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Revisions			
Rev.	Description	Date	Approved
A	Initial Release Per ECO 17-006	1/16/17	A.S.



## Jeep TJ/LJ Rear Upper Control Arm Installation Instructions

Applications:  
1997-2006 Jeep Wrangler (TJ and LJ)



TITLE:  
**JEEP TJ/LJ REAR UPPER CONTROL  
ARM INSTALLATION INSTRUCTIONS**

SIZE	DWG NO:	REV
<b>A</b>	<b>8152-INST</b>	<b>A</b>
	SCALE: N/A	PAGE 1 OF 7



## JEEP TJ/LJ REAR UPPER CONTROL ARM INSTALLATION INSTRUCTIONS

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Thank you for purchasing the best aftermarket products available for your vehicle. We strongly feel that the parts you are about to install should meet or exceed your expectations for performance. Proper assembly is critical to the performance of these components and the vehicle as a whole. Please take the time to carefully read these instructions and familiarize yourself with the installation procedure before working on your vehicle. If you have any questions PLEASE contact Synergy Manufacturing BEFORE beginning installation. Thanks again for supporting Synergy – enjoy the performance benefits of the best aftermarket products available for your vehicle!

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Modifying or otherwise altering vehicle components may cause the vehicle to handle differently than originally designed. It is the driver's responsibility to familiarize themselves with the performance and handling characteristics of the modified vehicle. Vehicles with larger diameter than stock tires must be driven carefully and cannot be expected to perform as stock or meet OEM performance with regard to handling, braking or crash performance. Ensure all replacement components are compatible with vehicle capacities so as not to overload components, especially tires. It is up to the individual to ensure that the vehicle and all components are compatible with the intended vehicle use, including load ratings, road conditions, and driver abilities. Thorough and frequent vehicle inspections are recommended to ensure a safe and reliable state of readiness, especially after off-highway use.



## Parts List

<b>8152 JEEP TJ/LJ REAR UPPER CONTROL ARM KIT</b>		
<b>QTY</b>	<b>Part Number</b>	<b>Description</b>
2	815201	JEEP TJ/LJ REAR UPPER CONTROL ARM, ASSEMBLED

## General Notes

- These instructions are also available on our website: [www.synergymfg.com](http://www.synergymfg.com). Check the website before you begin for any updated instructions and additional photos for your reference.
- These rear control arms are adjustable and designed for applications with 0-4” of lift.
- Stock TJ rear upper control arms are 13.5”. Depending on driveshaft and lift height, your final adjusted control arm length will vary.

## Tools Needed

- Basic hand tools
- Jack and jack stands
- Tape measure and angle finder

## Estimated Installation Time

**1-2 Hours**



## Pre-Installation Checklist

- Are all other suspension components in good shape?
- Have the driveline components been greased lately?
- Would this be a good time to rotate your tires?

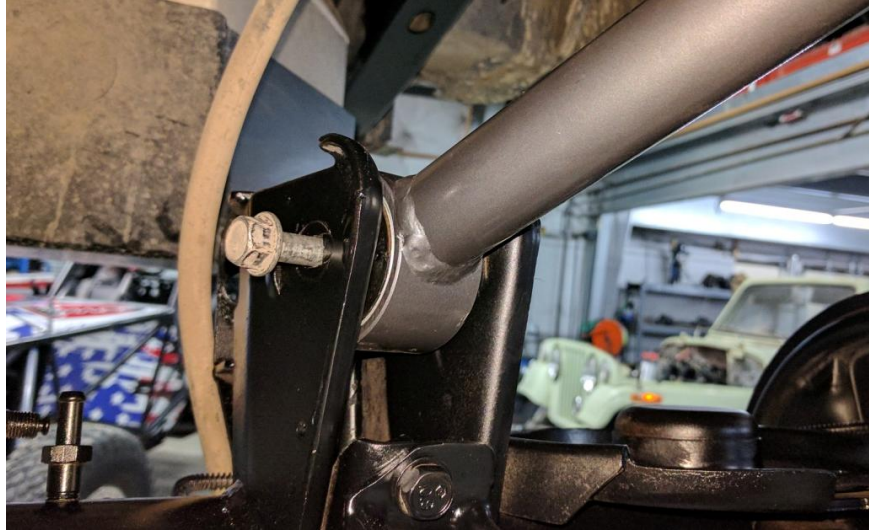
## Replacement Parts

Bushings and tie rod ends are considered wear parts. Under normal conditions and with a vehicle that is well maintained, the components should last many tens of thousands of miles. However, in the case of component wear, the following parts are available from Synergy Manufacturing for replacement:

<b>8152 TJ/LJ Rear Upper Control Arm Replacement Parts</b>		
<b>QTY</b>	<b>Part Number</b>	<b>Description</b>
4	4321-02	Control Arm Bushing

## Installation

1. Jack up the vehicle and support the frame with jack stands to that the axle is allowed to hang free. Removing the wheels and tires is not necessary. Place the jack under the rear pinion and raise the jack so that it just supports the pinion.
2. Remove the stock hardware securing the brake lines to the factory control arms.
3. Remove the axle side upper control arm bolts. **See Figure 1.**



**Figure 1. Removing Axle Side Rear Upper Control Arm Bolt**

4. Remove the frame side upper control arm bolts. These have a ‘flag’ nut on the back side that will spin until they encounter the frame. The bolt on the passenger size may be difficult to remove depending on the exhaust configuration. It may be necessary to move or remove the muffler to remove the bolt. **See Figure 2.**



**Figure 2. Passenger Side Frame Side Rear Upper Control Arm Bolt**

5. Make sure the Synergy Adjustable Arms are adjusted to their shortest length before installing. The silver double adjuster should be bottomed in the grey arm and the black bushing housing should be bottomed in the silver adjuster. There are both right hand and left hand threads. Install the Synergy Adjustable Arms, with the adjuster side on the frame side, and the pinch bolts pointing down. Start with the bolts on the frame side.
6. Install the axle side control arm bolts. Use the jack under the pinion to move the axle so that the bolt is able to pass through. **See Figure 3.**



**Figure 3. Installed Upper Control Arm**

7. Once installed, remove the jack from under the pinion and adjust the arm length to the approximate desired length by turning the zinc plated Double Adjusters. Torque the frame and axle side control arm bolts to 55 lb-ft.
8. Zip tie or otherwise secure any brake lines so that they will not be pinched or stretched.
9. Remove the jack stands and put the Jeep back on the ground. Re-measure the pinion angle and verify it is correct. If it is not correct, turn the silver adjusters on the Synergy control arms to adjust. Make sure both arms are the same length.
10. Once the pinion angle is correct, tighten the pinch bolts to 90 lb-ft.

### Notes:

**Adjusting control arm length:** Length depends on lift height and drive shaft configuration. For a stock type driveshaft, the rule of thumb is to adjust the arms so that the pinion yoke and output shaft of the transfer case are at the same angle, so that both u-joints see a similar operating angle. A stock driveshaft will only work on short lift heights or with dropped transfer cases. For a CV type driveshaft (SYE equipped Jeeps), typically the pinion yoke is pointed 2 degrees below parallel to the driveshaft.

**Troubleshooting:** If vibration is experienced during acceleration (on the throttle), then typically it means the pinion is too high. Try adjusting the arms shorter to fix. If vibration is experienced on deceleration (off throttle) then typically it means the pinion is too low. Try adjusting the arms longer to raise the pinion. In some cases the arms will not have enough adjustment. In these cases adjustable lower control arms will be required. Synergy part number 8153.



Installation is Complete

## Post-Installation Checklist

- Did you remember to torque all the hardware?
- Did you find any worn out parts during the install that should be replaced? Get the new parts on order!
- Do not forget to re-torque all hardware after a few hundred miles.