

# 20–090 Retrofitting New Lower Radiator Mounting

## TSB-20-090-FTL

Creation Date:2024-07-30

### Engine or Vehicle Affected:

► eCascadia

Warranty applies to this described condition. See the warranty information at the end of this bulletin.

### **Described Condition**

On eCascadia vehicles built before September 11, 2023, the bolts attaching the upper radiator mounting bracket to the frontbox may loosen over time. If this occurs, tighten loose bolts, then replace lower radiator casting with the new design that eliminates the lower radiator isolators and directly mount the radiator to the lower casting.

### **Parts Required**

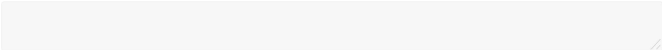
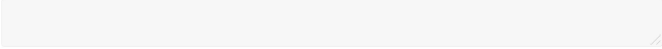
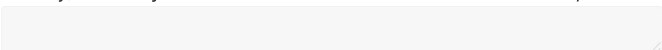
For a list of parts, see Table [1](#).

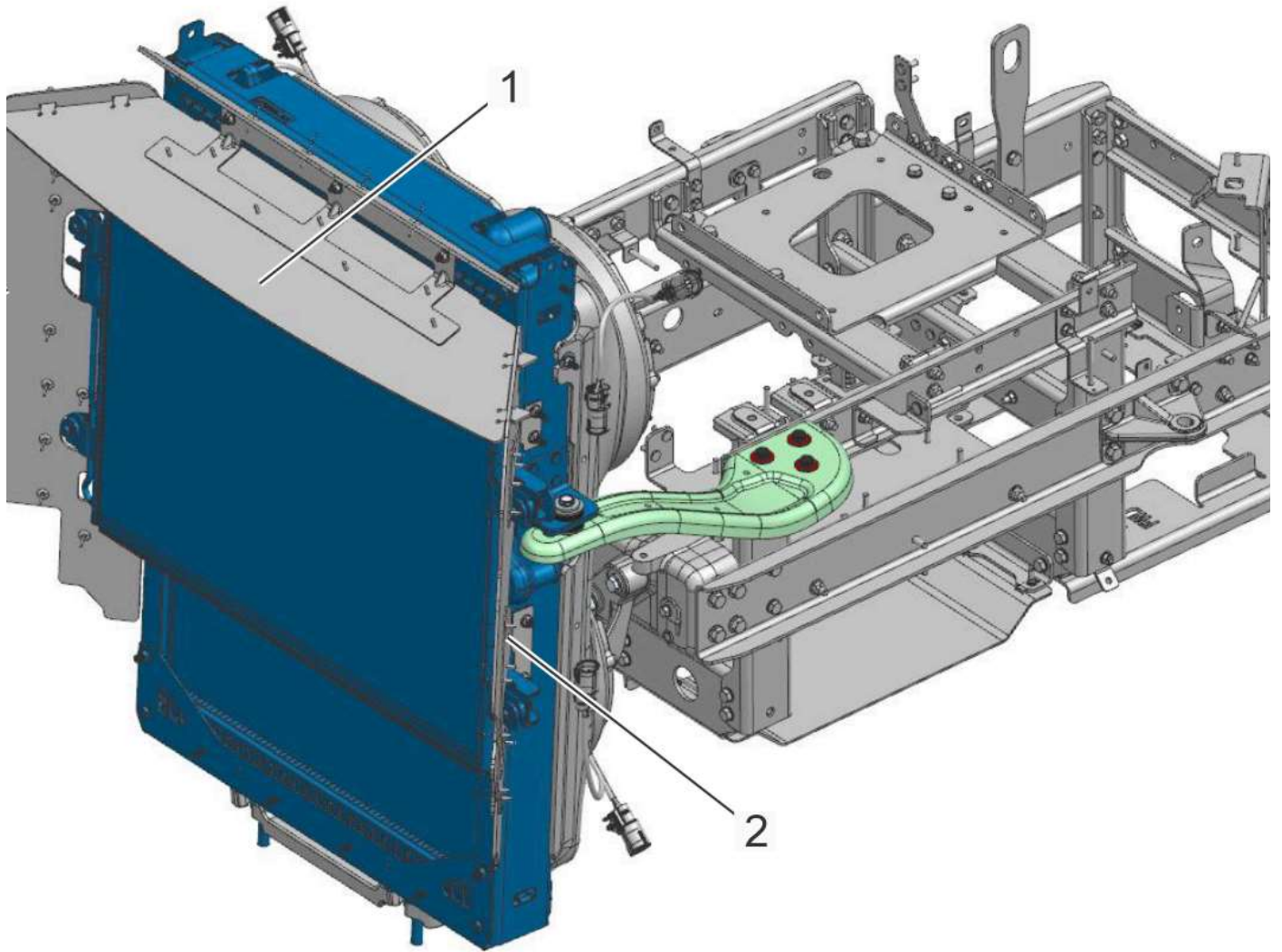
Table 1, Parts Table

Part Number	Part Description	Quantity
01-35683-000	BRKT-RAD MTG, LOWER, EP4	1

Table 1, Parts Table

### **Replacement of Lower Radiator Mounting**

- Park the vehicle on a level surface, shut down the vehicle and set the parking brake. Chock the tires.  

- Open the hood.  

- Disconnect the low voltage (LV) batteries. For instructions, see Chapter 13: Electrical, Instruments, and Controls, Section: Low Voltage Battery; and Subject: Disconnection in the *eCascadia Workshop Manual*.  

- Remove the radiator baffle assembly. See Fig. [1](#).



1. Upper Baffle

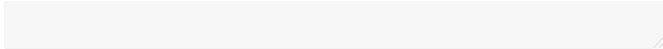
2. Left-Hand (LH) Baffle

3. Right-Hand (RH) Baffle

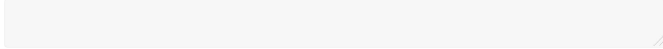
Fig. 1, Radiator Baffle Assembly

5.  Remove the bolts from the A/C receiver drier and unmount it.
6.  Remove the bolts from the A/C condenser mounts.
7.  Remove the condenser and set it aside.
8.  Disconnect the electric fans and three-way valve harnesses. See Fig. 5 and Fig. 6.
9.  Disconnect the three coolant hoses from the surge tanks. See Fig. 6.
10.  Disconnect the four radiator hoses from the radiator package. See Fig. 5 and Fig. 6.
11.  Disconnect the hood struts, straps and support hood.

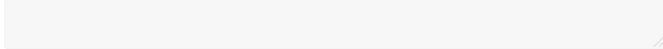
12.  Disconnect the fasteners connecting the radiator mounting brackets to the radiator. See Fig. 4.



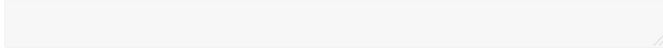
13.  Remove the LH radiator mounting bracket.



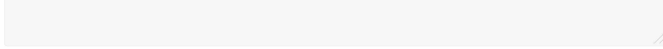
14.  Remove the lower radiator mounting fasteners.



15.  Remove the radiator from the vehicle.



16.  Remove the lower forward frontbox isolator fasteners. See Fig. 3.



17.  Support the frontbox with a hoist and lift it up a little bit. See Fig. 2.

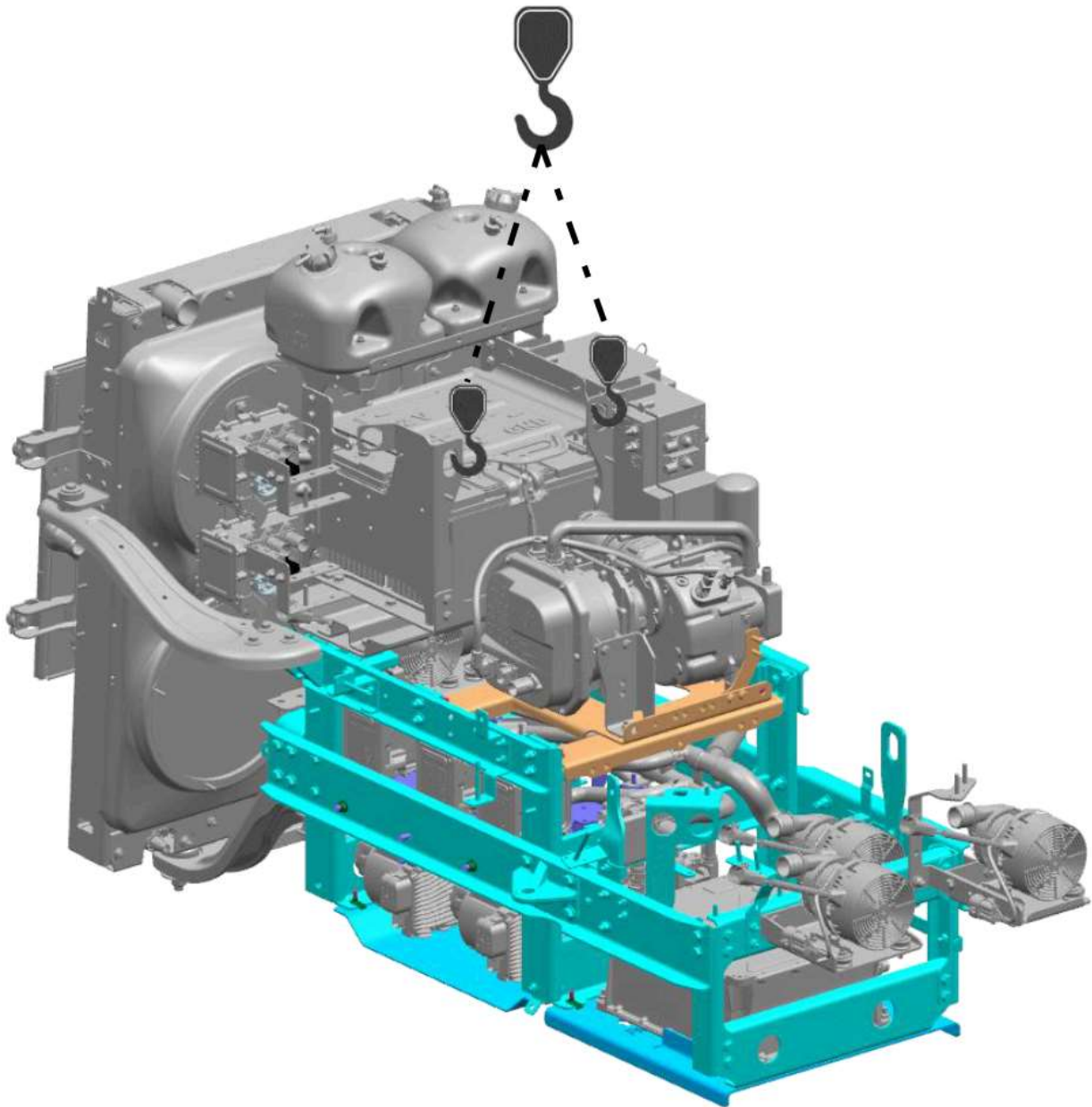
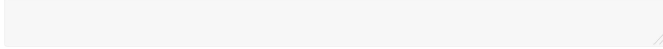
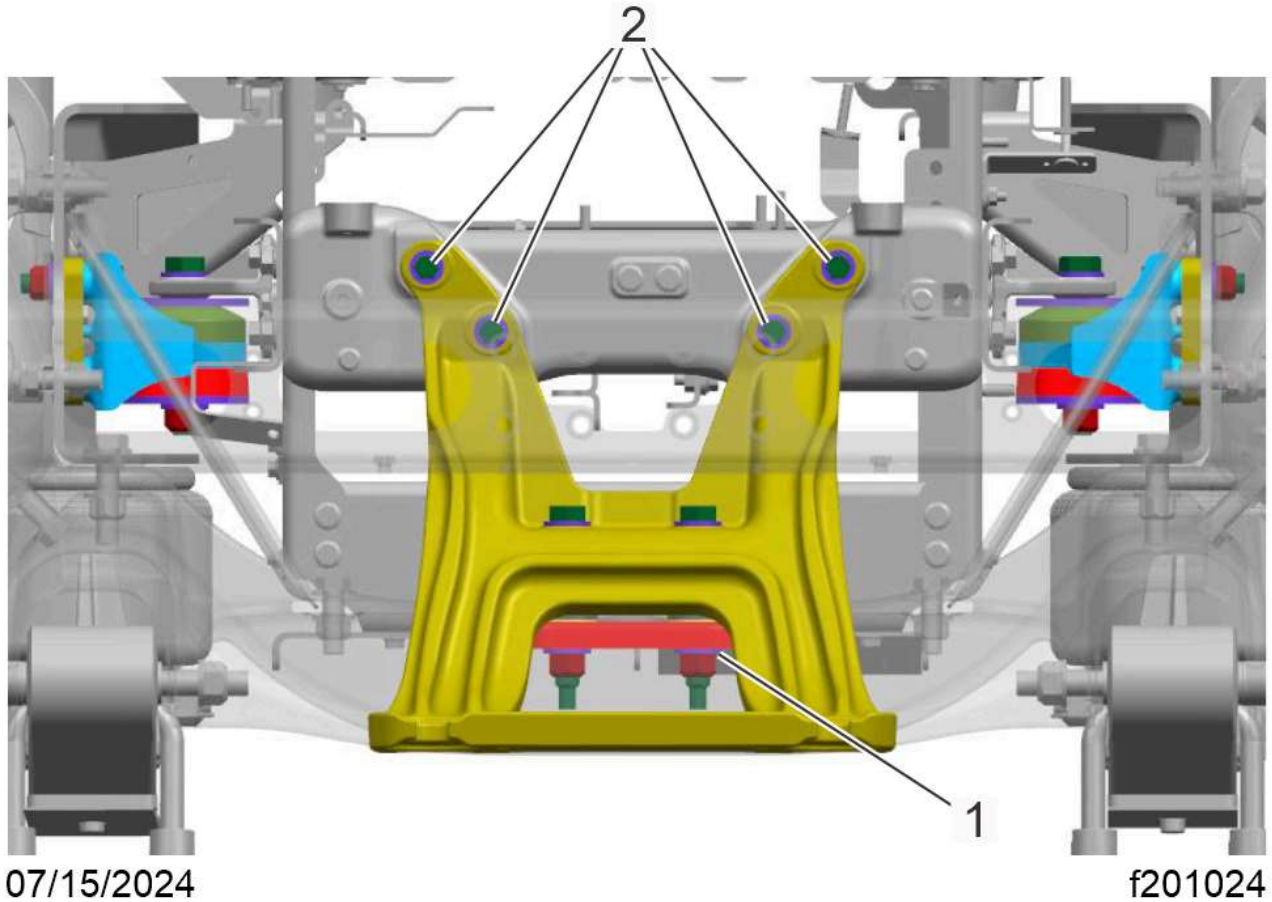


Fig. 2, Lifting Frontbox

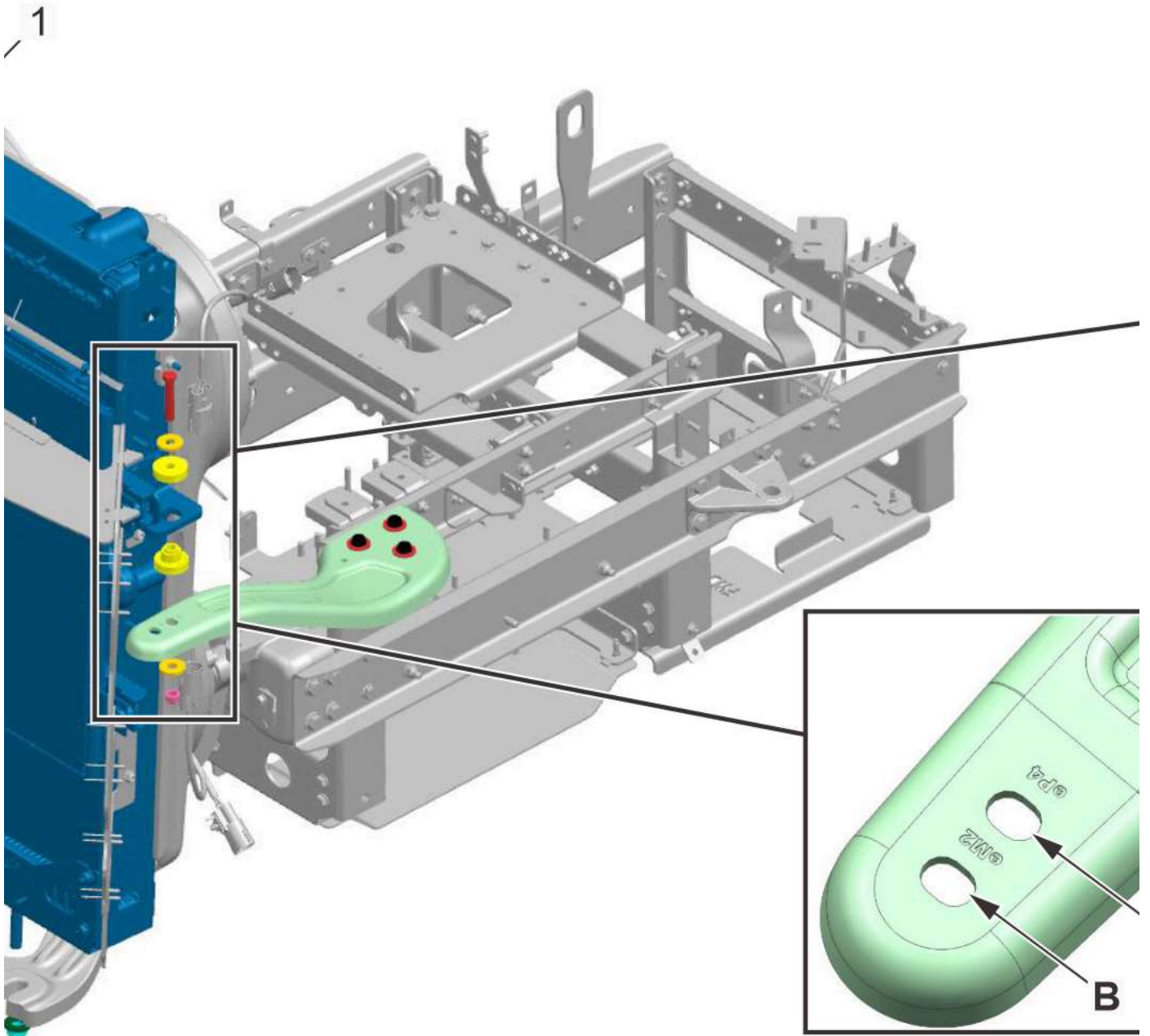
18.  Remove the four fasteners connecting the lower radiator support bracket to the frontbox. See Fig. 3.
19.  Remove the bracket from the vehicle.
20.  Install the frontbox isolator. See Fig. 3.
21.  Install the new lower radiator support bracket and install the four mounting fasteners. Tighten the fasteners 59 lb-ft (80 N·m). See Fig. 3.



1. Lower Frontbox Isolator Fasteners      2. Bolts

Fig. 3, Frontbox Mounting Fasteners

22.  Lower the frontbox and install the isolator fasteners. Tighten the fasteners 199 lb-ft (270 N·m).
23.  Install the vehicle radiator and the lower mounting fasteners. Tighten the lower mounting fasteners 173 lb-ft (235 N·m).
24.  Install the radiator mounting bracket. Tighten the isolator fasteners 59 lb-ft (80 N·m). See Fig. 4.

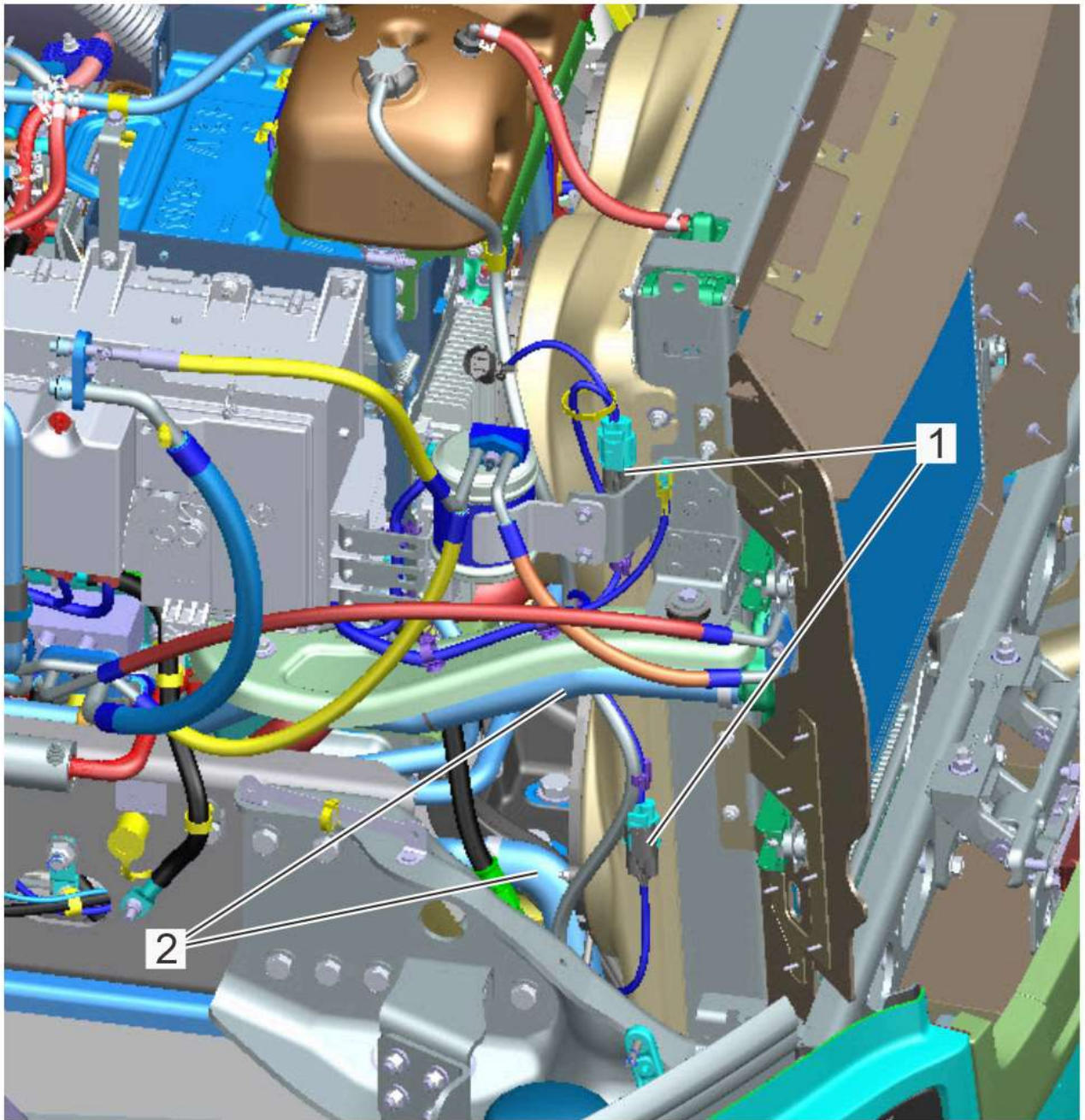


- A. eCascadia Only
1. Radiator
  2. Baffle Assembly
  3. Bolt

- B. eM2 Only
4. Washer
  5. Spacer
  6. Nut

Fig. 4, Radiator Mounting Bracket

25.  Connect the four radiator hoses to the radiator package. See Fig. 5 and Fig. 6.



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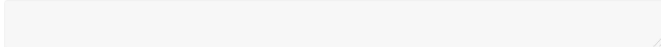
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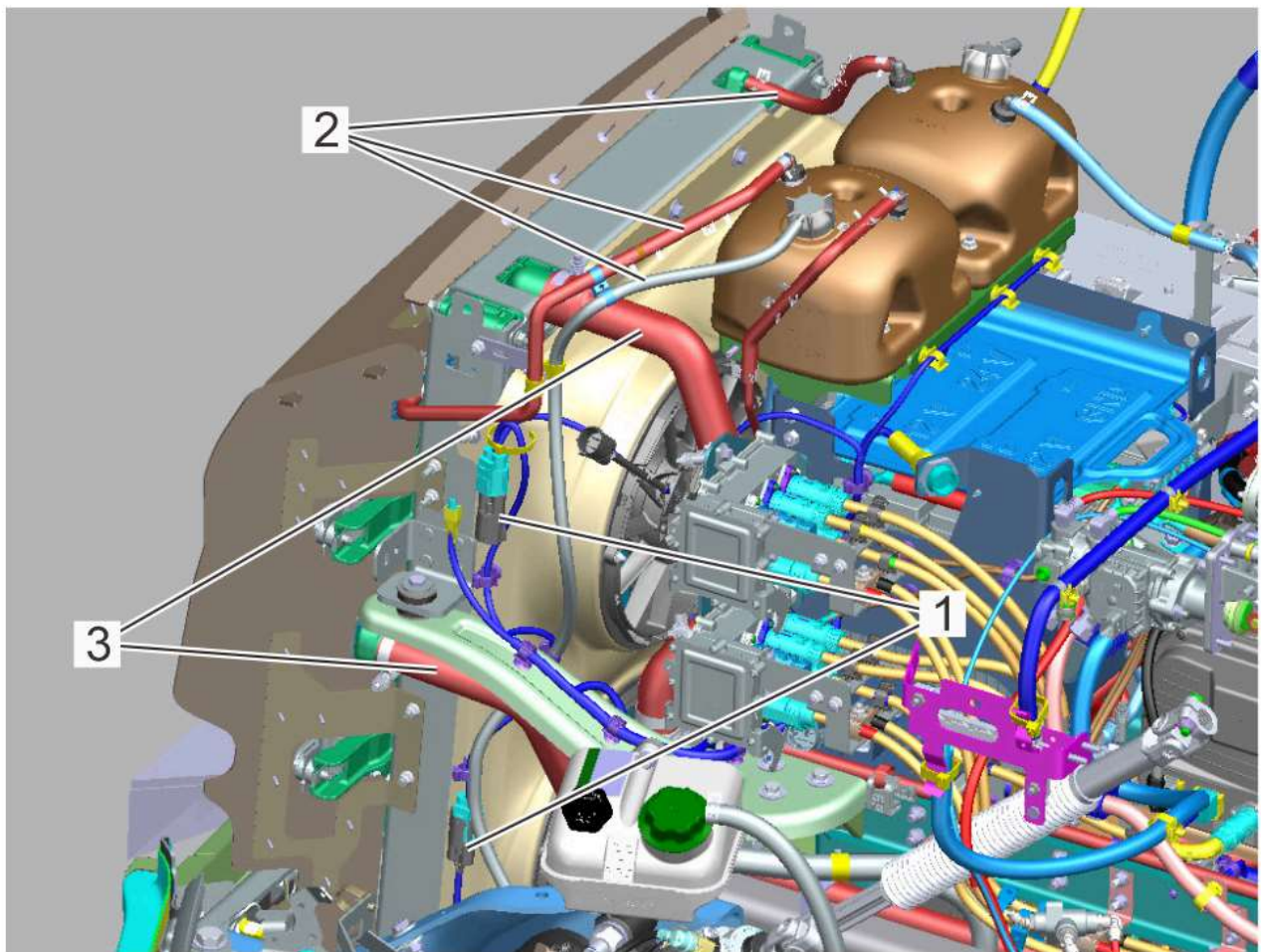
1. Fan Harnesses

2. Radiator Connections

Fig. 5, Radiator Hoses (right-hand side)

26.  Connect the three coolant hoses from the surge tanks. See Fig. 6.





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- |                                    |                   |
|------------------------------------|-------------------|
| 1. Fan and Three-Way Valve Harness | 3. Radiator Hoses |
| 2. Surge Tank Hoses                |                   |

Fig. 6, Radiator Hoses (left-hand side)

27.  Connect the electric fans and three-way valve harnesses and install any cable zip ties. See Fig. 5 and Fig. 6.
28.  Install the condenser and install the AC receiver drier.
29.  Connect the hood straps.
30.  Install the radiator baffle assembly. See Fig. 1.
31.  Connect the LV batteries. For instructions, see Chapter 13: Electrical, Instruments, and Controls, Section: Low Voltage Battery; and Subject: Disconnection in the *eCascadia Workshop Manual*.
32.  Fill and bleed the coolant system (two circuits). For instructions, see Chapter 4: Vehicle Cooling/Radiator, Section: Radiator Assembly; and Subject: Coolant System Bleeding Procedure in the *eCascadia Workshop Manual*.
33.  Close the hood.

**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.

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

Table 2, OWL VMRS Codes and Labor Allowance

<b>Damage Code and Time Guide Information</b>						
<b>Primary Failed Part</b>	<b>Component Code</b>	<b>Cause Code</b>	<b>Correction Code</b>	<b>SRT Code</b>	<b>Description</b>	<b>Hours</b>
01-35321-000	014-003-002	66	03	109-5000A	Bracket, Radiator support, Lower R/R	3.2

Table 2, OWL VMRS Codes and Labor Allowance

**Note:**

F38,F40  
REPLACE  
014-003-002

**CONTACT INFORMATION**

For questions, please create a Service Technical Request using the DTTS Application on the DTNA Portal.

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