



**MARINE**

**ILLUSTRATED**

**PARTS MANUAL**

**MODEL MP6.0L**

**MY 2003 - 2005**



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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 NUMBER	DESCRIPTION	QUANTITY
1	RB001005I	<b>Base Engine Assembly, 6.0L</b>	1

①

②

③

④

- 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 DESCRIPTION - This identifies what the component or assembly is.
- ④ QUANTITY - This refers to the number of pieces used.

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 PCM 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:**

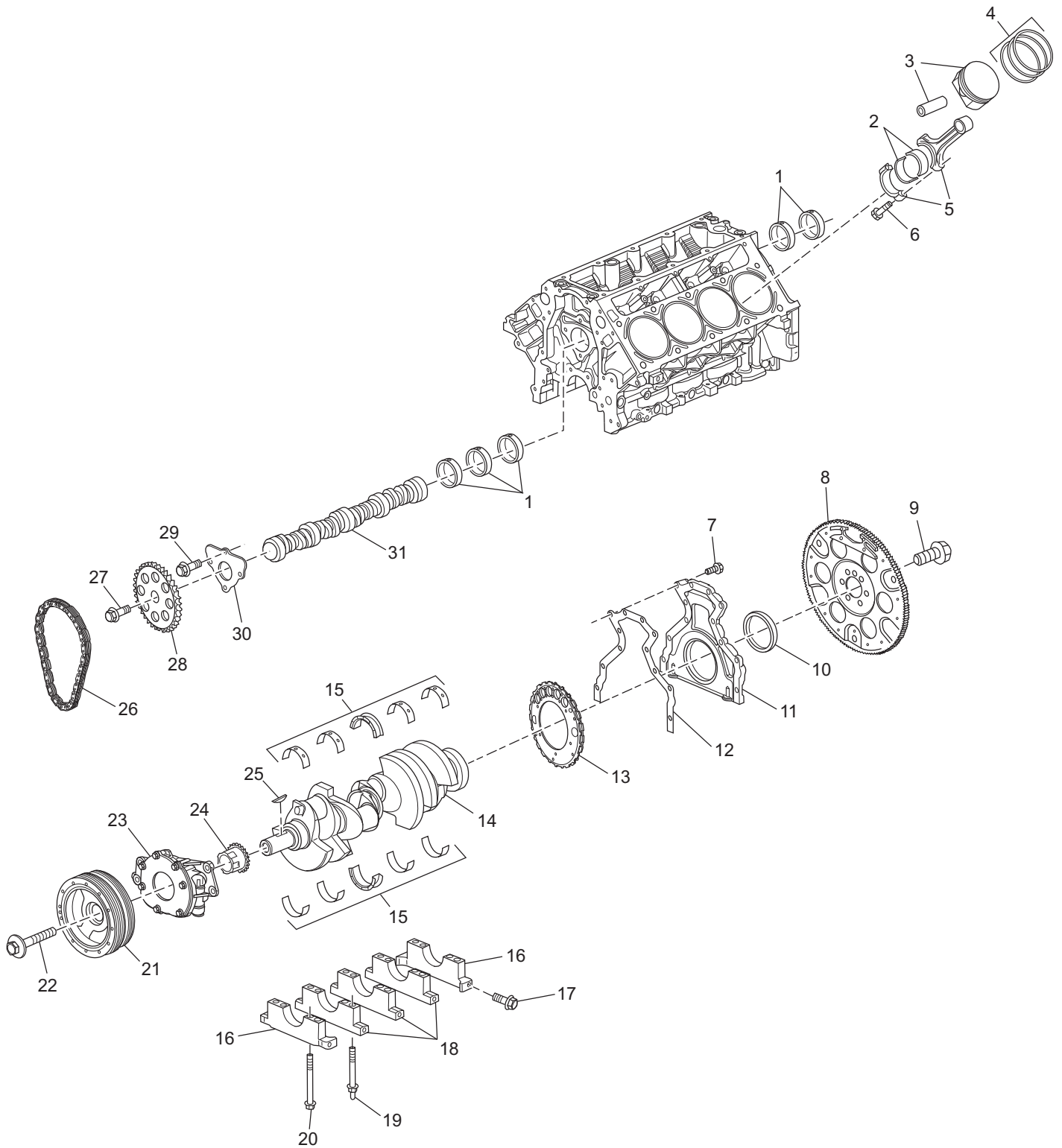
Description	Part Number
Oil Filter	R077001
Kit, Transmission Oil Filter (ZF)	RP077011
Fuel Filter (FCC)	RP080026
Spark Plugs	RP030011
Spark Plug Wire Set	RK120021
Serpentine Drive Belt	R066027
Raw Water Pump Impeller Kit	RP061022
Thermostat	R026002

**MARINE TRANSMISSIONS:**

PCM Engines are equipped with PCM or Hurth Transmissions, standard or "V"-drive. If transmission parts are required, contact your dealer or closest PCM Parts Distributor for required parts.

Parts manuals and overhaul manuals are available through PCM Distributors.

CYLINDER BLOCK ASSEMBLY - FIGURE 1



PC60P\_001  
11-4-02

## CYLINDER BLOCK ASSEMBLY - FIGURE 1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	RB001021	<b>Base Engine Assembly</b>	
1	TBD	<b>Bearing Set</b> , camshaft	1
2	R007029	<b>Bearing</b> , connecting rod (STD)	8
3	RA013018	<b>Piston</b> , (STD)	8
4	TBD	<b>Ring Set</b> , piston (STD)	8
5	TBD	<b>Connecting Rod</b> (STD)	8
6	TBD	<b>Bolt</b> , connecting rod cap	16
7	TBD	<b>Bolt</b> , rear engine cover	12
8	RA138016	<b>Flywheel Assembly</b>	1
9	R009205	<b>Bolt</b> , flywheel attaching	6
10	R047236	<b>Seal</b> , crankshaft rear oil	1
11	TBD	<b>Cover</b> , rear engine	1
12	RM0288	<b>Gasket</b> , rear engine cover	1
13	part of item #14	<b>Reluctor Ring</b> , crankshaft	1
14	TBD	<b>Crankshaft Assembly</b>	1
15	TBD	<b>Bearing Set</b> , crankshaft	1
16	TBD	<b>Cap</b> , crankshaft bearing #1 and #5	2
17	TBD	<b>Bolt</b> , crankshaft bearing cap side	10
18	TBD	<b>Cap</b> , crankshaft bearing #2 - #4	3
19	TBD	<b>Stud</b> , crankshaft bearing cap attaching	
20	TBD	<b>Bolt</b> , crankshaft bearing cap attaching	
21	R064016	<b>Balancer</b> , crankshaft	1
22	R009202	<b>Bolt</b> , crankshaft balancer	1
23	RA070018	<b>Oil Pump Assembly</b>	1
24	TBD	<b>Drive</b> , oil pump	1
25	TBD	<b>Key</b> , crankshaft	1
26	TBD	<b>Chain</b> , timing	1
27	TBD	<b>Bolt</b> , camshaft sprocket attaching	1
28	TBD	<b>Sprocket</b> , camshaft	1
29	TBD	<b>Bolt</b> , camshaft retainer attaching	3
30	TBD	<b>Retainer</b> , camshaft	1
31	TBD	<b>Camshaft</b>	1





## CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2

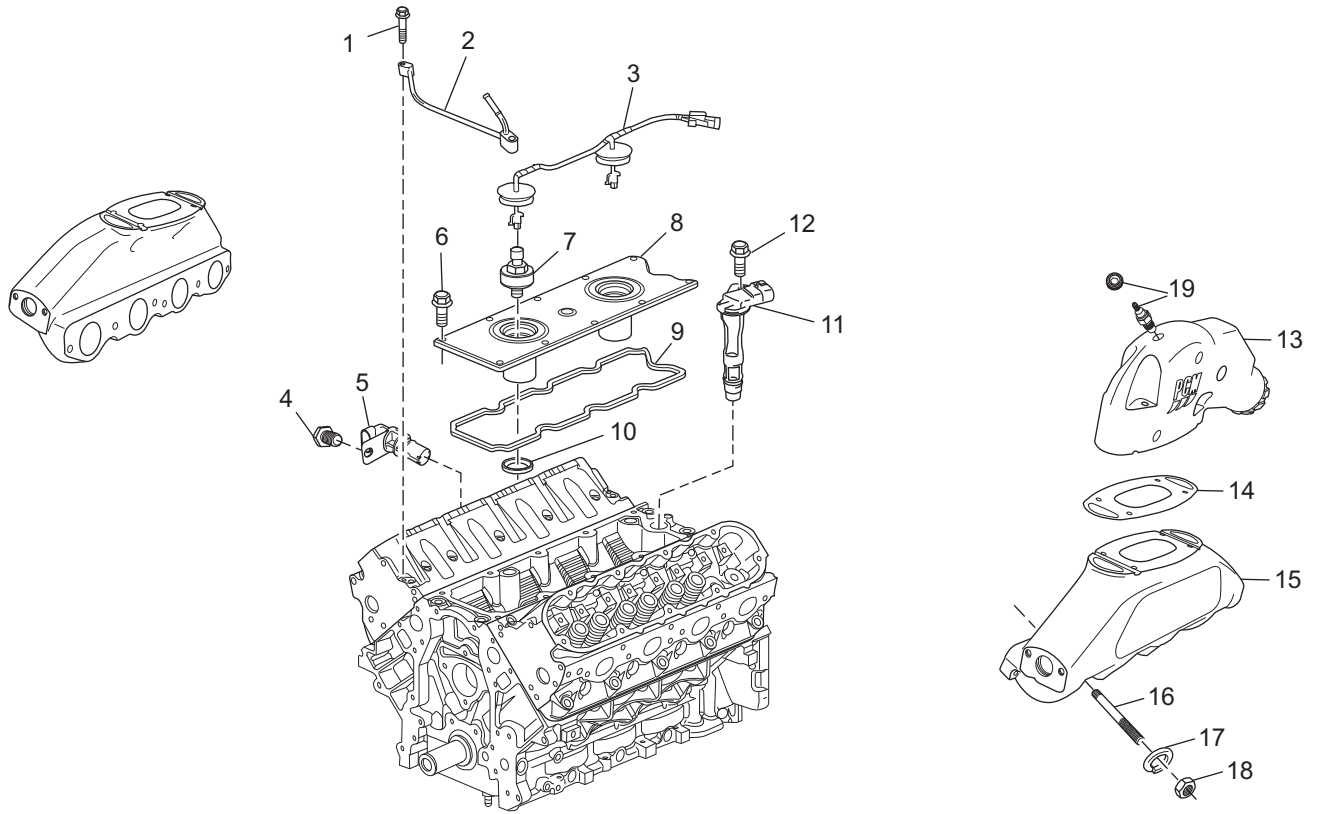
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R045049	<b>Hose</b> , PCV valve	AR
2	TBD	<b>Valve</b> , positive crankcase ventilation (PCV)	1
3	TBD	<b>Grommet</b> , PCV valve	1
4	TBD	<b>Rocker Arm</b> , valve	16
5	TBD	<b>Bolt</b> , valve rocker arm attaching	16
6	TBD	<b>Guide</b> , valve rocker arm	2
7	TBD	<b>Valve Spring Assembly</b>	16
8	TBD	<b>Retainer</b> , valve stem	32
9	98443025	<b>Bolt</b> , lifting eye attaching	4
10	93940000	<b>Lockwasher</b> , lifting eye attaching bolt	4
11	R042012	<b>Lifting Eye</b> , rear, all	1
11	R042014	<b>Lifting Eye</b> , front, std. drive	1
11	R042016	<b>Lifting Eye</b> , front, v-driv	1
12	TBD	<b>Cap</b> , valve spring	16
13	TBD	<b>Seal</b> , valve stem	16
14	TBD	<b>Rotator</b> , valve	32
15	TBD	<b>Guide</b> , valve stem	16
16	RP030011	<b>Spark Plug</b>	8
17	RK120021	<b>Spark Plug Wire Set</b>	1
18	R020046	<b>Engine Coolant Temperature (ECT) Sensor</b>	1
19	TBD	<b>Valve</b> , exhaust (STD)	8
20	TBD	<b>Valve</b> , intake (STD)	8
21	TBD	<b>Bolt</b> , valve lifter retainer attaching	8
22	TBD	<b>Retainer</b> , valve lifter	8
23	RM0280	<b>Gasket</b> , front engine cover	1
24	TBD	<b>Cover</b> , front engine	1
25	R047237	<b>Seal</b> , front engine cover oil	1
26	RM0281	<b>Gasket</b> , water circulating pump	2
27	RK057033B	<b>Water Circulation Pump Assembly</b>	1
28	TBD	<b>Bolt</b> , water circulating pump attaching	4
29	RM0275	<b>Gasket</b> , thermostat housing	2
30	R025036	<b>Housing</b> , thermostat	1
31	98223016	<b>Bolt</b> , thermostat housing attaching	2
32	93920000	<b>Lockwasher</b> , thermostat housing attaching	2
33	113186	<b>Plug</b> , thermostat housing	1
34	R026002	<b>Thermostat</b> , (160° F)	1
35	R109051	<b>Plate</b> , thermostat retainer	1
36	RS3551	<b>Plug</b> , water neck	1
37	R024208	<b>Water Neck</b>	1
38	R020002	<b>Switch</b> , coolant temperature	1
39	TBD	<b>Bolt</b> , front engine cover attaching	8



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

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
40	R040006	<b>Lifter</b> , valve	16
41	TBD	<b>Push Rod</b>	16
42	RM0278	<b>Gasket</b> , Cylinder Head	2
43	R003016	<b>Cylinder Head</b>	2
44	R009208	<b>Bolt</b> , cylinder head (short)	4
45	R009209	<b>Bolt</b> , cylinder head (medium)	10
46	R009207	<b>Bolt</b> , cylinder head (long)	16
47	RA033016	<b>Cover</b> , rocker (LH)	1
48	RM0282	<b>Gasket</b> , rocker cover	2
49	R009210	<b>Bolt</b> , rocker cover attaching	8
50	R045049	<b>Tube</b> , breather	AR
51	R034049	<b>Tube</b> , oil fill	1
52	R034038B	<b>Cap</b> , oil fill tube	1
53	TBD	<b>Fitting</b> , breather tube	1
54	RA033017	<b>Cover</b> , rocker w/Oil Fill (RH)	1

EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

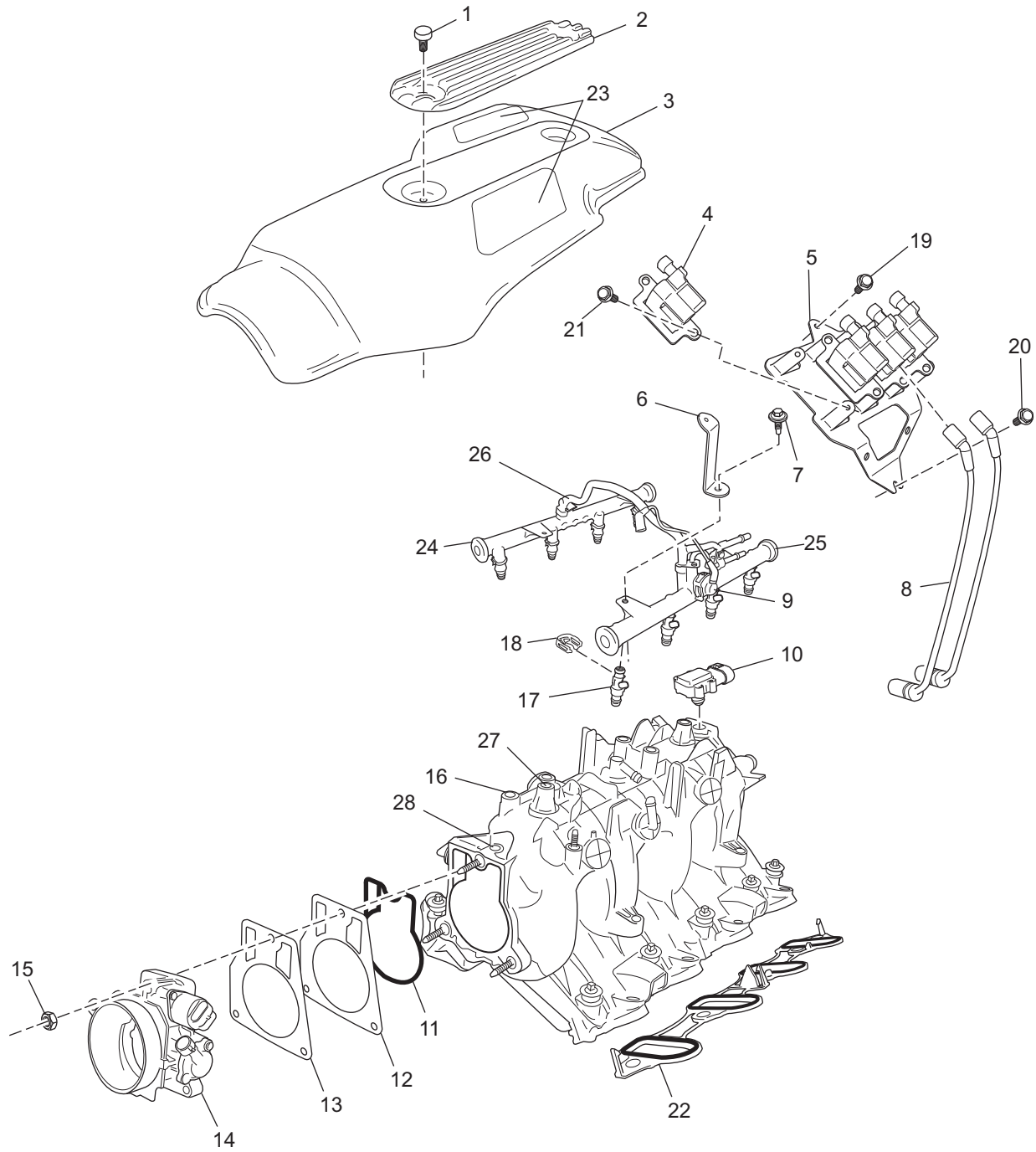


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## EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	TBD	<b>Bolt</b> , coolant air bleed pipe attaching	2
2	TBD	<b>Pipe</b> , coolant air bleed	1
3	R121100	<b>Harness</b> , knock sensor	1
4	TBD	<b>Bolt</b> , crankshaft position attaching	1
5	R020044	<b>Sensor</b> , crankshaft position	1
6	TBD	<b>Bolt</b> , valley cover attaching	10
7	R020043	<b>Sensor</b> , knock	2
8	RK060081	<b>Cover</b> , valley	1
9	RM0295	<b>Gasket</b> , valley cover	1
10	TBD	<b>Seal</b> , knock sensor oil	2
11	R020045	<b>Sensor</b> , camshaft position	1
12	TBD	<b>Bolt</b> , camshaft position attaching	1
13	R029016	<b>Elbow</b> , exhaust	2
14	RM0274	<b>Gasket</b> , exhaust elbow to manifold	2
15	R028023	<b>Manifold</b> , exhaust	2
16	R031035	<b>Stud</b> , exhaust manifold attaching	12
17	93930000	<b>Lockwasher</b> , exhaust manifold stud attaching	12
18	97330000	<b>Nut</b> , exhaust manifold stud attaching	12
19	RS3539	<b>Plug</b> , exhaust elbow	2
19	R020047	<b>Switch</b> , exhaust temperature (optional)	2

INTAKE MANIFOLD COMPONENTS - FIGURE 4

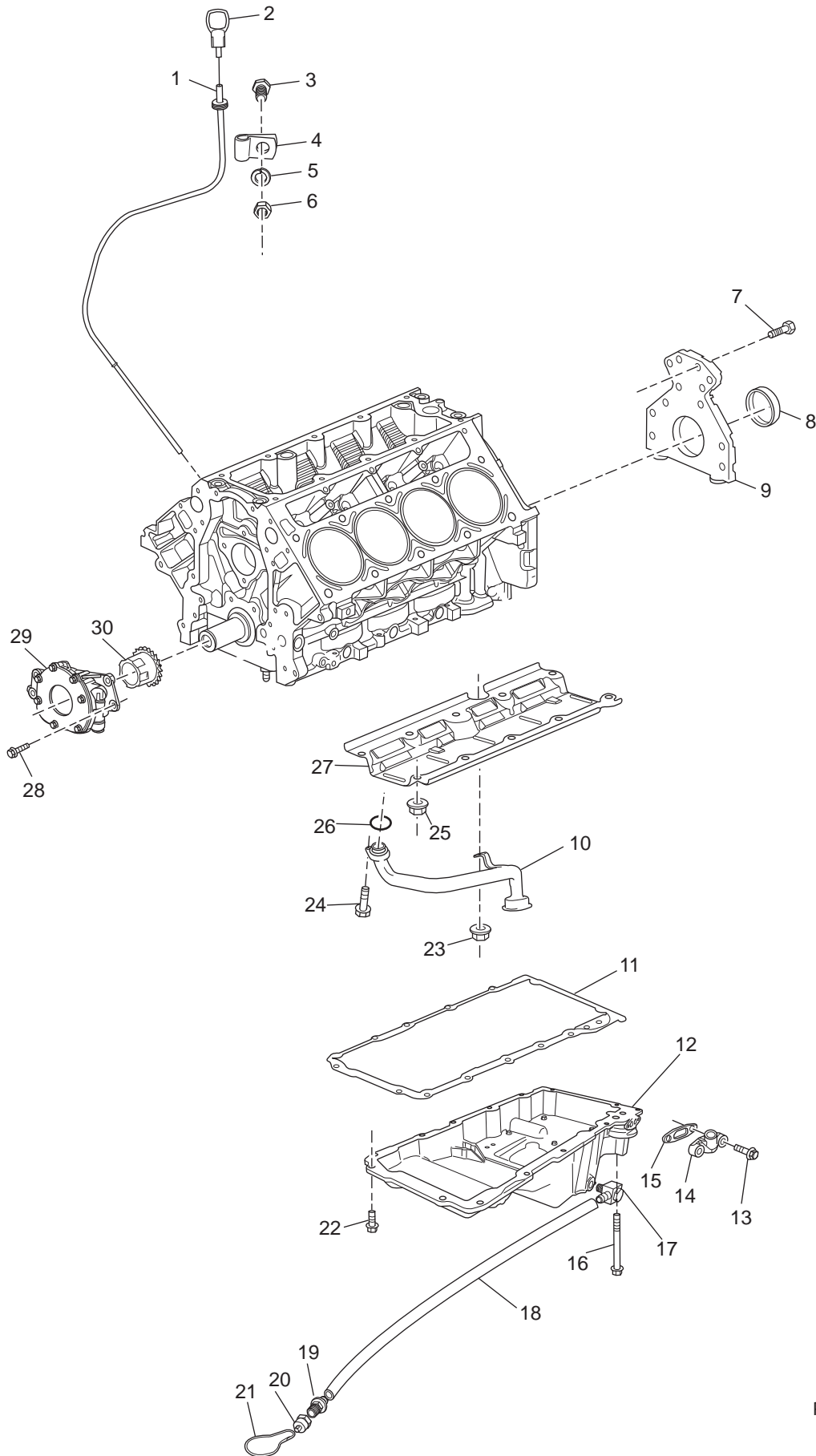


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## INTAKE MANIFOLD COMPONENTS - FIGURE 4

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R175055	<b>Bolt</b> , engine cover attaching	2
2	R060063	<b>Insert</b> , engine cover	1
3	R060062	<b>Cover</b> , engine	1
4	R117013	<b>Coil</b> , ignition	8
5	R090273	<b>Bracket</b> , ignition coil mounting	2
6	R090268	<b>Bracket</b> , support	2
7	TBD	<b>Bolt</b> , fuel rail attaching	4
8	RK120021	<b>Spark Plug Wire Set</b>	1
9	R088003	<b>Regulator</b> , fuel pressure ('03 Only)	1
10	R020036	<b>Sensor</b> , manifold absolute pressure (MAP)	1
11	TBD	<b>Seal</b> , throttle body	1
12	R062087	<b>Plate</b> , throttle body adapter	1
13	RM0251	<b>Gasket</b> , throttle body	1
14	RA035036B	<b>Throttle Body Assembly</b>	1
15	L00918	<b>Nut</b> , throttle body attaching	3
16	R002025	<b>Intake Manifold</b>	1
17	RA087008	<b>Fuel Injector Assembly</b>	8
NI	RK047253	<b>Kit</b> , Fuel Injector O-Ring	1
18	R127097	<b>Retainer</b> , fuel injector	8
19	RS5126	<b>Bolt</b> , coil bracket attaching	2
20	98223016	<b>Bolt</b> , coil bracket attaching	2
NI	93920000	<b>Lockwasher</b> , coil bracket attaching	2
21	91107075	<b>Bolt</b> , ignition coil attaching	16
22	RM0277	<b>Gasket Set</b> , intake manifold	1
23	R143154	<b>Decal</b> , engine cover	2
24	R086003	<b>Fuel Rail</b> , 6.0L, (right)	1
25	R086004	<b>Fuel Rail</b> , 6.0L, w/regulator pocket (left)	1
25	R086004A	<b>Fuel Rail</b> , 6.0L, w/o regulator pocket (left)	1
26	RA085103	<b>Fuel Rail</b> , 6.0L, crossover	1
27	R036007	<b>Insert</b> , threaded, intake	8
28	RS3550	<b>Plug</b> , pipe, 1/4" NPT	1

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5



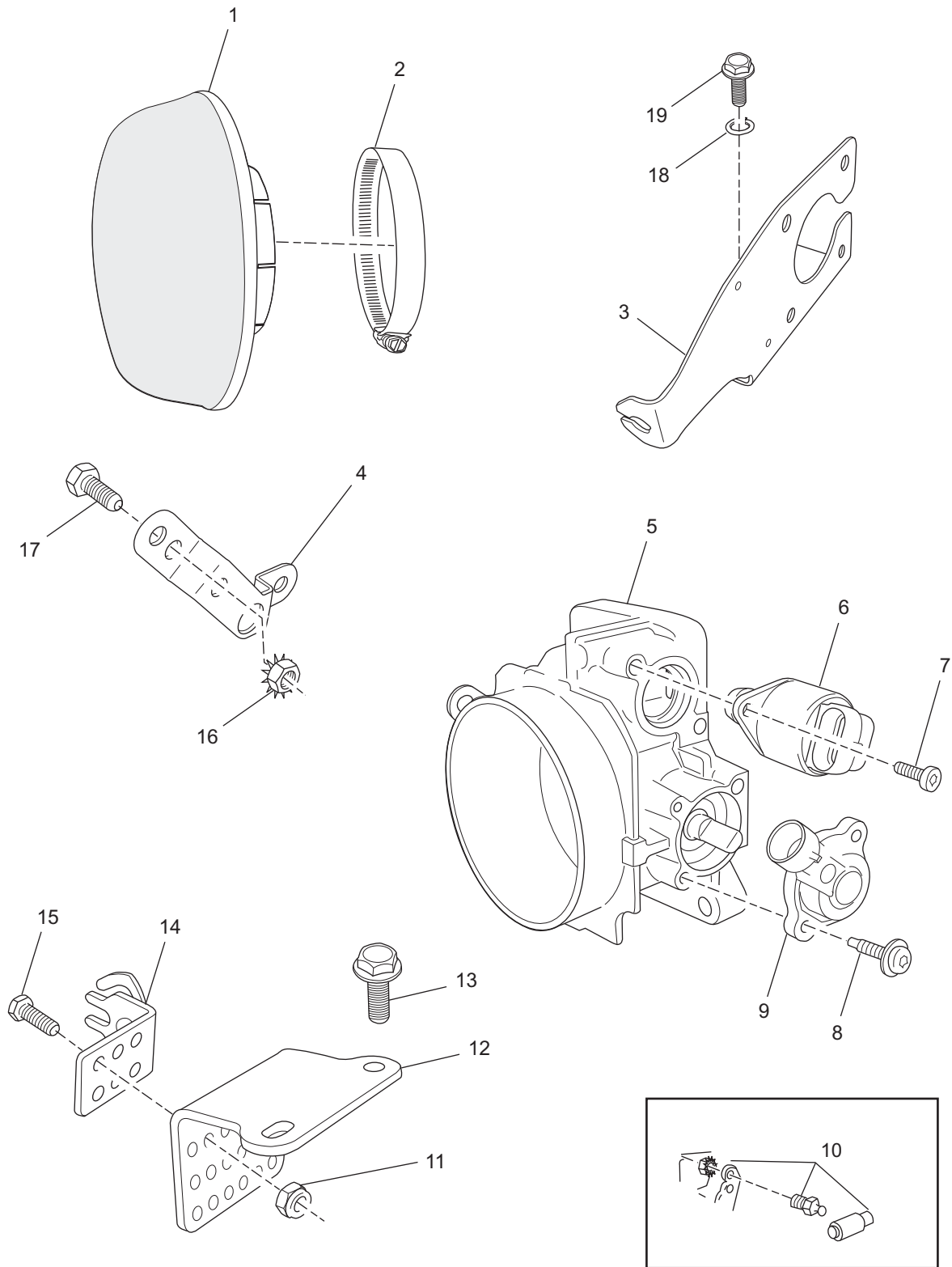
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## OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R041079	<b>Tube</b> , oil dipstick	1
2	R041080	<b>Dipstick</b> , oil level (0 to 4 degree)	AR
2	R041081	<b>Dipstick</b> , oil level (12 degree)	AR
3	RS0302	<b>Bolt</b> , oil dipstick tube attaching	1
4	R127015	<b>Clamp</b> , oil dipstick tube attaching	1
5	RS2180	<b>Lockwasher</b> , oil dipstick tube attaching	1
6	RS1028	<b>Nut</b> , oil dipstick tube attaching	1
7	TBD	<b>Bolt</b> , engine rear cover attaching	1
8	R047236	<b>Seal</b> , engine rear cover oil	1
9	TBD	<b>Cover</b> , engine rear	1
10	R074030	<b>Tube</b> , oil pickup	1
11	RM0279	<b>Gasket</b> , oil pan	1
12	R005025	<b>Oil Pan</b>	1
13	TBD	<b>Bolt</b> , oil sending unit adapter attaching	2
14	R079071	<b>Adapter</b> , oil sending unit	1
15	RM0284	<b>Gasket</b> , oil sending unit adapter	1
16	TBD	<b>Bolt</b> , oil pan attaching (long)	2
17	R024213	<b>Fitting</b> , oil drain	1
18	R045049	<b>Hose</b> , oil drain	AR
19	R024061	<b>Fitting</b> , oil drain	1
20	R024066A	<b>Cap</b> , oil drain	1
21	R190123	<b>Hook</b> , oil drain hose	1
22	TBD	<b>Bolt</b> , oil pan attaching (short)	12
23	TBD	<b>Nut</b> , oil pickup tube attaching	1
24	TBD	<b>Bolt</b> , oil pickup tube attaching	1
25	TBD	<b>Nut</b> , windage tray attaching	10
26	TBD	<b>O-ring</b> , oil pickup tube	1
27	R012027	<b>Tray</b> , windage	1
28	TBD	<b>Bolt</b> , oil pump attaching	4
29	RA070018	<b>Oil Pump Assembly</b>	1
30	TBD	<b>Drive</b> , oil pump	1

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

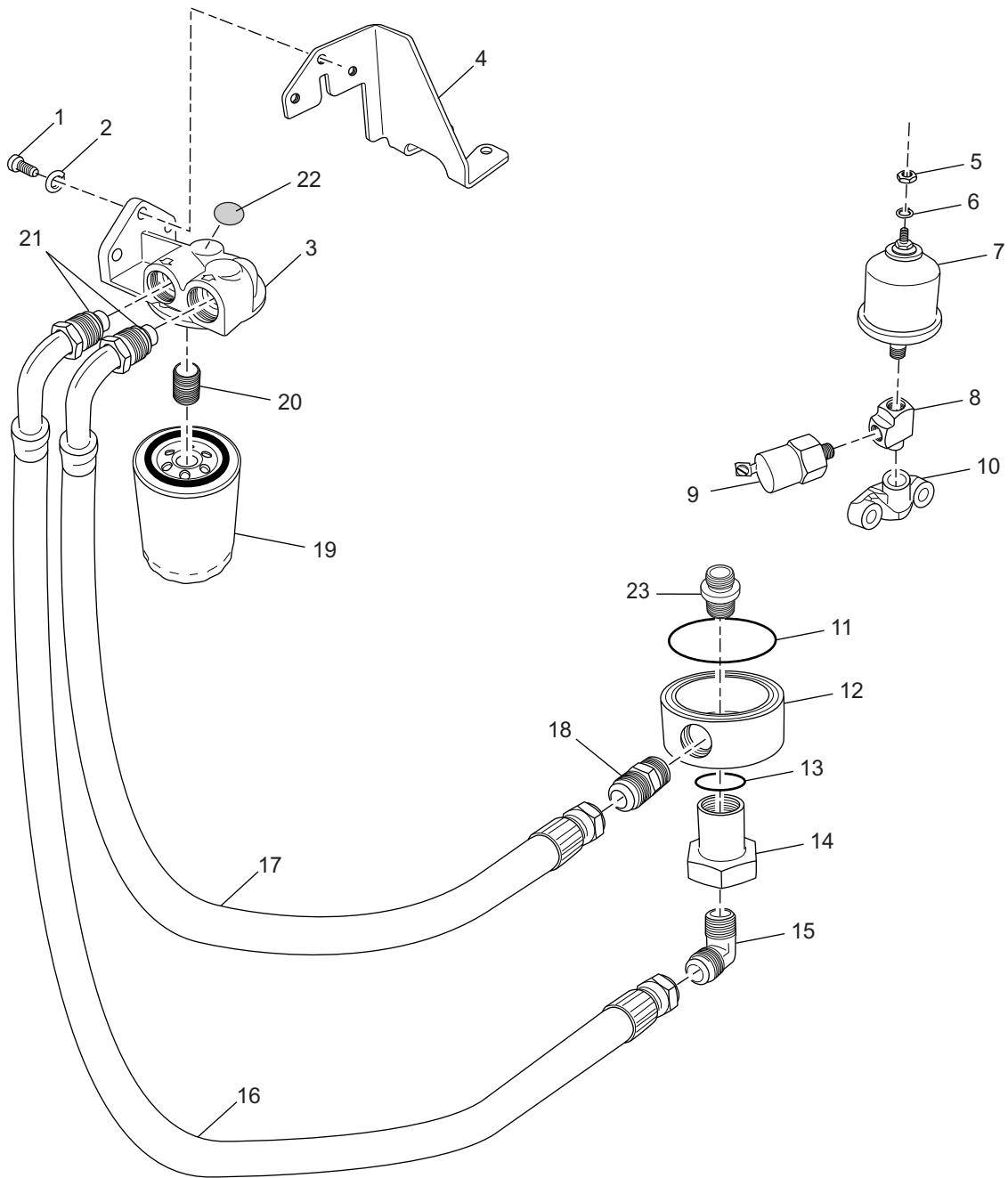


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## THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R145026	<b>Arrestor</b> , flame	1
2	RS3857	<b>Clamp</b> , flame arrestor	1
3	R090278	<b>Bracket</b> , perfect pass	1
4	R081008	<b>Throttle Arm</b> , throttle body	1
5	RA035036B	<b>Throttle Body Assembly</b>	1
6	R084003	<b>Valve</b> , idle air control	1
7	TBD	<b>Screw</b> , IAC valve attaching	2
8	TBD	<b>Screw</b> , TP sensor attaching	2
9	R020041	<b>Sensor</b> , throttle position	1
10	R178003	<b>Ball Joint Assembly</b> , cable attaching	1
11	RS2055	<b>Locking Nut</b> , cable clip mounting bolt	2
12	R090267A	<b>Throttle Bracket</b> , intake	1
13	98222018	<b>Bolt</b> , throttle cable brkt attaching	2
14	R090086	<b>Cable Clip</b> , throttle attaching	1
15	RS5122	<b>Bolt</b> , cable clip mounting	2
16	RS1078	<b>Nut</b> , throttle arm attaching	2
17	RS0251	<b>Bolt</b> , throttle arm attaching	2
18	93920000	<b>Lockwasher</b> , bracket attaching	1
19	RS6503	<b>Bolt</b> , bracket attaching	1

REMOTE OIL FILTER COMPONENTS (STANDARD DRIVE) - FIGURE 7

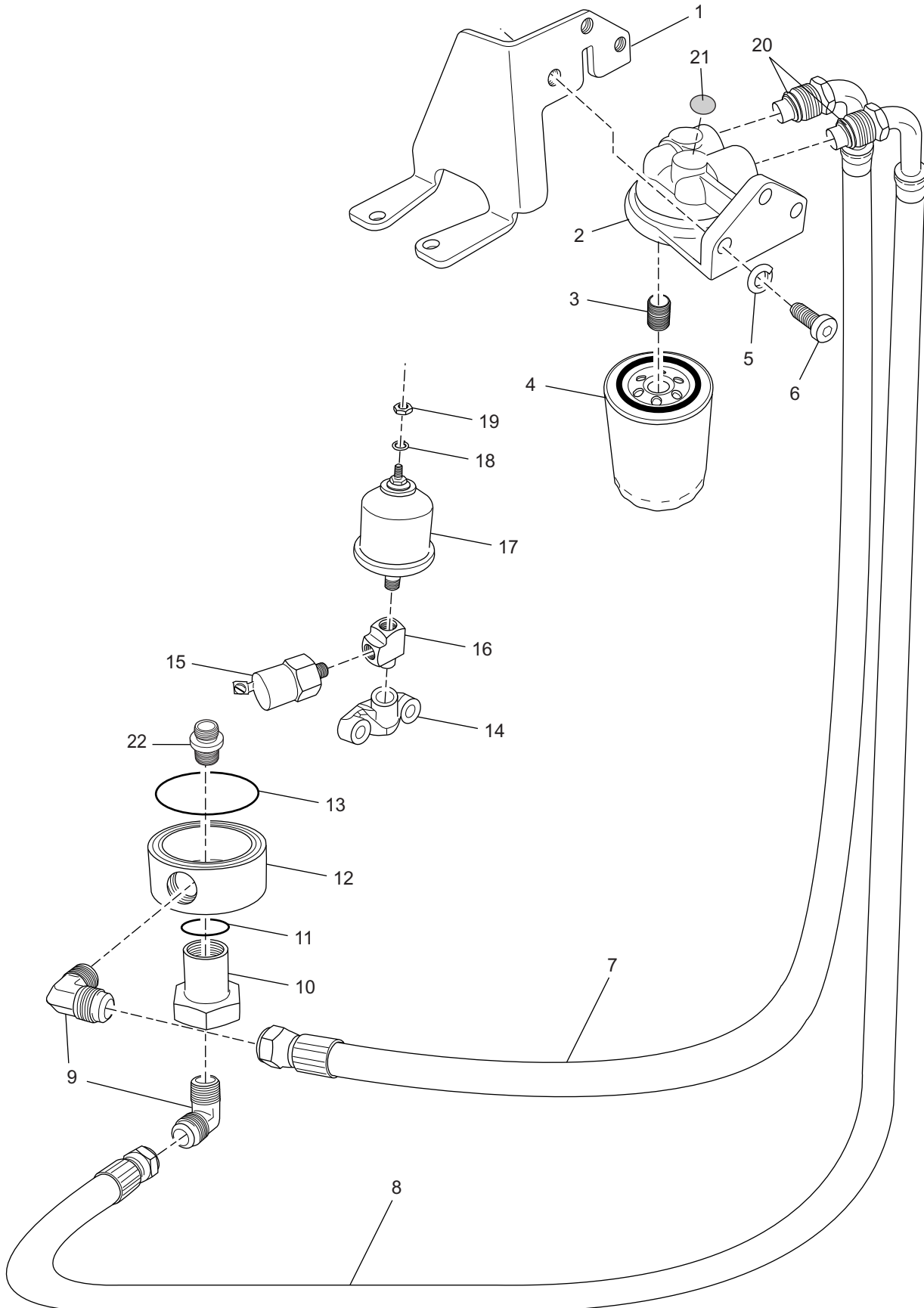


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## REMOTE OIL FILTER COMPONENTS (STANDARD DRIVE) - FIGURE 7

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	99333020	<b>Bolt</b> , oil filter header mounting	3
2	RS2179	<b>Lockwasher</b> , oil filter header mounting	3
3	R079066	<b>Oil Filter Header</b>	1
4	R090275	<b>Bracket</b> , oil filter header mounting	1
5	RS1540	<b>Nut</b> , sender terminal	1
6	RS2197	<b>Lockwasher</b> , sender terminal	1
7	R020001	<b>Sender</b> , oil pressure	1
8	R024145	<b>Tee</b> , sender attaching	1
9	R020015A	<b>Switch</b> , oil pressure	1
10	R079071	<b>Adapter</b> , oil sending unit	1
11	R047240	<b>O-ring</b> , oil bypass adapter	1
12	R079067	<b>Adapter</b> , oil bypass	1
13	R047202	<b>O-ring</b> , oil bypass adapter attaching fitting	1
14	R079068	<b>Nut</b> , oil bypass adapter attaching	1
15	R024184	<b>Fitting</b> , 90 degree	1
16	RA045120D	<b>Hose Assembly</b> , filter header to bypass adapter	1
17	RA045120D	<b>Hose Assembly</b> , bypass adapter to filter header	1
18	R024148	<b>Fitting</b> , straight	1
19	R077001	<b>Filter</b> , oil	1
20	R024203	<b>Nipple</b> , header filter adapter	1
21	R047245	<b>O-Ring</b> , oil line	2
22	R143175	<b>Decal</b> , "CAUTION HOT"	1
23	R079074	<b>Adapter</b> , engine to oil bypass	1

REMOTE OIL FILTER COMPONENTS ("V" - DRIVE) - FIGURE 8

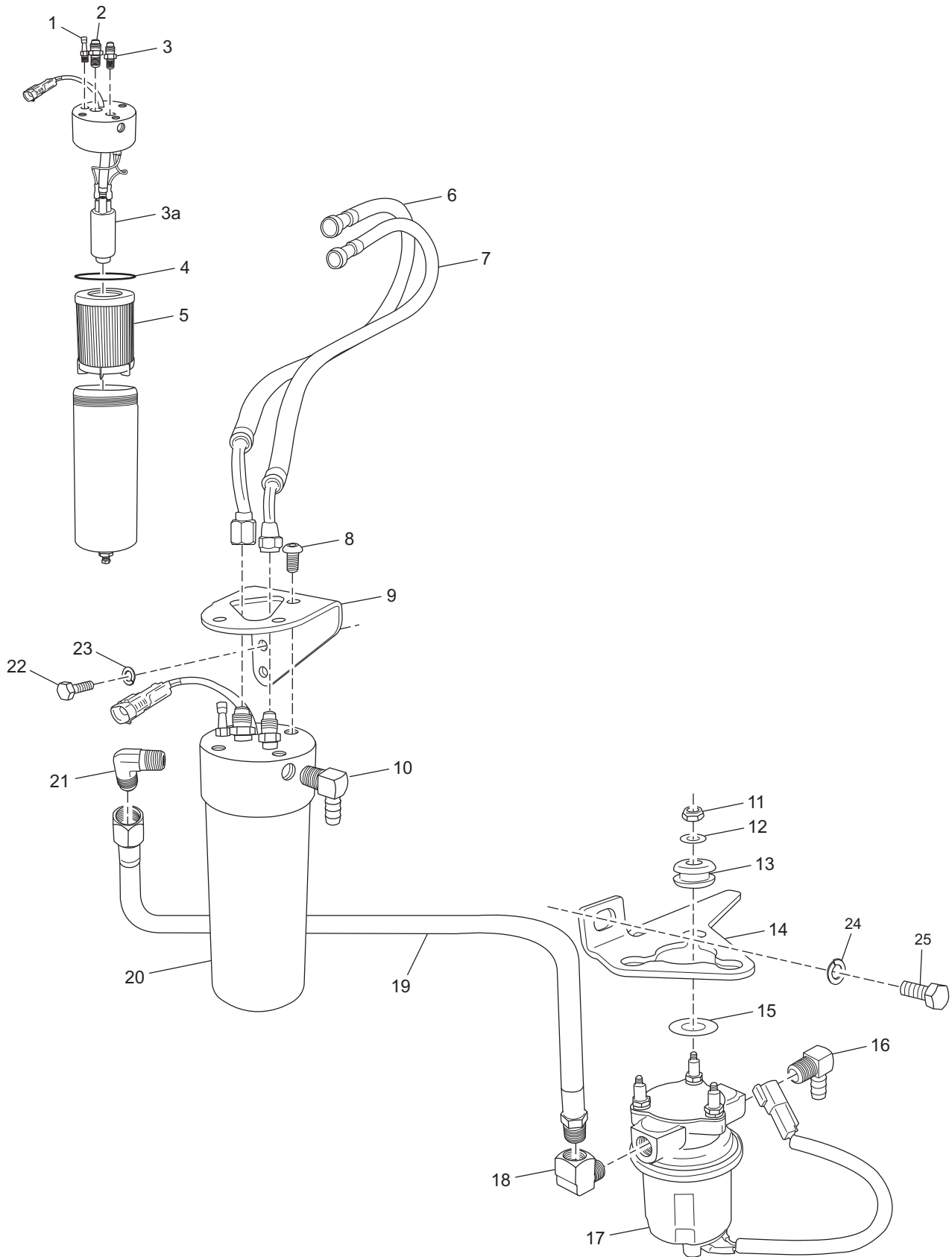


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## REMOTE OIL FILTER COMPONENTS ("V" - DRIVE) - FIGURE 8

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090275	<b>Bracket</b> , oil filter header mounting	1
2	R079066	<b>Oil Filter Header</b>	1
3	R024203	<b>Nipple</b> , header filter adapter	1
4	R077001	<b>Filter</b> , oil	1
5	RS2179	<b>Lockwasher</b> , oil filter header mounting	3
6	99333020	<b>Bolt</b> , oil filter header mounting	3
7	RA045120	<b>Hose Assembly</b> , bypass adapter to filter header	1
8	RA045120	<b>Hose Assembly</b> , filter header to bypass adapter	1
9	R024184	<b>Fitting</b> , 90 degree	2
10	R079068	<b>Fitting</b> , oil bypass adapter attaching	1
11	R047202	<b>O-ring</b> , oil bypass adapter attaching fitting	1
12	R079067	<b>Adapter</b> , oil bypass	1
13	R047240	<b>O-ring</b> , oil bypass adapter	1
14	R079071	<b>Adapter</b> , oil sending unit	1
15	R020015A	<b>Switch</b> , oil pressure	1
16	R024145	<b>Tee</b> , sender attaching	1
17	R020001	<b>Sender</b> , oil pressure	1
18	RS2197	<b>Lockwasher</b> , sender terminal	1
19	RS1540	<b>Nut</b> , sender terminal	1
20	R047245	<b>O-Ring</b> , oil line	2
21	R143175	<b>Decal</b> , "CAUTION HOT"	1
22	R079074	<b>Adapter</b> , engine to oil bypass	1

FUEL CONTROL CELL (FCC) COMPONENTS 2003 (STANDARD DRIVE) - FIGURE 9



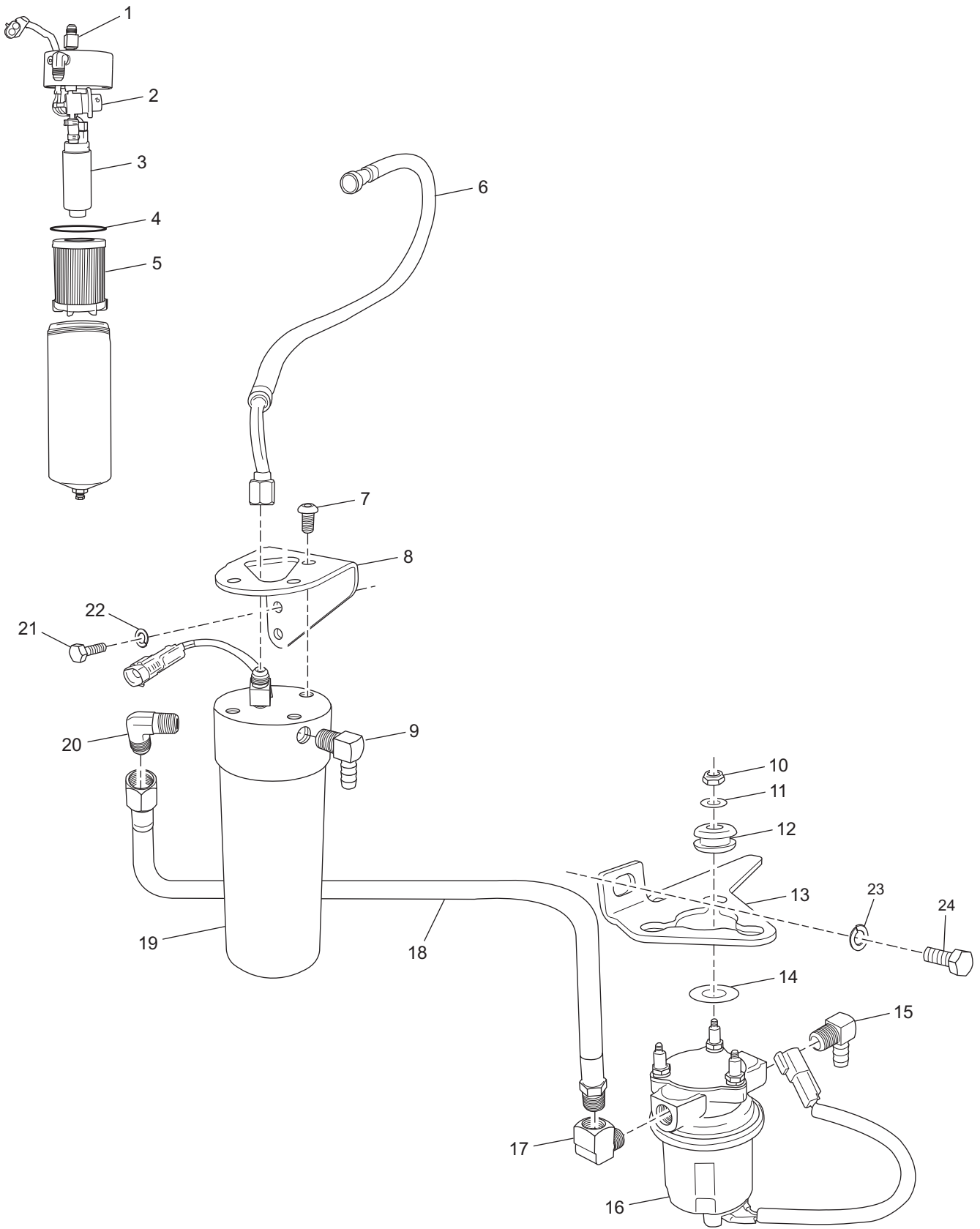
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## FUEL CONTROL CELL (FCC) COMPONENTS 2003 (STANDARD DRIVE) - FIGURE 9

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035031	<b>Fitting</b> , fuel pressure, Schrader valve	1
NI	R034041	<b>Cap</b> , schrader valve	1
2	R024163A	<b>Fitting</b> , fuel line	1
3	R024175	<b>Fitting</b> , fuel line	1
3a	RA080027	<b>Pump</b> , high pressure fuel	1
4	R047214	<b>O-ring</b> , FCC sealing	1
5	RP080026	<b>Filter</b> , FCC fuel (includes O-ring)	1
6	RA085090C	<b>Hose Assembly</b> , FCC to fuel rail (inlet)	1
7	RA085091C	<b>Hose Assembly</b> , fuel rail to FCC (return)	1
8	90384075	<b>Bolt</b> , FCC mounting	3
9	R090276	<b>Bracket</b> , FCC mounting	1
10	R024089	<b>Fitting</b> , 90 degree	1
11	RS1521L	<b>Locking Nut</b> , low-pressure fuel pump	3
12	R096142	<b>Washer</b> , fuel pump mounting	3
13	R094035A	<b>Grommet</b> , mounting bracket	3
14	R090280	<b>Bracket</b> , low-pressure fuel pump mounting	1
15	R096141	<b>Washer</b> , fuel pump mounting	3
16	R024089	<b>Fitting</b> , 90 degree	1
17	RA080018	<b>Fuel Pump</b> , low-pressure	1
18	R024192	<b>Fitting</b> , 90 degree	1
19	RA085071	<b>Hose Assembly</b> , low-pressure pump to FCC	1
20	RA080029	<b>Fuel Control Cell Assembly</b>	1
NI	R143112	<b>Decal</b> , FCC operating instructions	1
NI	R143114	<b>Decal</b> , Warning, fuel leaks	1
21	R024163	<b>Fitting</b> , 90 degree	1
22	98443025	<b>Bolt</b> , FCC mounting bracket	2
23	RS7070	<b>Lockwasher</b> , FCC mounting bracket	2
24	93940000	<b>Lockwasher</b> , bracket attaching	1
25	98443025	<b>Bolt</b> , bracket attaching	1

FUEL CONTROL CELL (FCC) COMPONENTS 2004 (STANDARD DRIVE) - FIGURE 10



## FUEL CONTROL CELL (FCC) COMPONENTS 2004 (STANDARD DRIVE) - FIGURE 10

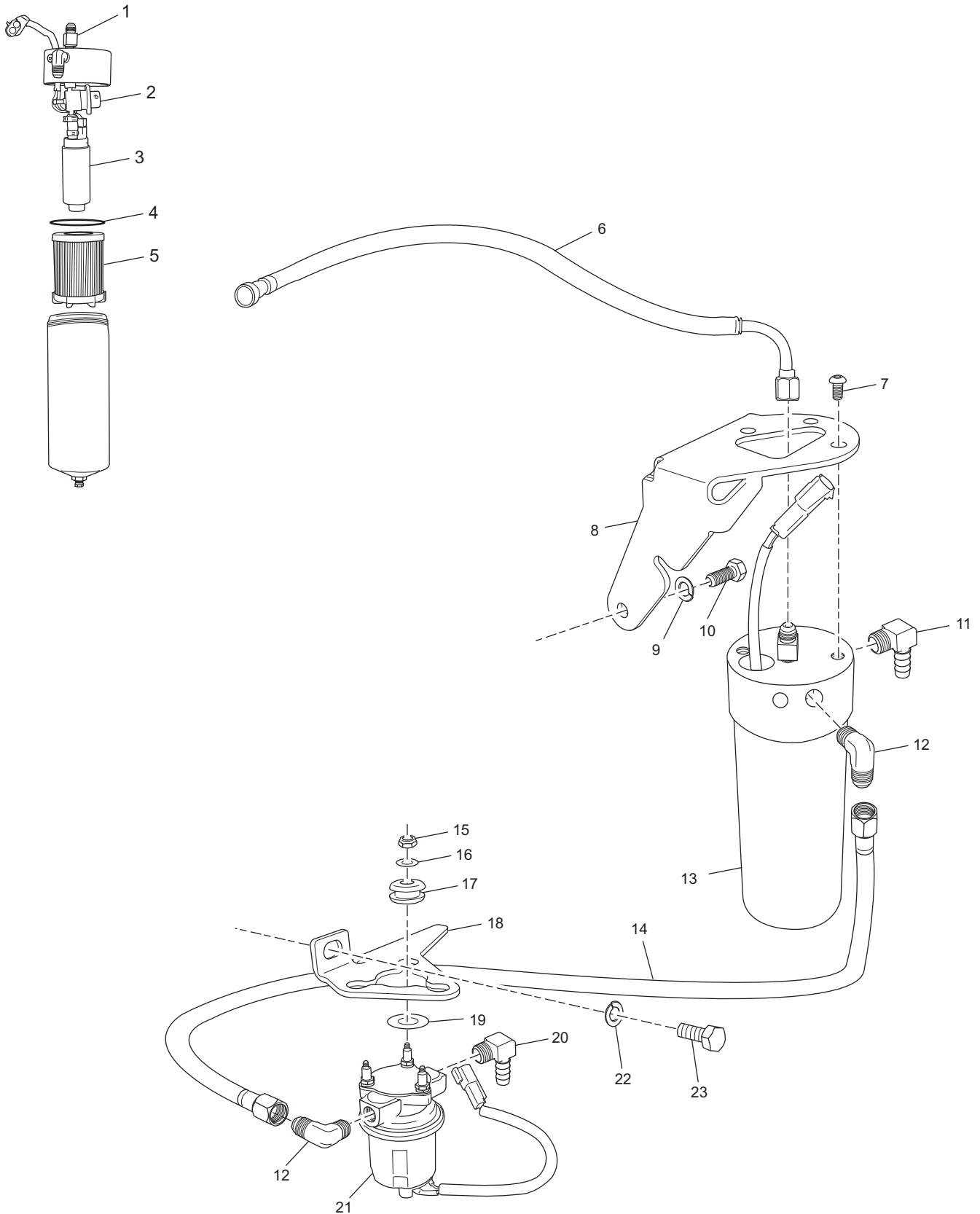
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024214	<b>Fitting</b> , fuel line	1
2	R088004	<b>Regulator</b> , fuel pressure ('04 Only)	1
3	RA080027	<b>Pump</b> , high pressure fuel	1
4	R047214	<b>O-ring</b> , FCC sealing	1
5	RP080026	<b>Filter</b> , FCC fuel (includes O-ring)	1
6	RA085090C	<b>Hose Assembly</b> , FCC to fuel rail (inlet)	1
7	90384075	<b>Bolt</b> , FCC mounting	3
8	R090276	<b>Bracket</b> , FCC mounting	1
9	R024089	<b>Fitting</b> , 90 degree	1
10	RS1521L	<b>Locking Nut</b> , low-pressure fuel pump	3
11	R096142	<b>Washer</b> , fuel pump mounting	3
12	R094035A	<b>Grommet</b> , mounting bracket	3
13	R090286	<b>Bracket</b> , low-pressure fuel pump mounting	1
14	R096141	<b>Washer</b> , fuel pump mounting	3
15	R024089	<b>Fitting</b> , 90 degree	1
16	RA080018	<b>Fuel Pump</b> , low-pressure	1
17	R024192	<b>Fitting</b> , 90 degree	1
18	RA085071	<b>Hose Assembly</b> , low-pressure pump to FCC	1
19	RA080030	<b>Fuel Control Cell Assembly</b>	1
NI	R143112	<b>Decal</b> , FCC operating instructions	1
NI	R143114	<b>Decal</b> , Warning, fuel leaks	1
20	R024163	<b>Fitting</b> , 90 degree	1
21	98443025	<b>Bolt</b> , FCC mounting bracket	2
22	RS7070	<b>Lockwasher</b> , FCC mounting bracket	2
23	93940000	<b>Lockwasher</b> , bracket attaching	1
24	98443025	<b>Bolt</b> , bracket attaching	1



## FUEL CONTROL CELL (FCC) COMPONENTS 2003 ("V" - DRIVE) - FIGURE 11

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035031	<b>Fitting</b> , fuel pressure, schrader valve	1
NI	R034041	<b>Cap</b> , schrader valve	1
2	R024163A	<b>Fitting</b> , fuel line	1
3	R024175	<b>Fitting</b> , fuel line	1
3a	RA080027	<b>Pump</b> , high pressure fuel ('03 Only)	1
4	R047214	<b>O-ring</b> , FCC sealing	1
5	RP080026	<b>Filter</b> , FCC fuel (includes O-ring)	1
6	RA085090B	<b>Hose Assembly</b> , FCC to fuel rail (inlet)	1
7	RA085091B	<b>Hose Assembly</b> , fuel rail to FCC (return)	1
8	90384075	<b>Bolt</b> , FCC mounting	3
9	R090277	<b>Bracket</b> , FCC mounting	1
10	RS7070	<b>Lockwasher</b> , FCC mounting bracket	2
11	98443025	<b>Bolt</b> , FCC mounting bracket	2
12	R024089	<b>Fitting</b> , 90 degree	1
13	R024163	<b>Fitting</b> , 90 degree	2
14	RA080029	<b>Fuel Control Cell Assembly</b>	1
NI	R143112	<b>Decal</b> , FCC operating instructions	1
NI	R143114	<b>Decal</b> , Warning, fuel leaks	1
15	RA085071	<b>Hose Assembly</b> , low-pressure pump to FCC	1
16	RS1521L	<b>Locking Nut</b> , low-pressure fuel pump	3
17	R096142	<b>Washer</b> , fuel pump mounting	3
18	R094035	<b>Grommet</b> , mounting bracket	3
19	R090280	<b>Bracket</b> , low-pressure fuel pump mounting	1
20	R096141	<b>Washer</b> , fuel pump mounting	3
21	R024089	<b>Fitting</b> , 90 degree	1
22	RA080018	<b>Fuel Pump</b> , low-pressure	1
23	93940000	<b>Lockwasher</b> , bracket attaching	1
24	98443025	<b>Bolt</b> , bracket attaching	1

FUEL CONTROL CELL (FCC) COMPONENTS 2004 ("V" - DRIVE) - FIGURE 12

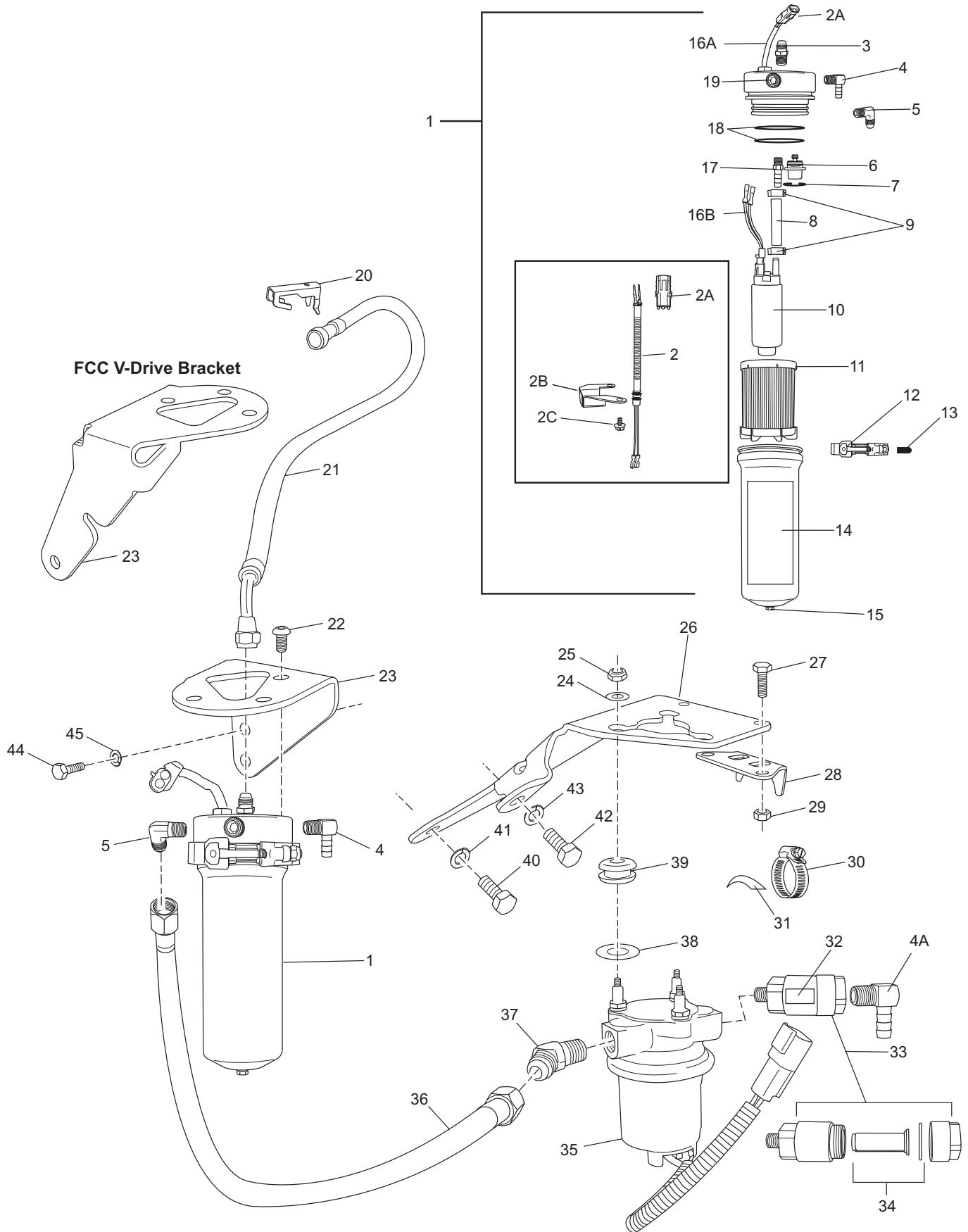


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## FUEL CONTROL CELL (FCC) COMPONENTS 2004 ("V" - DRIVE) - FIGURE 12

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024214	<b>Fitting</b> , fuel line	1
2	R088004	<b>Regulator</b> , fuel pressure ('04 Only)	1
3	RA080027	<b>Pump</b> , high pressure fuel ('04 Only)	1
4	R047214	<b>O-ring</b> , FCC sealing	1
5	RP080026	<b>Filter</b> , FCC fuel (includes O-ring)	1
6	RA085090B	<b>Hose Assembly</b> , FCC to fuel rail (inlet)	1
7	90384075	<b>Bolt</b> , FCC mounting	3
8	R090277	<b>Bracket</b> , FCC mounting	1
9	93940000	<b>Lockwasher</b> , FCC mounting bracket	2
10	98443025	<b>Bolt</b> , FCC mounting bracket	2
11	R024089	<b>Fitting</b> , 90 degree	1
12	R024163	<b>Fitting</b> , 90 degree	2
13	RA080030	<b>Fuel Control Cell Assembly</b>	1
NI	R143112	<b>Decal</b> , FCC operating instructions	1
NI	R143114	<b>Decal</b> , Warning, fuel leaks	1
14	RA085071	<b>Hose Assembly</b> , low-pressure pump to FCC	1
15	RS1521L	<b>Locking Nut</b> , low-pressure fuel pump	3
16	R096142	<b>Washer</b> , fuel pump mounting	3
17	R094035	<b>Grommet</b> , mounting bracket	3
18	R090286	<b>Bracket</b> , low-pressure fuel pump mounting	1
19	R096141	<b>Washer</b> , fuel pump mounting	3
20	R024089	<b>Fitting</b> , 90 degree	1
21	RA080018	<b>Fuel Pump</b> , low-pressure	1
22	93940000	<b>Lockwasher</b> , bracket attaching	1
23	98443025	<b>Bolt</b> , bracket attaching	1

2005 - FUEL CONTROL CELL (FCC) COMPONENTS - FIGURE 13



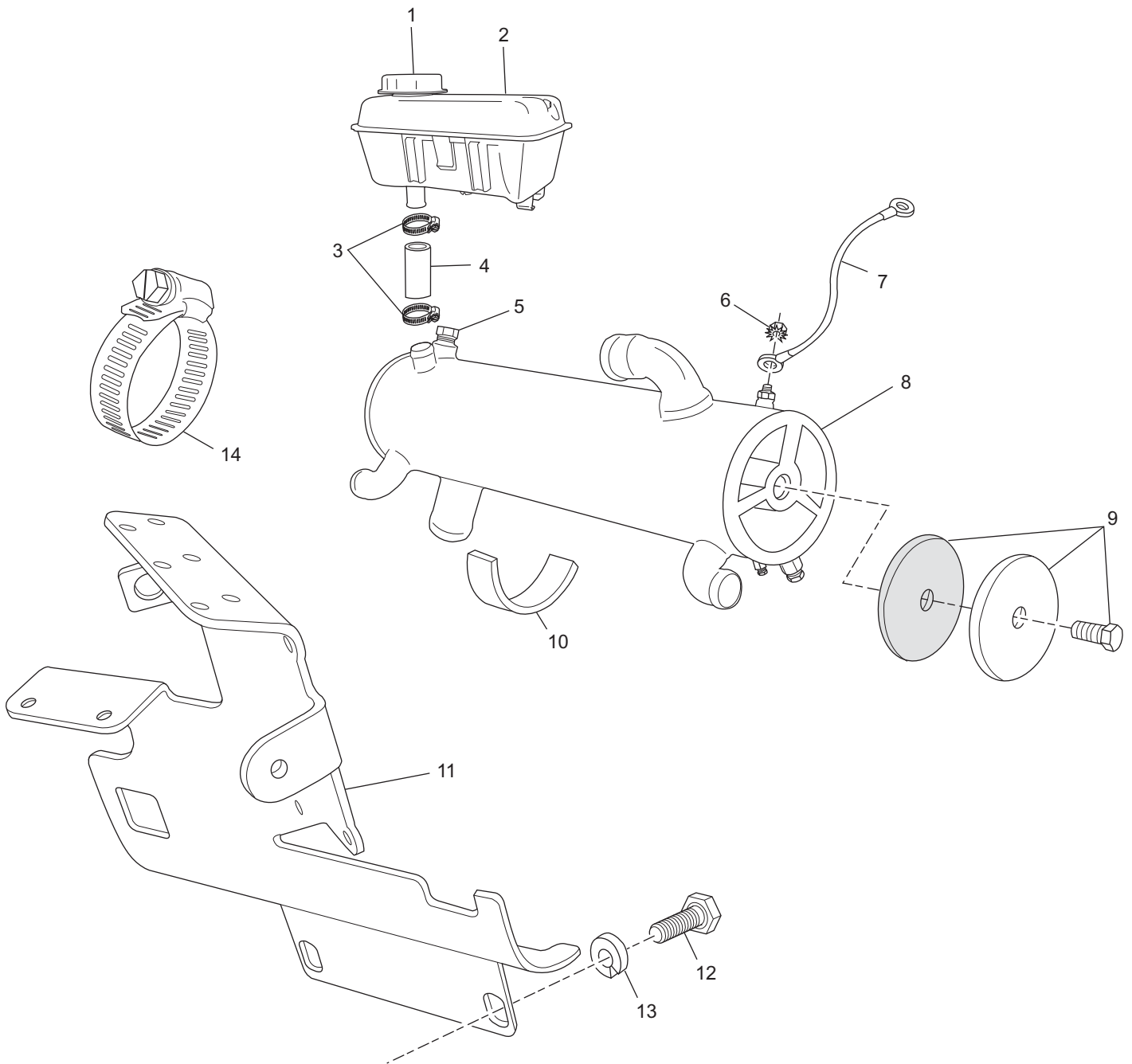
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## 2005 - FUEL CONTROL CELL (FCC) COMPONENTS - FIGURE 13

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA080030A	<b>Fuel Control Cell Assembly</b>	1
2	R121085A	<b>Harness</b> , 1-piece, FCC pass through (1-piece harness <b>does not</b> retro fit for 2-piece harness)	1
2A	7172040	<b>Connector</b> , W/P 2-way Female	1
2B	R012030	<b>Baffle</b> , FCC used w/1-piece harness	1
2C	91620025	<b>Screw</b> , self tapping, baffle/1-piece harness retaining	2
3	R024175	<b>Fitting</b> , 1/4 NPT X SAE	1
4	R024225	<b>Fitting</b> , 1/4 NPT to Hose (return to tank)	1
4A	R024226	<b>Fitting</b> , 3/8 NPT to Hose (to tank)	1
5	R024163	<b>Fitting</b> , 1/4 NPT X SAE (from LPFP)	1
6	R088004	<b>Regulator</b> , fuel pressure (FCC System Only)	1
7	R048070	<b>Retainer</b> , fuel pressure regulator	1
8	R045098B	<b>Hose</b> , 5/16id X 1/2od X 2 1/2	1
9	R127087	<b>Clamp</b> , Oetiker, 5/8	2
10	RA080027	<b>Pump</b> , high pressure fuel	1
11	R080026	<b>Filter</b> , fuel (FCC)	1
NI	RP080026	<b>Kit</b> , FCC filter and O-rings	1
12	R171010	<b>Clamp</b> , FCC	1
13	R128002	<b>Cover</b> , T-bolt end	1
14	R143112A	<b>Decal</b> , FCC	1
15	RS3554	<b>Plug</b> , pipe, hex head, 1/8	1
16A	RA121060	<b>Harness</b> , FCC Feed through	1
16B	RA121061A	<b>Harness</b> , FCC internal	1
17	R024219	<b>Fitting</b> , 1/8 NPT X 5/16 Barb	1
18	R047241	<b>O-Ring</b> , FCC sealing	1
19	RS3550	<b>Plug</b> , pipe, hex socket, 1/4	1
20	R127100	<b>Retainer</b> , fuel line	1
21	RA085090C	<b>Hose Assembly</b> , FCC to fuel rail (inlet)	1
21	RA085090B	<b>Hose Assembly</b> , FCC to fuel rail (inlet), V-DRIVE	1
22	90384075	<b>Bolt</b> , FCC attaching	3
23	R090276	<b>Bracket</b> , FCC mounting	1
23	R090277	<b>Bracket</b> , FCC mounting, V-DRIVE	1
24	R096142	<b>Washer</b> , flat, mounting, upper	3
25	RS1521L	<b>Locking Nut</b> , low-pressure fuel pump	3
26	R090286	<b>Bracket</b> , low-pressure fuel pump mounting	1
27	RS0251	<b>Bolt</b> , pre-filter bracket attaching	2
28	R090272	<b>Bracket</b> , pre-filter mounting	1
29	RS1078	<b>Nut</b> , w/lockwasher, pre-filter bracket attaching	2
30	RS3858	<b>Clamp</b> , pre-filter 1 1/4"	1
31	R094040	<b>Isolator</b> , rubber, w/ adhesive	1
32	R143174	<b>Decal</b> , pre-filter	1
33	RA077014	<b>Fuel Pre-filter Assembly, 150 micron</b>	1
34	RP077014	<b>Kit</b> , fuel filter and seal	1
35	RA080018	<b>Fuel Pump</b> , low-pressure	1
36	RA085071	<b>Hose Assembly</b> , low-pressure pump to FCC	1
37	R024197	<b>Fitting</b> , 45 degree	1
37	R024163	<b>Fitting</b> , 90 degree, V-DRIVE	1
38	R096141	<b>Washer</b> , fuel pump mounting, lower	3
39	R094035A	<b>Grommet</b> , isolator	3
40	98443025	<b>Bolt</b> , LPFP bracket attaching, block	1
41	93940000	<b>Lockwasher</b> , LPFP bracket attaching, block	1
42	99333020	<b>Bolt</b> , LPFP bracket attaching, mount	1
43	93930000	<b>Lockwasher</b> , LPFP bracket attaching, mount	1
44	98443025	<b>Bolt</b> , FCC mounting bracket	2
45	93940000	<b>Lockwasher</b> , FCC mounting bracket	2
NI	R143114	<b>Decal</b> , Warning, fuel leaks	1

HEAT EXCHANGER and COMPONENTS - FIGURE 14

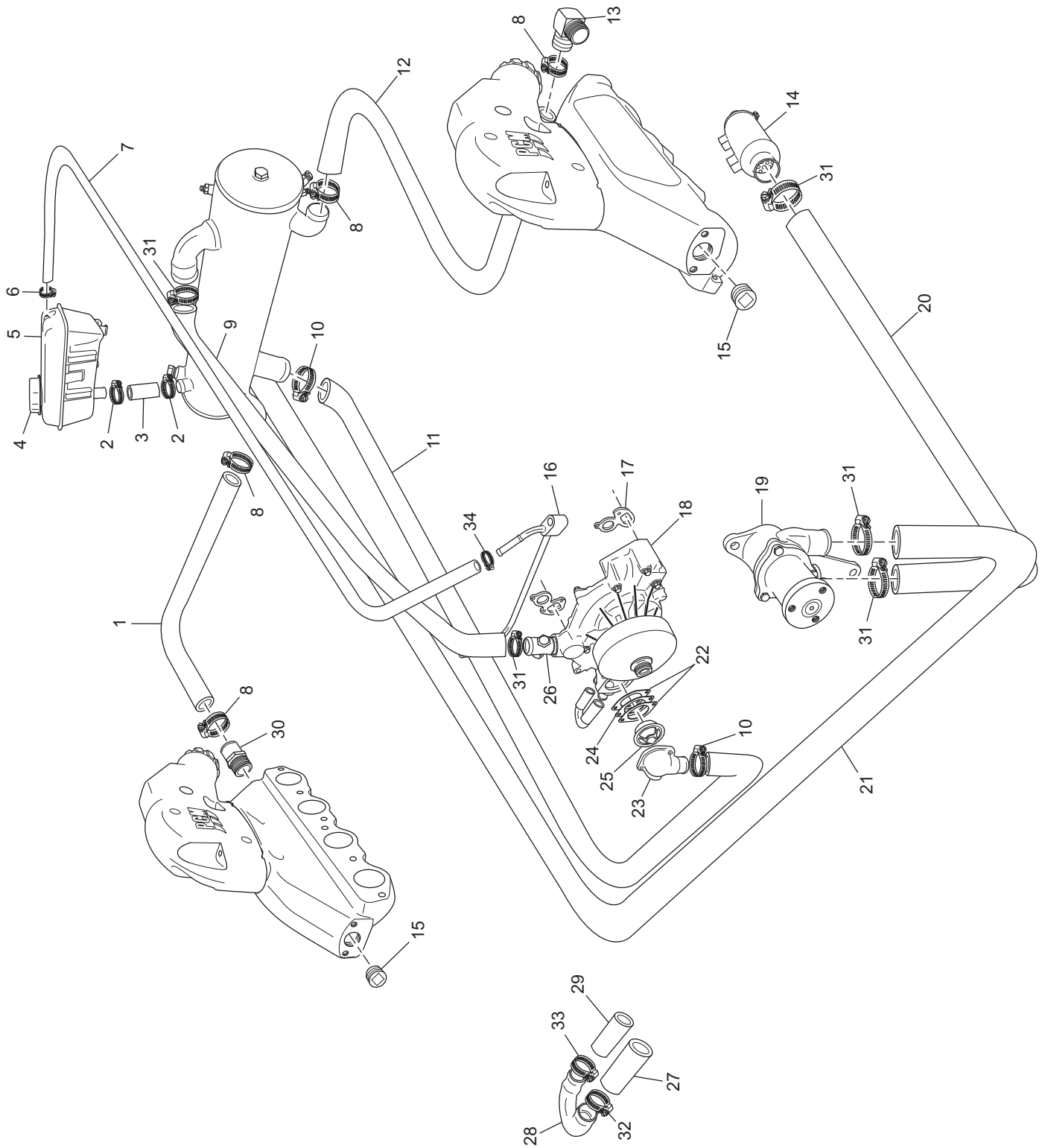


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## HEAT EXCHANGER and COMPONENTS - FIGURE 14

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R034045	<b>Cap</b> , degas bottle	1
2	R146001	<b>Bottle</b> , degas	1
NI	R143152	<b>Decal</b> , 6.0L specification	1
NI	R143153	<b>Decal</b> , coolant fill	1
3	RS3872	<b>Clamp</b> , hose	2
4	R045153	<b>Hose</b> , degas bottle to heat exchanger	1
5	R168008	<b>Anode</b> , sacrificial zinc	AR
6	RS1078	<b>Nut</b> , ground wire stud	1
7	R101013	<b>Wire</b> , grounding	1
8	RA147047	<b>Heat Exchanger Assembly</b>	1
9	R034009	<b>End Cap</b> , exchanger	AR
10	R094040	<b>Isolator</b> , rubber	2
11	R090279	<b>Bracket</b> , heat exchanger	1
12	RS0304	<b>Bolt</b> , heat exchanger bracket attaching	2
13	RS2380	<b>Lockwasher</b> , mounting bolt	2
14	RS3857	<b>Clamp</b> , exchanger mounting	2
NI	R143155	<b>Decal</b> , Protective Anode	1
NI	R143156	<b>Decal</b> , Raw Water Drain	1
NI	R143157	<b>Decal</b> , Fresh Water Drain	1
NI	R143162	<b>Decal</b> , 6.0 Emission MY '03	1
NI	R143162-04	<b>Decal</b> , 6.0 Emission MY '04	1
NI	R143162A	<b>Decal</b> , 6.0 Emission MY '05	1
NI	R143158	<b>Decal</b> , "Ultra Low Emission"	1

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 15

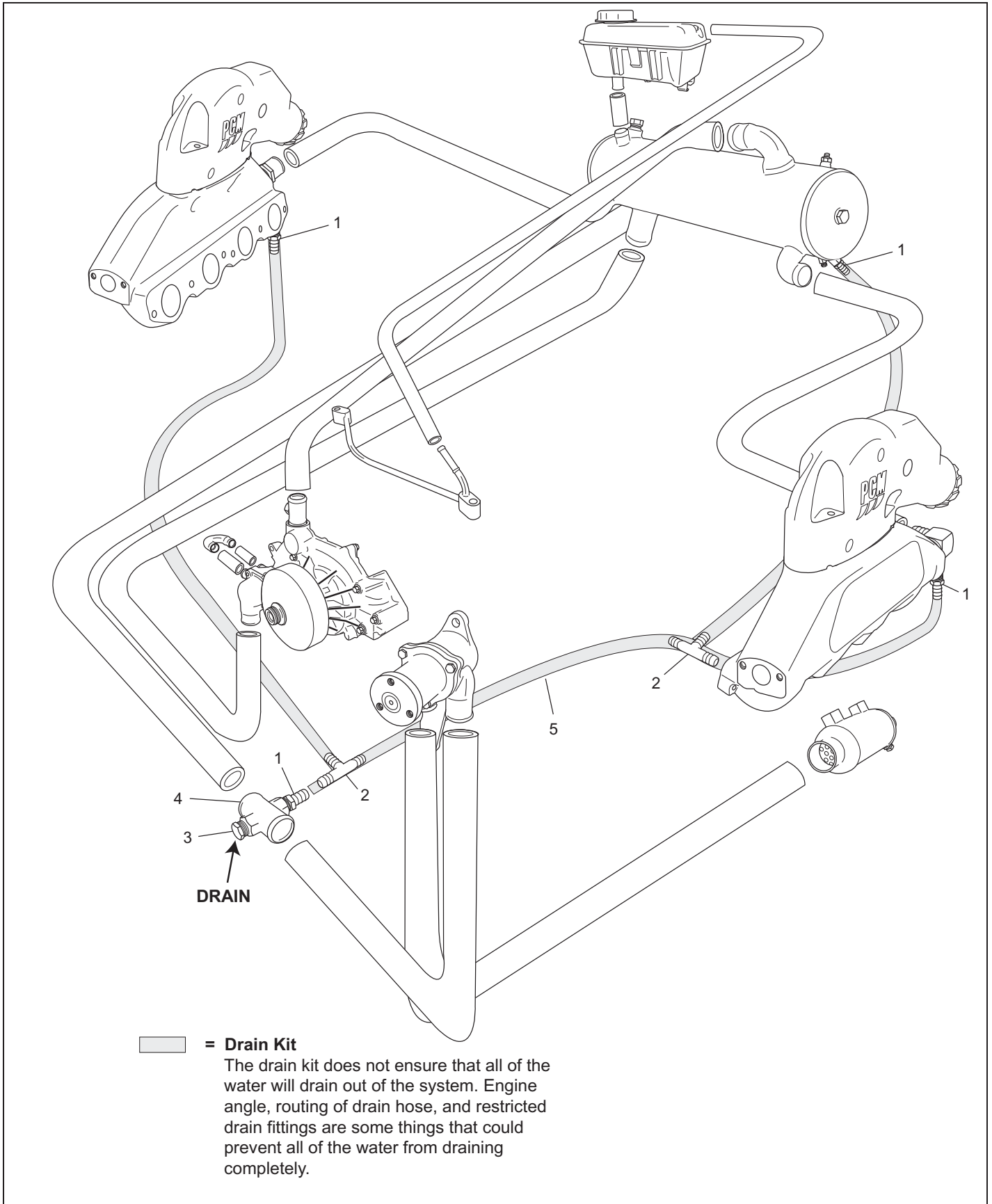


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## FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 15

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R045151	<b>Hose</b> , exchanger to exhaust manifold (Starboard STD)	1
2	RS3872	<b>Clamp</b> , hose	2
3	R045153	<b>Hose</b> , degas bottle to heat exchanger	1
4	R034045	<b>Cap</b> , degas bottle	1
5	R146001	<b>Bottle</b> , degas	1
6	R127087	<b>Clamp</b> , hose (5/8" - degas bottle)	1
7	R045132	<b>Hose</b> , coolant air bleed to bottle	1
8	RS3851	<b>Clamp</b> , hose (1")	4
9	R045149	<b>Hose</b> , circ. pump to heat exchanger	1
10	RS3868	<b>Clamp</b> , hose (1 1/2")	2
11	R045148	<b>Hose</b> , exchanger to thermostat housing	1
12	R045150	<b>Hose</b> , exchanger to exhaust manifold (Port STD)	1
13	R024006A	<b>Fitting</b> , 90 degree	1
14	R147014	<b>Cooler</b> , transmission oil	1
15	113186	<b>Plug</b> , manifold	2
16	TBD	<b>Tube</b> , coolant air bleed	1
17	RM0281	<b>Gasket</b> , water pump to engine block	2
18	RK057033B	<b>Water Pump Assembly</b>	1
19	RA057032	<b>Raw Water Pump</b>	1
20	R045152B	<b>Hose</b> , oil cooler to raw water pump	1
21	R045147	<b>Hose</b> , raw water pump to exchanger	1
22	RM0275	<b>Gasket</b> , thermostat housing	2
23	R025036	<b>Thermostat Housing</b>	1
24	R109051	<b>Plate</b> , thermostat retainer	1
25	R026002	<b>Thermostat</b> , (160 degree)	1
26	R024208	<b>Water Neck</b>	1
27	R045153	<b>Hose</b> , coolant bypass fitting (3/4" bulk)	1
28	R024210	<b>Bypass</b> , coolant	1
29	R045086	<b>Hose</b> , coolant bypass fitting (5/8" bulk)	1
30	R024073	<b>Fitting</b> , manifold straight	1
31	RS3858	<b>Clamp</b> , hose (1 1/4")	6
32	R127087G	<b>Clamp</b> , hose (1 1/16" oetiker)	2
33	R127087F	<b>Clamp</b> , hose (1" oetiker)	2
34	R127084	<b>Clamp</b> , hose (vent tube)	1

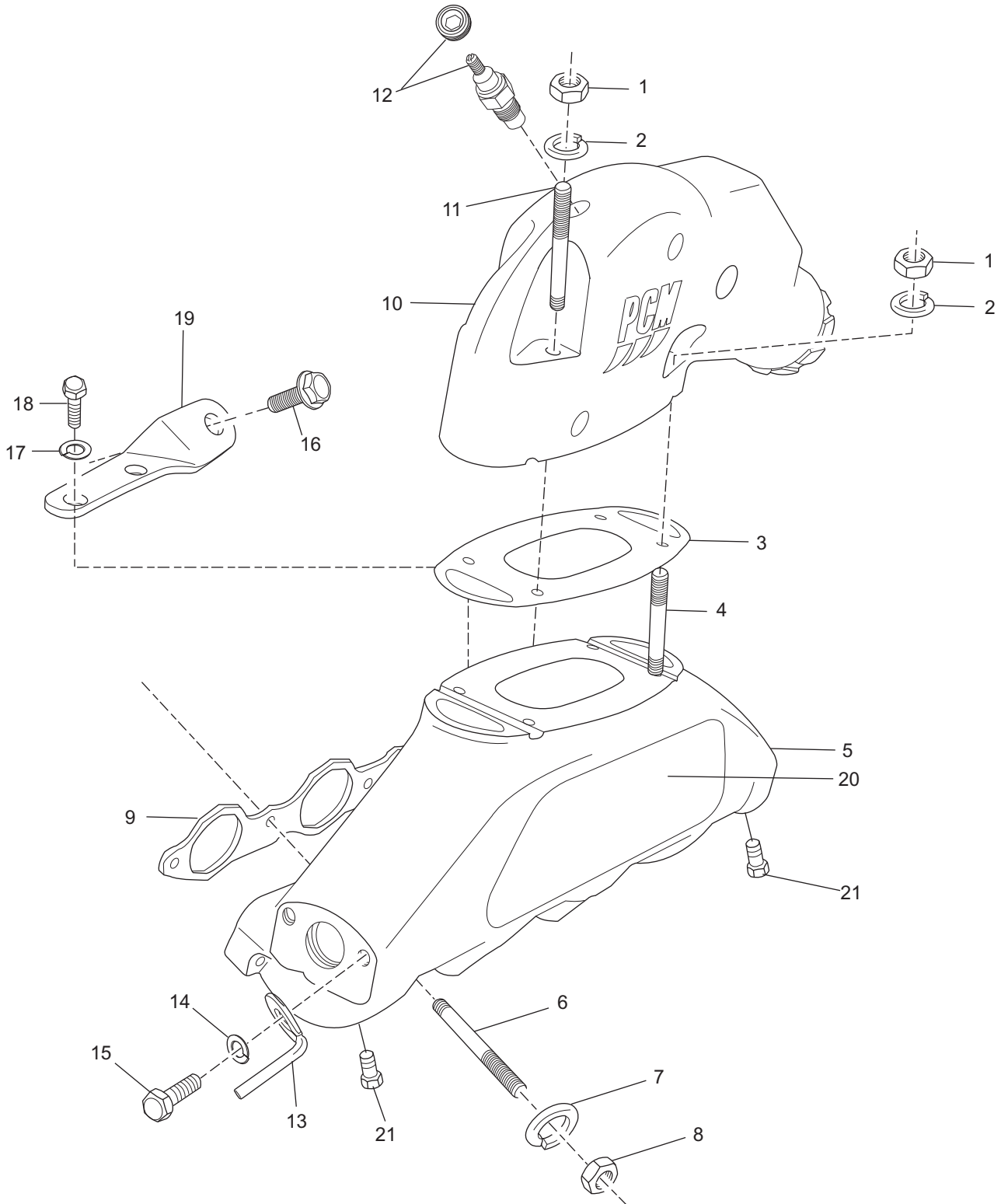
OPTIONAL DRAIN KIT COMPONENTS - FIGURE 16



## OPTIONAL DRAIN KIT COMPONENTS - FIGURE 16

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024218	<b>Fitting</b> , straight	4
2	R024215	<b>Tee</b> , hose	2
3	RS3557	<b>Plug</b> , drain	1
4	R024216	<b>Fitting</b> , 4-way RW drain	1
5	R045175	<b>Hose</b> , RW drain	AR
NS	R127087G	<b>Clamp</b> , hose (1 1/16" oetiker)	10
NS	R127087F	<b>Clamp</b> , hose (1" oetiker)	2

EXHAUST MANIFOLD and COMPONENTS - FIGURE 17



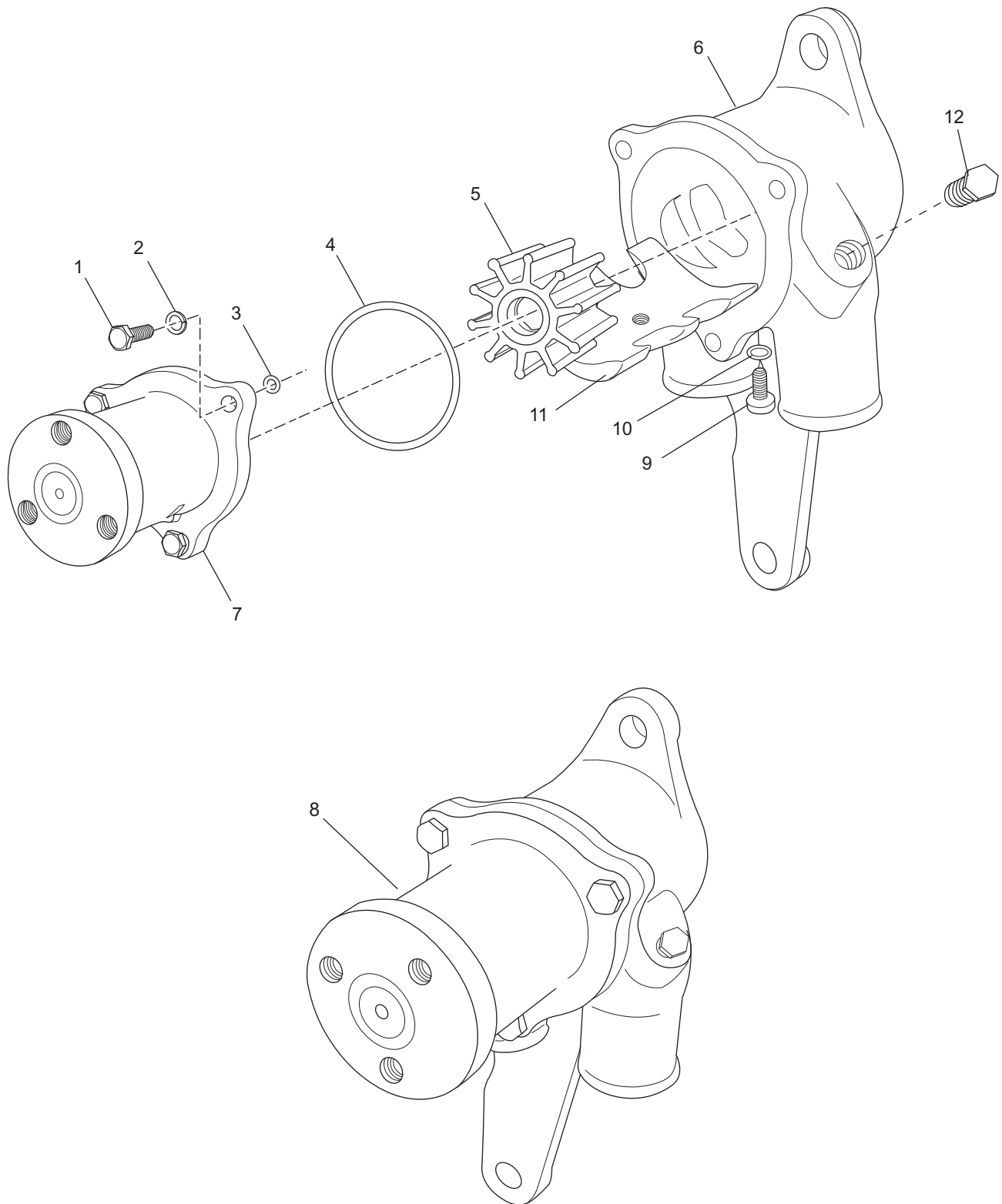
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## EXHAUST MANIFOLD and COMPONENTS - FIGURE 17

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	95310000	<b>Nut</b> , exhaust elbow attaching	8
2	93300000	<b>Lockwasher</b> , exhaust elbow attaching	8
3	RM0274	<b>Gasket</b> , manifold to exhaust elbow	2
4	R031036	<b>Stud</b> , exhaust elbow attaching (short)	4
4	R031039	<b>Stud</b> , exhaust elbow attaching w/4" riser (short)	AR
5	R028023	<b>Exhaust Manifold Assembly</b>	2
6	R031035	<b>Stud</b> , manifold to cylinder head attaching	12
7	RS2179	<b>Lockwasher</b> , manifold to cylinder head attaching	12
8	RS7026	<b>Nut</b> , manifold to cylinder head attaching	12
9	RM0276	<b>Gasket</b> , manifold to cylinder head	2
10	R029016	<b>Exhaust Elbow Assembly</b>	2
11	R031037	<b>Stud</b> , exhaust elbow attaching (long)	4
11	R031040	<b>Stud</b> , exhaust elbow attaching w/4" riser (long)	AR
12	RS3539	<b>Plug</b> , exhaust elbow	2
12	R020047	<b>Switch</b> , exhaust temperature (optional)	2
13	R096144	<b>Retainer</b> , spark plug wire clip	2
14	922200020	<b>Washer</b> , retainer attaching	2
15	RS0280	<b>Bolt</b> , retainer attaching	2
16	98222018	<b>Bolt</b> , bracket attaching	2
17	93920000	<b>Lockwasher</b> , bracket attaching	4
18	90165063	<b>Bolt</b> , bracket attaching	4
19	R090305	<b>Bracket</b> , manifold support	2
20	R143002F	<b>Decal</b> , exhaust manifold, 6.0L	2
21	RS3557	<b>Plug</b> , Hex Head, Brass 3/8" NPT ('04 and newer)	4
21	RS3552	<b>Plug</b> , Hex Head, Brass 1/4" NPT ('03)	4
<p><b>*NOTE:</b> See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.</p>			

RAW WATER COOLING PUMP - FIGURE 18

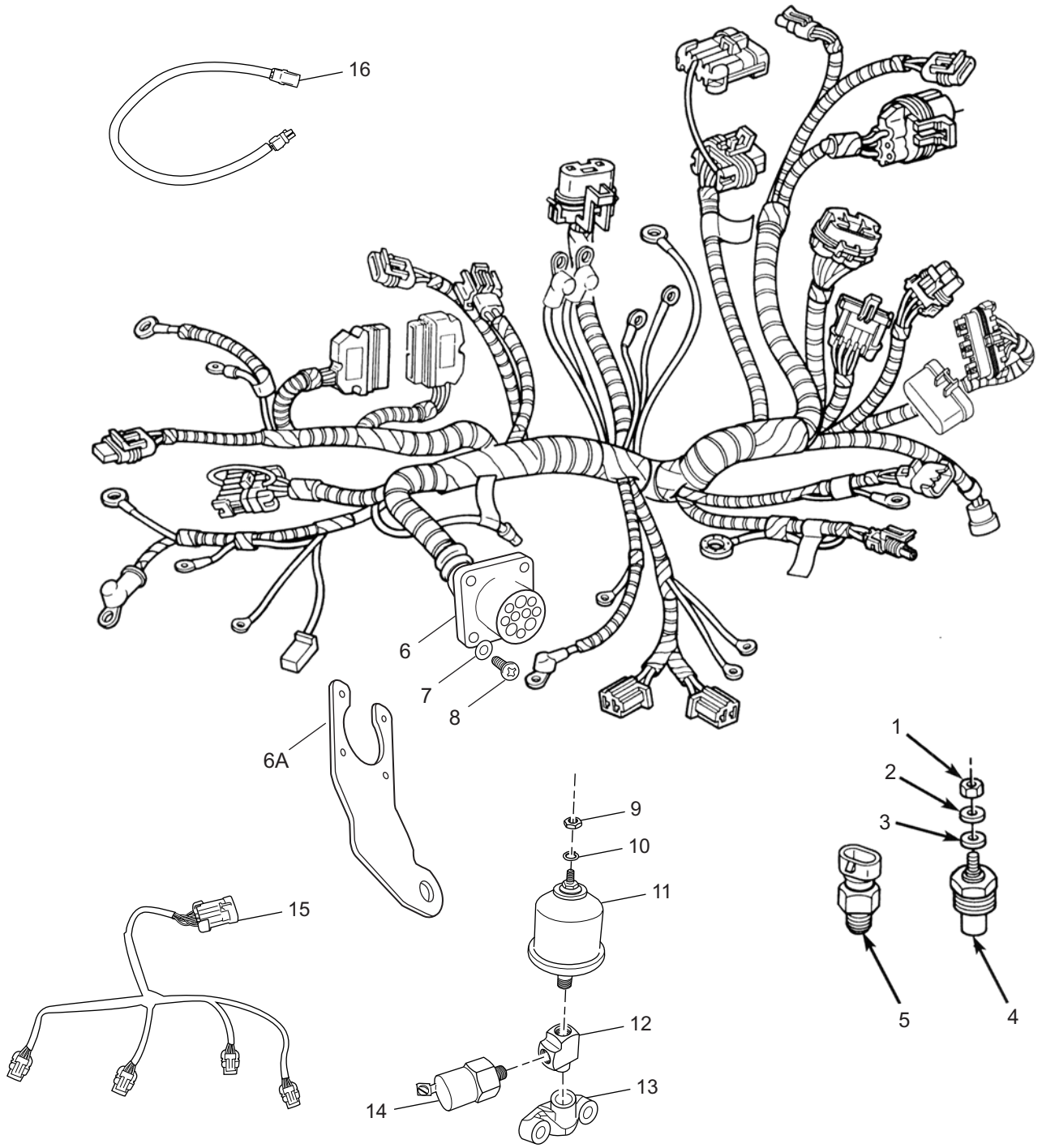


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## RAW WATER COOLING PUMP - FIGURE 18

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	TBD	<b>Bolt</b> , bearing housing attaching	3
2	TBD	<b>Lockwasher</b> , bearing housing attaching bolt	3
3	R047243	<b>O-ring</b> , bearing housing attaching bolt	3
4	R047242	<b>O-ring</b> , bearing housing attaching	1
5	RP061022	<b>Impeller Kit</b> (includes O-rings and impeller)	1
6	R057032	<b>Housing</b> , raw water pump	1
7	RA134071	<b>Bearing Housing Assembly</b>	1
8	RA057032	<b>Raw Water Pump Assembly</b>	1
9	TBD	<b>Bolt</b> , raw water pump cam	1
10	TBD	<b>Lockwasher</b> , raw water pump cam	1
11	R161018	<b>Cam</b> , raw water pump	1
12	RS3554	<b>Plug</b> , brass 1/8 NPT	1

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 19

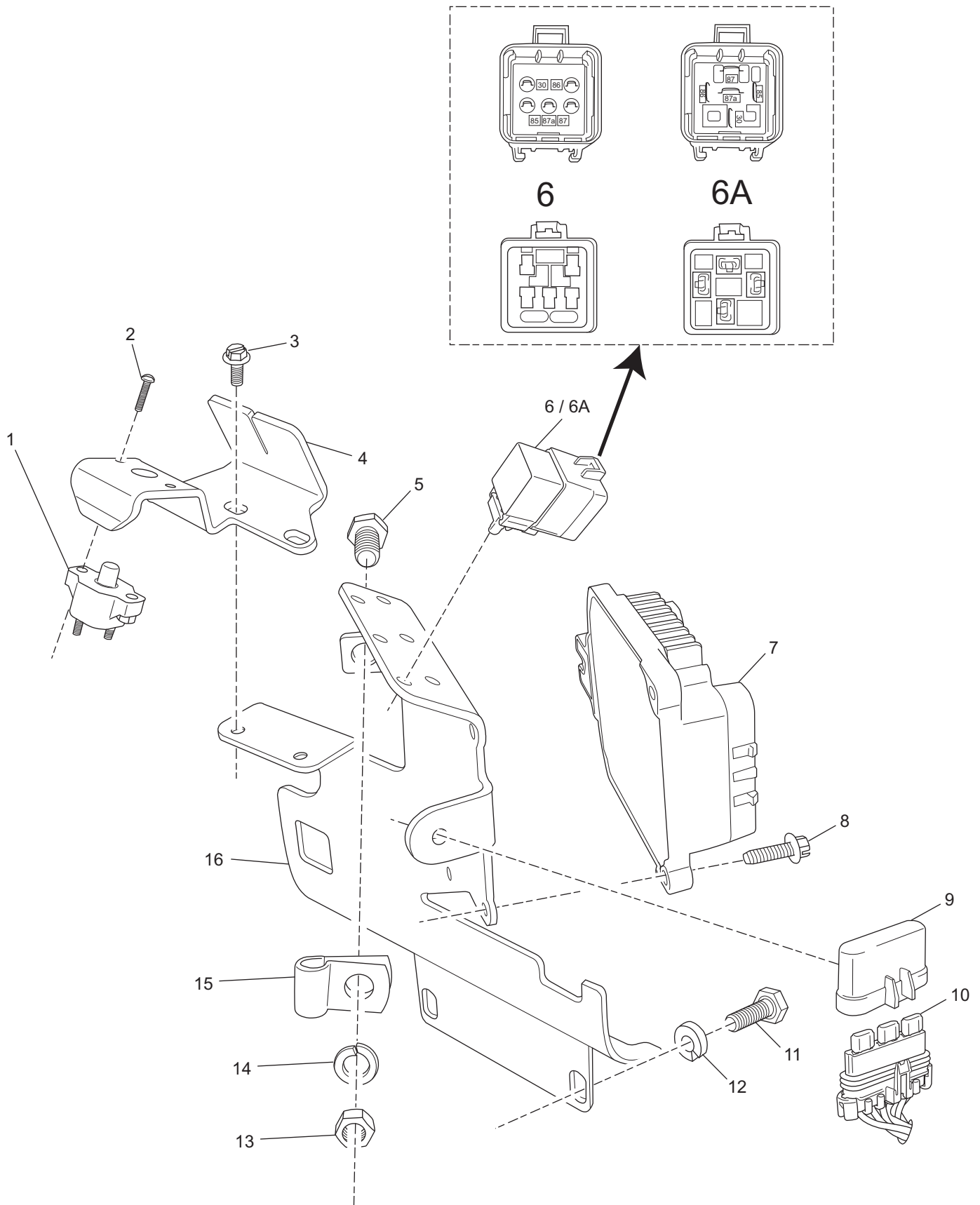


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## WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 19

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS1540	<b>Nut</b> , sender terminal	1
2	RS2197	<b>Lockwasher</b> , sender terminal	1
3	RS2746	<b>Washer</b> , sender terminal	1
4	R020002	<b>Sender</b> , temperature	1
5	R020046	<b>Sensor</b> , engine coolant temperature (ECT)	1
6	RA121076C	<b>Engine Wiring Harness Assembly</b> ('02-'04) (MUST be used with relay, p/n R130011A)	1
6A	R090282A	<b>Bracket</b> , 10-Pin	1
7	R096142	<b>Washer</b> , main harness attaching	4
8	RS5115	<b>Screw</b> , main harness attaching	4
9	RS1540	<b>Nut</b> , sender terminal	1
10	RS2197	<b>Lockwasher</b> , sender terminal	1
11	R020001	<b>Sender</b> , oil pressure	1
12	R024145	<b>Tee</b> , sender attaching	1
13	R079071	<b>Adapter</b> , oil sending unit	1
14	R020015A	<b>Switch</b> , oil pressure	1
15	R121101	<b>Harness</b> , ignition coil	2
16	R121078	<b>Harness</b> , FCC ("V" - Drive)	AR

ECM and RELAYS - FIGURE 20

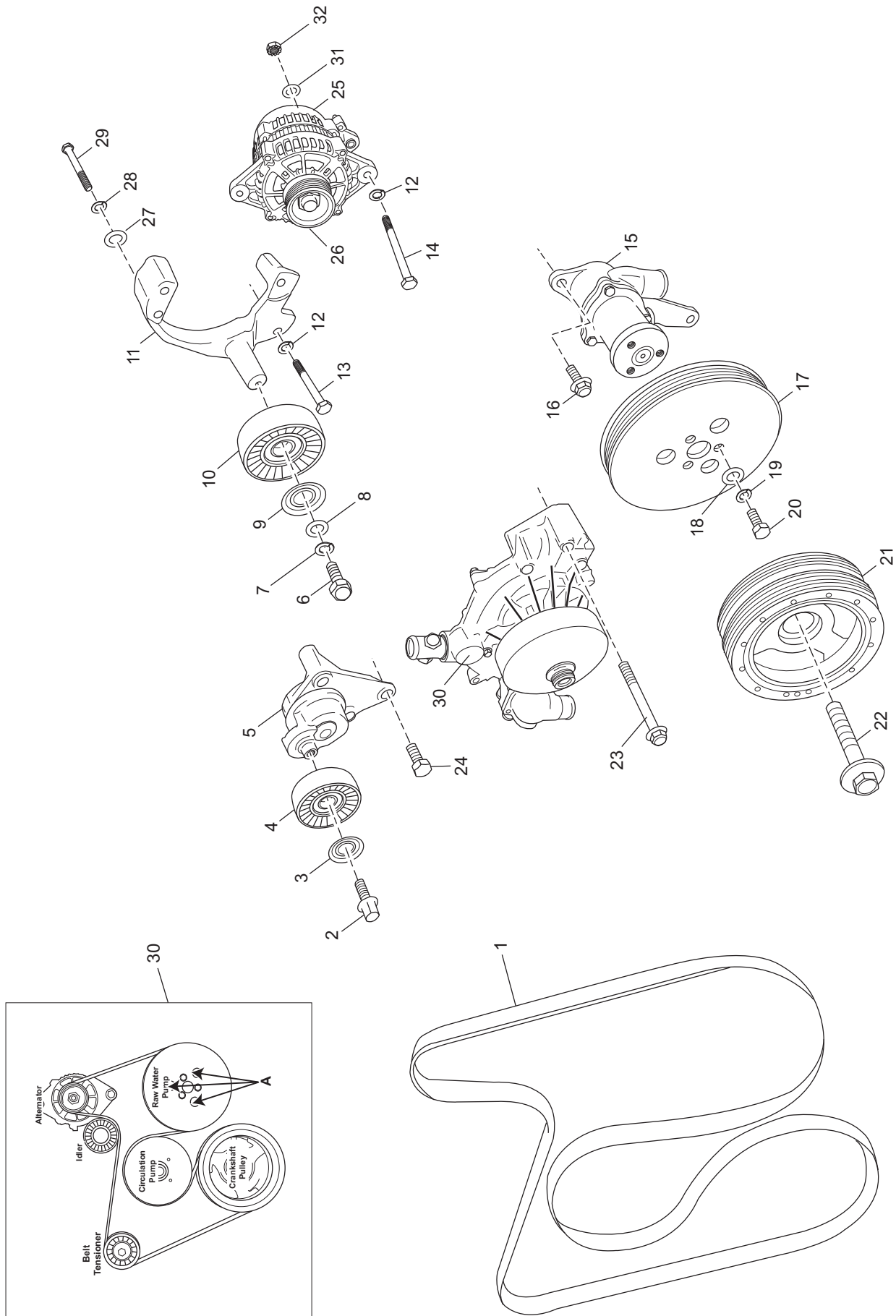


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## ECM and RELAYS - FIGURE 20

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R153006C	<b>Circuit Breaker Assembly (60 amp)</b>	1
2	RS5084	<b>Bolt</b> , circuit breaker mounting	2
3	91107075	<b>Bolt</b> , circuit breaker bracket attaching	2
4	R090274	<b>Bracket</b> , circuit breaker mounting	1
NI	23655	<b>Decal</b> , main circuit breaker	1
5	RS0302	<b>Bolt</b> , oil dipstick tube attaching	1
6	R130012	<b>Relay</b> , fuel pump, ignition, starter (s/n 420000 thru 445102)	3
6A	R130011A	<b>Relay</b> , fuel pump, ignition, starter (s/n 445103 thru present)	3
7	R116021K cksum - 3772 (0EBC)	<b>Engine Control Module</b> (thru '03) <b>w/10-Pin boat harness connector</b>	1
7	R116021Q cksum - 30455 (76F7)	<b>Engine Control Module</b> ('04 - '05) <b>w/10-Pin boat harness connector</b>	1
8	91107075	<b>Bolt</b> , ECM attaching	3
9	R126014	<b>Cover</b> , fuse holder	1
10	R153017B	<b>Fuses</b> , 20 amp	3
11	RS0304	<b>Bolt</b> , bracket attaching	2
12	RS2180	<b>Lockwasher</b> , bracket attaching bolt	2
13	RS1028	<b>Nut</b> , oil dipstick tube attaching	1
14	RS2180	<b>Lockwasher</b> , oil dipstick tube attaching	1
15	R127015	<b>Clamp</b> , oil dipstick tube attaching	1
16	R090279	<b>Bracket</b> , ECM/relay mounting	1

ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 21

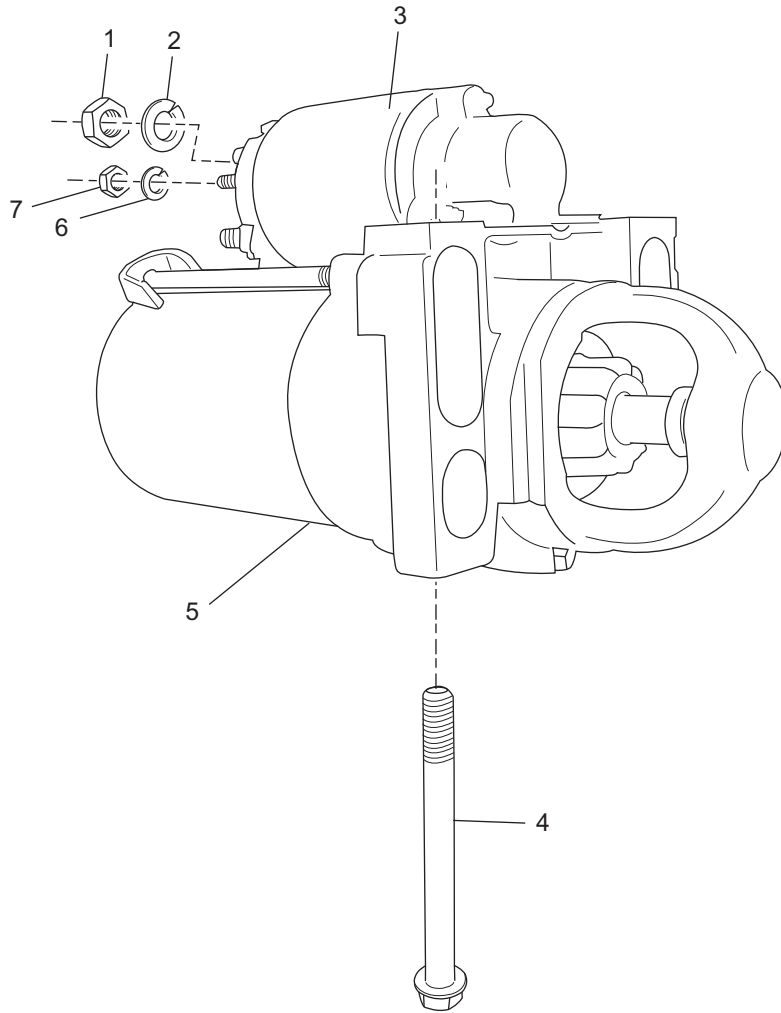




## ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 21

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066027	<b>Belt</b> , serpentine drive	1
2	part of item #5	<b>Bolt</b> , tensioner pulley attaching	1
3	part of item #5	<b>Washer</b> , tensioner pulley attaching bolt	1
4	part of item #5	<b>Pulley</b> , tensioner	1
5	RA068002	<b>Tensioner</b> , belt	1
6	98333025	<b>Bolt</b> , idler pulley attaching	1
7	RS2179	<b>Lockwasher</b> , idler pulley attaching bolt	1
8	92940000	<b>Washer</b> , idler pulley attaching bolt (small)	1
9	R096145	<b>Washer</b> , formed, idler pulley attaching bolt (large)	1
10	R065040	<b>Pulley</b> , idler	1
11	R090269	<b>Bracket</b> , idler pulley mounting / alternator	1
12	93940000	<b>Lockwasher</b> , idler pulley bracket attaching bolt	2
13	98443110	<b>Bolt</b> , idler pulley bracket attaching	1
14	98446070	<b>Bolt</b> , alternator mounting, lower	1
15	RA057032	<b>Raw Water Pump Assembly</b>	1
16	98442030	<b>Bolt</b> , raw water pump mounting	2
17	R065050	<b>Pulley</b> , raw water pump	1
18	92934000	<b>Flat Washer</b> , raw water pump pulley attaching	3
19	93934000	<b>Lockwasher</b> , raw water pump pulley attaching bolt	3
20	99335016	<b>Bolt</b> , raw water pump pulley attaching	3
21	R064016	<b>Balancer</b> , crankshaft	1
22	TBD	<b>Bolt</b> , crankshaft balancer	1
23	TBD	<b>Bolt</b> , water circulation pump attaching	4
24	TBD	<b>Bolt</b> , belt tensioner mounting	3
25	RA097007C	<b>Alternator Assembly, 70 Amp</b>	1
25	RA097009	<b>Alternator Assembly, 100 Amp</b>	1
NI	RF097009C	<b>Retro Fit Kit, 100 Amp Alternator</b>	AR
NI	R121081	<b>Harness</b> , Jumper, Adapt 70A to 100A	AR
26	R065055	<b>Pulley</b> , alternator (70 amp)	1
27	92200000	<b>Flatwasher</b> , alternator mounting	1
28	RS2179	<b>Lockwasher</b> , alternator mounting	1
29	98339070	<b>Bolt</b> , alternator mounting, upper	1
30	R143147	<b>Decal</b> , belt routing	1
31	92920000	<b>Flatwasher</b> , alternator wire attaching	2
32	97220060	<b>Nut</b> , alternator wire attaching (70A)	2
32	97330060	<b>Nut</b> , KEPS, Alternator Positive Post, 100A	1

STARTER ASSEMBLY COMPONENTS - FIGURE 22



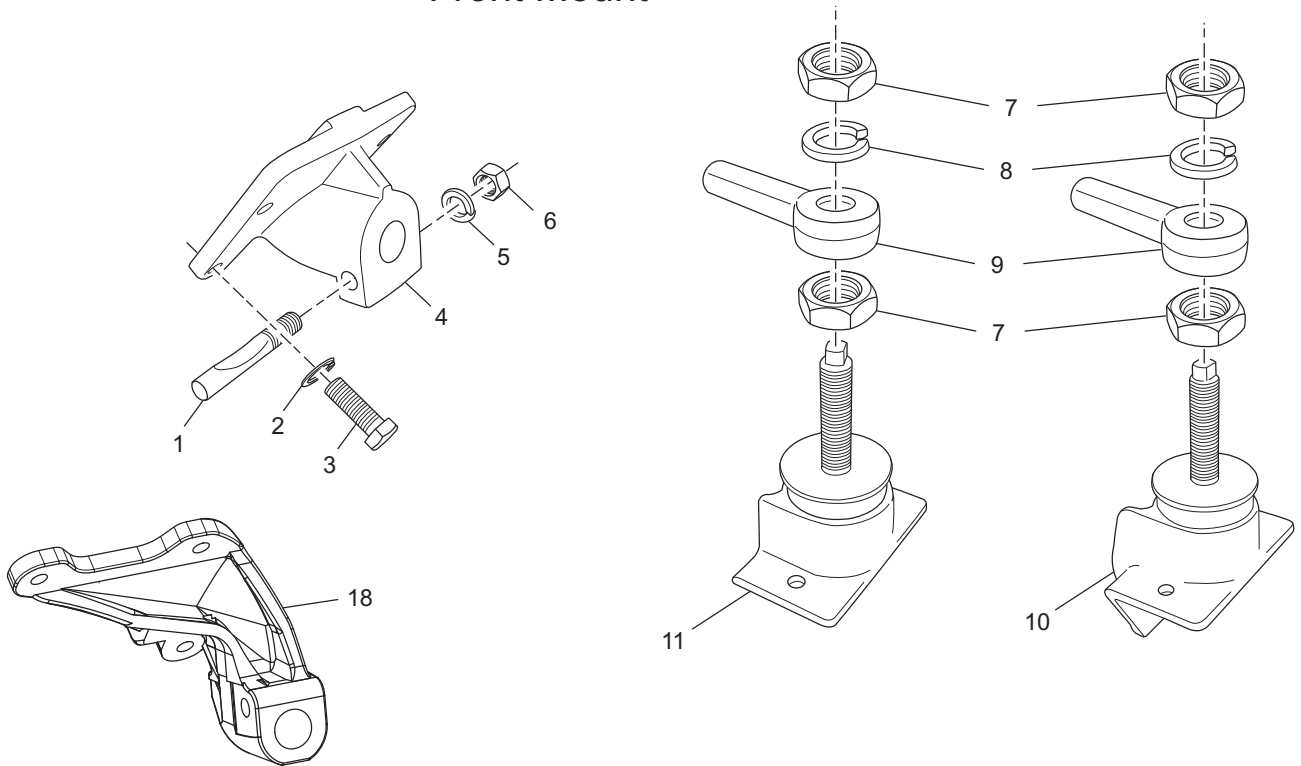
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11-8-02

## STARTER ASSEMBLY COMPONENTS - FIGURE 22

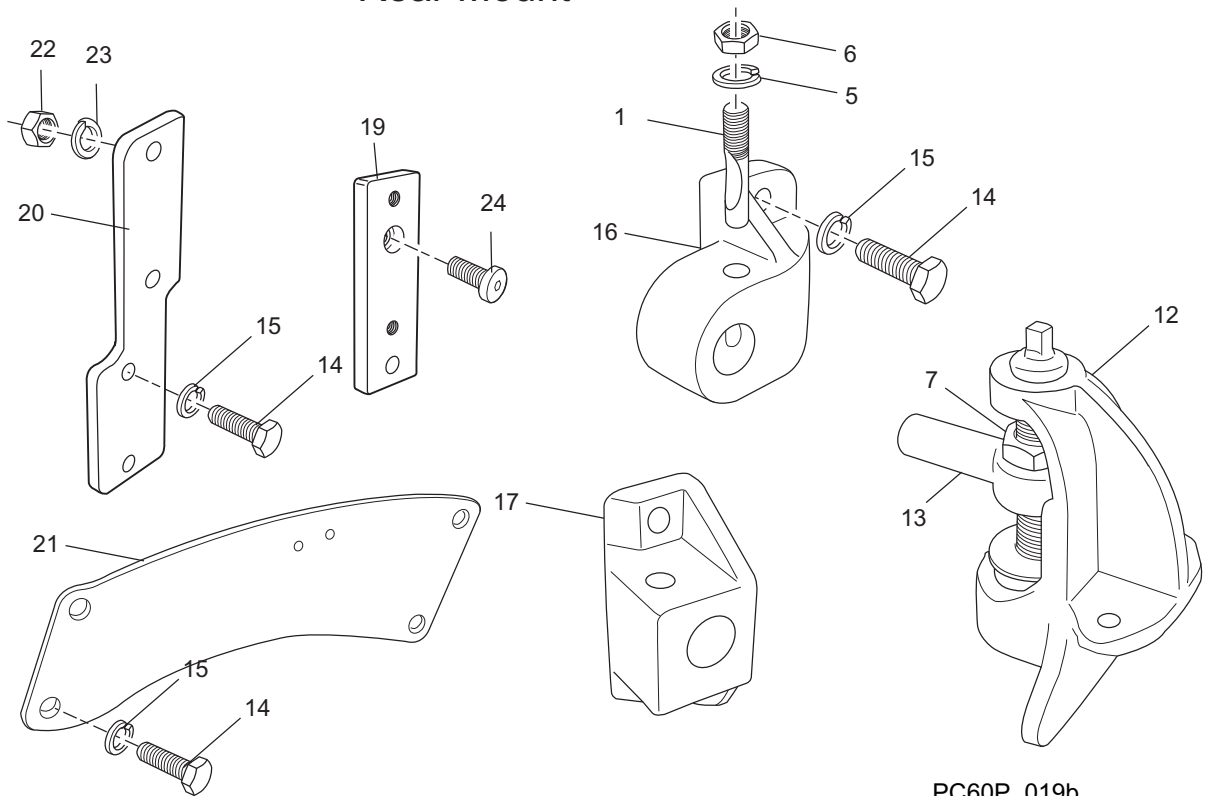
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS7019	<b>Nut</b> , solenoid terminal	1
2	RS2200	<b>Lockwasher</b> , solenoid terminal	1
3	RU0050A	<b>Solenoid</b> , starter	1
4	R009203	<b>Bolt</b> , starter mounting	2
5	RA122019	<b>Starter Motor Assembly</b>	1
6	93003000	<b>Lockwasher</b> , solenoid terminal	2
7	RS7036	<b>Nut</b> , solenoid terminal	2

ENGINE and TRANSMISSION MOUNTS - FIGURE 23

Engine Mount Group  
Front Mount



Engine Mount Group  
Rear Mount

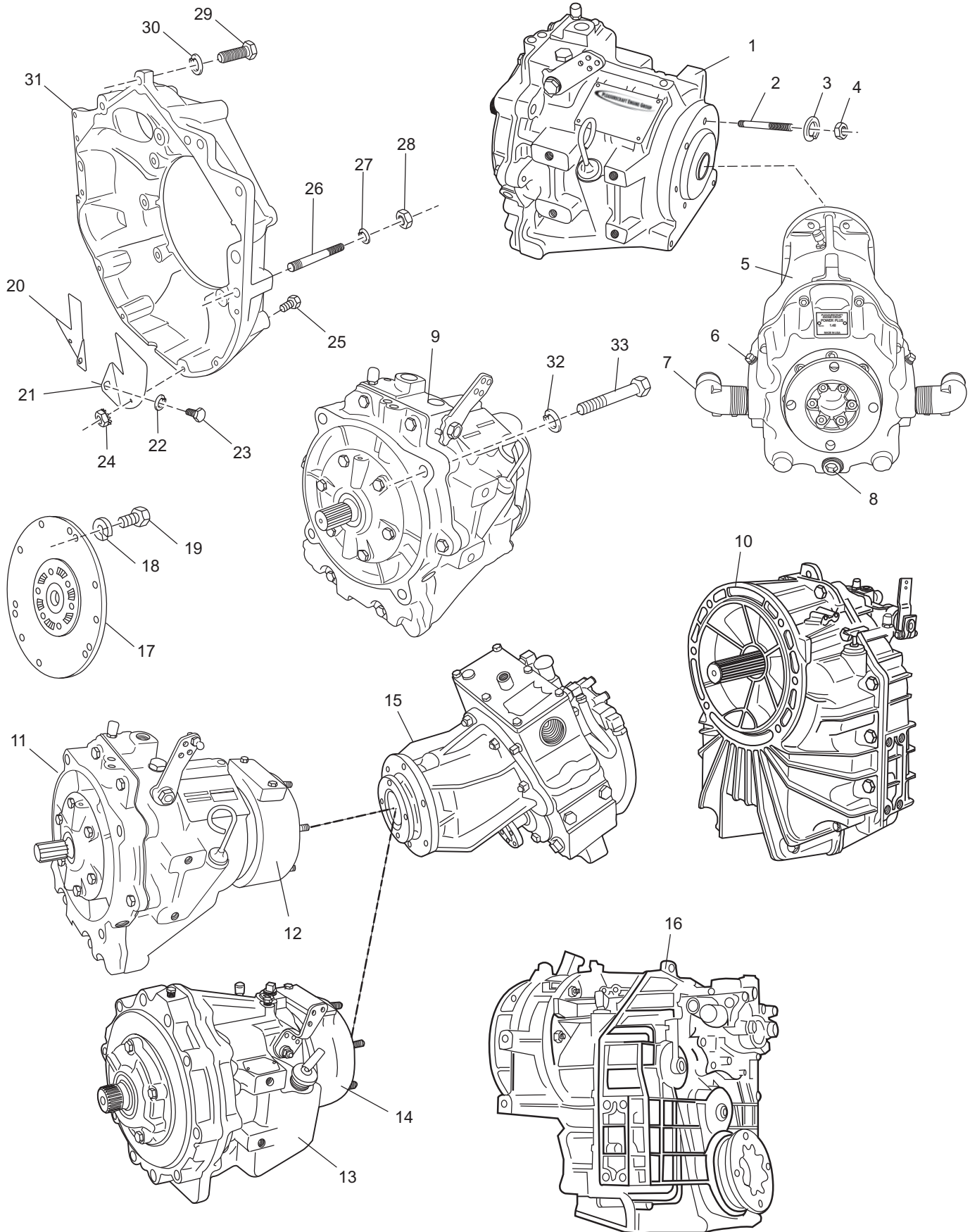


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## ENGINE and TRANSMISSION MOUNTS - FIGURE 23

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R095020	<b>Bolt</b> , trunnion clamp	2
2	93940000	<b>Lockwasher</b> , engine mount attaching bolt	8
3	98443030	<b>Bolt</b> , engine mount attaching	8
4	R090242	<b>Mount</b> , engine front	2
5	RS2181	<b>Lockwasher</b> , trunnion clamp bolt	2
6	RS1529	<b>Nut</b> , trunnion clamp bolt	2
7	RS1075	<b>Nut</b> , adjustment and lock	4
8	RS2186	<b>Lockwasher</b> , adjusting nut	2
9	R091001	<b>Trunnion</b> , long	2
9	R091007	<b>Trunnion</b> , short	2
10	RC091001	<b>Trunnion Assembly</b>	1
11	RA092016	<b>Trunnion Assembly</b>	1
12	RA092011	<b>Trunnion Assembly</b> , tall (1.23:1 STD / V-drive) Used with item #17 - R090145 mount	2
12	RA092011A	<b>Trunnion Assembly</b> , tall (1.23:1 STD / V-drive) Used with item #16 - R090205 mount	2
12	RA091003	<b>Trunnion Assembly</b> , short (1.0:1 STD) Used with item #17 - R090145 mount	2
12	RA091006	<b>Trunnion Assembly</b> , short (1.0:1 STD) Used with item #16 - R090205 mount	2
13	R091003	<b>Trunnion</b> , 2.5" (use with R090145)	2
13	R091006	<b>Trunnion</b> , 2.125" (use with R090205)	2
14	RS0327	<b>Bolt</b> , rear mount attaching (R109054, R090318-lower)	4
14	RS0329	<b>Bolt</b> , rear mount attaching (R090205)	4
14	RS0328	<b>Bolt</b> , rear mount attaching (R090145)	4
14	RS0330	<b>Bolt</b> , rear mount attaching (R090318-upper)	4
15	RS2181	<b>Lockwasher</b> , rear mount attaching bolt	4
16	R090205	<b>Mount</b> , rear	1
17	R090145	<b>Mount</b> , rear	1
18	R090293	<b>Mount</b> , engine front (port) 1.23:1	1
18	R090294	<b>Mount</b> , engine front (starboard) 1.23:1	1
18	R090302	<b>Mount</b> , engine front (port) 1.0:1	1
18	R090303	<b>Mount</b> , engine front (starboard) 1.0:1	1
NI	93940000	<b>Lockwasher</b> , engine mount attaching bolt	6
NI	98443030	<b>Bolt</b> , engine mount attaching, upper	4
NI	98449055	<b>Bolt</b> , engine mount attaching, lower	2
19	R169062	<b>Shim</b> , Mount, rear	AR
NI	R169063	<b>Spacer</b> , Mount, rear, 2"	AR
20	R090318	<b>Mount</b> , PCM V-DRV (use with RA092016, item 11)	2
21	R109054	<b>Plate</b> , brace, PCM V-DRV used when there is no mount	2
22	RS1029	<b>Nut</b> , rear mount attaching (R090318)	4
23	RS2181	<b>Lockwasher</b> , rear mount attaching (R090318)	4
24	90465100	<b>Bolt</b> , shim mount attaching (R169062)	2

BELL HOUSING ASSEMBLY - FIGURE 24

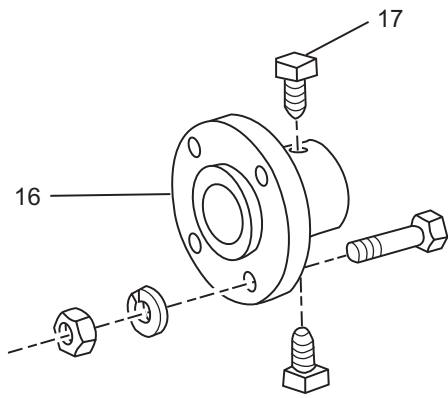


## BELL HOUSING ASSEMBLY - FIGURE 24

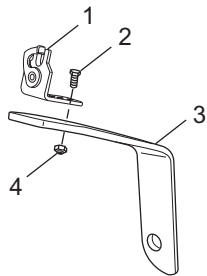
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA157015	<b>Transmission Assembly</b> , IRM40S, PCM to PCM V-DRV	AR
2	R031035	<b>Stud</b> , PCM V-DRV to transmission attaching	8
3	RS2179	<b>Lockwasher</b> , PCM V-DRV to transmission attaching	8
4	RS7026	<b>Nut</b> , PCM V-DRV to transmission attaching	8
5	RA156011B	<b>PCM Power-Plus V-Drive Assembly</b> , 1.48:1	AR
NI	R190250	<b>Gear Lube</b> , synthetic SAE 50, PCM V-DRV (1 qt.)	AR
6	TBD	<b>Plug</b> , brass, oil fill/drain, PCM V-DRV	2
7	97854	<b>Fitting</b> , brass elbow 90°, PCM V-DRV	2
8	RS3633	<b>Plug</b> , brass, raw water drain, 1/2" square socket	1
9	RA157017	<b>Transmission Assembly</b> , IRM40A, 1.23:1 PCM	AR
10	RA156009	<b>Transmission Assembly</b> , 630V, HURTH, 1.29:1	AR
10	RA156009A	<b>Transmission Assembly</b> , 630V, HURTH, 1.5:1	AR
11	RA157016	<b>Transmission Assembly</b> , IRM40I, 1.0:1 PCM	AR
12	R079056	<b>Adapter</b> , V-Drive, PCM to Walter	AR
13	RA157001	<b>Transmission Assembly</b> , 1.0:1 Warner (71C)	AR
13	RA157003	<b>Transmission Assembly</b> , 1.0:1 Warner (72C)	AR
13	RA157001A	<b>Transmission Assembly</b> , (71C w/v-drive adapter)	AR
14	R079072	<b>Adapter</b> , V-Drive, Warner to Walter	AR
15	RA156004	<b>V-Drive Assembly</b> , Walters, 1.46:1	AR
16	RA156010	<b>Transmission Assembly</b> , 90VTS, ZF 2-speed	AR
NI	RK104013	<b>Connector Kit</b> , ZF 2-speed	AR
17	98511	<b>Plate</b> , damper (Warner Transmissions, 6.0/8.1L)	1
17	R140016	<b>Plate</b> , damper (PCM Transmissions)	1
17	R140018	<b>Plate</b> , damper (Hurth Transmission/2-speed)	1
18	93940000	<b>Lockwasher</b> , damper plate attaching bolt	4
19	98446030	<b>Bolt</b> , damper plate attaching	4
20	R019011A	<b>Cover</b> , dust, (stbd) (use w/top mount starter)	1
20	R019011	<b>Cover</b> , dust (stbd) (use w/bottom mount starter)	1
21	R019012	<b>Cover</b> , dust (port)	1
22	93920000	<b>Lockwasher</b> , dust cover attaching	2
23	RS6503	<b>Bolt</b> , dust cover attaching	2
24	RS1078	<b>Nut</b> , dust cover attaching	2
25	RS0256	<b>Bolt</b> , dust cover attaching	2
26	R031034	<b>Stud</b> , bellhousing attaching	2
27	93940000	<b>Lockwasher</b> , bellhousing attaching	2
28	97440000	<b>Nut</b> , bellhousing attaching	2
29	98443050	<b>Bolt</b> , bellhousing attaching	3
30	93940000	<b>Lockwasher</b> , bellhousing attaching	3
31	R142014	<b>Bellhousing</b> , top or bottom mount starter	1
31	R142006B	<b>Bellhousing</b> , bottom mount starter, only	1
NI	R019010	<b>Cover</b> , dust, top mount starter (used w/R019008A)	1
NI	RS0327	<b>Bolt</b> , dust cover attaching	2
NI	RS2181	<b>Lockwasher</b> , dust cover attaching <b>** PCM **</b>	2
32	RS2180	<b>Lockwasher</b> , transmission attaching bolt	4
33	RS0329	<b>Bolt</b> , transmission attaching <b>**Velvet Drive **</b>	4
NI	96541	<b>Stud</b> , transmission mounting (4")	2
NI	RS2181	<b>Lockwasher</b> , transmission mounting	6
NI	RS1029	<b>Nut</b> , transmission mounting stud	2
NI	RS0337	<b>Bolt</b> , transmission mounting <b>**Hurth Gears**</b>	4
NI	R031018	<b>Stud</b> , transmission mounting (1 5/8")	2
NI	RS2181	<b>Lockwasher</b> , transmission mounting	6
NI	RS1029	<b>Nut</b> , transmission mounting stud	2
NI	RS0329	<b>Bolt</b> , transmission mounting	4



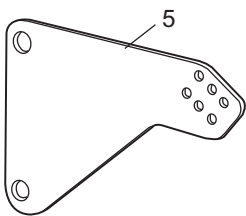
TRANSMISSION AND RELATED COMPONENTS (STANDARD DRIVE) - FIGURE 25



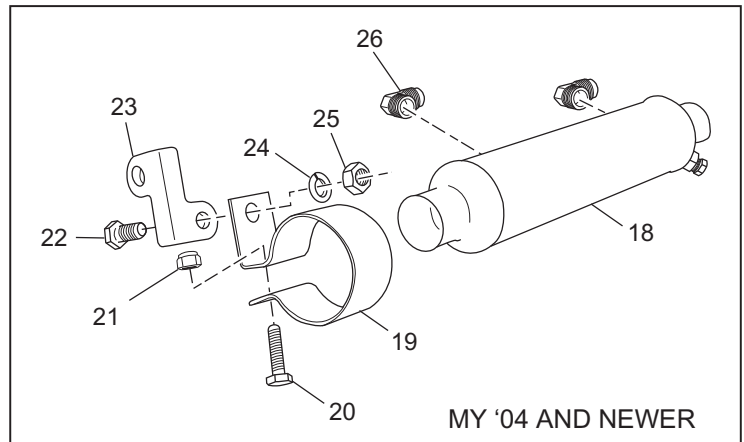
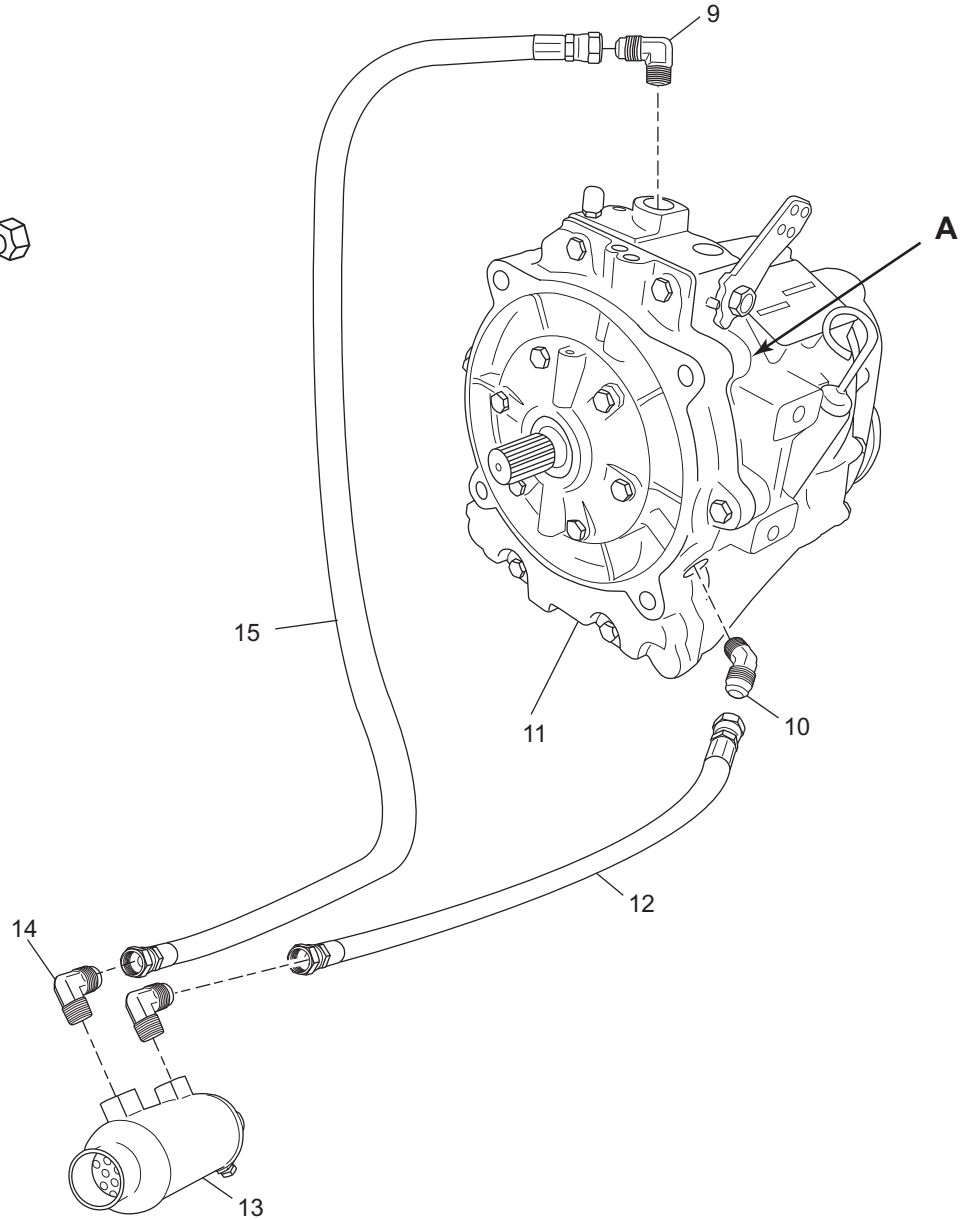
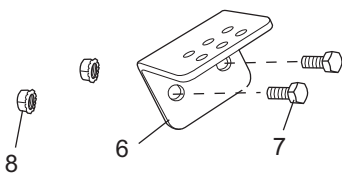
**A - FRONT MOUNT  
SHIFT BRACKET**



**PCM V-DRV SHIFT  
BRACKET**



**15-600V-02**



MY '04 AND NEWER

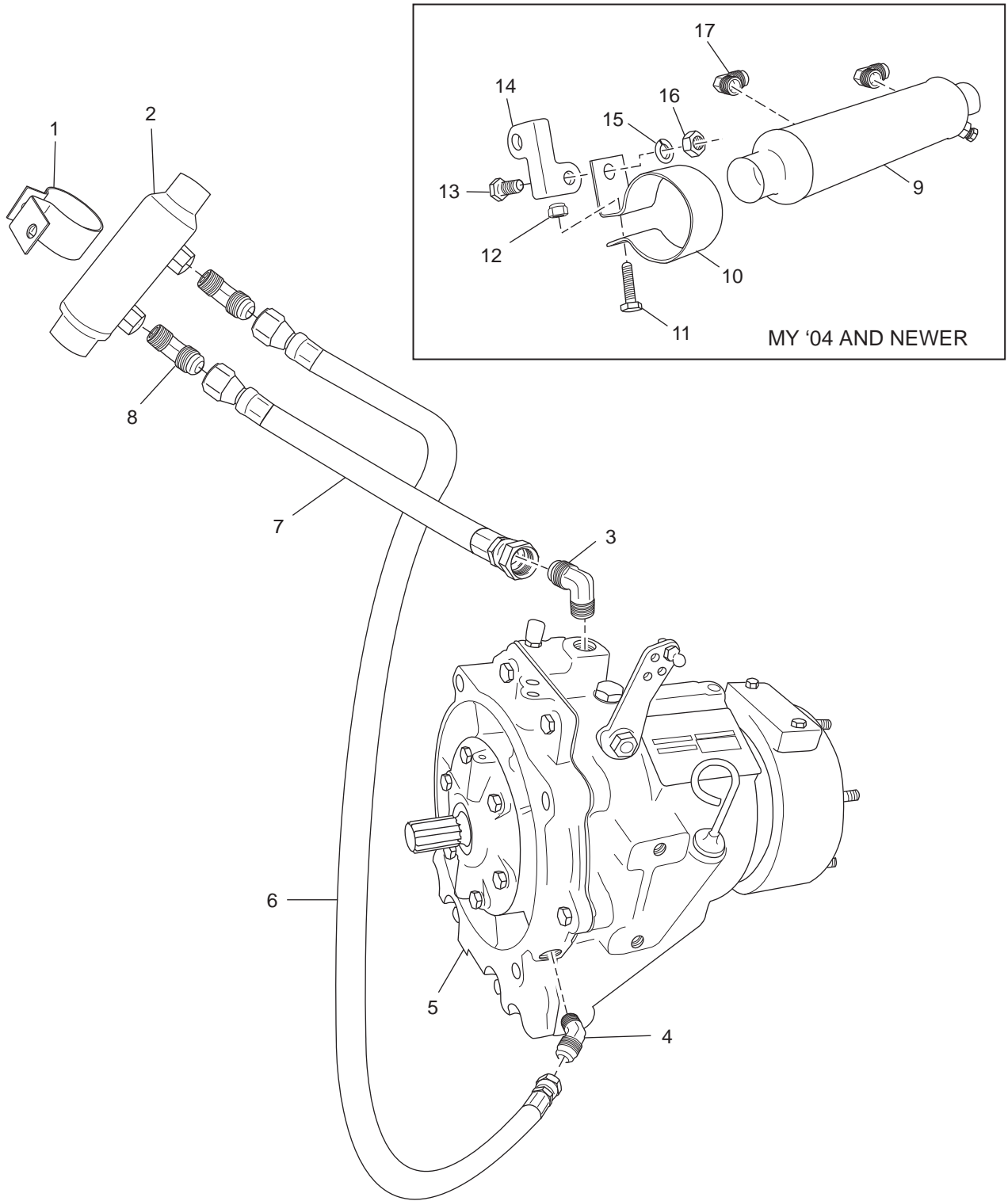
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## TRANSMISSION AND RELATED COMPONENTS (STANDARD DRIVE) - FIGURE 25

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090086	<b>Cable Clip</b> , single cable	1
2	RS5122	<b>Bolt</b> , cable clip attaching	2
3	R090143A	<b>Bracket</b> , shift	1
4	RS2055	<b>Nut</b> , cable clip attaching bolt	2
5	R090319	<b>Bracket</b> , shift (PCM V-DRV)	1
6	R090348	<b>Bracket</b> , shift (PCM V-DRV, attaches to R109054)	1
7	RS5124	<b>Bolt</b> , bracket attaching	2
8	RS1078	<b>Nut</b> , KEPS, bracket attaching bolt	2
9	R024010	<b>Fitting</b> , 90 degree	1
10	R024053	<b>Fitting</b> , 45 degree	1
11	RA157017	<b>Transmission</b> , 1.23:1	1
11	RA157016	<b>Transmission</b> , 1.0:1	AR
12	RA045007B	<b>Hose Assembly</b> , cooler to transmission (MY '03)	1
12	RA045007M	<b>Hose Assembly</b> , cooler to transmission (MY '04 -)	1
13	R147014	<b>Transmission Cooler Assembly</b>	1
14	R024010	<b>Fitting</b> , 90 degree	2
15	RA045007T	<b>Hose Assembly</b> , transmission to cooler	1
16	R148010	<b>Coupler</b> , prop shaft (4" X 1" shaft)	OPT
16	R148011	<b>Coupler</b> , prop shaft (4" X 1 1/8" shaft)	OPT
17	2000090	<b>Screw</b> , set - coupler	2
18	R147014	<b>Cooler Assembly</b> , transmission (MY '04 to present)	1
19	R090010	<b>Clamp</b> , cooler assembly mounting (MY '04 to present)	1
20	RS0256	<b>Bolt</b> , cooler attaching (MY '04 to present)	1
21	RS1078	<b>Nut</b> , cooler attaching (MY '04 to present)	1
22	RS0302	<b>Bolt</b> , cooler clamp attaching (MY '04 to present)	1
23	R090013A	<b>Bracket</b> , cooler mounting (MY '04 to present)	1
24	RS2180	<b>Lockwasher</b> , cooler clamp attaching bolt (MY '04 to present)	1
25	RS1028	<b>Nut</b> , oil cooler clamp attaching bolt (MY '04 to present)	1
26	R024010	<b>Fitting</b> , 90 degree (MY '04 to present)	2

TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 26



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## TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 26

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090010	<b>Bracket</b> , oil cooler mounting	1
2	R147014	<b>Cooler</b> , oil , transmission	1
3	R024010	<b>Fitting</b> , 90 degree	1
4	R024010	<b>Fitting</b> , 90 degree	1
5	RA157016	<b>Transmission</b> , 1.0:1, (w/R079056 Adapter)	1
6	RA045007B	<b>Hose Assembly</b> , cooler to transmission (MY '03)	1
6	RA045007M	<b>Hose Assembly</b> , cooler to transmission	1
7	RA045007K	<b>Hose Assembly</b> , transmission to cooler (MY '03)	1
7	RA045007T	<b>Hose Assembly</b> , transmission to cooler	1
8	R024010	<b>Fitting</b> , 90 degree	2
9	R147014	<b>Cooler Assembly</b> , transmission (MY '04 to present)	1
10	R090010	<b>Clamp</b> , cooler assembly mounting (MY '04 to present)	1
11	RS0254	<b>Bolt</b> , cooler attaching (MY '04 to present)	1
12	RS1078	<b>Nut</b> , cooler attaching (MY '04 to present)	1
13	RS0302	<b>Bolt</b> , cooler clamp attaching (MY '04 to present)	1
14	R090013A	<b>Bracket</b> , cooler mounting (MY '04 to present)	1
15	RS2180	<b>Lockwasher</b> , cooler clamp attaching bolt (MY '04 to present)	1
16	RS1028	<b>Nut</b> , oil cooler clamp attaching bolt (MY '04 to present)	1
17	R024010	<b>Fitting</b> , 90 degree (MY '04 to present)	2