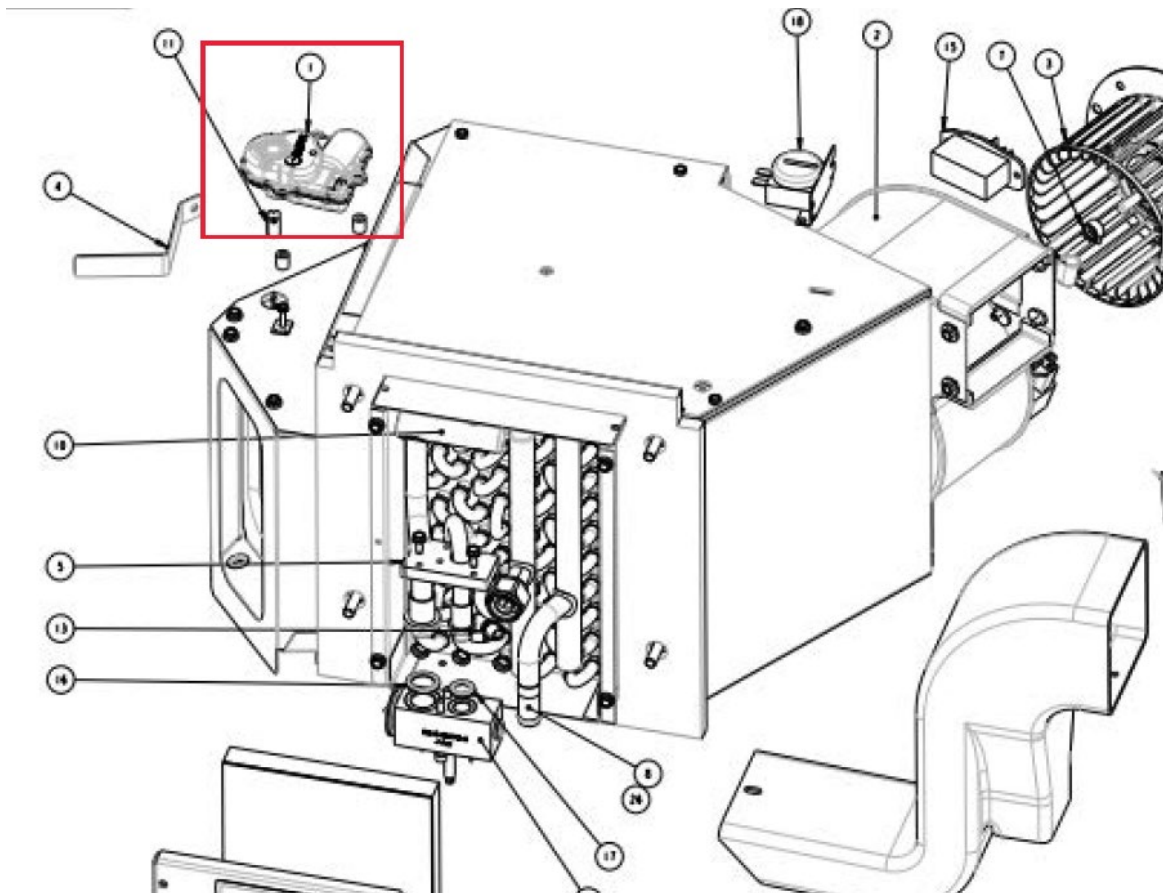


**Subject: HVAC Actuator Wiring Harness**

**Models Affected: Specific Western Star 4700, 4800, 4900 vehicles with Red Dot HVAC systems manufactured in Cleveland and Portland from December 19, 2005 through December 23, 2020**

Our records indicate that you are the owner of certain Western Star 4700, 4800, 4900 vehicles; therefore DTNA has decided to share the following documentation with you.

The wiring harness of the actuator of the fresh air recirculation door, shown in **Fig. 1**, on Western Star vehicles equipped with Red Dot HVAC systems should be inspected for signs of water intrusion and corrosion.



**Fig. 1, Location of Fresh Air Recirculation Door Actuator**

If signs of water intrusion or corrosion are found, replace the actuator and wiring using service kit RDH RD5 17147 0.

Prior to installation of the service kit, verify the wiring harness has the correct sealed connector.

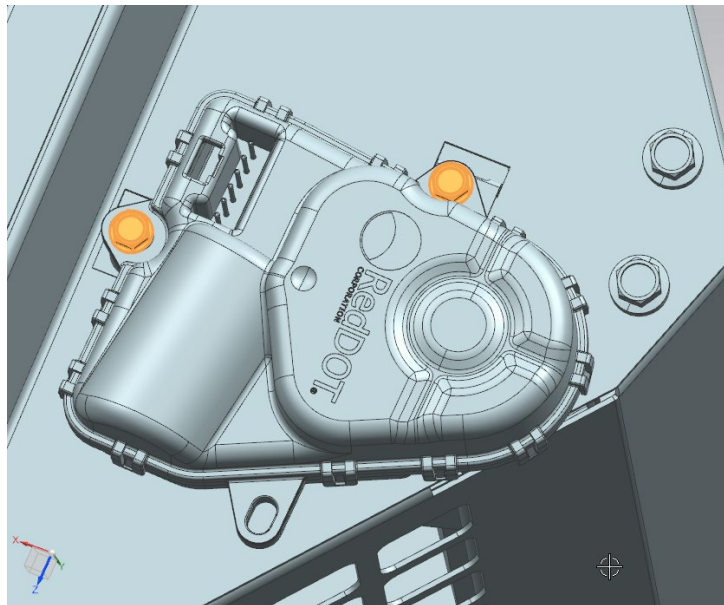
## Work Instructions: HVAC Actuator Wiring Harness Inspection and Replacement

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Depending on the model, open and remove the glove box liner or PDM3 cover and PDM to gain access to the actuator.

For instructions, see subject 60.06 in the *Western Star 4700 / 5700 / 4900 / 6900 Workshop Manual*.

3. Disconnect the wiring harness from the fresh air recirculation door actuator.
4. Remove the two hexhead screws shown in **Fig. 2** and remove the actuator from the HVAC unit.

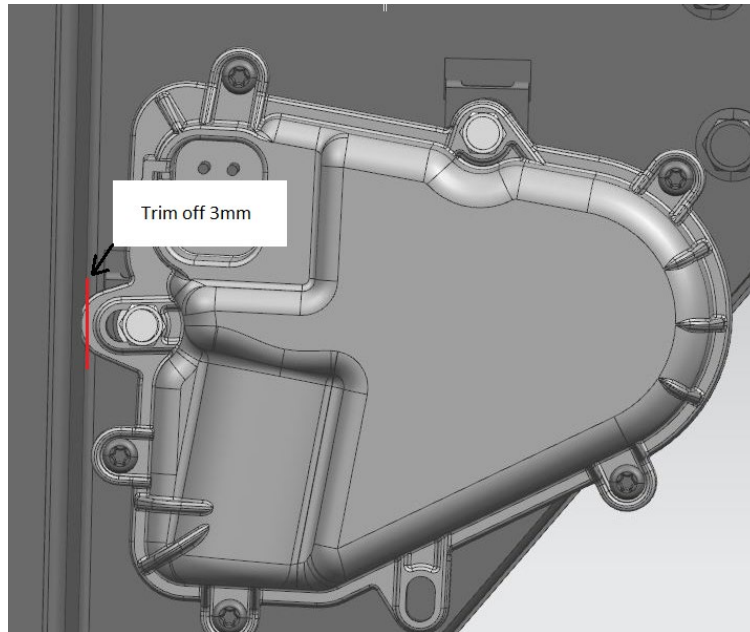
**NOTE:** There is a spacer between the actuator and HVAC unit under each screw.



**Fig. 2, Actuator Hexhead Screws**

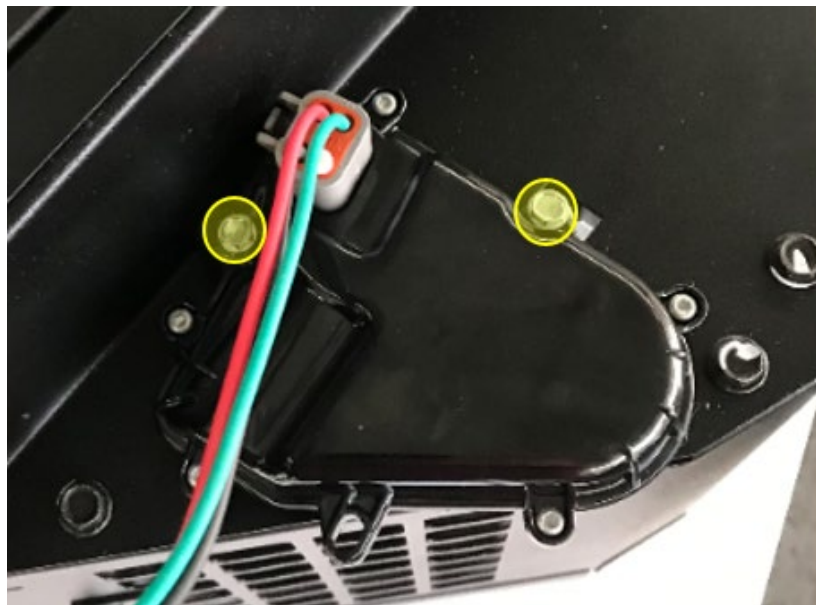
5. Inspect the wiring harness connector for corrosion.
  - a. If there is no corrosion, install the actuator on the HVAC unit, connect the wiring harness, and go to step 11.
  - b. If corrosion is found continue to step 6 to replace the actuator.

6. Before installing, use a grinder to trim 0.19 inch (3 mm) off the front tab of the new actuator (part number RDHRD3 22065 0P) as shown in **Fig. 3**.



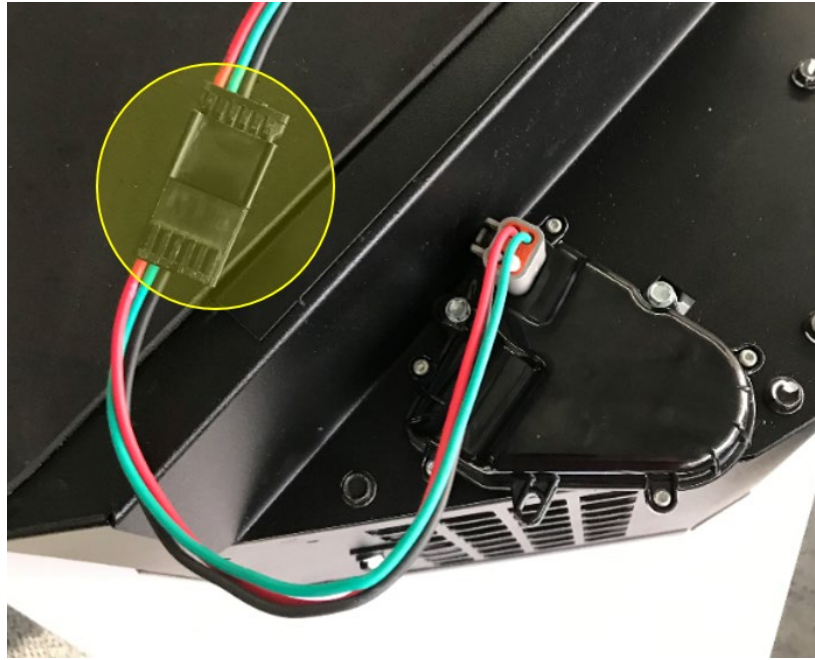
**Fig. 3, Area of the Actuator to Trim**

7. Install the new sealed actuator using two hexhead screws and spacers as show in **Fig. 4**.



**Fig. 4, Screws on the New Actuator**

8. Connect the jumper harness to the new sealed connector on the existing HVAC harness as shown in **Fig. 5**. Ensure the connectors are fully engaged.



**Fig. 5, Jumper Harness Connected to New Sealed Connector**

9. Turn the key ON and observe fresh air door movement to verify the actuator is operating normally. Troubleshoot as necessary.
10. When a functioning actuator is verified, turn the key OFF.
11. Install the glove box lining or PDM3 cover and PDM.

For instructions, see subject 60.06 in the *Western Star 4700 / 5700 / 4900 / 6900 Workshop Manual*.