ADDICTIVE DESERT DESIGNS®

2015-Current Ford F150
Shock Mount Bed Cage Installation Instructions

Preparation:

- Disconnect the negative battery terminal. Park the vehicle on level ground and set the emergency brake.
- We recommend reading through the installation instructions in whole before performing the work.
- Estimated Installation Time: **6 Hours**

*****This installation requires 2 people for best results*****

You will need the following tools:

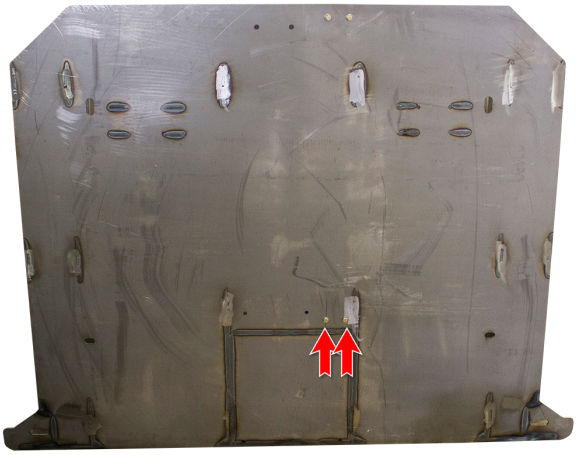
- Ratchet
- 18mm Wrench
- 7/8" Socket
- 7/16" Socket & Wrench
- 19mm Socket
- 9/16" Socket
- Welder
- 10mm Socket
- T50 Torx Bit
- 3/4" Socket & Wrench
- 3/16" Allen Wrench/Socket
- Drill
- Cutoff Wheel
- Black Paint
- 15mm Socket
- 13/16" Socket
- 15/16" Wrench
- 1/2" Wrench
- 11/32" Drill Bit
- Angle Grinder

Included in Kit:

4 - Spacers *(1/2" Long)*
4 - Hex Head Bolts *(M12-1.75 x 110mm)*
2 - Grade 8 Bolts *(1/2"-20 x 5")*
2 - Grade 8 Bolts *(1/2"-20 x 3 1/2")*
8 - Metal Lock Nuts *(1/2"-20)*
4 - Thread Cutting Bolts *(3/8"-16 x 1")*
8 - Flat Washers *(1/2")*
1 - Aluminum Brake Line Drop Bracket
2 - Flat Washers *(1/4")*
4 - Button Head Bolts *(5/16"-18 x 1")*
4 - Flat Washers *(5/16"-18)*
2 - Lower Shock Mounts
4 - Spacers *(3" Long)*
2 - Grade 8 Bolts *(1/2"-20 x 5 1/2")*
2 - Grade 8 Bolts *(1/2"-20 x 4 1/2")*
4 - Grade 8 Bolts *(1/2"-20 x 3")*
20 - Flat Yellow Washers *(1/2")*
4 - Hex Head Bolts *(1/2"-13 x 1 1/2")*
4 - Nylon Lock Nut *(1/2"-13)*
1 - Hex Head Bolt *(1/4"-20 x 3/4")*
1 - Nylon Lock Nut *(1/4"-20)*
8 - Flat Washers *(5/16")*
1 - Chase Rack Support Plate

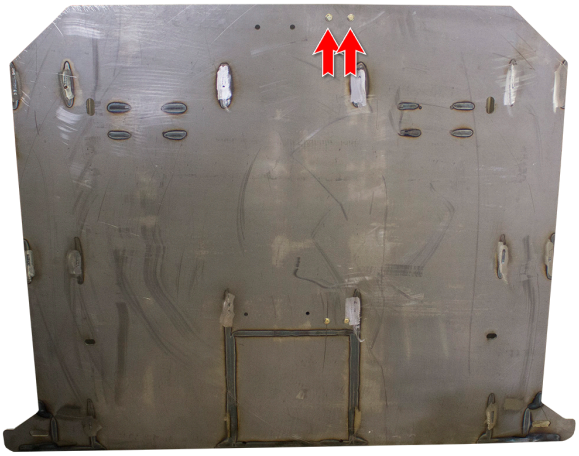
Installation:

1. Lift the vehicle in the air and support it with jack stands. **Never work under an unsupported vehicle.**
2. Remove the rear wheels.
3. If you have a Jack Kit to install on your bed cage, follow Steps (4-9). If not, skip ahead to Step (10).
4. Find the receiving end of the Jack Handle Holder within the Jack Kit. Then, install this piece into its mounting holes within the center opening of the bed cage using 2 of the bolts that came with the jack kit. Make sure to install the bolts with the head on the bottom of the bed cage and the nut on the inside of the bed cage. Torque these bolts to 13 foot pounds. (Fig A)



5. Find the second half of the Jack Handle Holder within the Jack Kit. Then, install this piece to its set of mounting holes within the center opening of the bed cage using 2 of the bolts that came with the jack kit. Make sure to install the bolts with the head on the bottom of the bed cage and the nut on the inside of the bed cage. Torque these bolts to 13 foot pounds. (Fig B)


Fig B



6. Remove the two mounting bolts for the Jack Release. (Fig C)

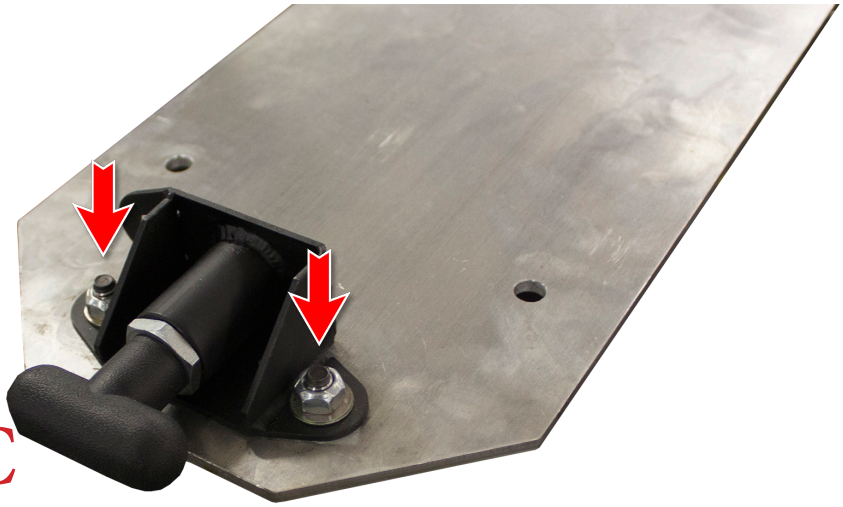


Fig C

7. Set the Jack Plate in place on the bed cage. Use the supplied 5/16" Bolts (x4), 5/16" Washers (x8), and 5/16" Lock Nuts (x4) to hold it in place. Make sure to install the bolts with the button heads facing down and the nut on the inside of bed cage. Torque these bolts to 13 foot pounds. (Fig D)

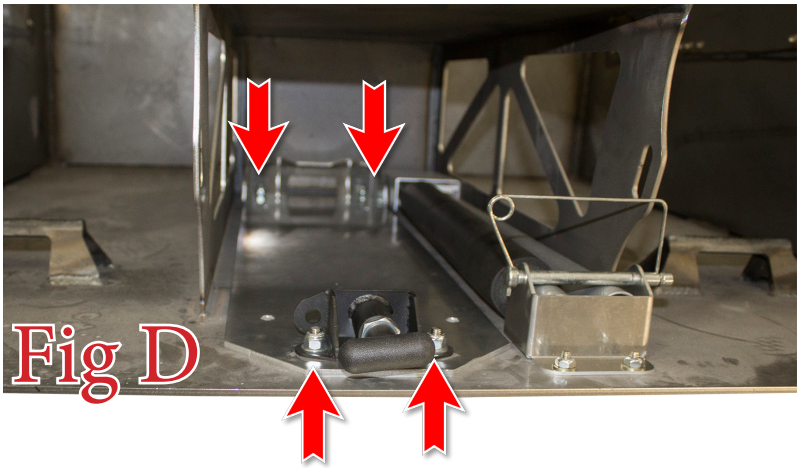
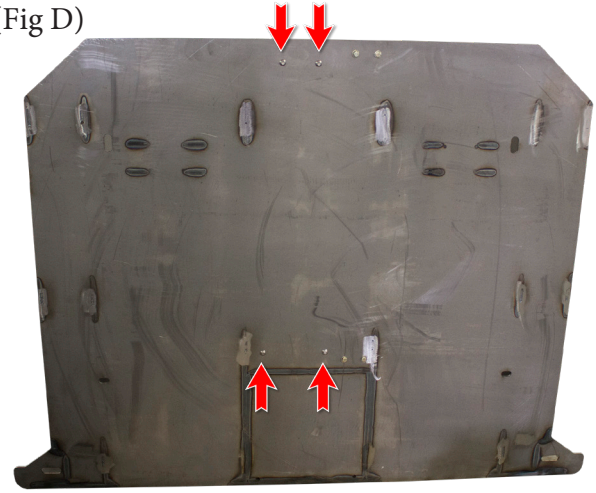
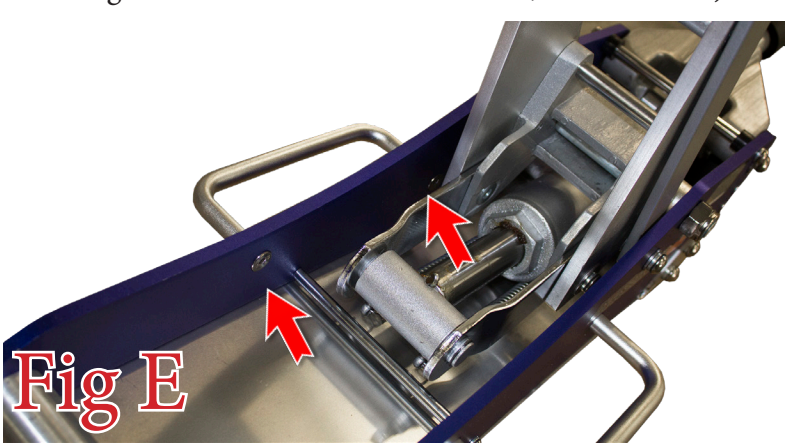


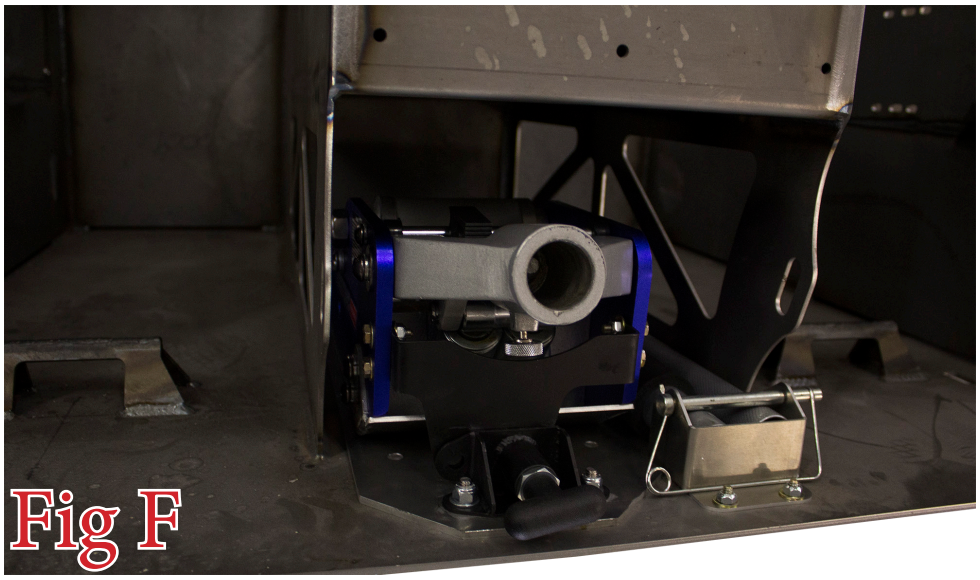
Fig D



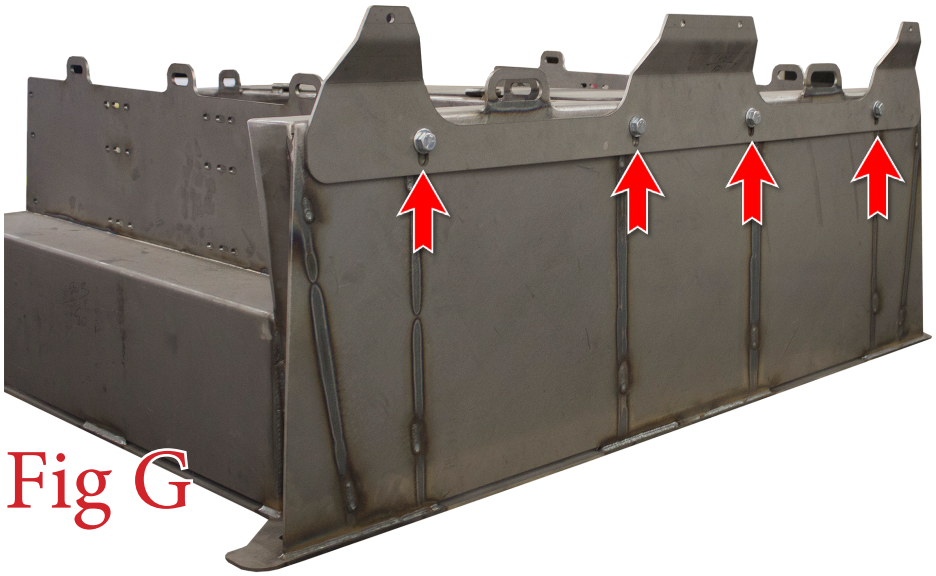
8. Using a 5mm Allen Wrench or Socket, remove both Jack Handles. (Fig E)



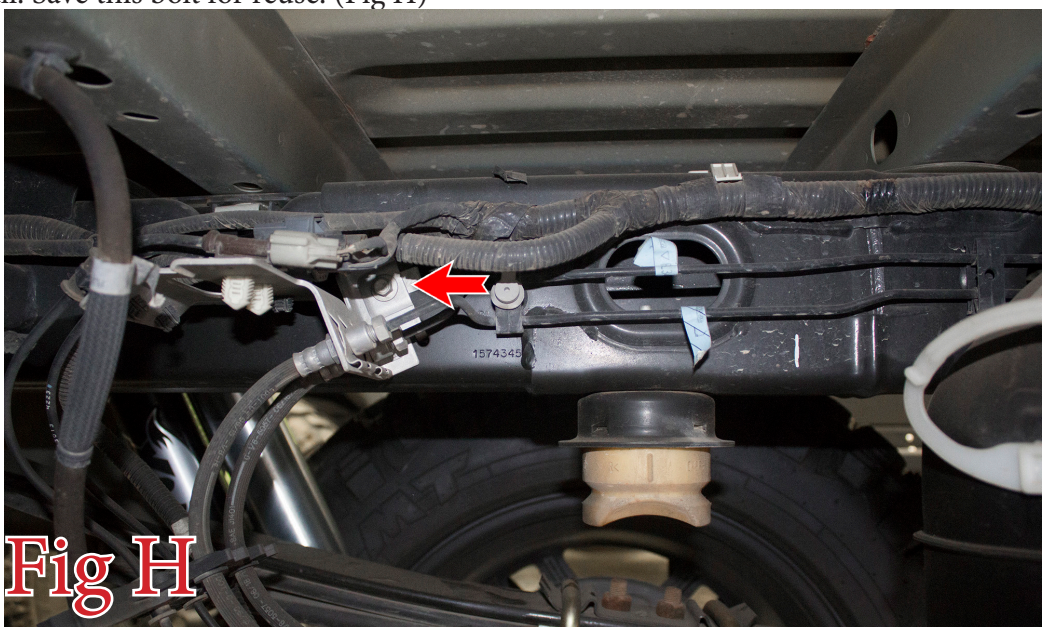
9. You may now put your jack and jack handles in the bed cage. (Fig F)



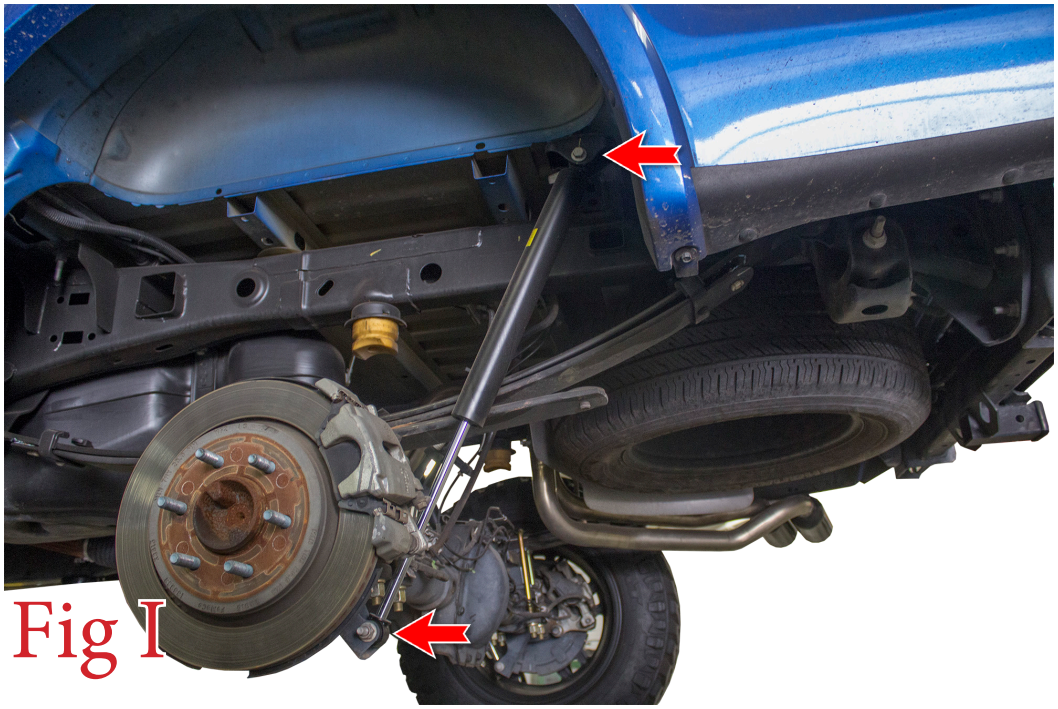
10. If you have fiberglass bedsides and a chase rack, follow this step. If not, please skip to the next step. Find the chase rack support piece. Mount it to the back of the bed cage as shown in (Fig G). Use the supplied 1/2" Bolts (x4), 1/2" Washers (x4), and 1/2" Lock Nuts (x4). Once all bolts are loosely installed, torque them to 70 foot pounds.



11. Using a 10mm Socket or Wrench, remove the brake line bracket that sits just above the rear axle on the driver side frame rail. Save this bolt for reuse. (Fig H)



12. Using a 15mm Socket and an 18mm Wrench, remove the OEM shock mounting bolts. Then, remove the OEM rear shocks. (Fig I)



13. Using a cut off wheel or an angle grinder, cut off all OEM shock mounts. Grind the areas smooth after making the cuts. (Fig J)

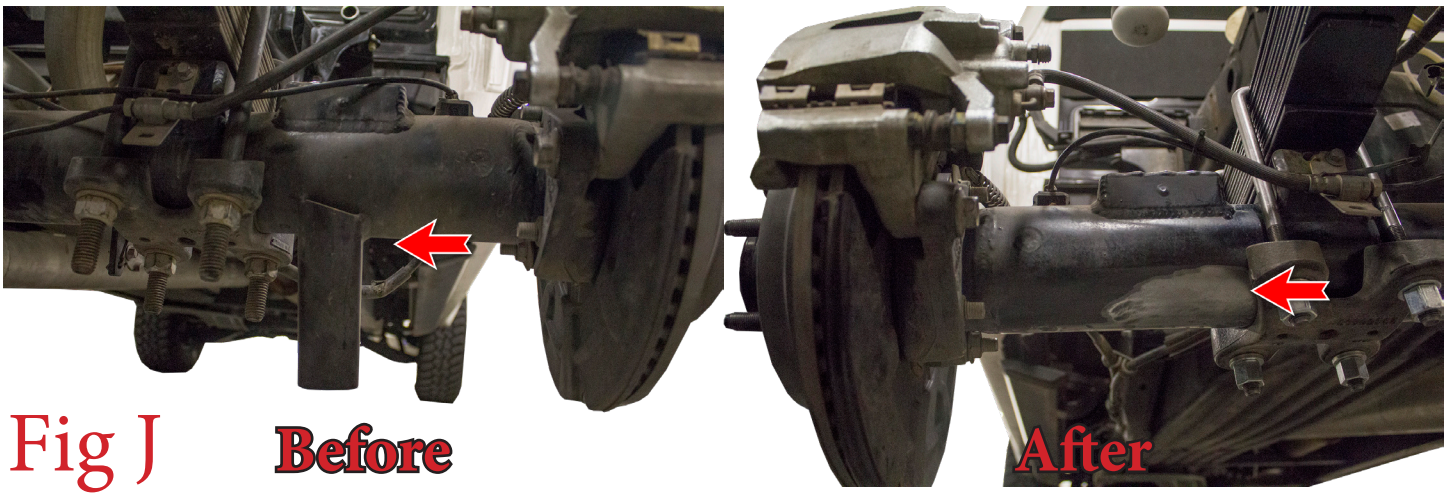


Fig J

14. Using a 7/8" Socket, loosen the leaf spring U-Bolt nuts (4 per side). Then, remove the leaf spring U-Bolts. (Fig K)

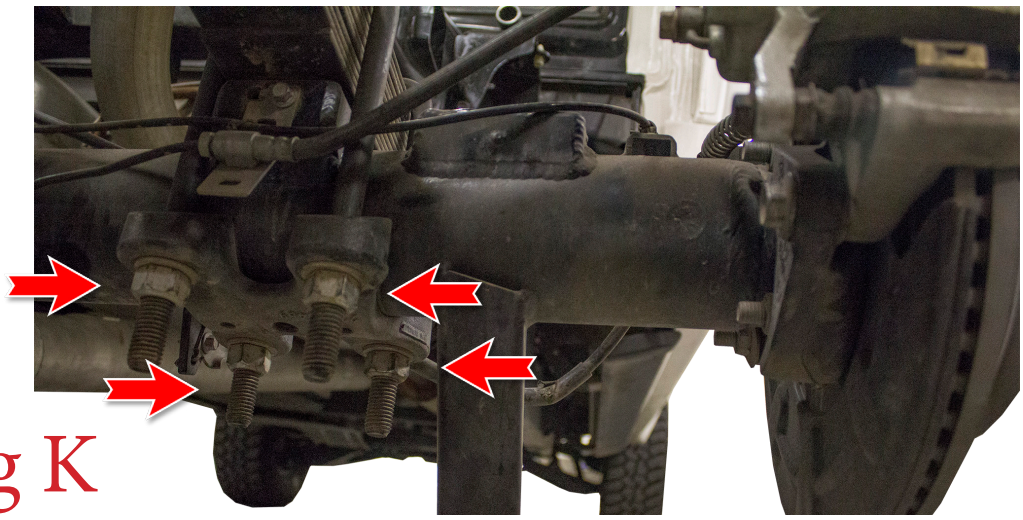


Fig K

15. Using a 13/16" and 15/16" Socket/Wrench combination, remove the front leaf spring bolts and the rear shackle bolts. You will have to cut the front leaf spring bolt on the driver side. Then, remove the leaf spring/shackle assembly. (Fig L)

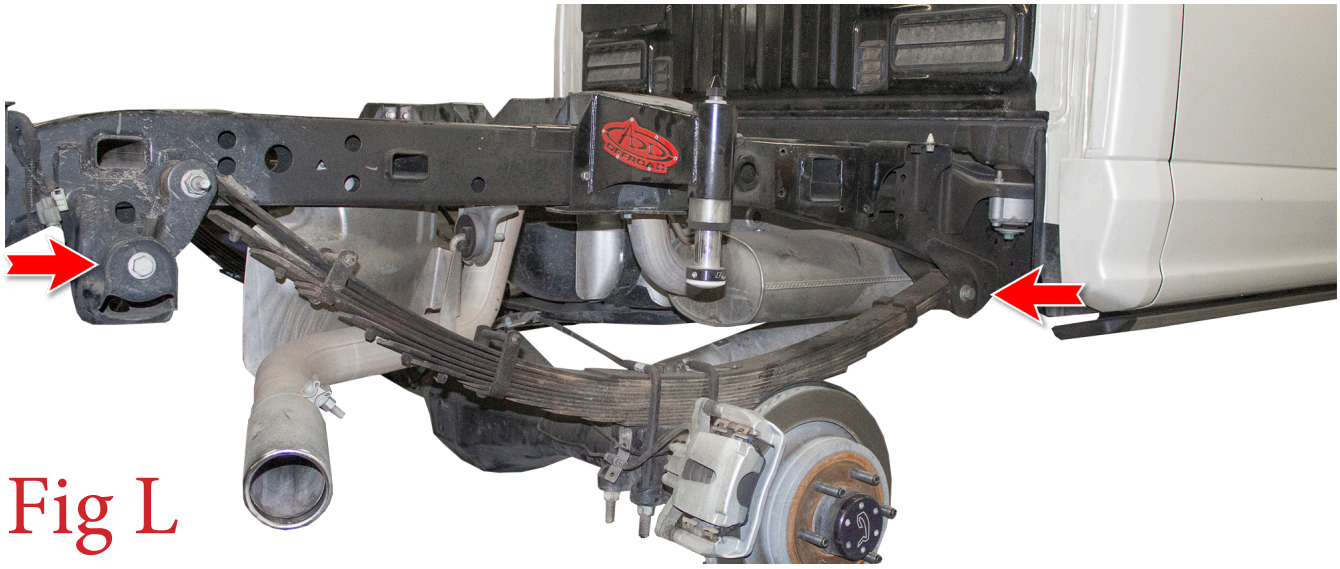


Fig L

16. Using a cut off wheel, trim the bed rail that sits above the rear shackle hanger. First, measure 1/2" from the frame rail. At this point on the front face of the bed rail, you will make a cut that is 3/4" high and 7" wide. On the back face of the bed rail, you will start your cut at 1/2" away from the frame still, but you will make it 1 3/8" high and 7" wide. (Fig M)

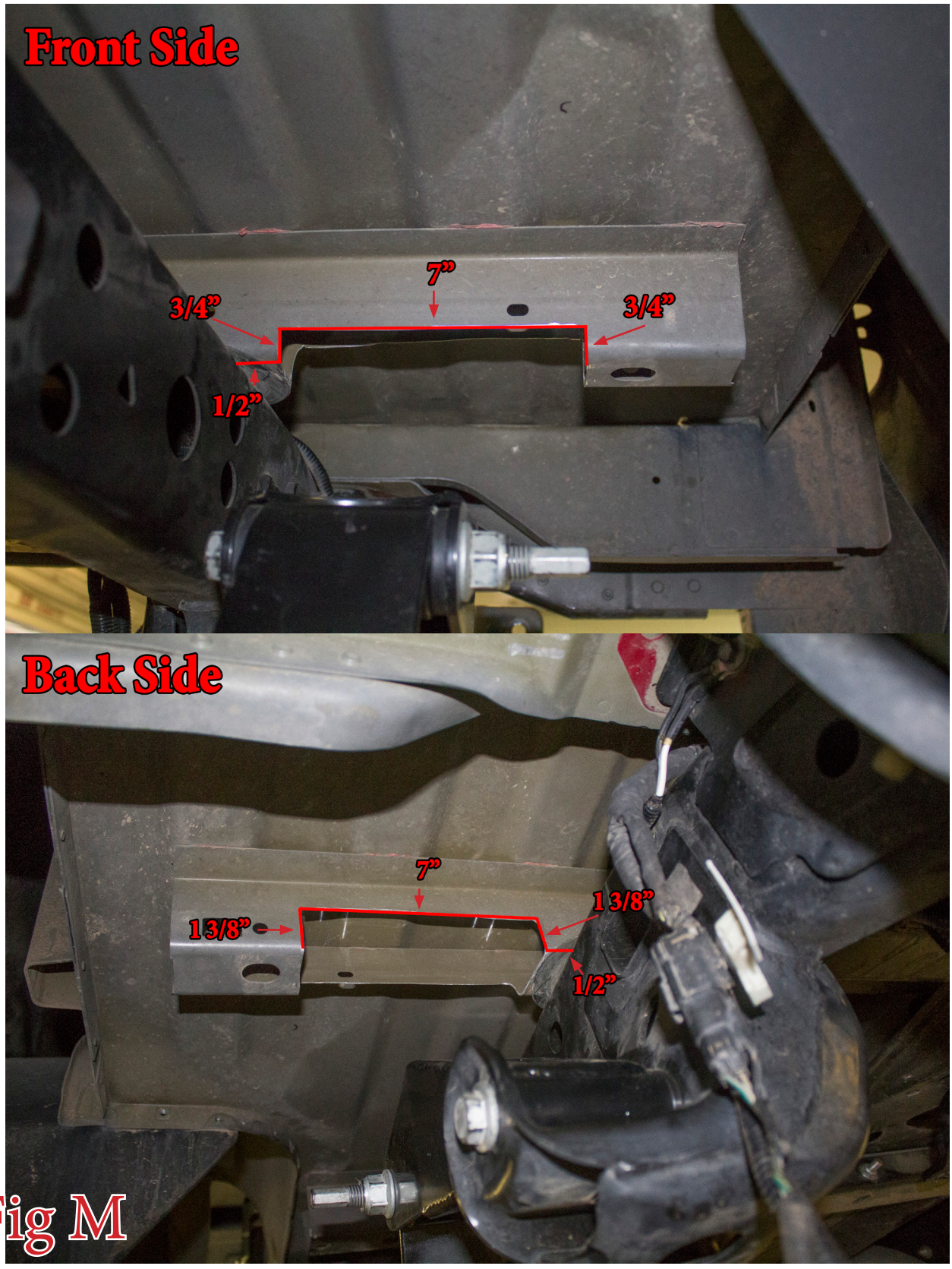


Fig M

17. Using the hardware supplied with the new leaf springs, mount the supplied Shackle to your new leaf spring. Then, mount the leaf spring/shackle assembly to the vehicle by reversing Steps 14 and 15. Make sure the leaf spring to shackle bolt has the threads facing outwards. Also make sure the last bolt for the leaf spring separation stops has the threads facing outwards. (Fig N)

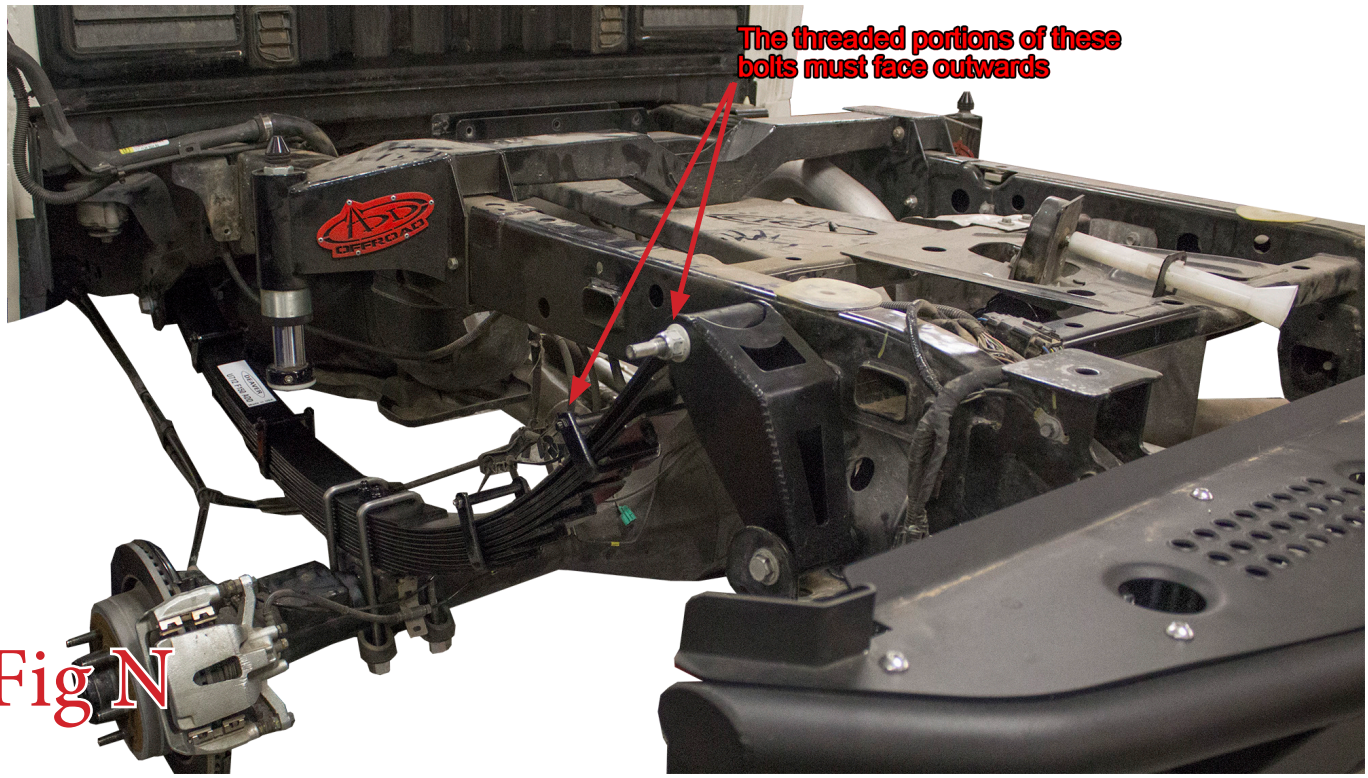


Fig N

18. Using a T-50 Torx Bit, remove the bed mounting bolts (x6). (Fig O)

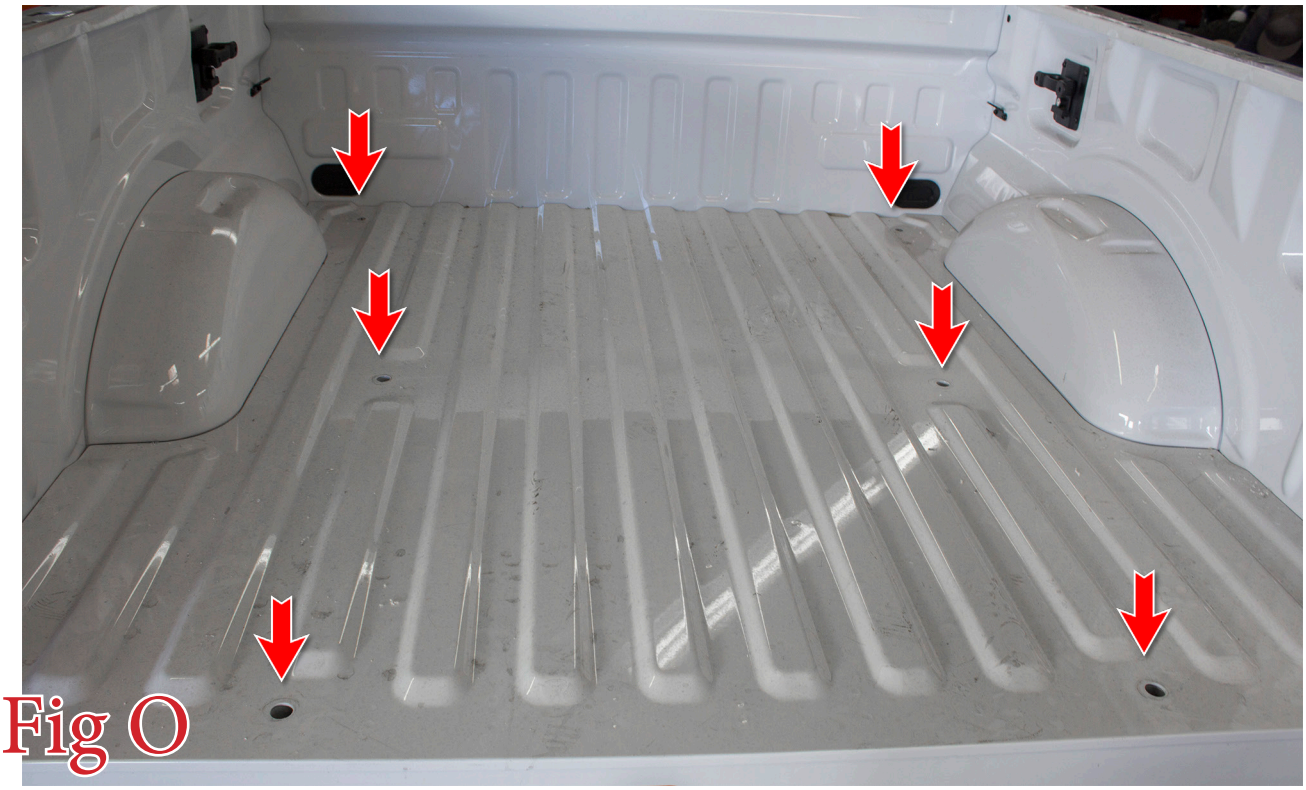


Fig O

19. Lift the bed up high enough to remove the most forward rubber piece that sits on top of each frame rail. This piece is accessible through the wheel well. After the rubber piece has been removed, set the bed back down and reinstall the rear most bed bolts. Torque these bolts to OEM torque spec. (Fig P)

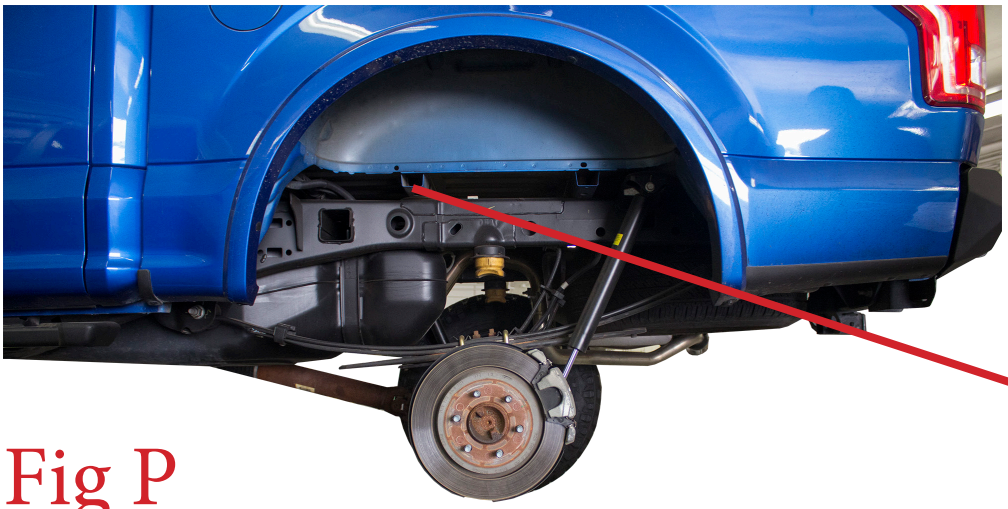


Fig P

20. Set the bed cage in place. Use the front two factory bed bolts to hold it in place. Using a sharpie, mark the cut out for the shock openings. Do this by following the edge of the bed cage base as shown in (Fig Q).

Fig Q

21. Drill the center set of mounting holes for your bed cage. Drill these holes into the bed floor, and into the top layer of the frame. The frame already has a hole there, try to keep that in line while drilling. (Fig R)

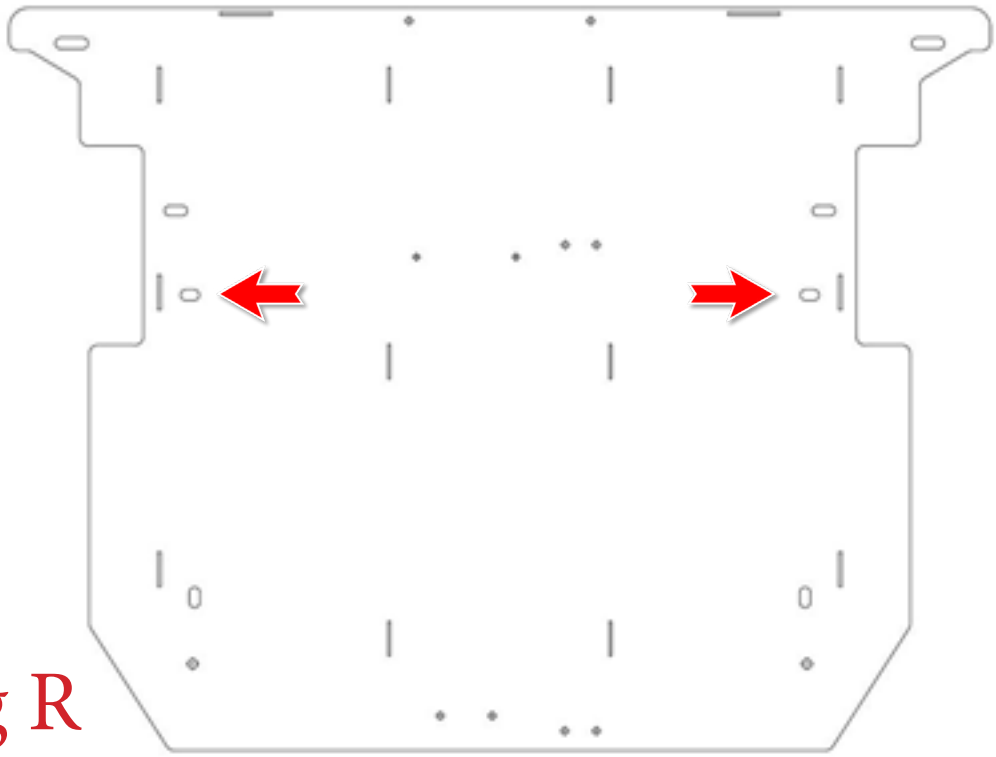


Fig R

22. Take the bed cage back out of the truck bed.
23. Inside the truck bed, measure 3 3/8" inward from the bedside on the top of the wheel well. Make a straight line paralell to the bedside. (Fig S)

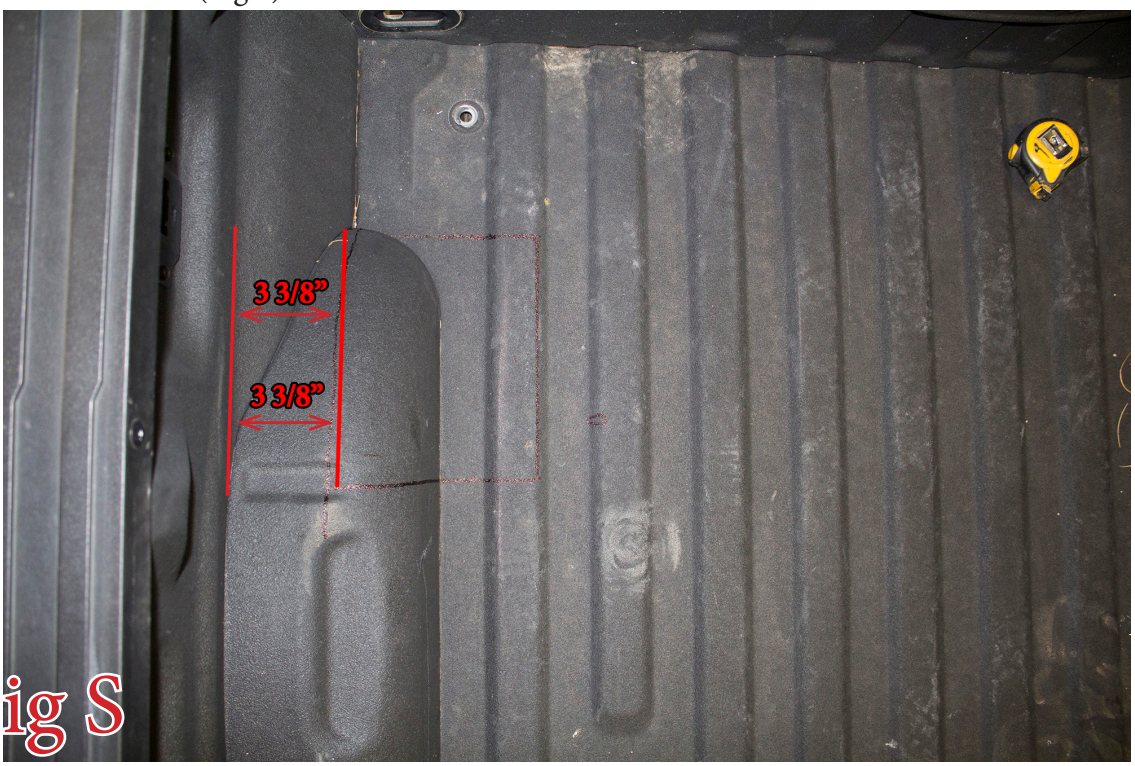


Fig S

24. Extend the lines from when you traced the bed cage shock pocket out to meet the line you drew in Step 23. Your truck bed should be marked like the one in (Fig T). Using a cut off wheel or something similar, cut out this section.

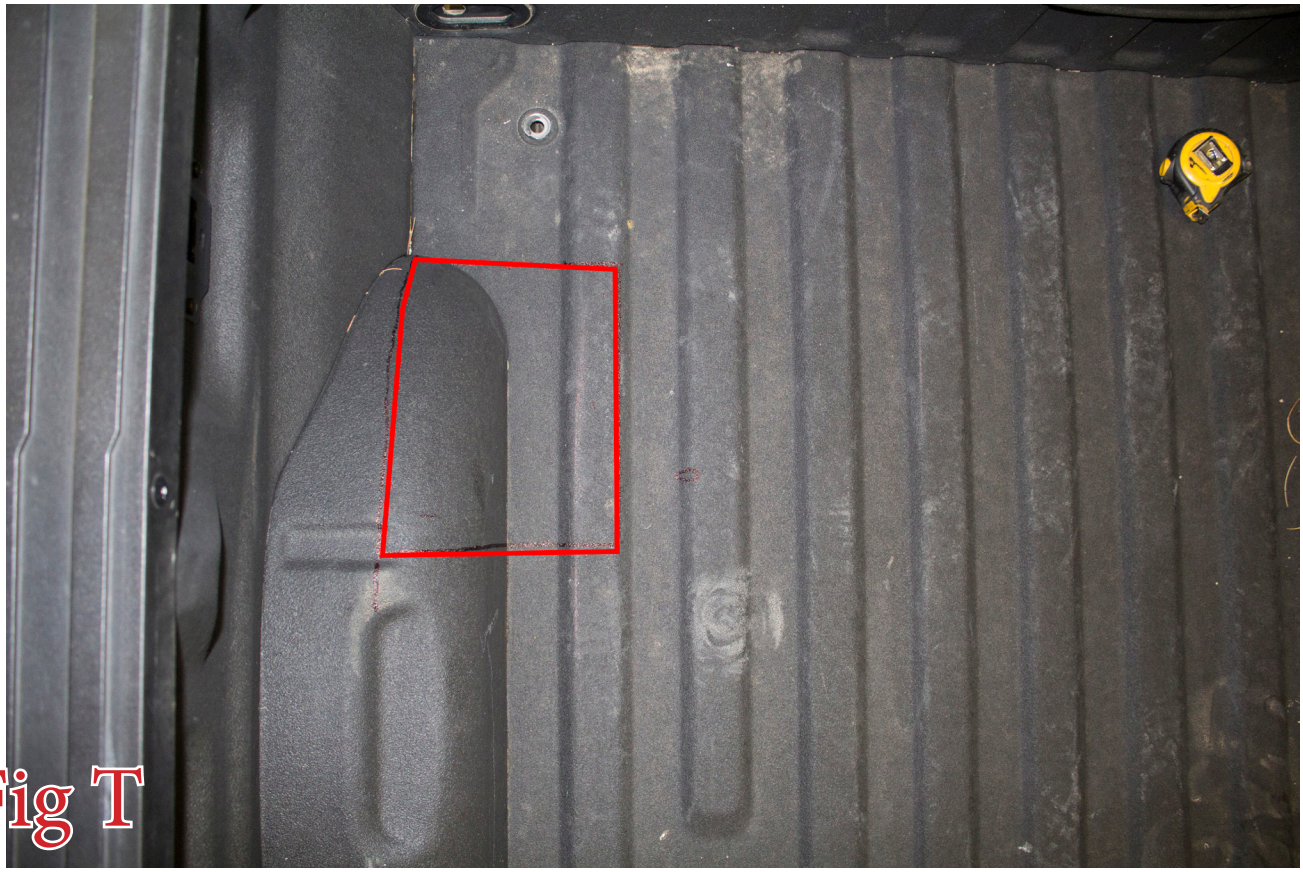


Fig T

25. Drill the hole from Step 21 out to be 1" diameter. Only drill through the bed. Do not drill the frame. (Fig U)

Fig U

26. From inside the wheel well, starting at the rear line of your newly cut shock pocket, measure back 1", make a point. Then, starting at the same spot you measured back 1" from, measure up 2", make a point. Connect both these points to make a triangle. Cut this shape out. (Fig V)

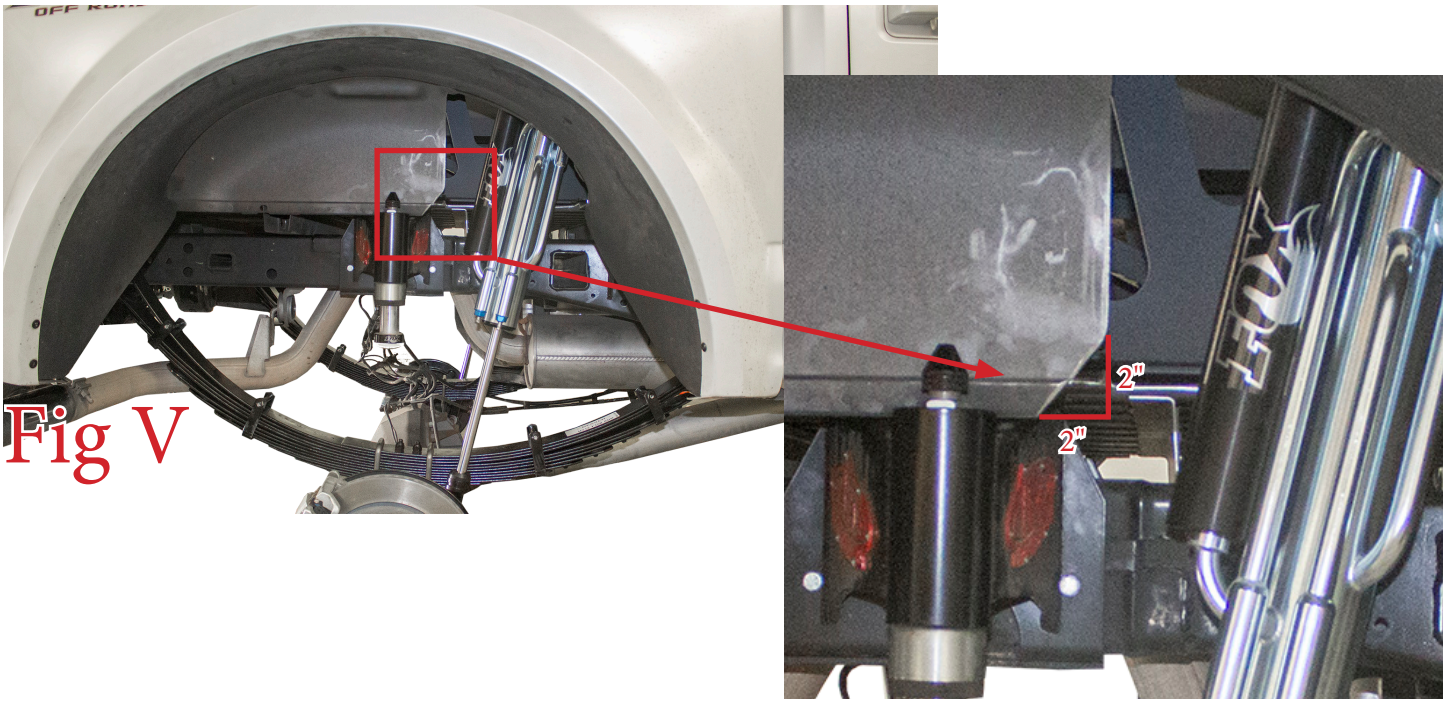


Fig V

27. From inside the truck bed, draw a diagonal line from the back corner of the cut you just made in Step 26 to meet your original shock pocket cut at the pinch weld seam. Cut this section out. Your truck bed should now look like the bed in (Fig W)


Fig W

28. Place the supplied 1/2" long spacers on top of the OEM bed bolt holes. Then, place the supplied 3" long spacers in the the center holes (drilled in Step 21). The spacers for the center holes should drop through the truck bed and rest on the truck's frame. The spacers on the front and rear mounting holes should sit on top of the truck bed sheet metal. (Fig X)

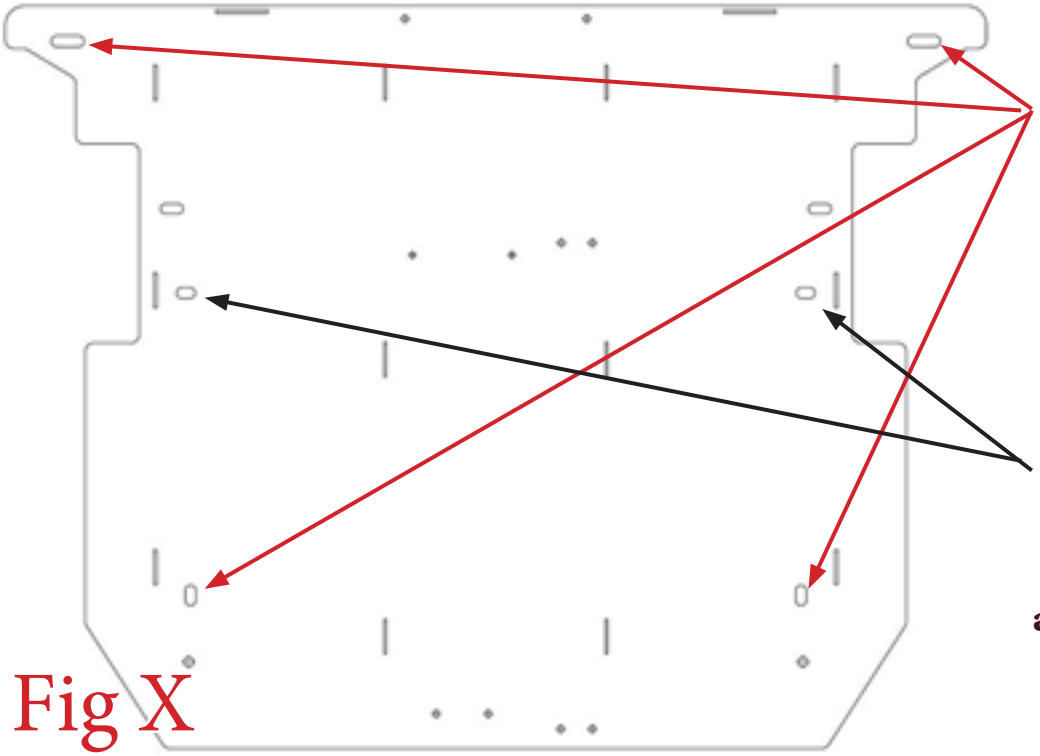


Fig X

29. Set the bed cage in place. Use the supplied M12 bolts (x4) and 1/2" Washers (x4) on the front and rear mounting holes. Then, use the supplied 1/2" x 5" Bolts (x2), 1/2" Washers (x4), and 1/2" Lock Nuts (x2) on the center mounting holes. There is an access hole on the frame to access the nut for the center mounting bolts. Tighten the M12 Bolts to factory torque spec. Tighten the 1/2" Bolts to 70 foot pounds. (Fig Y)

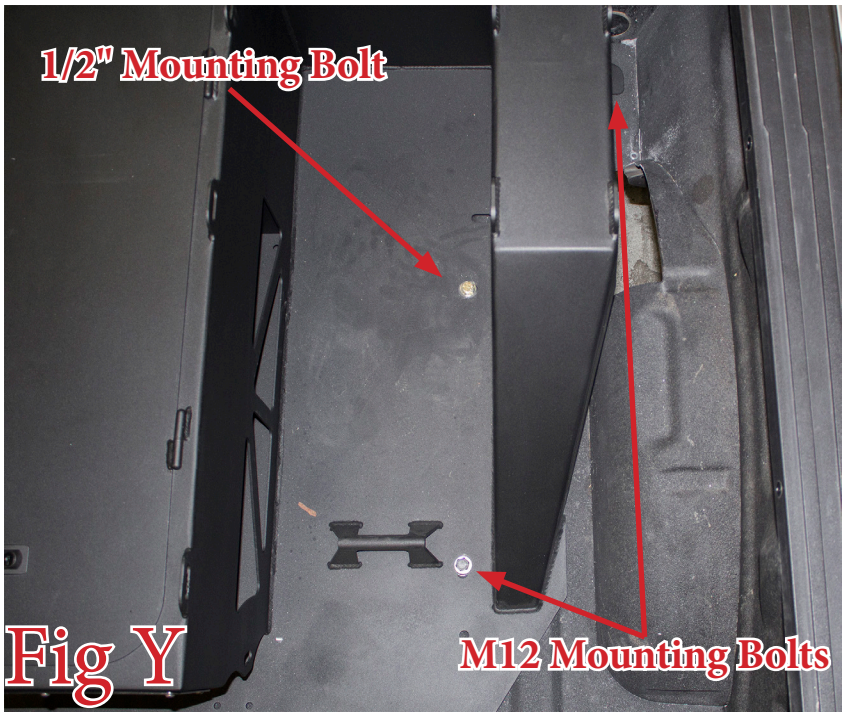


Fig Y

30. Send the shocks up through the bed and bolt the upper shock mounts into their mounting locations on the bed cage. The shocks get mounted with the reservoir facing the rear of the vehicle and the bypass tubes on the outside. You may use the OEM Shock Bolts or the supplied 1/2" x 3" Bolts (x2), 1/2" Washers (x4), and 1/2" Lock Nuts (x2). Torque the OEM bolts to OEM torque spec, or torque the 1/2" bolts to 70 foot pounds. (Fig Z)

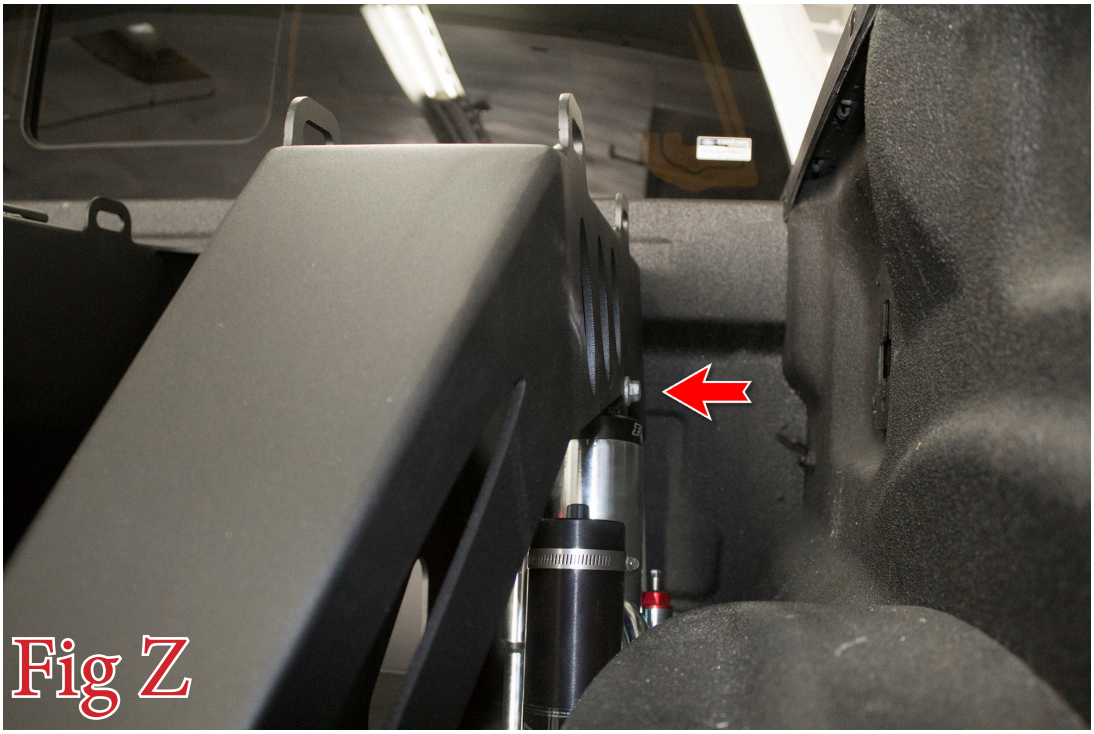


Fig Z

31. Set the vehicle/axle height so that the shackle is sitting 1/4" off of the hanger. (Fig AA)


Fig AA

32. Loosely bolt the lower shock mount to the shock. You can use the OEM shock bolts or the supplied 1/2" x 3" bolts (x2), 1/2" Washers (x4), and 1/2" Nuts (x2). Swing the shock over until the shock mount is resting against the axle. Measure 1.81 inches from the edge of the spring perch to the inner edge of the shock mount and tack it in place. Remove the shock from the lower mount, then fully weld the lower mount in place. (Fig AB)

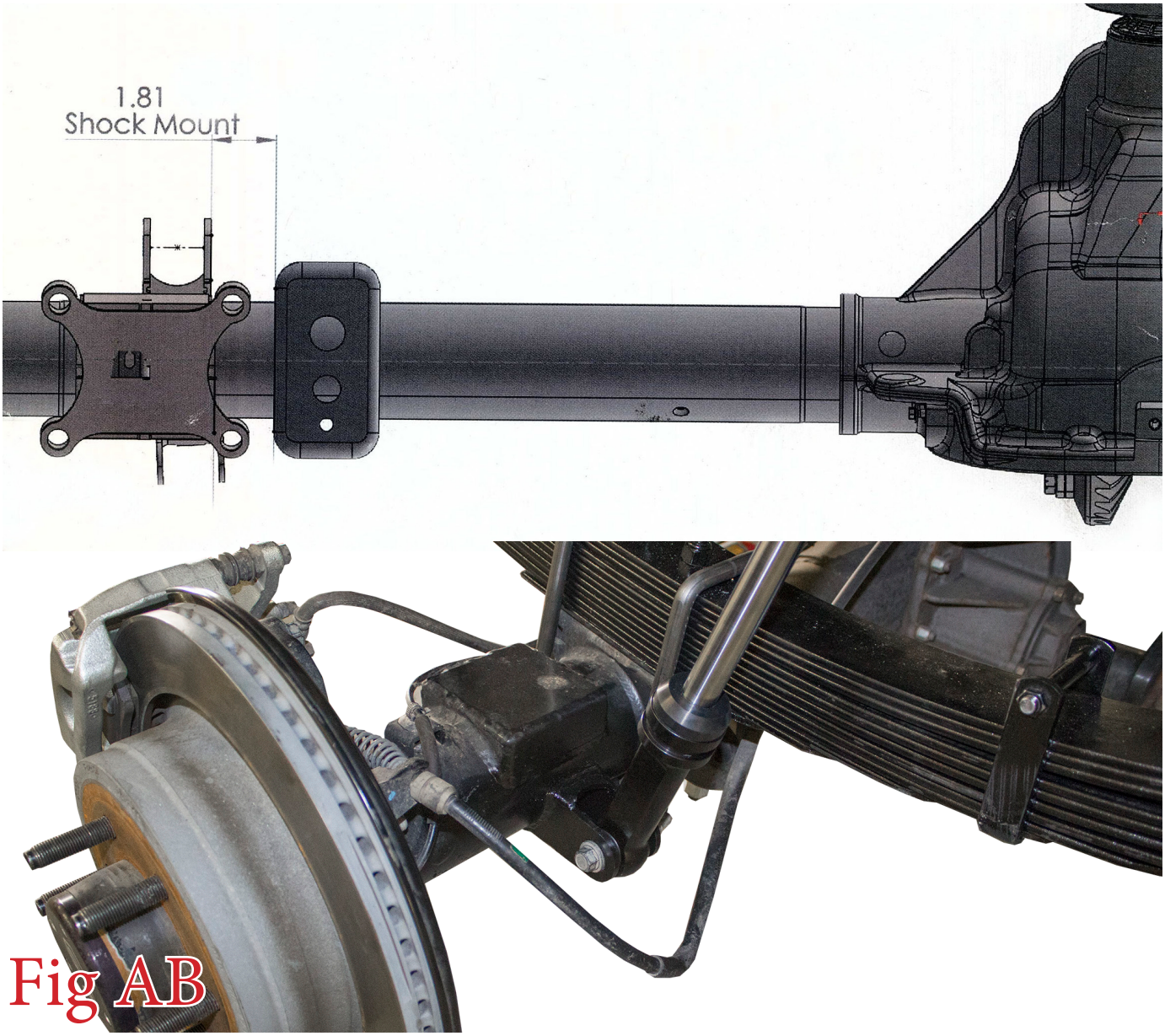


Fig AB

33. Once the shock mount is fully welded in place, re-bolt the shock to it. Torque OEM bolts to OEM torque specs or torque the supplied 1/2" Bolts to 70 foot pounds. Paint any bare metal.

34. Using the bolt you removed in Step 11, mount the supplied brake line drop bracket to the location in which the OEM brake bracket was mounted. Then, mount the OEM brake bracket to the other end of the supplied drop bracket using the supplied 1/4" Bolt, 1/4" Washers (x2), and 1/4" Nut. Torque the OEM bolt to OEM torque spec, and torque the supplied bolt to 20 foot pounds. (Fig AC)

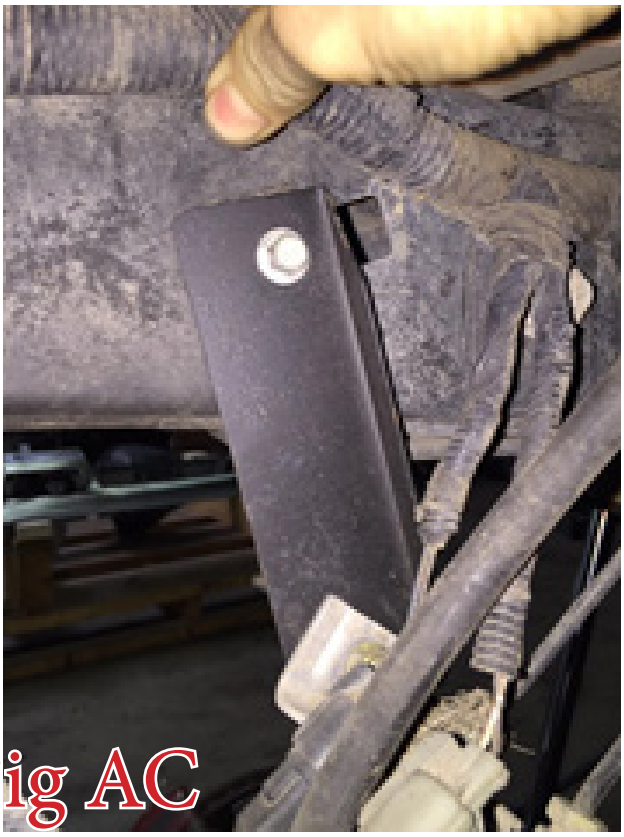


Fig AC

35. If you have fiberglass bed sides and a chase rack, please follow this step. If not, please skip to the next step. Adjust the Chase Rack Support Piece so that the upper holes are centered to the Chase Rack's lower tube. Then, use the support piece as a template to drill (11/32" Drill Bit) the 4 holes into the chase rack tube where the plate meets it. Once the holes are drilled, install the supplied 3/8" Thread Cutting Bolts into the newly drilled holes. (Fig AD)


Fig AD

38. Reinstall the wheels and put the vehicle back on the ground.
36. Stand back and enjoy your new ADD Shock Mount Bed Cage.
37. Check, and retighten if needed, all mounting bolts after 100 miles and periodically thereafter.

For Additional Support or Technical Questions,
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