

INSTALLATION INSTRUCTION



Suspension Systems **RS6556 & RS6557**



Hummer H2

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 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. Do not install a body lift kit with this suspension system or interchange Rancho components with parts from another manufacturer. Use the appropriate Rancho shock absorbers.

C. Do not powdercoat 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 2.

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: ☒

- ☐ Hummer H2 Service Manual
- ☐ Torsion Bar Unloading Tool J36202
- ☐ Universal Steering Linkage Puller J24319
- ☐ Ball Joint Separator J43631
- ☐ Prevailing Torque Nuts (for steering linkage & front wheel drive shaft)
- ☐ Welder
- ☐ Die Grinder
- ☐ Drill motor
- ☐ Assorted Drills: 1/8" through 1/2"
- ☐ 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
- ☐ Reciprocating Saw (to modify frame and differential)
- ☐ Hammer
- ☐ Wire Brush (to clean bracket mounting surfaces)
- ☐ Black Enamel Paint
- ☐ Silicone Spray Lubricant
- ☐ Tape Measure
- ☐ **Safety Glasses** (wear safety glasses at all times)

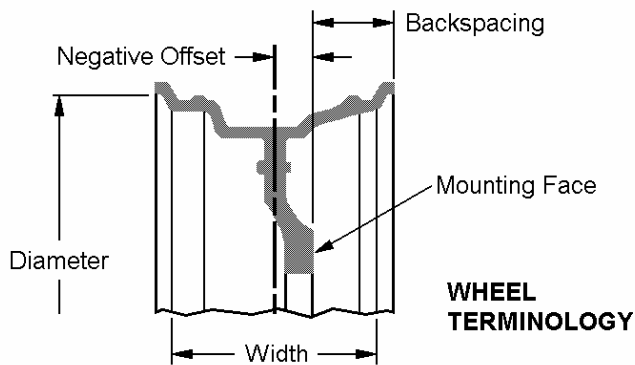
J. It is extremely important to replace torsion bars, CV flanges, and front drive shaft/pinion relationships as original. Be sure to mark left/right, front/rear, and indexing of mating parts before disassembly. A paint marker or light colored nail polish is handy for this.

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. Welding on a car 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.

M. The required installation time for this system is approximately 7 to 8 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. This suspension system was developed using the following tire & wheel combination: 37 x 12.5 x 17LT tire, 17 x 10 wheel with 5 inches of wheel backspacing. Before installing any other combination, consult your local tire and wheel specialist. Do not exceed 5 inches of wheel backspacing.



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. 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 & 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	165FT-LB	210 FT-LB
3/4	185 FT-LB	280 FT-LB	M18	170 FT-LB	240FT-LB	290 FT-LB
1/2-13x1.75 HHCS D T L X G = Grade Marking (bolt strength) D = Nominal Diameter (inches) T = Thread Pitch (threads per inch)			M12-1.25x50 HHCS D T L X P = Property Class (bolt strength) D = Nominal Diameter (millimeters) T = Thread Pitch (thread width, mm)			



RS6556



RS6557

PARTS LIST

<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
176138	Aft Brace Bracket	2	860416	Bump Stop Hardware Kit, Rear	1
176193	Rear Bump Stop Spacer	2		3/8-16x1.50 HHCS	4
176195	Rear Sway Bar End Link	2		3/8-16 Stover Nut	4
176214	Knuckle, Left	1		3/8 SAE Washer	8
176215	Knuckle, Right	1	860433	Subframe Hardware Kit	1
176219	Box Plate	1	420041	.75x.095x2.19 Sleeve	1
176220	Differential Support Bracket	1	520041	Bushing	2
176222	Subframe Aft Brace	2		5/8-18 x 4.5 HHCS	2
176226	Axle Spacer	2		5/8-18 x 5.5 HHCS	2
176270	Subframe	1		5/8-18 Stover Nut	4
176271	Torsion Bar Drop Bracket	2		5/8 SAE Washer	8
176272	R. Axle Tube Drop Bracket	1		Thread Lock	2
176274	Skid Plate Drop Bracket	1	860436	Axle Spacer Hardware Kit	1
176275	Track Bar Relocation Bracket	1		M10-1.50 x 60 HHCS	12
176276	Link Drop Bracket, Left Rear	1		Lock Washer	12
176277	Link Drop Bracket, Right Rear	1	860438	Brake Hose Bracket Hardware Kit	1
176279	Air Spring Spacer (6557 only)	2		M6-1.0 x 10 HHTS	2
176280	Spacer Retainer (6557 only)	2	860474	Aft Brace Hardware Kit	1
692	Coil Spring (6556 only)	2	420042	Sleeve	4
860179	Frnt. Differential Hardware Kit	1	520041	Bushing	8
	M10-1.50x60 HHCS	5		1/2-13 x 4.00 HHCS	4
	7/16-14 x 3.0 HHCS	1		1/2-13 x 1.00 HHCS	2
	7/16-14 Stover Nut	1		1/2-13 Stover Nut	4
	Washer	5		1/2 SAE Washer	10
	7/16 SAE Washer	2		Nut Bracket	2
860497	End Link Hardware Kit	1		Thread Lock	1
420044	.75x.156x9.5 Sleeve	2	860475	Torsion Bar Crossmember Hardware Kit	1
	3/8-16 x 14.0 HHCS	2	420043	Sleeve	2
	3/8-16 Nyloc Nut	2	552	Bushing	4
	Retainer	8		9/16-12 x 3.00 HHCS	2
	Cushion	8		9/16-12 Stover Nut	2
	3/8-16 Nut (not used)	4		9/16 SAE Washer	4
860412	End Link Hardware Kit, Rear	1		3/8-16 x 1.50 HHTS	4
	Sleeve	4	860476	Right Axle Tube Hardware Kit	1
	Bushing	4		M12-1.75 x 90 HHCS	1
	M12-1.75 x 70 HHCS	2		M12-1.75 Stover Nut	1
	M12-1.75 Nyloc Nut	2		M12 Washer	2
	SAE Washer	2	860477	Front Differential Hardware Kit	1
	USS Washer	2		M14-2.00 x 90 HHCS	1
860413	Brake Line Bracket Kit	1		M14-2.00 Stover Nut	1
170014	Brake Line Bracket	1		9/16 SAE Washer	2
	5/16-18x1.25 HHCS	1	860478	Skid Plate Hardware Kit	1
	5/16-18 Top lock Nut	1		M10-1.50 x 30 HHCS	3
	5/16 SAE Washer	2		M10 Washer	3
860414	Rear Drop Link Hardware	1		3/8-16 x 1.00 HHTS	2
	M14-2.00 x 90 HHCS	2	860479	Front Differential Bushing Kit	1
	M14-2.00 x 100 HHCS	2	520039-1	Upper Bushing, Front Differential	1
	M14-2.00 Top Lock Nut	4	520039-2	Lower Bushing, Front Differential	1
	SAE Washer	8	520039-3	Sleeve	1
	1/2-13x1.25 HHCS	2	860480	Air Spring Spacer Hardware Kit (6557 only)	1
	1/2-13 Stover Nut	2		M10-1.50 x 40 HHCS	2
	1/2 SAE Washer	4		M10 Washer	2
860415	Rear Track Bar Hardware Kit	1	860577	Sensor Link Kit (6557 only)	1
420052	Sleeve	1	176273	Rear Height Sensor Link, Short	2
	9/16-12x4.00 HHCS	1	176278	Rear Height Sensor Link, Long	2
	9/16-12 Stover Nut	1		Flexible End	4
	9/16 SAE Washer	2	94180	Information Pack	1
	7/16-14x1.25 HHCS	1	780281	Rancho Decal	1
	7/16-14 Stover Nut	1	88556	Installation Instruction	1
	7/16 SAE Washer	2	94119	Consumer Information	1
			94177	Warning Sticker	1

FRONT SUSPENSION

VEHICLE PREPARATION & TORSION BAR 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 #1.

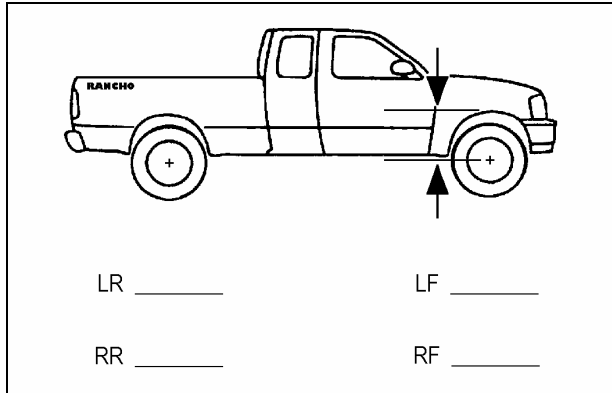


Illustration #1

- 2) ☐ Raise the front of the vehicle and support the frame with jackstands. Remove the front wheels and set them aside.
- 3) ☐ Remove the front skid plate and transmission cage.
- 4) ☐ Mark the torsion bars left and right. Make alignment marks on the torsion bars, the lower control arms, and the adjustment arms.
- 5) ☐ Install the GM torsion bar unloading tool (J 36202) and increase the tension on the torsion bar. Remove the adjusting bolt and nut. Relieve the tension on the torsion bar and remove the tool.
- 6) ☐ Slide the torsion bar forward and remove the adjustment arm. See illustration #2.

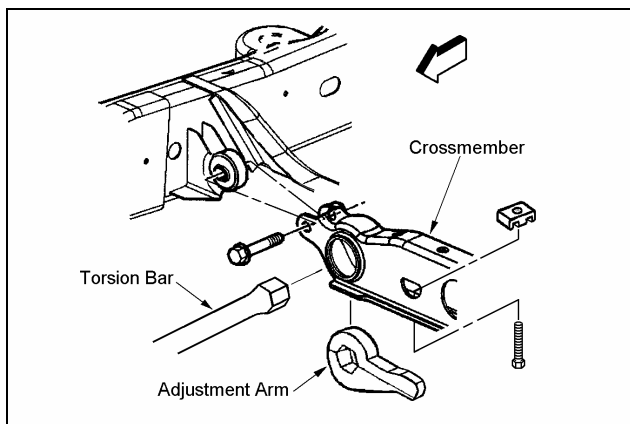


Illustration #2

- 6) ☐ Repeat steps 4 and 5 for the other side.
- 7) ☐ Remove the 2 bolts holding the torsion bar crossmember to the frame rail brackets. See illustration #2. Remove the crossmember.
- 8) ☐ Remove the torsion bars from the lower control arms.

SHOCK ABSORBER & END LINK REMOVAL

- 1) ☐ Remove the front shock absorbers. Remove the front bump stops.
- 2) ☐ Remove the sway bar end links. See illustration #3.

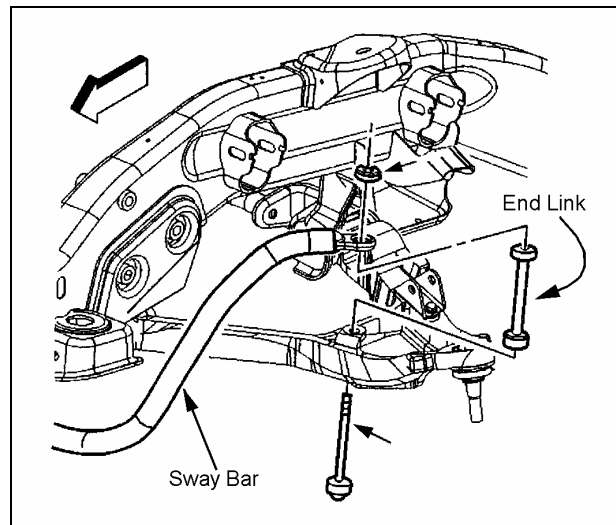


Illustration #3

STEERING KNUCKLE, HALF-SHAFT & LOWER CONTROL ARM REMOVAL

- 1) ☐ Loosen the brake hose bracket from the brake hose (top of steering knuckle) by prying the bracket open with pliers. Remove the brake hose brackets from the steering knuckle and upper control arm.
- 2) ☐ Remove the brake caliper and its mounting bracket as an assembly. Hang the caliper assembly with wire or a tie wrap.
- 3) ☐ Label the brake rotor left or right. Remove the brake rotor. Remove the axle hub nut and washer.
- 4) ☐ Remove the prevailing torque nut from the outer tie rod stud. Disconnect the tie rod end from the steering knuckle with a universal puller.

5) ☐ If applicable, disconnect the ABS connector and separate the cable from the upper control arm and the steering knuckle.

6) ☐ Remove the nuts at the upper and lower ball joints. Disconnect the ball joints from the steering knuckle using separating tool J43631. Remove the steering knuckle and hub assembly.

7) ☐ Remove the hub and bearing assembly mounting bolts. See illustration #4. Remove the hub and bearing assembly. Remove the splash shield and carefully remove the o-ring.

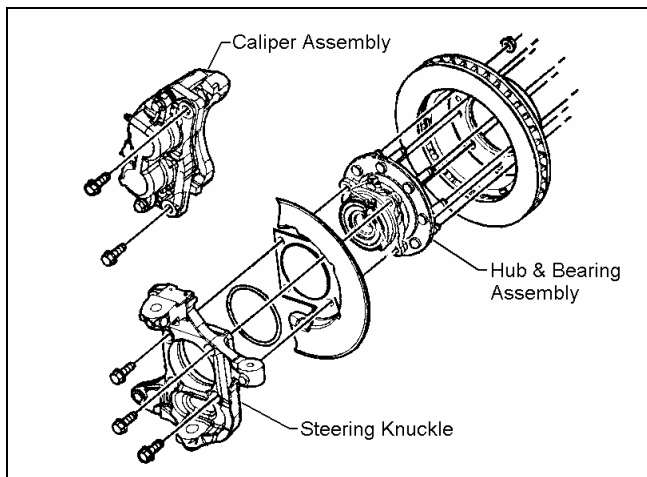


Illustration #4

8) ☐ Mark the differential output flange and the axle flange for installation reference.

9) ☐ Remove the six bolts from the inboard flange. See illustration #5.

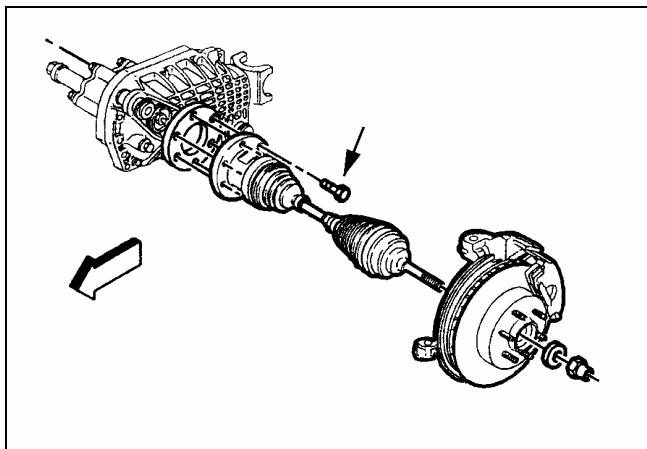


Illustration #5

10) ☐ Remove the lower control arm pivot bolts. See illustration #6. Remove the lower control arm.

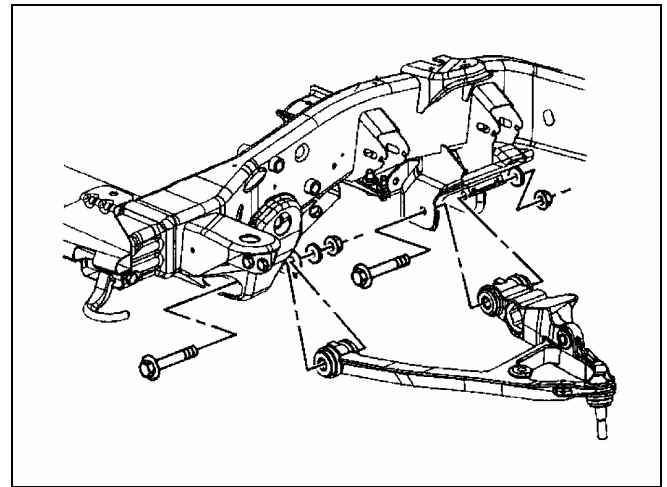


Illustration #6

11) ☐ Repeat steps 1 through 10 for the other side.

FRONT DIFFERENTIAL REMOVAL

1) ☐ Remove the five bolts that attach the rear crossmember to the differential and frame. See illustration #7. Remove the crossmember.

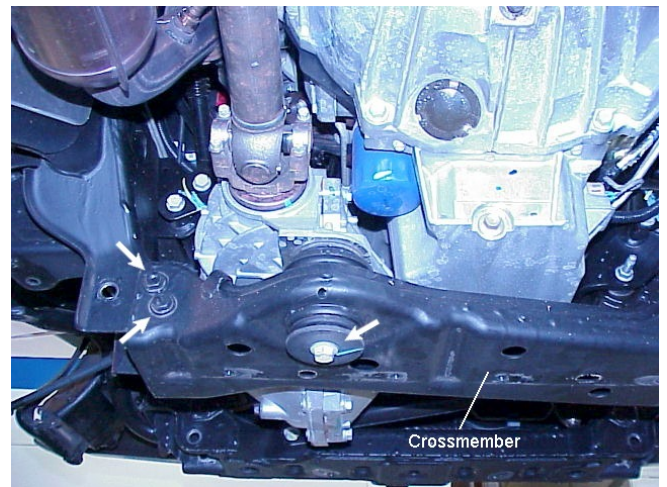


Illustration #7

2) ☐ Reference mark the front drive shaft U-joint to the differential yoke. Remove the bolts and retainers from the yoke and slide the shaft rearward to disengage. Tape the bearing cap assemblies and secure the shaft out of the way.

3) ☐ Disconnect the vent hose from the differential assembly.

4) ☐ Support the front differential assembly with a floor jack. Remove the right axle tube bolt and the differential upper mounting bolt.

5) ☐ Remove the differential assembly from the vehicle.

6) ☐ Cut off the driver side crossmember/control arm bracket at the location shown in illustration #8. The cut-off location should be just outside the bracket sleeves.

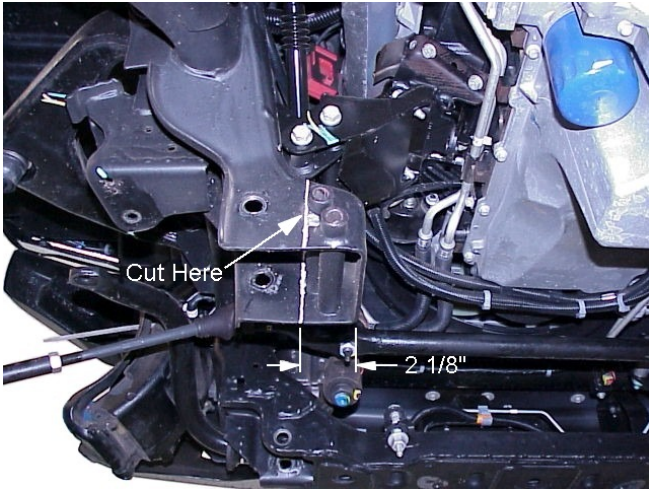


Illustration #8

7) ☐ Disconnect the battery. See important note “L”.

8) ☐ Weld box plate 176219 to inside of lower control arm frame bracket as shown in illustration #9.

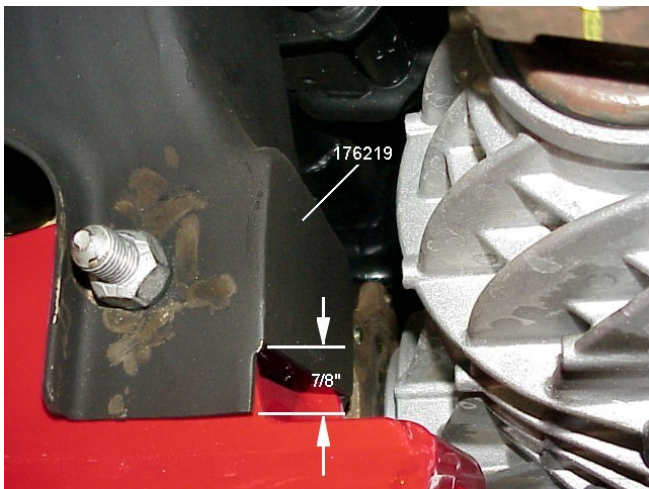


Illustration #9

NOTE: Box plate 176219 does not have a protective coating and may develop surface rust. Remove rust before welding plate to lower control arm frame bracket. After installation, coat the plate and bracket with enamel paint or undercoating.

FRONT DIFFERENTIAL & SUBFRAME INSTALLATION

1) ☐ To keep chips from falling into the differential, install a plugged hose on the vent fitting. See illustration #10. Carefully cut off the upper mount from the front differential as shown.

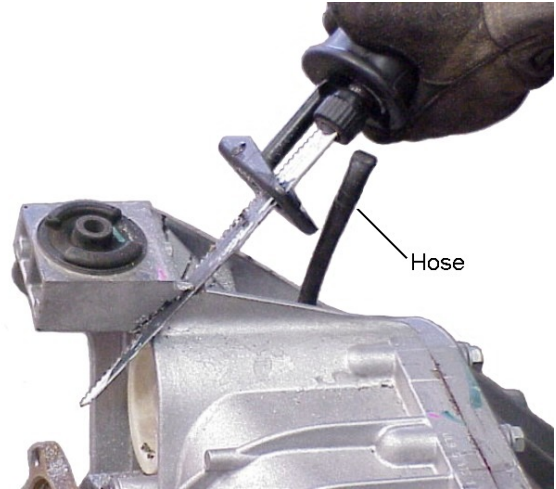


Illustration #10

2) ☐ Cut and file additional material until the top of the differential looks like illustration #11.

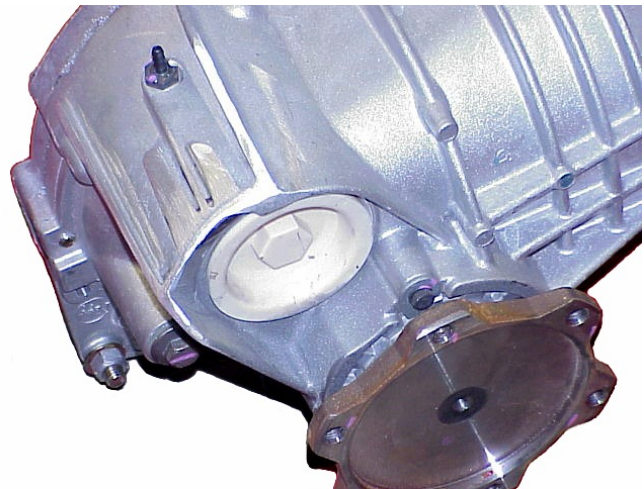


Illustration #11

3) ☐ Install two bushings (520041) into differential support bracket 176220. Apply silicon lubricant and press sleeve 420041 through the installed bushings. See illustration #12.

4) ☐ Remove the 5 case bolts from the front of the differential.

NOTE: After removing the bolts, oil may seep from the case. To avoid excessive oil seepage, do not stop installation at this point.

5) Attach bracket assembly 176220 to the front differential with the hardware from kit 860179. Refer to illustration #12. Tighten the bolts to 35 ft lbs.

6) Loosely attach bracket assembly 176220 to subframe 176270 with the hardware from kit 860477. See illustration 13.

7) Insert top bushing 520039-1 and OE washer between differential and subframe. Place lower bushing 520039-2 under subframe. See illustration #13.

8) Insert sleeve 520039-3 into bushings. Loosely attach the rear of the differential assembly to the subframe with the original hardware.

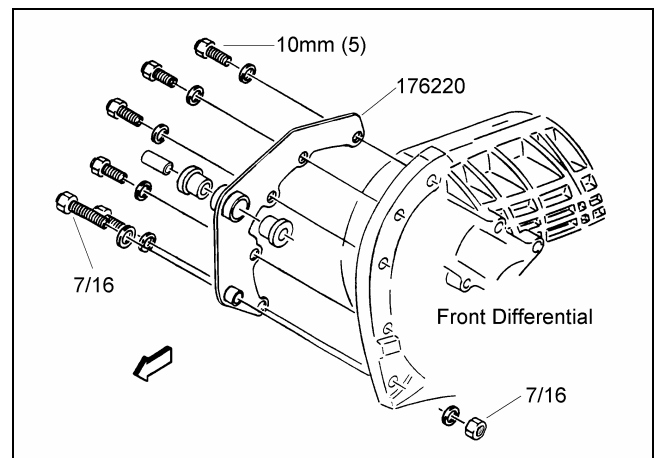


Illustration #12

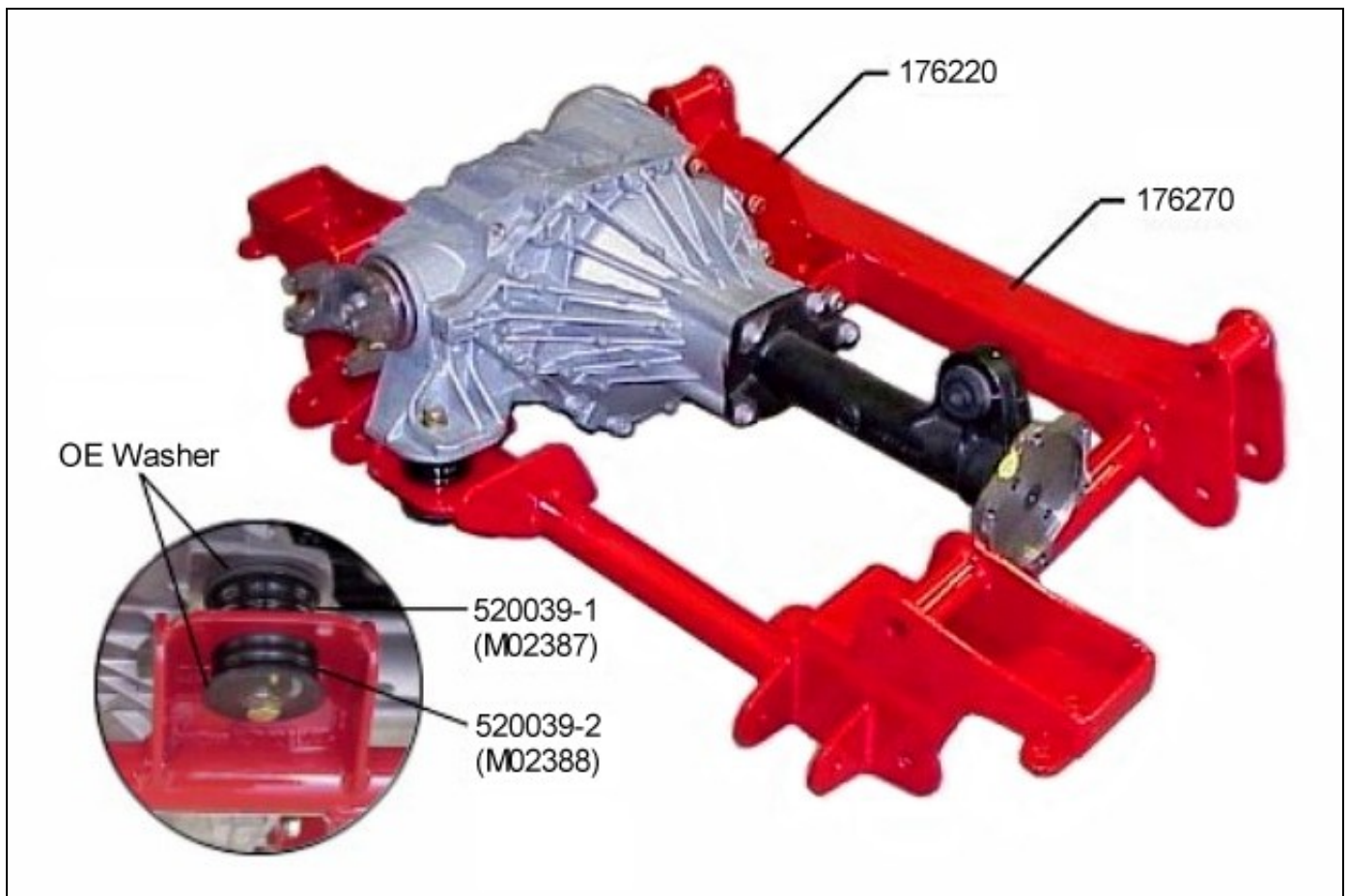


Illustration #13

9) □ With the help of an assistant, carefully raise the subframe up into the lower control arm frame brackets. Attach the subframe to the brackets with the original hardware. Tighten the subframe to bracket bolts to 107 ft. lbs.

10) □ Attach the right axle tube bracket 176272 to the frame bracket with the original hardware and to the axle tube with the hardware from kit 860476. See illustration #14. Tighten all differential mounting bolts securely.

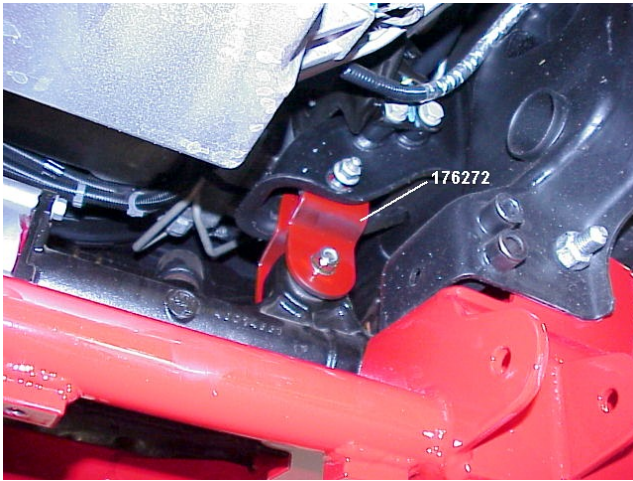


Illustration #14

CAUTION: Verify that the grease fitting on the relay rod does not contact the left side of the differential. See illustration #16. If necessary, remove additional material from the differential case.

- 5) ☐ Align marks and reconnect the front drive shaft to the differential. If applicable, reconnect the vent hose and electrical connector.

STEERING KNUCKLE & HALFSHAFT INSTALLATION

- 1) ☐ Loosely attach the left lower control arm to the subframe with the 5/8" hardware from kit 860433.
- 2) ☐ Connect left steering knuckle 176214 to the lower and upper control arm ball joints. Tighten the nut on the lower ball joint stud to 74 ft. lbs., and the nut on the upper ball joint stud to 37 ft. lbs.
- 3) ☐ Lubricate the original o-ring with wheel bearing grease. Install the o-ring and splash shield. See illustration #15. Be sure to align the ABS cable between the splash shield and steering knuckle.

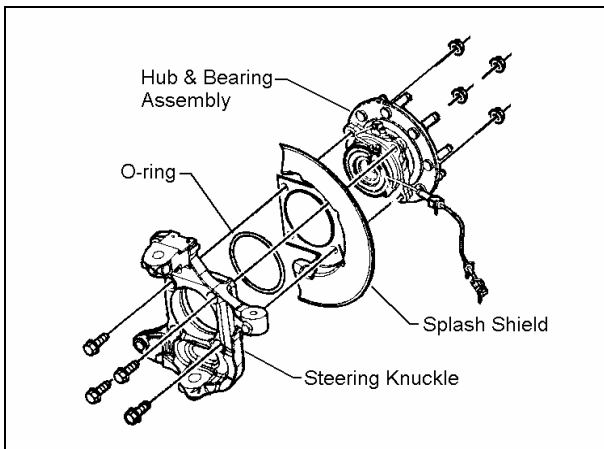


Illustration #15

NOTE: Replace o-ring if worn or damaged.

- 4) ☐ Apply thread lock to original bolts and attach the hub and bearing assembly to the left steering knuckle. Refer to illustration #15. Tighten the mounting bolts to 133 ft. lbs.
- 5) ☐ Loosen the tie rod end jam nut and thread the tie rod end inward 2.5 complete turns. Retighten the jam nut and attach the tie rod end to the new knuckle. Tighten the new prevailing torque nut to 33 ft. lbs.
- 6) ☐ Insert the wheel drive shaft (halfshaft) into the knuckle hub. Install the shaft washer and a new hub nut.

NOTE: Do not lubricate the wheel drive shaft splines or the knuckle hub with grease.

- 7) ☐ Place axle spacer 176226 against the differential flange. Place the axle flange against the spacer and align the flange marks. Attach the axle to the differential with the hardware from kit 860436. See illustration #16. Tighten the flange bolts to 58 ft. lbs.

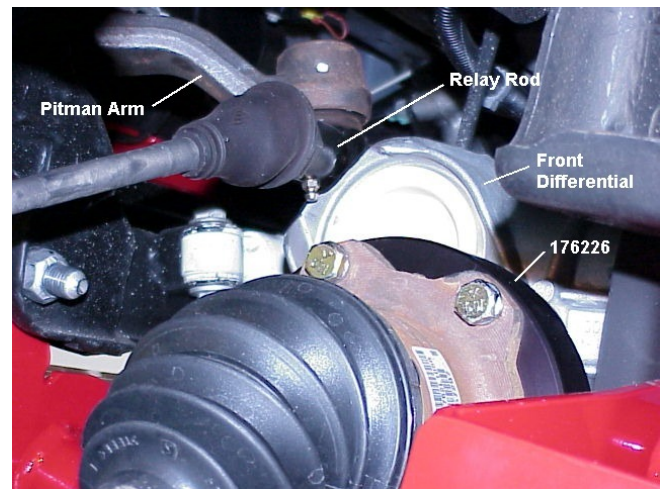


Illustration #16

- 8) ☐ Install the brake rotor. Reattach the front caliper with the original mounting bolts. Be sure to clean the bolt threads and apply thread lock. Tighten the caliper mounting bolts to 129 ft. lbs.
- 9) ☐ Place a drift or large screwdriver through the caliper to prevent the drive axle from turning. See illustration #17.

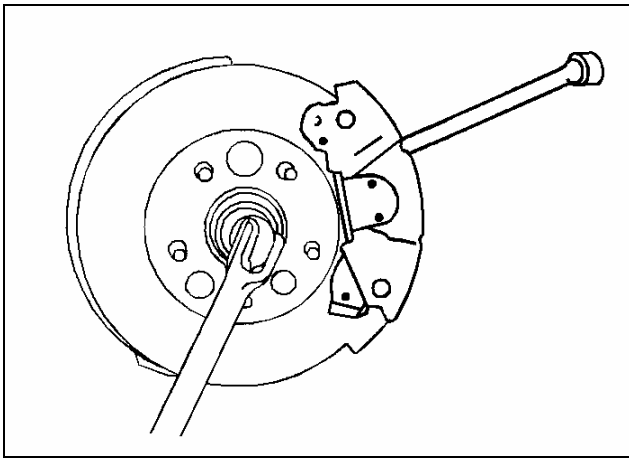


Illustration #17

10) ☐ Tighten the axle hub nut to 155 ft. lbs. Remove the drift from the rotor.

11) ☐ Adjust the brake hose clamp and place it over the two mounting holes on the back of the steering knuckle. See illustration #18. Insert the tab into one hole and install the new self-tapping screw from hardware kit 860438 into the other.

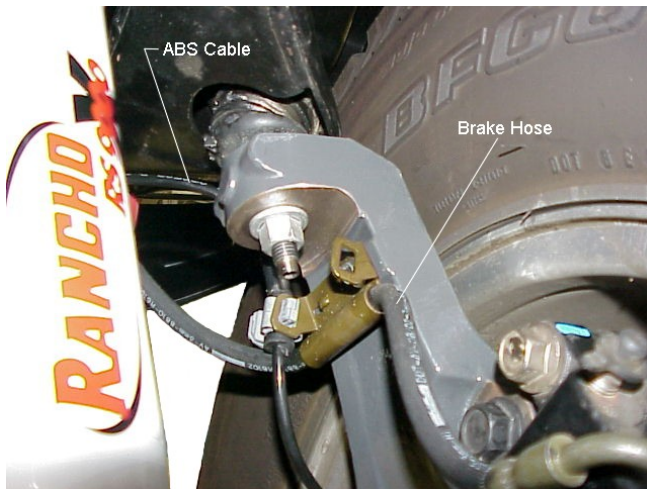


Illustration #18

12) ☐ If applicable, reconnect the ABS cable. Attach the ABS cable to the knuckle and upper control arm as shown in illustrations #18 and #19.

13) ☐ Repeat steps 1 through 12 for the other side.

14) ☐ Attach the sway bar to the lower control arm with the new end link assemblies (from kit 860497). See illustration #19. Insert the 3/8" x 14" bolt from the top and use the supplied nyloc nut only.

15) ☐ Install new Rancho shock absorbers.

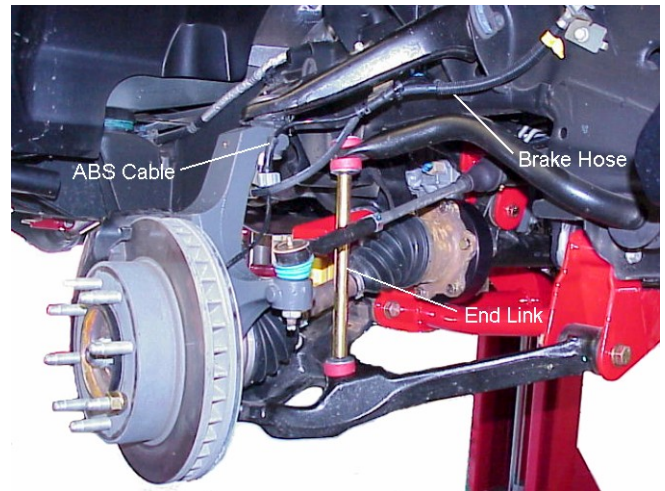


Illustration #19

TORSION BAR & DROP BRACKET INSTALLATION

1) ☐ Insert two bushings and a sleeve from kit 860475 into each torsion bar drop bracket (176271).

2) ☐ Loosely attach the drop brackets to the torsion bar crossmember with the 9/16" hardware from kit 860475. Attach the crossmember assembly to the frame brackets with the original hardware. See illustration #20.

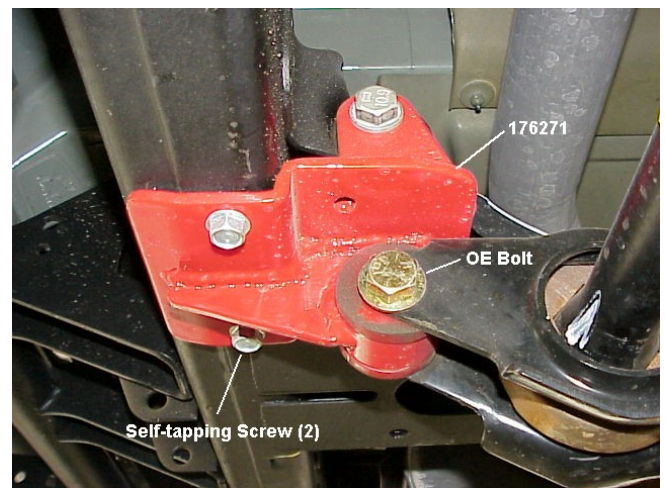


Illustration #20

3) ☐ Mark and center punch the 2 holes on the bottom of each frame rail. Drill a 11/32" hole at each of the marked locations. Insert the 3/8" self-tapping screws from kit 860475. Tighten the screws to 20 ft. lbs.

4) ☐ Align marks and insert the left and right torsion bars into their respective lower control arms. Carefully slide the bars forward. **Do not allow the torsion bars to contact the front axle boots.**

5) ☐ Slide a torsion bar rearward through the crossmember while holding the adjustment arm in proper position. Verify that the reference mark on the adjustment arm matches the mark on the end of the torsion bar.

6) ☐ Install the torsion bar unloading tool and increase the tension on the torsion bar.

7) ☐ Reinstall the retaining plate and adjusting bolt. Thread the adjusting bolt in until 1.5 inches of threads are exposed below the retaining plate. Remove the unloading tool.

8) ☐ Repeat steps 5 through 7 for other side.

SKID PLATE INSTALLATION (OEM)

1) ☐ Attach drop bracket 176274 to the front crossmember with the hardware from kit 860478.

2) ☐ Temporarily attach the OE skid plate to drop bracket 176274 with the original skid plate bolts. See illustration # 21.



Illustration #21

3) ☐ Lift the skid plate up until it contacts the front pockets of the Rancho subframe. Mark the two contact points on the skid plate. Remove skid plate.

4) ☐ Cut and file skid plate at the marked locations. See illustration #22. Reattach the skid plate to drop bracket 176274.

5) ☐ Flatten the outside tubes on the front of the transmission cage. See illustration #23.

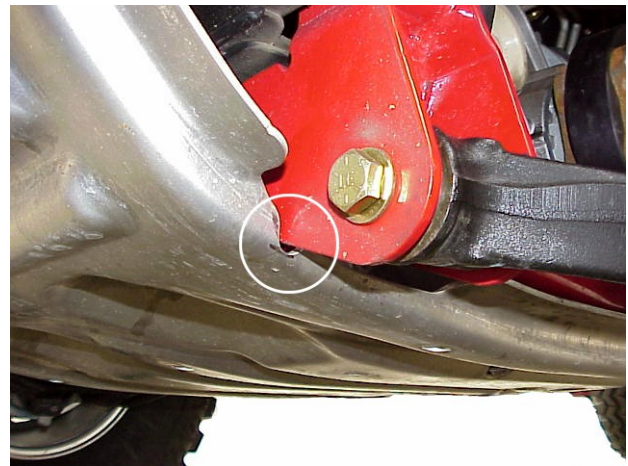


Illustration #22

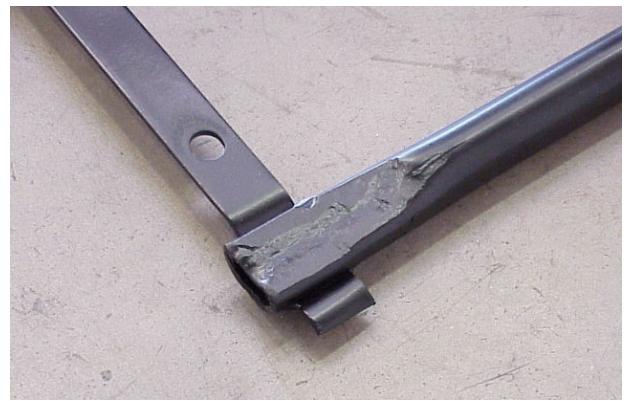


Illustration #23

6) ☐ Insert the cage between the skid plate and the subframe. Attach the cage and skid plate to the subframe with the original bolts. Reattach the cage to the transmission crossmember.

7) ☐ Using the skid plate as a template, drill two 5/16" holes into the front crossmember of the Rancho subframe. Install the self-tapping screws from hardware kit 860478. See illustration #24.



Illustration #24

AFT BRACE ASSEMBLY & INSTALLATION

- 1) ☐ Lubricate two bushings (520041) and one sleeve (420042), from kit 860474, with a silicone spray. Press the bushings and sleeve into aft brace 176222 as shown in illustration 26.
- 2) ☐ Repeat step 1 to install the rest of the bushings and sleeves.
- 3) ☐ Using the hardware from kit 860474, loosely attach the angled end of each aft brace to the rear of the subframe (176218).

NOTE: The angled end of the aft brace should direct the aft brace slightly outward.

- 4) ☐ Attach aft brace brackets (176138) to aft braces. See figure #25.
- 5) ☐ Rotate aft brace assemblies up and secure the brackets to the transmission crossmember with c-clamps. Remove the aft braces and mark the mounting hole locations on the bottom of the crossmember.
- 6) ☐ Remove the brackets and drill a 1/2" hole through the bottom of the crossmember at each location.
- 7) ☐ Repeat the previous two steps for the other side.

8) ☐ Attach the aft brace brackets to the transmission crossmember with the hardware from kit 860474. See illustration #26.

9) ☐ Tighten the aft brace and bracket mounting bolts to 65 ft. lbs.

10) ☐ Install front wheels and lower vehicle to ground. Tighten the lug nuts to 140 ft. lbs.

11) ☐ Tighten the lower control arm pivot bolts to 107 ft. lbs.

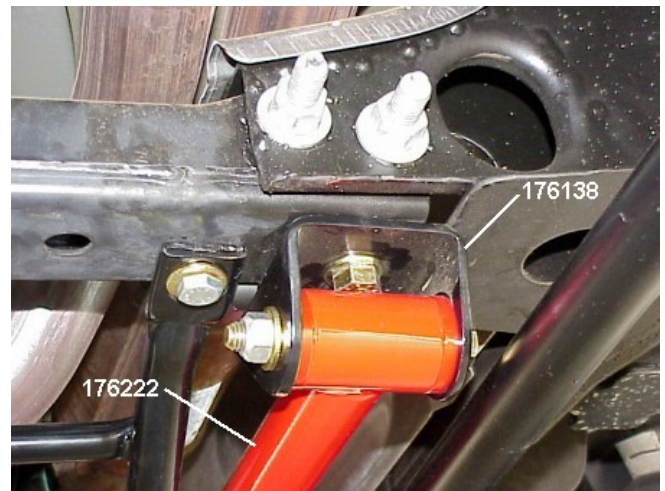


Illustration #25

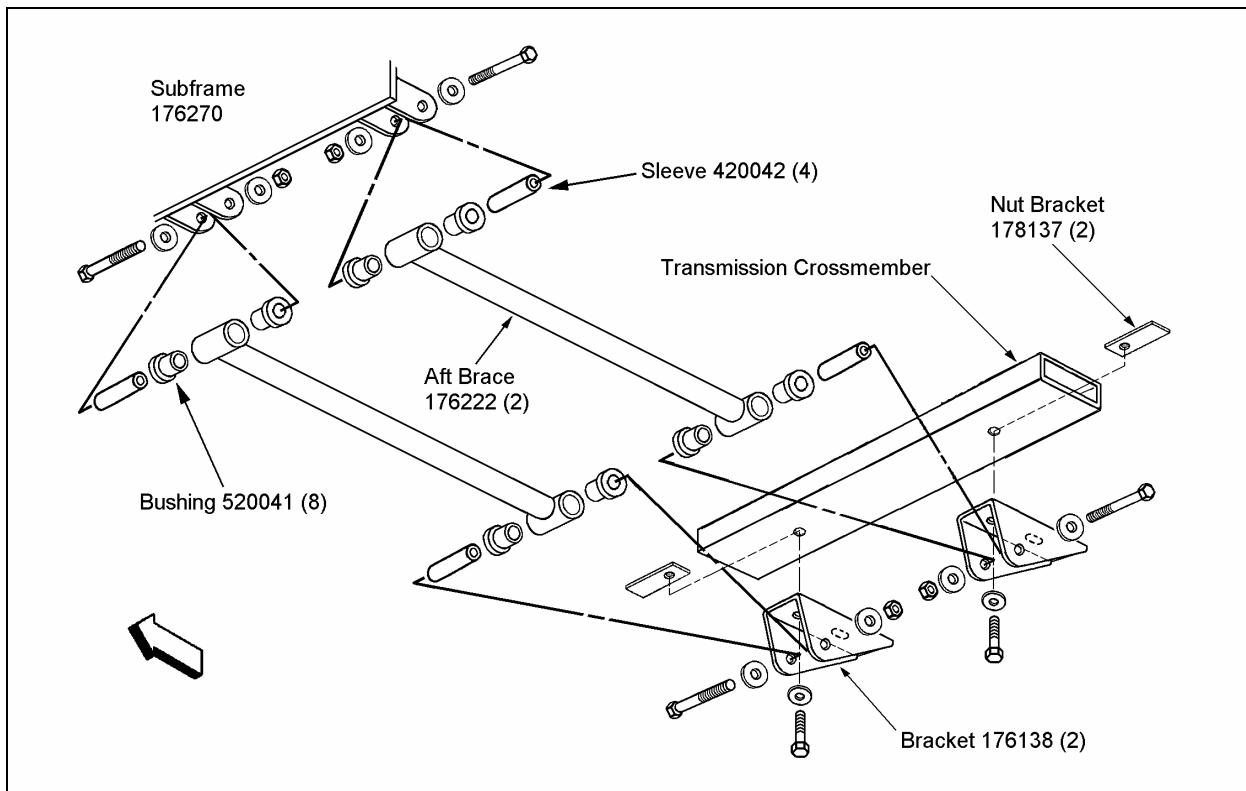


Illustration #26

REAR SUSPENSION

END LINK, SHOCK ABSORBER, & SPRING REMOVAL

- 1) ☐ Chock front wheels. Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 2) ☐ For vehicles equipped with air springs, disconnect the battery.
- 3) ☐ Support the rear axle assembly with a floor jack.
- 4) ☐ Remove the end link nut and bolt from the frame bracket. Remove the end link nut from the ball stud. See illustration #27.

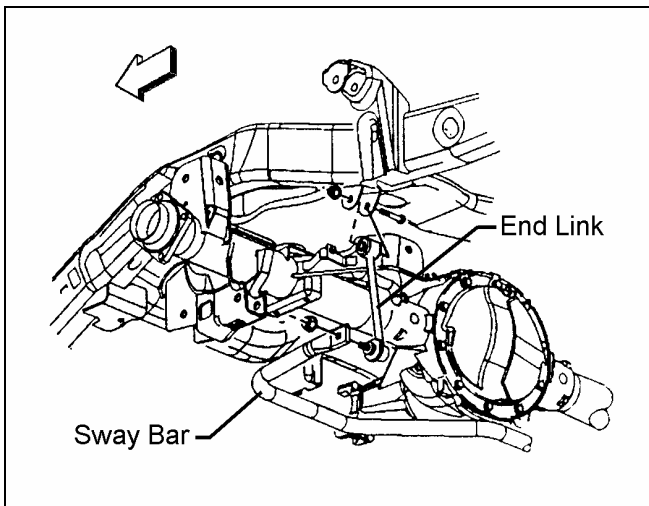


Illustration #27

- 5) ☐ Remove the end link.
- 6) ☐ Repeat steps 4 and 5 for the other side.
- 7) ☐ Remove the upper shock absorber nut and bolt. Remove the lower shock absorber nut and bolt. See illustration #28. Remove the shock absorber.
- 8) ☐ Repeat step 7 for the other side.
- 9) ☐ Remove the nut and bolt holding the track bar to the rear axle.
- 10) ☐ Remove the bracket holding the brake line junction block to the rear differential. Remove the bracket that attaches the brake line to the differential. Carefully lower the rear axle.

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

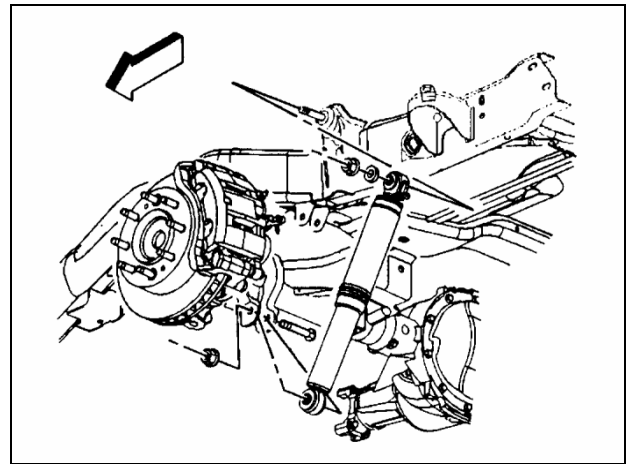


Illustration #28

- 11) ☐ For kit 6556, remove the coil springs and insulators. See illustration #29.

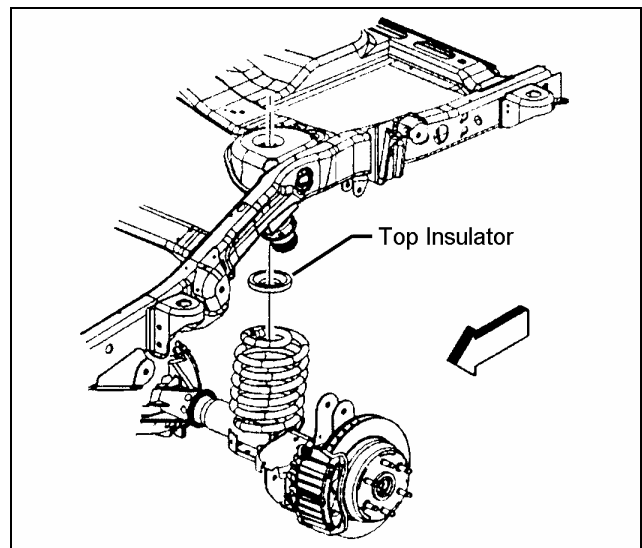


Illustration #29

- 12) ☐ For kit 6557, disconnect the airline from the top of each airbag by simultaneously pushing down on the fitting and pulling up on the hose. See illustration #30. Rotate and remove the air spring assembly.



Illustration #30

LINK DROP BRACKET & BUMP STOP SPACER INSTALLATION

- 1) ☐ Remove the gas tank skid plate to gain access to the driver side lower link frame bolt.
- 2) ☐ For kit 6557, spray the ends of the airbag sensor links with a silicone lubricant. See illustration #31. Using a separator tool, carefully remove the links.

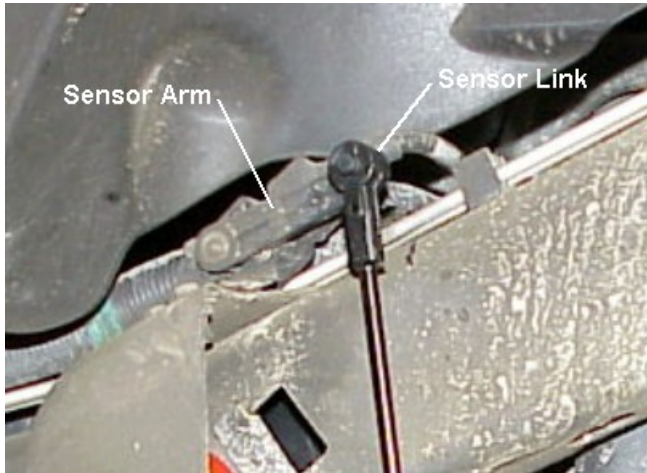


Illustration #31

CAUTION: The plastic sensor arm is easily breakable. Secure the arm and remove the link slowly.

- 3) ☐ Separate the parking brake cable at the cable connector on the driver side. See illustration #32.

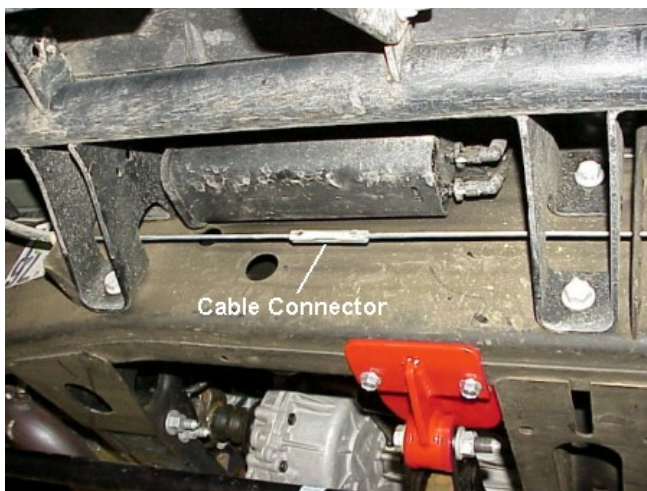


Illustration #32

- 4) ☐ Disconnect the brake cable from the frame and axle.
- 5) ☐ Remove the nuts and bolts attaching the upper and lower links to the driver side frame. See illustration #33. Do not detach the links from the passenger side.

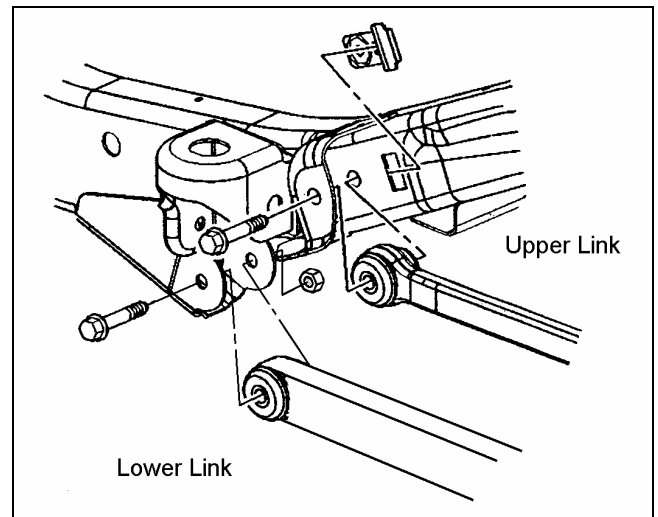


Illustration #33

- 6) ☐ Loosen the bolt attaching the lower link to the axle bracket. Allow the lower link to hang downward.
- 7) ☐ Insert left link drop bracket 176276 into the frame brackets. Attach the bracket to the frame with the original bolts. See illustration #34.

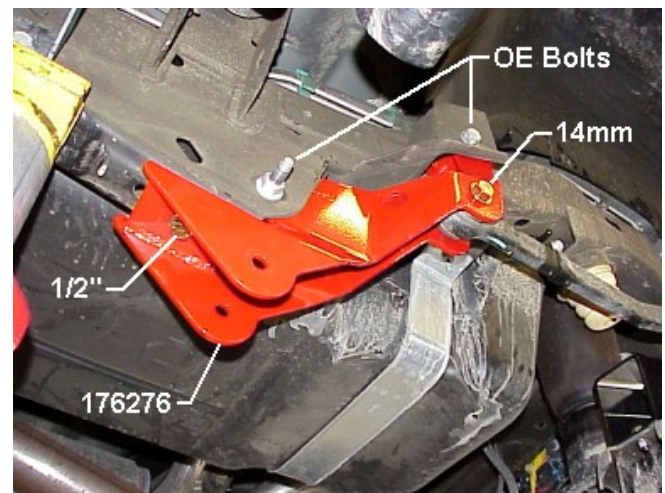


Illustration #34

- 8) ☐ Drill a 1/2" hole through the bottom of the lower frame bracket. Install the 1/2" hardware from kit 860414.
- 9) ☐ Tighten the 1/2" nut and bolt to 65 ft. lbs. and the original bolts to 80 ft. lbs.
- 10) ☐ Loosely attach the upper link to drop bracket 176276 with the 14mm hardware from kit 860414.

NOTE: Do not attach the lower link or brake cables at this time. Do not tighten the link pivot bolts until the vehicle is at normal ride height.

11) ☐ Place bump stop spacer 176193 on top of the lower link axle bracket. See illustration #35. Align the rear hole in the new bracket with the existing hole. Mark the additional mounting hole location.

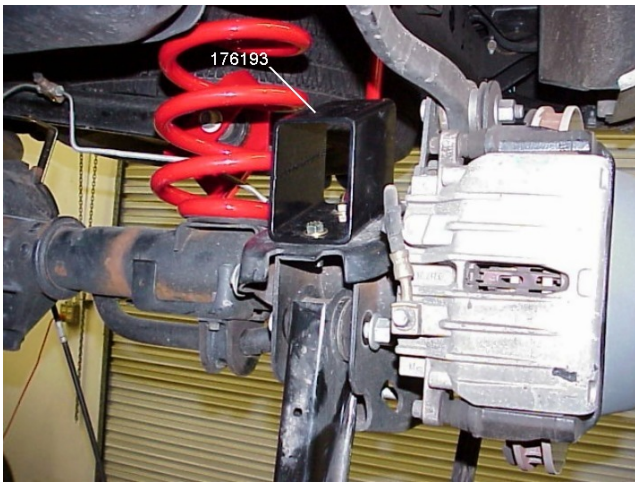


Illustration #35

12) ☐ Remove the spacer and drill a 3/8" hole at the marked location.

13) ☐ Attach bump stop spacer 176193 to the axle bracket with the 3/8" hardware from kit 860416.

14) ☐ Loosely attach the lower link to drop bracket 176276 with the 14mm hardware from kit 860414.

15) ☐ Repeat applicable steps to install drop bracket 176277 and bump stop spacer 176193 on the passenger side.

AIR OR COIL SPRING INSTALLATION

1) ☐ For kit 6557, insert retainer 176280 and the hardware from kit 860480 into spring spacer 176279. See illustration #36.

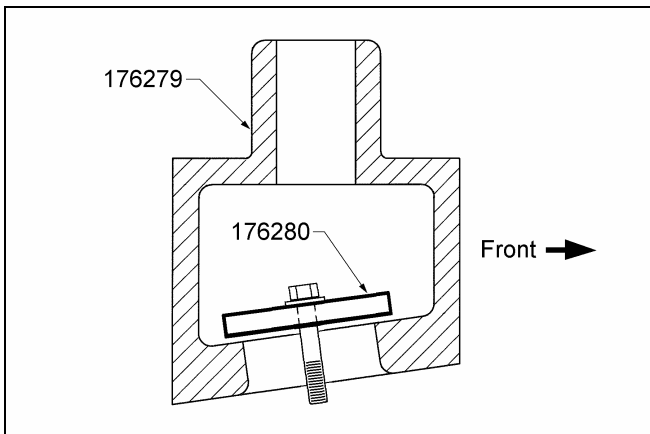


Illustration #36

2) ☐ For kit 6557, remove the plastic air spring adapter from the axle pad. Apply thread lock to bolt and place spacer assembly on the axle pad. Rotate spacer to angle forward.

3) ☐ Using a swivel and socket extension, attach spacer 176279 to the axle. See illustration #37. Tighten the bolt to 45 ft. lbs. Repeat for other side.

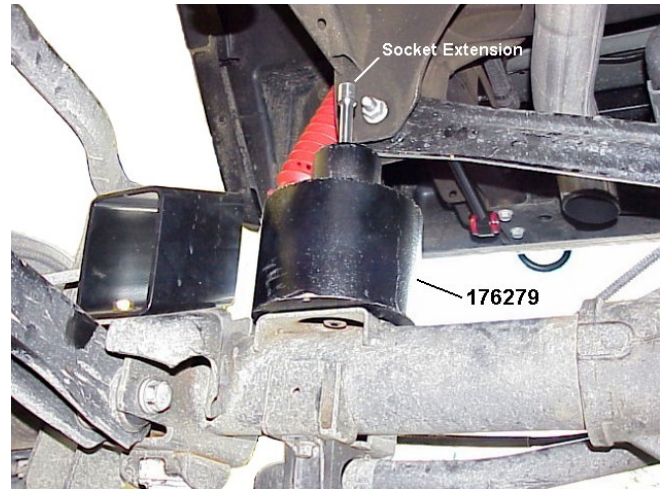


Illustration #37

4) ☐ For kit 6557, compress the airbag by rolling it over the bottom canister evenly. Place air spring assembly on spacer 176279. Align tabs and rotate spring until top snaps in place.

5) ☐ For kit 6557, reinstall airlines on airbag fittings. Push down until the line bottoms.

6) ☐ For kit 6556, place new coil springs (692) with original insulators on the rear axle. Raise the axle and guide the springs into the frame pockets.

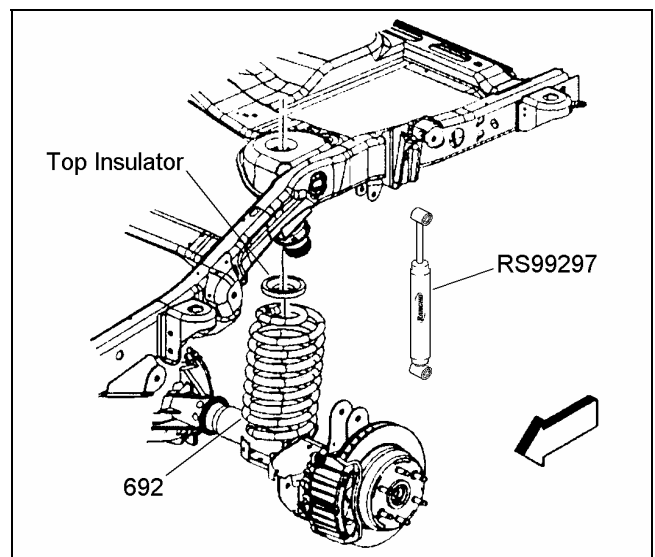


Illustration #38

- 7) ☐ Attach new Rancho shock absorbers to the upper and lower mounts.
- 8) ☐ Insert brake cables through drop bracket 176276 as shown in illustration #39. Reattach the cables to the axle, frame and connector.

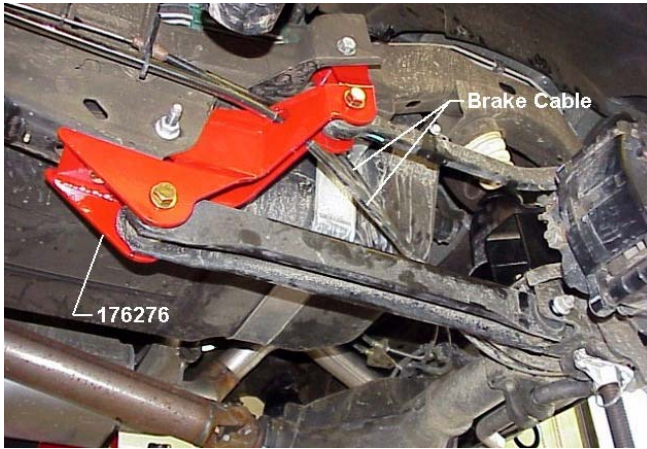


Illustration #39

SENSOR LINK ASSEMBLY & INSTALLATION (FOR KIT 6557)

- 1) ☐ Measure and record the length of the original sensor link from center of hole to center of hole. See illustration #40.

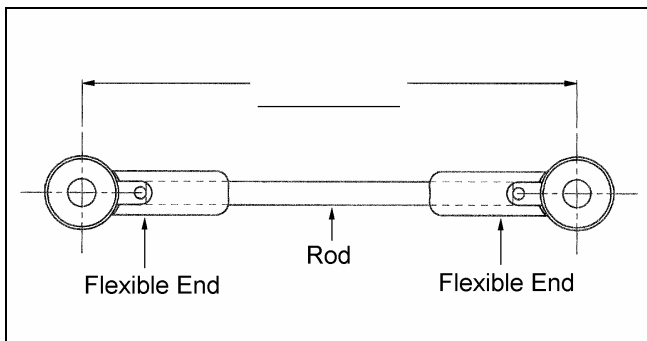


Illustration #40

- 2) ☐ If the length of the original sensor link is 4.6 inches, install the flexible ends (from kit 860577) on the shorter rods.

NOTE: The flexible ends may be installed on the longer rods. Remove if necessary.

- 3) ☐ If the length of the original sensor link is 5.3 inches, install the flexible ends on the longer rods.
- 4) ☐ Apply silicone lubricant and **carefully** attach the new sensor links to the upper control arm brackets and sensor arms. Refer back to illustration #31.

BRAKE LINE BRACKET INSTALLATION

- 5) ☐ Attach the new brake line bracket 170014 to the rear differential with the original bracket bolt. See illustration #41.

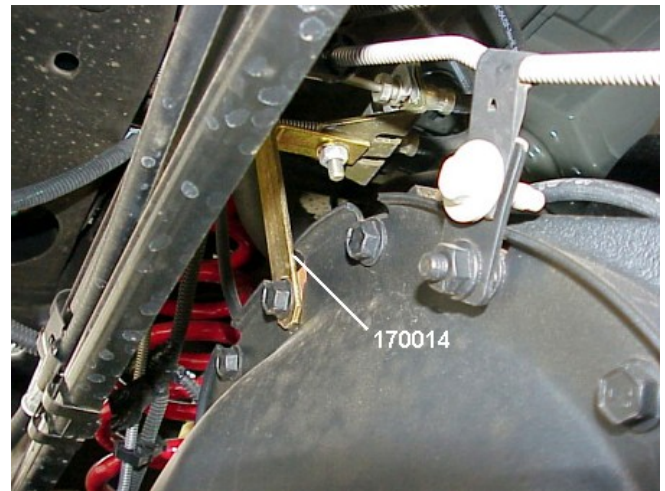


Illustration #41

- 6) ☐ Carefully reshape the brake line and attach the junction block to the top of bracket 170014. Use the 5/16" hardware from kit 860413.

- 7) ☐ Reattach the other brake line bracket to the differential.

TRACK BAR BRACKET INSTALLATION

- 1) ☐ Attach track bar bracket 176275 to the track bar with the original hardware. Insert sleeve 420052 and attach the new track bar bracket to the original bracket as shown in illustration #42. Use the 9/16" hardware from kit 860415.

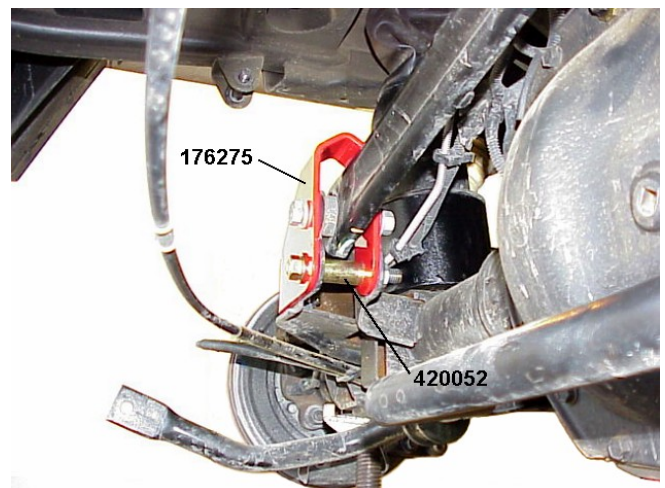


Illustration #42

- 2) ☐ Drill a 7/16" hole through the axle bracket at the location shown in illustration #43. Install the additional 7/16" hardware from kit 860415.

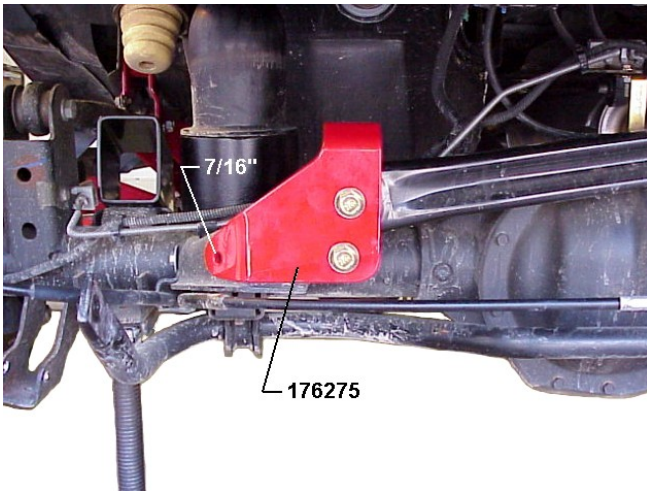


Illustration #43

- 3) ☐ Tighten the 9/16" bolt to 77 ft. lbs. and the 7/16" bolt to 45 ft. lbs. Do not tighten the original track bar bolt until the vehicle is at normal ride height.

SWAY BAR END LINK ASSEMBLY & INSTALLATION

- 1) ☐ Apply silicone lubricant and press the bushing from kit 860412 into sway bar end link 176195. See illustration #44. Apply silicone lubricant and press the sleeve into the installed bushing.

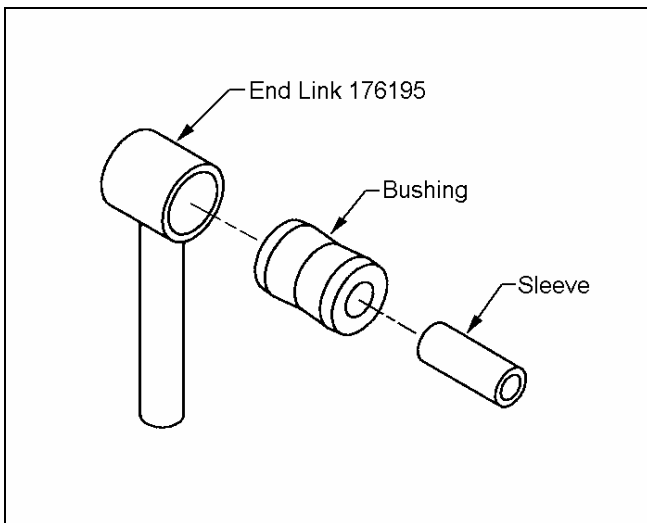


Illustration #44

- 2) ☐ Attach the end link assembly to the frame bracket with the original bolt. Attach the sway bar to the end link with the 12mm hardware from kit 860412. See illustration #45.



Illustration #45

- 3) ☐ Repeat step 3 for the other side. Do not tighten the end link bolts until the vehicle is at normal ride height.
- 4) ☐ Install rear wheels and lower vehicle to ground. Tighten lug nuts to 140 ft. lbs.
- 5) ☐ For kit 6557, **ensure that the air spring is fully engaged with spring spacer 176229 and the air bag has minimal distortion.** Refer back to illustrations #30 and #37.
- 6) ☐ To inflate the air springs for kit 6557: Reattach the battery. Start the engine and run for approximately two minutes to verify that the air suspension is operating properly.

NOTE: It may be necessary to close compartment doors and slightly raise the rear of the vehicle by the frame before the compressor will start.

- 7) ☐ Tighten the end link bolts to 24 ft. lbs. Tighten the track bar bolt to 77 ft. lbs. Tighten the upper link arm bolts to 77 ft. lbs and the lower link arm bolts to 89 ft. lbs.

FINAL CHECKS & ADJUSTMENTS

- 1) ☐ Jounce suspension and move the vehicle to normalize ride height. Verify that the front spindle to fender height is 28.5" and that both sides are equal. If necessary, reinstall GM tool J 36202 and adjust the tension on the torsion bars to correct the height.
- 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) ☐ 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.
- 4) ☐ Ensure that the vehicle brake system operates correctly. If new brake hoses were installed, verify that each hose allows for full suspension movement.
- 5) ☐ Readjust headlamps. Have vehicle Aligned at a certified alignment facility.

Recommended Alignment Specifications

Caster (degrees): $3.5^{\circ} \pm 1.0^{\circ}$

Camber (degrees): $0^{\circ} - .3^{\circ}$

Sum Toe In (degrees): $.1^{\circ} \pm .2^{\circ}$

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