



## IMPORTANT – PLEASE READ

### GRAND-AM CUP / KONI CHALLENGE SERIES STEEL FLYWHEEL for BMW's

#### ***Please read these instructions in their entirety before starting your installation***

This special purpose steel flywheel is specifically designed for use in all BMW models currently accepted for competition in the GRAND-AM CUP / KONI CHALLENGE Series. It is engineered to comply with the allowable flywheel weight and clutch mounting specifications stipulated in Sections 7-13.5 and 7-13.6 of the 2004-2009 GRAND-AM CUP / GRAND AM KONI CHALLENGE Series Regulations.



This flywheel is designed as a “multi-application” component which may be utilized with all BMW factory 5 & 6 speed manual transmissions. It is supplied “Zero-Balanced” and **requires the use of an OEM or performance aftermarket BMW E36 M3 style pressure plate** and the appropriate 240mm solid-hub clutch disc<sup>1</sup> matching the input shaft diameter/spline configuration of the transmission employed. This allows usage of this flywheel with the following BMW transmissions:

- “Standard” 5-speed manual transmission common to most late model 3-series
- Late model 6-speed manual transmission introduced in the '03 E46 330's and Z4's (see note<sup>2</sup>)
- E46 M3 6-speed manual transmission (S6S-420G) with the larger 35mm input shaft

Installation and use of a performance clutch disc, such as the HD Sports clutch discs offered by Sachs, is highly recommended. The clutch disc selected for use must have a pad lining thickness between 8.1 - 8.4mm thick for proper operation with the E36 M3 pressure plate. The disc hub must also match the input shaft diameter & spline configuration of the transmission being used. JB Racing can supply you with the complete flywheel/pressure plate/clutch disc package.

#### Notes-

<sup>1</sup> -This flywheel is designed for use with a solid-hub clutch disc. This flywheel is not designed to accept any sprung-hub clutch discs.

<sup>2</sup> -All applications, except the E46 M3 (S6S-420G), using or upgrading to the late model 6-speed transmission will require an optional flywheel hub mounted pilot bearing PN 552-271 (see photo) for support of the transmission input shaft. This bearing will be installed at the time of purchase if specified, or it may be purchased separately and retrofitted in the field to allow for any future transmission upgrades without requiring a flywheel change.



#### **CAUTION-**

**Correct installation of this flywheel requires that you use the flywheel-to-crankshaft bolts enclosed with your JBR flywheel. DO NOT ATTEMPT TO SUBSTITUTE as the factory stock flywheel bolts are too long. Use of the stock flywheel bolts will result in damage to internal engine components.**

#### **RECOMMENDED INSTALLATION PROCEDURE**

1. Remove the stock flywheel and clutch from the engine
2. Now would be a good time to check and/or change the rear crankshaft seal and pilot bearing
3. We also recommend you install a new Throw-out bearing

4. Install your new flywheel, making sure both the crankshaft flange and flywheel mating surfaces are wiped clean and free of any dirt or debris before assembly
5. The enclosed flywheel bolts MUST be used for correct installation. [The factory recommended torque specifications should be followed for all flywheel and pressure plate hardware.](#) This flywheel is designed to have a slight “interference” fit with the crankshaft hub and therefore it MUST be pulled onto the crankshaft *gradually and equally* until fully seated on the crankshaft flange. (DO NOT TORQUE THE BOLTS NOW)
6. Remove all of the bolts used to pull the flywheel onto the crankshaft.

#### **LOCTITE PROCEDURE FOR CRANKSHAFT BOLTS**

1. It is important that you do not allow the Loctite to get between the crankshaft flange and the flywheel.
2. Place a small amount of Loctite on a small screwdriver blade tip and then transfer it onto the female threads in the crankshaft flange. Do this in all eight (8) bolt holes. *NOTE: if you apply the Loctite directly to the bolt threads and then insert the bolts, the Loctite will be sheared from the threads and go between the flywheel and the crankshaft surface.*
3. Place a very small amount of moly-lube under the head of each bolt. We use, and recommend Loctite brand Heavy Duty Anti-Seize (PN 51609).
4. Install and snug all (8) bolts. Tighten all bolts using the factory sequence and torque specifications.
5. Wipe clean any/all excess moly-lube from around all of the bolt heads. If not cleaned, any excess moly-lube will sling from the bolts and will eventually get into the clutch surface causing slippage and premature wear.
6. Apply a drop of oil to the threads of the clutch cover mounting bolts and install the clutch and pressure plate assembly using the proper spline alignment tool. Torque the clutch cover bolts to 18 ft./lbs. maximum. DO NOT OVERTIGHTEN

**Thanks for selecting this JB Racing GRAND AM/KONI CHALLENGE SERIES  
Flywheel and/or Clutch System – GOOD LUCK and GOOD RACING!**