TOTAL CHAOS
FABRICATION

INSTALLATION INSTRUCTIONS

COMPONENT:
STOCK LENGTH HEIM STEER CONVERSION
1996-2002 4RUNNER

PART #: 96080-0E

PART #	DESCRIPTION	QUANTITY
99020H-OE	TIE ROD EXTENSION - HEIM STOCK LENGTH - TACOMA	2
12020	WASHER: 20MM LOCK (ZINC)	2
JMX14T770	HEIM: RHT 7/8" X 7/8"	2
11378	NUT: 7/8"-14 RHT JAM (ZINC)	2
17858	HI-MISALIGNMENT SPACER: 7/8" - 5/8"	4
10140	BOLT: 5/8"-18 X 4" GRADE 8 (ZINC)	2
11102	NUT: 5/8"-18 C-LOCK (ZINC)	2
59709-A	DOUBLE-SHEAR STEERING TAB - DRIVER SIDE	1
59709-B	DOUBLE-SHEAR STEERING TAB - PASSENGER SIDE	1

REQUIRED TOOLS

- 10mm socket
- 19mm socket
- 22mm wrench
- 24mm socket
- 9/16" wrench
- 5/8" drill bit
- Hammer
- Adjustable Pliers
- Grease gun
- Super Lube Synthetic Grease PN: 41150
- Paint pen to mark bolts

IMPORTANT

- Before starting install, make sure the vehicle is supported securely on jack stands.

- The factory manual is recommended for removal and re-installation of all factory components.

- **Total Chaos mandates when installing a heim steer upgrade the lower ball joint be replaced with either a genuine Factory Toyota lower ball joint OR Total Chaos Uniball conversion (PT# 96140-4RN, 96140-4RN, or 96140-H). Do not reinstall a used ball joint - they are prone to failure.**

STEP 1

Break looks the jam nut that couples the inner tie-rod to the outer tie rod.

STEP 2

Start to remove the factory tie rod by pulling out the cotter pin.

STEP 3

Loosen the castle nut but do not fully remove it.

STEP 4

Strike the lower ball joint to knock the tie rod taper loose. Once it pops free, remove the castle nut and separate the tie-rod from the lower ball joint.

STEP 5

Un-thread the outer tie rod from the inner tie rod.

STEP 6

From the bottom, drill out the hole using a 5/8” drill bit. A drill press is preferred.

STEP 7

Bolt up the misalignment spacers and the provided tab to see where the tab needs to be welded onto the ball joint. The spacers don’t need to be installed in the heim, you can just use the spacers themselves.

STEP 8

Mark where the tab will be welded (top and bottom) so the paint can be removed.

STEP 8 CONTINUED

STEP 9

With the paint removed, re-assemble the tab with the spacers and weld the tab onto the ball joint. Weld the inside of the tab first, then the outside.

TIP: TC recommends covering the ball joint with a wet rag to keep heat and sparks away from the ball joint and ball joint boot.

STEP 10

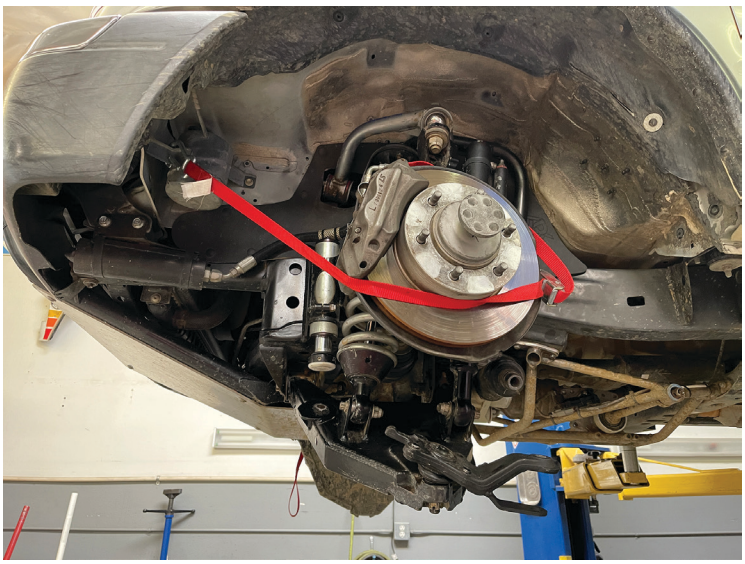
Once welding is complete, paint the lower ball joint with black paint to prevent corrosion.

STEP 11

Remove the (4) 14mm head bolts holding the old ball joint to the steering knuckle.

STEP 12

Use a tie-down strap routed under the hub to raise the steering knuckle and brake assembly up and out of the way. This will make removing the lower ball joint much easier.



STEP 13

Use a 19mm to loosen the ball joint castle nut. Do not fully remove the nut until the ball joint taper is separated from the lower control arm.

TIP: Strike the lower control arm with a hammer (see arrow) or use a tie rod puller (second photo) to separate the ball joint from the lower arm.

STEP 14

Install the new ball joint in the lower arm tightening the castle nut to 103 ft/lbs. Once torqued, install a new cotter pin.

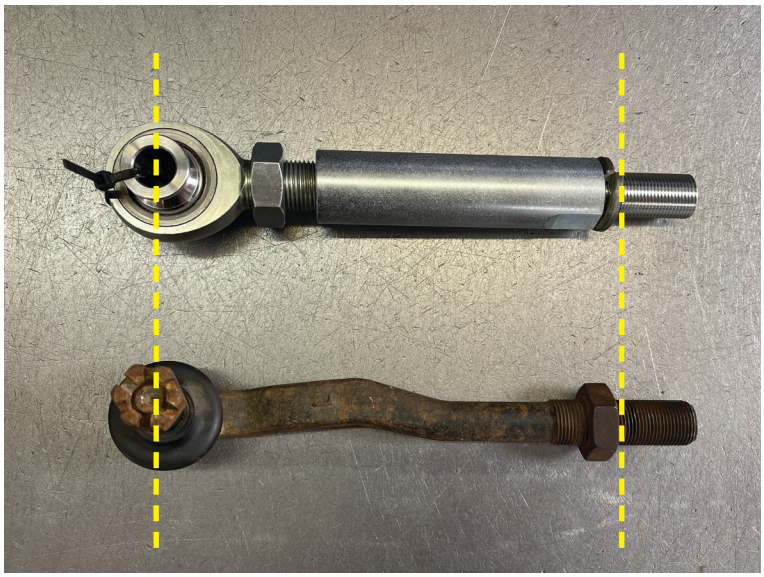
STEP 15

Lower the spindle down onto the new ball joint and torque the four bolts to 45 ft/lbs.

STEP 16

Adjust the new heim tie-rods so they're approximately the same length. This is not an exact measurement and is intended to make your car drivable to the alignment shop.

AN ALIGNMENT IS MANDATORY AFTER THIS INSTALL.



STEP 17

Apply anti-sieze to the male end of the tie rod before attaching it to the inner tie rod.

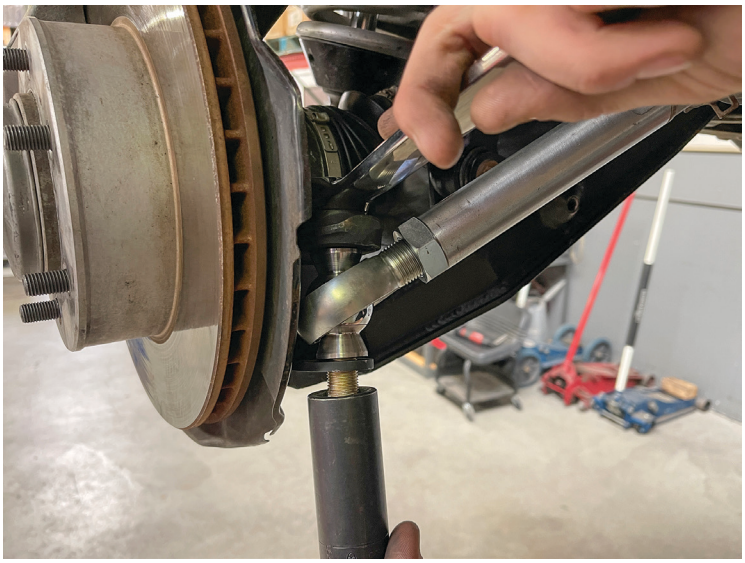
STEP 17 CONTINUED

STEP 18

Apply anti-sieze to the misalignment spacers before inserting them into the heim.

STEP 19

Slide the heim assembly into the balljoint, insert the bolt and torque the nut at the bottom to 100 ft/lbs.



YOU'RE DONE! NOW IT'S TIME FOR AN ALIGNMENT.

- An alignment will be required after installation is complete.
- Re-torque all hardware after the first 500 miles.

FOR INSTALL QUESTIONS OR CUSTOMER SERVICE INQUIRIES:

Call 951.737.9682 or email info@chaosfab.com