

Procedure to Clean Air System Shuttle Valves

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The proper method to remove and clean shuttle valve air dryers in air system (2 ea).

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CAUTIONARY NOTES:

You must be properly trained on the use of the manipulator arm prior to accomplishing this procedure; see [training list](#).

One each contained in air system boxes labeled "Dryer 1" and Dryer 2," mounted on west wall of Boiler room in Operations building, either side of large tank.

Isolate the dryer from the [air system](#)

Clean only ONE AT A TIME.

Must be unplugged when cleaning.

Bleed line prior to cleaning.

EQUIPMENT INVOLVED IN THIS PROCEDURE

Needle nose pliers; [Location](#): tool chest in 2.5m work area

KimWipes/cotton swabs

Silicone lubricant

5/8" wrench

1/2" deep-well socket

Crocus cloth

PROCEDURE: accomplish in order

Definitions:

"NO" = normally open

"NC" = normally closed

1. Close valve on copper line labeled "Compressor out NO"

2. Close valve on copper line labeled "Dryer NO"

3. Turn off power switch

4. Open "Drain vent NC" and remove dryer cover

5. Disconnect lower hoses (3 ea) with wrench

6. Remove lower nut with socket

7. Remove solenoid air pilot valve

8. Remove two center nut and lock washer attaching nut to
backplate

9. Remove remaining hose

10. Remove shuttle valve unit

11. Slide unit off and remove spring; store in safe place (next 4
photos)

12. Photo of valve before disassembly

13. Remove manifold plate and gasket

14. Remove valve end cap

15. Using pliers, remove valve, white nylon, and plug

16. Remove shuttle valve (view of dirty valve before
cleaning)

17. Dirt from inside valve cylinder

18. With alcohol, clean all removed housing parts. Clean shuttle valve with dish soap.

19. Clean inside of valve cylinder

20. Clean inside hose openings

21. Smooth manifold surface with Crocus cloth and clean with alcohol

22. Add a sheen of silicone lubricant to valve; remove excess

23. Clean all covers for valve unit

24. Apply thin coating of lubricant to manifold cover groove

25. Reassemble unit; add lubricant to all crews, tightening corner to

corner

26. Put shuttle valve back into housing

27. Attach white seal and cover

28. Lubricate screws and tighten; make sure holes are centered when

tightening

29. Reinstall shuttle valve unit to dryer

30. After shuttle valve is reassembled, turn all valves back to normal position (except "Open NO." Need to recylcel unit a fe wimte before opening this valve)

a. Close vent valve

b. Open inlet valve

c. Plug in and turn on power

31. Cycle a few time then engage "Open NO"

32. Replace cover on unit, watch recylcing a few more times to make sure compressor dryers are working.

END OF PROCEDURE
