



A Series Performance Camshaft

Part Numbers: G023CSF

Congratulations on your purchase of a Q Parts Performance Classic Camshaft. Q Parts is committed to offering a range of quality, innovative automotive products with value and reliability foremost.

Application

The supplied camshaft is suitable for Carburettor or Injection A-Series 998cc to 1380cc engines fitted with Standard or 1:5:1 roller rockers and A-Plus slot oil pump drives only

Please Note

Top and bottom gasket sets are required to complete installation. For fitment on MG Midget, early Minis with pin drive and 1275cc Minis with star drive, a slot drive oil pump is required.

Additional Performance Tuning Products

To release the potential of your fast road camshaft, check out the additional valve train upgrades below:

- Performance Camshaft Followers x 8 (G044CF2)
- A Series Adjustable Vernier Gear (G046)

Tools & Lubricants

- TT2929 Protractor Timing Disc
- G045 Cam Lubricant

General Instructions

The information below is intended to provide outline installation guidance only. For specific details on how to remove and install the camshaft along with torque data, please refer to your vehicle's Factory Workshop Manual. If you are intending to change other fuel or ignition components it is advisable to install and test these first prior to replacing the camshaft. Be sure that the engine starts and runs well before attempting to install the camshaft and related components. If this advice is not followed you risk increased initial wear of the camshaft and followers from poorer lubrication and less ideal initial conditions whilst fault finding in an attempt to get the engine to run.

Replacing the Camshaft

Replacing a camshaft on a A-Series engine requires removal of the inlet & exhaust manifold, pushrods, cam followers, timing cover, timing chain & gears, distributor, oil pump & drive and sump. For detailed camshaft removal instructions refer to your vehicles Factory Workshop Manual. For those vehicles where removal of the camshaft can be tackled with the engine remaining in situ the radiator, grill, and oil cooler (if fitted) should be removed, noting an engine hoist may be useful to facilitate removal of the sump when raising the engine slightly off its mountings.

Camshaft Timing

Your Q Parts Performance Classic Camshaft has been machined from steel billet 55-60 HRC, making use of the latest CNC machining technology to achieve consistent profiles. Unlike re-profiled camshafts which can suffer from inconsistencies across the cam lobes and typically do not retain their original timing specification, reducing the effectiveness of the factory pulley timing marks, a Q Parts Performance Classic Camshaft can be simply timed-in using the camshaft timing guidelines within your vehicle's Factory Workshop Manual. However, for optimum performance we recommend the use of an Adjustable Duplex Vernier Pulley to provide greater accuracy when setting the inlet full lift position (we refer you to the values given below).

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Alternatively offset woodruff keys may be used. (In both cases the use of a timing protractor disc and Dial Test Indicator is required).

Camshaft Timing Data

- FAST CAM 1070 (Inlet Full Lift After Top Dead Centre)
- Valve Clearances Inlet and Exhaust valve clearances should be set to 0.015" cold.

Bedding-in the Camshaft

Bedding-in the camshaft properly is essential to ensure a long service life. On installation coat the top and sides of the camshaft followers with engine oil. Coat the camshaft lobes and bottom of the camshaft followers using camshaft lubricant. Camshaft lubricant is optimised for high stress areas and must be used on fit up. Before bedding-in can commence ensure you have refilled the engine with the recommended oil. If the performance camshaft installation has been part of a wider engine rebuild, or there has been an extended period of time between installation of the valve-train and bedding-in; it is an advantage to prime the oil system. First remove the spark plugs, turn the engine over for no more than ten seconds on the starter motor and leave a further ten second interval between cranking. This should be repeated until the oil pressure gauge registers a reading. Ready your engine to ensure a quick start to reduce load on the camshaft and followers by setting the ignition timing, check the batteries are fully charged and switch on the ignition in order for the fuel pump to prime the carburettors. Once the engine is ready to start it is important not to crank the engine too much to get it started. On engine start up increase rpm immediately to 2500rpm and hold it there for 15 to 20 minutes by adjusting the throttle stops (idle screws). Use the accelerator pedal to increase the rpm incrementally up to 2700rpm, this will aid oil splash within the cylinder block and actually reduces the loads

between cam lobes and follower. Do not allow the engine to idle at any time during this period. If you need to adjust something on the car during this time, return the engine to idle using the throttle stop adjuster (idle screws) before switching off the ignition. Carry out the required adjustments and then restart, returning to 2500rpm for the remainder of the bedding in

Further Tuning

When using a performance camshaft, it should be possible to increase the dynamic ignition timing by two to four degrees. Selecting a richer carburettor needle optimised for your particular configuration will further improve engine running (contact your specialist for advice). For optimum engine set-up we recommend the use of a rolling road. For performance tuning advice we recommend Tuning the A Series Engine by David Vizard, published by J H Haynes & Co Ltd. ISBN-10 1859606202

Actual Camshaft Specification (Duration & Timing values measured at 0.050” Cam Lift)

PROFILE	RPM RANGE	INLET DURATION	EXHAUST DURATION	INLET OPEN/ CLOSE TIMING	EXHAUST OPEN/ CLOSE TIMING	PEAK CAMSHAFT LIFT
FAST	1500-6000	245	245	15-50	54-11	0.288”
No.1 inlet timing - 107°		Valve clearances (in/ex) 0.015”			Table data represents actual camshaft specification	