

FLA COE  
FLB COE  
> FLD Conventional  
Business Class

FLC 112 Conventional  
> Century Class Conventional  
Argosy COE  
Cargo

> Columbia  
Condor  
> Coronado  
Business Class M2

Freightliner  
Service Bulletin

## General Information

Vehicles with Caterpillar C-15 engines may have the surge tank vent line plumbed to an engine inlet port on the thermostat housing that will not allow the coolant to flow past the thermostat when it is closed. Follow the procedures in this bulletin to move the vent line to the port on the other side of the thermostat if required.

There are two possible installations for the surge tank vent line to the engine, depending on the build date. On vehicles built before 2004, the vent line is one continuous 3/8-inch hose from the surge tank to the engine connection. On vehicles built since January 2004, the vent line may be a 1/2-inch hose at the surge tank, with an adaptor placed in the line about three inches from the engine connection, then a 3/8-inch hose into the engine. Follow the appropriate procedure.

## Procedure for Vehicles With a Continuous 3/8-inch Hose from the Surge Tank to the Engine Connection

1. Stop the vehicle on a level surface, turn off the engine, set the parking brake, and chock the tires.
2. Using a suitable container, partially drain the coolant to below the level of the surge tank hoses.
3. Disconnect the vent line from the engine port at the top of the thermostat housing. Disconnect the vent line from the surge tank. Discard the hose. See [Fig. 1](#).
4. Using a new 3/8-inch hose from [Table 1](#), install one end of the hose onto the surge tank and secure it with the clamp that was removed.

NOTE: The new piece of 3/8-inch hose should be longer than the original piece to allow for rerouting to the new engine port. It may be necessary to trim it once it has been routed.

5. Remove the pipe plug from the top port of the tee, located on the engine approximately 2 inches to the right of the thermostat housing. Route the new hose to the tee and trim off any excess length.
6. Install a 90-degree fitting (p/n PH 1695HB64) into the top of the tee on the engine. See [Table 2](#).
7. Install the other end of the new hose onto the open end of the 90-degree fitting, and secure it with a clamp (p/n 23-11357-016).
8. Install the pipe plug that was removed from the tee, into the thermostat housing where the old vent hose was connected.
9. Fill the cooling system to the appropriate level.
10. Start the engine and allow it to run for 10 minutes. Check the coolant level, and add more if necessary. Check for leaks.
11. Stop the engine, close the hood, and remove the chocks from the tires.

## Procedure for Vehicles With a 1/2-Inch Hose from the Surge Tank to a 1/2- to 3/8-Inch Adaptor

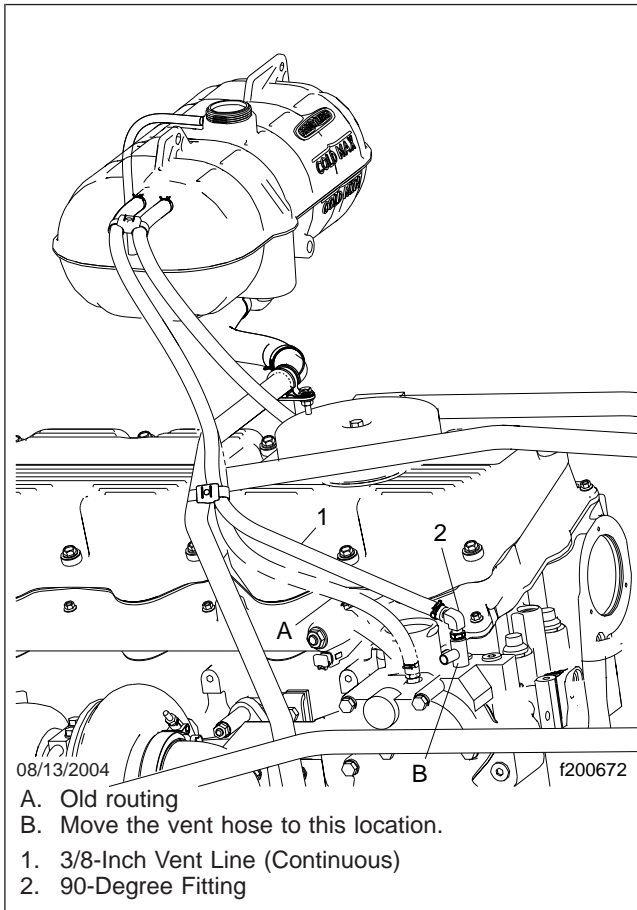
1. Stop the vehicle on a level surface, turn off the engine, set the parking brake, and chock the tires.
2. Using a suitable container, partially drain the coolant to below the level of the surge tank hoses.
3. Disconnect the vent line from the engine port at the top of the thermostat housing. See [Fig. 2](#).
4. Disconnect the 1/2-inch hose from the surge tank. Disconnect the other end of the 1/2-inch hose from the 1/2- to 3/8-inch adaptor, leaving the adaptor and short piece of 3/8-inch hose connected together.

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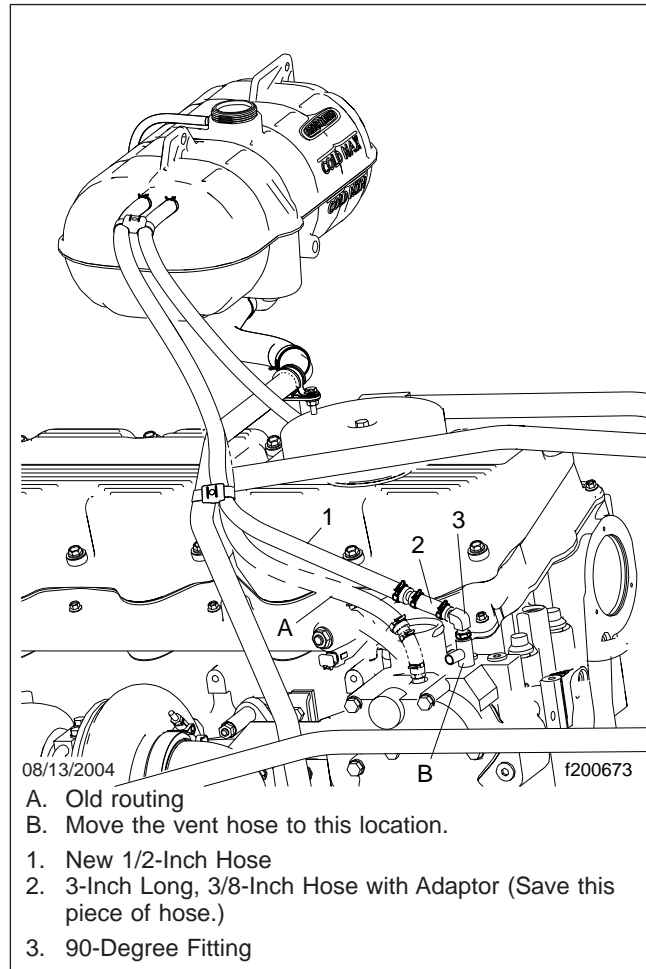
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**Fig. 1, Continuous Vent Hose, New Location**



**Fig. 2, Vent Hose with Adaptor, New Location**

- Using 60 inches of new 1/2-inch hose (see [Table 3](#)), install one end onto the surge tank and secure it with the clamp that was removed.

**NOTE:** The new piece of 1/2-inch hose should be longer than the original piece to allow for rerouting to the new engine port. It may be necessary to trim it once it has been routed. Do not trim the short piece of 3/8-inch hose.

- Connect the other end of the new 1/2-inch hose onto the adaptor. Secure it with the clamp that was removed.
- Remove the pipe plug from the top port of the tee, located on the engine approximately 2 inches to the right of the thermostat housing. Route the new hose assembly to the tee. See [Fig. 2](#).
- Install a 90-degree fitting (p/n PH 1695HB64) into the top of the tee on the engine.
- Install the other end of the 3/8-inch hose onto the open end of the 90-degree fitting, and secure it with a clamp (p/n 23-11357-016). See [Table 2](#).

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10. Install the pipe plug that was removed from the tee on the engine, into the thermostat housing where the old vent hose was connected.
11. Fill the cooling system to the appropriate level.
12. Start the engine and allow it to run for 10 minutes. Check the coolant level and add more if necessary. Check for leaks.
13. Stop the engine, close the hood, and remove the chocks from the tires.

## Parts

Referring to the vehicle BOM, match the type of material listed in [Table 1](#) or [Table 3](#) to the original equipment.

Vehicles Using 3/8-Inch Hose from the Surge Tank to the Engine Thermostat, Use the Following Hose		
Material	Qty (Inches)	Part Number
Hose, Blue Stripe, 0.38 ID	60	GT 4230SB3/8

**Table 1, 3/8-Inch Hose**

Description	Qty.	Part Number
90-Degree Fitting	1	PH 1695HB64
Clamp	1	23-11357-016

**Table 2, Parts Required at Engine Connection**

Vehicles Using 1/2-Inch Hose from the Surge Tank to an Adaptor, Use the Following Hose		
Material	Qty. (Inches)	Part Number
Hose, Blue Stripe, 0.50 ID	60	48-25122-050

**Table 3, 1/2-Inch Hose**

## Warranty

Normal warranty applies. When submitting claims, reference this bulletin in the story of the claim. See [Table 4](#) for damage code and time guide information.

Damage Code and Time Guide Information			
Damage Code	Operation Number	Description	Time: hours
270-001251940	270-5040A	Vent Line, Surge Tank, Relocate	0.7

**Table 4, Damage Code and Time Guide Information**