



SYNERGY MFG. 870 INDUSTRIAL WAY, SAN LUIS OBISPO, CA (805) 242-0397

## PPM-8032 JEEP JK 2 DR STRETCH KIT

Version 2.0

### 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.
- The installation of this suspension kit requires some major cutting, grinding and welding. Many of the major suspension brackets on the frame will need to be cut off and ground smooth. A plasma cutter or oxy-acetylene torch works best but you can also use a grinder with a cut off wheel.
- You will need basic hand tools, a grinder with cut off wheel or sawzall, floor jack or automobile lift, a welder and two sturdy jack stands to complete this installation.
- A list of additional components that can be added to this kit are available on our website. These components can be purchased and installed at a later date. Each component has instructions for installation.
- Removal of the fuel tank is required for removal of the passenger rear lower control arm bracket.
- This kit is designed to work with a stock axle, PPM-8056 rear Track Bar Bracket, PPM-8062 Rear Track Bar, PPM-8038 RUCAs, PPM-8036 RLCAs and PPM-5013 Rear C/O Kit.
- **\*\*NOTE\*\*** *This is a weld on kit that should be installed by an experienced welder. This is not an entry level suspension kit. It requires extensive cutting, grinding and fabrication skills to complete.*

### INSTALLATION:

- 1) Begin, by jacking the vehicle up and supporting the chassis safely using jack stands. Note, as this is an advanced kit, these instructions will not cover basic disassembly of the rear suspension.
  - a. Control arms, track bar, coils, shocks and sway bar / sway bar links will all need to be removed.

2) REMOVE STOCK REAR CONTROL ARM BRACKETS

- a) Remove the stock upper and lower control arms.
- b) Remove the fuel tank. You must remove the fuel tank to remove the passenger rear lower control arm bracket and to access the inner wall of the frame to install one of the nut tabs. Refer to the factory service manual for the exact procedure.
- c) Using a cut-off wheel, cut the sides of the lower control arm bracket as shown below. Cut just below the welds on the frame. Be careful to not cut through the frame. Cut the weld on the front of the control arm bracket on the bottom of the frame.



d) Cut off the upper control arm bracket as shown below



e) Trim the bottom of the rear body mount. Leave about 1 1/8" from the top surface of the body mount to cut edge.



- f) Grind the welds and smooth where you removed the control arm brackets and body mount. The side and bottom where the new control arm bracket is located needs to be smooth, the inside of the frame and the upper control arm bracket do not need to be completely cleaned off.
- g) Cut off the mounting tab on the gas tank skid that is located just in front of the lower control arm bracket.



- 3) With stock control arm brackets removed, fitment of the 8032 RLCA Stretch Brackets can begin. These brackets are self locating via the body mounts. Fit them to the chassis as shown below. Snug bolts and clamp bracket to frame as shown.



- 4) Once located and clamped into position, tack control arm bracket to frame. Tack in several places to ensure part does not shift when removing clamps.
- 5) Before fully welding, it's a good idea to install rear control arms and thoroughly cycle rear suspension to check for any binding or clearance issues.
- 6) Next, fit the frame side Track Bar Bracket (PPM-803207) to the frame.
  - a. The new TB Bracket should be located exactly 8" back from the factory mount. Clean area that will be welded and tack brkt onto frame.



- 7) This kit is designed to be compatible with a stock JK rear axle housing using all factory brackets, a Synergy Suspension Rear TB Bracket (8056 or 8090) and a factory or Synergy rear track bar.
  - a. Once the frame side TB bracket is tacked in place, hook up the rear track bar and cycle the suspension to check for binding or interference. Also, now is a good time to set the suspension at an approximate ride height and dbl check that the axle can be properly centered with the track bar being used.
  - b. Once satisfied that the suspension is cycling cleanly, now is a good time to cut off the factory rear frame side track bar mount. Follow the steps below for removal.
  
- 8) Begin by removing the factory gusset:



- 9) Next, using a 4-1/2" angle grinder with cut off wheel, cut on the weld of the remaining bracket. Be careful not to cut too far and cut into the frame.







10) With the welds cut, remove the bracket. It should come off in more or less one piece as shown below. Clean up the area with a grinder.



11) Now is the time to fully weld on all the new bracketry. Weld the 8032 RLCA Stretch Brackets wherever they meet the frame. See weld pictures below for reference.





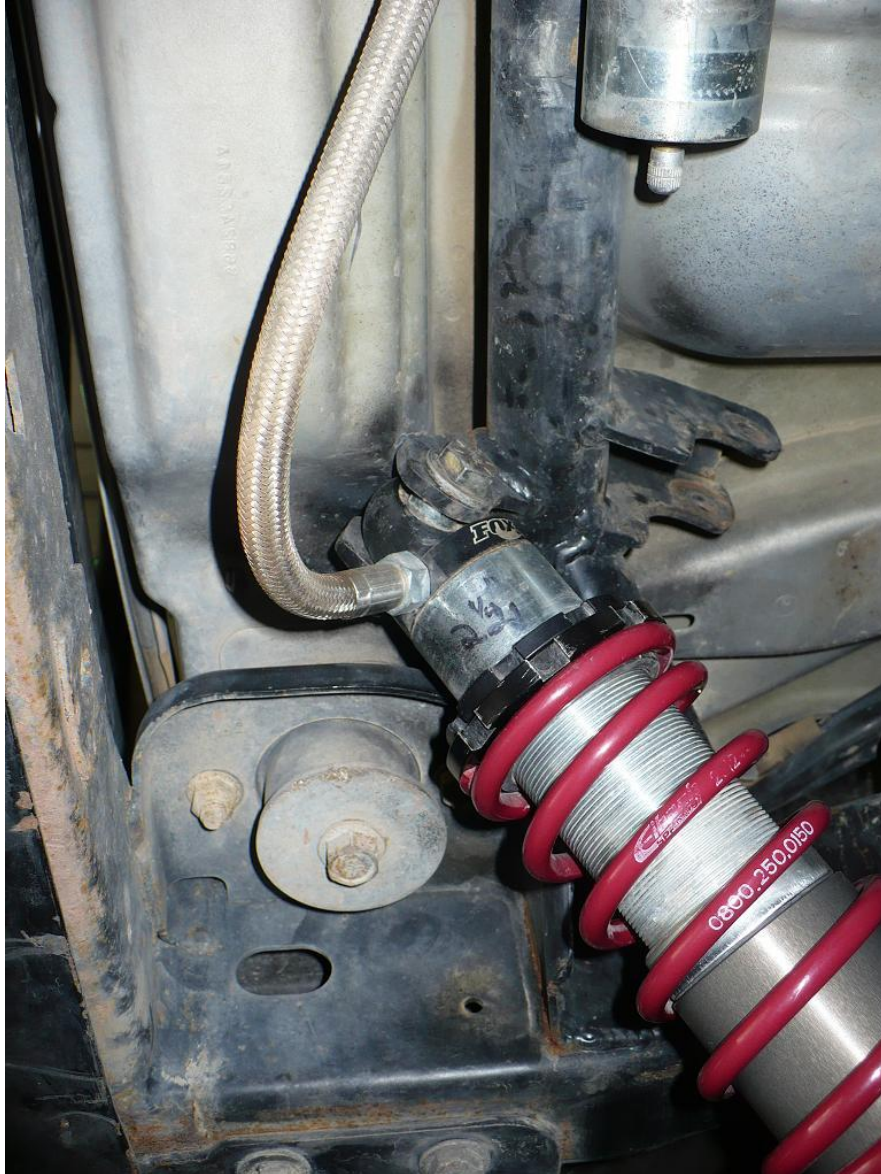
- 12) The previous covers the extent of installing the basic components of the stretch kit. Cutting of the body to allow for tire clearance is for the installer to determine as it will vary on a case by case basis depending on tire size, target ride height and up travel.
- 13) A couple of key features that will help in completing the stretch kit:
  - a. Note brake rear brake line modification seen below. Factory hard line re-routed to mount through the factory rear upper shock mount bracket. Standard Synergy 8066 Extended Brake Line kit can be used. (Modification may or may not be needed depending on configuration)



- b. Factory JK rear bump stops can be retained. Simply cut them off the frame at the weld and relocate 8" back. Pictures below show factory bump stop and 2" BS spacer.



- 14) This stretch kit includes 803202 Rear C/O tabs that are designed to be used in conjunction with Synergy 5013 JK Rear C/O kit to cycle and mount 12" Fox 2.0 Reservoir Coilovers. Again proper installation will vary on a case by case basis due to the previous stated reasons. The suspension will need to be cycled with the shocks installed to determine proper shock mount locations before fully welding the parts in. Below is a reference picture of the 803202 C/O tabs in use on the 5013 JK Rear C/O cross-member.



- a. Using the 803202 C/O tabs and the 5013 Rear C/O kit, installation can be completed with relative ease.
- b. Once completed, it's recommended to use a quality spray paint on all exposed areas of the frame to prevent rust.
- c. A custom length driveshaft (+8" longer than stock) will also be needed for completion.

Installation is Complete