

advanced FLOW engineering

Instruction Manual P/N: 46-70021 & 46-70022

Make: **FORD** Model: **F-250/350** Year: **1986-2011** Engine: **V8-6.9/7.3/6.0/6.4/6.7L**



- 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 Fins (46-70021)	05-60058
A2	1	Diff. Cover - Machined Fins (46-70022)	05-60059
B	1	Porthole View Gauge (Sight Glass)	03-50224
C	1	O-Ring	05-60057
D	1	6" Deep Reach Plug	03-50223
E	12	Socket Head Screws	03-50227
F	1	3/4" Square Socket Head Plug	03-50222
G	2	1/8" Hex Head Socket Plugs	03-50029
H	12	Flat Washers	03-50228

Installation will require the following tools:

1/2" Socket, 3/16" Allen Key, 1/4" Allen Socket Key, 1/2" Ratchet, Torque Wrench, Oil Drain Pan, Gasket Scraper



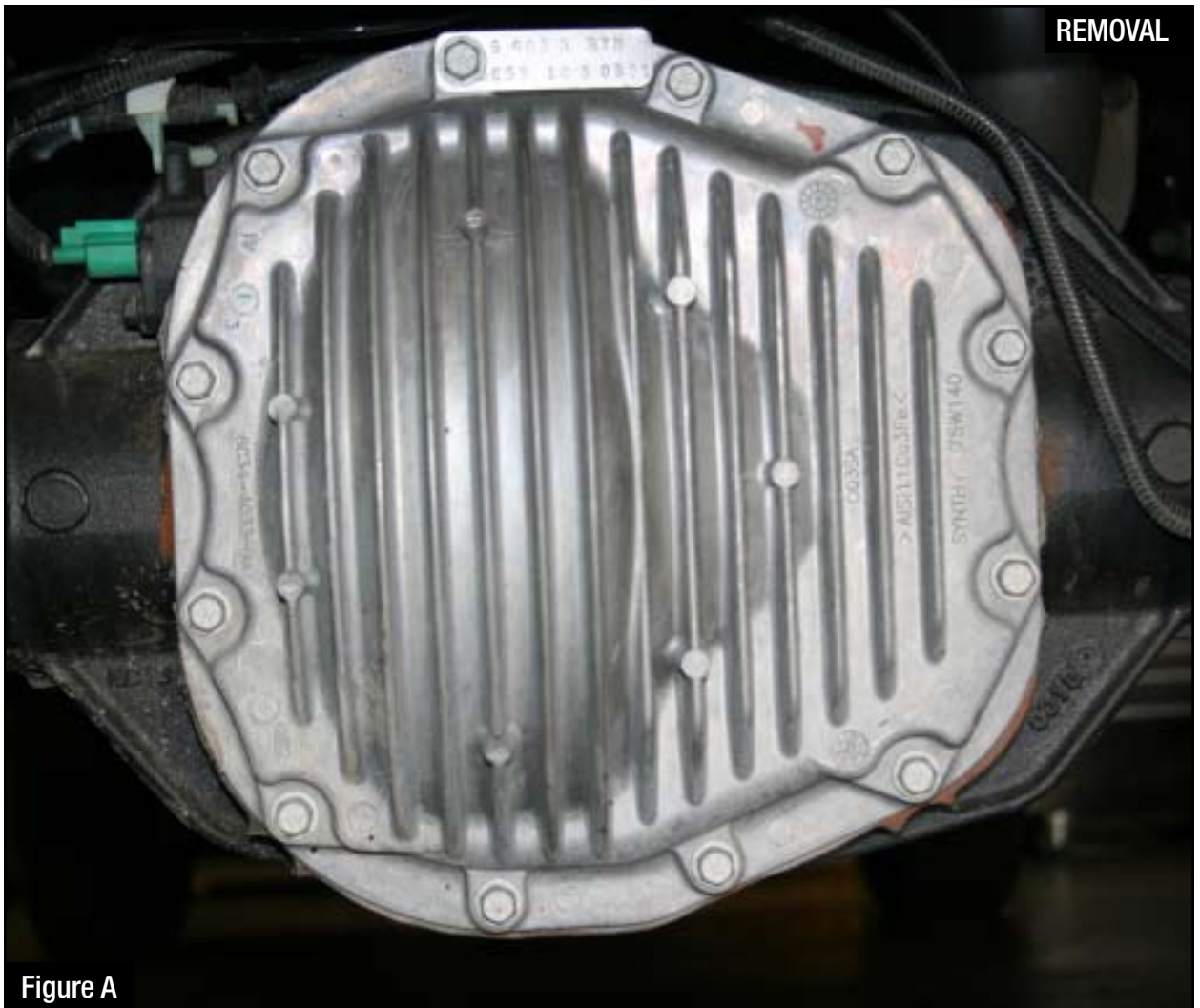


Figure A

Refer to Figure A for steps 1-4

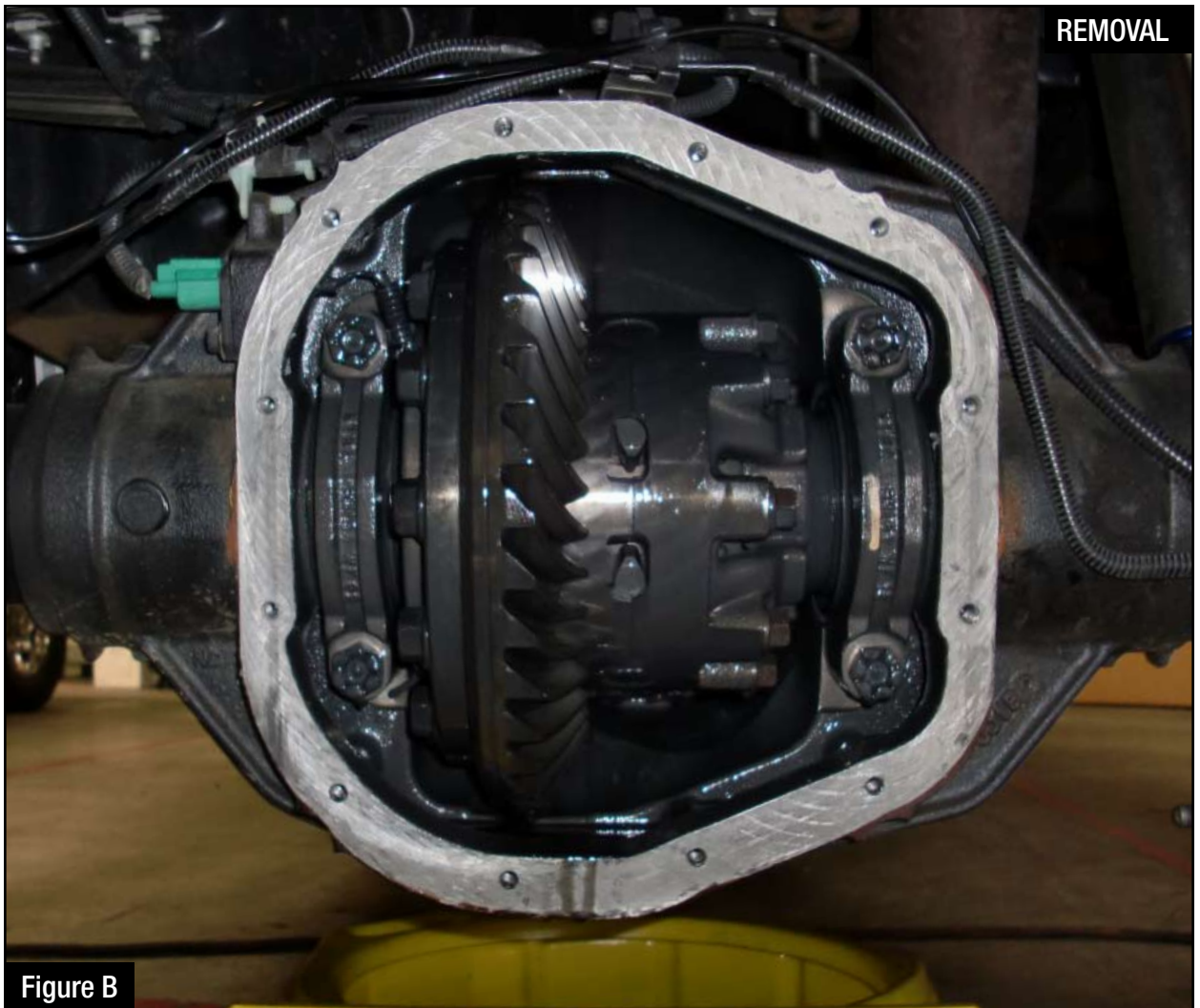
Step 1: Park your truck on level ground and apply the parking brake.

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

Step 3: Using a 1/2" socket, begin by loosening the lower 6 screws on the differential cover.

Step 4: Loosen the upper 6 screws to drain the old gear oil. DO NOT remove screws yet.

NOTE: You may need to pry the pan so the old fluid can start draining. If so, use a gasket scraper starting at the bottom of the cover and carefully (so as not to gouge the housing metal) insert and pry off old cover.



Refer to Figure B for steps 5-7

Step 5: Remove all screws and allow the last of the old gear oil to drain.

Step 6: Use a clean lint free rag and wipe down the remaining oil from the housing and scrape the gasket surface clean. This surface must be clean for the o-ring to seal.

Step 7: Before installing the aFe differential cover check the surface of the differential housing for any irregularities. Should there be any, carefully remove high spots using a smooth flat file.

DO NOT "ROUND OFF" THE FLAT GASKET SURFACE!



Refer to Figure C for steps 8-10

Step 8: Apply teflon pipe sealant tape on the threads of all the plug components before installing.

Step 9: Using a 3/16\"

NOTE: If installing a temperature sensor, do so at this time in the 1/8\"

Step 10: Using a 1/2\"

INSTALL



Figure D

Refer to Figure D for step 11

Step 11: Install your new o-ring onto the aFe differential cover.

**Figure E****Refer to Figure E for steps 12-13**

Step 12: Install the aFe differential cover by aligning the bolt holes and start one of the new allen cap screws and washers in the top bolt hole. Continue around the bolt pattern until all 12 screws and washers are installed and finger tight.

Step 13: Using a 1/4" allen socket key, torque the allen cap screws to 22-25 ft.-lbs. in a cross tight pattern.



Figure F

Refer to Figure F for steps 14-16

Step 14: Refill the aFe differential cover with new gear oil. Your new aFe differential cover takes about 4.5 quarts to fill.

Step 15: If your vehicle has been modified or “lifted” and the axle has been rotated, you will have to establish the correct oil level for your vehicle.

Step 16: Use aFe sight glass to check oil level

INSTALL



Figure G

Refer to Figure G for step 17

Step 17: If oil level is okay, using ½" ratchet install deep reach magnetic plug (torque to 50 ft.-lbs.)
DO NOT OVER TIGHTEN.

INSTALL



Figure H

Refer to Figure H for step 18

Step 18: Your installation is now complete.

NOTE: Drive at least 25 miles and check oil level using aFe sight glass, fill and re-torque all bolts if necessary.



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aFe Power Hat



P/N: 40-10114 S/M
P/N: 40-10115 L/XL

aFe Key Chain



P/N: 40-10103

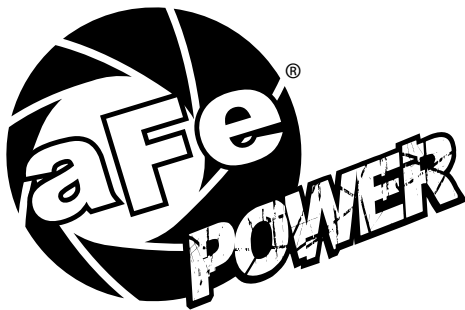
Warranty

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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