

FRANZ AND GRUBB ENGINE

VINTAGE TRIUMPH MOTORCYCLE
PARTS 1946-1970

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5149 STROHM AVENUE
NORTH HOLLYWOOD, CALIF. 91601

818-505-0340
FAGENGINE.COM

Triumph 650 Four speed Kibblewhite® high gear bushing installation notes

This 2 piece bushing kit is designed to replace the OEM style single bushing on all Triumph 650 four speed models from 1950 to 1972. However there are differences in the installation dependent on which year your transmission is. The following will help you decide which is correct for your application.



Pre Unit 500 and 650 1950-1962

The original bushing for these gearboxes was 2.200" long. This kit contains two 1.100" bushings. Install bushings from each end of gear until flush. If a space for oil to remain in the gear is desired, allow the outer bushing to protrude from the sprocket side of the gear. Protrusion can be as much as .437" (7/16") or as little as .100". The bushing will not interfere with the clutch assembly when installed this way.



Unit Construction 650 1963-1968

This arrangement used an oil seal (Triumph part 70-4578) which seals on the end of the bushing. The bushing on the sprocket side of the gear **MUST protrude from gear .437" (7/16")** to achieve contact with the seal. Inner bushing should be installed flush.



Unit construction 650 1968-1972

Since the oil seal for this configuration (Triumph part 70-6585) seals directly on the fourth gear, install both bushings flush in the ends of the gear.

This kit is designed to be sized **after installation** for clearance between the bushing ID and mainshaft. Honing the bushing is the most accurate way to achieve this. A 13/16" (.8125") reamer commonly used for camshaft bushings may also be employed.

Triumph factory specification for this clearance is .0032"/.0045". **The runout of the mainshaft, alignment of the inner cover, and condition of the bearings all must be taken into account when tighter clearances are used.**