

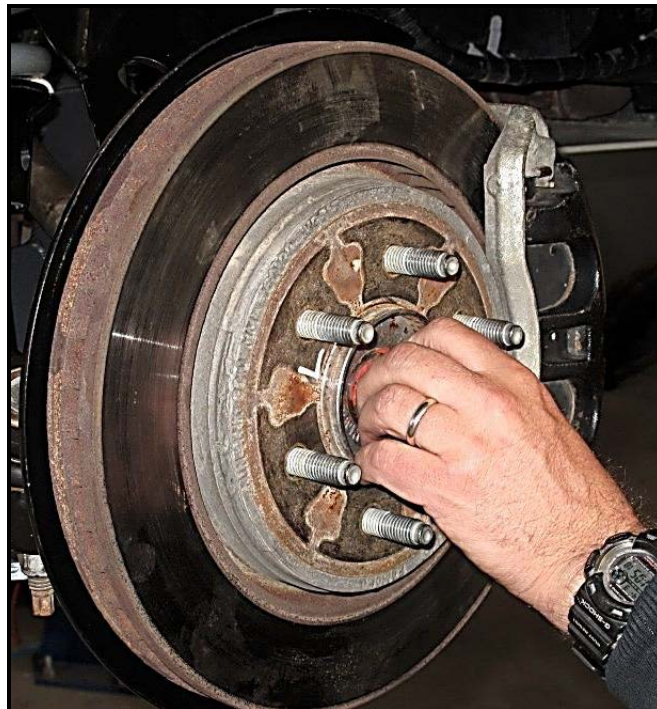
Part# 80515 Ford Raptor Uniball Lower Control Arms

Note:

- When balancing the front wheels, do not place weights on inside lip of the wheel. Use sticky weights, and place them at least one inch from the inside lip.
- Not compatible with the factory Ford Beadlock wheels.
- Installation of these control arms will reduce the turning radius by approximately four degrees.

Disassembly:

- With the vehicle on flat ground, jack up the front of the vehicle, and set the frame securely on jack stands.
- Remove the front wheels.
- Remove front calipers (21mm) and hang them out of the way.
- Remove the dust cap that covers the axle nut (do not damage, this needs to be reused and be air tight when re installed).



- Remove the axle nut (13mm).
- Remove the tie rod nut (21mm) and disconnect the tie rod from the knuckle.



- Remove the stock upper ball joint nut (21mm). Or if you already have Total Chaos UCAs you will need 7/8" and a 13/16" wrenches, and then disconnect the upper ball joint from the knuckle.



- Loosen the upper control arm bolts from the frame side (21mm).
- Loosen the lower stock ball joint nut (21mm) and disconnect the lower ball joint from the knuckle.

- As you lower the knuckle off of the lower ball joint, you will need to pull the knuckle out and pull the axle through the hub (this is easiest with two people).
- Once the knuckle is free, it will only be attached to the vehicle by the vacuum lines and the ABS wires. You will need to hang the Knuckle by a hook or strap making sure to not put tension on the vacuum and ABS lines.
- Remove the lower Shock bolt (27mm head, 30mm nut).
- Remove the sway bar link nut (18mm) from the lower control arm, and swing the link out of the lower control arm.
- Loosen the lower control arm pivot bolts (21mm head, 27mm nut), remove the bolts and remove the lower control arm from the vehicle.

Sway Bar Modification

- Remove the sway bar link from the sway bar itself (18mm).
- Measure from the bottom of the upper sway bar link 6 ¾" down the rod, mark with a sharpie, and cut the rod.
- Clean the burr off the cut end of the sway bar link and insert the link into the supplied bung.
- Mark the sway bar link where the bung ends and wire wheel the sway bar link so that when welded there will be maximum penetration.
- Re insert the sway bar rod into the bung and weld the bung to the sway bar link.
- After the weld is cool, paint the raw material, and re install the upper end of the sway bar link into the sway bar and tighten (18mm).

Cam Tab Gusset Installation

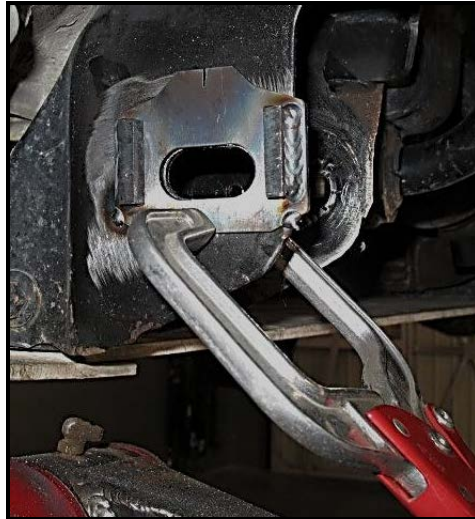
- Remove the paint from the back side of the front lower arm pivots, and the front side of the rear lower arm pivots.



- Using a small barrel sander or porting tool, open up the holes in the frame so that a 3/4" bolt will easily slide through the frame.



- Line up the slots in the new cam tabs with the slotted holes in the frame and using a clamp, clamp them to the frame.



- Double check that the holes are perfectly aligned by using a bolt through the hole.

- Tack weld the tab to the frame.

- Check one more time that the bolt will easily slide through the slotted hole, then weld the tab to the frame on both sides.



- Once the welds are cool, paint the raw parts of the frame and reinstall the lower control arms, making sure you insert the bolts with the welded cams into the new tabs so that the cams will be able to align the vehicle.



Installation (this whole process will be much easier with two people)

- Grease and install the new inner sleeves and bushings into the new lower control arms.
- Install the Zerk fittings into the pivots of the new lower control arms (3/8").
- Install the supplied tapered adapter/misalignment into the uniball and bolt the lower control arm to the knuckle.



- Hold the knuckle and lower control arm up and insert the axle into the hub.



- Once the axle is inserted into the hub, position the lower control arm pivots into the frame pockets and bolt the lower control arm to the vehicle.



- Pivot the lower control arm up and bolt the shock to the lower control arm.



-Connect the upper ball joint (or uniball) to the Knuckle.



- Bolt the axle to the knuckle and re install the dust cap with silicone (this dust cap must be air tight or the 4wd will not work).



- Re insert the tie rod into the knuckle.



- Re install the rotor and caliper.
- At this point tighten the caliper, lower control arm bolts, lower uniball through bolt (5/8" head 15/16" nut), upper control arm bolts, upper ball joint nut (or uniball bolt if you have Total Chaos UCA's), lower shock bolt, and tie rod nut.
- Mark the steering stop nub on the front of the spindle.



- Cut off the steering stop nub and sand smooth. (Failure to do so will result in drastic loss in turning radius, and damage to the front of the lower control arm)



- Take the 3/8" heim joint provided in the kit and thread on the jam nut.
- Thread the heim joint into the bung on the lower end of the sway bar link until there is 1 1/4" between the end of the bung and the center of the heim joint hole.
- Use the provided 3/8" socket head bolt (5/16" Allen) to fasten the heim joint to the lower control arm.



- Tighten the jam nut
- Double check tightness of all bolts before re installing wheels
- Re install and torque the wheels, and lower off of the jack stands.
- Have an alignment performed by a qualified professional who understands modified suspensions.
- Re-torque all hardware after 100 miles.

Part Number	Description	Quantity
80516L	Lower Arm Left Ford Raptor	1
80516R	Lower Arm Right Ford Raptor	1
FK-SJNR6	Jam Nut 3/8"-24 RHT	2
FK-HJMX6T	RHT 3/8"x3/8" High Angle	2
KTK-375TBRR750	3/8"-24 Threaded Bung For Sway Bar Link	2
59863	Cam Tab Lug	8
59867	Cam Tab Ford Raptor	4
10360	Bolt 3/4"-10x6" 12 Point	2
10365	Bolt 3/4"-10x6.5" 12 Point	2
12304	3/4" SAE Washer	4
11304	Nut 3/4"-10 C-Lock	4
10005	1/4"-28 90 Degree Zerk	4
10142	Bolt 5/8"-11x4.5"L 12 Point	2

10058C	1"-5/8" Hi Miss Spacer	2
10058FOR	04+ Ford F-150 Lower Tapered Adapter	2
12104	Washer 5/8" SAE	2
11105	Nut 5/8"-11 C-Lock SAE	2
10717	Bolt 3/8"-24x1.5" Socket head	2
68052	Inner Sleeve Lower Arm Front Raptor LCA	2
68053	Inner Sleeve Lower Arm Rear Raptor LCA	2
60893	07+ Tundra Bushings (Long)	4
60892	07+ Tundra Bushings (Short)	4
FK-WSSX16T-1	1" Stainless Uniball	2
30604	1" Snap Ring	2