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INSTALLATION INSTRUCTIONS FOR: RE4548 JK FRONT COILOVER 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.

RE4548 JK Front Coilover Kit:

- 1 RXC717FD Front Coilover Shock: Dvr
- 1 RXC717FP Front Coilover Shock: Pass
- 1 86-RM24196 Front Coilover Mounting Brace: Dvr
- 1 86-RM24202 Front Coilover Mounting Brace: Pass
- 1 86-RM24207 Center Coilover Mounting Bracket: Dvr
- 1 86-RM24208 Center Coilover Mounting Bracket: Pass
- 1 86-RM24211 Rear Coilover Mounting Brace: Dvr
- 1 86-RM24212 Rear Coilover Mounting Brace: Pass
- 1 86-RM24209 Lower Coilover Mounting Bracket: Dvr
- 1 86-RM24210 Lower Coilover Mounting Bracket: Pass
- 2 86-RM24213 Coilover Shim
- 2 86-RM24214 Coilover Spacer
- 2 86-RM24215 Coilover Front Nut Plate
- 2 90-2011 Spacer
- 4 35-RM31127 Upper Misalignment Spacer
- 1 35-RM24239 1/2"-13 Nut Plate

- 2 RE1535 Brake Line Kit
- 1 HWC15045 Hardware Pack:
 - 1 90-RM24015 Front Brake line Bracket: Drvr
 - 1 90-RM24016 Front Brake line Bracket: Pass
- 1 90-6626 Hardware Pack:
 - 2 1/4"-20 X 3/4" Hex Bolt Gr. 8
 - 4 1/4" SAE Flat Washer Gr. 8
 - 2 1/4"-20 Nylock Nut
 - 2 90-RM52001 Retention Spring
- 1 90-6319 Hardware Pack:
 - 12 10999 11" Black Zip Tie
- 1 HWC15047 Hardware Pack:
 - 6 7/16"-14 X 1 1/4" Hex Bolt Gr. 8
 - 6 7/16"-14 Nylock Nut Gr. 8
 - 12 7/16" SAE Flat Washer Gr. 8
 - 8 3/8"-16 X 1 1/4" Hex Bolt Gr. 8
 - 8 3/8"-16 Nylock Nut Gr. 8
 - 16 3/8" SAE Flat Washer Gr. 8
 - 4 1/2"-13 X 1 1/4" Hex Bolt Gr. 8
 - 2 1/2"-13 X 2 3/4" Hex Bolt Gr. 8
 - 2 1/2"-13 X 3 3/4" Hex Bolt Gr. 8
 - 2 1/2"-13 X 4 1/2" Hex Bolt Gr. 8
 - 12 1/2" SAE Flat Washer Gr. 8
 - 3 1/2"-13 Nylock Nut Gr. 8
 - 4 5/8"-11 X 1 1/2" Hex Bolt Gr. 8
 - 4 5/8"-11 Nylock Nut Gr. 8
 - 8 5/8" SAE Flat Washer Gr. 8

REQUIRED TOOLS:

Basic mechanics' hand tools
Vehicle Hoist
5/16" drill bit

Jack Stands
Floor Jacks

Front Installation:

1. Prepare for the front installation by removing the following items from the front of the vehicle: Tires, Shocks, Sway bar links (axle end only), Brake line bracket from the frame only, ABS mounts, and track bar (frame end only).
2. Measure up **1/2"** from the upper hole in the shock mounting bucket and scribe a horizontal across the bucket. **(photo 1 & 2)**
3. Using a Sawz-all or other appropriate cutting tool cut the shock mounting bucket along the previously scribed line. **(photo 3 & 4)**
4. Grind the **1/4"** lip on the edge of the shock mounting bucket. **(photo 5 & 6)**



(Photo #1)



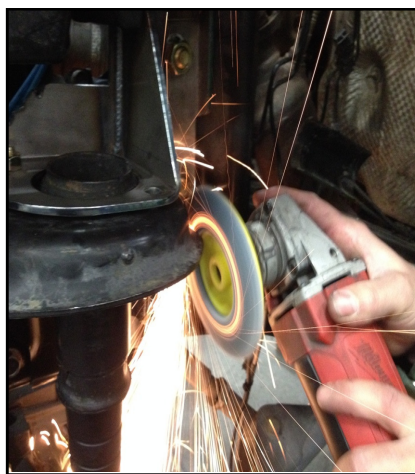
(Photo #2)



(Photo #3)



(Photo #4)



(Photo #5)



(Photo #6)

5. Install the center coilover mounting bracket, 86-RM24207 drvr and 86-RM24208 pass, to the shock mounting bucket using the **(2) 5/8" X 1 1/2"** bolts, coilover shim, 86-RM24213, (between the shock mounting bucket and the center coilover mounting bracket) and hardware. Leave hardware finger tight only at this time. **(photo 7)**

6. Install the front coilover mounting brace, 86-RM24196 drv and 86-RM24202 pass, and the coilover mount spacer, 86-RM24214. to the top of the factory upper coil spring mounting bucket using the (1) supplied **7/16" 1 1/4"** bolts and hardware. Leave hardware finger tight only at this time. **(photo 8)**

NOTE: The coilover mounting brace spacer can also be used as a template to drill the remaining front brace mounting holes, as directed in step 10.

7. Install the **1/2" X 3 3/4"** bolt, from the front of the vehicle, through the front and center coilover mounting bracket upper hole. **(photo 9)**
8. Slide the rear coilover mounting brace, 86-RM24211 drv and 86-RM24212, on to the previously installed **1/2" X 3 3/4"** bolt. Install the **1/2"** nut and washer onto the previously installed **1/2"** bolt. Leave hardware finger tight only at this time. Align the hole in the bottom rear coilover mounting brace with the large hole in the frame rail and clamp in place. **(photo 10)**



(Photo #7)



(Photo #8)



(Photo #9)



(Photo #10)



(Photo #11)

9. With all three coilover brackets in place. Tighten the center coilover mounting bracket **5/8"** hardware. **(photo 7)**
10. Drill the **(2)** remaining front coilover mounting brace holes through the factory bucket using a **7/16"** drill bit.
11. Tighten the front coilover mounting brace **7/16"** hardware. **(photo 8)**
12. Using the **(2)** lower mounting holes in the rear coilover mounting brace as a guide, drill through the frame rail using a **1/2"** drill bit.
13. Install the **1/2"-13** nut plate, 86-RM24215, into the large window in the frame rail and secure the **(2)** lower mounting holes in the rear coilover mounting bracket using the supplied **1/2" X 1 1/4"** bolts and washers. **(photo 11)**
14. Remove the previously installed **1/2" X 3 3/4"** bolt **1/2"** hardware. **(photo 12)**
15. Install the lower coilover mounting bracket, 86-RM24209 drv and 86-RM24210 pass, into the axle lower shock mount using the **3/8" X 1 1/4"** bolts and hardware.

NOTE: **Due to multiple configurations, before installing the coilover shocks, we suggest temporarily installing the tires, and resting the vehicle at full bump to examine the tire to fender clearance. It is possible the vehicle will need additional spacers, RE1380 2" or RE1383 3", installed under the bump stop axle pads to eliminate tire to fender interference.**

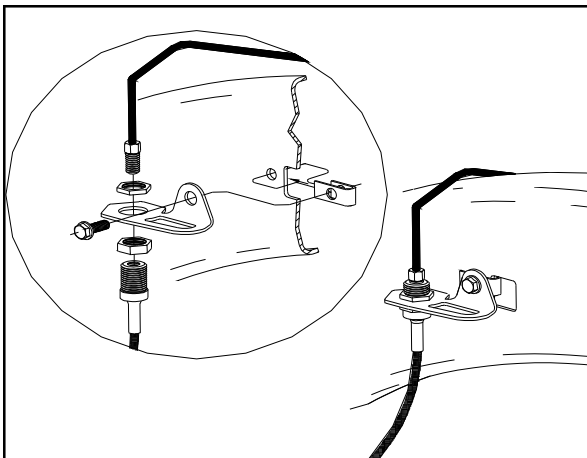
16. Install the upper misalignment spacers **(2)** into the coilover shock, RXC717FD drv and RXC717FP Pass, upper bearing.



(Photo #12)

17. Install the front coilover shock to the upper coil over mount assembly using the **1/2" X 3 3/4"** bolt and hardware.
18. Install the lower end of the coilover shock to the lower coilover mounting bracket using the supplied sleeve, 90-2011 (installed into the axle lower shock mount tabs), **1/2" X 4 1/2"** bolt and hardware. **(photo 12)**
19. Locate the rubber brake hose that runs from caliper to frame and detach it from the caliper and factory metal line. Plug or cover the caliper opening and remove the brake line from the vehicle.
20. Secure the supplied 90 degree brake line mounting bracket, 90-RM24015 drv and 90-RM24016 pass, to the frame using the supplied OE bolt. Position the bracket so it is below the mounting bolt. **(photo 13)**
21. Thoroughly clean all mating surfaces of the OE steel brake line. At the upper end of the brake hose, RE1535, insert the threaded end of the brake line from the bottom through the brake line mounting bracket. Install the supplied jam nut to the threaded end of the brake line and tighten the nut, securing it to the brake line bracket. **(photo 13)**

NOTE: **Do NOT allow the stainless steel brake hose to twist when tightening to the bracket or OE brake line. Twists can cause kinks in the brake hose assembly during suspension travel.**



(Photo #13)



(Photo #14)

22. Connect the new brake line, RE1535, to the existing frame metal brake line and tighten. Install the brake line to the caliper using the factory banjo bolt and new crush washer. Torque the banjo bolt to **23** ft./lbs. Position the line so it doesn't make contact with any other parts. Make sure brake lines are clean and dry of any material before ABS brake bleeding. **(photo 14)**

NOTE: **2011+ vehicles have a brake hose routing that bolts near the shock mount. The hoses supplied with any of the kits will not mount it the same fashion. Route the brake hose and ABS wire and zip tie together out of harms way.**

Repeat brake hose installation on the remaining side of vehicle.

IMPORTANT: BLEEDING OF THE BRAKE SYSTEM SHOULD BE DONE ACCORDING TO A JEEP FACTORY SERVICE MANUAL. BE VERY CAREFUL NOT TO LET THE MASTER CYLINDER RUN DRY! DAMAGE TO THE ABS SYSTEM WILL OCCURE IF THE MASTER CYLINDER IS ALLOWED TO GO EMPTY.

IMPORTANT: TEMPORARILY INSTALL THE FRONT WHEELS AND CYCLE THE FRONT SUSPENSION UP AND DOWN TO ITS LIMITS SEVERAL TIMES TO CHECK FOR ANY BINDING OR COLLISIONS OF SUSPENSION COMPONENTS. TRIM ANY AREAS THAT THE FRONT TIRES CONTACT. ENSURE THAT THERE ARE NO INTERFERENCE OR PINCHING PROBLEMS WITH THE BRAKE LINES AND/OR ABS WIRING.

23. Raise the axle into place and install the previously removed stock rear anti-sway bar end links in place of stock front end-links. Reinstall the factory track bar (frame end), and re-attach the ABS brake line bracket to the frame.
24. Reinstall the front wheels, lower vehicle, and check the torque on all nuts and bolts.

Installation review:

1. Torque all the bolts to factory specifications. Be sure to double check your work.
2. Test drive and note the location of the steering wheel.
3. Adjust the drag link to center the steering wheel if necessary.
4. Align the vehicle as soon as possible. Set to minimum factory caster angle (3-4.5 degrees positive) and factory toe-in specifications.
5. Recheck all bolts after 50 miles and again after every off road excursion.

Application information:

This kit is designed for the use of **37"** diameter tires or smaller.

NOTE: Installation of 37" tires will require fender modification.



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.**