



## J2 TECHNICAL ARTICLE

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### A SECOND METHOD OF BALANCING THE ENGINE

If your gear stick rattles and does this louder and louder as the engine R.P.M. is increased, there may be a good chance that your crankshaft and flywheel are out of balance. There is no better substitute for a professional balance unit, but if you want to correct the problem without having to pull the engine, one MMM Register member came up with "Bodger Balancing"

1. Remove the inspection cover on the bellhousing and number the bolts that hold the clutch cover plate onto the flywheel.
2. Start the engine and judge the amount of vibration at 3,000 rpm.
3. make a weight 3/4" in diameter, 1/4" thick with a 5/16 hole.
4. Place the weight at the first bolt (#1) and repeat the vibration assesment of step two. Move the weight to bolt position #2 and repeat the vibration assesment. Continue moving the weight and repeating the vibration assesment until all bolts have had the weight.
5. Leave the weight fitted at the bolt position where the least vibration was experienced.
6. Repeat steps 3,4, & 5 with weights of greater and lesser weight as needed until no improvement can be made. It is possible that the final weight being added might be as light as 1/16th of an ounce.

In conclusion there is some food for thought. If you have had your crankshaft professionally balanced, you have wasted your money if your clutch cover bolts and springs are of different weights, unless you number them and keep them in the same position as they were when the assembly was ballanced. Also that the washers are always kept with the same bolt. If 1/16 ounce can make a visual difference in vibration at 3,000 rpm then bolts washers and springs are critical in maintaining the balance.