

PARTS SUPPLIED

QTY	Description	ID
1	Live Valve Sensor Bracket Kit	1
4	FK 7/8 X 3/4 RHT Heim Joints	15
4	7/8-14 RHT Jam Nuts	2
4	3/8-24 x 1.25" SHCS Allen Bolts	5
8	3/8 AN960 Round Washers	6
4	3/8-24 MS21042 Flanged Nuts	7
8	Frame Pivot Heim Spacers	11
2	9/16" Upper Domed Uniball Spacers	10
2	9/16" Tapered Uniball Spindle Adaptors	12
2	9/16-18 x 4.5" 12pt Bolts	8
2	9/16" SAE Grade 8 Round Washers	4
2	9/16-18 Stover Lock Nuts	3
2	Uniball Cover Caps (press-on)	13
4	Uniball Cover Cap O-rings	9
4	Camburg 8.5" Stickers	

Thanks for purchasing a set of our KINETIK series billet upper a-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 | Deburring Tool
 21mm Socket & Wrench | 2-3 lb. Mini Sledge Hammer | Rubber Mallet
 1-1/4" Open-end Wrench | 7/16" Socket | 9/16" 12pt Socket
 7/8" Socket | 5/16" Allen Driver | Torque Wrench | Brake Cleaner
 Anti-seize | Grease | Red Loctite | Blue Painters Tape | Hand Drill

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

Using a 21mm socket, loosen the nut from on the upper ball-joint where it connects to the spindle 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 so you can remove the coilover/strut to access the upper arm bolts at the frame. Refer to your coilover instructions or service manual for details. Make sure to position & support the spindle so that it doesn't pull on the brake line and that it doesn't pull out the inner CV or strain the CV boots and axles. Once the coilover is removed use a 21mm socket & wrench to loosen and remove the OEM upper a-arm bolts. Then remove the stock upper arm. You will re-use the factory hardware.

3.0 Pre-Installation

On **2019+** models with FOX Live Valve electronic suspension you will need to remount the position sensor on the frame and install our stainless heim brackets for the linkage. Refer to the supplemental instructions included with those components. 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 4 threads exposed past the nut. Install the 3/8" allen heim pinch bolts and washers 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. See diagram for reference.

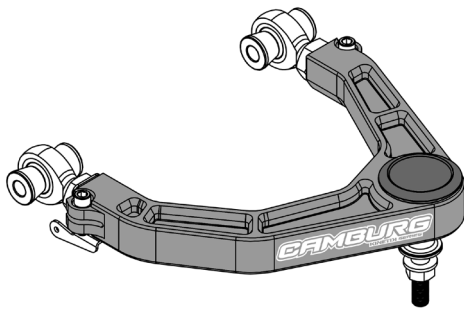
Now install the heim pivot spacers. We recommend coating the surface that slips into the heim with a little anti-seize. See diagram for reference. Using a countersink bit or deburring scraper tool, slightly chamfer the top-hole edge of the ball-joint taper in the spindle. This will allow the spacer to fully seat when tightened and eliminate possible stress risers. Then inspect and clean the tapered hole.

4.0 Installation

Install the driver side Camburg upper arm into the frame using the original hardware in the same orientation as it was removed. 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 bolts pushed all the way through, clean the threads with brake cleaner and once dry apply a little red Loctite to the nut area Our arms are built with higher precision and tighter tolerances than the factory arms, so it will be a tighter fit into the frame. You may need to pry the outer tabs out very slightly to make it easier to install. When the stock arms are tightened from the factory it bends the tabs slightly in. Use a 21mm wrench and 21mm socket and torque to 110 ft/lbs.

Cycle the arm up and down to make sure there are no clearance issues. You may need to bend out slightly or trim the outer frame tabs near the heim pinch bolt as it gets very close to the arm. Re-install coilover/strut. Refer to your coilover instructions for details.

Apply anti-seize to the uniball spacers and 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" 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 before tightening. If the 9/16" bolt doesn't fit all the way through, you'll need to chase the spindle/knuckle with a 9/16" drill bit to remove minimal material at the bottom of the taper. You can use our lower uniball spacer as a drill guide. We see some variances in castings from Ford. 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 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. Do not over-tighten or use an impact gun. See diagram for reference.



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Lastly install the uniball 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 uniball cup. Position and center the cap over the uniball cup with the Camburg 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, 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.

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. You can also adjust the heim joints to correct camber as well if needed.

6.0 Maintenance & Care

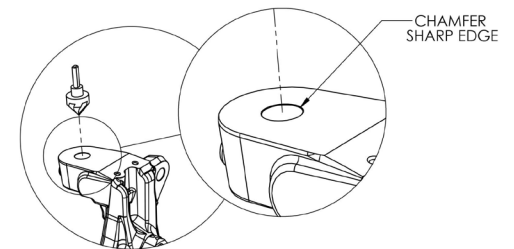
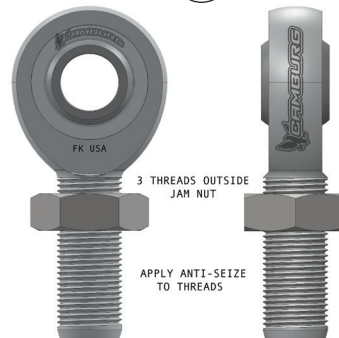
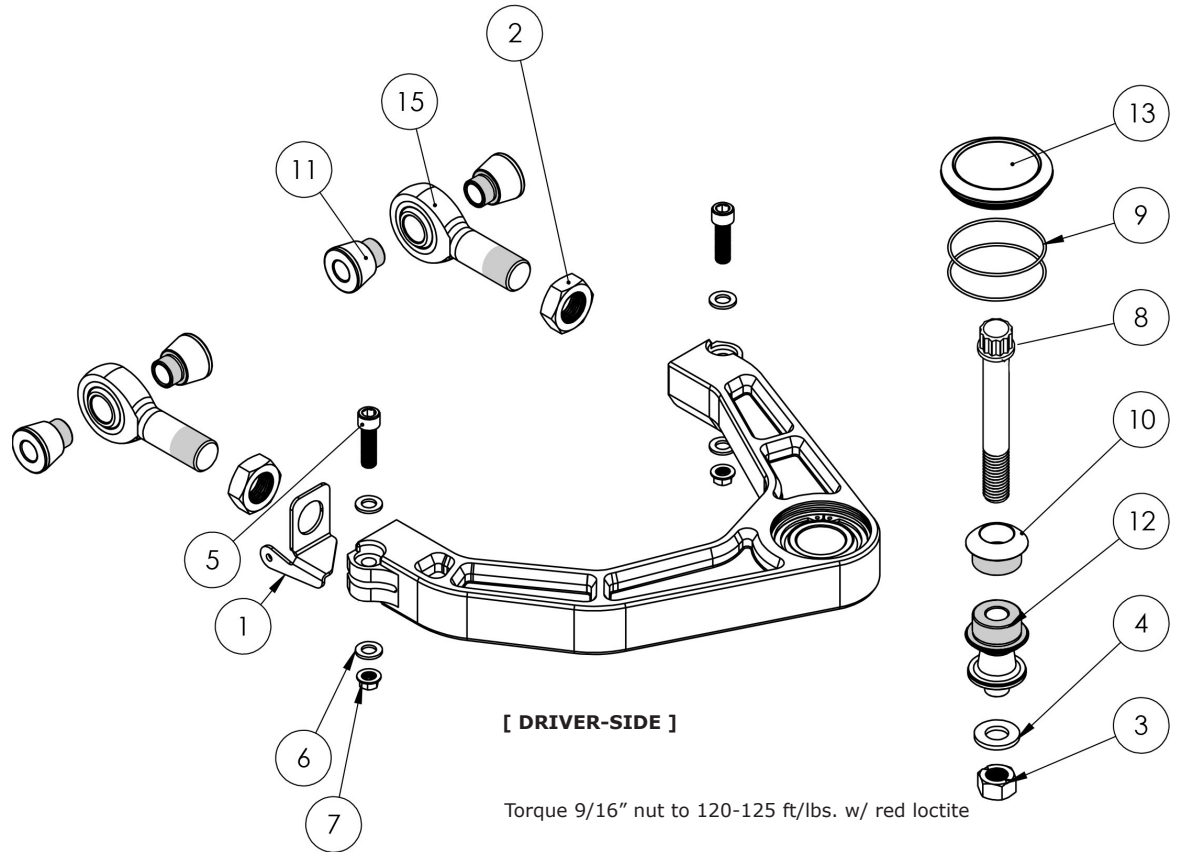
Use mild soap & water to clean the anodized aluminum surfaces, using chemicals can stain/dis-color the finish. Uniballs and heims are precision parts with tight tolerances which can lead to occasional noise when they become dirty. Occasionally wipe off the heims and underside of the uniball with a clean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

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: 35-37" x 12.50"
- Recommended wheel size: 17 X 8-9"
- Recommended wheel backspacing = 4.75-5.00"
- Maximum wheel backspacing = 5.75"

Fits Raptor and Raptor R models with factory wheels & 35-37" tires



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