

COMPRESSOR FAILURES ON YUKON

For several years and several modifications, the GM light truck, with the compressor mounted low on the engine, has had trouble with noise, the compressor locking up, belts breaking, and or tensioner flapping.

GM has published at least three service bulletins about these situations. The bulletins suggested a redesigned AC hose to the rear unit, PROM change to allow the compressor to turn during cranking, and finally replace all the parts. The testing that was done after the parts were changed found NO PROBLEM.

Each repair corrected the problem even though they did not address the real cause. Finally they issued a bulletin; 01-01-38-03A, that supersedes all the past bulletins. This bulletin still gives a long list of possible causes but it does address one of the most probable causes.

The cause addressed is "LOW REFRIGERANT CHARGE". R134a can only circulate the oil properly when there is a full charge. That's because R134a does not mix with the oil but rather carries it "piggy back".

As the charge gets low, it cannot carry as much so the oil gets left behind in the low side of the system. The oil can collect in the evaporator, accumulator and the suction hose. On acceleration, there is a surge of refrigerant flow that could push a "puddle" of oil into the compressor creating noise, bending or breaking reed valves and popping the belt.

Another very probable cause they still do not address is that of a plugged condenser. The same symptoms listed above occur. Perform a "temperature drop test". If the temperature drop across the condenser is more than expected, usually less than 50 degrees, the condenser should be replaced.

After the symptoms have been eliminated by replacing the affected parts, be sure to thoroughly leak test the system. The smallest leak will eventually cause the symptom to return and more parts will be damaged. Also perform another temperature drop test to verify that the entire system is performing properly.



Four Seasons` Deslugger™ solves this liquid "slugging" problem by pulsing the compressor clutch multiple times during initial engagement. By gradually engaging the compressor, trapped liquid is gently moved out, preventing catastrophic hydraulic damage. Once the brief deslugging function is complete, the compressor reverts to normal cycling operation until the system has been off again for more than 30 minutes.