STANLEY
Engineered Fastening

HeliCoil® Gall Resistant Inserts

For uniform corrosion resistance and cost effective wear resistance

Heli-Coil® Gall Resistant Inserts, manufactured from austenitic Nitronic® 60 stainless steel, are inherently resistant to galling. The gall resistant properties will reduce surface tension and friction and provide a significantly lower cost way to combat wear and galling as compared to alternative alloys. Its uniform corrosion resistant properties are superior to stainless 304 in most environments.

Due to the resulting reduction in friction, the inserts supply a more consistent and true clamping torque within the fastener assembly. Ideal for high temperature applications, these inserts offer excellent high-temperature oxidation resistance, up to 500°F, and low-temperature impact resistance.

Compatible with stainless steel screws, Gall Resistant inserts also offer a maximum tension level of 200,000 psi.

Galling and wear are one of the first concerns of a design engineer. Use Gall Resistant Heli-Coil® inserts with confidence.

FEATURES & BENEFITS:

- Manufactured from corrosion-resistant stainless steel
- Eliminates the need for lubrication to prevent galling
- Reduces friction by an average of 35%
- Increases strength through uniform load distribution
- Virtually particle free
- Eliminates foreign object debris (FOD)

Gall Resistant inserts are ideal for use in commercial and military aerospace applications.

HeliCoil® Gall Resistant Inserts

Testing was performed using #10-32 standard tapped hole blocks prepared in 316 grade stainless steel material. #10-32 STI holes were prepared to Heli-Coil® specifications in aluminum material. Gall Resistant inserts were installed and tangs removed. Tests were performed using both plain and chemically polished 316 stainless steel screws. Torque tests were conducted with the test blocks correctly aligned as well as mis-aligned by 2.2 and 4.4 degrees from perpendicular. The torque was recorded for the 20 screws in each combination, during the 10 insertions for each screw. (Figure 1.)

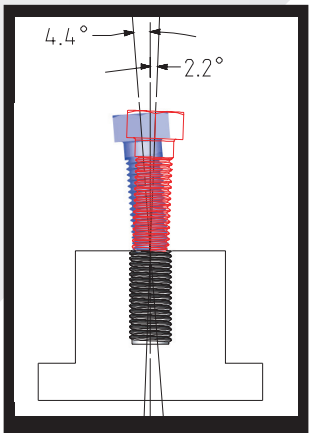
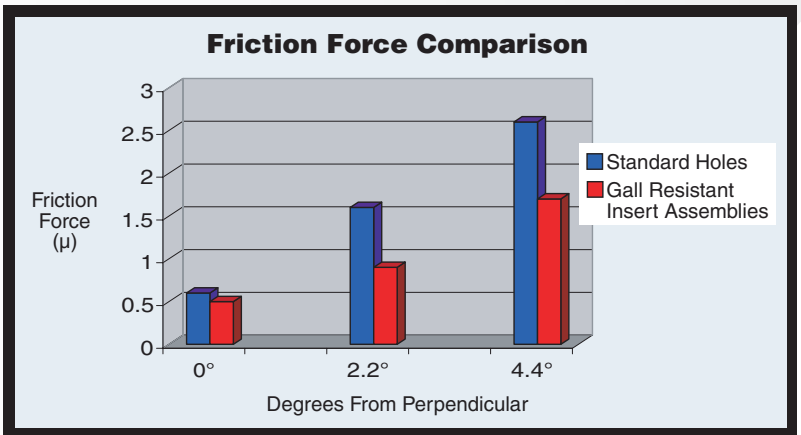
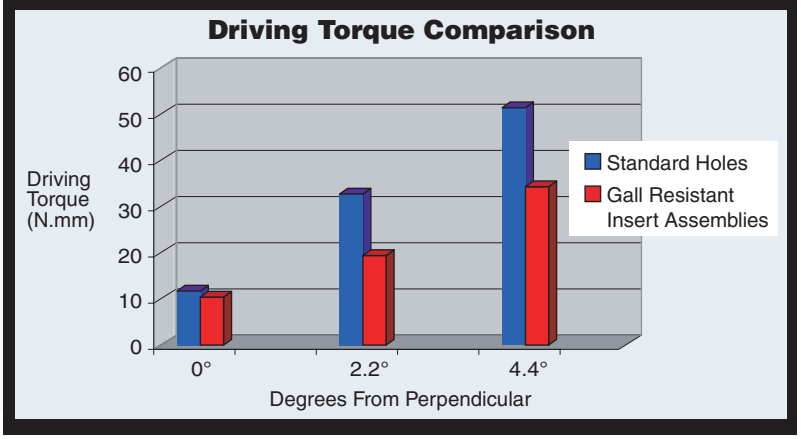


Figure 1





Based on the testing completed, Heli-Coil® Gall Resistant inserts provide superior gall resisting characteristics as compared to standard tapped holes fitted with inserts made of 300 series stainless steel. Gall Resistant inserts also provide increased compensation for mis-alignment of both assemblies and fasteners. Because of the reduction in friction, Gall Resistant inserts provide a more consistent, true clamping torque in the fastener assembly.

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