

## **Mustang GT500 Air Induction System**

P/N 10699-07S. 10699-07ST, 10699-10S, 10699-10ST, 10699-13S ©Copyright 2007

## CLI22

Note: Due to the extreme flow capacity of our upgrade intake assembly, a computer re-tune is necessary. If you did not receive our CL7140 programmer with this intake assembly, then you MUST have a custom tune programmed by a reputable tuner that was developed SPECIFICALLY for this intake assembly. This system increases airflow by 36% and the usable horsepower range by 35%. The installation of this (or any other aftermarket) air intake system without proper tuning will result in poor performance and an air/fuel ratio that is not correct. If you are having a custom tune performed by someone who is not familiar with the tuning requirements of this system, please have them contact us directly, and we will provide them with the necessary information.

The **C&L 7140** Predator tuner that we supply comes with 2 different flow bench and dyno developed tunes for our GT500 system. The tunes are accessible from the main menu (under "Performance Tunes"), and your computer will automatically be loaded with the appropriate adjustments when selected. As with all supercharged applications, these tunes require the use of premium unleaded fuel. One tune is for just the air intake assembly (the "Stage 1" package), and the other tune provides support for a smaller diameter blower pulley (the "Stage 2" system). Choose the tune that matches your installation and follow the separate tuning directions that we provided with your programmer. **If your C&L kit came with a Predator Tuner and the C&L logo does not come up when you plug the tuner up to your vehicle, you did not receive our CL7140 tuner.** You may have to use the "options" menu of the Predator to obtain your CAL ID and have a knowledgeable tuner generate a custom tune for your Programmer, or tunes may be purchased from C&L. This tune will then need to be transferred to your predator using the DSDownloader software (available from the Diablo website) using a 9 pin serial cable and a 12-volt power supply as described in the Predator manual. The only official tuning support that we provide for our GT500 air intake system is available through the CL7140 Predator Tuner.

If you make any other changes to the vehicle that may affect the air/fuel ratio or timing requirements, refer to the tuning tips sheet provided with the CL7140 programmer for directions on how to properly make these adjustments. The use of a dyno equipped with a wide-band air/fuel ratio monitor is suggested to make such adjustments, and you should try to maintain your wide open throttle air/fuel ratio from between 11.7:1 (conservative) to 12.0:1 (aggressive) throughout the entire upper RPM range.

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

\*\*Important note: Some Mustangs built after December 2005 use self-tapping screws to hold the MAF sensor in place. DO NOT USE THE SELF-TAPPING SCREWS IN OUR INLET ASSEMBLY. We have provided you with new MAF screws and washers to replace the original factory fasteners, and they will be found already threaded into the inlet pipe assembly. If your vehicle came with the "self taping" type screws from the factory, you will risk damaging your new inlet assembly if you attempt to install them. We will not warranty parts not installed correctly.

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. There is a small vacuum hose that is attached to the right hand side of the inlet pipe near the throttle body. This must also be unplugged. Now disconnect the MAF sensor connector located on the top left of the air filter housing (near the driver's side valve cover) which has a wiring connector plugged into it from the left side directly above the valve cover. To disconnect, slide the red tab (located under the MAF connector) towards the left of the vehicle. This will unlock the connector. To slide the connector off the MAF sensor, squeeze the underside of the connector tab and pull the connector away towards the left. Go to the right hand side of the factory air filter box assembly, and you will see a 10mm bolt that secures the front of the stock air intake assembly to the body of the vehicle just in front of the driver's side wheel well. Loosen and remove this bolt using the 10 mm socket wrench with extension, and set it aside for future use. 2010 owners will separate the factory air filter shroud from the round plastic "cold air" feed by loosening the clamp that attaches it to the rubber boot, which stays attached to the factory filter shroud. The entire air inlet assembly can now be 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. Remove the intake assembly by pulling it out towards the front of the vehicle and sliding the stock rubber inlet tube under the factory strut tower brace.

- 2. Once off the vehicle, use the supplied T-20 torx bit to remove the two screws that secure the factory air meter sensing element to the stock air box assembly. Carefully lift the sensor straight out of the housing, and the entire sensor cartridge will come out. Using the screws supplied with this system, carefully lower the sensor into the mass air flow section of the inlet pipe. The sensor will only line up in one direction, with the "flow" arrow pointing towards the engine, away from the front (slightly angled) filter end of the inlet tube. **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.** Loosen the clamps that are already attached to the inlet pipe, but leave them and the silicone hose on the assembly. You will notice that the silicone hose has been slipped down the pipe as far as possible. This is necessary to aid in the installation through better clearance when the assembly is slid under the factory strut tower brace.
- 3. Locate the small section of black electrical tape that was applied to the bottom of the new filter shroud assembly and apply it over the "P" that is molded into the driver's side valve cover. This will protect both the valve cover and the coating on the new inlet pipe during installation or removal of the new assembly. Once installed, the inlet pipe will be solidly attached to the engine and will move with the engine as it rocks from side to side in the engine cradle.
- 4. Carefully slide the new intake assembly (silicone hose first) under the factory strut tower brace up to the front of the throttle body. With the hose clamps loose, slide the silicone hose away from the end of the pipe and over the front end of the throttle body. Make sure that the hose is all the way over the neck of the throttle body and tighten that hose clamp. Next, slide the inlet pipe assembly into the silicone hose, so that the end of the pipe moves up to the front of the throttle body. At this point, you will be able to adjust the orientation of the inlet pipe. When lined up and rotated properly, there will be about an equal amount of clearance across the underside of the strut tower brace, the clearance notch on the side of the inlet pipe nearest the corner of the strut tower will visibly "line up" and clear the body, and the end of the inlet assembly will appear to be level with the ground.
- 5. Take the supplied new filter shroud and lower it into the engine bay. Slip the end of the inlet pipe through the oval opening in the shroud assembly and line up the large mounting hole in the filter shroud with the original factory mounting location. Insert the factory bolt through this hole and thread most of the way down without completely tightening. If the end of the inlet tube does not line up properly with the oval hole in the filter shroud, adjust its location before tightening the clamp that couples it to the silicone hose. Unwrap the supplied air filter and take the clamp off of it. Slide the clamp over the end of the inlet assembly and through the oval opening in the shroud assembly. Slide the clamp up the front of the inlet assembly so that the air filter may be completely installed on to the end of the pipe with the clamp behind it over the inlet tube. Slide the air filter over the front of the inlet tube with the metal seam pointing down, so that the "C&L" logo is right side up. Push the filter all the way over the end of the front of the pipe until it hits the positive "stop" that is molded into the neck of the air filter. Make sure that the filter is "centered" by rotating it clockwise and counterclockwise, until you feel the least amount of resistance. With pressure being applied to the front of the filter (to ensure that it is all the way on the pipe) tighten the hose clamp, which will be located behind the shield, with the head of the clamp on the left hand side of the pipe. This ensures a proper seal; tightening a clamp across the top does not provide an even clamping force around the filter. When properly installed, the hose clamp will be behind the filter shroud and the end of the filter will appear to be level with the ground.
- 6. There is a small hole located on the left hand side of the front of the filter shroud assembly. For 2007-2009 models, this hole will line up with the corner of one of the factory ABS lines. For 2010 applications, please read the alternate instructions provided below. If any of the ABS lines are in the way of the front end of the shroud, they can be easily adjusted by pulling them towards the front of the vehicle. This should not require much effort, as the lines will swivel at the ABS block. Once the shroud is lined up properly, tighten up the 10 mm factory bolt and use the supplied nylon zip tie to secure the front of the filter shroud to the corner of the closest ABS brake line. If installed correctly, the shroud will conform to the contours of the hood line. You may now re-connect the MAF sensor plug, but be sure to slide the connector lock back (to the right) into position. Re-connect the valve cover vent hose, small diameter vacuum hose and tighten all clamps and bolts. Check all fittings, hoses and connections. Installation is now complete!

2010 Owners: The 2010 shroud is different than what is used on the 2007-2009 models, and the secondary mounting point for the nylon tie wrap is located even with the center of the "passenger's side" of the "cold air" feed tube. The edge of the filter shroud will be just behind the outside (passenger side) edge of this round "fresh air" feed tube. You must drill a small hole in the center of the "outside" of the air intake feed tube, and using the supplied zip tie, line up the supplied filter shield with the hole in the "cold air" feed. This will not only provide additional mounting support for the air filter shroud, but it will also ensure that all of the air that is entering from the stock "cold air" feed will go directly into the new filter assembly.