Five Things You Need to Know About Spark Plugs

1. Anti-seize

NGK spark plugs feature what is known as Trivalent plating. This silver or chrome colored finish on the threads is designed to provide corrosion resistance against moisture and chemicals. This

coating also acts as a release agent during spark plug removal. NGK spark plugs are installed at the factory dry, without the use of anti-seize. NGK tech support has received a number of tech calls from installers whom have over-tightened spark plugs because of the use of anti-seize. Anti-seize compound can act as a lubricant altering torque values up to 20 percent, increasing the risk of spark plug thread breakage.

2. Corona Stain

Corona stain is observed as a light brown or tan discoloration above the hex (located on the

ceramic body of the spark plug). Corona stain is created by oil or dirt particles surrounding the spark plug. Spark plugs create a high amount of static electricity as they fire, attracting these particles to the exposed ceramic between the plug boot and the hex. Corona stain is completely normal and should not be mistaken for exhaust gas blow-by or broken seals inside the spark plug.

3. Gapping fine-wire spark plugs

In the late 1980's, when fine-wire spark plugs first appeared, installers used incorrect gap tools

and procedures resulting in broken-off firing electrodes. As a result, many people assumed that one cannot adjust the gap on a precious metal plug. While most NGK spark plugs are pre- gapped, there are instances where the gap requires modification. NGK recommends a wire-style or feeler gage gap tool, which can adjust the gap without prying against the center electrode. NGK also recommends adjusting the gap no more than +/-0.008" from the preset gap.

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4. Torque

Torque is critical in the plug's ability to dissipate heat and perform properly. Always follow the

manufacturer's recommended torque specification. An under-torqued spark plug can lead to excessive vibration and improper heat dissipation, causing spark plug and/or engine damage. An over-torqued spark plug may cause thread damage or breakage, or compromise internal seals within the spark plug, leading to improper heat dissipation or exhaust gas blow-by.

5. "Copper plugs"

"Copper spark plugs" is a term mistakenly used for a standard material spark plug. A standard

material spark plug traditionally uses a nickel-alloy outer material fused to a copper core. Almost all spark plugs use a copper core center to conduct the electricity, jump the gap, and promote heat dissipation. However, as an outer electrode material, copper would not be a good choice, as it is soft and has a low melting point (resulting in a plug that would last minutes, not miles). All NGK spark plugs, including precious metal Iridium and Platinum, have a copper core.

When one talks in terms of nickel alloys, platinum and iridium, one is referring to its durability, or how long a spark plug will last before it needs to be replaced. However, when one talks about copper, he or she is referring to its ability to conduct electricity that is needed to fire across the gap and ignite the air/fuel mixture.

For more information please call NGK Technical Support at 1-877-473-6767 ext. 2, or visit us on the web at ngksparkplugs.com.

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