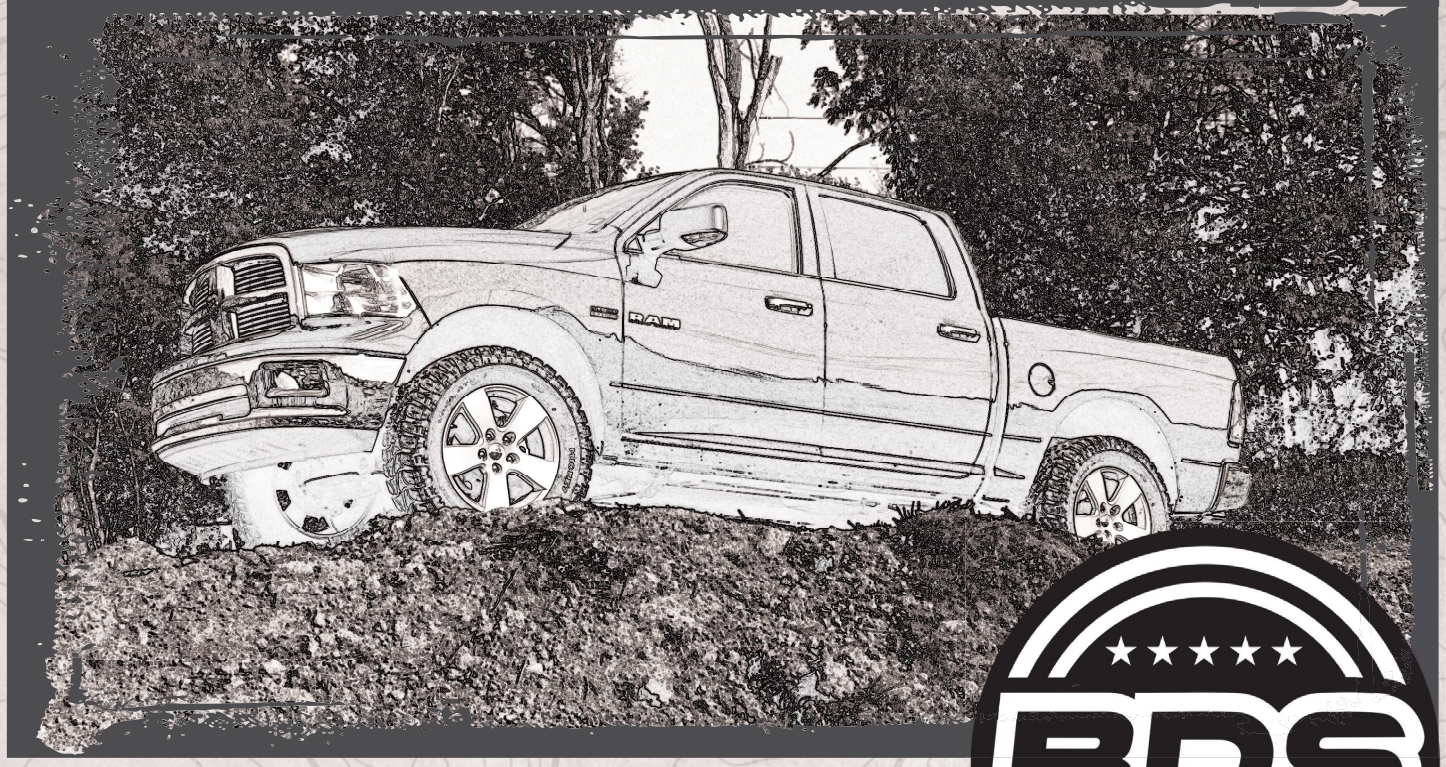
INSTALLATION GUIDE



Part#: 122331

HARDCORE LIMITED LIFETIME WARRANTY

Front Coil Over Conversion

Ram 2500/ 3500 | 2019-2024

Rev.032125

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135

Web: www.bds-suspension.com • E-mail: tech-bds@ridefox.com

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

See main instructions

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

122331 Box Kit		
Part #	Qty	Description
B1678	1	Bag Kit
	1	1.250 X 5/16 X 1.65" DOM Sleeve
	1	Passenger Lower Bolt Hole Adapter
	1	Front Bump Cutout Template - Pass
BP1082	1	Coilover Conversion Bolt Pack
	4	1/4"X 5/8" SS Button Head Hex Drive Screw
	2	1/2" X 3-1/2" Grade 8 - Bolt - Black
	2	1/2" X 1-1/4" Grade 8 Bolt - Yellow Zinc
	6	1/2" SAE Flat Washer - Yellow Zinc
	1	18mm Flat Washer - Clear Zinc
	1	5/8" X 3-1/4" Bolt Partial thread - Yellow Zinc
	1	5/8" SAE Washer - Yellow Zinc
	8	7/16"X 1-1/2" Bolt Full thread - Yellow Zinc
	16	7/16" SEA Flat Washer - Yellow Zinc
	8	7/16"-14 Grade 8 Nylock Nut - Yellow Zinc
	2	1/2" X 3" Bolt Partial Thread - Yellow Zinc
	2	1/2"-13 Prevailing Torque Nut - Yellow Zinc
B1442	2	Bag Kit
	2	1/8" X.187" SS Blind Rivet
	1	BDS Badge (3.920")
A475	2	Upper Coilover Mount w/sleeve
05501	1	Lower Coilover Mount - DRV
05502	1	Lower Coilover Mount - PASS
5503	2	Reservoir Mount
05603	1	Front Bump Cutout Template - DRV
05674	1	Coilover Bucket Gusset
FOX88326101	1	Rear, 2.5 Truck PES, P/B, 2-3.5" Lift, DSC
FOX88406517	1	Front Coilover, 2.5 Truck PES, R/R
FOX88302155	1	Gen2, Bump Stop 2.0 Series, IFP
FOX88326066	1	Rear, 2.5 Truck PES, P/B, 10.6", 3-4" Lift, DSC
FOX88406518	1	Front Coilover, 2.5 Truck PES, R/R, 4" Lift, DSC
FOX88326067	1	Rear, 2.5 Truck PES, P/B, 11.1", 6" Lift, DSC
FOX88406519	1	Front Coilover, 2.5 Truck PES, R/R, 6" Lift, DSC

122332 Box Kit		
Part #	Qty	Description
B1096	1	Bag Kit - Ram Front Bump Stop
	2	Pyramid Bushing - black
785	1	Bolt Pack
	4	3/18" x 1-1/4 Self Tapping screws - Hex
	4	3/8"-16 x 2" Bolt, Grade 5, Clear Zinc
	6	3/8" SAE Washer, Clear Zinc
	2	3/8" Split Lock Washer, Clear Zinc
	2	3/8"-16 Nut, Grade 5, Clear Zinc
05611	2	C/O Conversion 3" Bump Stop Ext

122432 Box Kit		
Part #	Qty	Description
B1096	1	Bag Kit - Ram Front Bump Stop
	2	Pyramid Bushing - black
785	1	Bolt Pack
	4	3/18" x 1-1/4 Self Tapping screws - Hex
	4	3/8"-16 x 2" Bolt, Grade 5, Clear Zinc
	6	3/8" SAE Washer, Clear Zinc
	2	3/8" Split Lock Washer, Clear Zinc
	2	3/8"-16 Nut, Grade 5, Clear Zinc
05612	2	C/O Conversion 4" Bump Stop Ext

122632 Box Kit		
Part #	Qty	Description
B1096	1	Bag Kit - Ram Front Bump Stop
	2	Pyramid Bushing - black
785	1	Bolt Pack
	4	3/18" x 1-1/4 Self Tapping screws - Hex
	4	3/8"-16 x 2" Bolt, Grade 5, Clear Zinc
	6	3/8" SAE Washer, Clear Zinc
	2	3/8" Split Lock Washer, Clear Zinc
	2	3/8"-16 Nut, Grade 5, Clear Zinc
05613	2	C/O Conversion 6" Bump Stop Ext

IMPORTANT

It is required that ride height measurements be taken before and after installation. Measure from the **WHEEL AXLE CENTER** up to the **FENDER LIP** of the wheel opening. Do this for all 4 wheels. Record measurements below.**

BEFORE

*Left Front*_____ *Right Front*_____

*Left Rear*_____ *Right Rear*_____

AFTER

*Left Front*_____ *Right Front*_____

*Left Rear*_____ *Right Rear*_____

***These ride heights will be required if you have any ride height concerns after installation. Please be prepared to provide these to Technical Support.*

PRE-INSTALLATION INSTRUCTIONS

1. Park vehicle on clean, flat, and level surface. Block the rear wheels for safety.
2. Raise the front of the vehicle and support the frame rails with jackstands.
3. Remove the front wheels.

SPECIAL TOOLS

Torque Wrench

8677 Chrysler Ball Joint Separation Tool (or Equiv)

FRONT DISASSEMBLY

See front main instructions for disassembly of the sway bar, track bar, shock, coil spring, and relevant steps.

4. Remove the rear driveshaft, retain hardware. Disconnect the front driveshaft from the transfer case. (Fig 1a, 1b)
5. Remove front drive shaft completely. 2013-2018 (4", 6", and 8") and 2019+ (all lift heights) insert photo's from 122623 for 13-18 photos of front drive shaft removed. Insert Photo's from 122624_122625_122626_122421 of front drive shaft removal photo's and instructions.

FIGURE 1A

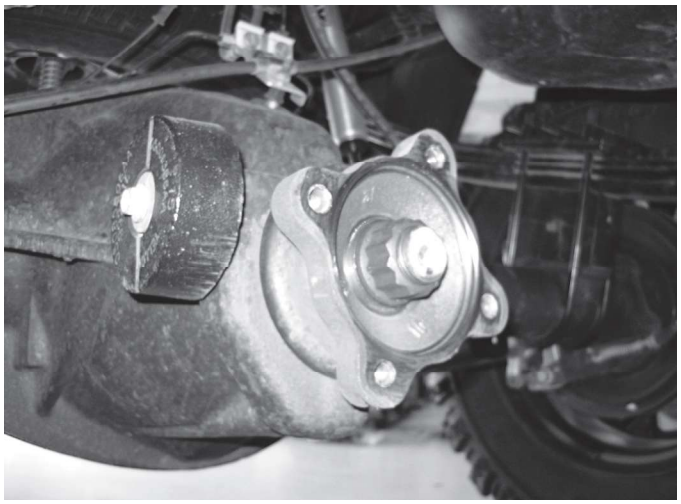
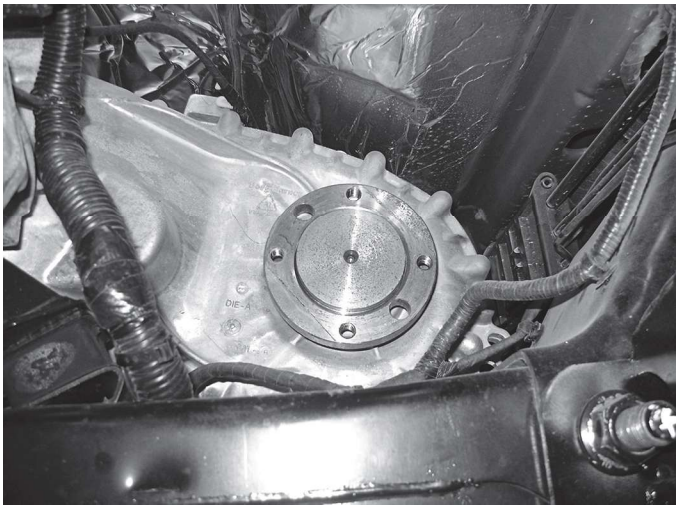


FIGURE 1B



6. Remove the rear driveshaft, retain hardware. Disconnect the front driveshaft from the transfer case. It will be necessary to remove the forward most clamp on the front drive shaft boot to access the retaining clip to slide the front drive shaft off. Replacement clamps are provided (Fig 2, 3, 4)

FIGURE 2

FIGURE 3

FIGURE 4

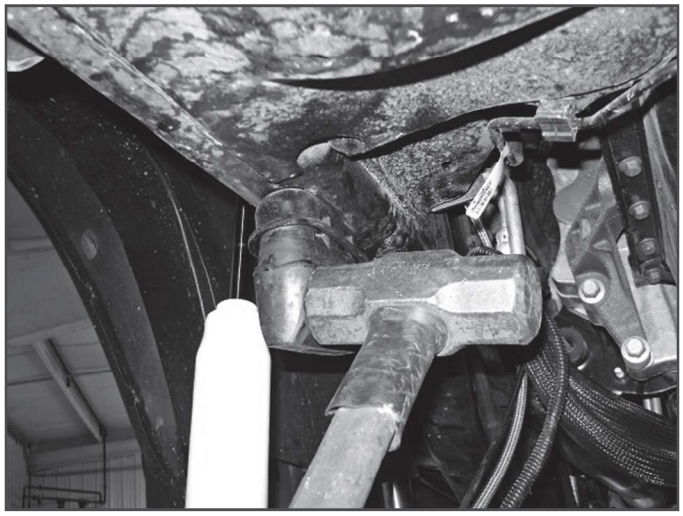
HYDRO BUMP INSTALLATION

If installing Hydraulic bump stop please follow the following steps. If you are installing the Bump stop extensions please skip ahead to the next section.

PASSENGER SIDE HYDRO BUMP INSTALLATION

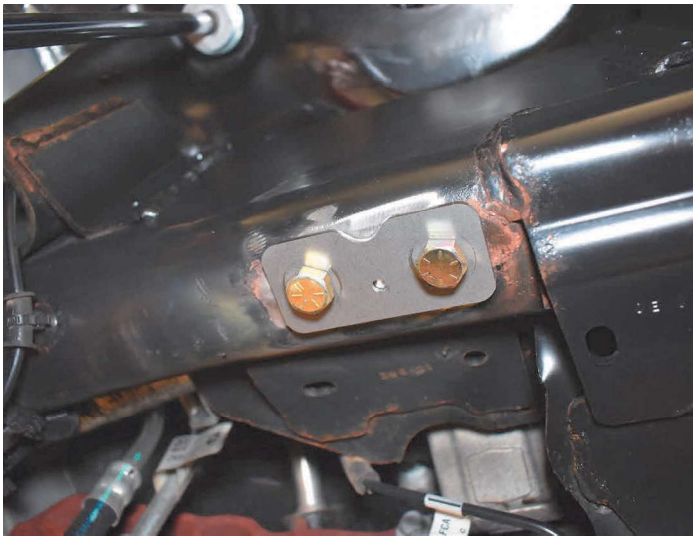
7. Remove the rubber OE bump stop by knocking it out with a hammer. Fig. 5

FIGURE 5



8. Remove the OE bump stop mount by cutting the two welds.
9. Using the passenger side template, install to the oe holes on the frame with the notch out Using the 3/8 self tapping screws provided in Bolt Pack 785. Use the center hole to drill a 3/16" pilot hole into the frame,. Fig. 6

FIGURE 6



10. Remove the template and Drill the pilot hole with a 3/16". Remove the template and using a 2-1/2" metal cutting hole saw cut, centering on the pilot hole. Fig. 7

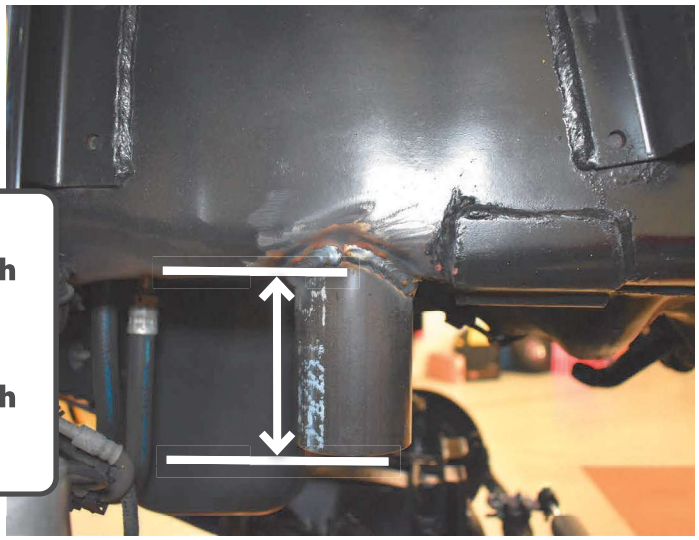
FIGURE 7

11. Prep the surface around the hole for welding. Fig. 8

FIGURE 8

12. Insert the bump tube. For 6" and 8" kits set tube to a depth of 3.5" measuring from the bottom of the frame to the bottom of the tube. For 3" and 4" kits the tube depth should be set at 1.75". Tack into place and check for level. Once level weld the tube to the frame. Fig. 9

FIGURE 9



DRIVER SIDE HYDRO BUMP INSTALLATION

13. Remove the driver side bump stop and install the driver side templates. Fig. 10

FIGURE 10

14. Using a plasma cutter, cut out the hole as indicated by the template. Fig. 11A,11B

FIGURE 11A

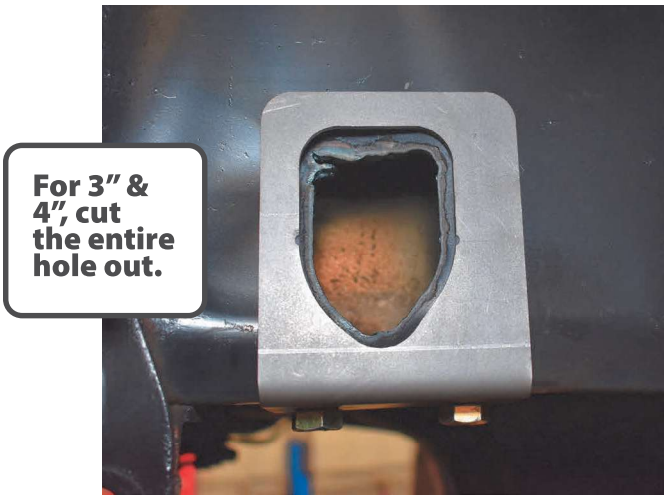
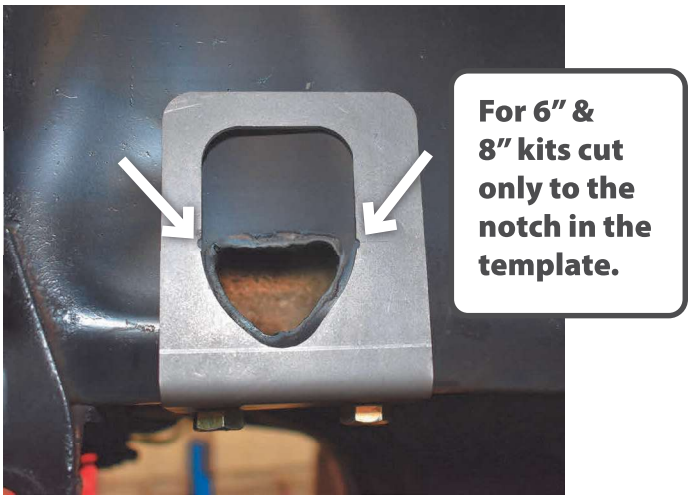


FIGURE 11B



15. On the bottom of the frame, drill the template hole into the frame. Fig. 12

FIGURE 12

16. Remove the template and using the same hole saw as the passenger side, cut a hole in the frame. Fig. 13

FIGURE 13

17. Clean and prep the surface for welding. Fig. 14

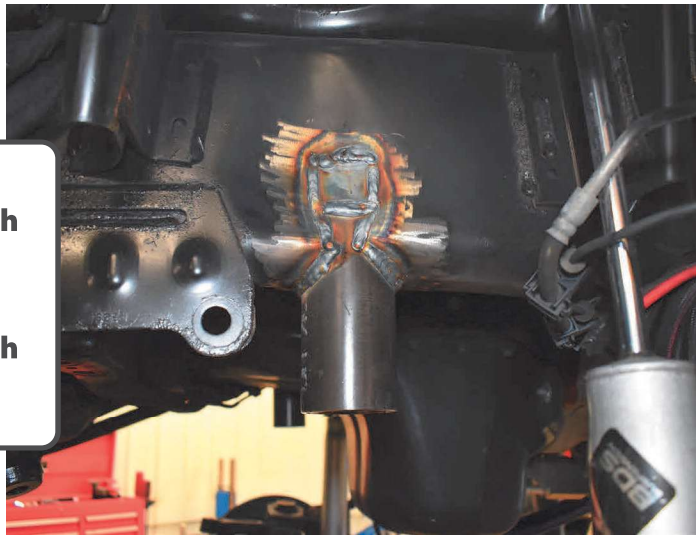
FIGURE 14

18. Insert the bump tube. For 6" and 8" kits set tube to a depth of 3.5" measuring from the bottom of the frame to the bottom of the tube. For 3" and 4" kits the tube depth should be set at 1.75" . Tack into place and check for level. Once level weld the tube to the frame. Fig. 15

FIGURE 15

For 6" and 8" kits set tube to a depth of 3.5"

For 3"and 4" kits set tube to a depth of 1.75"

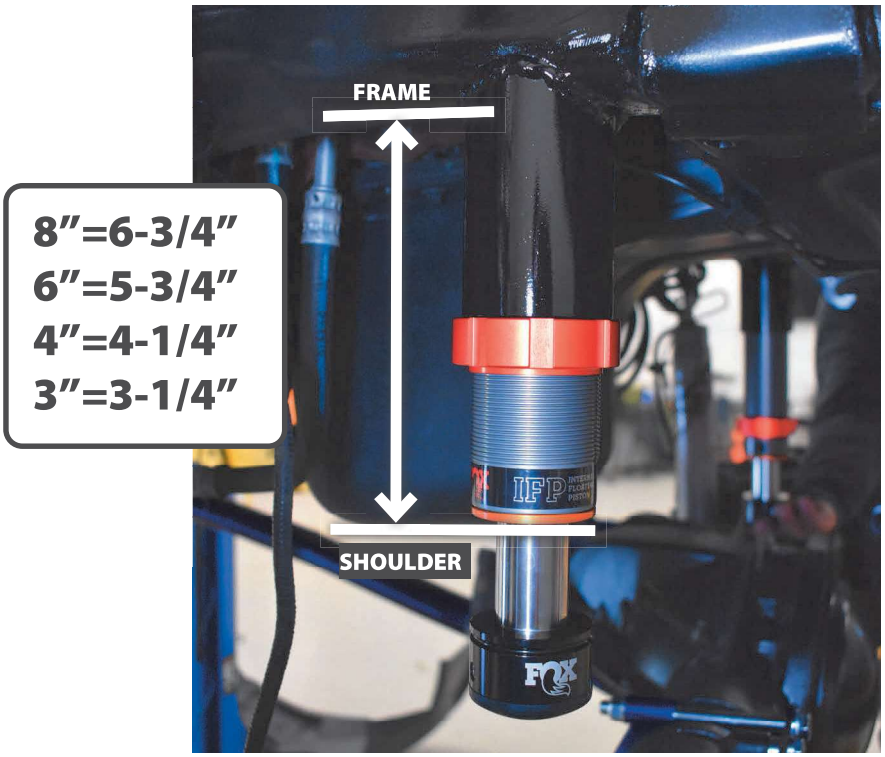


19. One the tube is welded in place, clean up any rough welds and coat with paint to prevent rust. Fig.16

FIGURE 16

20. Install the hydro bumps into the frame tubes. Set the distance from the frame to shoulder of the bump stop as shown in Figure 17.

FIGURE 17



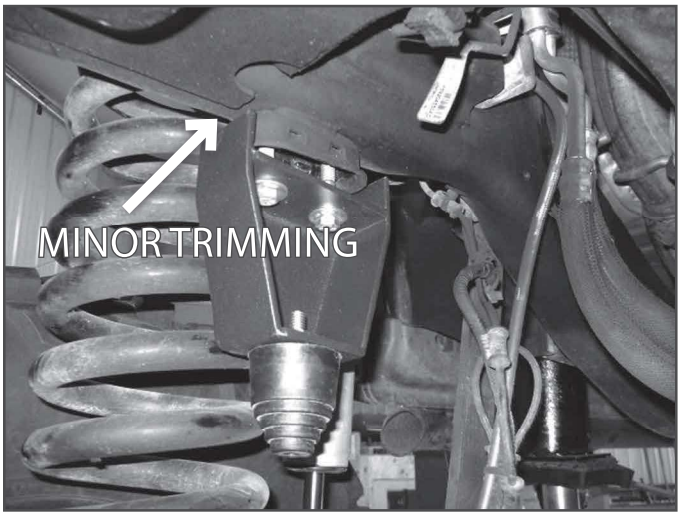
NON-HYDRO BUMP STOP INSTALLATION:

If not installing a hydro bump stop. follow steps 5,6.

21. Located the 2 existing holes in the frame rail inside the factory bump stop cup. If these holes do not exist, they must be drilled out to 21/64", use the bump stop extension as a guide for drilling the holes. Use the 3/8" self threading bolts to cut new threads into the frame rail., impact gun highly recommended (Fig 18a). Attach bump stop to bracket with washer, lock washer, and regular nut, tighten securely. Attach bracket with 3/8" x 2" bolts with washers, tighten to 30 ft-lbs. (Fig 18B) Hardware is in bolt pack # 785. Note: On the passenger's side only, there may be interference with the factory plate, this small amount will need to be trimmed off for clearance to the bump stop bracket if the bracket can not sit flush.

FIGURE 18A

FIGURE 18B



PASSENGER SIDE COILOVER INSTALLATION

1. Working on the pass. side first.
2. Using a sawzall, cut coil spring bucket hole flange to flatten underside surface. Grind to smooth. Fig. 19, 20, 20

FIGURE 19

FIGURE 20

FIGURE 21

3. Mark and drill holes to mount coil over to coil sprint bucket. Use provided template at the end of the instructions to Mark the 4 holes and drill out to 1/2". On the driver side be care not to drill the ABS module on top of the coil spring bucket. Fig. 22

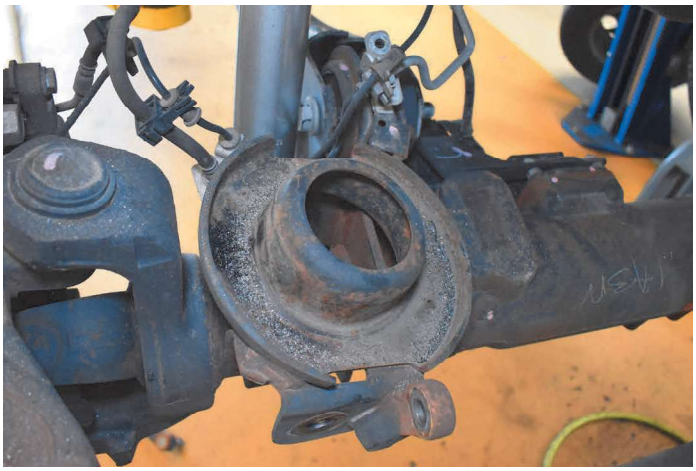
FIGURE 22

4. Coat with paint to prevent rust. Fig. 23

FIGURE 23

5. Using a plasma cutter, cut the lower spring bucket from axle. Fig. 24

FIGURE 24



6. Grind clean a spot to ground your plasma cutter.
7. Wear eye protection.
8. Cut the welds using as plasma cutter as shown in the following images. Fig. 25A- 25D (Pass. Side), Fig. 26A-26D (Driver Side) It may be necessary to cut some of the areas with a cut off wheel to get a cleaner cut.

PASSENGER SIDE

FIGURE 25A

FIGURE 25B

FIGURE 25C

FIGURE 25D

DRIVER SIDE

FIGURE 26A

FIGURE 26B

FIGURE 26C

FIGURE 26D

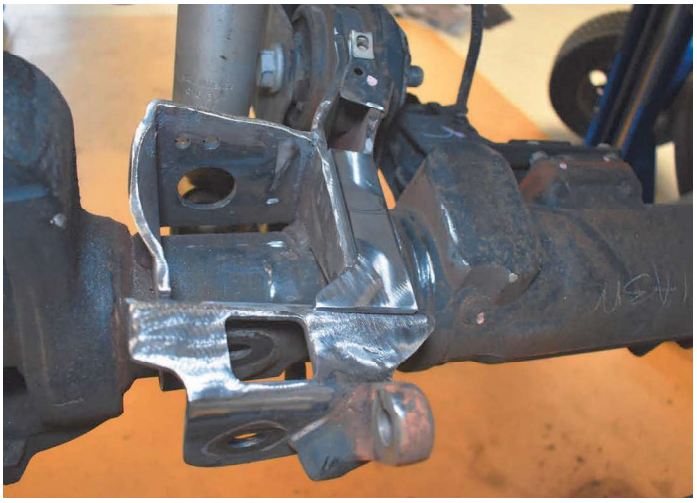
9. Grind to clean up and square the bracket. Fig. 27, 28

FIGURE 27

FIGURE 28

10. Prep surface for welding gussett on pass. side. Fig. 29

FIGURE 29



11. Weld gusset in place as shown in images, grind if needed. Fig. 30, 31

Note: The Gusset is required for additional strength due to the fact that the track bar attaches on the passenger side.

FIGURE 30

FIGURE 31

12. Coat with paint to prevent rust.
13. Test fit the coil over upper mount to make sure all the holes align properly.
14. Fit the coil over top bracket to the coilover making sure that the 2 threaded holes are out. This is where the reservoir bracket will mount. Fig.32

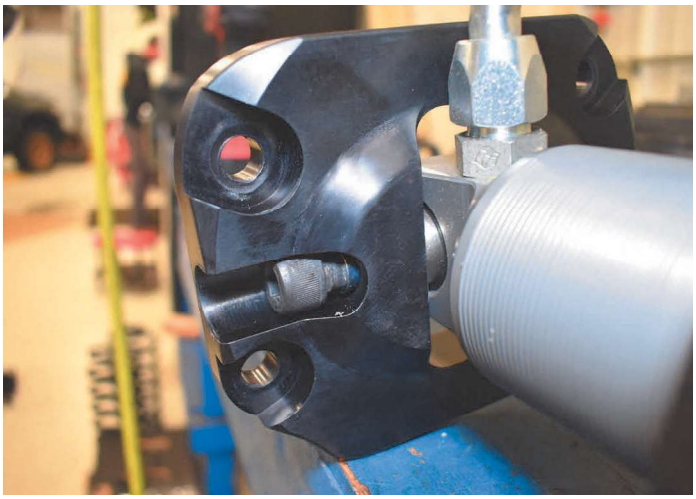
FIGURE 32

15. Loctite the upper coilover 1/2″ x 3-1/2″ socket head bolt before installing. Fig. 33

FIGURE 33

16. Install bolt into the upper coilover bracket. Torque Bolts to 30 ft-lbs. Fig. 34

FIGURE 34



17. Test fit lower coilover bracket into the lower bucket to confirm orientation. Coilover hardware can be found in bolt pack BP1082. Fig.35A, 35B

FIGURE 35A - PASSENGER SIDE

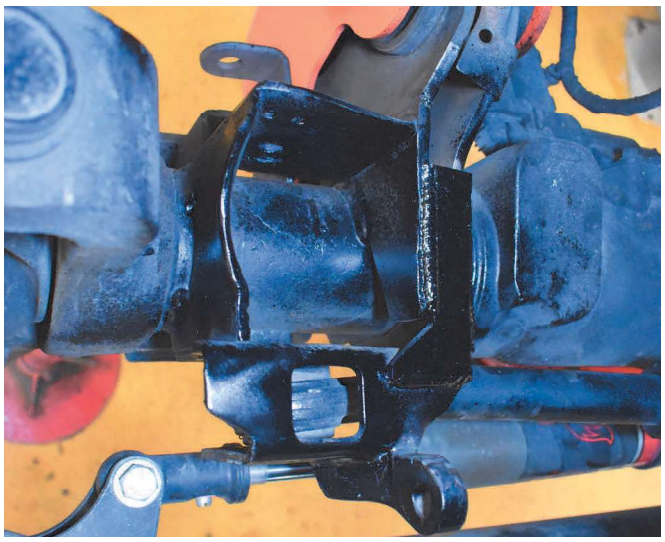
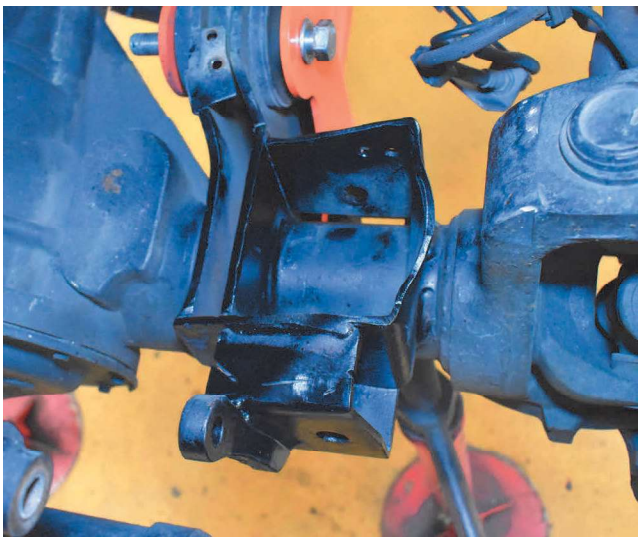
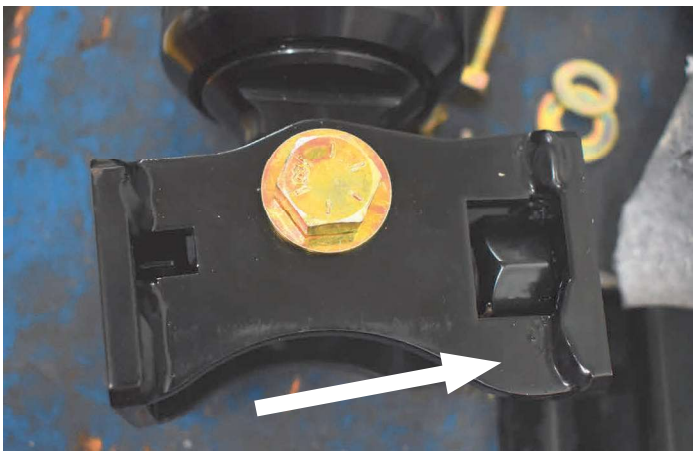


FIGURE 36B - DRIVER SIDE



18. Install lower coil over bracket to coilover using the provided hardware. 1/2" x 3" Hex Bolt, nut and washers. NOTE: Wider part goes toward front of vehicle Fig. 36

FIGURE 36

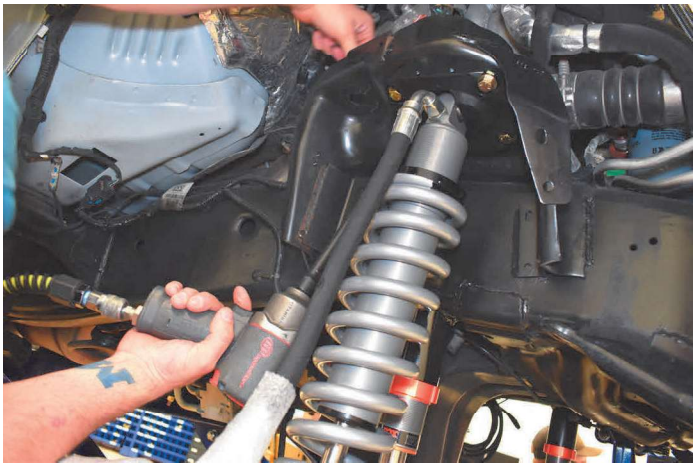


19. Fit coilover in to the bottom coilover bucket then position the top bracket into the upper strut tower. Fig. 37

FIGURE 37

20. Align the 4 holes and Install coilover using the 4 provided 7/16" x 1-1/2" Bolt, washers & nuts. Leave loose. Fig. 38

FIGURE 38



21. Install the factory track bar bolt through the track bar bracket and track bar. Through the lower coil bucket bracket. And thread it into the lower coil over bracket weld nut. Do not tighten at this time. Fig. 39

Note: If replacing the factory track bar. Now is a good time to install the axle side of the new track bar.

FIGURE 39

22. Install the provided step washer into the large hole on the backside of the axle coil bucket.

23. Using the provided hardware 1/2" x 1-1/4" Hex head bolt and washer install the back side bolt through step washer and strut bucket into the lower strut brackets weld nut. Torque 1/2" hardware to 80 ft-lbs. Fig 40

FIGURE 40

DRIVER SIDE COILOVER INSTALLATION

Driver side installation does not requiring the weld in gusset as the track bar does not connect on driver side.

Repeat steps 3 through 7 and 9 through 20.

24. The driver side requires that a mounting hole be drilled for the attachment of the coilover to the lower strut bucket on the back side. Align template with 2 factory holes, mark and drill lower strut mounting hole to 9/16" (Specialty tool 9/16" drill bit). Fig. 41, 42

FIGURE 41

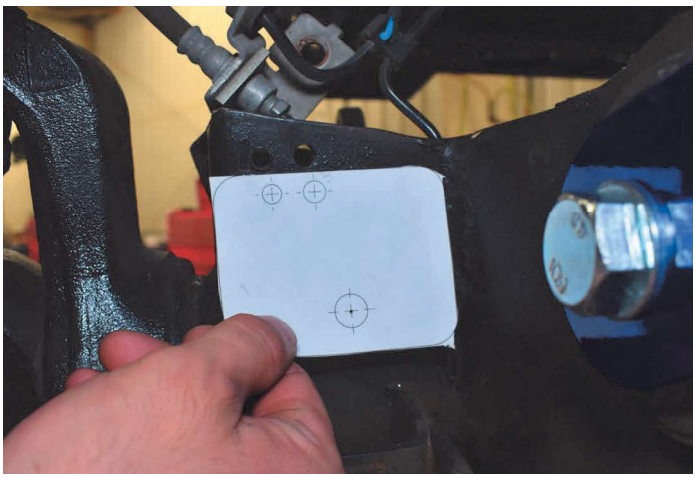
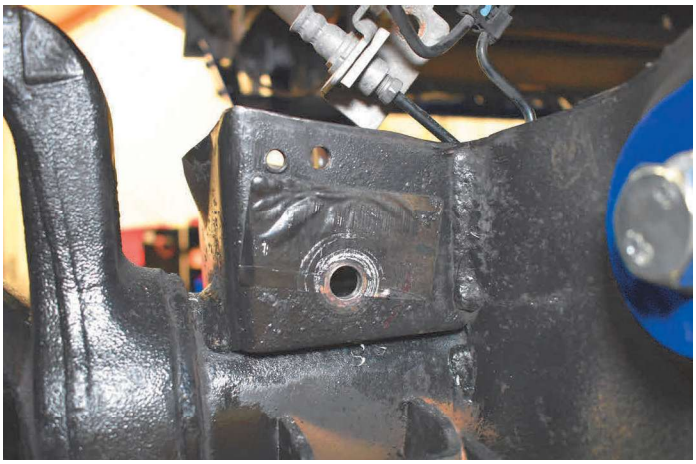
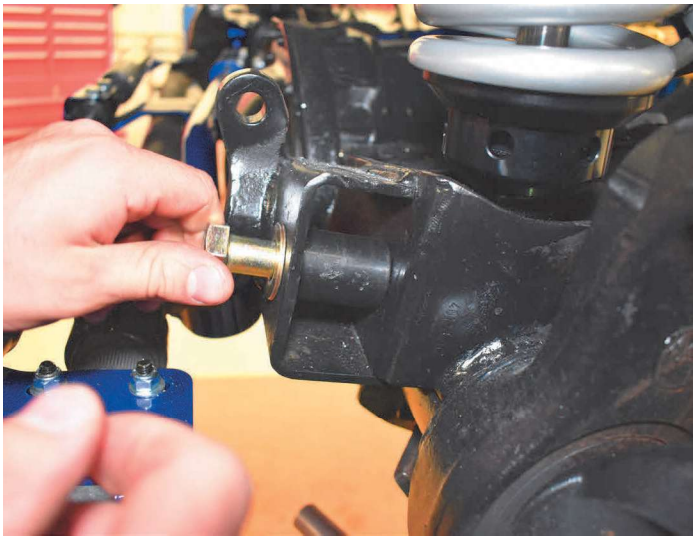


FIGURE 42



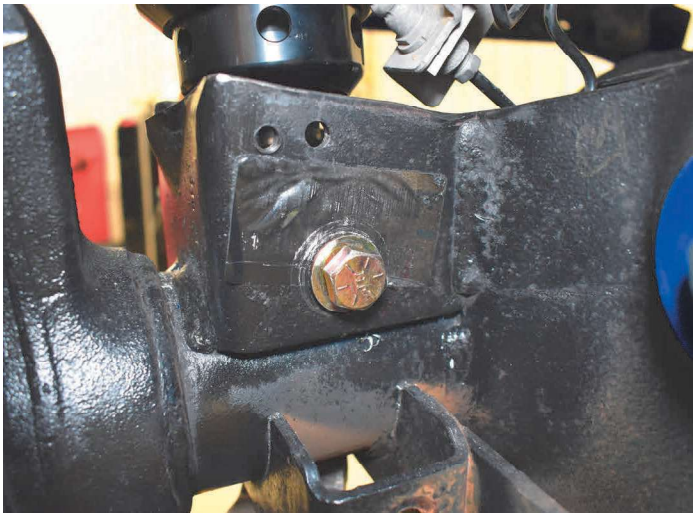
25. Attach the bottom coilover bracket to the lower strut bucket using the 5/8" x 3-1/4" bolt, washer, and sleeve (1.25" OD x 1.65" Long) and thread into the weld nut of the lower mount. Do not tighten yet. Fig. 43

FIGURE 43



26. Attach the coilover bracket on the back side with provided 1/2" x 1-1/4" hex bolt and washer through drilled hole. Torque the 1/2 hardware to 80 ft-lbs. Then torque the 5/8" hardware to 120 ft-lbs. Fig. 44

FIGURE 44



27. Install the 2 reservoir brackets to the coil over hat on both the drivers and passenger sides. Use thread locker. 1/4"x 5/8" stainless button head bolts. Torque to 61 in-lbs. Fig. 45

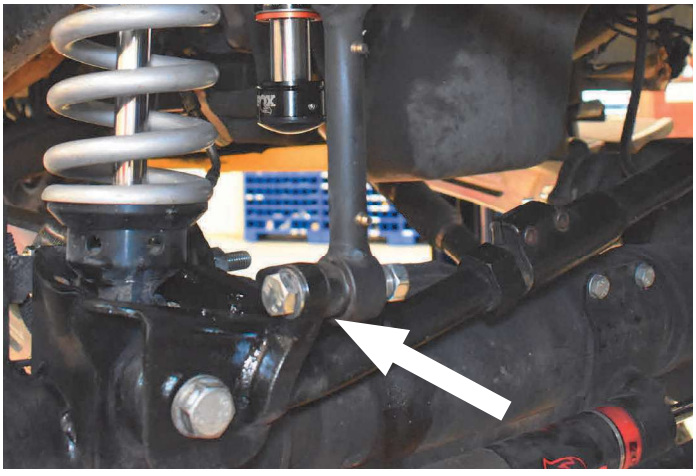
FIGURE 45

28. Install reservoir to the brackets using the provided clamps and coilovers and rivet on the provided BDS badge. Bolt Pack 887. Fig. 46

FIGURE 46

29. Reconnect the sway bar links. Fig. 47

FIGURE 47



30. Reattach the tie rod to the knuckle. Fig. 48

FIGURE 48

31. Reattach drive shaft to differential. Fig. 49A, 49B

FIGURE 49A

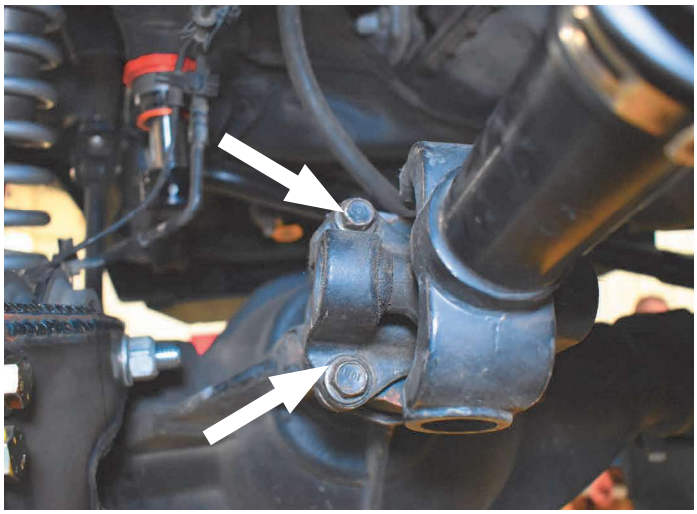
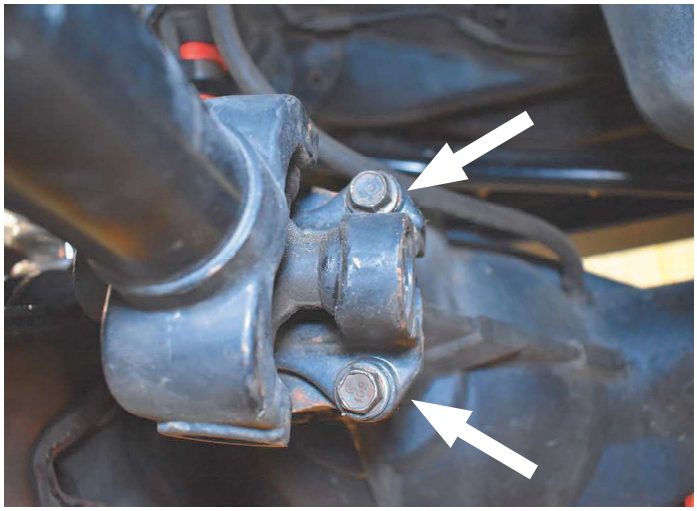


FIGURE 49B



32. Reattach the brake line brackets. Figure 50A, 50B

FIGURE 50A

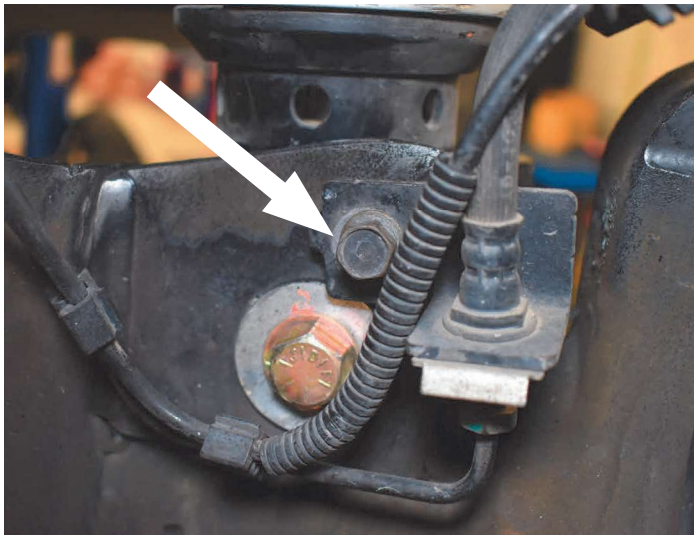
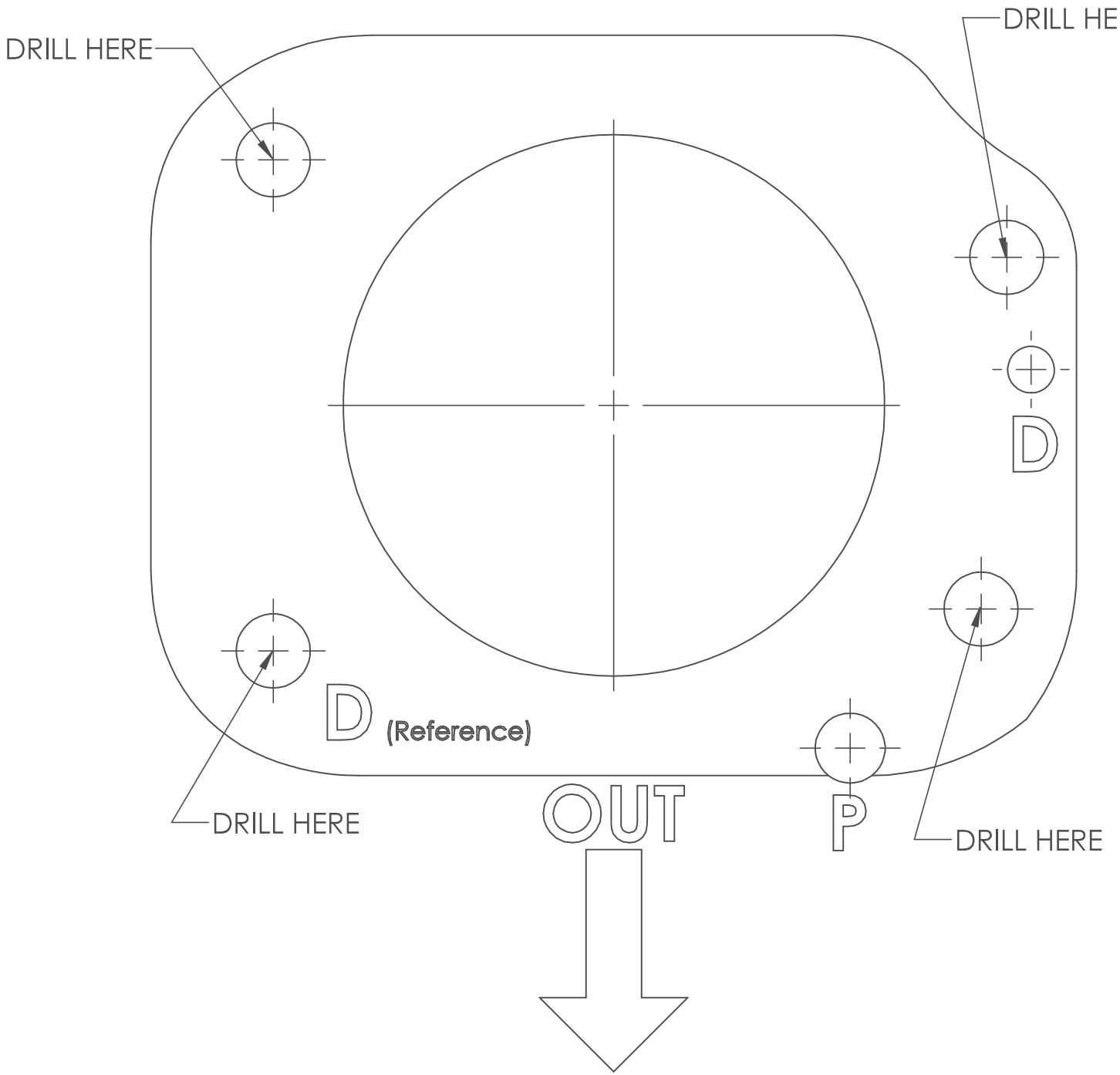


FIGURE 50B

33. Continue with the main front instructions.
34. Once complete and on the ground. Torque the alxe track bar bolt to 285 ft-lbs. and the driver side 5/8" lower coilover bolt to 127 ft-lbs.


DRILL HERE
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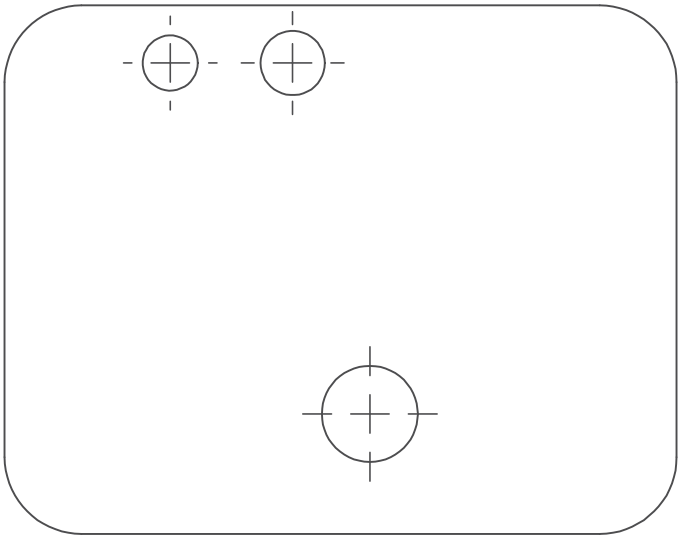

TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. XXXX
2. XXXX

TECH TIPS

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

1. XXX
2. XXX

SPECIAL TOOLS

XXX

XXX

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