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Rough Country 31014 Installation Instructions

Coilover Conversion Kit with Vertex Coilovers for Ram 2500 4WD

Part number: 31014

trailfortress.com/rough-country-4-5-6-inch-coilover-conversion-upgrade-kit-31014

Scan for fitment, price and install help

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ROUGH COUNTRY
SUSPENSION SYSTEMS®

2019-22 Ram 2500 5” Coilover Conversion

Thank you for choosing Rough Country for all your vehicle needs.

Please read instructions before beginning installation. Check the kit hardware against the kit contents shown below. Be sure you have all needed parts and know where they go.
If question exist, please call us @1-800-222-7023. We will be happy to answer any questions concerning this product.
Check all fasteners for proper torque. Check to ensure for adequate clearance between all components.
Periodically check all hardware for tightness.

Kit Contents:

RH Coilover x1
LH Coilover x1
Shock Pair x1
Dr Lower Mount x1
Pass Lower Mount x1
Dr Upper Mount x1
Pass Upper Mount x1
Dr Reservoir Mount x1
Pass Reservoir Mount x1

Tools Needed:

9/16” Socket/Wrench
1-1/16” Socket/Wrench
10mm Socket/Wrench
13mm Socket/Wrench
21mm Socket/Wrench
22mm Socket/Wrench
Jack/Jack Stands

Hardware Included:

3/8” x 1-1/4” Bolts x16
3/8” Flat Washers x16
3/8” Flange Lock Nuts x14
3/8” Flag Nuts x2
14mm x 75mm Bolts x4
14mm Lock Nut x4
14mm Flat Washers x8

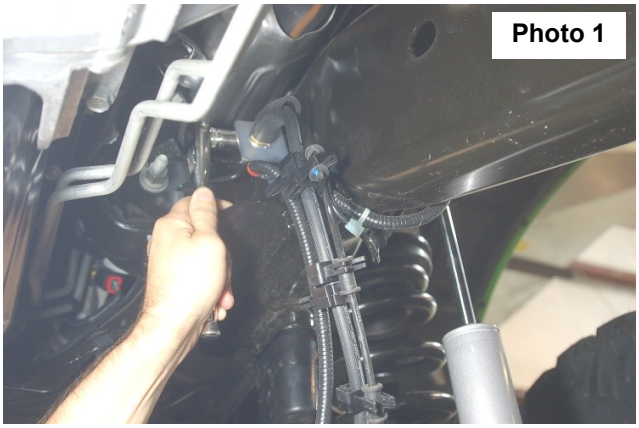


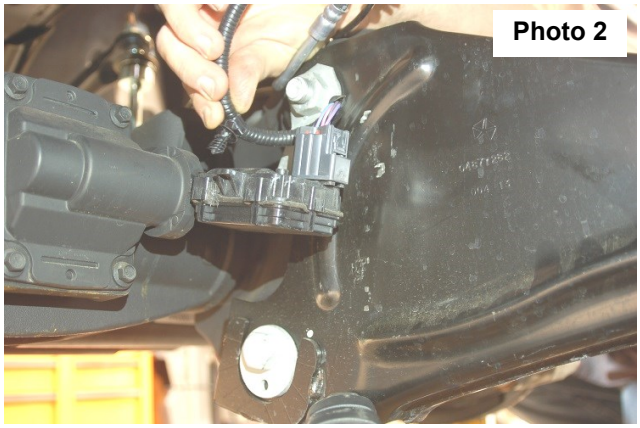
Torque Specs:

Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16”	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8”	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16”	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2”	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16”	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8”	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4”	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs

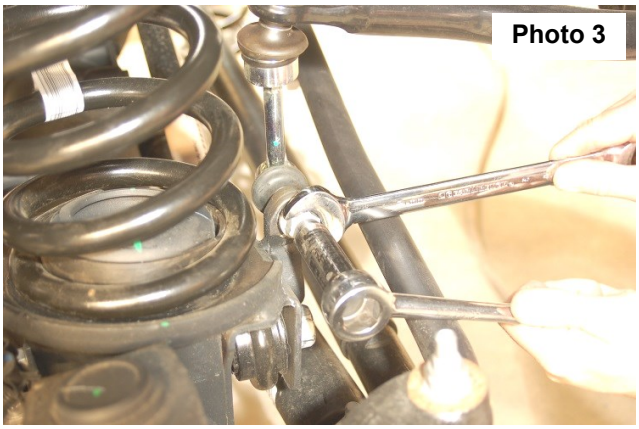
FRONT INSTALLATION INSTRUCTIONS

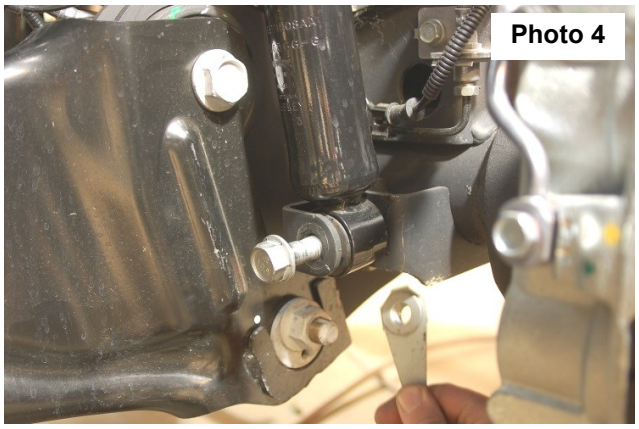
1. Secure and block the rear tires of the vehicle on a level concrete or asphalt surface
2. Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and tires and set aside. Position a hydraulic jack under the front axle and raise the jack until the front suspension begins to compress
3. On both sides of the vehicle, scribe alignment marks on the adjustment cam and axle bracket at the lower axle bolt of the radius arm for later reference.
4. Unbolt the brake line brackets from the inside of the frame using a 13mm wrench to ensure brake line free play during the suspension system installation. **See Photo 1.** Retain stock hardware for later use.
5. Unplug the electrical connector for the four wheel drive engagement. **See Photo 2.**
6. Using a 15mm wrench, remove the bolts from the front driveshaft at the pinion flange. Retain hardware. **Do not allow the driveshaft to hang by the Rzeppa joint, this can cause damage to the joint. Place a jack under the driveshaft or use wire to tie it up.**





7. Remove the sway bar links by unbolting the lower sway bar nut as shown in **Photo 3** using a 10mm socket and a 21mm wrench. Retain hardware.
8. Remove the track bar from its upper mounting point on the frame using a 1 1/16” wrench and rest it on the axle. It may be helpful to loosen the lower track bar bolt on the axle. Retain hardware for reuse.
9. Remove the cotter pin, and castle nut from the drag link where it connects to the pitman arm. A pitman arm tool may be needed to separate the drag link from the pitman arm. Remove the stock nut, and lock washer from the sector shaft on the steering box. Save hardware for later installation. Using a pitman arm puller carefully remove the stock pitman arm.
10. Remove the front shocks with a 18mm wrench for the upper stud and a 21mm socket for the lower bolt. **See Photo 4.** Retain lower shock mount factory hardware.

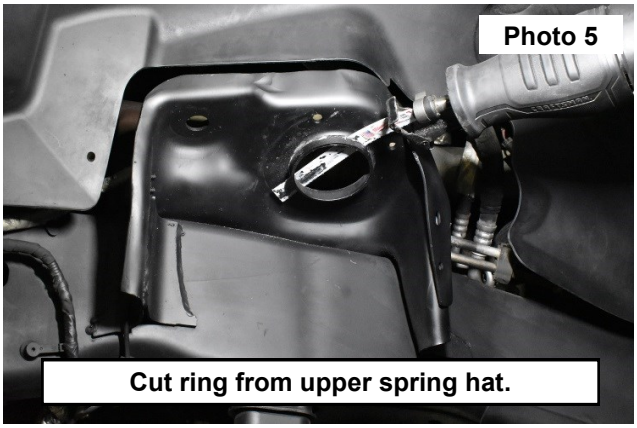


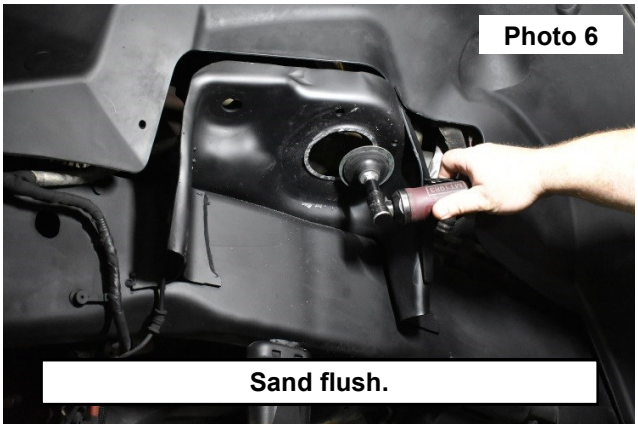


11. Lower the axle and remove the coil springs. Note there is a rubber push pin made on to the factory coil isolator to align the coil spring. Push on the top the pin to release the isolator from the frame coil pocket.

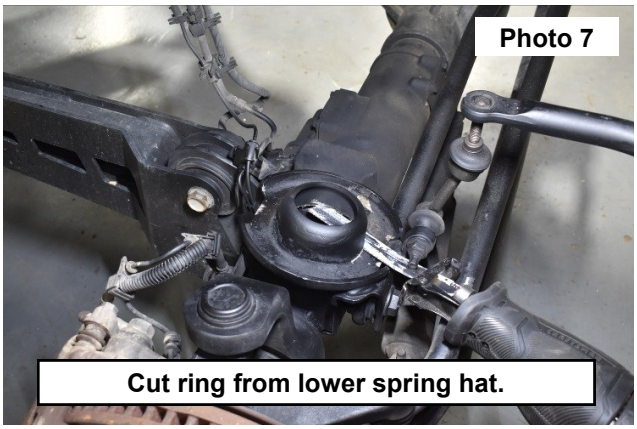
NOTICE **The install shown below is on the passenger side of the vehicle. The driver side will follow the same process but the holes in the brackets will be different locations and the ABS pump will need to be moved prior to drilling. Skip to Photo 20 to see ABS pump removal.**

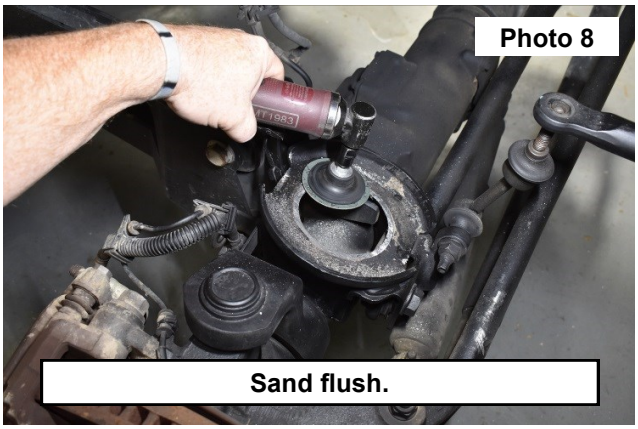
12. Cut the ring from the upper spring hat and sand flush. **See Photo 5** and **Photo 6**.



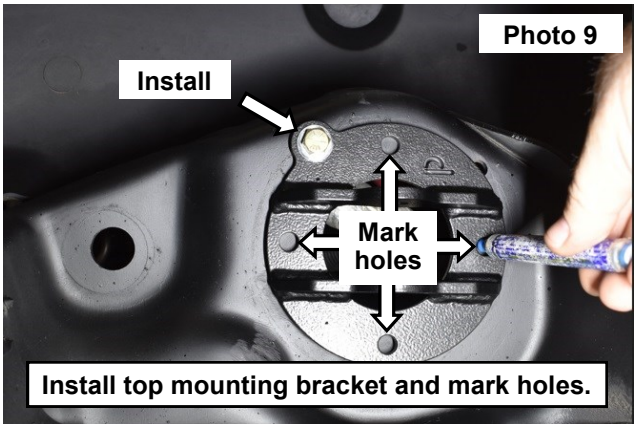


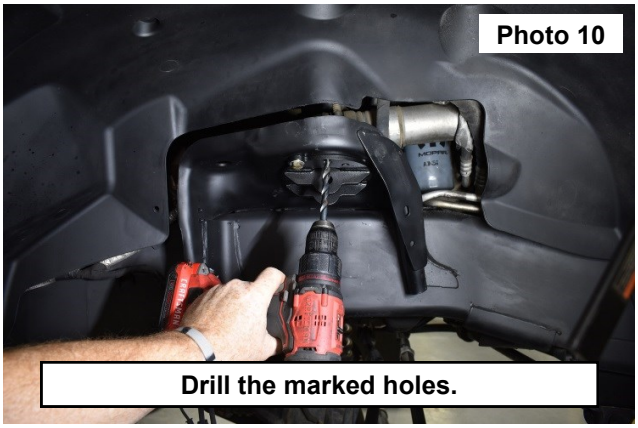
13. Cut the ring from the lower spring hat and sand flush. **See Photo 7** and **Photo 8**.



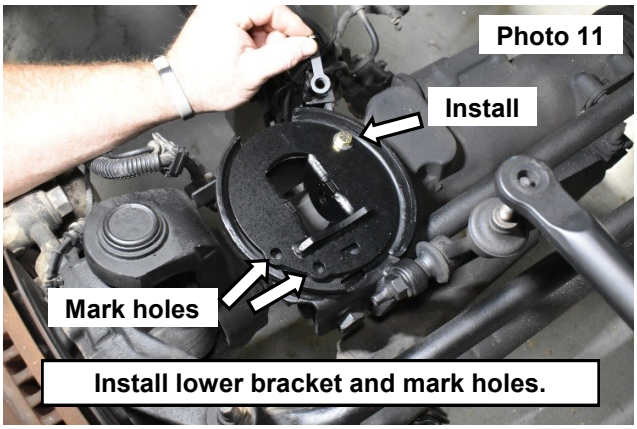


14. **NOTE: Spray paint both of the sanded areas to prevent rust**.
15. Temporarily install the top mounting bracket using a 3/8” bolt and center the bracket with the large hole. Mark the locations of the other 4 holes using a paint pen. **See Photo 9**.
16. Drill the marked holes using a 13/32” drill bit. **See Photo 10**.



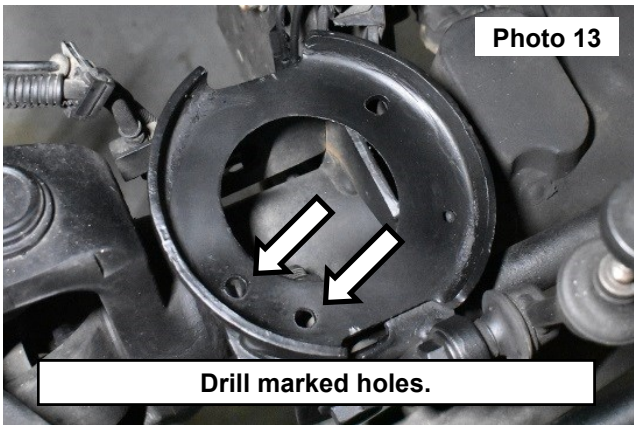


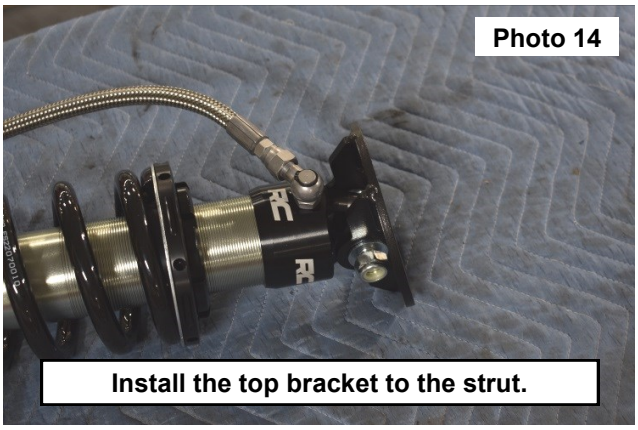
17. Temporarily install the lower mounting bracket using a 3/8” bolt and flag nut. Center the bracket and mark the other two holes using a paint pen. If the bolt and flag nut do not align, remove the bracket and drill out the hole using a 7/16” drill bit. **See Photo 11** and **Photo 12**.



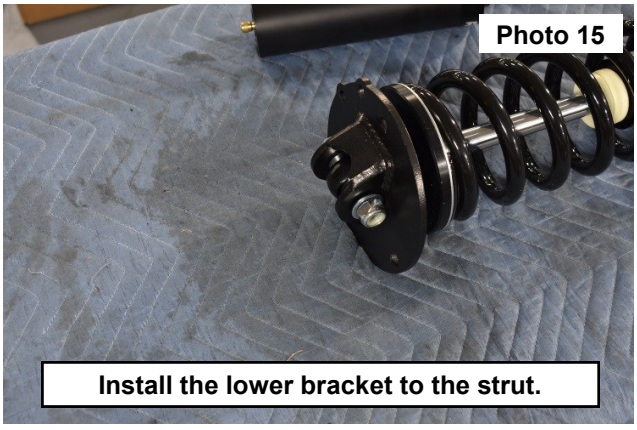


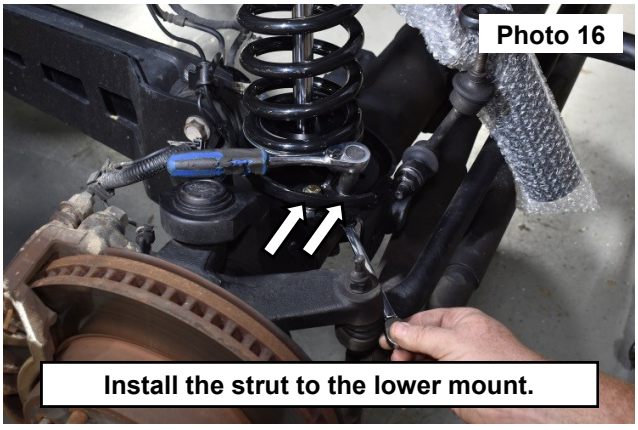
18. Drill the marked holes using a 13/32” drill bit. **See Photo 13**
19. Install the top bracket to the strut with the supplied 14mm x 75mm bolts, nuts, and flat washers using two 22mm socket/wrenches. **See Photo 14**.



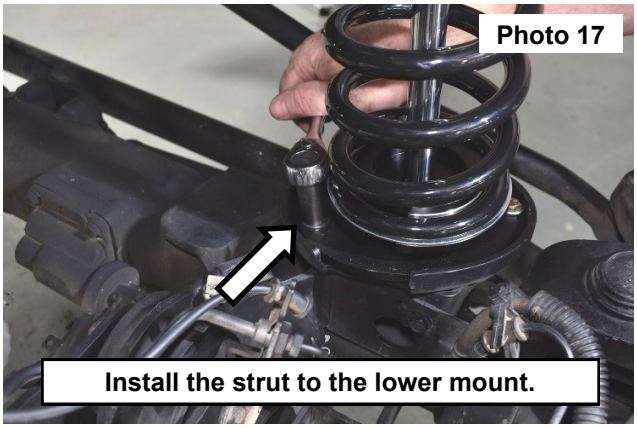


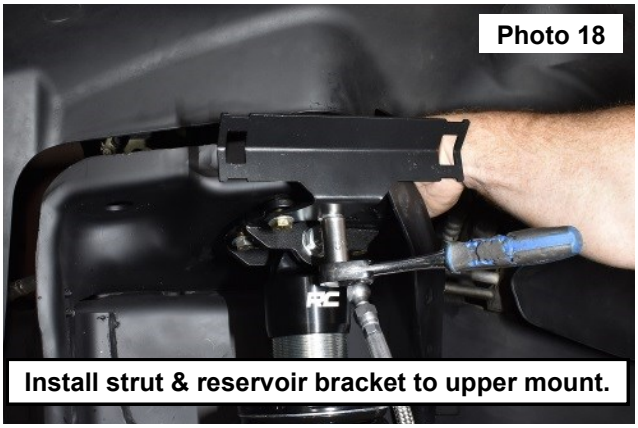
20. Install the lower bracket to the strut with the supplied 14mm x 75mm bolts, nuts, and flat washers using two 22mm socket/wrenches. **See Photo 15**.
21. Install the strut to the lower mount with the supplied 3/8” x 1-1/4” bolts, flange nuts, and flat washers using two 9/16” socket/wrenches. **See Photo 16** and **Photo 17**.





22. Install the strut and the reservoir bracket to the upper mount with the supplied 3/8” x 1-1/4” bolts, flange nuts, and flat washers using two 9/16” socket/wrenches. **See Photo 18**.

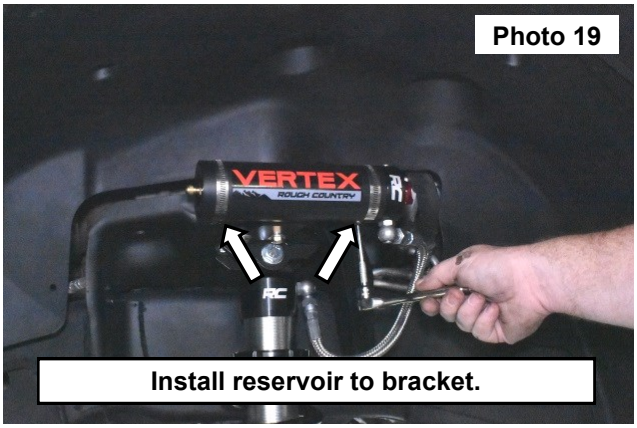


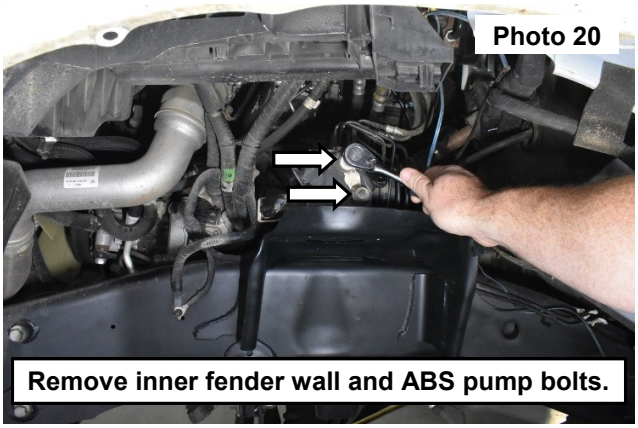


23. Install the reservoir to the bracket using the supplied clamps. **See Photo 19**.

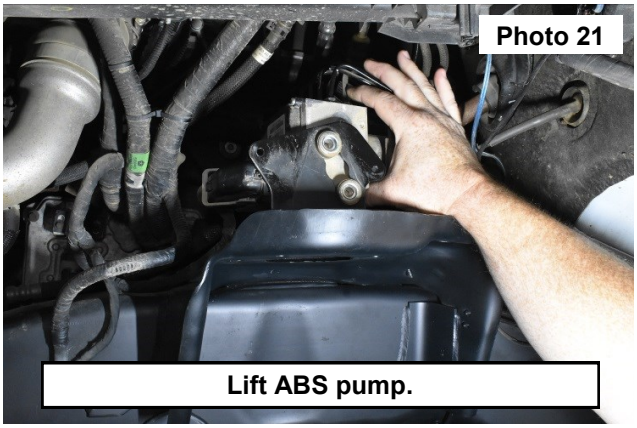
<u>Driver Side Only for removing ABS pump for drilling</u>

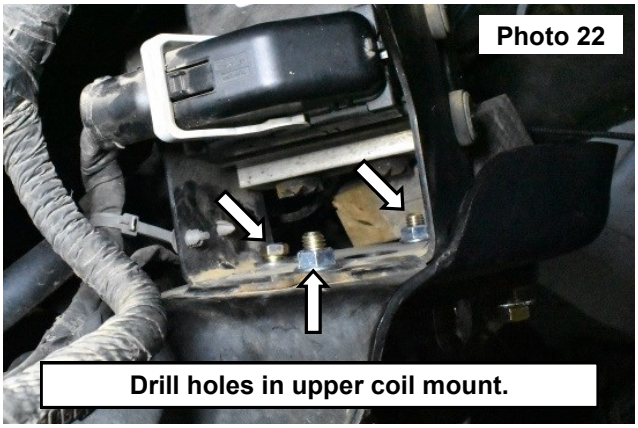
24. Remove the inner fender wall and remove the bolts securing the ABS pump. **See Photo 20**.





25. Lift the ABS pump up and drill the holes in the upper coil mount using the same process in Steps 15 and 16. **See Photo 21** and **Photo 22**. **NOTE: Rear bolt needs to be install top down to clear ABS pump**.





26. Reinstall ABS pump in reverse order of teardown.
27. Reinstall the remainder of the suspension in reverse order of teardown.

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