MODIFICATION

ENGINE OIL FILLER CAP WASHER.

Owing to the reported loss of oil filler cap washers in service, it is considered advisable that this washer be permanently fixed in its recess.

This modification is now being incorporated on all cars prior to delivery, but a certain number of cars were delivered before the alteration took place and it is necessary that these cars should receive attention.

The process consists of sticking the rubber washer into the cap using Bostik No.772, care being taken that surfaces are clean and free from oil before adhesive is applied.

It is a simple matter to verify whether any particular car has been modified, as a washer which has not been stuck down is easily removable from its cap, and Retailers should take the necessary action when cars come in for servicing.

Will all Retailers kindly inform this Service Depot Concerning cars on which they carry out this alteration.

PRINTED IN ENGLAND

FOR INFORMATION. CANCELS BB43 dated 4.1.54.

REPLACEMENT OF TAPPETS.

This Bulletin supercedes Bulletin BB43 dated 4.1.54. which should be destroyed.

1. INTRODUCTION.

It has been found that a greater running clearance is desirable with the two window type tappet now being supplied for replacement purposes. This tappet, having two windows less than the earlier type, is more rigid, has a greater bearing surface and is slightly heavier, all factors which may cause the tappet temporarily to stick in the bore when the lubricating oil is cold.

Fitting in accordance with previous instructions may lead to this overtightness which is evidenced by considerable valve gear noise when lightly revving a cold engine. The noise is not unlike that of slack pistons. It will occur only when tappets have recently been replaced in service and should not be confused with tappet noise due to wear after considerable mileage.

Briefly, the new instruction is to fit tappets one size smaller than is found by 'feel fit' as previously recommended. The full procedure is detailed in the following paragraphs.

2. COLOUR CODING OF TAPPETS.

A range of tappets is available allowing selective fitting in steps of .00025" on the diameter as set out below. The tappets are colour coded as indicated and do not bear separate part numbers. Replacement orders should be by colour only. Both inlet and exhaust tappets are coloured similarly.

Tappet Diameter	Colour
1.18675 to 1.1870	Blue
1.1870 to 1.18725	Green
1.18725 to 1.1875	Yellow
1.1875 to 1.18775	Black
1.18775 to 1.1880	Black and Yellow
1.1880 to 1.18825	Green and Yellow

Retailers are advised that a set of six of these latest type tappets should be held for gauging purposes. Any of the earlier four window type now held in stock should be used up on repairs and not held as gauges in order to avoid confusion when re-ordering due to previous colour code changes.

3. TAPPET SELECTION AND FITTING.

Tappets are selectively fitted and should be a close clearance fit in their bores. A master set of six should be used for gauging purposes.

(i) Carefully wipe clean the tappet bore. Select a tappet from the set of gauges that will just slide down the bore without lubricant with the finger pressing lightly on the top.

(ii) Select a new tappet from stock that is one size less than the gauge tappet. Thus if a 'yellow' gauge tappet is found to give the required feel fit a 'green' tappet should be selected for fitting to the bore. Repeat for all the tappet bores.

(iii) Wash and wipe clean the new tappets without removing the 'Parkerising' from the bottom face. This surface, as well as being rustproof, is of value during running in. Etch the appropriate number from 1 to 6 on the top of each tappet to correspond with its bore, inlet or exhaust, commencing from the front of the engine.

(iv) Fit the tappets to the bores smearing the sides and bottom face with Gargoyle grease 234 or Mobilgrease 234. These greases have a high film strength and will assist in obtaining a good bedding surface during running in. They may be obtained in small quantities from the manufacturers.

Whenever the cylinder head is removed for decarbonising the tappets should be checked for pitting on the bottom face. Pitted tappets should be renewed. Serviceable tappets should be replaced in their original bores.

CATEGORY 2

STICKING OF THROTTLE CONTROLS.

This modification is introduced in order to prevent the possibility of complaints of sticking throttle controls, due to seizure of the lower throttle countershaft mounted in the frame. Briefly, the action to be taken consists of increasing the diametrical clearance between the countershaft and its bearings by reaming the bushes to .320" + .002" dia. or in the event of a reamer of this size being unobtainable, by reducing the diameter of the shaft by approximately .004" to .306" dia. by carefully polishing with emery cloth.

On chassis nos. B-297-CD, B-347-CD and all subsequent cars no action is required as the bores of the countershaft bushes are .320" + .002" diameter, giving the required clearance of .008" to .012".

PROCEDURE.

(i) Remove the R.H. front and rear undersheets to gain access to the countershaft.

(ii) Remove the lever from the outermost end of the countershaft, that is, remove the lever from the end of the countershaft which is situated inside the box section of the frame. This operation requires some ingenuity owing to the comparative inaccessibility of this end of the shaft.

(iii) Disconnect the control rod from the lever on the inner end of the countershaft, then, to provide withdrawal clearance for the countershaft, prop the clutch pedal in the disengaged position with the aid of a piece of wood of suitable length, and then remove the countershaft.

(iv) Ream the bushes to .320" + .002" dia. It may be necessary to remove the flywheel lower cover in order to obtain the necessary working clearance to carry out the reaming operation.

If a suitable reamer is not available, the countershaft should be reduced in diameter by approximately .004" to .306" - .002" dia. by carefully polishing with emery cloth. The reduced diameter should be localised to the two areas in contact with the bushes.

Continued

(v) Re-assemble the countershaft to its bracket after cleaning and lubricating the bushes. Check that the shaft possesses end play, the exact amount is not important as long as some is present.

(vi) As a means of identification to show that this modification has been carried out, the letter "R" should be stamped on the chassis frame just beneath the rearmost nut of the countershaft bracket.

Will all Retailers please notify this Service Station of the chassis numbers of cars on which the modification is carried out.

TIGHTENING DOWN THE CYLINDER HEAD.

FOR INFORMATION:

Further to Paragraph 2 of Service Bulletin BB-42, it is not now recommended that a break back or torque loaded spanner should be used since there is a danger of stretching the cylinder head holding down studs at a tension of 280-lbs/ins. on the 5/16" diameter studs. It should be particularly noted therefore that the only reliable and satisfactory method of tightening down the cylinder heads is under the control of a skilled fitter using a box spanner with a fixed length of tommy bar. The recommended tommy bar length is 6", and the nuts should be tightened down evenly working from the centre until by experienced "feel" the nuts are as tight as is wise having regard to the elasticity of the studs.

It may also be noted for information, that until recently 5/16" studs with standard 5/16" nuts were used. In order to improve the tensile properties of the studs, a special heat treatment operation was introduced. It will also be found that later cars have cadmium plated nuts, and as this has the effect of reducing the thread friction, extra care is necessary in tightening down.

Present production cars are now fitted with $\frac{3}{8}$" diameter studs and nuts. These will stand a greater degree of tension in tightening down.

The chief points arising out of these instructions are as follows:-

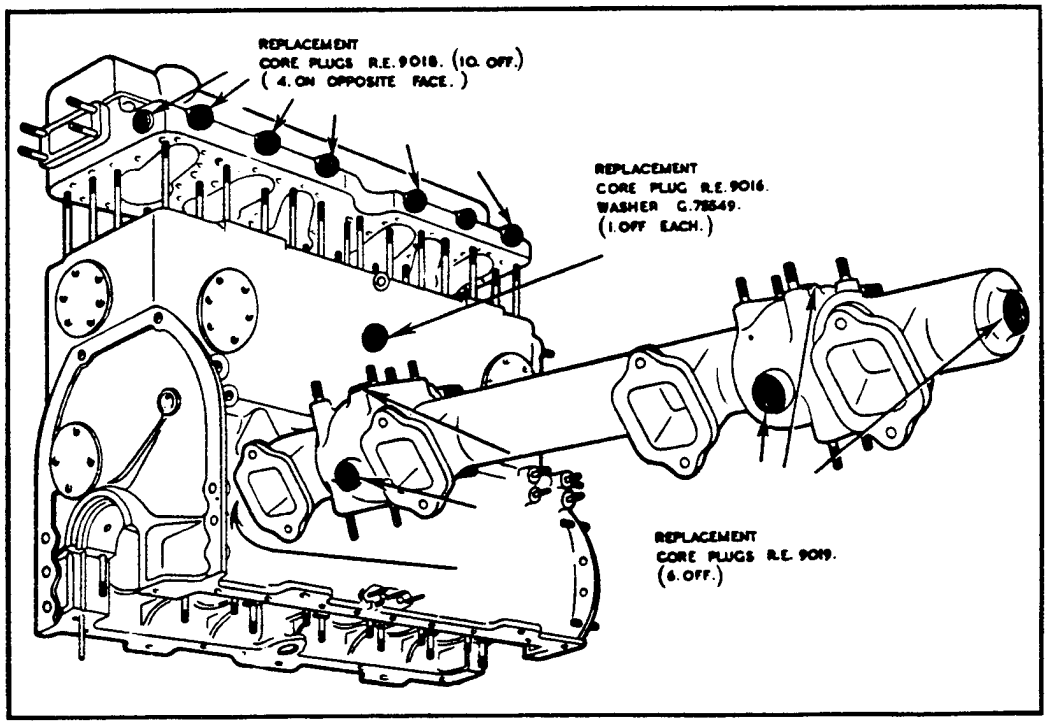
1. Klingerite gaskets where available, may be used up.
2. Future deliveries of gaskets will be copper asbestos.
3. It is advisable to use a jointing compound along the exhaust side of the C & A gaskets.
4. Care must be taken in tightening down the 5/16" holding down studs. Do not use an excessive length of tommy bar and tighten down uniformly keeping within the elastic limit of the stud.
5. Latest engines have $\frac{3}{8}$" diameter nuts and studs.

FOR INFORMATION:

CORE PLUGS.

Bentley Service Bulletin BB-19 deals with the replacement of engine core plugs on a Category 2 basis, conditional upon partial or complete overhaul.

The following illustration gives fuller details of the location of the core plugs to be replaced, together with replacement part numbers.



It should also be noted that if a coolant leak develops from any of the core plugs when the engine is fitted with the pre-modified type, this may indicate that a state of corrosion exists in other core plugs caused initially by the engine remaining drained of coolant for lengthy periods of storage or shipment. If a leak is apparent therefore, the instructions given in Bulletin BB-19, limiting this modification to overhaul cases only, must be disregarded, and all core plugs replaced with the modified type.

FOR INFORMATION:

CORE PLUGS - ADDENDUM.

When the modification detailed in Bentley Service Bulletin BB-19 is effected, an aluminium alloy crankcase core plug, additional to those illustrated in Service Bulletin BB-65, must be replaced by the modified type.

This core plug is positioned under the coolant pump mounting adaptor and in order to facilitate replacement, the coolant pump and adaptor must be removed.

The replacement core plug is the type specified for the crankcase side (RE.9016) and must be fitted with an aluminium washer (G.75549.) The amended list of parts necessary to incorporate this modification is as follows:-

RE. 9016	Core Plug	2	Off	(Crankcase)
G. 75549	Washer	2	Off	(Crankcase)
RE. 9018	Core Plug	10	Off	(Cylinder Head)
RE. 9019	Core Plug	6	Off	(Induction Pipe)