



# HEAT: THE NUMBER ONE ENEMY OF ALTERNATORS

It is that time of year again! Rely on your training!

**REMEMBER** – low rotational speeds, high amp draws (AC, cooling fans, stereos) and high outside ambient temperatures – along with extreme under hood temperatures – can lead to failures.

**LET'S REVIEW WHAT WE CAN DO ABOUT THEM:**

SYMPTOM / CONDITION	CAUSE / REMEDY
My alternator/battery light came on.	Perform a conductance battery test and make sure it's fully charged at 12.6 volts. If it's fully charged, have the alternator tested.
I have thick black belt dust over the front of my alternator.	This is an indication that the alternator is being overworked, putting out 100% of its output 100% of the time. Check battery wiring connections and grounds.
I hear this loud howling noise coming from my alternator.	This is caused by diode failure. Diodes are used to convert AC (alternating current) to DC (direct current). They act like one way valves allowing flow in only one direction. The sound you hear is leaking current. The alternator must be replaced and voltage drop tests performed to determine, find, and repair the cause of the failure.
I'm on my second alternator and they only last a few days. (Hitachi style alternators are famous for this AL-456,472,702,706)	Perform voltage drop tests on both the positive side and negative sides of the circuit. Check conductance battery tests, cables, connections and grounds as well as relays and fuses. Remember the alternator is only <u>one</u> part of a much larger system.
I was told I can test my alternator's output by removing the battery cable while the engine is running and see if the engine continues to run.	NEVER do this. It will most certainly cause voltage spikes which is the number one cause of destroying voltage regulators.

Courtesy of OE+