GZ Motorsports Vacuum Pump Kit
Motor Plate or Head Mount Installation Instructions

Remove existing harmonic damper mounting bolt. Slide the provided Grade 8 pulley mounting bolt through the pulley and install on the harmonic damper. Only thread the bolt into the crankshaft 1-2 turns while we check a couple things. First, make sure that the damper surface that the pulley mounts on is machined. Most aftermarket dampers are, however many stock dampers aren't. It is important that the surface is machined or the pulley will not run true. Second, be sure that there will be approximately ¾" of bolt engaging the threads in the crank snout. If it is to short, be sure the dampener is completely pressed onto the crankshaft. If the bolt is too long, it can be shortened or the thick washer from the old mounting bolt can be used. Make certain the bolt doesn't bottom in the crankshaft before tightening the pulley. Lightly, install the 1/8" dowel pin in the end of the pulley (so it can be removed), see if it lines up with the keyway in the balancer and if the depth of the air gap in the keyway is deep enough to accept the dowel pin.If the dowel pin is missing or doesn't line up with the keyway, leave it out. It isn't critical to have it installed.

2. Once the bolt length is confirmed, install the pulley using the provided washer and torque per OEM specification. **Re-torque after heating the engine.**

3 Install the UVPM plate with vacuum pump on the appropriate head or to the motorplate as applies and as provided per your receipt/packing list.

4. Check alignment with the pulley. Add washers, or cut billet shims as required to attain alignment of the pump pulley with the crank pulley or mandrel.

5. Install hoses between the inlet side of the pump and the fitting installed in the front face of the valve cover or GZMS Pan Evac breather in top front of the valve cover. Plumb the outlet side of the pump to a breather tank.

6. Once the plumbing is completed, the pump performance should be checked. A quick check can be done by starting the engine and removing the inlet hose from the valve cover. Cover the hose your hand and make sure you can feel the suction from the pump. A better way is to connect a vacuum gauge to the valve cover and measure the vacuum. A well-sealed engine with good piston rings (not much blow by) should draw between 12 to 15 inches or more Mercury (hg), depending on the pump you purchased, at 5000 rpm motor (depending on the under drive ratio). You should install a Vacuum Relief Valve if the measured vacuum at the end of the track (at maximum RPM) exceeds 10" on your gauge. The VP104 Super Pro pump is tested at 1900 rpm pump, each pump develops between 17 and 23 inches of Mercury at these rpm, the net vacuum you achieve is dependent on blow by, which varies from engine to engine and fuel type and power adder's

1. Important Installation Notes:

- Although the pump internals are relatively resistant to rust, moisture or Alcohol sitting in the pump for a long period of time could cause damage. This condition can be alleviated by running the engine long enough to warm the pump and adding 2-3 oz of oil before storing pump..

- **Do NOT over tighten fittings in pump. A cracked case is not warranted.**

- The pump requires some oil to pass through it to keep the Rulon wipers lubricated. A dry pump will cause relatively rapid wear to the Rulon wipers. If a GZMS Vacuum pump wears out within one year of purchase, GZMS will repair or replace the pump at no cost unless the pump has been run "dry". Be sure to CHECK and limit oil content in breather tank per pass to ¼ tank or less this is YOUR responsibility. GZMS takes no responsibility for how products are manufactured, installed or used. It is the users sole responsibility to assure appropriate use of GZMS products. If you have questions Call GZMS.

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