

# SS 1034531 WABCO Air Dryer Signal Line Freeze Up

---

## **Applicable Vehicles**

Specific Model years 2019-2020 Western Star 4700, 4900, 5700, and 6900 manufactured March 6, 2018, through June 7, 2019, and equipped with a WABCO HP air dryer.

## **Concern**

Some WABCO HP air dryers have experienced signal line freeze-up issues.

## **Solution**

Follow the instructions below to replace the cut-off valve. Part number TDA S432 470 921 2 is superseded to WAB432 480 005 2.

**Subject: WABCO HP Air Dryer Turbo Cut-Off Valve Replacement**

## Replacement Procedure

1. Park the vehicle on a level surface, shut down the engine, and apply the parking brake. Chock the tires.
2. Drain the air from the system.
3. Open the hood.
4. Remove the bumper. For instructions, see Group 31 of the applicable workshop manual.
5. Disconnect the air compressor signal line from the air dryer.
6. Disconnect the air compressor signal line from the air compressor side of the line.
7. Using 50-psi (345 kPa) shop air, clean the signal line.
8. Connect the signal line to the air dryer.

## SS 1034531 WABCO Air Dryer Signal Line Freeze Up

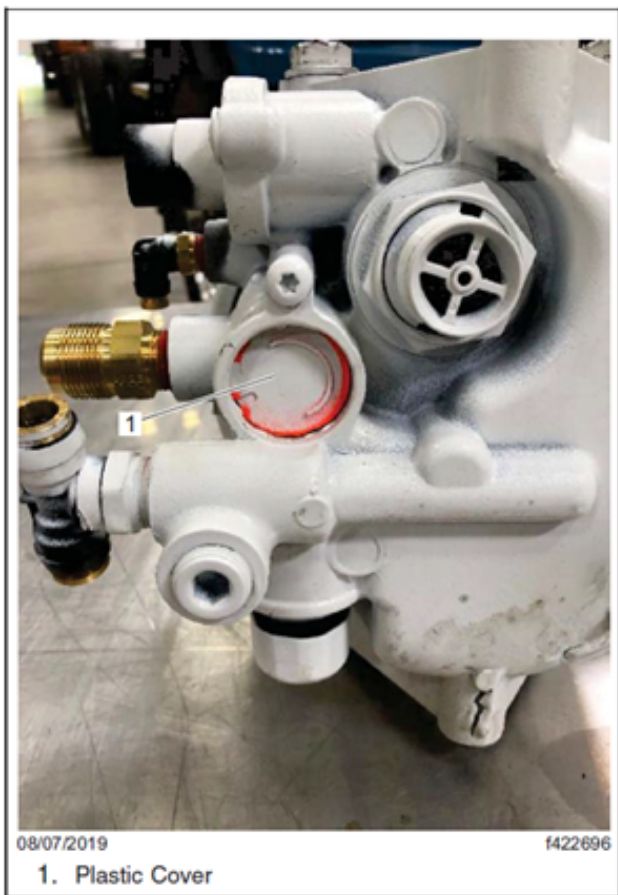
9. Connect the signal line to the air compressor side of the line.

10. Remove the snap ring that holds the turbo cut-off valve to the air dryer. See [Fig. 1](#).

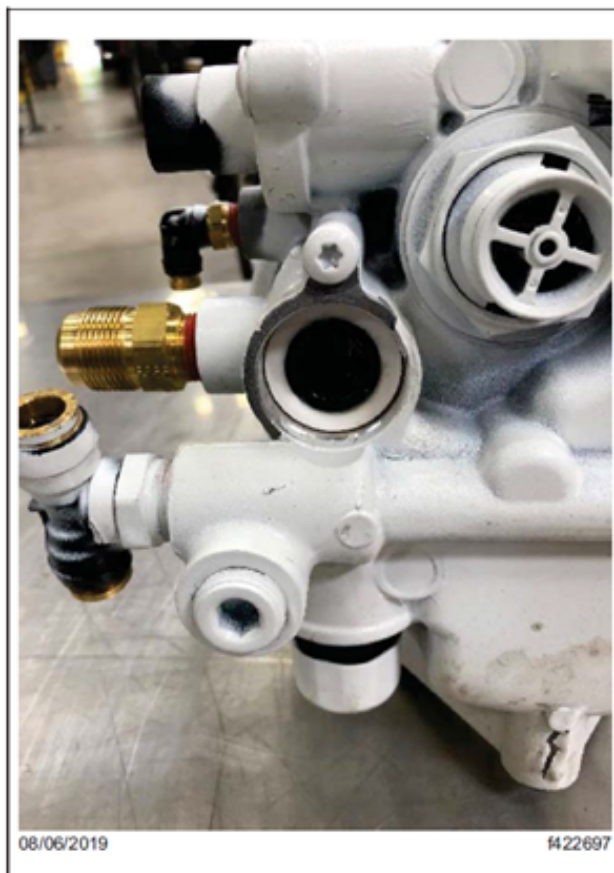


**Fig. 1, Snap Ring Holes**

11. Remove the plastic cover (orange and white in color) from the turbo cut-off valve. See [Fig. 2](#) and [Fig. 3](#).



**Fig. 2, Removing the Plastic Cover**



**Fig. 3, Plastic Cover Removed**

12. Install the snap ring. See [Fig. 4](#).

13. Using 15 psi (103 kPa) shop air through the signal port of the air dryer, dislodge the turbo cut-off valve.

See [Fig. 5](#).



Fig. 4, Snap Ring Installed



Fig. 5, Applying Shop Air to Dislodge the Valve

14. Remove the snap ring again. See [Fig. 6](#)

15. Remove and discard the turbo cut off valve. See [Fig. 7](#) for an example of the valve.



**Fig. 6, Snap Ring Is Removed a Second Time**



**Fig. 7, Old Valve Removed**

16. Clean the turbo cut off valve bore, then inspect for any debris or damage; repair as needed.

17. Lubricate the turbo cut off valve bore with the supplied grease.

18. Install the new turbo cut off valve on the air dryer. See [Fig. 8](#) for an example of the valve.

19. Install the snap ring. See [Fig. 9](#)

20.



Fig. 8, New Valve to be Installed

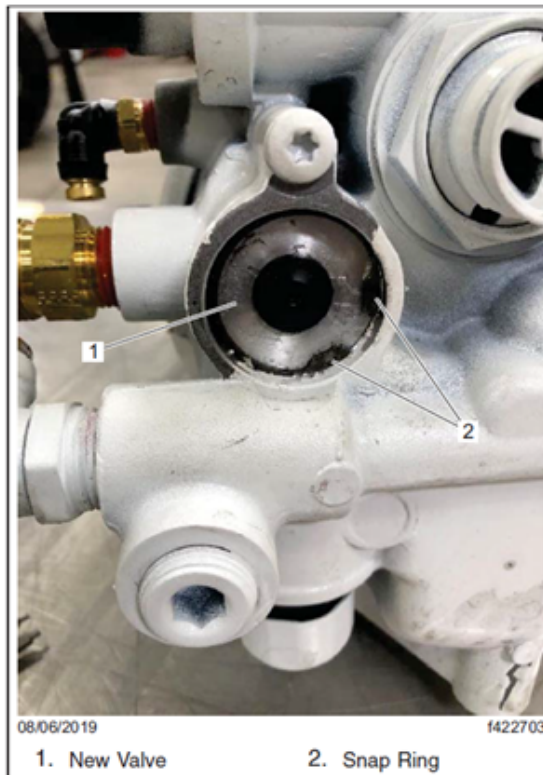


Fig. 9, Snap Ring and New Valve Installed on the Air Dryer

See the warnings below before starting the engine.

21. Start the engine and build system pressure. Verify proper purge from the air dryer and system cutout.

21. Install the bumper. For instructions, see Group 31 of the applicable workshop manual.

22. Close the hood.

 **WARNING:**

**PERSONAL INJURY**

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

 **WARNING:**

**PERSONAL INJURY**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

- Always start and operate an engine in a well ventilated area.
- If operating an engine in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system or emission control system

 **WARNING:**

**ENGINE EXHAUST**

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.