CHRYSLER

Revised July 2013

Dealer Service Instructions for:

Safety Recall N25 / NHTSA 13V-177
Three-Way Coolant Valve

NOTE: The repair description in this document has been corrected.

Models

2013 (DS) RAM Truck (1500 series)

NOTE: This recall applies only to the above vehicles equipped with a 3.6L engine ***(sales code ERB)*** *built through December 12, 2012* ***(MDH 121200)****.*

IMPORTANT: Some of the involved vehicles may be in dealer new vehicle inventory. Federal law requires you to complete this recall service on these vehicles before retail delivery. Dealers should also consider this requirement to apply to used vehicle inventory and should perform this recall on vehicles in for service. Involved vehicles can be determined by using the VIP inquiry process.

Subject

The three-way coolant valve on about 490 of the above vehicles may become inoperable due to an improperly soldered circuit board in the valve. If the three-way coolant valve sticks in a position that does not allow coolant flow to the heater core, the vehicle will not defrost the windshield as specified in Federal Motor Vehicle Safety Standard (FMVSS) No. 103 - Windshield Defrosting and Defogging Systems. An inoperative windshield defroster could limit the driver's vision and cause a crash without warning.

Repair

All involved vehicles must have the date code inspected on the 3-way coolant valve. Three-way coolant valves built within a specific date range must be replaced.

Parts Information

Part Number	Description
CBA0N251AA	Valve, Coolant Three-Way (with mounting bracket)

Part Number	Description
68163849AA	Coolant, Engine **NOTE: One gallon of coolant can service six vehicles.**

Special Tools

The following special tools are required to perform this repair:

➢ NPN	wiTECH VCI Pod Kit
➢ NPN	Laptop Computer
➢ NPN	wiTECH Software
➢ 8195	Funnel, Coolant Fill
➢ 223-SE375	Mirror, Oversized Inspection

NOTE: One oversized inspection mirror was mailed to each Chrysler/Jeep/Dodge dealer free of charge in April 2013. Additional oversized inspection mirrors can be purchased, at dealer expense, by calling Pentastar Service Equipment at 1-800-223-5623 during regular business hours.

Service Procedure

A. Inspect Three-Way Coolant Valve Date Code

1. Open the hood and locate the three-way coolant valve on the right side frame rail.
2. Locate the white information label on the three-way coolant valve.
3. Using an oversized inspection mirror, inspect the date code on the white information label (Figure 1 and 2):
   - If the build date on the three-way valve label is 12/10/25 (year/month/day) or earlier, the three-way coolant valve must be replaced. Continue with **Section B – Replace Three-way Valve and Bleed Cooling System**.
   - If the build date on the three-way coolant valve label is 12/10/26 (year/month/day) or later, continue with Step 4 of this inspection procedure.
   - If the build date label on the three-way valve is missing or not legible, replace the three-way coolant valve. Continue with **Section B – Replace Three-way Valve and Bleed Cooling System**.

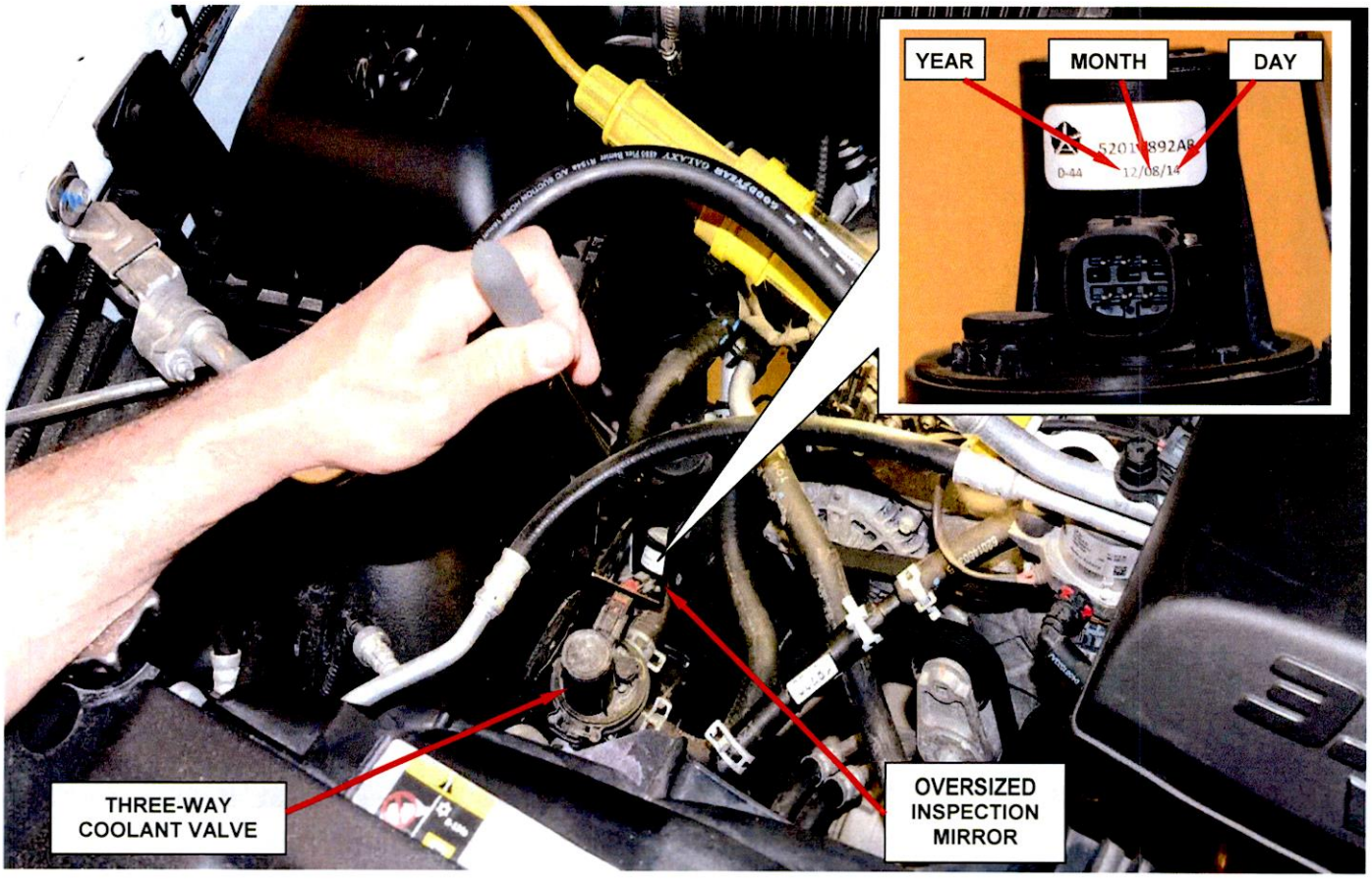

Figure 1 – Using an Oversized Inspection Mirror, Read the Date Code on the Three-Way Valve

Service Procedure (Continued)

4. If the build date on the three-way coolant valve white information label (Figure 1 and 2):

   - has a date code of 12/11/19, 12/11/20, or 12/11/21, the three-way coolant valve must be replaced. Continue with **Section B – Replace Three-way Valve and Bleed Cooling System**.

   - has a date code other than 12/11/19, 12/11/20, or 12/11/21 the three-way coolant valve does not require replacement. Close the hood and return the vehicle to the customer.

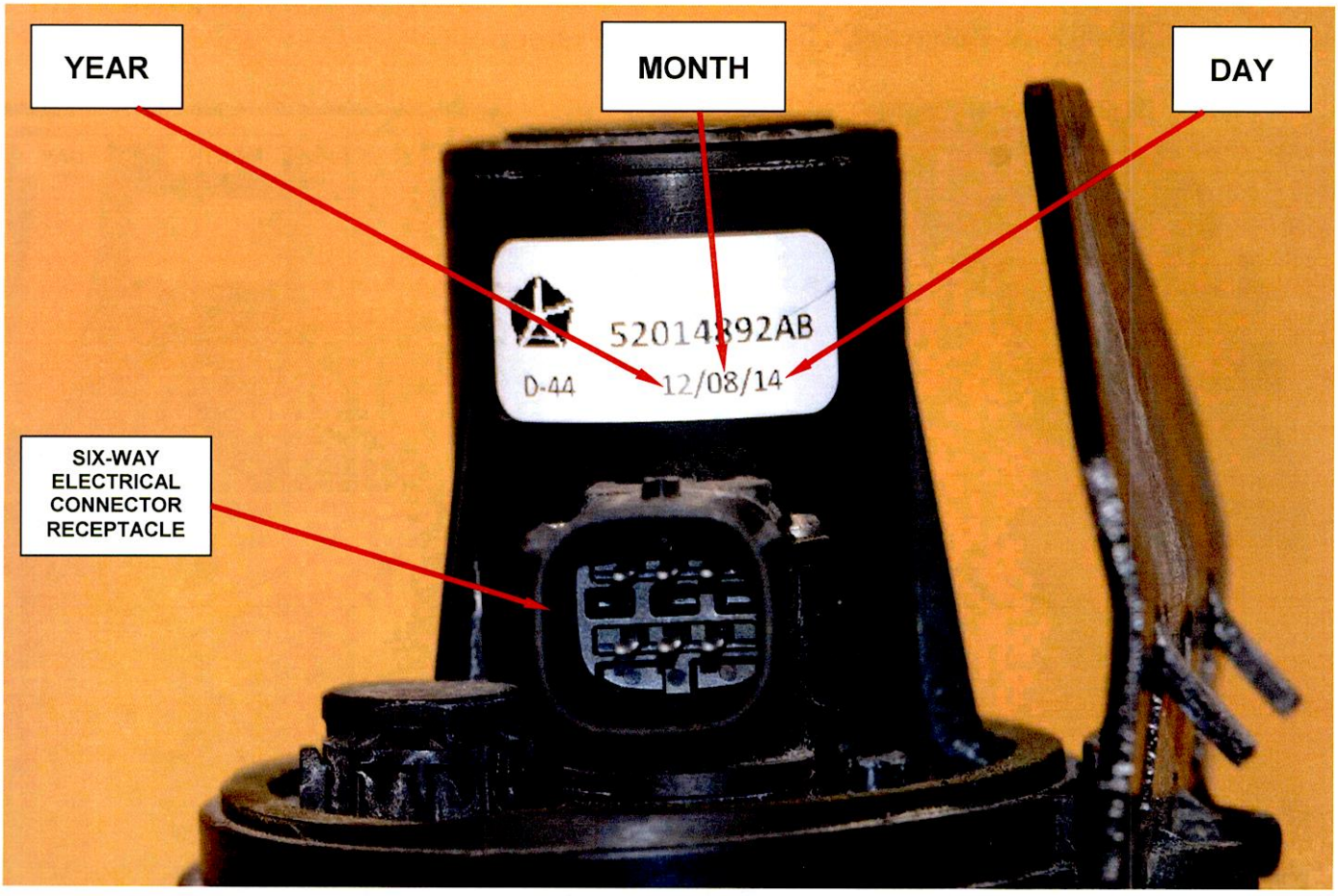

Figure 2 – Read Date Code on Three-Way Coolant Valve

Service Procedure (Continued)

B. Replace Three-Way Coolant Valve and Bleed Cooling System

NOTE: The following procedure is required if the three-way coolant valve requires replacement per the inspection in Section "A." ***Very few vehicles are expected to require this repair.***

1. Disconnect the negative battery cable.
2. Disconnect the wire harness six-way electrical connector from the three-way valve electrical connector receptacle (Figure 2).
3. Disengage the two wire harness retaining push pins from the three-way coolant valve bracket.
4. Using hose clamp-off pliers, clamp-off the three coolant hoses going to the three-way coolant valve (Figure 3).

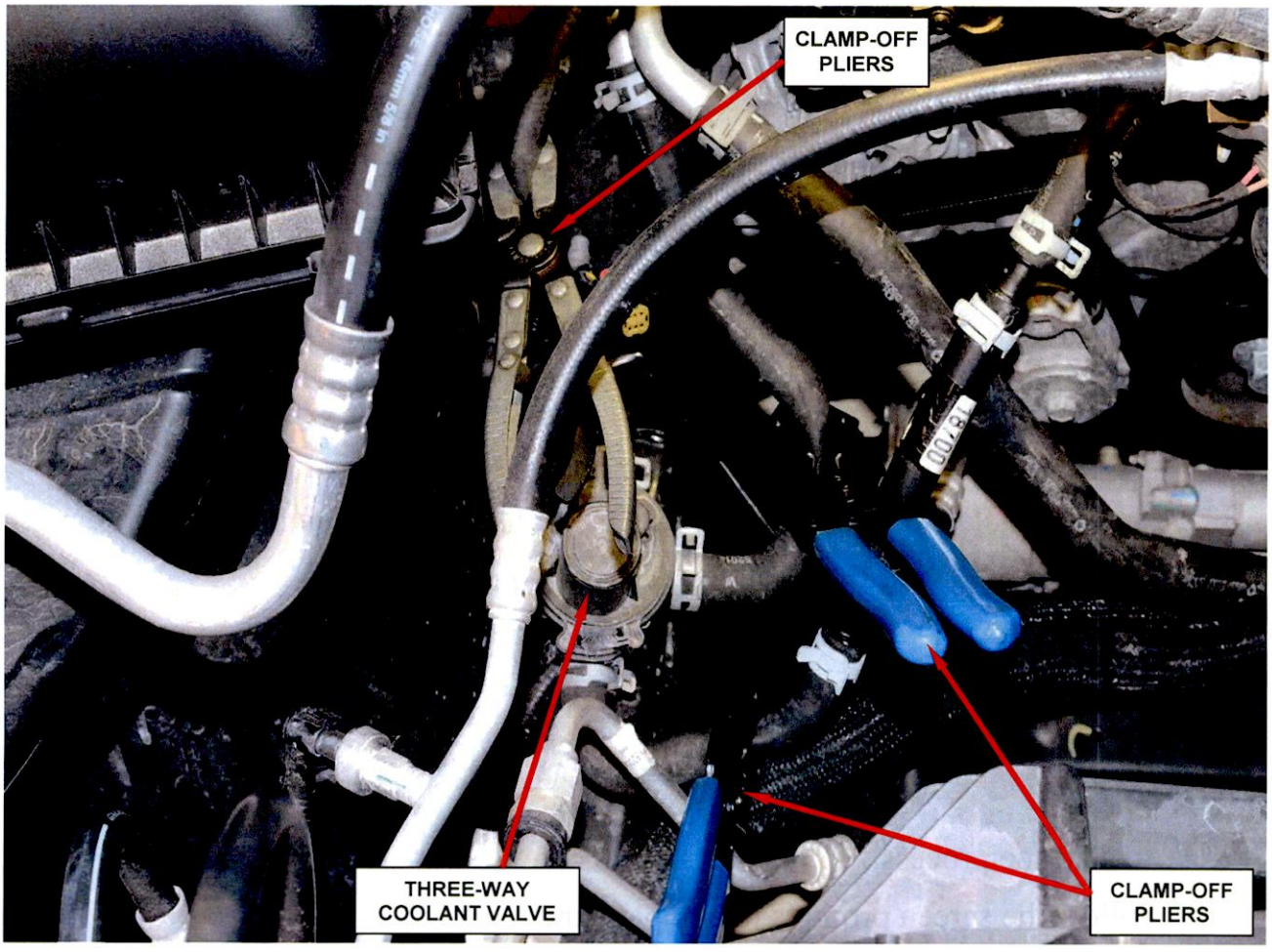

Figure 3 – Clamp-Off the Three Coolant Hoses at the Three-Way Valve

Service Procedure (Continued)

5. Disconnect the three coolant hoses from the three-way coolant valve.
6. Remove and save the three-way coolant valve bracket retaining bolts at the right frame rail (Figure 4).

   NOTE: The three-way coolant valve bracket retaining bolts can be accessed through the right front wheel well.
7. Remove and discard the original three-way coolant valve and bracket.

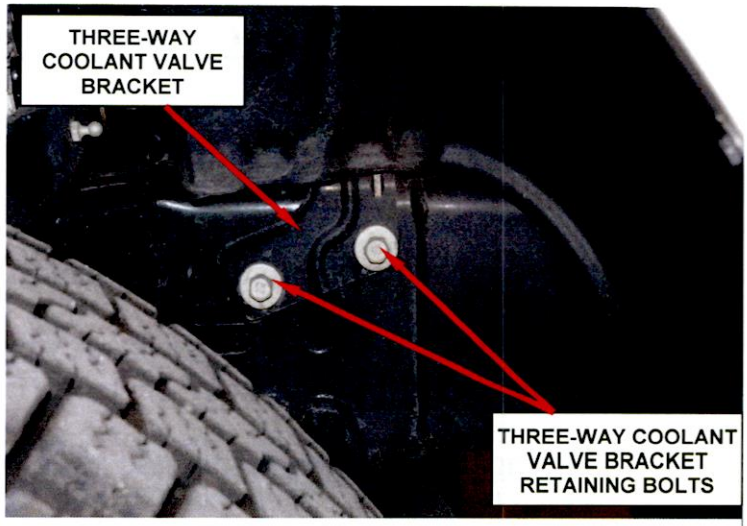

Figure 4 – Retaining Bolts Viewed Through Right Front Wheel Opening

8. Place the new three-way coolant valve and bracket on the right front frame rail and install the retaining bolts. Tighten the retaining bolts to 177 in. lbs. (20 N·m).
9. Connect the three coolant hoses to the three-way coolant valve and then remove the three clamp-off pliers.
10. Connect the body wire harness six-way electrical connector for the three-way coolant valve to the three-way coolant valve electrical connector receptacle (Figure 2).
11. Insert the two wire harness retaining push pins into the three-way coolant valve bracket holes.
12. Connect the negative battery cable.
13. Reset the Coolant Three-Way Valve Counter using the following procedure:
    a. Connect the wiTECH scan tool to the vehicle.
    b. Start a wiTECH session.
    c. Select the PCM icon on the network topology map.
    d. Select the "**Misc. Tab**".
    e. Select "**Coolant Three-Way Valve Replaced**" and click on the green arrow to start the process.
    f. Follow the screen prompts to complete the reset process.
    g. Clear all DTC's after the reset process is complete.

Service Procedure (Continued)

14. Use the following procedure to bleed the air from the cooling system:

    CAUTION: Failure to bleed the air from the engine cooling system could cause engine damage due to overheating.

    a. Install coolant fill funnel (Special Tool 8195) (Figure 5).

    b. Remove and save the air cleaner housing and air inlet hose (Figure 6).

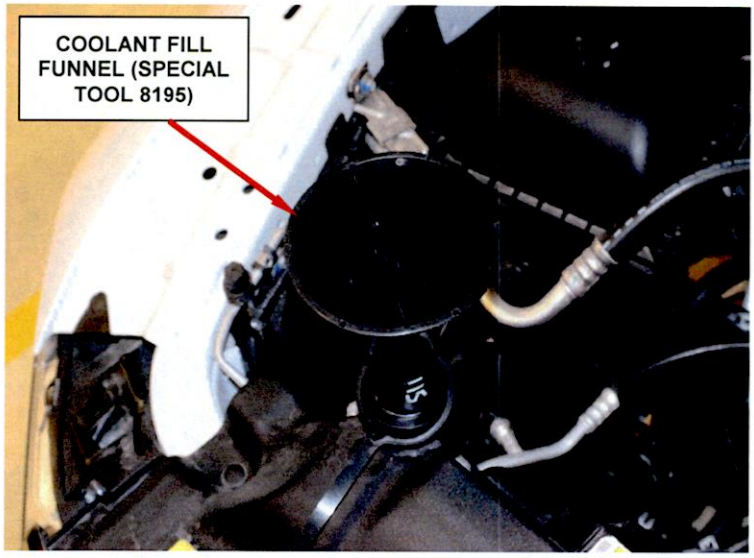

Figure 5 – Coolant Fill Funnel

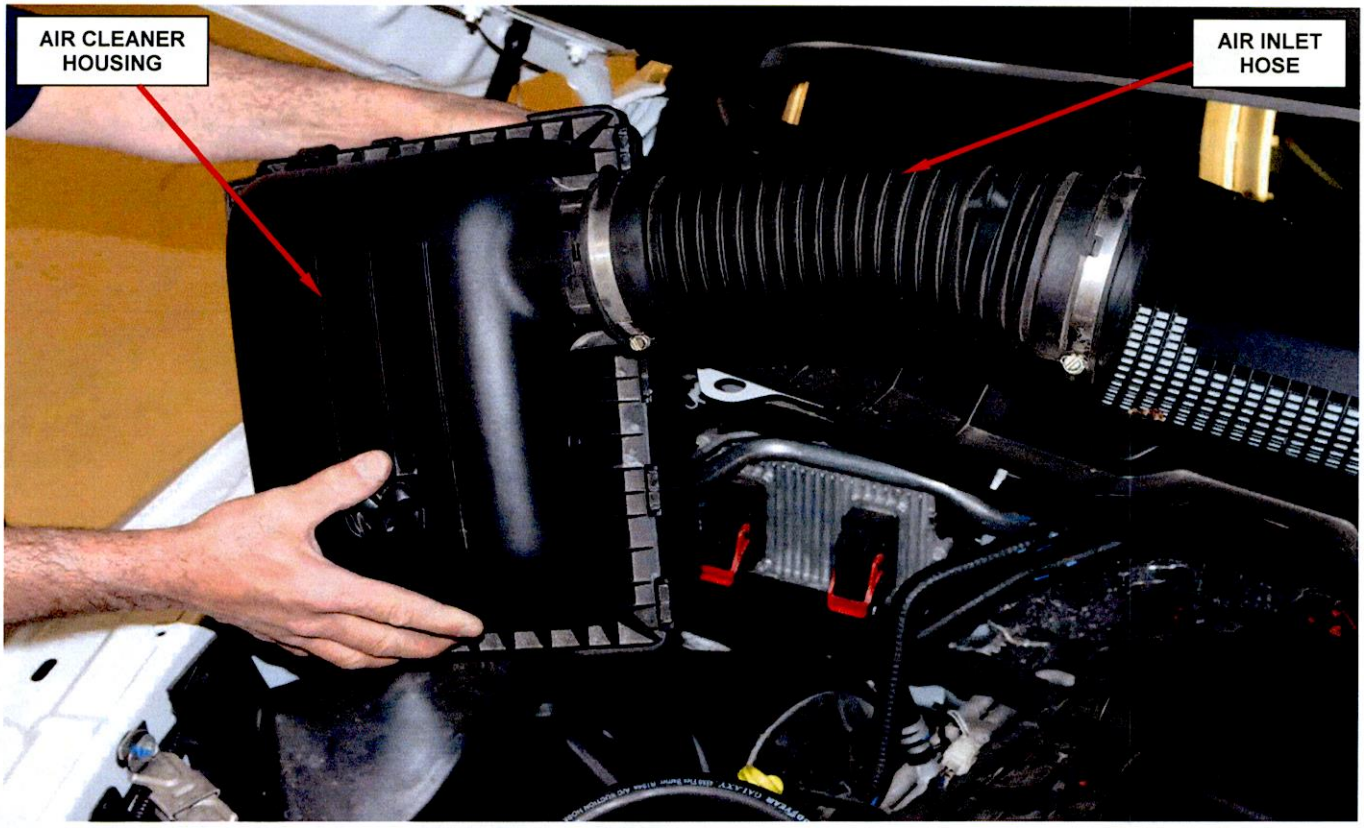

Figure 6 – Air Cleaner Housing and Air Inlet Tube

Service Procedure (Continued)

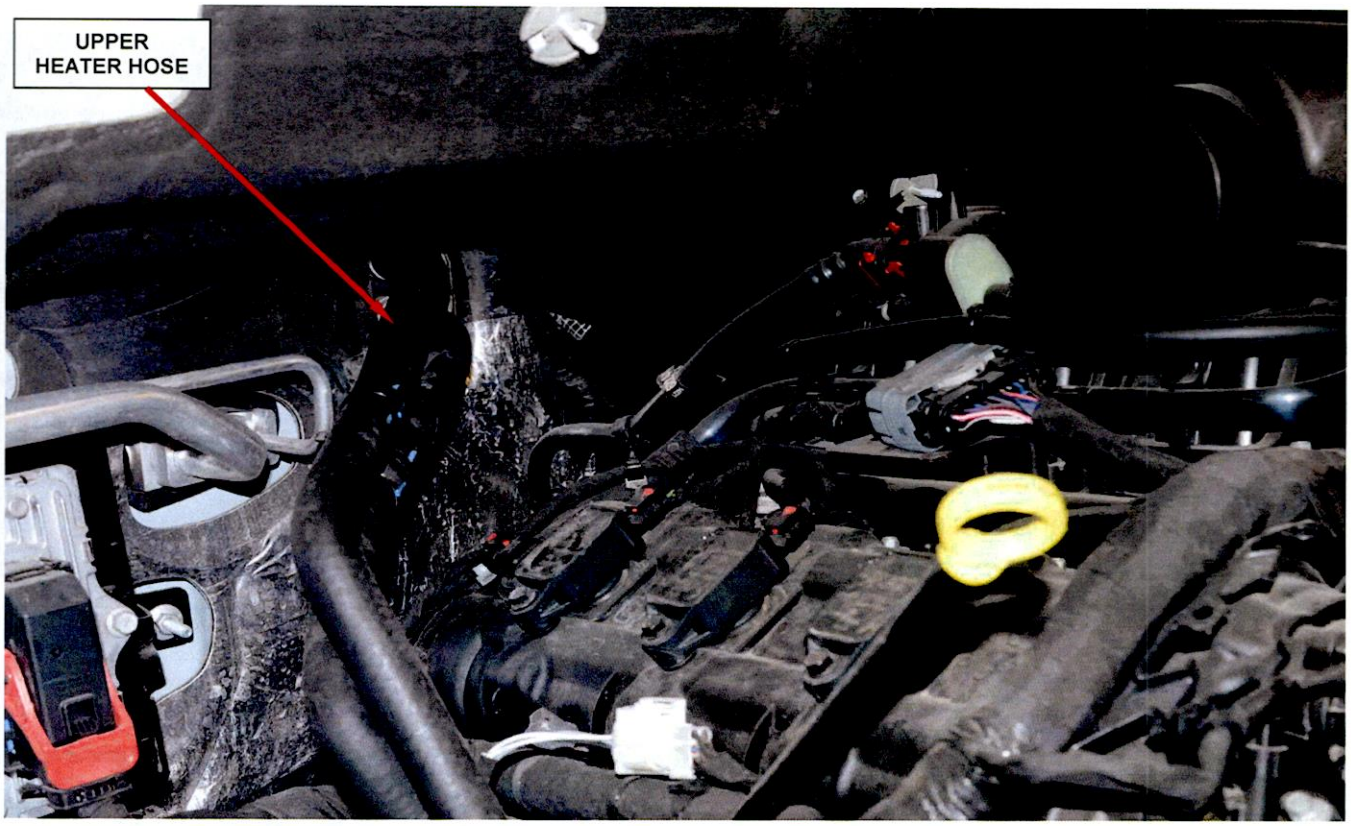

Figure 7 – Disconnect the Upper Heater Hose at the Dash Panel

c. Disconnect the upper heater hose at the heater core tube (Figure 7).

d. Fill the radiator to the recommended level.

e. Connect the heater core hose to the heater core tube when coolant flow from the hose is present.

f. Fill the coolant overflow bottle to the recommended level (Figure 8).

g. Remove the fill funnel (Special Tool 8195) from the radiator.

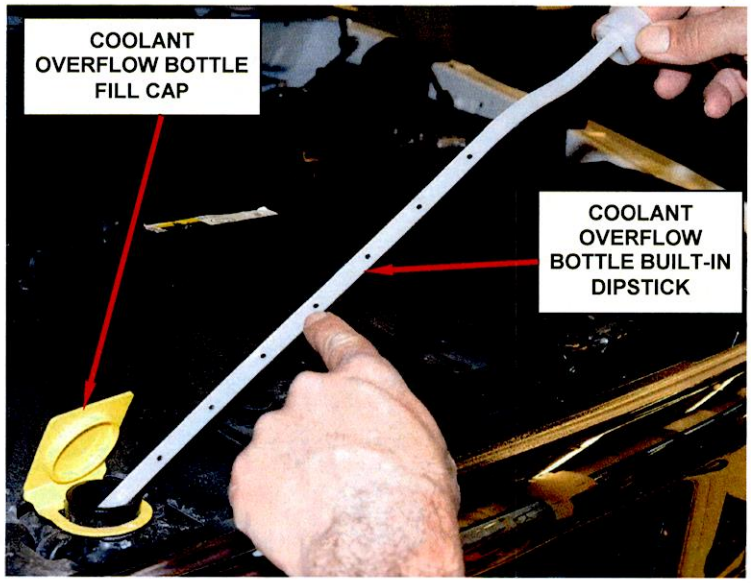

Figure 8 – Check Overflow Bottle Coolant Level

Service Procedure (Continued)

h. Install the radiator cap.

i. Install the air cleaner housing and air inlet tube (Figure 6).

j. Start the engine and place the HVAC control to "**full hot.**"

NOTE: The blower motor speed and the HVAC control positioning will determine the position of the three-way coolant valve and flow rate of engine coolant through the heater core and transmission heater.

k. Place the blower switch to "**low**" and allow the engine to warm up at idle for approximately 10 minutes.

l. Top off the coolant level in the overflow bottle if required (Figure 8).

m. Increase the engine speed to 4,000 RPM until the engine thermostat opens at 220° F (105° C) and verify that the radiator fan is operating.

n. Switch the HVAC control to "**full cold**" with the blower switch on "**high**" for 15 minutes to allow the coolant to be mainly directed through the three-way coolant valve into the transmission heater.

o. Switch the HVAC to "**full hot**" with the blower switch on "**high**" for 10 minutes to allow the coolant to flow mainly through the heater core.

p. Switch the blower from "**high**" to "**low,**" which will reposition the three-way coolant valve to flow a small amount of coolant to the transmission heater.

q. Shut the engine off and allow the engine to cool-down enough for the thermostat to close.

NOTE: An external fan should be used to aid in the cool-down of the engine.

r. Top off the coolant in the overflow bottle if required (Figure 8).

s. Restart the engine and increase the engine speed up to 4,000 RPM until the thermostat opens and then allow the engine to idle after the engine thermostat opens.

Service Procedure (Continued)

t. Verify that the radiator fan is operational.

u. Switch the HVAC controls to "**full cold**" with the blower switch on "**high**."

v. Top off the coolant level in the overflow bottle if required (Figure 8).

w. Switch the HVAC controls to "**full hot**."

x. Top off the coolant level in the overflow bottle if required (Figure 8).

y. Road test the vehicle.

z. Top off the coolant level in the overflow bottle if required (Figure 8).

Completion Reporting and Reimbursement

Claims for vehicles that have been serviced must be submitted on the DealerCONNECT Claim Entry Screen located on the Service tab. Claims submitted will be used by Chrysler to record recall service completions and provide dealer payments.

Use one of the following labor operation numbers and time allowances:

	Labor Operation Number	Time Allowance
Inspect three-way coolant valve date code	24-N2-51-81	0.2 hours
Inspect three-way coolant valve date code, replace three-way coolant valve and bleed cooling system	24-N2-51-82	1.7 hours

Add the cost of the recall parts package plus applicable dealer allowance to your claim.

NOTE: See the Warranty Administration Manual, Recall Claim Processing Section, for complete recall claim processing instructions.

Dealer Notification

To view this notification on DealerCONNECT, select "Global Recall System" on the Service tab, then click on the description of this notification.

Owner Notification and Service Scheduling

All involved vehicle owners known to Chrysler are being notified of the service requirement by first class mail. They are requested to schedule appointments for this service with their dealers. A generic copy of the owner letter is attached.

Enclosed with each owner letter is an Owner Notification postcard to allow owners to update our records if applicable.

Vehicle Lists, Global Recall System, VIP and Dealer Follow Up

All involved vehicles have been entered into the DealerCONNECT Global Recall System (GRS) and Vehicle Information Plus (VIP) for dealer inquiry as needed.

GRS provides involved dealers with an updated VIN list of their incomplete vehicles. The owner's name, address and phone number are listed if known. Completed vehicles are removed from GRS within several days of repair claim submission.

To use this system, click on the **"Service"** tab and then click on **"Global Recall System."** Your dealer's VIN list for each recall displayed can be sorted by: those vehicles that were unsold at recall launch, those with a phone number, city, zip code, or VIN sequence.

Dealers must perform this repair on all unsold vehicles *before* retail delivery. Dealers should also use the VIN list to follow up with all owners to schedule appointments for this repair.

Recall VIN lists may contain confidential, restricted owner name and address information that was obtained from the Department of Motor Vehicles of various states. Use of this information is permitted for this recall only and is strictly prohibited from all other use.

Additional Information

If you have any questions or need assistance in completing this action, please contact your Service and Parts District Manager.

Customer Services / Field Operations
Chrysler Group LLC