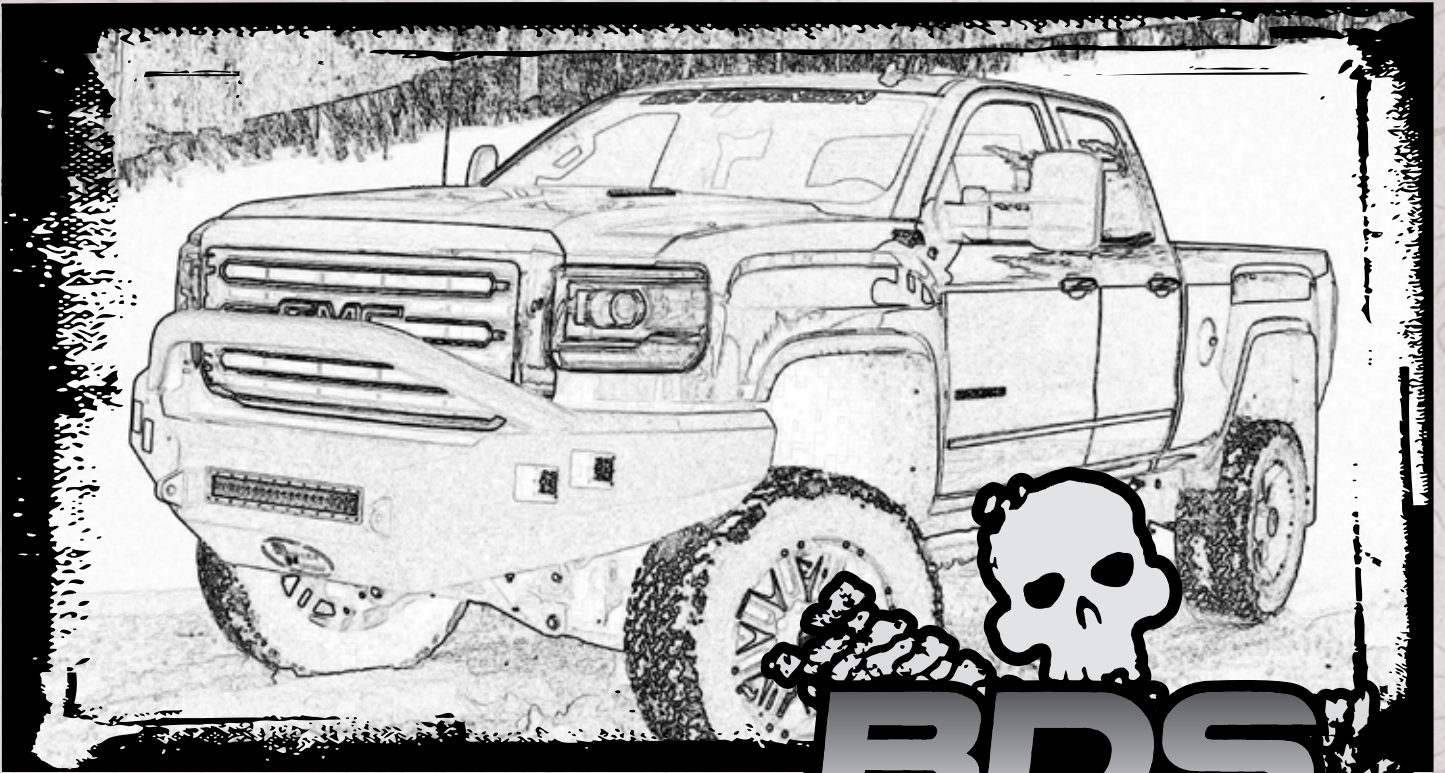


# Installation instructions



Part#: 121653

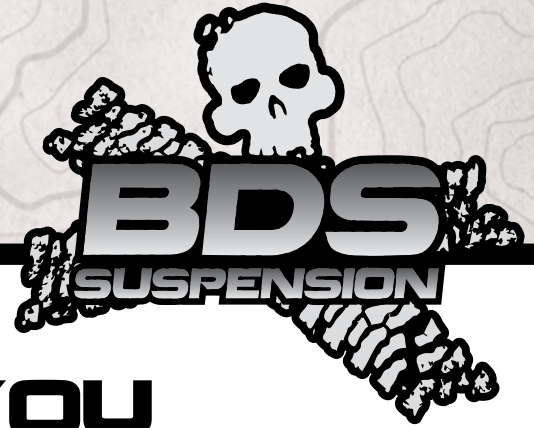


**6.5" Coilover Upgrade Kit**

**Chevy/GM 2500/3500 HD Pickup 2WD/4WD | 2011-2017**



# Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.



## THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come. Thank you for choosing BDS Suspension!

### BEFORE YOU START

BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known.

### FOR YOUR SAFETY

Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices. You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

### BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
- Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
- Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
- Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
- If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
- Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.



### TIRES AND WHEELS

6.5" Kit:

37 x 12.50 on 17" x 9" w/ 4-1/2 to 4-5/8" Backspacing

37 x 12.50 on 18" x 9" w/ 4-1/2 to 4-5/8" Backspacing

37 x 12.50 on 20" x 9" w/ 4-2/2" to 5-1/2" Backspacing

Larger than 20", use 20" wheel specs

Stock 20" x 8.5" wheels not recommended, however, they can be reinstalled if necessary. Stock 17" and 18" wheels will not fit back on the vehicle once this suspension system is installed.

### BEFORE YOU DRIVE

Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.

Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

# CONTENTS OF YOUR KIT

| <b>BDS 121653</b> |     |  |
|-------------------|-----|--|
| Part #            | Qty | Description                                  |
| 02834             | 1   | Coilover Conversion - Upper Mount - DRV      |
| 02835             | 1   | Coilover Conversion - Upper Mount - PASS     |
| 02912             | 1   | Weld-in Support Gusset - DRV                 |
| 02913             | 1   | Weld-in Support Gusset - PASS                |
| 02838             | 1   | Coilover Conversion - Reservoir Mount - DRV  |
| 02919             | 1   | Coilover Conversion - Reservoir Mount - PASS |
| 911109            | 2   | Sway Bar Link                                |
| SB35BK            | 2   | Wide Eb1 Bushing                             |
| SB26RB            | 4   | Sway Bar Link Stem Bushing                   |
| 54587             | 2   | 3/4" OD x 1.575" x 9/16" ID Sleeve           |
| B14X34G5          | 2   | 1/4"-20 x 3/4" Self-tapping Bolt CZ          |
| 099000            | 2   | Zip Tie                                      |
| 954               | 1   | Bolt Pack - Mounting Hardware                |
|                   | 2   | 1/2"-13 x 1-1/4" Bolt                        |
|                   | 4   | 1/2"-13 x 1-1/2" Bolt                        |
|                   | 2   | 1/2"-13 x 3-1/4" Bolt                        |
|                   | 2   | 1/2"-13 x 4-1/4" Bolt                        |
|                   | 20  | 1/2" SAE Thru-Hardened Washer                |
|                   | 10  | 1/2"-13 Prevailing Torque Nut                |
| 955               | 1   | Bolt Pack - Sway Bar Links                   |
|                   | 2   | 7/16"-14 Nylock Nut                          |
|                   | 4   | 7/16" USS Washer                             |
|                   | 2   | 9/16"-12 x 3" Bolt                           |
|                   | 4   | 9/16" SAE Thru-hardened washer               |
|                   | 2   | 9/16"-12 Prevailing Torque Nut               |
| 02390b            | 2   | Rear Bump Stop Extension                     |
| 02391B            | 2   | Front Bump Stop Extension                    |
| 02392             | 2   | Nut Tab                                      |
| 95105A169         | 3   | 1/2" Rivet Nut                               |
| 95105A159         | 3   | 3/8" Short Rivet Nut                         |
| 95105A168         | 3   | 3/8" Tall Rivet Nut                          |
| 593               | 1   | Bolt Pack - Bump Stop Hardware               |
|                   | 2   | 3/8"-16 x 1" Bolt                            |
|                   | 4   | 3/8"-16 x 1-1/4" Bolt                        |
|                   | 1   | 3/8"-16 x 1-1/2" Bolt                        |
|                   | 6   | 3/8" Lock Washer                             |
|                   | 6   | 3/8" USS Flat Washer                         |
|                   | 1   | 3/8" Star Washer External Tooth              |
|                   | 1   | 7/16"-20 Hex Nut                             |
|                   | 1   | 1/2" Star Washer External Tooth              |
|                   | 2   | 1/2"-13 x 2" Bolt                            |
|                   | 2   | 1/2" SAE Flat Washer                         |
|                   | 2   | 1/2" Lock Washer                             |

| <b>BDS021250 - UCA Box Kit</b> |     |                          |
|--------------------------------|-----|--------------------------|
| Part #                         | Qty | Description              |
| A258                           | 1   | UCA Assembly - DRV       |
| 02836                          | 1   | 2011 Chevy HD UCA - DRV  |
| K6696                          | 1   | Ball Joint (Moog)        |
| 02839                          | 2   | Bushing - UCA            |
| 02911                          | 1   | Aluminum Cap - Anodized  |
| 9452K145                       | 1   | O-ring (#139)            |
| A259                           | 1   | UCA Assembly - PASS      |
| 02837                          | 1   | 2011 Chevy HD UCA - PASS |
| K6696                          | 1   | Ball Joint (Moog)        |
| 02839                          | 2   | Bushing - UCA            |
| 02911                          | 1   | Aluminum Cap - Anodized  |
| 9452K145                       | 1   | O-ring (#139)            |

| <b>BDS021251 LCA Box Kit - DRV</b> |     |                               |
|------------------------------------|-----|-------------------------------|
| Part #                             | Qty | Description                   |
| A256                               | 1   | LCA Assembly - DRV            |
| 02832                              | 1   | 2011 Chevy HD LCA - DRV       |
| K500232                            | 1   | Lower Ball Joint (Moog)       |
| MB08B700720                        | 1   | Rear Lower Bushing            |
| MB08B700710                        | 1   | Front Lower Bushing           |
| 02899                              | 2   | BDS Large Logo                |
| N14AN                              | 2   | 1/4"-20 Acorn nut - stainless |

| <b>BDS021252 LCA Box Kit - PASS</b> |     |                               |
|-------------------------------------|-----|-------------------------------|
| Part #                              | Qty | Description                   |
| A257                                | 1   | LCA Assembly - PASS           |
| 02833                               | 1   | 2011 Chevy HD LCA - PASS      |
| K500232                             | 1   | Lower Ball Joint (Moog)       |
| MB08B700720                         | 1   | Rear Lower Bushing            |
| MB08B700710                         | 1   | Front Lower Bushing           |
| 02899                               | 1   | BDS Large Logo                |
| N14AN                               | 2   | 1/4"-20 Acorn nut - stainless |

## SPECIAL TOOLS

34mm socket  
 T30 Torx bit  
 1-1/16" (27mm) socket/wrench  
 Torsion Bar Unloading tool (see Pre-Installation Note #2)

# INSTALLATION INSTRUCTIONS

## TECH TIPS

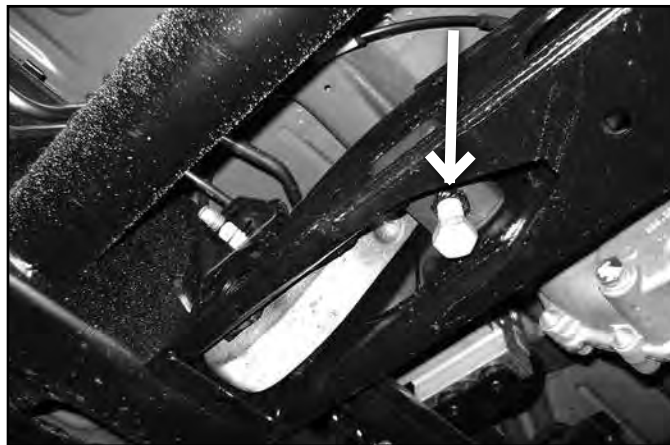
1. Disassembly/assembly of the factory torsion bar system requires the use of a special unloading tool. The GM specified tool # is CH48809.
2. Some minor trim will be required with certain wheel/tire combination. This is normal with most aftermarket tire/wheel fitment on Chevy/GM trucks. Trimming will normally included the bottom edge of the inner fender shrouds and/or lower corner of front bumper valance. As a rule of thumb, deeper backspacing and shorter/narrower tires will reduce/eliminate trimming required. Further trimming tips are included at the end of this instruction sheet.
3. Coilover Coil has a large amount of preload, a coil spring compressor must be used to remove the coil from the coilover. Failure to use a coil spring compressor may result in death or injury.
4. System can not be set at a lower ride height, there will be alignment problems. Designed for use with 5" rear block.

**THIS IS ONLY THE 6.5" COILOVER UPGRADE INSTALLATION FOR VEHICLES W/  
BDS 6.5" NO TORSION BAR DROP KIT ALREADY INSTALLED. SEE 021655 INST  
SHEET FOR COMPLETE INSTALLATION FOR A STOCK VEHICLE.**

## FRONT INSTALLATION

1. Park the vehicle on a flat, clean surface and block the rear wheels for safety.
2. Welding is required. Disconnect the battery (batteries). Failure to do so can cause electronic damage to the vehicle.
3. Raise the front of the vehicle and support with jack stands under the frame rails.
4. Remove the wheels.

**FIGURE 1**



5. Unload the torsion bars but do not remove. Remove and save adjuster bolt/retainer block. (Fig 1)



**Tip** Torsion bars are under extreme pressure. A proper torsion bar tool is necessary to unload the bars. A tool designed specifically for GM torsion bars is required see troubleshooting notes.

6. Remove the torsion bar adjuster plate by pushing the torsion bar forward to allow the plate to drop free. On some vehicles this will require using a hammer/punch or air hammer. Access the end of the torsion bar through the hole in the back of the torsion bar crossmember and drive forward. Leave the torsion bars in the lower control arms.
7. Remove the two bolts that attach the torsion bar crossmember to the frame rails (Fig 2). Remove the torsion bar crossmember from the vehicle. Save bolts and crossmember. On diesel models, disconnect the wire on the passenger's side of the crossmember before removing (Fig 3)

**FIGURE 2**

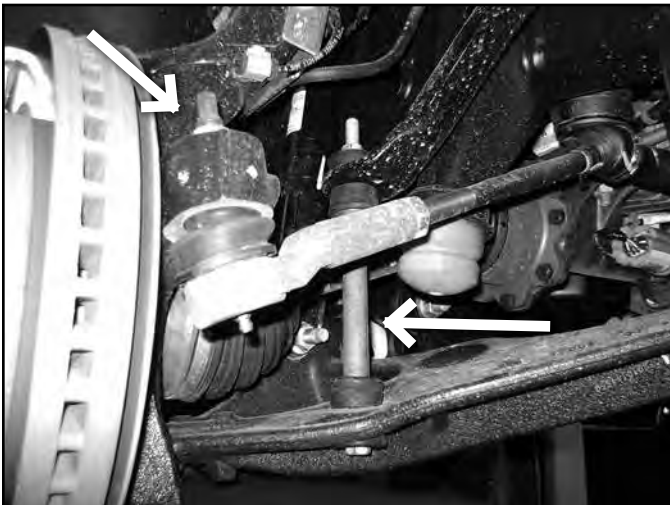


**FIGURE 3**



8. Remove the torsion bars by pulling them rearward out of the lower control arms. Set the torsion bars aside.
9. Disconnect the sway bar end links from the sway bar and the lower control arms (Fig 4A). Discard the link assemblies.
10. Disconnect the tie rod ends from the steering knuckles (Fig 4A). Remove the tie rod end nuts and save. Strike the knuckle near the tie rod end to dislodge the tie rod end taper (Fig 4B). Remove the tie rod ends from the knuckles.

**FIGURE 4A**



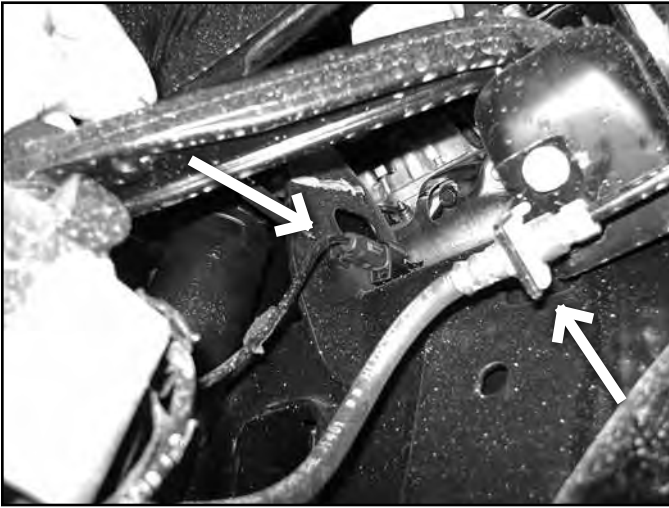
**FIGURE 4B**



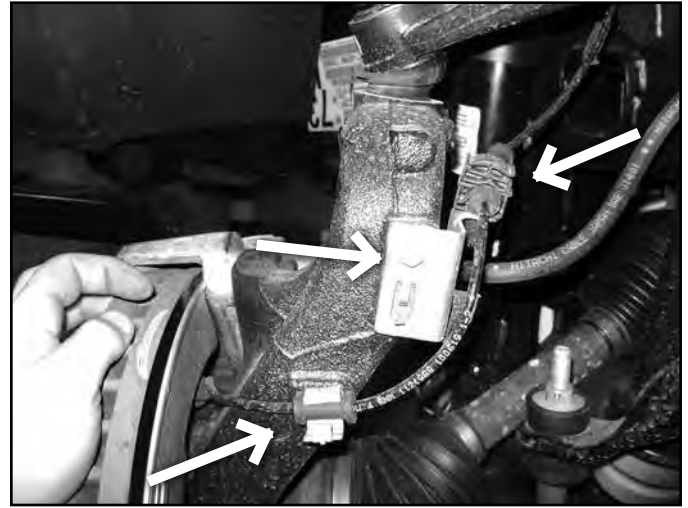
11. Disconnect the ABS brake wire from the connector at the frame (Fig 5) Remove the wire from the plastic retainers on the frame and brake line bracket on the steering knuckle (Fig 6).
12. Disconnect the brake line bracket from the steering knuckle (Fig 6).



**FIGURE 5**



**FIGURE 6**



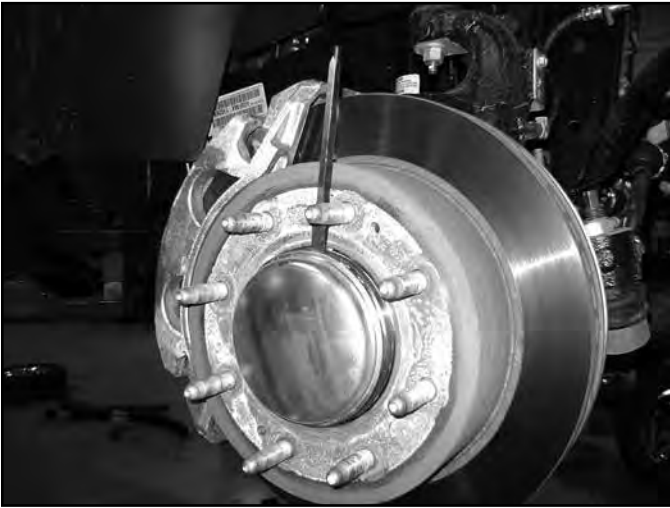
13. Remove the two bolts mounting the brake caliper assembly to the steering knuckle and hang the caliper out of the way (Fig 7). Do not hang the caliper by the brake hose. Save mounting bolts.

**FIGURE 7**

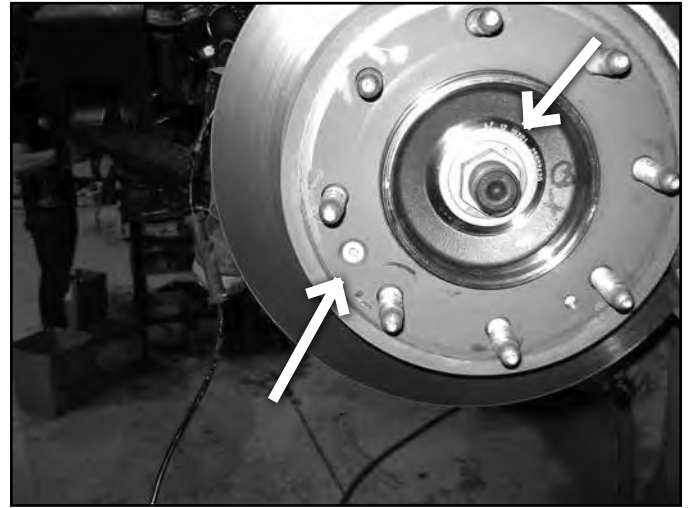


14. Carefully remove the hub dust cover. Save cover (Fig 8). Tip: Carefully work the cover loose with a small chisel.
15. Remove the rotor retaining bolt using a T30 torx bit (Fig 9). Remove the brake rotor and set aside. Save retaining bolt.
16. Remove the CV axle nut and washer (Fig 9). Save hardware.

**FIGURE 8**



**FIGURE 9**



17. Remove the upper and lower ball joint nuts (Fig 11). Reinstall the nuts a couple of turns by hand. Strike the knuckle near the ball joints to release the taper. Remove the nuts and remove the steering knuckle from the vehicle. Save nuts. Take care not to strike the ball joint.

**FIGURE 11**



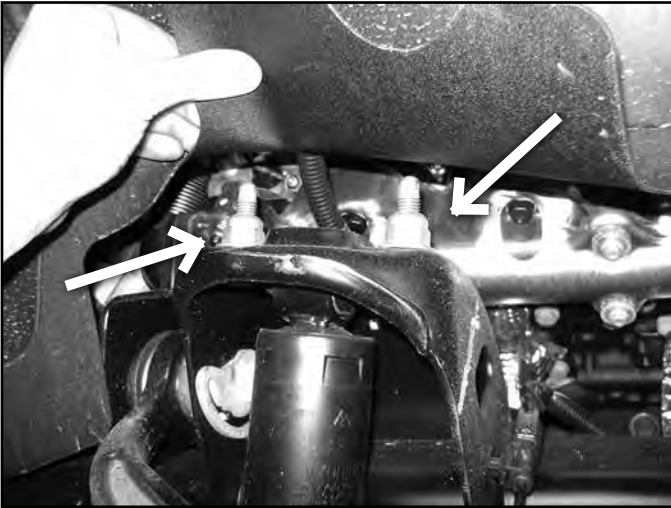
18. Remove the CV axle flange bolts at the differential (Fig 12). There are 8 bolts per side. Remove the CV shafts from the vehicle and set aside. Save bolts.

**FIGURE 12**

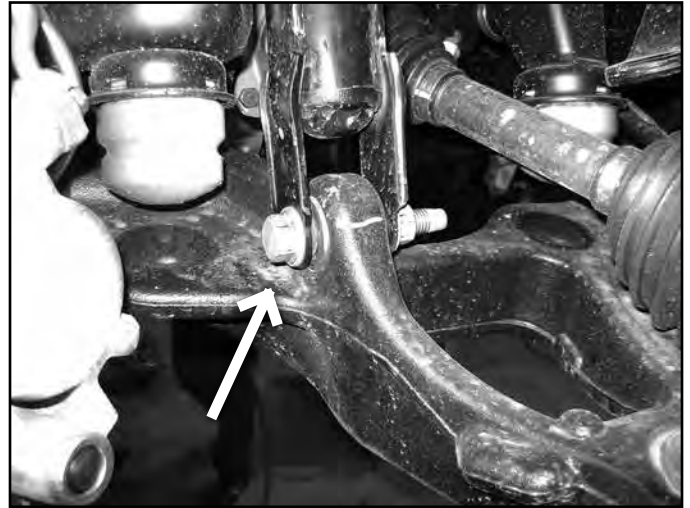


19. Disconnect the shocks from the frame (Fig 13A) and lower control arm (Fig 13B). Remove shocks. Save the lower shock mount hardware.

**FIGURE 13A**

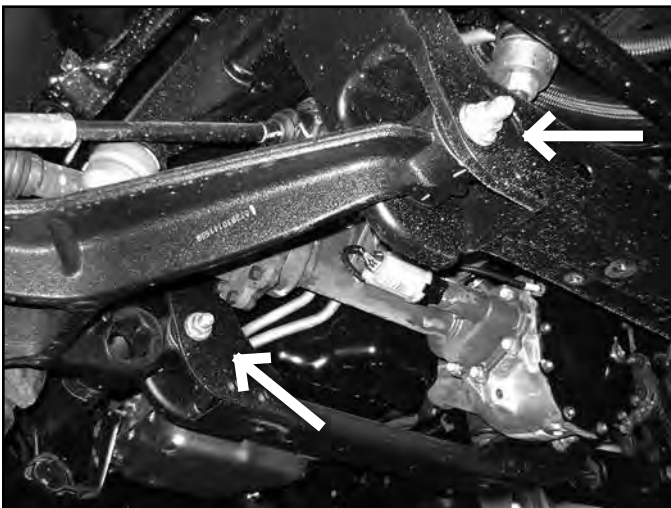


**FIGURE 13B**



20. Remove the front and rear lower control arm bolts and remove the control arms from the vehicle (Fig 14a) Save the control arms mounting hardware.  
21. Remove the upper control arms from the vehicle. Keep the cam bolts for later reinstallation. (Fig 14b)

**FIGURE 14A**



**FIGURE 14B**





22. There are two factory bump stops per side. Remove the front rubber bumpstop from the frame mounts on each side. They can be removed with a pair of channel-lock pliers.
23. *At this point the steering knuckles, control arms, bump stops, and CV shafts will be removed from the vehicle.*

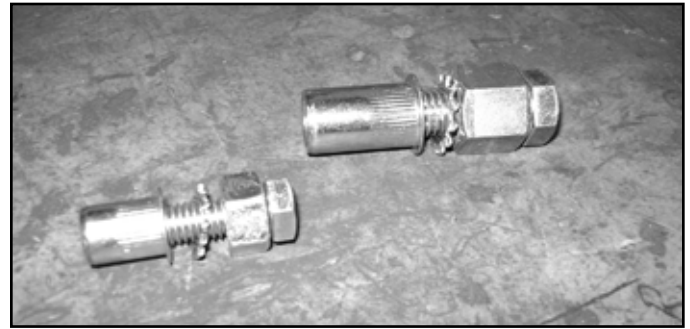
## BUMP STOP INSTALLATION:

24. Locate all of the provided rivet nuts and bump stop bolt pack #593. There are 3 each of 3 different rivet nuts sizes are provided, 1/2" (large) and two 3/8" with one set longer than the other. Sort the rivet nuts by size (Fig 15a). Set up the rivet nut installation tools. The 1/2" tool consists of a 1/2" x 2" bolt, 9/16" high nut and 1/2" star washer. The 3/8" tool consists of a 3/8" x 1-1/2" bolt, 7/16" hex nut and 3/8" star washer. Set up the tools as shown (Fig 15b).

**FIGURE 15A**

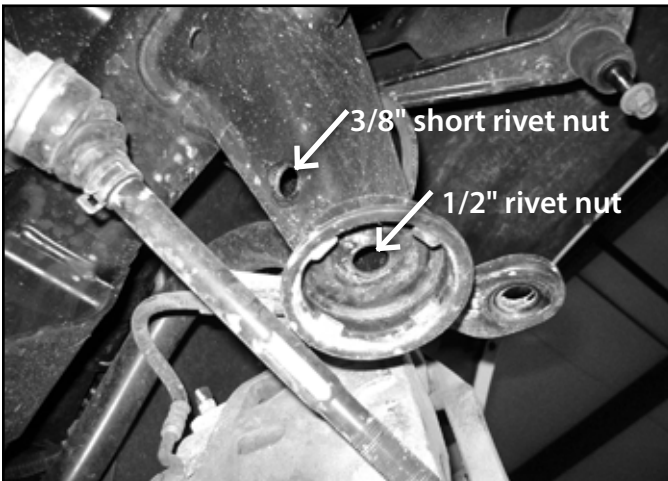


**FIGURE 15B**



25. Six holes need to be slightly clearanced on the factory bump stop mounts to accepted the rivet nuts. For the 3/8" rivet nuts drill the holes to 17/32" and 11/16" for the 1/2" rivet nuts. In both cases, if the necessary bits are not available, a rotary grinding tool can be used to enlarge the holes to the proper size. Take care not to open the holes too much. Drill out the holes shown in (Fig 16a - Front, Fig 16b - Rear)

**FIGURE 16A (FRONT BUMP STOP)**



**FIGURE 16B (REAR BUMP STOP)**

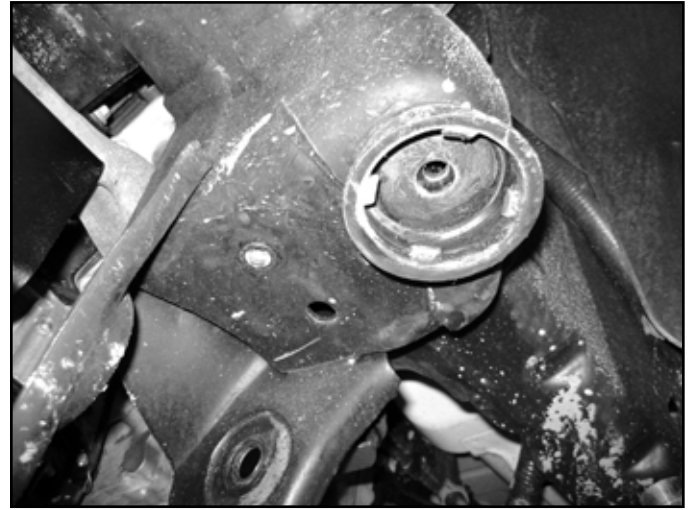


26. Install the rivet nuts. Thread the appropriate rivet nut on the preassembled tool. The longer 3/8" rivet nut will be installed in the rear bump stop mount. The 1/2" rivet nut goes in the center of the factory front bump stop cup. Insert the rivet nuts into the holes. Hold the jam nut with a wrench and tighten the bolt to collapse the rivet nut in the hole (Fig 17a). Be sure to hold the rivet nut tight and flush in the hole. Take care not to over tighten. The 3/8" rivet nut can be tighten to approximately 40-45ft-lbs and the 1/2" to approximately 90 ft-lbs. Reuse the tools to install all six rivet nuts (Fig 17b). For detailed rivet nut installation instructions see the end of this instruction sheet.

**FIGURE 17A**

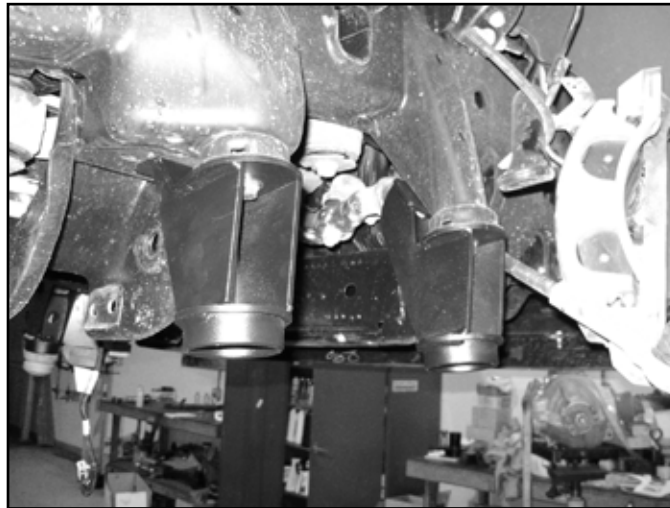


**FIGURE 17B**



27. With all the rivet nuts installed, locate the provided front bump stop brackets. Attach the front brackets to the factory bump stop mount with a 1/2" x 2" bolt, flat washer and lock washer (use the installation bolt for one of the brackets). Fasten the back of the mount with a 3/8" x 1-1/4" bolt, flat washer and lock washer. Torque the 3/8" hardware to 30 ft-lbs and 1/2" hardware to 60 ft-lbs (Fig 18).

**FIGURE 18**



28. Locate the rear bump stop brackets and two nut plates. Install the nut plates in the factory bump stop cups so the tabs point down and lock in place against the tabs in the cup (Fig 19). Attach the bump stop bracket to the factory mount with a 3/8" x 1" bolt, flat washer and lock washer into the nut plate. Snug hardware. Fasten the back tab of the bracket to the rivet nut with a 3/8" x 1-1/4" bolt, flat and lock washer. Torque 3/8" hardware to 30 ft-lbs.

**FIGURE 19**



29. Install the factory bump stops into the new mounts. Place the bump stops in the new cups at an angle and twist them into the cups (Fig 20).

**FIGURE 20**



### **CONTROL ARM AND COILOVER INSTALLATION**

30. Prep the area by the upper shock mount for welding. Remove the GM undercoating in this area. Using brake clean with a putty knife is the easiest way to remove large chunks of the undercoating.
31. Place the weld-in support plate against the factory brackets. Ensure area is properly prepared for welding. Weld plate with appropriate mig or tig welder, certified welder highly recommended. (Fig 21a, 21b)



**FIGURE 21A**



**FIGURE 21B**



32. Allow plate to cool, coat bare metal with paint.
33. Install the upper control arms at this time (#02836 - DRV, #02837 - Pass). Use the factory cam bolts, washers, and nuts. Do not torque to specification at this time. Center the cams and snug hardware.
34. Place the upper coilover bracket against the factory shock mounting bracket. Mark center of the lower slot and drill out to 1/2". Driver's side will be an existing hole that needs to be enlarged. (Fig 22a, 22b)


**FIGURE 22A**



**FIGURE 22B**



35. Install the upper coilover bracket with 1/2" x 1-1/2" hardware through the original upper mount, attach the reservoir bracket to the top side. Attach lower hole with 1/2" x 1-1/4" hardware (BP # 954) . Tighten to 65 ft-lbs.
36. Install the coilover at this time. Attach to the upper bracket with 1/2" x 3-1/4" hardware.

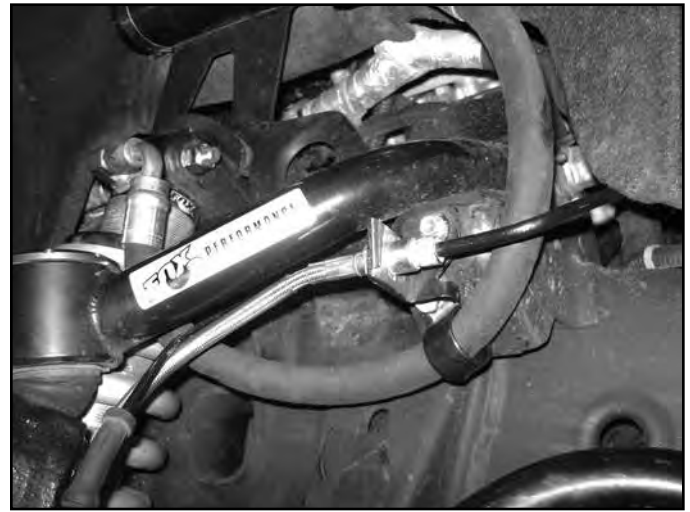
 **Tip** *Fitting will face towards the FRONT of the vehicle. (Fig 23a, 23b)*

37. Route the reservoir hose BEHIND the brakeline bracket. The brakeline bracket will need to have a new hole drilled on the upper control arm droop limiter, drill to 7/32" and attach with included 1/4" self threading bolts. Attach the reservoir hose to the original brakeline bracket mounting hole with factory hardware and new 7/8" clamp.

**FIGURE 23A**



**FIGURE 23B**



38. Install new lower control arms with factory hardware. Do not tighten the hardware at this time.
39. Attach the lower control arm to the lower coilover mount with 1/2" x 4-1/4" hardware. (Fig 24)

**FIGURE 24**



## **STEERING KNUCKLE / CV'S:**

40. Install the CV into the hub. Reattach the steering knuckles with new ball joint hardware to the lower ball joint. . Swing the knuckle up and attach to the upper ball joint with new nut. Torque the upper ball joint nut to 37 ft-lbs and the lower ball joint nut to 74 ft-lbs (Fig 25).

**FIGURE 25**



41. Locate the hub o-ring in the factory steering knuckle hub bores. Carefully remove the o-rings (Fig 26) and install into the new steering knuckles.
42. Attach the CV to the differential output flange. Align the differential flange holes and fasten with the factory bolts. Apply Loctite to the threads and torque to 40 ft-lbs.

**FIGURE 26**



43. Reinstall the torsion bar crossmember in the frame with the original mounting bolt. Torque bolts to 90 ft-lbs. On diesel models, reconnect the factory wiring that was disconnected during disassembly (Fig 2B - beginning of instruction sheet).
44. Install the original CV axle nut and washer and torque to 155 ft-lbs. Reinstall the hub dust cap.
45. Install the brake rotor on the hub by aligning the tapered retainer bolt hole in the rotor with the threaded hole in the hub flange. Fasten the rotor to the hub with the original retainer bolt and tighten securely with a T30 torx bit.



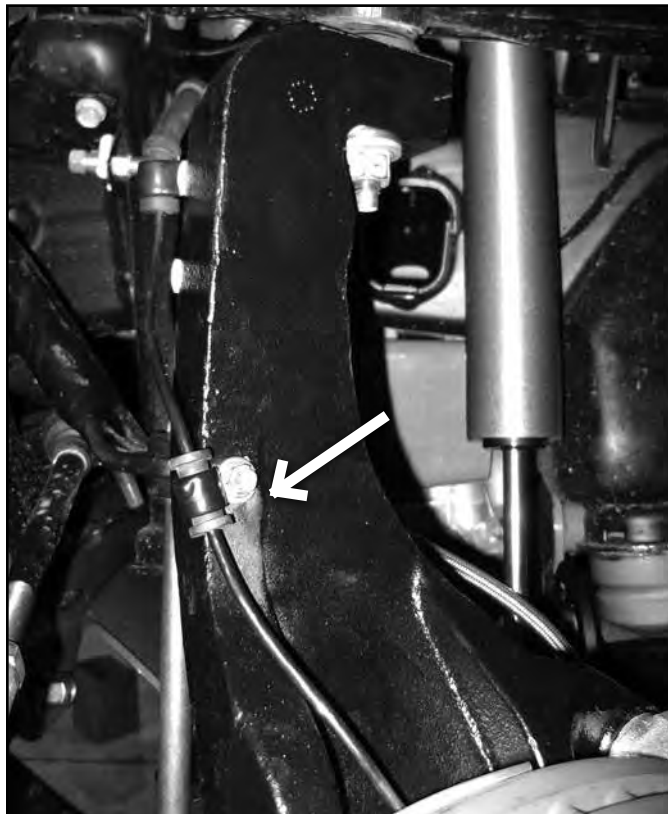
46. Attach calipers to steering knuckle with factory hardware. Tighten to 221 ft-lbs.
47. Attach brake and ABS wires to the steering knuckle with previously installed hardware. The hardware will be tightened once the line slack is set. (Fig 27). Ensure there is adequate clearance between the brakeline and reservoir hose at full droop. Adjust accordingly, it may be necessary to deform the clamp slightly to hold the brakeline in place to keep it from sliding in the clip.

**FIGURE 27**



48. Reattach the ABS wire to the front face of the knuckle. Tighten securely. (Fig 28) Adjust the slack in the two other lines, rotating the steering knuckle back and forth as a check, and tighten the upper two clamps to 10 ft-lbs.

**FIGURE 28**



49. Locate the new front sway bar links (911109), hourglass bushings (SB35BK) and 3/4" OD X 1.575" steel sleeves (54587). Lightly grease and install the bushings and sleeves into the sway bar link ends.

50. Install the new sway bar links into the new lower control arms with 9/16" hardware. Leave bolts loose. Install a provided 7/16" washer followed by a stem bushing. Install the link end into the sway bar end and fasten with a second stem bushing, 7/16" washer and 7/16" nylock nut (BP 955). Tighten the 7/16" nut just until the stem bushings begin to swell. (Fig 29) Torque the 3/8" hardware to 30 ft-lbs.

**FIGURE 29**



51. Attach the tie rod ends to the knuckles. The tie rod end with mount from the top down. Fasten with the original nuts and torque to 45 ft-lbs.
52. Install the front wheels. Torque the lug nuts to 140 ft-lbs. Lower the vehicle to the ground.
53. Bounce the front end to settle the suspension.
54. Torque the lower control arm bolts (4) to 250 ft-lbs.
55. Center the front cam, adjust the rear upper cam to be 'in' 3/4 of the way. Torque upper control arm hardware to 192 ft-lbs.
56. Check all front hardware for proper torque.
57. Grease the upper and lower ball joint. Lightly grease the o-ring and install on the upper ball joint cap. Press the cap in squarely to seat. Cap must be removed at maintenance intervals to grease the upper ball joint.
58. Check tire/wheel clearance with the fenders/bumper as well as with the steering knuckle. It is not uncommon to trim the lower plastic valance of the bumper and inner fender shroud slightly to add proper tire clearance while turning.
59. Check the reservoir hose and brakeline for adequate clearance. Adjust as necessary.

## **POST-INSTALLATION**

1. Check all hardware for proper torque.
2. Reconnect the positive and negative battery cables.

## **FINAL CHECK**

3. The vehicle will need a complete front end alignment. Variations in ride height will affect alignment. Do not adjust coilovers down to a lower height, or alignment may not be possible. If alignment specifications are difficult to achieve, additional positive caster is acceptable and recommended for improved driving characteristics.
4. Check all hardware after 500 miles.
5. Adjust headlights.

# RIVET NUT INSTALLATION INSTRUCTIONS

## RIVET NUT SIZING

1. Verify the correct size rivet nut for the application based on the thickness of material where the rivet nut is to be installed using the following chart.

| Part Number | Thread Size | Body Length (in) | Material Thickness (in) |      | Drill Size (in) |
|-------------|-------------|------------------|-------------------------|------|-----------------|
|             |             |                  | Min.                    | Max. |                 |
| 95105A159   | 3/8-16      | .690             | .027                    | .150 | 17/32           |
| 95105A168   | 3/8-16      | .805             | .150                    | .312 | 17/32           |
| 95105A169   | 1/2-13      | 1.150            | .063                    | .200 | 11/16           |
| 95105A170   | 1/2-13      | 1.300            | .200                    | .350 | 11/16           |

## HOLE PREPARATION

2. Drill hole to appropriate size for rivet nut installation. 1/2" Rivnuts require an 11/16" hole and 3/8" Rivnuts require a 17/32" drill. It is critical that this hole is drilled to the correct size. Remove any burrs that could keep the rivet nut from seating flat against either side of the hole surface.

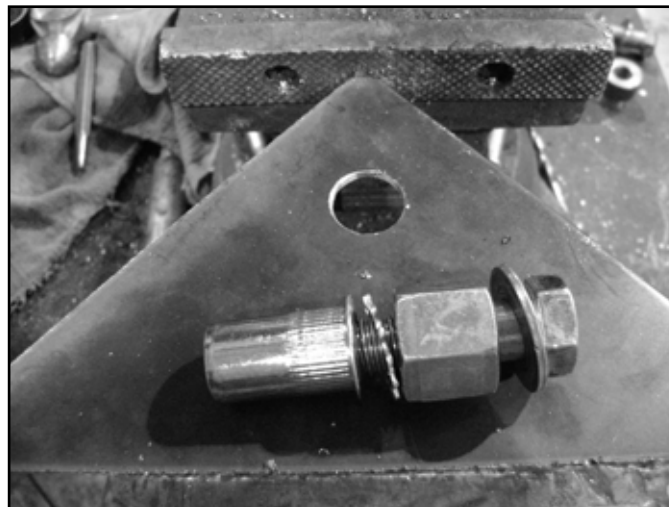


**Tip** *If the correct drill size is not available, it is possible to drill the hole to an available smaller size and slowly grind it out to until the rivet nut fits tight.*

## RIVET NUT INSTALLATION TOOL ASSEMBLY

3. For a 3/8" rivet nut, place the provided 3/8" SAE flat washer on the 3/8" x 1-1/2" bolt, followed by 7/16" hex nut and then a 3/8" serrated washer. **Figure 1** Thread this tool assembly into the rivet nut.
4. For a 1/2" rivet nut, place the provided 1/2" SAE washer on a 1/2" x 2" bolt followed by a 9/16" high nut and 1/2" serrated edge lock washer. Thread this tool assembly into the rivet nut as shown. (Fig. 1)

**FIGURE 1 - 1/2" RIVET NUT SHOWN**



## RIVET NUT INSTALLATION

5. Place the installation tool with the rivet nut threaded on the end into the appropriately sized hole.
6. For a 3/8" rivet nut, hold the nut closest to the rivet nut still with an 5/8" wrench and tighten the 3/8" bolt with a 9/16 wrench to set the rivet nut. Be sure to hold the rivet nut flush to the surface and square to the hole as it is tightened. (Fig. 2)



**Tip** *If available, an impact gun is recommended for tightening the bolt to ensure the rivet nut remains square to the hole and to ease holding the nut from spinning.*



7. For a 1/2" rivet nut, hold the nut closest to the rivet nut still with an 7/8" wrench and tighten the 1/2" bolt with a 3/4" wrench to set the rivet nut. Be sure to hold the rivet nut flush to the surface and square to the hole as it is tightened. (Fig. 2)

**FIGURE 2 - 1/2" RIVET NUT SHOWN**



## TORQUE SPECIFICATIONS

- 3/8" rivet nuts will approach 40 ft. lbs for maximum grip strength. Do not exceed 45 ft-lbs when setting the rivet nut.
- 1/2" rivet nuts will approach 90 ft lbs for maximum grip strength. Do not exceed 100 ft-lbs when setting the rivet nut.



**Tip** *If using the recommended impact gun, use caution to not exceed the recommended torque specifications.*

## RIVET NUT TOOL REMOVAL

8. Once the center bolt is tightened, remain holding the nut from spinning with the wrench and loosen the center bolt to remove the installation tool.



**Caution** *It is very important to hold the nut as the bolt is loosened because the grip of the star washer will try to spin the rivet nut and ruin the installation.*

9. Verify proper installation by checking for consistent rivet nut deformation to see the threads are square and centered to the rivet nut. (Fig. 3)

**FIGURE 3**

