Big 6 Engine Rear Oil Thrower Conversion

Peter Stringer

In my overall quest to bring Traction driveability and performance into the 21st Century I have been able to come up with a modification for the Big 6 engines to reduce oil loss from the rear end. Unlike the 4 cyl. Perfo and ID engines the six has the crankshaft exiting from both ends of the engine block. Both portals use the traditional old oil slinger method which after a while is prone to leakage. In this article I will describe how I have tackled oil leakage in the rear portal of the timing gear cover where the ring gear / harmonic balancer assembly is fitted.

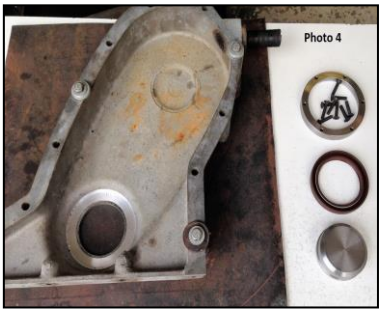
The first step is to remove the engine followed by the removal of the harmonic balancer assembly then the removal of the aluminium gear timing cover. See photo 1.

The three spoke damper hub has a diameter of 53mm where it passes into the oil baffle. This has to be reduced to 52mm to allow a speedi-sleeve to be fitted. See photo 2.

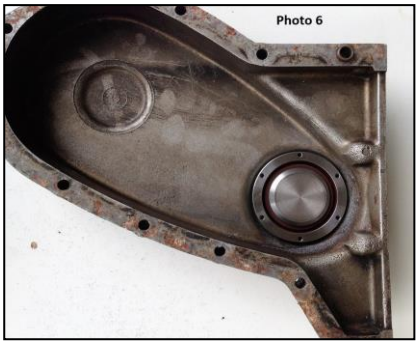
The grooves in the damper spigot are filled with epoxy as the sleeve is fitted. See photo 3.

NOTE: The sleeve in this photo has been pushed too far down, it should stop flush or just after the face of the hub so you don't see any grooves at the end. You then peel off the bottom flange. You can see from photo 10 that the seal only just sits on the sleeve in this instance. This was allowing a clearance of about 3mm between the hub and the face of the timing case cover.

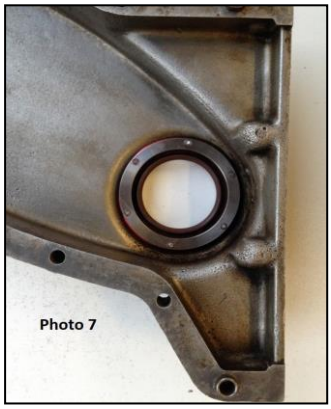
The baffle in the timing cover has to be removed with a special milling cutter to prepare the surface for fitting the neoprene oil seal. See photo 4.

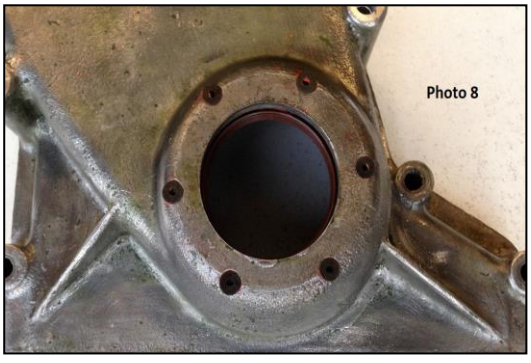


A retaining ring that houses the oil seal is centred with a centring plug then six attachment holes drilled through the cover. See photos 5 and 6.



With six countersunk M4 x 16 screws, some Loctite 501 Flange Sealant the retaining ring with the seal fitted is attached. See photos 7 and 8.





The components used are shown in photo 9.

The harmonic balancer in place Photo 10.

The cover and balancer assembly are now ready for refitting. If you haven't already done so, now is a good time to get the ring gear / harmonic balancer assembly dynamically balanced before the final assembly and replace the castellated crankshaft nut with the new hex nut which is now available.

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