

Blast Valve Rebuild

When following the preventive maintenance plan in Appendix G, the blast valve should be rebuilt every five years. The following procedure outlines how to rebuild the blast valve.

Key Points

The following is a list of items to keep in mind when rebuilding the blast valves.

- The bottom of the pull rods will have to be removed from the operating shaft.
- The blast valve body will have to be removed from the breaker.
- Some cotter pins will have to be replaced.
- All rubber pieces will be replaced.

Safety

This procedure requires the removal of parts attached to the reservoir. Therefore, the breaker reservoir needs to be drained. Close the supply valve, and open the drain valve for the duration of the job.

Summary of Method

The following list is a summary of work needed to be done.

- The reservoir needs drained.
- The bottom of the pull rod needs to be disconnected from the shaft.
- The blast valve body needs to be removed from the reservoir.
- The blast valve needs to be disassembled.
- The blast valve needs to be reassembled with the new parts.
- The blast valve needs to be replaced in the reservoir.
- The pull rod will need to be reconnected to the shaft.

Rebuilding The Blast Valve

The following steps are required to rebuild a blast valve.

Method

1. With the breaker open, remove the pin connecting the pull rod to the operating shaft.
2. Slam the moving contacts closed by hand.
3. Remove the four 1" bolts holding the blast valve body to the valve casing.
4. Remove the blast valve assembly and remove the o-ring between assembly and reservoir.
5. Remove the cotter pin going through the castle nut.
6. Remove the pin going through the valve body and lever assembly. This will allow more freedom of play.
7. Remove the castle nut and washer from the valve stem.
8. Remove the valve cap from the valve stem.
9. Remove the two o-rings from the valve stem.
10. Replace the two o-rings with two new ones on the valve stem.
11. Remove the valve disk from the valve cap.
12. Replace the valve disk with a new one in the valve cap.
13. Place the valve cap onto the valve stem next to the o-rings and cone.
14. Place washer and castle nut back on the valve stem.
15. Tighten castle nut until a .008" feeler gauge will not fit between the cone and valve disk.
Note: If after tightening castle nut, the holes do not line up for a cotter pin to fit through the castle nut, try using a thicker or thinner washer. Also try a combination.
16. Replace cotter pin through castle nut.

17. Replace pin through valve body and lever assembly.
18. Slam the blast valve closed manually a couple of times. It should give off a dull “thud” sound of rubber on metal. There should not be a metal on metal sound.
19. Check the gap between the cone and valve body on the inside of the valve by using long feeler gauges. The gap should be between .025” and .040”.
Note: If gap is too small, the castle nut needs tightened more.
20. Replace mounting o-ring between the blast valve and reservoir with new one. A little silicon grease may help in holding the o-ring in place. However, too much can be detrimental.
21. Put blast valve assembly back in the valve casing.
22. Tighten the four 1” bolts.
23. Place pin connecting the pull rod and operating shaft back in place.

Recommended Manpower

Two people

Recommended Tools

½” Drive ratchet with extension and 1-1/8” socket

Vice

Box wrench for castle nut

Pliers for cotter pins

Small screwdriver

Recommended PPE

Hard Hat

Gloves

Safety Glasses