



advanced FLOW engineering

Instruction Manual P/N: 46-71180A / 46-71180B

Super 8.8 – 12 Bolt Rear Differential Cover

Make: **Ford**
Make: **Ford**
Make: **Ford**

Model: **F150**
Model: **F150**
Model: **F150**

Year: **15-23**
Year: **18-21**
Year: **15-23**

Engine: **V6 – 2.7L/3.5L**
Engine: **V6 – 3.0L (td)**
Engine: **V8 – 5.0L**



- 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 (46-71180A)	05-61026A
A2	1	Differential Cover – Black, Machined Fins (46-71180B)	05-61027B
B	1	RTV Silicone	05-60096
C	12	Screw, Socket Head M10x1.5x30mm	03-50533
D	12	Washer, Flat	03-50230
E	1	Washer, Crush M12	03-50384
F	1	Plug, 1/8" NPT	03-50029
G	1	Plug, 3/4" NPT (Included in 46-71180A)	03-50391
H	1	Plug, Magnetic 3/4" NPT, 6" Deep Reach (Included in 46-71180B)	03-50223
I	1	Plug, 1" NPT Sight Glass (Included in 46-71180B)	03-50224
J	1	Plug, Magnetic M12x1.25	03-50385

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



I



J



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. If applicable, remove the three (3) brake line clips and move the lines out of the way.
4. If applicable, remove the three (3) bolts the brake line clips were attached to. Keep note which position these were installed and set them aside.
5. Remove all but the top bolt from the differential cover.
6. Loosen, but do not remove, the top bolt. Break the seal on the cover and the gear oil will begin to drain.



7. Allow all of the gear oil to drain from the differential.
8. Remove the one (1) remaining bolt from the top of the differential cover.
9. Carefully insert a gasket scraper between the differential cover and the housing. Pry the differential cover off. **Do not gouge the sealing surface.**
10. Remove the OEM cover from the housing.



11. Use a clean, lint free shop towel to wipe down the remaining gear oil from the housing.
12. Clean off the sealing surface with a gasket scraper. Be careful not to gouge the surface while cleaning.
13. 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.



14. Hold the supplied aFe differential cover up to the gasket surface to make sure you will be able to maneuver it into place easily.
15. 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.



16. Hold the aFe differential cover in position, aligning the screw holes. Install four (4) of the supplied M10x1.5x30 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.

17. If applicable, reinstall the three (3) bolts removed in step 4.
18. Continue installing the remaining M10x1.5x30 socket head screws and flat washers finger tight.
19. Torque the mounting screws to 25-30 ft. -lbs. in a crisscross pattern.
20. If applicable, reinstall the three (3) brake line clips removed in step 3.



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

When installing kit number 46-71180B only:

22. Apply Teflon pipe sealant to the threads and install the supplied 1" NPT Sight Glass plug into the side of the cover.



23. Using the top fill port, 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.



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



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



When installing kit number 46-71180B only:

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



If installing kit number 46-71180A:

27a. Install the supplied 3/4" NPT plug into the top of the cover.

If installing kit number 46-71180B:

27b. Install the 3/4" NPT magnetic 6" deep reach plug into the top of the cover.



28. Your Installation is complete.



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