

PREVOST

ENREGISTRÉ - REGISTERED
ISO 9001 & ISO 14001

MAINTENANCE INFORMATION Mi06-02



DATE :	FEBRUARY 2006	SECTION :	05 - Cooling
SUBJECT :	CHARGE AIR COOLER (CAC) LEAK TEST		

APPLICATION

Model	
H3 Series Model Year : Since 2002	
XLII Series Model Year : Since 2002	

DESCRIPTION

Some customer may be experiencing a loss of power of the engine and/or black smoke exiting from the exhaust system. It could be more economical to have the Charge Air Cooler (CAC) checked by a radiator shop before having a series of expensive tests undertaken by a Detroit Diesel service center.

The Charge Air Cooler (CAC) system is not a completely air tight system. Thus, it is normal for some leakage to occur. The following procedures explain the allowable rate and how to test for excessive leakage.

Before performing the leak test, you must check first the pressure tester.

NOTE

This publication is not a warranty bulletin. It is only intended to inform are customers and to give technical tips.

PROCEDURE

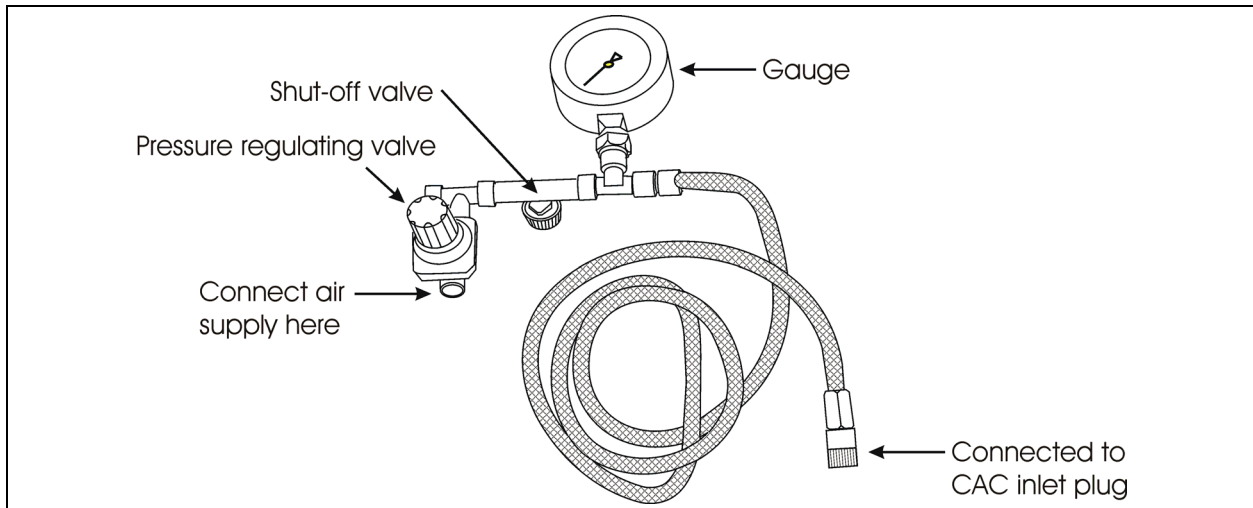


Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

Pressure tester, checking

Before performing the actual leak test, make sure the pressure tester is functioning properly. Otherwise the CAC leak test may not be valid.

1. Plug the end of the pressure tester. Connect the other end to an air supply. Using the pressure regulating valve, set the pressure gauge to 14 psi (100 kPa).
2. Close the shut-off valve. After two minutes, check the gauge. If the pressure has dropped, the regulator or the pressure tester are not reliable and should be checked for leaks.



PRESSURE TESTER

Charge Air Cooler, checking

1. Remove the flexible hoses at the inlet and outlet of the CAC.
2. Plug the CAC outlet.
3. At the CAC inlet, install a plug that has a nipple to allow connection with the pressure tester.
4. Connect a safety chain or cable to both plugs.



Stand clear of the plug area when system is pressurized.

5. Connect the pressure tester to the inlet plug.
6. Close the shut-off valve and then connect the pressure tester to an air supply.

7. Open the shut-off valve. Using the pressure regulating valve, set the pressure gauge to 30 psi (207 kPa).
8. Close the shut-off valve.
9. For the CAC to be pressure-approved, the pressure loss should not exceed 5 psi (34.5 kPa) in 15 seconds.
10. If leakage is found, repeat the test a few times. Also, check hoses and connections of the pressure tester with soapy water.
11. When reinstalling the inlet and outlet flexible hoses, refer to your vehicle Maintenance Manual for the correct clearance between pipes. Tighten hose clamps to 10±1 lbf-ft (dry).

NOTE

Charge Air Cooler system is essential today to meet emissions regulations. However, it also improves power, lowers fuel consumption and reduces thermal stresses of the engine by cooling hot turbocharged air before it enters the engine intake manifold. The system uses ambient air as cooling medium. Hot turbocharged air passes through core tubes where heat is transferred to the ambient air by heat-exchanging fins. The turbocharged air can be up to 392°F (200°C) or higher as it enters the CAC and is cooled to around 104°F (40°C) when it exits to the engine.

Waste disposal:

Return replaced parts to PrevoSt Car with A.F.A. for full reimbursement.