

advanced FLOW engineering

Instruction Manual P/N: 46-71460A / 46-71460B

Dana M235 – 14 Bolt Rear Differential Cover

Make: Ford

Model: Bronco Raptor

Year: 2022-2026

Engine: V6-3.0L (tt)



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- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- For technical support please call 951-493-7185.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A1	1	Differential Cover – Raw, Machined Fins (46-71460A)	05-61671A
A2	1	Differential Cover – Black, Machined Fins (46-71460B)	05-61671B
B	11	Screw, Socket Head M8 x 1.25 x 25	03-50231
C	3	Threaded Stud, M8 x 1.25 x 80	03-50754
D	14	Washer, Flat: 5/16 AN S/S	03-50228
E	3	Hex Nut, M8 x 1.25	03-50403
F	1	Plug, M12 x 1.25	03-50385
G	1	Washer, Aluminum: M12, 15.85MM OD	03-50384
H	1	Plug, 1/8" NPT	03-50029
J	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach (46-71460B)	03-50223
K	1	Porthole View Gauge (46-71460B)	03-50224
M	1	Plug, 3/4" NPT (46-7160A)	03-50391
N	1	Plug, 1" NPT (46-71460A)	03-50390

Tools Needed:

- 1-1/2" Socket
- 10mm Deep Socket
- 13mm Deep Socket
- 14mm Socket
- 3/16" Hex-Bit Socket
- 6mm Hex-Bit Socket
- Ratchet & Extension
- Prying Bar
- Torque Wrench

Warranty Information available at <https://afepower.com/contact#warranty>

Emissions Disclaimer: This product does not require a CARB EO#.



A1



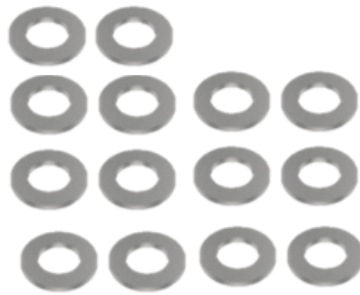
A2



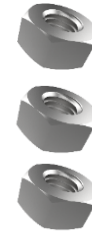
B



C



D



E



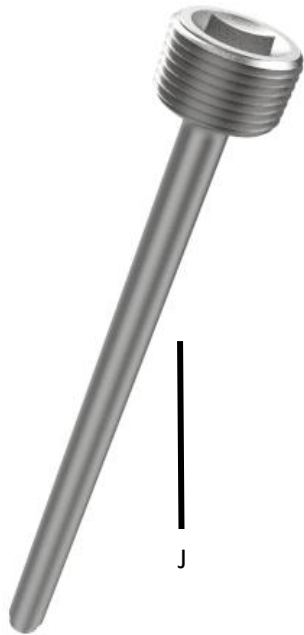
F



G



H



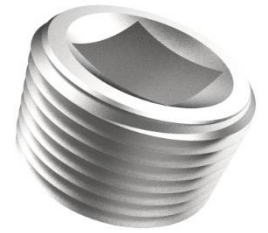
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K



M



N

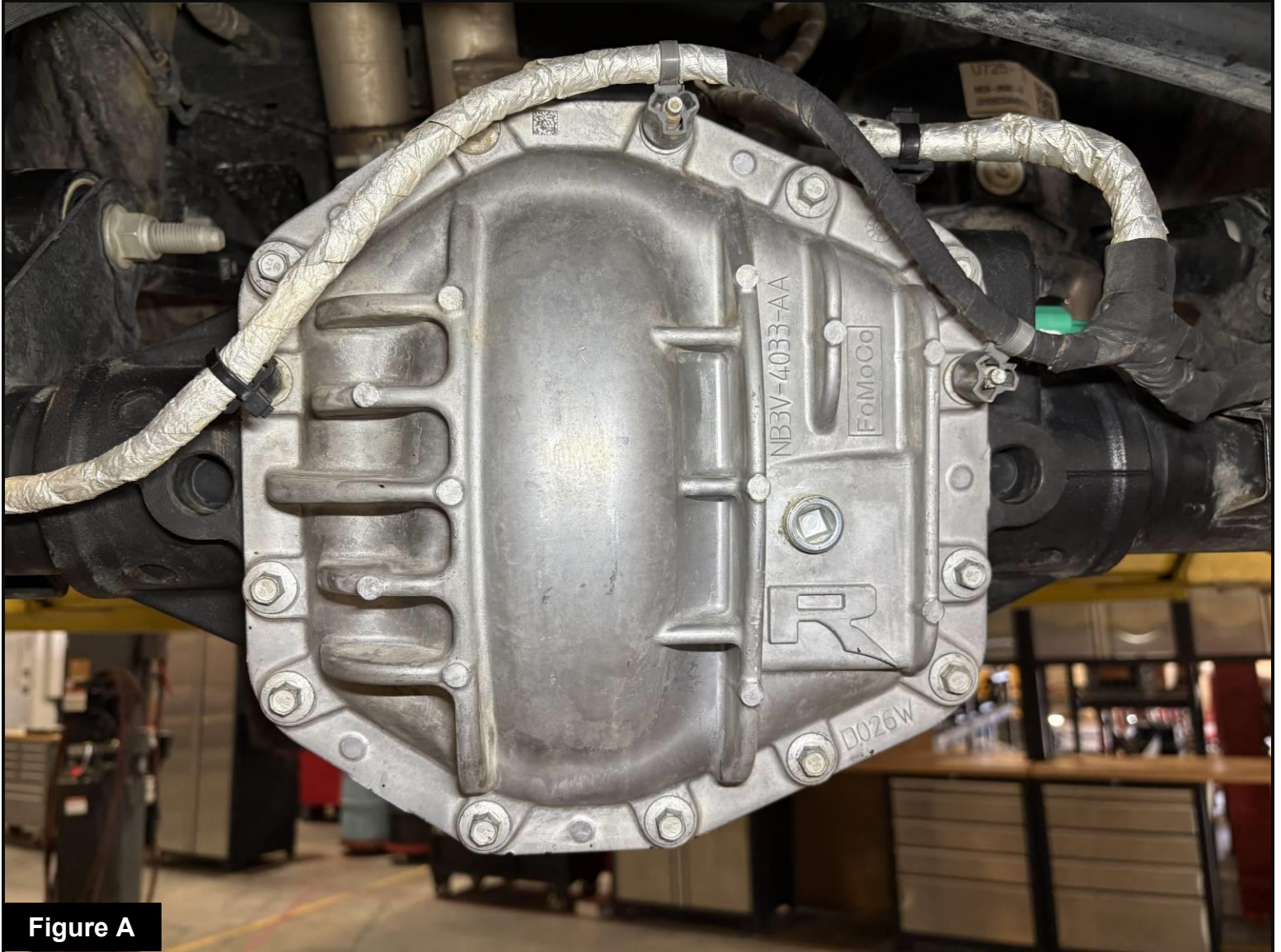


Figure A

Refer to Figure A for Step 1

Step 1: Park the vehicle on level surface and engage the parking brake. Allow the vehicle to cool down completely before beginning installation.

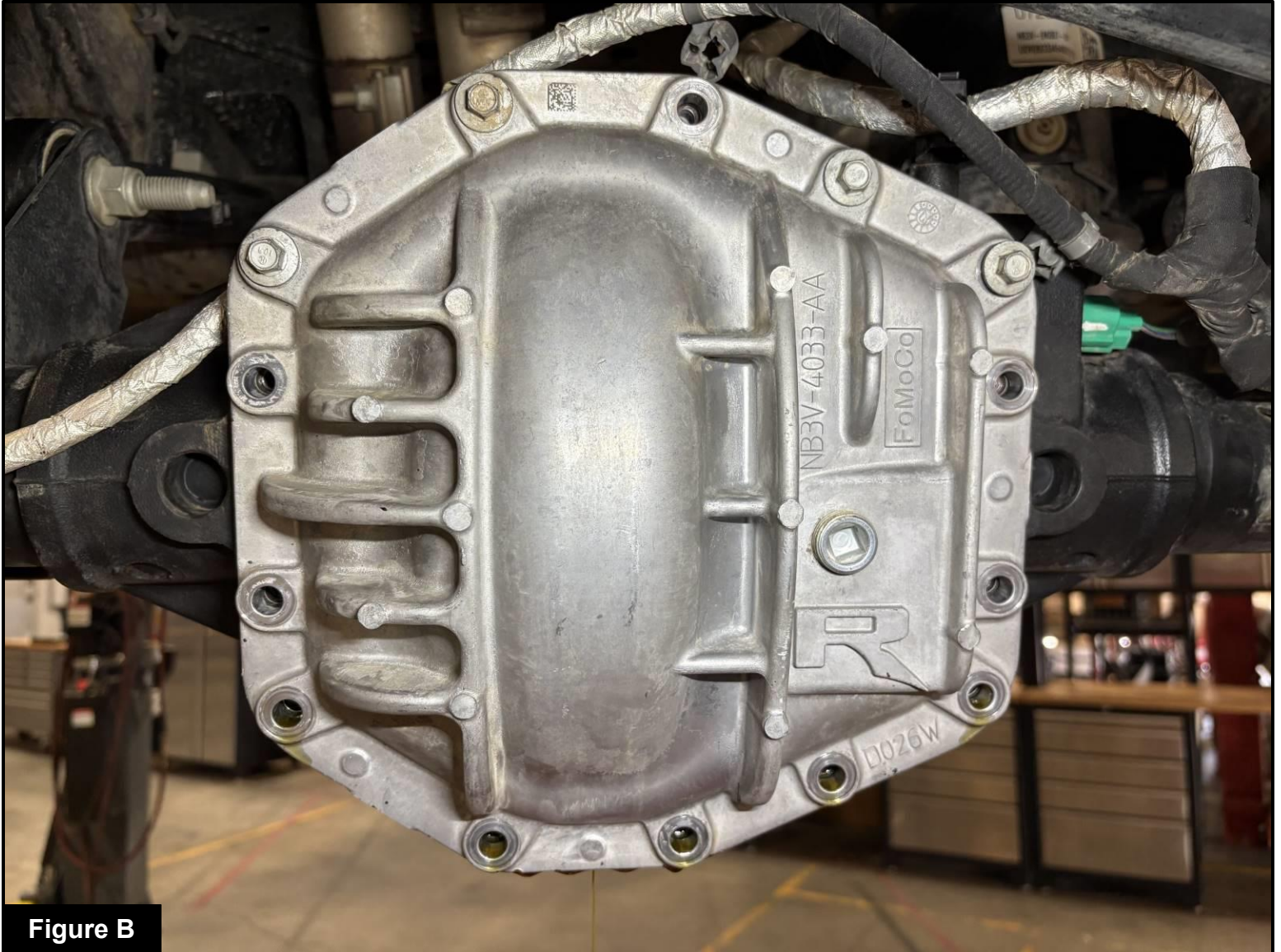


Figure B

Refer to Figure B for Steps 2-6

Step 2: Remove the three (3) retaining clips securing the harness from the stock differential cover.

Step 3: Remove the bottom seven (7) hex-head screws from the stock differential cover.

Step 4: Remove the three (3) studded hex-head screws from the stock differential cover.

Step 5: Loosen, but do not remove, the top four (4) hex-head screws. Carefully break the seal on the stock differential cover and drain the gear oil completely.

Step 6: Carefully pry the stock differential cover away from the differential housing. Use caution when removing the stock differential cover.

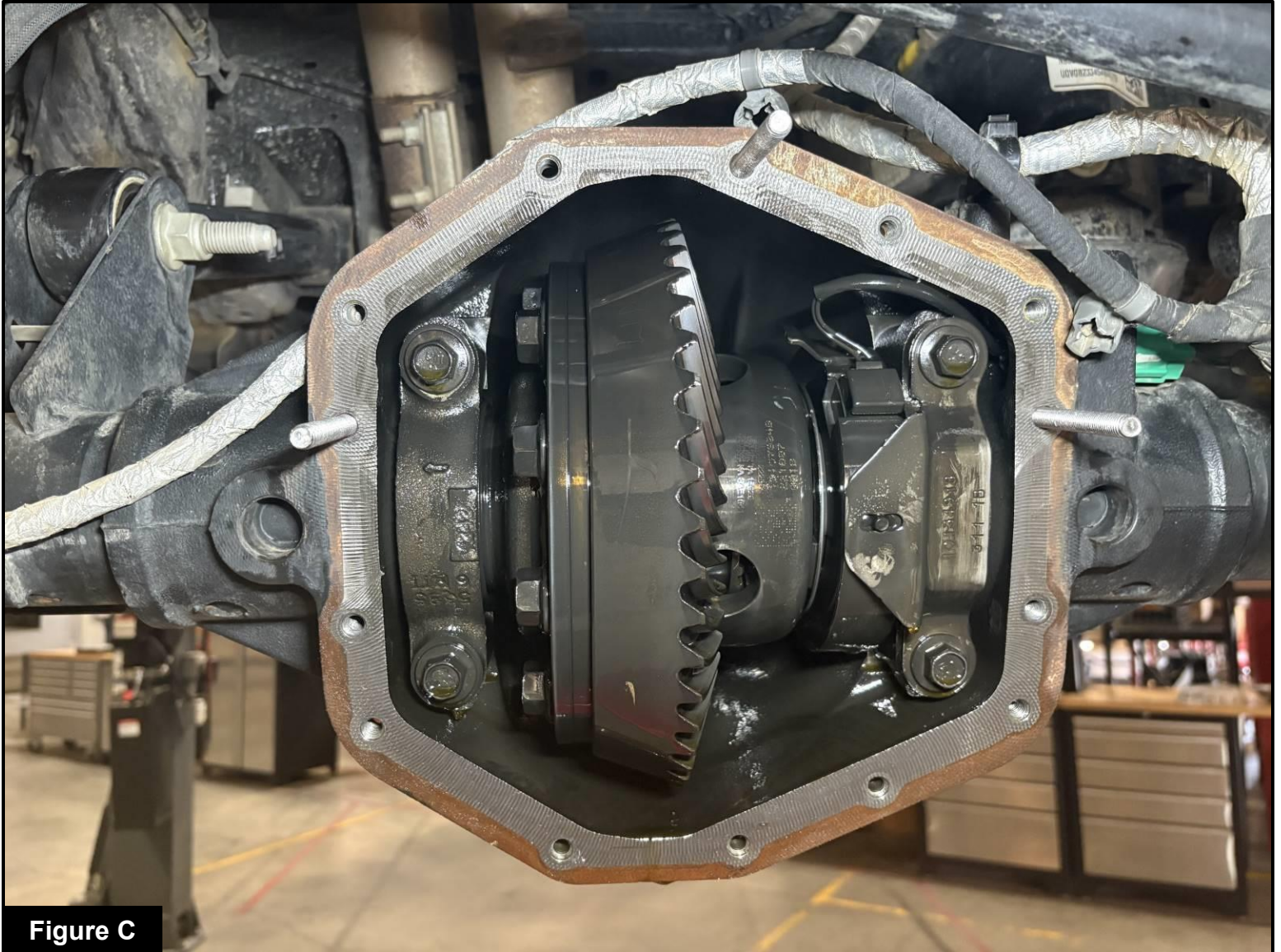


Figure C

Refer to Figure C for Steps 7-8

Step 7: Thoroughly clean the mating surface.

Step 8: Install the supplied three (3) M8 threaded studs into the differential housing (as shown).

Note: Clean the surrounding area of debris.



Figure D

Refer to Figure D for Steps 9-12

Step 9: Carefully position the aFe differential cover with a new differential cover gasket (not included) against the differential housing. Ensure the gasket is properly aligned, and verify that the cover seats evenly on the housing surface.

Step 10: Install the supplied eleven (11) socket head cap screws and eleven (11) washers to secure the aFe differential cover. **Tighten each screw snugly but do not fully torque at this stage.**

Step 11: Install the remaining three (3) washers and three (3) M8 hex nuts onto the threaded studs securing the aFe differential cover. **Tighten snugly but do not fully torque at this stage.**

Step 12: Torque all the screws and nuts to 15 ft-lbs (20 Nm) in an X-pattern.



Figure E

Refer to Figure E for Step 13

Step 13: Apply Teflon pipe sealant to the threads of the supplied 1" NPT fitting. Install the fitting into the large side port of the aFe differential cover and tighten securely.

For cover **46-71460A**: Install the 1" NPT plug included in the kit.

For cover **46-71460B**: Install the 1" NPT sight glass included in the kit.

Note: Do not overtighten



Figure F

Refer to Figure F for Step 14

Step 14: Install the supplied M12 x 1.25 drain plug and crush washer into the bottom of the aFe differential cover. Torque the drain plug to **20 ft-lb (27 Nm)**.



Figure G

Refer to Figure G for Step 15

Step 15: Using the top fill port on the aFe differential cover, fill the differential with the vehicle manufacturer's recommended gear oil until fluid begins to flow out of the 1/8" NPT side port. (approximately 4 quarts).



Figure H

Refer to Figure H for Steps 16-17

Step 16: Apply Teflon pipe sealant to the threads of the 1/8" NPT plug.

Step 17: Install the 1/8" NPT plug into the side port of the aFe differential cover and tighten securely.

Note: Do not overtighten.

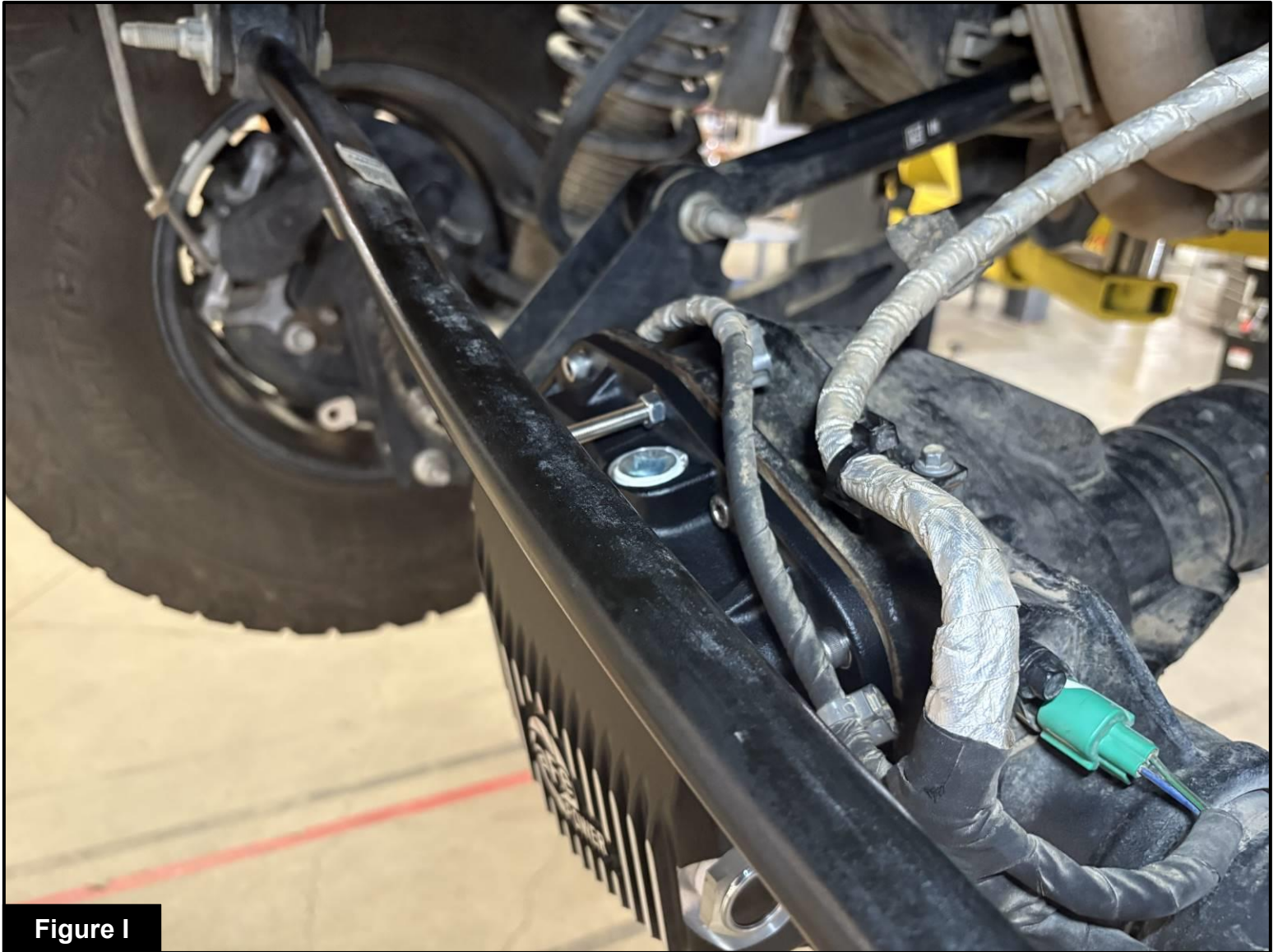


Figure I

Refer to Figure I to Step 18

Step 18: Apply Teflon pipe sealant to the threads of the supplied 3/4" NPT fitting and install it into the top of the aFe differential cover. Tighten securely.

For cover **46-71410A**: Install the 3/4" NPT plug included the kit.

For cover **46-71410B**, Install the 3/4" NPT magnetic 6" deep reach plug included in the kit.

Note: Do not overtighten.

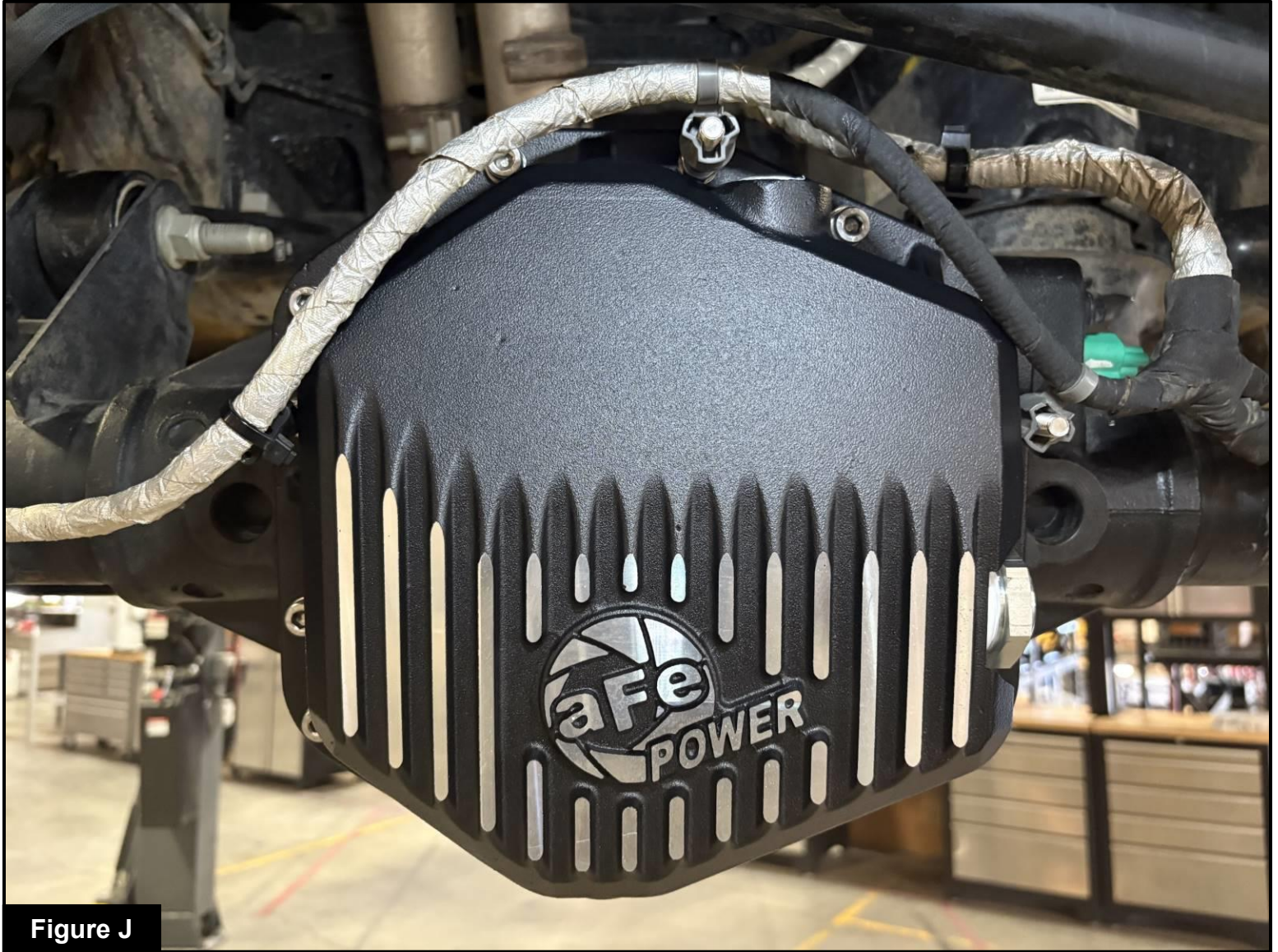


Figure J

Refer to Figure J for Steps 19-20

Step 19: Install the three (3) retaining clips for the harness onto the three (3) M8 threaded studs on the aFe differential cover.

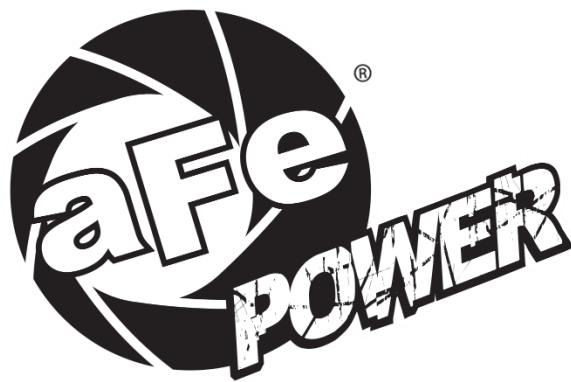
Step 20: Installation is now complete.



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