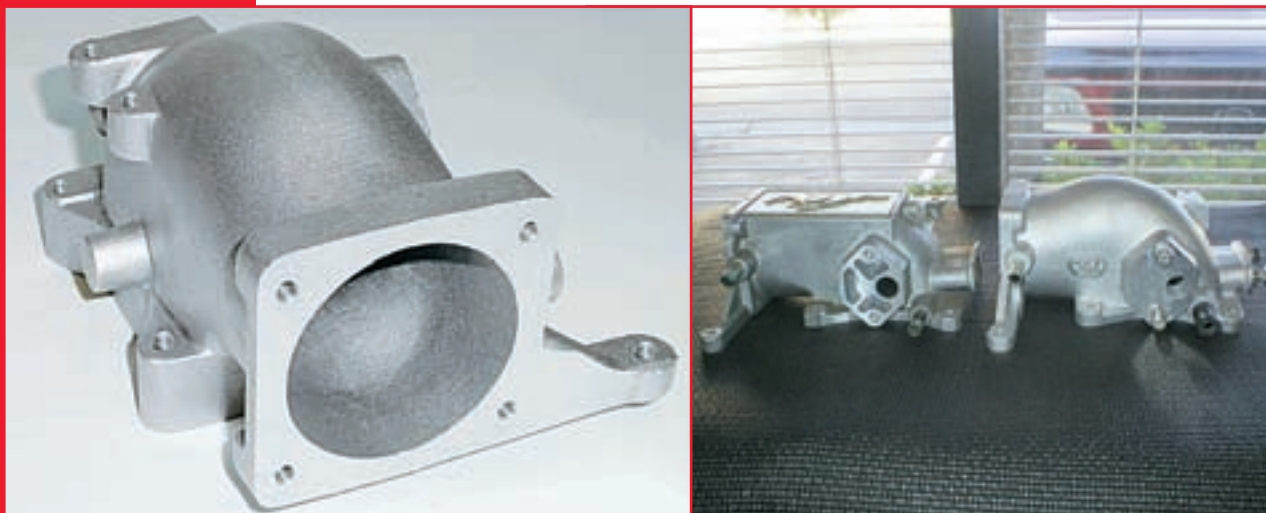


FIRST LOOK! C&L TRUEFLOW 4.6L GT INTAKE PLENUM

OPEN UP YOUR MOD GT'S TOP END WITH C&L'S LATEST GO-FAST GOODY



LEFT: C&L's new Trueflow plenum for the 4.6L GT Mustang is not only the key to unlocking the real potential of larger-than-stock throttlebodies, it's a snappy-looking piece to boot.

RIGHT: Here's a side-by-side comparison of the stock plenum (left) and the C&L Trueflow plenum. From this profile you can see that the C&L unit is designed to flow more air in a smoother path between the throttlebody and the intake than the OE plenum.

LARGER THROTTLEBODIES ARE AMONG THE FIRST ENGINE MODIFICATIONS MADE TO ENHANCE MUSTANG PERFORMANCE. HIGHER-FLOWING THROTTLEBODIES ARE KEY INGREDIENTS TO BOOSTING POWER OUTPUT, BUT THEIR EFFECTIVENESS IS LIMITED NOT BY THEIR BORE SIZE, BUT BY UPSTREAM AND DOWNSTREAM AIR RESTRICTIONS. AS CONTRIBUTOR CHRIS HEMER POINTS OUT SO EFFECTIVELY IN THIS MONTH'S AND THE PREVIOUS ISSUE'S INSTALLMENTS OF "BOLT-ON BLITZ," ONE COMPONENT UPGRADE, BY ITSELF, DOESN'T AMOUNT TO MUCH BECAUSE POTENTIAL GAINS MADE FROM ONE ITEM ARE LIMITED BY THE DESIGN OF OTHER COMPONENTS IN THE SYSTEM.

It would be tough to illustrate this point any better than with the 4.6 throttlebody upgrade. As we said, larger throttlebodies are a first-string modification for most folks, but higher airflow here will only deliver a miniscule increase in power output when installed on the relatively restrictive stock intake plenum.

C&L Performance has addressed this problem handily with their new Trueflow intake plenum for 4.6L two-valve engines. The new C&L plenum addresses a couple of the characteristics that make the stock plenum less than ideal for high-output endeavors.

The OE plenum, for instance, narrows through its center as it changes from a round opening on the throttlebody side to an oval opening where it mates to the stock manifold. C&L has designed the Trueflow plenum's core, via raising the roof and recontouring the floor, to allow air to make a smoother transition from end to end, and maintain a more consistent volume of airflow. This design also nixed the 90-degree turn found in the OE plenum. Through exacting flow bench testing, C&L also determined the optimal core volume.

C&L also isn't shy about sharing their technical data, so strongly are they convinced of



1. Remove the intake tube leading up to the throttle body.

2. Disconnect the electronic harnesses for the throttle position sensor (TPS), idle air control sensor (IAC), and all vacuum hoses that plug into the stock plenum.

3. Disconnect the throttlebody linkage from the throttle body. Remove the return spring, disconnect the cruise control cable and steel throttle cable, and set them off to the side.

4. Remove the two bolts which secure the throttle cable bracket to the top of the stock plenum. This will allow you to completely set aside the throttle cable assembly and linkage.

5. Unbolt the EGR valve on the driver's side of the stock plenum by removing the two 10mm bolts that secure it (you may want to spray the bolts with WD-40 or similar penetrating lubricant to loosen them). Next, pull the EGR valve away from the stock plenum. Note that you will not have to completely remove the EGR; simply remove the two bolts and this will give you enough room to work with.

6. Remove the five 8mm bolts that connect the stock upper aluminum plenum to the lower plastic intake manifold base. This will allow you to carefully lift up and completely remove the stock upper plenum, as well as reveal the opening on the lower intake manifold. GTR recommends stuffing a rag in the opening to prevent anything from dropping into the intake.

7. With the stock plenum on a workbench, you can now remove the four 8mm bolts that secure the throttle body to the upper plenum, then carefully separate the throttle body from plenum. The stock gasket should be in good, re-usable shape. If not, make sure to use a new one.

8. Unbolt the IAC valve on the side of the plenum by removing its two retaining bolts, then carefully pull it away from the plenum. Inspect the gasket for wear or damage (you can reuse it if it's in good shape). The stock upper plenum is now completely stripped. Now transfer your original IAC valve onto the new C&L plenum, making sure to position the gasket properly and tighten the bolts.

9. Carefully lower the new C&L plenum onto the base of the stock plastic intake manifold and align the bolt holes between the C&L upper and the stock lower. Be careful not to damage the original blue silicone O-ring gasket. Reuse the original upper plenum mounting bolts and tighten.

10. Reattach the original EGR valve to the new C&L plenum and tighten. Reuse the original gasket (it should be in good shape, as it is a metal gasket), or get a new one if necessary.

WHAT'S IT COST?

C&L 4.6L GT Plenum: \$189.99*

Ford Racing 70mm Throttlebody: \$189.99*

* All prices at GTR High Performance retail cost

11. Reconnect the throttle linkage bracket to the top of the C&L intake plenum using the factory bolts, then reattach the throttlebody linkage to the new throttlebody, making sure to reattach the cruise control cable, throttle cable, and return spring.

NOTE: It is a good idea to verify that the throttlebody blade is fully opening. Have an assistant fully depress the gas pedal and make sure that the blade is completely wide open.

12. Here we're installing the FRPP 70mm throttlebody (not included in the C&L plenum kit) onto the C&L plenum. Use the original throttlebody attaching bolts, and don't forget the gasket.

NOTE: C&L strongly recommends the use of a 75mm throttlebody for optimum results with their new plenum. Company dyno-testing has shown that a 75mm throttlebody with the C&L plenum consistently makes about 3 rwhp more than a 70mm throttlebody with the same C&L plenum. In our case, because a 75mm throttlebody was not available at the time of installation, we used a Ford Racing 70mm unit, which is still larger than the stock throttlebody. However, if possible, use a 75mm throttlebody. Installation procedure will be similar regardless of throttlebody size.

13. Reconnect all the vacuum fittings and vacuum lines that were removed from the OE plenum and attach them to the C&L plenum.

14. Reinstall the intake tube leading up to the throttlebody to complete the C&L plenum installation. Start the engine and check for air leaks before declaring the job finished.

15. With the serious-flowing C&L plenum now installed, Josh's new throttlebody and Paxton blower can now deliver a significant horsepower increase.



their design. The company has put on its Web site all of the data and dyno charts from its plenum testing, which you can view for yourself by going to www.cnlperformance.com.

The caveat is that the benefits of the Trueflow plenum is restricted by the size of the throttlebody used. The company recommends the use of a 75mm throttlebody to allow the plenum to reach its full potential. In a nutshell, however, C&L's published results indicate that with the Trueflow plenum and 75mm throttlebody, gains of around eight rear wheel horsepower are possible on 4.6 two-valve Mustangs with mild engine modifications; 11-15 on more substantially modified cars; and 15-25 rwhp may be achieved for supercharged applications.

We didn't get the opportunity to perform before and after evaluations of our test car on the dyno, so we refer you to the published dyno charts available on the C&L Web site if you want a visual. Furthermore, C&L encourages potential customers to contact the company directly with any questions about the design, performance, and applications of the Trueflow intake plenum.

Like we said, they're confident of their product's performance and construction, and aren't shy about giving you the full scoop. In the interim, the following illustrates just how simple a C&L Trueflow plenum and a throttlebody swap can be on the 4.6L GT engine. Our test mule is a 2000 GT (five-speed, Paxton Novi 1000 supercharger) owned by Josh Felton. Even though the blower was in place, understand that the installation procedure for C&L's intake plenum is identical to that of a stock or naturally aspirated Mustang GT.

We took Josh's pony to GTR High Performance in Rancho Cucamonga, California, for the install. In addition to performing installation work on all components that they sell, GTR also sells the new C&L Trueflow plenum. ■

SOURCES C&L PERFORMANCE

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