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CATEGORY C

CYLINDER HEADS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche cars.

All Bentley 'T' Series and Corniche cars.

DESCRIPTION:

It is apparent that cylinder heads in service are being machined to remove bow which can occur under certain circumstances.

Previously service personnel have not been aware of the permissible amount of material which may be removed from the cylinder head face. As a result of this it has been found that some cylinder heads have been machined well below limits.

The maximum of material which may be machined from the cylinder head face is 0.025" (0.635 mm).

It has been found however that more than the necessary amount has often been removed such that any further machining would reduce the face thickness below the permissible limits. Thus the head has been scrap after only a small service life.

The following procedure must be strictly adhered to when machining cylinder heads:-

PROCEDURE:

The cylinder head must first be measured to determine whether there is sufficient material to permit machining.

1. The depth from the rocker aperture sealing face to the cylinder head sealing face is nominally 4.420" (112.27 mm). The minimum permissible depth after machining is 4.393" (111.58 mm).
2. The amount of bow evident on the cylinder head face should be determined.

If there is insufficient material on the cylinder head to eliminate the bow by machining, advice should be sought from the factory before proceeding further.

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3. When machining the cylinder head must be clamped level and must be well supported.
4. The cutting tool should be adjusted until it is just touching the 'high spot' on head. The head should then be machined preferably using a minimum of two cuts. The total depth of machining should be equal to the bow which has been previously measured. The final cut should be of approximately .002" - .003" (.05 mm - .075 mm).
5. If there is no suitable equipment available for accurately measuring the bow evident then several light cuts should be taken until the head is nearly machined its full length. The final cut should not be deeper than .0015" - .002". (.035 - .05 mm).

UNDER NO CIRCUMSTANCES SHOULD A LARGE UNCALCULATED CUT BE TAKEN SINCE THIS INVARIABLY RESULTS IN THE REMOVAL OF MORE MATERIAL THAN IS NECESSARY. THIS IN TURN REDUCES THE POSSIBILITY OF ANY FURTHER MACHINING SHOULD IT EVER BE NECESSARY.

Arr/JC1/Hly