

FRANZ AND GRUBB ENGINE

VINTAGE TRIUMPH MOTORCYCLE
PARTS 1946-1970

TRIUMPH ENGINE SPECIALISTS

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Triumph 500 Piston installation notes 1967-1974

These JCC 500 Pistons are a close reproduction of the OEM Hepolite/AE Triumph specification. We have found this piston set to be suitable for all 1967-up Unit construction Triumph 500 twin engines when installed correctly.

Although all Unit 500 cylinders are the same, the heads are different. These pistons are for the 1967-1974 “**non squish band**” heads. Use with earlier squish band heads will result in very low compression and poor performance.

They are a 9.0:1 compression ratio, however true C/R can only be determined by measuring, as there are many variables.

IMPORTANT:

These pistons are directional and must be installed with the larger cutaway towards the intake side. The smaller cutaway goes toward the exhaust.

Cylinder boring should only be done by a shop that is set up for boring motorcycle cylinders.

Most automotive machine shops do not have this capability. The cylinder must be bored from the base flange to maintain or correct the 90 degree relationship between the crankshaft and cylinder. Honing a cylinder to the next size will not correct a crooked bore.

Piston to wall clearance should be set at .0045” to .0055” for street bikes. Pistons should be measured just above the bottom of the skirt at a 90 degree angle from the wrist pin.

If you are having your cylinder bored at a shop that regularly does Japanese engines you may want to stress that this clearance is correct, as many modern clearances can be .002” or less.

Our procedure for setting up these pistons has worked well for us for the last hundred cylinders and is as follows:

Cylinder is bored from the clean base flange to .003” of the desired finished size using a Kwik Way FWS II boring bar on a Kwik Way stand

Cylinder is honed to .001” of the final size using Sunnen 150 grit stones (M27-J45) using an ample flow of honing oil

Final .001” is honed using Sunnen 220 grit stones (M27-J55) for Hastings cast ring set (Sunnen 280 grit stones {M27-J65} for Hastings Chrome top ring set)

Cylinder edges are deburred on head gasket surface, and thoroughly cleaned with a brush and washed in a 180° (82C) aqueous parts washer.

Bore straightness, roundness, and surface finish are equally important in the success of seating the piston rings. If you cannot find a local machine shop to do this work we would be happy to do it for you. Please email or call the shop for details.

A NON SYNTHETIC OIL SHOULD BE USED FOR BREAKING IN NEW RINGS