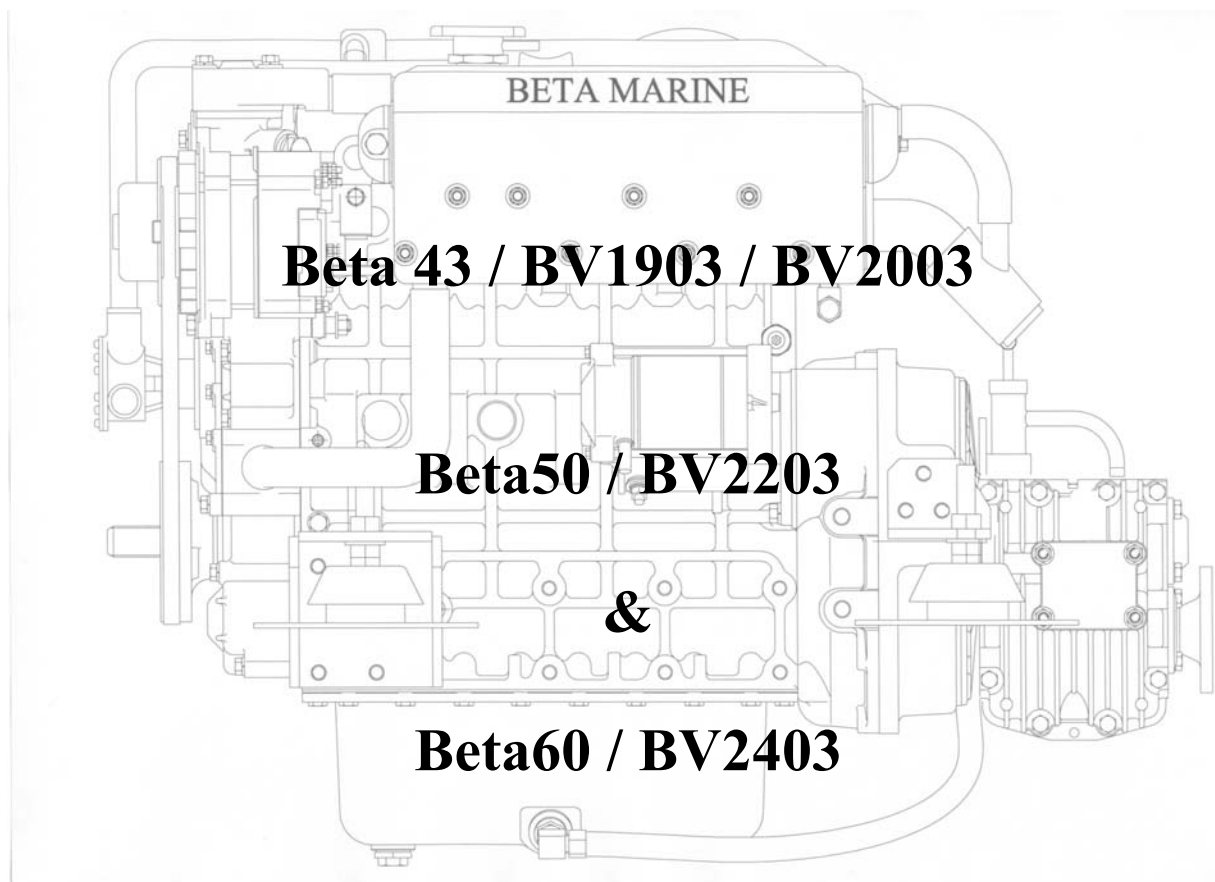


# **BETA MARINE**



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## **SUPER 3 SERIES 4 CYLINDER ILLUSTRATED PARTS LIST INCLUDING:**



## **HEAT EXCHANGER COOLED MARINE DIESEL ENGINES**

CALIFORNIA - Proposition 65 Warning  
Diesel engine exhaust and some of its constituents are known to the state  
of California to cause cancer, birth defects and other reproductive harm.

Beta43-Beta50HE Illustrated parts list Rev 004 October 2011

Prices and specifications are subject to amendment without notice. Information given is subject to our current conditions of tender and sale.

Prices and specifications are subject to amendment without notice. Information given is subject to our current conditions of tender and sale. In all cases please quote *Beta Marine WOC 'K' number* and Engine Type. Beta Marine will not be held responsible for incorrect supply without this information.

## Spare Parts Listing

### Heat Exchanger & Keel Cooled Beta43, Beta50 and Beta60

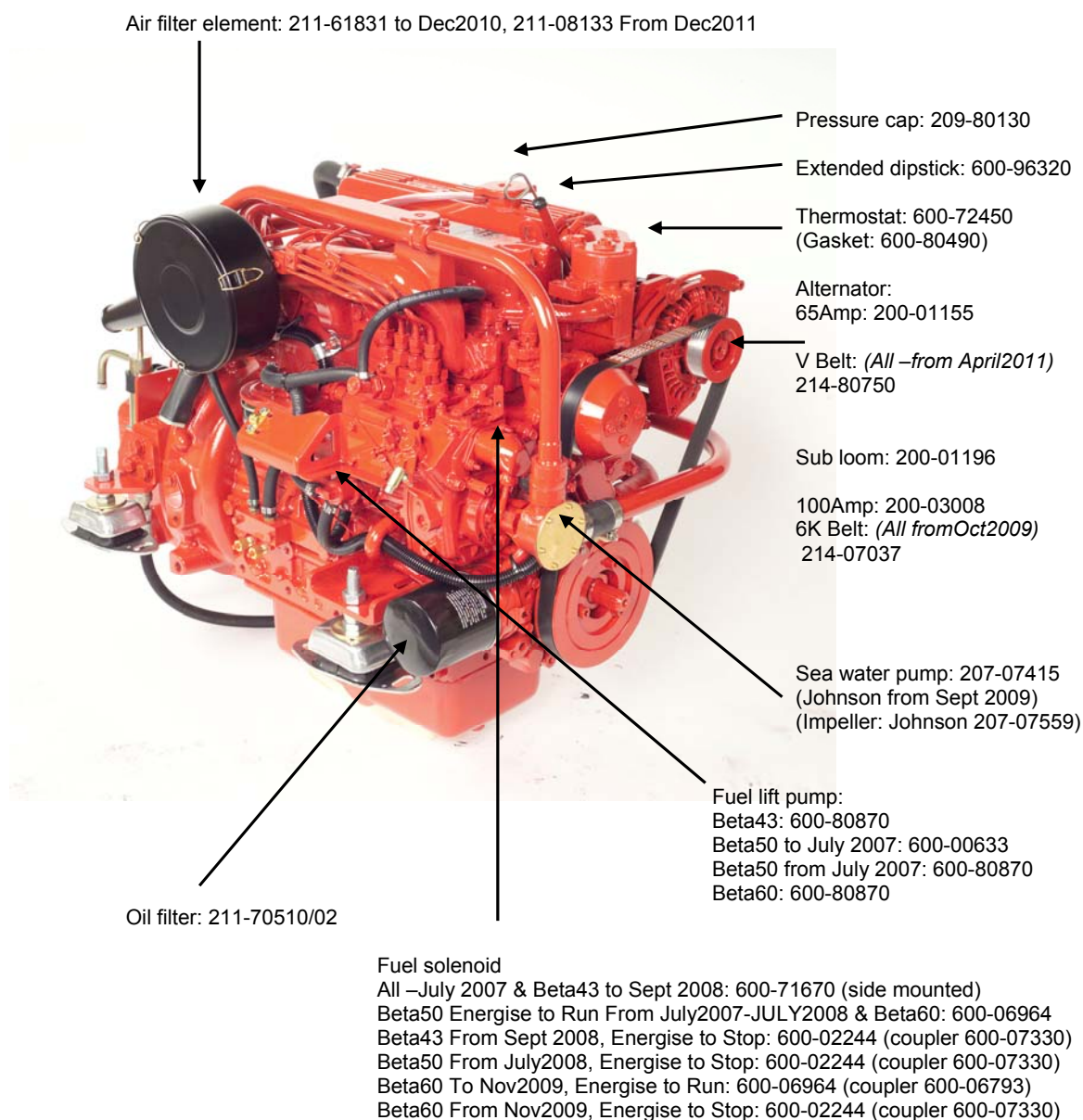
| Description                                                                |                                                                                | Part No      | Qty/Engine                    |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------|-------------------------------|
| Wasting Zinc Anode                                                         |                                                                                | 209-61840    | 1                             |
| Heat Exchanger "O" Ring (HEADER WITH SINGLE BOLT ENDCAP)                   |                                                                                | 209-80110    | 2                             |
| Heat Exchanger "O" Ring (2011 HEADER WITH 3 BOLT ENDCAP)                   |                                                                                | 212-07273    |                               |
| Pressure Cap 95kPa – 15 PSI                                                |                                                                                | 209-80130    | 1                             |
| Thermostat                                                                 |                                                                                | 600-72450    | 1                             |
| Thermostat Gasket                                                          |                                                                                | 600-80490    | 1                             |
| Fuel Filter                                                                |                                                                                | 211-60210    | 1                             |
| Air Filter Element –End 2010 (3 CLAMP TYPE)                                |                                                                                | 211-61831    | 1                             |
| Air Filter Element –From 2011 (WITH CENTRAL WING NUT)                      |                                                                                | 211-08133    |                               |
| Lubricating Oil Filter                                                     |                                                                                | 211-70510/02 | 1                             |
| Sump Pump                                                                  |                                                                                | 210-80061    | 1                             |
| Sump Pump Clamp                                                            |                                                                                | 212-00793    | 2                             |
| Dip Stick Extended - guide and stick kit                                   |                                                                                | 600-96320    | 1                             |
| Sea Water Pump –Johnson from Sept 2009                                     |                                                                                | 207-07415    | 1                             |
| Sea Water Pump –Jabsco to Sept 2009                                        |                                                                                | 207-80780    |                               |
| Sea Water Pump Impeller Kit–Johnson from Sept 2009                         |                                                                                | 207-07559    | 1                             |
| Sea Water Pump Impeller Kit–Jabsco to Sept 2009                            |                                                                                | 207-80800    |                               |
| Sea Water Pump Service Kit (inc gasket and screws) –Johnson from Sept 2009 |                                                                                | 207-07560    | 1                             |
| Sea Water Pump Service Kit (inc gasket and screws) –Jabsco to Sept 2009    |                                                                                | 207-80810    |                               |
| Fuel Lift Pump                                                             | Beta43 / Beta60 & Beta50 from July2008                                         | 600-80870    | 1                             |
|                                                                            | Beta50 (to July2008)                                                           | 600-00633    | 1                             |
| Fuel Lift Pump Gasket                                                      |                                                                                | 600-00538    | 1                             |
| Belt                                                                       | Std "V" – 65A, Beta43 to Sept08, Beta50 to July07                              | 214-96830    | Correctly<br>Select a<br>Belt |
|                                                                            | Std "V" – 65A, Beta43 from Sept08-April11, Beta50 from July07-April11 & Beta60 | 214-99223    |                               |
|                                                                            | Std "V" – 65A, Beta43,Beta50 & Beta60 –from April2011                          | 214-80750    |                               |
|                                                                            | 6K -100A, Beta43 to Sept08, Beta50 to July07                                   | 214-00497    |                               |
|                                                                            | 6K- 100A, Beta43 from Sept08-Oct09, Beta50 from July07 & Beta60 –Oct09         | 214-92105    |                               |
|                                                                            | 6K- 100A, Beta43, Beta50 & Beta60 –From Oct 2009                               | 214-07037    |                               |
| Alternator                                                                 | 65 Amp External Fan                                                            | 200-01155    | 1                             |
|                                                                            | 100 Amp Internal Fan                                                           | 200-03008    | 1                             |
| Control Panel standard Key                                                 | To June 2008                                                                   | 600-00058    | a pair                        |
|                                                                            | From June 2008                                                                 | 600-00058/01 |                               |
| Control Panel Key Switch                                                   | To June 2008                                                                   | 600-00057    | N/A                           |
|                                                                            | From June 2008                                                                 | 600-00057/01 | 1                             |
| Control Panel Stop Button (and heat & start on ABVW)                       |                                                                                | 200-00072    | 1                             |

| Description                                                                 |                                                                                    | Part No      | Qty/Engine |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------|------------|
| Tachometer 0-3000rpm with digital hour counter                              |                                                                                    | 200-02373/03 | 1          |
| Water temperature switch Gauge (B & C panels)                               |                                                                                    | 200-96200    | 1          |
| Oil pressure switch Gauge (C panels only)                                   |                                                                                    | 200-96190    | 1          |
| Voltmeter (C panels only)                                                   |                                                                                    | 200-96210    | 1          |
| Green power on indicator lamp & retaining clip                              |                                                                                    | 200-04656    | 1          |
| Red warning indicator lamp & retaining clip                                 |                                                                                    | 200-04657    | 3 or 4     |
| Alarm board – all panels from June 2005                                     |                                                                                    | 200-04655    | 1          |
| Relay 12 Volt 40A (28Ra) fitted to rear of panels                           |                                                                                    | 200-87020    | 1          |
| Stop Solenoid                                                               | <i>Side mounted</i> , energise to stop –All to July 2007 & Beta43 to Sept2008      | 600-71670    | 1          |
|                                                                             | <i>Front mounted</i> , energise to run –Beta50 from July2007 –July2008 & Beta60    | 600-06964    |            |
|                                                                             | <i>Front mounted</i> , energise to stop –Beta43 from July08 & Beta50 from July2008 | 600-02244    |            |
| Fuse (Blade) 40 Amp                                                         |                                                                                    | 200-00959    | 1          |
| Standard Engine Harness                                                     |                                                                                    | 200-05267    | 1          |
| 65 Amp Alternator Sub Loom Iskra                                            |                                                                                    | 200-01196    | 1          |
| Control panel extension loom                                                | 1 Metre                                                                            | 200-04588/01 | 1          |
|                                                                             | 2 Metre                                                                            | 200-04588/02 |            |
|                                                                             | 3 Metre                                                                            | 200-04588/03 |            |
|                                                                             | 4 Metre                                                                            | 200-04588/04 |            |
| Water Temperature Switch (Panel A, ABV & ABVW)                              | To October 2008                                                                    | 200-01133    | 1          |
|                                                                             | From November 2008                                                                 | 600-62820    |            |
| Water Temp Sender (Panel C & B) 5/8UNF (Not Beta60 from Mar11)              |                                                                                    | 200-94360    |            |
| Water Temp Sender (Panel C & B) 1/8NPT –Beta60 from Mar11                   |                                                                                    | 200-08248    |            |
| Oil Pressure Switch (Panel A, ABV & ABVW)                                   |                                                                                    | 600-62670    | 1          |
| Oil Pressure Sender (Panel C)                                               |                                                                                    | 200-94350    |            |
| Exhaust Bend Gasket                                                         |                                                                                    | 212-09070    | 1          |
| Drive Plate                                                                 | 22-B-60 - TMC60                                                                    | 206-91950    | 1          |
|                                                                             | PRM150 – Hydraulic –to Dec2009                                                     | 206-03981    |            |
|                                                                             | PRM150 – Hydraulic –from Dec2009                                                   | 206-07584    |            |
|                                                                             | PRM260 - Hydraulic                                                                 | 206-02095    |            |
|                                                                             | ZF25 – Hydraulic – <b>CHECK WOC WITH BETA</b>                                      | 206-05185    |            |
| Flexible Mountings                                                          | (Metalastic type 45)                                                               | 213-85900/02 | 4          |
|                                                                             | (Metalastic type 55)                                                               | 213-96970/01 |            |
| Rocker Cover Gasket (from Jan 2006)                                         |                                                                                    | 600-06374    | 1          |
| Operators Maintenance Manual                                                |                                                                                    | 221-02889    | 1          |
| Workshop Manual– base engine only                                           |                                                                                    | 600-00758    | 1          |
| Spare Parts Manual – base engine only, Beta43, 50 & 60 (available as a pdf) |                                                                                    | 600-02441    | 1          |

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| 7  | Illustrated quick reference parts listing –starboard view              |
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## **Beta43, Beta50 & Beta60 ILLUSTRATED QUICK REFERENCE PARTS LIST 2011 –FRONT VIEW**



## **Beta43, Beta50 & Beta60 ILLUSTRATED QUICK REFERENCE PARTS LIST 2011 –PORT VIEW**

O Rings: 209-80110 (1 BOLT)  
O Rings: 212-07273 (3 BOLT)

Zinc: 209-61840

Exhaust Gasket: 212-09070

Fresh water pipe: 209-94520

Fuse: 200-00959

Engine harness: 200-05267

Calorifier:  
AK/HE/CAL/003 (FROM SEPT2010)

Starter:

BV1903: 600-00540

BV2003: 600-07408

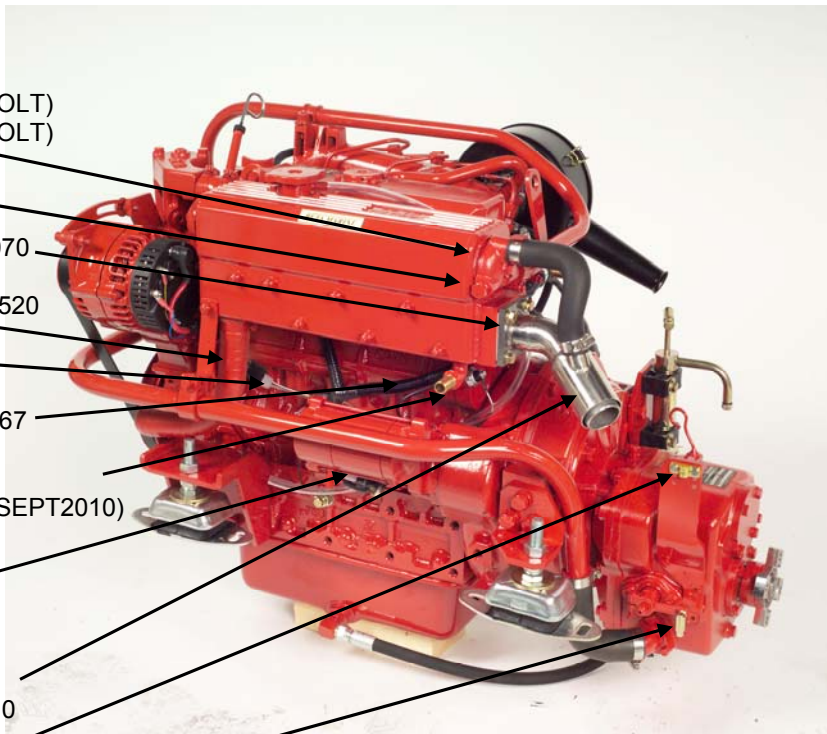
Beta50: 600-00540

Beta60: 600-07064

Exhaust elbow: 202-90610

Saddle: 212-99241/01

Ball joint: 212-99240/01

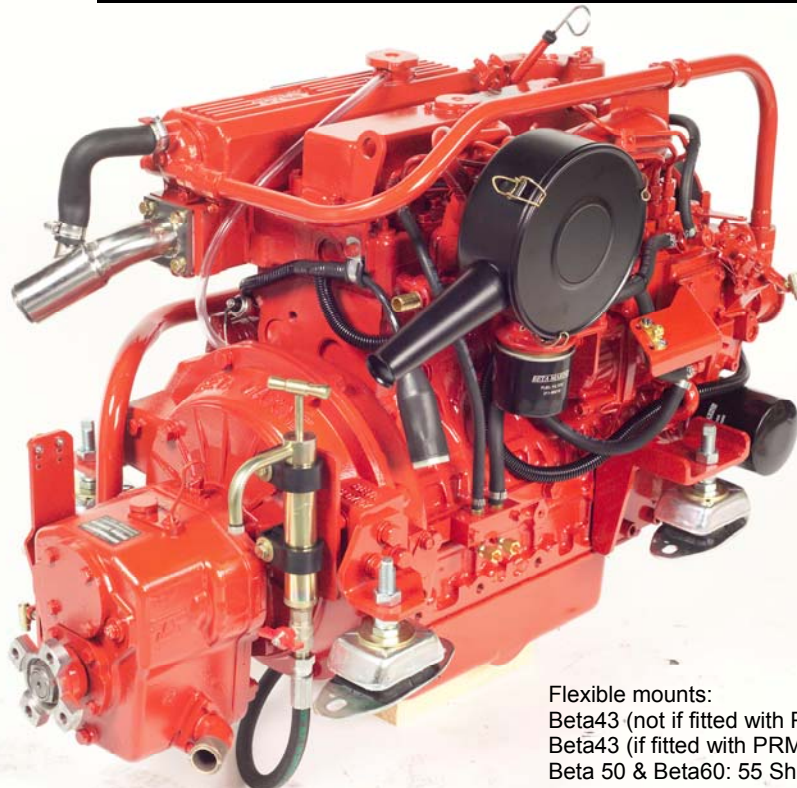




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## Beta43, Beta50 & Beta60 ILLUSTRATED QUICK REF. PARTS LIST 2011 –STARBOARD VIEW



Fuel filter: 211-60210

Sump drain pump: 210-80061  
(Clamp: 212-00793)

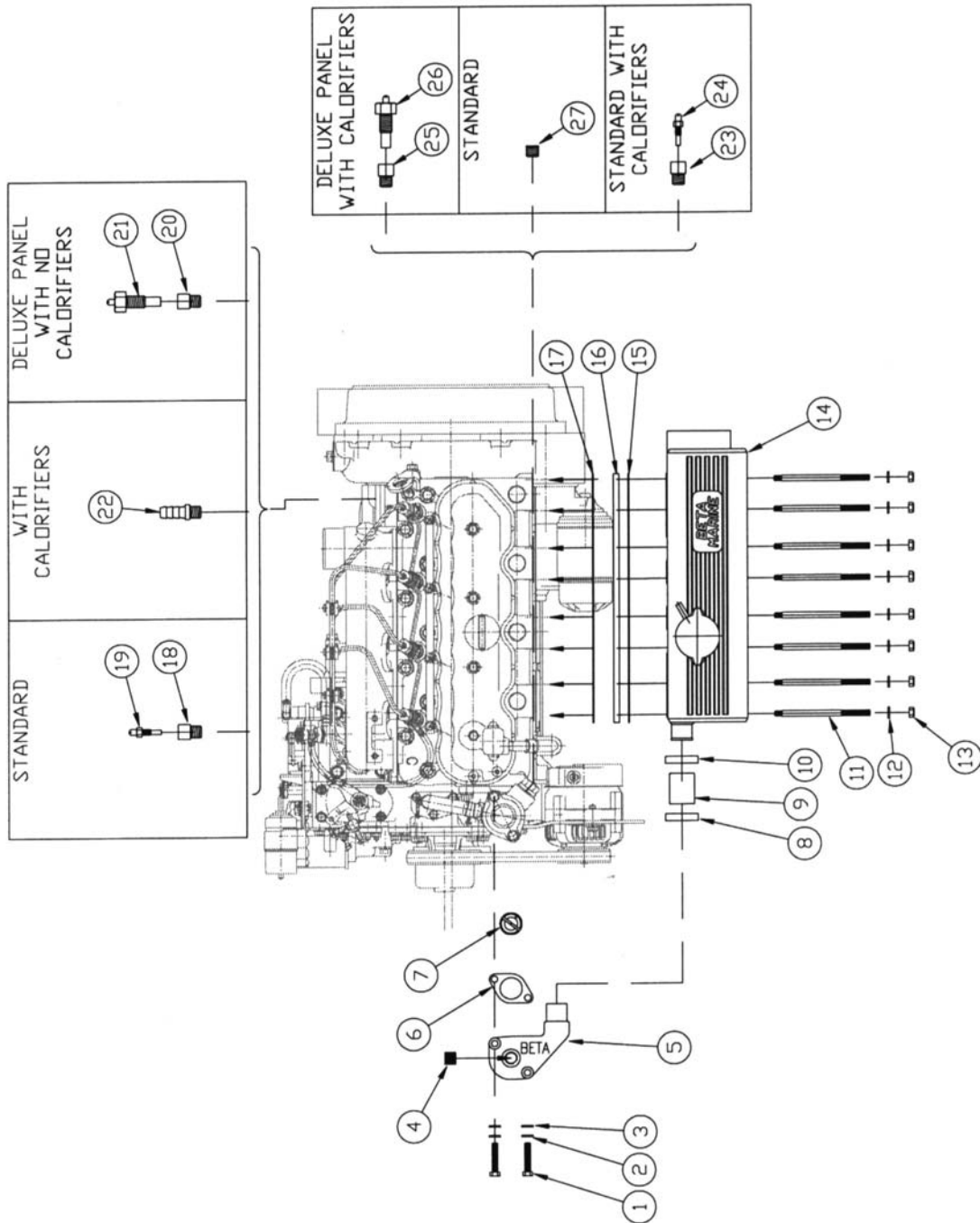
Flexible mounts:

Beta43 (not if fitted with PRM260) 45 Shore: 213-85900/02

Beta43 (if fitted with PRM260) 55 Shore: 213-96970/01

Beta 50 & Beta60: 55 Shore: 213-96970/01

| GEARBOX<br>OPTIONS | GEARBOX<br>P/No | DAMPER<br>P/No | MORSE GEAR<br>BRACKET P/No | ADAPTOR<br>PLATE P/No | FLEXIBLE<br>COUPLING |           |
|--------------------|-----------------|----------------|----------------------------|-----------------------|----------------------|-----------|
| TMC 60 R2          | 204-91680       | 206-91950      | 202-05129                  | 205-60990             | 212-01430            |           |
| TMC 60 R2.5        | 204-01627       |                |                            |                       |                      |           |
| TMC 260 R2         | 204-02134       | 206-02094/01   |                            |                       |                      |           |
| TMC 260 R2.5       | 204-03336       |                |                            |                       |                      |           |
| TMC 260 R3         | 204-05312       |                |                            |                       |                      |           |
| TM 345A R2         | 204-03053       | 206-03335      | 202-61582                  | N/A                   | 212-01248            |           |
| ZF 12M R2          | 204-85860       | 206-00895      |                            | 205-60990             | 212-01430            |           |
| ZF 15M R2          | 204-85870       | 206-91950      |                            |                       |                      |           |
| ZF 15MA R2         | 204-85875       |                |                            |                       |                      |           |
| ZF15 MIV 2.13:1    | 204-00767       | 206-00895      |                            |                       |                      | ASK       |
| ZF 25M R2          | 204-91660       | 206-01682      |                            |                       |                      | 205-85810 |
| ZF 25H R2          | 204-98890       | 206-05185      |                            | 202-05406             |                      |           |
| ZF 25H R2.8        | 204-01191       |                |                            |                       |                      |           |
| ZF 25HA R2         | 204-00743       |                |                            |                       |                      |           |
| ZF 25HA R2.29      | 204-02880       |                |                            |                       |                      |           |
| ZF 25HA R2.71      | 204-01148       |                |                            |                       |                      |           |
| PRM 150 D2         | 204-91920       | 206-07584      | 202-94100                  | 205-60990             |                      |           |
| PRM 150 D3         | 204-91700       |                |                            |                       |                      |           |
| PRM 260 D2         | 204-80530       | 206-02095      | 202-80560                  | 205-72820             | 212-01248            |           |
| PRM 260 D3         | 204-92230       |                |                            | 255-02598             | 212-02699            |           |
| PRM 500 D2.5       | 254-94834       | 206-04811      |                            |                       |                      |           |



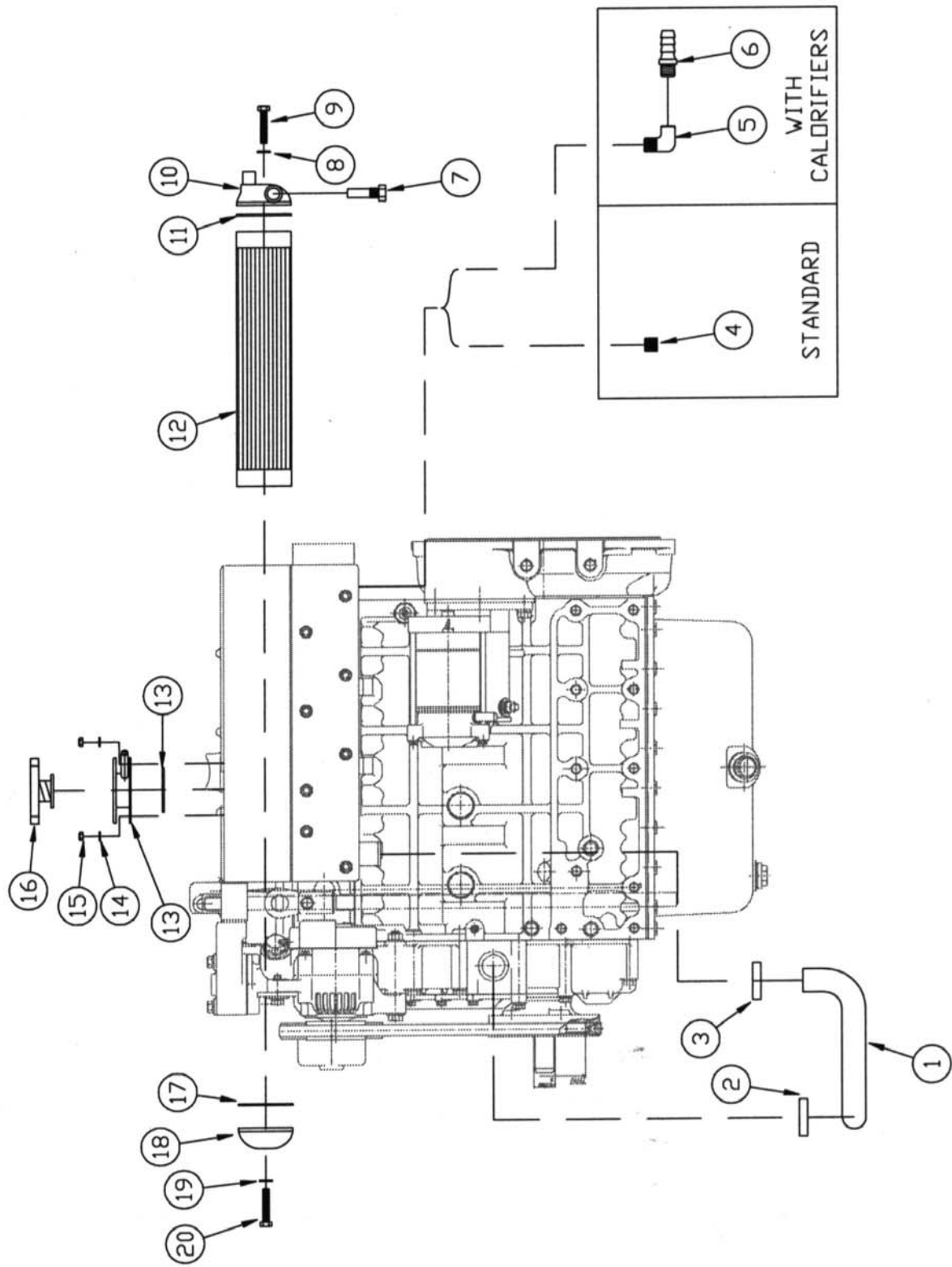


**DRAWING 100-05301****Beta43, Beta50 & Beta60 WATER SYSTEM****(PAGE 1 of 5)**

| Ref No | Part Number  | Part Name                                                                              | Quantity |
|--------|--------------|----------------------------------------------------------------------------------------|----------|
| 01     | 217-99304    | M8 x 60 mm SET                                                                         | 2        |
| 02     | 217-99292    | M8 SPRING WASHER                                                                       | 2        |
| 03     | 217-99293    | M8 FLAT WASHER                                                                         | 2        |
| 04     | 212-99403    | 3/8" BSP GALVANISED PLUG                                                               | 1        |
| 05     | 209-90290    | SUPER 3 SERIES THERMOSTAT HOUSING –MAR2011                                             | 1        |
|        | 209-07643    | SUPER 3 THERMOSTAT HOUSING –FROM MARCH 2011                                            |          |
| 06     | 600-80490    | SUPER 3 SERIES THERMOSTAT GASKET                                                       | 1        |
| 07     | 600-72450    | SUPER 3 SERIES THERMOSTAT                                                              | 1        |
| 08     | 212-00066    | S/S HOSE CLIP 30-40mm                                                                  | 1        |
| 09     | 218-99262    | 28mm I/D SILICON HOSE                                                                  | 0.7      |
| 10     | 212-00066    | S/S HOSE CLIP 30-40mm                                                                  | 1        |
| 11     | 201-71380/01 | SUPER 3 MANIFOLD STUD                                                                  | 8        |
| 12     | 217-99293    | M8 FLAT WASHER                                                                         | 8        |
| 13     | 217-99296    | M8 NYLOC                                                                               | 8        |
| 14     | 209-01925    | SUPER 3 SERIES 4 CYLINDER HEAT EXCHANGER (INCLUDES 15 & 16)                            | 1        |
|        | 209-08539    | SUPER 3 SERIES 4 CYLINDER HEAT EXCHANGER – FROM MAR2011 (LESS ZINC ANODE 209-61840)    |          |
| 15     | N/A          | HEAT EXCHANGER GASKET –TO MAR11 SEE 14                                                 | 0        |
|        | 212-08629    | HEAT EXCHANGER EXHAUST GASKET –FROM MAR11                                              | 4        |
| 16     | N/A          | HEAT EXCHANGER SPACER PLATE –TO MAR11 SEE 14                                           | 0        |
|        | 202-08618    | EXHAUST GASKET SPACER PLATE –FROM MAR2011                                              | 4        |
| 17     | 600-72880    | EXHAUST MANIFOLD GASKET                                                                | 4        |
| 18     | 212-01480    | WATER TEMPERATURE SWITCH ADAPTOR                                                       | 1        |
| 19     | 200-01133    | WATER TEMPERATURE SWITCH –TO OCT 2008                                                  | 1        |
|        | 600-62820    | WATER TEMPERATURE SWITCH –FROM NOV 2008                                                | 1        |
| 20     | 200-91980    | TEMPERATURE SENDER ADAPTOR                                                             | 1        |
| 21     | 200-94360    | WATER TEMPERATURE SENDER (DELUXE PANEL)                                                | 1        |
| 22     | 212-99233    | 3/8" BSP x 5/8 HOSE CONNECTOR                                                          | 1        |
| 23     | 212-04626    | ADAPTOR 1/2" BSPTM x 1/8" BSPF –Beta43 to Sept2008, Beta50 to July2007                 | 1        |
|        | 212-01480    | ADAPTOR 3/8 BSPTM x 1/8 BSPF GALV –Beta43 from Sept2008, Beta50 from July2007, Beta60  | 1        |
| 24     | 200-01133    | WATER TEMP SWITCH –TO Nov2008                                                          | 1        |
|        | 600-62820    | WATER TEMP SWITCH –FROM Nov2008                                                        | 1        |
| 25     | 201-03202    | ADAPTOR, 1/2" BSPM x 5/8" UNFF –Beta43 to Sept2008, Beta50 to July2007                 | 1        |
|        | 200-91980    | ADAPTOR, 3/8 BSPTM x 1/8 BSPF GALV –Beta43 from Sept2008, Beta50 from July2007, Beta60 | 1        |
| 26     | 200-94360    | WATER TEMPERATURE SENDER (DELUXE PANEL)                                                | 1        |
| 27     | 212-05076    | M12 FINE PLUG, Beta50 from July2007 – July 2008, Beta60                                | 1        |
|        | 209-80050    | 3/8 BSP PLUG, Beta43 from Sept2008                                                     | 2        |
|        |              | 3/8 BSP PLUG, Beta50 from July2007 – July2008                                          | 1        |
|        |              | 3/8 BSP PLUG, Beta50 from July2008                                                     | 2        |
|        |              | 3/8 BSP PLUG, Beta60                                                                   | 2        |
|        | 600-02060    | 1/2" BSP PLUG, Beta43 to Sept2008, Beta50 to July2007                                  | 1        |

**For latest calorifier fitting –see page 56 (all engines from September 2010)**

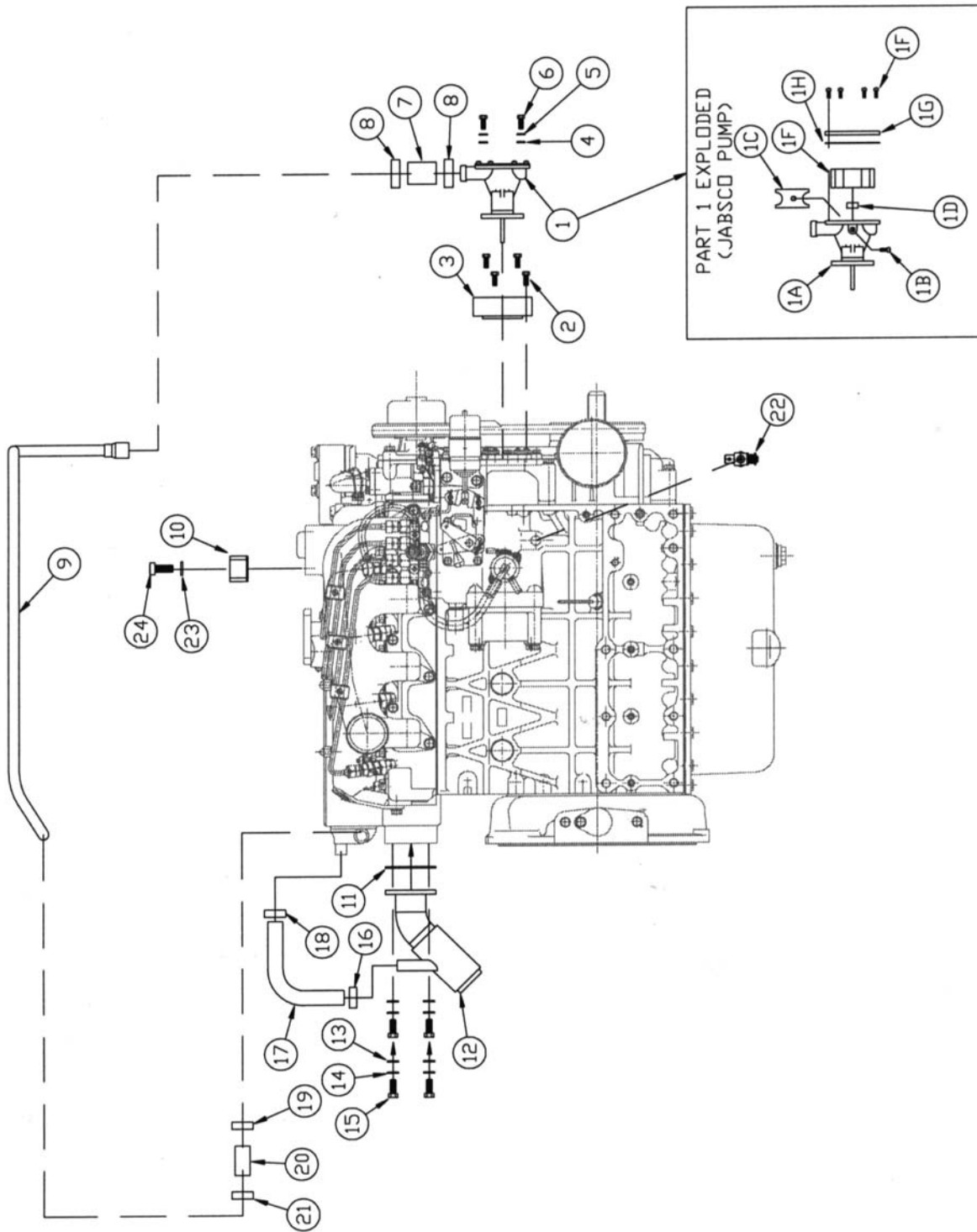
**DRAWING 100-05301 (PAGE 2 of 5)**



**DRAWING 100-05301****Beta43, Beta50 & Beta60 WATER SYSTEM****(PAGE 2 of 5)**

| Ref No | Part Number  | Part Name                                                                           | Quantity |
|--------|--------------|-------------------------------------------------------------------------------------|----------|
| 01     | 209-94520    | SUPER 3 SERIES SILICON FRESH WATER PIPE                                             | 1        |
| 02     | 212-00066    | STAINLESS STEEL HOSE CLIP 30-40mm                                                   | 1        |
| 03     | 212-00066    | STAINLESS STEEL HOSE CLIP 30-40mm                                                   | 1        |
| 04     | 212-99403    | 3/8" BSP GALVANISED PLUG                                                            | 1        |
| 05     | 212-99237    | 3/8" BSPTM x 3/8" BSPF 90° ELBOW                                                    | 1        |
| 06     | 212-99233    | 3/8" BSP x 5/8 HOSE CONNECTOR                                                       | 1        |
| 07     | 209-61840    | ZINC ANODE                                                                          | 1        |
| 08     | 209-00017    | M8 BONDED SEAL (SINGLE BOLT TUBESTACK ONLY)                                         | 1        |
| 09     | 209-00016    | M8 PHOSPHUR BRONZE BOLT                                                             | 1        |
|        | 217-00190Z   | M8 x 1 x 45mm SOCKET CAP HEAD                                                       | 3        |
| 10     | 209-80440    | 22mm GUNMETAL HEADER                                                                | 1        |
|        | 208-07271    | 22mm GUNMETAL HEADER –SUITS ANODE                                                   |          |
| 11     | 209-80110    | NITRILE 'O' RING –TUBESTACK (SINGLE BOLT TYPE)                                      | 1        |
|        | 212-07273    | NITRILE 'O' RING –TUBESTACK (3 BOLT TYPE)                                           |          |
| 12     | 209-85840    | SUPER 3 SERIES 4 CYLINDER H/E TUBESTACK –TO MARCH 2011 (SINGLE BOLT)                | 1        |
|        | 209-04662    | SUPER 3 SERIES 4 CYL H/E SPECIAL HOT CLIMATE TUBESTACK –TO MARCH 2011 (SINGLE BOLT) |          |
|        | 209-08543    | SUPER 3 SERIES 4 CYLINDER H/E TUBESTACK –FROM MARCH 2011 (3 BOLT TYPE)              |          |
| 13     | 209-02167    | FILLER NECK ASSEMBLY & 'O' RING                                                     | 1        |
| 14     | 217-99275    | M6 SPRING WASHER                                                                    | 2        |
| 15     | 217-00052    | M6 NUT                                                                              | 2        |
|        | 217-06947    | M6 x 20mm SOCKET BUTTON SCREW (EARLY MODELS)                                        |          |
| 16     | 209-80130    | 95kPa PRESSURE CAP (NOT USA)                                                        | 1        |
|        | 209-02323    | 13PSI PRESSURE CAP (USA ONLY) & ALL 3 BOLT TYPE                                     |          |
| 17     | 209-80110    | NITRILE 'O' RING –TUBESTACK (SINGLE BOLT TYPE)                                      | 1        |
|        | 212-07273    | NITRILE 'O' RING –TUBESTACK (3 BOLT TYPE)                                           |          |
| 18     | 209-80100/01 | HEAT EXCHANGE RETURN ENDCAP (1 BOLT TYPE)                                           | 1        |
|        | 208-07272    | HEAT EXCHANGE RETURN ENDCAP (3 BOLT TYPE)                                           |          |
| 19     | 209-00017    | M8 BONDED SEAL (SINGLE BOLT TUBESTACK ONLY)                                         | 1        |
| 20     | 209-00016    | M8 PHOSPHUR BRONZE BOLT                                                             | 1        |
|        | 217-00190Z   | M8 x 1 x 45mm SOCKET CAP HEAD                                                       | 3        |

**DRAWING 100-05301 (PAGE 3 of 5)**

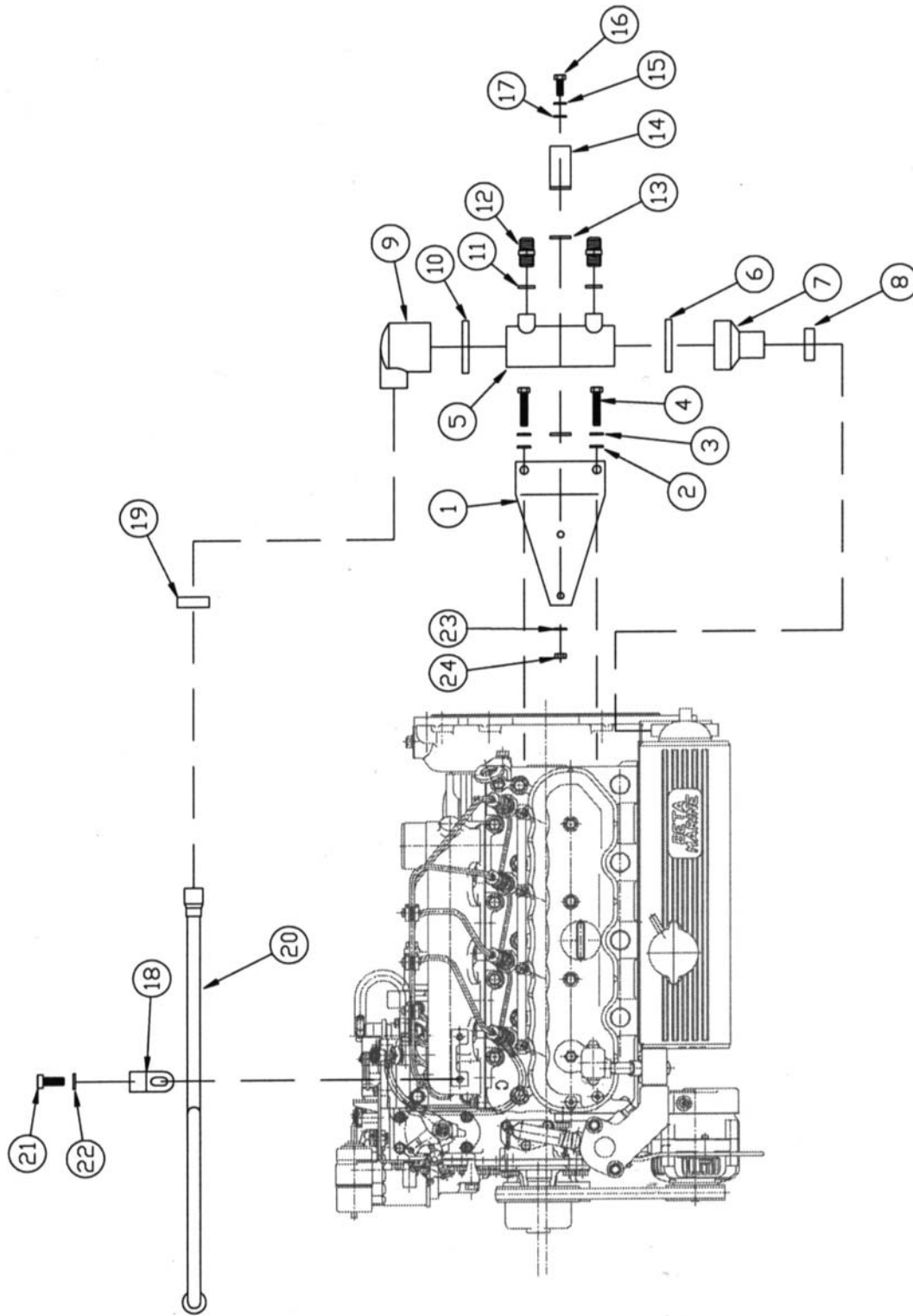


**DRAWING 100-05301****Beta43, Beta50 & Beta60 WATER SYSTEM****(PAGE 3 of 5)**

| Ref No | Part Number  | Part Name                                                                           | Quantity |
|--------|--------------|-------------------------------------------------------------------------------------|----------|
| 01     | 207-80780    | SUPER 3 JABSCO SEA WATER PUMP –TO SEPT 2009                                         | 1        |
|        | 207-07415    | S3 JOHNSON SEA WATER PUMP –FROM SEPT 2009                                           |          |
| 02     | 217-99289    | M6 x 20mm SOCKET CAP SCREW                                                          | 4        |
| 03     | 201-63120    | SUPER 3 SEA WATER PUMP ADAPTOR RING                                                 | 1        |
|        | 600-00866    | GASKET FOR 201-63120                                                                | 1        |
| 04     | 217-99281    | M6 x 20mm SET                                                                       | 4        |
| 05     | 217-99275    | M6 SPRING WASHER                                                                    | 4        |
| 06     | 217-99276    | M6 FLAT WASHER                                                                      | 4        |
| 07     | 218-99251    | 1 1/8" I/D BLACK RADIATOR HOSE                                                      | 0.06m    |
| 08     | 212-00066    | STAINLESS STEEL HOSE CLIP 30-40mm                                                   | 2        |
| 09     | 209-03203    | SUPER 3, 4 CYLINDER RAW WATER COOLING PIPE (MECHANICAL GEARBOX ONLY, NO OIL COOLER) | 1        |
| 10     | 212-02808    | PIPE FITTING CLIP (N°4)                                                             | 1        |
| 11     | 600-62620    | GASKET, 2" EXHAUST                                                                  | 1        |
| 12     | 202-90610    | 2"x22mm WATER INJECTION BEND                                                        | 1        |
|        | 202-92400/22 | 5" HIGH RISE 2"x22mm WATER INJECTION BEND                                           | 1        |
| 13     | 217-99293    | M8 FLAT WASHER                                                                      | 4        |
| 14     | 217-99292    | M8 SPRING WASHER                                                                    | 4        |
| 15     | 217-99299    | M8 x 25mm SET                                                                       | 4        |
| 16     | 212-98464    | STAINLESS STEEL HOSE CLIP 22-30mm                                                   | 1        |
| 17     | 209-91760    | 22mm DIAMETER 90 ELBOW                                                              | 1        |
| 18     | 212-98464    | STAINLESS STEEL HOSE CLIP 22-30mm                                                   | 1        |
| 19     | 212-98466    | STAINLESS STEEL HOSE CLIP 25-35mm                                                   | 1        |
| 20     | 218-99249    | 7/8" I/D BLACK RADIATOR HOSE                                                        | 0.06m    |
| 21     | 212-98464    | STAINLESS STEEL HOSE CLIP 22-30mm                                                   | 1        |
| 22     | 600-00621    | SUPER 3 SERIES WATER DRAIN TAP                                                      | 1        |
| 23     | 217-99321    | M10 FLAT WASHER                                                                     | 1        |
| 24     | 217-99335    | M10 x 25mm FINE SOCKET CAP SCREW                                                    | 1        |

| Ref No | Part Number     | Part Name                                   | Quantity |
|--------|-----------------|---------------------------------------------|----------|
| 1A     | 207-80780       | SUPER 3 SERIES SEA WATER PUMP –TO SEPT 2009 | 1        |
| 1B     | 207-01323       | SCREW, SUPER 3 SERIES JABSCO PUMP CAM       | 1        |
| 1C     | 207-01250       | CAM, SUPER 3 SERIES JABSCO PUMP             | 1        |
| 1D     | 207-80810       | SERVICE KIT, INCLUDES 1E, 1F, 1H            | 1        |
| 1E     | 207-80800       | IMPELLER, SUPER 3 SERIES JABSCO PUMP        | 1        |
| 1F     | 207-00062       | SCREW, JABSCO PUMP ENDCOVER PLATE           | 6        |
| 1G     | 207-00138       | PLATE, JABSCO PUMP BRASS ENDCOVER           | 1        |
| 1H     | 207-62600       | GASKET, JABSCO PUMP ENDCOVER PLATE          | 1        |
| NA     | 207-06377       | OIL SEAL, JABSCO PUMP                       | 1        |
| NA     | 207-80780/SHAFT | SHAFT TO SUIT S3 JABSCO PUMP                | 1        |

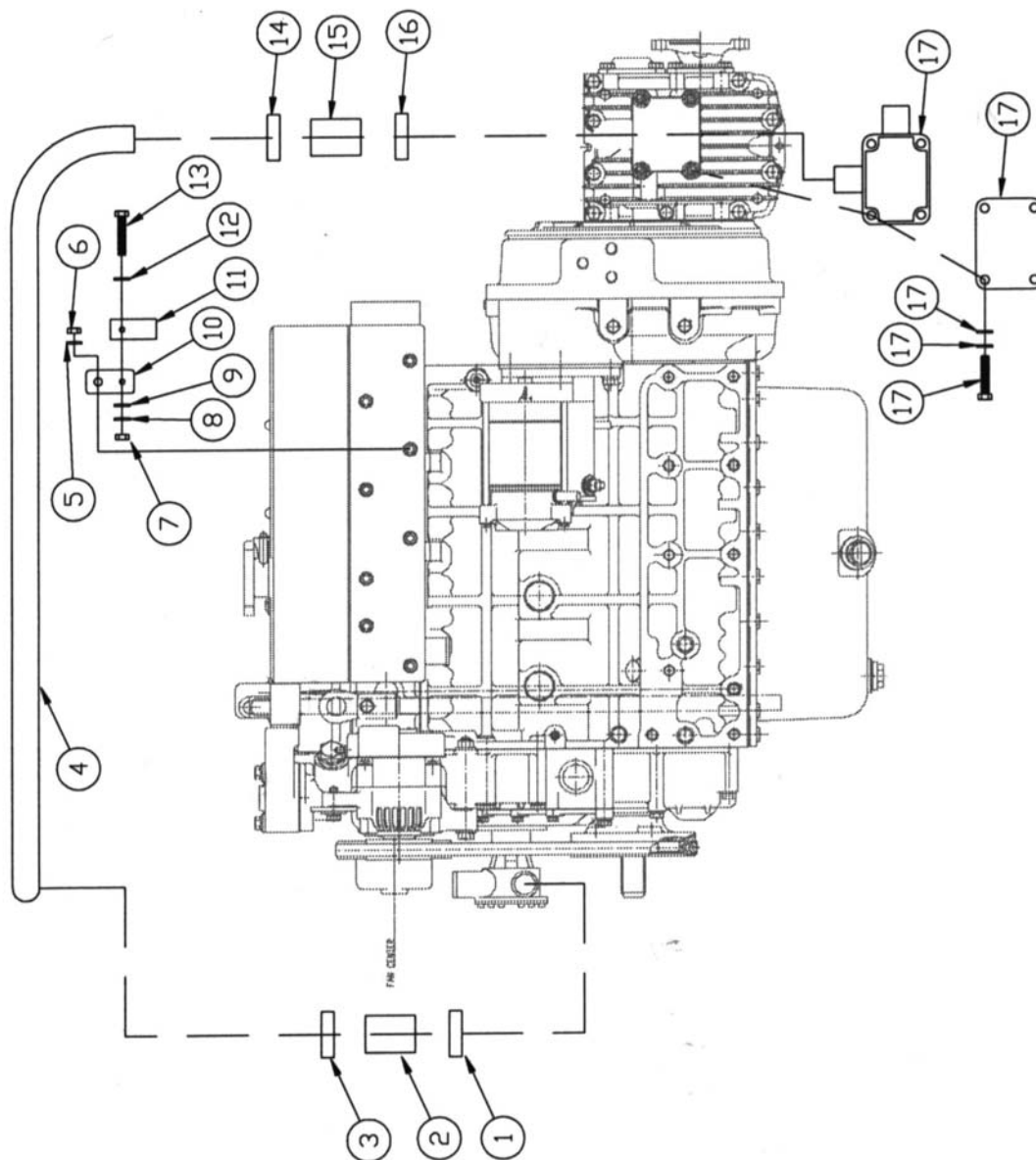
| Ref No | Part Number | Part Name                                 | Quantity |
|--------|-------------|-------------------------------------------|----------|
| NA     | 207-07415   | S3 JOHNSON SEA WATER PUMP –FROM SEPT 2009 | 1        |
| NA     | 207-07559   | JOHNSON SEA WATER PUMP IMPELLER KIT       | 1        |
| NA     | 207-07560   | JOHNSON SEA WATER PUMP SERVICE KIT        | 1        |



**DRAWING 100-05301****Beta43, Beta50 & Beta60 WATER SYSTEM FOR HYDRAULIC GEARBOXES****(PAGE 4 of 5)**

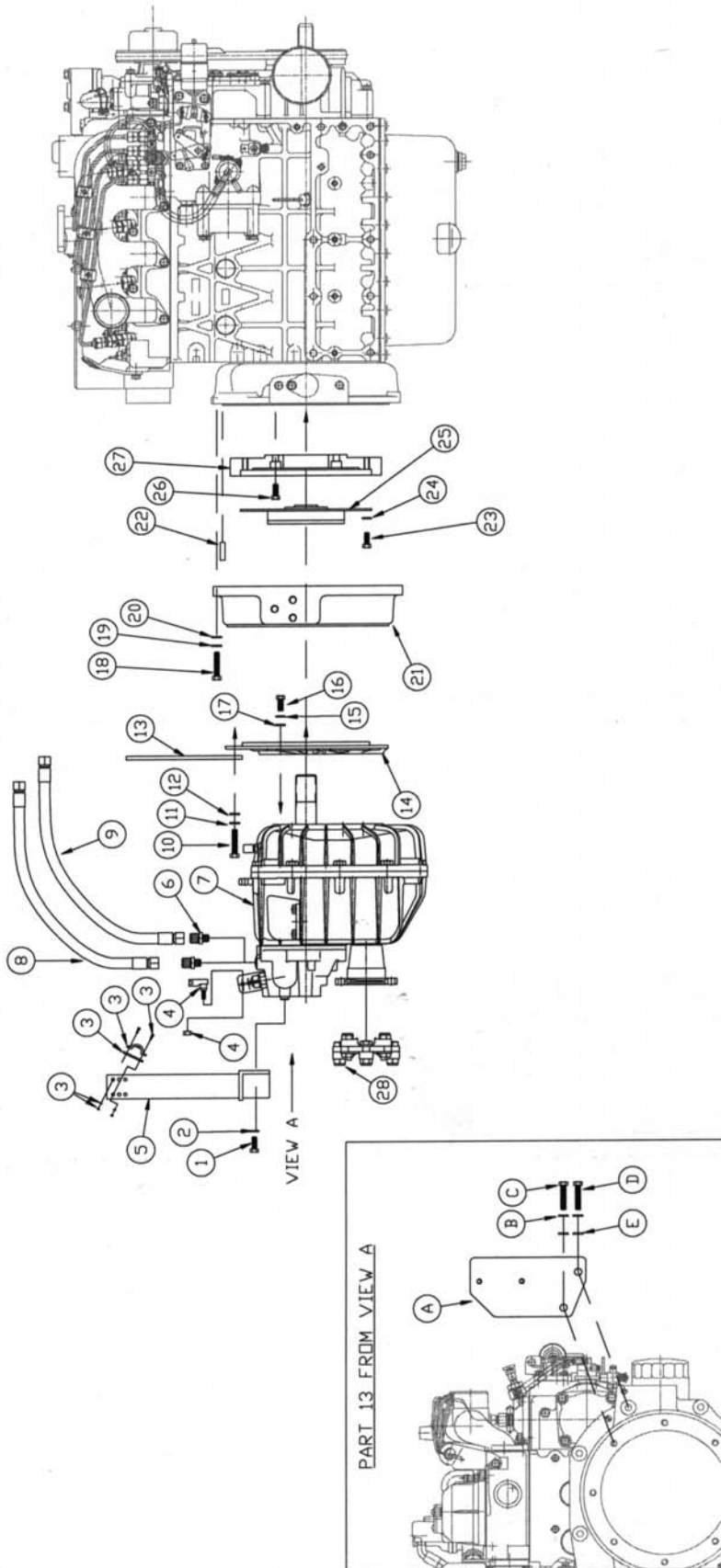
| Ref No | Part Number | Part Name                                                                          | Quantity |
|--------|-------------|------------------------------------------------------------------------------------|----------|
| 01     | 202-02860   | SUPER 3 SERIES H/E DC60 OIL COOLER BRACKET                                         | 1        |
| 02     | 217-99341   | M12 FLAT WASHER                                                                    | 2        |
| 03     | 217-99342   | M12 SPRING WASHER                                                                  | 2        |
| 04     | 217-99351   | M12 x 30 x 1.25mm SET                                                              | 2        |
| 05     | 210-91630   | OIL COOLER DC60-YDA (INC 06, 07, 09, 10)                                           | 1        |
| 06     | 212-00117   | STAINLESS STEEL HOSE CLIP 45-60mm                                                  | 1        |
| 07     | 210-00171   | ENDCAP 22mm STRAIGHT OUTLET                                                        | 1        |
| 08     | 212-98464   | STAINLESS STEEL HOSE CLIP 22-30mm                                                  | 1        |
| 09     | 210-00172   | ENDCAP 22mm 90° INLET                                                              | 1        |
| 10     | 212-00117   | STAINLESS STEEL HOSE CLIP 45-60mm                                                  | 1        |
| 11     | 212-99379   | 1/2"BSP COPPER WASHER                                                              | 2        |
| 12     | 212-99383   | ½"BSP x 3/8"BSP M-M ADAPTOR                                                        | 2        |
| 13     | 212-01544   | RUBBER STRIP 3mm T x 25mm W x 80mm L                                               | 2        |
| 14     | 210-92260   | OIL COOLER CLAMP (TO AUGUST 2007                                                   | 1        |
|        | 212-06547   | OIL COOLER CLAMP (FROM AUGUST 2007)                                                | 2        |
| 15     | 217-99292   | M8 SPRING WASHER                                                                   | 2        |
| 16     | 217-99301   | M8 x 35mm SET                                                                      | 2        |
| 17     | 217-99293   | M8 FLAT WASHER                                                                     | 2        |
| 18     | 212-02808   | PIPE FITTING CLIP (N°4)                                                            | 1        |
| 19     | 212-98464   | STAINLESS STEEL HOSE CLIP 22-30mm                                                  | 1        |
| 20     | 209-03204   | SUPER 3, 4 CYLINDER RAW WATER COOLING PIPE<br>-DC60 OIL COOLER (HYDRAULIC GEARBOX) | 1        |
| 21     | 217-99335   | M10 x 25mm FINE SOCKET CAP SCREW                                                   | 1        |
| 22     | 217-99321   | M10 FLAT WASHER                                                                    | 1        |
| 23     | 217-99293   | M8 FLAT WASHER                                                                     | 2        |
| 24     | 217-99296   | M8 NYLOC                                                                           | 2        |





**DRAWING 100-05301****Beta50 WATER SYSTEM FOR HBW150 WATER COOLED GEARBOX****(PAGE 5 of 5)**

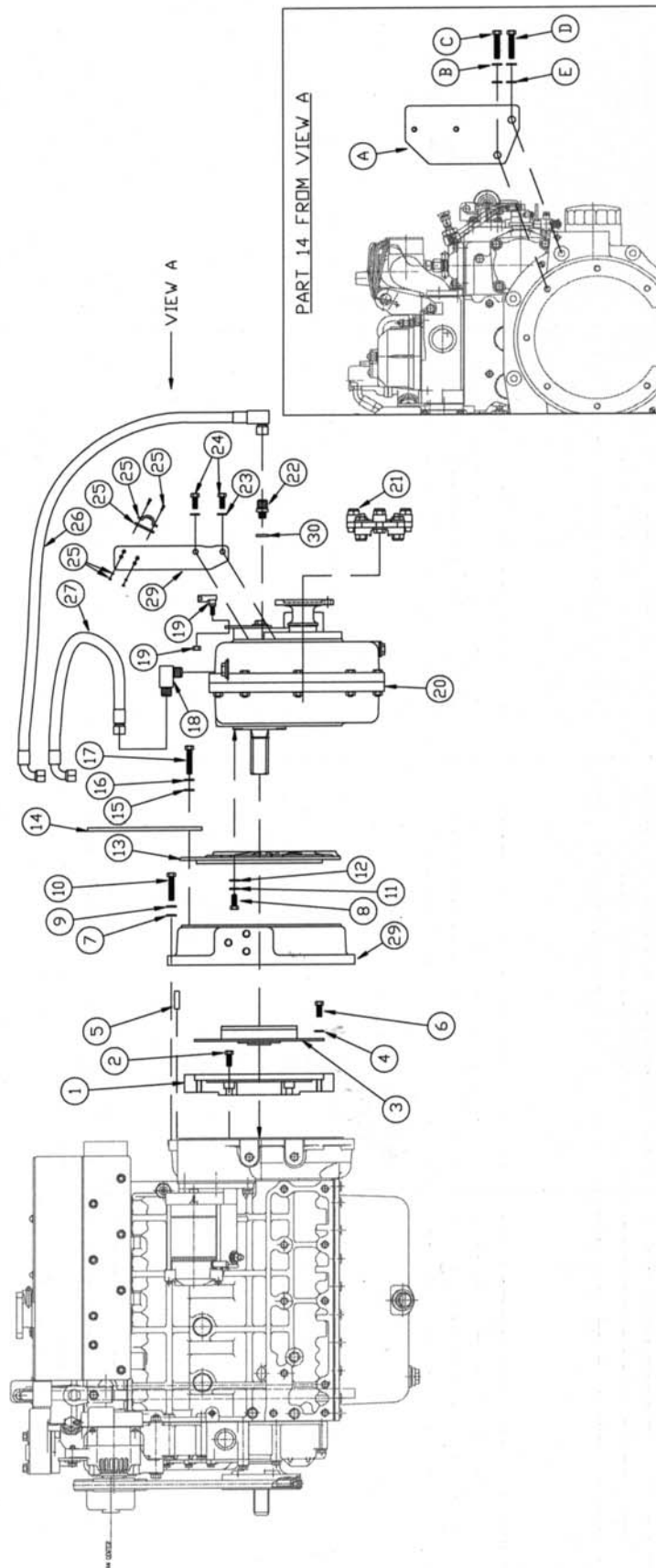
| Ref No | Part Number | Part Name                                                              | Quantity |
|--------|-------------|------------------------------------------------------------------------|----------|
| 01     | 212-00066   | STAINLESS STEEL HOSE CLIP 30-40mm                                      | 2        |
| 02     | 218-99251   | 1 1/8" I/D BLACK RADIATOR HOSE                                         | 0.06m    |
| 03     | 212-00066   | STAINLESS STEEL HOSE CLIP 30-40mm                                      | 2        |
| 04     | 209-03177   | Beta50 RAW WATER COOLING PIPE –HBW 150 OIL COOLER (MECHANICAL GEARBOX) | 1        |
| 05     | 217-99293   | M8 FLAT WASHER                                                         | 2        |
| 06     | 217-99296   | M8 NYLOC                                                               | 2        |
| 07     | 217-99295   | M8 FULL NUT                                                            | 2        |
| 08     | 217-99292   | M8 SPRING WASHER                                                       | 2        |
| 09     | 217-99293   | M8 FLAT WASHER                                                         | 2        |
| 10     | 202-03215   | RAW WATER PIPE BRACKET, Beta50 –HBW150                                 | 2        |
| 11     | 212-02808   | PIPE CLAMP                                                             | 2        |
| 12     | 217-99293   | M8 FLAT WASHER                                                         | 2        |
| 13     | 217-99299   | M8 x 25mm SET                                                          | 2        |
| 14     | 212-00066   | STAINLESS STEEL HOSE CLIP 30-40mm                                      | 1        |
| 15     | 209-91770   | 28mm I/D ELBOW, BLACK RADIATOR HOSE                                    | 1        |
| 16     | 212-00066   | STAINLESS STEEL HOSE CLIP 30-40mm                                      | 1        |
| 17     | 210-00089   | OIL COOLER –HBW150 GEARBOX                                             | 1        |



**DRAWING 100-05302****Beta43, Beta50 & Beta60 HURTH HSW250 / ZF25H GEARBOX ASSEMBLY****(PAGE 1 of 5)**

| Ref No | Part Number  | Part Name                                          | Quantity |
|--------|--------------|----------------------------------------------------|----------|
| 01     | 217-99360    | 3/8UNC x 1" SET                                    | 2        |
| 02     | 217-99359    | 3/8UNC SPRING WASHER                               | 2        |
| 03     | 212-99241/01 | GEARBOX MORSE CABLE CLAMP                          | 1        |
| 04     | 212-99240/01 | GEARBOX MORSE CABLE BALL JOINT                     | 1        |
| 05     | 202-05406    | HSW250 / ZF25H MORSE GEAR BRACKET                  | 1        |
| 06     | 212-01018    | 3/8"BSPT x 3/8"BSP M-M ADAPTOR                     | 2        |
| 07     | 204-98890    | HURTH HSW250 R1.97 / ZF25H R1.97                   | 1        |
|        | 204-01191    | HURTH HSW250 R2.8 / ZF25H R2.8                     |          |
|        | 204-00743    | HURTH HSW250 'A' R1.93 / ZF25H 'A' R1.93           |          |
|        | 204-01148    | HURTH HSW250 'A' R2.71 / ZF25H 'A' R2.71           |          |
| 08     | 210-94220    | HYDRAULIC OIL PIPE 3/8"BSP 450mm 90°-ST            | 1        |
| 09     | 210-94220    | HYDRAULIC OIL PIPE 3/8"BSP 450mm 90°-ST            | 1        |
| 10     | 217-99326    | M10 x 30mm SET (TOP)                               | 3        |
|        | 217-99325    | M10 x 25mm SET (BOTTOM)                            | 4        |
| 11     | 217-99320    | M10 SPRING WASHER                                  | 7        |
| 12     | 217-99321    | M10 FLAT WASHER                                    | 7        |
| 13     | 202-97590    | SUPER 3 –HSW250 SUMP DRAIN PUMP BRACKET            | 1        |
| 14     | 205-85810    | HURTH HSW250 / ZF25H - B/W ADAPTOR                 | 1        |
| 15     | 217-99320    | M10 SPRING WASHER (NOT ON BOTTOM BOLTS)            | 4        |
| 16     | 217-99325    | M10 x 25mm SET                                     | 6        |
| 17     | 217-99321    | M10 FLAT WASHER                                    | 6        |
| 18     | 217-99330    | M10 x 40 x 1.25mm SET                              | 6        |
| 19     | 217-99320    | M10 SPRING WASHER                                  | 6        |
| 20     | 217-99321    | M10 FLAT WASHER                                    | 6        |
| 21     | 208-62300    | Beta43 / Beta50 FLYWHEEL HOUSING                   | 1        |
|        | 208-62300    | Beta60 FLYWHEEL HOUSING                            |          |
| 22     | 217-99339    | DOWEL 10mm DIAMETER x 20mm OAL                     | 2        |
| 23     | 217-99311    | M8 x 25mm SOCKET CAP SCREW                         | 6        |
| 24     | 217-99293    | M8 FLAT WASHER                                     | 6        |
| 25     | 206-97790    | DS22 DAMPER, SAE 6.5 -TO JULY 2006                 | 1        |
|        | 206-05185    | VULCAN DAMPER, MACHINED TO SAE 6.5 -FROM JULY 2006 |          |
| 26     | 217-99349    | M12 x 20mm SOCKET CAP SCREW                        | 6        |
| 27     | 201-01630    | Beta43/50– DS22 INERTIA RING SAE6.5 (TO JULY 2006) | 1        |
|        | 201-90330    | Beta43/50 STD INERTIA RING SAE6.5 (FROM JULY 2006) |          |
|        | 201-07145    | Beta60 INERTIA RING                                |          |
| 28     | 212-01430    | FLEXIBLE COUPLING                                  | 1        |

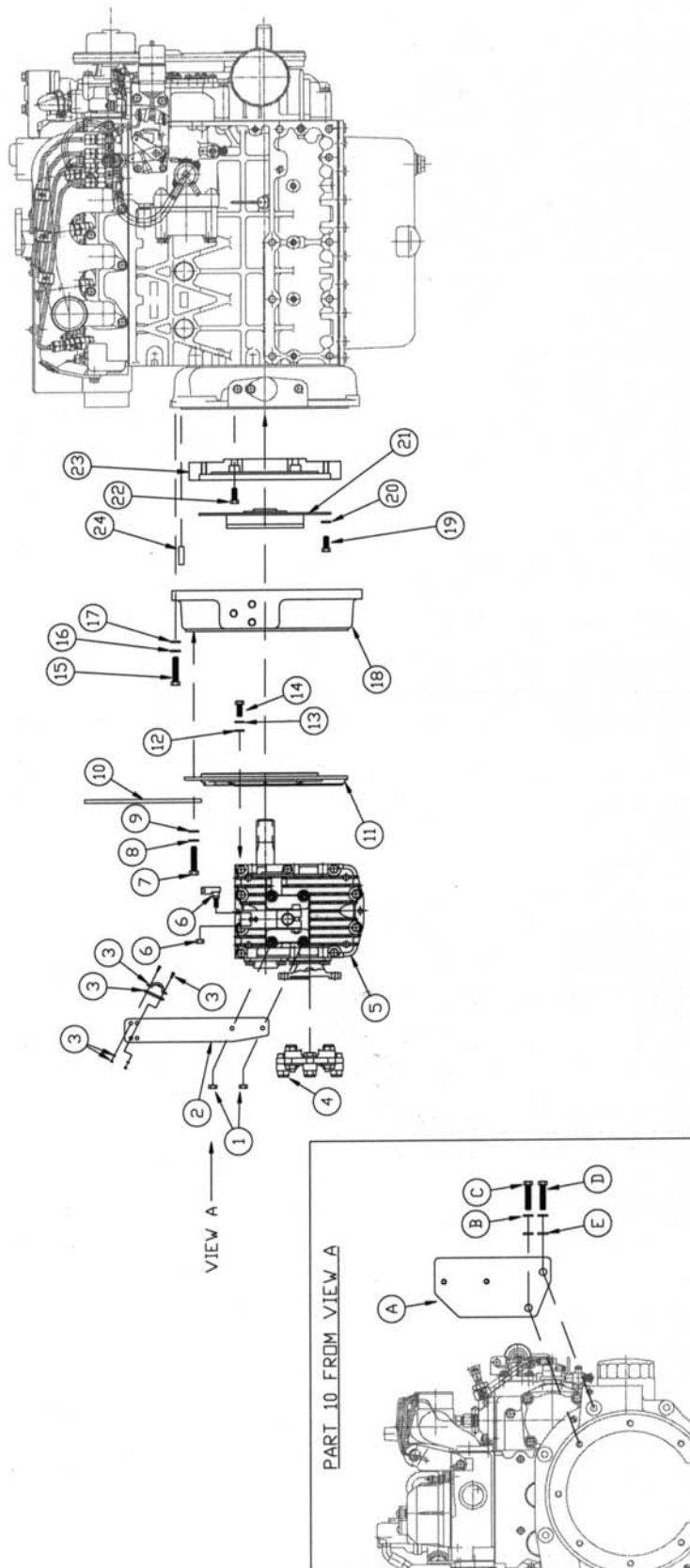
| Ref No | Part Number | Part Name              | Quantity |
|--------|-------------|------------------------|----------|
| A      | N/A         | SEE 13 ABOVE           | 1        |
| B      | 217-99320   | M10 SPRING WASHER      | 2        |
| C      | N/A         | SEE 10 ABOVE           | 1        |
| D      | 217-02760   | M10 x 100 x 1.25mm SET | 1        |
| E      | 217-99321   | M10 FLAT WASHER        | 8        |



**DRAWING 100-05302****Beta43 / Beta50 NEWAGE PRM 150 GEARBOX ASSEMBLY****(PAGE 2 of 5)**

| Ref No | Part Number  | Part Name                                  | Quantity |
|--------|--------------|--------------------------------------------|----------|
| 01     | 201-90330    | SUPER 3 – DS15 INERTIA RING SAE 6.5        | 1        |
| 02     | 217-01237    | M12 x 30mm SOCKET CAP SCREW                | 6        |
| 03     | 206-02094    | PRM150 DS15 DRIVEPLATE SAE6.5 –TO FEB 2004 | 1        |
|        | 206-03981    | PRM150 DS15 DRIVEPLATE FROM FEB 2004-DEC09 |          |
|        | 206-07584    | PRM150 43-AG-60 DAMPER FROM DEC2009        |          |
| 04     | 217-99293    | M8 FLAT WASHER                             | 6        |
| 05     | 217-99339    | DOWEL 10mm DIAMETER x 20mm OAL             | 2        |
| 06     | 217-99299    | M8 x 25mm SET –TO DEC 2009                 | 6        |
|        | 217-99298    | M8 x 20mm SET –FROM DEC 2009               |          |
| 07     | 217-99321    | M10 FLAT WASHER                            | 6        |
| 08     | 217-99311    | M8 x 25mm SOCKET CAP SCREW                 | 6        |
| 09     | 217-99320    | M10 SPRING WASHER                          | 6        |
| 10     | 217-99330    | M10 x 40 x 1.25mm SET                      | 6        |
| 11     | 217-99292    | M8 SPRING WASHER                           | 6        |
| 12     | 217-99293    | M8 FLAT WASHER                             | 6        |
| 13     | 205-92480    | PRM80 / PRM120 –BORG WARNER ADAPTOR        | 1        |
| 14     | 202-97590    | SUPER 3 –PRM150 SUMP DRAIN PUMP BRACKET    | 1        |
| 15     | 217-99321    | M10 FLAT WASHER                            | 7        |
| 16     | 217-99320    | M10 SPRING WASHER                          | 7        |
| 17     | 217-99326    | M10 x 30mm SET (TOP)                       | 3        |
|        | 217-99325    | M10 x 25mm SET (BOTTOM)                    | 4        |
| 18     | 210-91940    | 1/4”BSPT x 3/8”BSP M-M 90° ADAPTOR         | 1        |
| 19     | 212-99240/01 | GEARBOX MORSE CABLE BALL JOINT             | 1        |
| 20     | 204-91920    | NEWAGE PRM 150D2 GEARBOX                   | 1        |
|        | 204-91700    | NEWAGE PRM 150D3 GEARBOX (NOT Beta50 / 60) |          |
| 21     | 212-01430    | FLEXIBLE COUPLING                          | 1        |
| 22     | 210-91940    | 1/4”BSPT x 3/8”BSP M-M 90° ADAPTOR         | 1        |
| 23     | 217-99292    | M8 SPRING WASHER                           | 2        |
| 24     | 217-99301    | M8 x 30mm SET                              | 2        |
| 25     | 212-99241/01 | GEARBOX MORSE CABLE CLAMP                  | 1        |
| 26     | 210-94220    | HYDRAULIC OIL PIPE 3/8”BSP 450mm 90°-ST    | 1        |
| 27     | 210-94220    | HYDRAULIC OIL PIPE 3/8”BSP 450mm 90°-ST    | 1        |
| 28     | 202-94100    | PRM150 MORSE GEAR BRACKET                  | 1        |
| 29     | 208-62300    | Beta43 / Beta50 FLYWHEEL HOUSING           | 1        |

| Ref No | Part Number | Part Name              | Quantity |
|--------|-------------|------------------------|----------|
| A      | N/A         | SEE 14 ABOVE           | 1        |
| B      | 217-99320   | M10 SPRING WASHER      | 2        |
| C      | N/A         | SEE 17 ABOVE           | 1        |
| D      | 217-02760   | M10 x 100 x 1.25mm SET | 1        |
| E      | 217-99321   | M10 FLAT WASHER        | 8        |



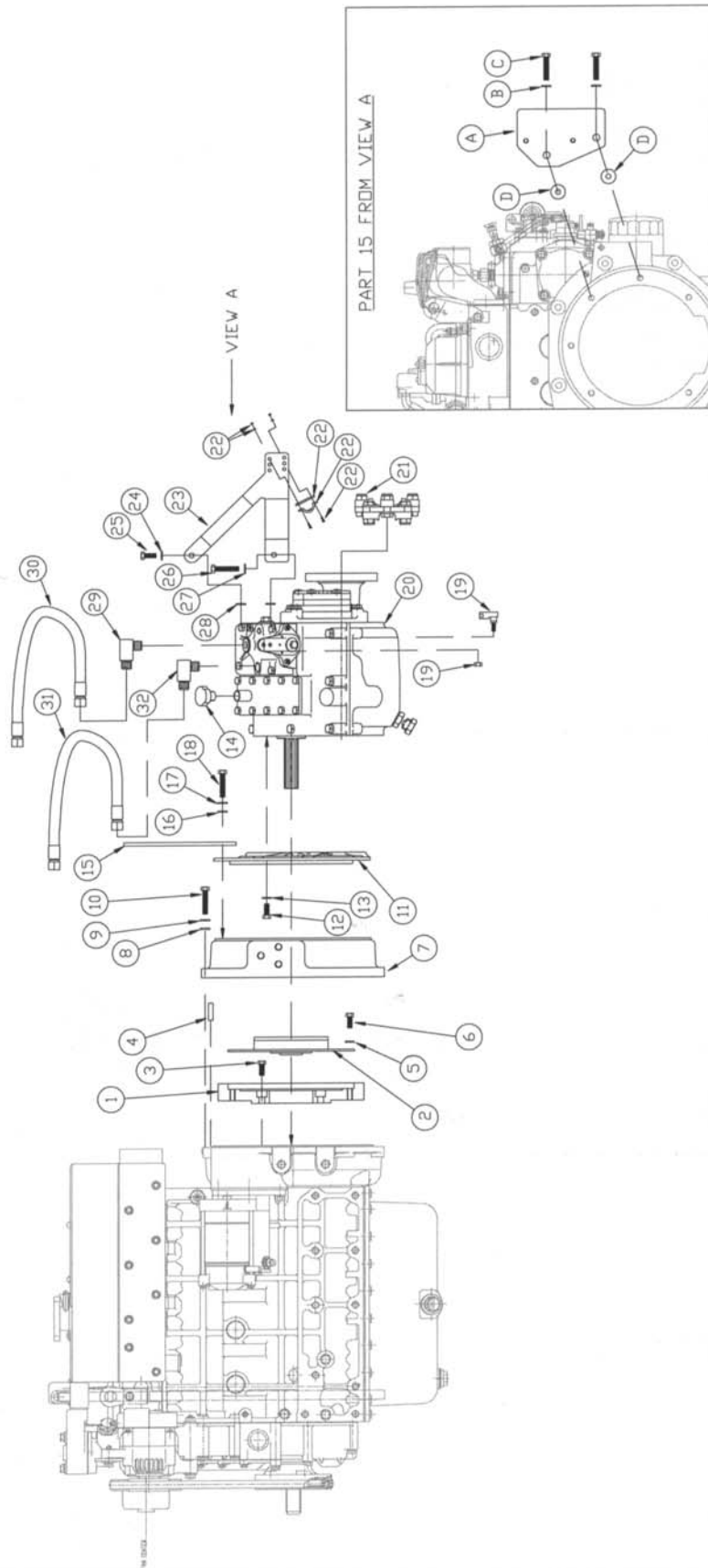
**DRAWING 100-05302****Beta43 & Beta50 HURTH 125 / 150 (ZF12M / ZF15M) GEARBOX ASSEMBLY****(PAGE 3 of 5)**

| Ref No | Part Number                                      | Part Name                                                                                                             | Quantity |
|--------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------|
| 01     | 217-99295                                        | M8 NUT                                                                                                                | 2        |
| 02     | 202-61582                                        | HURTH 50-150 (ZF5M-15M) GEAR BRACKET                                                                                  | 1        |
| 03     | 212-99241/01                                     | GEARBOX MORSE CABLE CLAMP                                                                                             | 1        |
| 04     | 212-01430                                        | FLEXIBLE COUPLING (NOT 'V' DRIVE GEARBOX)                                                                             | 1        |
| 05     | 204-85860<br>204-85870<br>204-00767<br>204-85875 | HBW125 R2 (ZF12 M R2) (BV1903 ONLY)<br>HBW150 R2 (ZF15 M R2)<br>HBW150 V R2 (ZF15 MIV R2)<br>HBW150 A R2 (ZF15 MA R2) | 1        |
| 06     | 212-99240/01                                     | GEARBOX MORSE CABLE BALL JOINT                                                                                        | 1        |
| 07     | 217-99326<br>217-99325                           | M10 x 30mm SET (TOP)<br>M10 x 25mm SET (BOTTOM)                                                                       | 3<br>4   |
| 08     | 217-99320                                        | M10 SPRING WASHER                                                                                                     | 7        |
| 09     | 217-99321                                        | M10 FLAT WASHER                                                                                                       | 7        |
| 10     | 202-97590                                        | SUPER 3 –HBW125 SUMP DRAIN PUMP BRACKET                                                                               | 1        |
| 11     | 205-60990                                        | HBW125 / 150 –BORG WARNER ADAPTOR                                                                                     | 1        |
| 12     | 217-99293                                        | M8 FLAT WASHER                                                                                                        | 6        |
| 13     | 217-99292                                        | M8 SPRING WASHER                                                                                                      | 4        |
| 14     | 217-99299                                        | M8 x 25mm SET                                                                                                         | 6        |
| 15     | 217-99330                                        | M10 x 40 x 1.25mm SET                                                                                                 | 6        |
| 16     | 217-99320                                        | M10 SPRING WASHER                                                                                                     | 6        |
| 17     | 217-99321                                        | M10 FLAT WASHER                                                                                                       | 6        |
| 18     | 208-62300<br>208-07157                           | Beta43 / Beta50 FLYWHEEL HOUSING<br>Beta60 FLYWHEEL HOUSING                                                           | 1        |
| 19     | 217-99311                                        | M8 x 25mm SOCKET CAP SCREW                                                                                            | 6        |
| 20     | 217-99293                                        | M8 FLAT WASHER                                                                                                        | 6        |
| 21     | 206-00895<br>206-91950                           | DRIVEPLATE 43-AC-60 (HBW125 & HBW150V)<br>DRIVEPLATE 22-B-60 (HBW150 & 150A)                                          | 1        |
| 22     | 217-01237                                        | M12 x 30mm SOCKET CAP SCREW                                                                                           | 6        |
| 23     | 201-90330                                        | SUPER 3 – DS15 INERTIA RING SAE 6.5                                                                                   | 1        |
| 24     | 217-99339                                        | DOWEL 10mm DIAMETER x 20mm OAL                                                                                        | 2        |

| Ref No | Part Number | Part Name              | Quantity |
|--------|-------------|------------------------|----------|
| A      | N/A         | SEE 10 ABOVE           | 1        |
| B      | 217-99320   | M10 SPRING WASHER      | 2        |
| C      | N/A         | SEE 7 ABOVE            | 1        |
| D      | 217-02760   | M10 x 100 x 1.25mm SET | 1        |
| E      | 217-99321   | M10 FLAT WASHER        | 8        |



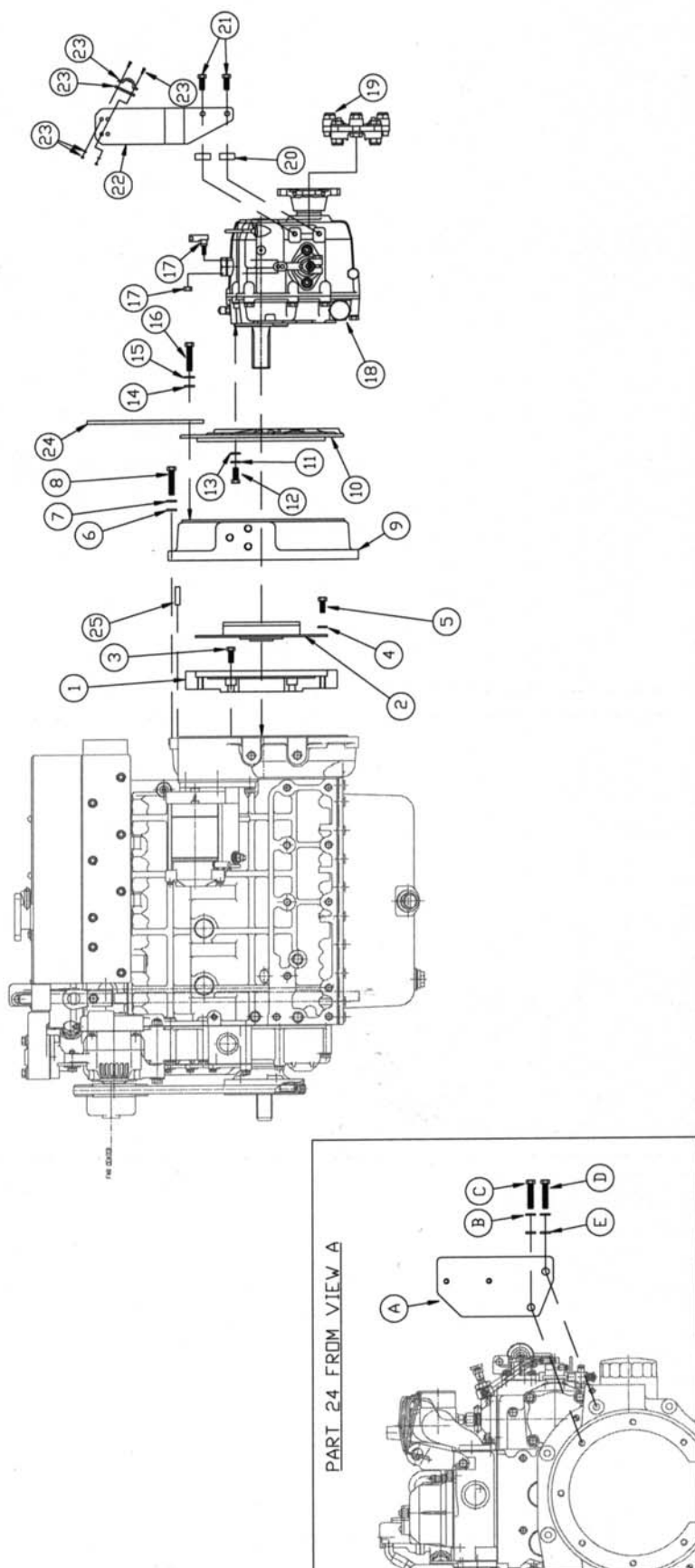
**DRAWING 100-05302 (PAGE 4 of 5)**



**Beta43, Beta50 & Beta60 NEWAGE PRM260 GEARBOX ASSEMBLY****(PAGE 4 of 5)**

| Ref No | Part Number  | Part Name                               | Quantity |
|--------|--------------|-----------------------------------------|----------|
| 01     | 201-90330    | Beta43 / Beta50 INERTIA RING            | 1        |
|        | 201-07145    | Beta60 INERTIA RING                     |          |
| 02     | 206-02095    | DRIVEPLATE DS15 – PRM260 SAE 6.5        | 1        |
| 03     | 217-01237    | M12 x 30mm SOCKET CAP SCREW             | 6        |
| 04     | 217-99339    | DOWEL 10mm DIAMETER x 20mm OAL          | 2        |
| 05     | 217-99293    | M8 FLAT WASHER                          | 6        |
| 06     | 217-99311    | M8 x 25mm SOCKET CAP SCREW              | 6        |
| 07     | 208-62300    | Beta43 / Beta50 FLYWHEEL HOUSING        | 1        |
|        | 208-07157    | Beta60 FLYWHEEL HOUSING                 |          |
| 08     | 217-99330    | M10 x 40 x 1.25mm SET                   | 6        |
| 09     | 217-99320    | M10 SPRING WASHER                       | 6        |
| 10     | 217-99321    | M10 FLAT WASHER                         | 6        |
| 11     | 205-72820    | NEWAGE PRM 260 – BORG WARNER ADAPTOR    | 1        |
| 12     | 217-99323    | M10 NYLOC NUT                           | 5        |
| 13     | 201-01752    | M10 STUD                                | 5        |
| 14     | 205-02829    | NEWAGE PRM 260 GEARBOX BREATHER CAP     | 1        |
| 15     | 202-97590    | SUPER 3 –PRM260 SUMP DRAIN PUMP BRACKET | 1        |
| 16     | 217-99321    | M10 FLAT WASHER                         | 7        |
| 17     | 217-99320    | M10 SPRING WASHER (NOT ON BOTTOM BOLTS) | 4        |
| 18     | 217-99326    | M10 x 30mm SET (TOP)                    | 3        |
|        | 217-99325    | M10 x 25mm SET (BOTTOM)                 | 4        |
| 19     | 212-99240/01 | GEARBOX MORSE CABLE BALL JOINT          | 1        |
| 20     | 204-80530    | NEWAGE PRM 260 D2 GEARBOX               | 1        |
|        | 204-92230    | NEWAGE PRM 260 D3 GEARBOX               |          |
| 21     | 212-01248    | FLEXIBLE COUPLING                       | 1        |
| 22     | 212-99241/01 | GEARBOX MORSE CABLE CLAMP               | 1        |
| 23     | 202-80560    | NEWAGE PRM260 MORSE GEAR BRACKET        | 1        |
| 24     | 217-99292    | M8 SPRING WASHER                        | 1        |
| 25     | 217-99357    | 5/16 UNF x 1 ¼” SET                     | 1        |
| 26     | 217-99358    | 5/16 UNF x 2 ½” SET                     | 1        |
| 27     | 217-99292    | M8 SPRING WASHER                        | 1        |
| 28     | 209-00017    | M8 DOWTY WASHER                         | 2        |
| 29     | 212-99388    | 3/8”BSPT x 3/8”BSP M-M 90° ADAPTOR      | 1        |
| 30     | 210-94220    | HYDRAULIC OIL PIPE 3/8”BSP 450mm 90°-ST | 1        |
| 31     | 210-94220    | HYDRAULIC OIL PIPE 3/8”BSP 450mm 90°-ST | 1        |
| 32     | 212-99388    | 3/8”BSPT x 3/8”BSP M-M 90° ADAPTOR      | 1        |

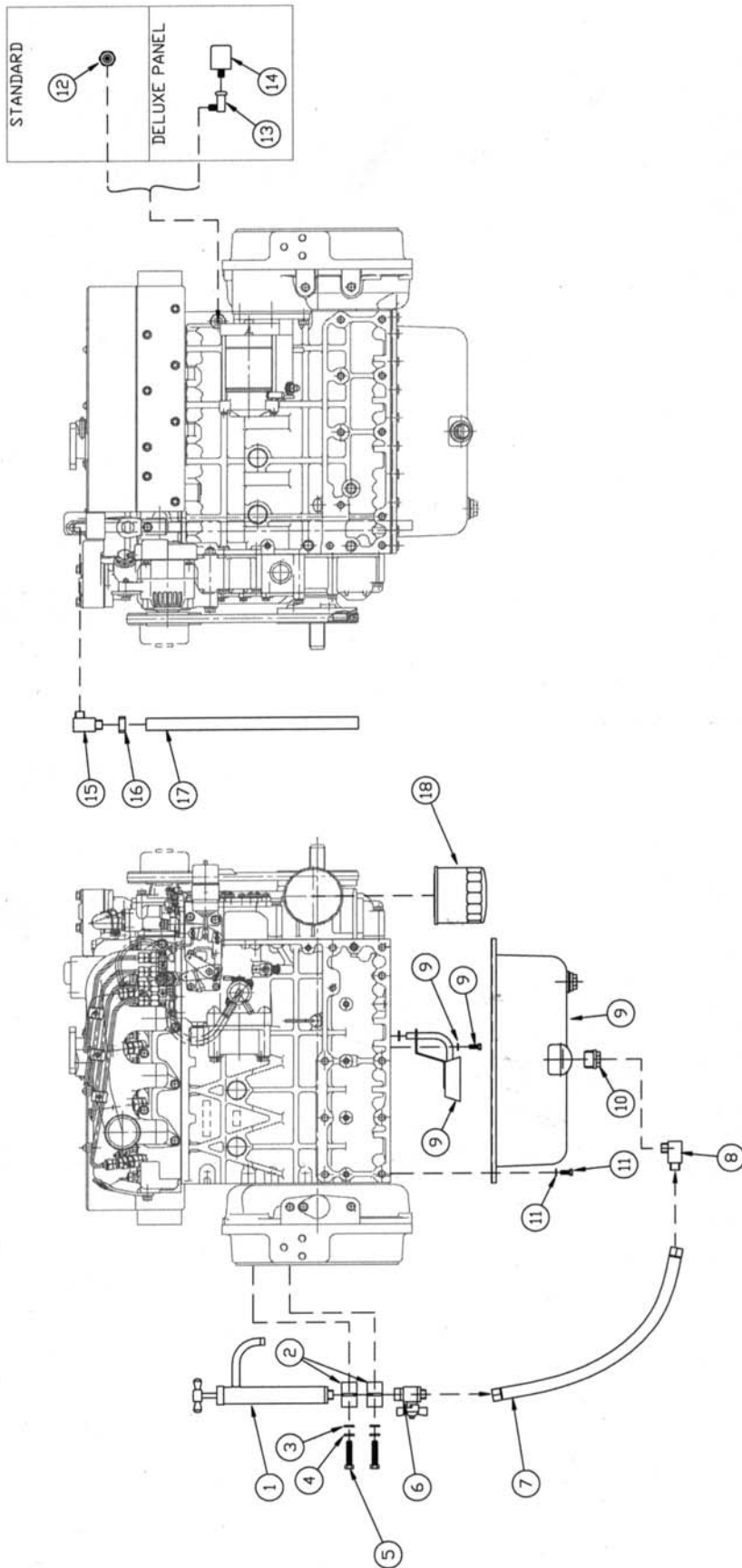
| Ref No | Part Number | Part Name         | Quantity |
|--------|-------------|-------------------|----------|
| A      | N/A         | SEE 15 ABOVE      | 1        |
| B      | 217-99320   | M10 SPRING WASHER | 2        |
| C      | N/A         | SEE 18 ABOVE      | 1        |
| D      | 201-61801   | SPACER, 18mm OAL  | 2        |



**DRAWING 100-05302****Beta43 TECHNODRIVE TMC60 GEARBOX ASSEMBLY****(PAGE 5 of 5)**

| Ref No | Part Number  | Part Name                              | Quantity |
|--------|--------------|----------------------------------------|----------|
| 01     | 201-90330    | SUPER 3 – DS15 INERTIA RING SAE 6.5    | 1        |
| 02     | 206-91950    | DRIVEPLATE 22-B-60                     | 1        |
| 03     | 217-01237    | M12 x 30mm SOCKET CAP SCREW            | 6        |
| 04     | 217-99293    | M8 FLAT WASHER                         | 6        |
| 05     | 217-99311    | M8 x 25mm SOCKET CAP SCREW             | 6        |
| 06     | 217-99321    | M10 FLAT WASHER                        | 6        |
| 07     | 217-99320    | M10 SPRING WASHER                      | 6        |
| 08     | 217-99330    | M10 x 40 x 1.25mm SET                  | 6        |
| 09     | 208-62300    | SUPER 3 SERIES FLYWHEEL HOUSING        | 1        |
| 10     | 205-60990    | TMC60 –BORG WARNER ADAPTOR             | 1        |
| 11     | 217-99292    | M8 SPRING WASHER                       | 4        |
| 12     | 217-99299    | M8 x 25mm SET                          | 6        |
| 13     | 217-99293    | M8 FLAT WASHER                         | 6        |
| 14     | 217-99321    | M10 FLAT WASHER                        | 7        |
| 15     | 217-99320    | M10 SPRING WASHER                      | 7        |
| 16     | 217-99326    | M10 x 30mm SET (TOP)                   | 3        |
|        | 217-99325    | M10 x 25mm SET (BOTTOM)                | 4        |
| 17     | 212-99240/01 | GEARBOX MORSE CABLE BALL JOINT         | 1        |
| 18     | 204-91680    | TECHNODRIVE TMC 60 GEARBOX             | 1        |
| 19     | 212-01430    | FLEXIBLE COUPLING                      | 1        |
| 20     | 201-01204    | SPACER 7mm OAL                         | 2        |
| 21     | 217-02585    | M8 x 25mm COUNTERSUNK SET SCREW        | 2        |
| 22     | 202-05129    | TMC 60 MORSE GEAR BRACKET              | 1        |
| 23     | 212-99241/01 | GEARBOX MORSE CABLE CLAMP              | 1        |
| 24     | 202-97590    | SUPER 3 –TMC60 SUMP DRAIN PUMP BRACKET | 1        |
| 25     | 217-99339    | DOWEL 10mm DIAMETER x 20mm OAL         | 2        |

| Ref No | Part Number | Part Name              | Quantity |
|--------|-------------|------------------------|----------|
| A      | N/A         | SEE 24 ABOVE           | 1        |
| B      | 217-99320   | M10 SPRING WASHER      | 2        |
| C      | N/A         | SEE 16 ABOVE           | 1        |
| D      | 217-02760   | M10 x 100 x 1.25mm SET | 1        |
| E      | 217-99321   | M10 FLAT WASHER        | 8        |

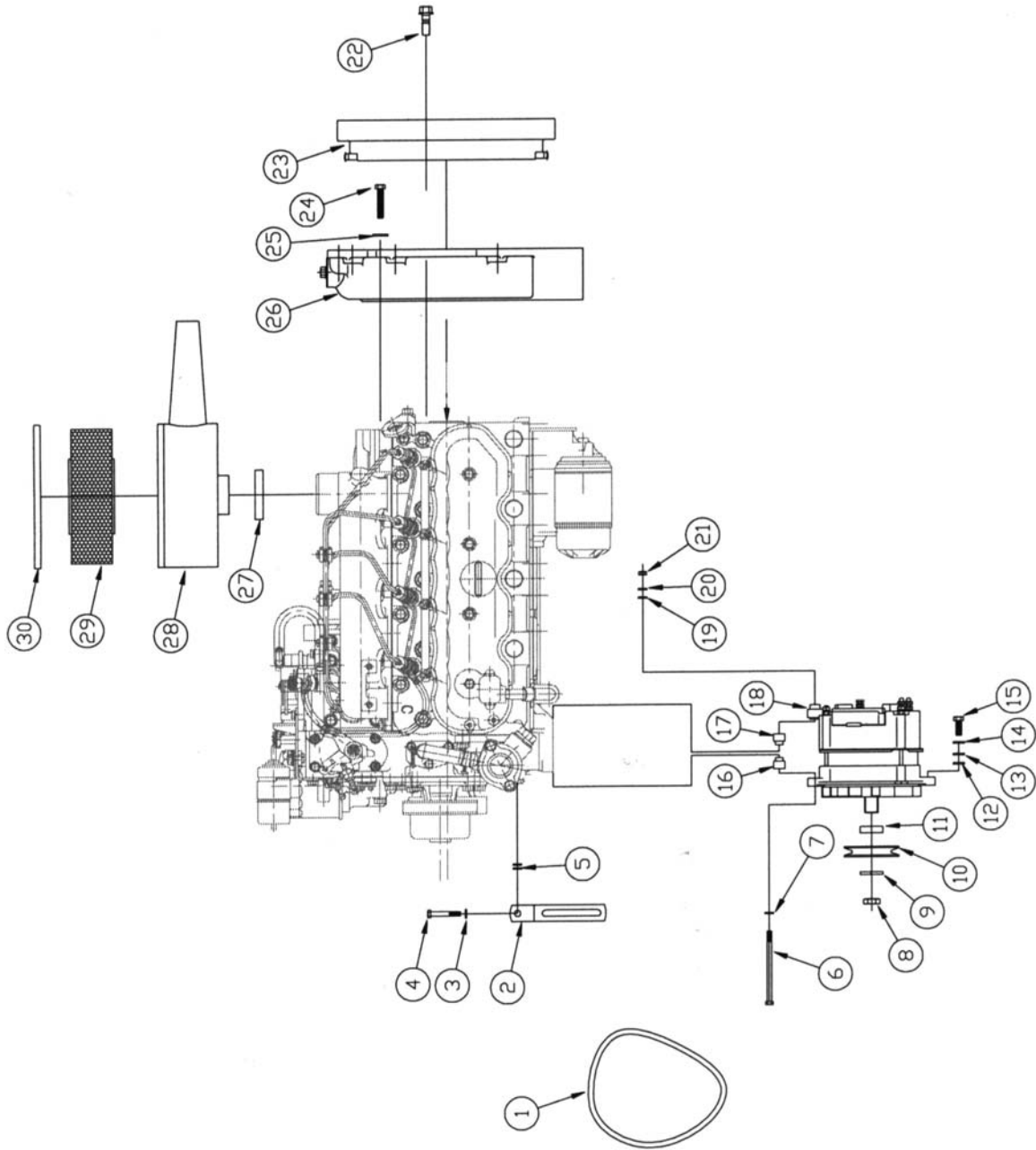


**DRAWING 100-05303****Beta43, Beta50 & Beta60 OIL SYSTEM WITH STANDARD SUMP****(PAGE 1 of 1)**

| Ref No | Part Number  | Part Name                                                                                   | Quantity |
|--------|--------------|---------------------------------------------------------------------------------------------|----------|
| 01     | 210-80061    | SUMP DRAIN PUMP                                                                             | 1        |
| 02     | 212-00793    | TYPE 14 PUMP CLAMP                                                                          | 2        |
| 03     | 217-99294    | M8 PENNY WASHER                                                                             | 2        |
| 04     | 217-99292    | M8 SPRING WASHER                                                                            | 2        |
| 05     | 217-99303    | M8 x 50mm SET                                                                               | 2        |
| 06     | 210-94530    | 3/8"BSP SUMP DRAIN PUMP TAP                                                                 | 1        |
| 07     | 210-94200    | HYD PIPE 3/8BSP 640mm STR-STR                                                               | 1        |
| 08     | 210-91940    | 1/4x3/8"BSP M-M BLOCK ELBOW                                                                 | 1        |
| 09     | 600-01129    | SUPER 3 SERIES, 4 CYLINDER STANDARD SUMP                                                    | 1        |
|        | 600-00571    | GASKET, SUPER3 SUMP                                                                         | 1        |
| 10     | 201-02318    | 1/4"BSP SUMP DRAIN PUMP TAPPING –STD SUMP                                                   | 1        |
|        | 201-02318    | M16x3/8 SUMP PUMP TAPPING –SHALLOW SUMP                                                     |          |
| 11     | 600-02845    | SUMP FLANGE BOLT                                                                            | 24       |
| 12     | 600-62670    | OIL PRESSURE SWITCH                                                                         | 1        |
| 13     | 212-99395    | 1/8"BSPTM x 1/8"BSPF GALV ELBOW                                                             | 1        |
| 14     | 200-94350    | DELUXE OIL PRESSURE SENDER                                                                  | 1        |
| 15     | 212-99378    | 1/4" BSP 90° M-M COMPACT ADAPTOR – <b><i>OPEN BREATHER ENGINES ONLY TO JANUARY 2006</i></b> | 1        |
| 16     | 217-99244    | 5/8" 'O' CLIP – <b><i>OPEN BREATHER ENGINES ONLY TO JANUARY 2006</i></b>                    | 1        |
| 17     | 600-01717    | SUPER 3 SERIES BREATHER PIPE – <b><i>OPEN BREATHER ENGINES ONLY TO JANUARY 2006</i></b>     | 1        |
| 18     | 211-70510/02 | SUPER 3 SERIES OIL FILTER                                                                   | 1        |

**Beta43, Beta50 & Beta60 OIL SYSTEM WITH SHALLOW SUMP OPTION****ALL AS ABOVE, EXCEPT AS BELOW:**

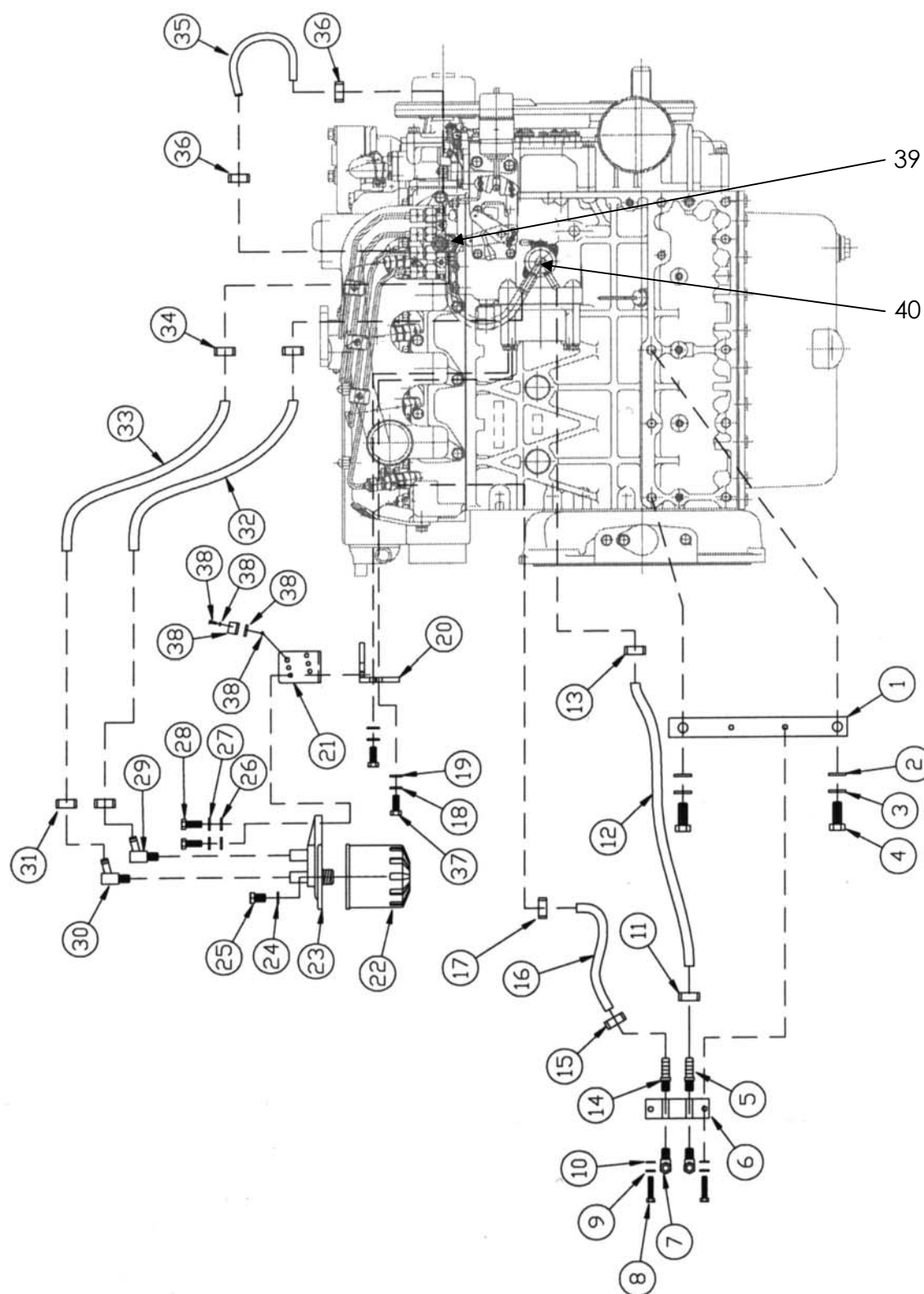
| Ref No | Part Number   | Part Name                                                                 | Quantity |
|--------|---------------|---------------------------------------------------------------------------|----------|
| 09     | AK/S3/4/4/003 | SHALLOW OIL PAN KIT COMPLETE WITH GASKETS, STRAINER & DRAIN PLUG, SUPER 3 | 1        |
| 09     | 600-01548     | OIL PAN, SUPER BV19/2203 SHALLOW                                          | 1        |
| 09     | 600-01549     | OIL FILTER, S3 SHALLOW SUMP                                               | 1        |
| 09     | 600-01550     | DRAIN PLUG, S3 SHALLOW SUMP                                               | 1        |
| 09     | 600-01551     | DRAIN PLUG, S3 SHALLOW SUMP                                               | 1        |
| 09     | 600-01552     | GASKET COPPER, S3 SHALLOW SUMP                                            | 1        |
| 09     | 600-01553     | GASKET COPPER, S3 SHALLOW SUMP                                            | 1        |
| 09     | 600-00571     | GASKET, SUPER3 SHALLOW SUMP                                               | 1        |



**DRAWING 100-05304****Beta43, Beta50 & Beta60 ALTERNATOR, FLYWHEEL & AIR INTAKE SYSTEM****(PAGE 1 of 1)**

| Ref No | Part Number | Part Name                                                                                  | Quantity |
|--------|-------------|--------------------------------------------------------------------------------------------|----------|
| 01     | 214-96830   | DRIVEBELT (Beta43 to Sept2008, Beta50 to July2007)                                         | 1        |
|        | 214-99223   | DRIVEBELT (Beta43 from Sept 2008 to April2011, Beta50 From July2007& Beta60 to April 2011) |          |
|        | 214-87050   | DRIVEBELT (All from April 2011)                                                            |          |
| 02     | 202-96260   | SUPER 3 SERIES ALTERNATOR ARM                                                              | 1        |
| 03     | 217-99292   | M8 SPRING WASHER                                                                           | 1        |
| 04     | 217-99306   | M8 x 80mm SET (MODIFIED TO 75mm LONG)                                                      | 1        |
| 05     | 217-99293   | M8 FLAT WASHER                                                                             | 3        |
| 06     | 217-99308   | M8 x 130mm BOLT                                                                            | 1        |
| 07     | 217-99293   | M8 FLAT WASHER                                                                             | 1        |
| 08     | N/A         | PART OF 65 AMP ALTERNATOR – <b>SEE 18</b>                                                  |          |
| 09     | N/A         | PART OF 65 AMP ALTERNATOR – <b>SEE 18</b>                                                  |          |
| 10     | 200-91730   | ISKRA PULLEY (A SECTION FOR SUPER 3)                                                       | 1        |
| 11     | 200-91740   | ISKRA SPACER (THICK)                                                                       | 1        |
| 12     | 217-99294   | M8 PENNY WASHER                                                                            | 1        |
| 13     | 217-99294   | M8 PENNY WASHER                                                                            | 1        |
| 14     | 217-99292   | M8 SPRING WASHER                                                                           | 1        |
| 15     | 217-99299   | M8 x 25mm SET                                                                              | 1        |
| 16     | 201-58920   | SUPER 3 -65 AMP SHORT ALTERNATOR SPACER                                                    | 1        |
| 17     | 201-58920   | SUPER 3 -65 AMP SHORT ALTERNATOR SPACER                                                    | 1        |
| 18     | 200-01155   | 12VOLT 65AMP ALTERNATOR                                                                    | 1        |
| 19     | 217-99293   | M8 FLAT WASHER                                                                             | 1        |
| 20     | 217-99292   | M8 SPRING WASHER                                                                           | 1        |
| 21     | 217-99295   | M8 NUT                                                                                     | 1        |
| 22     | 600-02102   | BOLT, FLYWHEEL Beta43 & Beta50                                                             | 6        |
|        | 600-07154   | BOLT, FLYWHEEL Beta60                                                                      |          |
| 23     | 600-02267   | Beta43 & Beta50 FLYWHEEL                                                                   | 1        |
|        | 600-07153   | Beta60 FLYWHEEL                                                                            |          |
| 24     | 217-99351   | M12 x 30 x 1.25mm SET                                                                      | 11       |
| 25     | 217-99342   | M12 SPRING WASHER                                                                          | 11       |
| 26     | 600-03192   | Beta43 & Beta50 FLYWHEEL HOUSING BACKPLATE                                                 | 1        |
|        | 600-07155   | Beta60 FLYWHEEL HOUSING BACKPLATE                                                          |          |
| 27     | 212-98460   | HEAVY DUTY CLAMP 56-59mm                                                                   | 1        |
| 28     | 211-93700   | AIR FILTER ASSEMBLY (INC 29 & 30) 3 CLAMP TYPE                                             | N/A      |
|        | 211-08131   | AIR FILTER ASSEMBLY (INC 29 & 30) WINGNUT TYPE                                             | 1        |
| 29     | 211-61831   | AIR FILTER ELEMENT (3 CLAMP TYPE TO DEC 2010)                                              | 1        |
|        | 211-08133   | AIR FILTER ELEMENT (WINGNUT TYPE FROM DEC 2010)                                            |          |
| 30     | N/A         | AIR FILTER ASSEMBLY COVER – <b>SEE 28</b>                                                  |          |

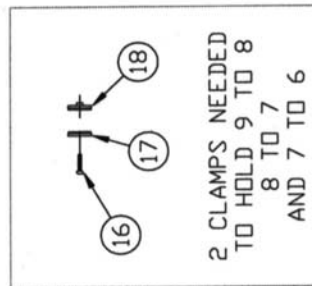
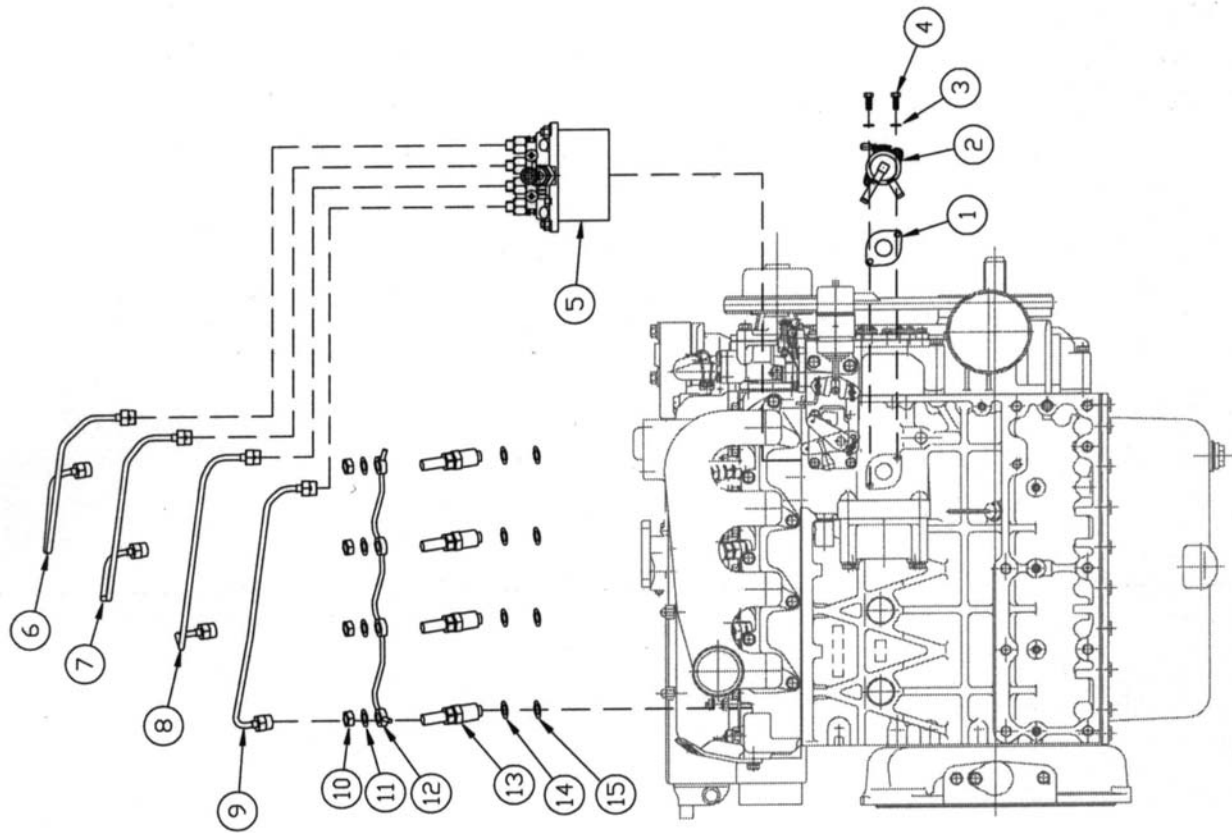




**DRAWING 100-05305****Beta43, Beta50 & Beta60 HEAT EXCHANGE FUEL SYSTEM****(PAGE 1 of 2)**

| Ref No | Part Number              | Part Name                                                                           | Quantity |
|--------|--------------------------|-------------------------------------------------------------------------------------|----------|
| 01     | 202-03057                | FUEL BLOCK BRACKET, SUPER 3 H/E                                                     | 1        |
| 02     | 217-99341                | M12 FLAT WASHER                                                                     | 2        |
| 03     | 217-99342                | M12 SPRING WASHER                                                                   | 2        |
| 04     | 217-99351                | M12 x 30 x 1.25mm SET                                                               | 2        |
| 05     | 212-99253                | ¼"BSPT MALE x 8mm HOSE TAIL                                                         | 1        |
| 06     | 202-01460                | FUEL CONNECTION BLOCK                                                               | 1        |
| 07     | 212-97114<br>(212-99253) | 8mm x 1/4"BSPT MALE COMPRESSION ELBOW<br>(or ¼"BSPT MALE x 8mm HOSE TAIL –USA ONLY) | 2<br>(2) |
| 08     | 217-99283                | M6 x 30mm SET                                                                       | 2        |
| 09     | 217-99275                | M6 SPRING WASHER                                                                    | 2        |
| 10     | 217-99276                | M6 FLAT WASHER                                                                      | 2        |
| 11     | 212-02826                | STAINLESS STEEL HOSE CLIP TYPE 15                                                   | 1        |
| 12     | 212-02423                | FUEL HOSE 8mm BORE -ISO7480 CLASS A1                                                | 0.33m    |
| 13     | 212-02826                | STAINLESS STEEL HOSE CLIP TYPE 15                                                   | 1        |
| 14     | 212-02835                | ¼"BSPT MALE x 5mm HOSE TAIL                                                         | 1        |
| 15     | 212-02910                | STAINLESS STEEL HOSE CLIP TYPE 12                                                   | 1        |
| 16     | 218-02827                | FUEL HOSE 5mm BORE -ISO7480 CLASS A1                                                | 0.36m    |
| 17     | 212-02910                | STAINLESS STEEL HOSE CLIP TYPE 12                                                   | 1        |
| 18     | 217-99292                | M8 SPRING WASHER                                                                    | 2        |
| 19     | 217-99293                | M8 FLAT WASHER                                                                      | 2        |
| 20     | 202-97630                | SUPER 3 SERIES H/E FUEL FILTER BRACKET                                              | 1        |
| 21     | 202-05064                | SPEED CONTROL MORSE SADDLE BRACKET –TO JULY 2008                                    | 1        |
|        | 202-06194                | SPEED CONTROL MORSE SADDLE BRACKET – FROM JULY2008                                  |          |
| 22     | 211-60210                | FUEL FILTER                                                                         | 1        |
| 23     | 600-80290                | FUEL FILTER ASSEMBLY<br>(COMPLETE WITH HEAD) INCLUDING 09 & 10                      | 1        |
| 24     | N/A                      | PART OF FUEL FILTER ASSEMBLY – <b>SEE 23</b>                                        |          |
| 25     | N/A                      | PART OF FUEL FILTER ASSEMBLY – <b>SEE 23</b>                                        |          |
| 26     | 217-99293                | M8 FLAT WASHER                                                                      | 2        |
| 27     | 217-99292                | M8 SPRING WASHER                                                                    | 2        |
| 28     | 217-99298                | M8 x 20mm SET                                                                       | 2        |
| 29     | N/A                      | PART OF FUEL FILTER ASSEMBLY – <b>SEE 23</b>                                        |          |
| 30     | N/A                      | PART OF FUEL FILTER ASSEMBLY – <b>SEE 23</b>                                        |          |
| 31     | 212-02826                | STAINLESS STEEL HOSE CLIP TYPE 15                                                   | 2        |
| 32     | 212-02423                | FUEL HOSE 8mm BORE -ISO7480 CLASS A1                                                | 0.22m    |
| 33     | 212-02423                | FUEL HOSE 8mm BORE -ISO7480 CLASS A1                                                | 0.21m    |
| 34     | 212-02826                | STAINLESS STEEL HOSE CLIP TYPE 15                                                   | 2        |
| 35     | 218-02827                | FUEL HOSE 5mm BORE -ISO7480 CLASS A1                                                | 0.29m    |
| 36     | 212-02910                | STAINLESS STEEL HOSE CLIP TYPE 12                                                   | 2        |
| 37     | 217-99305                | M8 x 70mm SET                                                                       | 2        |
| 38     | 212-99241/01             | SPEED CONTROL MORSE CABLE CLAMP                                                     | 1        |
| 39     | 600-03233                | FUEL BLEED SCREW-SUPER 3 SERIES                                                     | 1        |
| 40     | 600-80870                | FUEL LIFT PUMP, Beta43 & Beta60                                                     | 1        |
|        | 600-00633                | FUEL LIFT PUMP, Beta50 TO JULY 2007                                                 |          |
|        | 600-80870                | FUEL LIFT PUMP, Beta50 FROM JULY 2007                                               |          |

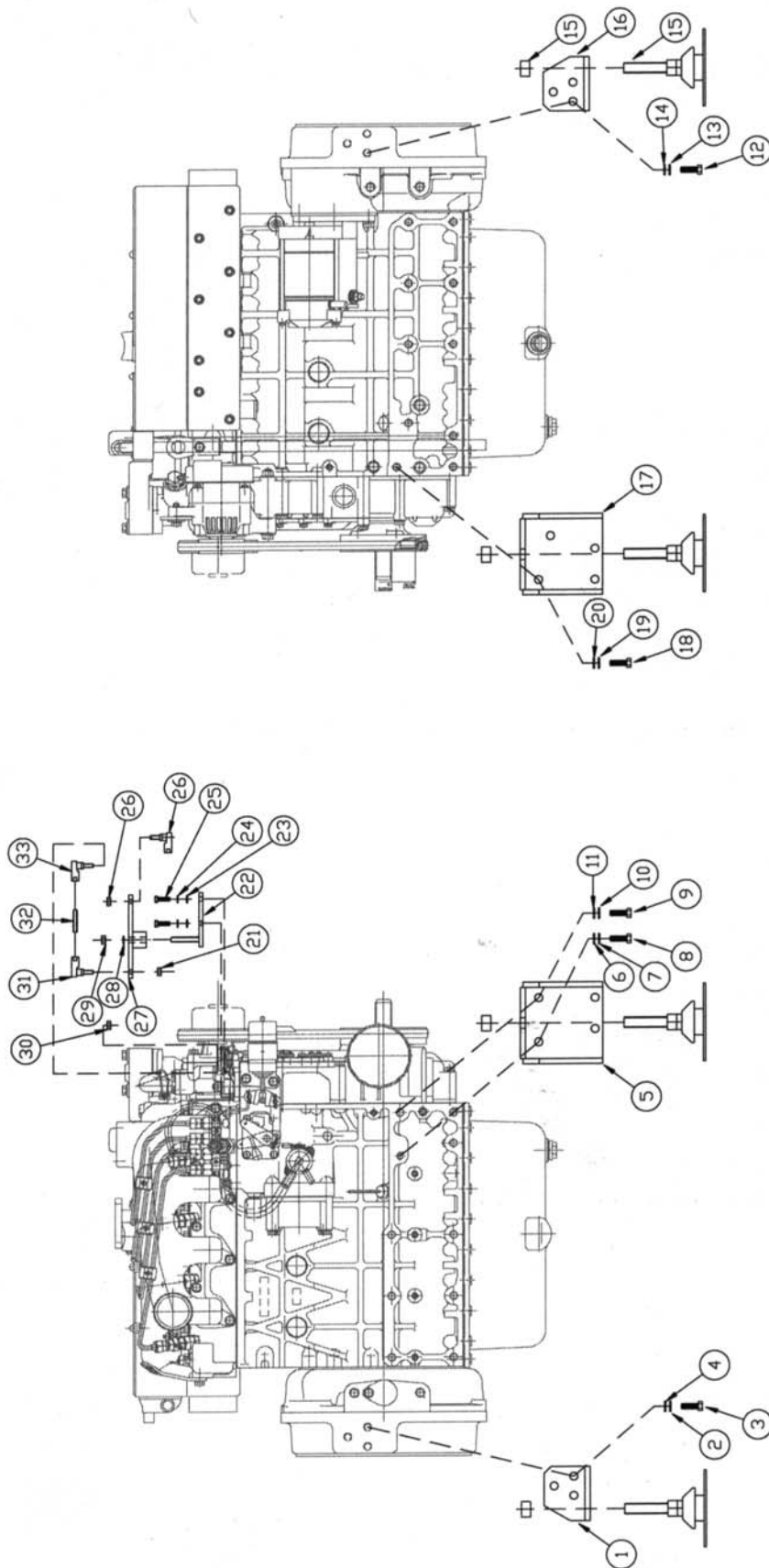
**DRAWING 100-05305 (PAGE 2 of 2)**



**DRAWING 100-05305****Beta43, Beta50 & Beta60 HEAT EXCHANGE FUEL SYSTEM****(PAGE 2 of 2)**

| Ref No | Part Number  | Part Name                                                                              | Quantity |
|--------|--------------|----------------------------------------------------------------------------------------|----------|
| 01     | 600-00538    | GASKET, FUEL LIFT PUMP                                                                 | 1        |
| 02     | 600-80870    | FUEL LIFT PUMP –Beta43                                                                 | 1        |
|        | 600-00633    | FUEL LIFT PUMP –Beta50 TO JULY 2007                                                    |          |
|        | 600-80870    | FUEL LIFT PUMP –Beta50 & 60 FROM JULY 2007                                             |          |
| 03     | 217-99275    | M6 SPRING WASHER                                                                       | 2        |
| 04     | 217-99280    | M6 x 16mm SET                                                                          | 2        |
| 05     | 600-03184    | Beta43 FUEL INJECTION PUMP –TO SEPT 2008                                               | 1        |
|        | 600-07156    | Beta43 FUEL INJECTION PUMP –FROM SEPT 2008                                             |          |
|        | 600-03184/50 | Beta50 FUEL INJECTION PUMP –TO JULY 2007                                               |          |
|        | 600-07152    | Beta50 FUEL INJECTION PUMP –FROM JULY 2007                                             |          |
|        | 600-07152    | Beta60 FUEL INJECTION PUMP                                                             |          |
| 06     | 600-01113    | INJECTOR PIPE A, (1) OPEN BREATHER ENGINES TO JAN 2006                                 | 1        |
|        | 600-01031    | INJECTOR PIPE A, (1) BTM ENGINES FROM JAN 2006                                         |          |
| 07     | 600-01114    | INJECTOR PIPE B, (2) OPEN BREATHER ENGINES TO JAN 2006                                 | 1        |
|        | 600-02049    | INJECTOR PIPE B, (2) BTM ENGINES FROM JAN 2006                                         |          |
| 08     | 600-01115    | INJECTOR PIPE C, (3) OPEN BREATHER ENGINES TO JAN 2006                                 | 1        |
|        | 600-01465    | INJECTOR PIPE C, (3) BTM ENGINES FROM JAN 2006                                         |          |
| 09     | 600-01116    | INJECTOR PIPE D, (4) OPEN BREATHER ENGINES TO JAN 2006                                 | 1        |
|        | 600-01032    | INJECTOR PIPE D, (4) BTM ENGINES FROM JAN 2006                                         |          |
| 10     | 600-00622    | NUT, INJECTOR SUPER 3 SERIES                                                           | 4        |
| 11     | 600-00537    | COPPER GASKET, FUEL LEAK OFF RAIL                                                      | 4        |
| 12     | 600-00548    | FUEL LEAK OFF RAIL Beta43 & Beta60                                                     | 1        |
|        | 600-00549    | FUEL LEAK OFF RAIL Beta50 TO JULY 2007                                                 |          |
|        | 600-00548    | FUEL LEAK OFF RAIL Beta50 FROM JULY 2007                                               |          |
| 13     | 600-00541    | INJECTOR, Beta43 TO SEPTEMBER 2008, COMPLETE (INC 10, 11)                              | 4        |
|        | 600-02048    | INJECTOR, Beta50 TO JULY 2007, COMPLETE (INC 10, 11)                                   |          |
|        | 600-00542    | INJECTOR, Beta43 FROM SEPT 2008, Beta50 FROM JULY 2007 & Beta60, COMPLETE (INC 10, 11) |          |
| 14     | 600-00242    | GASKET, INJECTOR SUPER 3 SERIES                                                        | 4        |
| 15     | 600-01042    | HEAT SEAL, INJECTOR                                                                    | 4        |
| 16     | 600-91803    | FUEL CLAMP SCREW, WITH WASHER                                                          | 3        |
| 17     | 600-91802    | FUEL CLAMP –NO THREAD                                                                  | 3        |
| 18     | 600-91801    | FUEL CLAMP –WITH THREAD                                                                | 3        |

**DRAWING 100-05306 (PAGE 1 of 1)**

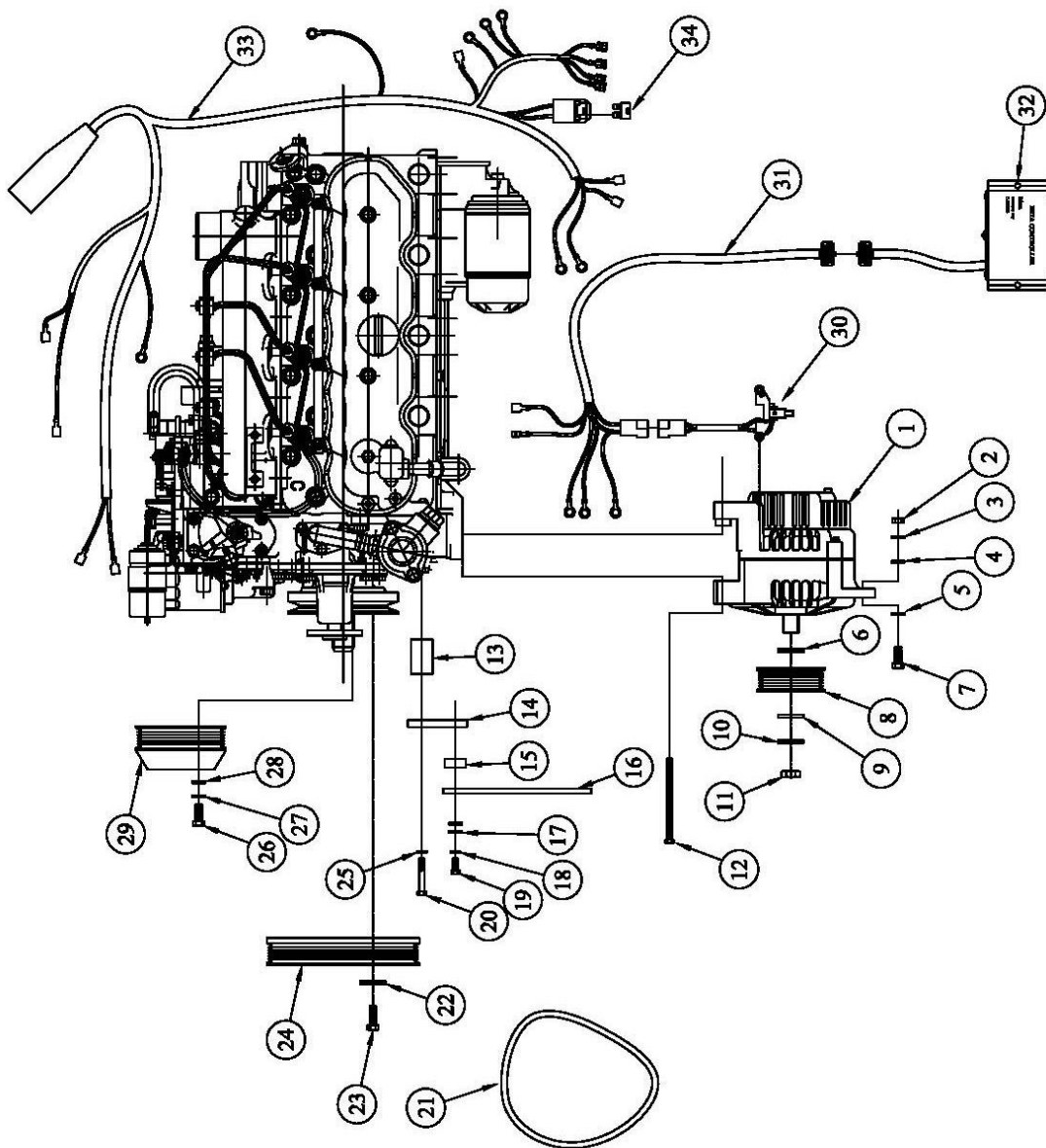


**DRAWING 100-05306****Beta43, Beta50 & Beta60 FEET & SPEED CONTROL BRACKETRY****(PAGE 1 of 1)**

| Ref No | Part Number  | Part Name                                                                            | Quantity |
|--------|--------------|--------------------------------------------------------------------------------------|----------|
| 01     | 202-88660    | S3 REAR FOOT ( <b>HANDED PAIR AS 15</b> )                                            | 1        |
| 02     | 217-99342    | M12 SPRING WASHER                                                                    | 3        |
| 03     | 217-99345    | M12 x 30mm SET                                                                       | 3        |
| 04     | 217-99341    | M12 FLAT WASHER                                                                      | 3        |
| 05     | 202-88650    | SUPER 3 H/E FRONT FOOT (STAR)                                                        | 1        |
| 06     | 217-99321    | M10 FLAT WASHER                                                                      | 1        |
| 07     | 217-99320    | M10 SPRING WASHER                                                                    | 1        |
| 08     | 217-99329    | M10 x 25 x 1.25mm SET                                                                | 1        |
| 09     | 217-99351    | M12 x 30 x 1.25mm SET                                                                | 3        |
| 10     | 217-99342    | M12 SPRING WASHER                                                                    | 3        |
| 11     | 217-99341    | M12 FLAT WASHER                                                                      | 3        |
| 12     | 217-99345    | M12 x 30mm SET                                                                       | 3        |
| 13     | 217-99342    | M12 SPRING WASHER                                                                    | 3        |
| 14     | 217-99341    | M12 FLAT WASHER                                                                      | 3        |
| 15     | 213-85900/02 | 45 SHORE FLEXIBLE MOUNT (MOST Beta43 ONLY)                                           | 4        |
|        | 213-96970/01 | 55 SHORE FLEXIBLE MOUNT<br>Beta43 –PRM260 & ALL Beta50 & Beta60                      |          |
| 16     | 202-88660    | S3 REAR FOOT ( <b>HANDED PAIR AS 01</b> )                                            | 1        |
| 17     | 202-88640    | SUPER 3 H/E FRONT FOOT (PORT)                                                        | 1        |
| 18     | 217-99351    | M12 x 30 x 1.25mm SET                                                                | 4        |
| 19     | 217-99342    | M12 SPRING WASHER                                                                    | 4        |
| 20     | 217-99341    | M12 FLAT WASHER                                                                      | 4        |
| 21     | 217-99354    | 1/4" UNF HEX FULL NUT –Beta43 to Sept2008, Beta50 to July2007                        | 1        |
| 22     | 202-05064    | SUPER 3 SPEED CONTROL BRACKET<br>–Beta43 to Sept2008, Beta50 to July2007             | 1        |
|        | 202-06194    | SUPER 3 SPEED CONTROL BRACKET –Beta43 from Sept2008,<br>Beta50 from July2007, Beta60 | 1        |
| 23     | 217-99276    | M6 FLAT WASHER –Beta43 to Sept2008, Beta50 to July2007                               | 2        |
| 24     | 217-99275    | M6 SPRING WASHER –Beta43 to Sept2008, Beta50 to July2007                             | 2        |
| 25     | 217-99282    | M6 x 25mm SET –Beta43 to Sept2008, Beta50 to July2007                                | 2        |
| 26     | 212-99240/01 | SPEED CONTROL MORSE CABLE BALL JOINT<br>–Beta43 to Sept2008, Beta50 to July2007      | 1        |
| 27     | 202-01396    | SUPER 3 SPEED CONTROL LEVER ASSY<br>–Beta43 to Sept2008, Beta50 to July2007          | 1        |
| 28     | 217-99293    | M8 FLAT WASHER –Beta43 to Sept2008, Beta50 to July2007                               | 1        |
| 29     | 217-99296    | M8 NYLOC NUT –Beta43 to Sept2008, Beta50 to July2007                                 | 1        |
| 30     | 217-99354    | 1/4" UNF HEX FULL NUT –Beta43 to Sept2008, Beta50 to July2007                        | 1        |
|        | 217-99354    | 1/4" UNF HEX FULL NUT –Beta43 from Sept2008, Beta50from<br>July2007 & Beta60         |          |
| 31     | 212-92270    | SUPER 3 SPEED CONTROL ELBOW<br>–Beta43 to Sept2008, Beta50 to July2007               | 1        |
| 32     | 217-99355    | 1/4" UNF THREADED BAR –Beta43 to Sept2008, Beta50 to July2007                        | 0.05m    |
| 33     | 212-92270    | SUPER 3 SPEED CONTROL ELBOW<br>–Beta43 to Sept2008, Beta50 to July2007               | 1        |
|        | 212-92270    | SUPER 3 SPEED CONTROL ELBOW –Beta43 from Sept2008,<br>Beta50from July2007 & Beta60   |          |

**Beta43, Beta50 & Beta60 WITH 100 AMP ALTERNATOR / BETA CONTROLLER**

**(PAGE 1 of 1)**



**DRAWING 100-05466****Beta43, Beta50 & Beta60 WITH 100 AMP ALTERNATOR / BETA CONTROLLER****(PAGE 1 of 1)**

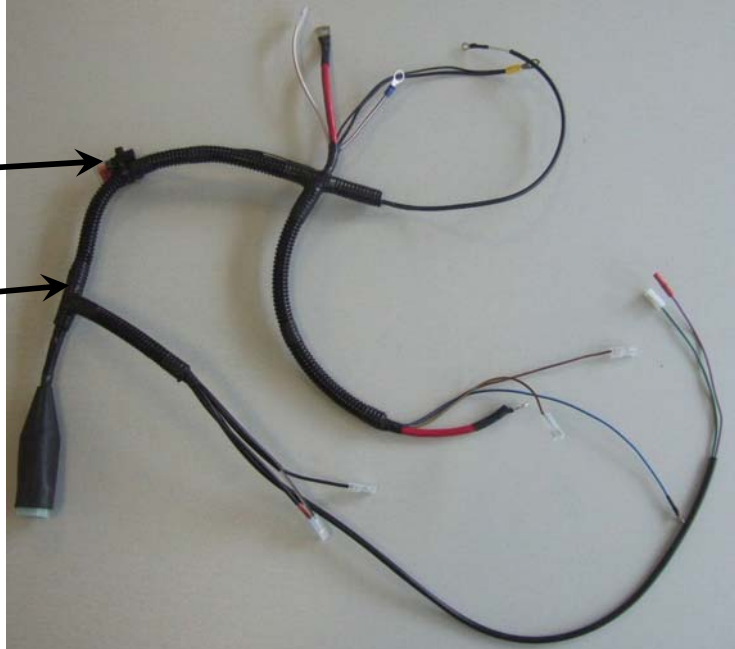
| Ref No | Part Number  | Part Name                                                          | Quantity |
|--------|--------------|--------------------------------------------------------------------|----------|
| 01     | 200-03008    | ALTERNATOR, 100A INTERNAL FAN                                      | 1        |
| 02     | 217-99295    | M8 NUT                                                             | 1        |
| 03     | 217-99292    | M8 SPRING WASHER                                                   | 1        |
| 04     | 217-99293    | M8 FLAT WASHER                                                     | 1        |
| 05     | 217-99293    | M8 FLAT WASHER                                                     | 1        |
| 06     | N/A          | SPACER (PART OF 200-03008)                                         |          |
| 07     | 217-99302    | M8 x 40mm SET                                                      | 1        |
| 08     | 201-02251    | 6K ALTERNATOR DRIVEN PULLEY 80mm DIAMETER                          | 1        |
| 09     | N/A          | FLAT WASHER (PART OF 200-03008)                                    |          |
| 10     | N/A          | SPRING WASHER (PART OF 200-03008)                                  |          |
| 11     | N/A          | NUT (PART OF 200-03008)                                            |          |
| 12     | 217-02204    | M10 x 130mm SOCKET CAP SCREW                                       | 1        |
| 13     | 201-61440/46 | SPACER 25DIA x 63mm 201-61440 -MACHINED TO 46mm OAL                | 1        |
| 14     | 202-05459    | 100AMP ALTERNATOR ARM SPACER BRACKET                               | 1        |
| 15     | 201-61420/10 | SPACER 25DIA x 20.5mm 201-61420 -MACHINED TO 10mm OAL              | 1        |
| 16     | 202-01086    | 100AMP ALTERNATOR ADJUSTING ARM                                    | 1        |
| 17     | 217-99294    | M8 PENNY WASHER                                                    | 2        |
| 18     | 217-99292    | M8 SPRING WASHER                                                   | 1        |
| 19     | 217-99301    | M8 x 35mm SET                                                      | 1        |
| 20     | 217-99306    | M8 x 80mm SET                                                      | 2        |
| 21     | 214-00497    | Belt Polyvee 100 Amp 6PK1173 Beta43 to Oct2008, Beta50 to July2007 | 1        |
|        | 214-92105    | Belt, 6K Polyvee 100A -All from 2008 & Beta43 from Oct2008 –Oct09  |          |
|        | 214-07037    | Belt, 6K Polyvee 100Amp -All from October 2009                     |          |
| 22     | 217-99293    | M8 FLAT WASHER                                                     | 3        |
| 23     | 217-02738    | M8 x 70mm SOCKET CAP SCREW                                         | 3        |
| 24     | 201-05440    | S3 CRANK OVERPULLEY 6 GROOVE FOR 100AMP ALT.                       | 1        |
| 25     | 217-99293    | M8 FLAT WASHER                                                     | 2        |
| 26     | 217-99298    | M8 x 20mm SET                                                      | 4        |
| 27     | 217-99292    | M8 SPRING WASHER                                                   | 4        |
| 28     | 217-99293    | M8 FLAT WASHER                                                     | 4        |
| 29     | 201-05439    | S3 WATER PUMP PULLEY 6 GROOVE FOR 100AMP ALT.                      | 1        |
| 30     | 200-01771    | REGULATOR TO SUIT 200-03008 ALTERNATOR                             | 1        |
|        | 200-02684    | BRUSH BOX 100A –TO SUIT CONTROLLER ONLY                            |          |
| 31     | 200-02737    | WIRING LOOM BETA CONTROLLER                                        | 1        |
| 32     | 200-02580    | BETA CONTROLLER                                                    | 1        |
| 33     | 200-05267    | SUPER 3 SERIES ENGINE HARNESS                                      | 1        |
| 34     | 200-00959    | ENGINE HARNESS FUSE                                                | 1        |



### Wiring harness & switches

010

020



| Ref. No. | Part No.     | Part Name                                                    | Qty | Remarks                                                 |  |
|----------|--------------|--------------------------------------------------------------|-----|---------------------------------------------------------|--|
| 010      | 200-00959    | Engine harness fuse (blade type)                             | 1   |                                                         |  |
| 020      | 200-05267    | Super3 Series engine harness                                 | 1   | Includes fuse                                           |  |
| 030      | 600-62670    | Oil pressure switch (not 2C panel)                           | 1   |                                                         |  |
| 040      | 600-62820    | Water temperature switch (not 2C panel)                      | 1   | Std from Nov 2008                                       |  |
| 050      | 200-01133    | Water temperature switch / sender 95°C (Not 2C panel) 1/8BSP | 1   | Std before Nov 2008                                     |  |
| 060      | 212-01480    | 3/8BSPT Male x1/8BSP Female galvanised adaptor for 200-01133 | 1   | Required if temp sender being fitted into 3/8BSP thread |  |
| 070      | 200-04588/01 | 1 metre extension harness                                    | 1   | Not shown                                               |  |
| 080      | 200-04588/02 | 2 metre extension harness                                    | 1   | Not shown                                               |  |
| 090      | 200-04588/03 | 3 metre extension harness                                    | 1   | Not shown                                               |  |
| 100      | 200-04588/04 | 4 metre extension harness                                    | 1   | Not shown                                               |  |
| 110      | 200-04588/05 | 5 metre extension harness                                    | 1   | Not shown                                               |  |
| 120      | 200-04588/06 | 6 metre extension harness                                    | 1   | Not shown                                               |  |
| 130      | 200-04588/08 | 8 metre extension harness                                    | 1   | Not shown                                               |  |
| 140      | 200-04588/10 | 10 metre extension harness                                   | 1   | Not shown                                               |  |
| 150      | 200-04588/15 | 15 metre extension harness                                   | 1   | Not shown                                               |  |
| 160      | 200-57640    | Relay (for extension harnesses)                              | 1   | Not shown                                               |  |

030

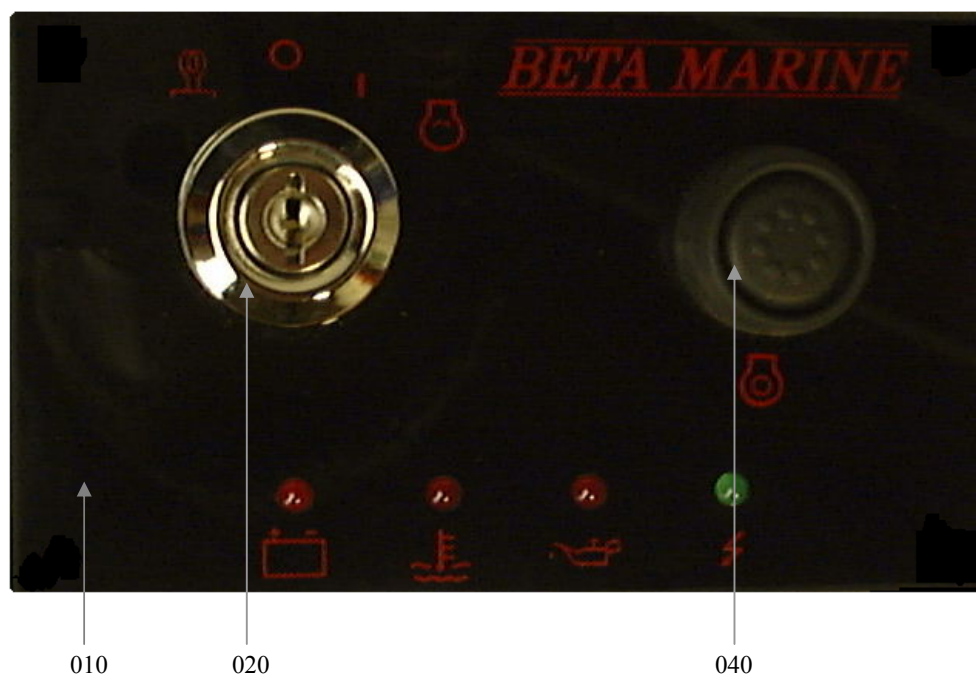
040

050

060



Simple 2A panel –LED type to May 2005



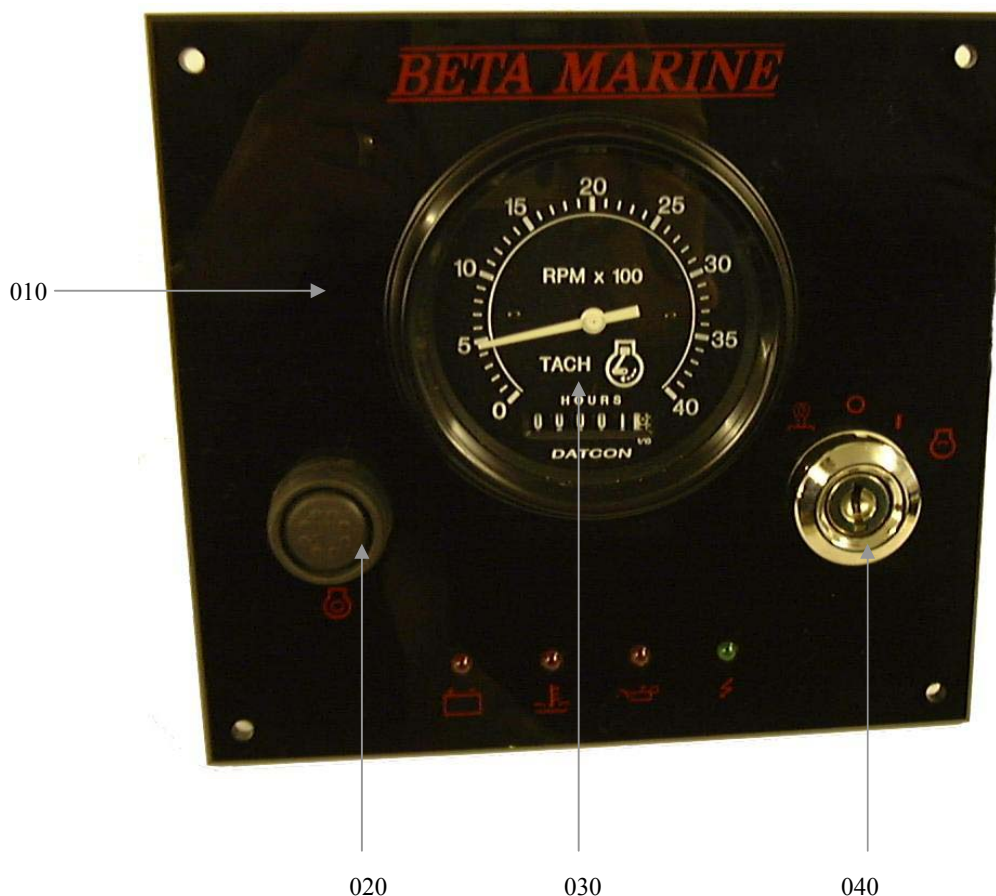
| Ref. No. | Part No.  | Part Name                             | Qty | Remarks                                    |                             |
|----------|-----------|---------------------------------------|-----|--------------------------------------------|-----------------------------|
| 010      | N/A       | Simple panel (complete with LED pack) | 1   | No longer available, Use AK/2AS/KS01       | N/A                         |
| 020      | 600-00057 | Kubota keyswitch                      | N/A |                                            |                             |
| 030      | 600-00058 | Kubota keys -PAIR                     | 1   | Not shown                                  |                             |
| 040      | 200-00072 | Panel stop button                     | 1   |                                            |                             |
| 050      | 200-01295 | LED Pack assembly & buzzer (SEASPEC)  | 1   | Not shown                                  |                             |
|          | 200-01296 | LED Pack assembly & buzzer (DOMESTIC) |     | Not shown                                  |                             |
| 060      | 200-01288 | Panel blank 2A –LED SEASPEC           | 1   | Check availability<br>Does not include 050 | Suits 3 red,<br>1 green LED |
|          | 200-01291 | Panel blank 2A –LED DOMESTIC          |     | Check availability<br>Does not include 050 | Suits 4 red,<br>1 green LED |
| 070      | 200-00639 | 11 Way plug to suit male type spade   | 1   | Not shown                                  |                             |
| 080      | 200-00048 | Large shroud for 11 way plug          | 1   | Not shown                                  |                             |
| 090      | 200-00047 | Male spade for 11 way plug            | 11  | Not shown                                  |                             |
| 100      |           |                                       |     |                                            |                             |

Simple 2A panel –LAMP type from May 2005



| Ref. No. | Part No.     | Part Name                                | Qty | Remarks            |  |
|----------|--------------|------------------------------------------|-----|--------------------|--|
| 010      | AK/2AS/KS01  | Simple panel with 3m loom (complete)     | 1   |                    |  |
| 020      | 600-00057    | Kubota keyswitch –suits small key        | N/A | To August 2008     |  |
|          | 600-00057/01 | Kubota keyswitch –suits large key        | 1   | From August 2008   |  |
| 030      | 600-00058    | Kubota keys –PAIR (SMALL)                | 1   | To August 2008     |  |
|          | 600-00058/01 | Kubota keys –PAIR (LARGE)                | 1   | From August 2008   |  |
| 040      | 200-00072    | Panel stop button                        | 1   |                    |  |
| 050      | 200-04657    | Red 12V warning lamp & retaining clip    | 3   |                    |  |
| 060      | 200-04656    | Green 12V power on lamp & retaining clip | 1   |                    |  |
| 070      | N/A          | Panel blank 2A –LAMP TYPE                | 1   | Check availability |  |
| 080      | 200-00639    | 11 Way plug to suit male type spade      | 1   | Not shown          |  |
| 090      | 200-00048    | Large shroud for 11 way plug             | 1   | Not shown          |  |
| 100      | 200-00047    | Male spade for 11 way plug               | 11  | Not shown          |  |
| 110      | 200-04655    | Alarm board with buzzer                  | 1   | Not shown          |  |
| 120      |              |                                          |     |                    |  |

2AB panel –LED type to May 2005



| Ref. No. | Part No.  | Part Name                                  | Qty | Remarks                                    |     |
|----------|-----------|--------------------------------------------|-----|--------------------------------------------|-----|
| 010      | 200-00853 | 2AB panel (excludes tachometer –see 030)   | 1   | No longer available, Use AK/2ABD/KS31      | N/A |
| 020      | 200-00072 | Panel stop button                          | 1   |                                            |     |
| 030      | 200-00054 | 0-4000 RPM tachometer & hourmeter (DATCON) | 1   | To March 2002                              |     |
|          | 200-02373 | 0-4000 RPM tachometer & hourmeter (VDO)    |     | From March 2002, <b>Viewline Jan2010</b>   |     |
| 040      | 600-00057 | Kubota keyswitch                           | N/A |                                            |     |
| 050      | 600-00058 | Kubota keys -PAIR                          | 1   | Not shown                                  |     |
| 060      | 200-01295 | LED Pack assembly & buzzer (SEASPEC)       | 1   | Not shown                                  |     |
|          | 200-01296 | LED Pack assembly & buzzer (DOMESTIC)      |     | Not shown                                  |     |
| 070      | 200-01289 | Panel blank 2AB (SEASPEC)                  | 1   | Check availability<br>Does not include 050 |     |
|          | 200-01292 | Panel blank 2AB (DOMESTIC)                 |     | Check availability<br>Does not include 050 |     |
| 080      | 200-00639 | 11 Way plug to suit male type spade        | 1   | Not shown                                  |     |
| 090      | 200-00048 | Large shroud for 11 way plug               | 1   | Not shown                                  |     |
| 100      | 200-00047 | Male spade for 11 way plug                 | 11  | Not shown                                  |     |
| 110      |           |                                            |     |                                            |     |

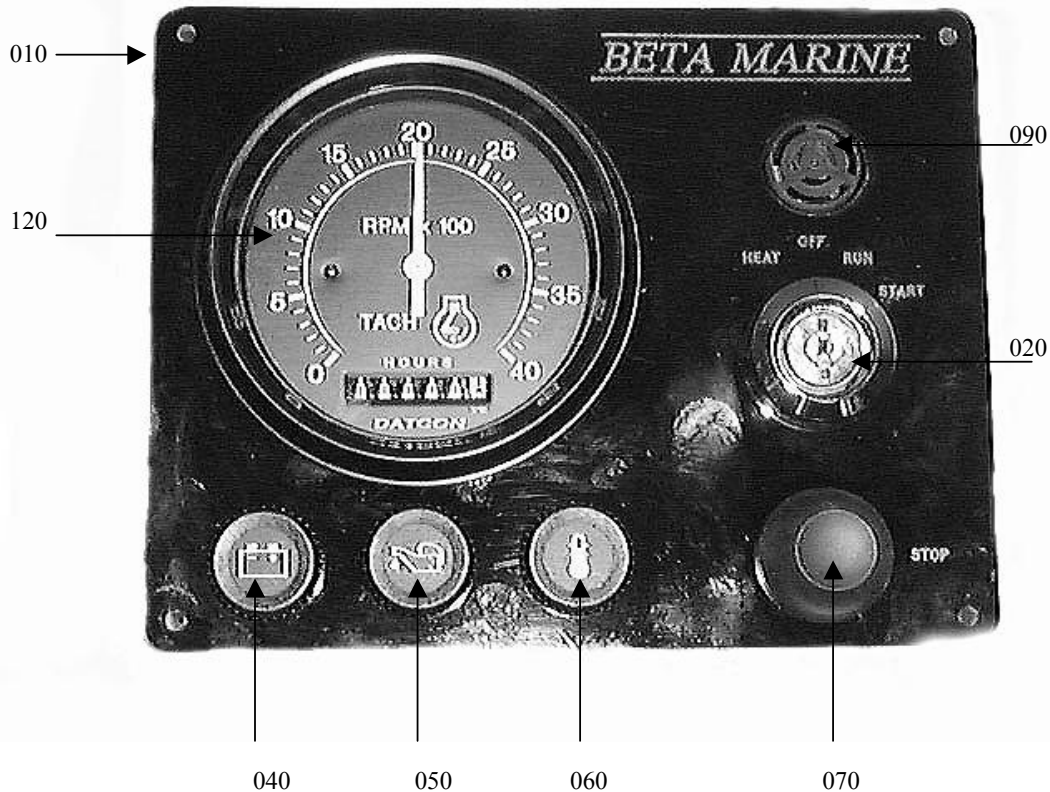
**2AB panel –LAMP type from May 2005**



| Ref. No. | Part No.     | Part Name                                | Qty | Remarks                                  |  |
|----------|--------------|------------------------------------------|-----|------------------------------------------|--|
| 010      | AK/2ABD/KS31 | 2AB panel with 3m loom (Complete)        | 1   |                                          |  |
| 020      | 200-00072    | Panel stop button                        | 1   |                                          |  |
| 030      | 200-02373    | 0-4000 RPM tachometer (VDO)              | 1   | From March 2002                          |  |
|          | 200-02373/03 | 0-3000 RPM tachometer (VDO)              |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 040      | 600-00057    | Kubota keyswitch –suits small key        | N/A | To August 2008                           |  |
|          | 600-00057/01 | Kubota keyswitch –suits large key        | 1   | From August 2008                         |  |
| 050      | 600-00058    | Kubota keys –PAIR (SMALL)                | 1   | To August 2008                           |  |
|          | 600-00058/01 | Kubota keys –PAIR (LARGE)                |     | From August 2008                         |  |
| 060      | 200-04657    | Red 12V warning lamp & retaining clip    | 4   |                                          |  |
| 070      | 200-04656    | Green 12V power on lamp & retaining clip | 1   |                                          |  |
| 080      | N/A          | Panel blank 2AB (DOMESTIC)               | 1   | Check availability                       |  |
| 090      | 200-00639    | 11 Way plug to suit male type spade      | 1   | Not shown                                |  |
| 100      | 200-00048    | Large shroud for 11 way plug             | 1   | Not shown                                |  |
| 110      | 200-00047    | Male spade for 11 way plug               | 11  | Not shown                                |  |
| 120      | 200-04655    | Alarm board with buzzer                  | 1   | Not shown                                |  |
| 130      | 200-87020    | 12V 28Ra 40Amp relay                     | 1   | Not shown                                |  |
| 140      |              |                                          |     |                                          |  |



**2AB'V' panel –LAMP type to May 2005**



| Ref. No. | Part No.  | Part Name                              | Qty | Remarks                                  |     |
|----------|-----------|----------------------------------------|-----|------------------------------------------|-----|
| 010      | 200-89421 | 2AB'V' panel (excludes tacho –see 120) | 1   | No longer available, Use AK/2ABV/KS31    | N/A |
| 020      | 600-00057 | Kubota keyswitch                       | N/A |                                          |     |
| 030      | 600-00058 | Kubota keys -PAIR                      | 1   | Not shown                                |     |
| 040      | 200-00059 | Warning lamp battery                   | 1   |                                          |     |
| 050      | 200-00060 | Warning lamp oil                       | 1   |                                          |     |
| 060      | 200-00061 | Warning lamp water                     | 1   |                                          |     |
| 070      | 200-00072 | Panel stop button                      | 1   |                                          |     |
| 080      | 200-97490 | 12V bulb                               | 3   | Not shown                                |     |
| 090      | 200-06434 | 12V DC buzzer to suit 2AB'V' panel     | 1   | Not shown                                |     |
| 100      | 200-98980 | Panel diode pack                       | 1   | Not shown                                |     |
| 110      | 200-00042 | Panel blank 2AB'V'                     | 1   | Check availability Includes 090 only     |     |
| 120      | 200-00054 | 0-4000 RPM tacho & hourmeter (DATCON)  | 1   | To March 2002                            |     |
|          | 200-02373 | 0-4000 RPM tacho & hourmeter (VDO)     |     | From March 2002, <b>Viewline Jan2010</b> |     |
| 130      | 200-00639 | 11 Way plug to suit male type spade    | 1   | Not shown                                |     |
| 140      | 200-00048 | Large shroud for 11 way plug           | 1   | Not shown                                |     |
| 150      | 200-00047 | Male spade for 11 way plug             | 11  | Not shown                                |     |
| 160      |           |                                        |     |                                          |     |

**2AB'V' panel –LAMP type from May 2005**



| Ref. No. | Part No.     | Part Name                                | Qty | Remarks                                  |  |
|----------|--------------|------------------------------------------|-----|------------------------------------------|--|
| 010      | AK/2ABV/KS31 | 2AB'V' panel with 3m loom (complete)     | 1   |                                          |  |
| 020      | 600-00057    | Kubota keyswitch –suits small key        | N/A | To July 2008                             |  |
|          | 600-00057/01 | Kubota keyswitch –suits large key        | 1   | From July 2008                           |  |
| 030      | 600-00058    | Kubota keys –PAIR (SMALL)                | 1   | To July 2008                             |  |
|          | 600-00058/01 | Kubota keys –PAIR (LARGE)                | 1   | From July 2008                           |  |
| 040      | 200-04657    | Red 12V warning lamp & retaining clip    | 3   |                                          |  |
| 050      | 200-04656    | Green 12V power on lamp & retaining clip | 1   |                                          |  |
| 060      | 200-00072    | Panel stop button                        | 1   |                                          |  |
| 070      | 200-02373    | 0-4000 RPM tachometer (VDO)              | 1   | From March 2002                          |  |
|          | 200-02373/03 | 0-3000 RPM tachometer (VDO)              |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 080      | N/A          | Panel blank 2ABV                         | 1   | Check availability                       |  |
| 090      | 200-00639    | 11 Way plug to suit male type spade      | 1   | Not shown                                |  |
| 100      | 200-00048    | Large shroud for 11 way plug             | 1   | Not shown                                |  |
| 110      | 200-00047    | Male spade for 11 way plug               | 11  | Not shown                                |  |
| 120      | 200-04655    | Alarm board with buzzer                  | 1   | Not shown                                |  |
| 130      |              |                                          |     |                                          |  |

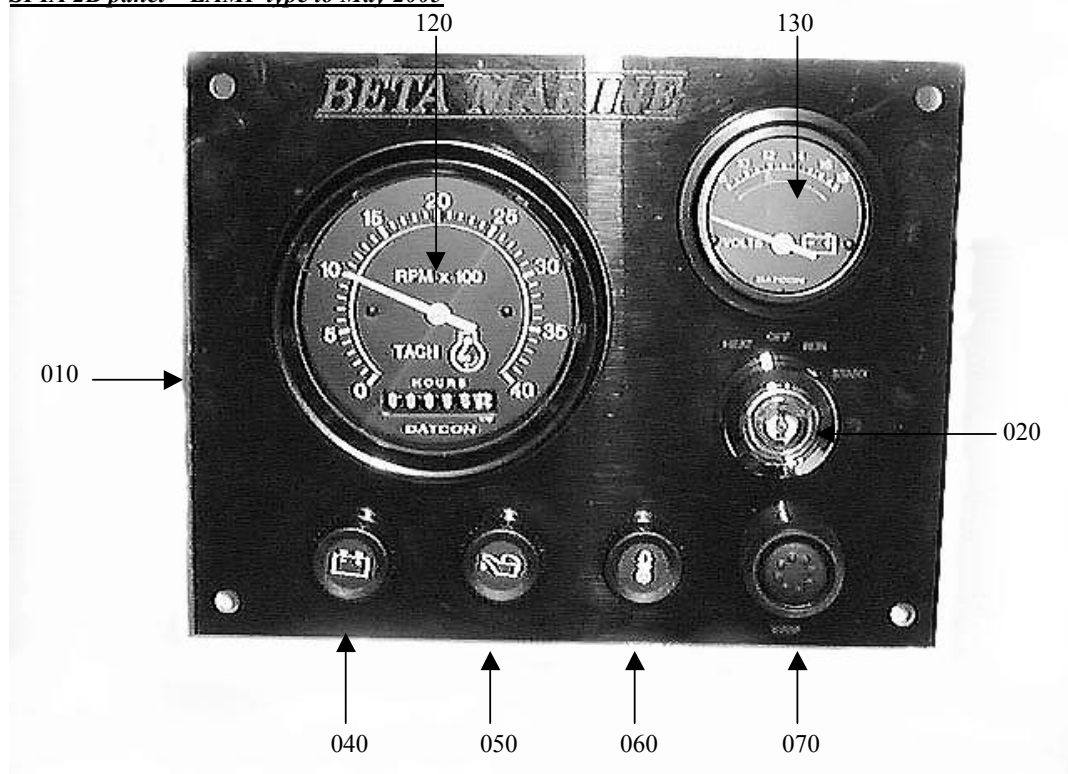
**2AB'V'W pushbutton control panel –LAMP type from May 2005**



| Ref. No. | Part No.      | Part Name                                | Qty | Remarks                                  |  |
|----------|---------------|------------------------------------------|-----|------------------------------------------|--|
| 010      | AK/2ABVW/KS31 | 2AB'V'W panel with 3m loom (complete)    | 1   |                                          |  |
| 020      | 200-00072     | Panel stop / start / heat button         | 3   |                                          |  |
| 030      | 200-04657     | Red 12V warning lamp & retaining clip    | 3   |                                          |  |
| 040      | 200-04656     | Green 12V power on lamp & retaining clip | 1   |                                          |  |
| 050      | 200-02373     | 0-4000 RPM tachometer & hourmeter (VDO)  | 1   | From March 2002                          |  |
|          | 200-02373     | 0-3000 RPM tachometer & hourmeter (VDO)  |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 060      | N/A           | Panel blank 2ABVW                        | 1   | Check availability                       |  |
| 070      | 200-00639     | 11 Way plug to suit male type spade      | 1   | Not shown                                |  |
| 080      | 200-00048     | Large shroud for 11 way plug             | 1   | Not shown                                |  |
| 090      | 200-00047     | Male spade for 11 way plug               | 11  | Not shown                                |  |
| 100      | 200-04655     | Alarm board with buzzer                  | 1   | Not shown                                |  |
| 110      | 200-87020     | 12V 28Ra 40Amp relay                     | 2   | Not shown                                |  |
| 120      | 200-03466     | Pektron diode                            | 1   | Not shown                                |  |
| 130      | 200-02618     | Diode bridge                             | 1   | Not shown                                |  |



**SFIA 2B panel –LAMP type to May 2005**



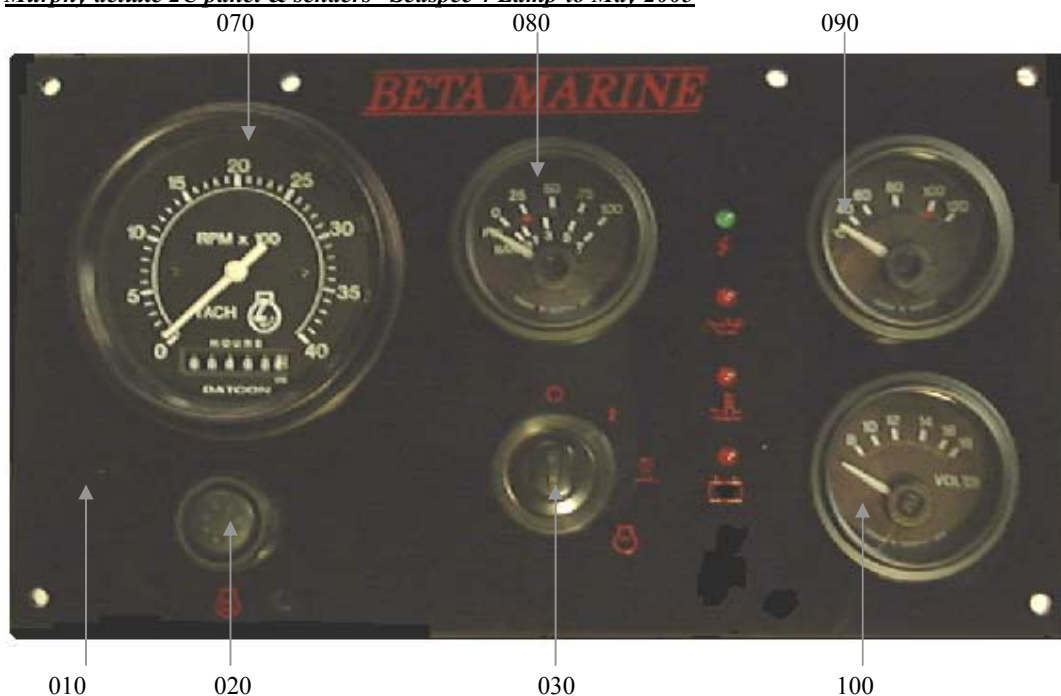
| Ref. No. | Part No.  | Part Name                                                                                  | Qty | Remarks                                  |     |
|----------|-----------|--------------------------------------------------------------------------------------------|-----|------------------------------------------|-----|
| 010      | 200-05408 | SFIA 2B Panel –with temperature gauge<br>From February 2003 (excludes tachometer –see 120) | 1   | No longer available,<br>Use AK/2BT/KS31  | N/A |
|          | 200-60952 | SFIA 2B Panel –with voltmeter<br>To February 2003 (excludes tachometer –see 120)           |     |                                          | N/A |
| 020      | 600-00057 | Kubota keyswitch                                                                           | N/A |                                          |     |
| 030      | 600-00058 | Kubota keys -PAIR                                                                          | 1   | Not shown                                |     |
| 040      | 200-00059 | Warning lamp battery                                                                       | 1   |                                          |     |
| 050      | 200-00060 | Warning lamp oil                                                                           | 1   |                                          |     |
| 060      | 200-00061 | Warning lamp water                                                                         | 1   |                                          |     |
| 070      | 200-00072 | Panel stop button                                                                          | 1   |                                          |     |
| 080      | 200-97490 | 12V bulb                                                                                   | 3   | Not shown                                |     |
| 090      | 200-99433 | 12V DC Buzzer                                                                              | 1   | Not shown                                |     |
| 100      | 200-98980 | Panel diode pack                                                                           | 1   | Not shown                                |     |
| 110      | 200-00043 | Panel blank SFIA 2B                                                                        | 1   | Check availability                       |     |
| 120      | 200-00054 | 0-4000 RPM tachometer & hourmeter (DATCON)                                                 | 1   | To March 2002                            |     |
|          | 200-02373 | 0-4000 RPM tachometer & hourmeter (VDO)                                                    |     | From March 2002, <b>Viewline Jan2010</b> |     |
| 130      | 200-91400 | Water temperature gauge (from February 2003)                                               | 1   | From February 2003                       |     |
|          | 200-91390 | Voltmeter gauge (-February 2003)                                                           |     | To February 2003                         |     |
| 140      | 200-00639 | 11 Way plug to suit male type spade                                                        | 1   | Not shown                                |     |
| 150      | 200-00048 | Large shroud for 11 way plug                                                               | 1   | Not shown                                |     |
| 160      | 200-00047 | Male spade for 11 way plug                                                                 | 11  | Not shown                                |     |

**SFIA 2B panel –LAMP type from May 2005**

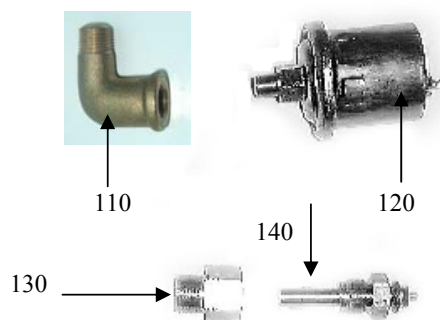


| Ref. No. | Part No.     | Part Name                                                         | Qty | Remarks                                  |  |
|----------|--------------|-------------------------------------------------------------------|-----|------------------------------------------|--|
| 010      | AK/2BT/KS31  | SFIA 2B Panel –with temperature gauge<br>From May 2005 (complete) | 1   | With Murphy temp gauge                   |  |
| 020      | 600-00057    | Kubota keyswitch –suits small key                                 | N/A | To July 2008                             |  |
|          | 600-00057/01 | Kubota keyswitch –suits large key                                 | 1   | From July 2008                           |  |
| 030      | 600-00058    | Kubota keys –PAIR (SMALL)                                         | 1   | To July 2008                             |  |
|          | 600-00058/01 | Kubota keys –PAIR (LARGE)                                         |     | From July 2008                           |  |
| 040      | 200-04657    | Red 12V warning lamp & retaining clip                             | 3   |                                          |  |
| 050      | 200-04656    | Green 12V power on lamp & retaining clip                          | 1   |                                          |  |
| 060      | 200-00072    | Panel stop button                                                 | 1   |                                          |  |
| 070      | 200-02373    | 0-4000 RPM tachometer (VDO)                                       | 1   | To March 2002                            |  |
|          | 200-02373/03 | 0-3000 RPM tachometer (VDO)                                       |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 080      | 200-96200    | Murphy water temperature gauge                                    | 1   | (Murphy not shown)                       |  |
| 090      | N/A          | Panel blank 2B                                                    | 1   | Check availability                       |  |
| 100      | 200-04655    | Alarm board with buzzer                                           | 1   | Not shown                                |  |
| 110      | 200-00639    | 11 Way plug to suit male type spade                               | 1   | Not shown                                |  |
| 120      | 200-00048    | Large shroud for 11 way plug                                      | 1   | Not shown                                |  |
| 130      | 200-00047    | Male spade for 11 way plug                                        | 11  | Not shown                                |  |
| 140      |              |                                                                   |     |                                          |  |

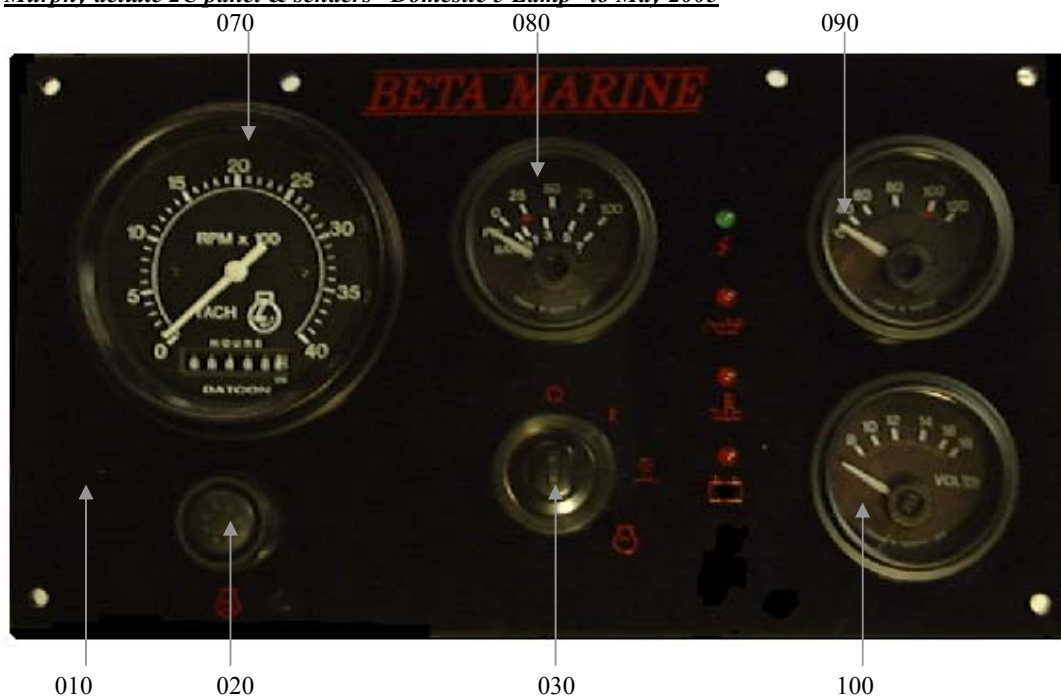
**Murphy deluxe 2C panel & senders –Seaspec 4 Lamp-to May 2005**



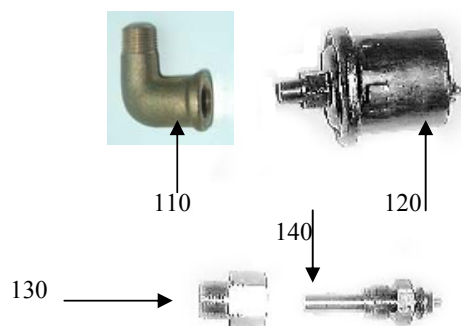
| Ref. No. | Part No.  | Part Name                                                                                     | Qty | Remarks                                  |     |
|----------|-----------|-----------------------------------------------------------------------------------------------|-----|------------------------------------------|-----|
| 010      | 200-00854 | Murphy 2C deluxe panel –Seaspec 4 Lamp (Excludes gauges & loom –See 070, 080, 090, 100 & 150) | 1   | No longer available, Use AK/2CD/KS31     | N/A |
| 020      | 200-00072 | Panel stop button                                                                             | 1   |                                          |     |
| 030      | 200-00073 | Murphy panel keyswitch                                                                        | 1   |                                          |     |
| 040      | 200-98965 | Murphy deluxe panel single key                                                                | 2   | Not shown                                |     |
| 050      | 200-01295 | LED Pack assembly & buzzer –Seaspec 4 Lamp                                                    | 1   | Not shown                                |     |
| 060      | 200-01290 | Murphy deluxe panel blank (Seaspec 4 Lamp)                                                    | 1   | Excludes LED pack                        |     |
| 070      | 200-00054 | 0-4000 RPM tachometer                                                                         | 1   | To March 2002                            |     |
|          | 200-02373 | 0-4000 RPM tachometer (VDO)                                                                   |     | From March 2002, <b>Viewline Jan2010</b> |     |
| 080      | 200-96190 | Murphy oil pressure gauge                                                                     | 1   |                                          |     |
| 090      | 200-96200 | Murphy water temperature gauge                                                                | 1   |                                          |     |
| 100      | 200-96210 | Murphy voltmeter gauge                                                                        | 1   |                                          |     |
| 110      | 212-04355 | 1/8" BSP MxF elbow                                                                            | 1   |                                          |     |
| 120      | 200-94350 | Murphy pressure sender                                                                        | 1   |                                          |     |
| 130      | 200-91980 | Water temperature sender adaptor                                                              | 1   |                                          |     |
| 140      | 200-94360 | Murphy temperature sender                                                                     | 1   |                                          |     |
| 150      | 200-93830 | Murphy deluxe 3m connecting loom                                                              | 1   | Not shown                                |     |
| 160      | 200-00046 | 11 Way socket to suit female type spade                                                       | 1   | Not shown                                |     |
| 170      | 200-00181 | Female spade for 11 way plug                                                                  | 11  | Not shown                                |     |



**Murphy deluxe 2C panel & senders –Domestic 5 Lamp –to May 2005**



| Ref. No. | Part No.  | Part Name                                                                                      | Qty | Remarks                                  |     |
|----------|-----------|------------------------------------------------------------------------------------------------|-----|------------------------------------------|-----|
| 010      | 200-00851 | Murphy 2C deluxe panel –Domestic 5 Lamp (Excludes gauges & loom –See 070, 080, 090, 100 & 150) | 1   | No longer available, Use AK/2CD/KS31     | N/A |
| 020      | 200-00072 | Panel stop button                                                                              | 1   |                                          |     |
| 030      | 200-00073 | Murphy panel keyswitch                                                                         | 1   |                                          |     |
| 040      | 200-98965 | Murphy deluxe panel single key                                                                 | 2   | Not shown                                |     |
| 050      | 200-01296 | LED Pack assembly & buzzer –Domestic 5 Lamp                                                    | 1   | Not shown                                |     |
| 060      | 200-01293 | Murphy deluxe panel blank (Domestic 5 Lamp)                                                    | 1   | Excludes LED pack                        |     |
| 070      | 200-00054 | 0-4000 RPM tachometer                                                                          | 1   | To March 2002                            |     |
|          | 200-02373 | 0-4000 RPM tachometer (VDO)                                                                    |     | From March 2002, <b>Viewline Jan2010</b> |     |
| 080      | 200-96190 | Murphy oil pressure gauge                                                                      | 1   |                                          |     |
| 090      | 200-96200 | Murphy water temperature gauge                                                                 | 1   |                                          |     |
| 100      | 200-96210 | Murphy voltmeter gauge                                                                         | 1   |                                          |     |
| 110      | 212-04355 | 1/8" BSP MxF elbow                                                                             | 1   |                                          |     |
| 120      | 200-94350 | Murphy pressure sender                                                                         | 1   |                                          |     |
| 130      | 200-91980 | Water temperature sender adaptor                                                               | 1   |                                          |     |
| 140      | 200-94360 | Murphy temperature sender                                                                      | 1   |                                          |     |
| 150      | 200-93830 | Murphy deluxe 3m connecting loom                                                               | 1   | Not shown                                |     |
| 160      | 200-00046 | 11 Way socket to suit female type spade                                                        | 1   | Not shown                                |     |
| 170      | 200-00181 | Female spade for 11 way plug                                                                   | 11  | Not shown                                |     |



**Murphy deluxe 2C panel & senders –Domestic 5 Lamp –from May 2005**



| Ref. No. | Part No.     | Part Name                                                                              | Qty | Remarks                                  |  |
|----------|--------------|----------------------------------------------------------------------------------------|-----|------------------------------------------|--|
| 010      | AK/2CD/KS31  | Murphy 2C deluxe panel –Domestic 5 Lamp (Complete, less 3m interconnection cable 1670) | 1   |                                          |  |
| 020      | 200-00072    | Panel stop button                                                                      | 1   |                                          |  |
| 030      | 600-00057    | Kubota keyswitch –suits small key                                                      | N/A | To July 2008                             |  |
|          | 600-00057/01 | Kubota keyswitch –suits large key                                                      | 1   | From July 2008                           |  |
| 040      | 600-00058    | Kubota keys –PAIR (SMALL)                                                              | 1   | To July 2008                             |  |
|          | 600-00058/01 | Kubota keys –PAIR (LARGE)                                                              |     | From July 2008                           |  |
| 050      | 200-04657    | Red 12V warning lamp & retaining clip                                                  | 4   |                                          |  |
| 060      | 200-04656    | Green 12V power on lamp & retaining clip                                               | 1   |                                          |  |
| 070      | N/A          | Murphy deluxe panel blank (Domestic 5 Lamp)                                            | 1   | Check availability                       |  |
| 080      | 200-02373    | 0-4000 RPM tachometer (VDO)                                                            | 1   | From March 2002                          |  |
|          | 200-02373/03 | 0-3000 RPM tachometer & hourmeter (VDO)                                                |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 090      | 200-96190    | Murphy oil pressure gauge                                                              | 1   |                                          |  |
| 100      | 200-96200    | Murphy water temperature gauge                                                         | 1   |                                          |  |
| 110      | 200-96210    | Murphy voltmeter gauge                                                                 | 1   |                                          |  |
| 120      | 212-04355    | 1/8"BSP MxF elbow                                                                      | 1   |                                          |  |
| 130      | 200-94350    | Murphy pressure sender                                                                 | 1   |                                          |  |
| 140      | 200-91980    | Water temperature sender adaptor                                                       | 1   |                                          |  |
| 150      | 200-94360    | Murphy temperature sender 5/8UNF                                                       | 1   |                                          |  |
|          | 200-08248    | Murphy temperature sender 1/8NPT -Beta60 March11                                       |     | Not shown                                |  |
| 160      | 200-04588/03 | 3m extension harness                                                                   | 1   | Not shown                                |  |
| 170      | 200-00639    | 11 Way plug to suit male type spade                                                    | 1   | Not shown                                |  |
| 180      | 200-00047    | Male spade for 11 way plug                                                             | 11  | Not shown                                |  |



120



130

140

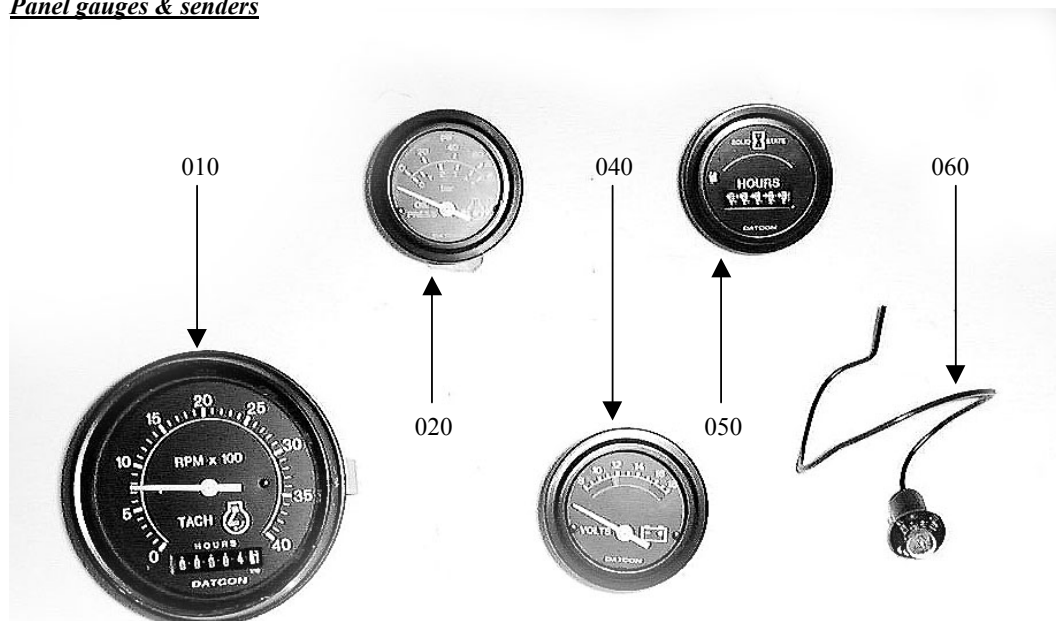


150





## Panel gauges & senders



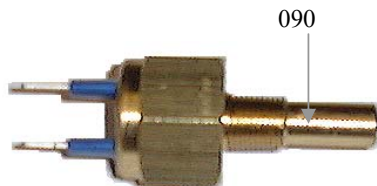
| Ref. No. | Part No.     | Part Name                             | Qty | Remarks                                  |  |
|----------|--------------|---------------------------------------|-----|------------------------------------------|--|
| 010      | 200-00054    | 0-4000 RPM tacho & hourmeter          | 1   | To March 2002                            |  |
|          | 200-02373    | 0-4000 RPM tacho & hourmeter (VDO)    |     | From March 2002                          |  |
|          | 200-02373/03 | 0-3000 RPM tacho & hourmeter (VDO)    |     | From March 2007, <b>Viewline Jan2010</b> |  |
| 020      | 200-08011    | Oil pressure gauge –VDO Viewline      | 1   | Not shown                                |  |
|          | 200-91380    | Oil pressure gauge –Datcon            |     |                                          |  |
| 030      | 200-07981    | Water temperature gauge –VDO Viewline | 1   | Not shown                                |  |
|          | 200-91390    | Water temperature gauge –Datcon       |     | Not shown                                |  |
| 040      | 200-07980    | Voltmeter gauge –VDO Viewline         | 1   | Not shown                                |  |
|          | 200-91400    | Voltmeter gauge –Datcon               |     |                                          |  |
| 050      | 200-90000    | Hourmeter gauge                       | 1   |                                          |  |
| 060      | 200-01392    | Datcon gauge bulb 12V                 | 1   |                                          |  |
| 070      | 212-04355    | 1/8"BSP MxF elbow                     | 1   |                                          |  |
| 080      | 200-62680    | 0-5 Bar switch / sender               | 1   |                                          |  |
| 090      | 200-01133    | Water temperature switch / sender 95C | 1   |                                          |  |
| 100      | 212-01480    | 3/8BSPTM x1/8BSPF adaptor             | 1   |                                          |  |
| 110      | 200-04805    | Bulb, red for 12V VDO tacho           | 1   | Not shown                                |  |
| 120      | 200-96220    | Datcon tacho bulb 12V                 | 1   | Not shown                                |  |
| 130      | 200-07664    | 8 Pin connector –for Viewline gauges  | 1   | Not shown – comes with gauge             |  |



070



080

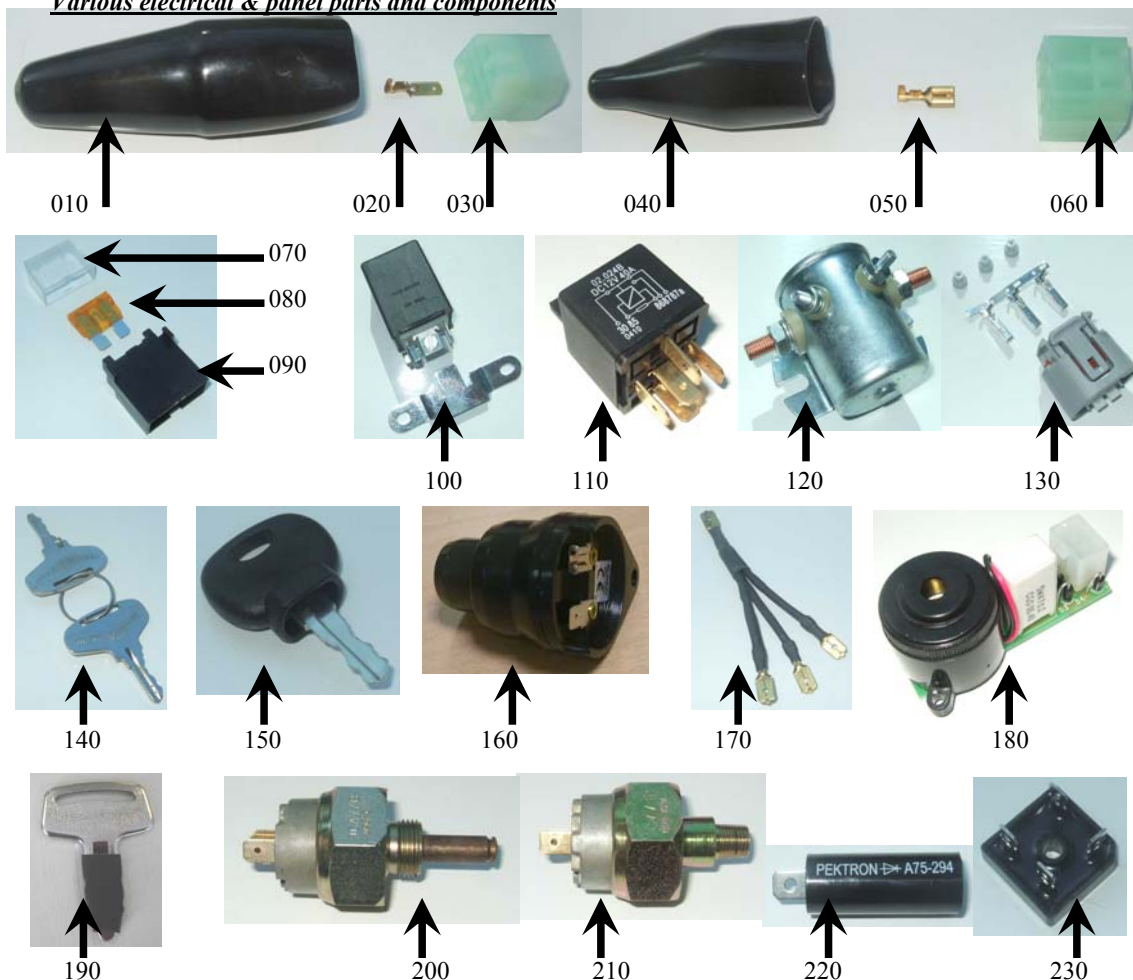


090



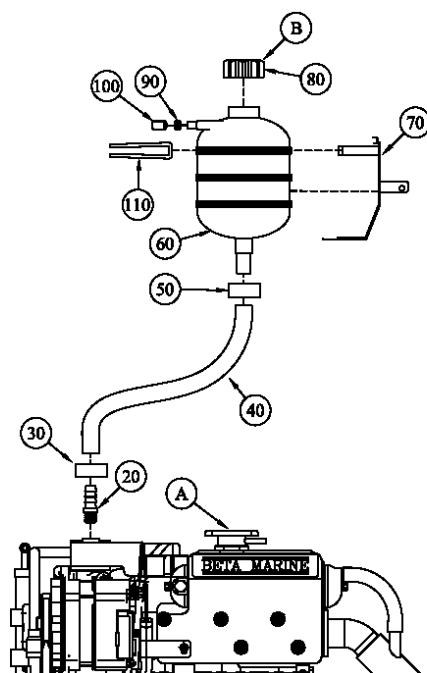
100

Various electrical & panel parts and components



| Ref. No. | Part No.     | Part Name                               | Qty | Remarks              |  |
|----------|--------------|-----------------------------------------|-----|----------------------|--|
| 010      | 200-00048    | Large shroud for 11 way plug            | 1   | On panel connection  |  |
| 020      | 200-00047    | Male spade for 11 way plug              | 11  | On panel connection  |  |
| 030      | 200-00639    | 11 Way plug to suit male type spade     | 1   | On panel connection  |  |
| 040      | 200-00638    | Small shroud for 11 way socket          | 1   | On engine harness    |  |
| 050      | 200-00181    | Female spade for 11 way socket          | 11  | On engine harness    |  |
| 060      | 200-00046    | 11 Way socket to suit female type spade | 1   | On engine harness    |  |
| 070      | 200-01426    | Plastic clear fuse cover                | 1   | On engine harness    |  |
| 080      | 200-00959    | Fuse, blade type 40 Amp                 | 1   | On engine harness    |  |
| 090      | 200-00640    | Fuse holder, blade type for 40 Amp      | 1   | On engine harness    |  |
| 100      | 200-57640    | 12V 33Ra 70Amp relay                    | 1   | For extended looms   |  |
| 110      | 200-87020    | 12V 28Ra 40Amp relay                    | 1   | On rear of panel     |  |
| 120      | 200-89950/01 | 12V heavy duty relay                    | 1   | For insulated earth  |  |
| 130      | 600-02405    | Kubota alternator 3 pin coupler         | 1   | For 3 pin Denso alt  |  |
| 140      | 600-00058    | Kubota keys –PAIR, SMALL                | 1   | Standard to mid 2008 |  |
| 150      | 200-98965    | Murphy deluxe panel single key          | 2   | Deluxe to May 2005   |  |
| 160      | 200-99433    | 12V buzzer                              | 1   | 2B to May 2005       |  |
| 170      | 200-98980    | Panel diode pack                        | 1   | 2ABV to May 2005     |  |
| 180      | 200-04655    | Alarm board with buzzer                 | 1   | Std from May 2005    |  |
| 190      | 600-00058/01 | Kubota keys –PAIR, LARGE                | 1   | From mid 2008        |  |
| 200      | 200-02069    | Water temperature switch 096C 3/8BSP    | 1   | Genset standard      |  |
| 210      | 200-61190    | Oil pressure switch 98kPa 1/8BSP        | 1   | Genset standard      |  |
| 220      | 200-03466    | Pektron diode                           | 1   | Push button panels   |  |
| 230      | 200-02618    | Diode bridge                            | 1   | Push button panels   |  |
| 240      | 200-04623    | 14 Core panel cable                     | /m  | Not shown            |  |

# Expansion water bottle & spare parts list –all engines



|    |                             |                |
|----|-----------------------------|----------------|
| 10 | EXPANSION TANK KIT COMPLETE | AK/SML/EXP/001 |
|----|-----------------------------|----------------|

| REF | PART NAME                   | PART NO   |
|-----|-----------------------------|-----------|
| 20  | 3/8 BSPT - 3/4 HOSE TAIL    | 210-03297 |
| 30  | 30mm S/S HOSE CLIP          | 212-98464 |
| 40  | 3/4 BORE HEATER HOSE        | 212-00471 |
| 50  | 30mm S/S HOSE CLIP          | 212-98464 |
| 60  | EXPANSION TANK              | 209-03065 |
| 70  | MOUNTING BRACKET            | 209-03067 |
| 80  | EXPANSION TANK CAP          | 209-03066 |
| 90  | LARGE FUEL CLIP (NO:17)     | 212-03393 |
| 100 | HOSE CAP (10mm ID)          | 212-03303 |
| 110 | EXPANSION TANK HOLDING BAND | 209-03068 |

WHEN FILLING, FILL POINT A AND REPLACE WATER CAP  
THEN FILL POINT B.

POINT A MUST BE STANDARD FILLER CAP P/N 209-80130  
(PRESSURE 13 PSI)

| Ref. No.                                                   | Part No.       | Part Name                         | Qty  | Remarks |  |
|------------------------------------------------------------|----------------|-----------------------------------|------|---------|--|
| 010                                                        | AK/SML/EXP/001 | Expansion tank kit, complete      | 1    |         |  |
| (This kit consists of all items listed individually below) |                |                                   |      |         |  |
| 020                                                        | 210-03297      | 3/8BSPT-3/4" Hose connector       | 1    |         |  |
| 030                                                        | 212-98464      | Stainless steel hose clip 22-30mm | 1    |         |  |
| 040                                                        | 212-00471      | 3/4" Bore water hose              | 1.5m |         |  |
| 050                                                        | 212-98464      | Stainless steel hose clip 22-30mm | 1    |         |  |
| 060                                                        | 209-03065      | Expansion tank                    | 1    |         |  |
| 070                                                        | 209-03067      | Expansion tank mounting bracket   | 1    |         |  |
| 080                                                        | 209-03066      | Expansion tank lid                | 1    |         |  |
| 090                                                        | 212-07009      | No 22 Stainless steel hose clip   | 1    |         |  |
| 100                                                        | 212-07011      | Hose cap blanking bung            | 1    |         |  |
| 110                                                        | 209-03068      | Expansion tank holding band       | 1    |         |  |





## Standard fitting of calorifier connections to Super 3

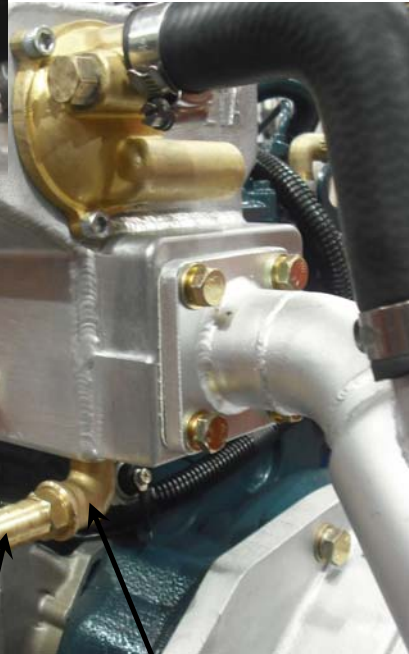
### -Heat exchanger cooled engine from March 2011

#### Hot water to calorifier tank



1. Remove 1/8" BSP bung from cylinder head, behind last injector at rear starboard side of engine.

2. Fit 1/8" BSP Male swivel adaptor with the supplied copper washer. Into this, fit the elbow and 5/8" hose connector.



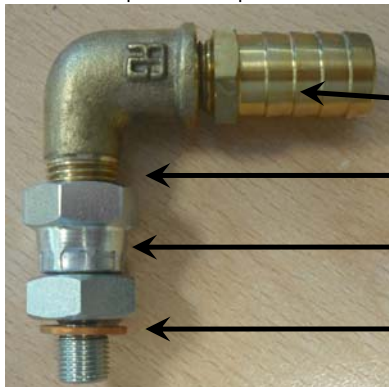
#### Cool water from calorifier tank

3. Remove bung from underside of heat exchanger tank with 8mm hex key.

4. Fit 3/8" BSP Male x Female elbow

5. Fit 3/8" BSP x 5/8 hose connector

**Note:** All fittings to be sealed with PTFE tape or pipe sealant to prevent water leaks when engine is at operating temperature and pressure.



**Part Numbers:** 212-99233      212-99237

212-00904

212-04356

212-04356

212-06565

**COMPLETE KIT: AK/HE/CAL/003**

## **Cleaning the heat exchanger tube stack & replacing wasting zinc anode on 2011 Mini, Super5 & Super3 Series engines**

1. The wasting zinc anode should be replaced every year. This can be more frequent depending on the environment the vessel is in. The anode is attached to the bolt inserted in the rear end cap of the heat exchanger. See fig. 1.
2. Using a 9/16" spanner, unscrew the bolt and replace the complete unit with a new one.
3. Check for leaks.
4. It is possible for fine sea weed and other debris to get past the inlet filter and into the tube stack. This requires removal of the tube stack for cleaning.
5. Drain off coolant into a bucket.
6. Unscrew the 6 end cap retaining bolts using a 5mm Hex Key (three each end of the tube stack). Remove the 'O' rings and slide out the tube stack. Clean tube stack and end caps.
7. Re-assemble using new 'O' rings, Beta Marine part number 212-07273. Do not over tighten end cap bolts and make sure the tube stack is the right way round -see aligning marks Fig 2. This is to ensure sea water flows correctly through the tube stack straight out of the exhaust, allowing sea water to flow from the lower twenty tubes to the front endcap where it then returns through the upper twenty tubes, past the wasting anode and into the exhaust system.
8. Re-fill engine with water/anti-freeze solution and run engine up to temperature to check for leaks.



**Fig 1 Wasting anode**



**Fig 2 Aligning marks**

**Part numbers:**  
**2 OFF 212-07273 O RING HEAT EXCHANGER TUBESTACK**  
**1 OFF 209-61840 ZINC WASTING ANODE**  
**6 OFF 217-00190Z M6 x 16mm SOCKET CAP SCREW**

## Installation Kits



| Ref. No. | Part No.          | Part Name                                                      | Qty | Remarks   |
|----------|-------------------|----------------------------------------------------------------|-----|-----------|
| 010      | AK/SML/HE/6e/S301 | WATER INLET KIT SUPER3 -BALL VALVE FROM JAN11 1" ID            | 1   |           |
| 020      | AK/SML/HE/6b/001  | 2" WATER COOLED EXHAUST KIT                                    | 1   |           |
| 030      | AK/SML/HE/6c/001  | 2" PLASTIC WATERLOCK (& 4 OFF HOSE CLIPS)                      | 1   |           |
| 040      | 212-00466         | ANTI-SYPHON WITH VENT                                          | 1   |           |
| 050      | AK/SML/6g/001     | FLEXIBLE FUEL PIPES 24" OAL ISO7840                            | 1   |           |
| 060      | AK/SML/6k/001     | FUEL DELIVERY KIT                                              | 1   |           |
|          | AK/SML/6k/001     | FUEL LEAK OFF KIT                                              | 1   |           |
| 070      | AK/SML/6l/H01     | FUEL / WATER SEPARATOR HEAT EXCHANGER COOLED (8mm HOSE TAILS)  | 1   | NOT SHOWN |
|          | AK/SML/6l/001     | FUEL / WATER SEPARATOR KEEL COOLED (8mm COMPRESSION)           |     |           |
| 080      | AK/6H/HE/001      | ELECTRIC FUEL LIFT PUMP (HEAT EXCHANGER COOLED 8mm HOSE TAILS) | 1   |           |
|          | AK/6H/KC/001      | ELECTRIC FUEL LIFT PUMP (KEEL COOLED 8mm COMPRESSION)          |     |           |
| 090      | AK/MID/3h/001     | S3 REMOTE OIL FILTER BULKHEAD MOUNTED                          | 1   | NOT SHOWN |
| 100      | AK/SML/5a/002     | SINGLE LEVER CONTROL                                           | 1   |           |
| 110      | 212-96070/01      | SINGLE LEVER CONTROL CABLE 3m                                  | 1   |           |
| 120      | 200-96160         | BATTERY LEADS 1m, 25mm 1 BLACK & 1 RED -UP TO Beta60 ONLY      | 1   |           |



### Short Voyage Spares Kits



| Ref. No. | Part No.           | Part Name                                                   | Qty | Remarks   |
|----------|--------------------|-------------------------------------------------------------|-----|-----------|
| 010      | AK/S3H4/18/MVE01   | SPARES KIT Beta43 & 60 H/E 65AMP<br>-FROM APRIL11           | 1   | NOT SHOWN |
|          | AK/S3H4/18/6KMVE01 | SPARES KIT Beta43 & 60 H/E 100AMP 6K DRIVE<br>-FROM MARCH11 |     | NOT SHOWN |

**PLEASE NOTE: THERE ARE TOO MANY COMBINATIONS OF SPARES KIT TO LIST,  
PLEASE ADVISE BETA MARINE OF YOUR ENGINES WOC (K) NUMBER OR SERIAL  
NUMBER AND WE SHALL ADVISE.**

**PRICE OF THIS KIT WILL BE THE SAME AS ILLUSTRATED ABOVE.**

## **SPARES & REPLACEMENT PARTS**

These items are available from

---

***BETA MARINE***

---

Beta Marine Limited  
Davy Way  
Waterwells  
Quedgeley  
Gloucester  
GL2 2AD, UK

Telephone: 01452 723492      Int. Tel: 44 1452 723492  
Fax: 01452 729916  
Internet: [www.betamarine.co.uk](http://www.betamarine.co.uk)  
Spares email: [spares@betamarine.co.uk](mailto:spares@betamarine.co.uk)