



Equipped with AEM® Dryflow™ Filter  
No Oil Required!

## INSTALLATION INSTRUCTIONS

### PART NUMBER: 21-8119

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2008

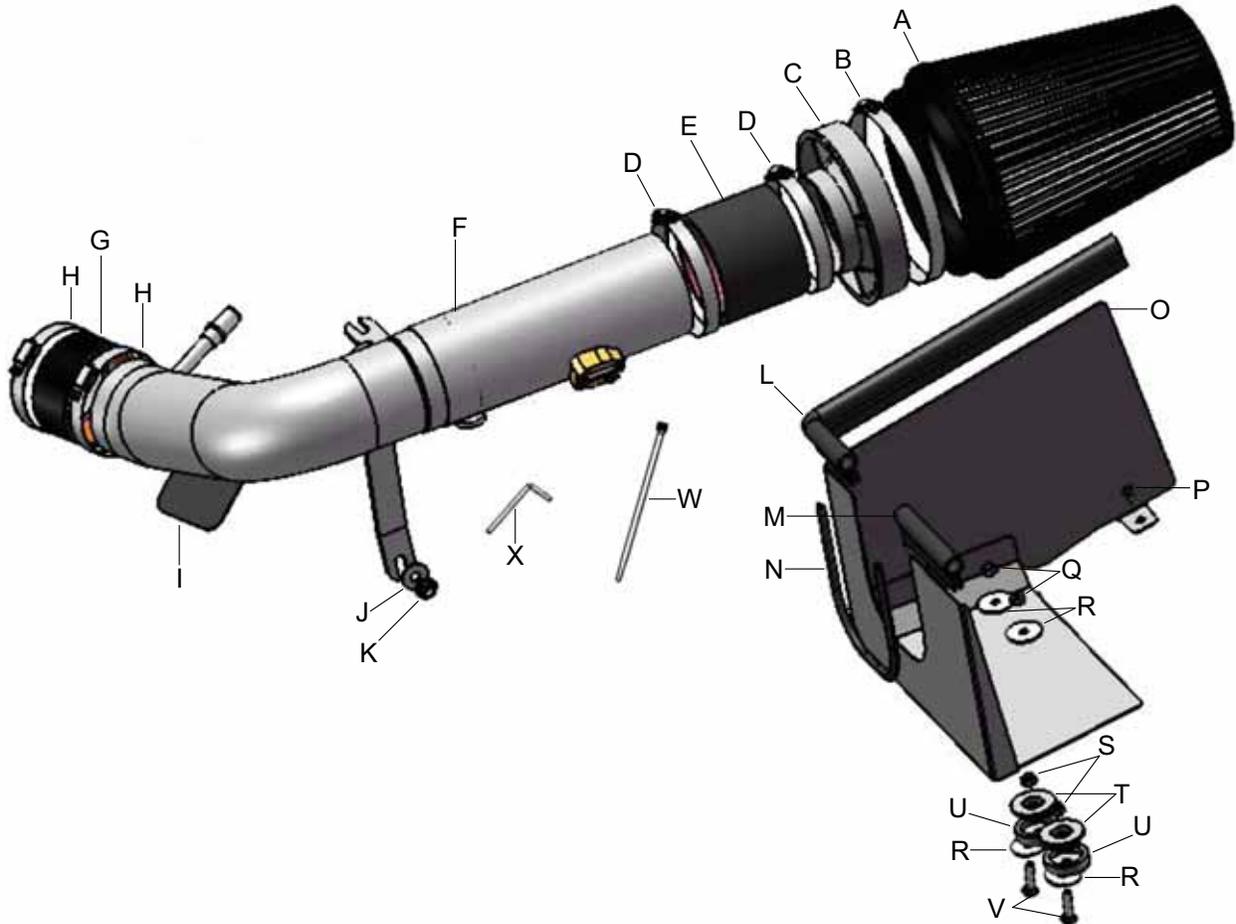
FORD F-150 V8-4.6

C.A.R.B. E.O. # D-670

**\* NOTE: Legal in California only for racing vehicles which may never be used upon a highway**

## PARTS LIST

	Description	Qty.	Part Number
A	Air Filter Assy. 6.00 X 9" Dry Ele.	1	21-2099DK
B	1/2" Bnd. Hose Clamp, 4.125-7.00"	1	94104
C	Adapter, A/F	1	9-P4510832
D	1/2" Bnd. Hose Clamp, 3.15"-4.00"	2	9456
E	Hose, Silicone 3.50x3" Blk.	1	5-350
F	Inlet Pipe	1	2-81191
G	Hose, Silicone 3.25 X 2.0" Blk.	1	5-326
H	1/2" Bnd. Hose Clamp, 2.90"-3.75"	2	9452
I	Neoprene, 1/16" X 4" X 3" Adhes.	1	8-126-3
J	Washer, 8mm Soft Mount	1	559960
K	Nut, M8 Hex Serrated	1	444.460.08
L	Edge Trim, 15"	1	8-4015
M	Edge Trim, 4"	1	8-4004
N	Rubber Edge Trim 15"	1	8-3015
O	Heat Shield	1	20-8119
P	Screw, Sheet Metal #12 X .5"	1	1-2085
Q	Nut, 1/4-20	2	1-2073
R	Washer, 1/4 X 1-1/4 Fender	4	1-3027
S	Nut, 1/4-20 Nylock	2	1-2074
T	Spacer, 04 F150 Heat Shield Up Black	2	2-691
U	Spacer, 04 F150 Heat Shield Lo Black	2	2-692
V	Bolt, Hex 1/4-20 Unc X 1"	2	1-2100
W	Zip Tie, 4" Long	1	1-117
X	Wrench; Torx T20 T/R, L-Key	1	69801



Read and understand these instructions **BEFORE** attempting to install this product. Failure to follow installation instructions and not using the provided hardware may damage the intake tube, throttle body and engine.

## 1. Preparing Vehicle

- a. Make sure vehicle is parked on level surface.
- b. Set parking brake.
- c. If engine has run in the past two hours, let it cool down.
- d. Disconnect negative battery terminal.
- e. Do not discard stock components after removal of the factory system.

## 2. Removal of stock system



a. Factory air box system installed.



b. Unclip the plastic crankcase breather tube from the stock air inlet tube.



c. Loosen hose clamps at the throttle body and the air filter housing.



d. Remove upper inlet pipe.



e. Unclasp the clip holding the air filter element casing together.



f. Gently pry open the housing at the any one of the tabs. Be careful not to damage the MAF sensor.



g. Disconnect the MAF sensor connector from the MAF sensor. Be careful not to damage MAF sensor harness.



h. Remove the mass airflow sensor from the air box using the supplied torx tool (Be sure to keep the sensor in a safe place to be used later).



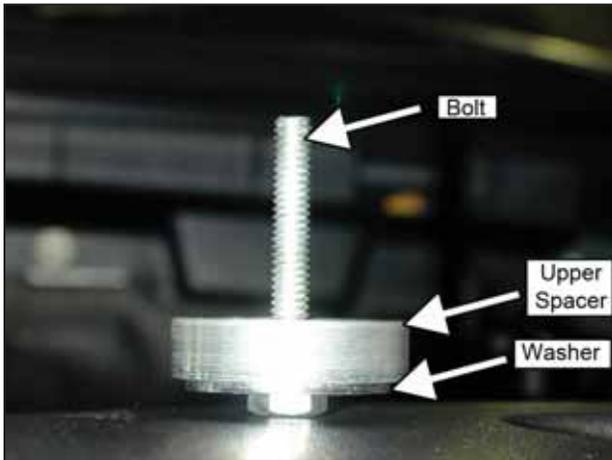
i. Remove filter element and housing. Gently pull up on the housing to remove.



j. Remove rubber grommets left by the filter element housing.

### 3. Installation of AEM® intake system.

a. When installing the intake system, do not completely tighten the hose clamps or mounting hardware until instructed to do so.



b. Assemble the following bolt, washer and lower spacer.



c. On the left is a fully assembled anchor for the heat shield. On the right, insert the upper spacer into the stock housing mounting surface.



d. Insert the assembly from Step 3c. into the upper spacer from underneath. Secure with provided nut.



e. Place the heatshield into the engine bay aligning the two holes located on the bottom face of the heat shield with the two bolts installed in step 3d. With a marker, mark the location of the third hole.



f. Remove the heatshield and drill a 1/8" pilot hole where you marked the engine bay in step 2e.



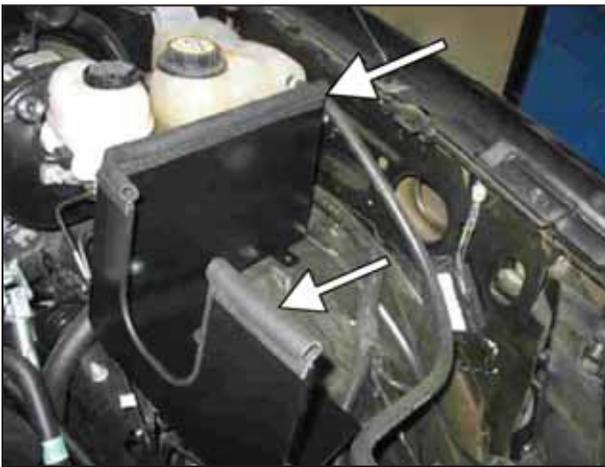
g. Place the heatshield in the engine bay and screw in the supplied self tapping screw.



h. Secure the rest of the heatshield with the two supplied lock nuts and washers.



i. Install the rubber edge trim on the pipe opening on the heatshield.



j. Install the rubber gasket on the top edges of the heat shield.



k. Mark a line 1" from the end of the inlet tube and 2" from the nipple, on the outside of the bend.



l. Apply rubber patch from the line marked in 3k. on the outside of the bend. Make sure to place the patch on the underside of the tube.



m. Install the mass airflow sensor into the straight section of the inlet pipe. Use the two factory torx bolts to secure the sensor.



n. Attach the 5-326 hose to the throttle body and loosely secure with hose clamp #52. Place another #52 hose clamp on the other side of the hose loosely.



o. Remove the front bolt from steering pump fluid reservoir bracket.



p. Insert the inlet pipe (patch end) into the 5-326 hose and loosely secure with #52 hose clamp.



q. Align the bottom bracket over the stud protruding from the left hand cylinder head.



r. Align the top bracket over the threaded hole in the steering pump fluid reservoir bracket.



s. Loosely secure the bottom bracket with the 559960 washer and 444.460.08 nut.



t. Loosely secure the top bracket with the bolt removed in 3o.



u. Insert the adapter into the filter and secure with hose clamp (part # 94104).



v. Attach the 5-350 hose to the air horn and secure with #56 hose clamp. Place another #56 hose clamp on the other side of the hose.



w. From inside the heat shield, slide the filter assembly over the inlet pipe and loosely secure with #56 hose clamp.



x. Connect the breather hose to the to the inlet pipe.



y. Reconnect the mass airflow sensor harness to the mass airflow sensor and lock it.



z. Secure mass airflow sensor harness to top bracket with zip tie 1-117.



Factory air box system installed



AEM® intake system installed

#### 4. Reassemble Vehicle

- Position the inlet pipes for the best fitment. Be sure that the pipes or any other components do not contact any part of the vehicle. Tighten the rubber mount, all bolts, and hose clamps.
- Check for proper hood clearance. Re-adjust pipes if necessary and re-tighten them.
- Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tightened.
- Reconnect negative battery terminals and start engine. Let the vehicle idle for 3 minutes. Perform a final inspection before driving the vehicle.

#### 5. CARB Sticker Placement

- The C.A.R.B. exemption sticker, (attached), must be visible under the hood so that an emissions inspector can see it when the vehicle is required to be tested for emissions. California requires testing every two years, other states may vary.

#### 6. Service and Maintenance

- It is recommended that you service your AEM® Dryflow™ filter every 20,000 miles for optimum performance. Use AEM Dryflow cleaning kit part # 21-110.
- Use aluminum polish to clean your polished AEM® intake tube.
- Use window cleaner to clean your powder coated AEM® intake tube. **(NOTE: DO NOT USE aluminum polish on powder coated AEM intake tubes).**

For technical inquiries  
e-mail us at  
sales@aemintakes.com  
or  
call us at  
800.992.3000

### **AEM Air Intake System Warranty Policy**

AEM® warrants that its intake systems will last for the life of your vehicle. AEM will not honor this warranty due to mechanical damage (i.e. improper installation or fitment), damage from misuse, accidents or flying debris. AEM will not warrant its powder coating if the finish has been cleaned with a hydrocarbon-based solvent. The powder coating should only be cleaned with a mild soap and water solution. Proof of purchase of both the vehicle and AEM intake system is required for redemption of a warranty claim.

This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is nontransferable. Improper use or installation, use for racing, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Credit for defective products will be issued pending inspection. Product must be received by AEM within 30 days of the date RMA is issued.

If you have a warranty issue, please call (800) 992-3000 and our customer service department will assist you. A proof of purchase is required for all AEM warranty claims.