

advanced FLOW engineering

Instruction Manual P/N: 46-70080 / 46-70081 / 46-70082 / 46-70083

Make: **Ford** Model: **F-250/350** Year: **1999-2016** Engine: **V8-7.3/6.0/6.4/6.7L (td)**
Axle: **12 Bolt-9.75"**



- 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.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A1	1	Diff. Cover - Black, Machined Fins; Street Series(46-70083)	05-60071
A2	1	Diff. Cover - Black Fins(46-70081)	05-60070
A3	1	Diff. Cover - Raw, Machined Fins(46-70080)	05-60070A
A4	1	Diff. Cover - Black, Machined Fins; Pro Series(46-70082)	05-60071
B	1	Plug, 1"-11.5 NPT(46-70080, 46-70083)	03-50390
C	1	O-Ring	05-60111
D	1	Plug, 3/4"-14 NPT(46-70080, 46-70083)	03-50391
E	10	Socket Head Screws	03-50229
F	1	Plug, 1/2"-14 NPT, Magnet	03-50242
G	2	Plug, Hex Head Socket, 1.8" - 27 NPT (Zn Plt)	03-50029
H	10	Flat Washers	03-50230
I	1	Plug, 6" Deep Reach, Magnet (46-70081, 46-70082)	03-50223
J	1	Porthole View Gauge (Pre-installed) (46-70081, 46-70082)	03-50224

Installation will require the following tools:

Oil Drain Pan (12 QT. Capacity Minimum), 9/16" socket wrench and driver, 5/16" allen socket (3/8" drive), extension (3/8" drive), 3/8" drive torque wrench, 1/2" drive ratchet, gasket scraper, smooth flat file, factory recommended gear oil

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

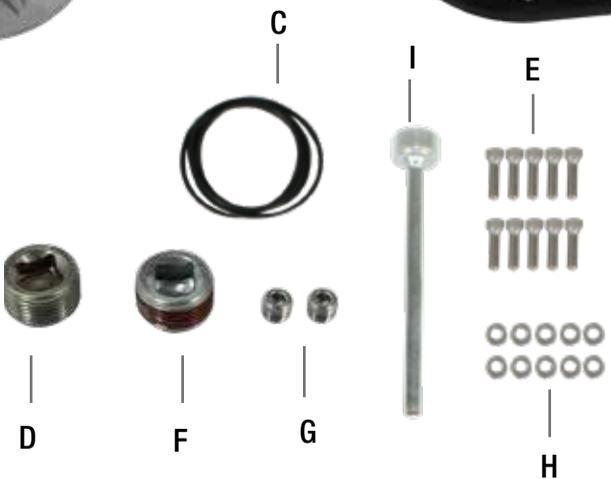




Figure A

Refer to Figure A for steps 1-5

Step 1: Park your truck on level ground and apply the parking brake.

Step 2: Position a drain pan under the differential cover to catch the oil.

Step 3: Remove the bottom 8 bolts. Take loose the top 2 leaving them in place.

Step 4: Using a gasket scraper, start at the bottom and carefully insert between the cover and the differential housing. Pry the cover off. (Do not gouge the differential sealing surface)

Step 5: Allow all the oil to drain.

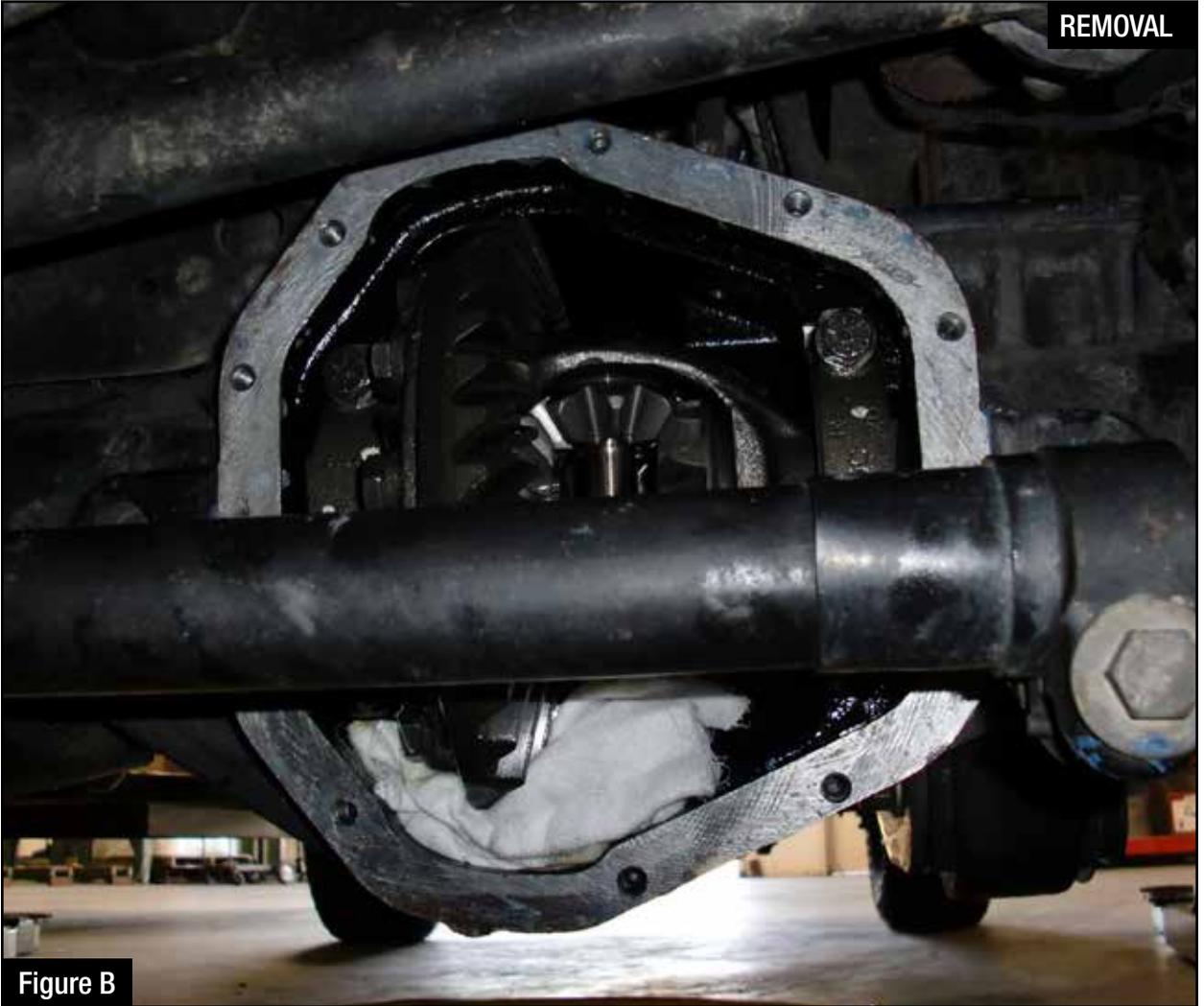


Figure B

Refer to Figure B for step 6-8

Step 6: Using a gasket scraper, carefully remove the old gasket material, making sure the sealing surface is clean.

Step 7: Using a lint-free rag, wipe all remaining oil and old gasket from the differential housing.

Step 8: Install the supplied O-ring onto your aFe differential cover.



Refer to Figure C for steps 9-12

Step 9: Apply teflon tape on the threads of all the plug components before installing.

Step 10: Install the 1/8" NPT plug into the top of the aFe differential cover and tighten.

Step 11: Install the 3/4" NPT magnetic drain plug into the bottom of the aFe differential cover and tighten.

When installing kit number 46-70080 & 46-70083 only:

Step 12: Install the large 1" NPT plug into the large hole on the side of the differential cover (not shown).

Note: Do not overtighten NPT plugs.



Figure G

Refer to Figure G for step 13-15

Step 13: Using new gear oil, apply a thin layer to the o-ring on the differential cover.

Step 14: Position the cover by aligning the bolt holes. Start one of the new allen head bolts at the top bolt hole. Continue around the cover till all bolts are started.

Step 15: Using a 5/16" allen socket, torque all allen head bolts (to 12-16 ft.-lbs.) in a cross tight pattern.



Figure H

Refer to Figure H for step 16-17

Step 16: Fill the aFe differential cover using new oil. Fill till the oil runs out of the 1/8" NPT plug on the side of the differential cover.

Step 17: Install the 1/8" NPT plug in the side of the aFe differential cover.

Note: If your vehicle has been modified or lifted and your axle is rotated, you will need to check if you have the correct level of oil in the differential for your vehicle.

INSTALL



Figure 1

Refer to Figure 1 for step 18-19

If installing kit 46-70080 & 46-70083:

Step 18a: Install the 3/4" NPT plug in the top of the aFe differential cover and tighten.

If installing kit 46-70081 & 46-70082:

Step 18b: Install the 3/4" NPT 6" deep reach magnet into the top of the aFe differential cover and tighten.

Do not over tighten NPT plugs

Step 19: Your install is now complete.

NOTE: Retighten all connections after approximately 100-200 miles.



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