COLD AIR SYSTEM

Installation Instructions for:
Part Number 21-450
2000-2003 Ford Focus 2.0L Zetec

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Instruction Part Number: 10-277
2000-2001 Ford Focus 2.0L Zetec C.A.R.B. E.O. #D-392-16
2002-2003 Ford Focus 2.0L Zetec C.A.R.B. E.O. #D-392-21

Congratulations! You have just purchased the finest Air Induction & Filtration system for your car at any price!

The ***AEM*** Cold Air System is the result of extensive development on a wide variety of cars. Each system is engineered for the particular application. The ***AEM*** Cold Air System differs from all others in several ways. We take the inlet air from outside of the engine compartment where the inlet air is considerably cooler than the hot underhood air. The cooler inlet air temperature translates to more power during the combustion process because cool air is denser than warm air. ***AEM*** has conducted extensive inlet air temperature studies and we have seen temperature reductions of up to 50 degrees by pulling air from outside of the engine compartment. The *air mass* flow to the engine is increased because of the increased airflow *and* reduced inlet temperature, which translates to more power. The ***AEM*** Cold Air Systems are **50 states Street Legal** (some models and years still pending) and come with complete instructions for ease of installation.

Our system is constructed of lightweight aluminum and then painted with a zirconia based powder coat for superior heat insulating characteristics. The aluminum will not crack in extended use like plastic and it is actually lighter than plastic. The tube diameter and length are matched for each engine to give power over a broad rpm range. Unlike the plastic systems that use a continually diverging cross section, we take advantage of the acoustical energy in the duct to promote cylinder filling during the intake valve-opening event.

Our Dyno testing as well as **independent dyno tests** (see 7/97 Sport Compact Car Magazine) prove that the ***AEM*** Cold Air System produces as much as twice the power gain than any other system on the market.

Bill of Materials for:

Part Number 21-450 2000-2003 Ford Focus

Quantity	Part Number	Description
1	2-451	Upper Inlet Pipe
1	2-452	Lower Inlet Pipe
1	1228599	Rubber Mount
1	1228598	5/8" Tall Rubber Mount
3	444.460.04	6mm Nyloc Nut
3	559999	6mmX25mmX1mm Washer
1	21-201	2.5" ***AEM*** Air Filter & Clamp
1	103-BLO-4420	2.75" Hose Clamp
1	103-BLO-5620	3.5" Hose Clamp
2	103-BLO-4020	2.5" Hose Clamp
1	5-250	2.5" Connector Hose
30”	65004	5/8" Hose
2	99024.032	1" Hose Clamp
1	1-124	L-Key, T20 Tamper Resistant Torx™
1	10-277	Instructions
1	5-301	Hose, Adapter 3.15/2.5 90 Deg.
2	10-922S	***AEM*** Silver Decal

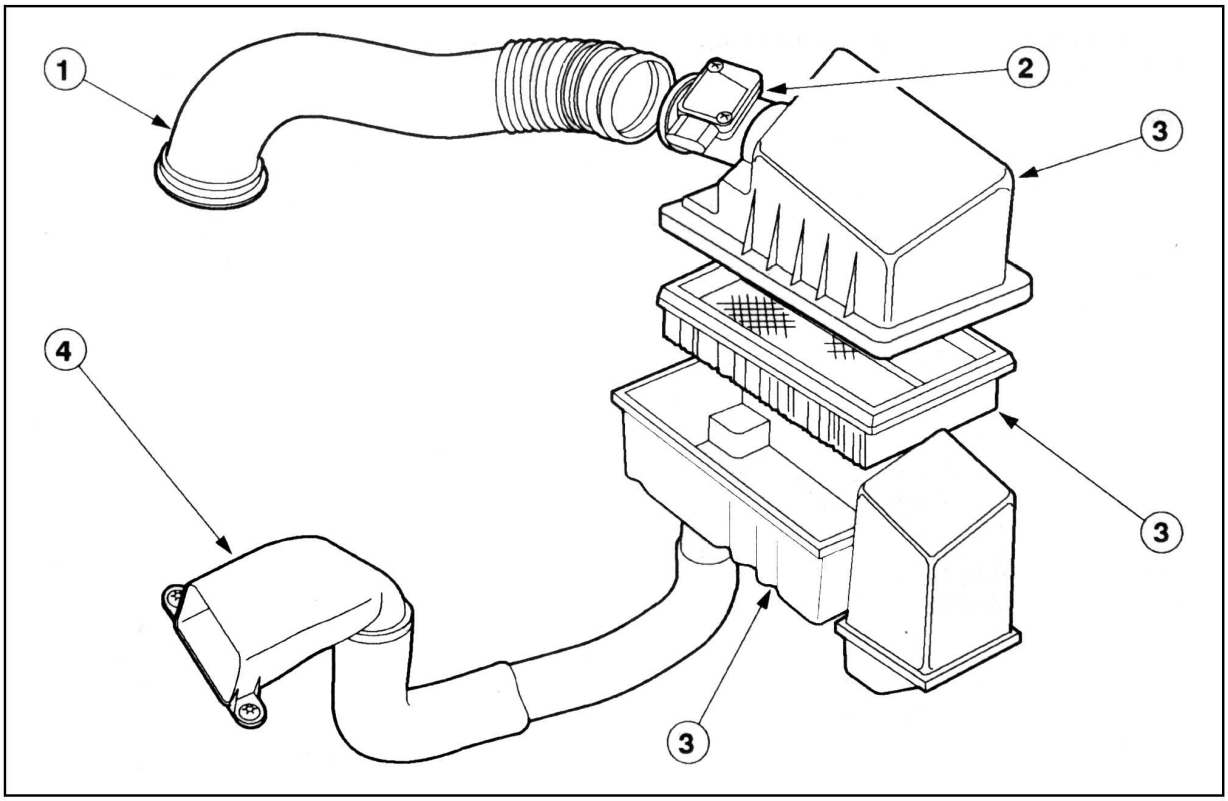
Read and understand these instructions BEFORE attempting to install this product.

1) Getting started

a) Make sure vehicle is parked on a level surface.
b) Set parking brake.
c) **Remove the battery cover and disconnect negative battery terminal**.
d) If engine has run within the past two hours let it cool down.

2) Removing the stock air intake system

a) Loosen the hose clamps attaching the primary stock intake pipe to the throttle body and the primary stock intake pipe to the mass air flow sensor.
   i) Remove the primary stock intake pipe.
b) Disconnect the wiring harness from the mass air flow sensor.
c) Remove the sensor from the stock intake piping using the supplied Torx™ tool and set aside as it will be used in the installation of the AEM intake. Be careful not to damage the mass air flow sensor.
d) Remove the breather hose from the valve cover to the air cleaner housing.
e) Remove the air cleaner housing from the vehicle. This is done by pulling straight up on the housing. There are no bolts holding the housing in.
f) Disconnect the positive battery cable.
g) Unfasten the battery by removing the battery strap.
h) Carefully lift the battery out of the car and place in a safe place.
i) Remove the battery tray.
   i) Be sure to disconnect any harnesses that may be attached to the tray.
j) Remove the two plastic hold downs from the secondary intake tube.
k) Remove the secondary intake tube from the engine mount by lifting straight up.
l) Remove the secondary intake tube through the front of the vehicle.



1) Primary stock intake piping	3) Air cleaner housing assembly
2) Mass air flow sensor	4) Secondary stock intake piping

3) Installing the cold air system

On the last page of the instructions are pictures of the ***AEM*** Cold Air Intake installed on the Ford Focus to help you with the installation process.

a) When installing the Cold Air Intake System, DO NOT completely tighten the hose clamps or mounting tab hardware until instructed to do so later in these instructions.

b) Install the mass air flow sensor on the AEM intake piping using the original bolts.

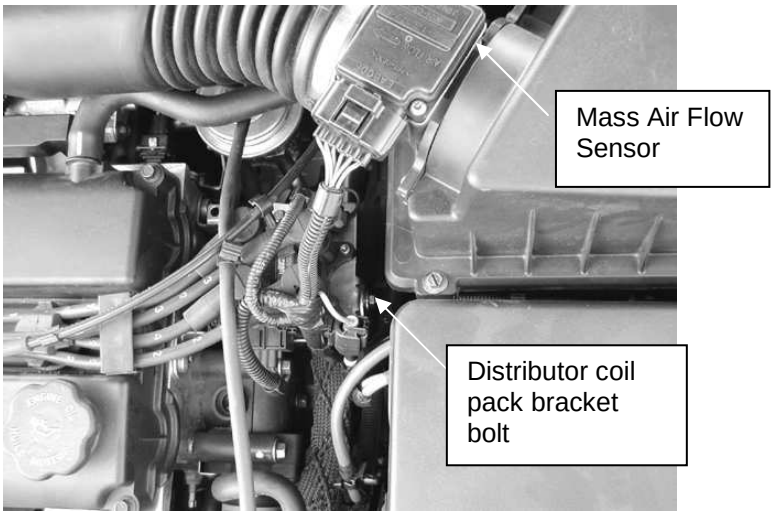
c) Install the large end of the 90° reducer hose onto the throttle body.

  i) Install the supplied 3.5" and 2.75" hose Clamps over the respective sections of the 90° reducer hose.

d) Remove the 10mm bolt from the distributor coil pack bracket and install a rubber soft mount.

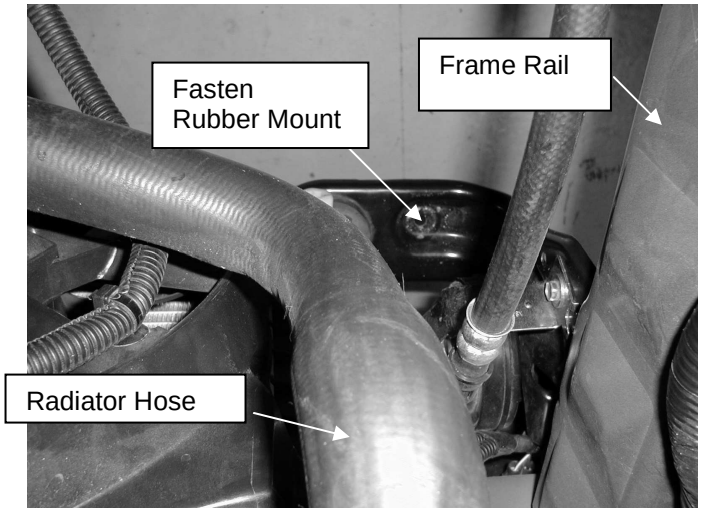
  i) If your vehicle has an **automatic transmission**, then use one of the 1" long rubber mounts.

  ii) If your vehicle has a **manual transmission**, then **use the 5/8" long rubber mount**.

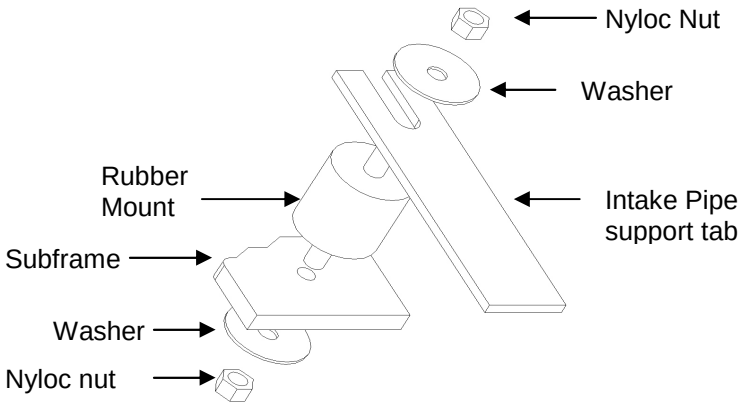


Location of distributor coil pack bracket bolt.

e) Mount a 1" long rubber mount (manual or auto trans) onto the <u>upper portion</u> of the lower subframe using the supplied Nyloc nut and washer. See the picture below for locations and orientation.



Location of mounting point on the lower subframe (viewed from above with battery removed).



Orientation of the rubber mount assembly.

f) Mock up the upper ***AEM*** Inlet Pipe to determine the final position of the 90° Reducer Hose. The end of the inlet pipe that is closest to the mass air flow sensor goes towards the throttle body.
g) Loosely fasten the upper ***AEM*** Intake pipe support tab to the soft mount on the coil pack bracket using the supplied washer and nyloc nut.
h) Install the supplied rubber connecting hose onto the end of the upper AEM Inlet Pipe, and then loosely fasten two hose clamps on it.
i) Jack the front of the vehicle and support using properly rated jack stands.
j) Install the lower ***AEM*** Inlet Pipe. The pipe should be installed from underneath the vehicle. Insert the pipe from underneath the front bumper area, just in front of the front wheel. Note: On automatic transmission cars, the pipe is designed to go above the two transmission cooler lines, and below the power steering cooler line.
k) Insert the end of the lower pipe into the rubber connector hose that was installed on the end of the upper pipe. Loosely tighten the hose clamps.
l) Loosely fasten the lower ***AEM*** Intake Pipe support tab to the subframe using the supplied washer and nyloc nut.
m) Install the supplied 5/8" breather hose from the breather nipple on the valve cover to the AEM inlet pipe. Install the two 1" hose clamps on the breather hose. Route the hose in such a fashion that it does not rub any sharp objects or that it doesn't get pinched between any two objects.
n) Install the ***AEM*** filter on to the end of the inlet tube. Push the filter on around 2 inches over the inlet pipe and install one hose clamp to secure the filter on to the inlet pipe. Once fitment is checked, you can either push the filter on to the inlet pipe more or less depending on clearances. Tighten the hose clamp after this is done.
o) Plug in the mass air flow sensor wiring harness to the mass air flow sensor on the AEM Intake Pipe.
p) Check the placement of the air inlet tube for proper alignment. Make sure that the tube does not contact any component along its route nor should it interfere with the function of any other accessory. Make sure that the inlet pipe does not rub the transmission mount.
q) Tighten all hose clamps and fasteners.

4) Re-assemble the vehicle

a) Reinstall the battery tray, battery, and battery cover.
   i) **Note: When the battery has been disconnected and reconnected, some abnormal drive symptoms may occur while the vehicle relearns its adaptive strategy. The vehicle may need to be driven 10 miles or more to relearn the strategy.**
b) Inspect the engine bay for any loose tools and check that all fasteners that were moved or removed are properly tight.
c) Perform a final inspection before driving the vehicle.

For technical inquiries please E-Mail us at: tech@aempower.com