

Supplemental Information for 451-485 or AAA3105X Billet Crankshaft (EN40B) MG TB, TC, TD, TF, TF1500

About the Moss Crankshaft

For many years Moss supplied forged steel crankshafts for the T-Series. These proved to be truly excellent, and they have kept many MGs on the road. When it came time to think about the next generation of crankshafts, we decided to make some changes. The New Moss Crankshafts are made from, EN40B, is a chromium molybdenum steel alloy. They are machined in England from solid steel billets using state of the art CNC machines programmed with the specifications off the original MG blueprints. Once machined, the bearing journals are carefully polished. After machining and polishing, the crank is hardened and tempered to a 'T' condition, giving it a tensile strength of 850-1000 N/mm² (123,282 to 145,037 PSI). And finally, the crankshafts are balanced and Nitrided, The EN40B alloy is particularly well suited to Nitriding, a type of case hardening which gives a hard wear resistant case in the range of 61-65Rc. The end result is a crankshaft that will provide a rock solid foundation for your engine. **Note:** Comments in the original factory workshop manual indicate that it was not a good idea to turn the cranks undersized. This was due to a concern about subsequent failure of the machined crank. It is actually OK to turn an original crank 0.020 – 0.030” undersized, and certainly not a problem with our crankshaft.

Section of the original blueprint

Crank Journals, Standard Workshop Manual Specifications

The Workshop Manual incorrectly gives the journal diameter without any tolerance:

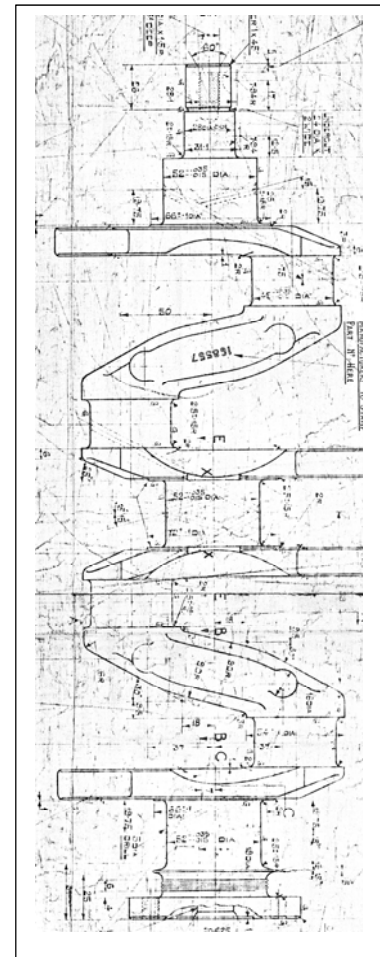
Main Bearing Journals	52 MM	(2.047 inches)
Rod Bearing Journals	45 MM	(1.772 inches)

Specifications from the Factory Engineering Drawings

Main Bearing & Rod Bearing Journals

Moss Crankshafts are CNC machined to these specifications

			Nominal	Tolerance	Min/Max
Main Bearing Journals	Min	MM	52.000	-0.0350	51.9650
	Max	MM		-0.0150	51.9850
	Min	Inch	2.04724	-0.0014	2.0459
	Max	Inch		-0.0006	2.0467
Rod Bearing Journals	Min	MM	45.000	-0.0350	44.9650
	Max	MM		-0.0150	44.9850
	Min	Inch	1.77165	-0.0014	1.7703
	Max	Inch		-0.0006	1.7711



Rear Oil Control Screw

This information is for those wishing to retain the “Archimedes” oil control screw

			Nominal	Tolerance	Min/Max
Crankshaft OD at oil control threads	Minimum	Inch	2.3129	0.0019	2.3148
	Max	Inch		0	2.3129
Rear Seal, ID	Minimum	Inch	2.3228	-0.0011	2.3217
	Max	Inch		-0.0027	2.3201
Clearance between oil control thread on crank and ID of Seal	Minimum	Inch			0.0053
	Max	Inch			0.0088

It is interesting to note the MGA which uses a similar “Archimedes” oil control screw gives a clearance of 0.003” to 0.006” in the MGA Factory Workshop Manual.



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