



Service Bulletin

File in Section: 01 - HVAC

Bulletin No.: 99-01-39-004F

Date: August, 2014

TECHNICAL

Subject: Air Conditioning Odor (Install Evaporator Core Dryer Kit and Apply Cooling Coil Coating)

Models: 2015 and Prior GM Passenger Cars and Trucks
All Equipped with Air Conditioning

Attention: This bulletin also applies to any of the above models that may be export vehicles.

This bulletin has been revised to add the 2015 Model Year, remove information under Correction, update the Parts Information and to remove the reference to the Cooling Coil Coating (CCC), Aerosol Can part numbers 12377952 (10953503 Canada). The use of the aerosol can of CCC has been found to be ineffective when applying to evaporator cores installed in the vehicle. Procedures have also been modified from previous methods to ensure enhanced results. Please discard Corporate Bulletin Number 99-01-39-004E.

Condition

Some customers may comment about short duration musty odors emitted from the Heating, Ventilation and Air Conditioning (HVAC) system at vehicle start-up in hot, humid conditions.

Cause

This condition may be caused by condensate build-up on the evaporator core, which does not evaporate by itself in high humidity conditions. The odor may be the result of microbial growth on the evaporator core. When the blower motor fan is turned on, the microbial growth may release an unpleasant musty odor into the passenger compartment for a few seconds.

There are several other possible sources of a musty odor in a vehicle. A common source is a water leak into the interior of the vehicle or foreign material in the HVAC air distribution system. Follow the procedures in SI for identifying and correcting water leaks and air inlet inspection.

The procedure contained in this bulletin is only applicable if the odor source has been determined to be microbial growth on the evaporator core inside the HVAC module.

Correction

Enable Afterblow

Many vehicles currently incorporate an afterblow function within the HVAC control module software. The afterblow feature, when enabled, employs the HVAC blower fan to dry the evaporator after vehicle shut down and this function will inhibit microbial growth. Technicians are to confirm that the customer concern is evaporator core odor and that the vehicle has the imbedded afterblow feature, as defined in the SI document for that specific vehicle model, model year and specific HVAC option. Refer to SI for enabling the afterblow function. Vehicles being delivered in areas prone to high humidity conditions may benefit from having the afterblow enabled calibration installed prior to any customer comment.

Important: If the vehicle is not factory equipped with the imbedded afterblow enable feature, it may be added with the Electronic Evaporator Dryer Module Kit (P/N 12497910).

Important: When installing the Electronic Evaporator Dryer Module, you **MUST** use the included electrical splice connectors to ensure a proper splice. Complete detailed installation instructions and self testing procedures are supplied with the kit. If necessary, the Electronic Evaporator Dryer Module may be installed underhood if it is protected from extreme heat and water splash areas.

To immediately remove the evaporator core odor on all suspect vehicles, it is necessary to eliminate the microbial growth and prevent its re-occurrence. To accomplish this, perform the following procedure:

Vehicle and Applicator Tool Preparation

1. The evaporator core **must be dry**. This may be accomplished by disabling the compressor and running the blower fan on the recirc heat setting for an extended period of time. (Recommend employing an external DC power source and run fan 15 plus minutes)

Note: Compressor engagement will cause the evaporator core to remain wet and will prevent full adherence of the Cooling Coil Coating to the evaporator core surfaces. (Compressor must not operate during entire process).

2. Verify that the air conditioning drain hose is not clogged and place a drain pan beneath the vehicle.
3. Place protective shop cloths or equivalent over outlet ducts to prevent overspray.
4. Remove the cabin air filter, if equipped. If the cabin air filter appears to have little or no remaining life, suggest a replacement to your customer.
5. If the HVAC module has a blower motor cooling tube, be careful **NOT TO SPRAY THE COOLING COIL COATING INTO THE BLOWER MOTOR COOLING TUBE**.
6. Attach the Flexible Applicator Pressure Spray Tool to a compressed air line operating at 586 kPa (85 psi) to 793 kPa (115 psi).
7. Shake the bottle of Cooling Coil Coating well. Screw the bottle onto the cap on the applicator tool's pick-up tube.

Note: The pick-up tube is designed for 120 ml (4 oz) and should coil slightly at the bottom of a bottle.

8. Use the following method to apply the Cooling Coil Coating.

Important: During application the nozzle should be pulsed 3 seconds on then reposition nozzle in the case and repeat 3 seconds until all 4 oz are applied. The blower motor must be operated the entire time as well as 20 minutes after complete application.

Application Through a Hole in the HVAC Module

- If power module is not available for removal between the fan and the evaporator core, it may be necessary to drill a hole in the HVAC module.
 - Locate an area of the HVAC module between the blower motor and the evaporator core. Drill a 3/4 inch or 9/16 inch hole in the HVAC module. Use caution to keep the drill clear of the evaporator core and the blower motor fan. Employ drill depth limiting device less than a 1 inch depth.
 - With the air distribution vents closed, covered and the blower motor fan speed on HIGH, insert the applicator tool into the hole and/or power module opening and spray the Cooling Coil Coating into the airstream toward the evaporator core. During this application, the blower motor should be on high, and a "pulsed" spray — 3 seconds on – 3 seconds off while repositioning the nozzle head to assure all areas of the core face and case is covered. The use of the blower assures material transition through the core as well as into the duct surfaces.
 - Use GM body plug P/N 15632415 (3/4 inch plug) or 95326304 (9/16 inch plug) and overseal with a GM approved RTV sealant to plug the hole in the HVAC module.
9. After the Cooling Coil Coating application is complete, start and run the vehicle for approximately 10 minutes, with the compressor disabled, HVAC mode set to Recirculate/Max, heat set to full warm, blower motor fan speed on high, and one window open approximately 12 mm (1/2 in). This cures the Cooling Coil Coating onto the evaporator core surface.
 10. While the engine is running, rinse the applicator tool with warm water to prolong the life of the tool. Be sure to spray warm water through the nozzle to rinse out any residual Cooling Coil Coating still in the capillary pick up tube, otherwise it will dry and clog the applicator tool. Also remove the small green valve from the bottle cap and rinse it thoroughly while rolling it between two fingers and then reinstall it. If this valve is clogged, the Cooling Coil Coating will not flow through the applicator tool.

Important: Prior to re-engaging the compressor, it is extremely important that the coating be dry.

11. Shut off the engine and enable the compressor again.
12. Remove the protective cover from inside the vehicle.
13. Verify proper HVAC system operation.
14. Remove the drain pan from underneath the vehicle.
15. Reinstall the cabin air filter if necessary.

Parts Information

Important: The Cooling Coil Coating listed below is the only GM approved product for use under warranty as an evaporator core disinfectant and for the long term control of evaporator core microbial growth.

Part Description	GM Part Number
Cooling Coil Coating (CCC) Kit (with flexible applicator tool and 1 bottle of Cooling Coil Coating)	12346391
Refill for Cooling Coil Coating (1 x 120 ml (4 oz) Aerosol Can of CCC)	12346390
Electronic Evaporator Dryer Module Kit (one per vehicle)	12497910

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4480118*	Apply Cooling Coil Coating and Install Electronic Evaporator Dryer Kit	0.8 hr

*This is a unique Labor Operation for Bulletin use only. It will not be published in the Labor Time Guide.