



# 451-521 Crankshaft 10/10, Forged Steel

## Supplemental Information & Instructions

### MGA 1500, 1600

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#### A Little History

Crankshafts continue to be a challenge. As worldwide demand declines, it is becoming very hard to find a manufacturer that CAN make the crank AND actually WANTS to make them. We finally found a factory in India that could make them, but we had to buy a lot more than we actually needed. The good news is that the price, compared to what we have to pay for the T-Series crank, was reasonable. The bad news is the manufacturer has declined to make any more cranks because the tooling has been damaged, and they do not consider re-tooling to be economically feasible. We have not yet found anyone else willing to make these crankshafts.

#### What About the Quality?

Moss provided a long list of specifications to the manufacturer, starting with the steel. The cranks are forged from EN19, which is a high quality medium carbon, high tensile alloy steel that offers excellent ductility and resistance to wear. The US AISI equivalent would be 4140. This produces a crank which will offer greater durability than the original. The cranks are shipped to us packed in wooden crates with a thick anti corrosion material protecting the machined surfaces. Upon receipt in California each crank is cleaned and inspected. The journal diameters are compared to the factory spec. The balance is checked, and fine tuned if necessary. The depth of the input shaft hole is measured (at least 2.125") and then the pilot bushing is installed. The threads in the nose (5/8-16TPI) and rear flange are checked. Every crankshaft that was found to meet the original factory specifications was sold under the 451-520 part number. Those cranks are all gone. During the inspection process, we found a number of crankshafts that did not meet the factory specifications for the main/rod journals. These crankshafts, in addition to the work described above, have had all bearing journals ground 10 thousandths undersized, then micro-polished. The oil galleries have been cleaned. The cranks have been coated with Cosmoline, an oily/waxy petroleum based preservative and then re-packed in their wooden shipping boxes to ensure that they arrive at your door in good condition. Resized cranks are sold as 451-421, and they are shipped with matching main and rod, bearings, and a set of thrust washers. Please note that these are still new, not used crankshafts, and when our stock is exhausted, we will not have any more.

### Additional Notes

The B Series engine is pretty simple and can be rebuilt successfully by someone with reasonable mechanical skills. However there are a lot of tricks and techniques that can only be learnt by practice. We suggest that you have the engine rebuilt by an experienced professional mechanic and machinist, preferably folks with knowledge of the BMC B Series engine. For those wishing to take the plunge without professional assistance, we can only recommend seeking information from as many sources as possible. The factory workshop manual or restoration books alone will not give enough information to ensure success. We strongly suggest that you get help from someone who has had experience rebuilding these engines.

***Although every effort has been made to ensure the accuracy and clarity of this information, any suggestions that you may have that will improve the information (especially detailed installation notes and photos) are welcome. These instructions were developed and written by Moss Technical Support. If you have any questions or difficulties with your installation of this product, telephone 800-667-7872 between 7:00 a.m. and 4:00 p.m., Pacific Time for assistance.***

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