

advanced FLOW engineering

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

Make: **Ford** Model: **F-250/350/Excursion** Year: **1999-2016** Engine: **V8-7.3L/6.0L/6.4L/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)	05-60071A
A4	1	Diff. Cover - Black, Machined Fins; Pro Series (46-70082)	05-60071
B	1	Plug, 1"-11.5 NPT (46-70080)	03-50390
C	1	O-Ring	05-60111
D	1	Plug, 3/4"-14 NPT (46-70080)	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

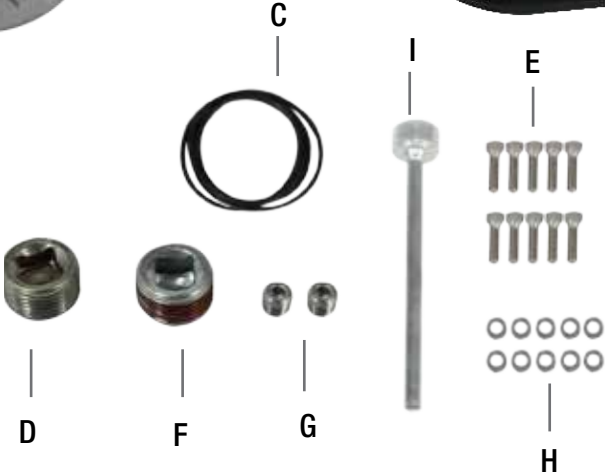
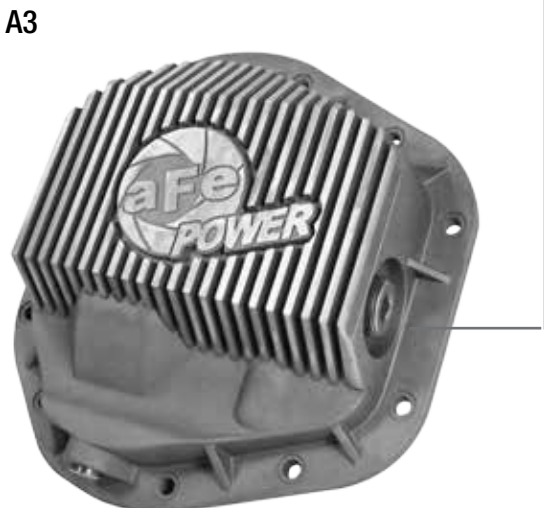




Figure A

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 I

Refer to Figure I 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.



7.3L DFS780 Fuel System



P/N: 42-13011 (Relay)
42-13012 (Boost)

aFe Sight Glass



P/N: 46-00001

aFe Magnetic Fill Plug



P/N: 46-00002

7.3L Intake System



P/N: 50-73002 (P10R)
51-73002 (PDS)

6.0L Intake System



P/N: 50-73003 (P10R)
51-73003 (PDS)

6.4L Intake System



P/N: 50-73004 (P10R)
51-73004 (PDS)
75-73004 (PG7)

6.7L Intake System



P/N: 50-73005-1 (P10R)
51-73005-1 (PDS)

Oil Filter



P/N: 44-LF004 (7.3L)
44-LF003 (6.0L/6.4L)
44-LF024 (6.7L)

7.3L Exhaust System



P/N: 49-43075-B (Blk Tip)
49-43075-P (Pol Tip)

6.0L Exhaust System



P/N: 49-43077-B (Blk Tip)
49-43077-P (Pol Tip)

6.4L Exhaust System



P/N: 49-43054-B (Blk Tip)
49-43054-P (Pol Tip)

6.7L Exhaust System



P/N: 49-43055-B (Blk Tip)
49-43055-P (Pol Tip)

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to aFepower.com.

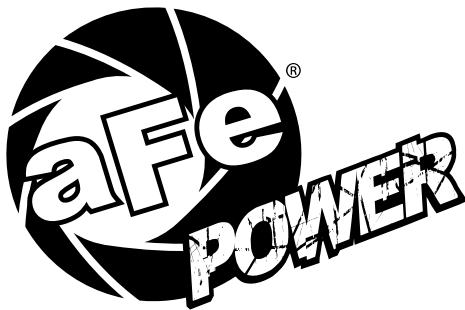
Warranty

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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