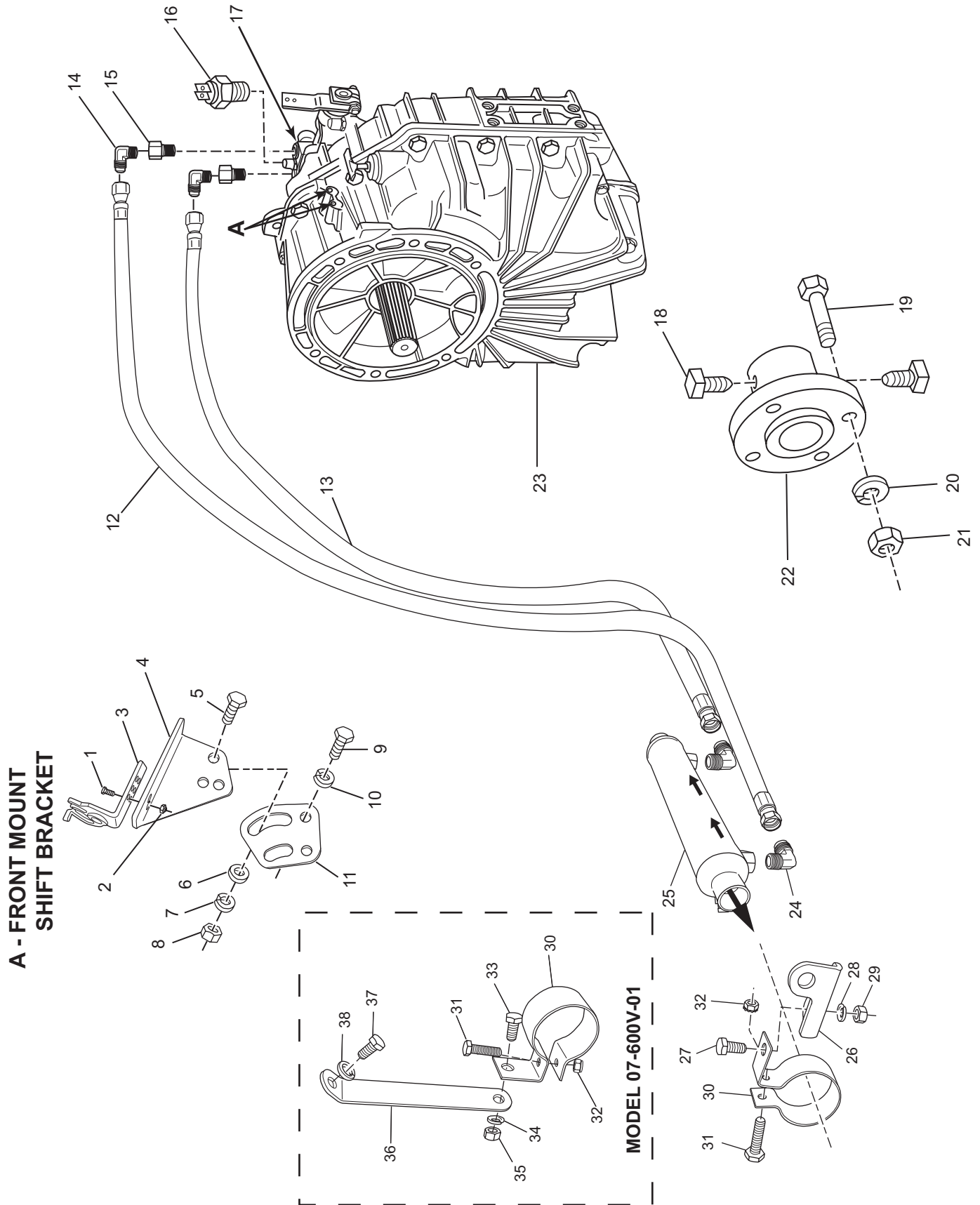


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TRANSMISSION AND RELATED COMPONENTS (VELVET DRIVE 5000) - FIGURE 26

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RA045007T	1	Hose Assembly , transmission to cooler	
2	98227	1	Shift Bracket , (front entry)	
3	R090086	1	Cable Clip , single cable	
3	22232	OPT	Cable Clip , dual cable clip (not shown)	
4	RS5122	2	Bolt , clip attaching (1/2")	
5	RS2055	2	Nut , attaching bolt	
6	RS0329	2	Bolt , shift bracket attaching	
7	RS2180	2	Washer , shift bracket attaching bolt	
8	R024196	1	Fitting , adapter	
9	R020037	1	Sender , temperature alarm	
10	25542	1	Switch & O-Ring Assembly (not shown)	
11	30603	1	Fitting , adapter	
12	2000090	2	Screw , set - coupler	
13	R148001	OPT	Coupler , prop shaft (1" shaft)	
13	R148002	OPT	Coupler , prop shaft (1 1/8" shaft)	
13	R148003	OPT	Coupler , prop shaft (1 1/4" shaft)	
13	R148004	OPT	Coupler , prop shaft (1 3/8" shaft)	
13	R148005	OPT	Coupler , prop shaft (1 1/2" shaft)	
13	R148007	OPT	Coupler , prop shaft (1 3/4" shaft)	
13	R148008	OPT	Coupler , prop shaft (2" shaft)	
14	22136	4	Bolt , coupling (1 1/2")	
15	RS2181	4	Lockwasher , coupling bolt	
16	RS1529	4	Nut , coupling bolt	
17	RA157020B	1	Transmission (1.50:1 Reduction) Down Angle	
17	RA157020C	1	Transmission (2:1 Reduction) Down Angle	
17	RA157020D	1	Transmission (2.45:1 Reduction) Down Angle	
17	RA157020E	1	Transmission (2.80:1 Reduction) Down Angle	
17	RA156008	1	Transmission (1.25:1 Reduction) V-Drive	
17	RA156008A	1	Transmission (1.50:1 Reduction) V-Drive	
17	RA156008B	1	Transmission (2:1 Reduction) V-Drive	
17	RA156008C	1	Transmission (2.50:1 Reduction) V-Drive	
18	18203	1	Hose Assembly , cooler to transmission	
19	R024010	2	Fitting , 90 degree	
20	R147006	1	Cooler Assembly , transmission oil	
21	137425	1	Fitting , 90 degree	
22	R090013A	1	Bracket , cooler attaching	
23	RS0302	1	Bolt , cooler bracket attaching	
24	RS2180	1	Lockwasher , cooler bracket mounting	
25	RS2058	1	Nut , cooler bracket attaching	
26	R090010	1	Bracket , transmission cooler mounting	
27	RS0256	1	Bolt , cooler bracket attaching	
28	RS1028	1	Nut , cooler bracket attaching	

TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) - FIGURE 27



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TRANSMISSION AND RELATED COMPONENTS (HURTH GEAR) - FIGURE 27

ITEM	PART NO.	QTY.	DESCRIPTION	MODEL ID
1	RS5122	2	Bolt , cable clip attaching	
2	RS2055	2	Nut , cable clip attaching bolt	
3	R090086	1	Cable Clip , single cable	
3	22232	OPT	Cable Clip , dual cable clip (not shown)	
4	R090202	1	Shift Bracket , cable clip attaching	
5	RS0282	2	Bolt , shift bracket attaching	
6	RS2674	2	Washer , shift bracket attaching bolt	
7	RS2179	2	Lockwasher , attaching bolt	
8	RS1027	2	Nut , shift bracket attaching bolt	
9	RS6531	2	Bolt , shift bracket attaching	
10	93930000	2	Lockwasher , shift bracket attaching bolt	
11	R090235	1	Bracket , shift	
12	RA045007H	1	Hose Assembly , transmission to cooler	
13	RA045007T	1	Hose Assembly , cooler to transmission	
14	R024010	2	Fitting , 90 degree	
15	R024196	2	Fitting , adapter	
16	R020037	1	Sender , temperature alarm	
17	25542	1	Switch & O-Ring Assembly (not shown)	
18	2000090	2	Screw , set - coupler	
19	90418138	4	Bolt , coupling (1 3/8")	
20	RS2181	4	Lockwasher , coupling bolt	
21	RS1529	4	Nut , coupling bolt	
22	R148001	OPT	Coupler , prop shaft (1" shaft)	
22	R148002	OPT	Coupler , prop shaft (1 1/8" shaft)	
22	R148003	OPT	Coupler , prop shaft (1 1/4" shaft)	
22	R148004	OPT	Coupler , prop shaft (1 3/8" shaft)	
22	R148005	OPT	Coupler , prop shaft (1 1/2" shaft)	
22	R148007	OPT	Coupler , prop shaft (1 3/4" shaft)	
22	R148008	OPT	Coupler , prop shaft (2" shaft)	
23	RA157022	1	Transmission 630A (1.22:1 Reduction)	8° Down Angle
23	RA157022A	1	Transmission 630A (1.55:1 Reduction)	
23	RA157022B	1	Transmission 630A (2.00:1 Reduction)	
23	RA157022C	1	Transmission 630A (2.50:1 Reduction)	
23	RA157022D	1	Transmission 630A (2.70:1 Reduction)	
23	RA157023F	1	Transmission 800A (2.85:1 Reduction)	V-Drive
23	RA156009	1	Transmission 630V (1.29:1 Reduction)	
23	RA156009A	1	Transmission 630V (1.50:1 Reduction)	
23	RA156009B	1	Transmission 630V (2.00:1 Reduction)	
23	RA156009C	1	Transmission 630V (2.50:1 Reduction)	
24	R024010	2	Fitting , 90 degree	
25	R147006	1	Cooler Assembly , transmission oil	
26	R090013A	1	Bracket , cooler attaching	
27	RS0302	1	Bolt , cooler bracket attaching	
28	RS2180	1	Lockwasher , cooler bracket mounting	
29	RS2058	1	Nut , cooler bracket attaching	
30	R090010	1	Bracket , transmission cooler mounting	
31	RS0256	1	Bolt , cooler bracket attaching	
32	RS1028	1	Nut , cooler bracket attaching	
33	90318275	1	Bolt , oil cooler clamp to bracket attaching	07-600V-01
34	9330000	1	Lockwasher , oil cooler clamp to bracket attaching	07-600V-01
35	95310300	1	Nut , oil cooler clamp to bracket attaching	07-600V-01
36	R090233A	1	Bracket , oil cooler attaching	07-600V-01
37	98443025	1	Bolt , bracket attaching	07-600V-01
38	93940000	1	Lockwasher , bracket attaching	07-600V-01
NI	RP077011	AR	Kit , transmission oil filter (ZF)	