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# JEEP COMANCHEE 4" SUSPENSION LIFT INSTALLATION INSTRUCTIONS '86-'93 2WD & 4WD JCP-34

## **⚠ WARNING**

Read and understand all instructions, warnings and safety precautions in these instructions and your owners manual before attempting to install these components.

## **⚠ WARNING**

Performance Automotive Group does not recommend combined use of suspension lifts, body lifts or other lift devices. Combined use of lifts may result in unsafe and unexpected handling characteristics. Also, many states now have laws restricting vehicle lift, bumper heights and other alterations. Consult local laws to determine if your proposed alterations (including installation of this kit) comply with your state laws.

## **PRODUCT SAFETY WARNING**

Certain Performance Automotive Group products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Use of oversized tires, suspension lifts, body lifts and other suspension modifications may raise your vehicle's center of gravity resulting in an increased tendency for the vehicle to pitch and roll during sudden turns or abrupt maneuvers. Extreme care must be used to prevent loss of control or vehicle roll over. Failure to drive your modified vehicle safely may result in serious injury or death. Drive at reduced speeds to ensure your ability to maintain control of the vehicle under all driving conditions. Always wear seat belts.

## **PRODUCT SAFETY LABEL**

Supplied in kit is a Safety Warning label. Install label inside cab. Locate label in a highly visible location to all operators of this vehicle.

## **WARNING**

Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting the wheel and tire combination for your vehicle consider the additional stress you could be inducing on OE and related components. As you increase the size of wheel/tire combinations over stock, you also increase the possibility of OE and related component failure.

## **⚠ CAUTION**

Proper installation of Performance Automotive Group products requires knowledge of recommended procedures for disassembly/assembly of OE vehicles and components. Access to OE shop manuals and special tools are required. Attempting to install this kit without knowledge of these procedures may affect the safety of your vehicle and/or the performance of these components. Performance Automotive Group strongly recommends that this kit be installed by a certified mechanic with off-road experience.

## PRE-INSTALLATION NOTES

1. Performance Automotive Group Systems do not incorporate components to accommodate extended cab and/or two piece driveshafts unless otherwise stated. Post installation the vehicle may experience driveline vibrations. Driveline angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened, shafts may need trued, and U-joints may require frequent replacement. Performance Automotive Group systems are not recommended for vehicles with 13 inch or shorter drive shafts.
2. Ride Height and vehicle attitude, ie; rake or tail drag, may vary from vehicle to vehicle. Original equipment options and aftermarket accessories alter the vehicle's front sprung weight. Setting of spring components is normal. Performance Automotive Group cautions you in regards to your choice of tire size and initial clearances. Settling of spring components may occur and slightly diminished clearances will be observed. Normal settling is not covered under your warranty. Vehicles subjected to long term over weight situations may experience an abnormal amount of spring component settling.
3. Adhere to recommendations when replacement fasteners, retainers, and keepers are called out in OE manual. This system may not include all replacement fasteners recommended by the OE manual. Additional replacement fasteners should be obtained prior to installation of system
4. Compare parts included in your system with the enclosed parts list. Placing hardware with components before you start may reduce installation time. Contact your Performance Automotive Group dealer if any parts are missing or appear to be different than those indicated on the parts list.
5. Keep this and all information regarding your altered vehicle for future reference.
6. Front Skidplate will not work with this suspension system.

7. Vehicles built March of '86 and later use original nut and bolt on front track bar. If there are shims under the tracking bar, be sure to reinstall them.

### **⚠ WARNING**

Always wear safety glasses when using power tools.

### **⚠ CAUTION**

Performance Automotive Group recommends the use of Loctite® on all hardware, unless noted otherwise

### **⚠ WARNING**

Properly block and secure vehicle prior to installation.

## FRONT INSTALLATION INSTRUCTIONS

1. Position hydraulic floor jack under front axle on the passenger side next to the differential. Raise axle so the tires are approximately one foot off the ground. Place adjustable jack stands under frame rails at a point 8" behind the lower strut arm frame mounting points. Lower axle until the vehicle rests on the jack stands and the shocks are partially extended. Leave the floor jack positioned under the axle.
2. Remove skid plate if equipped and discard. Remove both front tires and shocks. Remove front sway bar from frame and retain all parts. Remove track bar end at axle mounting point on passenger side and allow to drop free.
3. On each side, remove lower strut arm at frame and release arm to swing down from frame. Save all nuts and bolts.
4. On each side, remove lower strut arm adjustment bracket from inside the frame pocket by removing the 2 nuts on the rear of the pocket. This will allow the bracket to slide forward and out of the pocket.
5. Locate left and right lower drop down brackets in the kit. These are the two large welded brackets. With the ears facing away from you, the bracket with the ear on the left side is the passenger side bracket. On each side slide the bracket into the lower frame pocket and install the two 3/8" x 1-1/4" bolts, washers and lock nuts in the strut arm adjustment bracket holes. Position the 2-1/4" tube spacer bushing into the bracket. Install the 1/2" x 4-1/2" bolt and washer,

from the outside to the inside, thru the original lower strut arm mounting hole. Tighten only the 3/8" bolts at this time.

6. Install the original lower strut arm adjustment brackets into the drop down brackets just installed using original nuts.
7. Remove upper strut arm ends from the frame brackets on each side and lower to the hole in the ear of the drop down bracket. Install the "Z" brackets provided in the kit, positioning the large hole at the bottom so that the 1/2" x 4-1/2" bolt passes thru the large hole. Install the 1/2" washer and lock nut, finger tighten. (The "Z" brackets will only fit one way). Position the 2" tube spacer bushing, provided in the kit, into the upper strut arm pocket. Line up the top hole of the "Z" bracket on the out side of the pocket and insert the 10mm x 80mm bolt with washer thru the bracket pocket and spacer. Finger tighten into frame. Position the free end of the upper strut arm between the ear on the lower bracket and the "Z" bracket, line up the holes and install the 10mm x 90mm bolt and washer from the out side to the inside. Install washer and lock nut; tighten all bolts and nuts in step 7.
8. Install lower strut arm ends in the drop down brackets using the original bolts and nuts, tighten.
9. Remove coil spring retaining clips at axle. Lower axle sufficiently to remove coil springs. Install new coils and original retaining clips. Insure coils are seated properly. Raise axle slightly to compress springs.
10. Locate original track arm mounting hole on the passenger side of the axle. Measure 3/4" from the center of the original hole on the same horizontal line toward the driver's side of the bracket, mark and center punch. (see figure #1 on page 5 of instructions) Using drill with 3/8" drill bit, drill a hole thru the center punched front of the bracket only. Repeat the same 3/4" measurement on the back of the bracket and center punch. Insert the 3/8" drill bit thru the newly drilled hole and drill thru the center punched mark on the back of the bracket. Position the free end of the tracking arm between the newly drilled holes and insert the original bolt. Locate the opening between the rear of the tracking arm bracket and the front axle, approx. 1-1/2" below the coil spring, the opening faces the driver's side of the vehicle. Insert the square nut into the small opening, align

with the original bolt and tighten. Suggestion: To position the square nut in the small opening, tape nut to a common screw driver using a loop of masking tape.

11. Install new shocks.
12. Attach front sway bar drop down brackets to the frame using the original bolts. Install the sway bar to the drop down brackets using the 3/8" x 1-1/4" bolts, washers and lock nuts provided in the kit. Reassemble the axle in original position.
13. Install the front wheels and lower vehicle to the ground.

## REAR INSTALLATION INSTRUCTIONS

1. Jack up rear axle, place jack stands in front of rear springs on frame rails. Be sure to block front wheels.
2. Lower floor jack until only slight pressure is left on rear axle.
3. Remove tires, differential vent tube, unbolt brake equalizer bracket.
4. Remove U-bolts, place C-clamp on springs and remove center bolt. Remove bottom leaf and replace with new leaf.
5. Install new center pin and tighten.
6. Lower floor jack and reinstall U-bolts.
7. Take special note: Depending on year of vehicle perform step "a" or "b" below...
  - a. Before March of 1986. There is a L shaped bracket mounted on cross-member, it has a brake line in one end and a brake hose on the other end. Unbolt bracket and pull U-shaped clip out of bracket and let line hang freely. Drill a hole into the bracket and mount onto new bracket. Unbolt top and bottom bolt and install "L" shaped bracket and tighten. Straighten brake line and reinstall using U-shaped clip.

- b. On or after March, 1986. Flip up brake equalizer plate at differential cover and ball and nut. Bolt back onto differential cover.
8. Install new, longer vent tube.
  9. Install shocks, tires and check all bolts, cables, brake lines, etc.

## POST-INSTALLATION NOTES

### ⚠ CAUTION

1. Performance Automotive Group does not recommend a particular tire and wheel combination for use with its products and assumes no responsibility for customer choice of tires and wheels. Consult your owners manual for recommended tire sizes and warnings related to use of oversize tires and wheels. In general, larger tire and wheel combinations may increase stress and wear on steering components leading to increased maintenance and greater risk of component failure, including loss of steering control. Property damage or personal injury may result. Large tire and wheel combinations may also alter speedometer calibration, reduce braking effectiveness and alter vehicle center of gravity height (See product safety warnings). Check with an experienced off-road shop for the tire and wheel combinations that work best on your truck. Remember, **BIGGER** isn't necessarily better.

2. After installation of system it may be necessary to replace brake hoses to ensure there is adequate slack in hoses when suspension is at full extension. On front of vehicle a steering sweep should be performed to ensure brake hoses have sufficient slack and will not come in contact with any rotating, mobile or fixed members. Failure to perform check/replacement may result in component failure! Longer replacement hoses may be located through your local parts supplier.

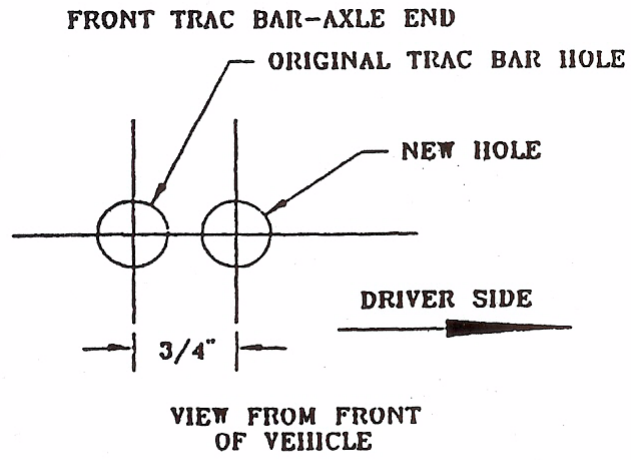
3. Retorque all fasteners after 500 miles and every off-road use. Visually inspect components and retorque fasteners during routine vehicle service.

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between All rotation, mobile, fixed, and heated members. Inspect brake lines for damage and adequate clearance/slack. Ensure there is adequate clearance between exhaust and brake lines, fuel lines, fuel tank, floor board, and wiring harnesses. Check steering gear for interference and proper working order. Test brake system.

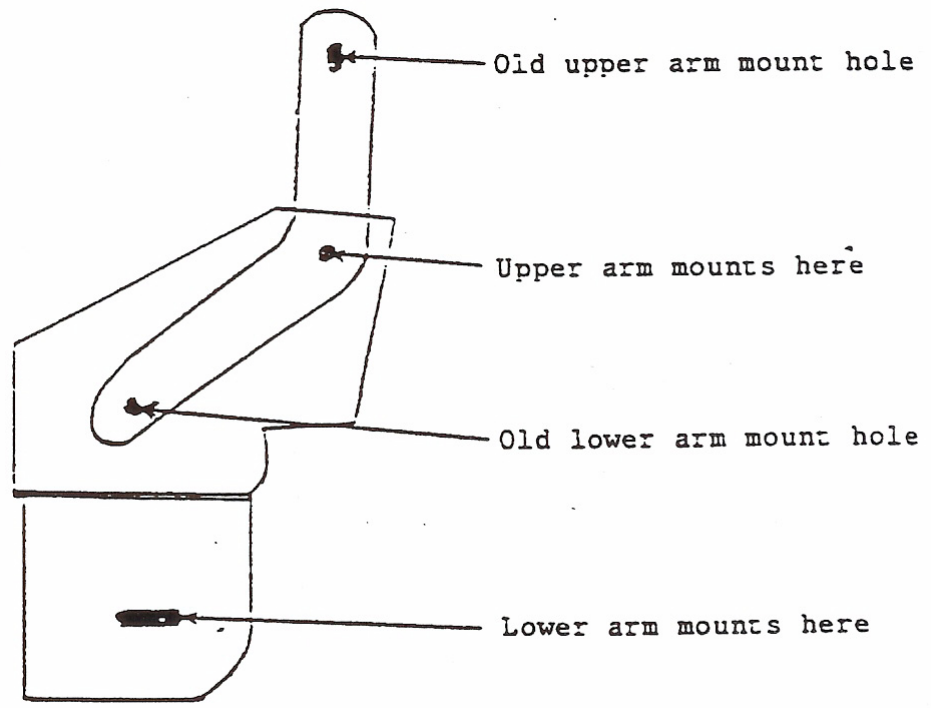
2. Vehicle alignment is necessary after suspension system is installed. Recommended Caster is +5 degrees plus or minus 1/2 degree. Camber and two should be at factory specifications. The size of rim and tire combination should be considered when making front end adjustments.
3. Performance Automotive Group goal is to provide you with the best system possible for a reasonable cost. It must be noted that the components in your Performance Automotive Group system do not eliminate OE component weaknesses.
4. Retain this and all information regarding your altered vehicle for future reference. Thank you for choosing Trail Master. For questions or suggestions, contact our Technical Assistance Department at (928) 636-3175.

## PARTS LIST

<u>Qty</u>	<u>Description</u>
2	R2537 Rear Add-A-Leafs
2	5/16" Center Bolt
2	5/16" Nut
2	Lift Coil
1	Left lower radius arm bracket
1	Right lower radius arm bracket
1	Left upper radius arm bracket
1	Right upper radius arm bracket
1	Left sway bar extension
1	Right sway bar extension
1	Rear brake extension
2	1/4" Flat Washers
2	2-1/4" spacer
2	2" spacer
2	1/2" x 4-1/2" Bolt
2	1/2" Lock Nut
1	1/4" x 1" Bolt
2	10mm x 80mm Bolt
2	10mm x 90mm Bolt
8	3/8" x 1-1/4" Bolt
8	3/8" Lock Nut
14	3/8" Flat Washer
2	12mm x 70mm Bolt
2	10mm Lock Nut
2	1/2" Flat Washer
1	10mm Square Nut
1	2' Hose



**Fig.#1**



**Fig. #2**