INSTALLATION INSTRUCTIONS

COMPONENT: LOWER UNIBALL CONVERSION
(FOR VEHICLES WITH OE TOYOTA TIE ROD ENDS)
1996-2002 TOYOTA 4RUNNER

PART #: 96140-4RN

PART #	DESCRIPTION	QUANTITY
696145-R	LOWER UNIBALL ADAPTER - RIGHT	1
696145-L	LOWER UNIBALL ADAPTER - LEFT	1
*FK-WSSX16T-1	1” UNIBALL (STAINLESS) W/ PTFE LINER	2
*30604	SNAP RING / 1” UNIBALL	2
10058-C	5/8” CUSTOM HI-MISALIGNMENT SPACER	2
10058-TAC	05 TACOMA HI-MISALIGNMENT/TAPERED LOWER SPACER	2
10143-C	BOLT - CUSTOM MACHINED HEAD 5/8”-18 X 3.75” 12 POINT	2
11102	NUT - 5/8-18 C-LOCK	2
12104	WASHER - 5/8” SAE WASHER	2
10630	BOLT - 10MM 1.25 X 30MM GRADE 10.9	4
10635	BOLT - 10MM 1.25 X 35MM GRADE 10.9	4
***THESE PARTS ARE PRE-INSTALLED IN THE UNIBALL ADAPTER.**		

REQUIRED TOOLS

- 14mm wrench or socket
- 19mm socket
- 22mm/24mm/27mm socket for lower ball joint. Size may vary depending on the ball joint manufacturer.
- 24mm socket
- 5/8” 12-point wrench or socket
- 15/16” socket
- Hammer
- Pliers
- Red Loctite
- Anti-Sieze

IMPORTANT

- Torque the 10mm bolts to 55 FT/LB
-- **MUST USE RED LOCTITE** on 10mm metric bolts to prevent catastrophic failure.
- Anti seize must be used on the 5/8" 12 point bolt to reduce the possibility of the c-lock nut gaulling.
- We recommend customers spin the front wheels to make sure their inner wheel weights do not contact any steering or suspension components.

- These instructions show installation on TOTAL CHAOS lower control arms. The procedure is the exact same on stock Toyota lower control arms.

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

- When this component was designed, we slightly changed the steering arm location to optimize the steering geometry. Because of this, you will need an alignment after installing these parts.

- On any variation of the 96140, extreme care must be taken when lowering the steering knuckle onto the uniball conversion to not damage the dust seal that is on the outer CV joint. Make sure when lowering the steering knuckle onto the uniball conversion the shock has already been installed in the lower control arm and is holding the suspension at full droop, not extending past its limit. Also note that if the seal is not perfectly round contact may occur between the 5/8" machined bolt head, and the dust seal. It may be necessary to purchase a new dust seal from Toyota (Part number 9008030028).

STEP 1

Remove the cotter pin from the ball joint and tie rod end.

STEP 2

Use a 19mm to loosen (do not remove) the tie rod castle nut.

STEP 3

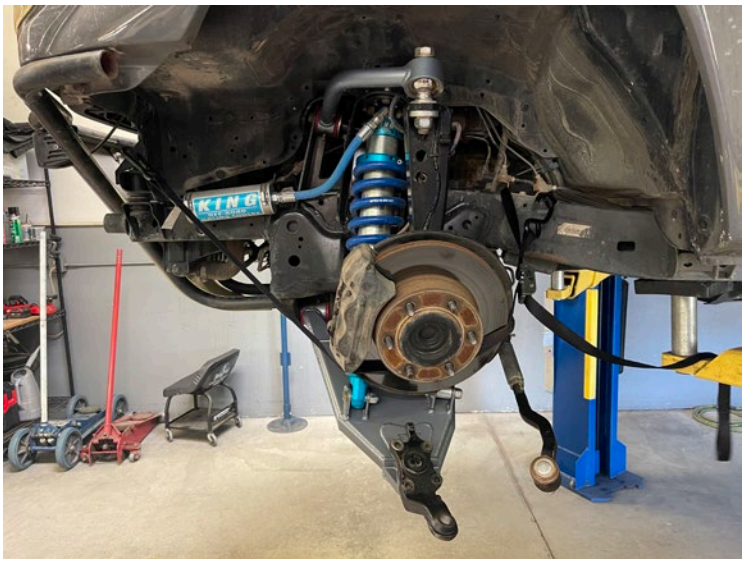
Strike the tie rod end to knock it loose from the lower ball joint. Once loose, remove the castle nut and pull the tie rod end out.

STEP 4

Remove the 14mm head bolts holding the ball joint to the steering knuckle.

STEP 5

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.

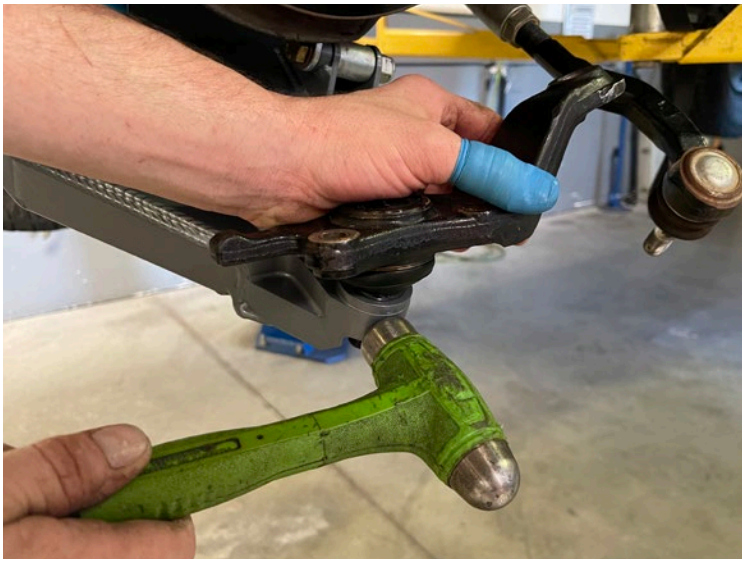


STEP 6

Use a 24mm to loosen (do not remove) the ball joint castle nut.

STEP 7

Either by striking the lower control arm or by using a ball joint press separate the lower control arm from the factory ball joint. Once separated, remove the castle nut and take the ball joint off the lower control arm.



STEP 8 (CONTINUED ON NEXT PAGE)

The first step to installing the new parts is to put the supplied misalignment spacers into the uniball bore. Apply a dab of anti-sieze to the outside of the spacers to ensure they don't get stuck in the uniball.

STEP 8 CONTINUED

The short misalignment spacer goes on top of the uniball.

The tall misalignment spacer with a built in tapered adapter goes in the bottom of the uniball.

STEP 9

Set the new uniball adapter with the tapered adapter onto the lower control arm with the tapered adapter going through the lower control arm.

STEP 10

Use the supplied custom 12-point head 5/8” bolt through both misalignment spacers and the lower control arm.

Note: Remember to use anti seize on the 5/8” bolt to aid the c-lock nut threading onto the bolt

STEP 11

Slide on the supplied 5/8” SAE washer and then thread on the supplied c-lock nut.

STEP 12

Torquing this nut is difficult because the 12 point head is so short. It is much easier with two people; one to hold a wrench or socket square on the head of the bolt and the other to torque the nut side to 125ft/lb.

STEP 13

With the 5/8” bolt torqued and the uniball adapter in a roughly level position, slowly lower the steering knuckle down onto the adapter. Further adjustment may be necessary to get the four bolt holes to correctly line up (see next page).

Be careful not to damage the two built-in dowel pins on the uniball adapter. Make sure they line up with the corresponding holes in the steering knuckle before lowering all the way.

STEP 13 CONTINUED

To adjust the position of the adapter as you lower the spindle down, use a line-up tool, ratchet extension or something similar through the tie rod hole to move the adapter into place.

Note: You'll notice that the center of the new adapter registers into the bottom of your steering knuckle. This helps take the shear load off the 10mm bolts that hold the adapter to the steering knuckle.

STEP 14

Be sure the correct length bolts go in the proper place when attaching the uniball adapter to the spindle. The tall bolts go in the holes with the dowel pins (closest to the brake rotor) and the shorter two bolts go on the inboard side.

STEP 15

Before installing the four bolts, Total Chaos recommends using red Loctite on the threads to ensure they do not come loose over time.

Thread in the supplied 10mm 10.9 flange head bolts and torque to 55ft/lb.

Failure to use RED LOCTITE and properly torque the metric bolts can result in damage to the uni-ball conversion and/or catastrophic failure of front suspension.

STEP 16

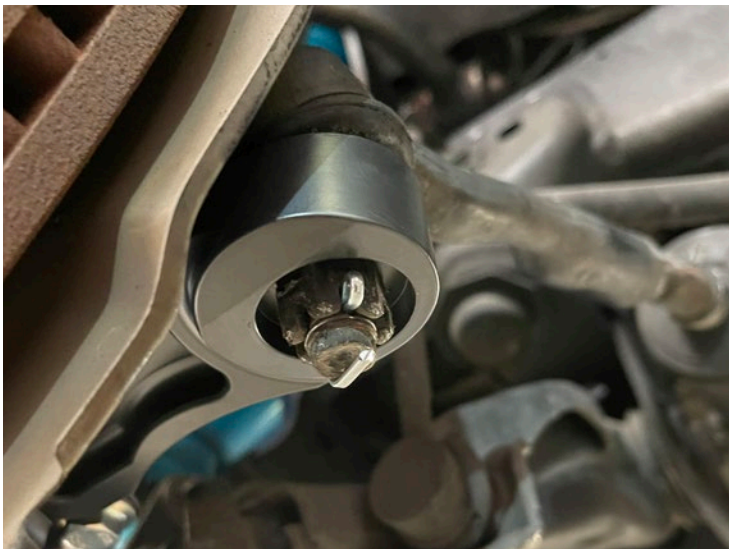
Rotate the tie rod so that the threads and castle nut are now facing downward.

STEP 17

Lastly hook up your factory tie rod to the new steering arm and torque the tie rod nut ball joint to factory spec (67ft/lb).

STEP 18

Install a new cotter pin through the tie rod castle nut.



IMPORTANT!

- When this component was designed, we slightly changed the steering arm location to optimize the steering geometry. Because of this, you will need an alignment after installing these parts.

- Re-torque all hardware after the first 500 miles.

- Torque the 10mm bolts to 55 FT/LB
- **MUST USE RED LOCTITE** on 10mm metric bolts to prevent catastrophic failure.
- Anti seize must be used on the 5/8" 12 point bolt to reduce the possibility of the c-lock nut gaulling.
- We recommend customers spin the front wheels to make sure their inner wheel weights do not contact any steering or suspension components.

- The uniballs will be tight at first and require a break-in period to loosen up. This break-in period may last up to 5,000 miles so do not be alarmed if steering feels stiff or is slow to return to center. Periodically apply a dry PTFE-based lubricant such as Tri-Flow Superior Dry Lube.

FOR INSTALL QUESTIONS OR CUSTOMER SERVICE INQUIRIES:

Call 951.737.9682 or email info@chaosfab.com