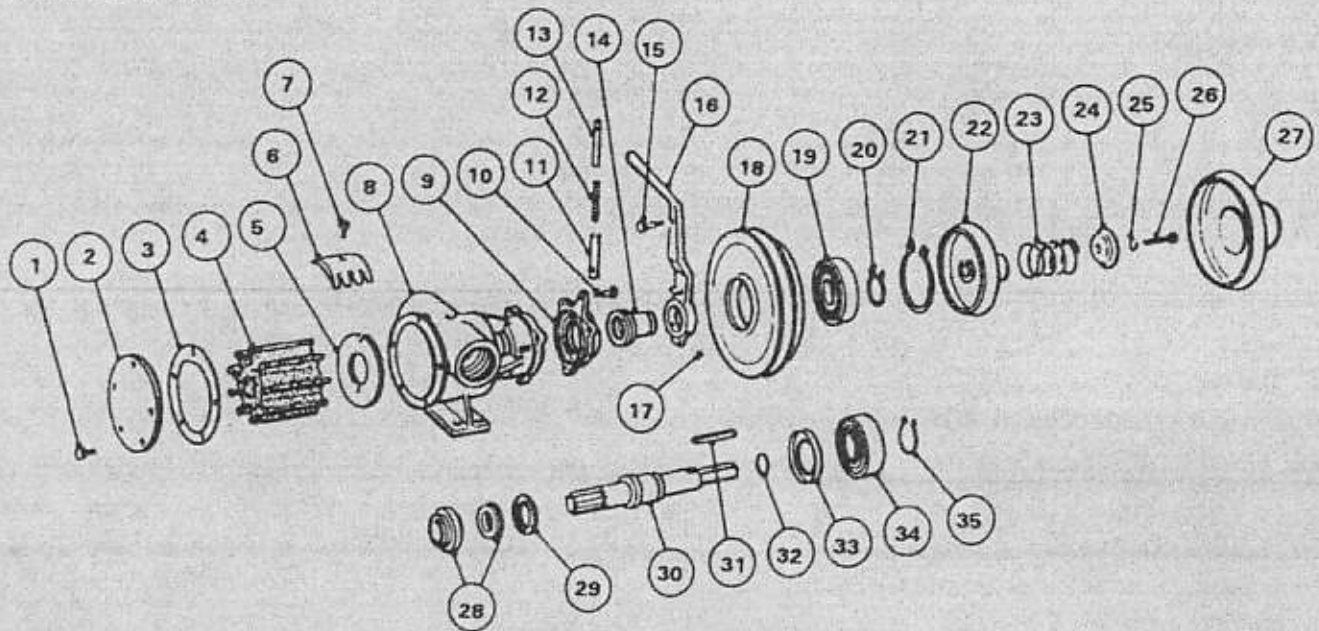


## EXPLODED VIEW



### 51080 SERIES

| KEY | DESCRIPTION                | QTY | PART NUMBER |
|-----|----------------------------|-----|-------------|
| 1   | Endcover Screws*           | 6   | X3001-147F  |
| 2   | Endcover                   | 1   | 3993        |
| 3   | Gasket*                    | 1   | 890         |
| 4   | Neoprene Impeller*         | 1   | 17937-0001  |
|     | or Nitrile Impeller**      | 1   | 17937-0003  |
| 5   | Wearplate                  | 1   | 4156        |
| 6   | Cam                        | 1   | 934         |
| 7   | Cam Screw                  | 1   | SP1004-09   |
| 8   | Body                       | 1   | 50084-2100  |
| 9   | Engaging Mech/Housing      | 1   | 51081-0000  |
| 10  | Bolt                       | 3   | X3001-178F  |
| 11  | Guide Tube Outer           | 1   | 51089-0000  |
| 12  | Spring                     | 1   | 51093-0000  |
| 13  | Guide Tube Inner           | 1   | 51088-0000  |
| 14  | Engaging Mech/Sleeve       | 1   | 51082-0000  |
| 15  | Retaining Bolt             | 1   | 51094-0000  |
| 16  | Handle                     | 1   | 51083-0000  |
| 17  | Grub Screw                 | 2   | X3009-145F  |
| 18  | Pulley                     | 1   | 51084-0000  |
| 19  | Bearing                    | 1   | SP2600-11   |
| 20  | Retaining Ring             | 1   | SP1700-137  |
| 21  | Retaining Ring             | 1   | SP1700-245  |
| 22  | Clutch Cone                | 1   | 51085-0000  |
| 23  | Spring                     | 1   | X5250-001   |
| 24  | Spring Retainer            | 1   | 51086-0000  |
| 25  | Spring Washer              | 1   | X3081-101C  |
| 26  | Screw                      | 1   | X3001-211F  |
| 27  | Cover                      | 1   | 51092-0000  |
| 28  | Lip Seal (not illustrated) | 1   | SP2700-1027 |
| 29  | Slinger                    | 1   | 3180        |
| 30  | Shaft                      | 1   | 51087-0000  |
| 31  | Key                        | 1   | X4000-208A  |
| 32  | Shim                       | 1   | 51091-0000  |
| 33  | Inner Bearing Seal         | 1   | SP2700-48   |
| 34  | Bearing                    | 1   | SP2600-06   |
| 35  | Retaining Ring             | 1   | SP1700-247  |

### 51200 SERIES

| KEY | DESCRIPTION           | QTY | PART NUMBER |
|-----|-----------------------|-----|-------------|
| 1   | Endcover Screws*      | 5   | X3001-176F  |
| 2   | Endcover              | 1   | 9336        |
| 3   | Gasket*               | 1   | 816         |
| 4   | Neoprene Impeller*    | 1   | 17935-0001  |
|     | Nitrile Impeller**    | 1   | 836-0003    |
| 5   | Wearplate             | 1   | 2574        |
| 6   | Cam                   | 1   | 834         |
| 7   | Cam Screw             | 1   | SP1005-04   |
| 8   | Body                  | 1   | 50204-2100  |
| 9   | Engaging Mech/Housing | 1   | 51201-0000  |
| 10  | Bolt                  | 3   | X3001-180F  |
| 11  | Guide Tube Outer      | 1   | 51089-0000  |
| 12  | Spring                | 1   | 51213-0000  |
| 13  | Guide Tube Inner      | 1   | 51088-0000  |
| 14  | Engaging Mech/Sleeve  | 1   | 51202-0000  |
| 15  | Retaining Bolt        | 1   | 51094-0000  |
| 16  | Handle                | 1   | 51203-0000  |
| 17  | Grub Screw            | 2   | X3009-172F  |
| 18  | Pulley                | 1   | 51204-0000  |
| 19  | Bearing               | 1   | SP2600-09   |
| 20  | Retaining Ring        | 1   | SP1700-137  |
| 21  | Retaining Ring        | 1   | SP1700-245  |
| 22  | Clutch Cone           | 1   | 51205-0000  |
| 23  | Spring                | 1   | X5250-002   |
| 24  | Spring Retainer       | 1   | 51206-0000  |
| 25  | Spring Washer         | 1   | X3081-101C  |
| 26  | Screw                 | 1   | X3001-213F  |
| 27  | Cover                 | 1   | 51212-0000  |
| 28  | Seal Assembly*        | 1   | 21849       |
| 29  | Slinger               | 1   | 3181        |
| 30  | Shaft                 | 1   | 51207-0000  |
| 31  | Key                   | 1   | X4000-270A  |
| 32  | Shim                  | 1   | 51211-0000  |
| 33  | Inner Bearing Seal    | 1   | SP2700-50   |
| 34  | Bearing               | 1   | SP2600-04   |
| 35  | Retaining Ring        | 1   | SP1700-245  |

Service Kit SK406-0001 contains parts marked\*

Service Kit SK406-0003 contains parts marked\* plus \*\* in place of Neoprene Impeller.

Service Kit SK407-0011 contains parts marked\*

Service Kit SK407-0003 contains parts marked\* plus \*\* in place of Neoprene Impeller.

Inspect all parts for wear or damage and replace if necessary.

#### DIS-ASSEMBLY-CLUTCH

1. Remove snap-on cover.
2. Unscrew spring retaining bolt at end of shaft. Remove retainer, spring and clutch cone.  
Note: Bolt is assembled with Loctite.
3. Remove one retaining bolt from guide tube assembly.
4. Unscrew bolts holding engaging mechanism housing to body. Remove complete clutch assembly including pulley and engaging mechanism from pump.
5. Remove key and shim from shaft.
6. To break down handle, pulley and engaging mechanism remove small retaining ring at bearing, support pulley press engaging mechanism sleeve through bearing in handle and remove handle from engaging mechanism.
7. If pulley bearing requires renewing, remove retaining from pulley and push out bearing.

#### DIS-ASSEMBLY-PUMP

1. Remove end cover screws, end cover and gasket.
2. Remove impeller.
3. Loosen cam screw and remove cam.
4. Remove wearplate.
5. Remove seal assembly, (Lip seal - 51080).
6. Press shaft on impeller drive end to remove shaft and from pump.
7. Remove bearing retaining ring from shaft.
8. Press shaft out of bearing supporting bearing inner.
9. Remove inner bearing seal if it needs replacing.

#### ASSEMBLYPUMP

1. Press new seal into bearing end of body with lip facing away from bearing bore.
2. Press shaft into bearing supporting inner race of bearing. Fit bearing retaining ring onto shaft.
3. Position slinger in body drain area. Grease seal area of shaft. Push bearing and shaft into body by pressing on outer race of bearing.
4. MODEL 51080.  
Fit lip seal into body with lip facing into impeller bore.  
MODEL 51200  
Take new seal seat (cup rubber and seal seat), lightly grease the outside edge of cup rubber and press into cavity in pump body with ceramic facing towards impeller bore. Slide mechanical seal sub assembly over shaft until it engages against ceramic face of stationary seal.
5. Fit wearplate.
6. Coat cam screw thread, top side and back of cam, with non setting jointing compound and fit into body, securing with the cam screw.
7. Lightly grease impeller bore and fit impeller.
8. Fit end cover and gasket and secure with screws.

#### ASSEMBLY-CLUTCH

1. Screw engaging mech/sleeve into housing approximately 1 turn. Fit handle over sleeve and set 0.25mm clearance between housing and handle, when in the dis-engaged position, by screwing sleeve in or out as required. Lock handle on sleeve with grub screws.  
Note: Lubricate thread with ANTI-SCUFFING PASTE.
2. Re-fit bearing and retaining ring into pulley. While supporting clutch mech/sleeve press pulley bearing assembly onto sleeve hard up against handle.
3. Fit pulley/handle/engaging mech. assembly to pump with 3 bolts.
4. Fit guide tube mechanism to handle and to engaging mech housing.
5. Fit shim and key onto shaft.
6. Fit clutch cone, spring and spring retainer and secure with bolt. Tighten bolt until retainer is clamped against shaft.  
Notes: Lubricate between shaft and clutch cone with ANTI-SCUFFING PASTE. Assemble screw with Loctite (nut lock).
7. Re-fit snap-on cover.

#### ADJUSTMENT-CLUTCH

When new, the clutch will begin to engage approx. half way between the 'OFF' and 'ON' position i.e. when handle is near to the vertical position. As wear takes place the engaging position will move towards the 'ON' position. When there is little movement left between the engaging point and the 'ON' stop the clutch can be adjusted as follows:

1. When handle in the 'OFF' position remove snap on cover.
2. Unscrew spring retaining bolt at end of shaft. Remove retainer spring, clutch cone and key.  
Note: Bolt is assembled with Loctite Nut Lock.
3. Remove shim and re-assemble key, clutch cone, spring, retainer, screw and cover.  
Note: Removal of shim will restore engaging point to its original position. Once shim has been removed no further adjustment is possible and clutch cone, and possibly pulley will need to be replaced.

Refer to Operating Instructions on page 17.