

Charge Air Cooler (CAC) Cleaning

Materials

Name	Specification
Motorcraft® Metal Brake Parts Cleaner PM-4-A, PM-4-B	-

Cleaning

1. Remove the turbocharger boost pressure sensor from the CAC.
2. **NOTE:** Do not use a high-pressure power washer to clean the CAC or damage to the CAC may occur.

NOTE: Drain all contaminants such as coolant, fuel and oil prior to cleaning the CAC.

Thoroughly clean the joint clamp areas as well as the turbocharger connection, engine connection and the CAC connections, using motorcraft metal brake parts cleaner.

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3. Lay the CAC flat with the inlet and outlet ports pointing up.
4. **NOTE:** Plug or cap the CAC openings prior to agitating.
5. Add an appropriate amount of commercially available detergent cleaner such as Simple Green Pro HD to the CAC. Follow the manufacturer's directions for solution dilution. Fill the CAC to 40% of its volume with solution.
6. Raise one end of the CAC and agitate it by hand for at least 5 minutes.
7. Raise the opposite end of the CAC and agitate it by hand for at least 5 minutes.
8. Drain the CAC.
9. Flush the CAC thoroughly with clean water.
10. Repeat Steps 2 through 7 until no contaminants are found in the flush water.
11. Allow the CAC to air dry.
12. **NOTE:** The following leak test steps must be performed prior to installing the CAC.

NOTE: Use a commercially available kit, such as the Johnson Manufacturing Company CAC Test Set Part No. 351-CAS, or equivalent.

Install the commercially available CAC tester on the CAC following the manufacturer's installation instructions.
13. Tighten the clamps to 5 Nm (44 lb-in).
14. **WARNING:** Never exceed the specified pressure. Excessive pressure may cause the test adapter to blow off or may damage the charge air cooler (CAC). Failure to follow this instruction may result in serious personal injury.

Slowly apply air pressure to 150 kPa (22 psi).
15. Let the CAC stand for a few minutes and note any loss in pressure.
16. Release the air pressure.
17. Repeat Steps 13 through 15 as many times as necessary to verify the readings. The reading is considered verified when 3 consecutive tests show approximately the same pressure drop.
18. If the pressure loss exceeds 10 kPa (1.5 psi) per minute, install a new CAC.
Refer to: Charge Air Cooler (CAC) Outlet Pipe (303-12B Intake Air Distribution and Filtering - 2.7L EcoBoost (238kW/324PS), Removal and Installation).