



MARINE ILLUSTRATED PARTS MANUAL MODEL MP5.0/5.7L MY 2002 - 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, 5.7L	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
NS	=	Not Shown
TBD	=	To Be Determined
NI	=	Not Illustrated

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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:

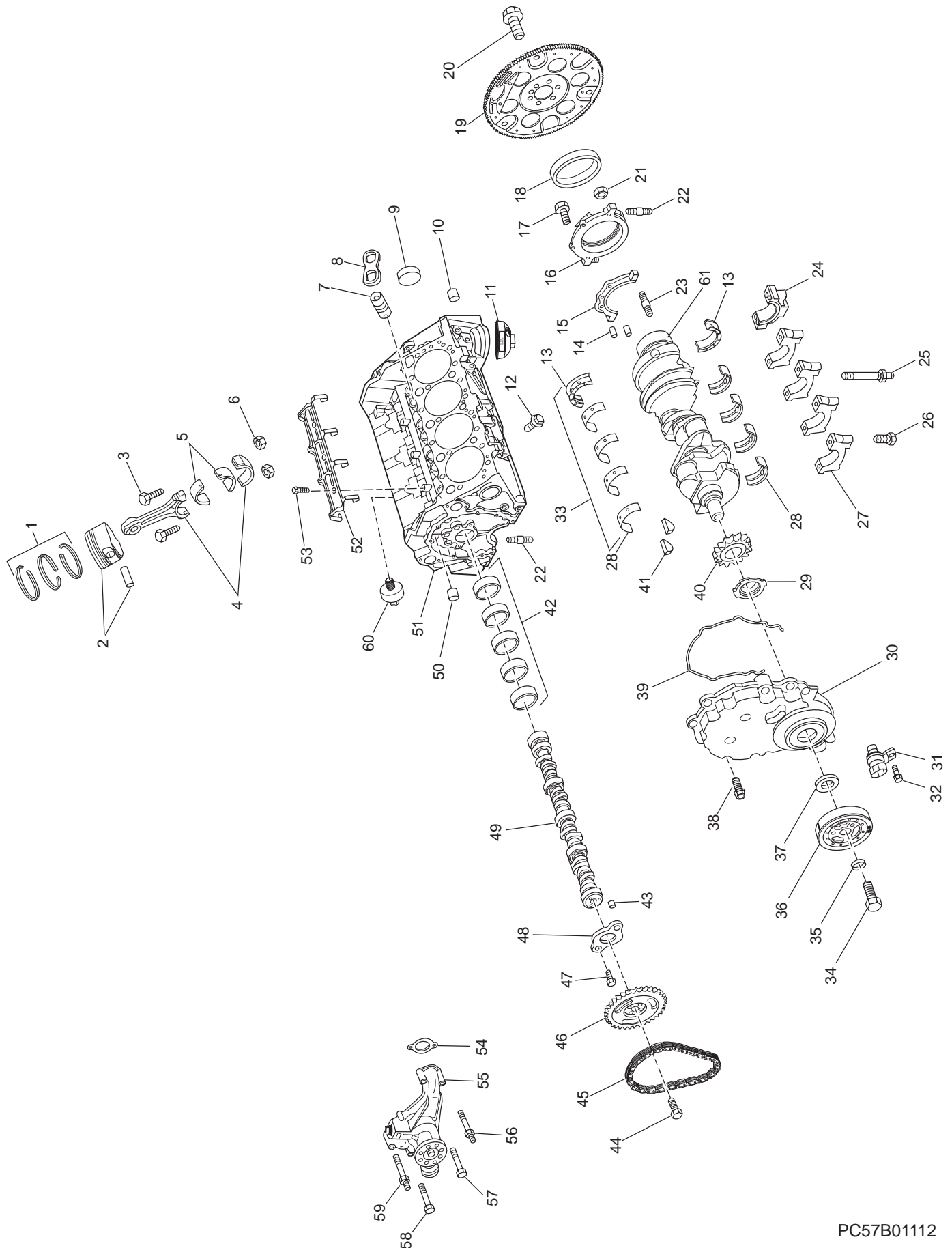
Description	Part Number
Oil Filter	R077001
Fuel Filter (FCC)	RP080026
Spark Plugs	RP030010
Spark Plug Wire Set	RK120018
Alternator Drive Belt (V-belt applications)	R066008
Raw Water Pump Drive Belt (Belt-Driven Pump)	R066026
Drive Belt Set, (5.0/5.7L)	RP066008/26
Serpentine Belt	R066028
Impeller Kit (Belt or Crank Driven Raw Water Pump)	RP061017
Impeller Kit (Serpentine Raw Water Pump)	RP061022
Exhaust Service Kit, 5.0/5.7L	RP173091

MARINE TRANSMISSIONS:

PCM Engines are equipped with PCM or Hurth Transmissions, standard or “V”-drives. 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

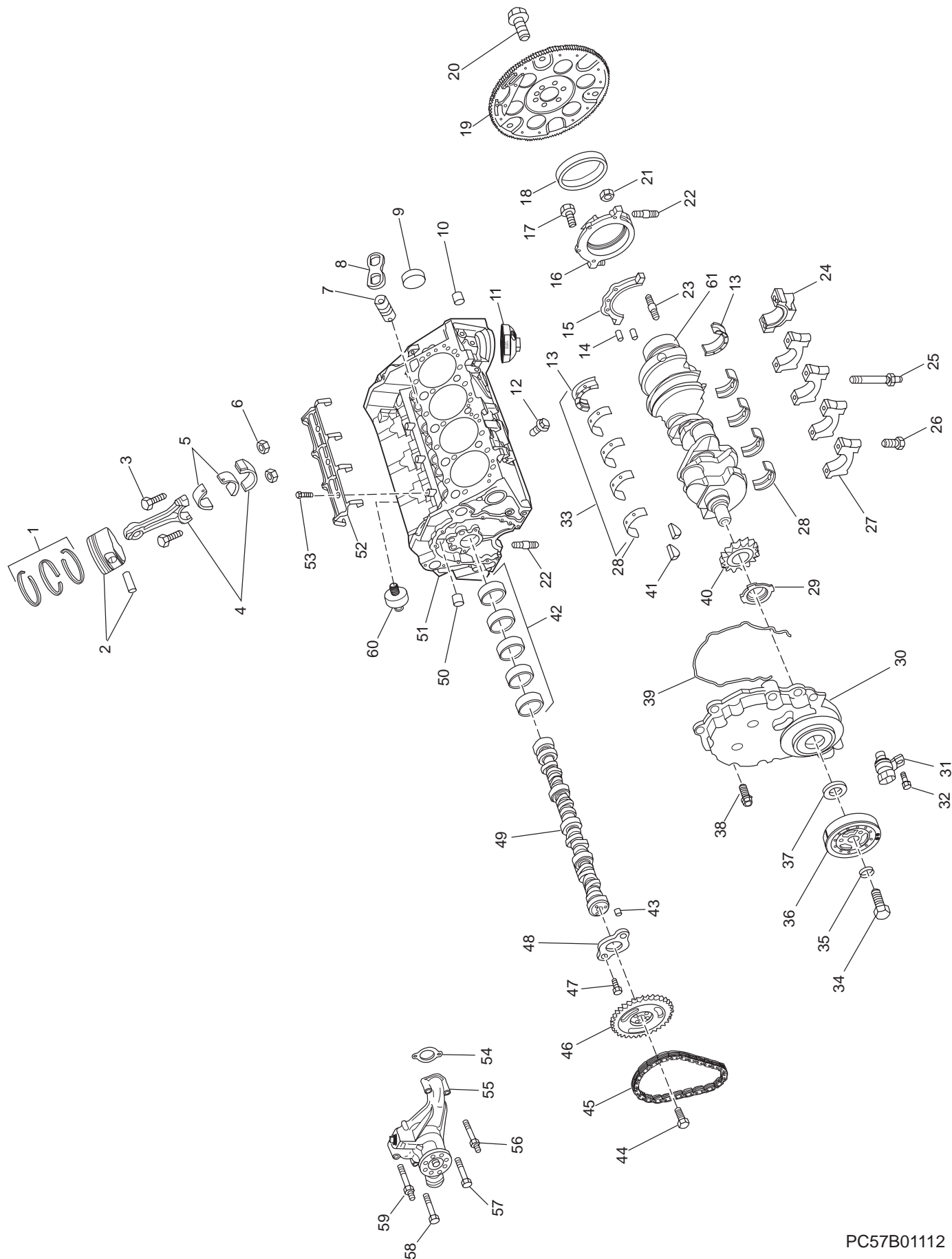


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CYLINDER BLOCK ASSEMBLY - FIGURE 1

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
*	RB001004B	5.0L Base Engine Assembly	
*	RB001005I	5.7L Base Engine Assembly	
1	R015013	Ring Set , piston (STD)	8
2	RA013016	Piston , 5.7L (STD)	8
2	RA013017	Piston , 5.0L (STD)	8
3	TBD	Bolt , connecting rod cap	16
4	RA011012	Connecting Rod (STD)	8
5	R007023	Bearing Set , connecting rod (STD)	8
6	TBD	Nut , connecting rod cap	16
7	R035038	Lifter , valve	16
8	R037001	Guide , valve lifter	8
9	R069064	Plug , camshaft	1
10	TBD	Plug , oil gallery	
11	R079051	Adapter , oil bypass	1
12	TBD	Plug , engine block coolant drain hole	2
13	TBD	Bearing , crankshaft rear main (STD)	1
13	TBD	Bearing , crankshaft rear main (.001 US)	AR
13	TBD	Bearing , crankshaft rear main (.010 US)	AR
13	TBD	Bearing , crankshaft rear main (.020 US)	AR
14	TBD	Pin , flywheel locating	2
15	RM0282	Gasket , crankshaft rear oil seal housing	1
16	R134070	Housing , crankshaft rear oil seal	1
17	TBD	Bolt , crankshaft rear oil seal housing, short	2
17	TBD	Bolt , crankshaft rear oil seal housing, long	1
18	R047173A	Seal , crankshaft rear oil	1
19	RA138010	Flywheel Assembly	1
20	TBD	Bolt , flywheel attaching	6
21	TBD	Nut , crankshaft rear oil seal housing	2
22	TBD	Stud , crankshaft rear oil seal housing	2
23	TBD	Stud , crankshaft rear oil seal housing	2
24	NSS	Cap , crankshaft bearing #5	1
25	TBD	Stud , crankshaft bearing cap	5
26	TBD	Bolt , crankshaft bearing cap	5
27	NSS	Cap , crankshaft bearing #1 - #4	4
28	TBD	Bearing , crankshaft main (STD)	4
28	TBD	Bearing , crankshaft main (.002 US)	AR
28	TBD	Bearing , crankshaft main (.010 US)	AR
28	TBD	Bearing , crankshaft main (.020 US)	AR
29	R056001	Ring , crankshaft position sensor reluctor	1

CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont'd)

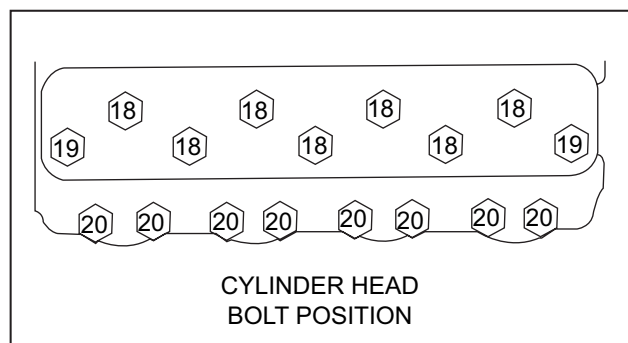
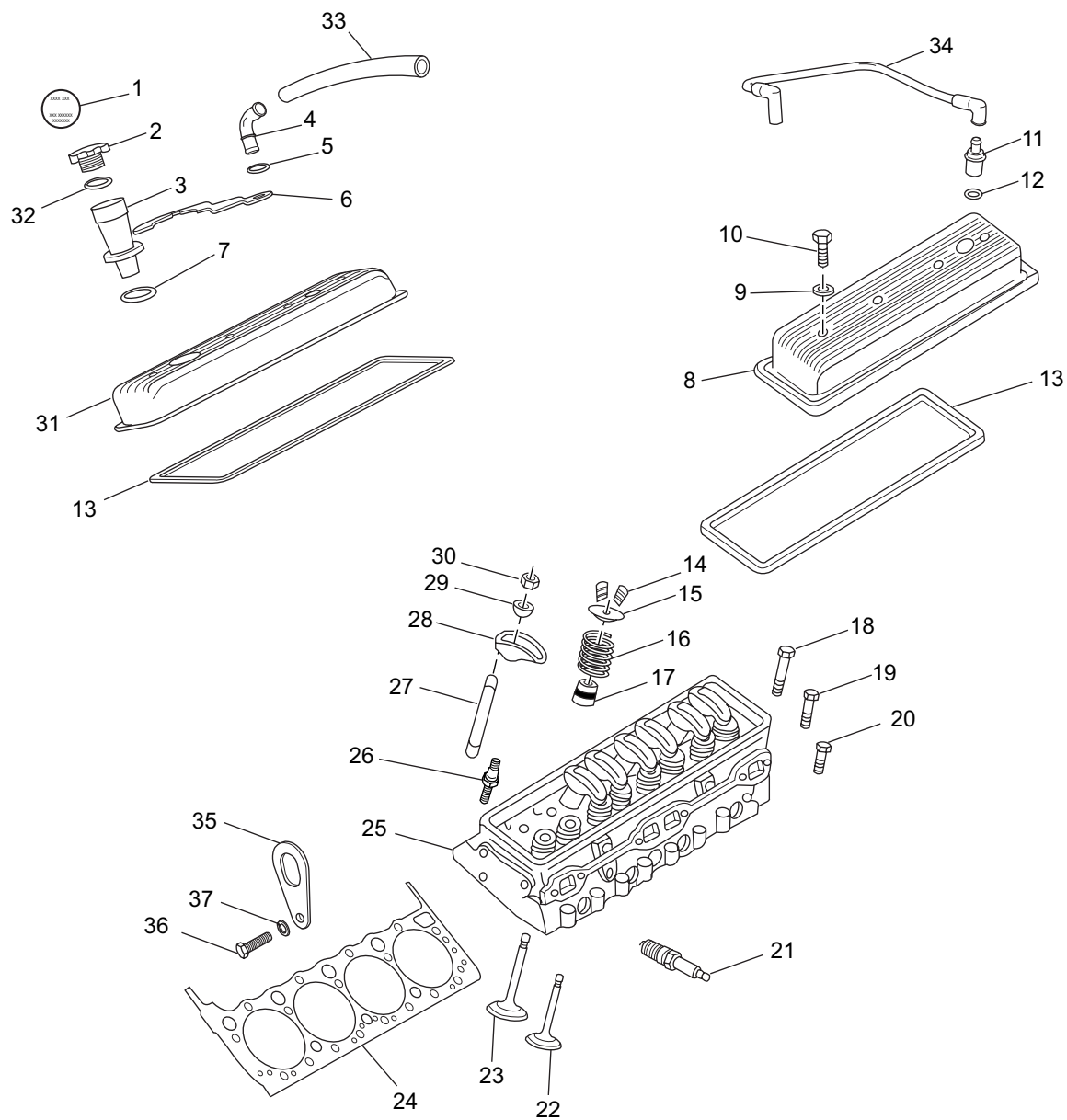


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CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont'd)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
30	R004010A	Cover , engine front cover (includes gasket and seal) '02-'03 engines	1
30	TBD	Cover , engine front cover (includes gasket and seal) '04 engines	1
31	R020038	Sensor , crankshaft position	1
32	TBD	Bolt , crankshaft position sensor attaching	1
33	RK007020	Bearing Set , crankshaft main (STD)	1
34	R009091	Bolt , crankshaft balancer	1
35	R096074	Washer , crankshaft balancer bolt	1
36	R064010A	Balancer , crankshaft - '02 and newer	1
36	R064010	Balancer , crankshaft - '97-'01	1
37	NSS	Seal , crankshaft front oil	1
38	R009177	Bolt , engine front cover attaching, short	6
38	R009176	Bolt , engine front cover attaching, long	2
39	NSS	Gasket , engine front cover	1
40	R054024	Sprocket , crankshaft	1
41	R164024	Key , crankshaft balancer	2
42	RK051030	Bearing Set , camshaft	1
42	TBD	Cam Bearing #1	1
42	TBD	Cam Bearing #2 & #5	2
42	TBD	Cam Bearing #3 & #4	2
43	R022022	Pin , camshaft sprocket locating	1
44	TBD	Bolt , camshaft sprocket attaching	1
45	R055011	Chain , camshaft timing	1
46	R054041	Sprocket , camshaft	1
47	TBD	Bolt , camshaft retaining	2
48	R109050	Retainer , camshaft	1
49	RA050021	Camshaft , engine	1
50	TBD	Plug , oil gallery	1
51	NSS	Block , engine	
52	R090253A	Retainer , valve lifter	1
53	RS0279	Bolt , valve lifter retainer	3
54	RM0203	Gasket , water pump to engine block	2
55	RA057027	Water Pump Assembly	1
56	R095026	Stud , water pump attaching	1
57	RS0307	Bolt , water pump attaching	1
58	90305275	Bolt , water pump attaching	1
59	R095026	Stud , water pump attaching	1
60	R020027	Sensor , knock	1
61	R006017A	Crankshaft , 350 1996/Later	1

CYLINDER HEAD ASSEMBLY - FIGURE 2

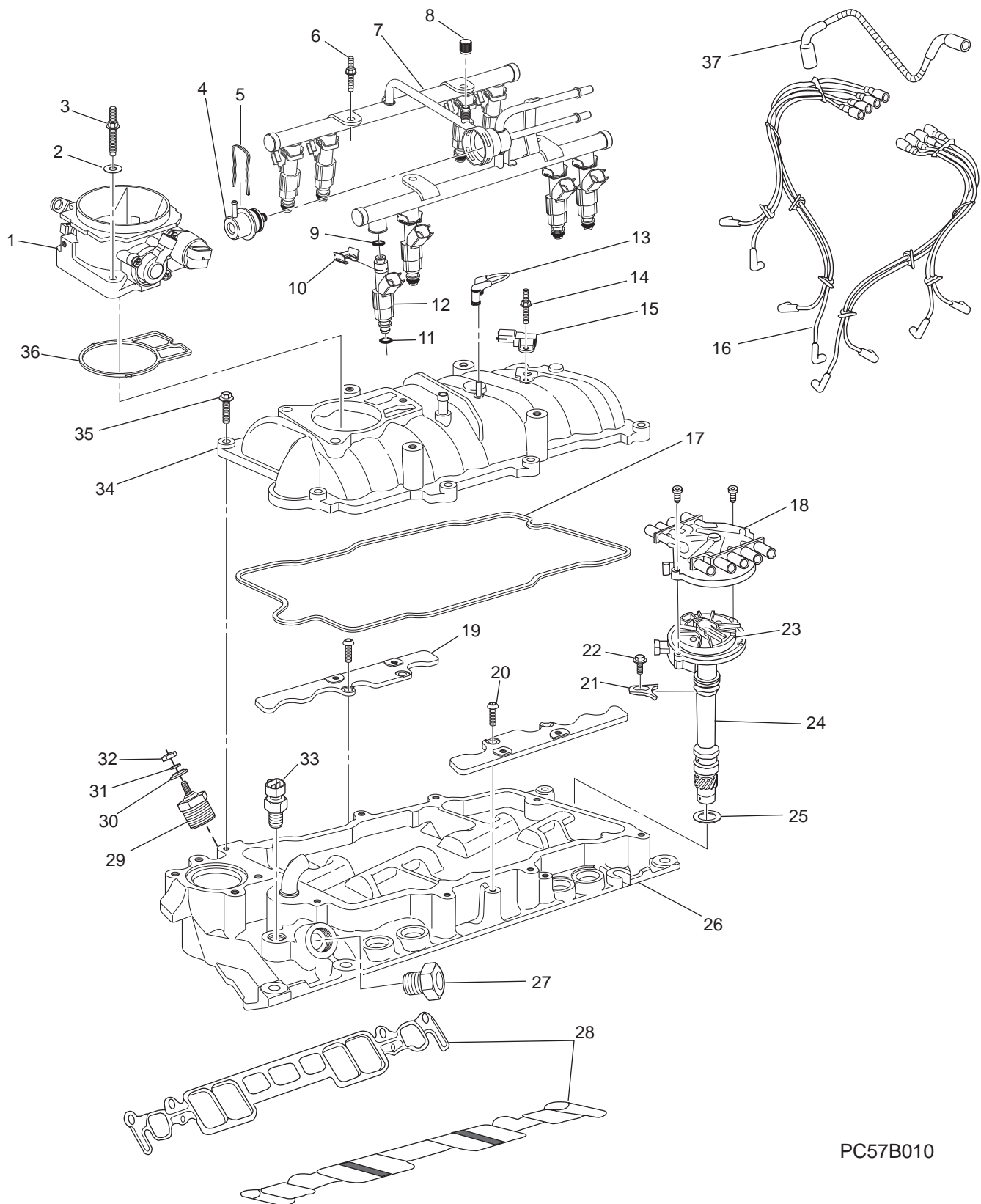


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CYLINDER HEAD ASSEMBLY - FIGURE 2

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R143137	Decal , oil fill riser cap	1
2	R034037	Cap , oil fill riser	1
3	R034048	Riser , oil fill	1
4	R024013C	Elbow , breather tube	1
5	R094002	Grommet , breather tube elbow	1
6	R127098	Retainer , oil fill riser	1
7	R047228	O-ring , oil fill riser	1
8	R033008A	Cover , rocker (left side)	1
9	TBD	Washer , rocker cover retaining bolt	8
10	TBD	Bolt , rocker cover retaining	8
11	R035015	Valve , positive crankcase ventilation	1
12	R094015	Grommet , pcv valve	1
13	RM0193	Gasket , rocker cover	2
14	R049012	Retainer , valve stem	32
15	R049015	Cap , valve spring	16
16	R046050	Valve Spring Assembly	16
17	R047238	Seal , valve stem (intake)	8
17	R047239	Seal , valve stem (exhaust)	8
18	R009168	Bolt , cylinder head to engine block (long)	14
19	TBD	Bolt , cylinder head to engine block (medium)	4
20	TBD	Bolt , cylinder head to engine block (short)	16
21	R030010	Spark Plug	8
22	R043035	Valve , (intake)	8
23	R043036	Valve , (exhaust)	8
24	RM0195	Gasket , cylinder head	2
25	R003007B	5.0L Cylinder Head Assembly	2
25	R003008B	5.7L Cylinder Head Assembly	2
26	R095034	Stud , valve rocker arm	16
26	TBD	Stud , valve rocker arm (.013 OS)	AR
26	R095035	Stud , valve rocker arm (.033 OS)	AR
27	R039023	Push Rod	16
28	R038015	Rocker Arm , Assembly w/ball	16
29	R038011	Ball , rocker arm	16
30	R017069	Nut , rocker arm attaching	16
31	R033008	Cover , rocker (right side)	1
32	NSS	O-Ring , oil fill riser cap	1
33	TBD	Tube , breather	1
34	TBD	Tube , PCV	1
35	R042008	Bracket , lift ring	2
36	RS0304	Bolt , lift ring attaching	2
37	RS2180	Lockwasher , lift ring attaching	2

INTAKE MANIFOLD ASSEMBLY - FIGURE 3

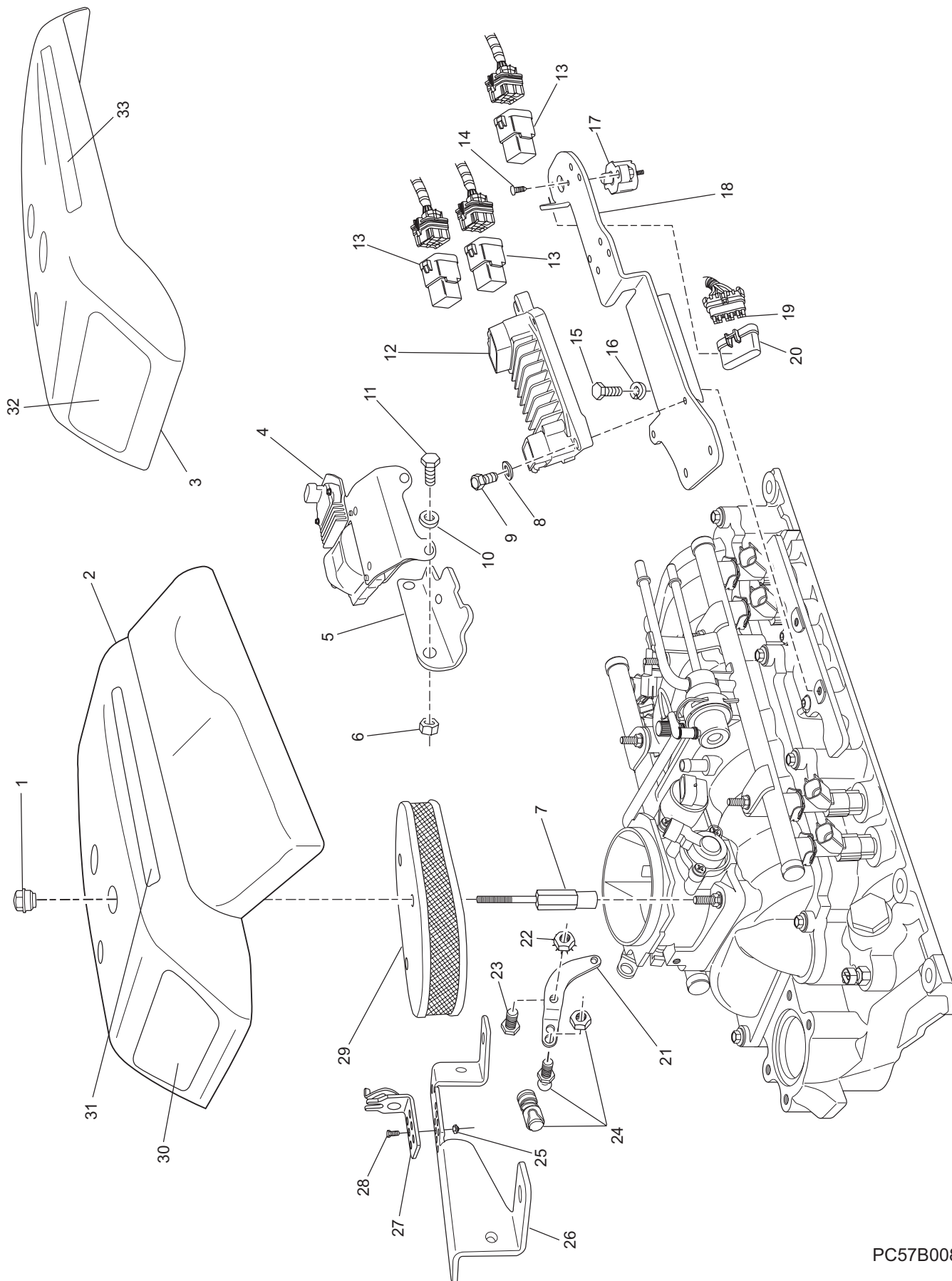


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INTAKE MANIFOLD ASSEMBLY - FIGURE 3

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035040	Throttle Body Assembly	1
2	NSS	Washer , throttle body attaching stud	3
3	R095040	Stud , throttle body attaching	3
4	R088002	Regulator , fuel pressure	1
5	TBD	Retainer , fuel pressure regulator	1
6	R095041	Stud , fuel rail attaching	4
7	RA086002	Fuel Rail Assembly	1
8	TBD	Cap , fuel pressure service port	1
9	NSS	O-Ring , fuel injector (top)	8
10	TBD	Clip , fuel injector retaining	8
11	NSS	O-Ring , fuel injector (bottom)	8
12	RA087007	Fuel Injector Assembly	8
13	R085074A	Hose , fuel pressure regulator vacuum	1
14	R095041	Stud , MAP sensor attaching	1
15	R020039	Sensor , manifold absolute pressure	1
16	RK120018	Spark Plug Wire Set	1
17	RM0271	Gasket , upper intake manifold to lower	1
18	RA108009	Cap , distributor	1
19	NSS	Plate , component attaching	2
20	TBD	Bolt , component attaching plate attaching	4
21	R127026A	Hold Down , distributor	1
22	R009193	Bolt , distributor hold down	1
23	R103011	Rotor , distributor	1
24	RA107044	Distributor Assembly (LH)	1
25	RM0123	Gasket , distributor assembly	1
26	R002023	Intake Manifold , lower	1
27	R069069	Plug , intake manifold	1
28	RM0250	Gasket , intake manifold	1
29	R020003	Sender , temperature	1
30	RS2746	Washer , sender terminal	1
31	RS2197	Lockwasher , sender terminal	1
32	RS1540	Nut , sender terminal	1
33	R020019	Sensor , engine coolant temperature	1
34	R002024	Intake Manifold , upper	1
35	TBD	Bolt , upper intake manifold to lower attaching	8
36	RM0272	Gasket , throttle body to upper manifold	1
37	RA120018	Coil Wire , Ignition (red)	1

INTAKE MANIFOLD COMPONENTS - FIGURE 4

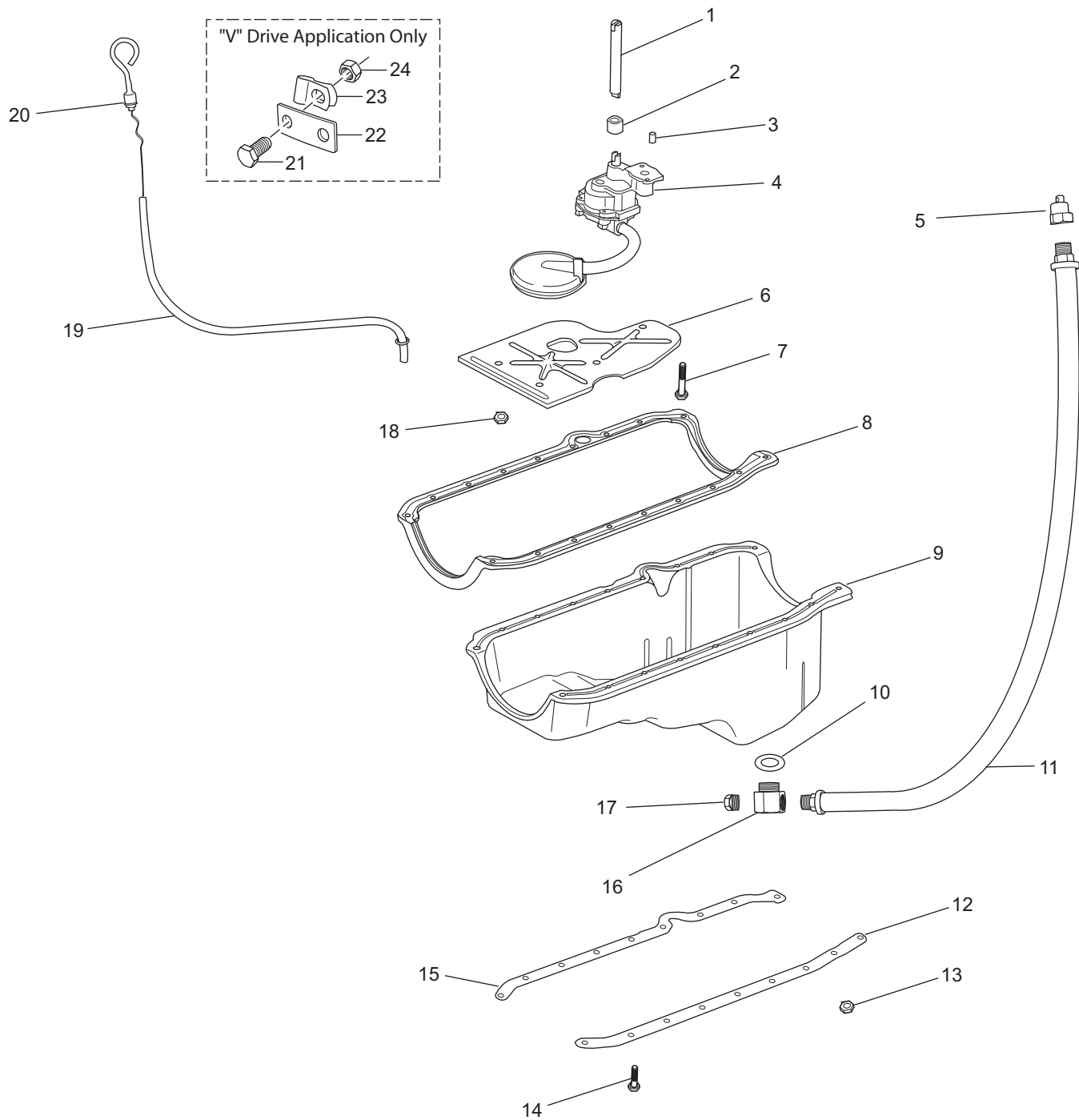


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INTAKE MANIFOLD COMPONENTS - FIGURE 4

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R009194	Nut , engine cover attaching	3
2	R060060	Cover , engine (Grey)	1
2	R060060A	Cover , engine (Red)	1
3	R060061A	Cover , engine (Grey)	1
3	R060061B	Cover , engine (Red)	1
3	R060061	Cover , engine (Black)	1
4	RA117011	Ignition Coil/Module Assembly	1
5	R090249	Bracket , ignition coil/module assembly mounting	1
6	RS2058	Nut , attaching	2
7	R095038	Stud , flame arrestor/engine cover attaching	3
8	RS2178	Washer , ECM attaching	2
9	90105075	Bolt , ECM attaching	2
10	92100000	Washer , attaching	2
11	RS0254	Bolt , attaching	2
12	R116019B	Engine Control Module	1
13	R130012	Relay Assembly (S/N 420000 thru 440611)	3
13	R130011A	Relay Assembly (S/N 440612 and above)	3
14	RS5084	Bolt , circuit breaker mounting	2
15	98223016	Bolt , bracket attaching	2
16	93920000	Lockwasher , bracket attaching	2
17	R153006C	Circuit Breaker Assembly (60 amp)	1
18	R090250	Bracket , ECM/relay mounting	1
19	R153017B	Fuses , 20 amp	3
20	R126014	Cover , fuse holder	1
21	R081007	Throttle Arm , throttle body	1
22	RS1078	Nut , throttle arm attaching	2
23	RS0251	Bolt , throttle arm attaching	2
24	R178003	Ball Joint Assembly , cable attaching	1
25	RS2055	Locking Nut , cable clip mounting bolt	2
26	R090248	Throttle Bracket , intake	1
27	R090086	Attaching Clip , throttle cable	1
28	RS5122	Bolt , cable clip mounting	2
29	R145025	Flame Arrestor	1
30	R143141	Decal , (PCM)	1
31	R143142	Decal , (PCM)	1
32	R143141A	Decal , (Sea Maxx)	1
32	R143148	Decal , (PCM)	1
33	R143142A	Decal , (Sea Maxx)	1
33	R143149	Decal , (PCM)	1
NI	R143158	Decal , "Ultra Low Emissions"	1
NI	R143159	Decal , 5.7L Emission (C.A.R.B.) MY '03	1
NI	R143159-04	Decal , 5.7L Emission (C.A.R.B.) MY '04	1

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

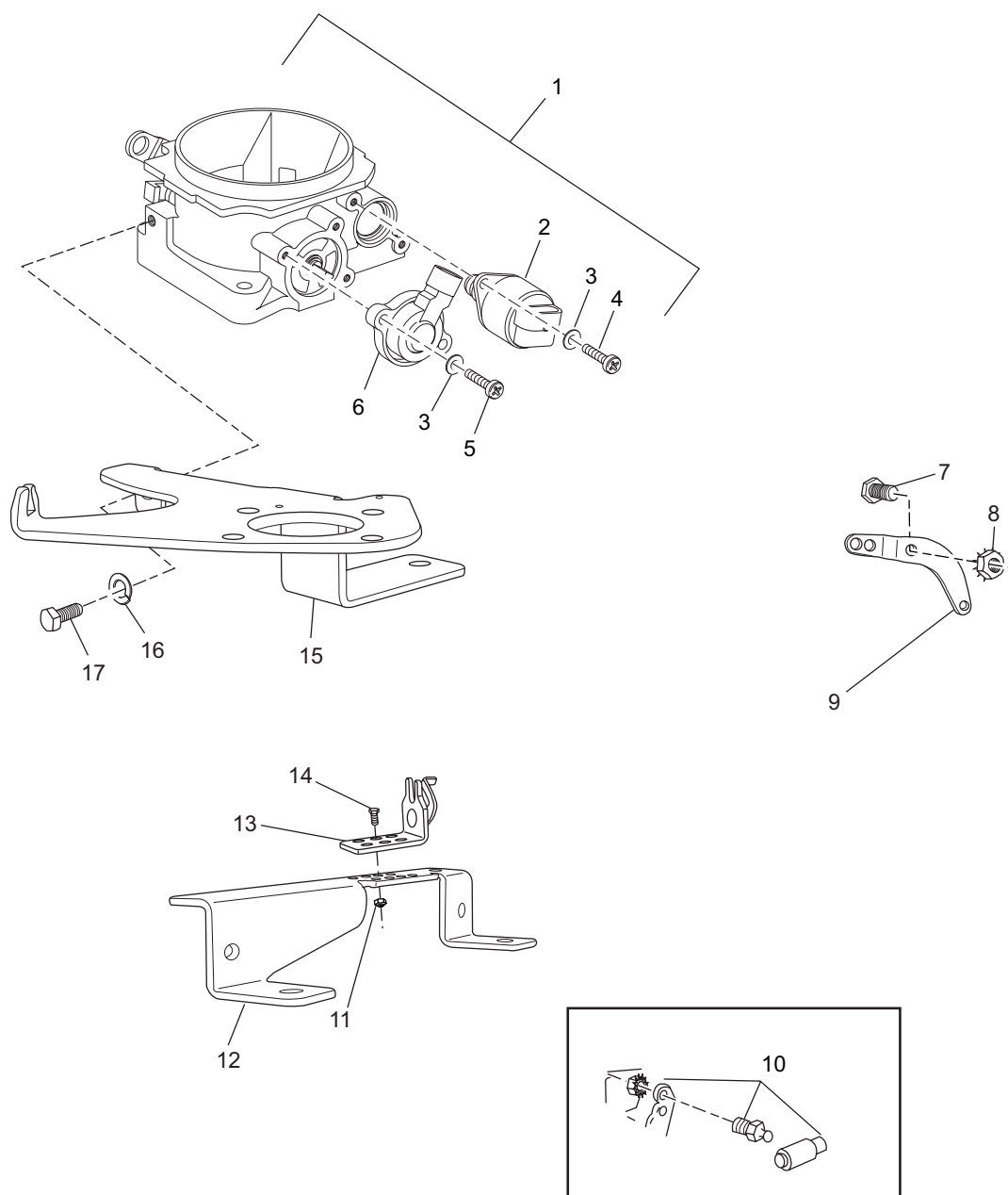


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OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R058054	Shaft , oil pump drive	1
2	TBD	Retainer , oil pump drive shaft	1
3	R022022	Pin , oil pump locating	2
4	RA070010	Oil Pump Assembly	1
5	R024066	Fitting , oil pan drain hose	1
6	R012028	Deflector , crankshaft oil	1
7	TBD	Bolt , oil pump	1
8	RM0249	Gasket , oil pan	1
9	R005011	Oil Pan	1
10	RM0245	Gasket , oil pan drain hose fitting	1
11	R045049	Hose , oil pan drain	1
12	TBD	Reinforcement , oil pan (LH)	1
13	95200010	Nut , oil pan	4
14	R009157	Bolt , oil pan	14
15	TBD	Reinforcement , oil pan (RH)	1
16	R024179	Fitting , oil pan drain hose	1
17	RS3552	Plug , oil pan drain hose fitting	1
18	TBD	Nut , crankshaft oil deflector	5
19	R041065	Tube , oil level dipstick	1
20	R041036A	Dipstick , oil level (0 to 4 degree)	AR
20	R041043A	Dipstick , oil level (12 degree)	AR
20	R041067A	Dipstick , v-drive	AR
21	RS0302	Bolt , dipstick tube mounting clamp	AR
22	R090233	Bracket , dipstick tube	AR
23	R127015	Clamp , dipstick tube mounting	AR
24	RS1028	Nut , dipstick tube mounting clamp bolt	AR
NI	RK024179	Kit , oil drain (includes items 5,10,11,16,17)	1

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

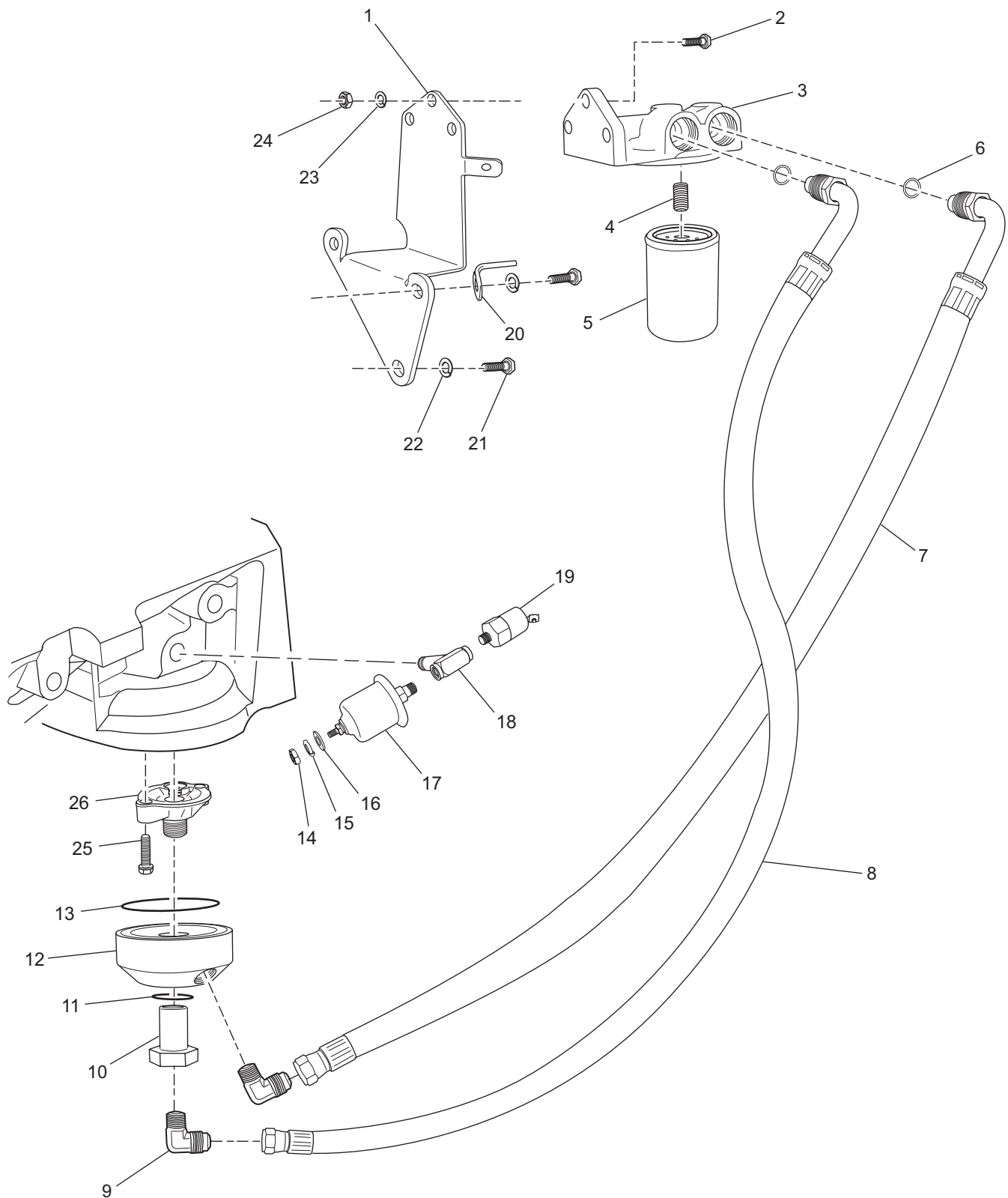


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THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA035040	Throttle Body Assembly	1
2	R084005	Valve , idle air control	1
3	TBD	Washer , attaching	4
4	TBD	Screw , IAC valve attaching	2
5	TBD	Screw , TP sensor attaching	2
6	R020041	Sensor , throttle position	1
7	RS0251	Bolt , throttle arm attaching	2
8	RS1078	Nut , throttle arm attaching	2
9	R081007	Throttle Arm , throttle body	1
10	R178003	Ball Joint Assembly , cable attaching	1
11	RS2055	Locking Nut , cable clip mounting bolt	2
12	R090248	Throttle Bracket , intake	1
13	R090086	Cable Clip , throttle attaching	1
14	RS5122	Bolt , cable clip mounting	2
15	R090261	Bracket , perfect pass	1
16	98223016	Lockwasher , bracket attaching	2
17	93920000	Bolt , bracket attaching	2

REMOTE OIL FILTER COMPONENTS ('02-'04) DIRECT DRIVE - FIGURE 7
(Thru '04 Model Year S/N - _____)

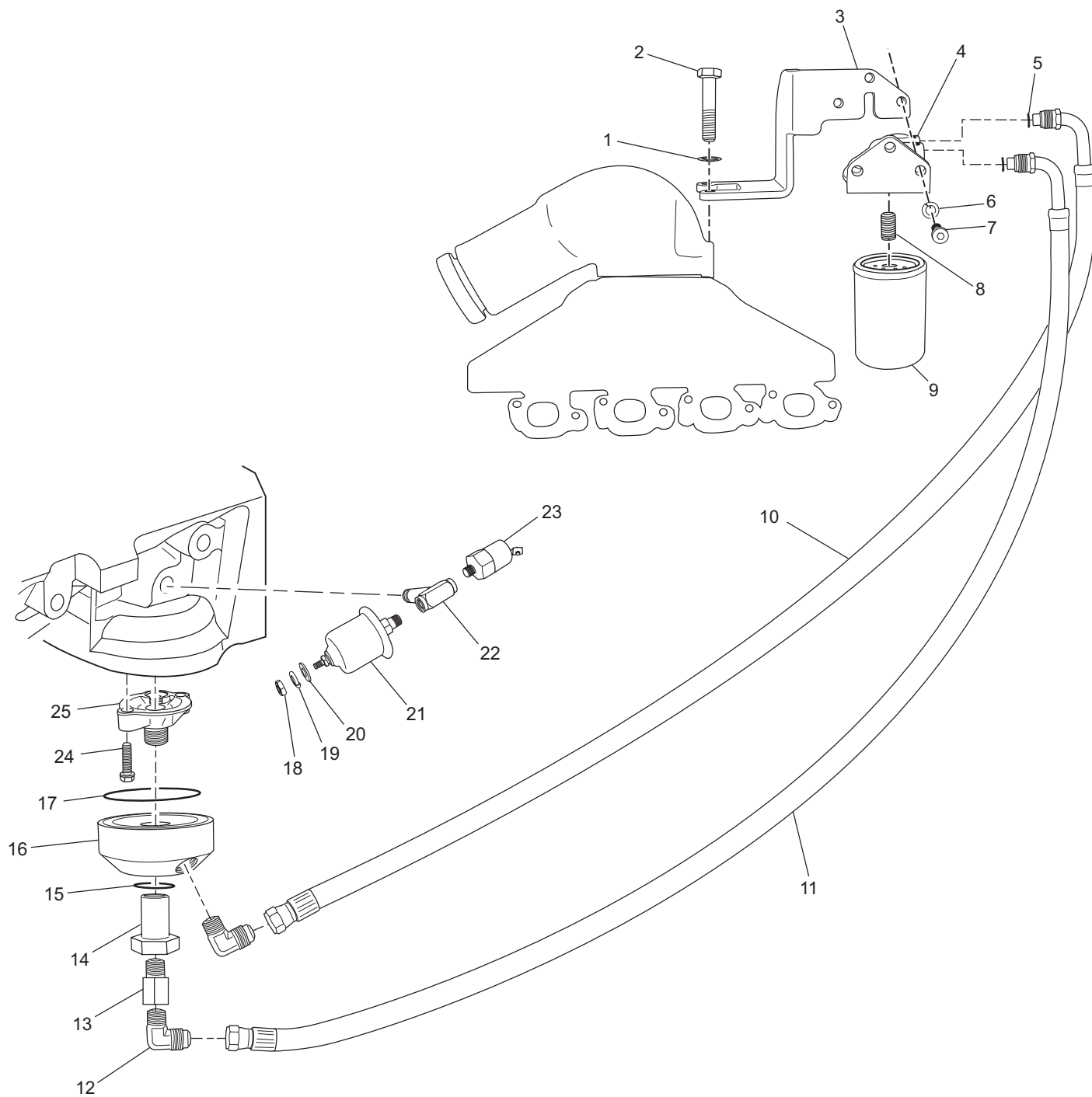


PC57B022

REMOTE OIL FILTER COMPONENTS ('02-'04) DIRECT DRIVE - FIGURE 7
(Thru '04 Model Year S/N - _____)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090190A	Bracket , oil filter header mounting	1
2	RS0282	Bolt , oil filter header mounting	3
3	R079066	Oil Filter Header	1
4	R024203	Nipple , header filter adapter	1
5	R077001	Filter , oil	1
6	R047245	O-Ring , oil line	2
7	RA045120C	Hose Assembly , bypass adapter to filter header	1
8	RA045120C	Hose Assembly , filter header to bypass adapter	1
9	R024184	Fitting , 90 degree	2
10	R017073	Fitting , oil bypass adapter attaching	1
11	R047202	O-ring , oil bypass adapter attaching fitting	1
12	R079051	Adapter , oil bypass	1
13	R047203	O-ring , oil bypass adapter	1
14	95011000	Nut , sender terminal	1
15	95300300	Lockwasher , sender terminal	1
16	92300200	Washer , sender terminal	1
17	R020001	Sender , oil pressure	1
18	R024205	Tee , sender attaching	1
19	R020015A	Switch , oil pressure	1
20	R096144	Bracket , spark plug wire loom (90 degree)	2
20	R096144A	Bracket , spark plug wire loom (flat)	2
21	RS0302	Bolt , oil filter header mounting bracket attaching	3
22	RS2180	Lockwasher , attaching bolt	3
23	RS2179	Lockwasher , oil filter header mounting bolt	3
24	RS1027	Nut , oil filter header mounting bolt	3
25	R009089	Bolt , oil adapter attaching	2
26	RA079028	Adapter , oil	1

REMOTE OIL FILTER COMPONENTS ('02-'04) V-DRIVE - FIGURE 8

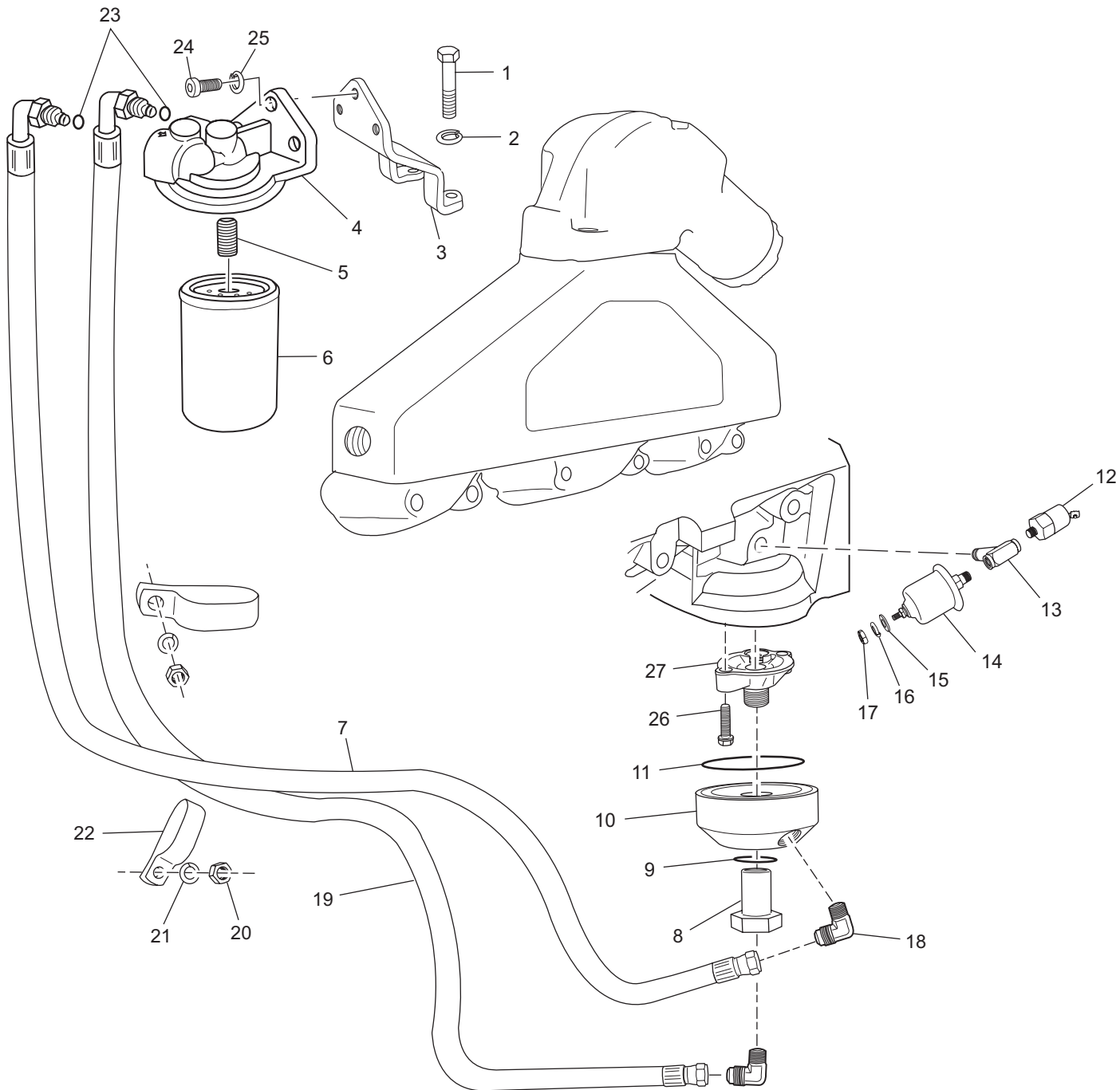


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REMOTE OIL FILTER COMPONENTS ('02-'04) V-DRIVE - FIGURE 8

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS2179	Lockwasher , attaching bolt	2
2	90205200	Bolt , oil filter header mounting bracket attaching	3
3	R090257	Bracket , oil filter header mounting	1
4	R079066	Oil Filter Header	1
5	R047245	O-Ring , oil line	2
6	RS2179	Lockwasher , oil filter header mounting bolt	3
7	99333020	Bolt , oil filter header mounting	3
8	R024203	Nipple , header filter adapter	1
9	R077001	Filter , oil	1
10	RA045120D	Hose Assembly , bypass adapter to filter header	1
11	RA045120D	Hose Assembly , filter header to bypass adapter	1
12	R024184	Fitting , 90 degree	2
13	R024182	Adapter , fitting	1
14	R017073	Fitting , oil bypass adapter attaching	1
15	R047202	O-ring , oil bypass adapter attaching fitting	1
16	R079051	Adapter , oil bypass	1
17	R047203	O-ring , oil bypass adapter	1
18	95011000	Nut , sender terminal	1
19	95300300	Lockwasher , sender terminal	1
20	92300200	Washer , sender terminal	1
21	R020001	Sender , oil pressure	1
22	R024205	Tee , sender attaching	1
23	R020015A	Switch , oil pressure	1
24	R009089	Bolt , oil adapter attaching	2
25	RA079028	Adapter , oil	1

REMOTE OIL FILTER COMPONENTS - DIRECT DRIVE ('02-'03) - FIGURE 9

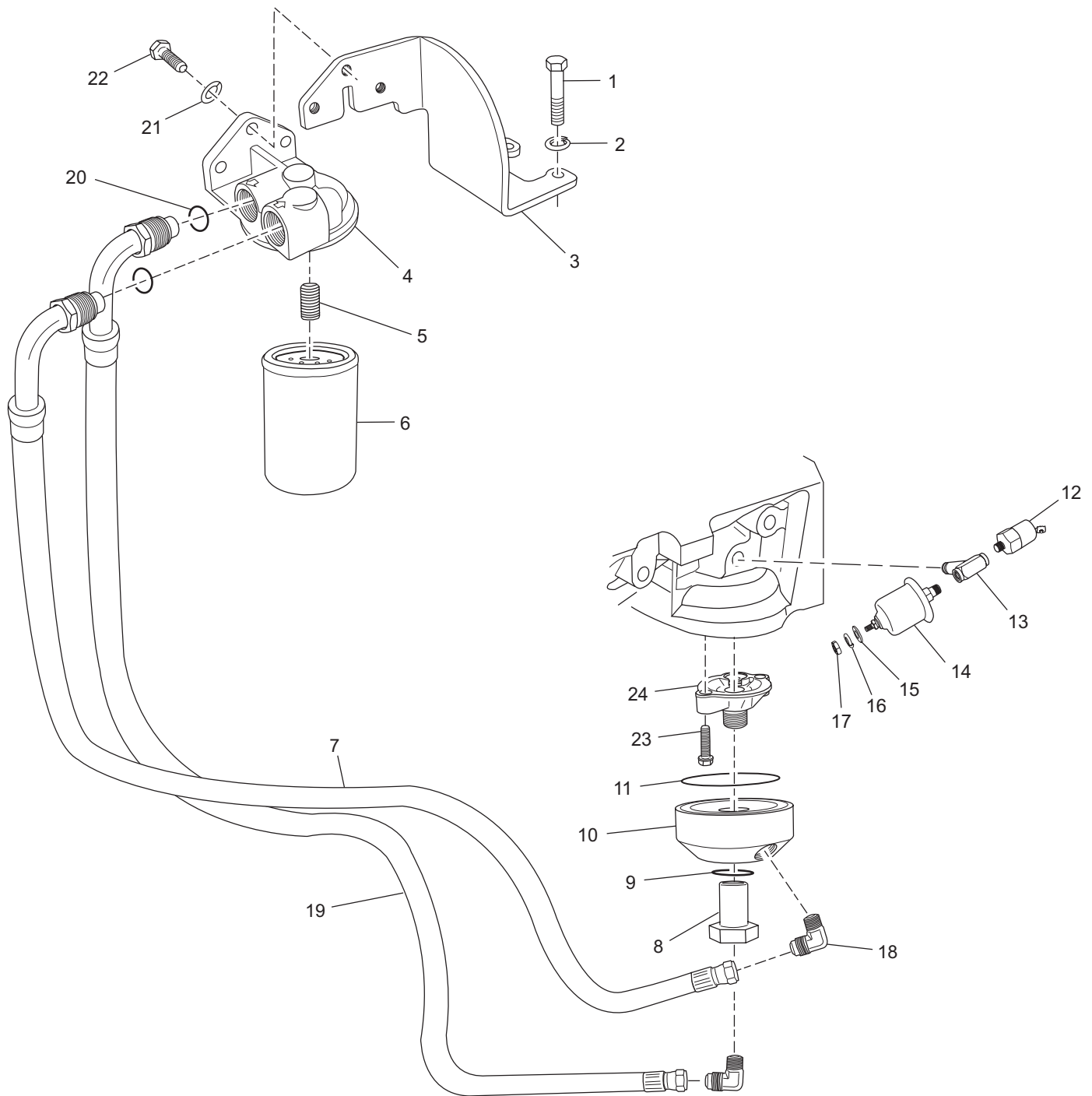


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REMOTE OIL FILTER COMPONENTS - DIRECT DRIVE ('02-'03) - FIGURE 9

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS0286	Bolt , oil filter header mounting bracket attaching	2
2	RS2180	Lockwasher , attaching bolt	2
3	R090252	Bracket , oil filter header mounting	1
4	R079066	Oil Filter Header	1
5	R024203	Nipple , header filter adapter	1
6	R077001	Filter , oil	1
7	RA045120D	Hose Assembly , bypass adapter to filter header	1
8	R017073	Fitting , oil bypass adapter attaching	1
9	R047202	O-ring , oil bypass adapter attaching fitting	1
10	R079051	Adapter , oil bypass	1
11	R047203	O-ring , oil bypass adapter	1
12	R020015A	Switch , oil pressure	1
13	R024205	Tee , sender attaching	1
14	R020001	Sender , oil pressure	1
15	92300200	Washer , sender terminal	1
16	95300300	Lockwasher , sender terminal	1
17	95011000	Nut , sender terminal	1
18	R024184	Fitting , 90 degree	2
19	RA045120D	Hose Assembly , filter header to bypass adapter	1
20	RS1028	Nut , strap clamp attaching	2
21	RS2180	Lockwasher , strap clamp attaching	2
22	R127099	Clamp , strap	2
23	R047245	O-Ring , oil line	2
24	RS0282	Bolt , oil filter header mounting	3
25	RS2179	Lockwasher , oil filter header mounting bolt	3
26	R009089	Bolt , oil adapter attaching	2
27	RA079028	Adapter , oil	1

REMOTE OIL FILTER COMPONENTS ('04) DIRECT DRIVE - FIGURE 10
('04 Model Year S/N - _____ thru present)

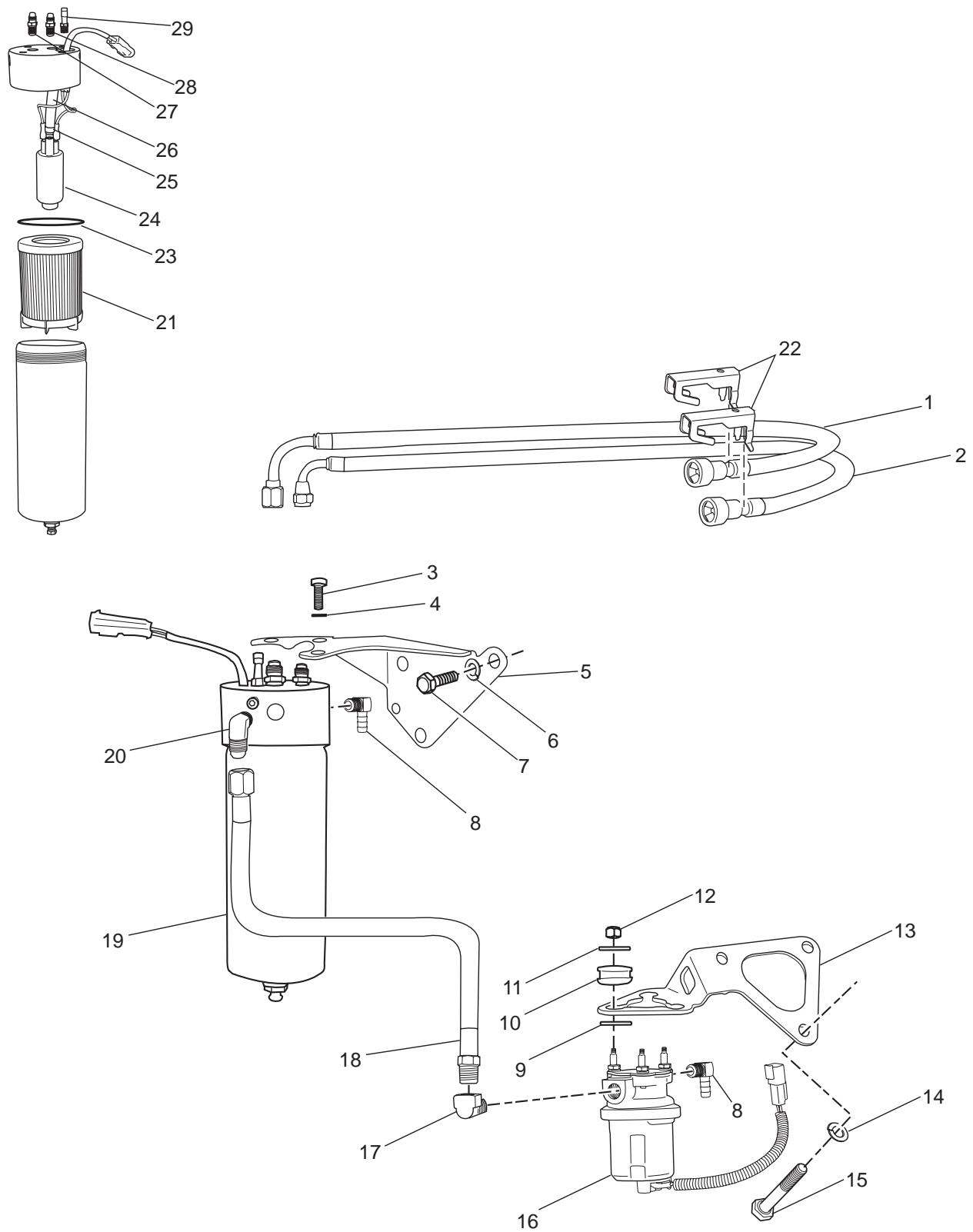


PC57B020b

REMOTE OIL FILTER COMPONENTS ('04) DIRECT DRIVE - FIGURE 10
('04 Model Year S/N - _____ thru present)

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS0286	Bolt , oil filter header mounting bracket attaching	2
2	RS2180	Lockwasher , attaching bolt	2
3	R090257	Bracket , oil filter header mounting	1
4	R079066	Oil Filter Header	1
5	R024203	Nipple , header filter adapter	1
6	R077001	Filter , oil	1
7	RA045120D	Hose Assembly , bypass adapter to filter header	1
8	R017073	Fitting , oil bypass adapter attaching	1
9	R047202	O-ring , oil bypass adapter attaching fitting	1
10	R079051	Adapter , oil bypass	1
11	R047203	O-ring , oil bypass adapter	1
12	R020015A	Switch , oil pressure	1
13	R024205	Tee , sender attaching	1
14	R020001	Sender , oil pressure	1
15	92300200	Washer , sender terminal	1
16	95300300	Lockwasher , sender terminal	1
17	95011000	Nut , sender terminal	1
18	R024184	Fitting , 90 degree	2
19	RA045120D	Hose Assembly , filter header to bypass adapter	1
20	R047245	O-Ring , oil line	2
21	RS2179	Lockwasher , oil filter header mounting bolt	3
22	98333020	Bolt , oil filter header mounting	3
23	R009089	Bolt , oil adapter attaching	2
24	RA079028	Adapter , oil	1

FUEL CONTROL CELL (FCC) COMPONENTS ('02-'03) DIRECT DRIVE - FIGURE 11

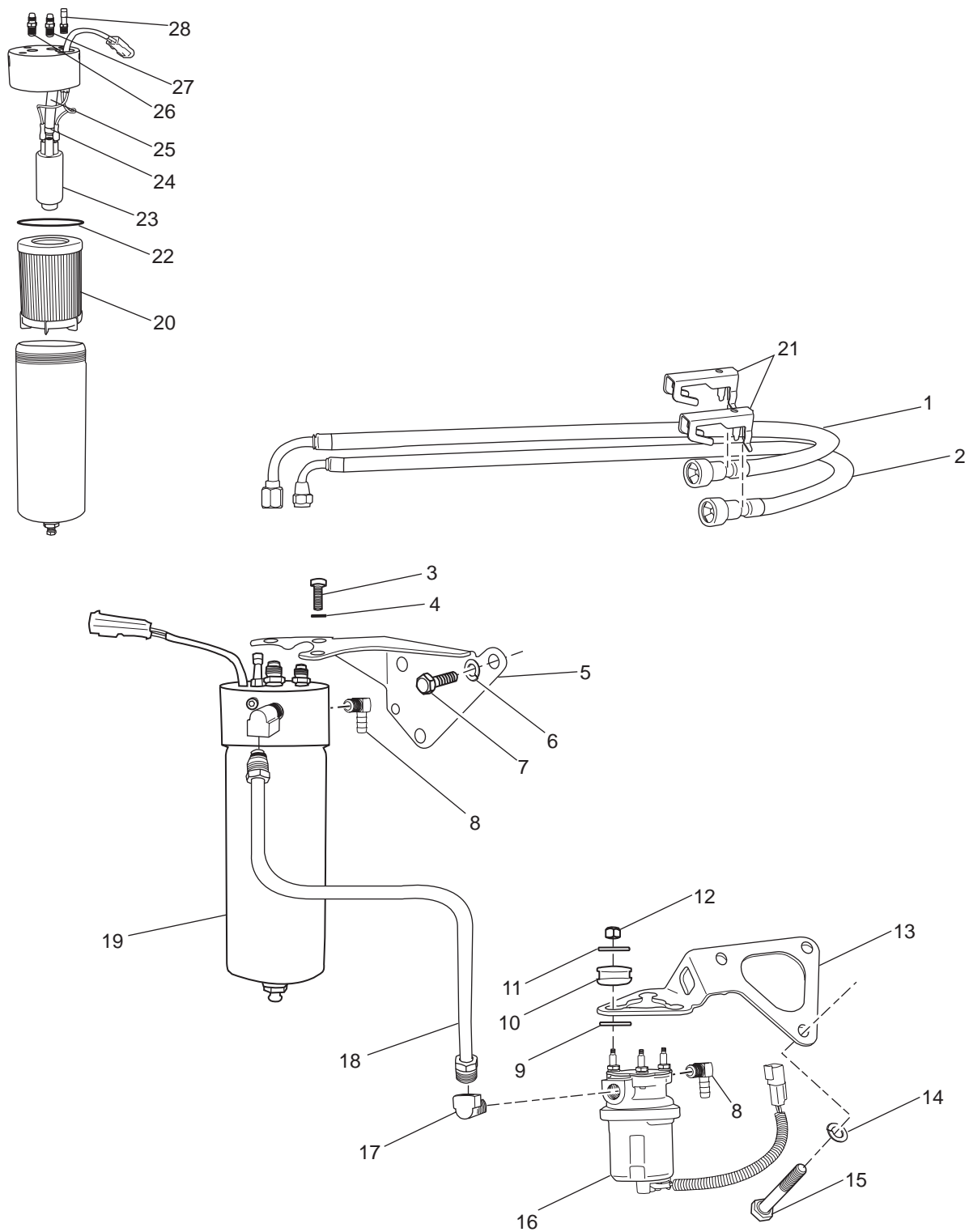


PC57B018

FUEL CONTROL CELL (FCC) COMPONENTS ('02-'03) DIRECT DRIVE - FIGURE 11

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085090A	Hose Assembly , FCC to fuel rail (inlet)	1
2	RA085091A	Hose Assembly , fuel rail to FCC (return)	1
3	RS0304	Bolt , FCC mounting	3
4	RS2180	Lockwasher , FCC mounting	3
5	R090179B	Bracket , FCC mounting	1
6	RS2180	Lockwasher , FCC mounting bracket	3
7	RS0304	Bolt , FCC mounting bracket	3
8	R024089	Fitting , 90 degree	2
9	R096142	Washer , fuel pump mounting	3
10	R094035	Grommet , mounting bracket	3
11	R096142	Washer , fuel pump mounting	3
12	RS1521L	Locking Nut , low-pressure fuel pump	3
13	R090223	Bracket , low-pressure fuel pump mounting	1
14	RS2180	Lockwasher , bracket mounting	3
15	RS0305	Bolt , bracket mounting	3
16	RA080018	Fuel Pump , low-pressure	1
17	R024192	Fitting , 90 degree	1
18	RA085070	Hose Assembly , low-pressure pump to FCC	1
19	RA080025	Fuel Control Cell Assembly	1
20	R024163	Fitting , 90 degree	1
21	RP080026	Fuel Filter , FCC assembly	1
22	R127100	Locking Clip , fuel line	2
23	R047214	O'Ring , FCC seal	1
24	RA080025A	Fuel Pump , high pressure	1
25	R127087	Clamp , Oetiker	2
26	R045098	Hose , 5/16 I.D. - 1/2 O.D.	1
27	R024175	Fitting , fuel line	1
28	R024163A	Fitting , fuel line	1
29	R035031	Fitting , fuel pressure, Schrader valve	1
NI	R034041	Cap , Schrader valve	1

FUEL CONTROL CELL (FCC) COMPONENTS ('02-'04) DIRECT DRIVE - FIGURE 12

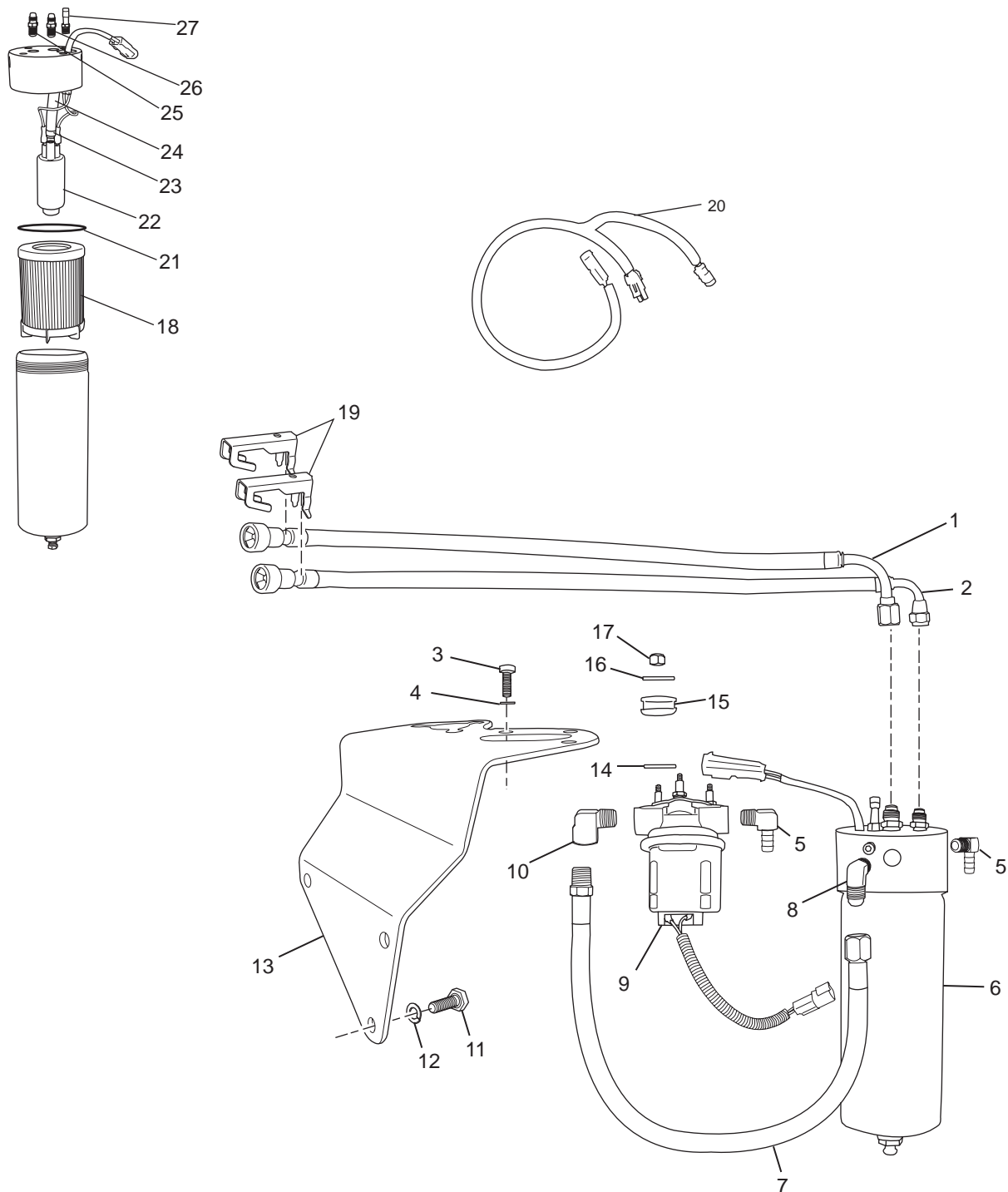


PC57B018a

FUEL CONTROL CELL (FCC) COMPONENTS ('02-'04) DIRECT DRIVE - FIGURE 12

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085090A	Hose Assembly , FCC to fuel rail (inlet)	1
2	RA085091A	Hose Assembly , fuel rail to FCC (return)	1
3	RS0304	Bolt , FCC mounting	3
4	RS2180	Lockwasher , FCC mounting	3
5	R090179B	Bracket , FCC mounting	1
6	RS2180	Lockwasher , FCC mounting bracket	3
7	RS0304	Bolt , FCC mounting bracket	3
8	R024089	Fitting , 90 degree	2
9	R096142	Washer , fuel pump mounting	3
10	R094035	Grommet , mounting bracket	3
11	R096142	Washer , fuel pump mounting	3
12	RS1521L	Locking Nut , low-pressure fuel pump	3
13	R090223	Bracket , low-pressure fuel pump mounting	1
14	RS2180	Lockwasher , bracket mounting	3
15	RS0305	Bolt , bracket mounting	3
16	RA080018	Fuel Pump , low-pressure	1
17	R024017	Fitting , 90 degree	2
18	RA085096	Hose Assembly , low-pressure pump to FCC	1
19	RA080025	Fuel Control Cell Assembly	1
20	RP080026	Fuel Filter , FCC assembly	1
21	R127100	Locking Clip , fuel line	2
22	R047214	O'Ring , FCC seal	1
22	RA080025A	Fuel Pump , high pressure	1
23	R127087	Clamp , Oetiker	2
24	R045098	Hose , 5/16 I.D. - 1/2 O.D.	1
25	R024175	Fitting , fuel line	1
26	R024163A	Fitting , fuel line	1
27	R035031	Fitting , fuel pressure, Schrader valve	1
NI	R034041	Cap , Schrader valve	1

FUEL CONTROL CELL (FCC) COMPONENTS ('02-'03) V-DRIVE- FIGURE 13

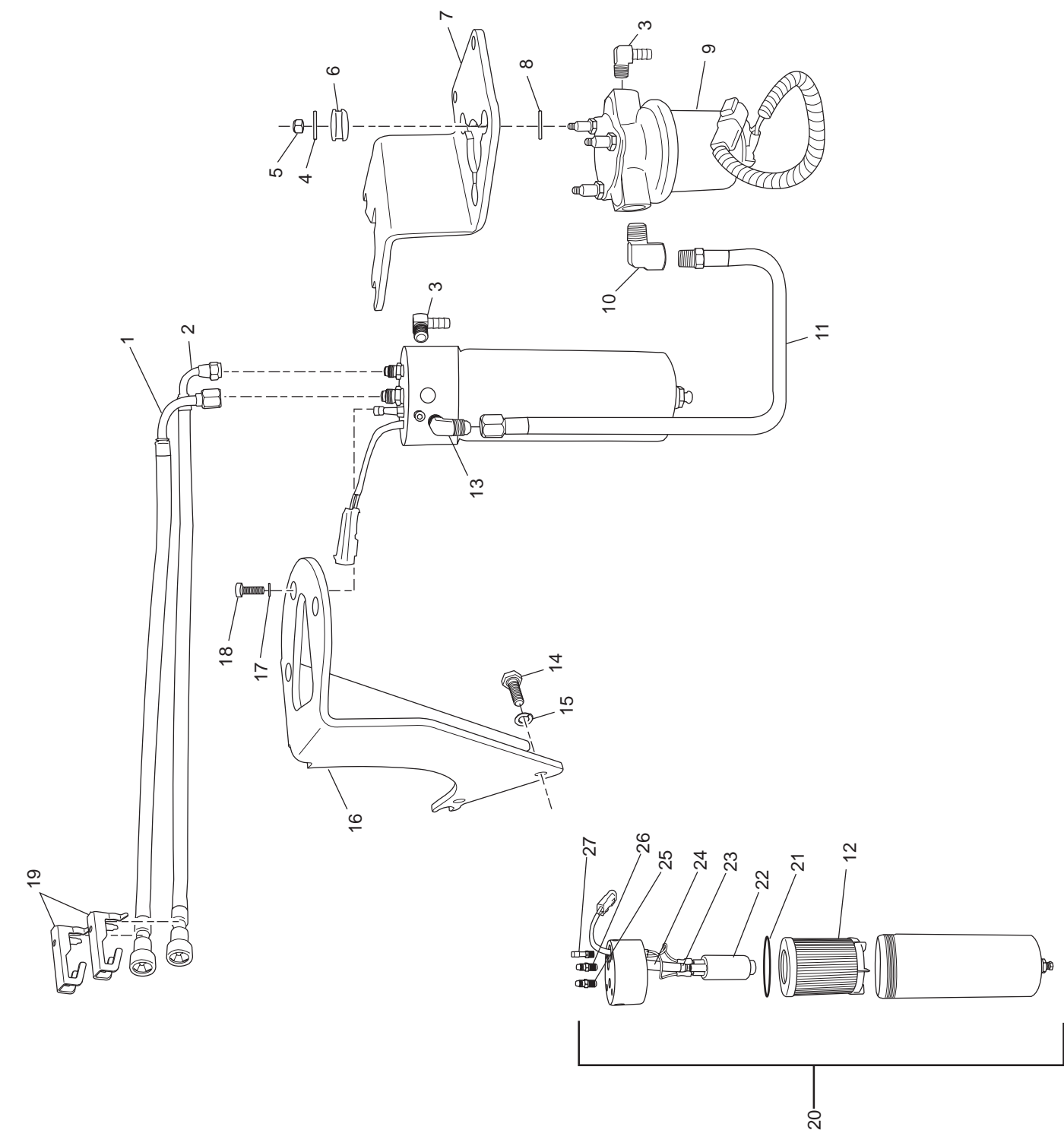


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FUEL CONTROL CELL (FCC) COMPONENTS ('02-'03) V-DRIVE- FIGURE 13

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085090B	Hose Assembly , FCC to fuel rail (inlet)	1
2	RA085091B	Hose Assembly , fuel rail to FCC (return)	1
3	RS0304	Bolt , FCC mounting	3
4	RS2180	Lockwasher , FCC mounting	3
5	R024089	Fitting , 90 degree	2
6	RA080025	Fuel Control Cell Assembly	1
7	RA085070	Hose Assembly , low-pressure pump to FCC	1
8	R024163	Fitting , 90 degree	1
9	RA080018	Fuel Pump , low-pressure	1
10	R024017	Fitting , 90 degree	1
11	RS0304	Bolt , FCC mounting bracket	3
12	RS2180	Lockwasher , FCC mounting bracket	3
13	R090204	Bracket , FCC mounting	1
14	R096142	Washer , fuel pump mounting	3
15	R094035	Grommet , mounting bracket	3
16	R096142	Washer , fuel pump mounting	3
17	RS1521L	Locking Nut , low-pressure fuel pump	3
18	RP080026	Fuel Filter , FCC assembly	1
19	R127100	Locking Clip , fuel line	2
20	RA121062C	Harness Extension , FCC	1
21	R047214	O'Ring , FCC seal	1
22	RA080025A	Fuel Pump , high pressure	1
23	R127087	Clamp , Oetiker	2
24	R045098	Hose , 5/16 I.D. - 1/2 O.D.	1
25	R024175	Fitting , fuel line	1
26	R024163A	Fitting , fuel line	1
27	R035031	Fitting , fuel pressure, Schrader valve	1
NI	R034041	Cap , Schrader valve	1

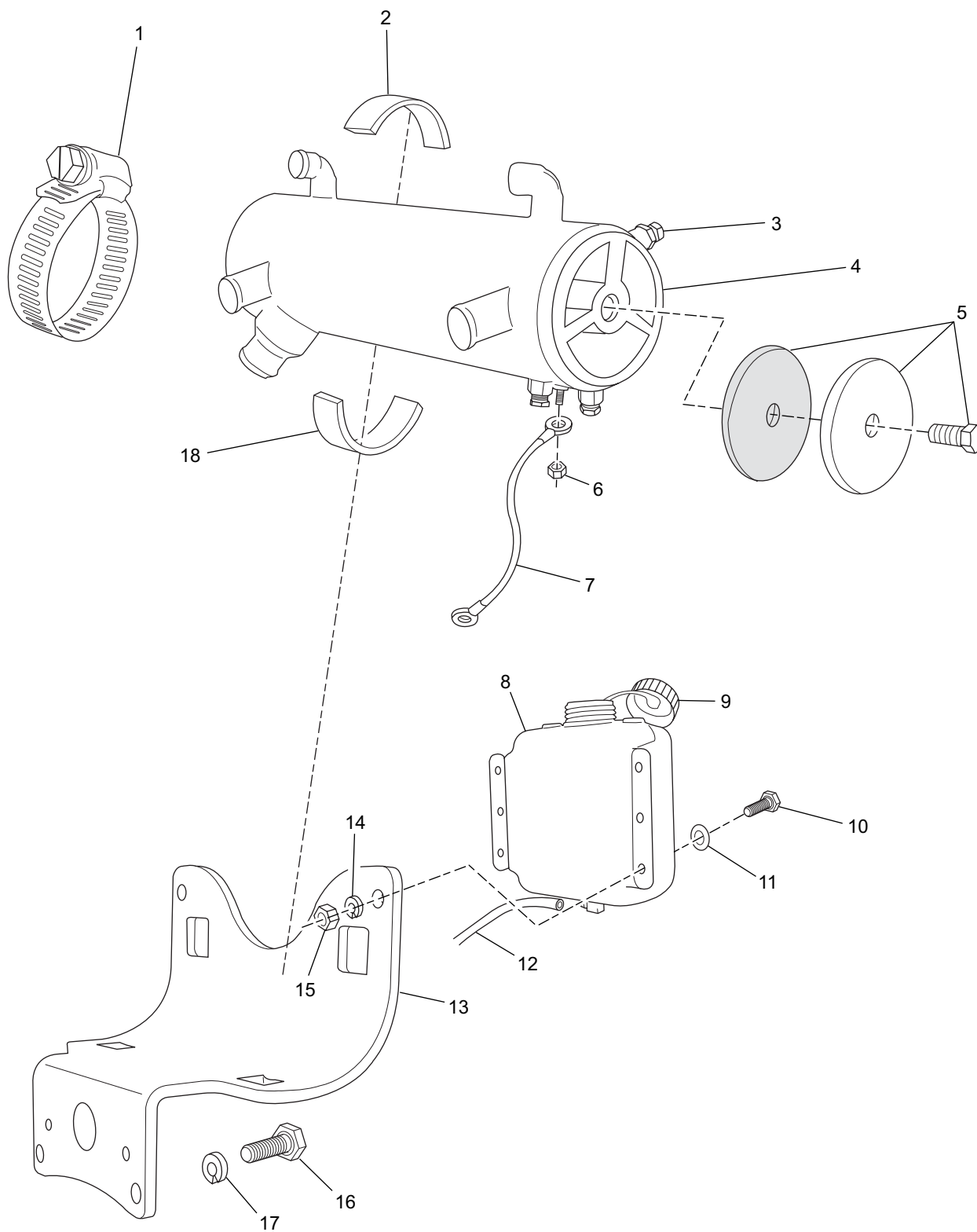
FUEL CONTROL CELL (FCC) COMPONENTS ('04) (V-Drive)- FIGURE 14



FUEL CONTROL CELL (FCC) COMPONENTS ('04) (V-Drive)- FIGURE 14

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA085090B	Hose Assembly , FCC to fuel rail (inlet)	1
2	RA085091B	Hose Assembly , fuel rail to FCC (return)	1
3	R024089	Fitting , 90 degree	2
4	R096142	Washer , fuel pump mounting	3
5	RS1521L	Locking Nut , low-pressure fuel pump	3
6	R094035	Grommet , mounting bracket	3
7	R090299	Bracket , LPFP mounting	1
8	R096142	Washer , fuel pump mounting	3
9	RA080018	Fuel Pump , low-pressure	1
10	R024017	Fitting , 90 degree	1
11	RA085070	Hose Assembly , low-pressure pump to FCC	1
12	RP080026	Fuel Filter , FCC assembly	1
13	R024163	Fitting , 90 degree	1
14	RS0304	Bolt , FCC mounting bracket	2
15	RS2180	Lockwasher , FCC mounting bracket	2
16	R090296	Bracket , FCC mounting	1
17	RS2180	Lockwasher , FCC mounting	3
18	RS0304	Bolt , FCC mounting	3
19	R127100	Locking Clip , fuel line	2
20	RA080025	Fuel Control Cell Assembly	1
21	R047214	O'Ring , FCC seal	1
22	RA080025A	Fuel Pump , high pressure	1
23	R127087	Clamp , Oetiker	2
24	R045098	Hose , 5/16 I.D. - 1/2 O.D.	1
25	R024175	Fitting , fuel line	1
26	R024163A	Fitting , fuel line	1
27	R035031	Fitting , fuel pressure, Schrader valve	1
NI	R034041	Cap , Schrader valve	1

HEAT EXCHANGER and COMPONENTS ('02-'03) - FIGURE 15

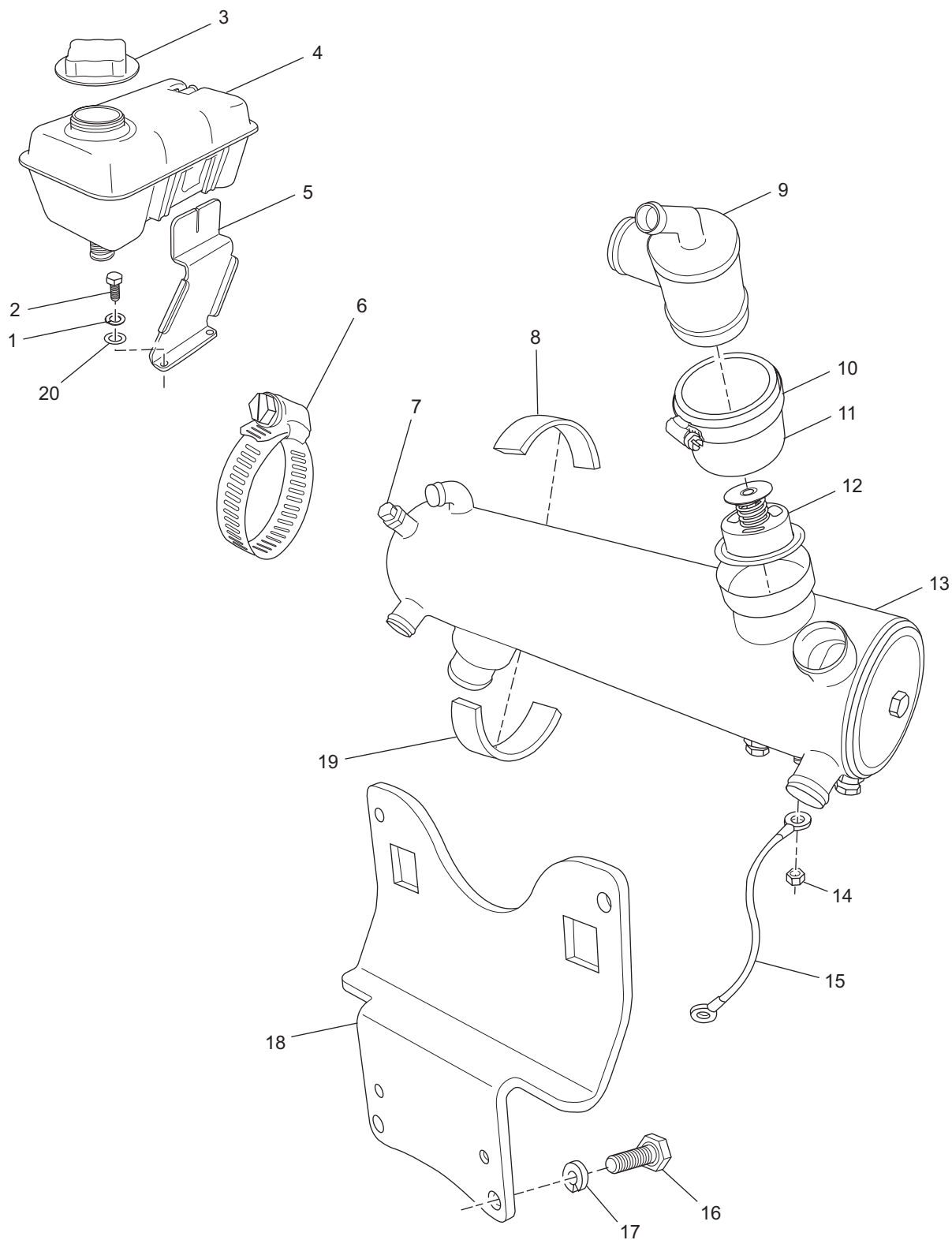


PC57B033

HEAT EXCHANGER and COMPONENTS ('02-'03) - FIGURE 15

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS3857	Clamp , exchanger mounting	2
2	R094041	Isolator , top	2
3	R168008	Zinc , sacrificial	1
4	RA147046	Heat Exchanger Assembly	1
5	R034024	End Cap Kit , exchanger	AR
6	RS1078	Nut , ground wire stud	1
7	R101013	Wire , grounding	1
8	R146002	Bottle , coolant overflow	1
9	NSS	Cap , coolant fill (P/O item #8)	1
10	RS0282	Bolt , coolant overflow mounting	2
11	RS2673	Washer , mounting bolt	2
12	R045139	Tube , overflow	1
13	R090265	Bracket , H.E. (PCM bell housing)	1
13	R090266	Bracket , H.E. (new style bell housing)	1
14	RS2179	Lockwasher , mounting bolt	2
15	RS1027	Nut , mounting bolt	2
16	RS0281	Bolt , bracket (R090265) mounting	2
16	RS0304	Bolt , bracket (R090266) mounting	2
17	RS2179	Lockwasher , bracket (R090265) mounting	2
17	RS2180	Lockwasher , bracket (R090266) mounting	2
18	R094040	Isolator , bottom	2

HEAT EXCHANGER and COMPONENTS ('04) (SERPENTINE BELT SYSTEM) - FIGURE 16

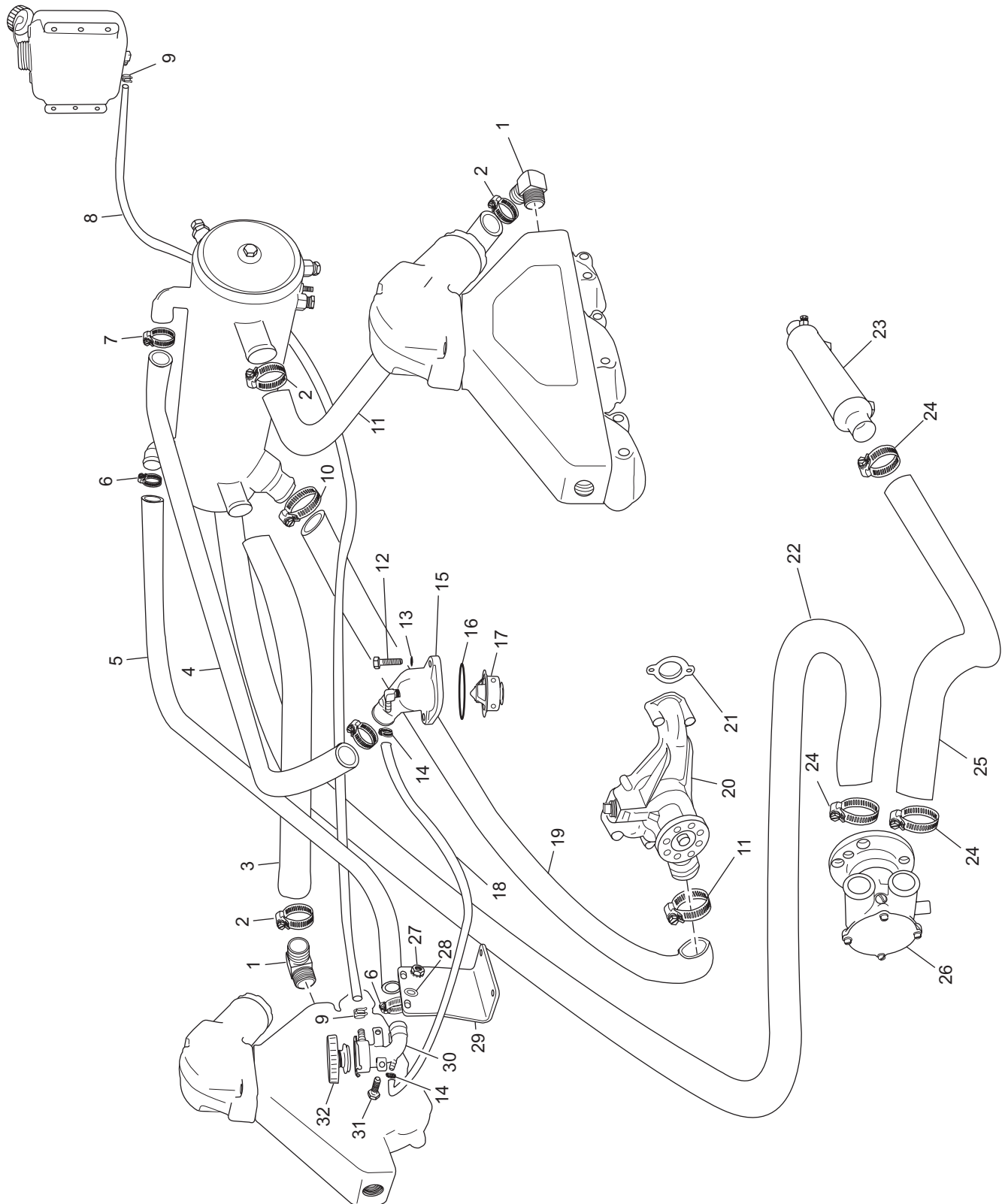


PC57B033a

HEAT EXCHANGER and COMPONENTS (SERPENTINE BELT SYSTEM) - FIGURE 16

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS2672	Lockwasher , mounting bolt	2
2	98223016	Bolt , degas bottle bracket mounting	2
3	R034045	Cap , degas bottle	1
4	R146001	Bottle , degas	1
5	R090295	Bracket , degas bottle mounting	1
6	RS3857	Clamp , exchanger mounting	2
7	R168005	Zinc , sacrificial	1
8	R094040	Isolator , top	2
9	R025039	Thermostat Housing	1
10	RS3860	Clamp , thermostat housing	2
11	R045162	Hose , thermostat housing attaching	1
12	R026007	Thermostat , (170 degree)	1
13	RA147050	Heat Exchanger Assembly	1
14	RS1078	Nut , ground wire stud	1
15	R101013	Wire , grounding	1
16	RS0304	Bolt , bracket mounting	2
17	RS2180	Lockwasher , bracket mounting	2
18	R090266	Bracket , heat exchanger	1
19	R094040	Isolator , bottom	1
20	RS7068	Washer , mounting bolt	2
N.I.	TBD	End Cap Kit , exchanger	AR

FRESH WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 17

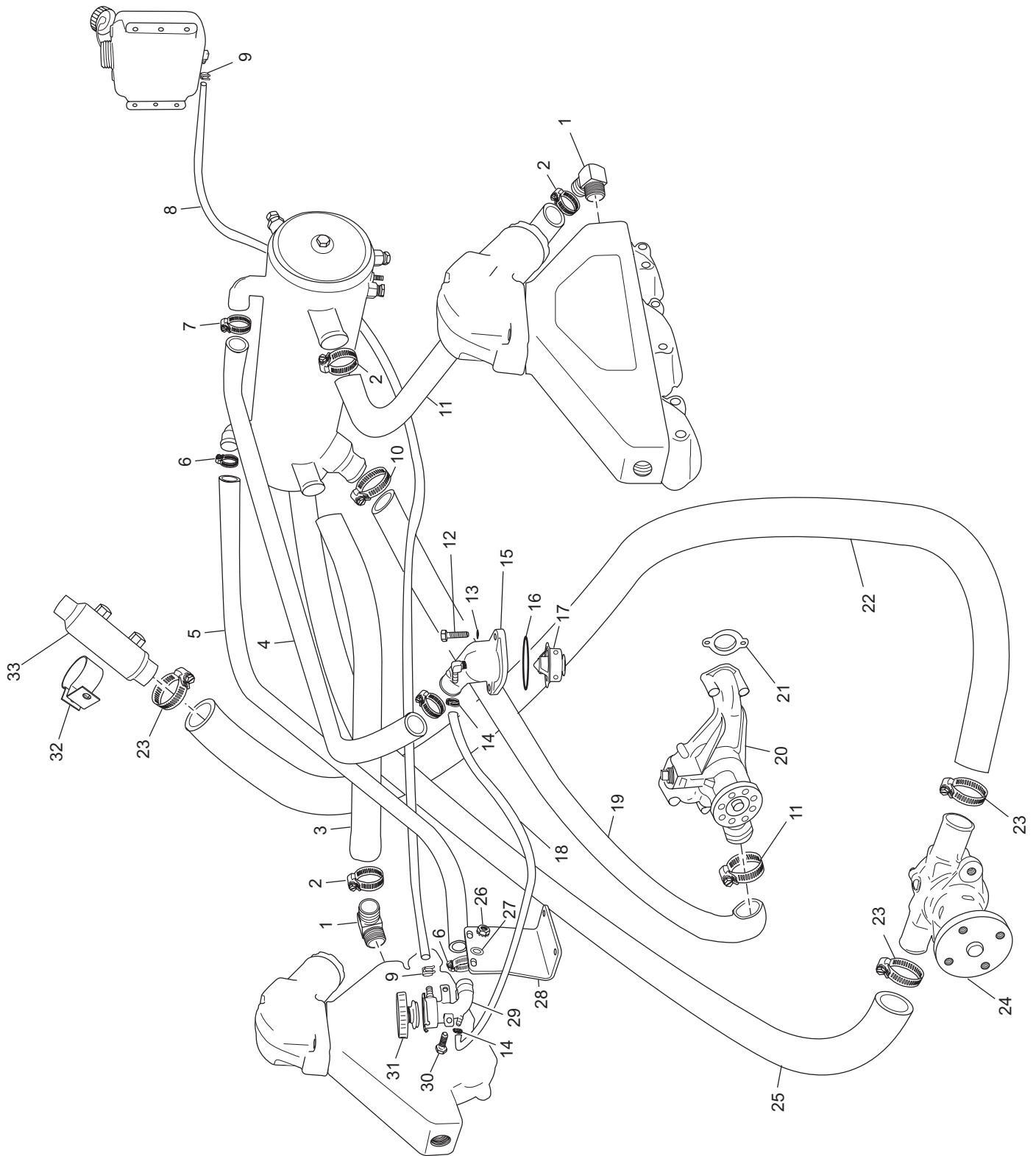


PC57B034

**FRESH WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 17**

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024006A	Fitting , 90 degree	1
2	RS3851	Clamp , hose	4
3	R045025	Hose , exchanger to exhaust manifold (Starboard STD)	1
4	R045144	Hose , thermostat housing to exchanger	1
5	R045124	Hose , coolant fill riser to exchanger	1
6	RS3851	Clamp , hose	2
7	RS3858	Clamp , hose	2
8	R045139	Hose , coolant fill riser to overflow bottle	1
9	R127084	Clamp , hose	2
10	RS3852	Clamp , hose	2
11	R045025	Hose , exchanger to exhaust manifold (Port STD)	1
12	RS6531	Bolt , thermostat housing attaching	2
13	RS2179	Lockwasher , thermostat housing attaching	2
14	RS3870	Clamp , hose	2
15	R025015A	Thermostat Housing	1
16	R047189	O-ring , thermostat	1
17	R026002F	Thermostat , (160 degree)	1
18	R045132	Hose , thermostat housing to coolant fill riser	1
19	R045146	Hose , exchanger to circulation pump	1
20	RA057027	Water Pump Assembly	1
21	RM0266	Gasket , water pump to engine block	2
22	R045102A	Hose , raw water pump to exchanger	1
23	R147014	Cooler , oil, transmission	1
24	RS3858	Clamp , hose	4
25	R045113	Hose , oil cooler to raw water pump	1
26	RA057026	Raw Water Pump	1
27	RS1026	Nut , fill tube attaching	2
28	RS2178	Washer , fill tube attaching	2
29	R090260A	Bracket , fill tube mounting	1
30	R034047	Coolant Tube Riser	1
31	RS0252	Bolt , fill tube attaching	2
32	R034006A	Cap , fill tube pressure (7 lb.)	1
NI	RK147046	Kit , Fresh Water Cooling, Direct Drive (See L591003 for Instructions and Contents)	AR
NI	RK147046A	Kit , Fresh Water Cooling, V-Drive (See L591004 for Instructions and Contents)	AR

FRESH WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 18

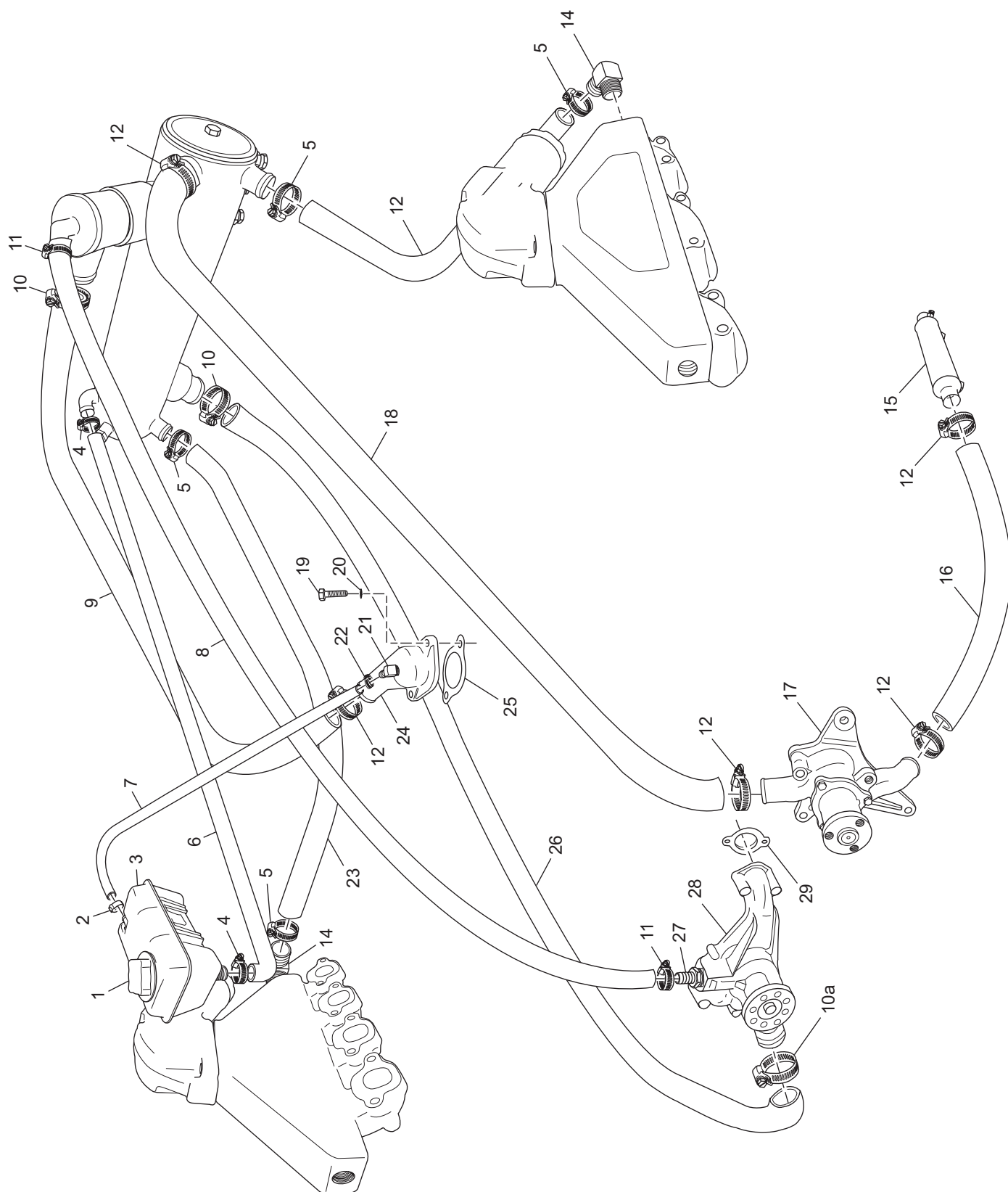


PC57B034a

**FRESH WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 18**

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R024006A	Fitting , 90 degree	2
2	RS3851	Clamp , hose	4
3	R045025	Hose , exchanger to exhaust manifold (Starboard STD)	1
4	R045144	Hose , thermostat housing to exchanger	1
5	R045124	Hose , coolant fill riser to exchanger	1
6	RS3851	Clamp , hose	2
7	RS3858	Clamp , hose	2
8	R045139	Hose , coolant fill riser to overflow bottle	1
9	R127084	Clamp , hose	2
10	RS3852	Clamp , hose	2
11	R045025	Hose , exchanger to exhaust manifold (Port STD)	1
12	RS6531	Bolt , thermostat housing attaching	2
13	RS2179	Lockwasher , thermostat housing attaching	2
14	RS3870	Clamp , hose	2
15	R025015A	Thermostat Housing	1
16	R047189	O-ring , thermostat	1
17	R026002F	Thermostat , (160 degree)	1
18	R045132	Hose , thermostat housing to coolant fill riser	1
19	R045146	Hose , exchanger to circulation pump	1
20	RA057027	Water Pump Assembly	1
21	RM0266	Gasket , water pump to engine block	2
22	R045021	Hose , oil cooler to raw water pump	1
23	RS3858	Clamp , hose	4
24	RS057031	Raw Water Pump	1
25	R045102A	Hose , raw water pump to exchanger	1
26	RS1026	Nut , fill tube attaching	2
27	RS2178	Washer , fill tube attaching	2
28	R090260A	Bracket , fill tube mounting	1
29	R034047	Coolant Tube Riser	1
30	RS0252	Bolt , fill tube attaching	2
31	R034006A	Cap , fill tube pressure (7 lb.)	1
32	R090010	Clamp , oil cooler	1
33	R147014	Cooler , oil, transmission	1
NI	RK147046	Kit , Fresh Water Cooling, Direct Drive (See L591003 for Instructions and Contents)	AR
NI	RK147046A	Kit , Fresh Water Cooling, V-Drive (See L591004 for Instructions and Contents)	AR

FRESH WATER COOLING SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 19

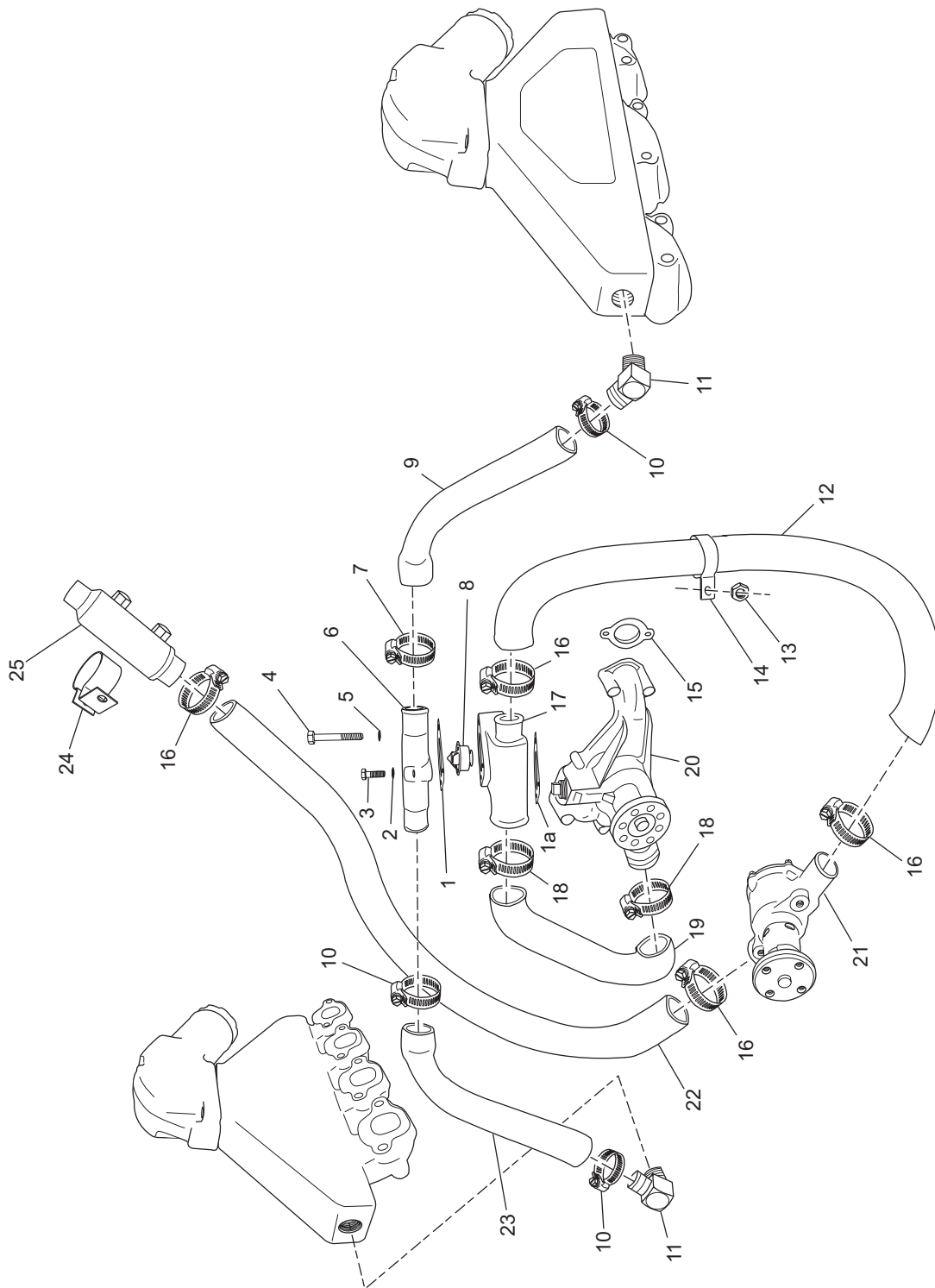


PC57B034b

FRESH WATER COOLING SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 19

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R034045	Cap , degas bottle	1
2	R127087	Clamp , hose (5/8" oetiker)	1
3	R146001	Bottle , degas	1
4	RS3854	Clamp , hose (3/4")	2
5	RS3851	Clamp , hose (1")	4
6	R045161	Hose , degas bottle to exchanger	1
7	R045132	Hose , degas bottle to water neck (1/4" X 30")	1
8	R045086	Hose , water pump to thermostat housing (5/8" X 31")	1
9	R045144	Hose , water neck to exchanger	1
10	RS3858	Clamp , hose (1 1/2")	2
10a	RS3852	Clamp , hose (1 3/4")	1
11	RS3852	Clamp , hose (5/8")	2
12	RS3858	Clamp , hose (1 1/4")	5
13	R045151	Hose , exchanger to exhaust manifold (Port)	1
14	R024006A	Fitting , 90 degree	2
15	R147014	Cooler , oil, transmission	1
16	R045159	Hose , oil cooler to raw water pump (level installation with 1.23:1 transmission)	1
16	R045152	Hose , oil cooler to raw water pump (angled installation with 1.0:1 transmission)	1
17	RA057034	Raw Water Pump	1
18	R045163	Hose , raw water pump to exchanger	1
19	RS6531	Bolt , water neck attaching	2
20	RS2179	Lockwasher , water neck attaching	2
21	R024055	Fitting , 90 degree, water neck	1
22	RS3870	Clamp , hose (1/4")	1
23	R045151	Hose , exchanger to exhaust manifold (Starboard)	1
24	R025015A	Water Neck	1
25	RM0121	Gasket , water neck	1
26	R045146	Hose , exchanger to circulation pump	1
27	R024217	Fitting , straight, barbed; water pump	2
28	RA057027	Water Pump Assembly	1
29	RM0266	Gasket , water pump to engine block	2
NI	RK147050	Kit , Fresh Water Cooling, Direct Drive (See L591001 for Instructions and Contents)	AR
NI	RK147050A	Kit , Fresh Water Cooling, V-Drive (See L591002 for Instructions and Contents)	AR

RAW WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 20

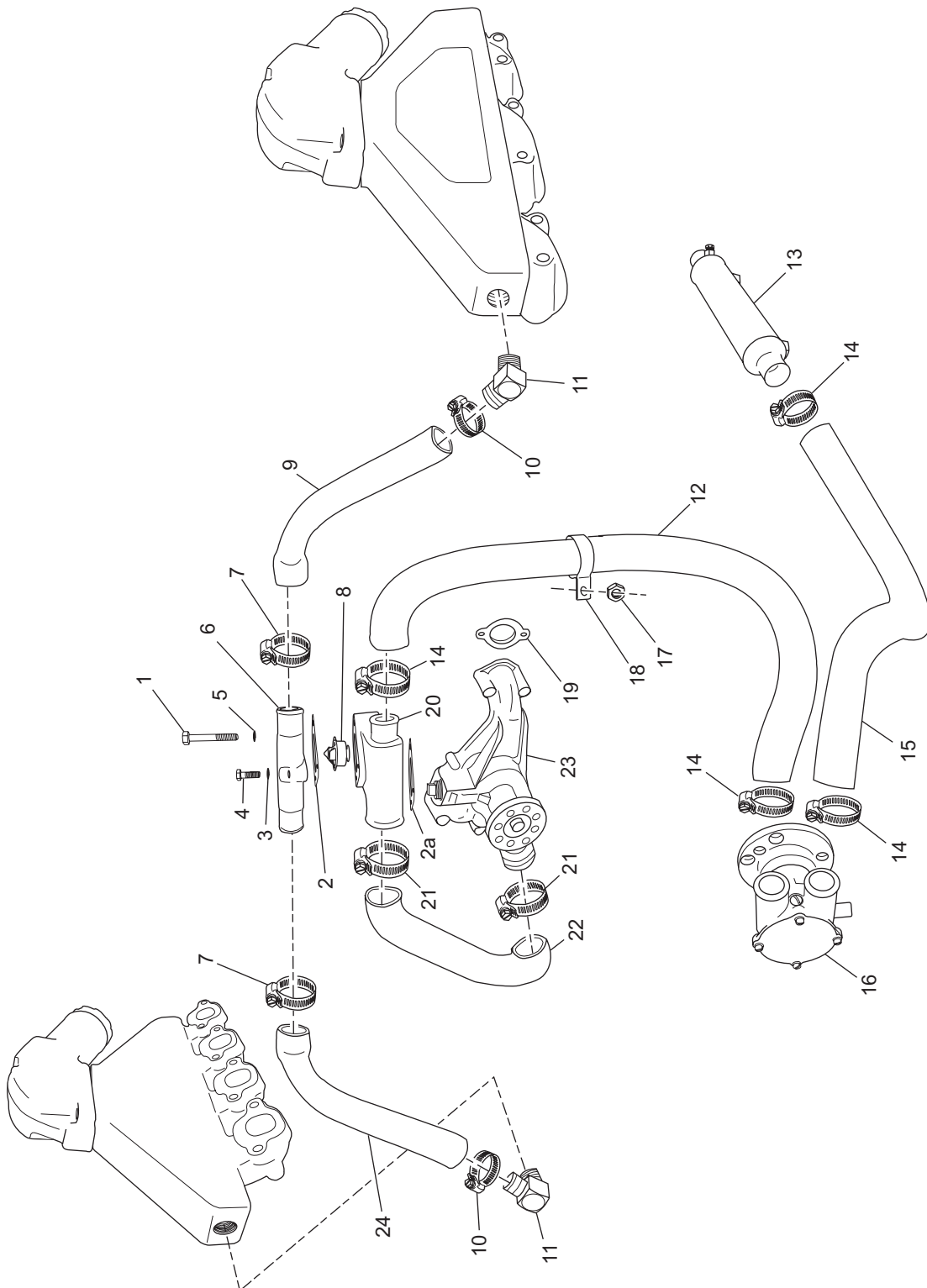


PC57B019

RAW WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 20

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RM0258	Gasket , upper fill riser to lower fill riser / lower to intake	1
1a	RM0121	Gasket , lower to intake	1
2	93920000	Lockwasher , attaching bolt	1
3	98223035	Bolt , upper fill riser to lower fill riser attaching	1
4	98333080	Bolt , upper fill riser to lower fill riser attaching	2
5	RS2179	Lockwasher , attaching bolt	2
6	R025033	Fill Riser , upper	1
7	RS3858	Clamp , hose	2
8	R026002	Thermostat , coolant (160 degree)	1
9	R045107	Hose , fill riser to exhaust manifold (port)	1
10	RS3851	Clamp , hose	2
11	R024006A	Fitting , 90 degree	2
12	R045135A	Hose , raw water pump to fill riser	1
13	RS1527	Nut , strap clamp attaching	1
14	R090082	Clamp , strap	1
15	RM0203	Gasket , water pump to engine block	2
16	RS3858	Clamp , hose	4
17	R025031	Fill Riser , lower	1
18	RS3852	Clamp , hose	2
19	R045048	Hose , fill riser to water pump	1
20	RA057027	Water Pump Assembly	1
21	RA057031	Raw Water Pump Assembly	1
22	R045021F	Hose , oil cooler to raw water pump	1
23	R045107	Hose , fill riser to exhaust manifold (starboard)	1
24	R090010	Clamp , oil cooler mounting	1
25	R147014	Cooler , oil, transmission	1
NI	RK147046	Kit , Fresh Water Cooling, Direct Drive (See L591003 for Instructions and Contents)	AR
NI	RK147046A	Kit , Fresh Water Cooling, V-Drive (See L591004 for Instructions and Contents)	AR

RAW WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 21

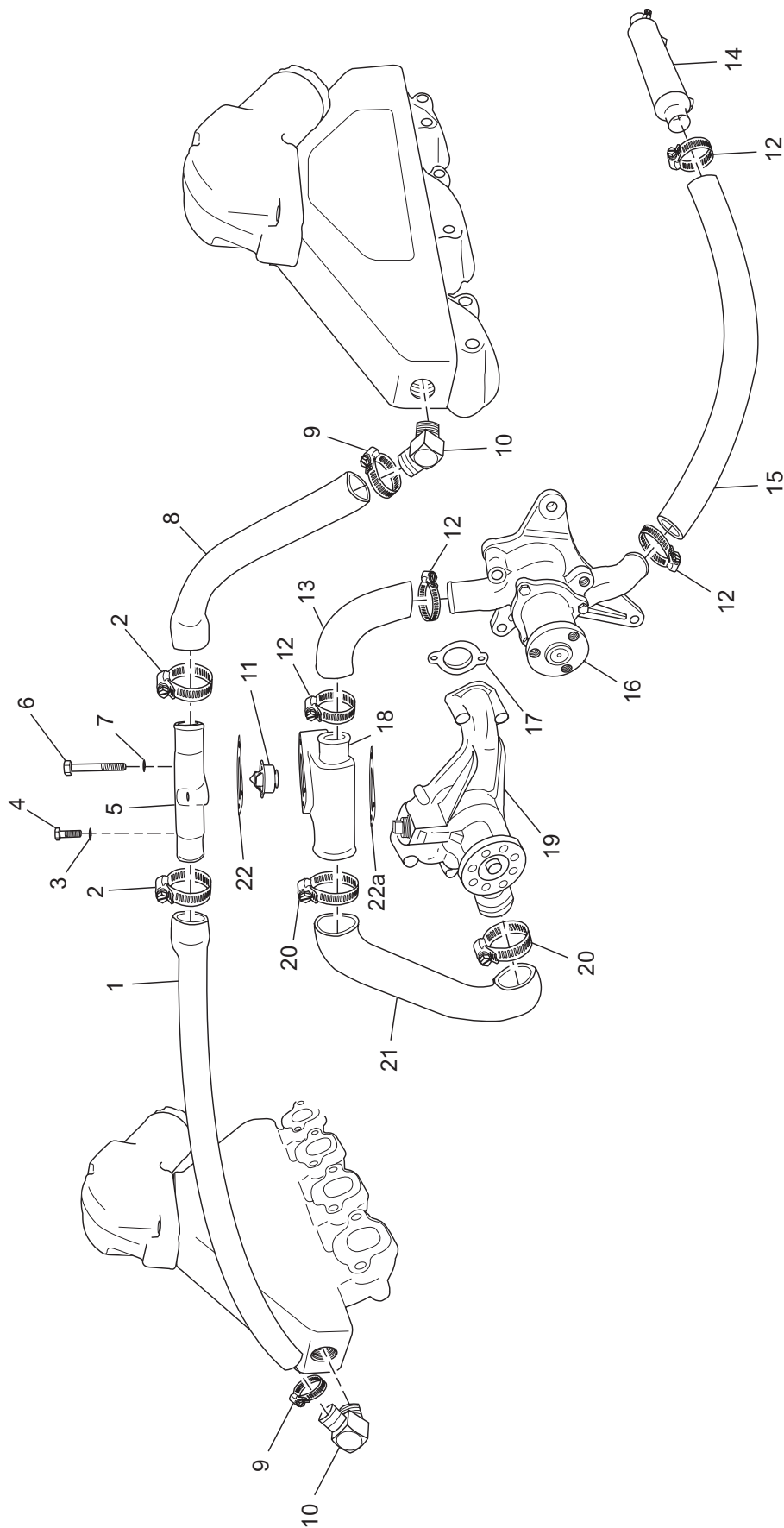


PC57B019a

**RAW WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 21**

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	90205200	Bolt , upper fill riser to lower fill riser attaching	2
2	RM0258	Gasket , upper fill riser to lower fill riser / lower to intake	1
2a	RM0121	Gasket , lower to intake	1
3	93920000	Lockwasher , attaching bolt	1
4	98223035	Bolt , upper fill riser to lower fill riser attaching	1
5	RS2180	Lockwasher , attaching bolt	2
6	R025033	Fill Riser , upper	1
7	RS3858	Clamp , hose	2
8	R026002	Thermostat , coolant (160 degree)	1
9	R045107	Hose , fill riser to exhaust manifold (port)	1
10	RS3851	Clamp , hose	2
11	R024006A	Fitting , 90 degree	2
12	R045097	Hose , raw water pump to fill riser	1
13	R147014	Cooler , oil, transmission	1
14	RS3858	Clamp , hose	4
15	R045113	Hose , oil cooler to raw water pump	1
16	RA057026	Raw Water Pump Assembly	1
17	RS1527	Nut , strap clamp attaching	1
18	R090082	Clamp , strap	1
19	RM0203	Gasket , water pump to engine block	2
20	R025031	Fill Riser , lower	1
21	RS3852	Clamp , hose	2
22	R045048	Hose , fill riser to water pump	1
23	RA057027	Water Pump Assembly	1
24	R045107	Hose , fill riser to exhaust manifold (starboard)	1
NI	RK147046	Kit , Fresh Water Cooling, Direct Drive (See L591003 for Instructions and Contents)	AR
NI	RK147046A	Kit , Fresh Water Cooling, V-Drive (See L591004 for Instructions and Contents)	AR

RAW WATER COOLING SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 22

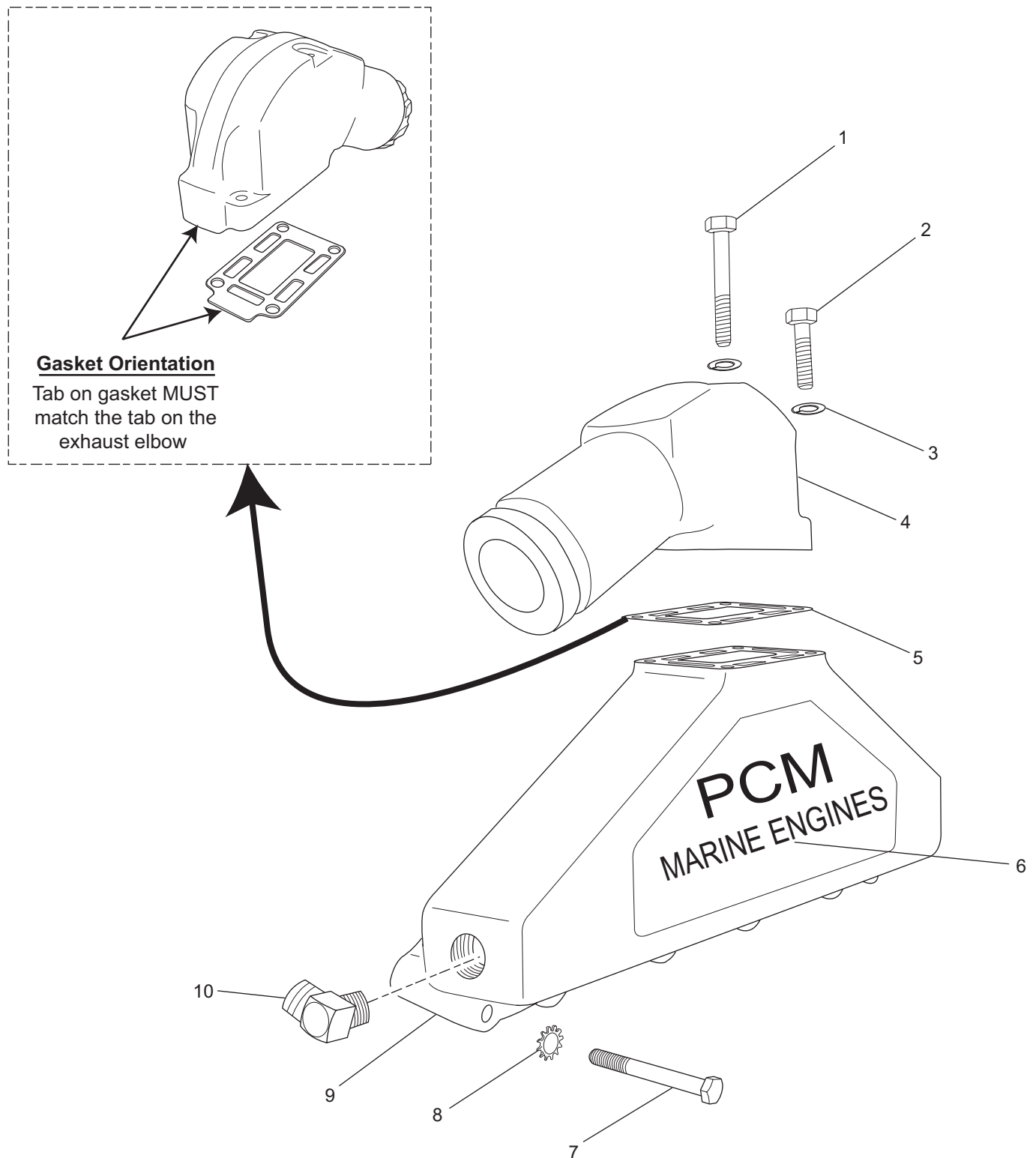


PC57B019b

RAW WATER COOLING SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 22

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R045107	Hose , fill riser to exhaust manifold (starboard)	1
2	RS3858	Clamp , hose	6
3	93920000	Lockwasher , attaching bolt	1
4	98223035	Bolt , upper fill riser to lower fill riser attaching	1
5	R025033	Fill Riser , upper	1
6	90205200	Bolt , upper fill riser to lower fill riser attaching	2
7	RS2180	Lockwasher , attaching bolt	2
8	R045107	Hose , fill riser to exhaust manifold (port)	1
9	RS3851	Clamp , hose	2
10	R024006A	Fitting , 90 degree	2
11	R026002	Thermostat , coolant (160 degree)	1
12	RS3858	Clamp , hose (1 1/4")	3
13	R045160	Hose , raw water pump to fill riser	1
14	R147014	Cooler , oil, transmission	1
15	R045159	Hose , oil cooler to raw water pump (level installation with 1.23:1 transmission)	1
15	R045152	Hose , oil cooler to raw water pump (angled installation with 1.0:1 transmission)	1
16	RA057034	Raw Water Pump Assembly	1
17	RM0203	Gasket , water pump to engine block	2
18	R025031	Fill Riser , lower	1
19	RA057027	Water Pump Assembly	1
20	RS3852	Clamp , hose	2
21	R045048	Hose , fill riser to water pump	1
22	RM0258	Gasket , upper fill riser to lower fill riser	1
22a	RM0121	Gasket , lower fill riser to intake manifold	1
NI	RK147050	Kit , Fresh Water Cooling, Direct Drive (See L591001 for Instructions and Contents)	AR
NI	RK147050A	Kit , Fresh Water Cooling, V-Drive (See L591002 for Instructions and Contents)	AR

EXHAUST MANIFOLD and COMPONENTS - FIGURE 23

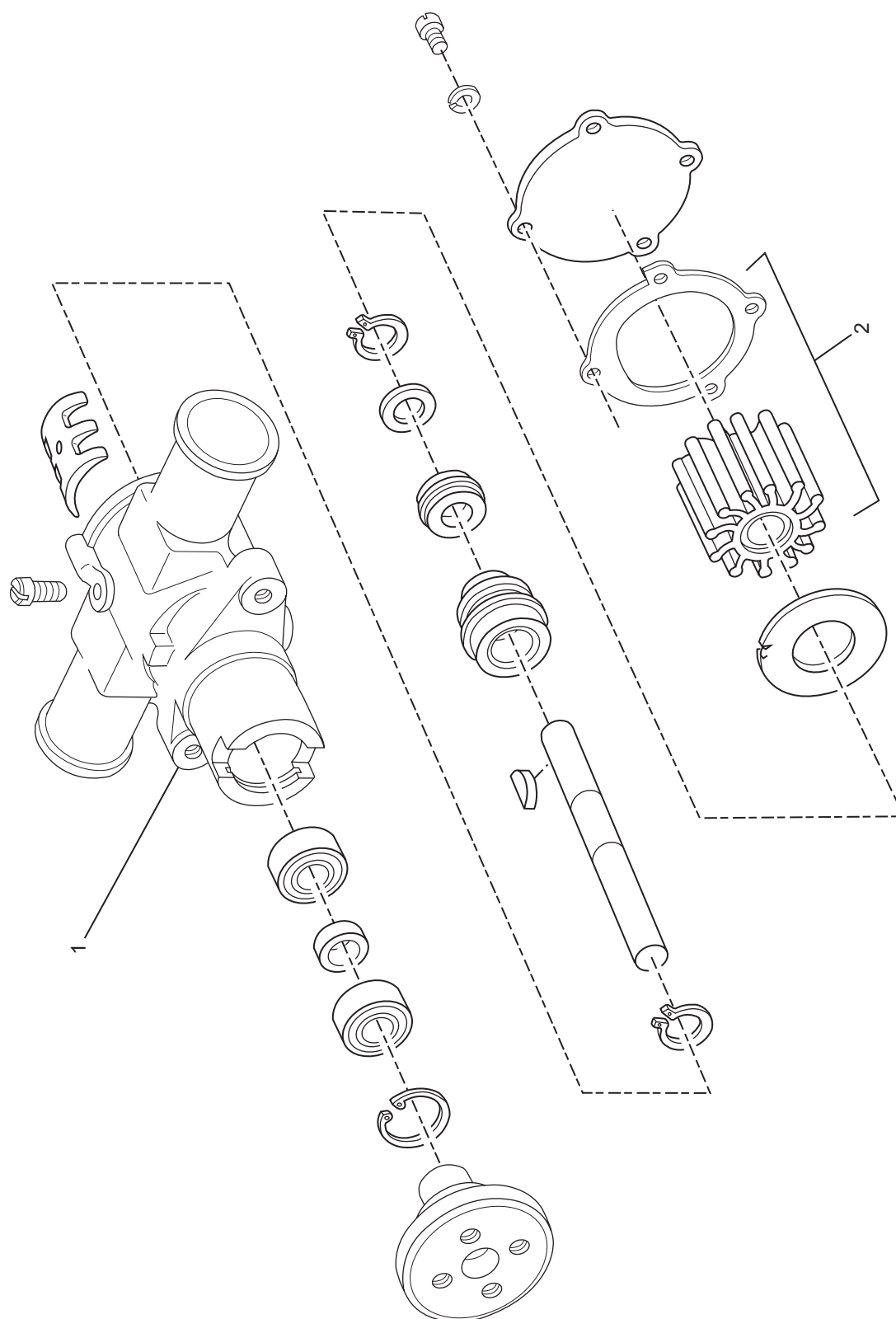


PC57B026

EXHAUST MANIFOLD and COMPONENTS - FIGURE 23

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS0387	Bolt , exhaust elbow attaching (long)	4
2	RS0285	Bolt , exhaust elbow attaching (short)	4
3	RS2179	Lockwasher , exhaust elbow attaching bolt	8
4	R029011	Exhaust Elbow Assembly	2
5	RM0002	Gasket , manifold to exhaust elbow	2
6	R143002E	Decal , exhaust manifold	2
7	RS0454	Bolt , manifold to cylinder head attaching	16
8	RS2425	Starwasher , manifold attaching bolt	16
9	R028009	Exhaust Manifold Assembly	2
10	R024006A	Fitting , 90 degree	2
NI	RP173091	Kit , Exhaust Service	AR
<p>*NOTE: See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.</p>			

RAW WATER COOLING PUMP (BELT-DRIVEN) - FIGURE 24

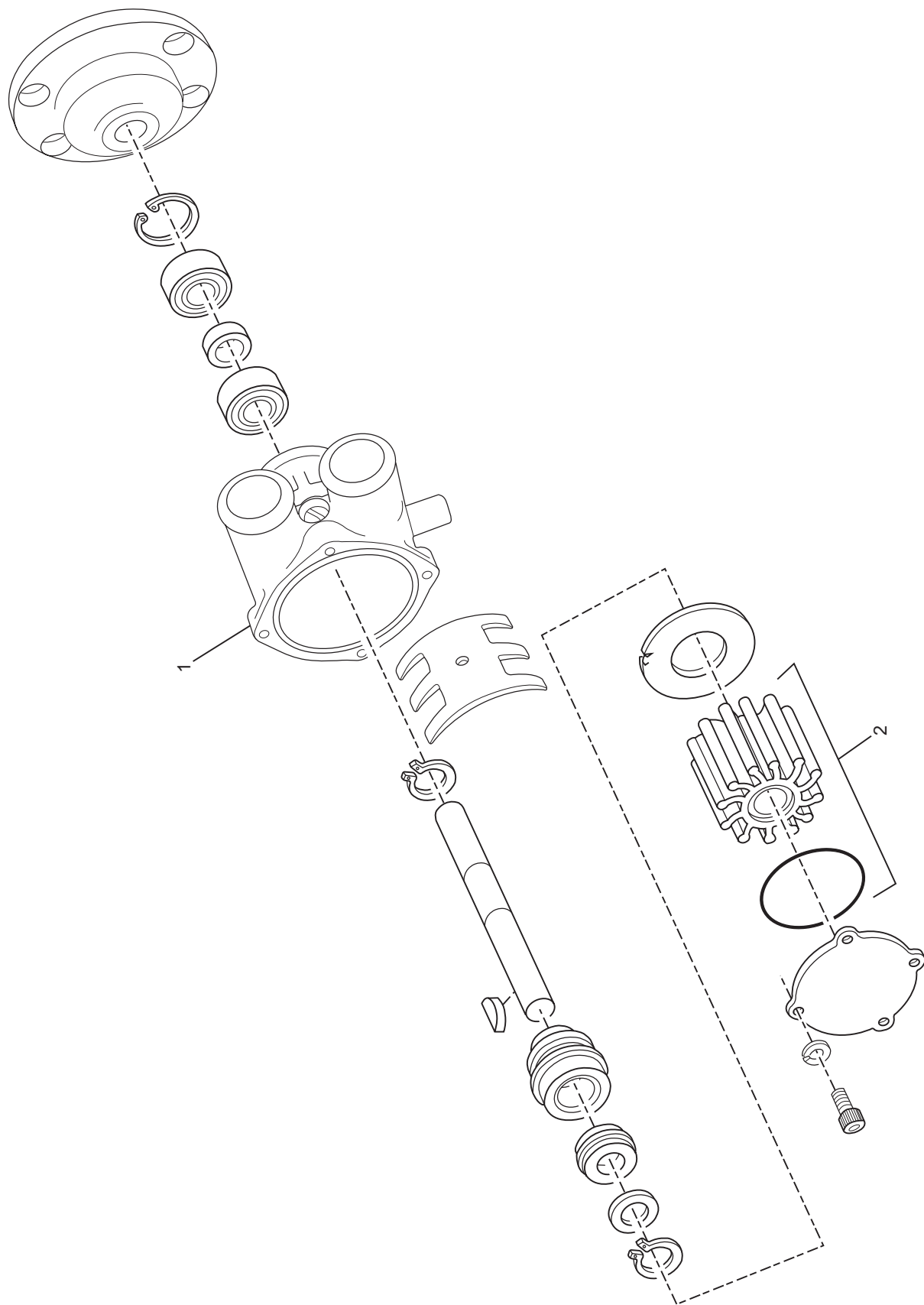


PC57B027

RAW WATER COOLING PUMP (BELT-DRIVEN) - FIGURE 24

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA057031	Raw Water Pump Assembly	1
2	RP061017	Kit , impeller	1

RAW WATER COOLING PUMP (CRANK-DRIVEN) - FIGURE 25

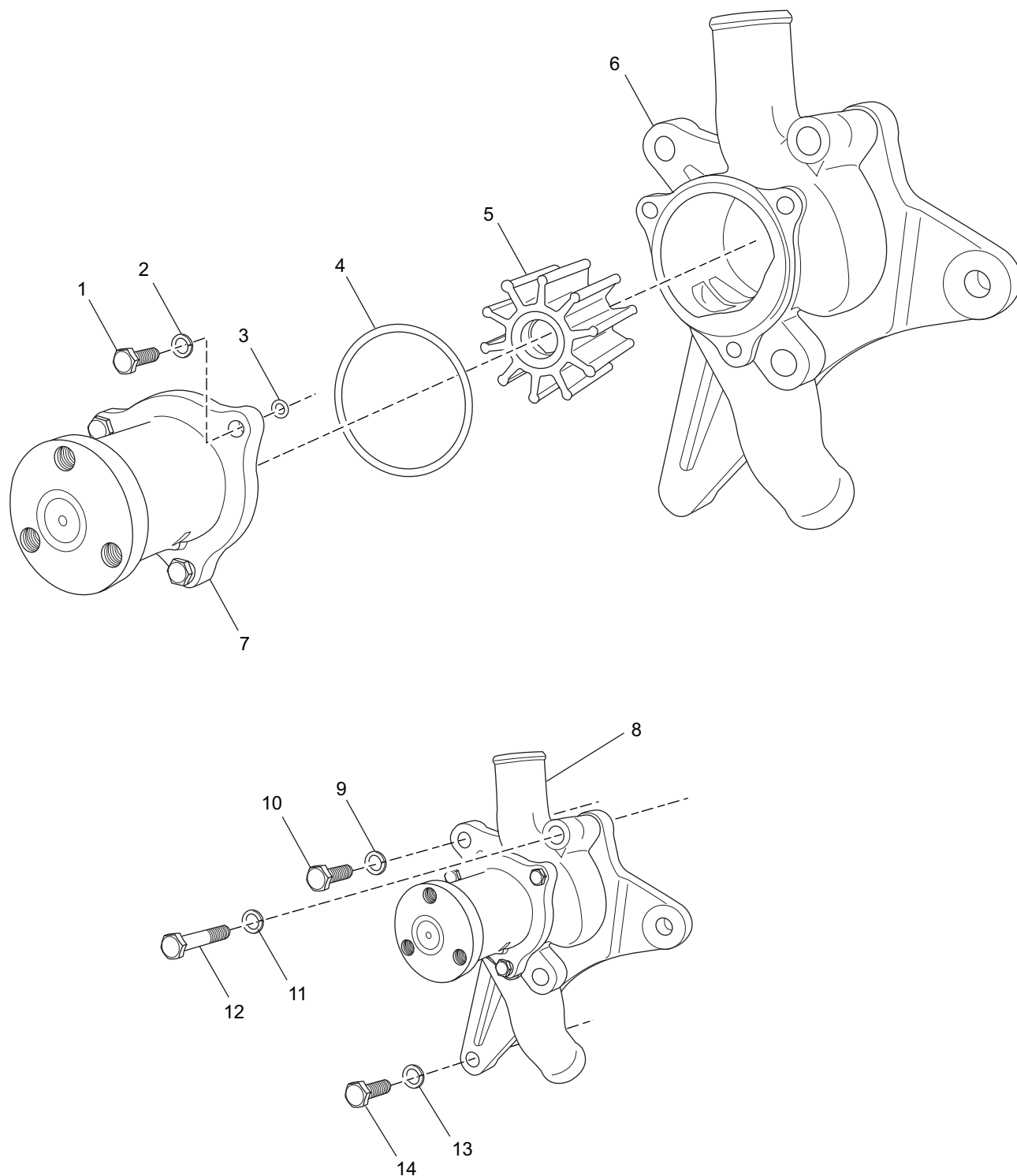


PC57B028

RAW WATER COOLING PUMP (CRANK-DRIVEN) - FIGURE 25

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA057026	Raw Water Pump Assembly	1
2	RP061017	Kit , impeller	1

RAW WATER COOLING PUMP (SERPENTINE) - FIGURE 26

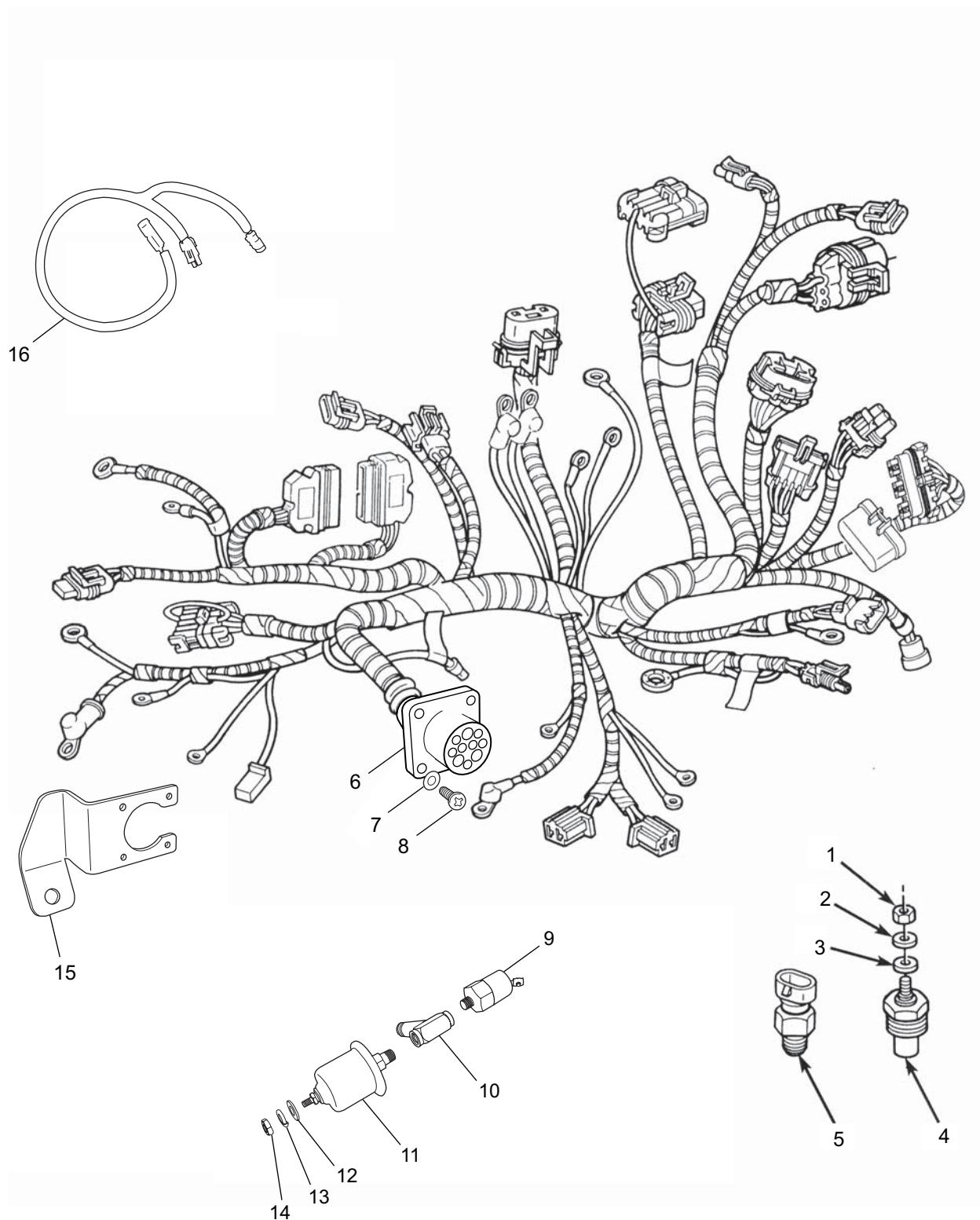


PC57B028a

RAW WATER COOLING PUMP (SERPENTINE) - FIGURE 26

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 Kit (includes O-rings and impeller)	1
6	R057034	Housing , raw water pump	1
7	RA134071	Bearing Housing Assembly	1
8	RA057034	Raw Water Pump Assembly	1
9	RS2180	Lockwasher , raw water pump attaching; upper left flange	1
10	RS0306	Bolt , raw water pump attaching; upper left flange	1
11	RS2180	Lockwasher , raw water pump attaching; upper right flange	1
12	RS0454	Bolt , raw water pump attaching; upper right flange	1
13	RS2180	Lockwasher , raw water pump attaching; lower left flange	1
14	RS0306	Bolt , raw water pump attaching; lower left flange	1

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 27

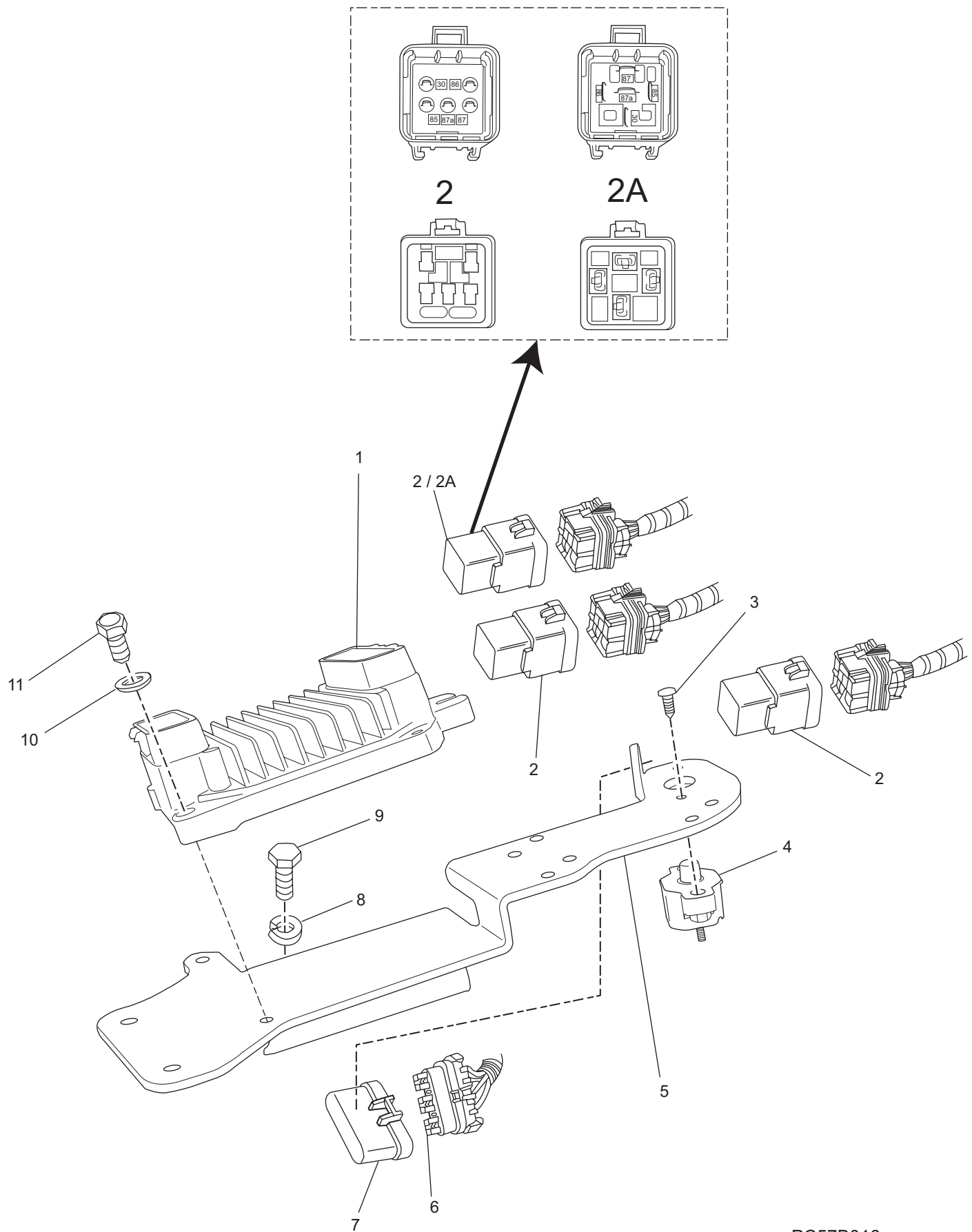


PC57B025

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 27

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS1540	Nut , sender terminal	1
2	RS2197	Lockwasher , sender terminal	1
3	RS2746	Washer , sender terminal	1
4	R020003	Sender , temperature	1
5	R020019	Sensor , engine coolant temperature (ECT)	1
6	RA121079A	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	R020015A	Switch , oil pressure	1
10	R024205	Tee , sender attaching	1
11	R020001	Sender , oil pressure	1
12	RS2746	Washer , sender terminal	1
13	RS2197	Lockwasher , sender terminal	1
14	RS1540	Nut , sender terminal	1
15	R090251	Bracket , main harness attaching	1
16	RA121062C	Harness , jumper (V-drive applications)	AR
N.I.	R153018A	100 amp Fused Wire , starter to circuit breaker	1

ECM and RELAYS - FIGURE 28

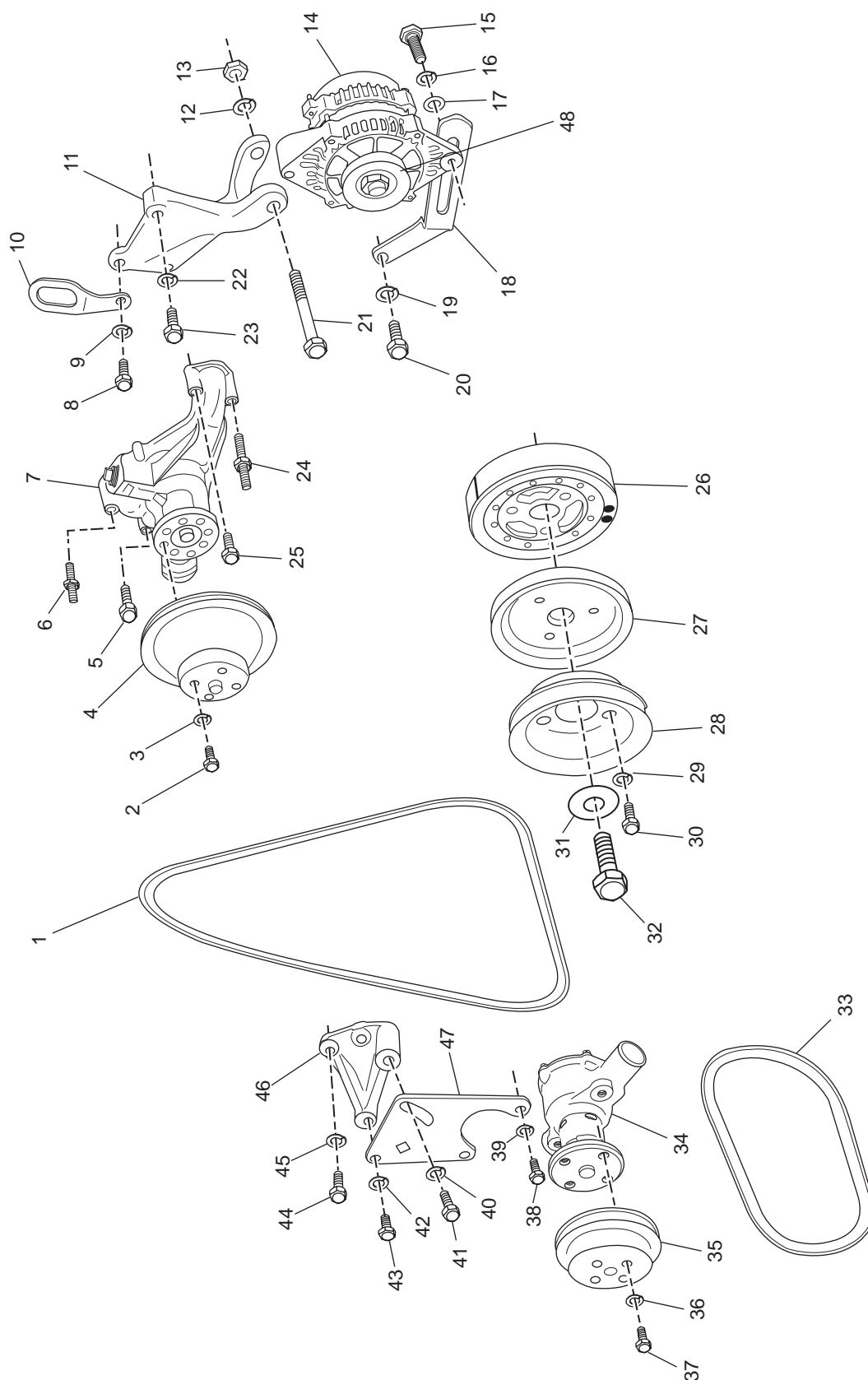


PC57B016

ECM and RELAYS - FIGURE 28

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R116019B	Engine Control Module	1
2	R130012	Relay , fuel pump, ignition, starter (s/n 420000 thru 440611)	3
2A	R130011A	Relay , fuel pump, ignition, starter (s/n 440612 and above)	3
3	RS5084	Bolt , circuit breaker mounting	2
4	R153006C	Circuit Breaker Assembly (60 amp)	1
5	R090250	Bracket , ECM/relay mounting	1
6	R153017B	Fuses , 20 amp	3
7	R126014	Cover , fuse holder	1
8	93920000	Lockwasher , bracket attaching bolt	2
9	98223016	Bolt , bracket attaching	2
10	RS2178	Washer , ECM attaching	2
11	RS0254	Bolt , ECM attaching	2

ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE 29

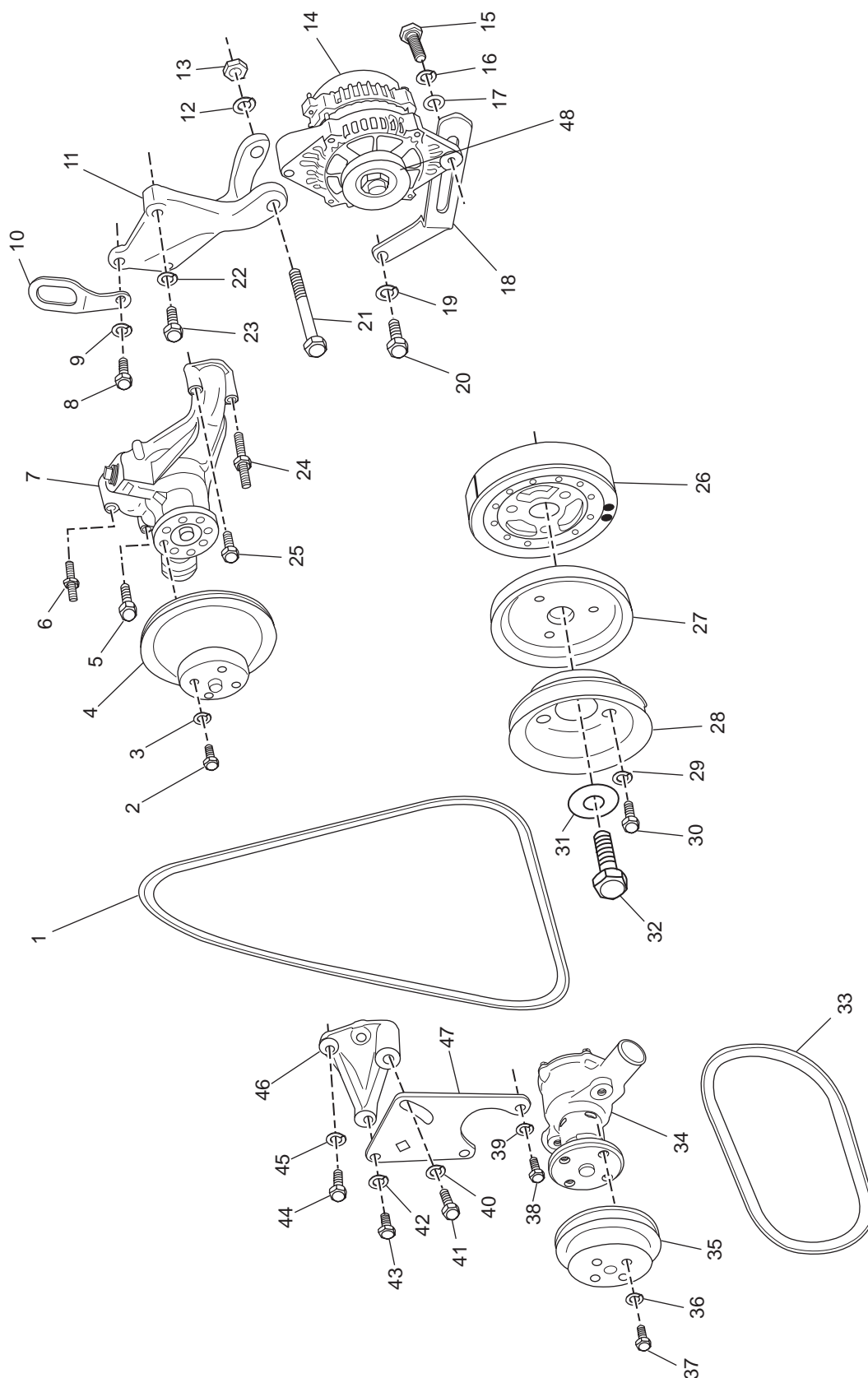


PC57B017

ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE 29

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066008	Belt , alternator drive	1
2	RS0775	Bolt , water pump pulley attaching	4
3	RS2179	Lockwasher , water pump pulley attaching bolt	4
4	R065049	Pulley , water pump	1
5	90305275	Bolt , water pump mounting	1
6	R095026	Stud , water pump mounting	1
7	RA057027	Water Pump Assembly	1
8	RS0305	Bolt , lift bracket attaching	2
9	RS2180	Lockwasher , lift bracket attaching bolt	2
10	R042008	Bracket , lift	1
11	R090075	Bracket , alternator mounting	1
12	RS2180	Lockwasher , alternator mounting	1
13	RS1028	Nut , alternator mounting	1
14	RA097007B	Alternator Assembly	1
15	RS6531	Bolt , alternator mounting	1
16	RS2180	Lockwasher , alternator mounting bolt	1
17	RS2673	Washer , alternator mounting bolt	1
18	R099009	Bracket , alternator mounting (adj. strap)	1
19	RS2180	Lockwasher , alternator bracket attaching bolt	1
20	RS0304	Bolt , alternator bracket attaching	1
21	RS0315	Bolt , alternator mounting	1
22	RS2180	Lockwasher , alternator bracket attaching bolt	1
23	RS0306	Bolt , alternator bracket attaching	1
24	R095026	Stud , water pump mounting	1
25	90305175	Bolt , water pump mounting	1
26	R064010A	Balancer , crankshaft	1
27	R065048	Pulley , alternator drive belt	1
28	R065046	Pulley , raw water pump drive belt	1
29	RS2180	Lockwasher , pulleys to crankshaft balancer bolt	3
30	90315100	Bolt , pulleys to crankshaft balancer	3
31	R096074	Washer , crankshaft balancer	1
32	R009091	Bolt , crankshaft balancer	1
33	R066026	Belt , raw water pump drive	1
34	RA057031	Raw Water Pump Assembly	1
35	R065047	Pulley , raw water pump	1
36	RS2179	Lockwasher , raw water pump pulley attaching bolt	3
37	RS0775	Bolt , raw water pump pulley attaching	3
38	RS0282	Bolt , raw water pump mounting	2

ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE 29

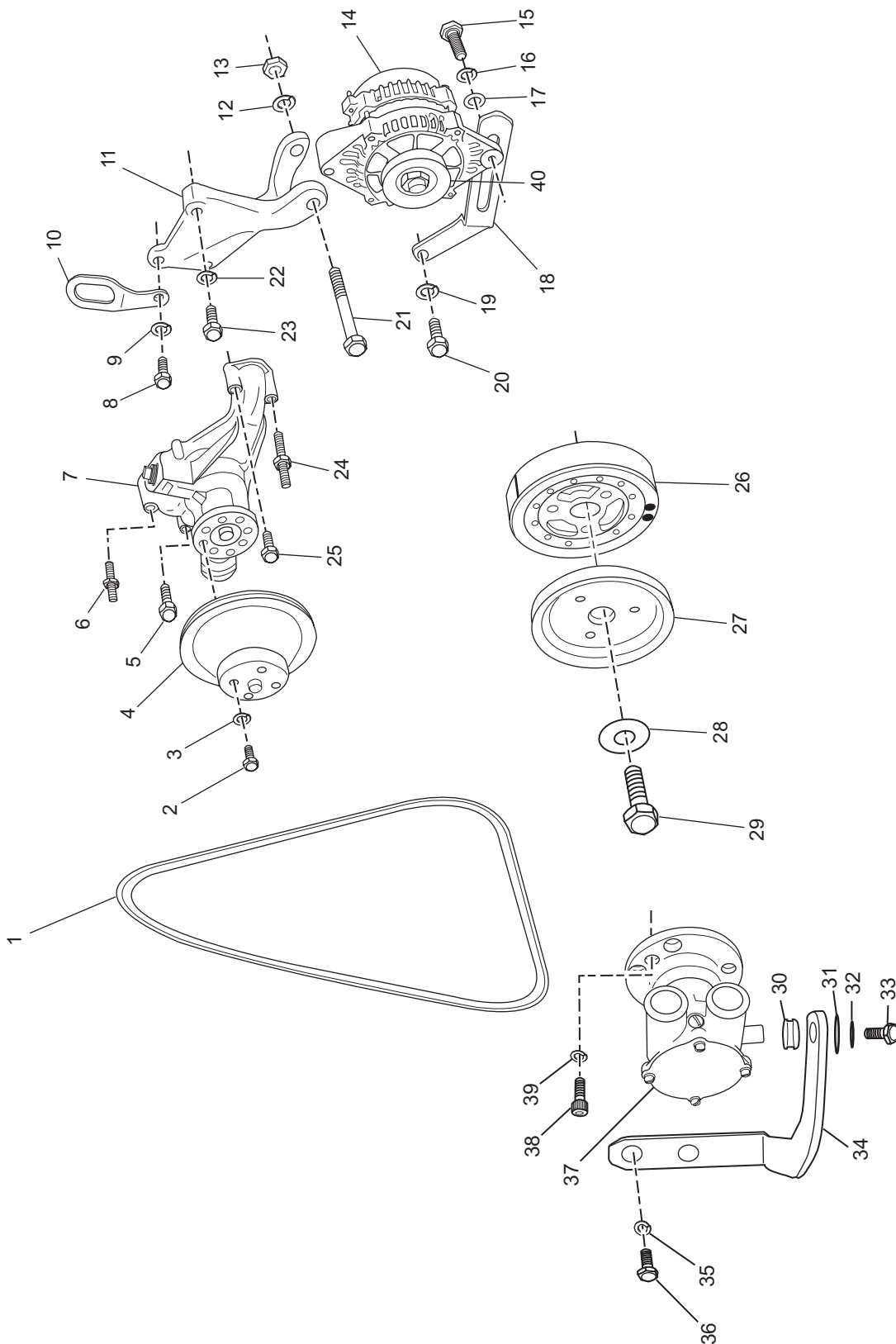


PC57B017

ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE 29

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
39	RS2179	Lockwasher , raw water pump mounting bolt	2
40	RS2181	Lockwasher , bracket attaching bolt	1
41	RS0327	Bolt , bracket attaching	1
42	RS2181	Lockwasher , bracket attaching bolt	1
43	RS0327	Bolt , bracket attaching	1
44	RS0307	Bolt , bracket attaching	2
45	RS2180	Lockwasher , bracket attaching bolt	2
46	R090264	Bracket , raw water pump	1
47	R090263	Bracket , raw water pump	1
48	R065038	Pulley , alternator	1

ACCESSORY DRIVE SYSTEM COMPONENTS (CRANK-MOUNTED RAW WATER PUMP) -
FIGURE 30

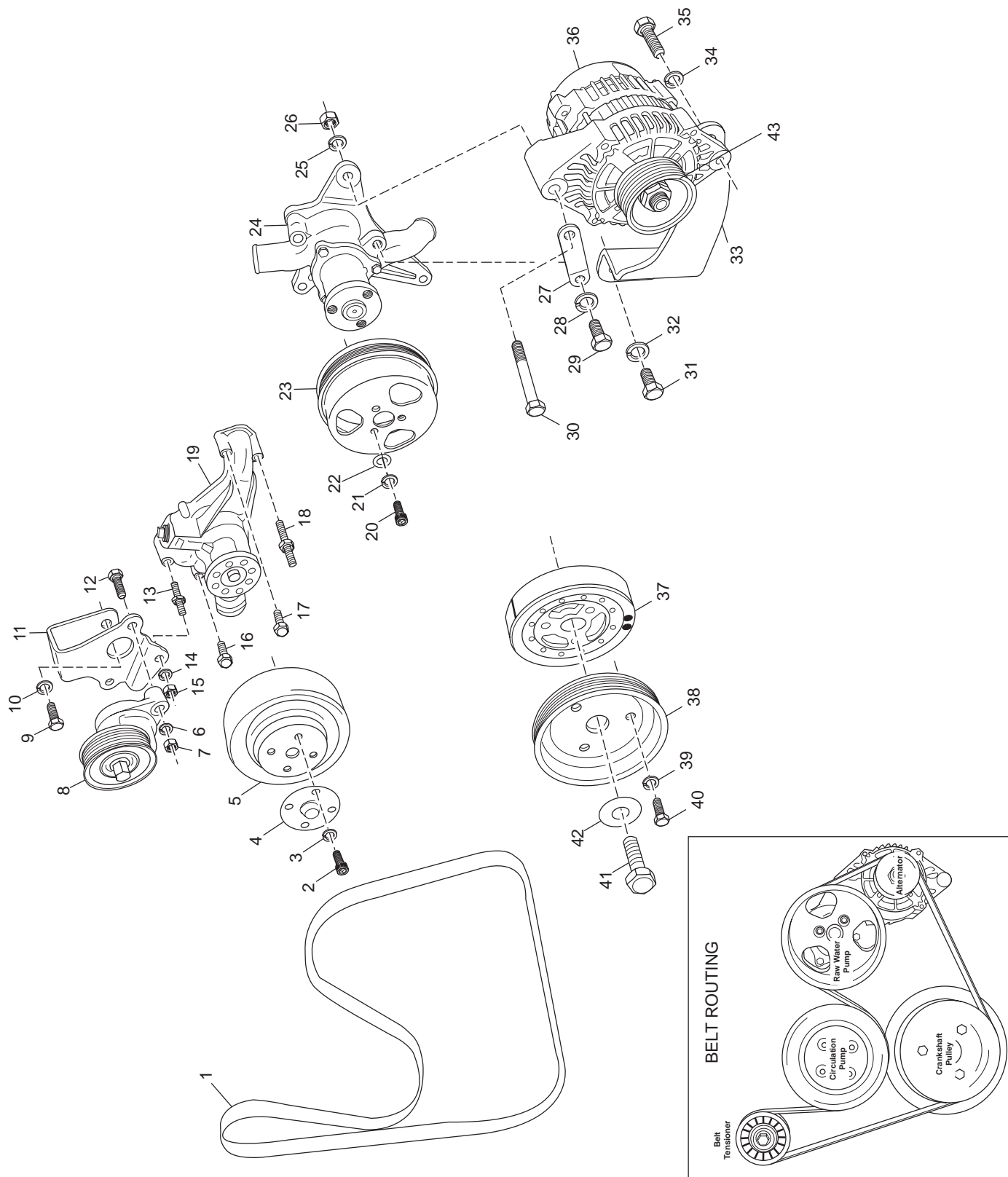


PC57B029

**ACCESSORY DRIVE SYSTEM COMPONENTS (CRANK-MOUNTED RAW WATER PUMP) -
FIGURE 30**

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066008	Belt , alternator drive	1
2	RS0775	Bolt , water pump pulley attaching	4
3	RS2179	Lockwasher , water pump pulley attaching bolt	4
4	R065049	Pulley , water pump	1
5	90305275	Bolt , water pump mounting	1
6	R095026	Stud , water pump mounting	1
7	RA057027	Water Pump Assembly	1
8	RS0305	Bolt , lift bracket attaching	2
9	RS2180	Lockwasher , lift bracket attaching bolt	2
10	R042008	Bracket , lift	1
11	R090075	Bracket , alternator mounting	1
12	RS2180	Lockwasher , alternator mounting	1
13	RS1028	Nut , alternator mounting	1
14	RA097007B	Alternator Assembly	1
15	RS6531	Bolt , alternator mounting	1
16	RS2179	Lockwasher , alternator mounting bolt	1
17	RS2673	Washer , alternator mounting bolt	1
18	R099009	Bracket , alternator mounting (adj. strap)	1
19	RS2180	Lockwasher , alternator bracket attaching bolt	1
20	RS0304	Bolt , alternator bracket attaching	1
21	RS0315	Bolt , alternator mounting	1
22	RS2180	Lockwasher , alternator bracket attaching bolt	1
23	RS0306	Bolt , alternator bracket attaching	1
24	R095026	Stud , water pump mounting	1
25	90305275	Bolt , water pump mounting	1
26	R064010A	Balancer , crankshaft	1
27	R065045	Pulley , alternator drive belt	1
28	R096074	Washer , crankshaft balancer	1
29	R009091	Bolt , crankshaft balancer	1
30	R094038	Grommet , rubber	1
31	RS2673	Flat Washer , mounting bolt	1
32	RS2179	Lock Washer , mounting bolt	1
33	RS0280	Bolt , raw water pump mounting	1
34	R090177A	Bracket , raw water pump mounting	1
35	RS2181	Washer , raw water pump mounting bracket	2
36	RS0302	Bolt , raw water pump mounting bracket	2
37	RA057026	Raw Water Pump Assembly	1
38	R009161	Bolt , raw water pump-to-balancer mounting	3
39	RS2180	Lockwasher , raw water pump-to-balancer mounting	3
40	R065038	Pulley , alternator	1

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 31

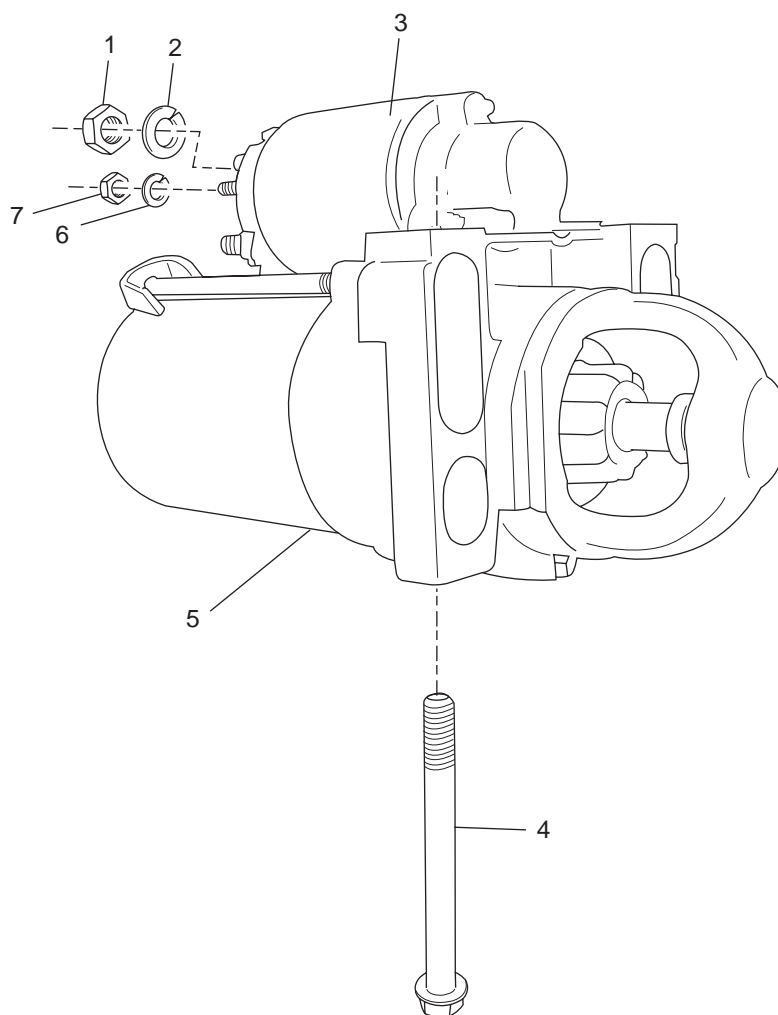


PC57B029a

ACCESSORY DRIVE SYSTEM COMPONENTS (SERPENTINE RAW WATER PUMP) - FIGURE 31

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R066028	Belt , serpentine drive	1
2	90274075	Bolt , water pump pulley attaching	4
3	RS2307	Lockwasher , water pump pulley attaching bolt	4
4	R096147	Cover , water pump pulley	1
5	R065053	Pulley , water pump (5.7L: Red)	1
5	R065053A	Pulley , water pump (5.0L: Black)	1
6	RS2180	Lockwasher , belt tensioner attaching	2
7	RS1028	Nut , belt tensioner attaching	2
8	RA068001	Belt Tensioner Assembly	1
9	RS0304	Bolt , tensioner bracket attaching	1
10	RS2180	Lockwasher , tensioner bracket attaching	1
11	R090287	Bracket , belt tensioner mounting	1
12	RS0308	Bolt , belt tensioner attaching	2
13	R095026	Stud , water pump mounting	1
14	RS2179	Lockwasher , belt tensioner attaching	2
15	RS1527	Nut , belt tensioner attaching	2
16	90305275	Bolt , water pump mounting	1
17	90305275	Bolt , water pump mounting	1
18	R095026	Stud , water pump mounting	1
19	RA057027	Water Pump Assembly	1
20	99335016	Bolt , RWP pulley attaching	3
21	93934000	Lockwasher , RWP pulley attaching	3
22	92934000	Flatwasher , RWP pulley attaching	3
23	R065052	Pulley , raw water pump	1
24	RA057027	Raw Water Pump Assembly	1
25	RS2180	Lockwasher , alternator mounting bolt	1
26	RS1028	Nut , alternator mounting bolt	1
27	R090289	Bracket , alternator mounting	1
28	RS2180	Lockwasher , alternator mounting bolt	1
29	RS0304	Bolt , alternator mounting	1
30	RS0454	Bolt , alternator mounting	1
31	RS0304	Bolt , alternator bracket attaching	1
32	RS2180	Lockwasher , alternator bracket attaching bolt	1
33	R090288	Bracket , alternator mounting	1
34	RS7069	Lockwasher , alternator mounting bolt	1
35	RS6738	Bolt , alternator mounting	1
36	RA097007C	Alternator Assembly	1
37	R064010A	Balancer , crankshaft	1
38	R065051	Pulley , crank, serpentine	1
39	RS2180	Lockwasher , drive belt pulley attaching bolt	3
40	90315100	Bolt , drive belt pulley attaching	3
41	R009091	Bolt , crankshaft balancer	1
42	R096074	Washer , crankshaft balancer	1
43	R065055	Pulley , Alternator (5.X/6.0), serpentine	1

STARTER ASSEMBLY COMPONENTS - FIGURE 32



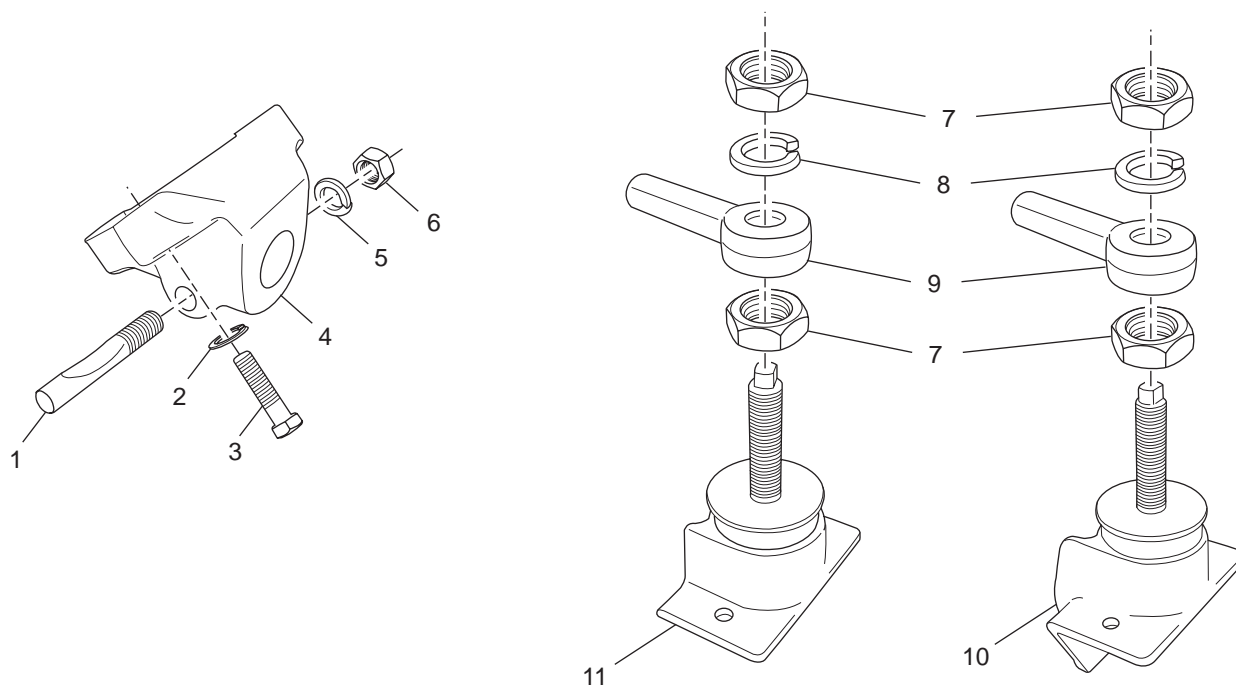
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STARTER ASSEMBLY COMPONENTS - FIGURE 32

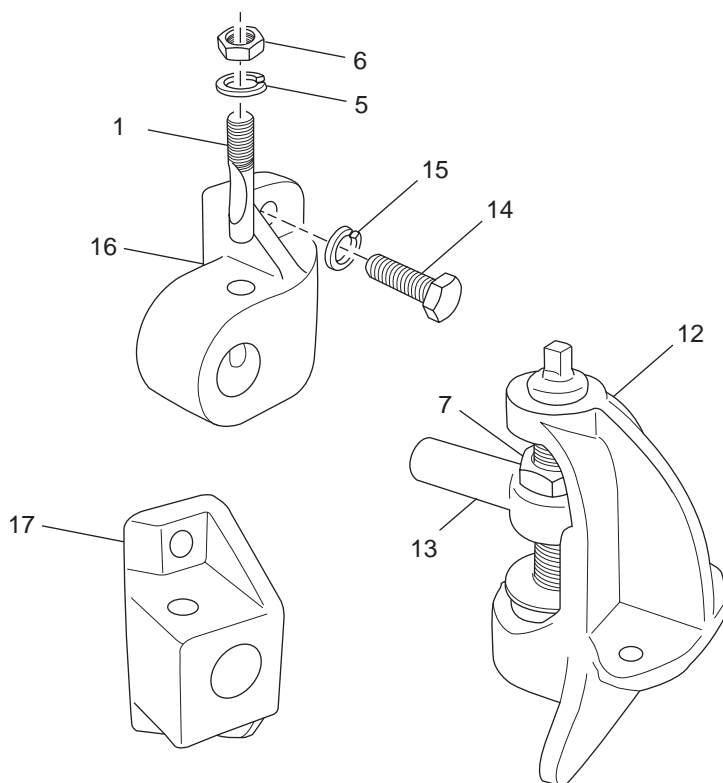
ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RS7018	Nut , solenoid terminal	1
2	RS7080	Lockwasher , solenoid terminal	1
3	RU0050B	Solenoid , starter	1
4	R009167	Bolt , starter mounting	2
5	RA122015	Starter Motor Assembly	1
6	93003000	Lockwasher , solenoid terminal	1
7	RS7036	Nut , solenoid terminal	1

ENGINE and TRANSMISSION MOUNTS - FIGURE 33

Engine Mount Group
Front Mount



Engine Mount Group
Rear Mount

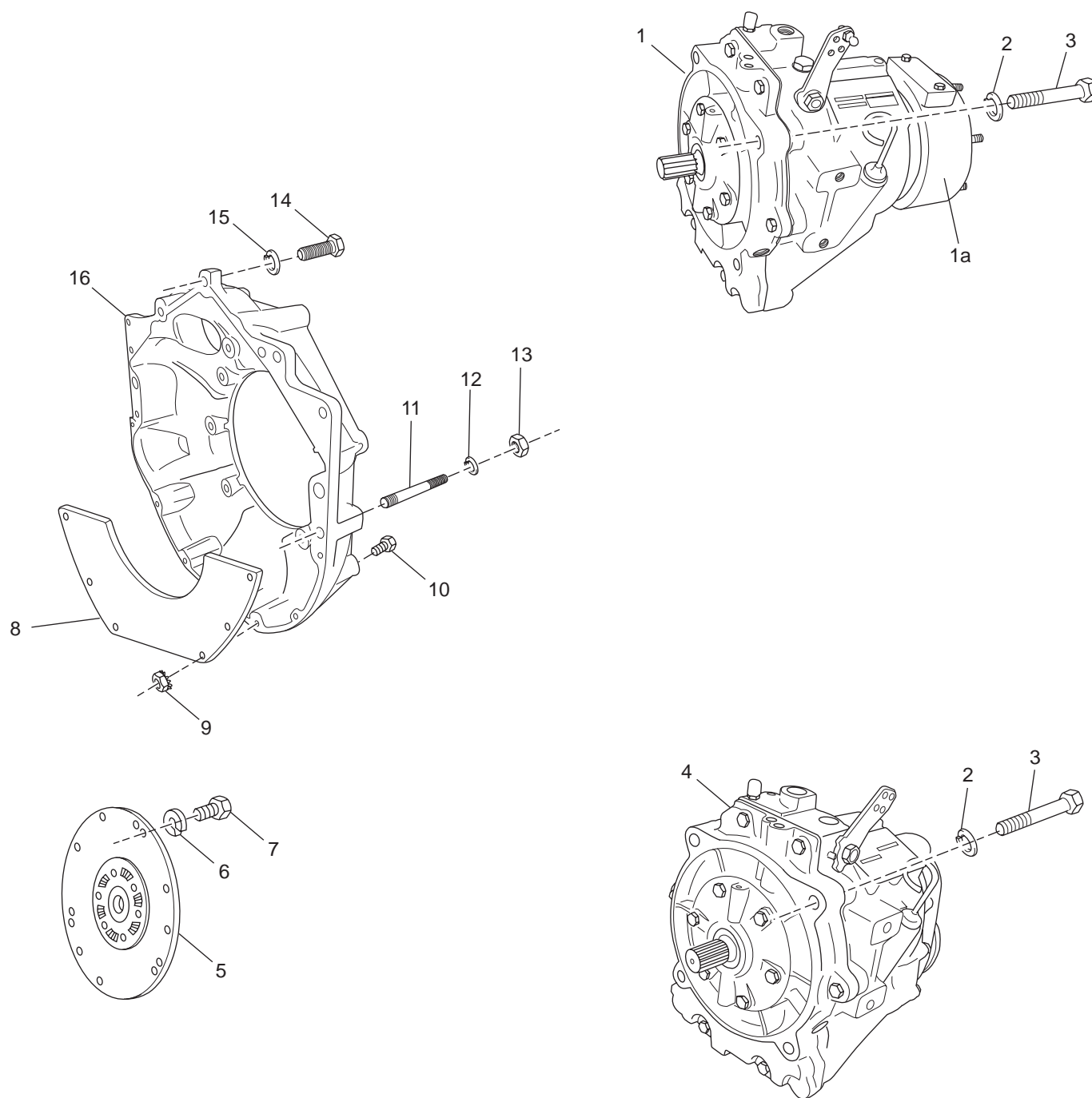


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11-11-02

ENGINE and TRANSMISSION MOUNTS - FIGURE 33

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R095020	Bolt , trunnion clamp	2
2	RS2180	Lockwasher , engine mount attaching bolt	6
3	RS0306	Bolt , engine mount attaching (R090071)	6
3	RS0311	Bolt , engine mount attaching (R090071A)	4
NI	RS3442	Stud , engine mount attaching (R090071A)	2
NI	RS1028	Nut , engine mount attaching (R090071A)	2
NI	R090071A	Mount , engine front, tall	2
4	R090071	Mount , engine front, short	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	2
11	RA092016	Trunnion Assembly	2
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	RS0328	Bolt , rear mount attaching (R090145)	4
14	RS0329	Bolt , rear mount attaching (R090205)	4
15	RS2181	Lockwasher , rear mount attaching bolt	4
16	R090205	Mount , rear	2
17	R090145	Mount , rear	2

BELL HOUSING ASSEMBLY - FIGURE 34

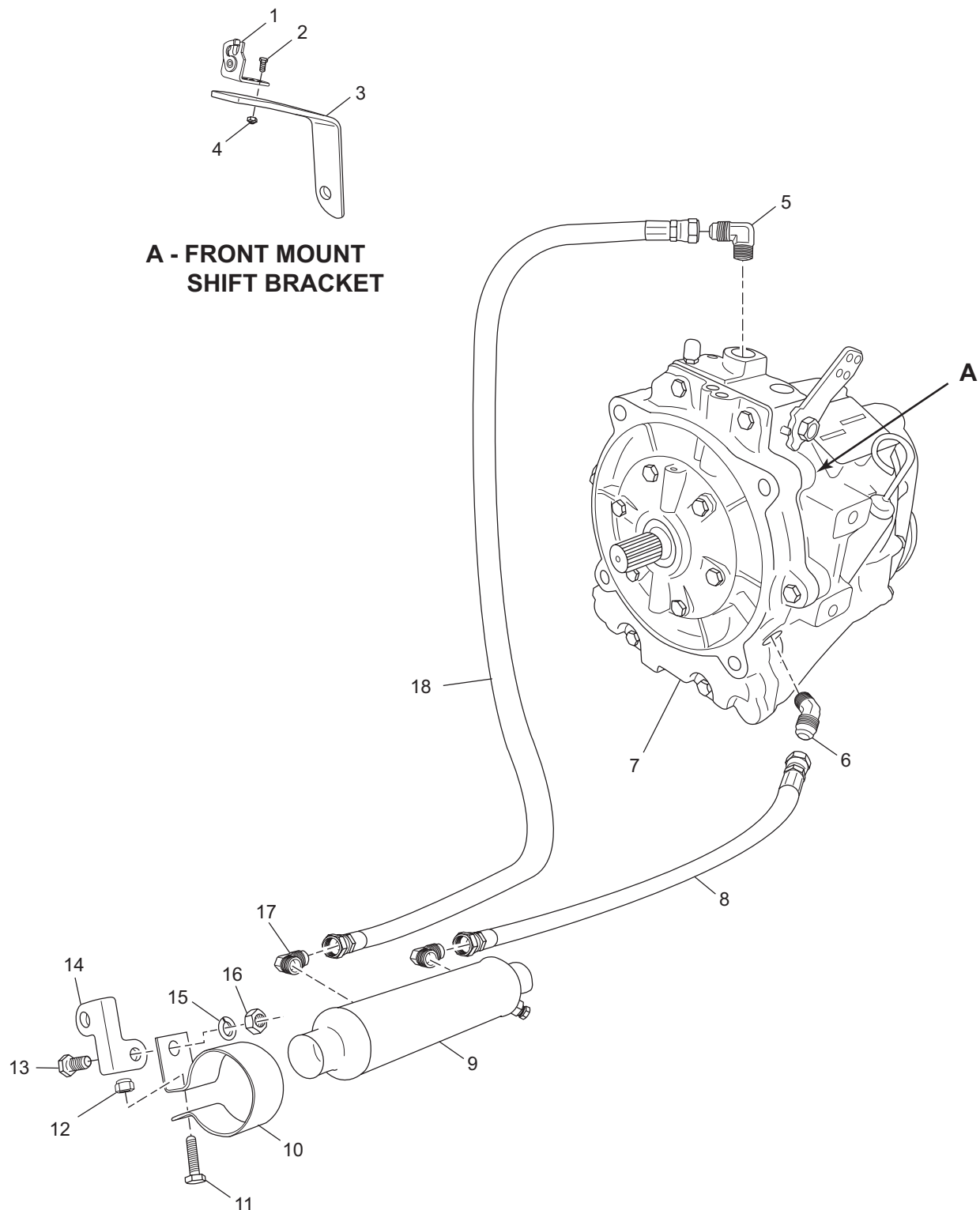


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BELL HOUSING ASSEMBLY - FIGURE 34

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	RA157016	Transmission Assembly , 1.0:1 PCM	AR
1a	R079056	Adapter , V-Drive (Walter)	AR
2	RS2180	Lockwasher , transmission attaching bolt	4
3	RS0329	Bolt , transmission attaching	4
4	RA157017	Transmission Assembly , 1.23:1 PCM	AR
5	R140016	Plate , damper (PCM Transmissions)	1
5	R140019	Plate , damper (Hurth Transmission/2-speed)	1
6	93940000	Lockwasher , damper plate attaching bolt	4
7	98446030	Bolt , damper plate attaching	4
8	R019008	Cover , dust (use w/top mount starter)	1
8	R019008A	Cover , dust (use w/bottom mount starter)	1
9	RS1078	Nut , dust cover attaching	2
10	RS0256	Bolt , dust cover attaching	2
11	R031033	Stud , bellhousing attaching	2
12	93940000	Lockwasher , bellhousing attaching	2
13	97440000	Nut , bellhousing attaching	2
14	98443050	Bolt , bellhousing attaching	3
15	93940000	Lockwasher , bellhousing attaching	3
16	R142014	Bellhousing , top and bottom mount starter	1
16	R142006B	Bellhousing , bottom mount starter	1
NI	RA156010	Transmission Assembly , ZF/Hurth (2-Speed)	AR
NI	R019010	Cover , dust, top mount starter (used w/R019008A)	1
NI	RS0327	Bolt , dust cover attaching	2
NI	RS2181	Lockwasher , dust cover attaching	2

TRANSMISSION AND RELATED COMPONENTS (1.23:1 FWC) - FIGURE 35

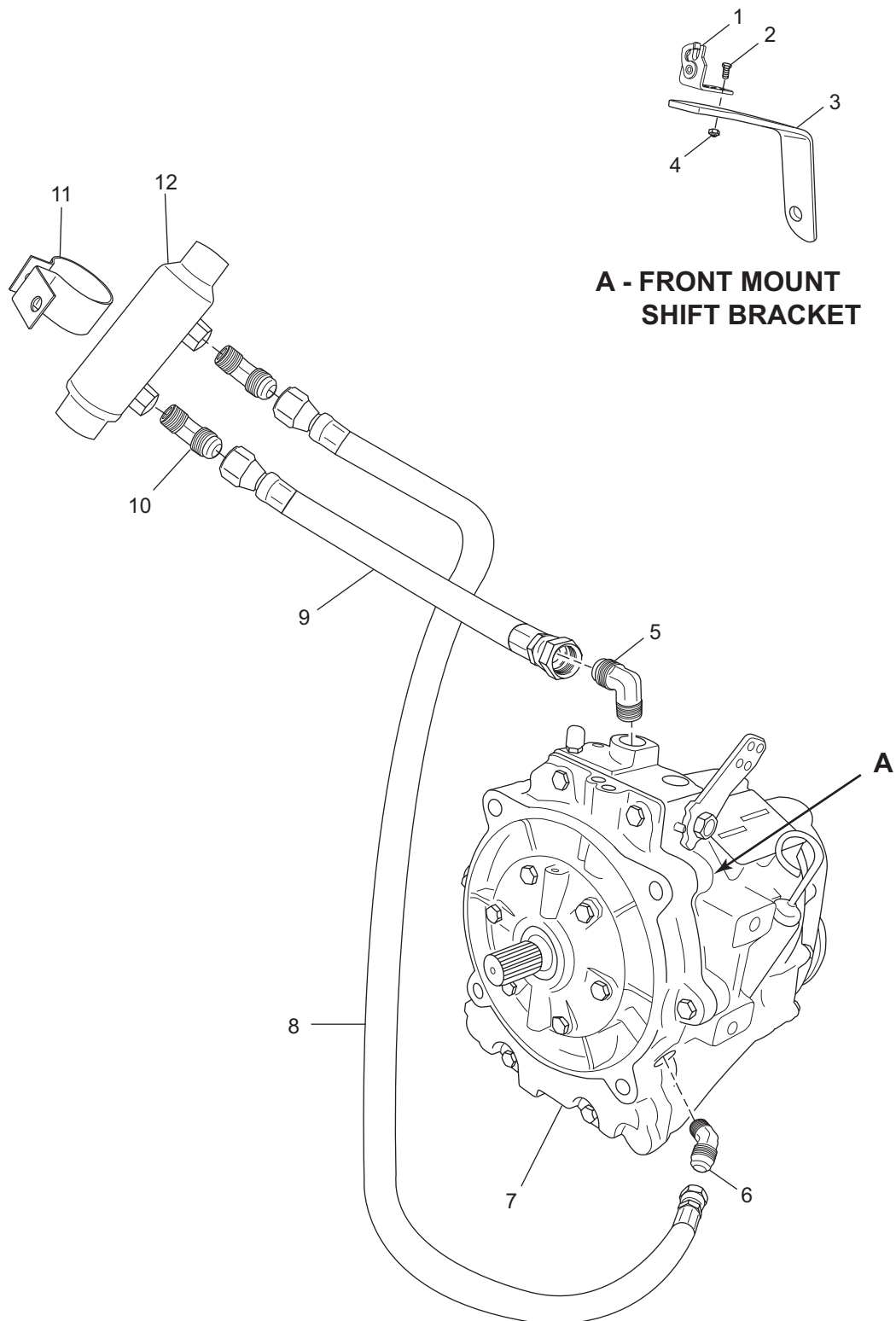


PCB57035

TRANSMISSION AND RELATED COMPONENTS (1.23:1 FWC) - FIGURE 35

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090086	Cable Clip , single cable	1
2	RS5122	Bolt , cable clip attaching	2
3	R090143	Bracket , shift (RWC)	1
3	R090143A	Bracket , shift (FWC)	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
8	RA045007S	Hose Assembly , cooler to transmission	1
9	R147014	Oil Cooler Assembly , transmission	1
10	R090010	Clamp , oil cooler assembly mounting	1
11	RS0254	Bolt , oil cooler attaching	1
12	RS1078	Nut , oil cooler attaching	1
13	RS0302	Bolt , oil cooler clamp attaching	1
14	R090013A	Bracket , oil cooler mounting	1
15	RS2180	Lockwasher , oil cooler clamp attaching bolt	1
16	RS1028	Nut , oil cooler clamp attaching bolt	1
17	R024010	Fitting , 90 degree	2
18	RA045007T	Hose Assembly , transmission to cooler	1

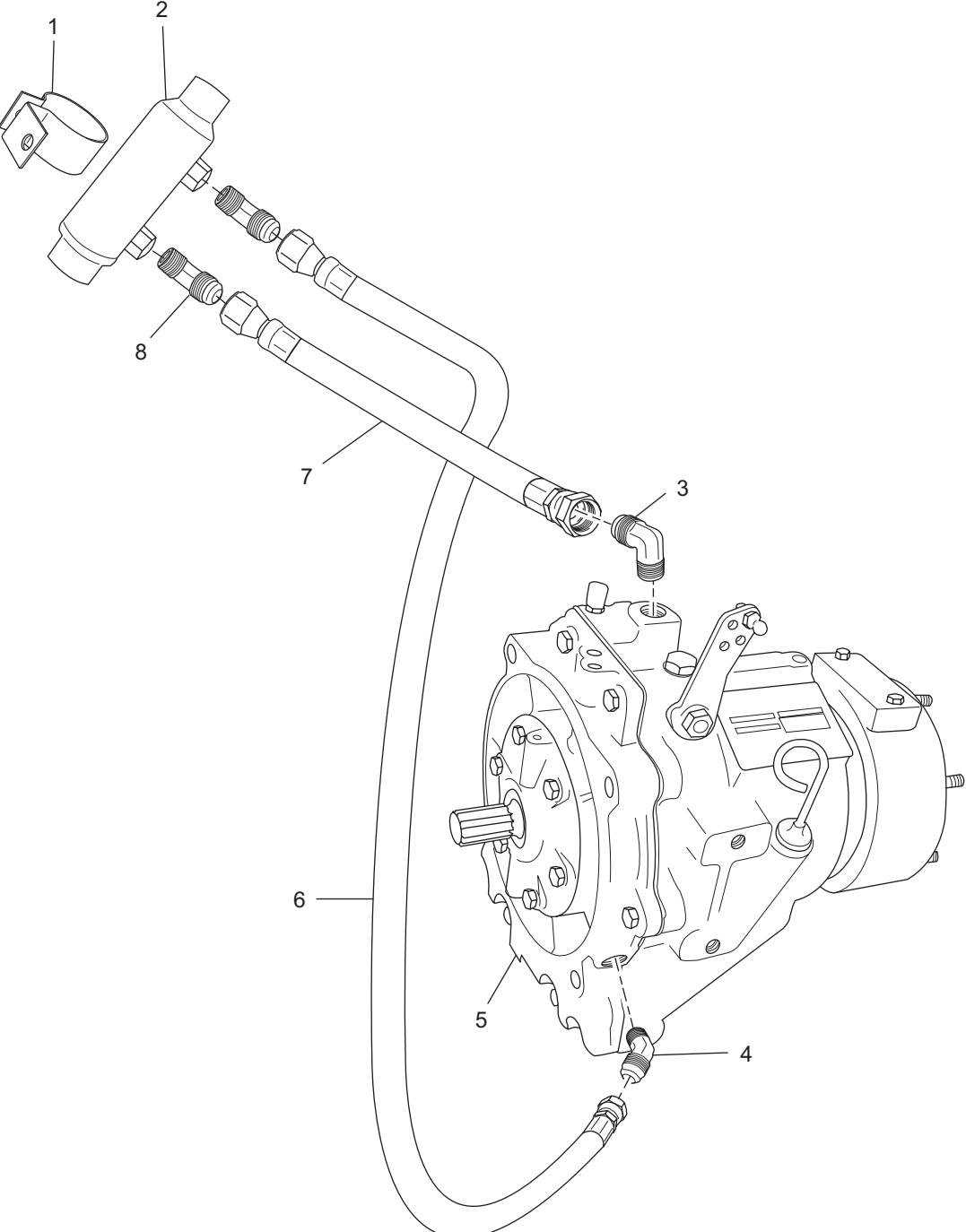
TRANSMISSION AND RELATED COMPONENTS (1.23:1 RWC) - FIGURE 36



TRANSMISSION AND RELATED COMPONENTS (1.23:1 RWC) - FIGURE 36

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	R090086	Cable Clip , single cable	1
2	RS5122	Bolt , cable clip attaching	2
3	R090143	Bracket , shift (RWC)	1
3	R090143A	Bracket , shift (FWC)	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
8	RA045007R	Hose Assembly , cooler to transmission	1
9	RA045007K	Hose Assembly , transmission to cooler	1
10	R024010	Fitting , 90 degree	2
11	R090010	Clamp , oil cooler assembly mounting	1
12	R147014	Oil Cooler Assembly , transmission	1

TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 37



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TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 37

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