

FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional

Century Class Conventional
Argosy
Cargo
Columbia
122SD and Coronado

> Business Class M2
Cascadia
108SD/114SD
New Cascadia

**Freightliner
Service Bulletin**

General Information

Some Business Class M2 106 vehicles built from January 2017 through June 2021 may have a heater hose installed too close to the electric horn. This applies to Business Class M2 106 vehicles with a 160 mm cab equipped with Cummins ISB engines and either single or dual horns. It also applies to heater systems with or without automatic shut-off valves. Horn failures have been reported due to high heat produced by the heater hose. In some cases, the horn comes in direct contact with the heater hose. See **Fig. 1**.

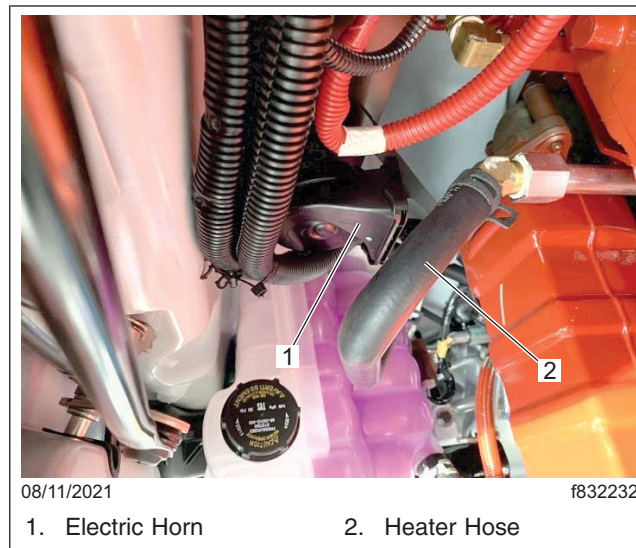


Fig. 1, Heater Installation with Close Proximity to Electric Horn

Heater Hose Modification

1. Park the vehicle on a level surface, shut down the engine, and apply the parking brake. Chock the tires.
2. With the ignition switch ON, check for proper operation of the horn(s). If the horn does not sound, or sound is weak, dull or abnormal, replace the horn(s) following the Horn Replacement procedure below.
3. Disconnect the batteries.
4. Open the hood to access the heater hose installation.
5. Drain the coolant.
6. Remove the coolant hose as follows.
 - 6.1 Remove the clamp opposite the 45 degree fitting, as shown in **Fig. 2**.

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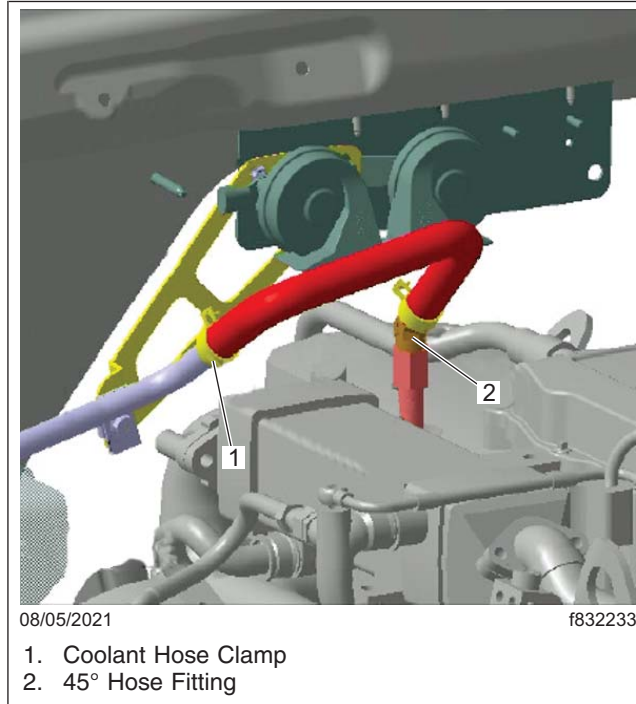


Fig. 2, Original Heater Hose Installation

- 6.2 Remove the 45 degree fitting, shown in **Fig. 2**. Use a wrench to hold the end of the heater coolant supply tube as you remove the fitting.
7. Install the tube reflecting sleeve (part number BEN 476445028) on the heater hose and secure it with tie straps. See **Fig. 3**.

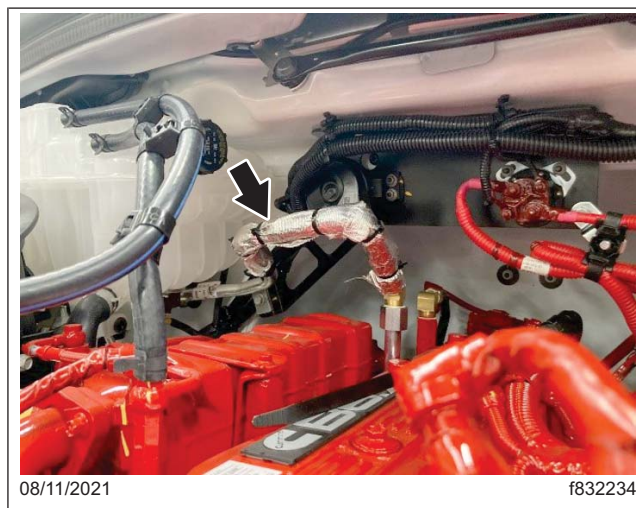


Fig. 3, Tube Reflecting Sleeve

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NOTE: The additional 90 degree fitting is not required if the heater coolant system is equipped with an optional supply shut-off valve. In this case, only install the tube reflecting sleeve.

8. Attach the 90 degree fitting (part number 210503 000027) under the 45 degree fitting. See [Fig. 4](#).

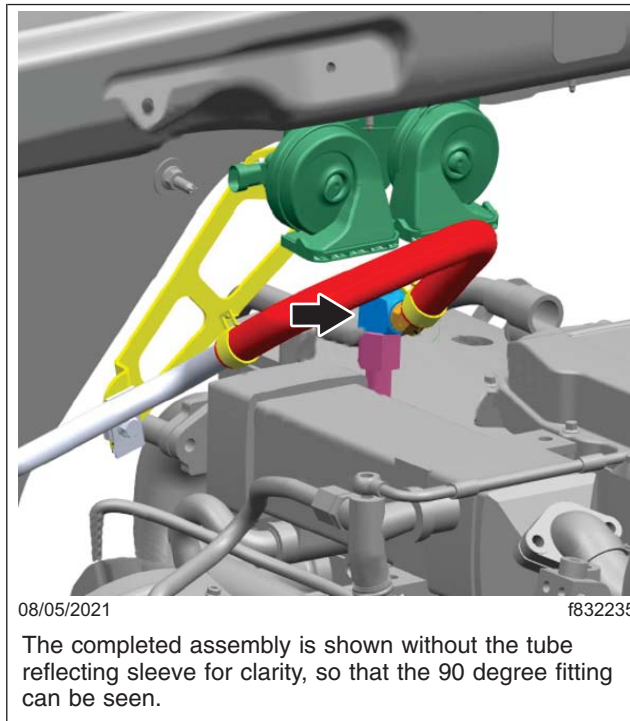


Fig. 4, Updated Heater Hose Installation

8.1 To prevent coolant leaks, apply Loctite® 592 thread sealant to both the 90 degree fitting and the 45 degree fitting before assembly. See [Fig. 5](#).



Fig. 5, Loctite 592 Thread Sealant

8.2 Tighten the fitting assembly by hand.

8.3 Using a wrench to hold the end of the coolant supply tube, attach the fitting assembly to the tube. Tighten the fitting assembly 40 lbf-ft (54 N·m).

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- 8.4 Attach the heater hose to the fitting assembly and secure it with a clamp (part number 23-09796-309).

Parts

See [Table 1](#) for a list of required parts.

Parts Table		
Part Number	Part Description	Quantity
BEN 476445028	TUBE-RFLT SLEEVE,1.50",HTSHD	1.3 feet
210503 000027	ELB-ST 90 08 MPT X 08 F	1
23-09796-309	CLAMP-CABLE TIE,1-3/4X8	4

Table 1, Parts Table

Horn Replacement

If the horn inspection indicates that horn replacement is necessary, perform the following steps.

1. Unplug the horn harness.
2. Remove the two fastener and washer hardware sets. See [Fig. 6](#).

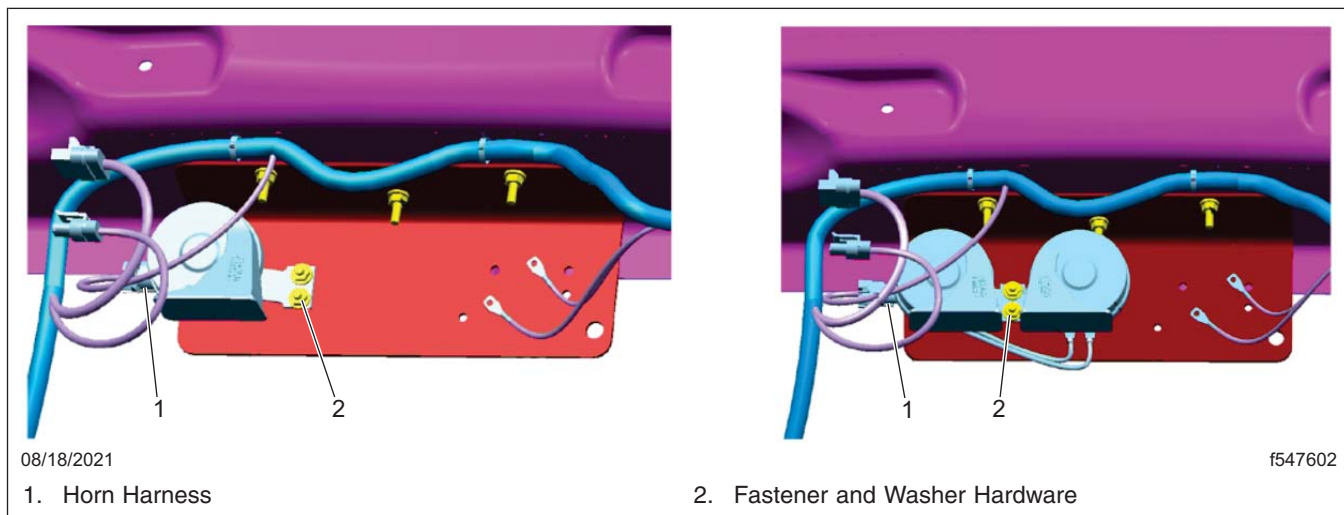


Fig. 6, Single- and Dual-Horn Installation

3. Replace the single or dual horn part numbers with same part number, or replacement part, per available Paragon information. Use removed hardware to install. Tighten the fasteners 48 to 60 lbf-in (542 to 678 N-cm).

Warranty

This procedure is warrantable only if the described condition exists 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.

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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	Correction Code	SRT Code	Description	Time: Hours
66-01788-002/ 003/004/005	054-001-042	38 - SHORTED	03 - REPLACE WITH NEW	726-6010A	HORN, ELEC, R/R	0.3

Table 2, OWL VMRS Codes and Labor Allowance