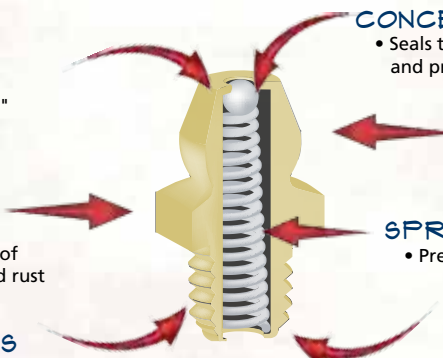


DESIGN STANDARDS

The purpose of this section is to familiarize you with the basic aspects of the SAE J534 or Surface Vehicle Standard, (last revised in May 2008). The specification standard covers "complete general and dimensional specifications for the various types of lubrication fittings and related threaded components intended for general application in the automotive and allied fields." Upon closer examination one could conclude that the standard is influenced by the competing interests of various manufacturers. Designs are not necessarily uniform dimensionally. For example, there are three nipple designs which can pose some grease gun coupler compatibility issues in high volume applications. In this section, G.L. Huyett defines the interpretations of the standard. We hope that you gain a greater appreciation for the quality of our G.L. Huyett brand grease fittings.

FITTING DESIGN



NIPPLE PROFILE

- SAE-J534
- Controlled within +/- 0.012"

CONCENTRIC BALL

- Seals to limit leakage and prevent contamination

HEAT TREATMENT

- 83 min. on Rockwell 15N scale
- Case Depth: 0.005" - 0.009"

PLATING

- ASTM B633
- Salt spray life of 72 hours to red rust

SPRING

- Premium Grade 2 Music Wire

MACHINED THREADS

- Material is removed through the turning process

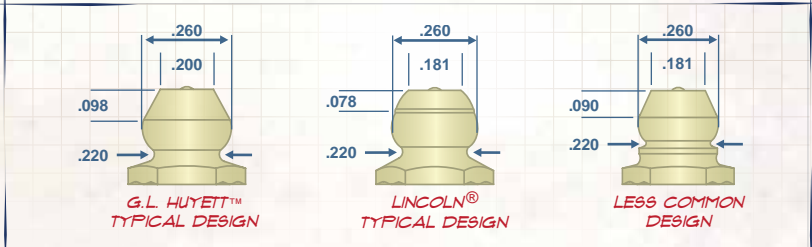
ASSEMBLY

- Lip is formed after assembly of ball & spring

NIPPLE VARIATIONS

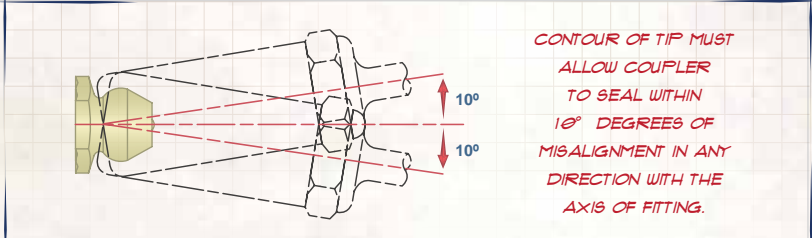
The three nipple designs, shown to the right, are approved. They are manufactured within a tolerance of +/- 0.012."

G.L. HUYETT'S NIPPLE DESIGN COMPLIES WITH SAE SPECIFICATIONS.



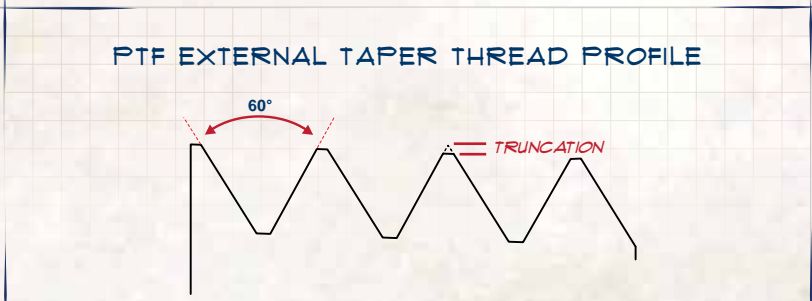
COUPLER ALIGNMENT

Grease fitting nipples are hardened to provide additional strength and to minimize wear from repeated contact with the jaws of a grease gun coupler during use.



THREAD SPECIFICATION

Per SAE J534: "External threads may have greater maximum truncation due to manufacturing practices." Truncation of threads minimizes damage during assembly and shipment, but can create interpretive challenges during inspection. For more information on the thread specifications see pages 6-9.



All manufacturer names and numbers are for cross reference identification purposes only. In no way are we implying that our parts were made by the manufacturers listed. Prices, materials, dimensions, tolerances, designs and grades subject to change without notice. © G.L. Huyett 2011

MANUFACTURING

Grease fittings are often sold through logistical management and so-called "Class C" component distributors. The parts are often treated in the same manner as fasteners. The reality is that a grease fitting is a working mechanical device and thus the finished threads are different than those for a nut, bolt or screw. The Heritage™, Vanguard™ and Euro™ lines of grease fittings in this catalog conform to the important SAE J534 standard, where it applies.

PRODUCTION

1 TURNED
Fittings are turned, including threads.

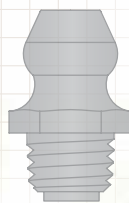
2 HEAT TREATED
Only the nipple is hardened.

PLEASE NOTE: THREADS ARE HARDENED ON THREAD FORMING FITTINGS.

3 PLATED
Zinc yellow plating is typically specified because of its added corrosion resistance as compared to zinc clear plating.

4 ASSEMBLED
Ball check and spring along with any other critical pieces are inserted and the lip is rolled to secure internal parts.

TURNED



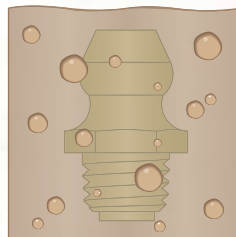
HEAT TREATED

R15N 83 MIN

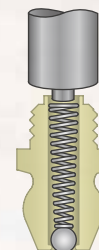


PLATED

ASTM B633



ASSEMBLED



INSPECTION

1 HEAT TREATMENT
We use destructive testing with a micro-hardness tester. We use this method of testing over standard Rockwell testing because it can break through the case depth, showing a false result.

2 PLATING THICKNESS
We inspect on a flat spot, such as on the hex. Spot tests can render bad results for complicated forms, where plating can build up in corners, or where parts are "bruised" in assembly.

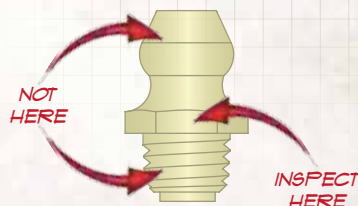
3 PLATING PERFORMANCE
Our salt spray test measures function and is far more reliable than other manufacturing testing in most applications.

4 PRESSURE TEST
The pressure test checks to ensure grease fittings will not blow out before specified range. Although, SAE J534 does NOT require a pressure test, we perform this test to ensure quality.

HEAT TREATMENT



PLATING THICKNESS



PLATING PERFORMANCE

ASTM B117



PRESSURE TEST

