



- 1 Cam gear tooth and camshaft key should have been aligned vertical at top dead but camshaft assembly error means the keyway is out of place and would retard timing by 5° on camshaft. New keyway to be cut 175° anticlockwise from existing, and gear rotated 180°.
- 2 Gear meshing determines position of crankshaft pinion  
At both meshing points the gear teeth are almost but not exactly aligned with the gear centrelines. This is a coincidence.
- 3 Because the engine is Desaxe, top dead centre is not where the crank is vertical but when the crank throw and connecting rod are in line (and bottom dead centre is not 180° from top dead). Crank angle at TDC: 3.42° at BDC: 185.10°
- 4 The crankshaft keyway is aligned with the crank.
- 5 These considerations determine the relationship between the teeth and keyway in the crankshaft pinion. The keyway centreline is 1.21° clockwise from the tooth centreline, looking at the timing end.
- 6 The ignition timing magnets are on the horizontal centreline.
- 7 A one thou error in the centering of a keyway produces an error of approximately one degree in crankshaft timing

Title: <b>Seagull Engine Timing Assembly</b>		
Scale: <b>2 : 1</b>	Projection: Third Angle	Dimensions: <b>in</b>
Drawn by: <b>C Lamont</b>	Date: <b>2010-11-03</b>	Drawing No: <b>ME014-25A</b>