

## 1.50 Uniball Performance Upper Arm Instructions

Tundra 2wd/4wd 2007-2021 | Sequoia 2wd/4wd 2008-2022

### PARTS SUPPLIED

QTY	DESCRIPTION	ID
8	Polyurethane Pivot Bushings	8
8	Large Bushing Washers	9
4	7/8" OD x 0.635" ID x 2.335" L Sleeves	7
4	90 deg. Zerk Grease Fittings (self tapping)	6
2	M16 x 1.50 Nyloc Nuts	10
2	9/16" Upper Domed Uniball Spacers	2
2	9/16" Tapered Uniball Spindle Adapters	3
2	9/16-18 x 4" 12pt Bolts	1
2	9/16" SAE Grade 8 Washers	4
2	9/16-18 Stover Lock Nuts	5
4	10-32 x 3/4" SHCS Allen Bolts	11
8	#10 Stainless Washers	12
4	Stainless Rubber Insulated Clamps	13
4	10-32 Nyloc Nuts	14
4	Bushing Grease Packets	
4	Camburg 8.5" Stickers	

Thanks for purchasing a set of our Camburg 1.50 uniball performance upper arms for your vehicle. Please follow all instructions. If you are not installing these yourself have a qualified shop do so. These arms are designed for 1-3" of lift from coilovers and to be used with stock OEM spindles or Camburg performance spindles. These are NOT designed to be used with cheap spacer type lifts. Make sure to check the parts list to make sure you have every component prior to starting. Camburg Engineering has made every attempt to insure you receive the highest quality components in the most complete manner. This is a guide to help you through the process with recommended torque specs. It's your responsibility to ensure parts are being installed correctly using the correct tools and procedures. We recommend reviewing a service manual for more details and torque specs.

### Tools & Supplies Required

Eye Protection | Jack | Jack Stands | Deburring Tool  
2-3 lb. Mini Sledge Hammer | Rubber Mallet | Needle Nose Pliers  
10mm Socket | 19mm Socket | 22mm Socket & Wrench  
24mm Socket | 1/4" Wrench | 9/16" 12pt Socket | 7/8" Socket  
5/32" Allen Wrench | 3/8" Wrench | Torque Wrench | Brake Cleaner  
Anti-seize | Red Loctite | Grease

### 1.0 Setup

Park the vehicle on level ground and set the parking brake and chock both rear wheels. Jack up the front end from the chassis until the front tires are off the ground. Place jack stands under the front frame rails and set down. Make sure the vehicle is supported correctly and the front tires are still off the ground. Place the jack under the driver side lower arm and raise the tire 1/2", then remove the wheel while keeping jack under lower a-arm to support the suspension. Read these instructions start to finish before moving forward and review diagrams.

### 2.0 Removal

Remove the ABS speed sensor wire from the sheet metal bracket on the stock upper arm, being very careful not to damage the wire. Using needle nose pliers, remove the cotter pin from the upper ball-joint at the spindle. Using a 19mm socket, loosen the castle nut but do not fully remove. With a mini sledge hammer strike the top of the spindle numerous times to release the ball-joint tapered stud. This can be a little difficult since it's a press fit, heating up the spindle to get it to expand will help if need be. Once the ball joint releases from the spindle, then remove the nut. This will allow you to position the upper arm and spindle out of the way. Make sure to position & support the spindle so that it doesn't pull on the brake line and on 4wd models that it doesn't pull out the inner CV or strain the CV boots and axles. Use a 10mm socket to temporarily disconnect the battery cable wiring harness clamp from the inner fender and push aside (driver side only). Using a 22mm socket & wrench, loosen and remove the OEM upper a-arm bolt. Remove the stock upper arm. You will not re-use the original large washers or nut.

### 3.0 Pre-installation

Using a 1/4" wrench install the self-tapping zerk fittings into the Camburg arms. Do not bottom out the fittings into the arms. Position them pointing outward for grease gun access.

Now press the polyurethane bushings into the arms. Using the supplied bushing grease, apply grease onto the OD of the inner pivot sleeves and press into the bushings. Wipe excess grease onto outer bushing face and apply additional grease if needed. See diagram for reference.

Using a countersink bit or deburring scraper tool, slightly chamfer the top-hole edge of the ball-joint taper in the spindle. This will allow the spacer to fully seat when tightened and eliminate possible stress risers. Then inspect and clean the tapered hole. See diagram for reference.

### 4.0 Installation

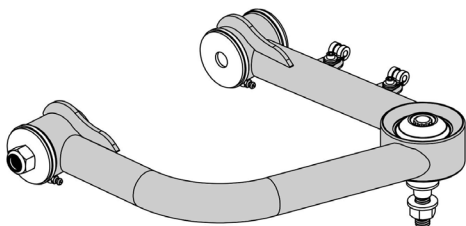
Install the driver side Camburg upper arm to the frame using the original M16 bolt with four of the supplied zinc-plated washers on either side of the polyurethane bushings. To insure you're installing the correct arm, the zerk fittings will be pointed downward, pivot gussets are on top and the longer a-arm tube towards the front of the vehicle. Install the bolt in the opposite orientation as stock so the head of the bolt is towards the backside of the arm. With the bolt pushed all the way through clean the threads using brake cleaner and install the supplied nyloc nut with red loctite. Using a 22mm wrench and 24mm socket, torque to 120 ft/lbs. Cycle the arm up and down to make sure there are no clearance issues. See diagram for reference.

Inspect and clean the tapered hole in the spindle/knuckle. Apply anti-seize to the uniball spacer surfaces shaded gray in the diagram. Insert the tapered lower uniball spacer into the uniball. Then install the upper spacer into the top of the uniball making sure both spacers are fully seated. If not damage will occur in the following steps. Install the 9/16" 12pt bolt through the spacers and uniball and attach the upper arm to the spindle by swinging it down to the spindle with some finesse. You may need to jack up the lower arm and move the uniball joint. The tapered spacer should sit almost flush with the top of the spindle/knuckle before tightening. Make sure the lower spacer did not pull out slightly from the uniball or damage will occur as the spacer can get caught on the bearing race. Install the 9/16" washer and stover lock nut with a small amount of red loctite onto clean threads. Using a 9/16" 12pt socket and 7/8" socket, torque to 120-125 ft/lbs. Don't over-tighten or use an impact gun. See diagram for reference.

Using the supplied 10-32 hardware and rubber clamps, attach the speed sensor wire to the backside of the upper arm using a 5/32" allen and 3/8" wrench. Get this hand tight only and do not over-tighten. Make sure to route the wire so that it has proper clearances and slack. See diagram for reference.

Now slightly bend back & inward the sheet metal tab on the inner fender behind the upper arm for added clearance. If not the upper arm and speed sensor wire can make contact and incur damage. See image for reference.

\*\* REFER TO EXPLODED CAD DRAWING ON \*\*  
\*\* OTHER SIDE FOR PARTS REFERENCE NUMBERS \*\*



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**Repeat steps 1 through 4 to install passenger side arm**

### 5.0 Alignment

You will need to have your vehicle aligned by a qualified shop. Additional caster is built into the Camburg arms to correct alignment issues that are inherent with lifting the vehicle. Have your alignment shop increase positive caster, then set camber and toe to factory OEM specifications. Having an increase in caster helps with straight line stability and cornering precision for performance driving on and off-road.

### 6.0 Maintenance & Care

Uniballs are precision parts with tight tolerances which can lead to occasional noise when they become dirty. Occasionally wipe off the top and underside of the uniball with a clean rag to remove road grime and dirt. Cleaning and lubricating them with WD-40 or a PTFE dry film lube like Super Lube can minimize any noise from stiction. Do not use harsh chemicals or grease/oil that attracts dirt to clean & lubricate the uniball as it will damage and wear the PTFE liner that is bonded internally. Over time the pivot bushings will also need to be cleaned and lubricated. Use grease that's designed specifically for polyurethane bushings. Not using the correct grease can cause the bushings to squeak abnormally and wear faster. The best method to grease the bushings is to remove the arms from the vehicle, disassemble, clean and lubricate. When using a grease gun, do so slowly, loosen the upper arm bolts so you're able to pull the washers slightly away from the outer bushings to relieve pressure prior to greasing them slowly. Most grease guns operate at 1500+ psi. and can damage the bushings applying too much pressure.

Neglecting care and upkeep will wear parts out faster.

We recommend greasing the polyurethane bushings 2-3 times a year or every 5-8k miles depending on use with a high temp., waterproof teflon (PTFE) based grease like Super Lube. Higher frequency lubing may be required when used off-road and/or in wet/snow/mud conditions.

Inspect and re-torque all hardware and components after the first 500 miles, inspect at your scheduled maintenance intervals and whenever using the vehicle off-road

### Notes

Recommended tire size: 33-35 in.

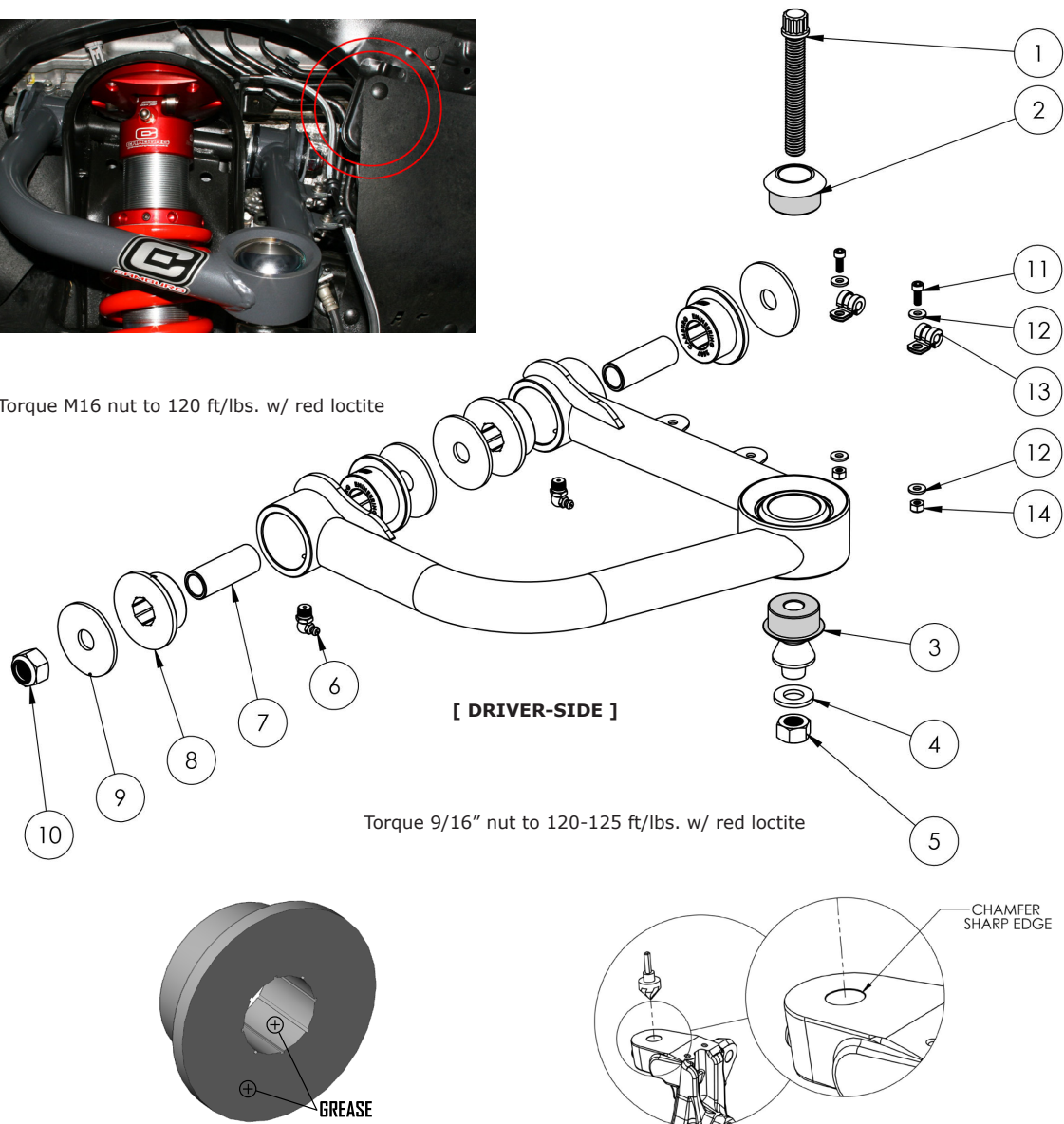
Recommended wheel size: 17-20 in.

Recommended wheel backspacing = 5.75 in.

Maximum wheel backspacing = 6.00 in.



Torque M16 nut to 120 ft/lbs. w/ red loctite



[ DRIVER-SIDE ]

Torque 9/16" nut to 120-125 ft/lbs. w/ red loctite

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