

FOR RANCHO SUSPENSION SYSTEMS RS6560 & RS6561: DODGE DAKOTA AND DURANGO

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 of the vehicle 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 another manufacturer. Use the appropriate Rancho shock absorbers. Contact your local Rancho representative for the correct application.

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. Do not powdercoat, chrome, cadmium, or zinc plate any of the components in this suspension system. To change color, enamel paint can be applied over the original coating.

H. 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.

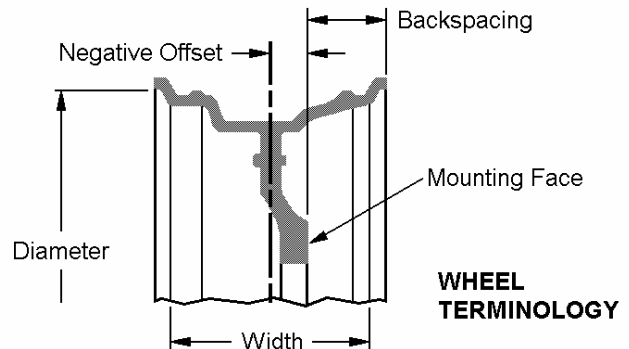
- Dakota/Durango Service Manual
- Tie Rod Remover C-3894-A
- Remover MB-991113
- Remover C-4150A
- Reciprocating Saw
- Die Grinder
- Drill Motor
- Assorted Drills
- Torque Wrench (250 FT-LB capacity)
- 1/2" Drive Ratchet and Sockets
- Assorted Combination Wrenches
- Heavy Duty Jack Stands
- Wheel Chocks (wooden blocks)
- Hydraulic Floor Jack
- Center punch
- File
- Hammer
- Wire Brush (to clean bracket mounting surfaces)
- Silicone Spray Lubricant
- Tape Measure
- Brake Fluid (DOT 3)
- Safety Glasses--Wear safety glasses at all times**

I. This suspension system is a "bolt on assembly". Do not weld any of these components to the vehicle. Do not repair any broken or bent components. Contact your local Rancho dealer or Rancho for replacement parts.

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 the following tire & wheel combination: 265/75 R16 tire, 16 x 7 wheel with 5 inches of wheel backspacing. Before installing any other combination, consult your local tire and wheel specialist. 16 x 7 OE wheels can be reinstalled; 15 inch OE wheels will not fit this suspension system.



M. The required installation time for this system is approximately 12 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. Important information for the end user is contained in the consumer information pack. If you are installing this system for someone else, display the information pack by hanging it from the rear view mirror.

O. 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 SUSPENSION IS NOT RESPONSIBLE FOR DAMAGE OR FAILURE RESULTING FROM AN IMPROPER OR MODIFIED INSTALLATION...**

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) D = Nominal Diameter (inches) 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) D = Nominal Diameter (millimeters) 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>
1417	Rear Bump Stop (6560 only)	2		9/16-12x4.5 HHCS	2
1432	Front Bump Stop (6561 only)	2		1/2-13x1.25 HHCS	2
15140	Riser Block (6560 only)	2		9/16-12 Stover Nut	2
170098	Brake Hose, Right	1		1/2-13 Stover Nut	2
170099	Brake Hose, Left	1		9/16 SAE Washer	8
176088	Rear End Link (6560 only)	2		1/2 SAE Washer	2
176120	Rear Bump Stop Bracket (6560 only)	2	860463	Knuckle Hardware Kit	1
176121	Torsion Bar Drop Bracket, Left	1	176263	Axle Spacer	2
176122	Torsion Bar Drop Bracket, Right	1		M22-1.50 Castle Nut	2
176123	Rear Spring Forward Brkt. (6561 only)	2		3/16 x 2.0 Cotter Pin	2
176124	Rear Spring Shackle (6561 only)	2		1/8 x 1.50 Cotter Pin	2
176125	Rear Bump Stop Bracket (6561 only)	2	860464	Front Crossmember Hardware Kit	1
176247	Front Crossmember	1		M12-1.75 x 110 HHCS	2
176248	Rear Crossmember	1		M12-1.75 x 30 HHCS	2
176249	Diff. Drop Bracket, Front Forward	1		M12-1.75 Stover Nut	4
176250	Diff. Drop Bracket, Front Aft	1		12mm Washer	8
176252	Diff. Drop Bracket, Aft Right	1		Thread Lock	1
176253	Diff. Drop Bracket, Aft Left	1	860465	Rear Crossmember Hardware Kit	1
176254	Diff. Drop Bracket, Right Forward	1		M14-2.00 x 110 HHCS	2
176255	Diff. Drop Bracket, Right Aft	1		M14-2.00 Toplock Nut	2
176256	Transmission Spacer	1		14mm Washer	4
176258	Crossmember Drop Bracket, Left	1		M12-1.75 x 30 HHCS	2
176259	Crossmember Drop Bracket, Right	1		M12-1.75 Stover Nut	2
176260	Knuckle, Left	1	860466	Differential Skid Plate Hardware Kit	1
176261	Knuckle, Right	1		M12-1.75x35 HHCS	2
176262	Skid Plate	1		M12-1.75 Stover Nut	2
740016	U-bolt (6560 only)	4		12mm Washer	4
8103	U-bolt Hardware Kit (6560 only)	1		3/8-16 x 1.00 HHTS	2
	5/8-16 Nut	8	860467	Differential Hardware Kit (front & right)	2
	5/8 Washer	8		M12-1.75 x 60 HHCS	2
860010	Pin Kit, Long (if applicable)	1		M12-1.75 x 65 HHCS	2
	.562 x 1.10 Pin	2		M12-1.75 Stover Nut	4
860086	Brake Hose Gasket Kit	1		12mm Washer	8
	Copper Gasket	4	860468	Differential Hardware Kit, Rear	1
860155	Rear End Link Hardware Kit (6560 only)	1		M12-1.75 x 35 HHCS	2
420088	Sleeve	4		M12-1.75 x 60 HHCS	2
545	Bushing	4		M12-1.75 Stover Nut	2
	7/16-20x2.5 HHCS	4	860469	Front Bump Stop Kit (6560 only)	1
	7/16-20 Stover Nut	4	176282	Bump Stop Spacer	2
	7/16 SAE Washer	4		5/16-18 x 1.25 HHCS	4
	7/16 USS Washer	6		5/16 SAE Washer	4
860170	TB Drop Bracket Hardware Kit	1	860470	Trans Drop Bracket Hardware Kit	1
	Torsion Bar Adjuster Bolt	2		M12-1.75 x 30 HHCS	8
	7/16-20x1.25 HHCS	2		M12-1.75 Stover Nut	8
	3/8-16x2.5 HHCS	2		12mm Washer	16
	7/16-20 Stover Nut	2		M10-1.50 x 30 HHCS	4
	3/8-16 Stover Nut	2		M10-1.50 Nyloc Nut	4
	7/16 SAE Washer	2		10mm Washer	8
	7/16 USS Washer	4	860471	Trans Spacer Hardware Kit	1
	3/8 SAE Washer	4		M12-1.75 x 35 HHCS	4
860171	Bump Stop Hardware Kit (6560 only)	1		M12-1.75 Stover Nut	4
	3/8-16x1.25 HHCS	2		12mm Washer	8
	3/8-16 Stover Nut	2	860472	Trans Skid Plate Hardware Kit	1
	5/16-24 Nyloc Nut	8	420057	Sleeve	2
	3/8 SAE Washer	4		M10-1.50 x 70 HHCS	2
	5/16 SAE Washer	8		7/16 USS Washer	2
860187	Rear Spring Hardware Kit (6561 only)	1	8662	Pin Kit, Short (6560 only)	1
422	Sleeve	2		.562 x .875 Pin	2
429	Sleeve	2	88061	Instructions	1
624	Bushing	4	94140	Consumer Information Pack	1

FRONT SUSPENSION

VEHICLE PREPARATION & TORSION BAR UNLOADING

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 1.

LF: _____ RF: _____

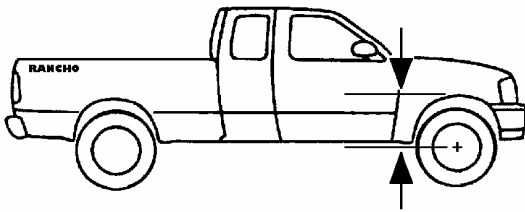


Illustration 1

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

3) Mark torsion bars as either driver side front or passenger side front. Make alignment marks on the lower control arms, the torsion bars, and the torsion bar anchors (for installation reference).

4) Turn adjustment bolt counterclockwise to release spring load. Remove the adjustment bolt from the swivel. See illustration 2.

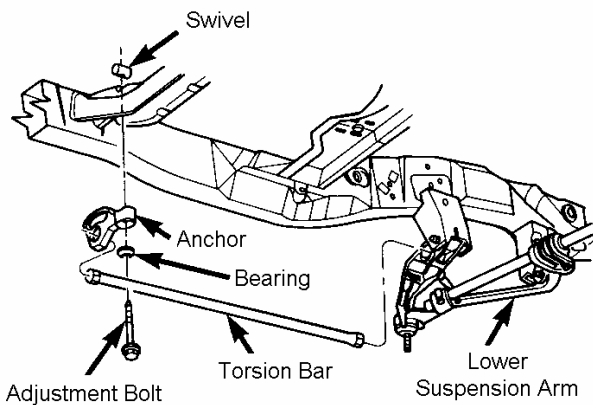


Illustration 2

5) Repeat step 4 for the other side.

SHOCK ABSORBER & SWAY BAR REMOVAL

1) Remove the upper shock absorber nut, retainer and grommet. Remove the lower bolt and remove the shock absorber. See illustration 3.

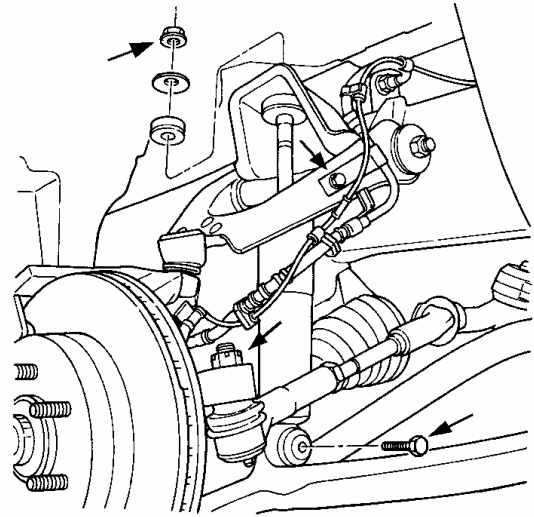


Illustration 3

2) Repeat step 1 for the other side.

3) If equipped, remove the differential and transmission skid plates.

4) Remove the sway bar retainer bolts from the lower suspension arms and remove the retainers. See illustration 4.

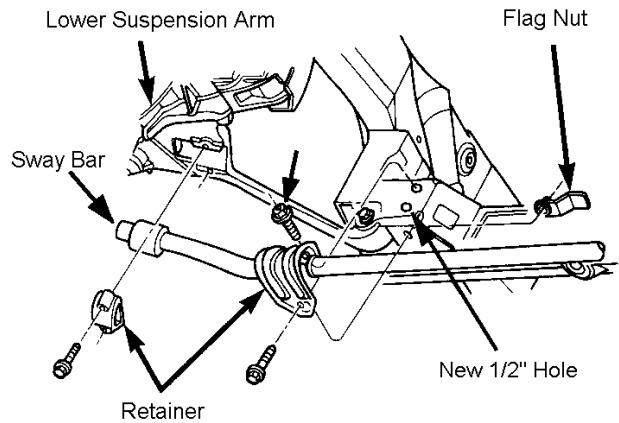


Illustration 4

5) Remove the sway bar retainer nuts from the frame crossmember. Remove the sway bar assembly.

6) Drill a new 1/2" mounting hole 2 inches below the existing hole. See Illustration 4.

STEERING KNUCKLE REMOVAL

- 1) Remove the nut from the outer tie rod end. Refer to illustration 3. Separate the tie rod end from the steering knuckle with tie rod remover C-3894-A.
- 2) Remove the bolt holding the brake hose to the upper control arm (illustration 3). If necessary, remove the ABS sensor from the steering knuckle. Save hardware for reuse.
- 3) Remove the brake caliper and secure it up and out of the way. Mark the brake rotor left or right. Remove the brake rotor.
- 4) Remove the cotter pin and halfshaft nut. See illustration 5.

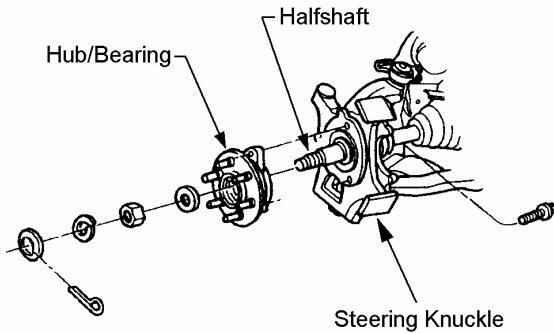


Illustration 5

- 5) Remove the upper ball joint cotter pin and nut. Separate the ball joint from the knuckle with remover MB-991113. Be careful not to damage the ball joint seal.
- 6) Remove the lower ball joint cotter pin and nut. Separate the ball joint from the knuckle with remover C-4150A. Remove the steering knuckle.
- 7) Remove the hub/bearing bolts. See illustration 5. Separate the hub/bearing from the steering knuckle. Remove the brake shield.
- 8) Repeat steps 1 through 7 for the other side.

LOWER CONTROL ARM & TORSION BAR REMOVAL

- 1) Remove the lower control arm pivot bolts. See illustration 6. With the help of an assistant, remove the control arm and torsion bar as an assembly.

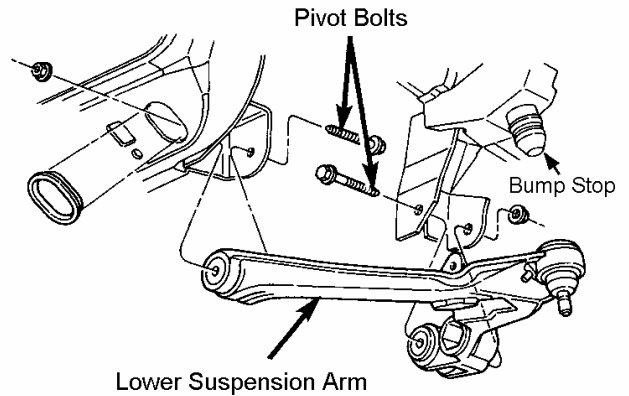


Illustration 6

- 2) Remove the anchor and slide the torsion bar out of the control arm pocket. Refer back to illustration 2.
- 3) Repeat steps 1 and 2 for the other side.
- 4) For kit 6561, remove the bump stops. See illustration 6.

FRONT & REAR CROSSMEMBER INSTALLATION

- 1) Grind off the inside edge of the front lower control arm pockets to provide clearance for the front crossmember. See illustration 7.

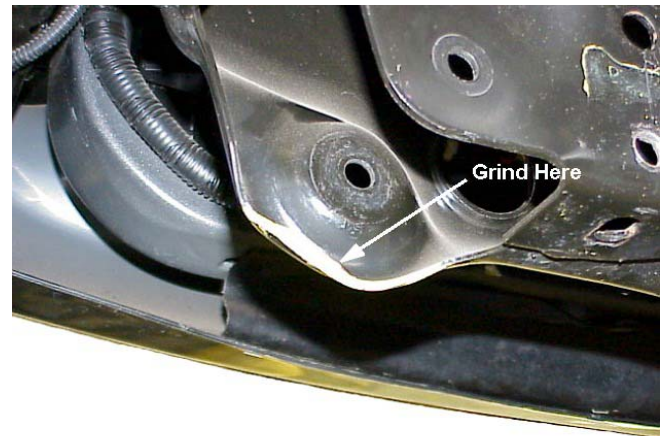


Illustration 7

- 2) Insert front crossmember 176247 into the lower control arm front pockets. See illustration 8. Attach crossmember to the frame pockets with the original hardware.

NOTE: If installed correctly, the slotted holes in the bottom of the crossmember will offset toward the rear of the vehicle.

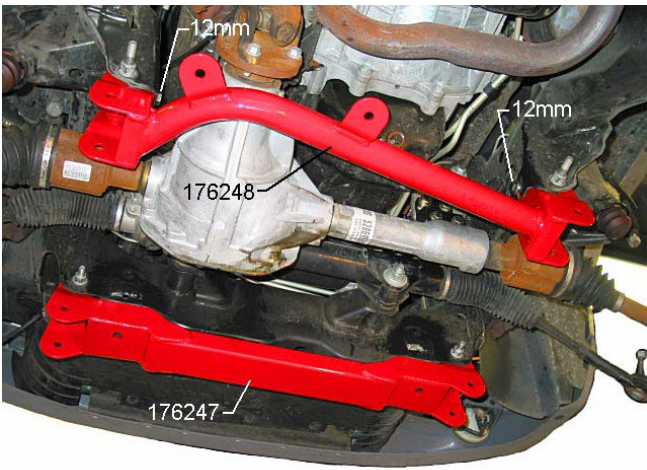


Illustration 8

5) □ Insert rear crossmember 176248 into the lower control arm rear pockets. Loosely attach the crossmember to the frame pockets with the original bolts and the 12mm hardware from kit 860465. See illustration 8.

6) □ Tighten the original front crossmember bolts to 80 ft. lbs. Tighten the original rear crossmember bolts to 140 ft. lbs and the new 12mm bolts to 55 ft. lbs.

FRONT DIFFERENTIAL RELOCATION

- 1) □ Support the front differential with a floor jack.
- 2) □ Remove the bolts holding the front differential to the left and right engine mounts. See illustration 9.

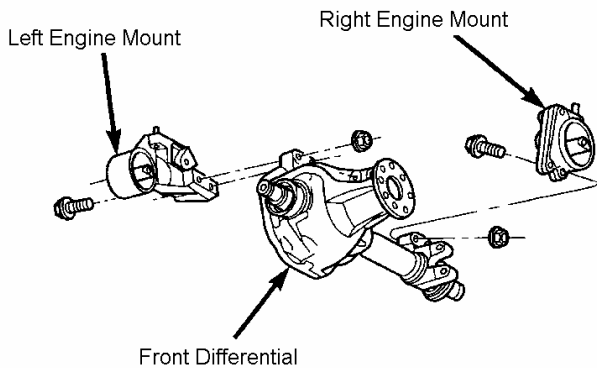


Illustration 9

3) □ Remove the bolts holding the front differential to the rear mount. See illustration 10. Carefully, lower the front differential about 5 inches.

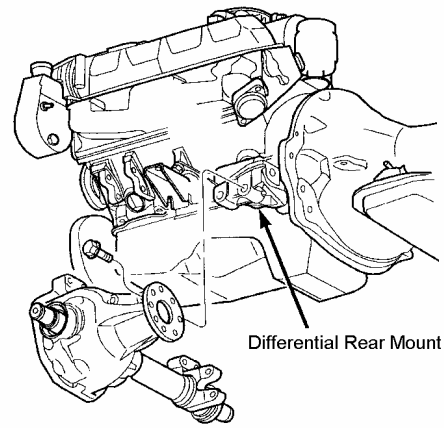


Illustration 10

4) □ Using the hardware from kit 860467, loosely attach drop brackets 176249 and 176250 to the left engine mount and the top mount of the front differential. See illustration 11. Use the longer bolts on the bottom.

NOTE: The differential drop brackets are similar in shape. Pay close attention to the part number and up-arrow when installing each bracket. Use the illustrations in this manual to verify correct bracket installation.

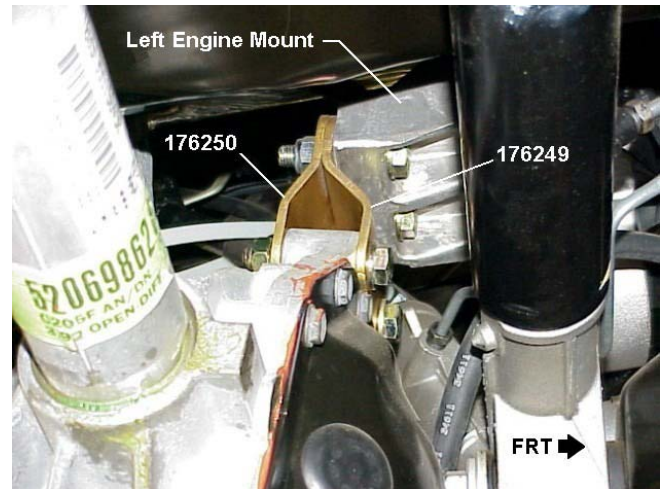


Illustration 11

5) □ Loosely attach drop brackets 176254 and 176255 to the right engine and differential mounts. Use the 12mm hardware from the second 860467 kit. See illustration 12. Use the longer bolts on the bottom.

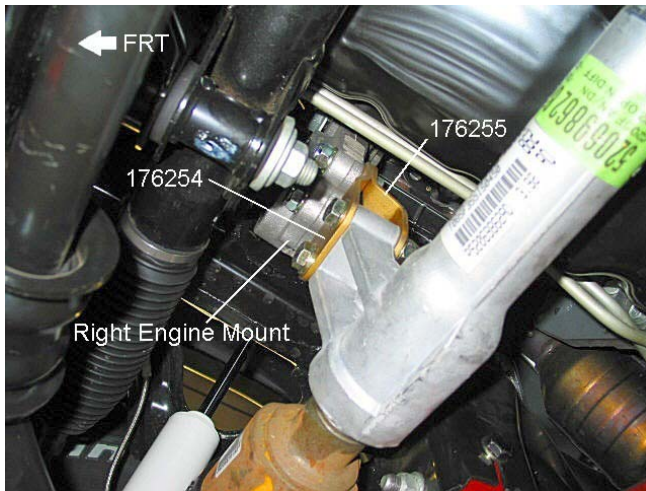


Illustration 12

6) □ Loosely attach drop brackets 176252 and 176253 to the rear differential mount with the hardware from kit 860468. See illustration 13. Use the longer bolts on the bottom.

7) □ Tighten all differential mounting bolts to 70 ft-lbs.

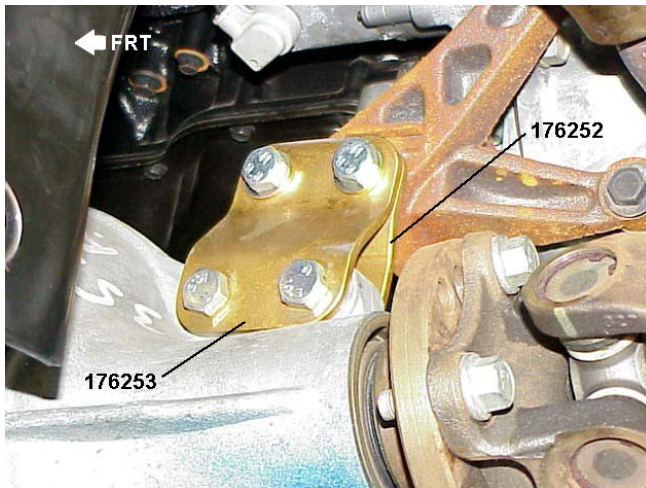


Illustration 13

LOWER CONTROL ARM & STEERING KNUCKLE INSTALLATION

1) □ Insert the driver side lower control arm into the front (176247) and rear (176248) crossmembers.

2) □ Attach the lower control arm to the front crossmember with the 12mm hardware from kit 860464 and to the rear crossmember with the 14mm hardware from kit 860465. Insert pivot bolts from inside to out.

NOTE: Do not tighten lower control arm pivot bolts until vehicle is at normal ride height.

3) □ Attach the brake shield and hub/bearing to left knuckle 176260 with the original bolts. See illustration 14. Tighten the hub bolts to 123 ft. lbs.

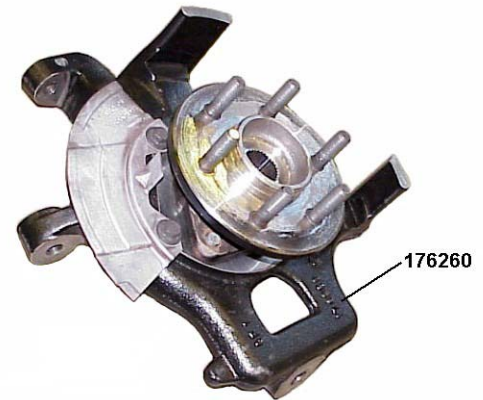


Illustration 14

4) □ Install axle spacer (176263) from hardware kit 860463 onto the halfshaft. See illustration 15.

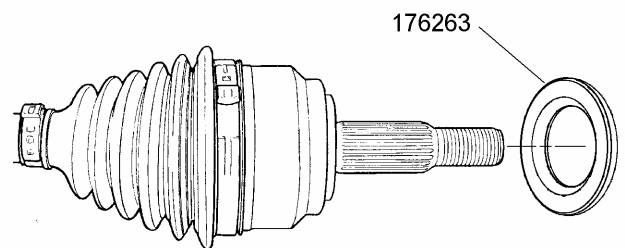


Illustration 15

5) □ Support the lower control arm with a hydraulic jack. Insert the halfshaft into the hub/bearing and install the knuckle onto the upper and lower ball joint.

6) □ Install the upper and lower ball joint nuts. Tighten the upper nut to 60 ft. lbs. and the lower nut to 135 ft. lbs. Insert new cotter pins from kit 860463.

7) Install the original halfshaft washer and new castle nut from kit 860463.

NOTE: The halfshaft castle nut is easier to torque when the vehicle is on the ground.

8) □ Rotate the tie rod end ball stud downward. Loosen the jam nut and thread the tie rod end in four turns.

- 9) Insert the tie rod ball stud (from the top) into the knuckle and install the nut. Tighten the ball stud nut to 60 ft. lbs. Tighten the jam nut to 55 ft. lbs.
- 10) Install brake rotor. Install caliper over rotor and attach to steering knuckle. Be sure ends of brake shoes are seated on slide surfaces.
- 11) Install and tighten caliper slide pins to 22 ft. lbs.
- 12) Repeat steps 1 through 11 for the other side.
- 13) Install New Rancho shock absorbers.

BRAKE HOSE REPLACEMENT

- 1) Remove the brake hose from the brake line at the frame bracket. Plug the line to prevent the master cylinder from draining completely.
- 2) Remove the brake hose from the caliper. Cover hole in caliper to prevent contamination.
- 3) Attach new brake hose 170098 (right) or 170099 (left) to the caliper with the new gaskets from kit 860086. See illustration 16. Tighten the fitting bolt to 18 ft. lbs.

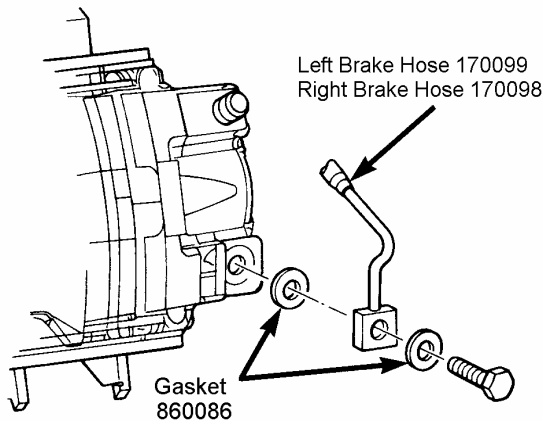


Illustration 16

- 6) Route the new brake hose between the control arms and attach it to the brake line at the frame bracket. Install clip and tighten fitting to 170 In. lbs. Attach hose clamp to upper control arm with the original bolt. See illustration 17.

NOTE: If the brake hose contacts the upper control arm, bend the clamp to provide clearance.

- 7) If applicable, attach the ABS speed sensor to the hub/bearing with the original bolt.
- 8) Repeat steps 1 through 7 for the other side. Fill master cylinder with approved brake fluid and bleed the front brakes.

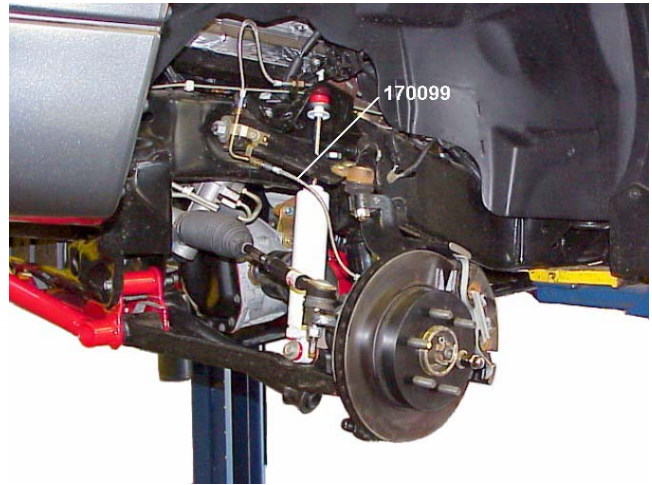


Illustration 17

SWAY BAR & BUMP STOP INSTALLATION

- 1) Remove the original bolts from the sway bar frame retainers. Refer back to illustration 4.
- 2) Attach the sway bar to the bottom of front crossmember 176247 with the original bolts and flag nuts.
- 3) Attach the sway bar to the frame with the 12mm hardware from kit 860464. Do not attach the sway bar to the lower control arm at this time.

NOTE: The vehicle must be at normal ride height when tightening the sway bar mounting bolts.

- 4) For kit 6561, insert the new bump stops (1432) into the frame brackets. Refer back to illustration 6.
- 5) For kit 6560, cut out the bump stop template from the last page of this manual. Punch out the pin location hole in the template.
- 6) Place the template on the passenger side lower control arm below the OE bump stop. Position the punched hole in the template over the torsion bar retaining pin.
- 7) Align the arrowed edge of the template with the forward edge of the arm. Mark the location of the two 11/32" holes with a center punch. Remove template.

- 8) Drill two 11/32" holes at the marked locations.
- 9) Attach bump stop spacer (176282) to the lower control arm with the hardware from kit 860469.
- 10) Repeat steps 5 through 9 for the driver side.

TRANSMISSION SPACER & DROP BRACKET INSTALLATION

- 1) Support the transmission with a hydraulic jack. Separate the transmission crossmember from the frame brackets and the transmission mount. Remove the crossmember.
- 2) Remove the transmission mount.
- 3) Attach spacer 176256 to the transmission with the original hardware. See illustration 18. Tighten nuts and bolts to 50 ft. lbs.

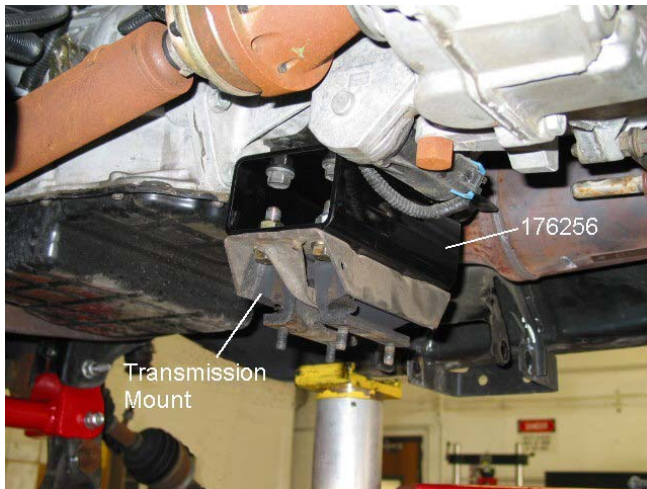


Illustration 18

- 4) Attach transmission mount to spacer 176256 with the hardware from kit 860471.
- 5) Mark the locations for cutting the crossmember frame brackets as shown in illustration 19.
- 6) Cut off the mounting tabs closest to the frame rail at the marked locations. See illustration 19. Repeat for other side.



Illustration 19

- 7) Loosely attach the left (176258) and right (176259) crossmember drop brackets to the transmission crossmember with the original bolts. See illustration 20.

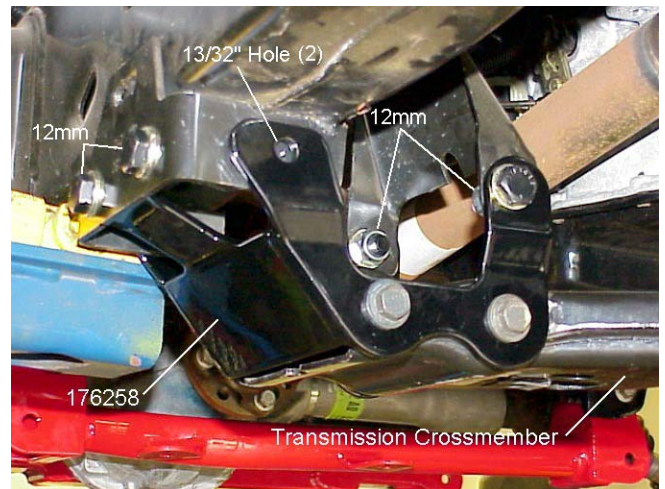


Illustration 20

- 8) Attach the crossmember drop brackets to the modified frame brackets with the 12mm hardware from kit 860470. See illustration 20.
- 9) Using the drop bracket as a template, drill two 13/32" holes through the frame bracket. Install the 10mm hardware from kit 860470. Tighten the bolts to 32 ft. lbs. Repeat for other side.
- 10) Lower the transmission onto the crossmember. Reattach the transmission mount. Tighten the nuts to 35 ft. lbs.
- 11) Tighten the OE bolts and the new 12mm bolts to 50 ft. lbs.

TORSION BAR DROP BRACKET INSTALLATION

- 1) Cut out the drop bracket installation templates from the last page of this booklet.
- 2) Place the straight edges of the template against the welded tab on the crossmember. See illustration 21. Mark and center punch the 3/8" mounting hole location.



Illustration 21

- 3) Drill a 3/8" hole through the crossmember at the marked location.
- 4) Align reference marks and insert the correct torsion bar through the crossmember drop bracket and into the lower control arm. Install the anchor on the torsion bar in its original position.
- 5) Place drop bracket 176121 (left) or 176122 (right) inside the crossmember. Attach the bracket to the crossmember with the hardware from kit 860170. See illustration 21. Lightly coat the top of the anchor with grease, and position the anchor against the new drop bracket.
- 6) Attach the anchor to the crossmember with new adjustment bolt (from kit 860170) and the original bearing & swivel. Turn the adjustment bolt clockwise until the bolt extends 1" above the swivel (preliminary height adjustment). See illustration 21.
- 7) Repeat steps 2 through 6 for the other side.

SKID PLATE INSTALLATION

- 1) Temporarily attach skid plate 176262 to rear crossmember 176248 with the 12mm hardware kit 860466. See illustration 22.

- 2) Using the skid plate as a template, center punch the two holes in the bottom of front crossmember 176247. Remove skid plate.
- 3) Drill two 5/16" holes at the marked locations.
- 4) Reattach the skid plate to the rear crossmember. Insert the self-tapping screws from kit 860466 into the front crossmember.

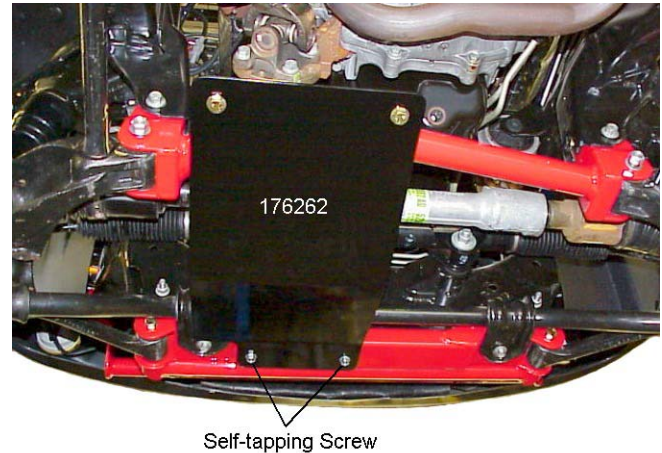


Illustration 22

- 5) If equipped, reattach the front of the transmission skid plate to the transmission crossmember with the original bolts. Reattach the rear of the skid plate with the sleeves and hardware from kit 860472. Tighten the bolts to 17 ft. lbs.

FINAL ASSEMBLY

- 1) Install front wheels and lower vehicle to the ground. Tighten the lug nuts to 85--110 ft. lbs.
- 2) Tighten the front axle nuts to 173 ft lbs. Install a new cotter pin from kit 860463.
- 3) Rotate the sway bar up against the lower control arms. Install the retainers and bolts to the lower control arm. Check the alignment of the sway bar to ensure spacing is equal on both sides. Adjust if necessary. Tighten the control arm retainer bolts to 25 ft. lbs.
- 4) Tighten the frame retainer bolts to 80 ft. lbs.
- 5) Tighten the lower control arm front pivot bolts to 80 ft. lbs. and the rear pivot bolts to 140 ft. lbs.

DAKOTA REAR SUSPENSION

RISER BLOCK INSTALLATION

- 1) Chock the front wheels. Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 2) Support the rear axle with a floor jack. Remove the rear shock absorbers. Do not reuse original shocks.
- 3) Remove the sway bar end links.
- 4) Loosen (do not remove) the leaf spring U-bolt nuts on both sides of the vehicle.
- 5) Remove the U-bolts on one side of the vehicle and carefully lower the rear axle about 6 inches. Do not allow the axle to hang by any hoses or wires.
- 6) Insert a block pin from kit 8662 into the hole in the axle pad. Place riser block 15140 on the axle pad as shown in illustration 23.

NOTE: Use the longer block pins from kit 860010 if the pins from kit 8662 are too short.

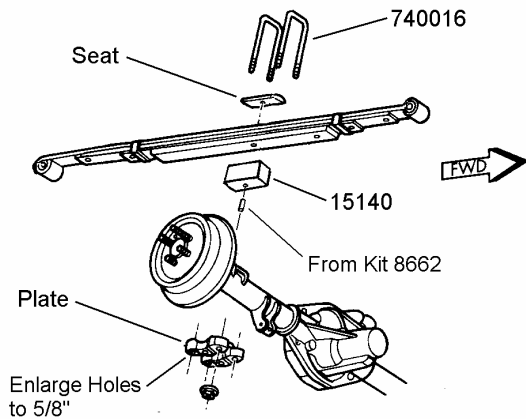


Illustration 23

- 7) Raise the axle until the riser block contacts the bottom of the spring. Make sure center pin aligns with hole in block.
- 8) Enlarge the holes in the original U-bolt plate to 5/8". See Illustration 23.
- 9) Place new Rancho U-bolts (740016) over the spring, riser block, and axle.

10) Attach the axle to the leaf spring with the modified plate and the 5/8" hardware from kit 8103. Snug down nuts only. Do not tighten.

11) Repeat steps 5 through 10 for the other side.

BUMP STOP INSTALLATION

- 1) Remove the bump stops located on the frame rails above the axle.
- 2) Attach bump stop bracket 176120 to the frame as shown in illustration 24. Use the 3/8" hardware from kit 860171. Tighten to specifications.



Illustration 24

- 3) Attach bump stop 15140 to bracket 176120 with the 5/16" hardware from kit 860171. Tighten to specifications.
- 4) Repeat steps 2 and 3 for the other side.

END LINK INSTALLATION

- 1) Apply silicone lubricant (or a mild solution of soap and water) to a bushing from kit 860155. Press the bushing into a new Rancho end link 176088. See illustration 25.
- 2) Apply silicone lubricant to a sleeve from kit 860155. Press the sleeve into the previously installed bushing.

BRACKET INSTALLATION

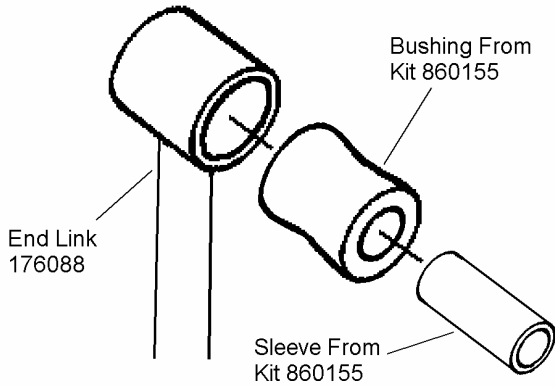


Illustration 25

- 3) Repeat steps 1 and 2 to install the rest of the bushings and sleeves.
- 4) Attach the new end links to the frame and sway bar with the hardware from kit 860155. See illustration 26. If necessary, enlarge the holes in the frame and sway bar to fit the 7/16" bolts. Do not tighten.

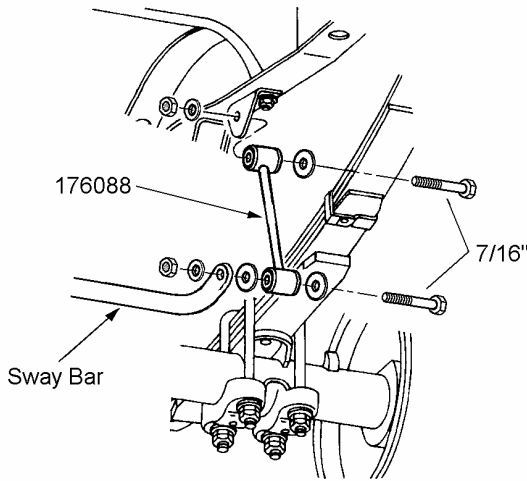


Illustration 26

- 5) Install new Rancho rear shocks.
- 6) Install rear wheels and lower vehicle to ground. Tighten lug nuts to 85--110 ft. lbs.
- 7) Tighten the U-bolt nuts to 110 ft. lbs.
- 8) Tighten the sway bar mounting bolts to 40 ft. lbs.

- 1) Chock the front wheels. Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 2) Separate the parking brake cable from the left side (driver side) frame rail.
- 3) Support the rear axle with a floor jack. Remove the rear shock absorbers.
- 4) Loosen the U-bolt nuts on the right side (passenger side) of the rear axle.
- 5) Remove the two bolts attaching the rear shackle to the leaf spring and the frame. Remove the shackle. See illustration 27.

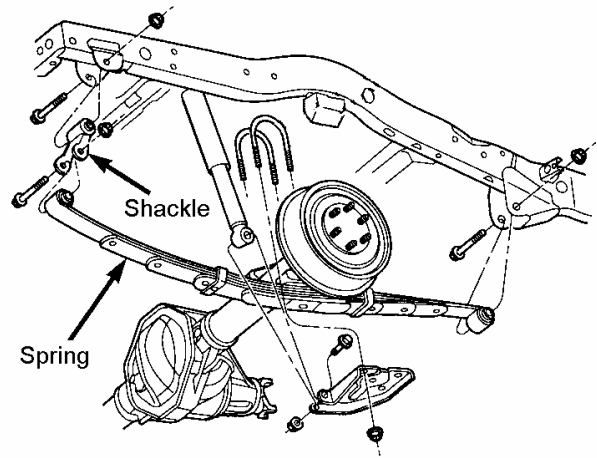


Illustration 27

- 6) Apply silicone lubricant and press two bushings and a 3 1/2" sleeve (from kit 860187) into shackle 176124.
- 7) Replace the OE shackle with the new shackle assembly. Loosely attach the shackle to the frame and leaf spring with the original hardware. See illustration 28.
- 8) Remove the bolt attaching the leaf spring to the front frame bracket. Move the spring out of the bracket (illustration 27).



Illustration 28

9) Attach forward bracket 176123 to the front frame bracket with the hardware and 3" sleeve from kit 860187. See illustration 29.

10) Insert the leaf spring into the forward bracket. Place a 9/16" washer (from kit 860187) on each side of the spring eye to compensate for the wider bracket. See illustration 29. Loosely attach the leaf spring to the forward bracket with the original hardware.



Illustration 29

11) Insert bump stop bracket 176125 under the U-bolts and on top of the axle. See illustration 30. Align the bracket so the top surface is parallel with the OE bump stop.

12) Cross-tighten the U-bolt nuts evenly to 90 ft. lbs.

13) Repeat steps 4 through 12 for the other side (driver side).

NOTE: On the driver side of the vehicle, the fuel tank prevents an easy removal of the front eye bolt. To

remove the front eye bolt, the U-bolts must be removed and the leaf spring tilted.



Illustration 30

14) Install new Rancho rear shock absorbers.

15) Reattach the parking brake cable to the left side frame rail.

16) Install rear wheels and lower vehicle to ground. Tighten lug nuts to 85–110 ft. lbs.

17) Tighten the leaf spring eye and shackle bolts to 85 ft. lbs.

FINAL CHECKS & ADJUSTMENTS

1) Jounce suspension and move vehicle to normalize ride height. Adjust torsion bars so that the front spindle to fender height is 24 inches. Refer back to illustration 1.

NOTE: The front spindle to fender measurement should be equal on both sides.

2) 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.

3) Readjust headlamps. Have vehicle aligned at a certified alignment facility.

General Alignment Specifications

Caster (degrees)	3 1/2°
Camber (degrees)	0°
Sum Toe In (degrees)	.10°

RANCHO INDUSTRIES USA LIMITED WARRANTY

ABOUT OUR WARRANTY

Rancho Industries USA, warrants the listed products for the listed time period and/or mileage to the original retail purchaser against defect and wear-out when used on passenger cars and light trucks under normal operating conditions. The warranty does not apply to Rancho products which have been improperly applied or installed. The consumer will be responsible for removing from the vehicle and returning any defective item(s), transportation costs prepaid, to the dealer from which it was purchased or a Rancho Authorized Installer, and for reinstallation of the part upon return. A copy of the sales receipt is required for all warranty adjustments. Rancho Industries will, without charge, repair or replace at its option, defective products or component part(s).

In the case that the customer is unable to return to the original place of purchase or an Authorized Installer, the consumer may contact Rancho Industries at 1-734-384-7804 to obtain a Return Authorization Number prior to shipping. The consumer will be responsible for removing from the vehicle and returning any defective item(s), transportation cost pre-paid, to the following address: 1 International Drive, Monroe MI. 48161. A copy of the sales receipt is required for any warranty adjustments. Rancho Industries will, without charge, repair or replace at its option, defective products or component part(s). Such item(s) will be returned with transportation costs prepaid within the United States from Rancho Industries. The customer will be responsible for reinstallation.

Exclusions from this warranty are sales outside of the United States, the finish, any condition(s) caused by abnormal use or service, and product-specific limitations, if any, listed below.

THE LOSS OF USE OF THE PRODUCT, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS OR CONSEQUENTIAL DAMAGES ARE NOT COVERED. RANCHO INDUSTRIES RESERVES THE RIGHT TO CHANGE THE DESIGN OF ANY PRODUCT WITHOUT ASSUMING ANY OBLIGATION TO MODIFY ANY PRODUCT PREVIOUSLY MANUFACTURED.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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THIS WARRANTY SHALL NOT APPLY TO ANY RANCHO PRODUCT WHICH HAS BEEN MODIFIED, CUSTOMIZED OR IMPROPERLY INSTALLED. WARRANTY DOES NOT APPLY TO ANY RANCHO COMPONENTS USED FOR RACING PURPOSES, OR RACE TYPE ACTIVITIES. WARRANTY DOES NOT APPLY TO ANY RANCHO INDUSTRIES RACING PRODUCTS.

The product, time periods and/or mileage under this warranty are as follows:

RS1000 / RS5000 / RS5600 / RS9000

LIMITED LIFETIME WARRANTY

Limited lifetime warranty on these Rancho shock absorbers. Rancho Industries warrants each new shock against factory defects in material and workmanship (except for finish, including the shock boot) for as long as the original retail purchaser owns the vehicle on which the units were originally installed.

AIR RANCHO / RC9000 REMOTE CONTROL

LIMITED 2 YEAR, 24,000 MILE WARRANTY

Limited 2 year, 24,000 mile warranty on these Rancho products. Rancho Industries warrants each new RS4000, Air Rancho shock and RC9000 Remote Control System against factory defects in material and workmanship (except for finish, including shock boot) for the first to occur of 2 years or 24,000 miles after the date of purchase.

SUSPENSION COMPONENTS LIMITED LIFETIME WARRANTY

Limited lifetime warranty on all of Rancho's suspension products. Rancho Industries warrants each new Suspension Component against factory defects in material and workmanship (except finish) for as long as the original retail purchaser owns the vehicle on which the products were originally installed.

POWERFLOW EXHAUST LIMITED LIFETIME WARRANTY

Limited lifetime warranty on all of Rancho's PowerFlow exhaust products. Rancho Industries warrants each of its exhaust products against factory defects in material and workmanship (except finish) for as long as the original retail purchaser owns the vehicle on which the products were originally installed. THIS LIMITED WARRANTY DOES NOT COVER THE FOLLOWING:

- Exhaust system parts that rust or are blown-out by faulty engine conditions
- Any component that has been modified, customized, or improperly installed
- Any part that is obsolete and is no longer available or supplied by Rancho

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Rancho Industries reserves the right to make changes in design, material and specifications or to make product changes as deemed necessary without prior notice. Obligations or liabilities will not be assumed with respect to similar products previously advertised.

WARRANTY DOES NOT APPLY TO ANY RANCHO COMPONENTS USED FOR RACING PURPOSES, OR RACING TYPE ACTIVITIES. WARRANTY DOES NOT APPLY TO ANY RANCHO INDUSTRIES RACING PRODUCTS.

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TEMPLATES

