

# INSTALLATION INSTRUCTIONS

88501

Rev A

FOR RANCHO *SPORT KIT* SUSPENSION SYSTEMS **RS6501**: JEEP WRANGLER (TJ)

***READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION***



## **IMPORTANT NOTES!**

**WARNING:** This suspension system will enhance the off-road performance of your vehicle. It will handle differently, both on and off-road, from a factory equipped passenger car or truck. Extreme care must be used to prevent loss of control or vehicle rollover during abrupt maneuvers. Failure to drive this vehicle safely may result in serious injury or death to the driver and passengers. ALWAYS WEAR your seat belts, REDUCE your speed, and AVOID sharp turns and other abrupt maneuvers.

A. Before installing this system, have the vehicle's alignment and frame checked at a state approved facility. The alignment must be within factory specifications and the frame must be sound (no cracks, damage, or corrosion).

B. Do not install a body lift kit with Rancho's suspension system or interchange parts from this system with components from another manufacturer. To obtain maximum performance, use the following Rancho shock absorbers with this kit: RS5255, RS9255, RS99255, or RS999255 for the front & RS5256, RS9256, RS99256, or RS999256 for the rear. OE steering stabilizer replacement RS5407 can also be used.

C. Compare the contents of this system with the parts list in these instructions. If any parts are missing, including fasteners, contact the Rancho Technical Department at 1-734-384-7804. Each hardware kit in this system contains fasteners of high

strength and specific size. Do not substitute a fastener of lesser strength or mix one hardware kit with another.

D. Apply **THREAD LOCKING COMPOUND** to all bolts during installation. One drop on the exposed threads of each bolt before installing the nut is sufficient to provide an adequate bond. **CAUTION:** Thread locking compound may irritate sensitive skin. Read warning label on container before use.

E. Install all nuts and bolts with a flat washer. When both SAE (small OD) and USS (large OD) washers are used in a fastener assembly, place the USS washer against the slotted hole and the SAE washer against the round hole.

F. Unless otherwise specified, tighten all bolts to the standard torque specifications listed at the end of the note's section. Do not use an impact wrench to tighten any of these bolts. They tend to over tighten smaller bolts and under tighten larger bolts. **USE A TORQUE WRENCH!!**

G. Rancho parts come with a protective coating. Do not powder coat, chrome, cadmium, or zinc plate any of the components in this system. If you wish to change the appearance of components enamel paint can be applied over the original coating.

H. Do not weld anything to these components, and do not weld any of these components to the vehicle. If any component breaks

or bends, contact your local Rancho dealer or Rancho for replacement parts.

I. Some of the service procedures require the use of special tools designed for specific procedures. The following tools and supplies are recommended for proper installation of this kit.

- Jeep Service Manual
- Spring Compressor
- Pitman Arm Puller C-4150-A
- Steering Linkage Puller C-3894-A
- Drill Motor
- Drill assortment (1/8" to 1/2")
- Torque Wrench (250 FT-LB capacity)
- Hammer
- 1/2" Drive Ratchet and Sockets
- Combination Wrenches
- Allen Wrenches
- Torx Key Sockets
- Hacksaw
- File
- Large "C" Clamps and/or Bench Vise
- Hydraulic Floor Jack
- Heavy Duty Jack stands
- Wheel Chocks (Wooden Blocks)
- Molybdenum Grease or Anti Seize Compound
- Synthetic Grease with Teflon
- Silicone Spray
- Safety Glasses**--Wear safety glasses at all times

J. It is extremely important to replace torsion bars, CV flanges, and front drive shaft/pinion relationships as original. Be sure to mark left/right, front/rear, and indexing of mating parts before disassembly. A paint marker or light colored nail polish is handy for this.

K. Suspension components that use rubber or urethane bushings should be tightened with the vehicle at normal ride height. This will prevent premature failure of the bushing and maintain ride comfort.

L. The required installation time for this system is approximately 5 to 6 hours. Check off the box (  ) at the beginning of each step when you finish it. Then when you stop during the installation, it will be easier to find where you need to continue from.

M. Important information for the end user is contained in the consumer/installer information pack. If you are installing this system for someone else, place the information pack on the driver's seat. Please include the installation instructions when you finish.

N. This suspension system was developed using the following tire and wheel combination: 33 x 12.50R-15 tire, 15" x 8" wheel with 3.75" of wheel backspacing. Before installing any other combination, consult your local tire and wheel specialist.

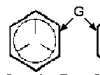

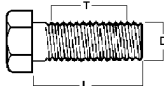

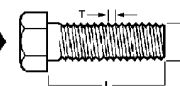
O. To reduce rear driveline vibration and/or to increase ground clearance, you may want to install a double-cardan driveshaft and not use the skid plate/crossmember spacers and shift relocating bracket. A double-cardan driveshaft for the Rubicon (Part No. 3394-0100) is available from: Powertrain Industries 7532 Anthony Avenue, Garden Grove, CA 92841 (714) 893-4583. Consult your local 4X4 shop for more information.

P. Lubricate the lower link bushings during installation and every 3000 miles.

Q. Thank you for purchasing the best suspension system available. For the best installed system, follow these instructions. If you do not have the tools or are unsure of your abilities, have this system installed by a certified technician. RANCHO IS NOT RESPONSIBLE FOR DAMAGE OR FAILURE RESULTING FROM AN IMPROPER INSTALLATION.

<b>STANDARD BOLT TORQUE SPECIFICATIONS</b>						
INCH SYSTEM			METRIC SYSTEM			
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 9.8	Class 10.9	Class 12.9
5/16	15 FT-LB	20 FT-LB	M6	5 FT-LB	9 FT-LB	12 FT-LB
3/8	30 FT-LB	35 FT-LB	M8	18 FT-LB	23 FT-LB	27 FT-LB
7/16	45 FT-LB	60 FT-LB	M10	32 FT-LB	45 FT-LB	50 FT-LB
1/2	65 FT-LB	90 FT-LB	M12	55 FT-LB	75 FT-LB	90 FT-LB
9/16	95 FT-LB	130 FT-LB	M14	85 FT-LB	120 FT-LB	145 FT-LB
5/8	135 FT-LB	175 FT-LB	M16	130 FT-LB	165 FT-LB	210 FT-LB
3/4	185 FT-LB	280 FT-LB	M18	170 FT-LB	240 FT-LB	290 FT-LB

<b>BOLT IDENTIFICATION</b>	
<p style="text-align: center;">1/2-13x1.75 HHCS</p> <p style="text-align: center;">D    T    L    X</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Grade 5</p> </div> <div style="text-align: center;">  <p>Grade 8</p> </div> <div style="text-align: center;">  <p>L</p> </div> </div> <p>G = Grade Marking (bolt strength)      L = Length (inches)  D = Nominal Diameter (inches)            X = Description (hex head cap screw)  T = Thread Pitch (threads per inch)</p>	<p style="text-align: center;">M12-1.25x50 HHCS</p> <p style="text-align: center;">D    T    L    X</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>10.9</p> </div> <div style="text-align: center;">  <p>L</p> </div> </div> <p>P = Property Class (bolt strength)      L = Length (millimeters)  D = Nominal Diameter (millimeters)      X = Description (hex head cap screw)  T = Thread Pitch (thread width, mm)</p>

## PARTS LIST

<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
130019	Rear Track Bar Bracket	1	860155	Rear End Link Hardware	1
420027	Rear Bumpstop Spacer	2	545	End Link Bushing	4
694	Coil Spring – Front	2		7/16-20 x 2.5 Gr 5 HHCS	4
695	Coil Spring – Rear	2		7/16-20 Gr 8 Stover Nut	4
1335	Lower Link	4		7/16 Hardened SAE Washer	4
130019	Rear Track Bar Bracket	1	860684	7/16 Hardened USS Washer	6
8597	Link Bushing kit	1		Front Suspension Hardware	1
420025	Sleeve 1.0 x .219W x 2.53	8		M10x1.25x35mm Gr 10.9 HHCS	2
530-4	Link Bushing	16		M10x1.25 Top-lock Gr 10.9 Nut	2
860160	Shift Relocation Kit	1		M10 Hardened Washer	4
176090	Bracket	1	545	3/8-16 x x 1.5 Type F HHTS	2
	1/4-20x.75 BHCS	4	420084	End Link Bushing	4
	1/4 SAE Washer	4		Sleeve .688 x .522 x 1.4	4
	1/4-20 Nyloc Nut	4		1/2-20 x 2.75 Gr 8 HHCS	2
	Thread Lock	2		1/2-20 Gr 8 Nylock Nut	2
860072	Rear Track Bar Relocation Kit	1		1/2 Hardened Washer SAE	4
420026	Sleeve	1		1/2 Hardened Washer USS	4
	7/16-14x1.0 HHCS	1		1/2-13 x 2.75 Gr 8 HHCS	2
	7/16-14 Stover Nut	1	860516	1/2-13 Top-lock Gr 8 Nut	2
	7/16 SAE Washer	2		Hardware Kit	1
	M12-1.75x70 HHCS	2		8mmx1.25x20mm Gr 10.9 HHCS	2
	M12-1.75 Nut	2		8mmx1.25 Nylock Nut	2
	SAE Washer	4		M8 Hardened Washer	2
	3/8-16x1.0 HHCS	1	88501	Tie Strap	6
	3/8-16 Stover Nut	1		Jeep TJ Sport Kit Instructions	2
	3/8 SAE Washer	2	94180	Information Pack	1
860161	Skid Plate Spacer / Bumpstop Kit	1	780281	Rancho Decal	1
176091	Skid Plate Spacer	6	88056	Instructions	1
176092	Skid Plate Shim	6	94119	Consumer/Warranty Information	1
	1/2 Cone Washer	6	94177	Warning Sticker	1
	1/2-13x2.5 FSHCS	6			
	M10-1.50x70 HHCS	2			
	10mm Lock Washer	2			
860483	Skid Plate Spacer MY2003	1			
	M12-1.75 x 65 HHCS	6			
	12mm Washer	6			
176088	Rear End Link	2			
176609	Front End Link	2			
176300	Front End Link Adaptor	2			
176604	Front Brakeline Drop Bracket	2			

### RANCHO LINK ASSEMBLY

#### BUSHING & SLEEVE INSTALLATION

- 1)  Lubricate the outside diameter of two urethane bushings 530-4 with a silicone spray or a mild solution of soap and water.
- 2)  Press the lubricated bushings into one end of a new Rancho suspension link 1335 as shown in Figure 1.
- 3)  Lubricate the outside diameter of sleeve 420025 and the inside diameter of the installed urethane bushings with synthetic grease. Refer to Important Note P. Press the sleeve into the bushings.

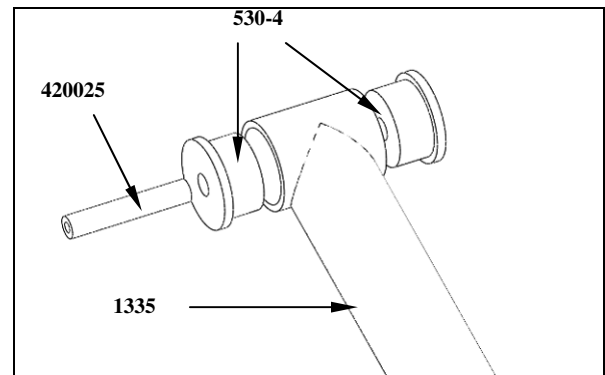


Figure 1

NOTE: It may be necessary to use a bench vise or C-clamp to press the bushings and sleeves into the cast links. Do not use a hammer.

4)  Slowly apply grease to each end of the links (through the grease fitting) with a grease gun. Stop when the grease begins to appear around the edges of the bushings. Do not force the bushings out of the link.

5)  Repeat steps 1 through 4 for the remaining link ends, bushings, and sleeves.

## FRONT SUSPENSION

### TRACK BAR & COIL SPRING REMOVAL

1)  Park vehicle on a level surface and set the parking brake. Center front wheels and chock rear wheels.

2)  Utilizing a straight edge, measure the horizontal distance between the outer edge of each front tire and the vehicle body (at top edge of fender well).

Left Side: \_\_\_\_\_ Right Side: \_\_\_\_\_

3)  Remove the cotter pin and nut from the ball stud end of the track bar at the frame rail bracket. Separate the ball stud from the bracket with the recommended puller tool. See figure 2.

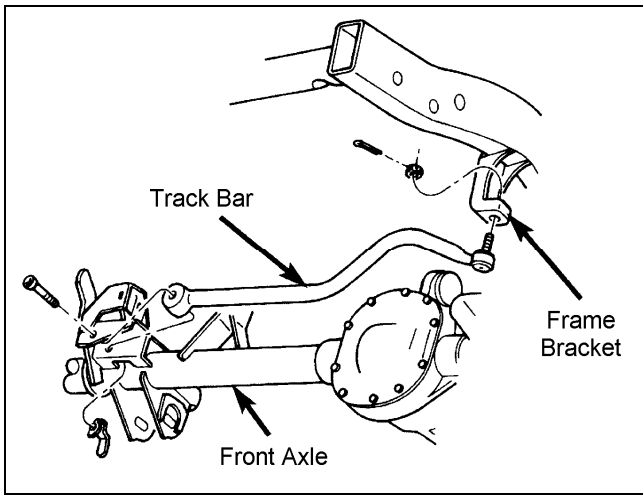


Figure 2

4)  Remove the bolt and flag nut from the axle bracket. Remove the track bar. Save for reuse.

5)  From inside the engine compartment, remove the upper stud nut, retainer and grommet from both front shock absorbers.

6)  If applicable, remove the bolts attaching the automatic transmission skid plate to the frame rails and the transfer case cross member (Do not use an impact wrench). Remove the skid plate.

NOTE: To reinstall the automatic transmission skid plate, adapter kit RS904 must be purchased separately.

7)  Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and set them aside.

8)  Position a floor jack under the front axle for support. Remove both front sway bar end links. See Figure 3.

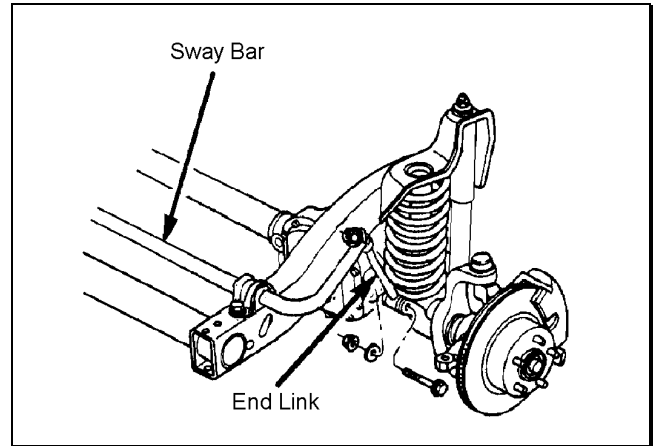


Figure 3

9)  Lower axle and remove floor jack.

10)  Remove the shock absorber lower nuts and bolts. Remove the front shock. DO NOT REUSE ORIGINAL SHOCK ABSORBERS.

11)  Remove the rubber bump stop and bump stop mount from inside of the coil spring.

12)  If applicable, remove the coil spring retainer bolt and retainer. Push down on the axle and remove the coil spring.

13)  Repeat steps 10 through 12 for other side.

### LOWER ARM REMOVAL & LINK INSTALLATION

1)  Support the front axle with a floor jack.

2)  If applicable, paint or scribe alignment marks on the adjustment cams and axle brackets for installation reference. See Figure 4.

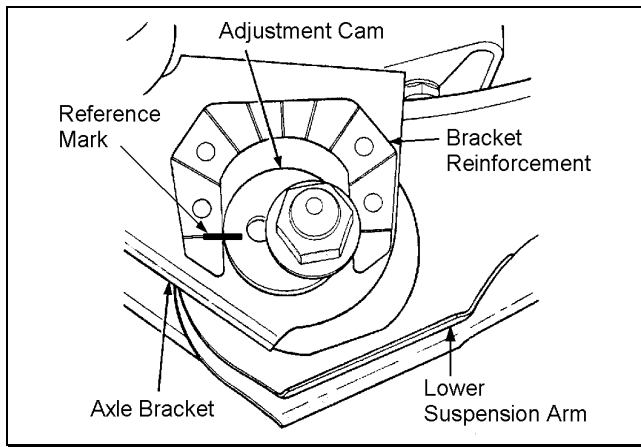


Figure 4

3)  If equipped with ABS brakes, remove sensor wires and clamps from the inboard side of the lower arms. Save clamps for reuse.

NOTE: Remove and replace one suspension arm at a time.

4)  Remove the nut, cam, and cam bolt from the axle bracket. Remove the nut and bolt from the frame bracket. Remove the lower suspension arm. See Figure 5.

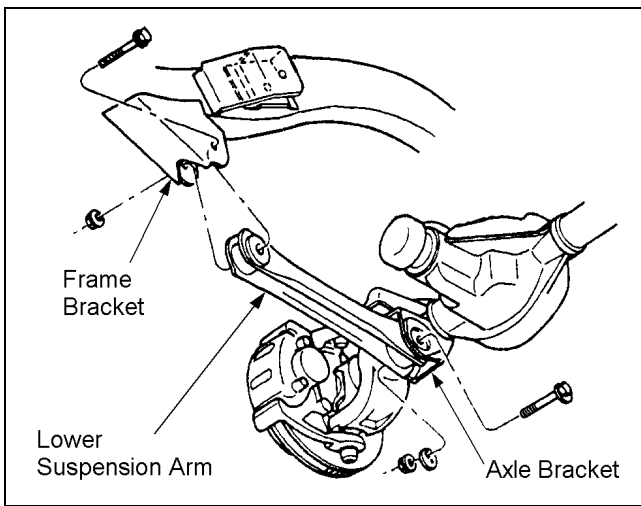


Figure 5

5)  Install new Rancho suspension link 1335 to the frame and axle brackets as shown in figure 6. Use original hardware but do not tighten. Tightening the bolts at this point could create ride height issues.

6)  Repeat steps 4 and 5 for the other side.

7)  If applicable, drill a 23/64" hole into each link and reinstall the ABS sensor wires. Use the original clamps.

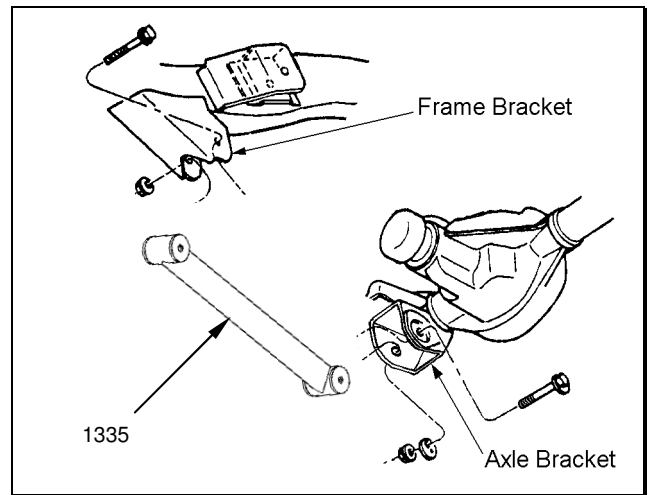


Figure 6

### TRACK BAR RELOCATION

- 1)  Locate the track bar mounting point on the axle.
- 2)  Using a 7/16" drill bit, mark and drill a new mounting hole 3/4" inboard. See Figure 7. It may be necessary to disconnect the draglink from the right steering arm to make clearance to drill the relocation hole.



Figure 7

3)  Do not reattach the track bar to the axle yet. Leaving the track bar disconnected will make coil spring installation easier.

### COIL SPRING INSTALLATION

- 1)  Lower the front axle and remove the hydraulic floor jack.
- 2)  Drill a 5/16" hole through the center of the coil spring axle pad. Reinstall the rubber bump stop.

- 3)  Compress the new front coil spring to 16 inches in length. Use a quality spring compressor like the one shown in Figure 8.

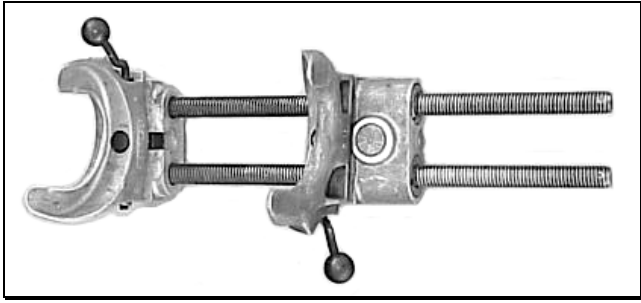


Figure 8

- 4)  Place bump stop perch 176443 inside the compressed spring as you install the spring into the upper and lower spring pockets. Carefully remove the spring compressor.
- 5)  Rotate spring so pig tail end fits back in spring pocket. Attach the bump stop perch to the axle pad with the 3/8"-16 x 1.5 self-tapping screw from kit 860684.
- 6)  Repeat steps 2 through 5 for other side.

#### **BRAKE LINE DROP BRACKET INSTALLATION**

- 1)  Remove the self tapping bolt that attaches the brake line bracket to the frame. Save for reuse.
- 2)  Connect brake line drop bracket 176604 to the OE brake line bracket using the 8mm hardware from kit 860516. Torque to 23 ft-lbs.
- 3)  Attach bracket 176604 to the frame reusing the OE self tapping bolt. See Figure 9 for details.

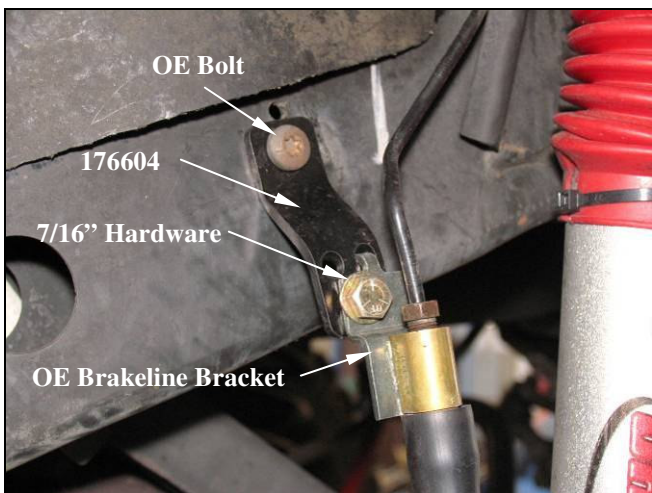


Figure 9

#### **SWAY BAR END LINK ASSEMBLY AND INSTALLATION**

- 1)  Apply silicone lubricant and press bushings 545 from kit 860684 into both loops of front end link 176609.
- 2)  Apply silicone lubricant and press sleeves 420084 from kit 860684 into the installed bushings. See Figure 10.
- 3)  Repeat for other end link.

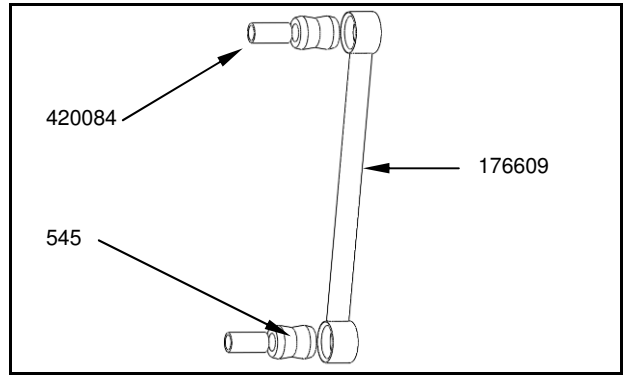


Figure 10

- 4)  Connect the lower mount of end link 176300 using the 1/2"-20 x 2.75" bolt, 2 USS 1/2" washers and 1 SAE 1/2" washer. The 2 USS washers should go on either side of the end link bushing to retain it properly. See Figure 11 for details. Do not torque yet.
- 5)  Attach clevis bracket 176300 to the bottom side of the sway bar at the end link mounting hole. Installing the bolt from the bottom side, use the M10-1.25x35mm bolt, 2 M10 washers and 1 M10 top-lock nut from hardware kit 860684. Torque to 32 ft-lbs. See Figure 11 for details.
- 5)  Connect the upper mount of end link 176300 to the clevis using the 1/2"-13 x 2.5" bolt, 1/2" SAE washer (under the nut) and 1/2" top-lock nut from hardware kit 860864. **IMPORTANT:** Insert the 1/2" bolt from the inside (ie. The bolt head should be facing the inside of the vehicle). Torque to 70 ft-lbs.



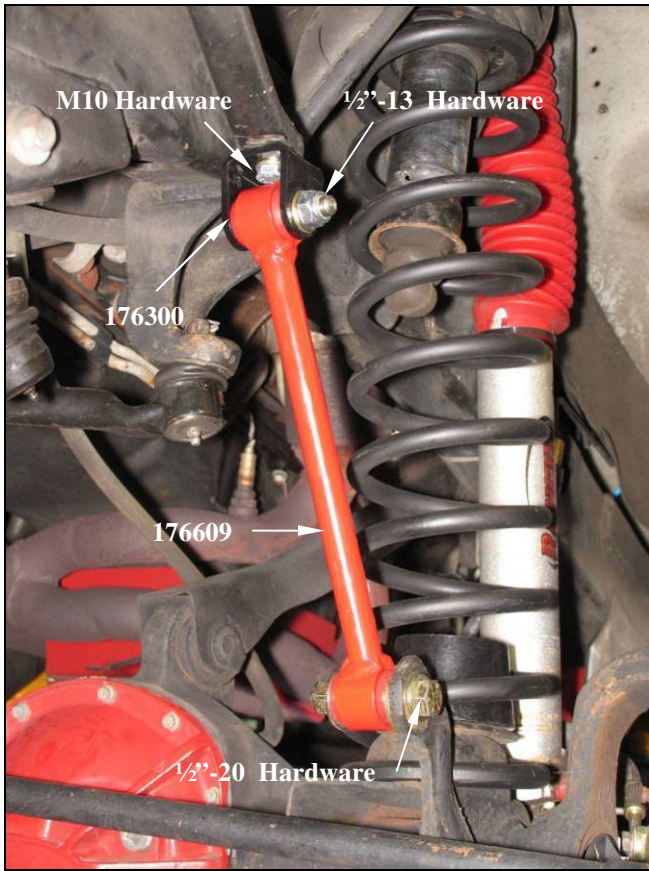


Figure 11

- 6)  Repeat steps 1 through 5 to assemble and install the other end link.
- 7)  Install one retaining washer and grommet onto each new front shock absorber. Attach shocks to axle brackets. Tighten bolts to 23 FT-LBS.
- 8)  Position shock stud through upper mounting hole. Install upper shock grommet, retainer and nut. Tighten to 17 FT-LBS. Repeat for other side.
- 9)  Tighten the sway bar lower link bolts to 70 FT-LBS.
- 10)  Align the reference marks on the adjustment cams and lower arm axle brackets. Tighten nuts to 85 FT-LBS.

## REAR SUSPENSION

### TRACK BAR & COIL SPRING REMOVAL

- 1)  Chock front wheels. Disconnect and remove the rear sway bar end links.
- 2)  Disconnect the track bar from the frame bracket. See figure 12.

- 3)  Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 4)  Separate the track bar from the axle bracket. Remove the track Bar. See Figure 12.

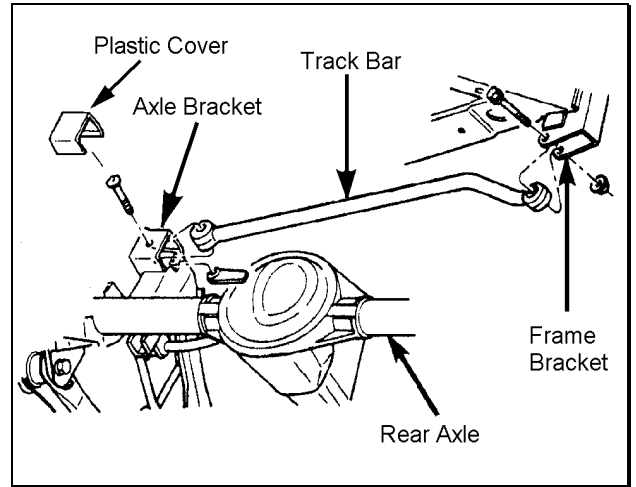


Figure 12

- 5)  Support the rear axle with a floor jack and remove the shock absorbers. **DO NOT REUSE ORIGINAL SHOCK ABSORBERS.**
- 6)  Mark the orientation of the coil springs on the axle pads. Carefully lower the rear axle until the coil springs are free from the upper mount seat. Remove the coil springs.

### TRACK BAR BRACKET INSTALLATION

- 1)  Place track bar bracket 130019 on top of the axle bracket as shown in figure 13. To properly align the bracket, insert a 12mm bolt from kit 860072 through both brackets.
- 2)  Using the new bracket as a template, mark the two additional mounting holes on the axle bracket. Remove bracket and drill a 13/32" hole through the top of the axle bracket and 15/32" hole through the side.
- 3)  Reinstall the track bar bracket and attach it to the axle with the sleeve and hardware from kit 860072. See Figure 13. Tighten to specification.

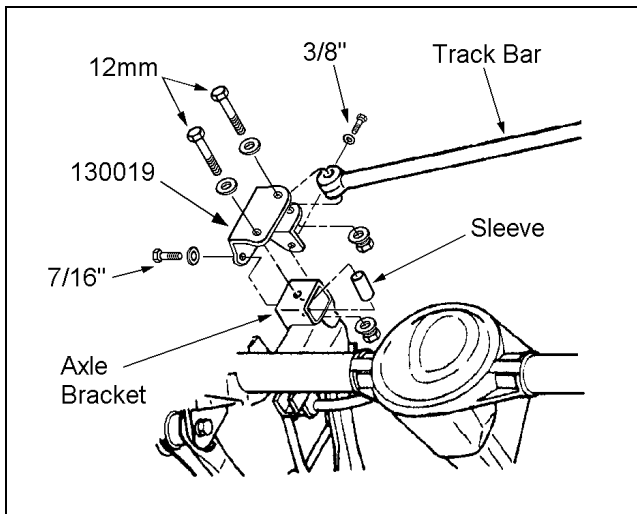


Figure 13

- 4)  Insert track bar into track bar bracket and install the 14mm hardware from kit 860072.

NOTE: Do not attach the track bar to the frame bracket or tighten the mounting bolt at this time.

- 5)  Bend gas tank skid plate away from track bar if necessary.

### LOWER ARM REPLACEMENT

NOTE: Remove and replace one suspension arm at a time.

- 1)  Support the rear axle with a hydraulic jack.
- 2)  Remove the lower arm axle and frame mounting bolts. Remove the lower suspension arm.
- 3)  Install new Rancho suspension link 1335 to the frame and axle brackets. See figure 14. Use original hardware but do not tighten. Tightening the bolts at this point could create ride height issues.

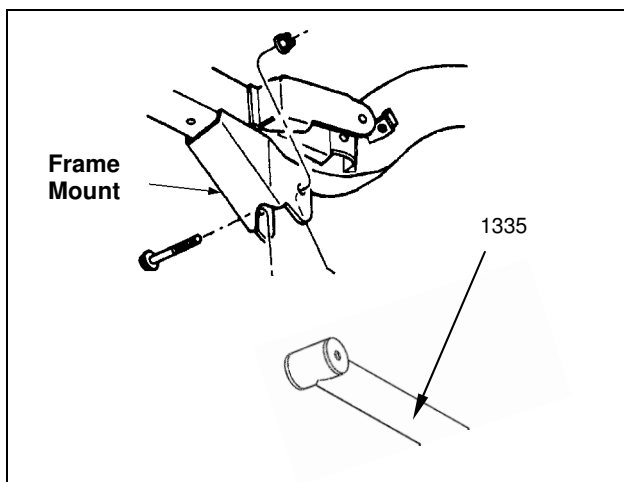


Figure 14

- 4)  Repeat steps 2 and 3 for the other side.

### BUMP STOP SPACER & COIL SPRING INSTALLATION

- 1)  Remove the rubber bump stop and bump stop bracket from the upper spring mount.
- 2)  Insert Rancho spacer 420027 and reinstall the bracket with the 10mm hardware from kit 860161. Insert the bump stop into the bump stop bracket. See figure 15.

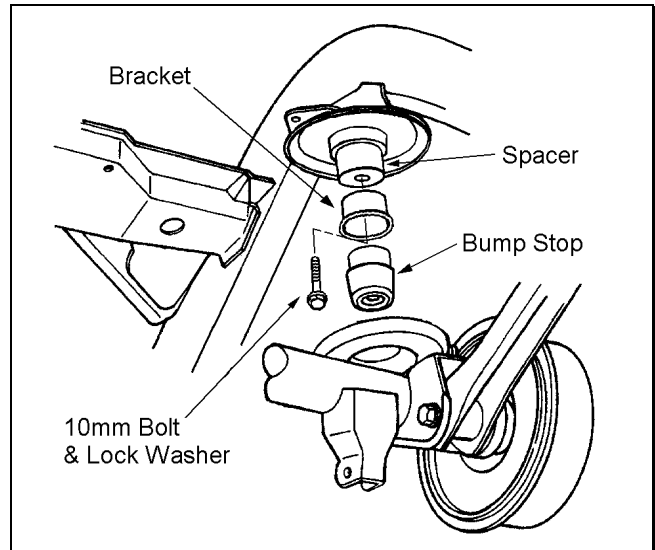


Figure 15

- 3)  Repeat steps 1 & 2 for other side.
  - 4)  Lower rear axle and position the new coil springs onto the axle pads. Align springs with reference marks. Raise the axle until the spring seat in the upper mounts.
- NOTE: When installing coil springs, make sure that the rubber damper is positioned in the upper mount and the small egg-shaped coil end is at the top.
- 5)  Install new Rancho rear shocks to the upper frame rail. Tighten mounting bolts to 23 FT-LBS.
  - 6)  Loosely attach shocks to the axle brackets.

### SWAY BAR END LINK INSTALLATION

- 1)  Apply silicone lubricant and press a bushing from kit 860155 into a new rear end link (176088).
- 2)  Apply silicone lubricant and press a sleeve from kit 860155 into the installed bushing.



- 3)  Repeat steps 1 and 2 to install the rest of the bushings and sleeves.
- 4)  Attach the new end link assemblies to the frame brackets and rear sway bar with the hardware from kit 860155. See Figure 16. Tighten the end link mounting bolts to 40 ft. lbs.

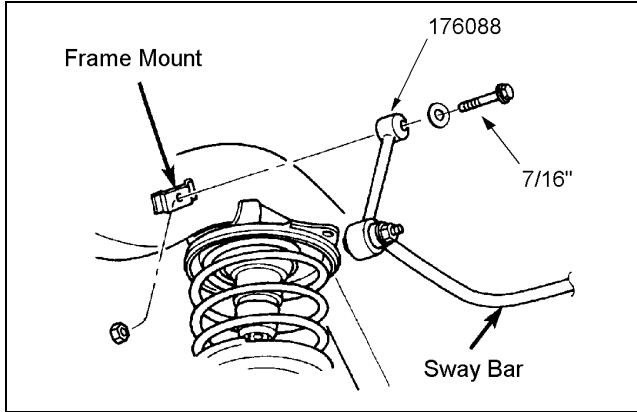


Figure 16

NOTE: It may be necessary to enlarge the mounting holes in the sway bar and frame brackets to 7/16".

- 5)  Place the track bar into the frame bracket and install the original hardware. Do not tighten the bolts at this point. NOTE: it may be necessary to use a come-along device to move the axle over to allow proper alignment of the track bar and mounting hole.
- 6)  Tighten the shock absorber to axle bracket bolts to 74 ft. lbs.
- 7)  Grease new lower suspension arms until you see a slight amount of grease coming out of bushings. **DO NOT OVER GREASE!**

## TRANSMISSION & TRANSFER CASE

NOTE: See Important Note O before proceeding.

### CROSS MEMBER RELOCATION

- 1)  Place the transmission in neutral. Support the transfer case crossmember/skid plate with a hydraulic jack. Loosen the 6 bolts holding the crossmember to the frame. See figure 17. Do not use an impact gun.

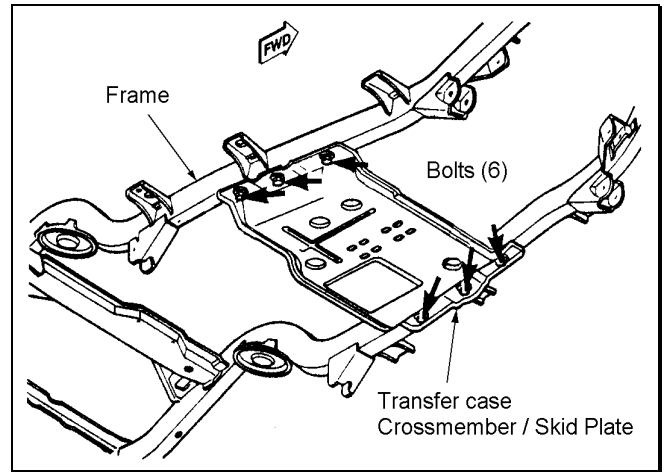


Figure 17

- 2)  Remove 3 bolts on one side and carefully lower the cross member/skid plate.
- 3)  Place 3 spacers from kit 860161 between the cross member and the frame with the conical end of the spacer facing down. See figure 18a. For vehicles with an automatic transmission, add 3 shims.
- 4)  If flat head screws were removed, install a conical washer and apply thread lock to 3 flat head screws from kit 860161. Insert the screws through the crossmember, spacers, and into the frame. See figure 18.

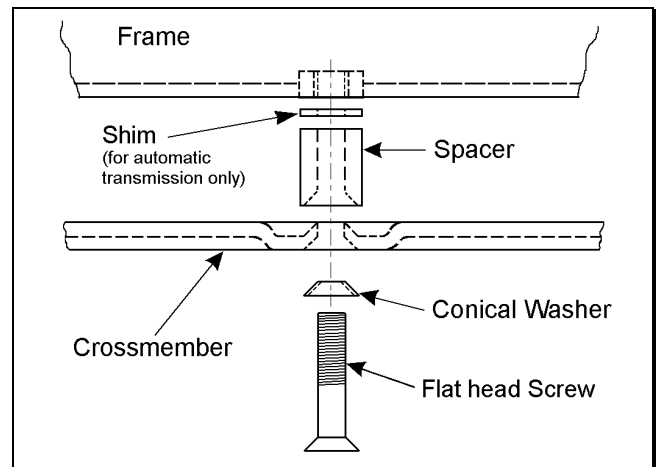


Figure 18

- 5)  If hex head screws were removed, install the hardware from kit 860483. See figure 19.
- 6)  Repeat steps 3 through 6 for the other side of the cross member. Tighten all bolts to 45 FT-LBS.

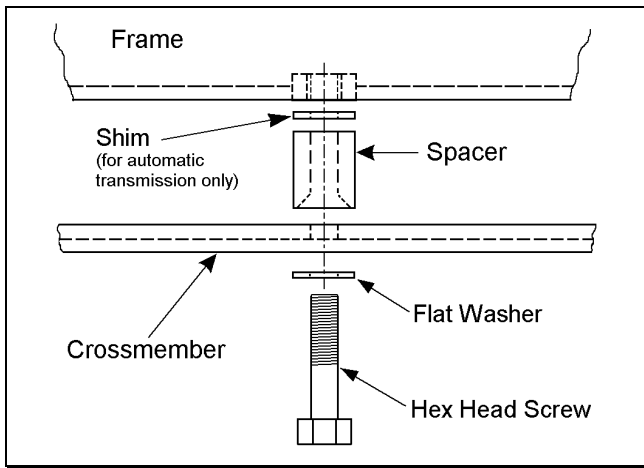


Figure 19

### LINKAGE RELOCATION & ADJUSTMENT

- 1)  Pull back carpet/mat to gain access to torque shaft bracket mounting screws. If necessary, loosen the screws attaching the console to the floor panel.
- 2)  Remove the four screws that attach the torque shaft bracket to the floor pan. See figure 20.
- 3)  Slide the torque shaft bracket off the torque shaft, and remove the bearing plate & gasket.
- 4)  Attach the bearing plate (with gasket) to shift relocating bracket 176090 as shown in figure 21.
- 5)  Using bracket 176090 as a template, mark the two mounting holes locations on the torque shaft bracket. See figure 20. Drill a 9/32" hole at each location.

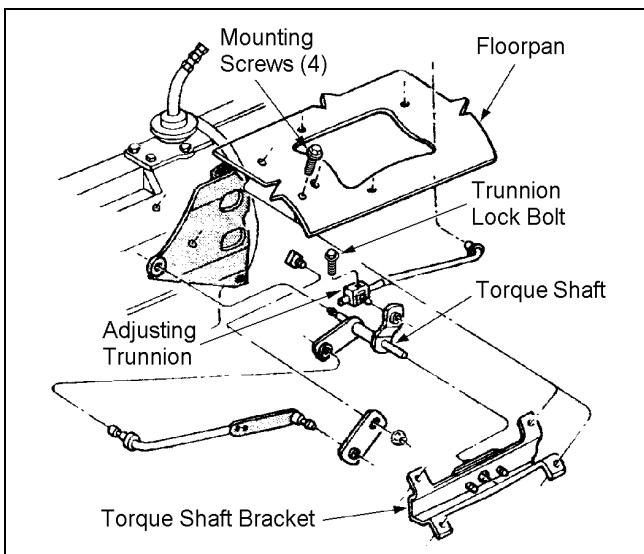


Figure 20

- 6)  Attach the shift relocating bracket 176090 to the torque shaft bracket with the hardware from kit 860160. See figure 21.

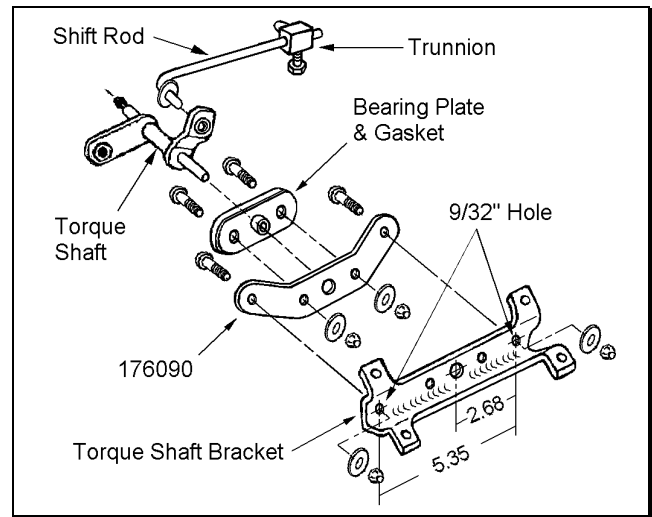


Figure 21

- 7)  Insert the torque shaft into the bearing plate and reinstall the torque shaft bracket to the floor pan. Verify that the torque shaft is level and the shifting linkage moves without restriction. If necessary, file the end of the shift rod to provide adequate clearance.
  - 8)  Shift transfer case into 4L position and loosen lock bolt on adjusting trunion.
- NOTE: Be sure shift rod slides freely in trunion.
- 9)  Verify that transfer case range lever is fully engaged in 4L position. Tighten adjusting trunion lock bolt.
  - 10)  Reinstall carpet/mat and tighten console mounting bolts.

### FLOOR PAN MODIFICATION (MANUAL TRANS ONLY)

- 1)  Move the seats to the full rearward position.
- 2)  Pry up the shift boot and bezel from the floor console. See figure 22.
- 3)  Remove the bolts attaching the console to the floor pan.
- 4)  Lift the console upward and remove through the passenger door.

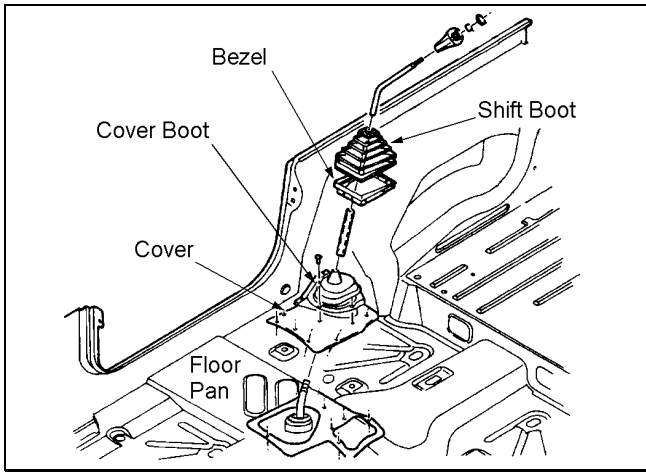


Figure 22

- 5)  Remove the 4 screws attaching the cover boot to the cover. Slide the boot upward to expose the opening in the cover and floor pan.
- 6)  Shift the transmission into 2nd and reverse. Verify a minimum of 1/8" clearance between the shift lever and floor pan. If necessary, enlarge the opening in the floor pan with a half round file.
- 7)  Reposition the cover boot. Install one screw on the left side or 9 o'clock position.
- 8)  Rotate the boot clockwise to match the increased floor pan opening. Mark and drill the three new mounting holes. See figure 23.

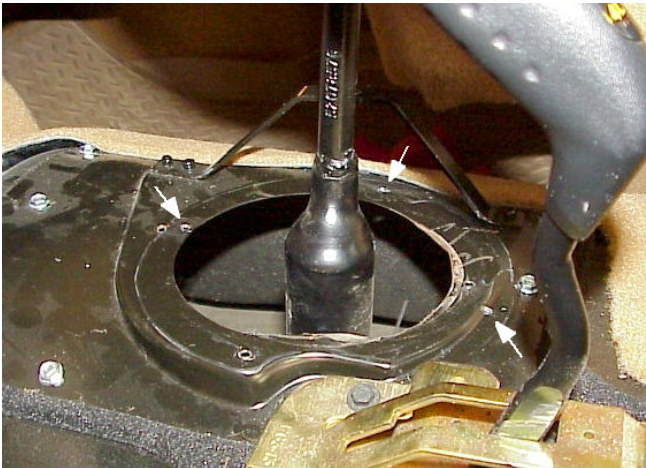


Figure 23

- 9)  Reinstall the cover boot, console, and shift boot.

## FINAL CHECKS & ADJUSTMENTS

- 1)  Install the wheels and lower the vehicle to the ground. Tighten lug nuts to 80-110 ft-lbs.
- 2)  Torque the axle mounts for both the front and rear lower links to 85 ft-lbs. Torque the frame mounts for the both the front and rear lower links to 130 ft-lbs.
- 3)  Apply grease to the new lower suspension arms. **DO NOT OVER GREASE!**
- 4)  Attach the lower mount of the front track bar to the newly drilled hole using the OE hardware. Torque to 55 ft-lbs.
- 5)  Torque the upper and lower mounts of the rear track bar to 70 ft-lbs.
- 6)  Turn the front wheels completely left then right. Verify adequate tire, wheel, and brake hose clearance. Inspect steering and suspension for tightness and proper operation.
- 7)  With the suspension at maximum extension (full droop), inspect and rotate all axles and drive shafts. Check for binding and proper slip yoke insertion. The slip yoke should be inserted a minimum of one inch into the transfer case and/or transmission.
- 8)  Readjust headlamps. Have vehicle Aligned to manufacturer's specifications.

### Alignment Specifications

Adjustment	Preferred	Range
Caster	7°	±1.0°
Camber (fixed angle)	-0.25°	±0.63°
Toe-In (each wheel)	0.15°	±0.15°
Thrust Angle	0	±0.15°

**Please retain this publication for future reference. See Important Note M.**

