

advanced FLOW engineering

Instruction Manual P/N: 46-71050B

AAM 9.25 – 12 Bolt Front Differential Cover

Make: GM	Model: 2500	Year: 2011-2018	Engine: V8 6.6L
Make: GM	Model: 2500	Year: 2011-2018	Engine: V8 6.0L
Make: GM	Model: 3500	Year: 2011-2018	Engine: V8 6.6L
Make: GM	Model: 3500	Year: 2011-2018	Engine: V8 6.0L



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	Differential Cover – Black, Machined Fins	05-60946B
B	12	Screws, Socket Head M8x1.25x25	03-50231
C	12	Washer, Flat	03-50228
D	1	Plug, Magnetic M12 x 1.25	03-50385
E	1	Crush Washer	03-50384
F	1	Plug, 1/8" NPT	03-50029
G	1	Plug, Magnetic 1/2" NPT, 3" Deep Reach	03-50612
H	1	Porthole View Gauge (Pre-Installed)	03-50224



A



B



C



D



E



F



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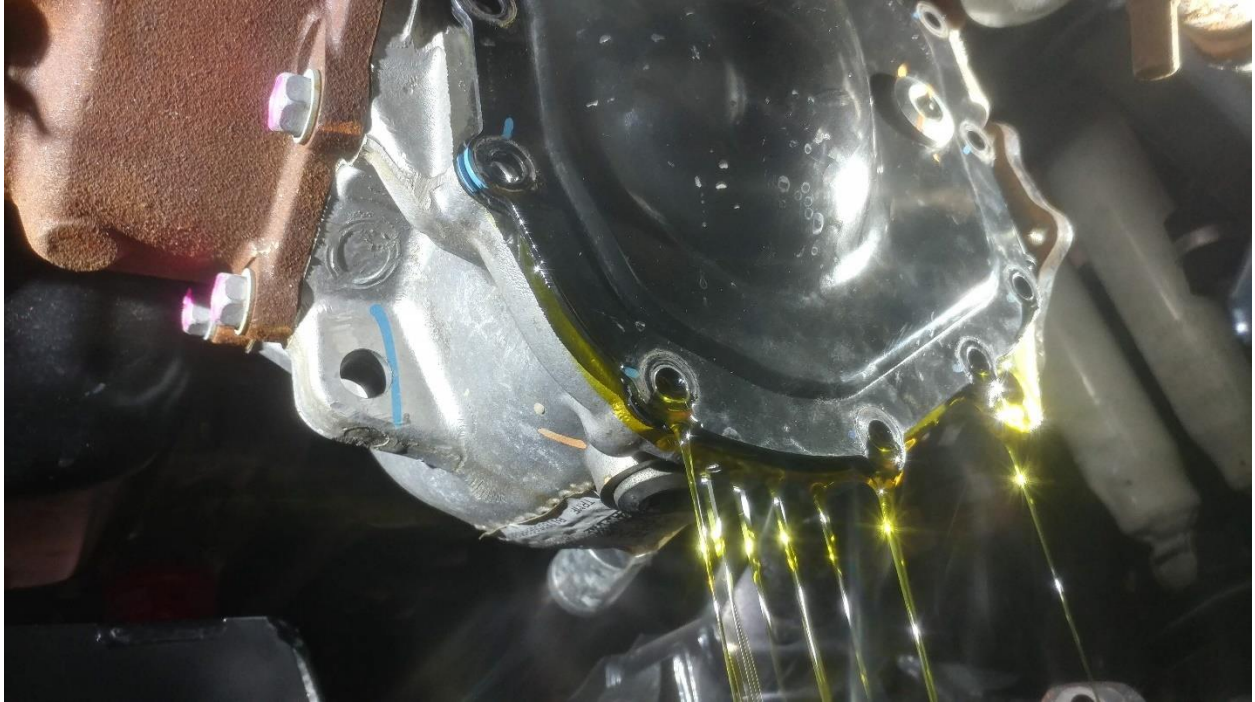


H



1. Park your vehicle on a flat, dry surface. You will need to block the tires to prevent the vehicle from rolling.
2. If applicable, remove the skid plate from the front of the vehicle.
3. Place a drain pan under the differential cover.
4. Disconnect the four wheel drive actuator wire from the left side and top of the OE differential cover.
5. Remove the **bottom** 10 bolts from the differential cover.
6. Loosen, but do not remove the top two (2) bolts. Break the seal on the cover and the gear oil will begin to drain.

Note: If your differential housing has a bottom drain plug, you may also use this to drain the gear oil.



7. Allow all of the gear oil to drain from the differential.
8. Remove the two (2) remaining bolts from the top of the differential cover.

Note: Be careful while removing the OEM gasket, it will be reused later during the installation.

9. Remove the OEM cover and gasket from the housing.



10. Use a clean, lint free shop towel to wipe down the remaining gear oil from the housing.
11. Clean off the sealing surface with a gasket scraper. Be careful not to gouge the surface while cleaning.
12. Check the surface of the housing for any irregularities. If there are any, carefully remove high spots using a smooth flat file.

Note: DO NOT “ROUND OFF” THE FLAT GASKET SURFACE



13. Align the OEM gasket and supplied aFe differential cover into position using the correct orientation shown above.



14. Hold the OEM gasket and aFe differential cover into position, aligning the screw holes. Install one (1) of the supplied M8x1.25x25 socket head screws and flat washers at the top of the cover to hold it in place.
15. Continue installing the 11 remaining M8x1.25x25 socket head screws and flat washers finger tight.
16. Torque the mounting screws to 12-16 ft.-lbs. in a crisscross pattern.



17. Install the supplied M12x1.25 drain plug and crush washer into the bottom of the cover.



Note: We recommend using a hose or external pump to assist in filling the aFe differential cover.

18. Fill the aFe differential cover using new gear oil. Fill until gear oil runs out of the 1/8" NPT port on the side of the cover (about 2 quarts).

Note: If your vehicle is lifted and your axle has been rotated, you will have to verify you have the correct oil level for your vehicle.



19. Apply Teflon pipe sealant to the threads of the supplied 1/8" NPT plug.



20. Install the 1/8" NPT plug into the side of the cover.



21. Apply Teflon pipe sealant to the threads of the supplied 1/2" NPT magnetic 3" deep reach plug.



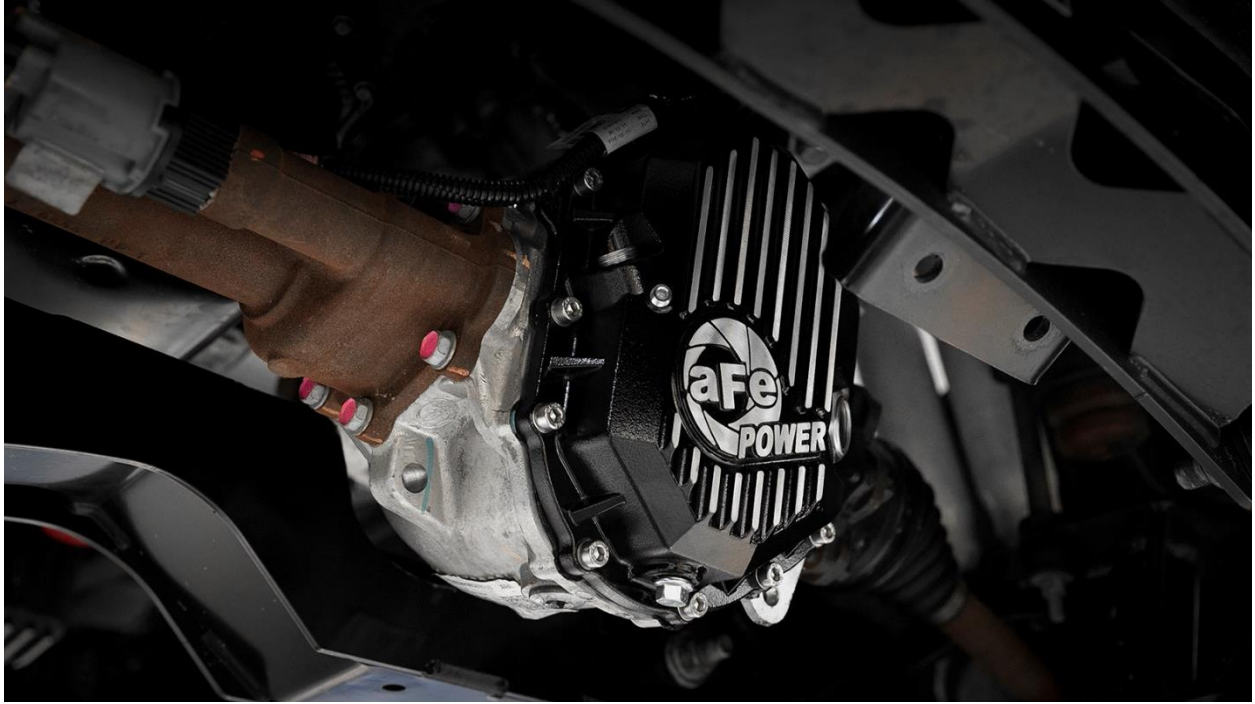
22. Install the 1/2" NPT magnetic 3" deep reach plug into the fill port.



23.Reconnect the four wheel drive actuator wire to the left side and top of the aFe differential cover.

Note: If the clip broke during removal, you can use zip ties to re-secure the wire.

24.If removed, reinstall the skid plate to the front of the vehicle.



25. Your installation is complete.

Warranty

General Terms:

- aFe warrants their products to be free from manufacturer's defects due to workmanship and material.
- This warranty applies only to the original purchaser of the product and is non-transferrable.
- Proof of purchase of the aFe product is required for all warranty claims.
- Warranty is valid provided aFe instructions for installation and/or cleaning were properly followed.
- Proper maintenance with regular inspections of product is required to insure warranty coverage.
- Damage due to improper installation, abuse, unauthorized repair or alteration is not warranted.
- Incidental or consequential damages or cost, including installation and removal of part, incurred due to failure of aFe product is not covered under this warranty.
- All warranty is limited to the repair and/or replacement of the aFe part. To request Return Goods Authorization ("RGA"), email RGA@afepower.com or call (951)493-7100. Upon receipt of the RGA, you must return the product to the address provided in the RGA, freight prepaid and accompanied with a dated proof of purchase and the RGA. Upon receipt of the defective product and upon verification of proof of purchase, aFe will either repair or replace the defective product within a reasonable time, not to exceed thirty days.

Product Category	P/N Prefix	Warranty Duration
Direct OE Replacement Filters	10,11,30,31,71,73	Life of the vehicle
Racing Filters	18	1 year
Universal	21,24,72	2 years
Air Intake Systems	50,51,54,55,75	2 years
Exhaust Systems	49	2 years
Intercoolers & Intercooler Tubes	46-2	2 years
Intake Manifolds	46-1	2 years
Differential Cover/Transmission Pan	46-7	Life of the vehicle
Exhaust Manifolds	46	2 years
Throttle Body Spacers	46-3	2 years
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81,87	2 years
PowerSports Intake Systems	85	2 years

No other warranty expressed or implied applies nor is any person or advanced FLOW engineering authorized to assume any other warranty. Some States do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

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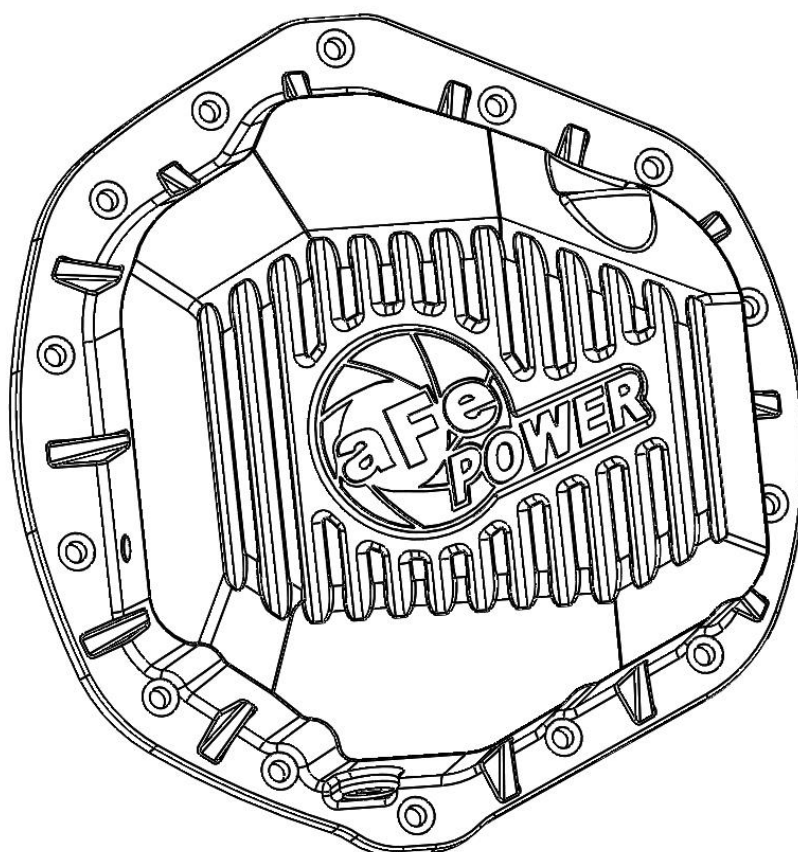
advanced FLOW engineering, inc.

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E-Mail: Tech@aFepower.com

**06-81186
02-22-2018 DR**



advanced FLOW engineering

Instruction Manual P/N: 46-71060A / 46-71060B

AAM 11.5 – 14 Bolt Rear Differential Cover

Make: **GM** Model: **2500** Year: **2001-2019** Engine: **V8 6.6L**

Make: **GM** Model: **3500** Year: **2001-2019** Engine: **V8 6.6L**

Make: **GM** Model: **3500** Year: **2001-2007** Engine: **V8 8.1L**

Make: **GM** Model: **3500** Year: **2007-2019** Engine: **V8 6.0L**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A1	1	Differential Cover – Raw, Machined Fins (46-71060A)	05-60812A
A2	1	Differential Cover – Black, Machined Fins (46-71060B)	05-60812B
B	1	RTV Silicone, Black Instant Gasket	05-60096
C	14	Screws, Socket Head M8x1.25x30	03-50225
D	2	Screws, Socket Head M8x1.25x40	03-50245
E	18	Washer, Flat	03-50228
F	1	Plug, Magnetic M12 x 1.25	03-50385
G	1	Crush Washer	03-50384
H	2	Spacer	03-50529
I	1	Plug, 1/8" NPT	03-50029
J	1	Plug, 3/4" NPT (Included in 46-71060A)	03-50391
K	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach (Included in 46-71060B)	03-50223
L	1	Plug, 1" NPT (Included in 46-71060A)	03-50390
M	1	Porthole View Gauge (Pre-Installed) (Included in 46-71060B)	03-50224



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A1



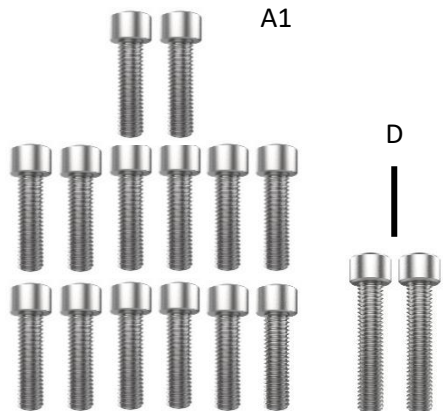
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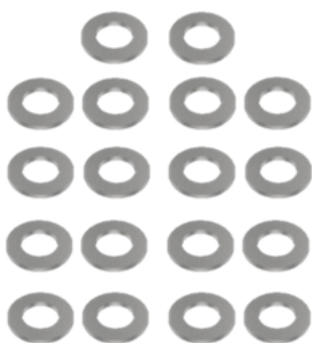


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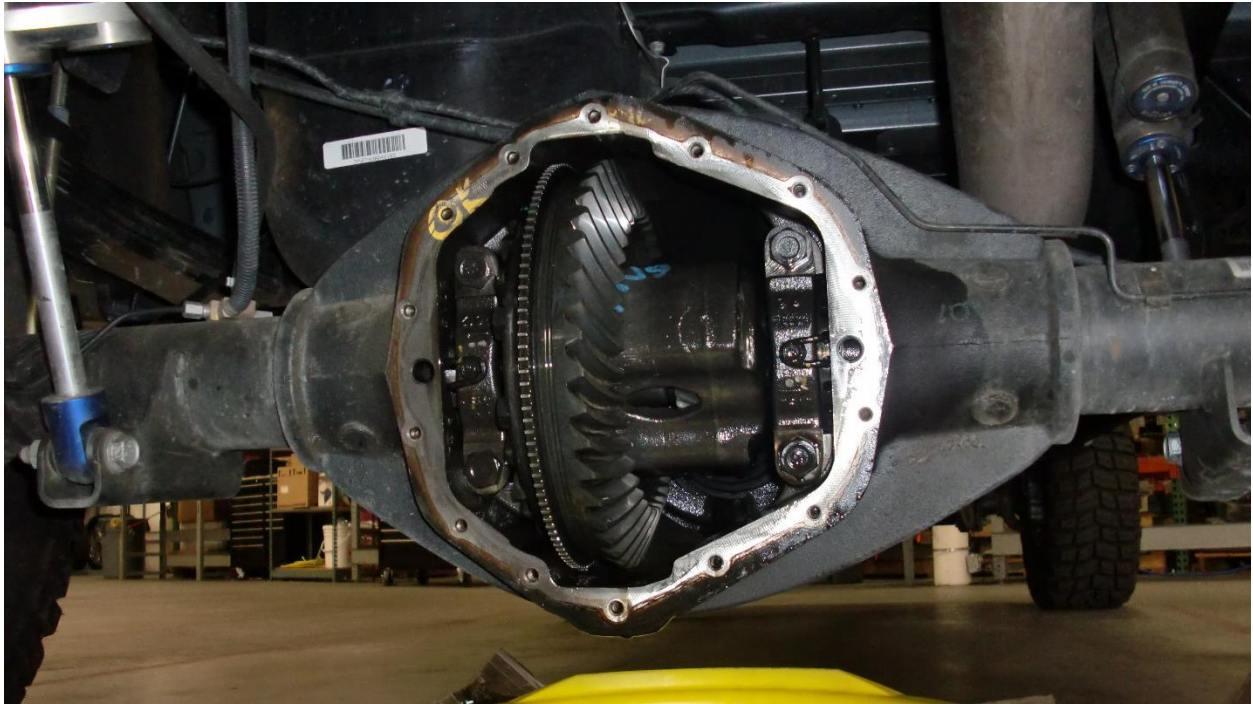


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M



1. Park your vehicle on a flat, dry surface. You will need to block the tires to prevent the vehicle from rolling.
2. Place a drain pan under the differential cover.
3. Remove the **bottom** 13 bolts from the differential cover, leaving only the top bolt. Keep note of the position of any brackets removed during this step.
4. Loosen, but do not remove the top bolt. Break the seal on the cover and the gear oil will begin to drain.



5. Allow all of the gear oil to drain from the differential.
6. Remove the one (1) remaining bolt from the top of the differential cover.
7. Remove the OEM cover and gasket from the housing.



8. Use a clean, lint free rag to wipe down the remaining gear oil from the housing.
9. Clean off the sealing surface with a gasket scraper. Be careful not to gouge the surface while cleaning.
10. Check the surface of the housing for any irregularities. If there are any, carefully remove high spots using a smooth flat file.

Note: DO NOT “ROUND OFF” THE FLAT GASKET SURFACE

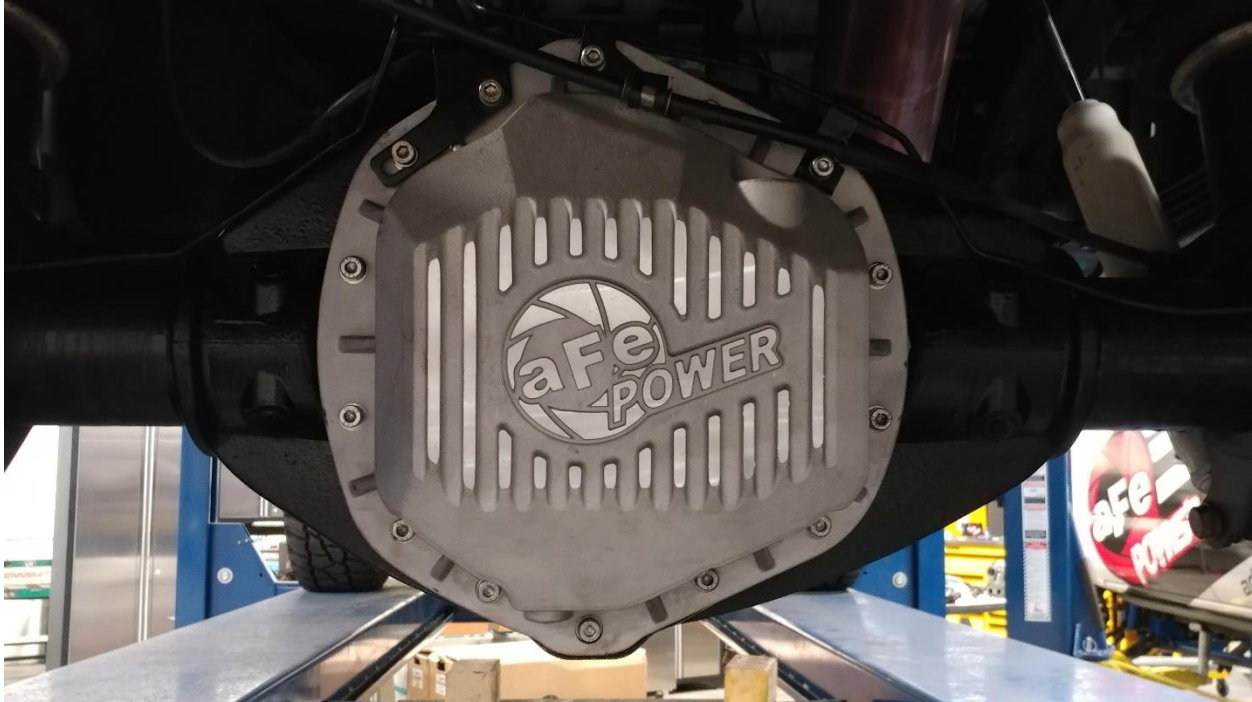


11. Hold the supplied aFe differential cover up to the gasket surface to make sure you will be able to maneuver it into place easily.

Note: If applicable, you can re-use the OEM gasket in place of silicone.

12. Spread the supplied RTV silicone across the gasket surface. Be generous when spreading the silicone across the surface, ensuring to follow along the inside of all the bolt holes.

Note: Before moving on, make sure that the silicone will completely seal with the gasket surface.



13. Hold the aFe differential cover into position, aligning the screw holes. Install four (4) of the supplied M8x1.25x30 socket head screws and flat washers into separate sides of the cover to hold it in place.

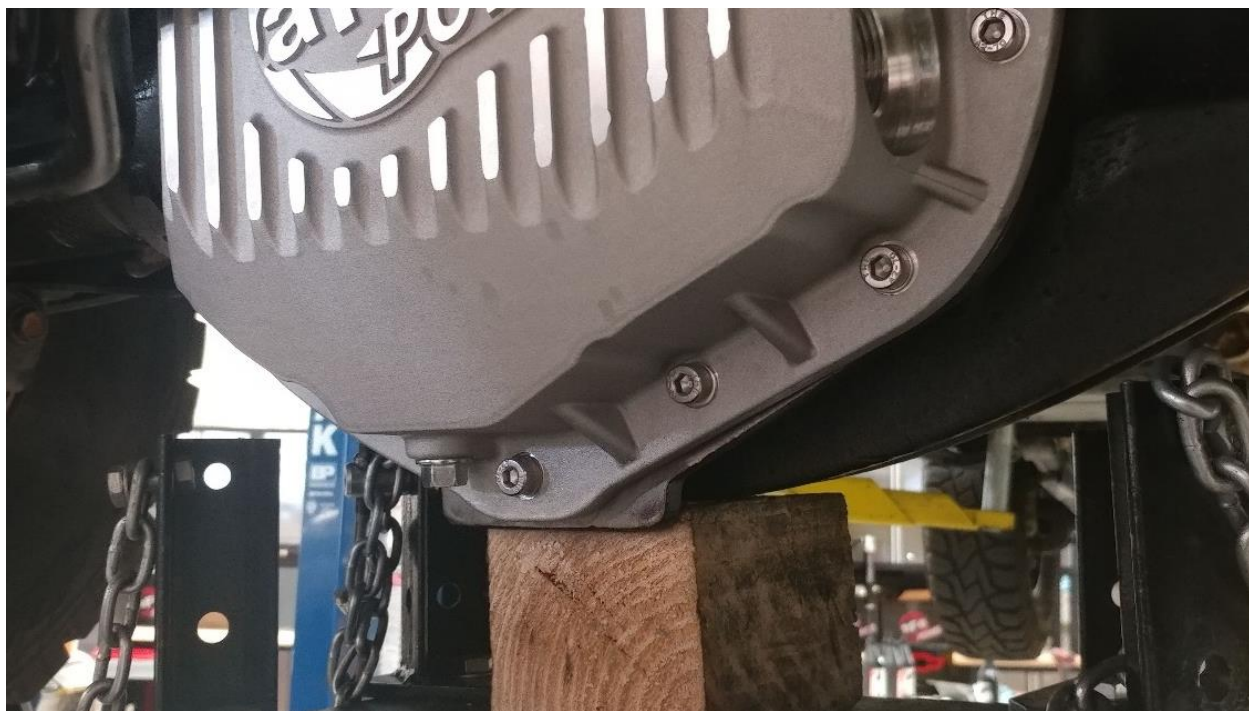
Note: Be careful not to move the cover around once it touches the gasket surface.

14. If applicable, reinstall the top left brake line bracket using two (2) supplied M8x1.25x40 socket head screws, two (2) spacers, and four (4) flat washers.

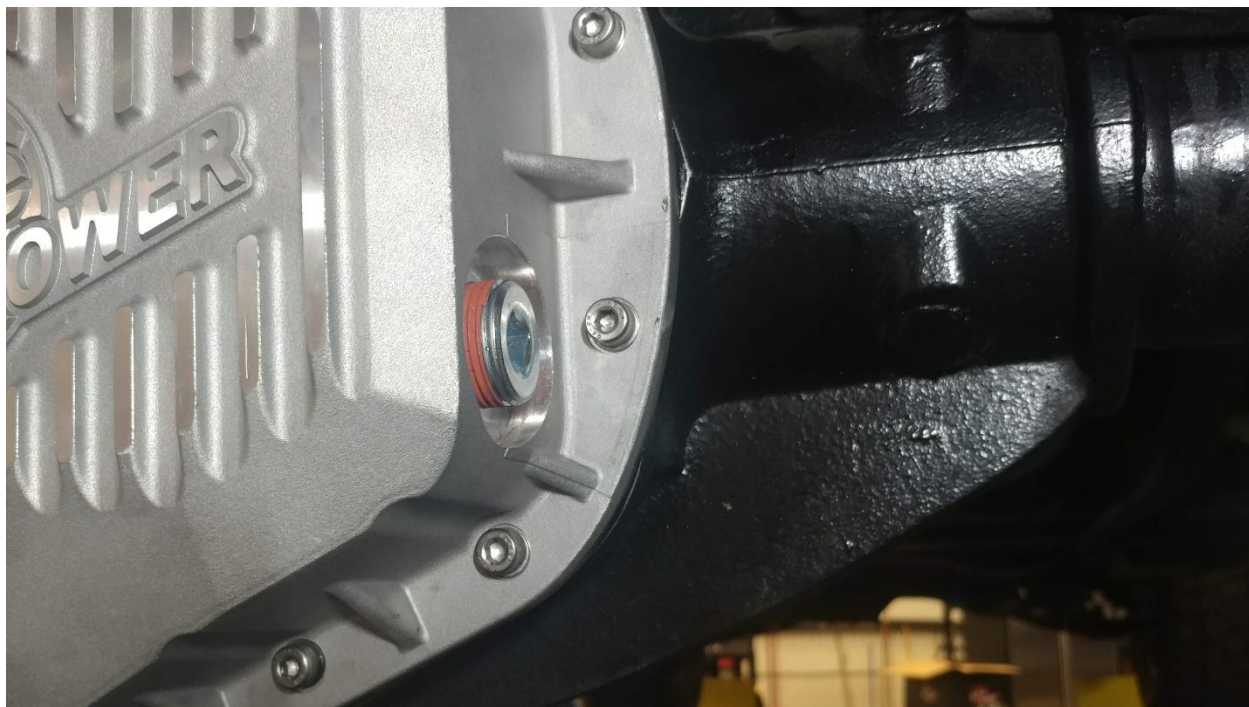
15. Reinstall the remaining brackets using M8x1.25x30 socket head screws and flat washers.

16. Continue installing the remaining M8x1.25x30 socket head screws and flat washers finger tight.

17. Torque the mounting screws to 12-16 ft. -lbs. in a crisscross pattern.



18. Install the supplied M12x1.25 drain plug and crush washer into the bottom of the cover.



When installing kit number 46-71060A only:

19. Install the supplied 1" NPT plug into the side of the cover.

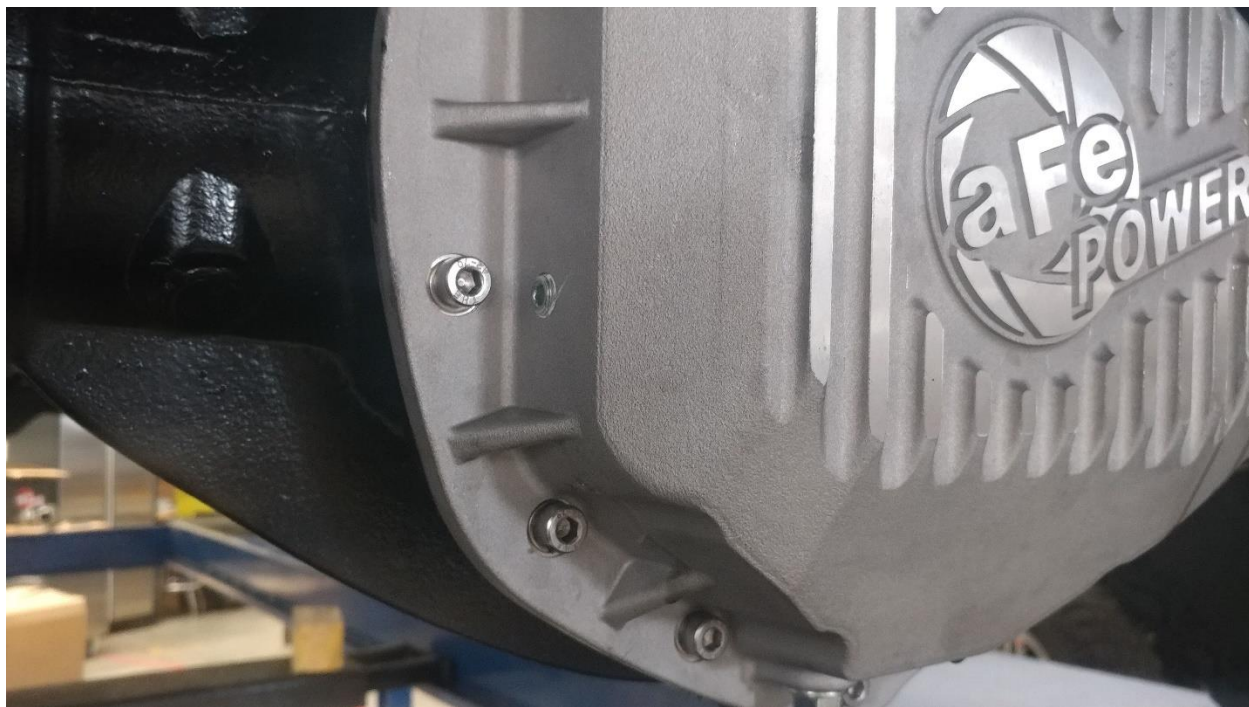


20. Fill the aFe differential cover using new gear oil. Fill until gear oil runs out of the 1/8" NPT port on the side of the cover (about 4 quarts).

Note: If your vehicle is lifted and your axle has been rotated, you will have to verify you have the correct oil level for your vehicle.



21. Apply Teflon pipe sealant to the threads of the supplied 1/8" NPT plug.

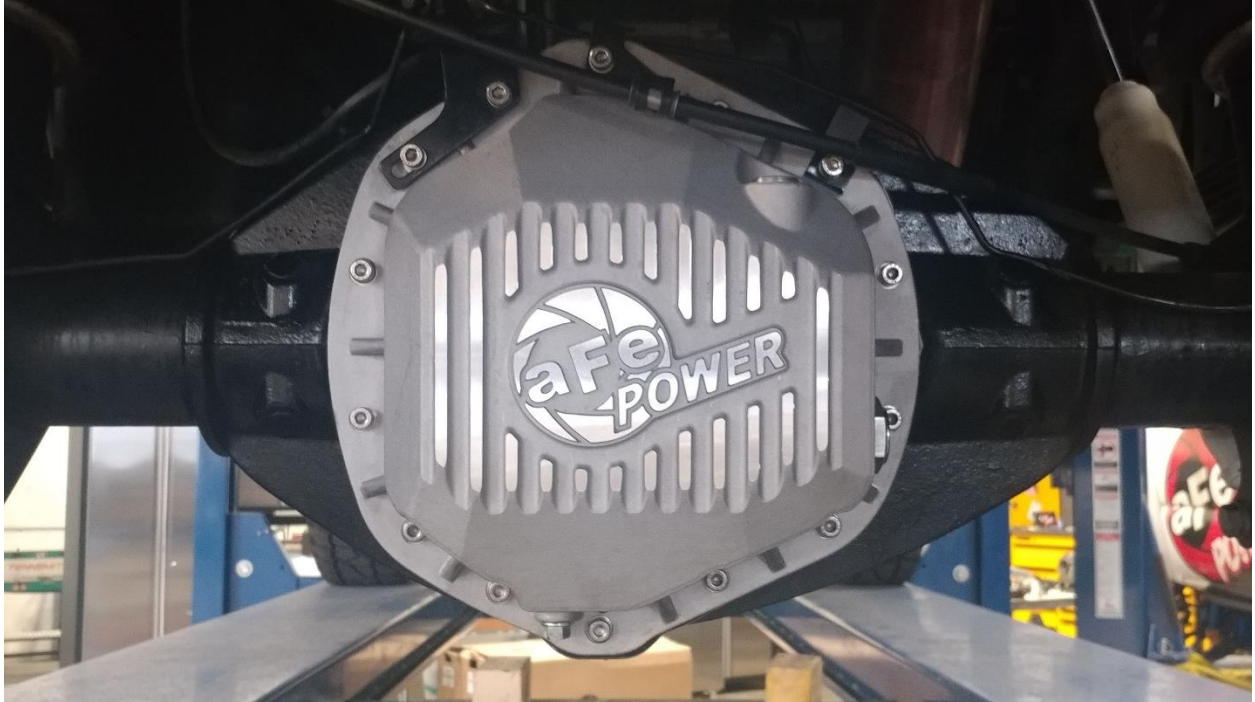


22. Install the 1/8" NPT plug into the side of the cover.



When installing kit number 46-71060B only:

23. Apply Teflon pipe sealant to the threads of the supplied 3/4" NPT magnetic 6" deep reach plug.



If installing kit number 46-71060A:

24a. Install the supplied 3/4" NPT plug into the top of the cover.

If installing kit number 46-71060B:

24b. Install the 3/4" NPT magnetic 6" deep reach plug into the top of the cover.



25. Your installation is complete.

Warranty

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**06-81180
1-11-2019 DR**