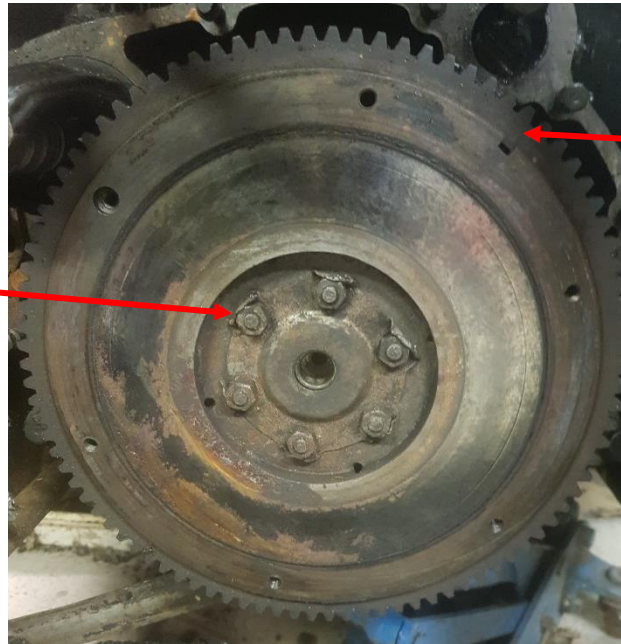


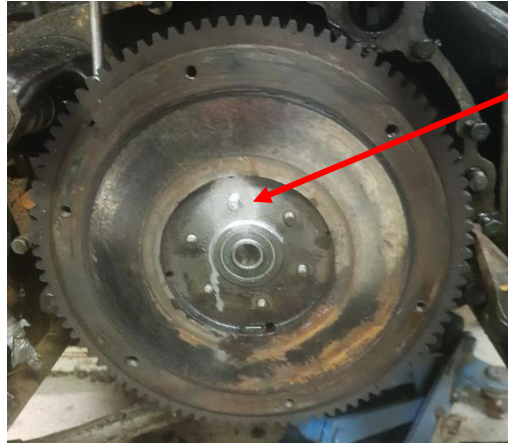
Flywheel

Removed this and had it and have the clutch face cleaned up, lightened and balanced.

To remove straighten out the locking plate and undo the mounting bolts. Ensure you mark the position of the flywheel on the mounting bolts for timing on the engine



This is the 8 degree timing mark that the 6 mm pin will sit in through the bell housing



I Initially sprayed the flywheel and bolt with paint to know which hole aligned with which bolt. After this I stamped the hole and bolt position so they are permanently marked.

Firstly removed the flywheel taking care to note which hole aligned with which bolt so that it can be replaced in the same position for ignition timing.

The refacing and balancing was done by Crankshaft Rebuilders in Cottage St. Blackburn and takes about a week. They need the flywheel and clutch housing (don't need the clutch plate) and ideally a crankshaft (doesn't need to be the one out of the car) to mount and spin the flywheel on. If you don't have a crankshaft then they can still do it but takes a little longer and as a result more \$.

There has been much discussion about how to lighten the flywheel and by how much. General consensus is that the flywheel can do with being lighter but you don't want to take too much weight

off as the engine does benefit from having the inertia of the flywheel. By lightening the flywheel it is thought you get-

- Better acceleration/economy
- Better cornering as there isn't as much of the gyroscope effect of the flywheel when changing direction (i.e. reduces the want for the car to continue in the direction of travel).

Some have suggested that you can knock the metal ring off the front of the flywheel (just in front of the starter motor gearing) while others have taken metal off the back of the flywheel.

Thought this ring at the front can be removed by getting a cold chisel in behind it and hitting the chisel with a hammer



Alternatively, you can shave off the full face of the metal at the back of the flywheel



Most appear to take metal off the back of the flywheel and the amounts have varied greatly (up to 30 mm deep). If you take this much you may have difficulty in being able to align the 6 mm pin with the 8 degree timing slot cut into the edge of the flywheel.

With the weight reduction of the diaphragm clutch Crankshaft Rebuilders have suggested taking no more than 15 mm off the back of the flywheel.

The flywheel ended up having 15 mm taken off the back of it. This reduced the original flywheel weight of 15.2 kgs to 11.6 Kgs.



Flywheel with 15 mm of full face shaved off

The original clutch housing, mounting ring and plate weighed 9.7 kgs. The new diaphragm type housing, mounting ring and clutch plate weighs 7.5 kgs.



Clutch plate face dressed.

Note that the clutch assembly mounting surface has also been dressed down the same amount as the clutch plate face to maintain the correct mounting distance of the clutch plate

Overall the complete flywheel/clutch assembly went from 24.9 kgs down to 19.1 kgs, a reduction of 5.8 kgs.



The flywheel with the new clutch assembly mounting ring attached



And with the diaphragm clutch body in place.

The flywheel was also balanced. To do this they took an original crankshaft, cleaned up the main bearings and balanced it. They then added the lightened flywheel and balanced that then adding the new diaphragm clutch body and balanced that.



Old crankshaft to spin the flywheel on. Cleaned up main bearings so it ran well in the balancing jig

Typically they reported that at about 10 grms out of balance you can start to feel the vibration. Anything out by around 20-30 grms is quite noticeable and anything above 40grms will have a definite impact and must be corrected.

They found that the flywheel was 70 grms out of balance which they said was quite significant and would certainly cause vibrations within the car at certain speeds. They corrected this to 0 and then added the new diaphragm clutch body (minus the clutch plate) and did similar.

They found that when they added the new diaphragm body that it was 49 grms out of balance which is also quite significant and would be on its own creating vibrations, maybe something that members need to be aware of if they are just changing from the original clutch assembly to the later diaphragm system?