

These instructions apply to the following mechanical seals:-

S Range **S100** (Pt No. 1000096000)  
**S150** (Pt No. 1500097000)  
**S200** (Pt No. 2010381000)

### Important Pre Changeover Checks

Before the new seal is installed certain requirements must be met otherwise the integrity of the new seal will be compromised.

- A. Conditions of the flushing chamber lip seals and shaft sealing surfaces must be good.

See relevant service manual.

- B. Seal chamber must be clean and free of grit and silt deposits. The flushing oil properties will otherwise be impaired.

- C. Shaft bearings must be in good condition without excessive end play.

- D. Size and condition of the stationary seat recess should be checked. The stationary face, will spin in an oversize bore. Drawn sizes are: diameter in mm

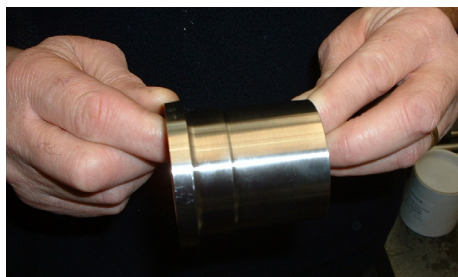
S100 Seltorque 57.2 – 57.3

S150 + S200 Seltorque 70.0 – 70.1

The lead in chamfer must be smooth and rust free.



- E. The stainless steel seal mounting sleeve must be in good condition. Clean, smooth and free from burrs and scratches.



- F. The impeller and seal sleeve must be a tight but sliding fit on the shaft.

### Assembly seal to sleeve

With all checks completed and passed proceed as follows to assemble the seal to the sleeve.

- Inspect the seal faces for damage or contamination and wipe clean if necessary.
- Lightly lubricate the shaft sleeve bore with Shell Ensis or grease "do not pack" 'O' ring recess as it will cause the ring to dismount on assembly.



- With clean hands smear the outside of the shaft sleeve with soft soap. Place on a clean flat surface with the shoulder downwards.
- Take the rotating element and smear soft soap in the bore of the rubber bellows, push the assembly firmly onto the prepared sleeve until the rubber is hard against the shoulder.



- Press on the bottom coil to push home, Do Not apply any pressure or force to the seal face.



- Check that the bellows abuts the shoulder all around the base.

### Seal assembly in pump

With pre changeover checks complete and seal assembled on sleeve proceed as follows:

- 'Lightly' lubricate the seal sleeve 'O' ring and shaft surface with oil and slide the 'O'-ring, up the shaft, taking particular care not to contact it on the keyway edges. Push into final position against shaft shoulder with the aid of the seal sleeve.



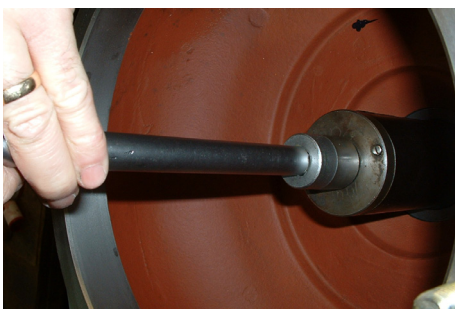
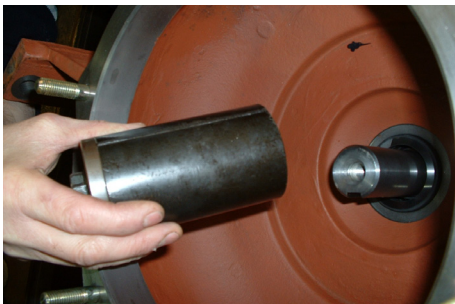


- Inspect and wipe clean if necessary the seal recess and lead chamfer. Lubricate the bore and lead, with soft soap. Lubricate the outside of the stationary face assembly, using soft soap.



Push it home into the recess ensuring that it is seated square and firmly against the shoulder at the bottom of the recess.

Service tool part number S100 - 1006304000 / S150 - 1506305000 may be used see photos.



Tighten centre bolt on tool to push face into the housing, when fully home keep tool in place for 10 seconds before removal to allow the rubber to relax into position. Withdraw tool and inspect for contamination of face and wipe clean if necessary.

- Check that the face is free of dirt or contamination, wipe if necessary with a clean cloth.

Apply a couple of drops of 'clean oil' and spread to a thin film with a 'clean' finger.



- Place seal/ sleeve assembly on the drive shaft being careful not to contact the face on the shaft end, push forward until seal faces contact firmly together.



- Lubricate the impeller key with Shell Ensis or grease and locate in the key way. Apply Ensis/ grease to the bore and key way of the impeller. Mount the impeller onto the Shaft, and push firmly against the shoulder of the shaft sleeve.



- Using a new patched impeller bolt two Belleville washers and an impeller Washer, push the impeller forward compressing the spring of the seal until a torque of: 81.3 Nm for S100 or 108 Nm for S150 + S200 is achieved.

Jam the Impeller using a block of wood from the impeller blades to the drain tap recess or cutwater to prevent shaft rotation during this procedure.



- Reassemble rest of pump in accordance with pump manual using new gaskets. Refill the flushing chamber to level/ filler with the recommended oil prior to running unit.