



Air Intake System
2005 to 2009 Mustang GT
Installation Instructions (10699-05-PI)
C.A.R.B. EO# D-640

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Note: This kit includes the **C&L Calibration Insert**. We have already installed it inside the mass air flow housing. **There is NO-TUNING required when running the Calibration insert.** When properly installed, the rear of the insert will be flush with the rear of the mass air flow (MAF) housing (the rear of the MAF is the smaller end) and the sensor opening in insert should line up with the sensor opening in the MAF housing. (If you choose to run a tune, simply remove the calibration insert from the MAF housing and load a tune specific to the "street" kit. Due to the nature of the 2005 processor, a computer re-tune is necessary when installing this kit without the No-Tune option.) **This kit is 50 State Legal on all vehicles with a production date of 5/2005 and newer.**

The optional **C&L 7140/7145** Predator tuners come with dyno developed tunes programmed for our system. It is accessible from the main "Performance" menu, and your computer is automatically loaded with the appropriate adjustments when selected. There are tunes available for 93 octane and 91 octane fuels. The standard tune that is loaded from this file assumes that you are using premium-unleaded fuel to deliver maximum performance. If you choose to run standard (87) octane gasoline, then all you have to do is modify the tune to remove 4 to 5 degrees of timing from the 93 octane tune (refer to the Predator manual) before loading the tune into your processor. The changes will be written to your processor, and you will then have the appropriate level of timing for the lower grade fuel. An 89-octane tune would be 3 to 4 degrees removed from the 93-octane tune. **If your C&L kit came with a Predator Tuner and the C&L logo does not come up when you install the tuner, you must obtain your CAL ID and acquire a custom tune from the business you purchased the kit from or you may purchase a tune from C&L.**

If you are not using a Predator to adjust the computer for this system, it is strongly recommended that you have your vehicle dyno tuned in person by a knowledgeable tuner using a wide-band air/fuel ratio monitor. A "mail order" program is not recommended. If you do not re-flash the computer, the vehicle will still appear to run fine, but your wide open throttle air/fuel ratio will be leaner than what is ideal for maximum performance. This will negate most of the gains that you would receive from the airflow improvement into the engine. **If you install this system prior to having the computer re-tuned, do not run the vehicle under a heavy load or at wide-open throttle until the computer adjustments have been made.**

Tools needed for installation: a flat blade screwdriver, socket wrench with extension, 8mm socket, 10mm socket and a socket driver for the supplied T-20 torx bit.

****Important note: all Mustangs built after December 2005 use self-tapping screws to hold the MAF sensor in place. DO NOT USE THE FACTORY MAF SENSOR SCREWS IN OUR MAF HOUSING. In your bracket and bolt package supplied with this kit, we have provided new MAF sensor screws to replace the factory self-tapping screws. If you use the factory screws, you will risk damaging your new housing.**

Installation of this system is relatively simple, and should be accomplished within a short period of time. Installation time will be reduced if you choose to not use the optional supplied mounting bracket for the mass airflow housing. Since this bracket is a rigid mount to the engine, you must make all of your fit adjustments prior to tightening the bolts on the bracket to the air meter and valve cover. This is because there is a certain amount of room for adjustment built into the silicone hose couplers, particularly the one that connects the inlet pipe to the throttle body. A small change in how the hose clamps on to the pipe can effect filter location and filter shroud fit. When installed properly, the end of the air filter should be just in front of where the filter shroud comes down from the stock filter mounting location, and the front edge of the shroud should be level with the plastic cover/lid that goes over the radiator assembly.

1. To remove the stock assembly, loosen the clamp that secures the stock inlet hose to the throttle body. Next, you will notice a nylon vacuum hose that runs from the valve cover to the left hand side of the stock inlet pipe. Reach under the fitting that attaches this hose to the inlet pipe, and you will find that there is a little green tab that is pointing straight down. Pull this tab towards the rear of the vehicle and then pull the connector towards the passenger side of the vehicle. The green tab will now clear the catch that is located on the stock vacuum nipple fitting on the inlet pipe. Next, you will disconnect the MAF sensor located on the top of the air filter housing which has a wiring connector plugged into it from

the rear. To disconnect, slide the red tab on the connector towards the rear of the vehicle. This will unlock the connector; slide the connector off the MAF sensor by squeezing the tab and pulling it towards the rear of the vehicle. Go to the end of the air filter assembly, and you will see a 10mm bolt located between the driver's side fender and the air box. Loosen and remove this bolt and set it aside for future use. At this point, the entire air inlet assembly can be completely removed from the vehicle. After removing the rubber inlet hose from the throttle body, lift straight up on the air box assembly releasing the rubber feet that isolate it from the body and the entire assembly will come out. If you are going to use the MAF mounting bracket, remove the valve cover bolt at the front of the driver's side valve cover using an 8mm socket. Once loose, you must pull up on the bolt to unsnap the rubber sleeve that is pressed through the hole in the valve cover, and it will lift right out.

2. Using the supplied T-20 torx bit, remove the two screws that secure the factory air meter-sensing element to the air box assembly. Carefully lift the sensor straight out of the housing, and the entire sensor cartridge will come out. Using the supplied screws, carefully lower the sensor into the new larger aluminum MAF housing provided in this kit. The sensor will only bolt up in one direction, with the "flow" arrow pointing towards the smaller end of the unit, away from the (larger) filter end. **Under the stock sensor, there is a rectangular shaped rubber seal that should come out with the sensor cartridge. Make sure that it transfers to the new housing and forms a positive seal.** Slide the smaller end of the new MAF housing into the silicone hose coupler that is already installed on the round end of the inlet pipe. You should feel the end of the MAF housing make contact with the inlet pipe. At this point, the silicone hose should completely cover the small end of the MAF body. Rotate the MAF housing so that the sensor will be pointing towards the rear of the vehicle once the assembly has been installed on to the throttle body. If you are using the mounting bracket, fasten it to the bottom of the MAF housing using the supplied small bolts and washers, but do not tighten the bolts yet.

3. Slide the silicone hose on the oval end of the inlet pipe completely over the inlet of the throttle body and tighten the hose clamp. If you are using the mounting bracket, rotate the MAF housing so that it lines up with the front valve cover bolt hole, but do not fasten the bracket down yet. Next, install the filter shroud by inserting it into the engine bay with the front corner of the shield going in first while holding the right hand side up. It may be necessary to pull the rearmost ABS lines towards the front of the vehicle so that they clear the bottom of the filter shroud. (They should move easily, and not require any real effort.) The opening in the shield will go over the front of the MAF housing as it is lowered in place. You can now insert the factory air box bolt through the hole in the new filter shroud but do not tighten it all the way down. If the air meter housing is properly located through the opening in the filter shroud, the front edge of the filter shroud should be level with the plastic cover that goes over the radiator. Slide the supplied filter over the neck of the new MAF body. You will need to orient the clamp so that you can tighten it with a screwdriver or socket wrench. The clamp may have to be pushed through the underside of the opening in the filter shroud in order to go all the way up the neck of the filter for proper fit. With the filter installed, the end of the filter should be just barely in front of where the plastic filter shroud comes down from the factory mounting point. If it is touching the shroud, then you should loosen the front clamp at the throttle body (the one fastening the hose to the inlet pipe) and this will allow you to make adjustments to the fit of the meter through the opening in the shroud and the location of the end of the filter.

4. Tighten the bolt that secures the filter shroud and use one of the supplied zip ties to secure the front of the filter shroud to the closest ABS line using the hole that is already drilled into the filter shroud. Re-connect the MAF wiring connector on to the sensor and slide the red tab forward to lock it into place. Pull on the underside of the green tab on the valve cover vent hose, and slide the fitting over the pipe that is pressed into the inlet pipe at the throttle body end and release once a positive seal is made. Secure the hose clamps on the inlet pipe and check to make sure that everything is fastened and sealed. At this point, you can adjust the mounting bracket as necessary in order to secure it to the MAF housing and the valve cover. It may also be necessary to rotate the mass airflow housing for proper bracket fit. The bracket has elongated holes on it, which will allow for you to make small adjustments (towards the front and back of the vehicle) prior to tightening the bolts. Use the supplied bolt and washer to attach the bracket to the valve cover. **Do not over tighten the bolt, as you could crack the front tab on the valve cover where the bolt runs through it.** After a thorough check of all the fittings, hoses and connections, installation should now be complete!

Attn: Included with your C&L kit is a label with an ARB E.O. number. Make sure your ARB E.O. label is placed in plain view inside the engine compartment. The ARB E.O. label is required for passing the California Smog Check inspection.