



Parts Manual

Cummins **Onan**

Performance you rely on.™



Marine Generator Set

MDKBP (Spec D)
MDKBR (Spec D)
MDKBV (Spec A)

MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION
AND DATE (IF APPLICABLE)

SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.



This symbol warns of immediate hazards which will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

PRODUCT SAFETY PRECAUTIONS



Service and repair of Onan equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.



Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.



Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!



Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!



Servicing and replacement of MARINE CRITICAL PARTS must be carried out by persons trained and experienced with marine gasoline engine-generator safety requirements!

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.

| <u>MODEL</u> | <u>HERTZ</u> |
|--------------|--------------|
| MDKBP/* | 50/60 |
| MDKBR/* | 50/60 |
| MDKBV/* | 50/60 |

* – 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.

WIRING DIAGRAM

630–2694 DC



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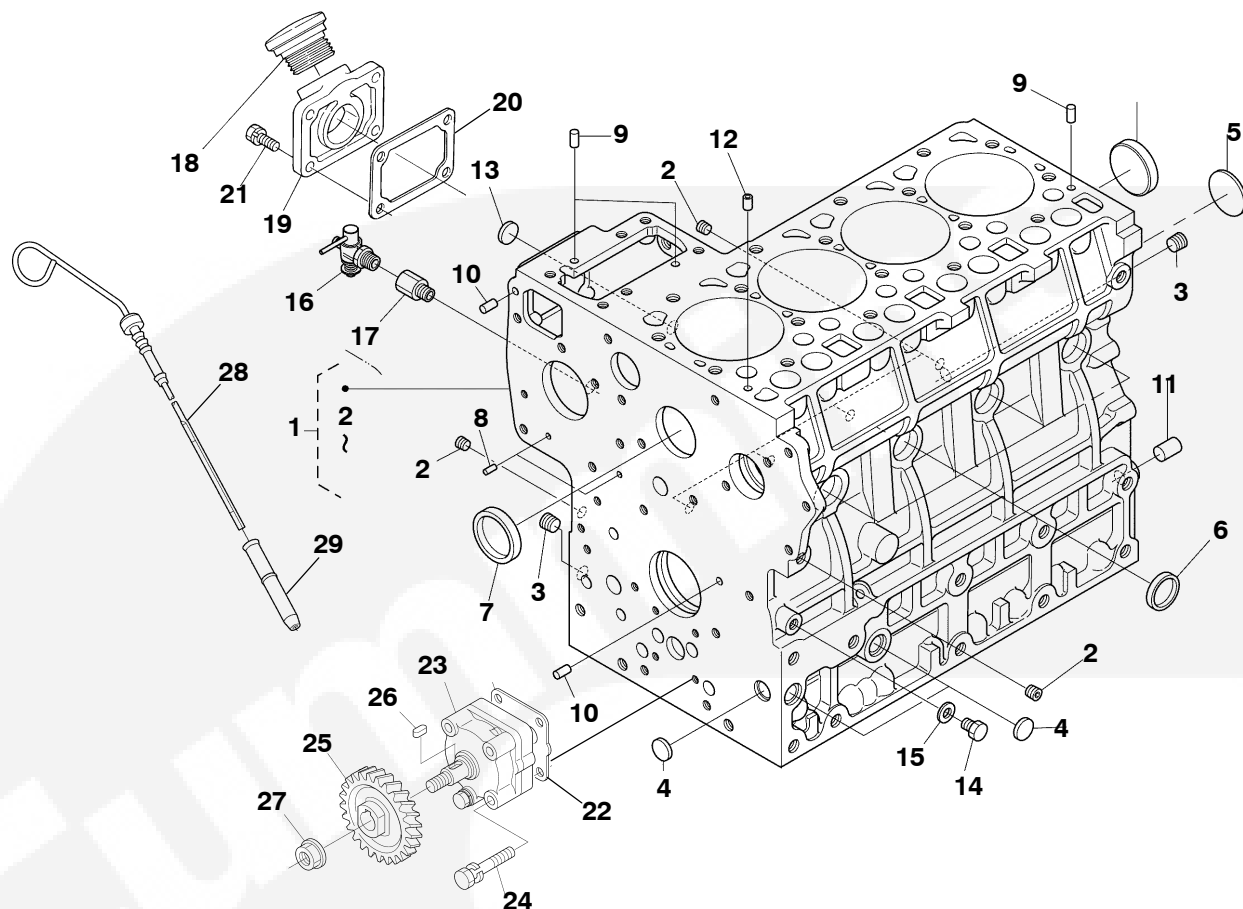
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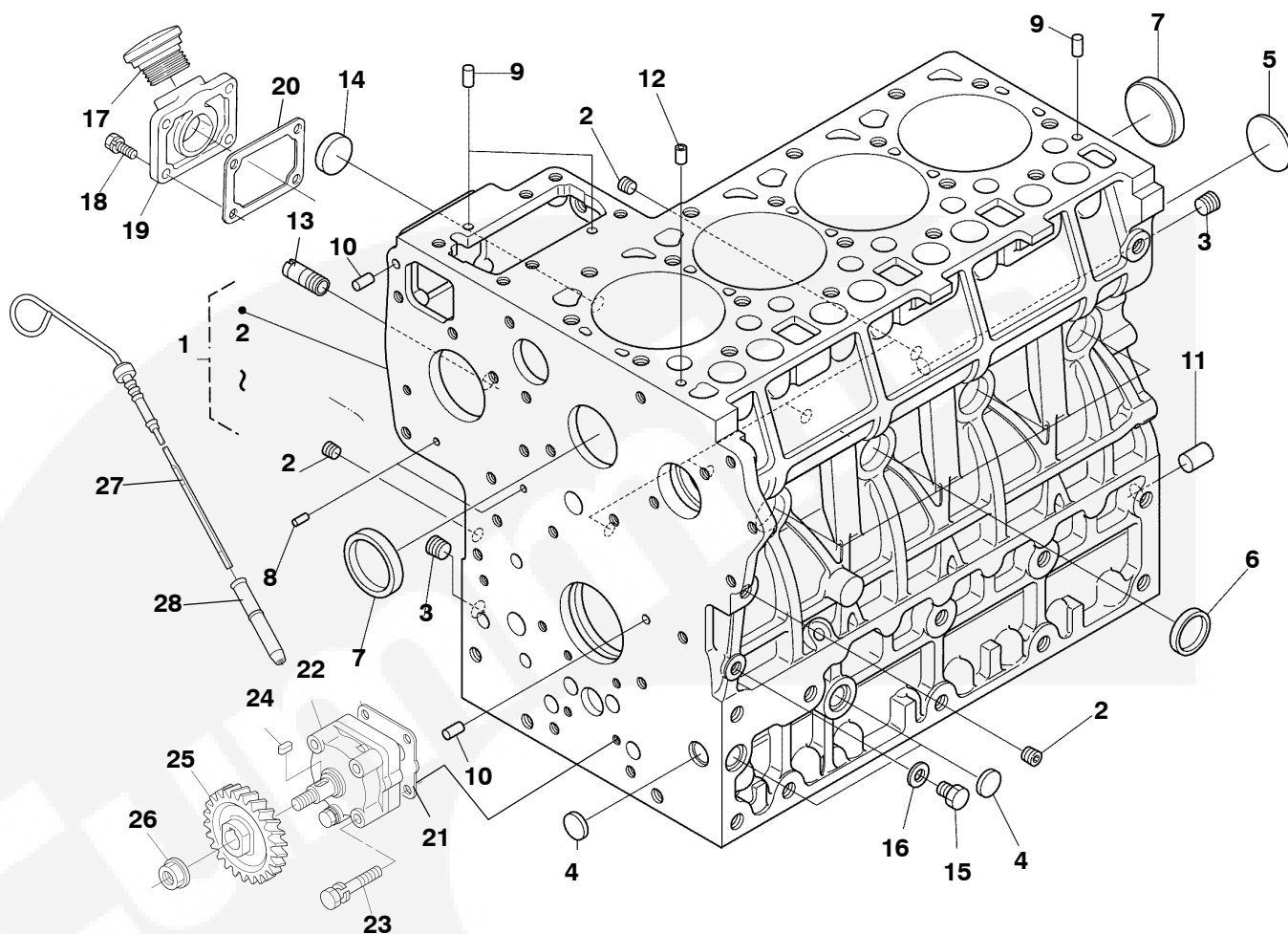
Cylinder Block, MDKBP



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|----------|----------|----------------------|
| | | | Engine, Replacement | 16 | 185-5846 | 1 | Drain, Valve |
| | 100-4103-01 | 1 | 12V | 17 | 185-5847 | 1 | Joint, Drain |
| | 100-4103-02 | 1 | 24V | 18 | 123-2425 | 1 | Plug, Oil Filler |
| 1 | 101-4096 | 1 | Block Assy, Cylinder (Includes Parts Marked *) | 19 | 123-2426 | 1 | Flange, Oil Filler |
| 2 | 185-2233 | 6 | *Plug | 20 | 101-0837 | 1 | Gasket, Pump Cover |
| 3 | 185-2234 | 2 | *Plug | 21 | 185-2386 | 4 | Bolt |
| 4 | 185-6121 | 3 | *Plug, Expansion | 22 | 120-1355 | 1 | Gasket, Oil Pump |
| 5 | 185-6040 | 1 | *Plug, Expansion | 23 | 185-5848 | 1 | Assy Pump, Oil |
| 6 | 185-5840 | 6 | *Cap, Sealing | 24 | 185-7069 | 4 | Bolt |
| 7 | 185-5841 | 2 | *Cap, Sealing | 25 | 185-5851 | 1 | Gear, Oil Pump Drive |
| 8 | 185-5842 | 2 | *Pin, Straight | 26 | 185-2352 | 1 | Key |
| 9 | 185-2350 | 3 | *Pin, Straight | 27 | 185-7031 | 1 | Nut, Flange |
| 10 | 185-5843 | 2 | *Pin, Straight | 28 | 123-2424 | 1 | Gauge, Oil |
| 11 | 185-5844 | 1 | *Pin, Straight | 29 | 123-2262 | 1 | Guide, Oil Gauge |
| 12 | 185-2094 | 1 | *Pin, Pipe | | | | |
| 13 | 185-5483 | 1 | *Cap, Sealing | | | | |
| 14 | 517-0373 | 1 | Plug | | | | |
| 15 | 185-2338 | 1 | Gasket | | | | |

* - Parts Included in Keel Cooling Kit Found on Keel Cooling Dry Exhaust Page).

Cylinder Block MDKBR and MDKBV

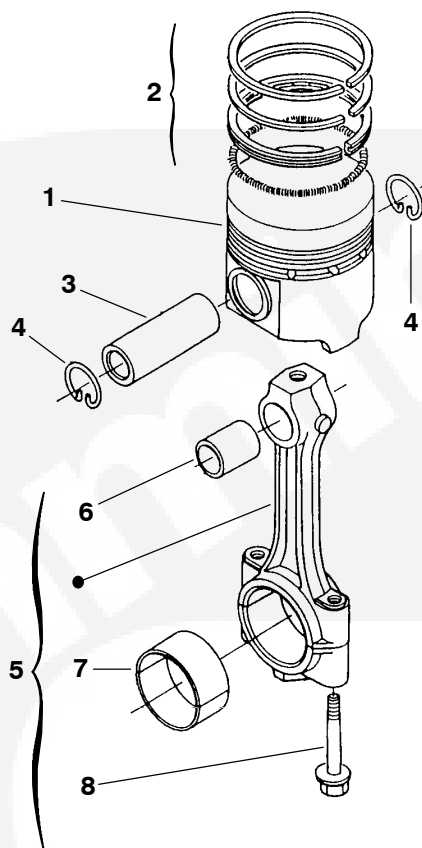


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|----------|----------|----------------------|
| | | | Engine, Replacement | 16 | 185-2338 | 1 | Gasket |
| | 100-4104-01 | 1 | 12V | 17 | 123-2425 | 1 | Plug, Oil Filler |
| | 100-4104-02 | 1 | 24V | 18 | 185-2389 | 4 | Bolt |
| 1 | 110-4105 | 1 | Block Assy, Cylinder (Includes Parts Marked #) | 19 | 123-2426 | 1 | Flange, Oil Filler |
| 2 | 185-2233 | 6 | #Plug | 20 | 101-0837 | 1 | Gasket, Pump Cover |
| 3 | 185-2234 | 2 | #Plug | 21 | 120-1355 | 1 | Gasket, Oil Pump |
| 4 | 185-6121 | 3 | #Plug, Expansion | 22 | 185-5848 | 1 | Pump, Oil |
| 5 | 185-6040 | 1 | #Plug, Expansion | 23 | 185-7069 | 4 | Bolt |
| 6 | 185-5840 | 6 | #Cap, Sealing | 24 | 185-2352 | 1 | Key |
| 7 | 185-5841 | 2 | #Cap, Sealing | 25 | 185-5851 | 1 | Gear, Oil Pump Drive |
| 8 | 185-5842 | 2 | #Pin, Straight | 26 | 185-7031 | 1 | Nut, Flange |
| 9 | 185-2350 | 3 | #Pin, Pipe | 27 | 123-2424 | 1 | Gauge, Oil |
| 10 | 185-5843 | 2 | #Pin, Straight | 28 | 123-2262 | 1 | Guide, Oil Gauge |
| 11 | 185-5844 | 1 | #Pin, Straight | | | | |
| 12 | 185-2094 | 1 | #Pin, Pipe | | | | |
| 13 | 505-2529 | 1 | #Pipe, Water Return | | | | |
| 14 | 185-5483 | 1 | #Cap, Sealing | | | | |
| 15 | 517-0373 | 1 | Plug | | | | |

- Parts included in Cylinder Block Assy.

* - Parts Included in Keel Cooling Kit Listed on Keel Cooling-Dry Exhaust Page.

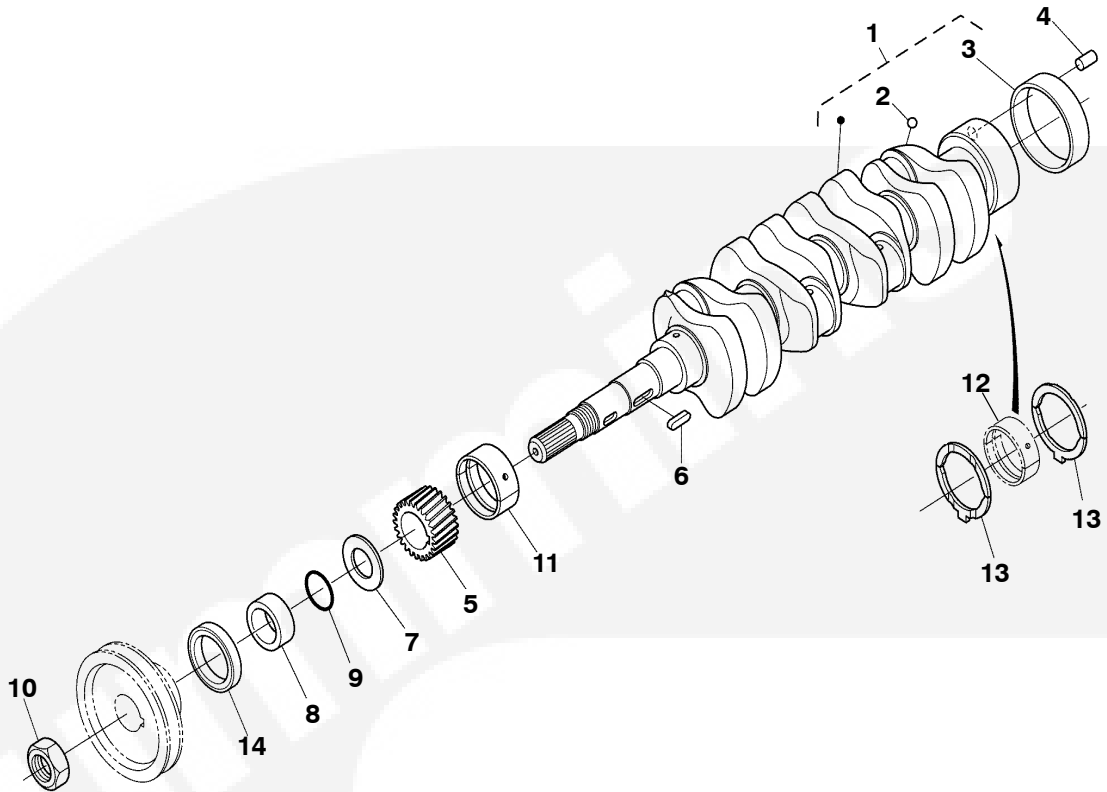
Piston



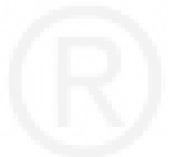
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--------------------------|---------|----------|----------|---|
| 1 | | | Piston | 3 | 112-0335 | 4 | Pin, Piston |
| | 112-0333 | 4 | MDKBP Standard | 4 | 518-0732 | 8 | Ring, Retaining |
| | 112-0334 | 4 | 0.5 mm Oversize | 5 | 185-5917 | 4 | Rod Assy, Connecting (Includes Bushing, Bearing and Bolts) |
| | 112-0336 | 4 | MDKBR, MDKBV Standard | 6 | 185-5918 | 4 | Bushing |
| | 112-0337 | 4 | 0.5 mm Oversize | 7 | 185-6076 | 4 | Bearing Standard |
| 2 | | | Set, Ring | | 185-5921 | 4 | 0.2 mm Undersize |
| | | | MDKBP | | 185-5922 | 4 | 0.4 mm Undersize |
| | 113-0357 | 4 | Standard | 8 | 185-6771 | 8 | Bolt |
| | 113-0358 | 4 | 0.5 mm Oversize | | | | |
| | | | MDKBR, MDKBV | | | | |
| | 541-1168 | 4 | Standard | | | | |
| | 541-1169 | 4 | 0.5 mm Oversize | | | | |



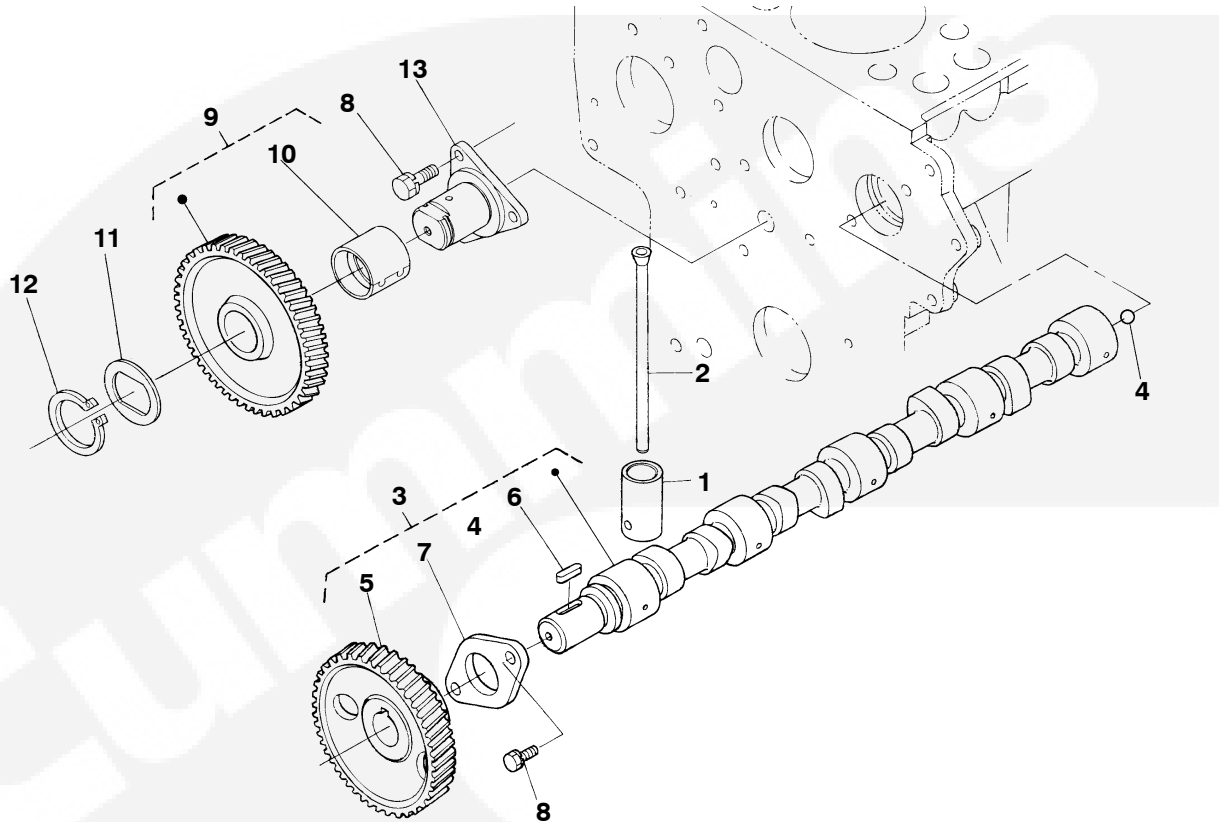
Crankshaft



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|---------|----------|----------|--------------------------|
| 1 | 104-2165 | 1 | Crankshaft (Includes Balls and Sleeve) | 10 | 185-5930 | 1 | Nut, Camshaft |
| 2 | 185-5924 | 4 | Ball | 11 | 104-2033 | 1 | Bearing Standard |
| 3 | 185-5925 | 1 | Bush, Crankshaft | 11 | 104-2037 | 1 | 0.2 mm Undersize |
| 4 | 516-2144 | 1 | Pin, Straight | 11 | 104-2038 | 1 | 0.4 mm Undersize |
| 5 | | | Gear | 12 | 104-2034 | 2 | Bearing, Main Standard |
| | 507-0006 | 1 | MDKBP | 12 | 104-2041 | 2 | 0.2 mm Undersize |
| | 507-0042 | 1 | MDKBR, MDKBV | 12 | 104-2042 | 2 | 0.4 mm Undersize |
| 6 | | | Key | 13 | 104-2036 | 2 | Bearing, Thrust Standard |
| | 185-5905 | 1 | MDKBP | 13 | 104-2043 | 2 | 0.2 mm Oversize |
| | 185-6081 | 1 | MDKBR, MDKBV | 13 | 104-2044 | 2 | 0.4 mm Oversize |
| 7 | 185-6973 | 1 | Slinger, Oil | 14 | 185-5931 | 1 | Seal, Oil |
| 8 | 185-5928 | 1 | Collar | | | | |
| 9 | 185-5929 | 1 | O'Ring | | | | |

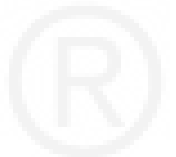


Camshaft

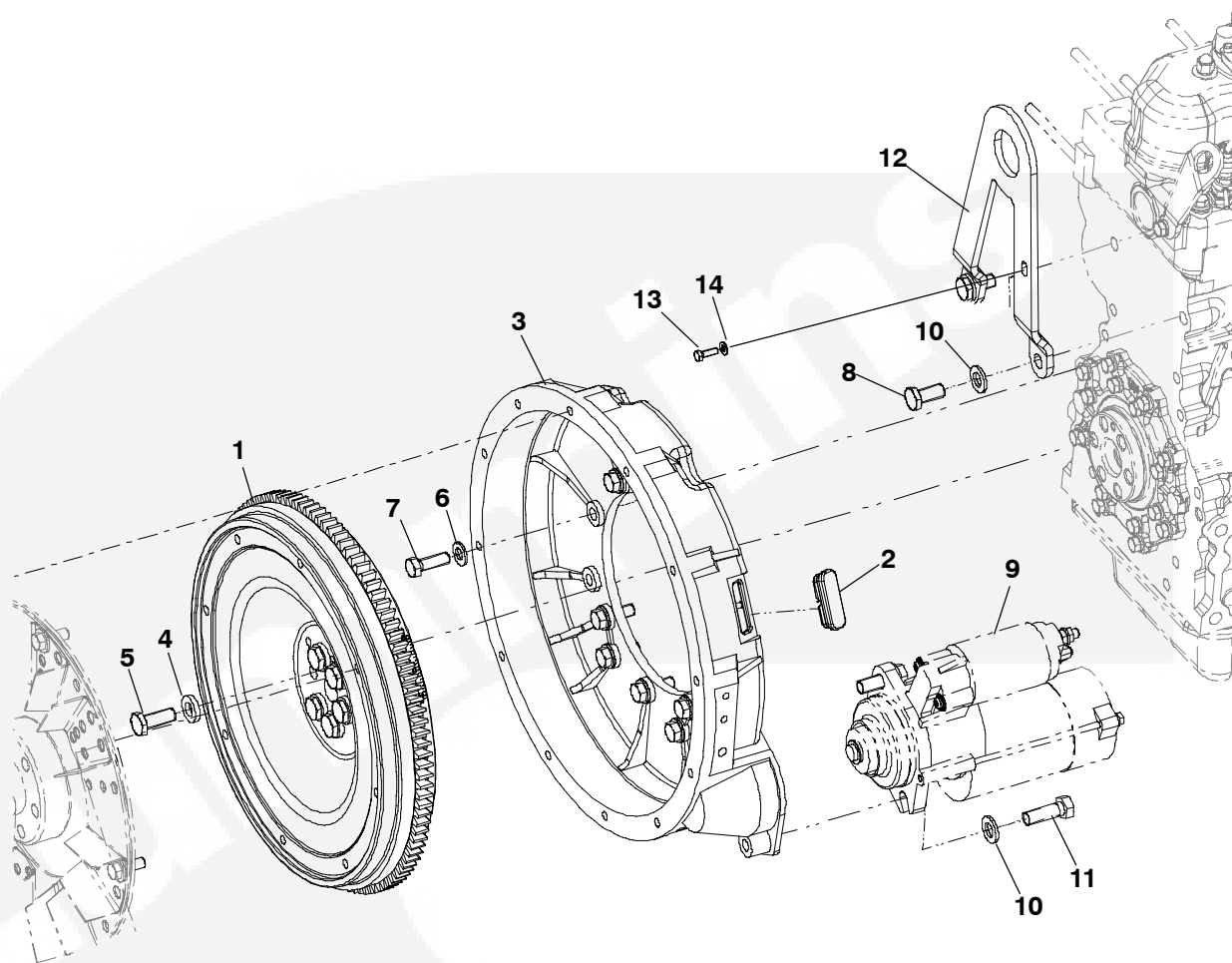


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|------------------------------------|
| 1 | 185-5900 | 8 | Tappet | 7 | 185-5906 | 1 | *Stopper, Camshaft |
| 2 | | | Rod, Push | 8 | 185-2400 | 5 | Bolt |
| | 185-5901 | 8 | MDKBP | 9 | 507-0008 | 1 | Gear Assy, Idle (Includes Bushing) |
| | 115-0568 | 8 | MDKBR, MDKBV | 10 | 508-1216 | 1 | Bushing, Idle Gear |
| 3 | | | Camshaft Assy (Includes Parts Marked *) | 11 | 406-1071 | 1 | Collar |
| | 105-0771 | 1 | MDKBP | 12 | 185-6072 | 1 | Circular Clip, External |
| | 105-0772 | 1 | MDKBR, MDKBV | 13 | 120-1397 | 1 | Shaft, Idle Gear |
| 4 | 185-5924 | 1 | Ball | | | | |
| 5 | 507-0007 | 1 | Gear, Camshaft | | | | |
| 6 | 185-5905 | 1 | *Key | | | | |

* - Parts Included in Camshaft Assy

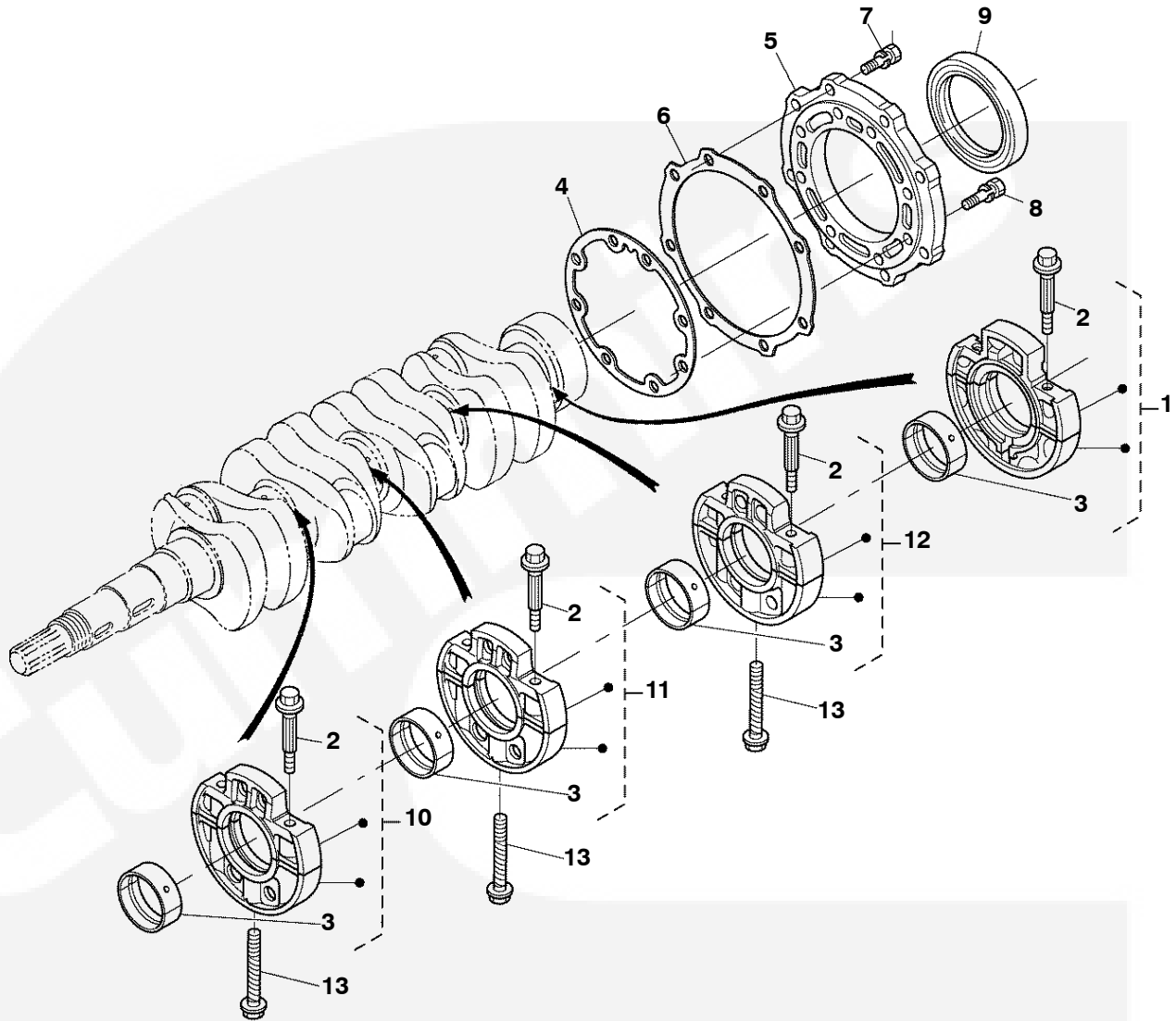


Flywheel



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|----------|-------------|----------|--|
| 1 | 104-2134 | | Flywheel Assy (Includes Ring Gear) | 9 | | | Starter (See Separate Page For Components) |
| 2 | 101-0811 | 1 | Plug, Hole | 191-1959 | 1 | 1 | 12V |
| 3 | 101-0821 | 1 | Adapter, Engine | 191-1550 | 1 | 1 | 24V |
| 4 | 526-0145 | 6 | Washer, Flat (M12) | 10 | 526-2140 | 4 | Washer, Flat (M12) |
| 5 | 800-3032 | 6 | Screw, Hex Head Cap (M12 x 1.25 x 30mm) | 11 | 800-2113 | 2 | Screw, Hex Head Cap (M12 x 1.75 x 35mm) |
| 6 | 526-0399-62 | 11 | Washer, Flat (M10) | 12 | 403-7060-02 | 1 | Bracket, Engine Lifting |
| 7 | 800-3005 | 11 | Screw, Hex Head Cap (M10 x 1.25 x 30mm) | 13 | 800-2056 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 16mm) |
| 8 | 800-3033 | 2 | Screw, Hex Head (M21 x 1.25 x 25mm) | 14 | 526-2100 | 1 | Washer, Flat (M8) |

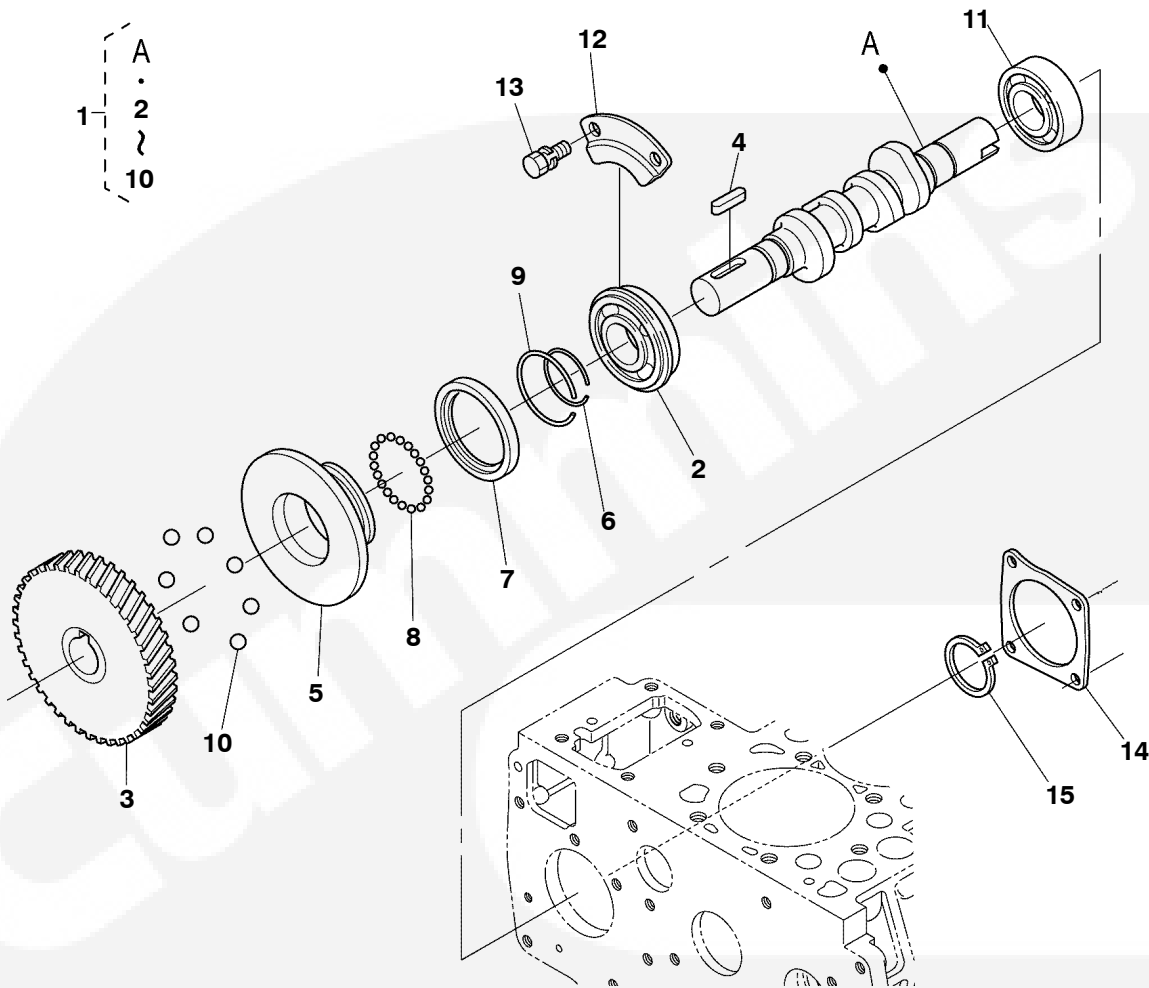
Main Bearing Housing



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|-----------------------------|---------|----------|----------|-------------------------------|
| 1 | 104-2029 | 1 | Housing, Main Bearing MDKBP | 5 | 101-0836 | 1 | Cover, Bearing Housing |
| | 104-2166 | 1 | MDKBR, MDKBV | 6 | 185-5893 | 1 | Gasket, Bearing Housing Cover |
| 2 | 800-6329 | 8 | Bolt, Bearing Housing | 7 | 185-2403 | 8 | Bolt |
| 3 | | | Bearing, Crankshaft | 8 | 185-2404 | 8 | Bolt |
| | 104-2035 | 1 | Standard Set | 9 | 509-0416 | 1 | Seal, Oil |
| | 104-2039 | 1 | 0.20mm Set | 10 | 104-2031 | 1 | Housing, Main Bearing |
| | 104-2040 | 1 | 0.40mm Set | 11 | 104-2032 | 1 | Housing, Main Bearing |
| 4 | 101-0834 | 1 | Gasket, Bearing Housing | 12 | 104-2164 | 1 | Housing, Main Bearing |
| | | | | 13 | 185-5899 | 3 | Bolt, Bearing Housing |



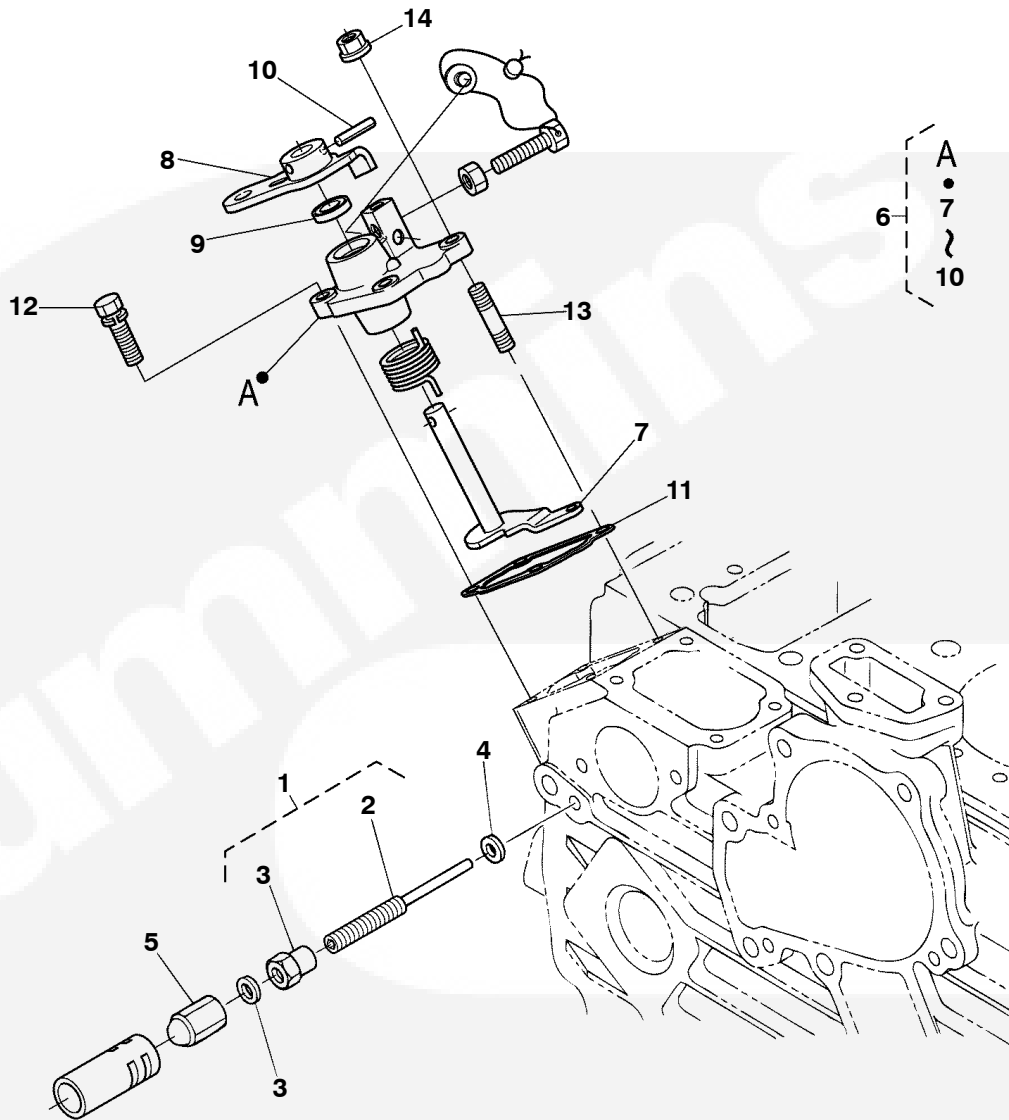
Fuel Camshaft



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|---------|----------|----------|-------------------------|
| 1 | | | Camshaft Assy, Fuel (Includes Parts Marked *) | 10 | 105-0741 | 7 | *Ball |
| | 150-2978 | 1 | MDKBP | 11 | 510-0265 | 1 | Bearing, Ball |
| | 150-2983 | 1 | MDKBR, MDKBV | | 510-0267 | 1 | MDKBP |
| 2 | | | *Bearing, Ball | | | | MDKBR, MDKBV |
| | 185-5947 | 1 | MDKBP | 12 | 185-5962 | 1 | Stopper, Fuel Camshaft |
| | 510-0266 | 1 | MDKBR, MDKBV | | 150-2984 | 1 | MDKBP |
| 3 | 507-0041 | 1 | *Gear, Injection Pump | | | | MDKBR, MDKBV |
| 4 | 185-5949 | 1 | *Key, Feather | 13 | 185-6956 | 2 | Bolt |
| 5 | 150-2798 | 1 | *Sleeve, Governor | 14 | 150-2985 | 1 | Gasket |
| 6 | 518-0712 | 1 | *Clip, External Circular | 15 | 185-5963 | 1 | Clip, External Circular |
| 7 | 150-2800 | 1 | *Case, Governor Ball | | | | |
| 8 | 185-5575 | 39 | *Ball | | | | |
| 9 | 518-0713 | 1 | *Clip, Circular | | | | |

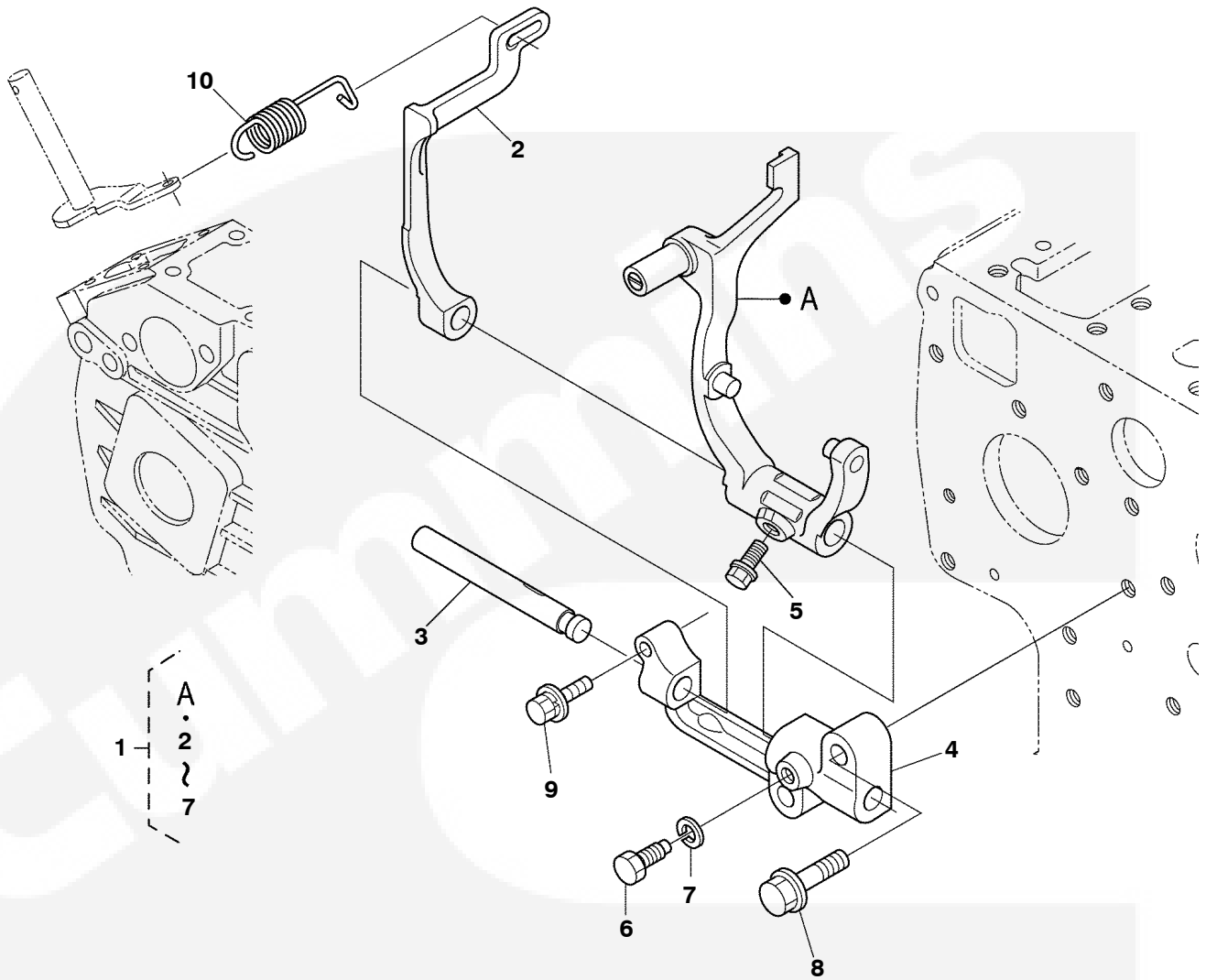
* - Parts Included in Fuel Camshaft Assy

Speed Control



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--------------------------------|---------|----------|----------|----------------------|
| 1 | 150-2840 | 1 | Bolt, Adjusting - Maximum Fuel | 8 | 150-2982 | 1 | Lever, Speed Control |
| 2 | 800-6307 | 1 | Bolt, Adjusting | 9 | 509-0553 | 1 | Seal, Oil |
| 3 | 185-6164 | 1 | Nut | 10 | 185-2351 | 1 | Pin, Spring |
| 4 | 185-2284 | 2 | Gasket | 11 | 150-2844 | 1 | Gasket, Plate |
| 5 | 185-5529 | 1 | Nut | 12 | 185-2388 | 2 | Bolt |
| 6 | 150-2981 | 1 | Plate, Speed Control | 13 | 185-5727 | 2 | Stud |
| 7 | 150-2841 | 1 | Comp Lever, Governor | 14 | 185-7166 | 2 | Nut, Flange |

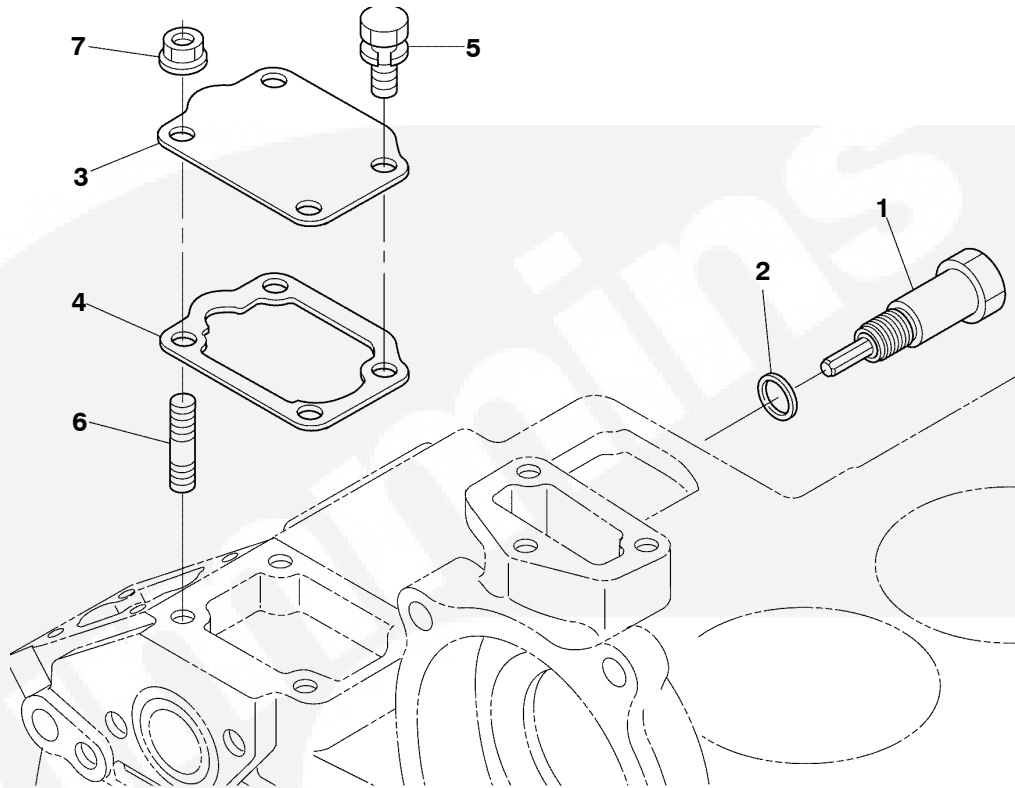
Governor



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|---------|----------|----------|------------------|
| 1 | 150-2980 | 1 | Lever, Governor MDKBP | 6 | 800-6306 | 1 | *Bolt |
| | 150-2986 | 1 | MDKBR, MDKBV | 7 | 185-6759 | 1 | *Washer, Spring |
| 2 | 150-2842 | 1 | Lever Assy, Fork (Includes Parts Marked *) | 8 | 800-6334 | 1 | *Bolt, Flange |
| 3 | 150-2805 | 1 | *Shaft, Fork Level | 9 | 185-5147 | 2 | Bolt |
| 4 | 150-2836 | 1 | *Holder, Fork Lever | 10 | 506-0028 | 1 | Spring, Governor |
| 5 | 800-6305 | 1 | *Bolt, Flange | | | | |

* - Parts Included in Fork Lever Assy.

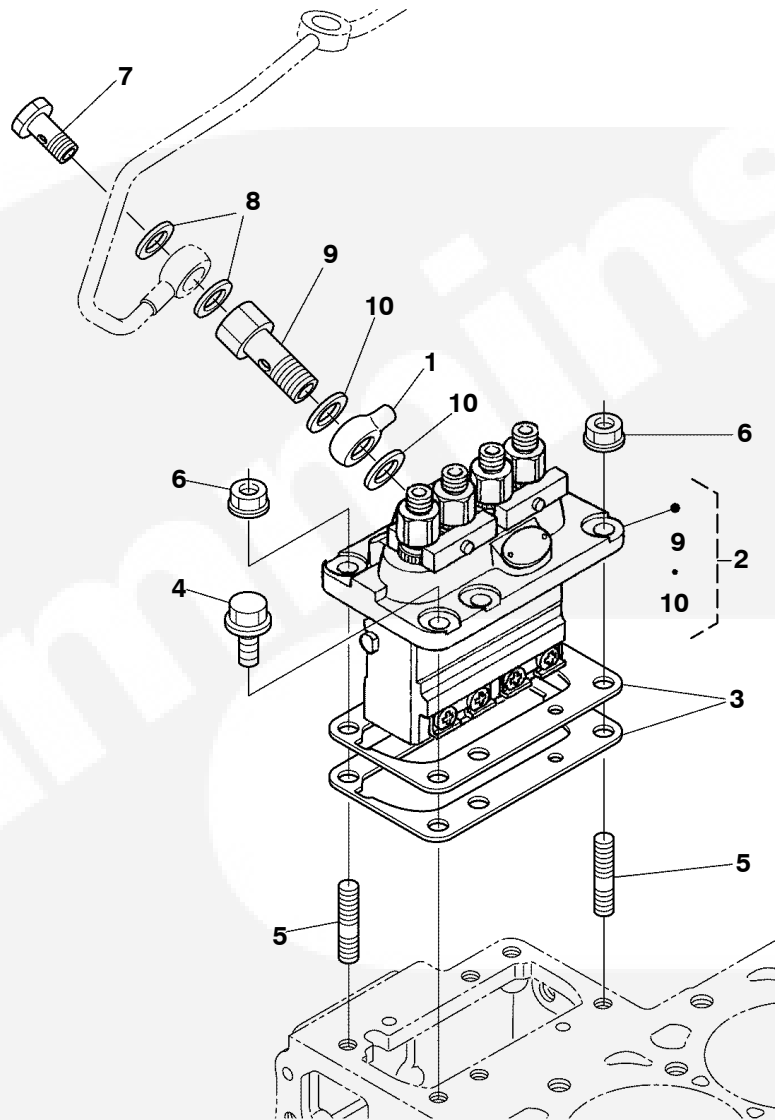
Idle



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---------------------------|---------|----------|----------|------------------|
| 1 | 150-2853 | 1 | Apparatus, Idling | 6 | 181-9034 | 2 | Stud |
| 2 | 509-0418 | 1 | Gasket | 7 | 185-7166 | 2 | Nut, Flange |
| 3 | 150-2979 | 1 | Cover, Boost Comp Housing | | | | |
| 4 | 150-2844 | 1 | Gasket, Plate | | | | |
| 5 | 185-2390 | 2 | Bolt | | | | |

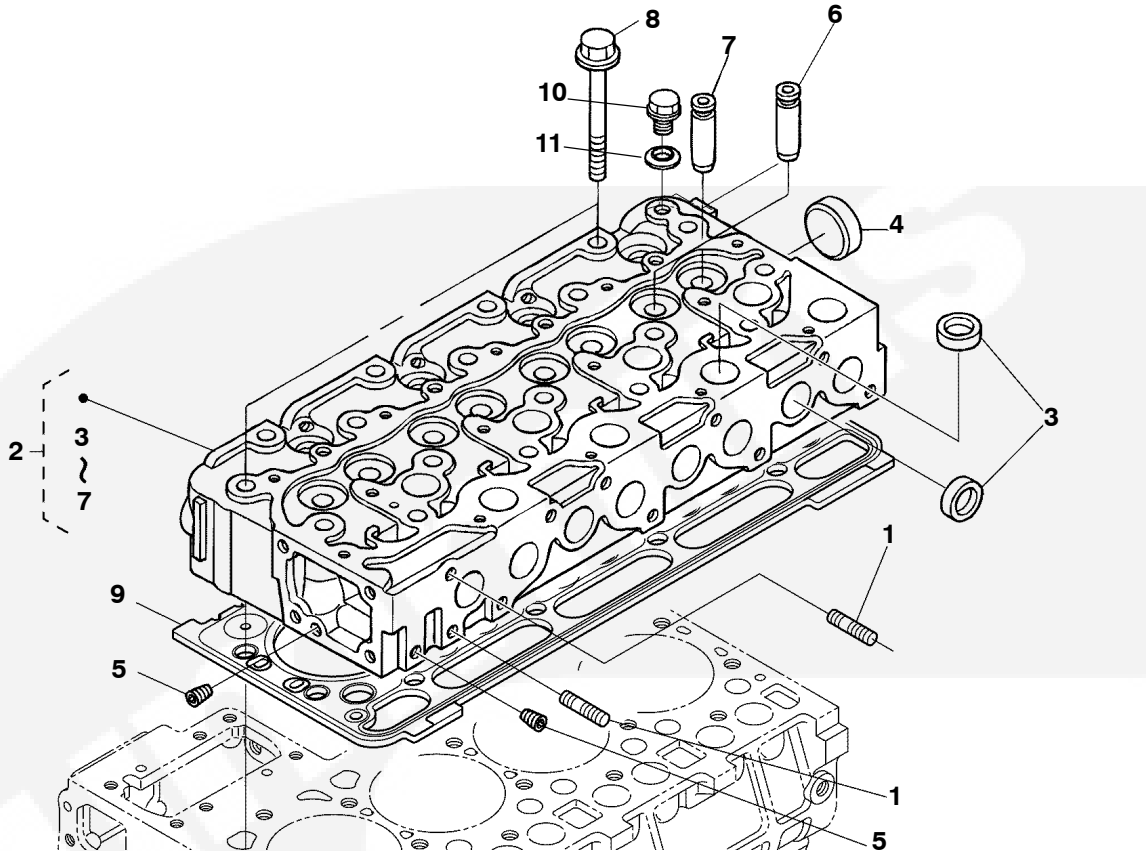


Injection Pump Components



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|----------------------|---------|----------|----------|--------------------|
| 1 | 185-6418 | 1 | Joint | 4 | 800-6333 | 4 | Bolt, Flange |
| 2 | 147-0902 | 1 | Assy Pump, Injection | 5 | 185-2106 | 2 | Stud |
| 3 | | | Shim, Injection Pump | 6 | 185-7134 | 2 | Nut, Flange |
| | 147-0983 | 1 | 0.175mm | 7 | 185-7045 | 1 | Screw, Hollow |
| | 185-6756 | 1 | 0.200mm | 8 | 185-2578 | 2 | Gasket |
| | 185-6757 | 1 | 0.250mm | 9 | 185-6153 | 1 | Screw, Hollow |
| | 185-6758 | 1 | 0.300mm | 10 | 185-6154 | 2 | Seat, Lower Spring |

Cylinder Head

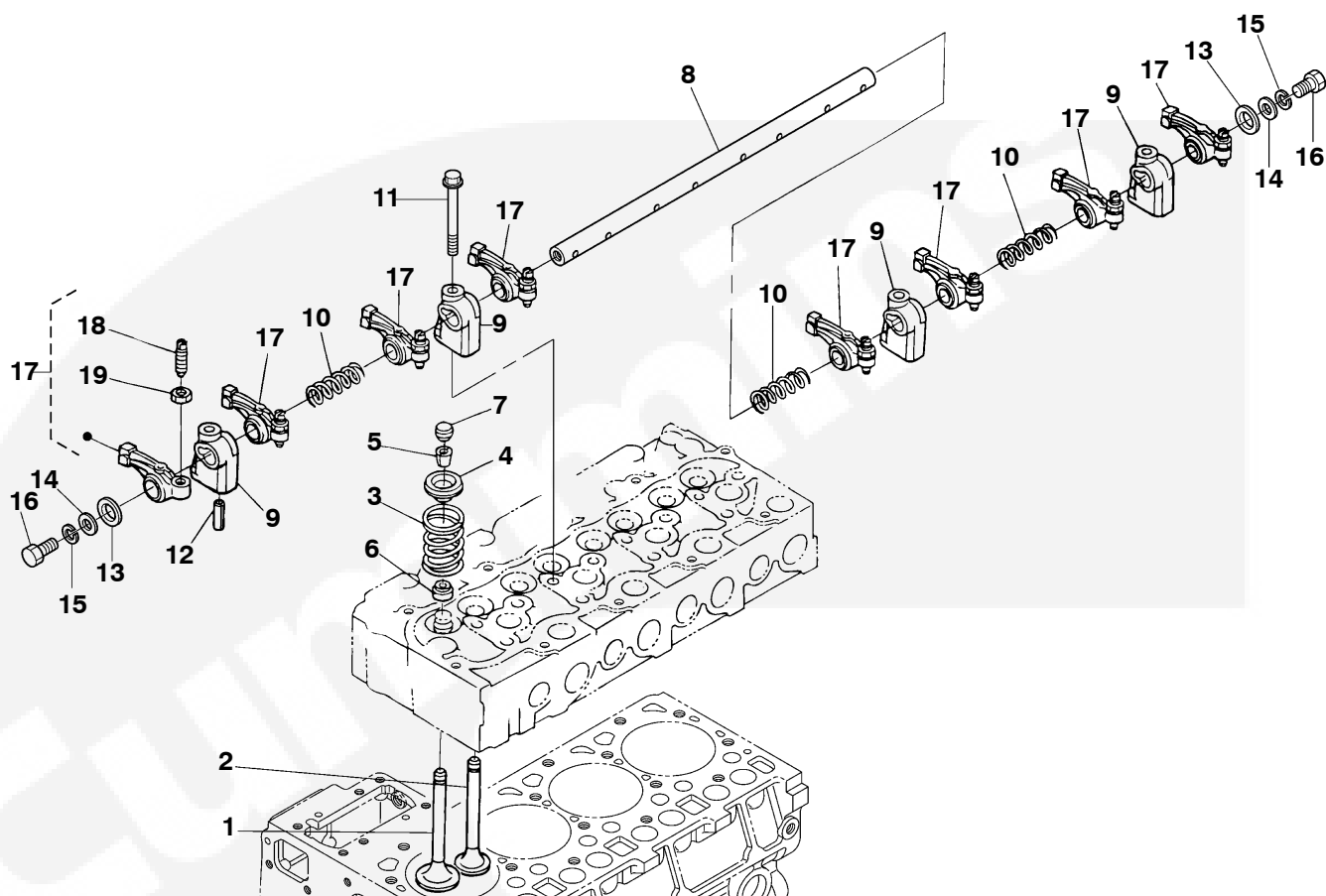


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|----------|----------|----------|-----------------------------|
| 1 | 185-6048 | 2 | Stud | 9 | | | Gasket, Cylinder Head MDKBP |
| 2 | | 1 | Head Assy, Cylinder (Includes Parts Marked #) | 110-4098 | 1 | 1.15mm | |
| | 110-4097 | 1 | MDKBP | 110-4099 | 1 | 1.20mm | |
| | 110-4106 | 1 | MDKBR, MDKBV | 110-4100 | 1 | 1.25mm | |
| 3 | 185-6050 | 12 | #Cap, Sealing | 110-4101 | 1 | 1.30mm | |
| 4 | 185-2412 | 1 | #Cap, Sealing | 110-4102 | 1 | 1.35mm | |
| 5 | 185-2188 | 2 | #Plug | | | | MDKBR, MDKBV |
| 6 | 185-5862 | 4 | #Guide, Inlet Valve | 110-4107 | 1 | 1.15mm | |
| 7 | 110-3987 | 4 | #Guide, Exhaust Valve | 110-4108 | 1 | 1.20mm | |
| 8 | 185-5865 | 18 | Bolt, Cylinder Head | 110-4109 | 1 | 1.25mm | |
| | | | | 110-4110 | 1 | 1.30mm | |
| | | | | 110-4111 | 1 | 1.35mm | |
| | | | | 10 | 185-5867 | 1 | Plug |
| | | | | 11 | 185-5868 | 1 | Washer, Rubber |

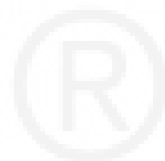
- Parts Included in Cylinder Head Assy.



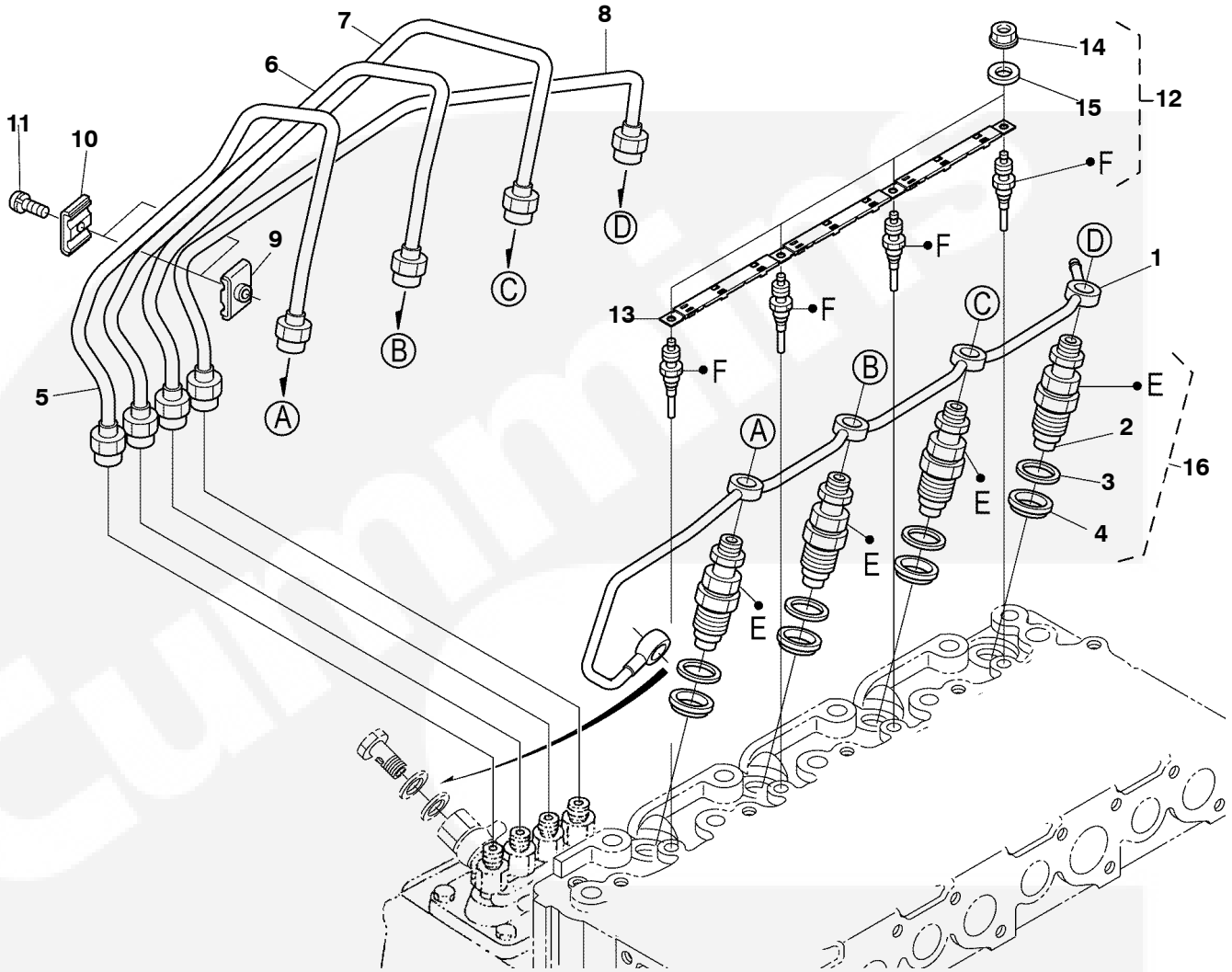
Rocker Arm



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|--|
| 1 | 110-4103 | 4 | Valve, Inlet | 10 | 185-6026 | 3 | Spring, Rocker Arm |
| 2 | 110-4104 | 4 | Valve, Exhaust | 11 | 800-6335 | 4 | Bolt, Flange |
| 3 | 185-6016 | 8 | Spring, Valve | 12 | 185-6789 | 1 | Pin, Spring |
| 4 | 185-6017 | 8 | Retainer, Valve Spring | 13 | 185-6025 | 2 | Washer, Rocker Arm Shaft |
| 5 | 110-3948 | 8 | Collet, Valve Spring | 14 | 185-7221 | 2 | Washer, Plain |
| 6 | 185-6018 | 8 | Seal, Valve Stem | 15 | 185-6957 | 2 | Washer, Spring |
| 7 | 185-6019 | 8 | Cap, Valve | 16 | 800-6327 | 2 | Bolt |
| 8 | 185-6020 | 1 | Assy, Rocker Arm Shaft (Includes Set Screws) | 17 | 185-6028 | 8 | Assy, Rocker Arm (Includes Screw, Adjusting |
| 9 | 185-6022 | 4 | Bracket, Rocker Arm | 18 | 185-6029 | 8 | Nut |

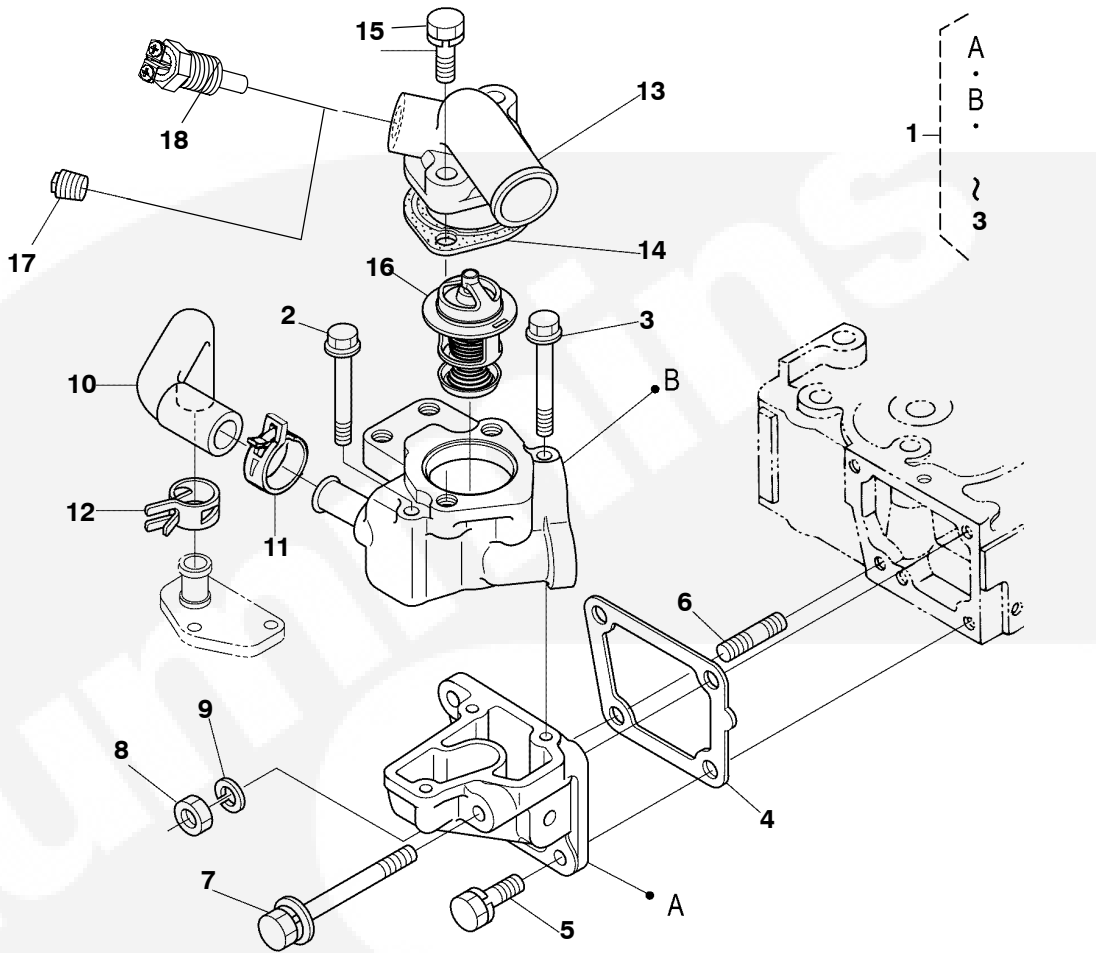


Nozzle Holder and Glow Plug



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|---------|----------|----------|---|
| 1 | 185-6731 | 1 | Pipe, Overflow | 11 | 185-2385 | 3 | Screw (With Washer) |
| 2 | 185-6095 | 4 | Nozzle | 12 | 185-5990 | 4 | Plug, Glow 12V |
| 3 | 185-5337 | 4 | Gasket | | 185-6725 | 4 | 24V |
| 4 | 185-5985 | 4 | Seal, Heat | 13 | 337-4114 | | Cord, Glow Plug |
| 5 | 185-5986 | 1 | Pipe, Injection | 14 | 185-5615 | 4 | Nut, Flange |
| 6 | 185-5987 | 1 | Pipe, Injection | 15 | 185-7004 | 4 | Washer, Plain |
| 7 | 185-5988 | 1 | Pipe, Injection | 16 | 185-6094 | 4 | Kit Holder, Nozzle (Includes Nozzle, Gasket and Heat Seal |
| 8 | 185-5989 | 1 | Pipe, Injection | | | | |
| 9 | 185-5612 | 3 | Clamp, Pipe | | | | |
| 10 | 185-2345 | 3 | Clamp, Pipe | | | | |

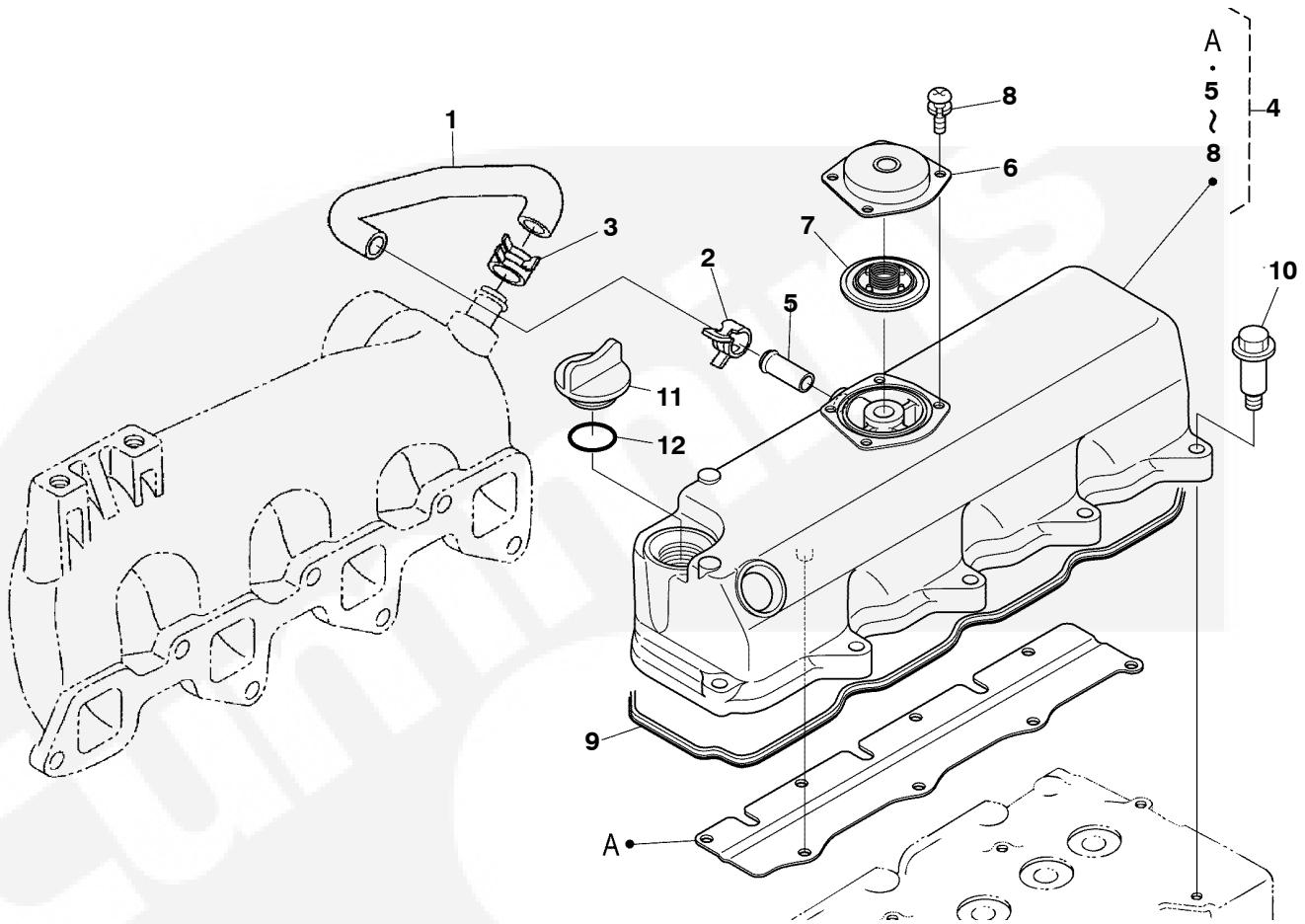
Water Outlet Flange



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--|---------|-------------|----------|----------------------------------|
| | | | *Kit, Sender (Includes Water Temperature Sender) | 13 | 135-6003 | 1 | Cover, Thermostat |
| | 300-5040 | 1 | Negative Ground | 14 | 130-6332 | 1 | Gasket, Thermostat |
| | 300-5041 | 1 | Isolated Ground | 15 | 185-2565 | 2 | Bolt |
| 1 | 130-8281 | 1 | Flange, Water Outlet (Includes Pipe) | 16 | 130-6329 | 1 | Thermostat |
| 2 | 800-6331 | 2 | Bolt, Flange | 17 | 514-0441 | 1 | Plug |
| 3 | 800-6332 | 1 | Bolt, Flange | 18 | | | + Sender, Water Temperature (E2) |
| 4 | 130-6334 | 1 | Gasket, Water Flange | | 193-0318 | 1 | Negative Ground |
| 5 | 185-2401 | 2 | Bolt | | 193-0457-01 | 1 | Isolated Ground |
| 6 | 185-2106 | 1 | Stud | | | | |
| 7 | 800-6328 | 1 | Bolt | | | | |
| 8 | 185-2367 | 1 | Nut | | | | |
| 9 | 185-6957 | 1 | Washer, Spring | | | | |
| 10 | 503-2553 | 1 | Pipe, Water Return | | | | |
| 11 | 503-3128 | 1 | Clamp, Hose | | | | |
| 12 | 503-2552 | 1 | Clamp, Hose | | | | |

* - Kit Also Includes Oil Pressure Sender Listed on Oil Pan Page.
 + - Water Temperature Sender ties to E2-2 Iso Harness (See Isolated Ground 338-4200-01)

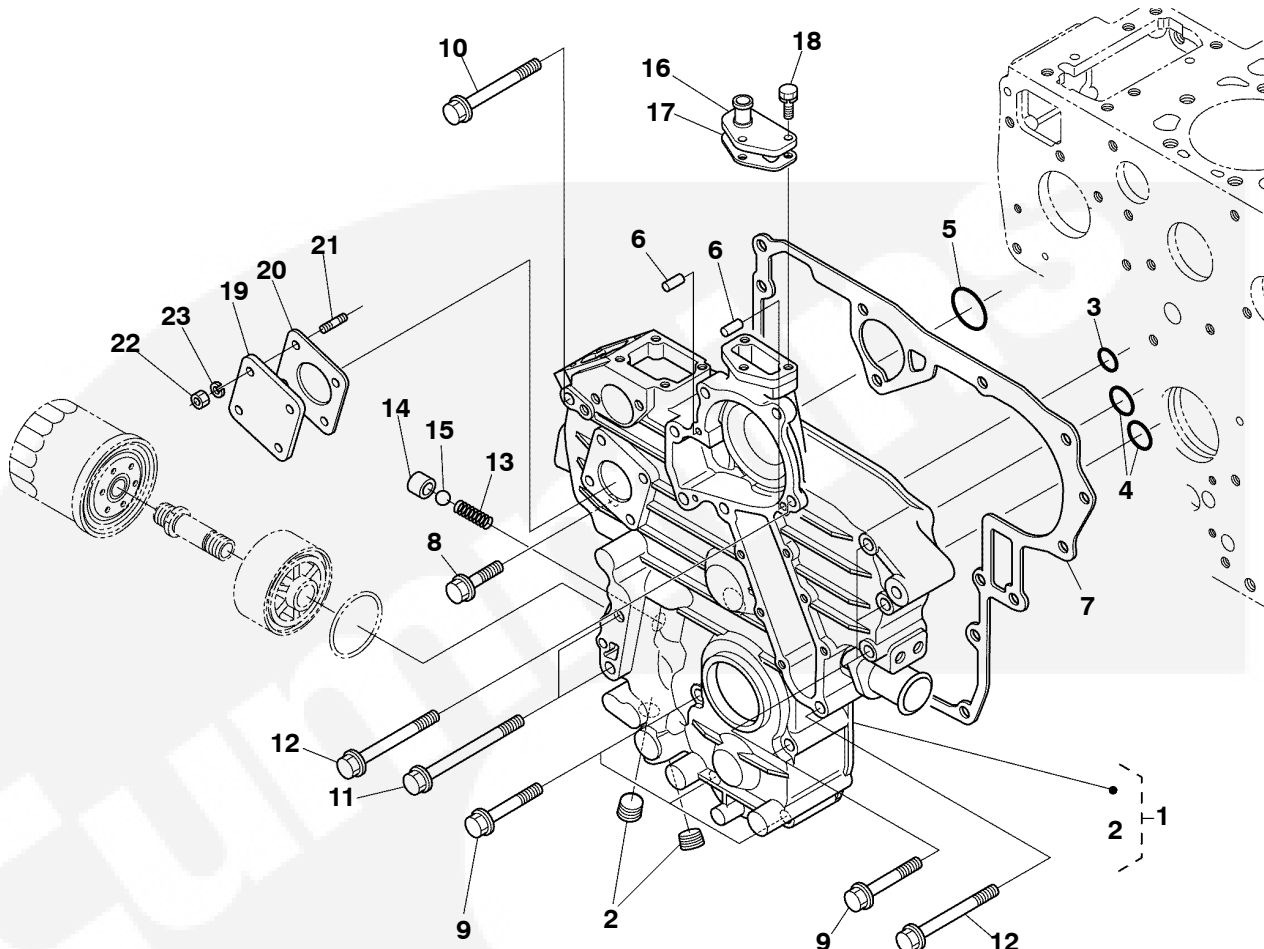
Cylinder Head Cover



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|----------------------|---------|----------|----------|--------------------|
| 1 | 123-2423 | 1 | Tube, Breather | 7 | 123-2296 | 1 | Breather |
| 2 | 181-9025 | 1 | Clamp, Hose | 8 | 184-2384 | 4 | Bolt |
| 3 | 185-6722 | 1 | Clamp, Hose | 9 | 115-0567 | 1 | Gasket, Head Cover |
| 4 | 134-5391 | 1 | Cover, Cylinder Head | 10 | 800-6330 | 10 | Bolt |
| 5 | 185-6103 | 1 | Pipe, Water Return | 11 | 185-5407 | 1 | Plug, Oil Filler |
| 6 | 181-9238 | 1 | Cover, Breather | 12 | 509-0414 | 1 | O'Ring |

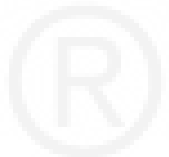


Gearcase

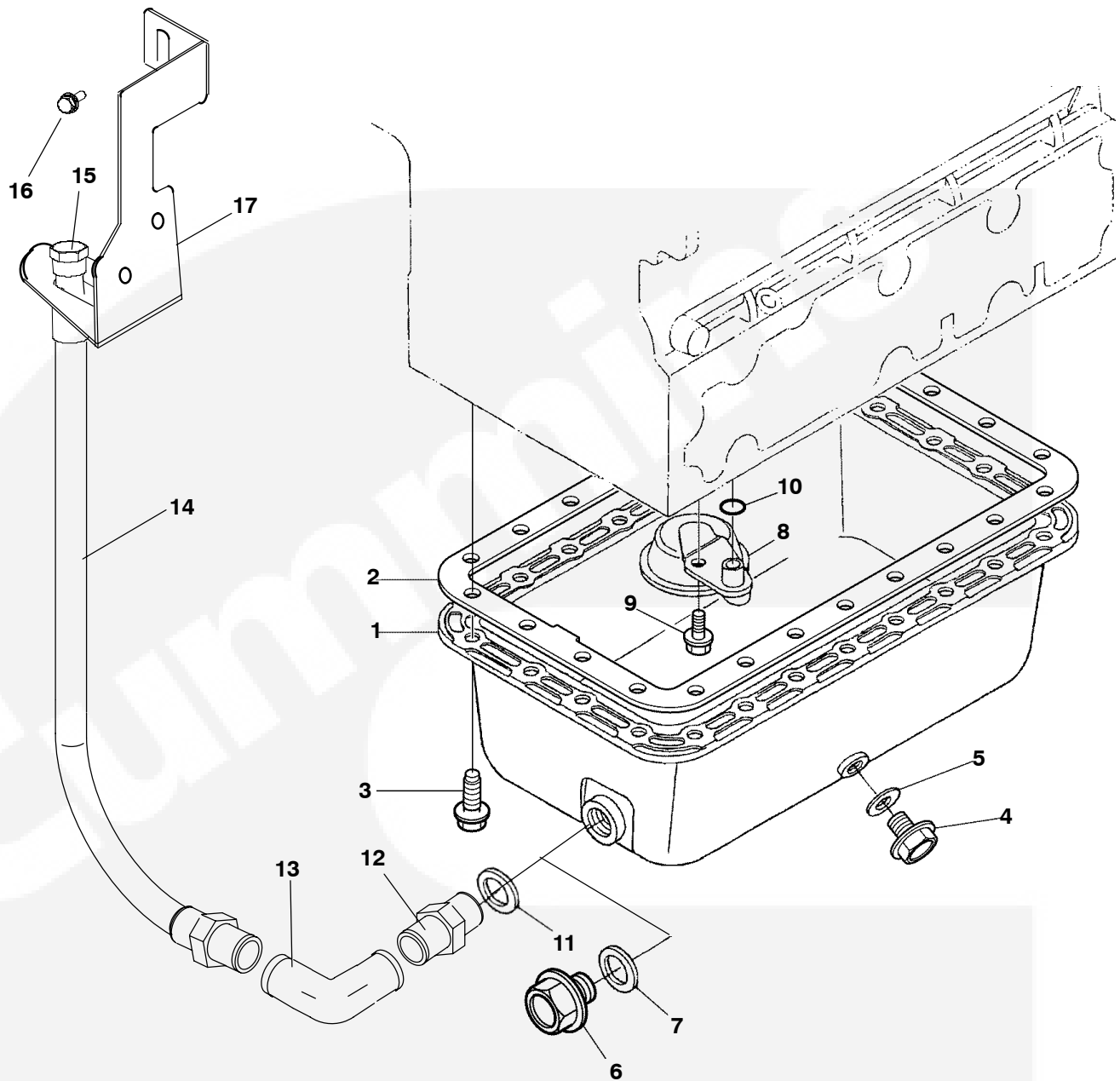


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|----------------------|
| 1 | | | Gearcase Assy (Includes Parts Marked *) | 14 | 185-5878 | 1 | Seat, Valve |
| | 103-0863 | 1 | MDKBP | 15 | 185-6711 | 1 | Ball |
| | 103-0864 | 1 | MDKBR, MDKBV | 16 | 185-5879 | 1 | Flange, Water Return |
| 2 | 185-6481 | 2 | *Plug | 17 | 185-5880 | 1 | Gasket, Water Return |
| 3 | 509-0410 | 1 | O'Ring | 18 | 185-2559 | 3 | Bolt |
| 4 | 509-0412 | 2 | O'Ring | 19 | 185-2153 | 1 | Cover |
| 5 | 509-0413 | 1 | O'Ring | 20 | 302-2084 | 1 | Gasket, Hourmeter |
| 6 | 185-5843 | 2 | Pin, Straight | 21 | 181-9034 | 4 | Stud |
| 7 | 103-0832 | 1 | Gasket, Gear Case | 22 | 185-4255 | 4 | Nut |
| 8 | 800-6334 | 1 | Bolt | 23 | 185-6759 | 4 | Washer, Spring |
| 9 | 815-1593 | 7 | Bolt | | | | |
| 10 | 800-6414 | 1 | Bolt | | | | |
| 11 | 815-1594 | 2 | Bolt | | | | |
| 12 | 815-1595 | 4 | Bolt | | | | |
| 13 | 185-5877 | 1 | Spring | | | | |

* - Parts Included in Gearcase Assy



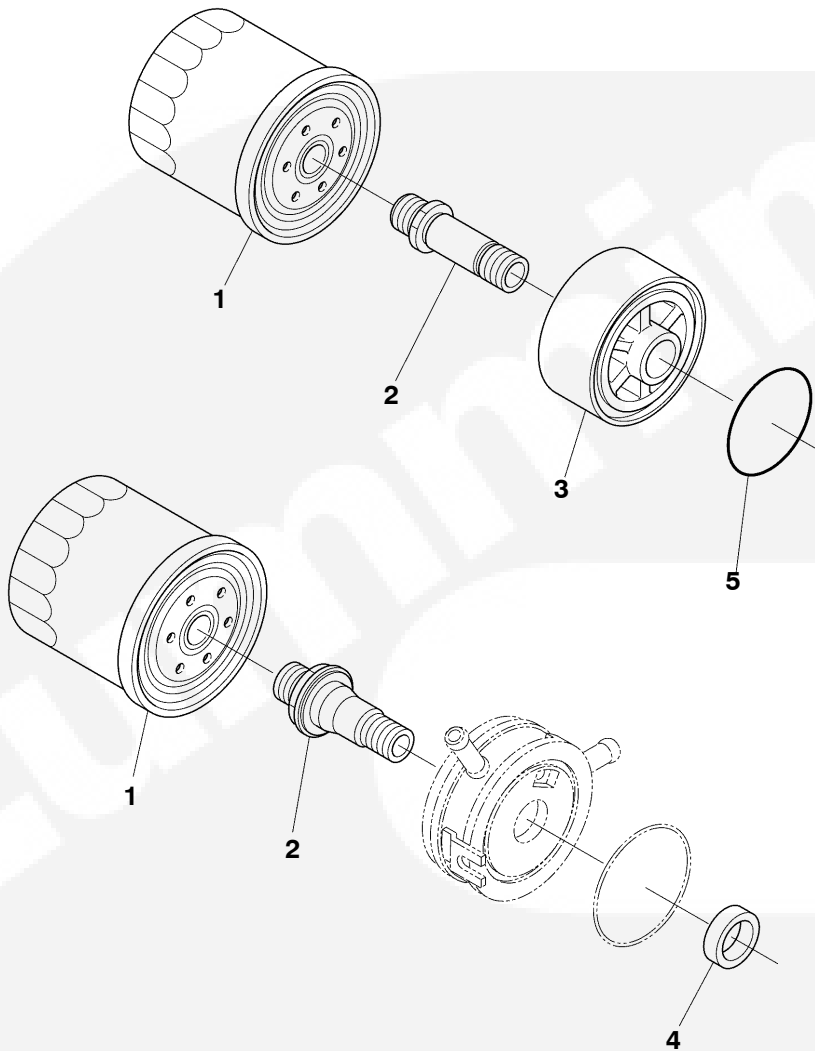
Oil Pan



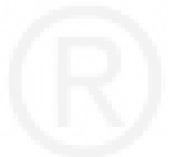
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|---------|-------------|----------|---|
| 1 | 185-6727 | 1 | Pan, Oil | 11 | 526-0413 | 1 | Washer |
| 2 | 185-5854 | 1 | Gasket | 12 | 102-1449-01 | 1 | Adapter, Oil Drain |
| 3 | 815-1592 | 4 | Bolt, Flange | 13 | 502-0263 | 1 | Elbow, 90 |
| 4 | 517-0418 | 1 | Plug, Drain | 14 | 501-0910 | 1 | Hose, Assy |
| 5 | 509-0428 | 1 | Gasket | 15 | 502-1123 | 1 | Cap, Pipe |
| 6 | 185-6760 | 1 | Plug, Drain | 16 | 821-6002-03 | 3 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) |
| 7 | 185-6761 | 1 | *Gasket | 17 | 120-1387-03 | 1 | Bracket, Oil Drain |
| 8 | 185-6728 | 1 | Tube, Oil Pickup | | | | |
| 9 | 185-2573 | 1 | Bolt | | | | |
| 10 | 504-0411 | 1 | O'Ring | | | | |

* Bolt and Gasket Removed with Installation of Oil Drain.

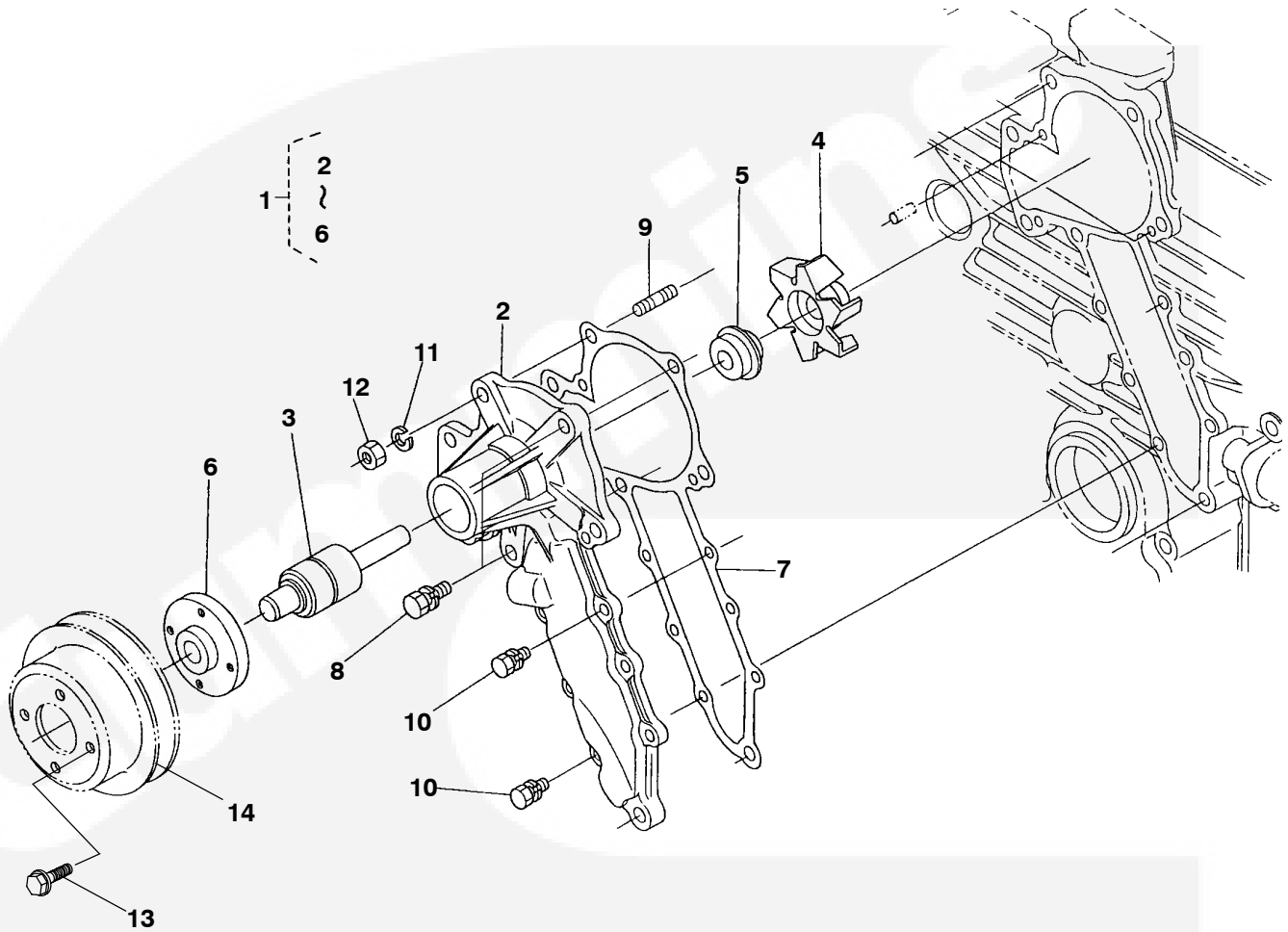
Oil Filter Assembly



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|------------------|---------|----------|----------|-----------------------|
| 1 | 122-0893 | | Filter, Oil | 4 | 508-1341 | 1 | Collar (MDKBR, MDKBV) |
| 2 | | | Connector | 5 | 122-0886 | | O'Ring |
| | 122-0942 | 1 | MDKBP | | | | |
| | 122-0944 | 1 | MDKBR, MDKBV | | | | |
| 3 | 122-0943 | 1 | Spacer (MDKBP) | | | | |



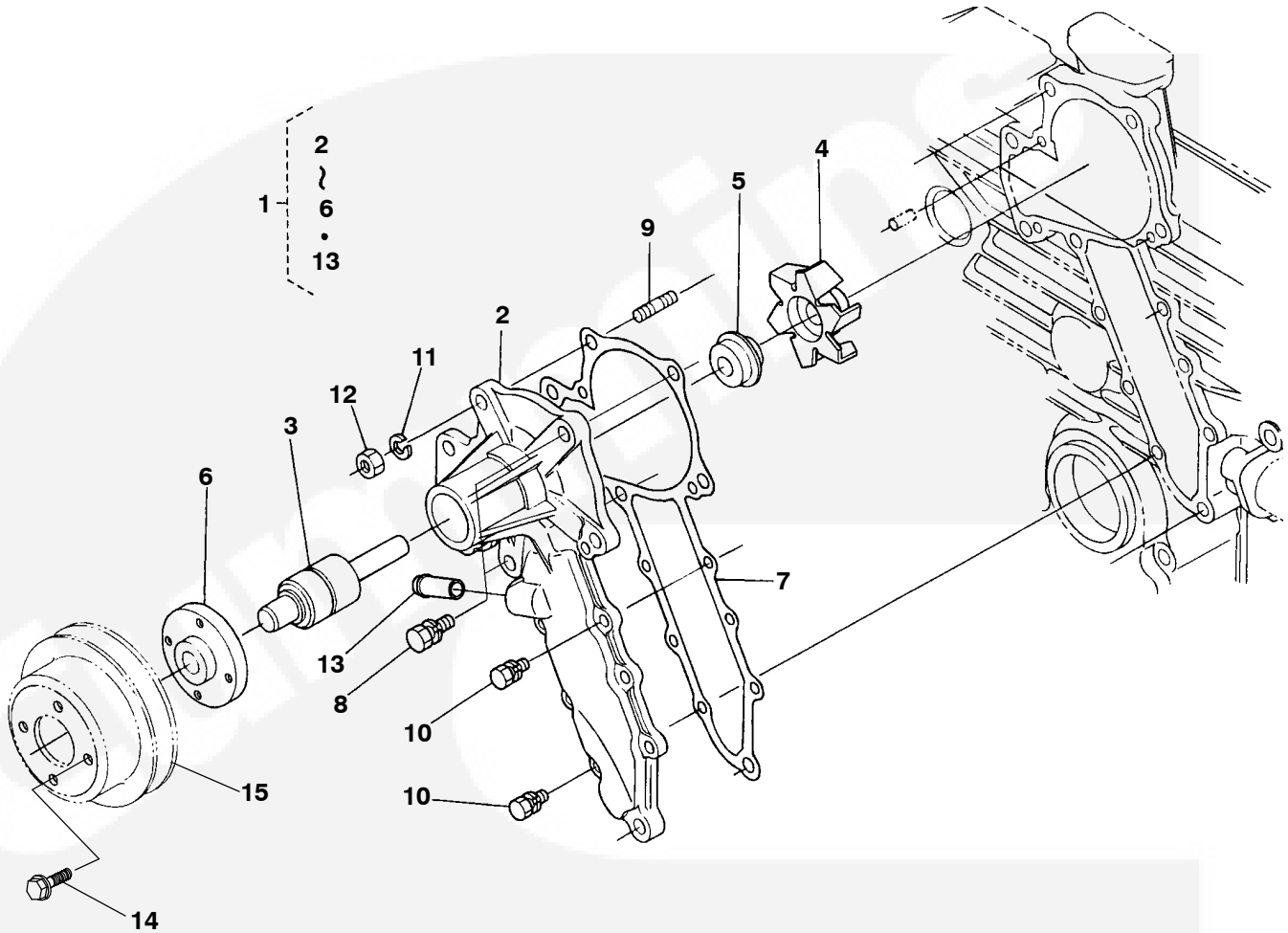
Water Pump MDKBP



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|------------------|
| 1 | 132-0520 | 1 | Pump Assy, Water (Includes Parts Marked *) | 9 | 520-2655 | 1 | Stud |
| 2 | 132-0446 | 1 | *Housing, Water Pump | 10 | 185-2386 | 6 | Bolt |
| 3 | 185-6007 | 1 | *Bearing | 11 | 185-6957 | 1 | Washer, Spring |
| 4 | 132-0444 | 1 | *Impeller, Water Pump | 12 | 185-2367 | 1 | Nut |
| 5 | 185-6978 | 1 | *Seal, Mechanical | 13 | 185-7013 | 4 | Bolt, Flange |
| 6 | 130-6347 | 1 | *Flange, with Pump Shaft | 14 | 185-6013 | 1 | Pulley |
| 7 | 132-0447 | 1 | Gasket, Water Pump | | | | |
| 8 | 185-2404 | 2 | Bolt | | | | |

* - Parts Included in Water Pump Assy

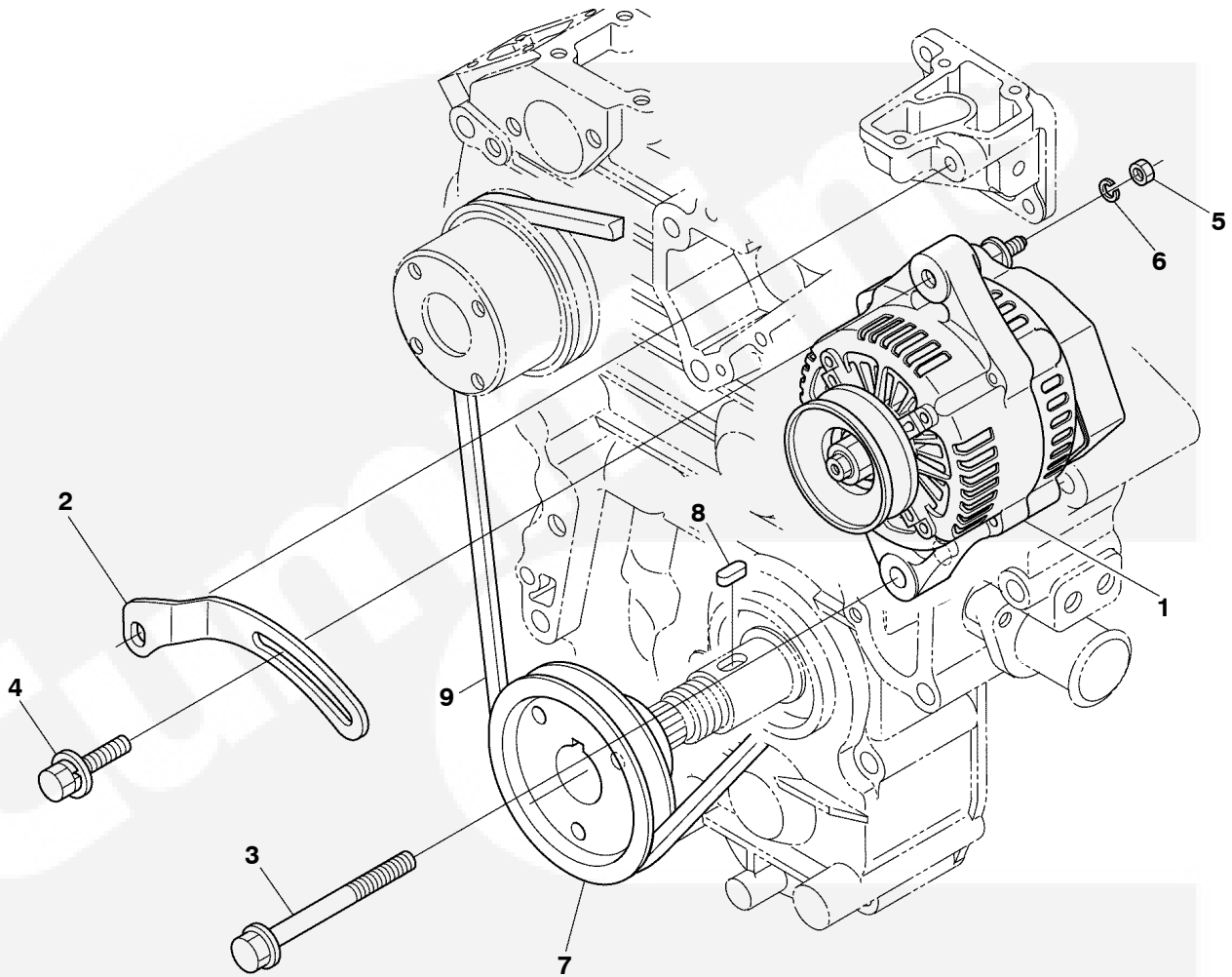
Water Pump MDKBR, MDKBV



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|--------------------|
| 1 | 132-0521 | 1 | Pump Assy, Water (Includes Parts Marked *) | 10 | 185-2389 | 6 | Bolt |
| 2 | 132-0446 | 1 | *Housing, Water Pump | 11 | 185-6957 | 1 | Washer, Spring |
| 3 | 185-6007 | 1 | *Bearing | 12 | 185-2367 | 1 | Nut |
| 4 | 132-0444 | 1 | *Impeller, Water Pump | 13 | 185-6445 | 1 | Pipe, Water Return |
| 5 | 185-7021 | 1 | *Seal, Mechanical | 14 | 185-7013 | 4 | Bolt, Flange |
| 6 | 130-6347 | 1 | *Flange, with Pump Shaft | 15 | 185-6013 | 1 | Pulley |
| 7 | 132-0447 | 1 | Gasket, Water Pump | | | | |
| 8 | 185-2404 | 2 | Bolt | | | | |
| 9 | 185-6241 | 1 | Stud | | | | |

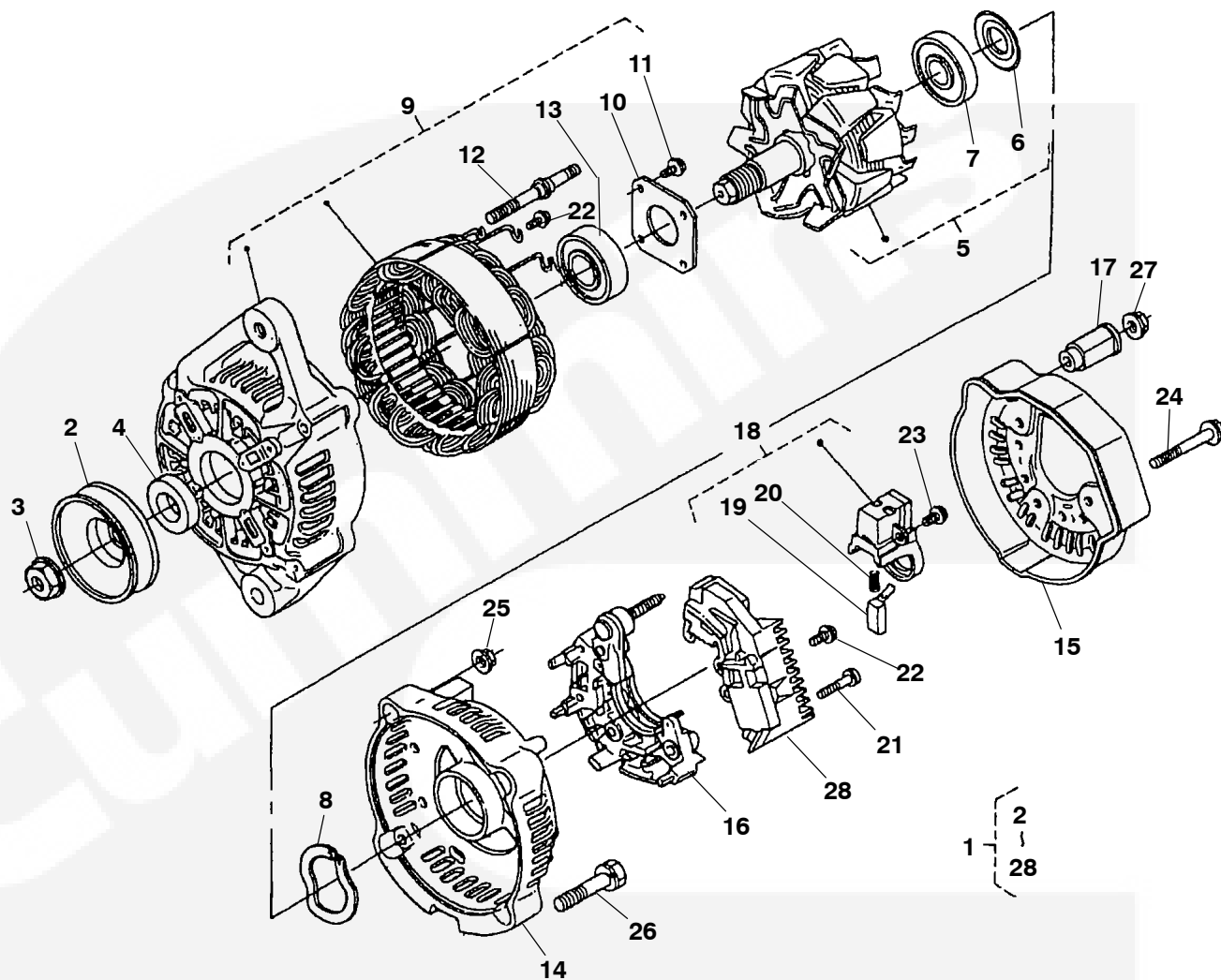
* - Parts Included in Water Pump Assy

Alternator (Negative Ground)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|-------------------|
| 1 | | | Alternator, Complete (See Separate Page for Components) | 4 | 185-9008 | 1 | Bolt |
| | 185-5994 | 1 | 12V | 5 | 185-4255 | 1 | Nut |
| | 185-6724 | 1 | 24V | 6 | 185-6759 | 1 | Washer, Spring |
| 2 | | | Bracket, Adjusting | 7 | 512-0445 | 1 | Pulley, Fan Drive |
| | 191-2505 | 1 | 12V | 8 | 185-5905 | 1 | Key |
| | 191-2506 | 1 | 24V | 9 | | | Belt |
| 3 | 815-1596 | 1 | Bolt | | 185-7016 | | 12V |
| | | | | | 511-0255 | 1 | 24V |

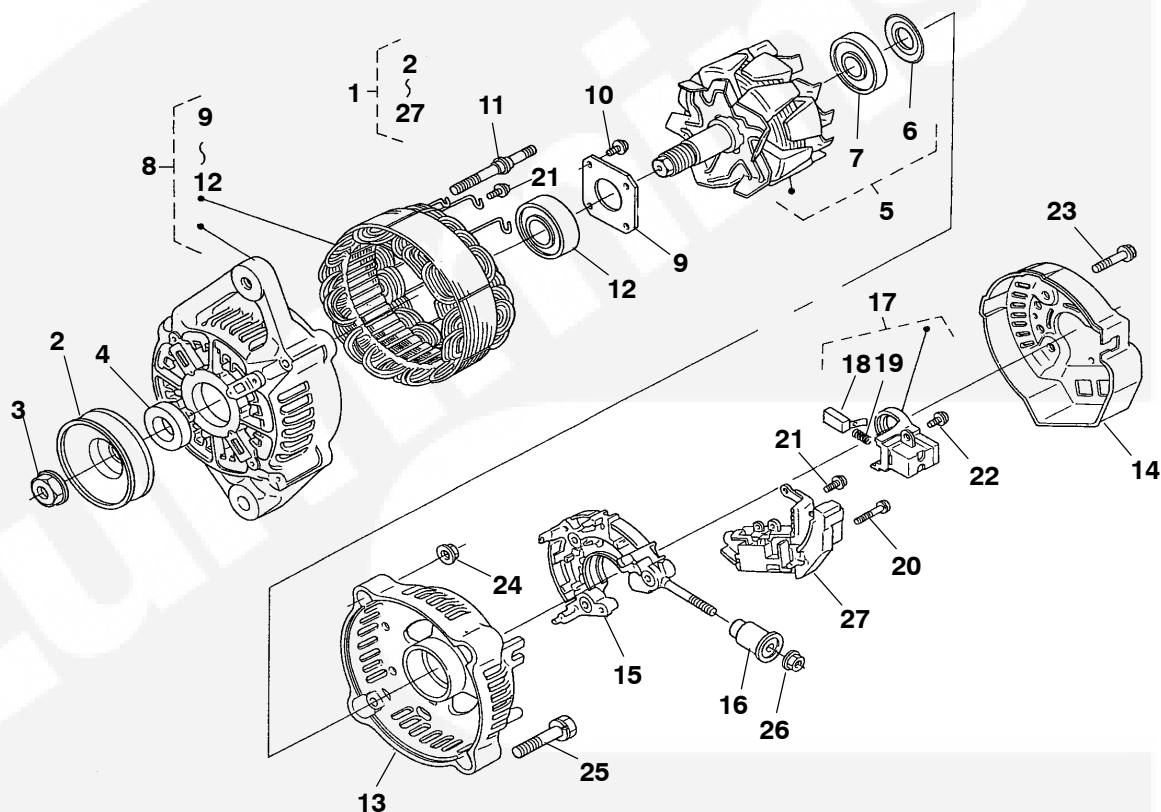
Alternator Components (Negative Ground) (12V)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|---|
| 1 | 185-5994 | 1 | Assy., Alternator (12V) | 17 | 185-6191 | 1 | Insulation, Brush |
| 2 | 185-6186 | 1 | Pulley | 18 | 181-9146 | 1 | Holder Assy, Brush (Includes Brushes and Springs) |
| 3 | 185-5768 | 1 | Nut | 19 | 185-5783 | 2 | Brush |
| 4 | 185-5769 | 1 | Collar | 20 | 185-5784 | 2 | Spring, Brush |
| 5 | 185-9263 | 1 | Rotor (Includes Bearing and Cover) | 21 | 185-5785 | 2 | Screw, Round Head |
| 6 | 185-5771 | 1 | Cover, Bearing | 22 | 185-5786 | 6 | Screw, Round Head |
| 7 | 185-5777 | 1 | Bearing | 23 | 185-5787 | 1 | Screw, Round Head |
| 8 | 185-6787 | 1 | Washer, Thrust | 24 | 185-5788 | 3 | Bolt |
| 9 | 185-5773 | 1 | Frame, Drive End (Includes Parts Marked *) | 25 | 185-5789 | 2 | Nut |
| 10 | 185-5774 | 1 | *Plate, Retainer | 26 | 185-5790 | 2 | Bolt |
| 11 | 185-5775 | 4 | *Screw, Round Head | 27 | 185-2961 | 1 | Nut |
| 12 | 185-5776 | 2 | *Bolt, Through | 28 | 185-5791 | 1 | Regulator |
| 13 | 181-9148 | 1 | *Bearing | | | | |
| 14 | 185-6188 | 1 | Frame, End | | | | |
| 15 | 185-6189 | 1 | Cover, End | | | | |
| 16 | 185-6190 | 1 | Rectifier | | | | |

* - Parts Included in Drive End Frame

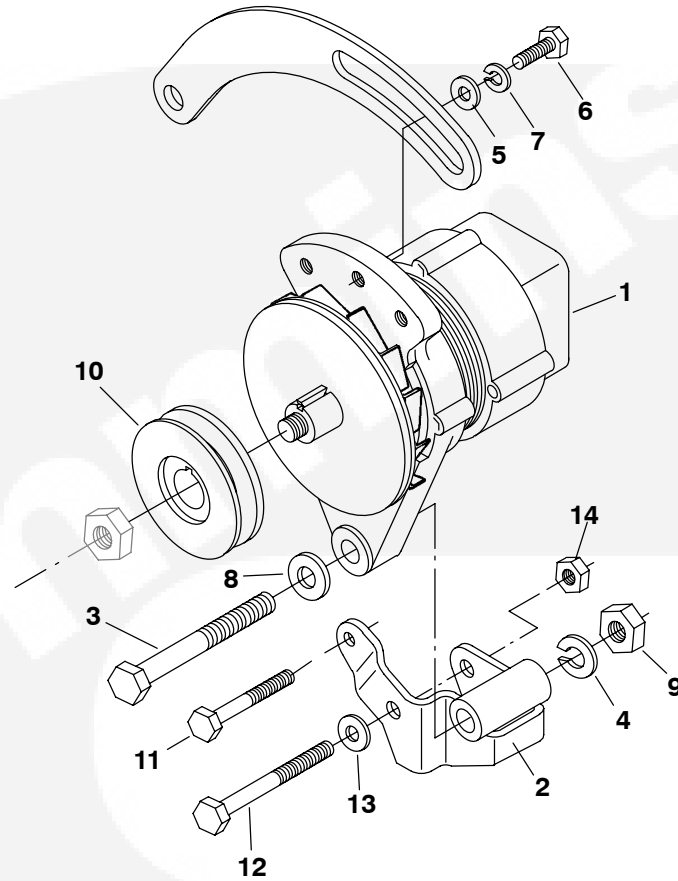
Alternator Components (Negative Ground) (24V)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|---------|----------|----------|---|
| 1 | 185-6724 | 1 | Alternator (24V) | 16 | 185-5781 | 1 | Insulation, Brush |
| 2 | 185-6809 | 1 | Pulley | 17 | 181-9146 | 1 | Holder Assy, Brush (Includes Brushes and Springs) |
| 3 | 185-5768 | 1 | Nut | 18 | 185-5783 | 2 | Brush |
| 4 | 185-5769 | 1 | Collar | 19 | 185-5784 | 2 | Spring, Brush |
| 5 | 185-9263 | 1 | Rotor (Includes Bearing and Cover) | 20 | 185-5785 | 2 | Screw, Round Head |
| 6 | 185-5771 | 1 | Cover, Bearing | 21 | 185-5786 | 6 | Screw, Round Head |
| 7 | 181-9147 | 1 | *Bearing | 22 | 185-5787 | 1 | Screw, Round Head |
| 8 | 185-6812 | 1 | Frame, Drive End (Includes Parts Marked *) | 23 | 185-5788 | 3 | Bolt |
| 9 | 185-5774 | 1 | *Plate, Retainer | 24 | 185-5789 | 2 | Nut |
| 10 | 185-5775 | 4 | *Screw, Round Head | 25 | 185-5790 | 2 | Bolt |
| 11 | 185-5776 | 2 | *Bolt, Through | 26 | 185-2961 | 1 | Nut |
| 12 | 181-9148 | 1 | Bearing | 27 | 185-6820 | 1 | Regulator |
| 13 | 181-9096 | 1 | Frame, End | | | | |
| 14 | 185-6815 | 1 | Cover, End | | | | |
| 15 | 185-6816 | 1 | Rectifier | | | | |

* - Parts Included in Drive End Frame

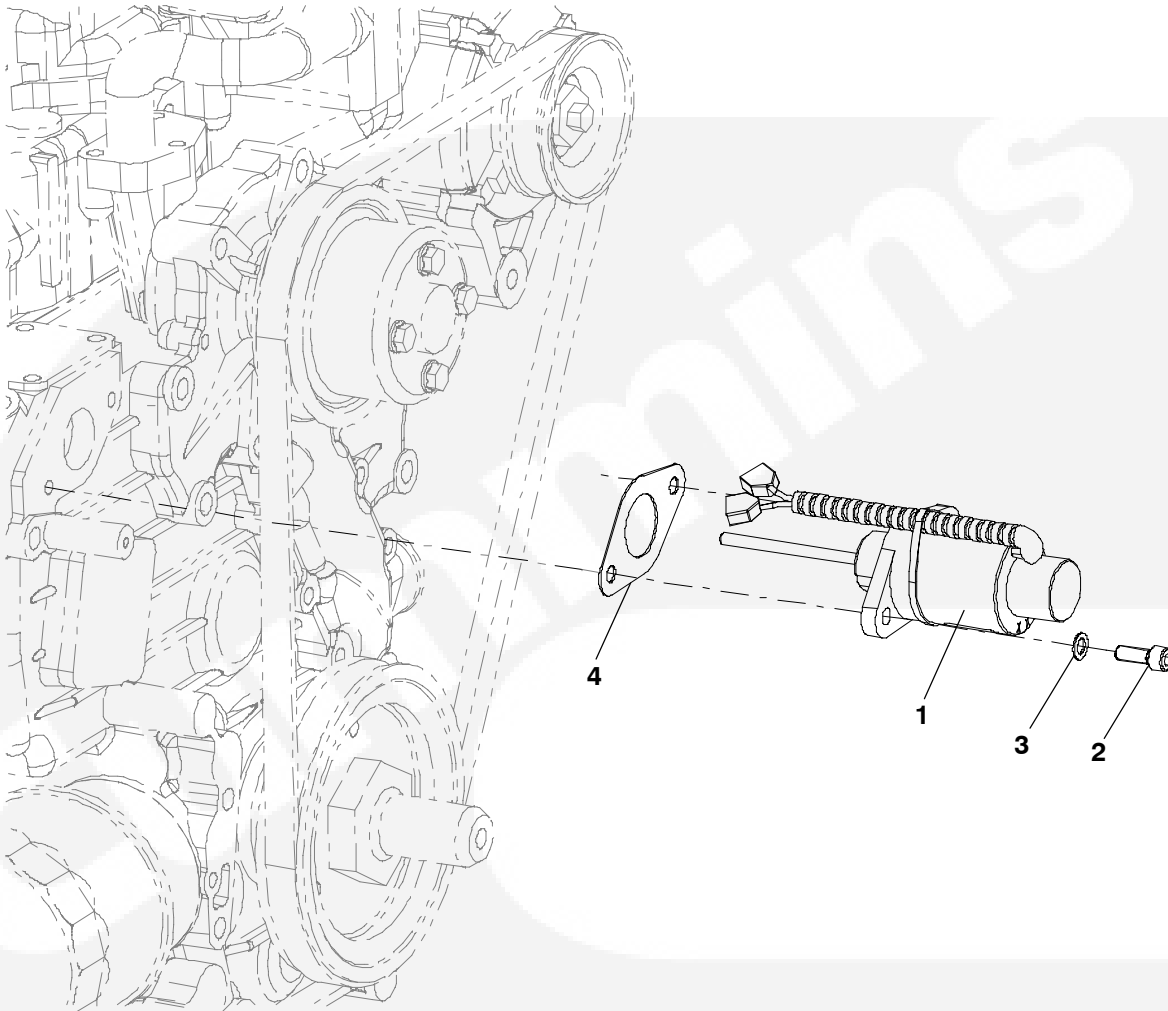
**Alternator
(Isolated Ground)
(12V/24V)**



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|---------|----------|----------|--|
| 1 | | | Alternator, Complete (No Components Available) | 9 | 862-0016 | 1 | Nut (1/2-13) |
| | 191-2169-02 | 1 | 12V | 10 | 191-2170 | 1 | Pulley, Alternator |
| | 191-2169-01 | 1 | 24V | 11 | 800-2069 | 1 | Screw, Hex Head Cap (M8 x 80mm) |
| 2 | 191-2489-02 | 1 | Bracket, Alternator | 12 | 800-2071 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 90mm) |
| 3 | 800-0104 | 1 | Screw, Hex Head Cap (1/2-13 x 4-1/2") | 13 | 526-0451 | 1 | Washer, Flat |
| 4 | 850-0060 | 1 | Washer, Lock (1/2") | 14 | 870-2055 | 1 | Nut, Hex-Lock Flange (M8 x 1.25) |
| 5 | 850-0045 | 1 | Washer, Flat (5/16") | | | | |
| 6 | 800-0027 | 1 | Screw, Hex Head Cap (5/16-18 x 7/8") | | | | |
| 7 | 526-0045 | 1 | Washer, Lock (5/16") | | | | |
| 8 | 526-0219 | 1 | Washer, Flat (1/2") | | | | |

* - Alternator ties to G2-GND, Iso Ground Harness (See Isolated Ground 338-4200-01)

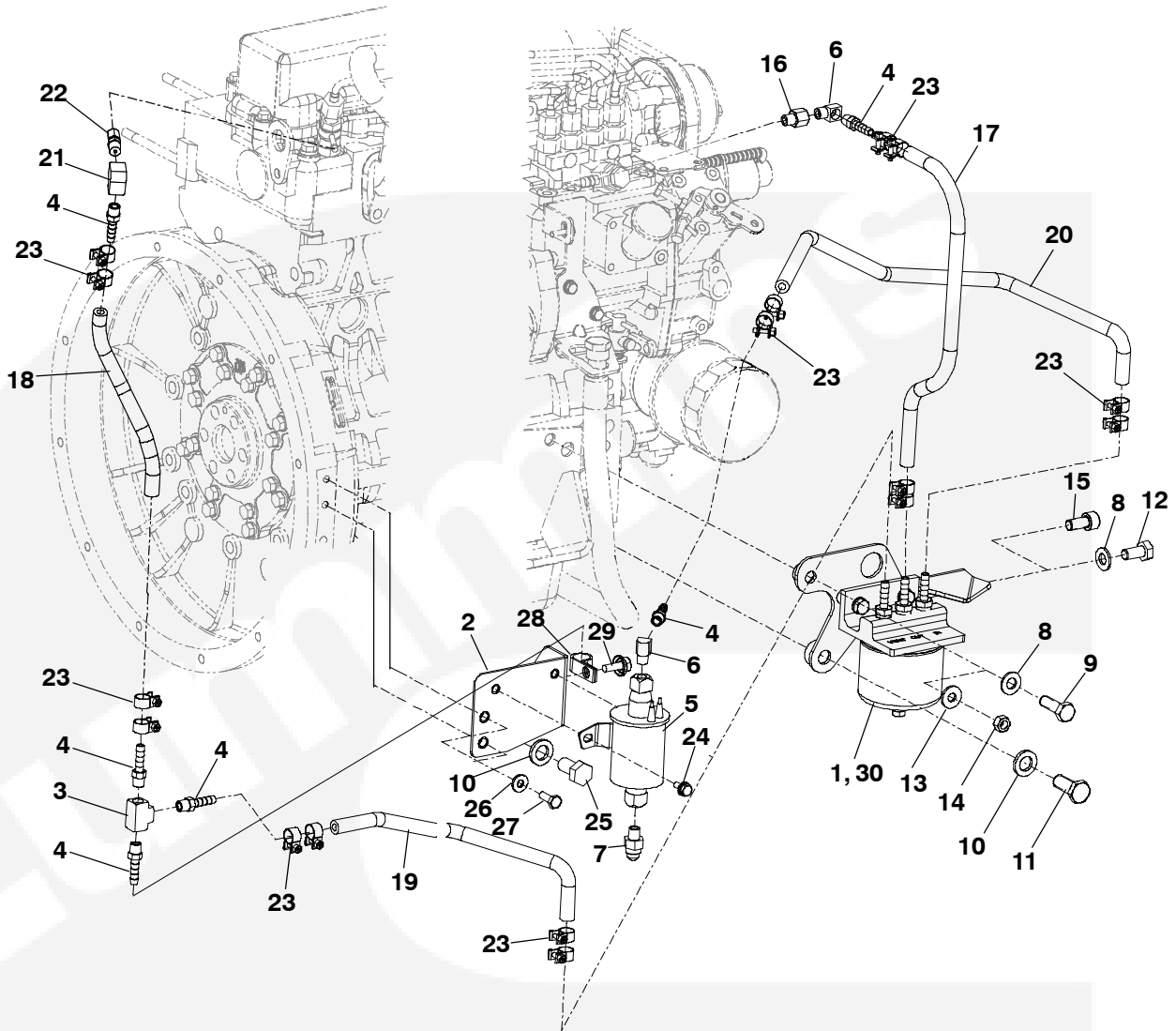
Governor Actuator



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|------------------------------------|
| 1 | 306-5316-01 | 1 | Actuator, Governor 12V |
| | 306-5316-02 | 1 | 24V |
| 2 | 725-1027 | 2 | Screw, Socket Head Cap (M6 x 16mm) |
| 3 | 526-0063 | 2 | Washer, Copper (1/32") |
| 4 | 150-2918 | 1 | Gasket, Solenoid Cover |

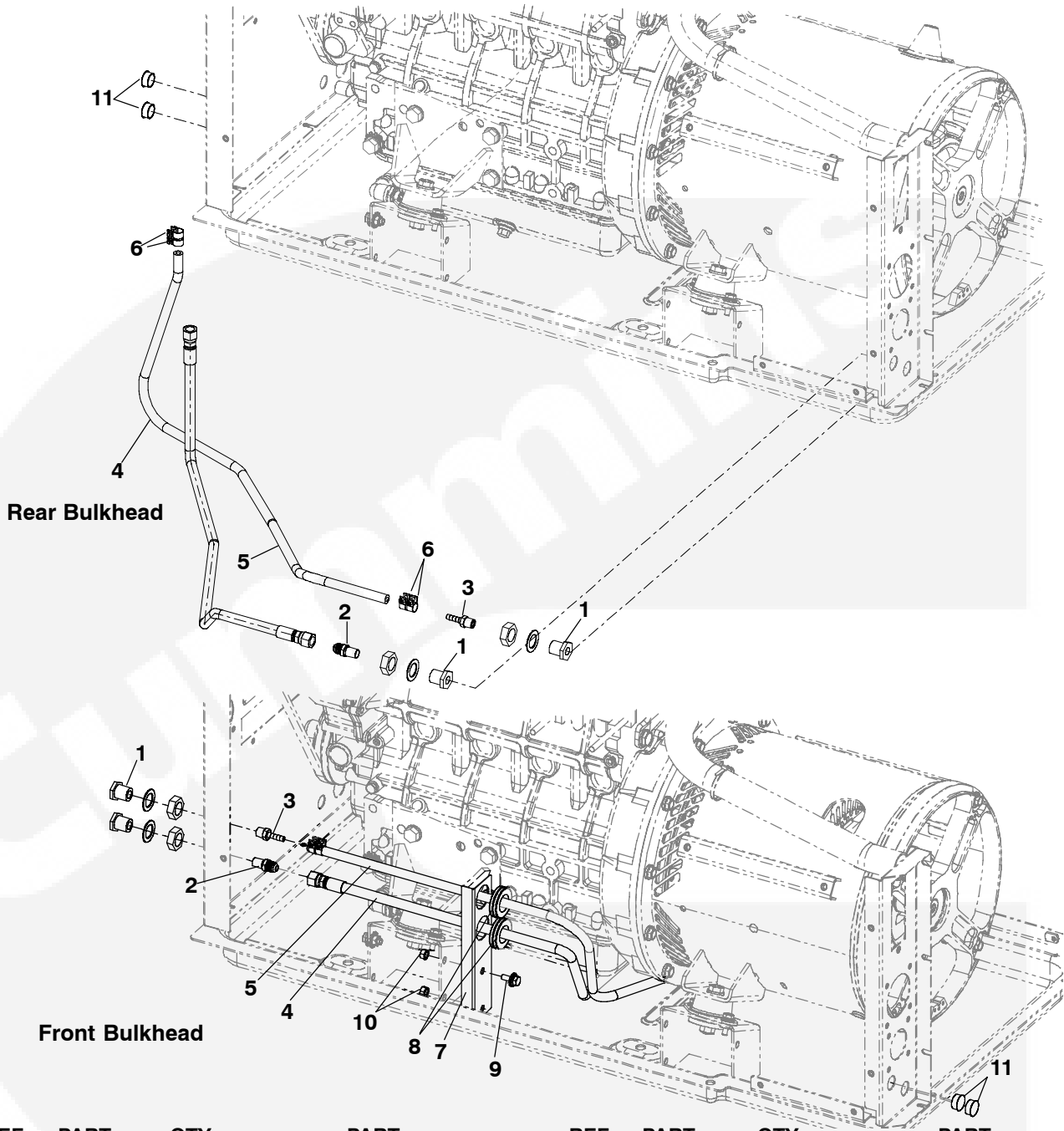


Fuel System



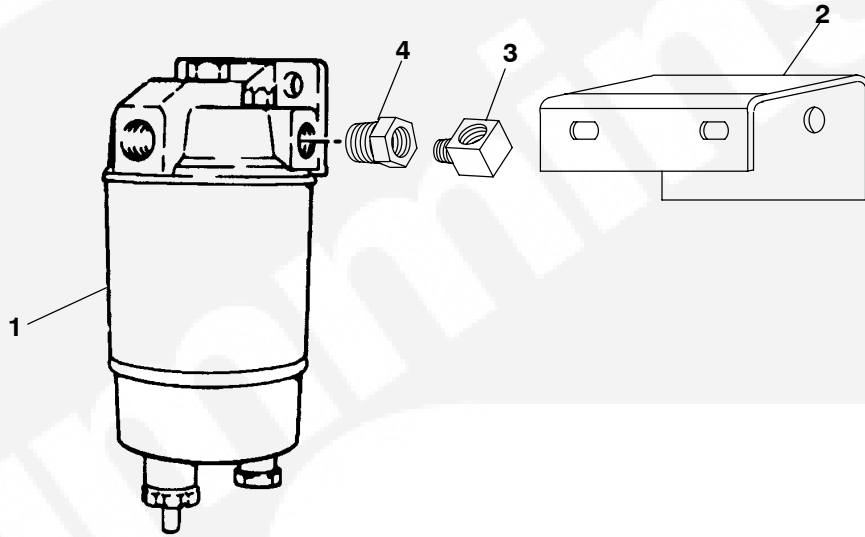
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|-------------|----------|---|
| 1 | 146-0891 | 1 | Fuel, System | 15 | 815-0904 | 1 | Screw, Socket Head Cap |
| 2 | 149-2862-03 | 1 | Bracket, Fuel Pump | 16 | 502-0175 | 1 | Adapter, Pipe (1/8") |
| 3 | 502-0079 | 1 | Tee | 17 | 503-2806 | 1 | Hose, Fuel |
| 4 | 502-1367-01 | 6 | Connector, Hose | 18 | 503-2883-01 | 1 | Hose, Fuel |
| 5 | | | Pump, Fuel | 19 | 503-2883-11 | 1 | Hose, Fuel |
| | 149-2646 | 1 | 12V | 20 | 503-2883-12 | 1 | Hose, Fuel |
| | 149-2795 | 1 | 24V | 21 | 502-0055 | 1 | Elbow, Pipe |
| 6 | 502-0020-01 | 1 | Elbow, 90° | 22 | 502-1245 | 1 | Adapter, Pipe |
| 7 | 505-1490 | 1 | Connector, Male | 23 | 503-2808 | 16 | Clamp, Hose |
| 8 | 526-2120 | 1 | Washer, Flat (M10) | 24 | 821-6002-02 | 2 | Screw, Hex Head Sems (M6 x 1.0 x 12mm) |
| 9 | 800-3005 | 1 | Screw, Hex Head (M10 x 1.25 x 30mm) | 25 | 800-3031 | 1 | Screw, Hex Head Cap (M12 x 1.25 x 25mm) |
| 10 | 526-0399-64 | 1 | Washer, Flat (M12) | 26 | 526-0399-13 | 2 | Washer, Flat |
| 11 | 800-3032 | 1 | Screw, Hex Head (M12 x 1.25 x 30mm) | 27 | 800-0310-04 | 2 | Screw, Hex Head Cap |
| 12 | 800-3004 | 1 | Screw, Hex Head Cap (M10 x 1.25 x 20mm) | 28 | 518-0548-08 | 1 | Clamp, Hose |
| 13 | 526-2106 | 1 | Washer, Flat (M8) | 29 | 821-6003-01 | 1 | Screw, Hex Head Sems (M8 x 1.25 x 16mm) |
| 14 | 860-2008 | 1 | Nut, Hex (M8 x 1.25mm) | 30 | 149-2634-01 | 1 | Filter, Fuel (Not Shown) |

Fuel Transfer Lines

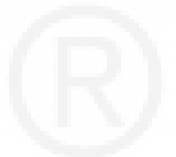


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------------------|---------|-------------|-----------|--|
| 1 | 502-1133 | 2 | Coupling, Anchor | 8 | 508-0117 | 1 | *Grommet (1") Front Housed |
| 2 | 502-1615 | 1 | Coupling, Hose | 9 | 821-6003-01 | 2 | *Screw, Hex Head Sems (M8 x 1.25 x 16mm) |
| 3 | 502-1367-02 | 1 | Connector, Hose (1/4NPT x 1/4 Hose) | 10 | 750-1006 | 2 | *Nut, Hex (M8 x 1.25mm) |
| 4 | 503-2588-06 | 1 | Hose, Fuel | 11 | 517-0136-01 | 2 | Plug, Hole Housed Only |
| 5 | 503-2935-03 | 1 | Hose, Fuel | | | | |
| 6 | 503-2808 | 4 | Clamp, Hose | | | | |
| 7 | 149-2759-03 | 1 | *Bracket, Fuel Line (Front Housed) | | | | |
| | | | | | | | *-Front Housed Only |

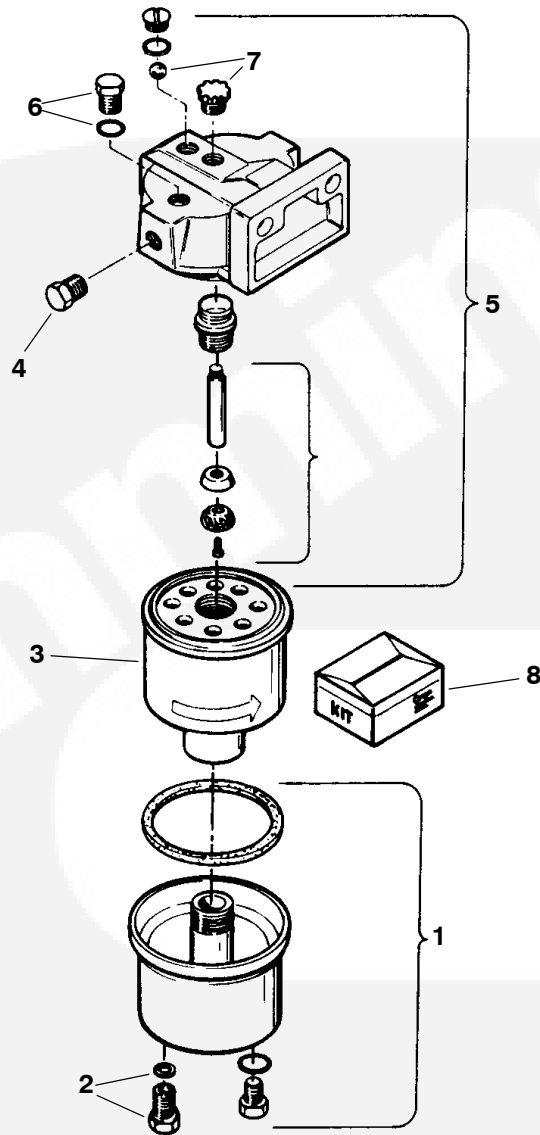
Remote Water Separator



| 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 | 502-0020-01 | 1 | Elbow, Street 90Degrees |
| | | | | 4 | 502-0029 | 2 | Bushing, Pipe |



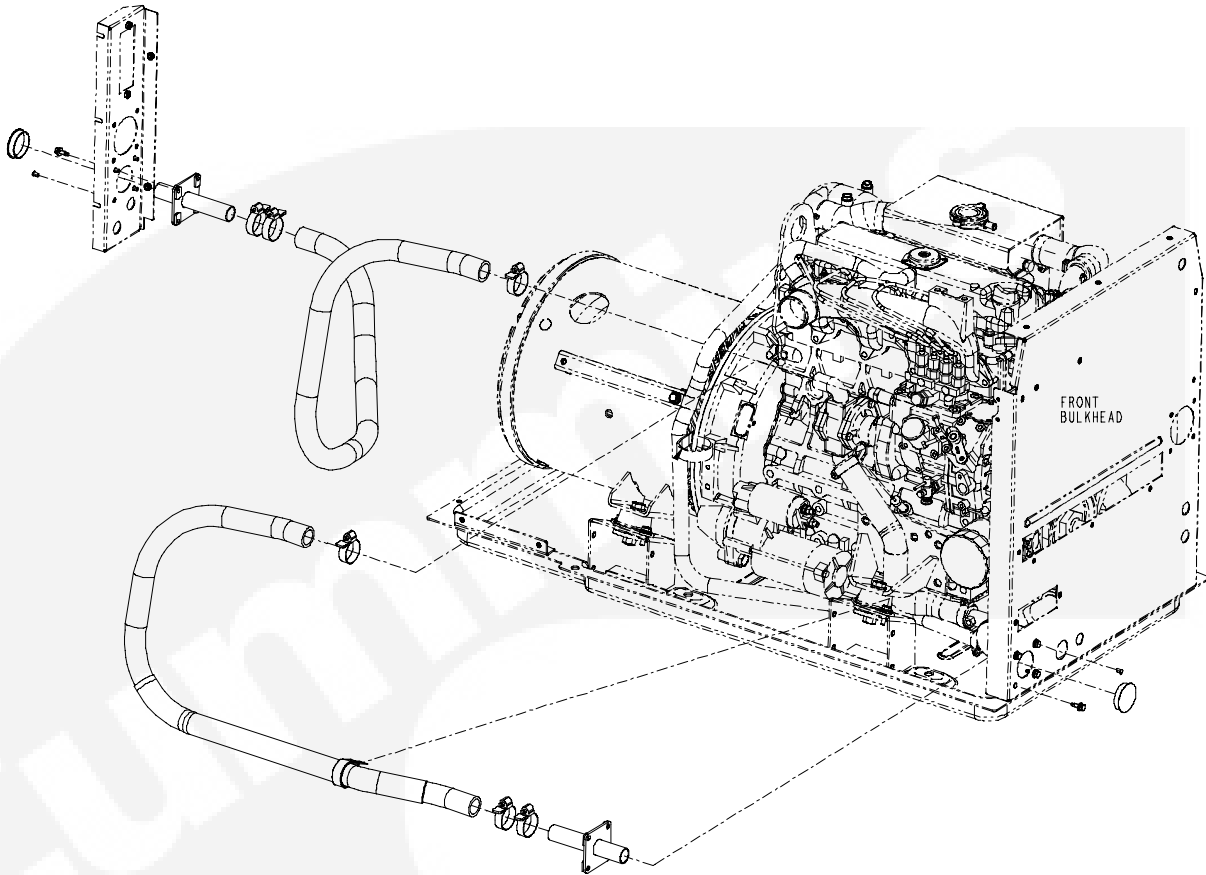
Water Separator Components



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

* - Parts not shown but included in kit.

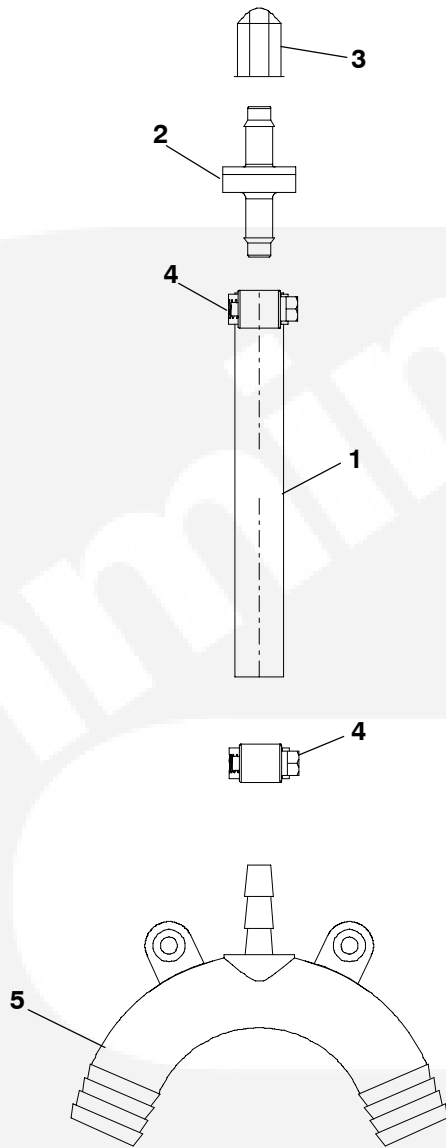
Water Inlet



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--------------------------|---------|-------------|----------|--------------------------|
| 1 | 404-0058 | 1 | Assy Bulkhead | 7 | 517-0131-02 | 4 | Plug, (Hole Housed Only) |
| 2 | 501-0997-02 | | Assy Hose (Water) | 8 | 503-2984 | 1 | Clamp, Hose (J-Style) |
| | 501-0997-01 | | Front, Rear Housed | | | | Front Housed Only) |
| | 501-0997-01 | | Rear Unhoused | | | | |
| 3 | 503-1137 | 3 | Clamp, Hose | | | | |
| 4 | 503-2823 | 3 | Clamp, Hose (Cover | | | | |
| 5 | 800-6395-01 | 4 | Screw, Hex Head Sems | | | | |
| | | | (M6 x 1.0 x 16mm) | | | | |
| 6 | 517-0138-07 | 1 | Plug, (Hole Housed Only) | | | | |

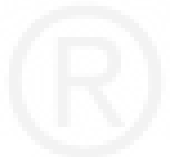


Break Siphon



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|-------------------|---------|----------|----------|------------------|
| | 541-0876-01 | 1 | Kit, Siphon Break | 6 | 503-0977 | 2 | *Clamp, Hose |
| 1 | 503-2728-01 | 1 | Hose, Coolant | 7 | 508-1102 | 2 | *Grommet, Rubber |
| 2 | 504-0223 | 1 | Valve, Check | | | | |
| 3 | 502-1425-02 | 1 | Cap, Tube | | | | |
| 4 | 503-2309 | 2 | Clamp, Hose | | | | |
| 5 | 502-1463 | 1 | Connector, Hose | | | | |

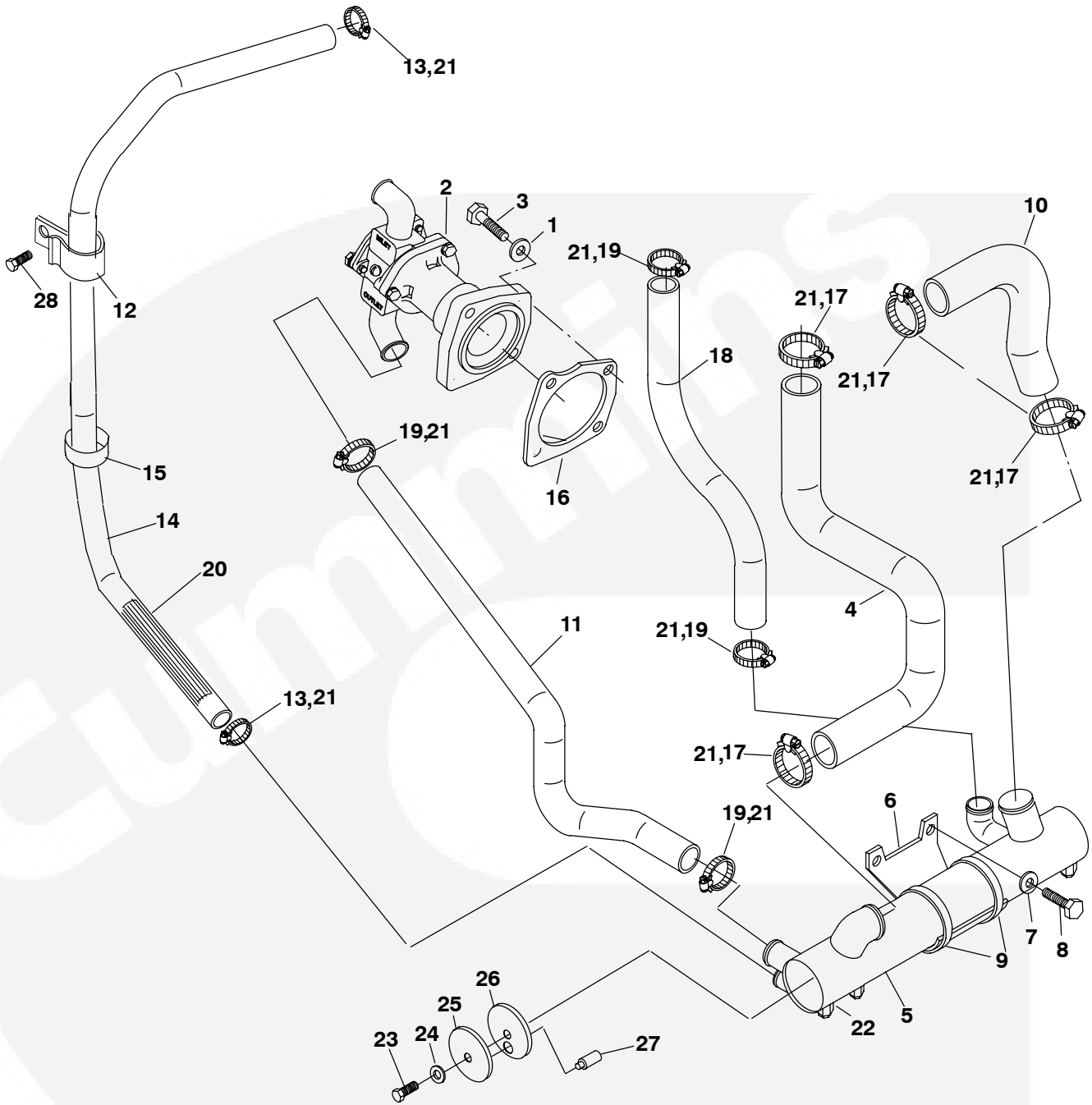
* - Parts not shown but included in kit.



“Blank Page”



Heat Exchanger



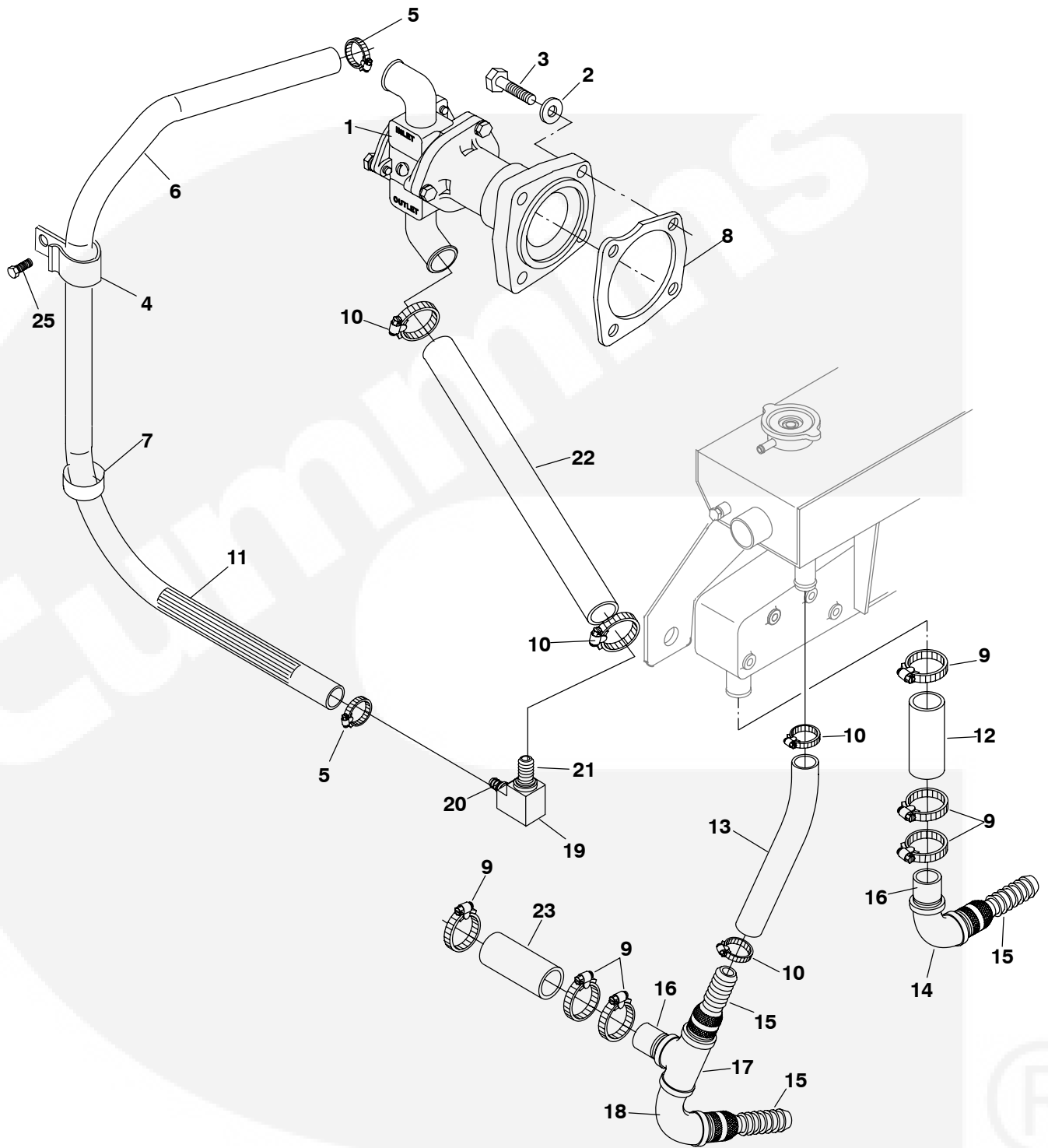
Heat Exchanger

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|-------------|----------|-------------------------------------|
| 1 | 526-2100 | 5 | Washer, Flat (M8) | 19 | 503-1137 | 4 | Clamp, Hose |
| 2 | 132-0356 | 1 | Pump, Water | 20 | 898-1311-01 | 1 | Sleeving (Wet Exhaust) |
| 3 | 800-2057 | 4 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) | 21 | | | Clamp, Hose (Cover) |
| 4 | 503-1977 | 1 | Hose | | 503-2823 | 14 | Dry Exhaust |
| 5 | 130-7986-02 | 1 | Exchanger, Heat | | 503-2823 | 16 | Wet Exhaust |
| 6 | 130-7987-02 | 1 | Bracket, Heater Exchanger | 22 | 130-4434 | 1 | Pencil, Zinc (W/Screw) |
| 7 | 526-2120 | 2 | Washer, Flat (M10) | 23 | 800-0317 | 1 | Screw, Hex Head (5/16-18 x 3/4") |
| 8 | 800-3030 | 2 | Screw, Hex Head Cap ((M10 x 1.25 x 20mm) | 24 | 850-0165 | 1 | Washer Locking (5/16") |
| 9 | 503-1143 | 2 | Clamp, Hose | 25 | | | Cover, Heat Exchanger |
| 10 | 503-1896 | 1 | Hose, Coolant | | 130-4567 | 1 | W/O Zinc Pencil Hole |
| 11 | 503-2909 | 1 | Hose, Coolant | | 130-4962-01 | 1 | W/ Zinc Pencil Hole |
| 12 | 327-0923 | 1 | Clamp, "J" (Wet Exhaust) | 26 | | | Gasket, Cover |
| 13 | 503-1136 | 2 | Clamp, Hose (Wet Exhaust) | | 130-4566 | 1 | W/O Zinc Pencil Hole |
| 14 | 503-2122 | 1 | Hose, Coolant (Wet Exhaust) | | 130-4960 | 1 | W/ Zinc Pencil Hole |
| 15 | 130-4830 | 1 | Clamp, Hose (2 OD Wet Exhaust) | 27 | 130-4961 | 1 | Pencil, Zinc (W/O Screw) |
| 16 | 132-0346 | 1 | Gasket, Water Pump | 28 | 821-6003-01 | 1 | Screw, Hex Head |
| 17 | 503-1138 | 8 | Clamp, Hose | | | | |
| 18 | 503-1163 | 1 | Hose, Coolant | | | | |

+ - Parts Included in Heat Exchanger Zinc Pencil Kit.
* - Parts Included in End Cover Kit.



Keel Cooling



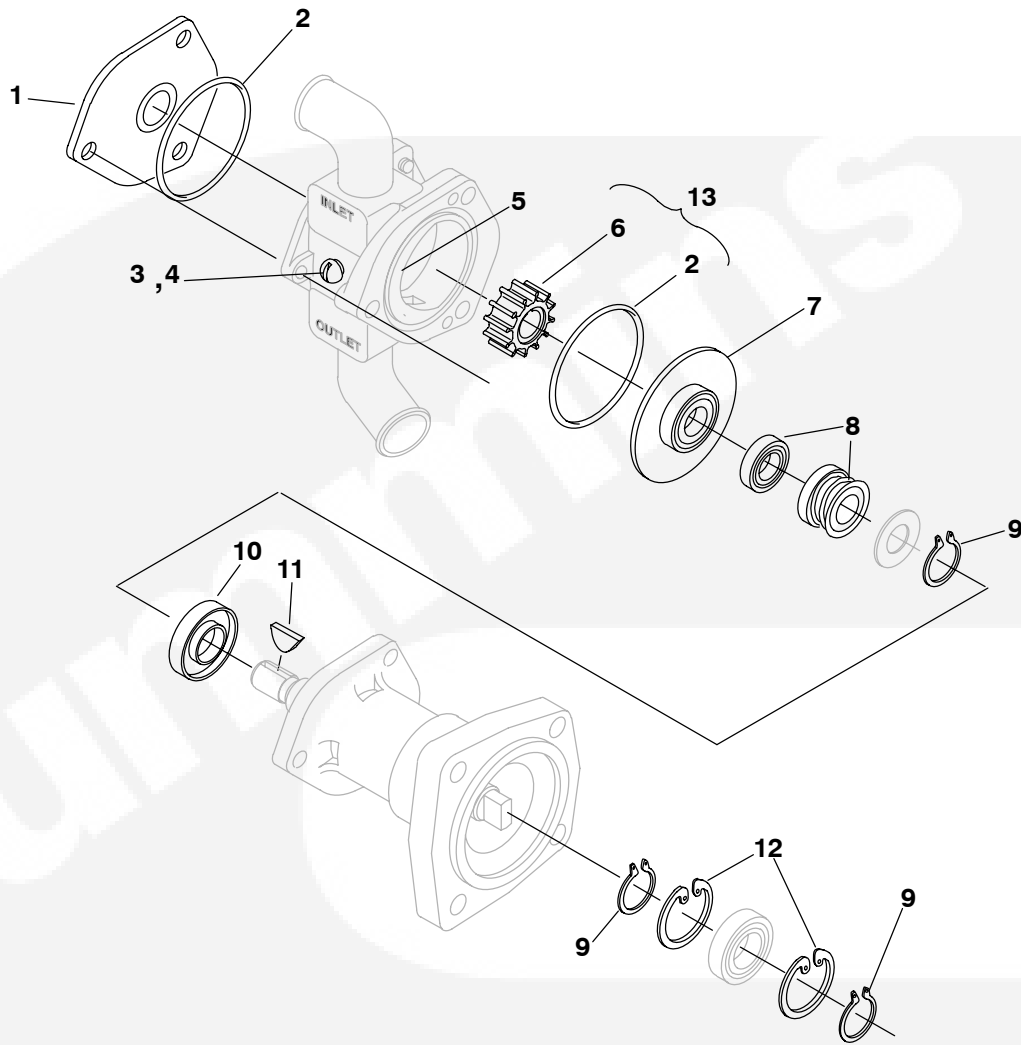
Keel Cooling

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---------------------------------------|---------|-------------|----------|-----------------------------|
| 1 | 132-0356 | 1 | Pump, Raw Water | 15 | 505-0759 | 3 | Nipple, Combination |
| 2 | 526-2100 | 4 | Washer, Flat (M8) | 16 | 505-0446-01 | 2 | Nipple, Half |
| 3 | 800-2057 | 4 | Screw, Hex Head (M8 x 1.25 x 20mm) | 17 | 505-0304 | 1 | Tee (1") |
| 4 | 327-0923 | 1 | Clamp "J" | 18 | 505-0003 | 1 | Elbow, (1" x 90) |
| 5 | 503-1136 | 2 | Clamp, Hose | 19 | 502-1297 | 1 | Elbow, 90 |
| 6 | 503-2122-01 | 1 | Hose, Coolant | 20 | 502-1295-01 | 1 | Adapter, (3/4" x 5/8") |
| 7 | 130-4830 | 1 | Clamp, Hose | 21 | 502-1295-02 | 1 | Adapter, (3/4" x 1") |
| 8 | 132-0346 | 1 | Gasket, Water Pump | 22 | 503-2079 | 1 | Outlet, Keel Cooling |
| 9 | 503-1138 | 10 | Clamp, Hose | 23 | 503-2823 | 2 | Hose, Coolant |
| 10 | 503-1137 | 4 | Clamp, Hose | 24 | 503-2823 | 16 | Cover, Hose Clamp |
| 11 | 898-1311-01 | 2 | Sleeving | 25 | 821-6003-01 | 1 | Screw, Hex Head (Not Shown) |
| 12 | 503-2023 | 2 | Hose, Coolant | | | | |
| 13 | 503-2079 | 1 | Outlet, Keel Cooling | | | | |
| 14 | 505-0041 | 1 | Elbow, (1 x 90) | | | | |

* - Parts Included in Keel Cooling Kit.



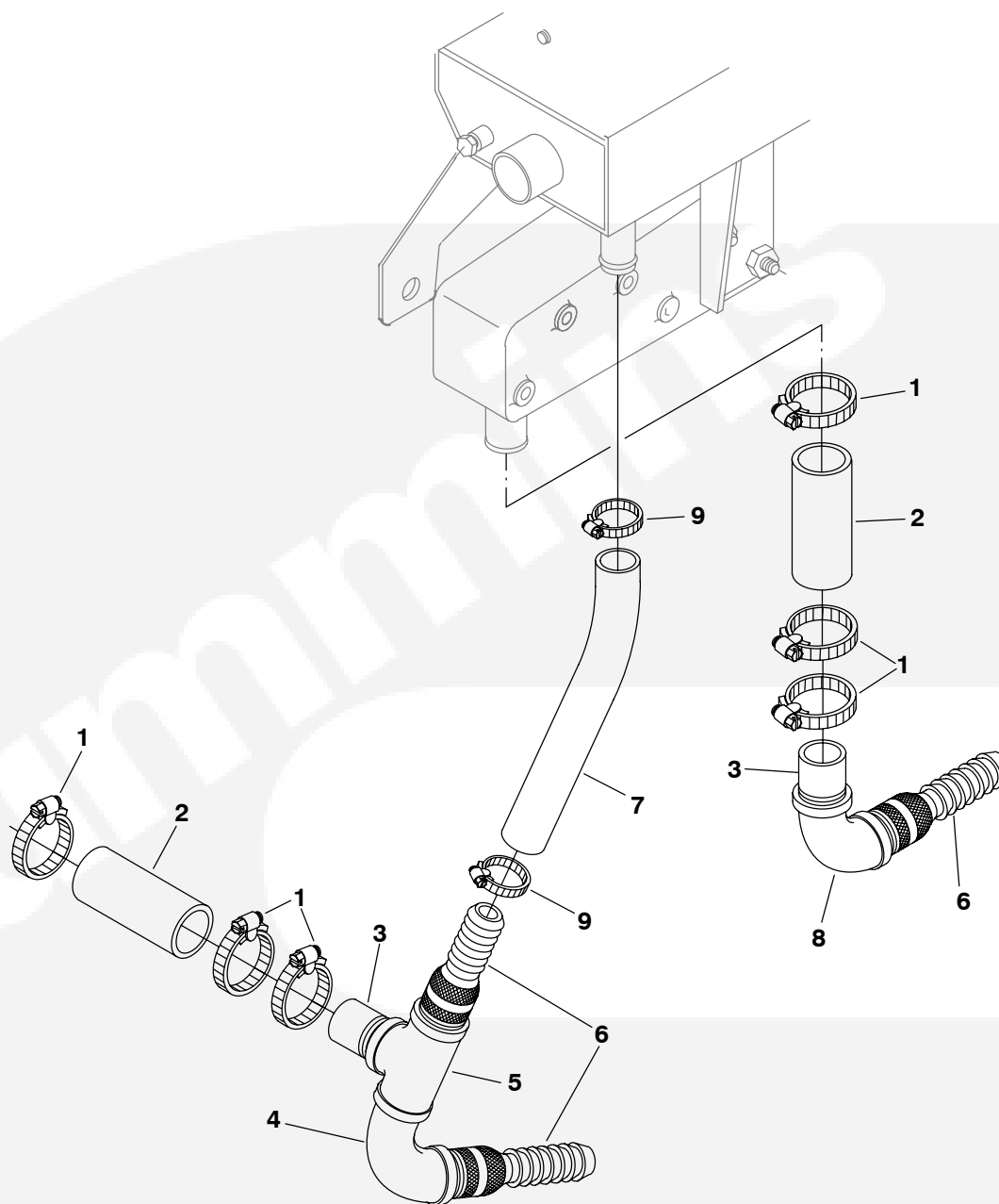
Water Pump Components



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|--------------------|---------|----------|----------|-----------------------------|
| | 541-1523 | 1 | Kit, Major Service | 8 | 132-0387 | 1 | Seal, Seat Assy |
| 1 | 132-0386 | 1 | Cover | 9 | 132-0393 | 3 | Ring, Retaining |
| 2 | 132-0293 | 2 | O'Ring | 10 | 132-0394 | 1 | Seal, Lip |
| 3 | 132-0390 | 1 | Screw, Cam | 11 | 132-0391 | 1 | Key |
| 4 | 132-0389 | 1 | Washer, Seal | 12 | 132-0392 | 2 | Ring, Retaining |
| 5 | 132-0388 | 1 | Cam | 13 | 541-1521 | 1 | Kit, Impeller |
| 6 | 132-0348 | 1 | Impeller | 14 | 132-0420 | 1 | Ring, Retaining (Not Shown) |
| 7 | 132-0385 | 1 | Plate, Wear | | | | |



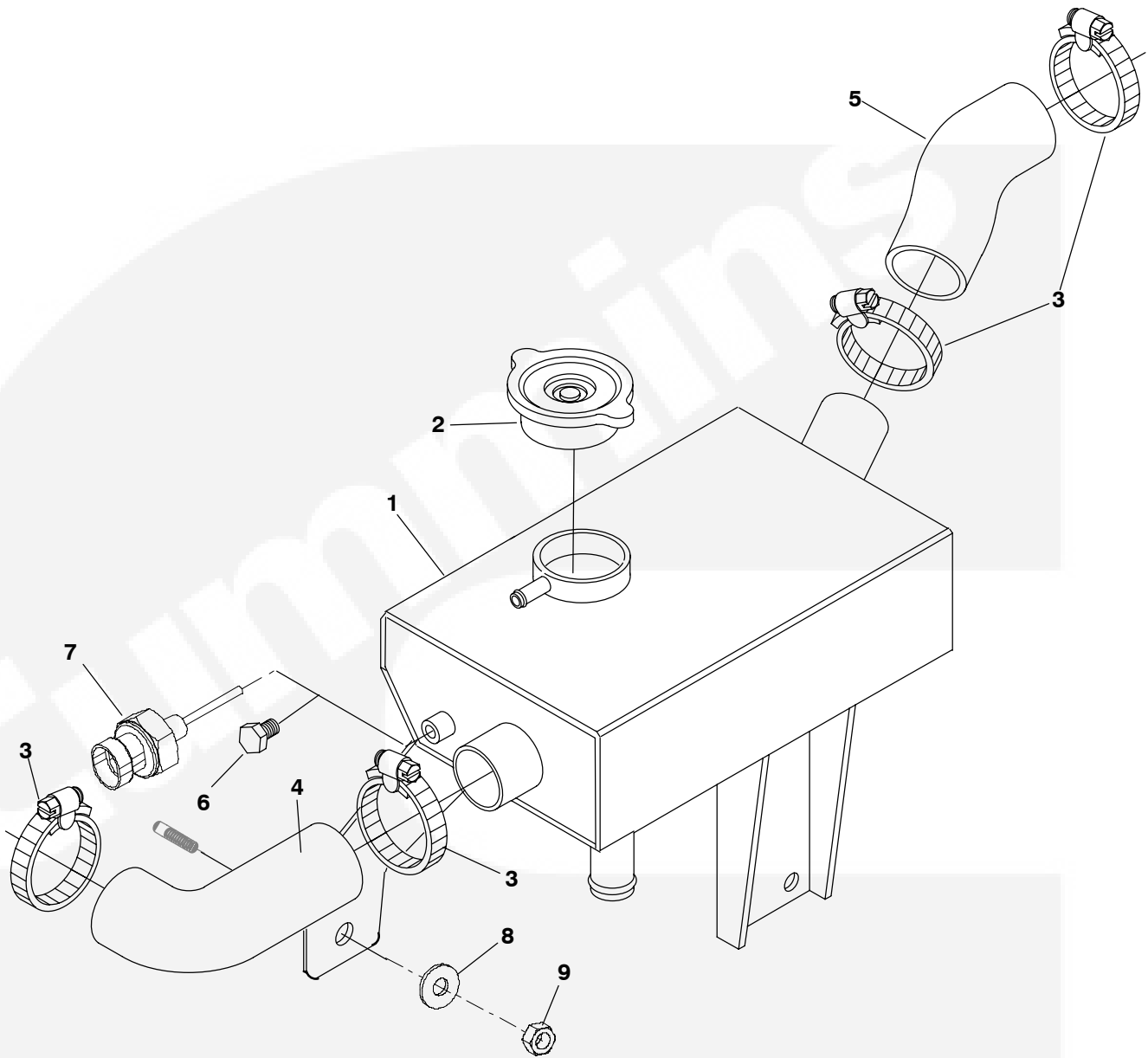
Keel Cooling System (Dry Exhaust)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|----------|----------|---------------------------|
| | 155-3087 | 1 | Kit, Keel Cooling (Includes Parts Marked *) | 7 | 503-2079 | 1 | *Hose, Coolant (1" x 10") |
| | 155-3284 | 1 | Kit, Exhaust | 8 | 505-0041 | 1 | *Elbow |
| 1 | 503-1138 | 6 | Clamp, Hose (1-3/8") | 9 | 503-1137 | 2 | Clamp, Hose (1") |
| 2 | 503-2023 | 2 | *Hose, Coolant (1-3/8" x 4") | | | | |
| 3 | 505-0446-01 | 2 | *Nipple, Half | | | | |
| 4 | 505-0003 | 1 | *Elbow | | | | |
| 5 | 505-0304 | 1 | Tee | | | | |
| 6 | 505-0759 | 3 | *Barb, Hose | | | | |

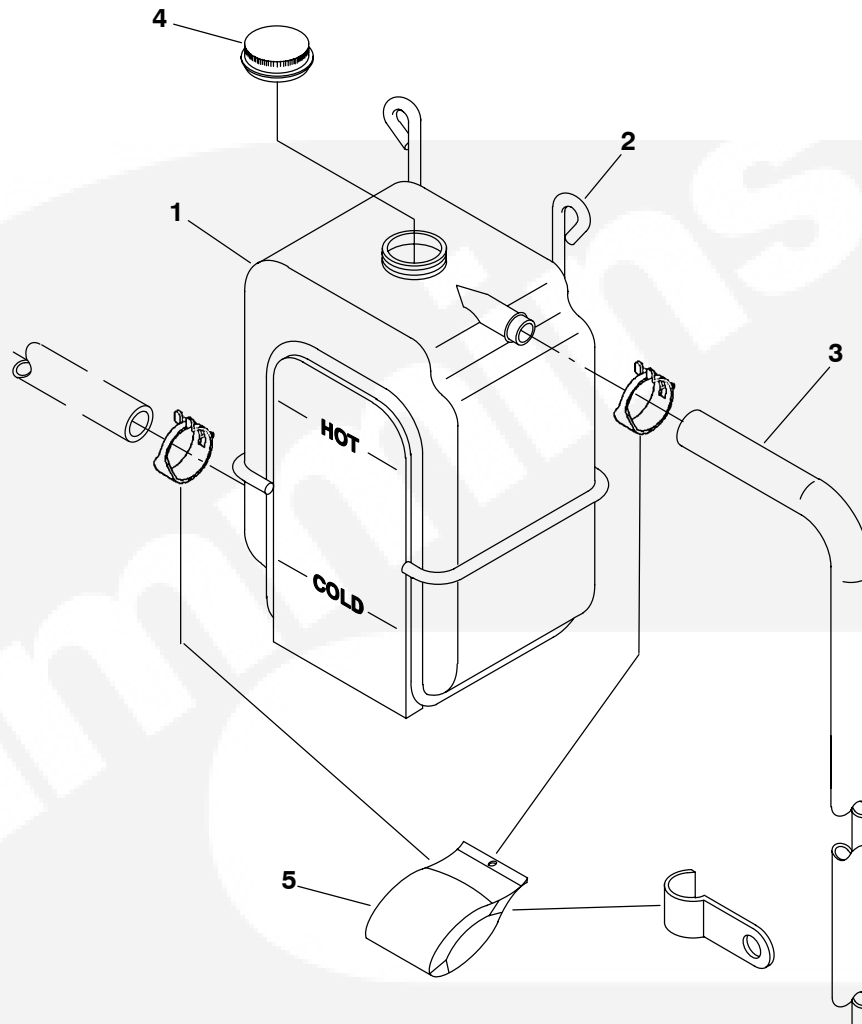
* - Parts Included in Keel Cooling Kit. (Also Includes Cover, Gasket and Hardware Found on Cylinder Block Page.)

Coolant Tank



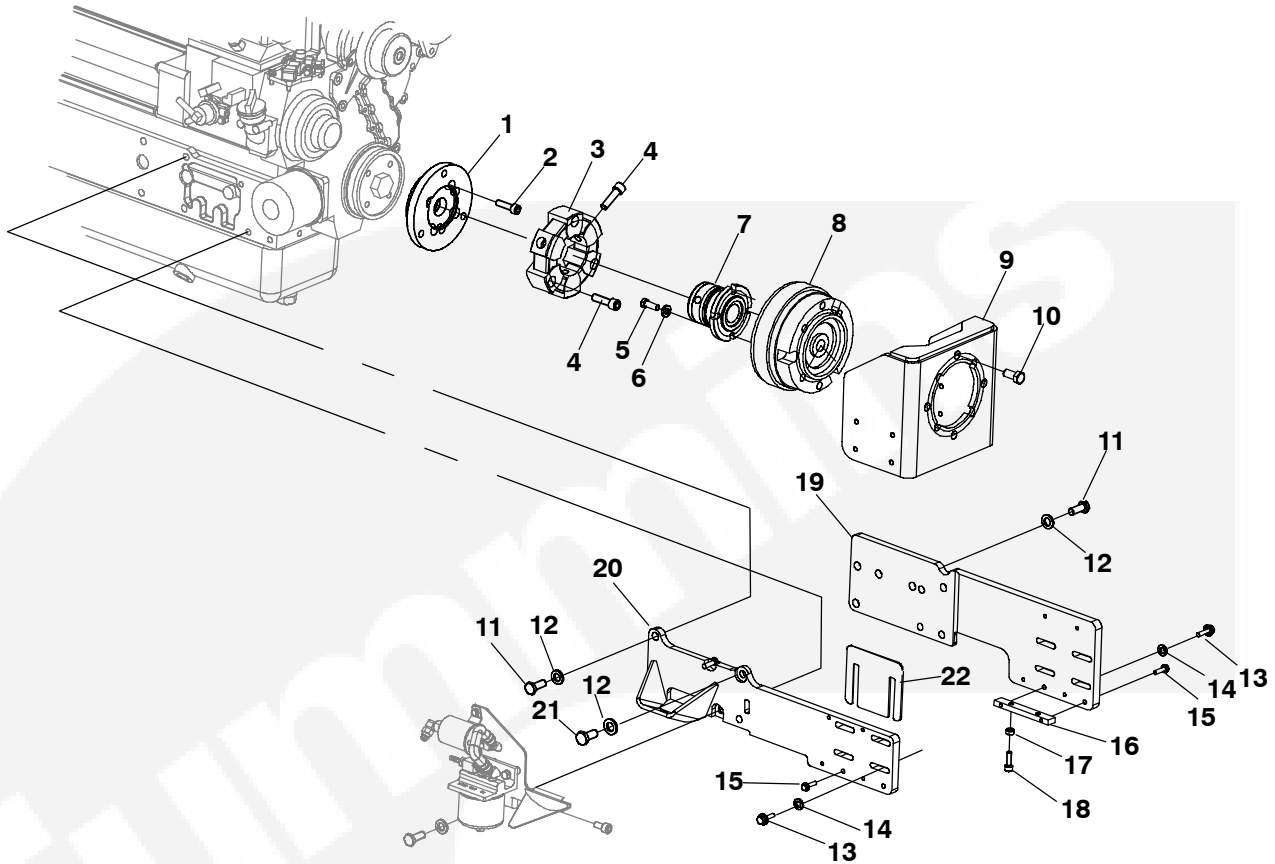
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|----------------------|----------|----------|----------|----------------------|
| 1 | 130-7881-02 | 1 | Tank, Coolant | 503-1898 | | 1 | MDKBP |
| 2 | 130-3721 | 1 | Cap, Tank | 503-1999 | | 1 | MDKBR, MDKBV |
| 3 | | | Clamp, Hose (1-3/8") | 5 | 503-1899 | 1 | Hose, Upper "S" |
| | 503-1138 | 4 | Heat Exchange | | | | (1-3/8") |
| | 503-1138 | 4 | Keel Cooling | 6 | 502-0153 | 1 | Plug, Hex Pipe (1/4) |
| | 503-2823 | 4 | Wet | 7 | 193-0468 | 1 | Sender, Low Coolant |
| | 503-2823 | 4 | Dry | 8 | 526-2100 | 1 | Washer, Flat |
| 4 | | | Hose, Upper Elbow | 9 | 750-1006 | 1 | Nut, Hex Head |

Coolant Recovery



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

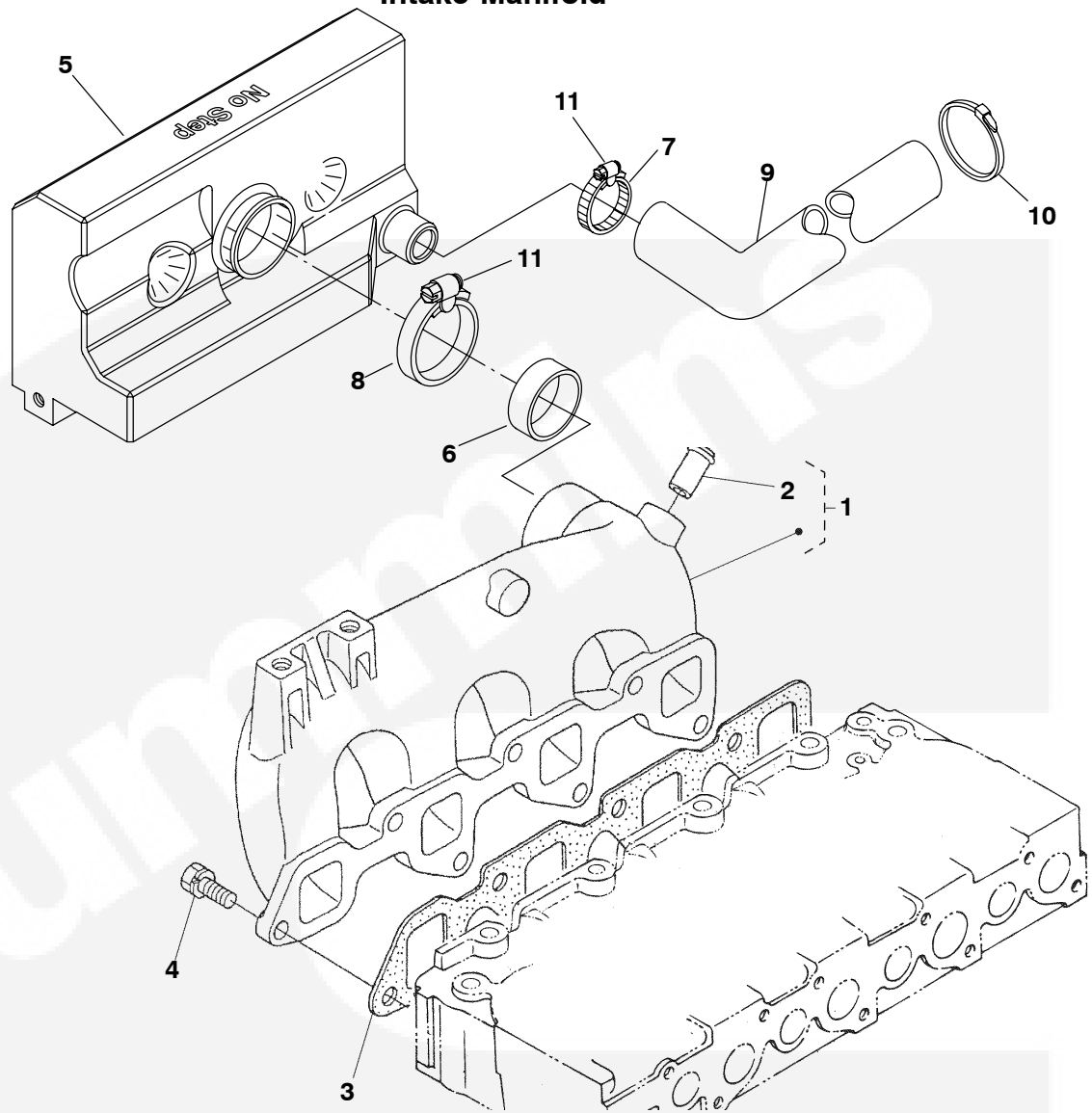
PTO



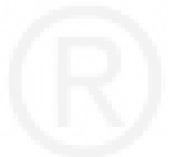
| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|----------------|----------|--|
| 1 | 190-0763-02 | 1 | *Adapter, Coupling | 14 | 526-0451 | 8 | *Washer, Flat Stainless (M8) |
| 2 | 725-1053 | 3 | *Screw, Socket Head Cap | 15 | 821-2035 | 4 | *Screw, Locking Flange (M6 x 1 x 25mm) |
| 3 | 190-0768 | 1 | *Coupling, Flex | 16 | 190-0766-03 | 2 | *Bracket, Mounting Pad |
| 4 | 725-1103 | 6 | *Screw, Socket Head Cap (M12 x 1.75 x 40mm) | 17 | 862-0026-55 | 4 | *Nut, Hex (M8) |
| 5 | 801-1050 | 4 | *Screw, Hex Head Cap (3/8-24 x 1") | 18 | 815-0916 | 4 | *Screw, Socket Head (M8 x 1.25 x 25mm) |
| 6 | 526-0174 | 4 | *Washer, Flat | 19 | 190-0792-04 | 1 | *Bracket, PTO (Left) |
| 7 | 190-0767-02 | 1 | *Adapter, Coupling | 20 | 190-0896-02 | 1 | *Bracket, PTO (Right) |
| 8 | | | *Clutch | 21 | 800-3033 | 1 | *Screw, Hex Head Cap (M12 x 1.25 x 25mm) |
| | 190-0729-01 | 1 | 12V | 22 | | | *Shim, PTO |
| | 190-0729-02 | 1 | 24V | | 190-0771-02 AR | | .12 GA |
| 9 | 190-0769-04 | 1 | *Bracket, PTO Clutch | | 190-0771-04 AR | | .14 GA |
| 10 | 800-0090 | 2 | *Screw, Hex Head Cap (1/2-13 x 1.00") | | 190-0771-06 AR | | .20 GA |
| 11 | 800-3032 | 9 | *Screw, Hex Head Cap | | | | |
| 12 | 526-0399-64 | 10 | *Washer, Flat (M12) | | | | |
| 13 | 800-2515 | 8 | *Screw, Hex Head (M8 x 1.25 x 30mm) | | | | |

* - Parts Included in PTO Kit. (Also Includes Fuel Pump Mounting Hardware Found on Fuel Pump Page)

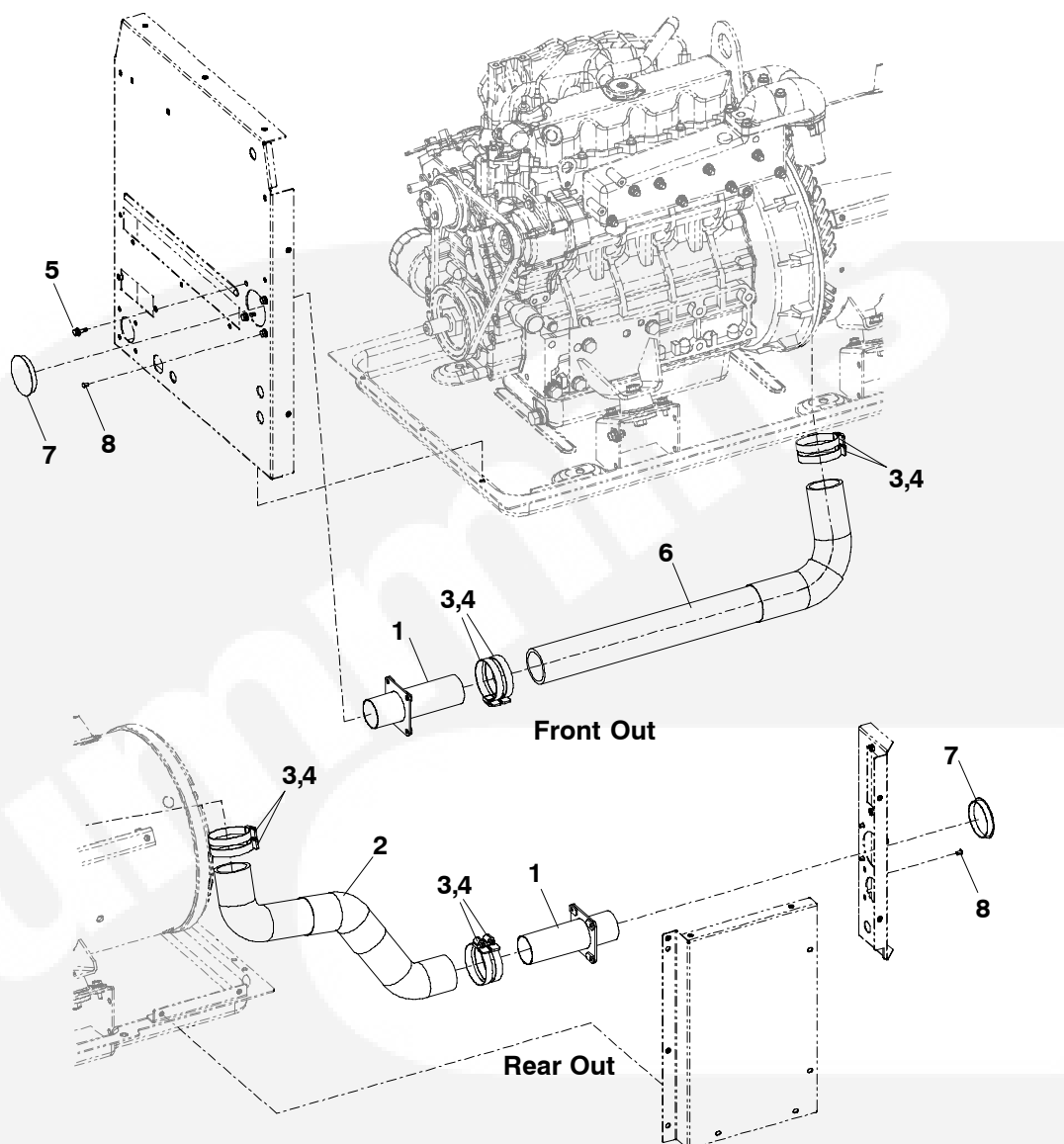
Intake Manifold



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|-----------------------|---------|----------|----------|-------------------|
| 1 | 185-6715 | 1 | Manifold Assy, Intake | 7 | 503-1138 | 1 | *Clamp, Hose |
| 2 | 185-6723 | 1 | Joint, Breather | 8 | 503-1143 | 1 | Clamp, Hose (3") |
| 3 | 185-6035 | 1 | Gasket | 9 | 503-1939 | 1 | Hose, Intake |
| 4 | 185-2402 | 7 | Bolt | 10 | 332-1389 | 1 | Cable, Tie |
| 5 | 140-2859 | 1 | Resonator, Intake | 11 | 503-2823 | 2 | Cover, Hose Clamp |
| 6 | 140-3048 | 1 | Sleeve, Air Intake | | | | |



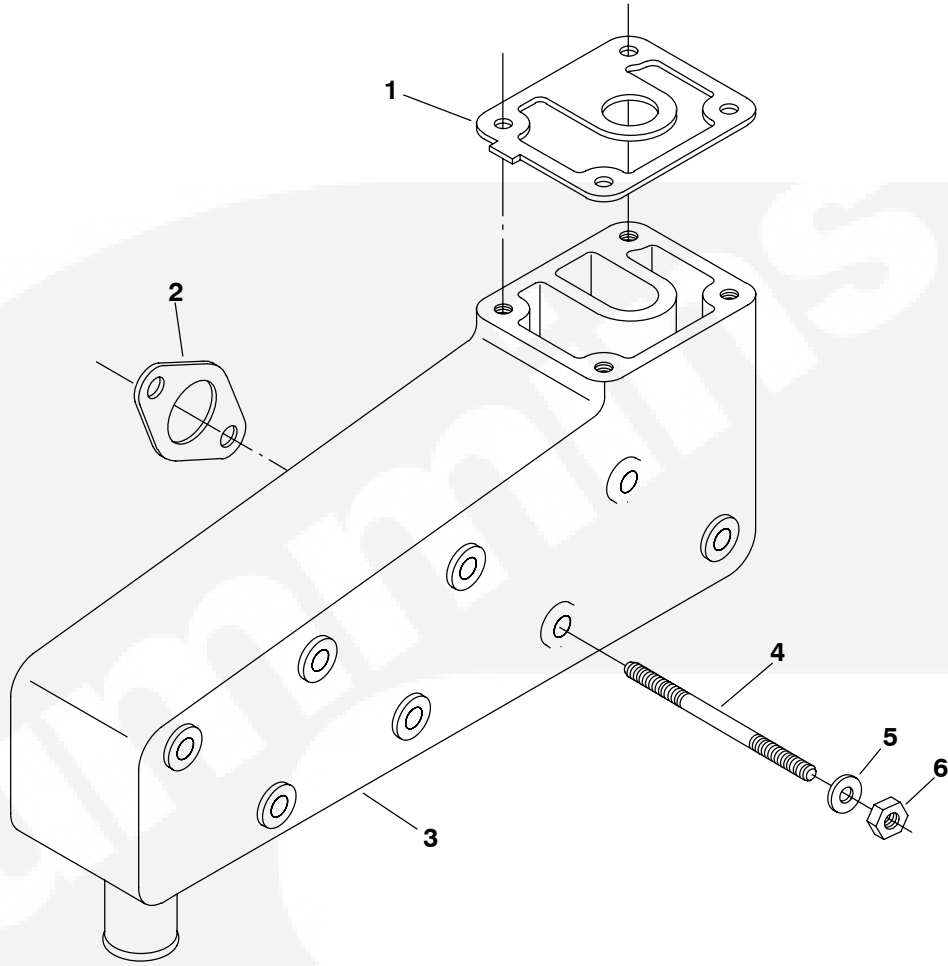
Bulkhead Exhaust



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|------------------------|---------|-------------|----------|--|
| 1 | 404-0057 | 1 | Bulkhead Assy, Exhaust | 5 | 800-6395-01 | 4 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) |
| 2 | 501-0909-01 | 1 | Hose, (Rear) | 6 | 501-1005 | 1 | Hose, (Front Housed) |
| 3 | 503-1142 | 4 | Clamp, Hose | 7 | 517-0138-09 | 1 | Plug, Hole (Housed) |
| 4 | 503-2823 | 4 | Clamp, Hose (Cover) | 8 | 517-0131-02 | 4 | Plug, Hole (Housed) |

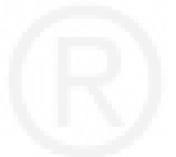


Exhaust Manifold

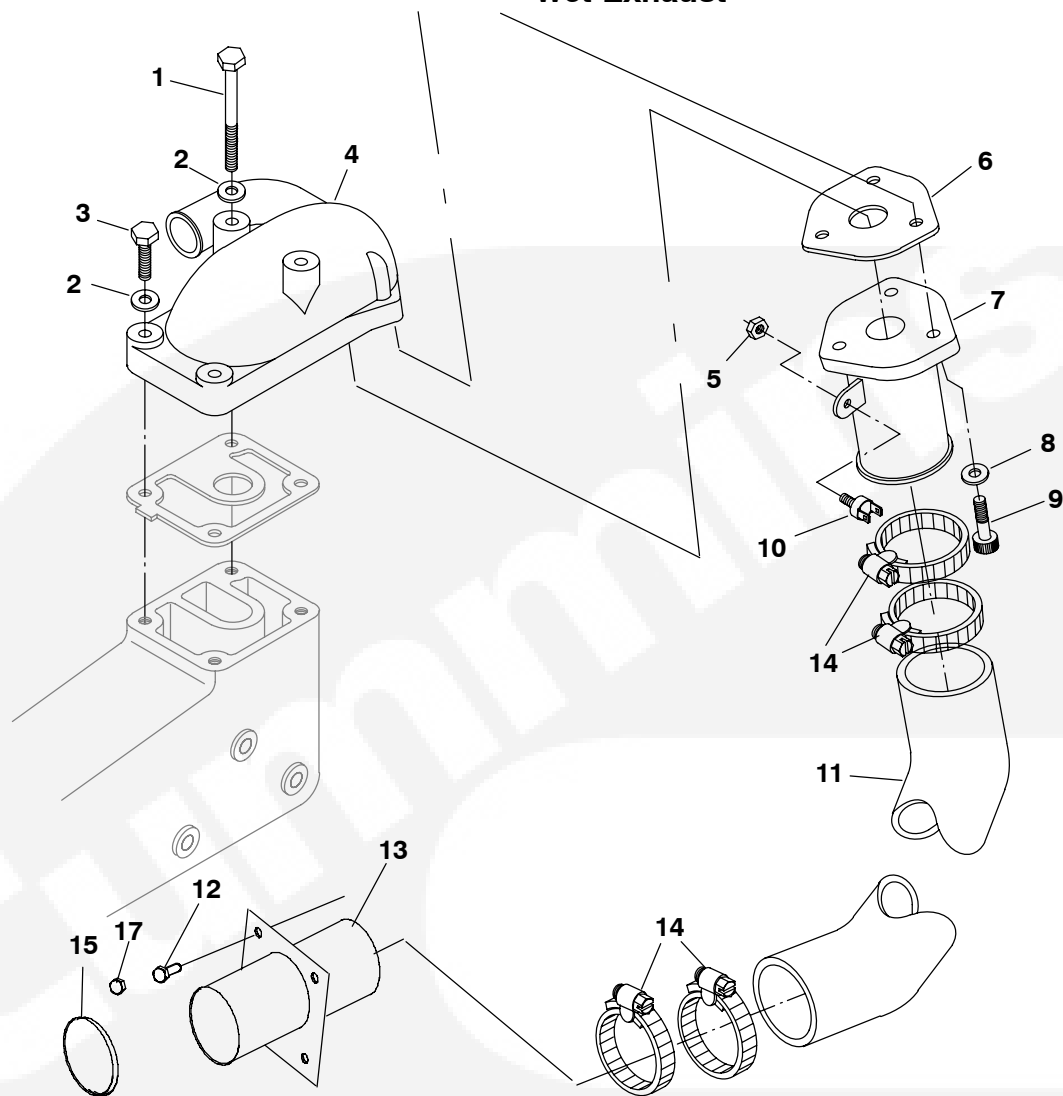


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--------------------------|---------|----------|----------|-------------------|
| 1 | 155-2975 | 1 | *Gasket, Riser, Adapter | 5 | 526-2100 | 8 | Washer, Flat (M8) |
| 2 | 154-2915 | 4 | Gasket, Exhaust Manifold | 6 | 750-1006 | 8 | Nut (M8 x 1.25) |
| 3 | 154-2887 | 1 | Manifold, Exhaust | | | | |
| 4 | 520-2218-01 | 8 | Stud | | | | |

* - Part Included in Exhaust Adapter Kit Found on Dry Exhaust Page.

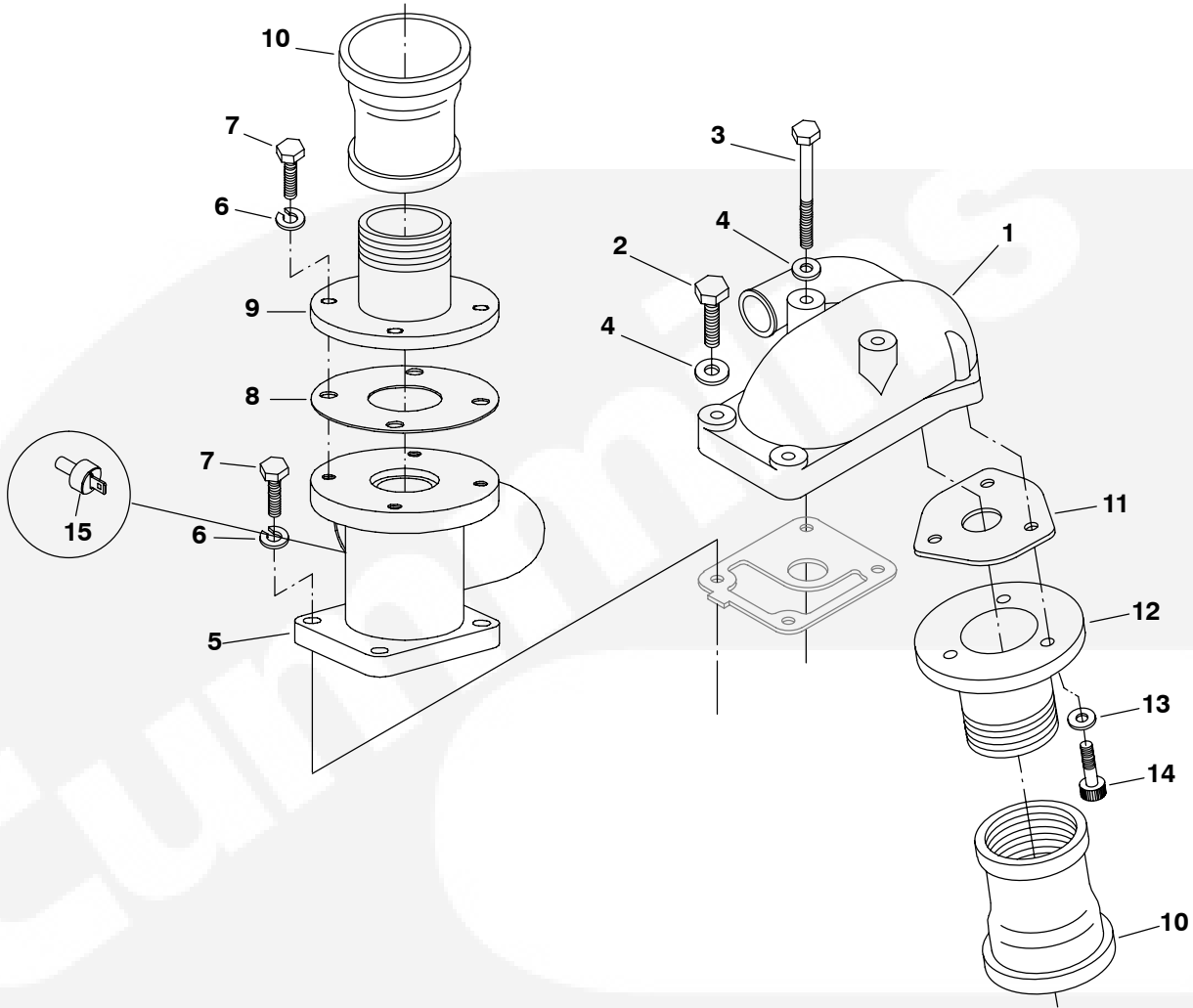


Wet Exhaust



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|---------|-------------|----------|--|
| | | | Kit, Exhaust (Wet) | | | | |
| | 541-1472-01 | 1 | MDKBP (Rear Out) | 8 | 740-1004 | 3 | Washer, Flat (M6) |
| | 541-1472-02 | 1 | MDKBP (Front Out) | 9 | 802-2068 | 3 | Screw, Socket Cap (M6 x 1 x 20mm) |
| | 541-1472-03 | 1 | MDKBR, MDKBV (Rear Out) | 10 | 309-0597-01 | 1 | Switch, High Exhaust Temperature (S5) |
| | 541-1472-04 | 1 | MDKBR, MDKBV (Front Out) | | | | |
| 1 | 800-2067 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 70mm) | 11 | 501-1005 | | Hose, Exhaust |
| 2 | 526-2100 | 4 | Washer, Flat (M8) | 12 | 800-6395-01 | 4 | Screw, Hex Head Sems Stainless (M6 x 1 x 16mm) |
| 3 | 800-2515 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 30mm) | 13 | 404-0057 | 1 | Bulkhead, Exhaust Connector |
| 4 | 154-2891 | 1 | Riser, Exhaust | 14 | 503-1142 | 4 | Clamp, Hose Exhaust |
| 5 | 870-0221-01 | 1 | Nut, Hex (8-32) | 15 | 517-0138-09 | 1 | Plug, Hole (Rear Out Housed) |
| 6 | 155-3061 | 1 | Gasket, Mixer | 16 | 503-2823 | 4 | Cap, Hose Clamp (Not Shown) |
| 7 | 154-3163 | 1 | Mixer | 17 | 517-0131-02 | 4 | Plug (Rear Out Housing) |

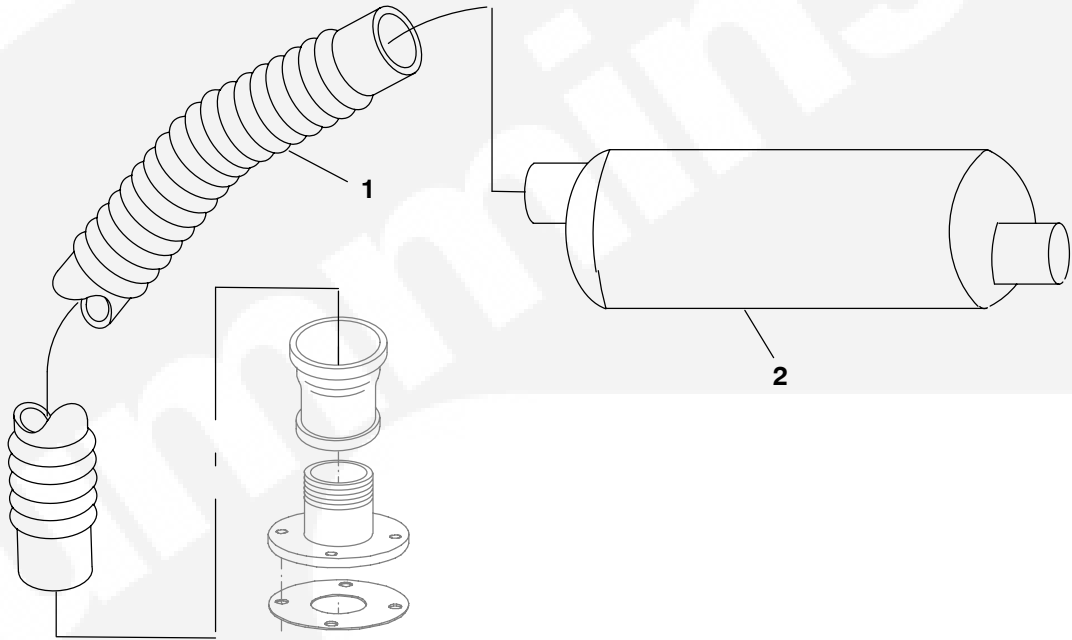
Dry Exhaust (Up or Down)



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|---------|-------------|----------|------------------------------------|
| | 155-2980 | 1 | Kit, Exhaust Adapter (Includes Parts Marked *) | 8 | 155-2981 | 1 | *Gasket, Exhaust Adapter |
| | 155-3094 | 1 | Kit, Exhaust Flange (Includes Parts Marked +) | 9 | 155-3069-02 | 1 | *Flange, Exhaust |
| 1 | 154-2891 | 1 | Riser, Exhaust | 10 | 505-0339-02 | 1 | *Coupling, Reducer (2 x 1-1/2") |
| 2 | 800-2515 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 30mm) | 11 | 155-3061 | 1 | +Gasket, Exhaust (Mixer) |
| 3 | 800-2067 | 2 | Screw, Hex Head Cap (M8 x 1.25 x 70mm) | 12 | 155-3068-02 | 1 | +Flange, Exhaust |
| 4 | 526-2100 | 4 | Washer, Flat (M8) | 13 | 740-1004 | 3 | +Washer, Flat (M6) |
| 5 | 154-2963-02 | 1 | *Adapter, Exhaust | 14 | 802-2068 | 3 | +Screw, Socket Cap (M6 x 1 x 20mm) |
| 6 | 850-2008 | 8 | *Washer, Lock (M8) | 15 | 309-0597-01 | 1 | Switch, Hi Exhaust Temperature |
| 7 | 718-1037 | 8 | *Screw, Hex Head Cap (M8 x 1.25 x 25mm) | | | | |

* - Parts Included in Exhaust Adapter Kit. (Also Includes Gasket on Exhaust Manifold Page.)
 + - Parts Included in Exhaust Flange Kit.

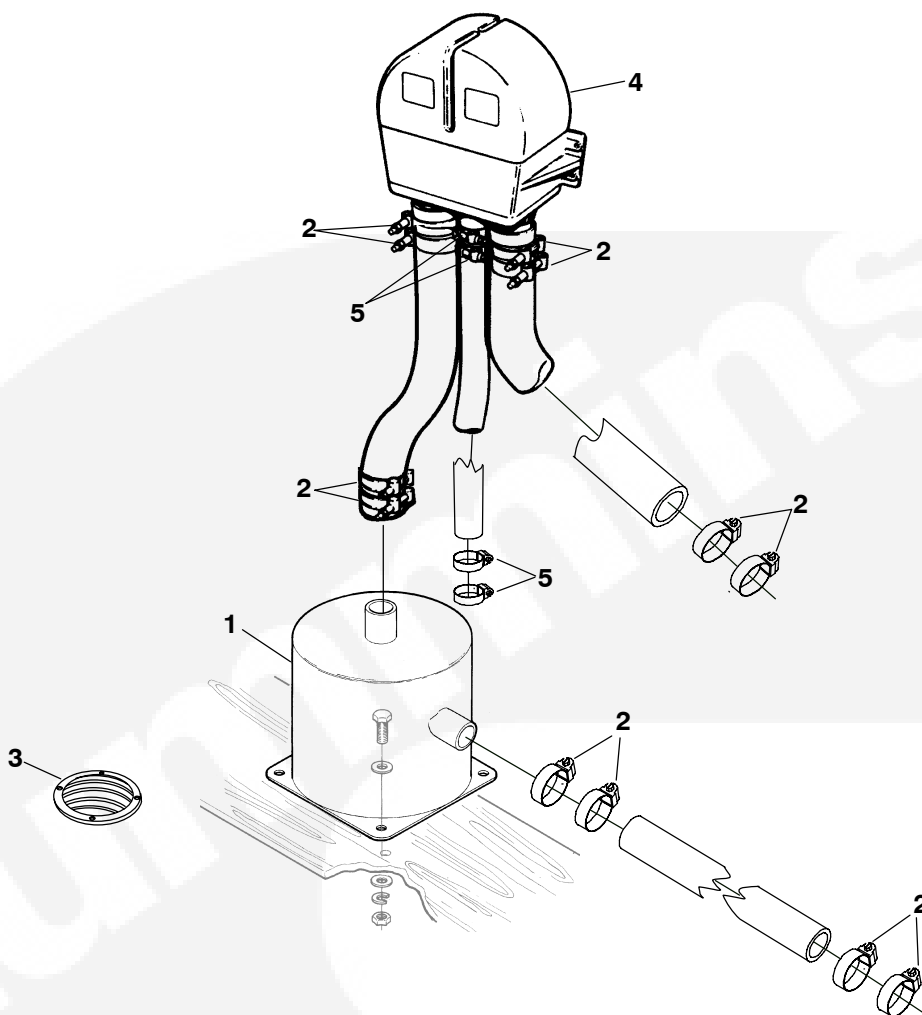
Muffler



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|
| 1 | 155-2355-04 | 1 | Tube, Flexible Exhaust (2") |
| 2 | 155-2063-09 | 1 | Muffler, Dry Exhaust (Up) (2") Industrial |
| | 155-2064-09 | 1 | Critical |



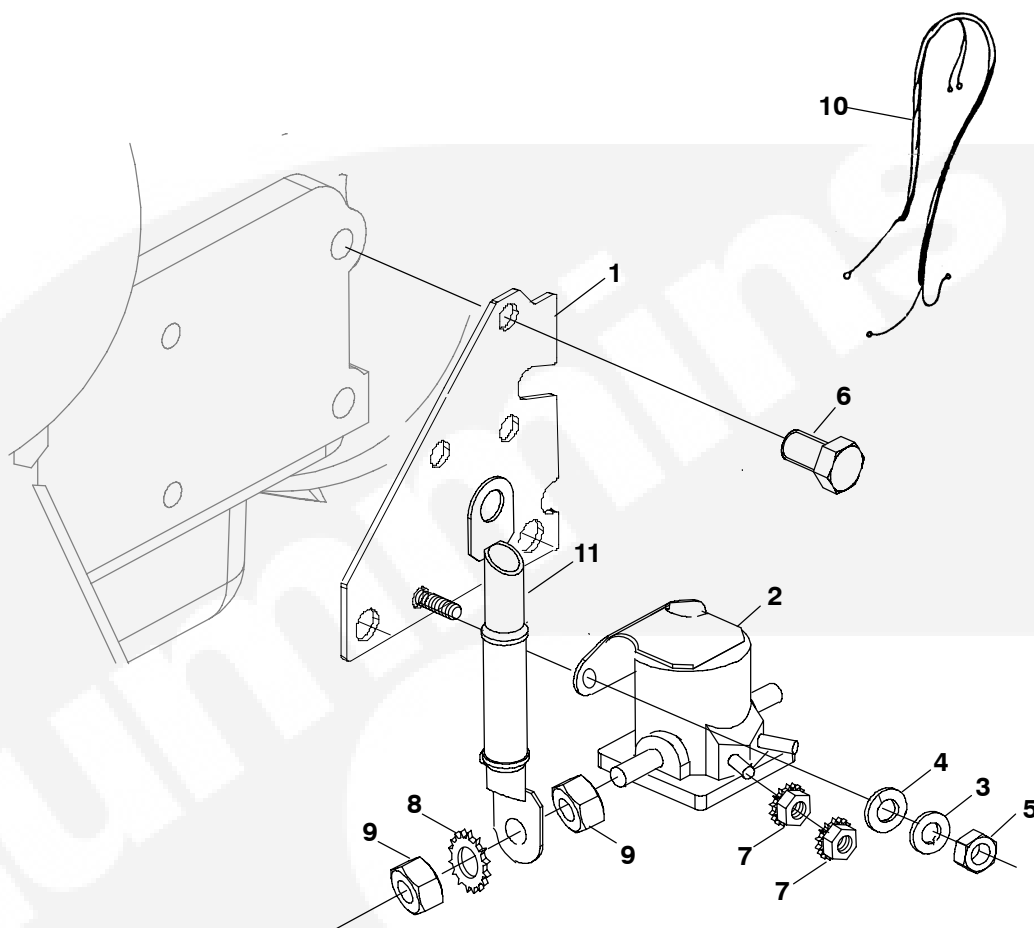
Water Separator, Muffler



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|----------|----------|----------|-----------------------------|
| | | | Kit, Muffler, Separator (Includes Parts Marked *) | 2 | | | Clamp, Hose (2") |
| | 155-3217 | 1 | MDKBP | 503-1133 | 8 | + | Muffler Kit (2") |
| | 155-3223 | 1 | MDKBR, MDKBV | 503-1133 | 4 | # | Separator Kit (2") |
| | | | Kit, Muffler (Includes Parts Marked +) | 503-1133 | 10 | * | Muffler, Separator Kit (2") |
| | 155-2030 | 1 | MDKBP | 503-1133 | 8 | + | Muffler Kit (2-1/2") |
| | 155-3222 | 1 | MDKBR, MDKBV | 503-1133 | 4 | # | Separator Kit (2") |
| | | | Kit, Water Separator (Includes Parts Marked #) | 503-1133 | 10 | * | Muffler/Separator Kit (2") |
| | 155-3216 | 1 | MDKBP | 3 | 155-1002 | 1 | *+ Strainer, Water Pickup |
| | 155-3224 | 1 | MDKBR, MDKBV | 4 | | | *#Separator, Water |
| 1 | | | *+Muffler, Marine | 155-3218 | 1 | | (2")MDKBP |
| | 155-2029 | 1 | MDKBP | 155-3221 | 1 | | (2-1/2")MDKBR, MDKBV |
| | 155-3220 | 1 | MDKBR, MDKBV | 5 | 503-1139 | 4 | *#Clamp, Hose (1-1/2") |

* - Parts Included in Muffler/Separator Kit.
 + - Parts Included in Muffler Kit.
 # - Parts Included in Water Separator Kit.

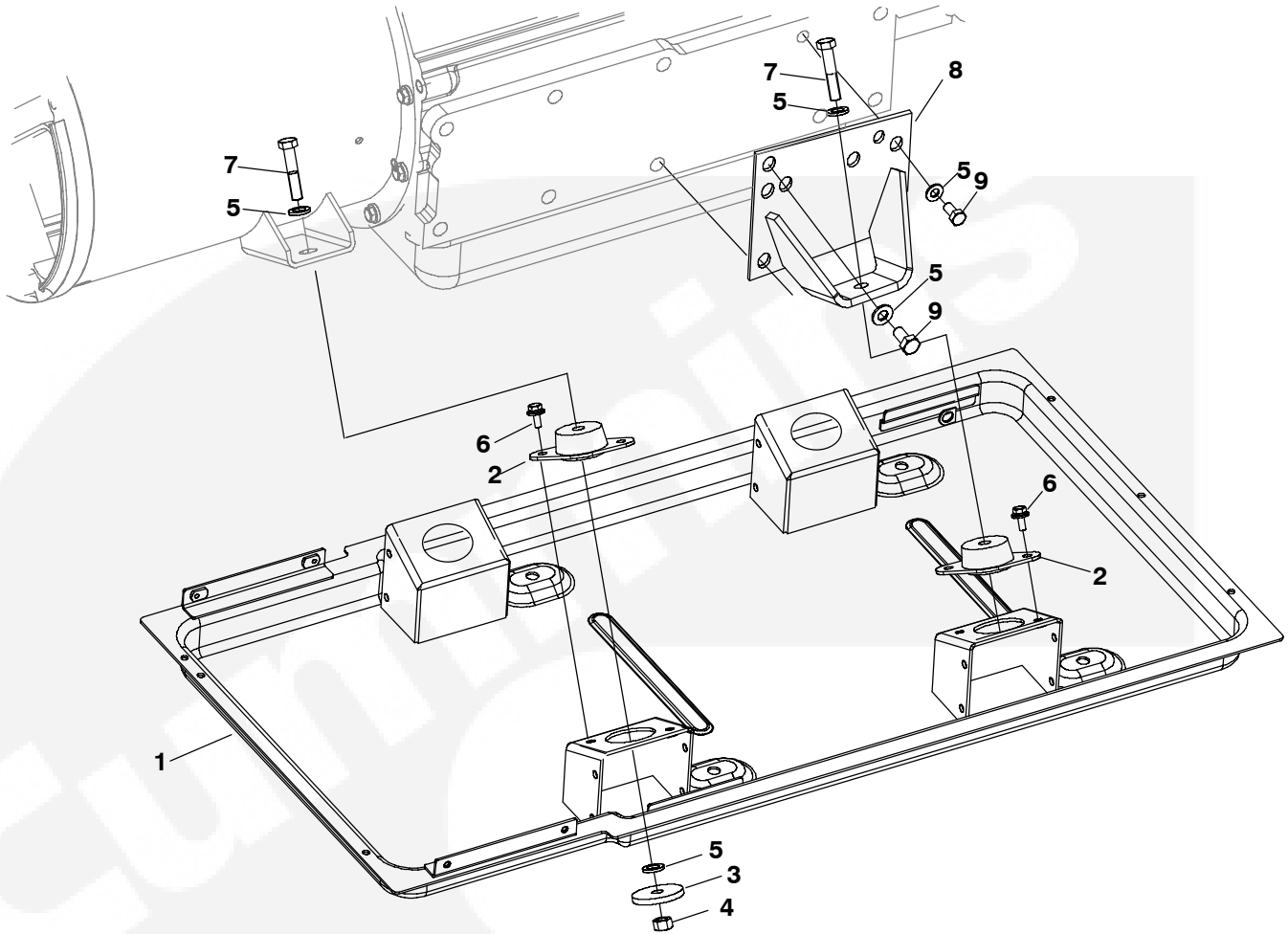
Isolated Ground



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|-------------|-----------|--|
| | | | Kit Isolated Ground (Includes Screws, Sending Units and Harness) | 6 | 800-3031 | 3 | Screw, Hex Head Cap (M12 x 1.25 x 20) |
| | 541-0823 | 1 | 12V | 7 | 870-0131 | 2 | Nut, ET Hex (#10-32) (12V) |
| | 541-0824 | 1 | 24V | 8 | 853-0016 | 2 | Washer, ET Lock (5/16") |
| 1 | 333-0732-02 | 1 | Bracket, Solenoid | 9 | 862-0026-30 | 2 | Nut, Hex (5/16-24) |
| 2 | | | *Relay, Solenoid | 10 | 338-4200-01 | 1 | Harness, Isolated Ground |
| | 307-1617 | 1 | 12V | 11 | 338-4200-02 | 1 | Harness, Ground |
| | 307-2656 | 1 | 24V | | | | |
| 3 | 526-0399-58 | 2 | Washer, Flat (M6) | | | | |
| 4 | 850-0114-53 | 2 | Washer, Split Lock (M6) | | | | |
| 5 | 862-0026-54 | 2 | Nut, Hex (M6) | | | | |

* - Relay Solenoid ties to B- and K9-1 Isolated Ground
Harness (338-4200-01)

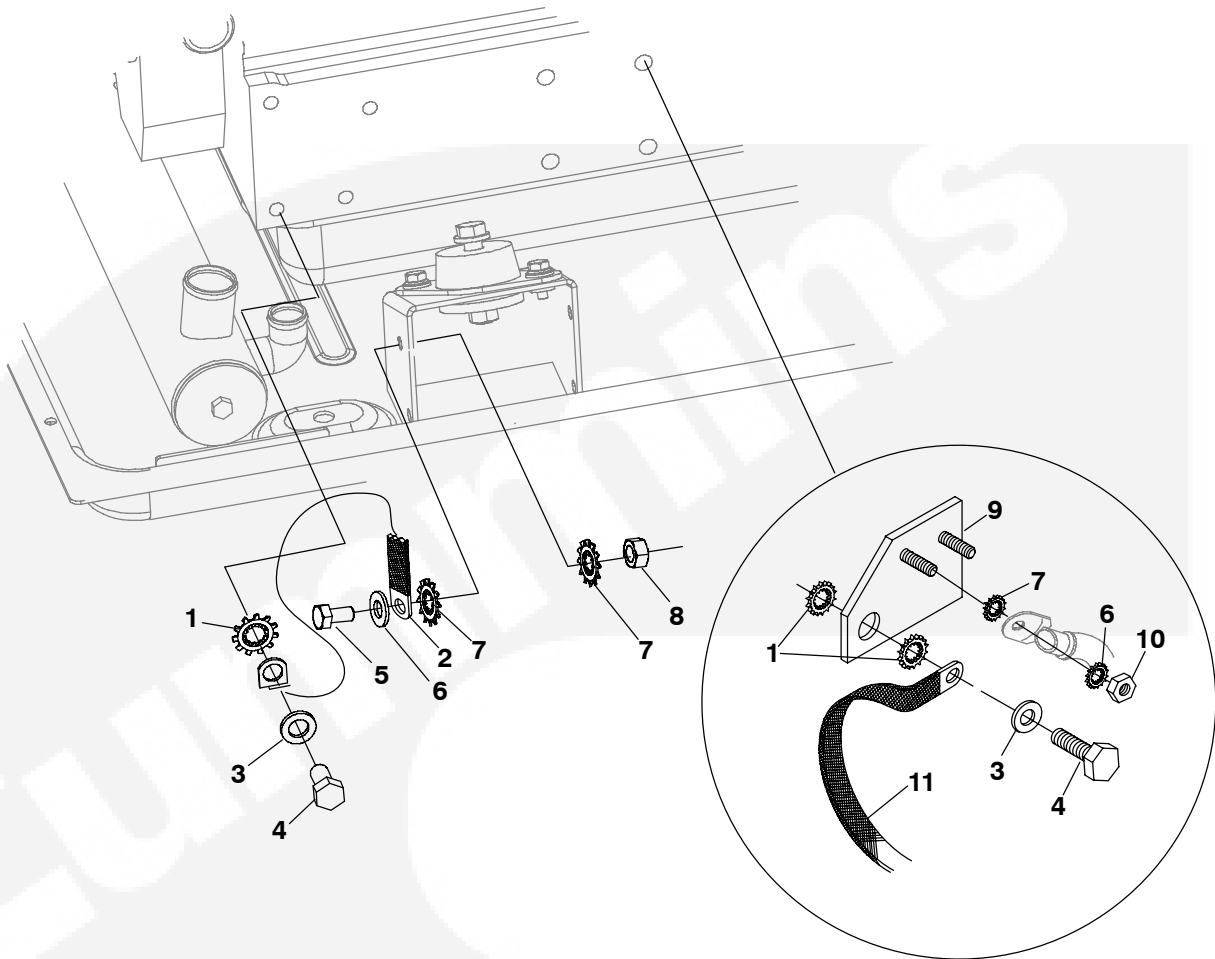
Mounting Base



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---------------------------------|---------|-------------|----------|---|
| 1 | 403-4581-02 | 1 | Base, Generator Mounting | 6 | 821-6003-02 | 8 | Screw, Hex Head Cap (M8 x .25 x 20mm) |
| 2 | 403-3573 | 4 | Isolator, Mounting W/O PTO | 7 | 800-2118 | 4 | Screw, Hex Head Cap (M12 x 1.75 x 60mm) |
| | 403-3573 | 2 | With PTO | 8 | 403-6788-02 | 2 | Mount, Engine W/O PTO |
| | 403-3955 | 2 | With PTO | 9 | | | Screw, Hex Head Cap (M12 x 1.25 x 20mm) |
| 3 | 526-0172 | 4 | Washer, Flat (M12) | | 800-3031 | 7 | without PTO |
| 4 | 750-1010 | 4 | Nut, Hex Machine (M12 x 1.75mm) | | 800-3031 | 1 | with PTO |
| 5 | | | Washer, Flat (M12) | | | | |
| | 526-2140 | 19 | Without PTO | | | | |
| | 526-2140 | 13 | With PTO | | | | |



Grounding System

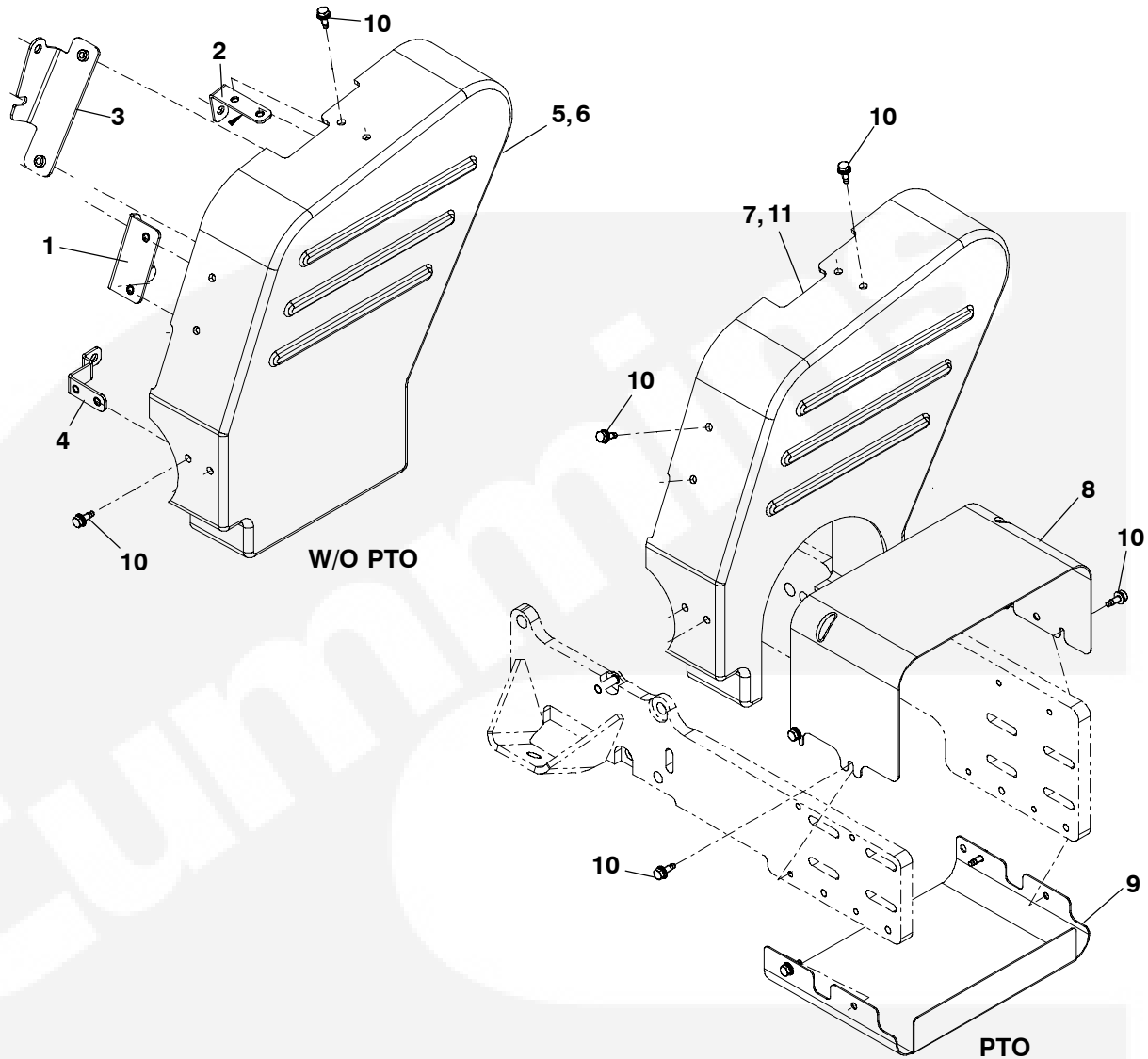


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|----------|----------|---|
| 1 | 856-0013 | 3 | Washer, EIT Lock (1/2") |
| 2 | 337-2785 | 1 | Strap, Bond |
| 3 | 526-2140 | 2 | Washer, Flat (M12) |
| 4 | 800-3032 | 1 | Screw, Hex Head Cap (M12 x 1.25 x 30mm) |
| 5 | 800-2057 | 1 | Screw, Hex Head Cap (M8 x 1.25 x 20mm) |
| 6 | 526-2100 | 2 | Washer, Flat (M8) |

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|-----------------------------|
| 7 | 856-0008 | 2 | Washer, EIT Locking (5/16") |
| 8 | 750-1006 | 1 | Nut, Hex (M8 x 1.25mm) |
| 9 | 337-2784-02 | 1 | Bar, Bus |
| 10 | 871-0025 | 1 | Nut, Hex Brass (5/16-18") |
| 11 | 337-0090-02 | 1 | Strap, Electrical |



Belt Guard and PTO Belt Guard

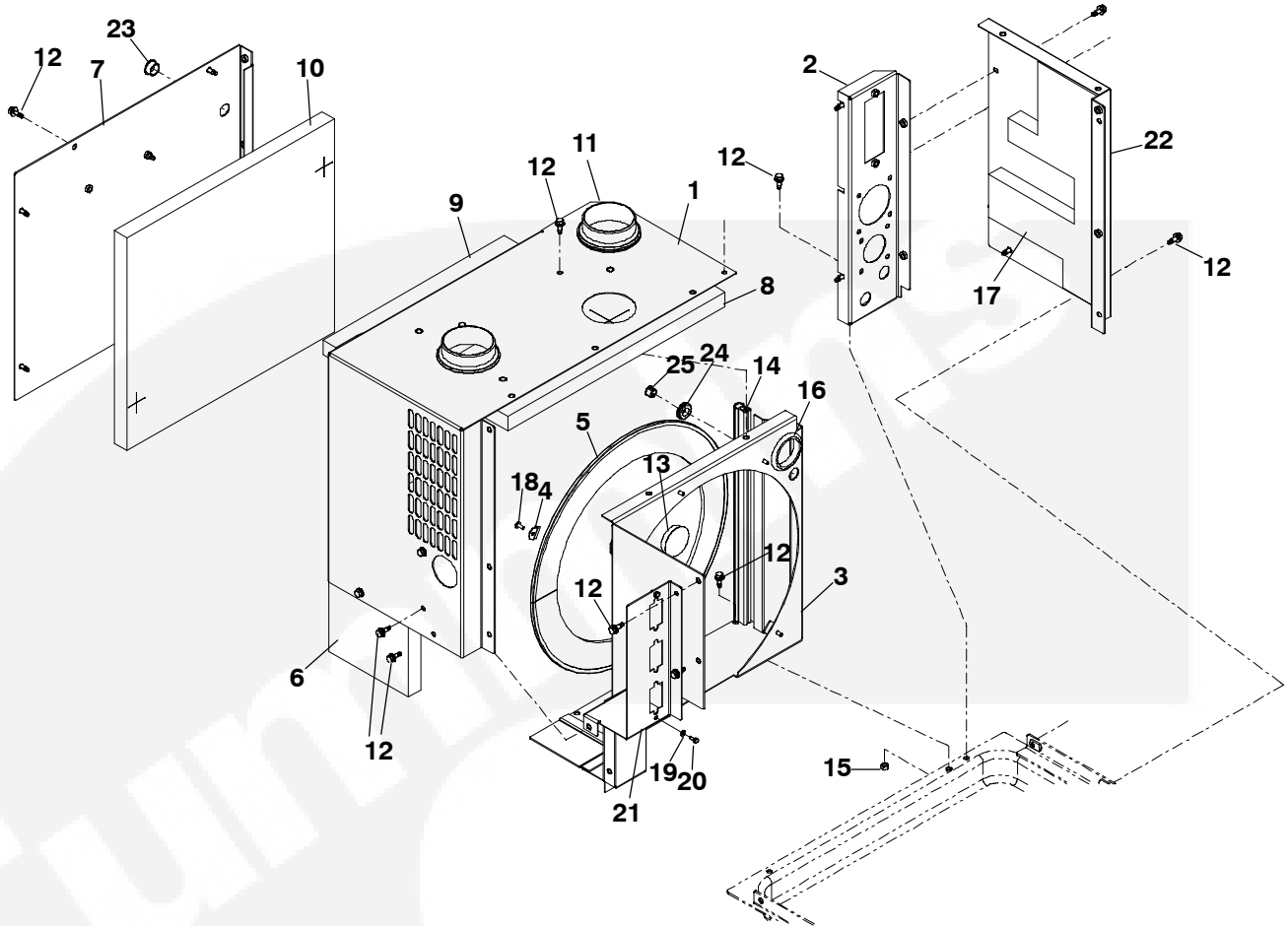


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|-------------------------------|---------|-------------|----------|-----------------------------------|
| 1 | 130-7922-03 | 1 | Bracket, Fan Guard | 10 | | | Screw, Hex Head (M6 x 1.0 x 16mm) |
| 2 | 130-4492-03 | 1 | Bracket, Guard | | 800-6395-01 | 8 | W/O PTO |
| 3 | 130-7923-03 | 1 | Bracket, Fan Guard | | 800-6395-01 | 16 | W PTO |
| 4 | 130-7924-03 | 1 | Bracket, Fan Guard | 11 | 130-7984-02 | 1 | Guard, Belt Iso Gnd W PTO |
| 5 | 130-7920-01 | 1 | Guard, Belt (Neg Gnd W/O PTO) | | | | |
| 6 | 130-7984-01 | 1 | Guard, Belt (ISO Gnd W/O PTO) | | | | |
| 7 | 130-7920-02 | 1 | Guard, Belt (Neg Gnd PTO) | | | | |
| 8 | 130-5469-03 | 1 | Coupling, Guard (PTO) | | | | |
| 9 | 130-5470-03 | 1 | Coupling, Guard (PTO) | | | | |

All Parts are for Unhoused Units Only
 * - Parts Included in Negative Gnd Belt Guard Kit
 + - Parts Included in ISO Gnd Belt Guard Kit
 ~ - Parts Included in PTO Belt Guard Kit

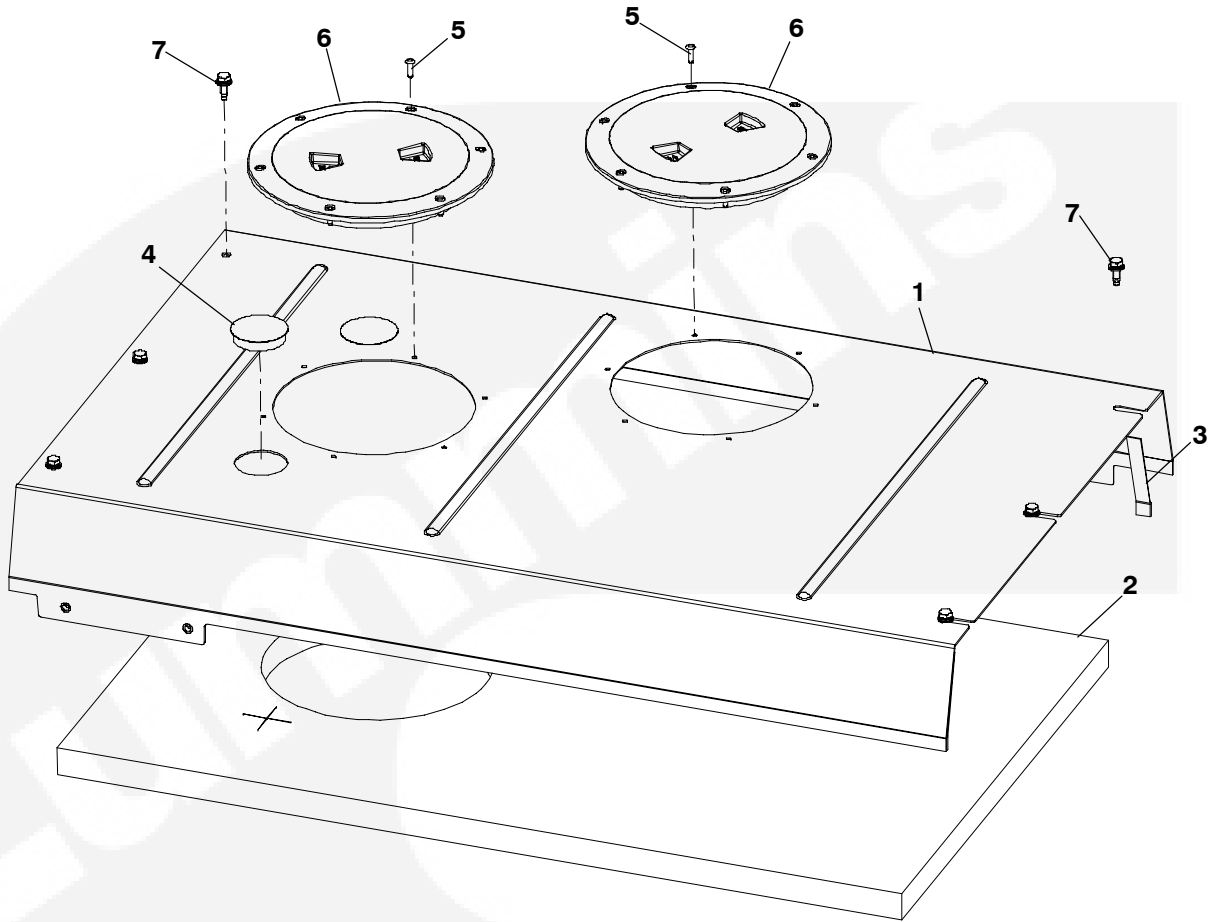


Generator Housing



| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|---------|-------------|----------|---------------------------------------|
| 1 | | | Panel, Housing | 13 | 517-0138-07 | 1 | Plug, Hole |
| | 404-0018-03 | 1 | Single Phase | 14 | 895-0402 | 1 | Seal, Weather (1.23') |
| | 404-0023-03 | 1 | Three Phase | 15 | 860-2057 | 2 | Nut, Hex (M6 x 1.0mm) |
| 2 | 404-0019-03 | 1 | Panel, Housing | 16 | 508-0051 | 1 | Grommet |
| 3 | 404-0020-03 | 1 | Panel, Air Baffle | 17 | 405-9631 | 1 | Insulation, Panel |
| 4 | 134-5299-02 | 5 | Bracket, Fan | 18 | 818-0231-02 | 5 | Rivet, Pop |
| 5 | 509-0368 | 1 | Seal, Brush | 19 | 526-2050 | 2 | Washer, Flat (M4) |
| 6 | | | Insulation, Panel | 20 | 800-3042 | 2 | Screw, Hex Head Cap (M4 x 0.7 x 10mm) |
| | 405-6684 | 1 | Single Phase | 21 | 404-0022-03 | 1 | Panel, Enclosure |
| | 405-7430 | 1 | Three Phase, MDKBV Single | 22 | 404-0024-03 | 1 | Panel, Enclosure |
| 7 | 404-0021-03 | 1 | Cover, Enclosure (Rear) | 23 | 517-0136 | 1 | Plug, Hole |
| 8 | 405-9129 | 1 | Insulation, Panel | 24 | 508-0021 | 1 | Grommet |
| 9 | 405-9079 | 1 | Insulation, Enclosure | 25 | 517-0133 | 1 | Plug, Hole |
| 10 | 404-0045 | 1 | Insulation, Cover | | | | |
| 11 | 508-1152 | 2 | Grommet, Rubber | | | | |
| 12 | 800-6395-01 | 25 | Screw, Hex Head Sems (M6 x 1.0 x 16mm) | | | | |

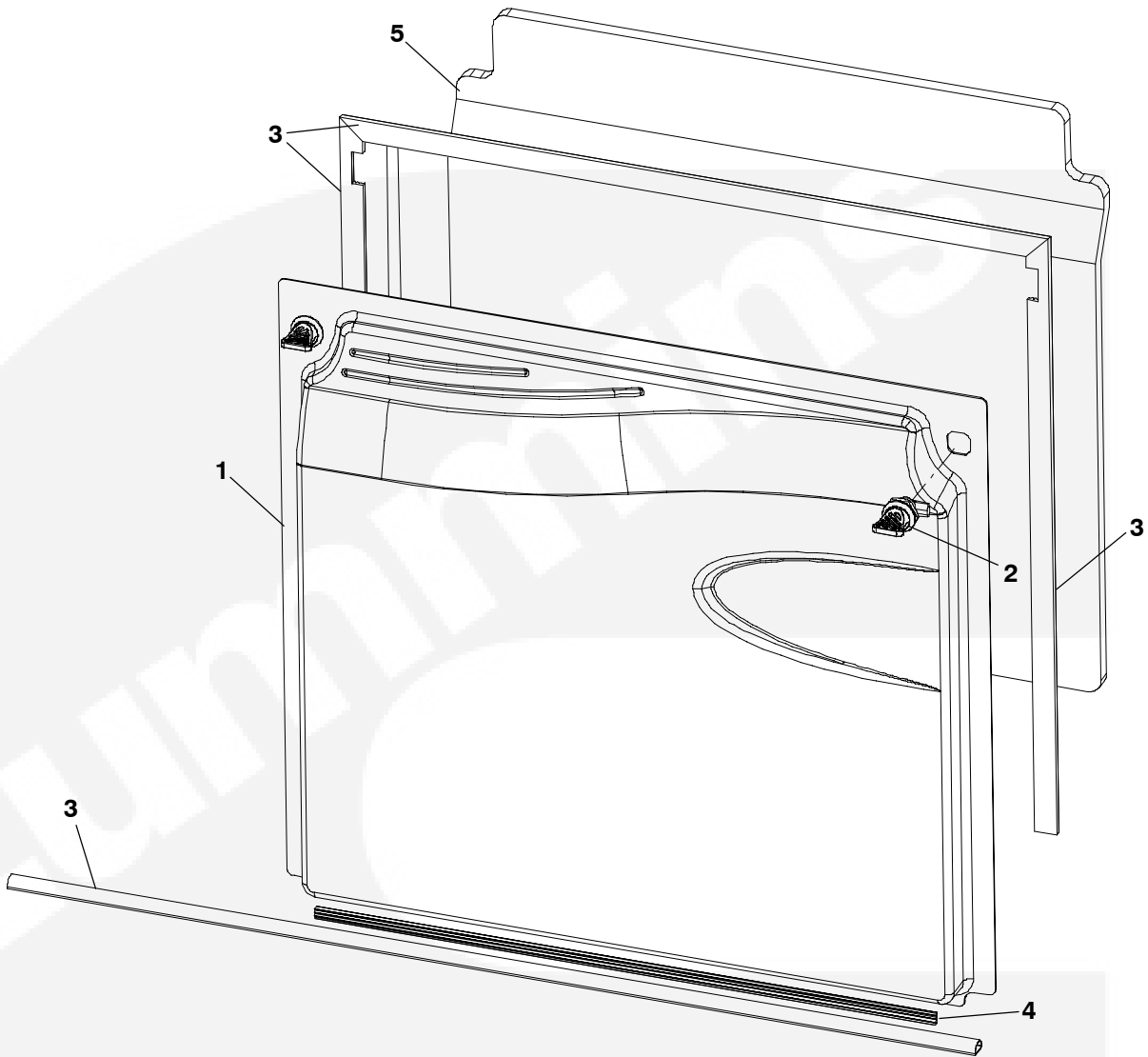
Engine Sound Shield



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|------------------|---------|-------------|-----------|---|
| 1 | 404-0090-03 | 1 | Panel, Roof | 6 | 405-6340 | 2 | Cover, Access |
| 2 | 404-0572 | 1 | Insulation, Roof | 7 | 800-6395-01 | 6 | Screw, Hex Head Sems (M6 x 1 x 16mm) |
| 3 | 405-5052 | 4 | Gasket, Baffle | | | | |
| 4 | 517-0392-19 | 2 | Plug, Hole | | | | |
| 5 | 818-0239-03 | 12 | Rivet, Pop | | | | |



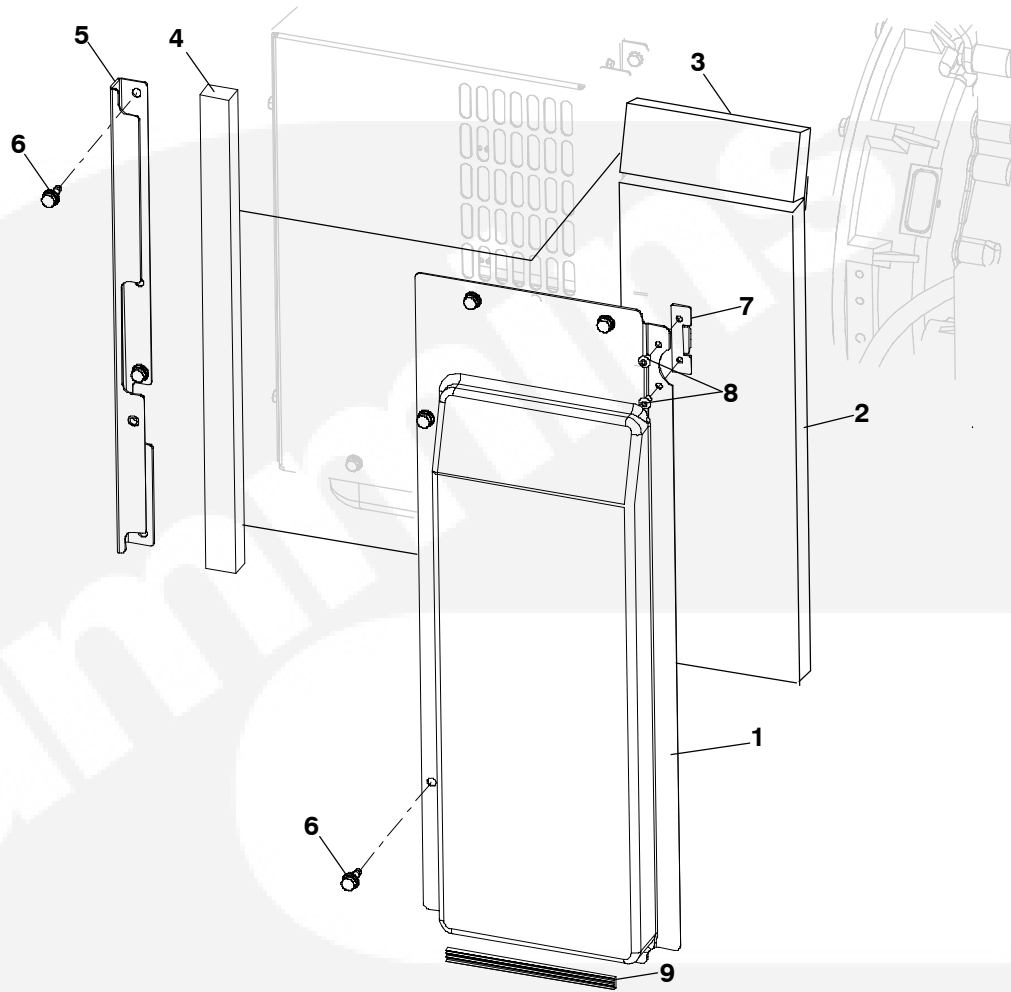
Engine Sound Shield



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|----------------------|---------|----------|-----------|------------------|
| 1 | 405-9751-03 | 1 | Door, Access | 4 | 895-0395 | AR | Seal, Weather |
| 2 | 406-0958 | 2 | Latch, Door | 5 | 405-9568 | 1 | Insulation, Door |
| 3 | 895-0411 | AR | Seal, Weather (12.5) | | | | |



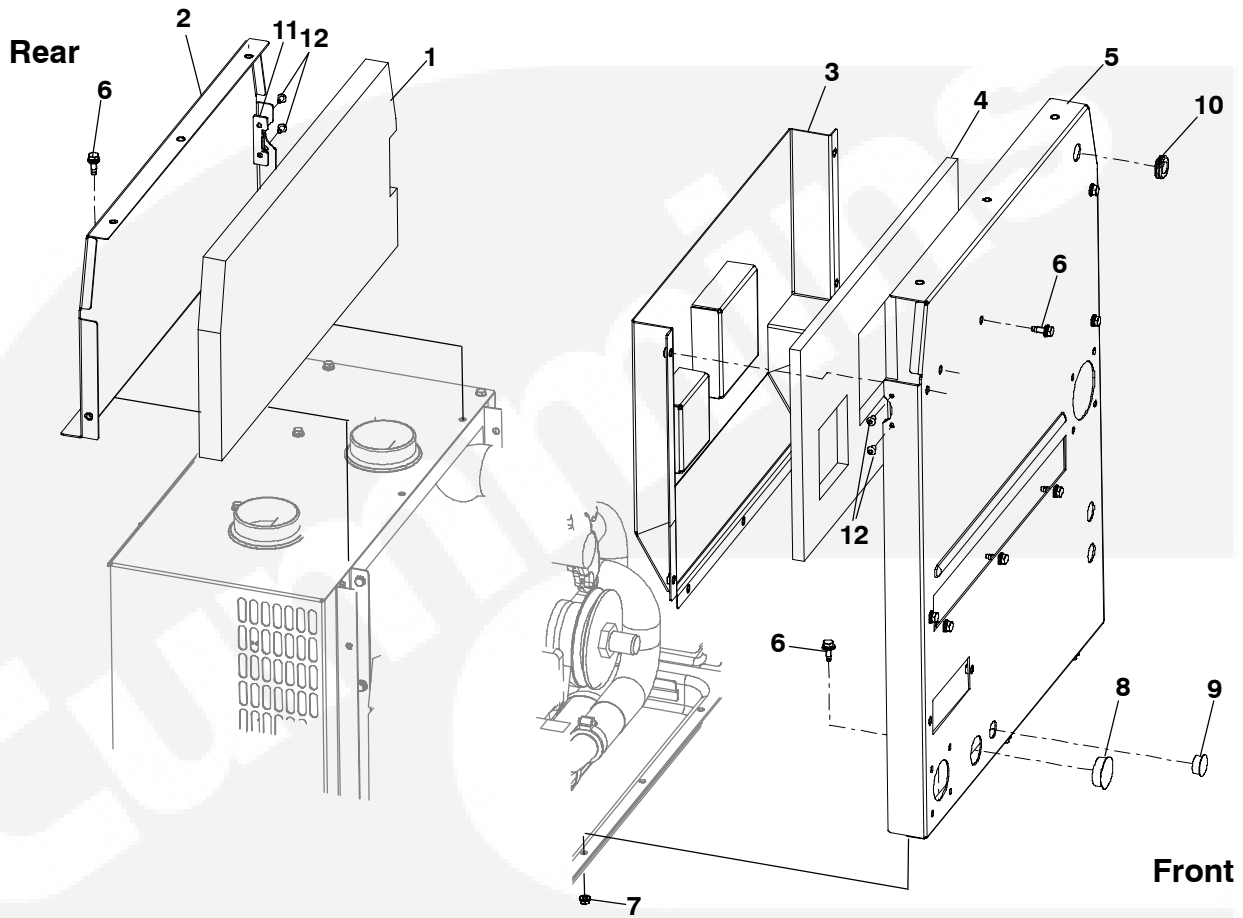
Engine Sound Shield



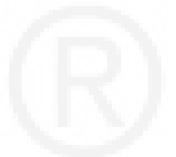
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------|---------|-------------|-----------|--------------------------------------|
| 1 | 404-0097-03 | 1 | Panel, Access | 6 | 800-6395-01 | 6 | Screw, Hex Head Sems (M6 x 1 x 16mm) |
| 2 | 405-6995-01 | 1 | Insulation, Sound | 7 | 406-1032 | 2 | Catch, Door |
| 3 | 405-6993-01 | 1 | Insulation, Sound | 8 | 818-0231-01 | 4 | Rivet, Pop |
| 4 | 405-7347 | 1 | Insulation, Sound | 9 | 895-0395 | AR | Seal, Weather |
| 5 | 404-0098-03 | 1 | Spacer, Panel | | | | |



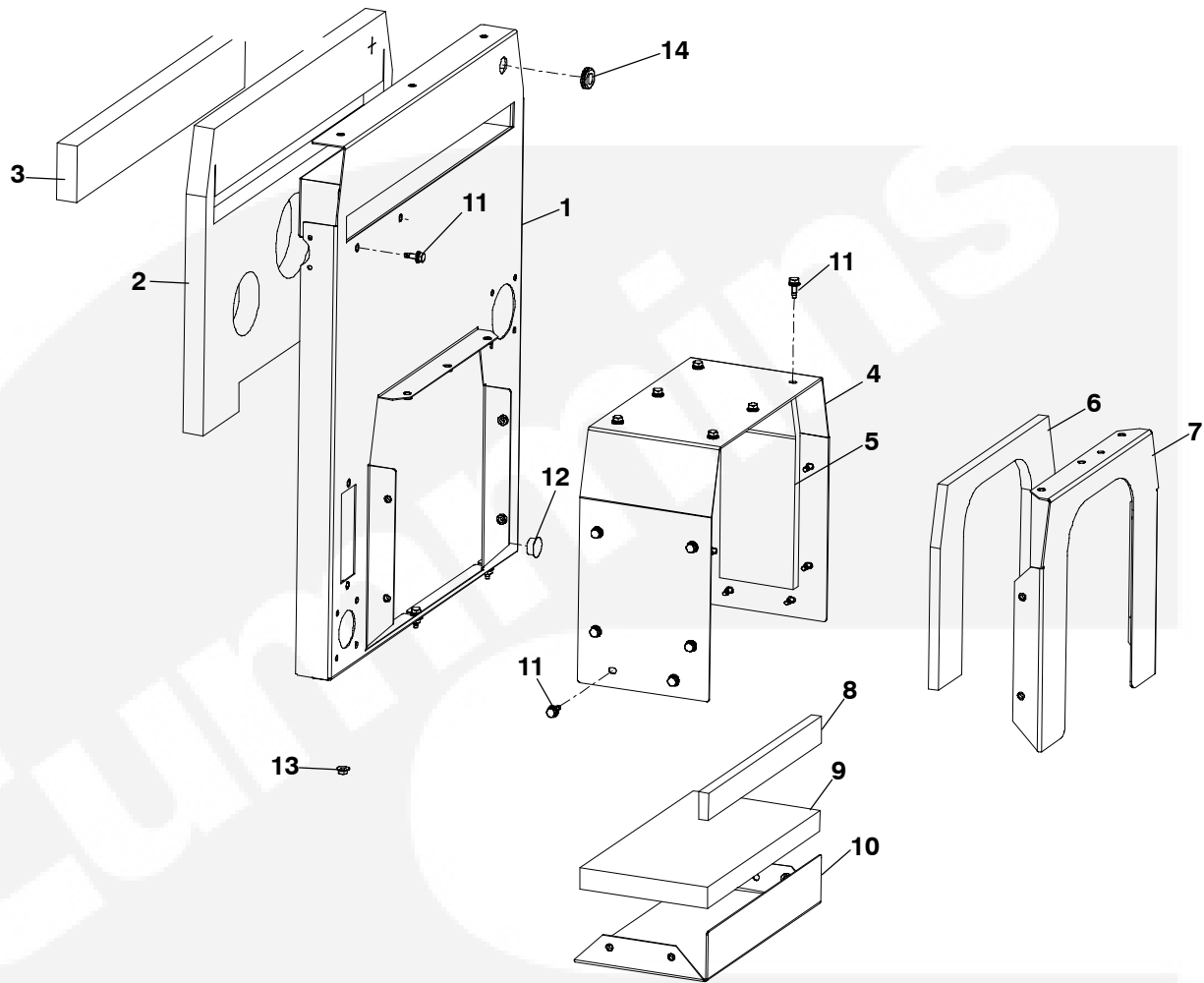
Engine Sound Shield (Front and Rear with out PTO)



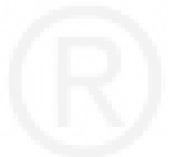
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------------------|---------|-------------|-----------|----------------------|
| 1 | 405-7179 | 1 | Insulation, Roof End | 8 | 517-0138-04 | 1 | Plug, Hole (W/O PTO) |
| 2 | 404-0096-03 | 1 | Panel, Roof End | 9 | 517-0136 | 1 | Plug, Hole |
| 3 | 404-0573-03 | 1 | Panel, Duct (W/O PTO) | 10 | 508-0021 | 1 | Grommet |
| 4 | 404-0576 | 1 | Insulation, Duct (W/O PTO) | 11 | 406-1032 | 2 | Catch, Door |
| 5 | 404-0039-03 | 1 | Panel, Enclosure (Front W/O PTO) | 12 | 818-0231-01 | 4 | Rivet, Pop |
| 6 | 800-6395-01 | 16 | Screw, Hex Head Sems (M6 x 1 x16mm) | | | | |
| 7 | 870-2065-02 | 2 | Nut, Lock Flanged (M6) | | | | |



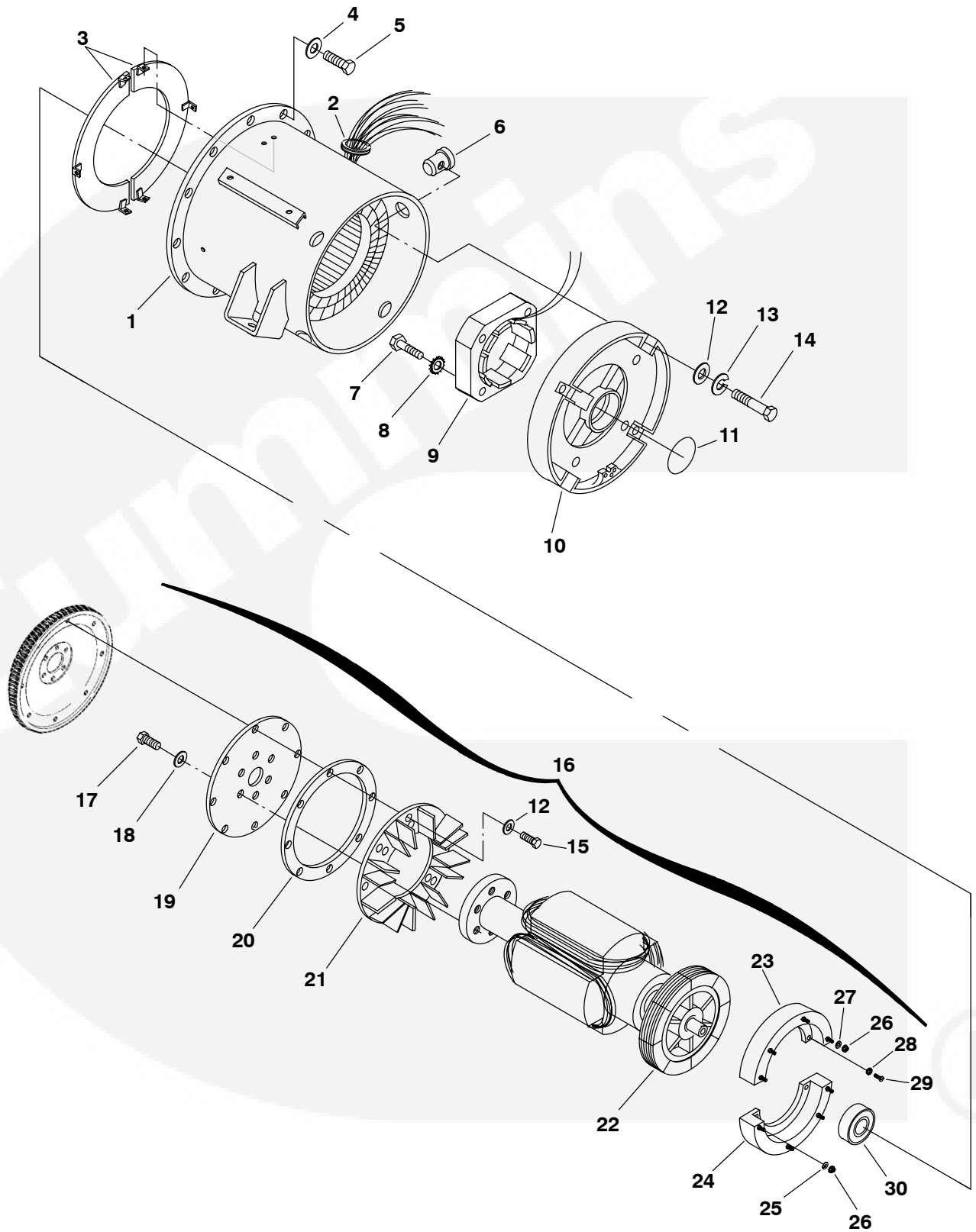
Engine Sound Shield (Front w/PTO)



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|------------------------------|---------|-------------|-----------|--------------------------------------|
| 1 | 404-0040-03 | 1 | Panel, Enclosure (Front PTO) | 9 | 405-6819 | 1 | Insulation, Sound (PTO) |
| 2 | 404-0575 | 1 | Insulation, Panel (PTO) | 10 | 190-0893-03 | 1 | Guard, PTO |
| 3 | 404-0100 | 1 | Insulation, Enclosure (PTO) | 11 | 800-6395-01 | 24 | Screw, Hex Head Sems (M6 x 1 x 16mm) |
| 4 | 190-0890-03 | 1 | Guard, PTO | 12 | 517-0136 | 1 | Plug, Hole |
| 5 | 404-0160 | 1 | Insulation, Sound (PTO) | 13 | 870-2065-02 | 3 | Nut, Hex Flanged (M6) |
| 6 | 404-0161 | 1 | Insulation, Sound (PTO) | 14 | 508-0021 | 1 | Grommet |
| 7 | 190-0891-03 | 1 | Guard, PTO | | | | |
| 8 | 404-0159 | 1 | Insulation, Sound (PTO) | | | | |



Generator



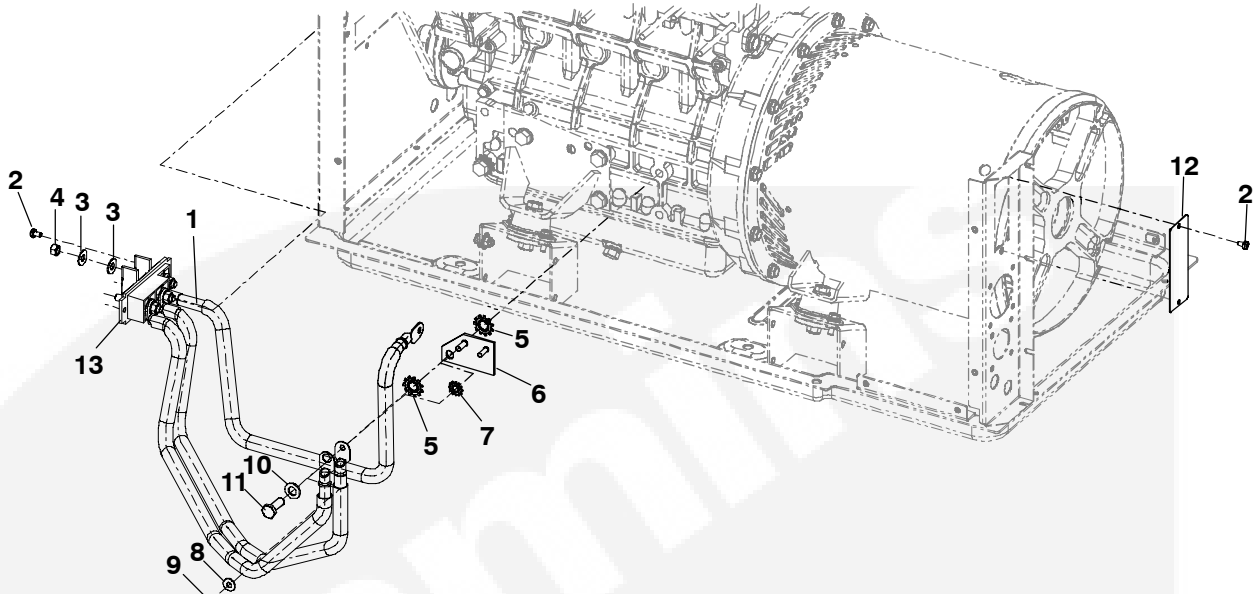
Generator

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|---|---------|-------------|----------|--|
| 1 | | | Stator, Generator (Includes Grommet) | 16 | | | Rotor Assy, Generator (Includes Parts Marked *) |
| | 220-4618-02 | 1 | Single Phase MDKBP | | 201-3517-02 | 1 | MDKBP |
| | 220-4618-04 | 1 | MDKBR, MDKBV | | 201-3517-04 | 1 | MDKBR, MDKBV |
| | | | Three Phase | 17 | 800-3010-44 | 6 | *Bolt, Hex Head Cap (.50-13 UMC x 1.0") |
| | 220-4619-02 | 1 | MDKBP | 18 | 526-0399-44 | 6 | *Washer, Flat |
| | 220-4619-04 | 1 | MDKBR, MDKBV | 19 | 232-3672-03 | 1 | *Disc, Drive |
| 2 | 508-1203 | 1 | Grommet | 20 | 232-3826-02 | 1 | *Spacer, Fan |
| 3 | 234-0935-02 | 2 | Baffle, Air (3 Phase) | 21 | 205-0229-02 | 1 | *Fan, Generator |
| 4 | 526-0174 | 12 | Washer, Flat (3/8) | 22 | 201-3515-02 | 1 | *Rotor, Wound (Excitor) |
| 5 | 800-0051 | 12 | Screw, Hex Head Cap (3/8-16 x 1-1/4) | 23 | 358-0069 | 1 | *Rectifier (Positive) |
| | | | Retainer, Endbell | 24 | 358-0070 | 1 | *Rectifier (Negative) |
| 6 | 232-3706-02 | 4 | Screw, Hex Head Thread Forming (1/4-20 x 2") | 25 | 526-0008 | 10 | *Washer, Flat (#10) |
| 7 | 815-0935 | 4 | Washer, ET Lock (1/4") | 26 | 870-0131 | 2 | *Nut, ET Hex (.190-32) |
| 8 | 853-0013 | 4 | Stator, Wound | 27 | 526-0399-11 | 2 | *Washer, Flat (#10) |
| 9 | 220-4413-02 | 1 | Endbell | 28 | 853-0008 | 4 | *Washer, ET Lock (.190") |
| 10 | 211-0435-01 | 1 | Seal, O'Ring | 29 | 813-0100 | 4 | *Screw, Pan Head Machine (.190-32 x .50") |
| 11 | 509-0094 | 1 | Washer, Flat (3/8) | 30 | 510-0112 | 1 | *Bearing, Ball |
| 12 | 526-0399-42 | 4 | Washer, Lock (5/16") | | | | |
| 13 | 850-0114-06 | 4 | Screw, Hex Head Cap (5/16"-18 x 2-1/2") | | | | |
| 14 | 800-0310-27 | 4 | Screw, Hex Head Cap (3/8-16 x 1) | | | | |
| 15 | 800-0310-36 | 8 | | | | | |

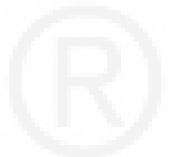
* - Parts Included in Generator Rotor Assy.



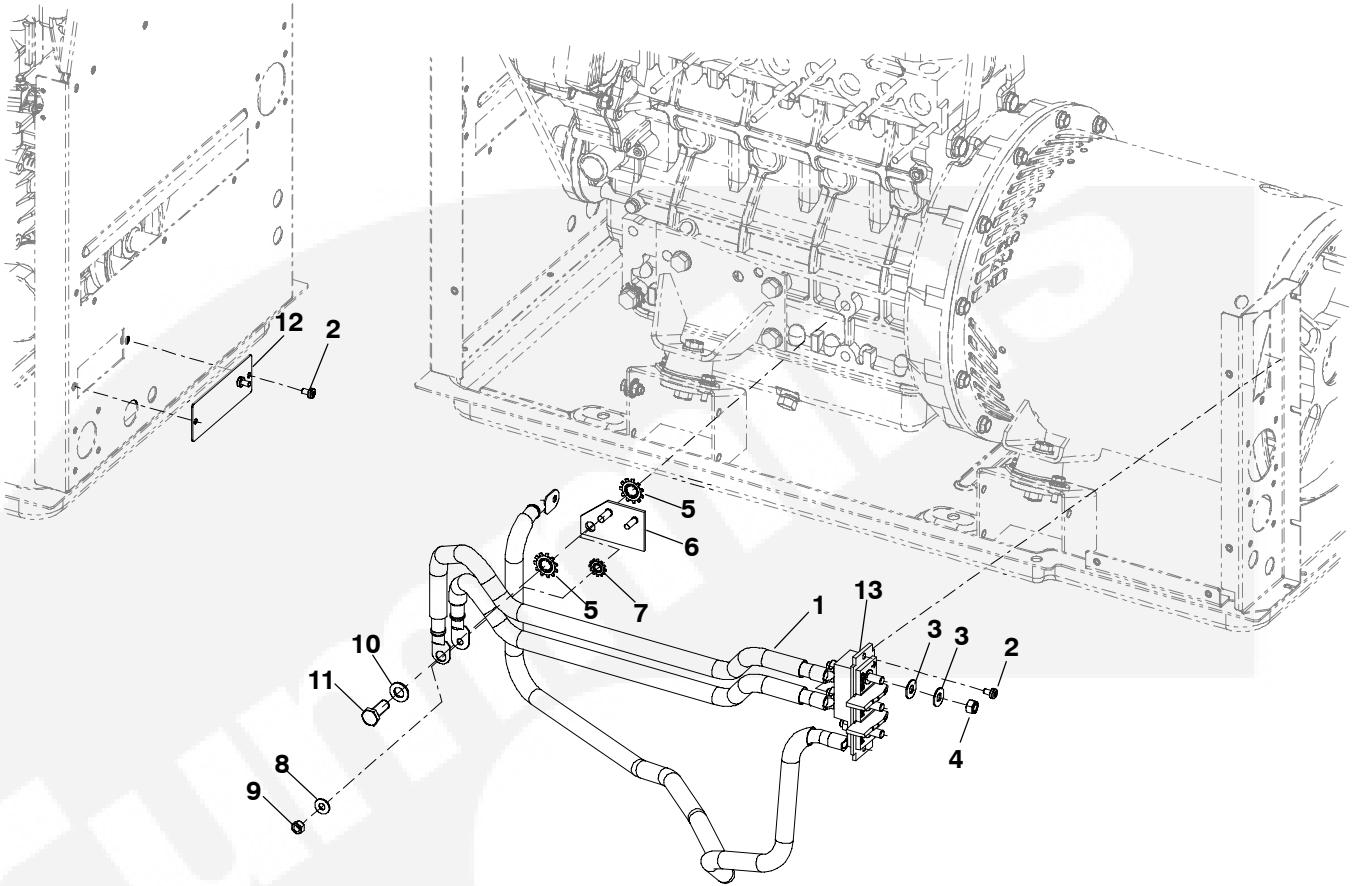
Battery Harness Front



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|--|
| 1 | 338-4623-02 | 1 | Harness, Battery | 9 | 871-0025 | 1 | Nut, HB Full (5/16-18) |
| 2 | 823-1002-03 | 4 | Screw, Pan Head Torx (M6 x 1.0 x 10mm) | 10 | 526-2140 | 1 | Washer, Flat (M12) |
| 3 | 526-0029 | 6 | Washer, Flat (1/2") | 11 | 800-3032 | 1 | Screw, Hex HEad Cap (M12 x 1.25 x 30mm) |
| 4 | 862-0003 | 3 | Nut, Hex (3/8-16UNC) | 12 | 405-9764-02 | 1 | Cover, Access |
| 5 | 856-0013 | 2 | Washer, ETIT Locking (1/2") | 13 | 332-3865-03 | 1 | Block, Terminal |
| 6 | 337-2748-02 | 1 | Assy Bus, Bar | | | | |
| 7 | 856-0008 | 1 | Washer, ETIT Locking (Neg GND 5/16") | | | | |
| 8 | 526-0054 | 1 | Washer, Flat Neg GND(8.33ID x 19.05OD) | | | | |



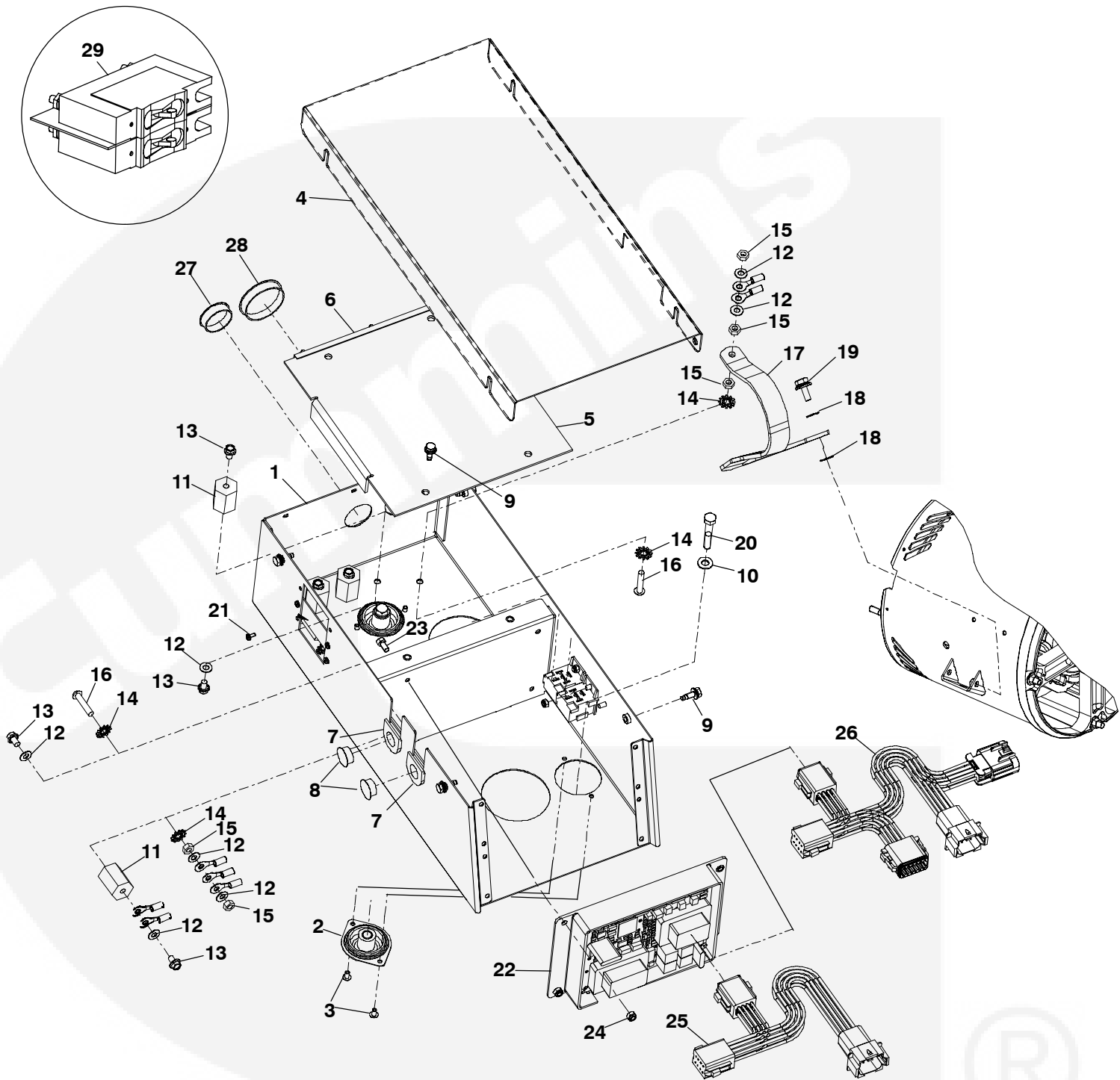
Battery Harness Rear



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|--|---------|-------------|-----------|---|
| 1 | 338-4623-02 | 1 | Harness, Battery | 9 | 871-0025 | 1 | Nut, HB Full (5/16-18) |
| 2 | 823-1002-03 | 4 | Screw, Pan Head Torx (M6 x 1.0 x 10mm) | 10 | 526-2140 | 1 | Washer, Flat (M12) |
| 3 | 526-0029 | 6 | Washer, Flat (1/2") | 11 | 800-3032 | 1 | Screw, Hex HEad Cap (M12 x 1.25 x 30mm) |
| 4 | 862-0003 | 3 | Nut, Hex (3/8-16UNC) | 12 | 405-9764-02 | 1 | Cover, Access |
| 5 | 856-0013 | 2 | Washer, ETIT Locking (1/2") | 13 | 332-3865-03 | 1 | Block, Terminal |
| 6 | 337-2748-02 | 1 | Assy Bus, Bar | | | | |
| 7 | 856-0008 | 1 | Washer, ETIT Locking (Neg GND 5/16") | | | | |
| 8 | 526-0054 | 1 | Washer, Flat (Neg GND(8.33ID x 19.05OD)) | | | | |



Control Box

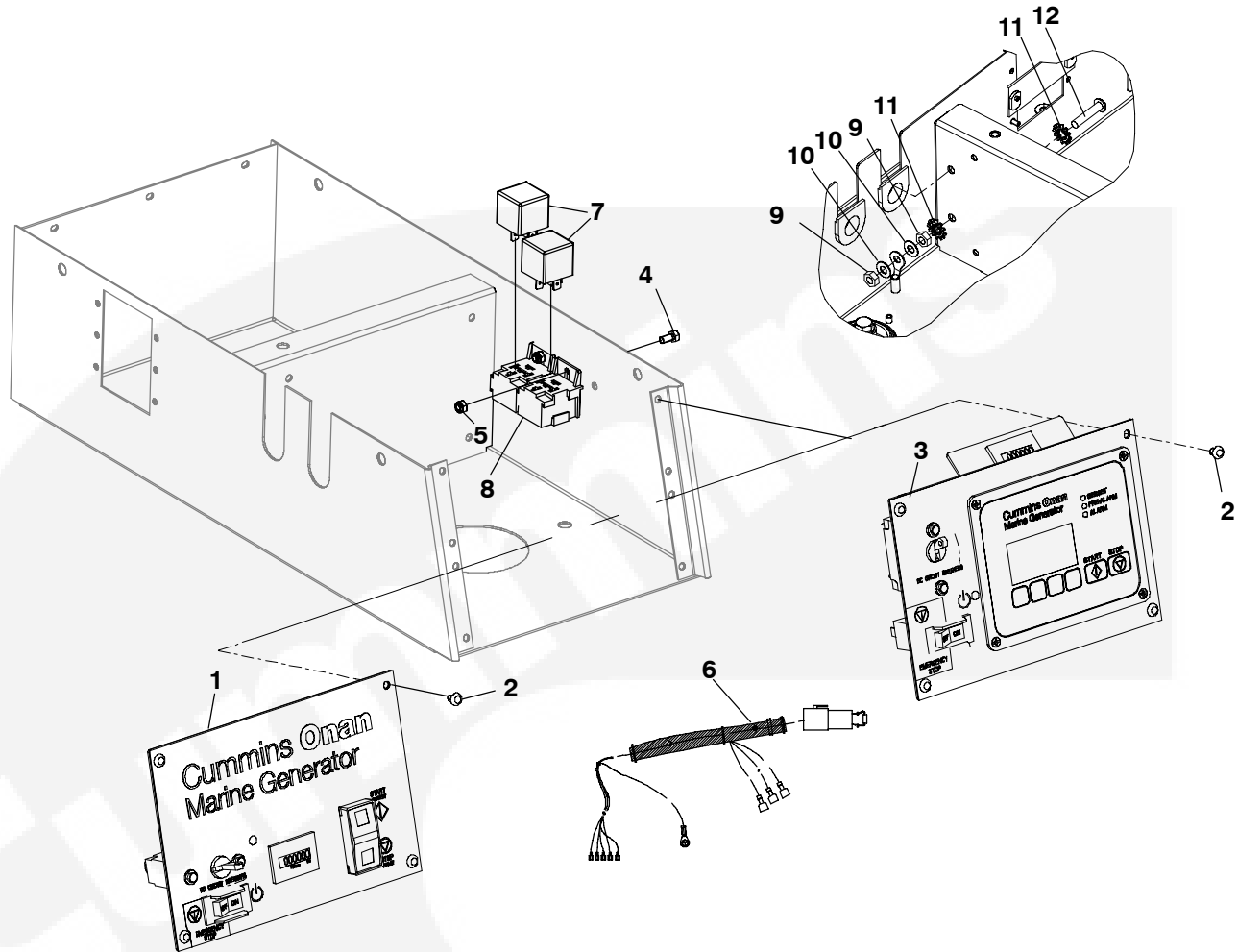


Control Box

| 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 | 22 | | | Neg GND 3 Phase 12 & 24V |
| 6 | 332-3750 | 1 | Guide, Card | | | | ISO GND 3 Phase 12 & 24V |
| 7 | 508-1105 | 2 | Grommet, Remote | 22 | | | PCB |
| 8 | 517-0136 | 2 | Plug, Hole | 327-1686-01 | 1 | | NIM/J1939 |
| 9 | 800-6395-01 | 6 | Screw, Hex Head Sems (M6 1.0 x 16mm) | 327-1686-02 | 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 | | | | (NIM/J1939/ Smartcraft1&2) |
| | 332-2370 | 3 | Neg GND 3 Phase 12 & 24V | 24 | 870-2062 | 1 | Nut, Nylon Locking SmartCraft 2(M5) |
| | | | ISO GND 1 Phase 12 & 24V | 25 | 338-4491 | 1 | Harness, Accessory (J1939 / SmartCraft) |
| | 332-2370 | 4 | ISO GND 3 Phase 12 & 24V | 26 | 338-4982 | 1 | Harness, Accessory (SmartCraft 2) |
| 12 | | | Washer, Flat (6.75ID x 14.30D x .8mm) | 27 | 517-0138-05 | 1 | Plug, Hole |
| | 526-0052 | 6 | Neg GND 1 Phase 12 & 24V | 28 | 517-0138-08 | 1 | Plug, Hole |
| | 526-0052 | 7 | Neg GND 3 Phase 12 & 24V | 29 | | | Breaker, Circuit MDKBP |
| | 526-0052 | 8 | ISO GND 1 Phase 12 & 24V | | | | 30Amps |
| | 526-0052 | 9 | ISO GND 3 Phase 12 & 24V | | | | 35Amps |
| 13 | | | Screw, Locking Head (1/4-20UNC x 14.30D x .8) | | | | 55Amps |
| | 821-0009 | 4 | Neg GND 1 Phase 12 & 24V | | | | MDKBR |
| | 821-0009 | 6 | Neg GND 3 Phase 12 & 24V | | | | 40Amps |
| | | | ISO GND 1 Phase 12 & 24V | | | | 45Amps |
| | 821-0009 | 8 | ISO GND 3 Phase 12 & 24V | | | | MDKBR, MDKBRV |
| 14 | 856-0006 | 4 | Washer, ETIT Locking (1/4") | | | | 50Amps |
| 15 | 871-0016 | 5 | Nut, Hex (1/4-20") | | | | 55Amps |
| 16 | 810-0155 | 2 | Screw, Round Head (1/4-20UNC x 1.25") | | | | 70Amps |
| 17 | 337-2795 | 1 | Strap, Bond | | | | |
| 18 | 853-0016 | 2 | Washer, ET Locking (5/16") | | | | |
| 19 | 821-6003-01 | 1 | Screw, Hex Head Sems (M8 x 1.25 x 16mm) | | | | |

SmartCraft is a trademark of the Brunswick Corporation.

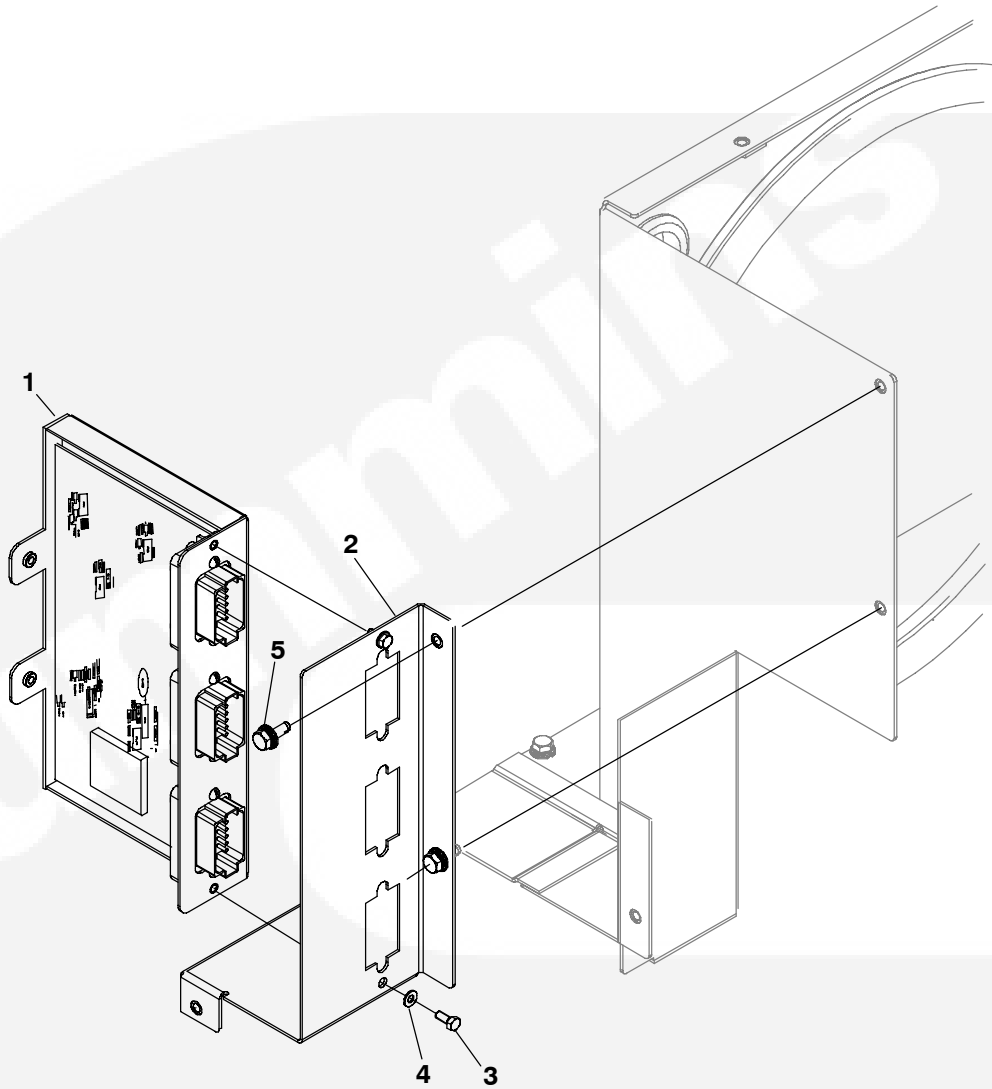
Control Panel Components



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|----------|-----------|--|
| 1 | | | Assy, Engine Panel (See Control Panel for Parts) | 7 | | | Relays |
| | 300-6362-03 | 1 | 12V | | 307-2767 | 2 | 12V |
| | 300-6362-04 | 1 | 24V | | 307-2819 | 2 | 24V |
| 2 | 818-1150-03 | 8 | Rivet, Drive Plastic (Std) | 8 | 323-1563 | 2 | Contact, Relay |
| 3 | 300-6363-01 | 1 | Assy, Control | 9 | 871-0016 | 5 | Nut, Hex (.25-20UNC) |
| 4 | 800-6002 | 2 | Screw, Hex Head Cap (M5 x .8 x 10mm) | 10 | 526-0052 | 1 | Washer, Flat (6.75 x14.3) |
| 5 | 870-2062 | 2 | Nut, Nylon Lock (M5) | 11 | 856-0006 | 2 | Washer Etit Locking (1/4") |
| 6 | 338-4414-03 | 1 | Harness, Control | 12 | 810-0155 | 2 | Screw, Round Head (.25-20UNC 1.25") |

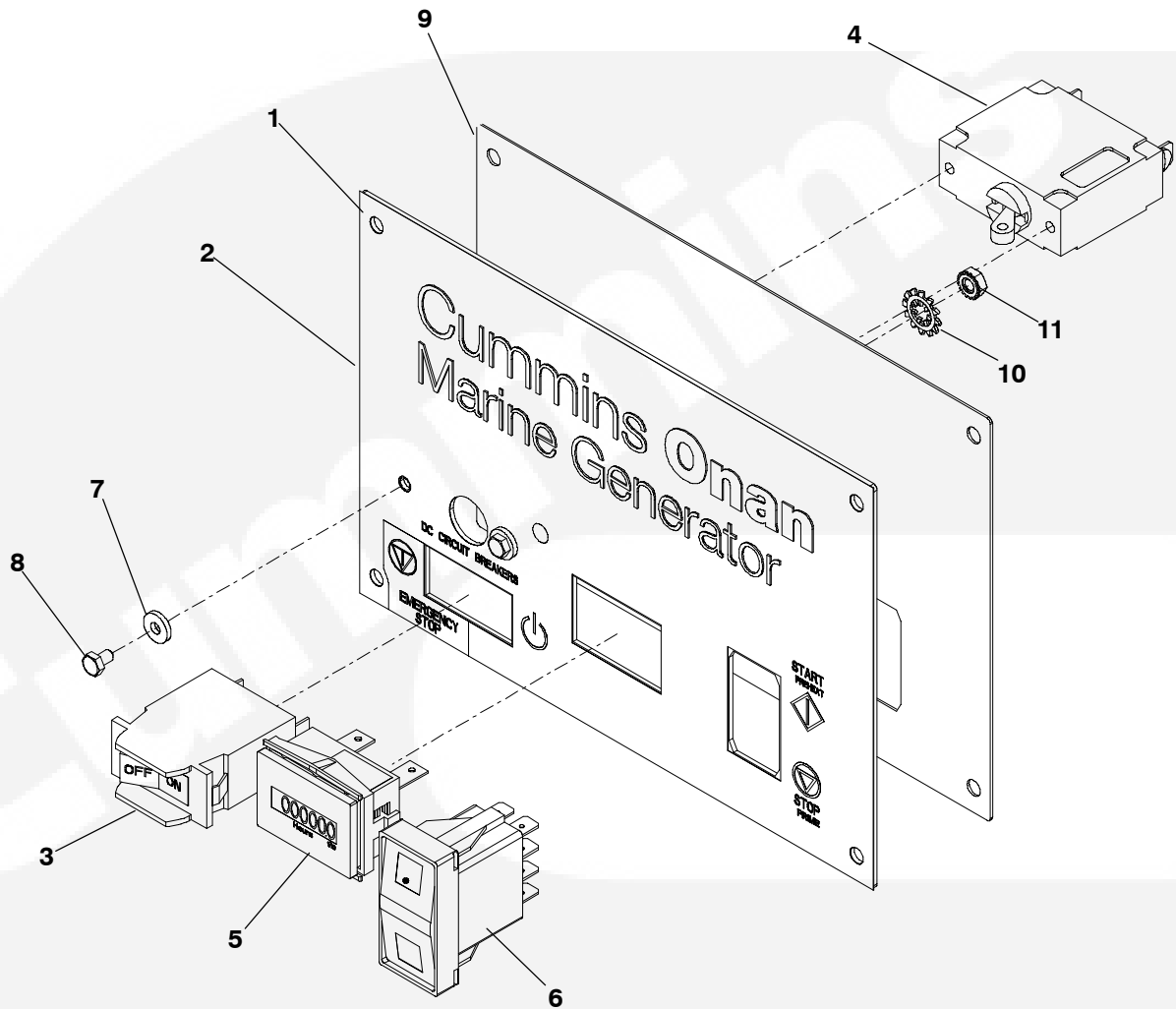


PCB Mounting



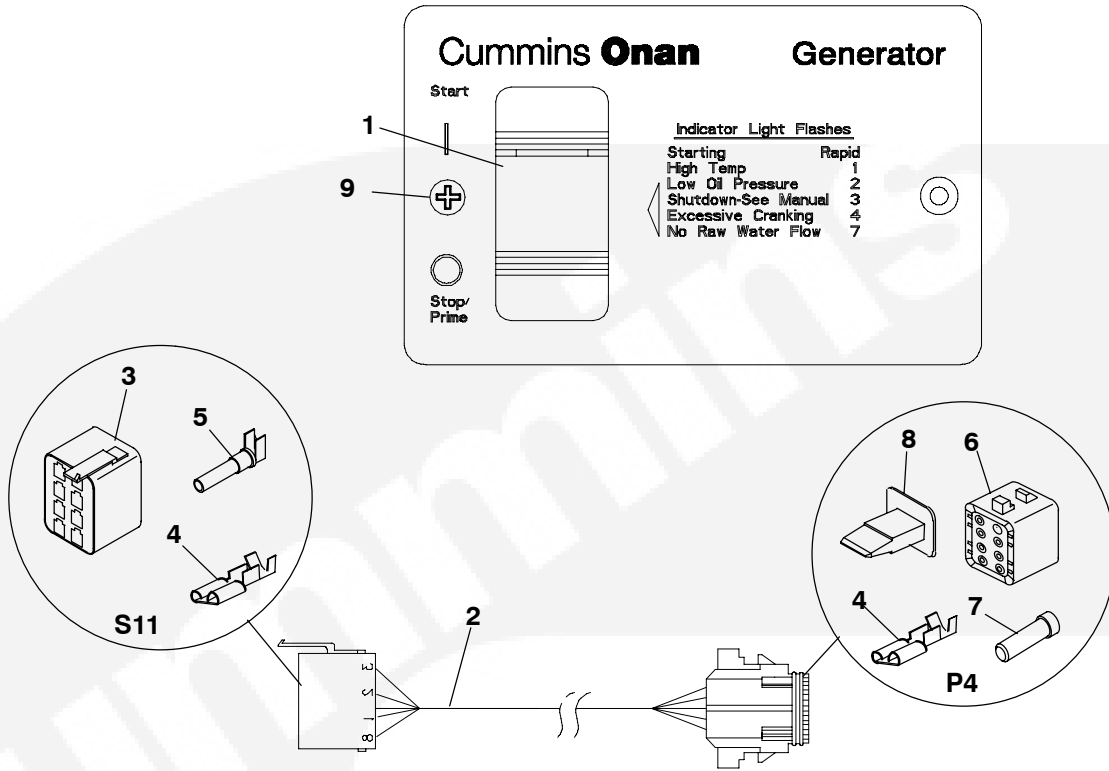
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---------------------|---------|-------------|-----------|--|
| 1 | 300-6396 | 1 | PCB, Control | 4 | 526-2050 | 2 | Washer, Flat (M4) |
| 2 | 404-0022-03 | 1 | Panel, UMC Mounting | 5 | 800-6395-01 | 2 | Screw, Hex Head Sems Stainless (M6 x 1 x 16mm) |
| 3 | 800-3042 | 2 | Screw, Hex (M4) | | | | |

Control Panel Components (Breaker Switch)



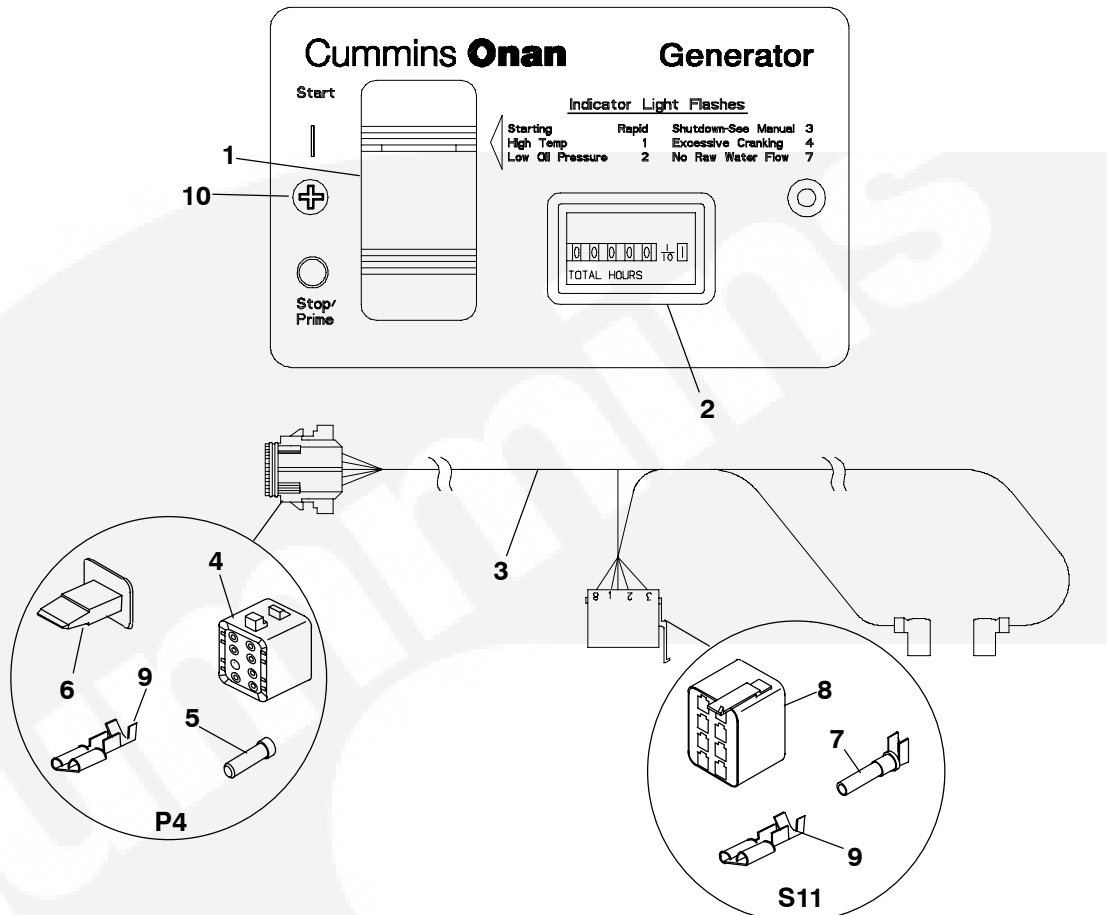
| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|-------------|-----------|------------------------------------|
| | | | Assy, Engine Panel (All Parts Included) | 6 | | | Breaker Circuit |
| | 300-6362-03 | 1 | 12V | | 308-1218 | 1 | 12V |
| | 300-6362-04 | 1 | 24V | | 308-1219 | 1 | 24V |
| 1 | 319-6871-02 | 1 | Panel, Control | 7 | 526-1002 | 2 | Washer, Flat DAC |
| 2 | 98-8713 | 1 | Label, Information (Control) | 8 | 800-0309-10 | 2 | Screw, Hex Head Mach (6-32 x 1/4") |
| 3 | 320-2361 | 1 | Breaker Circuit | 9 | 319-6873 | 1 | Panel, Control Box |
| 4 | 320-2362 | 1 | Breaker Circuit | 10 | 656-0003 | 1 | Washer, EIT Lock (#10) |
| 5 | 302-2048 | 1 | Meter, Hour | 11 | 870-0131 | 1 | Nut, Sems EIT (#10-32) |

Remote Switch Panel



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|----------|-----------|---|
| | | | Kit, Remote Switch Harness (Includes Parts Marked +) | 3 | 308-1019 | 1 | *Connector, Switch (S11) |
| | 541-0941-01 | 1 | 12V | 4 | 332-2890 | 6 | *Terminal, Receptacle (.25") |
| | 541-0941-02 | 1 | 24V | 5 | 323-1492 | 6 | *Terminal, Socket |
| | | | Kit, Panel Remote (Includes Parts Marked #) | 6 | 323-1541 | 1 | *Plug, (8 Pin) |
| | 300-5725-01 | 1 | 12V | 7 | 323-1491 | 3 | *Plug, Seal |
| | 300-5725-02 | 1 | 24V | 8 | 323-1543 | 1 | *Wedge, Plug (8 Pin) |
| 1 | | | ## Switch, Rocker (S11) | 9 | 815-0910 | 2 | #Screw, Wood (#6 x 1) |
| | 308-1101 | 1 | 12V | 10 | 98-8092 | 1 | +Label, Instructions (Not Shown) |
| | 308-1102 | 1 | 24V | 11 | 98-8081 | 1 | ##Label, Warning (Not Shown) |
| 2 | | | ## Harness, Remote Panel (Includes Parts Marked *) | | | | - Parts Included in Remote Panel. |
| | 541-0585-01 | 1 | 12V | | | | + - Parts Included in Remote Switch Harness. Instructions included in Kits only |
| | 541-0585-02 | 1 | 24V | | | | |

Remote Switch/Hourmeter Panel

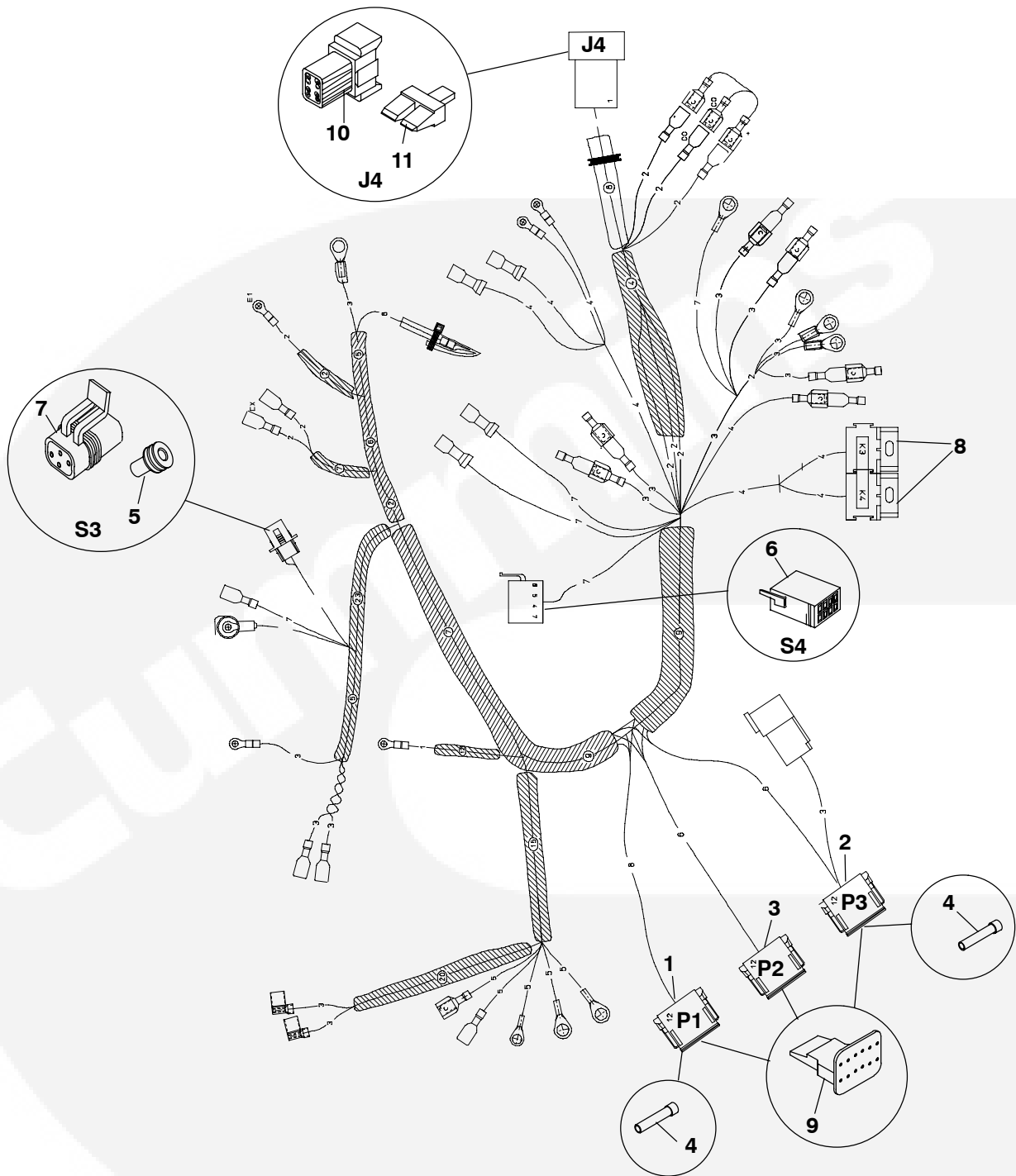


| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|-------------|----------|--|---------|----------|----------|------------------------------|
| | | | Kit, Remote Panel | 5 | 323-1591 | 2 | *Plug, Seal |
| | 300-5727-01 | 1 | 12V | 6 | 323-1543 | 1 | *Wedge, Plug (8 Pin) |
| | 300-5727-02 | 1 | 24V | 7 | 323-1492 | 6 | *Pin, Contact |
| 1 | | | Switch, Rocker (S11) | 8 | 308-1019 | 1 | *Connector, Switch (S11) |
| | 308-1101 | 1 | 12V | 9 | 332-2890 | 6 | *Terminal, Receptacle (.25") |
| | 308-1102 | 1 | 24V | 10 | 815-0910 | 2 | Screw, Wood (#6 x 1) |
| 2 | 302-2002 | 1 | Meter, Hour (M11) | 11 | 98-8081 | 1 | Label, Panel (Not Shown) |
| 3 | 338-3990 | 1 | Harness, Remote Panel (Includes Parts Marked *) | | | | |
| 4 | 323-1541 | 1 | *Plug (8 Pin) (P4) | | | | |

* - Parts Included in Remote Panel Wiring Harness.

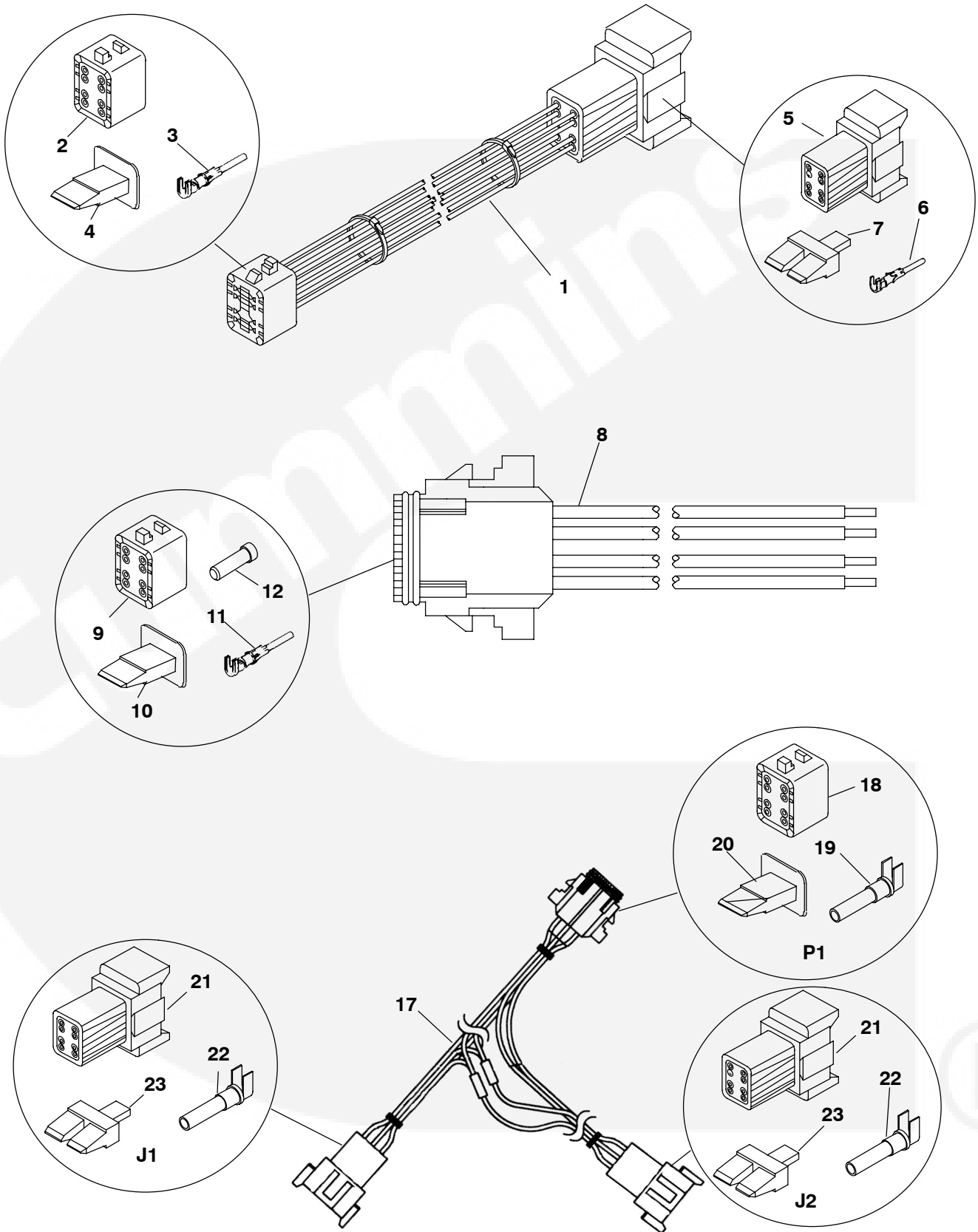


Control Harness

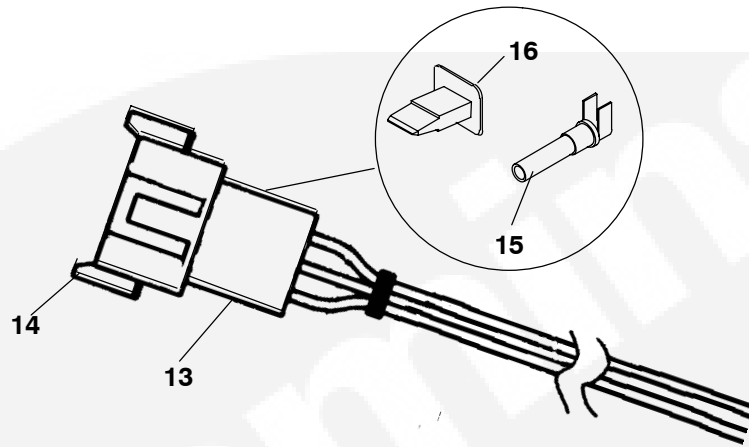


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|-------------------------|---------|----------|-----------|--------------------------------------|
| | 338-5174 | 1 | Harness, Control | 7 | 323-1765 | 1 | Connector, Housing 4 Pin (S3) |
| 1 | 323-1582-06 | 1 | Plug (12 Pin, Black P1) | 8 | 323-1563 | 1 | Socket, Relay |
| 2 | 323-1582-05 | 1 | Plug (12 Pin, Gray P3) | 9 | 323-1583 | 3 | Plug, Wedge 12 Pin, P1, P2, P3 |
| 3 | 323-1582-07 | 1 | Plug (12 Pin, Green P2) | 10 | 323-1542 | 2 | Connector, Receptacle 8 Pin (J4, J8) |
| 4 | 323-1591 | AR | Plug (P1) | 11 | 323-1544 | 2 | Receptacle, Wedge(J4, J8) |
| 5 | 323-1708 | AR | Seal,Cable(S3) | 12 | 98-7917 | 1 | Label, Information (Not Shown) |
| 6 | 308-1019 | 1 | Switch, Connector (S4) | | | | |

Wiring Harnesses



Wiring Harnesses

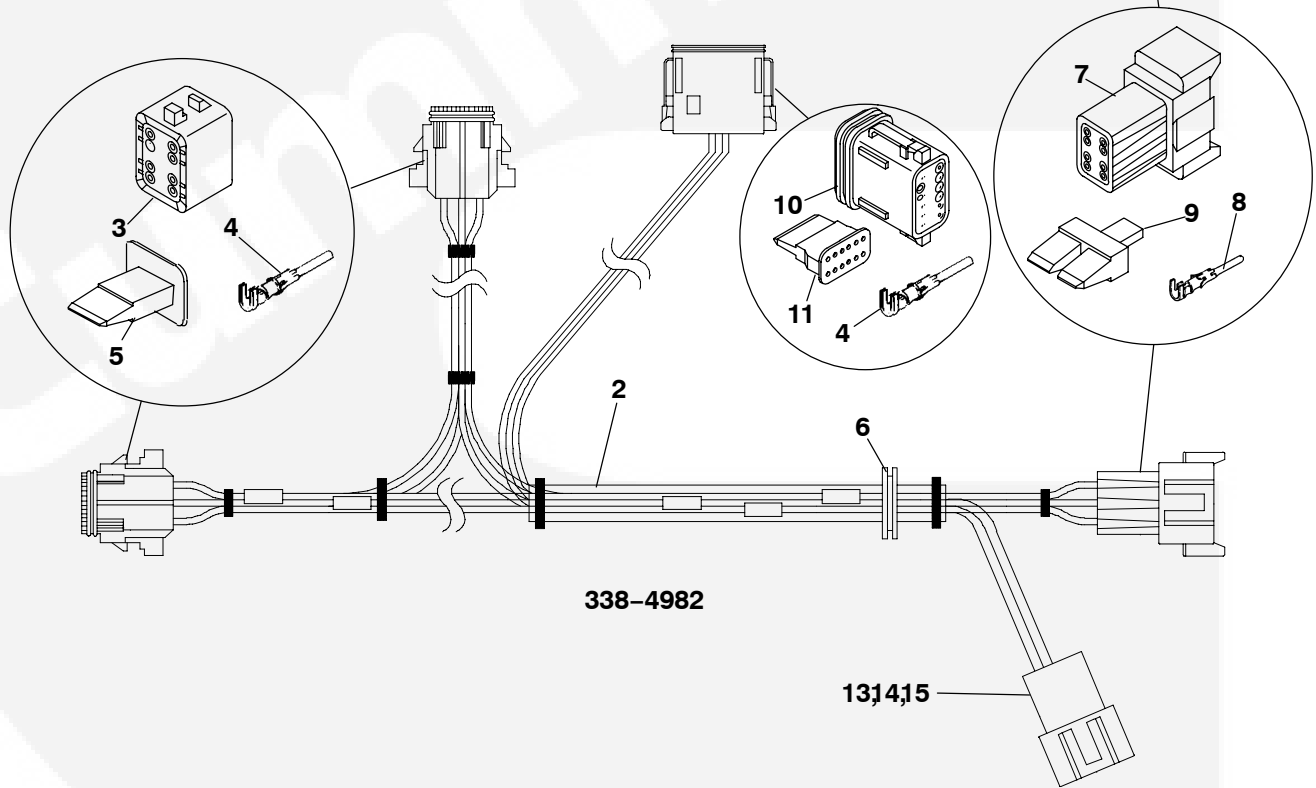
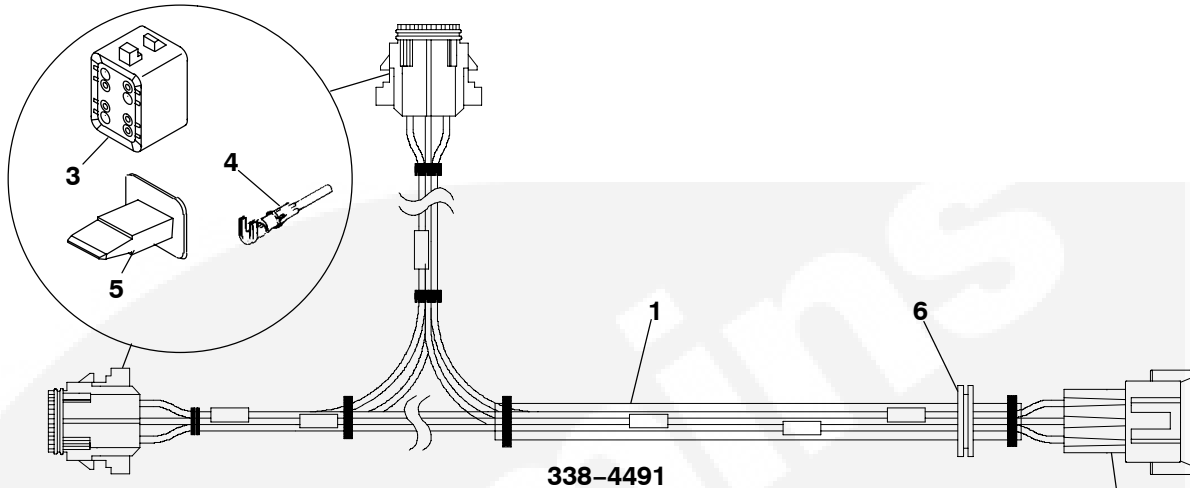


| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|-------------|-----------|---|---------|----------|-----------|---|
| 1 | | | Harness, Remote Extension (Includes Parts Marked #) | 13 | 338-4017 | 1 | Harness, Pigtail (Includes Parts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

- 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.



Wiring Harnesses



| REF NO. | PART NO. | QTY. USED | PART DESCRIPTION | REF NO. | PART NO. | QTY. USED | PART DESCRIPTION |
|---------|----------|-----------|---|---------|----------|-----------|------------------------------|
| 1 | 338-4491 | | Harness, Remote (Includes Parts marked *) | 8 | 323-1491 | 8 | *+ Terminal, Pin |
| 2 | 338-4982 | | Harness, Remote (Includes Parts marked +) | 9 | 323-1544 | 1 | *+ Wedge, Receptacle (8 Pin) |
| 3 | 323-1541 | 2 | *+ Connector, Plug (8Pin) | 10 | 323-1582 | 1 | Connector, Plug (10Pin) |
| 4 | 323-1492 | 1 | *+ Terminal, Socket | 11 | 323-1583 | 1 | Wedge, Plug (10Pin) |
| 5 | 323-1543 | 1 | *+ Wedge, Plug (8 Pin) | 12 | 323-1492 | 1 | Terminal, Socket (Not Shown) |
| 6 | 508-1105 | 1 | *+ Grommet | 13 | 323-2524 | 1 | Housing, Receptacle |
| 7 | 323-1542 | 1 | *+ Connector, Receptacle | 14 | 323-2522 | 1 | Seal, Connector |
| | | | | 15 | 332-4287 | 1 | Terminal, Pin |

Labels, Kits

| REF NO. | PART NO. | QTY USED | PART DESCRIPTION | REF NO. | PART NO. | QTY USED | PART DESCRIPTION |
|---------|------------|----------|-------------------------------|---------|-------------|----------|---------------------------------|
| | 98-7525 | 1 | Label, Batt B+ | | 98-8701 | 1 | Label, Information (Front) |
| | 98-8340 | 1 | Label, Logo | | 98-8699 | 1 | Label, Information (Rear) |
| | 98-7939-02 | 1 | Label, Blank | | 98-8703 | 1 | Label, Information (PTO) |
| | 98-5926 | 1 | Label, Barcode | | 98-8878-08 | 1 | Label, Emissions (MDKBP) |
| | 98-6989 | 1 | Label, Barcode | | 98-8878-09 | 1 | Label, Emissions (MDKBR, MDKBV) |
| | 98-8111 | 1 | Label, Information Program | | 98-8878-11 | 1 | Label, Emissions (MDKBP) |
| | 98-8053 | 1 | Label, Information Relay | | 98-8878-12 | 1 | Label, Emissions (MDKBR, MDKBV) |
| | 98-8801 | 1 | Label, Information Muffler | | | | |
| | 98-8323 | 1 | Label, Information Display | | | | |
| | 98-4798-01 | 1 | Label, Warning (Unhoused) | | | | |
| | 98-5161 | 1 | Label, Coolant (Housed) | | 100-3478-04 | 1 | Kit, Cruise Includes |
| | 98-6995 | 4 | Label, Warning (Housed) | | | | All of The Following Items: |
| | 98-8601 | 1 | Label, Information Sheet | | 149-2106 | 2 | Filter, Fuel |
| | | 4 | Label, Warning | | 122-0810 | 2 | Filter, Oil |
| | | 1 | Label, Information (No Step) | | 132-0349 | 2 | Kit Pump, Service |
| | | 1 | Label, Warning (Coolant) | | 511-0211 | 2 | Belt |
| | | 1 | Label, Information (Coolant) | | 130-4434 | 2 | Pencil, Zinc |
| | | 1 | Label, Information (Oil Fill) | | 417-0223 | 2 | Box, Cruise Kits |
| | | 1 | Label, Information (Lifting) | | | | |
| | 98-8689 | 1 | Label, Information Sheet | | 100-3478-05 | 1 | Kit, Cruise Includes |
| | | 1 | Label, Information | | | | All of The Following Items: |
| | | 1 | Label, Information (Service) | | 149-2106 | 2 | Filter, Fuel |
| | | 1 | Label, Warning | | 122-0810 | 2 | Filter, Oil |
| | | 1 | Label, Information (No Step) | | 132-0349 | 2 | Kit Pump, Service |
| | | 1 | Label, Danger | | 185-7055 | 2 | Belt |
| | | 1 | Label, Warning (Coolant) | | 130-4434 | 2 | Pencil, Zinc |
| | | 1 | Label, Information Ground | | | | |
| | 98-8714 | 2 | Label, Logo (Cummins, Onan) | | 300-5725-01 | 1 | Kit, Remote Panel |
| | 98-8715 | 2 | Label, Logo (Cummins, Onan) | | 300-5725-02 | 1 | Kit, Remote Panel |
| | 98-8717 | 1 | Label, Logo (Cummins, Onan) | | 332-3771 | 1 | Kit, Terminal Boot |



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