



## **ALUMINUM FLYWHEEL INSTRUCTIONS**

**Congratulations, you have purchased the finest flywheel for both increased engine performance and engine life!**

Please follow the OEM recommendations for installation of your new flywheel with the following notes:

### **FITMENT**

Because of standard OEM factory manufacturing tolerances, the aluminum flywheel to crankshaft fit may vary from slip to interference. If an interference is present, check to see that when the flywheel bolts are torqued, the flywheel is pulled tight against the mating crankshaft surface. Remove flywheel and inspect for evidence of proper fit. Excessive flywheel run-out is evidence of improper fit.

Interference at the crankshaft "boss" can be corrected by removing excessive material with a 3 cornered scraper or by heating the flywheel on an electric "hot plate". Never leave the hot plate unattended. Aluminum expands at twice the rate of steel so that in order to retain a tight fit when the engine and flywheel gets hot — the aluminum flywheel has to go on tighter at ambient temperatures for a proper tight fit at running temperatures.

**Test the flywheel and clutch that you plan to use for rotational clearance inside of the bellhousing and to the engine for clearance before final assembly. Normal manufacturing tolerances with the factory bellhousings, oil pan, sensors, engine blocks and or any other area that could cause clearance problems must be checked.**

*The flywheel application has been derived using the best possible sources. The end user must verify fitment before installation.*

### **INSTALLATION**

For vehicles equipped with sensors triggered off of the flywheel, measure the clearance between the flywheel and trigger before removal of the original flywheel. This clearance must be matched after installation of your new flywheel. This may require shimming for clearance or moving the sensor in.

Failure to do so will result in a vehicle that runs poorly or not at all.

Apply a small amount of Loctite to the OD of your pilot bearing when installing it in your new flywheel. The fit is not as tight as your OEM steel flywheel as the aluminum flywheel and steel bearing heat differently. The flywheel must be designed this way to work properly.

Clutch threaded bolt holes are USS (coarse thread) or standard Metric as this is stronger for aluminum.

If your flywheel uses dowels for the clutch, the dowels should be pressed in with a vise. You must apply a small amount permanent Loctite on each dowel before installation.

Follow the OEM specifications for the torque and replacement of the flywheel to crank bolts and clutch mounting bolts.

### **BALANCING**

**Since this is a CNC machined aluminum flywheel it is very close to the correct balance, but you should always check the balance with your clutch pressure plate and your particular engine - especially if it is an external balance configuration.**

### **WARNING**

*Do not use Loctite on the crank register because it prevents the flywheel from properly seating against the crank.*

*Dual Mass replacement flywheels may cause added gearbox noise. This is a normal effect that is well worth the added performance. The noise comes from the idler gears and does not pose a premature wear problem*

### **FOR ANY PERFORMANCE USE VEHICLE**

Inspect flywheel whenever possible for fatigue cracks.

Some of the most critical areas to inspect are:

- (1) The crankshaft register
- (2) Flywheel to crank mounting holes
- (3) Ring Gear

Extreme heat can adversely affect the dowels and ring gear. For performance use vehicles special dowels are available. Extreme heat can, as with any flywheel, affect the ring gear causing the ring gear to grow and not return to its static diameter. Precautions must be taken in performance use vehicles for this situation.

The use of a scatter shield for the clutch and flywheel area is a must in all performance use vehicles.

High Performance parts and Service excluded from warranty.

Due to the unusual stress placed on racing parts, and because of the circumstances under which they are often used, racing parts are sold without warranty, as is, and all warranties, express or implied, of merchantability, or of fitness for a particular purpose, or otherwise are expressly disclaimed and denied.

See reverse side for specific number instructions and policies.

### **LIMITED WARRANTY**

Except for high performance parts, seller warrants this merchandise to be free from defects in material and workmanship for one year from date of purchase. This limited warranty is in lieu of all other warranties, expressed or implied, including, but not limited to, warranty of merchantability, and warranty of fitness for a particular purpose. SELLER DISCLAIMS ALL RESPONSIBILITY FOR CONSEQUENTIAL, INCIDENTAL, OR COMMERCIAL LOSSES, INCLUDING LABOR CLAIMS from use of this merchandise. If the merchandise fails to conform as warranted, deliver or... ship it to seller, freight prepaid, along with proof of purchase and note explaining defect, defective, merchandise will be repaired or replaced free of charge, or credit given at seller's option. This warranty shall be interpreted and applied in accordance with Ohio law.

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**SPECIFIC MODEL INSTRUCTIONS**

**161881- Eclipse V6** - Original steel mounting plate must be attached using the provided hardware. Be sure to use a drop of permanent Loctite on each screw. Torque to 30 foot lbs.

**161941, 161947, 161991 & 161997 - Mazda RX7** - To ensure that your new aluminum flywheel was constructed to the optimum design, the factory counterweight must be used. This counterweight (part number N351-11-521) was used on RX7's with automatic transmissions. This part is available through your local Mazda dealer. The use of Grade 8 or higher 10MM X 1.25MM X 21MM bolts to mount the counterweight is also required.

The rotary motor used in your RX7 is capable of much higher RPM than most standard motors. For this reason the use of a certified scatter shield for any high performance use is necessary. This is true whether using our aluminum flywheel or the factory steel unit.

**194201** - For 1996 and up applications the clutch and flywheel mounting bolts from 1995 model must be used.

**199145** - New Porsche flywheel bolts (part number 911 102 171 00) must be installed. Torque the flywheel bolts to 110 foot lbs.

**199441** - Torque the flywheel to crank bolts at 74 foot lbs. Adjust the sensor screw on the side of the flywheel for proper clearance to the sensor.

**199681** - The pilot bearing must be Loctited into place once the correct depth is found. Allow the Loctite to set up before installing the flywheel. Follow Loctite's instructions for use.

**199111 & 199991** - Torque the flywheel to crank mounting bolts to 70 foot lbs. 1978-1983 911's require the use of pilot bushing #901-102-025-01.

**LEGAL POLICY****HIGH PERFORMANCE PARTS, SERVICE AND INFORMATION EXCLUDED FROM WARRANTY:**

Due to the unusual stress placed on high performance parts, and because of the circumstances under which they are often used, high performance parts are sold without warranty, AS IS, WITH ALL FAULTS, and all warranties, expressed or implied, of merchantability, or of fitness for a particular purpose, or otherwise are expressly disclaimed and denied.

**NO INDEPENDENT REPRESENTATIONS OR AGREEMENTS:**

There are no agreements outside of this written contract, except as the parties have elsewhere agreed in writing, nor has either party been induced to enter this agreement as the result of any oral representation or promise. Each party has relied on his own expertise and knowledge in entering this contract and each party acknowledges the consideration for the contract to be valuable and sufficient.

**DUTIES:**

The duty of Fidanza Engineering Corporation to the customer is strictly contractual and shall in no way exceed the duties accepted herein, and where there appears an ambiguity in the contract language, the same shall be construed to limit the duty of Fidanza Engineering Corporation.

**CONSENT TO JURISDICTION:**

The parties agree that any dispute arising out of parts, service or information provided by Fidanza Engineering Corporation shall be decided by the courts of the state of Ohio and that no other court shall have jurisdiction over said dispute. Fidanza Engineering Corporation maintains no sales force, service facility or agents outside the state of Ohio.

**EMISSION CONTROL COMPLIANCE:**

Customers are responsible for emission control compliance (if any) of FEC's engine and/or other components in their locality.