



MARINE

ILLUSTRATED

PARTS MANUAL

MODEL MP5.0/5.7L



This Page Was
Intentially
Left Blank

Contents:

| | |
|--|----|
| Symbols | 2 |
| Maintenance Item Part Numbers | 3 |
| Cylinder Block Assembly - Figure 1 | 4 |
| Cylinder Head Assembly - Figure 2 | 8 |
| Intake Manifold Assembly - Figure 3 | 10 |
| Intake Manifold Components - Figure 4 | 12 |
| Oil Pan and Oil Pump Assembly - Figure 5 | 14 |
| Throttle Body and Related Components - Figure 6 | 16 |
| Remote Oil Filter Components - Figure 7 | 18 |
| Remote Oil Filter Components (V-Drive) - Figure 8 | 20 |
| Remote Oil Filter Components - Figure 9 | 22 |
| Fuel Control Cell (FCC) Components - Figure 10 | 24 |
| Fuel Control Cell (FCC) Components - Figure 11 | 26 |
| Fuel Control Cell (FCC) Components (V-Drive) - Figure 12 | 28 |
| Heat Exchanger and Components - Figure 13 | 30 |
| Fresh Water Cooling System Components (Crank-Driven RWP) - Figure 14 | 32 |
| Fresh Water Cooling System Components (Belt-Driven RWP) - Figure 15 | 34 |
| Raw Water Cooling System Components (Belt-Driven RWP) - Figure 16 | 36 |
| Raw Water Cooling System Components (Crank-Driven RWP) - Figure 17 | 38 |
| Exhaust Manifold and Components - Figure 18 | 40 |
| Raw Water Cooling Pump (Belt-Driven) - Figure 19 | 42 |
| Raw Water Cooling Pump (Crank-Driven) - Figure 20 | 44 |
| Wiring Harness Assemblies and Senders - Figure 21 | 46 |
| ECM and Relays - Figure 22 | 48 |
| Accessory Drive System Components (Belt-Driven RWP) - Figure 23 | 50 |
| Accessory Drive System Components (Crank-Driven RWP) - Figure 24 | 54 |
| Starter Assembly Components - Figure 25 | 56 |
| Engine and Transmission Mounts - Figure 26 | 58 |
| Bellhousing Assembly - Figure 27 | 60 |
| Transmission and Related Parts (1.23:1 FWC) - Figure 28 | 62 |
| Transmission and Related Parts (1.23:1 RWC) - Figure 29 | 64 |
| Transmission and Related Parts (1:1 V-Drive) - Figure 30 | 66 |

“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 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
- =====

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:

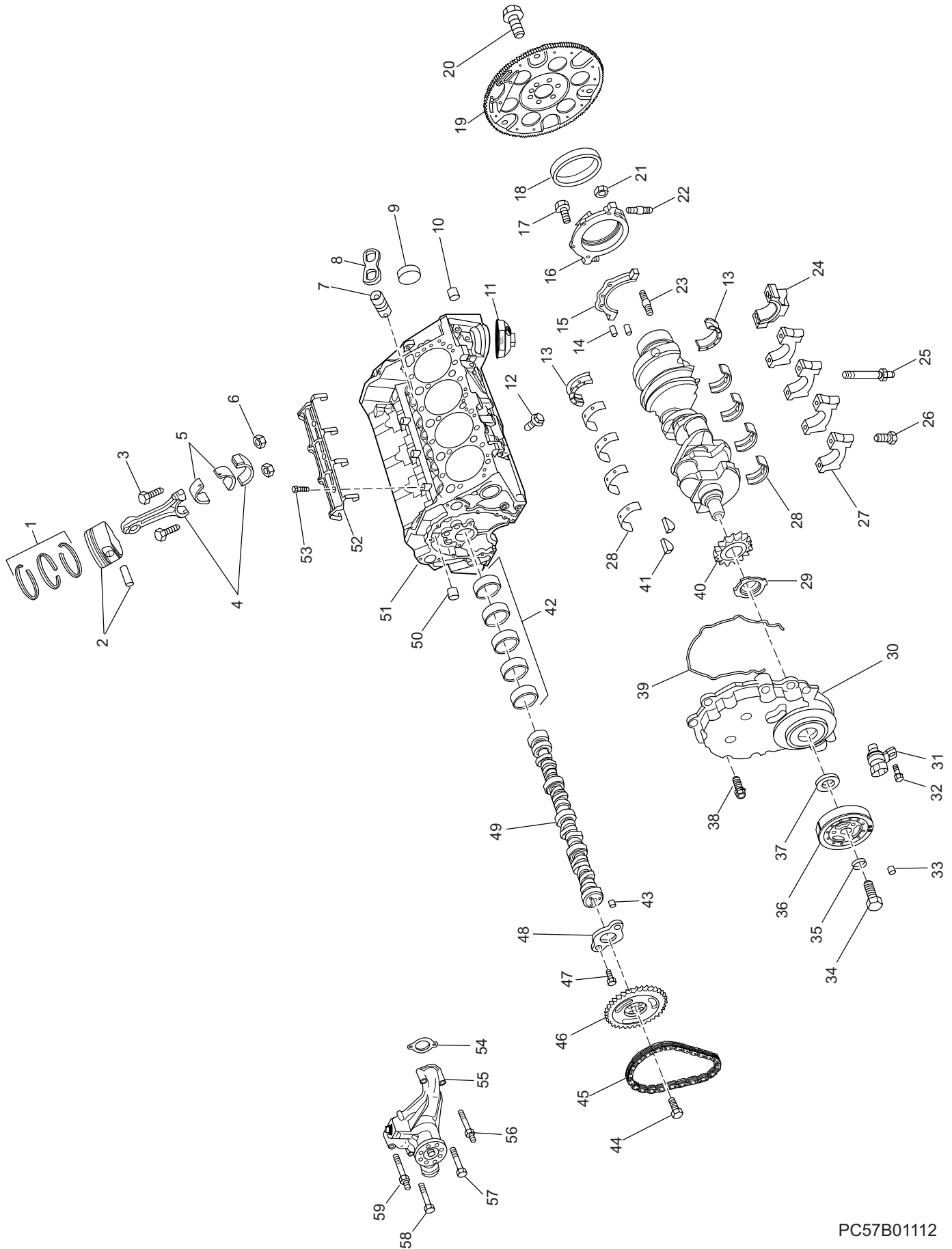
| Description | Part Number |
|--|-------------|
| Oil Filter | R077001 |
| Fuel Filter (FCC) | RP080026 |
| Spark Plugs | RP030010 |
| Spark Plug Wire Set | RK120018 |
| Alternator Drive Belt | R066008 |
| Raw Water Pump Drive Belt (Belt-Driven Pump) | R066026 |

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

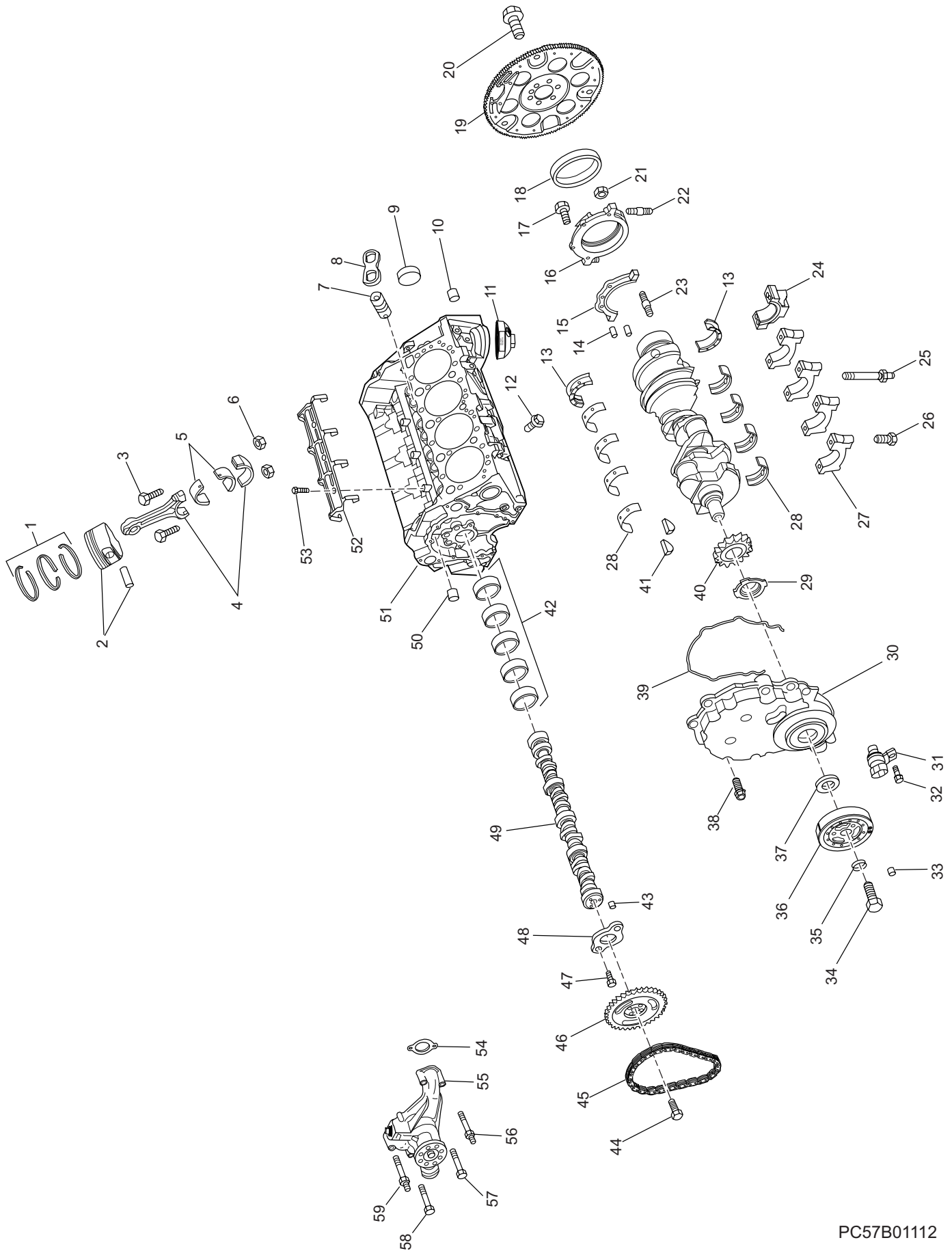


PC57B01112

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 (thrust) | 1 |
| 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 | 2 |
| 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 (STD) | 4 |
| 29 | R056001 | Ring , crankshaft position sensor reluctor | 1 |
| 30 | R004010A | Cover , engine front cover (includes gasket and seal) | 1 |
| 31 | R020038 | Sensor , crankshaft position | 1 |
| 32 | TBD | Bolt , crankshaft position sensor attaching | 1 |
| 33 | TBD | Pin , front groove (crankshaft balancer) | 1 |
| 34 | R009091 | Bolt , crankshaft balancer | 1 |

CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont'd)

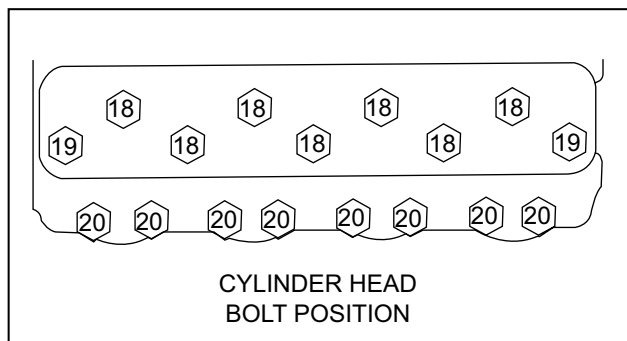
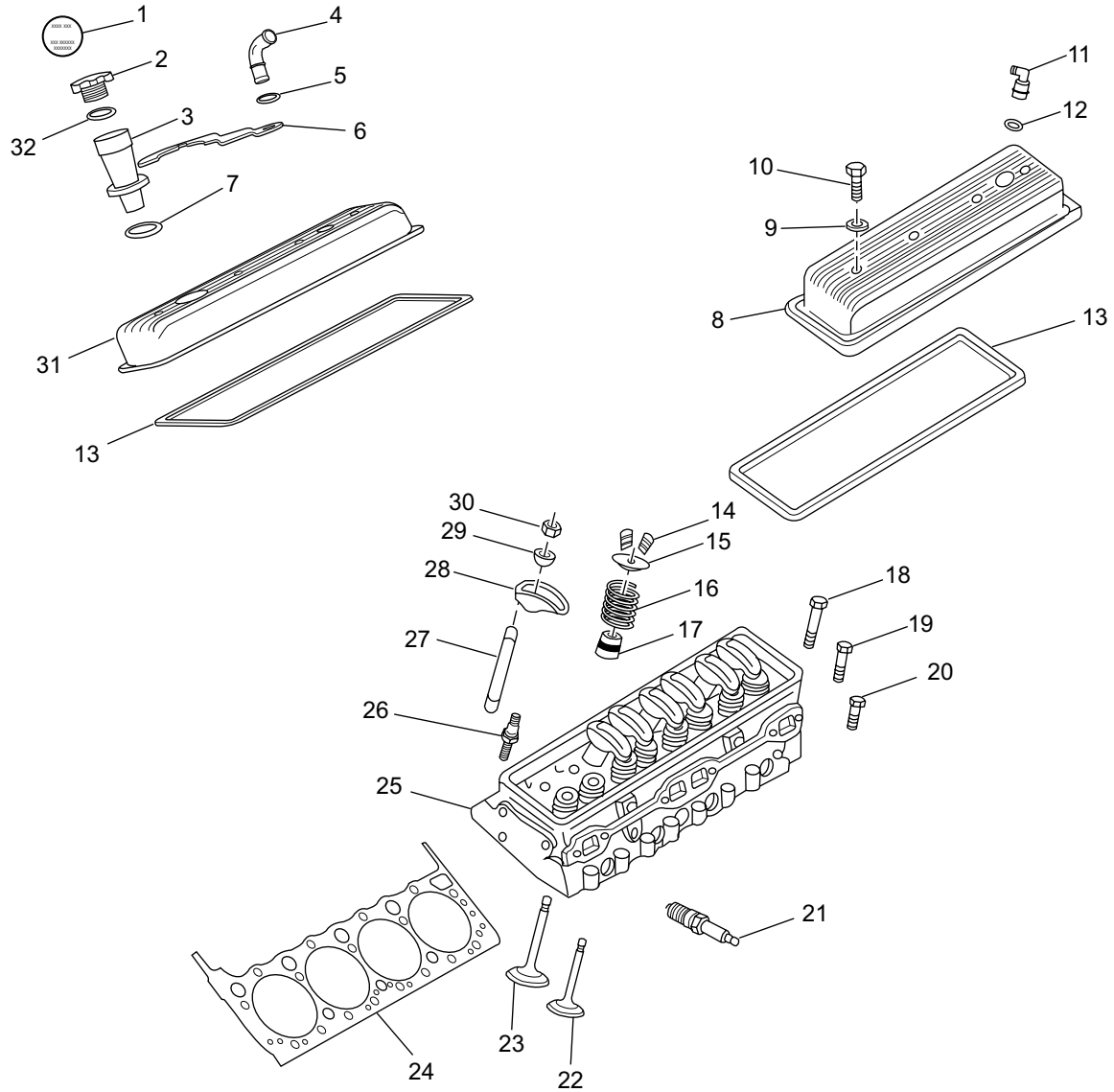


PC57B01112

CYLINDER BLOCK ASSEMBLY - FIGURE 1 (cont'd)

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|--|----------|
| 35 | R096074 | Washer , crankshaft balancer bolt | 1 |
| 36 | R064010A | Balancer , crankshaft | 1 |
| 37 | R047178B | Seal , crankshaft front oil | 1 |
| 38 | R009177 | Bolt , engine front cover attaching | 8 |
| 39 | NSS | Gasket , engine front cover | 1 |
| 40 | R054024 | Sprocket , crankshaft | 1 |
| 41 | R164024 | Key , crankshaft balancer | 2 |
| 42 | RK051030 | Bearing Set , camshaft | 1 |
| 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 | TBD | 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 | TBD | Bolt , water pump attaching | 1 |
| 58 | TBD | Bolt , water pump attaching | 1 |
| 59 | R095026 | Stud , water pump attaching | 1 |

CYLINDER HEAD ASSEMBLY - FIGURE 2

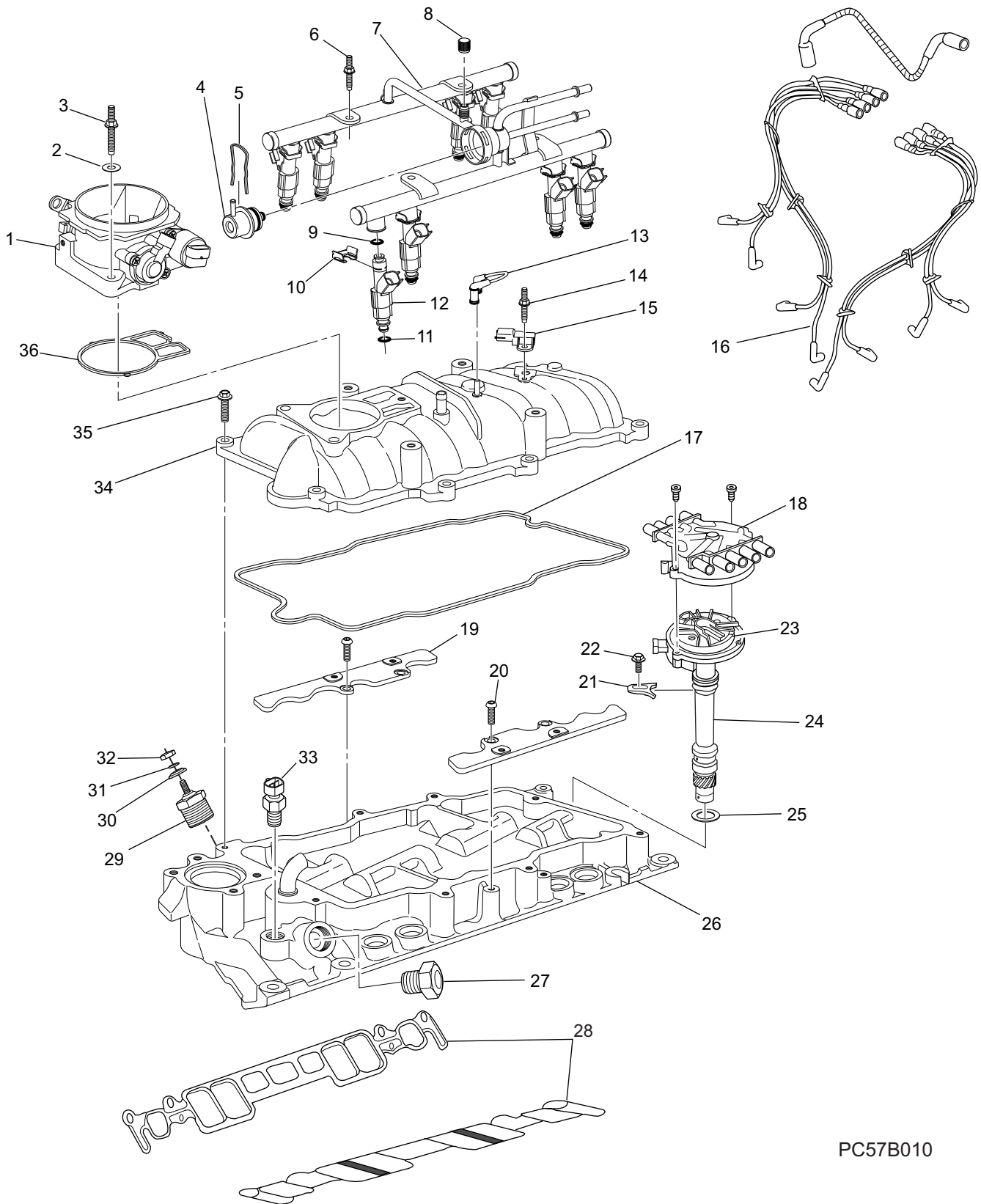


PC57B009

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 | NSS | 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 |
| 27 | R039023 | Push Rod | 16 |
| 28 | R038011 | Rocker Arm , valve | 16 |
| 29 | TBD | Ball , rocker arm | 16 |
| 30 | R017069 | Nut , rocker arm attaching | 16 |
| 32 | R033008 | Cover , rocker (right side) | 1 |
| 33 | NSS | O-Ring , oil fill riser cap | 1 |

INTAKE MANIFOLD ASSEMBLY - FIGURE 3

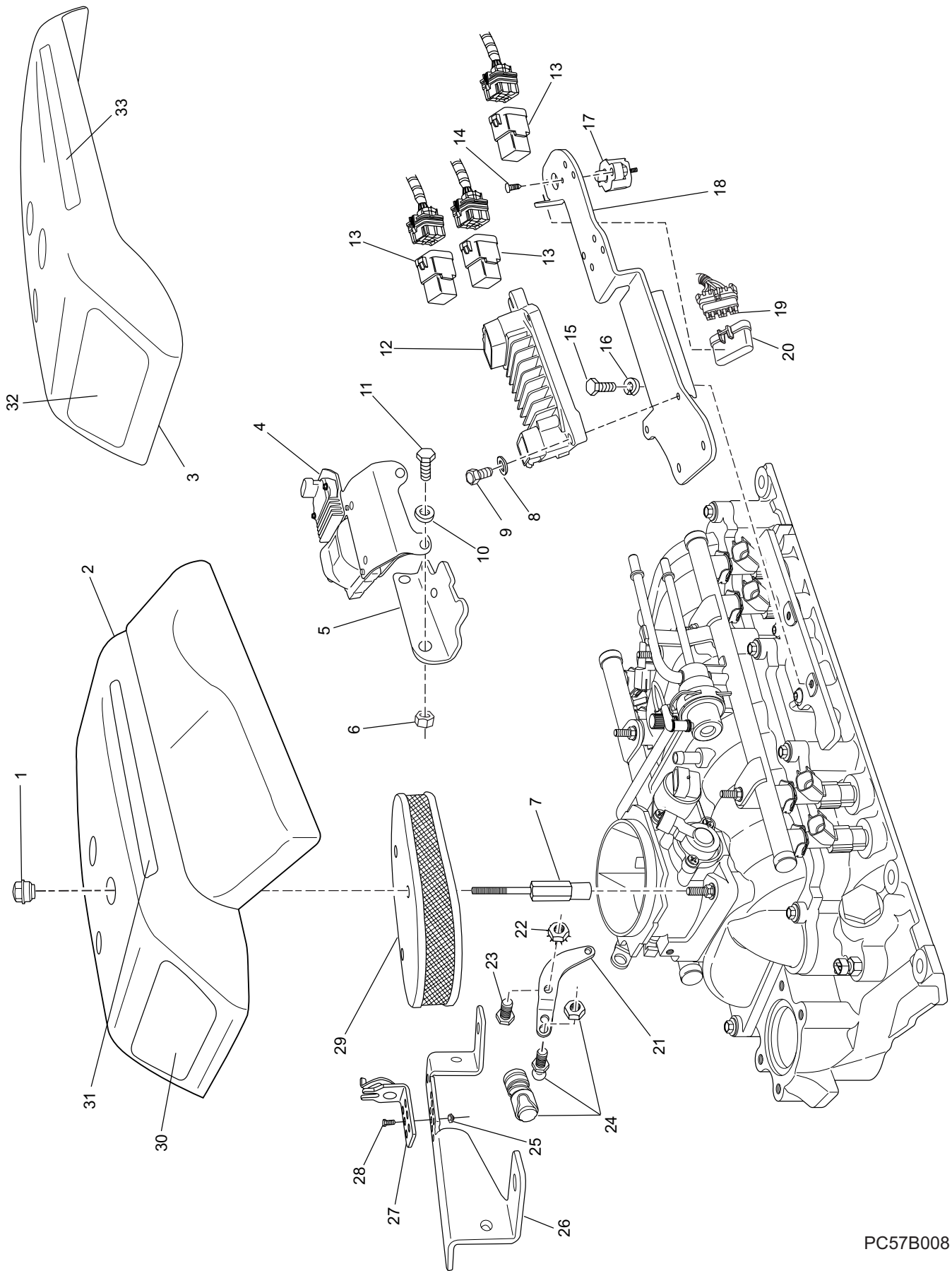


PC57B010

INTAKE MANIFOLD ASSEMBLY - FIGURE 3

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|--|----------|
| 1 | RA035040 | Throttle Body , mechanical throttle | 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 , high voltage switch | 1 |
| 19 | TBD | Plate , component attaching | 2 |
| 20 | TBD | Bolt , component attaching plate attaching | 4 |
| 21 | R127026A | Hold Down , high voltage switch | 1 |
| 22 | R009193 | Bolt , high voltage switch hold down | 1 |
| 23 | R103011 | Rotor , high voltage switch | 1 |
| 24 | RA107044 | High Voltage Switch Assembly (LH) | 1 |
| 24 | RA107045 | High Voltage Switch Assembly (RH) | 1 |
| 25 | RM0123 | Gasket , high voltage switch 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 | 95011000 | Washer , sender terminal | 1 |
| 31 | 95300300 | Lockwasher , sender terminal | 1 |
| 32 | 95011000 | Nut , sender terminal | 1 |
| 33 | R020019 | Sensor , engine coolant temperature | 1 |
| 34 | R002024 | Intake Manifold , upper | 1 |
| 35 | 98222025 | Bolt , upper intake manifold to lower attaching | 8 |
| 36 | RM0272 | Gasket , throttle body to upper manifold | 1 |

INTAKE MANIFOLD COMPONENTS - FIGURE 4

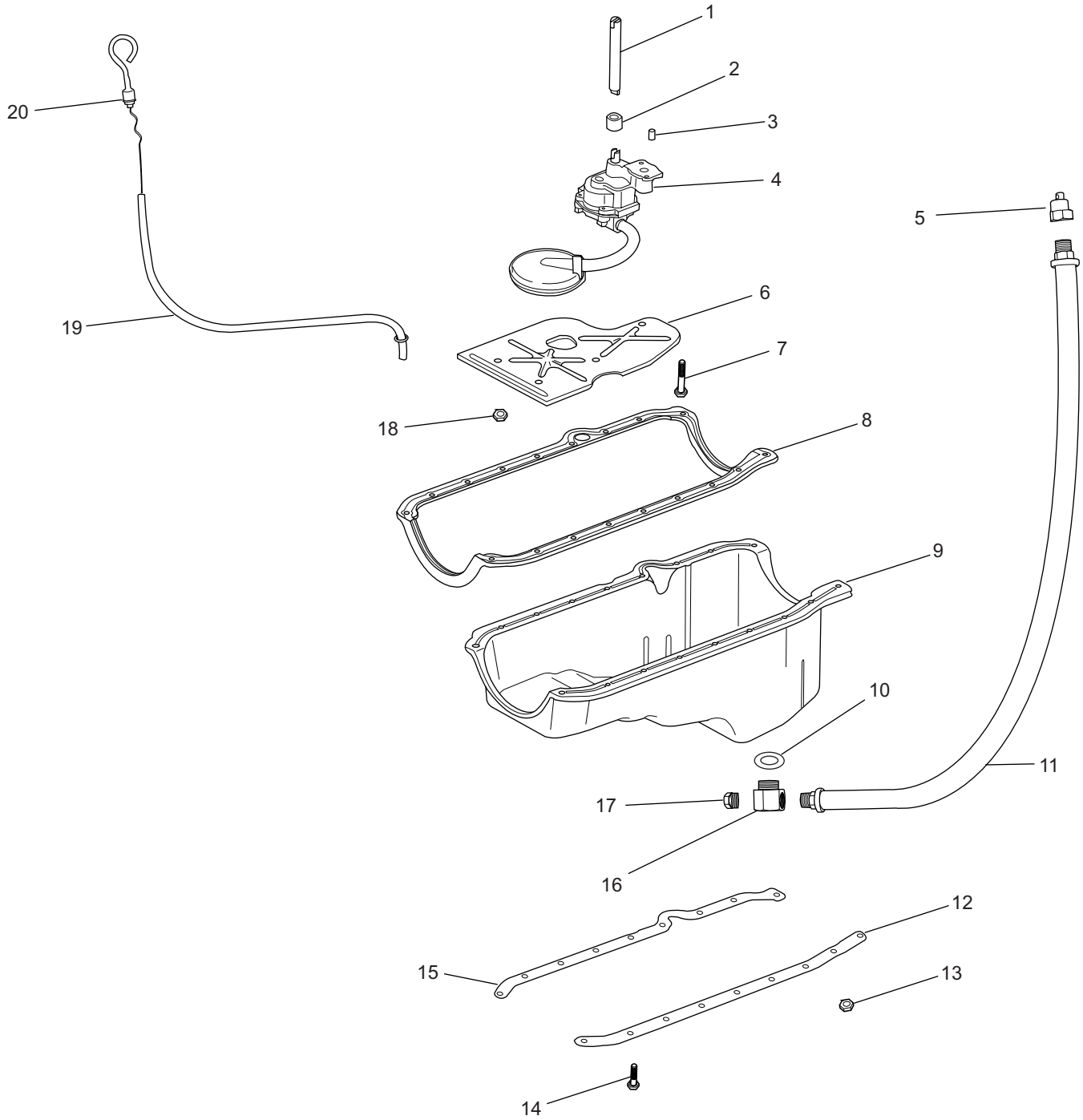


PC57B008

INTAKE MANIFOLD COMPONENTS - FIGURE 4

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R009194 | Nut , engine cover attaching | 3 |
| 2 | R060060 | Cover , engine | 1 |
| 3 | R060061A | Cover , engine (PCM) | 1 |
| 3 | R060061 | Cover , engine (Sea Maxx) | 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 | R116019 | Engine Control Module | 1 |
| 13 | R130012 | Relay Assembly | 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 |

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

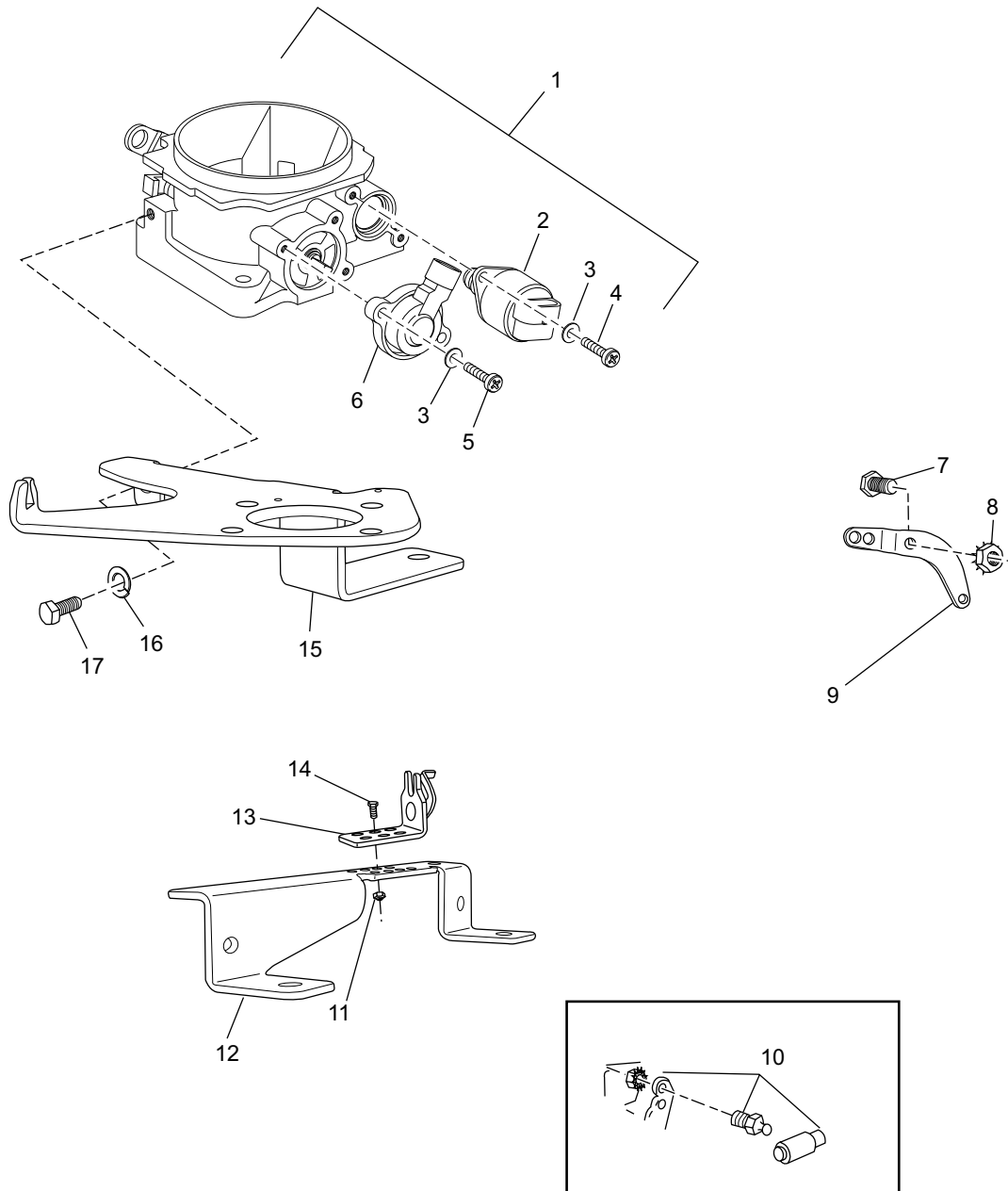


PC57B024

OIL PAN and OIL PUMP ASSEMBLY - FIGURE 5

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R058054 | Shaft , oil pump drive | 1 |
| 2 | NSS | 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 | TBD | Nut , oil pan | 4 |
| 14 | TBD | 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 |
| NI | TBD | Kit , oil drain | 1 |

THROTTLE BODY and RELATED COMPONENTS - FIGURE 6

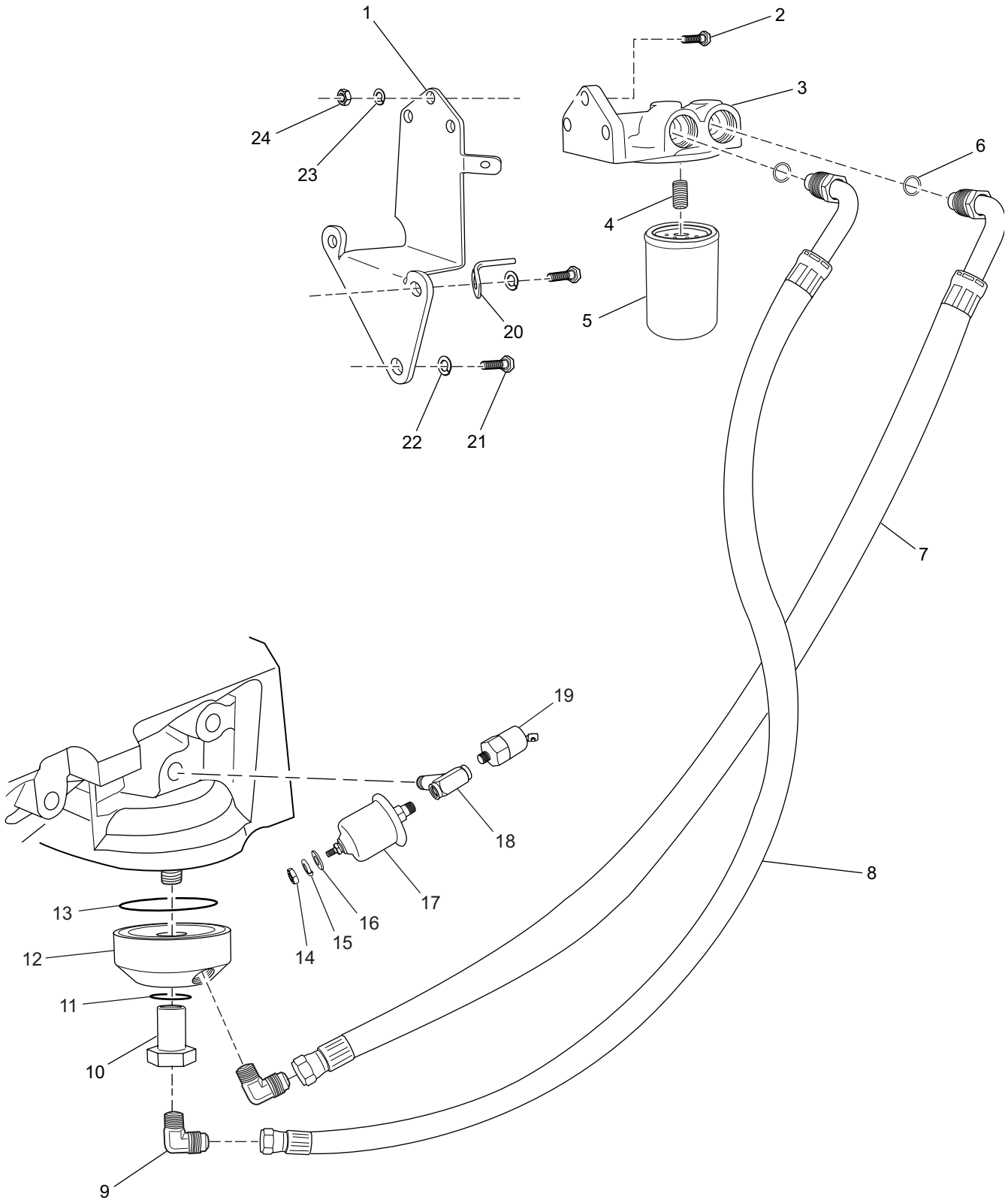


PC57B023

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 - FIGURE 7

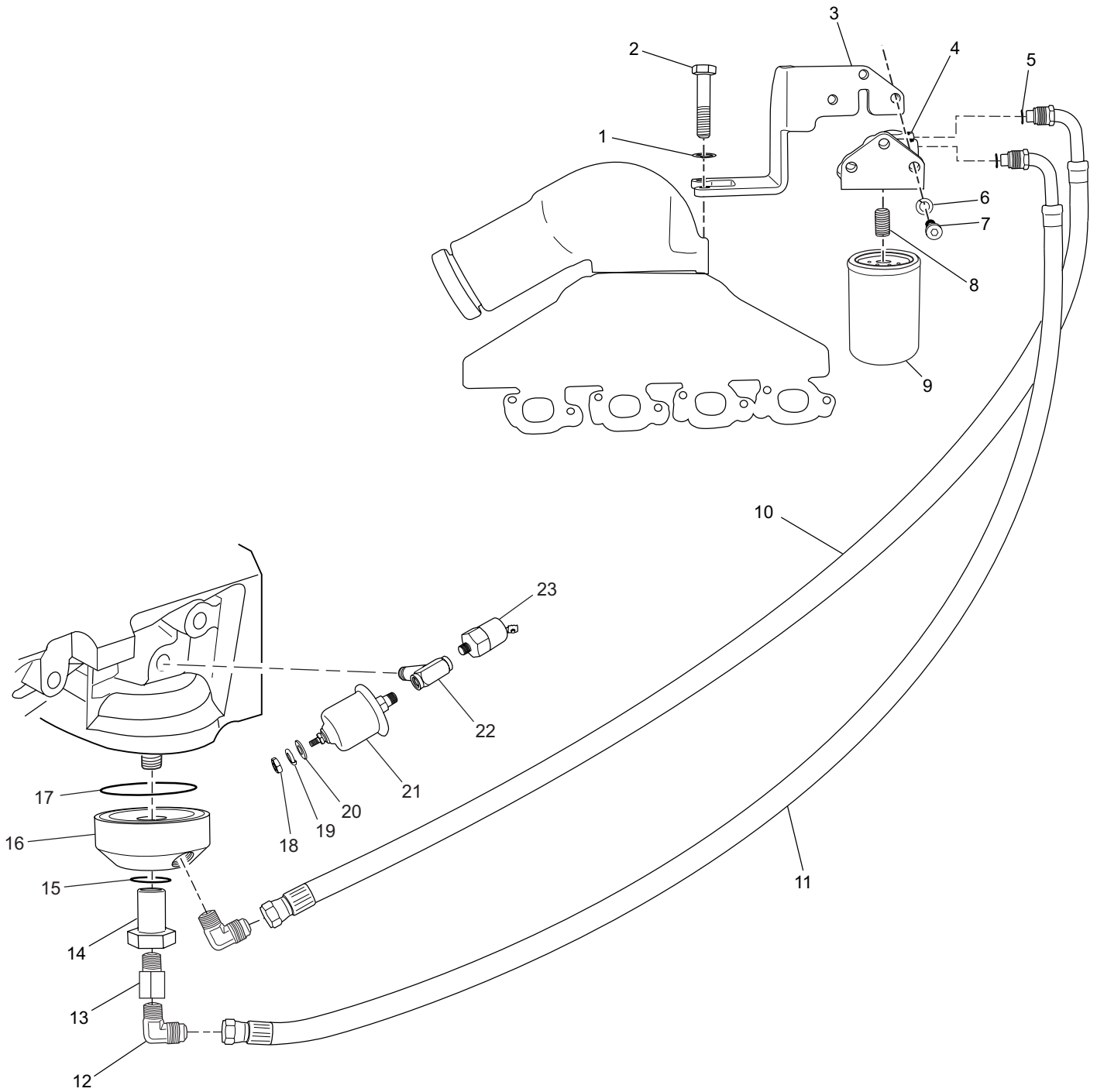


PC57B022

REMOTE OIL FILTER COMPONENTS - FIGURE 7

| 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 | TBD | 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 |

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

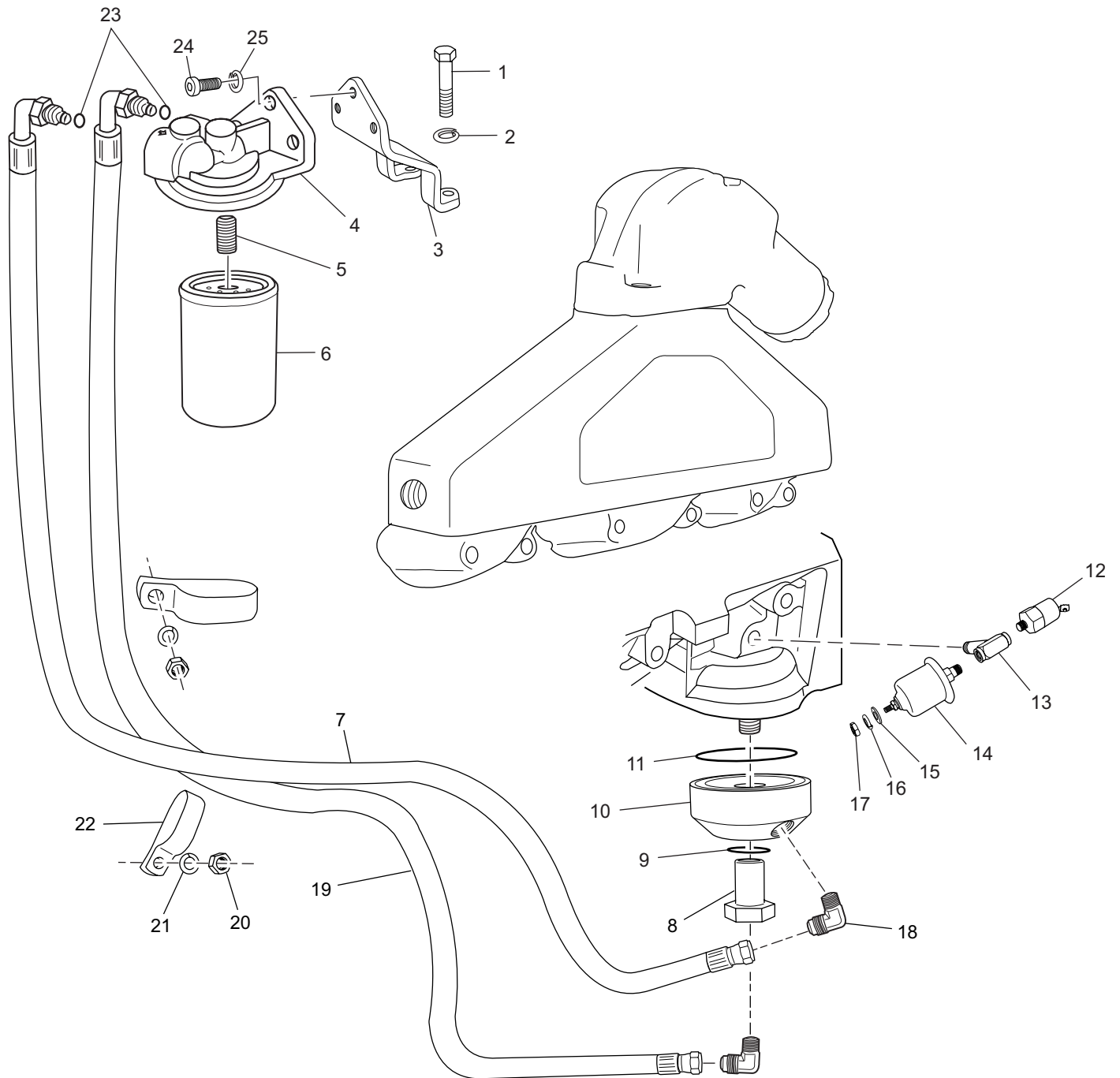


PC57B020

REMOTE OIL FILTER COMPONENTS (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 | RM0257 | Bracket , oil filter header mounting | 1 |
| 4 | R079066 | Oil Filter Header | 1 |
| 5 | TBD | 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 |

REMOTE OIL FILTER COMPONENTS - FIGURE 9

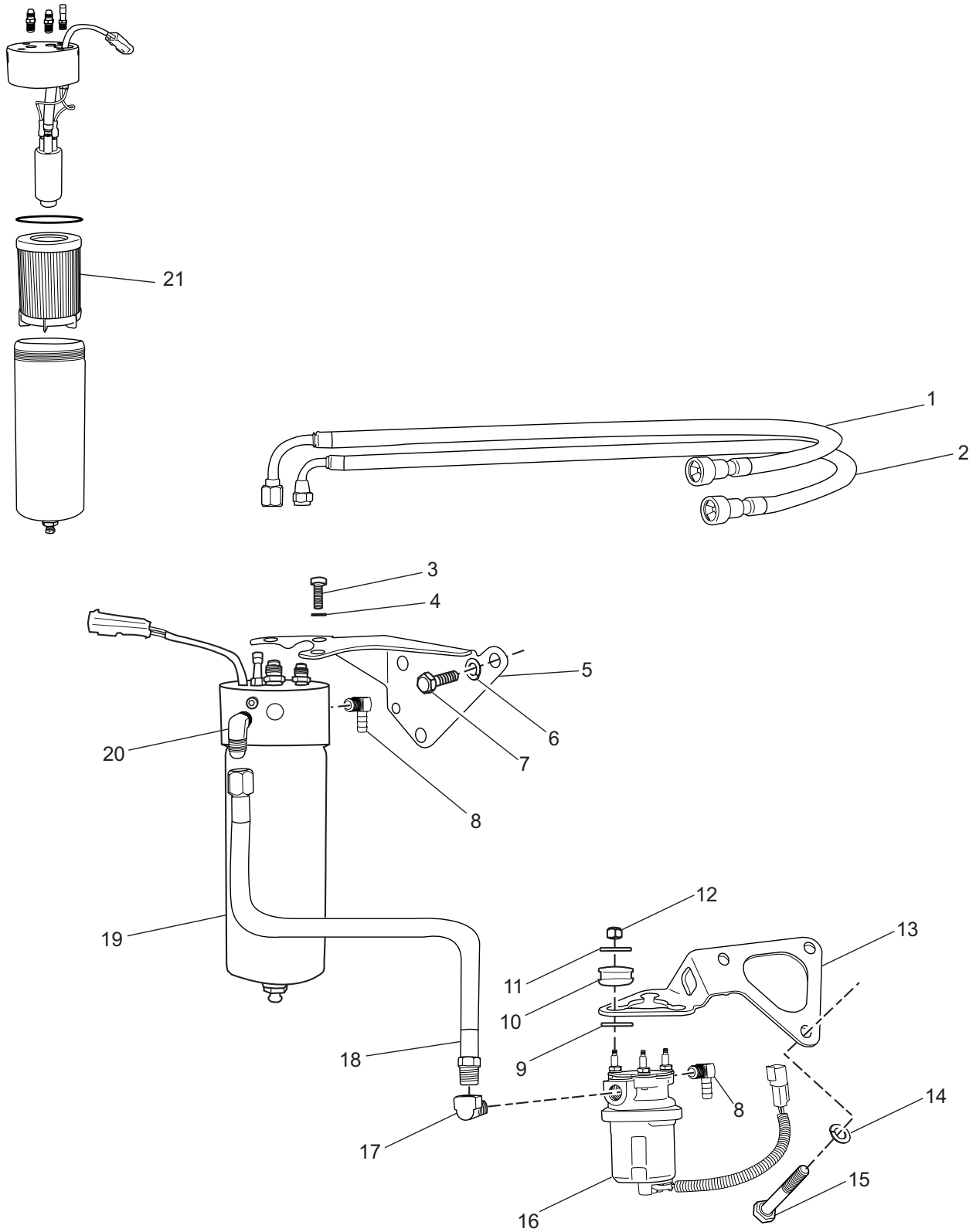


PC57B020a

REMOTE OIL FILTER COMPONENTS - 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 | TBD | O-Ring , oil line | 2 |
| 24 | RS0282 | Bolt , oil filter header mounting | 3 |
| 25 | RS2179 | Lockwasher , oil filter header mounting bolt | 3 |

FUEL CONTROL CELL (FCC) COMPONENTS- FIGURE 10

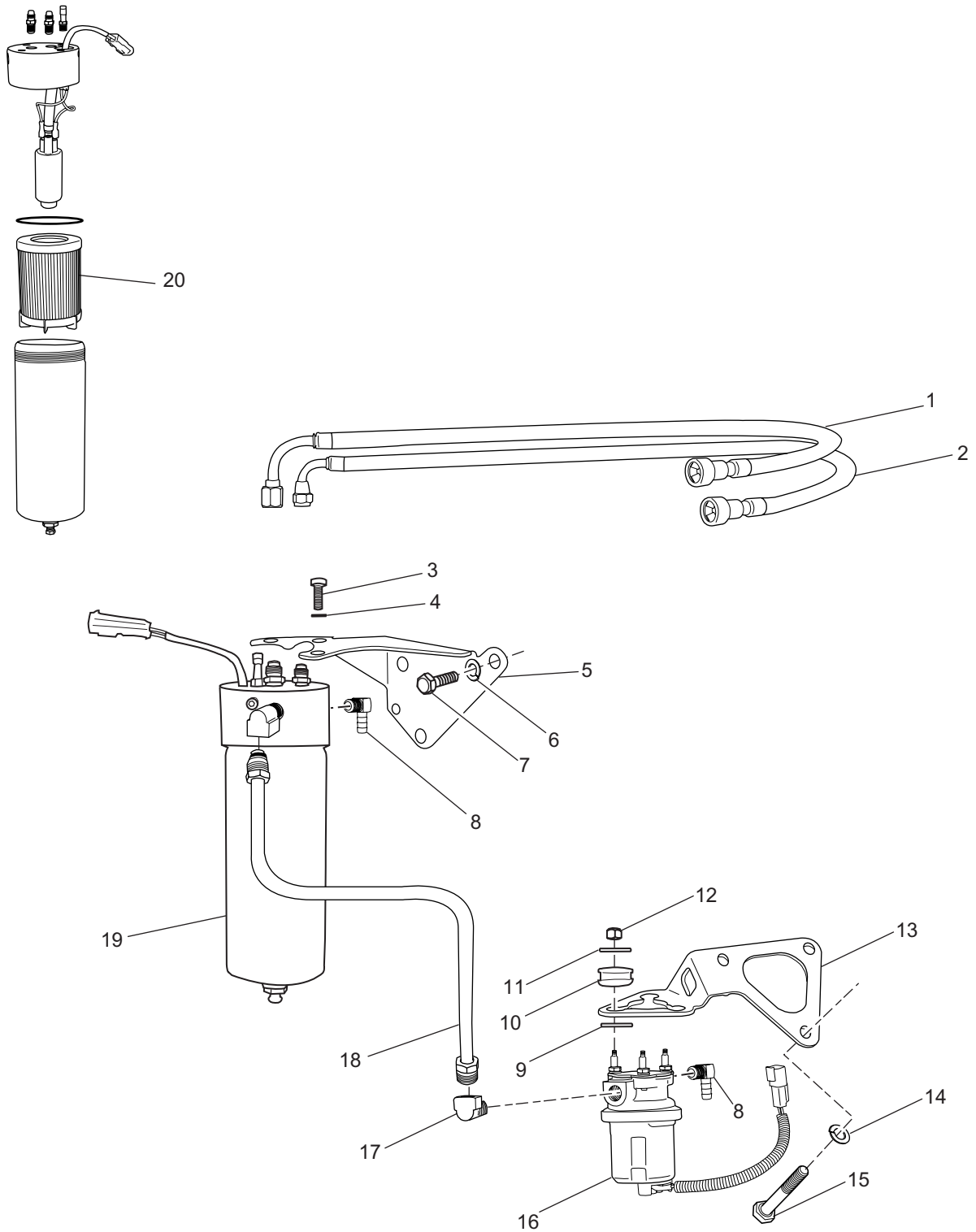


PC57B018

FUEL CONTROL CELL (FCC) COMPONENTS- FIGURE 10

| 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 | R090179 | 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 | 1 |
| 18 | RA085096 | 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 |

FUEL CONTROL CELL (FCC) COMPONENTS- FIGURE 11

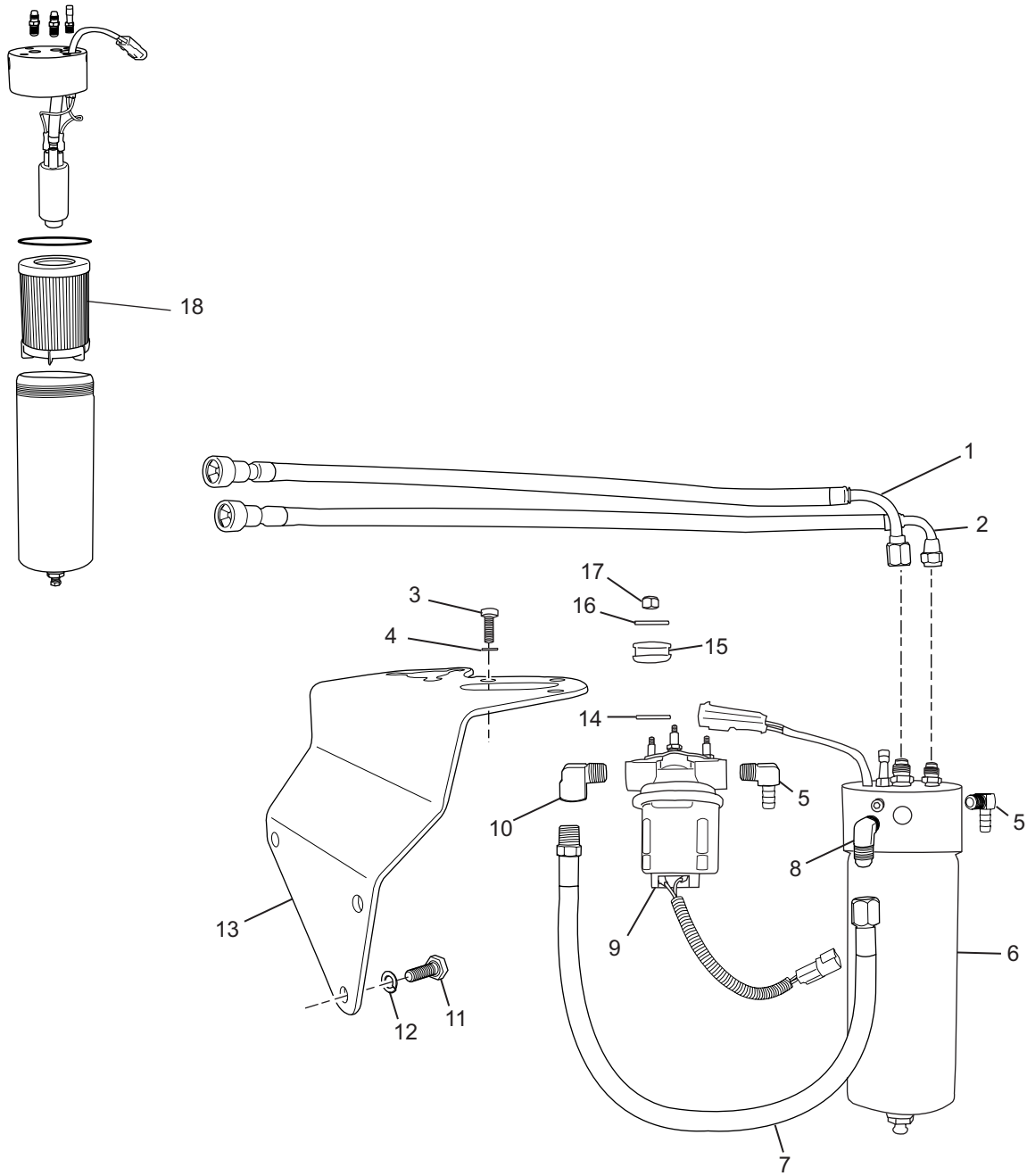


PC57B018a

FUEL CONTROL CELL (FCC) COMPONENTS- 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 | 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 |

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

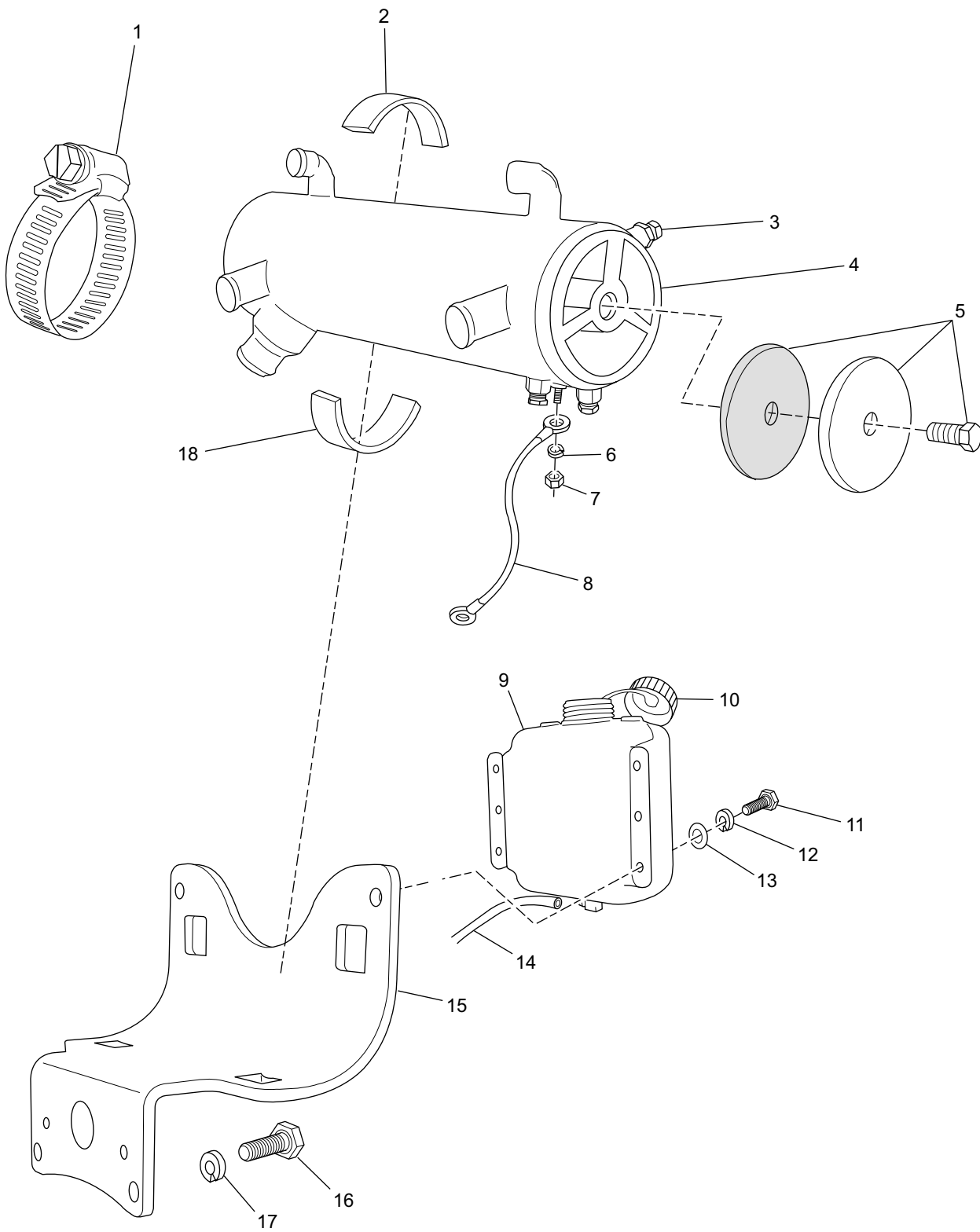


PC57B021

FUEL CONTROL CELL (FCC) COMPONENTS (V-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 | R024089 | Fitting , 90 degree | 2 |
| 6 | RA080025 | Fuel Control Cell Assembly | 1 |
| 7 | RA085071 | 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 |

HEAT EXCHANGER and COMPONENTS - FIGURE 13

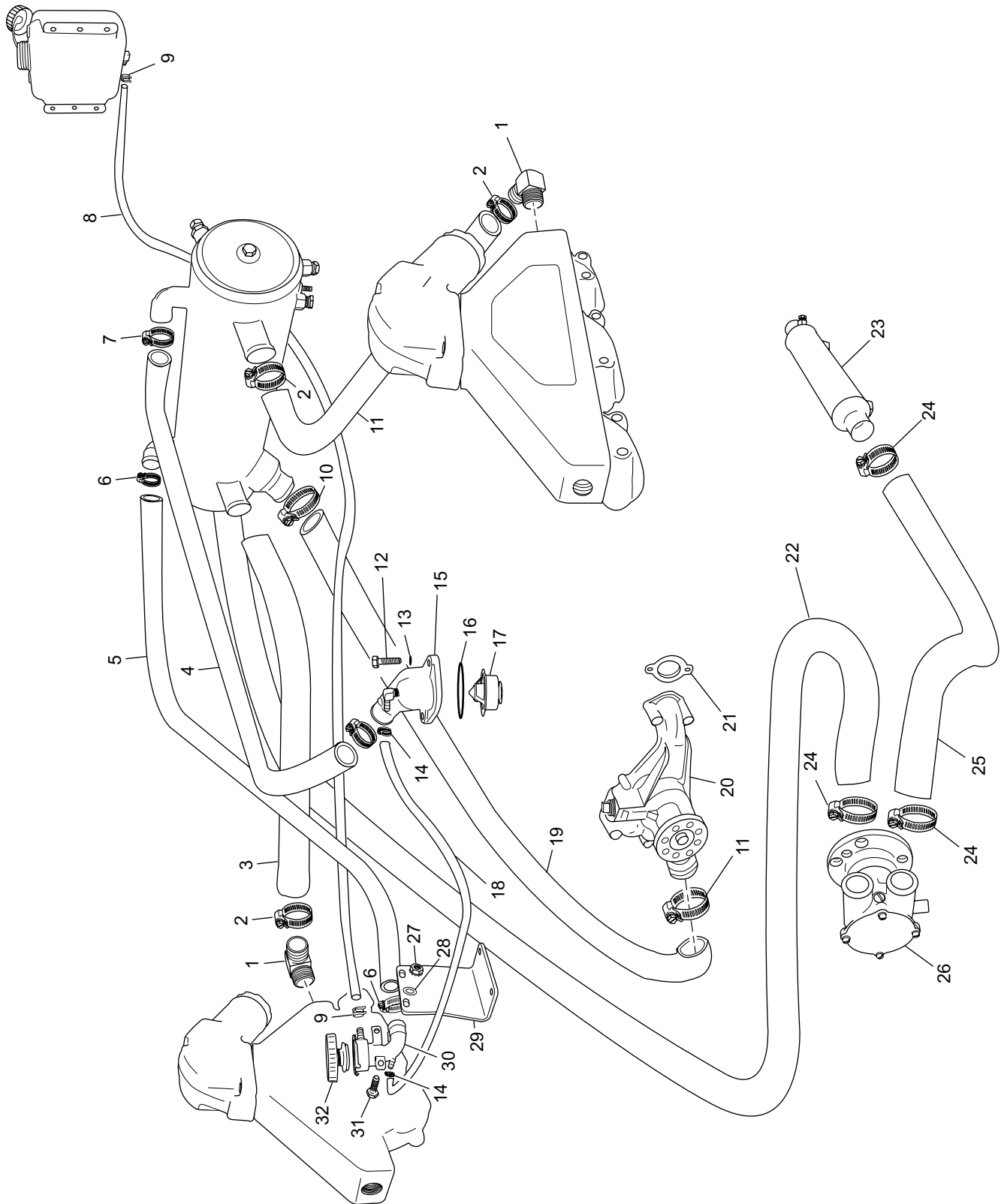


PC57B033

HEAT EXCHANGER and COMPONENTS - FIGURE 13

| 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 | TBD | Lockwasher , ground wire stud | 1 |
| 7 | TBD | Nut , ground wire stud | 1 |
| 8 | R101013 | Wire , grounding | 1 |
| 9 | R146002 | Bottle , coolant overflow | 1 |
| 10 | TBD | Cap , coolant fill | 1 |
| 11 | RS0282 | Bolt , coolant overflow mounting | 2 |
| 12 | RS2179 | Lockwasher , mounting bolt | 2 |
| 13 | RS2673 | Washer , mounting bolt | 2 |
| 14 | R045139 | Tube , overflow | 1 |
| 15 | R090265 | Bracket , heat exchanger | 1 |
| 16 | RS0281 | Bolt , bracket mounting | 2 |
| 17 | RS2179 | Lockwasher , bracket mounting | 2 |
| 18 | R094040 | Isolator , bottom | 2 |

FRESH WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 14

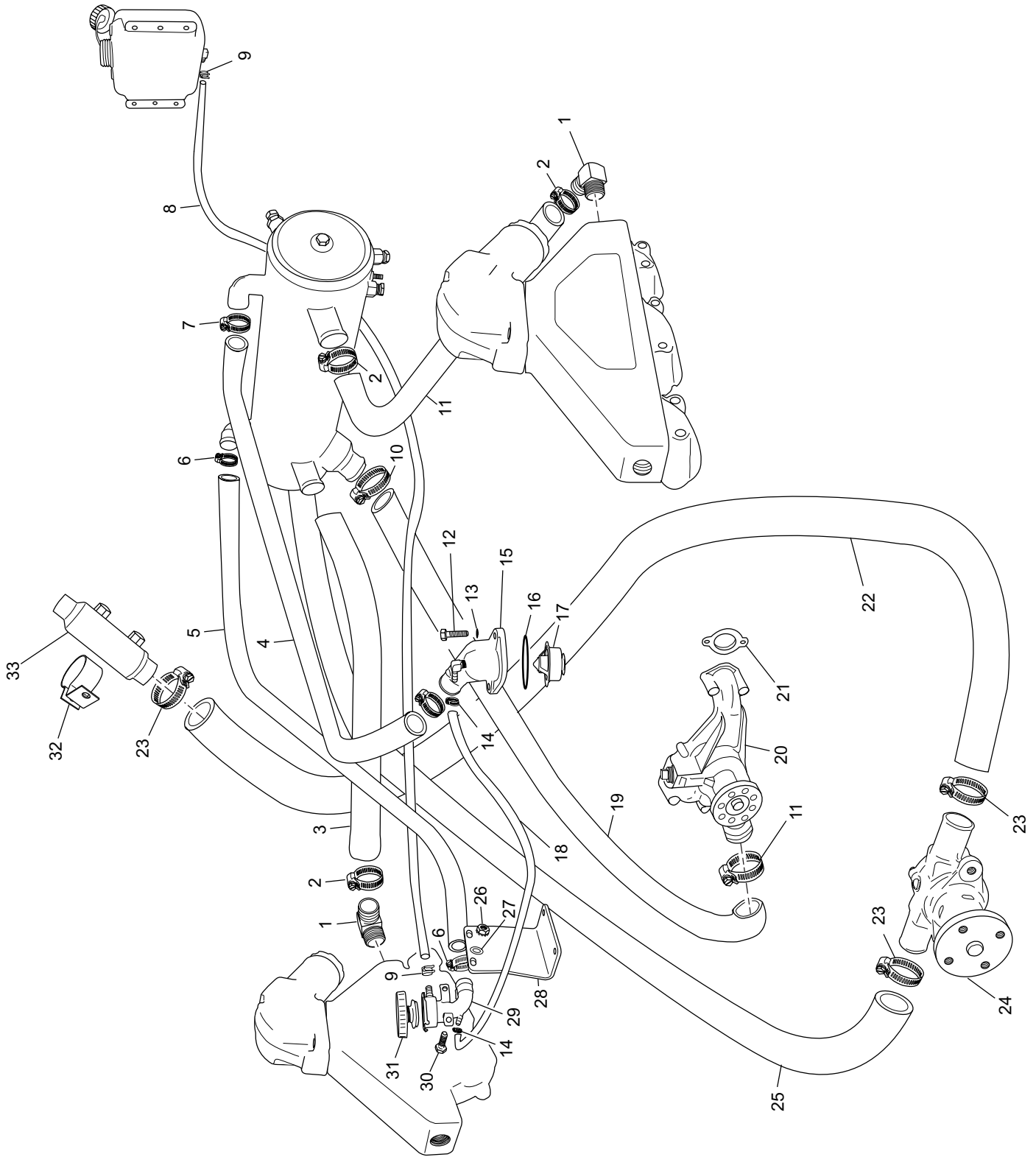


PC57B034

FRESH WATER COOLING SYSTEM COMPONENTS (CRANK-DRIVEN RAW WATER PUMP) -
FIGURE 14

| 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 , (170 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 | 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 |

FRESH WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 15

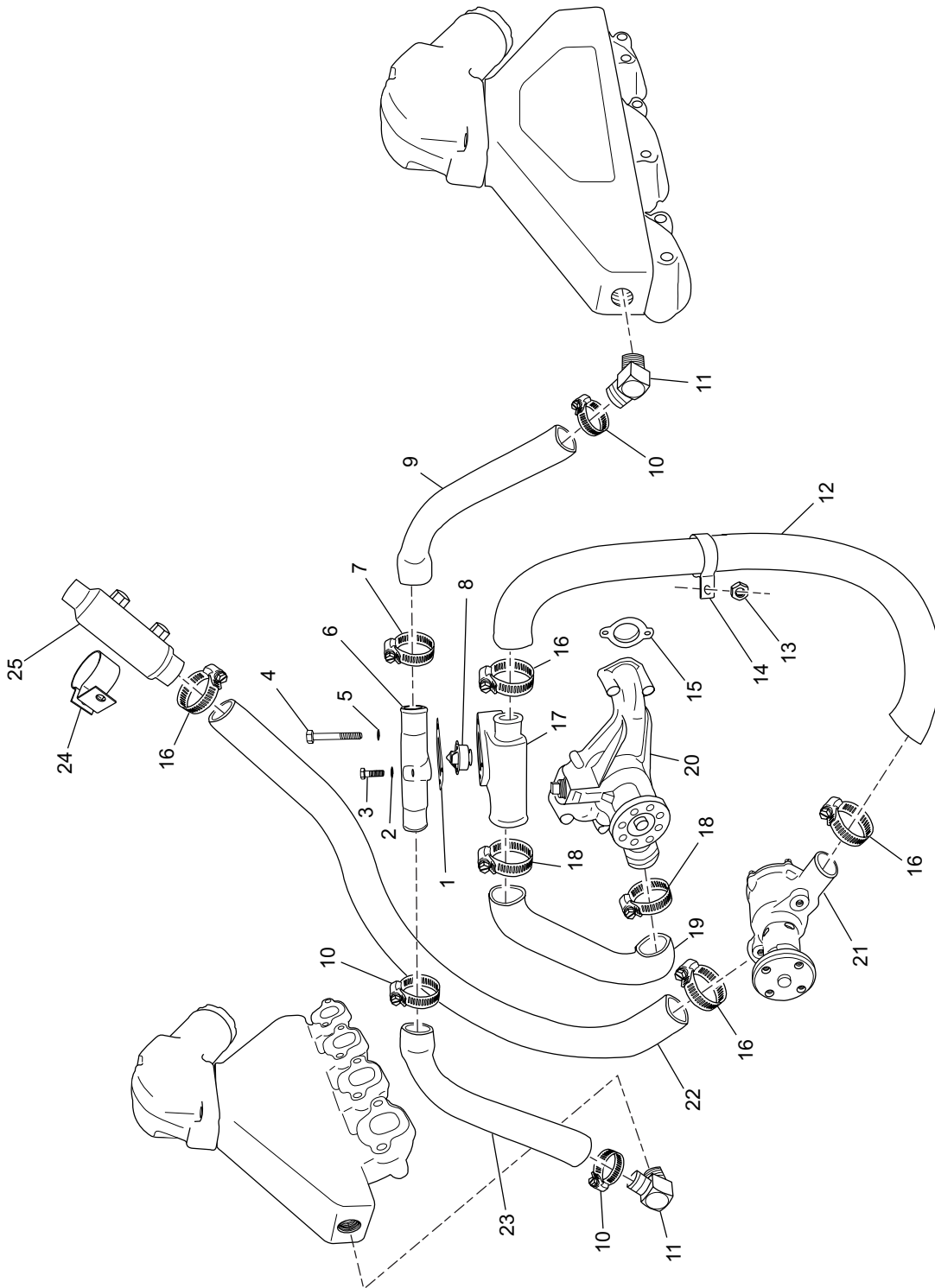


PC57B034a

FRESH WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 15

| 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 , (170 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 | 1 |

RAW WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 16

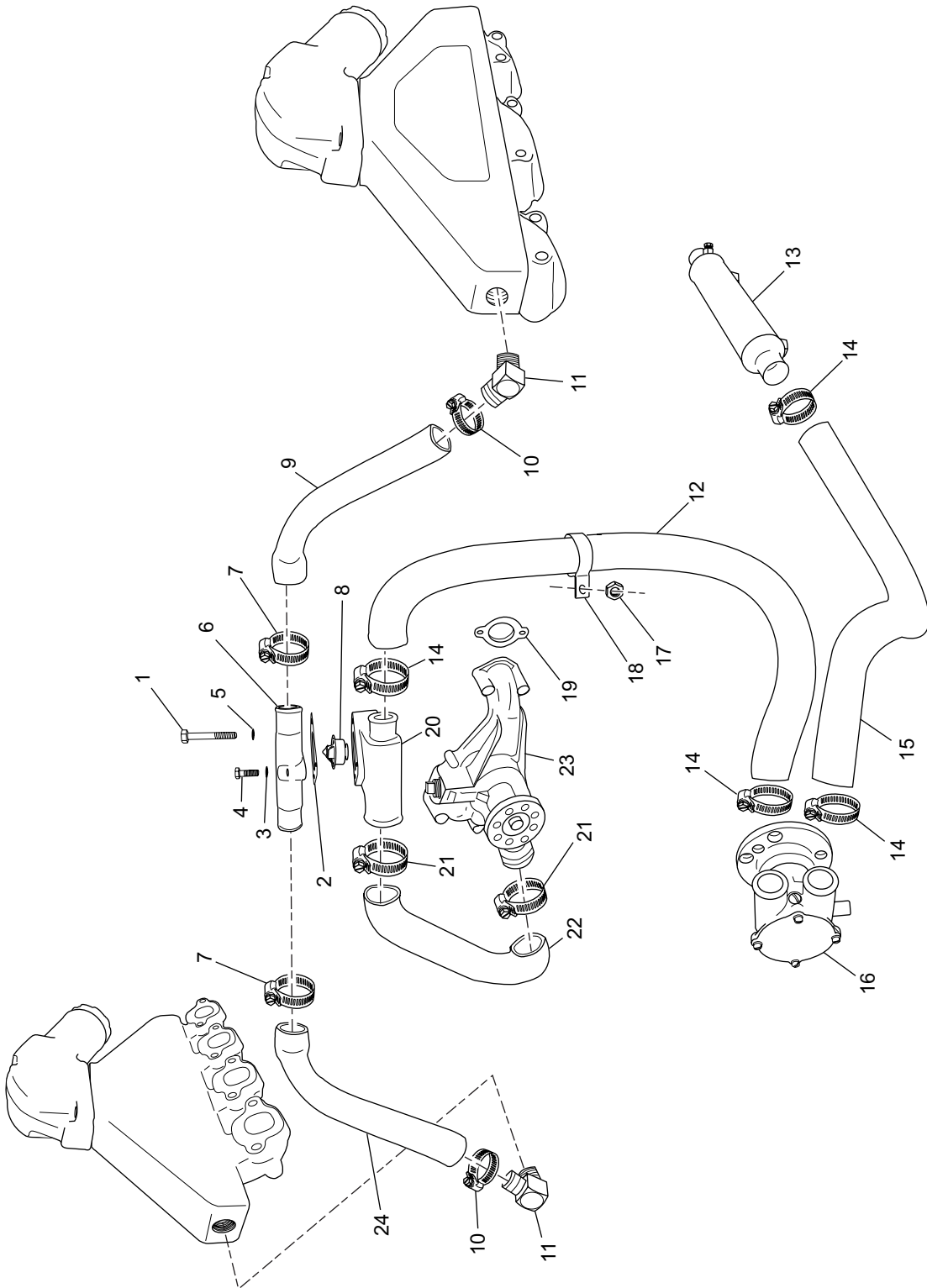


PC57B019

RAW WATER COOLING SYSTEM COMPONENTS (BELT-DRIVEN RAW WATER PUMP) -
FIGURE 16

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|--|----------|
| 1 | RM0258 | Gasket , upper fill riser to lower fill riser | 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 | R026002F | Thermostat , coolant (? 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 | 1 |

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

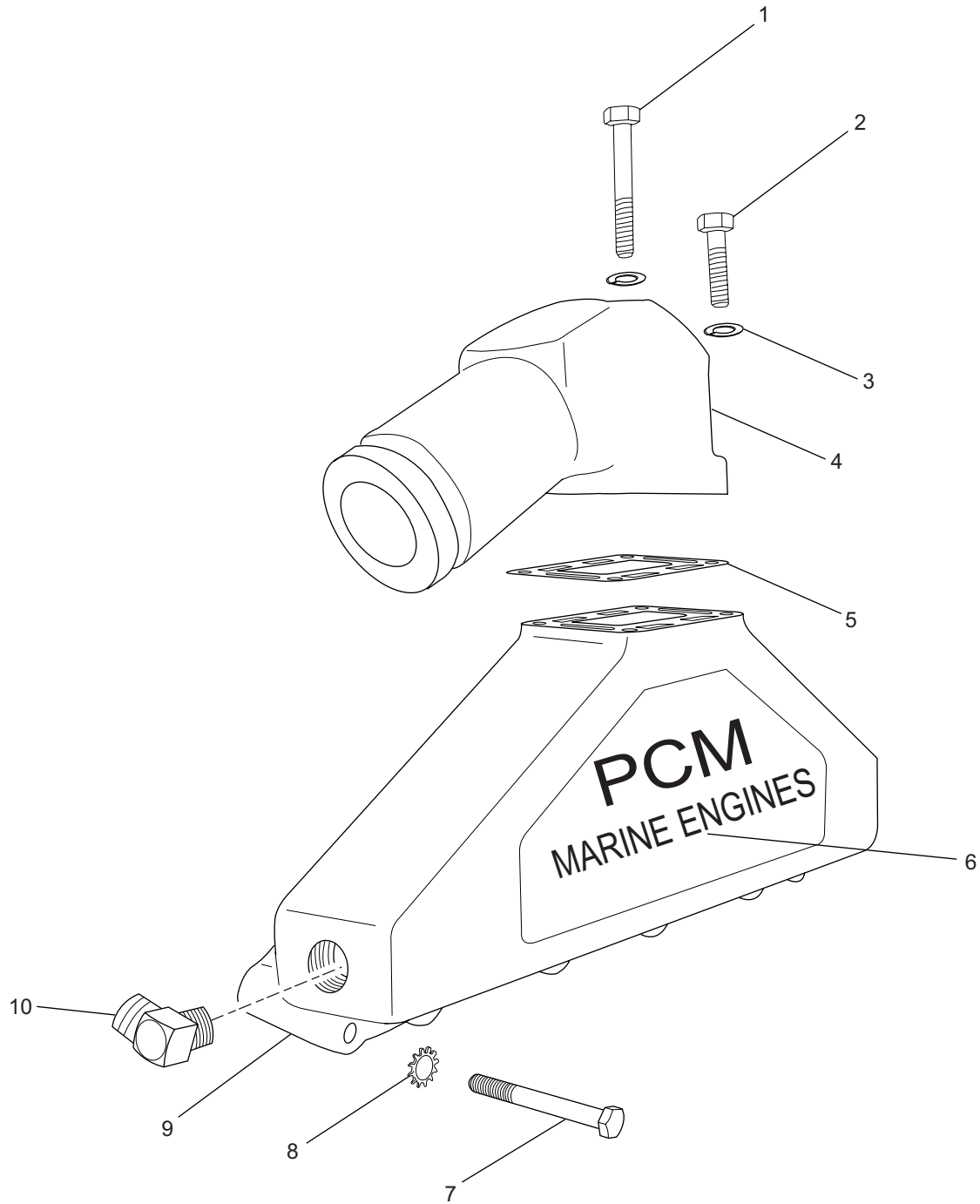


PC57B019a

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

| 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 | 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 | R026002F | Thermostat , coolant (? 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 | R147014 | Cooler , oil | 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 |

EXHAUST MANIFOLD and COMPONENTS - FIGURE 18

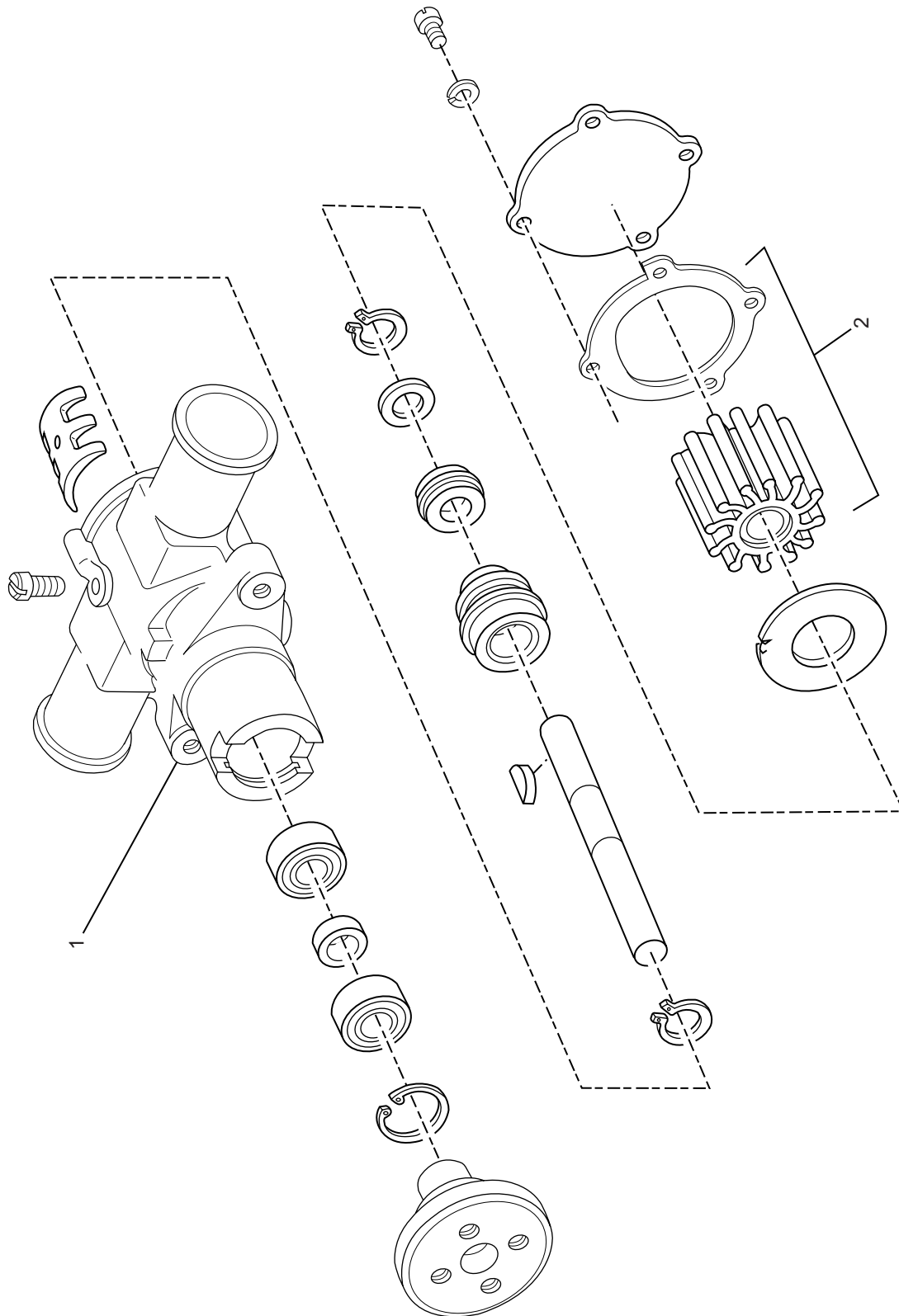


PC57B026

EXHAUST MANIFOLD and COMPONENTS - FIGURE 18

| 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 |
| <p>*NOTE: See Fresh Water Cooling section for parts used on Fresh Water Cooled engines.</p> | | | |

RAW WATER COOLING PUMP (BELT-DRIVEN) - FIGURE 19

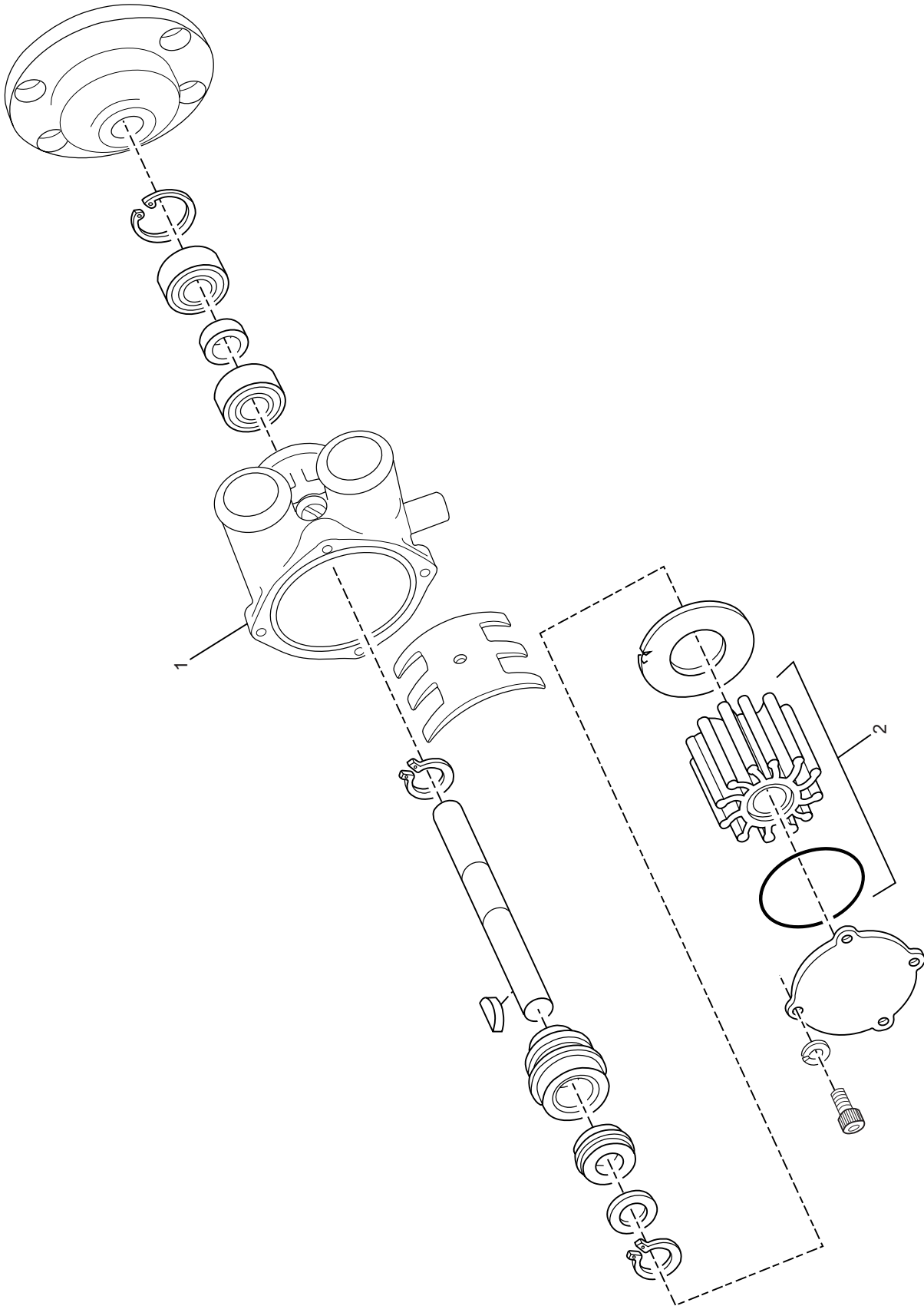


PC57B027

RAW WATER COOLING PUMP (BELT-DRIVEN) - FIGURE 19

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

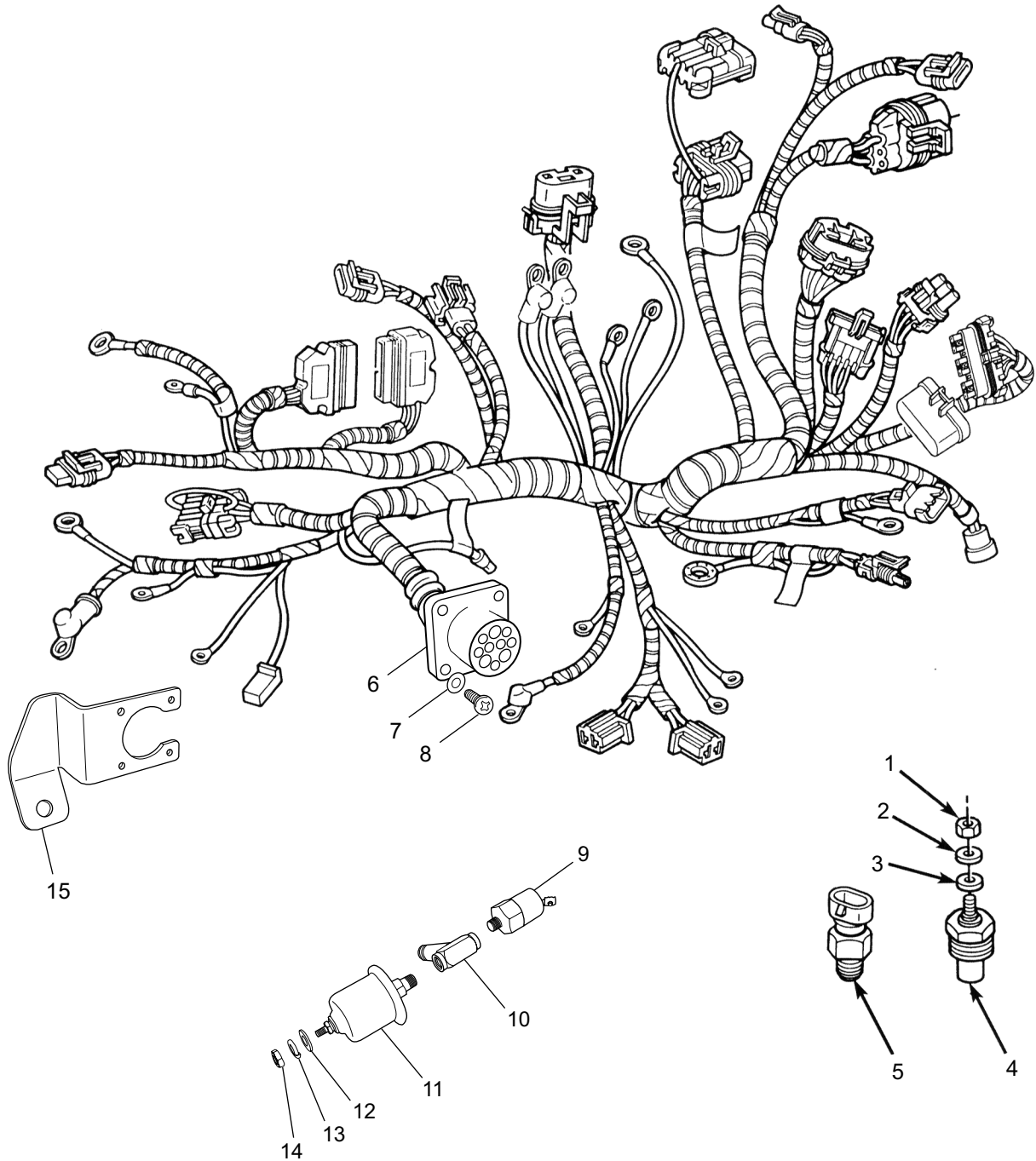
RAW WATER COOLING PUMP (CRANK-DRIVEN) - FIGURE 20



RAW WATER COOLING PUMP (CRANK-DRIVEN) - FIGURE 20

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

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 21

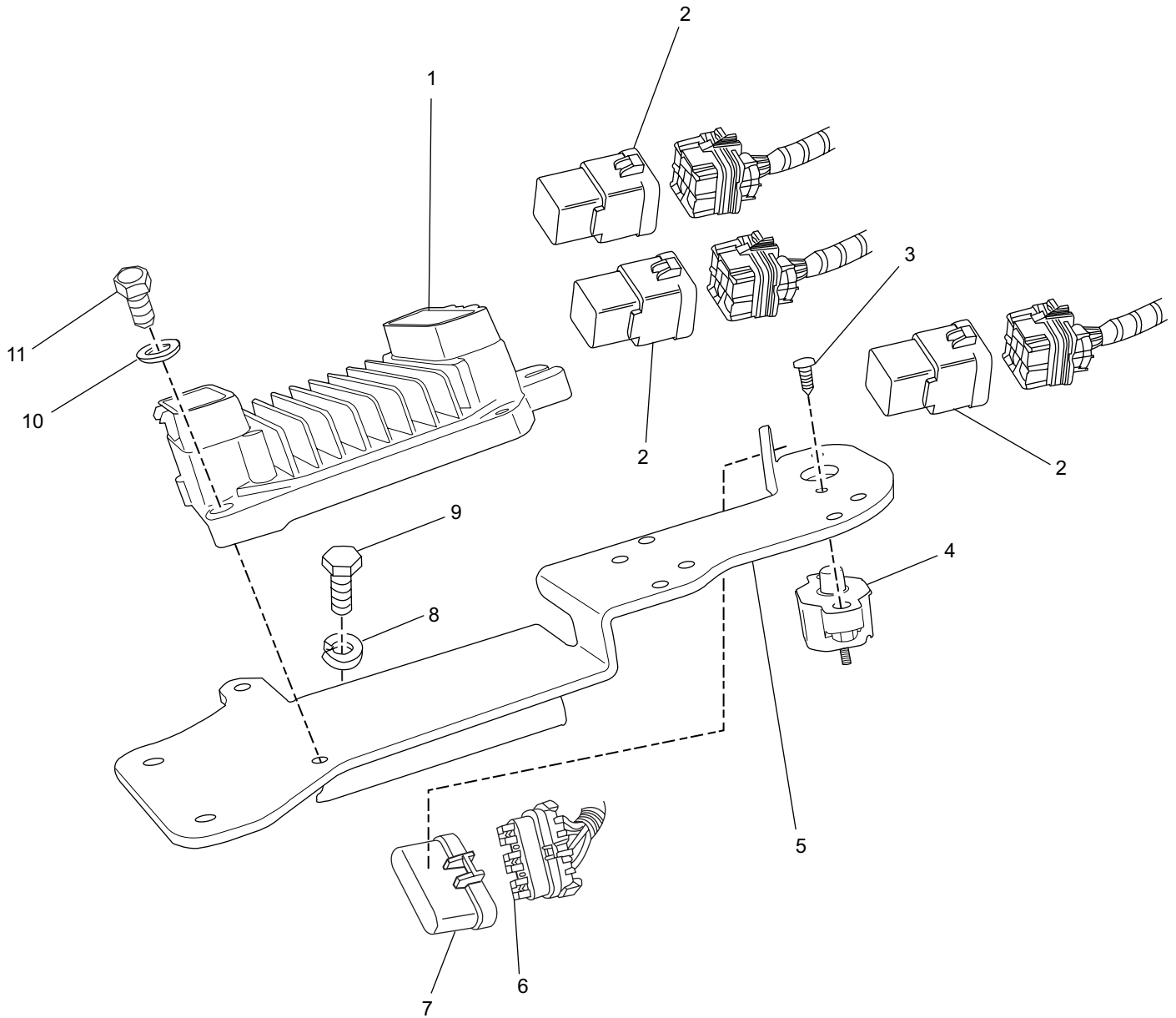


PC57B025

WIRING HARNESS ASSEMBLIES and SENDERS - FIGURE 21

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|--|----------|
| 1 | 95011000 | Nut , sender terminal | 1 |
| 2 | 95300300 | Lockwasher , sender terminal | 1 |
| 3 | 92300200 | Washer , sender terminal | 1 |
| 4 | R020003 | Sender , temperature | 1 |
| 5 | R020019 | Sensor , engine coolant temperature (ECT) | 1 |
| 6 | RA121067C | Engine Wiring Harness Assembly | 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 | 92300200 | Washer , sender terminal | 1 |
| 13 | 95300300 | Lockwasher , sender terminal | 1 |
| 14 | 95011000 | Nut , sender terminal | 1 |
| 15 | R090251 | Bracket , main harness attaching | 1 |

ECM and RELAYS - FIGURE 22

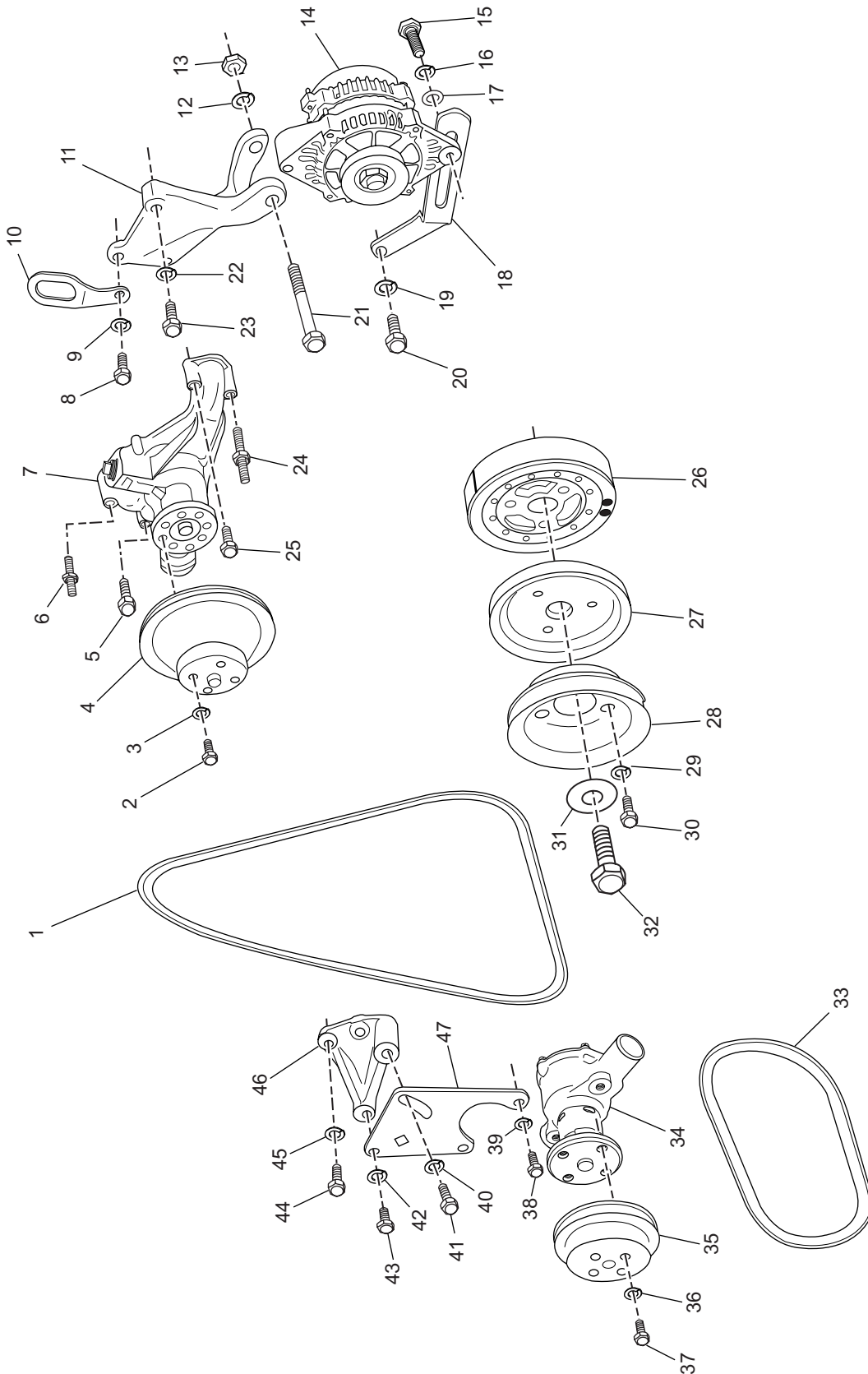


PC57B016

ECM and RELAYS - FIGURE 22

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R116019 | Engine Control Module | 1 |
| 2 | R130012 | Relay , fuel pump, ignition, starter | 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 23



PC57B017

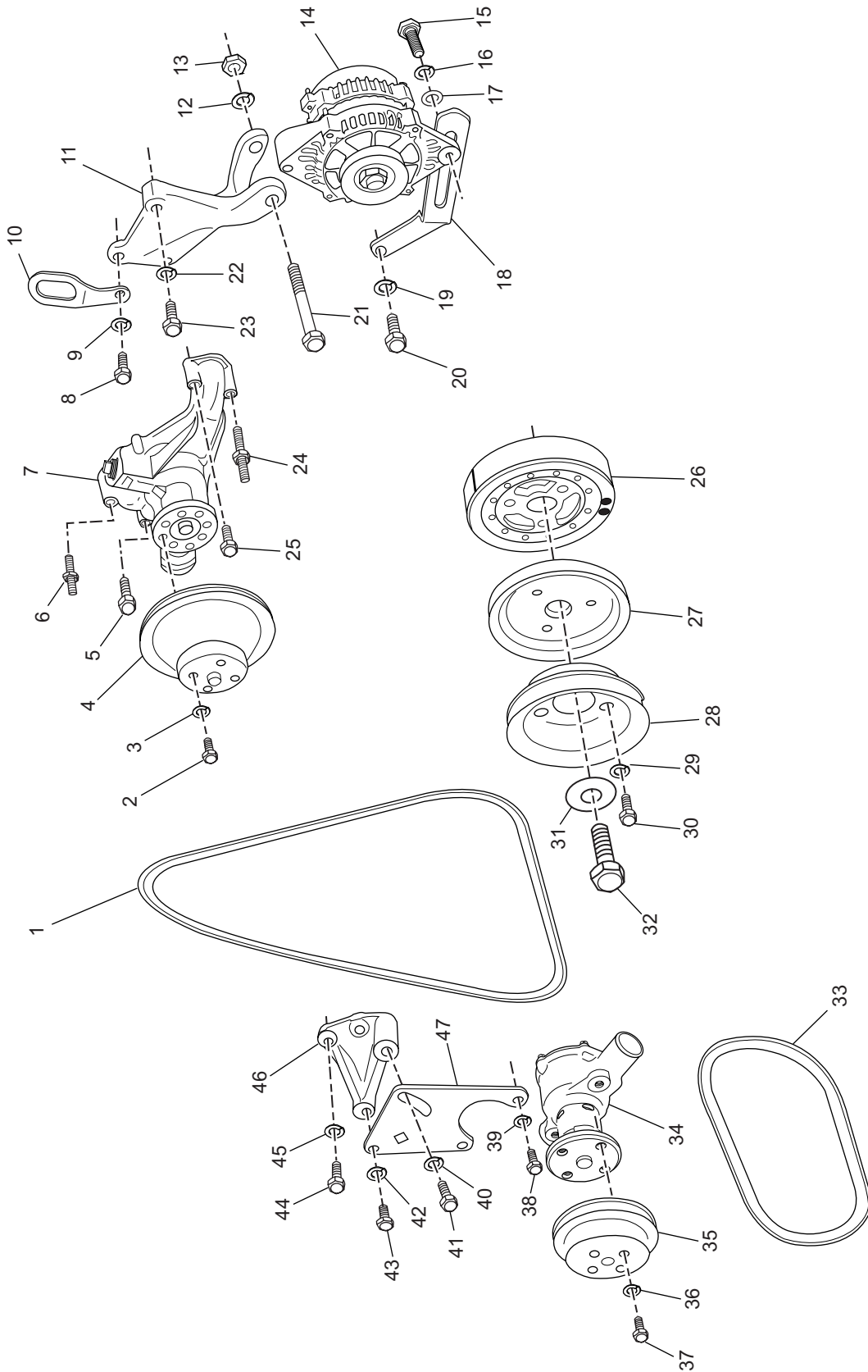
ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE

23

| 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 | | Bolt , raw water pump mounting | 2 |

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

23

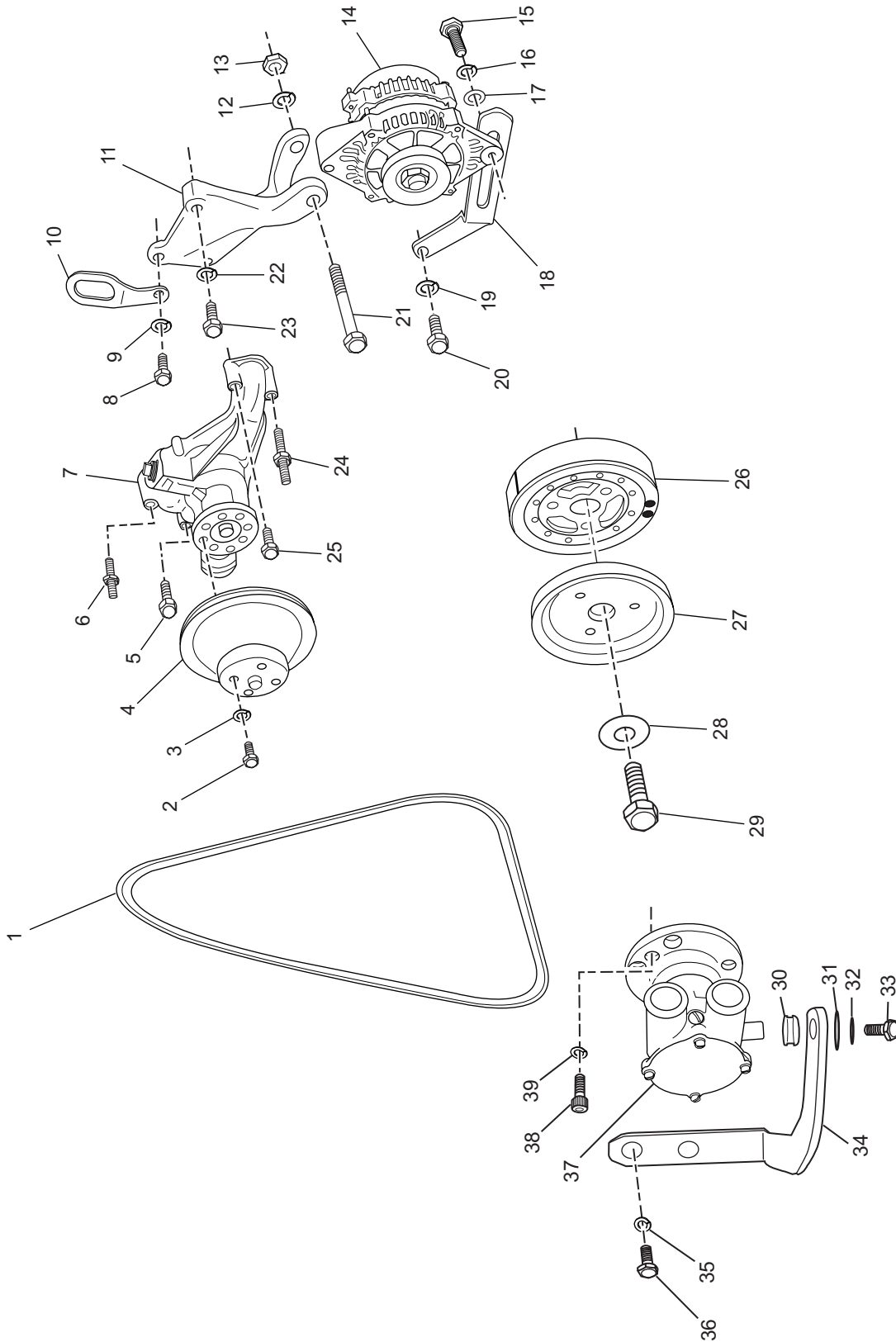


PC57B017

ACCESSORY DRIVE SYSTEM COMPONENTS (BELT DRIVEN RAW WATER PUMP) - FIGURE
23

| 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 |

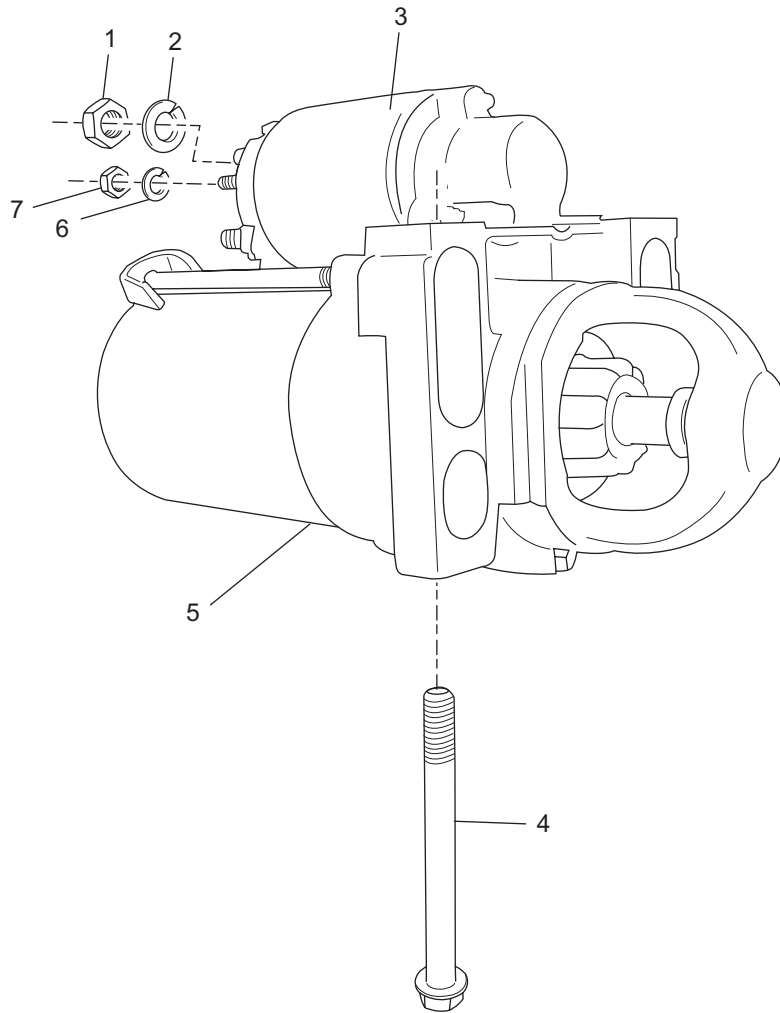
ACCESSORY DRIVE SYSTEM COMPONENTS (CRANK-MOUNTED RAW WATER PUMP) -
FIGURE 24



ACCESSORY DRIVE SYSTEM COMPONENTS (CRANK-MOUNTED RAW WATER PUMP) -
FIGURE 24

| 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 | Washer , mounting bolt large | 1 |
| 32 | RS2179 | Washer , mounting bolt small | 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 |

STARTER ASSEMBLY COMPONENTS - FIGURE 25



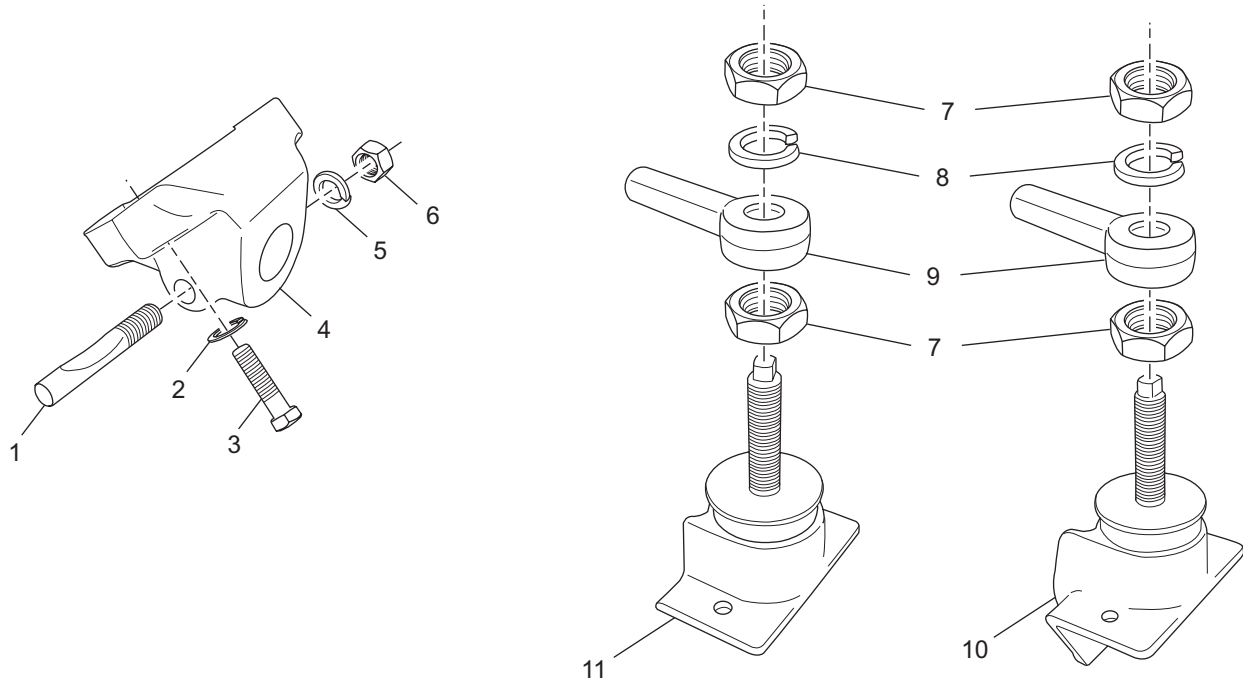
PC60P_016
11-8-02

STARTER ASSEMBLY COMPONENTS - FIGURE 25

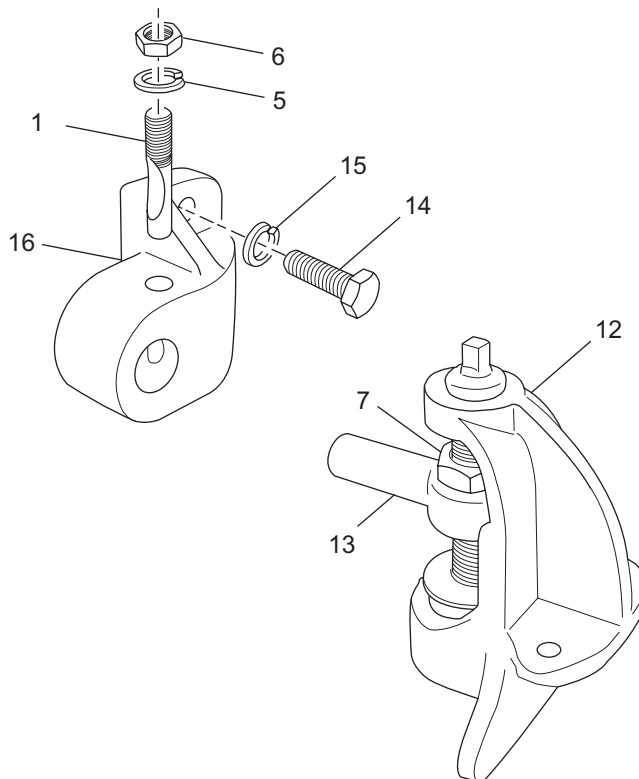
| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---------------------------------------|----------|
| 1 | RS7019 | Nut , solenoid terminal | 1 |
| 2 | TBD | Lockwasher , solenoid terminal | 1 |
| 3 | RU0050A | Solenoid , starter | 1 |
| 4 | R009167 | Bolt , starter mounting | 2 |
| 5 | RA122015 | Starter Motor Assembly | 1 |
| 6 | 93003000 | Lockwasher , solenoid terminal | 1 |
| 7 | RS7036 | Nut , solenoid terminal | 1 |

ENGINE and TRANSMISSION MOUNTS - FIGURE 26

Engine Mount Group
Front Mount



Engine Mount Group
Rear Mount

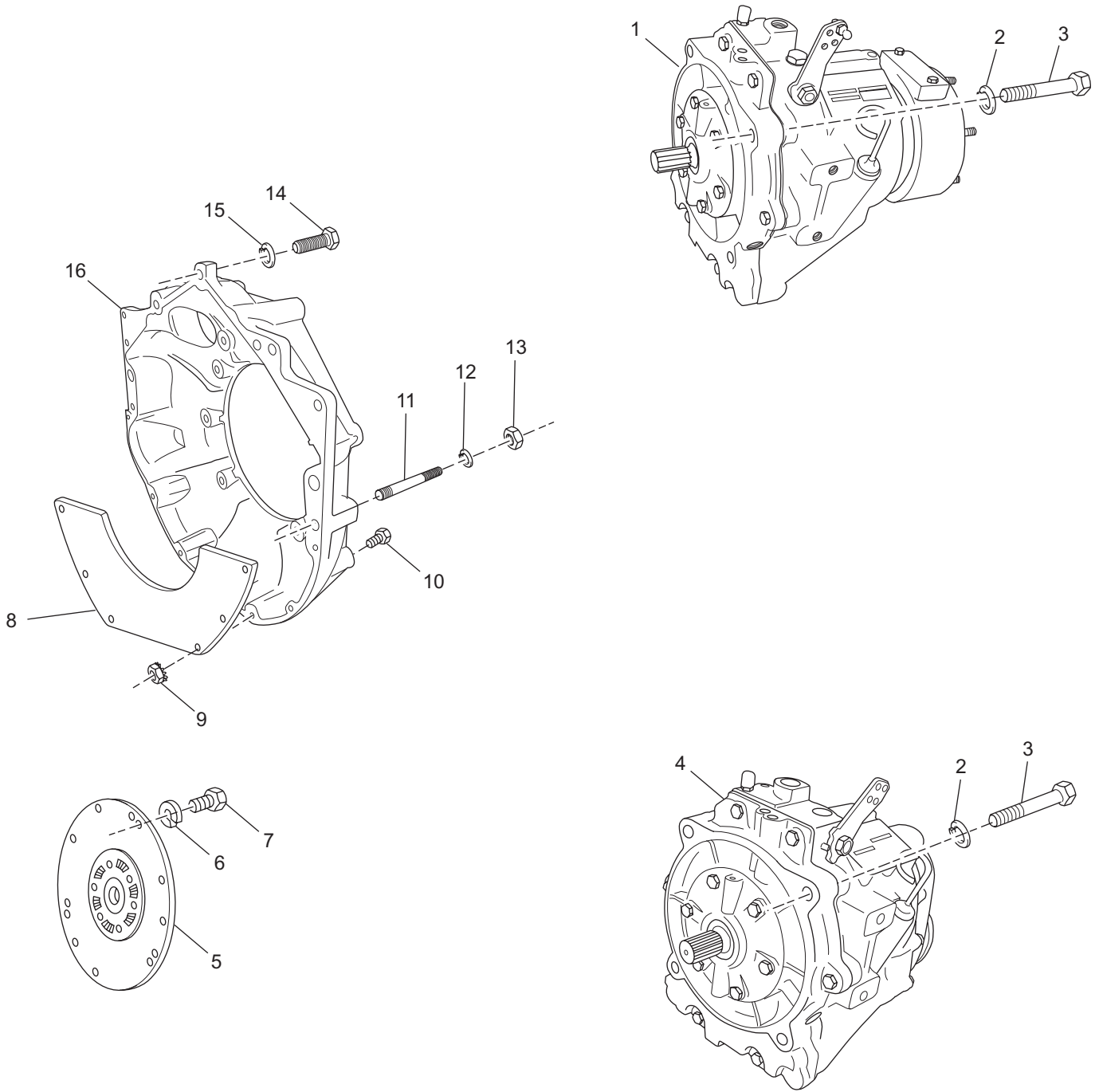


PC60P_019a
11-11-02

ENGINE and TRANSMISSION MOUNTS - FIGURE 26

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R095020 | Bolt , trunion clamp | 2 |
| 2 | RS2180 | Lockwasher , engine mount attaching bolt | 6 |
| 3 | RS0306 | Bolt , engine mount attaching | 6 |
| 4 | R090071 | Mount , engine front | 2 |
| 5 | RS2181 | Lockwasher , trunion clamp bolt | 2 |
| 6 | RS1529 | Nut , trunion clano bolt | 2 |
| 7 | RS1075 | Nut , adjustment and lock | 4 |
| 8 | RS2186 | Lockwasher , adjusting nut | 2 |
| 9 | R091001 | Trunion | 2 |
| 10 | RC091001 | Trunion Assembly | 1 |
| 11 | RA092016 | Trunion Assembly | 1 |
| 12 | RA092011A | Trunion Assembly | 1 |
| 13 | R091003 | Trunion | 2 |
| 14 | RS0328 | Bolt , rear mount attaching | 4 |
| 15 | RS2181 | Lockwasher , rear mount attaching bolt | 4 |
| 16 | R090205 | Mount , rear | 2 |

BELL HOUSING ASSEMBLY - FIGURE 27

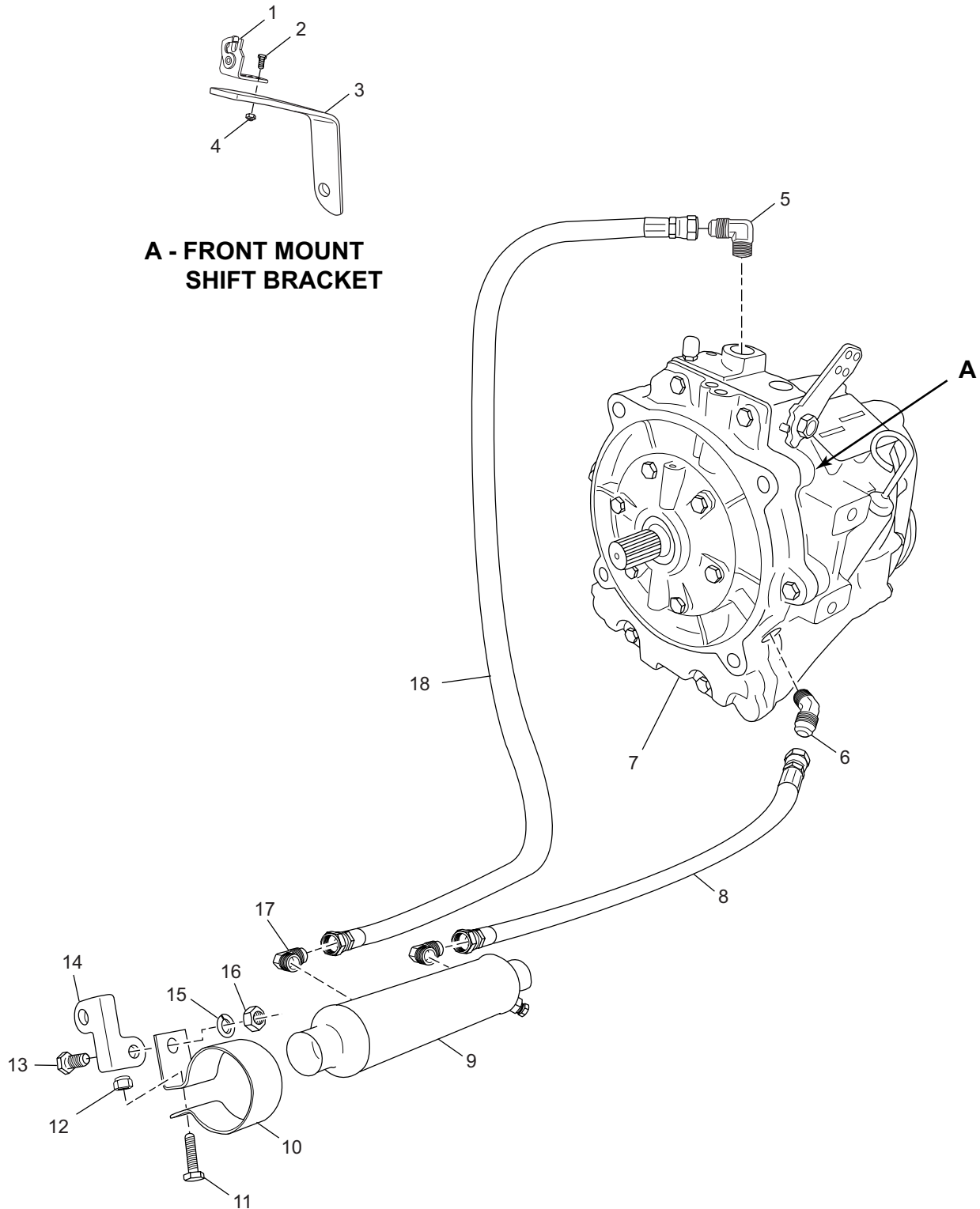


PC60P_021
11-11-02

BELL HOUSING ASSEMBLY - FIGURE 27

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | RA157016 | Transmission Assembly , ("V" - Drive) | AR |
| 2 | RS2180 | Lockwasher , transmission attaching bolt | 4 |
| 3 | RS0329 | Bolt , transmission attaching | 4 |
| 4 | RA157017 | Transmission Assembly , (standard) | AR |
| 5 | R140016 | Plate , damper | 1 |
| 6 | 93940000 | Lockwasher , damper plate attaching bolt | 4 |
| 7 | 98446030 | Bolt , damper plate attaching | 4 |
| 8 | R019008 | Cover , dust | 1 |
| 9 | RS1078 | Nut , dust cover attaching | 2 |
| 10 | RS0256 | Bolt , dust cover attaching | 2 |
| 11 | R031031 | 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 | R142014A | Bellhousing | 1 |

TRANSMISSION AND RELATED COMPONENTS (1.23:1 FWC) - FIGURE 28

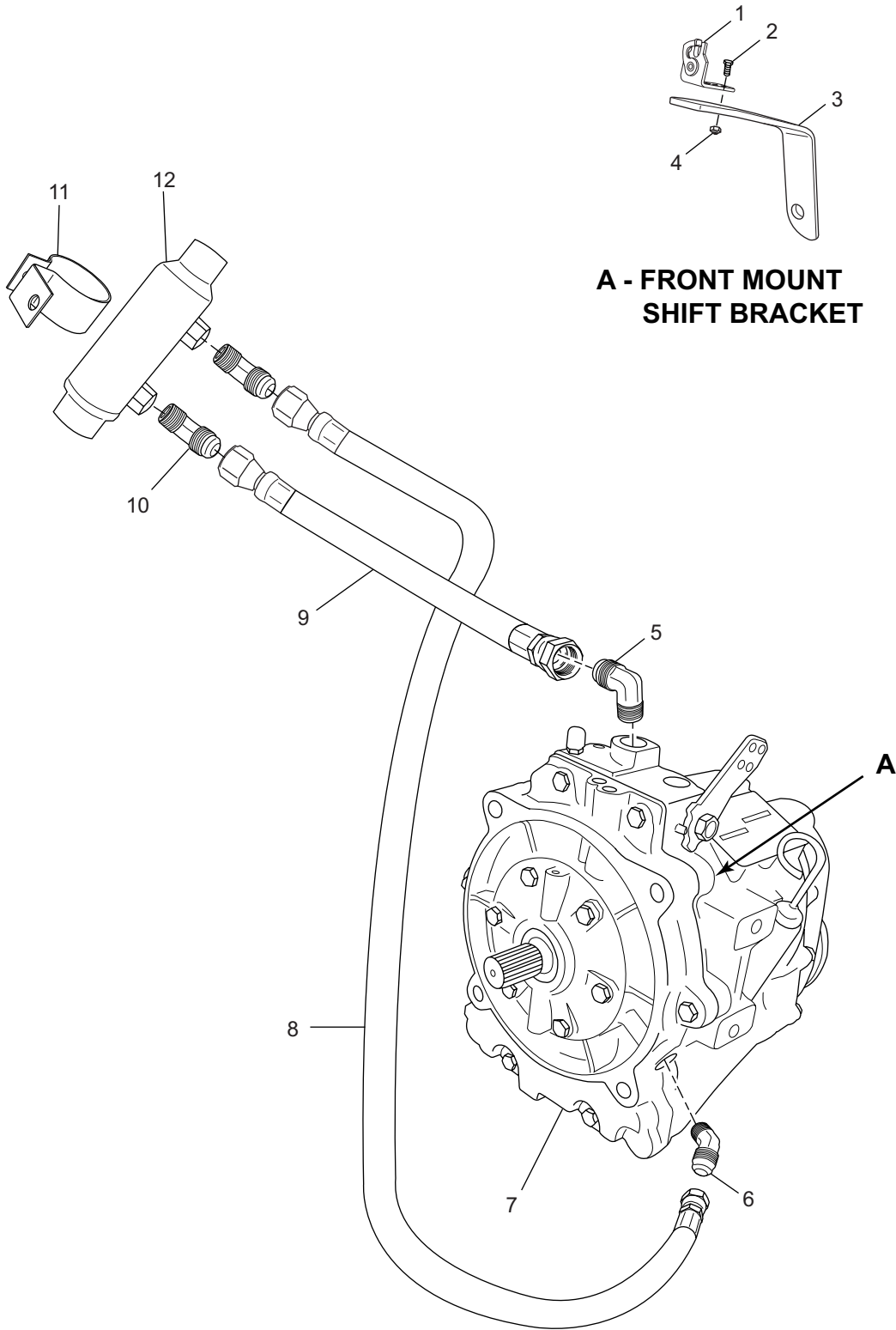


PCB57035

TRANSMISSION AND RELATED COMPONENTS (1.23:1 FWC) - FIGURE 28

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R090086 | Cable Clip , single cable | 1 |
| 2 | RS5122 | Bolt , cable clip attaching | 2 |
| 3 | R090143 | 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 |
| 8 | RA045007S | Hose Assembly , cooler to transmission | 1 |
| 9 | R147014 | Oil Cooler Assembly | 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 |

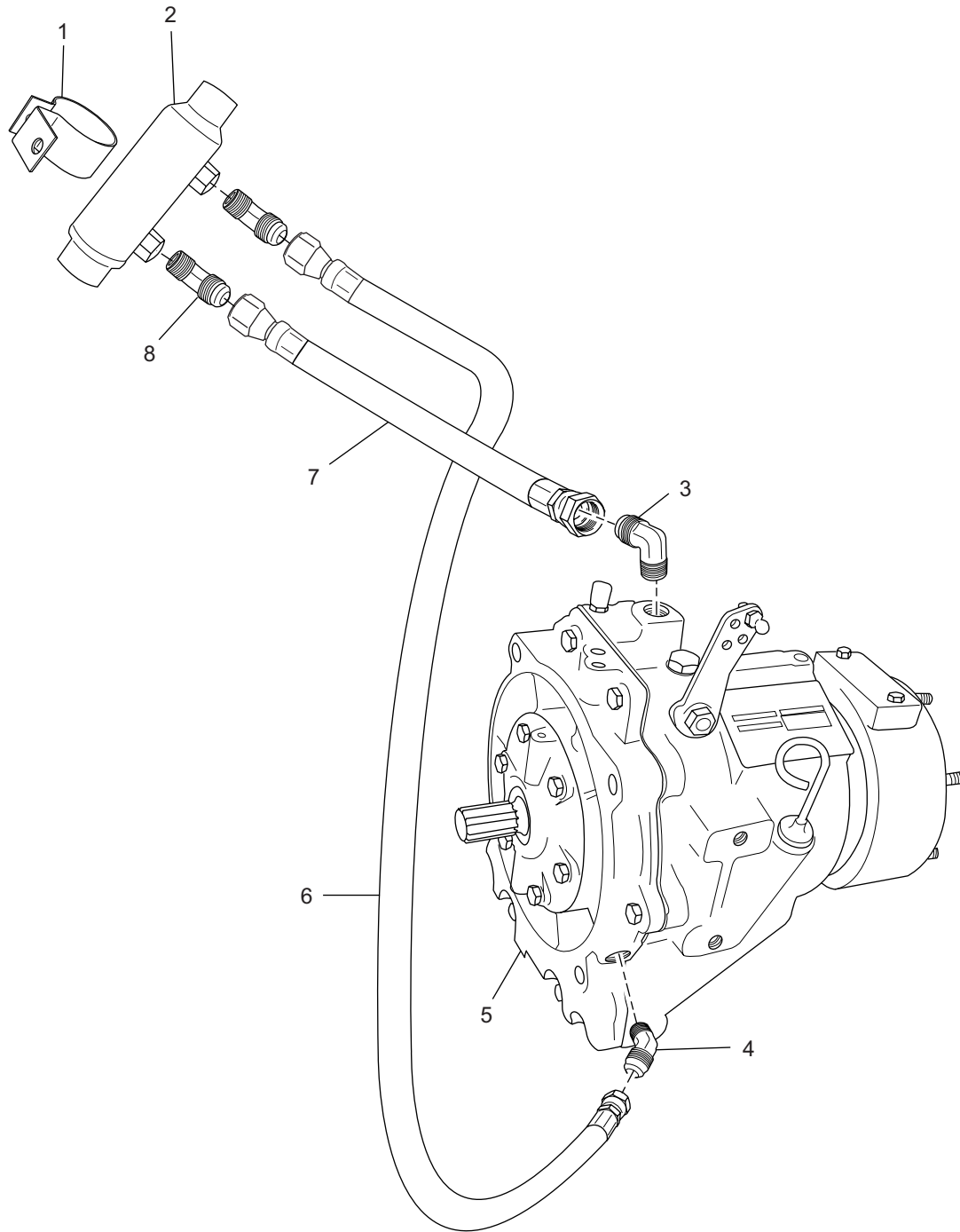
TRANSMISSION AND RELATED COMPONENTS (1.23:1 RWC) - FIGURE 29



TRANSMISSION AND RELATED COMPONENTS (1.23:1 RWC) - FIGURE 29

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R090086 | Cable Clip , single cable | 1 |
| 2 | RS5122 | Bolt , cable clip attaching | 2 |
| 3 | R090143 | 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 |
| 8 | RA045007R | Hose Assembly , cooler to transmission | 1 |
| 9 | TBD | 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 | 1 |

TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 30



PCB57036

TRANSMISSION AND RELATED COMPONENTS (1.0:1 "V" - DRIVE) - FIGURE 30

| ITEM | PART NUMBER | DESCRIPTION | QUANTITY |
|------|-------------|---|----------|
| 1 | R090010 | Bracket , oil cooler mounting | 1 |
| 2 | R147014 | Cooler , oil | 1 |
| 3 | R024010 | Fitting , 90 degree | 1 |
| 4 | R024010 | Fitting , 90 degree | 1 |
| 5 | RA157016 | Transmission , "V"- Drive | 1 |
| 6 | TBD | Hose Assembly , cooler to transmission | 2 |
| 7 | RA045007K | Hose Assembly , transmission to cooler | 1 |
| 8 | R024010 | Fitting , 90 degree | 2 |