



UPPER CONTROL ARM KIT

INST-1000-013 - Instructions

2021+ Ford Bronco

SKU: AOR-2000-0033





NOTICE

Vehicles that have been enhanced for off-road performance often have unique handling characteristics due to the higher center of gravity and larger tires. This vehicle may handle, react and stop differently than many passenger cars or unmodified vehicles, both on and off-road. You must drive your vehicle safely! Extreme care should always be taken to prevent vehicle rollover or loss of control, which can result in serious injury or even death. Always avoid sudden sharp turns or abrupt maneuvers and allow more time and distance for braking! AccuTune Offroad reminds you to fasten your seat belts at all times and reduce speed! We will gladly answer any questions concerning the design, function, maintenance and correct use of our products.

3 YEAR / 36K MILES WORRY FREE WARRANTY

To the original retail purchaser, AccuTune Offroad offers a 3 year / 36K mile warranty on all hard parts and wearable items as described below. If you have any failure that affects the use or integrity of the product, as confirmed by AccuTune Offroad, we will replace that part and cover ground shipping to get it to you. "3 Year/36K miles" based on whichever occurs first.

For warranty details please see www.accutuneoffroad.com/terms-conditions

ALIGNMENT

Plan on arranging for a professional alignment to be done on this vehicle once new Upper Control Arms have been installed. *Refer to the alignment specs on page 8 at the end of this guide.*

WARNING

Read all instructions from start to finish before beginning the installation process. Confirm you have all tools necessary to complete the job. AccuTune Offroad recommends installation be done by a qualified professional. Improper installation will void manufacturer warranty.

WARNING MESSAGES

Proper installation and service procedures are essential for the safe and reliable installation of chassis parts, requiring the experience and tools specially designed for this purpose. Installation and maintenance procedures for this product should be performed by a qualified service technician, to avoid potentially unsafe vehicle handling characteristics, which may result in SERIOUS INJURY or DEATH.

PAY CLOSE ATTENTION TO THE WARNING MESSAGES DISPLAYED IN THIS INSTALLATION GUIDE.

 **DANGER** WILL RESULT IN DEATH OR SERIOUS INJURY

 **WARNING** COULD RESULT IN DEATH OR SERIOUS INJURY



TECH NOTES & MAINTENANCE

AOR-2000-0033 Upper Control Arms come adjusted for optimal position from the factory. They can be adjusted if your vehicle has been in an accident, or if you are comfortable making advanced level changes to alignment. ****Note that changing the Heim positions is a DIY project that must be undertaken at your own risk. Moving the heim joints voids the warranty.***

All AccuTune Offroad Upper Control Arms have been designed to replace a factory control arm and be used with standard or extended travel coilovers. This UCA should be mounted to OEM mounts only. This Upper Control Arm will provide optimal alignment specs for 2-3" of lift and will improve fender clearance.

The ball joints come greased and ready to use out of the box. It is recommended the ball joints be greased every 15,000 miles or 1 year. We recommend using a high quality lithium based chassis grease. To access the grease Zerk fitting, pop up the ball joint cap. Do not over grease, a single pump of grease is sufficient. Wipe off any excess grease left behind. To reinstall the cap apply some Windex to the o-ring and slip a thick piece of plastic between the o-ring and cup during reinstallation. The plastic will help break the seal and let the air escape. Remove the plastic after installing the cup.

Heim joints don't require maintenance, but it is important to check them for play. If the Heim joints are loose and have any play, then they are worn out and need to be replaced. Replacement joints can be purchased separately from AccuTune Offroad.

Wheel/Tire Combo Notes:



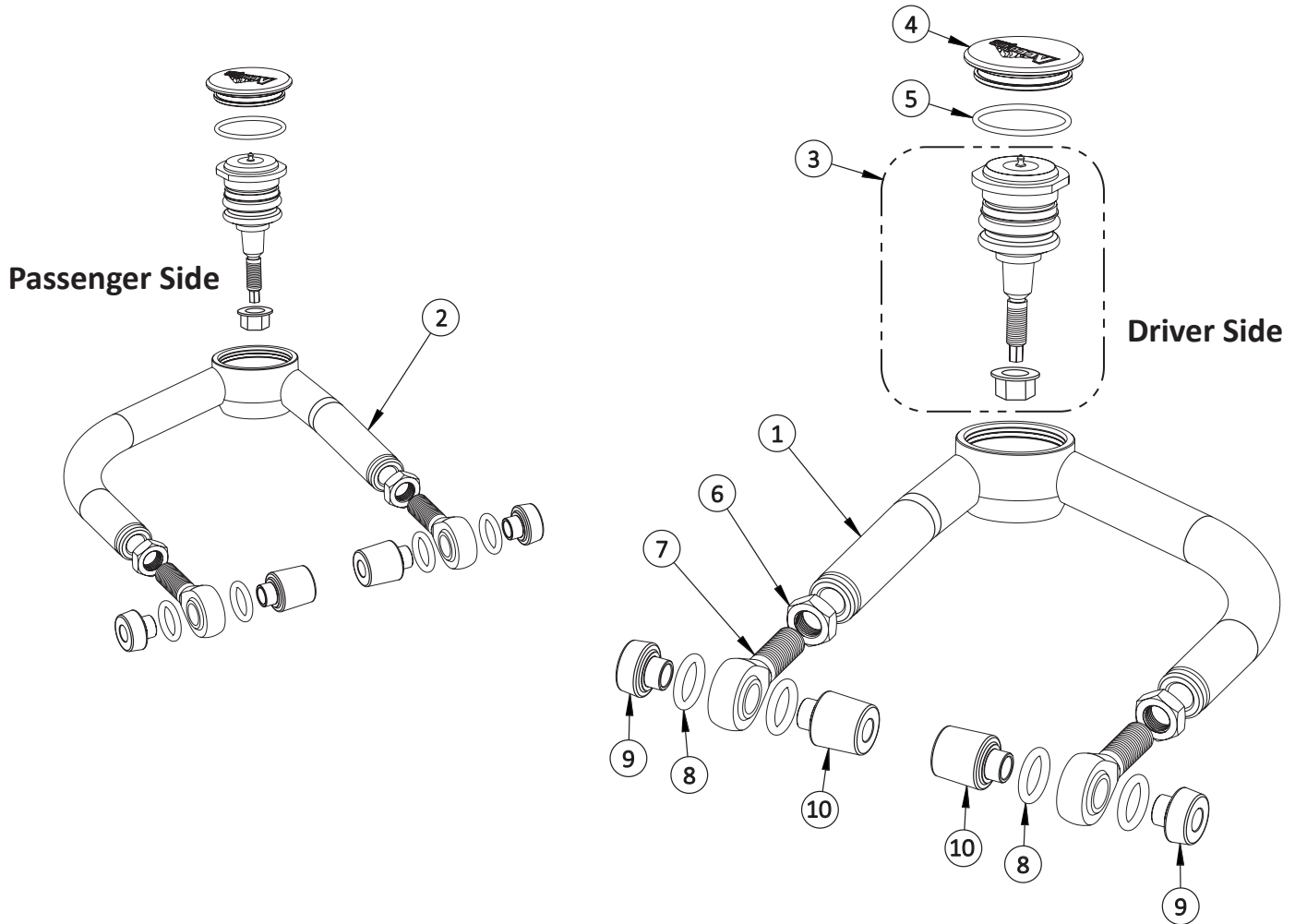
WARNING Due to the variety of manufacturers and options we cannot guarantee every tire and wheel fitment. We have been able to clear 37x12.50R/17 tires by removing the crash bars on the front of the chassis. The bumper and other related parts may need to be trimmed for tire clearance as well. Wheel offset recommendations: 17x8.5" wheel, with -8mm offset.

Coilover Shock Notes:



WARNING AccuTune Offroad Control Arms have been designed to work with shocks 24.6" extended maximum, measured from underneath the OEM frame mount to center of the lower shock mount. This includes any spacers.

These Upper Control arms are not designed to be used with a Long Travel Kit. Warranty void with aftermarket lower control arms. Many aftermarket lower control arms move the shock mount to wheel distance, which results in increased droop and may exceed the travel limitations of the ball joint.



PARTS LIST

ITEM #	DESCRIPTION	PART #	QTY
1	UCA, 22+ Bronco, Heim & BJ, Left, Powdercoated	2002-015-L-21	1
2	UCA, 22+ Bronco, Heim & BJ, Right, Powdercoated	2002-015-R-21	1
3	Ball Joint, All Metal, 22+ Bronco	2003-009	2
4	Ball Joint Cap	2002-006	2
5	O-Ring, NBR, 70A, General Purpose, -227	6102-000-227	2
6	Nut, Jam, Grade 5, Fine Thread, Gold Zinc, 0.75-16, 1.13" Hex x .42" OAL	3000-028-075	4
7	JM12-T, Heim Joints	FK-JM12T	4
8	O-Ring, NBR, 70A, General Purpose, -318	6102-000-318	8
9	Spacer JMX, 12 X .56 X 2.175 (SHORT)	4000-003-2175	4
10	Spacer JMX, 12 X .56 X 3.565 (LONG)	4000-003-3565	4



TOOLS NEEDED

Sockets / Wrenches: 10mm, 18mm, 21mm, & 24mm. Torque wrench.
Other: Large hammer, ball joint separator (or pickle fork), and Phillips screw driver.

Equipment: Preferably a 2-post lift, but floor jack with jack stands will work.

Estimated Install Time: 2 Hours (not including alignment or shock install)

REMOVAL

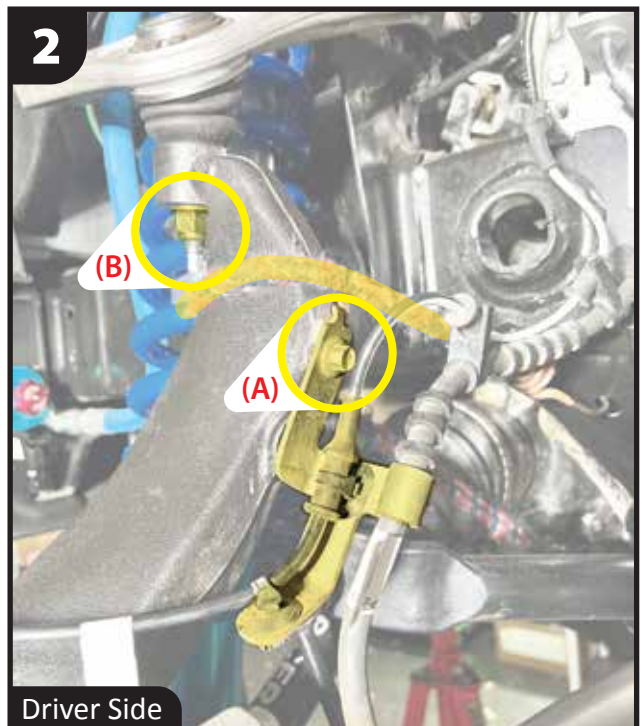
⚠ DANGER 1. Park vehicle on level ground. Use a floor jack to raise the vehicle tall enough for tires to be off the ground. Place the jack stands under the frame to support the vehicle. Remove the front wheels. NEVER get beneath a vehicle until you have fully ensured that the vehicle is completely secure and stable.



⚠ WARNING 2. Use a bungee cord, rope, or ratchet strap to support the knuckle during this phase of the disassembly. This will keep it from falling down as you separate the ball joint from the knuckle. **(A)** Use a 10 mm wrench to remove the bolt holding the ABS and brake lines attached to the knuckle. **NOTE: Be careful not to stretch these lines!**

(B) Use an 18 mm deep socket or wrench to loosen, but DO NOT remove, the upper ball joint nut. **Tech tip: Leaving the nut loosely attached, protects the ball joint threads from possibly being damaged. Do not remove at this time.**

NOTE: Your vehicle may have a suspension height sensor. You will need to carefully remove the height sensor arm bracket bolt and position it out of the way.

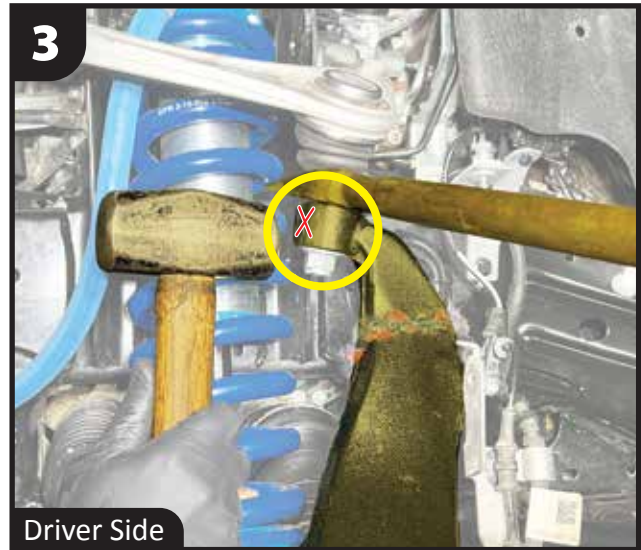


Driver Side

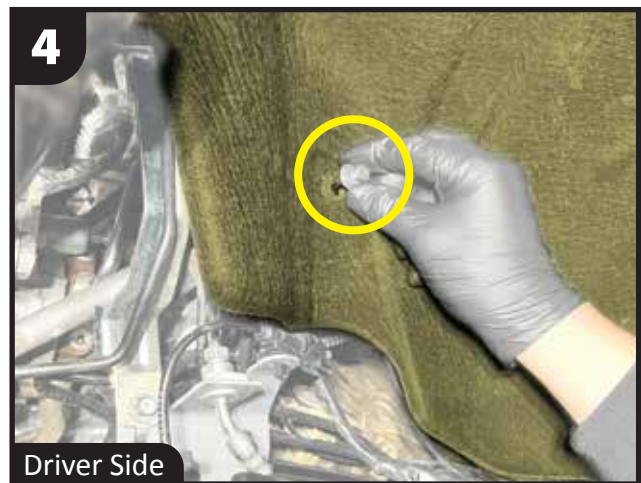
3. Use a pickle fork to apply leverage underneath the upper ball joint leaving it in place.

Using a hammer, lightly tap the spindle to break the tapered ball joint union free. Periodically check the leverage on the pickle fork to see if the tapered connection becomes dislodged.

Now fully remove the nut from the upper ball joint and separate the upper control arm with the spindle. **NOTE: The strap added earlier will help keep the knuckle from tilting outward, possibly damaging components.**



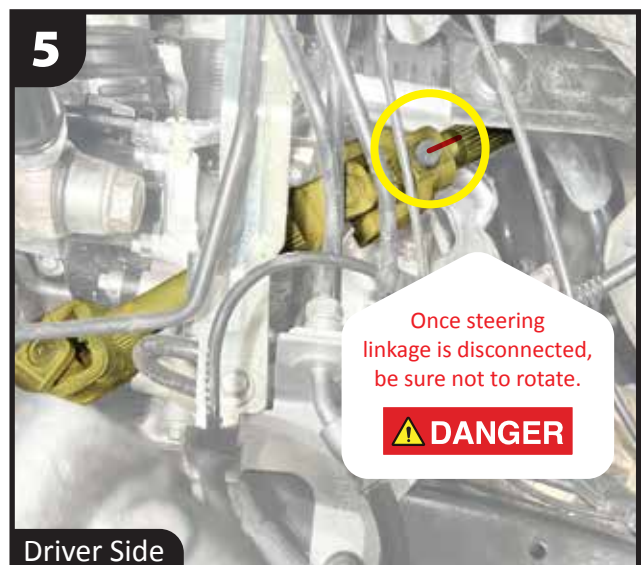
4. Remove the retainer clip on the fender liner to expose the steering joint connection. Bend the liner back, positioning it in an effort to allow access to the steering linkage and upper control arm bolt (both driver and passenger sides).



5. (Drivers side only) Use a paint pen to mark the connection between the steering column u-joint and shaft as shown in the illustration in order to reinstall it exactly as it was before.

Using a 10 mm wrench, remove the connector bolt for the steering linkage and push the shaft up towards the firewall to separate it from the u-joint connection. Do not allow the coupler to spin. This will provide clearance to remove the upper control arm bolt.

⚠ DANGER Do not rotate the steering linkage while disconnected to avoid damaging the steering wheel clock spring.



6. Remove the upper control arm pivot bolt holding the upper control arm to the frame pivot points. Use a 21 mm (A) socket / wrench on the nut and 24 mm (B) socket / wrench on the bolt and completely remove the pivot bolt. **Save for re-installation.** Remove upper control arm assembly by lifting the arm up and over the shock coil bucket.

NOTE: COILOVER SHOCKS

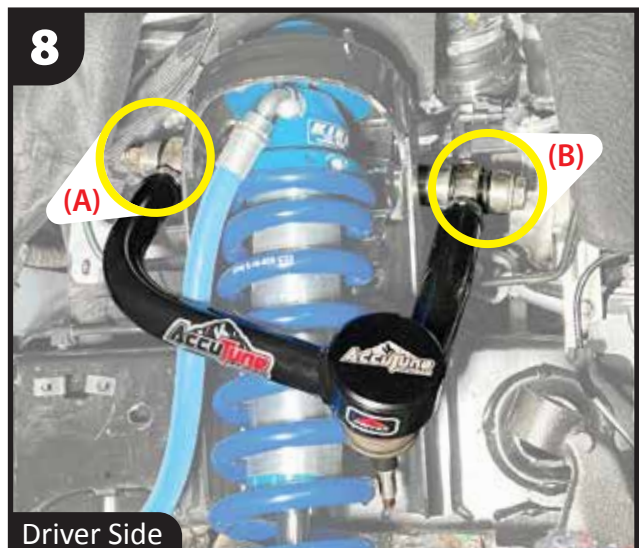
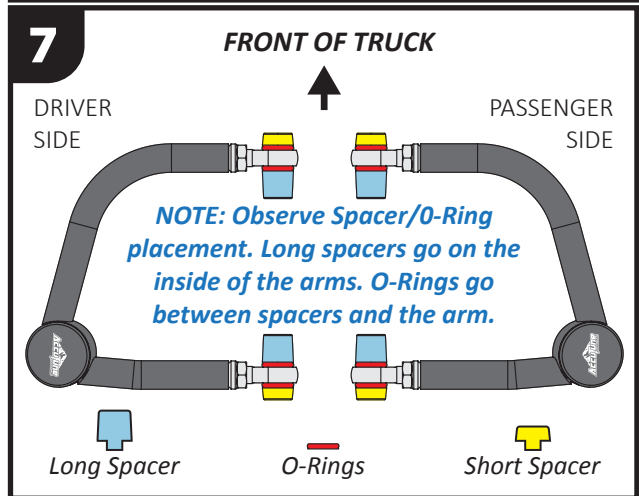
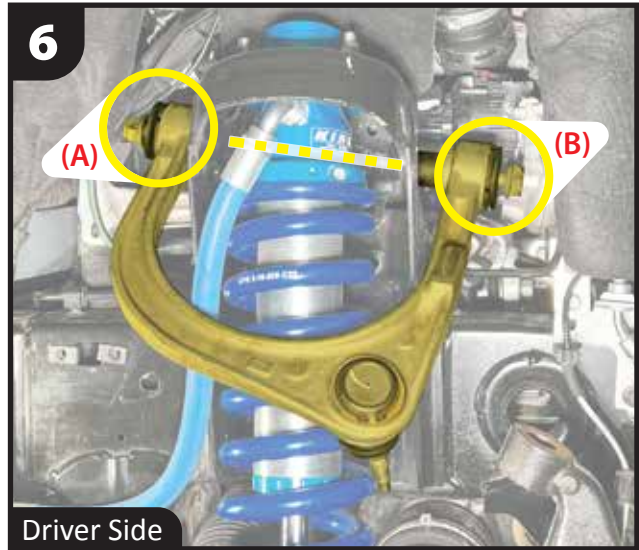
If you are installing aftermarket coilover shocks, now is the time to install them.

INSTALLATION

⚠️WARNING 7. The AccuTune Offroad Upper Control Arms come preset and do not need to be adjusted. If for some reason, the spacers and/or o-rings fall out of place during installation, be sure to reference the diagram to the right.

NOTE: You will need to dislodge the washer from the upper control arm pivot bolt saved from step 6. Only the bolt and nut are used in this kit. Using a large socket or other tubing that can fit over the flange of the bolt head, strike the washer until it is free from the bolt.

⚠️WARNING 8. Place the AccuTune Offroad UCA into place frame side first. Make sure to keep the spacers and o-rings in place as you align it to the frame pivot holes. Re-install the (B) pivot bolt and (A) nut. Torque to 122 ft-lbs.



⚠ DANGER 9. (Drivers side only) Now you can re-position and attach the steering joint connection. Make sure to position it so it is in the exact position it was before removal. Insert and tighten the bolt to 22 ft-lbs.

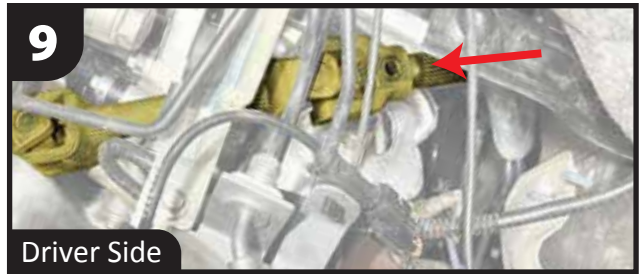
Re-position the fender liner and re-install the fender liner retainer clip.

⚠ DANGER 10. Rotate upper control arm down and insert the ball joint stud into the knuckle. Install 18 mm flanged nut with a deep socket wrench. Torque to 46 ft-lbs.

⚠ WARNING 11. Use a 10 mm wrench to re-install the ABS/brake line bracket with the OE bolt removed earlier. Torque it to 17 ft-lbs.

If your vehicle was equipped with the vehicle arm height sensor (see step 3), re-install this and torque the bolt to 53 ft-lbs.

(Repeat process on other side of vehicle)





CHECKLIST

- Check to make sure all bolts have been tightened and torqued to factory specs.
- UCA pivot bolt is torqued to 122 ft-lbs.
- Ball joint nut is torqued to 46 ft-lbs.
- Steering joint bolt is torqued to 20-30 ft-lbs.
- ABS/brake line bolt is torqued to 17 ft-lbs.
- Arm height sensor bracket bolt is torqued to 53 ft-lbs.
- Take vehicle to get a professional front end alignment (see below).
- Re-check all hardware after 500 miles/any off-road use.

ALIGNMENT NOTES:

Note to alignment tech: This customer is trying to fit larger tires than factory. We recommend starting the alignment with the factory cam settings.

	LEFT	RIGHT
Caster	$3.47^{\circ} \pm 0.60^{\circ}$	$3.47^{\circ} \pm 0.60^{\circ}$
Cross Caster	0.3° Max Diff	0.3° Max Diff
Camber	$-0.23^{\circ} \pm 0.50^{\circ}$	$-0.23^{\circ} \pm 0.50^{\circ}$
Cross Camber	0.3° Max Diff	0.3° Max Diff
Toe	$0.0^{\circ} \sim 0.15^{\circ}$	$0.0^{\circ} \sim 0.15^{\circ}$
Total Toe	$0.05^{\circ} \sim 0.3^{\circ}$	

Note that the Heim joints can be adjusted, but it is not recommended and we are not able to provide support for advanced installations of that nature.