



METALCLOAK

INSTALLATION INSTRUCTIONS

PRODUCT: 6PAKS & DUAL RATE COIL KIT, TJ/LJ

REV: C | 2-22-13 | II-1200

**READ INSTRUCTIONS IN FULL BEFORE INSTALLATION.
QUESTIONS? CALL 916-631-8071 M-F 8:00 AM – 5:00 PM PST**

The MetalCloak experience includes the ease of installation of our products. We design for most contingencies, but installation may be different based on different Jeep condition, configuration and/or year.

We are continually trying to improve our products and instructions – please help us by providing feedback and pictures if you find any part of the instructions that do not match your particular Jeep or are not easily understandable.

If you have any difficulties at all, please give us a call. Thank you and enjoy your MetalCloak Products!

IMPORTANT NOTE: We use Stainless Steel Hardware where possible. Therefore, a tube of Silver Anti-seize is provided and should be used on all bolts—only a small amount is needed.

SUSPENSION WARRANTY INFORMATION: Metalcloak products are warranted to be free of defects in material and workmanship for one year from the original purchase date. All products produced by Metalcloak are designed exclusively for off road applications and therefore do not have any warranty or guarantee of performance. No warranty or representation is made as to this products ability to protect the user from injury or death. The user assumes that risk. Because of the wide variety of applications of our products, the effectiveness, warranty and longevity of this equipment are directly related to the manner in which it is installed, used and/or maintained. The entire risk as to the quality and performance of these MetalCloak products is with the purchaser. Working on your vehicle can be a dangerous activity. If you are unsure of what you are doing, please leave mechanical or safety critical work to a skilled mechanic. We take no responsibility for how MetalCloak products are installed.

Section 1: Tools & Notes on Installation

Tools Required: This list is the recommended tools for ease of installation. Other versions of the same tool can be used. For example, Allen Wrenches instead of Allen Drive Sockets.



Socket & Ratchet Wrench

Electric Drill



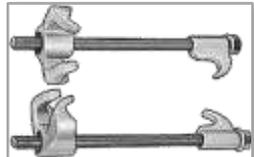
Socket Extension(s)

9/16" Drill Bit



13MM Hex Socket/Wrench
18MM Hex Socket/Wrench
3/4" Hex Socket/Wrench

Electric Cut-off Disc & Grinder



Spring Compressor

Welder



HOW TO USE THIS GUIDE: The installation guide contains ALL steps for installation. Please read and follow the instructions in order of each page top to bottom, and left to right.

Jeep Model: Instructions may apply to multiple JEEP models, but are labeled separately where appropriate (i.e. TJ vs. LJ).

Options: Because of the number of component options we offer, these instructions may contain steps that will not match your particular configuration. You can skip these steps.

Images: Pictures are provided and parts are labeled throughout the instructions. Each text box contains guidance based on the pictures next to it. The text will refer to alphabetical labels (A, B, etc) found in the images.

Installation Notes: Terms may be used in the body of the instructions that you may not be familiar with, if you have any questions feel free to contact us at the number below, or email techhelp@metalcloak.com

QUESTIONS: Any questions or comments about the instructions? Call us at 916-631-8071 M-F 8:00 AM – 5:00 PM PST.

Section 2: Front Suspension Instructions



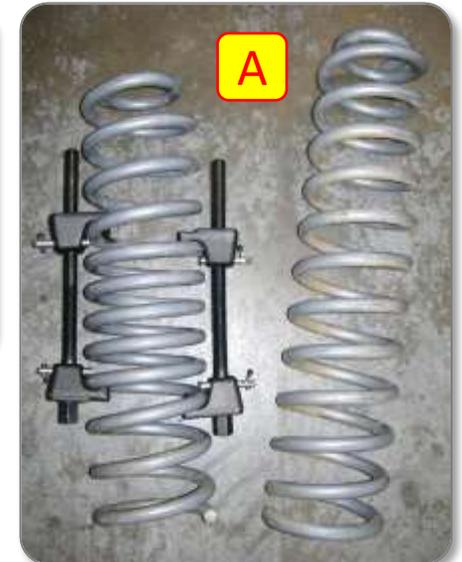
IMPORTANT NOTE! TO INSTALL LIFT COMPONENTS YOU WILL NEED TO FULLY 'DROOP' YOUR SUSPENSION IN THE FRONT AND REAR (THOUGH NOT AT THE SAME TIME). WE STRONGLY RECOMMEND THAT THE VEHICLE BE PLACED ON AN AUTOMOTIVE LIFT AND THAT ALL APPROPRIATE SAFETY PRECAUTIONS BE TAKEN TO SECURE THE VEHICLE WHILE IT IS OFF THE GROUND. ALWAYS USE THE NECESSARY AXLE STANDS (OR EQUIVALENT) TO SUPPORT THE AXLE WHEN THE SUSPENSION COMPONENTS ARE DISCONNECTED FOR SAFETY, AND TO ENSURE THE INTEGRITY OF YOUR SUSPENSION SYSTEM DURING THE INSTALLATION PROCESS.

BEFORE YOU BEGIN: If you are doing the MetalCloak Long-Arm Suspension Upgrade, it is intended 3.5" to 5.5" long-arm suspension kits that are already installed; it is assumed that many of the appropriate upgrades have been made (longer brake lines, for instance) to account for the greater flex provided by a long-arm setup. The Upgrade Kit was specifically designed around the Rubicon Express Extreme-Duty Long Arm System, but will work with other long arm suspensions.

A NOTE OF CAUTION: Effective use of bump-stops ensures you never over-compress your MetalCloak 6-Pak Shocks. During the installation, fully raise the axle with only the Shocks installed, but **DO NOT OVER-COMPRESS THE SHOCKS!** The bump-stops should stop the axle with a minimum 1/2" – 3/4" of Shock travel still available. Check out the MetalCloak Adjustable Bump-Stop System as an effective way to quickly customize your bump-stop height, whether you need to add or remove height to your system.

Step 1: Remove Front Shock Components

- A. Droop your suspension and remove your current shocks, springs and lower bump-stops. Disconnect your sway bar links, track bar and possibly your steering drag link (proceed in that order until you have enough droop). *NOTE: Spring Compressors are an inexpensive tool for purchase or rental that can drastically decrease the amount of time required to remove and install springs (a common type is shown here, next to an uncompressed spring). This tool reduces the number of components you must disconnect to get the needed droop.*



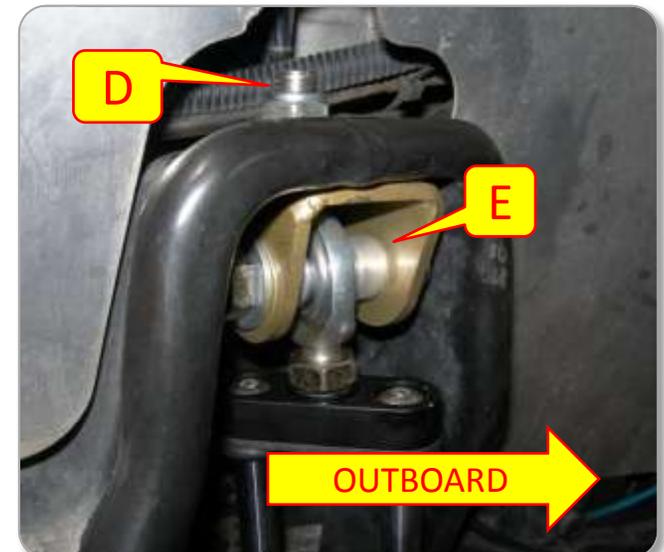
Section 2: Front Suspension Instructions

Step 2: Install Coils and Shock Mounts

- B. Place the bump-stop inside the MetalCloak Dual-Rate Coil Spring and install the TJ Front Dual-Rate Spring (the longer & skinnier of the two). *If you are using the MetalCloak Adjustable Bump-Stops, they can be installed after the Spring is in place, but we found it was easier to stack them ahead of time.*
- C. Use the provided 1/2" Hex Head Bolt, Spacers, and Flanged Nut to install the TJ Upper Shock Bracket on the Rod-End of the 6-Pak Shock. Finger tighten hardware for now.
- D. Install the threaded stud on the Bracket through the stock location on top of the shock tower; the stud is backed by a 1/2" Washer and Nylon LockNut.
- E. Orient the Bracket so that the rod-end is mounted OUTBOARD of the stud, and the Bracket itself is centered in the shock tower. Fully tighten Bracket hardware.



IMPORTANT: When installing or tightening the heim on the 6Paks, DO NOT hold the body of the shock, support the shock with an adjustable wrench on the shaft mount.



Section 2: Front Suspension Instructions



Step 3: Install MetalCloak Suspension

NOTE: It is strongly recommended that you use the MetalCloak Dual Rate Coil Springs. Due to their extended free length, the likelihood of the spring dropping out of the buckets is greatly reduced, even with the greater flex provided by the MetalCloak 6-Pak Shocks.

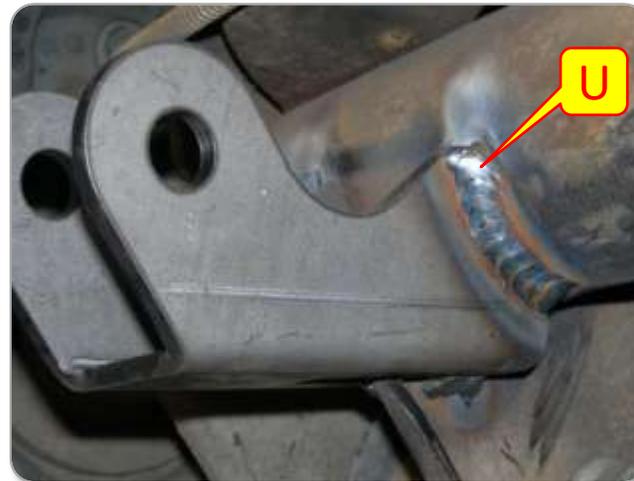
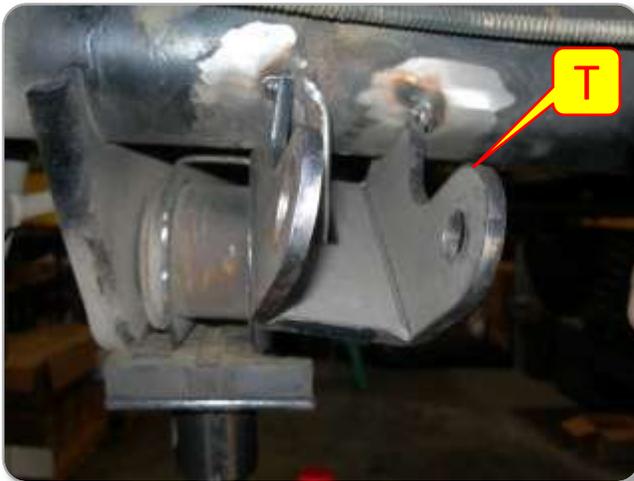
- H. Install the MetalCloak Front Dual Rate Springs. The closer coils indicate the top of the spring, and the bottom end of the spring aligns with the coil recess in the lower bucket. Install both springs before moving to the Shock installation. *Again, it is possible to install the MetalCloak Front Springs without disconnecting the steering drag link, but to further droop your suspension you may need to disconnect this arm.*
- I. Re-install the bump-stops. If you have longer bump-stops you may need to remove the bottom of the spring from the lower bucket, place the bump-stop inside the spring, and then re-install the spring (You can also use Metalcloak Adjustable Bump-Stops)
- J. Install the upper 1/2" rod end of the MetalCloak 6-Pak Shock in the Suspension Mount using the 1/2"-13 x 2.5" Hex Head Screw, 1/2" Washer and 1/2" Flange Nut. The longer aluminum Spacer goes towards the front of the vehicle [J1], and the reservoir tubes [red] should be oriented toward tire [J2].
- K. Install the Bar Pin Eliminator in the lower 1/2" rod end of the Shock, and use the provided M8 x 40MM Screws, Washers and Nylock Nuts to install the Bar Pin in the lower stock position. Repeat Shock installation for passenger side.



Section 3: Rear 6Pak & Dual Rate Coil Installation

Step 4: Prepare JEEP for Installation

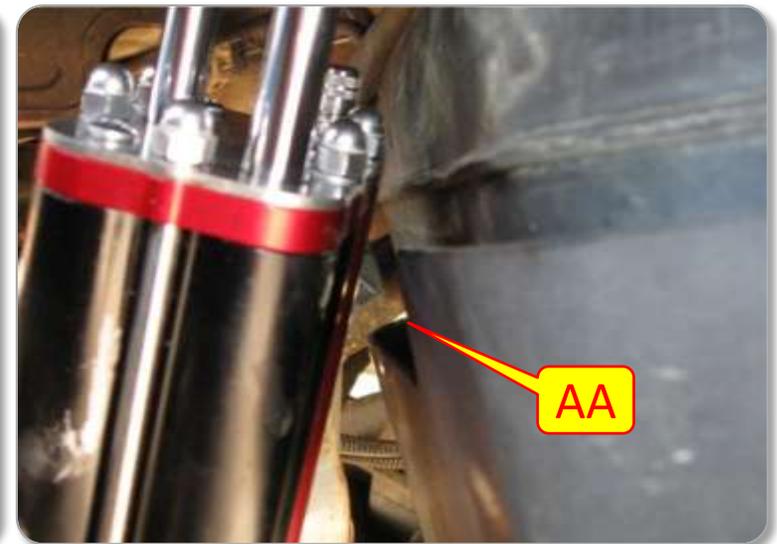
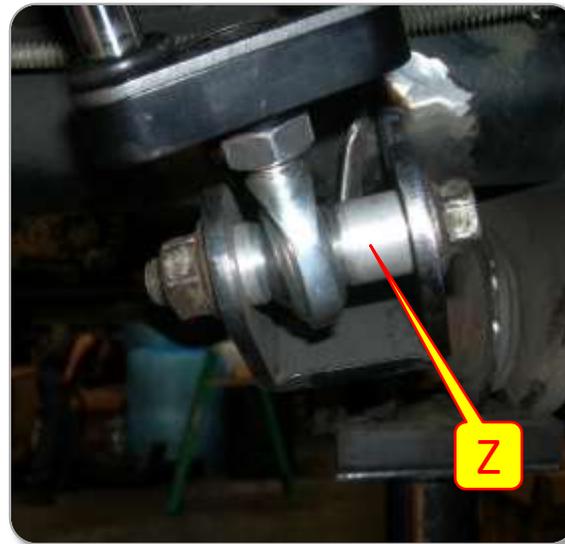
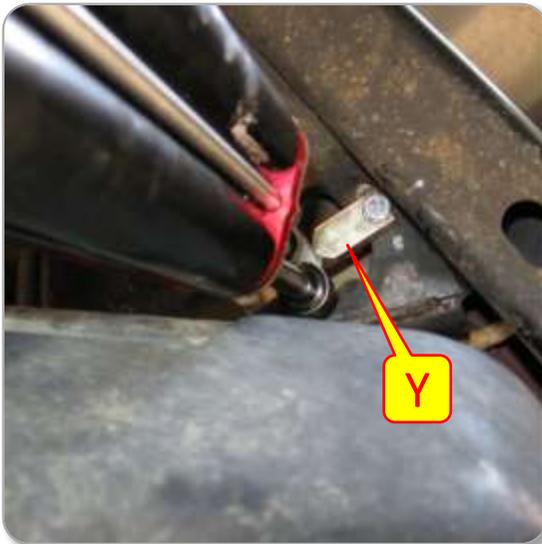
- R. You will need to use a Cut-off Disc and/or Grinder to remove the stock shock mounts from the axle. Be sure to grind any welds flush to make room for the replacement Lower Shock Mount.
- S. Align the Lower Shock Mount. The slot in the part centers on the inner side of the lower control arm bracket on the axle. You may need to grind the stock bracket a little to make the Shock Mount fit.
- T. To properly clock the Lower Shock Mount, turn the Mount on the axle until the top of the rear mounting position is level with the bottom of the axle (when the axle is at ride height).
- U. Weld the bracket in position.
- V. As always, we recommend that you paint all exposed metal to prevent rust.



Section 3: Rear Suspension Instructions

Step 5: Install MetalCloak Shocks & Coils

- W. For added clearance, trim the stock shock bucket so that it is flush with the rear of the axle. Paint exposed metal.
- X. Install the MetalCloak Rear Dual Rate Springs. The closer coils indicate the top of the spring, and the bottom end of the spring aligns with the coil recess in the lower bucket. Install both springs before moving to the Shock installation.
- Y. Install the upper rod end of the 6Pak Shock using the Bar Pin Eliminator and the provided M8 Screws and Lock Washers.
- Z. Install the lower rod end using the stock hardware and provided Spacers. The longer Spacer goes on the INSIDE, towards the center of the JEEP.
- AA. When properly installed the shocks will roughly parallel to the corners of the gas tank skid, with the reservoirs pointing toward the center of the JEEP. Depending on the fit of your shocks you may find it necessary to trim the stock gas tank skid. *Check this fit carefully before driving the vehicle, especially with aftermarket gas tank skids, to ensure you are not rubbing.*

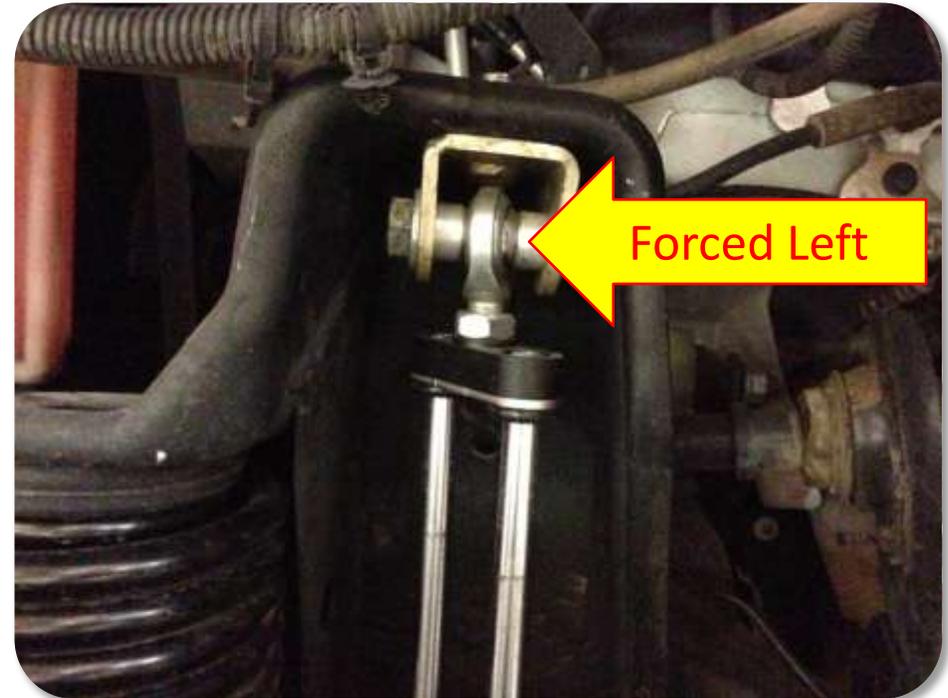


IMPORTANT NOTE:

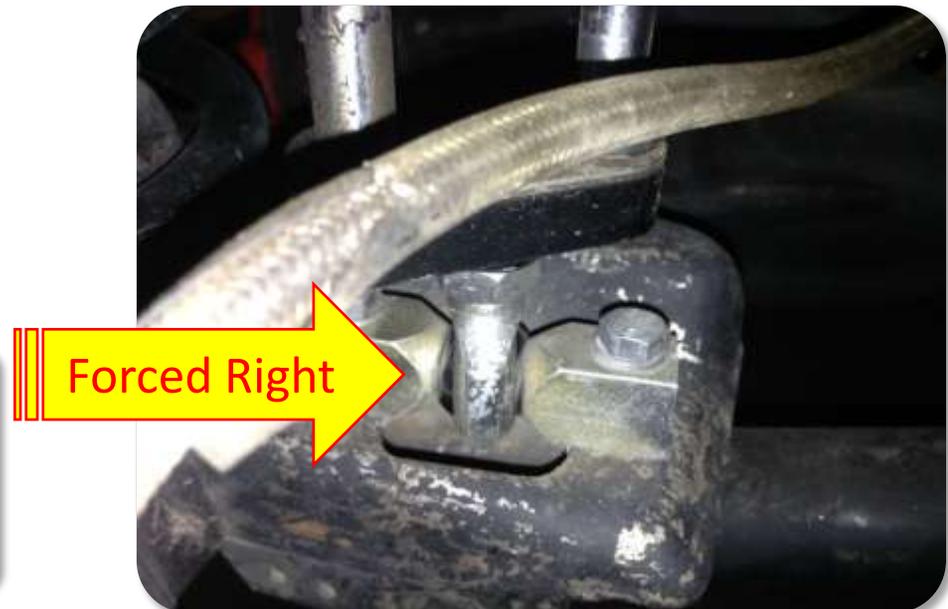
When properly installed, your shocks should have VERY LITTLE side to side motion.

To Achieve this, the heim joints on either end of the shock should be adjusted to LOCK against each other as shown in the image on the right.

The Top should be forced one direction and the bottom forced the other. Do this by loosening the lock nut on both sides, forcing the heims into place and tightening the lock nuts.



IMPORTANT: When installing or tightening the heim on the 6Paks, DO NOT hold the body of the shock, support the shock with an adjustable wrench on the shaft mount.



Enjoy Your MetalCloak Suspension!



Remember to post your pic of your Cloaked JEEP on your favorite forum and at [Facebook.com/metalcloak](https://www.facebook.com/metalcloak).



IF YOU HAVE ANY ISSUES WITH YOUR INSTALLATION OR WITH THE FUNCTIONING OF YOUR KIT, PLEASE FEEL FREE TO CALL US AT 916-631-8071 OR EMAIL [INFO@METALCLOAK.COM](mailto:info@metalcloak.com). Thank you!