

Ford Motorsports.

Installation instructions 1996-1999 Ford Explorer and Mercury Mountaineer.

This manual is intended for the installation of the Ford Motorsports Supercharger kit, Part Number M6066-E50, M6066-E51, M6066-E52 on the Ford 5.0 Liter motor, model years 1996 – 1999. This kit is designed to be 50 state smog legal and as of the writing of this manual C.A.R.B. (California Air Resources Board) exemption is pending. This kit already complies with Federal EPA memorandum 1A, making it smog legal in 49 states, providing your states pollution laws do not supercede EPA memorandum 1A.

It is very important that these instructions be followed exactly. Premium unleaded fuel with an octane rating of 92 or higher must be used with this supercharger at all times. Failure to use the proper fuel may cause detonation (pinging) and cause severe engine damage. Never change the crank pulley or the supercharger pulley as this will void the factory warranty (see warranty document on the preceding page) and may cause engine damage. To help you with your installation, please read each entire step before proceeding with that step.

Only install this kit on a cold engine with 0 (zero) fuel pressure to avoid injury and possible damage. Make sure that you have a chemical fire extinguisher handy when installing and/or testing any part of a fuel system. Do Not install any fuel system, or break open any fuel lines near to any source of heat or flame such as a water heater or cigarette.

Step 1. Disconnect the battery negative cable.

Step 2. Release all fuel pressure from the fuel rail schrader valve.

Step 3. Remove plastic air duct between throttle body and air filter enclosure. Remove cold air sensor from air duct and set aside for later use.

Step 4. Remove complete airfilter enclosure and mounting bracket assembly from inner fender well.

Step 5. Remove the mass air meter from the air filter enclosure and set aside for later use

Step 6. Drain about one gallon of coolant from the radiator. Remove the upper radiator hose.

Step 7. Remove the fan & fan clutch assembly and then remove the fan shroud and set aside.

Step 8. Remove the factory accessory serpentine belt.

Step 9. Remove the alternator from the alternator mounting bracket. Remove the belt tensioner from the alternator mounting bracket and set aside for latter use. Remove the alternator mounting bracket from the engine.

Step 10. Remove the overflow recovery / windshield washer tank and set aside for later use.

Step 11. Disconnect the heater hose from the water pump next to the thermostat housing.

Step 12. Remove the upper idler pulley above the water pump. Next remove the retainer holding the bolt to the pulley and discard the washer. The bolt will be used later.

Step 13. Using a harmonic balancer puller remove the factory harmonic balancer.

Step 14. Install the new modified harmonic balancer with the stock bolt and washer. Use a small bit of motor oil so it won't damage the factory front seal. Install the crankshaft pulley spacer and new supercharger drive pulley with the hardware provided in your kit.

Step 15. Locate and install the six ribbed idler pulley supplied in your kit above the water pump using the bolt that you set aside earlier.

Step 16. Install the new alternator mounting to the lower passenger side of the motor. This should be pre-assembled at the Powerdyne factory. (Refer to figure 1).

Step 17. Re-install the alternator and install the supplied #K060802 Gates belt. This belt will be tensioned later. (Refer to figure 2)



Figure 1.



Figure 2.

Step 18. Install the engine mounting bracket, supercharger mounting bracket and mounting bracket spacers using the hardware provided. Use the small diameter spacer next to the water pump by-pass hose. Use the 1/4" aluminum spacers in the pockets on the supercharger bracket behind the alternator tensioning bracket. Use the short idler shaft and flat pulley to mount to the alternator tensioner bracket and tension the belt. (Refer to figure 3).



Figure 3.

Step 19. Install the supercharger to the mounting bracket using the seven 3/8 bolts and seven an washers. Install the discharge tube between the supercharger and the throttle body using the two 3"x2" silicones and hose clamps. Install the plastic intake oval with the 3 1/2" flex hose to the supercharger inlet with the 3 1/2" silicone and clamps provided. (Refer to figure 4).



Figure 4.

Step 20. Re-install the heater hose that was disconnected earlier. Install the supercharger drive belt K060490 and mount the supplied tensioner to the supercharger mounting bracket using the two 3/8"x 1" bolts and washers and tension the belt tight.

Step 21. Locate the overflow bottle removed earlier and with a hacksaw cut in half leaving just the windshield washer bottle. With a file elongate the two remaining mounting holes and re-mount as far back as possible in the stock location. (Refer to figure 5).



Figure 5.



Figure 6.

Step 22. Mount the mass air meter that was removed from the air filter enclosure earlier to the new air filter enclosure using the four nuts, bolts and washers included in the kit. Mount the supplied replacement air filter to the inside of the air box and install the stock cold air temp sensor that was removed from the stock air duct earlier into the grommet on the new air filter adapter and connect the wire. Mount the new air filter enclosure to the passenger side fender well as far forward as possible using one existing hole and drill one 3/16" hole and use the #10 sheet metal screw provided. Connect the flex hose to the mass air meter and plug in wiring. Connect the breather hose from the oil filler tube to the fitting on the air box. (Refer to figure 6).

Step 23. Install the new radiator overflow bottle next to the radiator on the passenger side tucking the tab behind the radiator mount drill a hole and insert a sheet metal screw provided in the kit. Re-connect the stock overflow hose shorten if necessary. Re-install the upper radiator hose removed earlier and re-fill the radiator with coolant.

Step 24. Install the heatshield and brace on the right front exhaust stud and the lower throttle body stud. Connect the two together with the #10 screw and nut. (Refer to figure 7).



Figure 7

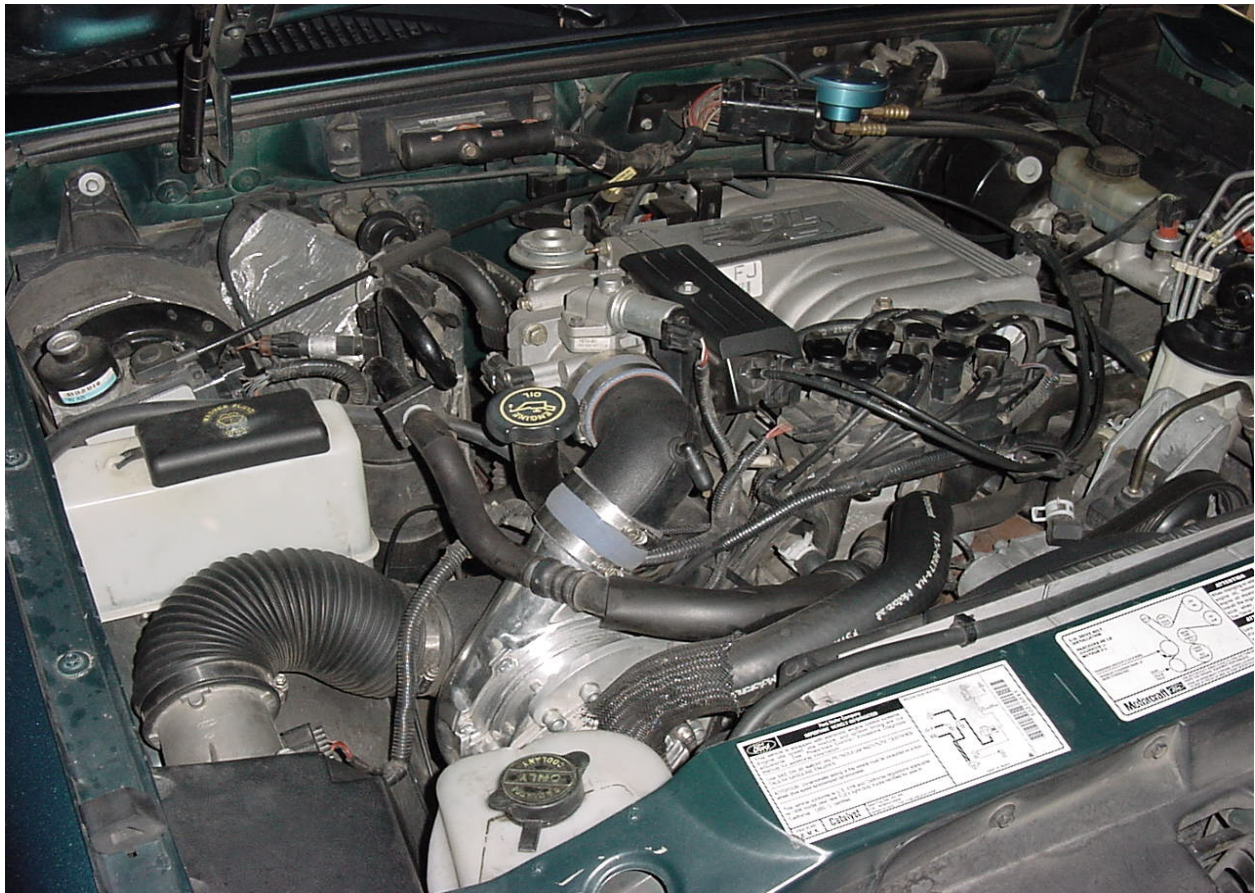
Step 25. Mount the provided FRU to the firewall using two #10 sheet metal screws connect the 5/32 vacuum hose to the stock fuel pressure regulator using the vacuum tee provided. Disconnect the return fuel line to the tank located driver side fender well it is grey in color and it is smaller diameter of the two. Route the new fuel lines from the fuel rail outlet to the side of the FRU and from the bottom of the FRU to the return line back to the fuel tank. Secure all fuel lines away from heat sources or moving objects with tie-wraps provided. (Refer to figure 8) 1999 models refer to diagram on last page of the manual.



Figure 8.

Step 26. Install the high performance fuel pump supplied in the kit according to the manufacturers instructions. If you have a 1999 model refer to the last page of this manual for a inline pump installation.

Step 27. Re-connect your battery ground cable and turn the key to the on position but do not start. Let the fuel pump cycle on and check all hoses for leaks. Now start the vehicle it should idle just as it did before check for proper belt alignment. Installation is now complete.



Complete install