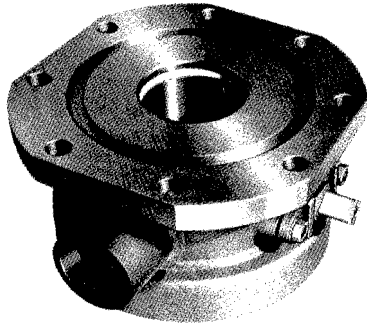


IMO - 89A

Issue Date: 12/01

INSTALLATION, MAINTENANCE, AND OPERATING INSTRUCTIONS



BODY STEAM JACKET CONVERSION FROM 4" (DN 100) AZFRC TO 4" (DN 100) SUZRC TANK CAR FIRE-TITE® BOTTOM UNLOADING VALVE

Read entire instructions carefully before installation or servicing

1 GENERAL

This instruction manual contains important information regarding the installation, operation and troubleshooting of Jamesbury Body Steam Jacket Conversion from 4" (DN 100) AZFRC to 4" (DN 100) SUZRC Tank Car *Fire-Tite* Bottom Unloading Valve. Please read the instructions carefully and save them for future reference.

1.1 WARNING

FOR YOUR SAFETY, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVAL OF THE VALVE FROM THE TANK CAR OR BEFORE ANY DISASSEMBLY.

1. EXERCISE NORMAL SAFETY PRECAUTIONS TO PROTECT YOURSELF AGAINST BOTH THE FLUID AND POSSIBLE UNRELIEVED PRESSURES IN THE VALVE ITSELF.
2. AFTER REMOVAL FROM CAR AND BEFORE DISASSEMBLY, CYCLE THE VALVE SEVERAL TIMES TO RELIEVE ANY RESIDUAL PRESSURE.

2 DISASSEMBLY

1. Read the instructions in the **WARNING** Section and refer to IMO-89 for disassembly.
2. Place the valve in the open position.
3. Remove the handle (15) bonnet plate nuts (10), indicator stop (12) and bonnet plate (9).
4. Pull out the stem (4), with the compression ring (18) emergency stem seal (13) and stem seals (7).

5. Place the valve in the vertical position with the insert end up.
6. Remove the body insert cap screws (20) and jack the insert (2) out of the valve body by tightening the jacking screws (26) evenly and alternately.
7. Reinsert the stem (4) and turn the ball (3) to the closed position. Remove the stem.
8. Lift out the body seal (6) and the seat (5). Remove the ball (3).
9. Pry the bottom seat (5) out of the body cavity. Use care to prevent damage to the seat face and sealing surface of the body.

3 CLEANING

1. Thoroughly clean entire valve to bare metal without damaging critical sealing surfaces as noted in **(Figure 1)**. In order to provide sealing, the bare metal critical sealing surfaces must be free of gouges, nicks, grinding marks and other flaws that would prevent sealing.

4 BODY/STEAM JACKET MODIFICATION

1. Break seam welds at the two places shown in Step 1, **(Figure 2)**.
2. Air-arc and grind out excess metal material shown by shaded area to the dimension shown in Step 2, **(Figure 2)**. Do not violate 3/8" (9.5 mm) minimum wall thickness as shown in **(Figure 2)**, Section B-B.

- Pneumatically pressure test the body for at least 3 minutes at 90 – 100 psi (6.2 – 6.9 bar). Immerse the entire body in water and observe for leakage. The criteria for this porosity test is zero leakage from the newly ground out area. The same criteria applies to the entire valve body. The old stem and bonnet hardware, together with new stem seals may be used for this porosity test.

5 WELDING

- Carefully fit steam jacket extension (1) around bonnet pad and butt to existing jacket as shown in **(Figure 2, Step 3)**.
- Weld per **(Figure 2, Step 3)**. Welding must be performed by welders qualified per ASME Section IX.

6 TESTING

- Pneumatically test pressure tightness of entire steam jacket to same pressures, durations, observation time

and leakage criteria as in Step 3 of **BODY/STEAM JACKET MODIFICATION** Section.

- Remove and discard stem seals and old stem.

7 IDENTIFICATION TAG

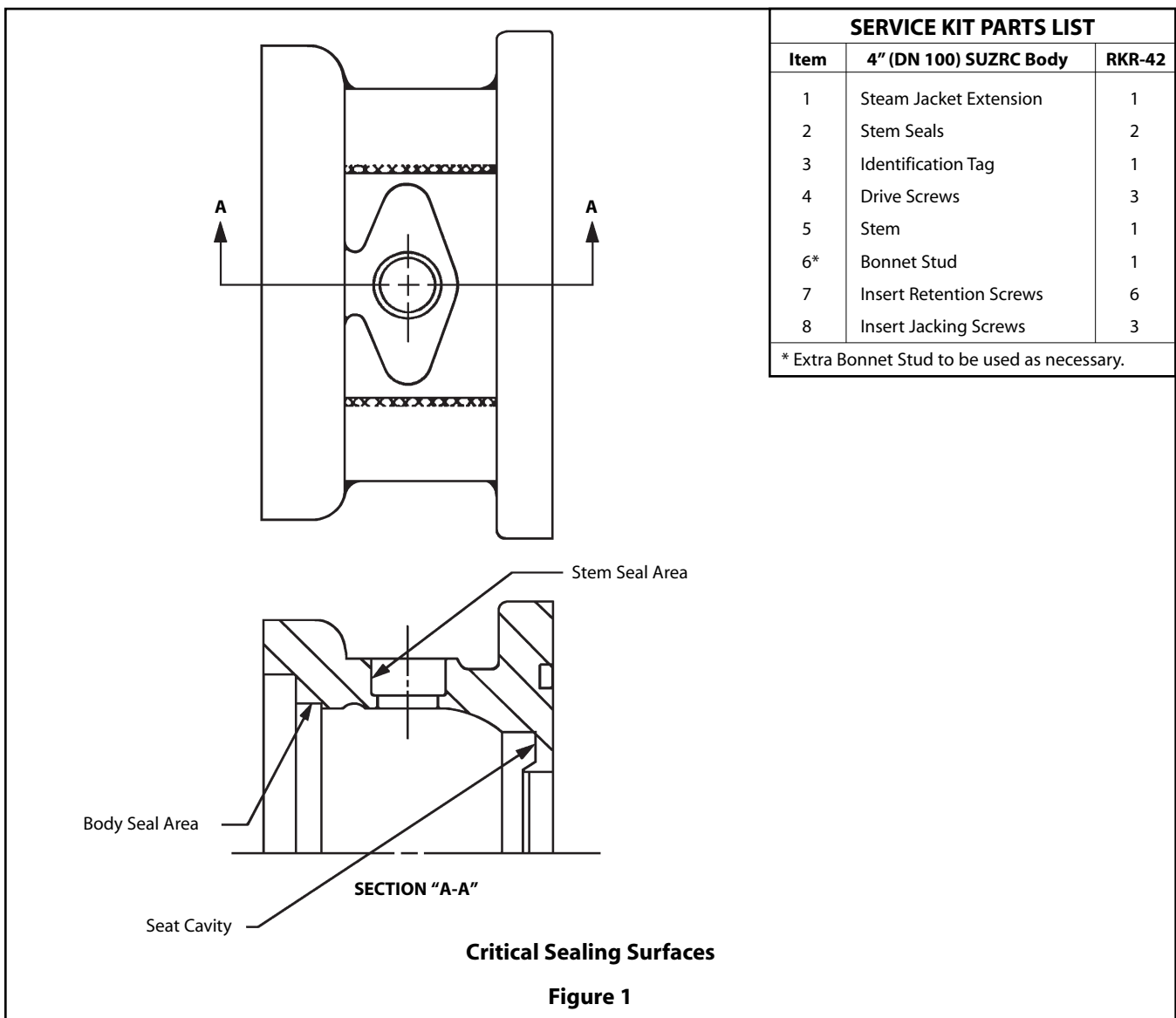
- Mount identification tag to insert flange by drilling as shown in **(Figure 3)** and driving in pins. One extra pin is provided.
- Failure to securely mount the tag will cause improper valve identification and will later result in incompatibility of repair kits.

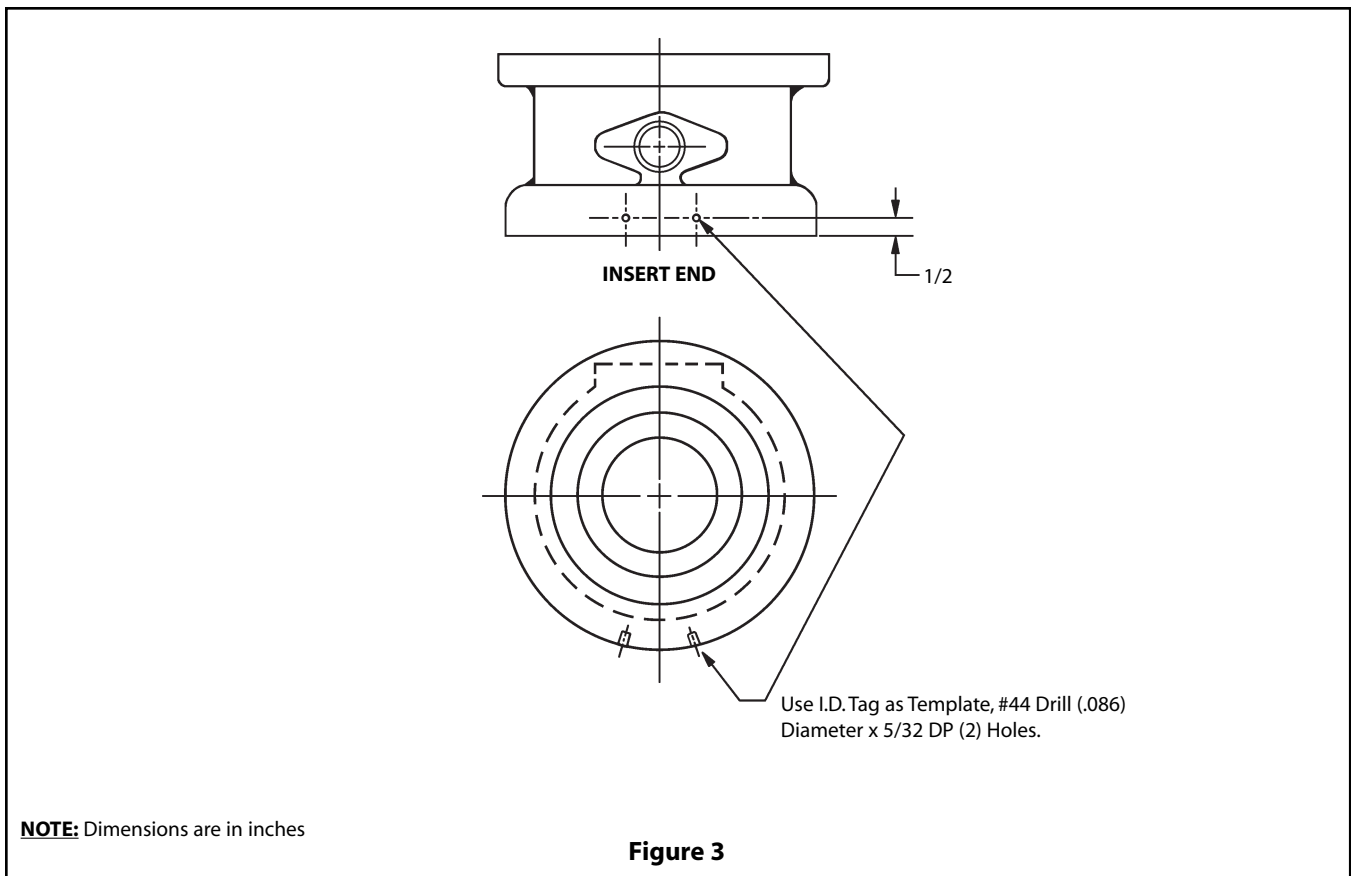
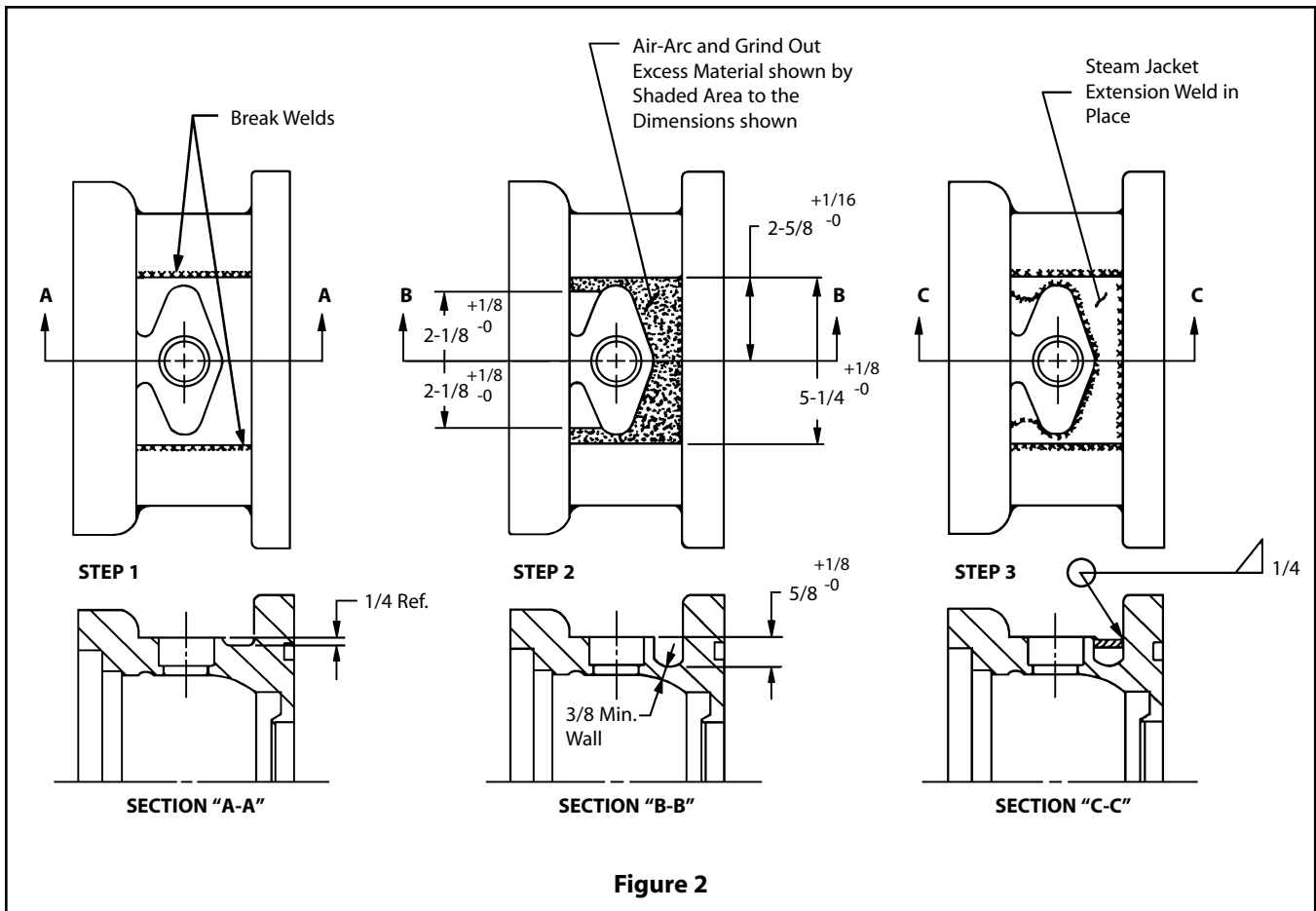
8 ASSEMBLY

- Rebuild valve with sulfur valve – 4" (DN 100) SUZRC – repair kit, RKR 40.

9 REPAIR KITS/SPARE PARTS

For further information on spare parts and service or assistance visit our web-site at www.Jamesbury.com.





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