



No.: 05 TS – 01
January 6, 2005

TO: All Distributors, Dealers, and their Branches – U.S. & Canada

ATTN.: General Manager, Service Manager

FROM: Technical Service

SUBJECT: **Charge Air Cooler Leaks**

The Charge Air Cooler (CAC) is part of a highly developed air intake system that is used to reduce the temperature of the compressed air leaving the turbocharger before it reaches the intake manifold. This permits a more dense charge of air to be delivered to the engine, resulting in improved engine performance, fuel economy, and lower emissions. Ductwork is used to transfer the air from the turbocharger outlet to the CAC, and then to the intake manifold. Flexible rubber couplings and hose clamps are used to secure the ductwork to the turbocharger, the CAC inlet and outlet, and the intake manifold. Proper inspection and maintenance of the components is required to insure continued efficiency of the CAC.

Leaks in the air-to-air cooling system result in a loss of boost pressure than can cause low power, excessive smoke, high exhaust temperatures, and elevated oil soot levels. Recently, several extreme cases have been noted where high exhaust temperatures have warped the turbocharger mounting flange (requiring replacement of the turbocharger), and high soot levels caused serious lubrication oil degradation and subsequent damage to the engine.

The CAC system *MUST* be routinely inspected for broken hoses, loose clamps and dirty, obstructed, or failed coolers. For on-highway vehicles, the *Series 60 Operator's Guide* (6SE484) states that the CAC and ductwork must be inspected every 15,000 miles or 6 months, whichever comes first. Damage to any of these components requires immediate repairs. Large CAC leaks can possibly be found visually, while small leaks will have to be found using a pressure loss leak test. The *Series 60 Service Manual* (6SE483) contains information on how to pressurize the CAC system to check for leaks. SIB #12-60-03 published June 17, 2003, also contains this information. See Figures 1 and 2 for examples of leaking Series 60 charge air coolers.

Please contact the DDC Customer Support Center at 313-592-5800 if you have any questions.

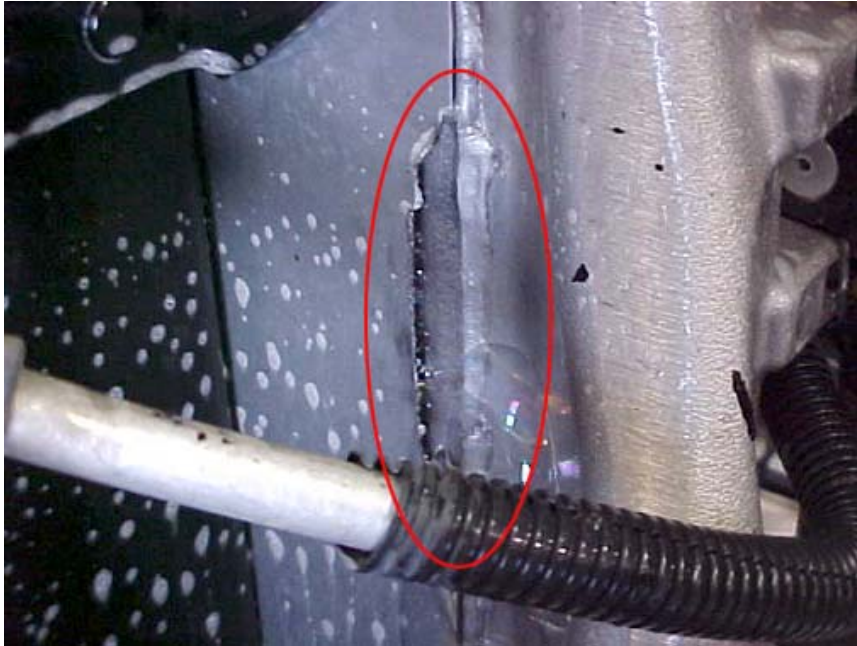


Figure 1 **Cracked Charge Air Cooler Housing**

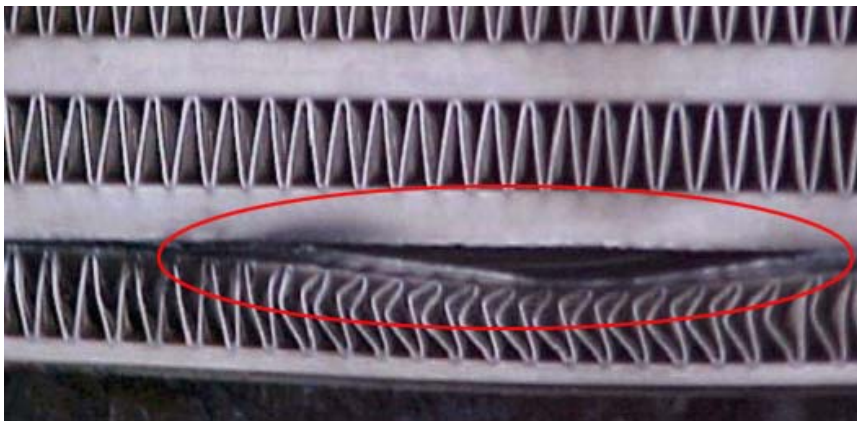


Figure 2 **Failed Charge Air Cooler Core**