

# INSTALLATION INSTRUCTION



## Suspension System **RS66104 & RS66104B** (4" Crawler System)

2012 JEEP MODELS EQUIPED WITH 3.6L V6 ENGINE NEED EXHAUST MODIFICATION KIT RS720003.  
OR REPLACEMENT FRONT DRIVESHAFT (DRIVESHAFT / EXHAUST CLERANCE ISSUE).



Jeep Wrangler (JK)  
2007 - 2012

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

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**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. Use the following Rancho shock absorbers with this system;

RS5000 / RS7000 / RS9000XL

<u>Front</u>	<u>Rear</u>
RS5331	RS5332
RS999331	RS999332
RS7331	RS7330

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. USE A TORQUE WRENCH for accurate measurements.

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 unless specifically stated in the instructions. If any component breaks or bends, contact your local Rancho dealer or Rancho for replacement parts.

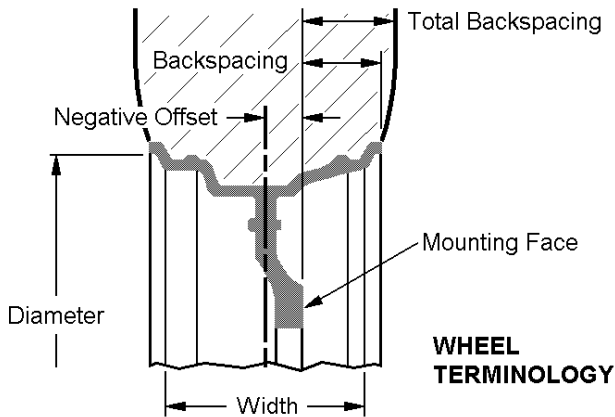
I. Some of the service procedures require the use of special tools designed for specific procedures. The following tools and supplies are recommended for proper installation of this kit.

- Jeep Service Manual
- Pitman Arm Puller C-4150-A
- Steering Linkage Puller C-3894-A
- Torque Wrench (250 FT-LB capacity)
- Hammer
- 1/2" Drive Ratchet and Sockets
- Combination Wrenches
- 3/8-16 Tap
- File
- Hydraulic Floor Jack
- Heavy Duty Jack stands
- Wheel Chocks (Wooden Blocks)
- Anti-seize compound
- 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. This suspension system was developed using a BF Goodrich® Mud-Terrain™ T/A® KM-35 x 12.50 x 18 D tire on an 18" x 9" wheel with 4.5" of backspacing. Total backspacing is 5.9". Before installing any other combination, consult your local tire and wheel specialist. **Actual tire size varies by manufacturer.**



**WHEEL TERMINOLOGY**

M. The required installation time for this system is approximately 4 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.

N. Welding on a vehicle creates an electrical charge throughout the body and frame. Disconnect the vehicle's battery prior to any welding. Place welding ground clamps as near as possible to the weld. Never use a vehicle suspension component as a welding ground point.

O. 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.

P. During high articulation events, the front driveshaft may contact the transmission oil pan. A smaller diameter driveshaft is suggested for optimal performance. Rancho recommends Powertrain Industries (Garden Grove, CA) front drive shaft 2007 -2011 models P/N 3194-1325 and 2012 models P/N 3194-2125. 1-800-798-4585.

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.**

Compatible With OE Wheels	Development Tire Size (actual)	Optional Tire Size <sup>2</sup> (actual)	Wheel Size (backspacing)
No	35x12.5xR17 (34.8"x12.5")	37x12.5xR17 (36.3"x12.8")	17x9 (4.5")

<sup>2</sup> Fitment of the optional tire size may require trimming to provide proper clearance.

STANDARD BOLT TORQUE SPECIFICATIONS						
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

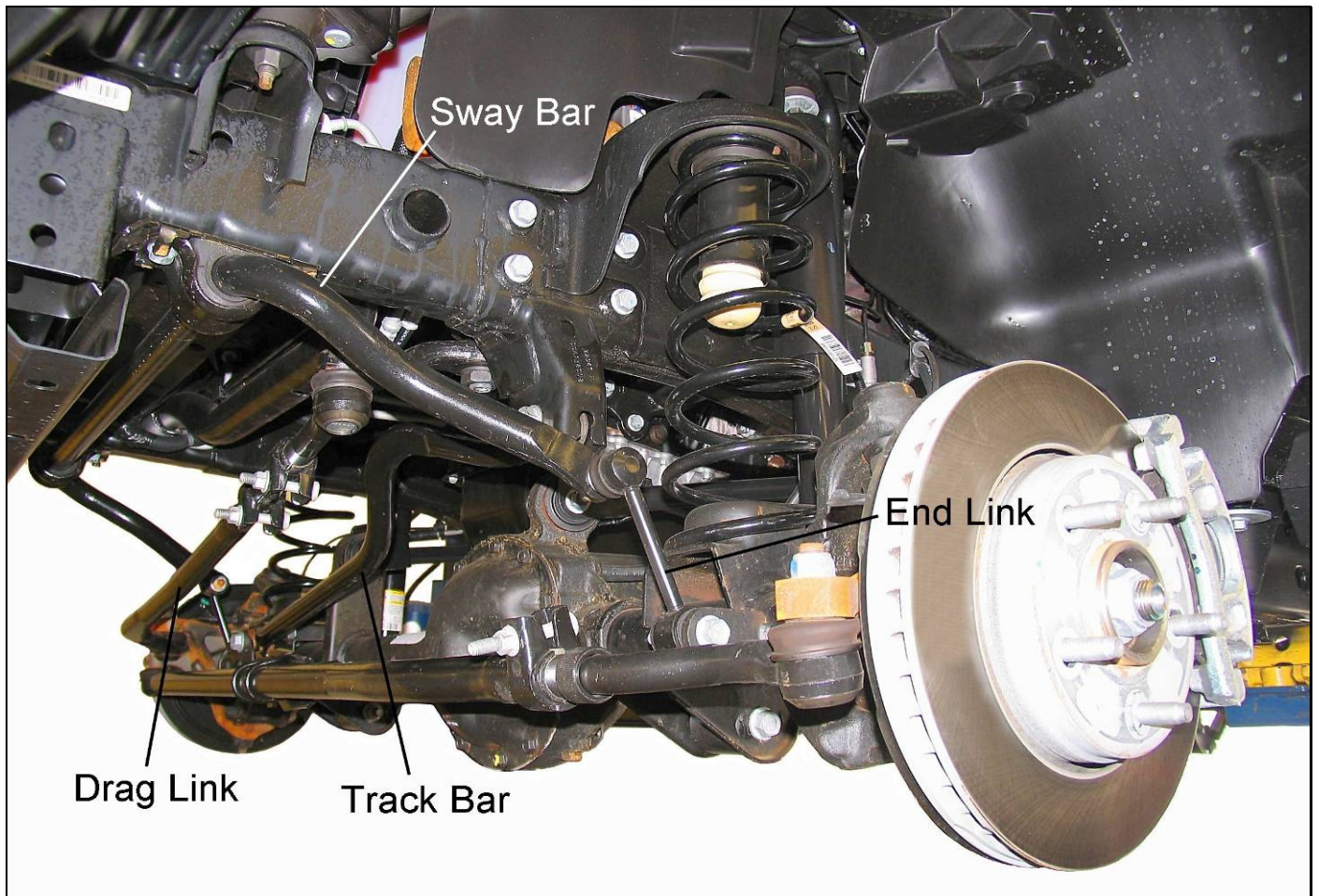
  

BOLT IDENTIFICATION	
<p>1/2-13x1.75 HHCS</p> <p>D T L X</p> <p>G = Grade Marking (bolt strength) L = Length (inches)            D = Nominal Diameter (inches) X = Description (hex head cap screw)            T = Thread Pitch (threads per inch)</p>	<p>M12-1.25x50 HHCS</p> <p>D T L X</p> <p>P = Property 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>
	<b>Box 1 of 3</b>			<b>Box 2 of 3</b>	
170110	Left Front Brake Line	1	176442	Rear Brake Line Bracket	2
170113	Right Front Brake Line	1	176444	Rear Bump Stop Spacer	2
176443	Front Bump Stop Spacer	2	176445	Rear Sway Bar Bracket	2
176645	Lower Suspension Arm, Front	2	176646	Lower Suspension Arm, Rear	2
176522	Upper Suspension Arm, Front	2	176649	Upper Suspension Arm, Rear	2
176650B	Front Track Bar Axle Bracket	1	176647	Rod End w/Articulation Bushing End	2
7789	Pitman Arm	1	176655B	Rear Track Bar Axle Bracket	1
176088	Sway Bar End Link	2	860713	Rear Track bar bracket Hardware Kit.	1
860275	Articulation Bushing Kit	1		U-Bolt, 38-16 x 3.50	1
420080	Sleeve	8		M14-1.50 x 80 HHCS	1
420090	2.25" Crush Sleeve	4		M14-1.50 NyLock	2
520080	Bushing	16		M14 Washers	3
520090	Bushing	8		M10-1.25 x 25mm	2
860613	Shim Kit	2		M10-1.25 Nut	2
	Washer	12		M10 Washer	4
860703	Front Track Bar Hardware Kit	1		3/8-16 NyLock	2
420067	Sleeve	1		3/8 SAE Washer	2
	U-Bolt, 3/8-16 x 3.0	2	94180	Information Pack	1
	M14-2.0 x 70 HHCS	1	780281	Rancho Decal	1
	M14-2.0 Stover Nut	1	89104	Instructions	1
	M14 Washer	2	94119	Consumer/Warranty Information	1
	3/8-16 x 1.0, HHCS	2	94177	Warning Sticker	1
	3/8-16 NyLock	6	860575	Rear Hardware Kit	1
	3/8 Washer	8	420067	Sleeve	1
860412	Sway Bar End Link Hardware Kit.	1		M14-2.00 x 80 HHCS	1
	M12-1.75 x 70	2		M14-2.00 Stover Nut	1
	M12-1.75 NyLock	2		M14 Washer	2
	Bushing	4		M12-1.75 x 30 HHCS	1
	1/2 SAE Washers	2		M12-1.75 Stover Nut	1
	1/2 USS Washers	4		M12 Washer	2
860586	Bearing Kit	1		M10-1.50 x 50 HHCS	4
770173	7/8-14 Jam Nut	4		M10 Washer	4
	M12-1.75 x 80 HHCS	1		M8-1.25 x 20 HHCS	4
	M12-1.75 Stover Nut	1		M8-1.25 Nylock Nut	4
	M12 Washer	2		M8 Washer	8
860625	Rod End Kit	1		1/4-20 x .75 HHCS	4
602627	7/8-14 Male Rod End	2		1/4-20 x Stover Nut	4
770196	.75-M12 High-misalignment Sleeve	4		1/4 SAE Washer	8
			822	<b>Box 3 of 3</b>	
			817	Front Coil Spring	2
				Rear Coil Spring	2



Front Suspension

## FRONT SUSPENSION

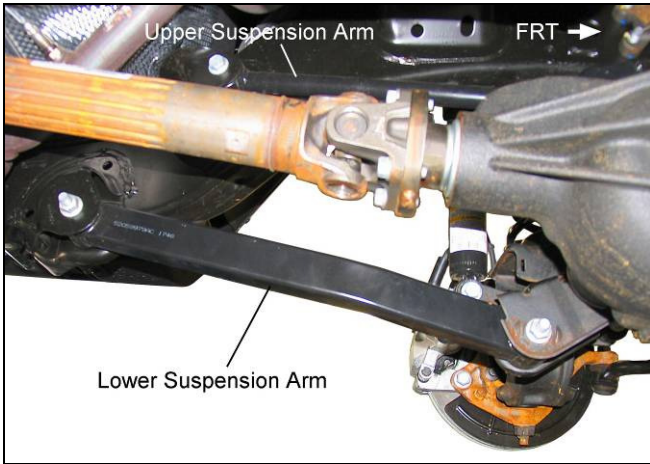
### SHOCK ABSORBER & COIL SPRING REMOVAL

- 1)  Park vehicle on a level surface. Set the parking brake and chock rear wheels. Disconnect the negative ground cable from the battery.
- 2)  Remove the end link to frame bracket nut and bolt. Remove the ball stud nut at the sway bar. Remove the end link. Repeat for other side.
- 3)  Remove the track bar to frame bracket nut and bolt.
- 4)  Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and set them aside.
- 5)  If equipped, remove the transmission skid plate.
- 6)  Remove the nut from the drag link at the pitman arm. Separate the drag link ball stud from the pitman arm with a puller tool. Do not use a pickle fork.
- 7)  Support the front axle with a jack. Remove the shock absorber upper nut, retainer, and bushing.
- 8)  Remove the shock absorber lower nut and bolt. Remove the front shock absorber.
- 9)  Repeat steps 6 and 7 for the other side. **DO NOT REUSE ORIGINAL SHOCK ABSORBERS.**
- 10)  If necessary, disconnect any vent hoses and electrical wiring from the axle. Separate the brake hoses from the frame rails by removing the bracket bolts.
- 11)  Carefully lower the front axle and remove the coil springs. Push down on axle if necessary.

**CAUTION:** Do not allow the front axle to hang by any hoses or cables.

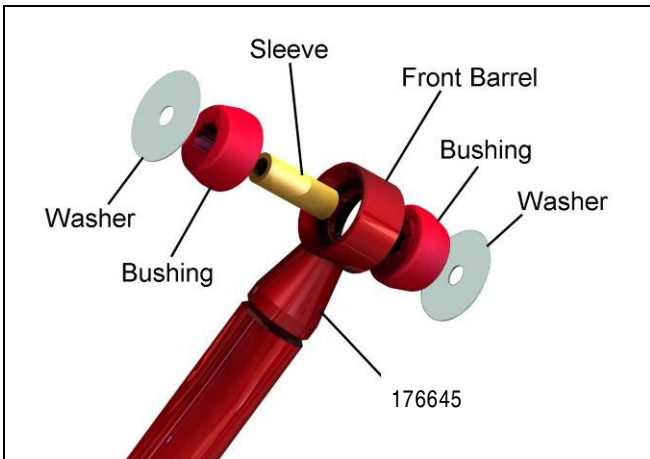
## SUSPENSION ARM REPLACEMENT

- 1)  Support the front axle with a jack.
- 2)  Remove the driver side upper suspension arm from the frame and axle brackets. Remove the driver side lower suspension arm from the frame and axle brackets. See Illustration 1.



Illus. 1

- 3)  Lubricate two bushings (520080) and a longer sleeve from kit 860275 with synthetic lithium grease. Insert bushings and sleeve into the front barrel of lower suspension arm 176645. See illustration 2.

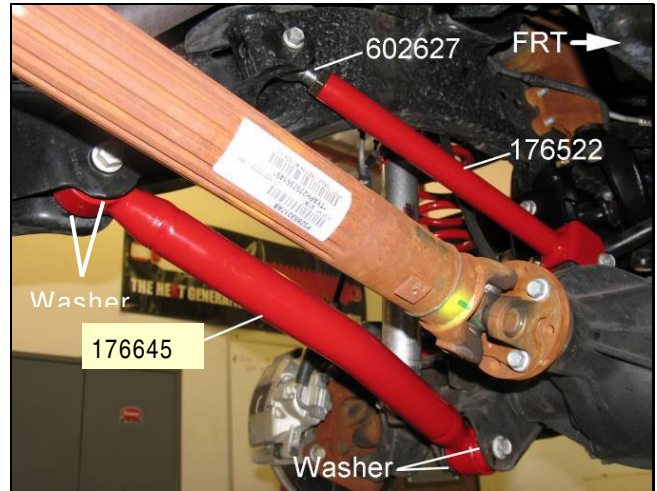


Illus. 2

- 4)  Apply a film of grease to the outside of the installed bushings. Place a washer from kit 860587 against each bushing. Attach the front barrel assembly to the driver side axle bracket with the original hardware. See illustration 3.
- 5)  Attach the rear barrel assembly to the frame bracket with the original hardware. Tighten nuts and bolts to 125 ft. lbs.

- 6)  Thread jam nut on rod end 602627 until 6 threads are left. Apply anti-seize compound and thread rod end into upper suspension arm 176522.

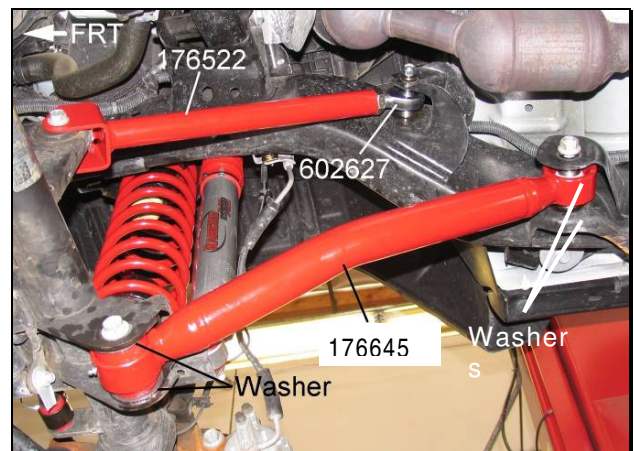
- 7)  Insert the sleeves from kit 860625 and attach rod end to frame bracket with the original hardware. Attach bracket end of upper suspension arm 176522 to the axle bracket with the original hardware. See illustration 3.



Illus. 3

- 8)  Center rod end 602627 and tighten jam nut to 125 ft. lbs. Do not tighten upper suspension arm bolts until vehicle is at normal ride height.
- 9)  Repeat steps 2 through 8 to install suspension arms on the passenger side.

**NOTE:** To disconnect the upper suspension arm from the passenger side frame bracket, the mounting bolt must be cutoff or the exhaust removed. Additional 12mm hardware is supplied in kit 860586 for the cutoff procedure.



Illus. 4

## BUMP STOP SPACER, COIL SPRING & SHOCK ABSORBER INSTALLATION

- 1)  Drill a 5/16" hole through the center of the coil spring axle pad. For ease of installation, tap the hole (3/8-16).
- 2)  Install original insulator on top of coil spring 822. Place bump stop spacer 176443 inside the coil spring.

**NOTE:** If you have a winch mounted to the front bumper, add spring spacer RS70082 (purchased separately) to compensate for the additional weight.

- 3)  Insert the spring assembly into the upper pocket and onto the axle pad. See illustration 5. Align pig tail with groove in axle pad.
- 4)  Attach the bump stop spacer to the axle pad with the self-tapping screw from kit 860574.
- 5)  Repeat steps 2 through 4 for the other side.
- 6)  Install retaining washer and bushing on NEW shock absorber, insert shock into upper mounting hole. Install bushing, washer and nut. Tighten nut until bushings compress. Repeat for other side.

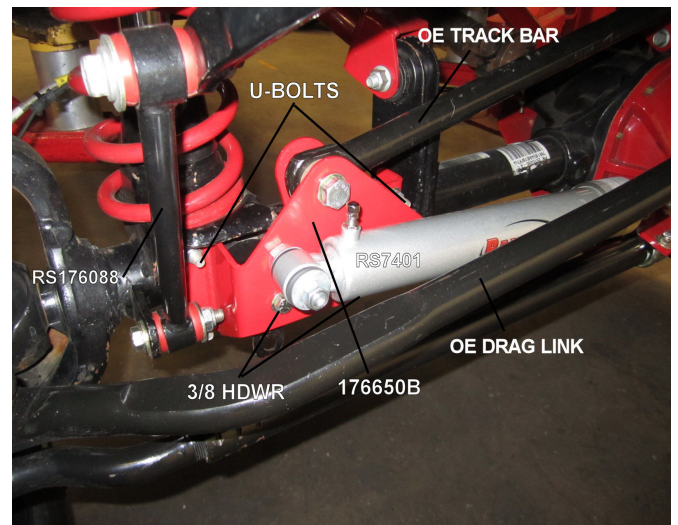


Illus. 5

- 7)  Raise front axle and attach shock lower mounts to axle brackets with the original hardware. Tighten nuts and bolts to 56 ft. lbs.
- 8)  Reattach vent hose and electrical wiring if necessary.

## PITMAN ARM & FRONT TRACK BAR AXLE BRACKET INSTALLATION

- 1)  Center the steering wheel and mark the position of the original pitman arm. Remove the nut and washer from the steering gear shaft.
- 2)  Remove the pitman arm from the steering gear with pitman arm puller C-4150-A.
- 3)  Insert track bar bracket 176650B over the original track bar axle mount bracket. See illustration 6.



Illus. 6

- 4)  Using the two existing holes, loosely attach the front edge of bracket 176650B with the 3/8 hardware from kit 860703.
- 5)  Using the two U-Bolts, loosely attach the outside edge of bracket 176650B with the hardware from kit 860703.
- 6)  Insert sleeve 420067 into the bracket at the original track bar location. Install the original hardware. Tighten OE bolt to 125 ft. lbs. Tighten the 3/8 bolts to 40 ft. lbs. and the two U-bolt nuts to 30 ft. lbs.

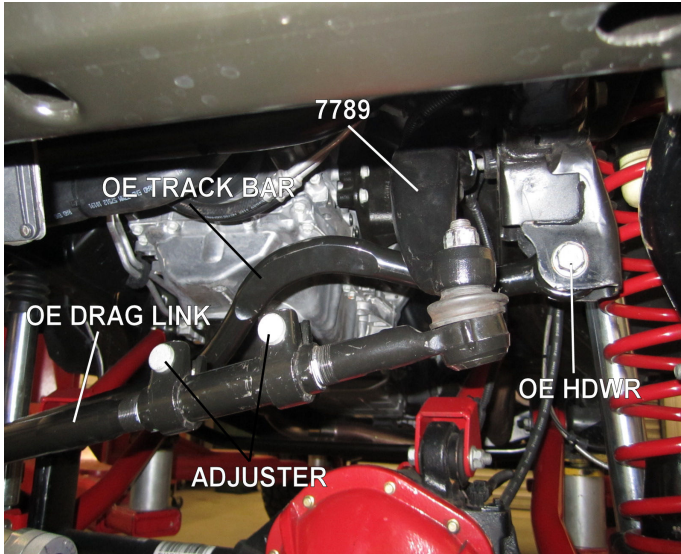
**NOTE:** Welding track bar bracket 176650B to the frame bracket is recommended for extreme off-road use. Refer to "Important Note N" on page 3. Welding should be performed by a trained professional. Clean area of all paint/coating. Repaint cleaned area after welding.

- 7)  Attach track bar to bracket 176650B with the 14mm hardware from kit 860703. Insert bolt from front and do not tighten until vehicle is at normal ride height.

8)  Align and install new pitman arm 7789 on the steering gear shaft. Install the washer and nut. Tighten the nut to 185 ft. lbs.

9)  Install the drag link ball stud to the pitman arm. Install the nut and tighten to 60 ft. lbs.

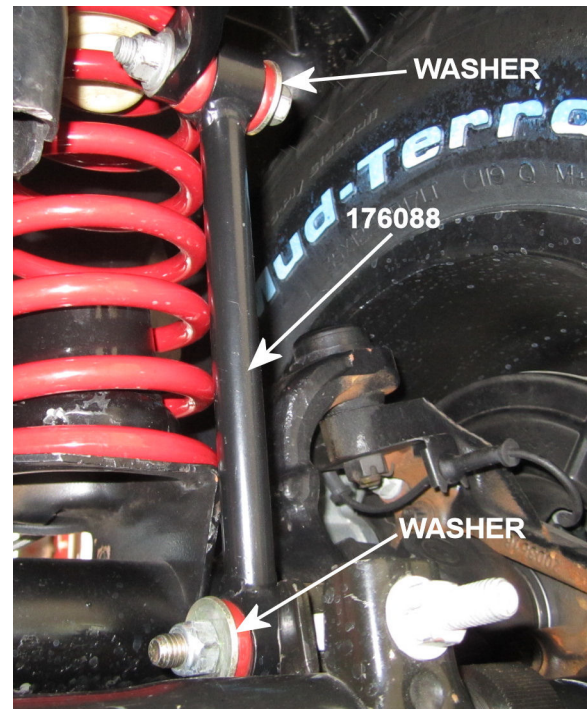
10)  To reposition the front wheels, turn the drag link adjustment sleeve six to eight turns in (shorten). Adjustment sleeve bolts must face forward. See illustration 7.



Illus. 7

#### **SWAY BAR END LINK INSTALLATION.**

- 1)  Using a silicone spray, insert the supplied bushings and sleeves into new end links (176088B).
- 2)  Attach end links to sway bar with the original bolts and large USS washers from hardware kit 860412. See illustration 6.
- 3)  Attach end links to axle brackets with the hardware from kit 860412. Tighten nuts and bolts to 70 ft. lbs. See illustration 8.
- 4)  Repeat steps 1 through 3 for the other side.



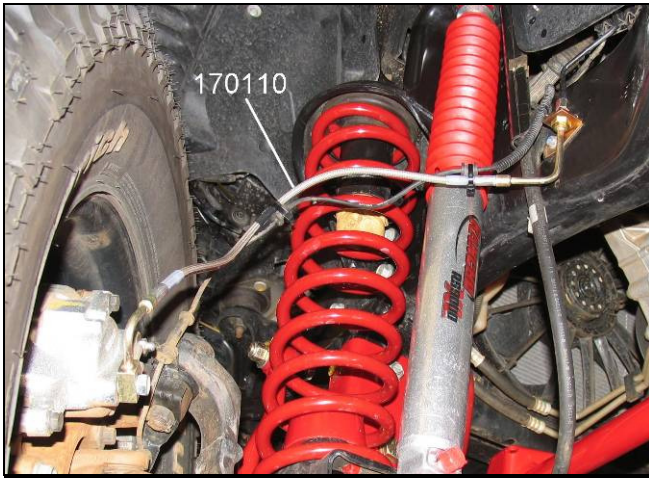
Illus. 8

#### **BRAKE HOSE REPLACEMENT**

**NOTE:** To keep the brake bleeding process to just the front brakes, do not allow the brake fluid to drain completely from the master cylinder reservoir.

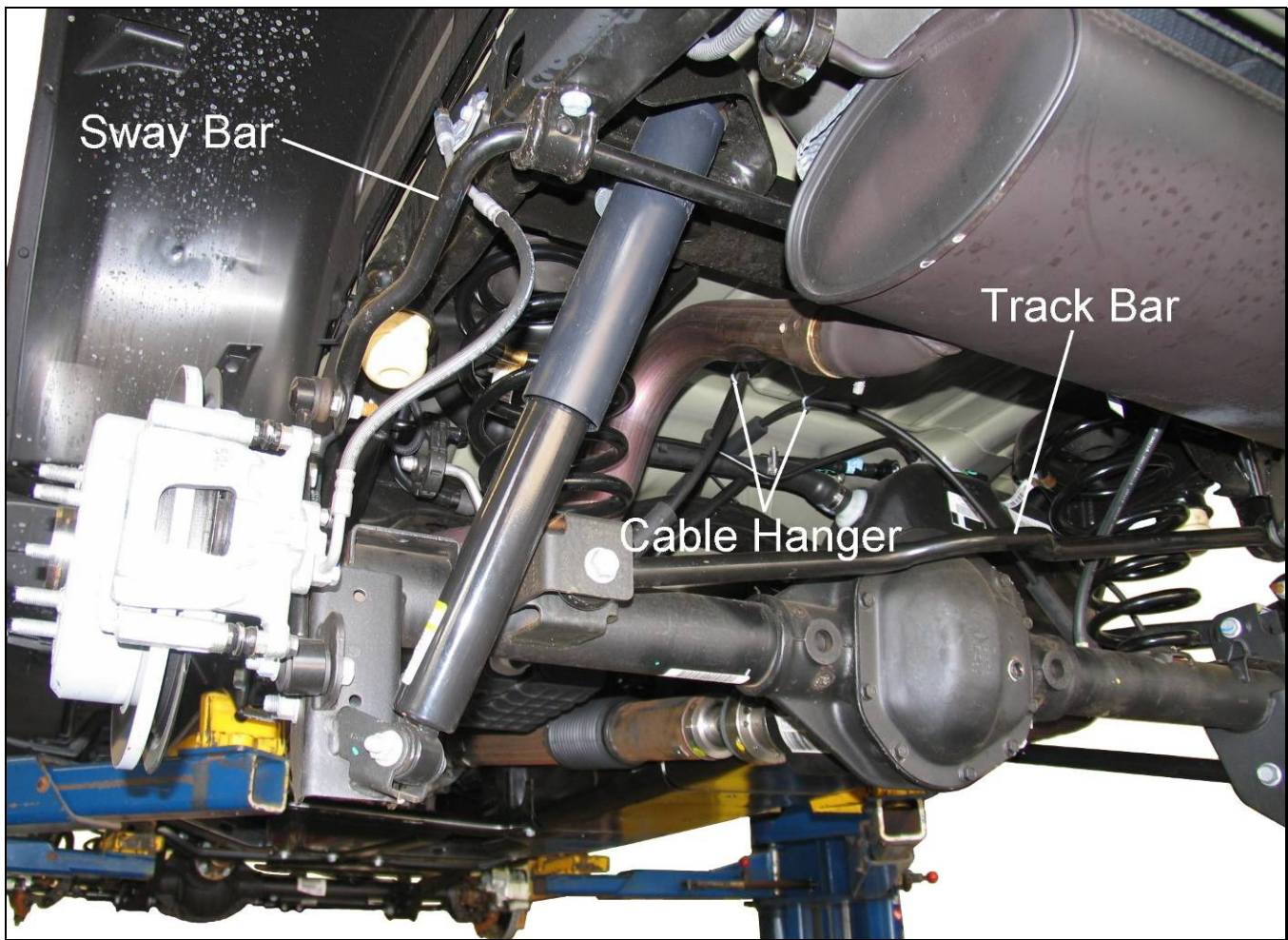
- 1)  Separate the driver sides ABS line from the brake hose.
- 2)  Remove brake hose to axle bracket bolts.
- 3)  Separate the driver side brake hose from the brake tube and frame rail. Plug tube to prevent brake fluid leakage.
- 4)  Remove the brake hose from the caliper. Discard copper washers.
- 5)  Attach left brake hose 170110 to the caliper with the supplied banjo bolt and new copper washers.
- 6)  Attach left brake hose to the frame rail with the original bolt. Attach brake tube to hose. Tighten brake tube fitting to 18 ft. lbs. See illustration 9.





Illus. 9

- 7)  Slide grommets on ABS wire to provide slack for full suspension/turning movement. Reattach ABS wires to brake lines.
- 8)  Repeat steps 1 through 7 to install right brake hose 170113 on the passenger side.
- 9)  Bleed front brakes.
- 10)  Install front wheels and lower vehicle to the ground. Tighten lug nuts to 80--110 ft. lbs.
- 11)  Tighten the Track bar nut and bolt to 125 ft. lbs.



Rear Suspension

## REAR SUSPENSION

### SHOCK ABSORBER & COIL SPRING REMOVAL

- 1)  Chock front wheels. Disconnect the track bar from the frame bracket. Disconnect the sway bar end links from the axle brackets.
- 2)  Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 3)  Remove bolts and separate the brake hoses from the frame rails. If necessary, disconnect any vent hoses and electrical wiring from the axle.
- 4)  Remove the bolts from the brake cable hanger above the rear axle. Remove the hanger from the cables.
- 5)  Support the rear axle with a floor jack. Remove the shock absorber upper mounting bolts. Remove the lower nut and bolt from the axle bracket. Remove the shock absorbers.

- 6)  Carefully lower the rear axle until the coil springs are free from the upper mount seat. Remove the coil springs.

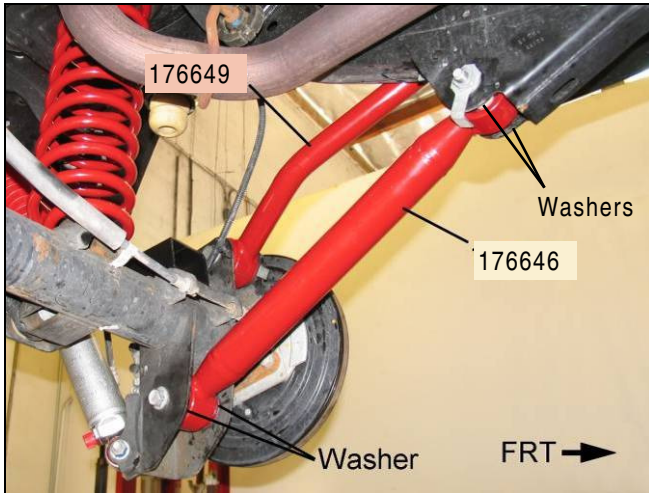
**CAUTION:** Do not allow the axle to hang by any hoses or cables.

### SUSPENSION ARM REPLACEMENT

- 1)  Remove the driver side lower suspension arm nut and bolt from the axle bracket.
- 2)  Remove the flag nut at the frame rail bracket. Remove the lower suspension arm.
- 3)  Remove the driver side upper suspension arm flag nut and bolt from the axle bracket.
- 4)  Remove the flag nut and bolt at the frame rail bracket. Remove the upper suspension arm.

5)  Lubricate two bushings (520080) and a longer sleeve (420080) from kit 860275 with synthetic lithium grease. Insert bushings and sleeve into lower suspension arm 176646. Refer back to illustration 2.

6)  Insert two greased washers from kit 860613 and attach the bushing end to the axle bracket with the original hardware. See illustration 10.



Illus. 10

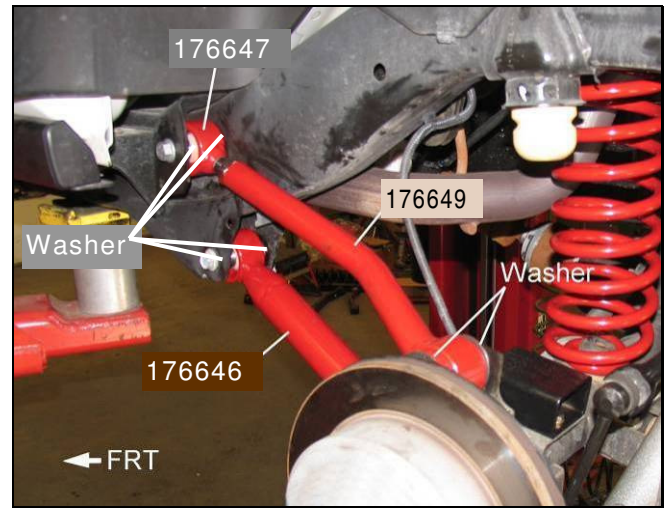
7)  Install jam nut on rod end 176647 until 5-6 threads (2dr) or 2-3 threads (4dr) are left. Apply anti-seize compound and thread rod end into upper suspension arm 176524.

8)  Lubricate two bushings (520090) and a shorter sleeve (420090) from kit 860275 with synthetic lithium grease. Insert bushings and sleeve into upper suspension arm 176649 and 176647. Refer back to illustration 2.

9)  Attach the adjustable end of the suspension arm assembly to the frame bracket with the original hardware plus two greased washers. Also insert two greased washers from kit 860613 and attach the bushing end to the axle bracket with the original hardware. See illustration 11.

10)  Center rod end 176647 and tighten jam nut. Do not tighten suspension arm bolts until vehicle is at normal ride height.

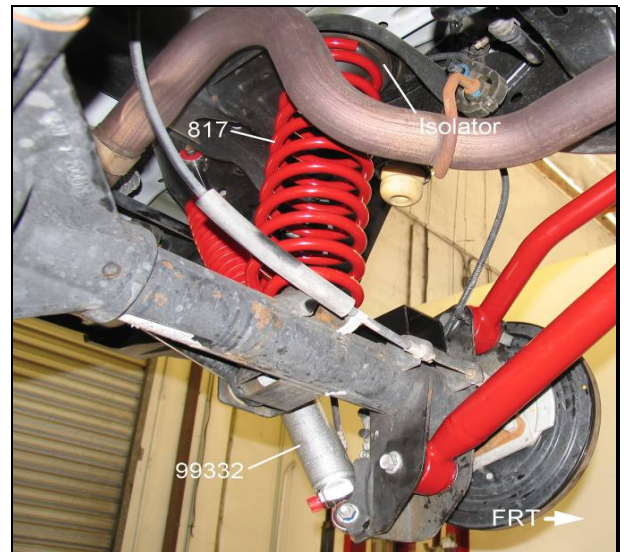
11)  Repeat steps 1 through 12 for the passenger side.



Illus. 11

### COIL SPRING & SHOCK ABSORBER INSTALLATION

1)  Place the new coil springs (817) onto the axle pads. Align upper pigtails towards the front of the vehicle. Raise the axle until the coil springs seat on the upper isolators. See illustration 12.



Illus. 12

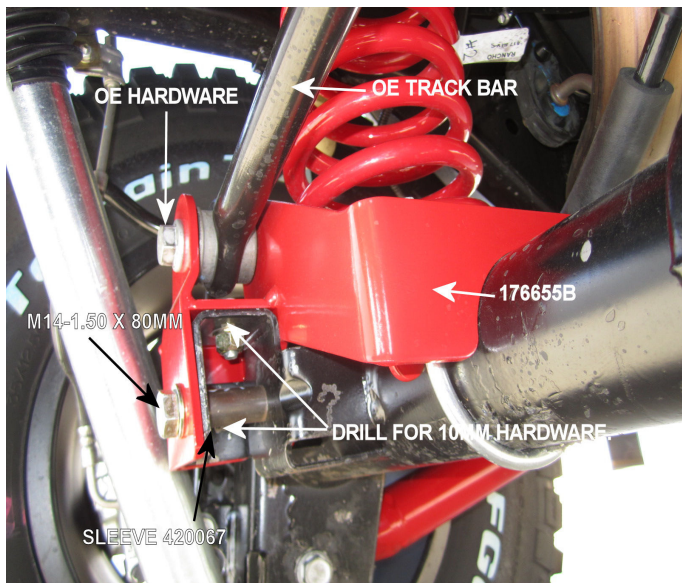
**NOTE:** When installing coil springs, make sure that the rubber isolator is positioned in the upper mount and the small egg-shaped coil end is at the bottom.

2)  Attach new Rancho rear shocks to the upper mounting brackets with the original bolts. Tighten bolts to 37 ft. lbs.

3)  Loosely attach shocks to the axle brackets with the original hardware.

## REAR TRACK BAR AXLE BRACKET INSTALLATION

- 1)  Remove OE rear Track Bar from rear axle bracket. See illustration Rear Suspension (page 10).



Illus. 13

- 2)  Place track bar bracket 176655B over the original rear axle bracket. The new bracket should fit on top over the original bracket.
- 3)  Insert the sleeve 420067 from kit 860713 and attach track bar bracket 176655B to the rear axle bracket with the M14-1.50 X 80mm hardware thru bottom OE hole. See illustration 10.
- 4)  Using the U-Bolt from hardware kit 860713, attach the top of bracket 176655B to the rear axle tube using 3/8 washer and NyLock nuts. At this time just snug down attached hardware. Do not torque down.
- 4)  Using a Clamp to hold bracket 176655B snug to axle bracket. Punch center mark for the two driller holes using bracket as template.
- 5)  Drill both holes with 10mm drill (3/8 drill), and apply the 2 supplied M10-1.25 X 25mm bolts from hardware kit 860713. Torque down all hardware at this time.
- 6)  Insert OE track bar and reuse OE hardware in both ends, replace OE nut plate with lock nut on axle end.

**NOTE:** Do not tighten the original track bar bolt until the vehicle is at normal ride height.

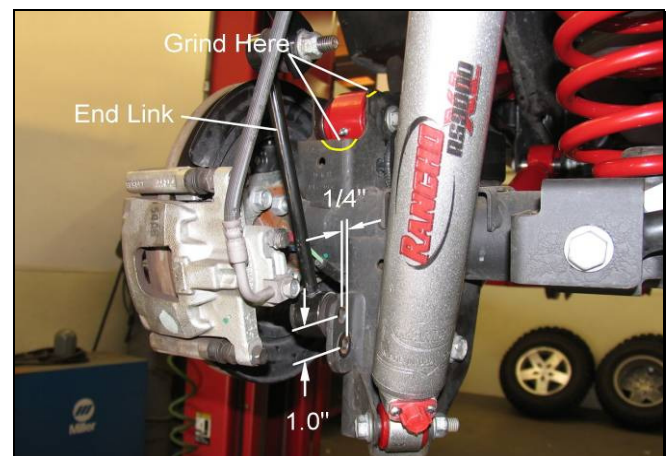
## SWAY BAR & BRAKE LINE BRACKET INSTALLATION

- 1)  Disconnect the sway bar from the frame rail.
- 2)  Insert sway bar bracket 176445 between the sway bar and the frame rail. See illustration 14.



Illus. 14

- 3)  Attach sway bar to frame rail with the 10mm hardware from kit 860575. Tighten bolts to 35 ft lbs.
- 4)  Attach brake line bracket 176442 to the frame rail with the original brake line bolt. See illustration 14.
- 5)  Attach brake line to the inside of bracket 176442 with the 1/4" hardware from kit 860575. Tighten nuts and bolts to 12 ft lbs.
- 6)  To provide clearance for the end link, grind the axle bracket at the locations shown in illustration 15.
- 7)  Temporarily disconnect lower shock mount. Drill a 12mm hole 1" above and 1/4" toward the rear of the original end link mounting hole. See illustration 15. Reinstall shock.



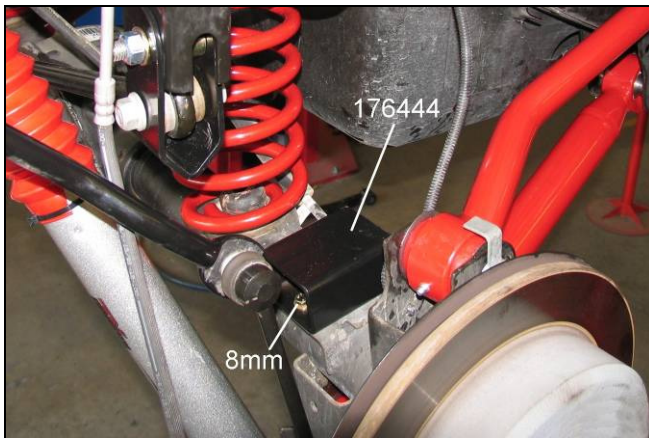
Illus. 15

8)  Using the new hole, attach end link to axle bracket with the original hardware. Tighten nut and bolt to 40 ft lbs.

9)  Repeat steps 1 through 8 for the other side.

### **BUMP STOP BRACKET INSTALLATION**

1)  Using the original holes on the axle pad, attach bump stop bracket 176444 to the axle with the 8mm hardware from kit 860575. See illustration 16.



Illus. 16

2)  Repeat for other side.

3)  Install rear wheels and lower vehicle to the ground. Tighten lug nuts to 80-110 FT-LBS.

4)  Tighten the track bar bolts to 125 ft. lbs. Tighten the shock absorber lower mounting bolts to 56 ft. lbs. Tighten the suspension arm bolts to 125 ft. lbs.

5)  Reconnect the battery ground cable.

### **FINAL CHECKS & ADJUSTMENTS**

1)  Turn the front wheels completely left then right. Verify adequate tire, wheel, brake hose and ABS wire clearance. Inspect steering and suspension for tightness and proper operation.

2)  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.

3)  Ensure that the vehicle brake system operates correctly. If new brake hoses were installed, verify that each hose allows for full suspension movement.

4)  Readjust headlamps. Have vehicle Aligned to manufacturer's specifications.

### **Alignment Specifications**

<u>Adjustment</u>	<u>Preferred</u>	<u>Range</u>
Caster	5.0°	±1.0°
Camber (fixed angle)	-0.25°	±0.63°
Toe-In (each wheel)	0.15°	±0.15°
Thrust Angle	0	±0.15°

### **IMPORTANT NOTICE**

**WARNING:** DO NOT OPERATE THIS VEHICLE ON PUBLIC ROADS OR AT SPEEDS GREATER THAN 15 MPH WITH THE SWAY BAR END LINKS DISCONNECTED.

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

**ATTENTION:** Steering wheel must be repositioned when vehicle returns to ground, to ensure that ESP system operates correctly. To reposition the front wheels and steering wheel turn the drag link adjustment sleeve in desired direction. Adjustment sleeve bolts must face forward for good clearance. See illustration 7.

### **2012 Exhaust modification, crossover pipe with clamps:**

Rancho part number: RS720003

### **Replacement drive shafts:**

During high articulation events, the front driveshaft may contact exhaust or transmission oil pan. A smaller diameter drive shaft is suggested for optimal performance.

Rancho recommends Powertrain Industries drives shafts:

2007 – 2011 Models:

Front drive shaft 4dr / 4dr Part Number 3194-1925

Rear drive shaft 4dr Part Number 3194-2750

Rear drive shaft 2dr Part Number 3194-0725

2012 Models

Front drive shaft 2dr / 4dr Part Number: 3194-2125

Rear drive shaft 2dr Part Number: 3194-0475

Rear drive shaft 4dr Part Number: 3194-2550

Powertrain Industries, Garden Grove, CA.

1-800-798-4585.