

# Cascadia Radiator Strut Rod Rubbing on Upper Radiator Hose

# 20-78

FLA COE  
FLB COE  
FLD Conventional  
Business Class  
FLC 112 Conventional

Century Class Conventional  
Argosy COE  
Cargo  
Columbia

122SD and Coronado  
Business Class M2  
> Cascadia  
108SD/114SD

**Freightliner  
Service Bulletin**

## General Information

In some operating conditions, the radiator strut rod may rub on the upper radiator hose on DD13 powered Cascadia 113/125, and Cummins ISX 15 powered Cascadia 125, with isolated M1400 radiators. Vehicles with these configurations should be checked for clearance, and if there is evidence of rubbing, replace the hose with the original part, and install a replacement strut rod. The replacement strut rod is redesigned for improved clearance. Refer to [Table 1](#) under "Parts" for a list of replacement strut rods.

## Inspection

1. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
2. Open the hood.
3. Inspect the upper radiator hose near the radiator strut rods for evidence of rubbing.

On vehicles with DD13 engines, rubbing will show near the right-side strut rod. See [Fig. 1](#).

On vehicles with Cummins ISX engines, rubbing will show near the bias strut rod. See [Fig. 2](#).

If there is evidence of rubbing, replace the hose and install a new strut rod. Refer to [Table 1](#) under "Parts" for replacement strut rods by vehicle configuration.



**Fig. 1, Hose Rubbing Area, DD13 Engines**



**Fig. 2, Hose Rubbing Area, Cummins ISX Engines**

**NOTE:** If the installed strut rod is already the replacement part listed in [Table 1](#), replace the hose only. Make sure that the hose is installed so that it will not rub.

## Replacement

1. Drain the cooling system into an appropriate container. For instructions, see **Group 20** of the *Cascadia Workshop Manual*.

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NOTE: On DD13 equipped vehicles there may be a spacer between the rod and the engine block. Discard this spacer when replacing strut rod. Make sure that the bolt is an M14x1.5x40, GR10.9. (210961 014001)

2. Remove the strut rod and discard.
3. Remove the damaged radiator hose.
4. Install the new radiator hose.
5. Install the new strut rod.

For DDC engines, tighten the radiator strut rod fasteners at the radiator 55 to 65 lbf-ft (75 to 90 N·m), and at the engine block 125 to 139 lbf-ft (171 to 188 N·m).

For Cummins engines, tighten the radiator strut rod fasteners at the radiator and the engine block 55 to 65 lbf-ft (75 to 90 N·m).

6. Fill the cooling system.
7. Start the engine and check for coolant leaks. Repair as needed.

## Parts

Parts are available through the PDCs. [Table 1](#) lists replacement radiator strut rods.

Replacement Radiator Strut Rods		
Original P/N	Description	Replace with P/N
A05-30645-000	STRUT-RAD,DD13,MED,F	A05-31386-000
A05-30646-000	STRUT-RAD,DD13,MD,FW	A05-31387-000
A05-30648-000	STRUT-RAD,DD13,MED,A	A05-31389-000
A05-30649-000	STRUT-RAD,DD13,MD,AF	A05-31390-000
A05-30743-000	STRUT-RAD,ISX,MED,BI	A05-31388-000

Table 1, Replacement Radiator Strut Rods

## 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.

Normal warranty applies. See [Table 2](#) for QuickClaim damage code and labor allowance information. Refer to this service bulletin by number at the beginning of the claim comments. See [Table 3](#) for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

QuickClaim Damage Code and Labor Allowance			
Damage Code	SRT Code	Description	Time: Hours
269-001032	269-5012A	RADIATOR, STRUT ROD, RUBBING UPPER RAD HOSE, R/R (20-78)	0.8

Table 2, QuickClaim Damage Code and Labor Allowance

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OWL VMRS Codes and Labor Allowance					
Primary Failed Part	Component Code	Cause Code	SRT Code	Description	Time: Hours
A05-30645-000 A05-30646-000 A05-30648-000 A05-30649-000 A05-30743-000	042-002-017	12	269-5012A	RADIATOR, STRUT ROD, RUBBING UPPER RAD HOSE, R/R (20-78)	0.8

**Table 3, OWL VMRS Codes and Labor Allowance**