



# Technical Service Bulletin

**Technical Service Bulletin:** TSB190042

**Released Date:** 21-Jan-2020

**New Vented Coolant Drain Line Kit to Reduce Variable Geometry Turbocharger Actuator Overheating: FC2636 and FC1894**

## New Vented Coolant Drain Line Kit to Reduce Variable Geometry Turbocharger Actuator Overheating: FC2636 and FC1894

### Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

### Contents

#### Product Affected

Engines:

- ISL9 CM2350 L101
- L9 CM2350 L123B

Original Equipment Manufacturer (OEM):

- Pierce
  - Fire Truck
- Nova
- Gillig
- MCI
- ADL
- EL-DORADO
- NABI
- Autocar
  - Transit
  - Fire Truck

#### Issue

Symptom:

- STOP ENGINE light with FC2636
- Amber lamp with FC1894

## Root Cause:

- Turbocharger actuator overheating.

## Verification

- Active or logged occurrences of fault codes 2636 or 1894.
- Verify unit is **not** equipped with new vented turbocharger coolant drain line kit part number. See Table 1 below.

## Resolution

Replace turbocharger actuator vented coolant drain line with corresponding kit.

## Service Instructions

- New turbocharger actuator vented coolant drain line kits are available with a horizontal or vertical outlet.
- Turbocharger actuator vented coolant drain line orientation **must** be determined in order to determine correct service kit to be ordered. See Figures 1, 2, 3, and 4 for existing product and service kit layouts.
- See Figure 5 for new production routing.
- See Table 1 for kit part numbers.
- For new turbocharger actuator coolant drain line kit installation, see corresponding Service Manual. Reference Procedure 008-017 in Section 08.
- Dips or sags of the coolant vent line below the bottom surface of the actuator should be avoided. If the coolant vent line to the OEM top tank, dips or sags below the bottom surface of the turbocharger actuator, the coolant vent line **must** be shortened and raised to be above the top surface of the turbocharger actuator. See Figure 1 below.

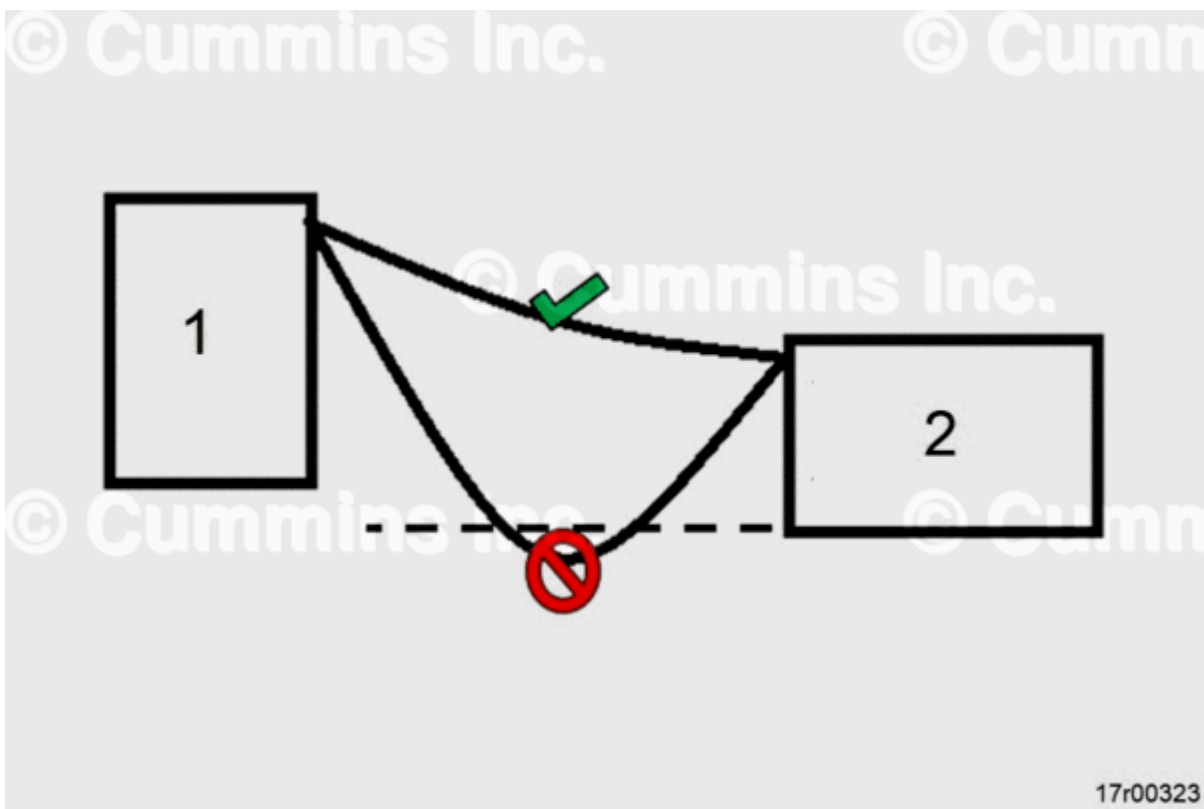


Figure 1, Coolant Vent Line Routing. OEM Top Tank (1). VGT Actuator (2).

### Service Parts Availability

Service kits contain a new turbocharger actuator vented coolant drain tube with vent accommodation, turbocharger vent line and associated hardware.

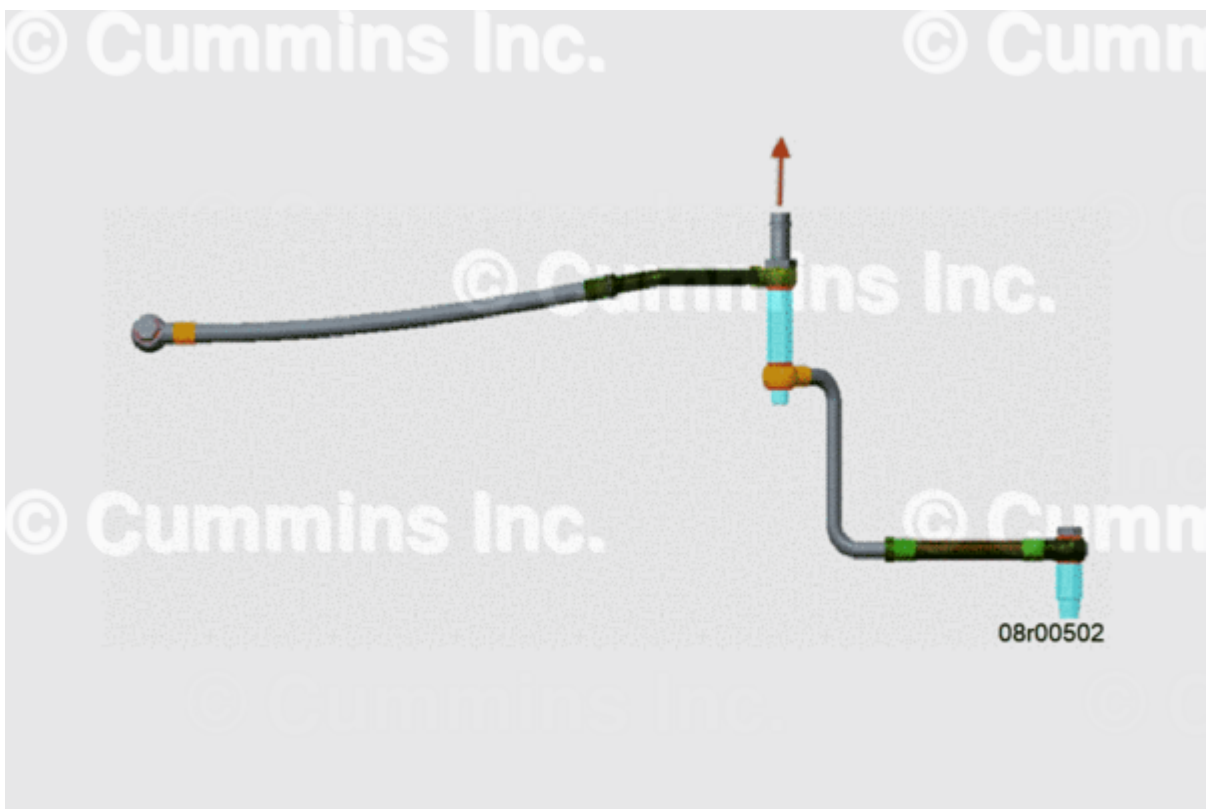


Figure 2, Existing Production Turbocharger Actuator Coolant Lines, Part Number 4352363.

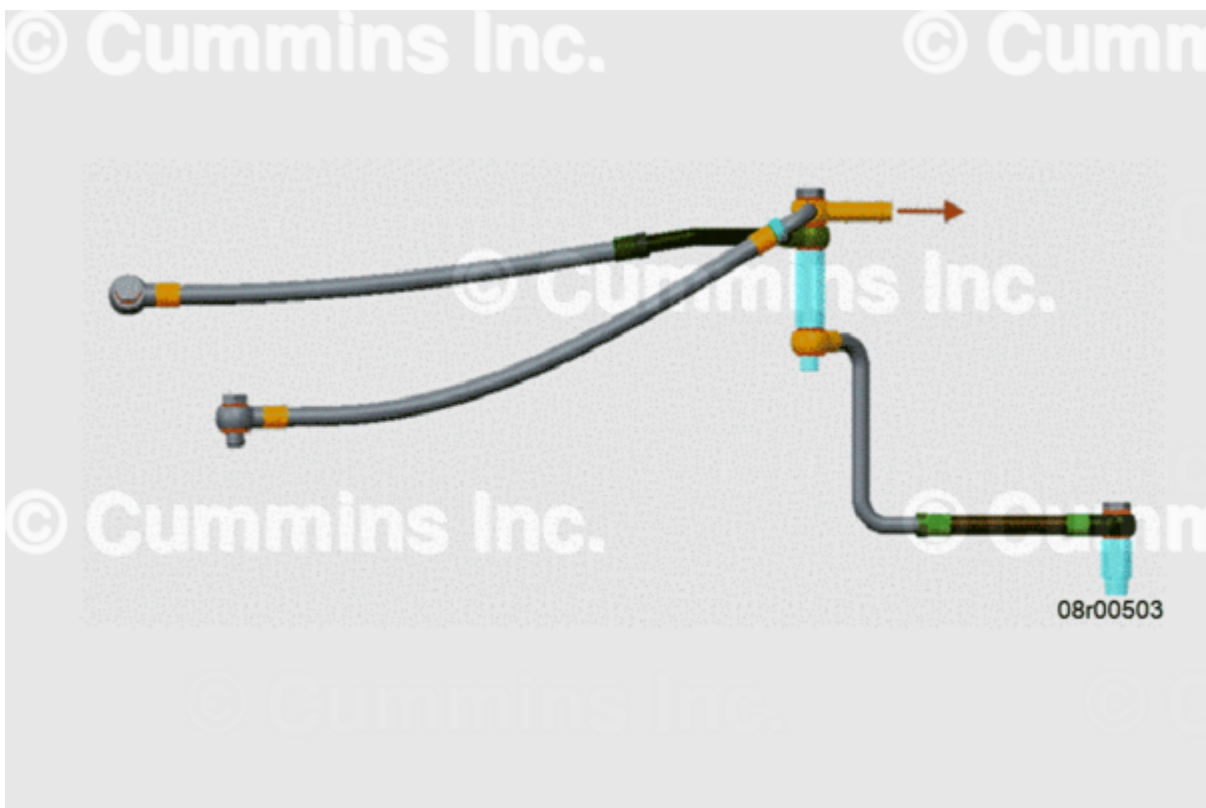


Figure 3, New Turbocharger Actuator Coolant Lines Kit with Horizontal Outlet, Part Number 5473157.

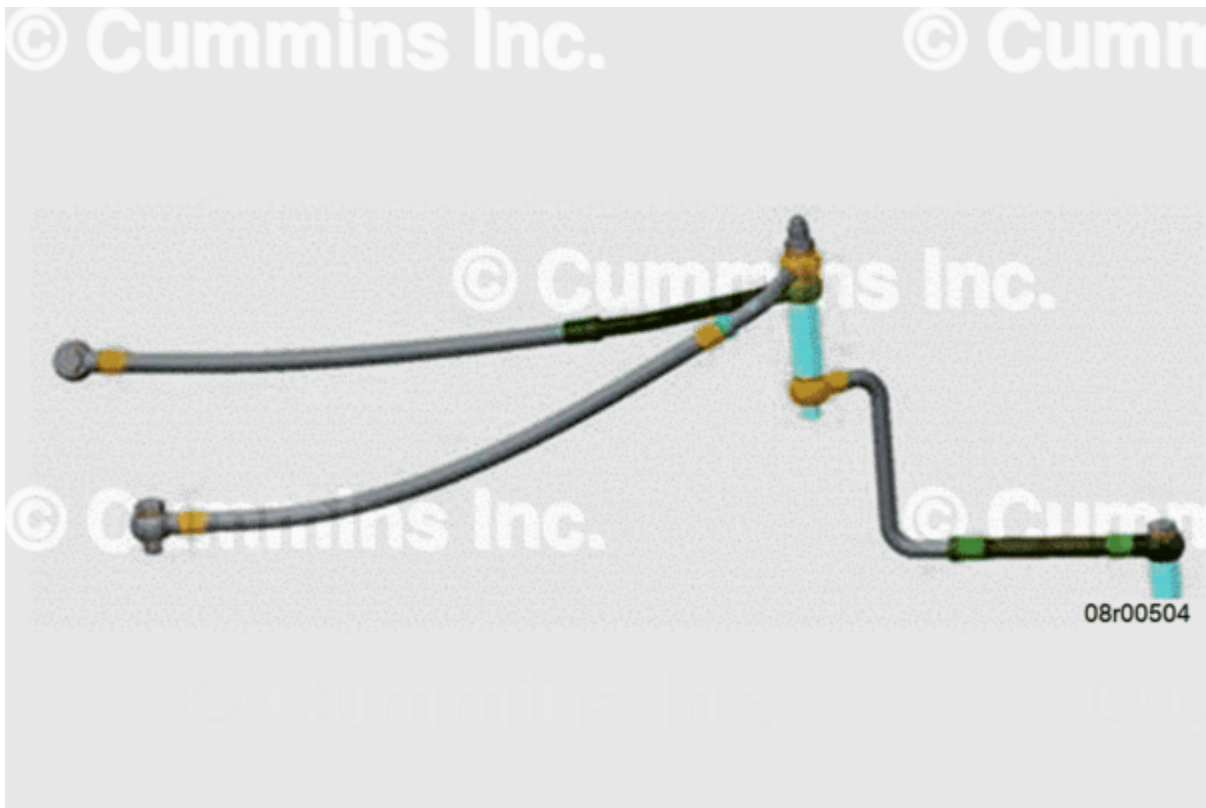


Figure 4, New Turbocharger Actuator Coolant Lines Kit with Vertical Outlet, Part Number 5473158.



Figure 5, New Self-Assembled Turbocharger Actuator Coolant Lines Kit, Part Number 5473159.

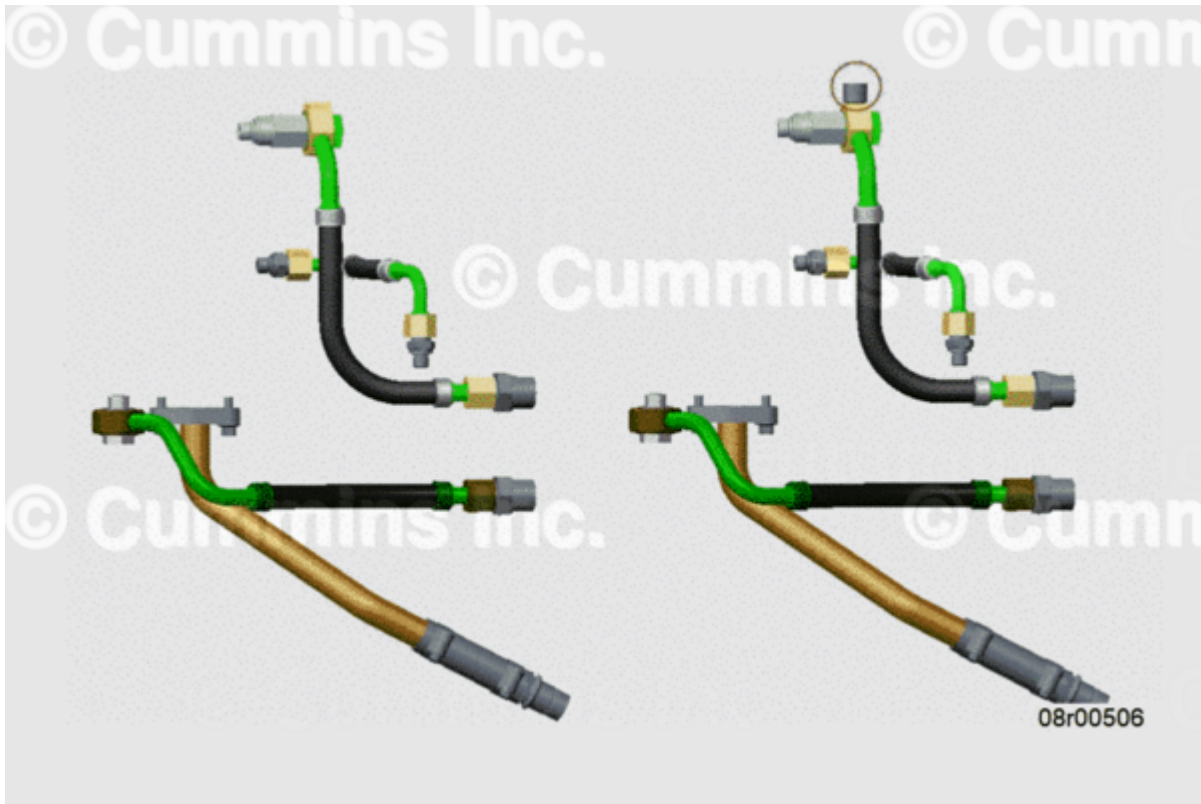


Figure 6, Existing Production Turbocharger Actuator Coolant Drain Tube With Vent Accommodation (Left), Part Number 5302803. New Production Turbocharger Actuator Coolant Drain Tube with Vent Accommodation (Right), Part Number 5446929.

**Service Parts Availability**

Service parts are available. See Table 1 for part numbers.

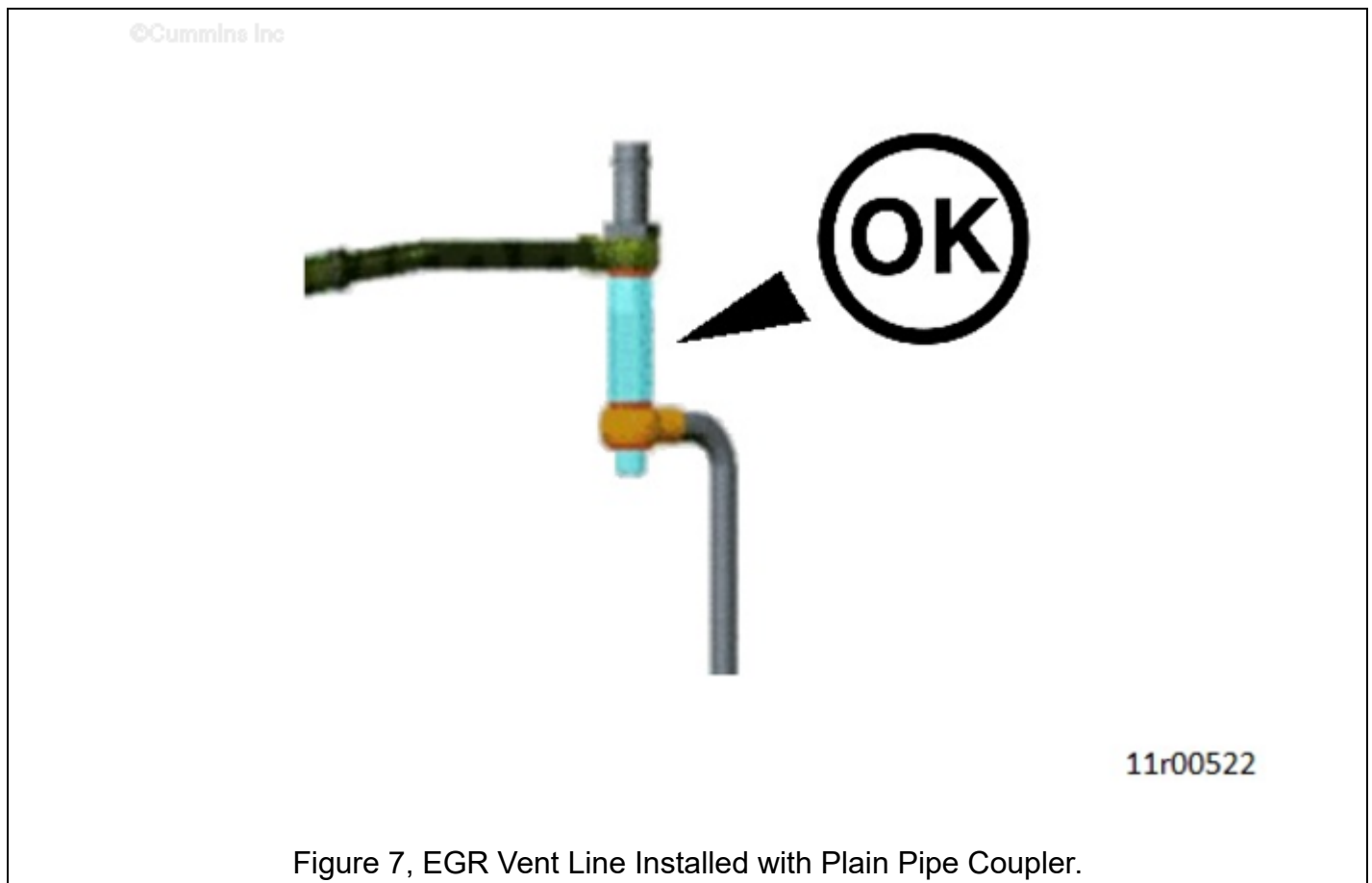
<b>Table 1, Service Parts</b>				
<b>Part Description</b>	<b>Existing Part Number</b>	<b>Obsolete</b>	<b>Superseded</b>	<b>New Part Number</b>
Horizontal vented coolant drain Out Kit	4352363	No	No	5473157
Vertical vented coolant drain Out Kit	4352363	No	No	5473158
Self- Assembled Kit	4352363	No	No	5473159

<b>Table 2, Kit Part Number and Confirmed Application Compatibility</b>	
<b>Kit Part Number</b>	<b>OEM</b>
5473157	Pierce Fire Trucks

Table 2, Kit Part Number and Confirmed Application Compatibility	
Kit Part Number	OEM
5473158	Nova Gillig MCI ADL EL-DORADO NABI
5473159	Autocar

### Part Identification

A Plain Pipe Coupler is required at the EGR coolant out vent location to install the new turbocharger vent lines. See Figure 6 for example of EGR vent line installed with the necessary plain pipe coupler. See Figure 7 for example of EGR cooler vent line installed without Plain Pipe Coupler. If engine does **not** have the plain pipe coupler installed see Table 3 for additional part number to order to install new turbocharger vent lines.



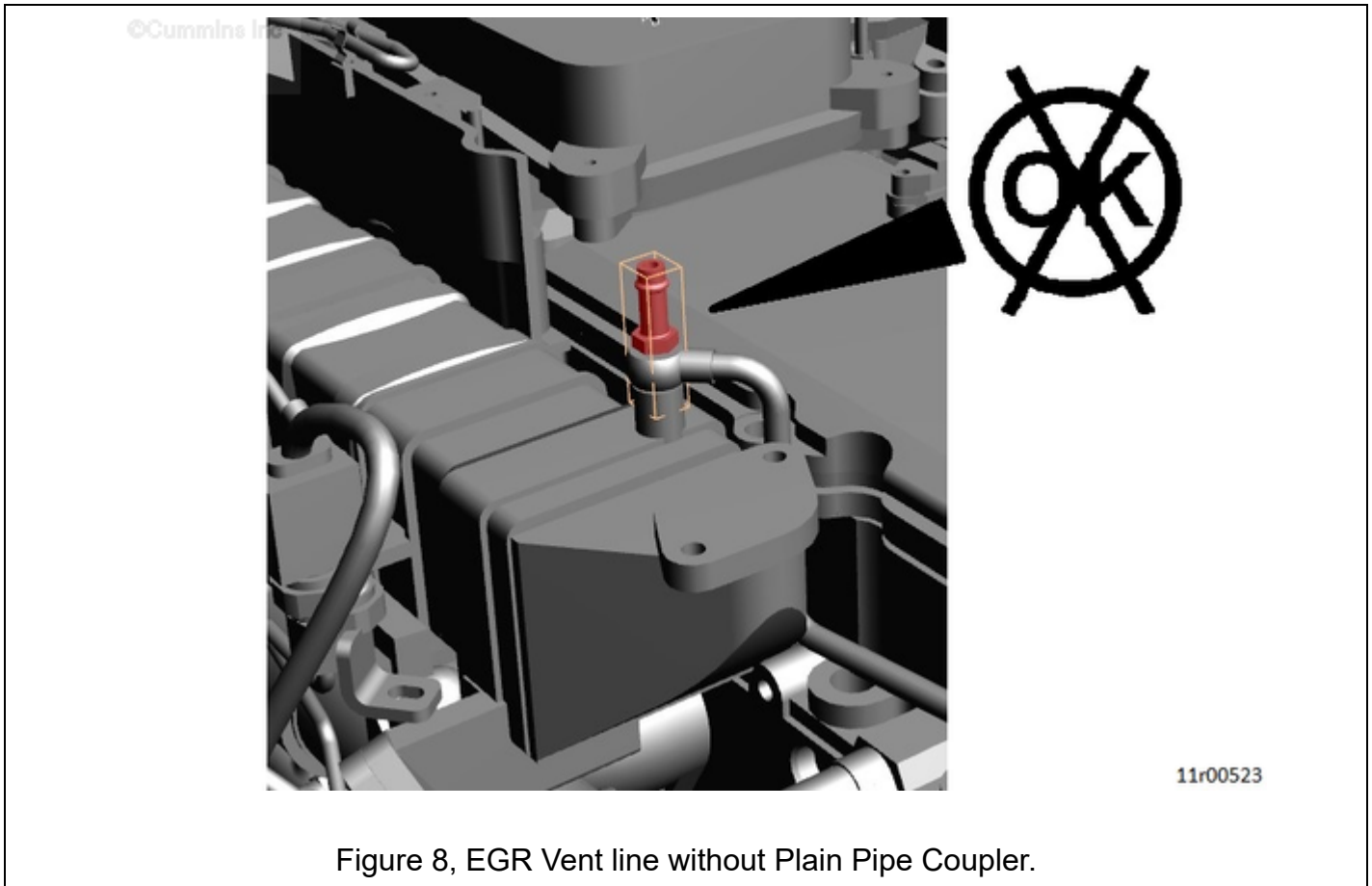


Figure 8, EGR Vent line without Plain Pipe Coupler.

**Table 3, Additional Part Number Needed**

Plain Pipe Coupler Present	Represented Figure	Action	Part Number
Yes	Figure 7	None	Not Applicable
No	Figure 8	Order Plain Pipe Coupler	5297873

**Production Status**

Implemented for production. See Table 4.

**Table 4, Production Information**

ESN First	Build Date <sup>1</sup>	Plant
74287491	16 March 2018	Rocky Mount Engine Plant

<sup>1</sup>Engine build date can be found on engine dataplate.

**Document History**

Date	Details



Date	Details
2019-3-19	Module Created
2019-6-20	Product Problem Solving (PPS)
2020-1-21	Added Part Identification Section

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**Last Modified: 21-Jan-2020**

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