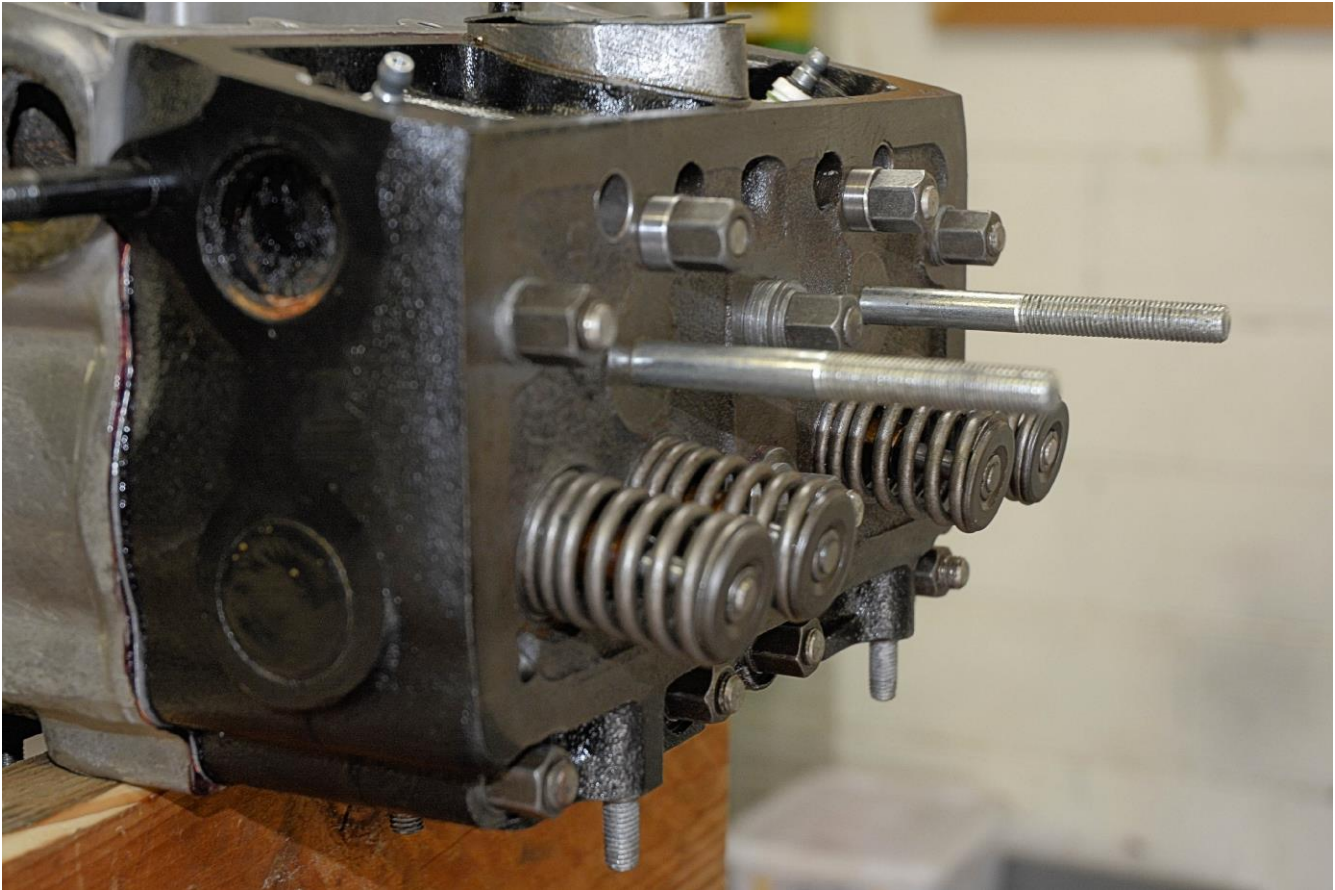


TECHNICAL NOTES SERIES

JOWETT JAVELIN – PA, PB, PC, PD & PE
JOWETT JUPITER – SA & SC



The cylinder head nuts tightened to first stage.

– PART XV –

ENGINE CYLINDER HEAD TIGHTENING TECHNIQUE

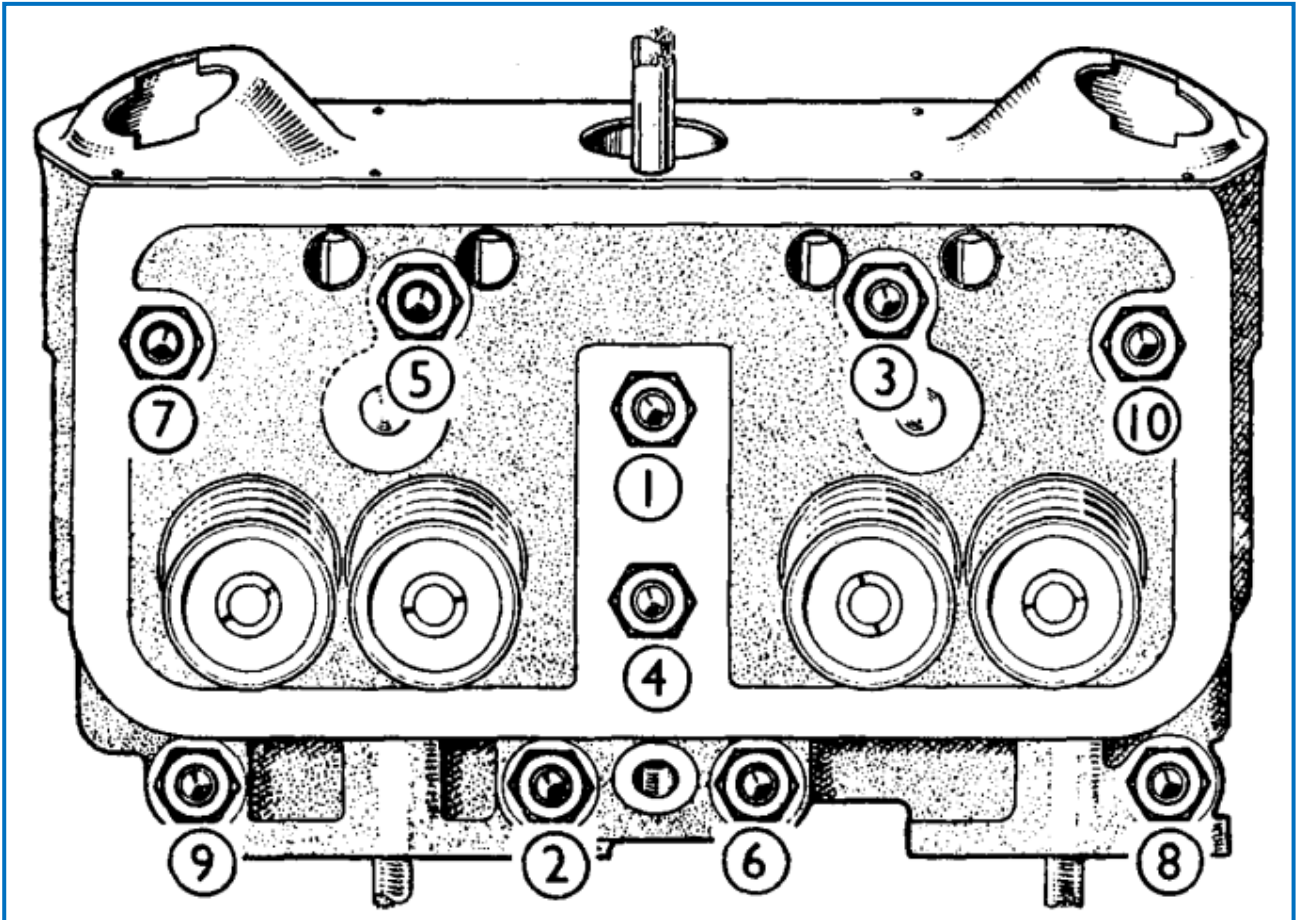
The Jowett Car Club of Australia Incorporated is not responsible for any inaccuracies or changes that may occur within this document. Every effort has been made to ensure total accuracy. It is not a Jowett Car Club publication and, therefore, the Club has no control over its contents. These Technical Notes have been compiled by using the latest information available.

Compiled by Mike Allfrey – 12th November, 2015.

Revised – 17th April, 2017

CYLINDER HEAD NUT TIGHTENING SEQUENCE

The sequence shown below must be used when tightening the cylinder head securing nuts. Assuming the cylinder liners are seated on copper spacers and shims, and New Zealand supplied cylinder head gaskets are used, the torque wrench setting should be 37.5 lb.ft (51 Nm). Tighten nuts in three equal stages – 27 Nm (20 lb.ft.), 40.5 Nm (30 lb.ft.) and finally to 50 Nm (37.5 lb.ft.).



Special Notes

1. Cylinder Head Stud Number 1 – This is the drilled and milled ‘oil feed’ stud. Typically, it is not threaded as far into the crankcase as the other studs. For this reason, the nut on this stud must be treated with great caution. During initial cylinder head tightening, use solid spacers and tighten this nut in sequence with the others. Use an open-end spanner to tighten.

While finish tightening, ensure that the oil feed banjo fitting does not rotate, otherwise the oil feed pipe could fracture at the silver soldered joint.

Torque on this stud/nut assembly should be 20 per cent less (40 Nm or 29 lb.ft.) than that specified for the remaining studs.

2. At Cylinder Head Stud Number 4:

The illustration at right shows a steel collar that can be machined from mild steel. The idea is to ensure a coolant tight seal at the at the rubber ring, Part Number 52913, by squeezing the rubber into the thread on the stud. This is done by forcing the spigot against the rubber ring, and tightening it until the major diameter contacts the cylinder head face. Using such collars may require that a longer cylinder head stud be machined. In use, the collar has proved to be entirely successful.



There is another method, however, and it involves the use of a small diameter cylinder head nut washer, same as at studs 3 and 5, outboard of the rubber sealing ring. Then, under the

nut, install a large diameter plain washer of substantial thickness. Thus good crush is achieved at the rubber sealing rings and there should not be any 'sponginess' while the nut is fully torqued. In this system, the small diameter plain washer forms the spigot shown on the collar.

3. Allow twenty-four hours for the Loctite 515 Master Gasket to cure prior to introducing a coolant mix to the cylinder head gasket joint.

4. Final Tightening Procedure:

Run the engine until it reaches normal operating temperature. Stop the engine and allow to stabilise over a twenty minute period before the final cylinder head nut tightening activity. Then, with the torque wrench set to 50 Nm (37.5 lb.ft.), tighten the cylinder head nuts in the correct sequence shown on Page 2.