



MARINE ILLUSTRATED PARTS MANUAL MODEL MP6.0L MY 2003 - 2004



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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	Base Engine Assembly, 6.0L	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.

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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 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:

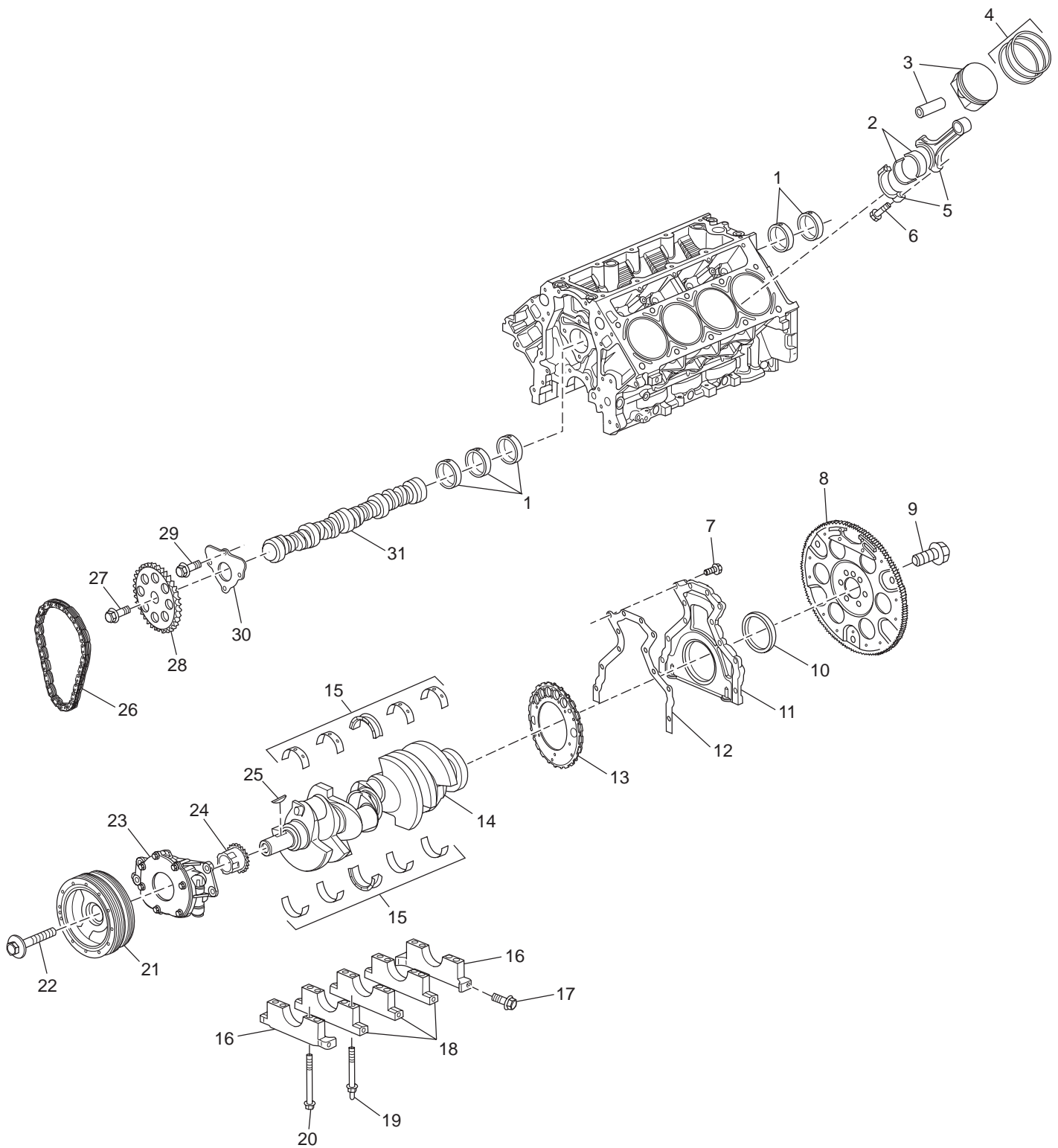
Description	Part Number
Oil Filter	R077001
Fuel Filter (FCC)	RP080026
Spark Plugs	RP030011
Spark Plug Wire Set	RK120021
Serpentine Drive Belt	R066027
Raw Water Pump Impeller Kit	RP061022
Thermostat	R026007

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

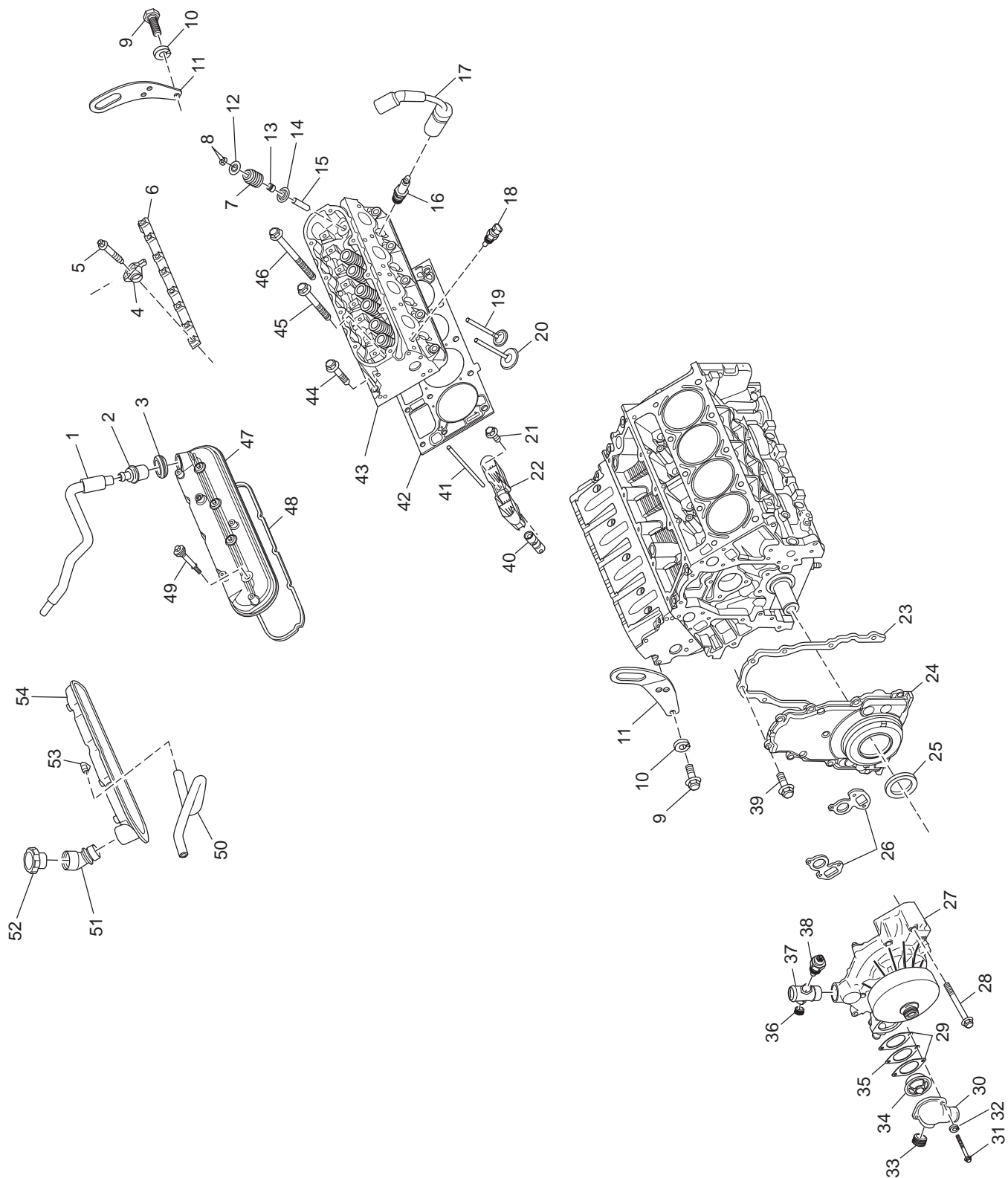


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CYLINDER BLOCK ASSEMBLY - FIGURE 1

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

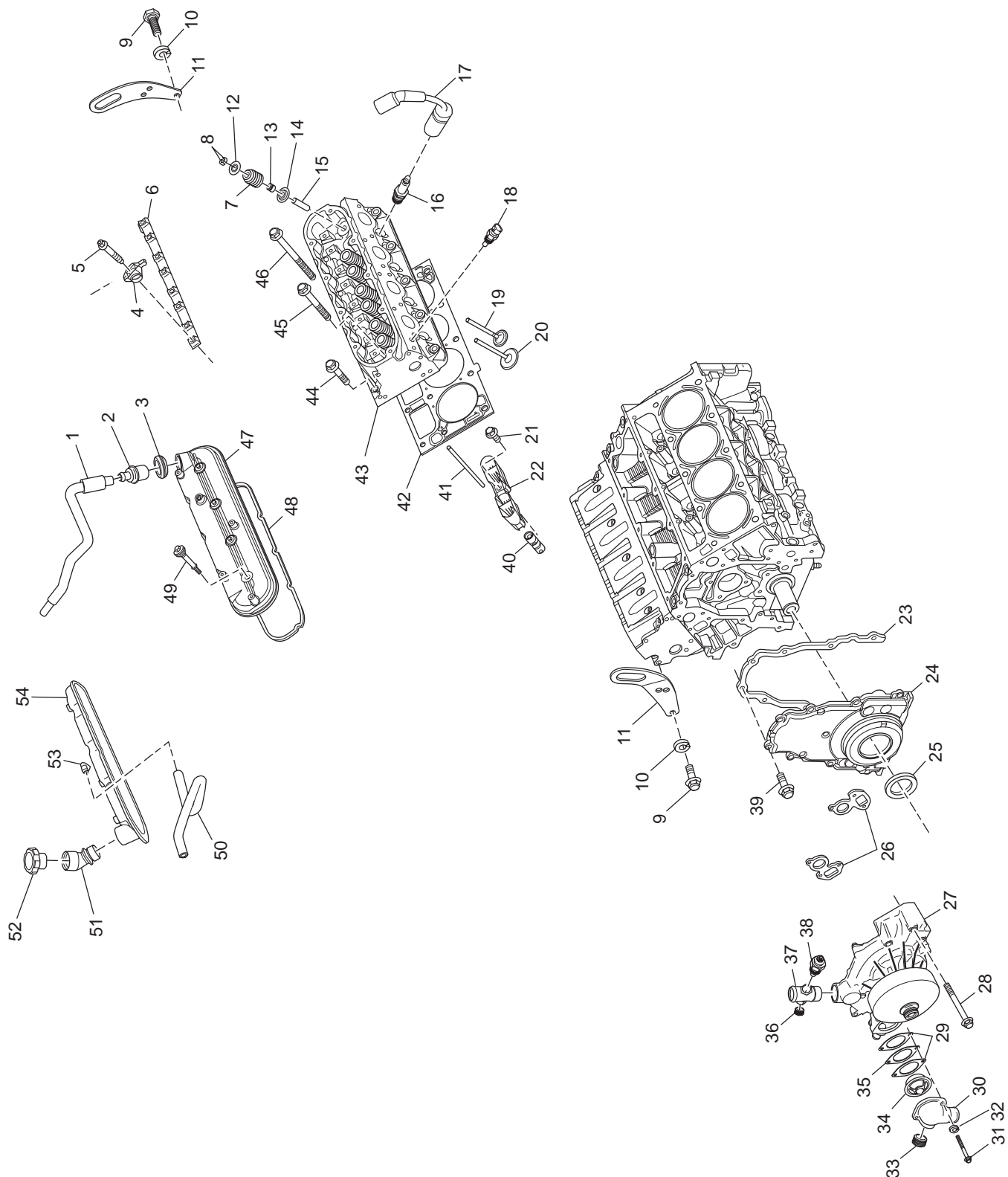
CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2



CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	TBD	Hose , PCV valve	1
2	TBD	Valve , positive crankcase ventilation (PCV)	1
3	TBD	Grommet , PCV valve	1
4	TBD	Rocker Arm , valve	16
5	TBD	Bolt , valve rocker arm attaching	16
6	TBD	Guide , valve rocker arm	2
7	TBD	Valve Spring Assembly	16
8	TBD	Retainer , valve stem	32
9	98443025	Bolt , lifting eye attaching	4
10	93940000	Lockwasher , lifting eye attaching bolt	4
11	R042012	Lifting Eye	2
12	TBD	Cap , valve spring	16
13	TBD	Seal , valve stem	16
14	TBD	Rotator , valve	32
15	TBD	Guide , valve stem	16
16	RP030011	Spark Plug	8
17	RK120021	Spark Plug Wire Set	1
18	R020046	Engine Coolant Temperature (ECT) Sensor	1
19	TBD	Valve , exhaust (STD)	8
20	TBD	Valve , intake (STD)	8
21	TBD	Bolt , valve lifter retainer attaching	8
22	TBD	Retainer , valve lifter	8
23	RM0280	Gasket , front engine cover	1
24	TBD	Cover , front engine	1
25	R047237	Seal , front engine cover oil	1
26	RM0281	Gasket , water circulating pump	2
27	RA057033	Water Circulation Pump Assembly	1
28	TBD	Bolt , water circulating pump attaching	4
29	RM0275	Gasket , thermostat housing	2
30	R025036	Housing , thermostat	1
31	98223016	Bolt , thermostat housing attaching	2
32	93920000	Lockwasher , thermostat housing attaching	2
33	113186	Plug , thermostat housing	1
34	R026002	Thermostat , (160° F)	1
35	R109051	Plate , thermostat retainer	1
36	RS3551	Plug , water neck	1
37	R024208	Water Neck	1
38	R020002	Switch , coolant temperature	1
39	TBD	Bolt , front engine cover attaching	8

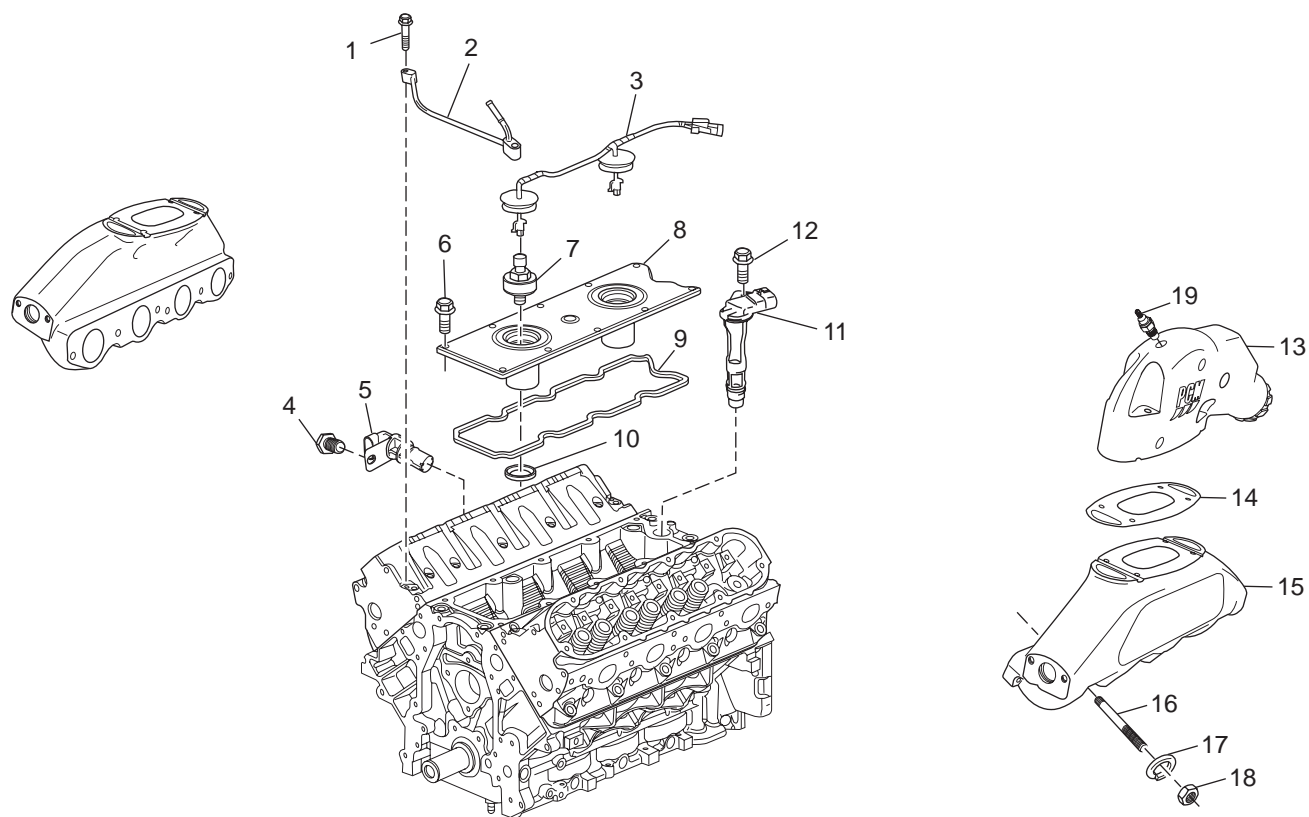
CYLINDER HEAD ASSEMBLY / FRONT COVER - FIGURE 2 (cont'd)



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

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
40	TBD	Lifter , valve	16
41	TBD	Push Rod	16
42	RM0278	Gasket , Cylinder Head	2
43	R003016	Cylinder Head	2
44	TBD	Bolt , cylinder head (short)	16
45	TBD	Bolt , cylinder head (medium)	4
46	TBD	Bolt , cylinder head (long)	14
47	TBD	Cover , rocker (LH)	1
48	RM0282	Gasket , rocker cover	2
49	TBD	Bolt , rocker cover attaching	8
50	TBD	Tube , breather	1
51	TBD	Tube , oil fill	1
52	R034038B	Cap , oil fill tube	1
53	TBD	Fitting , breather tube	1
54	TBD	Cover , rocker (RH)	1

EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

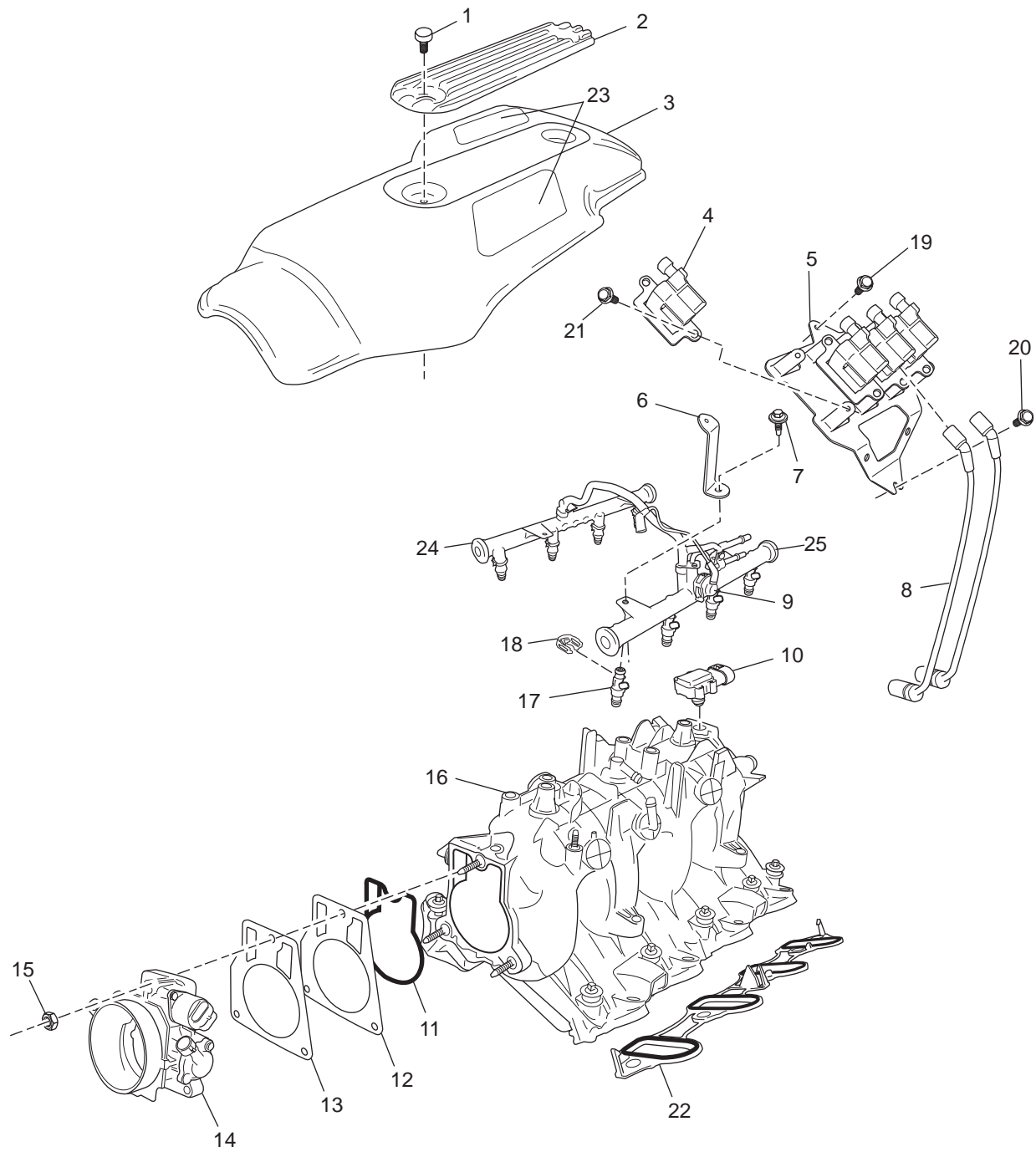


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EXHAUST MANIFOLD / KNOCK SENSORS - FIGURE 3

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

INTAKE MANIFOLD COMPONENTS - FIGURE 4

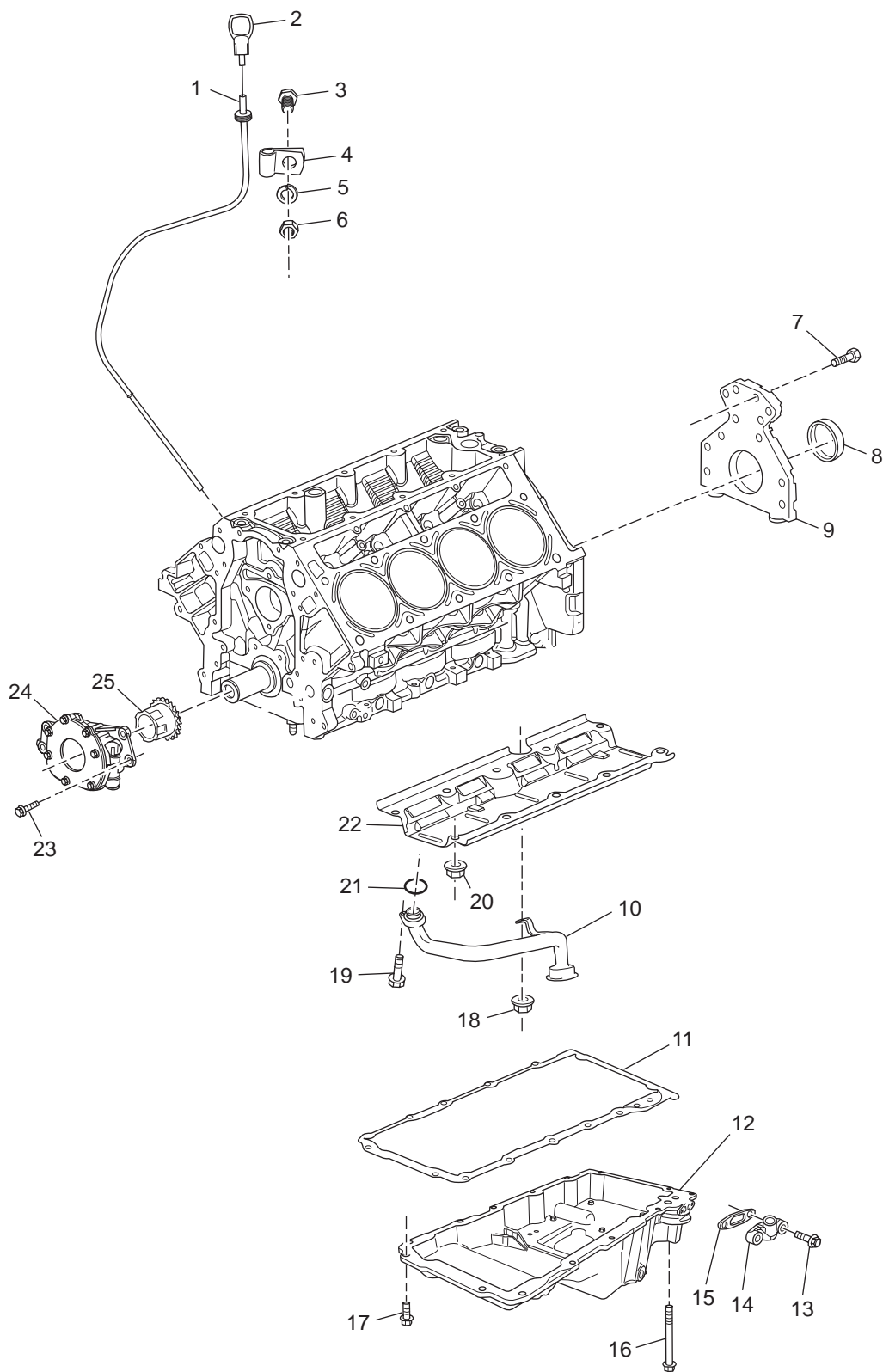


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INTAKE MANIFOLD COMPONENTS - FIGURE 4

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

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

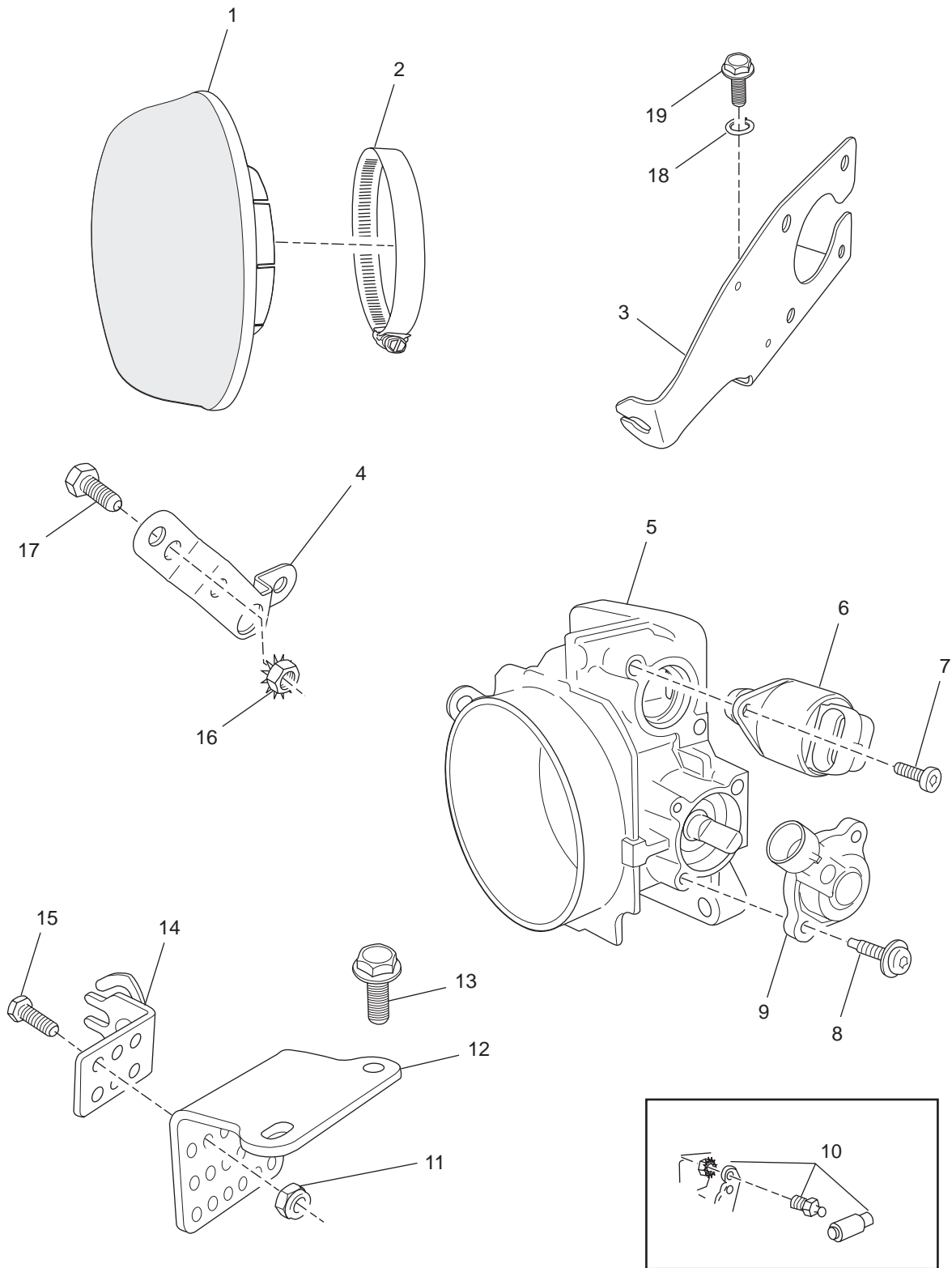


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OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

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

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

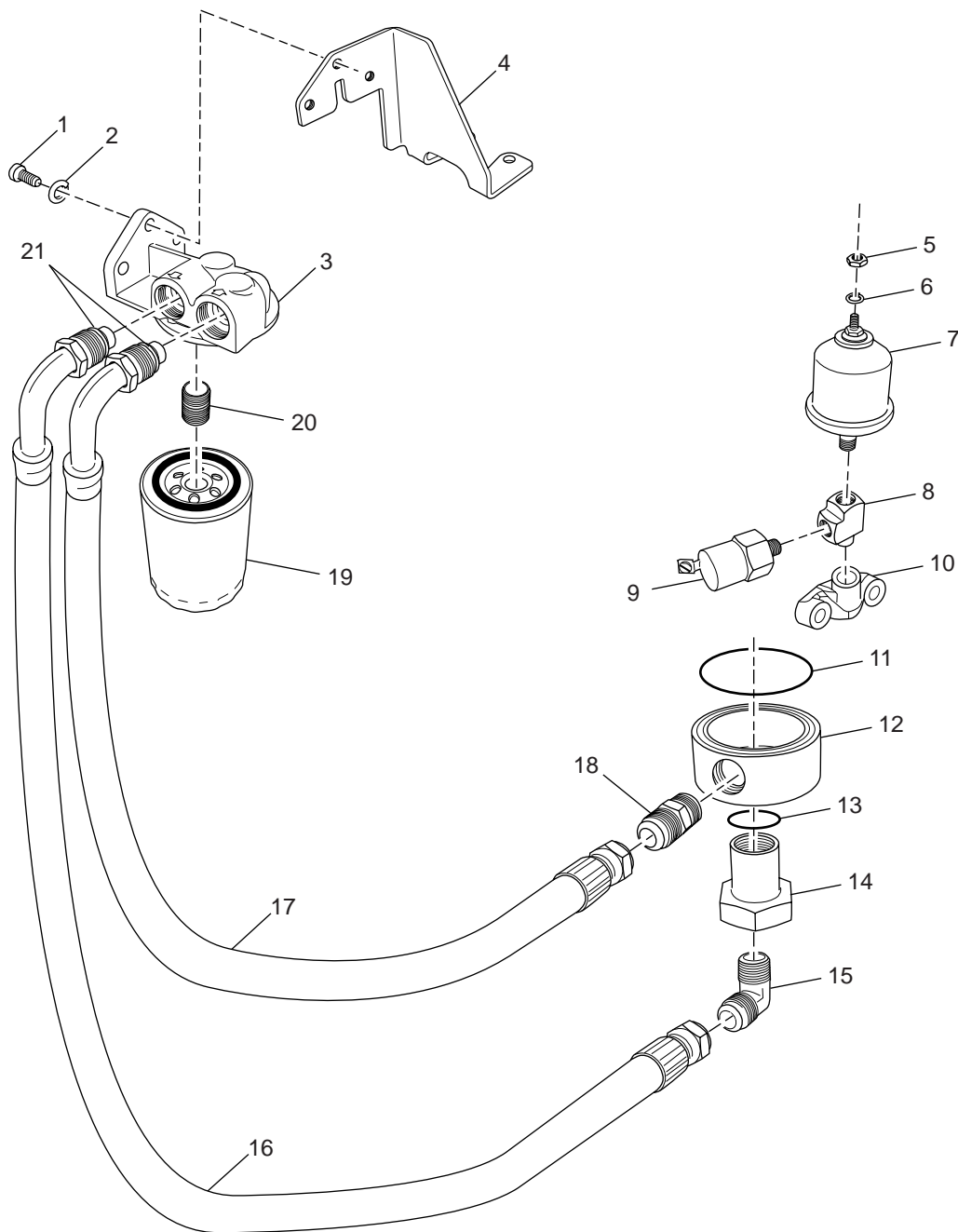


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THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

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

REMOTE OIL FILTER COMPONENTS (STANDARD DRIVE) - FIGURE 7

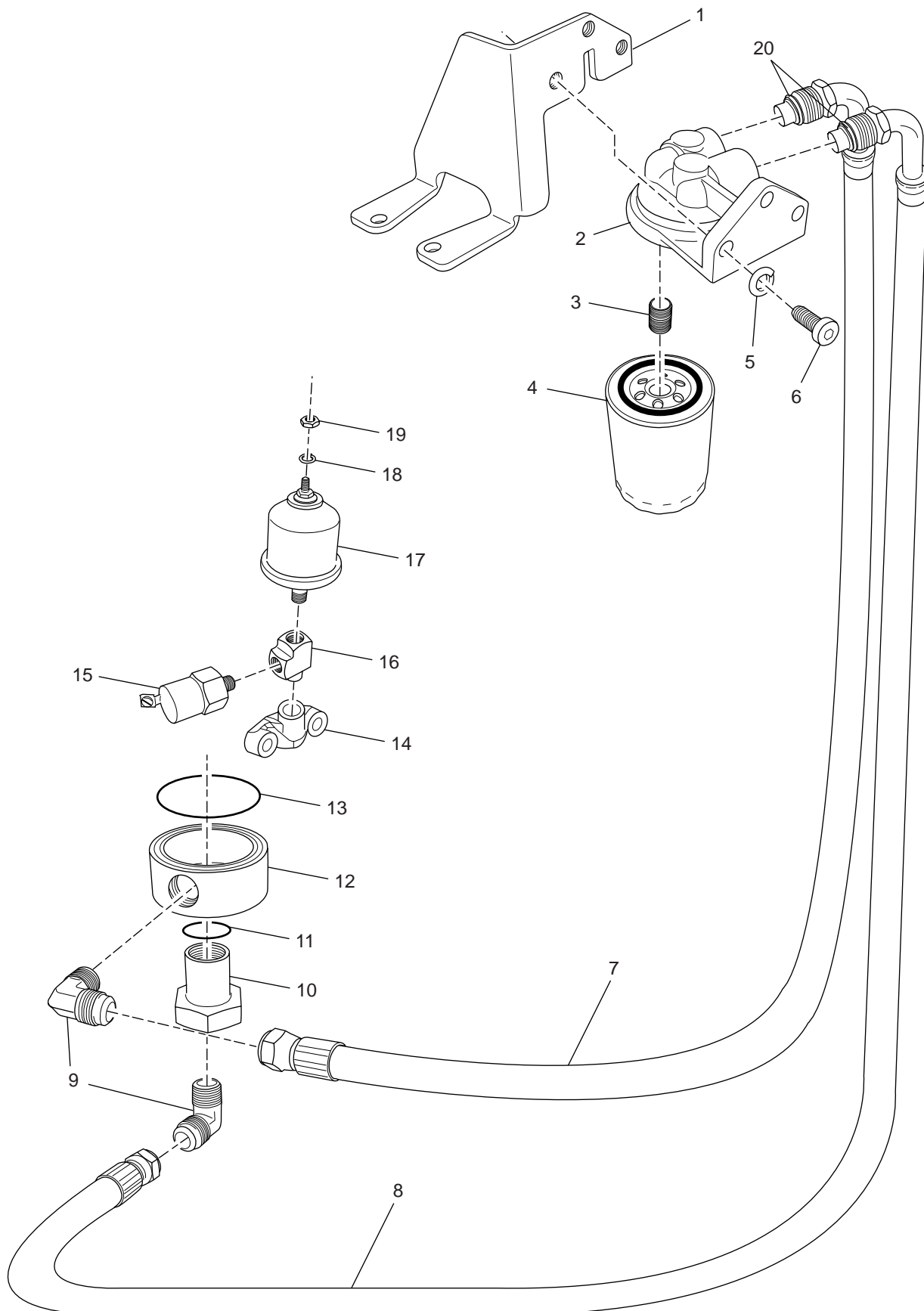


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REMOTE OIL FILTER COMPONENTS (STANDARD DRIVE) - FIGURE 7

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

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

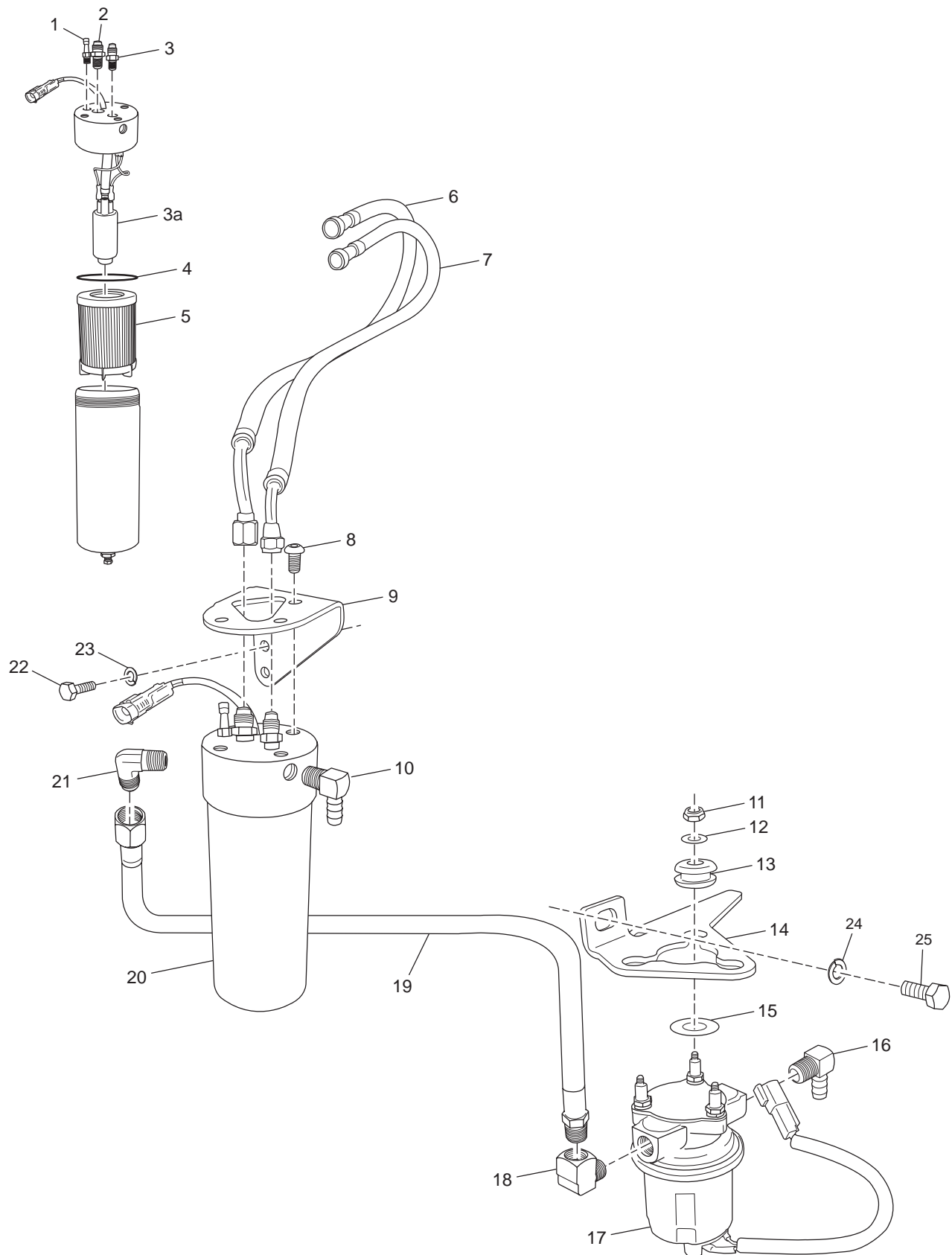


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REMOTE OIL FILTER COMPONENTS ("V" - DRIVE) - FIGURE 8

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

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

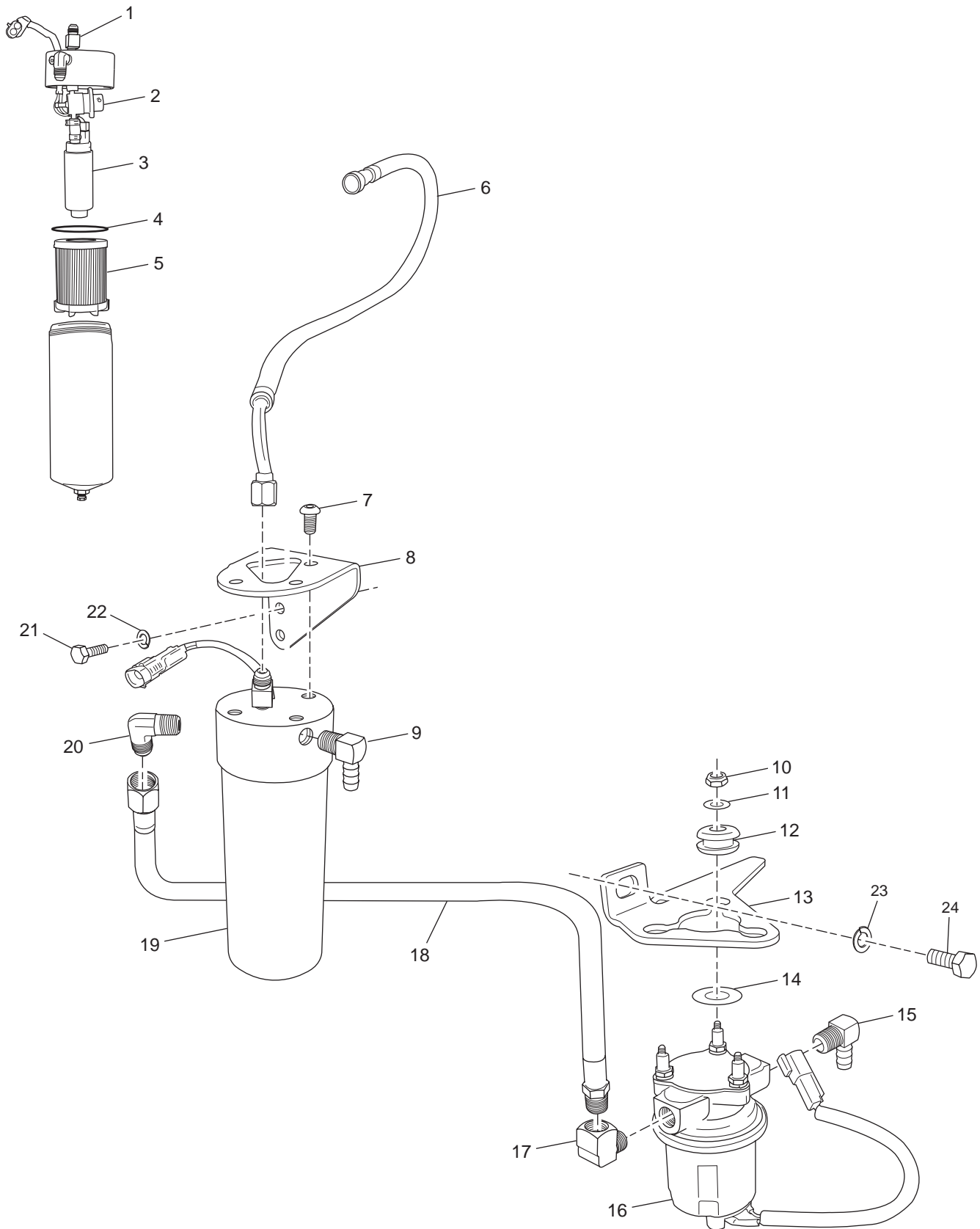


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FUEL CONTROL CELL (FCC) COMPONENTS 2003 (STANDARD DRIVE) - FIGURE 9

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035031	Fitting , fuel pressure, Schrader valve	1
NI	R034041	Cap , schrader valve	1
2	R024163A	Fitting , fuel line	1
3	R024175	Fitting , fuel line	1
3a	RA080027	Pump , high pressure fuel	1
4	R047214	O-ring , FCC sealing	1
5	RP080026	Filter , FCC fuel (includes O-ring)	1
6	RA085090C	Hose Assembly , FCC to fuel rail (inlet)	1
7	RA085091C	Hose Assembly , fuel rail to FCC (return)	1
8	90384075	Bolt , FCC mounting	3
9	R090276	Bracket , FCC mounting	1
10	R024089	Fitting , 90 degree	1
11	RS1521L	Locking Nut , low-pressure fuel pump	3
12	R096142	Washer , fuel pump mounting	3
13	R094035A	Grommet , mounting bracket	3
14	R090280	Bracket , low-pressure fuel pump mounting	1
15	R096141	Washer , fuel pump mounting	3
16	R024089	Fitting , 90 degree	1
17	RA080018	Fuel Pump , low-pressure	1
18	R024192	Fitting , 90 degree	1
19	RA085070A	Hose Assembly , low-pressure pump to FCC	1
20	RA080029	Fuel Control Cell Assembly	1
NI	R143112	Decal , FCC operating instructions	1
NI	R143114	Decal , Warning, fuel leaks	1
21	R024163	Fitting , 90 degree	1
22	98443025	Bolt , FCC mounting bracket	2
23	RS7070	Lockwasher , FCC mounting bracket	2
24	93940000	Lockwasher , bracket attaching	1
25	98443025	Bolt , bracket attaching	1

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

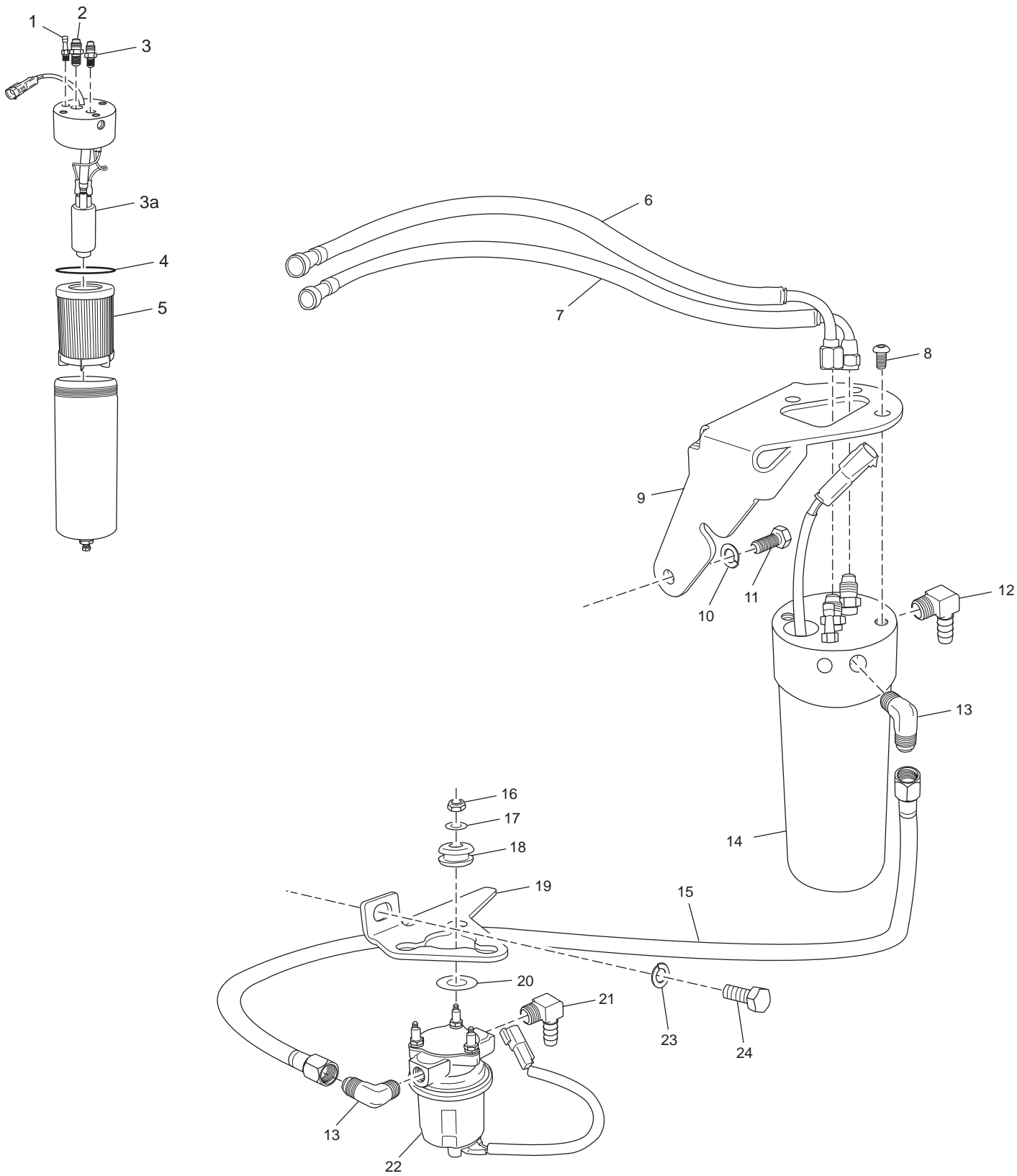


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FUEL CONTROL CELL (FCC) COMPONENTS 2004 (STANDARD DRIVE) - FIGURE 10

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024214	Fitting , fuel line	1
2	R088004	Regulator , fuel pressure ('04 Only)	1
3	RA080027	Pump , high pressure fuel	1
4	R047214	O-ring , FCC sealing	1
5	RP080026	Filter , FCC fuel (includes O-ring)	1
6	RA085090C	Hose Assembly , FCC to fuel rail (inlet)	1
7	90384075	Bolt , FCC mounting	3
8	R090276	Bracket , FCC mounting	1
9	R024089	Fitting , 90 degree	1
10	RS1521L	Locking Nut , low-pressure fuel pump	3
11	R096142	Washer , fuel pump mounting	3
12	R094035A	Grommet , mounting bracket	3
13	R090286	Bracket , low-pressure fuel pump mounting	1
14	R096141	Washer , fuel pump mounting	3
15	R024089	Fitting , 90 degree	1
16	RA080018	Fuel Pump , low-pressure	1
17	R024192	Fitting , 90 degree	1
18	RA085070A	Hose Assembly , low-pressure pump to FCC	1
19	RA080030	Fuel Control Cell Assembly	1
NI	R143112	Decal , FCC operating instructions	1
NI	R143114	Decal , Warning, fuel leaks	1
20	R024163	Fitting , 90 degree	1
21	98443025	Bolt , FCC mounting bracket	2
22	RS7070	Lockwasher , FCC mounting bracket	2
23	93940000	Lockwasher , bracket attaching	1
24	98443025	Bolt , bracket attaching	1

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

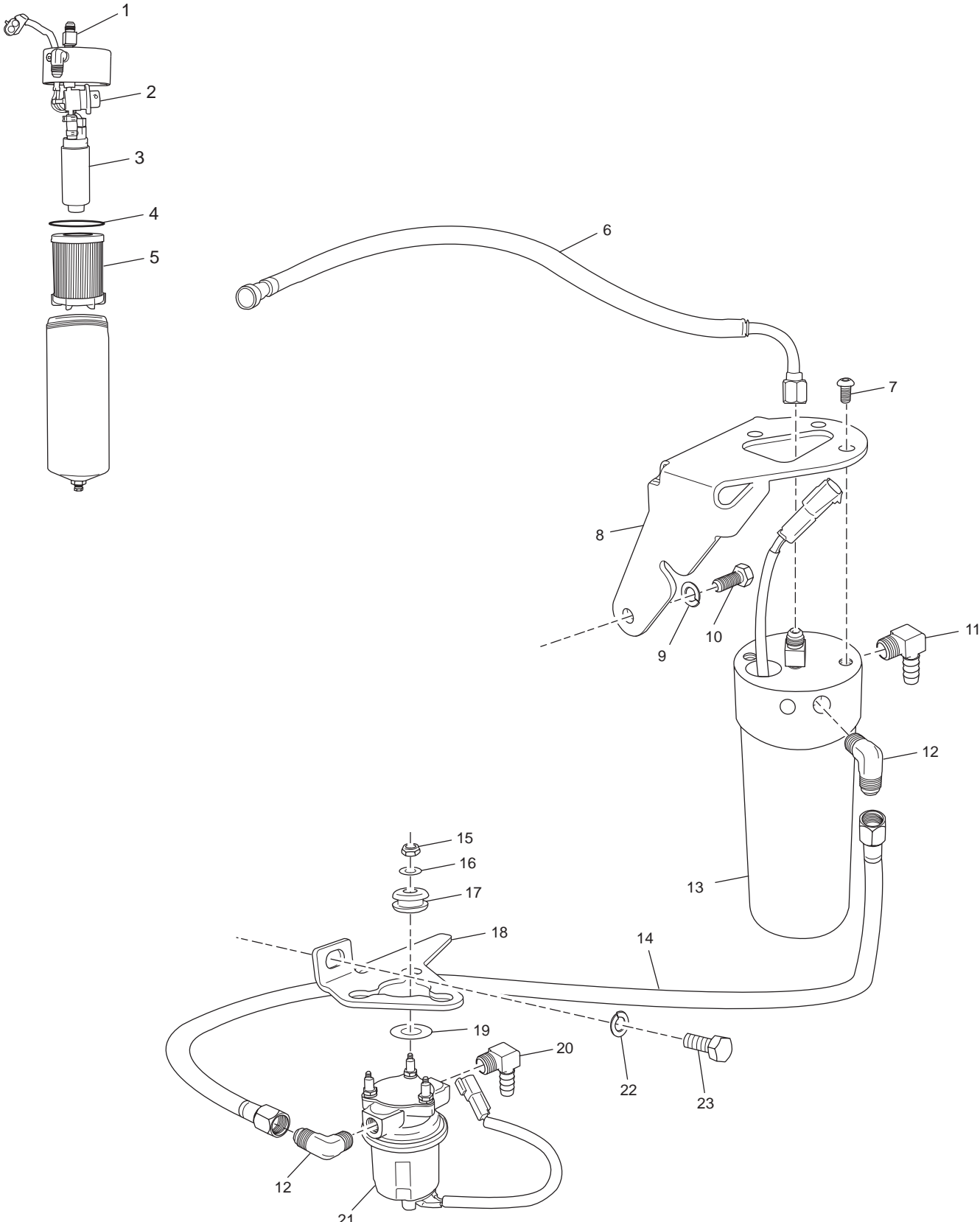


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FUEL CONTROL CELL (FCC) COMPONENTS 2003 ("V" - DRIVE) - FIGURE 11

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035031	Fitting , fuel pressure, schrader valve	1
NI	R034041	Cap , schrader valve	1
2	R024163A	Fitting , fuel line	1
3	R024175	Fitting , fuel line	1
3a	RA080027	Pump , high pressure fuel ('03 Only)	1
4	R047214	O-ring , FCC sealing	1
5	RP080026	Filter , FCC fuel (includes O-ring)	1
6	RA085090B	Hose Assembly , FCC to fuel rail (inlet)	1
7	RA085091B	Hose Assembly , fuel rail to FCC (return)	1
8	90384075	Bolt , FCC mounting	3
9	R090277	Bracket , FCC mounting	1
10	RS7070	Lockwasher , FCC mounting bracket	2
11	98443025	Bolt , FCC mounting bracket	2
12	R024089	Fitting , 90 degree	1
13	R024163	Fitting , 90 degree	2
14	RA080029	Fuel Control Cell Assembly	1
NI	R143112	Decal , FCC operating instructions	1
NI	R143114	Decal , Warning, fuel leaks	1
15	RA085071B	Hose Assembly , low-pressure pump to FCC	1
16	RS1521L	Locking Nut , low-pressure fuel pump	3
17	R096142	Washer , fuel pump mounting	3
18	R094035	Grommet , mounting bracket	3
19	R090280	Bracket , low-pressure fuel pump mounting	1
20	R096141	Washer , fuel pump mounting	3
21	R024089	Fitting , 90 degree	1
22	RA080018	Fuel Pump , low-pressure	1
23	93940000	Lockwasher , bracket attaching	1
24	98443025	Bolt , bracket attaching	1

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

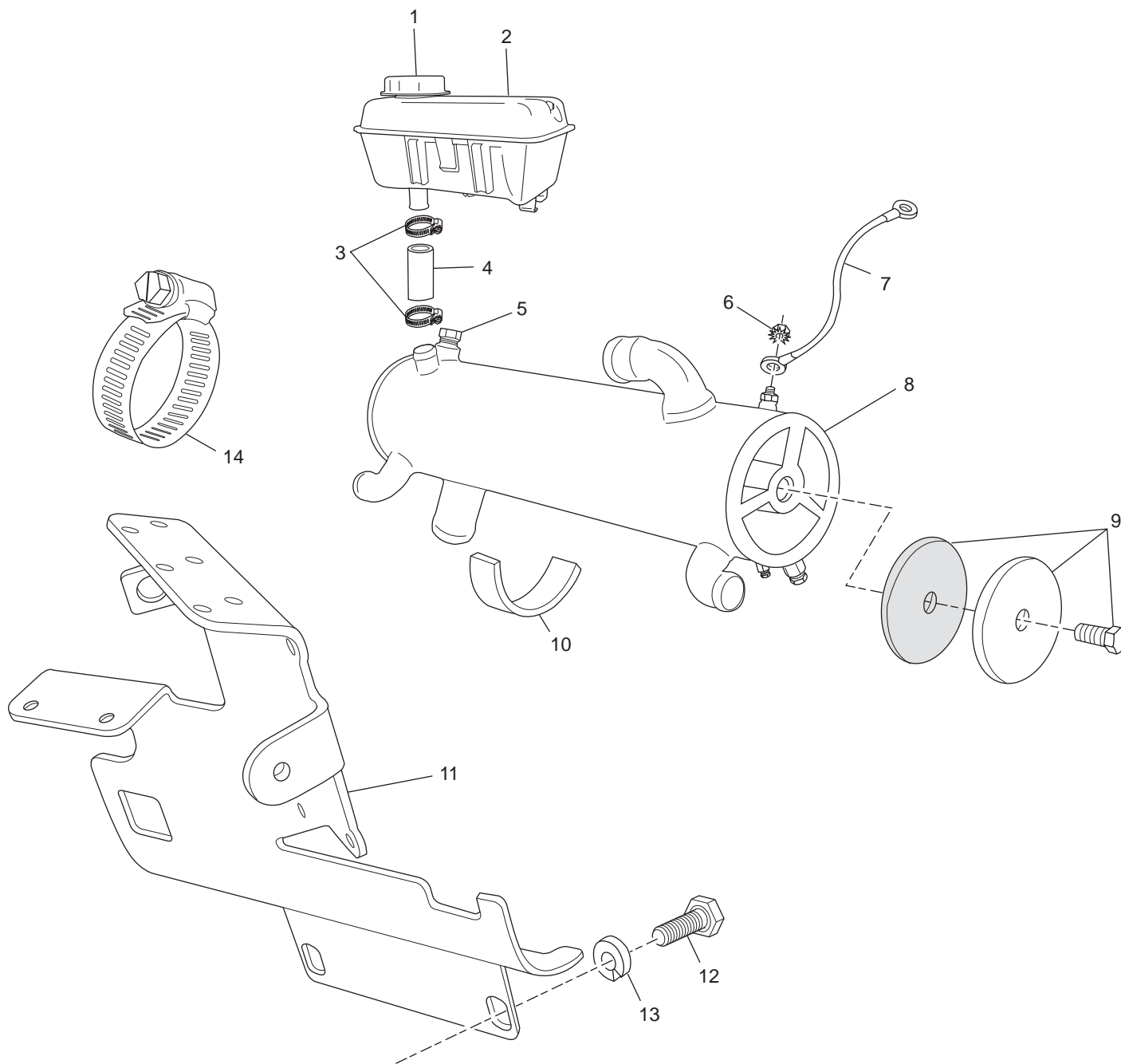


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FUEL CONTROL CELL (FCC) COMPONENTS 2004 ("V" - DRIVE) - FIGURE 12

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024214	Fitting , fuel line	1
2	R088004	Regulator , fuel pressure ('04 Only)	1
3	RA080027	Pump , high pressure fuel ('04 Only)	1
4	R047214	O-ring , FCC sealing	1
5	RP080026	Filter , FCC fuel (includes O-ring)	1
6	RA085090B	Hose Assembly , FCC to fuel rail (inlet)	1
7	90384075	Bolt , FCC mounting	3
8	R090277	Bracket , FCC mounting	1
9	RS7070	Lockwasher , FCC mounting bracket	2
10	98443025	Bolt , FCC mounting bracket	2
11	R024089	Fitting , 90 degree	1
12	R024163	Fitting , 90 degree	2
13	RA080030	Fuel Control Cell Assembly	1
NI	R143112	Decal , FCC operating instructions	1
NI	R143114	Decal , Warning, fuel leaks	1
14	RA085071B	Hose Assembly , low-pressure pump to FCC	1
15	RS1521L	Locking Nut , low-pressure fuel pump	3
16	R096142	Washer , fuel pump mounting	3
17	R094035	Grommet , mounting bracket	3
18	R090286	Bracket , low-pressure fuel pump mounting	1
19	R096141	Washer , fuel pump mounting	3
20	R024089	Fitting , 90 degree	1
21	RA080018	Fuel Pump , low-pressure	1
22	93940000	Lockwasher , bracket attaching	1
23	98443025	Bolt , bracket attaching	1

HEAT EXCHANGER and COMPONENTS - FIGURE 13

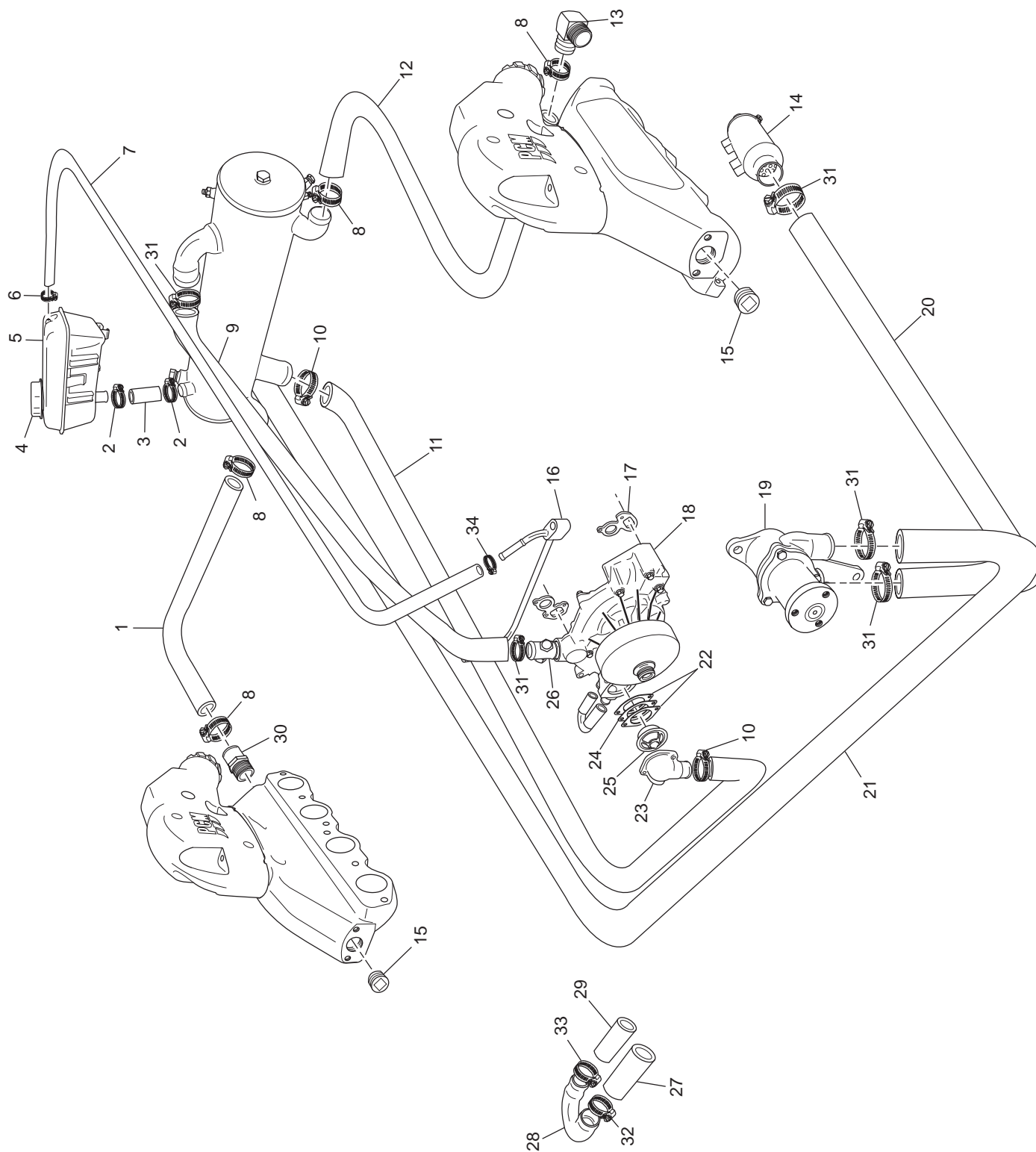


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HEAT EXCHANGER and COMPONENTS - FIGURE 13

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R034045	Cap , degas bottle	1
2	R146001	Bottle , degas	1
NI	R143152	Decal , 6.0L specification	1
NI	R143153	Decal , coolant fill	1
3	RS3872	Clamp , hose	2
4	R045153	Hose , degas bottle to heat exchanger	1
5	R168008	Anode , sacrificial zinc	AR
6	RS1078	Nut , ground wire stud	1
7	R101013	Wire , grounding	1
8	RA147047	Heat Exchanger Assembly	1
9	R034034	End Cap Kit , exchanger	AR
10	R094040	Isolator , rubber	2
11	R090279	Bracket , heat exchanger	1
12	RS0304	Bolt , heat exchanger bracket attaching	2
13	RS2380	Lockwasher , mounting bolt	2
14	RS3857	Clamp , exchanger mounting	2
NI	R143155	Decal , Protective Anode	1
NI	R143162	Decal , 6.0 Emission MY '03	1
NI	R143162-04	Decal , 6.0 Emission MY '04	1
NI	R143158	Decal , "Ultra Low Emission"	1

FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 14

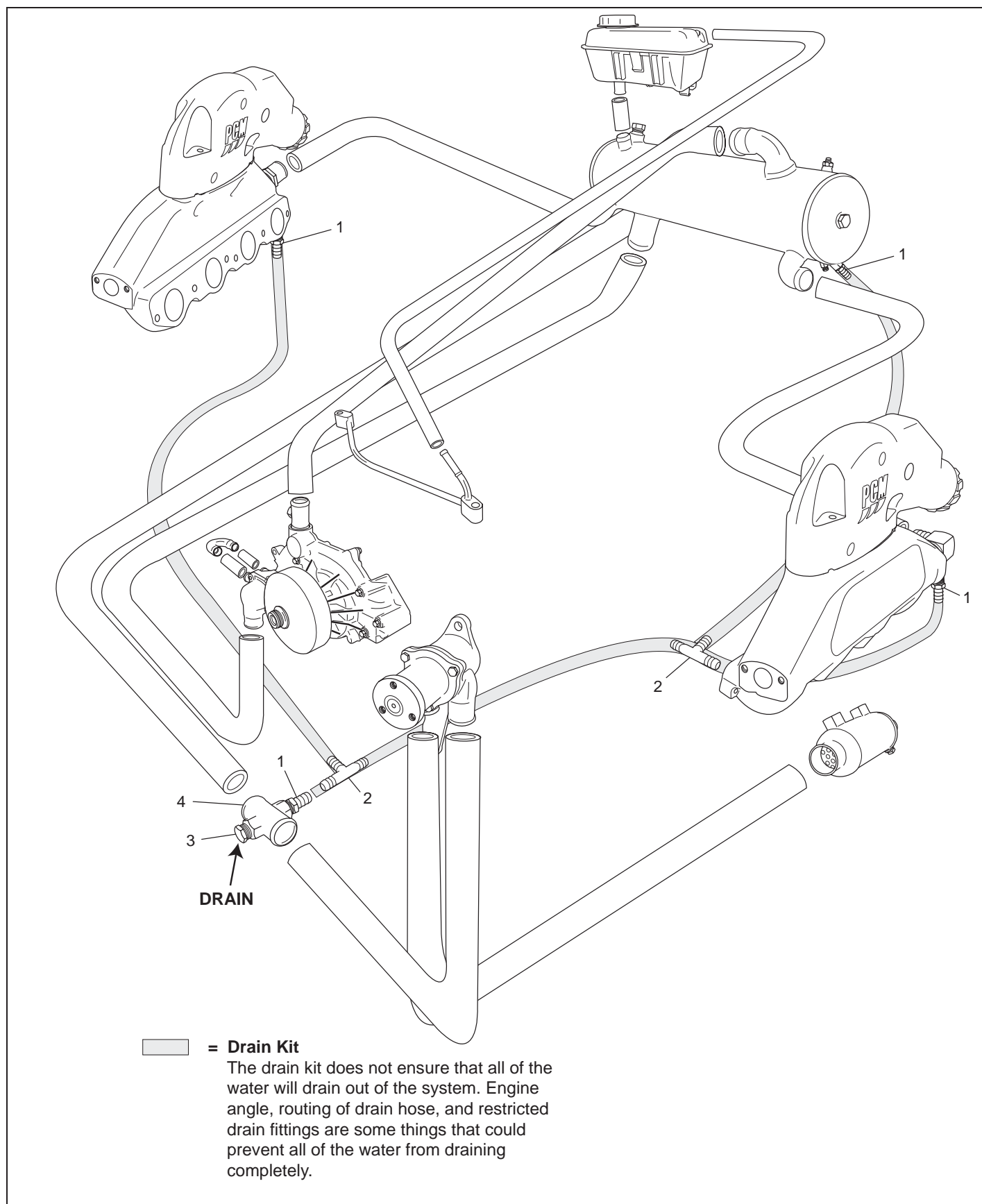


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FRESH WATER COOLING SYSTEM COMPONENTS - FIGURE 14

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R045151	Hose , exchanger to exhaust manifold (Starboard STD)	1
2	RS3872	Clamp , hose	2
3	R045153	Hose , degas bottle to heat exchanger	1
4	R034045	Cap , degas bottle	1
5	R146001	Bottle , degas	1
6	R127087	Clamp , hose (5/8" - degas bottle)	1
7	R045132	Hose , coolant air bleed to bottle	1
8	RS3851	Clamp , hose (1")	4
9	R045149	Hose , circ. pump to heat exchanger	1
10	RS3868	Clamp , hose (1 1/2")	2
11	R045148	Hose , exchanger to thermostat housing	1
12	R045150	Hose , exchanger to exhaust manifold (Port STD)	1
13	R024006A	Fitting , 90 degree	1
14	R147014	Cooler , transmission oil	1
15	113186	Plug , manifold	2
16	TBD	Tube , coolant air bleed	1
17	RM0281	Gasket , water pump to engine block	2
18	RA057033	Water Pump Assembly	1
19	RA057032	Raw Water Pump	1
20	R045159	Hose , oil cooler to raw water pump (level installation with 1.23:1 transmission)	1
20	R045152	Hose , oil cooler to raw water pump (angled installation with 1.0:1 transmission)	1
21	R045147	Hose , raw water pump to exchanger	1
22	RM0275	Gasket , thermostat housing	2
23	R025036	Thermostat Housing	1
24	R109051	Plate , thermostat retainer	1
25	R026002	Thermostat , (160 degree)	1
26	R024208	Water Neck	1
27	R045153	Hose , coolant bypass fitting (3/4" bulk)	1
28	R024210	Bypass , coolant	1
29	R045086	Hose , coolant bypass fitting (5/8" bulk)	1
30	R024073	Fitting , manifold straight	1
31	RS3858	Clamp , hose (1 1/4")	6
32	R127087G	Clamp , hose (1 1/16" oetiker)	2
33	R127087F	Clamp , hose (1" oetiker)	2
34	R127084	Clamp , hose (vent tube)	1

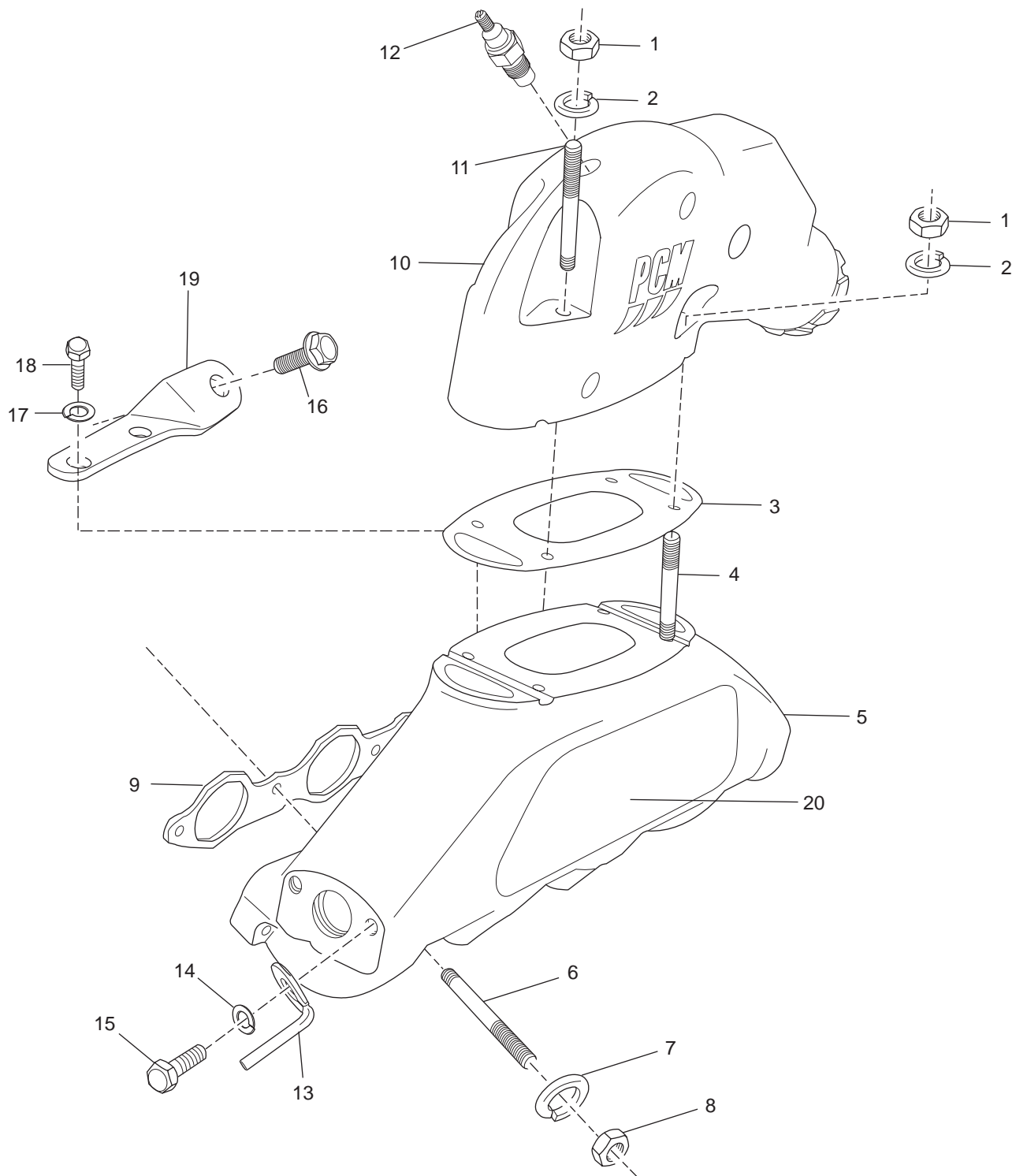
OPTIONAL DRAIN KIT COMPONENTS - FIGURE 15



OPTIONAL DRAIN KIT COMPONENTS - FIGURE 15

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

EXHAUST MANIFOLD and COMPONENTS - FIGURE 16

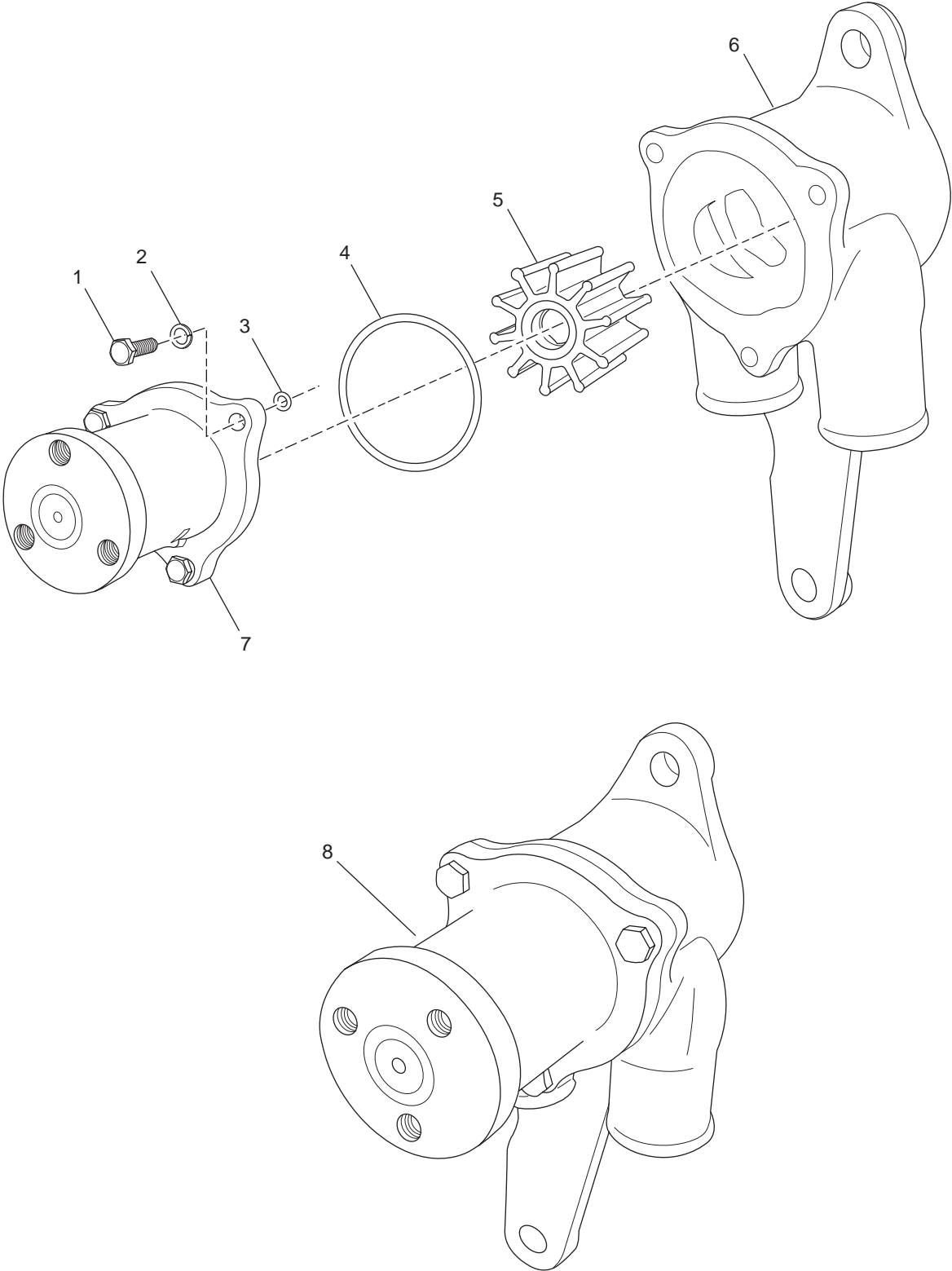


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EXHAUST MANIFOLD and COMPONENTS - FIGURE 16

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS1527	Nut , exhaust elbow attaching	8
2	RS2179	Lockwasher , exhaust elbow attaching	8
3	RM0274	Gasket , manifold to exhaust elbow	2
4	R031036	Stud , exhaust elbow attaching (short)	4
4	R031039	Stud , exhaust elbow attaching w/4" riser (short)	AR
5	R028023	Exhaust Manifold Assembly	2
6	R031035	Stud , manifold to cylinder head attaching	12
7	RS2179	Lockwasher , manifold to cylinder head attaching	12
8	RS7026	Nut , manifold to cylinder head attaching	12
9	RM0276	Gasket , manifold to cylinder head	2
10	R029016	Exhaust Elbow Assembly	2
11	R031037	Stud , exhaust elbow attaching (long)	4
11	R031040	Stud , exhaust elbow attaching w/4" riser (long)	AR
12	R020047	Switch , exhaust temperature	2
13	R096144	Retainer , spark plug wire clip	2
14	922200020	Washer , retainer attaching	2
15	RS0280	Bolt , retainer attaching	2
16	TBD	Bolt , bracket attaching	2
17	93920000	Lockwasher , bracket attaching	4
18	90165063	Bolt , bracket attaching	4
19	R090305	Bracket , manifold support	2
20	R143002F	Decal , exhaust manifold, 6.0L	2
<p>*NOTE: See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.</p>			

RAW WATER COOLING PUMP - FIGURE 17

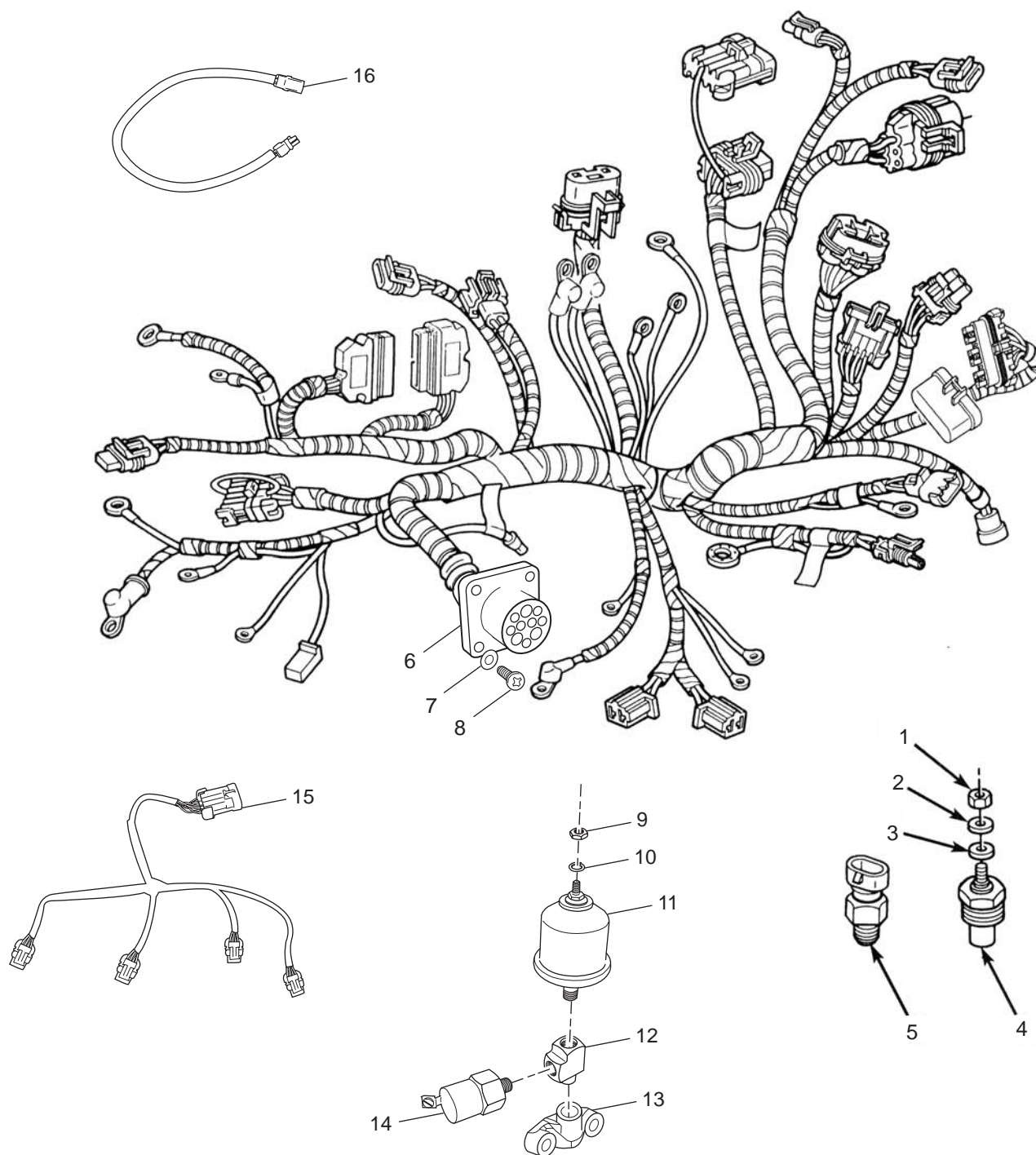


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RAW WATER COOLING PUMP - FIGURE 17

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	TBD	Bolt , bearing housing attaching	3
2	TBD	Lockwasher , bearing housing attaching bolt	3
3	R047243	O-ring , bearing housing attaching bolt	3
4	R047242	O-ring , bearing housing attaching	1
5	RP061022	Impeller	1
6	R057032	Housing , raw water pump	1
7	RA134071	Bearing Housing Assembly	1
8	RA057032	Raw Water Pump Assembly	1

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 18

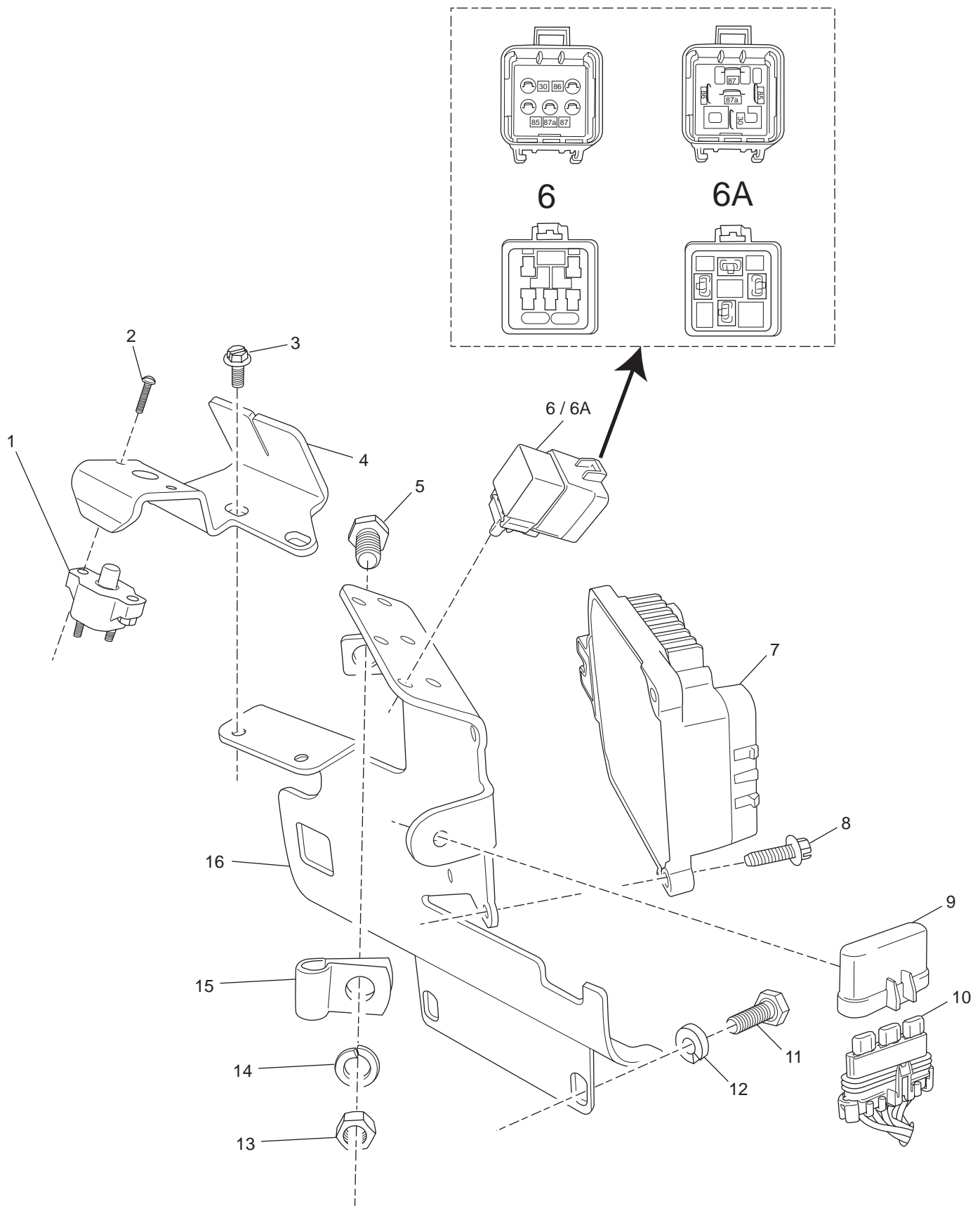


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WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 18

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS1540	Nut , sender terminal	1
2	RS2197	Lockwasher , sender terminal	1
3	RS2746	Washer , sender terminal	1
4	R020002	Sender , temperature	1
5	R020019	Sensor , engine coolant temperature (ECT)	1
6	RA121076C	Engine Wiring Harness Assembly ('02-'04) (MUST be used with relay, p/n R130011A)	1
7	R096142	Washer , main harness attaching	4
8	RS5115	Screw , main harness attaching	4
9	RS1540	Nut , sender terminal	1
10	RS2197	Lockwasher , sender terminal	1
11	R020001	Sender , oil pressure	1
12	R024145	Tee , sender attaching	1
13	R079071	Adapter , oil sending unit	1
14	R020015A	Switch , oil pressure	1
15	TBD	Harness , ignition coil	2
16	R121078	Harness , FCC ("V" - Drive)	AR

ECM and RELAYS - FIGURE 19

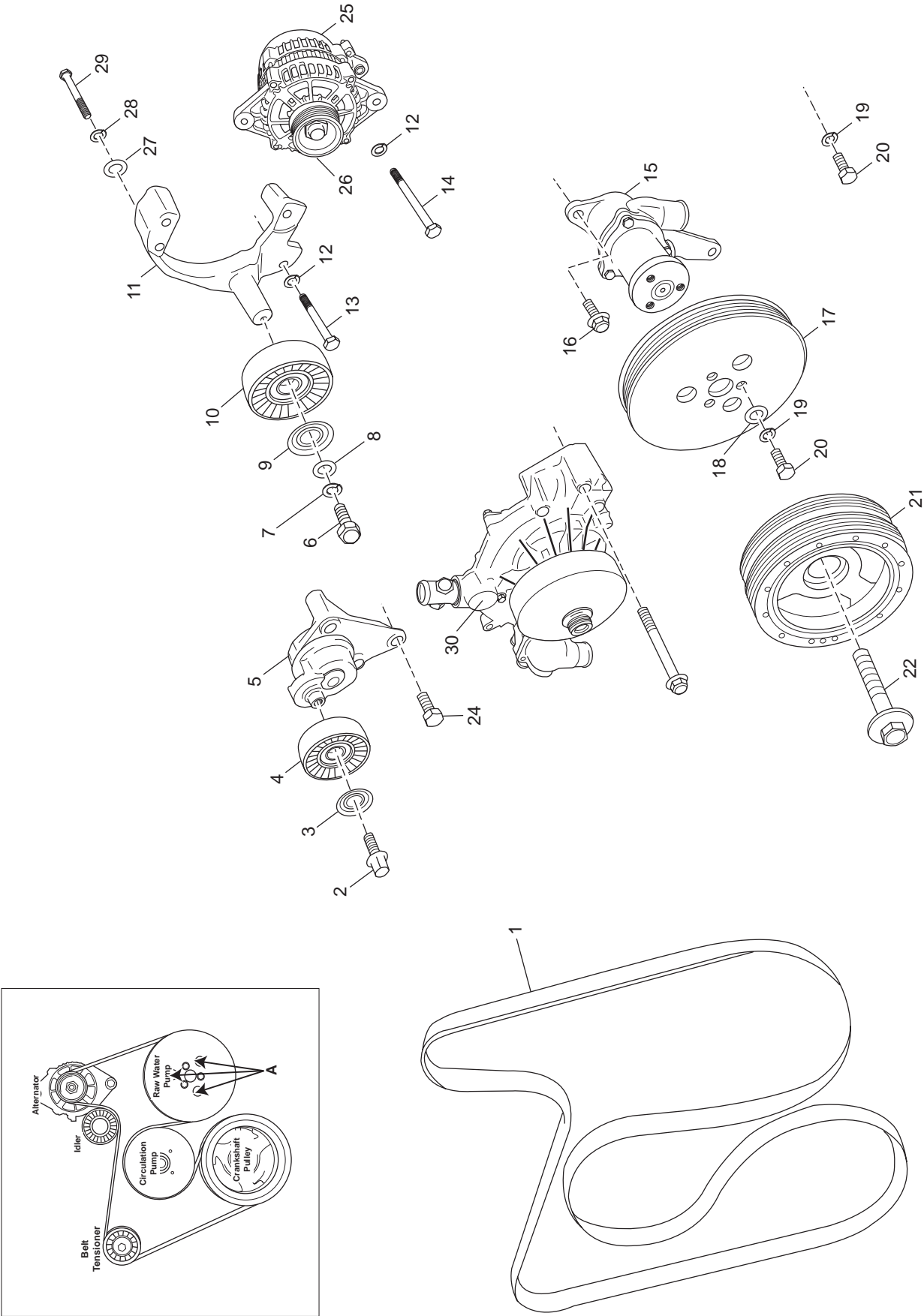


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ECM and RELAYS - FIGURE 19

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R153006C	Circuit Breaker Assembly (60 amp)	1
2	RS5084	Bolt , circuit breaker mounting	2
3	91107075	Bolt , circuit breaker bracket attaching	2
4	R090274	Bracket , circuit breaker mounting	1
NI	23655	Decal , main circuit breaker	1
5	RS0302	Bolt , oil dipstick tube attaching	1
6	R130012	Relay , fuel pump, ignition, starter (s/n 420000 thru 445102)	3
6A	R130011A	Relay , fuel pump, ignition, starter (s/n 445103 thru present)	3
7	R116019K	Engine Control Module (MEFI 4) ('03 Only)	1
7	R116021	Engine Control Module (MEFI 4B) ('04 Only)	1
8	91107075	Bolt , ECM attaching	3
9	R126014	Cover , fuse holder	1
10	R153017B	Fuses , 20 amp	3
11	RS0304	Bolt , bracket attaching	2
12	RS2180	Lockwasher , bracket attaching bolt	2
13	RS1028	Nut , oil dipstick tube attaching	1
14	RS2180	Lockwasher , oil dipstick tube attaching	1
15	R127015	Clamp , oil dipstick tube attaching	1
16	R090279	Bracket , ECM/relay mounting	1

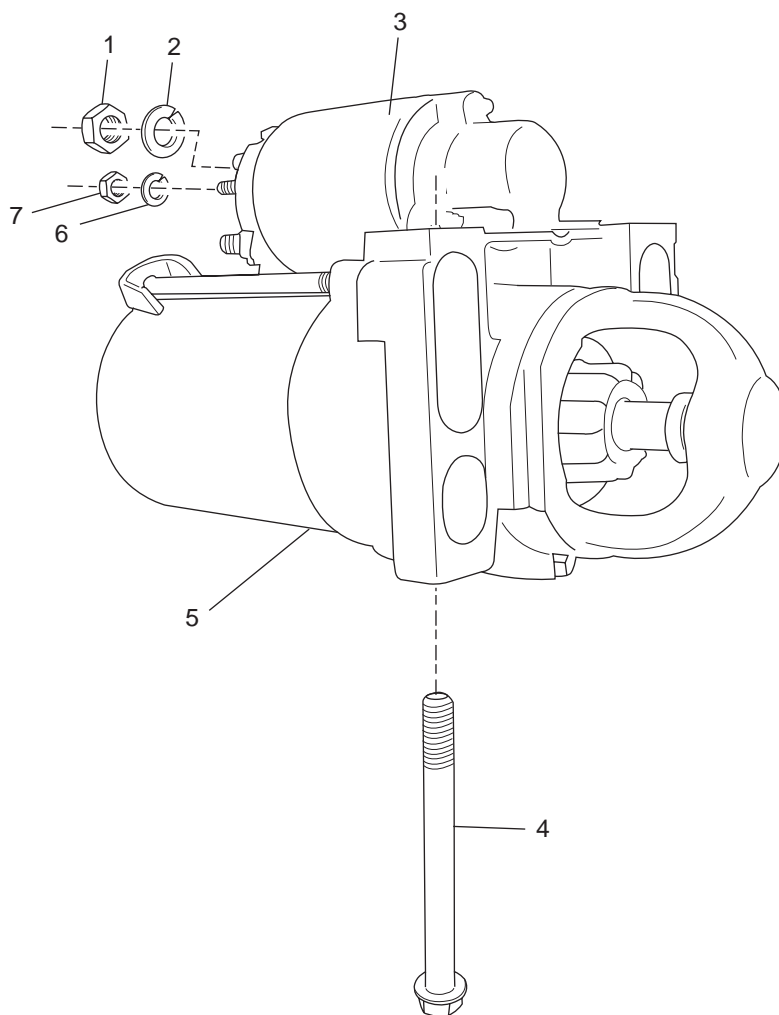
ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 20



ACCESSORY DRIVE SYSTEM COMPONENTS - FIGURE 20

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066027	Belt , serpentine drive	1
2	part of item #5	Bolt , tensioner pulley attaching	1
3	part of item #5	Washer , tensioner pulley attaching bolt	1
4	part of item #5	Pulley , tensioner	1
5	RA068002	Tensioner , belt	1
6	RS6531	Bolt , idler pulley attaching	1
7	RS2179	Lockwasher , idler pulley attaching bolt	1
8	92940000	Washer , idler pulley attaching bolt (small)	1
9	R096145	Washer , idler pulley attaching bolt (large)	1
10	R065040	Pulley , idler	1
11	R090269	Bracket , idler pulley mounting / alternator	1
12	93940000	Lockwasher , idler pulley bracket attaching bolt	2
13	98443110	Bolt , idler pulley bracket attaching	1
14	98446070	Bolt , alternator mounting	1
15	RA057032	Raw Water Pump Assembly	1
16	98442030	Bolt , raw water pump mounting	2
17	R065050	Pulley , raw water pump	1
18	92934000	Flat Washer , raw water pump pulley attaching	3
19	93934000	Lockwasher , raw water pump pulley attaching bolt	3
20	99335016	Bolt , raw water pump pulley attaching	3
21	R064016	Balancer , crankshaft	1
22	TBD	Bolt , crankshaft balancer	1
23	TBD	Bolt , water circulation pump attaching	4
24	TBD	Bolt , belt tensioner mounting	3
25	RA097007C	Alternator Assembly	1
26	R065055	Pulley , alternator (70 amp)	1
27	92930000	Flatwasher , alternator mounting	1
28	93930000	Lockwasher , alternator mounting	1
29	98339070	Bolt , alternator mounting	1
30	R143147	Decal , belt routing	1

STARTER ASSEMBLY COMPONENTS - FIGURE 21



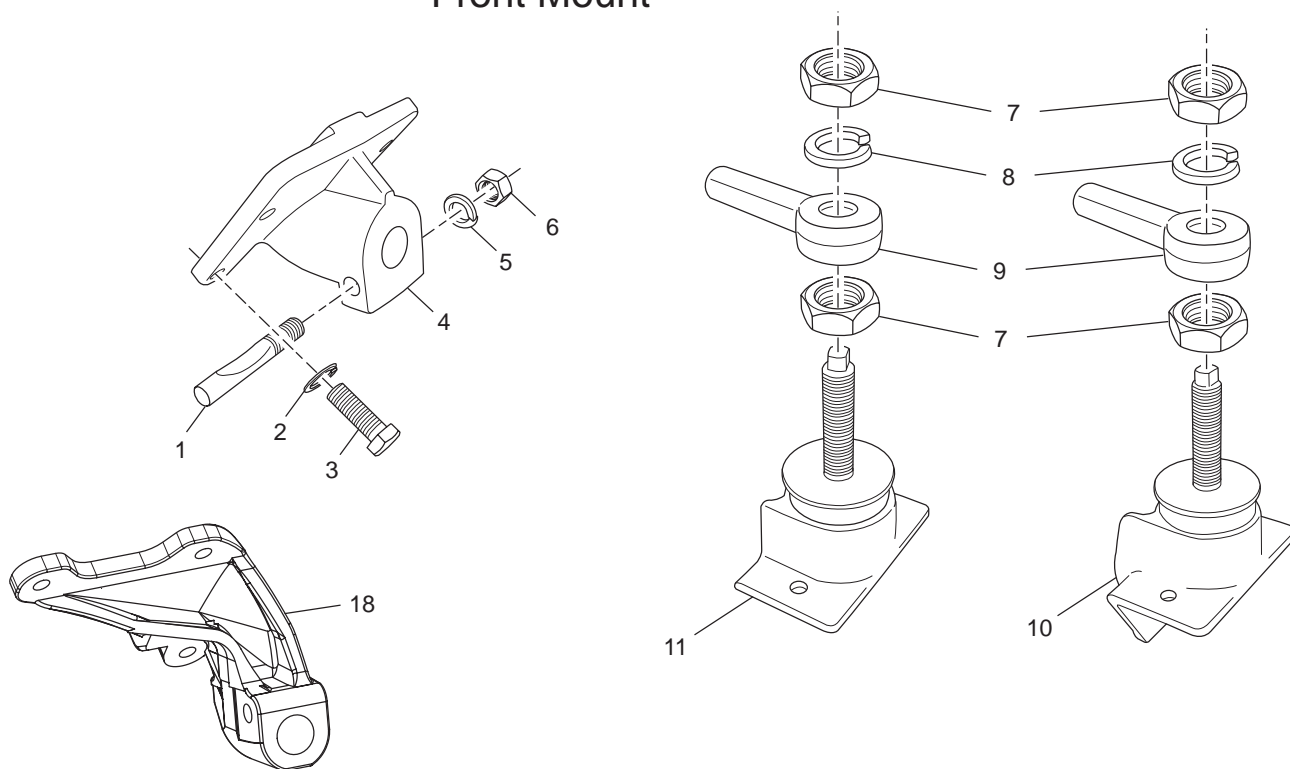
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STARTER ASSEMBLY COMPONENTS - FIGURE 21

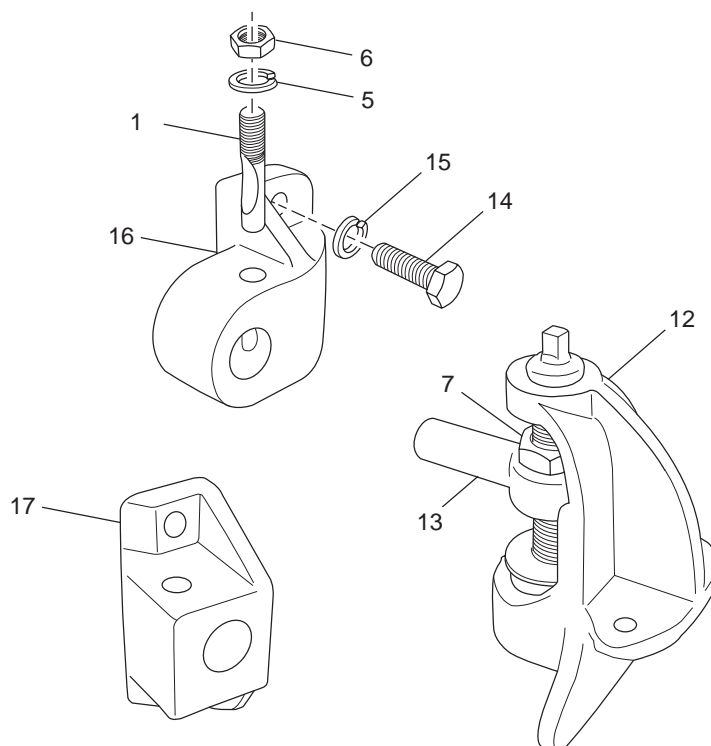
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS7018	Nut , solenoid terminal	1
2	RS7080	Lockwasher , solenoid terminal	1
3	RU0050A	Solenoid , starter	1
4	R009203	Bolt , starter mounting	2
5	RA122019	Starter Motor Assembly	1
6	93003000	Lockwasher , solenoid terminal	2
7	RS7036	Nut , solenoid terminal	2

ENGINE and TRANSMISSION MOUNTS - FIGURE 22

Engine Mount Group
Front Mount



Engine Mount Group
Rear Mount

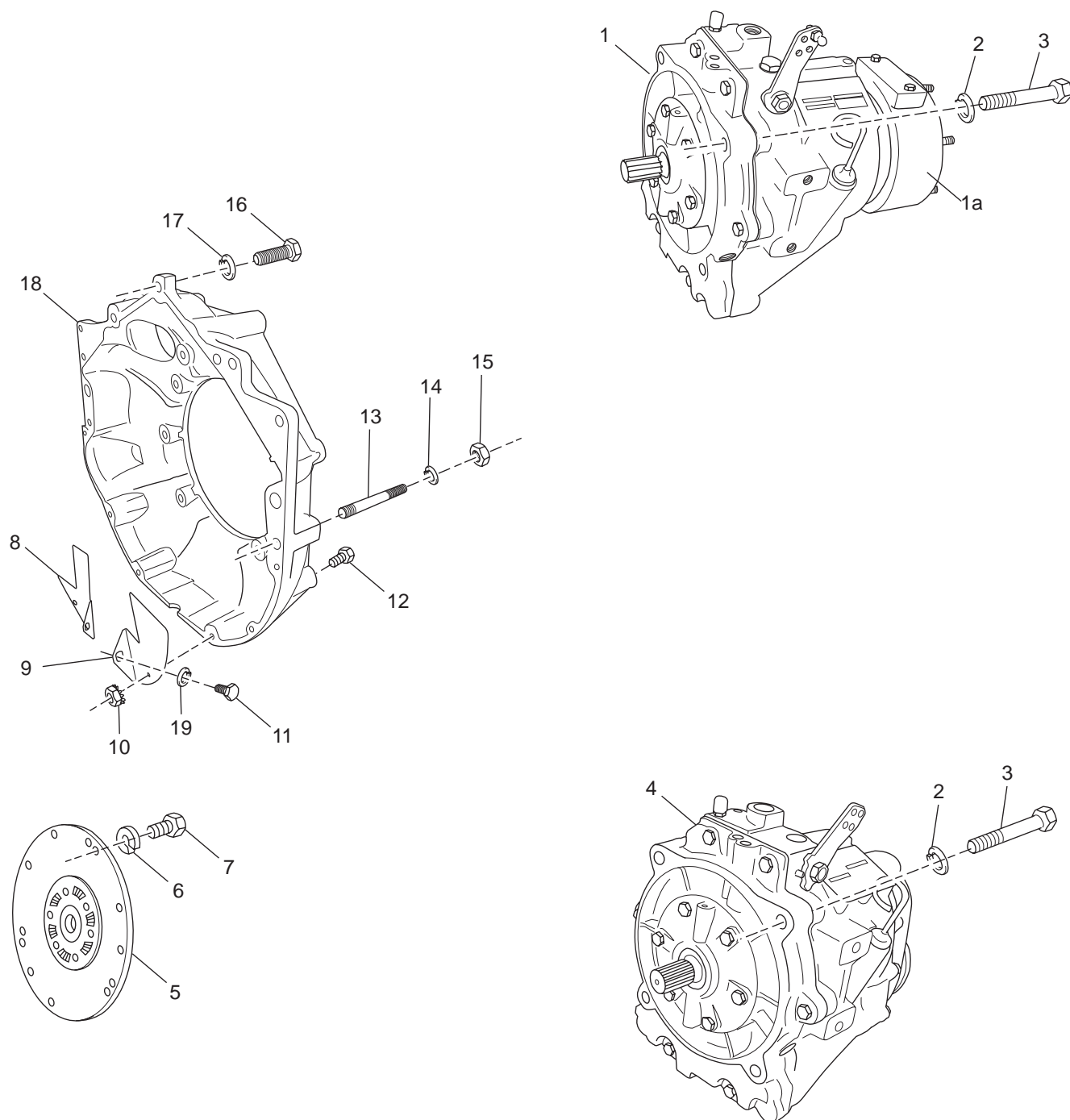


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ENGINE and TRANSMISSION MOUNTS - FIGURE 22

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R095020	Bolt , trunnion clamp	2
2	93940000	Lockwasher , engine mount attaching bolt	8
3	98443030	Bolt , engine mount attaching	8
4	R090242	Mount , engine front	2
5	RS2181	Lockwasher , trunnion clamp bolt	2
6	RS1529	Nut , trunnion clamp bolt	2
7	RS1075	Nut , adjustment and lock	4
8	RS2186	Lockwasher , adjusting nut	2
9	R091001	Trunnion	2
10	RC091001	Trunnion Assembly	1
11	RA092016	Trunnion Assembly	1
12	RA092011	Trunnion Assembly , tall (1.23:1 STD / V-drive) Used with item #17 - R090145 mount	2
12	RA092011A	Trunnion Assembly , tall (1.23:1 STD / V-drive) Used with item #16 - R090205 mount	2
12	RA091003	Trunnion Assembly , short (1.0:1 STD) Used with item #17 - R090145 mount	2
12	RA091006	Trunnion Assembly , short (1.0:1 STD) Used with item #16 - R090205 mount	2
13	R091003	Trunnion , 2.5" (use with R090145)	2
13	R091006	Trunnion , 2.125" (use with R090205)	2
14	RS0329	Bolt , rear mount attaching (R090205)	4
14	RS0328	Bolt , rear mount attaching (R090145)	4
15	RS2181	Lockwasher , rear mount attaching bolt	4
16	R090205	Mount , rear	1
17	R090145	Mount , rear	1
18	R090293	Mount , engine front (port) 1.23:1	1
18	R090294	Mount , engine front (starboard) 1.23:1	1
18	R090302	Mount , engine front (port) 1.0:1	1
18	R090303	Mount , engine front (starboard) 1.0:1	1
NI	93940000	Lockwasher , engine mount attaching bolt	6
NI	98443030	Bolt , engine mount attaching, upper	4
NI	98449055	Bolt , engine mount attaching, lower	2

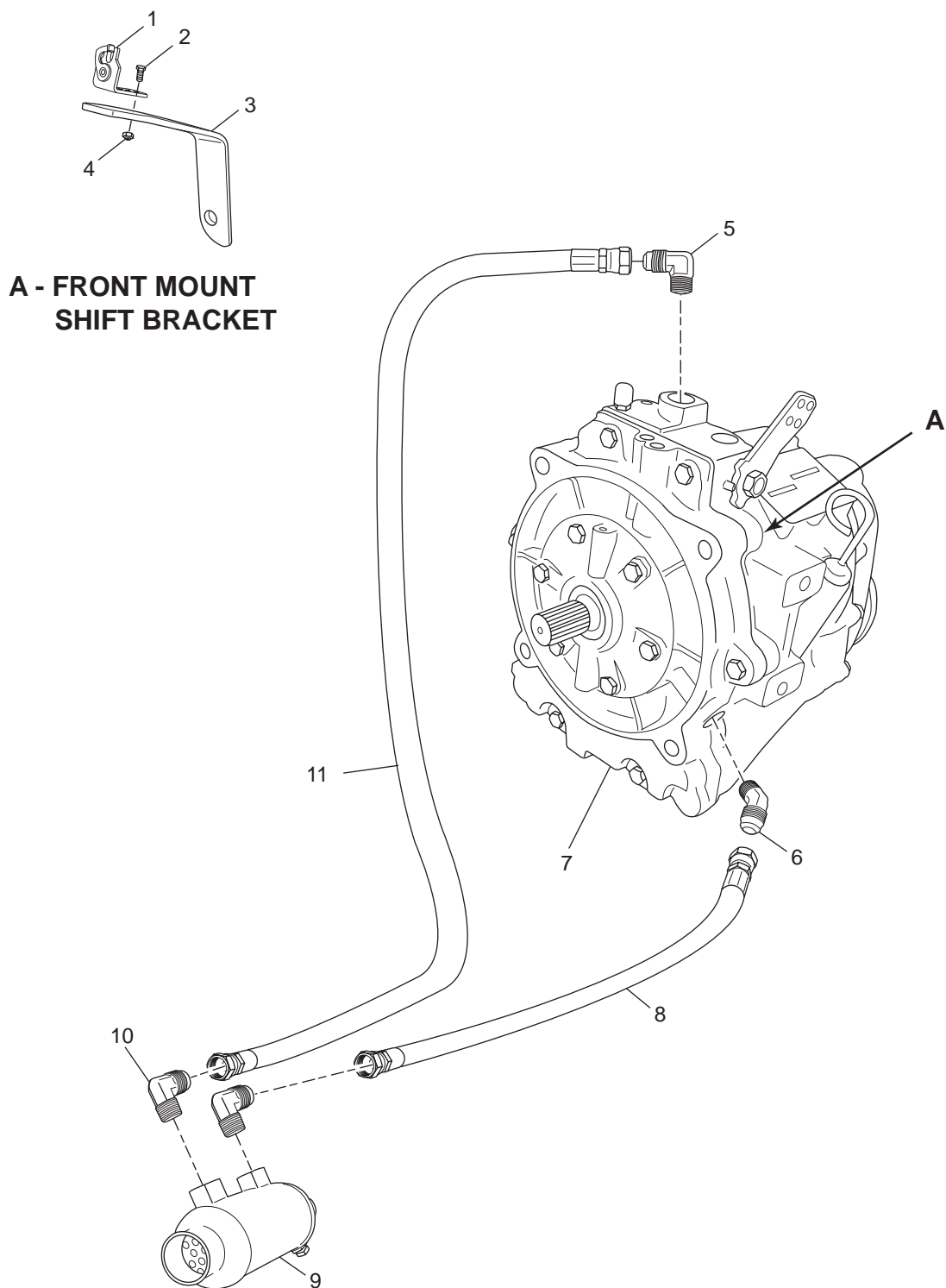
BELL HOUSING ASSEMBLY - FIGURE 23



BELL HOUSING ASSEMBLY - FIGURE 23

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA157016	Transmission Assembly , (1:1)	AR
1a	R079056	Adapter , V-Drive	AR
2	RS2181	Lockwasher , transmission attaching bolt	4
3	RS0334	Bolt , transmission attaching	4
4	RA157017	Transmission Assembly , (1.23:1)	AR
5	R140016	Plate , damper (PCM Transmissions)	1
5	R140018	Plate , damper (Hurth Transmission/2-speed)	1
6	RS7070	Lockwasher , damper plate attaching bolt	6
7	98446030	Bolt , damper plate attaching	6
8	R019011A	Cover , dust, (stbd) (use w/top mount starter)	1
8	R019011	Cover , dust (stbd) (use w/bottom mount starter)	1
9	R019012	Cover , dust (port)	1
10	RS1078	Nut , dust cover attaching	2
11	RS6503	Bolt , dust cover attaching	2
12	RS0256	Bolt , dust cover attaching	2
13	R031034	Stud , bellhousing attaching	2
14	RS7070	Lockwasher , bellhousing attaching	2
15	97440000	Nut , bellhousing attaching	2
16	RS6556	Bolt , bellhousing attaching	2
17	RS7070	Lockwasher , bellhousing attaching	2
18	R142014A	Bellhousing	1
19	93920000	Lockwasher , dust cover attaching	2
NI	R019010	Cover , dust, top mount starter (used w/R019011)	1
NI	RS0327	Bolt , dust cover attaching	2
NI	RS2181	Lockwasher , dust cover attaching	2

TRANSMISSION AND RELATED COMPONENTS (STANDARD DRIVE) - FIGURE 24

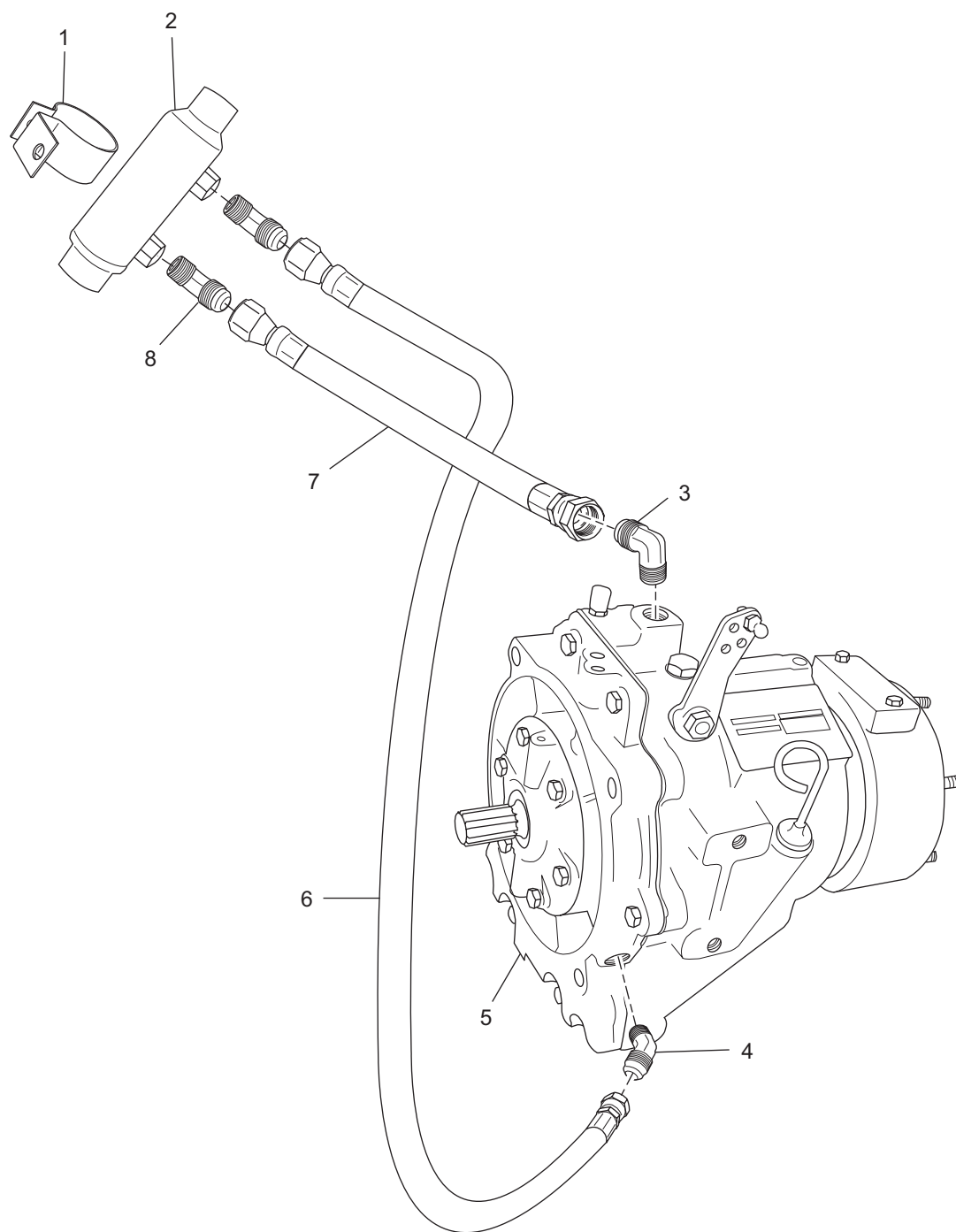


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TRANSMISSION AND RELATED COMPONENTS (STANDARD DRIVE) - FIGURE 24

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090086	Cable Clip , single cable	1
2	RS5122	Bolt , cable clip attaching	2
3	R090143A	Bracket , shift	1
4	RS2055	Nut , cable clip attaching bolt	2
5	R024010	Fitting , 90 degree	1
6	R024053	Fitting , 45 degree	1
7	RA157017	Transmission , 1.23:1	1
7	RA157016	Transmission , 1.0:1	AR
8	RA045007B	Hose Assembly , cooler to transmission	1
9	R147014	Transmission Cooler Assembly	1
10	R024010	Fitting , 90 degree	2
11	RA045007T	Hose Assembly , transmission to cooler	1

TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 25



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TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 25

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090010	Bracket , oil cooler mounting	1
2	R147014	Cooler , oil, transmission	1
3	R024010	Fitting , 90 degree	1
4	R024010	Fitting , 90 degree	1
5	RA157016	Transmission , 1.0:1, (w/R079056 Adapter)	1
6	RA045007B	Hose Assembly , cooler to transmission	2
7	RA045007K	Hose Assembly , transmission to cooler	1
8	R024010	Fitting , 90 degree	2