



11/05/09

**2003-2008 DODGE RAM 2500
5" LIFT KIT
P/N: 10-46603**

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 3			
20-56603-1	Axle Bracket	2	5, 7
20-56603-3	Trac Bar Drop Bracket	1	9
20-56603-4	Upper Control Arm	2	6, 7
20-56603-5	Lower Control Arm	2	6, 7
20-68188	Hardware Pack: U-Bolt Hardware		
13-30330	Washer, 9/16" Flat HRDN	8	12
13-10423	Nut, 9/16"-18 High	8	12
20-71240	Hardware Pack: Control Arm Brackets		
13-30382-Z	Washer, 1/2" Flat HRDN	16	5
13-21644-Z	Hex Bolt, 1/2" x 1-1/4" Gr. 8	8	5
13-10514-Z	Nut, 1/2" Top Lock	8	5
13-23042-Z	Hex Bolt, 9/16" x 4-1/2" Gr. 8	2	7
13-10397-Z	Nut, 9/16" Top Lock	2	7
13-30395-Z	Washer, 9/16" Flat HRDN	4	7
20-834922	Sleeve, 7/8" x .156 x 2.4"	2	5
20-71253	Hardware Pack: Link Hardware		
13-23770-Z	Hex Bolt, 9/16" x 6" Gr. 8	1	
13-30395-Z	Washer, 9/16" Flat HRDN	2	
13-10397-Z	Nut, 9/16 Top Lock	1	
15-10979	Bushing, Red	8	6
20-834779	Sleeve, 7/8" x .156 x 2.8"	2	6
20-833128	Sleeve, 7/8" x .156 x 2.58"	2	6
20-71266	Hardware Pack: Trac Bar Bracket		
13-30395-Z	Washer, 9/16" Flat HRDN	3	9
13-23211-Z	Hex Bolt, 9/16" x 3" Gr. 8	2	9
13-10397-Z	Nut, 9/16" Top Lock	2	9
20-833726-Z	Washer, 1-1/2" x 21/32" x 1/4"	1	9
20-71279	Hardware Pack: Sway Bar Link Extensions		
20-56603-2	Sway Bar Link Extension	2	11
20-71448	Hardware Pack: Brake Line		
13-20536-Z	Bolt, 5/16" x 1"	2	
13-10156-Z	Nut, 5/16" Nylock	2	
13-30187-Z	Washer, 5/16" Flat	4	
15-11941	Bumpstop, Dodge 2500	2	8
20-830645	Rear Block, 2"	2	12
13-91114	U-Bolt, 9/16" x 4-1/8" x 13-1/2"	4	12

Box 2 of 3

20-20244-1	Coil Spring, Dodge 2500, Front	2	
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Box 3 of 3

F4-BE5-6646-H6	Shock, Front	2	
F4-BE5-6647-H1	Shock, Rear	2	

One of the following Pitman Arms will be used in conjunction with this base kit:

10-20595 Pitman Arm 2003 - 2008
OR
10-20608 Pitman Arm 2009 and Later

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. 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. 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.

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

System is designed to accommodate up to a 35" x 12.5" tire on a wheel size of 17" x 9" with a maximum of 4.5" backspacing.

Special tools are required for safe removal and installation of the drag link and pitman arm. These tools can be purchased from your Dodge Dealer.

Some vehicles may experience front driveline vibration. Additional driveline and / or transfer case drop products may be required. Please call RCD Technical Support for details (619) 588-4723.

2006 and later gas engine equipped models will require an exhaust modification for front driveline clearance.

Front Installation Instructions

1. 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 front axle 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.
2. Using a suitable floor jack, raise the jack just enough to support the front axle's weight. Disconnect the sway bar end links at Sway Bar. (**Illustration 1**)
3. Disconnect the brake lines from the front axle.
4. Remove the nut and bushing from the top of the shock, then remove the three nuts and remove the shock tower.
5. Disconnect the lower shock bolt. It is accessed through a hole just below the axle spring perch.
6. Disconnect drag link from Pitman Arm.
7. Disconnect Trac Bar from the frame. (**Illustration 2**)
8. Lower front axle until springs are loose. Remove springs, rubber isolators, and stud plates.
9. Remove the bump stops from the bottom of the frame. They pull out.
10. Lower axle onto jack stands.

Illustration 1

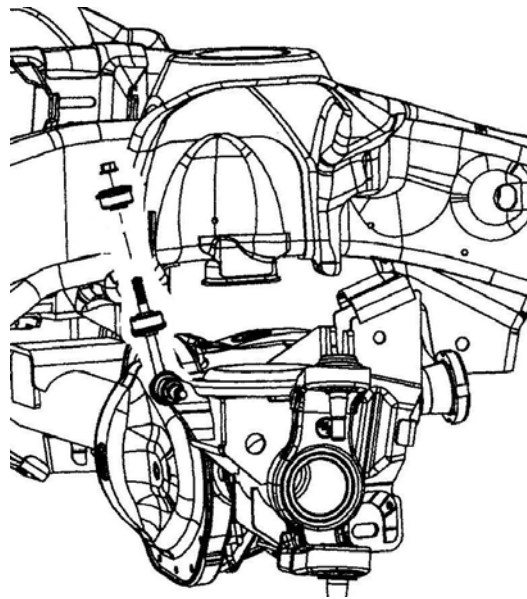
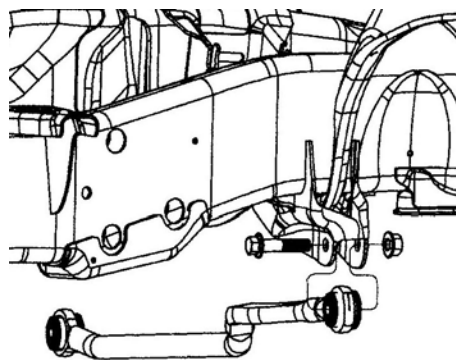


Illustration 2



11. Make index marks on the alignment eccentrics on either side of the vehicle for reassembly.

12. Disconnect upper and lower control arms at frame and at axle and remove. On some models the upper bolt on the passenger side will not come out without removing the exhaust pipe. If this is the case, cut the head off the bolt and pull it out the opposite side. We have included a new bolt for this location. **(Illustration 3)**

Note: it will be necessary to support the pinion so the axle does not rotate.

13. Cut bracket off axle at each side. Remove bracket completely, including all weld material. Paint all bare metal. **(Illustration 4)**

Illustration 3

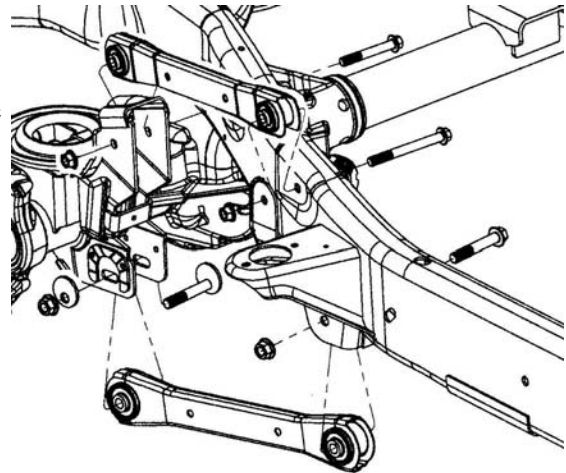
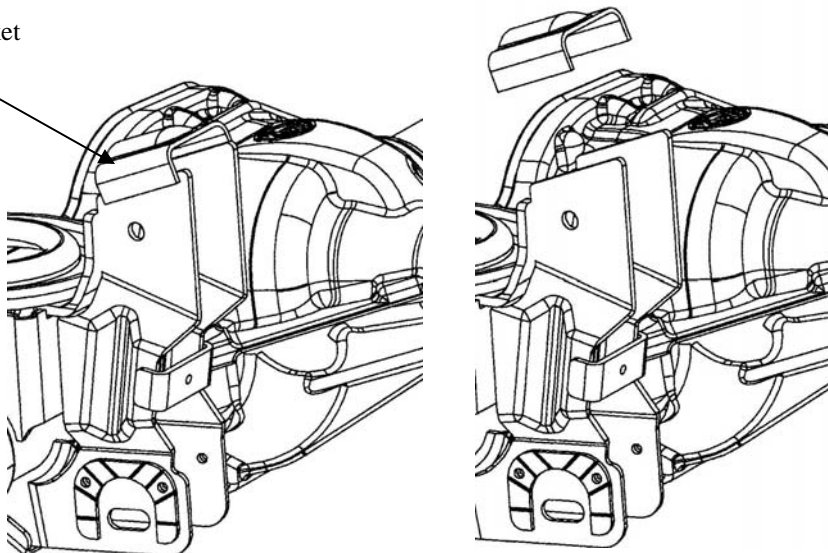


Illustration 4

Remove this bracket



14. Fit axle brackets over axle as shown. Align front hole in bracket with original upper control arm mounting hole. Push bracket up tight against the original bracket. **(Illustration 5)**

15. Mark the four holes to be drilled on the drivers and then passengers side of the vehicle. Remove the brackets and drill the eight 1/2" holes.

16. Reinstall the brackets and secure with the 1/2" x 1-1/4" bolts, nuts, and washers provided. Also insert spacer (RCD 20-834922) in original control arm location and install original bolt through bracket. Torque the original bolt to 95 ft./lbs. and the 1/2" bolts to 90 ft./lbs.

17. Assemble the bushings and sleeves into the upper and lower control arms as shown. **(Illustration 6)**

Illustration 5

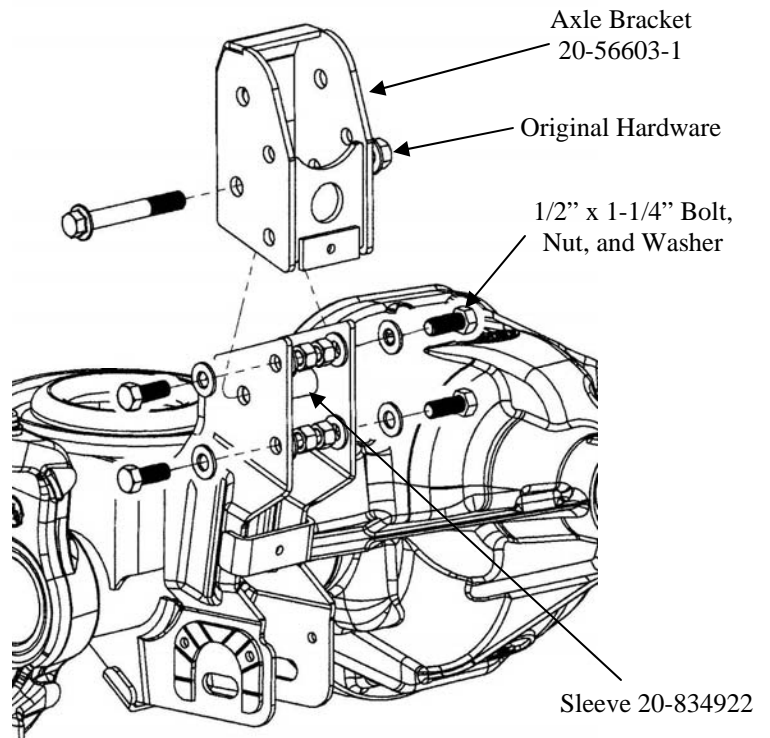
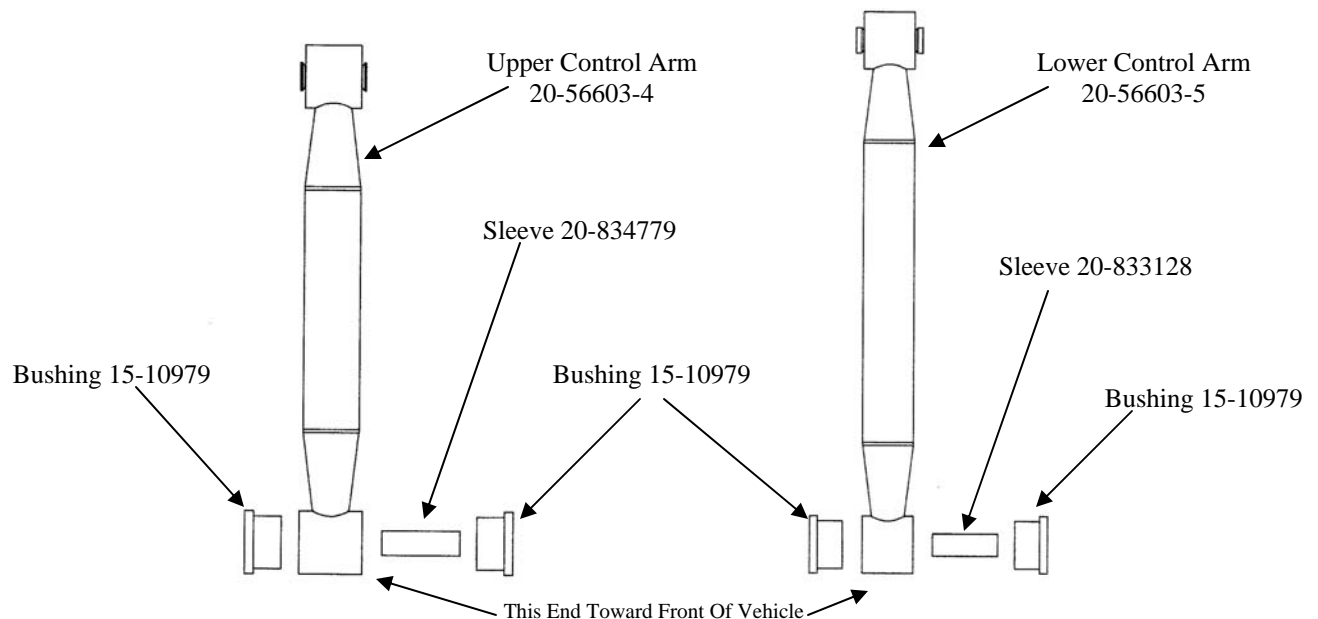
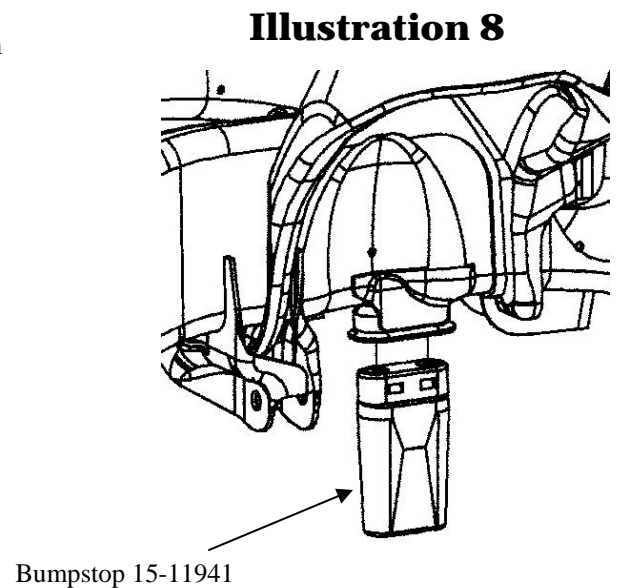
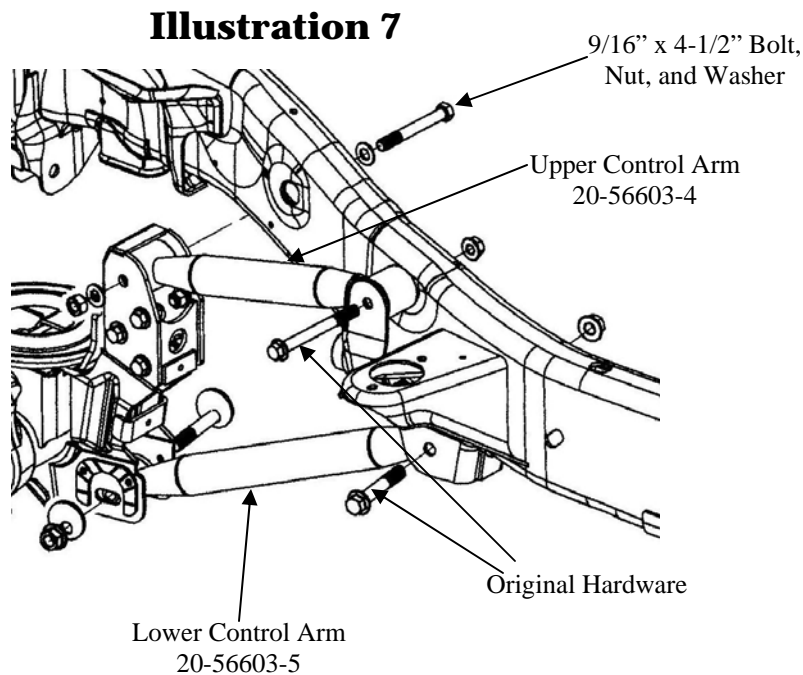


Illustration 6



18. Install the upper and lower control arms using the original hardware. The red bushings will go toward the front of the vehicle. If you cut the pass upper bolt then use the 9/16" x 6" bolt, nut, and washers provided. Install the cam bolts in the centered position. Be sure that the brake line runs below the upper arm. Do not tighten at this time. **(Illustration 7)**

19. Install new bump stops (15-11941) in original location. Lightly grease to ease installation. **(Illustration 8)**



20. Install original rubber isolator and stud plate on new spring (20-20244-1). Align studs with holes in frame and raise axle until springs are seated.

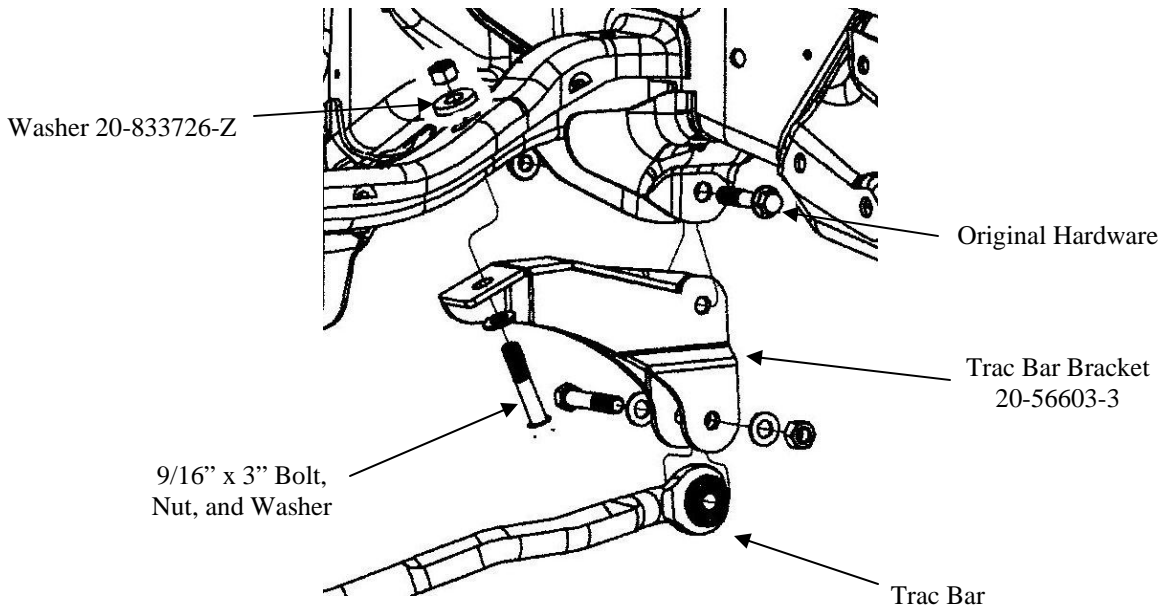
21. Install shocks (F4-BE5-6646-H6) and secure to axle with original hardware. Torque to 89 ft./lbs. Install a washer and bushing on shock stem, then install the shock tower over studs. Torque to 25 ft./lbs. Secure shock to tower with bushing, washer, and nut.

22. Attach brake line to new axle bracket using 5/16" hardware provided.

23. Install trac bar bracket (20-56603-3) to the frame using the original hardware and the 9/16" hardware provided. Attach trac bar to bracket with 9/16" hard-

ware provided. Torque the original hardware to 150 ft./lbs. and the 9/16" hardware to 160 ft./lbs. (**Illustration 9**)

Illustration 9



24. Remove the pitman arm using the appropriate puller. Install the new pitman arm (10-20595 or 10-20608) in same orientation. Torque the nut to 220 ft./lbs. (**Illustration 10**)

Illustration 10

25. Attach the drag link to the new pitman arm. It will be necessary to loosen clamp and rotate end so that the stud points up. Torque to 45 ft./lbs.

26. Apply loctite to the threads of the original sway bar links. Thread the link extensions onto the originals and tighten securely. Install original washer and bushing on new stud and insert into sway bar. Install second washer and bushing and secure with nut. (**Illustration 11**)

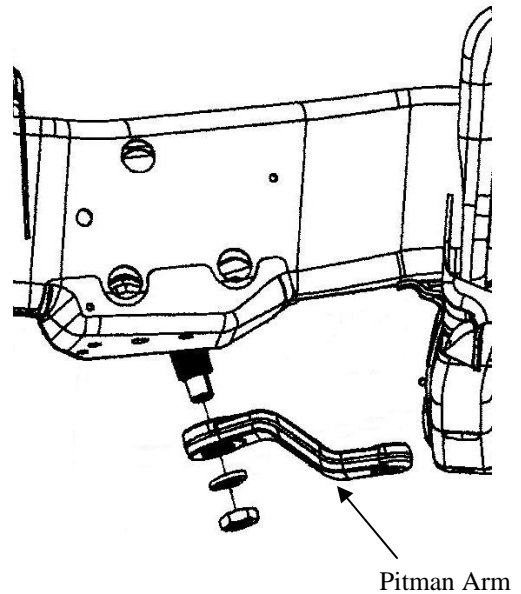
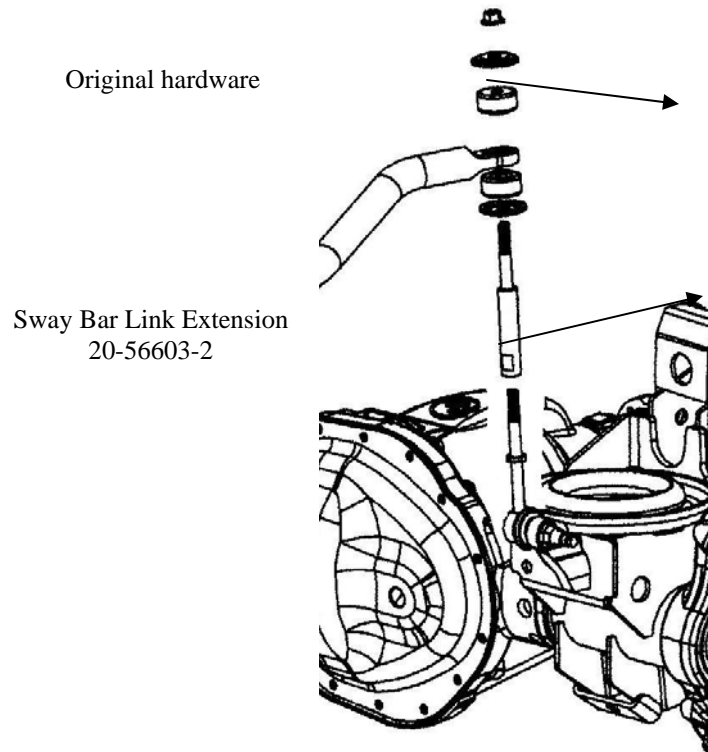


Illustration 11

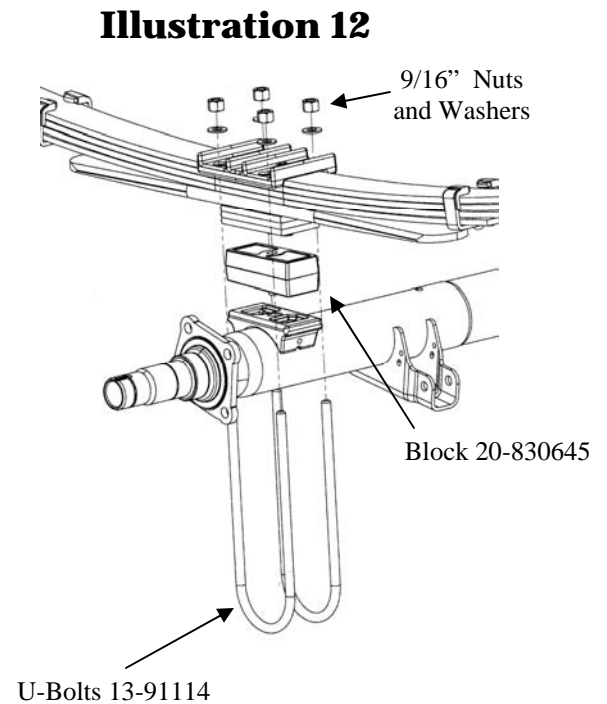


27. Install wheels and tires and lower vehicle to the ground. Torque lug nuts to 145ft./lbs.

28. 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.

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 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 and remove them.
4. Remove rear U-bolts attaching rear axle to driver side leaf spring. Carefully lower rear axle.



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

5. Insert new riser Block (20-830645) on axle pad. Make sure the pin in the block indexes into the hole of the axle housing spring pad. The short end of the block goes toward the front of the vehicle. Carefully raise rear axle until block makes contact with leaf spring. Make sure center bolt is aligned with hole in block. (**Illustration12**)
6. Re-mount axle to spring using the new U-bolts, Washers and High Nuts with existing spring plates. Torque U-bolts nuts to 85-100 ft.-lbs.
7. **Repeat steps 4 through 6 on passenger side.**
8. Install new longer Shock Absorbers (F4-BE5-6647-H1). Using the existing hardware attach the shock to lower axle mount. Attach shock to upper frame mount and Torque the nuts to specifications listed on the last page.
9. Install rear tire/wheel assemblies and lower the vehicle. Torque lug nuts to 145 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 the last page.
- 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.
- 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.
- 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

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:

Track Bar Bracket-to-Frame Bolt	150 ft. lbs.
Lower Control Arm Bolts	125 ft. lbs.
Upper Control Arm Bolts	95 ft. lbs.
Front Shock Absorber-to-Axle Bolt	89 ft. lbs.
ShockTower Nuts	25 ft. lbs.
Pitman Arm-to-Steering Box Nut	220 ft. lbs.
Drag Link-to-Pitman Arm Nut	45 ft. lbs.
Rear Shock Absorber-to-Frame Bracket Bolt	100 ft. lbs.
Rear Shock Absorber-to-Axle Bracket Bolt	100.0 ft. lbs.
U-Bolt Nuts	100 ft. lbs.
Wheel Lug Nuts	145 ft. lbs.