



8/26/04

**'99-'03 CHEVROLET/GMC
IFS 4WD/2WD
Yukon/ Tahoe
6" SUSPENSION SYSTEM
With or Without Delphi AutoRide**

**P/N. 10-41001 (4WD) or 10-41201 (2WD)
&
P/N. 10-41001AR (4WD) or 10-41201AR (2WD)**

INSTALLATION INSTRUCTIONS

NOTE: General Motors offers three suspension packages for this vehicle. **P/N. 10-41001 (4WD) or 10-41201 (2WD)** will fit if your vehicle is equipped with the rear Premium Ride (Load Leveling) or Z71 package. **P/N. 10-41001AR (4WD) or 10-41201AR (2WD)** will work on vehicles equipped with Delphi AutoRide Suspension Systems or front and or rear electric shocks.

NOTE: Each Lift Kit and options to Lift Kits are packaged separately. Therefore, installation procedures are covered in separate instructions. Familiarize yourself with each specific set of instructions before beginning.

Parts List

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
Box 1 of 5 (ALL KITS)			
20-51099-1	Front Crossmember	1	13
20-51099-2	Rear Crossmember	1	13, 17
Box 2 of 5 (ALL KITS)			
20-51099-5D	Front Spindle- Drvr.	1	
20-51099-6P	Front Spindle- Pass.	1	
Box 3 of 5 (ALL KITS)			
20-51099-24	Lateral Compression Struts	2	17
20-51099-22	Bracket, Strut Mount	2	17
20-68175	Bushing Pack Containing: (Compression Strut)		
15-11148	Bushing, Red	8	17
20-830918	Sleeve, 3/4" x 2-3/4" Lg.	4	17
20-68162	Hardware Pack Containing: (Compression Strut)		
13-20069-Z	Hex Bolt, 1/2"-13 x 4"	4	17
13-20164-Z	Hex Bolt, 1/2"-13 x 1-1/2"	2	17
13-30034-Z	Flat Washer, 1/2" SAE	12	17
13-10038-Z	Nyloc Nut, 1/2"-13	6	17
Box 4 of 5 (41001 & 41001AR ONLY)			
20-51001-1	Spring Spacer, 5.5" Rear	2	22
20-51001-3	Bracket, Torsion Bar Drop	2	18
20-51001-14	Mount, Rear Shock Pass.	1	23
20-51001-15	Mount, Rear Shock Drvr.	1	23
20-51001-6	Bracket, Rear Trac-Bar Drop	1	24
20-51001-9	Extension, Bumpstop Rear	2	21
20-51099-7	Bracket, Differential Support	1	11
20-51099-8	Bracket, Differential Drop	1	12

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
20-67837	Hardware Pack Containing: (Drive Axle Spacer)		
13-22639-Z	Hex Bolt, 10mm x 1.5 x 60mm Lg.	12	14
13-30642-Z	Flat Washer, 10mm	12	14
13-90490	Loctite, Compound	1	
20-51099-20	Drive Axle, Spacer	2	14
20-68981	Hardware Pack Containing: (Torsion Bar)		
13-21690-Z	Hex Bolt, 9/16"-12 x 3-1/4" Gr. 8	2	18
13-21456-Z	Hex Bolt, 1/2"-13 x 1-1/2" Gr. 8	2	18
13-30395-Z	Flat Washer, 9/16" Hrdn.	4	18
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	18
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	2	18
13-10514-Z	Top Lock Nut, 1/2" -13 Gr. C	2	18
11-13490	Tube, 1" x .219 x 1"	2	18
20-67863	Hardware Pack Containing:(Diff. Support & Drop)		
13-21144-Z	Hex Bolt, 9/16"-12 x 3-1/2" Gr. 8	1	
13-22665-Z	Hex Bolt, 9/16"-12 x 1-3/4" Gr. 8	2	12
13-22704-Z	Hex Bolt, 7/16"-14 x 3" Gr. 8	1	11
13-22639-Z	Hex Bolt, 10mm x 1.5 x 60mm Gr. 10.9	4	11
13-30395-Z	Flat Washer, 9/16" Hrdn	6	12
13-30304-Z	Flat Washer, 7/16" Hrdn.	2	11
13-30642-Z	Flat Washer, 10mm Hrdn.	4	11
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	3	12
13-10384-Z	Top Lock Nut, 7/16"-14 Gr. C	1	11
15-11148	Bushing, Red	2	11
20-832725	Sleeve, 3/4" x .095 x 2.25" Lg.	1	11
20-69917	Hardware Pack Containing:(Sway Bar Extension)		
20-833739	Flex Joint Sway Bar Extension (9-1/2")	2	19
13-22743-Z	Button Head, 1/2"-13 x 3" Lg.	2	19
13-30694-Z	Washer, Retainer 1-1/4"	6	19
13-10878-Z	Nut, 1/2" Nyloc	2	19
15-11616	Bushing, Sway Bar Link Inner	2	19
15-11629	Bushing, Sway Bar Link Outer	2	19
15-11746	Bushing, Swaybar Flex Joint	4	19
20-67915	Hardware Pack Containing:(F/R Crossmember)		
13-21950-Z	Hex Bolt, 5/8"-11 x 5-1/2" Gr. 8	2	
13-22028-Z	Hex Bolt, 5/8"-11 x 4-1/2" Gr. 8	2	
13-22223-Z	Hex Bolt, 9/16"-12 x 3-3/4" Gr. 8	1	

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
13-30369-Z	Flat Washer, 5/8" Hrdn.	8	
13-30395-Z	Flat Washer, 9/16" Hrdn.	2	
13-10345-Z	Top Lock Nut, 5/8"-11 Gr. C	4	
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	1	
11-15144	Spacer, 1" x .31"	2	13
20-69059	Hardware Pack Containing:(Brakeline Extension)		
20-51001-11	Extension, Rear Brakeline Bracket	1	
13-20425-Z	Hex Bolt, 5/16"-18 x 1-1/4"	1	
13-30187-Z	Washer, 5/16" SAE	2	
13-10155-Z	Nyloc Nut, 5/16"-18	1	
20-67928	Hardware Pack Containing:(Bumpstop)		
15-11018	Bumpstop, Low Profile	2	
13-30012-Z	Flat Washer, 3/8" SAE	2	
13-10022-Z	Nyloc Nut, 3/8"-16	2	
20-69072	Hardware Pack Containing:(Control Arm)		
15-10979	Bushing, Red Tapered	8	
20-833128	Sleeve, .875" x .156 x 2.58"	4	
20-68955	Hardware Pack Containing: (Tracbar)		
13-23107-Z	Hex Bolt, 9/16"-12 x 4" Gr. 8	1	24
13-21456-Z	Hex Bolt, 1/2"-13 x 1-1/2" Gr. 8	2	24
13-30395-Z	Flat Washer, 9/16" Hrdn.	2	24
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	24
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	1	24
13-10514-Z	Top Lock Nut, 1/2"-13 Gr. C	2	24
11-15144	Tube, 1" x .219 x .31"	1	24
20-51001-7	Plate, Stiffener Trac-Bar Drop	1	24
20-69020	Hardware Pack Containing: (Bumpstop)		
13-22938-Z	Hex Bolt, 3/8"-16 x 1-1/4" Gr. 8	4	21
13-30408-Z	Washer, 3/8" Hrdn.	8	21
13-10553-Z	Top Lock Nut, 3/8"-16	4	21
20-68305	Hardware Pack Containing: (Universal)		
13-20447-Z	Unslot Hex, #10 x 1/2"	4	
15-10966	Clamp, 3/8" x 3/8" x .203"	4	
15-11395	Wire Tie, 6"	4	
15-11447	Wire Tie, 8"	2	

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
15-11460	Wire Tie, 11"	2	
20-69280	Hardware Pack Containing:(Rear Shock Mount)		
13-23211-Z	Hex Bolt, 9/16"-12 x 3" Gr. 0	2	23
13-22847-Z	Hex Bolt, 1/2"-13 x 3-1/4" Gr. 8	2	23
13-30395-Z	Flat Washer, 9/16" Hrdn.	4	23
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	23
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	2	23
13-10514-Z	Top Lock Nut, 1/2"-13 Gr. C	2	23
20-68968	Hardware Pack Containing:(Spring Spacer)		
13-21703-Z	Hex Bolt, 1/2"-13 x 3" Gr. 8	2	22
13-30028-Z	Lock Washer, 1/2"	2	22
13-30382-Z	Flat Washer, 1/2" Hrdn.	2	22
20-51001-10	Cap, Spring Spacer	2	22
20-69007	Hardware Pack Containing:(Rear Sway Bar)		
13-21027-Z	Hex Bolt, 12mm-1.75 x 70mm	2	25
13-30694-Z	Flat Washer, 1-1/4" x 1/2" x 14Ga.	2	25
13-10696-Z	Top Lock Nut, 12mm-1.75 Gr. 10.9	2	25
15-11083	Bushing, 5/8" Hourglass	4	25
20-831451	Sleeve, .62" x 12mm x 1.48"	4	25
20-830554	Bracket, 4" x 4" x 10Ga (Weld Cap)	1	9
Box 4 of 5 (41201 & 41201AR ONLY)			
20-51001-1	Spring Spacer, 5.5" Rear	2	22
20-51001-3	Bracket, Torsion Bar Drop	2	18
20-51001-14	Mount, Rear Shock Pass.	1	23
20-51001-15	Mount, Rear Shock Drvr.	1	23
20-51001-6	Bracket, Rear Trac-Bar Drop	1	24
20-51001-9	Extension, Bumpstop Rear	2	21
20-68981	Hardware Pack Containing: (Torsion Bar)		
13-21690-Z	Hex Bolt, 9/16"-12 x 3-1/4" Gr. 8	2	18
13-21456-Z	Hex Bolt, 1/2"-13 x 1-1/2" Gr. 8	2	18
13-30395-Z	Flat Washer, 9/16" Hrdn.	4	18
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	18
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	2	18
13-10514-Z	Top Lock Nut, 1/2" -13 Gr. C	2	18
11-13490	Tube, 1" x .219 x 1"	2	18

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
20-69917	Hardware Pack Containing:(Sway Bar Extension)		
20-833739	Flex Joint Sway Bar Extension (9-1/2")	2	19
13-22743-Z	Button Head, 1/2"-13 x 3" Lg.	2	19
13-30694-Z	Washer, 1-1/4" Retainer	6	19
13-10878-Z	Nut, 1/2" Nyloc	2	19
15-11616	Bushing, Sway Bar Link Inner	2	19
15-11629	Bushing, Sway Bar Link Outer	2	19
15-11746	Bushing, Sway Bar Flex Joint	4	19
20-67915	Hardware Pack Containing:(F/R Crossmember)		
13-21950-Z	Hex Bolt, 5/8"-11 x 5-1/2" Gr. 8	2	
13-22028-Z	Hex Bolt, 5/8"-11 x 4-1/2" Gr. 8	2	
13-22223-Z	Hex Bolt, 9/16"-12 x 3-3/4" Gr. 8	1	
13-30369-Z	Flat Washer, 5/8" Hrdn.	8	
13-30395-Z	Flat Washer, 9/16" Hrdn.	2	
13-10345-Z	Top Lock Nut, 5/8"-11 Gr. C	4	
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	1	
11-15144	Spacer, 1" x .31"	2	13
20-69059	Hardware Pack Containing: (Brakeline Extension)		
20-51001-11	Extension, Rear Brakeline Bracket	1	
13-20425-Z	Hex Bolt, 5/16"-18 x 1-1/4"	1	
13-30187-Z	Washer, 5/16" SAE	2	
13-10155-Z	Nyloc Nut, 5/16"-18	1	
20-67928	Hardware Pack Containing: (Bumpstop)		
15-11018	Bumpstop, Low Profile	2	
13-30012-Z	Flat Washer, 3/8"SAE	2	
13-10022-Z	Nyloc Nut, 3/8"-16	2	
20-69072	Hardware Pack Containing: (Control Arm)		
15-10979	Bushing, Red Tapered	8	
20-833128	Sleeve, .875" x .156 x 2.58"	4	
20-68955	Hardware Pack Containing: (Tracbar)		
13-23107-Z	Hex Bolt, 9/16"-12 x 4" Gr. 8	1	24
13-21456-Z	Hex Bolt, 1/2"-13 x 1-1/2" Gr. 8	2	24
13-30395-Z	Flat Washer, 9/16" Hrdn.	2	24
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	24
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	1	24
13-10514-Z	Top Lock Nut, 1/2"-13 Gr. C	2	24
11-15144	Tube, 1" x .219 x .31"	1	24
20-51001-7	Plate, Stiffener Trac-Bar Drop	1	24

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
20-69020	Hardware Pack Containing: (Bumpstop)		
13-22938-Z	Hex Bolt, 3/8"-16 x 1-1/4" Gr. 8	4	21
13-30408-Z	Washer, 3/8" Hrdn.	8	21
13-10553-Z	Top Lock Nut, 3/8"-16	4	21
20-68305	Hardware Pack Containing: (Universal)		
13-20447-Z	Unslot Hex, #10 x 1/2"	4	
15-10966	Clamp, 3/8" x 3/8" x .203"	4	
15-11395	Wire Tie, 6"	4	
15-11447	Wire Tie, 8"	2	
15-11460	Wire Tie, 11"	2	
20-69280	Hardware Pack Containing: (Rear Shock Mount)		
13-23211-Z	Hex Bolt, 9/16"-12 x 3" Gr. 8	2	23
13-22847-Z	Hex Bolt, 1/2"-13 x 3-1/4" Gr. 8	2	23
13-3095-Z	Flat Washer, 9/16" Grdn.	4	23
13-30382-Z	Flat Washer, 1/2" Hrdn.	4	23
13-10397-Z	Top Lock Nut, 9/16"-12 Gr. C	2	23
13-10514-Z	Top Lock Nut, 1/2"-13 Gr. C	2	23
20-68968	Hardware Pack Containing: (Spring Spacer)		
13-21703-Z	Hex Bolt, 1/2"-13 x 3" Gr. 8	2	22
13-30028-Z	Lock Washer, 1/2"	2	22
13-30382-Z	Flat Washer, 1/2" Hrdn.	2	22
20-51001-10	Cap, Spring Spacer	2	22
20-69007	Hardware Pack Containing: (Rear Sway Bar)		
13-21027-Z	Hex Bolt, 12mm-1.75 x 70mm	2	25
13-30694-Z	Flat Washer, 1-1/4" x 1/2" x 14GA.	2	25
13-10696-Z	Top Lock Nut, 12mm-1.75 Gr. 10.9	2	25
15-11083	Bushing, 5/8" Hourglass	4	25
20-831451	Sleeve, .62" x 12mm x 1.48"	4	25
Box 5 of 5 (41001 & 41201 ONLY)			
BE5-6133-T5	Shock Absorber (Front)	2	
20-51001-2	Control Arm, Lower (Rear)	2	
20-51001-8	Link, Rear Sway Bar	2	23, 25
Box 5 of 5 (41001AR & 41201AR ONLY)			
20-51001-2	Control Arm, Lower (Rear)	2	
20-51001-8	Link, Rear Sway Bar	2	23, 25
20-51001-12	Mount, Front Shock Auto Ride	2	15

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
20-69293	Hardware Pack Containing: (41001-AR)		
13-22080-Z	Hex Bolt, 9/16"-12 x 2-1/2" Gr. 8	2	15
13-22301-Z	Hex Bolt, 1/4"-20 x 3/4"	4	
13-30395-Z	Flat Washer, 9/16" Hrdn.	4	15
13-30195-Z	Flat Washer, 1/4"	8	
20-51001-13	Washer, AutoRide Front Frame	2	15
13-30772-Z	Washer, Shock	2	15
13-10397-Z	Top Lock Nut, 9/16"-12	2	15
13-10161-Z	Nyloc Nut, 1/4"-20	4	
20-51001-16	Bracket, Rear Position Sensor	2	

BEFORE YOU BEGIN

- System 10-41001AR & 10-41201AR does not include replacement shock absorbers. It is designed to accommodate the Factory Delphi AutoRide System.
- Installation by a professional mechanic is recommended. Use of the appropriate power tools, a Chevrolet/GMC service manual and a shop hoist can greatly reduce installation time.
- Prior to installation, carefully inspect the vehicle's steering and drive train systems, paying close attention to the tie rod ends, Pitman and Idler Arms, Ball Joints and wheel bearing preload. Also check steering-to-frame and suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace worn parts.
- Read instructions carefully and study the illustrations before attempting installation. RCD Suspension is not responsible for damage, failure or injury resulting from improper installation or parts substitution of this kit.
- Check the parts and hardware against the parts list to assure that your kit is complete. Report any shortages to RCD Suspension at (1-619-588-4723). The parts and hardware supplied are of high-grade material and must not be replaced by inferior parts or failure may result.
- Separate parts according to the areas they will be used. Placing the hardware with brackets before you begin will save installation time.
- This kit is supplied as a bolt-on assembly. Do not weld anything to the components and do not weld any of the components to the vehicle unless instructed to do so. All welding should be done by a certified welder.

- All components in this kit come with a protective coating. Do not plate (i.e. chrome, cadmium, zinc etc.) or otherwise alter the finish in any way. This could weaken the structural strength of the components.
- Secure and properly block vehicle prior to beginning installation.
- Always wear safety glasses when using power tools.
- Foot-pound torque readings are listed on the Torque Specifications chart at the end of the instructions unless specifically stated in an instruction. **DO NOT USE AN IMPACT WRENCH TO TIGHTEN ANY OF THE BOLTS.**

PLEASE NOTE

WARNING: DO NOT USE WHEEL SPACERS.

Front end realignment is necessary.

Speedometer recalibration is necessary if bigger tires (10% more than stock diameter) are installed.

Clears 33" x 12.50" tires on 16" x 8" wheels, 35" x 12.50" with minor bumper trimming.

Requires wheels with a maximum of 4-1/2" of back spacing.

***Special tools are required for safe removal and installation of the Tie-Rods, Torsion Bars, These tools can be purchased from your GM Dealer.**



**Ball Joint Separator
Tool # J 43631**



**Torsion Bar Unloading
Tool # J 36202**



**Steering Linkage Puller
Tool # J 24319**

FRONT DISASSEMBLY

1) **GETTING STARTED:** Measure ride height with vehicle supporting its own weight. Ride height is the measured distance from the center of spindle-to-top of the fender well (Illustration 1).

Ride Height Measurement

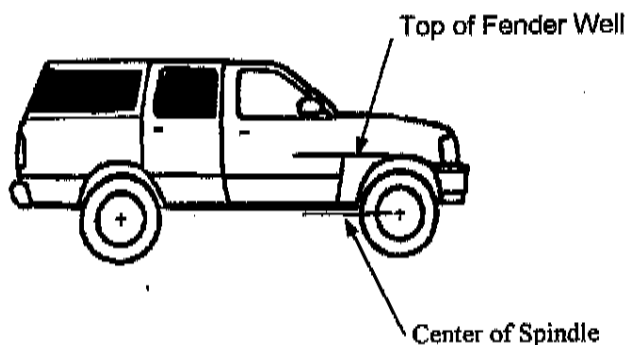


Illustration 1

2) Raise the vehicle. If working without a shop hoist, put vehicle in gear, set emergency brake and block rear wheels in front and behind tires. Loosen front wheel lug nuts. Place floor jack under the lower control arm's front crossmember and raise vehicle. Place safety jack stands under the frame rails behind the front wheel wells, and lower the frame onto the stands. Remove front wheels.

WARNING- Be extremely careful when loading or unloading the torsion bars. There is a tremendous amount of stored energy in the bars. Keep your hands and body clear of the adjuster arm assembly and puller tool in case anything breaks.

3) Measure Torsion Bar Adjusting Screw depth for replacement of Torsion Adjuster Arm. Remove the torsion bar adjusting screw. Apply a small amount of lubricating grease to the puller threads and the puller shaft-to-adjuster arm contact point. Position the puller and load adjuster arm until the adjuster nut can be removed from the crossmember (Illustration 2). With the bar unloaded, slide it further forward into the lower control arm. If the bar seems lodged, use a hammer and punch through the hole in the back of the crossmember. When the bar shifts forward, the adjuster arm will fall.

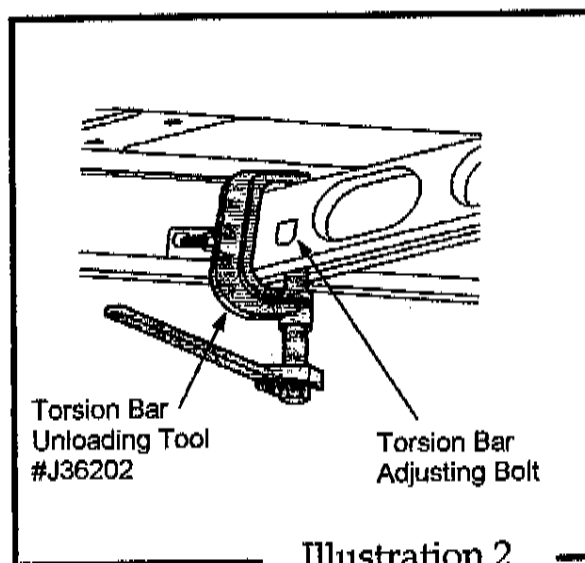
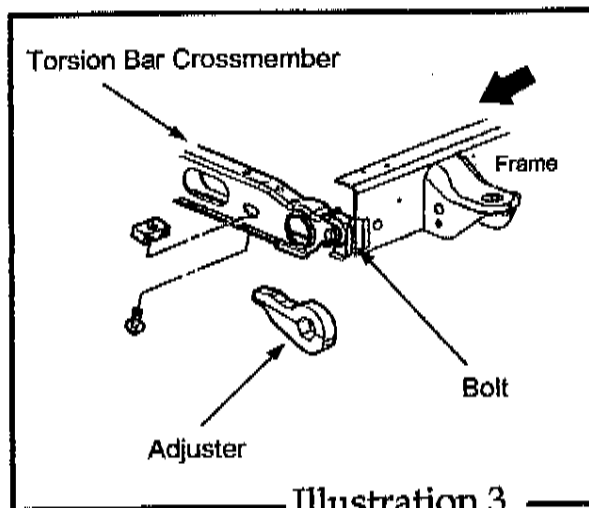
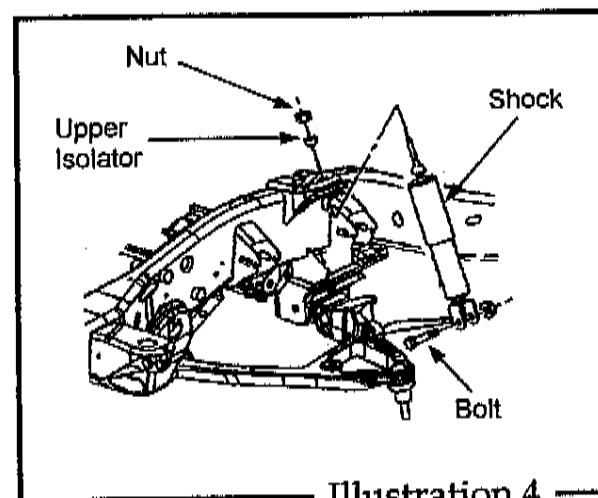


Illustration 2

4) Remove torsion bar crossmember by removing the bolt connecting the crossmember to each frame bracket (**Illustration 3**). With the crossmember out of the way, the torsion bars can be dislodged from the lower control arms and removed. Mark or separate the bars, since the bars must be reinstalled on the same side they were removed from.



5) Remove the front shock absorbers (**Illustration 4**). If equipped with **AutoRide** carefully disconnect the wiring from the front shock, paying close attention not to damage the wires. Be sure to save the shock absorbers as they will be reused in kit# 10-41001AR & 10-41201AR w/ AutoRide.



6) Pull existing front bumpstop from upper mounting cup. If equipped, remove nut and pull stop from cup.

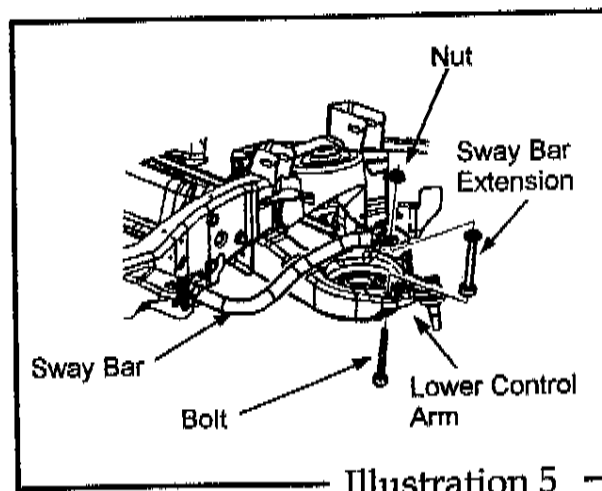
7) Remove both anti-sway bar extensions connecting the sway bar to the lower control arms (**Illustration 5**).

(41201 & 41201AR SKIP TO #10)

8) Mark the differential Flange and drive axle flange for installation reference.

9) Remove the nut and washer from the hub (**Illustration 6, see next page**). Remove six existing bolts fastening the drive axle to the differential. Pull drive axle out of the hub through the lower control arm.

NOTE: Be careful not to damage drive axle boots.



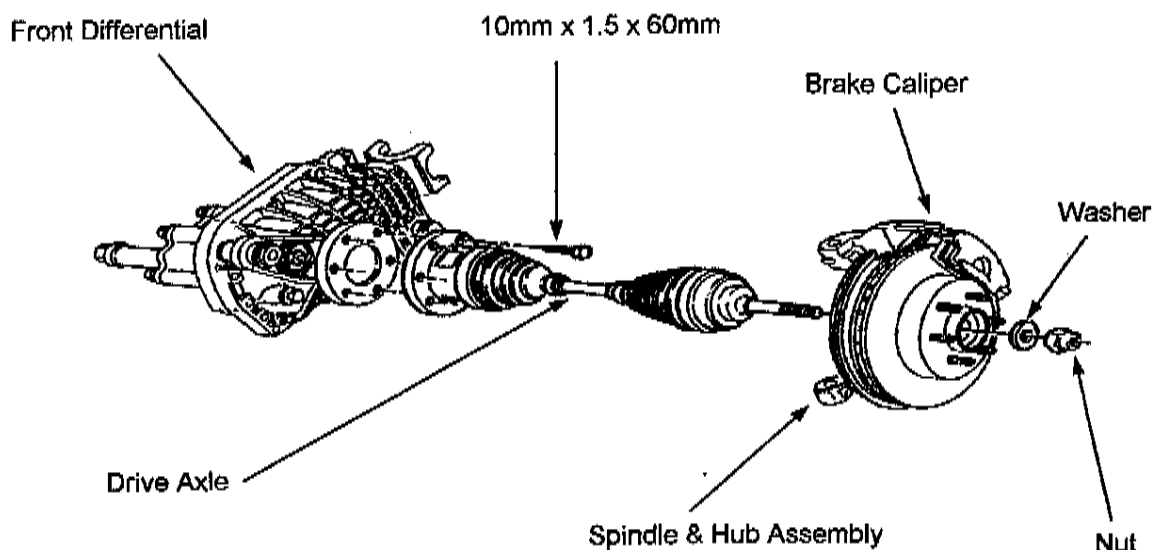


Illustration 6

10) Locate the two caliper bolts attaching brake caliper to backside of front knuckle. The caliper is held in place by Allen or Star Headed pins or there may be mounting bracket Hex Bolts. Remove the two bolts securing the caliper to the knuckle and lift caliper off brake rotor. Use a length of wire to secure brake caliper out of the way and prevent damage to the brake lines.

CAUTION: Do not allow the brake caliper to hang by the brake hose.

11) Remove the brake rotor. Locate tie rod end and remove the nut. Attach Universal Steering Link Puller (J 24319) and separate the tie rod end from the front spindle.

12) Separate the ABS sensor cable at the frame near upper control arm, if applicable.

13) Locate front lower ball joint, remove nut from ball joint. Using Ball Joint Separator Tool (J 43631) apply pressure on tool until ball joint breaks loose from lower part of the front spindle.

14) Locate front upper ball joint and remove the nut. Using a Ball Joint Separator Tool (J 43631) apply pressure on the tool until ball joint breaks loose from upper part of the front spindle. Remove front spindle with the hub and bearing assembly attached, set aside.

15) Remove the lower control arm pivot bolts and remove lower control arm (Illustration 7, see next page).

16) Repeat steps 6 thru 15 on opposite side.

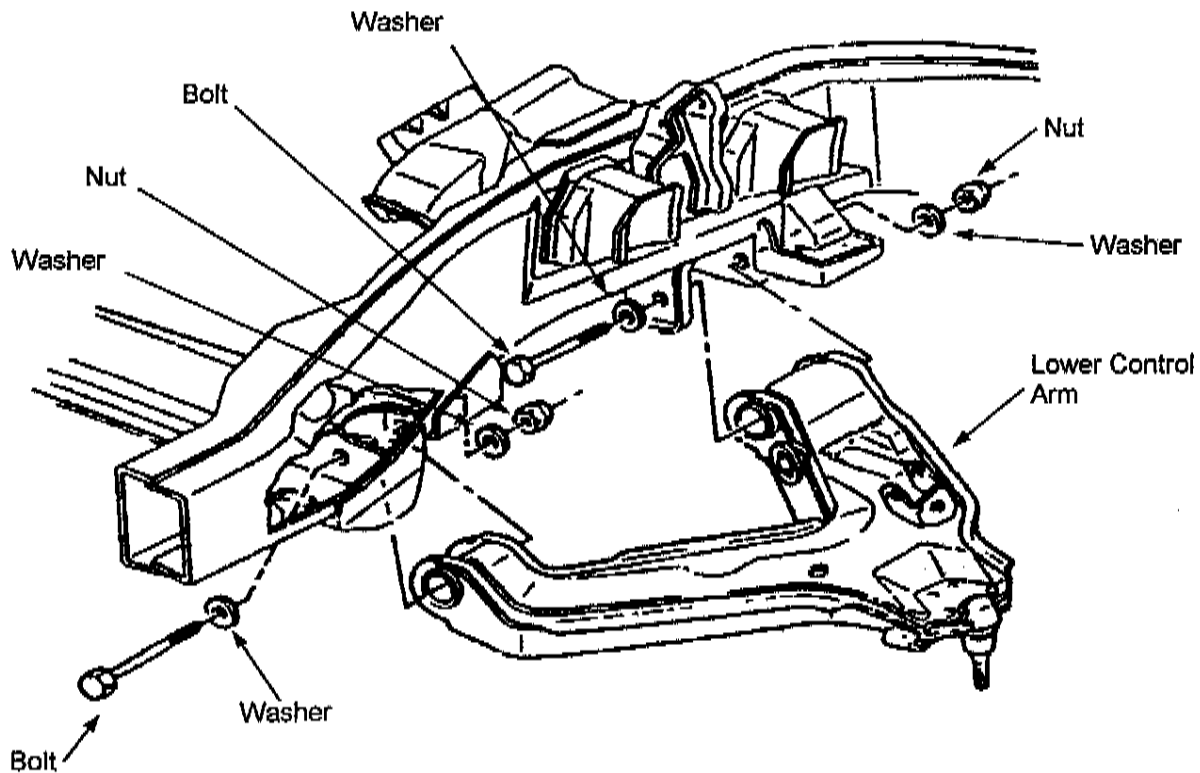


Illustration 7

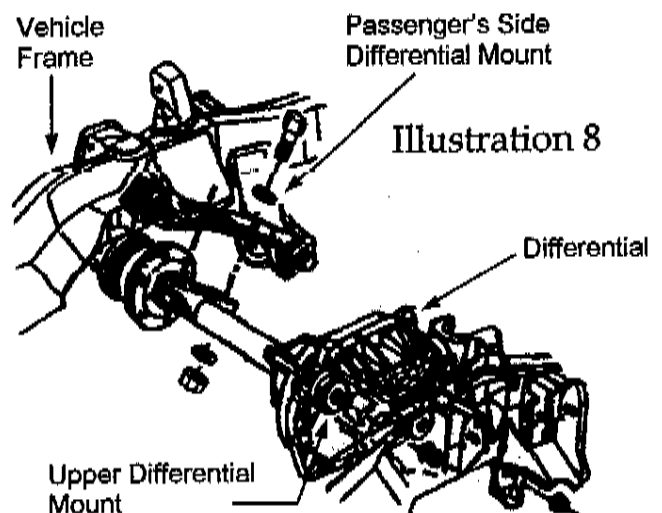
(41201 & 41201AR SKIP AHEAD TO INSTALLATION)

17) Remove the differential skid plate, if vehicle is so equipped.

18) Locate the front drive shaft U-joint to differential yoke. Place an index mark for installation reference on both the drive shaft U-joint and differential yoke. Remove the hardware from the yoke and slide the shaft rearward to disengage. Tape the bearing cap assemblies and secure the shaft out of the way.

19) Disconnect the electrical connector and vent hose from the differential assembly.

20) Support front differential assembly with a floor jack. Remove the upper mounting hardware and passenger side axle hardware (Illustration 8). Slowly remove the differential assembly from vehicle, and lower it to the floor.



21) Using a suitable cutting tool, cut off the rear lower wrap around differential mount bracket (drivers side), plus an additional one-inch of the frame supporting the bracket (Illustration 9, see next page). Weld in the provided Frame Cap (20-830554). File all sharp edges and paint exposed metal.

22) Locate the upper mount on front differential housing. Cut off upper mount flush to main case (Illustration 10). If the driver side wrap around differential mount bracket was properly modified grinding to clearance the case will not be necessary. If necessary, remove material from the left side of the differential to provide clearance for the lower control arm frame mount.

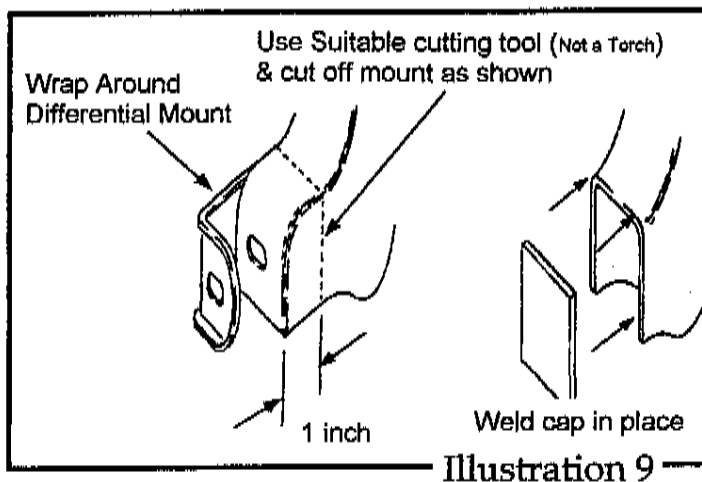


Illustration 9

If necessary, Grind this area

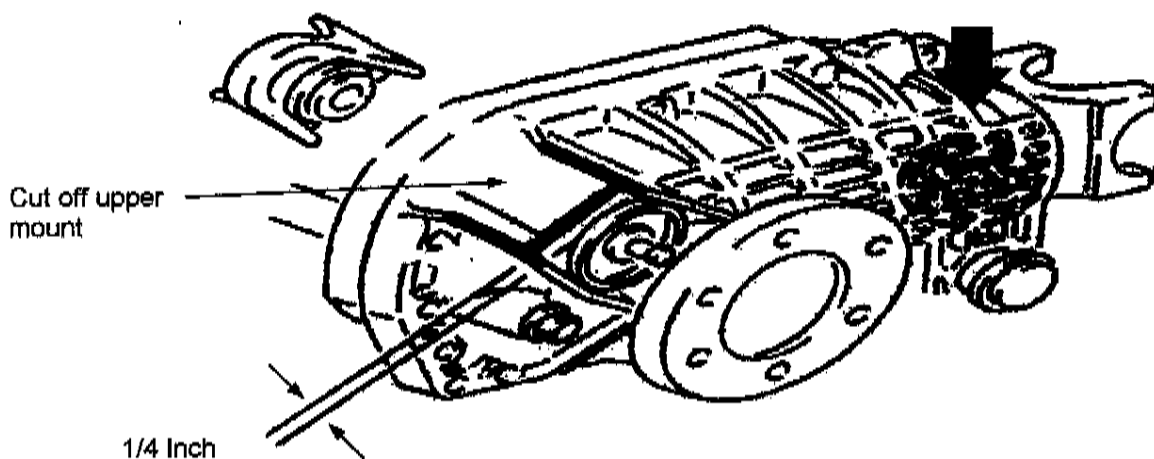


Illustration 10

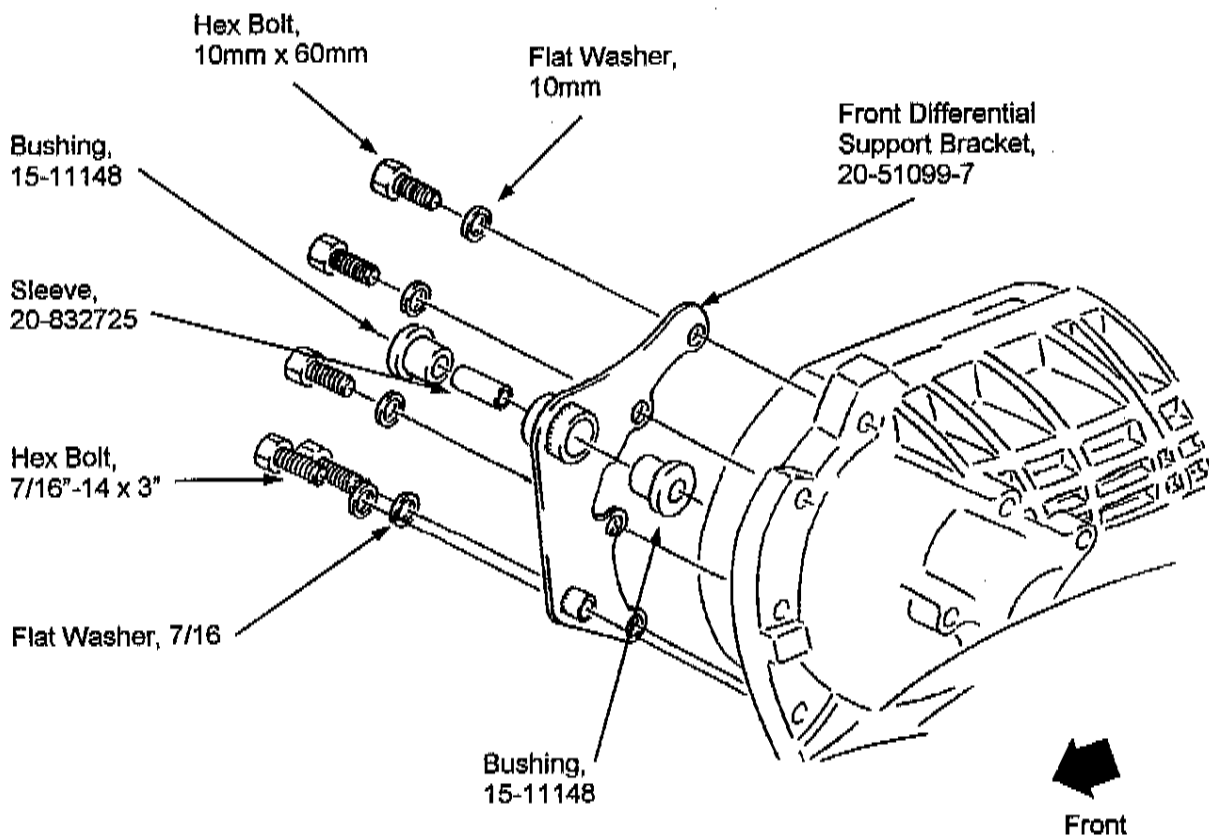
FRONT INSTALLATION

(41201 & 41201AR SKIP TO #3)

1) Install Bushings (15-11148) and Sleeve (20-832725), into Differential Support Bracket (20-51099-7). Attach Differential Support Bracket assembly to the front Differential (**Illustration 11**). Use Loctite (13-90490) compound and hardware provided. Torque to specification chart on last page of instructions.

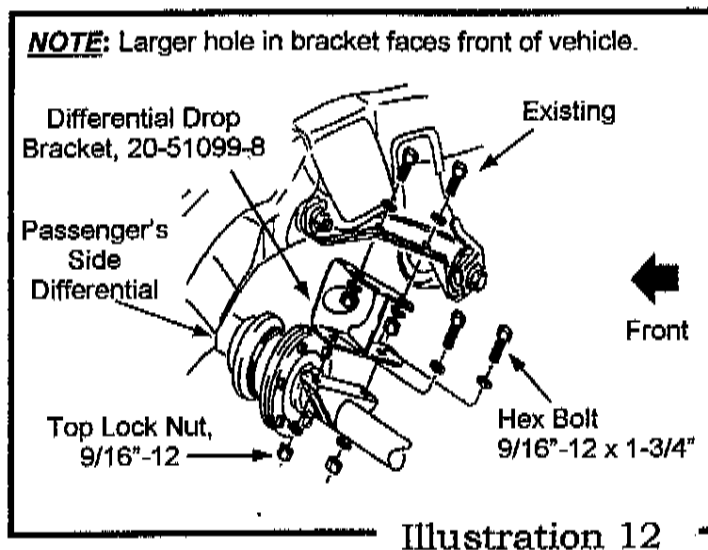
NOTE: When attaching the Differential Support Bracket, gear oil may leak from the case. Place this assembly in a large oil pan before removing hardware to catch the excess oil. Add one pint of factory recommended lubricant to differential before differential is installed.

Illustration 11

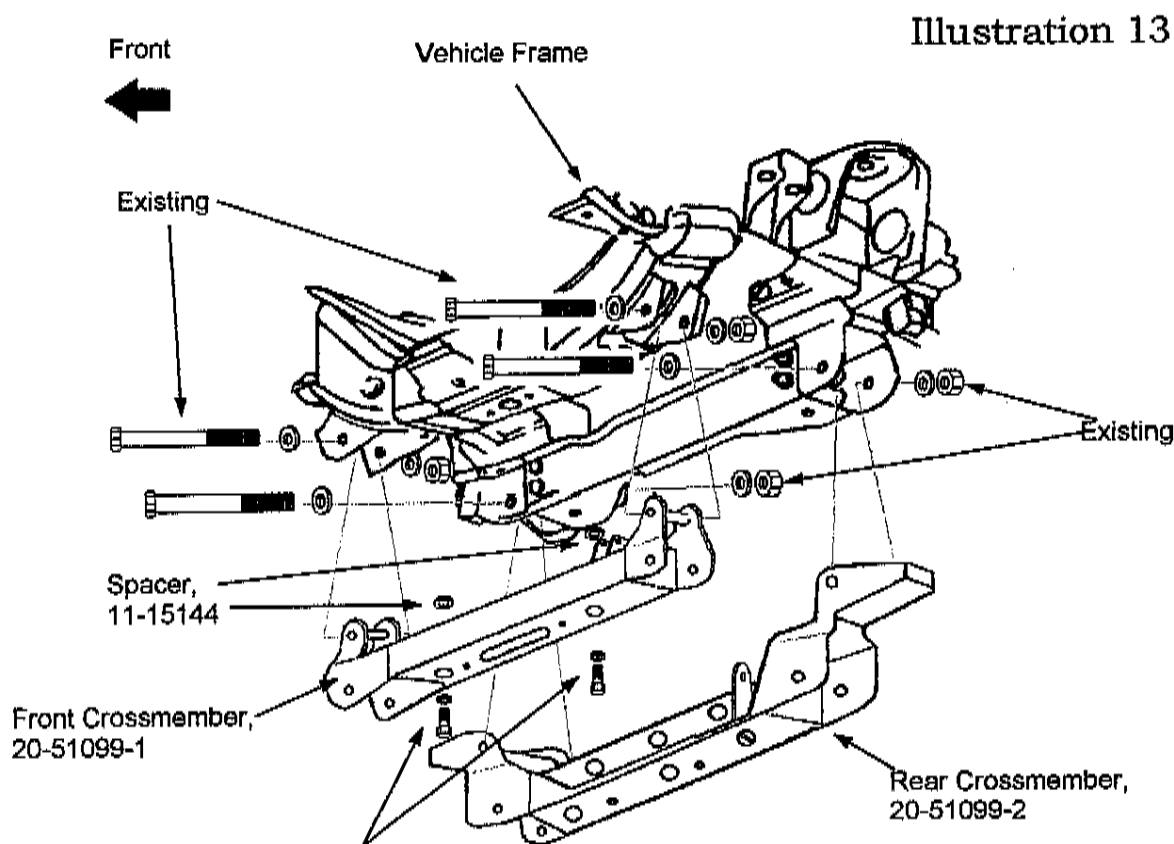


2) Loosely attach the passenger side Differential Drop Bracket (20-51099-8), to the differential axle. Use hardware provided (Illustration 12).

3) Install Front Crossmember (20-51099-1) into existing front lower control arm mounting pockets using existing hardware (Illustration 13). Make sure bolt heads are facing to the front of the vehicle, install Spacer (11-15144) between Crossmember and bottom of frame using two (2) bolts removed from drive axle. Do not tighten at this time.



4) Install Rear Crossmember (20-51099-2) into existing rear lower control arm mounting pockets, use hardware previously removed, Make sure the bolts heads are facing to the front of the vehicle. Do not tighten at this time.



Use Existing Drive Axle-to-Differential Bolt

5) Attach low profile Bumpstops (15-11018) to the rear crossmember bumpstop pad, using the 3/8" hardware provided.

(41201 & 41201AR SKIP TO #10)

6) Support the front differential assembly with a floor jack. Slowly raise the differential assembly into position.

7) Place the front driver side Differential Support Bracket between the tabs located on front crossmember. Position the rear driver side differential mount to rear crossmember differential mounting area. Install passenger side Differential Drop to frame bracket, using existing hardware. Attach Differential Support Bracket to front crossmember and rear differential mount to rear crossmember using existing hardware previously removed. Do not tighten at this time,

8) Connect the differential vent hose and electrical connector.

9) Align marks made on the front drive shaft U-joint and differential yoke and reconnect the front drive shaft to differential.

10) Install lower control arms into the front and rear crossmembers using appropriate 5/8" and 9/16" hardware provided. Do not tighten at this time. Make sure bolt heads face front of vehicle.

11) Torque existing lower control arm nuts used to install new Crossmembers to 107 ft. lbs. starting with the front then the rear.

(41201 & 41201AR SKIP #12)

12) Torque front differential mounting hardware to 75 ft. lbs.

13) Remove the splash shield, hub and bearing assembly from existing front spindles. Reinstall the splash shield, hub and bearing assembly to new Front Spindles (20-51099-5D Drvr. and 20-51099-6P Pass.).

NOTE: Make sure that hub and bearing assemblies are reinstalled on the same side they were removed from. Apply Loctite compound to existing hardware. Torque bolts to 133 ft. lbs.

14) Connect driver side front spindle assembly to the upper and lower control arm ball joints. Torque upper ball joint nut to 37 ft lbs. Torque lower ball joint nut to 74 ft. lbs.

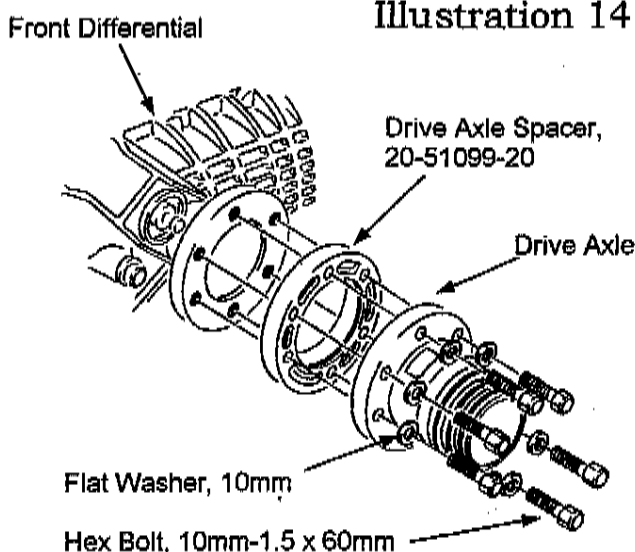
15) Loosen the tie rod end jam nut and thread the rod inward two complete turns. Retighten the jam nut and attach the tie rod to the front spindle. Torque nut to 46 ft. lbs.

(41201 & 41201AR SKIP TO #18)

16) Reinstall the drive axle into front spindle, using hardware previously removed. Do not tighten axle hub nut yet.

NOTE: Do not lubricate the drive axle splines and Front spindle with grease.

17) Place Drive Axle Spacer (20-51099-20), against the differential flange (Illustration 14). Align the reference marks on the axle flange and differential flange, making sure all mounting holes are aligned with each other. Attach using Loctite compound and hardware provided, torque bolts to 58 ft. lbs.

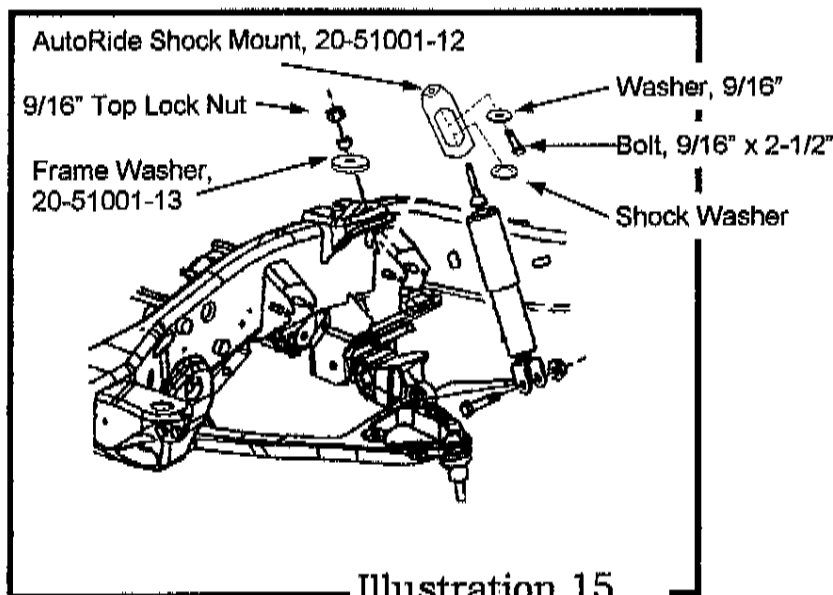


18) Install brake rotor. Reattach the front caliper with existing hardware. If removed, torque caliper mounting pins to 38 ft. lbs. If applicable, torque large Hex Bolts to 129 ft. lbs.

19) If equipped, connect the ABS sensor cable at the frame near upper control arm.

20) Torque axle hub nut to 155 ft. lbs.

21) Install new longer front shock absorbers (BE5-6133-T5) **if vehicle is NOT equipped with AutoRide.**



22) **If Vehicle is equipped with AutoRide** install front AutoRide shock mount (20-51001-12) and frame washer (20-51001-13) as shown in Illustration 15 using 9/16" x 2-1/2" bolt and hardware provided. Attach factory AutoRide shock to new mount using shock washer provided and attach AutoRide wiring to shock stem through large access hole.

NOTE: You need at least 1/4" clearance between shock body and stock bumpstop frame bracket. If clearance is needed, grind leading edge of stock bumpstop bracket (Illustration 16, next page).

23) Repeat steps 10 thru 21 on opposite side.

24) Cycle front suspension through full travel and check for adequate clearance between shocks, bumpstops and brake line hoses.

25) Install Bushings (15-11148) and Sleeves (20-830918) into both ends of the Lateral Compression struts (20-51099-24). Attach Lateral Compression Strut to Strut Mount bracket located on rear crossmember using hardware provided (Illustration 17). Do not tighten at this time.

26) Remove transmission skid plate, if equipped,

27) Attach Strut Mount Bracket (20-51099-22) to opposite end of the compression strut. Rotate the compression strut assembly upward until bracket contacts the bottom of the transmission crossmember. Use the bracket as a guide to mark and then center punch the mounting hole locations. Drill 1/2" hole at each of the marked locations. Install using the 1/2" hardware provided. Torque the nuts to 65 ft. lbs.

28) If vehicle is equipped with a transmission skid plate, notch the skid plate for clearance of the strut mount bracket. Reinstall the skid plate using existing hardware.

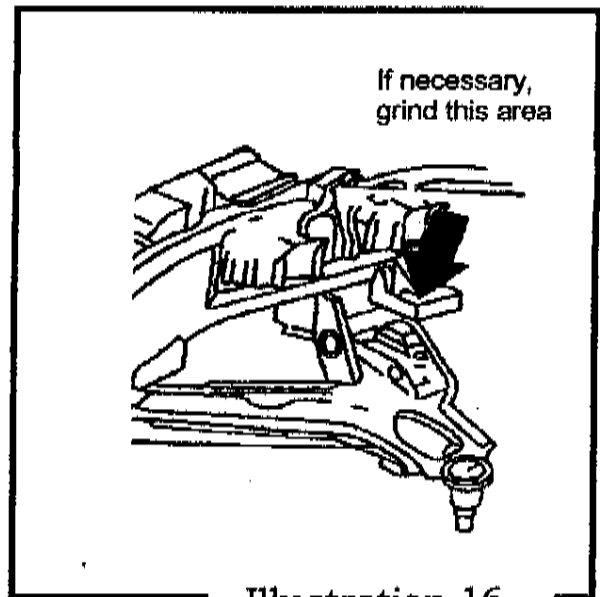


Illustration 16

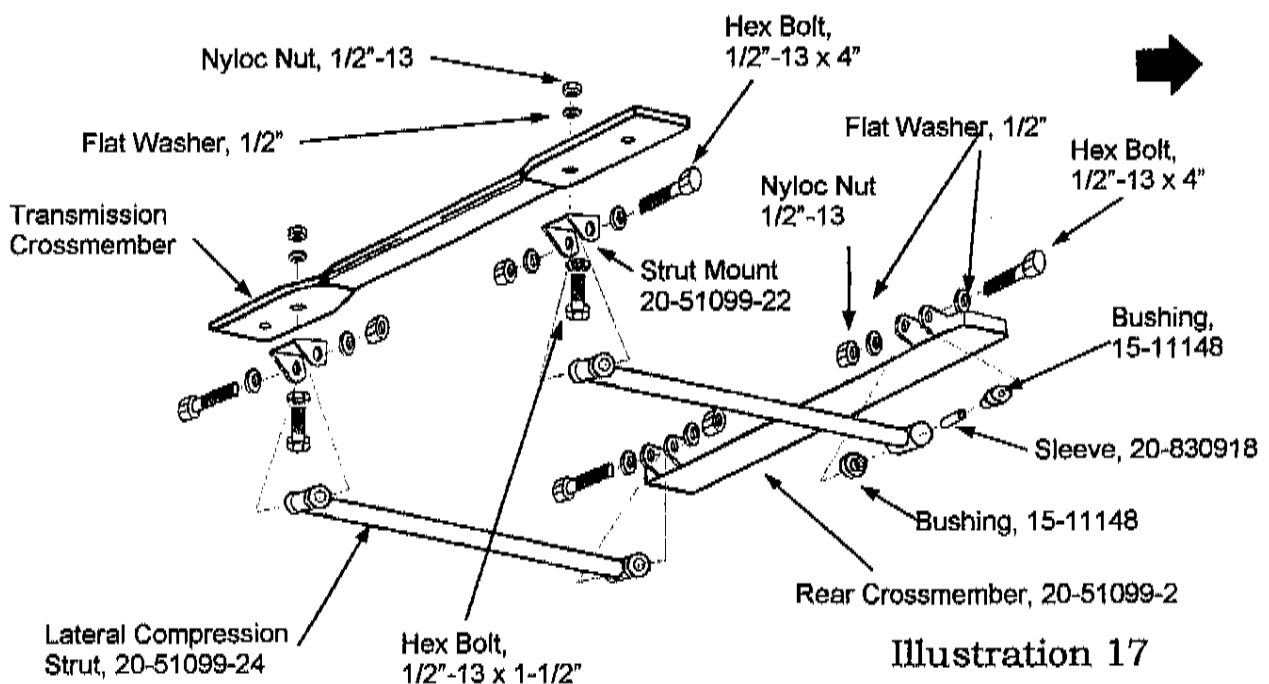


Illustration 17

29) On inside of frame rail, guide flat end of Torsion Bar Drop Bracket (20-51001-3) over existing torsion bar crossmember bracket (**Illustration 18**). Pass 9/16"-12 x 3-1/4" Hex Bolt with Flat washer through Drop Bracket and through eye of frame bracket. Install Flat Washer and 9/16"-12 Top Lock nut. Do not tighten yet.

30) Repeat Step 28 on opposite side of vehicle.

31) Load the torsion bars into their respective lower control arms. Slide the torsion bars forward.

32) Install existing torsion bar crossmember to new Brackets. Insert crossmember end tabs over lower Drop Bracket tabs. Insert Spacer Tube (11-13490) between Drop Bracket tabs. Align holes and insert existing crossmember mounting bolt through eye of bar tube and mounting tabs. Connect Drop Bracket to top of crossmember utilizing an existing 1/2" hole. Insert 1/2"-13 x 1-1/2" Hex Bolt, with Flat Washer, up through torsion bar and Bracket. Secure with Flat Washer and 1/2" Top Lock nut. Tighten all Bracket mounting nuts. Torque 1/2" nuts to 90 ft. lbs. Torque 9/16" nuts to 130 ft. lbs. Torque existing torsion bar bolt-to-weld nut to 70 ft. lbs.

33) Slide the torsion bar rearward through the torsion bar crossmember while holding the adjustment arm in the proper position. Verify that reference marks on the adjustment arm and torsion bar matches.

34) Install the Torsion Bar Unloading Tool (J 36202). Be very careful while increasing tension on the torsion bar.

35) Reinstall the retainer plate and adjusting bolt. Thread the adjusting bolt in until exposed length matches the measured length before removal. This way, they can be installed in the stock position.

36) Repeat steps 24 thru 35 on opposite side.

37) Install front tire/wheel assemblies and lower vehicle to the ground.

38) Refer to Step 1 of disassembly and adjust ride height.

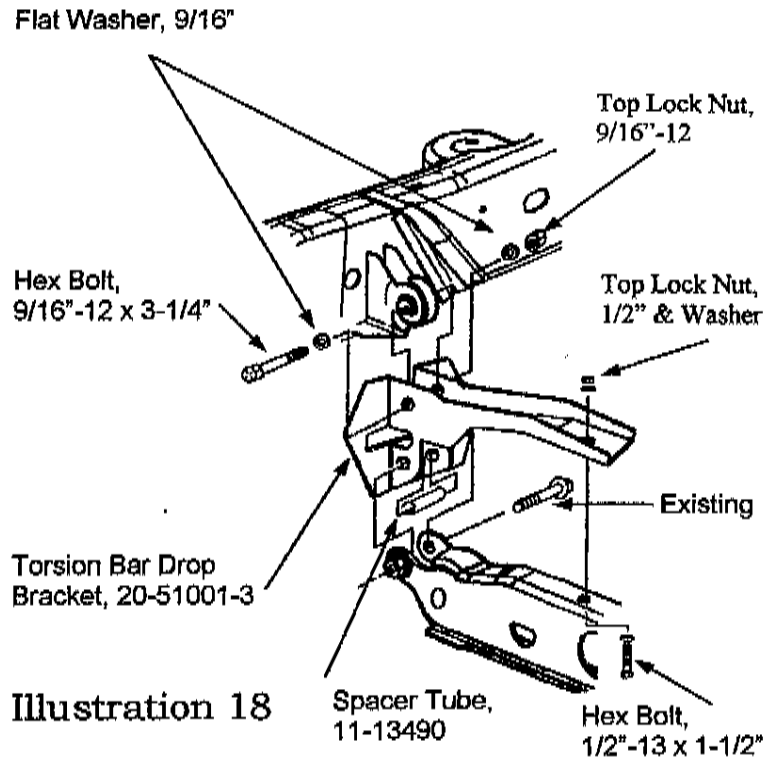


Illustration 18

39) When the vehicle is at ride height, torque the lower control arm to front and rear crossmember's pivot nuts to 121 ft. lbs. Torque nuts starting with the front then the rear.

40) Reinstall existing sway bar to both lower control arms using Sway Bar Extension (20-833739) and hardware provided (**Illustration 18**). Torque Button Head bolts to 66 ft. lbs.

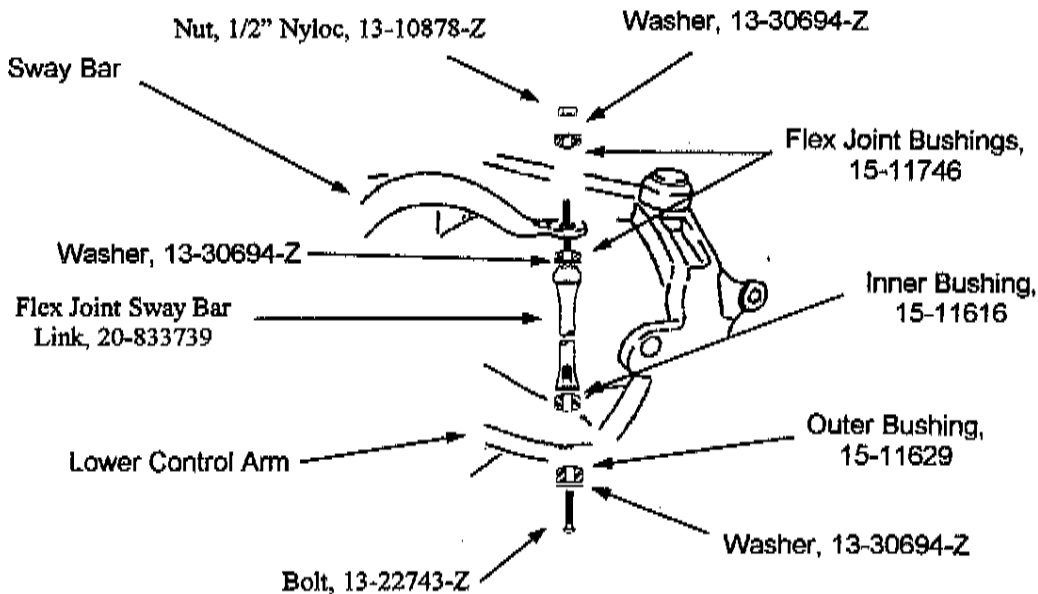


Illustration 19

REAR INSTALLATION

1) Raise the vehicle. If working without a shop hoist, support vehicle with suitable safety stands. To do this put vehicle in gear, block front wheels, both in front and behind tires, then disengage emergency brake. Place floor jack underneath rear axle and raise vehicle. Place safety jack stands under frame to support vehicle and lower vehicle onto safety stands. Remove rear tire/wheel assemblies.

2) Use a floor jack to raise the rear axle just enough to relieve tension from the shock absorbers.

3) Remove nut securing both of the sway bar links to ends of sway bar. Remove nut from sway bar to frame bracket and remove links.

4) On passenger's side of vehicle remove upper track bar mount bolt (**Illustration 20**). Pull track

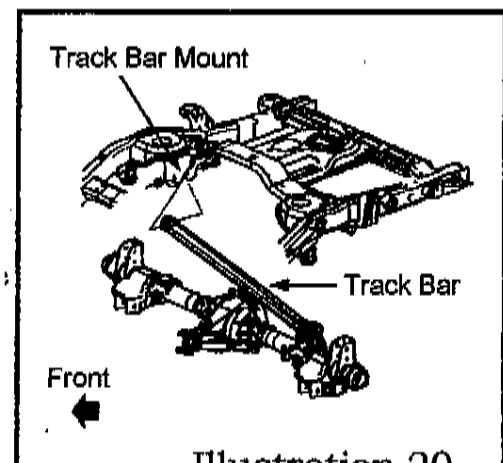


Illustration 20

5) Remove emergency brake cable hanger from passenger's side of vehicle.

6) Remove differential bolt securing brake line bracket to differential.

7) Remove upper and lower mounting bolts from rear shock. Remove shocks and secure shock to frame with mechanics wire so shock does not hang by electrical connectors (if equipped).

8) Remove the lower control arm forward mounting bolt from the frame mount. Remove rear bolt to axle mount and remove control arm.

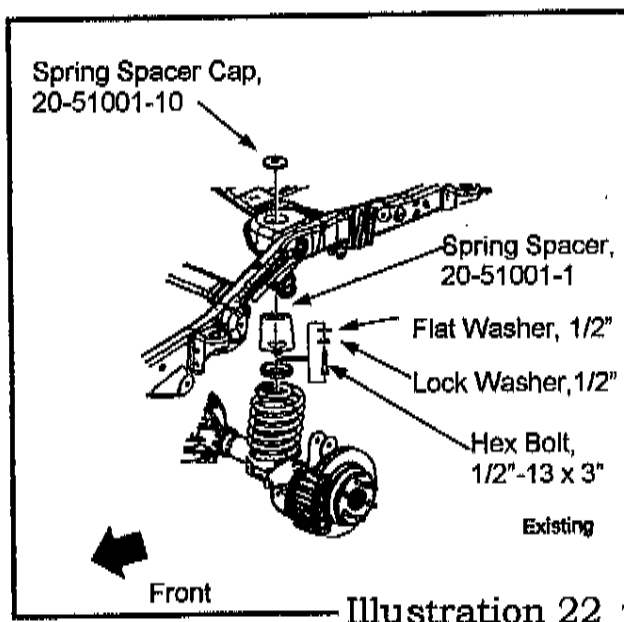
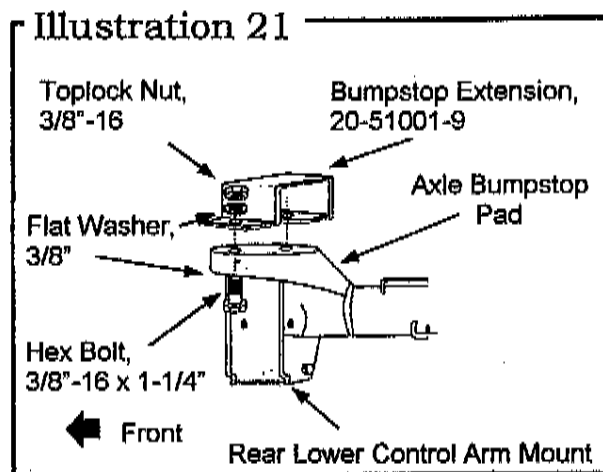
9) Repeat steps 7 & 8 on opposite side of vehicle.

10) Carefully lower axle and remove coil spring. Keep rubber isolators for installation.

NOTE: Make sure axle does not hang on brake line or hoses.

11) Align rear hole of Bumpstop Extension (20-51001-9) to existing hole on axle bumpstop pad (**Illustration 21**). Mark front mounting hole location. Remove Extension and drill 3/8" mounting hole. Install Extension to axle pad using 3/8"-16x 1-1/4" Hex Bolt with Flat Washers and Top Lock Nuts provided.

12) Install rear Coil Spring Spacer (20-51001-1) to coil spring pocket using large Spring Spacer Cap (20-51001-10) (**Illustration 22**). Lay Cap on top of existing coil spring pocket washer side down. Insert Coil Spacer (window side down) inside the upper spring pocket. Use socket and extension to insert 1/2"-13 x 3" Hex Bolt with Washers through hole in center of Spacer. Hold Spacer Cap and thread Bolt into Cap.



13) Insert Lower Control Arm (20-51001-2) into frame mount with Arm end gussets facing down. Insert rear of lower control arm into axle mount. Secure arm with existing hardware. Torque bolt to 89 ft. lbs.

14) Repeat steps 10-13 on Passenger side.

15) Install Passenger Side rear shock mount first. Remove stock E-Brake cable hanger located below the stock rear upper shock mount. Use existing shock bolt and attach top of Rear Shock Relocating Mount (20-51001-14) to stock shock top frame mount (Illustration 23). Swing the lower half of the Shock Mount forward so that the shaft points toward the rear differential. Line up the lower bracket mount with the hole from the E-Brake hanger. Using the bracket as a guide drill hole out to 1/2". Install 1/2" bolt and hardware supplied. Install factory shock into bracket using 9/16" bolt and hardware supplied.

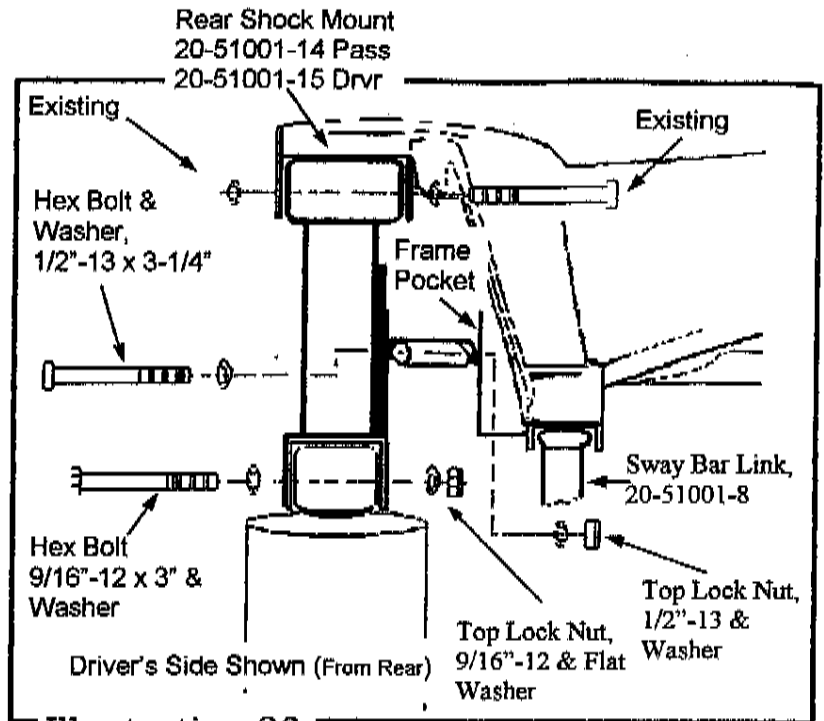
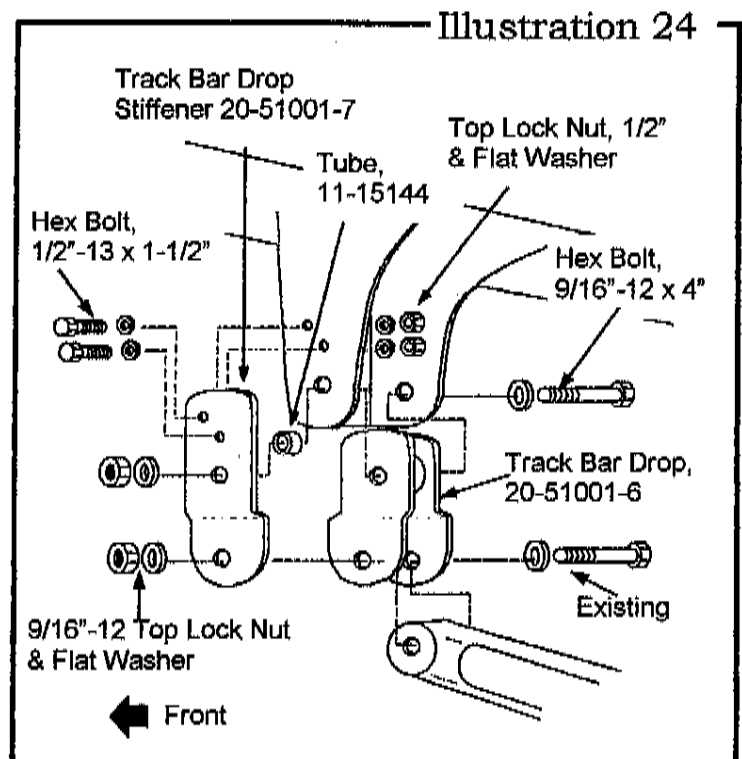


Illustration 23

16) Repeat Step 15 on driver side.

17) Insert rear Track Bar Drop (20-51001-6) between mounting tabs of track bar mount (Illustration 24). Install Drop with flat edge towards outside of vehicle. Insert 9/16"-12x 4" Hex Bolt through eye of track bar mount and Drop bracket. On forward side of track bar mount insert spacer Tube (11-15144) onto 9/16" Bolt. Insert Track Bar Drop Stiffener (20-51001-7) onto Bolt so radius end matches radius on forward part of Drop bracket. Install 9/16" Flat Washer and Top Lock nut. Do not tighten yet. Raise track bar and insert end into Track Bar Drop. Use existing hardware to attach bar. Do not tighten yet.



NOTE: Final assembly of Track Bar Drop bracket will be finished once vehicle is supporting its own weight.

18) Install existing coil spring with rubber isolator between top and bottom spring pockets. Raise differential until springs make contact with upper Spring Spacer.

19) If vehicle is equipped with AutoRide, disconnect Rear Ride Position Sensor rod from clamp around upper control arm and unscrew ball that sensor was clipped onto.

20) If vehicle is equipped with AutoRide, using 1/4" hardware provided, bolt new Ride Position Sensor Bracket in where ball used to be with third upper hole facing front of vehicle. Thread self tapping ball screw removed into remaining hole and reattach Air Ride Position Sensor.

21) Repeat steps 16 thru 18 on opposite side.

22) Install emergency brake cable hanger to passenger's side using exiting hardware.

23) Install Brake Line Extension (20-51001-11) to differential using 5/16"-18 x 1-1/4" hardware provided. Torque differential bolt to 30 ft. lbs.

24) Press Bushing (15-11083) and Sleeve (20-831451) into ends of Sway Bar Links (20-51001-8) (illustration 25). Install Links on both sides of vehicle to existing mounting tabs using existing hardware on top mount and 12mm-1.75x70mm Hex Bolt, large Flat Washer (13-30694-Z) and 12mm-1.75 Top Lock nut. Install large Washer on Link Bushing side. Torque 12mm nuts to 75 ft. lbs. Torque existing link nut to 48 ft. lbs.

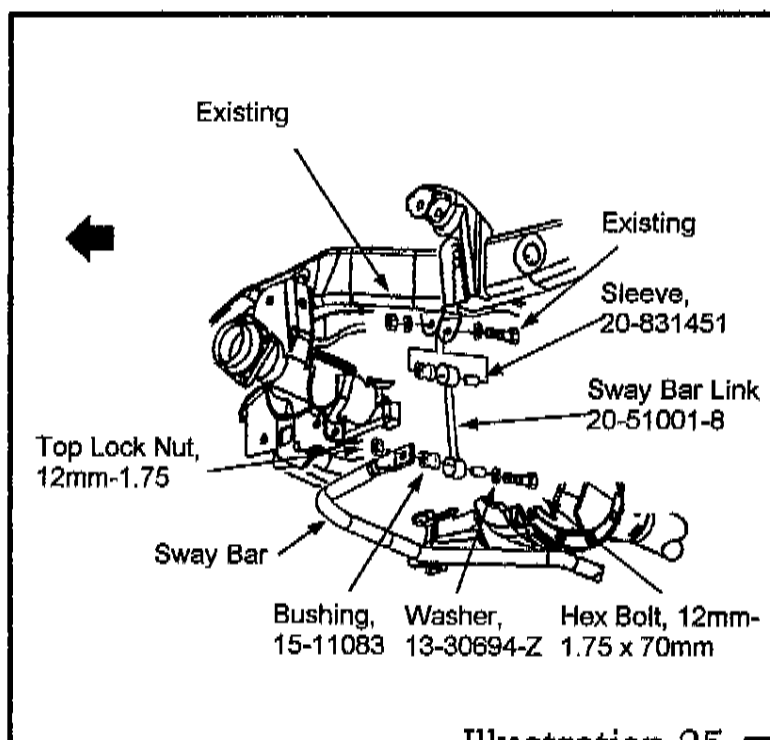


Illustration 25

25) Install rear tire/wheel assemblies and lower vehicle. Torque lug nuts to 140 ft. lbs.

26) After the rear lift is complete, final ride height adjustment should be performed. Manually bounce the front and rear of the vehicle to pre-settle the bar and springs. Evenly adjust the torsion bar bolts until the front of the vehicle is approximately 1/2" above the final desired ride height. Bars will settle slightly after vehicle is driven.

NOTE: Each bar may require slightly different adjustment to level vehicle side to side.

27) Ensure rear wheels are aligned in fender well and attach Trac Bar Drop bracket. With the Track Bar Drop bracket hanging straight down, locate and drill the two remaining 1/2" mounting holes for Stiffener. Install 1/2"-13 x 1-1/2" Hex Bolt with Flat Washers and Nyloc Nuts provided. Torque 1/2" nuts to 90 ft. lbs. Torque 9/16" nut to 130 ft. lbs.

SOME FINAL NOTES

- After installation is complete, double check that all nuts and bolts are tight. Refer to the torque specifications chart on last page.
- If new tires are installed that are more than 10% taller than original tires, the speedometer must be recalibrated for the Rear Wheel Anti-Lock Brake System to function properly. Contact an Authorized GM dealer for details on recalibration.
- With vehicle on the floor, cycle steering lock to lock and inspect steering, suspension and driveline systems for proper operation, tightness and adequate clearance. Recheck brake/hose fitting for leaks. Be sure all hoses are long enough.
- Have headlights readjusted to proper setting.
- Realign front end to factory specifications. Be sure vehicle is at desired ride height prior to realignment.

TORQUE SPECIFICATIONS *(Grade 8 & Class 10.9)*

5/16" NUTS	20 ft. lbs.	M6	9 ft. lbs.
3/8" NUTS	35 ft. lbs.	M8	23 ft. lbs.
7/16" NUTS	60 ft. lbs.	M10	45 ft. lbs.
1/2" NUTS	90 ft. lbs.	M12	75 ft. lbs.
9/16" NUTS	160 ft. lbs.	M14	120 ft. lbs.
5/8" NUTS	175 ft. lbs.	M16	165 ft. lbs.

EXISTING HARDWARE TORQUE SPECIFICATIONS:

Lower Control Arm Nuts	107 ft. lbs.	Rear Shock Nuts (Lower C3500HD)	52 ft. lbs.
Tie Rod Nuts	40 ft. lbs.	Lower Ball Joint Nuts	74 ft. lbs.
Front Shock Nuts (upper & Lower)	20 ft. lbs.	Upper Ball Joint Nuts	37 ft. lbs.
Rear Shock Nuts (Upper)	13 ft. lbs.	Stabilizer Bar Nuts	13 ft. lbs.
Rear Shock Nuts (Upper C3500HD)	11 ft. lbs.	Splash Shield Bolts	19 ft. lbs.
Rear Shock Nuts (Lower)	74 ft. lbs.	Drive Axle Inboard Flange Bolts	58 ft. lbs.
Rear Shock Nuts (Lower C3500HD)	52 ft. lbs.		