

GLOW PLUG PROBLEMS

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Today's glow plugs are well made products and they should give you good service. Although the life of a glow plug is unpredictable, you should reasonably expect a dozen or more flights out of one. It's always best to follow the manufacturer's specific glow plug recommendations, but if you have an engine that seems to eat glow plugs, the probability is that it is suffering from one of the following three causes:

Overheating: A glow plug coil will melt if it gets too hot. Reasons why this happens vary. Sometimes the combination of running an engine wide open with a lean setting before you take the glow plug heater off is too much for the element. Quite often people use a power panel which has a built-in surge feature, which sometimes results in a momentary over-voltage to the plug when the power is first switched on. When a glow plug fails because of overheating, the end of the element wire has a tear drop shape at the break. Sometimes a microscope is needed to see this affect.

Vibration: If the engine is soft mounted the element is shaken from side to side with tremendous force. This literally fatigues the metal until it breaks. When you look at the end of the element wire break through a microscope it has a jagged, rough type appearance. The only solution is to increase the rigidity of your engine mount.

Shockwave: Most model engines use a steel or brass liner mounted on top of a cast aluminum case. As the engine gets older, the liner flange works its way down into the case and lowers the head with it. When the piston clearance gets too low the increase in compression forces air out of the squish band area with supersonic velocity and the action on the glow plug elements is like when a jet plane zooms over your house and knocks out the windows. The cure here is to raise the head with another head gasket.

Less often reasons why glow plugs sometime fail are:

Cranking the engine when it's flooded sprays raw fuel onto the plug and the droplets beat the element over to the side of the housing where it shorts out.

Another problem that occasionally occurs is that engines sometimes wear abnormally, causing a crankshaft to crack, bearings to fail, or a connecting rod to chew metal off the crank pin. Of course, when this metal goes up and deposits on the plug element, the plug burns out.