

DEPEND ON
DAVEY

WATER PRODUCTS

5000 Series Single Impeller Firefighter




AUSTRALIAN MADE®
Pump made in Australia
& fitted to genuine brand
name engines

SERVICING INSTRUCTIONS



WARNING: ALL ELECTRICAL WORK TO BE PERFORMED BY SUITABLY QUALIFIED ELECTRICAL PERSONNEL.



Handle components carefully to avoid personal injury.



Viton Elastomers may become hazardous & cause serious personal injury when exposed to high temperatures. Suitable protective clothing must be used. Refer to Davey Service Bulletin **SW/62/930/499**

Tools Required

- Flat blade screwdriver
- Socket 10mm
- Socket 13mm
- Socket 14mm
- T Spanner 10mm
- Ring Spanner 17mm
- Soft head mallet

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Disassembly



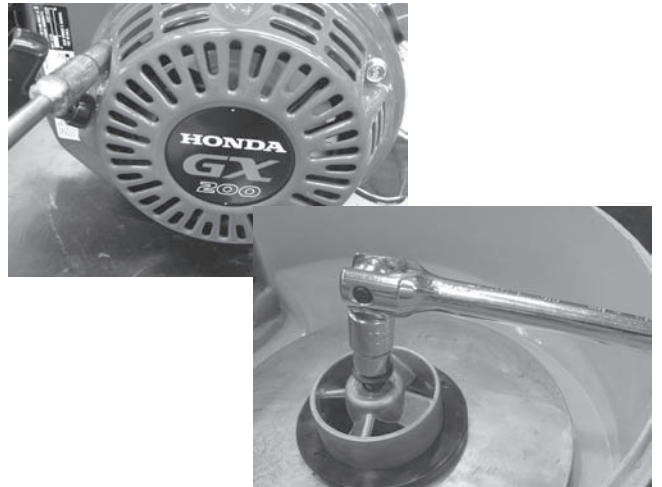
Step 1 – Remove the front casing bolts using a socket (14mm). Do not remove the bolts individually, instead loosen all the bolts before removing any as this keeps the compression on the casing even.



Step 2 – Remove the casing O-ring.



Step 3 – Remove the diffuser complete with flap valve; this can be lifted out by hand.



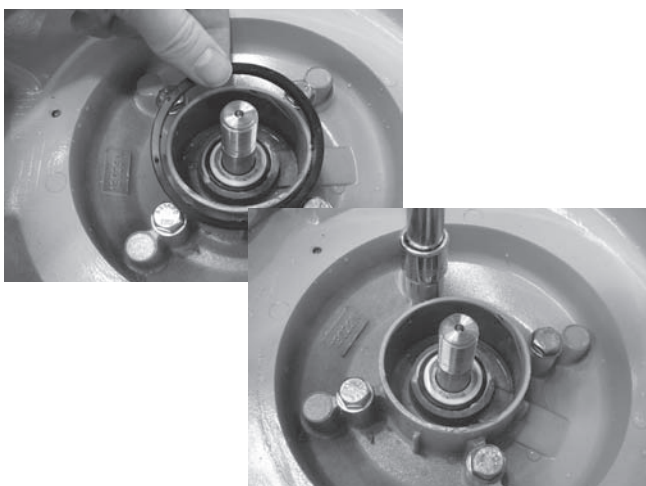
Step 4 – To remove the front half of the impeller first remove the 3 screws holding the starter coil of the motor in place using a T spanner or socket (10mm). Place a screwdriver through the coil cup to lock it in place then using a ring spanner or socket (13mm) remove the impeller nut. If the nut is too tight to remove in this manner it may be necessary to give the spanner a sharp tap with a soft head mallet to loosen it.



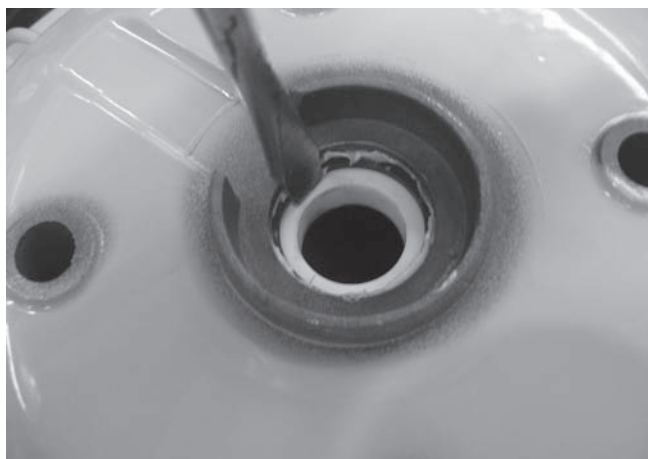
Step 5 – With the screwdriver still locking the cup coil of the motor in place use a ring spanner (17mm) to remove the back of the impeller. If necessary hit the spanner a sharp tap with a soft head mallet to loosen the impeller similar to the procedure with the impeller nut.



Step 6 – To remove the mechanical seal lift it off the shaft. If the mechanical seal is too tight to remove by hand use a pair of pointy nose pliers to remove the grommet in the middle of the seal, this will then allow the rest of the seal to be lifted up. Check the seal face for wear or abrasives.



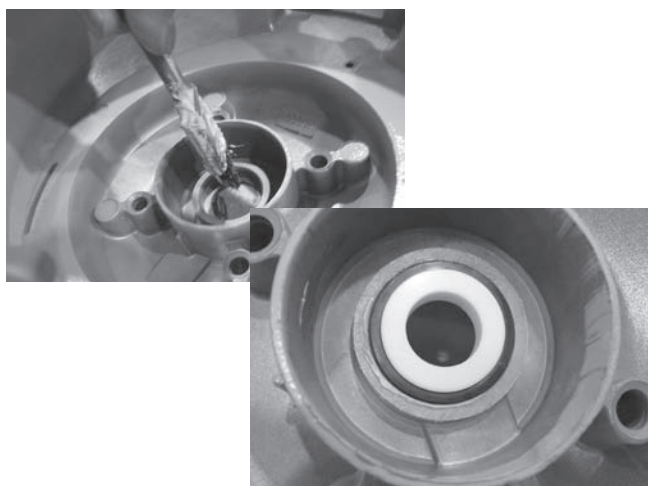
Step 7 – First remove the balance drum ring and then undo the four casing bolts with a socket (13mm) which will allow the rear casing to be removed.



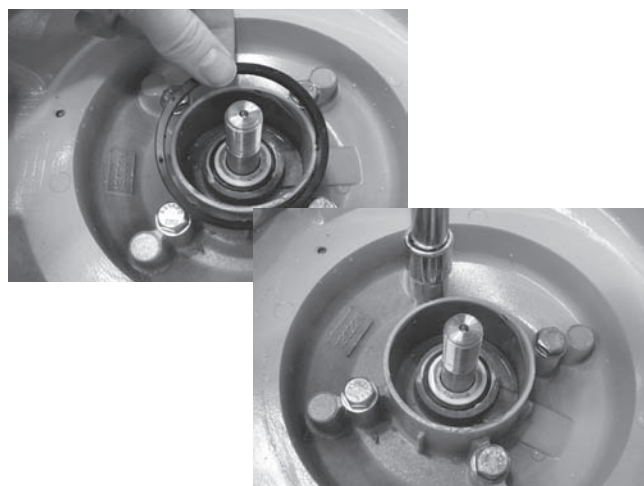
Step 8 – To remove the ceramic seal from the rear of the casing place a screwdriver on the back of it and using a soft head mallet give it a soft tap to push it through. Check for telltale signs of seal leaks in this area. A water stain down the back of the casing originating from the seal is a good indicator. Remove the locating disk (part number 12625-1) which is located on the motor on models 5190HE & 5113HE. 10HP Diesel model 5110YE will also have a locating disk (part number 12443) which is positioned behind the rear casing.

Note the locating disk is only applicable to the above mentioned models. For information relating to the Service of the motor contact the motor manufacturer.

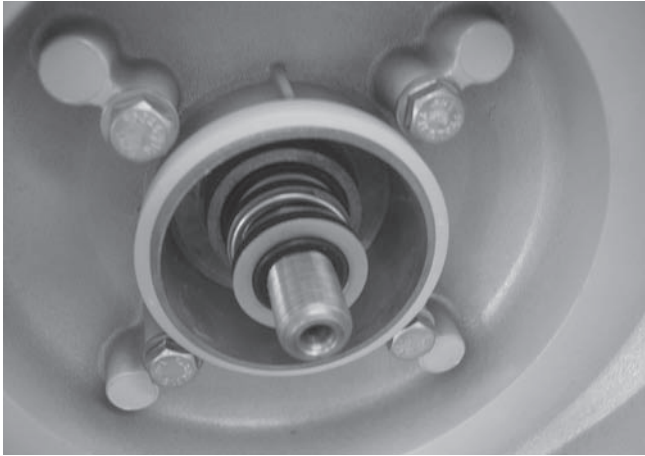
Assembly



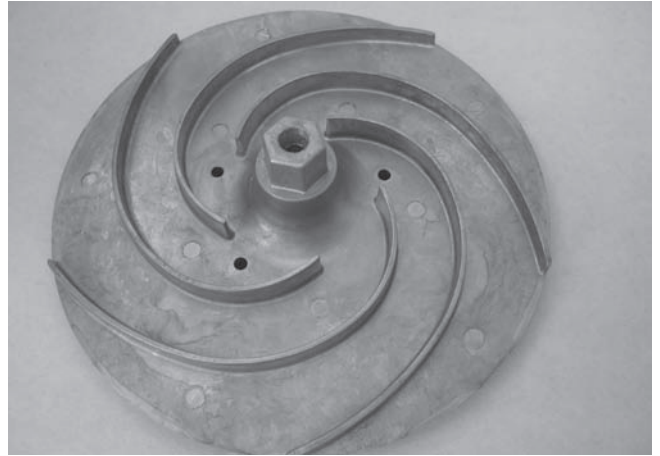
Step 1 – Apply a smear of water based lubricant to the inside diameter of the seal bore then press in the stationary seal making sure it is pressed all the way in and sitting square.



Step 2 – Fit the rear casing to the engine using the four stainless steel bolts, flat washers and O-rings. Using a socket (13mm) tighten the bolts in a criss cross pattern, the torque setting is 16nm, when bolts are fastened down put the balance drum ring back in place.



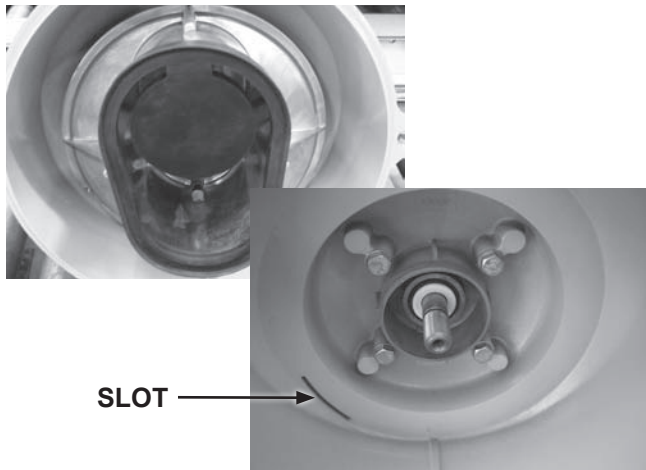
Step 3 – Fit the mechanical seal and push it all the way down to mate with the stationary seal face. This can be made easier by removing the grommet from the mechanical seal, slide the seal onto the shaft & then place the grommet back in position on the mechanical seal.



Step 4 – Screw on the back half of the impeller, the impeller has a hex on the shaft that takes a spanner or socket (17mm) to tighten it down.



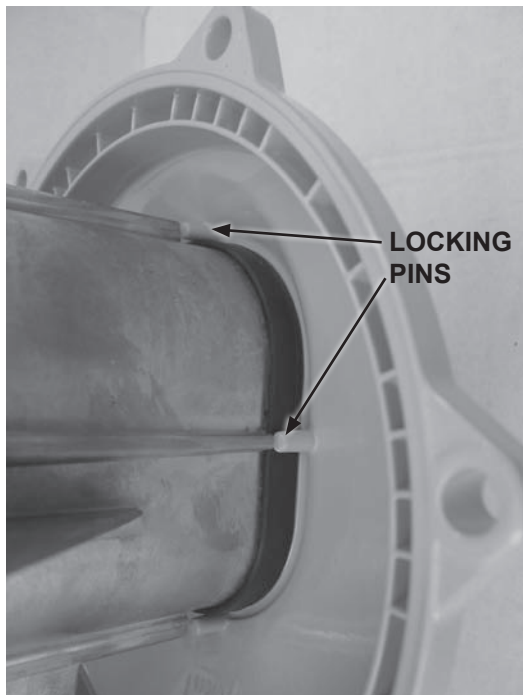
Step 5 – Fit the front half of the impeller over the rear section and tighten it down with a self tapping bolt using a socket (13mm), the torque setting is 14-16nm then fit the impeller neck ring.



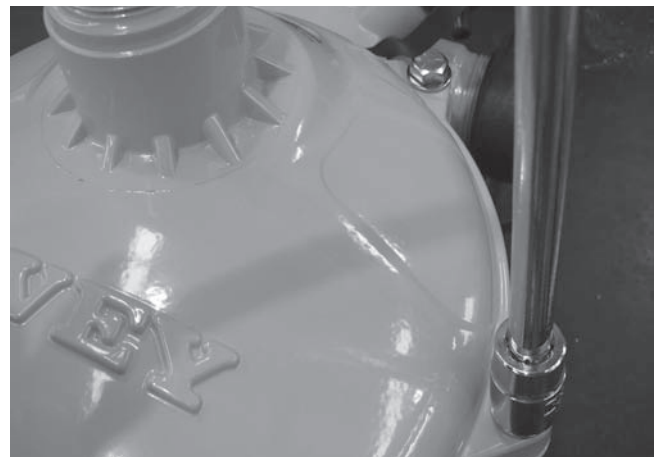
Step 6 – Fit the flap valve to the diffuser making sure it is fitted correctly & in the correct direction, note there is a slot in the rear casing for the diffuser to slot into.

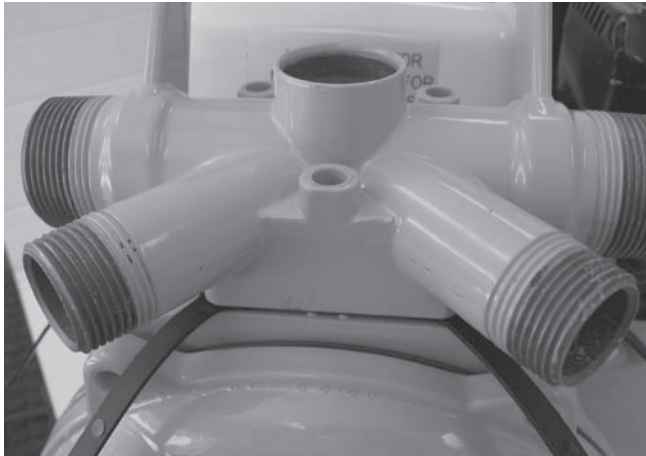


Step 7 – Fit casing O-ring in place.

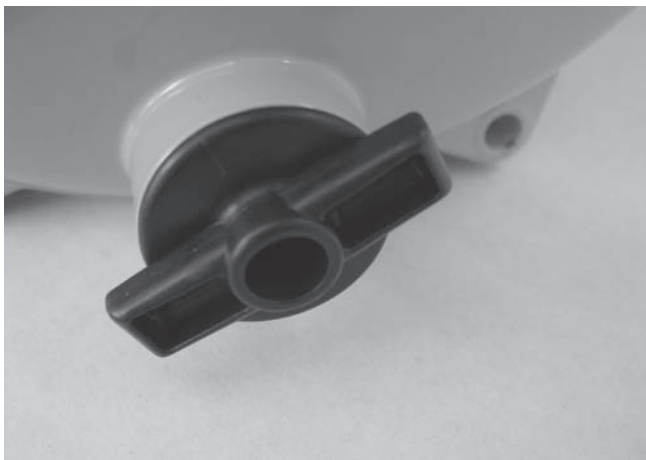


Step 8 – When fitting the front casing the pins on the inside should sit around the gasket holding it in place. Fit the bolt with the flat washer under the head and tighten the assembly in a criss cross pattern with a socket (14mm or 9/16 AF), torque setting is 22nm.



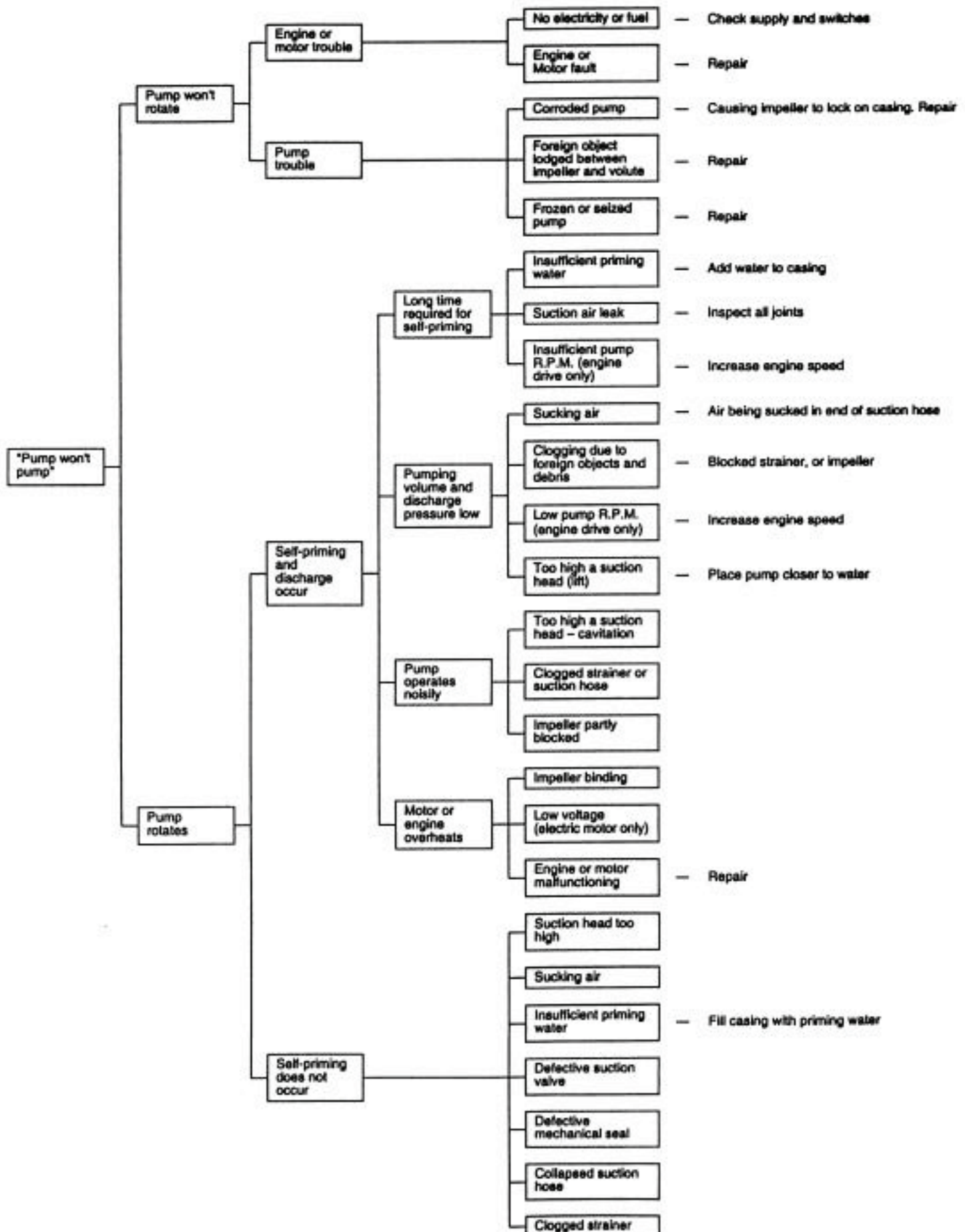


Step 9 – If the discharge head has been removed first replace the gasket then assemble the discharge head into position & tighten the 3 screws using a socket (10mm) turning the screws clock wise. Occasionally it can be difficult to find the thread so an option is to turn the screws slowly anticlockwise until they drop into the existing thread then tighten by turning clockwise. Torque setting for tightening the screws is 18nm.



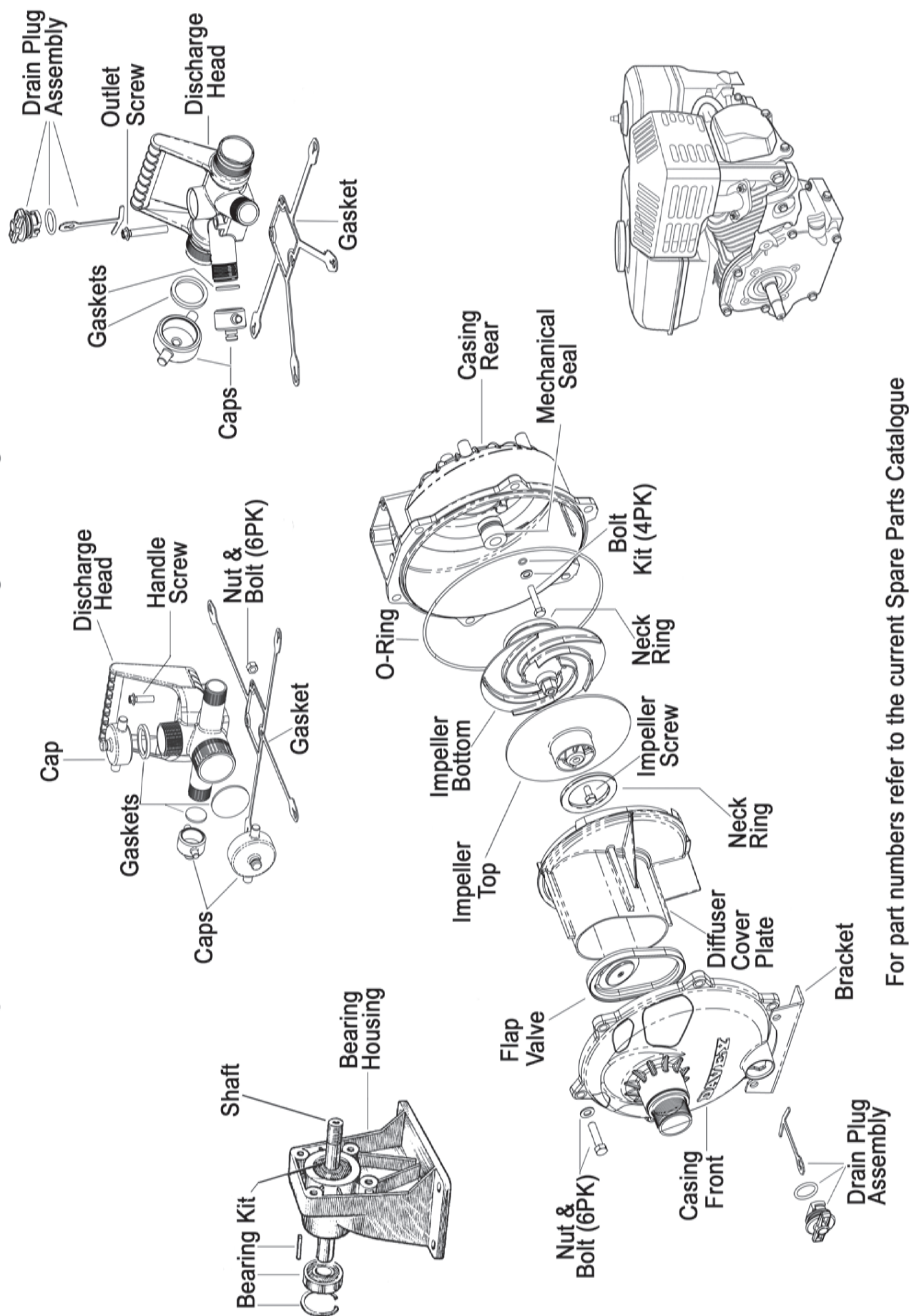
Step 10 – Fit the drain plug and priming plug, use a small amount of water based lubricant for a more secure fit. If a pressure gauge needs to be fitted drill a small hole in the centre of the priming plug & screw the gauge in. The hole should be 1/4 inch in size.

Troubleshooting



Exploded View

Exploded View 5000 Series Single Firefighter



For part numbers refer to the current Spare Parts Catalogue

[illegible]

Note:

Product specifications may change without notice.

Drawings are indicative only, product appearance may change slightly.

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DAVEY

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