



Factory Five Racing, Inc.

Big Block Installation



427 Shown here with fuel injection.

- ✎ These instructions are designed to supplement the assembly manual where the assembly process is different from the build up using a small block. Sections of the manual that deal with wiring and motor preparation of the small block will not apply and can be skipped. Read through these instructions before beginning assembly as some of the changes occur early on in the build up.
- ✎ Larger fuel line is usually necessary for all carbureted kits, the line routing is similar to what the manual describes for the back half of the car, however depending on the type of fuel pump you use (electric or mechanical) you may want to run the line differently.



Fuel line and pressure regulator mounted at rear of engine(For carbureted applications)

The electric fuel pump should be mounted to a frame rail as close to the tank as is practical. The 2"x 3" is a good solid location. Some pumps however must be mounted below the pickup so a bracket may have to be made.

ENGINE PREPARATION

The intake manifold used must have sufficient clearance for the air cleaner underneath the hood scoop. The Edelbrock Torker II manifold will fit but it is about the maximum height useable. The high-rise intake that comes with the 460 crate engines from Ford will not fit under the stock hood scoop.



460 Single plane manifold with 850 CFM Carburetor

The throttle cable from the kit can be used with a carburetor and most Holley's come with the correct linkage ball to snap on the cable. Use a universal throttle linkage bracket from Holley or equivalent to hook the cable up to the intake.

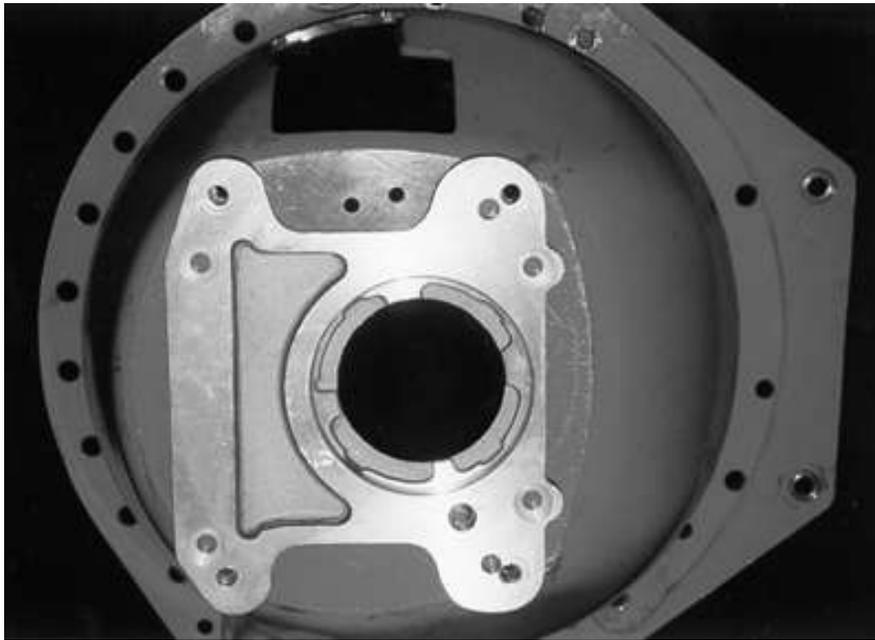
The oil pan that comes with the crate motor (along with most stock oil pans) is very deep and hangs down below the frame, we suggest the canton flat bottom pan which gives sufficient ground clearance and also provides extra baffling and windage control. The pan may have to be clearanced slightly to fit the motor mount on the passenger side. This can be done by gently tapping the pan with a soft hammer or by removing some material from the mount.

The oil filter relocation kit is no longer necessary as the header clears the filter in its stock location, this segment of the manual can be ignored.



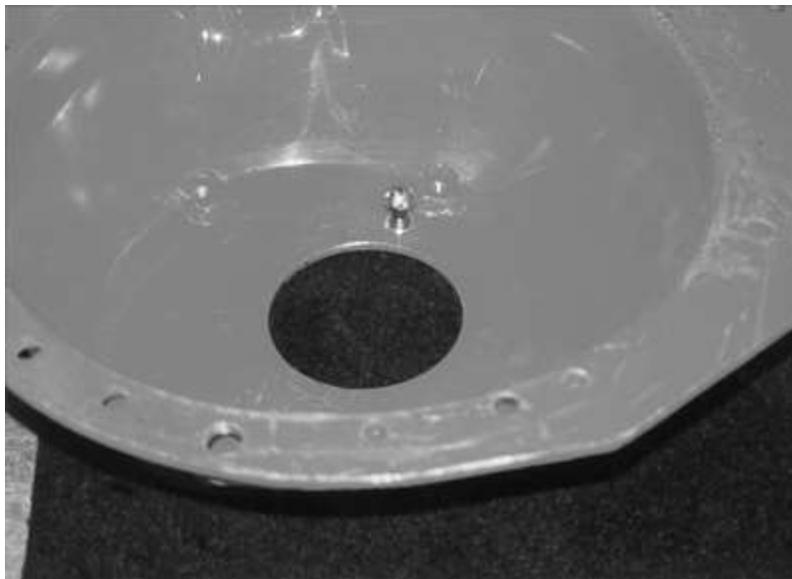
427 Engine Mount with rubber isolator.

The transmission we recommend is a Tremec TKO that will fit the big block engines with a Lakewood bellhousing and the spacer mentioned. In order to use any manual transmission the clutch linkage will need to be converted for use with the pedals and cable from the Mustang. If you are using the spacer from Mcleod it comes with a pivot and jam nut, as well as a clearance hole where the pivot needs to sit. Mark the location on the bellhousing using the spacer as a template, the pivot is centered about the hole in the spacer, then drill and tap the hole to fit your pivot. The height adjustment of the pivot should be made with the clutch attached to the motor at the correct torque spec. If you are not using the spacer but still need a ball pivot, an adjustable one is available also from Mcleod.



Bellhousing and spacer lined up to mark pivot hole

The Driveshaft will also vary in length depending on the transmission you select. Before you have your Driveshaft shortened, measure the distance between the end of the transmission and the rear axle flange with the car at ride height ($4\frac{3}{4}$ " from the ground to the bottom of the 4" round main rail). Make sure and include some room for the driveshaft to slide into the transmission with suspension travel, $\frac{1}{2}$ " is good. On the Lakewood scattershield there is a mount for the pivot on the driver's side for a mechanical or hydraulic linkage. This tab should be removed for extra clearance of the clutch fork. The slot for the fork should also be elongated to provide more clutch travel. Remove $\frac{1}{2}$ " of material toward the engine side of the shield. The last modification to the housing is to enlarge the hole for the clutch cable to pass through, the $\frac{1}{2}$ " bolt hole that is directly in front of the slot for the fork needs to be drilled out with a $\frac{1}{4}$ " $\frac{64}{100}$ " Drill.



Pivot installed in bellhousing



Clutch Fork installed awaiting transmission

The transmission mount to the crossmember must also be fitted with spacers due to the higher centerline of the Big Block crankshaft. Two one-inch spacers are fit between the mount and the transmission, which raises the entire assembly, by one inch. Even with this raise the rear of the tranny needs to be trimmed to fit over the 4-inch crossmember as explained in the manual for the TKO transmission.

Level the motor using the intake manifold or the back of the bellhousing, this is important in order for the side exhaust to line up correctly with the body as well as for valve cover clearance on the driver's side. The headers should be fitted to the engine after it has been lowered into place. Wait to mount the side pipes until after the body has been fitted. The exhaust gaskets for the side pipes will need to be cut from the material provided, it is all right to have excess material on the outside of the flange but try to keep the inside flush with the tubes.