

INSTALLATION INSTRUCTION

88045

Rev J

FOR RANCHO SUSPENSION SYSTEM **RS6545**: CHEVROLET SILVERADO

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 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, chrome, cadmium, or zinc plate any of the components in this system. Doing so will render the warranty null and void. To change the appearance of components, enamel 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 below. 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: ☒

- ☐ Chevrolet Service Manual
- ☐ Torsion Bar Unloading Tool J36202
- ☐ Universal Steering Linkage Puller J24319
- ☐ Ball Joint Separator J43631
- ☐ Prevailing Torque Nuts (for steering linkage)
- ☐ 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
- ☐ Large "C" Clamps, Bench Vise and Adjustable Straps
- ☐ Reciprocating Saw (to modify frame and differential)
- ☐ Hammer
- ☐ Wire Brush (to clean bracket mounting surfaces)
- ☐ 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 6 to 7 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.

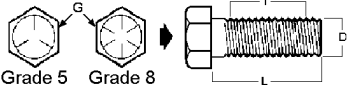
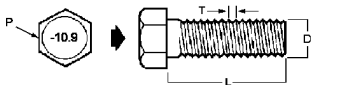
N. Please reference to your OE wheel size to determine which tire/wheel package should be used:

1999-2004 16" Wheels/Tires 285/75/16 w/16x8x4.5 BS.
2005-2007 17" Wheels/Tires 285/70/17 w/17x8x4.5 BS.

****Before installing any other combination, consult your local tire and wheel specialist**.**

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	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  G = Grade Marking (bolt strength) L = Length (inches) D = Nominal Diameter (inches) X = Description (hex head cap screw) T = Thread Pitch (threads per inch)			M12-1.25x50 HHCS  P = Property Class (bolt strength) L = Length (millimeters) D = Nominal Diameter (millimeters) X = Description (hex head cap screw) T = Thread Pitch (thread width, mm)			

PARTS LIST

<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
15080	Riser Block	2	420072	.75 x .090 x 2.74 Sleeve	4
176126	Subframe	1	420045	1.00 x .219 x 1.00 Sleeve	2
176127	Torsion Bar Drop Bracket	2	520041	Bushing	8
176128	Knuckle, Left	1		1/2-13 x 1.25 HHCS	2
176129	Knuckle, Right	1		1/2-13 x 2.5 HHCS	2
176130	Differential Support Bracket	1		1/2-13 x 4.00 HHCS	4
176131	Right Axle Tube Drop Bracket	1		1/2-13 Stover Nut	6
176132	Subframe Aft Brace	2		1/2 SAE Washer	12
176138	Aft Brace Bracket	2	860178	T Bar Crossmember Hardware Kit	1
176136	Rear Bump Stop Spacer	2	420043	.75 x .095 x 1.50 Sleeve	2
176159	Box Plate	1	552	Bushing	4
176235	Axle Spacer	2		7/16-14 x 1.25 HHCS	8
331	Add-A-Leaf	2		7/16-14 Stover Nut	8
7495	9/16-18 x 2.57 x 11.0 U-bolt	4		7/16 SAE Washer	16
8051	Riser Block Pin Kit	1	860179	Differential Hardware Kit	1
	.625 x .875 Pin	2		M10-1.50 x 60 HHCS	4
8102	U-bolt Hardware Kit	1		7/16-14 x 3.0 HHCS	1
	9/16-18 Nyloc Nut	8		7/16-14 Stover Nut	1
	9/16 SAE Washer	8		SAE Washer	4
860174	Subframe Hardware Kit	1		7/16 SAE Washer	2
1429	Bump Stop (low profile)	2	860180	End Link Hardware Kit	1
420041	.75 x .095 x 2.19 Sleeve	1	420044	.75x.156 x 9.5 Sleeve	2
520041	Bushing	2		Retainer	8
	5/8-18 x 4.5 HHCS	2		3/8-16 x 14.0 HHCS	2
	5/8-18 x 5.5 HHCS	2		3/8-16 Nylon Nut	2
	5/8-18 Stover Nut	4	860182	Bump Stop Hardware Kit	1
	5/8 SAE Washer	8		M10-1.50 x 20 HHCS	2
	3/8-16 Nyloc Nut	2		M8-1.25 x 10 HHCS	1
	3/8 SAE Washer	2		SAE Washer	2
	Thread Lock	3		10mm Lock Washer	2
860175	Front Differential Hardware Kit	1	860185	Spring Installation Kit	1
	9/16-12 x 1.75 HHCS	2		3/8-24 x 7.5 HHCS	1
	9/16-12 Stover Nut	2		3/8-24 Hi-Nut	1
	9/16 SAE Washer	2	860410	Center bolt Hardware Kit	1
	9/16 USS Washer	2		3/8-24 x 5.0 C-bolt	2
860176	Axle Spacer Hardware Kit	1		3/8-24 Hi-Nut	2
	M10-1.50x60 HHCS	12	94180	Information Pack	1
	SAE Washer	12	780281	Rancho Decal	1
860177	Support Tube Hardware Kit	1	88045	Installation Instruction	1
176137	Nut Bracket	2	94119	Consumer/Warranty 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.

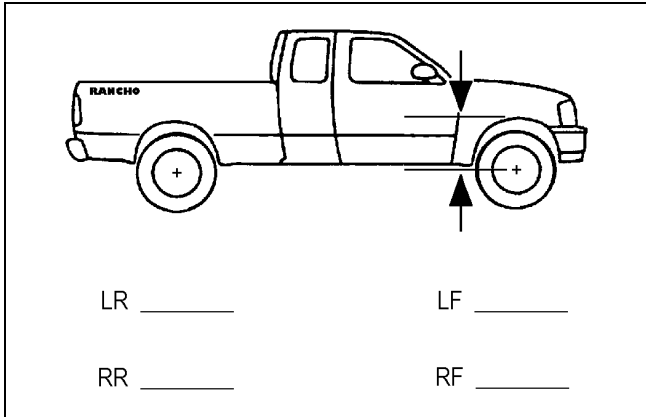


Illustration #1

- 2) ☐ Raise the front of the vehicle and support the frame with jackstands. Remove the front wheels and set them aside.
- 3) ☐ Mark the torsion bars left and right. Make alignment marks on the torsion bars, the lower control arms, and the adjustment arms.
- 4) ☐ 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.
- 5) ☐ Slide the torsion bar forward and remove the adjustment arm. See illustration #2.

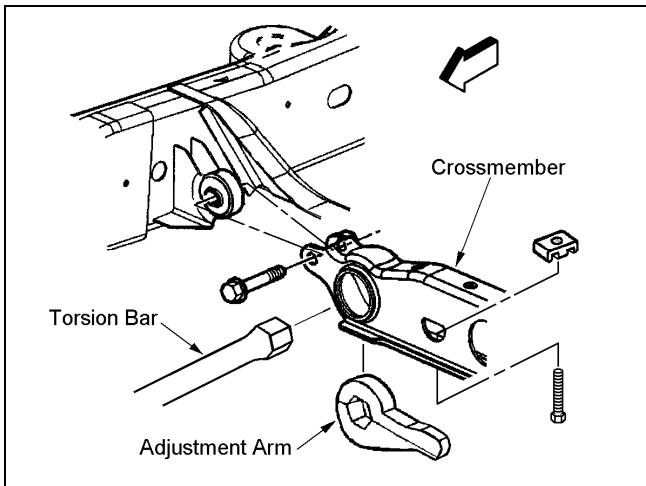


Illustration #2

- 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.

WHEEL DRIVE SHAFT (HALFSHAFT) REMOVAL

- 1) ☐ Remove the front shock absorbers. Unsnap the bump stop from the mounting cup.
- 2) ☐ Remove the sway bar end links. See illustration #3.

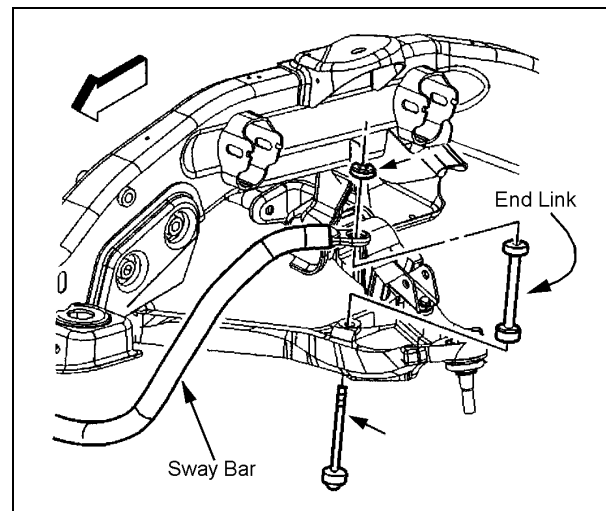


Illustration #3

- 3) ☐ Mark the differential output flange and the axle flange for installation reference.
- 4) ☐ Remove the nut and washer from the hub. Remove the six bolts from the inboard flange. See illustration #4.

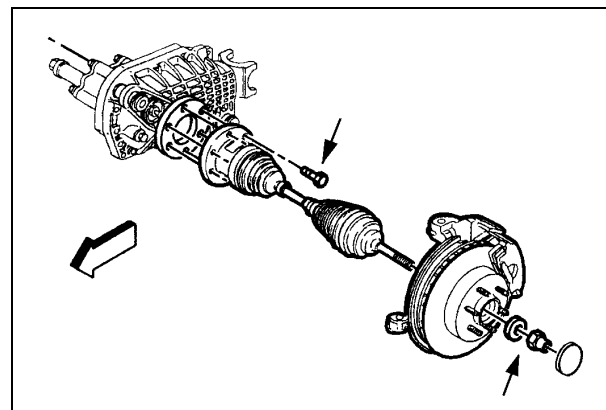


Illustration #4

- 5) ☐ Pull the halfshaft out of the hub and through the lower control arm opening. Be careful not to damage the drive shaft boots.
- 6) ☐ Repeat steps 3 through 5 for the other side.

STEERING KNUCKLE & LOWER CONTROL ARM REMOVAL

- 1) ☐ Separate the brake hose from the bracket on top of the steering knuckle. Use pliers to pry the bracket open. Remove the bolt and brake hose bracket from the 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) ☐ Remove the brake rotor.
- 4) ☐ Remove the prevailing torque nut from the outer tie rod stud. Discard nut. Disconnect the tie rod end from the steering knuckle with a universal puller.
- 5) ☐ If applicable, separate the ABS speed sensor cable at the frame and the upper control arm.
- 6) ☐ Remove the hub and bearing assembly mounting bolts. See illustration #5. Remove the hub and bearing assembly.

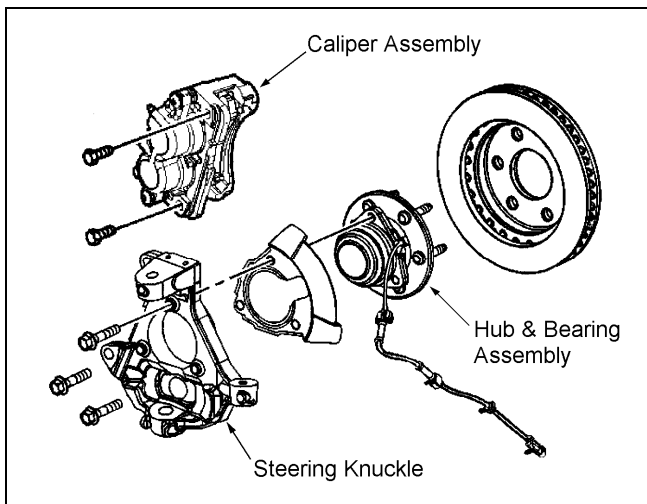


Illustration #5

- 7) ☐ 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.
- 8) ☐ Remove the lower control arm pivot bolts. See illustration #6. Remove the lower control arm.

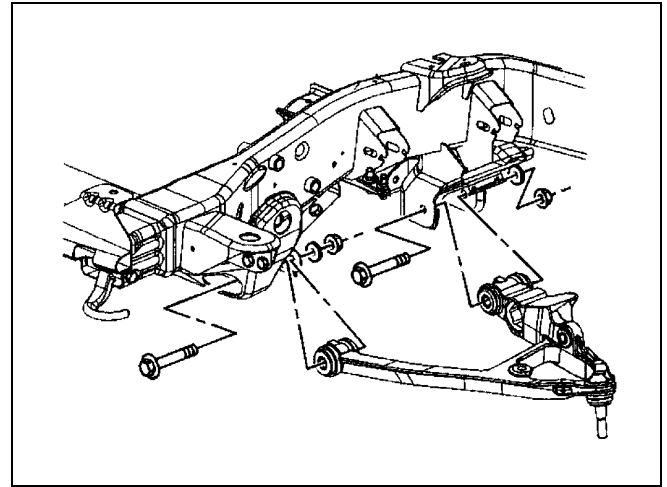


Illustration #6

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

FRONT DIFFERENTIAL REMOVAL

- 1) ☐ If applicable, remove the front differential skid plate.
- 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 electrical connector and the vent hose from the differential assembly.
- 4) ☐ Cut off the front differential lower frame bracket even with the lower control arm pocket. See illustration #7.



Illustration #7

- 5) ☐ Remove the right axle tube nuts and the differential lower mounting bolt. See illustration #8.

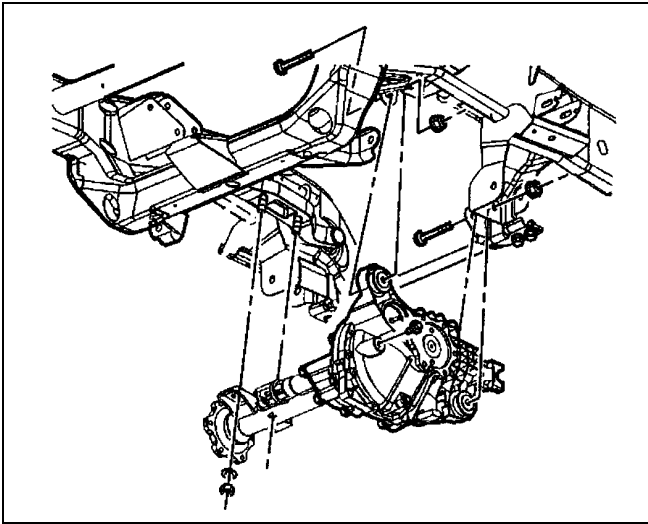


Illustration #8

- 6) ☐ Support the front differential assembly with a floor jack. Remove the upper mounting nut and bolt.
- 7) ☐ Remove the differential assembly from the vehicle.

FRONT DIFFERENTIAL & SUBFRAME INSTALLATION

NOTE: There are two ways to provide clearance between the front differential and the lower control arm frame bracket. Cutting the frame bracket and welding a plate is one way, cutting the fins off the differential case is another. Either way is acceptable, **only one is necessary.**

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- 1) ☐ Option 1 (Cutting & Welding):
 - Cut 1 1/4 inches off the inside of the lower control arm pocket and what's left of the differential frame bracket. See illustrations #9 and #10.

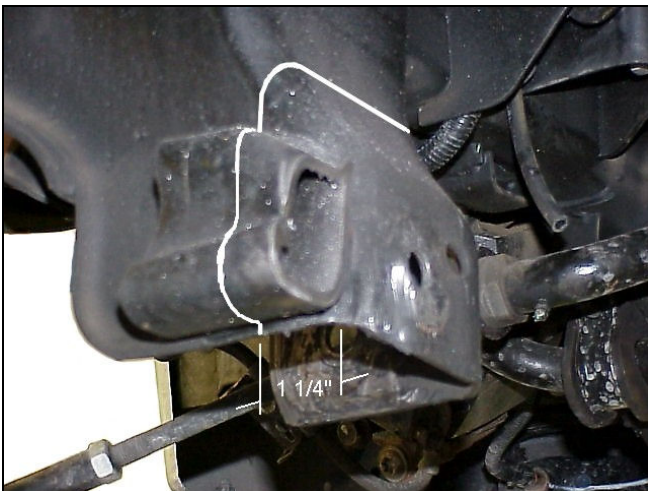


Illustration #9

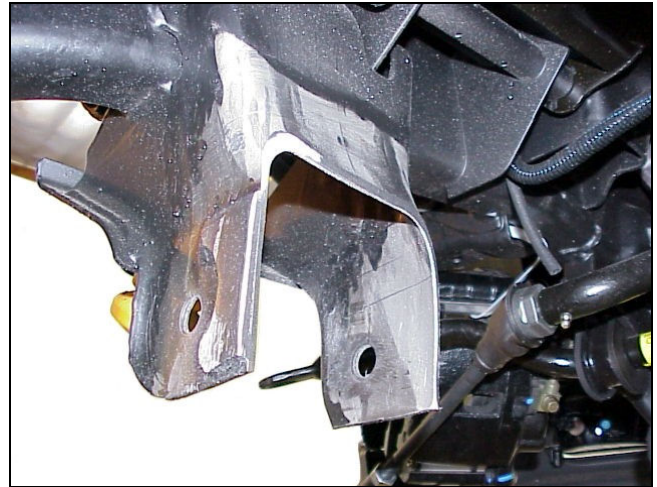


Illustration #10

NOTE: Removing the rest of the differential bracket, as shown in illustration #10, is optional.

- Disconnect the battery. See important note "L".
- Weld box plate 176159 to the lower control arm bracket as shown in illustration #11.

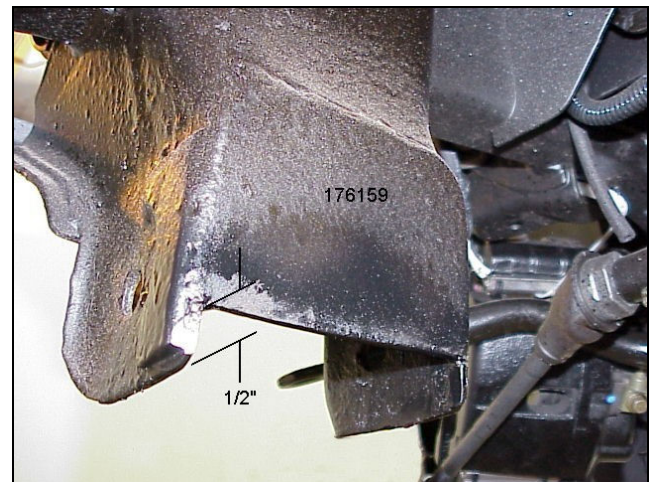


Illustration #11

NOTE: Box plate 176159 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.

- 1) ☐ Option 2 (Cutting Only):
 - Cut a **section of the fins** from the front differential as shown in illustration #12.

CAUTION: When modifying the front differential, do not cut into housing.

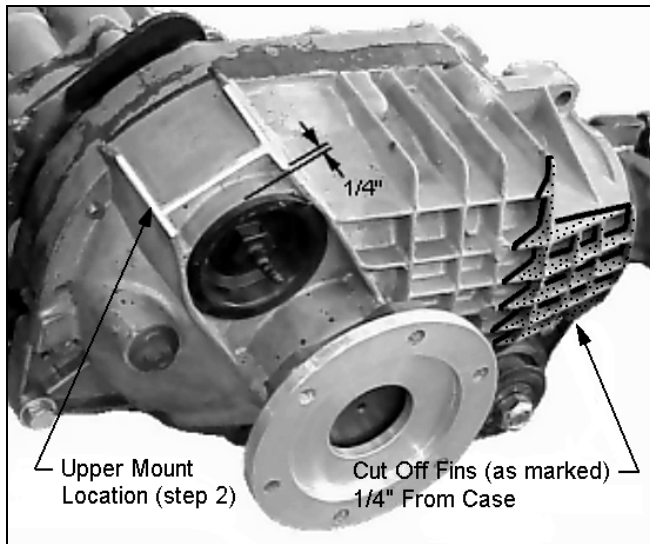


Illustration #12

- 2) ☐ Cut off the differential upper mount 1/4" from the case. See illustration #12.
- 3) ☐ Install bushings 520041 into differential support bracket 176130. Apply silicon lubricant and press sleeve 420041 through the installed bushings.
- 4) ☐ Attach bracket assembly 176130 to the front differential as shown in illustration #13. Use the hardware from kit 860179. Tighten to specifications.

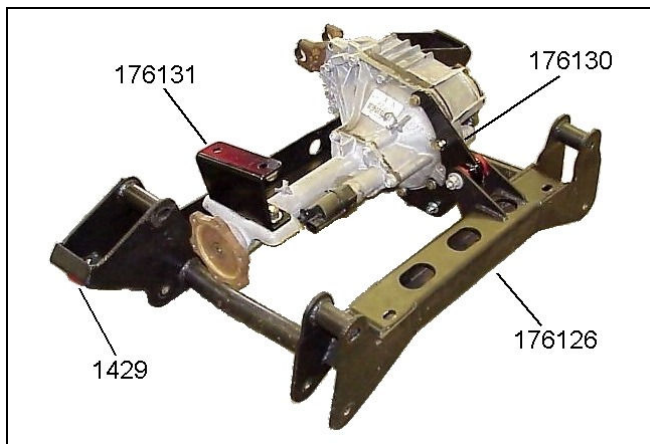


Illustration #13

NOTE: Gear oil may leak from the case when the original bolts are removed.

- 5) ☐ Loosely attach drop bracket 176131 (as shown in illustration #13) to the differential axle tube with the 9/16" hardware from kit 860175.
- 6) ☐ Attach the front differential assembly to the subframe (176126) with the original hardware. Tighten the nuts and bolts to 75 ft. lbs.

7) ☐ Attach the low profile bump stops (1429) to the subframe with the 3/8" hardware from kit 860174.

8) ☐ Using a piece of 1/2" plywood, support the subframe and differential assembly with a floor jack.

9) ☐ 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 176131 to the frame bracket with the original hardware. Tighten all bracket mounting nuts and bolts to 75 ft. lb.

NOTE: Verify that the left side of the front differential does not contact the rear frame bracket of the lower control arm. If necessary, cut off more of the fins from the differential case (illustration #12). **FAILURE TO PROVIDE CLEARANCE COULD CAUSE DAMAGE TO THE DIFFERENTIAL AND AXLE ASSEMBLY.**

11) ☐ Reconnect the vent hose and electrical connector. Align marks and reconnect the front drive shaft to the differential.

STEERING KNUCKLE & HALFSHAFT INSTALLATION

1) ☐ Loosely attach the left lower control arm to the subframe with the 5/8" hardware from kit 860174.

2) ☐ Connect left steering knuckle 176128 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) ☐ Apply thread lock and attach the hub and bearing assembly to the left steering knuckle with the original hardware. See illustration #14. Tighten the mounting bolts to 133 ft. lbs.

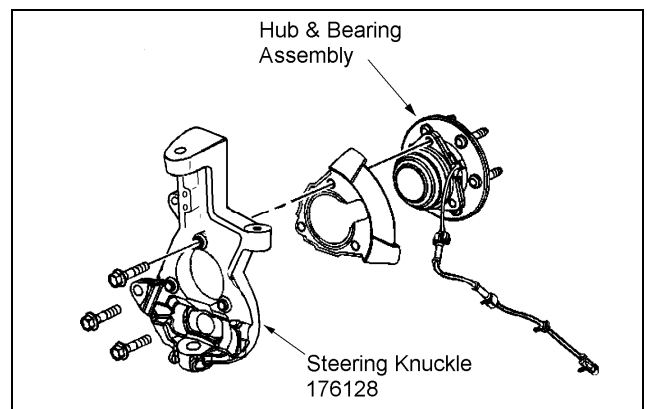


Illustration #14

4) ☐ Loosen the tie rod end jam nut and thread the tie rod end inward two 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.

5) ☐ Insert the wheel drive shaft (halfshaft) into the knuckle hub. Install the shaft washer and nut.

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

6) ☐ Place axle spacer 176235 against the differential flange. Place the axle flange against the spacer. Align the flange marks and attach the axle to the differential with the hardware from kit 860176. Be sure to apply thread lock to the bolts. Tighten the flange bolts to 58 ft. lbs.

7) ☐ 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.

8) ☐ Place a drift or large screwdriver through the caliper to prevent the drive axle from turning. Tighten the axle hub nut to 165 ft. lbs. Remove the drift from the rotor.

9) ☐ Insert tab of brake hose clamp into one of two mounting holes on the back of the steering knuckle. Attach clamp to knuckle with the original screw as shown in illustration #15. Tighten mounting screw securely.

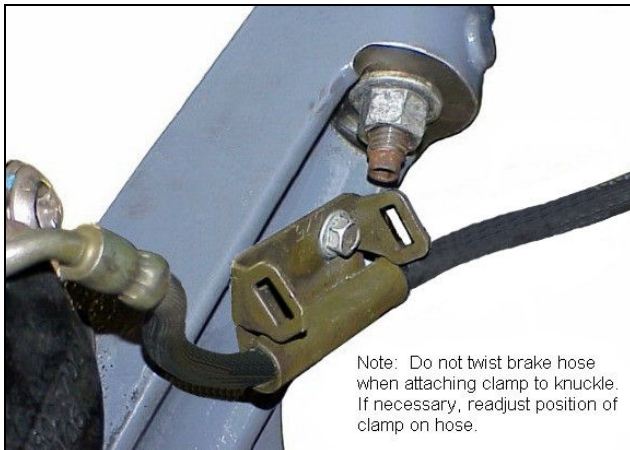


Illustration #15

10) ☐ If applicable, reconnect the ABS cable. Attach the ABS cable to the knuckle and upper control arm with tie wraps. See illustration #16.

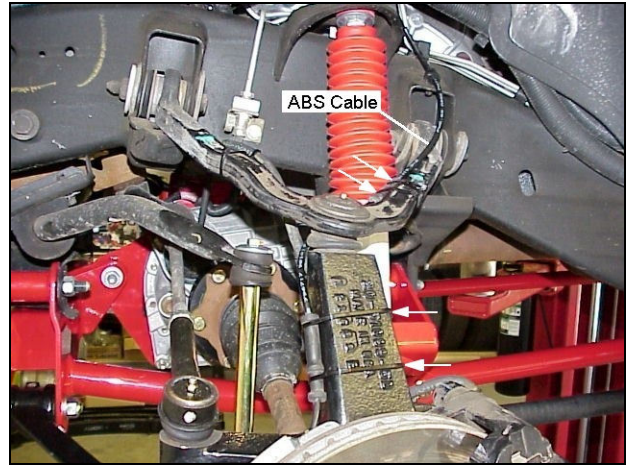


Illustration #16

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

12) ☐ Attach the sway bar to the lower control arm with the new end link assemblies (from kit 860180) and the original bushings. See illustration #17. Insert the 3/8" x 14" bolt from the top.

13) ☐ Install new Rancho shock absorbers.

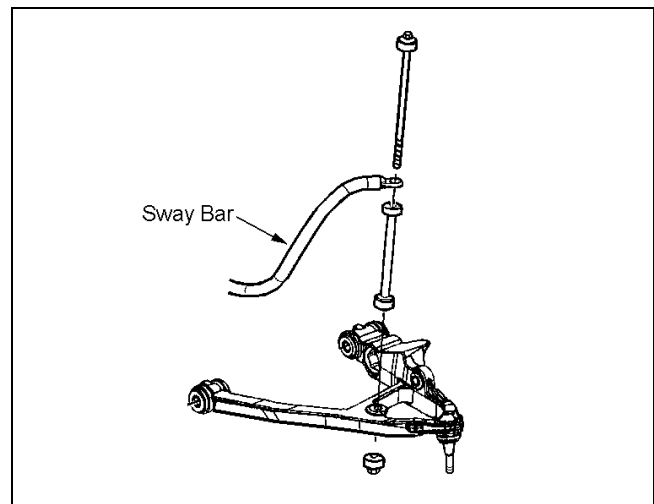


Illustration #17

AFT BRACE ASSEMBLY & INSTALLATION

1) ☐ Lubricate two bushings (520041) and one sleeve (420072), from kit 860177, with a silicon spray. Press the bushings and sleeve into aft brace 176132 as shown in illustration #18.

2) ☐ Repeat step 1 to install the rest of the bushings and sleeves.

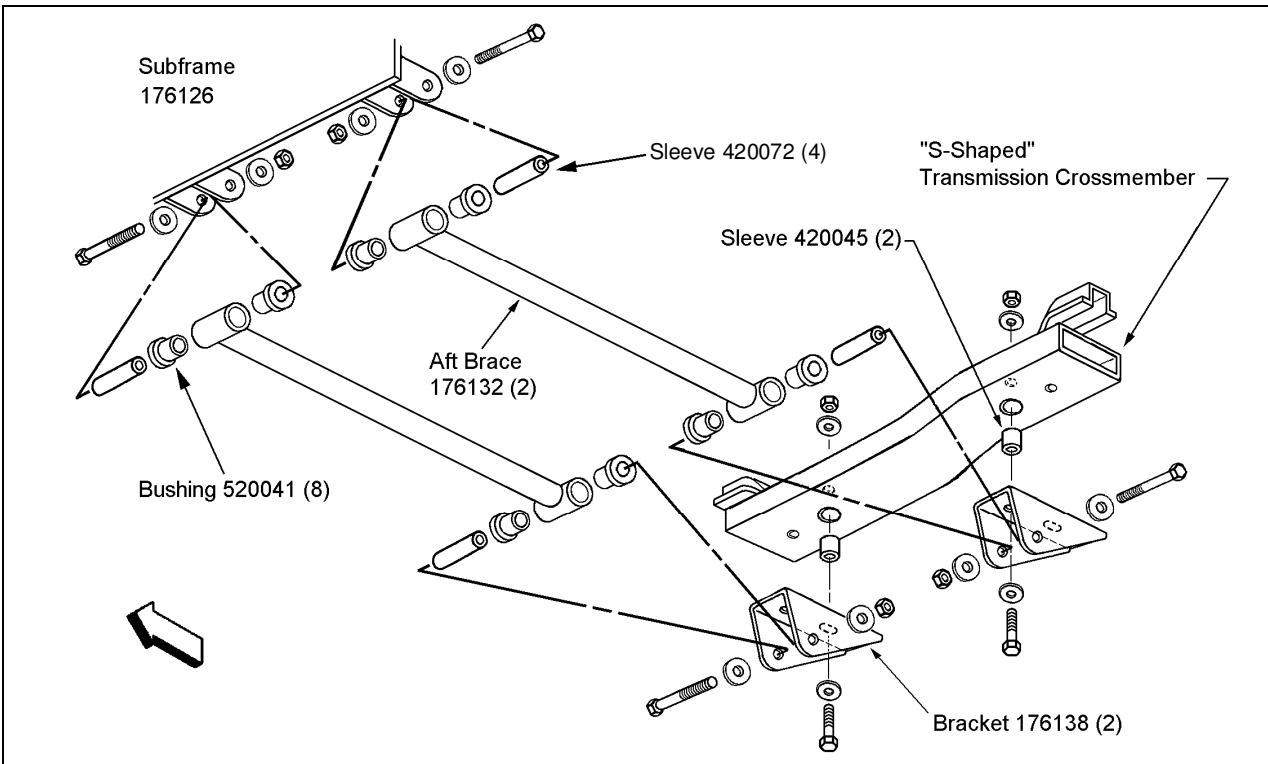


Illustration #18

3) ☐ For the "S-Shaped" transmission crossmember:

- Remove the bolts attaching the support brackets to the top of the transmission crossmember. If applicable, remove the transfer case skid plate.
- Insert a 2.5" bolt with washer (from kit 860177) through one of the top holes in bracket 176138. Use the round hole for driver side and the slotted hole for the passenger side. See illustration #18.
- Place sleeve 420045 over the bolt and loosely attach the assembly to the transmission crossmember as shown in illustration #18.
- Repeat the previous two steps for the other side.

NOTE: Two types of transmission crossmembers are currently being used on the Silverado: An "S-Shaped" crossmember (primarily for 1998 & 99 model years) and a "straight" crossmember. Follow the aft brace bracket installation for the type of crossmember installed.

4) ☐ For the "straight" transmission crossmember:

- If applicable, remove the transfer case skid plate.
- Insert nut bracket 176137 inside the crossmember as shown in illustration #19. Align the bracket over the existing hole.
- Apply thread lock and insert a 1.25" bolt with washer (from kit 860177) through the slotted

hole in bracket 176138. Attach the bracket to the crossmember by threading the bolt into the nut bracket. See illustration #19.

- Repeat the previous two steps for the other side.

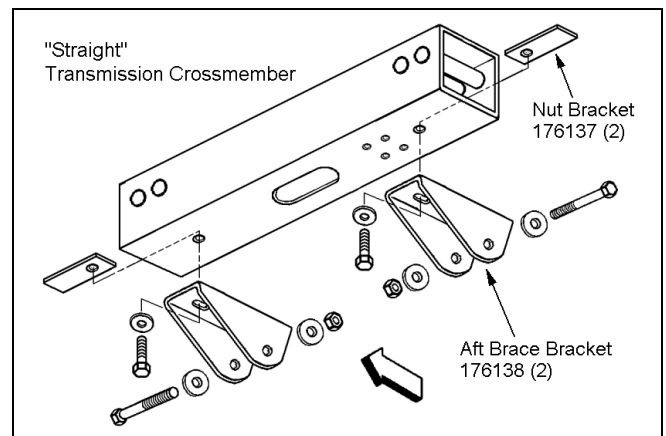


Illustration #19

5) ☐ Loosely attach each aft brace assembly to the rear of the subframe (176126) with the hardware from kit 860177. Attach the other end of each brace to the bracket on the transmission crossmember. See figure #20.

6) ☐ Tighten the aft brace mounting bolts to 80 FT-LBS then the bracket to crossmember bolts to 65 FT-LBS.

- 7) ☐ If applicable, cut the corner of the skid plate to avoid contact with the aft brace bracket. Reinstall the transfer case skid plate.

TORSION BAR & DROP BRACKET INSTALLATION

- 1) ☐ Place torsion bar drop bracket 176127 against the frame rail directly below the crossmember bracket. Align the large holes in the bracket with the existing rivets in the frame. See illustration #20.
- 2) ☐ Mark and center punch the 2 holes on the bottom and the 2 holes on the outside of the frame.

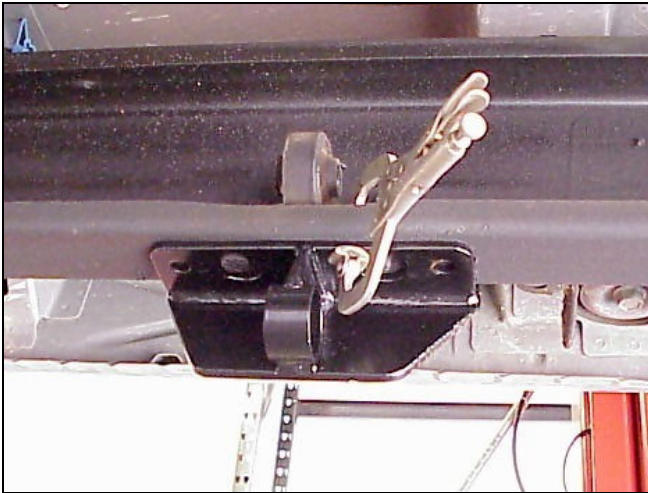


Illustration #20

NOTE: Inspect the inside of the frame rail before drilling. Move any components that might become damaged.

- 3) ☐ Remove the bracket and drill a 7/16" hole at each of the marked locations.
- 4) ☐ Repeat steps 1 through 3 for the other side.
- 5) ☐ Align marks and insert the left and right torsion bars into their respective lower control arms. Slide the arms forward.
- 6) ☐ Insert two bushings and a sleeve (from kit 860178) into each torsion bar drop bracket.
- 7) ☐ Attach the drop brackets to the crossmember with the original bolts.
- 8) ☐ Attach the crossmember assembly to the frame rails with the 7/16" hardware from kit 860178. Tighten all nuts and bolts to 70 ft. lbs.

- 9) ☐ 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.

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

- 11) ☐ Reinstall the retaining plate and adjusting bolt. Thread the adjusting bolt in until 1.6 inches of threads are exposed below the retaining plate. Remove the unloading tool.

- 12) ☐ Repeat steps 9 through 11 for other side.

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

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

REAR SUSPENSION

ADD-A-LEAF & RISER BLOCK INSTALLATION

- 1) ☐ Chock front wheels. Raise the rear of the vehicle and support the frame with jack stands. Remove the rear wheels.
- 2) ☐ Support the rear axle assembly with a floor jack. Remove both rear shock absorbers. Do not reuse OEM shock absorbers.
- 3) ☐ With the axle still being supported, remove the anchor plate, U-bolts, and spacer. See illustration #21.

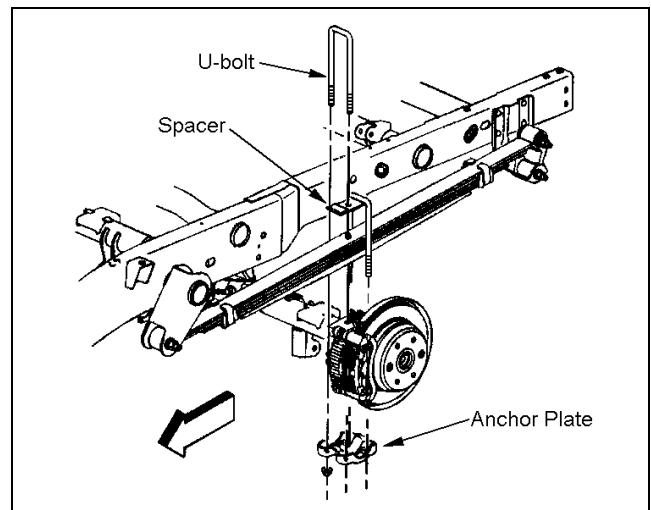


Illustration #21

4) ☐ Carefully lower the rear axle and remove the original riser block. Do not allow the axle to hang by any hoses or cables.

5) ☐ Clamp the spring assembly securely together with two C-clamps as shown in illustration #22.

6) ☐ Loosen the nut and remove the center bolt. If necessary, hold the head of the center bolt with locking pliers. Do not remove the spring clips.

7) ☐ Carefully remove the C-clamps and set the helper spring aside.

8) ☐ Apply a small amount of grease to the top ends of Rancho Add-A-Leaf RS331.

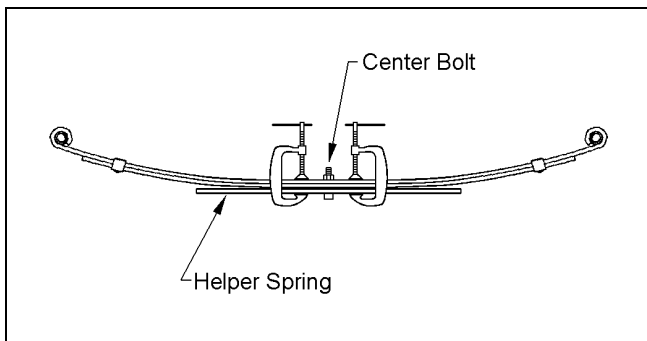


Illustration #22

9) ☐ Place the Add-A-Leaf under the spring pack and reinstall the helper spring. Temporarily, secure the assembly together with a 3/8" x 7.5" bolt and nut from kit RS860185. Install a C-clamp on each side of the bolt. See illustration #23.

NOTE: The 3/8" bolt will keep the center holes aligned as the spring pack is compressed.

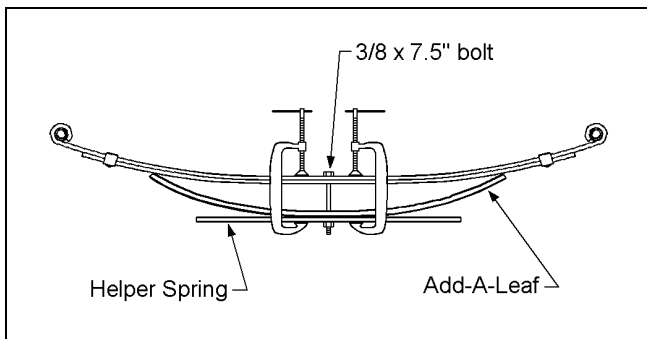


Illustration #23

10) ☐ Alternating between C-clamps, compress the spring pack to within 4 inches. Install nylon safety straps as shown in illustration #24.

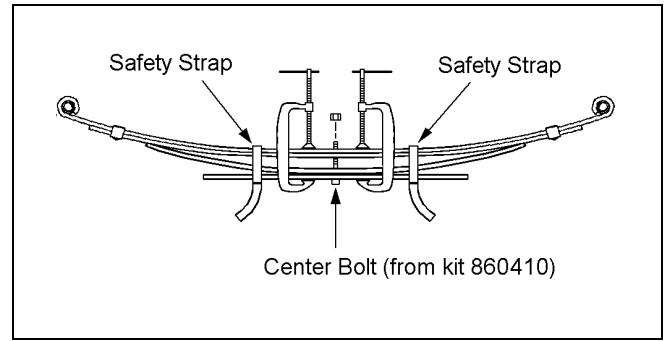


Illustration #24

11) ☐ Carefully, without disturbing the C-clamps, remove the 3/8" bolt. Install the center bolt and nut from kit 860410. See illustration #24. Do not compress the spring with the center bolt.

12) ☐ Tighten the C-clamps to fully compress the spring assembly. Once compressed, tighten the center bolt to 25 ft. lbs. If necessary, hold the head of the center bolt with locking pliers.

13) ☐ Remove the C-clamps and straps.

14) ☐ Insert a block pin from kit 8051 into the hole in the axle pad. Place the new riser block (15080) on the axle pad with the taller end of the block in the rear and the top hole offset to the front. See illustration #25.

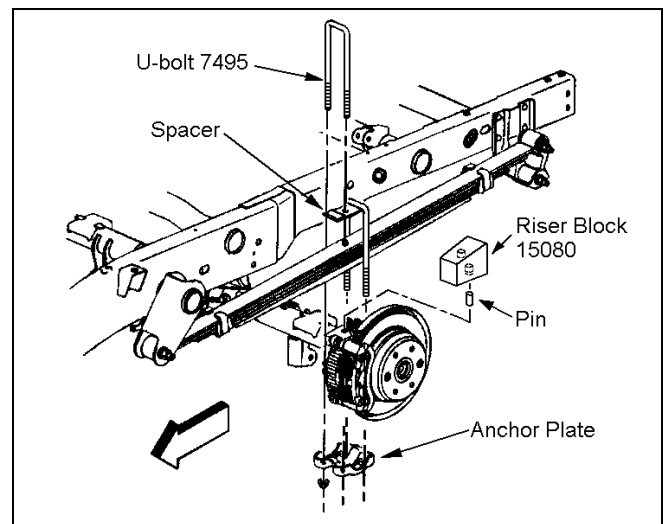


Illustration #25

NOTE: Ignore the "up" stamped on the riser block for this application. All block imprinting faces downward.

15) ☐ Raise the axle assembly until the riser block contacts the helper spring. Be sure to align the hole in the block with the head of the center bolt.

16) ☐ Reinstall the U-bolt spacer on top of the leaf spring. Attach the spring to the axle with the NEW U-bolts (7495), original anchor plate, and hardware from kit 8102. Snug the nuts down but do not tighten.

17) ☐ Repeat steps 3 through 16 for the other side.

18) ☐ Cross tighten the U-bolt nuts evenly to 89 ft. lbs. Recheck the torque on the center bolt.

19) ☐ Replace the bolt holding the brake cable to the lower shock bracket with a shorter bolt from kit 860182. See illustration #26.

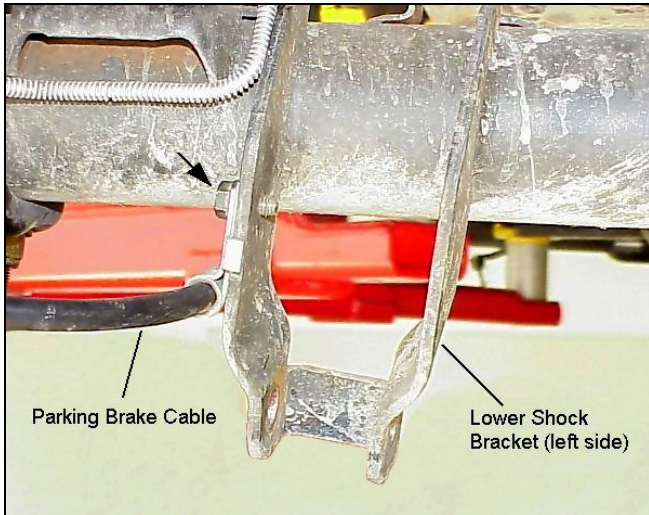


Illustration #26

20) Install new Rancho shock absorbers.

BUMP STOP SPACER INSTALLATION

1) ☐ Remove the nut holding the bump stop to the frame bracket. Remove the bump stop.

2) ☐ Attach bump stop spacer 176136 to the frame bracket with the hardware from kit 860182.

3) ☐ Cut off the tab from the top of the bump stop. See illustration #27.

4) ☐ Apply thread lock and attach the bump stop to the installed spacer.

5) ☐ Repeat steps 1 through 4 for the other side.

6) ☐ Install rear wheels and lower vehicle to ground. Tighten lug nuts to 140 ft. lbs.

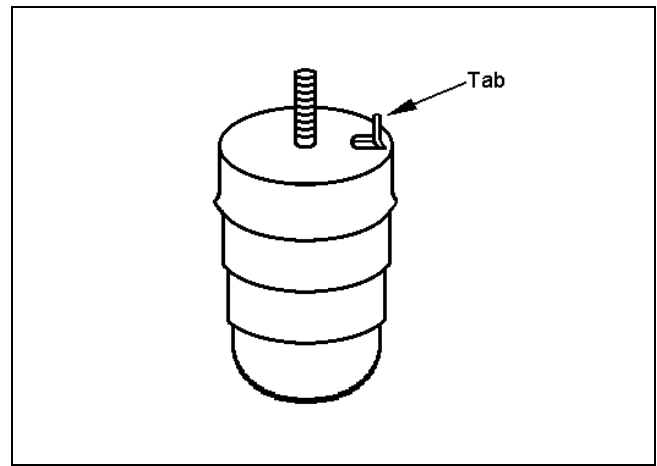


Illustration #27

FINAL CHECKS & ADJUSTMENTS

1) ☐ Jounce suspension and move the vehicle to normalize ride height. Verify that the front spindle to fender height is 25.5" 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): $4.5^{\circ} \pm 1.0^{\circ}$

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.**