

Cummins **Onan**



Parts Manual

Marine Generator Set

MDKBL (Spec A–G)

MDKBM (Spec A–G)

MDKBN (Spec A–G)

Introduction

This catalog applies to the standard marine generator sets listed below. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Unless otherwise mentioned in the description or page heading, parts are interchangeable between models. Throughout this catalog left and right sides are determined by facing the engine end (front) of the set.

Generator Set Data Table

| Model and Specification | Electrical Data | | | | | Battery Voltage |
|-------------------------|-----------------|-------|-------|------|-------|-----------------|
| | Watts | Volts | Hertz | Wire | Phase | |
| 7MDKBL* | 7,000 | # | 50 | 2,3 | 1 | # |
| 9MDKBL* | 9,000 | # | 60 | 2,3 | 1 | # |
| 9.5MDKBM* | 9,500 | # | 50 | 2,3 | 1 | # |
| 11.5MDKBM* | 11,500 | # | 60 | 2,3 | 1 | # |
| 11MDKBN* | 11,000 | # | 60 | 2,3 | 1 | # |
| 13.5MDKBN* | 13,500 | # | 50 | 2,3 | 1 | # |

* – The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from the standard model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.

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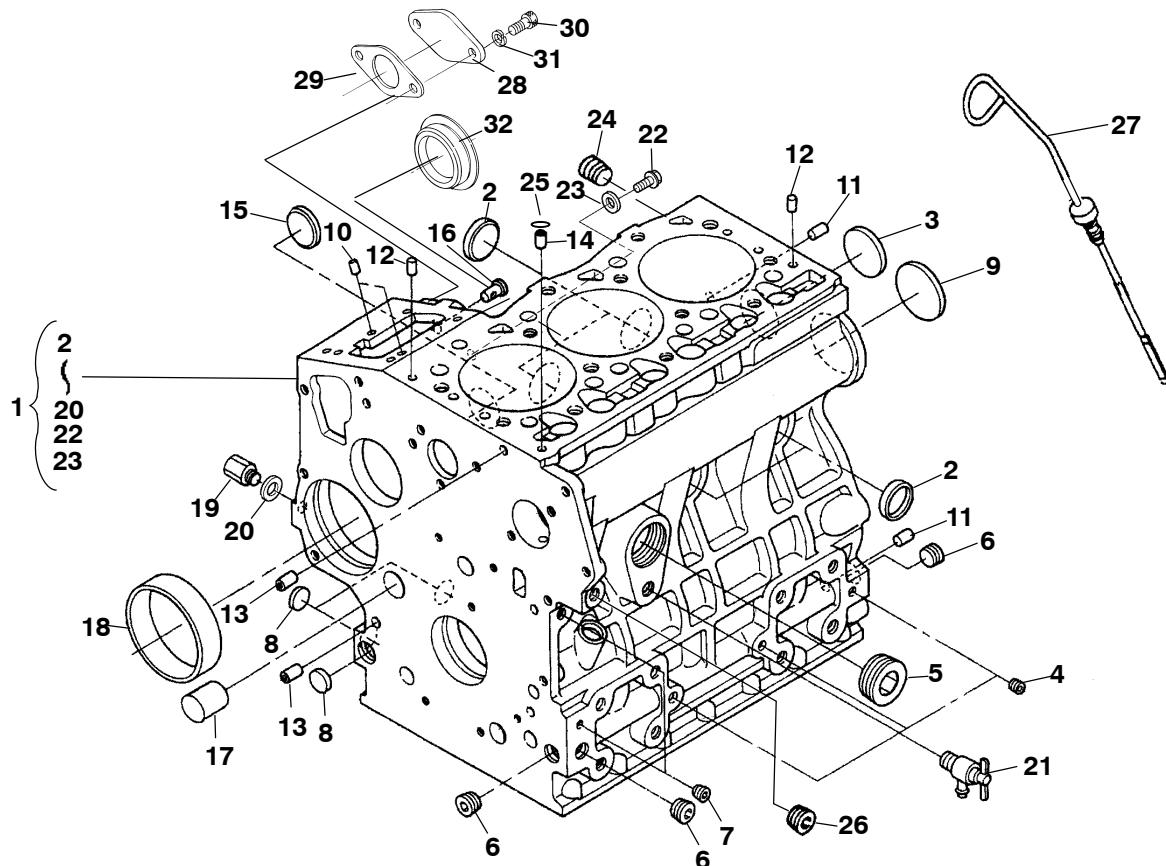
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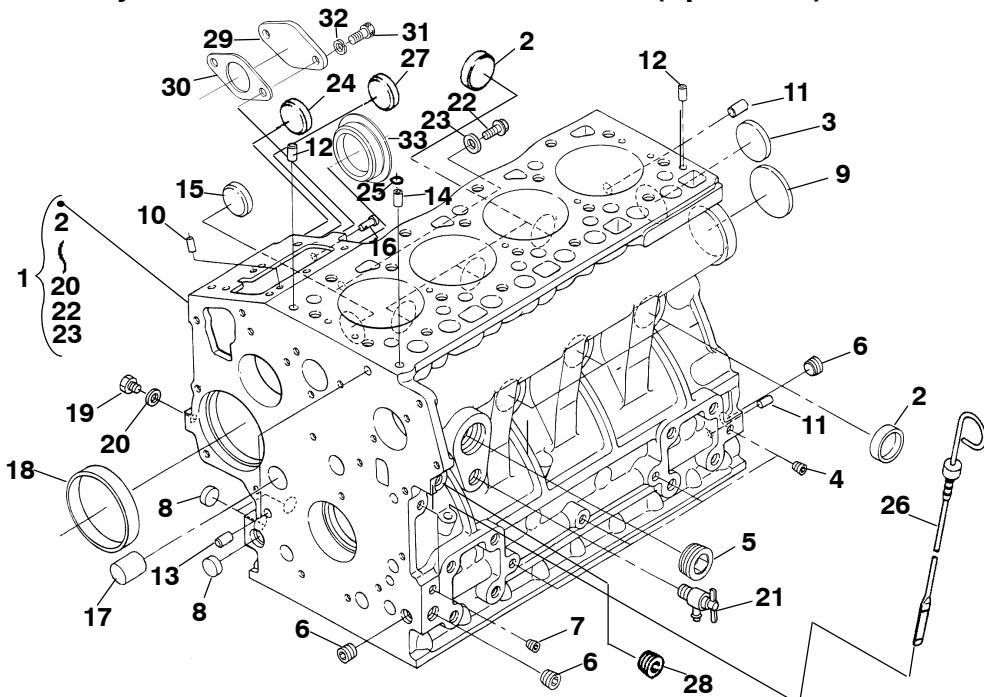
Cylinder Block MDKBL



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|-------------|----------|----------|--|---------|----------|----------|--------------------------------|
| | | | Assy, Engine Replacement MDKBL (Spec A) | 15 | 185-6470 | 1 | *Plug Spec A |
| 100-3616-01 | 1 | 12V | | 16 | 185-7212 | 1 | Begin Spec B |
| 100-3616-02 | 1 | 24V | | 17 | 185-6857 | 1 | *Pin, Start Spring |
| | | | MDKBL (Spec B-D) | 18 | 185-6471 | 1 | *Plug |
| 100-3944-01 | 1 | 12V | | 19 | 185-6472 | 1 | *Bush, Governor Gear |
| 100-3944-02 | 1 | 24V | | 20 | 185-5845 | 1 | *Plug |
| | | | MDKBL (Spec E-F) | 21 | 185-2338 | 1 | *Gasket |
| 100-4101-01 | 1 | 12V | | 22 | 185-5490 | 1 | Cock Assy, Drain |
| 100-4101-02 | 1 | 24V | | 23 | 185-2572 | 1 | *Bolt, Flange |
| | | | MDKBL (Begin Spec G) | 24 | 185-2284 | 1 | *Gasket |
| A044B662 | 1 | 12V | | 25 | 185-6039 | 1 | Plug (Spec A) |
| A044B664 | 1 | 24V | | 26 | 185-2095 | 1 | O'Ring (Spec A) |
| 1 | | | Block, Cylinder (Includes Parts Marked *) Spec A | 27 | 185-5502 | 1 | Plug (Spec A) |
| 185-7372 | 1 | | | 28 | 185-6866 | 1 | Indicator, Oil Lever |
| 2 185-5484 | 4 | | *Cap, Sealing | | 185-6578 | 2 | Cover, Solenoid Spec A |
| 3 185-2412 | 1 | | *Cap, Sealing | | 184-0071 | 2 | Begin Spec B |
| 4 185-2188 | 3 | | *Plug | 29 | 185-6579 | 1 | Gasket |
| 5 185-6856 | 1 | | *Plug | | 185-2403 | 2 | Spec A |
| 6 185-6468 | 3 | | *Plug | | 800-6548 | 2 | Bolt, Hex Socket Head Spec A |
| 7 185-2233 | 2 | | *Plug | 31 | 185-6759 | 2 | Begin Spec B |
| 8 185-6121 | 3 | | *Plug, Expansion | | 120-1386 | 1 | Washer, Spring (Begin Spec B) |
| 9 185-6040 | 1 | | *Plug, Expansion | | | | Cover, Hydraulic Pump Spec B-D |
| 10 185-5486 | 2 | | *Pin, Straight | 32 | 185-7223 | 1 | Begin Spec E |
| 11 185-5487 | 2 | | *Pin, Straight | | | | |
| 12 185-7420 | 2 | | *Pin, Straight | | | | |
| 13 185-2115 | 2 | | *Pin, Pipe | | | | |
| 14 185-6469 | 1 | | *Pin, Pipe | | | | |

* – Parts Included in Cylinder Block.

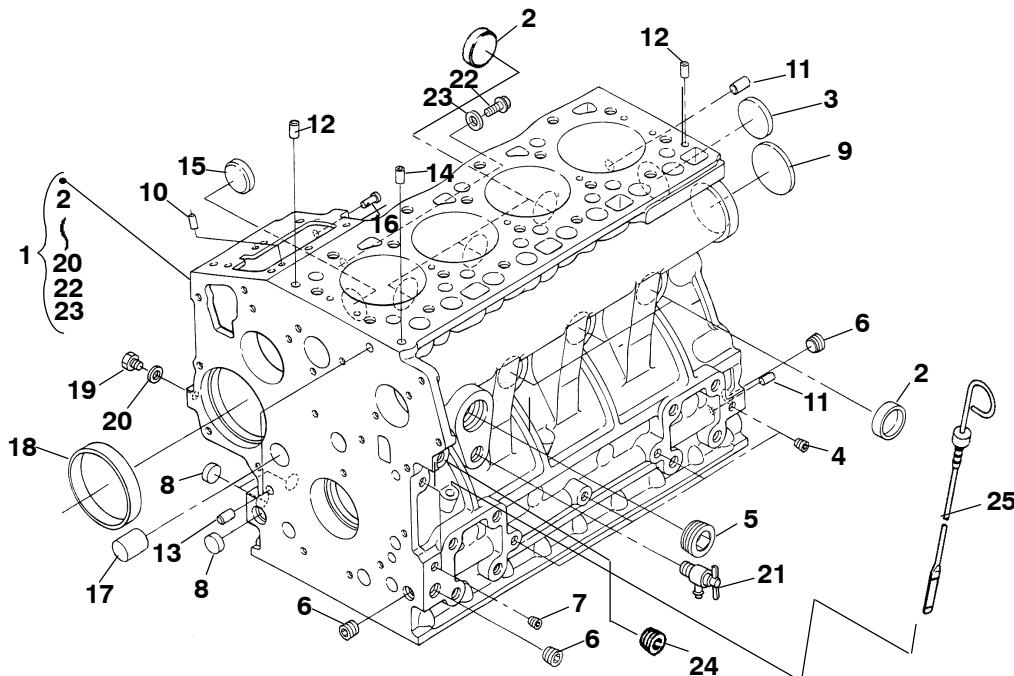
Cylinder Block MDKBM and MDKBN (Spec A-D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|-------------|--------------|--|------------|-------------|--------------|------------------------|
| | | | Engine, Replacement MDKBM (Spec A) | 11 | 185-5487 | 2 | *Pin, Straight |
| 100-3811-01 | 1 | 1 | 12V | 12 | 185-5843 | 2 | *Pin, Straight |
| 100-3811-02 | 1 | 1 | 24V | | 185-7420 | 2 | Spec A Begin Spec B |
| | | | MDKBM (Spec B-D) | 13 | 185-2115 | 2 | *Pin, Pipe |
| 100-3945-01 | 1 | 1 | 12V | 14 | 185-6469 | 1 | *Pin, Pipe |
| 100-3945-02 | 1 | 1 | 24V | 15 | 185-7212 | 1 | *Plug |
| | | | MDKBN (Spec A) | 16 | 185-2102 | 1 | *Pin, Start Spring |
| 100-3812-01 | 1 | 1 | 12V | 17 | 185-6471 | 1 | *Plug |
| 100-3812-02 | 1 | 1 | 24V | 18 | 185-6472 | 1 | *Bush, Governor Gear |
| | | | MDKBN (Spec B-D) | 19 | 185-5845 | 1 | *Plug |
| 100-3946-01 | 1 | 1 | 12V | 20 | 185-2338 | 1 | *Gasket |
| 100-3946-02 | 1 | 1 | 24V | 21 | 185-5490 | 1 | Cock Assy, Drain |
| 1 | | | Block, Cylinder (Includes Parts Marked *) | 22 | 185-2572 | 1 | *Bolt, Flange |
| | | | MDKBM | 23 | 185-2284 | 1 | *Gasket |
| 185-7245 | 1 | 1 | Spec A | 24 | 185-6889 | 1 | Cap, Sealing |
| | | | MDKBN | 25 | 185-2095 | 1 | O'Ring (Spec A) |
| 185-7302 | 1 | 1 | Spec A | 26 | 185-6866 | 1 | Indicator, Oil Level |
| 2 185-5484 | 6 | 6 | *Cap, Sealing | 27 | 185-7212 | 1 | Plug |
| 3 185-2412 | 1 | 1 | *Cap, Sealing | 28 | 184-0072 | 1 | Plug Square Head |
| 4 185-2188 | 4 | 4 | *Plug | 29 | 184-0071 | 1 | Cover, Solenoid |
| 5 185-6856 | 1 | 1 | *Plug | 30 | | | |
| 6 185-6468 | 3 | 3 | *Plug | 31 | 800-6548 | 2 | Bolt, Hex Socket Head |
| 7 185-2233 | 2 | 2 | *Plug | 32 | 185-2380 | 2 | Washer Spring |
| 8 185-6121 | 3 | 3 | *Plug, Expansion | 33 | 185-7223 | 1 | Cover, Hydraulic Pump |
| 9 185-6040 | 1 | 1 | *Plug, Expansion | | | | |
| 10 185-5486 | 2 | 2 | *Pin, Straight | | | | |

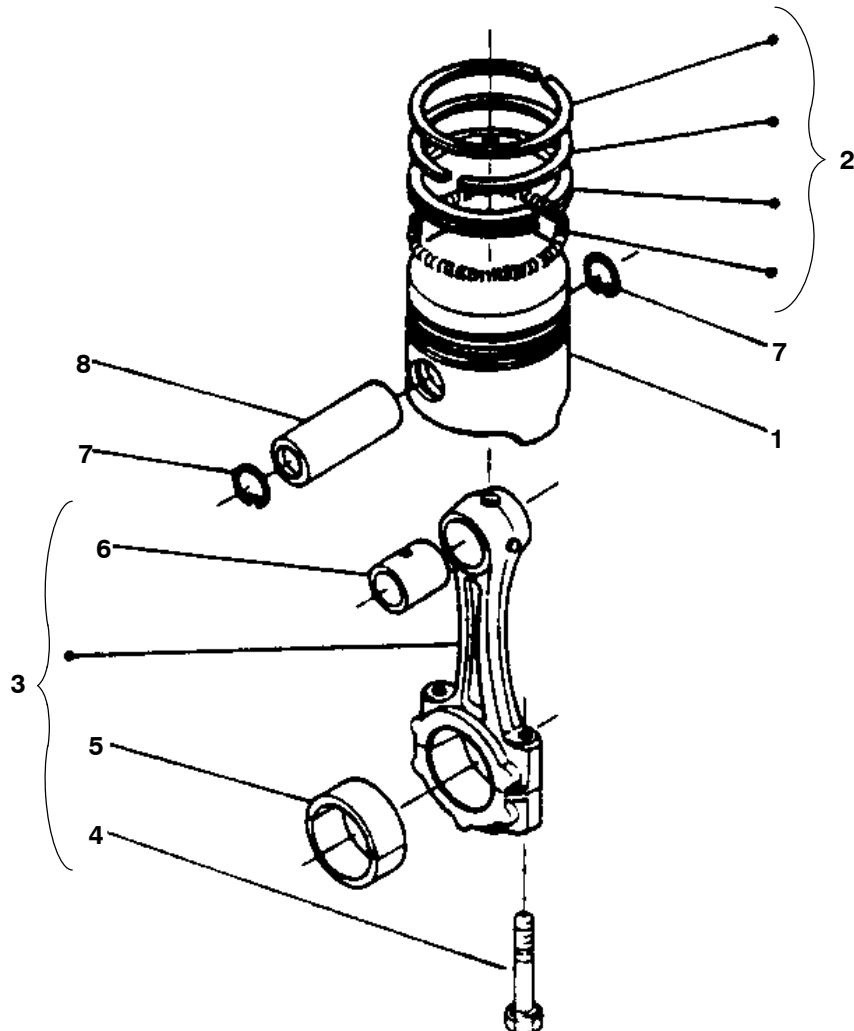
* – Parts Included in Cylinder Block.

Cylinder Block MDKBM and MDKBN (Begin Spec E)



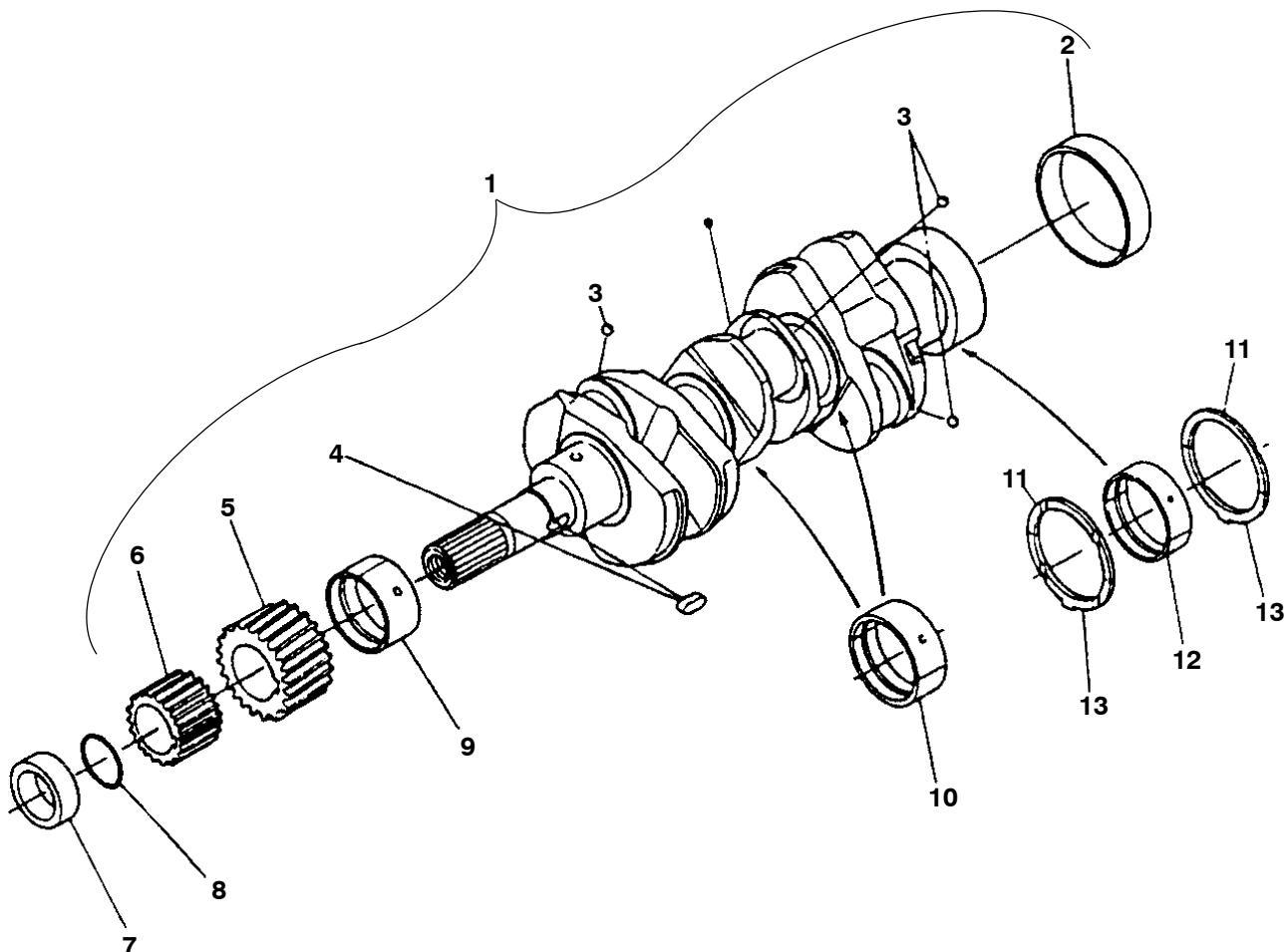
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|-------------|--------------|--|------------|-------------|--------------|---------------------------------------|
| | | | Engine, Replacement (Spec E-F) | 11 | 185-5487 | 2 | *Pin, Straight |
| 100-4102-01 | 1 | 1 | 12V | 12 | 185-5843 | | *Pin, Straight |
| 100-4102-02 | 1 | 1 | 24V | 13 | 185-2115 | 2 | *Pin, Pipe |
| | | | (Begin Spec G) | 14 | 185-6469 | 1 | *Pin, Pipe |
| A044B666 | 1 | 1 | 12V | 15 | 185-7212 | 1 | *Plug |
| A044B669 | 1 | 1 | 24V | 16 | 181-9093 | 1 | *Pin, Start Spring |
| 1 110-4093 | 1 | 1 | Block, Cylinder (Includes Parts Marked *) | 17 | 185-6471 | 1 | *Plug |
| 2 185-5484 | 6 | 6 | *Cap, Sealing | 18 | 185-6472 | 1 | *Bush, Governor Gear |
| 3 185-2412 | 1 | 1 | *Cap, Sealing | 19 | 185-5845 | 1 | *Plug |
| 4 185-2188 | 4 | 4 | *Plug | 20 | 185-2338 | 1 | *Gasket |
| 5 185-6856 | 1 | 1 | *Plug | 21 | 185-5490 | 1 | Cock Assy, Drain |
| 6 185-6468 | 3 | 3 | *Plug | 22 | 185-2572 | 1 | *Bolt, Flange |
| 7 185-2233 | 2 | 2 | *Plug | 23 | 185-2284 | 1 | *Gasket |
| 8 185-6121 | 3 | 3 | *Plug, Expansion | 24 | 184-0072 | 1 | Plug Square Head |
| 9 185-6040 | 1 | 1 | *Plug, Expansion | 25 | 185-6866 | 1 | Indicator, Oil Level |
| 10 185-5486 | 2 | 2 | *Pin, Straight | | | | * – Parts Included in Cylinder Block. |

Piston MDKBL



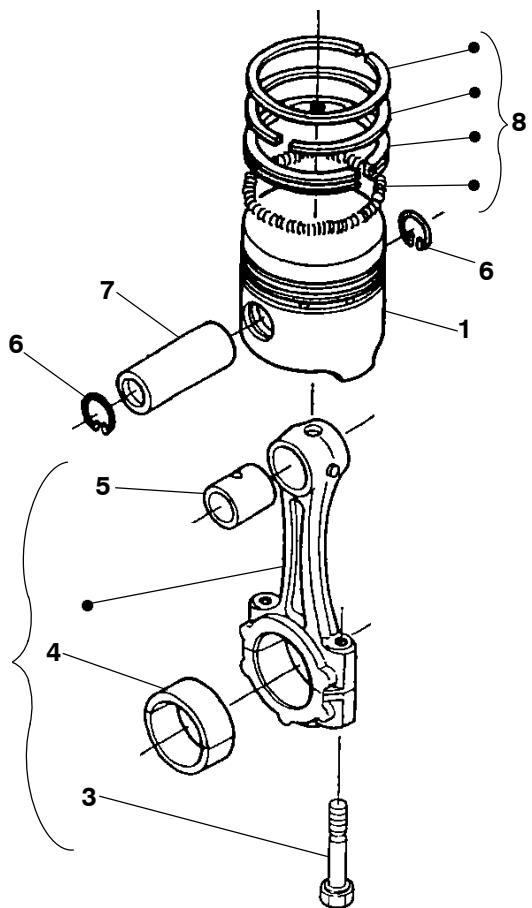
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|-------------------------|
| 1 | | | Piston | 4 | | | Bolt, Connecting Rod |
| | 185-7308 | 3 | Spec A | | 185-6535 | 6 | Spec A |
| | 185-7309 | 3 | Standard | | 181-9102 | 6 | Begin Spec B |
| | | | .5mm Oversize | 5 | 185-6536 | 3 | Bearing, Connecting Rod |
| | 112-0319 | 3 | Spec B-D | | 185-6537 | 3 | Standard |
| | 112-0328 | 3 | Standard | | 185-6538 | 3 | .2mm Undersize |
| | | | .5mm Oversize | 6 | 185-6534 | 3 | .4mm Undersize |
| | 112-0319 | 3 | Begin Spec E | | 114-0450 | 3 | Bushing, Connecting Rod |
| | 112-0320 | 3 | Standard | | | | Spec A |
| | | | .5mm Oversize | 7 | 185-6532 | 6 | Begin Spec B |
| 2 | | | Ring Set, Piston | | 8 | 185-6531 | Circlip, Piston Pin |
| | 185-7310 | 3 | Standard | | | | Pin, Piston |
| | 185-7311 | 3 | .5mm Oversize | | | | |
| 3 | | | Rod Assy, Connecting (Includes Bolt, Bearing and Bushing) | | | | |
| | 185-6533 | 3 | Spec A | | | | |
| | 114-0430 | 3 | Begin Spec B | | | | |

Crankshaft MDKBL



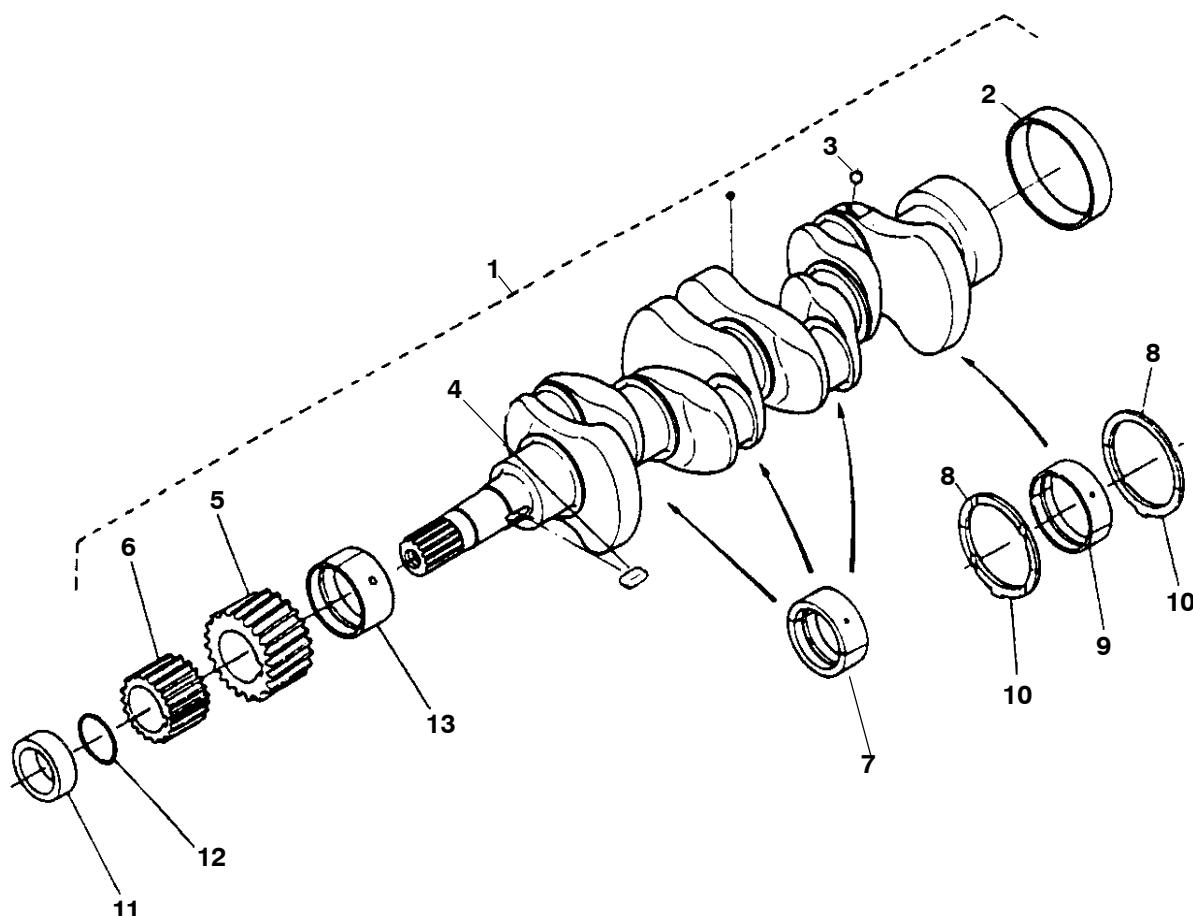
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--------------------------------------|----------|----------|-----------------|-----------------------------------|
| 1 | 185-7376 | 1 | Crankshaft (Includes Parts Marked *) | 11 | 185-5938 | 2 | Washer, Thrust Standard |
| 2 | 185-6543 | 1 | *Sleeve, Crankshaft | 185-6555 | 2 | .2mm, Oversize | |
| 3 | 185-5924 | 3 | *Ball Spec | 185-6556 | 2 | .4mm, Oversize | |
| 4 | 185-6541 | 1 | *Key | 12 | 185-7430 | 1 | Bearing, Crankshaft Standard |
| 5 | 185-6540 | 1 | *Gear, Crankshaft | 185-6553 | 1 | .2mm, Undersize | |
| 6 | 185-6542 | 1 | *Gear, Oil Pump Drive | 185-6554 | 1 | .4mm, Undersize | |
| 7 | 185-6544 | 1 | Collar, Crankshaft | 13 | 185-5941 | 2 | Washer, Thrust Standard |
| 8 | | | O'Ring | 185-5942 | 2 | .2mm, Oversize | |
| | 185-6545 | 1 | Spec A | 185-5943 | 2 | .4mm, Oversize | |
| | 185-7429 | 1 | Begin Spec B | | | | * – Parts Included in Crankshaft. |
| 9 | | | Bearing, Crankshaft | | | | |
| | 185-6546 | 1 | Standard | | | | |
| | 185-6547 | 1 | .2mm, Undersize | | | | |
| | 185-6548 | 1 | .4mm, Undersize | | | | |
| 10 | | | Bearing, Crankshaft | | | | |
| | 185-6549 | 2 | Standard | | | | |
| | 185-6550 | 2 | .2mm, Undersize | | | | |
| | 185-6551 | 2 | .4mm, Undersize | | | | |

Piston MDKBM and MDKBN



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|----------|----------|-----------|---|
| 1 | | | Piston MDKBM Spec A-D | 3 | 185-6535 | 8 | Bolt, Connecting Rod Spec A |
| | 185-6745 | 4 | Standard (Spec A) | | 181-9102 | 8 | Begin Spec B |
| | 185-6746 | 4 | .5mm, Oversize | 4 | 185-6536 | 4 | Bearing, Connecting Rod Standard |
| | | | MDKBN Spec A | | 185-6537 | 4 | .2mm Undersize |
| | 185-7308 | 4 | Standard | 5 | 185-6538 | 4 | .4mm Undersize |
| | 185-7309 | 4 | .5mm Oversize | | 185-6534 | 8 | Bushing, Connecting Rod Spec A |
| | | | Spec B-D | | 114-0450 | 8 | Begin Spec B |
| | 112-0319 | 4 | Standard | 6 | 185-6532 | 8 | Circlip, Piston Pin |
| | 112-0328 | 4 | .5mm Oversize | 7 | 185-6531 | 4 | Pin, Piston |
| | | | MDKBM and MDKBN Begin Spec E | 8 | | | Ring Set, Piston MDKBM (Spec A-D) |
| | 112-0319 | 4 | Standard | | 185-6529 | 4 | Standard |
| | 112-0320 | 4 | .5mm Oversize | | 185-6530 | 4 | .5mm Oversize |
| 2 | | | Rod Assy, Connecting (Includes Bolt, Bearing and Bushing) | 185-7310 | 4 | | MDKBN (Spec A-D) Standard |
| | 185-6533 | 4 | Spec A | 185-7311 | 4 | | .5mm Oversize |
| | 114-0430 | 4 | Begin Spec B | | 181-9134 | 4 | MDKBM and MDKBN (Begin Spec E) Standard |
| | | | | | 181-9135 | 4 | .5mm Oversize |

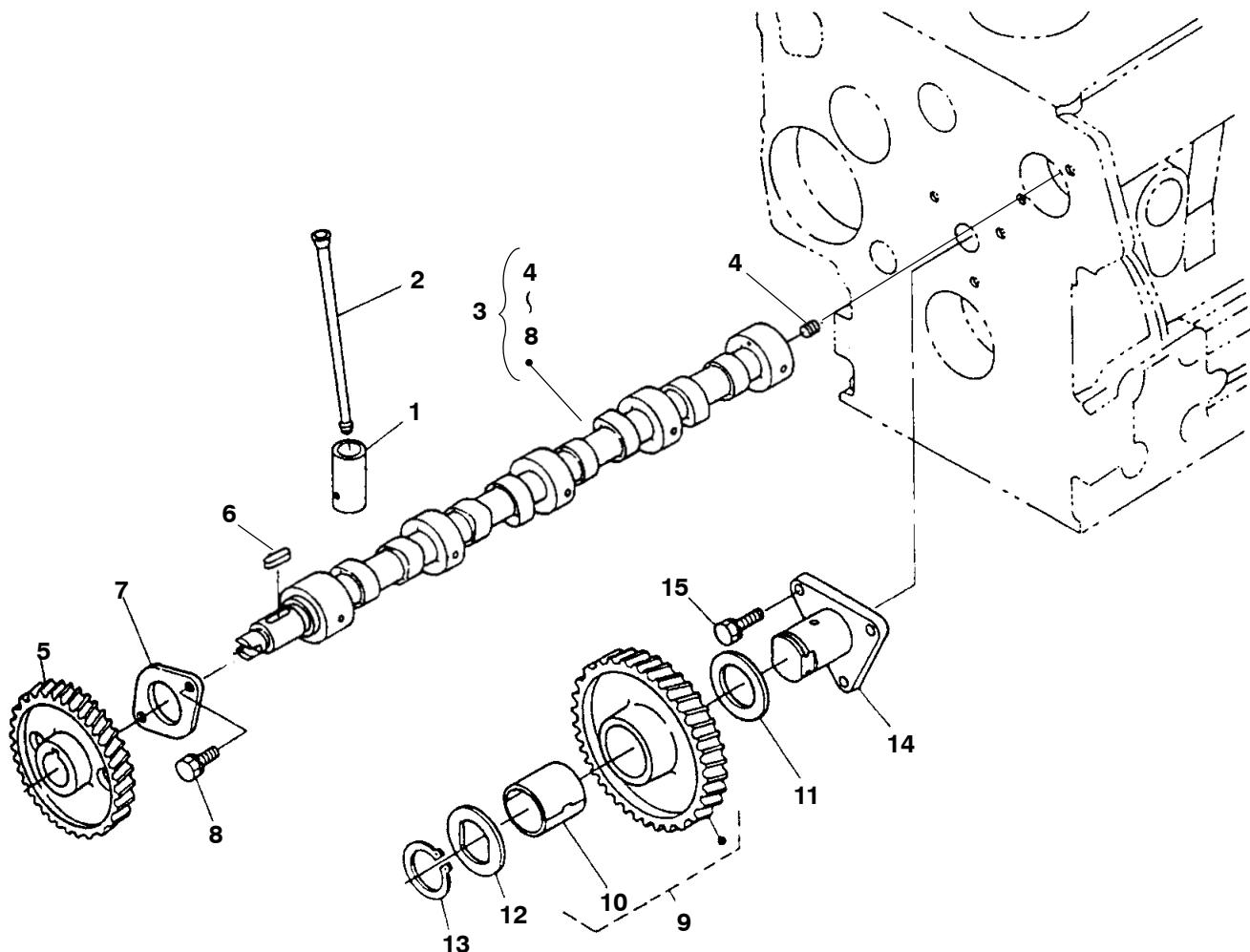
Crankshaft MDKBM and MDKBN



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--------------------------------------|----------|----------|-----------|------------------------------|
| 1 | | | Crankshaft (Includes Parts Marked *) | 9 | | | Bearing, Crankshaft Spec A-D |
| | 185-7249 | 1 | MDKBM (Spec A-D) | 185-6552 | | 1 | Standard |
| | 185-7312 | 1 | MDKBN (Spec A-D) | 185-6553 | | 1 | .2mm, Undersize |
| | 185-7312 | 1 | MDKBM and MDKBN (Begin Spec E) | 185-6554 | | 1 | .4mm, Undersize |
| 2 | 185-6543 | 1 | *Sleeve, Crankshaft | 104-2121 | | 1 | Begin Spec E Standard |
| 3 | 185-5924 | 4 | *Ball MDKBM, MDKBN | 510-0264 | | 1 | .2mm, Undersize |
| 4 | 185-6541 | 1 | *Key | 104-2158 | | 1 | .4mm, Undersize |
| 5 | 185-6540 | 1 | *Gear, Crankshaft | 10 | | | Washer, Thrust |
| 6 | 185-6542 | 1 | *Gear, Oil Pump Drive | | 185-5941 | 2 | Standard |
| 7 | | | Bearing, Crankshaft MDKBM, MDKBN | | 185-5942 | 2 | .2mm, Oversize |
| | 185-6549 | 3 | Standard | | 185-5943 | 2 | .4mm, Oversize |
| | 185-6550 | 3 | .2mm, Undersize | 11 | 185-6544 | 1 | Collar, Crankshaft |
| | 185-6551 | 3 | .4mm, Undersize | 12 | 185-6545 | 1 | O'Ring |
| 8 | | | Washer, Thrust | 185-7429 | | 1 | Standard |
| | 185-5938 | 2 | Standard | 13 | 185-6546 | 1 | .2mm, Undersize |
| | 185-6555 | 2 | .2mm, Oversize | | 185-6547 | 1 | Bearing, Crankshaft Standard |
| | 185-6556 | 2 | .4mm, Oversize | | 185-6548 | 1 | .2mm, Undersize |
| | | | | | | | .4mm, Undersize |

* – Parts Included With Crankshaft.

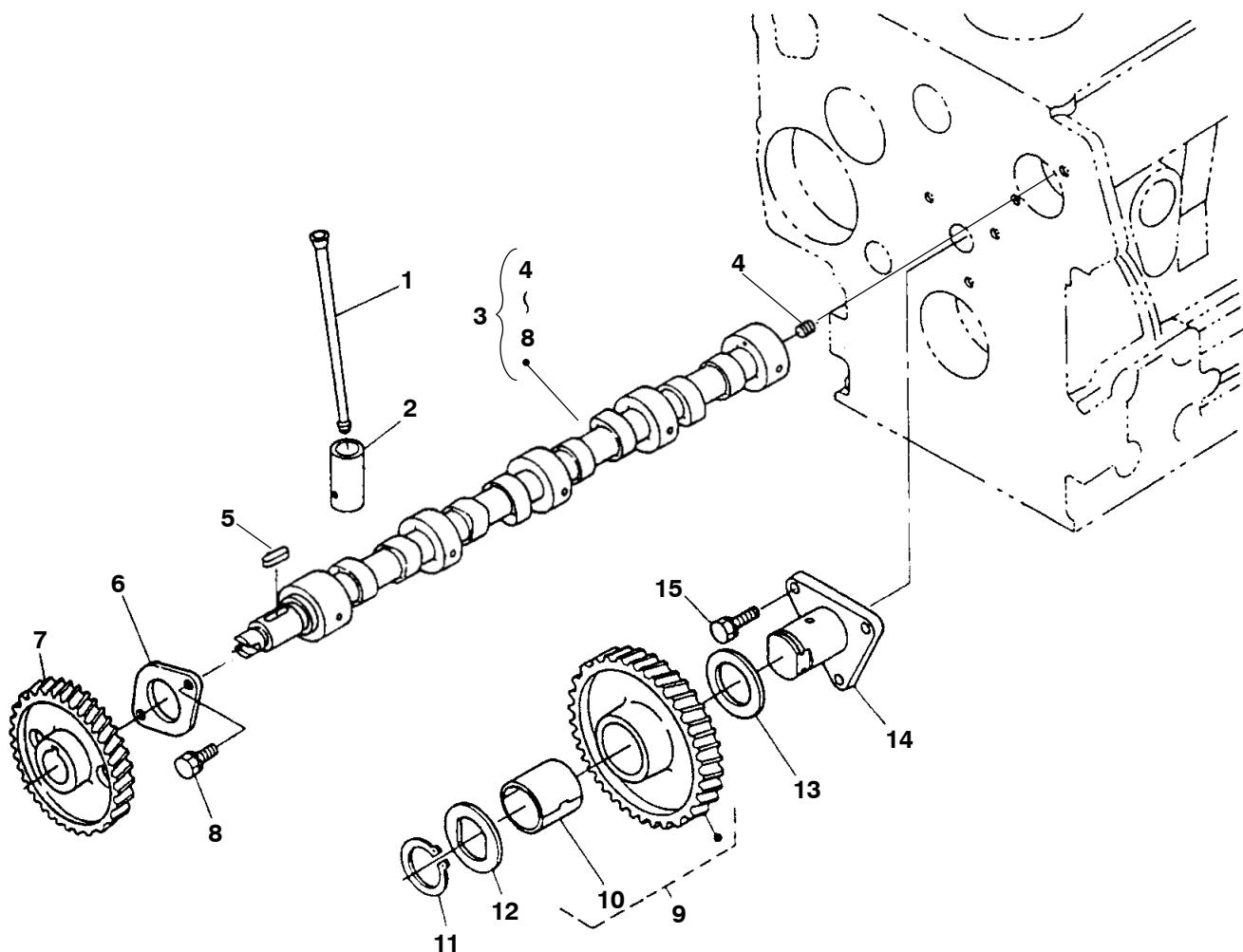
Camshaft MDKBL



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|------------------------------------|
| 1 | 185-6516 | 6 | Tappet Spec A-D | 8 | 185-2387 | 2 | *Bolt Spec A-D |
| | 115-0541 | 6 | Begin Spec E | | 185-2388 | 2 | Begin Spec E |
| 2 | 185-6517 | 6 | Rod, Push | 9 | 185-6521 | 1 | Gear Assy, Idle (Includes Bushing) |
| 3 | | | Camshaft Assy (Includes Parts Marked *) | 10 | 185-6522 | 1 | Bushing, Idle Gear |
| | 185-6873 | 1 | Spec A-D | 11 | 185-6523 | 1 | Collar, Idle Gear |
| | 181-9120 | 1 | Begin Spec E | 12 | 185-6524 | 1 | Collar, Idle Gear |
| 4 | 185-5558 | 1 | *Screw, Set | 13 | 185-6525 | 1 | Circlip, Idle Gear |
| 5 | 185-6519 | 1 | *Gear, Cam | 14 | 185-6526 | 1 | Shaft, Idle Gear |
| 6 | 185-5560 | 1 | *Key, Feather | 15 | 185-2388 | 3 | Bolt |
| 7 | 185-6520 | 1 | *Stopper, Camshaft | | | | |

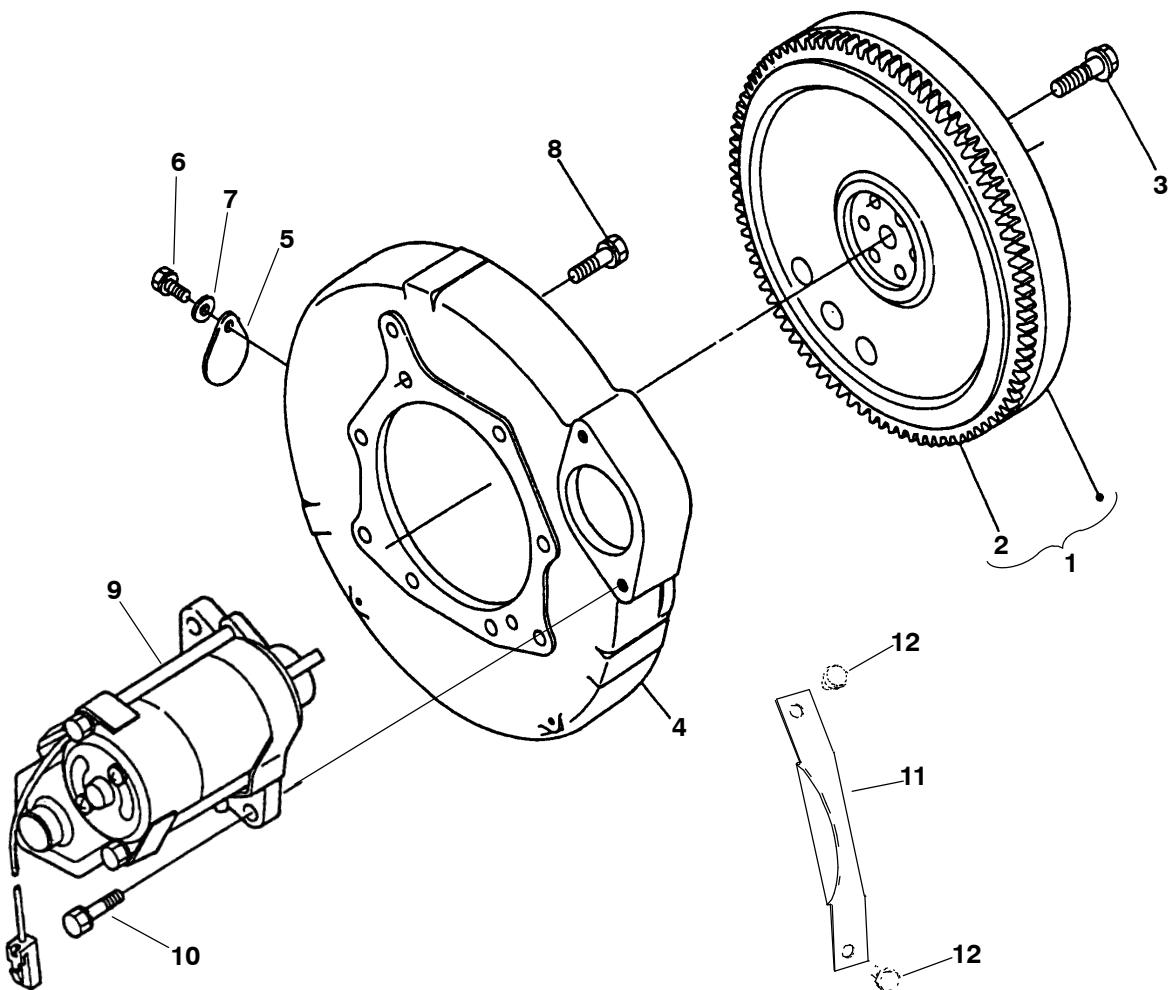
* – Parts Included in Camshaft Assy.

Camshaft MDKBM and MDKBN



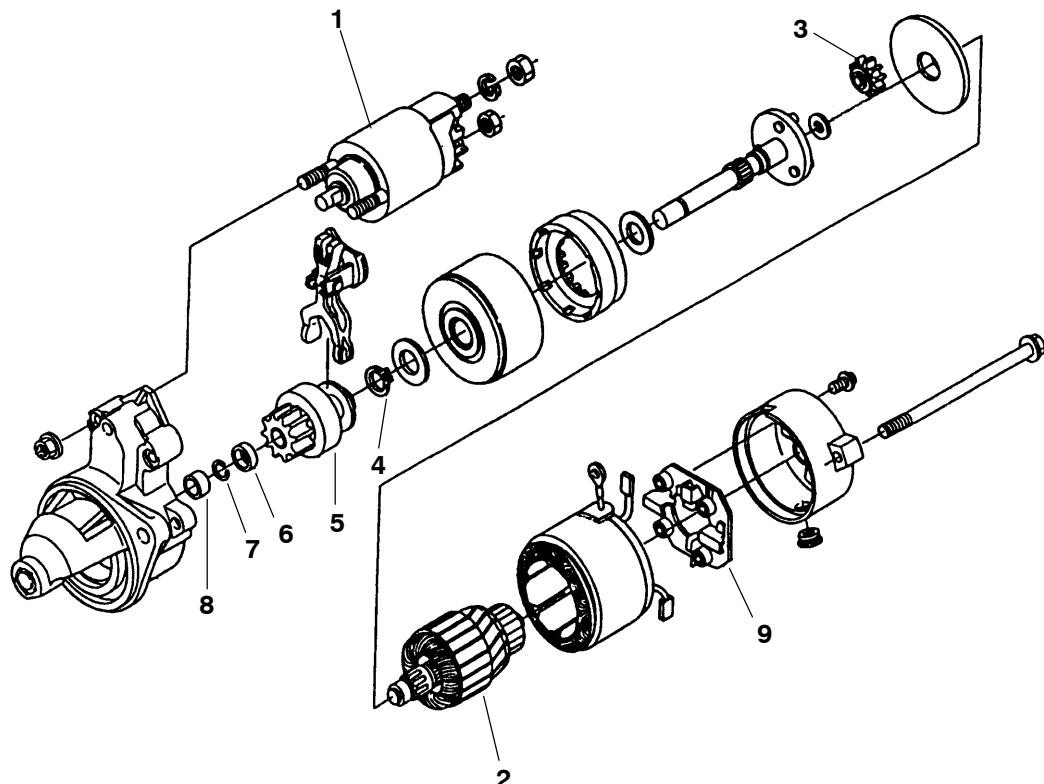
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|--------------------------------------|
| 1 | 185-6517 | 8 | Rod, Push | | 185-2387 | 2 | Spec A-D |
| 2 | 185-6516 | 8 | Tappet | | 185-2388 | 2 | Begin Spec E |
| | 115-0541 | 8 | Spec A-D | 9 | 185-6521 | 1 | Gear Assy, Idle (Includes Bushing) |
| 3 | 185-6518 | 1 | Begin Spec E | 10 | 185-6522 | 1 | Bushing, Idle Gear |
| | 181-9126 | 1 | Camshaft Assy (Includes Parts Marked *) | 11 | 185-6525 | 1 | Circlip, Idle Gear |
| 4 | 185-5558 | 1 | Spec A | 12 | 185-6524 | 1 | Collar, Idle Gear |
| 5 | 185-5560 | 1 | Begin Spec B | 13 | 185-6523 | 1 | Collar, Idle Gear |
| 6 | 185-6520 | 1 | *Screw, Set | 14 | 185-6526 | 1 | Shaft, Idle Gear |
| 7 | 185-6519 | 1 | *Key, Feather | 15 | 185-2388 | 3 | Bolt |
| 8 | | | *Stopper, Camshaft | | | | * – Parts Included in Camshaft Assy. |

Flywheel



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|----------|----------|----------|---|----------|-------------|----------|--|
| 1 | | | Flywheel (Includes Ring Gear) Spec A-D | 7 | 185-7221 | 1 | Washer, Plain |
| 185-7217 | 1 | 1 | MDKBL | 8 | 185-2178 | 8 | Bolt |
| 185-7250 | 1 | 1 | MDKBM and MDKBN | 9 | | | Starter (See Separate Page for Components) |
| | | | Begin Spec E | 10 | 185-7104 | 1 | 12V |
| 104-2156 | 1 | 1 | MDKBL | 185-7105 | 1 | 24V | |
| 104-2159 | 1 | 1 | MDKBM and MDKBN | 185-2564 | 2 | Screw | |
| 2 | 185-2170 | 1 | Gear, Ring | 11 | 191-2275-02 | 1 | Guard, Starter |
| 3 | 185-6409 | 6 | Bolt, Flywheel | 12 | 815-0194 | 2 | Screw, Hex Head (#10-32 x .38") |
| 4 | 185-7218 | 1 | Housing, Flywheel | | | | |
| 5 | 185-7219 | 1 | Cover | | | | |
| 6 | | | Bolt | | | | |
| | 185-6956 | 1 | MDKBL | | | | |
| | 185-7222 | 1 | MDKBM and MDKBN | | | | |

Starter Components (12V)

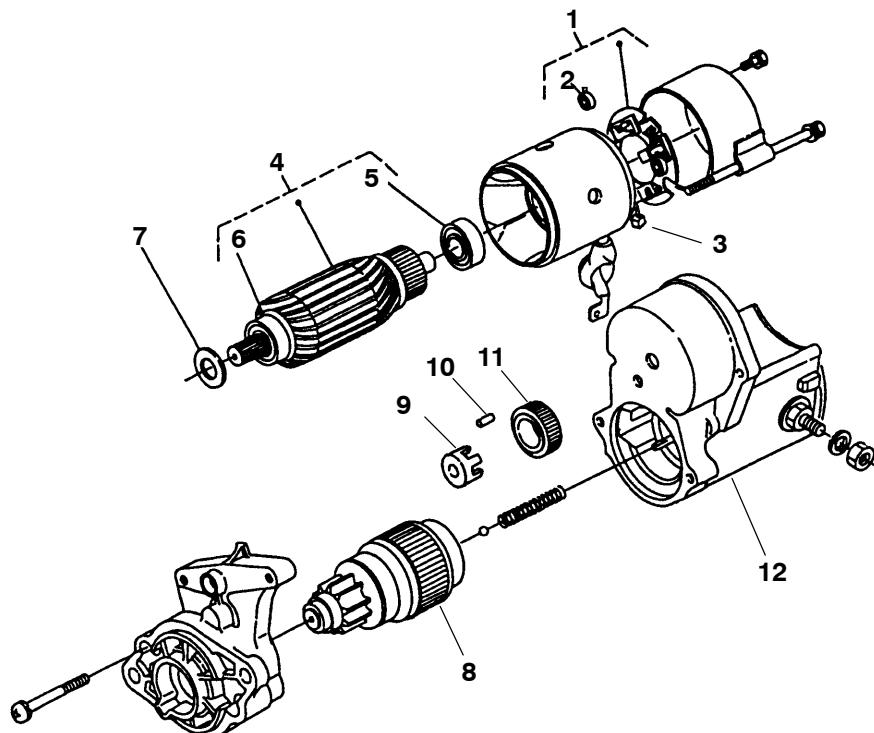


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|
| 1 | 185-7104 | 1 | Starter |
| 2 | 185-2658 | 1 | Switch, Magnetic |
| 3 | 185-7231 | 1 | Armature |
| 4 | 185-7234 | 3 | Gear |
| 5 | 185-7235 | 1 | Ring, Snap |
| 5 | 185-7232 | 1 | Clutch, Starter |

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|
| 6 | 185-7236 | 1 | Collar |
| 7 | 185-6386 | 1 | Ring, Snap |
| 8 | 185-7233 | 1 | Bearing, Oilless |
| 9 | 185-7230 | 1 | Holder, Brush |

Note: Parts not Identified are Not For Sale.

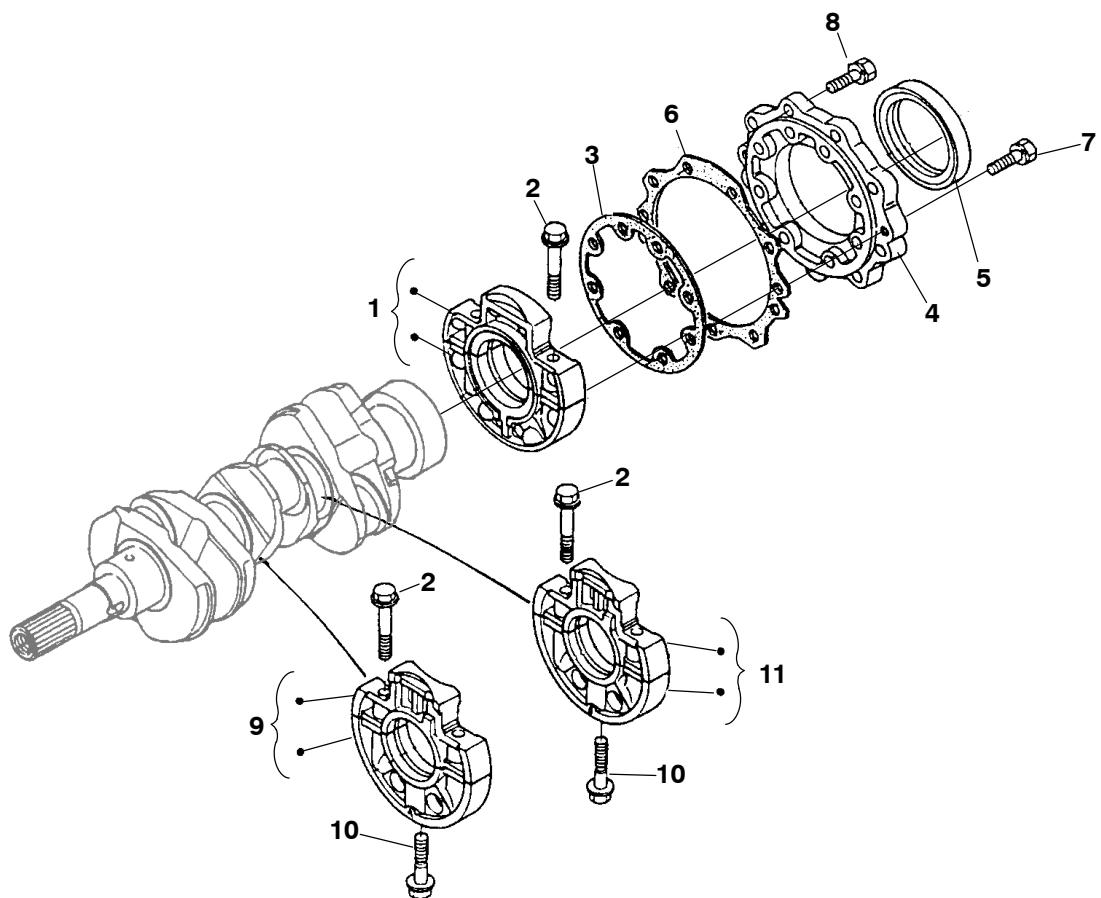
Starter Components (24V)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|------------|-------------|--------------|---------------------|
| 1 | 185-7105 | 1 | Starter | 8 | 185-6354 | 1 | Clutch |
| 2 | 185-7240 | 1 | Holder Assy, Brush | 9 | 185-6362 | 1 | Retainer |
| 3 | 185-6358 | 4 | Spring, Brush | 10 | 191-2252 | 5 | Roller |
| 4 | 185-7237 | 2 | Brush, Yoke | 11 | 185-7296 | 5 | Gear, Pinion |
| 5 | 185-7238 | 1 | Armature | 12 | 185-7239 | 1 | Switch, Magnetic |
| 6 | 185-6442 | 1 | Bearing, Ball | | | | |
| 7 | 185-6441 | 1 | Bearing, Ball | | | | |
| 7 | 185-6365 | 1 | Washer, Felt | | | | |

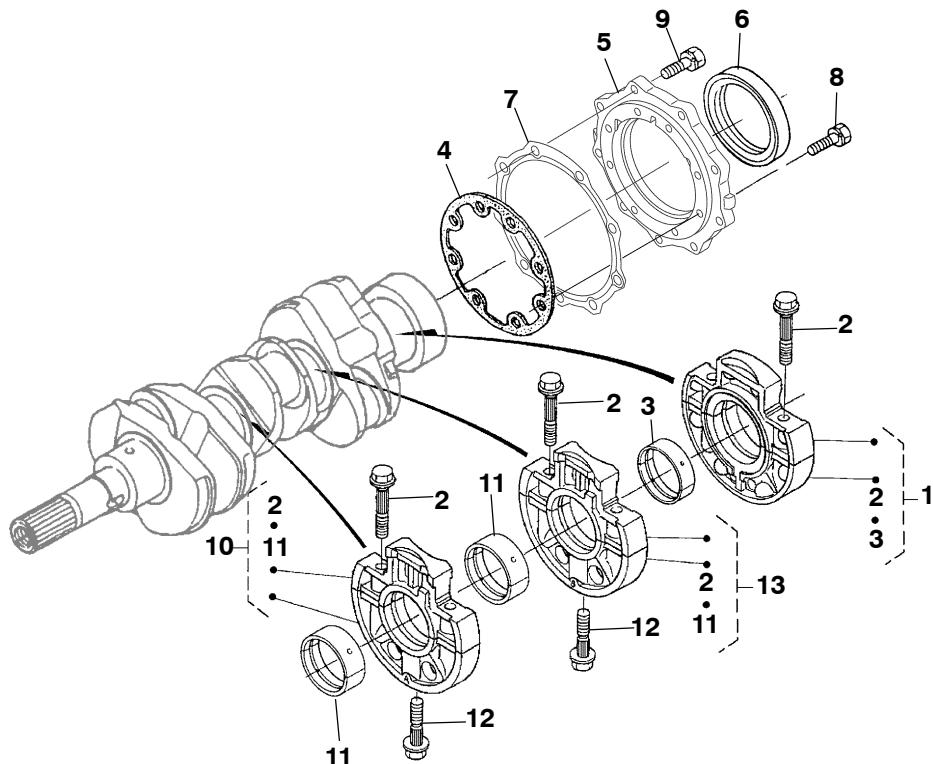
Note: Parts Not Identified are Not Sold Separately.

Main Bearing Case (MDKBL Spec A-D)



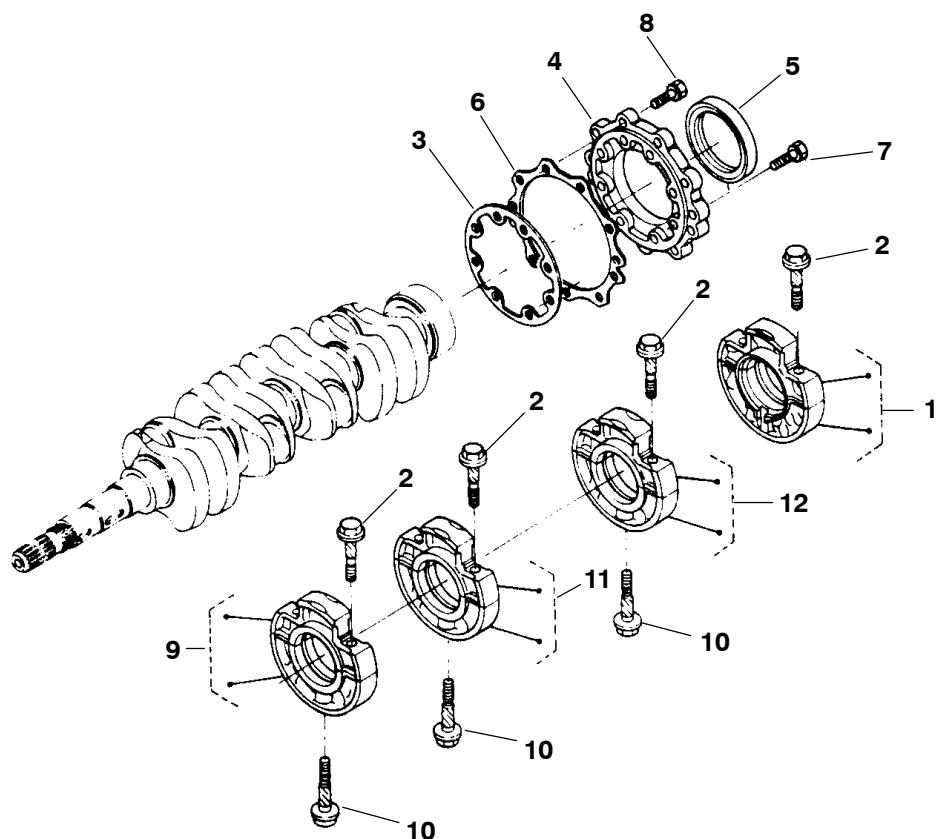
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|----------------------------|---------|----------|----------|-------------------------|
| 1 | 185-6506 | 1 | Case Assy, Main Bearing | 9 | | | Case Assy, Main Bearing |
| 2 | 185-6507 | 6 | Bolt, Bearing Case | 10 | 185-7305 | 1 | Spec A |
| 3 | | | Gasket, Bearing Case | 11 | 185-3505 | 1 | Begin Spec B |
| | 185-6869 | 1 | Spec A | 10 | 185-6513 | 2 | Bolt, Bearing Case |
| | 185-6865 | 1 | Begin Spec B | 11 | 185-6507 | 2 | Spec A |
| 4 | 185-6509 | 1 | Cover, Bearing Case | 11 | 185-7306 | 1 | Begin Spec B |
| 5 | 185-6510 | 1 | Seal, Oil | 11 | 185-7306 | 1 | Case Assy, Main Bearing |
| 6 | 185-6871 | 1 | Gasket, Bearing Case Cover | | | | Spec A |
| 7 | 185-2391 | 8 | Bolt | | | | Begin Spec B |
| 8 | 185-2390 | 9 | Bolt | | | | |

Main Bearing Case (MDKBL Begin Spec E)



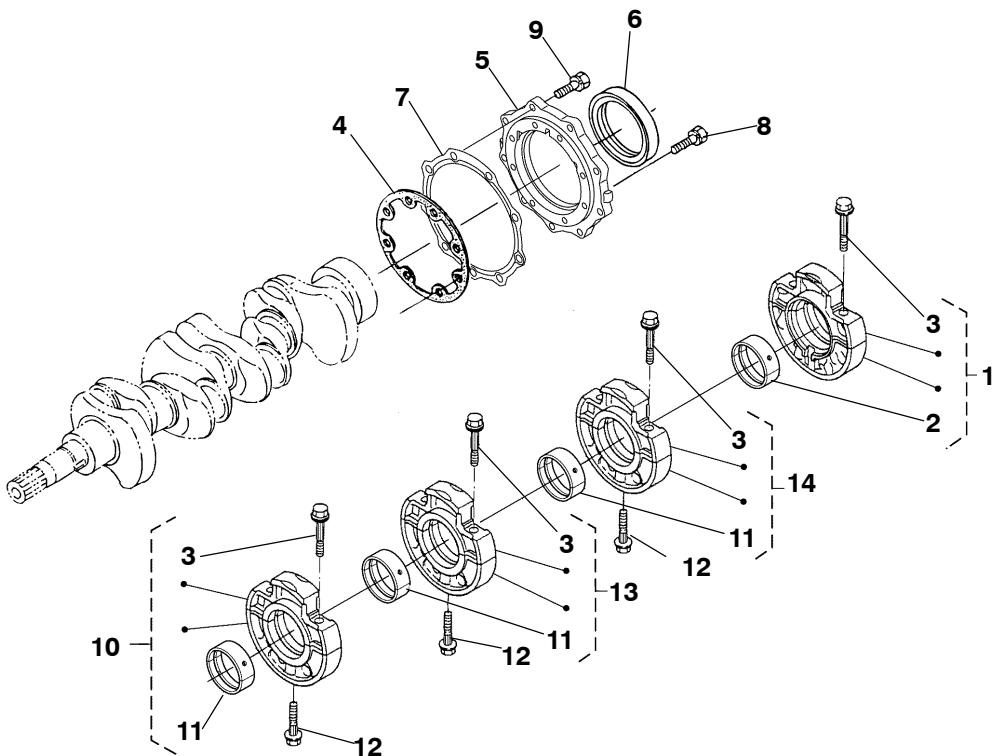
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|----------------------------|------------|-------------|-------------|---|
| 1 | 104-2120 | 1 | Case Assy, Main Bearing | 8 | 185-2391 | 8 | Bolt |
| 2 | 185-6507 | 3 | Bolt, Bearing Case | 9 | 185-2390 | 9 | Bolt |
| 3 | | | Bearing | 10 | 104-2118 | 1 | Assy, Bearing Case Main Metal, Crankshaft |
| | 104-2121 | 1 | Standard Set | 11 | 185-6549 | 2 | Standard Set |
| | 104-2157 | 1 | 0.20mm Set | | 185-6550 | 2 | 0.20mm Set |
| | 181-9137 | 1 | 0.40mm Set | | 185-6551 | 2 | 0.40mm Set |
| 4 | 181-9124 | 1 | Gasket, Bearing Case | 12 | 185-6513 | 2 | Bolt, Bearing Case |
| 5 | 232-4204 | 1 | Cover, Bearing Case | 13 | 104-2119 | 1 | Assy, Bearing Case Main |
| 6 | 509-0547 | 1 | Seal, Oil | | | | |
| 7 | 185-6511 | 1 | Gasket, Bearing Case Cover | | | | |

Main Bearing Case (MDKBM and MDKBN Spec A-D)



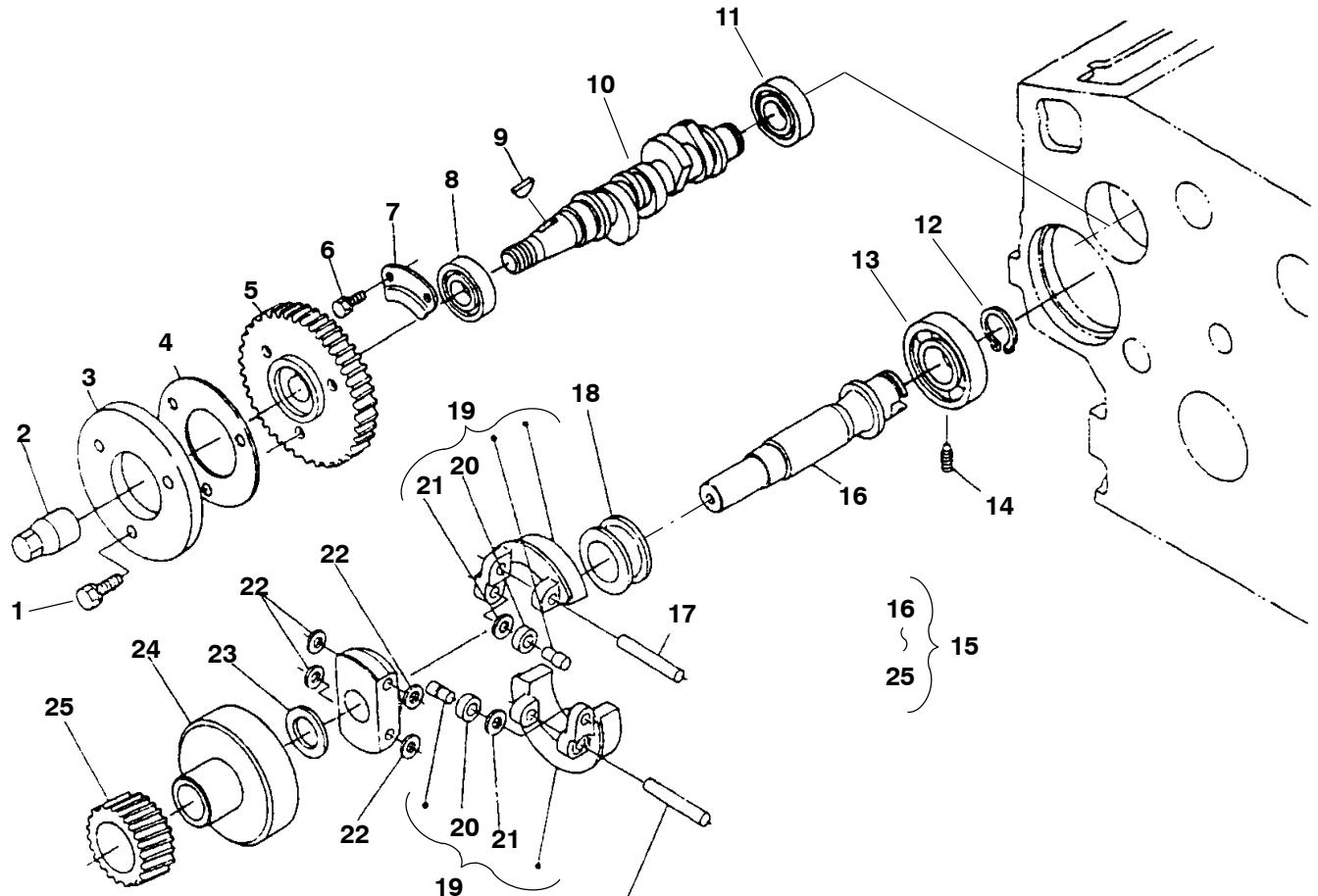
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|----------------------------|----------|----------|-----------|--------------------|
| 1 | 185-6506 | 1 | Case, Main Bearing | 10 | 185-6513 | 3 | Bolt, Bearing Case |
| 2 | 185-6507 | 8 | Bolt, Bearing Case | 11 | 185-7306 | 1 | Case, Main Bearing |
| 3 | 185-6869 | 1 | Gasket, Bearing Case | 185-6514 | | 1 | MDKBN |
| 4 | 185-6870 | 1 | Cover, Bearing Case | 12 | 185-6515 | 1 | MDKBM |
| 5 | 185-6510 | 1 | Seal, Oil | 185-7305 | | 1 | Case, Main Bearing |
| 6 | 185-6871 | 1 | Gasket, Bearing Case Cover | 185-7307 | | 1 | MDKBM (Spec A) |
| 7 | 185-2391 | 8 | Bolt | | | 1 | MDKBN (Spec A) |
| 8 | 185-2390 | 9 | Bolt | | | 1 | MDKBM, MDKBN |
| 9 | | | Case, Main Bearing | | | | Begin Spec B |
| | 185-7305 | 1 | MDKBN (Spec A) | | | | |
| | 185-6512 | 1 | MDKBM (Spec A) | | | | |
| | 185-7305 | 1 | MDKBM, MDKBN | | | | |
| | | | Begin Spec B | | | | |

Main Bearing Case (MDKBM and MDKBN Begin Spec E)



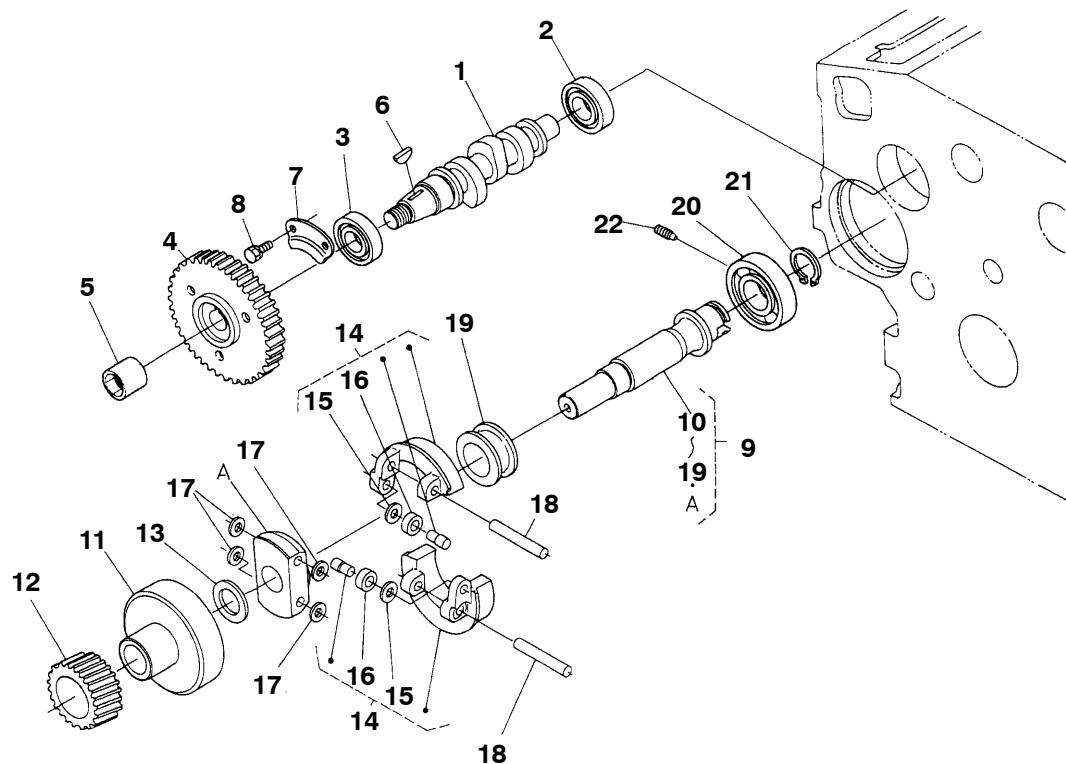
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|----------------------|---------|----------|-----------|-------------------------|
| 1 | 104-2120 | 1 | Case, Main Bearing | 8 | 185-2391 | 8 | Bolt |
| 2 | 104-2121 | 1 | Metal, Crankshaft | 9 | 185-2390 | 9 | Bolt |
| 3 | 185-6507 | 8 | Bolt, Bearing Case | 10 | 104-2118 | 1 | Assy Bearing Case, Main |
| 4 | 181-9124 | 1 | Gasket, Bearing Case | 11 | 185-6549 | 3 | Metal, Crankshaft |
| 5 | 232-4204 | 1 | Cover, Bearing Case | 12 | 185-6513 | 3 | Bolt, Bearing Case |
| 6 | 509-0547 | 1 | Seal, Oil | 13 | 104-2119 | 1 | Assy Bearing Case, Main |
| 7 | 101-0868 | 1 | Gasket, Case Cover | 14 | 232-4226 | 1 | Assy Bearing Case, Main |

Fuel Camshaft (Spec A)



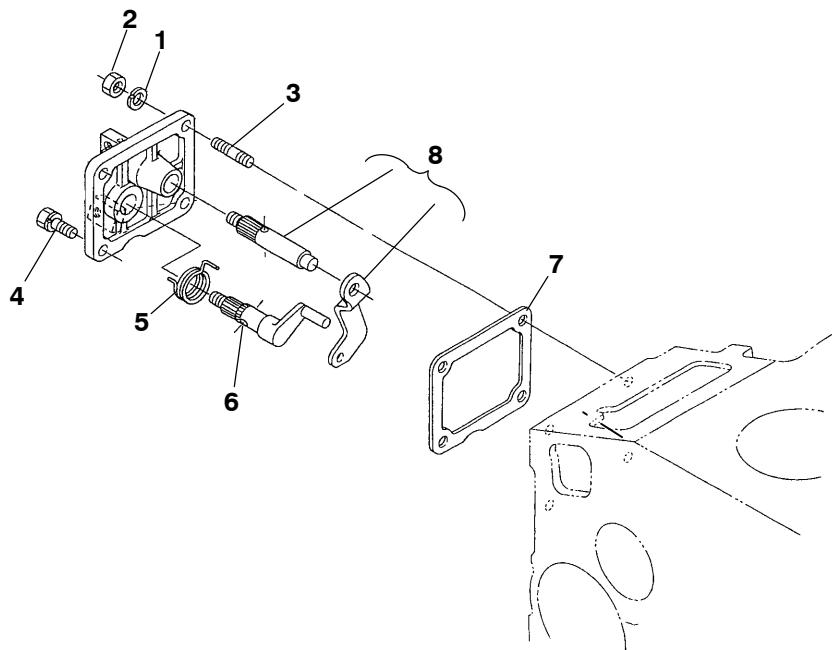
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|----------|----------|----------|---|
| 1 | 185-2389 | 3 | Bolt | 16 | | | *Shaft, Governor |
| 2 | 185-6560 | 1 | Nut, Cap | 185-6878 | | 1 | MDKBL |
| 3 | 185-6876 | 1 | Cam, Fuel | 185-6564 | | 1 | MDKBM, MDKBN |
| 4 | 185-6879 | 1 | Washer | 17 | 185-6569 | 2 | *Shaft, Governor Weight |
| 5 | 185-6558 | 1 | Gear, Injection Pump | 18 | 185-6570 | 1 | *Sleeve, Governor |
| 6 | 185-2386 | 2 | Bolt | 19 | 185-6567 | 2 | *Weight, Governor (Includes Bearing and Washer) |
| 7 | 185-6562 | 1 | Stopper, Fuel Camshaft | 20 | 185-5959 | 2 | Bearing |
| 8 | 185-3093 | 1 | Bearing, Ball | 21 | 185-5960 | 2 | Washer |
| 9 | 185-6561 | 1 | Key, Woodruff | 22 | 185-6568 | 4 | *Washer, Governor Weight |
| 10 | | | Camshaft, Fuel | 23 | 185-6566 | 1 | *Collar, Governor Shaft |
| | 185-6875 | 1 | MDKBL | 24 | 185-6880 | 1 | *Holder, Governor Gear |
| | 185-6741 | 1 | MDKBM, MDKBN | 25 | 185-6565 | 1 | *Gear, Governor |
| 11 | 510-0163 | 1 | Bearing, Ball | | | | * – Parts Included in Governor Shaft Assy. |
| 12 | 185-6572 | 1 | Circlip, Governor Shaft | | | | |
| 13 | 185-6571 | 1 | Bearing, Ball | | | | |
| 14 | 185-6573 | 1 | Screw, Set | | | | |
| 15 | | | Shaft Assy, Governor (Includes Parts Marked *) | | | | |
| | 185-6877 | 1 | MDKBL | | | | |
| | 185-6563 | 1 | MDKBM, MDKBN | | | | |

Fuel Camshaft (Begin Spec B)



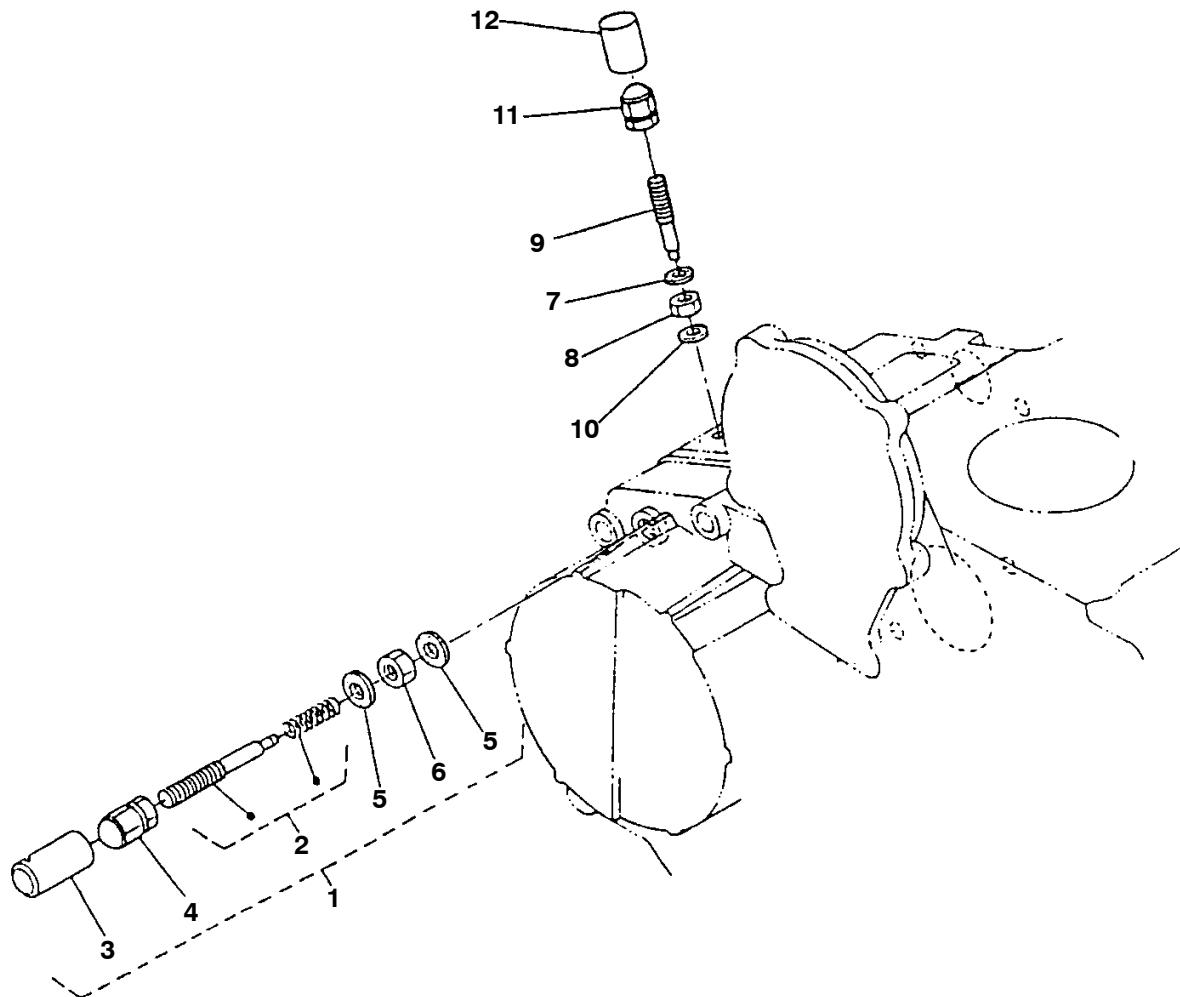
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------------|---------|----------|----------|-------------------------|
| 1 | | | Camshaft, Fuel | 11 | 185-6880 | 1 | Holder, Governor Gear |
| | 185-6875 | 1 | MDKBL | 12 | 185-6565 | 1 | Gear, Governor |
| | 185-6741 | 1 | MDKBM and MDKBN | 13 | 185-6566 | 1 | Collar, Governor Weight |
| 2 | 181-9122 | 1 | Bearing, Ball | 14 | 185-6567 | 2 | Comp Weight, Governor |
| 3 | 181-9123 | 1 | Bearing, Ball | 15 | 185-5960 | 2 | Washer |
| 4 | 181-9223 | 1 | Gear, Injection Pump | 16 | 185-5959 | 2 | Bearing |
| 5 | 185-6560 | 1 | Nut | 17 | 185-6568 | 4 | Washer, Governor Weight |
| 6 | 185-6561 | 1 | Key, Woodruff | 18 | 185-6569 | 2 | Shaft, Governor Weight |
| 7 | 185-6562 | 1 | Stopper, Fuel Camshaft | 19 | 185-6570 | 1 | Sleeve, Governor |
| 8 | 185-2388 | 2 | Bolt | 20 | 185-6571 | 1 | Bearing, Ball |
| 9 | | | Assy. Shaft, Governor | 21 | 185-6572 | 1 | Circlip, Governor Shaft |
| | 185-6877 | 1 | MDKBL | 22 | 185-6573 | 1 | Screw, Set |
| | 185-6563 | 1 | MDKBM and MDKBN | | | | |
| 10 | | | Shaft, Governor | | | | |
| | 185-6878 | 1 | MDKBL | | | | |
| | 185-6564 | 1 | MDKBM and MDKBN | | | | |

Speed Control Plate



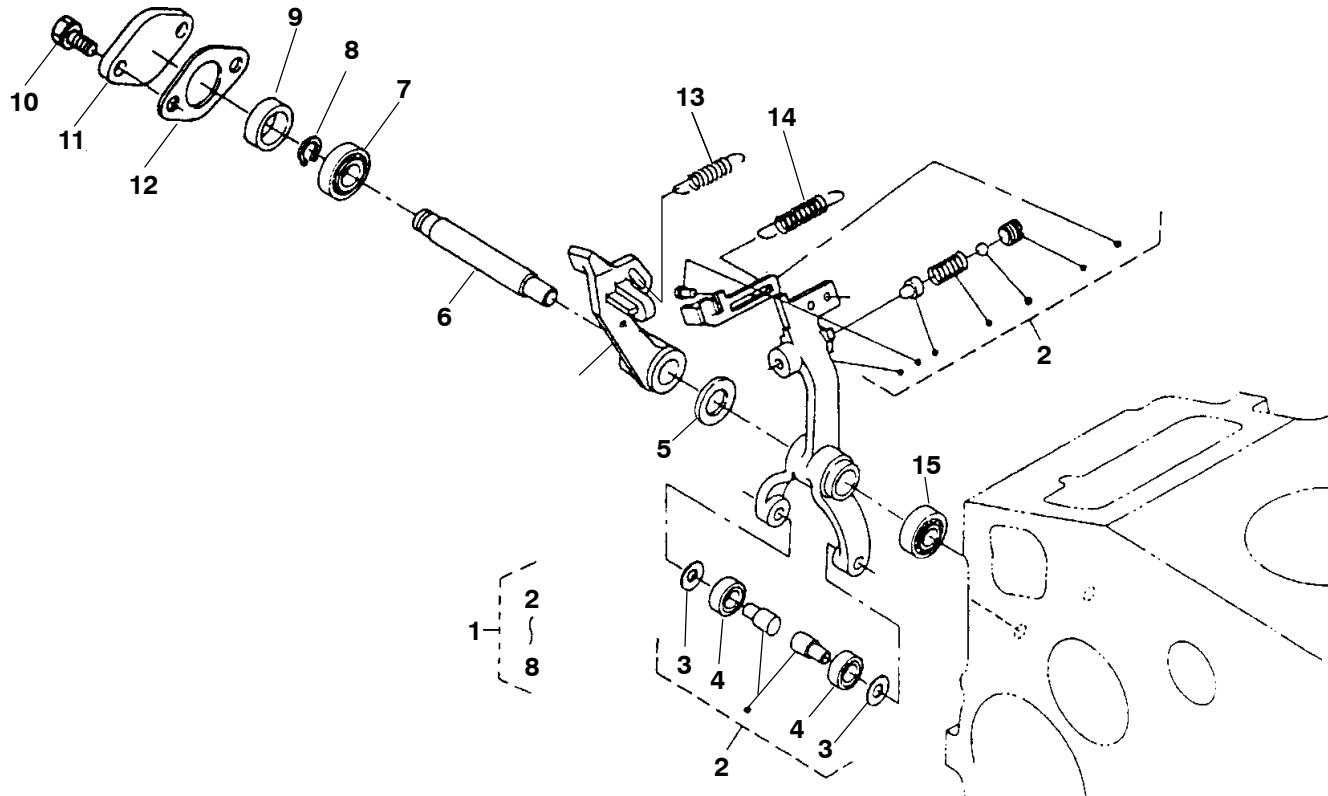
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|---------------------|---|-------------|-------------|---------------------|
| 1 | 185-6759 | 2 | Washer, Spring | 6 | 185-6615 | 1 | *Shaft, Stop Lever |
| 2 | 185-4255 | 2 | Nut | 7 | 185-6894 | 1 | Gasket |
| 3 | 185-7425 | 2 | Stud | 8 | 185-6612 | 1 | Comp. Lever, Gov |
| 4 | 185-2388 | 1 | Bolt | * – Parts Included in Control Plate Assy. | | | |
| 5 | 185-6614 | 1 | *Spring, Return | | | | |

Governor Lever



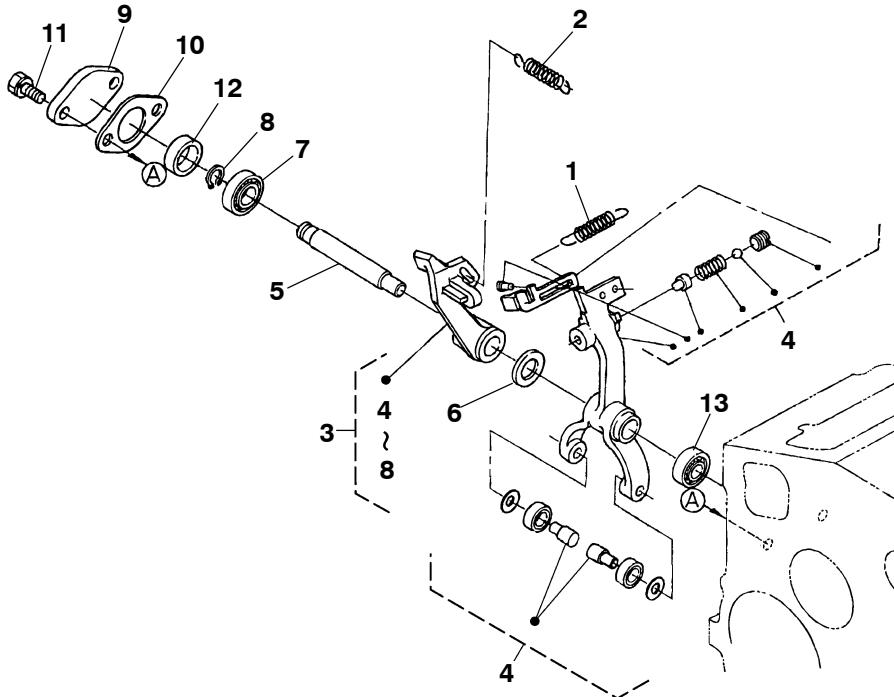
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|--|-------------|--------------|---------------------|
| 1 | 181-9113 | 1 | Assy, Governor Lever (Includes Parts Marked *) | 8 | 185-6931 | 1 | Nut, Lock |
| 2 | 181-9114 | 1 | *Bolt Assy, Adjusting | 9 | 181-9104 | 1 | Bolt, Adjusting |
| 3 | 185-6930 | 1 | *Cap | 10 | 185-7313 | 1 | Gasket |
| 4 | 181-9067 | 1 | *Nut, Cap | 11 | 181-9067 | 1 | Nut, Cap |
| 5 | 185-2284 | 2 | *Gasket | 12 | 185-6932 | 1 | Cap |
| 6 | 185-5684 | 1 | *Nut | * – Parts Included in Governor Lever Assy. | | | |
| 7 | 185-2284 | 1 | Gasket | | | | |

Governor (MDKBL, MDKBM and MDKBN Spec A-D)



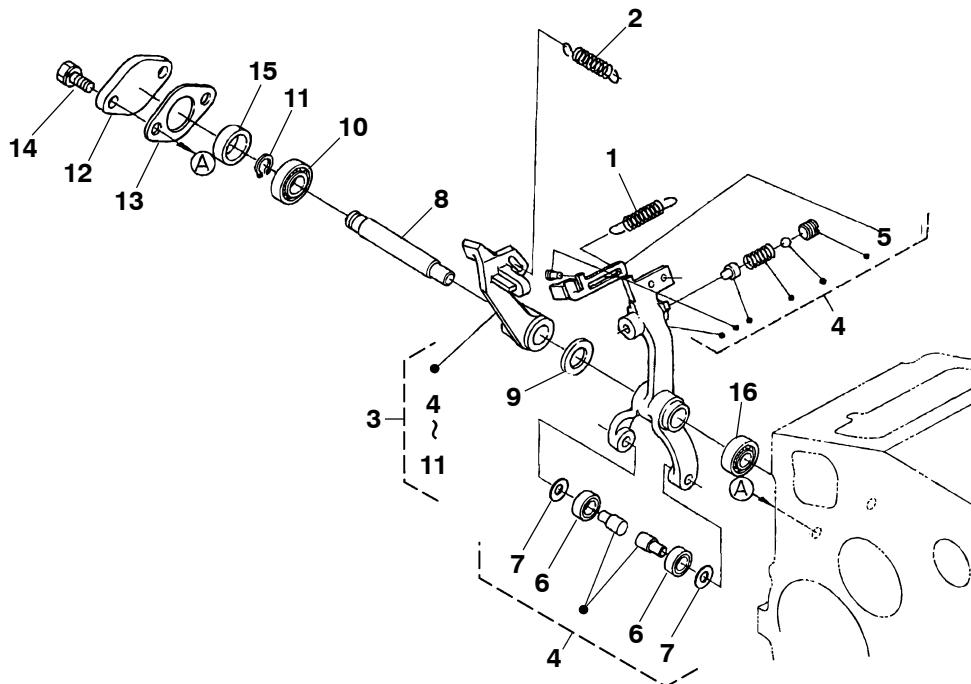
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|----------|----------|-----------|--|----------|----------|--------------|--|
| 1 | 181-9149 | 1 | Lever Assy, Fork (Includes Parts Marked *) | 12 | 185-6603 | 1 | Gasket |
| 2 | 185-7432 | 1 | *Lever, Fork (Includes Washer and Bearing) | 13 | | | Spring, Governor MDKBL |
| 3 | 185-5960 | 2 | Washer | 185-7377 | | 1 | 60 Hz Spec A |
| 4 | 185-5959 | 2 | Bearing | 185-7378 | | 1 | 50 Hz Spec A |
| 5 | 185-6163 | 1 | *Washer, Plain | 181-9152 | | 1 | Begin Spec B |
| 6 | 185-6519 | 1 | *Shaft, Fork Lever | 185-7253 | | 1 | MDKBM, MDKBN |
| 181-9105 | 1 | MDKBL | 181-9150 | | 1 | 50 Hz Spec A | |
| 7 | 185-6600 | 1 | MDKBM, MDKBN | 14 | | 1 | Begin Spec B |
| 8 | 185-6601 | 1 | *Bearing, Miniature | 185-6891 | | 1 | Spring, Start |
| 9 | 185-6604 | 1 | *Circlip, External | 185-6593 | | 1 | MDKBL |
| 10 | 185-2386 | 2 | Collar | 15 | 185-6605 | 1 | MDKBM, MDKBN |
| 11 | 185-6602 | 1 | Bolt | | | | Bearing, Miniature |
| | | | Cover, Fork Lever Shaft | | | | * – Parts Included in Fork Lever Assy. |

Governor (MDKBL Begin Spec E)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|--|
| 1 | 185-6891 | | Spring, Start | 8 | 185-6601 | 1 | *Circlip, External |
| 2 | 181-9152 | | Spring, Governor | 9 | 150-2927 | 1 | Cover, Fork Lever Shaft |
| 3 | 181-9149 | 1 | Lever Assy, Fork (Includes Parts Marked *) | 10 | 185-6603 | 1 | Gasket |
| 4 | 185-7432 | 1 | *Lever, Fork (Includes Washer and Bearing) | 11 | 185-2386 | 2 | Bolt |
| 5 | 185-6599 | | *Shaft, Fork Lever | 12 | 185-6604 | 1 | Collar |
| 6 | 185-6163 | 1 | *Washer, Plain | 13 | 185-6605 | 1 | *Bearing, Miniature |
| 7 | 185-6600 | 1 | Bearing, Miniature | | | | * – Parts Included in Fork Lever Assy. |

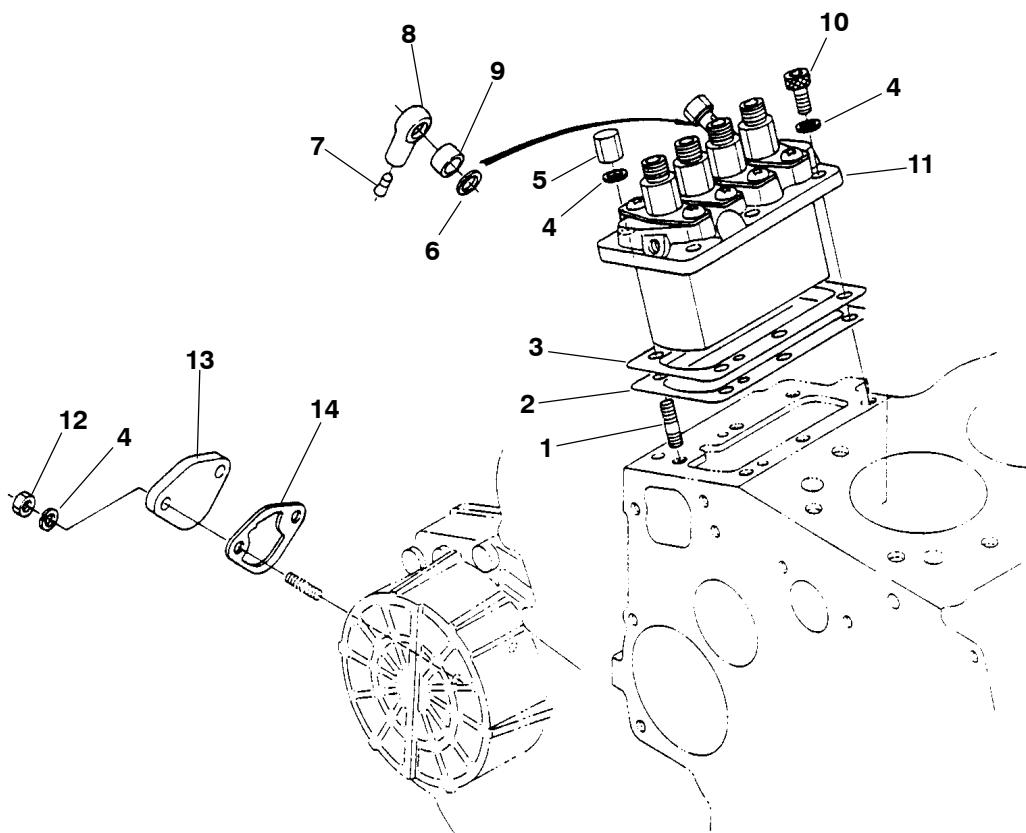
Governor (MDKBM and MDKBN Begin Spec E)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|-------------------------|
| 1 | 185-6593 | 1 | Spring, Start | 9 | 185-6163 | 1 | *Washer, Plain |
| 2 | 181-9150 | 1 | Spring, Governor | 10 | 185-6600 | 1 | *Bearing, Miniature |
| 3 | 181-9149 | 1 | Lever Assy, Fork (Includes Parts Marked *) | 11 | 185-6601 | 1 | *Circlip, External |
| 4 | 185-7432 | 1 | *Lever, Fork (Includes Washer and Bearing) | 12 | 150-2927 | 1 | Cover, Fork Lever Shaft |
| 5 | 185-6597 | 1 | Lever, Thrust | 13 | 185-6603 | 1 | Gasket |
| 6 | 185-5959 | 2 | Bearing | 14 | 185-2386 | 2 | Bolt |
| 7 | 185-5960 | 2 | Washer | 15 | 185-6604 | 1 | Collar |
| 8 | 181-9105 | 1 | *Shaft, Fork Lever | 16 | 185-6605 | 1 | Bearing, Miniature |

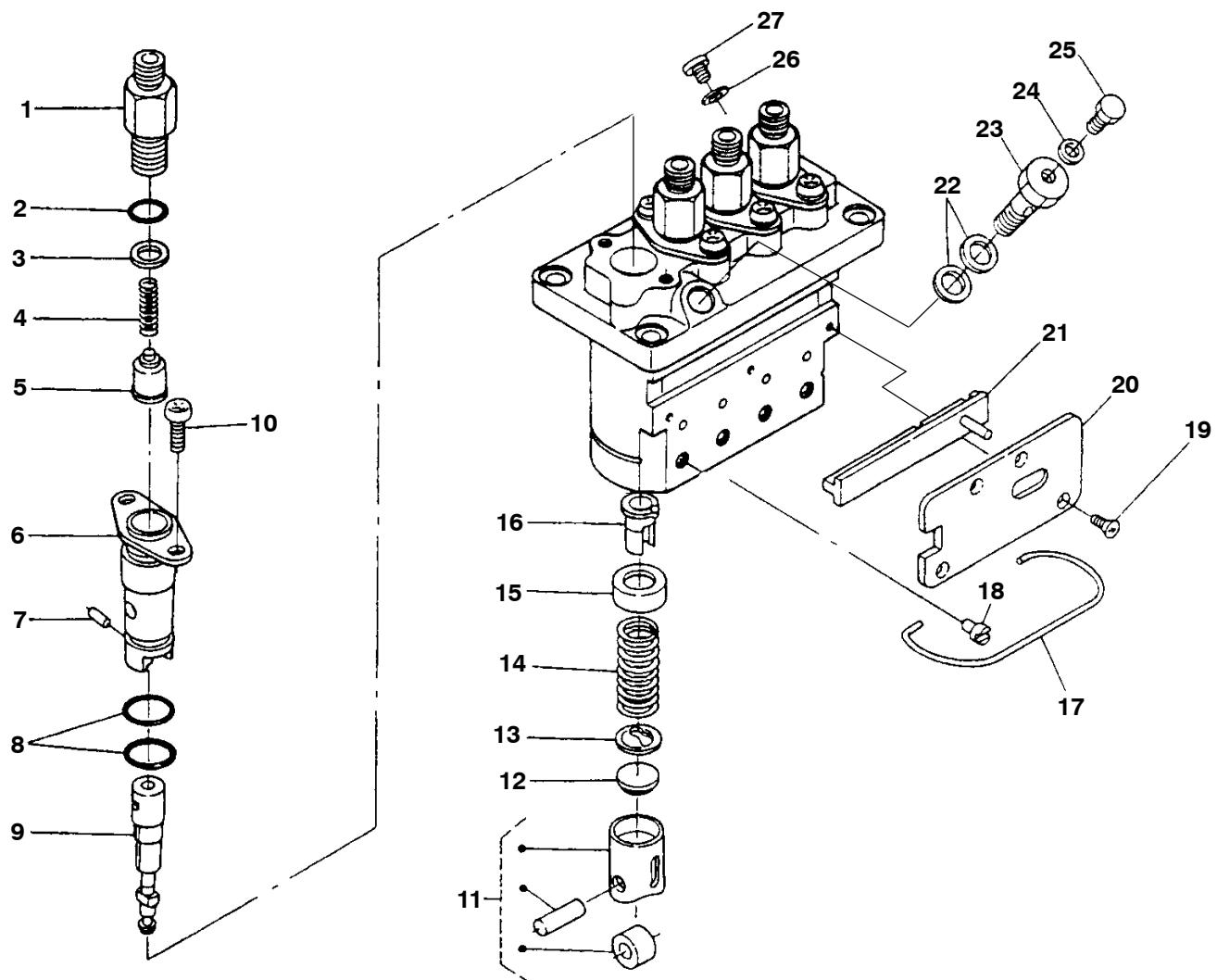
* – Parts Included in Fork Lever Assy.

Injection Pump (Spec A)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | |
|---------|----------|-----------|------------------------------|---------|----------|-----------|---|--------|
| 1 | 185-5624 | 3 | Stud | 7 | 185-6586 | 1 | Cap | |
| 2 | 185-6845 | 1 | Shim, Injection Pump (.30mm) | 8 | 185-6584 | 1 | Joint, Eye | |
| 3 | | | Shim, Injection Pump MDKBL | 9 | 185-6585 | 1 | Collar, Eye Joint | |
| | 185-6749 | AR | .20mm | 10 | 185-5623 | 32 | Bolt, Hex Socket Head | |
| | 185-6739 | AR | .25mm | 11 | | | Pump Assy, Injection (See Separate Page for Components) | |
| | | | MDKBM, MDKBN | | 185-6882 | 1 | MDKBL | |
| | 185-6742 | AR | .20mm | | 185-6748 | 1 | MDKBM, MDKBN | |
| | 185-6743 | AR | .25mm | | 12 | 185-4255 | 2 | Nut |
| 4 | 185-6759 | 86 | Washer, Spring | | 13 | 185-5798 | 1 | Cover |
| 5 | 185-5625 | 32 | Nut, Cap | | 14 | 185-6580 | 1 | Gasket |
| 6 | 185-2578 | 1 | Gasket | | | | | |

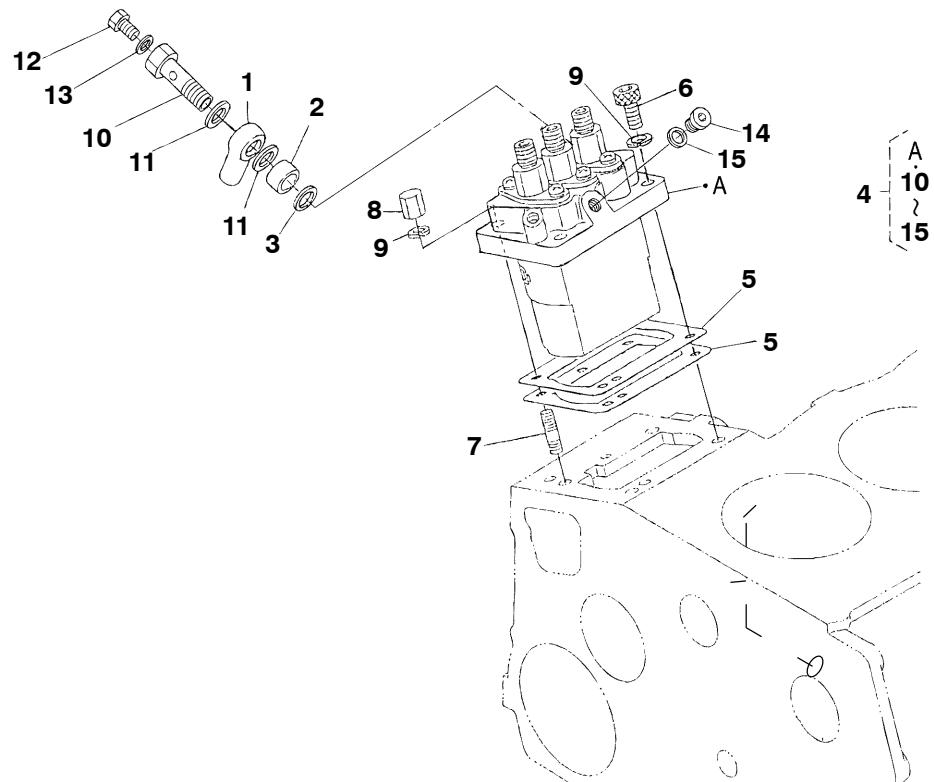
Injection Pump Components (Spec A)



Injection Pump Components (Spec A)

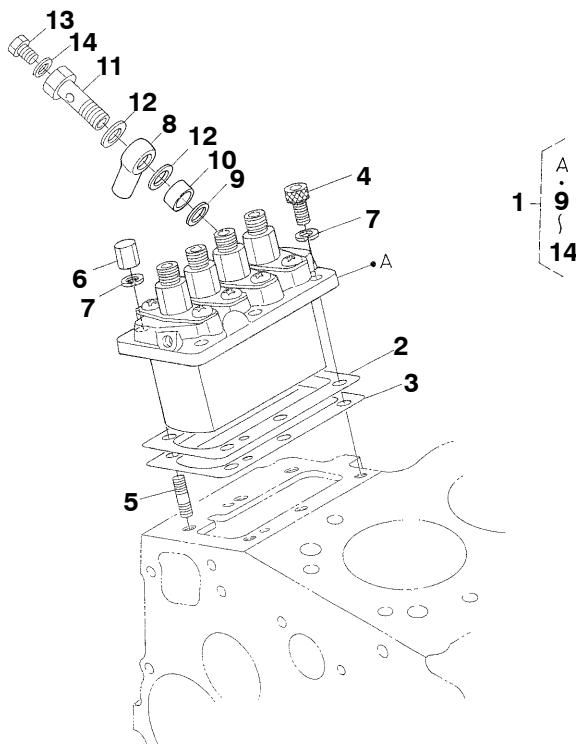
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|------------------------|---------|----------|-----------|-------------------------|
| | | | Pump Assy, Injection | 12 | 185-5655 | 3 | Shim |
| | 185-6882 | 1 | MDKBL | 12 | 185-5655 | 4 | MDKBL, MDKBN |
| 1 | 185-6748 | 1 | MDKBM, MDKBN | 13 | 185-5654 | 3 | Seat, Spring Lower |
| | | | Holder, Delivery Valve | 13 | 185-5654 | 4 | MDKBL |
| | 185-6588 | 3 | MDKBL | 14 | 185-5652 | 3 | MDKBM, MDKBN |
| 2 | 185-6588 | 4 | MDKBM, MDKBN | 14 | 185-5652 | 4 | Spring, Plunger |
| | | | O'Ring | 15 | 185-5653 | 3 | MDKBL |
| | 185-5643 | 3 | MDKBL | 15 | 185-5653 | 4 | MDKBM, MDKBN |
| 3 | 185-5643 | 4 | MDKBM, MDKBN | 16 | 185-5659 | 3 | Seat, Spring Upper |
| | | | Gasket, Delivery Valve | 16 | 185-5659 | 4 | MDKBL |
| | 185-5641 | 3 | MDKBL | 17 | 185-6707 | 1 | MDKBM, MDKBN |
| 4 | 185-5641 | 4 | MDKBM, MDKBN | 17 | 185-6589 | 1 | Sleeve, Control |
| | | | Spring, Delivery Valve | 18 | 185-5650 | 3 | Pin, Clamp |
| | 185-5640 | 3 | MDKBL | 18 | 185-5650 | 4 | MDKBL |
| 5 | 185-5640 | 4 | MDKBM, MDKBN | 19 | 185-5658 | 4 | MDKBM, MDKBN |
| | | | Valve, Delivery | 19 | 185-5658 | 5 | Pin, Tappet Guide |
| | 185-5639 | 3 | MDKBL | 20 | 185-6886 | 1 | Screw, Countersunk Head |
| 6 | 185-5639 | 4 | MDKBM, MDKBN | 20 | 185-7251 | 1 | MDKBL |
| | | | Flange, Sleeve | 21 | 185-6885 | 1 | MDKBM, MDKBN |
| | 185-5644 | 3 | MDKBL | 21 | 185-5661 | 2 | Rack, Control |
| 7 | 185-5644 | 4 | MDKBM, MDKBN | 22 | 185-5661 | 1 | Gasket |
| | | | Pin, Joint | 23 | 185-6887 | 1 | Bolt, Joint |
| | 185-5645 | 3 | MDKBL | 24 | 185-5663 | 1 | Gasket |
| 8 | 185-5645 | 4 | MDKBM, MDKBN | 25 | 185-5662 | 1 | Screw, Air Bleed |
| | | | O'Ring | 26 | 185-5820 | 1 | Gasket (MDKBL) |
| | 185-5646 | 6 | MDKBL | 27 | 185-6888 | 1 | Plug (MDKBL) |
| 9 | 185-5646 | 8 | MDKBM, MDKBN | | | | |
| | | | Plunger, Pump | | | | |
| | 185-6884 | 3 | MDKBL | | | | |
| 10 | 185-6884 | 4 | MDKBM, MDKBN | | | | |
| | | | Screw | | | | |
| | 185-5647 | 6 | MDKBL | | | | |
| 11 | 185-5647 | 8 | MDKBM, MDKBN | | | | |
| | | | Tappet | | | | |
| | 185-5649 | 3 | MDKBL | | | | |
| | 185-5649 | 4 | MDKBM, MDKBN | | | | |

Injection Pump (MDKBL Begin Spec B)



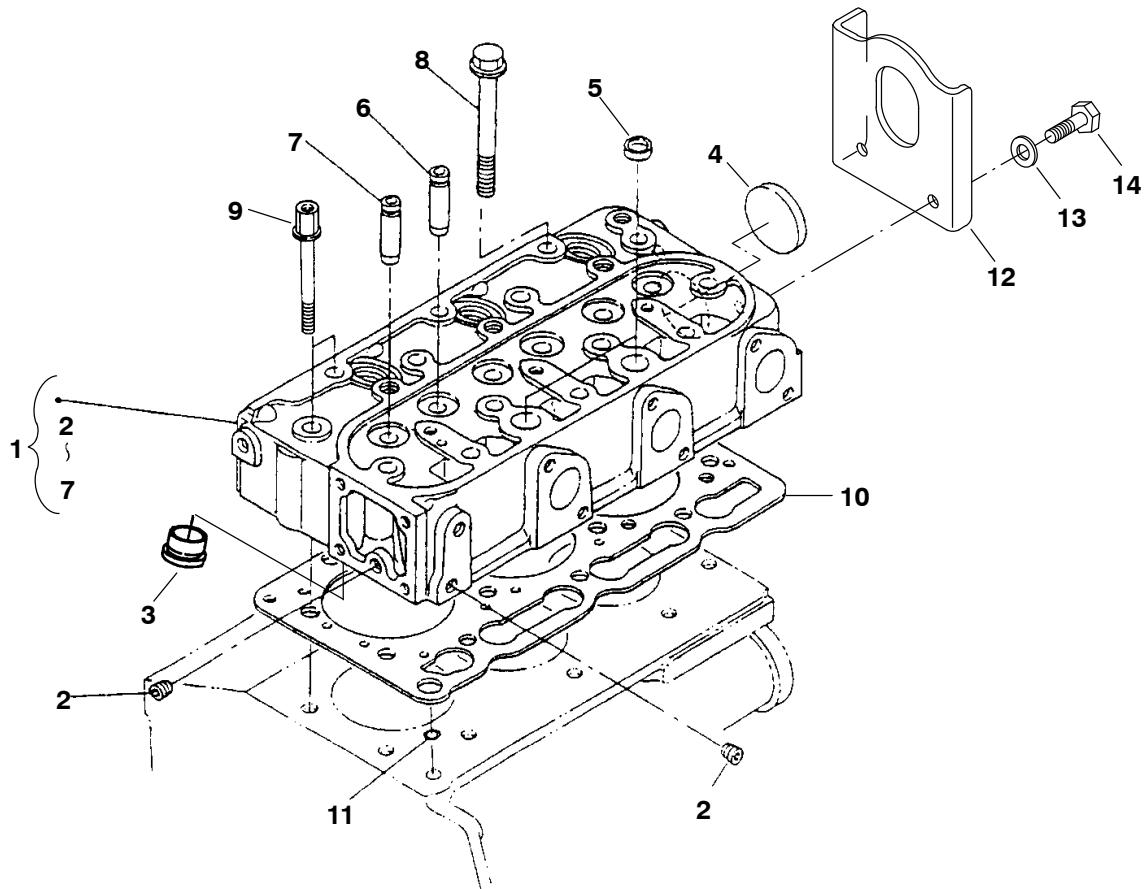
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|---|------------|-------------|-------------|---------------------|
| 1 | 185-6584 | 1 | Joint | 7 | 185-5624 | 2 | Stud |
| 2 | 185-6585 | 1 | Collar, Joint | 8 | 185-5625 | 2 | Nut |
| 3 | 185-2578 | 1 | Gasket | 9 | 185-6759 | 4 | Washer, Spring |
| 4 | 185-6882 | 1 | Assy., Pump Injection Shim, Injection Pump | 10 | 185-6887 | 1 | Bolt, Joint |
| 5 | 185-6749 | 1 | .20mm | 11 | 185-5661 | 2 | Gasket |
| | 185-6739 | 1 | .25mm | 12 | 185-5662 | 1 | Screw |
| | 185-6845 | 1 | .30mm | 13 | 185-5663 | 1 | Gasket |
| 6 | 185-5623 | 2 | Bolt, Hex Socket Head | 14 | 185-6888 | 1 | Plug |
| | | | | 15 | 185-5823 | 1 | Gasket |

Injection Pump (MDKBM and MDKBN Begin Spec B)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|----------|-----------|------------------|
| 1 | 185-6748 | 1 | Assy, Pump Injection Shim, Injection Pump Spec B-D | 5 | 185-5624 | 3 | Stud |
| 2 | 185-6742 | 1 | .20mm | 6 | 185-5625 | 3 | Nut |
| | 185-6743 | 1 | .25mm | 7 | 185-6759 | 6 | Washer, Spring |
| | | | Begin Spec E | 8 | 185-6584 | 1 | Joint |
| | 147-0976 | 1 | .20mm | 9 | 185-2578 | 1 | Gasket |
| | 147-0977 | 1 | .25mm | 10 | 185-6585 | 1 | Collar, Joint |
| 3 | 185-6744 | 1 | Shim, Injection Pump (.30mm) | 11 | 185-6887 | 1 | Bolt, Joint |
| 4 | 185-5623 | 3 | Bolt, Hex Head Socket | 12 | 185-5661 | 2 | Gasket |
| | | | | 13 | 185-5662 | 1 | Screw |
| | | | | 14 | 185-5663 | 1 | Gasket |

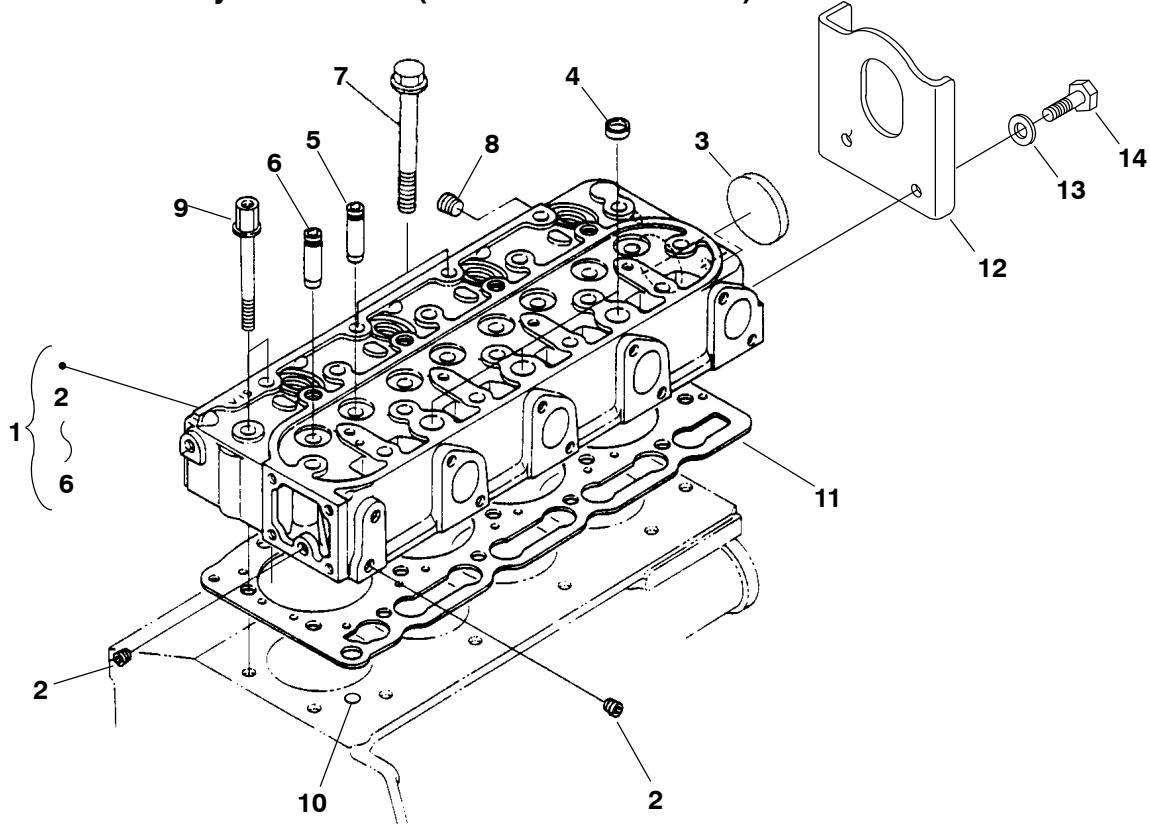
Cylinder Head (MDKBL)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|----------|----------|----------|---|----------|-------------|----------|--|
| 1 | | | Head Assy, Cylinder (Includes Parts Marked *) | 7 | 185-6475 | 3 | *Guide, Inlet Valve Spec A |
| 185-7374 | 1 | | Spec A-D | 110-3960 | | 3 | Begin Spec B |
| 110-4092 | 1 | | Begin Spec E | 8 | 185-6477 | 12 | Bolt, Cylinder Head |
| 2 | 185-2188 | 2 | *Plug | 9 | 185-6479 | 2 | Bolt, Cylinder Head |
| 3 | 185-7375 | 3 | *Chamber, Combustion (Spec A) | 10 | | | Gasket, Cylinder Head |
| 4 | 185-2411 | 1 | *Cap, Sealing | 185-7373 | | 1 | Spec A |
| 5 | 185-2413 | 2 | *Cap, Sealing | 181-9222 | | 1 | Begin Spec B |
| 6 | | | *Guide, Exhaust Valve | 11 | 185-2095 | 1 | O-Ring (Spec A) |
| | 185-6476 | 3 | Spec A | 12 | 403-4284-04 | 1 | Bracket, Lifting |
| | 181-9119 | 3 | Begin Spec B | 13 | 526-0399-60 | 2 | Washer, Flat (M8) |
| | | | | 14 | 800-3017-18 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 16mm) |

* – Parts Included in Cylinder Head Assy.

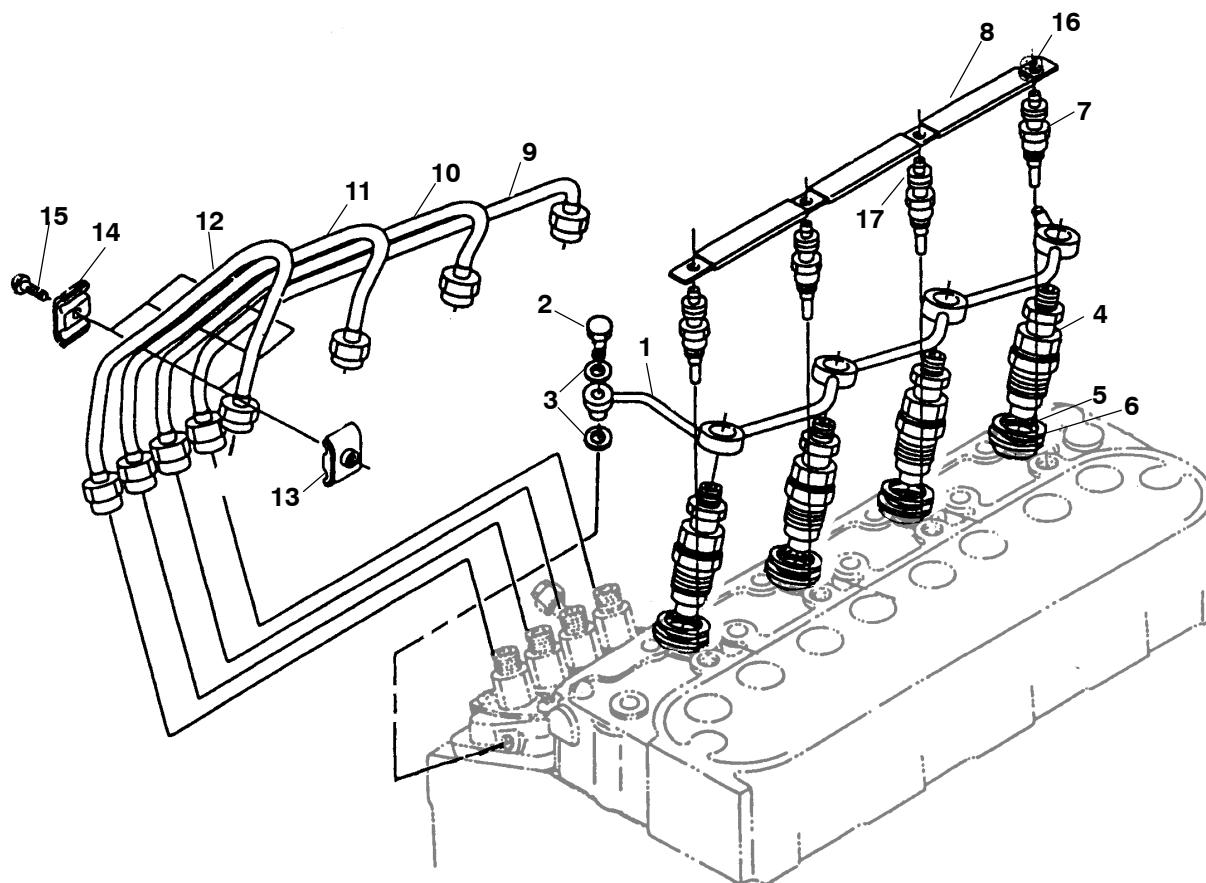
Cylinder Head (MDKBM and MDKBN)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|----------|--------------------------------|--|----------|-------------|--------------|--|
| 1 | | | Head Assy, Cylinder (Includes Parts Marked *) Spec A-D | 8 | 185-5502 | 1 | Plug (Spec A) |
| 185-6747 | 1 | MDKBM | | 9 | 185-6479 | 2 | Bolt, Cylinder Head |
| 185-7303 | 1 | MDKBN | | 10 | 185-2095 | 1 | O'Ring (Spec A) |
| 110-4094 | 1 | Begin Spec E | | 11 | | | Gasket, Cylinder Head MDKBM |
| 2 185-2188 | 2 | *Plug | MDKBM and MDKBN | 185-6478 | 1 | Spec A | Spec A |
| 3 185-2411 | 1 | *Cap, Sealing | | 110-3967 | 1 | Begin Spec B | Begin Spec B |
| 4 | | *Cap, Sealing | | 185-7304 | 1 | MDKBN | MDKBN |
| 185-2413 | 3 | MDKBM (Spec A-D) | | 110-3965 | 1 | Spec A | Spec A |
| 185-2413 | 4 | MDKBN (Spec A-D) | | 110-3965 | 1 | Begin Spec B | Begin Spec B |
| 185-2413 | 3 | MDKBM and MDKBN (Begin Spec E) | | 12 | 403-4284-04 | 1 | MDKBM and MDKBN |
| 5 | | *Guide, Exhaust Valve | | 13 | 526-0399-60 | 2 | Begin Spec E |
| 185-6476 | 4 | Spec A | | 14 | 800-3017-18 | 2 | Bracket, Lifting |
| 181-9119 | 4 | Begin Spec B | | | | | Washer, Flat (M8) |
| 6 | | *Guide, Inlet Valve | | | | | Screw, Hex Head Cap (M8 x 1.25 x 16mm) |
| 185-6475 | 4 | Spec A | | | | | |
| 110-3960 | 4 | Begin Spec B | | | | | |
| 7 185-6477 | 16 | Bolt, Cylinder Head | | | | | |

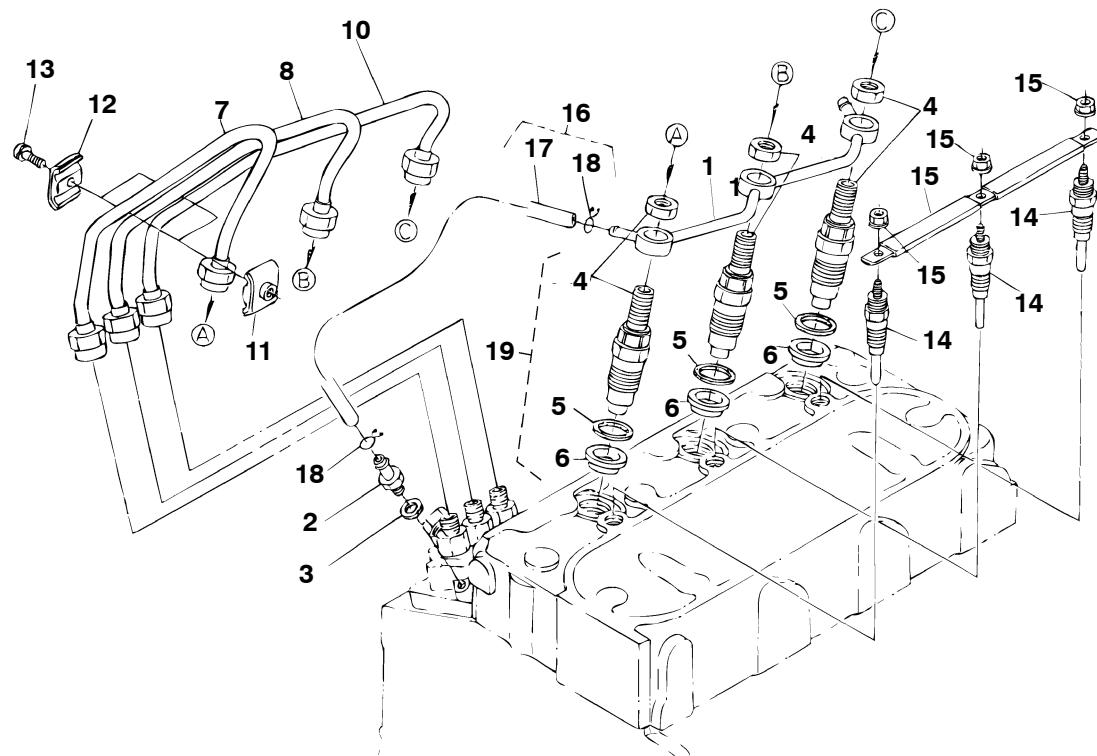
* – Parts Included in Cylinder Head Assy.

Nozzle Holder and Glow Plug (Spec A)



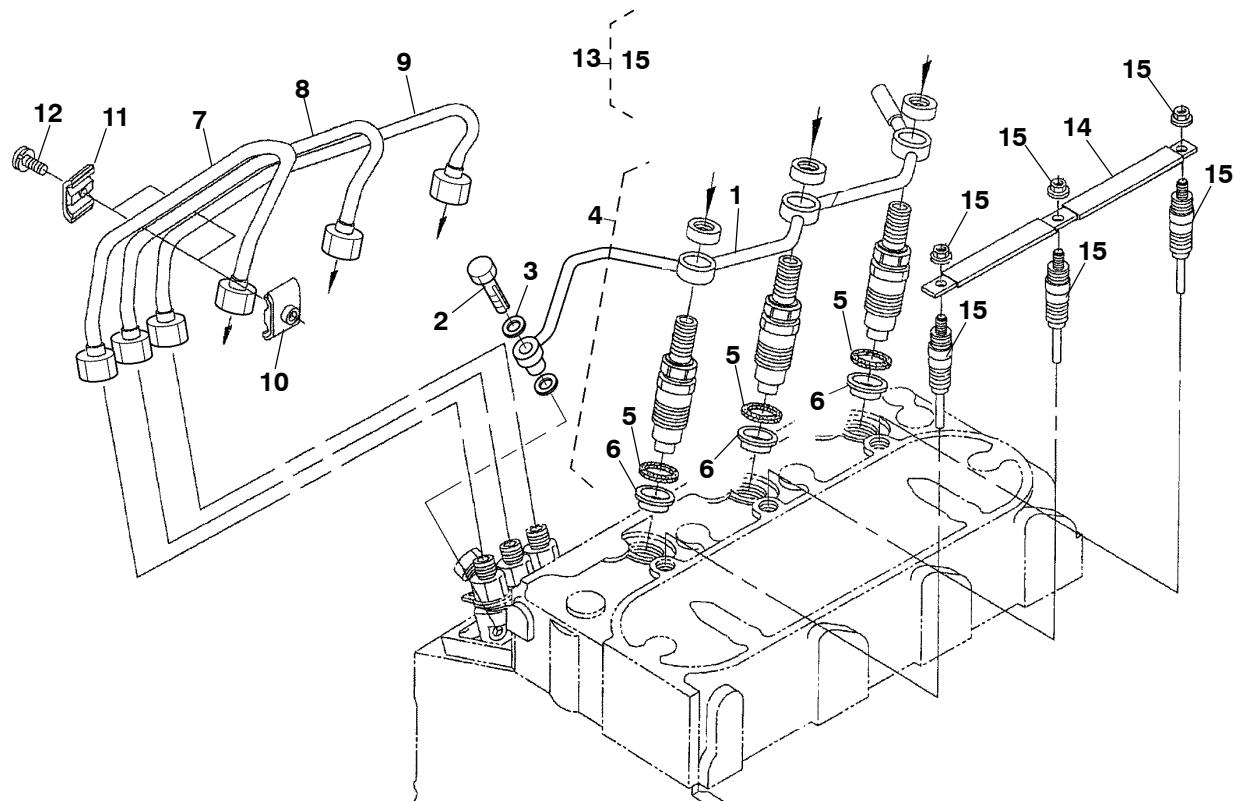
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|----------|----------|-----------|--|---------|----------|-----------|--------------------------------|
| 1 | 185-7106 | 1 | Pipe, Overflow MDKBL | 8 | 185-6899 | 1 | Cord, Glow Plug MDKBL |
| | 185-7265 | 1 | MDKBM, MDKBN | | 185-6624 | 1 | MDKBM, MDKBN |
| 2 | 185-7082 | 1 | Screw, Air Bleeder | 9 | 185-7266 | 1 | Pipe, Injection (MDKBM, MDKBN) |
| 3 | 185-2284 | 2 | Gasket | 10 | 185-6621 | 1 | Pipe, Injection |
| 4 | | | Holder Assy, Nozzle (See Separate Page for Components) | 11 | 185-6751 | 1 | Pipe, Injection |
| | 185-6740 | 3 | MDKBL | 12 | 185-6750 | 1 | Pipe, Injection |
| | 185-6740 | 4 | MDKBM, MDKBN | 13 | 185-5612 | 2 | Clamp, Pipe MDKBL |
| 5 | | | Gasket | 14 | 185-5612 | 3 | MDKBM, MDKBN |
| | 185-5337 | 3 | MDKBL | | 185-2345 | 2 | Clamp, Pipe MDKBL |
| | 185-5337 | 4 | MDKBM, MDKBN | | 185-2345 | 3 | MDKBM, MDKBN |
| 6 | | | Seal, Heat | 15 | 185-2385 | 2 | Screw, Washer Head MDKBL |
| | 185-5985 | 3 | MDKBL | 16 | 185-2385 | 3 | MDKBM, MDKBN |
| | 185-5985 | 4 | MDKBM, MDKBN | | 185-5615 | 3 | Nut, Flange MDKBL |
| 7 | | | Plug, Glow MDKBL | | 185-5615 | 4 | MDKBM, MDKBN |
| | 185-5421 | 3 | 12V | 17 | 185-7004 | 3 | Washer, Plain MDKBL |
| | 185-7268 | 3 | 24V | | 185-7004 | 4 | MDKBM, MDKBN |
| | | | MDKBM, MDKBN | | | | |
| 185-5421 | 4 | 12V | | | | | |
| 185-7268 | 4 | 24V | | | | | |

Nozzle Holder and Glow Plug (MDKBL Spec B-D)



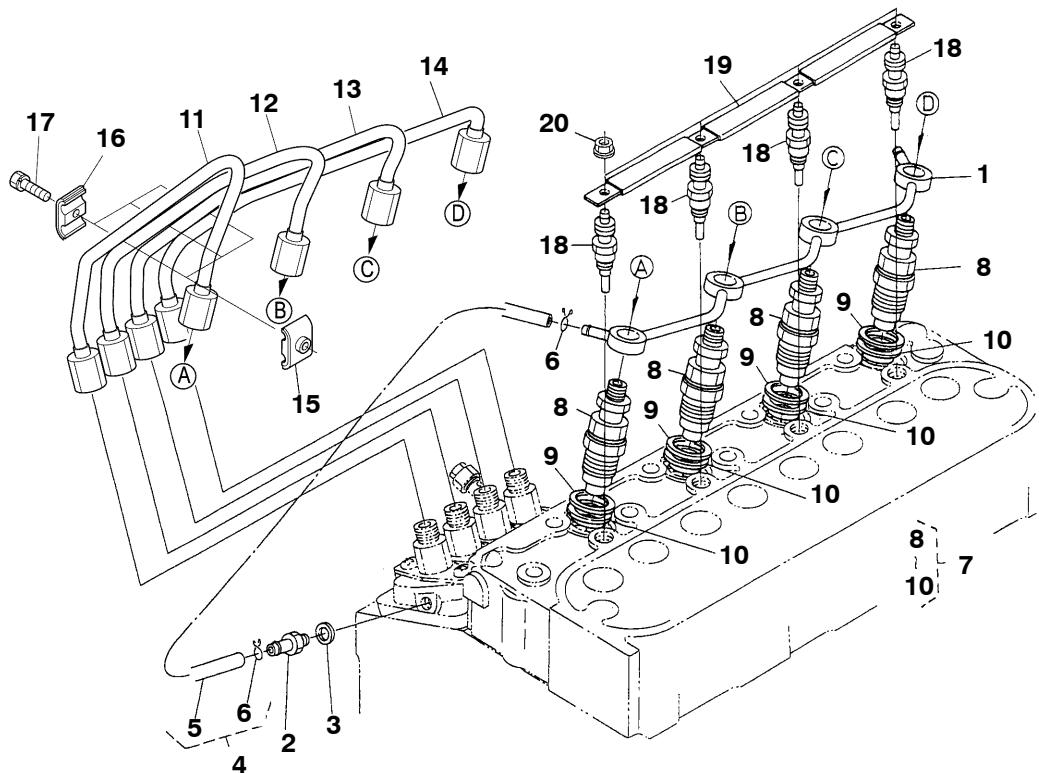
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|----------|----------|----------|---------------------|
| 1 | 185-6896 | 1 | Assy. Pipe, Overflow | 11 | 185-2345 | 2 | Clamp, Pipe |
| 2 | 185-5609 | 1 | Screw, Air Bleeder | 12 | 185-2385 | 2 | Screw, with Washer |
| 3 | 185-2284 | 1 | Gasket | 13 | | | Glow Plug |
| 4 | 185-6740 | 3 | Assy. Holder, Nozzle (See Separate Page for Components) | 333-0802 | | 3 | 12V |
| | | | | 185-7268 | | 3 | 24V |
| 5 | 185-5337 | 3 | Gasket | 14 | 185-6899 | 1 | Cord, Glow Plug |
| 6 | 185-5985 | 3 | Seal, Heat | 15 | 185-5615 | 3 | Nut, Flange |
| 7 | 185-6750 | 1 | Pipe, Injection | 16 | 185-5607 | 1 | Assy, Pipe Overflow |
| 8 | 185-6751 | 1 | Pipe, Injection | 17 | 181-9055 | 1 | Pipe, Fuel Overflow |
| 9 | 185-6897 | 1 | Pipe, Injection | 18 | 185-5608 | 2 | Clip, Pipe |
| 10 | 185-5612 | 2 | Clamp, Pipe | 19 | 147-0924 | 1 | Kit, Holder Nozzle |

Nozzle Holder and Glow Plug (MDKBL Begin Spec E)



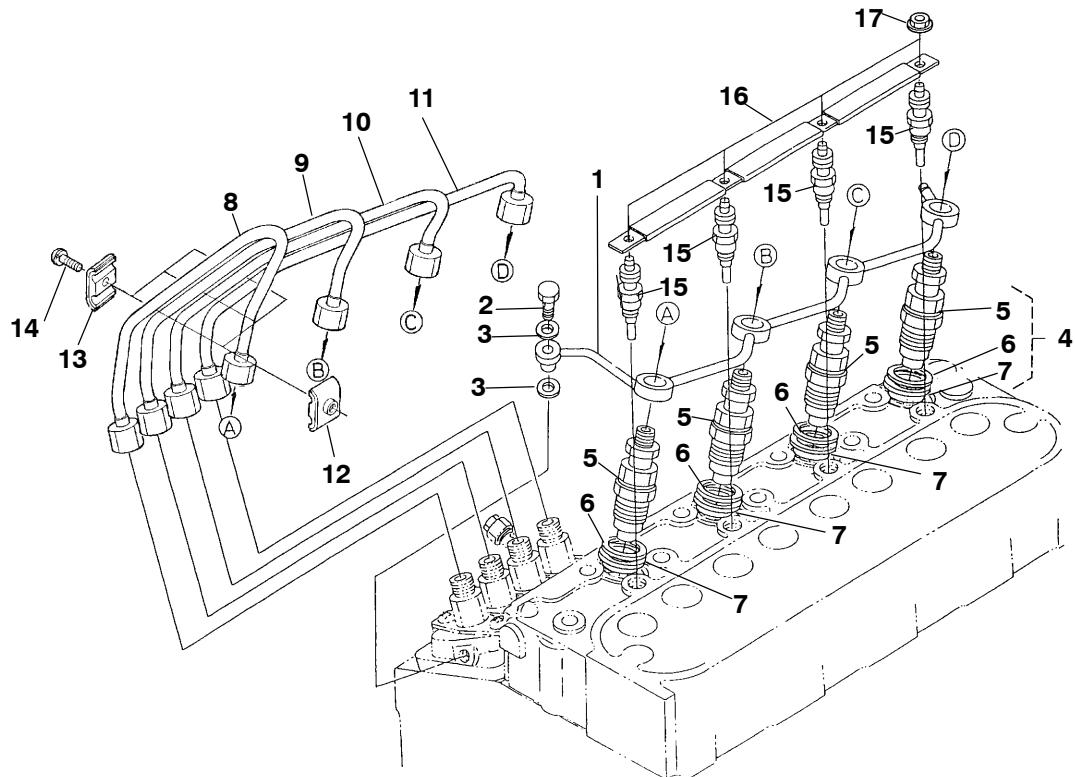
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|--------------------|
| 1 | 185-7106 | 1 | Assy. Pipe, Overflow | 9 | 185-6897 | 1 | Pipe, Injection |
| 2 | 185-7082 | 1 | Screw, Air Bleeder | 10 | 185-5612 | 2 | Clamp, Pipe |
| 3 | 185-2284 | 2 | Gasket | 11 | 185-2345 | 2 | Clamp, Pipe |
| 4 | 147-0978 | 3 | Assy. Holder, Nozzle (See Separate Page for Components) | 12 | 185-2385 | 2 | Screw, with Washer |
| 5 | 185-5337 | 3 | Gasket | 13 | 333-0802 | 3 | Glow Plug 12V |
| 6 | 185-5985 | 3 | Seal, Heat | | 185-7268 | 3 | 24V |
| 7 | 185-6750 | 1 | Pipe, Injection | 14 | 185-6899 | 1 | Cord, Glow Plug |
| 8 | 185-6751 | 1 | Pipe, Injection | 15 | 185-5615 | 3 | Nut, Flange |

Nozzle Holder and Glow Plug (MDKBM Spec B-D)



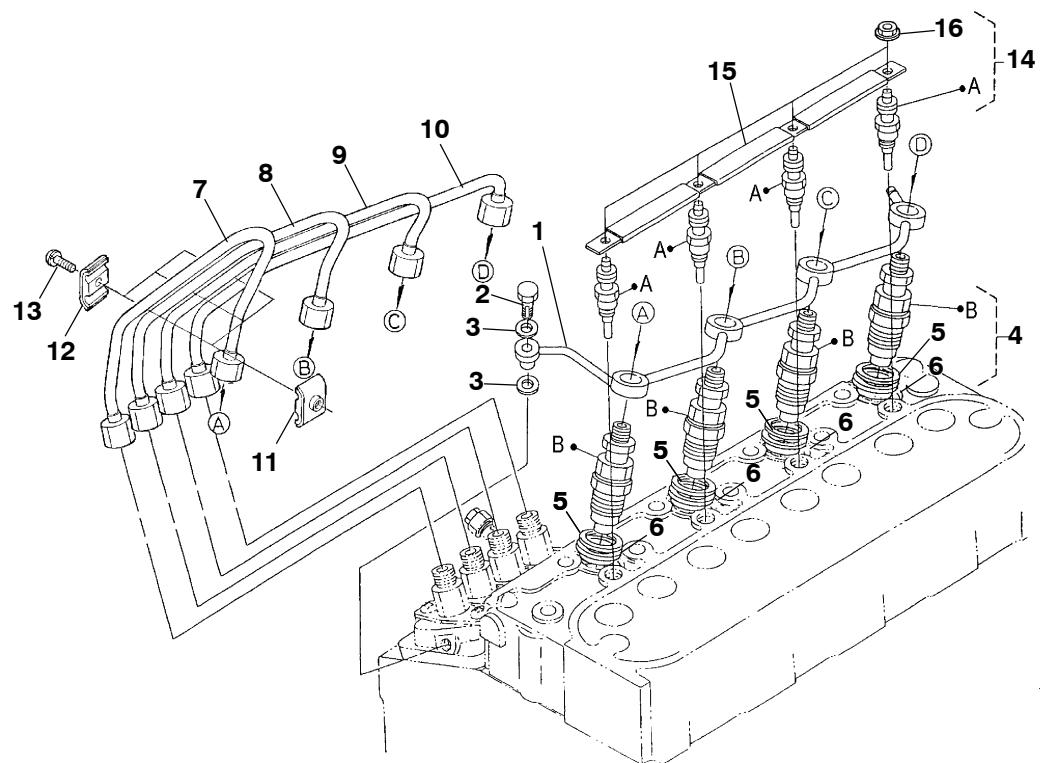
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION | |
|---------|----------|----------|-------------------------------------|---------|----------|----------|------------------|-----------------|
| 1 | 185-7404 | 1 | Assy., Pipe Overflow | 12 | 185-6751 | 1 | Pipe, Injection | |
| 2 | 185-5609 | 1 | Screw, Air Bleeder | 13 | 185-6897 | 1 | Pipe, Injection | |
| 3 | 185-2284 | 1 | Gasket | 14 | 185-7266 | 1 | Pipe, Injection | |
| 4 | 185-5607 | 1 | Pipe Assy, Overflow (Includes Clip) | 15 | 185-5612 | 3 | Clamp, Pipe | |
| 5 | 181-9055 | 1 | Pipe, Overflow | 16 | 185-2345 | 3 | Clamp, Pipe | |
| 6 | 185-5608 | 2 | Clip, Pipe | 17 | 185-2385 | 3 | Screw, W/Washer | |
| 7 | 147-0924 | 4 | Kit, Holder Nozzle | 18 | 333-0802 | 4 | Plug, Glow | |
| 8 | 185-6740 | 4 | Holder, Nozzle | | 185-7268 | 4 | 12V | |
| 9 | 185-5337 | 4 | Gasket | | 19 | 185-6624 | 1 | 24V |
| 10 | 185-5985 | 4 | Seal, Heat | | 20 | 185-5616 | 4 | Cord, Glow Plug |
| 11 | 185-6750 | 1 | Pipe, Injection | | | | Nut, Flange | |

Nozzle Holder and Glow Plug (MDKBN Spec B-D)



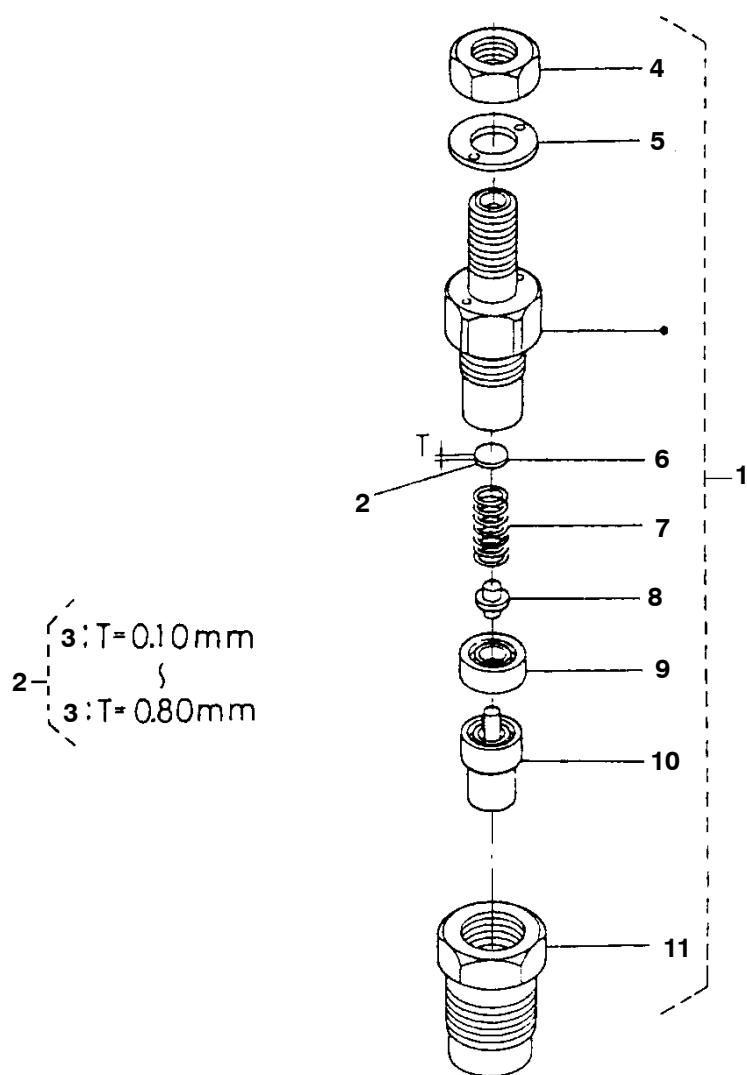
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|----------------------|---------|----------|-----------|--------------------|
| 1 | 185-7265 | 1 | Assy Pipe, Overflow | 11 | 185-7266 | 1 | Pipe, Injection |
| 2 | 185-7082 | 1 | Screw, Air Bleeder | 12 | 185-5612 | 3 | Clamp, Pipe |
| 3 | 185-2284 | 2 | Gasket | 13 | 185-2345 | 3 | Clamp, Pipe |
| 4 | 181-9090 | 4 | Kit Holder Nozzle | 14 | 185-2385 | 3 | Screw, Washer Head |
| 5 | 185-6740 | 4 | Assy. Holder, Nozzle | 15 | 333-0802 | 4 | Glow, Plug 12V |
| 6 | 185-5337 | 4 | Gasket | | 185-7268 | 4 | 24V |
| 7 | 185-5985 | 4 | Seal, Heat | 16 | 185-6624 | 1 | Cord Glow, Plug |
| 8 | 185-6750 | 1 | Pipe, Injection | 17 | 185-5615 | 4 | Nut, Flange |
| 9 | 185-6751 | 1 | Pipe, Injection | | | | |
| 10 | 185-6897 | 1 | Pipe, Injection | | | | |

Nozzle Holder and Glow Plug (MDKBM and MDKBN Begin Spec E)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|---------------------|---------|----------|-----------|--------------------|
| 1 | 185-7265 | 1 | Assy Pipe, Overflow | 10 | 185-7266 | 1 | Pipe, Injection |
| 2 | 185-7082 | 1 | Screw, Air Bleeder | 11 | 185-5612 | 3 | Clamp, Pipe |
| 3 | 185-2284 | 2 | Gasket | 12 | 185-2345 | 3 | Clamp, Pipe |
| 4 | 147-0978 | 4 | Kit Holder, Nozzle | 13 | 185-2385 | 3 | Screw, with Washer |
| 5 | 185-5337 | 4 | Gasket | 14 | 333-0802 | 4 | Plug, Glow |
| 6 | 185-5985 | 4 | Seal, Heat | | 185-7268 | 4 | 12V |
| 7 | 185-6750 | 1 | Pipe, Injection | 15 | 185-6624 | 1 | 24V |
| 8 | 185-6751 | 1 | Pipe, Injection | 16 | 185-5615 | 4 | Cord, Glow Plug |
| 9 | 185-6897 | 1 | Pipe, Injection | | | | Nut, Flange |

Nozzle Holder Components

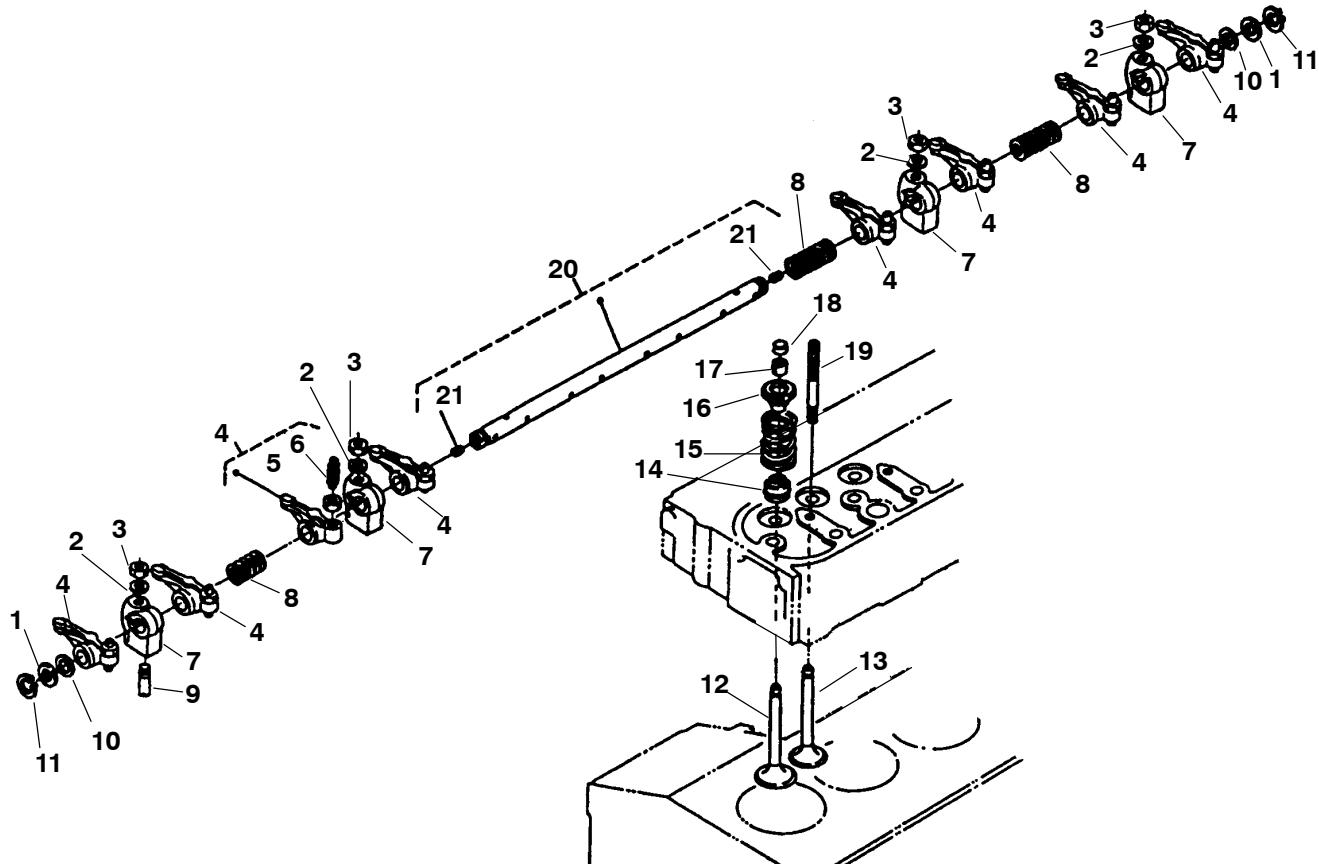


Nozzle Holder Components

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|---|------------|-------------|-------------|-------------------------------|
| 1 | | | Holder Assy, Nozzle (Includes Parts Marked *) | 4 | 185-6900 | 3 | *Nut MDKBL |
| | 185-6740 | 3 | MDKBL Spec A-D | | 185-6900 | 4 | MDKBM, MDKBN |
| | 185-6740 | 4 | MDKBM, MDKBN Spec A-D | 5 | 185-6906 | 3 | *Washer, Plain MDKBL |
| | 147-0978 | 4 | MDKBL, MDKBM, MDKBN Begin Spec E | | 185-6906 | 4 | MDKBM, MDKBN |
| 2 | | | *Washer Assy, Adjust (Includes Adjusting Washers) | 6 | 185-6901 | 3 | *Washer, Adjusting MDKBL |
| | 185-6908 | 3 | MDKBL | | 185-6901 | 4 | MDKBM, MDKBN |
| | 185-6908 | 4 | MDKBM, MDKBN | 7 | 185-6902 | 3 | *Spring, Nozzle MDKBL |
| 3 | | | Washer, Adjusting MDKBL | | 185-6902 | 4 | MDKBM, MDKBN |
| | 185-6909 | 3 | .10mm | 8 | 185-6904 | 3 | *Rod, Push MDKBL |
| | 185-6910 | 3 | .20mm | | 185-6904 | 4 | MDKBM, MDKBN |
| | 185-6911 | 3 | .30mm | 9 | 185-6903 | 3 | *Piece, Distance MDKBL |
| | 185-6912 | 3 | .40mm | | 185-6903 | 4 | MDKBM, MDKBN |
| | 185-6913 | 3 | .50mm | 10 | 185-6907 | 3 | *Piece, Nozzle MDKBL Spec A-D |
| | 185-6914 | 3 | .52mm | | 147-0974 | 3 | MDKBL Begin Spec E |
| | 185-6915 | 3 | .54mm | | 185-6907 | 4 | MDKBM, MDKBN Spec A-D |
| | 185-6916 | 3 | .56mm | | 147-0974 | 4 | MDKBM, MDKBN |
| | 185-6917 | 3 | .58mm | 11 | 185-6905 | 3 | Begin Spec E *Nut, Nozzle* |
| | 185-6918 | 3 | .80mm | | 185-6905 | 4 | MDKBL |
| | | | MDKBM, MDKBN | | | | MDKBM, MDKBN |
| | 185-6909 | 4 | .10mm | | | | |
| | 185-6910 | 4 | .20mm | | | | |
| | 185-6911 | 4 | .30mm | | | | |
| | 185-6912 | 4 | .40mm | | | | |
| | 185-6913 | 4 | .50mm | | | | |
| | 185-6914 | 4 | .52mm | | | | |
| | 185-6915 | 4 | .54mm | | | | |
| | 185-6916 | 4 | .56mm | | | | |
| | 185-6917 | 4 | .58mm | | | | |
| | 185-6918 | 4 | .80mm | | | | |

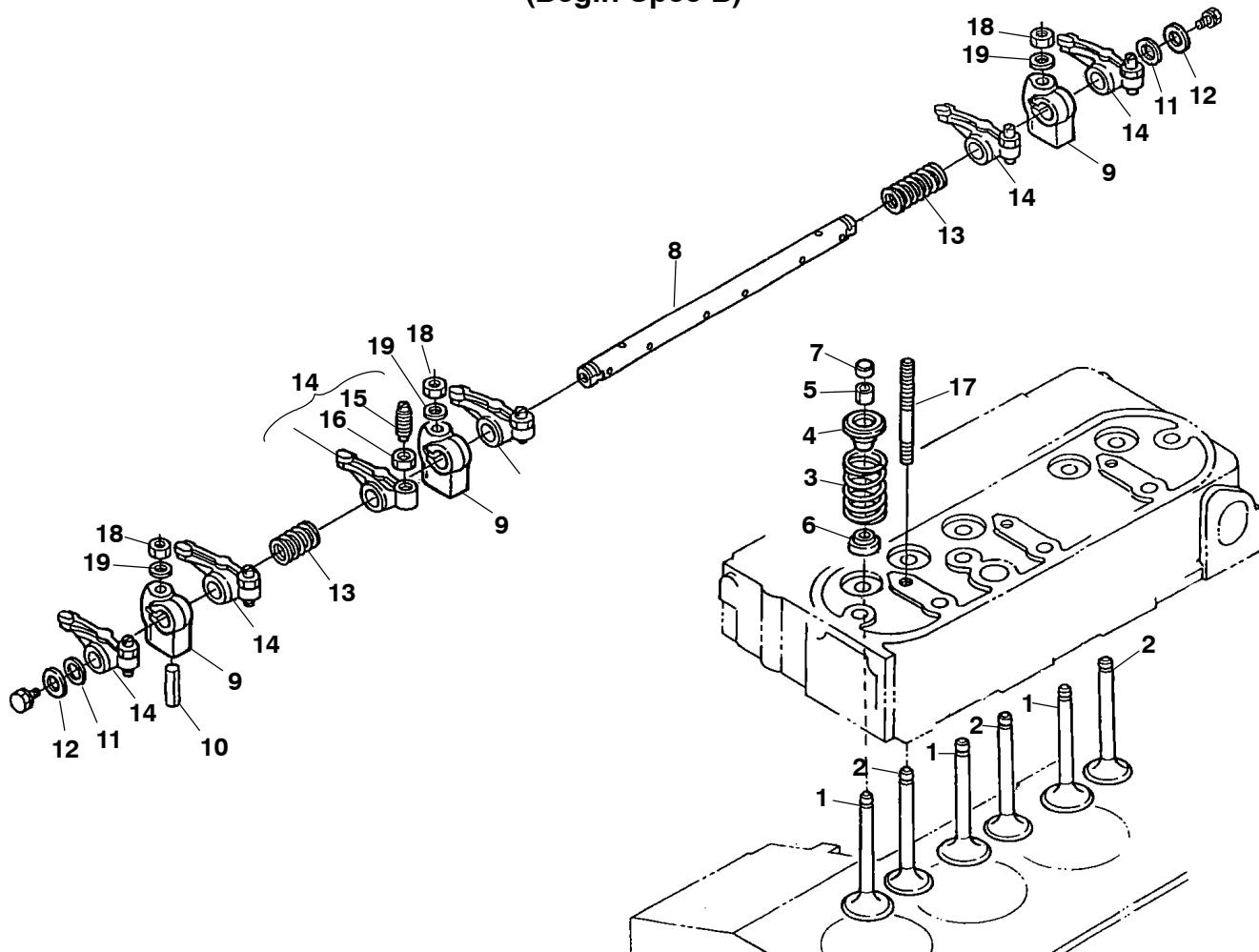
* – Parts Included in Nozzle Holder Assy.

Valve and Rocker Arm (Spec A)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|---|----------|----------|------------------|--|
| 1 | 185-6690 | 2 | Washer, Rocker Arm Shaft | 13 | 185-6682 | 3 | Valve, Exhaust |
| 2 | 185-2184 | 3 | Washer, Plain | 185-6682 | 4 | MDKBL | MDKBL |
| 3 | 185-2184 | 4 | MDKBM, MDKBN | 14 | 185-7300 | 6 | MDKBM, MDKBN |
| 4 | 185-2179 | 3 | Nut | 185-7300 | 8 | Seal, Valve Stem | MDKBL |
| 4 | 185-2179 | 4 | MDKBL | 15 | 185-6683 | 6 | MDKBM, MDKBN |
| 4 | 185-2179 | 4 | MDKBM, MDKBN | 185-6683 | 8 | Spring, Valve | MDKBL |
| 4 | 185-6693 | 6 | Arm Assy, Rocker (Includes Screw and Nut) | 16 | 185-2076 | 6 | MDKBL |
| 4 | 185-6693 | 8 | MDKBL | 185-2076 | 8 | MDKBM, MDKBN | MDKBL |
| 5 | 185-6695 | 6 | Nut | 17 | 110-3827 | 6 | Retainer, Valve Spring |
| 5 | 185-6695 | 8 | MDKBL | 110-3827 | 8 | MDKBL | MDKBM, MDKBN |
| 6 | 185-6694 | 6 | MDKBM, MDKBN | 18 | 185-2080 | 6 | Collet, Valve Spring |
| 6 | 185-6694 | 8 | Screw, Adjusting | 185-2080 | 8 | MDKBL | MDKBL |
| 7 | 185-6687 | 3 | MDKBL | 19 | 185-6688 | 3 | MDKBM, MDKBN |
| 7 | 185-6687 | 4 | MDKBM, MDKBN | 185-6688 | 4 | Cap, Valve | MDKBL |
| 8 | 185-6691 | 3 | Bracket, Rocker Arm | 20 | 185-6923 | 1 | MDKBL |
| 8 | 185-6691 | 4 | MDKBL | 185-6685 | 1 | MDKBM, MDKBN | MDKBL |
| 9 | 185-2072 | 1 | MDKBM, MDKBN | 21 | 185-6686 | 2 | Shaft Assy, Rocker Arm (Includes Screws) |
| 10 | 185-6689 | 2 | Screw, Rocker Arm Set | 185-6681 | 1 | MDKBL | (Includes Screws) |
| 11 | 185-6692 | 2 | Washer, Rocker Arm Shaft | 185-6681 | 1 | MDKBM, MDKBN | MDKBL |
| 12 | 185-6681 | 2 | Circlip, External | | | | MDKBL, MDKBN |
| | 185-6681 | 3 | Valve, Inlet | | | | Screw, Set |
| | 185-6681 | 4 | MDKBL | | | | |

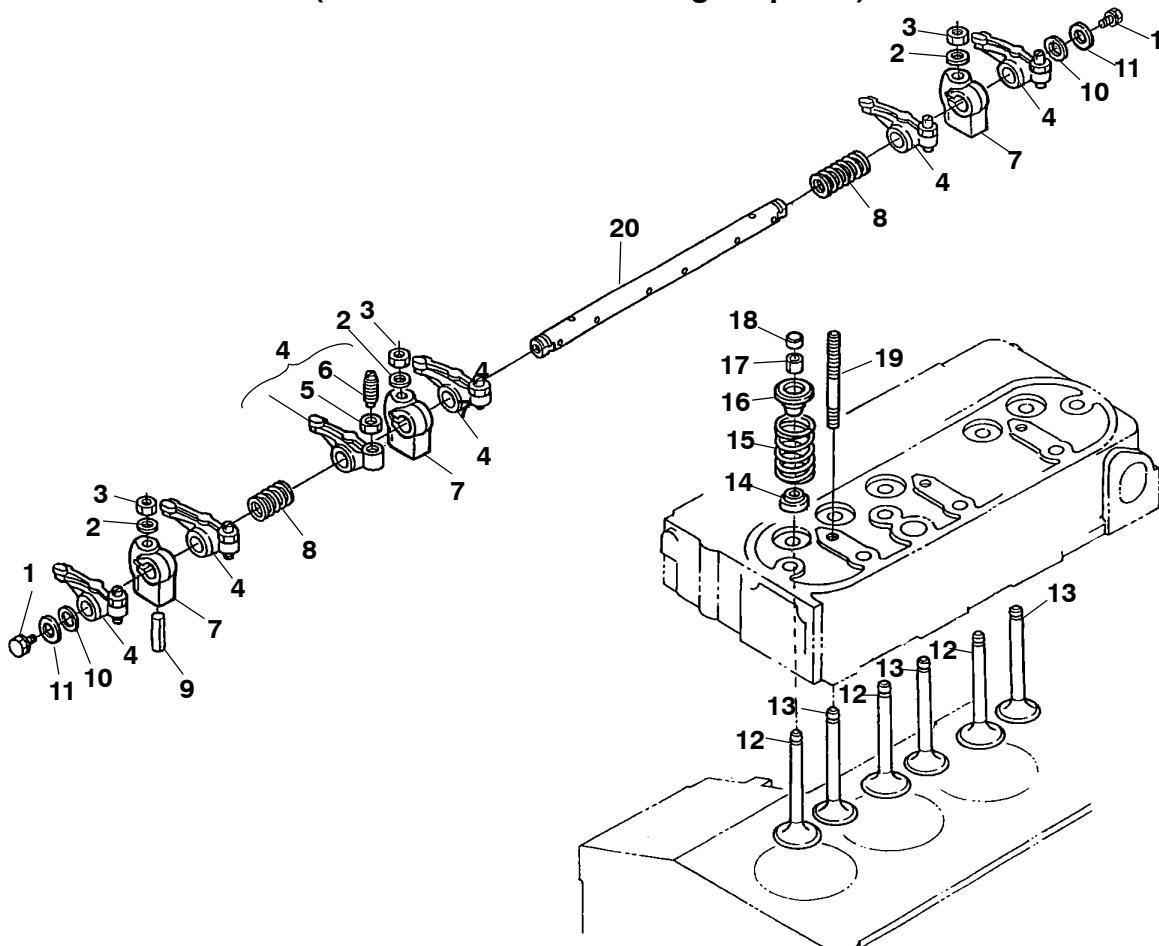
Valve and Rocker Arm MDKBL
(Begin Spec B)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|----------------------------|
| 1 | 185-6681 | 3 | Valve, Inlet Spec B-D |
| | 110-4021 | 3 | Begin Spec E |
| 2 | 185-6682 | 3 | Valve, Exhaust Spec B-D |
| | 110-4022 | 3 | Begin Spec E |
| 3 | 185-6683 | 6 | Spring, Valve |
| 4 | 110-3959 | 6 | Retainer, Spring |
| 5 | 181-9036 | 6 | Collet, Valve Spring |
| 6 | 185-7300 | 6 | Seal, Valve Stem |
| 7 | 185-6459 | 6 | Cap, Valve |
| 8 | 185-7439 | 1 | Shaft, Rocker Arm |

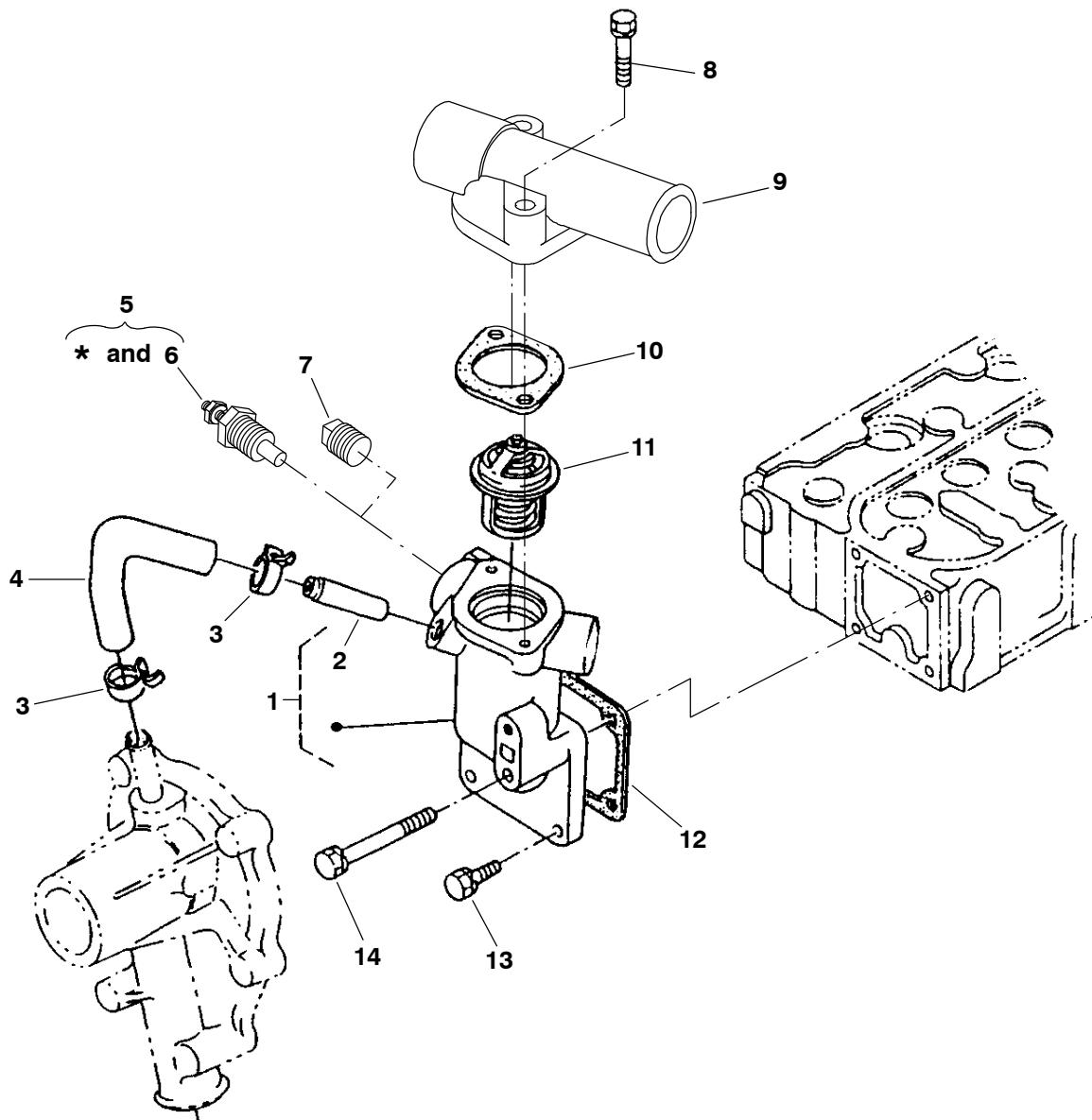
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|--------------------------|
| 9 | 185-6697 | 3 | Bracket, Rocker Arm |
| 10 | 185-7441 | 1 | Pin, Spring |
| 11 | 185-6689 | 2 | Washer, Rocker Arm Shaft |
| 12 | 185-7395 | 2 | Washer, Plain |
| 13 | 185-6691 | 2 | Spring, Rocker Arm |
| 14 | 185-6693 | 6 | Assy, Rocker Arm |
| 15 | 185-6694 | 6 | Screw, Adjusting |
| 16 | 185-6695 | 6 | Nut |
| 17 | 185-6688 | 3 | Stud |
| 18 | 185-2179 | 3 | Nut |
| 19 | 185-2184 | 3 | Washer, Plain |

Valve and Rocker Arm
(MDKBM and MDKBN Begin Spec B)



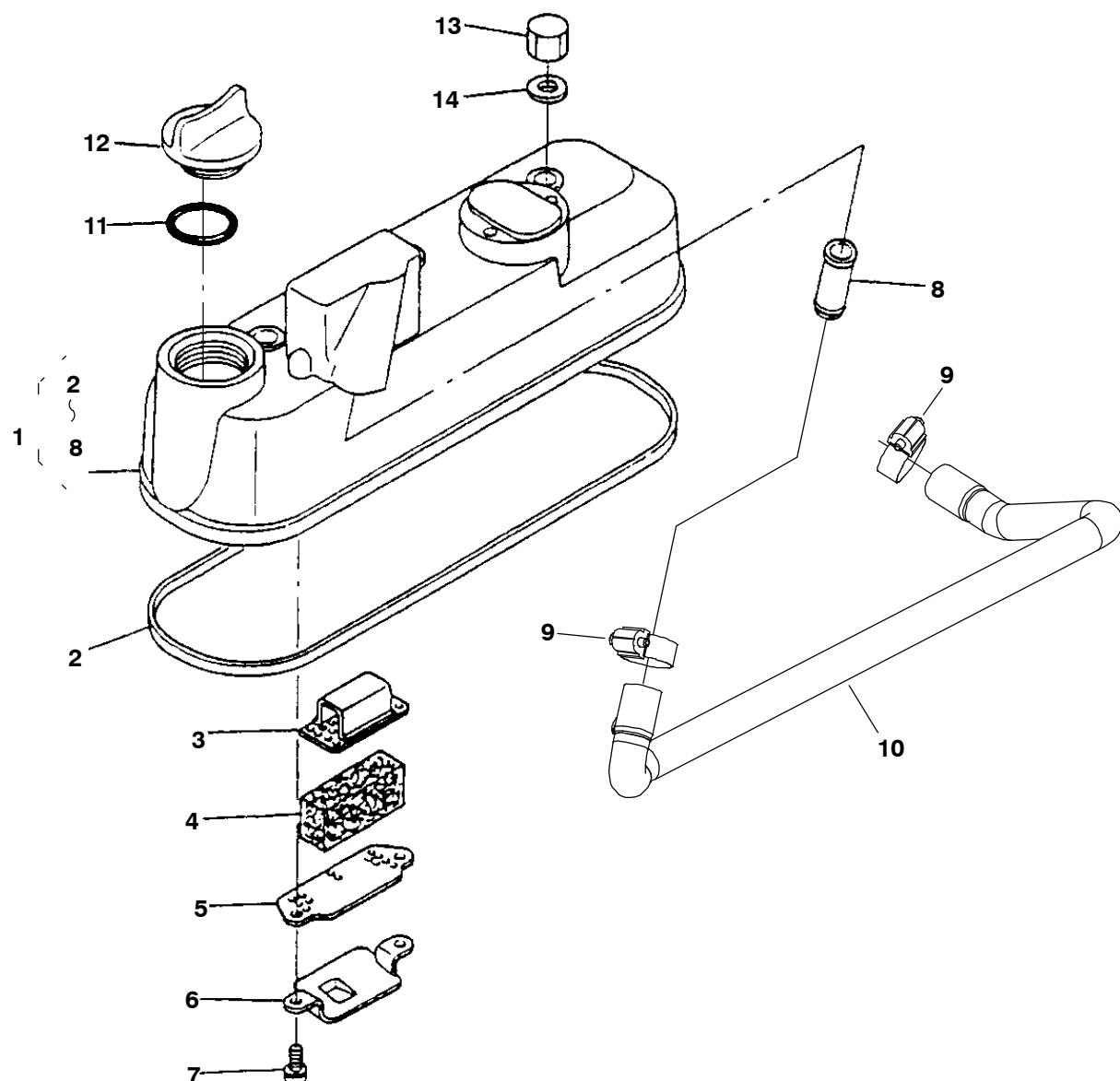
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|---------------------------|
| 1 | 185-7440 | 2 | Bolt | 13 | 185-6682 | 4 | Valve, Exhaust Spec B-D |
| 2 | 185-2184 | 4 | Washer, Plain | 14 | 110-4022 | 4 | Begin Spec E |
| 3 | 185-2179 | 4 | Nut | 15 | 185-6683 | 8 | Seal, Valve Stem Spec B-D |
| 4 | 185-6693 | 8 | Arm Assy, Rocker (Includes Screw and Nut) | 16 | 181-9117 | 8 | Begin Spec E |
| 5 | 185-6695 | 8 | Nut | 17 | 181-9036 | 8 | Spring, Valve |
| 6 | 185-6694 | 8 | Screw, Adjusting | 18 | 185-6459 | 8 | Retainer, Spring |
| 7 | 185-6687 | 4 | Bracket, Rocker Arm | 19 | 185-6688 | 4 | Collet, Valve Spring |
| 8 | 185-6691 | 3 | Spring, Rocker Arm | 20 | 181-9100 | 1 | Cap, Valve |
| 9 | 185-7441 | 1 | Pin, Spring | | | | Stud |
| 10 | 185-6689 | 2 | Washer, Rocker Arm Shaft | | | | Shaft, Rocker Arm |
| 11 | 185-7395 | 2 | Washer, Plain | | | | |
| 12 | 185-6681 | 4 | Valve, Inlet Spec B-D | | | | |
| | 110-4021 | 4 | Begin Spec E | | | | |

Water Flange



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|----------|-----------|--|
| 1 | 185-7297 | 1 | Flange, Water (Includes Water Return Pipe) | 7 | 185-5826 | 1 | Plug |
| 2 | 185-6445 | 1 | Pipe, Water Return | 8 | 185-6781 | 2 | Bolt |
| 3 | 185-6667 | 2 | Band, Pipe | 9 | 185-7298 | 1 | Cover, Thermostat |
| 4 | 185-6666 | 1 | Pipe, Water Return | 10 | 185-6004 | 1 | Gasket, Thermostat |
| 5 | | | *Kit, Sender (Includes Water Temperature Sender) | 11 | 185-6005 | 1 | Thermostat |
| | 300-5040 | 1 | Negative Ground | 12 | 185-6922 | 1 | Gasket, Water Flange |
| | 300-5041 | 1 | Isolated Ground | 13 | 185-2388 | 3 | Bolt |
| 6 | | | Sender, Water Temperature (E2) | 14 | 185-6665 | 1 | Bolt |
| | 193-0318 | 1 | Negative Ground (B200, B201) | | | | * - Kit Also Includes Oil Pressure Sender Listed on Oil System Page. |
| | 193-0457-01 | 1 | + Isolated Ground (B380) | | | | + - Sender Included in Isolated Ground Kit Listed on Isolated Ground Page. |

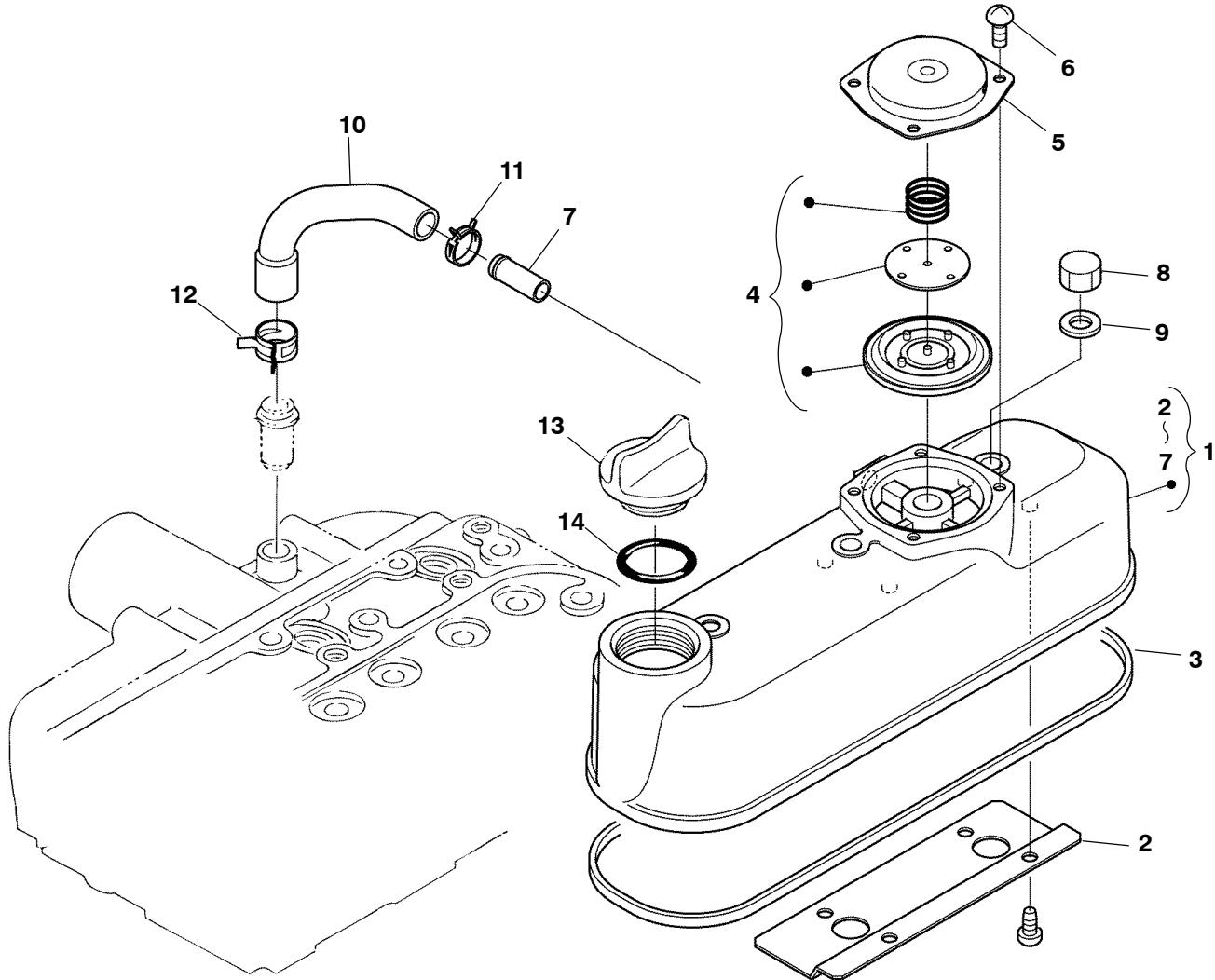
Cylinder Head Cover (Spec A)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|----------|-----------|------------------|
| 1 | | | Cover Assy, Cylinder Head (Includes Parts Marked *) | 11 | 185-2349 | 1 | O'Ring |
| | 185-6867 | 1 | MDKBL | | 185-2349 | 2 | MDKBL |
| | 185-6497 | 1 | MDKBM, MDKBN | 12 | 185-5407 | 1 | Cover, Oil Fill |
| 2 | | | *Gasket, Cylinder Head Cover | | 185-5407 | 2 | MDKBL |
| | 185-6868 | 1 | MDKBL | 13 | 185-6394 | 3 | MDKBM, MDKBN |
| | 185-6498 | 1 | MDKBM, MDKBN | | 185-6394 | 4 | Nut, Cap |
| 3 | 185-6501 | 1 | *Plate, Upper Breather Element | 14 | 185-2291 | 3 | MDKBL |
| 4 | 185-6721 | 1 | *Element, Breather | | 185-2291 | 4 | MDKBM, MDKBN |
| 5 | 185-6500 | 1 | *Plate, Lower Breather Element | 14 | | | Gasket |
| 6 | 185-6503 | 1 | *Shield, Breather Oil | | | | MDKBL |
| 7 | 185-2384 | 2 | *Screw, Washer Head | | | | MDKBM, MDKBN |
| 8 | 185-6499 | 1 | *Joint, Breather Pipe | | | | |
| 9 | 503-0976 | 2 | Clamp, Hose | | | | |
| 10 | | | Hose, Breather | | | | |
| | 503-2070 | 1 | MDKBL | | | | |
| | 503-2087 | 1 | MDKBM, MDKBN | | | | |

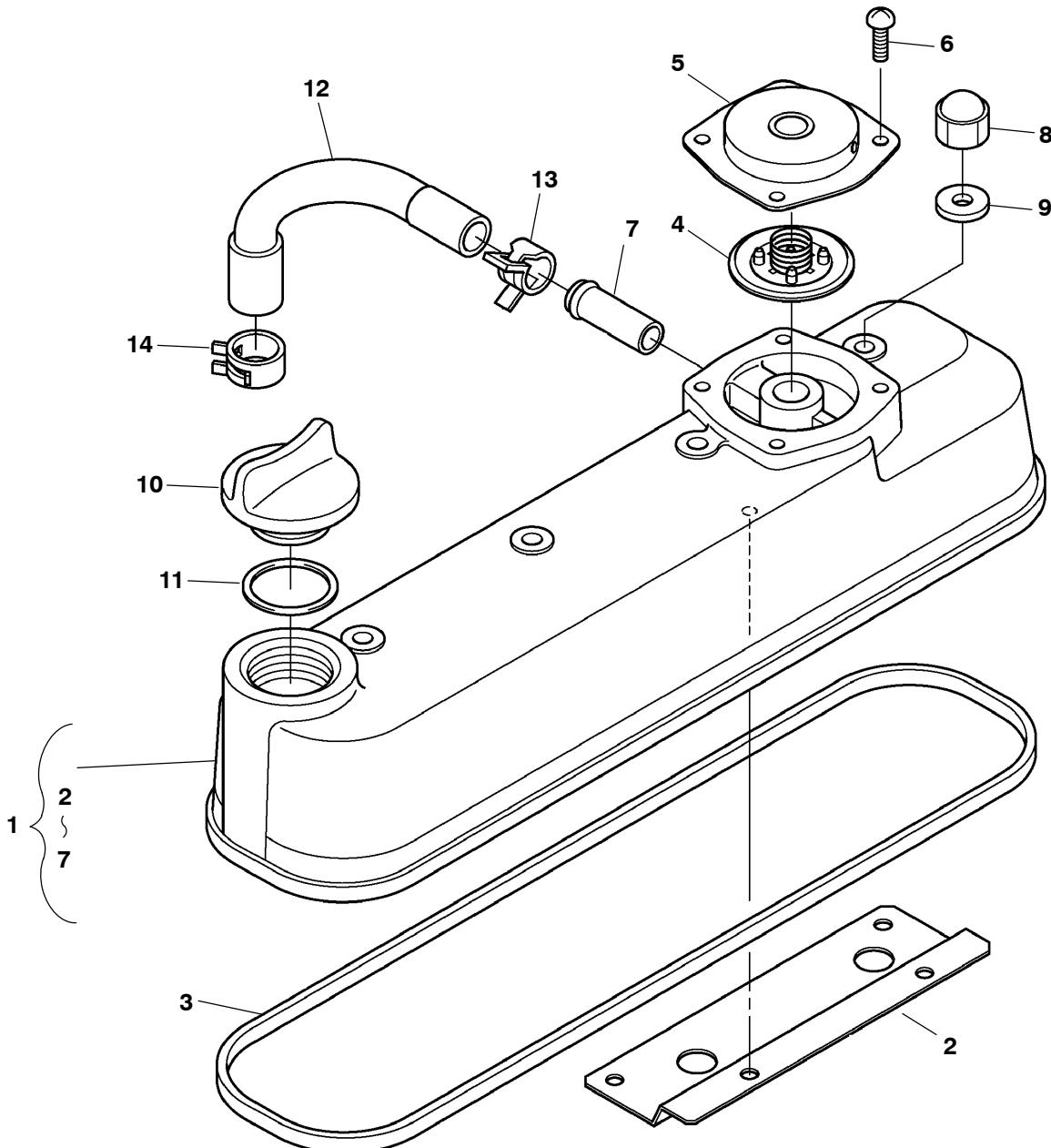
* – Parts Included in Cylinder Head Cover Assy.

**Cylinder Head Cover
MDKBL (Begin Spec B)**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|----------|----------|----------|--|---------|----------|----------|---|
| 1 | | | Cover Assy, Cylinder Head (Includes Parts Marked *) | 8 | 185-6394 | 3 | *Nut |
| 134-5384 | 1 | 1 | Begin Spec B | 9 | 185-2291 | 3 | Gasket |
| 2 | 123-2298 | 1 | Shield, Breather | 10 | 181-9220 | 1 | Tub, Breather |
| 3 | 185-6868 | 1 | *Gasket, Cylinder Head Cover | 11 | 181-9109 | 1 | Clamp, Hose |
| 4 | 181-9240 | 1 | *Comp. Valve, Breather | 12 | 181-9025 | 1 | Clamp, Hose |
| 5 | 181-9238 | 1 | *Cover, Breather | 13 | 181-9000 | 1 | Plug, Oil Filler |
| 6 | 185-2384 | 4 | *Screw, Pan Head | 14 | 185-7426 | 1 | O' Ring |
| 7 | 185-6103 | 1 | *Pipe, Water Return | | | | * – Parts Included in Cylinder Head Cover Assy. |

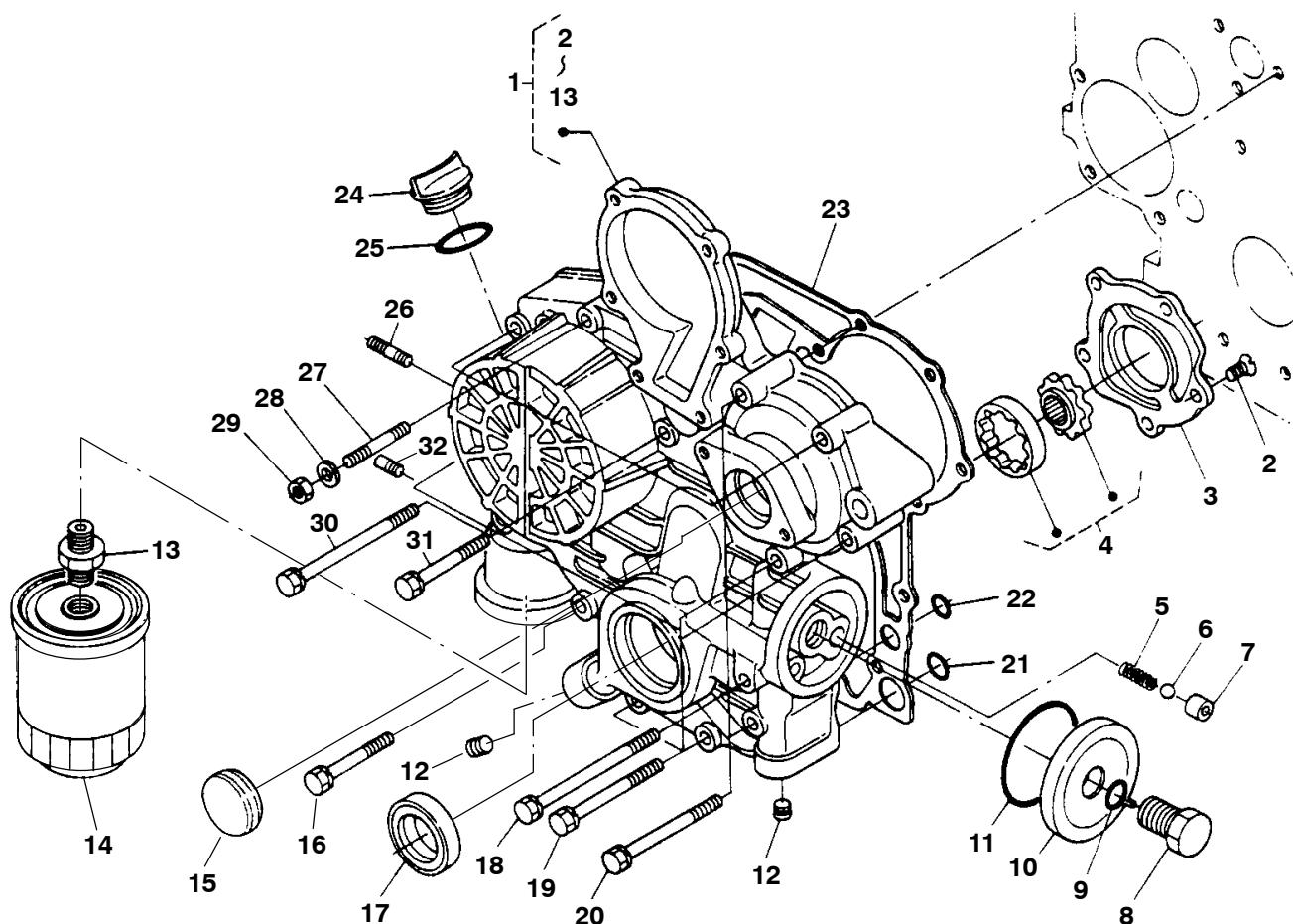
**Cylinder Head Cover
MDKBM, MDKBN (Begin Spec B)**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|----------|----------|----------|--|---------|----------|----------|------------------|
| 1 | | | Cover Assy, Cylinder Head (Includes Parts Marked *) | 11 | 185-7426 | 1 | O' Ring |
| 134-5386 | 1 | 1 | Begin Spec B | 12 | 181-9220 | 1 | Tub, Breather |
| 2 | 123-2298 | 1 | Shield, Breather | 13 | 181-9109 | 1 | Clamp, Hose |
| 3 | 185-6498 | 1 | *Gasket, Cylinder Head Cover | 14 | 181-9025 | 1 | Clamp, Hose |
| 4 | 181-9240 | 1 | *Comp. Valve, Breather | | | | |
| 5 | 181-9238 | 1 | *Cover, Breather | | | | |
| 6 | 185-2384 | 4 | *Screw, Pan Head | | | | |
| 7 | 181-9188 | 1 | *Pipe, Water Return | | | | |
| 8 | | | *Nut | | | | |
| | 185-6394 | 3 | Spec B-D | | | | |
| | 181-9079 | 3 | Begin Spec E | | | | |
| 9 | 185-2291 | 3 | Gasket | | | | |
| 10 | 181-9000 | 1 | Plug, Oil Filler | | | | |

* – Parts Included in Cylinder Head Cover Assy.

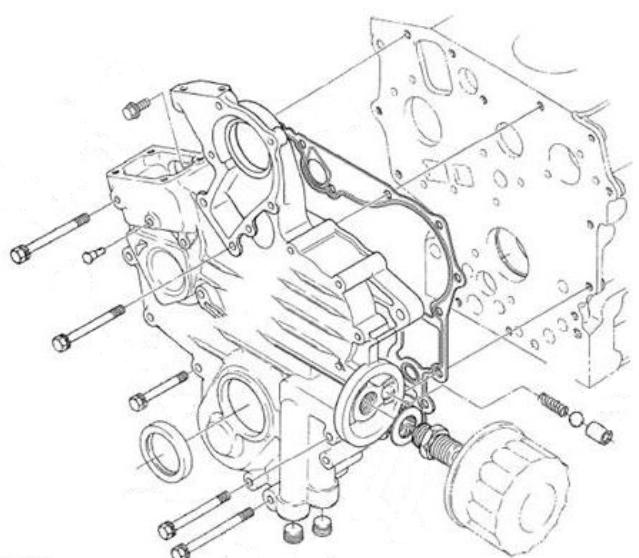
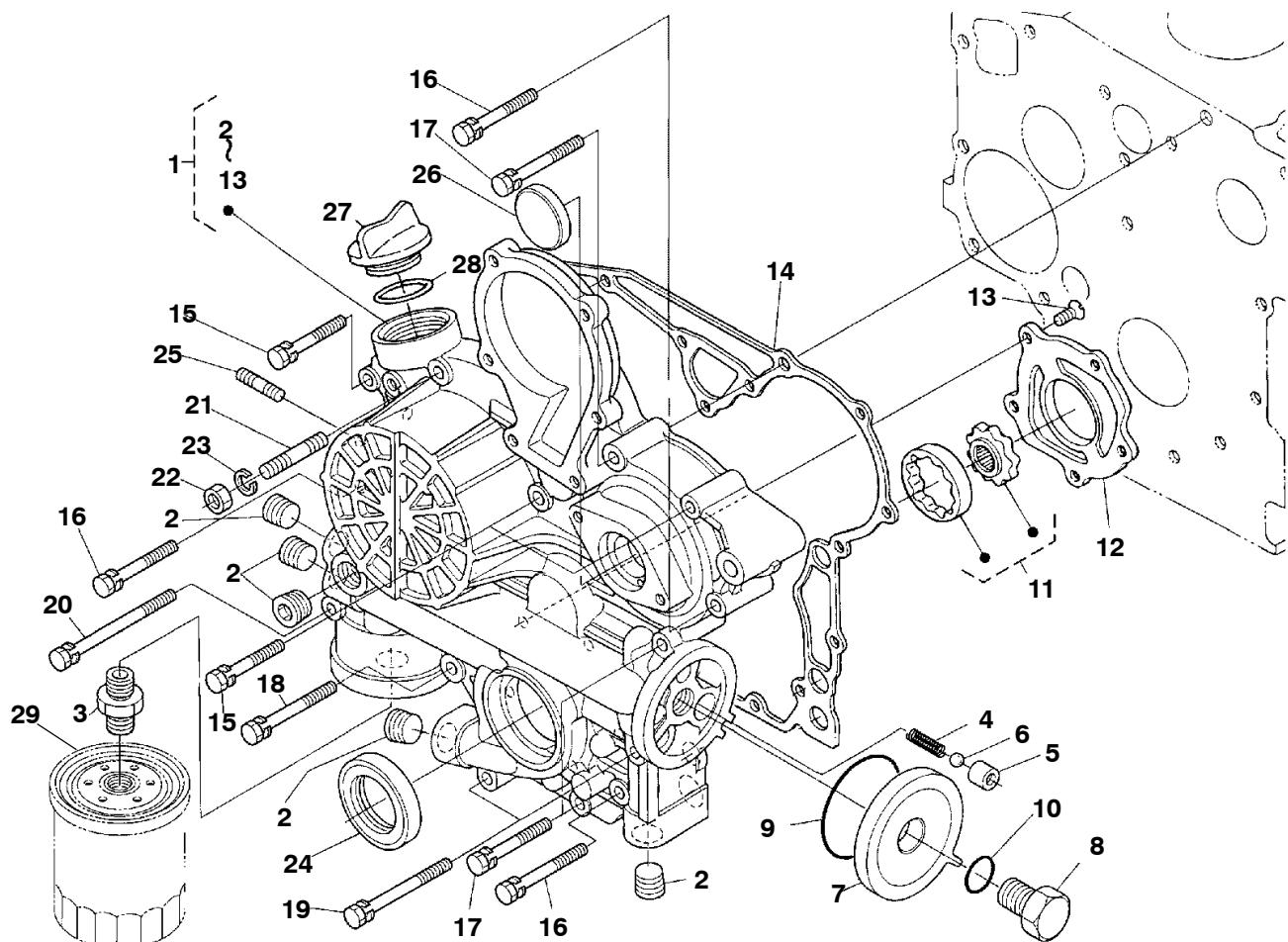
Gearcase (MDKBL, MDKBM and MDKBN Spec A-D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|---|---------|----------|-----------|------------------------------------|
| 1 | | | Gearcase Assy (Includes Parts Marked *) | 18 | 185-6491 | 2 | Bolt |
| | 185-6480 | 1 | Spec A | 19 | 185-7069 | 4 | Bolt |
| | 103-0858 | 1 | Begin Spec B MDKBL | 20 | 185-6665 | 2 | Bolt |
| | 103-0861 | 1 | Begin Spec B MDKBM, MDKBN | 21 | 185-5869 | 2 | O'Ring (Spec B) |
| | | | | 22 | 185-3080 | 2 | O'Ring (Spec B) |
| | | | | 23 | 185-6863 | 1 | Gasket, Gearcase |
| | | | | 24 | | | Cover, Oil Fill |
| 2 | 185-6487 | 5 | *Screw, Countersunk Head | | 185-5407 | 1 | Spec A-B |
| 3 | 185-6486 | 1 | *Cover, Oil Pump | | 123-2299 | | Spec C MDKBL |
| 4 | 185-6485 | 1 | *Rotor, Oil Pump | 25 | 185-2349 | 1 | O'Ring (MDKBL) |
| 5 | 185-6482 | 1 | *Spring | 26 | | | Stud |
| 6 | 185-6484 | 1 | *Ball | | 185-2359 | 1 | Spec A |
| 7 | 185-6483 | 1 | *Seat, Valve | | 185-7425 | 1 | Begin Spec B |
| 8 | 185-5742 | 1 | *Bolt | 27 | | | Stud |
| 9 | 185-5869 | 1 | *O'Ring | | 185-6493 | 2 | Spec A |
| 10 | 185-5741 | 1 | *Cover | | 185-7423 | 2 | Begin Spec B |
| 11 | 185-5743 | 1 | *O'Ring | 28 | 185-6759 | 1 | Washer, Spring |
| 12 | 185-6481 | 5 | *Plug | 29 | 185-4255 | 1 | Nut |
| 13 | 185-2124 | 1 | *Fitting, Connector | 30 | 185-6492 | 1 | Bolt |
| 14 | 185-5835 | 1 | Filter, Oil | 31 | 185-5833 | 3 | Bolt |
| 15 | 185-7216 | 1 | Plug | 32 | 505-2252 | 1 | Plug (MDKBM, MDKBN) |
| 16 | 185-6490 | 1 | Bolt | | | | |
| 17 | | | Seal, Oil | | | | |
| | 185-6864 | 1 | MDKBL | | | | |
| | 185-6494 | 1 | MDKBM, MDKBN | | | | |
| | | | | | * | | – Parts Included in Gearcase Assy. |

* – Parts Included in Gearcase Assy.

Gearcase (MDKBL, MDKBM and MDKBN Begin Spec E)



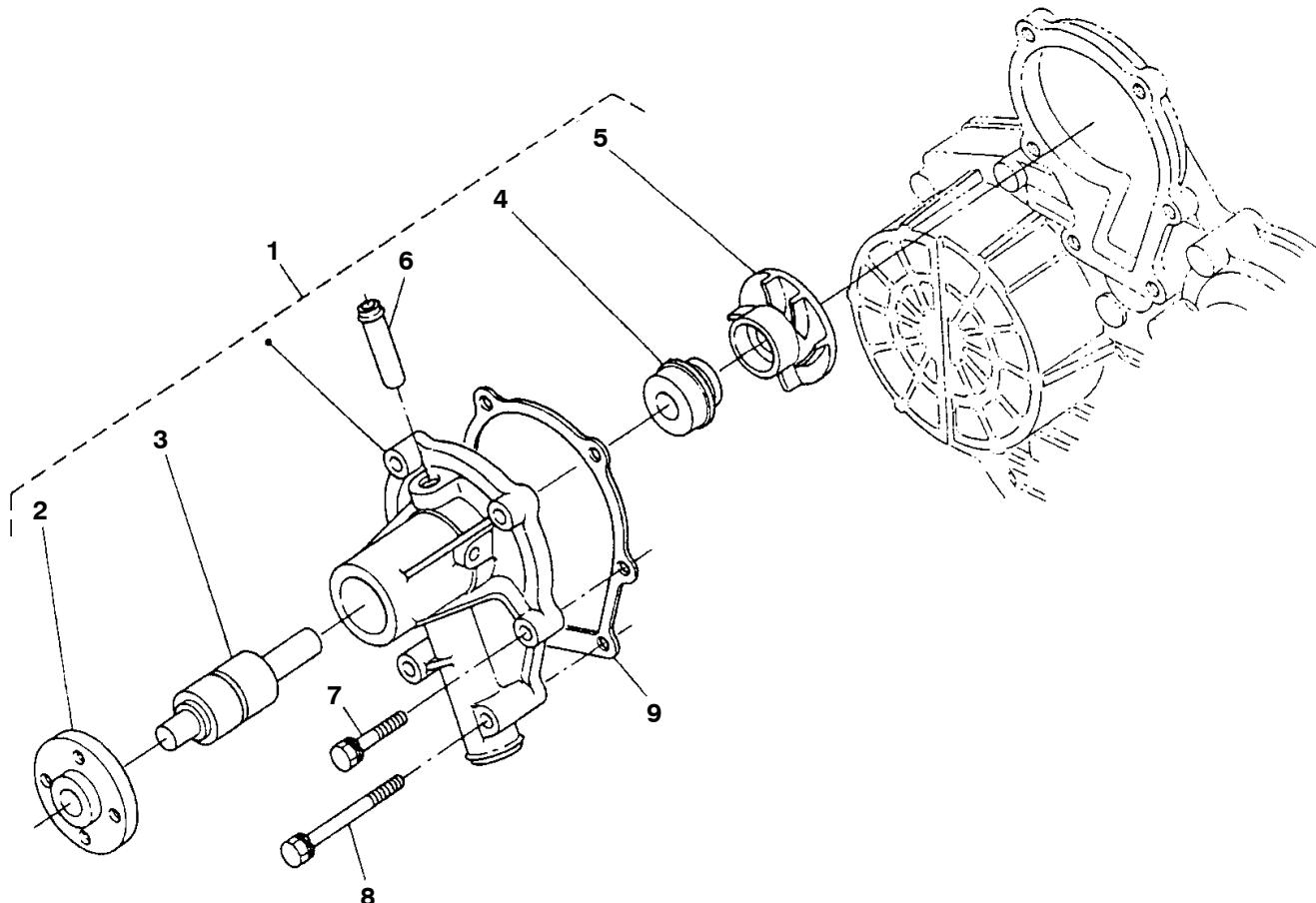
NEW Gearcase

OLD Gearcase

Gearcase (MDKBL, MDKBM and MDKBN Begin Spec E)

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|--------------------------------------|-------------|--------------|---------------------|
| 1 | 103-0861 | 1 | Gearcase Assy (Includes Parts Marked *) | 16 | 185-7069 | 4 | Bolt |
| 2 | 185-6481 | 4 | *Plug | 17 | 185-6489 | 2 | Bolt |
| 3 | 185-2124 | 1 | *Joint, Pipe | 18 | 184-0038 | 1 | Bolt |
| 4 | 185-6482 | 1 | *Spring | 19 | 185-6491 | 2 | Bolt |
| 5 | 185-6483 | 1 | *Seat, Valve | 20 | 185-6492 | 1 | Bolt |
| 6 | 185-6484 | 1 | *Ball | 21 | 185-7423 | 1 | Stud |
| 7 | 185-5741 | 1 | *Cover | 22 | 181-9013 | 1 | Nut |
| 8 | 185-5742 | 1 | *Bolt | 23 | 185-6759 | 1 | Washer, Spring |
| 9 | 181-9021 | 1 | *O'Ring | 24 | 185-6864 | 1 | Seal, Oil |
| 10 | 181-9019 | 1 | *O'Ring | 25 | 185-7425 | 2 | Stud |
| 11 | 185-6485 | 1 | *Assy Rotor, Oil Pump | 26 | 185-7216 | 1 | Cover, Gear Case |
| 12 | 185-6486 | 1 | *Cover, Oil Pump | 27 | 181-9000 | 1 | Cover, Oil Fill |
| 13 | 185-6487 | 5 | *Screw, Counter Sunk Head | 28 | 185-7426 | 1 | O'Ring |
| 14 | 185-6863 | 1 | Gasket, Gear Case | 29 | 185-5835 | 1 | Filter, Oil |
| 15 | 185-5833 | 3 | Bolt | * – Parts Included in Gearcase Assy. | | | |

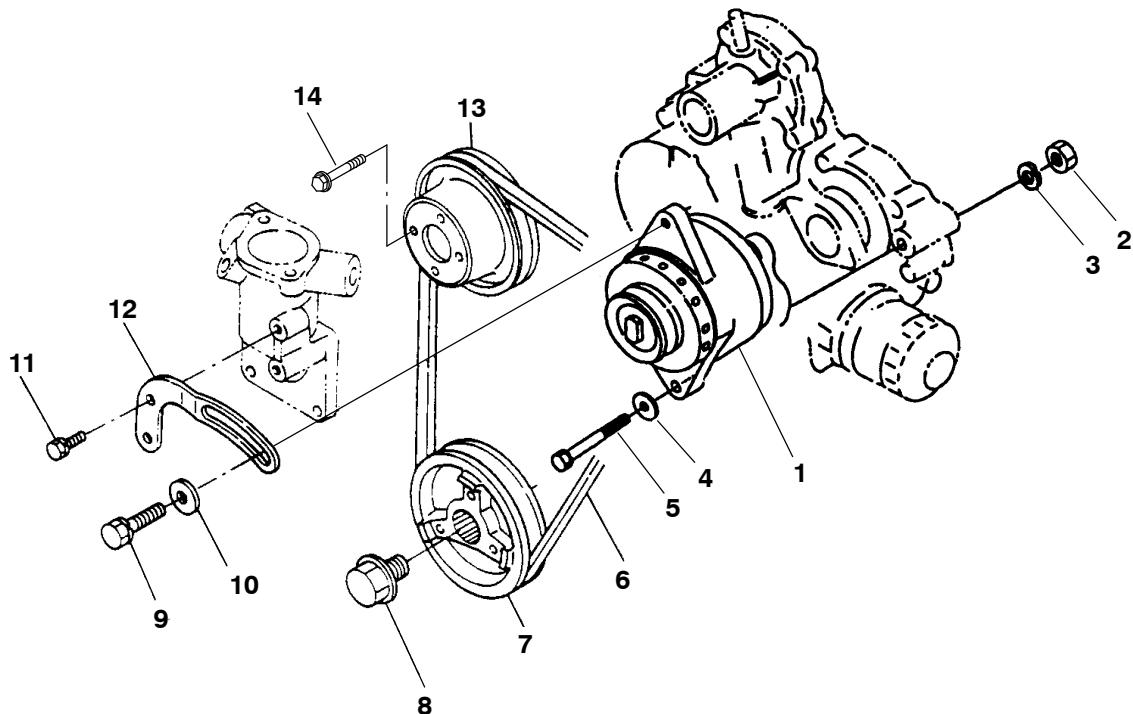
Captive Water Pump Components



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|----------|-----------|--------------------------------------|
| 1 | | | Pump Assy, Water (Includes Parts Marked *) | 5 | 185-6674 | 1 | *Impeller, Captive Water Pump Spec A |
| | 185-6671 | 1 | Spec A | | 181-9115 | 1 | Begin Spec B |
| | 181-9108 | 1 | Begin Spec B | 6 | 185-5716 | 1 | *Pipe, Water Return |
| 2 | 185-6672 | 1 | *Flange, Pump Water | 7 | 185-6677 | 4 | Bolt |
| 3 | | | *Bearing | 8 | | | Bolt |
| | 185-6673 | 1 | Spec A | | 185-5745 | 2 | Spec A |
| | 181-9116 | 1 | Begin Spec B | | 181-9007 | 2 | Begin Spec B |
| 4 | | | *Seal Assy, Mechanical | 9 | 185-7299 | 1 | Gasket, Water Pump |
| | 185-5714 | 1 | Spec A | | | | |
| | 181-9233 | 1 | Begin Spec B | | | | |

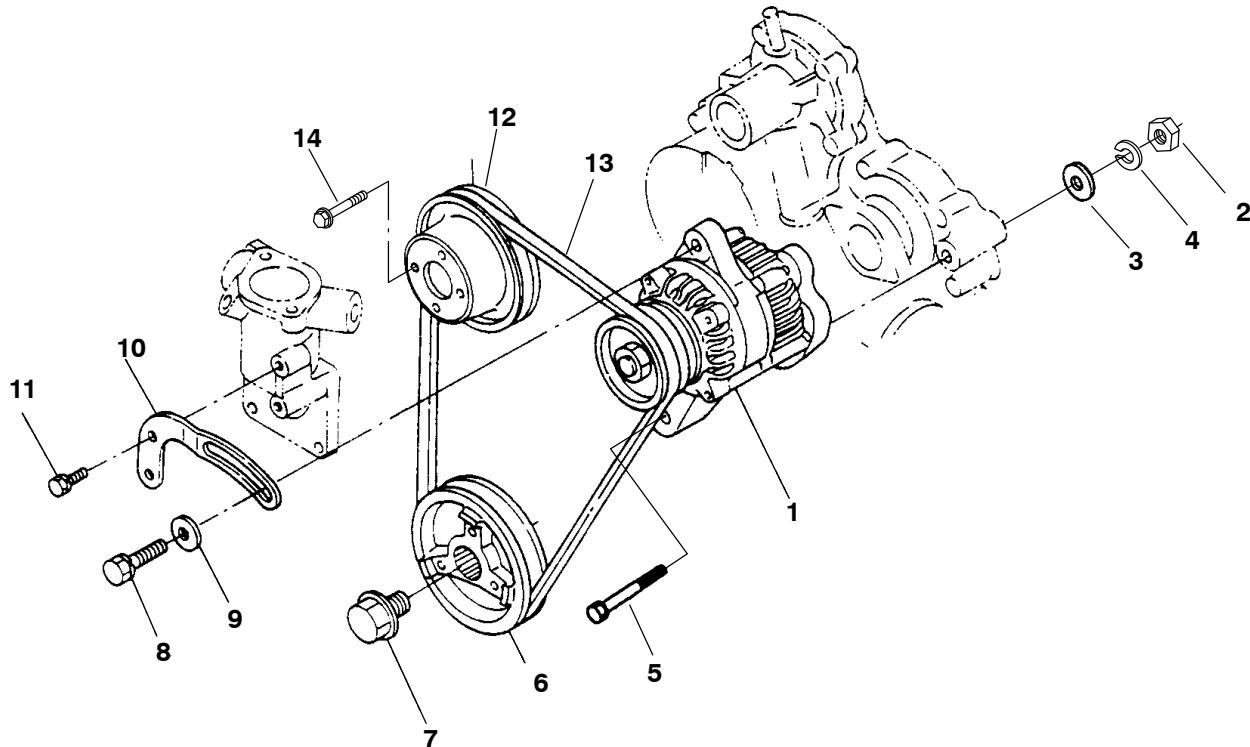
* – Parts Included in Water Pump Assy.

**Alternator
(12V)**



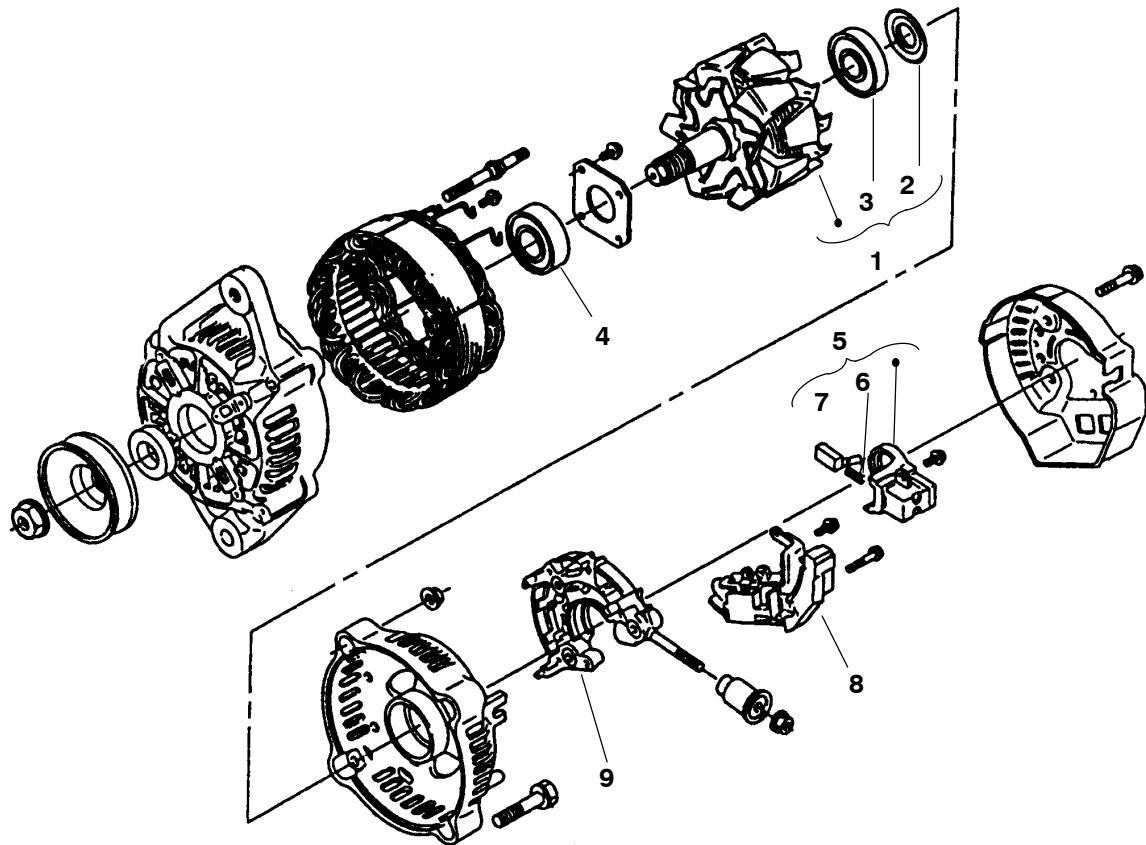
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---------------------|
| 1 | 185-7269 | 1 | Alternator (12V) (No Components Available) | 8 | 185-6633 | 1 | Bolt |
| 2 | 185-5445 | 1 | Nut | 9 | 185-2564 | 1 | Bolt |
| 3 | 185-6785 | 1 | Washer, Spring | 10 | 185-6786 | 2 | Washer, Plain |
| 4 | 185-7272 | 1 | Washer, Plain | 11 | 185-2388 | 1 | Bolt |
| 5 | 185-7271 | 1 | Bolt | 12 | 185-7270 | 1 | Stay, Alternator |
| 6 | 185-6934 | 1 | Belt, Fan (37.5") | 13 | 185-6631 | 1 | Pulley, Fan |
| 7 | | | Pulley, Fan Drive | 14 | 185-2572 | 4 | Bolt |
| | 185-6933 | 1 | MDKBL | | | | |
| | 185-7273 | 1 | MDKBM, MDKBN | | | | |

**Alternator
(24V)**



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---------------------|
| 1 | 185-7225 | 1 | Alternator (24V)(See Separate Page for Components) | 7 | 185-6633 | 1 | Bolt |
| 2 | 185-5445 | 1 | Nut | 8 | 185-2564 | 1 | Bolt |
| 3 | 185-6630 | 1 | Washer, Plain | 9 | 185-6786 | 1 | Washer, Plain |
| 4 | 185-6785 | 1 | Washer, Spring | 10 | 185-7226 | 1 | Stay, Alternator |
| 5 | 185-7227 | 1 | Bolt | 11 | 185-2388 | 1 | Bolt |
| 6 | 185-6933 | 1 | Pulley, Fan Drive | 12 | 185-6631 | 1 | Pulley, Fan |
| | 185-7273 | 1 | MDKBL | 13 | 185-6934 | 1 | Belt, Fan (37.5") |
| | | | MDKBM, MDKBN | 14 | 185-2572 | 4 | Bolt |

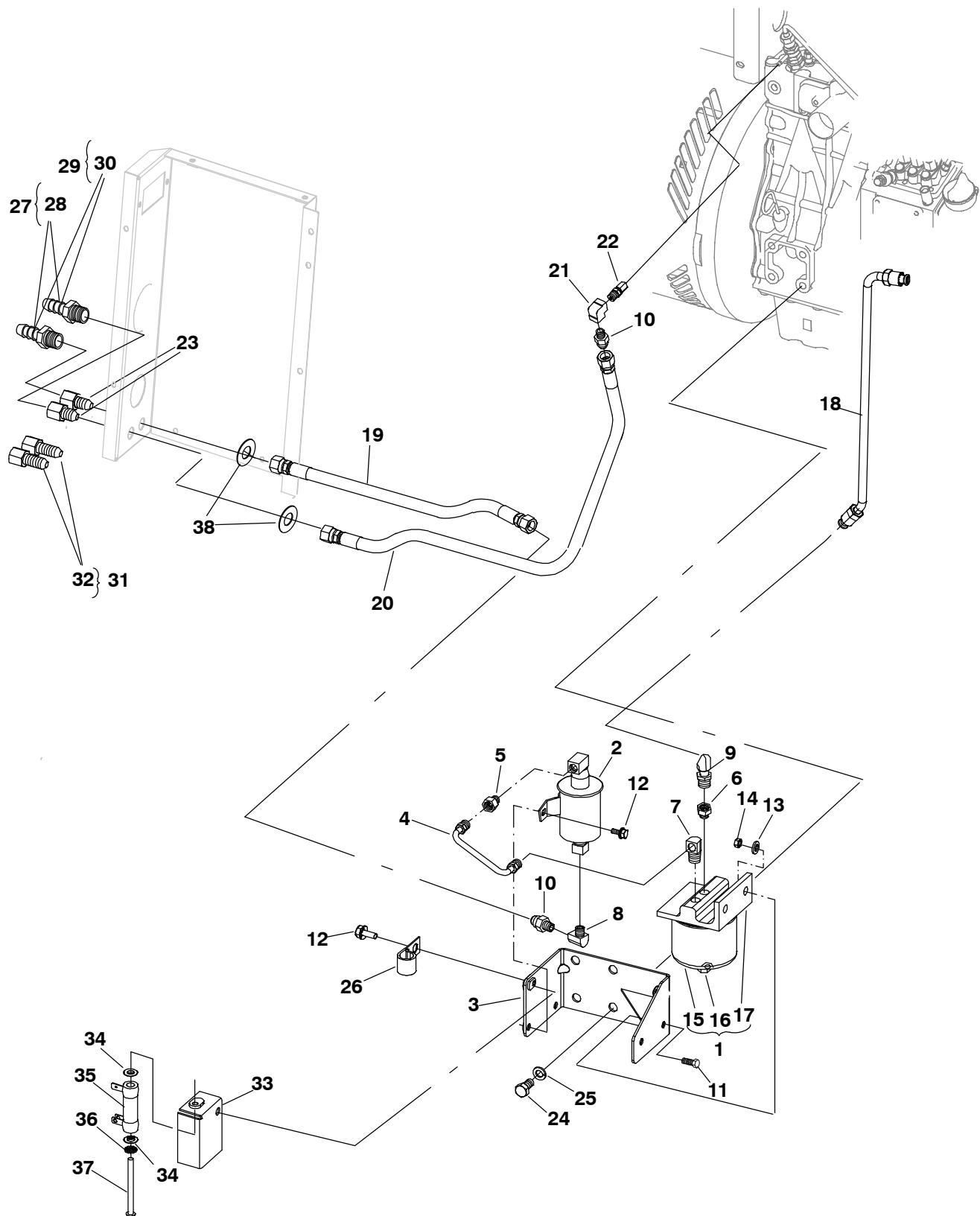
Alternator Components (24V)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---------------------|
| 1 | 185-7225 | 1 | Alternator | 6 | 185-5784 | 2 | Spring, Brush |
| | 185-7228 | 1 | Rotor (Includes Cover and Bearing) | 7 | 185-5783 | 2 | Brush |
| 2 | 185-5771 | 1 | Cover, Bearing | 8 | 185-6820 | 1 | Regulator |
| 3 | 185-7229 | 1 | Bearing, Ball | 9 | 185-6816 | 1 | Rectifier Assy |
| 4 | 185-5777 | 1 | Bearing, Ball | | | | |
| 5 | 185-5782 | 1 | Holder, Brush (Includes Brush and Spring) | | | | |

Note: Parts not Identified are Not For Sale.

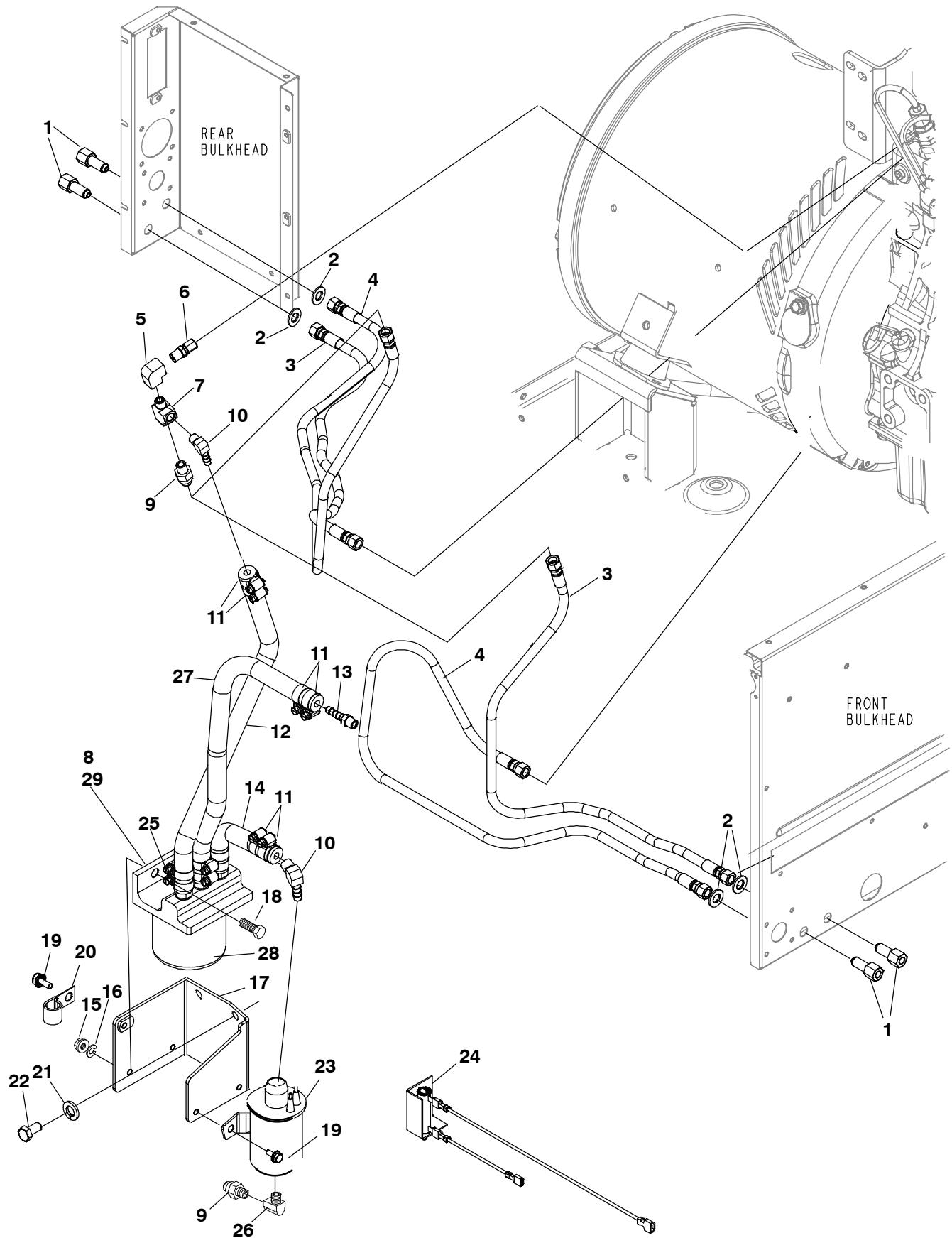
**Fuel Pump
(Spec A-B)**



**Fuel Pump
(Spec A-B)**

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|--|
| 1 | 149-2100 | 1 | All parts Marked *) *Filter, Base (Includes Element, Plug, and Base) | 21 | 502-0055 | 1 | Elbow, Pipe |
| 2 | 149-2331-01 | 1 | *Pump, Fuel (E5) | 22 | 502-1245 | 1 | Adapter, Pipe |
| 3 | 149-2618-04 | 1 | *Bracket, Mounting | 23 | 505-1489 | 2 | Connector, Female Bulkhead |
| 4 | 149-2601 | 1 | *Line, Fuel (.25") | 24 | 800-3030 | 3 | Screw, Hex Head Cap (M10 x 1.25 x 20mm) |
| 5 | 502-0003 | 1 | *Connector, Inverted Male | 25 | 850-0114-55 | 3 | Washer, Lock (M10) |
| 6 | 502-0029 | 1 | *Bushing, Pipe | 26 | 518-0515 | 1 | Clip, Hose |
| 7 | 502-0041 | 1 | *Elbow, Male | 27 | 149-2655 | 1 | Kit, Fuel Adapter (Includes Barbed Hose Connector) |
| 8 | 502-0020-01 | 1 | *Elbow, Pipe | 28 | 502-1162 | 2 | Connector, Barbed Hose (1/4-18 x 3/8") |
| 9 | 502-0065 | 1 | *Elbow, Inverted Male | 29 | 149-2654 | 1 | Kit, Fuel Adapter (Includes Barbed Hose Connector) |
| 10 | 505-1490 | 2 | *Connector, Male | 30 | 502-1218 | 2 | Connector, Barbed Hose (1/4-18 x 5/16") |
| 11 | 800-3017-19 | 2 | *Screw, Hex Head Cap (M8 x 1.25 x 20mm) | 31 | 149-2612 | 1 | Kit, Adapter Fitting (Includes Metric Adapters) |
| 12 | 821-6002-02 | 2 | *Screw, Hex Head Sems (M6 x 1 x 12mm) | 32 | 505-1485 | 2 | Adapter, Metric NPT |
| 13 | 850-0114-54 | 2 | *Washer, Lock (M8) | 33 | 304-0831-03 | 1 | Bracket, Resistor (24V) |
| 14 | 862-0026-55 | 2 | *Nut, Hex (M8) | 34 | 304-0796 | 2 | Washer, Centering (24V) |
| 15 | 149-2106 | 1 | Element | 35 | 304-0797 | 1 | Resistor (24V) |
| 16 | 502-0028 | 1 | Plug, Drain | 36 | 856-0003 | 1 | Washer, EIT (#10)(24V) |
| 17 | 149-2635 | 1 | Base, Aluminum | 37 | 813-0112 | 1 | Screw, Round Head Machine (#10-32 x 2.5")(24V) |
| 18 | | | Line, Fuel Assy | 38 | 526-0406 | 2 | Washer, Flat (M14) |
| | 501-0709 | 1 | MDKBL | | | | |
| | 501-0710 | 1 | MDKBM, MDKBN | | | | |
| 19 | 501-0672-01 | 1 | Line, Fuel (28.5") | | | | |
| 20 | 501-0672-04 | 1 | Line, Fuel (38.5") | | | | |

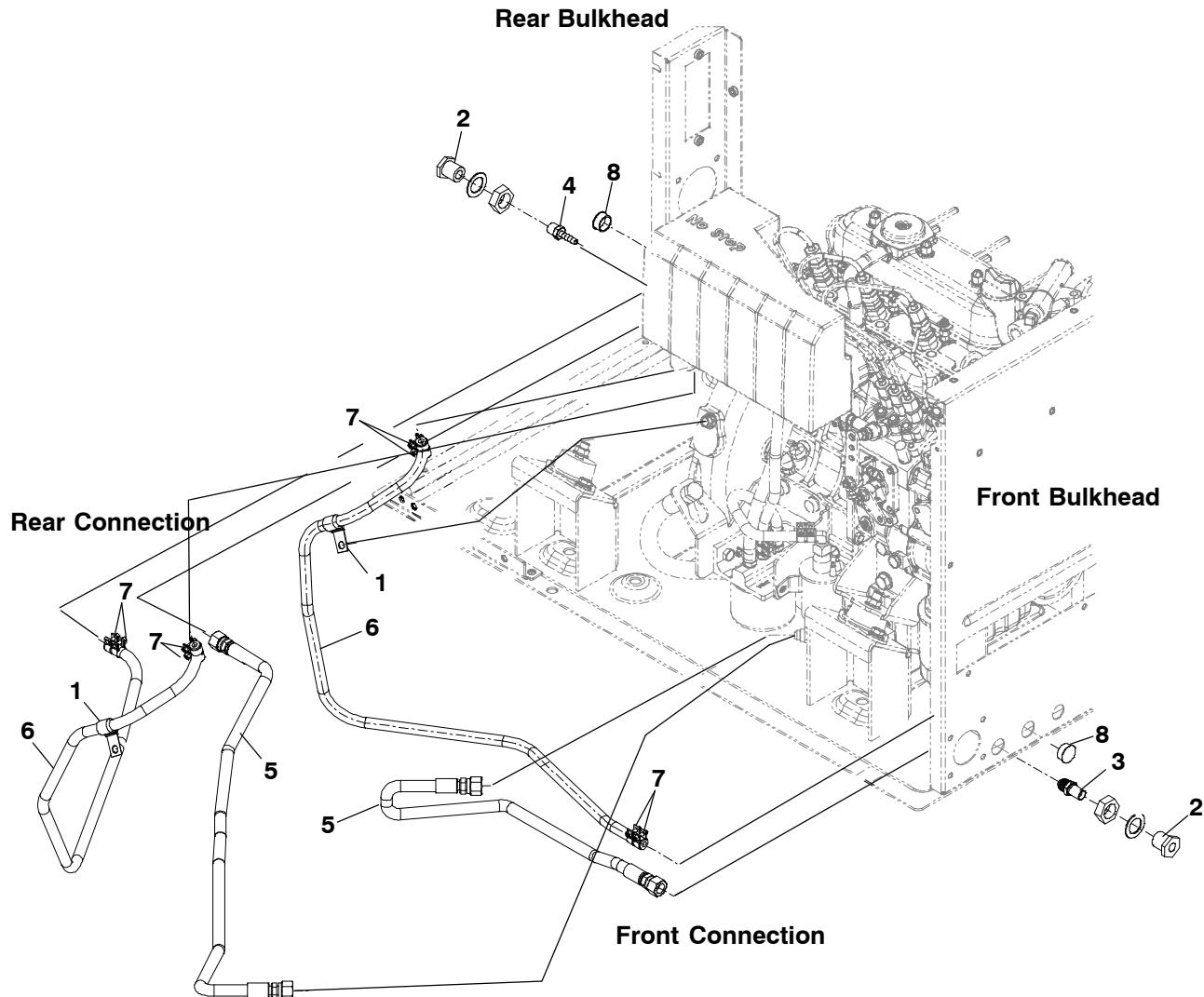
**Fuel Pump, Fuel Transfer
(Spec C)**



**Fuel Pump, Fuel Transfer
(Spec C)**

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|----------------------|-------------|--------------|--|------------|-------------|--------------|---|
| Fuel Transfer | | | | | | | |
| | 541-0853 | 1 | Kit, Label, Bulkhead | 15 | 862-0026-55 | 2 | Nut, Hex (M8) |
| 1 | 505-1489 | 2 | Connector, Bulkhead | 16 | 850-0114-54 | 2 | Washer, Lock (M8) |
| 2 | 526-0406 | 2 | Washer, Flat (M14) | 17 | 149-2761-03 | 1 | Bracket, Fuel Pump |
| 3 | 503-2588-04 | 1 | Hose, Fuel (Front or Rear) | 18 | 800-3017-19 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) |
| 4 | 503-2588-03 | 1 | Hose, Fuel (Front or Rear) | 19 | 821-6002-02 | 5 | Screw, Hex Head Sems (M6 x 12mm) |
| 5 | 502-0055 | 1 | Elbow, Pipe | 20 | 518-0515 | 1 | Clip |
| 6 | 502-1245 | 1 | Adapter, Pipe | 21 | 850-0114-55 | 3 | Washer, Lock (M10) |
| 7 | 502-1368 | 1 | Tee, Street | 22 | 800-3030 | 3 | Screw, Hex Head Sems (M10 x 1.25 x 20mm) |
| Fuel Pump | | | | | | | |
| 8 | 149-2634-01 | 1 | Assy Filter, Fuel (Includes Parts Marked *) | 23 | 149-2646 | 1 | Pump, Fuel |
| 9 | 505-1490 | 2 | Connector, Male | 24 | 304-0832 | 1 | Resistor, (24V) |
| 10 | 502-1353-02 | 1 | Elbow, 90° Street | 25 | 502-1367-02 | 3 | Connector, Hose (1 per Filter Opening) |
| 11 | 503-2309 | 12 | Clamp, Hose | 26 | 502-0020-01 | 1 | Elbow, Street |
| 12 | 503-2200-07 | 1 | Hose, Fuel | 27 | 503-2200-08 | 1 | Hose, Fuel |
| 13 | 502-1367-01 | 1 | Connector, Hose | 28 | A026K278 | 1 | *Soperator, Fuel Filter |
| 14 | 503-2200-09 | 1 | Hose, Fuel | 29 | 149-2635 | 1 | *Base, Filter |

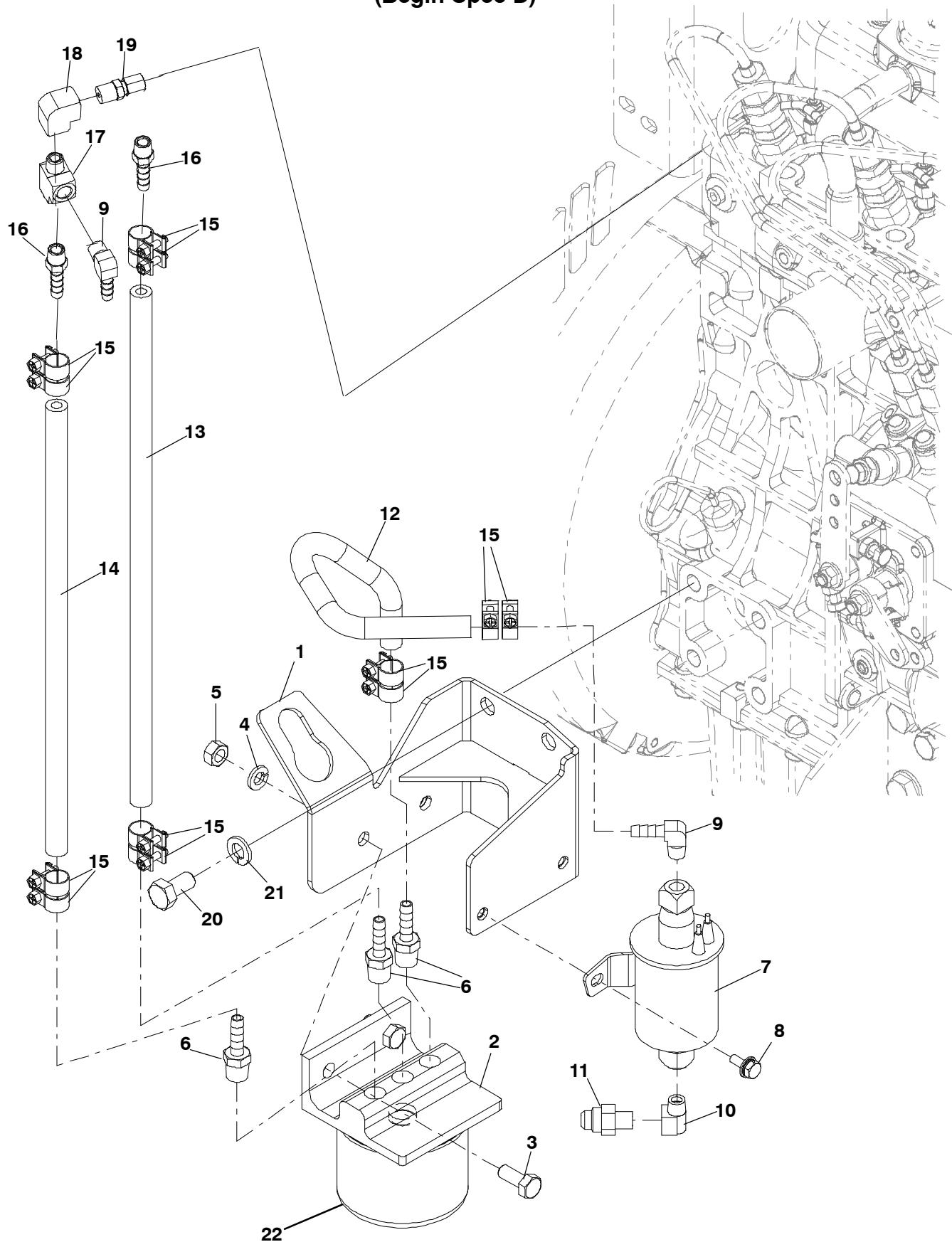
Fuel Transfer (Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|------------------|---------|-------------|-----------|------------------------------------|
| 1 | 518-0515 | 1 | Clamp, Hose | 6 | 503-2935-02 | 1 | Hose, Fuel |
| 2 | 502-1133 | 2 | Coupling, Hose | 7 | 503-2808 | 4 | Clamp, Hose |
| 3 | 502-1615 | 1 | Coupling, Hose | 8 | 517-0136-01 | 2 | Plug, Hose (Front and Rear Housed) |
| 4 | 502-1367-02 | 1 | Connector, Hose | | | | |
| 5 | 503-2588-03 | 1 | Hose, Fuel | | | | |

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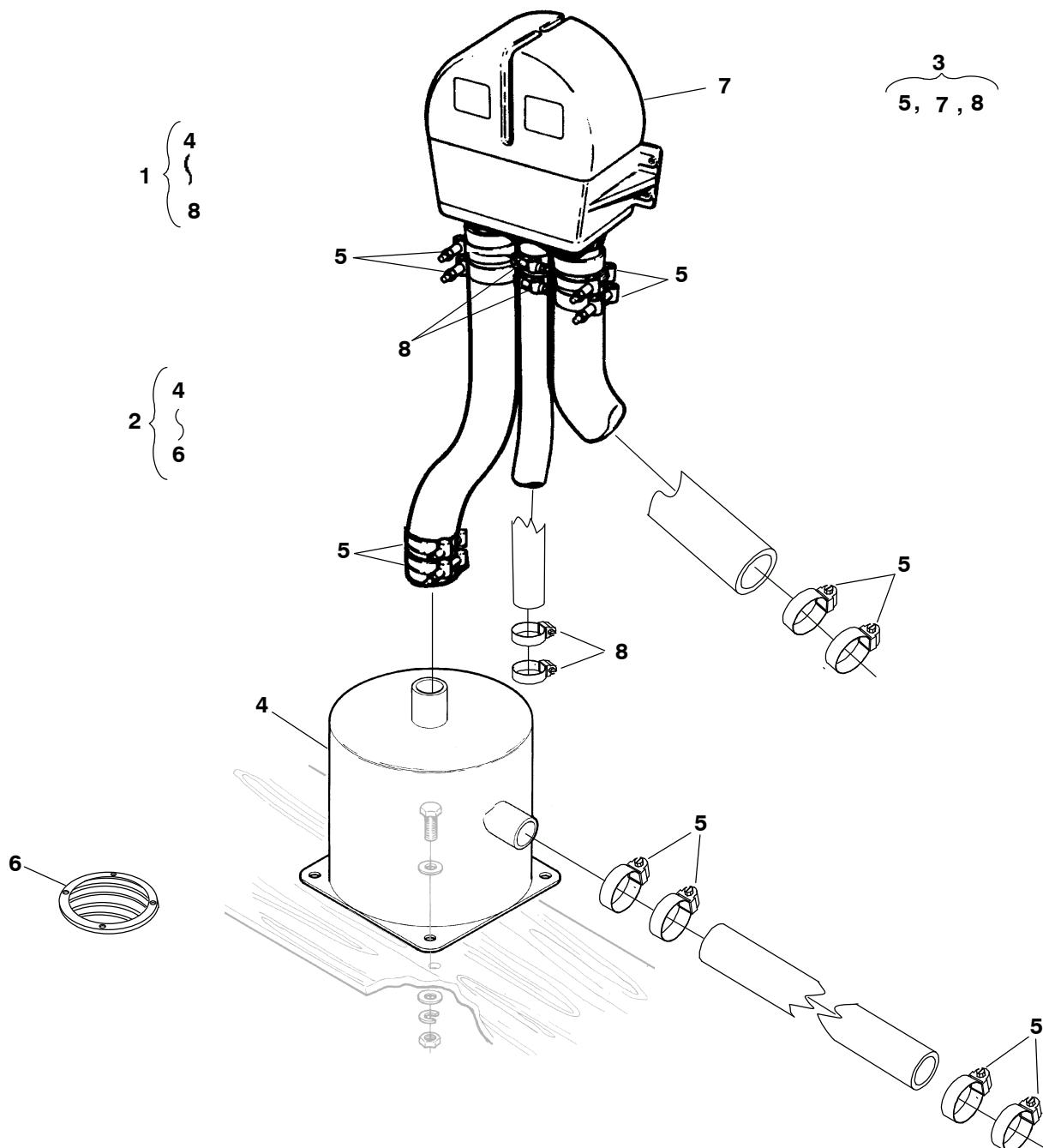
**Fuel Pump
(Begin Spec D)**



**Fuel Pump
(Begin Spec D)**

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|--|
| 1 | 149-2830-03 | 1 | Bracket, Fuel Pump | 11 | 505-1490 | 1 | Connector, Male |
| 2 | 149-2634-01 | 1 | Filter, Full | 12 | 503-2883-01 | 1 | Hose, Fuel |
| 3 | 800-3017-19 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) | 13 | 503-2883-08 | 1 | Hose, Fuel |
| 4 | 850-0114-54 | 2 | Washer, Split Locking (M8) | 14 | 503-2883-07 | 1 | Hose, Fuel |
| 5 | 862-0026-55 | 2 | Nut, Hex (M8 x 1.25) | 15 | 503-2808 | 12 | Clamp, Hose |
| 6 | 502-1367-02 | 3 | Connector, Hose (1/4 NPT x 1/4 Hose) | 16 | 502-1367-01 | 2 | Connector, Hose (1/8 NPT x 1/4 Hose) |
| 7 | | | Pump, Fuel | 17 | 502-1368 | 1 | Tee, Street (1/8 NPT) |
| | 149-2646 | 1 | 12V | 18 | 502-0055 | 1 | Elbow, Pipe |
| | 149-2795 | 1 | 24V | 19 | 502-1245 | 1 | Adapter, Pipe |
| 8 | 821-6002-02 | 2 | Screw, Hex Head Sems (M6 x 1.0 x 12mm) | 20 | 800-3030 | 1 | Screw, Hex Head Cap (M10 x 1.25 x 20mm) |
| 9 | 502-1353-02 | 2 | Elbow, 90° Pipe | 21 | 850-0114-55 | 3 | Washer, Split Locking (M10) |
| 10 | 502-0020-01 | 1 | Elbow, Pipe | 22 | A026K278 | 1 | Filer, Fuel (Spin on type) |

Water Separator/Muffler



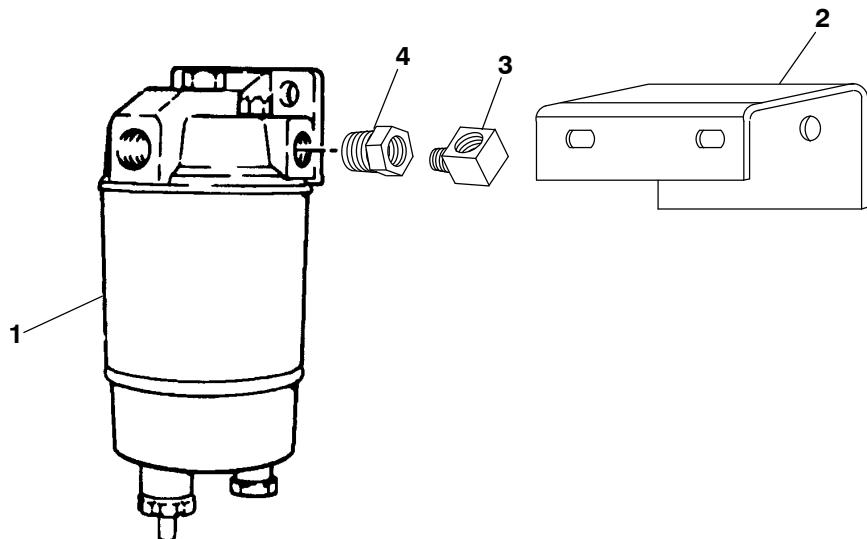
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|--|
| 1 | 155-3217 | 1 | Kit, Muffler/Separator (Includes Parts Marked *) | 6 | 155-1002 | 1 | *+Strainer, Slotted |
| 2 | 155-2030 | 1 | Kit, Muffler Marine (Includes Parts Marked +) | 7 | 155-3218 | 1 | *#Separator, Water (2") |
| 3 | 155-3216 | 1 | Kit, Water Separator (Includes Parts Marked #) | 8 | 503-1139 | 4 | *#Clamp, Hose (1-1/2") |
| 4 | 155-2029 | 1 | *+Muffler, Marine | | | | * - Parts Included in Muffler/Separator Kit. |
| 5 | | | Clamp, Hose (2") | | | | + - Parts Included in Muffler Kit. |
| | 503-1142 | 8 | + Muffler Kit | | | | # - Parts Included in Water Separator Kit. |
| | 503-1142 | 4 | # Separator Kit | | | | |
| | 503-1142 | 10 | * Muffler/Separator Kit | | | | |

* - Parts Included in Muffler/Separator Kit.

+ - Parts Included in Muffler Kit.

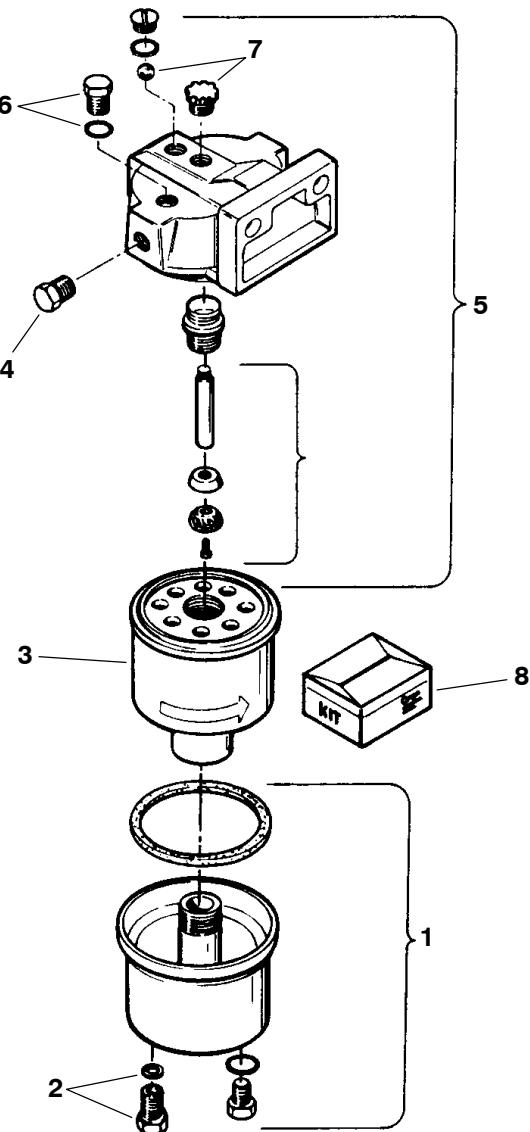
- Parts Included in Water Separator Kit.

Remote Water Separator



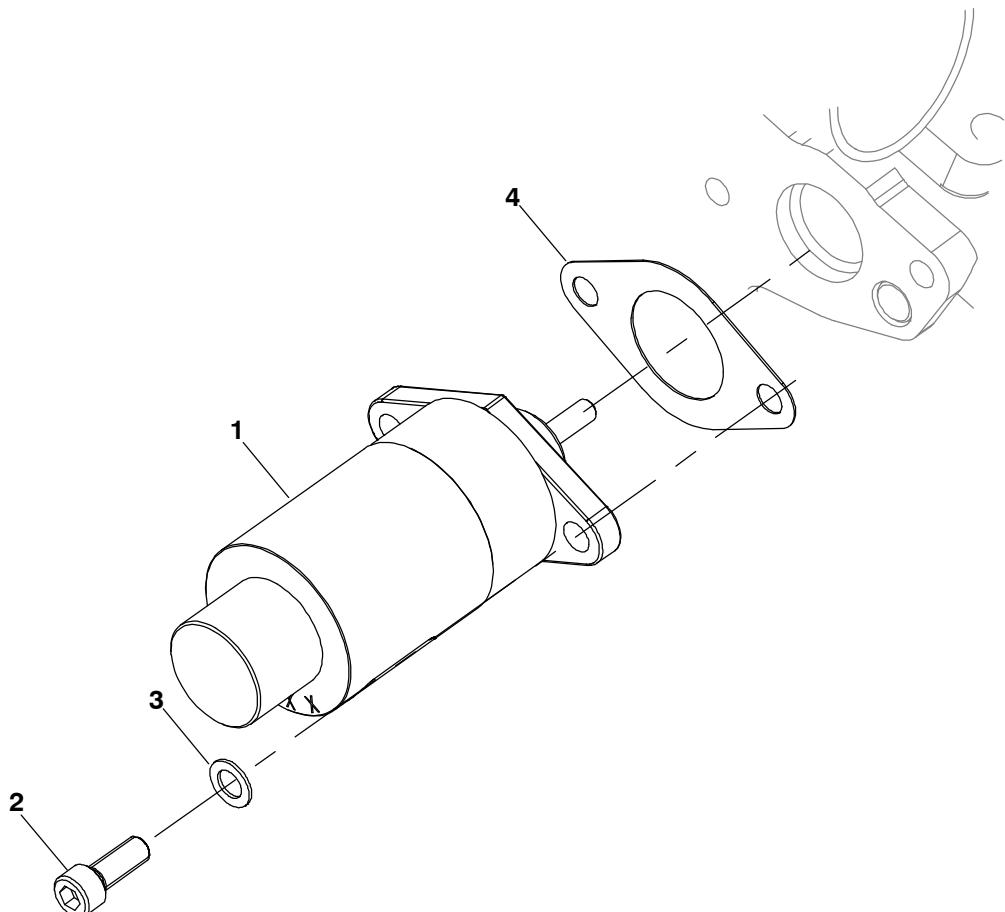
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|-----------------------------|
| | 149-2073 | 1 | Kit, Remote Fuel/Water Separator | 2 | 149-2041-03 | 1 | Bracket, Separator Mounting |
| 1 | 149-1908-05 | 1 | Separator, Fuel/Water (See Separate Page for Components) | 3 | 502-0020 | 1 | Elbow, Street 90° |
| | | | | 4 | 502-0029 | 2 | Bushing, Pipe |

Remote Water Separator Components



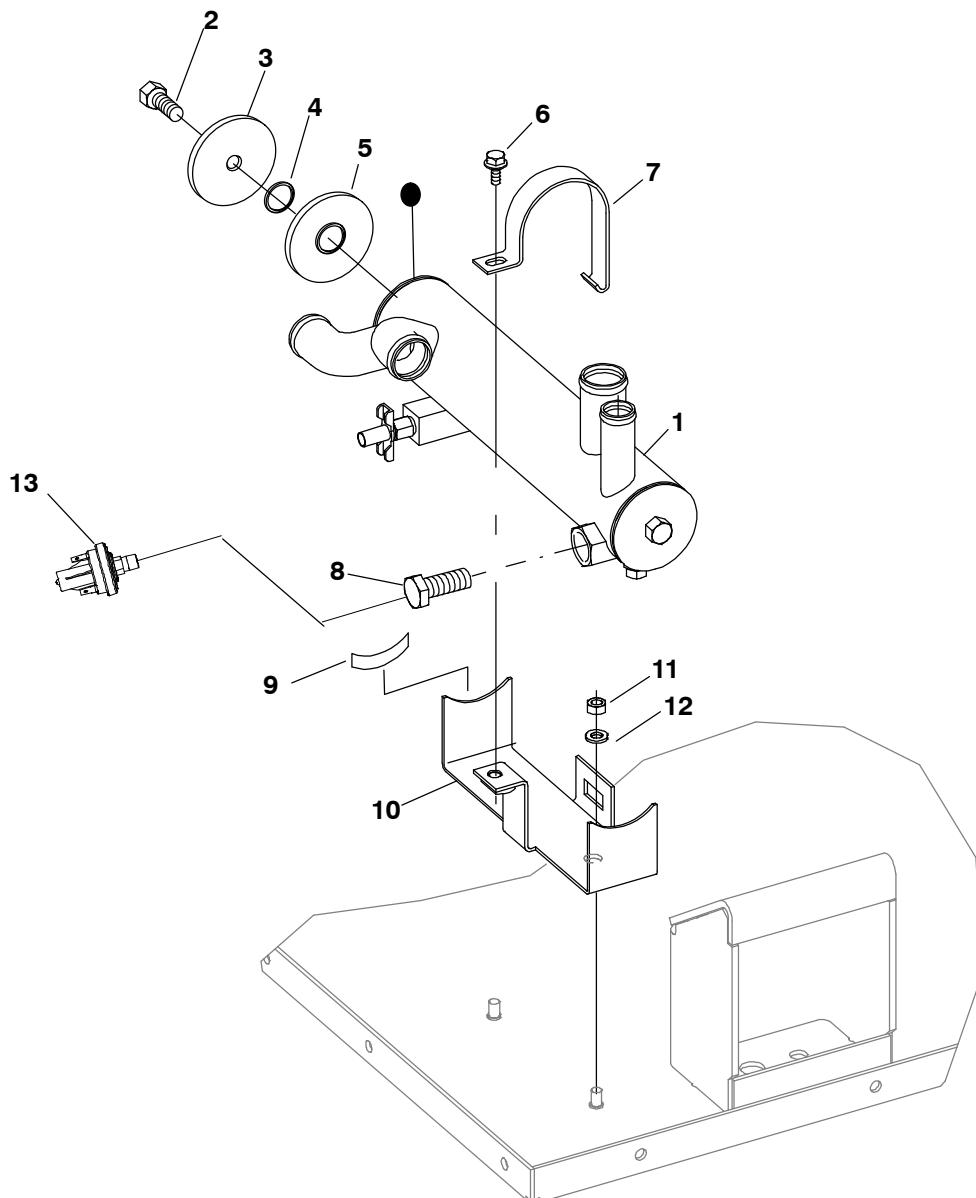
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|--|
| 1 | 149-1908-05 | 1 | Separator, Water | 6 | 149-1952 | 1 | Plug, Vent (Includes O'Ring) |
| | 149-2046 | 1 | Kit, Metal Bowl Replacement (Includes Plug, O'Rings and Drain Assy) | 7 | 149-2047 | 1 | Assy, Pump (Includes Plunger, Retainer, Shaft, Check Ball, Knob and Screw) |
| 2 | 149-1953 | 1 | Assy, Drain (Includes Knob and Seal) | 8 | 149-2045 | 1 | Kit O'Ring (Includes Seal and Plunger) |
| 3 | 149-1914-01 | 1 | Element (Includes Seals) | | | | |
| 4 | 502-0153 | 1 | Plug, Hex (1/4") | | | | |
| 5 | 149-1949 | 1 | Assy, Replacement Head (Includes Vent Plug, O'Rings, Seal, Cap, Tube and Pump Assy) | | | | |

Governor Actuator



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|
| 1 | 306-5006-01 | 1 | Actuator, Governor |
| | 306-5006-02 | 1 | (12V) |
| | | | (24V) |
| 2 | 725-1027 | 2 | Screw, Slotted Head Cap (M6 x 1 x 16mm)(1/32") |
| 3 | 526-0063 | 2 | Washer, Copper |
| 4 | 184-0071 | 1 | Gasket, Solenoid Cover |

Heat Exchanger

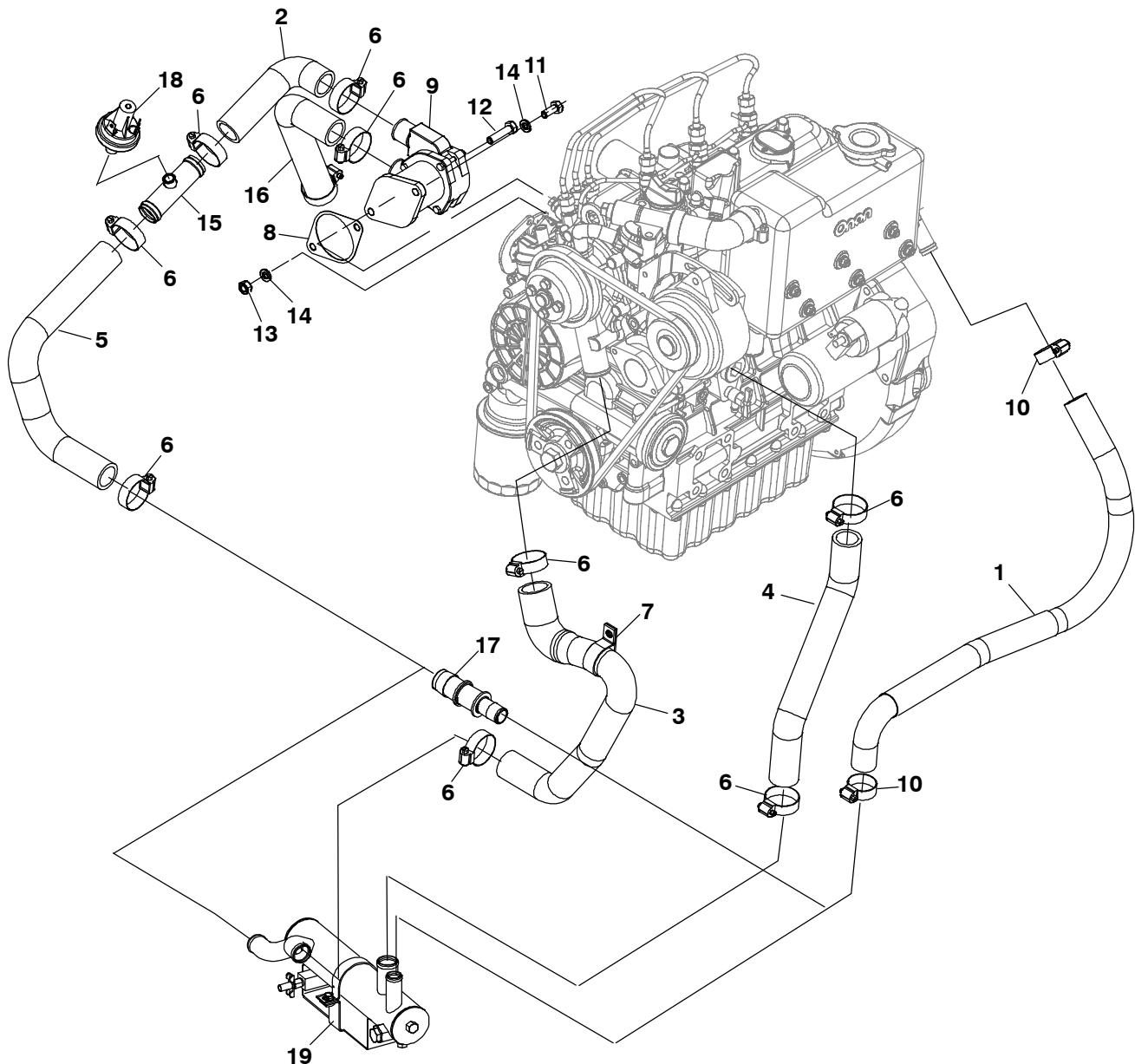


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|-------------|-----------|---------------------------------------|
| 1 | 130-5176 | 1 | Kit, End Cover (Includes Parts Marked *) | 7 | 130-4740-03 | 1 | Strap, Mounting |
| | 130-4985-03 | 1 | Exchanger, Heat Spec A-D | 8 | 130-4434 | 1 | Pencil, Zinc |
| 2 | 130-7489-02 | 2 | Begin Spec E | 9 | 508-0210 | 2 | Edging, Heat Exchanger Bracket (90mm) |
| 3 | 800-0317 | 1 | *Screw, Hex Head (5/16-18) | 10 | 130-4739-03 | 1 | Bracket, Heat Exchanger |
| 4 | 130-5169 | 1 | *Cover, End | 11 | 862-0026-54 | 2 | Nut, Hex (M6 x 1mm) |
| 5 | 509-0351 | 1 | *O'Ring | 12 | 850-0114-53 | 2 | Washer, Lock (M6) |
| 6 | 130-5170 | 1 | *Gasket, End Cover | 13 | 309-0717 | 1 | Switch, Pressure |
| | 821-6002-02 | 1 | Screw, Hex Head Sems (M6 x 1 x 12mm) | | | | |

* – Parts Included in End Cover Kit

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Cooling System (Spec A-C)

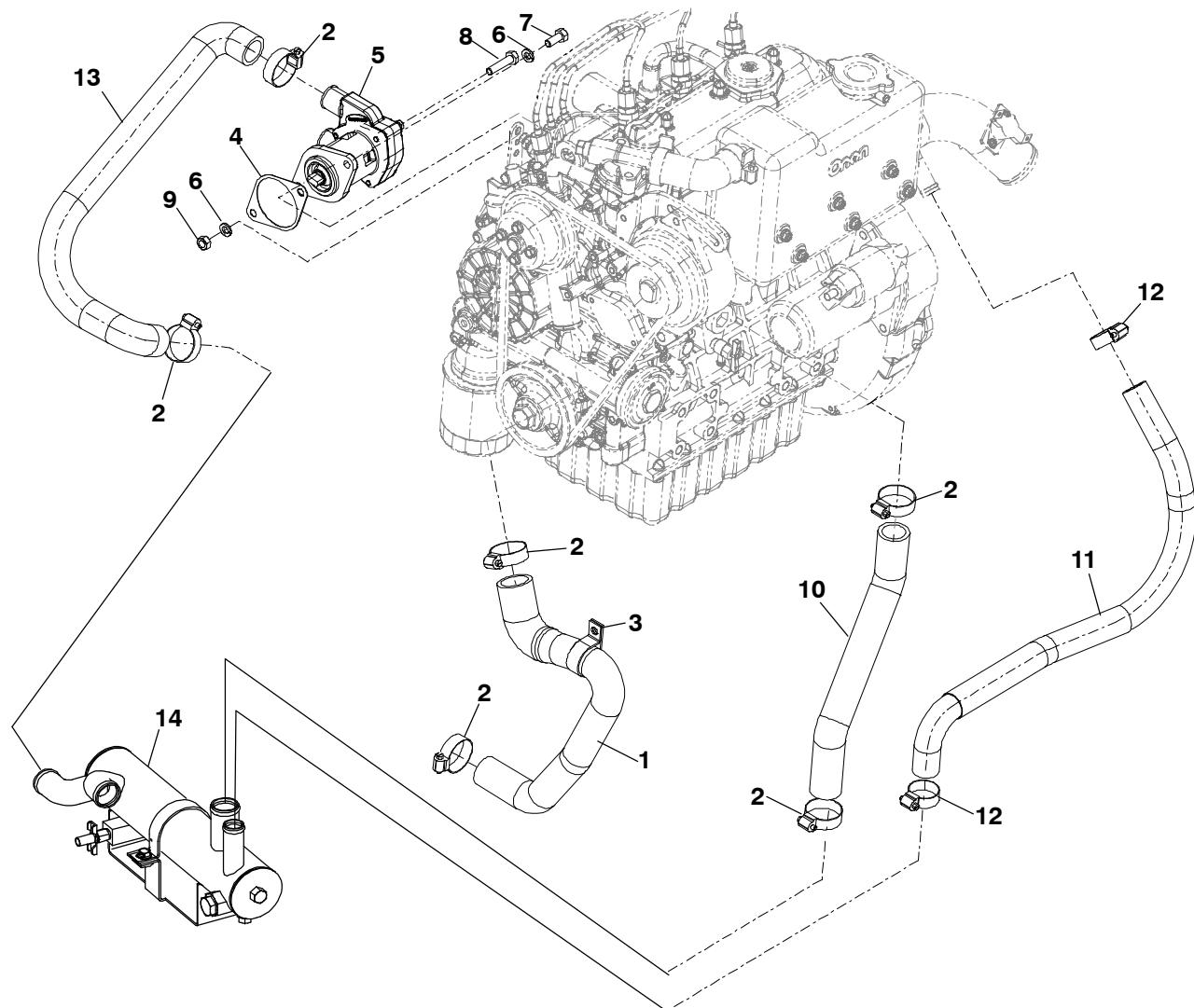


Cooling System (Spec A-C)

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|---|
| 1 | 501-0712-01 | 1 | Hose, Coolant (MDKBL Heat Exchange Wet Exhaust) | 11 | 800-3017-19 | 1 | Screw, Hex Head (M8 x 20mm) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| | 501-0712-02 | 1 | (Heat Exchange Wet Exhaust MDKBM and MDKBN) | 12 | 800-3017-22 | 1 | Screw, Hex Head (M8 x 35mm) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| 2 | 503-2089-02 | 1 | (Keel Cooling Wet all models) | | | | |
| 2 | 503-2207 | 1 | Hose, Coolant (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) | 13 | 862-0026-55 | 1 | Nut, Hex (M8)(Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| 3 | 503-2195 | 1 | Hose, Coolant (All Options) | 14 | 850-0114-54 | 2 | Washer, Lock (M8) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| 4 | 503-2196 | 1 | Hose, Coolant (Heat Exchange Wet and Dry Exhaust) | 15 | 130-5387-01 | 1 | Tube, Low Pressure Switch (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| 5 | 503-2197 | 1 | Hose, Coolant (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) | 16 | 503-2230 | 1 | Hose, Coolant (Spec A-B) (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) |
| 6 | | | Clamp, Hose Spec A-B | | | | |
| | 503-1137 | 10 | Heat Exchange Dry and Wet | | | | |
| | 503-1137 | 8 | Keel Cooling Wet | 17 | 502-1354 | 1 | Reducer, Hose Connector (Keel Cooling Wet Exhaust) |
| | 503-1137 | 2 | Keel Cooling Dry Spec C | 18 | 309-0667 | 1 | Switch, Pressure (12 and 24V Gnd 12v Iso) |
| | 503-1137 | 8 | Heat Exchange Dry and Wet | 19 | - | 1 | Exchanger, Heat (See Heat Exchanger Page for Details) |
| | 503-1137 | 6 | Keel Cooling Wet | | | | |
| | 503-1137 | 2 | Keel Cooling Dry | | | | |
| 7 | 518-0548-05 | 1 | Clamp, Hose (All Options) | | | | |
| 8 | 185-6579 | 1 | Gasket, Water Pump (Heat Exchange Wet and Dry Exhaust Keel Cooling Wet Exhaust) | | | | |
| 9 | | | Water Pump (See Separate Page for Components) | | | | |
| | 132-0358 | 1 | Spec A-B | | | | |
| | 132-0459 | 1 | Spec C | | | | |
| 10 | 503-1136 | 2 | Clamp, Hose (Keel Cooling Wet Exhaust and Heat Exchange Wet Exhaust) | | | | |

* – For Heat Exchanger Service Parts See Heat Exchanger Previous Page

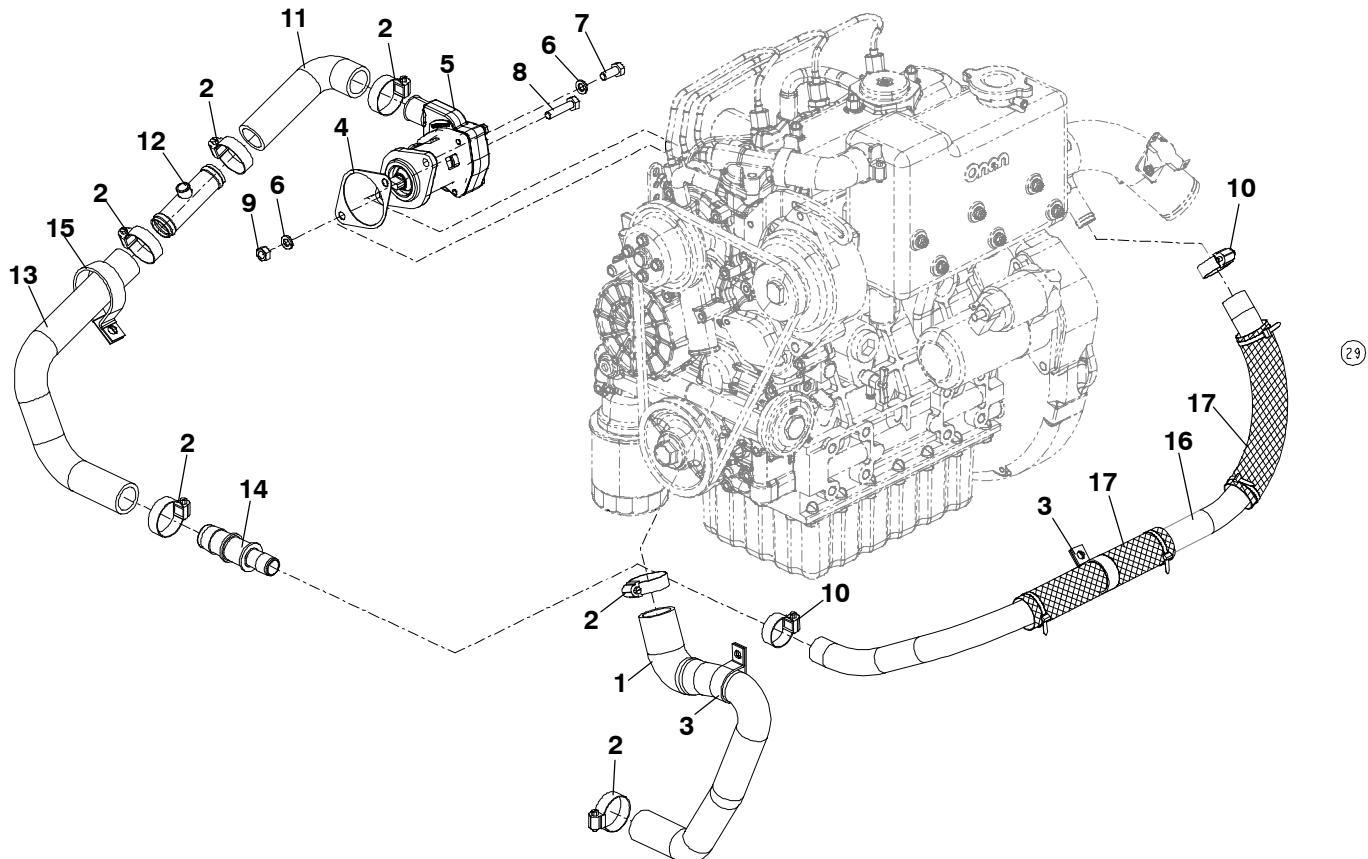
Cooling System Wet and Dry Exhaust (Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|---|
| 1 | 503-2195 | 1 | Hose, Coolant | 10 | 503-2196 | 1 | Hose, Coolant |
| 2 | 503-1137 | 6 | Clamp, Hose | 11 | 501-0712-01 | 1 | MDKBL |
| 3 | 518-0548-05 | 1 | Clamp, Hose (Insulated) | | 501-0712-02 | 1 | MDKBM and MDKBN |
| 4 | 185-6579 | 1 | Gasket, Water Pump | 12 | 503-1136 | 1 | Clamp, Hose (Wet) |
| 5 | 132-0459 | 1 | Pump, Water | 13 | 503-2908 | 1 | Hose |
| 6 | 850-0114-54 | 2 | Washer, Split Locking (M8) | 14 | - | 1 | Exchanger, Heat (See Heat Exchanger Page for Details) |
| 7 | 800-3017-19 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) | | | | |
| 8 | 800-3017-22 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 35mm) | | | | |
| 9 | 862-0026-55 | 1 | Nut, Hex (M8 1.25mm) | | | | |

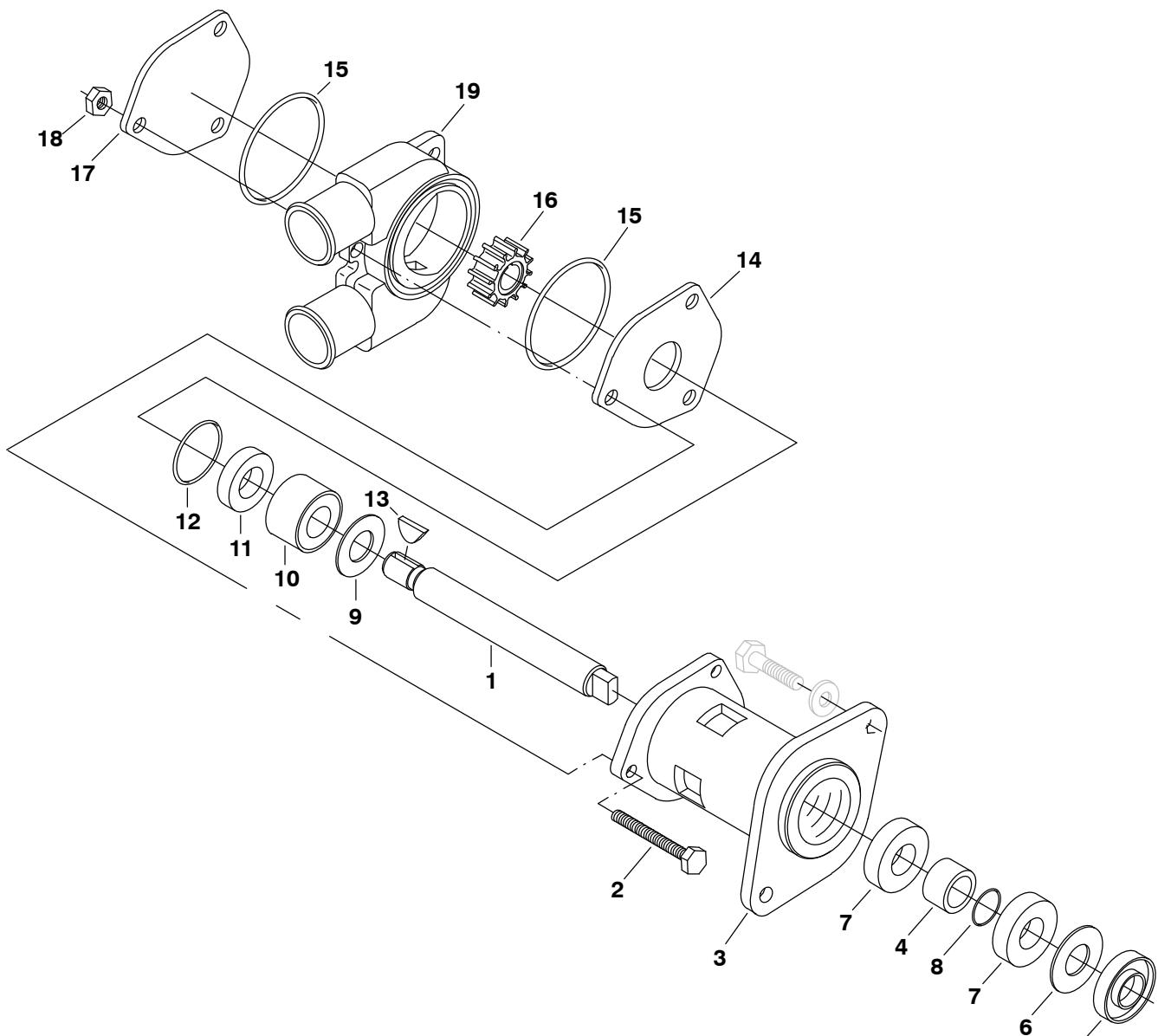
* - For Heat Exchanger Service Parts See Heat Exchanger Previous Page

Keel Cooling (Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|-------------|-----------|---|
| 1 | 503-2195 | 1 | Hose, Coolant | 9 | 862-0026-55 | 1 | Nut, Hex (M8 x 1.25mm) |
| 2 | 503-1137 | 2 | Hose, Clamp | 10 | 503-1136 | 2 | Clamp, Hose (Wet Exhaust) |
| | 503-1137 | 2 | Dry Exhaust | 11 | 503-2207 | 1 | Hose, Coolant (Raw Water) |
| | 503-1137 | 6 | Wet Exhaust | 12 | 130-5387-01 | 1 | Tube, Low Pressure Switch (Wet Exhaust) |
| 3 | | | Clamp, Hose (Insulated) | 13 | 503-2197 | 1 | Hose, Coolant (Raw Water) |
| | 518-0548-05 | 1 | Dry Exhaust | 14 | 502-1354 | 1 | Reducer, Hose Connector |
| | 518-0548-05 | 2 | Wet Exhaust | 15 | 130-4830 | 1 | Clamp, Hose (2 OD) |
| 4 | 185-6579 | 1 | Gasket, Water Pump | 16 | 503-2916-01 | 1 | Hose, Water (Wet Exhaust) |
| 5 | 132-0459 | 1 | Pump, Water | | 503-2916-02 | 1 | MDKBL |
| 6 | 850-0114-54 | 2 | Washer, Split Locking (M8) | | 503-2916-02 | 1 | MDKBM and MDKBN |
| 7 | 800-3017-19 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) | 17 | 898-1311-02 | 2 | Sleeving, Nylon Mesh |
| 8 | 800-3017-22 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 35mm) | | | | |

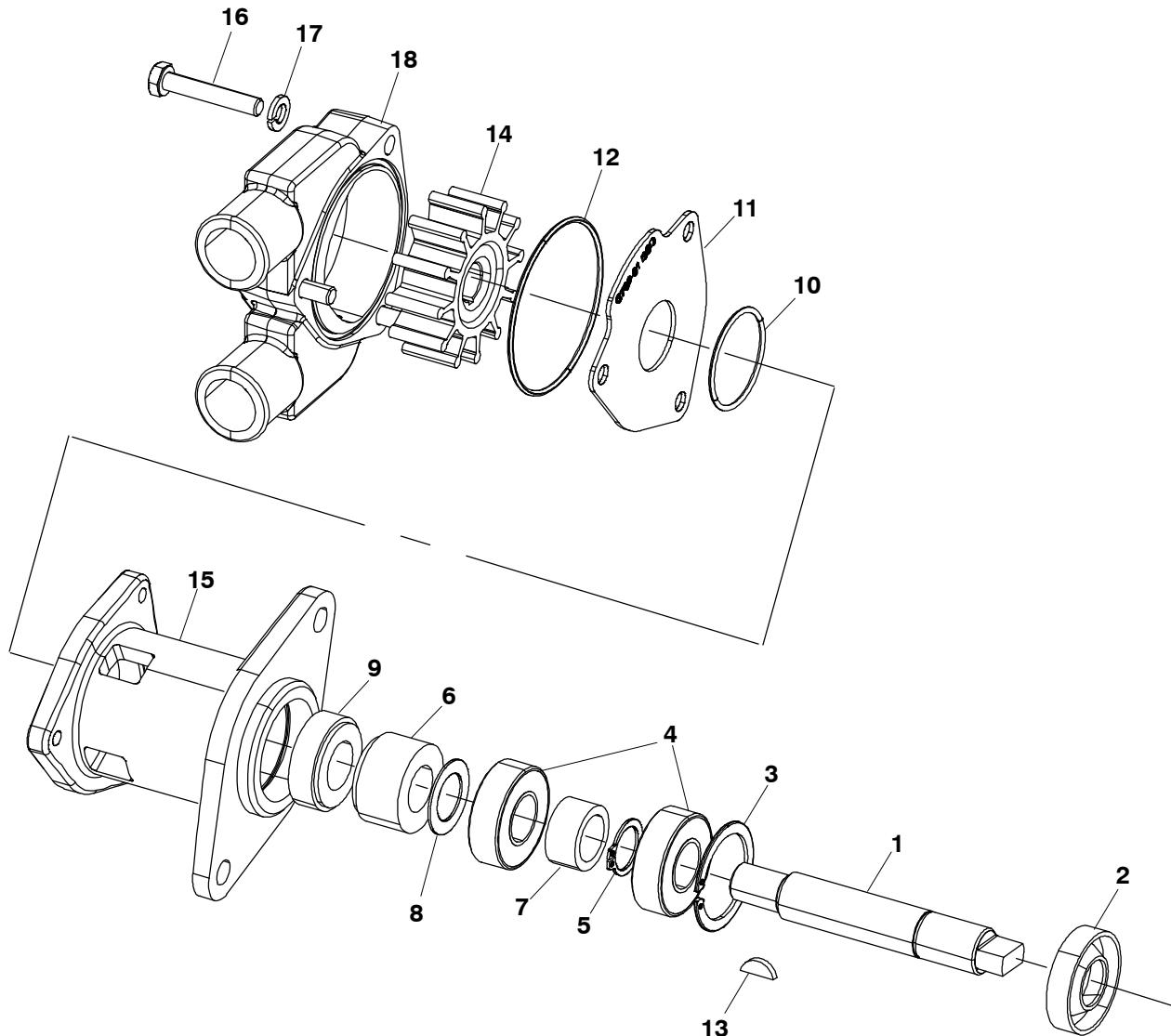
Raw Water Pump Components (Spec A-B)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|----------|-----------|--|
| | 132-0379 | 1 | Kit, Minor Service (Includes Parts Marked *) | 12 | 132-0370 | 1 | +O'Ring |
| | 132-0380 | 1 | Kit, Major Service (Includes Parts Marked +) | 13 | 132-0374 | 1 | +Key |
| | 132-0358 | 1 | Pump, Water | 14 | 132-0371 | 1 | +Plate, Wear |
| 1 | 132-0360 | 1 | Shaft | 15 | 132-0372 | 2 | *+O'Ring |
| 2 | 132-0376 | 3 | Bolt | 16 | 132-0375 | 1 | *+Impeller |
| 3 | 132-0362 | 1 | Body | 17 | 132-0373 | 1 | +Plate, Cover |
| 4 | 132-0367 | 1 | Spacer | 18 | 132-0377 | 3 | Nut |
| 5 | 132-0361 | 1 | +Seal, Lip | 19 | 132-0378 | 1 | Housing |
| 6 | 132-0363 | 1 | +Ring, Internal Retaining | 20 | 132-0379 | 1 | Kit, Minor Service (Includes Parts Marked *) |
| 7 | 132-0364 | 2 | +Bearing, Ball | 21 | 132-0380 | 1 | Kit, Major Service (Includes Parts Marked +) |
| 8 | 132-0365 | 1 | +Ring, External Retaining | | | | |
| 9 | 132-0368 | 1 | +Washer, | | | | |
| 10 | 132-0366 | 1 | +Seal, Mechanical | | | | |
| 11 | 132-0369 | 1 | +Seat, Seal | | | | |

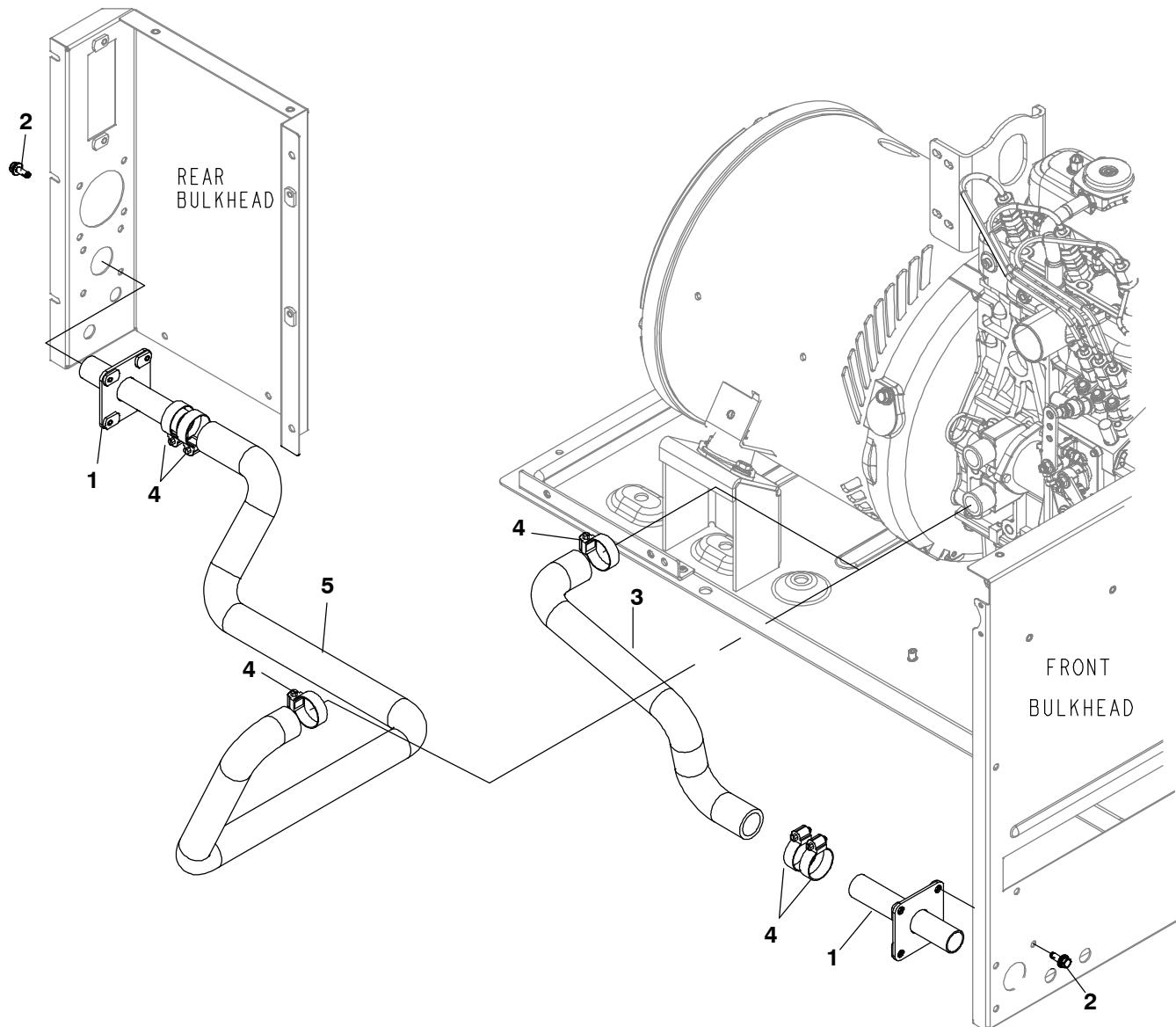
* - Parts Included in Minor Service Kit.
+ - Parts Included in Major Service Kit.

Raw Water Pump Components (Begin Spec C)



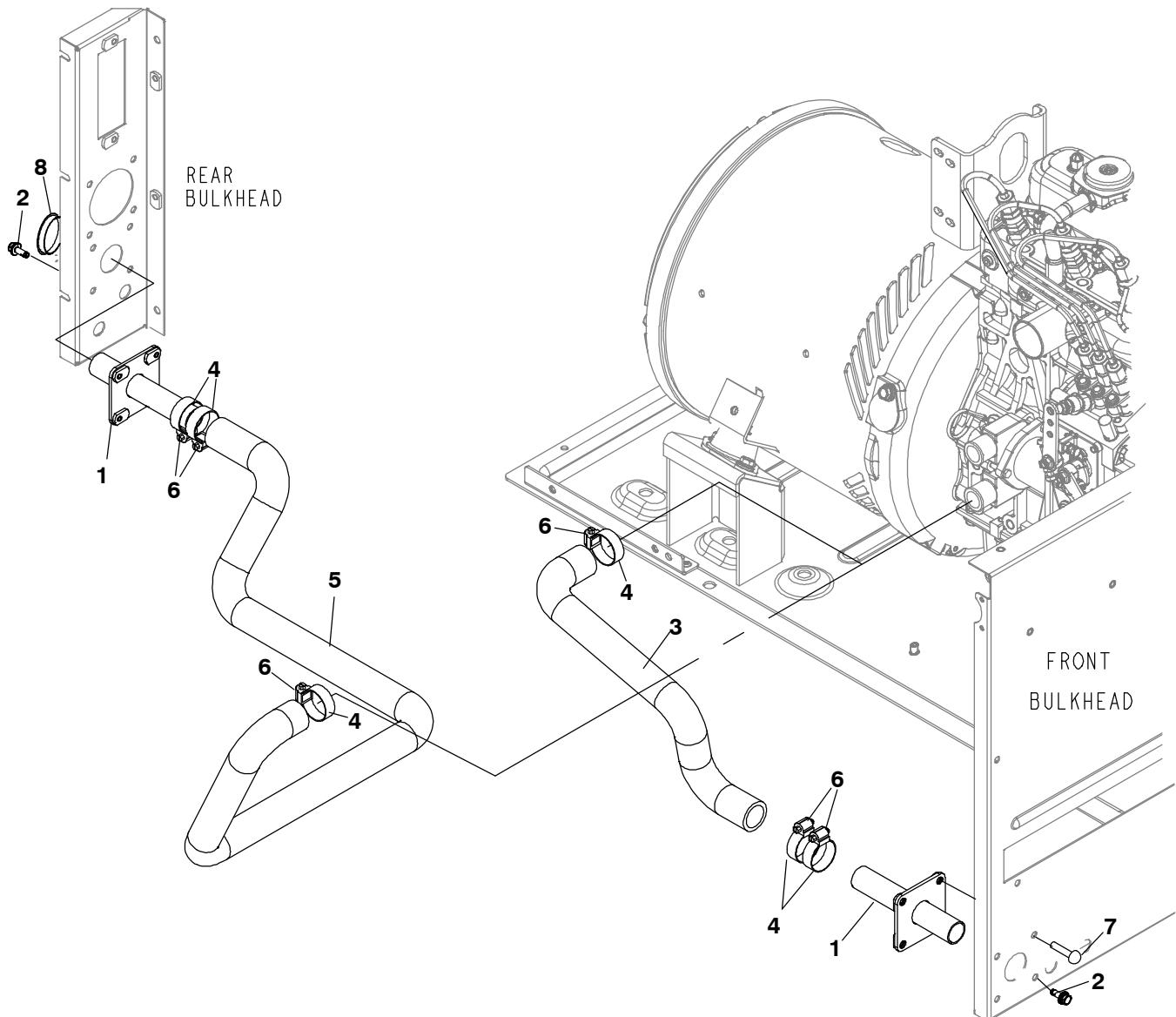
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|----------|-----------|--|
| | 541-1519 | 1 | Kit, Minor Service (Includes Parts Marked *) | 9 | 132-0369 | 1 | +Seat, Seal |
| | 541-1520 | 1 | Kit, Major Service (Includes Parts Marked +) | 10 | 132-0370 | 1 | +O'Ring |
| 1 | 132-0459 | 1 | Pump, Water | 11 | 130-6526 | 1 | +Plate, Wear |
| 1 | 132-0360 | 1 | Shaft | 12 | 132-0372 | 2 | *+O'Ring |
| 2 | 132-0361 | 1 | +Seal, Lip | 13 | 132-0374 | 1 | +Key |
| 3 | 132-0363 | 1 | +Ring, Internal Retaining | 14 | 132-0498 | 1 | *+Impeller |
| 4 | 132-0364 | 2 | +Bearing, Ball | 15 | 132-0460 | 1 | Body, Water Pump |
| 5 | 132-0365 | 1 | +Ring, External Retaining | 16 | 800-6362 | 2 | Screw |
| 6 | 132-0366 | 1 | +Seal, Mechanical | 17 | 850-2088 | 2 | Washer, Lock |
| 7 | 132-0367 | 1 | Spacer | 18 | 132-0461 | 1 | Body, Water Pump |
| 8 | 132-0368 | 1 | +Washer, | | | | * - Parts Included in Minor Service Kit. + - Parts Included in Major Service Kit. |

**Raw Water Inlet
(Spec C)**



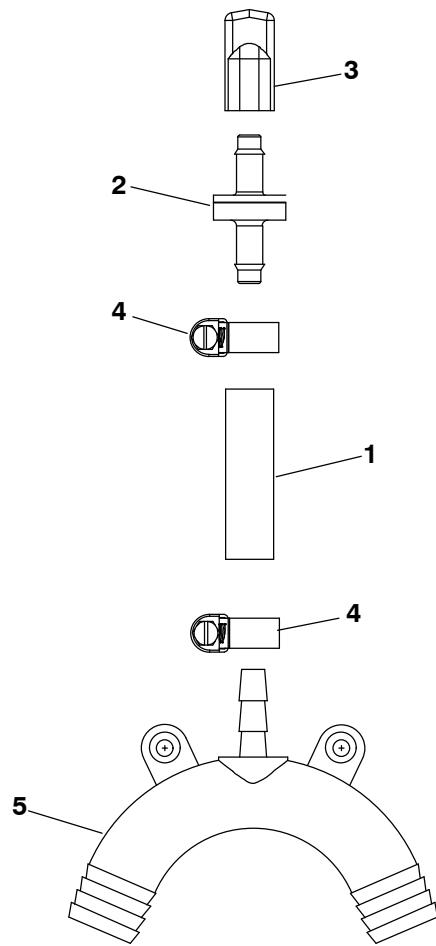
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|----------|----------|-----------|------------------|
| 1 | 405-7211 | 1 | Assy, Bulkhead | 5 | 503-2578 | 1 | Hose, Rear Water |
| 2 | 821-6006-01 | 4 | Screw, Hex Head Sems Stainless (M6 x 1.0 x 16mm) | 503-2579 | 1 | MDKBL | |
| 3 | 503-2580 | 1 | Hose, Front Water | | | 1 | MDKBM and MDKBN |
| 4 | 503-1137 | 3 | Screw, Hose Clamp | | | | |

**Raw Water Inlet
(Begin Spec D)**



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|----------|-------------|-----------|-------------------|
| 1 | 404-0058 | 1 | Assy, Bulkhead | 503-2578 | | 1 | MDKBL |
| 2 | 800-6395-01 | 4 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | 503-2579 | | 1 | MDKBM and MDKBN |
| 3 | 503-2580 | 1 | Hose, Front Water | 6 | 503-2823 | 3 | Cover, Hose Clamp |
| 4 | 503-1137 | 3 | Clamp, Hose | 7 | 517-0131-02 | 4 | Plug, Hole |
| 5 | | | Hose, Rear Water | 8 | 517-0138-07 | 1 | Plug, Hole |

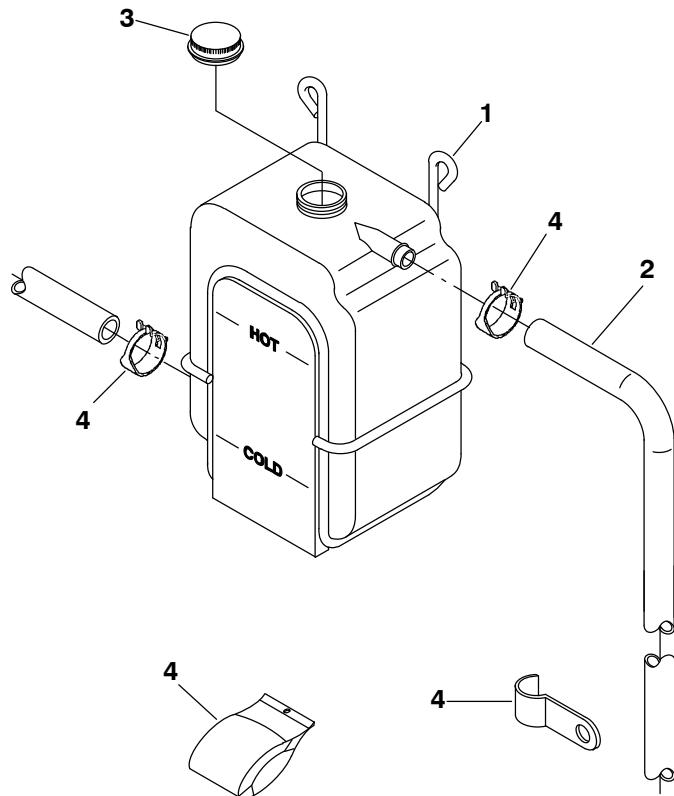
Vacuum Relief Valve



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|------------|-------------|--------------|---------------------|
| | 541-0876-01 | 1 | Kit, Siphon Break | | 502-1463 | 1 | Connector, Hose |
| 1 | 503-2728-01 | 1 | Hose, Coolant | 6 | 503-0977 | 2 | *Clamp, Hose |
| 2 | 504-0223 | 1 | Valve, Check | 7 | 508-1102 | 2 | *Grommet, Rubber |
| 3 | 502-1425-02 | 1 | Cap, Tube | | | | |
| 4 | 503-2309 | 2 | Clamp, Hose | | | | |

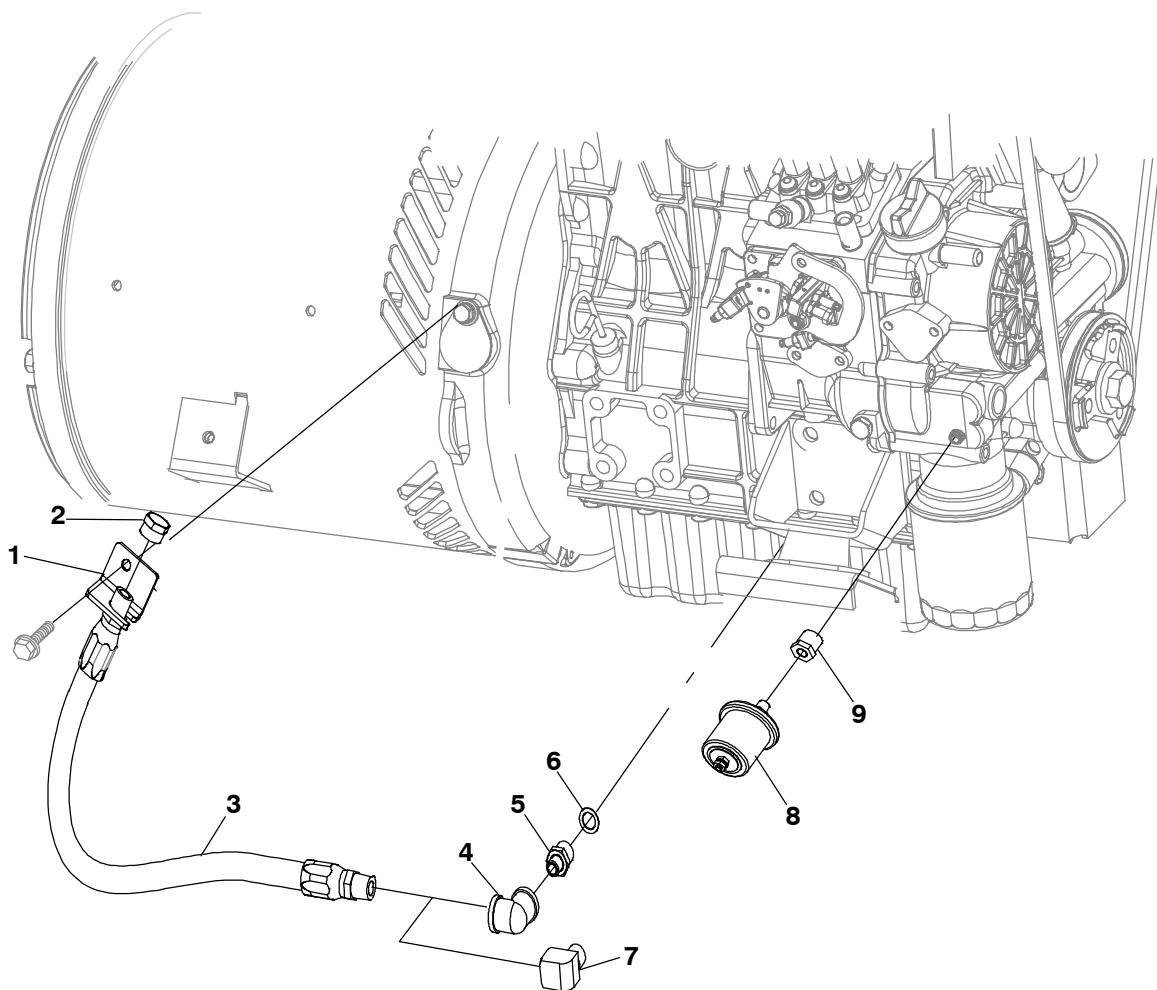
* – Parts not shown, loose in kit.

Coolant Recovery Tank



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|-----------------------------|------------|-------------|--------------|---|
| | 130-3574 | 1 | Kit, Coolant Recovery | | 4 | 130-3573 | 1 |
| 1 | 130-3571 | 1 | Hanger, Tank | | 5 | 130-3570 | 1 |
| 2 | 503-1692 | 1 | Hose (5/16 I.D. x 120" Lg.) | | | | Hardware Package (Includes Mounting Hardware) |
| 3 | 130-3572 | 1 | Cap, Tank | | | | Tank, Coolant |

Oil System (Spec A-C)

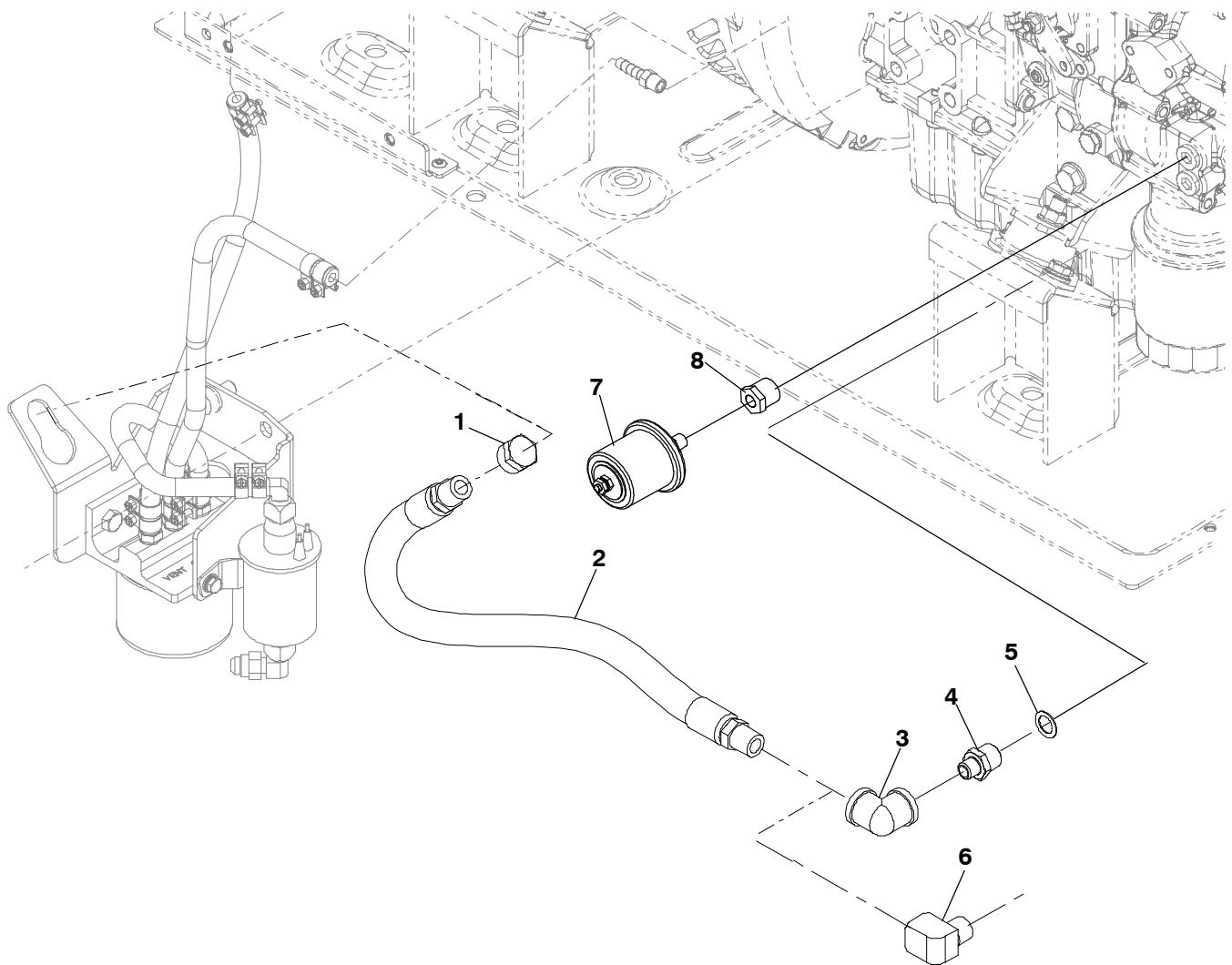


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------------|
| 1 | 120-1332-02 | 1 | Bracket, Oil Drain |
| 2 | 502-1123 | 1 | Cap, Pipe |
| 3 | 501-0910 | 1 | Hose, Oil Drain |
| 4 | 502-0263 | 1 | Elbow, Pipe (MDKBL) |
| 5 | 102-1485 | 1 | Adapter, Oil Drain (MDKBL) |
| 6 | 185-5495 | 1 | Gasket, Oil Drain (MDKBL) |
| 7 | 502-1180 | 1 | Elbow, Pipe (MDKBM and MDKBN) |

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|
| 8 | 193-0244 | 1 | *Sender, Oil Pressure Negative Ground (B200 B201) |
| | 193-0430-01 | 1 | + Isolated Ground (B380) |
| 9 | 505-0395 | 1 | Reducer, Bushing (1/8" NPSF) |

* - Sender Included in Sender Kit Listed on Water Flange Page.
 + - Sender Included in Isolated Ground Kit Listed on Isolated Ground Page.

Oil System (Begin Spec D)

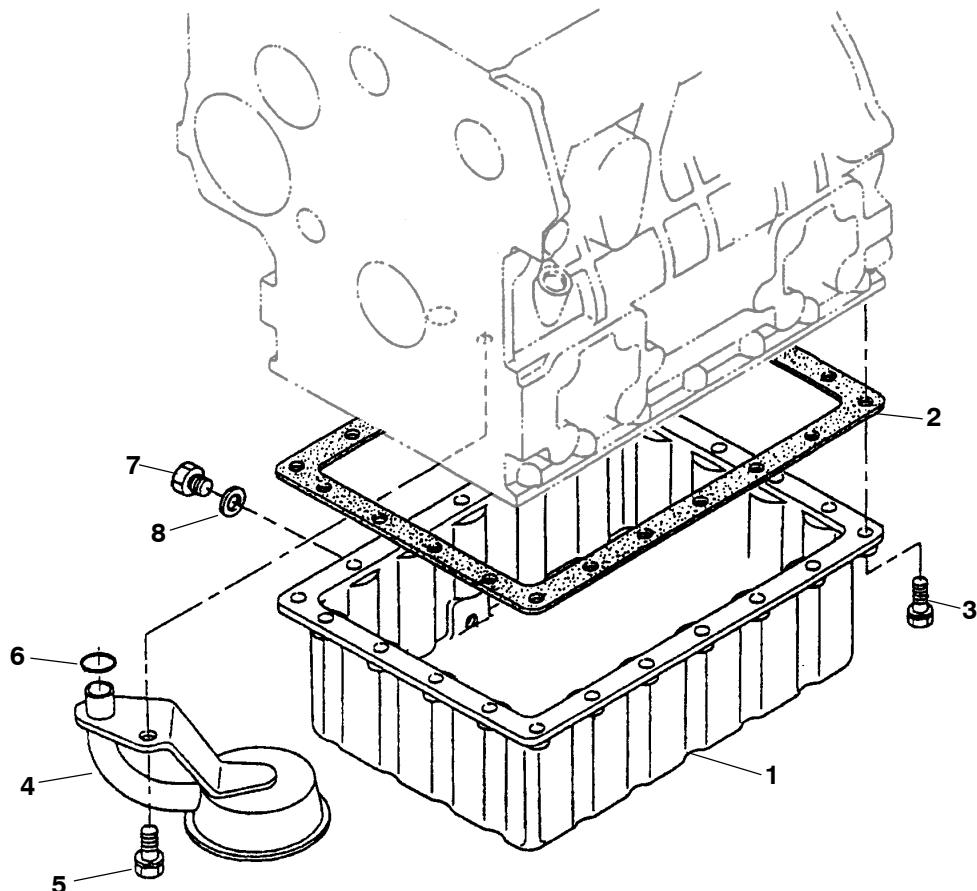


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|----------------------------------|
| 1 | 502-1123 | 1 | Cap, Pipe |
| 2 | 501-0910 | 1 | Hose, Oil Drain |
| 3 | 502-0263 | 1 | Elbow, Pipe(MDKBL) |
| 4 | 102-1485 | 1 | Adapter, Oil Drain (MDKBL) |
| 5 | 185-5495 | 1 | Gasket, Oil Drain (MDKBL) |
| 6 | 502-0075 | 1 | Elbow, Pipe (MDKBM and MDKBN) |

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|
| 7 | 193-0244 | 1 | *Sender, Oil Pressure Negative Ground (B200 B201) |
| 8 | 193-0430-01 | 1 | + Isolated Ground (B380) |
| | 505-0395 | 1 | Reducer, Bushing (1/8" NPSF) |

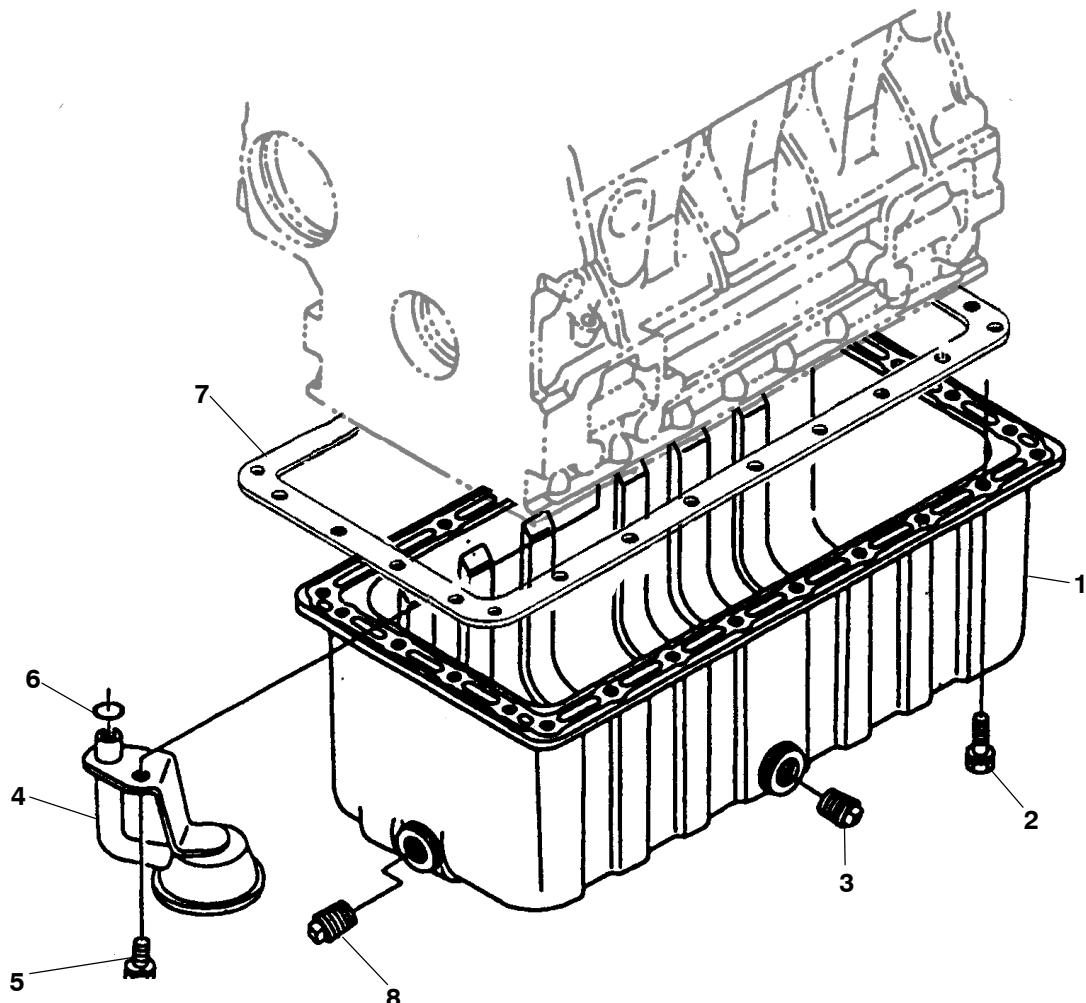
* – Sender Included in Sender Kit Listed on Water Flange Page.
 + – Sender Included in Isolated Ground Kit Listed on Isolated Ground Page.

Oil Pan MDKBL



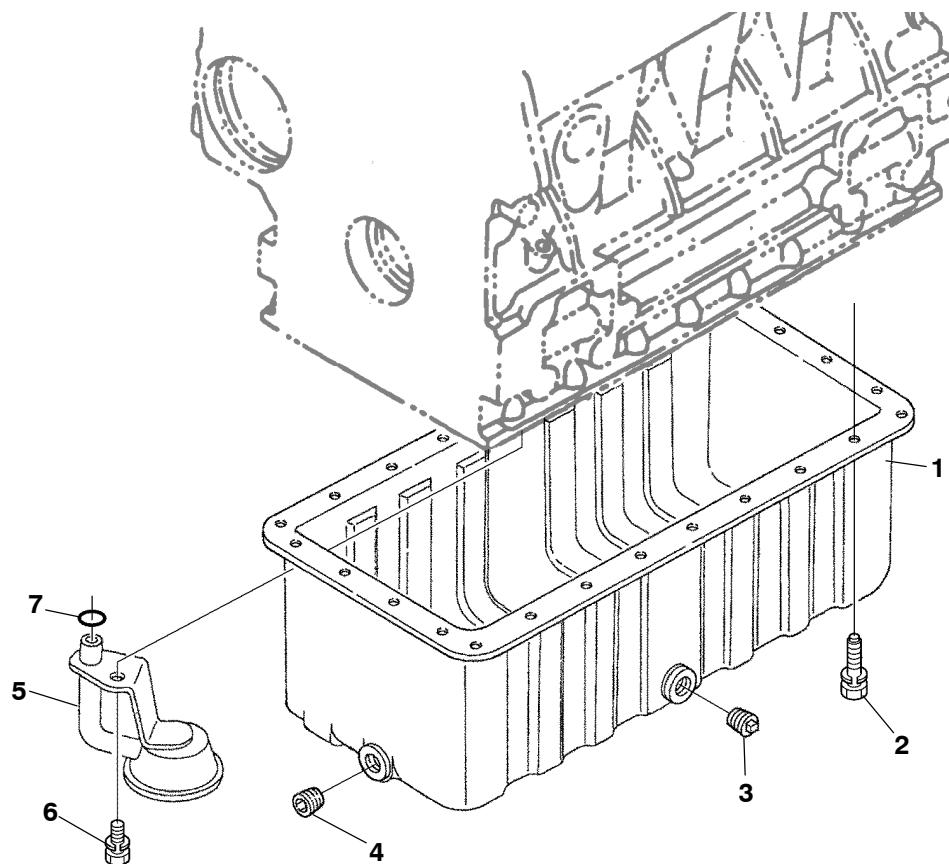
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|------------|-------------|-------------|---------------------|------------|-------------|-------------|---------------------|
| 1 | 185-7213 | 1 | Pan, Oil | 6 | | | O'Ring |
| 2 | 185-7214 | 1 | Gasket, Oil Pan | 185-3078 | | 1 | Spec A-D |
| 3 | 185-2389 | 22 | Screw, Hex Head | 185-7421 | | 1 | Begin Spec E |
| 4 | | | Tube, Oil Pickup | 7 | | | Plug |
| | 185-7215 | 1 | Spec A-D | 185-2096 | | 1 | Spec A-D |
| | 122-0932 | 1 | Begin Spec E | 517-0418 | | 1 | Begin Spec E |
| 5 | 185-6762 | 1 | Bolt | 8 | | | Gasket |
| | | | | 185-2343 | | 1 | Spec A-D |
| | | | | 509-0428 | | 1 | Begin Spec E |

Oil Pan MDKBM and MDKBN (Spec A-D)



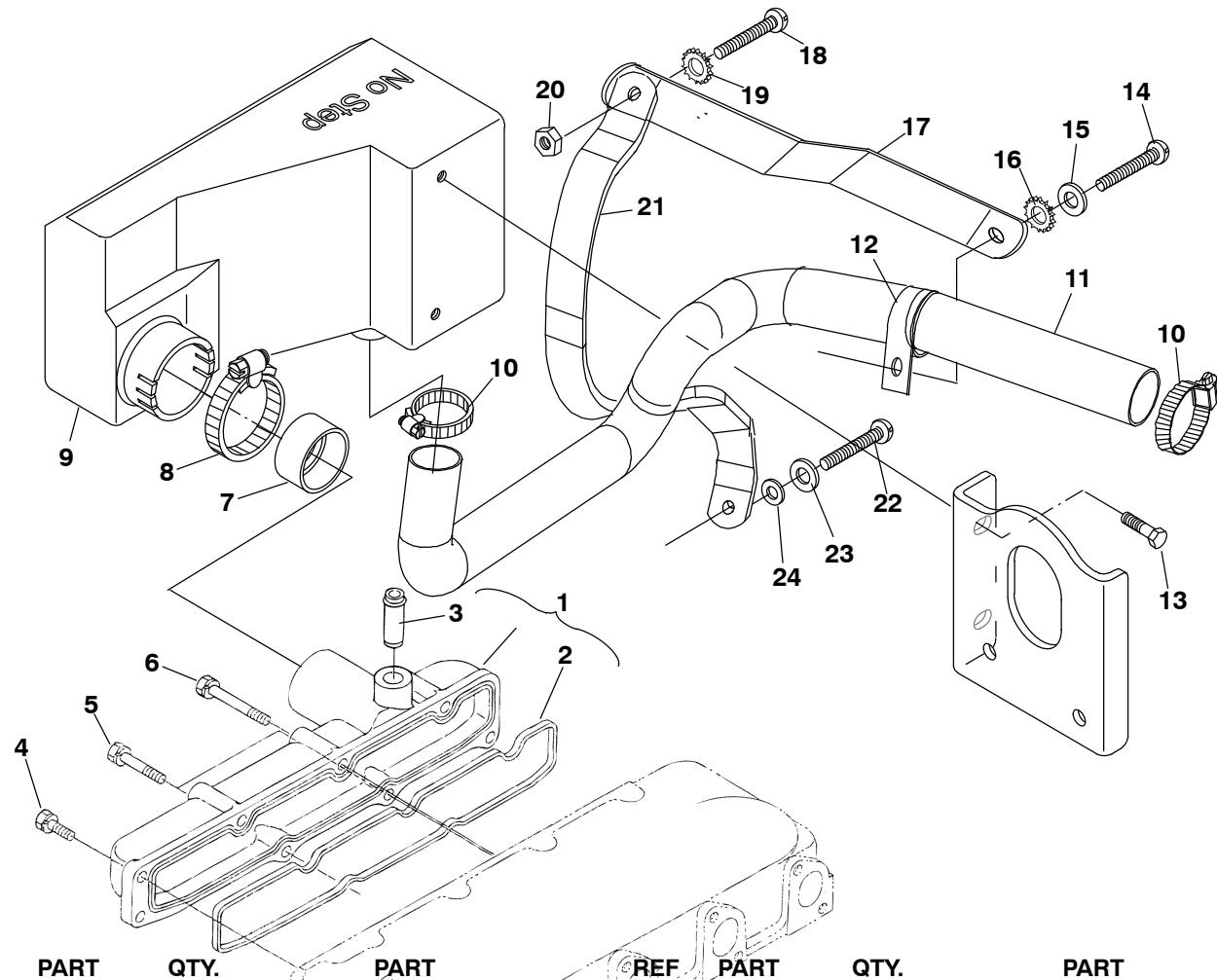
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|---|---------|----------|-----------|--|
| 1 | 185-7246 | 1 | Pan, Oil MDKBM, MDKBN | 6 | 185-3078 | 1 | O'Ring |
| 2 | | | Bolt MDKBM, MDKBN | 7 | 185-5478 | 1 | *Gasket, Oil Pan MDKBM, MDKBN |
| | 185-2386 | 26 | Spec A | 8 | 185-5826 | 1 | Plug (MDKBM, MDKBN) Spec A |
| | 800-6505 | 26 | Spec B-D | | 102-1511 | 1 | Spec B-D |
| 3 | | | Plug MDKBM, MDKBN | | | | * – Or Use Three Bond #1207D or #TB1216. |
| 4 | 185-5826 | 2 | Tube, Oil Pickup MDKBM, MDKBN (Spec A) | | | | |
| | 185-7247 | 1 | MDKBM, MDKBN (Spec A) | | | | |
| | 181-9128 | 1 | MDKBM, MDKBN Spec B-D | | | | |
| 5 | 185-6762 | 1 | Bolt | | | | |

Oil Pan MDKBM and MDKBN (Begin Spec E)



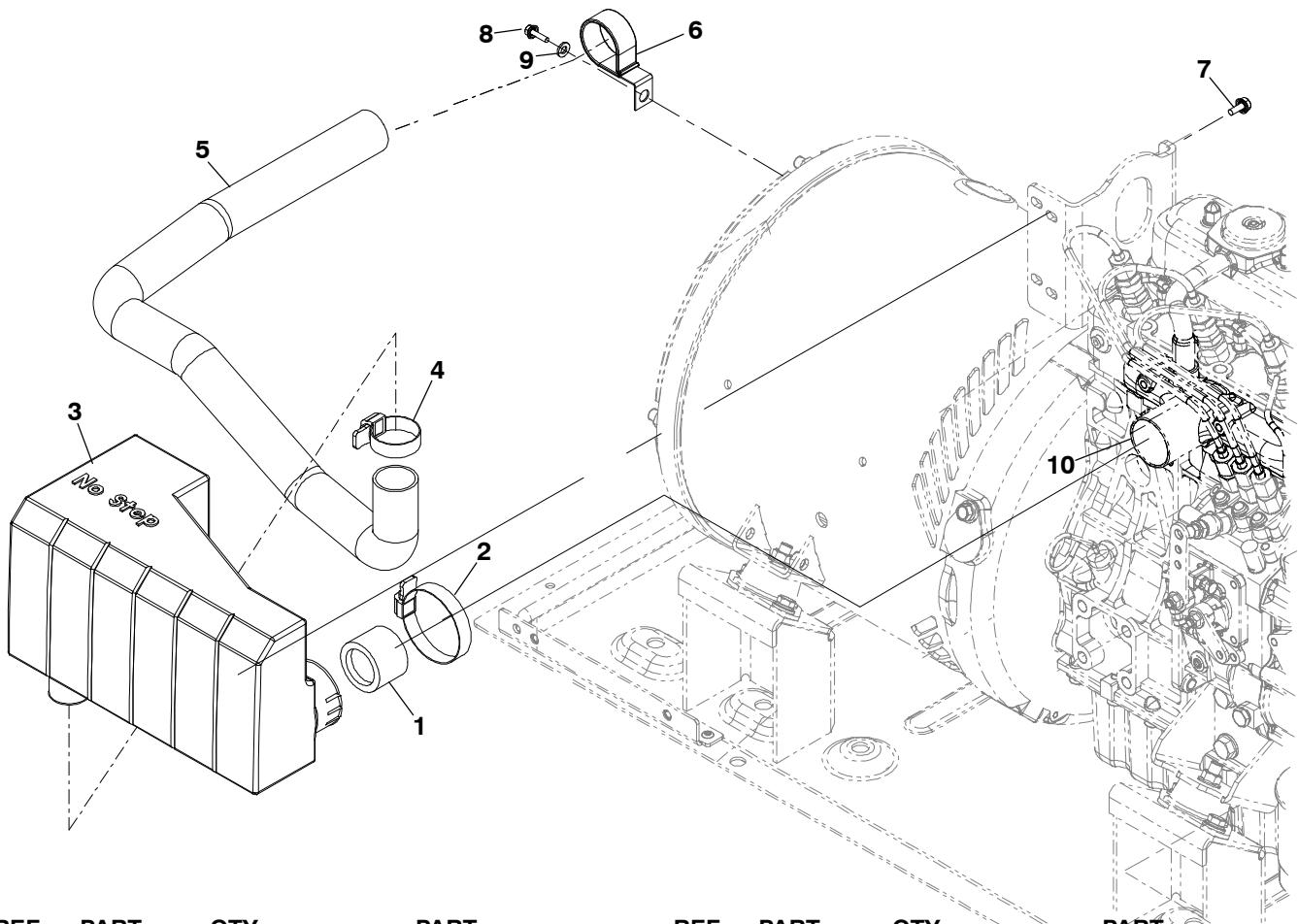
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|------------|-------------|--------------|---------------------|
| 1 | 185-7246 | 1 | Pan, Oil | 5 | 123-2414 | 1 | Tube, Oil Pickup |
| 2 | 181-9094 | 26 | Bolt | 6 | 185-2563 | 1 | Bolt |
| 3 | 817-0441 | 1 | Plug | 7 | 185-7421 | 1 | O'Ring, Seal |
| 4 | 181-9230 | 1 | Plug | | | | |

Resonator (Spec A-C)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|--|---------|-------------|-----------|---------------------------------|
| 1 | 155-3239 | 1 | Kit, Resonator (Includes Instructions) | 7 | 140-2898 | 1 | Sleeve, Air Intake |
| | | | Manifold, Intake (Includes Gasket) | 8 | 503-1141 | 1 | Clamp, Hose |
| | | | MDKBL | 9 | 140-3078-01 | 1 | Resonator, Intake |
| | 185-6927 | 1 | Spec A | 10 | 503-1137 | 2 | Clamp, Hose |
| | 181-9189 | 1 | Begin Spec B | 11 | 503-2202-01 | 1 | Hose, Air Intake (1.25" ID) |
| | | | MDKBM, MDKBN | 12 | 130-4830 | 1 | Clamp |
| | 185-6700 | 1 | Spec A | 13 | 821-6002-02 | 2 | Screw, Hex Head Sems (M6 x 12) |
| | 181-9110 | 1 | Begin Spec B | 14 | 821-6001-03 | 1 | Screw, Hex Head |
| 2 | | | Gasket | 15 | 526-2291 | 2 | (M5 x 0.8 x 16mm) |
| | 185-6926 | 1 | MDKBL | 16 | 856-0003 | 1 | Washer, Flat |
| | 185-6701 | 1 | MDKBM, MDKBN | 17 | 337-0081 | 1 | Washer, EIT (M10) |
| 3 | 185-6499 | 1 | Joint, Breather Pipe | 18 | 810-0155 | 1 | Strap, Bond (.75 x 7.50") |
| | | | Begin Spec B | 19 | 856-0006 | 2 | Screw, Slotted Round Head |
| 4 | 185-2389 | 3 | Screw, Hex Head | 20 | 871-0016 | 2 | Brass (1/4-20 x 1.25") |
| | | | (M6 x 18mm) | 21 | 337-3507 | 1 | Washer, EIT (1/4") |
| 5 | | | Screw | 22 | 800-3042 | 1 | Nut, Hex Brass (1/4-20) |
| | 185-6677 | 1 | MDKBL | 23 | 856-0002 | 1 | Strap, Bond |
| | 185-6677 | 2 | MDKBM, MDKBN | 24 | 526-2050 | 1 | (12.7 x 412.7mm) |
| 6 | | | Screw, Hex Head | | | | Screw, Hex Head Cap (M4 X 10mm) |
| | | | (M6 x 50mm) | | | | Washer, EIT (#8) |
| | 185-7069 | 2 | MDKBL | | | | Washer, Flat (M4) |
| | 185-7069 | 3 | MDKBM, MDKBN | | | | |

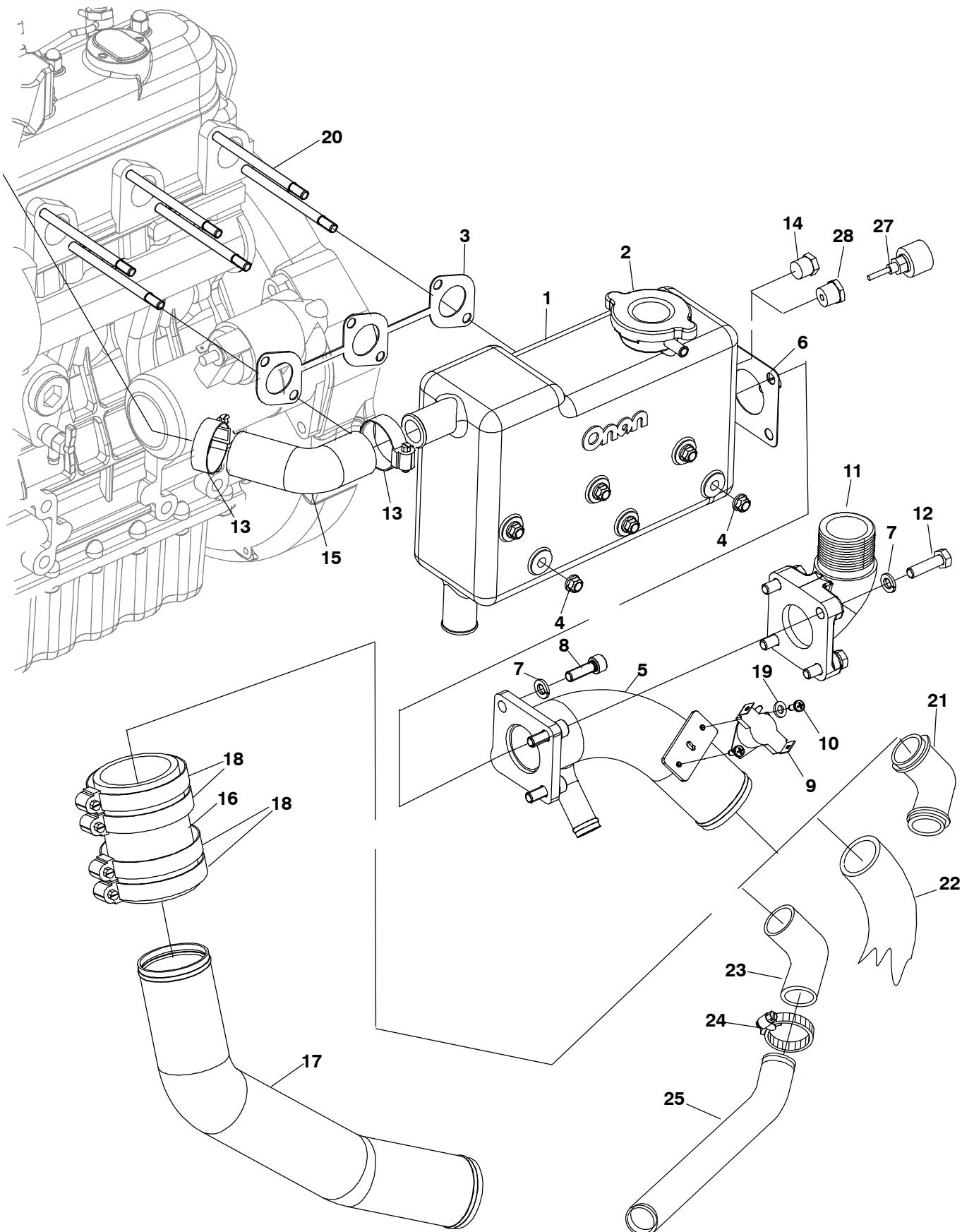
Resonator (Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|-----------------------------------|------------|-------------|--------------|--|
| 1 | 140-2898 | 1 | Sleeve, Air Intake | 8 | 821-6001-03 | 1 | Screw, Hex Head (M5 x 0.8 x 16mm) |
| 2 | 503-1141 | 1 | Clamp, Hose | 9 | 526-2291 | 1 | Washer, Flat |
| 3 | 140-3078-01 | 1 | Resonator, Intake | 10 | - | 1 | See Intake Manifold Spec A-C for Manifold Screws Gasket and Manifold |
| 4 | 503-1137 | 1 | Clamp, Hose | | | | |
| 5 | 503-2202-01 | 1 | Hose, Air Intake (1.25" ID) | | | | |
| 6 | 503-2790 | 1 | Clamp | | | | |
| 7 | 821-6002-02 | 2 | Screw, Hex Head Sems (M6 x 12) | | | | |

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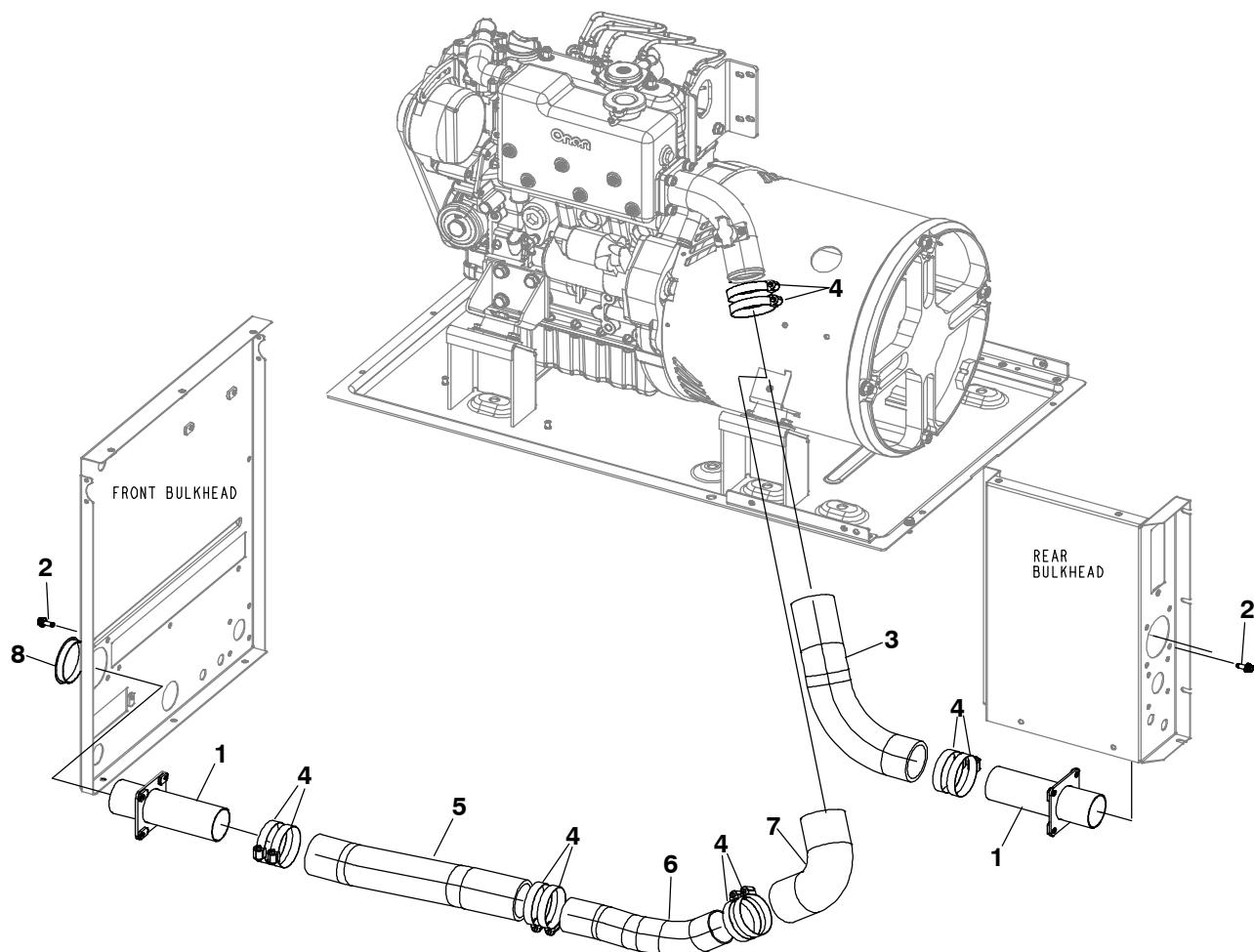
Exhaust Manifold



Exhaust Manifold

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|--|
| | 541-0599 | 1 | Kit, Marine Muffler | | | | (M4 x 10mm)(Wet) |
| | 155-3147 | 1 | Kit, Marine Muffler | 11 | 155-2666-01 | 1 | +Elbow, Exhaust (Dry Exhaust) |
| | 155-2355-02 | 1 | Kit, Exhaust Tube | 12 | 800-3017-21 | 4 | Screw, Hex Head Cap |
| | 155-3146 | 1 | Kit, Dry Exhaust (Includes Parts Marked +) | 13 | 503-1137 | 2 | (Dry Exhaust) (M8 x 30mm) |
| | 155-3240 | 1 | Kit, Front Exhaust (Includes Parts Marked*) | 14 | | | Clamp Hose |
| | 300-4686-01 | 1 | Kit, Low Coolant Sender (Includes Sender Harness) | | 502-0153 | 1 | Plug, Pipe |
| 1 | | | Manifold Assy (Includes Filler Neck) | | 502-0820 | 1 | MDKBL |
| | 154-3020-01 | 1 | MDKBL | 15 | 503-2046 | 1 | MDKBM, MDKBN |
| | 154-3060 | 1 | MDKBM, MDKBN | 16 | 503-2249 | 1 | Hose, Coolant |
| 2 | 130-3721 | 1 | Cap, Radiator | 17 | 155-3522 | 1 | Hose, Exhaust (Wet) |
| 3 | | | Gasket, Exhaust Manifold Spec A-D | | 155-3523 | 1 | Tube, Exhaust (Wet) |
| | 185-6925 | 1 | MDKBL | | | | MDKBL |
| | 185-6854 | 1 | MDKBM, MDKBN | | | | MDKBM, MDKBN |
| | | | Begin Spec E | 18 | 503-1142 | 4 | Clamp, Hose (Wet) |
| | 154-2369 | 1 | MDKBL | 19 | 526-0003 | 2 | Washer, Flat (Wet) |
| | 154-3270 | 1 | MDKBM, MDKBN | 20 | | | Stud |
| 4 | | | Nut, Hex Flange (M7 x 1mm) | | 185-7110 | 6 | MDKBL |
| | | | Spec A-D | | 185-7110 | 8 | MDKBM, MDKBN |
| | 185-6699 | 6 | MDKBL | 21 | 155-2033 | 1 | Elbow, Exhaust (2") |
| | 185-6699 | 8 | MDKBM, MDKBN | 22 | | | Hose, Exhaust |
| | | | Begin Spec E | | 503-1963-04 | 1 | 2" x 3' |
| | 185-6699 | 6 | MDKBL | | 503-1963-05 | 1 | 2" x 5' |
| | 185-6699 | 8 | MDKBM, MDKBN | | 503-1353 | 1 | 2" x 10' |
| 5 | 155-3261-02 | 1 | Mixer, Elbow (Wet) | | 503-1320 | 1 | 2" (Bulk) |
| 6 | 185-6853 | 1 | +Gasket, Exhaust | 23 | 503-1527 | 1 | #*Elbow, Molded Exhaust |
| 7 | 850-0114-54 | 4 | Washer, Lock (M8) | 24 | 503-1142 | 4 | #*Clamp, Hose |
| 8 | 815-0916 | 4 | Screw, Socket Head Cap (M8 x 1.25 x 25mm)(Wet) | 25 | 155-3233 | 1 | *Tube, Exhaust |
| 9 | 309-0295-01 | 1 | Switch, Temperature (Wet) | | 155-3256 | 1 | MDKBL (27") |
| 10 | 815-0862 | 2 | Screw, Pan Head XREC | 26 | 508-0115 | 1 | MDKBM, MDKBN (30.5") |
| | | | | 27 | 193-0468 | 1 | *Grommet |
| | | | | 28 | 502-0029-06 | 1 | Sender, Low Coolant |
| | | | | | | | Bushing, Reducer 3/4 to 1/4" (MDKBM and MDKBN) |

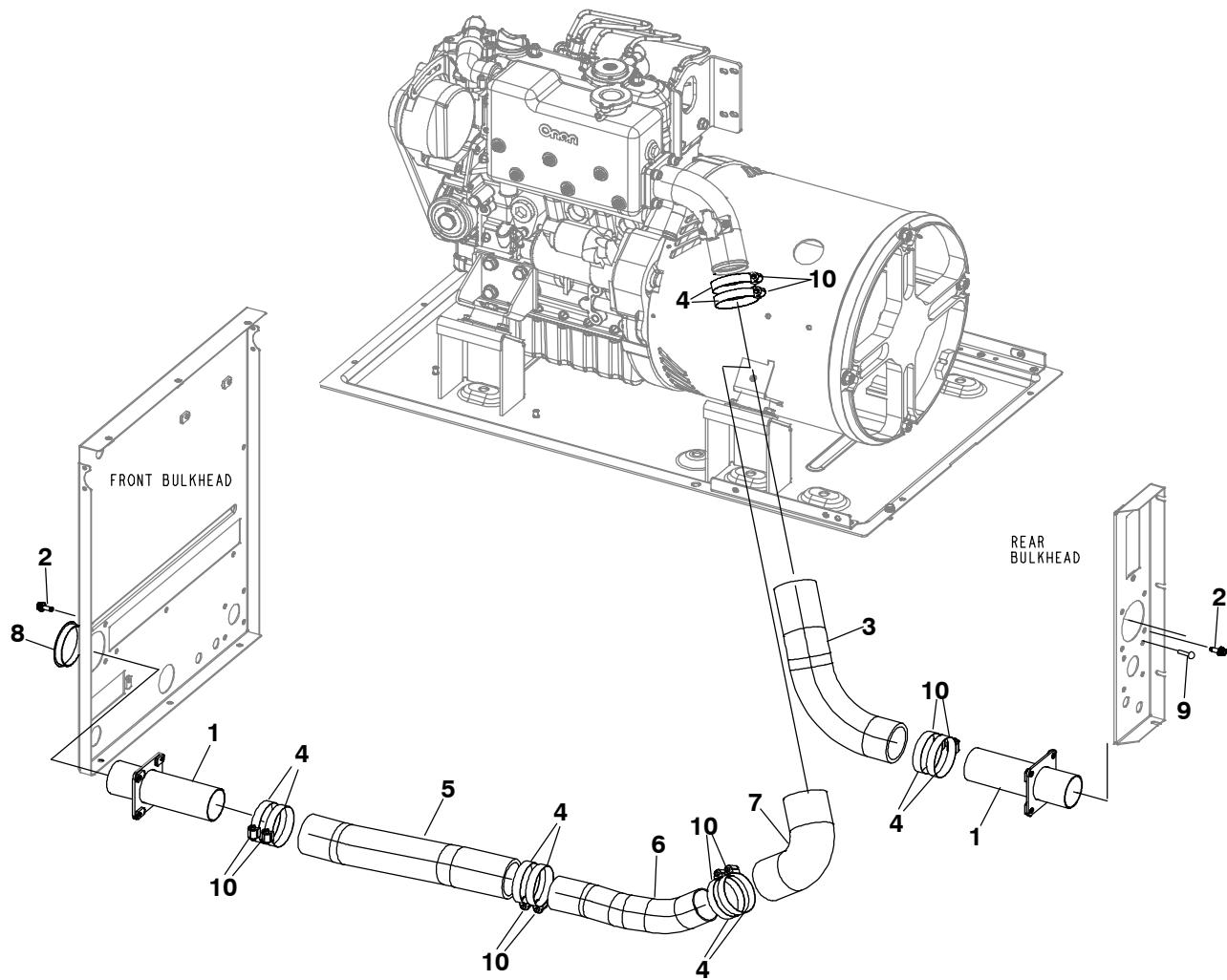
Bulkhead Exhaust
(Spec B-C)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|----------------------------|
| 1 | 155-2030 | 1 | Muffler, Exhaust (Not Shown) | 5 | 503-2575-01 | 1 | Hose, Front Housed Exhaust |
| 2 | 405-7210 | 1 | Connection, Bulkhead | 5 | 503-2575-02 | 1 | MDKBL |
| 3 | 821-6006-01 | 4 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | 6 | 155-4417 | 1 | MDKBM and MDKBN |
| 4 | 503-2581 | 1 | Hose, Rear Exhaust | 7 | 503-2573 | 1 | Tube, Front Housed Exhaust |
| | 503-2572 | 1 | MDKBL | 8 | 517-0138-09 | 1 | Hose, Front Exhaust |
| | 503-1142 | 8 | MDKBM and MDKBN | | | | Plug, Rear Housed Hole |
| | 503-1142 | 4 | Clamp, Hose | | | | |
| | | | Front, Housed | | | | |
| | | | Rear | | | | |

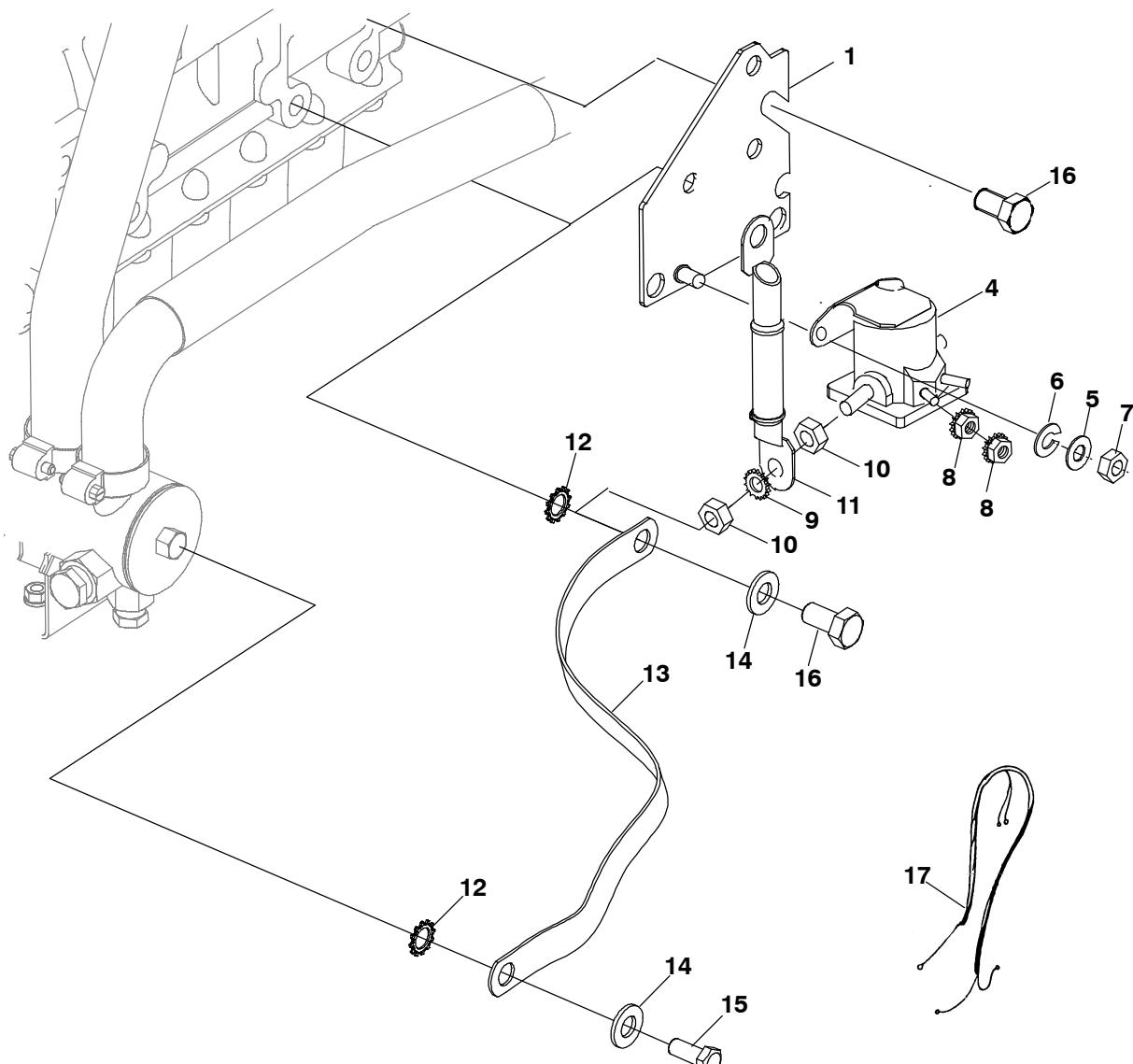
* – Not noted if covers all three models.

Bulkhead Exhaust (Begin Spec D)



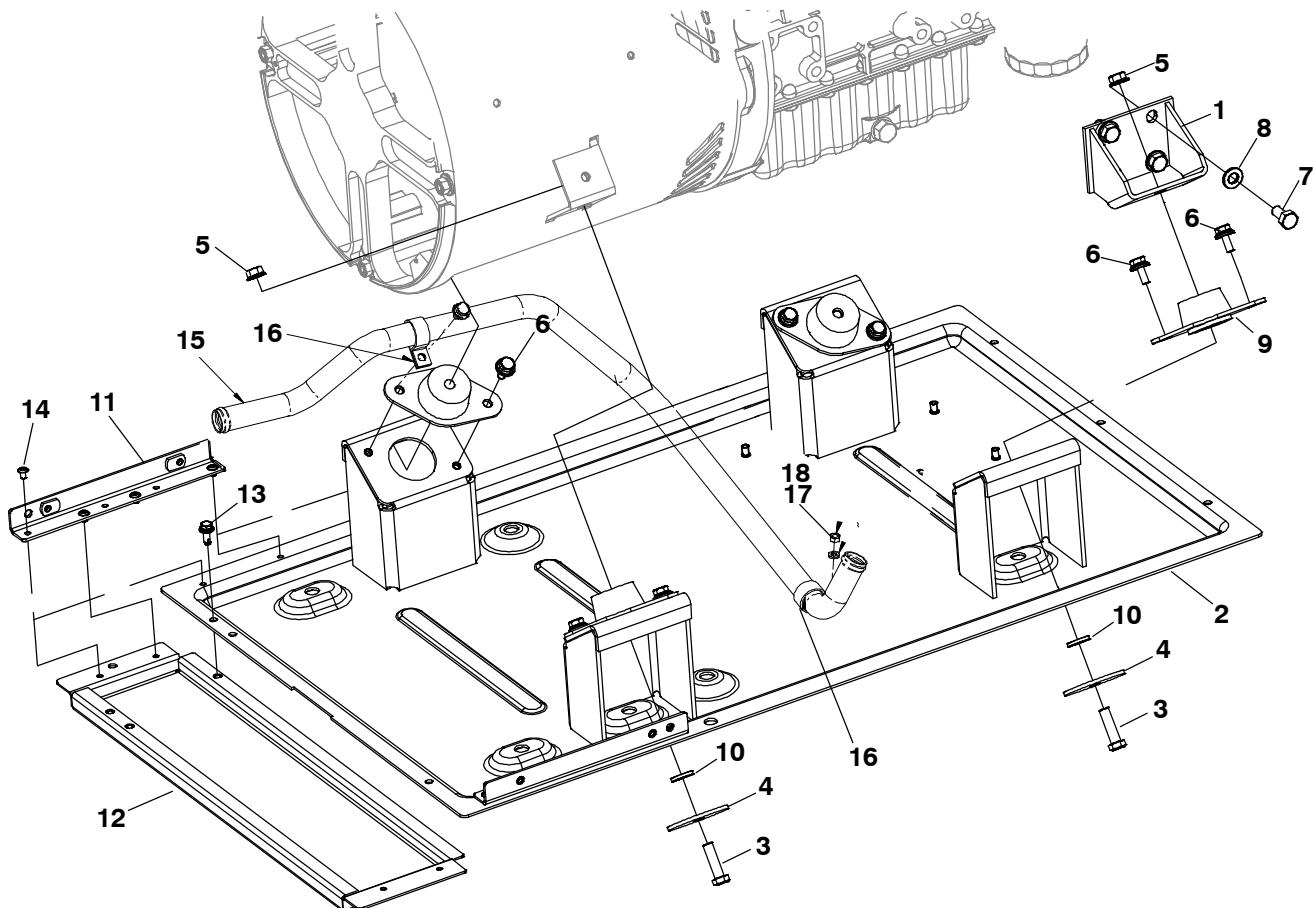
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|---|
| 1 | 155-2030 | 1 | Muffler, Exhaust (Not Shown) | 6 | 155-4417 | 1 | Tube, Front Housed Exhaust |
| 2 | 404-0057 | 1 | Connection, Bulkhead | 7 | 503-2573 | 1 | Hose, Front Exhaust |
| 3 | 800-6395-01 | 4 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | 8 | 517-0138-09 | 1 | Plug, Rear Housed Hole |
| 4 | 503-2581 | 1 | Hose, Rear Exhaust | 9 | 517-0131-02 | 4 | Plug, Hole |
| 5 | 503-2572 | 1 | MDKBL | 10 | 503-2823 | 8 | Cover, Hose Clamp |
| 6 | 503-1142 | 1 | MDKBM and MDKBN | | 503-2823 | 4 | Front, Housed |
| 7 | 503-1142 | 4 | Clamp, Hose | | | | Rear, Housed and Unhoused |
| 8 | 503-2575-01 | 1 | Front, Housed | | | | |
| 9 | 503-2575-02 | 1 | Rear, Housed and Unhoused | | | | |
| 10 | | | Hose, Front Housed Exhaust | | | | * – Not noted if covers all three models. |

Isolation Ground



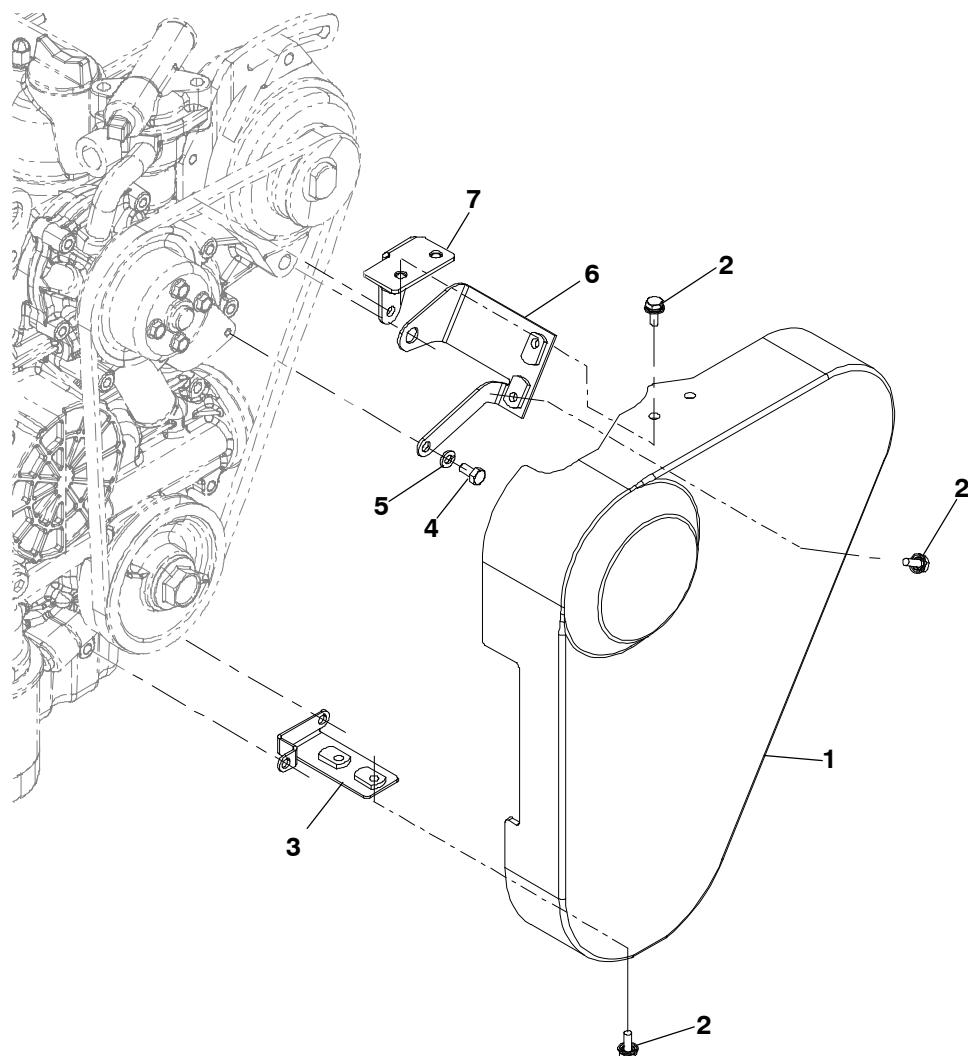
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|----------------------------|
| | 541-0822 | 1 | Kit, Isolated Ground 12V (Includes Parts Marked+ and Instructions) (12V Isolated Gnd Only Parts Included Marked *) | 10 | 862-0026-30 | 4 | *Nut, Hex (5/16-24) |
| | 1 | 333-0732-02 | *Bracket, Solenoid | 11 | 338-4200-02 | 1 | *Harness, Ground |
| 2 | - | 1 | +Sender, Water Temp (See Water Flange Page) | 12 | 853-2010 | 1 | Washer, ET Lock (5/16") |
| 3 | - | 1 | +Sender, Oil Pressure (See Oil System Page) | 13 | 853-2010 | 2 | 12 and 24 Volt Ground |
| 4 | 307-1617 | 1 | *Relay, Solenoid (12V) | 14 | 337-3466-01 | 1 | 12Volt Isolated Ground |
| 5 | 526-0399-58 | 2 | *Washer, Flat (M6) | 15 | 526-2120 | 2 | Strap, Bond |
| 6 | 850-0114-53 | 2 | *Washer, Split Lock (M6) | | 526-2120 | 1 | Washer, ET Lock (5/16") |
| 7 | 862-0026-54 | 2 | *Nut, Hex (M6) | 16 | 800-0026 | 1 | 12 and 24 Volt Ground |
| 8 | 870-0131-01 | 4 | *Nut, ET Hex (#10-32) (12V) | | 800-3030 | 1 | 12Volt Isolated Ground |
| 9 | 853-0016 | 2 | *Washer, ET Lock (5/16") | | 800-3030 | 3 | + Harness, Isolated Ground |
| | | | | 17 | 338-4159 | 1 | + Harness, Isolated Ground |

Mounting Base



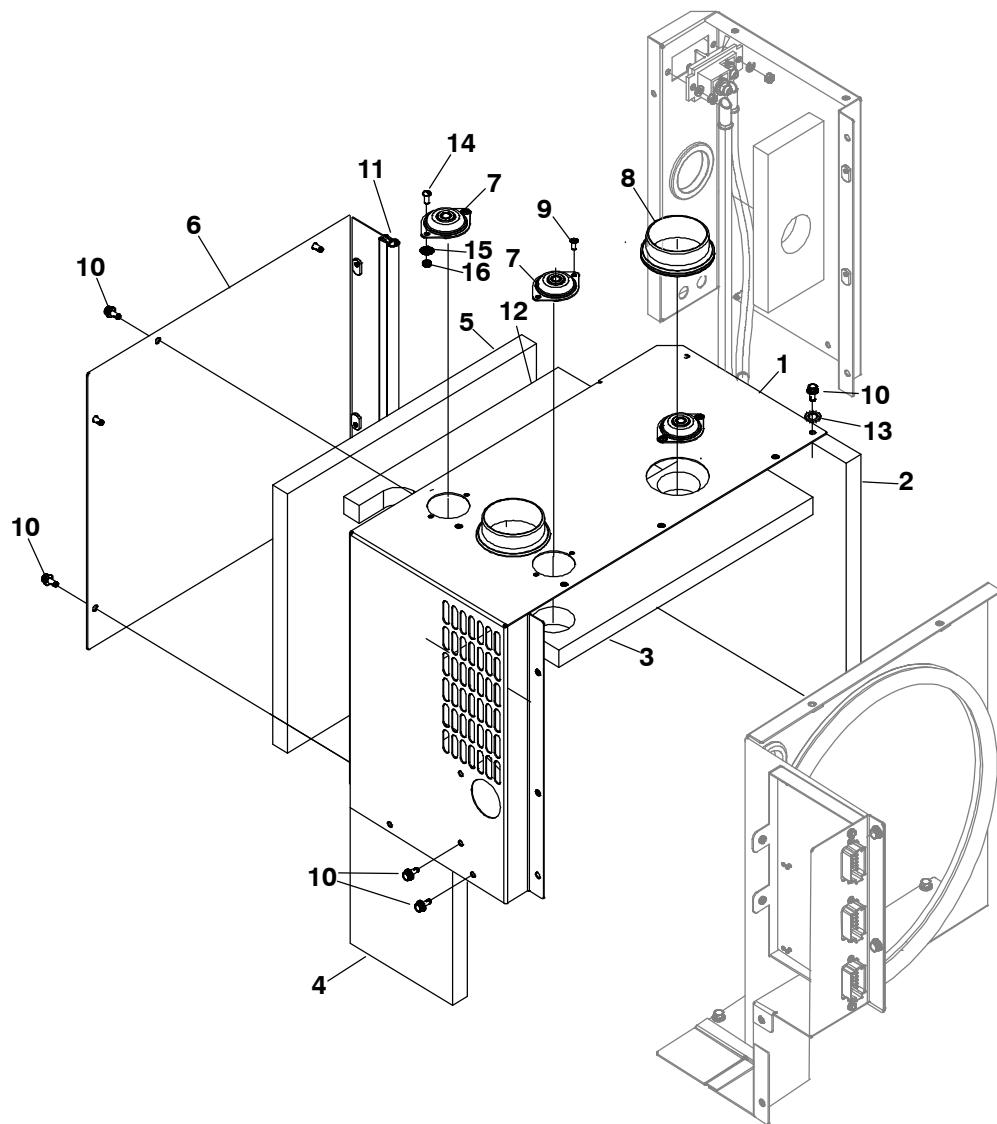
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | |
|---------|-------------|-----------|---|---------|-------------|-------------|---|------------|
| 1 | 403-6785-02 | 2 | Mount, Engine Base, Mounting | 10 | 526-0030 | 4 | Washer, Flat | |
| 2 | 403-6402-03 | 1 | MDKBL | 11 | 405-6516-02 | 2 | Housing, Bracket Spec A-C | |
| | 403-6402-04 | 1 | MDKBM and MDKBN | | 404-0044-02 | 2 | Begin Spec D | |
| 3 | 800-0573 | 4 | Screw, Hex Head Cap (3/8-16 x 2.25") | 12 | 405-6518-02 | 1 | Extension, Mounting Base (MDKBM, MDKBN) | |
| 4 | 526-2340 | 4 | Washer, Flat | 13 | 800-6395-01 | 2 | Screw, Hex Head Sems Stainless (M6 1.0 x 16mm) (MDKBM, MDKBN) | |
| 5 | 870-0550-09 | 4 | Nut, Hex (3/8-16) | | 14 | 818-0231-01 | 6 | Rivet, Pop |
| 6 | 821-6003-02 | 8 | Screw, Hex Head Sems (M8 x 1.25 x 16mm) | | 818-0231-01 | 8 | MDKBL | |
| 7 | 800-3030 | 8 | Screw, Hex Head Cap (M10 x 1.25 x 20mm) | | 818-0231-01 | 8 | MDKBM, MDKBN | |
| 8 | 526-0399-62 | 8 | Washer, Flat (M10) | 15 | 130-5448-02 | 1 | Tube, Coolant | |
| 9 | 402-0728 | 4 | Isolator, Vibration | 16 | 518-0546-42 | 2 | Clamp, Hose | |
| | 402-0728-02 | 4 | MDKBL (Blue Dot, 150lbs) | 17 | 860-0114-63 | 1 | Washer (m6) | |
| | | | MDKBM, MDKBN (Purple Dot, 215lbs) | 18 | 862-0026-54 | 1 | Bolt (M6) | |

Belt Guard



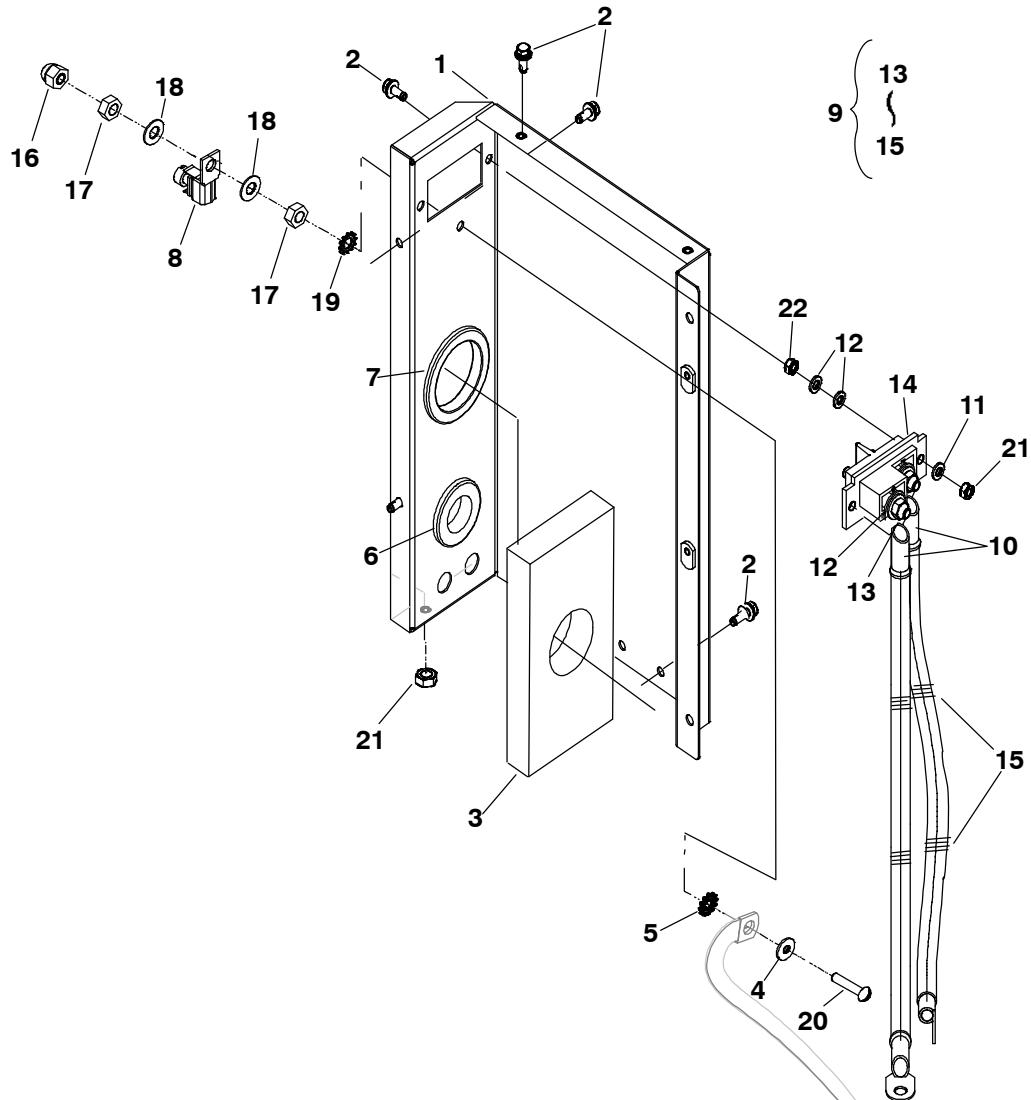
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|--------------------------|
| | 541-0590 | 1 | Kit, Belt Guard | 5 | 850-0114-53 | 1 | Washer, Lock (M6) |
| 1 | 130-4870 | 1 | Guard, Belt | 6 | 130-4945-03 | 1 | Bracket, Belt Guard Side |
| 2 | 821-6002-02 | 6 | Screw, Hex Head Sems (M6 x 1 x .12mm) | 7 | 130-4847-03 | 1 | Bracket, Belt Guard Top |
| 3 | 130-4869-03 | 1 | Bracket, Belt Guard Bottom | | | | * – Unhoused Set Only. |
| 4 | 800-3017-02 | 1 | Screw, Hex Head Cap (M6 x 1 x 12mm) | | | | |

Generator Sound Shield Housing (Spec A-B)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-----------------------------------|---------|-------------|-----------|---|
| 1 | 405-6491-03 | 1 | Panel, Housing | 10 | 821-6006-01 | 3 | Screw, Hex Head Semis Stainless Steel (M6 x 1.0 x 16mm) |
| 2 | 405-6682 | 1 | Insulation, Housing | 11 | 895-0402 | 1 | Seal, Weather (1.25') |
| 3 | 405-6685 | 1 | Insulation, Housing (Top) | 12 | 405-6686 | 1 | Insulation, Housing |
| 4 | 405-6684 | 1 | Insulation, Housing | 13 | 853-2006 | 3 | Washer, Lock ETIT (M6) |
| 5 | 405-6689 | 1 | Insulation, Housing Rear Cover | 14 | 813-0100 | 1 | Screw, Hex Head Cap (M6 x 1 16mm) |
| 6 | 405-6520-03 | 1 | Cover, Rear | 15 | 856-0003 | 1 | Washer Eit (#10) |
| 7 | 402-0681-01 | 3 | Isolator, Vibration | 16 | 870-0131 | 1 | Nut, Sems Eit (#10-32) |
| 8 | 508-1152 | 2 | Grommet, Rubber | | | | |
| 9 | 818-0231-01 | 5 | Rivet, Pop (.315 x 1.77") | | | | |

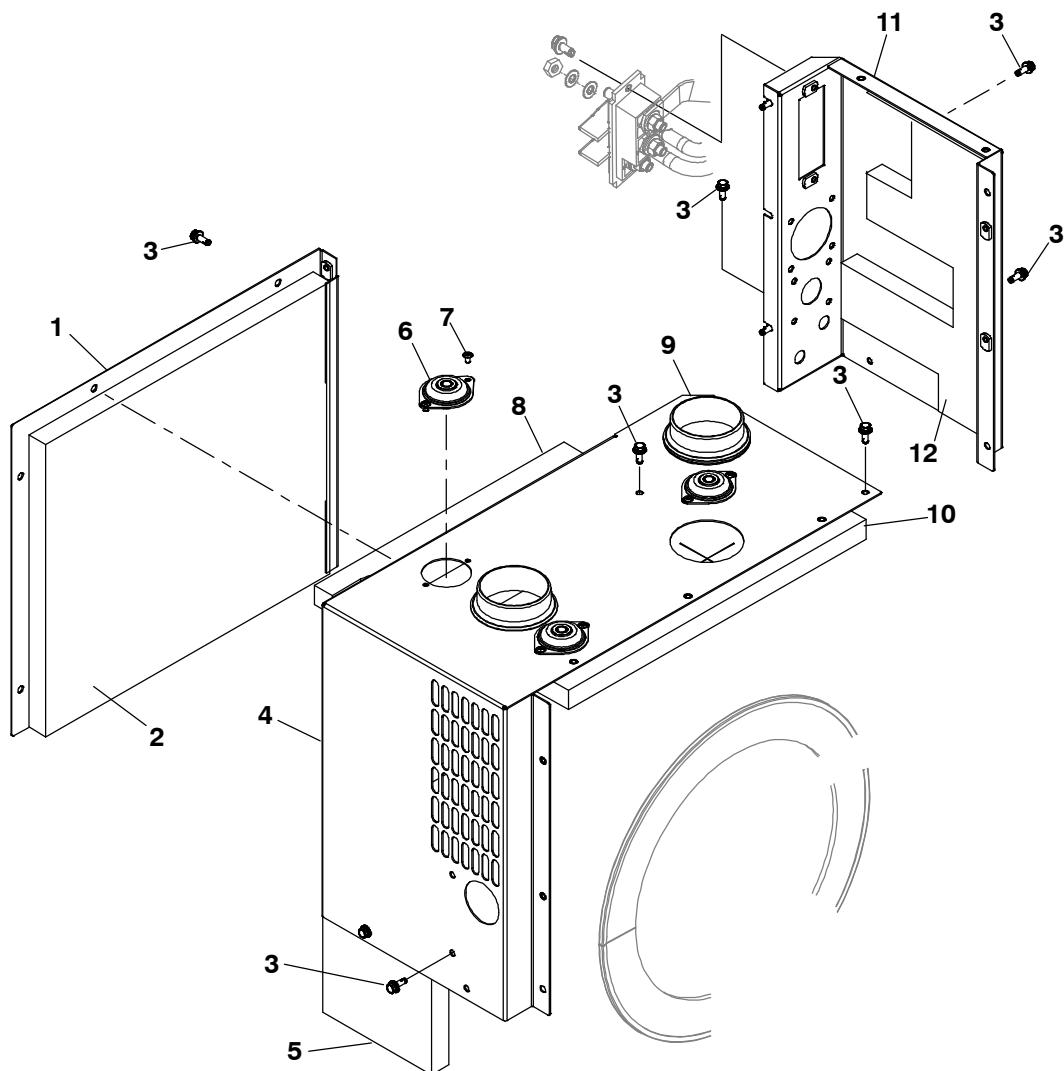
Generator Housing Panel (Spec A-B)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|----------|-----------|--|
| 1 | 332-3771 | 1 | Kit, Terminal Boot (Includes Parts Marked *) | 11 | 526-2081 | 2 | Washer, Flat |
| 2 | 405-6492-03 | 1 | Panel, Housing | 12 | 526-0054 | 4 | #Washer, Flat Brass (5/16") |
| 3 | 821-6006-01 | 7 | Screw, Hex Sems Stainless Steel (M6 x 1 x 16mm) | 13 | 862-0015 | 2 | #Nut, Hex (.313-18) |
| 4 | 332-3408 | 1 | Insulation | 14 | 332-1554 | 1 | #Block, Terminal |
| 5 | 332-1554 | 4 | Washer, Flat (M6) | 15 | 332-1554 | 4 | #Clamp, Loop |
| 6 | 860-2036 | 1 | Washer, EIT (1/4") | 16 | 860-2036 | 1 | Nut, Hex Acorn (1/4-20 Nylon) |
| 7 | 871-0016 | 2 | Grommet, Rubber | 17 | 871-0016 | 2 | Nut, Hex Brass (1/4-20) |
| 8 | 526-0052 | 2 | Grommet, Rubber | 18 | 853-2006 | 2 | Washer, Flat (1/4") |
| 9 | 853-2006 | 2 | Lug, Solderless | 19 | 810-0155 | 1 | Washer, ET (M6) |
| 10 | 338-3577-01 | 1 | Harness, Battery (Includes Parts Marked#) | 20 | 860-2057 | 1 | Screw, Round Head Brass Mach (1/4-20 x 1-1/4") |
| 11 | 332-2112 | 1 | *Red and Black Insulators | 21 | 860-2057 | 3 | Nut, Hex Mach (M6) |
| 12 | 332-2112-01 | 2 | Black | 22 | 871-0025 | 2 | Nut, Full (5/16-18) |
| 13 | | | Red | | | | |

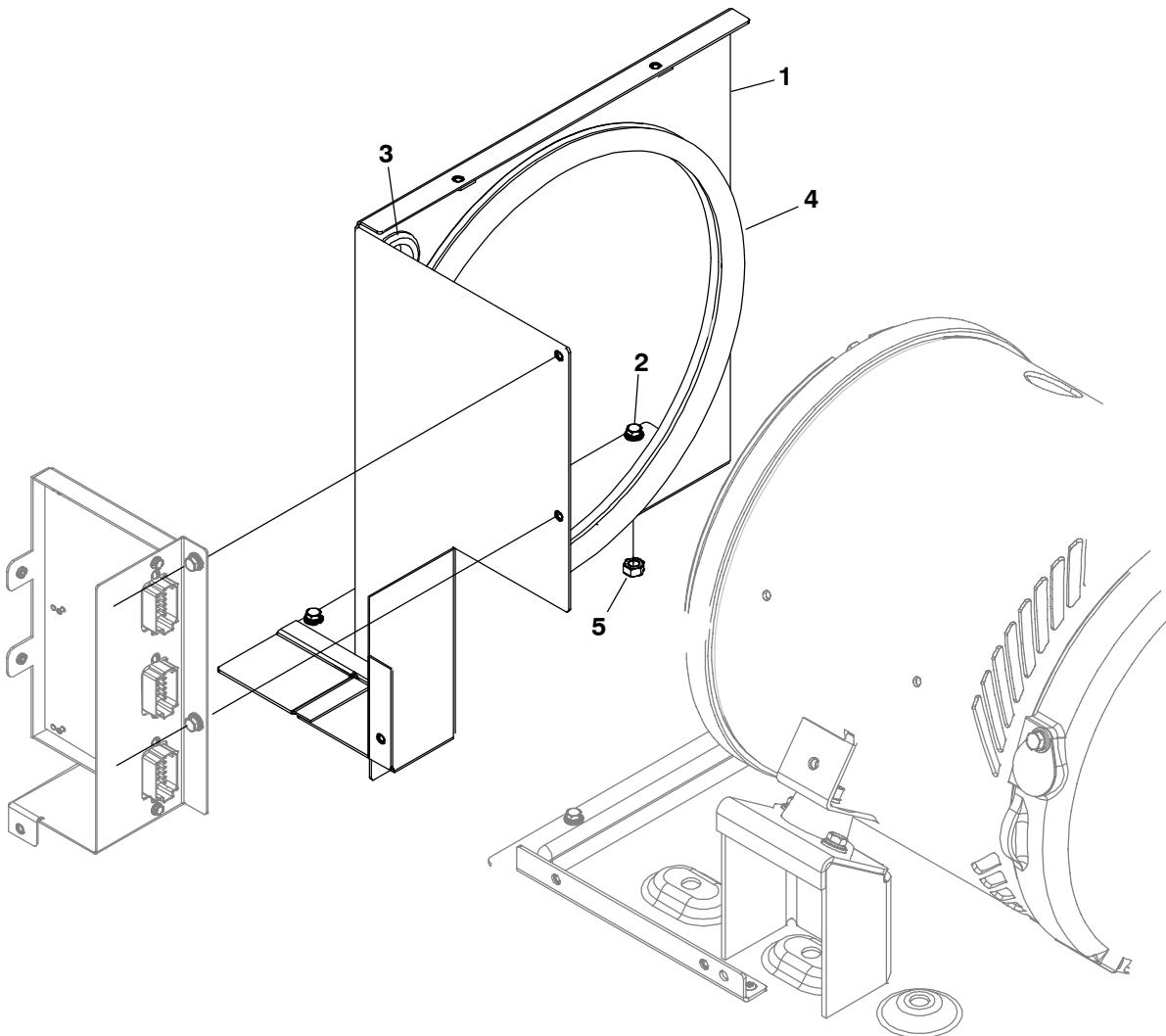
*— Parts Included in Terminal Boot Kit.

Generator Sound Shield Housing (Spec C)



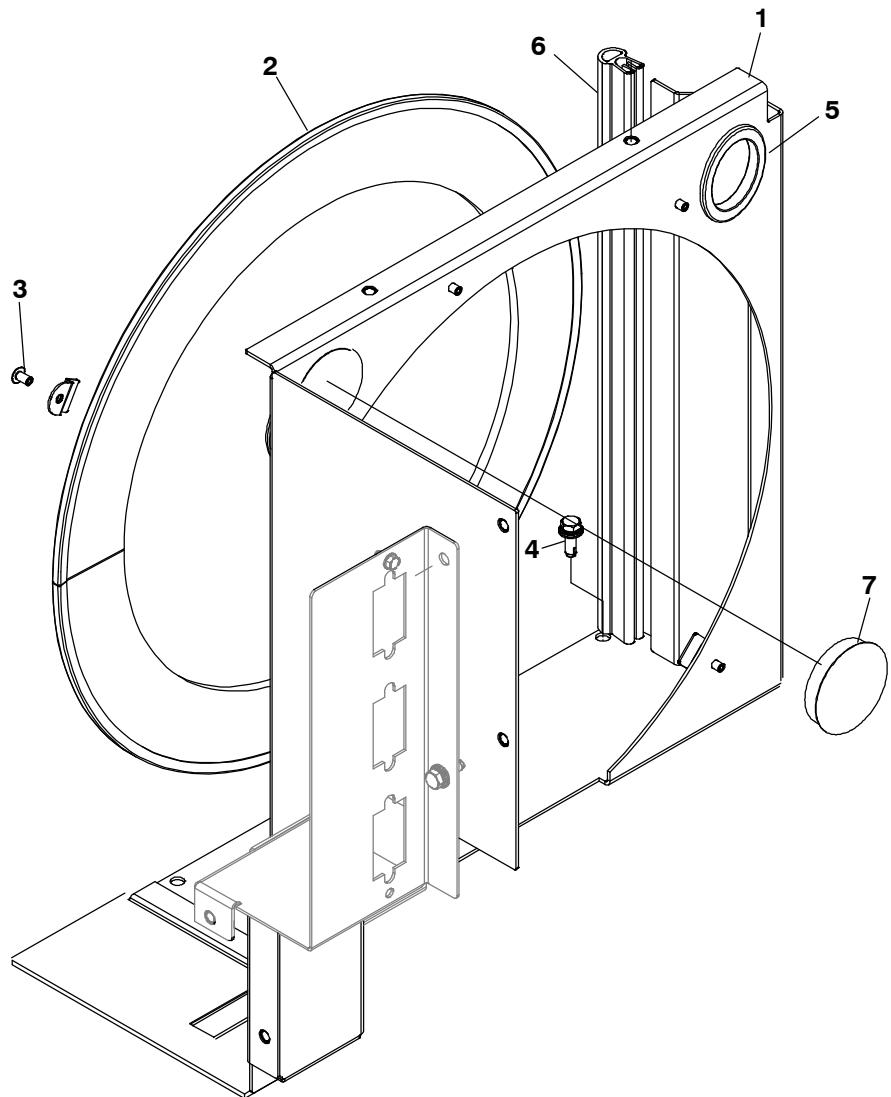
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---------------------------|
| 1 | 405-9047-03 | 1 | Cover, Enclosure (Rear) | 6 | 402-0681-01 | 3 | Isolator, Vibration |
| 2 | 405-9078 | 1 | Insulation, Housing | 7 | 818-0231-01 | 5 | Rivet, Pop (.315 x 1.77") |
| 3 | 821-6006-01 | 16 | Screw, Hex Head Sems Stainless Steel (M6 x 1.0 x 16mm) | 8 | 405-9079 | 1 | Insulation, Housing |
| 4 | 405-6491-03 | 1 | Panel, Housing | 9 | 508-1152 | 2 | Grommet, Rubber |
| 5 | 405-6684 | 1 | Insulation, Housing | 10 | 405-9129 | 1 | Insulation, Housing |
| | | | | 11 | 405-8783-03 | 1 | Panel, Housing |
| | | | | 12 | 405-9631 | 1 | Insulation, Panel |

**Generator Baffle
(Spec A-B)**



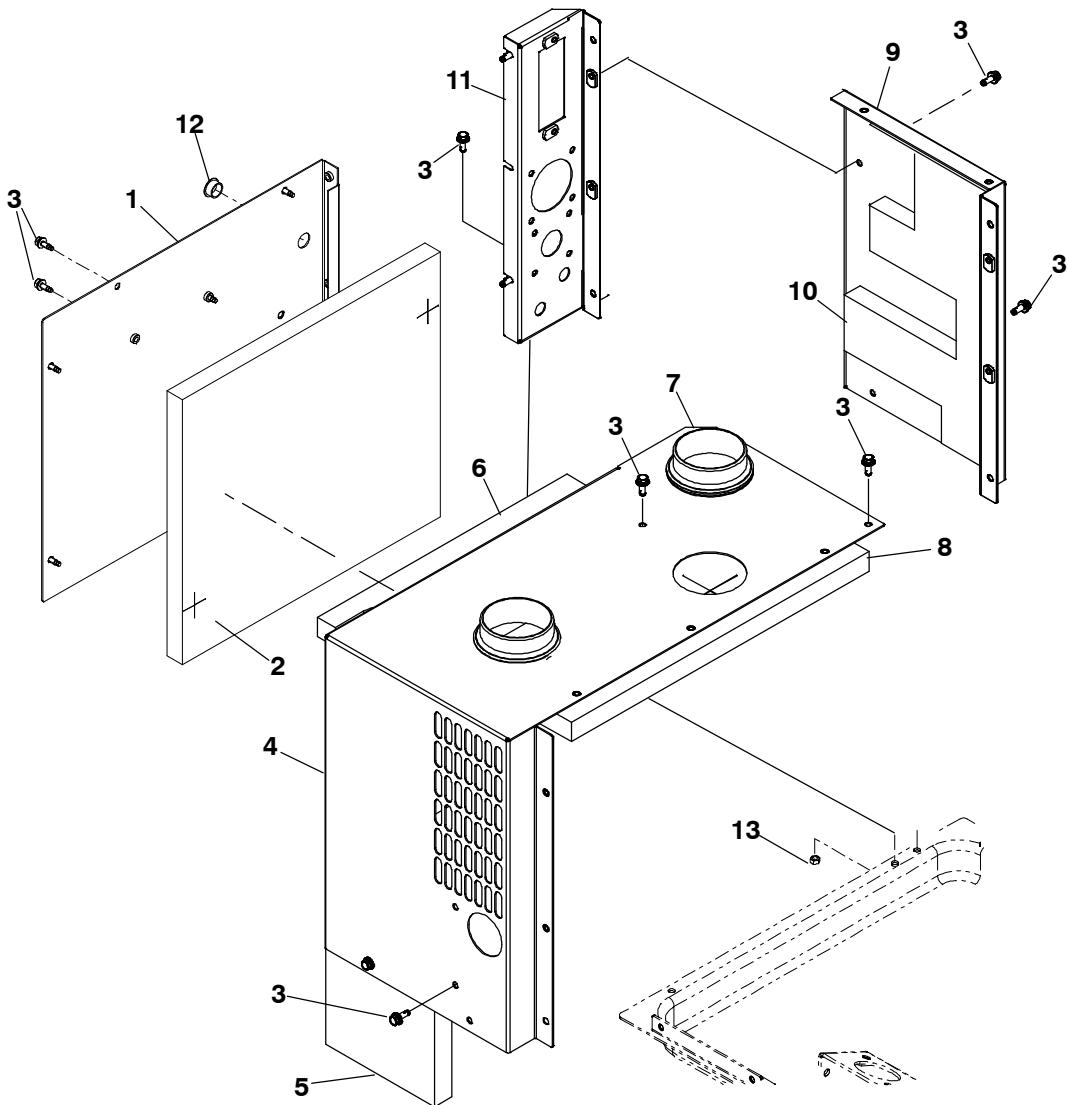
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|----------------------|
| 1 | 405-6517-03 | 1 | Baffle, Generator | 4 | 895-0381 | 1 | Seal, Weather (3.6') |
| 2 | 821-6006-01 | 2 | Screw, Hex Sems Stainless (M6 x 1 x 16mm) | 5 | 860-2057 | 2 | Nut, Hex Mach (M6) |
| 3 | 508-1126 | 1 | Grommet, Rubber | | | | |

**Generator Baffle
(Spec C)**



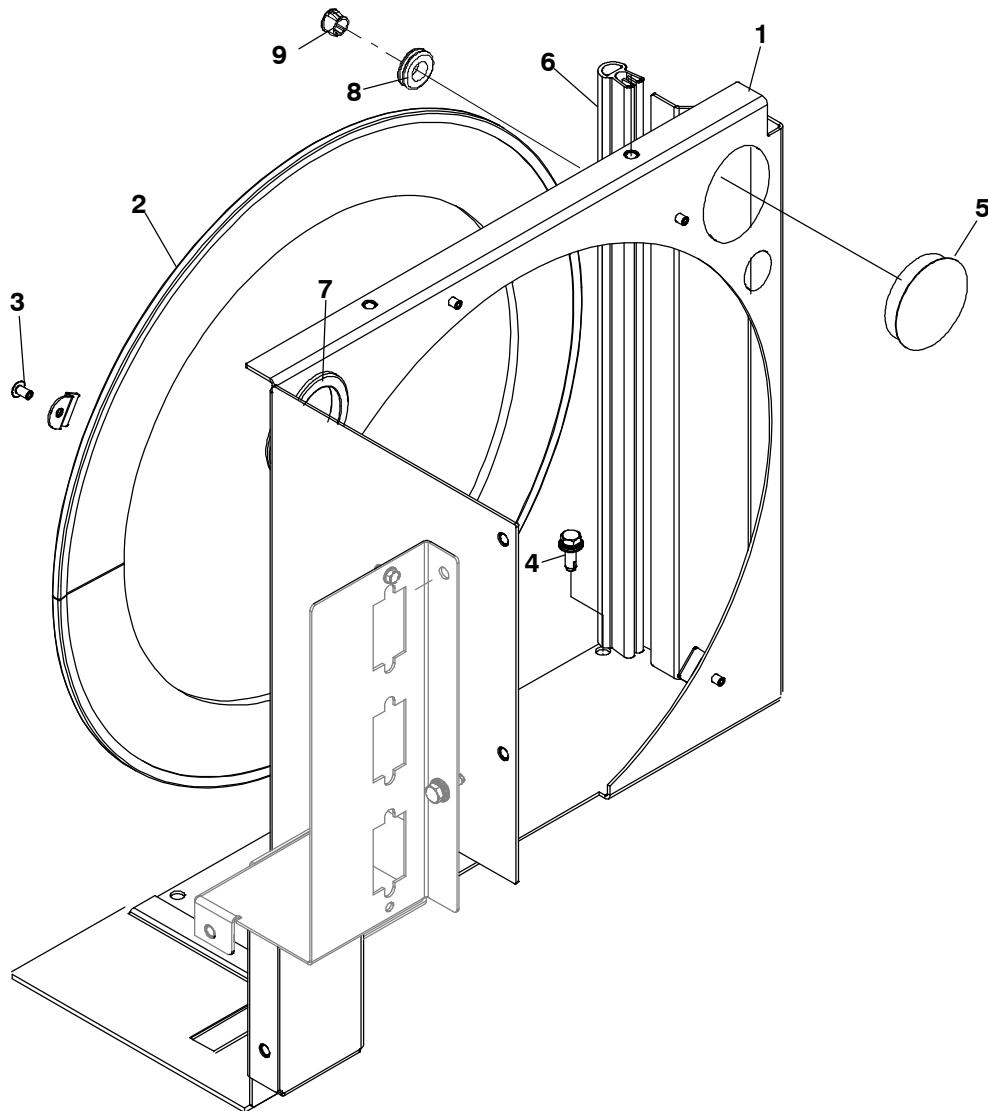
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|-----------------------|
| 1 | 405-9077-03 | 1 | Panel, Air Baffle | 5 | 508-0051 | 1 | Grommet, Rubber |
| 2 | 509-0368 | 1 | Seal, Bush | 6 | 895-0402 | 1 | Seal, Weather (1.23') |
| 3 | 818-0231-01 | 6 | Rivet, Pop | 7 | 517-0138-07 | 1 | Plug, Hole |
| 4 | 821-6006-01 | 5 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | | | | |

**Generator Sound Shield Housing
(Begin Spec D)**



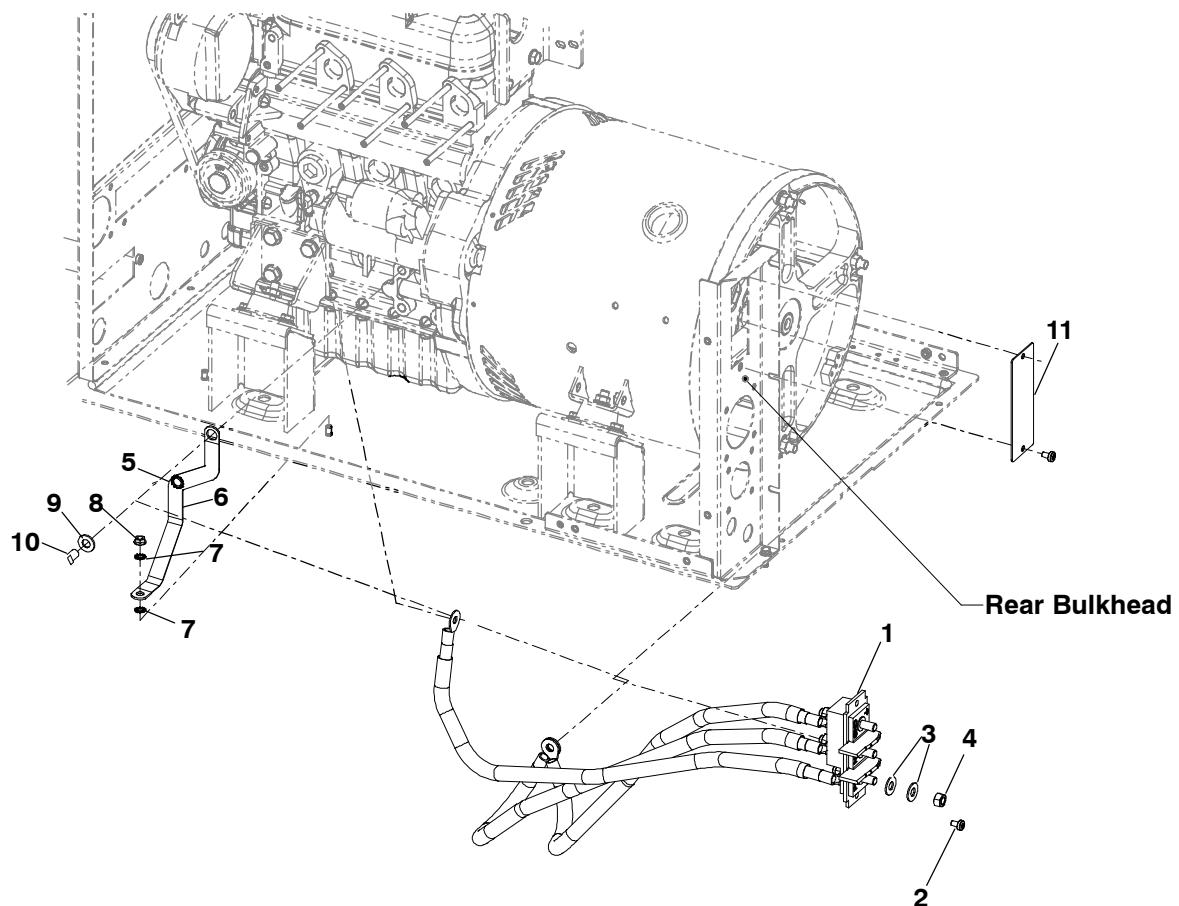
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---------------------|
| 1 | 404-0021-03 | 1 | Cover, Enclosure (Rear) | 7 | 508-1152 | 2 | Grommet, Rubber |
| 2 | 404-0045 | 1 | Insulation, Housing | 8 | 405-9129 | 1 | Insulation, Housing |
| 3 | 800-6395-01 | 16 | Screw, Hex Head Sems Stainless Steel (M6 x 1.0 x 16mm) | 9 | 404-0024-03 | 1 | Panel, Housing |
| 4 | 404-0023-03 | 1 | Panel, Housing | 10 | 405-9631 | 1 | Insulation, Panel |
| 5 | 405-6684 | 1 | Insulation, Housing | 11 | 404-0019-03 | 1 | Panel, Enclosure |
| 6 | 405-9079 | 1 | Insulation, Housing | 12 | 517-0136 | 1 | Plug, Hole |
| | | | | 13 | 860-2057 | 2 | Nut, Hex (M6 x 1mm) |

**Generator Baffle
(Begin Spec D)**



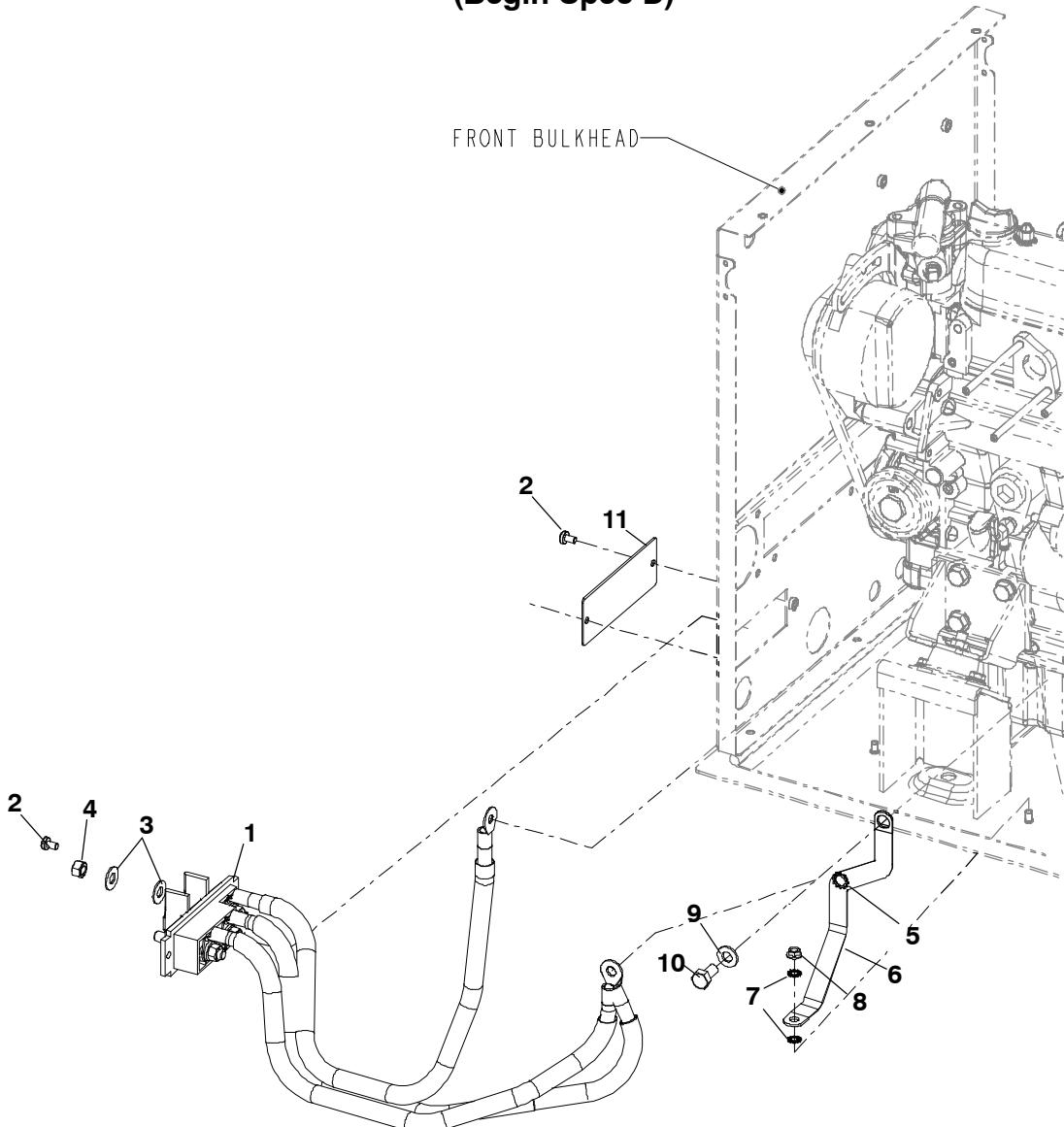
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|-----------------------|
| 1 | 404-0020-03 | 1 | Panel, Air Baffle | 6 | 895-0402 | 1 | Seal, Weather (1.23') |
| 2 | 509-0368 | 1 | Seal, Bush | 7 | 508-1126 | 1 | Grommet, Rubber |
| 3 | 818-0231-02 | 6 | Rivet, Pop | 8 | 508-0021 | 1 | Grommet |
| 4 | 800-6395-01 | 5 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | 9 | 517-0133 | 1 | Plug, Hole |
| 5 | 517-0138-08 | 1 | Plug, Hose | | | | |

**Rear Bulkhead Battery Connection
(Begin Spec D)**



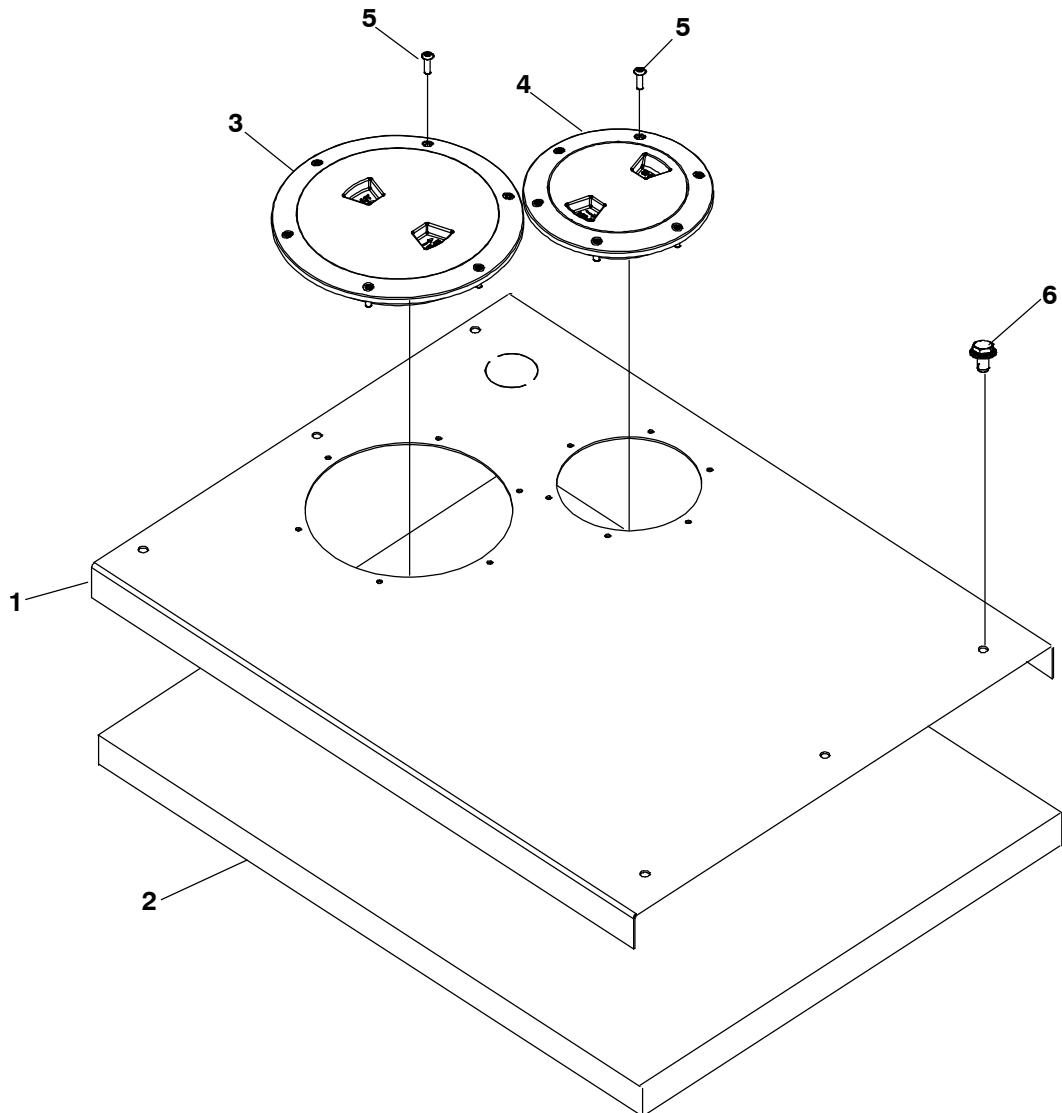
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|----------|-----------|---|---------|-------------|-----------|------------------------|
| 1 | 338-4622 | 1 | Harness, Battery | 5 | 853-2010 | 1 | Washer, Lock EIT (M10) |
| 2 | | | Screw, Pan Head Torx (M6 x 1 x 10mm) | 6 | 337-2785 | 1 | Strap, Bond |
| 823-1002-03 | 4 | 4 | Housed | 7 | 853-2006 | 2 | Washer Lock (M6) |
| 823-1002-03 | 2 | 2 | Unhoused | 8 | 185-6699-02 | 1 | Nut, Hex Flange |
| 3 | 526-0029 | 6 | Washer, Flat (1/2") | 9 | 526-2120 | 1 | Washer, Flat (M10) |
| 4 | 862-0003 | 3 | Nut, Hex Heavy (3/8-16 UNC) | 10 | 800-3030 | 1 | Screw, Hex Head |
| | | | | 11 | 405-9764-02 | 1 | Cover, Access Housed |

**Front Bulkhead Battery Connection
(Begin Spec D)**



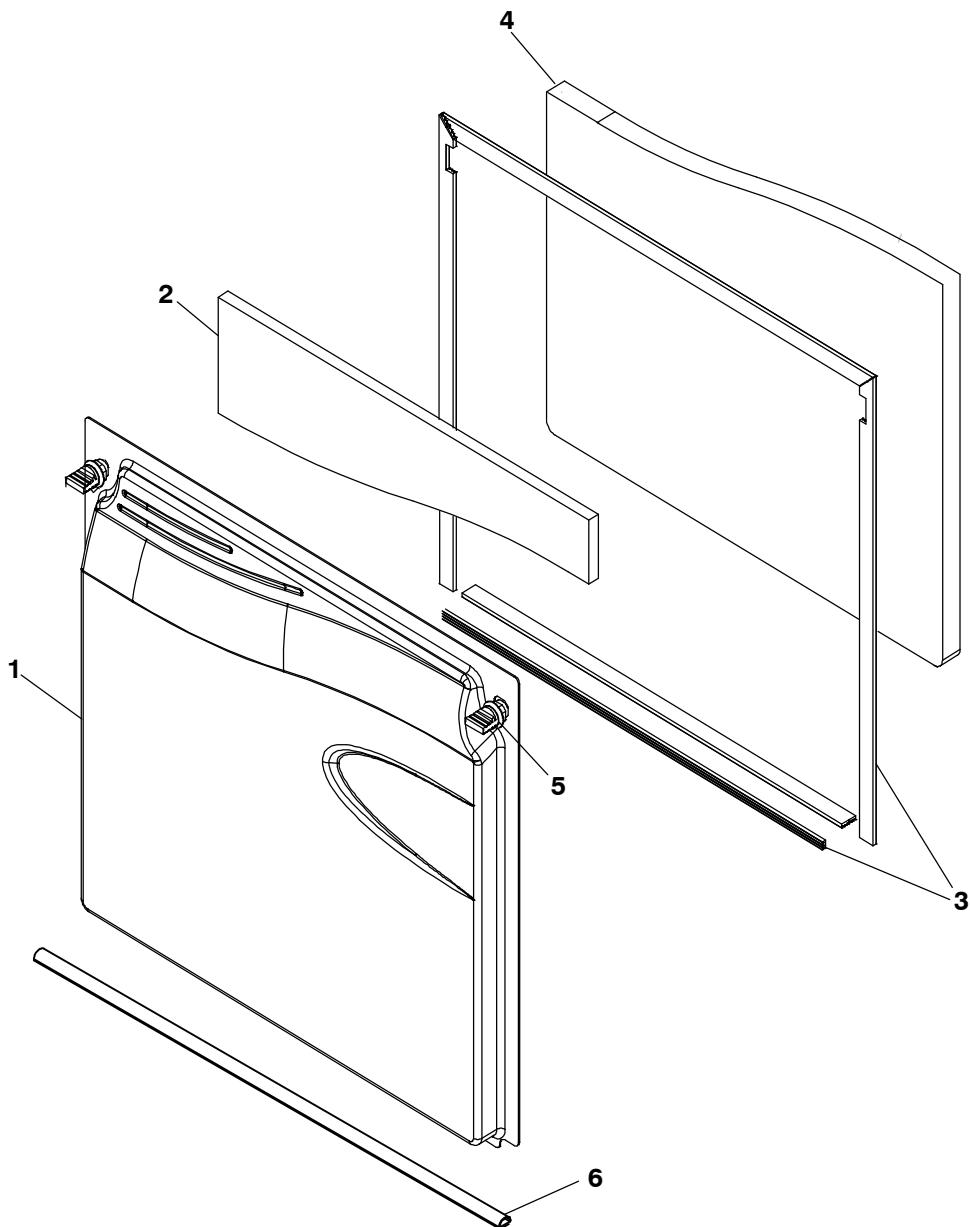
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|----------|-----------|---|---------|-------------|-----------|----------------------|
| 1 | 338-4622 | 1 | Harness, Battery | 6 | 337-2785 | 1 | Strap, Bond |
| 2 | | | Screw, Pan Head Torx (M6 x 1 x 10mm) | 7 | 853-2006 | 2 | Washer Lock (M6) |
| 823-1002-03 | 4 | 4 | Housed | 8 | 185-6699-02 | 1 | Nut, Hex Flange |
| 823-1002-03 | 2 | 2 | Unhoused | 9 | 526-2120 | 1 | Washer, Flat (M10) |
| 3 | 526-0029 | 6 | Washer, Flat (1/2") | 10 | 800-3030 | 1 | Screw, Hex Head |
| 4 | 862-0003 | 3 | Nut, Hex Heavy (3/8-16 UNC) | 11 | 405-9764-02 | 1 | Cover, Access Housed |
| 5 | 853-2010 | 1 | Washer, Lock EIT (M10) | | | | |

Engine Sound Shield (Spec A-C)



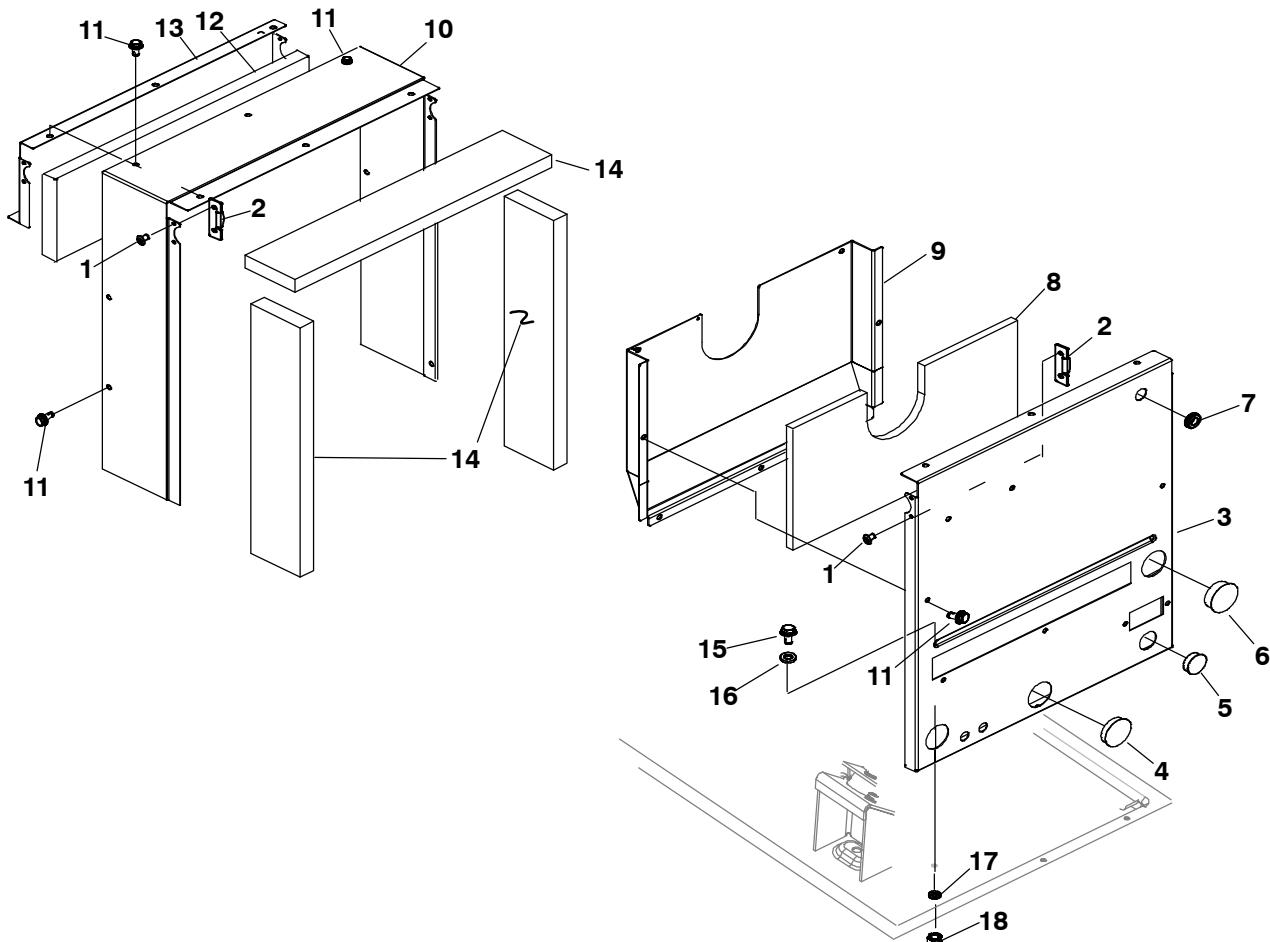
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|--|
| | | | Kit, Sound Shield (Includes + for next 3 Pages) | 2 | 405-6688 | 1 | +Insulation, Roof |
| 541-0588 | 1 | 1 | MDKBL, | 3 | 405-6340 | 1 | +Cover, Access |
| 541-0589 | 1 | 1 | MDKBM MDKBN | 4 | 405-6709 | 1 | +Cover, Access |
| 405-6959 | 1 | 1 | Kit, Panel Roof | 5 | 818-0239-03 | 12 | +Rivet, Pop |
| 1 | 405-6524-03 | 1 | +Panel, Roof | 6 | 821-6006-01 | 6 | +Screw, Hex Head Sems (M6 x 1 x 16mm) |

Engine Panel Sound Shield (Spec A-C)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|-------------------------|------------|-------------|--------------|---|
| 1 | 405-6957 | 1 | Kit, Door (Single Door) | 6 | 895-0411 | 1 | +Weather, Seal (Spec C 2.5') |
| 2 | 405-6519-03 | 1 | +Door, Sound Shield | | | | |
| 3 | 405-6797 | 1 | +Insulation, Door | | | | |
| 4 | 895-0395 | 1 | +Seal, Weather (15.6') | | | | |
| 5 | 405-6687 | 1 | +Insulation, Door | | | | |
| 5 | 406-0958 | 2 | +Latch, Door (1/4 Turn) | | | | |
| | | | | | | | + - Parts Included in Sound Shield Kit Listed on Engine Sound Shield Page. |

Engine Panel Sound Shield (Spec A-C)

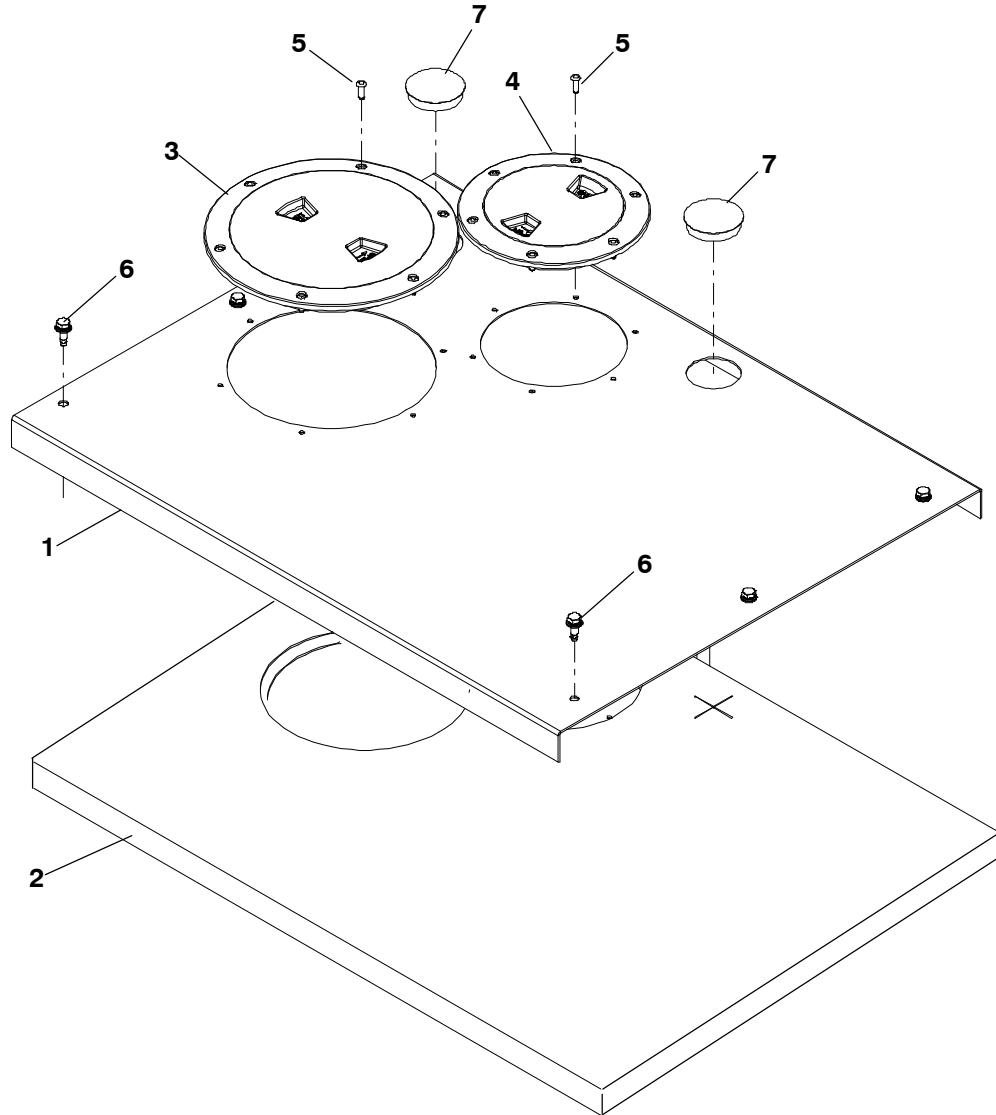


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|----------------|----------------|-------------------------|---|
| | 405-6958 | 1 | Kit, Front Panel (Includes Parts Marked *) | | 10 405-6521-03 | 1 | >Panel, Roof Extension |
| | 405-6960 | 1 | Kit, Panel Duct (Includes Insulation and Panel) | 11 | | | Screw, Hex Sems Stainless (M6 x 1 x 16mm) MDKBL |
| | 405-6961-01 | 1 | Kit, Roof Extension Panel (Included Catch & Rivets +) | 821-6006-01 | 17 | | MDKBM, MDKBN |
| | 405-6961-02 | 1 | Kit, Roof Extension Panel (Included Catch & Rivets >) | 821-6006-01 | 24 | | >+Panel, Roof End Insulation |
| 1 | 818-0231-01 | 8 | >+*Rivet, Pop | 12 405-4445-03 | 1 | +>Panel, Roof End | +Panel, Roof End |
| 2 | 406-1032 | 4 | >+*Catch, Door | 13 405-6523-03 | 1 | >Insulation, Panel Roof | Extension (MDKBM, MDKBN) |
| 3 | | | *Panel, Front | 14 405-6811 | 3 | | Screw, Hex Head Cap (M6 x 1x 16mm) (Spec A) |
| | 405-6513-03 | 1 | Spec A-B | 15 800-6033 | 1 | | Washer, ET (M6) (Spec A) |
| | 405-8825-03 | 1 | Spec C | 16 853-2006 | 1 | | Washer, Lock (M6)(Spec A) |
| 4 | 517-0138-07 | 1 | *Plug, Hole | 17 850-2056 | 3 | | Nut, Hex (M6) |
| 5 | 517-0138-04 | 1 | *Plug, Hole | 18 860-2057 | 3 | | Spec A-B |
| 6 | 517-0138-09 | 1 | *Plug, Hole (Spec A) | 185-6699-02 | 3 | | Spec C |
| 7 | 508-0021 | 1 | *Grommet, Rubber | | | | |
| 8 | | | Insulation, Duct | | | | |
| | 405-6700 | 1 | Spec A-B | | | | |
| | 405-9616 | 1 | Spec C | | | | |
| 9 | | | Panel, Duct | | | | |
| | 405-6515-03 | 1 | Spec A-B | | | | |
| | 405-9615-03 | 1 | Spec C | | | | |

* – Parts Included in Front Panel Kit.

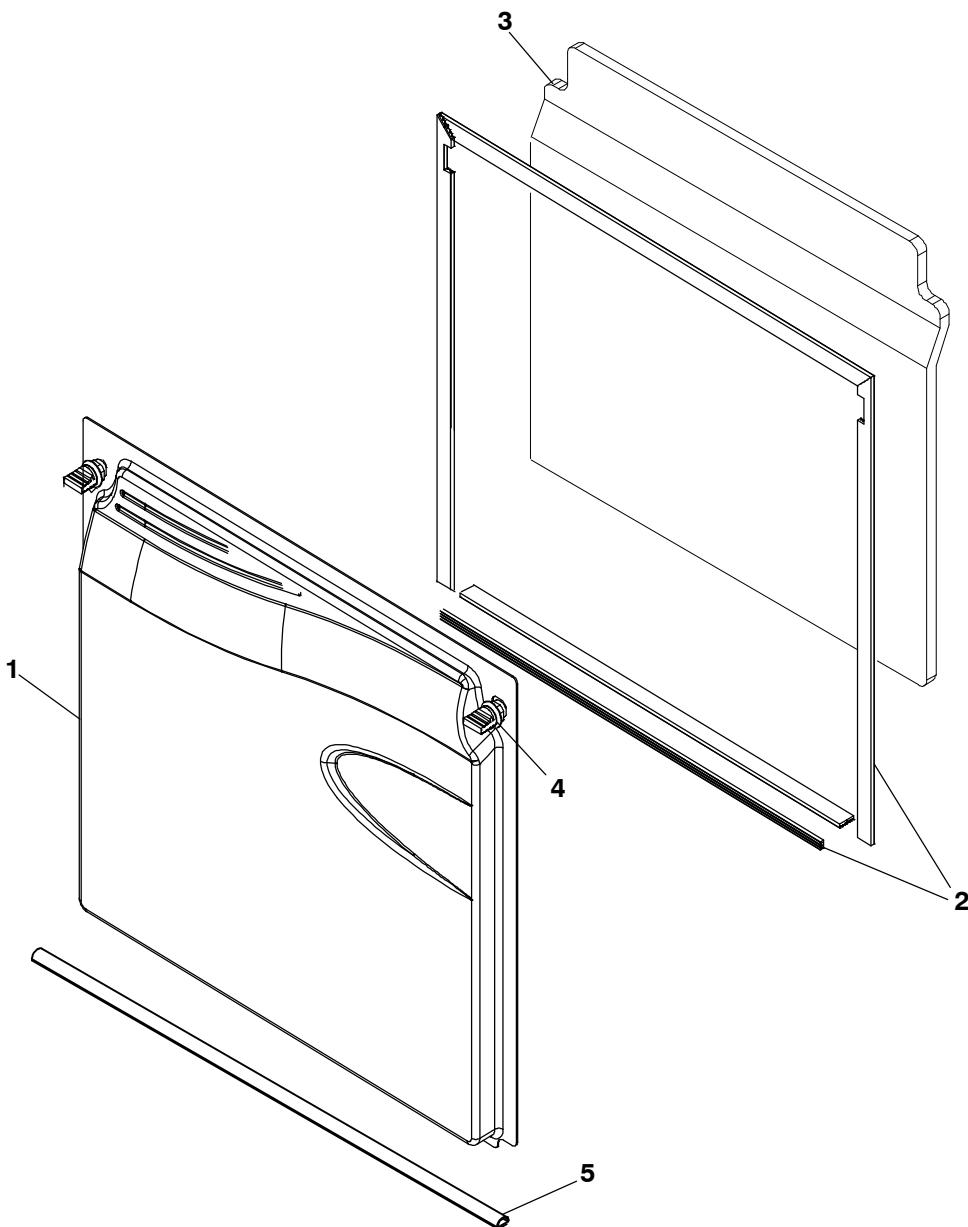
+> – Parts Included in Roof Extension Panel Kit.

Engine Sound Shield (Begin Spec D)



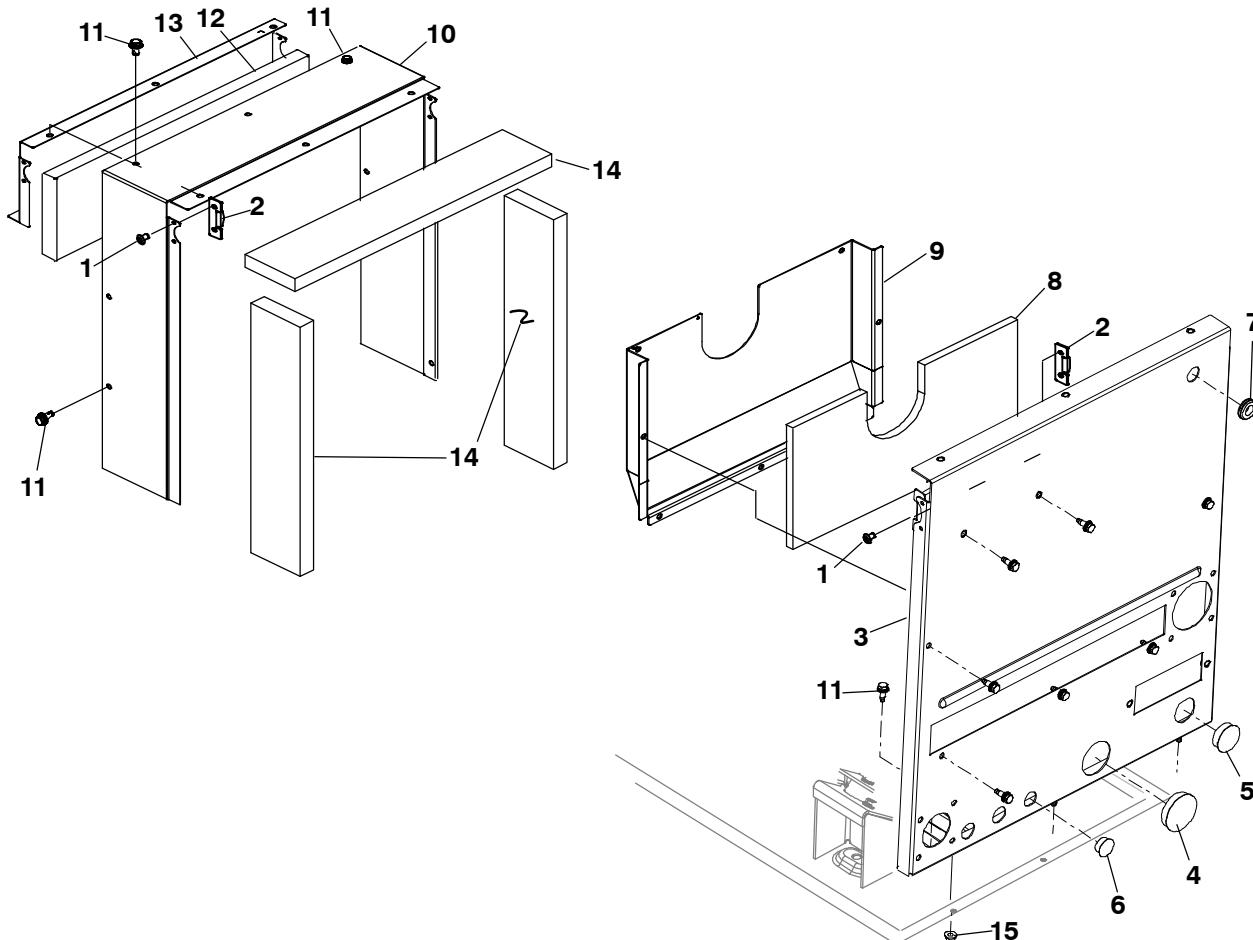
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---------------------|------------|-------------|--------------|----------------------|
| 1 | 404-0016-03 | 1 | Panel, Roof | 6 | 800-6395-01 | 6 | Screw, Hex Head Sems |
| 2 | 405-6688 | 1 | Insulation, Roof | | A030B088 | 6 | Spec D-E |
| 3 | 405-6340 | 1 | Cover, Access | | | | Begin Spec F |
| 4 | 405-6709 | 1 | Cover, Access | 7 | 517-0392-19 | 2 | Plug, Hole |
| 5 | 818-0239-03 | 12 | Rivet, Pop | | | | |
| | A030F177 | 12 | Spec D-E | | | | |
| | | | Begin Spec F | | | | |

Engine Panel Sound Shield (Spec D)



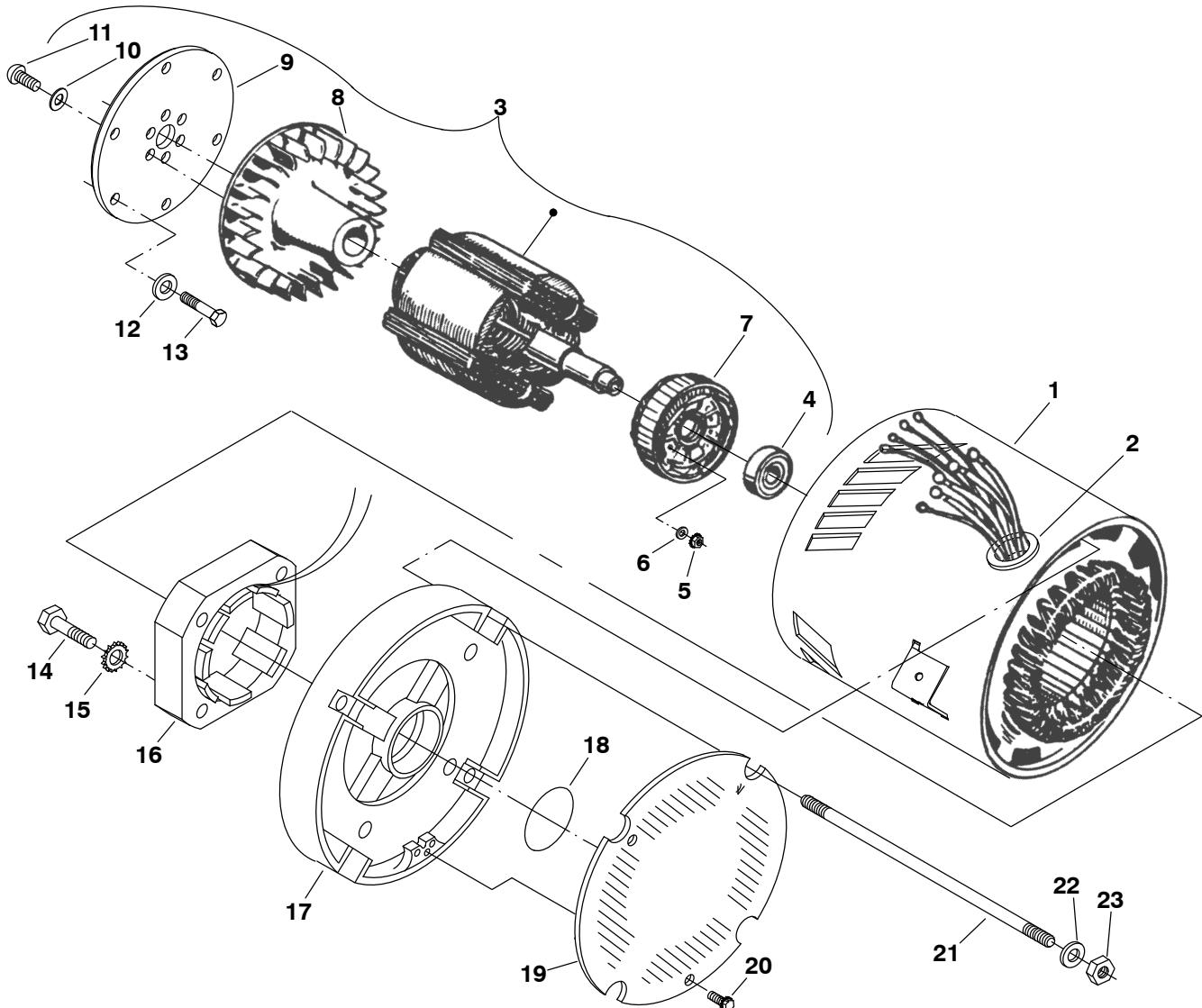
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|------------------------|------------|-------------|--------------|----------------------|
| 1 | 405-9751-03 | 1 | Door, Sound Shield | 406-0958 | | | (Knob) |
| 2 | 895-0395 | 1 | Seal, Weather (27.5') | A030B824 | | | (Slotted) |
| 3 | 405-9568 | 1 | Insulation, Door | 5 | 895-0411 | 1 | Weather, Seal (4.1') |
| 4 | | 2 | Latch, Door (1/4 Turn) | | | | |

Engine Panel Sound Shield (Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------------------|--------------|--|-------------|-------------|--------------|--|
| 1 | 818-0231-01 A030F179 | 8 | Rivet, Pop Spec D-E Begin Spec F | 11 | | | Screw, Hex Sems Stainless (M6 x 1 x 16mm) MDKBL Spec D-E |
| 2 | 406-1032 | 4 | Catch, Door | 800-6395-01 | 19 | | MDKBM, MDKBN Spec D-E |
| 3 | 404-0012-03 | | Panel, Front | 800-6395-01 | 26 | | MDKBL Begin Spec F |
| 4 | 517-0138-07 | 1 | Plug, Hole | A030B088 | 19 | | MDKBM, MDKBN |
| 5 | 517-0138-04 | 1 | Plug, Hole | A030B088 | 26 | | Begin Spec F |
| 6 | 517-0136 | 1 | Plug, Hole | 12 | 405-4445-03 | 1 | Panel, Roof End Insulation |
| 7 | 508-0021 | 1 | Grommet, Rubber | 13 | 404-0014-03 | 1 | Panel, Roof End |
| 8 | 405-9616 | 1 | Insulation, Duct | 14 | 405-6811 | 3 | Insulation, Panel Roof Extension (MDKBM, MDKBN) |
| 9 | 404-0017-03 | 1 | Panel, Duct | 15 | 185-6699-02 | 3 | Nut, Hex (M6) |
| 10 | 404-0015-03 | 1 | Panel, Roof Extension (MDKBM and MDKBN) | | | | |

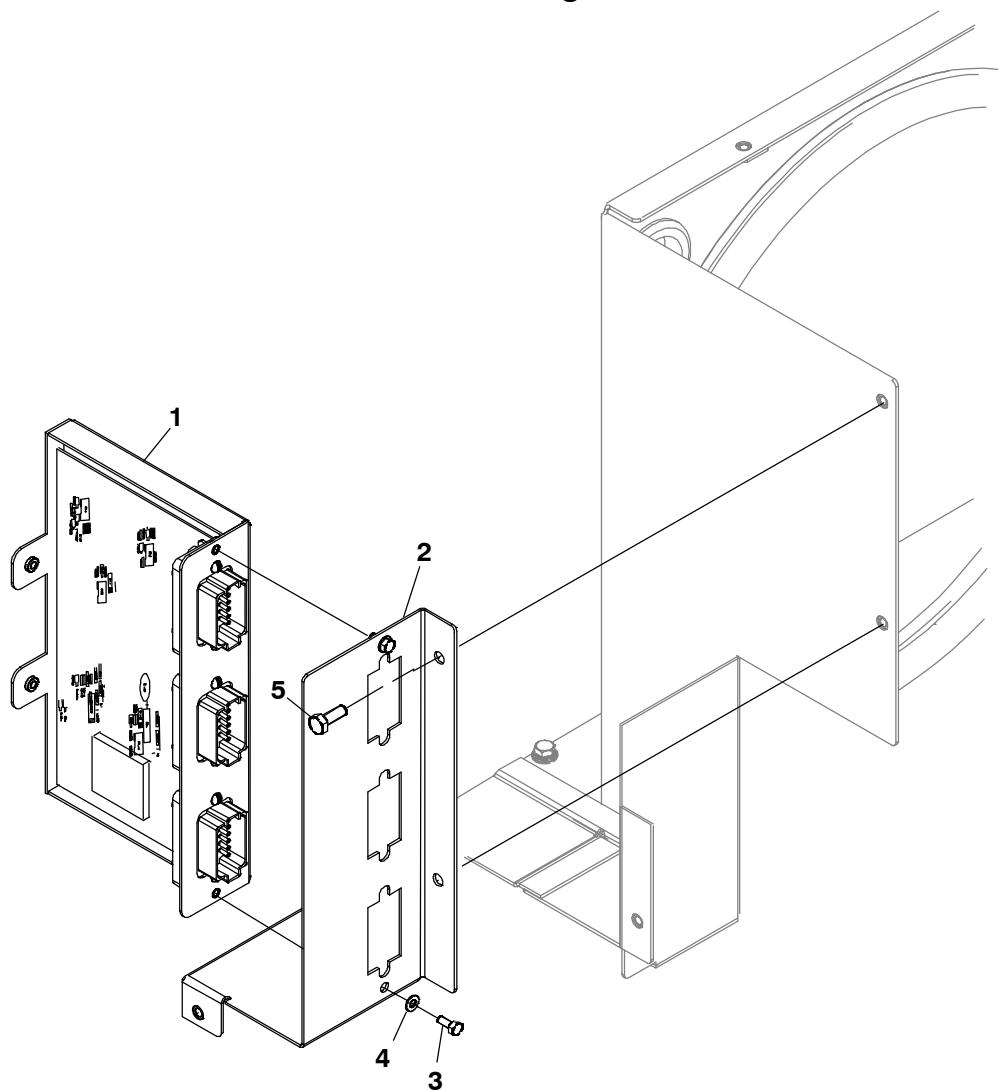
Generator



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|---|
| 1 | | | Stator, Generator (Includes Grommet) | 12 | 526-0399-41 | 6 | Washer, Flat (.312) |
| | 220-4600-01 | 1 | MDKBL | 13 | 800-2054 | 6 | Screw, Hex Head Cap (M8 x 1.25 x 14mm) |
| | 220-4600-03 | 1 | MDKBM, MDKBN | 14 | 815-0843 | 4 | Screw, Hex Head Thread Form (1/4") |
| 2 | 508-0183 | 1 | Grommet | 15 | 853-0013 | 4 | Washer, Lock ET (1/4") |
| 3 | | | Rotor Assy, Generator (Includes Parts Marked *) | 16 | 220-4413-02 | 1 | Stator, Exciter |
| | 201-3565-01 | 1 | MDKBL | 17 | 211-0465-02 | 1 | Endbell |
| | 201-3565-03 | 1 | MDKBM, MDKBN | 18 | 509-0094 | 1 | Seal, O'Ring |
| 4 | 510-0112 | 1 | *Bearing, Ball | 19 | 234-1068-03 | 1 | Cover, Endbell |
| 5 | 870-0131-01 | 2 | *Nut, ET Hex (#10-32) | 20 | 815-0181 | 3 | Screw, ET Hex Head Thread Cutting (#10-32 x 1/2") |
| 6 | 526-0399-11 | 2 | *Washer, Flat (#10) | 21 | | | Stud |
| 7 | 201-3515-02 | 1 | *Rotor, Exciter | | 520-1002-06 | 4 | MDKBL |
| | 358-0069 | 1 | Diode | | 520-1004-02 | 4 | MDKBM, MDKBN |
| | 358-0070 | 1 | Rectifier | 22 | 526-0399-42 | 4 | Washer, Flat (.375") |
| 8 | 205-0255 | 1 | *Fan, Generator | 23 | 862-0026-07 | 4 | Nut, Hex (3/8-16") |
| 9 | 232-2826 | 1 | *Disk, Rotor Drive | | | | |
| 10 | 526-0399-42 | 6 | *Washer, Flat (3/8") | | | | |
| 11 | 815-0917-04 | 6 | *Screw, Button Head Torx (3/8-16 x 1") | | | | |

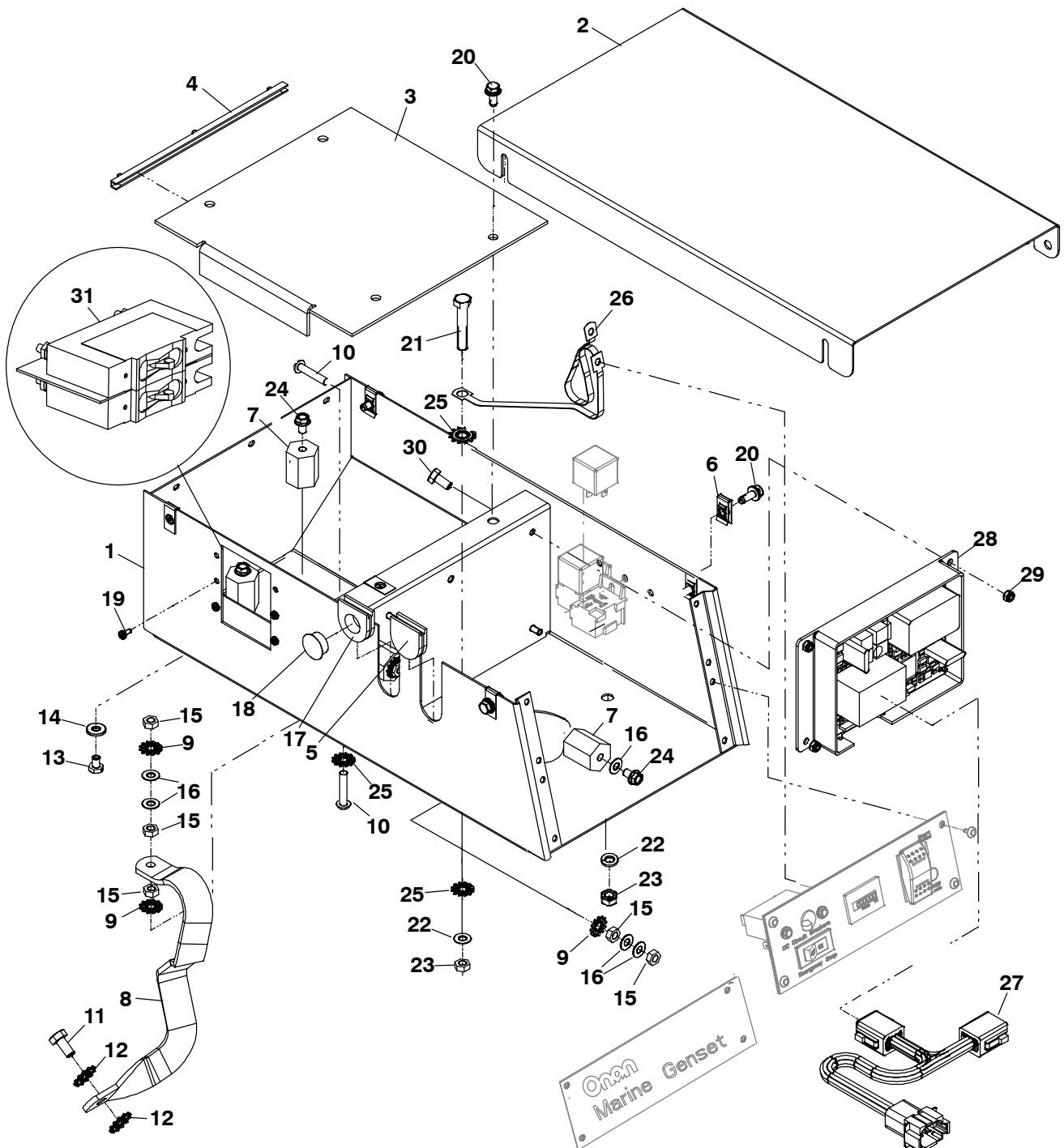
* – Parts Included in Rotor Assy.

PCB Mounting



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|----------------------|------------|-------------|--------------|---------------------------|
| 1 | 300-6396 | 1 | PCB, Control | 4 | 526-2050 | 2 | Washer, Flat (M4) |
| 2 | 404-0022-03 | 1 | Panel, UMC Mounting | 5 | 800-6033 | 3 | Screw, Hex Head Sems |
| 3 | 800-3042 | 2 | Screw, Hex (M4 x 10) | | | | Stainless (M6 x 1 x 16mm) |

Control Box (Spec A-C)

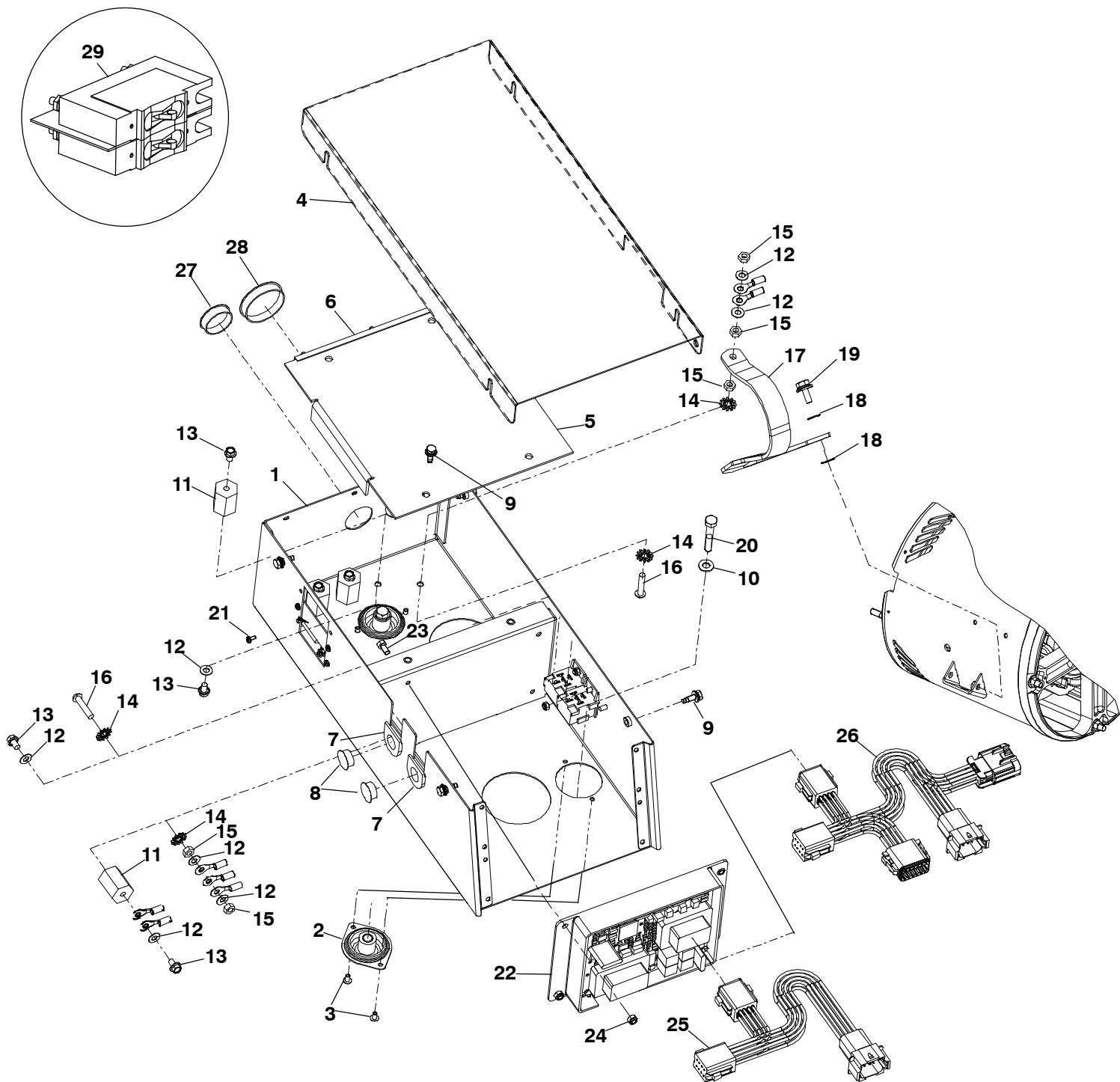


Control Box (Spec A-C)

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|---|------------|-------------|--------------|---|
| 1 | 319-5503-03 | 1 | Control, Box | 20 | 821-6006-01 | 6 | Screw, Hex Head Sems Stainless (M6 x 1 x 16mm) |
| 2 | 319-4370-03 | 1 | Cover, Control | 21 | 800-6062 | 3 | Screw, Hex Head Cap (M8 x 1.25 x 45mm) |
| 3 | 319-4404 | 1 | Cover, Control | 22 | 850-2058 | 3 | Washer, Split Lock Stainless (M8) |
| 4 | 332-3750 | 1 | Guide, Card | 23 | 860-2058 | 3 | Nut, Hex Stainless (M8 x 1.25mm) |
| 5 | 508-1105-01 | 1 | Grommet, Remote | 24 | | | Screw, Hex Flange (1/4-20 x 3/8") |
| 6 | 870-2228 | 6 | Clip, Nut | | | | Neg Gnd Single Phase |
| 7 | | | Standoff, Insulator | | | | Neg Gnd Three Phase |
| | 332-2370 | 2 | | | | | ISO Gnd Single Phase |
| | 332-2370 | 3 | | | | | ISO Gnd Three Phase |
| | 332-2370 | 3 | | | | | ISO Gnd Single Phase |
| | 332-2370 | 4 | | | | | ISO Gnd Three Phase |
| 8 | 337-2795 | 1 | Strap, Bond | | 821-0009 | 2 | Neg Gnd Single Phase |
| 9 | | | Washer, Lock (1/4") | | 821-0009 | 3 | Neg Gnd Three Phase |
| | 856-0006 | 4 | | | 821-0009 | 3 | ISO Gnd Single Phase |
| | 856-0006 | 3 | | | 821-0009 | 4 | ISO Gnd Three Phase |
| 10 | | | Screw, Brass (1/4-20 x 1.25") | 25 | 856-0008 | 2 | Washer, EIT(5/16") |
| | 810-0155 | 2 | | 26 | 337-3508 | 1 | Strap, Bond |
| | 810-0155 | 1 | | 27 | 338-4491 | 1 | Harness, Accessory (NIM) PCB (NIM) |
| 11 | 800-3017-18 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 16mm) | 28 | | | J1939 |
| 12 | 853-0016 | 2 | Washer, Lock | 29 | 870-2062 | 4 | * SmartCraft |
| 13 | | | Screw, Hex Head Cap (1/4-20 x .375") | 30 | 800-6002 | 4 | Nut, Nylon Lock (M5) |
| | 800-0310-01 | 2 | | 31 | | | Screw, Hex Head Sems (M5 x .8 x 10mm) |
| | 800-0310-01 | 3 | | | | | Breaker, Circuit MDKBL |
| 14 | | | Washer, Flat (1/4-20) | | 320-1689-04 | 1 | 30Amps |
| | 526-0399-13 | 2 | | | 320-1689-05 | 1 | 35Amps |
| | 526-0399-13 | 3 | | | 320-1689-12 | 1 | 55Amps |
| 15 | | | Nut, Hex Brass (1/4-20) | | | | MDKBM |
| | 871-0016 | 5 | | | 320-1689-06 | 1 | 40Amps |
| | 871-0016 | 3 | | | 320-1689-07 | 1 | 45Amps |
| 16 | | | Washer, Flat Brass (1/4") | | 320-1689-08 | 1 | MDKBN |
| | 526-0052 | 4 | | | 320-1689-09 | 1 | 50Amps |
| | 526-0052 | 3 | | | 320-1689-12 | 1 | 55Amps |
| 17 | 508-1105 | 1 | Grommet, Remote | | | | 70Amps |
| 18 | 517-0136 | 1 | Plug, Hole | | | | |
| 19 | | | Screw, Pan Head XREC (6-32 x .31) | | | | |
| | 815-0550-01 | 4 | | | | | |
| | 815-0550-01 | 6 | | | | | |
| | | | Single Phase | | | | |
| | | | Three Phase | | | | |

SmartCraft is a trademark of the Brunswick Corporation.

Control Box (Begin Spec D)

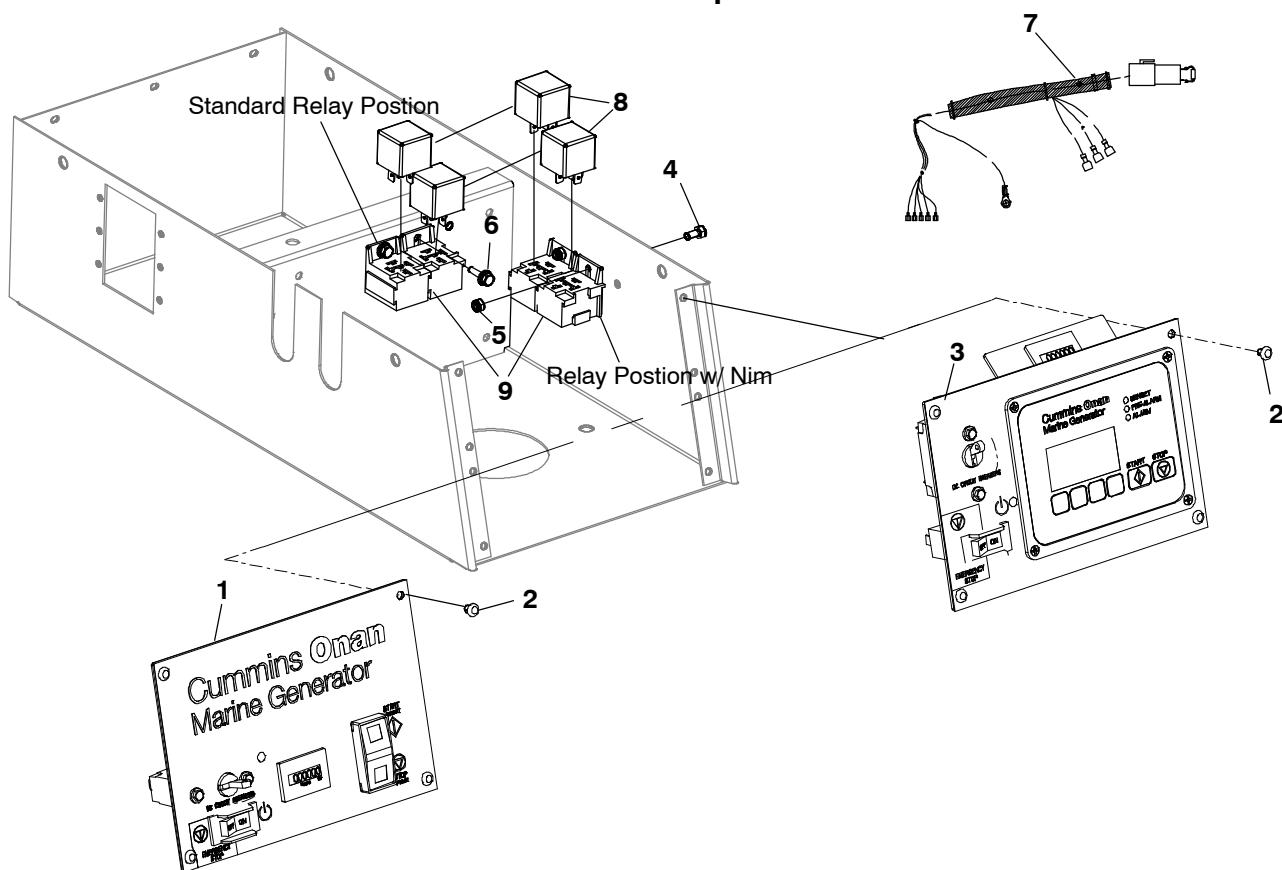


Control Box (Begin Spec D)

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|-------------|-------------|--------------|--|
| 1 | 319-6227-03 | 1 | Control, Box | 20 | 800-6062 | 3 | Screw, Hex Head Cap (M8 x 1.25 x 45mm) |
| 2 | 402-0681-01 | 3 | Isolator, Vibration | 21 | | | Screw, XREC Phillips (#6-23 x .312") |
| 3 | 818-0231-01 | 6 | Rivet, Pop | | 815-0550-03 | 4 | Neg GND 1 Phase 12 &24V |
| 4 | 319-6228-03 | 1 | Cover, Box Control | | 815-0550-03 | 6 | ISO GND 1 Phase 12 &24V |
| 5 | 319-4404 | 1 | Cover | | | | Neg GND 3 Phase 12 &24V |
| 6 | 332-3750 | 1 | Guide, Card | | | | ISO GND 3 Phase 12 &24V |
| 7 | 508-1105 | 2 | Grommet, Remote | | | | PCB |
| 8 | 517-0136 | 2 | Plug, Hole | 22 | 327-1659-01 | 1 | NIM/J1939 |
| 9 | 800-6395-01 | 6 | Screw, Hex Head Sems (M6 1.0 x 16mm) | | 327-1659-02 | 1 | NIM/SmartCraft |
| 10 | 526-2100 | 3 | Washer, Flat (M8) | | 327-1686-03 | 1 | \NIM/SmartCraft 2 |
| 11 | | | Standoff, Insulator | 23 | 800-6002 | 4 | Screw, Hex Head (M5 x 0.8 x 10mm) |
| | 332-2370 | 2 | Neg GND 1 Phase 12 & 24V | 24 | 870-2062 | 2 | Nut, Nylon Locking (M5) |
| | 332-2370 | 3 | Neg GND 3 Phase 12 & 24V | 25 | 338-4491 | 1 | Harness, Accessory (J1939 / SmartCraft) |
| | 332-2370 | 4 | ISO GND 1 Phase 12 & 24V | 26 | 338-4982 | 1 | Harness, Accessory (SmartCraft 2) |
| 12 | | | ISO GND 3 Phase 12 & 24V | 27 | 517-0138-05 | 1 | Plug, Hole |
| | 526-0052 | 6 | Washer, Flat (6.75ID x 14.30D x .8mm) | 28 | 517-0138-08 | 1 | Plug, Hole |
| | 526-0052 | 7 | Neg GND 1 Phase 12 & 24V | 29 | | | Breaker, Circuit |
| | 526-0052 | 8 | Neg GND 3 Phase 12 & 24V | | | | MDKBL |
| | 526-0052 | 9 | ISO GND 1 Phase 12 & 24V | | | | 30Amps |
| 13 | | | ISO GND 3 Phase 12 & 24V | 320-1689-04 | 1 | | 35Amps |
| | 821-0009 | 4 | Screw, Locking Head (1/4-20UNC x 14.30D x .8) | 320-1689-05 | 1 | | 55Amps |
| | 821-0009 | 6 | Neg GND 1 Phase 12 & 24V | 320-1689-12 | 1 | | MDKBM |
| | 821-0009 | 8 | Neg GND 3 Phase 12 & 24V | 320-1689-06 | 1 | | 40Amps |
| | 821-0009 | 8 | ISO GND 1 Phase 12 & 24V | 320-1689-07 | 1 | | 45Amps |
| 14 | 856-0006 | 4 | ISO GND 3 Phase | | | | MDKBN |
| 15 | 871-0016 | 5 | 12 & 24V | | | | 50Amps |
| 16 | 810-0155 | 2 | Washer, ETIT Locking (1/4") | 320-1689-08 | 1 | | 55Amps |
| | | | Nut, Hex (1/4-20") | 320-1689-09 | 1 | | 70Amps |
| 17 | 337-2795 | 1 | Screw, Round Head | 320-1689-12 | 1 | | |
| 18 | 853-0016 | 2 | (1/4-20UNC x 1.25") | | | | |
| 19 | 821-6003-01 | 1 | Strap, Bond | | | | |
| | | | Washer, ET Locking (5/16") | | | | |
| | | | Screw, Hex Head Sems | | | | |
| | | | (M8 x 1.25 x 16mm) | | | | |

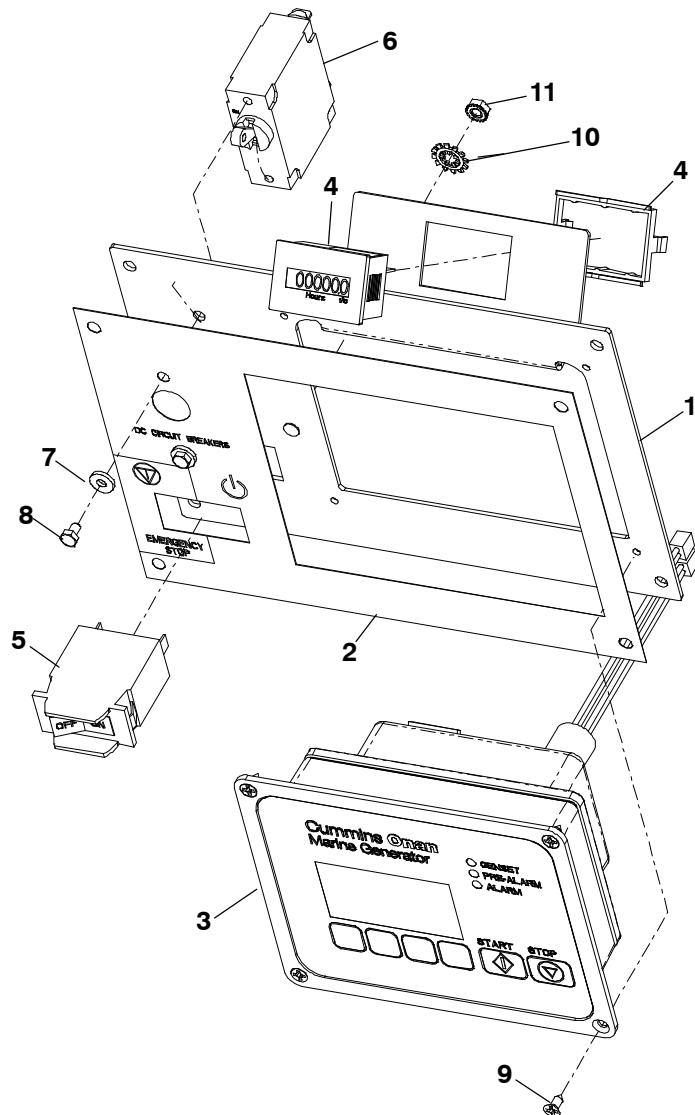
SmartCraft is a trademark of the Brunswick Corporation.

Control Panel Components



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|---|
| 1 | | | Assy, Engine Panel (Spec D See Control Panel for Parts) | 6 | 821-6001-03 | 2 | Screw, Hex Head Sems (M5 x .8 x 16mm) (Non NIM) |
| | 300-6362-01 | 1 | 12V | | 7 | | Harness, Control |
| | 300-6362-02 | 1 | 24V | | 338-4213 | 1 | N/A |
| 2 | 818-1150-03 | 4 | Rivet, Drive Plastic (Std) | | 338-4414 | 1 | Non Nim |
| 3 | 300-6363-02 | 1 | Assy, Control (Spec D) | | 338-4414 | 1 | Nim |
| 4 | 800-6002 | 2 | Screw, Hex Head Cap (M5 x .8 x 10mm) (NIM) | 8 | 307-2767 | 2 | Relays 12V |
| 5 | 870-2062 | 2 | Nut, Nylon Lock (M5) (NIM) | | 307-2819 | 2 | 24V |
| | | | | | 9 | 323-1563 | Contact, Relay |

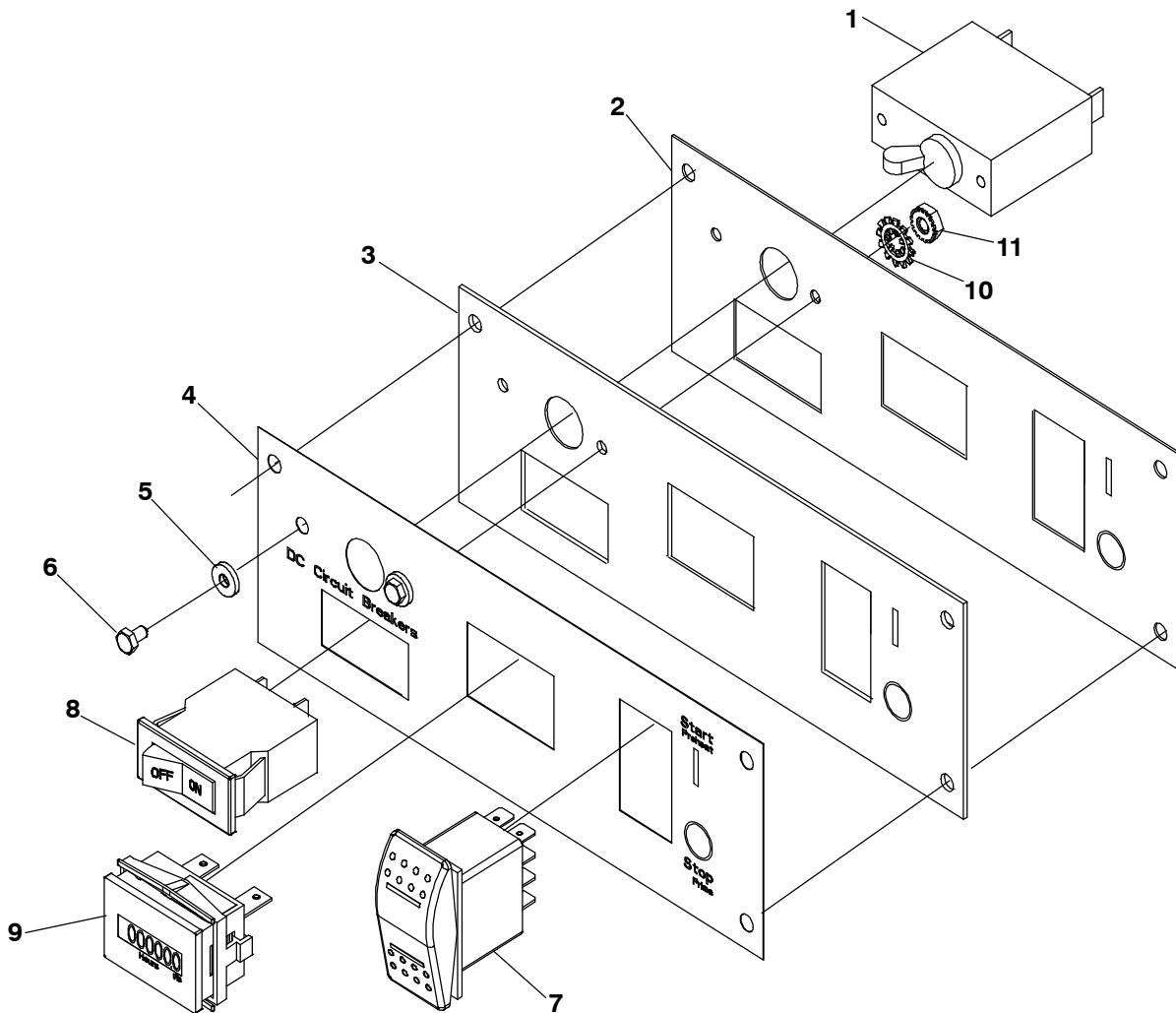
Control Panel Components (eSDD Display)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---|
| | 300-5944-03 | 1 | Kit, Control (Kit Includes Parts Marked *) | 7 | 526-0399-05 | 2 | *Washer, Flat (#6) |
| 1 | 319-5544-02 | 1 | *Panel, Display | 8 | 800-0309-10 | 2 | *Screw, Hex Head Mach (#6-32UNC-2A x .250") |
| 2 | 98-8323 | 1 | *Label, Information | 9 | 814-2155-01 | 4 | *Screw, Flange Head XREC (M3.5 x 9.5mm) |
| 3 | | | *Controls | 10 | 856-0003 | 1 | *Washer, ETIT Lock (#10") |
| | 300-5885 | 1 | Spec A-C | 11 | 870-0131 | 1 | *Nut, Sems ET (#10-32") |
| | 300-6393 | 1 | Begin Spec D | | | | |
| 4 | 302-2048 | 1 | Hourmeter | | | | |
| 5 | | | Breaker, Circuit | | | | |
| | 320-1140 | 1 | Spec A-C | | | | |
| | 320-2361 | 1 | Begin Spec D | | | | |
| 6 | | | Breaker, Circuit | | | | |
| | 320-1862-01 | 1 | Spec A-C | | | | |
| | 320-2362 | 1 | Begin Spec D | | | | |

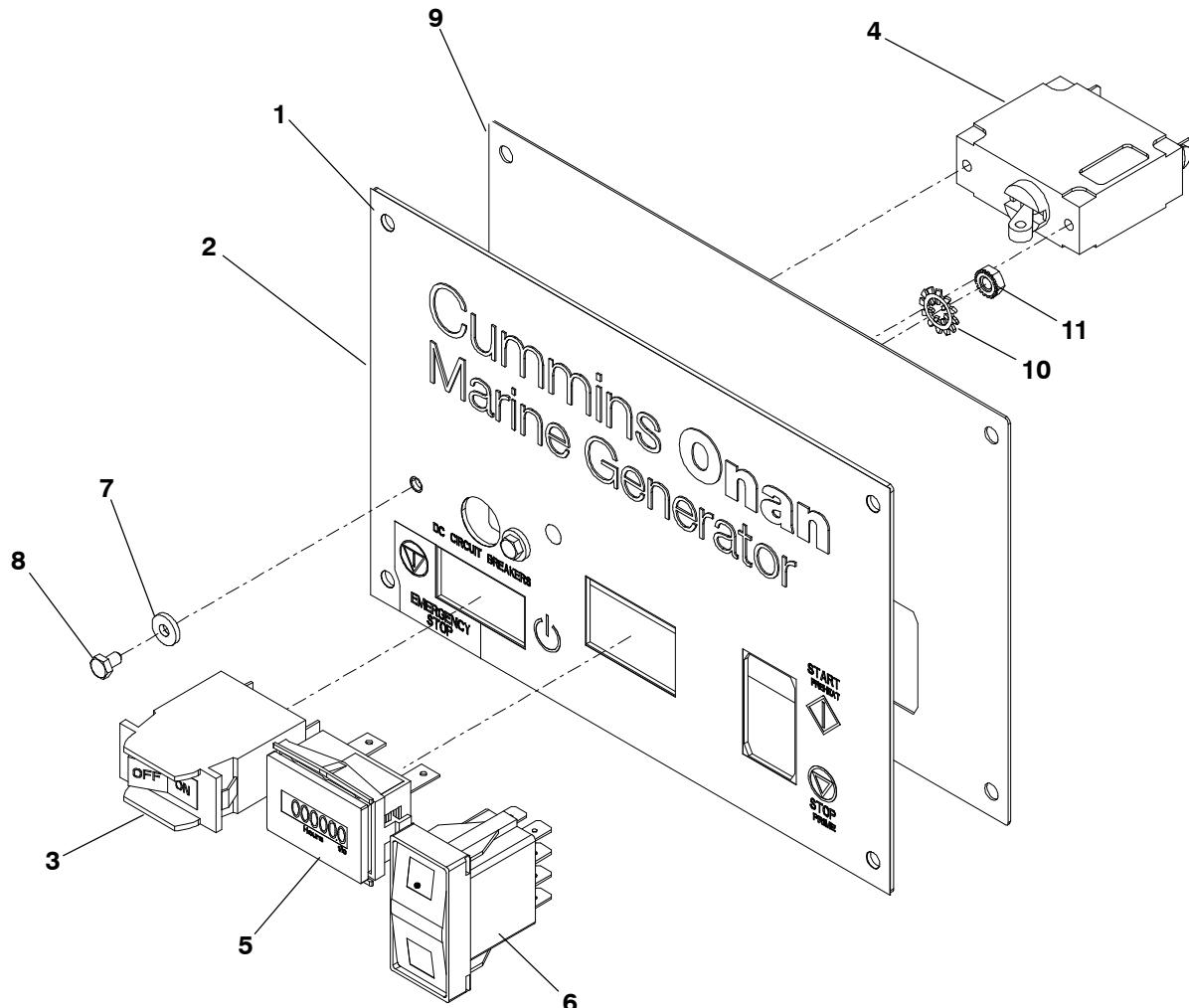
* – All Parts Included in Control Kit and Instruction Sheet.

Control Panel Components
(Breaker Switch Option Spec A-C)



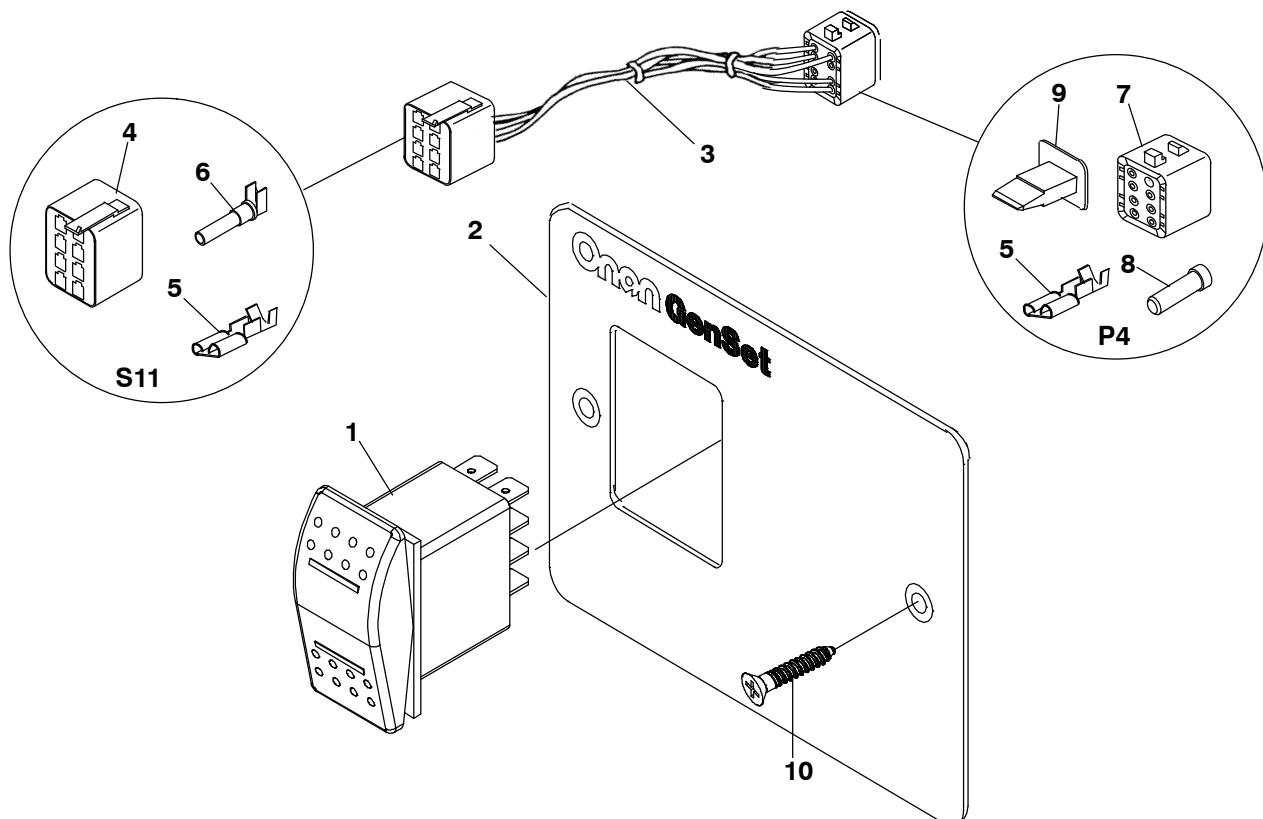
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|-------------|-----------|---|----------|----------|-----------|-----------------------------------|
| | | | Assy, Engine Panel (All Parts Included) | 7 | 308-1102 | 1 | Switch, Rocker SPDT 24VDC |
| 300-5476-05 | 1 | 12V | | 308-1101 | 1 | 12VDC | |
| 300-5476-06 | 1 | 24V | | 8 | 320-1140 | 1 | Breaker, Circuit (15 Amp) |
| 1 | 320-1862-01 | 1 | Breaker, Circuit (50 Amp) | 9 | 302-2048 | 1 | Meter, Hour |
| 2 | 319-4467-02 | 1 | Panel, Control (Ground) | 10 | 856-0003 | 1 | Washer, EIT Lock (#10) |
| 3 | 319-4368-06 | 1 | Panel, Control | 11 | 870-0131 | 1 | Nut, Sems EIT |
| 4 | 98-7781 | 1 | Label, Control | | | | * - See Control Box for Location. |
| 5 | 526-0399-05 | 2 | Washer, Flat (#6) | | | | |
| 6 | 800-0309-10 | 2 | Screw, Hex Head (6-32 x 1/4") | | | | |

Control Panel Components
(Breaker Switch Option Begin Spec D)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|-------------|-----------|---|----------|-------------|-----------|------------------------------------|
| | | | Assy, Engine Panel (All Parts Included) | 6 | 308-1218 | 1 | Switch, Rocker |
| 300-6362-01 | 1 | 12V | | 308-1219 | 1 | 12VDC | |
| 300-6362-02 | 1 | 24V | | 7 | 526-0399-05 | 2 | 24VDC |
| 1 | 319-6871-02 | 1 | Panel, Control | 8 | 800-0309-10 | 2 | Washer, Flat DAC |
| 2 | 98-8713 | 1 | Label, Information (Control) | | | | Screw, Hex Head Mach (6-32 x 1/4") |
| 3 | 320-2361 | 1 | Breaker Circuit | 9 | 319-6873 | 1 | Panel, Control Box (Ground) |
| 4 | 320-2362 | 1 | Breaker Circuit | 10 | 856-0003 | 1 | Washer, EIT Lock (#10) |
| 5 | 302-2048 | 1 | Meter, Hour | 11 | 870-0131 | 1 | Nut, Sems EIT (#10-32) |

Remote Control Panel

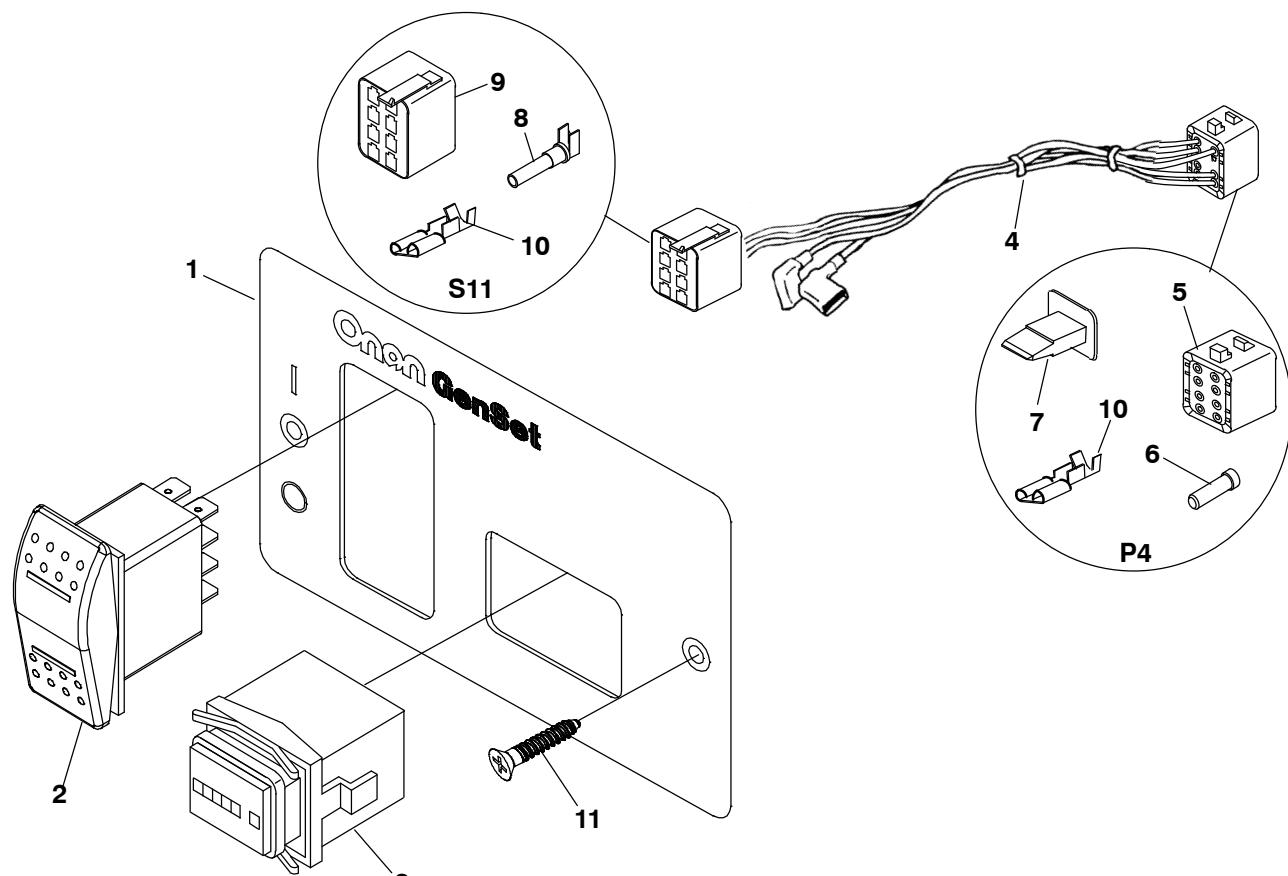


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|-------------|----------|-----------|---|---------|----------|-----------|-----------------------|
| | | | Kit, Remote Switch Harness (Includes Parts Marked +) | 6 | 323-1492 | 6 | *Terminal, Socket |
| 541-0941-01 | 1 | 12V | | 7 | 323-1541 | 1 | *Plug, (8 Pin) |
| 541-0941-02 | 1 | 24V | | 8 | 323-1491 | 3 | *Plug, Seal |
| | | | Kit, Panel Remote (Includes Parts Marked #) | 9 | 323-1543 | 1 | *Wedge, Plug (8 Pin) |
| 300-5725-01 | 1 | 12V | | 10 | 815-0910 | 2 | #Screw, Wood (#6 x 1) |
| 300-5725-02 | 1 | 24V | | 11 | 98-8092 | 1 | +Label, Instructions |
| 1 | | | #+Switch, Rocker (S11) | 12 | 98-8081 | 1 | #+Label, Warning |
| 308-1101 | 1 | 12V | | | | | |
| 308-1102 | 1 | 24V | | | | | |
| 2 | 319-6990 | 1 | #Panel, Remote (Includes Printing) | | | | |
| 3 | 338-3988 | 1 | #+Harness, Remote Panel (Includes Parts Marked *) | | | | |
| 4 | 308-1019 | 1 | *Connector, Switch (S11) | | | | |
| 5 | 332-2890 | 6 | *Terminal, Receptacle (.25") | | | | |

- Parts Included in Remote Panel.

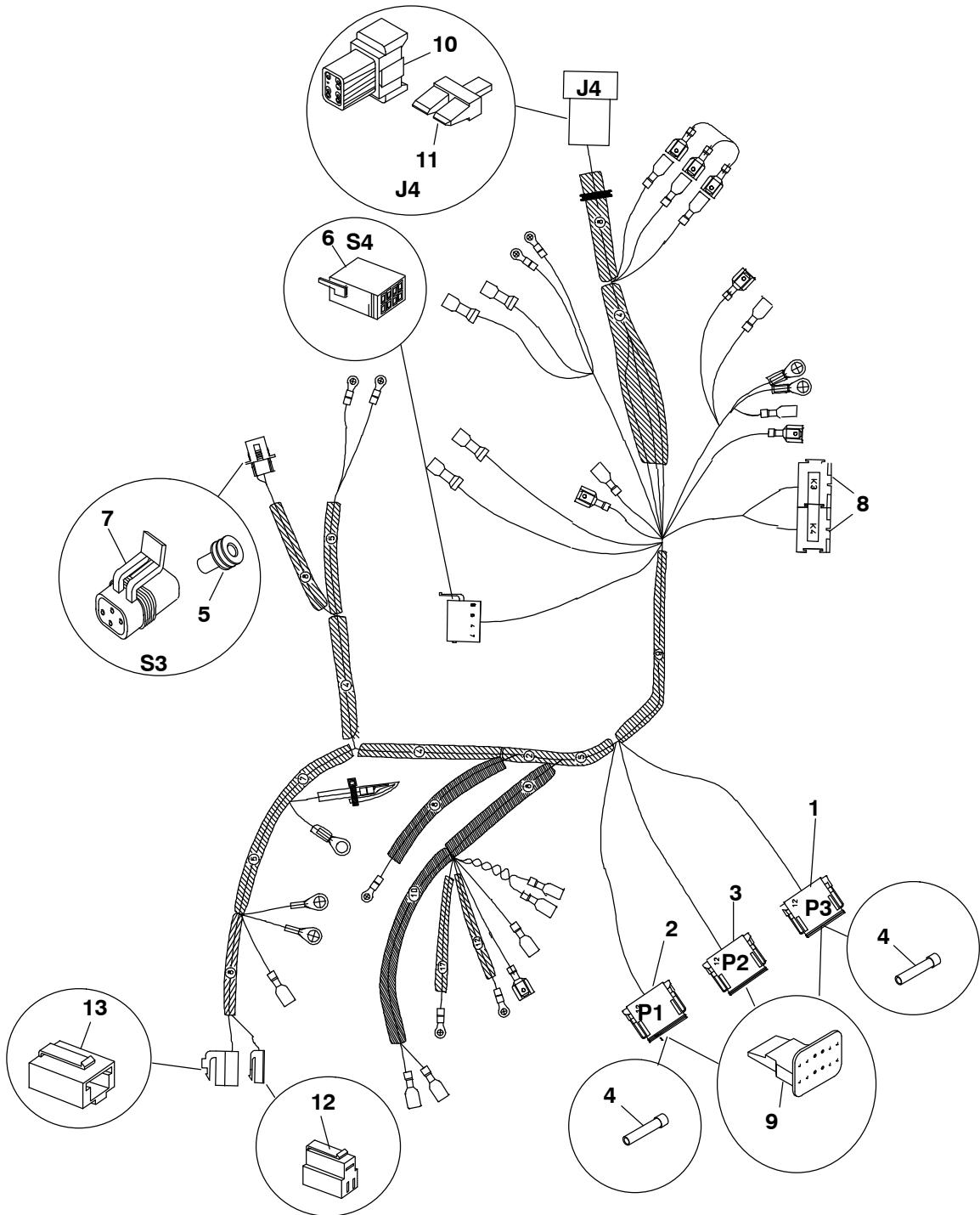
+ - Parts Included in Remote Switch Harness. Instructions included in Kits only

Remote Control Panel w / Hour Meter



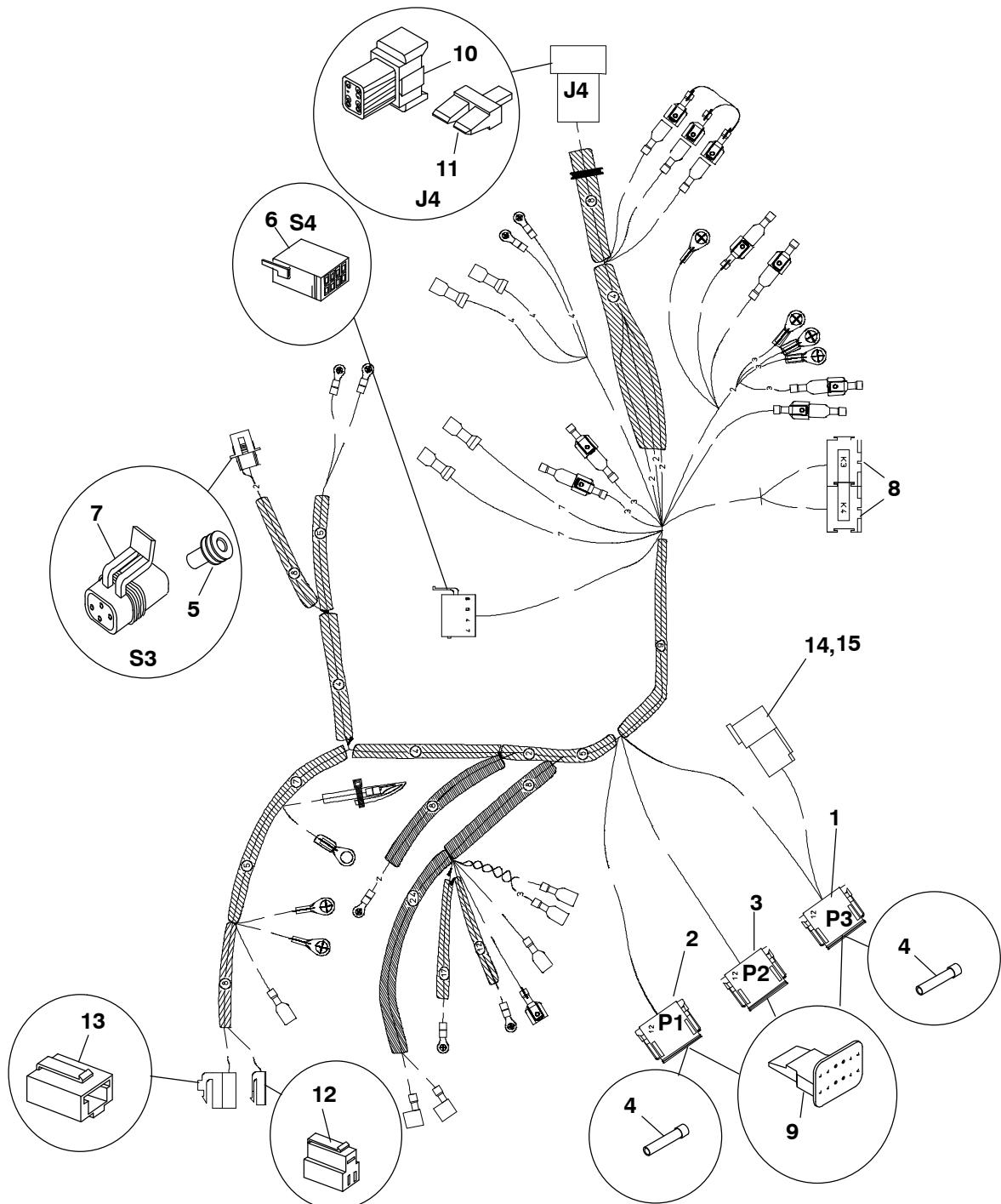
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|----------|-----------|--|
| | | | Kit, Remote Panel | 6 | 323-1591 | 2 | *Plug, Seal |
| | 300-5727-01 | 1 | 12V | 7 | 323-1543 | 1 | *Wedge, Plug (8 Pin) |
| | 300-5727-02 | 1 | 24V | 8 | 323-1492 | 6 | *Pin, Contact |
| 1 | 319-6992 | 1 | Panel, Remote Printed | 9 | 308-1019 | 1 | *Connector, Switch (S11) |
| 2 | | | Switch, Rocker (S11) | 10 | 332-2890 | 6 | *Terminal, Receptacle (.25") |
| | 308-1101 | 1 | 12V | 11 | 815-0910 | 2 | Screw, Wood (#6 x 1) |
| | 308-1102 | 1 | 24V | 12 | 98-8081 | 1 | Label, Panel (Remote) |
| 3 | 302-2002 | 1 | Meter, Hour (M11) | | | | * – Parts Included in Remote Panel Wiring Harness. |
| 4 | 338-3990 | 1 | Harness, Remote Panel (Includes Parts Marked *) | | | | |
| 5 | 323-1541 | 1 | *Plug (8 Pin) (P4) | | | | |

Control Harness (Spec A-C)



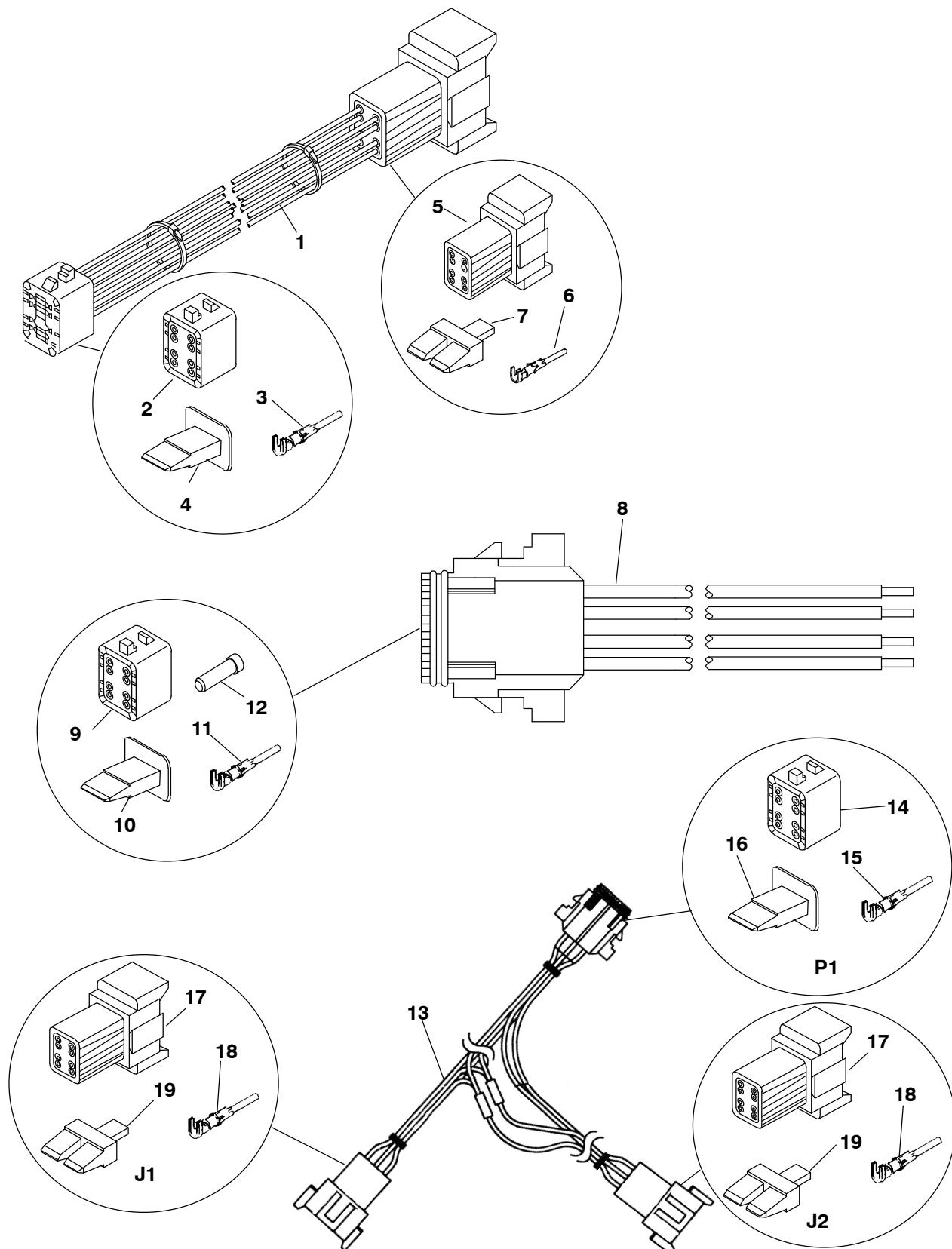
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------|---------|----------|-----------|-------------------------------|
| 1 | 338-4396 | 1 | Harness, Control | 7 | 323-1765 | 1 | Connector, Housing 4 Pin (S3) |
| 1 | 323-1582-06 | 1 | Plug (12 Pin, Green P3) | 8 | 323-1563 | 1 | Socket, Relay |
| 2 | 323-1582-05 | 1 | Plug (12 Pin, Black P1) | 9 | 323-1583 | 3 | Plug, Wedge 12 Pin |
| 3 | 323-1582-07 | 1 | Plug (12 Pin, Gray P2) | 10 | 323-1542 | 1 | Connector, Receptacle 8 Pin |
| 4 | 323-1591 | AR | Plug (P1, P3) | 11 | 323-1544 | 1 | Receptacle, Wedge (J4) |
| 5 | 323-1708 | AR | Seal,Cable (S3) | 12 | 323-1791 | 1 | Connector, Plus 1 Pos |
| 6 | 308-1019 | 1 | Switch, Connector (S4) | 13 | 323-1792 | 1 | Connector, Plus 3 Pos |

Control Harness (Begin Spec D)

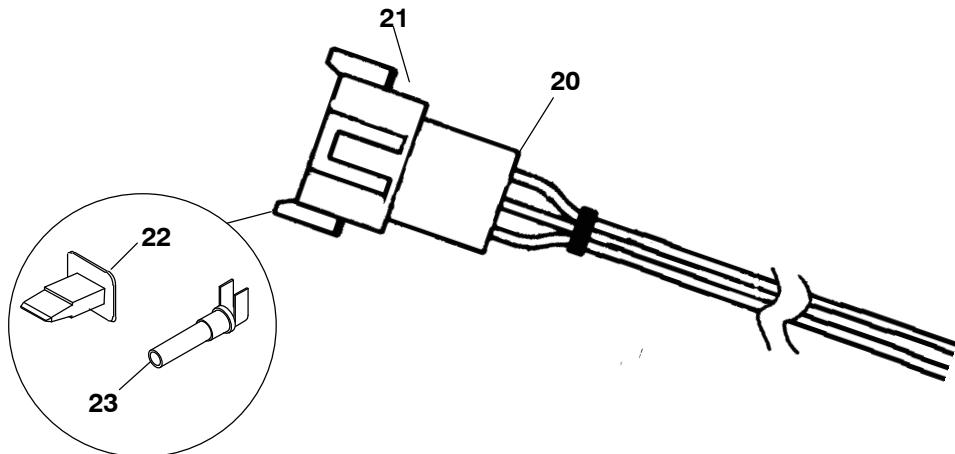


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------------|---------|----------|-----------|-----------------------------|
| 1 | 338-4953 | 1 | Harness, Control | 9 | 323-1583 | 3 | Plug, Wedge 12 Pin |
| 1 | 323-1582-06 | 1 | Plug (12 Pin, Green P3) | 10 | 323-1542 | 1 | Connector, Receptacle 8 Pin |
| 2 | 323-1582-05 | 1 | Plug (12 Pin, Black P1) | 11 | 323-1544 | 1 | Receptacle, Wedge (J4) |
| 3 | 323-1582-07 | 1 | Plug (12 Pin, Gray P2) | 12 | 323-1791 | 1 | Connector, Plus 1 Pos |
| 4 | 323-1591 | AR | Plug (P1, P3) | 13 | 323-1792 | 1 | Connector, Plus 3 Pos |
| 5 | 323-1708 | AR | Seal,Cable(S3) | 14 | 323-1625 | 1 | Connector, Connector |
| 6 | 308-1019 | 1 | Switch, Connector (S4) | 15 | 323-1626 | 1 | Receptacle 6 Pin |
| 7 | 323-1765 | 1 | Connector, Housing 4 Pin (S3) | | | | Wedge, 6 Pin |
| 8 | 323-1563 | 1 | Socket, Relay | | | | |

Wiring Harnesses



Wiring Harnesses



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|--------------|--|------------|-------------|--------------|---|
| 1 | | | Harness, Remote Extension (Includes Parts Marked #) | 14 | 323-1541 | 1 | ±°Plug, Connector (8 Pin) |
| | 338-3167 | 1 | 15 feet | 15 | 323-1492 | AR | ±°Terminal, Socket |
| | 338-3168 | 1 | 25 feet | 16 | 323-1543 | 1 | ±°Wedge, Plug (8 Pin) |
| | 338-3169 | 1 | 45 feet | 17 | 323-1542 | 2 | +Connector, Receptacle (8 Pin) |
| | 338-3169-01 | 1 | 75 feet | 18 | 323-1491 | AR | @Terminal, Pin |
| | 338-3169-02 | 1 | 100 feet | 19 | 323-1544 | 2 | +Wedge, Lock, Receptacle (8 Pin) |
| | 338-3169-03 | 1 | 150 feet | 20 | 338-4017 | 1 | Harness, Pigtail (Includes Parts Marked @) |
| 2 | 323-1541 | 1 | #Plug (8 Pin) | 21 | 323-1542 | 1 | @Connector, Receptacle (8 Pin) |
| 3 | 323-1492 | 8 | #Terminal, Socket | 22 | 323-1544 | 2 | @Wedge, Lock (8 Pin) |
| 4 | 323-1543 | 1 | #Wedge, Plug (8 Pin) | 23 | 323-1491 | AR | @Terminal, Pin |
| 5 | 323-1542 | 1 | #Receptacle, (8 Pin) | | | | |
| 6 | 323-1491 | 8 | #Terminal, Pin | | | | |
| 7 | 323-1544 | 1 | #Wedge, Receptacle (8 Pin) | | | | |
| 8 | 338-4223 | 1 | Harness, Remote Panel | | | | # - Parts Included in Remote Extension Harness. |
| 9 | 323-1541 | 1 | Plug (8 Pin) | | | | * - Parts Included in Custom Pigtail Harness. |
| 10 | 323-1543 | 1 | Wedge, Plug (8 Pin) | | | | ° - Parts Included in Adapter Harness. |
| 11 | 323-1492 | AR | Terminal, Socket | | | | .+ - Parts Included in Junction Harness. |
| 12 | 323-1591 | AR | Plug, Seal | | | | .@ - Parts Included in Pigtail Harness. |
| 13 | 338-4016 | 1 | Harness, Junction (Includes Parts Marked +) | | | | |

- Parts Included in Remote Extension Harness.

* - Parts Included in Custom Pigtail Harness.

° - Parts Included in Adapter Harness.

.+ - Parts Included in Junction Harness.

.@ - Parts Included in Pigtail Harness.

Labels / Kits

| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|------------|-------------|---|---------------------|-------------|-------------|---|---------------------|
| 98-8601 | 1 | Label, Information Sheet (Includes Labels Marked*) | | 98-8714 | 2 | Label, Logo (Cummins Onan) | |
| | 4 | *Label, Warning | | 98-8715 | 2 | Label, (Cummins C) | |
| | 1 | *Label, Information (No Step) | | 98-8717 | 1 | Label, Logo (Cummins Onan C) | |
| | 1 | *Label, Warning (Coolant) | | 98-8699 | 1 | Label, Information (Rear) | |
| | 1 | *Label, Information (Coolant) | | 98-8700 | 1 | Label, Information (Front) | |
| | 1 | *Label, Information (Oil Fill) | | 100-3478-02 | 1 | Kit, Cruise Includes All of The Following Items: | |
| | 1 | *Label, Information (Lifting) | | 149-2106 | 2 | Filter, Fuel | |
| | 1 | Label, Information Sheet (Includes Labels Marked+) | | 185-5835 | 2 | Filter, Oil | |
| | 1 | +Label, Information | | 132-0379 | 2 | Kit Pump, Service | |
| | 1 | +Label, Information (Service) | | 185-6934 | 2 | Belt | |
| 98-8687 | 3 | +Label Warning | | 130-4434 | 2 | Pencil, Zinc | |
| | 1 | +Label Information (No Step) | | 417-0233 | 1 | Box, Cruise Kits | |
| | 1 | +Label Danger | | 98-8387 | 1 | Label, Information (Reconnect) | |
| | 1 | +Label, Warning (Coolant) | | | | | |
| | 1 | +Label, Information (Ground) | | | | | |

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