

4S-100/DC & 4S-600/DCDA Maintenance Instructions

1/2"

NOTE:

Check valve modules are not user serviceable. In the event of check failure, replacement modules are sold individually.

Disassembly:

1. Close by-pass inlet and outlet shut-off valves (Figure 5).
2. Bleed pressure from the by-pass assembly by opening test cock No. 2,3, and 4.
3. Unscrew and remove bronze cap.
4. Remove stainless steel spacer using lifting tab.
5. Remove first check module by pulling outward with fingers (A small screwdriver may aid removal). Be sure test cock No.2 is open so as to prevent hydraulic lock. Generally, the first check o-ring will remain in the bore.

6. Remove second check assembly by sliding the assembly out of its bore (A small flat screwdriver placed in the groove provided will aid removal). Be sure test cock No.4 is open so as to prevent hydraulic lock.

Inspection:

1. All parts should be carefully inspected for any damage or excessive wear and thoroughly rinsed in clean water prior to reassembly.
2. Replace all worn parts as necessary.

Assembly:

1. Replace check modules, second check first then first check. Make sure first check o-ring is installed. (Tip: Push o-ring to the bottom of the bore before installing check module.) Press check module into bore. A thin coat of synthetic based lubricant on o-ring will aid insertion.
2. Replace stainless steel spacer.
3. Apply a thin coat of synthetic based lubricant on cap o-ring. Replace cap.

2 1/2-6"

A. Disassembly – Check Valves

1. Close #2 shut-off valve, then close #1 shut-off valve.
2. Bleed pressure from the assembly by opening #2, #3, and #4 test cocks.
3. Unscrew black plastic cap. Remove cover bolts, cover and gasket. Pry check assembly toward outlet to loosen check from its o-ring bore.
4. Remove complete check assembly from body.
5. Unscrew and remove spring assembly from seat housing by placing a wrench on the flats provided. **DO NOT REMOVE THE SOCKET HEAD BOLT.** Tension will be released from the check at this point.

WARNING:

The check valve spring is held in compression by the retainer bolt. This assembly should not be disassembled as serious injury could occur. The spring assembly is sold as a pre-loaded unit.

6. To remove the seat disc, remove the seat disc retaining screws and the disc retaining plate. Remove seat disc.

B. Inspection

1. All parts should be carefully inspected for any damage or excessive wear and thoroughly rinsed in clean water prior to reassembly. Replace worn parts as necessary.

C. Assembly – Check Valves

1. Install seat disc in seat disc retainer and secure with disc retaining plate and disc retaining screws.

NOTE:

Due to the symmetry of the seat disc, the old disc may be turned over to obtain an effective seal.

2. Install the spring assembly into the seat housing, making sure spring assembly is tight.
3. Install check assembly into body and push tight into place (toward inlet). To aid installation, liberally apply a non-toxic grease to o-ring surface. A pry-bar may be needed to aid in seating check assembly into o-ring bore. The test cock immediately upstream must be open to release the air in the chamber.
4. Replace gasket, cover plate and cover bolts. Tighten bolts evenly. Replace spring cap. Do not overtighten! Cap needs only to be snug.

8-10"

A. Disassembly – Check Valves

1. Close #2 shut-off valve, then close #1 shut-off valve.
2. Bleed pressure from the assembly by opening #2, #3, and #4 test cocks.
3. Remove cover bolts, cover, spring assembly, and gasket. Pry check assembly toward outlet to loosen check from its o-ring bore.
4. Remove check assembly from body.
5. To remove the seat disc, remove the seat disc retaining screws and disc retaining plate. Remove seat disc.

WARNING:

Do not disassemble the spring assembly as serious injury may occur. The spring assembly is sold as a pre-loaded unit.

6. All parts should be carefully inspected for damage or excessive wear and thoroughly rinsed in clean water prior to reassembly. Replace worn parts as necessary.

B. Assembly – Check Valves

1. Install seat disc in seat disc retainer and secure with disc retaining plate and disc retaining screws. Due to the symmetry of the disc, the old disc may be turned over to obtain an effective seal.
2. Install check assembly into body and push tight into place (toward inlet). To aid installation, liberally apply a non-toxic grease to o-ring surface. A pry-bar will be needed to aid in seating check assembly into the o-ring bore. The testcock immediately upstream must be open to release the air in the chamber.
3. Insure that cam positioner is flipped down on swingarm of check assembly. Replace spring assembly, gasket, and cover, making sure to place cam end of spring assembly on both cam rollers of the check assembly. The cover places approximately 1/4" of preload on the spring assembly. Replace cover bolts and tighten.