

INSTALLATION INSTRUCTIONS



**1984 – 2001 Jeep Cherokee XJ 3.5”
Adjustable Control Arm Black Suspension System
RS66002B — fits Chrysler 8.25” Rear Axle
RS66003B — fits Dana Rear Axle**

- INSTALLATION OF A SLIP YOKE ELIMINATOR AND REPLACEMENT DRIVESHAFT ON THE STOCK TRANSFER CASE IS RECOMMENDED -



WARNING

Carefully read, understand and follow the instructions provided in this manual, and keep it in a safe place for future reference. If you have any doubt whatsoever regarding the installation or maintenance of your Rancho suspension system, please see your retailer for assistance or advice. Failure to follow the warnings and instructions provided herein can result in the failure of the suspension system, or can cause you to lose control of your vehicle, resulting in an accident, severe personal injury or death.

These instructions should remain in the vehicle glove box for future reference.

 **WARNING: READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION. Failure to follow the warnings and instructions provided herein can result in an accident, severe personal injury or death.**

PRELIMINARY

This manual presumes that all persons installing this suspension system have a high level of mechanical training and experience, and have available to them all necessary tools and safety equipment. This manual is not and should not be construed as an exhaustive list of all required safety measures. Personnel should rely primarily on their training and experience, as well as on their own common sense.

This Manual is to be read as a supplement to, and must not be construed as a substitute for, the owner's manual and/or shop manual that originally accompanied the vehicle. Refer to such use, operation, maintenance and safety manuals as necessary, and especially after installation is complete, to insure proper vehicle operation.

The following terminology has been used in this Manual:

- I. **ACCIDENT:** Any event which could cause personal injury or death to anyone installing or using the suspension system, as well as to passengers and bystanders, or otherwise may result in property damage.

PRE-INSTALLATION WARNINGS and INSTRUCTIONS

 **WARNING: Only the following rim/tire sizes may be used with this suspension system: 31 x 10.50 x 15 tire on a 15" x 8" wheel with 3.75" Backspacing. See important Note M**

Use of any other rim/tire combination increases the risk of a roll-over and/or accident, resulting in severe personal injury or death.

 **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. 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.**

1) Service and repair tasks require specialized knowledge, training, tools, and experience. General mechanical aptitude may not be sufficient to properly install this suspension system. If you have any doubt whatsoever regarding your ability to properly install the suspension system, please consult a qualified mechanic.

2) Your brake lines and fuel lines should remain undisturbed during and after installation. If you think you need to modify these components in any way, you are mistaken. You are installing the lift improperly and will be creating a significant risk of an accident. In case of any doubt, consult a qualified mechanic.

3) If any component does not fit properly, something is wrong. You are installing the lift kit improperly and will be creating a significant risk of an accident. Never modify any component of the vehicle or suspension system, except as instructed herein. Do not continue with installation until you have identified the problem.

4) Several of the procedures described herein require at least two (2) persons to safely complete the task. If you have any doubt about your ability to complete any operation by yourself, always ask for help from a qualified assistant.

5) Before starting any operation, confirm that all personal safety devices and safety equipment are in proper condition and position.

6) Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in an error in installation and/or serious injury.

7) Install only tires approved by the United States Department of Transportation ("DOT approved"). Make sure the rim and tire size are properly matched.

8) If any components of the vehicle or suspension system are damaged in any way during installation, immediately replace the component.

9) During installation, carefully inspect all parts of the vehicle and replace anything that is worn or damaged.

10) Nip points present the risk of the catching, lacerating, crushing and/or amputating fingers, hands, limbs and other body parts during operations. Always keep clear. Wear protective gloves.

11) Oil and hydraulic fluids are poisonous, dangerous to health and are known to the State of California to cause cancer, birth defects or other reproductive harm. Do not inhale vapors or swallow. Do not allow contact with the eyes or skin. Should any oil or fluids be swallowed or inhaled or come into contact with the eyes, immediately follow the safety precautions on the label or call a poison control center immediately. Should any of the oil or fluids contact your skin, immediately wash thoroughly.

12) Never install the suspension system if you are under the effects of alcohol, medications and/or drugs. If you are taking prescription or over the counter medication, you must consult a medical professional regarding any side effects of the medication that could hinder your ability to work safely.

WARNINGS and INSTRUCTIONS **AFTER INSTALLATION**

13) After installation is complete, drive the vehicle slowly in an area free from heavy traffic for at least three (3) miles. Likewise, before traveling on any highways or at a high rate of speed, drive the vehicle for ten (10) miles on side roads at moderate speed. If you hear any strange noise or feel unusual vibration, if a component of the suspension system is not operating properly, or if any warning lights illuminate or buzzers sound, stop the vehicle immediately. Identify the cause and take any necessary remedial action.

15) Confirm that all components of the vehicle, including all lights (headlights, turn signals, brake lights, etc.), linkages (accelerator, etc.), electrical switches and controls (windshield wipers and defoggers, etc.), and other warning devices (low tire pressure monitoring systems) are fully operational.

16) Your headlights will need to be readjusted before the vehicle is used on the roads. Consult the vehicle owners' manual.

17) The speedometer and odometer will need to be recalibrated after installation. See your dealer.

18) Confirm proper rear view and side view while seated in the driver seat. Install supplemental mirrors as necessary.

19) Your original low tire pressure monitoring system may be re-installed in your new wheels. However, if you choose to purchase a new system, see your dealer to have them properly calibrated. Proper tire pressure is critical to safe operation of the vehicle.

OPERATION

20) Because it has been modified, the vehicle will not handle, turn, accelerate or stop in the same manner as an unmodified vehicle. In addition, the crash protection systems designed in the vehicle may operate differently from an unmodified vehicle. For example, turning and evasive maneuvers must be executed at a slower rate of speed. Further, there is a greater risk that the vehicle could roll over. These differences could result in an increased possibility of an accident, personal injury or death. Learn the vehicle's operations and handling characterizes and drive accordingly.

IMPORTANT NOTES

A. Before installing this system, have the vehicle's alignment and frame checked by a certified technician. The alignment must be within factory specifications and the frame of the vehicle must be sound (no cracks, damage or corrosion).

B. The components of Rancho's suspension system are designed as a single integrated system. To avoid compromises in terms of safety, performance, durability or function, do not substitute Rancho components with components manufactured by other companies. Use of other components will result in the forfeiture of any type of warranty on the vehicle/suspension system. New Rancho shock absorbers are required and must be purchased separately.

Front	Rear
RS7239	RS7256*
RS999239	RS999256*
RS55239	RS55245
RS5239	RS5256*

* Lower mounting bushing replacement required.

C. Do not powder-coat or plate any of the components in this system. To change the appearance of components, automotive paint can be applied over the original coating.

D. Each hardware kit in this system contains fasteners of high strength and specific size. Do not mix hardware kits or substitute a fastener of lesser strength. See bolt identification table on page 4.

E. Compare the contents of this system with the parts list in these instructions. If any parts are missing, contact the Rancho Technical Department at 1-734-384-7804.

F. 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.

G. Apply a drop of thread locking compound to all bolts during installation.  **CAUTION:** Thread locking compound may irritate sensitive skin. Read warning label on container before use.

H. Unless otherwise specified, tighten all nuts and bolts to the standard torque specifications shown in the table on page 2. USE A TORQUE WRENCH for accurate measurements.

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 system: If you do not know how to safely use any of these tools, stop the project and consult a qualified mechanic.

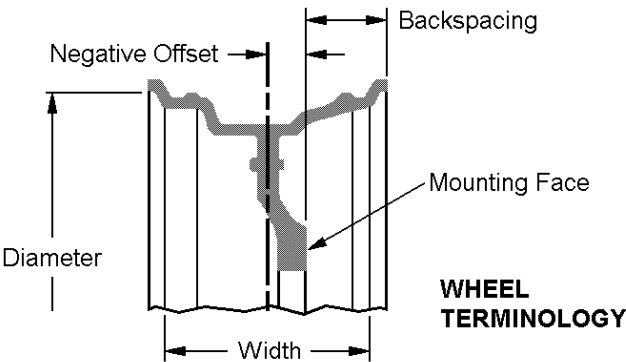
- ☐ Jeep Service Manual
- ☐ Spring Compressor
- ☐ Drill Motor
- ☐ Drill assortment (1/8" to 1/2")
- ☐ Torque Wrench (250 FT-LB capacity)
- ☐ Hammer
- ☐ 1/2" Drive Ratchet and Sockets
- ☐ Combination Wrenches
- ☐ Flair Nut Wrenches
- ☐ Allen Wrenches
- ☐ Torx Key Sockets
- ☐ Hacksaw
- ☐ File
- ☐ Large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

J. It is extremely important to replace coil springs, 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. This suspension system was developed using a 31 x 10.50 x 15 tire on a 15" x 8" wheel with 3.75" of backspacing. Before installing any other combination, consult your local tire and wheel specialist. **Actual tire size varies by manufacturer.**



N. 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.

O.  The lifespan of Rancho products depends on many factors. Improper use, abuse or harsh use in general may compromise the integrity of the suspension system and significantly reduce its lifespan. The suspension system is also subject to wear over time. Have the suspension system regularly inspected and maintained by qualified mechanics. If the inspection reveals any damage or excessive wear, no matter how slight, immediately replace or repair the component. The suspension system must be regularly maintained in order to optimize its safe and efficient use. The more severe the conditions under which the suspension system is operated, the more often it must be inspected and maintained.

Inspect components for wear, damage and proper fastener torque each time vehicle is driven off-road.

Compatible With OE Wheels	Development Tire Size (actual)	Optional Tire Size ¹ (actual)	Wheel Size (backspacing)
Yes ¹	31x10.5xR15	33x12.5xR15	15x8 (3.75")

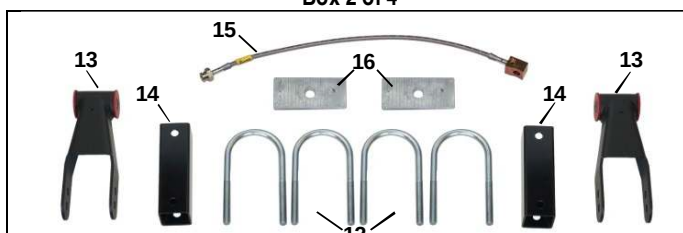
 The driver of this suspension system recognizes and agrees that there are risks inherent in driving a vehicle with a lifted suspension system, including but not limited to the risk that you could be involved in an accident that would not occur in an unmodified vehicle. By his/her purchase and use of this suspension system, the user expressly, voluntarily and knowingly accepts and assumes these risks, and agrees to hold Tenneco, Inc. and its related companies harmless to the fullest extent permitted by law against any resulting damages.

Box 1 of 4



ITEM	PART #	DESCRIPTION	QTY
	RS66002-1B RS66003-1B	BOX 1	1
1	RS822B	Jeep Front Coil	2
2	RS881010BL	Lower Control Arm, Left	2
3	RS881010BR	Lower Control Arm, Right	2
4	RS881012B	Upper Control Arm	2
5	RS176086	Track Bar	1
6	RS602612	T-Bar Rod End	1
	RS860157	Sub Assy, Track Bar	1
	RS520086-10	Track Bar Bushing,	2
	RS420086	Sleeve 1.60" Long	1
	RS770070	Jam Nut, 3/4-16	1
	RS770114	Cotter Pin	1
	RS7713	HHTS, 3/8-16 X 1.5	2
	RS860795	Sub Assy - Lock Nut	1
	RS770271	Nut 1/2-20 Lock Nut	1
7	RS176443	Front Bumpstop Spacer	2
8	RS176339	Sway Bar End Link	2
9	RS176300	Clevis, Sway Bar	2
	RS860797	Sub Assy, Sway Bar End Link	1
	RS545	Bushing, EB1 Hour Glass	4
	RS420084	Sleeve .688 X .522 X 1.40	4
	RS78341	HHCS 7/16-14 X 1.25	2
	RS78371	NUT 7/16-14 Top Lock	2
	RS7726	Washer 7/16 SAE	4
	RS7914	HHCS, M12-1.75X65MM	2
	RS7911	Nut, M12-1.75 Top Lock	2
	RS7915	Washer, M12	4
	RS7719	Washer, 1/2 USS	2
10	RS170081	Brake Line w/ Copper Washers, R	1
11	RS170082	Brake Line w/ Copper Washers, L	1
	RS980	Rear Lower Shock Bushing Kit	1
	1036000032	Bushing, Straight	2
	RS94180	Information Pack	1
	RS8882	Instruction	1

Box 2 of 4



ITEM	PART #	DESCRIPTION	QTY
	RS66002-2B ¹ RS66003-2B ²	Box 2	1
	RS746 ¹ RS741 ²	Kit, U-Bolt – Chrysler 8.25" Rear Axle Kit, U-Bolt, Dana Rear Axle	1
	RS420072	Sleeve, 2.74" Spring / Shackle	4
	RS454	Sleeve, 3.20" Forward Leaf Pivot	2
	RS575	Bushing, Forward Leaf Pivot	4
	RS626	Bushing, Spring / Shackle	8
12	RS7455 ¹	U-Bolt 1/2-20 X 3.125 X 6.55 (Chrysler)	4
12	RS74051 ²	U-Bolt 1/2-20 X 2.75 X 7.50 (Dana)	4
	RS8011	Sub Assy, 1/2" Nut	1
	RS7722	Nut, 1/2-20 Nylock	8
	RS7723	Washer, 1/2 SAE	8
	RS8882	Instruction	1
13	RS176767	XJ Rear Shackle	2
	RS860791	Sub Assy, XJ Rear Shackle	1
	RS626	Bushing, Spring / Shackle	4
	RS420111	Xj Rear Shackle Sleeve	2
14	RS176409	Rear Bumpstop Bracket	2
	RS860796	Sub Assy, Rear Bumpstop	1
	RS7733	Washer, 5/16 USS	8
	RS770241	HHCS, M8-1.25X25MM	4
	RS770128	Washer, M8	4
	RS603112	Nut, M8-1.25 Nylock	4
15	RS170119	Rear Brakeline XJ	1
16	RS7500	Leaf Shim 2.5 Deg	2

¹ Box RS66002-2B includes U-bolt kit RS746 with U-bolts RS7455 to fit Chrysler 8.25" rear axle.

² Box RS66003-2B includes U-bolt kit RS741 with U-bolts RS74051 to fit Dana rear axle.

Box 3 of 4



ITEM	PART #	DESCRIPTION	QTY
	RS66002-3B RS66003-3B	Box 3	1
17	RS44148	Rear XJ Leaf Spring	1

Box 4 of 4



ITEM	PART #	DESCRIPTION	QTY
	RS66002-4B RS66003-4B	Box 4	1
17	RS44148	Rear XJ Leaf Spring	1

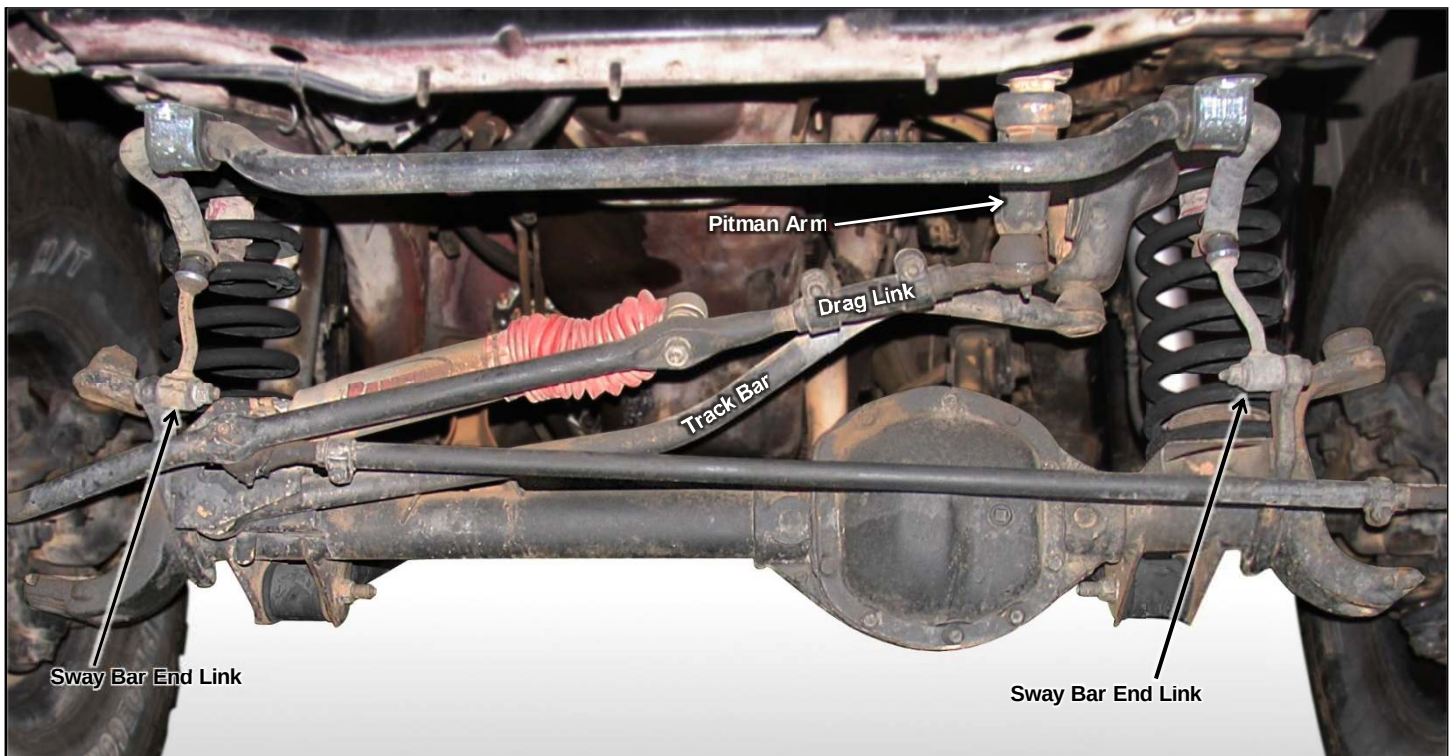


Illustration 1

FRONT SUSPENSION

TRACK BAR & COIL SPRING REMOVAL

1) ☐ Park the vehicle on a level surface. Set the parking brake and chock rear wheels. Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 2. Record these measurements in the space provided below.

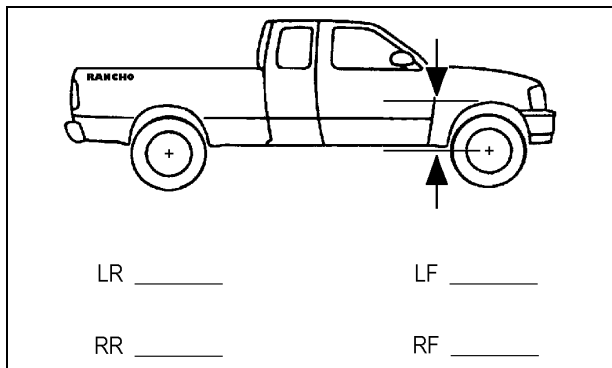


Illustration 2

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 using a puller or "pickle fork" separator. Alternatively reinstall retaining nut a few threads, and use a tie strap to pull down on the track bar, then turn steering wheel side to side. See Illustration 1.

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

5) ☐ Position a floor jack under the front axle for support.

6) ☐ Remove both front sway bar end links.

7) ☐ Remove bolts and separate the brake hoses from the frame rails. See Illustration 3. If necessary, disconnect any vent hoses and electrical wiring from the axle.

8) ☐ Remove the bolt and flag nut from the track bar axle bracket. Remove the track bar.

9) ☐ Disconnect the drag link at the pitman arm by removing the cotter pin and retaining nut and separating with a puller. Alternatively, reinstall retaining nut a few threads, and use a tie strap to pull down on the drag link while hitting the end of the pitman arm with a hammer. Take care not to damage ball joint, pitman arm or steering box.

10) ☐ Remove the shock absorber lower nuts and bolts. Remove the upper stud nut, retainer and grommet from both front shock absorbers. Remove the front shock.

DO NOT REUSE ORIGINAL SHOCK ABSORBERS

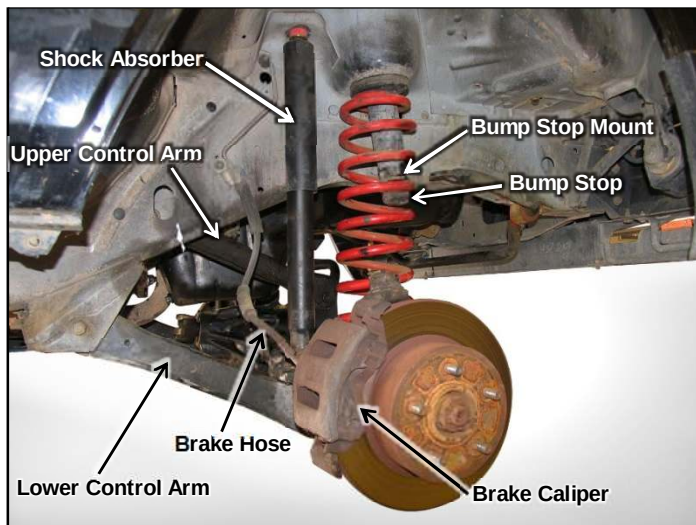


Illustration 3

11) ☐ Remove the rubber bump stop. Remove bump stop mount if it is bolted on behind the rubber bump stop.

12) ☐ Carefully lower the axle assembly using the jack. Loosen the spring retainer and remove the coil spring.

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

CONTROL ARM REPLACEMENT

1) ☐ Adjust Rancho lower control arms RS881010BL and RS881010BR to 16.00"

CAUTION: Do not exceed maximum length of 16.32" Exposed thread must be 1-3/16" (1.188") or less. See Illustration 4



Illustration 4

2) ☐ Adjust Rancho upper control arms RS881012B to 15.2".

CAUTION: Do not exceed maximum length of 15.32" Exposed thread must be 1-3/16" (1.188") or less



Illustration 5

CAUTION: Keep control arms attached on one side at all times to prevent axle from rotating.

3) ☐ Remove the passenger side lower control arm from the axle and frame bracket. See Illustration 3.

4) ☐ Remove the passenger side upper control arm from the axle and frame bracket.

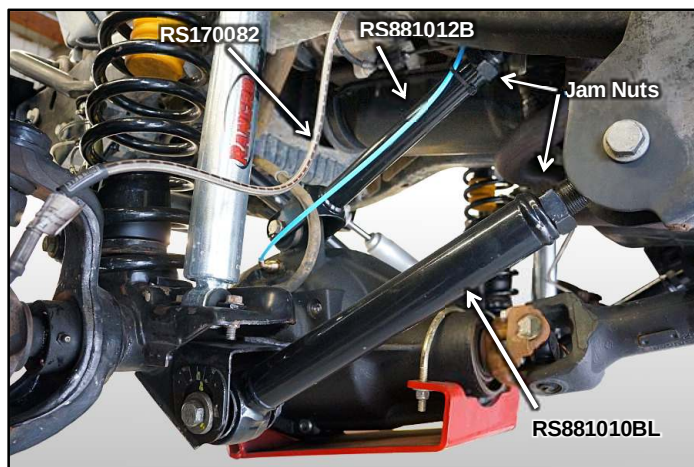


Illustration 6

5) ☐ Loosely attach adjustable end of Rancho upper control arm to frame bracket with the original hardware. Loosely attach bracket end of upper control arm to the axle bracket with the original hardware. See Illustration 6.

6) ☐ Insert Rancho lower control arm into frame and axle mount to check fit. If the mount has been deformed, you may need to spread it open slightly. If there is more than 1/8" of clearance call Rancho Technical Department at 1-734-384-7804 for a shim kit RS860422.

- 7) ☐ Lightly grease the shims if they are required.
- 8) ☐ Attach the adjustable end of the lower control arm R881010B to the frame bracket with shims if required, and OE hardware. See Illustration 6.
- 9) ☐ Attach non-adjustable end of lower control arm to the axle bracket with shims if required, and OE hardware.
- 10) ☐ Repeat steps 3-9 for driver side.
- 11) ☐ Tighten lower control arms to 135 Ft-Lbs. Tighten upper control arm at the frame to 35 Ft-Lbs. Tighten jam nuts to 150 Ft-Lbs.

DO NOT TIGHTEN UPPER CONTROL ARMS AT AXLE until vehicle is on the ground at ride height.

BUMP STOP SPACER, COIL SPRING & SHOCK ABSORBER INSTALLATION

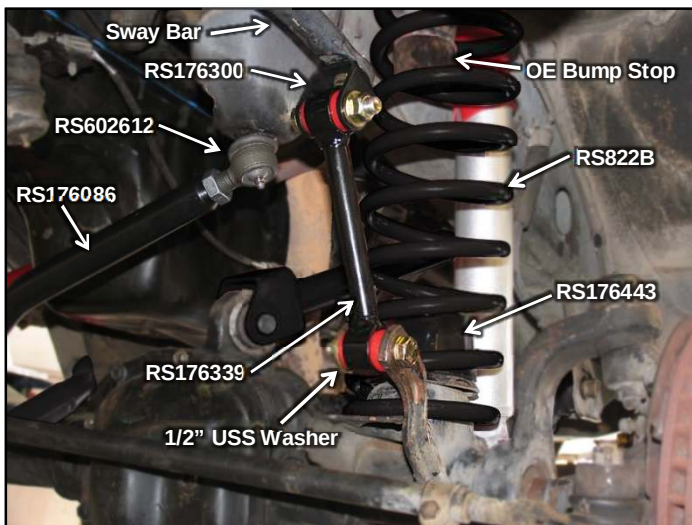


Illustration 7

- 1) ☐ Drill a 5/16" hole through the top center of the coil spring axle pad. For ease of installation, tap the hole (3/8-16). See Illustration 7.
 - 2) ☐ Install original insulator on top of coil spring RS822B. Place bump stop spacer RS176443, OE bump stop and bump stop mount inside the coil spring.
- NOTE:** If you have a winch mounted to the front bumper, optional spring spacer RS70082 (purchased separately) may be added to compensate for the additional weight.
- 3) ☐ Insert the spring assembly into the upper mount and onto the axle pad. Align pig tail with groove in axle pad. Install coil retainer and torque to 16 Ft-Lbs.

- 4) ☐ Re-install OE bump stop mount and rubber bump stop.
- 5) ☐ Attach the Rancho bump stop spacer to the axle pad with the self-tapping screw from RS860157.
- 6) ☐ Repeat steps 1 through 5 for the other side.
- 7) ☐ Install retaining washer and bushing on NEW Rancho shock absorber. Insert shock into upper mounting hole. Install bushing, washer and nut. Tighten nut until bushings compress. Repeat for other side.
- 8) ☐ Raise front axle and attach shock lower mounts to axle brackets with the original hardware. Tighten nuts and bolts to 14 Ft-Lbs.

BRAKE HOSE REPLACEMENT

NOTE: To keep the brake bleeding process to just the front calipers, do not allow the brake fluid to drain completely from the master cylinder reservoir. Use flare nut wrench on tube fittings to prevent stripping nuts.

- 1) ☐ Before removing OE brake hose, loosen and re-snug connections at metal brake tube and caliper to ensure connections move freely. See Illustration 3.
- 2) ☐ Separate the left front brake hose from the brake tube and the frame rail. Plug tube to prevent brake fluid leakage.
- 3) ☐ Remove the brake hose from the caliper. Discard copper washers.
- 4) ☐ Attach left brake hose RS170082 to the caliper with NEW COPPER washers supplied with brake hose, and the original bolt. See Illustration 8. Tighten the bolt to 23 ft.-lbs.

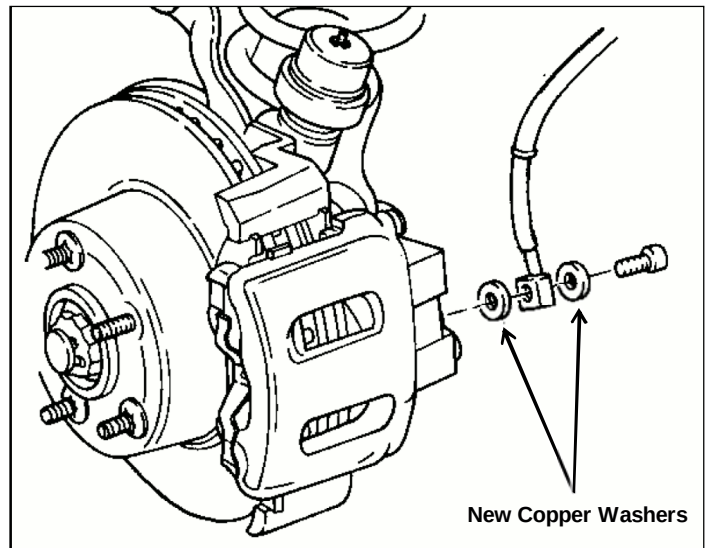


Illustration 8

6) ☐ Attach the new brake hose to the frame and brake tube. Tighten securely. See Illustration 6.

7) ☐ Repeat steps 1 through 5 to install right front brake hose RS170081.

8) ☐ Refill the master cylinder reservoir with approved brake fluid and bleed the front brakes as follows:

- A. Attach a clear hose to the right front caliper bleeder screw and immerse the other end into a container of clean brake fluid.
- B. Loosen the bleeder valve on the caliper.
- C. Have an assistant push the brake pedal down and then hold.
- D. Tighten the bleeder valve and slowly release the pedal.
- E. Repeat the procedure until all air is purged from the caliper.
- F. Attach the hose and container to the left front caliper and repeat the bleeding process. Refill the brake master cylinder reservoir as necessary.

9) ☐ Check lines for leaks. Tighten tube fitting 1/8" turn if leak occurs. Over tightening will damage flare fitting.

Do not exceed 23 ft.-lbs. on caliper bolt

SWAY BAR END LINK INSTALLATION.

1) ☐ Using a silicone spray, press the supplied bushings RS545 and sleeves RS420084 from bag RS860797 into new end links RS176339. Use a bench vise, C-clamp or arbor press. See Illustration 7.

2) ☐ Install sway bar clevis RS176300 to the end of the sway bar using 7/16" hardware from bag RS860797. Torque to 60 Ft-Lbs.

3) ☐ Attach end links to axle bracket with the original bolts and large 1/2" USS washers from hardware bag RS860797.

4) ☐ Attach end links to sway bar clevis with the 12MM hardware from bag RS860797. Tighten upper and lower end link hardware to 60 Ft-Lbs.

TRACK BAR INSTALLATION

1) ☐ Reconnect the drag link to the pitman using the retaining nut. Torque to 35 Ft-Lbs. Install new cotter pin.

2) ☐ Apply silicone spray or synthetic grease and press the bushings and sleeve from bag RS860157 into the track bar assembly.

3) ☐ Install the jam nut from bag RS860157 on the new track bar end RS602612. Thread the end assembly into the new track bar RS176086 until only four threads are exposed. Do not tighten the jam nut. See Illustration 7.

4) ☐ Loosely attach the new track bar to the axle bracket with the original bolt and flag nut.

5) ☐ Install front wheels.

6) ☐ 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.

7) ☐ Lower vehicle to the ground. Tighten lug nuts to 80-110 FT-LBS.

8) ☐ Torque upper control arms at axle to 45 Ft-Lbs.

9) ☐ Temporarily attach the track bar end to the frame rail bracket. If you cannot attach, have an assistant SLOWLY turn steering wheel to line up ball stud and bracket.

10) ☐ Slowly drive vehicle about 50 feet to settle suspension.

11) ☐ Repeat tire to fender well measurements (refer back to step 2 under Track Bar Removal). If necessary, adjust the track bar end to duplicate the previously measured difference. Tighten the jam nut.

12) ☐ Torque the track bar to axle bracket mounting bolt to 45 ft. lbs. and the ball stud nut to 35 ft. lbs. Slowly tighten castle nut up to 1/8 turn to line up cotter pin hole (See Note). Install a new cotter pin.

NOTE: After torqueing, if OE castle nut will not thread on track bar ball joint stud enough to insert cotter pin, replace castle nut with 1/2" center lock nut RS770271 from bag RS860795.

REAR SUSPENSION

- 1) ☐ Park the vehicle on a level surface. Set parking brake and chock front wheels. Raise the rear of the vehicle and support the frame with jack stands.
- 2) ☐ Remove the rear wheels.

BRAKE HOSE REPLACEMENT

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

Use flare nut wrench on tube fittings to prevent stripping nuts.

- 1) ☐ Before removing OE brake hose, loosen and re-snug brake hose to metal brake tube connections to ensure connections move freely. See Illustration 9.

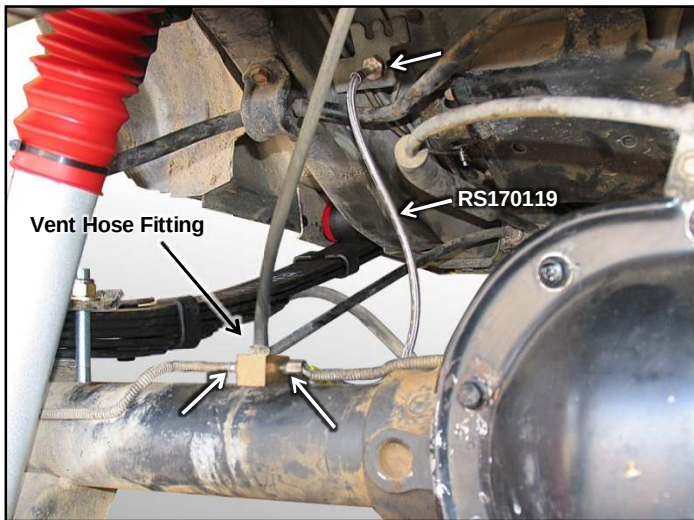


Illustration 9

- 2) ☐ Remove clip holding brake hose to frame bracket.
- 3) ☐ Remove vent hose from axle vent fitting. Remove vent fitting to disconnect brake hose from axle.
- 4) ☐ Disconnect brake hose from metal brake tubes at axle. Plug brake hose to prevent excess fluid from leaking.
- 5) ☐ Connect Rancho rear brake hose RS170119 to metal brake tubes at axle. Attach new hose to axle with vent hose fitting and snug brake tube connection nuts.
- 6) ☐ Disconnect brake hose from metal brake tube at frame bracket.
- 7) ☐ Connect Rancho rear brake hose to metal brake tube at frame bracket. Install clip to hold brake hose to frame bracket. Snug brake tube connection nut.

- 8) ☐ Refill the master cylinder reservoir with approved brake fluid and bleed the rear brakes as follows:

- A. Attach a clear hose to the right rear brake cylinder bleeder screw and immerse the other end into a container of clean brake fluid.
- B. Loosen the bleeder valve on the caliper.
- C. Have an assistant push the brake pedal down and then hold.
- D. Tighten the bleeder valve and slowly release the pedal.
- E. Repeat the procedure until all air is purged from the caliper.
- F. Attach the hose and container to the left rear brake cylinder and repeat the bleeding process. Refill the brake master cylinder reservoir as necessary.

- 9) ☐ Check lines for leaks. Tighten tube fitting 1/8" if turn leak occurs. Over tightening will damage flare fitting.

- 10) ☐ Remove axle vent fitting to detach hose from axle.

SHOCK BUSHING REPLACEMENT

Replace lower shock bushings if using RS7256, RS999256 or, RS5256.

Replacement bushing NOT REQUIRED for RS55245.

- 1) ☐ Lube bushing and sleeve with spray lube.
- 2) ☐ Using an arbor press, vise, or c-clamp, press out sleeve at least half way. Use a socket or pipe against the lower mounting loop and a socket or bolt against the sleeve. See Illustration 10. Sleeve can then be removed with pliers.

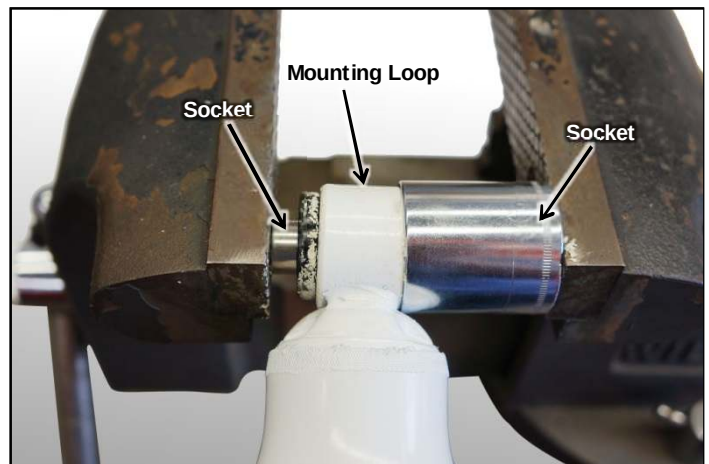


Illustration 10

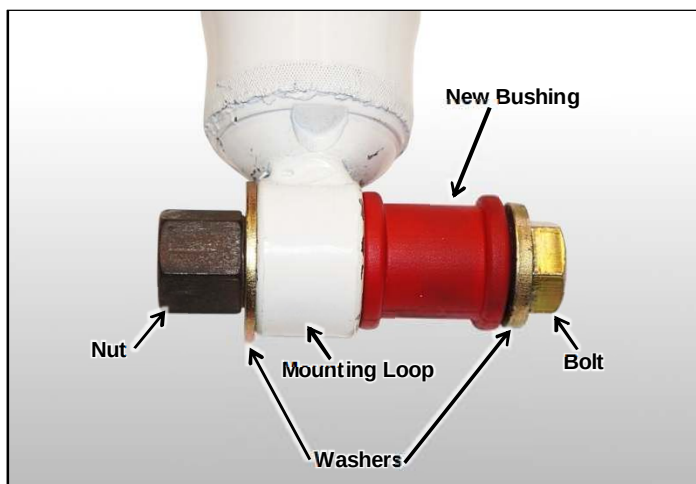


Illustration 11



Illustration 12

- 3) ☐ Use same large socket or pipe against mounting loop and another socket against bushing to remove bushing.
- 4) ☐ Clean mounting loop and lube loop and new bushing 1036000032 from kit RS980 with soapy water or silicon spray lube.
- 5) ☐ Press bushing into loop using 9/16 x 3" bolt, nut and washers. Press in by threading nut onto bolt. See
- 6) Illustration 11 and Illustration 12.
- 7) Lower mount will look like Illustration 13 when done.



Illustration 13

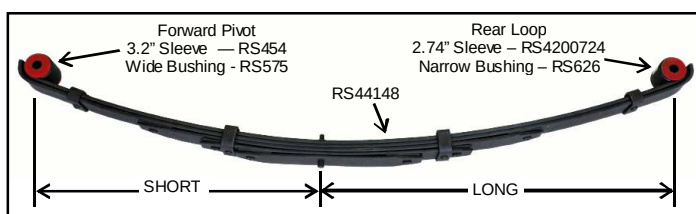


Illustration 14

LEAF SPRING AND SHACKLE REPLACEMENT

- 1) ☐ Press larger forward leaf pivot bushings RS575 and 3.2" long sleeve RS454 from Kit RS746 or RS741 into the eye loop closest to the center pin of new Rancho Leaf spring RS44148. Use a thin coat of synthetic grease. See Illustration 14.
- 2) ☐ Press smaller leaf bushings RS626 and 2.74" long sleeve RS400724 from Kit RS746 or RS741 into the eye loop furthest from the center pin of new Rancho leaf spring RS44148. Use a thin coat of synthetic grease.
- 3) ☐ Press bushings RS626 and 2.84" long sleeve RS420111 from bag RS860791 into new Rancho rear shackle RS176767. Use a thin coat of synthetic grease.
- 4) ☐ Support the rear axle with a floor jack to relieve the tension on the leaf spring.
- 5) ☐ Remove the rear shock absorbers.
- 6) ☐ If equipped disconnect sway bar end link from U-bolt anchor plate. See Illustration 15

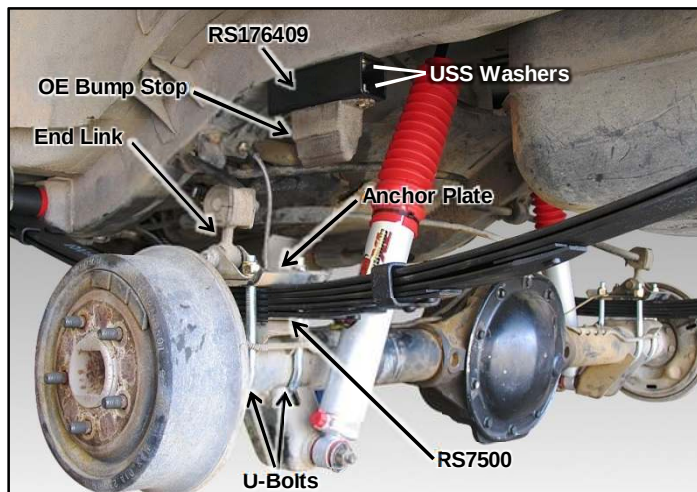


Illustration 15

NOTE: Remove and install one leaf spring assembly at a time to prevent the rear axle from tipping.

- 7) ☐ Loosen all the rear axle U-bolt nuts, but do not remove.
- 8) ☐ Starting with one side, remove rear axle U-bolts and anchor plate.
- 9) ☐ Remove the leaf spring bolts at the forward spring pivot and shackle.

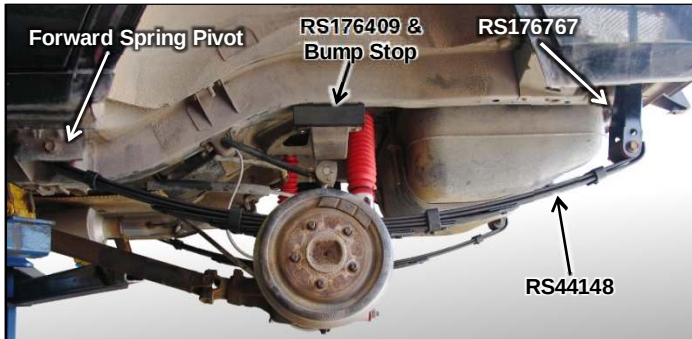


Illustration 16

- 10) ☐ Carefully lower the rear axle enough to remove the leaf spring from the vehicle. Do not allow the axle to hang from any brake lines or cables.
- 11) ☐ Remove shackle from frame.
- 12) ☐ Using OE hardware, loosely install bushing end of shackle RS176767 to frame mount.
- 13) ☐ Attach forward pivot loop of leaf (wider bushings & sleeve) to frame pivot and rear loop to shackle. Use OE hardware. Do not tighten until vehicle is on ground at ride height.
- 14) ☐ Insert leaf shim RS7500 between axle and leaf spring with the thin end forward and attach the spring assembly to the axle with OE anchor plate and new U-bolts, washers and nuts from kit RS746 or RS741. Do not tighten at this time. See Illustration 17

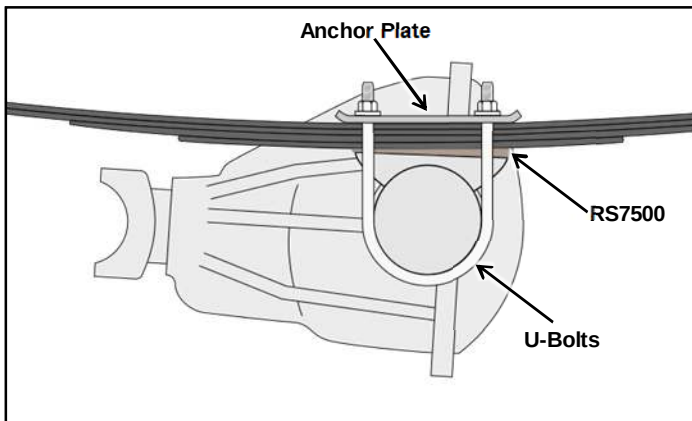


Illustration 17

- 15) ☐ Repeat steps 9-12 for other side of vehicle.
- 16) ☐ Tighten U-bolt nuts to 55 Ft-Lbs.
- 17) ☐ Install shock absorbers and torque upper nuts to 15 Ft-Lbs, and lower nuts to 44 ft-lbs.
- 18) ☐ Reconnect brake hose to axle with axle vent fitting and reattach vent hose.
- 19) ☐ Reattach sway bar end link and torque to 55 Ft-Lbs.

BUMP STOP DROP BRACKET INSTALLATION

- 1) ☐ Remove OE bump stops from frame. See Illustration 15 and Illustration 16.
- 2) ☐ Attach OE bump stops to Rancho rear bump stop bracket RS176409 using 8MM hardware from bag RS860796. Use 5/16 USS washer against bracket RS176409. Torque to 20 Ft-Lbs.
- 3) ☐ Attach bracket and bump stop assembly to frame using OE hardware and 5/16 USS washer against bracket RS176409. Torque to 20 Ft-Lbs.

LOWER VEHICLE AND FINAL CHECKS

- 1) ☐ Install the rear wheels.
- 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) ☐ Lower the vehicle to the ground. Tighten lug nuts to 80-110 FT-LBS. Do not release parking brake or remove wheel chocks.
- 4) ☐ Jounce vehicle to settle springs. Torque leaf spring and shackles to 80 Ft-Lbs.
- 5) ☐ 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.
- 6) ☐ Ensure that the vehicle brake system operates correctly. If new brake hoses were installed, verify that each hose allows for full suspension movement.
- 7) ☐ Readjust headlamps.
- 8) ☐ Center steering wheel. Loosen drag link adjust sleeve clamp bolts and turn the drag link adjustment sleeve in desired direction. Adjustment sleeve bolts must face forward for good clearance. Torque clamp bolt bolts to 26 lb-ft. See Illustration 1.

- 9) ☐ Have vehicle aligned to manufacturer's specifications.

Recommended Alignment Specifications

Caster (degrees): $7.00^\circ \pm 1.50^\circ$

Camber (degrees): $-0.25^\circ \pm 0.50^\circ$

Sum Toe In (degrees): $0.25^\circ \pm 0.25^\circ$ or $0.10" \pm 0.10"$

- 10) ☐ Park the vehicle on a level surface Measure and record the distance from the center of each wheel to the top of the fender opening. See Illustration 18

Record these measurements in the space provided.

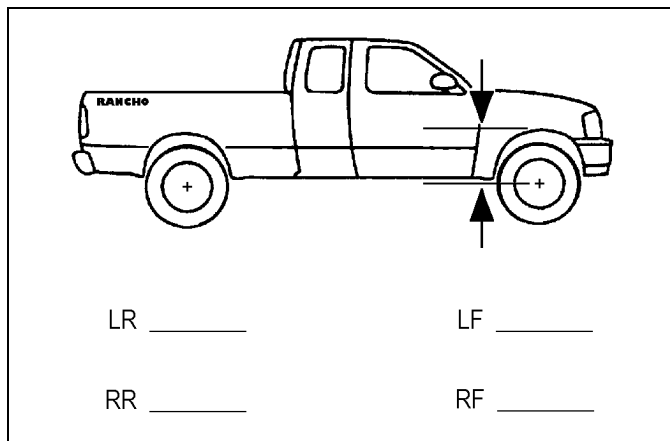


Illustration 18

Torque Specs

Front Components

Lower Control Arm	135 ft. lbs.
Upper Control Arm	45 ft. lbs.
Control Arm Jam Nuts	150 ft. lbs.
Shock Mount, Upper	10 ft. lbs.
Shock Mount, Lower	14 ft. lbs.
Coil Spring Retainer	16 ft. lbs.
Bump Stop Mount	31 ft. lbs.
Track Bar Upper (Ball Stud)	35 ft. lbs.
Track Bar Lower (Axle Bracket)	45 ft. lbs.
Drag Link to Pitman Arm	35 ft. lbs.
Sway Bar Clevis	35 ft. lbs.
Sway Bar End Link	60 ft. lbs.
Brake Hose to Caliper	23 ft. lbs.
Wheels (Lug Nuts)	80-110 ft. lbs.

Rear Components

Leaf Spring & Shackle	80 ft. lbs.
Leaf Spring U-bolt	55 ft. lbs.
Shock Absorber Upper	15 ft. lbs.
Shock Absorber Lower	44 ft. lbs.
Sway Bar Link	55 ft. lbs.
Bump Stop	20 ft. lbs.
Wheels (Lug Nuts)	80-110 ft. lbs.

STANDARD BOLT TORQUE & IDENTIFICATION

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

1/2-13x1.75 HHCS 			M12-1.25x50 HHCS 		
G = Grade Marking (bolt strength) D = Nominal Diameter (inches) T = Thread Pitch (threads per inch)			P = Property Class (bolt strength) D = Nominal Diameter (millimeters) T = Thread Pitch (thread width, mm)		



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