



# DIRECTIONS FOR DISASSEMBLY & REASSEMBLY OF PRICE AOD 40 ASR\*

\*BODY: ALUMINIUM (A)  
DIAPHRAGMS: SANTOPRENE (S)  
BALLS: RUBBER (R)

**CAUTION:** Before any maintenance or repair is attempted, the compressed air line to the pump should be disconnected and all air pressure allowed to bleed from the pump. Disconnect all intake, discharge, and air lines. Drain the pump by turning it upside down and allowing any fluid to flow into a suitable container. Be aware of any hazardous effects of contact with your process fluid.

The **PRICE AOD 40** has a 40 mm (1 1/2") inlet and outlet. 1 1/2" BSP connection

**AVAILABLE MOCs:**

- Polypropylene
- PVDF
- SS
- AL
- CI

**TOOLS REQUIRED:**

- Wrench
- Allen Wrench
- Adjustable Wrench
- Vise equipped with soft jaws (such as plywood, plastic or other suitable material)



**STEP 2 (Fig 2)**

Utilizing a wrench, remove the two small clamp bands that fasten the discharge manifold to the liquid chambers. (Fig 2)



**STEP 5 (Fig 5)**

Remove the two small clamp bands which fasten the suction manifold to the liquid chambers. (Fig 5)



**STEP 3 (Fig 3)**

Lift away the discharge manifold to expose the valve balls and seats. (Fig 3)



**STEP 6 (Fig 6)**

Lift suction manifold from liquid chambers and centre section to expose suction valve balls and seat. Inspect ball cage area of liquid chamber for excessive wear and damage. (Fig 6)

## DISASSEMBLY



**STEP 1 (Fig 1)**

Before starting disassembly, mark a line from each liquid chamber to its corresponding air chamber. This line will assist in proper alignment during reassembly. (Fig 1)



**STEP 4 (Fig 4)**

Remove the discharge valve balls, O-rings and seats (Fig 4) from the liquid chambers and inspect for nicks, gouges, chemical attack or abrasive wear. Replace worn parts with genuine PRICE parts for reliable performance.



**STEP 7 (Fig 7)**

Remove the discharge valve balls, O-rings and seats (Fig 7) from the liquid chambers and inspect for nicks, gouges, chemical attack or abrasive wear. Replace worn parts with genuine PRICE parts for reliable performance.



**STEP 8** (Fig 8)

Remove one set of large clamp bands, which secure one liquid chamber to the center section. (Fig 9)



**STEP 9** (Fig 9)

Lift liquid chamber away from center section to expose diaphragm and outer piston. (Fig 10)



**STEP 10** (Fig 10)

Using an adjustable wrench, or by rotating the diaphragm by hand, remove the diaphragm assembly. (Fig 11)



**STEP 11** (Fig 11)

NOTE: Due to varying torque values, one of the following two situations may occur:

- 1) The lock nut (outer piston), diaphragm and holding plate (inner piston) remain attached to the shaft and the entire assembly can be removed from the center section (Fig 12).
- 2) The lock nut (outer piston), diaphragm and holding plate (inner piston) separate from the shaft which remains connected to the opposite side diaphragm assembly (Fig 13). Repeat disassembly instructions for the opposite liquid chamber. Inspect diaphragm assembly and shaft for signs of wear or chemical attack. Replace all worn parts with genuine PRICE parts for reliable performance.



**STEP 12** (Fig 12)

To remove diaphragm assembly from shaft, secure shaft with soft jaws (a vise fitted with plywood or other suitable material) to ensure shaft is not nicked, scratched, or gouged. Using an adjustable wrench or by hand, remove diaphragm assembly from shaft. Inspect all parts for wear and replace with genuine PRICE parts if necessary. (Fig 14)

## REASSEMBLY

Upon performing applicable maintenance to the air distribution system, the pump can now be reassembled. Please refer to the disassembly instructions for photos and parts placement. To reassemble the pump, follow the disassembly instructions in reverse order. The air distribution system needs to be assembled first, then the diaphragms and finally the wetted path. Please find the applicable torque specifications on this page. The following tips will assist in the assembly process.

- Clean the inside of the center section shaft bushing to ensure no damage is done to new seals.
- Stainless bolts should be lubed to reduce the possibility of seizing during tightening.
- Ensure proper alignment on the sealing surfaces of intake and discharge manifolds.
- Liquid chambers are easier to attach when the diaphragm is inverted. Prior to attaching the second water chamber, push diaphragm assembly so that it is as close as possible to the center section.
- PVDF pumps require Teflon® gasket kits for improved sealing. Gasket kits may be installed on other pumps where sealing is an issue.

## MAXIMUM TORQUE SPECIFICATIONS

DESCRIPTION OF PART	PLASTIC PUMPS
AIR VALVE	3.4m-N[30in.-lbs.]
LOCK NUT (OUTER PISTON)	51.5m-N[38ft.-lbs.]
SMALL CLAMP BAND	9.6m-N[85in.-lbs.]
LARGE CLAMP BAND (Rubber fitted)	18.6m-N[165in.-lbs.]
LARGE CLAMP BAND (Teflon fitted)	18.6m-N[165in.-lbs.]



# DIRECTIONS FOR DISASSEMBLY & REASSEMBLY OF AIR VALVE / CENTER BLOCK FOR PRICE AOD 40\*

\*WITH SANTOPRENE DIAPHRAGMS

**TOOLS REQUIRED:**

- Adjustable Spanner
- 1/4" Spanner
- 5/16" Spanner
- Circlip Plyer
- Vise equipped with soft jaws (such as plywood, plastic or other suitable material)



**STEP 2 (Fig 2)**

Remove the diaphragm & lock nut. If diaphragm are damaged replace them (always replace both the diaphragm). (Fig 2)



**STEP 5 (Fig 5)**

Remove the piston block from the shaft block by opening the 4 holding bolts. (Fig 5)



**STEP 3 (Fig 3)**

Now check the centre block i.e. air valve with air cover. Take out main shaft, replace if worn out or scored. Check shaft block bush 'O' rings, replace if worn out. (Fig 3)



**STEP 6 (Fig 6)**

Remove the piston circlips, check piston block gasket and piston block cover. (Fig 6)

**DISASSEMBLY**



**STEP 1 (Fig 1)**

Remove the locknuts (outer piston) with the help of a Bench vice.



**STEP 4 (Fig 4)**

Remove pilot shaft by unscrewing two nylock nuts if found damage replace them. (Fig 4)



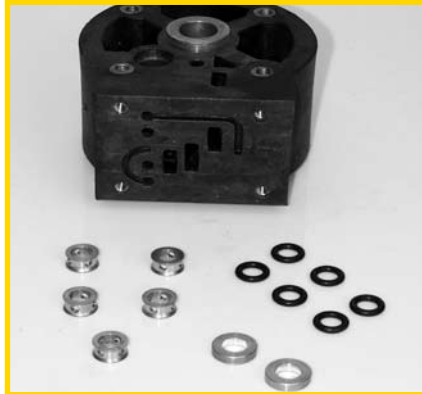
**STEP 7 (Fig 7)**

Remove piston block cap by help and holding bolts. Check the 'O' rings. Replace if worn out or damaged. (Fig 7)



**STEP 8** (Fig 8)

Remove the piston. Check Piston rings. Clean the piston with solvent. (Fig 8)



**STEP 11** (Fig 11)

Pilot bushes with rings and 'O' rings. (Fig 11)



**STEP 9** (Fig 9)

Remove air cover if required. Change gasket if Required. (Fig 9)



**STEP 12** (Fig 12)

Check the air covers and shaft block gaskets. If found damaged, replace them.



**STEP 10** (Fig 10)

Remove the pilot bushes. Check the 'O' rings. Replace if worn out or damaged. (Fig 10)

**ASSEMBLY**

For assembly, follow the reverse procedure.