

**advanced FLOW engineering**

**Instruction Manual** P/N: 46-70090 / 46-70092

Make: **Dodge** Model: **RAM 2500/3500** Year: **2003-2005** Engine: **L6-5.9L (td)**

Also Fits:

**RAM 2500**

**2003-2011**

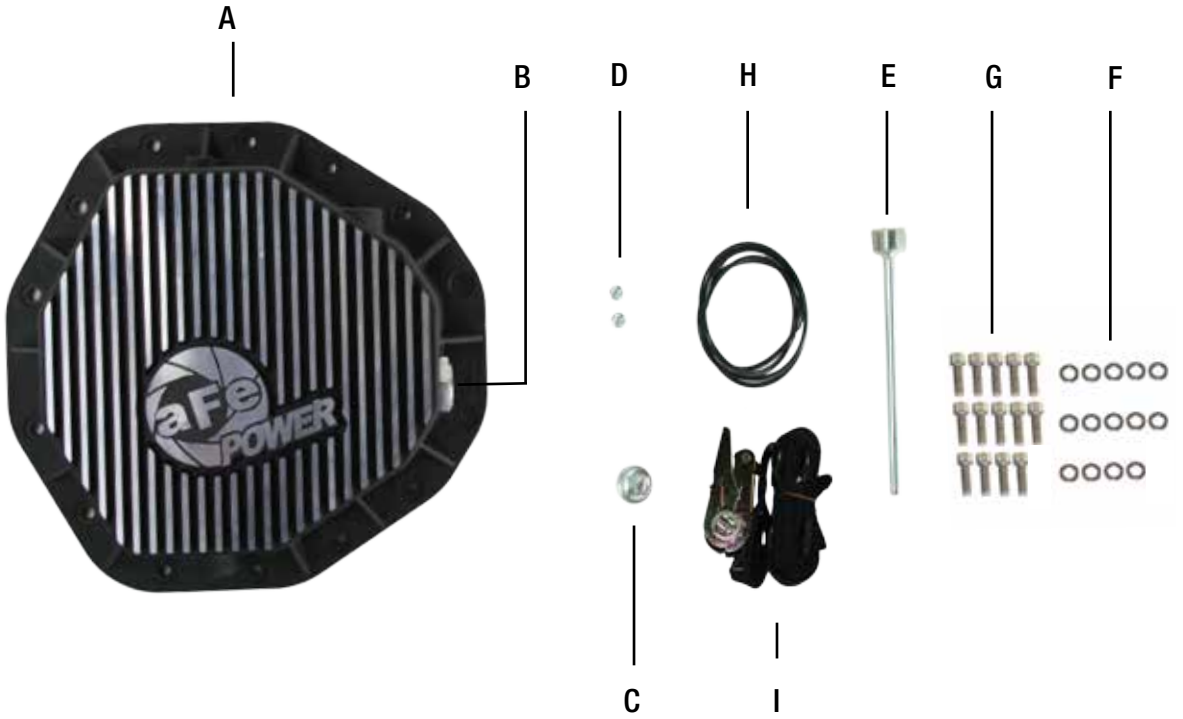
**Automatic Gas Trucks**



- 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
A	1	Diff. Cover Rear- Machined Fins AA-14-10.5	05-60073
B	1	Porthole View Gauge	03-50224
C	1	Plug, 3/4" -14 NPTF	03-50222
D	2	Plug, Hex Hd Socket 1/8 NPT	03-50029
E	1	Plug, 3/4"-14 NPTF, 6" Extended Reach	03-50223
F	14	Washer, Flat 5/16 AN	03-50228
G	14	Screws, Hex Socket, M8x1.25x30	03-50225
H	1	O-Ring 12.475" ID x .139"W	05-60168
I	1	Strap, Ratchet w/ S-Hook 1"x 10"	05-60085

Installation will require the following tools:  
 13mm socket, 6mm Allen bit w/ 3/8" ratchet drive, ratchet, 3/8" drive torque wrench, 1/2" drive torque wrench, 3/16 Allen key & oil drain pan, gasket scraper, a clean lint free rag & teflon pipe sealant tape





**Figure A**

**Refer to Figure A**

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

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



### **Refer to Figure B**

Step 3: Begin by loosening the 7 screws on the bottom of the differential cover using a 13mm socket.

Step 4: Now loosen the 7 screws on the top of the differential cover to start draining the old gear oil.

DO NOT remove screws.

Note: You may need to use a gasket scraper to crack the seal to start draining the gear oil. If so, start at the bottom of the cover and carefully insert and pry off the old cover (Do not scratch surface).



**Figure C****Refer to Figure C**

Step 5: Remove all the screws holding the cover on and allow the last of the 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 the high spots using a smooth flat file.

**DO NOT "ROUND OFF" THE FLAT GASKET SURFACE!**



Figure D

**Refer to Figure D**

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



Figure E

**Refer to Figure E**

Step 9: Using a 3/16" allen wrench, install 1/8" NPT plug into the aFe differential cover oil level port (Torque to 30 in-lbs). Install 1/8" NPT plug or temperature sensor into the sensor port at the top.  
Note: If installing a temperature sensor be sure to use anti-seize on sensor threads.





Figure F

**Refer to Figure F**

Step 10: Using a 1/2" Ratchet, install the drain plug onto the bottom of the aFe differential cover (Torque to 50 ft.-lbs.).



**Figure G**

**Refer to Figure G**

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



Figure H

### **Refer to Figure H**

Step 14: 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.

Step 15: Continue around the bolt pattern until all 14 screws and washers are installed finger tight.

Step 16: Using a 6mm hex bit, torque the allen cap screws to 16 ft-lbs. in a criss cross pattern.



Figure 1

**Refer to Figure 1**

Step 17: Refill the aFe differential cover with new gear oil. (Your new aFe differential cover takes about 4.5 quarts to fill)

**Figure J****Refer to Figure J**

Step 18: Use the aFe sight glass to check the oil level.

Note: 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. If the fluid is overfilled, it can be drained to the proper level through the side oil level port.





Figure K

**Refer to Figure K**

Step 19: Once the oil level is correct, using a 1/2" ratchet, install the deep reach magnetic plug (torque to 50 ft.-lbs.) DO NOT OVERTIGHTEN.



Figure L

**Refer to Figure L**

Step 20: If needed, use the strap provided to secure the spare tire towards rear of the truck to make clearance space between the spare tire and the aFe differential cover.

**Figure M****Refer to Figure M**

Step 21: Your installation is now complete. Verify all connections are secure before driving. Drive at least 25 miles and check the oil level using the aFe sight glass and fill if necessary.

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

**Intake Manifold**



P/N: 46-10071-1

**Turborcharger**



P/N: 46-60050

**Exhaust Manifold**



P/N: 46-40012

**Air Intake**



P/N: 50-72002

**Torque Converter**



P/N: 43-12021

**Intake Manifold**



P/N: 46-11011

**Exhaust System**



P/N: 49-42032-B

**Transmission Pan**



P/N: 46-70052

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to [aFepower.com](http://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](mailto: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.

<b>Product Category</b>	<b>P/N Prefix</b>	<b>Warranty duration</b>
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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