

Fast Moving Parts Listing

Heat Exchanger & Keel Cooled, Beta 28 & Beta 30

Description	Part Number	Qty per 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		
Keel cooled headed tank "O Ring" with built in oil cooler	210-98470		
Pressure Cap 95kPa -15PSI	209-02323	1	
Thermostat	600-72450	1	
Thermostat Gasket	600-80490	1	
Fuel Filter (Heat exchanger cooled)	211-60210	1	
Fuel Filter (Keel cooled / GreenLine)	211-02817	1	
Air Filter Element – All Beta 28 & Beta 30 –FROM JANUARY 2012	211-08132	1	
Air Filter Element - Beta 30 & Mechanical gearbox –FROM MARCH2011	211-08132		
Air Filter Element - Beta 30 & Mechanical gearbox –TO MARCH 2011	211-62950		
Air Filter Element - Beta 30 & Hydraulic gearbox – 2011 ONLY	211-08133		
Air Filter Element - Beta 30 & Hydraulic gearbox –TO END 2010	211-61831		
Lubricating Oil Filter	211-60390	1	
Sump Pump	210-80061	1	
Sump Pump Clamp	212-00793	2	
Dip Stick Extended – stick only (does not include guide)	600-96300	1	
Sea Water Pump –Beta Marine type (from June 2013)	Sea water pump	207-08922	1
	Sea water pump clamp	202-08924/01	1
	Impeller Kit (<i>includes O ring</i>)	207-09041-KIT	1
	Seal Kit	207-09228	1
	Shaft kit	207-09229	1
	Sea water pump hose tail (inlet)	212-99232	1
Sea Water Pump *Side mount from June 2013)	Sea water pump	207-61460/01	1
	Impeller Kit (<i>includes O ring</i>)	207-09041-KIT	1
	Seal Kit	207-09228	1
	Shaft kit	207-09229	1
	Sea water pump MxF elbow ½"BSP	212-10329	1
	Sea water pump hose tail (inlet)	212-99232	1

Heat Exchanger & Keel Cooled, Beta 28 & Beta 30

Description		Part Number	Qty per Engine
Sea Water Pump –Johnson (from July 2006 to June 2013)	Johnson (6 Screw)	207-61500/01	1
	Impeller Kit Johnson 6 Screw (includes gasket etc.)	207-09041-KIT	1
	Cover plate Johnson 6 Screw	207-05478	1
	Cover plate Bolt Johnson 6 Screw	207-05479	6
Sea Water Pump –Jabsco (to July 2006)	Jabsco (3 Screw)	207-61500	1
	Impeller	207-79630	1
	Gasket (6 screw to March 2004)	207-62600	1
	O Ring (3 Screw March2004 –July2006)	207-04206	1
Fuel Lift Pump		600-67830	1
Fuel Lift Pump Gasket		600-00065	1
Belt	Standard for 40 Amp K/C only	600-94280/01	Correctly Select a Belt
	Standard for 100 Amp K/C only	214-02614	
	Standard “Vee” – 65 & 70 Amp (H/E)	214-63090/Q	
	PolyVee 100 Amp (H/E) – to September2009	214-00493	
	PolyVee 100 & 120 Amp (H/E) – from October2009	214-04618	
Alternator	40 Amp Internal Fan (K/C)	600-02781	1
	100 Amp External Fan (K/C)	200-05231	1
	70 Amp External Fan (H/E) (To March 2019)	200-01155	1
	70 Amp External Fan (H/E) (From April 2019 & replacement for 65A)	200-10604	1
	100 Amp Internal Fan (single bolt manifold H/E)	200-03008	1
	120 Amp External Fan (3 bolt From June 2011) (H/E)	200-08183	
Control Panel standard Key – (Silver)	To June 2008	600-00058	a pair
	From June 2008	600-00058/01	
Control Panel Key Switch	To June 2008	600-00057	1
	From June 2008	600-00057/01	
Control Panel Stop Button (and heat & start on ABVW)		200-00072	1
Tachometer 0-4000rpm with digital hour counter		200-02373	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 (energised to stop fuel)		600-79660	1
Fuse (Blade) 40 Amp		200-00959	1

Heat Exchanger & Keel Cooled, Beta 28 & Beta 30

Description		Part Number	Qty per Engine
Standard Engine Harness		200-60973/05	1
65 Amp Alternator Sub Loom Iskra		200-01196	1
1 Metre control panel extension loom		200-04588/01	
2 Metre control panel extension loom		200-04588/02	
3 Metre control panel extension loom		200-04588/03	
4 Metre control panel extension loom		200-04588/04	
Water Temperature Switch (Panel A, ABV & ABVW)		600-62820	1
Water Temperature Sender (Panel C & B)		200-94360	1
Water Temperature Sender 1/8NPT (Panel C & B) <i>FROM APRIL2011</i>		200-08248	
Oil Pressure Switch (Panel A, ABV, ABVW & B)		600-62670	1
Oil Pressure Sender (Panel C)		200-94350	1
Panel A - standard		AK/2AS/KS01	1
Panel AB with tachometer		AK/2ABD/KS02	
Panel ABV with tachometer		AK/2ABV/KS01	
Panel ABVW with tachometer		AK/2ABVW/KS01	
Panel B – with tachometer and gauge		AK/2BT/KS02	
Panel BW – with tachometer and gauge		AK/2BTW/KS01	
Panel C – with tachometer and three gauges		AK/2CD/KS01	
Panel CW – with tachometer and three gauges		AK/2CW/KS01	
Exhaust Bend Gasket		212-09070	
Drive Plate 22-B-60 - TMC60 (Not Beta 30)		206-91950	1
Drive Plate 22-B-95 - TMC60 (Beta 30 only)		206-91960	1
Drive Plate PRM150 – Hydraulic (Not Beta 30)		206-02094	1
Drive Plate PRM260 – Hydraulic (Not Beta 30)		206-04110	1
Flexible Mountings	Beta 28 & Beta 30 K/C only	213-60910	4
	Standard (Trelleborg Type)	213-93440	4
	Type 55 (USA Only)	213-80170/01	4
Rocker Cover Gasket (from Jan 2006) - Beta 28 & Beta 30		600-66490	1
Head Gasket	BD1005	600-66270	1
	BD1105	600-08396	
Top Gasket Set	BD1005	600-01061	1
	BD1105	600-09600	

Heat Exchanger & Keel Cooled, Beta 28 & Beta 30

Description		Part Number	Qty per Engine
Lower Gasket set (excludes sump gasket)	BD1005	600-01062	1
	BD1105	600-09315	
Sump Gasket	BD1005 / BD1105	600-66170	1
Kubota rocker cover oil filler cap		600-00579	1
Kubota rocker cover O ring for oil filler cap		600-00258	1
Kubota fuel leak off rail	3 cylinder	600-00547	1
Kubota gasket to suit fuel leak off rail to injector		600-00537	3
Kubota gasket to suit fuel injector to cylinder head		600-00242	3
Kubota water hose -fresh water pump to thermostat housing body		600-00214	1
Kubota rocker cover air hose	Rocker cover -atmosphere (to 2005)	600-02260	1
	Inlet manifold to rocker cover vent (from 2005)	600-07180	
Starter motor		600-00918	1
Manuals			
Super5 Series Illustrated parts list	BD1005	221-10910	1
	BD1105	221-10911	
Operators Maintenance Manual		221-20031	1
Workshop Manual – base engine only		600-00757	1
Spare Parts Manual – base engine only	Beta 28	600-02439	1 Available as a "pdf"
	Beta 30	600-02469	

Note: the above part numbers are suitable for earth return installations only (where the battery negative cable is connected directly to engine earth /ground). For insulated earth (where battery negative cable is isolated from engine earth /ground) different harnesses, alternators, switches for oil pressure and engine temperature will be required.

If your application is wired as insulated earth return and the engine will not operate correctly, always check starter battery negative is connected to the correct terminal on the isolating solenoid. It should be connected to the terminal which is also used for all the small black wires, **NOT the terminal with the single black wire connected directly to engine ground.**

BD1105 ILLUSTRATED QUICK REFERENCE PARTS LIST –PORT VIEW

Pressure cap: 209-02323

8mm clear plastic expansion hose: 212-03194

Thermostat: 600-72450
(Gasket: 600-80490)

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

Water return pipe:
600-00214

Sea water pump:
207-61500/01 (to June13)
207-08922 (from June13)
(Impeller: 207-09041-KIT)

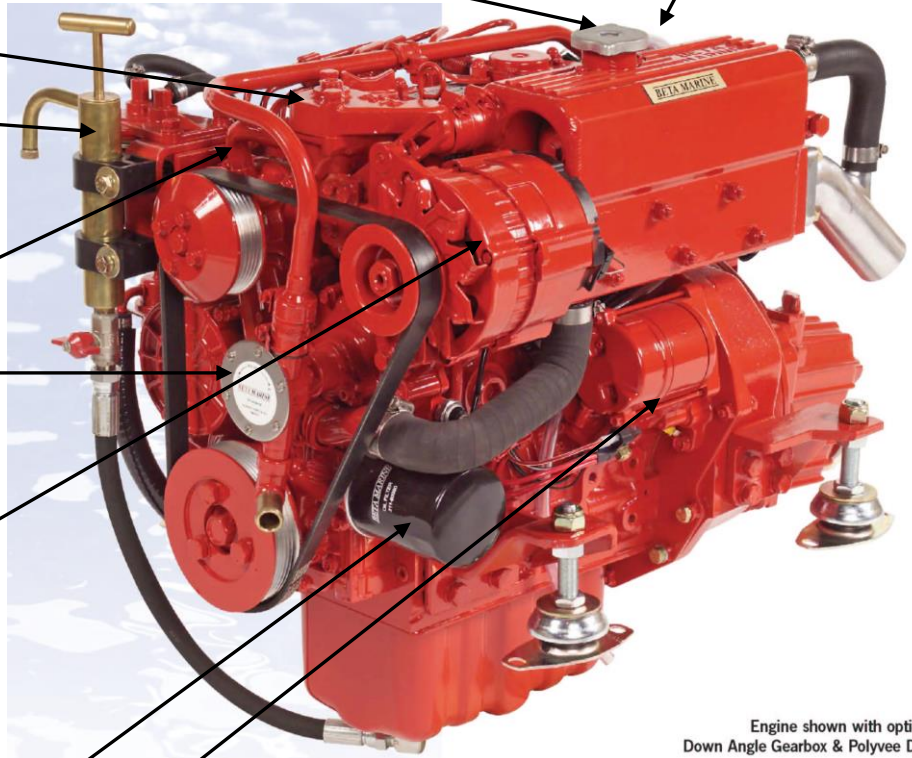
Alternator:
70Amp: 200-01155
V Belt: 214-63090/Q
Sub loom: 200-01196

100Amp: 200-03008
6K Belt: 214-04618

120Amp 200-08183
6K Belt: 214-04618

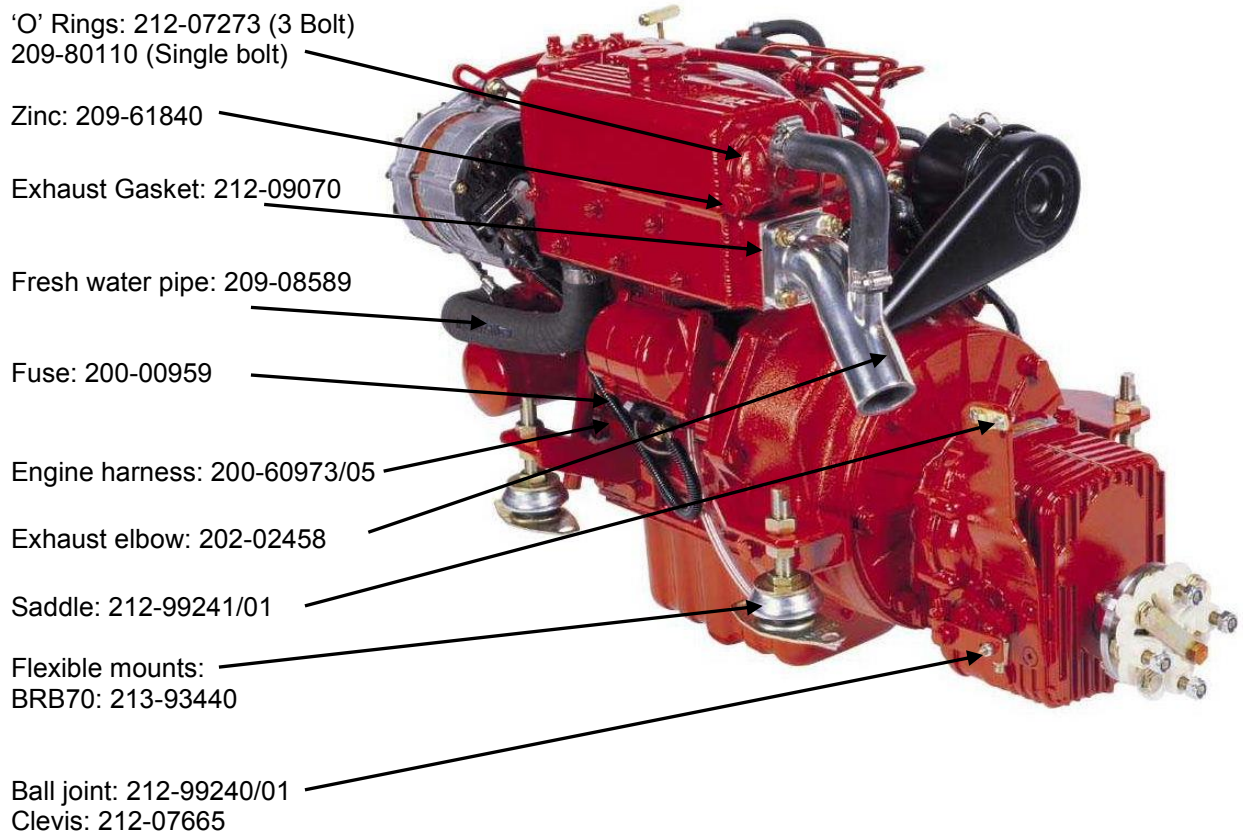
Oil filter: 211-60390

Starter: 600-00918



Engine shown with optional
Down Angle Gearbox & Polyvee Drive

BD1105 ILLUSTRATED QUICK REFERENCE PARTS LIST –REAR VIEW



BD1105 ILLUSTRATED QUICK REFERENCE PARTS LIST –STARBOARD VIEW



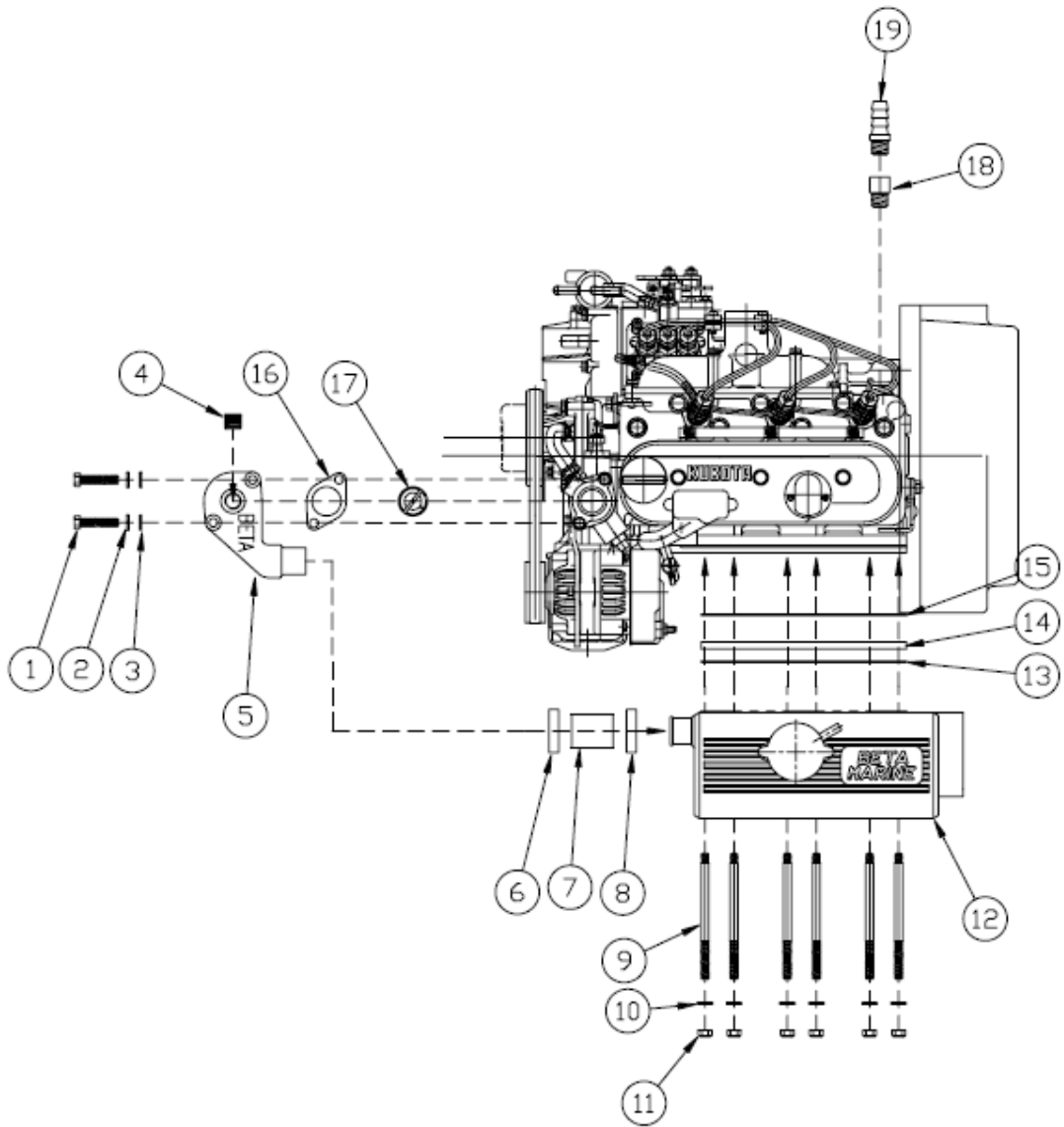
Fuel filter: 211-60210

Air filter element:
 211-61831 to March 2011
 211-08132 from March 2011

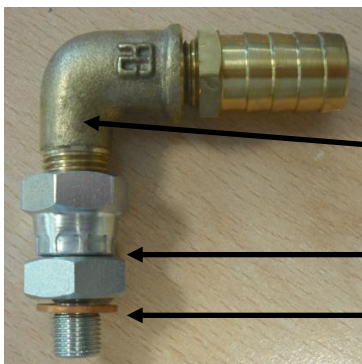
Fuel lift pump: 600-67830
 (Gasket: 600-00065)

Stop solenoid 600-79660

GEARBOX OPTIONS	GEARBOX P/No	DAMPER P/No	MORSE GEAR BRACKET P/No	ADAPTOR PLATE P/No	FLEXIBLE COUPLING
TMC 40 R2	204-91690	206-91960	202-61582/01	205-60990	212-93690
TMC 40 R2.6	204-91671				
TMC 60 R2	204-91680				
TMC 60 R2.5	204-01627				
TMC 60 R3	204-01192				
TMC 60 A R2	204-07724				
TMC 60 A R2.45	204-07928				
PRM 90 D2	204-10396				
PRM 90 D2.5	204-10642				
PRM 125 D2	204-10397				
PRM 125 D2.5	204-10773				
PRM 125 D3	204-11039	206-91885	202-94100		
PRM 150 D2	204-91920				
PRM 150 D3	204-91700	206-07706	N/A	N/A	212-04689
TTMC35A-2 2.36:1	204-04315				
TTMC35A-2 2.64:1	204-04315/01				



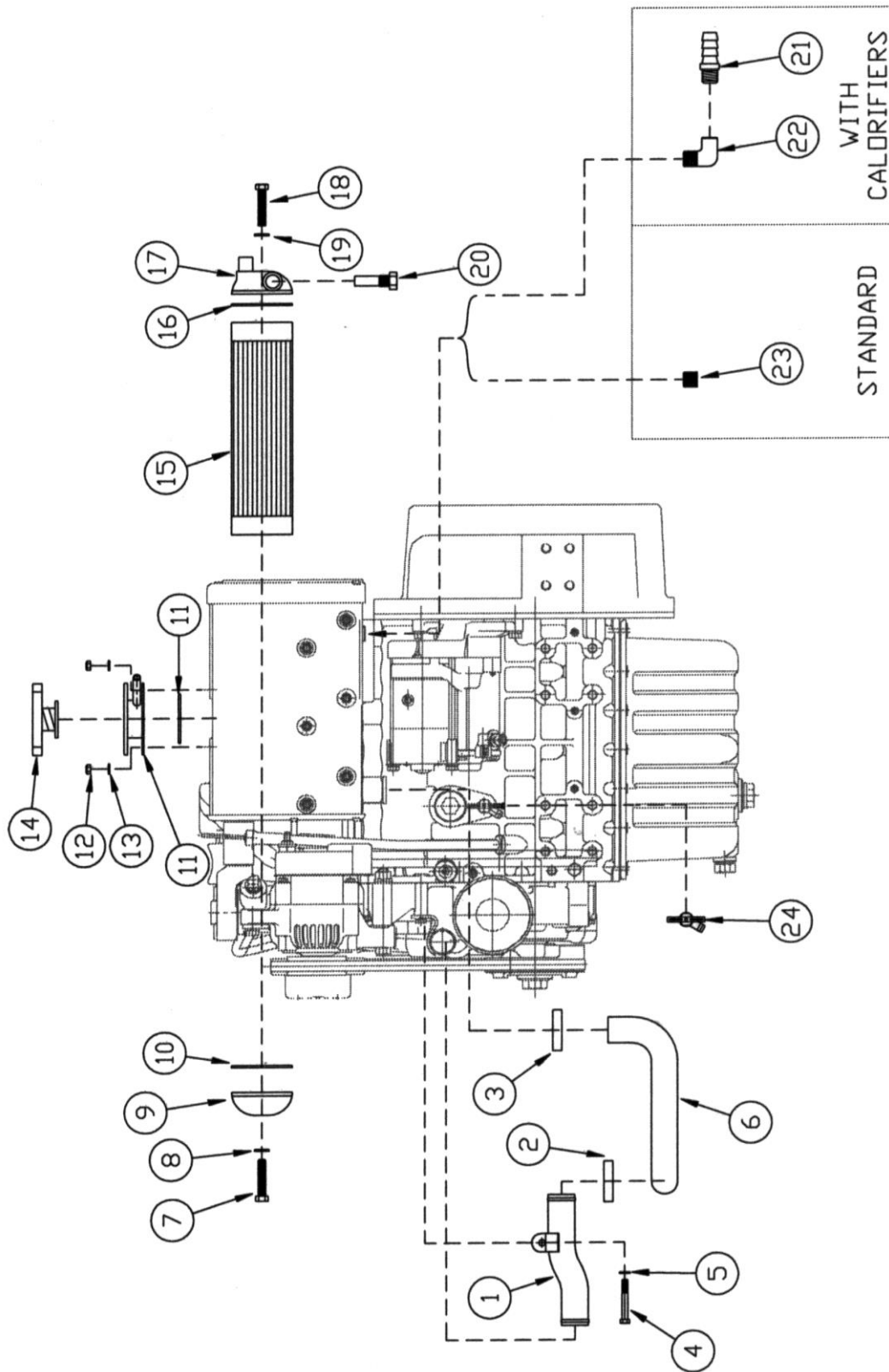
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DRAWING 100-05278**BD1105 WATER SYSTEM****(PAGE 1 of 4)**

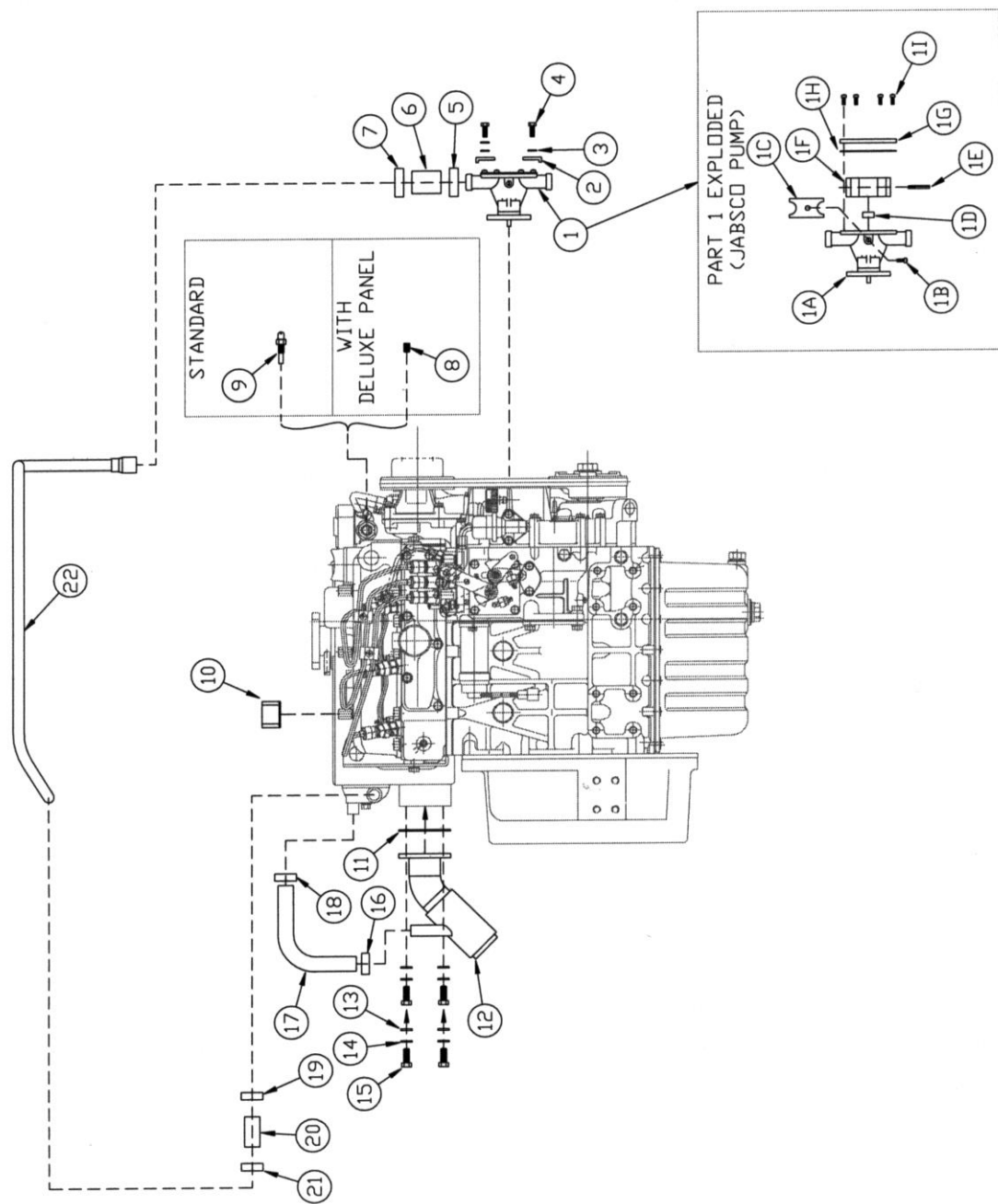
Ref No	Part Number	Part Name	Quantity
01	217-99304	M8 x 60 mm SET	2
02	217-99292	M8 SPRING WASHER	2
03	217-99293	M8 FLAT WASHER	2
04	212-99403	3/8" BSP GALVANISED PLUG	1
05	209-01789	SUPER 5 SERIES THERMOSTAT HOUSING	1
06	212-00066	S/S HOSE CLIP 30-40mm	1
07	218-99251	1 1/8" I/D BLACK RADIATOR HOSE	0.7
08	212-00066	S/S HOSE CLIP 30-40mm	1
09	201-62110/01	SUPER 5 MANIFOLD STUD	6
10	217-99293	M8 FLAT WASHER	6
11	217-99296	M8 NYLOC	6
12	209-01828/22	Beta 30 HEAT EXCHANGE MANIFOLD (SINGLE BOLT ENDCAP, INCLUDES 13 & 14)	1
	AK/S5/3CYL/E01	Beta 30 HEAT EXCHANGE MANIFOLD (3 BOLT ENDCAP) -FROM JAN 2012	
13	212-08627	EXHAUST PORT GASKET (SUITS 3 BOLT ENDCAP MANIFOLD) -FROM JAN 2012	3
14	202-09168	EXHAUST PORT SPACER PLATE (SUITS 3 BOLT ENDCAP MANIFOLD) -FROM JAN 2012	3
15	600-80300	EXHAUST MANIFOLD GASKET	1
16	600-80490	SUPER 5 SERIES THERMOSTAT GASKET	1
17	600-72450	SUPER 5 SERIES THERMOSTAT	1
18	212-03848	1/8BSP-1/4BSP MxF ADAPTOR -TO SEPT'10	1
19	212-00904	1/4BSP-5/8 HOSE CONNECTOR -TO SEPT'10	1
20	212-00904	1/4BSP-5/8 HOSE CONNECTOR -FROM SEPT'10	1
21	212-04356	1/4BSP MxF 90' ELBOW -FROM SEPT'10	1
22	210-07357	1/8" BSP Mx 1/4" BSP SWIVEL -FROM SEPT'10	1
23	212-06565	COPPER WASHER 1/8" BORE -FROM SEPT'10	1



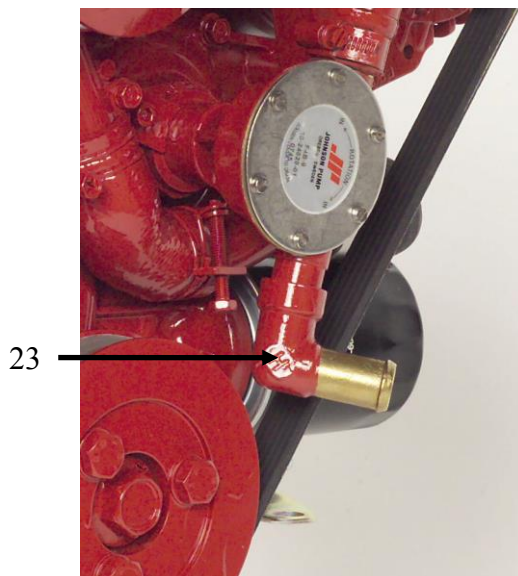
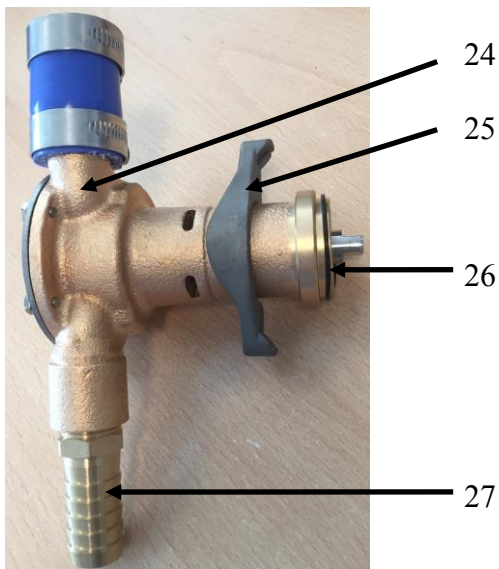
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DRAWING 100-05278
BD1105 WATER SYSTEM
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Ref No	Part Number	Part Name	Quantity
01	600-96340	SUPER 5 SERIES FRESH WATER PIPE	1
02	212-00066	S/S HOSE CLIP 30-40mm	1
03	212-00066	S/S HOSE CLIP 30-40mm	1
04	217-99288	M6 x 60mm SET	1
05	217-99275	M6 SPRING WASHER	1
06	209-08589	SUPER 5 SERIES SILICON FRESH WATER PIPE	1
07	209-00016	M8 PHOSPHUR BRONZE BOLT (SUITS SINGLE BOLT ENDCAP ONLY)	1
	217-00190Z	HEAT EXCHANGE MANIFOLD ENDCAP BOLT (SUITS 3 BOLT ENDCAP ONLY)	3
08	209-00017	M8 BONDED SEAL (SUITS SINGLE BOLT ENDCAP ONLY)	1
09	209-80100/01	HEAT EXCHANGE RETURN ENDCAP (SUITS SINGLE BOLT ENDCAP ONLY)	1
	208-07272	HEAT EXCHANGE MANIFOLD RETURN ENDCAP (SUITS 3 BOLT ENDCAP ONLY)	
10	209-80110	NITRILE 'O' RING –TUBESTACK (SUITS SINGLE BOLT ENDCAP ONLY)	1
	212-07273	NITRILE 'O' RING -TUBESTACK (SUITS 3 BOLT ENDCAP ONLY)	
11	209-02167	FILLER NECK ASSEMBLY & 'O' RING (SUITS SINGLE BOLT ENDCAP ONLY)	1
	209-08352	FILLER NECK ASSEMBLY & 'O' RING (SUITS 3 BOLT ENDCAP ONLY)	
12	217-00052	M6 NUT (SUITS SINGLE BOLT ENDCAP ONLY)	2
13	217-99275	M6 SPRING WASHER (SUITS SINGLE BOLT ENDCAP ONLY)	2
14	209-02323	PRESSURE CAP	1
15	209-80210	SUPER 5 SERIES 3 CYLINDER H/E TUBESTACK (SUITS SINGLE BOLT ENDCAP ONLY)	1
	209-07270	SUPER 5 SERIES 3 CYLINDER H/E TUBESTACK (SUITS 3 BOLT ENDCAP ONLY)	
16	209-80110	NITRILE 'O' RING –TUBESTACK (SUITS SINGLE BOLT ENDCAP ONLY)	1
	212-07273	NITRILE 'O' RING -TUBESTACK (SUITS 3 BOLT ENDCAP ONLY)	1
17	209-80440	22mm HEADER & ANODE (SUITS SINGLE BOLT ENDCAP ONLY) (MECHANICAL GEARBOX FROM OCTOBER 2002 & ALL HYDRAULIC GEARBOXES)	1
	208-07271	25mm HEADER, LESS ANODE (SUITS 3 BOLT ENDCAP ONLY)	
18	209-00016	M8 PHOSPHUR BRONZE BOLT (SUITS SINGLE BOLT ENDCAP ONLY)	1
	217-00190Z	HEAT EXCHANGE MANIFOLD ENDCAP BOLT (SUITS 3 BOLT ENDCAP ONLY)	3
19	209-00017	M8 BONDED SEAL (SUITS SINGLE BOLT ENDCAP ONLY)	1
20	209-61840	ZINC ANODE	1
21	212-99233	3/8" BSP x 5/8 HOSE CONNECTOR	1
22	212-99237	3/8" BSPTM x 3/8" BSPF 90° ELBOW	1
23	212-99403	3/8" BSP GALVANISED PLUG	1
24	600-00580	DRAIN TAP, COMPLETE	1



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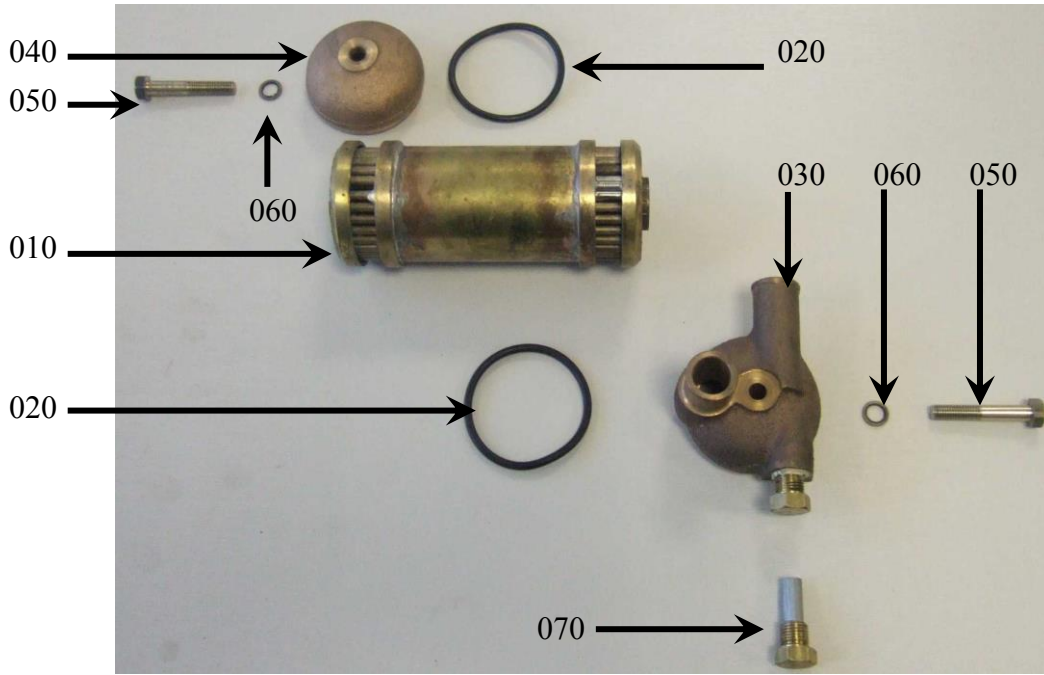


Prices and specifications are subject to amendment without notice. Information given is subject to our current conditions of tender and sale. In all cases please quote **Beta Marine WOC 'K' number** and Engine Type. Beta Marine will not be held responsible for incorrect supply without this information.

BD1105 RAW WATER SYSTEM**(PAGE 3 of 4)**

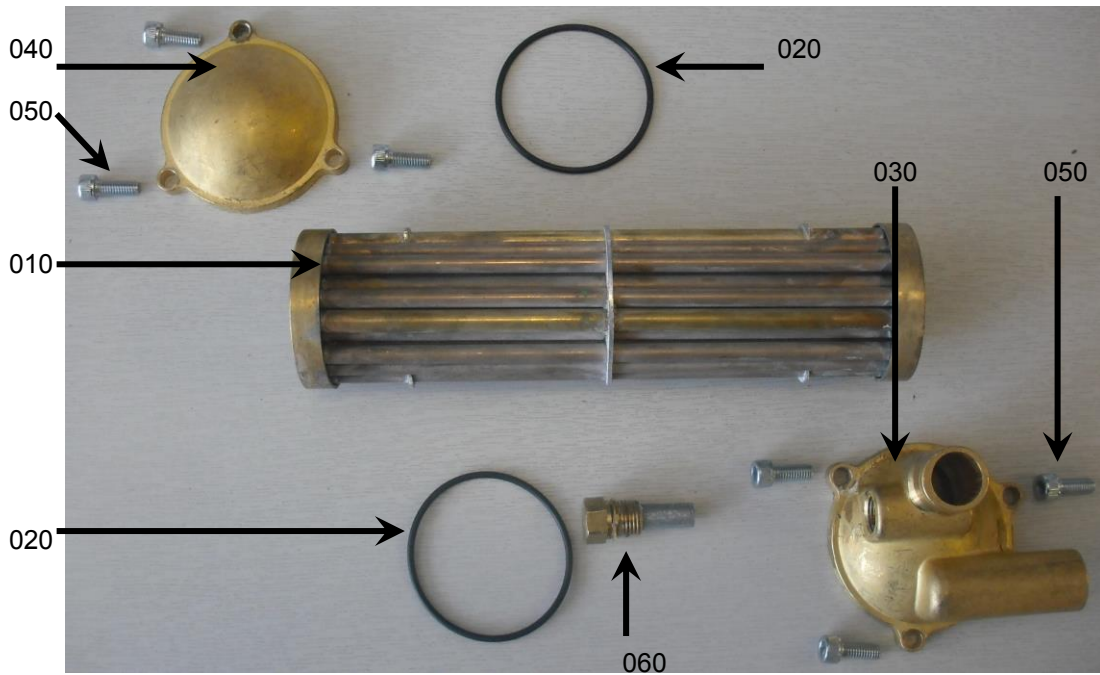
Ref No	Part Number	Part Name	Quantity
01	207-61500/01	SEA WATER PUMP –JOHNSON, FROM JULY 2006	1
02	202-01382	SEA WATER PUMP CLAMP	2
03	217-99275	M6 SPRING WASHER	2
04	217-99282	M6 x 25mm SET	2
05	212-98464	STAINLESS STEEL HOSE CLIP 22-30mm	1
06	218-99249	7/8" I/D BLACK RADIATOR HOSE	0.06m
07	212-98464	STAINLESS STEEL HOSE CLIP 22-30mm	1
08	212-99394	1/8"BSP GALVANISED PLUG	1
09	600-62820	WATER TEMP. SWITCH –FROM MARCH 2007	1
10	212-99264	PIPE FITTING CLIP	1
11	212-09070	GASKET, 2" EXHAUST	1
12	202-02458	2"O/D ALUMINIUM WATER INJECTION BEND (ALL GEARBOXES FROM OCTOBER 2002)	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	S/S HOSE CLIP 22-30mm (22mm INLET EXHAUST)	1
17	209-91760	22mm DIAMETER 90 ELBOW (22mm INLET EXHAUST)	1
18	212-98464	S/S HOSE CLIP 22-30mm (22mm INLET EXHAUST)	1
19	212-98464	S/S HOSE CLIP 22-30mm	1
20	218-99249	7/8" I/D RADIATOR HOSE (22mm INLET EXHAUST)	0.06m
21	212-98464	S/S HOSE CLIP 22-30mm	1
22	209-80310/22	SUPER 5 SERIES 3 CYL RAW WATER COOLING PIPE (22mm INLET EXHAUST ONLY –FROM OCT 2002)	1
23	212-99238	1/2"BSPM x 3/4" 90 ELBOW HOSE CONNECTOR	1
24	207-08922	BETA MARINE SEA WATER PUMP (FROM JUNE 2013)	1
25	202-08924/01	CLAMP –BETA MARINE SEA WATER PUMP (FROM JUNE 2013)	1
26	209-08266	SEA WATER PUMP O RING (PUMP TO ENGINE)	1
27	212-99232	1/2"BSPM X 3/4" STRAIGHT HOSE CONNECTOR (FROM JUNE 2013)	1

Heat exchange tubestack (with 22mm header & anode on aft end)

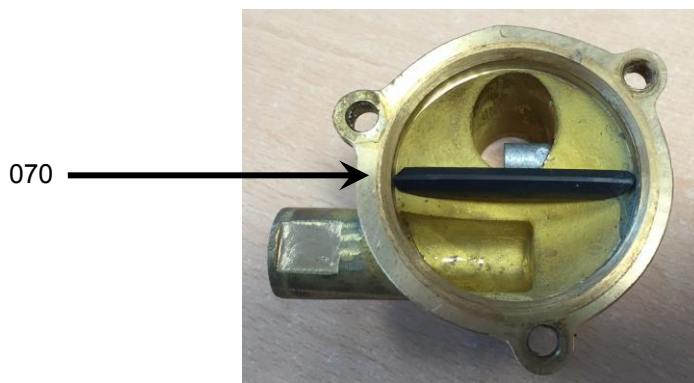


Ref. No.	Part No.	Part Name	Qty	Remarks
010	209-80210	Beta 30 Tubestack	1	(SINGLE BOLT ENDCAP ONLY)
	209-07270	Beta 30 Tubestack 2011 SPEC	1	(3 BOLT ENDCAP ONLY)
020	209-80110	Nitrile 'O' ring for tubestack	2	(SINGLE BOLT ENDCAP ONLY)
	212-07273	Nitrile 'O' ring for tubestack 2011 SPEC	2	(3 BOLT ENDCAP ONLY)
030	209-80440	22mm Gunmetal header & anode	1	(SINGLE BOLT ENDCAP ONLY)
	208-07271	22mm Gunmetal header less anode 2011 SPEC	1	(3 BOLT ENDCAP ONLY)
040	209-80100/01	Heat exchange endcap	1	(SINGLE BOLT ENDCAP ONLY)
	208-07272	Heat exchange endcap 2011 SPEC	1	(3 BOLT ENDCAP ONLY)
050	209-00016	M8 Phosphur bronze bolt	2	(SINGLE BOLT ENDCAP ONLY)
	209-00190Z	Heat exchange endcap bolt 2011 SPEC	6	(3 BOLT ENDCAP ONLY)
060	209-00017	M8 Bonded seal	2	(SINGLE BOLT ENDCAP ONLY)
070	209-61840	Zinc anode	1	¼" BSP

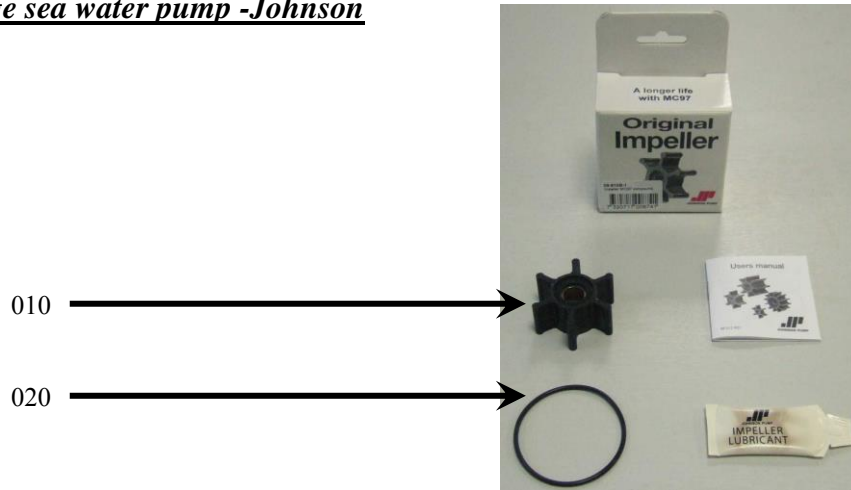
Heat exchange tubestack (2011 SPEC HEAT EXCHANGER MANIFOLD)



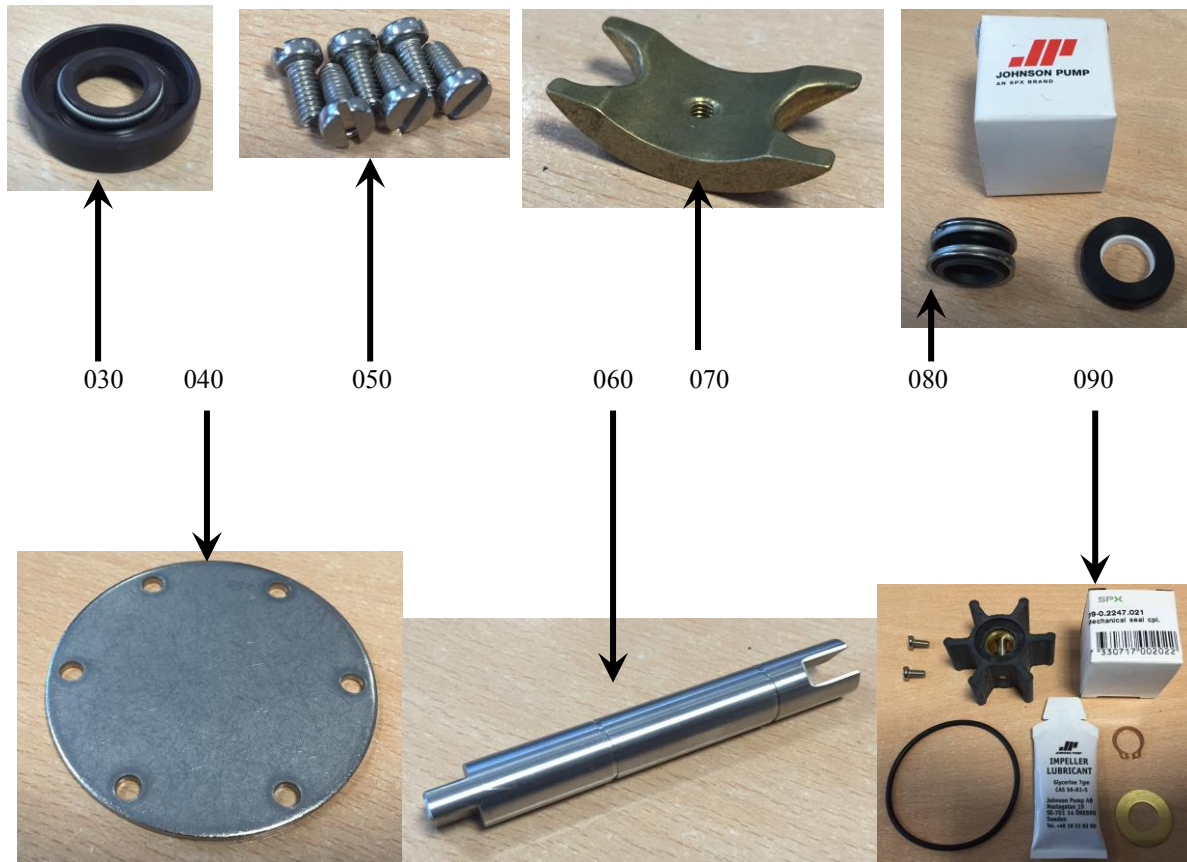
Ref. No.	Part No.	Part Name		Remarks	
010	209-07270	Beta 30 Tube stack 2011 SPEC	1		
020	212-07273	Nitrile 'O' ring for tubestack 2011 SPEC	2		
030	208-07271	22mm Gunmetal header suits anode 2011 SPEC	1		
040	208-07272	Heat exchange return endcap 2011 SPEC	1		
050	217-00190Z	Heat exchanger end cap bolt 2011 SPEC	6		
060	209-61840	Zinc anode	1	¼" BSP	
070	212-08730/55	Seal, 55mm OAL, to suit 030 endcap 2011 SPEC	1		



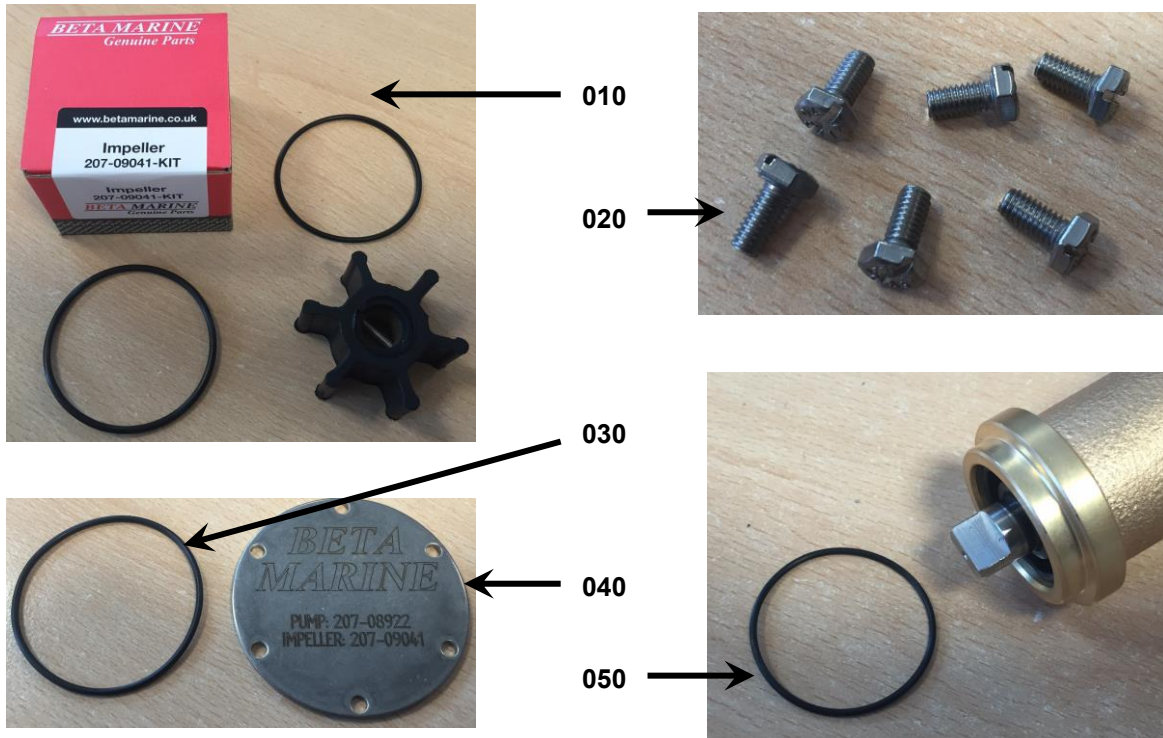
Heat exchange sea water pump -Johnson



Ref. No.	Part No.	Part Name	Qty	Remarks
010	207-09041-KIT	Beta Marine impeller kit to suit Johnson pump	1	Johnson from July 2006
020	207-09279	Beta O ring to suit Johnson pump	1	
030	207-06494	Johnson pump lip seal	1	Johnson from July 2006
040	207-05478	Johnson pump cover plate	1	Johnson from July 2006
050	207-05479	Johnson pump screws	6	Johnson from July 2006
060	207-06520	Johnson pump shaft	1	Johnson from July 2006
070	207-06152	Johnson pump cam	1	Johnson from July 2006
080	207-08636	Johnson pump mechanical seal	1	Johnson from July 2006
090	207-07714	Johnson pump service kit	1	Johnson from July 2006

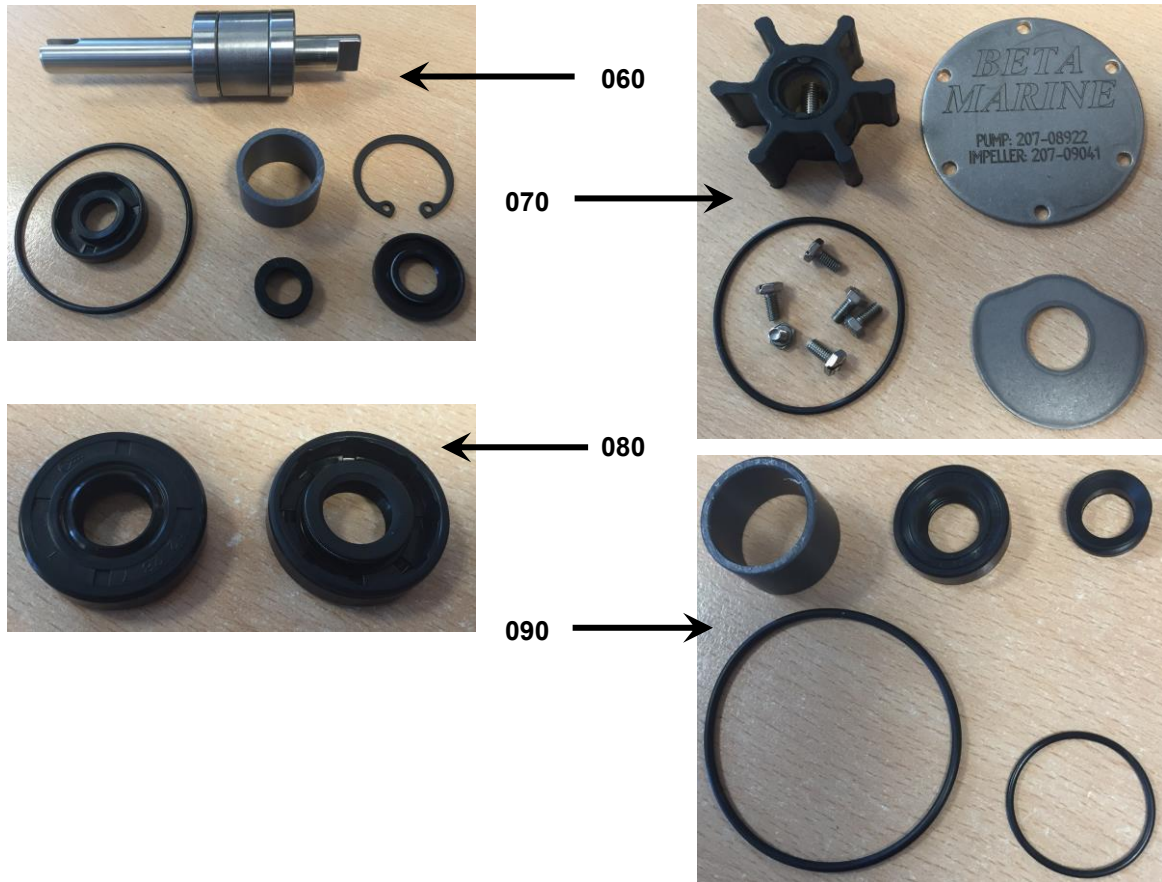


Heat exchange sea water pump –Beta type from June 2013



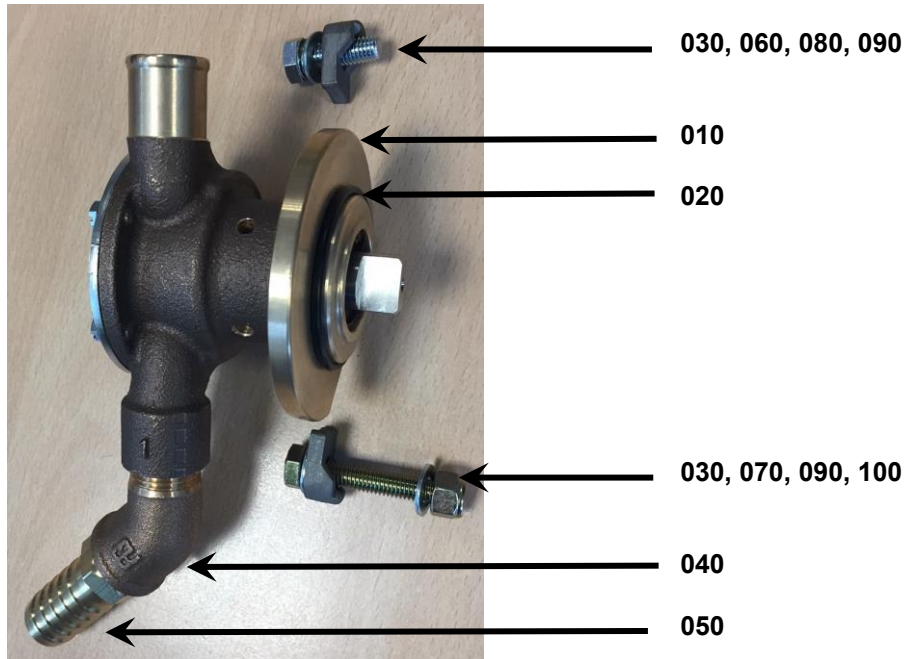
Ref. No.	Part No.	Part Name	Qty	Remarks
010	207-09041-KIT	Sea water pump impeller kit	1	Includes O ring for Beta & Johnson pumps
020	207-09483	Sea water pump cover plate screw	6	From June 2013
030	207-09279	Sea water pump cover plate O ring	1	From June 2013
040	207-09481	Sea water pump cover plate	1	From June 2013
050	209-08266	Sea water pump O ring	1	Seals pump to engine front cover

Heat exchange sea water pump –Beta type from June 2013

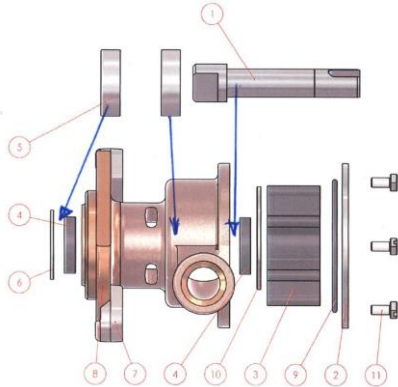


Ref. No.	Part No.	Part Name	Qty	Remarks
060	207-09229	Sea water pump shaft kit	1	From June 2013 Includes shaft, 2 x lip seal, lip seal spacer, bearing spacer, circlip, V ring seal, O ring for cover plate, 2 x bearings
070	207-09909	Sea water pump wear kit	1	From June 2013 Includes: wear plate, cover plate, cover plate O ring, cover plate screws
080	207-09351	Sea water pump lip seal	2	From June 2013
090	207-09228	Sea water pump seal kit	1	From June 2013 Includes: 1 x lip seal, lip seal spacer, V ring seal, O ring for cover plate & O ring

Heat exchange side mounted sea water pump -Beta type from January 2014

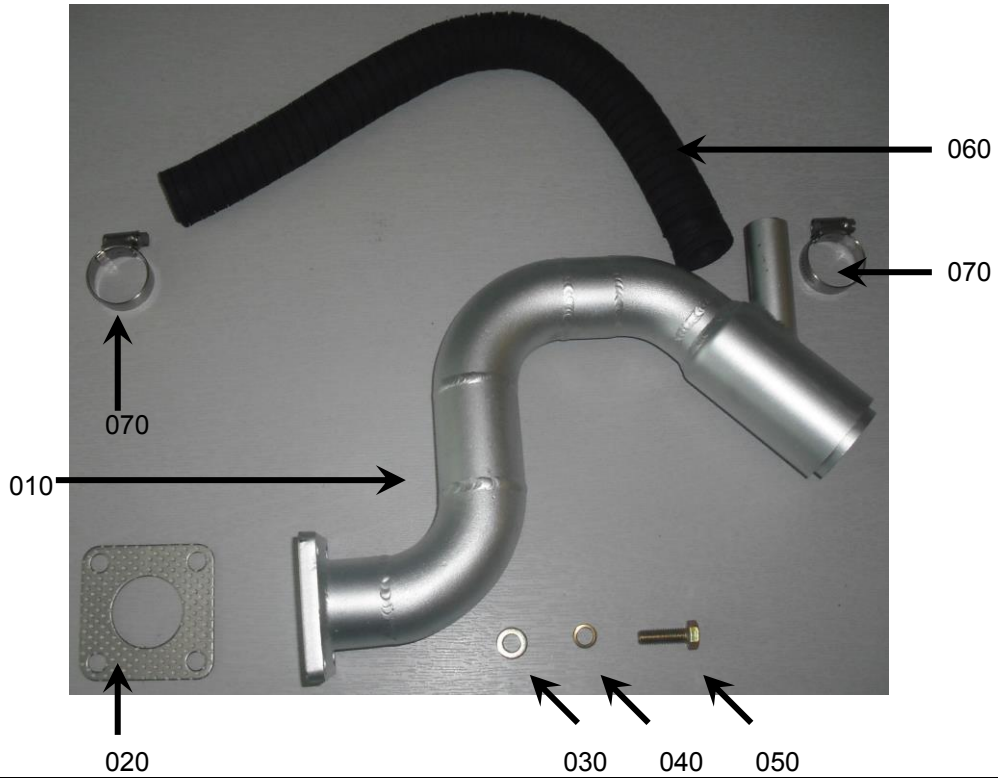


Ref. No.	Part No.	Part Name	Qty	Remarks
010	207-61460/01	Sea water pump, side mount	1	
020	212-98238	O Ring	1	
030	202-08924/03	Pump clamp (pair)	1	
040	212-10329	½" BSP Bronze elbow FxF	1	
050	212-99232	½" BSP x ¾" Hose connector	1	Suits Beta 28 – Beta 38
	212-09360	½" BSP x 1" Hose connector		Suits Beta 45 Only
060	217-99299	M8 x 25mm set	1	
070	217-00286	M8 x 45mm set	1	
080	217-99292	M8 Spring washer	1	
090	217-99293	M8 Flat washer	3	
100	217-99296	M8 Nyloc	1	
110	209-10727	Raw water pipe, Beta 30 side mount pump	1	Not shown, from January 2014



Ref. No.	Part No.	Part Name	Qty	Remarks
1	N/A	Shaft	1	Part of shaft kit, see 12
2	207-21760	Cover plate	1	
3	207-09041-KIT	Sea water pump impeller kit	1	Includes O ring 9
4	N/A	Lip seal	2	Part of shaft kit, see 12
5	N/A	Sealed bearing	2	Part of shaft kit, see 12
6	N/A	Circlip	1	Part of shaft kit, see 12
7	202-08924/03	Pump clamp (pair)	1	
8	207-61460/01	Sea water pump	1	
9	207-09279	Cover plate O ring	1	
10	N/A	Impeller backing plate	1	Part of wear kit, see 14
11	207-09483	Cover plate screw	6	
12	207-11164	Shaft kit	1	Includes 1, 4, 5 & 6
13	207-11163	Seal kit	1	Includes 4, 9
14	207-09909	Sea water pump wear kit	1	Includes 2, 3, 9, & 11, see previous page

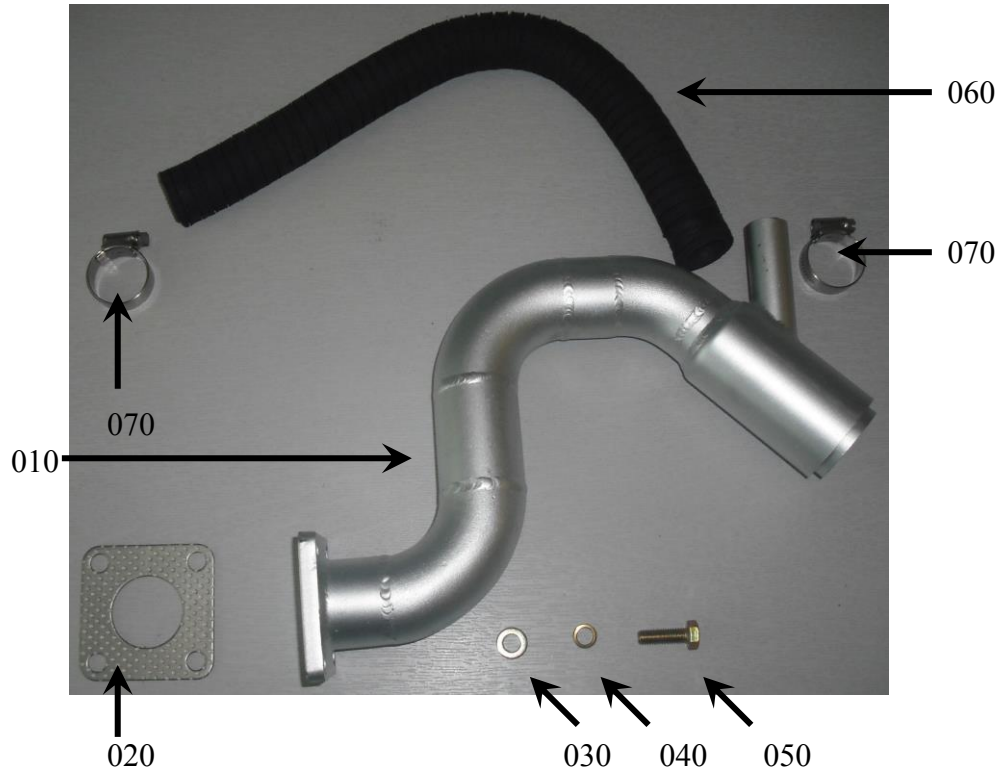
Water injection bends –Standard options



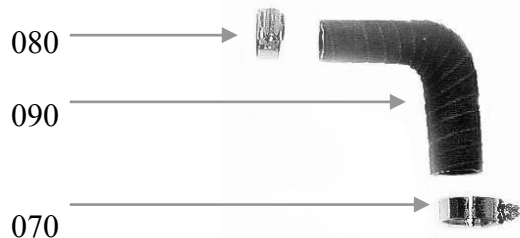
Ref. No.	Part No.	Part Name		Remarks
010	202-02458	2" O/D x 25mm Aluminium water injection bend	1	25mm from June 2013
	202-90610	2" O/D Stainless steel water injection bend x 25mm	1	25mm from June 2013
	202-92400/22	5" Stainless steel high rise water injection bend 2" O/D x25mm	1	25mm from June 2013
	202-06504	Volvo replacement stainless steel crossover injection bend 2" O/D x 25mm	1	25mm from June 2013
	202-94330/22	8" Stainless steel high rise cross-over water injection bend 2" O/D x25mm	1	25mm from June 2013
020	212-09070	Exhaust gasket 2", waterproof orange type	1	
030	217-99293	M8 Flat washer	4	
040	217-99292	M8 Spring washer	4	
050	217-99299	M8 x 25mm set	4	
060	218-03471	Corrugated radiator hose 25mm I/D -FROM JUNE'13 (430mm OAL)	0.43m	To suit 25mm exhaust
070	212-98464	Stainless steel hose clip 22-30mm	2	To suit 25mm exhaust
080	209-05125/01	25 x 25mm elbow to suit standard aluminium exhaust elbow	1	To suit 25mm exhaust
090	212-07575	Hose adaptor 22mm – 25mm ID	1	To suit 22mm manifold
100	212-00234/01	Glass fibre exhaust lagging 3x50mm	5m	Not shown
110	212-09630	Stainless steel tie, 300mm OAL, used to strap exhaust lagging	2	Not shown

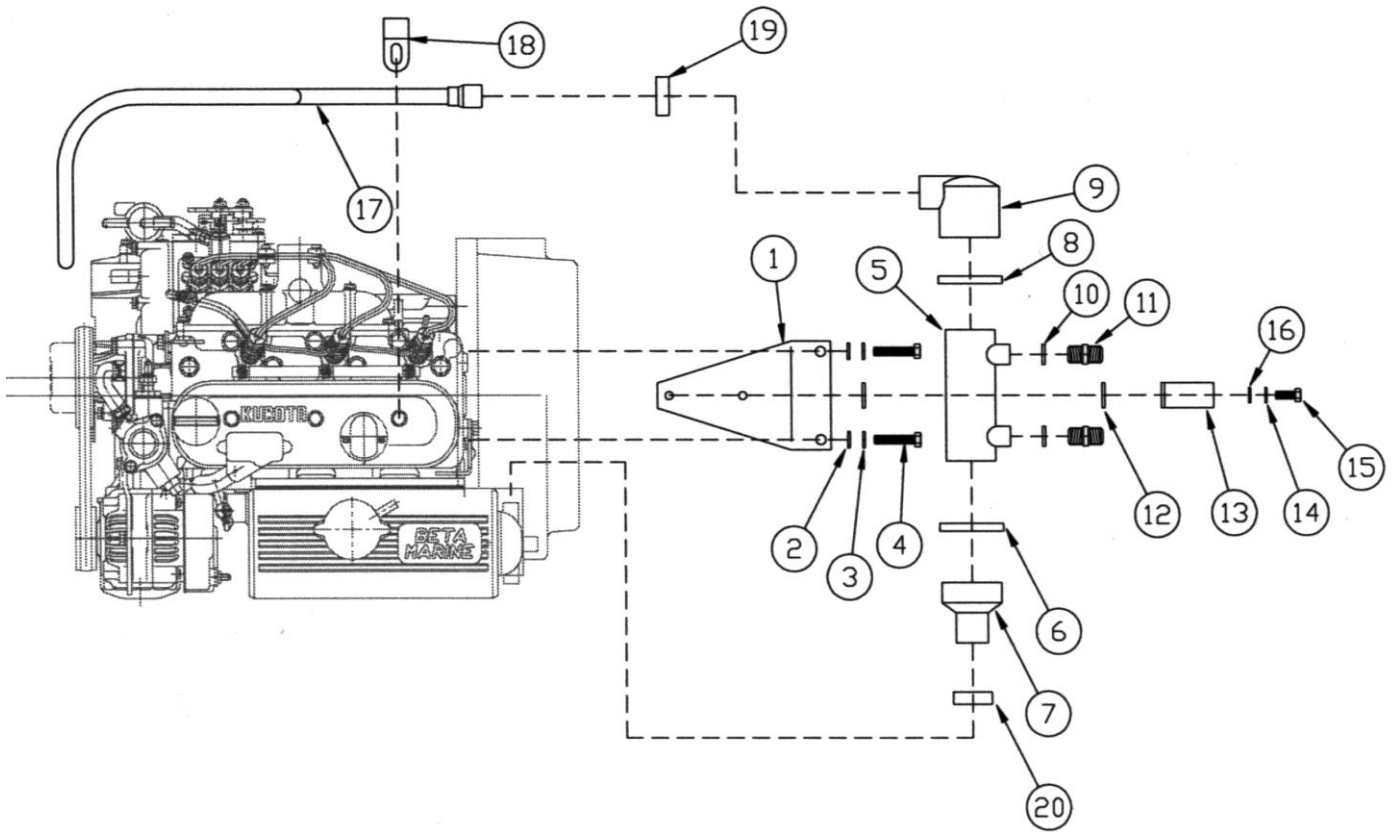


Water injection bends –non standard



Ref. No.	Part No.	Part Name		Remarks
010	202-59050/01	1 1/2" O/D x 22mm Stainless steel water injection bend (double skin)	1	Not standard
	202-04828	1 5/8" O/D Stainless steel water injection bend x 16mm	1	Not standard
	202-90610	2" O/D Stainless steel water injection bend x 22mm	1	Not standard
	202-92400/22	5" Stainless steel high rise water injection bend 2" O/D x22mm	1	(Shown) Optional
	202-01597/22	5" Stainless steel high rise water injection bend 1 5/8" O/D x22mm	1	Not standard
	202-06504	Volvo replacement stainless steel crossover high rise water injection bend 2" O/D x 22mm (Fits Beta 30 Pre March 2011 only)	1	From June 2006
	202-94330/22	8" Stainless steel high rise water injection bend 2" O/D x22mm	1	Not standard
020	212-09070	Exhaust gasket 2" (Orange type from May 2011)	1	
030	217-99293	M8 Flat washer	4	
040	217-99292	M8 Spring washer	4	
050	217-99299	M8 x 25mm set	4	
060	218-06368	Corrugated radiator hose 22mm I/D -FROM SEPT'09 (430mm OAL)	0.43m	To suit 22mm exhaust
070	212-98464	Stainless steel hose clip 22-30mm (2 required for standard high rise system)	2	Only 1 required for 16mm exhaust
080	212-98462	Stainless steel hose clip 17-25mm	1	Only required for 16mm exhaust
090	209-98232	16 x 22mm I/D Reducing elbow	1	To suit 16mm exhaust
100	212-00234/01	Glass fibre exhaust lagging 3x50mm	5m	Not shown





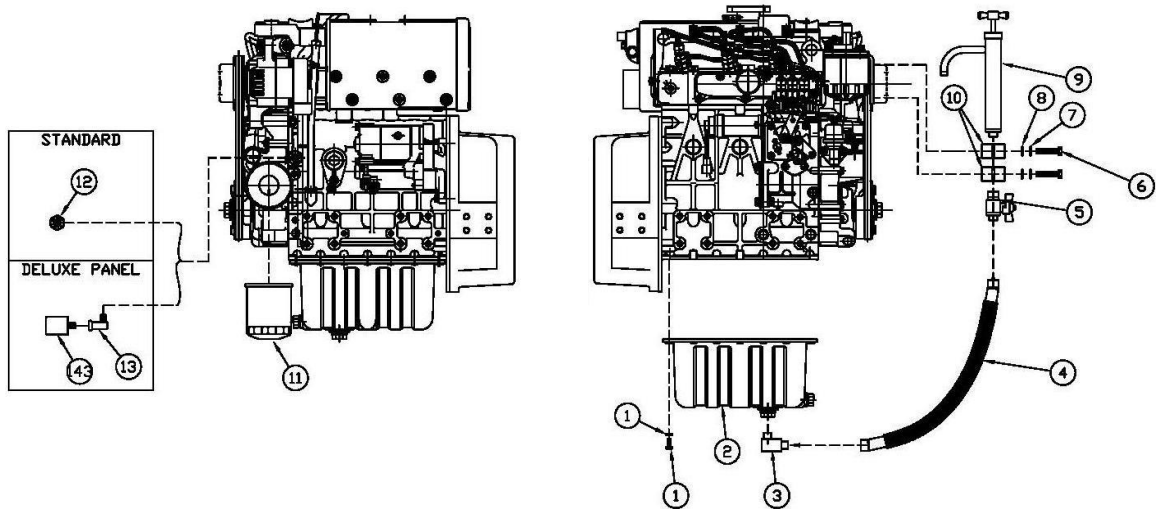
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BD1105 WATER SYSTEM FOR HYDRAULIC GEARBOXES

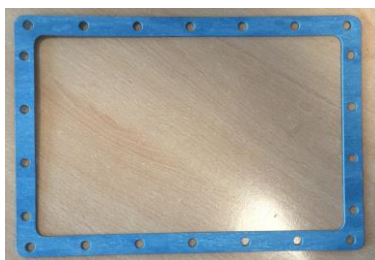
Ref No	Part Number	Part Name	Quantity
01	202-00173	SUPER 5 H/E DC60 OIL COOLER BRACKET	1
02	217-99321	M10 FLAT WASHER	2
03	217-99320	M10 SPRING WASHER	2
04	217-99331	M10 x 50 x 1.25mm SET	2
05	210-91630	OIL COOLER DC60-YDA (INC 06, 07, 08, 09)	1
06	212-00117	STAINLESS STEEL HOSE CLIP 45-60mm	1
07	202-09177	ENDCAP 22mm STRAIGHT OUTLET	1
08	212-00117	STAINLESS STEEL HOSE CLIP 45-60mm	1
09	210-00172	ENDCAP 22mm 90° INLET	1
10	212-99379	1/2"BSP COPPER WASHER	2
11	212-99383	1/2"BSP x 3/8"BSP M-M ADAPTOR	2
12	212-01544	RUBBER STRIP 3mm T x 25mm W x 80mm L	2
13	212-06547	OIL COOLER CLAMP	1
14	217-99292	M8 SPRING WASHER	2
15	217-99301	M8 x 35mm SET	2
16	217-99293	M8 FLAT WASHER	2
17	209-00175	SUPER 5 SERIES 3 CYLINDER RAW WATER COOLING PIPE (HYDRAULIC GEARBOX ONLY) TO JUNE 2013	1
	209-09202	SUPER 5 SERIES 3 CYLINDER RAW WATER COOLING PIPE (HYDRAULIC GEARBOX ONLY) FROM JUNE 2013	
18	212-99264	PIPE FITTING CLIP TO JUNE 2013	1
	212-09281	PIPE FITTING CLIP FROM JUNE 2013	
19	212-98464	STAINLESS STEEL HOSE CLIP 22-30mm	1
20	212-98464	STAINLESS STEEL HOSE CLIP 22-30mm	1

BD1105 OIL SYSTEM WITH STANDARD SUMP

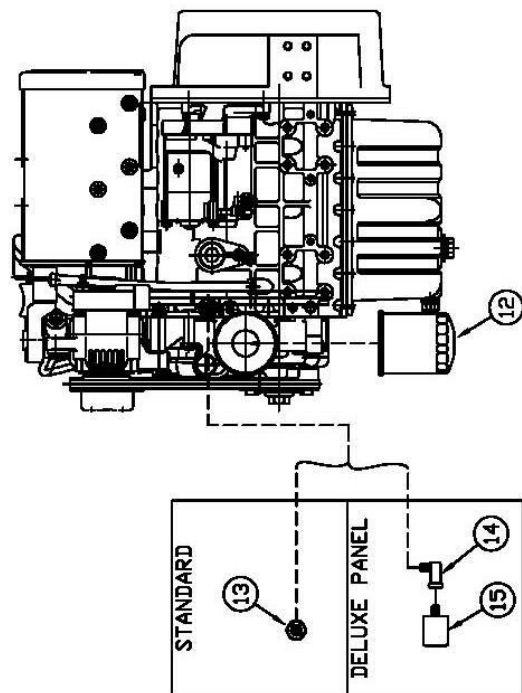
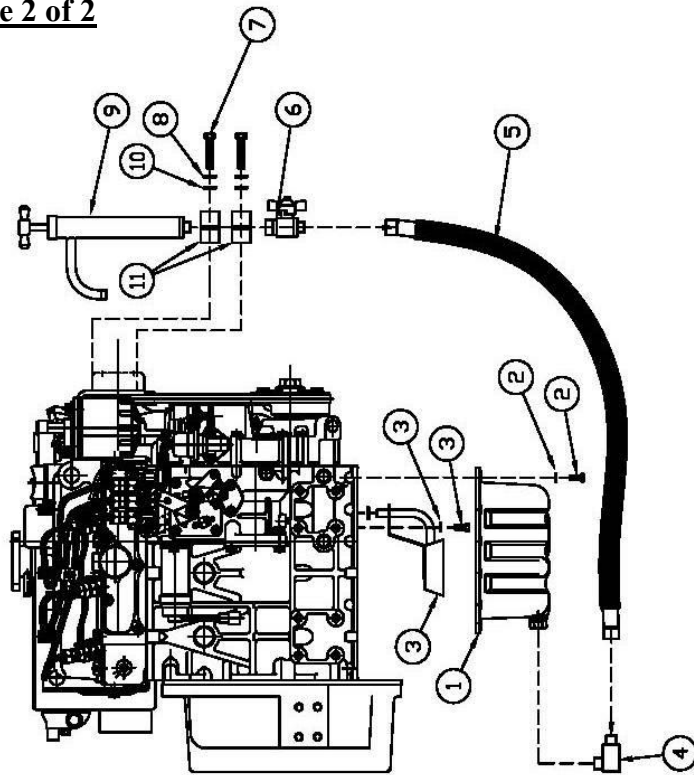
(PAGE 1 of 2)



Ref No	Part Number	Part Name	Quantity
01	600-02675	SUMP BOLT & WASHER	26
02	600-02761	SUPER 5 SERIES, 3 CYLINDER STANDARD SUMP	1
03	210-91940	1/4x3/8"BSP M-M BLOCK ELBOW	1
04	210-94190	SUMP PUMP PIPE 3/8BSP STR-STR	1
05	210-94530	3/8"BSP SUMP DRAIN PUMP TAP	1
06	217-99303	M8 x 50mm SET	2
07	217-99292	M8 SPRING WASHER	2
08	217-99294	M8 PENNY WASHER	2
09	210-80061	SUMP DRAIN PUMP	1
10	212-00793	PUMP CLAMP	2
11	211-60390	SUPER 5 SERIES OIL FILTER	1
12	600-62670	OIL PRESSURE SWITCH	1
13	212-04355	1/8"BSPTM x 1/8"BSPF GALV ELBOW	1
14	200-94350	DELUXE OIL PRESSURE SENDER	1
15	600-66170	SUPER 5 SERIES, 3 CYLINDER SUMP GASKET	1



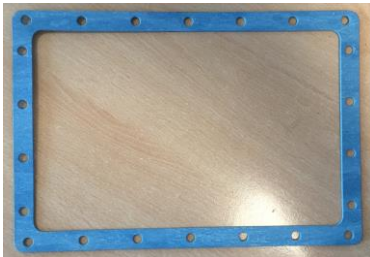
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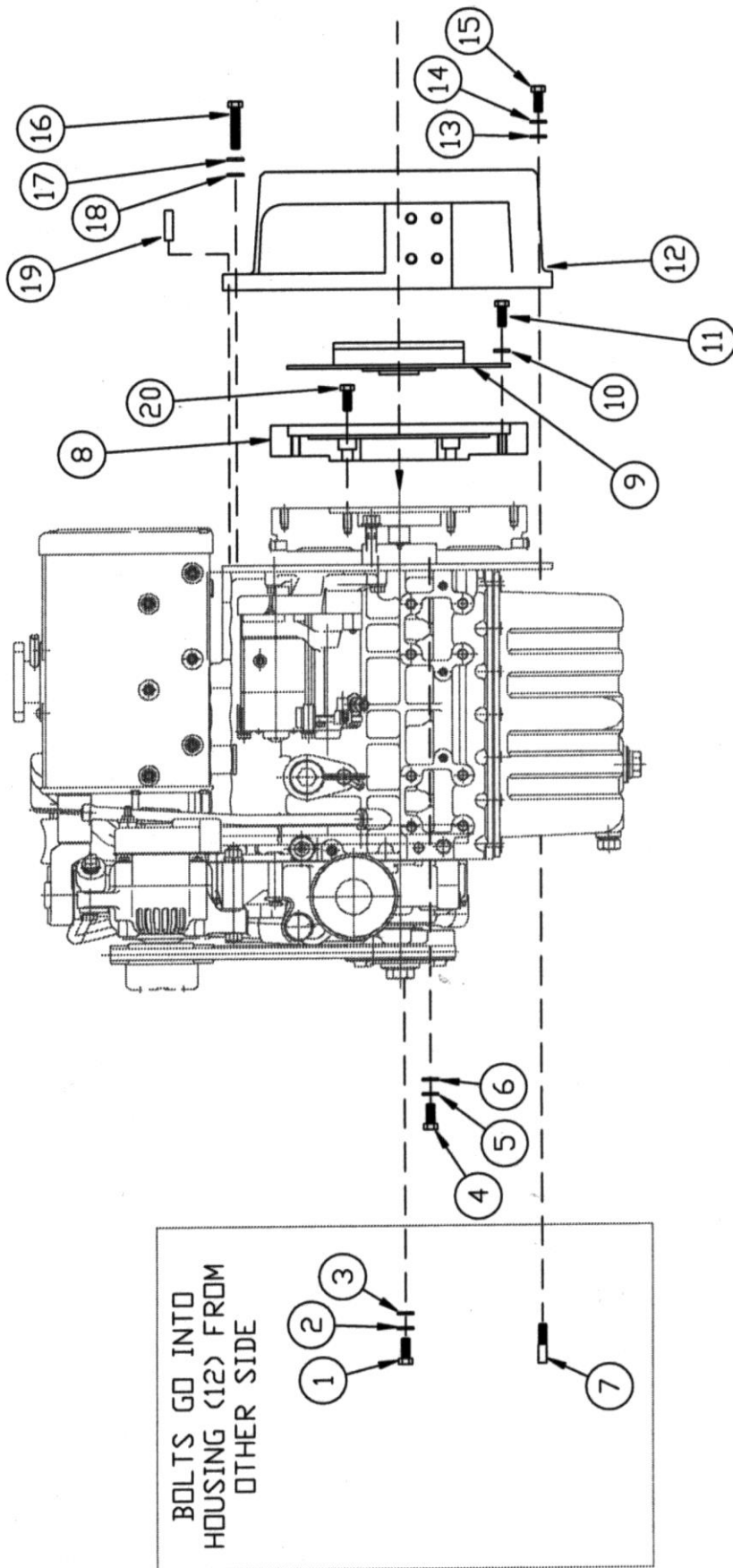
BD1105 OIL SYSTEM WITH SHALLOW SUMP

(PAGE 2 of 2)

Ref No	Part Number	Part Name	Quantity
01	600-01554	SUPER 5 SERIES 3 CYLINDER SHALLOW SUMP KIT (INCLUDING 03)	1
02	600-02675	SUMP BOLT & WASHER	26
03	N/A	PART OF 05 SERIES 3 CYL SUMP KIT -SEE 01	
04	210-91940	1/4x3/8"BSP M-M BLOCK ELBOW	1
05	210-94200	HYD PIPE 3/8BSP 640mm STR-STR	1
06	210-94530	3/8"BSP SUMP DRAIN PUMP TAP	1
07	217-99303	M8 x 50mm SET	2
08	217-99292	M8 SPRING WASHER	2
09	210-80061	SUMP DRAIN PUMP	1
10	217-99294	M8 PENNY WASHER	2
11	212-00793	PUMP CLAMP	2
12	211-60390	SUPER 5 SERIES OIL FILTER	1
13	600-62670	OIL PRESSURE SWITCH	1
14	212-04355	1/8"BSPTM x 1/8"BSPF GALV ELBOW	1
15	200-94350	DELUXE OIL PRESSURE SENDER	1
16	600-66170	Beta 30 SHALLOW SUMP GASKET	1
17	AK/S5/5B3/PS1	SUPER 5 SERIES 3 CYLINDER SHALLOW SUMP KIT (INCLUDING GASKET & SUMP DRAIN PUMP)	1



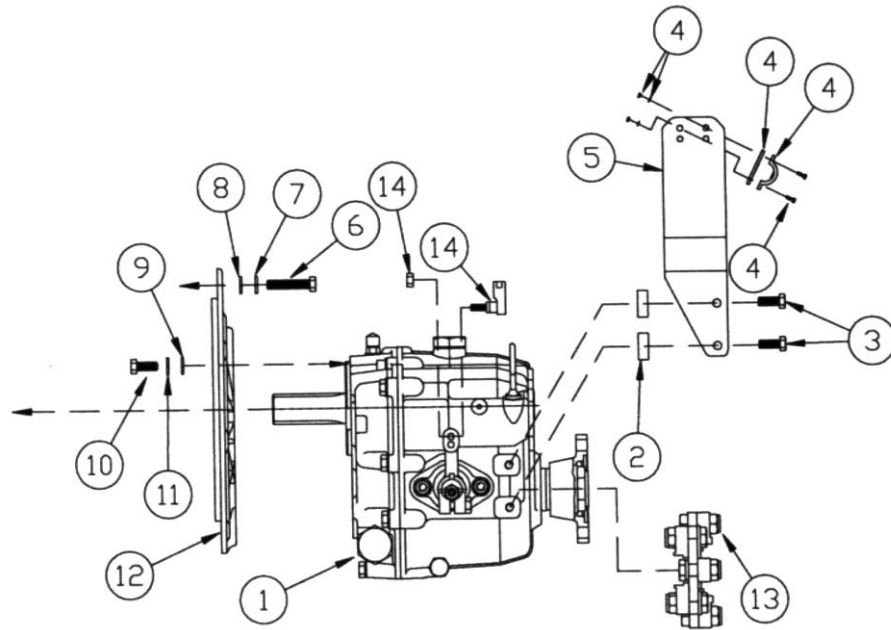
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BD1105 FLYWHEEL HOUSING & DRIVEPLATE MECHANICAL GEARBOXES**(PAGE 1 of 3)**

Ref No	Part Number	Part Name	Quantity
01	217-99301	M8 x 35mm SET	4
02	217-99292	M8 SPRING WASHER	4
03	217-99293	M8 FLAT WASHER	4
04	217-99299	M8 x 25mm SET	2
05	217-99292	M8 SPRING WASHER	2
06	217-99293	M8 FLAT WASHER	2
07	217-00744	LOCATION BOLT, SUPER 5 FLYWHEEL HOUSING	1
08	N/A	N/A	-
09	206-91960	22-B-95 DRIVEPLATE, SAE 6.5 – HURTH / TMC	1
10	N/A	N/A	-
11	217-99309	M8 x 16mm SOCKET CAPHEAD	6
12	208-85780/04	SUPER 5 SERIES FLYWHEEL HOUSING	1
13	217-99293	M8 FLAT WASHER	2
14	217-99292	M8 SPRING WASHER	2
15	217-99300	M8 x 30mm SET	2
16	217-99330	M10 x 40 x 1.25mm SET	2
17	217-99320	M10 SPRING WASHER	2
18	217-99321	M10 FLAT WASHER	2
19	217-99317	M8 x 24mm DOWELL	2
20	217-99335	M10 x 25mm x 1.25mm SOCKET CAP SCREW	6

TMC 60



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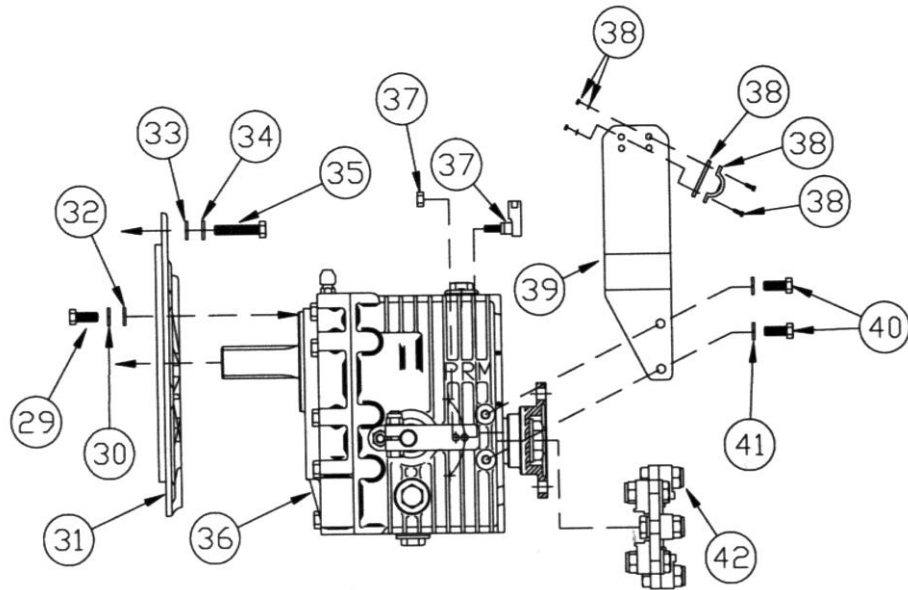
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BD1105 MECHANICAL GEARBOXES

(PAGE 2 of 3)

TMC 60 GEARBOXES

Ref No	Part Number	Part Name	Quantity
01	204-02479	TECHNODRIVE TMC 60 R1.5	1
	204-91680	TECHNODRIVE TMC 60 R2	
	204-07724	TECHNODRIVE TMC 60A R2 DOWNANGLE	
	204-01627	TECHNODRIVE TMC 60 R2.45	
	204-07928	TECHNODRIVE TMC 60A R2.45 DOWNANGLE	
	204-01192	TECHNODRIVE TMC 60 R2.94	
02	201-01204	SPACER 7mm	2
03	217-02585	M8 x 25 COUNTERSUNK SET SCREW	2
04	212-99241/01	GEARBOX MORSE CABLE CLAMP	1
05	202-05129	TECHNODRIVE TMC60 MORSE BRACKET	1
06	217-99325	M10 x 25mm Set	6
07	217-99320	M10 SPRING WASHER	6
08	217-99321	M10 FLAT WASHER	6
09	217-99293	M8 FLAT WASHER	6
10	217-99298	M8 x 20mm SET	2
	217-99299	M8 x 25mm SET	4
11	217-99292	M8 SPRING WASHER	4
	205-60990	HURTH – BORG WARNER ADAPTOR	1
13	212-93690	FLEXIBLE COUPLING	1
14	212-99240/01	GEARBOX MORSE CABLE BALL JOINT TO OCT 2015	1
	212-07665	GEARBOX MORSE CABLE CLEVIS FROM OCT 2015	



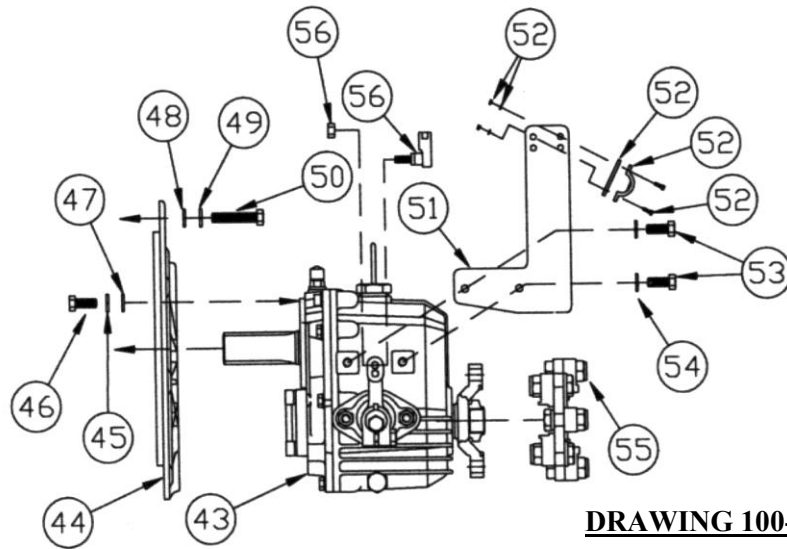
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BD1005 MECHANICAL GEARBOXES

(PAGE 2 of 3)

NEWAGE PRM 90 / PRM 125 GEARBOXES

Ref No	Part Number	Part Name	Quantity
29	217-99298	M8 x 20mm SET	2
	217-99299	M8 x 25mm SET	4
30	217-99292	M8 SPRING WASHER	4
31	205-60990	PRM80 / PRM120 –BORG WARNER ADAPTOR	1
32	217-99293	M8 FLAT WASHER	6
33	217-99321	M10 FLAT WASHER	6
34	217-99320	M10 SPRING WASHER	6
35	217-99325	M10 x 25mm SET	6
36	204-10396	NEWAGE PRM 90 D2 <i>(replacement for PRM80D2)</i>	1
	204-10642	NEWAGE PRM 90 D2.5 <i>(replacement for PRM80D2.5)</i>	
	204-10397	NEWAGE PRM 125 D2 <i>(replacement for PRM120D2)</i>	
	204-10773	NEWAGE PRM 125 D2.5 <i>(replacement for PRM120D2.5)</i>	
	204-11039	NEWAGE PRM 125 D3 <i>(replacement for PRM120D3)</i>	
37	212-99240/01	GEARBOX MORSE CABLE BALL JOINT TO OCT 2015	1
	212-07665	GEARBOX MORSE CABLE CLEVIS FROM OCT 2015	
38	212-99241/01	GEARBOX MORSE CABLE CLAMP	1
39	202-05129	PRM80/90/120/125 MORSE CONTROL BRACKET	1
40	217-99298	M8 x 20mm SET	2
41	217-99292	M8 SPRING WASHER	2
42	212-93690	FLEXIBLE COUPLING	1



DRAWING 100-05282

BD1005 MECHANICAL GEARBOXES

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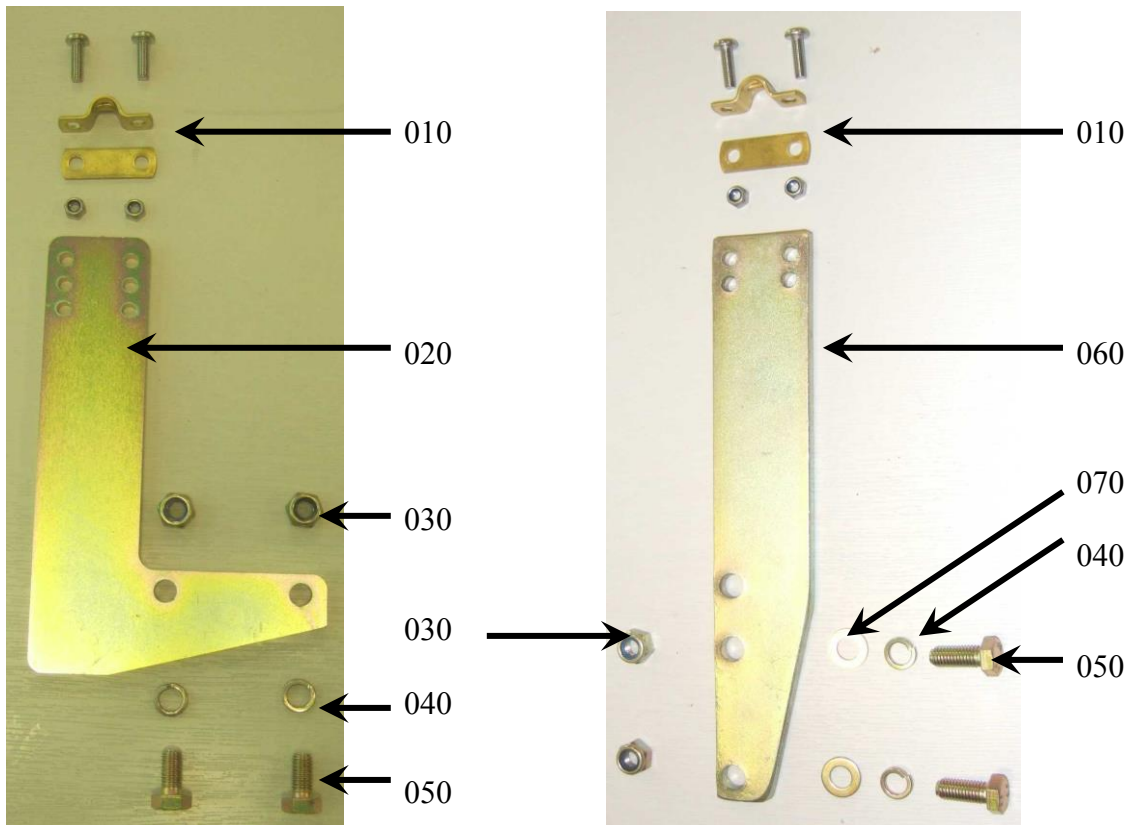


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TMC 40 GEARBOX

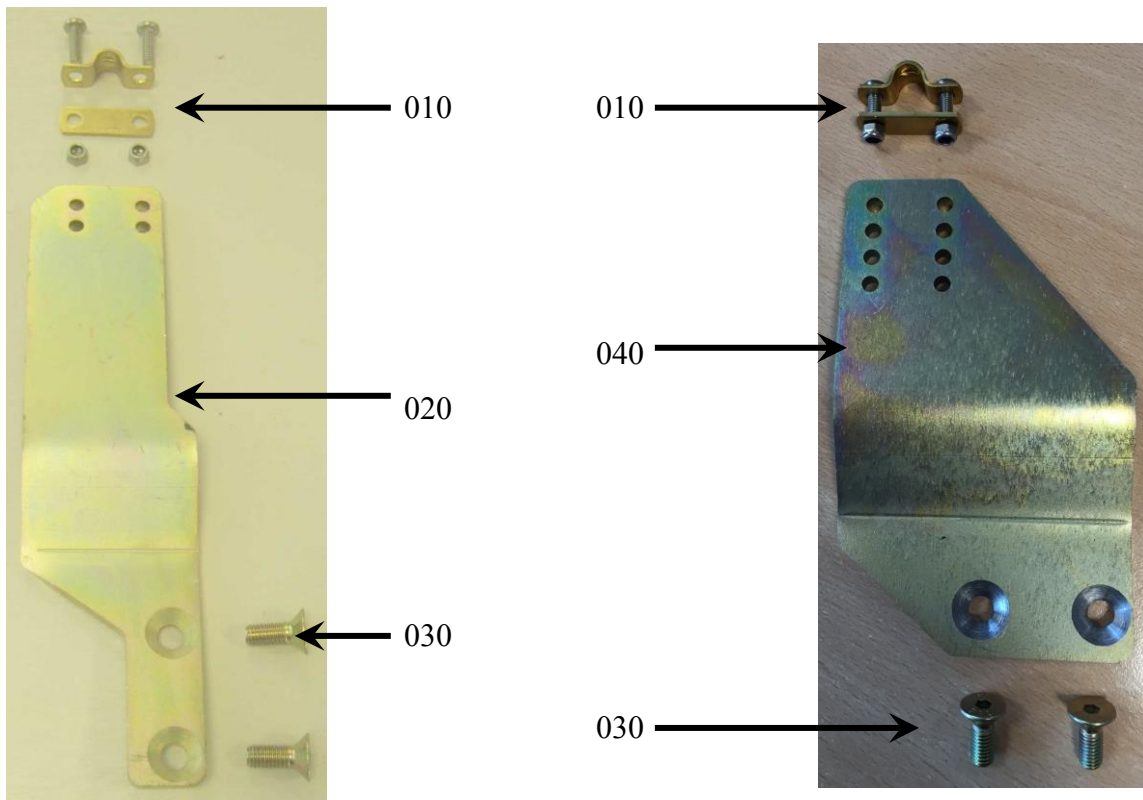
Ref No	Part Number	Part Name	Quantity
43	204-91690	TECHNODRIVE TMC 40 R2	1
	204-91671	TECHNODRIVE TMC 40 R2.6	
44	205-60990	HURTH – BORG WARNER ADAPTOR	1
45	217-99292	M8 SPRING WASHER	4
46	217-99298	M8 x 20mm SET	2
	217-99299	M8 x 25mm SET	4
47	217-99293	M8 FLAT WASHER	6
48	217-99321	M10 FLAT WASHER	6
49	217-99320	M10 SPRING WASHER	6
50	217-99325	M10 x 25mm Set	6
51	202-61582/01	TMC40 VERTICAL MORSE CONTROL BRACKET	1
52	212-99241/01	GEARBOX MORSE CABLE CLAMP	1
53	217-99297	M8 x 16mm SET	2
54	217-99292	M8 SPRING WASHER	2
55	212-93690	FLEXIBLE COUPLING	1
56	212-99240/01	GEARBOX MORSE CABLE BALL JOINT TO OCT 2015	1
	212-07665	GEARBOX MORSE CABLE CLEVIS FROM OCT 2015	1

Gearbox –TMC 40 Gear control brackets



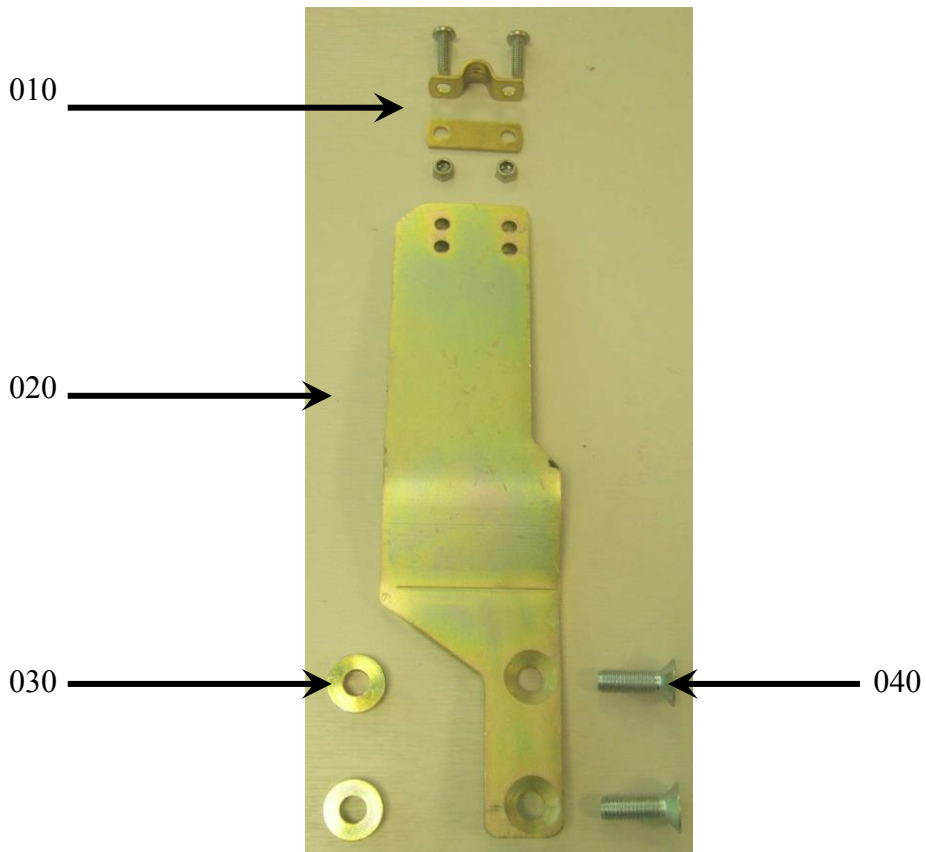
Ref. No.	Part No.	Part Name		Remarks
010	212-99241/01	Saddle clamp fitting kit	1	
020	202-61582/01	TMC vertical Morse control bracket	1	
030	217-06472	M8 Nyloc halfnut	2	TMC40'P' from April 2007
040	217-99292	M8 Spring washer	2	TMC40'M' to April 2007
050	217-99297	M8 x 16mm set	2	TMC40'M' to April 2007
060	202-09311	TMC 40 Horizontal Morse control bracket	1	
070	217-99293	M8 Flat washer	2	

Gearbox –PRM 80, 90, 120 & 125 Gear control brackets



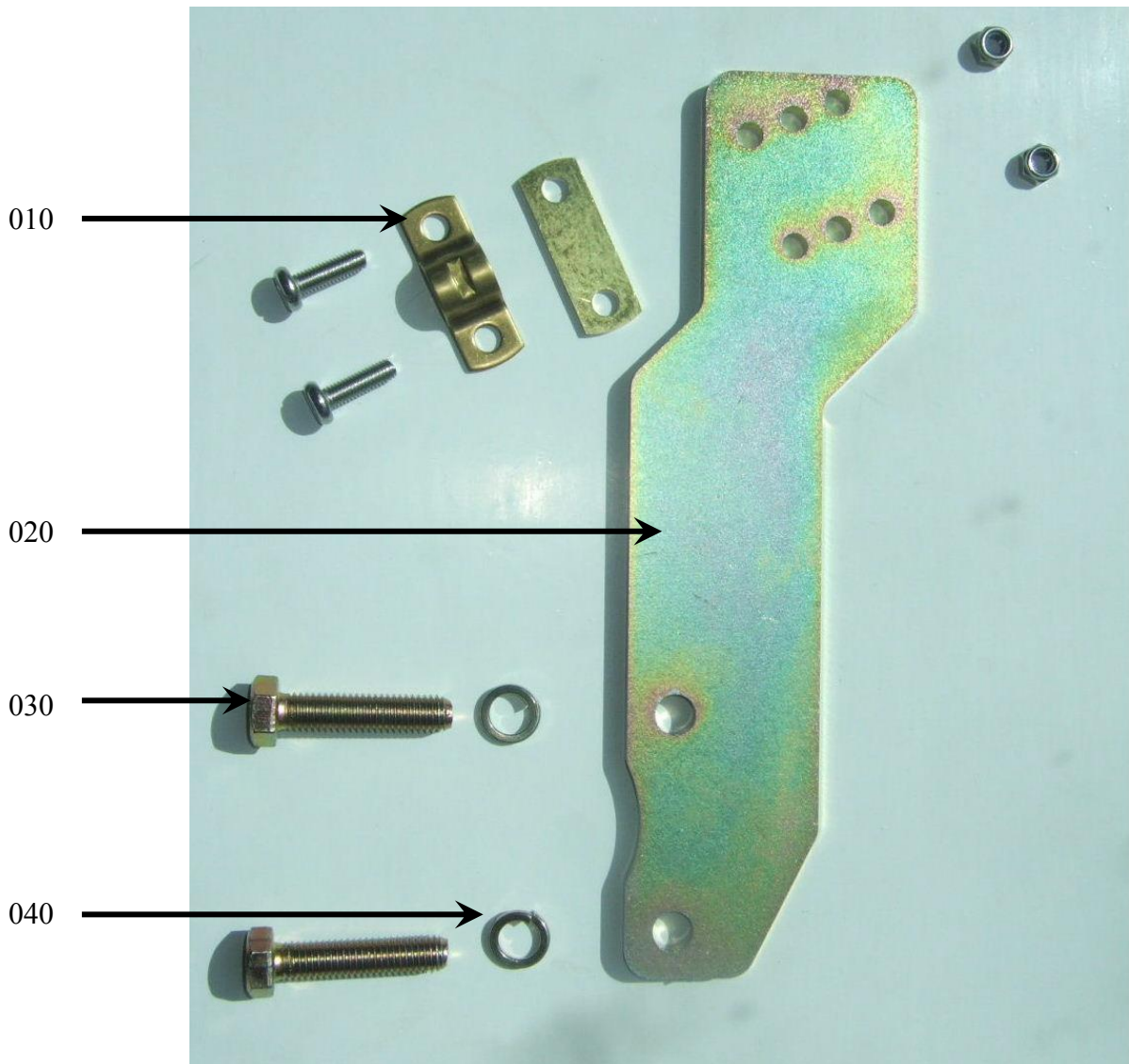
Ref. No.	Part No.	Part Name	Qty	Remarks
010	212-99241/01	Saddle clamp fitting kit	1	
020	202-05129	PRM Morse control bracket	1	
030	217-99315	M8 x 20mm Countersunk set screw	2	
040	202-05208	PRM horizontal Morse control bracket	1	

Gearbox –TMC 60 Gear control bracket

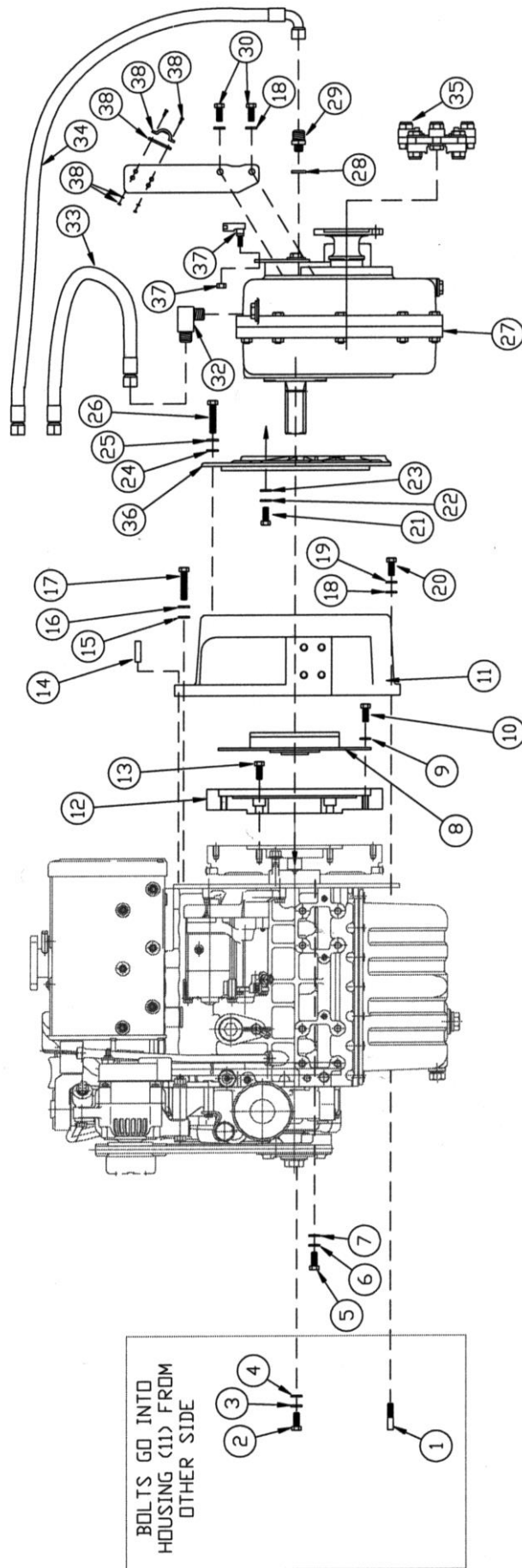


Ref. No.	Part No.	Part Name	Qty	Remarks	
010	212-99241/01	Saddle clamp fitting kit	1		
020	202-05129	TMC60 Vertical Morse control bracket	1		
030	201-01204	Spacer 7mm	2		
040	217-02482	M8 x 25mm Countersunk set screw	2		

Gearbox –PRM 150 Gear control bracket

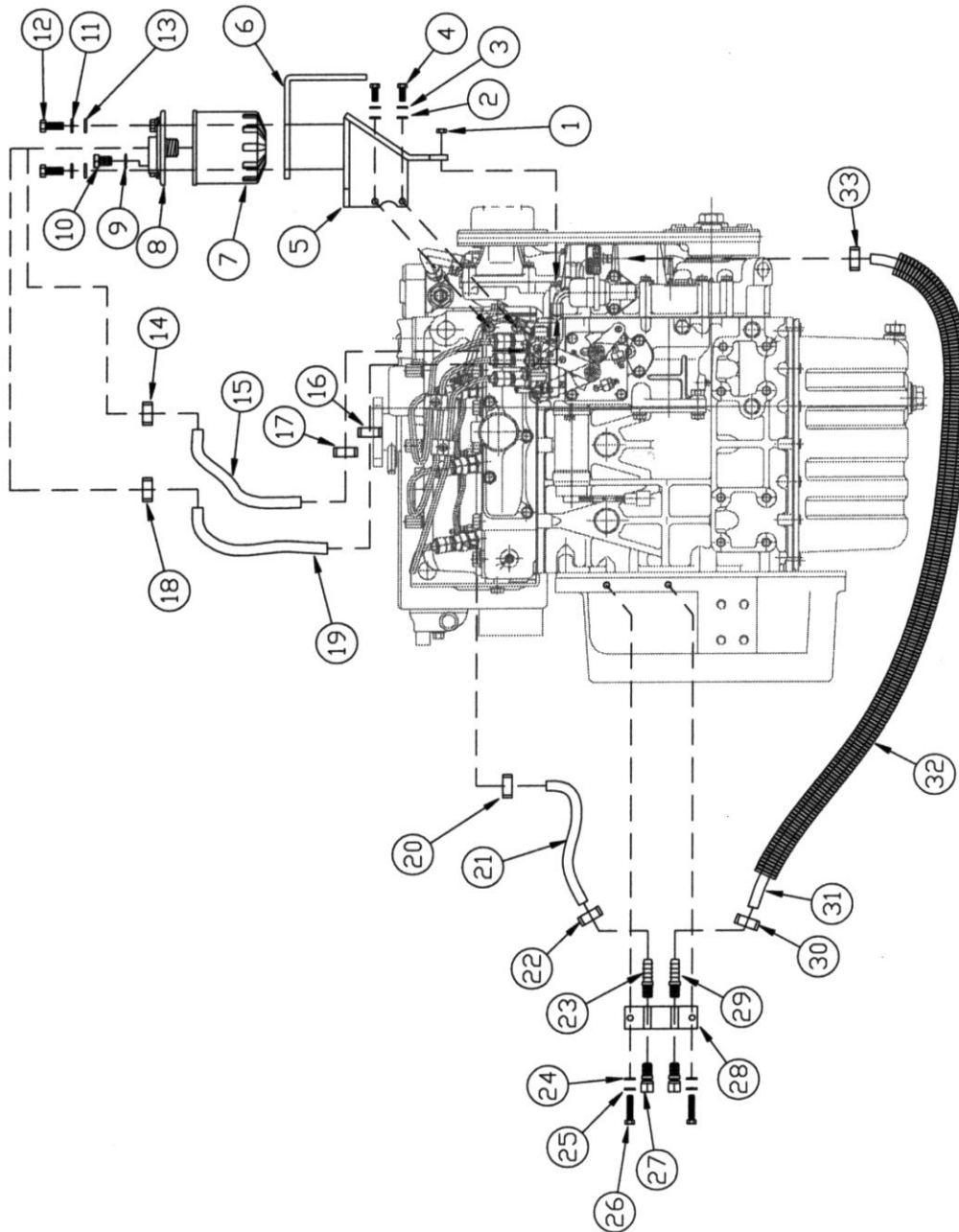


Ref. No.	Part No.	Part Name	Qty	Remarks
010	212-99241/01	Saddle clamp fitting kit	1	
020	202-94100	PRM 150 Morse control bracket	1	
030	217-99301	M8 x 35mm SET	2	
040	217-99292	M8 SPRING WASHER	2	



BD1105 FLYWHEEL HOUSING & DRIVEPLATE PRM150 GEARBOXES**(PAGE 3 of 3)**

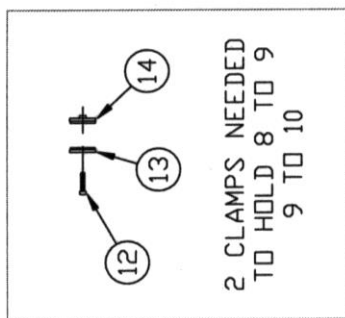
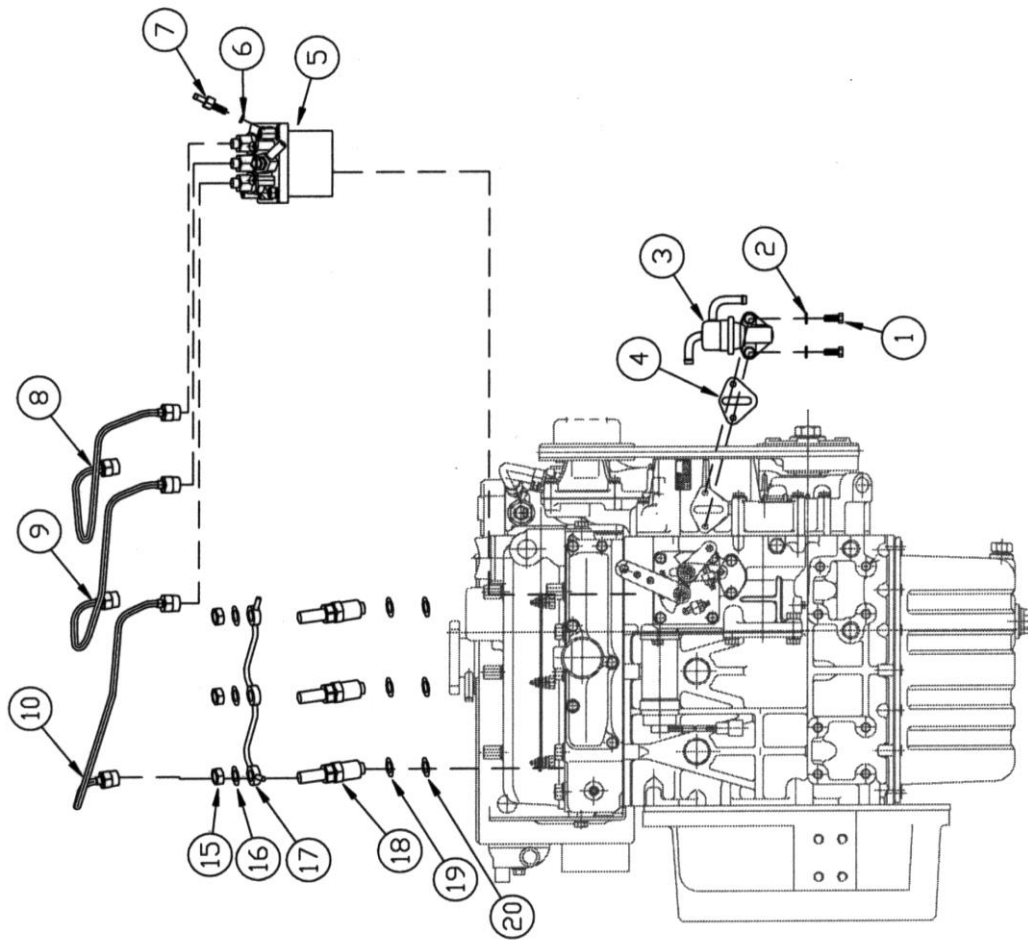
Ref No	Part Number	Part Name	Quantity
01	217-00744	LOCATION BOLT, SUPER 5 FLYWHEEL HOUSING	1
02	217-99301	M8 x 35mm SET	4
03	217-99292	M8 SPRING WASHER	4
04	217-99293	M8 FLAT WASHER	4
05	217-99299	M8 x 25mm SET	2
06	217-99292	M8 SPRING WASHER	2
07	217-99293	M8 FLAT WASHER	2
08	206-91885	PRM150 DS15 DRIVEPLATE	1
09	N/A	N/A	-
10	217-99309	M8 x 16mm SOCKET CAPHEAD	6
11	208-85780/04	SUPER 5 SERIES FLYWHEEL HOUSING	1
12	N/A	N/A	-
13	217-99335	M10 x 25mm x 1.25mm SOCKET CAP SCREW	6
14	217-99317	M8 x 24mm DOWELL	2
15	217-99321	M10 FLAT WASHER	2
16	217-99320	M10 SPRING WASHER	2
17	217-99330	M10 x 40 x 1.25mm SET	2
18	217-99293	M8 FLAT WASHER	2
19	217-99292	M8 SPRING WASHER	2
20	217-99300	M8 x 30mm SET	2
21	217-99298	M8 x 20mm SET	2
	217-99299	M8 x 25mm SET	4
22	217-99292	M8 SPRING WASHER	4
23	217-99293	M8 FLAT WASHER	6
24	217-99321	M10 FLAT WASHER	6
25	217-99320	M10 SPRING WASHER	6
26	217-99325	M10 x 25mm SET	6
27	204-00911	NEWAGE PRM 150 D1.5	1
	204-91920	NEWAGE PRM 150 D2	1
	204-91700	NEWAGE PRM 150 D3	1
28	N/A	N/A. PART OF 210-04948, ITEM 34	N/A
29	N/A	N/A. PART OF 210-04948, ITEM 34	N/A
30	217-99301	M8 x 35mm SET	2
31	217-99292	M8 SPRING WASHER	2
32	210-91940	¼"BSP x 3/8"BSP M-M 90° BLOCK ELBOW	1
33	210-94220	HYDRAULIC PIPE 3/8"BSP 450mm 90-ST	1
34	210-04948	HYD PIPE 3/8"BSP 490mm 90-1/4"BSP BANJO	1
35	212-93690	FLEXIBLE COUPLING	1
36	205-92480	PRM80 / PRM120 –BORG WARNER ADAPTOR	1
37	212-99240/01	GEARBOX MORSE CABLE BALL JOINT	1
38	212-99241/01	GEARBOX MORSE CABLE CLAMP	1
39	202-94100	PRM 150 MORSE CONTROL BRACKET	1



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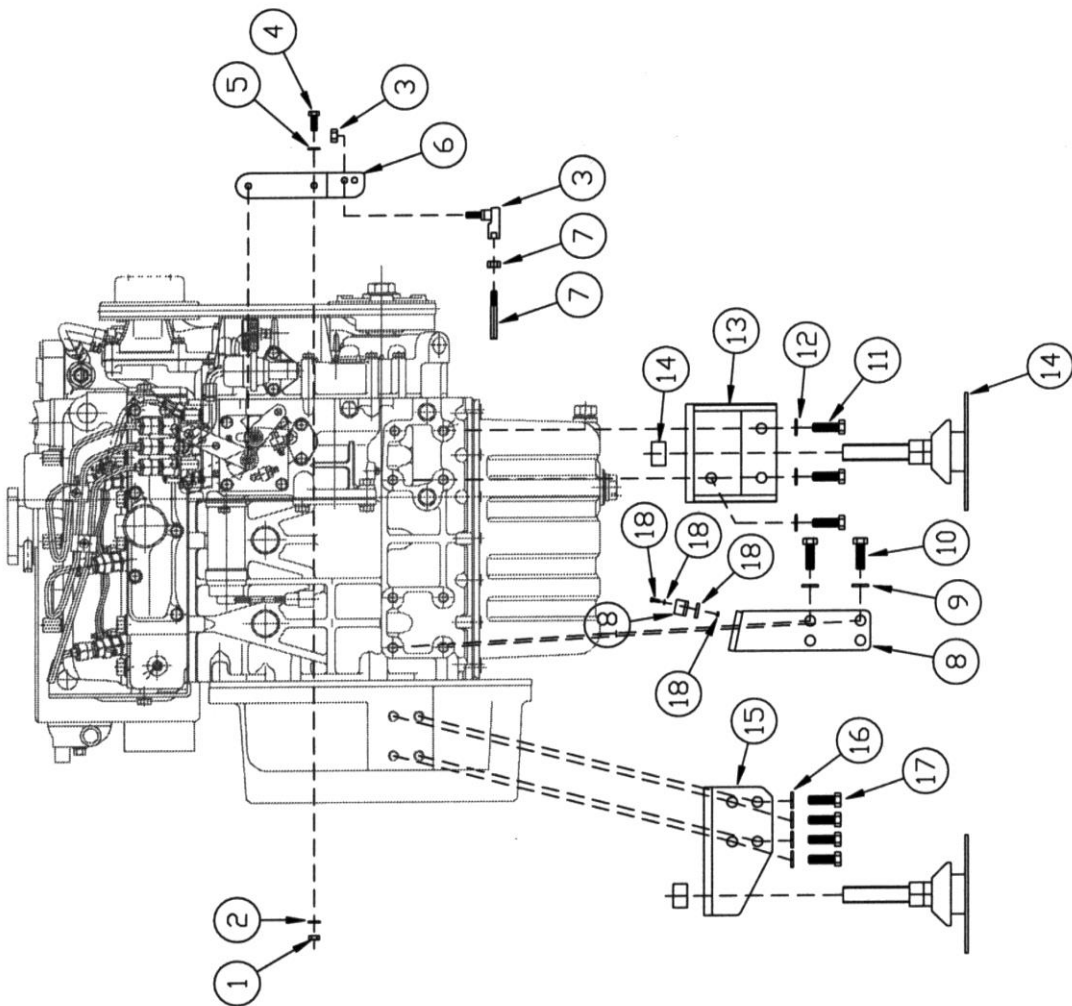
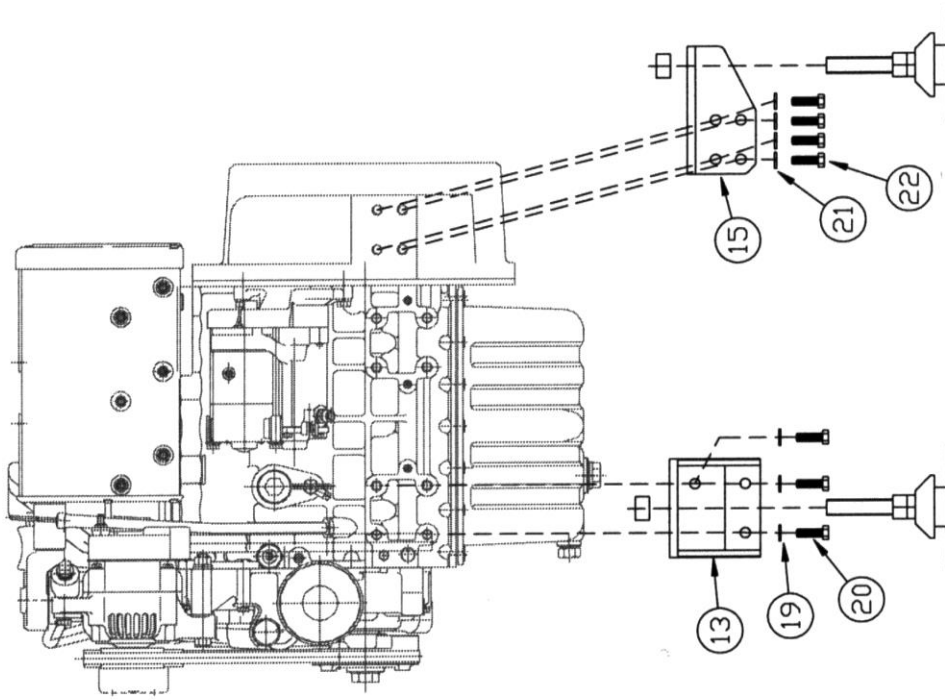
BD1105 FUEL SYSTEM**(PAGE 1 of 2)**

Ref No	Part Number	Part Name	Quantity
01	217-00052	M6 NUT	1
02	217-99276	M6 FLAT WASHER	2
03	217-99275	M6 SPRING WASHER	2
04	217-99282	M6 x 25mm SET	2
05	202-62160	SUPER 5 FUEL FILTER BRACKET	1
06	202-90320	MINI & SUPER 5 SUMP PUMP BRACKET	1
07	211-60210	FUEL FILTER	1
08	600-80290	FUEL FILTER ASSEMBLY (COMPLETE WITH HEAD) INCLUDING 09 & 10	1
09	N/A	PART OF FUEL FILTER ASSEMBLY – SEE 08	
10	N/A	PART OF FUEL FILTER ASSEMBLY – SEE 08	
11	217-99292	M8 SPRING WASHER	2
12	217-99298	M8 x 20mm SET	2
13	217-99293	M8 FLAT WASHER	2
14	212-02826	Nº15 STAINLESS HOSE CLIP	1
15	212-02423	FUEL HOSE 8mm BORE ISO7840 A1	0.27m
16	212-02826	Nº15 STAINLESS HOSE CLIP	1
17	212-02826	Nº15 STAINLESS HOSE CLIP	1
18	212-02826	Nº15 STAINLESS HOSE CLIP	1
19	212-02423	FUEL HOSE 8mm BORE ISO7840 A1	0.30m
20	212-04627	Nº11 STAINLESS HOSE CLIP	1
21	218-02827	FUEL HOSE 5mm BORE ISO7840 A1	0.23
22	212-04627	Nº11 STAINLESS HOSE CLIP	1
23	212-03125	¼"BSPT MALE x 3/16" HOSE TAIL	1
24	217-99276	M6 FLAT WASHER	2
25	217-99275	M6 SPRING WASHER	2
26	217-99283	M6 x 30mm SET	2
27	212-97112	8mm x1/4"BSPT MALE STUD COUPLING (NOT USA)	2
	212-99253	¼"BSPT MALE x 5/16" HOSE TAIL (USA ONLY)	2
28	202-01460	FUEL CONNECTION BLOCK	1
29	212-99253	¼"BSPT MALE x 5/16" HOSE TAIL	2
30	212-02826	Nº15 STAINLESS HOSE CLIP	1
31	212-02423	FUEL HOSE 8mm BORE ISO7840 A1	0.30m
32	200-00709	CONDUIT	0.30m
33	212-02826	Nº15 STAINLESS HOSE CLIP	1



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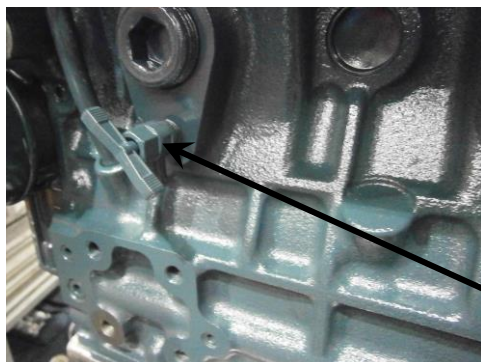
Ref No	Part Number	Part Name	Quantity
01	217-00052	M6 NUT	2
02	217-99275	M6 SPRING WASHER	2
03	600-67830	SUPER 5 SERIES FUEL LIFT PUMP WITH PRIMER	1
04	600-00065	GASKET, FUEL LIFT PUMP	1
05	600-00245	SUPER 5 FUEL INJECTION PUMP, 3 CYLINDER	1
06	600-00625	M6 COPPER WASHER	1
07	600-00536	FUEL RETURN SCREW	1
08	600-08075	INJECTOR PIPE A, BD1105 (1)	1
09	600-08076	INJECTOR PIPE B, BD1105 (2)	1
10	600-08077	INJECTOR PIPE C, BD1105 (3)	1
12	600-91803	FUEL CLAMP SCREW, WITH WASHER	3
13	600-91802	FUEL CLAMP –NO THREAD	3
14	600-91801	FUEL CLAMP –WITH THREAD	3
15	600-01914	NUT, INJECTOR SUPER 5 SERIES	3
16	600-00598	COPPER GASKET, FUEL LEAK OFF RAIL	3
17	600-00547	FUEL LEAK OFF RAIL, SUPER 5 SERIES 3 CYL	1
18	600-67740	INJECTOR SUPER 5, COMPLETE (INC 15)	3
19	600-00242	GASKET, INJECTOR SUPER 5 SERIES	3
20	600-01042	SEAL, HEAT	3



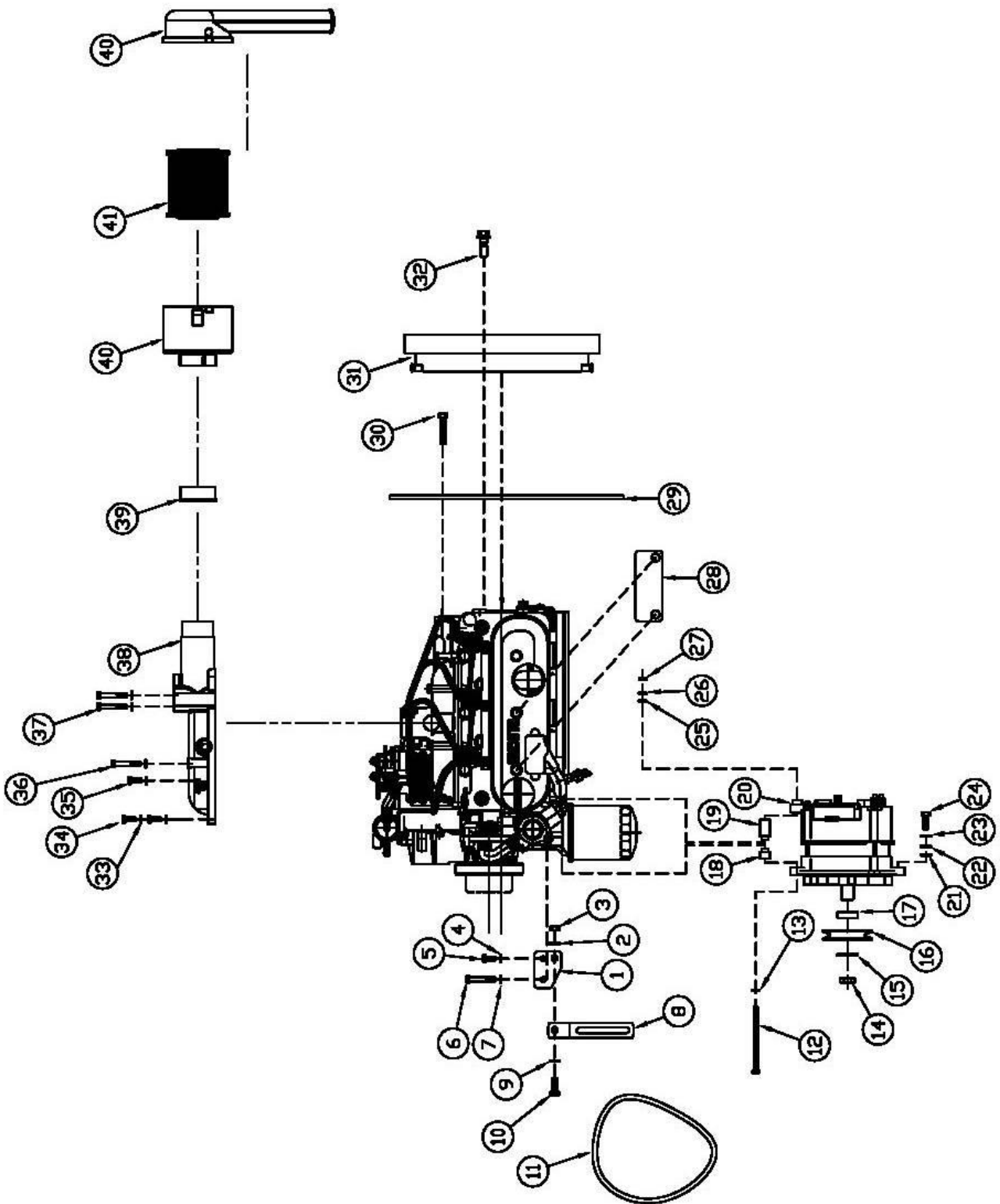
100-05284

BD1105 FEET & SPEED CONTROL BRACKETRY

Ref No	Part Number	Part Name	Quantity
01	217-99278	M6 NYLOC	1
02	217-99275	M6 SPRING WASHER	1
03	212-99240/01	GEARBOX MORSE CABLE BALL JOINT	1
04	217-99280	M6 x 16mm SET	1
05	217-99276	M6 FLAT WASHER	1
06	202-01722/01	SUPER 5 EXTENDED SPEED CONTROL LEVER	1
07	212-99990/02	SINGLE LEVER CONTROL CABLE 2m	2
	212-96070/01	SINGLE LEVER CONTROL CABLE 3m	2
	212-99990	SINGLE LEVER CONTROL CABLE 4m	2
08	202-01769	SUPER 5 SPEED CONTROL BRACKET	1
09	217-99320	M10 SPRING WASHER	2
10	217-99329	M10 x 25 x 1.25mm SET	2
11	217-99329	M10 x 25 x 1.25mm SET	3
12	217-99320	M10 SPRING WASHER	3
13	202-88590S/05	SUPER 5 FRONT FOOT (STARBOARD)	1
	202-88590P/05	SUPER 5 FRONT FOOT (PORT)	1
14	213-93440	FLEXIBLE MOUNT –TRELLEBORG TYPE	4
15	202-88600P	SUPER 5 REAR FOOT (PORT)	1
	202-88600S	SUPER 5 REAR FOOT (STARBOARD)	1
16	217-99320	M10 SPRING WASHER	4
17	217-99326	M10 x 30mm SET	4
18	212-99241/01	GEARBOX MORSE CABLE CLAMP	1
19	217-99320	M10 SPRING WASHER	3
20	217-99329	M10 x 25 x 1.25mm SET	3
21	217-99320	M10 SPRING WASHER	4
22	217-99326	M10 x 30 SET	4
23	600-00580	WATER DRAIN TAP	1



23

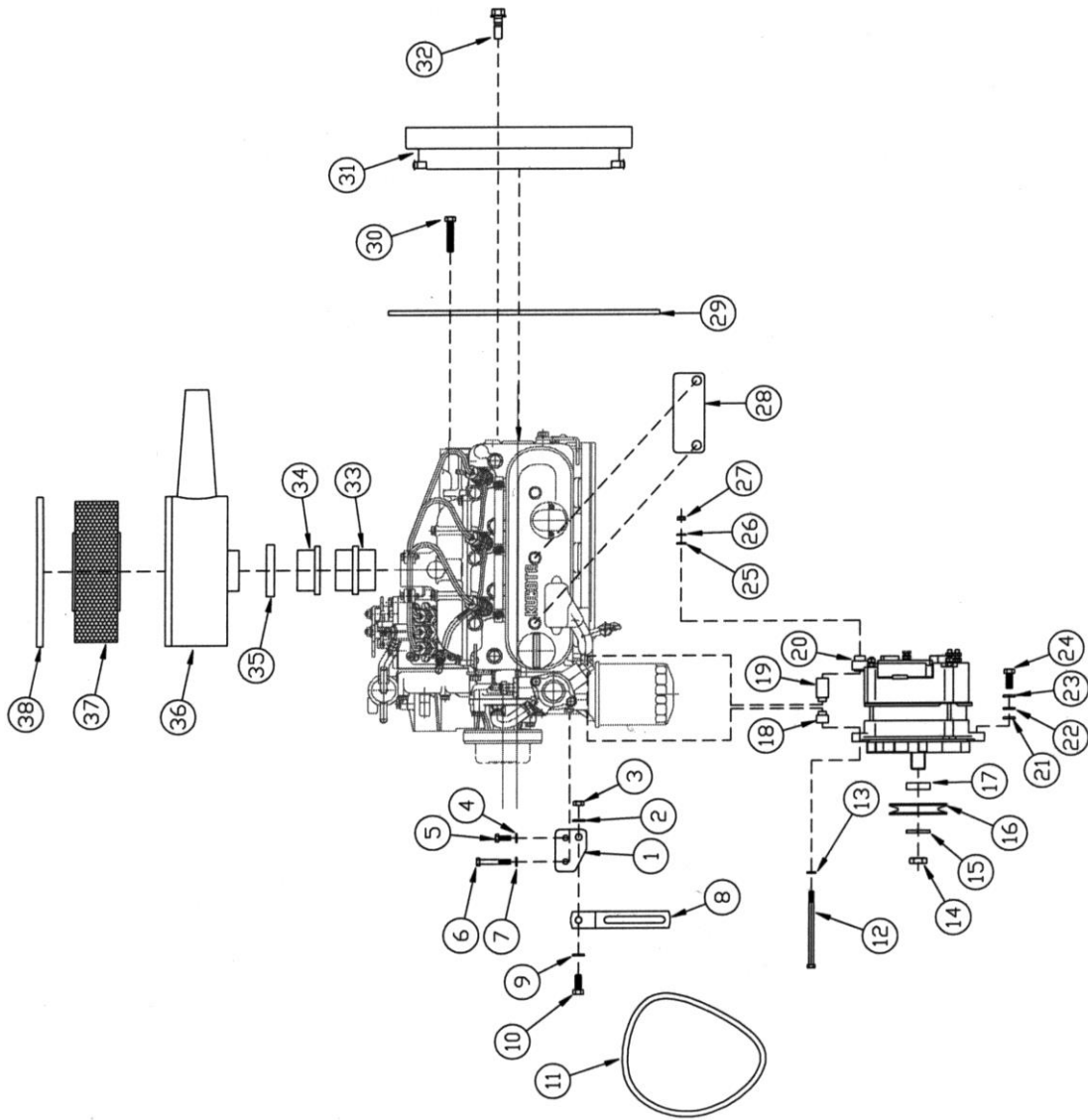


100-05285 Page 1 of 3 FROM JUNE 2003 ONLY

BD1105 ALTERNATOR, FLYWHEEL & AIR INTAKE SYSTEM –MECHANICAL GEARBOXES

FROM JUNE 2003 ONLY (PAGE 1 of 3)

Ref No	Part Number	Part Name	Quantity
01	202-61400	SUPER 5 SERIES ALTERNATOR ARM PLATE	1
02	217-99293	M8 FLAT WASHER	1
03	217-99296	M8 NYLOC	1
04	217-99275	M6 SPRING WASHER	1
05	217-99280	M6 x 16 mm SET	1
06	217-99287	M6 x 55 mm BOLT	1
07	217-99275	M6 SPRING WASHER	1
08	212-96260	SUPER 5 SERIES ALTERNATOR ARM	1
09	217-99293	M8 FLAT WASHER	1
10	217-99298	M8 x 20mm SET	1
11	214-63090/Q	XPZ1000CRE DRIVEBELT (65 AMP ALT H/E ONLY)	1
12	217-99308	M8 x 130mm BOLT	1
13	217-99293	M8 FLAT WASHER	1
14	N/A	PART OF 65 AMP ALTERNATOR –SEE 20	
15	N/A	PART OF 65 AMP ALTERNATOR –SEE 20	
16	200-91720/01	PULLEY, Z SECTION	1
17	200-91745	SPACER	1
18	201-58920	SUPER 5 -65 AMP SHORT ALTERNATOR SPACER	1
19	201-58910	SUPER 5 -65 AMP LONG ALTERNATOR SPACER	1
20	200-01155	12VOLT 65AMP ALTERNATOR	1
21	217-99294	M8 PENNY WASHER	1
22	217-99294	M8 PENNY WASHER	1
23	217-99292	M8 SPRING WASHER	1
24	217-99299	M8 x 25mm SET	1
25	217-99293	M8 FLAT WASHER	1
26	217-99292	M8 SPRING WASHER	1
27	217-99295	M8 NUT	1
28	202-97570	SUPER 5 SERIES LABEL PLATE	1
29	600-00630/4	SUPER 5 SERIES FLYWHEEL BACKPLATE	1
30	600-02680	BOLT, FLYWHEEL BACKPLATE	8
31	600-00630/3	SUPER 5 SERIES, 3 CYLINDER FLYWHEEL	1
32	600-02100	BOLT, FLYWHEEL SUPER 5 SERIES	6
33	217-99275	M6 SPRING WASHER	6
	217-99276	M6 FLAT WASHER	6
34	217-99283	M6 x 30mm SET	2
35	217-99283	M6 x 30mm SET	1
36	217-99286	M6 x 50mm SET	1
37	217-03470	M6 x 70mm SET	2
38	201-05635	BD1105 INLET MANIFOLD (REAR MOUNT FILTER)	1
39	212-00117	HOSE CLIP 45-60	1
40	211-60320	AIR FILTER ASSEMBLY (INC 39 & 41)	N/A
	211-08130	AIR FILTER ASSY (PLASTIC, FROM MARCH 2011)	1
41	211-62950	AIR FILTER ELEMENT (TO MARCH 2011)	1
	211-08132	AIR FILTER ELEMENT (FOR PLASTIC FILTER FROM MARCH 2011)	

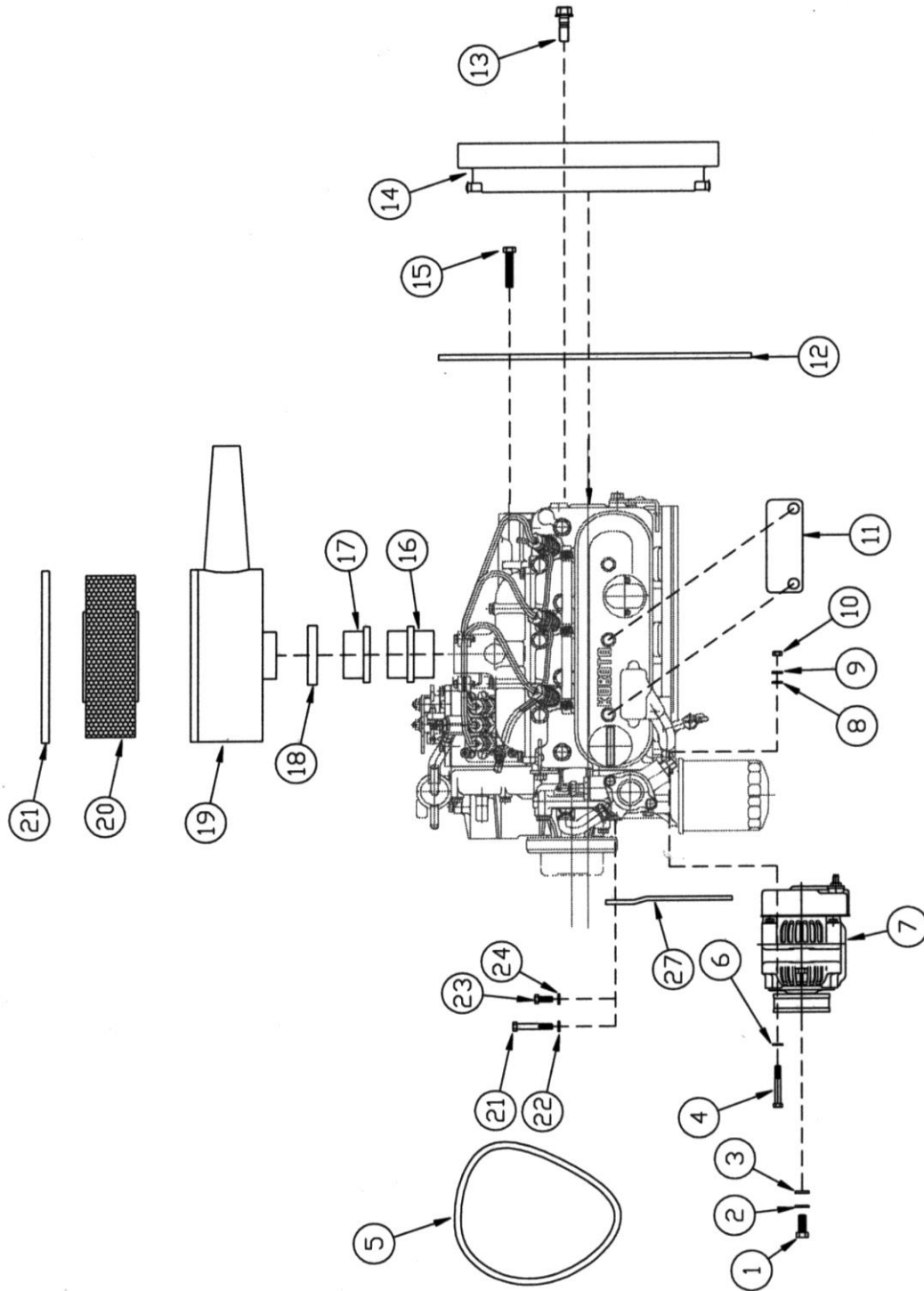


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TO JUNE 2003 ONLY FOR MECHANICAL GEARBOXES

BD1105 ALTERNATOR, FLYWHEEL & AIR INTAKE SYSTEM –HYDRAULIC GEARBOXES**ALSO SUITS MECHANICAL GEARBOXES TO JUNE 2003** (PAGE 2 of 3)

Ref No	Part Number	Part Name	Quantity
01	202-61400	SUPER 5 SERIES ALTERNATOR ARM PLATE	1
02	217-99293	M8 FLAT WASHER	1
03	217-99296	M8 NYLOC	1
04	217-99275	M6 SPRING WASHER	1
05	217-99280	M6 x 16 mm SET	1
06	217-99287	M6 x 55 mm BOLT	1
07	217-99275	M6 SPRING WASHER	1
08	212-96260	SUPER 5 SERIES ALTERNATOR ARM	1
09	217-99293	M8 FLAT WASHER	1
10	217-99298	M8 x 20mm SET	1
11	214-63090/Q	XPZ1000CRE DRIVEBELT (65 AMP ALT H/E ONLY)	1
12	217-99308	M8 x 130mm BOLT	1
13	217-99293	M8 FLAT WASHER	1
14	N/A	PART OF 65 AMP ALTERNATOR – SEE 20	
15	N/A	PART OF 65 AMP ALTERNATOR – SEE 20	
16	200-91720/01	PULLEY, Z SECTION	1
17	200-91745	SPACER	1
18	201-58920	SUPER 5 -65 AMP SHORT ALTERNATOR SPACER	1
19	201-58910	SUPER 5 -65 AMP LONG ALTERNATOR SPACER	1
20	200-01155	12VOLT 65AMP ALTERNATOR	1
21	217-99294	M8 PENNY WASHER	1
22	217-99294	M8 PENNY WASHER	1
23	217-99292	M8 SPRING WASHER	1
24	217-99299	M8 x 25mm SET	1
25	217-99293	M8 FLAT WASHER	1
26	217-99292	M8 SPRING WASHER	1
27	217-99295	M8 NUT	1
28	202-97570	SUPER 5 SERIES LABEL PLATE	1
29	600-00630/4	SUPER 5 SERIES FLYWHEEL BACKPLATE	1
30	600-02680	BOLT, FLYWHEEL BACKPLATE	8
31	600-00630/3	SUPER 5 SERIES, 3 CYLINDER FLYWHEEL	1
32	600-02100	BOLT, FLYWHEEL SUPER 5 SERIES	6
33	201-98370	SUPER 5 AIR INTAKE ADAPTOR (TO DEC2010 ONLY)	1
34	212-99391	AIR FILTER RUBBER GROMMET	1
35	212-00118	HOSE CLIP 44-64	1
36	211-93700	AIR FILTER ASSEMBLY (INC 34, 35, 37 & 38) (TO DEC2010)	N/A
	211-08131	AIR FILTER ASSEMBLY (INC 34, 35, 37 & 38) (FROM DEC2010)	1
37	211-61831	AIR FILTER ELEMENT (TO DEC2010)	1
	211-08133	AIR FILTER ELEMENT (FROM DEC2010)	
38	N/A	AIR FILTER ASSEMBLY COVER – SEE 36	N/A

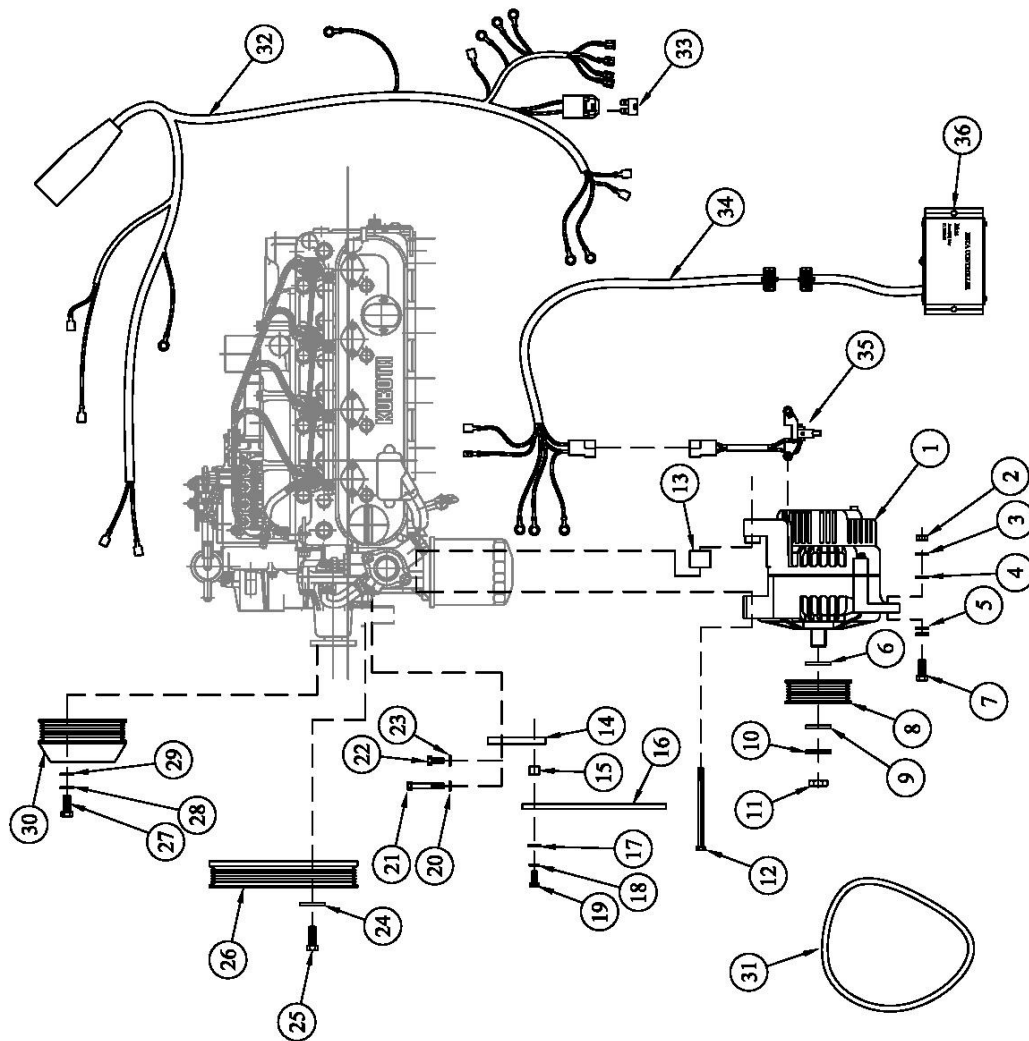


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BD1105 ALTERNATOR, FLYWHEEL & AIR INTAKE SYSTEM 40 AMP**BEFORE SEPTEMBER 2001 (PAGE 3 of 3)**

Ref No	Part Number	Part Name	Quantity
01	217-99299	M8 x 25mm SET	1
02	217-99292	M8 SPRING WASHER	1
03	217-99294	M8 PENNY WASHER	1
04	217-02760	M10 x 1.25 x 100mm BOLT	1
05	600-94280/01	DRIVEBELT, SUPER 5 –40 AMP ALTERNATOR	1
06	217-99321	M10 FLAT WASHER	1
07	600-00631	SUPER 5 SERIES 40 AMP ALTERNATOR	1
08	217-99321	M10 FLAT WASHER	1
09	217-99320	M10 SPRING WASHER	1
10	217-99322	M10 NUT	1
11	202-97570	SUPER 5 SERIES LABEL PLATE	1
12	600-00630/4	SUPER 5 SERIES FLYWHEEL BACKPLATE	1
13	600-02100	BOLT, FYLWHEEL SUPER 5 SERIES	6
14	600-00630/3	SUPER 5 SERIES, 3 CYLINDER FLYWHEEL	1
15	600-02680	BOLT, FLYWHEEL BACKPLATE	8
16	201-98370	SUPER 5 AIR INTAKE ADAPTOR (TO DEC2010 ONLY)	1
17	212-99391	AIR FILTER RUBBER GROMMET	1
18	212-00118	HOSE CLIP 44-64	1
19	211-93700	AIR FILTER ASSEMBLY (INC 34, 35, 37 & 38) (TO DEC2010)	N/A
	211-08131	AIR FILTER ASSEMBLY (INC 34, 35, 37 & 38) (FROM DEC2010)	1
20	211-61831	AIR FILTER ELEMENT (TO DEC2010)	1
	211-08133	AIR FILTER ELEMENT (FROM DEC2010)	
21	217-99287	M6 x 55mm BOLT	1
22	217-99275	M6 SPRING WASHER	1
23	217-99280	M6 x 16mm SET	1
24	217-99275	M6 SPRING WASHER	1

Drawing 100-05471 01

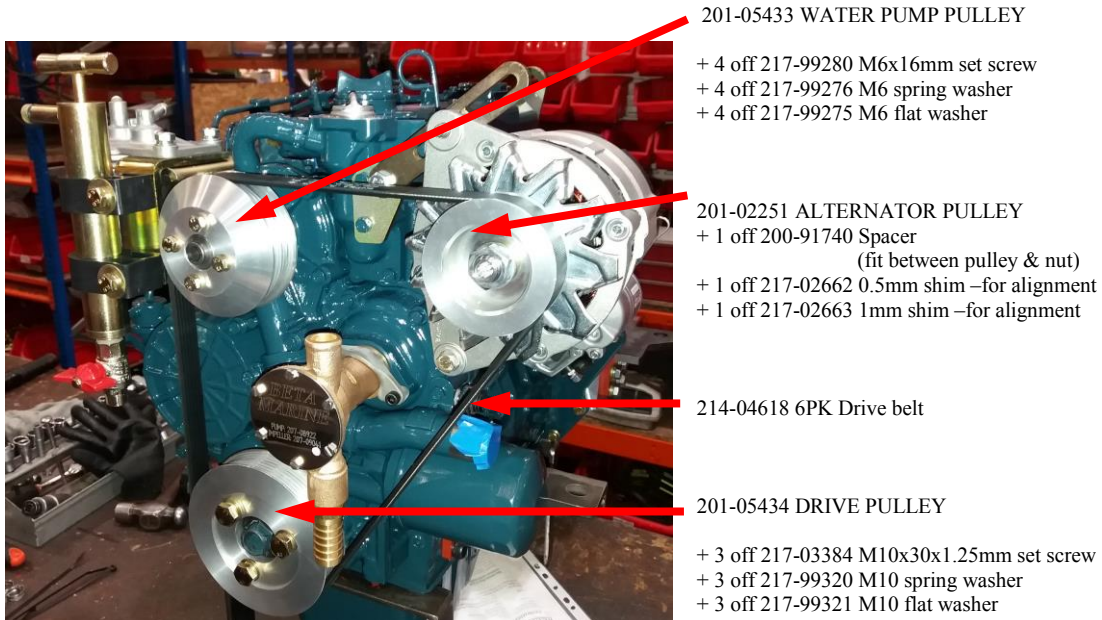


BD1105 100 AMP ALTERNATOR, 6K DRIVE SYSTEM & BETA CONTROLLER

Ref No	Part Number	Part Name	Quantity
01	200-03008	100AMP 12 VOLT ALTERNATOR INTERNAL FAN (SINGLE BOLT MANIFOLD ONLY)	1
	200-08183	120AMP 12 VOLT ALTERNATOR EXTERNAL FAN (3 BOLT MANIFOLD ONLY) *DOES NOT SUIT BETA CONTROLLER*	
02	217-99295	M8 Nut	1
03	217-99292	M8 SPRING WASHER	1
04	217-99293	M8 Flat washer	1
05	217-99294	M8 PENNY WASHER	2
06	N/A	PART OF 200-03008	1
07	217-99301	M8 x 35 SET	1
08	201-02251	PULLEY –ISKRA 80mm Dia	1
09	N/A	PART OF 200-03008	1
10	N/A	PART OF 200-03008	1
11	N/A	PART OF 200-03008	1
12	217-03178	3/8 UNC x 4 1/2" SOCKET CAP SCREW	1
13	201-61801	ELECTROLUX SPACER (WITH 10.5 DIA HOLE)	1
14	202-05437	S5 H/E 100A ALT ARM BRACKET	1
15	201-58920/01	SPACER BUTTON	1
16	202-01086	ISKRA ADJUSTING ARM (CURVED)	1
17	217-99293	M8 Flat washer	1
18	217-99292	M8 SPRING WASHER	1
19	217-99299	M8 x 25mm SET	1
20	217-99275	M6 SPRING WASHER	1
21	217-99287	M6 x 55 mm BOLT	1
22	217-99280	M6 x 16 mm SET	1
23	217-99275	M6 SPRING WASHER	1
24	217-99321	M10 FLAT WASHER	3
25	217-99329	M10 x 25 x 1.25mm SET	3
26	201-05434	S5 H/E 100A ALT DRIVE PULLEY 6K 130DIA	1
27	217-99281	M6 x 20 SET	4
28	217-99275	M6 SPRING WASHER	4
29	217-99276	M6 FLAT WASHER	4
30	201-05433	S5 H/E 100A ALT WATER PUMP PULLEY 6K 98DIA	1
31	214-04618	DRIVEBELT SUPER 5 -100 AMP ALTERNATOR	1
32	200-60973/05	SUPER 5 SERIES ENGINE WIRING HARNESS	1
33	200-00959	BLADE FUSE	1
34	200-02737	BETA CONTROLLER HARNESS	1
35	200-02684	100A BRUSH BOX (FOR 200-03008 ONLY)	1
36	200-02580	BETA CONTROLLER (FOR 200-03008 ONLY)	1
37	AK/S5H/100A/001	100A INTERNAL FAN ALTERNATOR KIT (MAY REQUIRE ITEM 22 PAGE13 209-80310/22 IF ENGINE HAS JABSCO SEA WATER PUMP) (SUITS SINGLE BOLT MANIFOLD ONLY)	1
	AK/S5H/100A/E01	120A EXTERNAL FAN ALTERNATOR KIT (SUITS 3 BOLT 2011 SPEC MANIFOLD ONLY)	
38	200-08183	MAHLE 120A 12V ALTERNATOR	1
39	200-04654	120A ALTERNATOR TO STARTER B+ LOOM	1
40	AK/S5H/100A/KS01	6K POLY-VEE BELT UPGRADE KIT (NO ALTERNATOR)	1

Super5 Series 6K alternator drive upgrade kit (AK/S5H/100A/KS01)

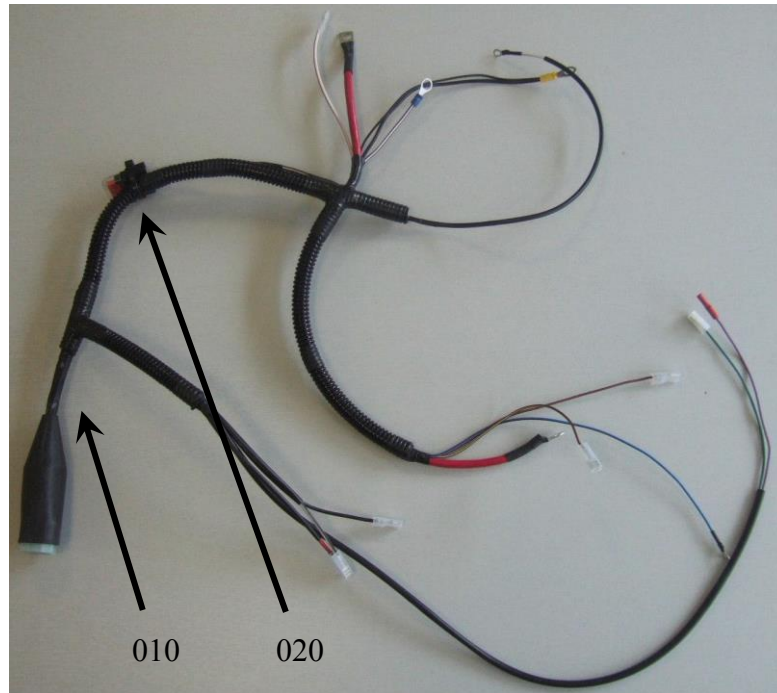
The following photographs are intended as a guide to help illustrate how to fit this alternator drive upgrade kit supplied to suit the Super5 Series engines. The kit is supplied to suit engines originally built to our most recent standard specification, further modification to the engine may be required whilst fitting. This is the responsibility of the installer & not Beta Marine.



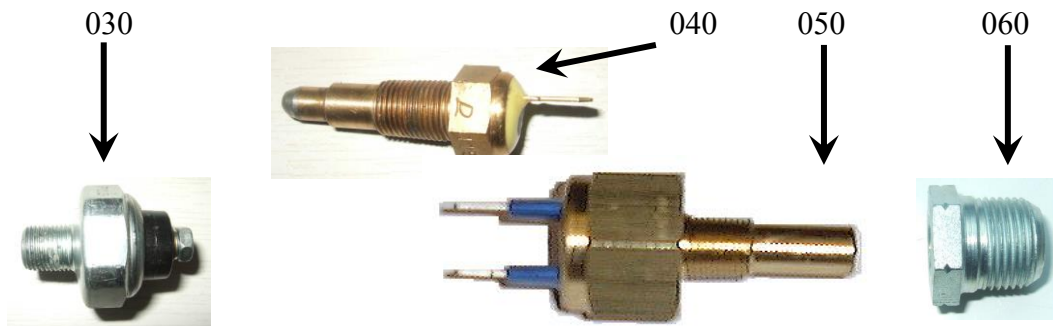
Notes: Set screws to be fitted with thread lock

Shims supplied to aid alternator pulley alignment whilst fitting, important this is checked to give correct pulley alignment

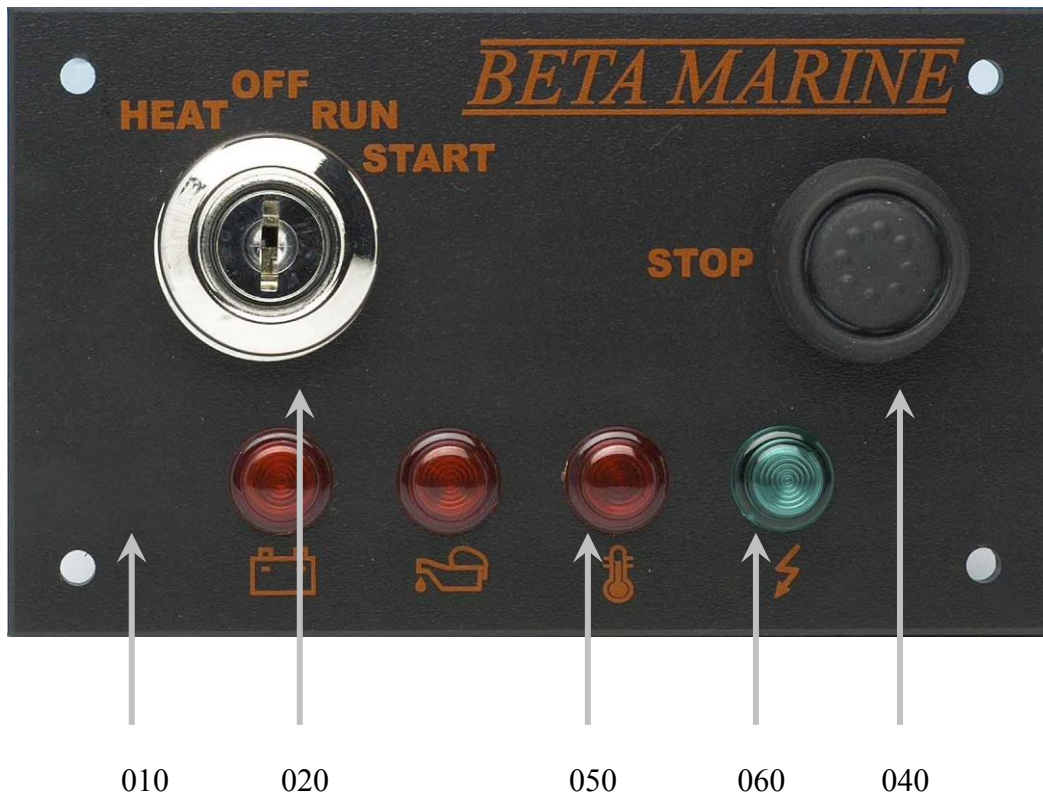
Wiring harness & switches



Ref. No.	Part No.	Part Name	Qty	Remarks
010	200-60973/05	Super5 Series engine harness	1	Includes fuse
020	200-00959	Engine harness fuse (blade type)	1	
030	600-62670	Oil pressure switch (not 2C panel)	1	
040	600-62820	Water temperature switch (not 2C panel)	1	Std from March 2007
050	200-01133	Water temperature switch / sender 95°C (Not 2C panel) 1/8BSP	1	Std before March 2007
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

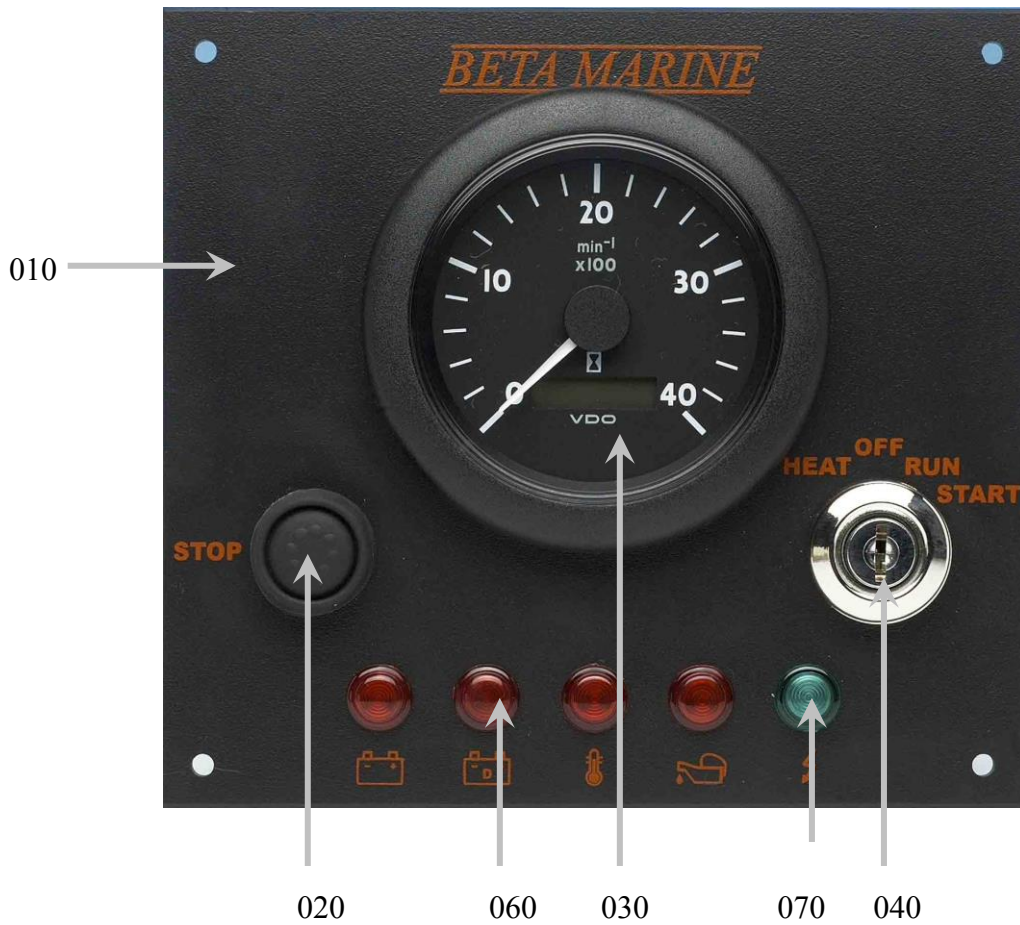


Simple 2A panel –LAMP type from May 2005



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	1	To August 2008	
	600-00057/01	Kubota keyswitch –suit 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	200-09797	Clip for Red or Green panel lamp	4	Not shown	

2AB panel –LAMP type from May 2005



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2ABD/KS02	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, Viewline Jan2010
040	600-00057	Kubota keyswitch –suits small key	1	To August 2008
	600-00057/01	Kubota keyswitch –suit large key	1	From August 2008
050	600-00058	Kubota keys –PAIR (SMALL)	1	To August 2008
	600-00058/01	Kubota keys –PAIR (LARGE)	1	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	200-09797	Clip for Red or Green panel lamp	5	Not shown

2AB'V' panel –LAMP type from May 2005



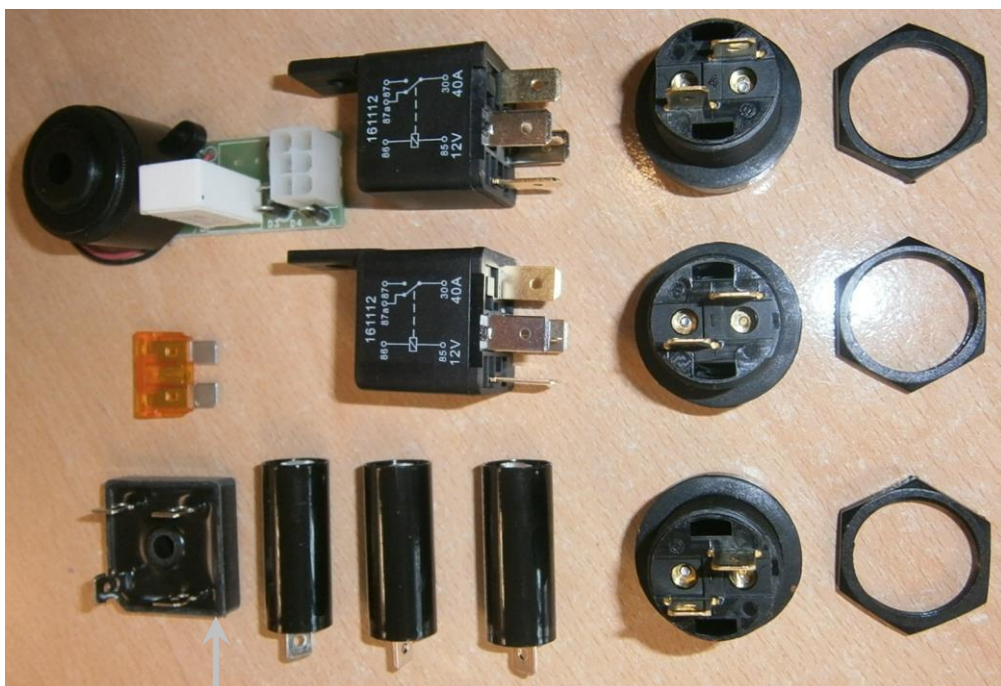
Ref. No.	Part No.	Part Name	Qty	Remarks	
010	AK/2ABV/KS01	2AB'V' panel with 3m loom (complete)	1		
020	600-00057	Kubota keyswitch –suits small key	1	To July 2008	
	600-00057/01	Kubota keyswitch –suit large key	1	From July 2008	
030	600-00058	Kubota keys –PAIR (SMALL)	1	To July 2008	
	600-00058/01	Kubota 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 & hourmeter (VDO)	1	From March 2002, Viewline Jan2010	
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	200-09797	Clip for Red or Green panel lamp	4	Not shown	

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



Ref. No.	Part No.	Part Name	Qty	Remarks	
010	AK/2ABVW/KS01	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, Viewline Jan2010	
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	
140	200-09797	Clip for Red or Green panel lamp	4	Not shown	

Service kit to suit 2AB'V'W pushbutton control panel



010

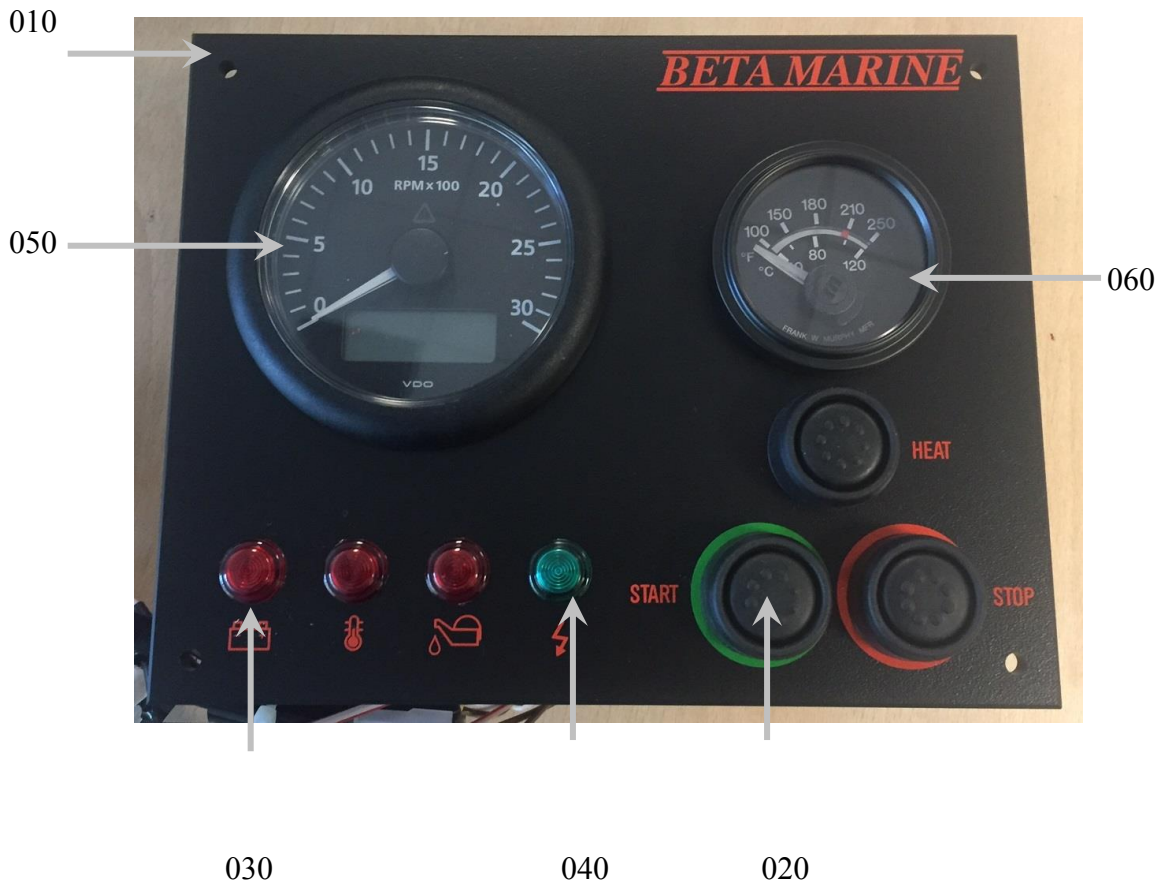
Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2ABVW/RKS01	2AB'V'W panel service kit (complete)	1	

SFIA 2B panel –LAMP type from May 2005



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2BT/KS02	SFIA 2B Panel –with temperature gauge From May 2005 (complete)	1	With Murphy temp gauge
020	600-00057	Kubota keyswitch –suits small key	1	To July 2008
	600-00057/01	Kubota keyswitch –suit 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 tach & hourmeter (VDO)	1	From March 2002, Viewline Jan2010
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	200-09797	Clip for Red or Green panel lamp	4	Not shown

2BW pushbutton control panel –LAMP type from May 2005

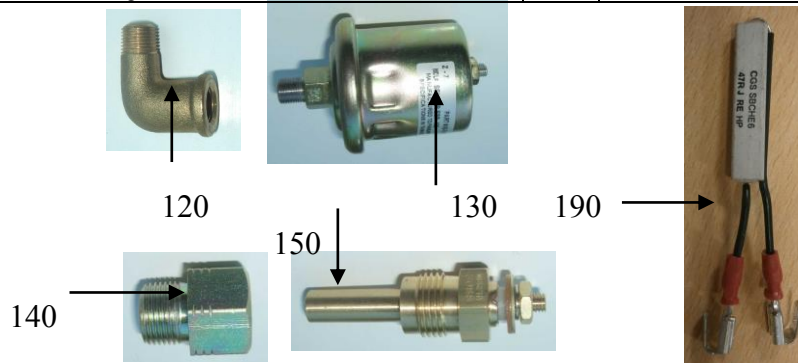


Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2BTW/KS01	2BW panel with 3m loom (complete)	1	
020	200-00072	Panel stop / start / heat button	3	
030	200-04657	Red 12V warning lamp & retaining clip	3	
040	200-04656	Green 12V power on lamp & retaining clip	1	
050	200-02373	0-4000 RPM tachometer & hourmeter (VDO)	1	Viewline from Jan2010
060	200-96200	Murphy water temperature gauge	1	
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
140	AK/2ABVW/RKS01	2AB'V'W panel service kit (complete)	1	See page 60

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



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2CD/KS01	Murphy 2C deluxe panel –Domestic 5 Lamp (Complete, less 3m interconnection cable 160)	1	
020	200-00072	Panel stop button	1	
030	600-00057	Kubota keyswitch –suits small key	1	To July 2008
	600-00057/01	Kubota keyswitch –suit large key	1	From July 2008
040	600-00058	Kubota keys –PAIR (SMALL)	1	To July 2008
	600-00058/01	Kubota keys –PAIR (LARGE)	1	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 & hourmeter (VDO)	1	From March 2002, Viewline Jan2010
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	For spares can use 1/8 sender 200-08248 & adaptor 212-01480
150	200-94360	Murphy temperature sender	1	
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
190	200-04583/5W	Domestic charge load resistor	1	



2CW Push button control panel -sea spec 4 lamp, from May 2005



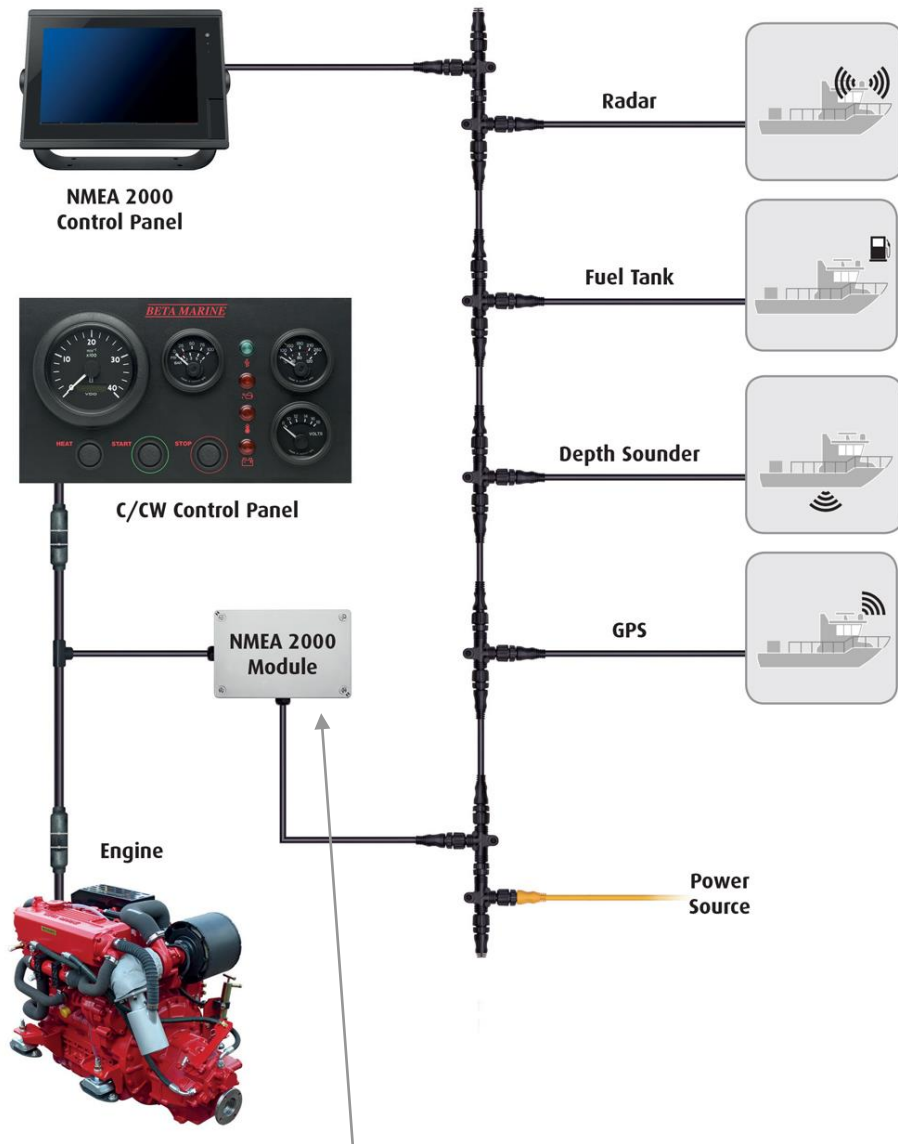
Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/2CW/KS01	2CW Push button control panel	1	Complete, less 3m connection cable 140
020	200-00072	Panel stop button	3	
030	200-04657	Red 12V warning lamp & retaining clip	3	
040	200-04656	Green 12V power on lamp & retaining clip	1	
050	200-01293P	2CW panel blank	1	
060	200-02373	0-4000 RPM tachometer (VDO)	1	From March 2002, Viewline Jan2010
070	200-96190	Murphy oil pressure gauge	1	
080	200-96200	Murphy water temperature gauge	1	
090	200-96210	Murphy voltmeter gauge	1	
100	212-04355	1/8" BSP MxF elbow	1	
110	200-94350	Murphy pressure sender	1	
120	200-91980	Water temperature sender adaptor	1	For spares you can use 1/8 sender 200-08248 & adaptor 212-01480
130	200-94360	Murphy temperature sender	1	
140	200-04588/03	3m extension harness	1	Not shown
150	200-00639	11 Way plug to suit male type spade	1	Not shown
160	200-00047	Male spade for 11 way plug	11	Not shown
170	200-10135	Diode pack to suit 2CW panel from Dec 2015	1	Not shown

2D Digital control panel



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/P/2D/KS01	2D Push button digital control panel	1	Complete, less 3m connection cable & senders -see below
020	200-09347	Illuminated rocker switch	1	
030	200-00072	Panel stop / start / heat button	3	
040	200-04588/03	3m extension harness	1	
050	212-04355	1/8" BSP MxF elbow	1	
060	200-94350	Murphy pressure sender	1	
070	200-91980	Water temperature sender adaptor	1	<i>For spares you can use 1/8 sender 200-08248 & adaptor 212-01480</i>
080	200-94360	Murphy temperature sender	1	

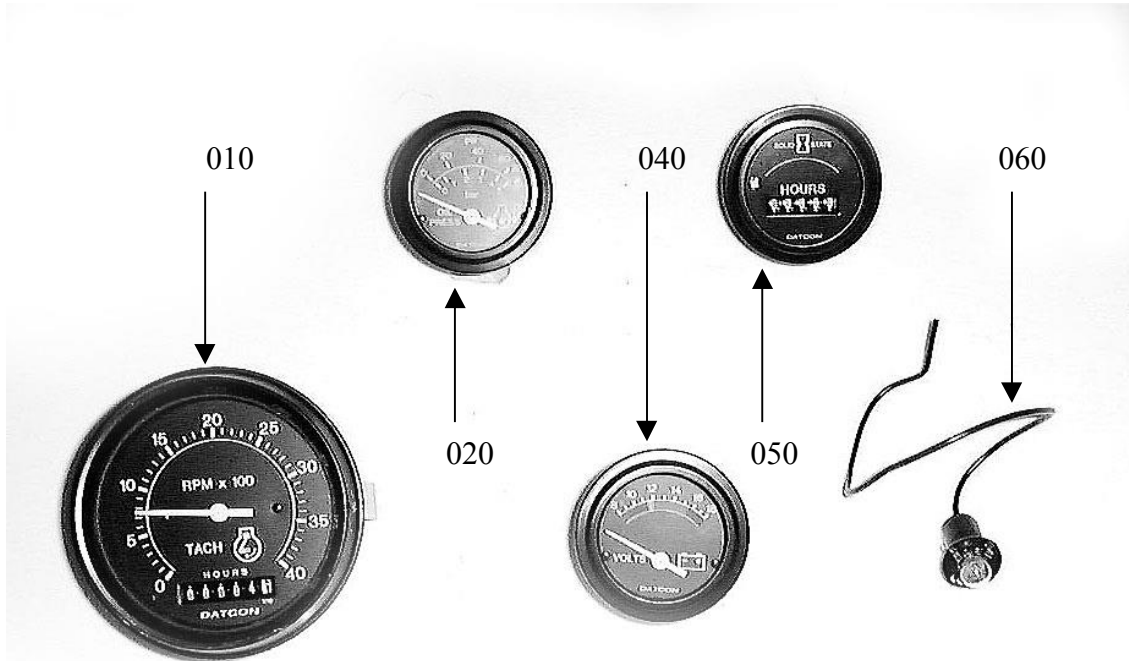
NMEA2000 Digital interface -for installations with deluxe control panel



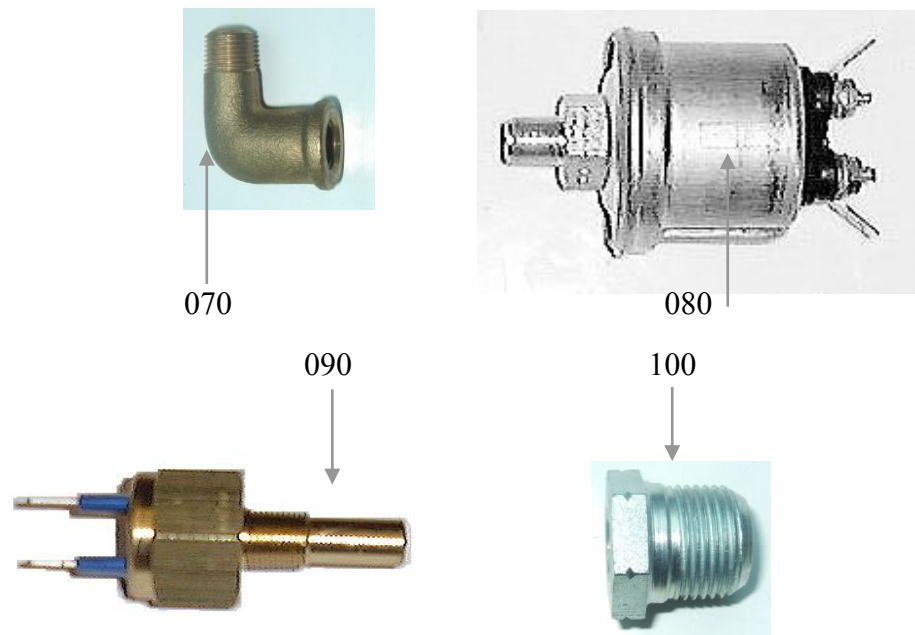
010

Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/P/2D/i01	NMEA2000 Add on for use with 2C panels TO DWG 200-10898	1	

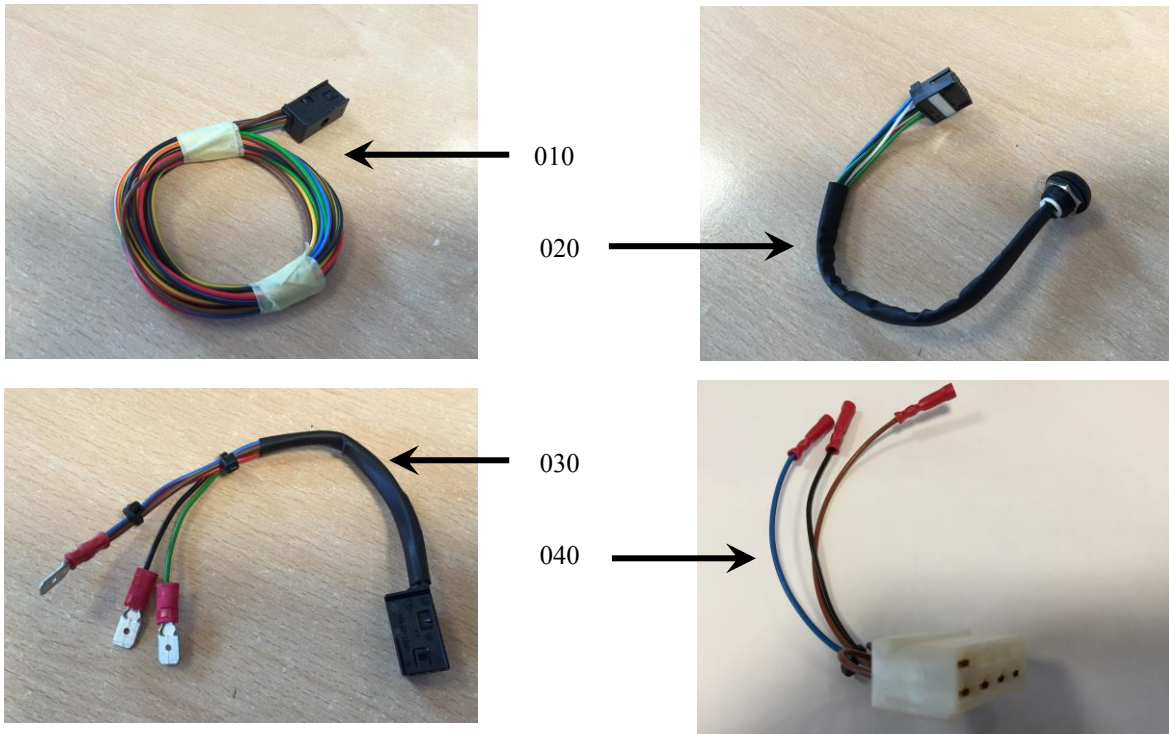
Panel gauges & senders



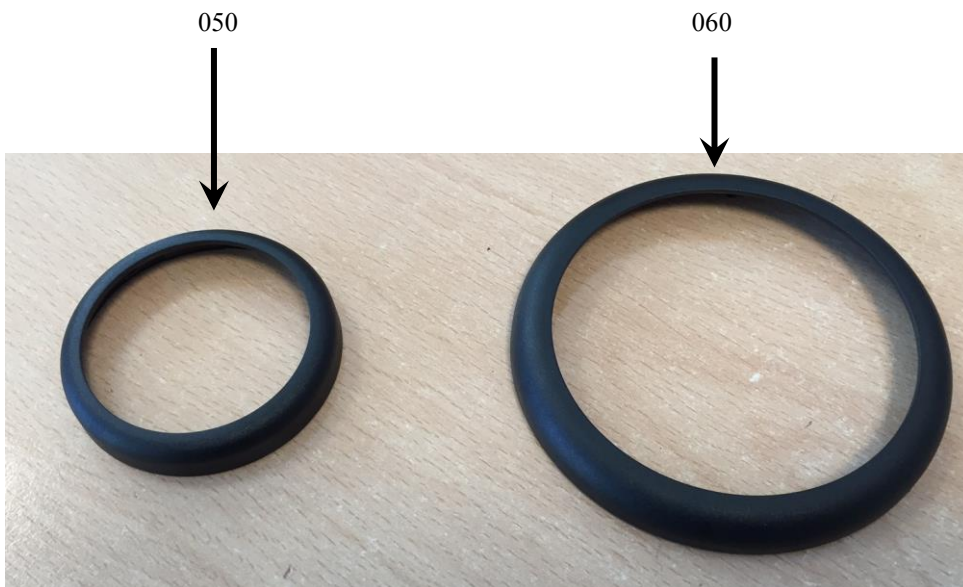
Ref. No.	Part No.	Part Name	Qty	Remarks
010	200-00054	0-4000 RPM tacho & hourmeter	1	To March 2002
	200-02373	0-4000 RPM tacho & hourmeter (VDO)		From March 2002, Viewline Jan2010
020	200-08011	Oil pressure gauge –VDO Viewline	1	Not shown
	200-91380	Oil pressure gauge –Datcon		
030	200-07981	Water temperature 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	200-96220	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 Oceanline 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



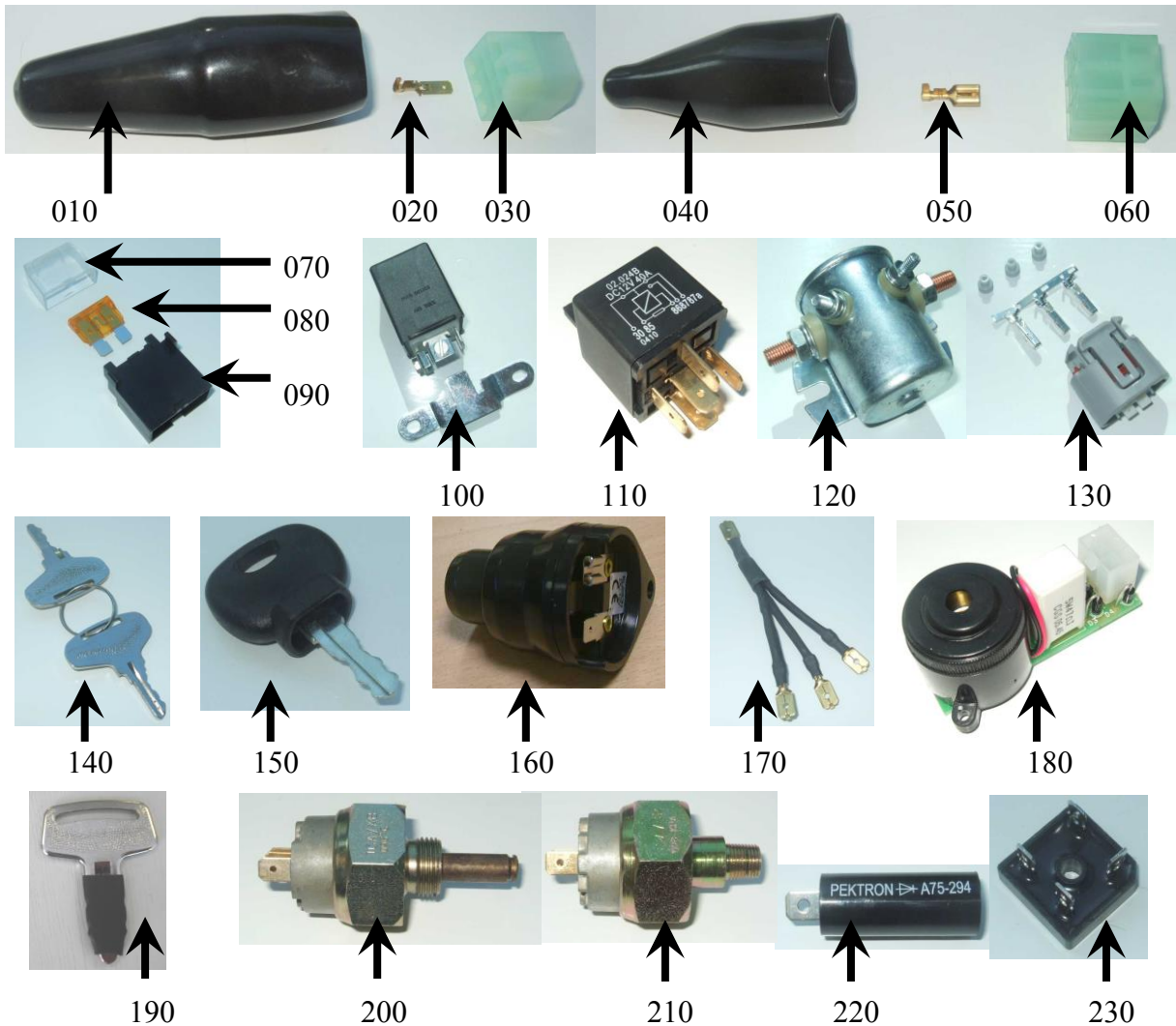
VDO Gauge accessories



Ref. No.	Part No.	Part Name	Qty	Remarks
010	200-07664	8 PIN CONNECTOR -FOR VIEWLINE GAUGES	1	
020	200-08875	VDO VIEWLINE TACHO CALIBRATION WIRING HARNESS	1	
030	200-07664-OL	8 PIN CONNECTOR, TO SUIT OCEANLINE REPLACEMENT	1	
040	200-10381	OCEANLINE CONVERSION HARNESS TO SUIT VIEWLINE PANEL	1	
050	200-10091B	BLACK BEZEL FOR 52mm VIEWLINE GAUGE	1	
060	200-10090B	BLACK BEZEL FOR 85mm VIEWLINE TACHO	1	

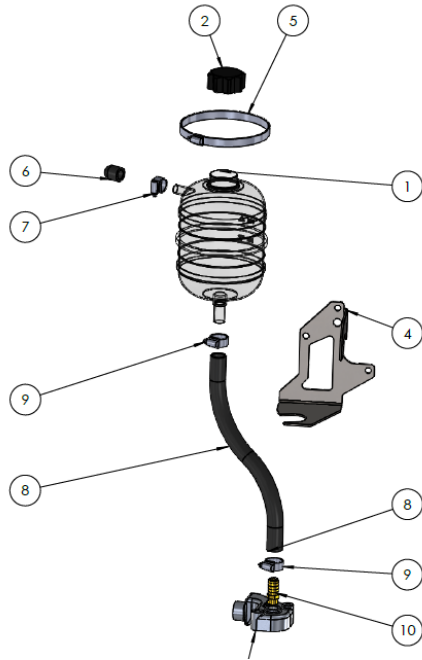


Various electrical & panel parts and components



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



ITEM NO.	PartNo	DESCRIPTION	QTY.
1	209-03065	EXPANSION TANK	1
2	209-03066	EXPANSION TANK CAP	1
4	202-21375	WATER BOTTLE BKT	1
5	262-04015	JUBILEE CLIP S/S 120mm - 140mm	1
6	212-07011	SILICON BUNG FOR EXPANSION TANK	1
7	212-06818	S/S JUBILEE 13-20MM SIZE 20	1
8	218-99247	3/4" (19mm) CAR HEATER HOSE	1
9	212-98464	S/S JUBILEE 22-30mm SIZE 30	2
10	210-03297	3/8BSPT x 3/4 HOSE TAIL GT17/19K	1

WHEN FILLING, FILL THE STANDARD FILLING POINT ON THE ENGINE FIRST AND REPLACE CAP. THEN FILL THROUGH THE EXPANSION BOTTLE

THE ENGINE FILLING CAP MUST BE STANDARD CAP P/N 209-80130 (PRESSURE 13PSI)

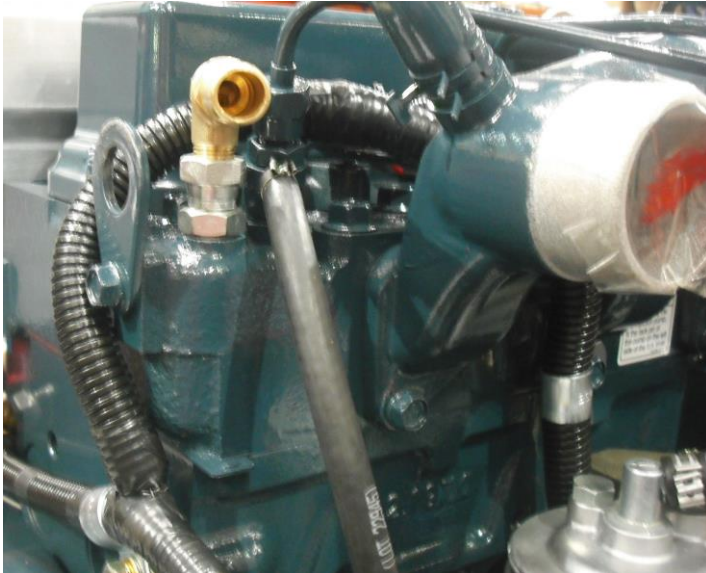
Ref. No.	Part No.	Part Name	Qty	Remarks
KIT	AK/SML/EXP/002	Expansion tank kit, complete	1	
(This kit consists of all items listed individually below)				
001	209-03065	Expansion tank	1	
002	209-03066	Expansion tank lid	1	
004	202-21375	Expansion tank mounting bracket	1	
005	262-04015	Stainless steel hose clip 120-140mm	1	
006	212-07011	Hose cap blanking bung	1	
007	212-06818	Stainless steel hose clip 13-20mm	1	
008	218-99247	3/4" Bore water hose	1m	
009	212-98464	Stainless steel hose clip 22-30mm	1	
010	210-03297	3/8BSPT x 3/4" hose tail	1	



Standard fitting of calorifier connections / hot water take off

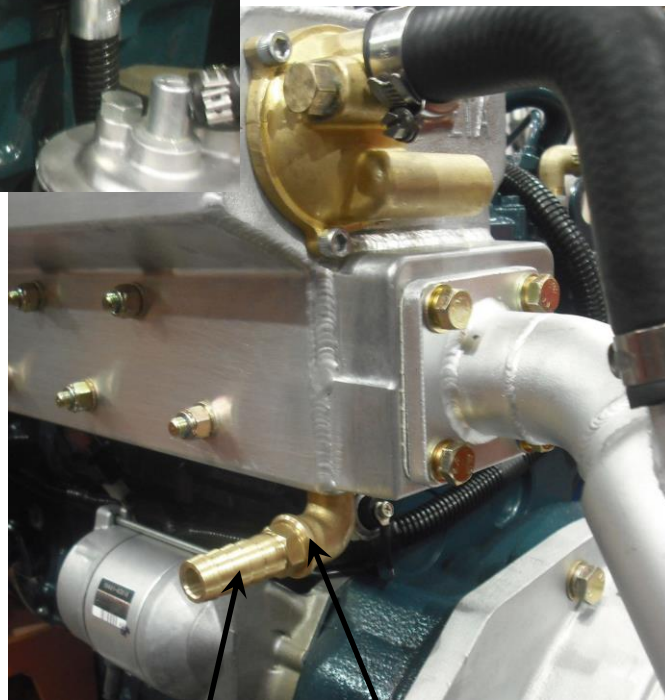
Heat exchanger cooled engine from December 2010

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.



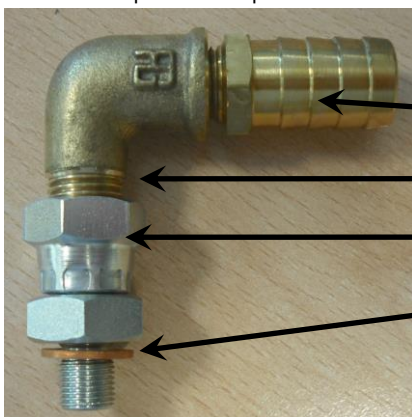
Cool water from calorifier tank

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

210-07357

212-06565

COMPLETE KIT: AK/HE/CAL/003

Installation Kits



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/SML/HE/6e/001	WATER INLET KIT -BALL VALVE FROM MAR04 3/4" ID	1	NOT SHOWN
	AK/SML/HE/6e/0S1	WATER INLET KIT -SPECIAL CLEAR PLASTIC TYPE 3/4"		
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 VENTILATION HOSE	1	
	212-00466/01	ANTI-SYPHON WITH PRESSURE VALVE (NO VENTILATION HOSE REQUIRED)	1	NOT SHOWN
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/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)		
070	212-99254	1/8"BSPT MALE x 8mm HOSE TAIL	2	
	212-97117	1/8"BSPT MALE STUD x 8mm COMPRESSION		
080	AK/SML/3h/001	REMOTE OIL FILTER BULKHEAD MOUNT -MINI & 05 SERIES	1	
090	AK/SML/5a/002	SINGLE LEVER CONTROL	1	
100	212-96070/01	SINGLE LEVER CONTROL CABLE 3m	1	
110	200-96160	BATTERY LEADS 1m, 25mm 1 BLACK & 1 RED -UP TO Beta60 ONLY	1	

Fuel / water separator



020 →



← 010



030 →

Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/SML/6I/H01	FUEL / WATER SEPARATOR HEAT EXCHANGER COOLED (8mm HOSE TAILS)	1	NOT SHOWN
	AK/SML/6I/001	FUEL / WATER SEPARATOR KEEL COOLED (8mm COMPRESSION)		
020	212-02632	Seal kit for separator	1	
030	212-02631	Filter for separator	1	

Short Voyage Spares Kits



Ref. No.	Part No.	Part Name	Qty	Remarks
010	AK/S5H/18/J651	SHORT VOYAGE SPARES -S5 H/E 65A STD -JOHNSON 6 VANE	1	

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.

Cleaning the heat exchanger tube stack and replacing wasting zinc anode on 2011 Super Mini & Super5 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 tubestack and not 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

