# 500 SERIES DISASSEMBLY & MAINTENANCE INSTRUCTIONS

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| SIZE | MODEL |
|---|---|
| 2" | 520 |
| 2 1/2" | 525 |
| 3" | 530 |
| 4" | 540 |

SINGLE FLOW

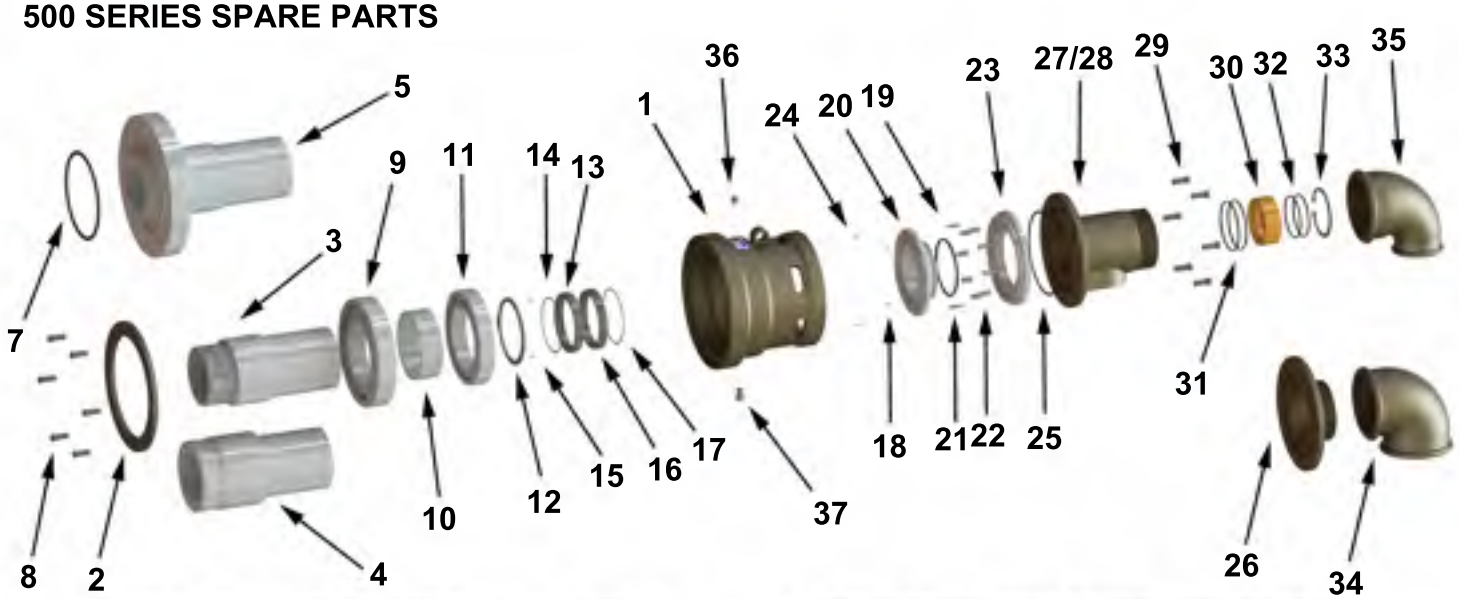
DUAL FLOW
S TYPE

DUAL FLOW
RSP TYPE

**WARNING**

Unless specified; ROTOFLUID rotary joints must not be used with Hydrocarbons or Flammable Mediums. Leaking may result explosion or fire.

## 500 SERIES SPARE PARTS




| NO | PART NAME | QTY |
|---|---|---|
| 1 | HOUSING | 1 |
| 2 | FRONT HOUSING FLANGE | 1 |
| 3 | SHAFT - THREADED | 1 |
| 4 | SHAFT - QR | 1 |
| 5 | SHAFT - FLANGE - TYPE 1 | 1 |
| 6 | SHAFT - FLANGE - TYPE 2 | 1 |
| 7 | FLANGE O-RING | 1 |
| 8 | BOLTS | 6 |
| 9 | FRONT BALL BEARING | 1 |
| 10 | WASHER | 1 |
| 11 | BOTTOM BALL BEARING | 1 |
| 12 | EXT. RETAINING RING | 1 |
| 13 | ROTARY SEAL RING | 1 |
| 14 | SEAL O-RING | 1 |
| 15 | PIM | 2 |
| 16 | FLOATING SEAL RING | 1 |
| 17 | SEAL O-RING | 1 |
| 18 | PIM | 2 |

| NO | PART NAME | QTY |
|---|---|---|
| 19 | FLOATING SEAL O-RING | 1 |
| 20 | FLOATING SEAL HOLDER | 1 |
| 21 | FLOATING SEAL PIM | 2 |
| 22 | SPRING | 8 |
| 23 | HOUSING FLANGE | 1 |
| 24 | HOUSING FLANGE PIM | 2 |
| 25 | END CAP O-RING | 1 |
| 26 | END CAP - SINGLE FLOW | 1 |
| 27 | END CAP - S TYPE | 1 |
| 28 | END CAP - RSP TYPE | 1 |
| 29 | BOLTS | 6 |
| 30 | BRONZE BEARING | 1 |
| 31 | BEARING O-RING | 2 |
| 32 | PIPE O-RING | 2 |
| 33 | INT. RETAINING RING | 1 |
| 34 | SINGLE FLOW ELBOW | 1 |
| 35 | DUAL FLOW ELBOW | 1 |
| 36 | GREASE RING | 1 |
| 37 | GREASE RELIEF FITTING | 1 |

1- Before disassembling the joint from the machine, close inlet and outlet valves and wait for all the medium to be drained completely. Be sure that there is no pressure and no residual pressure is applied to the pipe line system of the machine.
2- If hot medium is used, wait until all the system to be cooled down to normal temperature.
3- Disconnect inlet and outlet hose(if dual flow) from the supply and return pipes or valves.
4- Disassemble shaft from the machine with appropriate tool.
5- If dual flow is used, becareful not to damage the internal siphon pipe when seperating the dual flow joint from the machine.
6- If flanged shaft(5) is used, seperate flange o-ring(7) from the flange.
7- Hold the housing(1) of the joint with a bench wise and take out the inlet hose from the housing.
8- If dual flow-s type is used, turn the internal siphon pipe counterclockwise and take out the siphon pipe.
9- If dual flow-rsp type is used, hold the internal siphon pipe and pull slightly through the joint.
10- Becareful not to damage internal parts when taking out the siphon pipe.
11- Take out the outlet hose and elbow from the housing.
12- Prepare a clean place on the table where planned to make the maintenance.
13- Place the joint on the table onto shaft(3-4-5).
14- Control visually if there is any damage or defects.
15- Do not forget that there is spring(22) inside the joint. All internal parts may pop out from the housing because of the force of the spring.
16- Loosen all bolts(29) of the end cap(26/27/28) and seperate it from the housing(1).
17- Inspect end cap o-ring(25), if necessary replace it with new one.
18- If dual flow-rsp type end cap is used;
- Place end cap(28) on the table
- Take out the internal retaining ring(33) from the backside of the end cap.
- Take out the siphon pipe bearing(30) from the end cap slowly.
- Inspect bearing(30) and siphon pipe o-ring(32), if necessary replace them with new one.
- Take out the bearing o-rings(31) from the end cap, do not damage sockets of the o-rings, if necessary replace them with new ones.

19- Hold the floating seal group(16-17-20) and housing flange(23) together and take out from the housing. Rotate upside down and place them on the table onto the housing flange.
20- Seperate floating seal holder(20) and housing flange(23) from each other.
21- Take out the floating seal ring(16) and if necessary replace it with new one.
22- Take out the floating seal o-ring(17).
23- Inspect anti rotation pims(18) of the floating seal holder, if necessary replace them with new ones.
24- Take out and inspect springs(22) on the housing flange and if necessary replace them with new ones.
25- Inspect pims(21)on the housing flange(23) and if necessary replace them with new ones.
26- Take out the o-ring(19) of the floating seal holder and if necessary replace it with new one.
27- Take out the seal ring(13) from the shaft.
28- Seperate seal o-ring(14) from the shaft sealing socket(13).
29- Inspect anti rotation pims(15) inside the socket of the shaft.
30- If ball bearings do not need maintenance, jump to step 41.
31- Turn the housing upside down.
32- Loosen bolts(8) of the front flange(2) and seperate housing flange from the housing.
33- Hold the shaft from the threaded/flanged side and take out the shaft group from the housing.
34- Take out the external retaining ring(12) from the shaft with appropriate snap ring pliers.
35- Becareful not to damage sealing socket when seperating ball bearings(9-11) and washer(10) from the shaft.

36- Clean all parts and inspect for corrosion and deformation. If necessary replace them with new ones.
37- First assemble front ball bearing(9) onto the shaft, place washer(10) and assemble rear ball bearing(11) and fix them with external retaining ring(12).
38- Hold the shaft from threaded/flanged side and assemble it inside the housing until it is fully inside.
39- Place front housing flange(2) and fix it with appropriate bolts(8).
40- Turn housing upside down onto the shaft.
41- Place a new seal o-ring(14) inside socket of the seal ring and apply grease slightly.
42- Becareful when placing seal ring(13) into the shaft; sockets of the seal ring must correspond to anti rotation pims(15).
43- Apply grease into the spring sockets of the housing flange.
44- Place all 8 new springs(22) inside the sockets.
45- Place a new floating seal ring o-ring(17) inside the socket of the holder (20) and apply grease.
46- Becareful when placing floating seal ring(16) into the holder; sockets of the seal ring must be facing to anti rotation pims(18).
47- Assemble a new floating seal holder o-ring(19) and apply grease slightly.
48- Assemble floating seal group onto the housing flange.
49- Becareful that sockets of the floating holder must face to pims(21) of the housing flange.
50- Hold the floating seal and housing flange group together.
51- Turn the group upside down and place it inside the housing in position that the microlapped surfaces of the floating seal ring(16) and rotary seal ring(13) face each other.
52- Becareful that the sockets of the housing flange must face anti rotation pim(24) on the housing.
53- If single flow is used;
- Place a new end cap o-ring(25) to the socket of the end cap and apply grease slightly.
- Assemble end cap(26) to the housing and fix it with appropriate bolts(29).

54-If dual flow-s type is used;
- Place a new end cap o-ring(25) to the socket of the endcap and apply grease slightly.
- Assemble end cap(27) to the housing so that inlet will be $180^{o}$ to the anti rotation lug of the housing.
- Fix it with appropriate bolts(29).

55- If dual flow-rsp type is used
- Place new bearing o-rings(31) inside the sockets of the end cap.
- Place new siphon pipe o-rings(32) inside the sockets of the bearing.
- Place bearing(30) inside the end cap(28) and fix it with internal retaining ring(33).
- Place a new end cap o-ring(25) to the socket of the end cap and apply grease slightly.
- Assemble end cap(28) to the housing so that inlet will be $180^{o}$ to the anti rotation lug of the housing.
- Fix it with appropriate bolts(29).

56- Assemble elbow(34-35) to the end cap.
57- Check rotation of the joint, if any knocking or noise show up, go to step 13 and follow the steps.
58- Ball bearings will need lubrication. Apply grease according to lubrication instructions.
59- Hold the housing of the joint with a bench wise and assemble inlet and outlet hoses.
60- If dual flow is used, assemble the siphon pipe inside the shaft and fix it to end cap.
61- Assemble the joint to the machine roll. Control rotation of the joint; if any eccentricity seems, disassemble it and assemble it again.
62- If flanged shaft is used; place a new flange o-ring(79 into the socket of the shaft flange and assemble the joint to the machine roll and fix it with appropriate bolts.
63- Assemble the inlet and outlet hoses to the supply and return pipes or valves.
64- Now the joint is ready for work.