

# Strange

## SHOULDER STYLE WHEEL STUDS

- brake hat/drum + thickness of wheel must be slightly greater than “A” of stud
- this ensures measurement “A” fully engages into the wheel

**ASSEMBLY**

5/8" lug nut	torque
steel and aluminum	130 ft-lbs

Axle Type	Flange Thickness
40 spline race axle	0.438
race axles	0.312
alloy axles	0.420

**5/8"-18 CHROME-MOLY STUD KITS**

LOCK NUT 95 ft-lbs

LUG NUT (steel/aluminum) 130 ft-lbs

STUD 50 ft-lbs

add "S" or "L" at the end of part number for S= 0.250" washers L= 0.688" washers

Kit #	stud material	lug nut material	A	B	C	D	E
A1037TS	Titanium	Steel	0.875	2.063	2.875	1.188	0.4375
A1037TA	Titanium	Aluminum	0.875	2.063	2.875	1.188	0.4375
A1036	Chrome-Moly	Steel	0.775	1.550	2.362	0.775	0.250
A1037	Chrome-Moly	Steel	0.875	2.063	2.875	1.188	0.4375
A1037MD	Chrome-Moly	Steel	0.875	1.760	2.572	0.885	0.250
A1038	Chrome-Moly	Steel	1.187	2.375	3.187	1.188	0.4375
A1039	Chrome-Moly	Steel	1.500	2.688	3.500	1.188	0.4375
A1041	Chrome-Moly	Steel	1.875	3.125	4.000	1.250	0.4375

## BOLT HEAD STYLE STUDS

**5/8"-18 KIT**

0.06 WASHER

0.215 BOLT HEAD

Bolt Torque 95 ft-lbs & Red Loctite

SLEEVE WRENCH

LUG NUT 130 ft-lbs

.875 SLEEVE

.4375"

AXLE FLANGE

Kit #	bolt thread length	lug nut torque
A1027	3"	130 ft-lbs

**1/2"-20 KITS & M 12 x 1.5**

0.215 BOLT HEAD

Bolt Torque 90 ft-lbs & Red Loctite

SLEEVE WRENCH

LUG NUT 130 ft-lbs

.120 WASHER

AXLE FLANGE

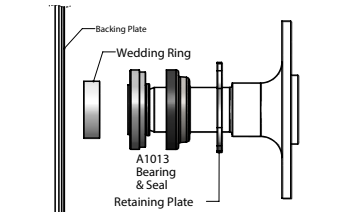
Kit #	bolt thread length	lug nut torque
A1025	2"	90 ft-lbs
A1026	3"	
A1035	50mm	85ft-lbs

- to calculate length “F” protruding through the axle to mount the rotor and wheel on use the following method:
  - For A1025 & A1026 kits: “F” = bolt thread length - 0.120” - axle flange thickness
  - For A1027 kit: “F” = bolt thread length - 0.060” - axle flange thickness
- Ensure the combined thickness of the bolt head and washer does not interfere with parking brake components. 5/8” bolts with modified heads are available and washers can be removed if clearance is an issue. However, if washers are not used, the inboard side of the axle must be modified with a 3/4” chamfer on the stud holes to allow bolt to fully engage. All 1/2” bolts feature a thin head.

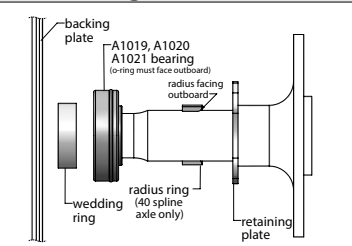
## PRESS-IN WHEEL STUDS (ALLOY AXLES)

Part #	Thread	G	H	Lug nut Torque
A3121	1/2"-20	1.970	.530	90 ft-lbs
A3130	7/16"-20	1.500	.344	80 ft-lbs
A3132 (metric)	M12-1.5	41.55 (mm)	8 (mm)	85 ft-lbs
A3151	1/2"-20	1.600	.563	90 ft-lbs
A3162	1/2"-20	1.650	.438	90 ft-lbs

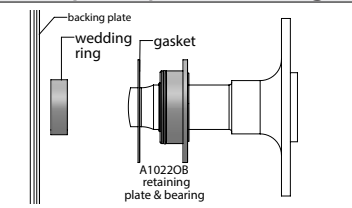
**A 1013 tapered bearing**



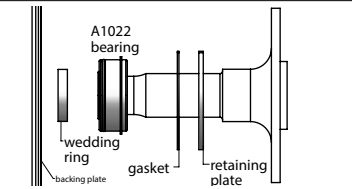
**A 1019, A 1020, A 1021 ball bearing**



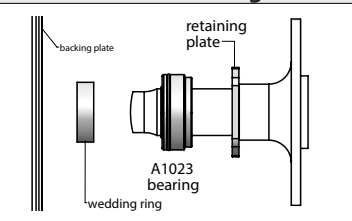
**A 1022OB old style Mopar ball bearing**



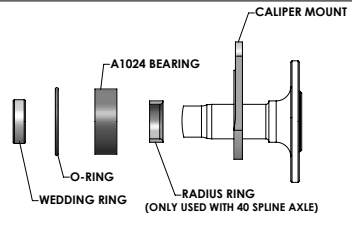
**A 1022 new style Mopar ball bearing**



**A 1023 small ford ball bearing**



**A 1024 double row ball bearing**



- Inspect the rear end housing for straightness.  
If the housing has been narrowed inspect the housing ends for square-ness
  - Clean bolts or studs and install into axle flange until 0.250" thread remains.
  - ⚠️ Apply red loctite and torque to spec. (refer to page 1 for assembly views)
    - Shoulder style studs** torque to 50 ft-lbs from outboard  
Then use a 1/4" allen wrench to hold the stud from back out and torque the lock nut to 95 ft-lbs
    - A1027 5/8" bolt head style studs** torque to 95 ft-lbs and red loctite
    - A1025 & A1026 1/2" bolt head style studs** torque to 90 ft-lbs and red loctite
    - Press-in wheel studs** must be installed using a hydraulic press. Ensure the stud seats flat against the axle flange
  - For 40 spline axle applications, install the radius ring on the axle by hand with the large 0.165" I.D. radius facing outboard. All other applications will have the radius rings or sleeves already pressed on the axle.
  - Slip the bearing retainer plate over the axle. This plate is replaced by the caliper mounting bracket if a Strange or aftermarket brake kit is utilized.  
Consult brake kit instructions for more information.
  - Pressing only on the inner race, use a hydraulic press to install the new bearing on the axle. Apply a slight coating of oil to the axle shaft bearing surface to aid in bearing installation. Bearing must be pressed on evenly and rest squarely on the axle's bearing shoulder without a gap.
- A1013 tapered bearing** is designed for the seal to be on the outside of the bearing. Step on the O.D. must face outboard. The retaining plate will push the seal in once the nuts on the housing end are tightened.
- A1019, A1020, A1021** o-ring on the O.D. of the bearing must face outboard  
**A1022OB** bearing and retaining plate are on piece  
**A1022** bearing and retaining plate are separate pieces. Spirolox faces outboard  
**A1023** Inboard axle seals in stock rear end housings must be removed if present. O-ring must face inboard. The bearing is fully sealed and does not require the inboard axle seal.  
**A1024** Bearing is symmetrical and can be installed in either orientation. Not intended for use with drum brakes. A separate o-ring must be installed in the housing end to seal the O.D. of the bearing before the bearing is installed. Aftermarket brakes and housing ends must be used.
- ⚠️ Retaining plate 3/8" hardware torque to 30 ft-lbs
  - Use a hydraulic press to install the wedding ring. Press evenly and check that the wedding ring seats on the axle bearing. The wedding ring is a press fit and should seat firmly against the bearing. There should not be any gap between the bearing and wedding ring.  
**Do not weld the wedding rings to the axle**
  - Check the engagement of the axle splines. Coat the axle splines with grease and install the axles into the axle housing and carrier. Remove the axles and measure the amount of spline engagement. Minimum spline engagement is one inch.  
**Note:** some posi-units will only accept 7/8" engagement
  - Lug nuts should be checked for torque regularly. Clean and lightly lubricate threads with oil.  
**Torque 1/2" lug nuts to 90 ft-lbs and 5/8" lug nuts to 130 ft-lbs**  
**Refer to figure below for proper lug nut torque sequence**  
**Note:** Consult wheel manufacturer to ensure lug nut torque spec is safe for specific wheel type as some aluminium wheels may begin to crush.

BEARING INFO AND DIMENSIONS			
Part #	I.D.	O.D.	TYPE
A1013	1.562	3.150	Tapered
A1019	1.772	3.150	Ball
A1020	1.531	3.150	Ball
A1021	1.562	3.150	Ball
A1022OB	1.562	2.875	Ball
A1022	1.562	2.875	Ball
A1023	1.562	2.835	Ball
A1024	1.772	3.350	Double Row Ball

