Charge Air Coolers and their Effect on Fuel Mileage

Turbo charging is used in diesel engines to increase the amount of air that enters the combustion chamber to achieve a more efficient and complete burn of the fuel. A typical turbo charging system involves two major components, the turbo charger and charge air cooler (intercooler). The turbo charger is powered by exhaust gases and increases the pressure of air going into the top of your engine. The air that is pressurized by the turbo charger passes through the intercooler before entering the combustion chambers of your engine. (see image below)



A leaking Intercooler results in incomplete combustion which causes; loss of engine power, increased fuel consumption, elevated soot levels in the oil, premature piston, ring and valve failure, turbo failures, and elevated coolant temperatures. It is estimated that up to 40% of trucks two years or older have leaking intercoolers. This results in an increased cost of approximately 4 cents per mile, or \$17/week. This equates to \$4420 per year!!! Systems that are suspect can be easily checked by a trained mechanic with the proper pressure testing kit.