

Authorized Field Change



AFC 21903

Date: APRIL 2022

Subject File: ENGINE

Subject: Heating, Ventilation, and Air Conditioning

Model: International® CV™ Series

Start Date: 1 August 2019 End Date: 6 April 2021

Engine Family: International® 6.6

DESCRIPTION

The engine mounted heater return tube may crack resulting in a small coolant leak.

ELIGIBILITY

This procedure applies ONLY to vehicles marked in the International® Service PortalSM with AFC 21903. Check and complete any other open campaigns also at this time.

TOOLS INFORMATION

Table 1. [Tools Information](#)

Description	Tool Number
Coolant Management Tool	KL5007NAV

PARTS INFORMATION

Table 2. [Parts Information](#)

Part Number	Description	Quantity
8900295R91	Heater Pipe Kit	1


PARTS INFORMATION (CONT.)


8900295R91 contains the following parts:

Table 3. **Parts Kit BOM**


Part Description	Quantity
Heater Pipe	1
Support, Lower, Heater Return	1
Clamp, 5/8-inch, Cushioned	1
Nut, Hex Flanged	1
Bolt, M8 X 25 PHC Class 8.8 Flanged	1


SERVICE PROCEDURE

 **WARNING:** To prevent personal injury and / or death, or damage to property, park vehicle on hard flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in both directions.

 **WARNING:** To prevent personal injury and / or death, or damage to property, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.

 **WARNING:** To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

 **WARNING:** To prevent personal injury and / or death, or damage to property, allow components in engine compartment to cool before servicing engine or vehicle.

 **WARNING:** To prevent personal injury and / death, or damage to property, remove ground cable from negative terminal of main battery before disconnecting or connecting electrical components. Always connect ground cable last.

1. Park vehicle on a flat surface.
2. Shift transmission to Park or Neutral, set parking brake.
3. Turn vehicle ignition to Key OFF position.
4. Install wheel chocks.
5. Unlatch and open hood.
6. Using coolant management tool drain the cooling system.
7. Remove passenger-side inner fender. Save inner fender and fasteners for reuse.
8. Remove air intake system / Intake upper and lower air box assemblies. For detailed instructions, click on the following link to the CV Technician Manual: [Removal - Service Information Home \(navistar.com\)](http://navistar.com)

SERVICE PROCEDURE (CONT.)

9. Note battery cable routing and cut cable tie strap securing battery cable to coolant pipe.

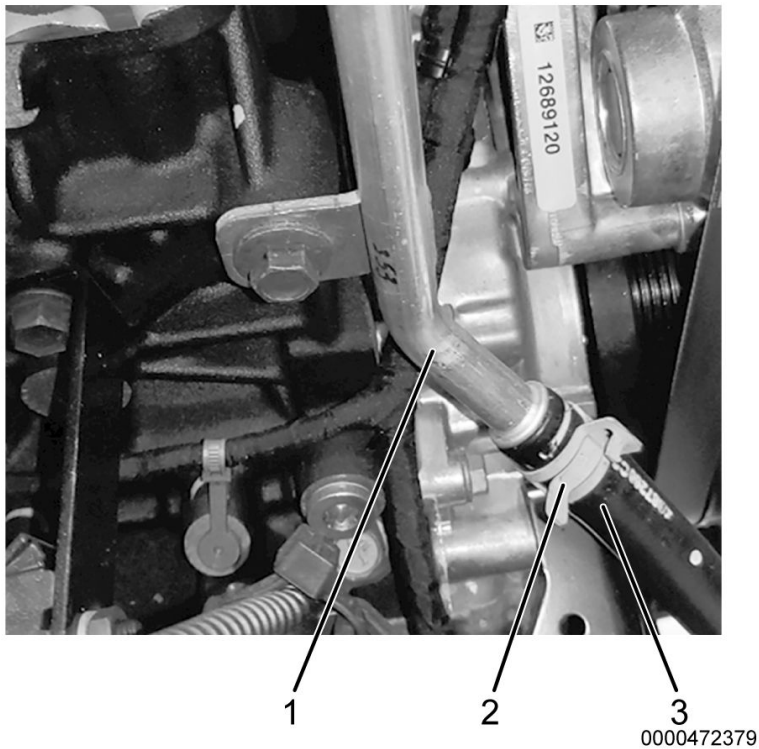
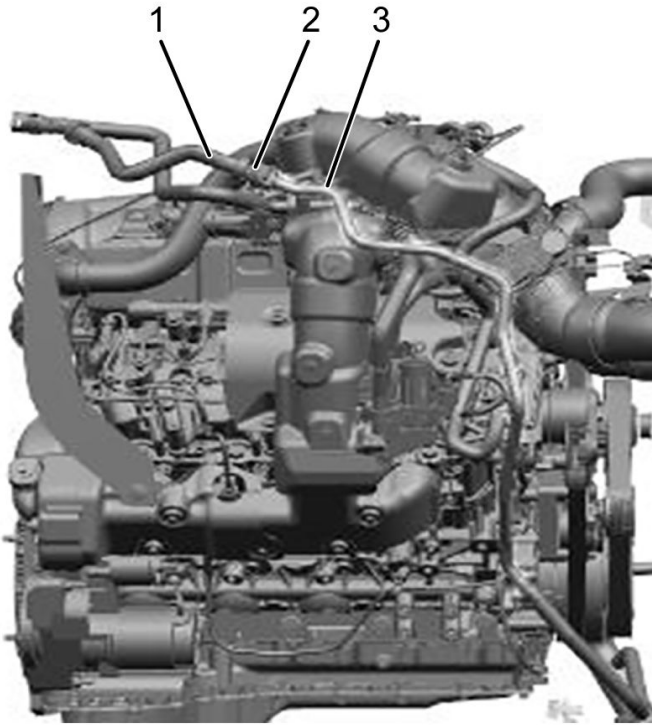


Figure 1. Reposition Lower Hose Clamp

1. Coolant pipe
2. Lower hose clamp
3. Engine hose

10. Reposition lower hose clamp (Figure 1, Item 2) below end of coolant pipe (Figure 1, Item 1) and remove engine hose (Figure 1, Item 3) from coolant pipe.

SERVICE PROCEDURE (CONT.)



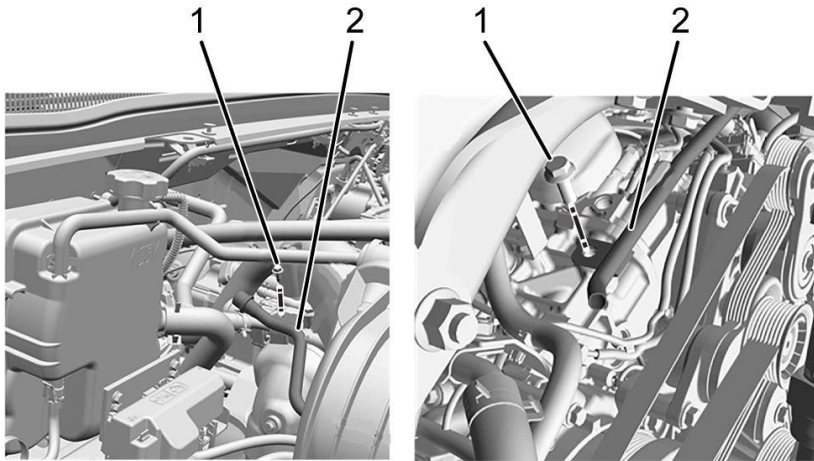
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Figure 2. Unlatch Heater Core Outlet Upper Hose

1. Heater core outlet upper hose
2. Quick connect
3. Coolant pipe

11. Unlatch heater core outlet upper hose (Figure 2, Item 1) quick connect (Figure 2, Item 2) and remove hose from coolant pipe (Figure 2, Item 3).

SERVICE PROCEDURE (CONT.)



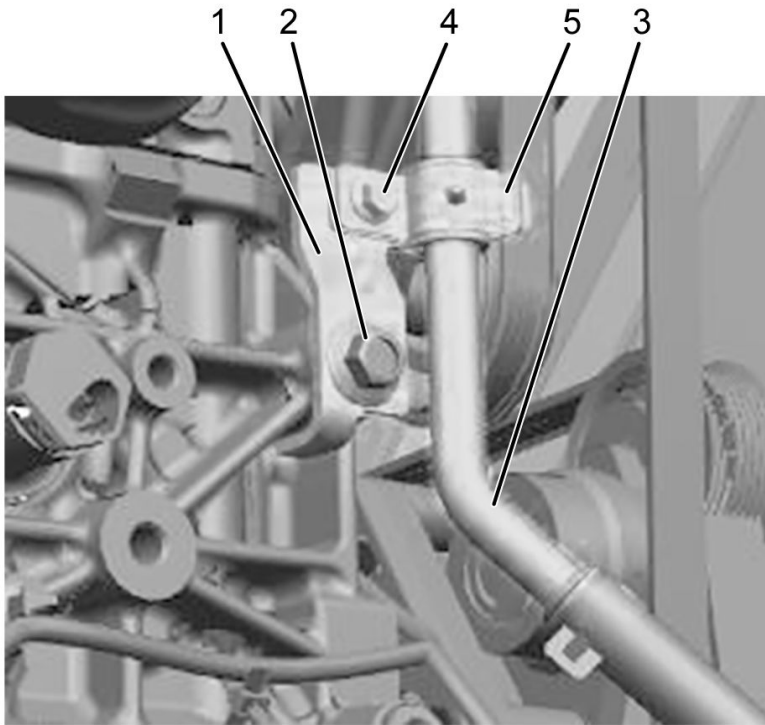
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Figure 3. Remove Upper and Lower Bolts

1. Upper and lower bolts
2. Coolant pipe

12. Remove upper and lower bolts (Figure 3, Item 1) securing coolant pipe (Figure 3, Item 2) to engine and remove pipe. Save bolts for reuse and discard pipe.
13. Position new pipe into place and secure upper bracket to engine with one bolt saved in Step 12. Do not tighten bolt to specification at this time.

SERVICE PROCEDURE (CONT.)



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Figure 4. Secure Lower Support Bracket

1. Lower support bracket
 2. Saved bolt
 3. Coolant pipe
 4. M8 X 25 bolt (flanged nut not shown)
 5. Slotted cushion clamp
14. Using bolt saved in Step 12 (Figure 4, Item 2), secure lower support bracket to engine (Figure 4, Item 1). Using M8 X 25 bolt and flanged nut (Figure 4, Item 4) from kit, loosely assemble slotted cushion clamp (Figure 4, Item 5) to coolant pipe (Figure 4, Item 3) and lower support bracket (Figure 4, Item 2).
 15. Using a torque wrench, tighten upper bracket bolt and lower support bracket bolts to 13 lb-ft (16 N•m).
 16. Using a ratchet wrench, socket and back-up wrench, securely tighten cushion clamp nut and bolt.
 17. Install engine hose (Figure 1, Item 3) onto coolant pipe (Figure 1, Item 1) and position spring clamp (Figure 1, Item 2) to secure hose in place.
 18. Install heater core outlet hose (Figure 2, Item 1) onto coolant pipe (Figure 2, Item 3) and ensure quick connect fitting (Figure 2, Item 2) has locked onto coolant pipe.
 19. Route battery cable as noted in Step 10 and secure in place with new cable tie strap. Remove excess material from cable tie strap.

SERVICE PROCEDURE (CONT.)

20. Install air intake system / Intake lower and upper air box assemblies. For detailed instructions, click on the following link to the CV Technician Manual: [Installation - Service Information Home \(navistar.com\)](http://navistar.com)
21. Install passenger side inner fender using fasteners saved in Step 7.
22. Fill cooling system.
23. Close hood.
24. Remove wheel chocks.

LABOR INFORMATION

Operation number must appear on all claims.

Table 4. Labor Information

Operation No.	Description	Time
A40-21903-1	Replace Heater Core Return Tube	0.6 hrs

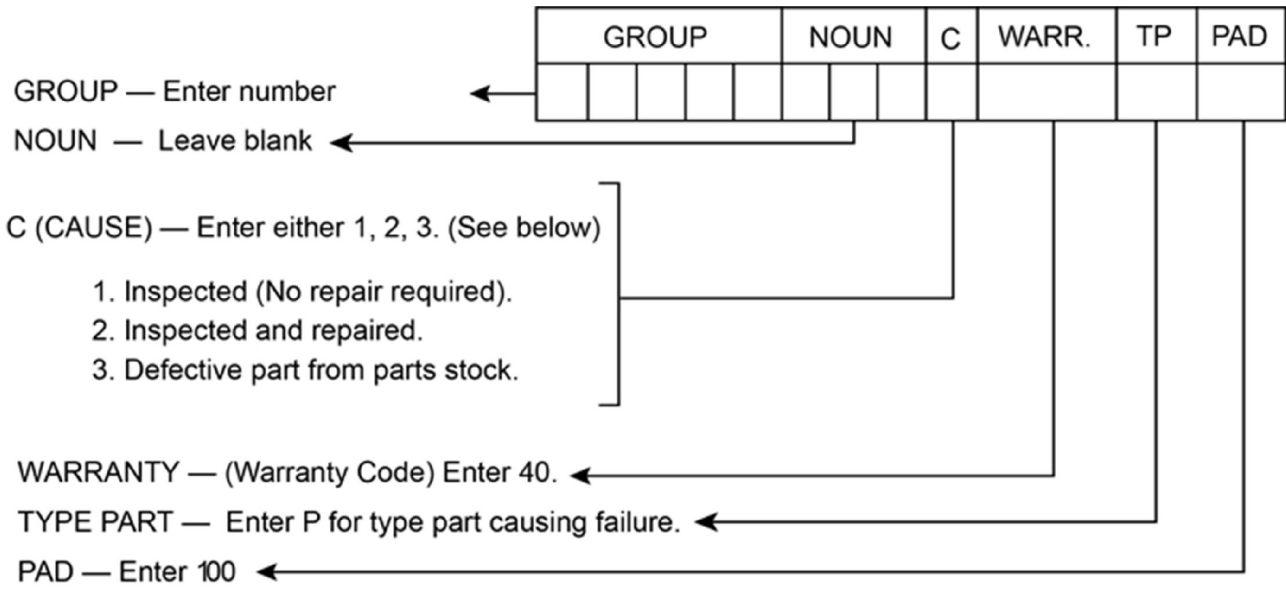
ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number 21903.

Section 7 of the Warranty Policy and Procedures Manual contains further information related to the submission and processing of AFC / Recall claims.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To ensure this important improvement is made in a timely manner, all claims for 21903 activity must be submitted by 26 April 2022 or within the normal warranty period for the component repaired, if after 26 April 2022.



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