Powerdyne Automotive Products Inc.
Installation instructions 1996-1999 Dodge Pickup 318 0r 360 C.I. Engine

This manual is intended for the installation of the Powerdyne Supercharger kit, Part Number K10516 on the Dodge 318 or 360 C.I. motors, 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.

Figure 1.

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. Jack up front of vehicle and place on jack stands. Make sure the vehicle is sitting securely on the jack stands.

Step 2. Using the supplied fuel system bracket as a template, drill the mounting holes in the drivers side frame rail in front of the transmission mount crossmember. See figure 2. Using the provided # 10 sheet metal screws, secure the bracket to the frame rail.

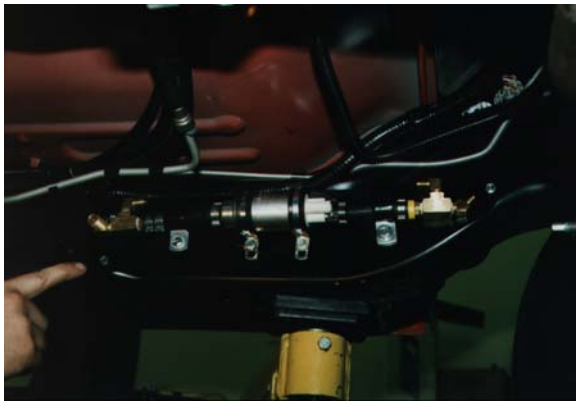

Figure 2.

Step 3. Disconnect the stock fuel line that connects to the fuel rail. Make sure to catch any spilled fuel in a pan for later disposal. Drain any fuel from this line. The stock fuel line has a plastic disconnect fitting in it. Remove this fitting and put in the new male connector supplied. The supplied male fuel hose is connected to the fuel rail line and to the 90 degree side of the front tee fitting on the fuel system. See figure 3. The female fuel line connects to the male line coming from the gas tank with the other end connecting to the fitting on the rear of the fuel system. See figure's 3 & 4.

Figure 3.

Figure 4.

Fuel regulation unit installation.

Step 4. Attach the fuel lines to the FRU before installing it to the vehicle. The 42 1/2" fuel line attaches to the bottom (center) fitting on the FRU. The 25 1/2" fuel line attaches to the 90 degree fitting that is on the side of the FRU. Note: This step may have been already done for you at the Powerdyne factory. If so, simply check the fittings for tightness.

Step 5. Place the FRU up to the firewall, next to the ground cable (without touching the ground cable) on the drivers side of the brake master cylinder.

Step 5 Cont.. Using the FRU bracket as a template, mark and drill the mounting holes in the firewall using a 9/32" or # 28 drill bit.
Secure the FRU to the firewall using the #10 sheet metal screws provided.

Step 6. Feed the fuel lines down the firewall to the fuel system. Connect the 29 1/2" line to the 45 degree fitting on the front of the fuel system. Connect the 42 1/2" line to the 90 degree fitting on the rear of the fuel system. Connect the 5/32" vacuum hose to the small nipple on the top of the FRU and the other end to the capped nipple on the drivers side of the intake manifold next to the brake vacuum hose. (Remove nipple cap first).

Fuel system relay installation.

Step 7. Using the mounting bracket as a template, drill a 9/32" hole in the driver side inner fender wall and secure the relay with the sheet metal screw provided as shown in figure 5.

Step 8. Feed the red wire down the fender well to the fuel system. Connect the red wire to the "+" (plus) connector on the pump. Connect the green wire to the green 12 gauge wire in the wire loom near the Fuse Box. See figure 6. Connect the orange wire to the positive side of the fuse box. See figure 7.

Figure 5.

Step 8. Cont.. Connect the supplied black ground wire to the negative (-) side of the pump and to the front, fuel system mounting screw to provide a ground.

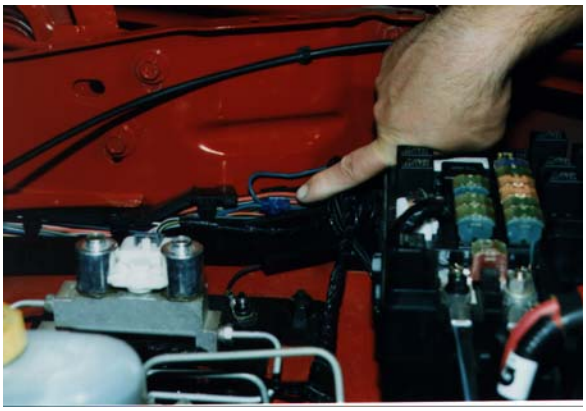

Figure 6.

Figure 8.

Figure 7.

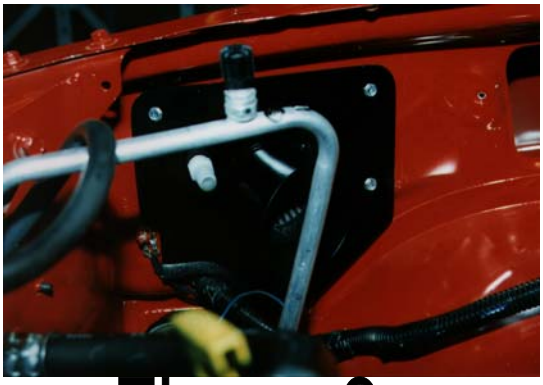

Figure 9.

Air filter ***installation:***

Step 9. Remove the stock Air Filter box and the intake tube that connects to the bonnet. Remove the computer from the passenger side of engine compartment. Using the factory bolts and holes, attach the computer relocation bracket to the fender well. See figure 8. Then mount computer to the relocation bracket.

Step 10. Place the Air Filter Cover in the opening in the passenger side fender well and using the Air Filter Cover as a template, mark and drill the 3 mounting holes. Secure with the 3 #10 sheet metal screws provided. (Fig. 9)

Step 11. Remove the Accessory Drive Belt. Remove the Ignition Coil. Reroute the coil wiring harness up towards the throttle body. Remove the second and third (from the front) inboard valve cover bolts. Using the supplied 3 5/8" standoffs and the 1/4-20 x 4" bolts, mount the factory ignition coil bracket to the valve cover in the second and third valve cover holes. Mount coil to bracket using the factory bolts and connect wiring harness. See Figure 10.

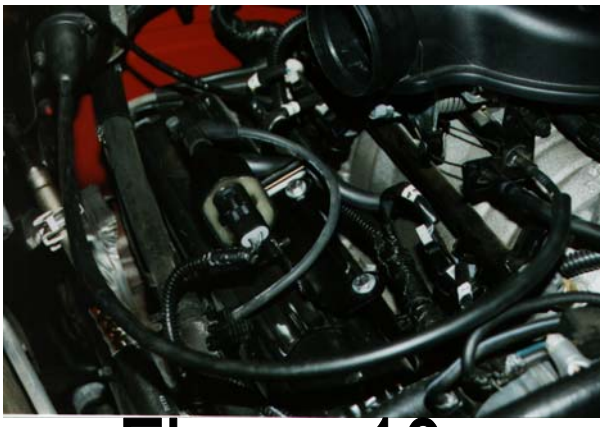

Figure 10.

Figure 12.

Step 11. Remove dipstick from tube. Remove dipstick tube mounting bolt. Push the dipstick tube toward the valve cover Approx. 1". Install the supplied dipstick tube mounting tab using the factory bolt. Using the supplied 5/16-24 x 3/8" bolt and washer, mount dipstick tube to mounting tab. Put dipstick back in the tube.
See figure 11.

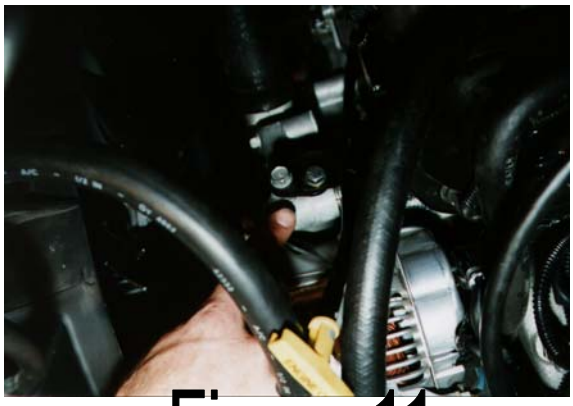

Figure 11

Supercharger Mounting Bracket.

Step 12. Select the 4, 3/8-16 x 3 1/2" bolts. Mount the rear mounting engine plate to the front mounting plate using the 4, 2" spacers between the two plates as shown in figure 12.
Secure the two plates together with the 3/8 – 16 nut and washer provided. See figure 12

Step 13. Mount the assembled bracket to the engine using the remaining 3 bolts from step 12 above. See figure 13.

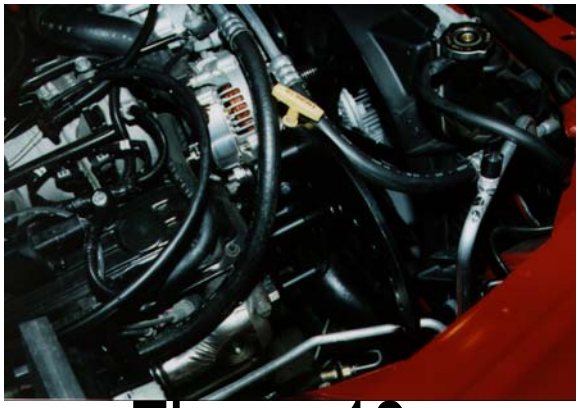

Figure 13.

Step 14. Mount the Supercharger to the Mounting bracket using the 7, 38-16 x 1" socket head cap bolts and AN washers provided. Connect the 11" flex hose to the Air filter outlet and secure with hose clamp provided. Connect the inlet tubes to the Supercharger inlet with the Silicone hose and clamp provided. Tighten all clamps securely. Remove the valve cover breather line from the intake bonnet. Remove the 90 degree elbow from the breather line. Connect the 1/2" x 38" breather hose to plastic line. Connect opposite...

Step 14 Cont.. end to 1/2" fitting on the Air Filter Cover. See figure 14. Use the supplied 1/2" cap to seal up the 1/2" nipple on the factory intake bonnet. Use the 3" cable tie to secure the cap to the bonnet.

Figure 14.

Step 15. Install the supplied Discharge Tube to the factory bonnet, loosely, using the supplied 3" x 2" blue silicone sleeve. Install opposite end on Supercharger in the same manner. Tighten all clamps using caution when tightening the clamp on the factory bonnet not to over tighten and crush the bonnet tube.

Step 16. Install the new Supercharger/accessory belt as per Figure 15. Powerdyne has included a custom sized belt for your application (Powerdyne Part# H80116-105.66). If you require a different size, please contact Powerdyne. Install the supplied tensioner on the front mounting bracket plate using the bolts provided. Tighten belt

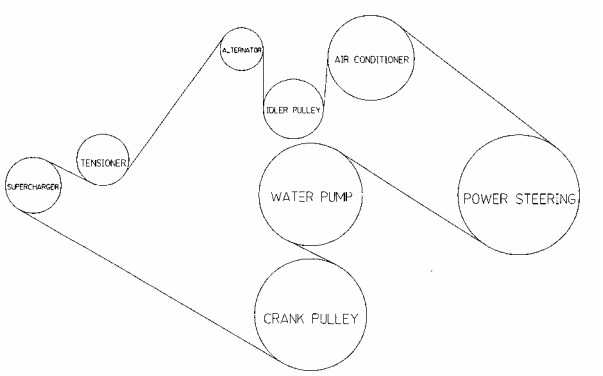

Figure 15.

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Step 17. Re-connect the battery ground cable. Turn the engine over a few times without starting it. Check for belt alignment and tension. Check to **make sure** that you tied all lines: Fuel, electrical and vacuum, away from any moving parts or heat sources. Start engine and let idle for a few minutes. Shut off engine and re-check belt alignment and tension. Drive vehicle and check for pinging. Some vehicles are built with slightly higher compression than others. This can cause pinging. If pinging (detonation) occurs, make sure you are using at least 92 octane fuel. If pinging still occurs, we recommend changing the injectors to the Ford 24Lb per hour injectors. These can be purchased through Powerdyne. Call (661) 723-2800 for further information.

Completed Installation