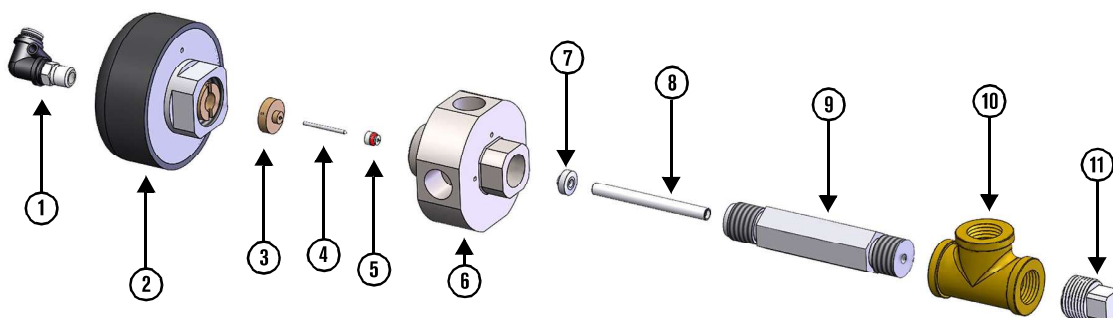


Bleed-down valve

- Repair the bleed-down valve:
 - every 1,000 hours.
 - if water leaks from the **WASTE WATER OUT** connection or from the weep holes while the pump is operating.
- Replace the bleed-down valve body every 3,000 hours.



- | | |
|----------------------------|--------------------------------|
| 1 Air fitting | 7 Bleed-down valve poppet seat |
| 2 Actuator | 8 Flow reducer |
| 3 Needle guide | 9 Outlet adapter |
| 4 Needle | 10 Tee fitting |
| 5 High-pressure valve seal | 11 Plug |
| 6 Bleed-down valve body | |

Repair the bleed-down valve

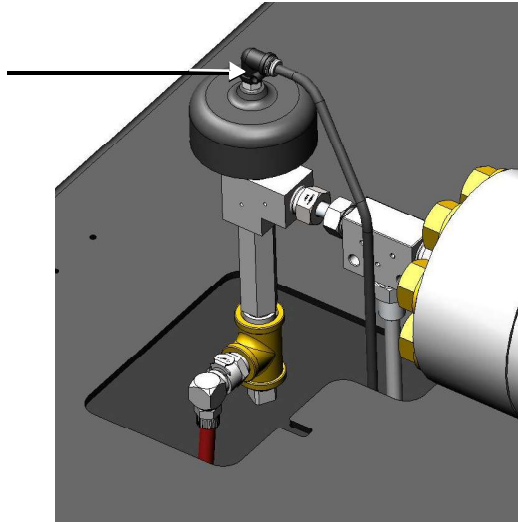
Parts, tools, and materials

Bleed-down valve repair kit
 Bleed-down valve body
 3/4-inch open-ended wrench
 5/8-inch open-ended wrench
 13/16-inch open-ended wrench
 1-inch open-ended wrench

1-1/8-inch open-ended wrench
 13/16-inch crowfoot wrench
 Torque wrench
 Clean towels
 Isopropyl alcohol

Do this task when the pump is not operating.

1. Turn the primary breaker disconnect lever on the electrical enclosure door to **OFF**.
2. Turn **OFF** the supply water to the pump. Make sure that the water pressure gauges show 0.0 bar (0 psi).
3. Turn **OFF** the compressed air source.
4. Turn **OFF** the electrical main (line disconnect switch). Use standard lock out–tag out procedures.
5. Remove the top cover and the front panel from the pump.
6. Disconnect the **COMPRESSED AIR** hose from the air fitting on top of the actuator.



7. Disconnect the water drain tube from the bleed-down valve.
8. Use 13/16-inch open-ended wrench to loosen the high-pressure fittings attached to the bleed-down valve body.
9. If the pump-mounted plumbing kit is installed on this machine, loosen the high-pressure fitting near the bleed-down valve.
10. Remove the bleed-down valve assembly from the pump.
11. Remove the outlet adapter from the valve body.
12. Remove the seat and the flow reducer from the outlet adapter.
13. Remove the actuator from the valve body.
14. Push a dowel through the bottom of the valve body to remove the seal, the needle guide, and the needle.
15. Put high-pressure antiseize lubricant on the seat.
16. Put the flow reducer into the outlet adapter.
17. Put the seat into the outlet adapter.
18. Install the outlet adapter in the bleed-down valve body. Use a torque wrench to tighten the adapter to 95 N·m (70 lbf·ft).
19. Put the needle through the needle guide and the valve seal. Make sure that the point of the needle faces the seal.

20. Put high-vacuum grease on the red O-ring on the valve seal. Make sure that the red O-ring on the valve seal faces away from the needle.



21. Put the needle-and-seal assembly into the valve body until the needle guide is even with the top of the bore.
22. Install the actuator on the valve body. Tighten the actuator by hand.
23. Use a torque wrench to tighten the high-pressure fittings on the valve body. Refer to [Fittings](#) on page 128.
24. Connect the water drain tube to the bleed-down valve.
25. Connect the **COMPRESSED AIR** hose to the fitting on top of the actuator.
26. Turn **ON** the supply water to the pump.
27. Turn **ON** the compressed air source.

Set the air pressure between 5.2 bar and 8.3 bar (75 psi and 120 psi).



CAUTION

Air pressure that is too low can prevent the bleed-down valve from closing and can cause the intensifier to overstroke.

Air pressure that is too high can cause damage to the needle and the poppet seat in the bleed-down valve. If the available air pressure is too high, install an air regulator (not included) to reduce the pressure.

28. Turn **ON** the electrical main (line disconnect switch).
29. Turn the primary breaker disconnect lever on the electrical enclosure door to **ON**.
- The operator interface screen is on when the pump is energized.
30. On the operation panel:
- a. Make sure that the **EMERGENCY STOP** button is not engaged. If the button is pushed in, turn the button clockwise until it releases.
 - b. Make sure that the **LOCAL-REMOTE** key switch is set to **LOCAL**.
 - c. Push the **CONTROLS ON** button.
31. On the operator interface, touch the **START** symbol.
- The controller starts the pump.



The normal start sequence is fully automated. Refer to [Normal start sequence](#) on page 168 for a description of the sequence.

32. Monitor for leaks.