

# THE CONMET CONNECTION



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## WHEEL HUB STUD STAND-OUT: WHAT IS IT AND WHY IS IT IMPORTANT?

During installation or re-installation of rear drive and trailer hubs, it's very important to understand what "hub stud stand-out" is and why it is important.

The "standout" for a ball seat mounting system is the measurement from the brake drum to the end of the stud, which should be between 1.31" and 1.44" (see Figure 1). The stud stand-out for a hub pilot mounting system (see Figure 2) is the measurement from the hub flange to the end of the stud (see the table below for proper standouts).

When dual wheels are mounted, the stud length required will depend on a number of factors, including the mounting system, the brake drum thickness, type of wheel, etc. See table below to determine the proper stud length for your application.

Proper stud length is critical for proper wheel installation. If the studs are too short, there isn't enough stud protruding from the hub and, therefore, the nut(s) (single nut on hub piloted, inner cap nut on stud piloted systems) may not have enough thread to assure proper wheel and brake drum attachment.

If the stand-out is too long on a stud piloted system or if the wrong inner cap is used, the stud could bottom out in the cap nut, leaving the inner wheel loose. In a hub piloted system, there will be an excess amount of stud sticking out beyond the nut.

**Note For Ball Seat Applications Only:** Standard cast

brake drums have a flange thickness of 1/2" while most steel-jacketed brake drums (e.g. ArvinMeritor's SteelLite X30™ or Hayes Lemmerz' CentriFuse®) have a 1/4" thick flange.

Therefore, longer studs are required for cast drums vs. steel jacketed drums in order to achieve the correct stud stand-out as mentioned earlier in this article.

When mounting dual aluminum wheels, use ALCOA inner cap nuts 5978R and 5978L or the equivalent.

These nuts can also be used with longer studs up to 1.88" stand-out.

For special single aluminum wheel applications on drive and trailer hubs, use ALCOA single cap nuts 5995R or the equivalent, depending on the stud thread length. For single steel wheel applications, use BATCO 13-3013R and 13-3013L or the equivalent.

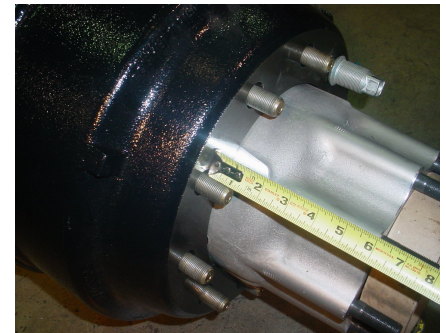


Figure 1: Stud Standout for ball seat.

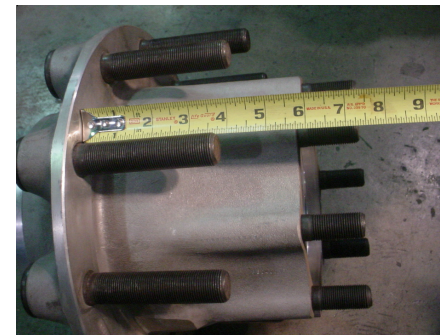


Figure 2: Stud Standout for hub pilot

Rules for Mounting System	Ball Seat	Hub Piloted
<b>Threads</b>	3/4" (rear or trailer)	M22
<b>Right Hand or Left Hand Threads</b>	LH threads go on the LH side (driver's side), RH threads go on the RH side (passenger's side)	RH is used on both sides of vehicle
<b>Standout</b>	1.31" – 1.44" past the surface of the brake drum.	2.94" for dual steel wheels 3.44" for single/wide base wheels* 3.80" for dual aluminum wheels (These dimensions are measured past the surface of the hub flange.)
<b>What determines stand-out?</b>	Brake drum back thickness (longer studs required for full cast drums).	Type of wheels used (aluminum wheels require longer studs because they are thicker than steel wheels).
<b>Governed by:</b>	SAE J694	SAE J694

\*Long studs for dual aluminum wheels will also work for single/wide base wheels