

# Allison Transmission Cooler Quick-Connect Fittings

## 20-018

Shuttle Bus  
Recreational Vehicle  
School Bus  
Walk-In Van

Freightliner Custom  
Chassis Service Bulletin

> S2

## General Information

On S2 chassis equipped with an Allison transmission, the Behr/Mahle cooling modules use quick-connect fittings to attach the transmission cooler lines to the radiator. Some of the fittings may leak, which can cause the transmission to lose fluid. Use the procedure in this bulletin to inspect and repair the connections.

**IMPORTANT:** This procedure is warrantable only if the quick-connect fittings that attach the transmission cooler lines to the radiator are leaking fluid, and the repair is performed within the applicable base or extended coverage warranty period. If the quick-connect fittings do not leak, this procedure is considered preventive and warranty does not apply.

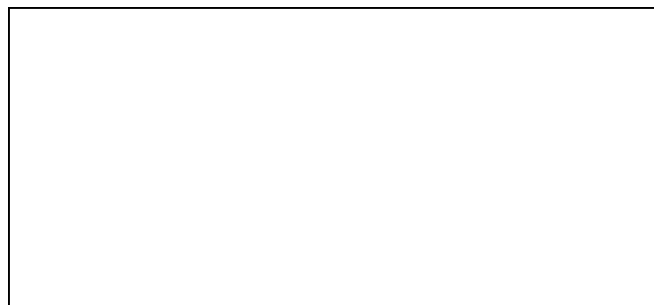
**NOTE:** This procedure applies only to vehicles equipped with a Cummins B-Series engine and an Allison transmission.

## Parts

The parts are available from the PDCs. See Table 1 and Fig. 1 .

Parts		
Part Number	Description	Qty.
23-12485-175	Clamp	2
07-24833-000	Collar	2

Table 1, Parts Required





**Fig. 1, Clamps and Collars**

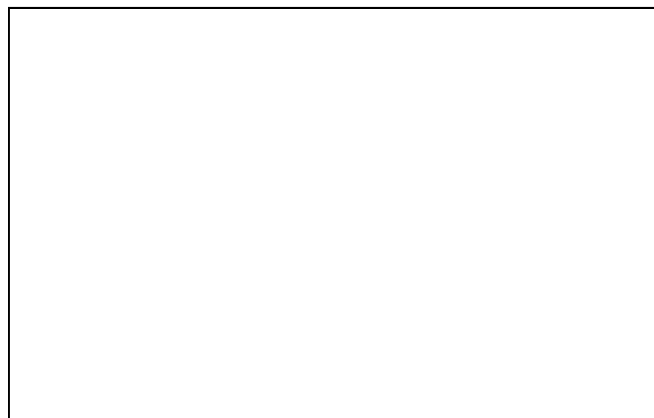
## Procedure

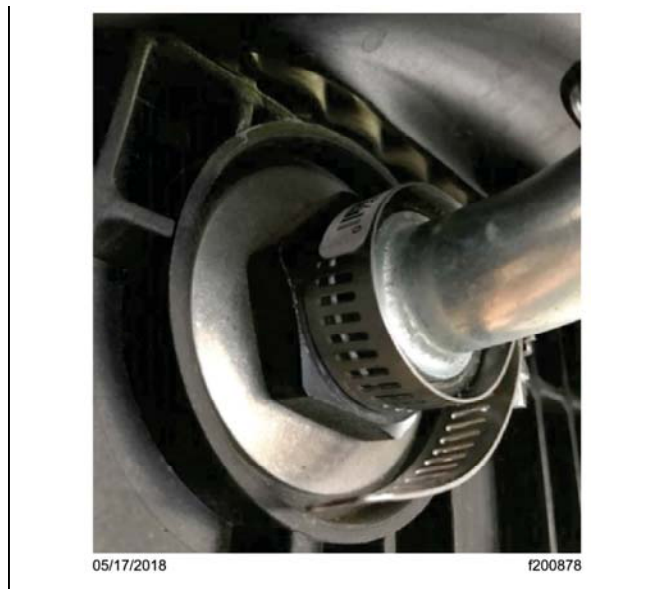
1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Inspect the transmission cooler lines where they connect to the radiator and determine if they have the original plastic cap and spring clip as installed from the factory (see Fig. 2 ) or if a hose clamp has been installed as a temporary containment (see Fig. 3 ).

If the hose clamp containment has already been installed, remove the hose clamps, discard them, and go to step 4.



**Fig. 2, Cooler Line Connection with Original Plastic Cap and Spring Clip**





**Fig. 3, Cooler Line Connection with Hose Clamp**

3. Remove the plastic retaining cap by gently prying it away from the fitting with a flat bladed screw driver. Slide the plastic cap back onto the metal portion of the transmission cooler line. See Fig. 4 .
4. Using a pick or small screwdriver, remove the metal retaining clip. See Fig. 5 . Set the clip aside.



**Fig. 4, Removing the Plastic Cap**



**Fig. 5, Removing the Spring Clip**

- 5.

On the driver-side connection, install one half of the collar assembly on the radiator fitting, as shown in Fig. 6 . While holding the collar half in place, gently pull the hose back (toward the rear of the vehicle) until it stops against the collar (this will help make installation of the other collar half easier).

**NOTE:** The inner diameter of the collar has a machined ridge that will locate in the groove where the metal spring clip was installed.

6. Install the other half of the collar. Unscrew the constant-torque clamp so that it can be wrapped around the line without removing the line, then wrap it around the collar halves as shown in Fig. 7 . Orient the clamp as shown, making sure it fits in the groove machined into the outer diameter of the collar. Tighten the clamp 55 to 65 in·lbs (620 to 735 N·cm).



**Fig. 6, Half of Collar Assembly Installed**



**Fig. 7, Collar and Clamp Installed**

7. Repeat the process for the passenger-side connection. Orient the clamp as shown in Fig. 8 . Tighten the clamp 55 to 65 in·lbs (620 to 735 N·cm).



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**Fig. 8, Passenger-Side Connection**

8. Start the vehicle and check the connections for leaks. If no leaks are found, cut away and discard the plastic caps (if applicable) using diagonal cutters.

## Warranty

This procedure is warrantable only if the quick-connect fittings that attach the transmission cooler lines to the radiator are leaking fluid, and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

Normal warranty applies. See Table 2 for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

OWL VMRS Codes and Labor Allowance					
Primary Failed Part	Component Code	Cause Code	SRT Code	Description	Time: Hours
BHT W8274001	026-013-032	03	370-5002A	COLLAR AND CLAMP, TRANS OIL COOLER, INSTALL (SB20-018)	0.2

**Table 2, OWL VMRS Codes and Labor Allowance**

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