2014 ENGINE Cooling System - Ram Pickup

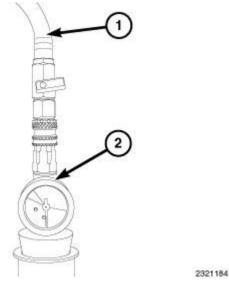


Fig. 6: Vacuum Generator/Venturi And Air Line Courtesy of CHRYSLER GROUP, LLC

- 10. Disconnect the vacuum generator/venturi and airline from the adaptor cone/vacuum gauge assembly.
- 11. Wait approximately 20 seconds, if the pressure readings do not move, the system has no leaks. If the pressure readings move, a leak could be present in the system and the cooling system should be checked for leaks and the procedure should be repeated.
- 12. Place the tool's suction hose into the coolant's container.
 - NOTE: Ensure there is a sufficient amount of coolant, mixed to the required strength/protection level available for use. For best results and to assist the refilling procedure, place the coolant container at the same height as the radiator filler neck. Always draw more coolant than required. If the coolant level is too low, it will pull air into the cooling system which could result in airlocks in the system.
- 13. Connect the tool's suction hose (1) to the adaptor cone/vacuum gauge assembly (2).

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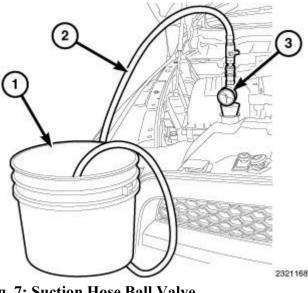


Fig. 7: Suction Hose Ball Valve Courtesy of CHRYSLER GROUP, LLC

NOTE: View typical

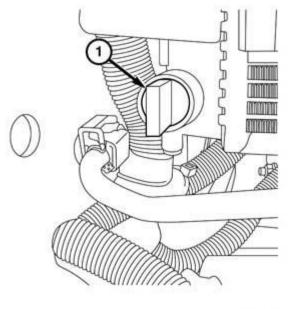
- 14. Open the suction hose's ball valve to begin refilling the cooling system.
- 15. When the vacuum gauge reads zero, the system is filled.

NOTE: On some remote pressurized tanks, it is recommended to stop filling when the proper level is reached.

- 16. Close the suction hose's ball valve and remove the suction hose from the adaptor cone/vacuum gauge assembly.
- 17. Remove the adaptor cone/vacuum gauge assembly from the radiator filler neck or reservoir tank.
- 18. With heater control unit in the HEAT position, operate engine with container cap in place.
- 19. After engine has reached normal operating temperature, shut engine off and allow it to cool. When engine is cooling down, coolant will be drawn into the radiator from the pressure container.
- 20. Add coolant to the recovery bottle/container as necessary. **Only add coolant to the container when the engine is cold. Coolant level in a warm engine will be higher due to thermal expansion.** Add necessary coolant to raise container level to the COLD MINIMUM mark after each cool down period.
- 21. Once the appropriate coolant level is achieved, attach the radiator cap or reservoir tank cap.

DRAINING - DIESEL ENGINE

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Fig. 8: Radiator Drain Courtesy of CHRYSLER GROUP, LLC

WARNING: Do not remove the cylinder block drain plugs or loosen the radiator drain plug with system hot and under pressure. Serious burns from coolant can occur.

DO NOT WASTE reusable coolant. If the solution is clean, drain the coolant into a clean container for reuse.

- 1. Start the engine and place the heater control temperature selector in the Full-On position.
- 2. Turn the ignition off.
- 3. Do not remove radiator cap when draining coolant from coolant recovery container. Open radiator drain (1) and when coolant recovery container is empty, remove radiator cap. If the coolant recovery container does not drain. Refer to **DIAGNOSIS AND TESTING**.
- 4. Remove radiator pressure cap.

FILLING - 6.7L DIESEL

WARNING: ANTIFREEZE COOLANT IS HARMFUL IF SWALLOWED OR INHALED. IF SWALLOWED, DRINK TWO GLASSES OF WATER AND INDUCE VOMITING. IF INHALED, MOVE TO FRESH AIR AREA. SEEK MEDICAL ATTENTION IMMEDIATELY. DO NOT STORE IN OPEN OR UNMARKED CONTAINERS. WASH SKIN AND CLOTHING THOROUGHLY AFTER COMING IN CONTACT WITH ETHYLENE GLYCOL. KEEP OUT OF REACH OF CHILDREN. DISPOSE OF GLYCOL BASED COOLANT PROPERLY. CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION

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OF COLLECTION CENTER IN YOUR AREA. DO NOT OPEN A COOLING SYSTEM WHEN THE ENGINE IS AT OPERATING TEMPERATURE OR HOT UNDER PRESSURE; PERSONAL INJURY CAN RESULT. AVOID RADIATOR COOLING FAN AND OTHER MOVING COMPONENTS WHEN ENGINE COMPARTMENT RELATED SERVICE IS PERFORMED; PERSONAL INJURY CAN RESULT.

WARNING: WEAR APPROPRIATE EYE AND HAND PROTECTION WHEN PERFORMING THIS PROCEDURE.

- CAUTION: Do not use well water or suspect water supply in cooling system. A 50/50 mixture of the recommended antifreeze coolant and distilled water is recommended.
- NOTE: Cooling system fill procedure is critical to overall cooling system performance.
- NOTE: Make sure all hoses are connected and radiator draincock is closed. Draincock should be hand tightened only.

CAUTION: All air must be purged from the 6.7L engine when refilling the cooling system. Failure to do so can cause EGR Cooler cracking which can lead to catastrophic engine and exhaust system damage.

- 1. Close the radiator drain plug.
- 2. Using (special tool #8195A, Funnel), fill the cooling system with coolant mixture. Refer to **COOLANT**, **DESCRIPTION**.
- 3. Add coolant to the overflow bottle until the level reaches the top of the fill neck. Then, allow the coolant level in the overflow bottle to settle for 90 seconds. Check level again and add coolant if necessary for the level to reach the top of the filler neck.
- 4. Install overflow bottle cap. Start engine and idle for 2 minutes. Shut off engine and ensure the coolant level is at the top of the overflow bottle filler neck. If coolant is added re-install the cap.
- 5. Start the engine and with the transmission in park and/or neutral, operate the engine at 2000 RPM. Monitor the coolant temperature on the EVIC. Once the temperature has reached 200° F, continue to operate the engine at 2000 RPM for 10 minutes, then shut the engine off.
- 6. After the engine has cooled check the coolant level. If coolant level is below the 'full Cold' marker, add coolant.