



SPARES for ROYAL ENFIELD & AMAL

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## 3 WAY TIMING PINION Part 90008

This pinion will allow an advance or retard of 3degree on the camshafts (6 degree on the crankshaft).

Fit the timing pinion in the following way:

Place an oil tray under the timing cover, to catch oil that will spill out.

Remove the timing cover.

Remove the oil pump worm nut on the end of the crankshaft. NOTE: this nut is a **left-hand thread**.

Check if the timing pinion can be removed. Some are a loose fit on the crankshaft and some require a puller to remove them. If a puller is required continue as below.

Remove the exhaust camshaft, note its positioning and whether end float shims are fitted.

Using a timing pinion extractor tool, draw the timing pinion off the crankshaft.

Replace the exhaust camshaft in its original position.

Loosely re-fit the original timing pinion onto the crankshaft, ensuring the valve timing is correct according to the workshop manual: i.e. timing marks align with engine at TDC (top dead centre) on firing stroke (both valves closed).

You are now ready to fit the 3 way timing pinion.

1. Bring the piston to TDC. Lock the position of both camshafts (still with the timing punch marks aligned) so that the crankshaft can rotate when the timing pinion is removed.

The 'standard' setting is identified by the letter 'S' stamped on the pinion, the 'advanced' setting by the letter 'A' and the 'retarded' setting by the letter 'R'.

2. Remove the standard timing pinion.
3. Fit the 3 way timing pinion.

For advanced cam timing

Rotate the crankshaft anti-clockwise 6 degrees so the timing pinion gears mesh with the exhaust camshaft gears (DO NOT ALLOW THE CAMSHAFT GEARS TO MOVE).  
Push the pinion onto the crankshaft.

For retarded cam timing

Rotate the crankshaft clockwise 6 degrees so that the timing pinion gears mesh with the exhaust camshaft gears (DO NOT ALLOW THE CAMSHAFT GEARS TO MOVE).  
Push the pinion onto the crankshaft.

4. Release the camshafts.
5. Replace the oil pump worm nut (left-hand threaded) – check the condition of cork or neoprene seal.
6. Replace the timing chest cover with a new gasket. You can refill the oil in the timing cover through the rocker cover or tappet cover. Check oil level after a short run.

