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CAMBURG

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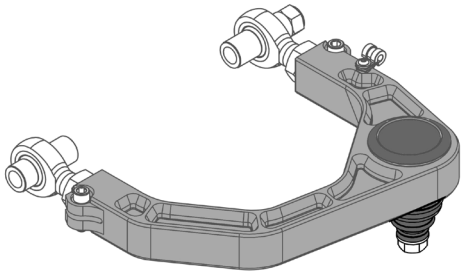
KINETIK Billet X-Joint XL Upper Arm Instructions

Toyota Tacoma 2024-2025 | Landcruiser 250 2024-2025 | Lexus GX550 2024-2025
Toyota Landcruiser 300 2022-2025 | Lexus LX600 2022-2025

PARTS SUPPLIED

QTY	DESCRIPTION	ID
4	FK 3/4 X 7/8 RHT Heim Joints	21
4	7/8-14 RHT Steel Jam Nuts	1
4	3/8-24 x 1.25" SHCS Allen Bolts	7
8	3/8 AN960 Washers	9
4	3/8-24 MS21042 Flanged Nuts	10
4	Heim Spacers (long | inner)	15
4	Heim Spacers (short | outer)	16
2	M16 x 1.50 Nyloc Nuts	5
2	Stainless Rubber Insulated Clamps	6
2	10-32 x 3/8" BHCS Allen Screws	8
4	10-32 Stainless Washers	4
2	X-Joint Cover Caps (press-on)	18
4	X-Joint Cover Cap O-rings	13
2	Grease Zerk Fitting (straight)	20
2	1.50" OD x 9/16" ID x 3/16" Washers	3
2	M14 x 1.5 Flanged Nyloc Nuts	2
1	#30 x 10" Fishing Line (for cap install only)	
4	Camburg 8.5" Stickers	

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



Thanks for purchasing a set of our KINETIK series billet 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.

Tools & Supplies Required

Eye Protection | Jack | Jack Stands | Needle Nose Pliers
2-3 lb. Mini Sledge Hammer | Rubber Mallet | 19mm Socket
22mm Socket & Wrench | 24mm Socket | 1-1/4" Open-end Wrench
7/16" Socket | 8mm Socket | 21mm Socket | 5/32" Allen Wrench
5/16" Allen Wrench | Torque Wrench | Brake cleaner | Anti-seize
Grease Gun | Red Loctite | Blue Painters Tape

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. **Lexus LX600 models only**, remove the air ride position sensor linkage from the control arm**.** 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 castle nut. Disconnect the arm from the spindle. 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. 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.

Tacoma/LC250/GX550 models: On the driver side only, you will need to either disconnect the intake charge tube from the intercooler using a small pick to disengage the metal clamp and position out of the way, or loosen the lower core support using a 14mm deep socket and raise with a pry bar. Either method allows you to remove and install the OEM frame pivot bolt. Make sure to re-install and/or tighten after step 4.0.

3.0 Pre-installation

We recommend putting blue painters tape on the billet arms for protection during installation. Thread the 7/8" jam nuts onto the heims then apply anti-seize compound on the exposed threads. Thread the heims into the upper arm so the heim is vertical and the jam nut makes contact with the arm and you have 3 threads exposed past the nut. Install the 3/8" allen heim pinch bolts into the arm. With a drop of red Loctite on the nut, tighten and torque to 20-22 ft/lbs. Use a 1-1/4" open-end wrench to fully tighten the jam nut using another wrench to hold the heim vertical (perpendicular to the arm) so it doesn't rotate. Now install the heim pivot spacers, first coating the surface that slips into the heim with anti-seize. The longer/thicker spacers go on the insides and the shorter/thinner spacers go on the outsides. See diagram for reference.

Lexus LX600 models: Install the supplied air ride position sensor bracket to the underside of the arm with the supplied 10-32 screws. Use blue loctite and do not over tighten. See diagram for reference.

Using an 8mm socket, install the straight grease zerk fitting into the top of the X-Joint. Do not over tighten or cross thread.

4.0 Installation

Install the driver side Camburg upper arm to the frame using the existing OEM M16 bolt. To insure you're installing the correct arm, the longer a-arm leg is towards the front of the vehicle along with the Camburg logo with the threaded hole for the ABS clamp towards the rear. 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.

Prior to installing the X-Joint stud into the spindle, inspect and clean the tapered hole in the spindle/knuckle. Swing down the upper arm so the X-Joint stud inserts into the spindle. You may need to jack up the lower arm and move the X-Joint stud. Install the 1.50" OD large washer and nyloc nut with a small amount of red Loctite onto clean threads. Using a 21mm socket, torque to 92 ft/lbs. Don't over-tighten or use an impact gun. See diagram for reference.

IMPORTANT: Now you'll need to grease the X-Joint, if not damage will occur. Using a hand grease gun with a high temp. lithium complex #2 synthetic grease, slowly pump grease into the joint through the zerk fitting making sure not to over grease or over pressurize. When you see the boot to begin to swell, that's a sign the X-Joint is fully greased.

Using the supplied 10-32 hardware and rubber clamps, attach the ABS speed sensor wire to the backside of the upper arm using a 5/32" allen wrench and a drop of blue loctite. Get this hand tight only and do not over-tighten. Make sure to route the wire so that is has proper clearances and slack.

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Lexus LX600 models only, attach the position sensor linkage to the control arm bracket. Lastly install the cap by first installing one of the supplied o-rings into the caps lower groove. Then apply a small amount of grease to the inside of the top of the cup. Use the supplied 30# fishing line and insert 2" of it into the upper arm cup This will be used to release the trapped air as the cap is pressed on. Position and center the cap with the Ironman logo in your desired position. Cover the cap with a rag to protect the finish and use a rubber mallet to tap the cover in if not by hand. Make sure to apply even pressure so that it presses in straight. When the cap is fully seated and you hear the air escape, pull the fishing line out and make sure the cap is tight to the cup. Twist the cap a few degrees to the right and left to help seat the cap and o-ring. Then install another o-ring between the cap and the arm. This will allow you to easily remove the cap by removing the
o-ring and having a recess to grasp by hand or with a small plastic tool. Periodically check the caps to make sure they are fully seated after off-road use and remove temporarily after any pressure washing for moisture to dissipate .

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

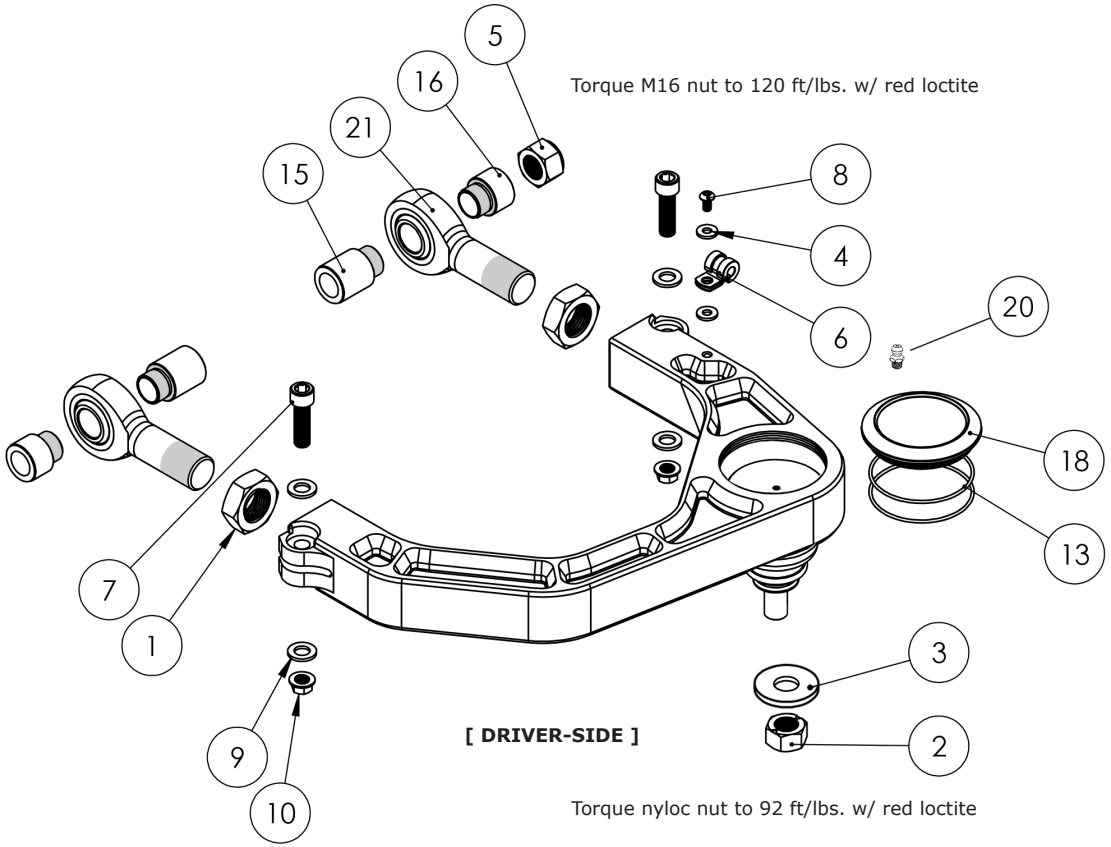
Use mild soap & water to clean the anodized aluminum surfaces, using chemicals can stain/dis-color the finish. Heims are precision parts with tight tolerances which can lead to occasional noise when they become dirty. Occasionally wipe off the heims with a clean rag to remove road grime and dirt. Cleaning 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/oils that attract dirt to clean & lube as it will damage and wear the internal teflon (PTFE) liner. Neglecting care and upkeep will wear parts out faster.

We recommend greasing the X-Joints 2-3 times per year or every 5-8k miles depending on use with a high temp. lithium complex #2 synthetic grease. 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 in. (Tacoma/LC250) | 33-35 in. (LC300)
Recommended wheel size: 17-18 in. (Tacoma/LC250) | 18-20 in. (LC300)
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 nyloc nut to 92 ft/lbs. w/ red loctite

Tacoma/LC250/GX550 Intake Tube