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## INSTALLATION INSTRUCTIONS FOR: RE4541 2007-2013 JEEP WRANGLER JK 3-LINK UPGRADE KIT

### **Safety Warning:**

Suspension systems or components that enhance the off-road performance of your vehicle may cause it to handle differently, on and off-road, than it did from the factory. Care must be taken to prevent loss of control or vehicle rollover during sudden maneuvers. Failure to drive the vehicle safely may result in serious injury or death to driver and passengers. We recommend you always wear your seatbelt, drive safely and avoid quick turns and other sudden maneuvers. Constant maintenance is required to keep your vehicle safe. Thoroughly inspect your vehicle before and after every off-road use.

### **Installation Warning:**

We recommend that certified technicians perform the installations of our products. Attempts to install these products without knowledge or experience may jeopardize the safety of the vehicle. These instructions only cover the installation of our products and may not include factory procedures for disassembly and reassembly of factory components. Read instructions from start to finish and be sure all parts are present before disassembling the vehicle. Included instructions are guidelines only for recommended procedures and in no way are meant to be definitive. Installer is responsible to insure a safe and controllable vehicle after performing modifications. Do not perform test drives on public roads with partially completed installations. Always double and triple check your work before use.

**ESP WARNING NOTE:** The 2007+ Jeep Wrangler JK is equipped an Electric Stability Program (ESP). This system is designed to help control the vehicle in times of uncertain traction conditions and roll stability. Due to the complex nature of this program Rubicon Express strongly suggest that after lifting the vehicle it is returned to the dealer for a computer "flash" to re address tire size and proper ESP control settings. Rubicon Express also recommends that you become familiar with the ESP controls and how the different level of settings can help you to keep better control of your vehicle.

### **Kit contents**

<b><u>RE4540 3-Link Upper Arm: (Box 1)</u></b>		8	1/2"-13 Stover Nut Gr. C
		16	1/2" Hardened Flat Washer
1	88-RM31001 Upper Arm: JK 3-Link	2	9/16"-12 X 4 1/2" Hex bolt Gr. 8
		2	9/16"-12 Stover nut Gr. C
		4	9/16" Hardened Flat Washer
	<b><u>RE4541 3-Link Axle Truss Kit: (Box 2)</u></b>	1	HWC15001 Hardware Pack: Upper Arm Bracket
1	86-RM24001 Upper Arm Mounting Bracket	1	7/16"-14 X 2 1/2" Hex Bolt
1	35-RM14001 3/8" Sleeve	1	7/16"-14 Stover Nut Gr. C
1	35-RM14002 7/16" Sleeve	2	7/16" Hardened Flat Washer
2	86-RM24002 Axle Truss Half Clamp	1	3/8"-16 X 3" Hex Bolt Gr. 8
1	86-RM24004 Rear Axle Truss	1	3/8"-16 Stover Nut Gr. C
1	35-RM24011 Differential Support Plate: Dana 44	2	3/8" Hardened Flat Washer
1	HWC15002 Hardware Pack: Axle Truss		
2	3/8"-16 X 1" Hex Bolt Gr. 8		
2	3/8"-16 Stover nut Gr. C		
4	3/8" Hardened Flat Washer		
8	1/2"-13 X 3 1/4" Hex Bolt Gr. 8	2	88-RM31060 Control arm JK LA w/o Mounts

### **OPTIONAL EQUIPMENT BOX: (Purchased Separately)**

### **RE4542 3-Link Lower Control Arm w/o Brackets:**

### **REQUIRED TOOLS:**

Basic mechanics' hand tools	Jack Stands
Vehicle Hoist	Floor Jacks
Fluid Drain Pan	New Differential Fluid

## Installation Overview

The installation can be broken down into the following tasks:

1. Installation of the upper arm mounting bracket
2. Installation of the rear axle truss assembly
3. Installation of the upper control arm
4. Installation of the lower control arms (Optional)

### Step 1 – Upper arm Mounting Bracket Installation

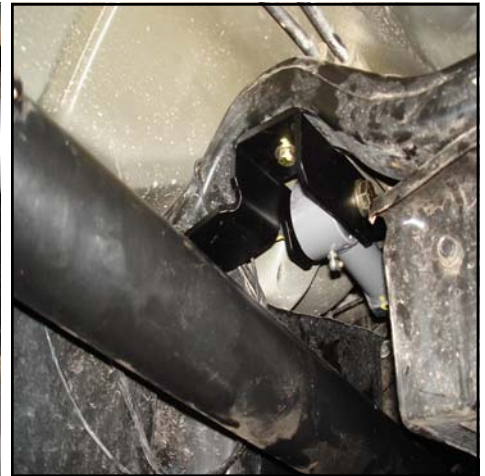
1. Using a floor jack, support the gas tank. Unbolt and remove the two inboard bolts toward the rear of the gas tank. **(Photo #1)**
2. Install the 3/8" (35-RM14001) and 7/16" (35-RM14002) sleeves into the corresponding holes in the frame crossmember. Hold the upper arm mounting bracket (86-RMS24001) against the crossmember. The hole in the tab on the bracket should align with the previously removed gas tank bolt holes. **(Photo #2 & 3)**
3. Reinstall and start the previously removed OE gas tank bolts, but do not tighten. Install the 3/8" x 3" bolt and hardware through the previously installed 3/8" spacer. Install the 7/16" x 2 1/2" bolt and hardware through the previously installed 7/16" spacer. Tighten all of the upper arm mounting bracket hardware at this time. 3/8" to 35 ft./lbs and 7/16" to 50 ft./lbs. **(Photo #1,2 & 3)**



**(Photo #1)**



**(Photo #2)**



**(Photo #3)**

### Step 2– Rear Axle Truss Installation

1. Prepare the rear axle by Removing the differential cover and the differential vent line from the rear axle housing.  
**NOTE: Be sure to have a drain pan positioned underneath the differential before removing the cover.**
2. Temporarily fit the differential support plate (35-RM24011) to the rear axle using the (10) previously removed OE differential cover bolts. **(Photo #4)**
3. Test fit the axle truss (86-RM24004) to the rear axle and the differential support plate. Look for any interference at this time. **NOTE: Be sure the (2) holes in the front of the axle truss line up with the (2) upper holes on the differential support plate.** Secure using the (2) 3/8" x 1" bolts and hardware. **(Photo #4)**
4. Once proper fitment has been verified, install the (2) axle truss half clamps (86-RM24002) using the provided (4) 1/2" x 3 1/4" bolts and hardware. Tighten 1/2" hardware to 85 ft./lbs.
5. Unbolt and remove the axle support plate. **(Photo #5 & 6)**
6. Reinstall the differential support plate and differential cover using silicone sealer on both sides of the differential support plate. Secure using the (10) previously removed OE bolts.
7. Install the (2) 3/8" x 1" upper bolts and hardware after the differential cover is secured. Tighten all of the axle truss and differential support plate hardware to 35 ft./lbs. at this time. **(Photo #5)**

8. Reinstall the rear axle vent line.



(Photo #4)



(Photo #5)



(Photo #6)

### **Step 3– Upper Arm Installation**

1. Install the bushing end of the upper arm (88-RMS31001) into the rear axle truss mounting pocket using the supplied 9/16" x 4 1/2" bolt and hardware. **(Photo #6)**
2. Adjust the coupler end of the upper arm so it fits correctly into the upper arm mounting bracket (86-RMS24001) using the supplied 9/16" x 4 1/2" bolt and hardware.
3. With the vehicle at ride height, check the rear axle pinion angle. Adjust if necessary. **(Photo #3)**
4. Once the proper pinion angle has been verified, remove the (2) existing upper arms from the rear axle and lower arms. Tighten the newly installed 9/16" upper arm hardware to **130 ft./lbs.**

**NOTE: Do not tighten the rubber bushing until the vehicle is on the ground to avoid bushing preload. (Photo #3 & 6)**

5. Refill the rear differential with fluid according to factory specifications.

### **\*Step 4- Lower Control Arm Kit (\*Optional- RE4542 Kit Sold Separately)**

1. Prepare the rear of the vehicle by unbolting and removing the lower control arms from the vehicle. Save the control arm mounting bolts for reinstallation.
2. Install the bushing end of the lower arm (88-RM31060) into the rear axle mounting pocket using the previously removed 9/16" x 4 1/2" bolt and hardware.
3. Install the coupler end of the lower arm into the lower arm mounting bracket using the previously removed 9/16" x 4 1/2" bolt and hardware. Tighten the 9/16" lower arm hardware to **130 ft./lbs.**

**NOTE: Do not tighten the rubber bushing until the vehicle is on the ground to avoid bushing preload.**

### **Installation review:**

1. Torque all the bolts to factory specifications. Be sure to double check your work.
2. With the vehicle on the ground, tighten the upper and lower control arm bushing end 9/16" bolts.
3. Set the pinion angle to factory specifications.
4. Recheck all bolts after 50 miles and again after every off road excursion.

### **Troubleshooting:**

**Acceleration Vibration:** Caused by the pinion being too high in relation to the transfer case output shaft. Adjust the upper control arm to lower the pinion accordingly.

**Deceleration Vibration:** Caused by the pinion being too low in relation to the transfer case output shaft. Adjust the upper control arm to raise the pinion accordingly.



## RUBICON EXPRESS ADVANTAGE LIFETIME WARRANTY

### ***Notice to Owner, Operator, Dealer and Installer:***

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! Rubicon Express 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.

Please make sure that the Dealer / Installer explains and delivers all warning notices, warranty forms and instruction sheets included with Rubicon Express product.

Application listings in this catalog have been carefully fit checked for each model and year denoted. However, Rubicon Express reserves the right to update as necessary, without notice, and will not be held responsible for misprints, changes or variations made by vehicle manufacturers. Please call when in question regarding new model year, vehicles not listed by specific body or chassis styles or vehicles not originally distributed in the USA.

Please note that certain mechanical aspects of any suspension lift product may accelerate ordinary wear of original equipment components. Further, installation of certain Rubicon Express products may void the vehicle's factory warranty as it pertains to certain covered parts; it is the consumer's responsibility to check with their local dealer for warranty coverage before installation of the lift.

### ***Warranty and Return Policy:***

Rubicon Express warrants its full line of products to be free from defects in workmanship and materials for the life of the product. Rubicon Express's obligation under this warranty is limited to repair or replacement, at Rubicon Express's option, of the defective product. Any and all costs of removal, installation, freight or incidental or consequential damages are expressly excluded from this warranty. Rubicon Express is not responsible for damages and / or warranty of other vehicle parts related or non-related to the installation of Rubicon Express product. A consumer who makes the decision to modify his vehicle with aftermarket components of any kind will assume all risk and responsibility for potential damages incurred as a result of their chosen modifications.

Warranty coverage does not include consumer opinions regarding ride comfort, fitment and design. Warranty claims can be made directly with Rubicon Express or at any factory authorized Rubicon Express dealer.

### ***Claims not covered under warranty:***

- Parts subject to normal wear; this includes bushings\*, shock absorbers, driveshafts, ball joints, tie rod ends and heim joints.
- Discontinued products at Rubicon Express's discretion.
- Finish after 90 days.

Rubicon Express accepts no responsibility for any altered product, improper installation, lack of or improper maintenance or improper use of our products.

**\*Rubicon Express PT-MEG Super-Ride bushings are covered by the Rubicon Express Advantage Lifetime Warranty, and will be replaced in the event of failure for the life of the product.**