



M-6066-T462 4.6L F-150 Supercharger Kit INSTALLATION INSTRUCTIONS

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!!! PLEASE READ ALL OF THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION. AT ANY TIME YOU DO NOT UNDERSTAND THE INSTRUCTIONS, PLEASE CALL THE FORD RACING TECHLINE AT 1-800-367-3788 !!!

OVERVIEW:

The following instructions cover the installation procedures required to install the M-6066-T462 Supercharger Kit on a 1997/98 4.6L F-150 truck. This kit can be installed using common mechanics tools and should take someone with average mechanical ability roughly a day to complete.

!!! USE OF PREMIUM FUEL IS STRONGLY RECOMMENDED FOR VEHICLES EQUIPPED WITH THIS KIT !!!

!!! PERFORM THE FOLLOWING WORK ON A COLD VEHICLE ONLY !!!

SECTION I: REMOVAL OF STOCK COMPONENTS:

- STEP 1.1:** Disconnect negative (-) side of battery.
- STEP 1.2:** Remove cover from top of throttle body.
- STEP 1.3:** Disconnect mass air meter and inlet air temperature sensor from harness.
- STEP 1.4:** Remove idle air bypass tube and silencer assembly.
- STEP 1.5:** Disconnect crankcase ventilation tube from fresh air inlet tube.
- STEP 1.6:** Remove fresh air inlet tube from throttle body and filter enclosure.
- STEP 1.7:** Remove Intake Air Temperature (IAT) sensor from fresh air tube. Retain sensor for future use.
- STEP 1.8:** Remove Mass Air Flow (MAF) meter from air filter enclosure and disconnect from wire harness. Retain MAF meter for future use.
- STEP 1.9:** Remove air filter enclosure.
- STEP 1.10:** Disconnect cam sensor connector from cam sensor on driver side of front cover.
- STEP 1.11:** Disconnect main wire harness connectors from driver side coil pack.
- STEP 1.12:** Remove driver side coil pack from mounting bracket. Retain mounting hardware and coil pack for re-installation.
- STEP 1.13:** Remove coil mounting bracket and studs from front of engine.

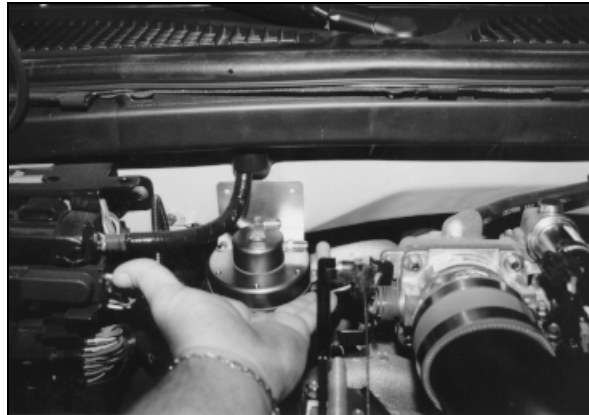
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SECTION II: FUEL REGULATION UNIT (FRU) INSTALLATION:

STEP 2.1: Using the FRU bracket as a template, mark the mounting bracket hole locations on the passenger side of the rear bulkhead of the engine compartment between the main fuse junction box and the throttle body. The bracket should be located approximately 1" below the plastic harness cover. **See Figure 1.**

Figure 1



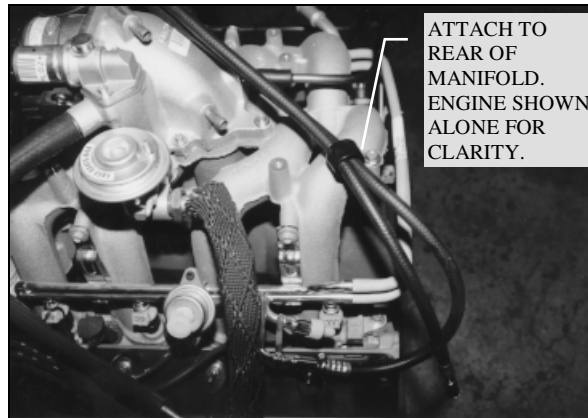
- STEP 2.2:** Drill holes marked in previous step with a 1/16" drill bit.
- STEP 2.3:** Mount FRU bracket to bulkhead with self tapping screws provided.
- STEP 2.4:** Mount FRU to bracket with bolts provided.
- STEP 2.5:** Connect fuel lines to FRU. Male fuel line connects to side of FRU (straight) and female fuel line connects to the top of the FRU (90°).
- STEP 2.6:** Relieve pressure from fuel rail. Consult Ford shop manual for proper procedure.
- STEP 2.7:** Disconnect fuel return line from fuel rail. Return line is the line outboard fuel line closest to the driver side inner fender.
- STEP 2.8:** Connect mail fuel line to fuel rail and re-install safety clip.
- STEP 2.9:** Connect female fuel line to tank return line.
- STEP 2.10:** Secure fuel line to rear of intake manifold with 1" insulated clamp and 6mm bolt and washer provided. **See Figure 2.**
- STEP 2.11:** Disconnect 3/8" vacuum line from side of throttle body adapter.

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- STEP 2.12:** Install 3/8" vacuum tee and 2" piece of 3/8" hose on vacuum nipple.
- STEP 2.13:** Re-install vacuum line on open end of 3/8" tee.
- STEP 2.14:** Connect 5/32" vacuum line to FRU.

Figure 2



SECTION III: ORIGINAL COMPONENT RELOCATION AND BRACKET INSTALLATION:

- STEP 3.1:** Remove power steering reservoir from original mounting bracket. **DO NOT REMOVE HOSES.**
- STEP 3.2:** Remove power steering reservoir bracket from engine and discard.
- STEP 3.3:** Install power steering reservoir relocation bracket onto the studs mounting the brake master cylinder using the two (2) nuts provided. **DO NOT REMOVE MASTER CYLINDER OR MOUNTING NUTS. See Figure 3.**
- STEP 3.4:** Mount power steering reservoir to the new bracket with 1/4"-20 X 3/4" socket cap bolts, nuts and washers provided. **See Figure 3.**

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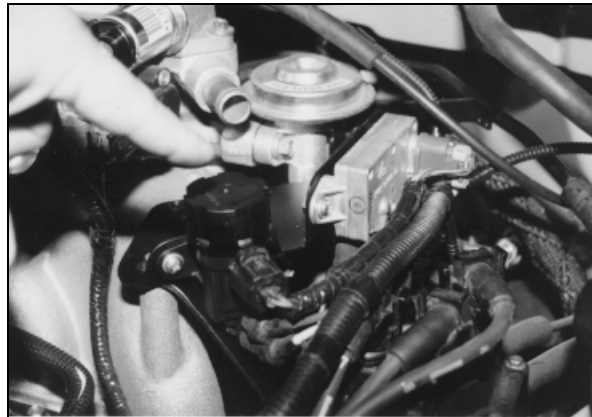
Figure 3



STEP 3.5: Remove EVR solenoid from EVR/DPFE bracket.

STEP 3.6: Install new EVR/DPFE bracket and new ignition coil bracket in the same mounting holes that the original EVR/DPFE was mounted in using the original mounting bracket hardware. The brackets stack on each other with the coil mounting bracket on the bottom and the EVR/DPFE bracket on top. **See Figure 4.**

Figure 4



STEP 3.7: Attach the EVR solenoid and DPFE to the new mounting bracket with provided hardware (4 pieces of each of the following: 10-24 X 1/2" socket cap screw, locking nut and #10 washer). **See Figure 4.**

STEP 3.8: Release the excess slack from the wire harness from underneath the engine below the lower radiator hose. This will allow the electrical connections to reach the coil pack, EVR and DPFE in their new locations.

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- STEP 3.9:** Cut back the plastic convoluted shield on the wire harness 1"-2" to allow the EVR/DPFE wire harness connectors to be separated and then connect them to the EVR and DPFE.
- STEP 3.10:** Install coil pack in new location using the original mounting hardware and connect to wire harness. **See Figure 5.**

Figure 5

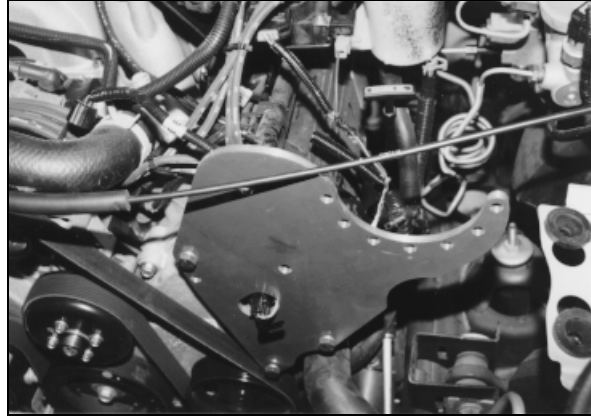


SECTION IV: ORIGINAL COMPONENT RELOCATION AND BRACKET INSTALLATION:

- STEP 4.1:** Install supercharger mounting plate in the same location that the coil mounting bracket was previously mounted in using three (3) 10mm x 100mm hex head bolts and washers on the front side of the supercharger mounting plate and three (3) .600" spacers on the back side of the plate. **DO NOT TIGHTEN. See Figure 6. Note: Due to differences between the Windsor and Romeo engines it may be necessary for the use of two (2) 8mm x 100mm hex head bolts in place of the 10mm bolts mentioned above. The 8mm bolts have been included in the kit. If your application does not require them to be used they may be discarded.**
- STEP 4.2:** Route cam sensor wire behind supercharger mounting plate and connect to cam sensor. **Note: It may be necessary to cut back the convoluted shielding to provide flexibility.**
- STEP 4.3:** Tighten mounting bracket.
- STEP 4.4:** Install 8mm bolt (from original coil mounting bracket) in remaining hole and tighten. **See Figure 6.**

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Figure 6



- STEP 4.5:** Install supercharger onto mounting bracket with 3/8" half-moon spacer between the supercharger and mounting bracket using seven (7) 3/8"-16 x 1-5/8" socket cap screws and 3/8" washer.
- STEP 4.6:** Install supercharger discharge tube between throttle body and outlet side of the supercharger using silicon sleeves and hose clamps provided.
- STEP 4.7:** Install idle air bypass hose (3/4" x 10") between the idle air bypass valve and 3/4" 90° elbow on the discharge tube. **Note: In some applications, while the vehicle is running, a resonance may be noticed that originates from this hose. If this happens, simply splice the original silencer into the hose and fasten with hose clamps.**
- STEP 4.8:** Using a file, remove the barb from the IAT sensor and then thread the sensor with a 1/2"-13 die.
- STEP 4.9:** Carefully thread the IAT sensor into the 1/2"-13 boss located in the front of the discharge tube. **DO NOT OVERTIGHTEN. See Figure 7.**

Figure 7





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STEP 4.10: Connect IAT to wire harness.

SECTION V: FRONT END ACCESSORY DRIVE (FEAD) INSTALLATION:

STEP 5.1: Remove guard from top of radiator and fan shroud.

STEP 5.2: Remove FEAD belt.

STEP 5.3: Remove cooling fan from clutch.

STEP 5.4: Remove harmonic balancer/crankshaft pulley.

STEP 5.5: Install new harmonic balancer on front of crankshaft using silicon in the keyway to prevent oil leakage.

STEP 5.6: Place supercharger drive pulley onto the front of the harmonic balancer and use original 1/4" x 1-1/2" washer, new crankshaft bolt provided (12mm x 60mm long) and 12mm washer to hold in drive pulley in place. **DO NOT TIGHTEN AT THIS TIME.**

STEP 5.7: Align three (3) holes in supercharger drive pulley with holes in harmonic balancer and install three (3) 8mm x 25mm socket cap bolts. Tighten evenly.

STEP 5.8: Tighten the crankshaft bolt. Torque to 66 ft./lbs., loosen, then torque to 37 ft./lbs. plus 90°.

STEP 5.9: Re-install fan shroud and position new fan (provided) onto fan clutch simultaneously.

STEP 5.10: Fasten new fan to fan clutch using the original hardware and tighten.

STEP 5.11: Re-install FEAD belt.

STEP 5.12: Install supercharger drive belt and tensioner. Fasten tensioner loosely to the supercharger mounting bracket with two (2) 3/8"-16 x 1-1/4" hex head bolts and washers.

STEP 5.13: Push tensioner downward until belt is tight and then tighten tensioner bolts.

STEP 5.14: Re-install fan shroud bolts and radiator guard.

SECTION VI: AIR INTAKE INSTALLATION:

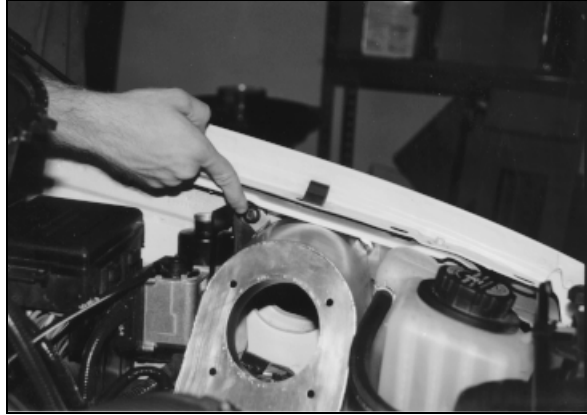
STEP 6.1: Mount MAF meter to new fresh air filter housing using 1/4"-20 x 3/4" socket head cap bolts, washers and lock nuts provided.

STEP 6.2: Mount air filter housing to fender/wheel well using the cruise control mounting bolt to attach the housing. **See Figure 8.**

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Figure 8



STEP 6.3: Drill a 1/16" hole through lower mounting tab into wheel well and fasten with #10 sheetmetal screw provided. See Figure 9.

Figure 9



STEP 6.4: Re-connect MAF meter to wire harness.

STEP 6.5: Connect intake elbow assembly to supercharger with clamp provided.

STEP 6.6: Connect flex hose to MAF meter and intake elbow with clamps provided. **Note: Rotate intake elbow so that flex hose does not come into contact with any other components.** See Figure 10.

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Figure 10



STEP 6.7: Install 5/8" breather hose between 5/8" barb fitting on air cleaner housing and fitting on the driver side cam cover. Use cable ties or hose clamps to secure hose ends.

SECTION VII: START UP:

STEP 7.1: Re-connect battery.

STEP 7.2: Check all wiring, hoses and fuel lines for clearance from moving parts, sharp edges and heat sources. Re-route if necessary.

STEP 7.3: Turn ignition to "key on" position. **DO NOT START.** This will energize the fuel pump and allow you to check for fuel leaks. If a leak is present, correct problem prior to starting engine.

STEP 7.4: Start engine and check for proper belt alignment and tension. **Note: Over time the supercharger drive belt may stretch slightly. Check belt periodically and adjust tensioner as necessary.**