

DESCRIPTION AND OPERATION > INTAKE AIR DISTRIBUTION AND FILTERING > OVERVIEW

The air intake system cleans intake air with a replaceable, dry-type engine Air Cleaner (ACL) element made of treated, pleated paper. A new Air Cleaner (ACL) element must be installed periodically as scheduled. Engine performance and fuel economy are adversely affected when maximum restriction of the Air Cleaner (ACL) element is reached.

The Charge Air Cooler (CAC) subsystem cools and increases the density of the compressed turbocharged air.

The air intake system measures air temperature with the IAT sensor.

DIAGNOSIS AND TESTING > INTAKE AIR DISTRIBUTION AND FILTERING

Diagnostics in this service information assume a certain skill level and knowledge of Ford-specific diagnostic practices. For information about these, REFER to: Diagnostic Methods .

For PCM/DTC, REFER to: ELECTRONIC ENGINE CONTROLS .

For driveability symptoms without DTC, Refer to ENGINE CONTROLS - SYMPTOM CHARTS (EXCEPT DIESEL & HYBRID) .

GENERAL PROCEDURES > CHARGE AIR COOLER (CAC) CLEANING

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.



NOTE: Thoroughly clean the joint clamp areas as well as the turbocharger

connection, engine connection and the CAC connections, using metal brake parts cleaner.

Lay the CAC flat with the inlet and outlet ports pointing up.

3.



NOTE: Plug or cap the CAC openings prior to agitating.

4.

Add an appropriate amount of commercially available detergent cleaner such as Simple Green Pro HD, or equivalent to the CAC. Follow the manufacturer's directions for cleaning. Fill the CAC to 40% of its volume with water.

5.

Raise one end of the CAC and agitate it by hand for at least 5 minutes.

6.

Raise the opposite end of the CAC and agitate it by hand for at least 5 minutes.

7.

Drain the CAC.

8.

Flush the CAC thoroughly with clean water.

9.

Repeat Steps 2 through 7 until no contaminants are found in the flush water.

10.

Allow the CAC to air dry.

11.



NOTE: The following leak test steps must be performed prior to installing the CAC.

Install the Turbocharger Boost Pressure Sensor on the CAC.

Torque

: 71 lb.in (8 Nm)

12.