



UPPER CONTROL ARM KIT

INST-1000-022 - Instructions

05-23 Toyota Tacoma

SKU: AOR-2000-0053

03-24 4Runner, FJ, GX460, GX470

SKU: AOR-2000-0054





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

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.

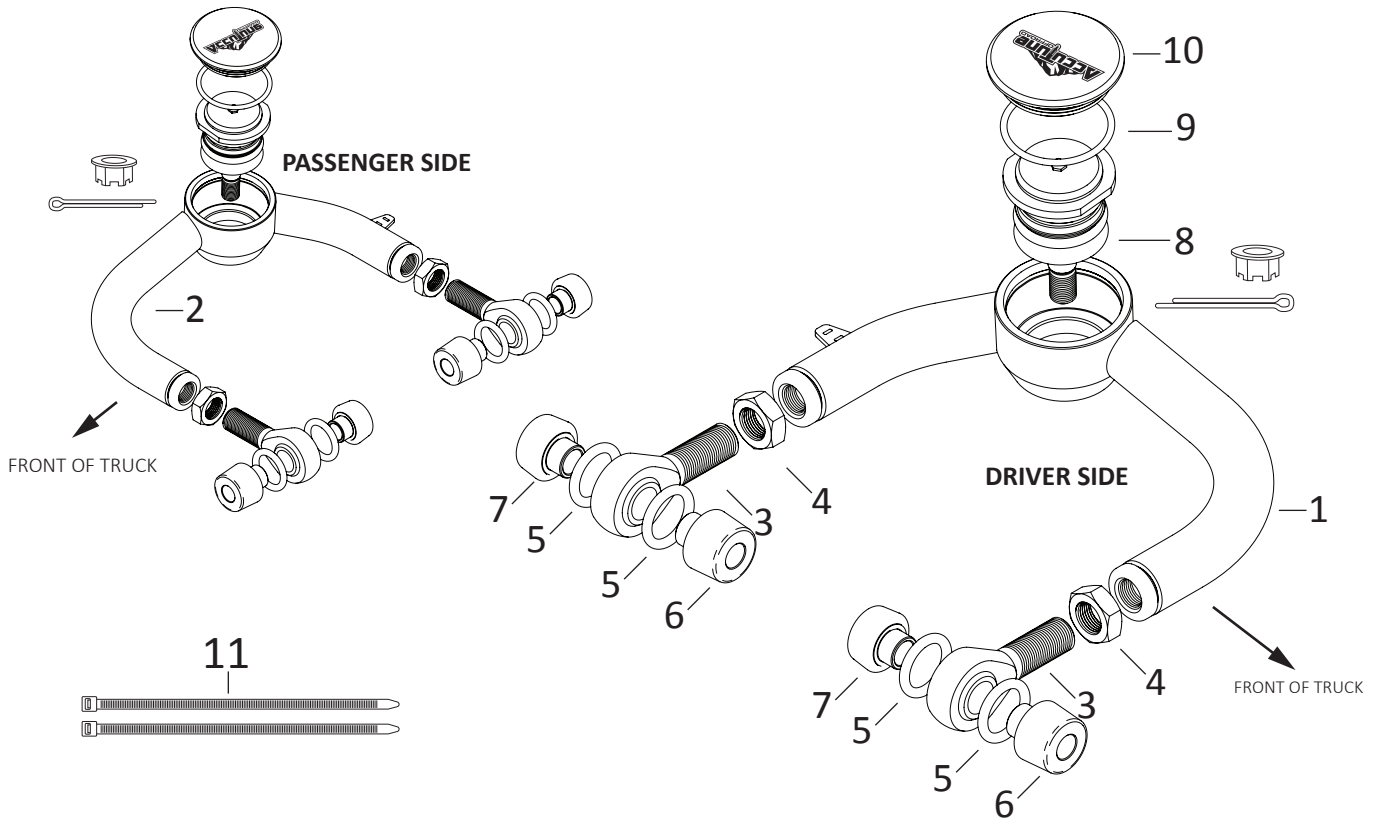
Wheel/Tire Combo Notes:

⚠ WARNING Due to the variety of manufactures and options we cannot guarantee every tire and wheel fitment. In general, tire sizes up to 285/70/17 have fit without the need of a cab mount chop. The bumper and other related parts may need to be trimmed for tire clearance. Wheel offset recommendations: 17x9 wheel, 4.5" backspacing.

Coilover Shock Notes:

⚠ WARNING AccuTune Offroad Control Arms have been designed to work with shocks 22.6" 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, 05-23 TACO, 03-24 4RNR, GX460/470, Heim, Steel, Left Side	2002-028-L-21	1
2	UCA, 05-23 TACO, 03-24 4RNR, GX460/470, Heim, Steel, Right Side	2002-028-R-21	1
3	Rod End, Alloy Steel, 3/4, PTFE	FK-JM12T	4
4	Nut, Jam, Grade 5, Fine Thread, 0.75-16, 1.13" Hex x .42" OAL	3000-028-075	4
5	O-Ring, FKM, 70A-75A, Dynamic, -319	6102-012-319	8
6	Heim Spacers - Long	4000-003-2875	4
7	Heim Spacers - Short	4000-003-2175	4
8	Ball Joint, Directional, PM, 05-23 Tacoma	2003-010	2
8	Ball Joint, Directional, PM, 03-24 4Runner, FJ, GX460, GX470	2003-011	2
9	O-Ring, NBR, 70A, General Purpose, -227	6102-000-227	2
10	Cap, Ball Joint Cover, 2.75 OD X 0.83 OAL	2002-006	2
11	Cable Tie, Black, 40 lb, UV Resistant, .14" Wide x 5.00" Long	3000-027-19-500	2



TOOLS NEEDED

Sockets / Wrenches: 10mm, 19mm, 21mm, 22mm 3/8", 5/16", 7/64" Allen Wrench, Torque Wrench

Other: Large Hammer, Flat Head Screwdriver, Needle Nose Pliers, Flush Cutters, Ratchet Strap

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)

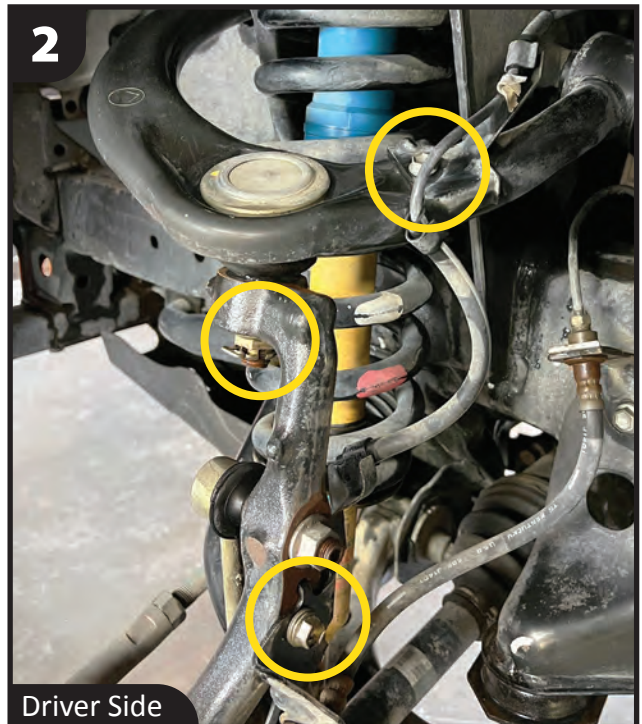
REMOVAL

⚠ 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.



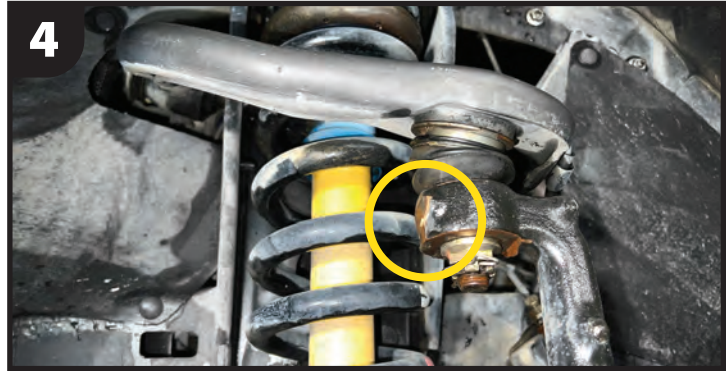
⚠ WARNING 2. Unclip ABS line on factory upper control arm and remove mounting bracket on the spindle. Be careful with ABS lines. Do not stretch or damage.

3. Remove cotter pin from ball joint and loosen castle nut with (19mm or 22mm, Taco & T4R respectively) socket wrench (do not remove).

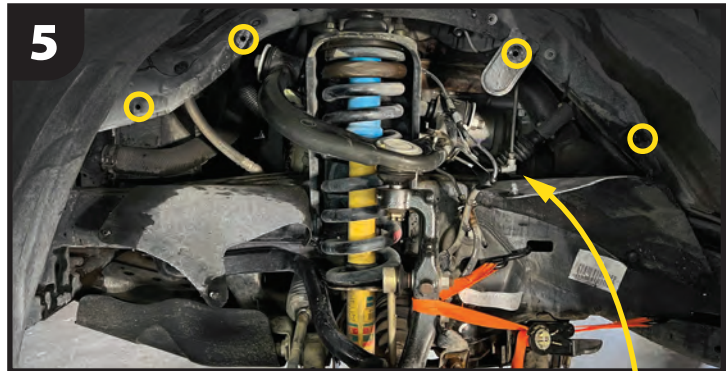


Driver Side

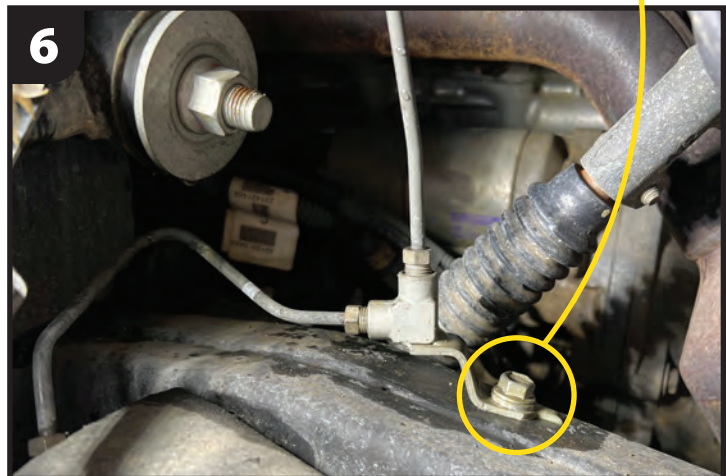
4. Using a hammer, hit the flat spot on the spindle to release the tapered ball joint stud from the spindle. It may take a few hits to break loose. Remove the ball joint from the spindle and lean to the side. We recommend using a ratchet strap to prevent the brake lines from being stretched.



5. Undo the top portion of the splash guards, 2 plastic clips on each side.



⚠️ WARNING 6. Unbolt the brake line bracket from frame side with a 12mm socket. This is making room for removing/replacing the upper control arm cross bolt.



7. Upper control arm cross bolt. There is one long bolt holding the upper control arm to the frame pivot points. From the Factory, this bolt is installed from front to back making it very difficult to remove. You can bend a piece of the inner fender near the bolt head to allow access to the bolt (show picture of location). Remove nut and bolt with a 19mm socket and wrench. Control arm should be free, and can be removed.

*Note, some have chosen to cut the bolt head off to remove. This is an option, but can be risky using a sawzall. PN of Toyota OEM cross bolt is 90105A0095

COILOVER SHOCKS

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

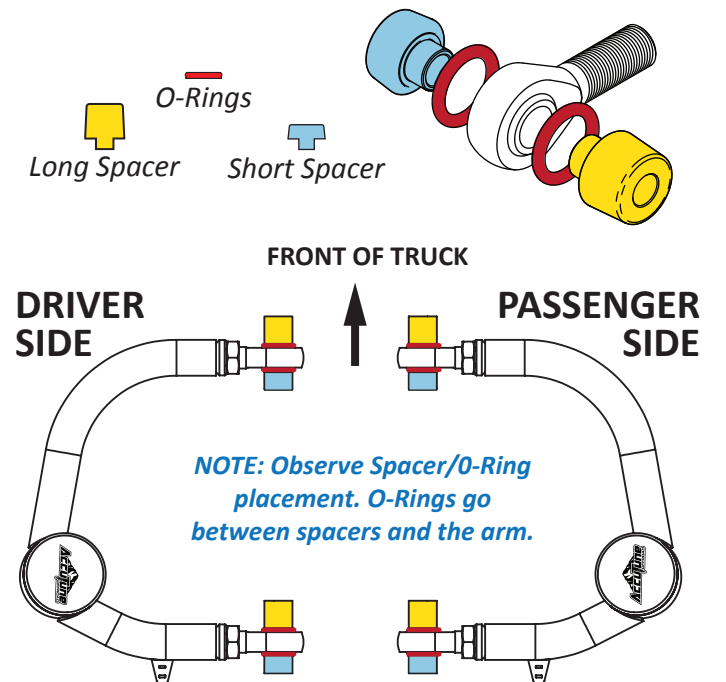
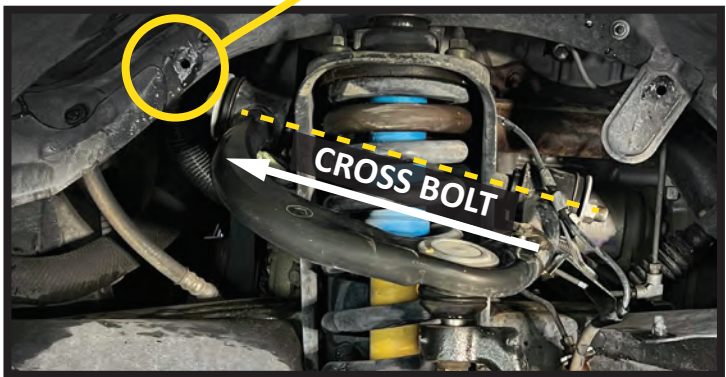
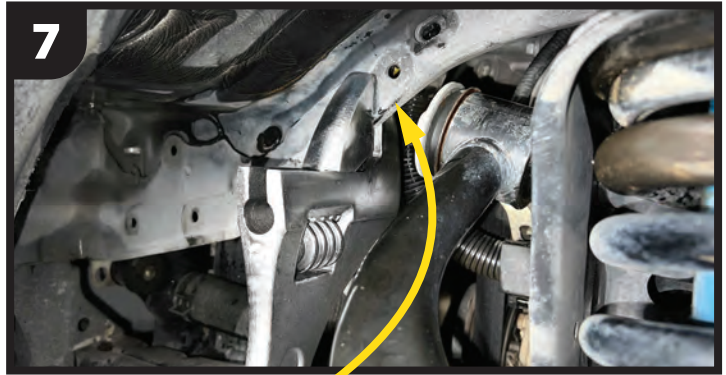
INSTALL

⚠️WARNING 1. AccuTune Off-Road Upper Adjustable Control Arms come preset and do not need to be adjusted. [See Diagram] Assemble Heim Joint Spacers and Heim Joint O-Ring Seals on upper control arms.

2. Place the UCA into place frame side first. Install the cross bolt and Torque to 85ft lbs.

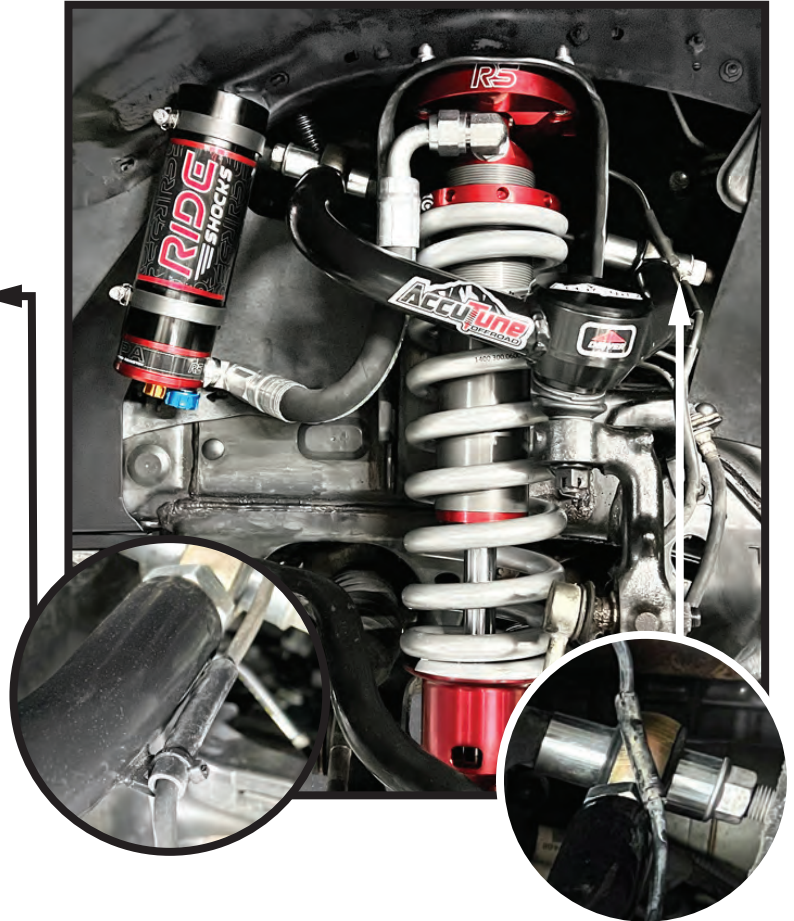
⚠️WARNING Do not reuse factory washers on cross bolt.

3. Rotate UCA down to locate ball joint stud in spindle. Install castle nut with socket wrench (19mm) . Tighten the castle nut to 82 ft lb and continue to tighten until the cotter pin hole is lined up and you can feed the new cotter pin through. If the cotter pin hole lines up at 80ft-lb we recommend continuing to tighten to the next hole. Secure cotter pin through



⚠ DANGER

4. Reattach brake line brackets on frame.
5. The shock is at full droop right now, so the ABS line should have more slack on the chassis side than spindle side of the UCA. Be sure ABS line is routed over the cross bolt and not under. Secure ABS line on upper control arm with supplied zip tie. Slide OE rubber sleeve to zip tie tab. Reattach the ABS bracket to the spindle.
6. Reinstall inner fender splash guards with clips.
7. Check to make sure all bolts have been tightened and torqued to factory specs.
8. Repeat process on other side of vehicle.
9. Take vehicle to get a professional alignment.



CHECKLIST

- UCA Cross bolt is torqued to 85ft lbs
- Ball Joint castle nut is torqued to 80ft lbs and cotter pin secured
- ABS line has been secured to UCA with zip tie
- Wheels have been re-installed and lug nuts torqued
- Ready for Alignment



ALIGNMENT NOTES:

Note to alignment tech: This customer is trying to fit larger tires than factory, and the wheel needs to move as far forward in the fender as possible for them to clear the firewall. The ideal final setting which results in the most clearance is for the front cam to be all the way in, and the rear cam all the way out. We recommend starting the alignment with the rear cam adjustment all the way out and the front cam vertical. Our alignment specs are different from the factory to aid in moving the tire forward, and to improve handling. Please disregard the factory specs, and use those published below:

	LEFT	RIGHT
CASTER	2.0° ~ 4.0°	2.0° ~ 4.0°
CROSS CASTER	0.3° Max Difference	
CAMBER	-0.5° ~ 0.8°	-0.5° ~ 0.8°
CROSS CAMBER	0.3° Max Difference	
TOE	0.0° ~ 0.15°	0.0° ~ 0.15°
TOTAL TOE	0.05° ~ 0.3°	

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.