



4/09/03

**'99-'01 GM 4WD DUAL SHOCK KIT
2500 8 LUG & 1500HD**

(Fits new body style standard 8-Lug only, Does not fit 2500 "HD" models)

Installation Instructions

P/N 10-31899

This kit is designed as an option to Lift Kit 10-41899

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.

<u>Item</u>	<u>Description</u>	<u>Qty.</u>	<u>Illus.</u>
20-31899-1	Hoop, Shock (Drvr.)	1	3
20-31899-2	Hoop, Shock (Pass.)	1	3
20-31899-3	Brace, Hoop Support (Drvr. Long)	1	3
20-31899-4	Brace, Hoop Support (Pass. Short)	1	3
20-31899-5	Mount, Lower Shock (Drvr.)	1	4
20-31899-6	Mount, Lower Shock (Pass.)	1	4
50-BE5-6237-T5	Shock, Bilstein 5100	4	3
20-69202	Hardware Pack: (1/2" Hardware & Sleeves)	1	
13-23003-Z	Hex Bolt, 1/2"-13 x 6-1/2" Gr.8	2	3
13-21976-Z	Hex Bolt, 1/2"-13 x 3-3/4" Gr.8	4	3
13-21430-Z	Hex Bolt, 1/2"-13 x 2-3/4" Gr.8	4	
13-30382-Z	Washer, 1/2" Hrdn.	20	3
13-10514-Z	Nut, 1/2"-13 Top Lock	10	3
20-831386	Sleeve, 3/4" x .120 x 2.25"	2	3
20-833232	Sleeve, 3/4" x .120 x 2.35"	2	3
20-69592	Hardware Pack: (3/8" Hardware & End Cap)	1	
13-23393-Z	Screw, 3/8"-16 x 2-3/4" Gr. 8	4	4
13-21482-Z	Screw, 3/8"-16 x 2-1/2" Gr. 8	4	4
13-22938-Z	Screw, 3/8"-16 x 1-1/4" Gr.8	8	3
13-30408-Z	Washer, 3/8" Hrdn.	32	3,4
13-10553-Z	Nut, 3/8"-16 Top Lock	16	3,4
15-11213	End Cap	4	3

BEFORE YOU BEGIN:

- Read instructions carefully and study the illustrations before attempting installation. *RCD Suspensions* 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 Suspensions* 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.
- System will not work on vehicles equipped with electronic and / or air ride suspension systems. Call *RCD Suspensions Tech Support* for details.

- Requires wheels with a maximum of 4.5" of back spacing.
- 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 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.**

INSTALLATION

1) Raise the vehicle. If working without a shop hoist, put the vehicle in gear, set emergency brake and block rear wheels, in front and behind tires. Loosen lug nuts. Lift vehicle with floor jack and place safety jack stands under frame rails, behind front wheel wells, and lower frame onto stands. Remove the front tire/wheel assemblies.

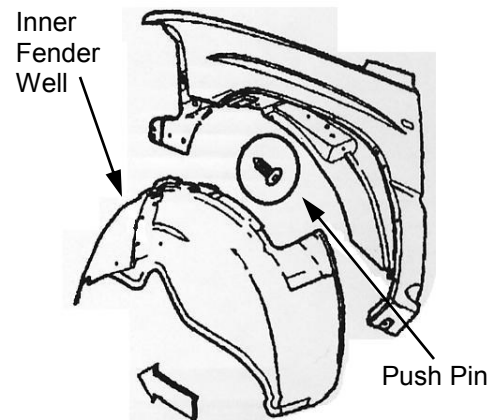


Illustration 1

- 2)** Support lower control arm with a suitable floor jack. Raise the jack just enough to support control arm's weight.
- 3)** Remove pushpins to detach plastic inner fender well from fender (**Illustration 1**).
- 4)** Remove existing shock
- 5)** Disconnect ABS connector and pull harness away from top of spring tower.
- 6)** Disconnect Brake line anchor from top of upper control arm.
- 7)** Locate brake line anchor on frame and remove bolt securing anchor (**Illustration 2**) During installation the hoop's front tab will mount under this anchor using the existing bolt.
- 8)** On driver's side only remove plastic cover and casing surrounding fuse panel.

9) Notice on factory upper shock mount a small 1/4" hole just to the rear of the vehicle from the large hole for the factory shock to bolt to. Drill this hole out to 3/8". Position Dual Shock Hoop Brace on top of factory shock mount. Center large hole on the plate of the Hoop Brace over the factory shock mount and install 3/8" x 1-1/4" bolt through hole drilled but do not tighten at this time.

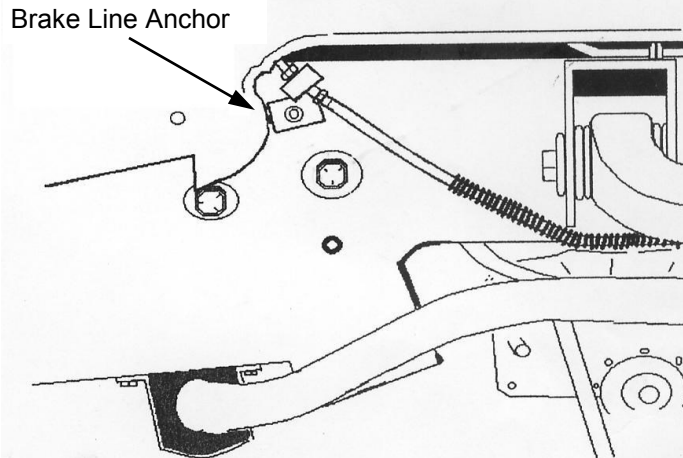


Illustration 2

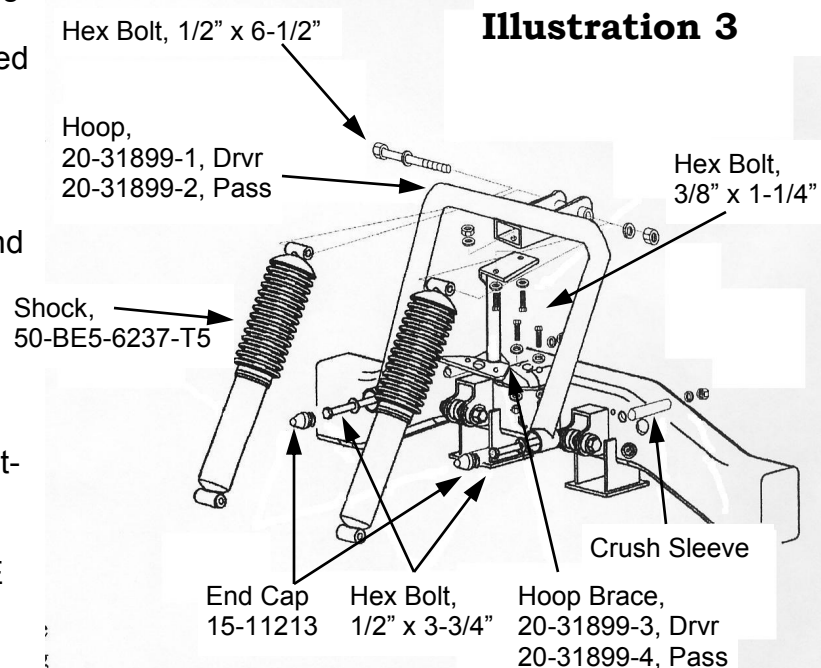
10) Place Shock Hoop onto brace and install two 3/8" x 1-1/4" bolts but do not tighten.

NOTE: See (Illustration 3) for Hoop Assembly overview.

11) Notice tab on the end of shock hoop. This should line up with the hole in the frame where the brake line anchor was located. Install existing bolt through tab into hole and tighten.

WARNING: Before drilling, remove hoses, wiring and/or components attached to both sides of work area.

12) Tighten all 3/8" bolts installed so far. With all bolts tightened, mark the location of 1/2" holes to be drilled through the frame at the hoop ends and one 3/8" hole to be drilled in the Plate on the Hoop Brace through the factory shock mount.



13) Remove shock hoop and brace. Drill 3/8" hole through factory upper shock mount were marked. Drill 1/2" holes all the way through the frame for Hoop ends. Next, drill only the outside frame rail hole to 3/4". DO NOT DRILL 3/4" HOLE THROUGH INSIDE FRAME RAIL.

14) Insert a guide bolt into each of the 1/2" holes from the inside of frame running out. Bolt length needs to pass through frame and stick out of the 3/4" hole on outside frame. The bolt prevents the Crush Sleeves from dropping between frame rails during assembly. Insert longer (3/4" x .120 x 2.35") Crush Sleeve through front 3/4" outside frame rail hole onto guide bolt. Insert shorter (3/4" x .120 x 2.25") Crush Sleeve through rear 3/4" outside frame rail hole onto guide bolt. Insert 1/2" x 3-3/4" Hex Bolt with Flat Washer through each hoop mounting hole and into crush sleeve (forcing guide bolt out). Secure assembly with Flat Washer and 1/2" Top Lock Nut. Attach hoop brace to spring tower and hoop using 3/8" x 1-1/4 Hex Bolts with Flat Washers and 3/8" Top Lock Nuts provided. Do not tighten assembly yet.

15) Use existing hardware to install brake line anchor on frame. It will now also secure tab on front hoop end.

16) Locate Dual Shock Lower Mount (20-31899-5 Drvr., 20-31899-6 Pass.). Position Lower Mount onto top of upper control arm. The mount's side plates will help position mount properly. The shortest side tab should be located right next to where the stock brake line mount was located on the upper control arm. If the tab is not there you have the wrong mount.

17) Align holes in mount with two existing holes on top of control arm. **(Illustration 4)** Mark the other two holes to be drilled on upper control arm. Remove mount and drill two marked holes and two existing holes to 3/8". Holes are to be drilled all the way through the upper control arm.

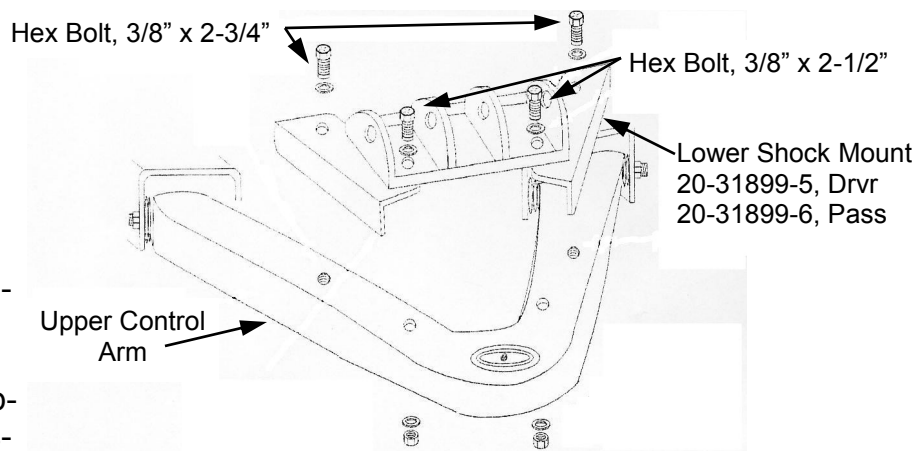


ILLUSTRATION 4

18) Install Lower shock mount to upper control arm using 3/8" x 2-3/4" Bolts with Flat Washers and Nuts provided towards center of vehicle and 3/8" x 2-1/2" Bolts with hardware towards outside of vehicle. Attach brake line bracket to upper control arm in stock location using new hardware. Drill bracket hole to 3/8" if needed.

19) Temporarily set inner fender well in place. Mark top center of inner fender well and trim enough off to clearance for shocks.

20) Install shocks (50-BE5-6237-T5) to upper Hoop mount using 1/2" x 6-1/2" Hex Bolt, Flat Washer, and Top Lock Nut Provided. Do not tighten assembly yet.

21) Install fuse panel case and cover. It may be necessary to trim fuse panel case to clear shock and wiring.

22) Install Shock to Lower Shock Mount using 1/2" x 2-3/4" Hex Bolts with Washers and Top Lock nuts provided. Torque to 90 ft. lbs.

23) Repeat preceding steps on opposite side of vehicle.

24) Torque all 3/8" bolts to 35 ft. lbs. Torque all 1/2" bolts to 90 ft. lbs. Insert End Cap (15-11213) into Hoop Ends.

25) Connect ABS wire connector and tie wrap wire to Hoop and Hoop Brace.

26) Use existing plastic push pins to attach plastic fender well to fender.

27) Repeat steps 24, 25 and 26 on opposite side of vehicle.

28) Replace tire/wheel assemblies and lower vehicle.

29) Check torque on all fasteners after the first 100 miles. Periodically inspect components for tightness and to ensure proper working condition.

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.
- With vehicle on the floor, cycle steering lock to lock and inspect steering, suspension and driveline for proper operation, tightness and adequate clearance. Re-check brake/hose fitting for leaks or chafing.
- Make sure kit components have at least 1/2" clearance from hoses, belts or other components that can cause chafing.

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

Shock, Upper Nut	15 ft. lbs.
Shock, Lower Bolt	59 ft. lbs.