



8/31/05

**'02-'05 DODGE 1500 4WD
6" SUSPENSION SYSTEM
P/N: 10-46402**

INSTALLATION INSTRUCTIONS

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.

Part List

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
Box 1 of 8			
20-56402-1	Front Crossmember	1	15
20-56402-2	Rear Crossmember	1	23,29
Box 2 of 8			
20-56402-5D	Steering Knuckle/Spindle - Driver's Side	1	27
Box 3 of 8			
20-51800-4	Compression Strut	2	29
20-51099-22	Rear Compression Strut Mount	2	29
20-69878	Hardware Pack: Compression Strut	1	
13-22262-Z	Hex Bolt, 1/2" x 4" Gr. 8	4	29
13-21664-Z	Hex Bolt, 1/2" x 1-1/4" Gr. 8	2	29
13-30382-Z	Washer, 1/2" Flat HRDN	12	29
13-10514-Z	Nut, 1/2" Top Lock	6	29
15-11148	Bushing, Red	8	29
20-830918	Sleeve, 3/4" x .095w x 2.75"	4	29
Box 4 of 8			
20-56402-3	Rack and Pinion Drop Bracket	1	18
20-56402-4	Front Bumpstop Extension	2	21
20-56402-11	Differential Drop Bracket (Drvr. Front)	1	22
20-56402-12	Sway Bar Drop Bracket (Pass.)	1	26
20-56402-13	Sway Bar Drop Bracket (Drvr.)	1	
20-56402-14	Torsion Bar Drop Bracket	2	30
20-70382	Hardware Pack: Rack and Pinion Mount	1	
13-23068-Z	Hex Bolt, 16mm x 90mm Gr. 10.9	2	18
13-22054-Z	Hex Bolt, 5/8" x 7-1/2" Gr. 8	2	18
13-21456-Z	Hex Bolt, 1/2" x 1-1/2" Gr. 8	3	18
13-30863-Z	Washer, 16mm Split Lock	2	18
13-30369-Z	Washer, 5/8" Flat HRDN	4	18
13-30382-Z	Washer, 1/2" Flat HRDN	6	18
13-10501-Z	Nut, 5/8" Nyloc	2	18
13-10038-Z	Nut, 1/2" Nyloc	3	18
20-66849	Hardware Pack: Diff Mount, Drvr. Front	1	
13-22132-Z	Hex Bolt, 1/2" x 2-1/4" Gr. 8	4	22
13-30382-Z	Washer, 1/2" Flat HRDN	8	22
13-10514-Z	Nut, 1/2" Top Lock	4	22

20-70395	Hardware Pack: Front Bumpstops	1	
15-11031	Bumpstop	2	21
13-21443-Z	Hex Bolt, 7/16" x 1" Gr. 8	2	21
13-30304-Z	Washer, 7/16" Flat HRDN	2	21
20-70408	Hardware Pack: Diff Mount, Pass.	1	
20-56402-9	Differential Drop Bracket (Pass. Inside)	1	22
20-56402-10	Differential Drop Bracket (Pass. Outside)	1	22
13-21456-Z	Hex Bolt, 1/2" x 1-1/2" Gr. 8	2	22
13-21703-Z	Hex Bolt, 1/2" x 3" Gr. 8	4	22
13-30382-Z	Washer, 1/2" Flat HRDN	12	22
13-10514-Z	Nut, 1/2" Top Lock	6	22
20-70421	Hardware Pack: Crossmembers	1	
13-21456-Z	Hex Bolt, 1/2" x 1-1/2" Gr. 8	2	15
13-21950-Z	Hex Bolt, 5/8" x 5-1/2" Gr. 8	2	15
13-21703-Z	Hex Bolt, 1/2" x 3" Gr. 8	4	23
13-30382-Z	Washer, 1/2" Flat HRDN	12	15, 23
13-30369-Z	Washer, 5/8" Flat HRDN	4	15
13-10514-Z	Nut, 1/2" Top Lock	6	15, 23
13-10501-Z	Nut, 5/8" Nyloc	2	15
20-70434	Hardware Pack: Diff Mount, Drvr. Rear	1	
20-56402-7	Differential Drop Bracket (Drvr. Outside Rear)	1	22
20-56402-8	Differential Drop Bracket (Drvr. Inside Rear)	1	22
13-22600-Z	Hex Bolt, 1/2" x 2-1/2" Gr. 8	3	22
13-30382-Z	Washer, 1/2" Flat HRDN	6	22
13-10514-Z	Nut, 1/2" Top Lock	3	22
20-70447	Hardware Pack: Sway Bar & Skidplate	1	
13-21664-Z	Hex Bolt, 1/2" x 1-1/4" Gr. 8	5	25
13-21118-Z	Hex Bolt, 7/16" x 1-1/4" Gr. 8	4	26
13-30028-Z	Washer, 1/2" Split Lock	5	25
13-30382-Z	Washer, 1/2" Flat HRDN	5	25
13-30304-Z	Washer, 7/16" Flat HRDN	8	26
13-10384-Z	Nut, 7/16" Top Lock	4	26
20-70460	Hardware Pack: Torsion Bar Drop Mounts	1	
13-23484-Z	Hex Bolt, 12mm x 90mm Gr. 10.9	2	30
13-30546-Z	Washer, 12mm Flat	4	30
13-10696-Z	Nut, 12mm Top Lock	2	30
20-70473	Hardware Pack: Steering Extension	1	
20-833596	Steering Shaft Extension	1	19
13-23549-Z	Hex Bolt, 10mm x 35mm Gr. 10.9	1	
20-70551	Hardware Pack: Front Brake Lines	1	
50-5602-1	Front Brake Line - Driver's Side	1	
50-5602-2	Front Brake Line - Passenger's Side	1	
50-5602-3	Brake Line E-Clip	2	
50-5602-4	Brake Line Aluminum Crush Washer	4	
50-5602-5	Brake Line Plug Fitting	1	
20-68305	Hardware Pack: Misc.	1	
13-20447-Z	Screws for Brake Line Clamps	4	
15-10966	Brake Line Clamps	4	
15-11395	Zip Tie, 6"	4	

15-11447	Zip Tie, 8"	2	
15-11460	Zip Tie, 11"	2	

Box 5 of 8

20-56402-17	Rear Bumpstop Extension	2	34
20-830671	3" Tapered Rear Block	2	32
13-91036	U-Bolt, 9/16" x 3-9/16" x 12" RD	4	32
20-68188	Hardware Pack: U-Bolts	1	
13-30330	Washer, 9/16" Flat HRDN, Plain	8	32
13-10423	Nut, 9/16" High, Plain	8	32
20-69020	Hardware Pack: Rear Bumpstop	1	
13-22938-Z	Hex Bolt, 3/8" x 1-1/4" Gr. 8	4	34
13-30408-Z	Washer, 3/8" Flat HRDN	8	34
13-10553-Z	Nut, 3/8" Top Lock	4	34

Box 6 of 8

50-BE5-6135-T5	Front Shock	2	
50-BE5-6134-T5	Rear Shock	2	

Box 7 of 8

20-56402-16	Crossmember Skidplate	1	25
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Box 8 of 8

20-56402-6P	Steering Knuckle/Spindle - Passenger's Side	1	
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INTRODUCTION

- Installation by a professional mechanic is recommended. Use of the appropriate tools, a Dodge 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, rack & pinion unit, ball joints and wheel bearing preload. Also check steering-to-frame and suspension-to-frame attachment points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace worn parts.
- Read instructions carefully and study 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 parts and hardware against the parts list to assure that your kit is complete. The parts and hardware supplied are of high-grade material and must not be replaced by inferior parts or failure may result. Do not begin installation if parts are missing.
- 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 the components to the vehicle.
- 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 decrease 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. Special Alignment Cam kits are necessary for proper alignment. These kits are available through most alignment shops. Contact RCD Suspension for details.
- Exhaust modification may be necessary to clear front driveshaft.
- Speedometer recalibration is necessary if larger tires (10% more than stock diameter) are installed.
- Brake system will need to be bled by a professional brake technician.
- System is designed to accommodate up to a 33" x 12.5" tire on a minimum wheel size of 17" x 8" with a maximum of 4.5" backspacing.
- Special tools are required for safe removal and installation of the ball joints, tie-rods and torsion bars. These tools can be purchased from your Dodge Dealer.

Torsion Bar Loader/Unloader Tool (P/N 8686)
Ball Joint Puller Tool (P/N 8677)

Front Disassembly Instructions

1. With the truck on level ground, and supporting it's own weight, measure and record the front ride height. Ride height can be measured as the vertical distance from the center of the wheel (or spindle) to the top of the fender well (**Illustration 1**).

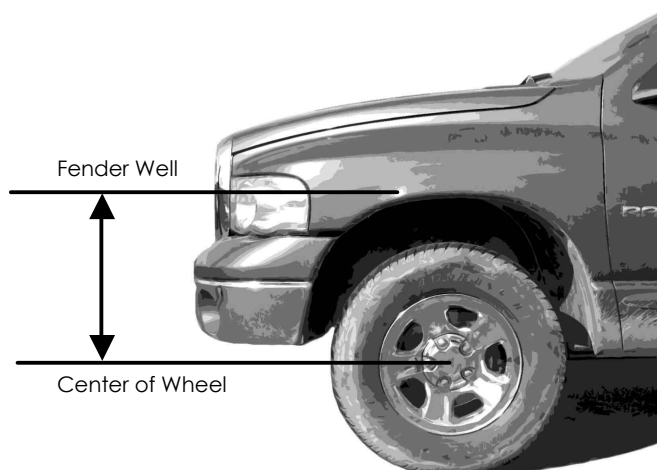
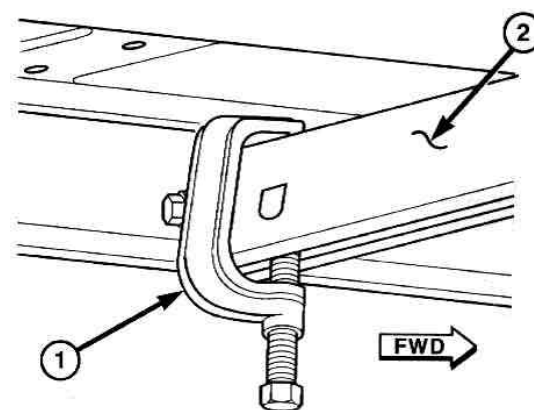


Illustration 1

2. Raise the vehicle. If working without a shop hoist, support vehicle with suitable safety jack stands. Put vehicle in gear, set emergency brake and block rear wheels, both 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 frame rails, behind front wheel wells, and lower the frame onto the stands. Once securely on jack stands remove floor jack. Remove front wheels.
3. Remove transfer case and front crossmember skidplates (if equipped).

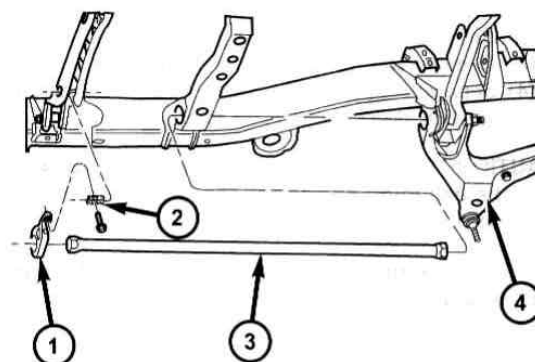


- 1 - Special Tool 8686
- 2 - Crossmember

Illustration 2

WARNING: *Be extremely careful when loading or unloading the torsion bars. There is 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.*

4. Mark or measure the Torsion Bar Adjustment Bolt for aid in re-installation. Install special Torsion Bar Loading/Unloading Tool #8686 (**Illustration 2**) and turn counterclockwise to remove the adjustment bolt and swivel nut. Remove the Unloading Tool, allowing the torsion bar to unload. Remove Torsion Bar and Anchor (**Illustration 3**). If the Torsion Bar and Anchor still does not easily slide out, the upper nut on the front shock may have to be loosened slightly (**NOT removed**) to allow the suspension to droop more. Note that the left and right side Torsion Bars are not interchangeable (stamped R and L) and should be kept separated for reinstallation.



- 1 - Anchor
- 2 - Swivel
- 3 - Torsion Bar
- 4 - Lower Control Arm

Illustration 3

5. With the Torsion Bars removed, remove the Torsion Bar Crossmember (which mounts the anchor and swivel nut) (**Illustration 3**). **DO NOT discard the stock mounting hardware.**
6. Beginning with the Driver's Side, locate and remove the two bolts attaching the Brake Caliper mount to the Back of the Steering Knuckle (**Illustration 4**). Remove the Caliper and it's mount as an assembly and hang out of the way with a length of wire, careful not to damage the brake lines. **DO NOT let the Caliper hang from the brake line.**
7. Remove the Brake Rotor (**Illustration 4**). Note that there may be a retainer clip holding the Rotor onto one of the wheel studs, which must first be removed.
8. Remove the large Halfshaft Nut holding the Halfshaft into the Steering Knuckle. Remove Wheel Speed Sensor (if equipped with ABS) from the Hub (**Illustration 5**).

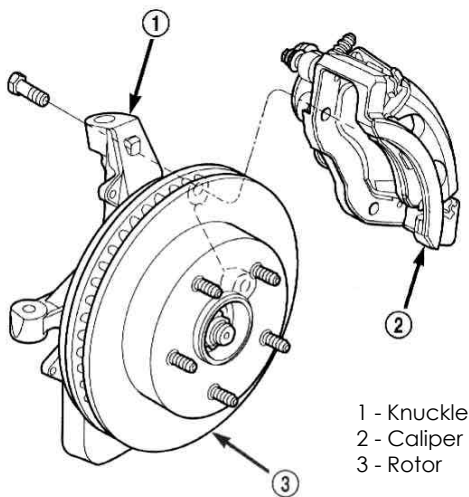


Illustration 4

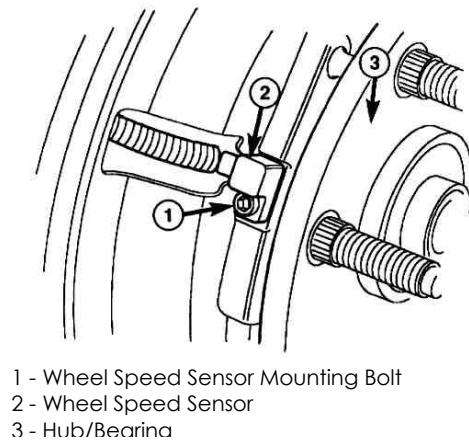


Illustration 5

9. Remove the nut from the steering Tie Rod. Separate the Tie Rod from the Steering Knuckle using special Ball Joint Puller #8677 (**Illustration 6**).

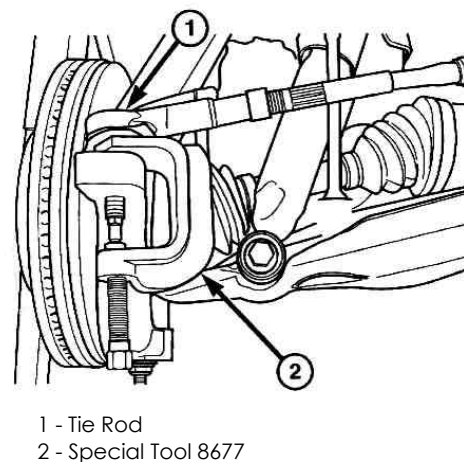
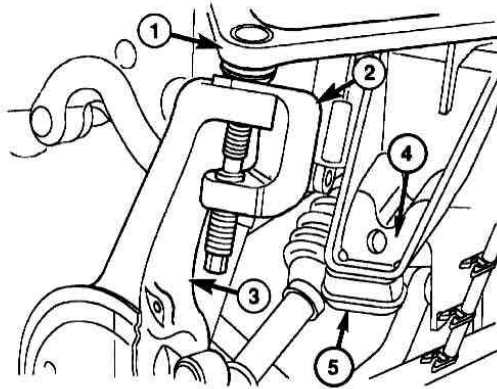


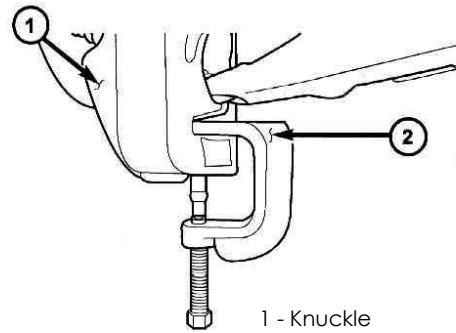
Illustration 6

10. Remove the nut from the Upper Ball Joint. Separate the Upper Ball Joint from the Steering Knuckle using special Ball Joint Puller #8677 (**Illustration 7**).
11. Remove the nut from the Lower Ball Joint. Separate the Lower Ball Joint from the Steering Knuckle using special Ball Joint Puller #8677 (**Illustration 8**). At this point, the Steering Knuckle can be separated from the Halfshaft and set aside.



- | | |
|-----------------------|--------------|
| 1 - Upper Control Arm | 4 - Gusset |
| 2 - Special Tool 8677 | 5 - Bumpstop |
| 3 - Knuckle | |

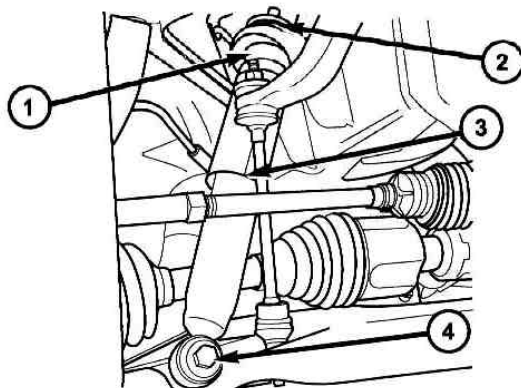
Illustration 7



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|-----------------------|
| 1 - Knuckle |
| 2 - Special Tool 8677 |

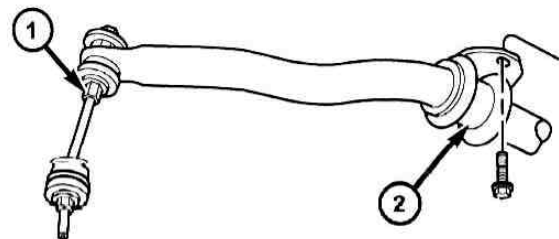
Illustration 8

12. Remove the lower Shock bolt. Remove the upper Shock nut with the bushing and retainer washer, and remove shock (**Illustration 9**).
13. Remove the upper nut, retainer washer and bushing holding the Sway Bar to the Sway Bar Link, and let the Lower Control Arm swing down out of the way (**Illustration 10**).
14. Remove the two bolts holding the Lower Control Arm onto the frame, and set aside the Arm and both bolts for re-installation.
15. Repeat steps 6-14 on the Passenger Side of the vehicle.



- | | |
|------------------------|-----------|
| 1 - Washer/Bushing | 3 - Shock |
| 2 - Nut/Washer/Bushing | 4 - Bolt |

Illustration 9



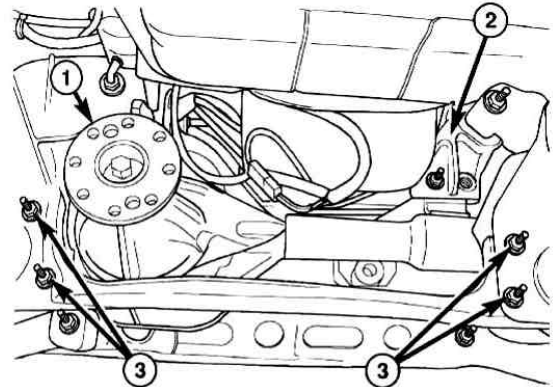
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|-------------------|
| 1 - Sway Bar Link |
| 2 - Frame Mount |

Illustration 10

16. Remove the four bolts attaching the rear crossmember to the frame (between the two rear mounts of the Lower Control Arms), and discard them along with the crossmember (**Illustration 11**).

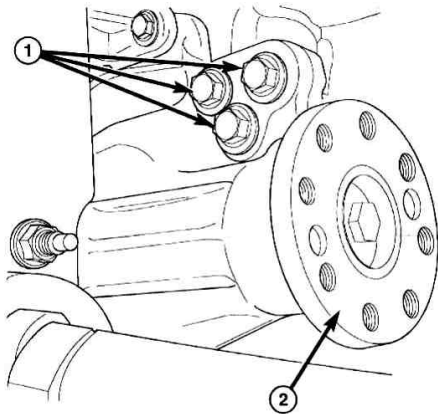
17. Mark the orientation of the Front Driveshaft with relation to the Differential pinion flange. Remove the four bolts holding the Driveshaft to the Front Differential pinion, and tie up driveshaft so it is not hanging from the transfer case.

18. Support the Front Axle Housing with a hydraulic jack. Remove the three Axle Housing Pinion mounting bolts and set aside, as they will be used in re-assembly (**Illustration 12**). Remove the two Axle Shaft Housing mounting bolts on the passenger side of the vehicle (**Illustration 13**). Remove the two Differential Housing mounting bolts (above and in front of the pinion mounting bolts) (**Illustration 14**). **Note the location of the Differential Vent Hose for re-installation.** Lower the Axle (and attached Halfshafts) from under the vehicle, and set aside the entire assembly.



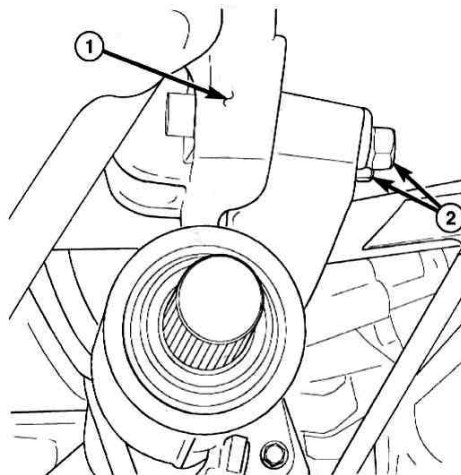
- 1 - Pinion Flange
- 2 - Axle Tube Mounting Brackets
- 3 - Crossmember Bolts

Illustration 11



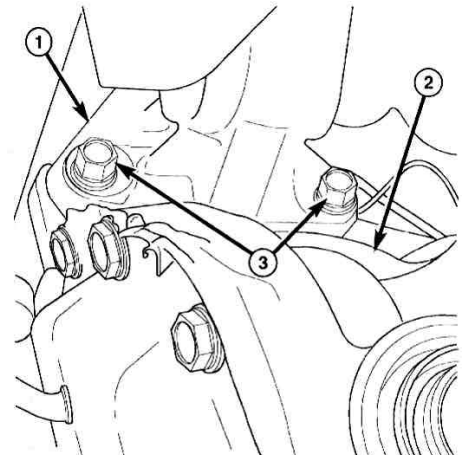
- 1 - Pinion Mounting Bolts
- 2 - Pinion Flange

Illustration 12



- 1 - Axle Housing Mounting Bracket
- 2 - Mounting Bolts

Illustration 13



- 1 - Differential Mounting Bracket
- 2 - Differential Housing
- 3 - Mounting Bolts

Illustration 14

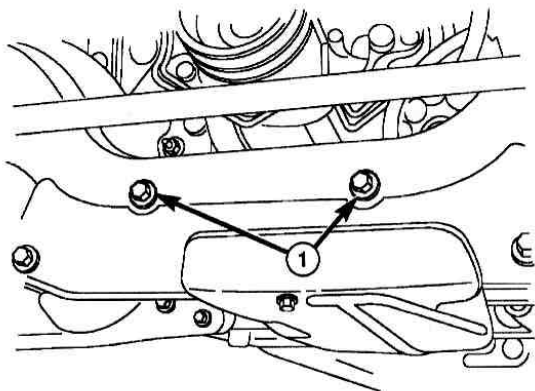
Front Installation Instructions

1. Put RCD Front Crossmember (20-56402-1) up into the two front Lower Control Arm mounts on the frame. Install the Crossmember with the three holes facing the rear of the vehicle (**Illustration 15**). Install two 5/8" x 5-1/2" Hex Bolts into the stock Control Arm mounting holes, and through the crossmembers. **DO NOT tighten any hardware at this point.**

NOTE: The next step may NOT be possible on all models. If a good, flat surface with adequate room for a 1/2" hole to be drilled doesn't exist, skip step #2.

2. With the new Crossmember still loose, locate the two 1/2" holes on the Crossmember's top plate (there are spacers welded on this top plate in line with the holes). Mark the location of these holes on the stock crossmember. Remove the RCD Crossmember and drill these two locations in the stock crossmember to 1/2". Reinstall Crossmember and 5/8" x 5-1/2" Bolts, washers and nuts, and install 1/2" x 1-1/2" Hex Bolts, washers and nuts. **DO NOT tighten any hardware at this point.**

3. Remove the two bolts holding the Steering Rack onto the stock front crossmember (**Illustration 17**). Disconnect the Steering Shaft from the Lower Steering Coupler, and set aside the pinch bolt (**Illustration 16**). **DO NOT let the rack hang by the hydraulic lines.** Make sure the Firewall Boot for the Steering Shaft does not disconnect from the firewall.



1 - Steering Rack Mounting Bolts

Illustration 17

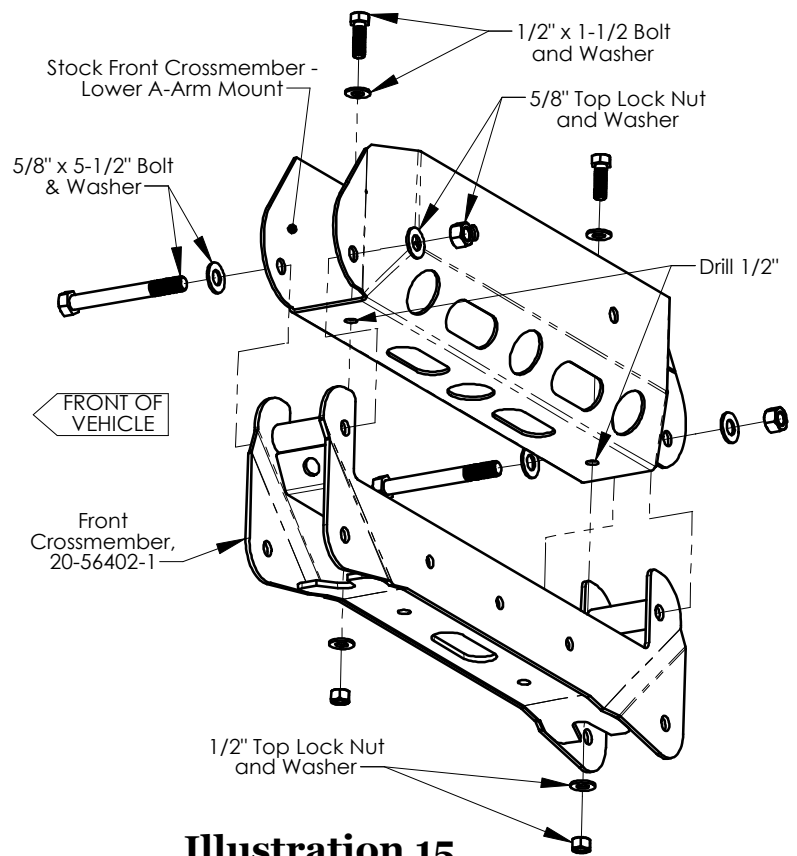
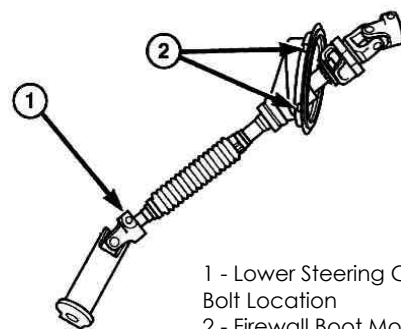


Illustration 15



1 - Lower Steering Coupler Pinch Bolt Location
2 - Firewall Boot Mounting

Illustration 16

- Find the Rack & Pinion Drop Bracket (20-56402-3) and slide in two 16mm x 90mm Hex Bolts and spring washers as shown (**Illustration 18**). Hold the bracket up to the frame and RCD Front Crossmember as shown, and slide in two 5/8" x 7-1/2" Hex Bolts and washers with the bolt heads facing the rear of the vehicle. **DO NOT tighten any hardware at this time.**

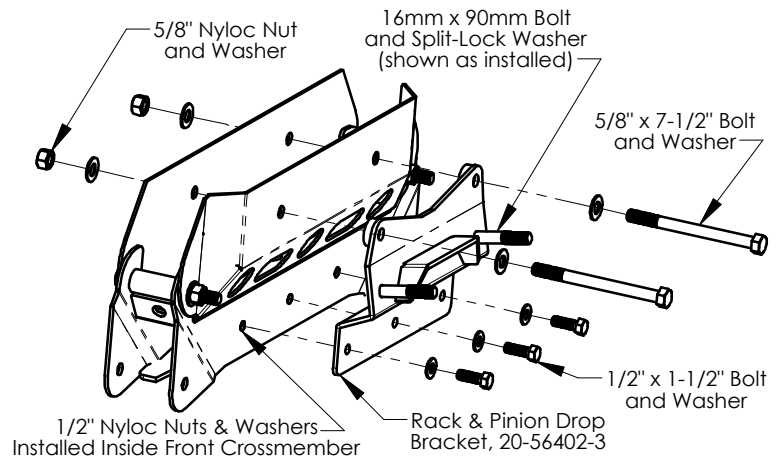
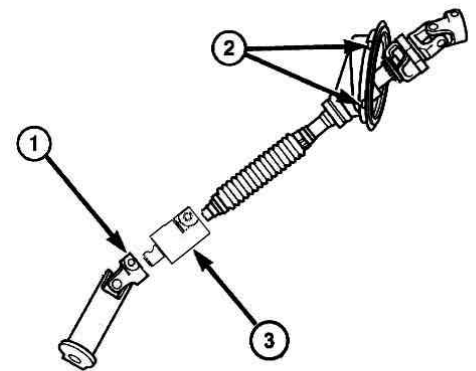


Illustration 18

- Slide the Steering Rack onto the 16mm x 90mm bolts previously installed into the Rack & Pinion Drop Bracket. Tighten the 16mm bolts onto the Steering Rack and torque to 165 ft. lbs. with the 5/8" x 7-1/2" bolts loose. Install three 1/2" x 1-1/2" Hex Bolts, washers and nuts into the Rack & Pinion Drop Bracket and RCD Front Crossmember as shown (**Illustration 18**), and torque to 90 ft. lbs. Install the remaining 5/8" washers and nuts on the two 5/8" x 7-1/2" bolts and torque to 175 ft. lbs.

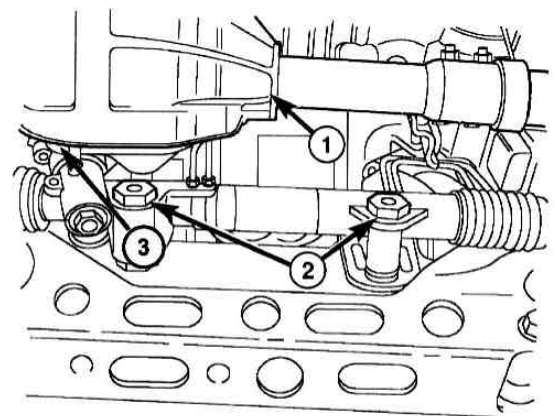


- 1 - Lower Steering Coupler Pinch Bolt Location
- 2 - Firewall Boot Mounting
- 3 - Steering Shaft Spacer, 20-833596

- Locate the Steering Shaft and Lower Steering Coupler previously disconnected, and install the Steering Spacer (20-833596) using the stock pinch bolt and the 10mm x 35mm Hex pinch bolt supplied, as shown (**Illustration 19**). Torque the two pinch bolts to 42 ft. lbs.

Illustration 19

- IMPORTANT:** Turn the steering wheel to check that there is adequate clearance for the Lower Steering Coupler to rotate, and that the Rack will not interfere with the frame crossmember located just to the rear of the Rack (**Illustration 20**). If there is any interference, mark the frame crossmember about 1/4" around the area of interference, remove the Steering Rack, and carefully grind or cut the area. Reinstall the Rack and re-check for unobstructed operation.



- 1 - Front Axle
- 2 - Steering Rack Mounting Nuts
- 3 - Inspect for Interference in This Area

- Tighten previously installed 5/8" and 1/2" hardware on the RCD Front Crossmember (**Illustration 15**). Torque the 5/8" Bolts to 175 ft. lbs, and the 1/2" bolts to 90 ft. lbs.

Illustration 20

9. Beginning on the Driver's side, find the Rubber Bumpstop Pad that is crimped into the frame mount (**Illustration 7**). Using a small pry bar, remove the rubber pad from its mount.

10. Install the Bumpstop Extension (20-56402-4) using the supplied 7/16" x 1" Hex Bolt and washer (**Illustration 21**). **Note that the Bumpstop Extension has holes drilled and tapped in both ends, which are NOT the same threads.** If there is not an existing hole in the center of the stock Bumpstop mount, a 7/16" hole must be drilled in the center of the circular frame mount. If a hole exists, but is off center, modify the hole so that it is centered, careful not to make the hole excessively large. If the stock frame mount has a gusset welded on in front of the newly installed bolt head, carefully cut out the bottom section of the gusset (**Illustration 21**) until a wrench can be used to tighten the 7/16" bolt. Torque the 7/16" bolt to 60 ft. lbs.

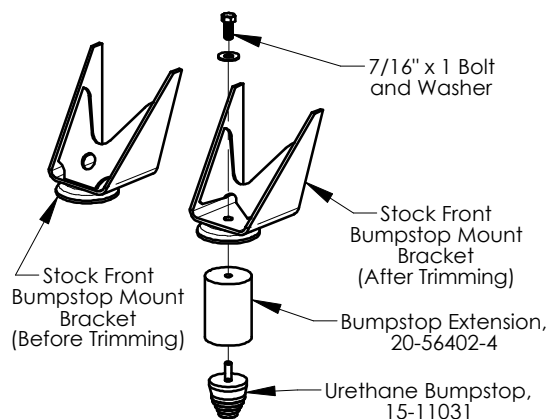


Illustration 21

11. Install the supplied urethane Bumpstop (15-11031) onto the Bumpstop Extension (**Illustration 21**).

12. **Repeat steps 9-11 on the Passenger's side of the vehicle.**

13. With the Front Axle assembly aside, install the Differential Drop Brackets (20-56402-7, 20-56402-8, 20-56402-9, 20-56402-10, 20-56402-11) onto the assembly with the supplied 1/2" hardware (**Illustration 22**). **Note that 20-56402-7 has more of an offset than 20-56402-8. Also note that 20-56402-10 has a very slight bend, which should be at the bottom of the bracket when installed. DO NOT tighten hardware at this time.**

14. Raise the Front Axle assembly into place until the Differential Drop Brackets line up with the stock Axle mounting points on the chassis (**Illustration 22**). **Make sure to route the Differential Vent Hose to suitable location above the differential.** Using the supplied 1/2" hardware, attach the Drop Brackets to the chassis. Use the three stock Pinion Mounting Bolts (**Illustration 12**) to mount the two driver's side Rear Brackets to the chassis (20-56402-7 and 20-56402-8). Torque all 1/2" hardware and the three stock mounting bolts to 70 ft. lbs.

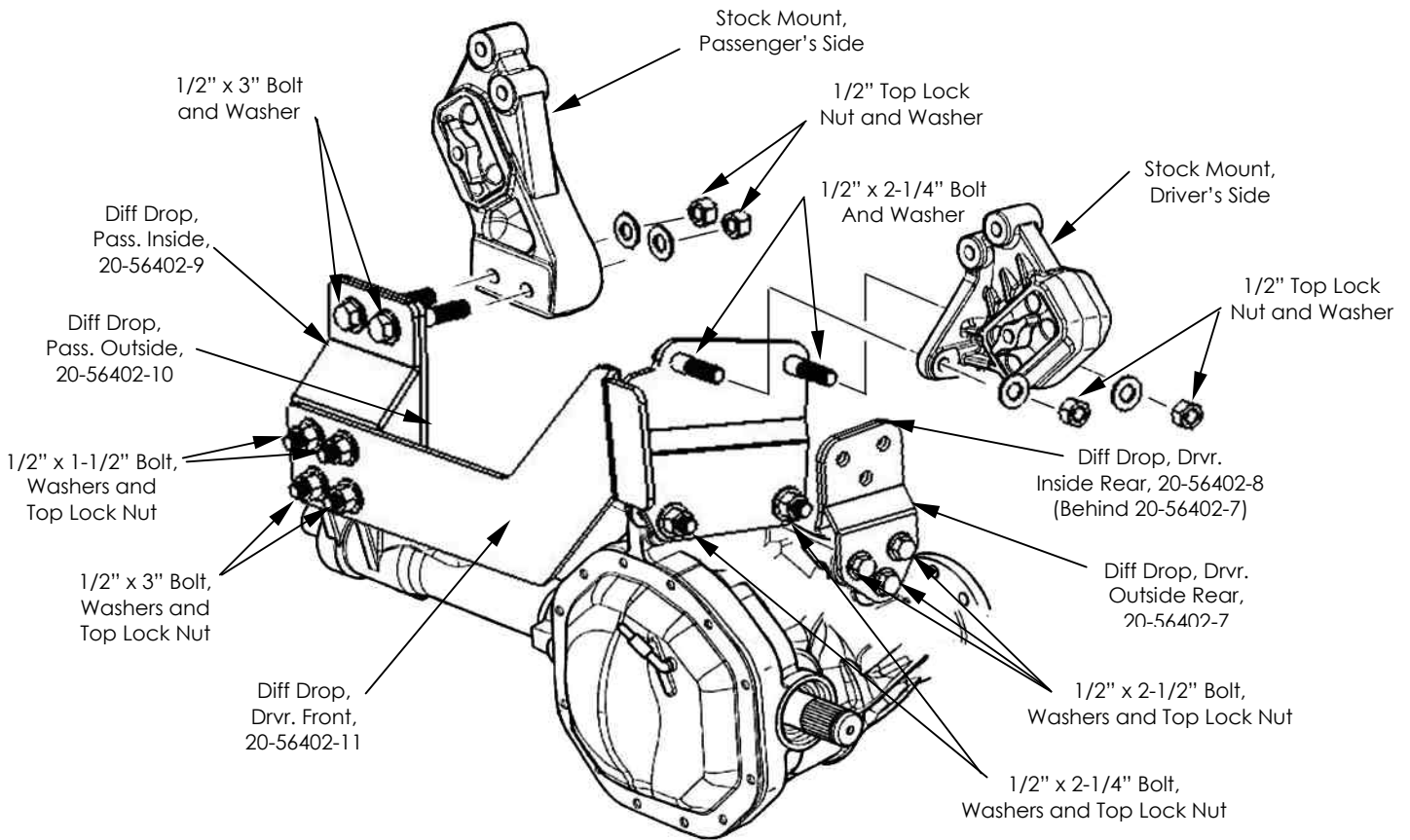


Illustration 22

NOTE: If the exhaust pipe is routed directly under the driveshaft, the pipe may have to be cut and modified to clear the lowering of the driveshaft at this point of the installation. If so, after installing kit, truck must be taken to a professional exhaust fabrication shop to replace cut out section with new section of pipe.

15. Re-attach the Front Driveshaft flange to the Differential flange using the alignment marks made upon disassembly. Torque the flange bolts to 85 ft. lbs. **If the Driveshaft hits the exhaust, or does not have at least one inch of clearance when attempting to re-attach it, you must cut out the section of exhaust that interferes.** Do not cut much more pipe than is needed to clear the driveshaft, as the exhaust fabrication shop can do any additional cutting when the truck is brought in.

16. Install the RCD Rear Crossmember (20-56402-2) in the location of the discarded stock Rear Crossmember by sliding in the driver's side of the Crossmember first, then lifting the passenger's side into place (**Illustration 23**). Use the four supplied 1/2" x 3" Hex Bolts, washers and nuts to attach it to the frame. **DO NOT tighten hardware at this time.**

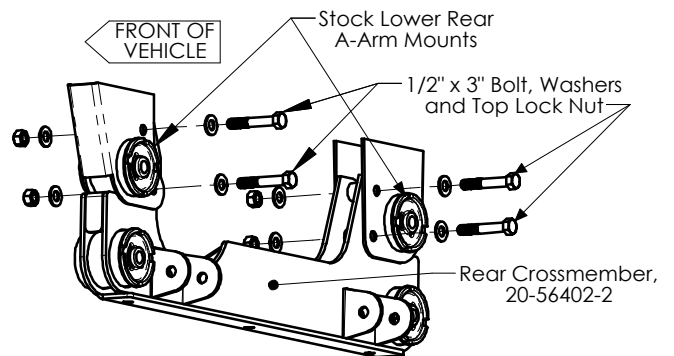


Illustration 23

17. **IMPORTANT:** Make sure there is at least 1/2" clearance for the differential with the frame that protrudes past the RCD Rear Crossmember on the **FRONT** part of the Driver's Side (**Illustration 24**). If necessary, cut or grind off the small area as shown. Make sure to stay away from the previously installed Nut and Washer.
18. Install the Crossmember Support Skidplate (20-56402-16) using the supplied 1/2" x 1-1/4" bolts, split-lock washers and flat washers (**Illustration 25**). **DO NOT tighten hardware at this time.**

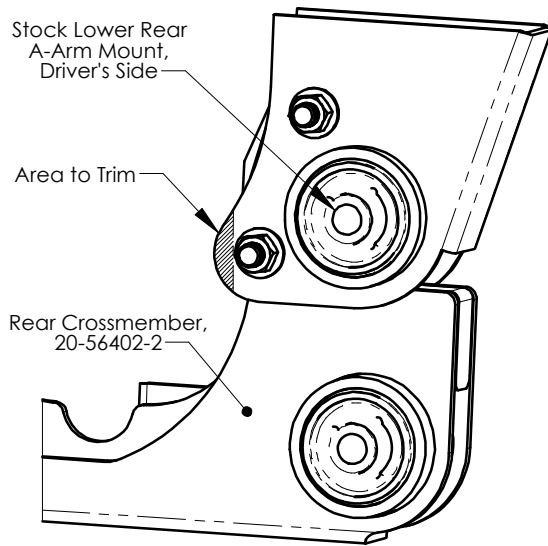


Illustration 24

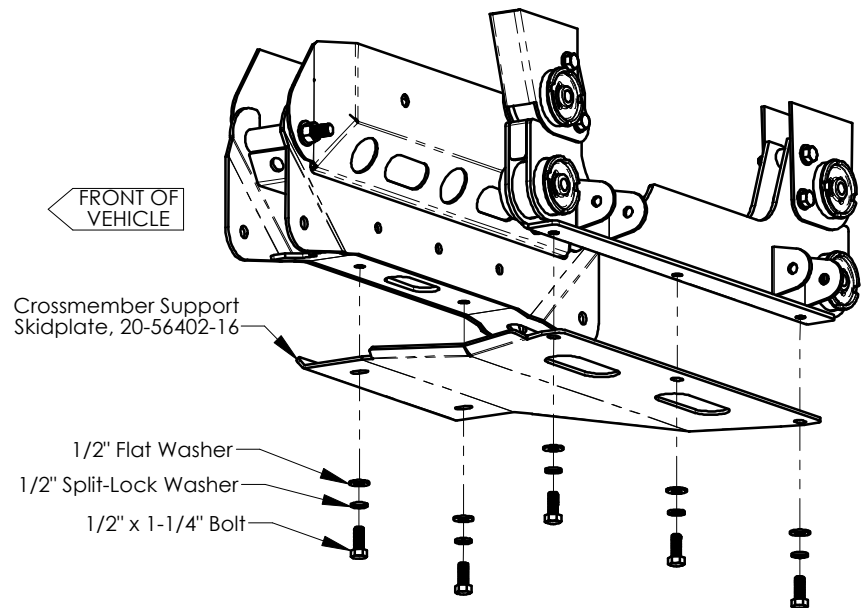


Illustration 25

19. Install both Lower Control Arms into the RCD Crossmembers using the stock mounting bolts and nuts. Make sure to use the Torx-head bolt on the rear Control Arm mounts, and to install them with the bolt heads facing the rear of the vehicle. The bolt heads for the front Control Arm mounts should face the front of the vehicle. **DO NOT tighten hardware at this time.**
20. Torque the 1/2" hardware mounting the RCD Rear Crossmember and the Crossmember Skidplate to 90 ft. lbs. (**Illustration 23 & Illustration 25**).
21. Raise each Lower Control Arm and insert the Sway Bar Link studs into the Sway Bar. Re-install the bushings, washers and nuts onto the Sway Bar Link. **DO NOT tighten hardware at this time.**
22. Loosen the two Sway Bar mounts on the bottom of the frame rail. Unbolt the Sway Bar mount from the frame on the Driver's side and insert the Driver's Side Sway Bar Drop Bracket (20-56402-13) (**Illustration 26, shows Passenger Side only**). **The Driver and Passenger's Side Drop Brackets are NOT identical parts. Both parts have one large hole and one small hole on THE OUTWARD FACING SIDE. For both, the large hole should be ABOVE, and towards the REAR of the smaller hole.** Using the stock bolts, loosely mount the Drop Bracket to the frame, and using the supplied 7/16" x 1-1/4" Hex Bolts, washers and nuts, loosely mount the Sway Bar Mount to the Drop Bracket.

Dropping one side at a time prevents having to fully drop the Sway Bar, as it is heavy and awkward to handle.

23. Repeat the previous step for the Passenger's side using the Passenger Side Sway Bar Drop Bracket (20-56402-12).
24. Torque the four stock Sway Bar mounting bolts (mounting the Sway Bar Drop Brackets to the frame) to 45 ft. lbs. Torque the four 7/16" x 1-1/4" bolts and nuts mounting the Sway Bar to the Drop Brackets to 60 ft. lbs.

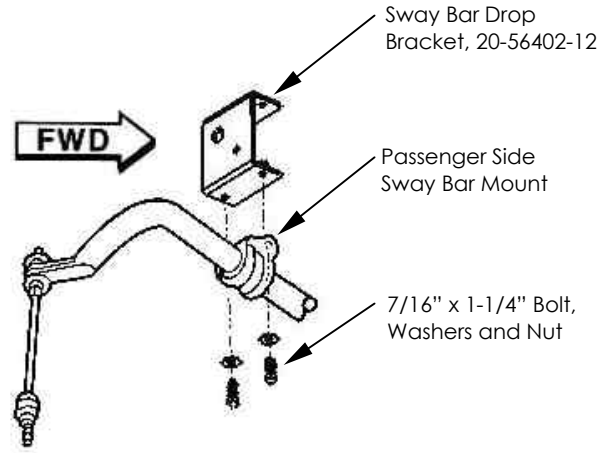
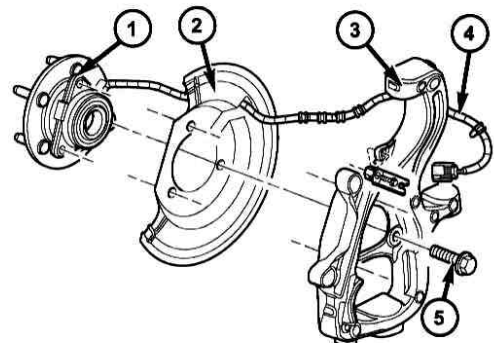


Illustration 26

25. Install the supplied Bilstein Front Shock Absorbers (50-BE5-6135-T5) into the Lower Control Arms using the stock mounting bolts. Lift the arms so that the stems on the new shocks slide into the stock upper mount. Use the supplied nut, washer and bushings on the upper shock mount (**Illustration 9**). **DO NOT tighten hardware at this time.**
26. Remove the Hubs and Brake Dust Shields from the two stock Steering Knuckles, and re-install onto the RCD Steering Knuckles (20-56402-5D & 20-56402-6P) (**Illustration 27**).

NOTE: Before installing the new Steering Knuckles, make sure that the Upper and Lower Ball Joint tapers and the Tie Rod taper are all clean and dry. Clean with mineral spirits, if necessary, to remove dirt and grease.

27. Beginning with the Driver's side, lift the RCD Steering Knuckle up onto the Lower Ball Joint stud, and thread on the stock nut.
28. Push the Front Axle Halfshaft through the center of the Hub, and thread on the Axle nut. Install the Upper Ball Joint into the Steering Knuckle, and thread on the stock nut. Install the Tie Rod into the Knuckle and thread on the stock nut.
29. Torque the Lower Ball Joint nut to 60 ft. lbs. Torque the Axle nut to 185 ft. lbs. Torque the Upper Ball Joint nut to 55 ft. lbs. Torque the Tie Rod nut to 55 ft. lbs.
30. Torque the Lower Control Arm mounting bolts and nuts to 150 ft. lbs. Torque the Sway Bar Link nut to 27 ft. lbs. (**Illustration 10**).



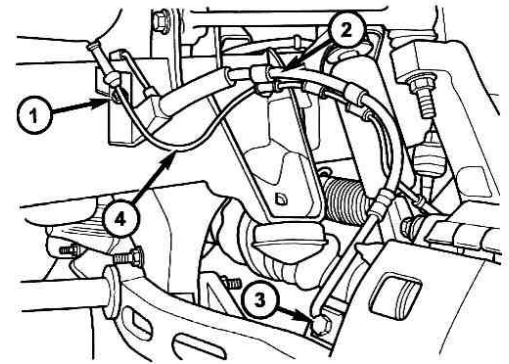
- 1 - Hub and Bearing
- 2 - Dust Shield
- 3 - Drvr. Steering Knuckle
- 4 - ABS Wheel Speed Sensor Wire
- 5 - Hub and Bearing Mounting Bolt

Illustration 27

31. Reinstall the ABS Wheel Speed Sensor (if equipped with ABS) into the hub (**Illustration 5**). Slide the Brake Rotor onto the hub (**Illustration 4**).

32. Install the Brake Caliper Assembly onto the Steering Knuckle (**Illustration 4**). If the brake hose won't allow the Caliper to be bolted on, place a jack under the Lower Ball Joint stud and raise the suspension so that it isn't fully drooped. Torque the Caliper Mount bolts to 130 ft. lbs.

33. Disconnect the hard brake line from the brake hose at the frame bracket (**Illustration 28**). Remove the Banjo Bolt securing the brake hose to the caliper. Remove the mounting bolt(s) securing the brake hose to the frame, and remove the Wheel Speed Sensor wire from the brake hose.



- 1 - Mounting Bolt and Frame Bracket
- 2 - Brake Hose
- 3 - Banjo Bolt
- 4 - ABS Wheel Speed Sensor Wire

Illustration 28

34. Remove the brake hose, and replace it with the new Driver's Side Stainless Steel Braided Brake Line (50-5602-1). **Note that the Driver and Passenger's Side Brake Lines are not interchangeable.** Reinstall the Banjo Bolt at the Caliper with two new bronze crush washers (50-5602-4) and torque to 20 ft. lbs. Install the new Frame Bracket, with the stock frame mounting bolt and torque to 7.5 ft. lbs. Secure the upper end of the new Brake Line using the supplied e-clip (50-5602-3). Reinstall the hard brake line to the new Stainless Steel Braided Brake Line (at the frame bracket) and torque to 14 ft. lbs. **Note that on the Driver's Side Brake Line, it may be necessary to plug one input port (using supplied plug 50-5602-5) if the vehicle does not utilize both ports.** Cycle the suspension and steering to make sure the new brake lines do not interfere with any moving parts, and are secured with the supplied plastic Zip-ties.

35. **Repeat step 27-34 on the Passenger's side of the vehicle, using the new Passenger's Side Stainless Steel Braided Brake Line (50-5602-2).**

36. Assemble Bushings (15-11148) and Sleeves (20-830918) into both ends of both Compression Struts (20-51800-4). Using 1/2" x 4" Hex Bolts (with the bolt heads facing inward), washers and nuts, mount compression struts into brackets on the back of the RCD Rear Crossmember (**Illustration 29**). **Note that BOTH washers are to be used on the BOLT HEAD SIDE, to prevent the Lower Control Arm from contacting the bolt.**

37. Attach Compression Strut Mount Brackets (20-51099-22) to opposite end of Compression Strut using 1/2" x 4" Hex Bolts (with the bolt heads facing inward), washers and nuts and swing up towards frame (**Illustration 29**). **Note that the mount brackets (20-51099-22) are oriented with the slotted hole towards the FRONT. DO NOT use the slotted hole to mount to the frame. Use the round hole only.** Mounts should intersect stock crossmember. Mark holes to be drilled to mount brackets. Lower and drill 1/2" holes as marked. Disconnect the Compression Strut Mounts from the Compression Struts, and bolt them through the newly drilled holes using the 1/2" x 1-1/4" Hex Bolts, washers and nuts, and torque to 90 ft. lbs. Reinstall the Compression Struts to the Mounts, and torque all remaining 1/2" hardware to 90 ft. lbs.

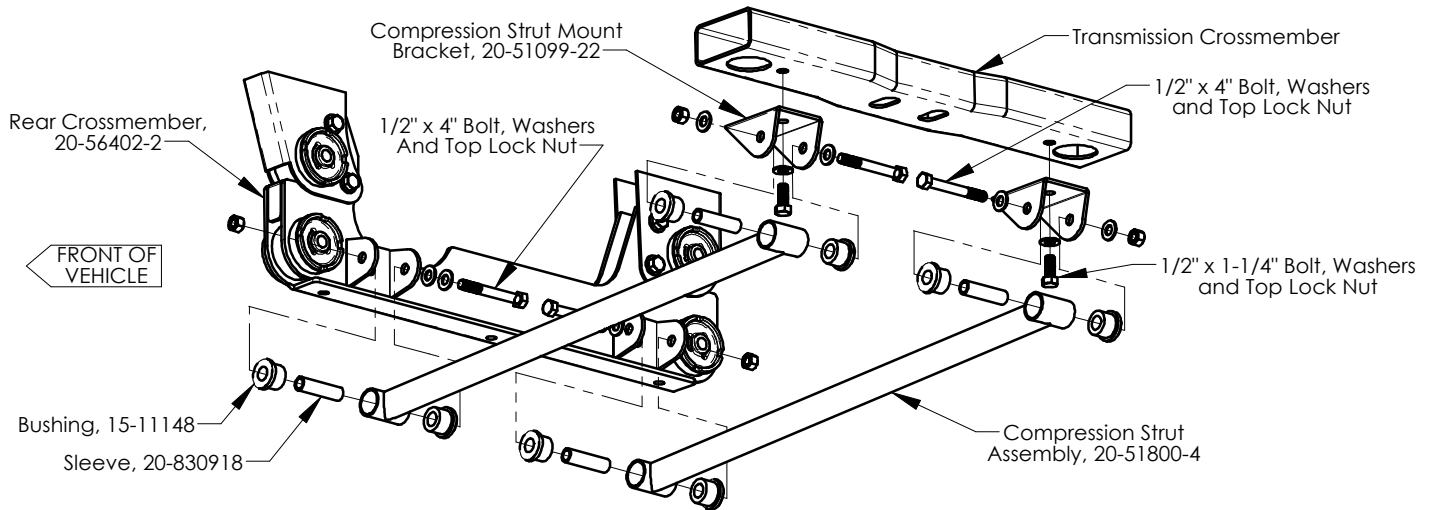


Illustration 29

38. Install the Torsion Bar Drop Brackets (20-56402-14) in the stock torsion bar crossmember mounting locations using the stock mounting hardware, with the RCD badges facing out (**Illustration 30**). Install the stock crossmember into the Drop Brackets using the supplied 12mm x 90mm Hex Bolts, washers and nuts. **DO NOT tighten hardware at this time.**
39. Install the Driver's side Torsion Bar into the Anchor and slide into the Lower Control Arm. Torque the upper shock mount nut to 40 ft. lbs. and the lower shock mount bolt to 100 ft. lbs. Torque the Driver's side Torsion Bar Drop Bracket hardware to 75 ft. lbs.
40. Using the Torsion Bar Loading/Unloading tool #8686, put tension on the Anchor to load the Torsion Bar (**Illustration 2**). Reinstall the adjuster bolt and swivel nut. Turn in the adjuster bolt until it is at the previously marked or measured distance into the adjuster nut. Remove the tool from the crossmember.
41. Repeat steps 39-40 on the Passenger's side of the vehicle.

Recheck ALL hardware used to install complete suspension system at this time. Anything not tightened to the specified torque needs to be tightened now. Refer to chart on the last page of these instructions for general and specified torque values.

42. Bleed the brakes, checking for leaks at the newly installed fittings. Install the wheels and tires, and lower the vehicle to the ground. Torque lug nuts to 135 ft-lbs.

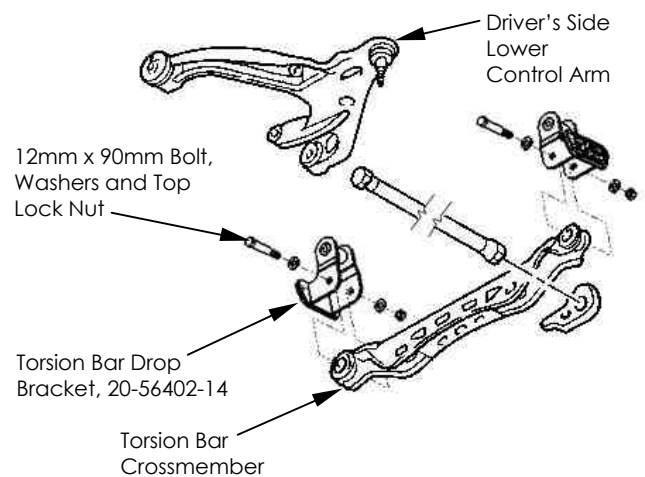


Illustration 30

Rear Installation Instructions

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 suitable safety stands under frame to support vehicle and lower vehicle onto safety stands.
2. Locate the Parking Brake Cable on the driver's side of the vehicle. If there is a cable hanger bracket just in front of the Driver's side rear wheel, remove the line from this bracket that connects to the Driver's side rear brake **(Illustration 31)**.
3. With the floor jack, raise the rear axle enough to relieve tension on the shock absorbers and remove them.
4. Remove the rear U-bolts attaching rear axle to the Driver's side leaf spring. Carefully lower the rear axle.

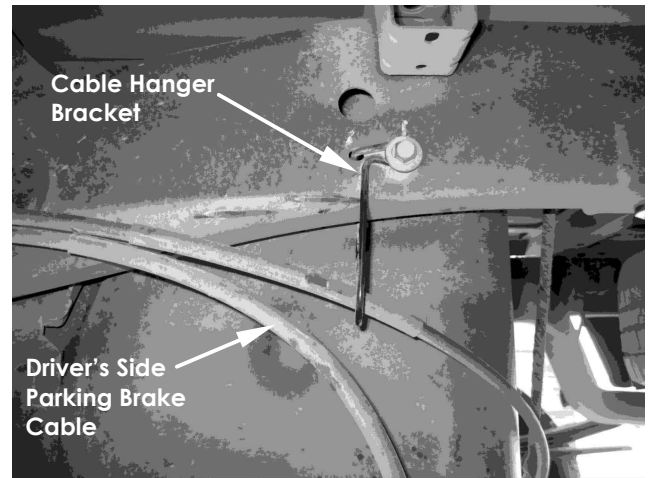


Illustration 31

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

5. Insert new Lift Block (20-830671) on axle pad. Make sure the Block's pin indexes into the hole of the axle housing spring pad **(Illustration 32)**. The short end of the Block faces the front of the vehicle. Carefully raise the rear axle until Block makes contact with the leaf spring. Make sure center bolt is aligned with the hole in the Block.
6. Re-mount axle to spring using the new U-bolts (13-91036), 9/16" Washers, 9/16" High Nuts and existing spring plates. Torque U-bolt nuts to 110 ft. lbs. **(Illustration 32)**.
7. **Repeat steps 3-5 on Passenger's side of the vehicle.**
8. Install the new Bilstein Rear Shock Absorbers (50-BE5-6134-T5) with the boot up. Using the existing hardware, attach the shocks to lower axle mounts. Attach shocks to upper frame mounts and torque the upper and lower nuts to 70 ft. lbs.

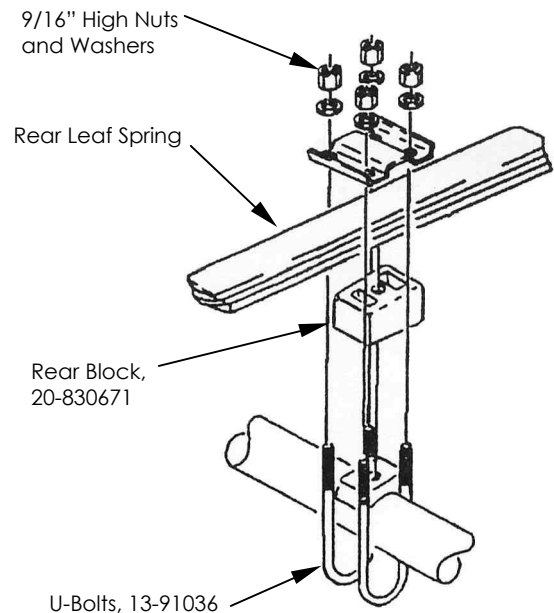
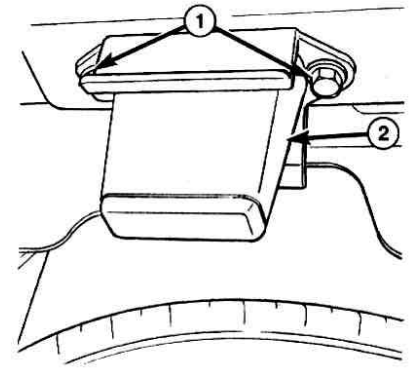


Illustration 32

9. Remove existing rear bumpstop from the bottom of the Driver's side frame rail (**Illustration 33**).
10. Install Rear Bumpstop Drop Bracket (20-56402-17) to the frame rail at the original bumpstop location, using the stock hardware. Torque the stock mounting bolts to 45 ft. lbs. Reinstall the bumpstop to the Drop Bracket using the supplied 3/8" x 1-1/4" Hex Bolts, washers and nuts (**Illustration 34**). Torque 3/8" nuts to 35 ft.-lbs.



1 - Stock Mounting Bolts
2 - Rear Bumpstop

Illustration 33

11. **Repeat steps 9-10 on Passenger's side of the vehicle.**
12. Install rear tire/wheel assemblies and lower the vehicle. Torque lug nuts to 135 ft-lbs.
13. After the rear lift is complete, final ride height adjustment should be performed. Manually bounce the front and rear of the vehicle to settle the Torsion Bars. Evenly adjust the torsion bar bolts until the front of the vehicle is approximately 1/2" above the final required ride height. Bars will settle slightly after vehicle is driven. **Note that each bar may require slightly different adjustment to level vehicle side to side.** The new ride height should be 6" more than the distance measured before disassembly. If the ride height is less than required, tighten the Torsion Bar adjuster bolts. If the ride height is more than required, loosen the adjuster bolts past the required height, and then tighten them until the required height is achieved.

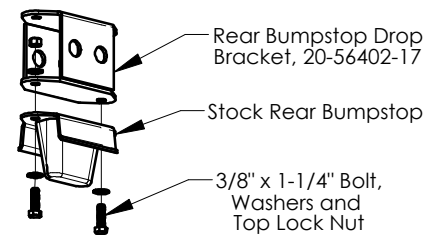


Illustration 34

Some Final Notes

1. After installation is complete, double check that all nuts and bolts are tight. Refer to the torque specifications chart on the last page.
2. If new tires are installed that are more than 10% taller than original tires, the speedometer must be recalibrated for the Anti-Lock Brake System to function properly. Contact an Authorized Dodge dealer for details on recalibration.
3. With vehicle on the floor, cycle the 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.
4. Have headlights readjusted to proper setting.
5. Realign front end to factory specifications. Be sure vehicle is at desired ride height prior to realignment.

Torque Specifications

General Torque Specifications:

5/16"	20 ft. lbs.	M6	9 ft. lbs.
3/8"	35 ft. lbs.	M8	23 ft. lbs.
7/16"	60 ft. lbs.	M10	45 ft. lbs.
1/2"	90 ft. lbs.	M12	75 ft. lbs.
9/16"	160 ft. lbs.	M14	120 ft. lbs.
5/8"	175 ft. lbs.	M16	165 ft. lbs.
3/4"	250 ft. lbs.	M18	220 ft. lbs.

Existing Hardware Torque Specifications:

Steering Shaft Coupler Pinch Bolt	42 ft. lbs.
Steering Rack Mounting Bolts	165 ft. lbs.
Pinion Mounting Bolts	70 ft. lbs.
Front Driveshaft/Front Differential Pinion Flange Bolts	85 ft. lbs.
Sway Bar to Frame Mounting Bolts	45 ft. lbs.
Lower Control Arm Mounting Bolts	150 ft. lbs.
Sway Bar Link Nuts	27 ft. lbs.
Lower Ball Joint Nut	60 ft. lbs.
Axle Nut	185 ft. lbs.
Upper Ball Joint Nut	55 ft. lbs.
Tie Rod Nut	55 ft. lbs.
Caliper Mount to Steering Knuckle Bolts	130 ft. lbs.
Front Brakeline Banjo Bolts	20 ft. lbs.
Brakeline Frame Bracket Mounting Bolts	7.5 ft. lbs.
Hard Brake Line to Brake Hose Fitting	14 ft. lbs.
Front Shock, Upper Mount Nut	40 ft. lbs.
Front Shock, Lower Mount Bolt	100 ft. lbs.
Wheel Lug Nuts	135 ft. lbs.
U-Bolt Nuts	110 ft. lbs.
Rear Shock, Upper and Lower Mount Nuts	70 ft. lbs.
Rear Bumpstop Mounting Bolts	45 ft. lbs.