ROLLS ROYCE MOTORS LIMITED
MOTOR CAR DIVISION
CREWE, ENGLAND

PRE–1972 SERVICE BULLETINS

for

Rolls-Royce Silver Shadow

and

Bentley T Series

TSD Publication 2859

Rolls Royce reserve the right
to change information without prior notice

Contents

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February, 1972

Contents

Chapter A

General Information

3. HIGH-SPEED ROUGHNESS

APPLICABLE TO:

All left-hand drive Rolls-Royce Silver Shadow and Bentley T series cars produced prior to car number 4308.

DESCRIPTION

On a small number of cars roughness may be felt if the car is cruised continually at speeds between 160 k.p.h. and 190 k.p.h. (100 m.p.h. and 118 m.p.h.).

The roughness can be heard and felt in the form of a heterodyne which has a frequency of approximately 1 per second. In descriptive terms it can be heard as a boom at 1 second intervals with corresponding roughness being felt through the seat and body structure.

It should be noted that this particular roughness is felt only at these higher speeds and the range over which it occurs can vary. On some cars the range over which the roughness occurs may be between 168 k.p.h. and 176 k.p.h. (105 m.p.h. and 110 m.p.h.), while on other cars the range may be greater, between 160 k.p.h. and 185 k.p.h. (100 m.p.h. and 115 m.p.h.).

This roughness is caused by small out of balance forces in the torque converter transmission being amplified by the flexible mounting of the transmission and so transmitted through the structure of the car. A stiffened cast aluminium bottom cover for the torus unit is now available for service use which eliminates the roughness to a point where it cannot be felt by the occupants of the car.

ACTION

In the event of a customer complaint of high speed roughness the stiffened bottom cover for the torus unit should be fitted. The new part numbers required are as follows:

MATERIAL REQUIRED

PART NUMBER	DESCRIPTION	QUANTITY
UG 12833	Bottom cover	1
LC 2644	Setscrew	2
UA 1253/Z	Washer	2

Continued...

PROCEDURE

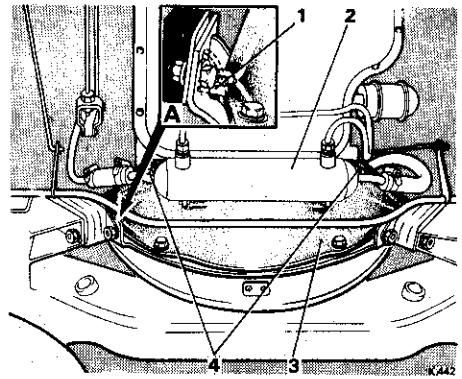
1. Drain the coolant system.

2. Remove the transmission oil cooler located beneath the torque converter transmission.

3. Remove the existing torus unit bottom cover.

Fig.2 Stiffened bottom cover - Torus unit

1 GUSSET TO BE REMOVED SHOWN DOTTED
2 TRANSMISSION OIL COOLER
3 STIFFENED TORUS COVER
4 LARGER SETSCREWS
A INSET TO SHOW GUSSET REMOVED



4. Remove the two lower engine foot gusset plates from the assembly plate (see Fig. 2). These are best removed using a cold chisel, the faces being filed flat afterwards.

5. Enlarge the two holes in the transmission casing where shown in Figure 2 and tap the hole to ⅜ in. U.N.C.

Recommended drill size 0.315 in. (8,00 mm.)
Alternative size 0.3125 in. (7,94 mm.)

6. Check for any casting flash on the sloping bottom face of the torque converter transmission casing.

Continued...

7. Place the bottom cover in position and lightly screw the four smaller setscrews with plain washers and the two ⅜ in. setscrews with plain washers into place.

8. Push the bottom cover up into the wedge shaped aperture, keeping the front face against the engine mounting plate.

9. Tighten the four smaller setscrews finger tight and then finger tighten the two ⅜ in. setscrews.

Torque tighten the four smaller setscrews to between 16 lb.ft. and 18 lb.ft. (2,21 kg.m. and 2,49 kg.m.) and the two ⅜ in. setscrews to between 19 lb.ft. and 22 lb.ft. (2,63 kg.m. and 3,04 kg.m.).

10. Fit the transmission oil cooler and fill the coolant system.

11. Road test the car.

4. LOW-SPEED VIBRATION

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

On a small number of cars a low-frequency vibration is apparent when the car is accelerated sharply from any speed within the range 60 k.p.h. to 130 k.p.h. (40 m.p.h. to 80 m.p.h.). The frequency of the vibration is approximately that of the road wheels and it is only apparent when accelerating.

In the cases experienced, the vibration was caused by the half-shafts running out of line due to the rear standing height of the car being too low.

PROCEDURE

In the event of a customer complaint of vibration of this nature it should only be necessary to reset the standing height of the car to eliminate the vibration. The correct procedure for setting the standing height of the car is given in Chapter H, 'Sub-Frames and Suspension', of the Workshop Manual.

CATEGORY C

ROAD WHEEL AND SUSPENSION ROUGHNESS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

INTRODUCTION

A number of complaints have been received of roughness and noise when travelling at varying speeds. The roughness and noise can be caused by a number of different features and this Service Bulletin is issued to described these features and the action to be taken by Service Personnel in the event of a customer complaint.

A brief description of the characteristics of the noises and the necessary procedures to effect a cure are as follows:

1. ROAD WHEEL VIBRATION

DESCRIPTION

Out-of-balance road wheels are by far the most common cause of high-speed roughness. This being so, before attempting to cure roughness of any kind it is most important to ensure that the road wheels are correctly balanced.

IMPORTANT

When it is necessary to balance the road wheels the following procedure should be applied.

1. Run the car on the road until the tyres are warm and naturally round. This will take approximately 12 miles (20 kms.) to achieve, dependent upon local conditions.

2. As soon as the car enters the garage remove the road wheels, before flats on the tyre are formed. Then balance the road wheels in the normal way.

Continued...

This procedure also applies if an on-the-car balancing machine is used. In this case the wheels should be raised off the ground as soon as the car enters the garage after running on the road. Then, and only then, should the wheels be balanced whilst on the car.

It is also important to note that the wheel and tyre units should run as true as possible, and to achieve this the correct fitting procedure as noted in Service Bulletin SY/R1, should be observed.

2. LOW-SPEED VIBRATION

DESCRIPTION

On a small number of cars a low-frequency vibration is apparent when the car is accelerated sharply from any speed within the range 40 m.p.h. to 80 m.p.h. (60 k.p.h. to 130 k.p.h.). The frequency of the vibration is approximately that of the road wheels and it is only apparent when accelerating.

In the cases experienced the vibration was caused by the half-shafts running out of line due to the rear standing height of the car being too low.

PROCEDURE

In the event of a customer complaint of vibration of this nature it should only be necessary to reset the standing height of the car to eliminate the vibration. The correct procedure for setting the standing height of the car is given in Chapter H, 'Sub-frames and Suspension' of the Workshop Manual.

CATEGORY C

CARS BUILT TO COMPLY WITH
THE AMERICAN FEDERAL SAFETY STANDARDS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series left-hand drive cars built to comply with the American Federal Safety Standards (car serial number SRX 6001 and onwards).

DESCRIPTION

Cars produced after and including the above car serial number and destined for the U.S.A. market are built to comply with the American Federal Safety Standards. This means that a number of the components fitted to these cars are peculiar to American market cars only, and that if any of these components are replaced with parts which are designed for use in another market, the car will no longer conform to the legal requirements of the American Federal Safety Standards.

Many American Owners take delivery of their cars in England and subsequently spend a touring holiday in England and Europe before having the car shipped to the U.S.A. Should it be necessary to replace any components on these cars, which are built to the American Federal Safety Standards, it is imperative that the correct components are used as denoted in the current Parts List (T.S.D. Publication 2201).

No. SY/A8
Circulation - All Distributors
and Retailers

CATEGORY C

THE CAR NUMBERING SYSTEM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars
All Rolls-Royce Phantom VI cars

DESCRIPTION

There has recently been three additions to the car serial numbering system which is used on the above cars and this Service Bulletin has been issued for information purposes to prevent any confusion arising from these additions.

The car serial number is marked on an engraved plate which is attached to the left-hand side of the bulkhead in the engine compartment, or in the case of later cars built to comply with the American Federal Safety Standard requirements, on an engraved plate attached to the left-hand front door pillar.

The complete car serial number consists of three letters followed by a four figure number.

CAR SERIAL NUMBER

The first letter of the car serial number denotes the body styling:

S = Standard saloon

C = Two-door saloon with coachwork by H.J. Mulliner, Park Ward

D = Convertible with coachwork by H.J. Mulliner, Park Ward

L = Long wheelbase saloon (Long wheelbase formal sedan in the U.S.A.)

P = Rolls-Royce Phantom VI limousine

Continued...

The second letter differentiates Silver Shadow motor cars from the Bentley T Series:

R = Rolls-Royce

B = Bentley

The third letter denotes whether the car is left or right-hand drive:

X = Left-hand drive

H = Right-hand drive

The different letter combinations of the car serial numbering system are shown below:

ROLLS-ROYCE

SRH = Standard saloon right-hand drive

SRX = Standard saloon left-hand drive

CRH = Two-door saloon right-hand drive

CRX = Two-door saloon left-hand drive

DRH = Convertible right-hand drive

DRX = Convertible left-hand drive

LRH = Long wheelbase saloon right-hand drive

LRX = Long wheelbase saloon left-hand drive (Long wheelbase formal sedan in the U.S.A.)

PRH = Phantom VI limousine right-hand drive

PRX = Phantom VI limousine left-hand drive

Continued...

BENTLEY

SBH = Standard saloon right-hand drive

SBX = Standard saloon left-hand drive

CBH = Two-door saloon right-hand drive

CBX = Two-door saloon left-hand drive

DBH = Convertible right-hand drive

DBX = Convertible left-hand drive

Note All coachbuilt cars were denoted by the prefix C (e.g. CRX) up to car serial number CRX 6646. Convertible cars produced after CRX 6646 however are denoted by the prefix D (e.g. DRX), while Two-door saloons continue to be denoted by the prefix C.

IMPORTANT

The complete and correct car serial number MUST be quoted whenever ordering parts or in any correspondence concerning a particular motor car, and on all Warranty claims.

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Service Bulletin issued for
Circulation All Distributors
and Retailers

Section A
Bulletin No SY/A9
Page No 1
Date 2.6.71

CATEGORY C

AUTOMATIC SPEED CONTROL

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series, and all Rolls-Royce and Bentley Corniche cars.

DESCRIPTION

An automatic speed control device is now available as a customer request item on a new car, providing it is included in the motor car specification order.

The device allows the driver to select a cruising speed which will then be automatically maintained, until cancelled by operation of the control switch, or by depressing the brake pedal. Provision is also made for increasing or decreasing the controlled speed without having to disengage and then re-engage the speed control. Cruising speeds of 24 m.p.h. (38 k.p.h.) and above may be selected.

The device comprises three main components, a Regulator, a Vacuum Servo and a Control panel.

The regulator, shown in Figure 1, is fitted in the engine compartment and is connected by special drive cables to both the transmission and the speedometer head, thus allowing the regulator to accurately assess the speed of the car. The regulator also contains a series of valves and is connected to the engine induction manifold such that the valves can accurately control in unison with engine speed the amount of manifold depression which is allowed to act on the vacuum servo.

As the vacuum servo is mechanically connected to the carburetter linkage, as shown in Figure 1, the regulator can by varying the vacuum applied to the servo, control the throttle opening and therefore the speed of the car.

The regulator is activated by the control panel which is situated within easy reach of the driver. The control panel has three switches, one of which is an 'On-Off' switch, one a decrease speed button and the third switch performs the functions of 'setting speed' and 'increasing speed'. The control panel is shown in Figure 2.

Continued...

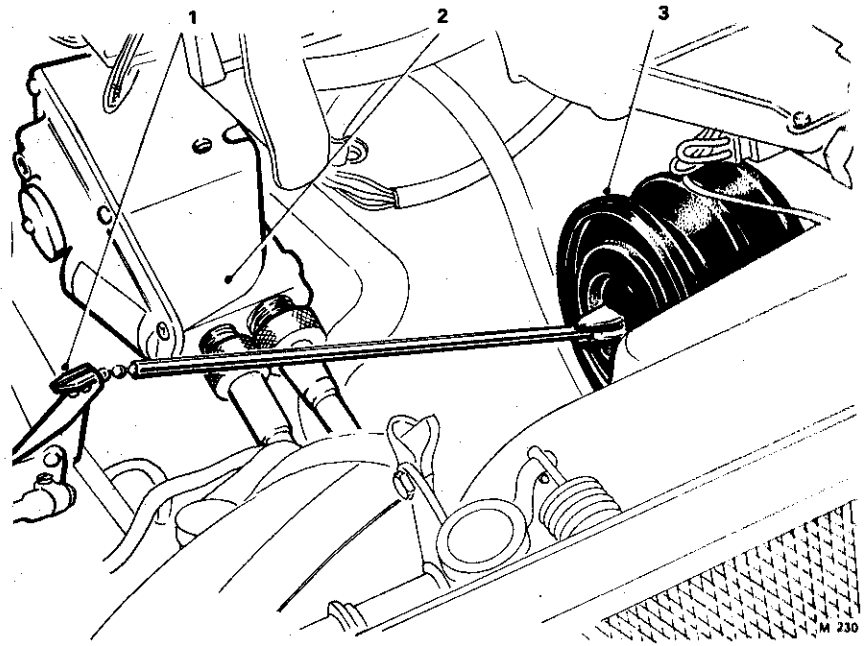

Fig. 1 Regulator and Bellows

1. Carburetter linkage
2. Regulator unit
3. Bellows unit

Continued...

When fitted, the speed control device must first be energised by using the 'On-Off' switch on the control panel. The car should then be accelerated in the normal manner until the desired cruising speed is achieved at which point the 'Increase' button should be momentarily depressed. This will have the effect of setting the regulator at that speed and the speed of the car will now be automatically maintained.

Adjustment of the cruising speed within the range quoted is accomplished by means of the two push-buttons. If it is desired to increase the selected cruising speed, this can be achieved by holding down the 'Increase' button which will cause the car to be gently accelerated. When the desired speed is reached, releasing the button will reset the regulator at that speed. Decreasing the cruising speed is achieved by holding down the 'Decrease' button, thus causing the car to decelerate until the desired speed is reached. Releasing the button will then reset the regulator. It is possible that if the 'Decrease' button is not depressed fully an increase in speed may result. Care must therefore be taken when using the 'Decrease' button.

Moving the control switch to the 'Off' position, or momentarily depressing the brake pedal, will de-energise the regulator and thus cause the vacuum servo to relax. The speed of the car will now be affected only by movement of the accelerator pedal.

TEST PROCEDURE

1. Drive the car along a level road at a speed of 50 m.p.h. (80 k.p.h.).

2. Energise the master switch.

3. Fully depress the 'Increase' button and then release. The car should then maintain 50 m.p.h. ± 1 m.p.h. (80 k.p.h. ± 1,6 k.p.h.).

4. Fully depress the 'Increase' button and hold until the road speed reaches 60 m.p.h. (96,56 k.p.h.) then release. The car should hold 60 m.p.h. ± 1 m.p.h. (96,5 k.p.h. ± 1,6 k.p.h.).

5. Fully depress 'decrease' button and hold until car reaches 50 m.p.h. (80 k.p.h.) then release and car should hold 50 m.p.h. ± 1 m.p.h. (80 k.p.h. ± 1,6 k.p.h.).

6. Slowly depress brake pedal until brake lamps are energised and speed control unit should disengage.

7. Re-engage speed control at 32 m.p.h. (51 k.p.h.) and check that it disengages when neutral is selected.

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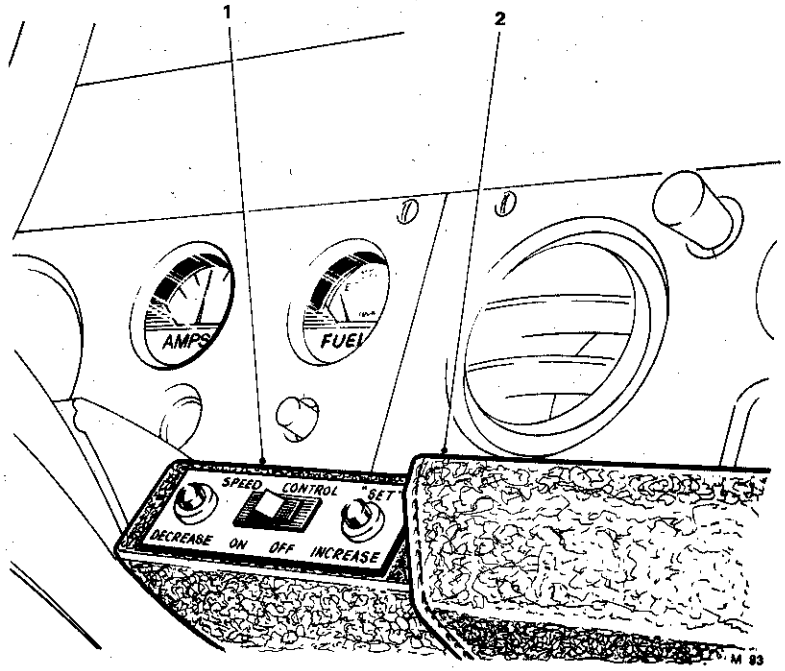

Fig. 2 Facia Controls

1. Automatic Speed Control controls
2. Facia lower roll

Continued...

Service Bulletin issued for
Circulation All Distributors and Retailers

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8. Re-engage the speed control and check that it disengages when 'On-Off' switch is moved to 'Off' position.

9. Check that the automatic control will not engage below 24 m.p.h.

10. In the event that the limits in item (3) above are exceeded an Allen-screw adjustment is provided on the regulator assembly, adjacent to the multi-pin socket.
It is marked 'C'. If it is found that the speed held in (3) is higher than that at which the unit was engaged or that the car accelerates from the engaged speed then the screw should be turned clockwise - i.e. in the direction of the arrow 'S'.
If the car decelerates then the screw should be turned anti-clockwise, i.e. in the direction of the arrow 'F'.

WARNING:

No other adjustments should be made to the regulator and the top cover should not under any circumstances be removed as this forms an integral part of the vacuum circuit.

Arr/JC1/EcK

Service Bulletin issued for
Circulation All Distributors and Retailers
Other Than U.S.A. And Canada

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Bulletin No SY/A10
Page No 1
Date 16.2.71.

CATEGORY C

INCREASED PERFORMANCE ENGINE FOR USE IN ROLLS-ROYCE AND BENTLEY CORNICHE MOTOR CARS

APPLICABLE TO

All Rolls-Royce and Bentley Coachbuilt two-door motor cars from Car Serial Number CRH 9919 onwards.

DESCRIPTION

The recently introduced Rolls-Royce and Bentley Corniche motor cars feature a number of changes from the two-door coachbuilt cars they replace. The styling and interior appointment changes are described in the relevant Sales Information Sheets.

The engine and its associated components feature a number of developments to give a greater power output than the engines of standard Rolls-Royce Silver Shadow and Bentley T series saloons. Some of these developments affect the servicing and overhaul of components and it is therefore important to note and familiarise service personnel with them.

1. Revised Camshaft Timing

The valve timing has been retarded by $7\frac{1}{2}^{o}$.
To achieve this the keyway in the crankshaft pinion gear which mates with the key in the crankshaft has been relocated thus retarding the angular position of the camshaft relative to the crankshaft.

To set the camshaft timing follow the procedure laid down in the Workshop Manual - T.S.D. 2476, Chapter E - Engine, Page E.42.

2. Increased Bore Exhaust System

To improve the dispersion of the exhaust gases the bore of the exhaust system has been increased at the front and rear ends.

The outlet from the manifolds has been increased by approximately 0.25 in. (6,35 mm.) and this larger bore is carried through the downpipes to the front silencer.

Other changes to the system concern the high frequency damper and the tail pipe which now protrudes horizontally from the rear apron.

Continued....

Service Bulletin issued for
Circulation All Distributors and Retailers
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Because of the increase in the exhaust downpipe diameter a change in the shape of the right-hand upper triangle lever has been introduced to provide adequate clearances at all times.

3. Air Cleaner Intake Tube and Intake Silencer

The length of the air cleaner/silencer intake tube has been reduced inside the silencer box. This has reduced the restriction to air flow through the air cleaner/silencer assembly.

A new development to cut intake noise has been introduced into the air breaking half way along its length. The unit is called a 'Helmholtz' resonator and its function is to provide a static air cushion to damp out the pressure waves developed in the intake system.

The air cleaner element requires service attention as laid down in standard saloon service schedules.

The 'Helmholtz' resonator requires no attention at all during the car's life.

4. Carburation

The improved air flow through the engine requires different carburation characteristics, and these have been provided by change to the carburetter needles. The new needles have the reference number BAM. All other carburetter features remain unchanged.

5. Faster Running Fan

To improve the performance of the cooling system a faster running cooling fan has been introduced. By reducing the coolant pump pulley diameter the fan speed at engine idle has been increased in the ratio 1.2 : 1.

The fan is still fitted with a viscous unit to reduce fan roar at speed and improve the warm-up rate of the engine but the viscous unit is larger to cope with the increased speeds. To prevent possible problems with cavitation at the higher speeds the waterpump impeller has been reduced in size to maintain standard engine water flow rates. Obviously the new pulley sizes have necessitated new belt lengths between the crankshaft pulley and the water pump pulley.

6. Transmitters

To feed the additional dashboard instrumentation used, a coolant temperature transmitter is fitted to the back of 'B' bank cylinder head and an oil pressure transmitter to the oil filter pedestal assembly. These units are both as used on early versions of the $6\frac{1}{4}$ litre engine. The tachometer used is of the impulse type, a feed being taken from the ignition circuit.

Arr/JC1

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Chapter B
Special Processes

M.651 T.S.D. 2859

February 1972

Printed in England

Chapter C
Air Conditioning

CATEGORY C

WATER LEAKS FROM THE AIR CONDITIONING UNIT

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars fitted with refrigeration units and produced prior to car number SRH 2970.

DESCRIPTION

We have received complaints from a number of Customers concerning water dripping into the interior of the car when the refrigeration unit is in operation.

This water is condensate which forms on the evaporator unit and its suction lines and, unless the water drains away readily, it can accumulate and drip into the interior of the car; usually onto either the driver's or the passenger's feet.

The water can drip from two sources.

1) The drip tray which fits under the evaporator box. The leakage from this source is caused by a rubber drain valve which if it is too stiff to operate, allows the condensate to accumulate and spill over the drip tray.

ACTION

Locate the evaporator box drain tube which is positioned centrally above the gearbox bell housing. It can be reached from under the bonnet by feeling down between the back of the engine and the bulk head.

Remove the drain tube and modify the flap valve by cutting the sides as shown in Figure 1.

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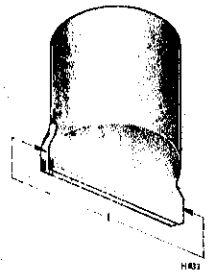

Fig.1 Flap valve showing cuts in sides

2) Condensate forms on the external low pressure suction lines. If the lagging on this pipe is not complete or if gaps exist in the lagging then condensate can collect and drip into the interior of the car. This pipe is located beneath the facia and runs along the left-hand side of the evaporator box. It runs in conjunction with the high pressure liquid pipe and is wrapped with a PVC backed foam lagging.

ACTION

If the leakage is from this source the pipes should be completely lagged with a suitable foam lagging or with one of the propriety lagging materials which can be obtained from any local refrigeration repair workshop.

CATEGORY C

DEMISTER DUCT OUTLETS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The front windscreens of the above cars are demisted by a series of nozzles located behind the instrument panel at the base of the screen.

Should the demisting system fail to clear the windscreen correctly, the nozzles should be examined to ensure that they have not become deformed or blocked by the adjacent trim. The nozzles will be visible by viewing from outside the car and looking through the windscreen towards the lower edge of the screen.

If the nozzles are blocked by the adjacent trim, the latter should be tucked down the sides of the nozzles, taking care not to deform the outlets.

Should the nozzles have deformed causing the outlets to close, this can be corrected by fitting small plastic wedges into the nozzles, as described in the following procedure, such that the sides of the outlet are held open. These plastic wedges can be made from small oblong pieces measuring 3.0 in. x 0.312 in. x 0.120 in. (7,62 cm. x 0,793 cm. x 0,305 cm.) which are obtainable from Rolls-Royce Limited, the part number being RH 8138.

PROCEDURE

1. Locate the outlet which requires modifying.

2. If the outlet is one of the two narrow ones each side of the centre of the ducting, cut the piece of plastic provided to the dimensions given in Figure 1.

3. Using a pair of long-nosed pliers, fit the wedge into the outlet such that the sides of the outlet are held apart and the shoulders of the wedge sit on the edges of the ducting as shown in Figures 3 and 4.

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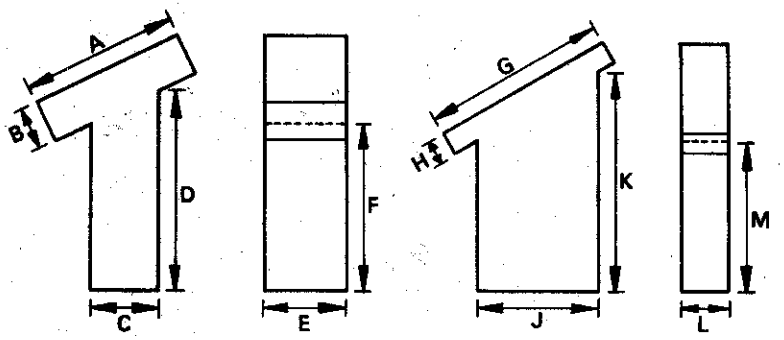

Wedge dimensions

Fig.1

A = 0.125 in. (3,18 mm.)
B = 0.0625 in. (1,59 mm.)
C = 0.10 in. (2,54 mm.)
D = 0.30 in. (7,62 mm.)
E = 0.125 in. (3,18 mm.)
F = 0.250 in. (6,35 mm.)

Fig.2

G = 0.55 in. (14,00 mm.)
H = 0.0625 in. (1,59 mm.)
J = 0.30 in. (7,62 mm.)
K = 0.437 in. (12,10 mm.)
L = 0.125 in. (3,18 mm.)
M = 0.375 in. (9,53 mm.)

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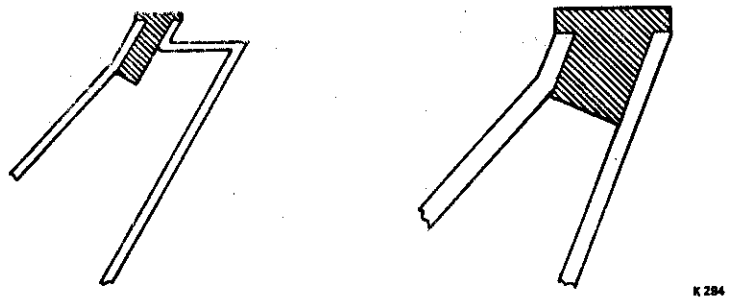

Wedges in position

Fig.3

Illustrating the wedge shown in Figure 1 fitted to one of the narrow outlet ducts.

Fig.4

Illustrating the wedge shown in Figure 2 fitted to one of the wider outlet ducts.

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M652 T.S.D.2859

Chapter D

Lubrication and Maintenance

No. SY/D5

Circulation - All Retailers

CATEGORY C

IGNITION DISTRIBUTOR CONTACT BREAKER CAM LUBRICATION

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars

DESCRIPTION

The purpose of this Service Bulletin is to advise Distributors, Retailers and Service Personnel that the Midland Silicones Compound MS4 mentioned in Service Bulletins SY/D4 and SY/M13 is obtainable as a stock item.

The compound is supplied in four ounce tubes, the Rolls-Royce part number being RH.8029.

No. SY/D6
Circulation - All Retailers

CATEGORY C

SPECIAL GREASES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

The purpose of this Service Bulletin is to inform Distributors, Retailers and Service Personnel that Duxtagrease Super G.P., which is mentioned in Section H4 of the Workshop Manual is available in 1lb. (0,45 Kg.) containers from Rolls-Royce Limited, the part number being RH 8126.

No. SY/D7
Circulation - All Countries other than United Kingdom.

CATEGORY C

ROCOL LUBRICANTS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The Lubricants and Maintenance Data Chart and the Workshop Manual quote a number of Rocol lubricants which are used in the servicing of the above cars. These lubricants can be obtained from Rocol Representatives, situated in each of the following countries.

AUSTRALIA

British Paints (Aust.) Pty. Ltd.,
Rocol Division -
P.O. Box 43,
9-29 Gow Street,
Bankstown,
SYDNEY, N.S.W.

AUSTRIA

Evva-Dauerfette-Fabrik GmbH.,
Fonsthaugasse Nr. 12-16,
VIENNA XX.

BELGIUM

Comauto S.A.,
Autostrade,
GRAND BIGARD.

FINLAND

Oy Impoil,
Snellmaninkatu 15.A.,
HELSINKI.

FRANCE * (and French Territories)

Societe Nouvelle des Huiles Minerales,
81 Rue de l'Industrie,
RUEIL-MALMAISON (S & O)

GERMANY (WEST)

Oel-Handels-Kontor,
Postfach 60,
4000 DUSSELDORF-KAISERSWERTH.

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CANADA (excluding British Columbia).

Peel Lubricants Ltd.,
P.O. Box 69,
Port Credit,
ONTARIO

British Columbia only.

Glenn-Lyster Sales Ltd.,
1036 Commercial Drive,
VANCOUVER 6.

DENMARK

Georg Keller A/S,
Vodroffsvej 7-9,
COPENHAGEN V.

ITALY

Rocol Molybdenised Lubricants,
R.T.D. Products and Aerosols
Agip S.p.A.,
Vextra,
Viale Dell'Arte 72,
ROME.

Rocol Kilopoise Products,
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JAPAN * (China and parts of S.E. Asia).

Sumico Lubricant Co.,
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11-3, 5-Chome Shimbashi,
Minato-ku,
TOKYO.

HOLLAND

AWZ Smeermiddelentechniek,
Vredeweg 35,
Postbus 20,
ZAANDAM.

HONG KONG

Lebel (China) Ltd.,
P.O. Box 699,
HONG KONG.

IRELAND

Wilby & Co. Ltd.,
15 Upper Ormond Quay,
DUBLIN 7.

SOUTH AFRICA

Wilson & Herd (Pty) Ltd.,
P.O. Box 7733,
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Wilson & Herd (Eng.) Pty. Ltd.,
P.O. Box 1459,
CAPE TOWN.

Kilburn & White (Pty) Ltd.,
P.O. Box 2609,
19 Ordnance Road,
DURBAN.

SPAIN

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Trafalgar 14,
BARCELONA 3.

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Harald A. Johanse,
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OSLO.

SWEDEN

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Fack,
SOLNA 1.

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Sociedade Activa de
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Import-Export,
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Section D
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CATEGORY C

PERIODIC LUBRICATION AND MAINTENANCE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche cars, and all Bentley T Series and Corniche cars except those destined for the U.S.A. or Canada.

DESCRIPTION

Since Service Bulletin SY/D13 Issue 1 was introduced, the Service Maintenance Schedules have been revised, as a result of Service experience. This Service Bulletin contains the new Schedules which Distributors and Retailers should now institute as normal routine.

The items marked thus * in the following Schedules are items which are classed as Essential Services and are therefore those which should be carried out at the stipulated intervals in order to ensure correct operation of the car and compliance with the Rolls-Royce Warranty.

SCHEDULES
REGULAR MAINTENANCE

As climatic and operation conditions affect maintenance to a large extent, the following items should be checked by the Owner or Distributor/ Retailer at the periods specified.

Battery

Weekly Check the level of the electrolyte; top-up if necessary with distilled water. During hot climatic conditions or when long distances are covered, the battery must be checked at more regular intervals.

Engine

Weekly or every 500 miles (800 km.) whichever is earlier. Check the oil level in the engine sump and top-up if necessary with the approved oil.

Headlamp alignment

Periodically Check the headlamp beam alignment whilst the engine is running.

Continued...

Hydraulic Reservoirs

Monthly Run the engine for 4 minutes then top-up the hydraulic reservoirs with the specified fluid to the indicated level.

Tyres

Weekly Check the tyre pressures and correct as necessary. The spare wheel also should be checked.

Windscreen washers

Periodically Check the level of fluid in the reservoir and top-up as required with the correct mixture.

SERVICE SCHEDULES
EVERY 3 000 MILES (5 000 KM.) OR 3 MONTHS, WHICHEVER IS THE EARLIER

If the car is used for constant 'stop-start' operation; renew the engine oil.

Initial Service - First 3 000 miles (5 000 km.) or 3 months, whichever is the earlier

Engine * Renew the engine oil.

Torque Converter Transmission or Four Speed Automatic Gearbox

* With the engine running check the fluid level; top-up if necessary. For full instructions refer to Workshop Manual TSD 2271 - Torque Converter Transmission or Workshop Manual TSD 2206 - Four Speed Automatic Gearbox.

Engine Cooling System

* Tighten all coolant hoses worm-drive clips.

Belt tensioning

Check the tension of the following belts: All cars - Coolant pump via the jockey pulley, Steering pump and Generator. Non-refrigerated cars - Steering pump and Generator. Refrigerated cars - Steering pump and refrigerant compressor, coolant pump and alternator.

Steering pump

Check the level of the fluid in the power steering pump reservoir; top-up if necessary.

Test

Road test the car for satisfactory performance.

Continued...

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EVERY 6 000 MILES (10 000 KM.) OR 6 MONTHS, WHICHEVER IS THE EARLIER

Engine

* Renew the engine oil and oil filter element.

Belt tensioning

Check the tension of the following belts: All cars - Coolant pump via the jockey pulley, Steering pump and Generator. Non-refrigerated cars - Steering pump and Generator. Refrigerated cars - Steering pump and refrigerant compressor, coolant pump and alternator.

Brakes

* Inspect the brake pad linings for wear, including the handbrake pads. When renewing foot brake pads examine the condition of the dust excluders fitted to the calipers. Although it is normally recommended that the face of the footbrake pad should not be less than 0.125 in. (3,2 mm.) from the backing plate, the mechanic should be able, through experience, to determine whether or not the brake pad linings are of a sufficient thickness to satisfactorily complete 6 000 miles (10 000 km.) to the next service. Should the lining back plate ever contact the braking disc, the resultant damage will necessitate renewal of the disc.
Manually adjust the handbrake pads.
Inspect all 'Bundy' brake pipes and connections for sign of corrosion.

Ignition system

Clean the sparking plugs and set the gaps to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Test the sparking plug for correct and efficient operation. Lubricate the distributor spindle, automatic advance mechanism and shaft bearings with engine oil.
Smear the contact breaker cam with the specified grease.
Clean and check the contact breaker gaps.
Clean the contact breaker points, check the gaps or dwell angle; if necessary, reset ignition timing.

Control linkages

Apply a few drops of engine oil to the accelerator linkages and to the gear range selector controls adjacent to the transmission casing.

Carburetters

Check the oil level in the air valve dampers. Reset the carburetter balance and engine idle-speed.

Continued...

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Electrical system

Check that all lamps, direction indicators, instruments and air conditioning controls are operating correctly.

Check the following levels and pressures

Check the fluid level in the power steering pump reservoir; top-up if necessary.
Check the level and specific gravity of the engine coolant; correct if necessary.
Run the engine for 4 minutes, then check the hydraulic reservoir fluid levels; top-up if necessary.
Check the level of electrolyte in the battery and top-up, if necessary, with distilled water.
Check the tyre pressures and adjust if necessary.
* Check the fluid level of the Four Speed Automatic Gearbox/Torque Convertor Transmission; top-up if necessary.

Test

Road test the car for satisfactory performance.

EVERY 12 000 MILES (20 000 KM.) OR 12 MONTHS WHICHEVER IS THE EARLIER

Engine

* Renew the engine oil and oil filter element.

Four Speed Automatic Gearbox or Torque Convertor Transmission

Renew the transmission fluid. On cars fitted with Four Speed Automatic Gearbox, drain the fluid coupling.
For full instructions refer to Workshop Manual TSD 2271 - Torque Convertor Transmission or Workshop Manual TSD 2206 - Four Speed Automatic Gearbox.

Belt tensioning

Check the tension of the following belts driving the following:
All cars - Coolant pump via jockey pulley. Non-refrigerated cars - Steering pump and Generator. Refrigerated cars - Steering pump and Refrigeration compressor, Coolant pump and Alternator.
Renew any belts showing signs of wear.

Brakes

* Inspect the brake pad linings for wear, including the handbrake pads. When renewing the footbrake pads, examine the condition of the dust excluders on the calipers. Although it is normally recommended that the face of the brake pad should not be less than 0.125 in. (3,2 mm.) from the back plate, the mechanic should be able, through experience, to determine whether or not the brake pad

Continued...

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linings are of sufficient thickness to satisfactorily complete 6 000 miles (10 000 km.) to the next service. Should the lining backplate ever contact the braking disc, the resultant damage will necessitate the renewal of the disc.
Manually adjust the handbrake pads.
Inspect all 'Bundy' brake pipes and connections for sign of corrosion.

Ignition System

Renew the sparking plugs, ensuring that the gaps are set to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Lubricate the distributor spindle, automatic advance mechanism and the shaft bearings with engine oil. Smear the distributor cam with the approved grease. Renew the contact breaker points; set the gaps or dwell angle. Check, and if necessary, set timing.

Control linkages

Apply a few drops of engine oil to the accelerator linkages, and to the gear range selector controls adjacent to the transmission casing.

Carburetters

Clean the air valves in the carburetters. Ensure that the float chamber lids are securely tightened. Check the oil level in the air valve dampers. Remove the inlet unions from the float chambers and clean the filters. Reset the carburetter balance and engine idle speed. Check the cold start idle speed (also the idle speed with the refrigeration system operation, if fitted); reset if necessary.

Steering mechanism

* Lubricate the six grease nipples with the approved grease.

Air silencer/filter

* Clean and oil the wire mesh filter elements (if fitted) or renew the paper filter elements (if fitted).

Handbrake linkage

Lubricate the pivot pins and pulleys in the handbrake system with the approved grease; free off where necessary.

Spare wheel

Lubricate the spare wheel lowering bolt and mechanism.

Electrical system

Ensure that all lamps, direction indicators, instruments and air conditioning controls are operating correctly.

Continued...

Check the following levels and pressures

Check the fluid level in the power steering pump reservoir and top-up if necessary.
Check the level and specific gravity of the engine coolant and correct if necessary.
* Check the oil level in the final drive unit and top-up if necessary.
Check the fluid level in the steering idler box damper and top-up if necessary. Check the level of electrolyte in the battery and top-up if necessary with distilled water. Run the engine for four minutes then check the hydraulic fluid levels; top-up if necessary.

Test

Road test the car for satisfactory performance.

EVERY 24 000 MILES (40 000 KM.) OR 2 YEARS WHICHEVER IS THE EARLIER

Engine

* Renew the engine oil and the oil filter element. Clean the gauze flame traps in the engine breather system.

Four Speed Automatic Gearbox or Torque Convertor Transmission

Renew the transmission fluid. On cars fitted with Four Speed Automatic Gearbox, drain the fluid coupling. On cars fitted with Torque Convertor Transmission, renew the fluid strainer.
For full instructions refer to Workshop Manual TSD 2271 - Torque Convertor Transmission or Workshop Manual TSD 2206 - Four Speed Automatic Gearbox.

Belt tensioning

Check tension of belts driving the following: All cars - Coolant pump via jockey pulley. Non-refrigerated cars - Steering pump and Generator. Refrigerated cars - Steering pump and Refrigeration compressor, Coolant pump and Alternator. Renew any belts which show signs of wear.

Brakes

* Inspect the brake pad linings for wear, including the handbrake pads. When removing the footbrake pads examine the condition of the dust excluders on the calipers. Although it is normally recommended that the face of the footbrake pads should not be less than 0.125 in. (3,2 mm.) from the backplate, the mechanic should be able, through experience, to determine whether or not the brake pad linings are of sufficient thickness to satisfactorily complete 6 000 miles (10 000 km.) to the next service. Should the lining back plate ever contact the braking disc, the resultant damage will necessitate renewal of the disc.

Continued...

Manually adjust the handbrake pads.
Inspect all 'Bundy' brake pipes and connections for signs of corrosion.

Ignition system

Renew the sparking plugs ensuring that the gaps are set to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Lubricate the distributor spindle, automatic advance mechanism and shaft bearings with engine oil. Smear the distributor cam with an approved grease. Renew the contact breaker points, set the gaps or dwell angle. Check, and if necessary reset ignition timing.

Control linkages

Apply a few drops of engine oil to the accelerator linkages and to the gear range selector controls adjacent to the transmission casing.

Carburetters

Clean the air valves in the carburetters. Ensure that the float chamber lids are securely tightened. Check the oil level in the air valve dampers. If wire mesh filters are fitted, remove the inlet unions from the float chambers and clean the filters.
Reset the carburetter balance and engine idle speed. Check the cold start idle speed (also the idle speed when the refrigeration system is operating if fitted); reset if necessary.

Steering mechanism

* Lubricate the six grease nipples with the approved grease.

Steering pump (Hobourn-Eaton)

Renew the filter element in the pump reservoir.

Air Silencer/Filter

* Clean and oil the wire mesh filters (if fitted) or renew the paper filter elements (if fitted).

Fuel pumps

Remove the fuel pump unit from the car and check for pumping efficiency. Fit a new fuel pump assembly if necessary.

Continued...

Handbrake linkage

Lubricate the pivot pins and pulleys in the handbrake system with the approved grease. On cars with exposed front cables, dismantle the pulley housings and pack with the approved grease.

Spare wheel

Lubricate the spare wheel lowering bolt and mechanism.

Electrical system

Check that all lamps, direction indicators, instruments and air conditioning controls are operating correctly.

Alternator (if fitted)

Inspect the slip rings and brushes for wear; check the brushes for freedom of movement in their holders.

Generator (if fitted)

Inspect the commutator and brushes for signs of wear; check the brushes for freedom of movement in their holders.

Final drive

* Drain when hot and refill with an approved oil.

Fuel tank

Remove the drain plug and allow any accumulated water to drain away. Fit the drain plug and add 4 S.B.N. inhibitors to the tank.

Height control mechanism

Disconnect the control valve linkage ball joints. Clean, grease and fit the ball joint.

Fuel filter

Renew the main line filter and clean out the filter bowl.

Fuel mixture weakening device filter (if fitted)

Fit a new fuel mixture weakening device filter.

Rear wheel drive-shaft

Lubricate the rear wheel drive-shaft outer universal couplings with an approved grease.

Continued....

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Power operated hood (Convertible cars)

Check the level of fluid in the reservoirs; top-up if necessary.

Check the following levels and pressures

Check the fluid level in the power steering pump; top-up if necessary.
Check the level and specific gravity of the engine coolant; correct if necessary.
Check the level of electrolyte in the battery and top-up if necessary, with distilled water.
Check the fluid level in the steering idler box damper; top-up if necessary.
Run the engine for four minutes, then check the hydraulic fluid levels; top-up if necessary.
Check the tyre pressures; correct if necessary.

Test

Road test the car for satisfactory performance.

SPECIAL SERVICES

These Special Services are not normal servicing arrangements and will be carried out only at the Owner's request. It is emphasised however, that it is the responsibility of the Service Manager to advise the Owner when these Special Services should be carried out at the specified distance/time intervals.

SEASONAL SCHEDULES
Every 12 months

Engine cooling system

Drain the coolant from the radiator and the engine crankcase. Clean any debris (flies, leaves etc.) from the surfaces of the refrigeration condensor and radiator matrices by reverse flushing with a hose. This should be carried out just prior to the Autumn (in the U.K. prior to September 21st.). Fill the system with the correct anti-freeze mixture, or in where anti-freeze is not required the correct approved inhibited solution.

Air conditioning system

Ensure that the foam filter element fitted to the scuttle intake grille is free from obstruction.
On long wheelbase cars fitted with a centre division, check that the foam filter element fitted to the intake grille in the rear decking panel is free from obstruction.

Continued...

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Refrigeration system (if fitted)

The following operations must be carried out by fully qualified refrigeration engineer.
Check that the refrigeration system is functioning correctly. If necessary top-up the system with refrigerant. If loss of refrigerant is evident, check the system for leakage. Visually check the refrigerant compressor for oil leakage, if oil leakage is apparent check the oil level and top-up if necessary.
In the event of a major oil loss, check and repair before topping-up (refer to Workshop Manual TSD 2476 - Chapter C - Air Conditioning System for a full instruction).

Body

Check that the body drain holes are unobstructed.

Every 2 years

In addition to the 12 monthly schedule, carry out the following:

Engine cooling system

Drain the coolant from the radiator and engine crankcase. Thoroughly reverse flush the coolant passages with a continuous flow of water. Fit a new coolant hose if necessary. Fit a new engine coolant thermostat. Fill the system with the correct anti-freeze mixture or inhibited solution.

Service Recommendations
Brake and hydraulic system components

48 000 miles (80 000 km.)

At this mileage and under normal motoring conditions it is recommended that the following servicing is carried out.
Renew the following flexible high pressure hoses; the front and rear accumulator to frame hoses, the front and rear brake pump to accumulator hoses.
Renew the disc brake caliper seals, the deceleration conscious pressure limiting valve seals and the master cylinder seals.
Completely drain the fluid from the hydraulic syste, then fill with Castrol-Girling Green Fluid. This fluid exceeds specification S.A.E. J 1703. Bleed the braking systems and automatic height control system.

Continued...

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96 000 miles (160 000 km.)

At this mileage and under normal motoring conditions it is recommended that the following servicing is carried out.
Renew the following flexible high pressure hoses; the front and rear accumulator to frame hoses, the front and rear brake pump to accumulator hoses.
Renew the disc brake caliper seals the deceleration conscious pressuure limiting valve seals and the master cylinder seals.
Completely drain the fluid from the hydraulic systems, then fill with Castrol-Girling Green Fluid. This fluid exceeds specification S.A.E. J 1703. Bleed the braking systems and automatic height control system.

Fuel mixture weakening device cut-off valve

Every 36 000 miles (60 000 km.) or 3 years, the fuel mixture weakening device cut-off valve must be renewed.

Special Precautions

Should the car be used in very cold temperatures, drain the engine sump and carburetter air valve dampers. The engine sump and carburetter air valve dampers should then be filled with oil having the following viscosity.
For constant temperatures of between $0^{o}C$ and $-23^{o}C$ ($32^{o}F$ and $-10^{o}F$), use a 10W/30 grade oil.
For constant temperatures of $-23^{o}C$ ($-10^{o}F$) and below, use a 5W/20 grade oil.

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Distributors and Retailers only

CATEGORY C

PERIODIC LUBRICATION AND MAINTENANCE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The Service Maintenance Schedules have been revised as a result of service experience and the following are the new Schedules which Distributors and Retailers should institute as normal routine.

'Essential' maintenance which is indicated thus * in the following Schedules is the minimum servicing which must be carried out, at the appropriate distance/time intervals, in order to comply with the Rolls-Royce Limited Warranty and the Motor Vehicle Air Pollution Control Act. The remaining items in the Schedules concern 'Preventive' maintenance, aimed at securing the maximum life and efficiency for the vehicle. Preventive maintenance will be carried out on request.

The following complete Schedules cover the whole car but it should be noted that some items are applicable only to cars fitted with the Exhaust Emission Control System, that is car serial number 6,000 and onwards. On cars produced prior to this car serial number these items are not applicable.

Additionally, some items are applicable only to cars fitted with the Fuel Evaporative Emission Control System, that is car serial number 9,000 and onwards. On cars produced prior to this car serial number these items are not applicable.

Note On the Initial Service - First 3,000 miles (5000 km.) or 3 months whichever is the earlier, the items marked thus † are carried out free of charge.

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REGULAR MAINTENANCE

As climatic and operating conditions affect maintenance to a large extent, the following items should be checked by the Owner or Distributor/Retailer at the periods specified.

BATTERY
Weekly - Check the level of the electrolyte and top-up if necessary with distilled water. During hot weather or when long distances are covered, the battery requires checking more frequently.

ENGINE
Weekly or every 500 miles (800 km.) whichever is the earlier - Check the oil level in the engine sump and top-up if necessary with an approved engine oil.

HEADLAMP ALIGNMENT
Periodically - Check headlamp beam alignment with the engine running.

HYDRAULIC RESERVOIRS
Monthly - Run the engine for four minutes then top-up the hydraulic reservoirs to the indicated level as required with the specified fluid.

TYRES
Weekly - Check the tyre pressures and adjust as required. Also check the spare wheel tyre pressure.

WINDSCREEN WASHER
Periodically - Check the level of fluid in the reservoir and top-up as required with the correct mixture.

SERVICE SCHEDULES

EVERY 3,000 MILES (5000 KM.) OR 3 MONTHS WHICHEVER IS THE EARLIER

*If the car is used for constant stop-start operation, change the engine oil.

INITIAL SERVICE - FIRST 3,000 MILES (5000 KM.) OR 3 MONTHS WHICHEVER IS THE EARLIER

Engine *Change the engine oil.

continued...

Torque Converter Transmission

*Check the fluid level and top-up if necessary; check the level with the engine running.
For full instructions refer to Workshop Manual TSD 2271 - Torque Converter Transmission.

Engine Cooling System *Tighten all coolant hose worm drive clips.

Belt Tension Check the tension of the belts driving the following. Fan and steering pump, generator or alternator, and the refrigeration compressor (if fitted).

Steering Pump Check the level of the fluid in the power steering pump reservoir and top-up as required.

Air Injection Pump † *Check the tension of the pump driving belt.

Ignition System † *Check the distributor contact breaker gaps and adjust if necessary. Check the ignition timing and adjust if necessary.

Choke Stove Pipe † *Check the depression in the choke stove pipe.

Carburetters † *Check the oil level in the air valve dampers and top-up if necessary. Check the tightness of the float chamber covers. Check depression in the float chamber. Check the exhaust CO emission and if necessary reset. carburetter balance, mixture strength and idle speed. Check and if necessary reset the cold start fast-idle speed.

Test: Road test the car for satisfactory performance.

EVERY 6,000 MILES (10000 KM.) OR 6 MONTHS WHICHEVER IS THE EARLIER

Engine *Change the engine oil and renew the oil filter element.

Belt Tension Check the tension of the belts driving the following. Fan and steering pump, generator or alternator and the refrigeration compressor (if fitted). Renew any belts which show signs of wear.

continued....

Brakes *Inspect the brake pad linings for wear, including the hand brake pads. When renewing the foot brake pads examine the condition of the dust excluders on the calipers. Although it is normally recommended that the face of the foot brake pad should not be less than ⅛ in. (3,2 mm.) from the back plate, the mechanic should be able to determine, through experience, whether or not the brake pad linings are of sufficient thickness to satisfactorily complete 6,000 miles (10000 km.) to the next service. Should the lining back plate ever contact the braking disc, the resultant damage will necessitate renewal of the disc.
Manually adjust the hand brake pads.
Inspect all 'Bundy' brake pipes and connections for signs of corrosion.

Ignition System Clean the sparking plugs and set the gaps to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Test the sparking plugs. Lubricate the distributor spindle, automatic advance mechanism and shaft bearings with engine oil. Smear the contact breaker cam with the specified grease. Clean and check the contact breaker gaps and reset if necessary. Check, and if necessary reset, the ignition timing.

Control Linkages Apply a few drops of engine oil to the accelerator linkages and to the gear range selector controls adjacent to the transmission casing.

Carburetters Check the oil level in the air valve dampers and top-up if necessary.

Electrical System Ensure that all lamps, instruments and air conditioning controls are operating satisfactorily.

Check the following levels and pressures Check the fluid level in the power steering pump reservoir and top-up if necessary.
Check the level and specific gravity of the engine coolant and correct if necessary.
*Check the fluid level of the torque converter transmission and top-up if necessary.
Run the engine for four minutes then check the hydraulic reservoir fluid levels; top-up if necessary with the specified fluid.
Check the level of electrolyte in the battery and top-up with distilled water if necessary.
Check the tyre pressures and adjust if necessary.

continued...

Test Road test the car for satisfactory performance.

EVERY 12,000 MILES (20000 KM.) OR 12 MONTHS WHICHEVER IS THE EARLIER

Engine *Change the engine oil and renew the oil filter element.

Torque Converter Transmission *Drain the transmission sump and refill with an approved fluid. For full instructions refer to Workshop Manual T.S.D. 2271 - Torque Converter Transmission.

Belt Tension Check the tension of the belts driving the following. Fan and steering pump, generator or alternator and the refrigeration compressor (if fitted). Renew any belts which show signs of wear.

Brakes *Inspect the brake pad linings for wear, including the hand brake pads. When renewing the foot brake pads, examine the condition of the dust excluders on the calipers. Although it is normally recommended that the face of the foot brake pad should not be less than ⅛ in. (3,2 mm.) from the back plate, the mechanic should be able to determine, through experience, whether or not the brake pad linings are of sufficient thickness to satisfactorily complete 6,000 miles (10000 km.) to the next service. Should the lining back plate ever contact the braking disc, the resultant damage will necessitate the renewal of the disc.
Manually adjust the hand brake pads.
Inspect all 'Bundy' brake pipes and connections for signs of corrosion.

Ignition System *Renew the sparking plugs, ensuring that the gaps are set to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Lubricate the distributor spindle, automatic advance mechanism and the shaft bearings with engine oil. Smear the distributor cam with the approved grease. Renew the contact breaker points and set the gaps. Check the ignition timing and reset if necessary.

Crankcase Breather System *Remove and clean the gauze flame traps in the crankcase breather tube and also clean the adaptor in the choke butterfly housing.

Air Injection Pump Belt Tension *Check the tension of the belt driving the air injection pump.

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Air Injection Pump Intake Filter *Remove and clean the intake filter element.

Air Injection System *Check the system for leaks and correct functioning; renew any defective items.

Carburetters *Clean the air valves in the carburetters. Check the oil level in the air valve dampers and top-up if necessary. Ensure that the float chamber lids are securely tightened. Remove the inlet unions from the float chambers and clean the filters. Reset the carburetter balance and engine idle speed. Check the cold start idle speed (and also the idle speed with the refrigeration system operating, if fitted); reset if necessary.

Control Linkages Apply a few drops of engine oil to the accelerator linkages and to the gear range selector controls adjacent to the transmission casing.

Steering Mechanism *Lubricate the six grease nipples with the approved grease.

Air Silencer/Filter *Clean and oil the wire mesh filter elements (if fitted) or renew the paper filter elements (if fitted).

Hand Brake Linkage Lubricate the pivot pins and pulleys in the hand brake system with the approved grease.

Spare Wheel Lubricate the spare wheel lowering bolt and mechanism.

Electrical System Ensure that all lamps, instruments and air conditioning controls are operating satisfactorily.

Check the Following Levels and Pressures Check the fluid level in the power steering pump reservoir and top-up if necessary.
Check the level and specific gravity of the engine coolant and correct if necessary.
*Check the oil level in the final drive unit and top-up if necessary.
Check the fluid level in the steering idler box damper and top-up if necessary.
Check the level of electrolyte in the battery and top-up with distilled water if necessary.
Run the engine for four mintures then check the hydraulic fluid levels; top-up if necessary.
Check the tyre pressures and adjust if necessary.

Test Road test the car for satisfactory performance.

continued...

EVERY 24,000 MILES (40000 KM.) OR 2 YEARS WHICHEVER IS THE EARLIER

Engine *Change the engine oil and renew the oil filter element.

Torque Converter Transmission *After the initial 24,000 miles (40000 km.) or two years, whichever is the earlier; drain the transmission sump and renew the fluid strainer; fill with an approved fluid. For full instructions refer to Workshop Manual T.S.D. 2271 - Torque Converter Transmission.

Belt Tension Check the tension of the belts driving the following. Fan and steering pump, generator or alternator and refrigeration compressor (if fitted). Renew any belts which show signs of wear.

Brakes *Inspect the brake pad linings for wear, including the hand brake pads. When renewing the foot brake pads examine the condition of the dust excluders on the calipers. Although it is normally recommended that the face of the foot brake pads should not be less than ⅛ in. (3,2 mm.) from the back plate, the mechanic should be able to determine, through experience, whether or not the brake pad linings are of sufficient thickness to satisfactorily complete 6,000 miles (10000 km.) to the next service. Should the lining back plate ever contact the braking disc, the resultant damage will necessitate renewal of the disc.
Manually adjust the hand brake pads.
Inspect all 'Bundy' brake pipes and connections for signs of corrosion.

Ignition System *Renew the sparking plugs ensuring that the gaps are set to between 0.023 in. and 0.028 in. (0,58 mm. and 0,71 mm.). Lubricate the distributor spindle, automatic advance mechanism and shaft bearings with engine oil. Smear the distributor cam with the approved grease. Renew the contact breaker points and set the gaps. Check the ignition timing and reset if necessary.

Crankcase Breather System *Remove and clean the gauze flame traps in the crankcase breather tube and also clean the adaptor in the choke butterfly housing.

Air Injection Pump Belt Tension *Check the tension of the belt driving the air injection pump.

Choke Stove Pipe *Check the depression in the choke stove pipe.

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ROLLS-ROYCE SILVER SHADOW
AND BENTLEY T SERIES

SERVICE BULLETIN

No. SY/D14
U.S.A. and Canada only

Air Injection Pump Intake Filter *Remove and clean the intake filter element.

Air Injection System *Check the system for leaks and correct functioning; renew any defective items.

Fuel Evaporative Emission Control Canister *Renew the foam filter element in the canister.

Fuel Evaporative Emission Control Purge Line Filter *Renew the paper element in the purge line filter.

Carburetter Mixture Weakening Device *Renew the air filter element for the fuel mixture weakening device.

Carburetters* Clean the air valves in the carburetters. Ensure that the float chamber lids are securely tightened. Check the oil level in the air valve dampers. Remove the inlet unions from the float chambers and clean the filters. Reset carburetter balance and engine idle speed. Check the cold start idle speed (and also the idle speed with the refrigeration system operating, if fitted); reset if necessary.

Control Linkages Apply a few drops of engine oil to the accelerator linkages and to the gear range selector controls adjacent to the transmission casing.

Steering Mechanism *Lubricate the six grease nipples with the approved grease.

Steering Pump (Holbourn Eaton) Renew the filter element in the pump reservoir.

Air Silencer/Filter *Clean and oil the wire mesh filter elements (if fitted) or renew the paper filter elements (if fitted).

Fuel Pumps Remove the fuel pump from the car and test on the bench. Fit a new pump unit if the performance is below the specified level (refer to Chapter K - Fuel System of the Workshop Manual).

Hand Brake Linkage Lubricate the pivot pins and pulleys in the hand brake system with the approved grease. On cars with exposed front cables, dismantle the pulley housings and pack with approved grease.

Spare Wheel Lubricate the spare wheel lowering bolt and mechanism.

Electrical System Ensure that all lamps, instruments and air conditioning controls are operating satisfactorily.

ROLLS-ROYCE LIMITED, PYM'S LANE, CREWE, ENGLAND

BP 10.12.69 CHAPTER D

Alternator (if fitted) Examine the slip rings and brushes for wear and check the brushes for freedom of movement in their holders (refer to Chapter M - The Electrical Section of the Workshop Manual).

Generator (if fitted) Examine the commutator and brushes for wear and the brushes for freedom of movement in their holders (refer to Chapter M - The Electrical Section, of the Workshop Manual).

Final Drive *Drain when hot and refill with an approved oil.

Fuel Tank Remove the drain plug and allow any accumulated water to drain away. Add four S.B.N. Inhibitors to the fuel tank, after fitting the drain plug.

Fuel Filter Renew the main line filter element and clean the filter bowl.

Height Control Mechanism Disconnect the control valve linkage ball joints. Clean, grease and refit the ball joints.

Rear Wheel Drive-Shaft Lubricate the rear wheel drive-shaft outer universal couplings with an approved grease.

Check the Following Levels and Pressures Check the fluid level in the power steering pump reservoir and top-up if necessary.
Check the level and specific gravity of the engine coolant and correct if necessary.
Check the level of electrolyte in the battery and top-up with distilled water if necessary.
Check the fluid level in the steering idler box damper and top-up if necessary.
Run the engine for four minutes then check the hydraulic reservoir fluid levels; top-up if necessary.
On Drophead Coupe cars, check the fluid level in the hood mechanism reservoir and top-up if necessary.
Check the tyre pressures and adjust if necessary.

Test Road test the car for satisfactory performance.

SPECIAL SERVICES

These Special Services are not normal servicing arrangements and will be carries out only at the Owner's request. It is emphasised that it is the responsibility of the Service Manager to advise the Owner when these Special Services are due and that in the interests of safety they should be carried out at the specified distance/time intervals.

continued...

SEASONAL SCHEDULES

EVERY TWELVE MONTHS

Engine Cooling System Drain the coolant from the radiator and the engine crankcase. Clean any debris from the surfaces of the refrigeration condenser and radiator matrices by reverse flushing with a hose. This should be carried out just prior to the Autumn. Fill the system with the correct anti-freeze mixture or inhibited solution. (See Chapter L of the Workshop Manual).

Air Conditioning System Ensure that the foam filter element fitted to the scuttle intake grille is free from obstruction. On Long Wheelbase cars fitted with a centre division, check that the foam filter element fitted to the intake grille in the rear decking panel is free from obstruction.

Refrigeration System (if fitted) These operations should be carried out only by an experienced refrigeration engineer.
Check that the refrigeration system is functioning correctly. If necessary, top-up the system with refrigerant. If loss of refrigerant is evident, check the system for leakage. Visually check the refrigerant compressor for oil leakage, if oil leakage is apparent check the oil level and top-up if necessary. In the event of a major oil loss check and repair before topping-up (refer to Workshop Manual T.S.D. 2217 - Air Conditioning (Refrigeration), for full instructions).

Body Check that the body drain holes are free from foreign matter.

EVERY TWO YEARS

In addition to the 12 monthly schedule, carry out the following.

Engine Cooling System Drain the coolant from the radiator and engine crankcase. Thoroughly reverse flush the coolant passages with a continuous flow of water. Change the coolant hoses where necessary. Fit a new engine coolant thermostat. Fill the system with the correct anti-freeze mixture or inhibited solution.

continued...

SERVICE RECOMMENDATIONS

BRAKE AND HYDRAULIC SYSTEM COMPONENTS

48,000 Miles (80000 km.) At this mileage and under normal motoring conditions it is recommended that the following servicing is carried out.
Renew the following flexible high pressure hoses: the front and rear brake pumps to accumulator hoses; the front and rear accumulator to frame hoses. Renew the disc brake caliper seals, the deceleration conscious pressure limiting valve seals, and the master cylinder seals. Completely drain the fluid from the hydraulic circuits and then fill with Castrol-Girling Brake Fluid Amber S.A.E. 70R3. Bleed the braking systems and automatic height control system.

96,000 Miles (160000 km.) At this mileage and under normal motoring conditions it is recommended that the following servicing is carried out.
Renew all the flexible hoses to the braking systems and the automatic height control system. Renew the disc brakes caliper seals, the deceleration conscious pressure limiting valve seals and the master cylinder seals. Completely drain the fluid from the hydraulic circuits and then fill with Castrol-Girling Brake Fluid Amber S.A.E. 70R3. Bleed the braking systems and automatic height control system.

SPECIAL PRECAUTIONS

Should the car be used in very cold temperatures, drain the engine sump when thoroughly warm and also drain the carburetter air valve dampers. The engine sump and carburetter air valve dampers should then be filled with oil having the following viscosity.
For constant temperatures of between $0^{o}C$ and $-23^{o}C$ ($32^{o}F$ and $-10^{o}F$), use a 10W/30 grade oil.
For constant temperatures of $-23^{o}C$ ($-10^{o}F$) and below, use a 5W/20 grade oil.

CATEGORY C

OIL RECOMMENDATION STICKERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

PROCEDURE

During an engine oil change it is common practice amongst Distributors and Retailers to affix a sticker to some convenient point, indicating the mileage at which the next oil change is due and recommending a certain brand of oil for topping-up purposes.

To avoid confusion it is most important that such stickers should be affixed on, or as near as is physically possible to, the appropriate filler cap, i.e. the stickers for the engine oil to be affixed on or by the engine oil filler cap.

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Page No 1
Date 14.9.71

CATEGORY C

HEATER FEED HOSE REPLACEMENT

APPLICABLE TO

All Rolls-Royce Silver Shadow and Corniche cars and all Bentley T Series and Corniche cars after Car Serial Number 3000 and all those cars prior to this number fitted with refrigeration.

DESCRIPTION

The heater on the above cars takes its feed from the high pressure side of the coolant pump and as a consequence the heater feed hose is more highly stressed than other hoses in the system.

It is therefore recommended that in future at all 24 month Seasonal Services the heater feed hose, Part No. UE 12961, is always renewed.

As previously recommended all other coolant hoses should be inspected and renewed as necessary.

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Chapter E

Engine

CATEGORY A

ACCELERATOR PEDAL CLAMPING LEFT-HAND DRIVE CARS

APPLICABLE TO:

Left-hand Rolls-Royce Silver Shadow Standard and Coachbuilt cars.
Left-hand Bentley T Series Standard and Coachbuilt cars.

DESCRIPTION

A new lever which clamps the accelerator pedal more securely is being fitted on production cars and it has been decided to modify all left-hand drive cars in Service.

The modification requires the changing of the lever and clamp which secures the accelerator pedal. The lever is easily seen from underneath the car at the forward end of the undersheet which covers the brake actuation mechanism. On a number of cars the accelerator pedal itself may have to be changed. This is because on early production cars the throttle pedal had a smooth stem whereas later cars had a pedal with a knurled stem to prevent slipping. It is this later pedal which should be fitted.

One of the knurled stem accelerator pedals will be included in each set of parts; if the car already has the knurled pedal, the one in the kit should be returned to the factory.

It will not be necessary to order the parts to do the modification as these will be sent direct to each Retailer, together with a list of the cars in his area which require modification. This will be done in arrangement with the Service Promotion Department at the factory and any communication concerning the modification should be addressed to the Service Promotion Manager (Europe) at the Crewe factory.

NOTIFICATION

When each modification has been completed, the label which is included in the set of parts should be filled in and despatched to the Technical Services Department, Crewe, England.

PROCEDURE

1. Place the car on a ramp.

Continued...

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PROCEDURE

1. Place the car on a ramp.

2. Remove the undersheet which covers the brake actuator mechanism.

3. Unscrew the 2 B.A. bolt which secures the accelerator pedal stem and remove the return spring.

4. Remove the split pin and the link which connects the accelerator pedal lever to the cross-shaft.

5. Remove the bolt which secures the lever between the two brackets.

6. Remove the distance tube from the existing lever.

7. Clean the distance tube and fit it to the new lever.

8. Fit the new lever to the car.

9. Refit the accelerator pedal taking care to ensure that when fitting the pedal the 2 B.A. nuts and bolts which secure the new clamping piece are tightened correctly. If the original pedal has a knurled stem it should be refitted. If the pedal has a plain stem, the new pedal provided in the modification kit should be fitted.

10. Ensure that the accelerator pedal does not foul the floor aperture during its full arc of travel.

11. Connect the accelerator linkage and refit the undersheet which covers the brake mechanism.

MATERIAL REQUIRED

Part Number	Description	Quantity
UR 15422	Assembly lever - accelerator pedal	1 off
UR 15424	Piece - clamping accelerator pedal to lever	1 off
UR 13446	Assembly accelerator pedal	1 off
XC 158/Z	Bolt	2 off
X 4404	Washer	2 off
-	Label	1 off

Continued...

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The foregoing material will be supplied in kit form, the kit number being Modification Kit No.2

MATERIAL DISPLACED

Part Number	Description	Quantity
UR 14013	Assembly lever - accelerator pedal	1 off
UR 10881	Clamping piece - accelerator pedal lever	1 off
	Assembly accelerator pedal (smooth stem pedal)	1 off

TIME ALLOWED

1.5 hours.

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Circulation - All Distributors and Retailers.

CATEGORY C

THE ENGINE OIL LEVEL INDICATOR

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars produced before car serial numbers SBH. 5320 and CRH. 5471 (Right-hand drive cars) and SRX. 6565 and CRX. 6610 (Left-hand drive cars).

INTRODUCTION

The purpose of this Service Bulletin is to inform Distributors and Retailers that in the event of a customer complaint of oil leakage from the oil level indicator joint, the securing setscrews should be fitted with spring washers.

DESCRIPTION

Service experience has shown that the cork gasket which is fitted between the engine sump and the oil level indicator on the above mentioned cars, reduces in thickness after a time and thereby slightly alters the torque loading on the six setscrews securing the oil level indicator to the sump. Therefore, to overcome this, all cars produced after the above mentioned serial numbers have been fitted with spring washers to the securing setscrews to allow for the settling of the gasket.

PROCEDURE

1. Remove one of the sump unit securing setscrews, clean the threads and fit a UD 5033 spring washer between the screw head and the existing aluminium washer.
2. Apply a generous coating of Wellseal compound to the threads of the screw.
3. Refit the setscrew, torque tightening to 22 lb.in.
4. Repeat the procedure on the remaining five setscrews.

Continued..

MATERIAL REQUIRED

Part No.	Description	Quantity
UD 5033	Spring washer	6 off

TIME ALLOWED

.25 hours.

SECTION E

Circulation - All Distributors and Retailers
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Sheet No. 1

CATEGORY C

CYLINDER LINERS

APPLICABLE TO:

All Rolls-Royce and Bentley motor cars fitted with aluminium V8 engines.

DESCRIPTION

When overhauling Rolls-Royce aluminium V8 engines, it is sometimes necessary to remove and renew one or more of the cylinder liners.

Since the liners are retained by the pressure exerted by the cylinder head studs on the cylinder head, it is essential that new liners have the correct 'nip' measurement, i.e. protrusion of the liner top face above the face of the crankcase.

It is, therefore, necessary to know accurately the depth (measured between points 'X' - 'Y' shown in Figure 1) of the crankcase counterbore at the two points shown in Figure 1. This counterbore is machined during manufacture to a depth of 0.324 in. to 0.326 in. (8,2296 mm. to 8,2804 mm.)

When ordering new liners the measured depth ONLY must be quoted, and liners providing the correct 'nip' will then be supplied by the Crewe Spares Department.

Fitting of the liners should be carried out as described in the Workshop Manual - Chapter E - page E10, T.S.D. Publication 2476.

Continued...

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Rolls-Royce Silver Shadow & Bentley T Series **Service Bulletin**

SECTION E

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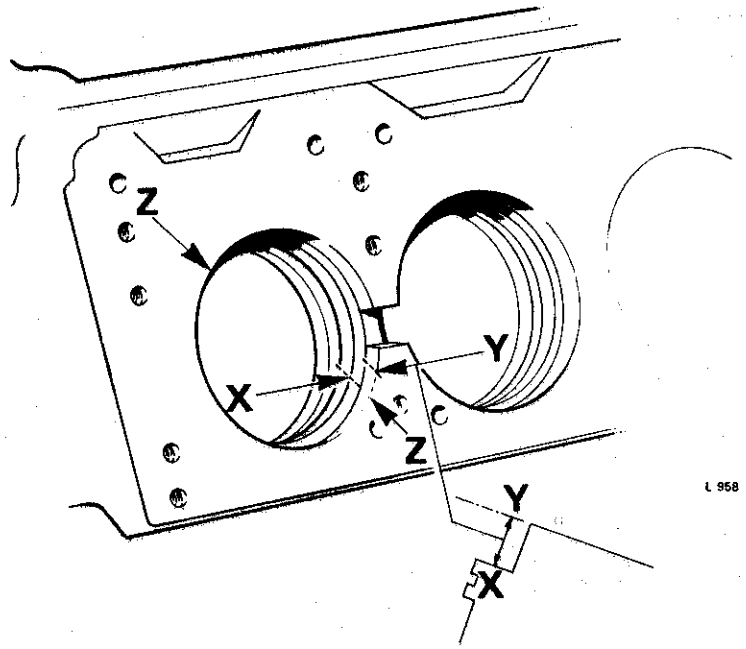

Figure 1 Counterbore depth measuring points

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SECTION E

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Date: 1.1.71

Bulletin No. SY/E8
Sheet No. 1

CATEGORY C

90° 'V' EIGHT CYLINDER REPLACEMENT ENGINE - SERVICE

APPLICABLE TO

All Rolls-Royce and Bentley motor cars fitted with aluminium 90° 'V' eight cylinder engines.

INTRODUCTION

From the 1st January, 1971 all replacement 90° 'V' eight cylinder engines for Rolls-Royce and Bentley motor cars will be supplied to a revised specification.

This change is necessary because it has become impossible to stock an adequate range of vee-eight engine specifications to meet world-wide service requirements. This is because of the very large number of vee-eight engine specifications which are required to meet the many differing, domiciliary and legal requirements throughout the world.

DESCRIPTION

An engine built to the revised specification will comprise of a basic engine unit - crankcase, crankshaft, connecting rods, pistons, cylinder heads, oil pump, coolant pump, camshaft and valve gear but will not include inlet manifolds, exhaust manifolds, carburetters, and all ancillary equipment. A revised specification engine is illustrated in Figure 1.

Certain detail engineering improvements and changes will be applied to all engines built to the revised specification to ensure that they are of a commonised standard. The basic unit will be tested in the factory to ensure that it conforms to our quality standards of workmanship and materials.

A minimum range of revised specifications will be available to meet requirements and a complete list of these specifications is detailed in the following text.

The procedure in service will be that a revised specification engine will be supplied and the Distributor or Retailer will then transfer the ancillary equipment from the old unit to the new one. Alternatively, and following discussions with the customer, the following two options are open to Service Personnel concerning the renewal of ancillary equipment.

1) That the ancillary units (Starter, Dynamo, etc) be reconditioned in accordance with Workshop Manual instructions and re-fitted to the engine.

Continued....

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2) That new or replacement components are fitted from Distributors or Retailers own stock.

The price of each of these options will vary considerably and as indicated in the previous paragraph the customer should be contacted regarding which option he required before any work is undertaken.

The costs involved in removing and replacing the engine unit and transferring the ancillary components are chargeable to the customer.

Should it be necessary to replace an engine under Warranty, agreement should be obtained from Rolls-Royce Limited before any work is commenced.

In the United Kingdom, Europe and all countries other than U.S.A. and Canada, permission should be obtained from the Service Promotion Manager at the Crewe factory.

In the U.S.A. permission should be obtained from the nearest Rolls-Royce Inc. office or in Canada from Rolls-Royce Motor Cars Ltd., Montreal.

It should be noted that when an engine is replaced under Warranty the charges involved in overhauling the ancillary units or supplying replacement units will not be acceptable under Warranty unless they have been damaged as a direct result of the engine failure.

ORDERING

When ordering the replacement engine, it is imperative that the correct RS number, quoted on page 4, is forwarded together with the Car Serial Number. Please note that the engine to be returned must be of the same specification as the replacement unit supplied i.e. less manifolds, carburetters etc.

IDENTIFICATION

These revised specification replacement engines will be identified by a serial number stamped on the crankcase or where applicable on a pedestal by the front of 'B' bank cylinder head (see Fig. 1). Whenever possible please quote this number in any future correspondence concerning the engine unit.

Continued....

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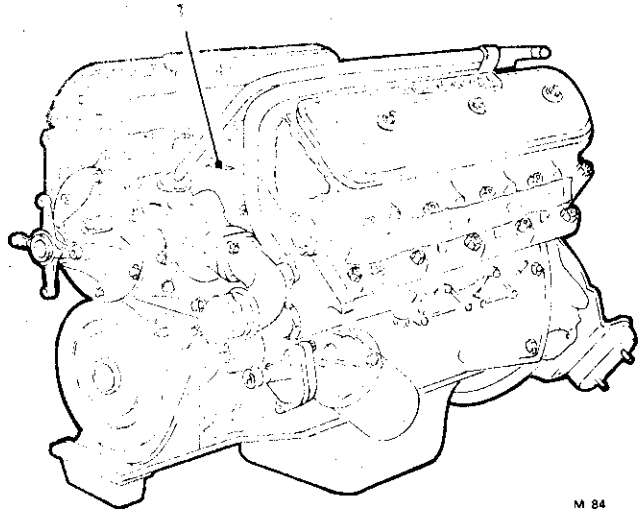

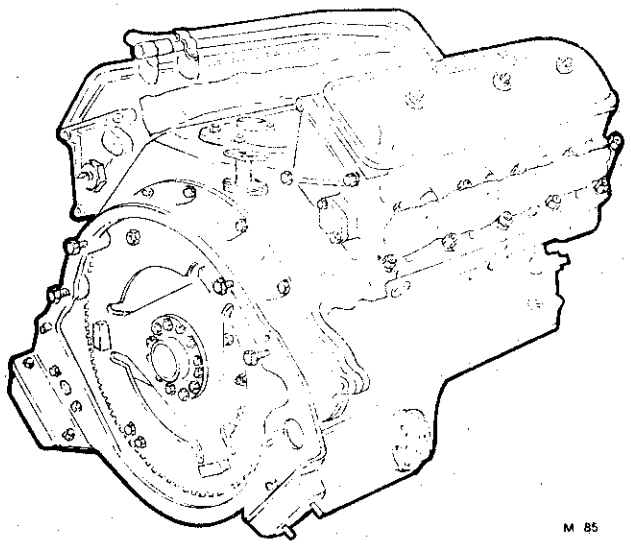

Figure 1 Front and rear view of engine
1. Position of engine serial number stamped on pedestal.

RANGE OF REPLACEMENT ENGINE SPECIFICATIONS

The complete range of revised engine specifications is listed below:

SPEC. NO.	DESCRIPTION	APPLICATION
RS1	6¾ litre vee-eight engine 8:1 compression ratio	(Silver Cloud II (Bentley S2
RS2	6¾ litre vee-eight engine 9:1 compression ratio	(Silver Cloud III (Bentley S3 (Phantom V
RS3	6¾ litre vee-eight engine 9:1 compression ratio suitable for cars fitted with Torque Converter Transmission	(All L.H.D. and later (R.H.D. Silver Shadow (and Bentley T Series (prior to Serial No. 8743
RS4	6¾ litre vee-eight engine 9:1 compression ratio suitable for cars fitted with R.R. Four Speed Automatic Gearbox	(Early R.H.D. Silver (Shadow and Bentley (T Series
RS5	6¾ litre vee-eight engine 8:1 compression ratio suitable for cars fitted with Torque Converter Transmission	(L.H.D. and later R.H.D. (Silver Shadow and Bentley (T Series prior to (Serial No. 8743
RS6	6¾ litre vee-eight engine 8:1 compression ratio suitable for cars fitted with R.R. Four Speed Automatic Gearbox	(Early R.H.D. Silver (Shadow and Bentley T (Series
RS7	6¾ litre vee-eight engine 9:1 compression ratio suitable for cars fitted with Torque Converter Transmission and engines with Exhaust Emission Control	(Silver Shadow and (Bentley T Series from (Car Serial Number 6000 (prior to Serial No. (8743
RS8	6¾ litre vee-eight engine 9:1 compression ratio suitable for cars fitted with the Hydramatic Gearbox	((Phantom VI ((
RS9	6¾ litre vee-eight engine 9:1 compression ratio	(((Silver Shadow and
RS10	6¾ litre vee-eight engine 9:1 compression ratio suitable for cars fitted with Exhaust Emission Control	(Bentley T Series (from Car Serial (Number 8743 (

Continued....

All engines will be supplied completely tested and inhibited against internal corrosion. In addition each engine will be supplied with a small pack of parts which will include thermostat, inlet manifold gaskets, exhaust gaskets and all other minor gaskets and 'O' rings to enable the ancillary equipment to be transferred from the old unit to the new one.

PROCEDURE

The procedure involved in transferring the ancillary equipment from the old unit to the new unit is straightforward and no problems are envisaged. However, in the following procedure we have listed the assembly points which require special attention:

1) Remove original engine unit from the car as detailed in the appropriate Workshop Manual.

2) TRANSFER OF COMPONENTS

2.1 Oil filler neck

Transfer the oil filler neck using the new gaskets supplied.

2.2 Breather pipe

On early S2 engines the breather pipe is of the non-enclosed variety. When transferring this to the new engine it will first be necessary to remove the tappet covers and transfer the baffle plate covering the breather outlet (see Fig. 2). Then fit the breather pipe and clip to the back of the replacement engine.

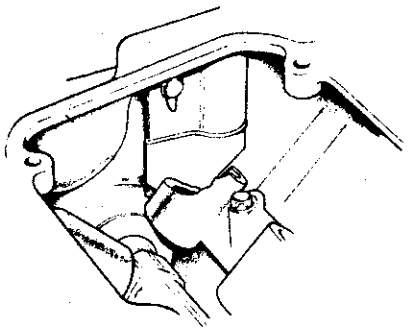

Figure 2 Modified Baffle shown in position.

Continued.....

Rolls-Royce Silver Shadow & Bentley T Series **Service Bulletin**

SECTION E

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In the case of those engines fitted with enclosed breather systems the breather will be fitted after the inlet manifold and and carburetters. The breather should be fitted using the 'O' rings supplied in the kit.

2.3 Brake pumps

On Silver Shadow and Bentley T Series engines the brake pumps must be fitted to the replacement engine before fitting the inlet manifold.

When requested to do so, overhaul the brake pumps as described in the Workshop Manual.

2.4 Hydraulic accumulators

On Silver Shadow and Bentley T Series engines transfer the hydraulic accumulators to the new unit. When requested, overhaul the accumulators as described in the Workshop Manual.

2.5 Inlet manifold

Transfer the inlet manifold and its associated fittings and drain pipe using the gaskets supplied.

Fit the by-pass elbow to the water pump using a new gasket and fit the bobbin with new 'O' rings or where applicable fit a new hose.

2.6 Thermostat

Fit the new thermostat into its housing and seal with the new gasket supplied.

2.7 Rocker covers

The replacement unit may have Rolls-Royce or Bentley rocker covers - transfer these as necessary.

2.8 Exhaust manifold

Transfer the exhaust manifold and choke stove pipes.

2.9 Carburetters and linkage

Transfer the carburetter assembly linkages, drain pipes, feed pipes etc. after removing as described in the Workshop Manual.

When fitting to the replacement engine use the new joint supplied to seal the assembly to the manifold.

When requested, overhaul the carburetters as described in the Workshop Manual. Transfer the engine oil dipstick and dipstick tube with the carburetters. The tube is simply pushed into the adaptor on the sump.

2.10 Crankshaft front pulley

The crankshaft assembly will have been balanced in the factory using a slave pulley. Since these pulleys are fully machined units it is permissible to interchange them.

When the replacement engine is received the castellated nut securing the adaptor to the front of the crankshaft will have been fully tightened and the castellations aligned to allow the lockplate to be fitted.

Continued.....

Therefore, to fit the crankshaft pulley simply remove the five setscrews retaining the lockplate and the lockplate itself. Fit the pulley onto the adaptor over the castellated nut.

Note The location of the damper and pulley is by dowels in the adaptor plate.

Fit the lockplate and tighten the setscrews.

2.11 Coolant pump pulley

Fit the coolant pump pulley and the various pipes to the coolant pump.

2.12 Steering pump

In the case of cars fitted with Saginaw steering pumps, fit the idler pulley for the water pump belts to the front of the crankcase transferring the pivot bolt from the old unit.

Fit the brackets from the old unit to the replacement engine for the Saginaw steering pump and/or fridge compressor and/or alternator or dynamo.

Fit the Saginaw or Hobourn Eaton steering pump. On cars fitted with refrigeration equipment, fit the refrigeration compressor.

Fit the dynamo or alternator.

Fit new belts to the water pump drive, steering pump drive, alternator or dynamo drive and compressor drive.

When requested, overhaul the above items as described in the relevant sections of the appropriate Workshop Manual.

2.13 Starter motor

It will not be possible to fit the starter motor until the engine is mated with the gearbox Torque Converter Transmission.

On those cars fitted with Torque Converter Transmission however, it may be necessary to fit packing washers between the mating faces of the starter motor and the crankcase. Determine the number of packing washers required as described in the Workshop Manual, Chapter M - Electrical System. When requested, overhaul the starter motor as described in the Workshop Manual.

2.14 Distributor and coil

Transfer the distributor and coil to the replacement unit following the fitting procedure described in the respective Workshop Manual.

It is recommended that new contact points are fitted to the distributor.

As an initial setting the ignition timing should be set statically. It should be rechecked once the engine has been started with a stroboscopic lamp to the settings detailed in the Workshop Manual.

Fit the ignition harness to the replacement engine.

Continued....

2.15 Emission Control System

On cars fitted with this equipment it is VERY IMPORTANT that the carburetters are reset to give the correct exhaust emission levels as described in Workshop Manual T.S.D. 2476 - Chapter U.

It is recommended with Silver Shadow and Bentley T Series engines that the hydraulic system is equipped with the rigid brake pump to accumulator pipes before the engine is fitted to the front sub-frame.

Certain early Silver Shadow and Bentley T Series engines from Right-Hand Drive cars had a heater take off point from the back of 'B' bank cylinder head. All replacement Silver Shadow engines will have heater feed and return from the water pump casing and this previous connection blanked off. It is to be noted therefore that when fitting a replacement engine to one of these early Silver Shadow and Bentley T Series cars the rear heater connections are to be used. This will involve using the later type of heater hose UD 12961.

The replacement engine may now be fitted to the front sub-frame as described in the Workshop Manual.

New coolant hoses should be used for the radiator to engine, heater to engine and transmission oil cooler to engine connections.

TIME ALLOWED

For the transfer of components as described on the preceeding pages with both engine units out of the sub-frame the following times are allowed.

All other items including assembly and replacement of engine unit are as shown in the Man-hour schedule:

S2 Series engines with non-enclosed breather pipe.	6.75 hrs.
S2 Series engines with enclosed breather pipe and S3 Series engines for those cars without refrigeration equipment.	6.00 hrs.
S2 and S3 Series engines for those cars fitted with refrigeration.	6.25 hrs.
Silver Shadow and Bentley T Series engines for those cars without refrigeration equipment.	7.50 hrs.
Silver Shadow and Bentley T Series engines for those cars fitted with refrigeration equipment.	7.75 hrs.
Silver Shadow and Bentley T Series engines for those cars fitted with exhaust emission control equipment.	9.25 hrs.

BP/JC

Service Bulletin issued for 'Vee' Eight Cylinder engines
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Date 16.2.71.

CATEGORY C

'VEE' EIGHT ENGINE CAMSHAFTS

APPLICABLE TO

All Rolls-Royce and Bentley vee-eight cylinder engined motor cars.

DESCRIPTION

A new camshaft being used in current production engines is now being supplied for service replacement purposes.

The new camshaft incorporates wider eccentrics, to operate the brake pumps, and a change to the lubrication of its thrust face.

The groove incorporated in previous camshafts (see Fig. 1) has been deleted and the thrust plate now has a chamfer machined on the thrust side of the central hole (see Fig. 1).

The camshaft will be supplied for replacement purposes in all vee-eight cylinder engined cars with the exception of early Rolls-Royce Silver Cloud Mark II and Bentley S2 motor cars which have a different camshaft bearing lubrication system (see Service Bulletin S2/E1).

When the new camshaft is fitted as a replacement it is most important that a small 45^{0} chamber is formed on the thrust plate as shown in Fig. 1. This may be done by careful use of a half-round file known to be in good condition.

Continued...

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Rolls-Royce & Bentley Motor Cars **Service Bulletin**

Service Bulletin issued for 'Vee' Eight Cylinder engines
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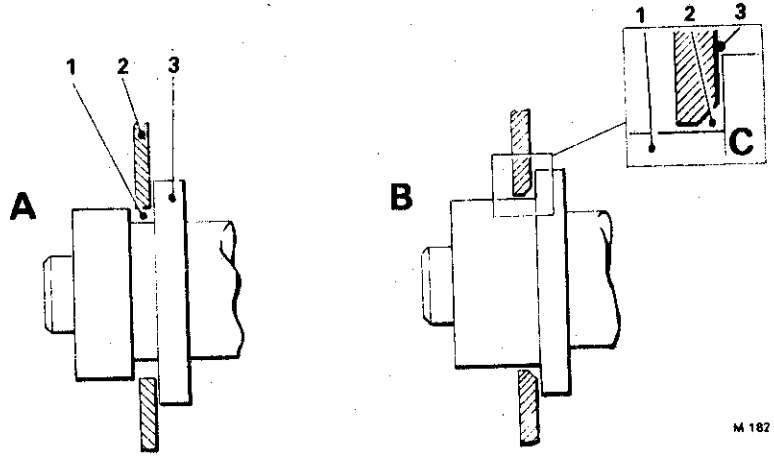


Figure 1 - New camshaft and thrust plate

A - Old type camshaft and thrust plate
1. Lubrication groove
2. Thrust plate
3. Camshaft
B - New type camshaft and thrust plate
C - Inset - showing enlarged view of modified thrust plate
1. Camshaft
2. Lubrication groove
3. Chamfered thrust plate.

Service Bulletin issued for
Circulation All Distributors and Retailers

Section E
Bulletin No SY/E10
Page No 1 of 6
Date 25.8.71

CATEGORY C

ENGINE DRIVE BELTS

APPLICABLE TO

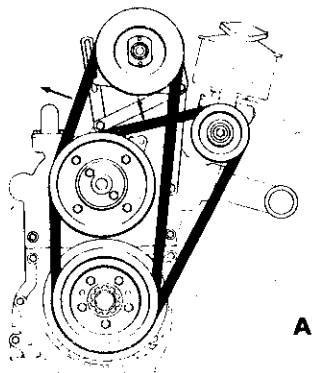
All Rolls-Royce Silver Shadow and Corniche cars.
All Bentley T Series and Corniche cars.

DESCRIPTION

Since the initial introduction of the above motor cars several configurations of belt drives have been adopted to cater for the various modifications and additions to the engine ancilliaries.

This Bulletin shows all the various belt layouts giving the relevant Rolls-Royce part numbers. The dimensions of the belts have also been given to enable substitute belts to be fitted only in an emergency. It must be stressed, however, that such belts must only be used in extreme circumstances and only the finest quality belts available must be used.

When substitute belts have been fitted, they should be exchanged for genuine Rolls-Royce belts at the earliest opportunity.



A

A. Early cars - Hobourn Eaton steering pump and dynamo

Crankshaft - Coolant pump - Dynamo 'vee' belt - Part No. UE 31126
Crankshaft - Coolant pump - Steering pump 'vee' belt - Part No. UE 32658

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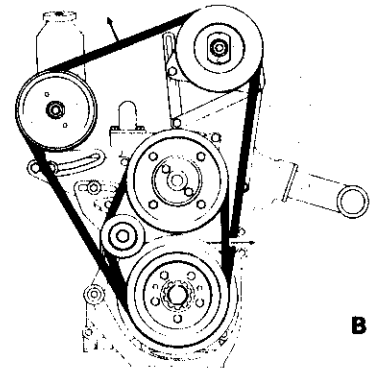
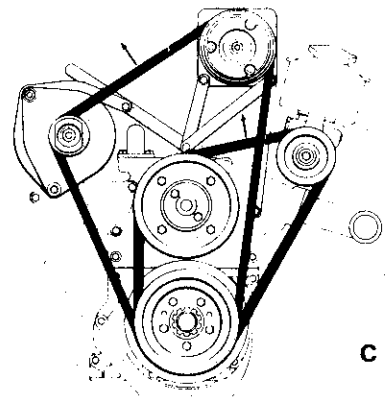


B

B. Early cars - Saginaw steering pump and dynamo

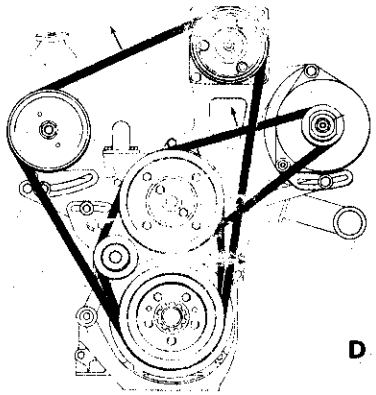
Crankshaft - dynamo - steering pump 'vee' belt - Part No. UE 34563
Crankshaft - coolant pump (jockey pulley) 'vee' belt - Part No. UE 34569



C

C. Early cars - Hobourn Eaton steering pump and Refrigerant compressor

Crankshaft - Coolant pump - Steering pump 'vee' belt - Part No. UE 32658
Crankshaft - Alternator - Compressor 'vee' belt - Part No. UE 31386



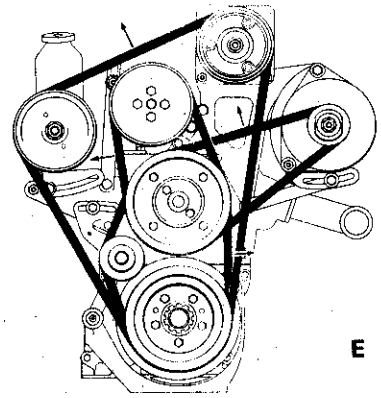
D

D. Later cars - Saginaw steering pump Alternator and Refrigerant compressor

Crankshaft - Steering pump - Compressor 'vee' belt - Part No. UE 36817) or) UE 37811)

Crankshaft - Coolant pump (jockey pulley) 'vee' belt Part No. UE 34569

Coolant pump - Alternator - 'vee' belt - Part No. UE 37058

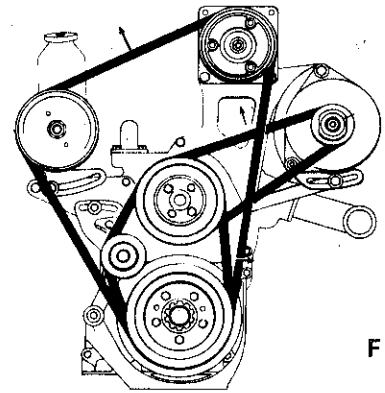


E

E. Later cars - Saginaw steering pump, refrigerant, compressor - Alternator and Exhaust emission control equipment

As D, including

Coolant pump - Air pump - 'vee' belt Part No. UE 33677



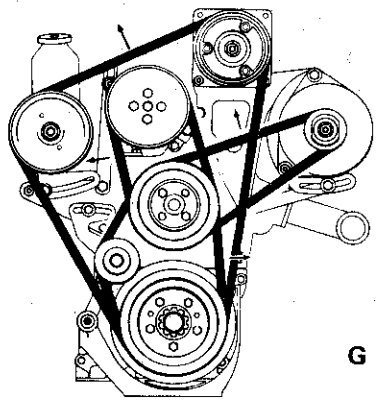
F

F. Later cars - 1.2:1 Coolant pump drive - Saginaw steering pump - Refrigerant compressor

Crankshaft - Steering pump - Compressor 'vee' belt - Part No. UE 36817

Crankshaft - Coolant pump (jockey pulley) 'vee' belt - Part No. UE 36361 or UE 37810

Coolant pump - Alternator 'vee' belt - Part No. UE 37079 or UE 37812



G

G. Later cars - 1.2:1 Coolant pump drive - Saginaw steering pump - Refrigerant compressor - Exhaust emission control equipment

As F including -

Coolant pump - Air pump 'vee' belt - Part No. UE 36360
or
UE 36363

TABLE OF BELT DIMENSIONS

Part Number	Effective Length in. (cm.)	Inside Circumference in. (cm.)	Outside Circumference in. (cm.)	Top Width in. (cm.)	Angle (in degrees)
UE 31126	47.250 (120,01)	46.000 (116,84)		0.4062 - 0.4312 (10,31) - (11,11)	40°
UE 32658	44.750 (111,95)	43.562 (109,34)		0.4062 - 0.4312 (10,32) - (11,10)	40°
UE 34563	56.980 (142,47)	55.843 (139,84)	58.000 (147,32)	0.406 - 0.431 (10,32) - (11,10)	40°
UE 34569	35.000 (88,90)	33.937 (84,05)	36.000 (91,44)	0.375 - 0.400 (9,52) - (11,16)	40°
UE 36360	28.500 (71,24)	27.375 (69,53)	29.531 (73,79)	0.406 - 0.431 (10,318) - (11,11)	40°
UE 36361	33.700 (83,99)	32.594 (81,43)	34.75 (86,55)	0.396 - 0.421 (10,05) - (10,69)	40°
UE 36363	29.000 (73,66)			0.375 - 0.425 (9,52) - (10,79)	40°
UE 36817	63.000 (160,02)			0.4062 - 0.4312 (10,31) - (10,94)	40°
UE 37058	35.600 (86,51)	34.562 (86,50)	36.625 (91,50)	0.375 - 0.400 (9,52) - (10,16)	40°
UE 37079	34.200 (86,87)			0.375 - 0.425 (9,52) - (10,79)	40°
UE 37810	34.646 (86,52)			0.374 - 0.425 (9,49) - (10,79)	40°
UE 37812	34.646 (86,52)			0.374 - 0.425 (9,49) - (10,79)	40°

Arr/JCl/Hly

Service Bulletin issued for
Circulation All Distributors and Retailers

Section E
Bulletin No SY/E11 (Issue 2)
Page No 1
Date 14.10.71

CATEGORY C

CAMSHAFT AND HYDRAULIC TAPPETS

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley T Series cars and all Rolls-Royce and Bentley Corniche cars.

DESCRIPTION

Engines in cars prior to SRX 2499 (four door saloon cars) and CRX 2672 (Coachbuilt cars) were fitted with 'hardenable iron' tappets. Owing to the wear characteristics of these tappets it was not permissible to fit new tappets to a used camshaft since this usually resulted in rapid and uneven wear of not only the tappet but also the camshaft.

Later engines however are fitted with the 'chilled cast' type of tappet and provided the camshaft is not abnormally 'scuffed', pitted or unevenly worn it is permissible to fit new 'chilled cast' tappets to a used camshaft in both earlier and later engines.

A number of camshafts have been renewed recently on the grounds of having worn below the limits quoted in the Workshop Manual. It should be remembered that these figures are only intended to be used as a guide when an engine is being reconditioned throughout and are such as to ensure that the camshaft will give a reasonable reconditioned engine mileage.

The camshaft is 'chilled' to a depth of 0.25 in. (6,35 mm.) thus it may be seen that the cam lobe is hardened to very nearly its entire depth. There is therefore no reason why new 'chilled cast' tappets should not be fitted to a camshaft worn below the limits stated in the Workshop Manual provided the camshaft lobes are not abnormally 'scuffed', pitted or unevenly or appreciably worn below limits.

Re-issued to amend text in second paragraph.
SY/E11 dated 17.9.71 should be removed and destroyed.

Printed in England
February 1972
T.S.D. 2859
M.655

Chapter G
Hydraulics

CATEGORY 2

HYDRAULIC FLUID FEED PIPES AND CONNECTIONS TO THE REAR DISC BRAKE CALIPERS

APPLICABLE TO:

Rolls-Royce Silver Shadow
Bentley T Series

DESCRIPTION

It is possible that when the rear suspension has contacted one of its bump stops during cornering, the metal pipes which supply master cylinder fluid to the upper cylinder of the rear disc brake caliper, and also the pipes which bridge over the caliper can touch against the car body causing a noise.

To eliminate this possibility, extra clearance has been provided by modifying the pipes and their connections to each rear disc brake caliper and fitting a shorter bleed screw to each lower cylinder.

The modification was introduced on production in two stages as follows.

Stage 1

Modified bridge pipes fitted.

Stage 2

Modified feed pipes and connections fitted with the short type lower bleed screws.

Due to the two stages of modification, there are cars in Service which require Stages 1 and 2 of the modification and also a group of cars which will require only Stage 2.

To enable you to decide which stages of modification are necessary, the car should be placed on a ramp and the configuration of the pipes and their connections checked against the illustrations.

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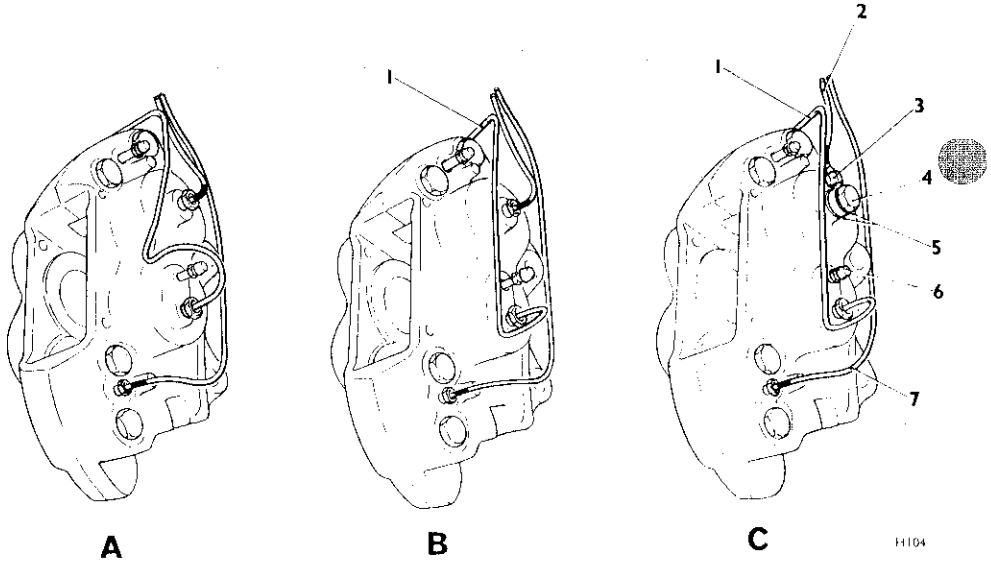

Fig.1 Rear disc brake calipers

A. Original brake pipework

1. Bridge pipe
2. Feed pipe from master cylinder

B. Stage 1 modification

3. Banjo connection
4. Banjo bolt
5. Washers

C. Stage 2 modification

6. Bleed screw (short type)
7. Feed pipe from power source

PROCEDURE

If any stages of the modification are necessary, chock the front wheels.

Place the gear range selector lever in the neutral position and remove the thermal cut-out from the fuse board below the facia.

Continued...

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With the ignition switched off, pump the brake pedal 50 or 60 times to depressurise the system. Confirm that the system is depressurised by switching on the ignition and observing that both red warning lights are illuminated, then switch off the ignition.

Jack up the rear end of the car and place stands in position as described in Chapter H of the Workshop Manual (T.S.D. 2205).

Remove the rear wheels.

Stage 1

Disconnect the bridge pipe (not colour coded) from each rear disc brake caliper and fit the modified bridge pipe.

Stage 2

Unfasten the clips securing each of the two metal pipes which run along the top of each trailing arm.

Disconnect each metal pipe (colour coded - one green the other blue) from its flexible pipe and also from the caliper, then remove the pipes.

Fit the modified (green coded) pipe with its banjo connection to each caliper and reconnect to each flexible pipe.

Fit the modified (blue coded) pipe to each caliper and to each flexible pipe.

Secure the pipes to each trailing arm (three clips along each arm).

Remove the long type bleed screw from each lower cylinder and fit the short type.

Bleed the brakes as described at the end of this Bulletin, fit the wheels, remove the stands and fit the thermal cut-out.

Finally, test the brakes and ensure that no leaks are evident around the connections which have been disturbed.

Continued...

Note Whilst changing pipes ensure that no dirt is introduced into the hydraulic lines; the utmost cleanliness at all times is essential.

MATERIAL REQUIRED

Part Number		Description	Quantity
Stage 1	CD 4837/8	Bridge pipes	1 off each
	(UR 14742/3	Feed pipes from master cylinder	1 off each
	(	(green code)	
	(UR 14624/4	Feed pipes from power source	1 off each
Stage 2	(	blue code)	
	(UR 14752	Banjo connection	2 off
	(UR 14753	Banjo bolt	2 off
	(UR 14754	Washer - banjo bolt	4 off
	(UR 10967	Bleed screw - short type	2 off

TIME ALLOWANCE

4 hours (this includes the time allowed for bleeding).

BLEEDING THE BRAKES

If Stage 1 of the modification only has been carried out, then it will be necessary to bleed only part of the power braking circuit.

If Stages 1 and 2 of the modification have been carried out it will be necessary for part of the power braking and the whole master cylinder hydraulic circuits to be bled. It will not be necessary to bleed the rear calipers of the front disc brakes since no part of this power system should have been disturbed during the modification.

Continued...

PROCEDURE

During all bleeding operations the fluid levels in the reservoir should be maintained at the correct level as indicated on the sight glass.

The following operations are necessary after either Stage 1 or Stage 2 modification.

Run the engine and observe that the warning lights extinguish.

Connect one end of a tube onto the bleed screw of the front caliper of one front disc brake and immerse the other end in a glass container partially filled with clean brake fluid.

With the engine running, open the bleed screw and depress the brake pedal.

When air free fluid flows through the bleed tube, tighten the bleed screw.

Repeat this procedure at the front caliper of the other front disc brake and also at the lower bleed screw of each rear disc brake caliper (i.e. the short bleed screw previously fitted).

Switch off the engine.

The following operations are necessary after a Stage 2 modification.

Place the bleed tube onto the upper bleed screw of a rear disc brake caliper. The free end of the tube should be immersed in clean brake fluid.

Slacken the bleed screw two complete turns while the second operator depresses the brake pedal with a quick forceful thrust.

Tighten the bleed screw and then allow the pedal to return; allow a few seconds for the master cylinder to fully recuperate.

Repeat the previous two operations until all air bubbles cease, and tighten the bleed screw on the downward stroke.

Continued...

Printed in England

Bleed at the upper bleed screw on the other rear disc brake caliper in a similar manner.

Tighten all bleed screws to a torque of 8 lb.ft. to 10 lb.ft. (1,10 kgm. to 1,38 kgm.).

Notes The procedure previously described for bleeding the master cylinder circuit is recommended because great difficulty may be encountered in removing air if other methods are adopted. However, if the brake pedal is thrust downwards too quickly with a top bleed screw open, it is possible to beat the 'G' valve. This condition can be demonstrated by first slowly depressing the pedal until it strikes its on-stop and then observing its lowest position. Next, by striking the pedal extremely fast it can be arrested before it reaches the previously observed low point. Under these circumstances the master cylinder will not receive a full travel delivery stroke and therefore air may remain trapped between the 'G' valve and the master cylinder. It should be noted that the above mentioned condition is possible only when bleeding the master cylinder circuit.

It is not necessary for the brake distribution valves to be bled. On later production cars the bleed screws have been dispensed with at these valves and therefore whenever bleeding brakes in the future, the distribution valves should not be touched even on those with bleed screws provided.

FOR INFORMATION

PAD RATTLE - REAR BRAKE CALIPERS

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard and Coachbuilt Cars
Bentley T Series Standard and Coachbuilt Cars

DESCRIPTION

Under certain driving conditions a continuous rattle may be heard from the rear of the car. On the few occasions this has occurred, the cause has been traced to the rear caliper brake pads settling on their abutment faces. This settling produces increased vertical clearances which allow the brake pads too much free movement.

The rattle, resulting from the pads hitting the caliper body, can be heard only when the car is driven as follows.

a. At road speeds between 10 m.p.h. and 20 m.p.h. (13 km.p.h. and 32 km.p.h.).

b. On road surfaces having small undulations similar to pavé conditions.

c. In quiet surroundings (i.e. off main traffic routes).

The noise cannot be heard under any other driving conditions.

If an Owner complains of a rattle which falls into the above category, this can be substantiated by driving the car as described previously and, if a rattle is heard, applying the foot brake very lightly. Should the rattle cease with the foot brake lightly applied, then the cause is as described previously.

PROCEDURE

Eliminating the rattle involves the simple exercise of fitting four springs to the rear brake caliper assemblies (i.e. one spring to each brake pad) as follows.

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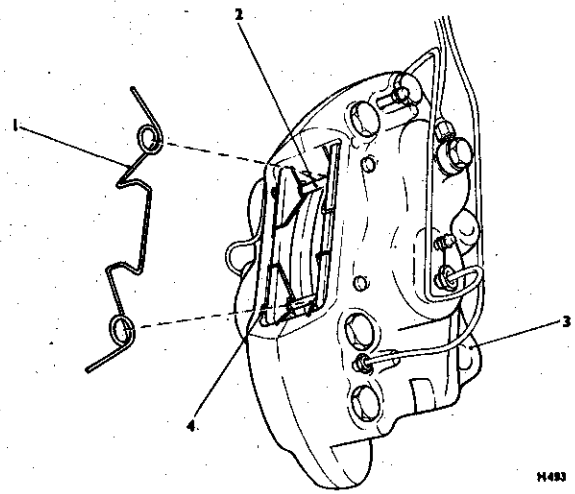

Fig.1 Brake pad anti-rattle springs in position

1 Anti-rattle spring
2 Brake pad locating pins
3 Rear brake caliper
4 Locating pin securing clip

1. Support the rear of the car at the recommended jacking points and remove each road wheel.

2. Remove the securing clip from each pad locating pin and slide the pins outward to disengage one pad.

3. Position one anti-rattle spring as shown in Figure 1 and enter the two pad locating pins into the spring coils (i.e. one pin into each coil).

4. Push the pins inward and through the coils of the second anti-rattle spring positioned by the opposite brake pad as shown in Figure 1.

5. Guide the pins further so that they pass through the brake pad back plate and into the respective holes in the brake caliper body. Fit the securing clips into each locating pin.

Continued....

6. Using the same procedure, fit the two remaining springs to the other rear brake caliper.

Note It is most important that the springs are fitted only in the positions indicated in Figure 1 and not the reverse way round.

MATERIAL REQUIRED

Part Number	Description	Quantity
CD.4928	Brake pad anti-rattle springs	4 off (2 per rear caliper)

TIME ALLOWED

0.2 hours (each caliper)

CATEGORY A

HYDRAULIC ACCUMULATORS AND ASSOCIATED HOSE CONNECTIONS

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard and Coachbuilt Cars
Bentley T Series Standard and Coachbuilt Cars

INTRODUCTION

Through the Rolls-Royce Engineering Policy of always continuing to test new and alternative materials, with the object of improving upon selected design features on current production cars, evidence has arisen which reveals that the accumulator valve housings and certain of their associated hoses can be manufactured to give a considerable increase in their working factor of safety, and at the same time provide simplified methods of manufacture.

The increases in safety have primarily been achieved by producing the accumulator valve housings from steel instead of aluminium. Altering the internal dimensions of certain hose end connections has had the effect of substantially improving their fluid seating capacity.

It has been decided to incorporate these improvements onto the limited number of cars at present in service, because of the increased long term advantages which they offer.

Since it has been decided to standardise these features, the most satisfactory expedient to ensure that cars at present in service receive the improvements, will be to recall cars into a service depot and fit the necessary components.

A separate communication will be issued shortly giving details of the car numbers and the date when they are to be called into a service depot. Sufficient material will be made available at that time for the completion of the modification.

Continued...

Printed in England

DESCRIPTION

The components to be renewed are the two accumulator valve housing assemblies complete, and the two short length pressure hoses (i.e. one from each accumulator valve housing) each of which connects to the small junction block attached to the body sidemember.

Note The accumulator spheres do not require renewal since they are already manufactured from steel.

PROCEDURE

You will be informed by a separate communication which cars you are required to modify, unless of course the material is supplied for a car which has an accumulator hose leaking.

When the car is on the premises and the material to carry out the modification is available, the following procedure should be adopted.

1. De-pressurise the hydraulic system.

2. Remove the left-hand front road wheel.

3. Slacken each accumulator sphere from its aluminium valve housing whilst the housings are still secured to the engine crankcase (see Chapter G - Section G8 of the Workshop Manual).

4. Using the existing small 'O' ring re-fit immediately, the accumulator charging valve cap. This ensures that the nitrogen gas is not allowed to escape from the sphere.

5. Remove the accumulator valve housings as described in Chapter G - Section G8 of the Workshop Manual.

6. Using a new large 'O' ring provided in the kit, hand tighten each accumulator sphere on to the new steel accumulator valve housing assembly.

7. Re-fit the accumulator assemblies to the engine crankcase then, fit the new hoses and tighten all connections. Refer to Service Bulletin SY/G4.

8. Remove the sphere charging valve cap and torque tighten each sphere to its valve housing to between 55 lb.ft. and 60 lb.ft. (7,60 kgm. and 8,24 kgm.).

Continued...

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9. Using a new small 'O' ring provided in the kit, re-fit and tighten immediately, the charging valve cap on to each sphere.

Note. The modification kit of parts does not include pressure switches. The existing ones must be removed from the aluminium valve housings and fitted to the steel valve housings.

10. Run the engine to pressurise the hydraulic systems and check that no leaks are evident around the connections disturbed.

11. Bleed the necessary parts of the hydraulic systems as described in Chapter G - Section G3, Page 13 of the Workshop Manual.

MATERIAL REQUIRED

Part No.	Description	Quantity
UE.34584	Steel Housing Assy.	2 off
UR.15246	Pressure Hose	1 off
UR.15249	Pressure Hose	1 off
UE.10376	'O' Ring Large	2 off
UE.10149	'O' Ring Small	2 off

MATERIAL REMOVED

Disposal of the parts removed is very important since the valve housing assemblies are required for stripping so that certain of the internal components may be reclaimed. All valve housing assemblies should therefore be returned to the factory as soon as possible and should not be retained at the service depot.

The two pressure hoses and four 'O' rings can be considered as scrap. They must never be used again.

NOTIFICATION OF MODIFICATION COMPLETED

As soon as the modification has been incorporated on any one car, the label which accompanied the new components should be completed and returned to the factory address provided.

TIME ALLOWED

5 hours (both accumulators).

Printed in England

CATEGORY A

BRAKE CALIPER SECURING SETSCREWS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series Standard, Long Wheelbase and Coachbuilt cars prior to Car Number 1800.

INTRODUCTION

Whilst cars are on your premises for the modification action detailed in Service Bulletin SY/G7, you should also carry out an additional operation detailed below. This operation simply entails a torque tightness check on the setscrews which secure the brake calipers to their mountings, and the rear hub assemblies to their trailing arms.

DESCRIPTION

The following list contains the setscrews which require checking against the torque figures provided.

Setscrews	Quantity	Torque to Further Tighten
Rear Caliper to Hub Assembly	4 off (2 per caliper)	60 lb.ft. to 65 lb.ft. (8,3 kgm. to 8,99 kgm.)
Rear Hub Assembly to Trailing Arm	8 off (4 per assembly)	60 lb.ft. to 65 lb.ft. (8,3 kgm. to 8,99 kgm.)
Front Caliper to Hub Assembly	8 off (2 per caliper)	42 lb.ft. to 45 lb.ft. (5,81 kgm. to 6,22 kgm.)

If, when attempting to FURTHER TIGHTEN, a setscrew turns at a torque figure below those listed, then that setscrew must be removed and the surface onto which the setscrew head seats be inspected for signs of contamination (i.e. paint, burrs around the hole edges etc.). Any such contamination must be removed and the same setscrew fitted and tightened to the specified torque figure after first ensuring that its mating face is free from burrs etc.

Continued...

Printed in England

Because of the difficulty in positioning a torque spanner onto the top securing screw of each rear caliper, it will be sufficient to check the tightness of these two setscrews by feel using an open jawed spanner.

Note When checking the torque tightness of the individual setscrews, it is important that the check be carried out by attempting to FURTHER TIGHTEN the setscrews.

If a setscrew is found to rotate at a torque figure below those specified and after you have completed the necessary action, you should then supply the Technical Services Department, Rolls-Royce Limited, Crewe with the relevant details.

IDENTIFICATION

After the check has been completed on a car, a spot of blue paint should be applied to the head of one setscrew of each brake caliper.

TIME ALLOWANCE

0.15 hours.

CATEGORY C

BRAKE PAD INSPECTION

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series Standard and Coachbuilt Cars

DESCRIPTION

Inspection of all the brake pad linings should be carried out every 6,000 miles (10,000 km.) as indicated in the Service Schedules.

The purpose of these inspections is to ensure that sufficient brake pad lining is available to cover a further 6,000 miles (10,000 km.) of service life, thus preventing the possibility of the lining metal back plate from contacting the brake disc.

The thickness of the linings should, therefore, be measured. If the linings are worn to within 0.125 in. (3.18 mm.) or less of the back plate, the brake pad assemblies should be renewed as described in Chapter G, Page G48 of the Workshop Manual.

Should the linings be worn almost to the minimum thickness limit of 0.125 in. (3.18 mm.), the decision of whether to renew the linings or not should be influenced by the manner in which the car is driven. If the Owner is known to be a fast driver, it would be advisable to renew the brake pad assemblies; if the car is driven at moderate speeds, the existing pad assemblies may be left in situ until the next 6,000 miles (10,000 km.) service.

No. SY/G15
Circulation - All Retailers

CATEGORY A

BRAKE ACTUATION MECHANISM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars produced prior to car number 3384.

DESCRIPTION

A case has occurred in service where a faulty linkage pin in the brake actuating mechanism has become slack due to lack of interference in its mating part. If one of these brake linkage pins should disengage it could result in a loss of one or more of the braking systems.

These pins, shown in Figure 1, form the end bearings for the balance levers in the brake actuating assembly and are pressed into their mating parts with a heavy interference and should not normally be able to move.

We believe that if there are any further faulty brake linkage pins in existence they will only have been fitted to cars contained in a narrow band of numbers, however, in the interests of safety and in accordance with Rolls-Royce policy, it has been decided to modify all cars prior to car number 3384.

The modifications which have been devised are in the form of three clips which can be fitted in position on the car in a matter of minutes and once in position they will retain the brake linkage pins even if they become slack. These clips will only be fitted retrospectively on cars in service and will not be fitted on cars produced after car number 3384.

It will not be necessary to order the parts to do the modification as these will be sent direct to each Retailer together with a list of cars in his area which require modification.

Continued...

Note Would Retailers please ensure that the modif cation record (pink) label included in the kit of parts is completed and returned to the Technical Service Department Crewe.

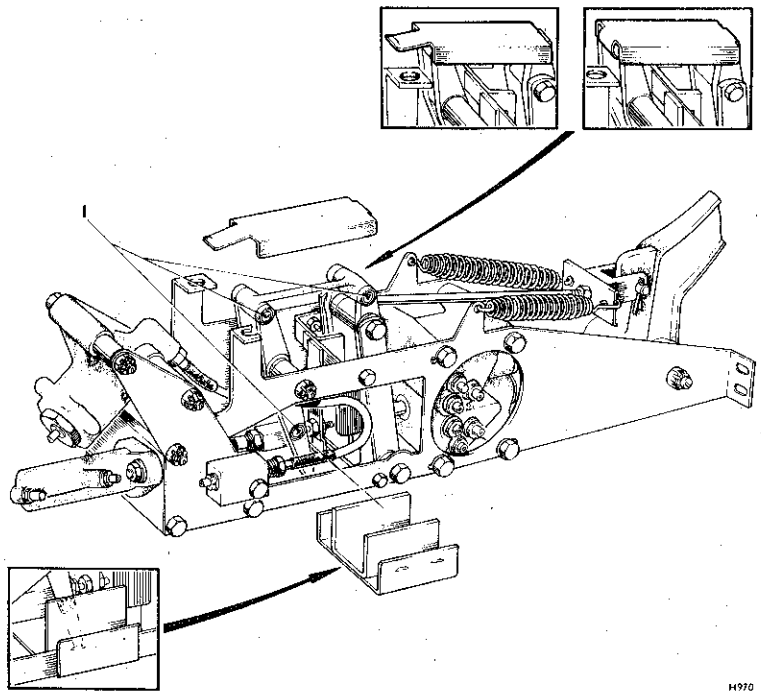

Fig.1 Method of fitting brake linkage retaining clips

1 BRAKE LINKAGE PINS

Continued...

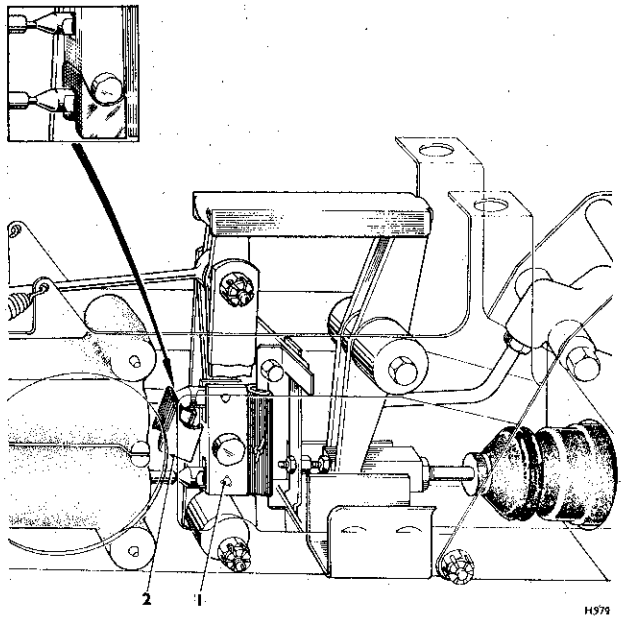

Fig.2 Method of fitting fulcrum pin retaining clip

1 FULCRUM PIN
2 RETAINING CLIP

We believe that the faulty brake linkage pins have only been fitted to a small number of cars contained within the range 1700 to 1900, it has been decided to modify these cars first and then modify the cars on each side of this range later.

The list of cars which require modificat on and the order in which they should be modified will be sent to each Retailer in arrangement with the Service Promotion Departments in London and at the Crewe factory and any communications concerning the campaign should be addressed to either the Service Promotion Manager (HOME) at the London Service Station or the Service Promotion Manager (EUROPE) at the Crewe factory.

Continued...

PROCEDURE

1. Place the car on a ramp or over a pit.

2. Remove the brake actuation mechanism undertray.

3. Spring the three retaining clips into position as shown in Figures 1 and 2. When the upper clip is in position the tang at its forward end should be bent under the link as shown in the inset in Figure 1.

   When the clip which retains the fulcrum pin of the push rod operating the lower distribution valve (see Fig. 2) is sprung into position, ensure that the flanges locate correctly on the balance lever.

4. When the clips are in position the mechanism should be operated to ensure freedom of movement. If the mechanism operates satisfactorily the undertray should be refitted.

IDENTIFICATION

When the undertray has been refitted a large spot of blue paint should be applied to indicate that the modification has been completed.

On right-hand drive cars the paintmark should be applied on the rear left-hand corner of the undertray.

On left-hand drive cars the paintmark should be applied at the rear and on the side of the undertray.

MATERIAL REQUIRED

Kit number 3.

TIME ALLOWED

0.75 hours.

Printed in England

No. SY/G19
Circulation - All
Distributors and Retailers

CATEGORY C

HYDRAULIC UNIT RECONDITIONING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

The purpose of this Service Bulletin is to inform Distributors, Retailers and Service Personnel of the work involved in stripping, cleaning and re-building certain components which are fitted in the braking or levelling hydraulic systems. This information is provided to enable a component to be reconditioned should a replacement component not be immediately available.

PROCEDURE

Before carrying out work of this nature it is important that reference is made to Chapter G of the Workshop Manual, Section entitled Special Precautions, which deals with component cleanliness and safety precautions. In view of the many modifications which have been incorporated on these hydraulic units in the past, the relevant Service Bulletins and Information Sheets should also be consulted before the following procedures are carried out.

In the majority of cases a hydraulic unit is removed for two reasons:

1. It is leaking.
2. One of the valves in the unit is affected by dirt and is not operating correctly as a result.

As a general guide the following list of the more usual troubles is provided.

ACCUMULATOR VALVE	Dirt beneath the regulator valve seating.

Continued...

HYDRAULIC PUMP	Dirt beneath the delivery valve or the non-return valve.
	Leakage from the sealing rings.
ROLL RESTRICTOR VALVE	Leakage from the sealing ring on the longer adaptor.
HEIGHT CONTROL RAM	Leakage from the seals.

The following procedures are intended to rectify faults of this nature.

ACCUMULATOR VALVE - TO RECONDITION

1. De-pressurise the relevant hydraulic circuit and remove the accumulator sphere and valve assembly from the engine as described in Chapter G of the Workshop Manual, Section entitled The Hydraulic Accumulators.
2. Remove the end plug from the accumulator valve. This can be achieved by using a suitable spanner, on a length of hexagonal bar or the barrel of a discarded Lucas accumulator switch inserted into the hexagonal recess in the end plug.
3. Insert a ¼ in. UNF bolt into the threaded hole in the valve sealing plug and withdraw the plug, discarding the sealing ring.
4. Remove the aluminium sealing disc (if fitted), spring and the non-return valve from the smaller bore of the valve bobbin. Should there by any signs of damage to the sealing disc, possibly caused by the piston 'hammering' a new sealing disc must be fitted. The part number of the sealing disc is UE 34472.
5. Remove the valve bobbin. This can be achieved by gently striking the valve body on a piece of wood.
6. Remove the three sealing rings from the bobbin leaving the white Fluon washer in place.
7. Remove the piston valve from the centre bore of the bobbin. Due to the difficulty encountered when fitting new seals to the piston valve, this seal should only be renewed if the existing seal is obviously unserviceable.
8. Remove the regulator valve, spring, adjusting washers, and sealing washer from the accumulator valve.

Continued...

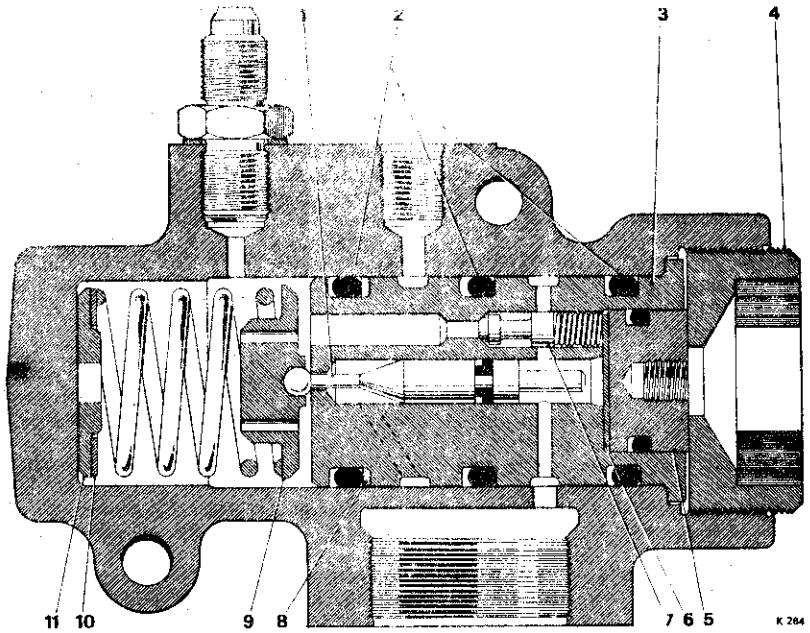

Fig.1 Accumulator valve

1 PISTON AND SEALING RING (UE 10230)
2 BOBBIN AND SEALING RINGS (UE 34920)
3 VALVE BOBBIN
4 END PLUG
5 VALVE SEALING PLUG AND SEALING RING (UE 35101)
6 ALUMINIUM SEALING DISC
7 NON-RETURN VALVE
8 FLUON WASHER
9 REGULATOR VALVE
10 ADJUSTING WASHER(S)
11 SEATING WASHER

Continued...

9. Thoroughly wash all the components including the accumulator valve housing in clean methylated spirits, and dry using clean compressed air.

10. Inspect the ball seat in the bobbin and the ball of the regulator valve for signs of ingrained dirt. If any dirt is present this should be removed and the parts re-washed.

11. Burnish the ball seat by lightly holding the ball onto the bobbin seat and rotating the regulator valve by hand.

a. Inspect the bobbin seat and ensure that it is of a uniform shiny appearance all round, free from heavy pitting or marks which extend across the face of the seat. A certain amount of light pitting is acceptable providing that it does not extend across the face of the seat.

b. If the seat is considered to be unserviceable, the burnishing operation should be repeated using a metal polish or a suitable extremely fine abrasive compound until the seat is considered to be serviceable.

c. Carefully wash the bobbin and the regulator valve and repeat the burnishing operation.

12. Fit the new sealing rings provided to the bobbin, piston valve (only if necessary) and sealing plug.

13. Assemble the valve by reverse procedure, lubricating all internal components with clean brake fluid of the correct type.

14. Fit the accumulator valve and sphere to the engine, connect the hydraulic pipes and bleed the system as described in Chapter G of the Workshop Manual, Section entitled Bleeding the Hydraulic Systems.

15. Check all disturbed unions for leaks.

MATERIAL REQUIRED

PART NUMBER	DESCRIPTION	NUMBER REQUIRED
UE 35101	Sealing ring - plug	1 off per valve
UE 34920	Sealing ring - bobbin	3 off per valve
UE 10230	Seal - piston	1 off per valve
UE 10376	Seal - Accumulator valve to sphere	1 off per valve
UE 34472	Sealing disc	1 off per valve

ALWAYS CHECK SPARES INFORMATION SHEETS AND CURRENT PARTS LISTS BEFORE ORDERING PARTS.

Continued...

Printed in England

HYDRAULIC PUMP - TO RECONDITION

It should be noted that on cars produced after SRH 2970 - Standard cars and CRH 3130 - Coachbuilt cars, the sealing arrangement of the reservoir pipe to hydraulic pump outer body was changed.

Earlier cars were fitted with a pipe connected to the pump by means of a brass olive and special nut, the pump housing having a stepped seating.

Later cars are fitted with a pipe having a flared end and a special nut, the pump housing seat being conical.

Should it be necessary to replace a hydraulic pump, ensure that the seat of the low pressure inlet port is correct for the type of reservoir pipe fitted to the car. If this is not so, the outer housing of the new pump should be replaced with the housing of the original pump.

1. Remove the hydraulic pump from the engine as described in Chapters E and G of the Workshop Manual.

2. Remove the circlip from the top of the pump body.

3. Remove the outer housing of the pump. This can be achieved by drawing the outer housing upwards.

4. Remove and discard the two sealing rings which encircle the valve body.

5. Remove the hexagonal adaptor from the top of the pump body. This adaptor is torque tightened to between 50 lb.ft. and 55 lb.ft. (6,91 kgm. and 7,60 kgm.).

6. Remove the small circlip from the non-return valve body.

7. Remove the cap from the non-return valve.

8. Remove the non-return valve and spring.

9. Remove the valve housing and chamfered washer. Gentle use of a screwdriver may be necessary to remove the chamfered washer, and if it has been badly spread it should be replaced, the part number being UE 34325.

10. Remove the inlet valve and wave washer.

11. Remove the circlip from the base of the pump body.

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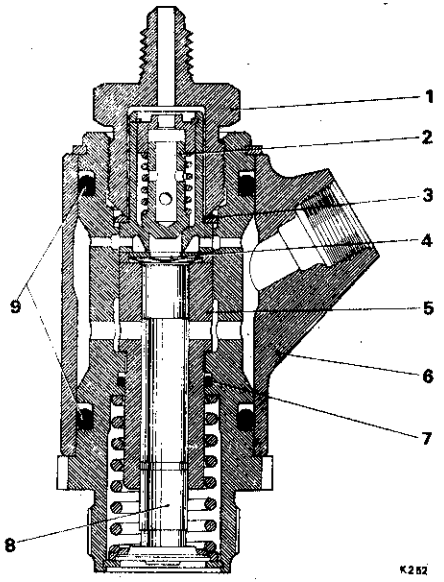

Fig.2 Hydraulic pump

1 ADAPTOR
2 NON-RETURN VALVE
3 CHAMFERED RING (UE 34325)
4 INLET VALVE
5 PUMP BARREL
6 OUTER HOUSING
7 SEALING RING (UE 32170)
8 PLUNGER
9 SEALING RINGS (UE 34921)

12. Remove the plunger, washer and spring.

13. Thoroughly wash all the components in clean methylated spirits and dry with clean compressed air.

14. Assemble the hydraulic pump by reverse procedure lubricating all moving parts with clean brake fluid of the correct type, and using the new sealing rings provided. Should the seating face of the inlet valve be marked, the valve should be assembled with the unused face towards the valve seat.

15. Fit and set the hydraulic pump to the engine as described in Chapters E and G of the Workshop Manual.

Continued...

MATERIAL REQUIRED

PART NUMBER	DESCRIPTION	NUMBER REQUIRED
UE 34921	Sealing ring - outer housing	2 off per pump
UE 34325	Washer	1 off per pump
UE 32170	Sealing ring - inner housing	1 off per pump

ALWAYS CHECK SPARES INFORMATION SHEETS AND CURRENT PARTS LISTS BEFORE ORDERING PARTS.

ROLL RESTRICTOR VALVE - TO RECONDITION

1. Remove the roll restrictor valve from the car, as described in Chapter G of the Workshop Manual, Section entitled The Roll Restrictor Valve.

2. Remove the longer of the two adaptors and the single plain washer.

3. Remove the sealing ring from the adaptor.

4. Remove the restrictor valve spring.

5. Remove the spring seat. This can be achieved by gently striking the restrictor valve against a piece of wood such that the spring seat drops down the bore.

6. Remove the remaining adaptor from the restrictor valve housing, noting the number and position of the adjusting washers.

   a. Remove and discard the sealing ring from the adaptor.

7. Remove the four ¼ in. UNF nuts and plain washers and detach the plunger housing from the restrictor valve housing. Discard the sealing ring.

   a. Remove the plunger from the plunger housing bore noting its position to facilitate assembly.

8. Remove the restrictor valve plunger, noting that the axial bore of the plunger faces the restrictor valve spring.

9. Remove the sealing ring from the restrictor valve plunger.

10. Thoroughly wash all the components in clean methylated spirits, and dry using clean compressed air.

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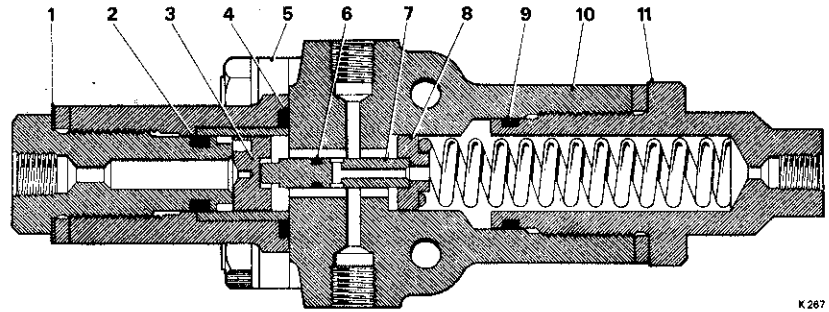

Fig.3 Roll restrictor valve

1 ADJUSTING WASHER
2 SEALING RING (UR 10814)
3 PLUNGER
4 SEALING RING (UE 8328)
5 PLUNGER HOUSING
6 SEALING RING (UR 10801)
7 RESTRICTOR VALVE
8 SPRING SEAT
9 SEALING RING (UR 10815)
10 RESTRICTOR VALVE HOUSING
11 ADAPTOR

11. Fit the new sealing rings provided to the two adaptors, the plunger housing and the restrictor plunger.

12. Assemble the valve by reverse procedure, lubricating all sealing rings and moving parts with clean brake fluid, of the correct type, and noting that the restrictor plunger and the adaptor adjusting washers are fitted as before.

13. Fit the roll restrictor valve to the car and bleed the hydraulic systems as described in Chapter G of the Workshop Manual, Section entitled The Roll Restrictor Valve.

Continued...

MATERIAL REQUIRED

PART NUMBER	DESCRIPTION	NUMBER REQUIRED
UE 8328	Sealing ring - plunger housing to case	1 off
UR 10815	Sealing ring - longer adaptor	1 off
UR 10814	Sealing ring - shorter adaptor	1 off
UR 10801	Sealing ring - restrictor valve	1 off

ALWAYS CHECK SPARES INFORMATION SHEETS AND CURRENT PARTS LISTS BEFORE ORDERING PARTS.

A HEIGHT CONTROL RAM - TO RECONDITION

1. Remove the ram from the car as described in Chapter G of the Workshop Manual, Section entitled The Height Control Rams.

2. Grip the piston in a vice, ensuring that the vice jaws contact only the serrations machined on the lower body of the assembly.

3. Using a suitable piece of hexagonal bar or a gearbox sump plug spanner, unscrew the blanking plug which is fitted in the lower end of the piston bore. Remove and discard the plug sealing ring.

4. Using a suitable box spanner unscrew the travel limiting stop bolt.

5. Withdraw the piston, bolt and distance piece from the ram.

6. Grip the ram in a vice such that the seals are accessible.

7. Remove the circlip, retaining washer, and the wiper seal from the outer end of the ram bore.

8. Using a pointed instrument extract the remaining seal(s) taking care not to damage the bore of the ram.

Note On cars produced prior to SRX 1755 - Standard cars and CBH 1696 - Coachbuilt cars, the rams will be fitted with a wiper seal and two main seals, further details of modifications to the ram being contained in Service Bulletin SY/G5. After removing the wiper seal the innermost main seal should be removed, followed by the secondary seal adjacent to the wiper seal.

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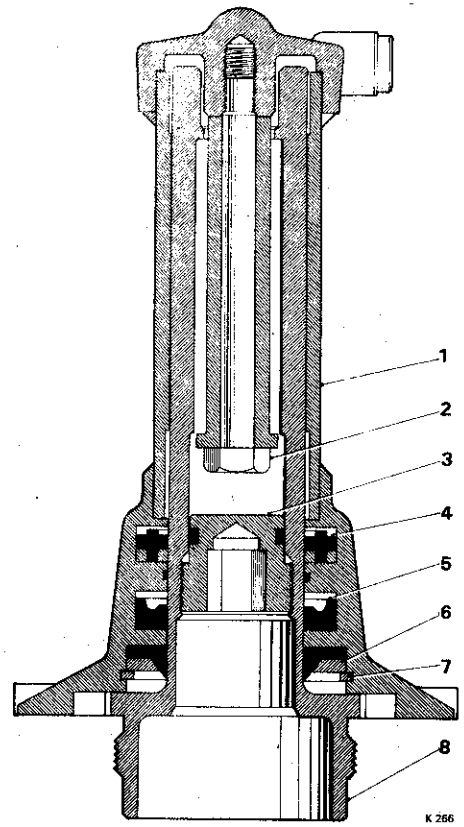

Fig.4 Rear height control ram (three seal type)

1 RAM BODY
2 TRAVEL LIMITING STOP BOLT
3 SEALING PLUG AND RING (UR 10815)
4 MAIN SEAL (UR 12075)
5 SECONDARY SEAL
6 WIPER SEAL (UR 10579)
7 CIRCLIP
8 PISTON

NOTE The sealing arrangement for a front height control ram is identical to the rear rams illustrated.

Continued...

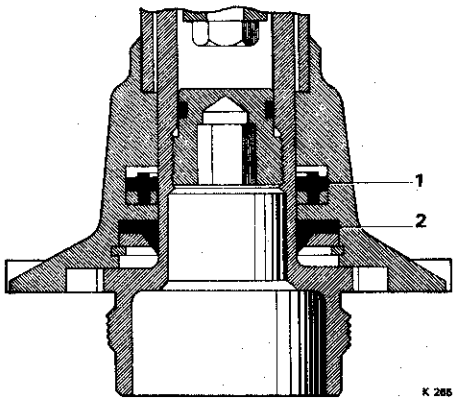

Fig.5 Rear height control ram (two seal type)

1 MAIN SEAL (UR 12075)
2 WIPER SEAL (UR 10579)

NOTE The sealing arrangement for a front height control ram is identical to the rear rams illustrated.

9. Place the piston in a lathe and using Corolith grit 320 emery cloth (or equivalent), carefully remove any score marks from the piston. Finally polish using a fine emery polishing cloth. The piston must be polished from the body end outwards.

10. Thoroughly wash all parts in clean methylated spirits and dry with compressed air.

11. Grease a main seal (UR 12075) with Molytone C or equivalent grease, and compress it with the fingers to an oval shape.

Note If the ram was previously fitted with three seals, the new main seal should be fitted into the groove originally used for the secondary seal, leaving the upper groove vacant. Ensure that the necessary blanks are fitted in place of the hydraulic pipes removed as detailed in Service Bulletin SY/G5.

12. Feed the seal sideways into the ram pushing it just beyond the groove before feeding it back into the groove using a blunt instrument. Ensure that the seal is fitted with the flat side towards the open end of the ram.

Continued...

13. Grease a wiper seal (UR 10579) and fit it into position, lip outwards, and retain with the washer and circlip.

14. Slide the piston into position, taking care not to double back the lip of the wiper seal.

15. Fit the bolt and distance piece and tighten to between 16 lb.ft. and 18 lb.ft. (2,21 kgm. and 2,49 kgm.).

16. Grease the plug sealing ring (UR 10815) and fit it to the plug. Screw the plug into position and tighten to between 60 lb.ft. and 65 lb.ft. (8,30 kgm. and 8,99 kgm.).

17. Refit the ram to the car as described in Chapter G of the Workshop Manual, Section entitled The Height Control Rams.

MATERIAL REQUIRED

PART NUMBER	DESCRIPTION	NUMBER REQUIRED
UR 12075	Main seal	1 off
UR 10579	Wiper seal	1 off
UR 10815	Sealing ring - Plug	1 off

ALWAYS CHECK SPARES INFORMATION SHEETS AND CURRENT PARTS LISTS BEFORE ORDERING PARTS.

No. SY/G20

The information contained in this Service Bulletin supersedes all previous information contained in the Workshop Manual, Owners' Handbook and Service Booklets.

Circulation - All Retailers

CATEGORY C

SERVICE RECOMMENDATIONS FOR HYDRAULIC COMPONENTS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

This Service Bulletin is issued to clarify the recommendations regarding the rubber components in the brake and height control systems on all Rolls-Royce Silver Shadow and Bentley T series cars.

Our recommendations are as follows:

Under normal motoring conditions it is recommended that the following Servicing Operations are carried out at 60,000 miles (100,000 Kms.), and for convenience this work may be carried out at the Scheduled Service or brake pad renewal nearest to the mileage specified above.

EVERY 60,000 Miles (100,000 Kms.)
Renew the following components:

1. All the flexible hoses fitted to the brake and height control systems with the exception of the following hoses:
   Brake pump to accumulator hose.
   Accumulator to frame hoses.
   Low pressure return hoses from the height control system, identified by white marker sleeves.

2. All disc brake caliper seals.

3. Deceleration conscious valve seals.

4. Master cylinder seals.

Continued...

Whilst doing this work the hydraulic systems should be completely drained and refilled with the approved fluid.

It should be emphasised that this Service will only be carried out at the request of the owner and it is the responsibility of the Service Manager to advise the owner that the Service is due. As noted earlier these operations may be carried out during a normal Scheduled Service or brake pad renewal.

It should also be noted that the 60,000 miles (100,000 Kms.) recommendation is for normal motoring conditions. If it is known that a particular owner habitually drives hard, then the Service Recommendations for brake components should be carried out at an earlier mileage. In these cases also, it is the responsibility of the Service Manager to advise the owner when the work is necessary.

In all cases this work is chargeable to the owner.

No. SY/G23
Circulation - All Distributors
and Retailers

CATEGORY C

STORAGE LIFE OF MASTER CYLINDERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

This Service Bulletin has been issued to advise Distributors and Retailers that the master cylinders as fitted to the above cars must not be used for replacements if they have been stored for longer than three years.

During storage the internal seals swell, and if a unit containing swollen seals is fitted to a car, the master cylinder may suffer from piston sticking.

PROCEDURE

When a master cylinder has been held in stock for a period of three years or more, before being fitted to a car it should be stripped, cleaned and rebuilt using new seals lubricated with the correct type of brake fluid.

All master cylinders produced after January 1968 have the date of manufacture stamped on the packing carton. Units produced prior to this date may not be marked and therefore should be carefully inspected before use.

Printed in England

No. SY/G2
Circulation - All Distributor
and Retailers

CATEGORY B

THE ROLL RESTRICTOR VALVE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to car serial number SRH. 3700.

DESCRIPTION

The roll restrictor valves fitted to cars produced after and including car serial number SRH. 3700 have been sealed with 'Loctite' sealing compound to prevent the possibility of the valve leaking.

This Service Bulletin has been issued to advise Distributors and Retailers that on cars prior to serial number SRH. 3700, the long adaptor (item 12) fitted to the roll restrictor valve should be sealed with 'Loctite' sealing compound (grade C.V.).

This should be carried out at the next convenient opportunity i.e. during the next scheduled service or when other work is being carried out.

'Loctite' grade C.V. sealing compound is available locally in most countries.

The sealing operation involves replacing the sealing ring (item 9) on the longer of the two adaptors (item 12) and smearing the adaptor threads with 'Loctite' sealing compound. After re-sealing, the valve should be marked with a spot of blue paint.

PROCEDURE

1. Depressurise the hydraulic systems and remove the roll restrictor valve from the car, as described in the Workshop Manual.

2. Remove the longer of the two adaptors (item 12) and the single plain washer (Item 11). Discard the adaptor sealing ring (item 9).

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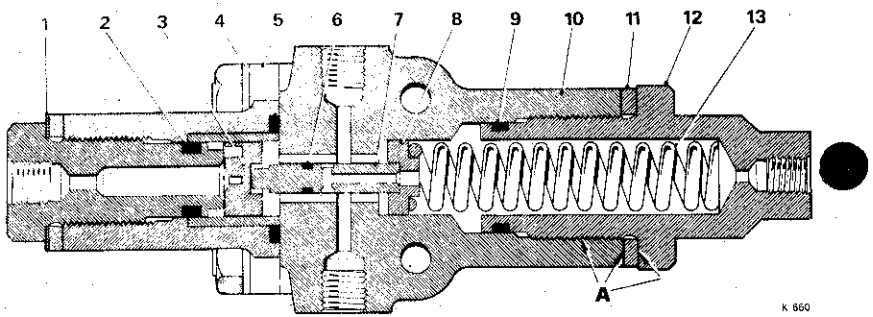

Fig.1 Roll restrictor valve

1 ADJUSTING WASHER
2 SEALING RING
3 PLUNGER
4 SEALING RING
5 PLUNGER HOUSING
6 SEALING RING
7 RESTRICTOR VALVE
8 SPRING SEAT
9 SEALING RING
10 RESTRICTOR VALVE HOUSING
11 WASHER
12 ADAPTOR
13 SPRING
A Apply compound to both faces of washer and threads of adaptor.

3. Remove the restrictor valve spring (item 13).

4. Using a clean fluff-free cloth remove any traces of dirt or rubber from the bore of the valve.

5. Thoroughly clean the threads of the adaptor.

Continued...

6. Fit a new sealing ring to the adaptor, lubricating with clean brake fluid.

7. Fit the restrictor valve spring.

8. Smear the threads of the adaptor, and the faces of the sealing washer with 'Loctite' sealing compound (grade C.V.); refer to arrows A.

9. Fit the washer to the adaptor, and fit the adaptor to the roll restrictor valve; torque tighten to between 48 lb.ft. and 50 lb.ft. (6,64 kg.m. and 6,91 kg.m.).

10. Fit the roll restrictor valve to the car.

11. Top-up and bleed the hydraulic system as described in the Workshop Manual.

12. Mark the valve body with a spot of blue paint which will be seen when the bonnet is raised.

PARTS REQUIRED

UR 10814	Sealing ring	1 off

TIME ALLOWED

1.15 hours.

No. SY/G27
Circulation - All Distributors
and Retailers

CATEGORY C

BLEEDING THE HYDRAULIC SYSTEMS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

After disturbing a component in one of the hydraulic systems on the above cars it is often the practice to bleed the complete hydraulic system comprising of the master cylinder system, the high pressure height control and braking system and the separate high pressure braking system. This practice is unnecessary and expensive in both brake fluid and labour costs.

This Service Bulletin has been issued to advise that only the hydraulic system which has been disturbed needs to be bled as described in Chapter G of the Workshop Manual.

For example, any work on one of the two high pressure systems will require only that one system to be bled. It should only be necessary to bleed the master cylinder system if a component in that system has been disturbed or if there is a complaint about the brake travel or sponge.

It should also be noted that the brake fluid bled out of any system must be discarded as it is unfit for further use.

The recommended times for bleeding the hydraulic systems, using two operators, are as follows:-

SYSTEM	TOTAL TIME ALLOWED
Combined high pressure height control and braking system	0.6 hrs.
High pressure braking system	0.5 hrs.
Low pressure master cylinder system	0.75 hrs.

The above times supersede those given in the Man Hour Schedule (T.S.D. Publication 2251) and are the only times acceptable on future Warranty Claim Forms.

No. SY/G28
Circulation - All United Kingdom
Distributors and Retailers

CATEGORY C

HYDRAULIC ACCUMULATOR - NITROGEN CHARGING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

This Service Bulletin is issued to advise Retailers and Service Personnel of the equipment necessary for charging the hydraulic accumulator with nitrogen. Three suppliers are quoted below but similar equipment may be available from other sources:

NITROGEN

(a) 'British Oxygen Co. Ltd.' can supply compressed nitrogen in two cylinder sizes, 165 cu.ft. or 220 cu.ft.
The cost of the nitrogen is 78/- per 1,000 cu.ft.
There is a fixed supply charge of 18/9d.
Cylinder rental is 5/- per month, per cylinder.

(b) 'Air Products Ltd.' can supply compressed high purity nitrogen in 275 cu.ft. cylinders at a cost of 82/- per 1,000 cu.ft.
There is a charge on delivery of 15/-.
Cylinder rental charge is 10/- per month.

Note Air Products also supply commercial nitrogen at a cost of 50/6d per 1,000 cu.ft. but this MUST NOT be used in hydraulic accumulators fitted to Rolls-Royce or Bentley cars.

REGULATORS

In order to control the flow of gas from the cylinder and to indicate the pressure in the accumulator, a regulator will be required.

(a) 'British Oxygen Co. Ltd.' can supply a suitable regulator designated 'X87 type O-1500', at a cost of £25. 5s. Od.

Continued...

(b) A similar regulator can be obtained from 'Air Products Ltd.' by ordering a 'Series 7000', working pressure 0-1500 lb/sq.in. and costs £23. 12s. 6d.

(c) 'Pressure Control Ltd.' of Chessington can also supply a suitable regulator, type '7000/100G', at a cost of £25. 12s. 6d.

PIPES AND FITTINGS

To enable the regulator to be connected to the accumulator a length of high pressure hose will be required. This hose, which must be able to withstand a gas pressure of at least 4,000 lb/sq.in., is of the normal 'Aeroquip' armoured type ('Aeroquip' 1503 Size 6) and can be bought with the regulator or obtained locally.

'Air Products Ltd.' quote a price of 3/9d. per ft. for hose with 0.25 in. bore. End fittings are priced at 6/8d. each but they also may be obtained locally provided they can withstand a pressure of 4,000 lb/sq.in. To connect the pipe to the accumulator, the end fitting can be made to fit directly onto the accumulator or to fit the Rolls-Royce charging and discharging tool RH.7808.

Note The prices quoted in this Service Bulletin are those which are applicable at the time of printing and are subject to revision at any time at the manufacturers' discretion.

PROCEDURE

It should be noted that the utmost care must be exercised when handling this charging equipment and consequently the accumulator should be removed from the car to enable it to be charged.

1. Before fitting the regulator to the nitrogen cylinder, the cylinder control valve should be opened, such that the subsequent discharge of nitrogen will remove any dust or grit which may be present on the cylinder control valve seating.

2. Fit the regulator and the high pressure pipe to the nitrogen cylinder.

Continued...

3. Remove the charging valve cap from the accumulator, ensuring that the cap is fitted with a serviceable sealing ring.

On later cars an additional seal is provided by a nylon ball which is fitted into the lower end of the charging valve adaptor (see Service Bulletin SY/G14). Great care must be exercised when removing the charging valve cap from these later cars; any gas which has escaped past the charging valve may be trapped behind the nylon ball and can cause it to be shot out with alarming force.

The nylon ball must be replaced with a new one when the accumulator has been charged.

4. Open the regulator valve slowly to eliminate any residual air and any dust which may be present in the high pressure pipe.

5. Connect the high pressure pipe to the accumulator.

6. Place the accumulator in a corner of the workshop and surround it with some form of shielding, preferably a number of sacks filled with sand or soil.

7. Open the main control valve of the nitrogen cylinder.

8. Slowly open the regulator valve and allow the pressure to build up until the gauge shows a reading of 1,000 lb/sq.in. or slightly more. This slight excess pressure will compensate for the small pressure loss which occurs when the high pressure pipe is disconnected.

9. Close the regulator valve, allowing the pressurised nitrogen in the high pressure pipe to escape and causing the accumulator charging valve to close.

10. Remove the high pressure pipe from the accumulator and quickly fit the warning plate, washer, nylon ball (where applicable) and charging valve cap.

11. Torque tighten the charging valve cap to between 22 lb.ft. and 25 lb.ft.

No. SY/G30
Circulation - All Distributors
and Retailers

CATEGORY C

BRAKE PADS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

An increasing number of brake pads are being returned to the factory for credit allowance and it is noticed that many of them are virtually unworn. It is obvious that they have been removed unnecessarily.

The purpose of this Service Bulletin is to inform Distributors and Retailers that when inspecting brake pads the following points should be observed:-

1. Brake pads should only be discarded for two reasons, 1) when they are worn out or 2) when they are contaminated with oil or other substances. In every other case, provided that they have an adequate thickness of friction material (see Service Bulletin SY/G11), the pads can be rendered serviceable by merely refacing the friction lining.

2. In cases of brake squeak, refacing the pad friction lining is just as effective in curing squeaks as fitting new pads and refacing is the only action recommended.

3. In cases of brake inefficiency where the cause has been found to be due to surface glazing of the pad friction lining, refacing is the only operation required. New pads are NOT required if the existing pads have sufficient service life left in them.

4. When it has been necessary to fit new pads, or to reface the original pads, the brakes should be fully bedded in before the car is returned to the Owner.

It should also be noted that no allowance is available on brake pads and worn out brake pads should not be returned to Rolls-Royce Limited. Any pads which are sent to Rolls-Royce Limited and which have an adequate thickness of friction material for further service, will be returned.

No. SY/G31
Circulation - All Distributors
and Retailers

CATEGORY C

ACCUMULATOR SPHERE OVERHAUL

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

This Service Bulletin has been issued to show the correct method to be adopted when reconditioning hydraulic accumulator spheres and the safety precautions which must be observed.

SAFETY PROCEDURES

It is most important that the following safety precautions are observed before and during the accumulator sphere overhaul.

1. Before carrying out any work on the hydraulic circuits ensure that BOTH high pressure systems are FULLY depressurised.

2. The nitrogen pressure must be COMPLETELY EXHAUSTED before conducting any work on the accumulator sphere.

3. Great care must be exercised when removing the charging valve cap since it is possible that the nylon ball, fitted to later charging valves, may be ejected with great force during or after this operation.

4. When discharging the nitrogen from the sphere care must be taken since, in the unlikely event of the diaphragm having split, a certain amount of brake fluid may be ejected from the charging valve along with the gas.

5. Charged accumulator spheres MUST NOT be transported. Spheres returned to Rolls-Royce should be completely discharged and labelled to that effect.

It is also important that strict cleanliness is observed when overhauling these units.

Continued...

PROCEDURE

The overhaul procedure to be adopted then is as follows:

a) Depressurise the hydraulic systems by pumping the brake pedal until both the hydraulic warning lamps are illuminated.

b) Remove the accumulator assembly from the car as described in Section G of the Workshop Manual.

c) To prevent the ingress of dirt, blank off all the ports and adaptors in the accumulator valve.

d) Carefully grip the accumulator valve in a vice using protective vice grips. The valve must ONLY be gripped on the boss which forms the uppermost mounting point.

e) Using tool number RH 7860, remove the accumulator sphere from the valve and discard the sealing ring.

f) Carefully remove the charging cap, washer and warning plate.

g) Should the sphere be fitted with a nylon ball this may be removed by holding the point of a scriber against the nylon ball at an angle of 45°. The scriber should then be tapped gently so that the nylon ball is impaled and can be levered out of the bore.

Note During this operation, position the sphere such that no damage will occur should the nylon ball be ejected by nitrogen pressure and do not work with the head directly above the charging valve.

h) Fit tool number RH 8235 to the charging valve adaptor (see Fig. 1) and completely discharge the sphere.

i) Fit the sphere into tool number RH 8145 as shown in Figure 1, and using a torque spanner in conjunction with tool number RH 8144 remove the locking ring.

Continued...

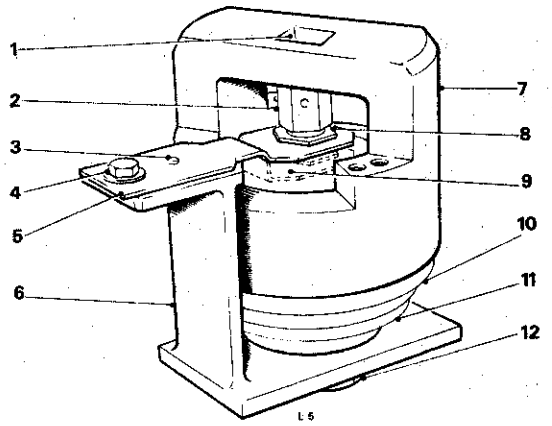

FIG.1 Accumulator sphere secured in the holding tool

1 Recess for torque spanner
2 Discharging tool RH 8235
3 Holding bar locating peg
4 Setscrew securing holding bar
5 Holding bar
6 Accumulator sphere holding tool RH 8145
7 Locking ring tool RH 8144
8 Hexagon boss on lower half of sphere
9 Longer cranked holding bar for small spheres (dotted outline)
10 Locking ring
11 Inverted upper half of accumulator sphere
12 Nut (and washer) retaining the sphere in the holding tool

Continued...

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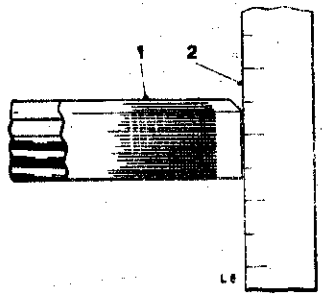

FIG.2 Checking the outer face of the locking ring for distortion

1 Locking ring
2 Straight edge

i) (Continued)

To comply with French requirements the accumulator spheres fitted to French cars are smaller than standard spheres. To accommodate this two holding bars are supplied with tool number RH 8145, the one with the longer crank (see Fig. 1) being designed for use when overhauling French spheres.

Should any small slivers of rubber be evident in the dismantled sphere, on the fluid side of the diaphragm, then the accumulator valve should also be dismantled and cleaned as described in Service Bulletin SY/G19, since any similar slivers in this unit could cause some future malfunctioning of the valve.

j) Remove the dismantled sphere from the holding tool and discard the old diaphragm. Remove the discharging tool from the adaptor.

k) Using a suitable pair of circlip pliers, remove the retaining circlip, the spring and the ball valve from the lower half of the sphere.

l) Inspect the three main components of the sphere paying particular attention to the following:-

The charging valve ball seat.

The diaphragm seat on the two halves of the sphere.

Continued...

l) (Continued)

Check the outer edge of the locking ring against a straight edge for any signs of bowing as shown in Figure 2. This check MUST ONLY be carried out on the locking ring when it is in its free state. Should any signs of bow, or distortion of any form, be evident the whole sphere must be sent to Rolls-Royce Limited with a note stating reason and a replacement sphere fitted.

m) Early spheres which do not have the nylon ball incorporated in the charging valve should be modified at this stage as follows:

Using a 7/32 in. (5,55 mm.) diameter drill increase the diameter of the charging valve bore at the outer end to a depth of 0.110 in. + 0.005 in. (2,79 mm. + 0,127 mm.). This will accommodate the nylon ball and allow it to be compressed when the cap is fitted, ensuring a good seal.

n) Clean all components using fresh methylated spirits and dry using compressed air.

o) Fit a new charging valve ball and lightly tap it onto its seat, using a suitable size punch with a concave end.

p) Fit the original spring and circlip ensuring that the circlip is located correctly in the groove.

q) Fit the inverted upper half of the sphere onto tool number RH 8145 as shown in Figure 1 and grip the tool in a vice.

r) IMPORTANT Take the new diaphragm and place it on a flat surface. Using the smooth rounded end of a small diameter rod positioned at the top of the curved portion of the diaphragm, depress the diaphragm so that it collapses symmetrically. Repeat this operation 20 to 25 times.

Performing this simple operation will exercise the diaphragm and encourage symmetrical collapse under working conditions.

Smear the sealing edge of the new diaphragm with brake fluid and fit it onto the seat in the upper half of the accumulator sphere.

Continued...

Printed in England

s) Fit the lower half of the sphere, ensuring that it seats correctly on the sealing edge of the diaphragm and screw the locking ring LIGHTLY into position by hand.

t) Fit tool number RH 8144 onto the locking ring and fit the holding bar over the hexagon boss on the lower half of the sphere. Secure the holding bar to tool number RH 8145 as shown in Figure 1, ensuring that the bar is positioned correctly on the locating peg. The purpose of the holding bar is to prevent relative rotation of the two halves of the sphere and damage to the diaphragm.

u) Tighten the locking ring, using a suitable torque spanner to between 265 lb.ft. and 275 lb.ft. (36,367 kgm. and 38,020 kgm.).

v) Charge the sphere with nitrogen as described in Service Bulletin SY/G28.

w) Fit a new nylon ball to the charging valve bore and a new sealing ring to the charging valve cap.

x) Fit the warning plate, washer and charging valve cap and torque tighten the cap to between 22 lb.ft. and 25 lb.ft. (3,041 kgm. and 3,456 kgm.).

y) Refit the sphere to the accumulator using a new sealing ring and torque tighten to between 55 lb.ft. and 60 lb.ft. (7,60 kgm. and 8,25 kgm.). Do not use the charging valve cap as a spannering point.

PARTS REQUIRED - to overhaul one accumulator sphere Kit No. 9 comprising of:

Part No.	Description	Quantity
UE 10255	Diaphragm	1
RG 6209	Charging valve ball	1
UE 35100	Sealing ring - Accumulator valve to sphere	1
UE 10149	Sealing ring - Charging valve cap	1
AJ 6769941	Nylon ball - Charging valve	1

TIME ALLOWED

4 - 5 hours.

SECTION G

Circulation - All Distributors and Retailers

Date: 22.9.70.

Bulletin No. SY/G31 Addendum

Sheet No. 1

CATEGORY C

ACCUMULATOR SPHERE OVERHAUL

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

A new type of diaphragm has been introduced onto present production motor cars and is now being supplied for all service replacements.

The new diaphragm when in its free state adopts the form outlined in the cross section shown in Figure 1.

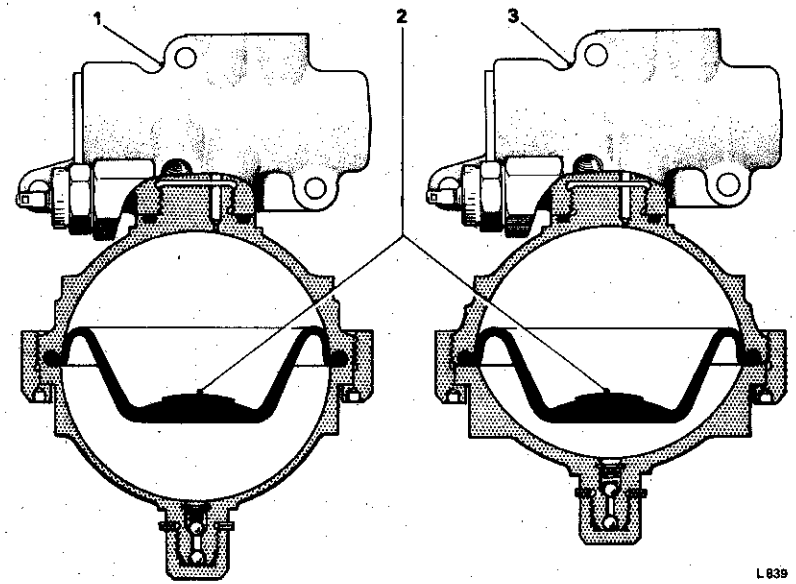

Fig.1 Sectional View - Hydraulic accumulators

1. Accumulator fitted to cars other than those destined for France.
2. New shaped diaphragm.
3. Accumulator fitted to cars destined for France.

Continued...

SECTION G

Circulation - All Distributors and Retailers

Bulletin No. SY/G31 Addendum

Date: 22.9.70

Sheet No. 2

It is most IMPORTANT when overhauling an accumulator sphere that the new diaphragm is fitted the correct way up. This is achieved by fitting the diaphragm as illustrated in figure 1. The moulded lip of the diaphragm will then sit neatly onto the machined seat, situated in the upper half of the sphere.

A smear of brake fluid should be used on the sealing face of the diaphragm during assembly.

The procedure for the complete sphere assembly is as laid down in Service Bulletin SY/G31.

CATEGORY C

THE MASTER CYLINDER 'ON STOP'

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced after and including the following car serial numbers:

SRH 7027 (also including SBH 7001)	-	Standard Cars
DRH 7060 (also including DRH 7018)	-	Coachbuilt Cars
LRX 6961	-	Long Wheelbase Cars

DESCRIPTION

This Service Bulletin has been issued to advise Distributors, Retailers and Service Personnel that the tube which formed the master cylinder 'ON STOP' on earlier cars has been replaced on the above cars with a flexible 'ON STOP' which provides a progressive on stop application in the unlikely event of master cylinder misbehaviour.

Should it be necessary to disturb the master cylinder, or the master cylinder operating lever, on a car fitted with the new flexible 'ON STOP' it is important that the setting of the stop is adjusted correctly as shown below.

PROCEDURE

It should be noted that when the 'ON STOP' setting has been adjusted it will then be necessary to adjust the 'OFF STOP' setting.

MASTER CYLINDER 'ON STOP'

1. Slacken the 'OFF STOP' adjusting bolt lock-nut and screw the bolt away from the master cylinder lever.

2. Slacken the master cylinder rod lock-nut and adjust the clearance between the 'ON STOP' bracket and the master cylinder lever to between 0.750 in. and 0.765 in. (19,05 mm. and 19,44 mm.) as shown at 'B' in Figure 1. The measurement should be taken at right angles to the lever.

Continued...

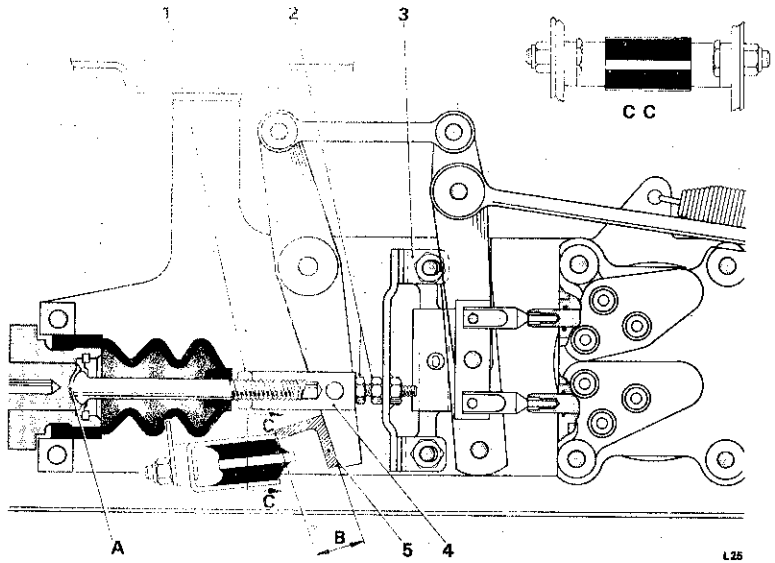

FIG.1 Foot brake actuation linkage with flexible 'ON STOP'

1 Adjuster lock-nut - 'ON STOP' setting
2 'OFF STOP' adjusting bolt and lock-nut
3 'OFF STOP' bracket
4 Master cylinder rod connecting block
5 'ON STOP' setting gauge

A 0.005 in to 0.010 in. (0,13 mm. to 0,25 mm.) clearance - master cylinder operating rod
B. 0.750 in. to 0.765 in. (19,05 mm. to 19,44 mm.) - 'ON STOP' setting.

3. Tighten the master cylinder rod lock-nut to between 13 lb.ft. and 15 lb.ft. (1,80 kg.m. and 2,07 kg.m.).

Continued...

MASTER CYLINDER 'OFF STOP'

1. Gently pull the brake pedal downwards until the clearance between the master cylinder piston and the operating rod has just been taken up; do not apply sufficient force to move the piston.

2. Screw the 'OFF STOP' adjusting bolt towards the master cylinder lever until a clearance of between 0.005 in. and 0.010 in. (0,13 mm. and 0,25 mm.) is obtained between the head of the adjusting bolt and the master cylinder rod connecting block. When the brake pedal is released this clearance will appear between the master cylinder piston and the operating rod, as shown at 'A' in Figure 1.

3. Tighten the 'OFF STOP' adjusting bolt lock-nut.

When adjusting the foot brake linkage setting on cars produced prior to the above car serial numbers, on which a tube forms the 'ON STOP', refer to Service Bulletin SY/G24.

No. SY/G33
Circulation - All Distributors
and Retailers

CATEGORY C

HYDRAULIC SYSTEMS - LOW PRESSURE HOSES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

It has been noticed that on a number of cars in service the worm drive clips which secure the various low pressure hoses used in the hydraulic systems have been over-tightened.

Over-tightening these clips can cause the inner lining of the hose to be damaged, with the consequent risk of rubber lining material getting into the hydraulic systems.

The particular clips in question are the ones which secure the following low pressure hoses:-

1. Hydraulic reservoir to front hydraulic pump hose.
2. Hydraulic reservoir to rear hydraulic pump hose.
3. Front accumulator to hydraulic reservoir hose.
4. Rear accumulator to hydraulic reservoir hose.

Extreme care should be taken when re-tightening the clips to ensure that they are tightened sufficiently to secure the hose but not so tight as to damage the hose material itself.

Printed in England

No. SY/G33
Circulation - All Distributors
and Retailers

CATEGORY C

THE BRAKE PRESSURE LIMITING VALVE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced after and including the following car serial numbers:-

SRX 6996	-	Standard Cars
CBH 7014	-	Coachbuilt Cars
LRX 6951	-	Long Wheelbase Cars

DESCRIPTION

The deceleration conscious, brake pressure limiting valve fitted in the high pressure feed to the rear brakes has been modified on the above cars by the addition of a bleed valve and an alteration to the outlet port.

This allows the brake pressure limiting valve to be bled during the normal bleeding operations and the following procedure should be adopted.

PROCEDURE

After disturbing the front brake pump or the front accumulator, the following procedure for bleeding should be adopted. If the system has been disturbed at the pressure limiting valve it will only be necessary to bleed the pressure limiting valve and the calipers.

1. Place the car on a ramp, select 'PARK' position on the gearchange lever and remove the gearchange actuator thermal cut-out switch. Securely chock at least one road wheel.
2. Ensure that the fluid level in the front compartment of the reservoir is maintained at the correct level whilst the system is being bled. Use only Castrol-Girling Brake Fluid Amber.
3. Run the engine at approximately 1,000 r.p.m. until the system is fully pressurised.

Continued...

4. Attach a bleed tube to the front accumulator bleed screw and immerse and hold the free end in a small quantity of fresh brake fluid in a clean container.

5. Open the bleed screw and allow fluid to pass into the container. Do not close the bleed screw until the fluid has been free from air bubbles for at least 15 seconds. Tighten the bleed screw and remove the bleed tube.

6. Attach the bleed tube to the bleed screw on the deceleration conscious pressure limiting valve, and depress the foot brake pedal half way.

7. Open the bleed screw a small amount until fluid passes into the container. When the fluid is free from air, open the bleed screw further and continue the bleeding for 15 seconds. Close and tighten the bleed screw and remove the bleed tube.

8. Attach the bleed tube to the upper bleed screw on one of the rear brake calipers and repeat operation number 7.

9. Attach the bleed tube to the upper bleed screw on the remaining rear brake caliper and repeat operation number 7.

10. Attach the bleed tube in turn to the bleed screw on each front wheel brake front caliper and repeat operation number 7.

NOTE Because the deceleration conscious pressure limiting valve is in the high pressure system it is possible that, if the upper bleed screw on either rear brake caliper or the bleed screw on the pressure limiting valve is opened too much, the high rate of fluid flow can cause the ball in the brake pressure control valve to contact its seat, and cut off the fluid supply, thus preventing bleeding. Should this occur the bleed screw should be closed, the brake pedal released, and the above procedures repeated until bleeding is successful.

TIME ALLOWED

For bleeding the high pressure braking system as described above - 0.5 man hours.

No.SY/G35
Circulation - All Distributors
and Retailers

CATEGORY C

FRONT AUTOMATIC HEIGHT CONTROL SYSTEM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced after and including the following car serial numbers:

SRX 7404 - Standard cars
DRX 7416 - Coachbuilt cars
LRX 7378 - Long Wheelbase cars

DESCRIPTION

The front automatic height control system has been deleted on present production cars and all cars delivered after the car serial numbers quoted above will have rear automatic height control only.

This change has resulted from a continuous development programme in which an increase in the initial standing height and detail suspension changes have been found to give unimpaired ride and handling characteristics with improved serviceability.

On cars built prior to the above car serial numbers the method for setting the standing and levelled heights remains the same as described in Chapters G and H of the Workshop Manual.

On cars with the front height control system deleted the preparation to enable the standing and levelled heights of the car to be checked will be different and the following instructions describe the new procedure.

To clarify the preparation procedure the loading requirements for cars with front automatic height control are included for comparison purposes.

PROCEDURE

The following procedure must be read in conjunction with Chapter H of the Workshop Manual.

Continued...

When checking the 'showroom' standing height and the hydraulically levelled height the car must be in an unladen condition with 10 gallons (12 U.S. gall., 45 litres) of petrol in the tank, and should be positioned on a ramp or over a pit with a suitably prepared level surface.

The car should first be run some distance on the road to remove flats from the tyres and loosen up the suspension. Following this, no time must be lost in running the car onto the ramp and carrying out the checking procedure.

Note DO NOT APPLY THE HAND BRAKE.

'SHOWROOM' STANDING HEIGHT

The hydraulic levelling system must be OUT of operation when checking the suspension standing height. This can be achieved in two ways, either by de-pressurising the hydraulic system until the right-hand brake warning light is illuminated, or disconnecting the height control valve linkages and discharging the rams. Both procedures are described in detail in Chapter H of the Workshop Manual.

When measuring the standing height of a car WITHOUT front hydraulic levelling, the car is loaded with weights equivalent to two front seat passengers i.e. 150 lb. (68 kg.) is placed on each front seat. This is 150 lb. (68 kg.) more than is used when checking the standing height of a car WITH front levelling where 150 lb. (68 kg.) only is placed between the front seats.

The measurements to be taken, together with the method of adjustment are detailed in Chapter H of the Workshop Manual.

HYDRAULICALLY LEVELLED HEIGHT

To check the hydraulically levelled height of the car the system must be fully pressurised and all the height control valve linkages connected.

The loading arrangement to check the hydraulically levelled height for a car WITHOUT a front levelling system is exactly the same as that for a car WITH a front levelling system. This loading arrangement is 600 lb. (272 kg.) evenly distributed between the front and rear seats.

Continued...

The measurements to be taken, together with the method of adjustment, are detailed in Chapter G of the Workshop Manual noting that on cars WITHOUT front levelling the measuring procedure need only be performed on the rear suspension.

SUMMARY

	Cars WITH hydraulic front levelling	Cars WITHOUT hydraulic front levelling
'Showroom' standing height	150 lb. (68 kg.) between the front seats.	150 lb. (68 kg.) on each front seat i.e. 300 lb. (136 kg.) total weight.
Hydraulically levelled height	150 lb. (68 kg.) on each seat i.e. 600 lb. (272 kg.) total weight.	150 lb. (68 kg.) on each seat i.e. 600 lb. (272 kg.) total weight.

When the standing or levelled heights have been reset it is important that the headlamp beams are also re-aligned. This should be done with the car loaded in the same manner as when measuring the hydraulically levelled height.

TIME ALLOWED

a) Cars WITHOUT front hydraulic levelling:

Checking the 'showroom' standing height and levelled height, including setting the headlamp beam alignment 0.75 hours

b) Cars WITH front hydraulic levelling:

For checking the 'showroom' standing height and levelled height time allowance refer to the Man Hour Schedule (T.S.D. Publication 2251)

For all adjustment and rectification times, again refer to the Man Hour Schedule.

No. SY/G37

Circulation - All Distributors
and Retailers

CATEGORY C

THE FRONT HEIGHT CONTROL SYSTEM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to the following car serial numbers:

SRX 7404	Standard cars
DRX 7416	Convertible
LRX 7378	Long Wheelbase cars
CRH 7455	2 door Saloons

DESCRIPTION

Current production cars are fitted with automatic height control to the rear suspension only as described in Service Bulletin SY/G33.

The detail changes to the front suspension which made this development possible can be applied to earlier cars to give unimpaired ride, handling characteristics and improved serviceability.

It is, therefore, recommended that should a defect develop in the front height control system, the owner should be offered the choice of having the car modified to the latest specification or of having the defect repaired.

This Service Bulletin gives the correct procedure to adopt when modifying the front suspension on the above cars to the current specification. Included is the procedure for the removal of the metal pipe connected to the left-hand front height control ram. Modified cars can be identified by noting the deletion of the pipe connecting the roll restriction valve to the left-hand front height control ram.

PROCEDURE

1. Depressurise the hydraulic systems as described in Chapter G - Section G2 of the Workshop Manual.

Continued...

IMPORTANT

2.(a) LEFT-HAND DRIVE CARS ONLY - Disconnect the uppermost orange sleeved metal pipe from the lower connection block adjacent to the rear accumulator (see Fig. 1(a)).

(b) RIGHT-HAND DRIVE CARS ONLY - Disconnect the orange-sleeved metal pipe from the side of the lower connection block adjacent to the rear accumulator (see Fig. 1(b)).

3. Fit a steel ball into the open part of the connecting block; fit the pipe.

4. Disconnect the uppermost white sleeved metal pipe from the roll restrictor valve.

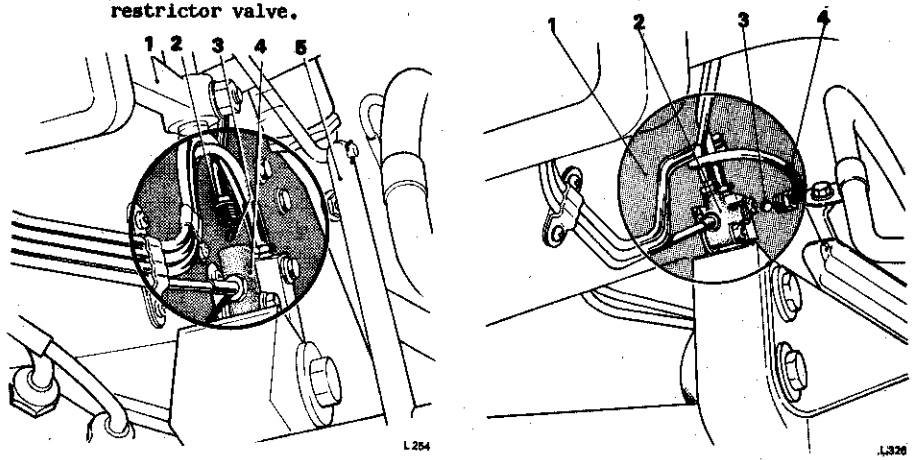

Fig. 1. Lower connection block adjacent to the rear accumulator

A. - Left-hand drive cars

1. Footbrake
2. Orange sleeved metal pipe
3. Ball
4. Connection block
5. Accelerator linkage.

B. - Right-hand drive cars

1. Left-hand body side member
2. Connection block
3. Ball
4. Orange sleeved metal pipe.

Continued...

5. Fit a steel ball into the open part of the valve; fit the pipe.

6. Locate and diconnect the white sleeved metal pipe connected to the upper of the three flexible hoses adjacent to the right-hand side of the radiator.

7. Fit a steel ball into the pipe connector; fit the pipe.

8. Remove both front rams as described in Chapter G - Section G17 of the Workshop Manual. Exhaust all fluid from the rams.

9. Unscrew and remove the ram bleed screws. Fit blanking plugs to all ram ports.

10. Fit a distance piece to each front ram as shown in Figure 2.

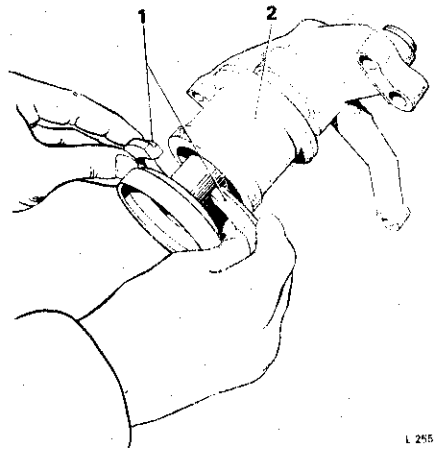

Fig. 2 - Showing the fitting of the spacers
1. Spacers
2. Ram

Continued...

11. Remove and discard the feed pipe which connects the left-hand front ram to the roll restrictor valve. Fit a blanking plug to the exposed port of the valve.

Note

All cars produced prior to car serial numbers SRH 1755 and CBH 1696 are fitted with a feed pipe and a return pipe to each front ram. The return pipes are fitted between the front rams and the three-way connecting blocks situated adjacent to the engine compartment scuttle. The pipes must be removed and discarded as described in Service Bulletin SY/G2. All the exposed ports should be fitted with blanking plugs.

12. The solenoid valve signal pressure must be blanked off from the roll restrictor valve. This is conveniently done under the car at the connecting block by the left-hand side of the gearbox. It will be necessary to remove the brake actuation box shield on left-hand drive cars to expose this block. Remove the forward end of the second most inboard metal pipe from the connecting block as shown in Figure 3. The pipe is identified by a yellow sleeve.

13. Fit a steel ball to the connecting block port; fit the pipe.

14. Unscrew and remove the nut and bolt clamping the operating arm to the spindle of the front height control valve.

15. Remove the ball joint securing the front height control valve rod to the stabiliser bar bracket.

16. Remove and discard the valve operating arm and rod.

17. Check and adjust the mechanical standing height and the rear levelled height, as described in Chapters H & G - Sections H10, H20 and G15 of the Workshop Manual and in Service Bulletin SY/33.

18. Adjust the headlamp beams as described in Chapter M - Section M9 of the Workshop Manual.

Continued...

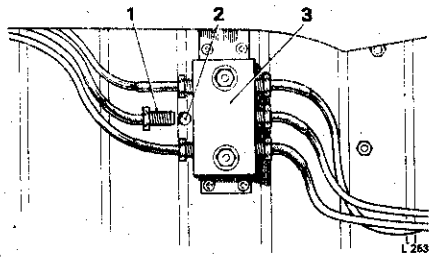

Fig. 3 - Showing the connecting block adjacent to the transmission.
1. Yellow sleeved pipe
2. Ball
3. Connection block.

MATERIAL REQUIRED	QUANTITY
Kit - Number 11	1

TIME ALLOWED

Right-hand drive cars	2.35 hours
Left-hand drive cars	2.85 hours

NOTE

The above times do not include the checking and adjustment of the mechanical standing height; the rear levelled height or the adjustment of the headlamp beams.

The times for the above mentioned operations are detailed in the Man Hour Schedule TSD.2251.

CATEGORY C

BRAKE PUMP TO ACCUMULATOR RIGID PIPES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The flexible hoses which connect the hydraulic brake pumps to the accumulators are renewed as part of the 48,000 miles (80000 km.) recommended service schedule.

Current production cars are now being fitted with rigid pipes made of mild steel in place of these flexible hoses. These rigid pipes do not need to be changed at any of the schedule services.

The flexible hoses and the rigid pipes are interchangeable and in future the new pipes will be supplied for all replacement purposes. The rigid pipes may be fitted at the appropriate schedule service and should always be fitted in pairs.

This Service Bulletin has been issued to advise the correct method of fitting the new pipes.

It is a feature of these steel pipes that the hydraulic 'knock' which may be audible on each pressure stroke of the brake pump may be accentuated. This feature is standard and no rectification work is necessary.

Although the front pump to accumulator steel pipe will fit all cars, two different rear pipes are available to allow for the difference in shape between the Rolls-Royce four speed gearbox and the torque converter transmission.

PROCEDURE

NOTE

The seven clips which secure the rigid pipes are identified in Figure 1 and this should be used in conjunction with the following text to ensure that the clips are fitted correctly.

continued...

1. Depressurise the hydraulic systems as described in Chapter G of the Workshop Manual.

2. Remove and discard the brake pump to accumulator flexible hoses.

FITTING OF REAR PIPE

3. Attach three clips (UR 16857, UR 16867 & UR 16858) to the rear pipe. The clips should be fitted in the upper, central and lower positions respectively, as shown at 5, 6, & 8 in Figure 2.

4. Loosely attach the extension pipe shown at 7 in Figure 2 to the pipe.

5. Loosely attach one of the larger brackets (UR 16866) to the upper clip as shown in Figure 3 - illustration B.

6. Lower the pipe into position on the rear pump and accumulator holding the pipe above the rear accumulator with the straight upper length of the pipe pointing towards the radiator. Carefully lower the pipe into place, simultaneously turning the pipe until the upper length is correctly aligned with the rear brake pump. This is a difficult operation but it should be noted that the pipe can be aligned without the use of force.

7. Finger tighten the pipe seating nuts to the pump and accumulator. At this stage the engine breather pipe may require moving forwards to clear the pipe being fitted.

8. Fit the lower clip to the rear accumulator securing bolt.

9. Secure the bracket at the upper end of the pipe to the cylinder head as shown in Figure 3 - illustration B.

10. Loosely attach the central clip (UR 16867) to the cylinder head as shown in Figure 3 - illustration A.

11. Tighten the pipe seating nuts onto the accumulator and brake pump taking care not to strain the pipes.

12. Tighten the extension pipe onto the lower end of the main pipe.

continued...

USE OF CLIPS	CLIP IDENTIFICATION	BRACKETS
1 off Rear pipe to rear accumulator	0.312 in. (7.92 mm) 0.725 in. (18.41 mm) 1.062 in. (26.98 mm) UR 16858	None
3 off Upper end of front pipe Upper end of rear pipe Lower end of front pipe	0.312 in. (7.92 mm) 0.725 in. (18.41 mm) 0.812 in. (20.62 mm) UR 16857	Use with longer bracket UR 16866 for upper end of rear pipe Use with short bracket UR 16853
1 off Front pipe to rocker cover	0.312 in. (7.92 mm) 0.562 in. (14.27 mm) 0.750 in. (19.05 mm) UR 16854	Use with longer bracket UR 16866
2 off Both pipes to cylinder head	elongated hole 0.328 in. dia (8.33 mm) 0.562 in. (14.27 mm) 1.10 in. (27.94 mm) UR 16867	None L325

Fig. 1 Clip Identification.

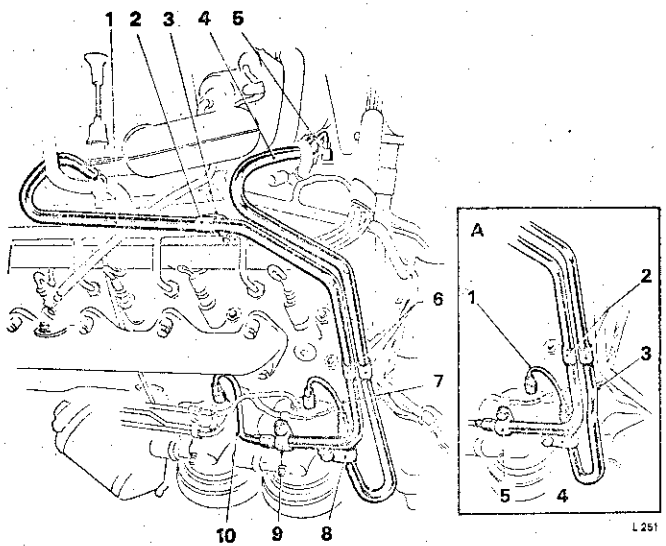

Fig.2 Position of rigid pipes and clips.

1. Pipe (UR 16869)
2. Clip (UR 16854)
3. Bracket (UR 16866 - use up UR 16855)
4. Pipe (UR 16871)
5. Clip (UR 16857) and bracket (UR 16866)
6. Clip (UR 16867)
7. Pipe (UR 16870)
8. Clip (UR 16858)
9. Clip (UR 16857)
10. Pipe (UR 16868)

Inset A Cars with the four speed automatic gearbox

1. Pipe (UR 16970)
2. Clip (UR 16867)
3. Pipe (UG 13331)
4. Clip (UR 16858)
5. Clip (UR 16857)

Continued...

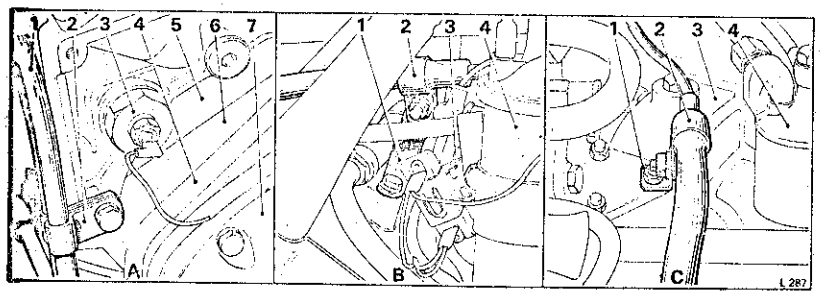

Fig. 3 Clips and locations - Pipes - Brake pump to accumulator.

A.
1. Rear pipe
2. Clips
3. Temperature transmitter
4. Transmission oil cooler pipe.
5. Cylinder head
6. Crankcase
7. Transmission

B.
1. Bracket
2. Clip
3. Ballast resistor
4. Ignition Coil

C.
1. Bracket
2. Clip
3. Manifold (induction)
4. Carburetter

FITTING OF FRONT PIPE

13. Fit a clip (UR 16857) to each end of the front pump to accumulator pipe.

14. Fit the small bracket (UR 16863) to the upper-most clip on the pipe and fit the remaining large bracket (UR 16866) to the rocker cover securing nut, as shown in Figure 3 illustration C, and Figure 2 respectively.

15. Lower the pipe into position and finger tighten the extension piece to the main pipe.

16. Loosely attach the pipe seating nuts to the brake pump and the accumulator.

NOTE

In order to fit the pipe to the brake pump it may be necessary on certain cars to move the refrigerant delivery hose which is attached to the refrigerant compressor. This is achieved by rotating the hose on its seating on the compressor, until sufficient clearance is obtained. The hose should not be moved too far as a foul may occur with the spring pot. The hose seating nut should not be slackened as this would allow an escape of refrigerant pressure.

17. Fit the lower clip to the rear accumulator securing bolt using two flat washers between the pipe clip and the wiring loom clip.

18. Fit the bracket on the upper clip to the bracket on the inlet manifold as shown in Figure 3 - illustration C.

19. Fit the remaining clip (UR 16867) to the front pipe and loosely attach it to the cylinder head as shown in Figure 3 - illustration A.

20. Tighten the two end nuts of the pipe and tighten the extension pipe to the main pipe.

21. Fit a clip (UR 16854) to the front pipe and secure it to the bracket on the rocker cover.

FINAL FITTING OPERATION - BOTH PIPES

22. Tighten the two clips (UR 16867) securing both pipes to the cylinder head.

23. Check that clearance exists between the front pump to accumulator pipe and the following components:

(a) The refrigerant delivery hose.
(b) The rear end of the high tension cable conduit tube.
(c) The extension pipe and the cylinder block.

Check that clearance exists between the rear pump to accumulator pipe and the following components:

(a) The engine breather pipe.
(b) The heater coolant tube.
(c) The high tension cable conduit tube.
(d) The extension pipe and the cylinder block.

continued...

24. Top-up and bleed the high pressure hydraulic systems as described in Chapter G, Section G3 of the Workshop Manual.

MATERIAL REQUIRED

CARS FITTED WITH THE TORQUE CONVERTER TRANSMISSION

PART NO.	DESCRIPTION	QTY	
UR 16927	Rear pipe	1	
UR 16925	Front pipe	1	
UR 16926	Rear Extension pipe	1	
UR 16924	Front Extension pipe	1	
UR 16863	Bracket	1	KIT NO. 1
UR 16857	Clip	3	
UR 16866	Bracket	2	
UR 16854	Clip	1	
UR 16867	Clip	2	
UR 16858	Clip	1	

CARS FITTED WITH THE FOUR SPEED AUTOMATIC GEARBOX

As above except that Rear Pipe UR 16927 is replaced by Rear Pipe UC 13331.

All necessary parts are contained in Kit Number 14.

IMPORTANT

When ordering parts ONLY KIT NUMBERS should be quoted.

TIME ALLOWED

Fitting rigid pipes on left-hand drive cars - 7 hours (8 hours on cars fitted with Exhaust Emission Control).

Fitting rigid pipes on right-hand drive cars - 6 hours.

Topping-up and bleeding the hydraulic systems-1.1 hours.

Continued...

ACCESSIBILITY

On cars fitted with rigid pipes the accessibility of the brake pump and the accumulator are affected, and before any service work can be undertaken on either of these items, the rigid pipes will have to be unclipped and moved to allow access to these units.

The changes to the existing procedures are listed below:

BRAKE PUMPS

1. If it is required to remove or gain access to either brake pump it will be necessary to remove all clips from that particular pipe, excepting the lower clip which secures the pipe to the accumulator. This will release the pipe sufficiently to allow it to be swung away from the pump. The pump can then be removed in the normal manner as described in Chapter G of the Workshop Manual.

FRONT ACCUMULATOR

1. In order to remove the front accumulator it will be necessary to remove only the extension pipe which connects the main front pipe to the accumulator. The front accumulator can then be removed as described in Chapter G of the Workshop Manual.

REAR ACCUMULATOR

When removing the rear accumulator the following procedure should be adopted:-

1. On left-hand drive cars the front accumulator should be removed. On right-hand drive cars the front accumulator bolts should be slackened.

2. Remove the front pipe extension piece shown at 10 in Figure 2.

3. Remove the clips shown at 6, 8, and 9 on Figure 2.

4. Remove the rear pipe extension piece.

5. The rear pipe can now be moved away from the accumulator sufficiently for the latter to be removed in the usual manner as described in Chapter G of the Workshop Manual.

Continued...

To cater for the increased work noted previously, the times quoted in Service Bulletin SY/G51 and in the Man Hour Schedule have been amended AND THE REVISED TIMES LISTED BELOW SHOULD BE USED FOR ALL CARS FITTED WITH RIGID PIPES.

RIGHT-HAND DRIVE CARS	TIME ALLOWED
FRONT ACCUMULATOR ASSEMBLY ONLY - replace Including bleeding the systems and fitting the road wheel.	2.60 hours
REAR ACCUMULATOR ASSEMBLY ONLY - replace Including slackening the front sphere for access, bleeding the system and fitting the road wheel.	4.0 hours
LEFT-HAND DRIVE CARS	
FRONT ACCUMULATOR ASSEMBLY ONLY - replace Including bleeding the systems and fitting the road wheel.	2.60 hours
REAR ACCUMULATOR ASSEMBLY ONLY - replace Including removing and fitting the front accumulator, bleeding the systems and fitting the road wheel.	5.0 hours
ALL CARS	
To replace both accumulator assemblies in one operation. Including bleeding the systems and fitting the road wheel.	5.0 hours
BRAKE PUMP - replace Including removal of carburetters, inlet manifold and bleeding the systems.	5.80 hours (7.30 on cars fitted with Exhaust Emission Control).
BOTH BRAKE PUMPS - replace Including removal of carburetters, inlet manifold and bleeding the systems	6.20 hours (7.90 on cars fitted with Exhaust Emission Control).

Continued...

BRAKE PUMP - replace 'O' rings
Including slackening of pipe for access, removal of pump body and bleeding system. 1.8 hours

CATEGORY C

HYDRAULIC ACCUMULATOR - NITROGEN CHARGING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

In Service Bulletin SY/G31 it is advised that the accumulators are charged as described in Service Bulletin SY/G39.

The equipment required and procedure are as described below.

NITROGEN

High purity nitrogen is required and can usually be obtained in cylinders of between 200 - 300 cu. ft. (5,66 - 8,49 cu.m.) capacity from the local suppliers of industrial gases.

REGULATORS

In order to control the flow of gas from the cylinder and to indicate the pressure in the accumulator, a regulator will be required having a working pressure of 0 - 1 500 lb/sq. in. (0 - 105,46 kg/sq.cm.) or 0 - 102,1 atmospheres. Usually these may be obtained either from or through the local gas supplier.

PIPES AND FITTINGS

To enable the regulator to be connected to the accumulator, a length of high pressure hose will be required. This hose should be of the armoured type and must be capable of withstanding a gas pressure of at least 4 000 lb/sq.in. (281,23 kg/sq.cm.) or 275 atmospheres.

End fittings for this pipe must be capable of withstanding the same pressures and should be obtained locally with the hose. To connect the pipe to the accumulator, the end fitting can be made to fit directly onto the accumulator or to fit the Rolls-Royce charging and

Continued...

discharging tool RH 7808.

PROCEDURE

It should be noted that the utmost care must be exercised when handling this charging equipment and consequently the accumulator should be removed from the car to enable it to be charged.

1. Before fitting the regulator to the nitrogen cylinder, the cylinder control valve should be opened, such that the subsequent discharge of nitrogen will remove any dust or grit which may be present on the cylinder control valve seating.

2. Fit the regulator and the high pressure pipe to the nitrogen cylinder.

3. Remove the charging valve cap from the accumulator, ensuring that the cap is fitted with a serviceable sealing ring.

   On later cars an additional seal is provided by a nylon ball which is fitted into the lower end of the charging valve adaptor (see Service Bulletin SY/G14). Great care must be exercised when removing the charging valve cap from these later cars; any gas which has escaped past the charging valve may be trapped behind the nylon ball and can cause it to be shot out with alarming force.

   The nylon ball must be replaced with a new one when the accumulator has been charged.

4. Open the regulator valve slowly to eliminate any residual air and any dust which may be present in the high pressure pipe.

5. Connect the high pressure pipe to the accumulator.

6. Place the accumulator in a corner of the workshop and surround it with some form of shielding, preferably a number of sacks filled with sand or soil.

7. Open the main control valve of the nitrogen cylinder.

Continued...

8. Slowly open the regulator valve and allow the pressure to build up until the gauge shows a reading of 1 000 lb/sq.in. (70,3 kg./sq.cm.) or slightly more. This slight excess pressure will compensate for the small pressure loss which occurs when the high pressure pipe is disconnected.

9. Close the regulator valve, allowing the pressurised nitrogen in the high pressure pipe to escape and causing the accumulator charging valve to close.

10. Remove the high pressure pipe from the accumulator and quickly fit the warning plate, washer, nylon ball (where applicable) and charging valve cap.

11. Torque tighten the charging valve cap to between 22 lb.ft. and 25 lb.ft. (3,04 kg.m. and 3,45 kg.m.)

No SY/G40

Circulation - All Distributors and Retailers

CATEGORY C

ACCUMULATOR VALVE OVERHAUL

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The design of the accumulator valve bobbin and piston has been changed.

The new design provides a hardened seat for the unloading valve and a shoulder on the piston taper to accommodate any dirt that may be present and which otherwise could impair the functioning of the piston.

These new parts are supplied in sets for all replacement purposes.

The two types of PISTONS ARE NOT INTERCHANGEABLE BETWEEN BOBBINS.

Under no circumstances should an early type of piston be fitted to the new type of bobbin. This is MOST IMPORTANT to ensure correct functioning of the valve.

The two piston and bobbin assemblies are illustrated overleaf in Figure 1.

PART NUMBERS FOR COMPONENTS

EARLY		LATE
UE 10387	Bobbin	UE 35225
UE 10266	Piston	UE 35226

Continued ...

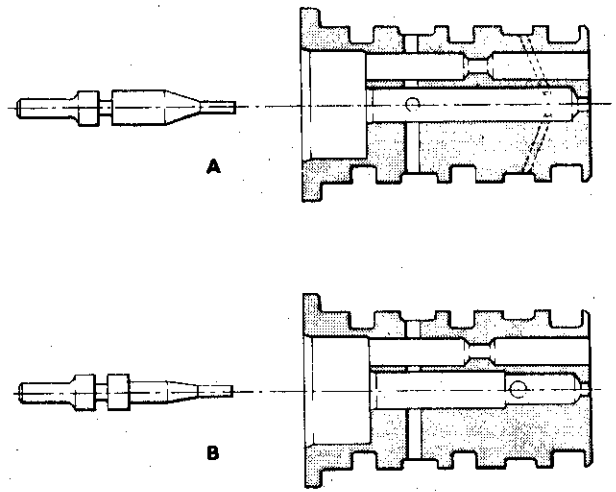

Fig. 1 Piston and bobbin assemblies

A Early design
B Late design

SECTION G

Circulation - All Distributors and Retailers

Bulletin No. SY/G41

Date: 27.8.70

Sheet No. 1

CATEGORY C

HANDBRAKE CALIPER LEVER LUBRICATION

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

When lubricating handbrake linkages at the 6 000 miles (10 000 km.) service, it has proved difficult to effectively lubricate certain of the caliper linkage pivots using the conventional techniques.

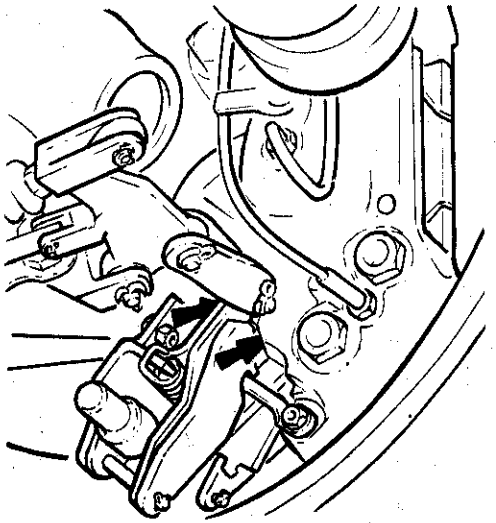

Fig. 1 Lubrication points of handbrake caliper pivots

Arrows indicate pivots to be lubricated with penetrating oil from an aerosol spray.

Continued...

SECTION G

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Sheet No. 2

Trials have shown that this problem can be overcome by the use of penetrating oil applied from an aerosol spray. Therefore, when lubricating the handbrake caliper linkages, it is recommended that the pivots arrowed in Figure 1 be sprayed with penetrating oil such as 'Rocket' W.D.40.

Care should be taken to ensure that this spray is directed at the pivots only and that it does not contact the brake discs and pads.

All other linkage pivots should be lubricated with an approved lubricant as listed in the Workshop Manual T.S.D. 2476 - Chapter D - Section D4.

SECTION

Circulation - All Distributors and Retailers

Bulletin No. SY/G42

Date: 4.12.70.

Sheet No. 1

BRAKE PAD IDENTIFICATION

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The brake pads approved for use in the above cars have previously been identified by a series of coloured paint spots on the outer edge of the brake pad back plate. This method of identification has now been discontinued and in future all brake pads will be identified by a series of letters and numbers painted on the outer edge of the friction material.

The changes have been made for standardisation purposes only, and there has been no change in brake pad dimension, part numbers or friction material. This Service Bulletin is therefore issued for information purposes only.

The changes in identification markings are shown in Figure 1.

BP/ECk

Continued...

SECTION

Circulation - All Distributors and Retailers

Bulletin No. SY/G42

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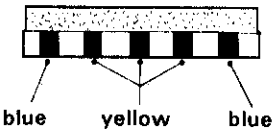
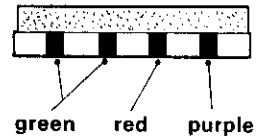
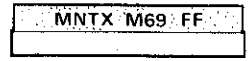
Sheet No. 2

PAD TYPE	DISPLACED PAD MARKING	NEW PAD MARKING
Ferodo DCI		
Mintex M69		

M48

Figure 1 Brake pad markings

BP/ECk

Circulation All Distributors & Retailers

Section G
Bulletin No SY/G43
Page No 1
Date 7.6.71

CATEGORY C

now changed to RP.368 9/5/73

CASTROL/GIRLING GREEN BRAKE FLUID

APPLICABLE TO

All Rolls-Royce Silver Shadow and Corniche motor cars, and all Bentley 'T' Series and Corniche motor cars produced after Car Serial Number: SRH 11085 and CRH 11148.

DESCRIPTION

The hydraulic systems of all cars produced after the above Car Serial Numbers will have been filled with Castrol/Girling Green brake fluid.

This type of fluid meets and exceeds the British Standards Specification SAE J 1703 which has superseded Specification SAE 70 R3. As the name implies the new fluid is Green in colour. The fluid is being used because it has a higher boiling point that the Castrol/Girling Amber fluid previously used and as such gives greater protection against brake fluid boiling.

The Green fluid is miscible with both Crimson and Amber fluids and can therefore be used for topping-up purposes on cars already filled with either of these fluids. However it is not advisable to top up a hydraulic system filled with Green fluid with any other fluid as this would lower its boiling point, thus reducing its effectiveness.

It is important that if a hydraulic system is drained and refilled with Green fluid, the warning plate on the fluid reservoir should be changed for one that recommends only Green fluid. A supply of labels suitable for this purpose is enclosed with this Service Bulletin.

It should also be noted that all brake fluid is hygroscopic, i.e. that the fluid will absorb and chemically combine with water from the atmosphere.

To eliminate the possibility of contaminating the brake fluid it is most essential that the brake fluid is not exposed to the atmosphere more than is absolutely necessary. It should always be stored in and used direct from small sealed containers. When the braking system is replenished immediately replace the covers both on the brake reservoirs and the container.

Continued...

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Circulation All Distributors & Retailers

Label - To fit

To enable the label to be affixed to the hydraulic fluid reservoir the following procedure should be followed.

1. Ensure that the surface to which the label is to be adhered is perfectly clean.
2. Immerse the label in tepid water for 15 seconds.
3. Peel off the protective backing from the label.
4. Place the label on the cleaned surface of the hydraulic fluid reservoir and apply even pressure until it has adhered.

Arr/JCl/ECk

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Service Bulletin issued for
Circulation All Distributors and Retailers

CATEGORY C

HYDRAULIC PUMP SERVICING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche motor cars, and all Bentley T Series and Corniche motor cars.

DESCRIPTION

A new tool is available for removing the hydraulic pumps from the above cars. This new tool has been developed to supersede the existing tool which required the carburetters and inlet manifold to be removed.

The new tool is so designed that it can be used to remove either hydraulic pump after disconnecting only the hydraulic pipes and the pump outer cover.

The tool is now available from Rolls-Royce Motors Limited, the part number being RH 8428.

It should also be noted that it is unnecessary to remove a brake pump from the engine in order to replace leaking sealing rings as these can easily be replaced with the pump in situ by removing the pipes and outer body and then removing the sealing rings with a suitable tool.

When replacing the sealing rings or the complete pump assembly on cars fitted with Exhaust Emission Control, it will be necessary to remove the pipe between the gulp valve and the carburetter 'T' piece to gain access.

TIME ALLOWED

To replace hydraulic pump sealing rings or to replace the complete pump assembly -

	CARS NOT FITTED WITH EXHAUST EMISSION CONTROL	CARS FITTED WITH EXHAUST EMISSION CONTROL
FRONT PUMP	1.8 hrs.	1.9 hrs.
REAR PUMP	2.0 hrs.	2.0 hrs.
BOTH PUMPS	3.8 hrs.	3.9 hrs.

Continued...

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Including partial removal of rigid pipes to gain access, removal of the pump outer body and including bleeding the systems as necessary on completion.

The above times supersede those given in the Manhour Schedule (TSD Publication 2251).

Arr/JCl/ECk

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Service Bulletin issued for
Circulation All Distributors
and Retailers

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Bulletin No SY/G45
Page No 1
Date 26.7.71

CATEGORY C

BRAKE PUMP BLANKING CAPS

APPLICABLE TO

All Rolls-Royce Silver Shadow, Bentley T Series and Rolls-Royce and Bentley Corniche motor cars.

New and reconditioned brake pumps and those removed during service always contain a certain quantity of brake fluid. Such brake pumps are fitted with blanking caps to prevent the ingress of dirt.

Fitting a pump without first removing the blanking caps can result in a hydraulic lock and it has been found that sufficient pressure can be generated against the cap to damage the hardened surface of the brake pump cam.

It is therefore imperative that the blanking caps are removed prior to fitting a brake pump.

Arr/JCl/Hly

Printed in England

Service Bulletin issued for
Circulation All Distributors and Retailers

Section G
Bulletin No SY/G16
Page No 1 of 1
Date 29.7.71

CATEGORY C

ACCUMULATOR/FRAME - FLEXIBLE HOSES

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T series and Rolls-Royce and Bentley Corniche motor cars.

DESCRIPTION

The Accumulator/Frame flexible hoses can be fitted incorrectly by allowing the hose to twist when tightening the fittings. This causes the hose to be rotated away from its correct position which may result in premature failure in service.

PROCEDURE

To fit the hoses, proceed as follows:

1. Attach hose end fittings to accumulators and frame connectors, ensuring that the ends are loose enough to allow the hoses to assume a natural position as dictated by hose stiffness and shape.

2. Grip hose ends whilst tightening end fittings to ensure that the hose is not rotated away from its natural run.

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Service Bulletin issued for Silver Shadow, Bentley T and Corniche
Circulation All Distributors and Retailers

Section G
Bulletin No SY/G47
Page No 1 of 6
Date 10th August, 1971

CATEGORY C

REAR HEIGHT CONTROL VALVE NOISE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series and all Rolls-Royce and Bentley Corniche cars produced after the following Car Serial Numbers.

Four-door Saloon cars	SRX 9393
Two-door Saloon cars	CRX 9248
Convertible cars	DRX 9247
Long Wheelbase cars	LRX 9281

DESCRIPTION

Over the past few months there has been an increase in the incidence of noisy height control valves in service. This noise has occurred in the form of a creaking or clicking noise low down in the rear quarters of the car.

It has been found that the noise followed a change to the valve installation to increase its sensitivity to wheel movements. This change was introduced to reduce any loss of levelled height occurring in service due to settling of various components.

This change increased the loads on the operating linkage and also the rubbing speed of the internal moving parts resulting in copper being deposited on the cross-shaft with increasing friction and subsequent noise.

A bearing of improved material known as 'Fluorosint' has therefore been developed as a replacement for the present phosphor bronze bearings. These bearings are now available for fitting to valves in service.

Because of the lower friction of these 'Fluorosint' bearings and quicker action of the valve it is possible that hydraulic pipe knocks may be produced. Therefore a new type of inlet/exhaust valve has been developed to provide the correct degree of damping on the action of fluid flow in the valve. The new inlet/exhaust valve is of a composite construction consisting essentially of a steel washer with a nylon insert moulded in its centre.

Continued...

Printed in England

It is important that whenever 'Fluorosint' bearings are used in a valve, a new composite inlet/exhaust valve is used also. In those cases where this modification is the subject of a warranty claim please quote this Bulletin number.

Fitting instructions for these items are given in the following procedure:

PROCEDURE

Before beginning this procedure it should be ensured that clean facilities are available for the valve overhaul.

1. Place the car on a ramp and depressurise the hydraulic system as described in the Workshop Manual T.S.D. 2476 Section G1.

2. Disengage the lower ball joints of the height control valve linkages.

3. Remove the flexible hoses and steel pipes from the rear adaptors of both height control valves.

4. The pipes from the front end of the valves are connected into junction blocks on the sub-frame crossmember. The pipes should be disconnected from the junction blocks.

5. Remove the nuts and bolts which secure the two valves to the car.

6. Remove the valves, operating linkages and steel pipes from the car as assemblies.

7. Remove the operating linkage from one of the valves after first marking the position of the lever on the shaft.

8. Remove the circlip and reservoir adaptor (see Fig. 1).

9. Remove the two circlips from the operating shaft bore and remove the backing washers and seals.

10. Remove the four nuts and washers which secure the two parts of the valve together.

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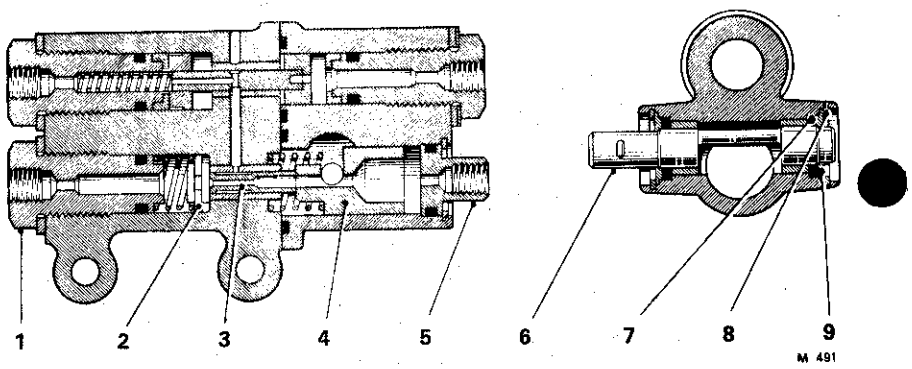


Fig. 1 Sectional View - Rear Height Control Valve

1. Adaptor-high pressure inlet
2. Inlet valve
3. Plunger valve
4. Plunger
5. Adaptor-reservoir connection
6. Operating shaft
7. Sealing ring
8. Circlip
9. Washer

11. Rotate the operating shaft through 180° to disengage the shaft from the plunger.

12. Withdraw the plunger.

13. Withdraw the operating shaft from the valve noting the position of the shaft to facilitate re-assembly. Inspect the shaft for any signs of copper being deposited on the two bearing surfaces. Any deposits of copper should be carefully smoothed with fine emery tape, but it will not be necessary to remove the deposits completely.

14. Place a washer (Part Number UA 2051) on the inside edge of one of the bushes and using a suitable piece of bar, carefully tap the bush out of the housing. Repeat this operation on the remaining bush.

Continued...

15. Remove the high pressure inlet adaptor, withdrawing the spring; discard the inlet valve.

16. Fit the new inlet valve and spring ensuring that the spring is correctly located on the valve.

17. Refit the high pressure inlet adaptor.

Note The following operations which detail the fitting of the new bushes should be carefully followed. If the bushes are damaged or misaligned the valve may leak from the shaft seal.

18. Place one of the new bushes into the housing (see Fig. 2), ensure that it is square with the bore.

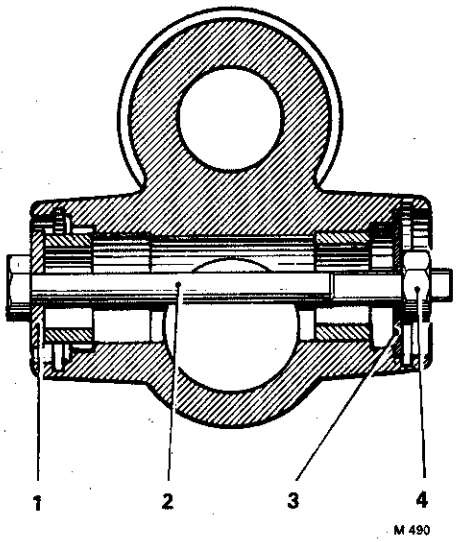


Fig. 2 Method of Fitting New Bushes

1. Small washer (UA 6102)
2. Bolt (UA 118)
3. Large Washer (UA 2053)
4. Nut (UA 301)

Continued...

19. Take a washer (Part Number UA 6102) and after ensuring that it is a free fit in the bore, place it on the outer edge of the bush. Pass a bolt (Part Number UA 118) through the washer and fit a washer (Part Number UA 2053) to the other end of the bolt. Using a nut (Part Number UA 301) carefully draw the bush into the housing until the washer (Part Number UA 6102) contacts the end of the bore.

20. Reverse the bolt and the washers and carefully draw the remaining bush into place.

21. Thoroughly wash all parts with clean methylated spirits and dry off with compressed air.

22. Remove all exposed rubber seals and fit new seals.

23. Fit the operating shaft to the valve noting that the position of the shaft denotes whether the valve assembly will be left or right-hand.

24. Fit new shaft seals, the backing washers and circlips. The seals should be lubricated with brake fluid.

25. Insert the spring and plunger into the bore ensuring that it moves freely. Allow the nose of the plunger to pass the operating shaft then rotate the shaft through 180° to lock the plunger into position.

26. Fit a new sealing ring to the adaptor. Fit the adaptor and circlip previously removed.

27. Fit the two parts of the valve together using new seals on the housing face.

28. Repeat operations 7 to 27 inclusive on the remaining valve.

29. To identify the valve as having been modified apply a spot of blue paint to the high pressure inlet adaptor of both valves.

30. Ensure that the valve linkage balls are free from cadmium plate, are lubricated and are correctly adjusted. Fit the operating lever in accordance with the marks previously made.

31. Refit the valves to the car, leaving the lower joints of the operating linkage disconnected.

Continued...

32. Bleed the rear levelling system at the two rear bleed nipples. It is not necessary to bleed any of the braking system.

33. Distribute a weight of approximately 600 lb. (272 kg.) equally between the front and rear seats.

34. Run the engine with the gear range selector lever in the Park position and the gearchange thermal switch removed.

35. Check and adjust the levelled height as necessary; the height from the ground to the centre of the rearmost bottom bolt which attaches the crossmember mounting forging to the body sill should be 0.875 in. ± 0.125 in. (22,22 mm. ± 3,175 mm.) less than the distance from the ground to the centre of the rearmost bottom bolt attaching the rear yoke to the trailing arm (see Fig. 3).

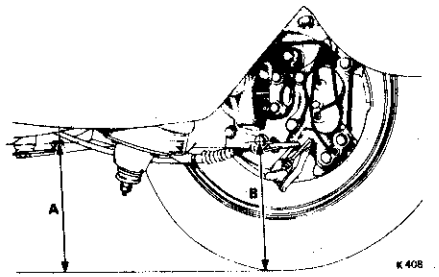


Fig. 3 Car Height Checking Points - Rear

A. Datum to centre of forging securing bolt
B. Datum to centre of axle yoke securing bolt.

Parts Required

Kit Number - 16

Time Allowed

3.50 hrs. This time is inclusive of removal, overhaul and refitting the two valves, bleeding, resetting levelled height and road testing.

M.656 T.S.D. 2859 February 1972 Printed in England

Chapter H

Sub-Frames and Suspension

FOR INFORMATION

FRONT SUSPENSION SHOCK DAMPERS

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard and Coachbuilt Cars
Bentley T Series Standard and Coachbuilt Cars

DESCRIPTION

On current production cars, the range of front wheel travel in the vertical plane has been slightly increased. To accommodate this increased movement, certain modifications to the front shock dampers and their connections have been necessary.

These modifications also affect earlier production cars which do not have the increased wheel travel, since the spares replacements for them will, in future, be the same as those fitted to current production cars.

With the introduction of these modified pieces, the method of setting the Front 'Showroom' Car Height (i.e. with the levelling system inoperative) requires revision, and it is mainly for this reason that this Bulletin has been issued.

The front shock damper arrangement shown in Figure 1 is common to production cars built prior to the following car numbers - SBH 1433 and CRX 1583.

The front shock damper arrangement shown in Figure 2 is common to cars produced after the foregoing car numbers with the exception of the following cars which have the arrangement shown in Figure 1.

1435 1437 1443 1445 1447 1449 1451 1453 1455 1457 1459 1461

The arrangement shown in Figure 1 provides a means of fine adjustment which permits 0.46 in. (11,51 mm.) alteration to the car front height. This adjustment is described in Section H5, page H36 of the Workshop Manual.

Continued...

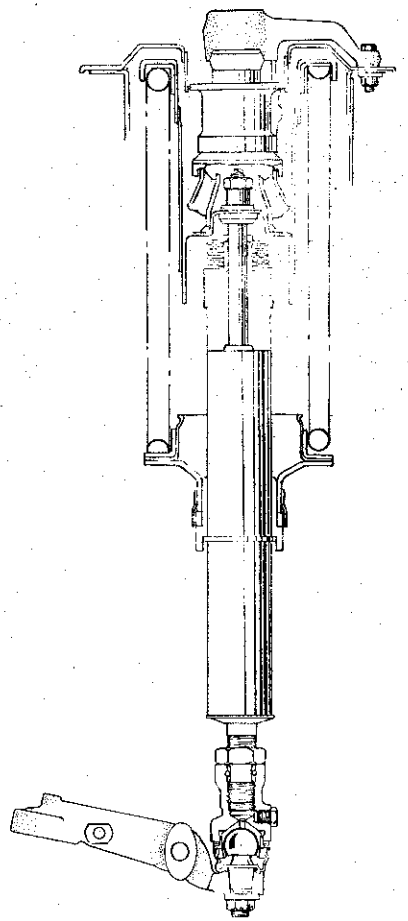


FIG.1 Front Suspension Damper Arrangement - Earlier Type

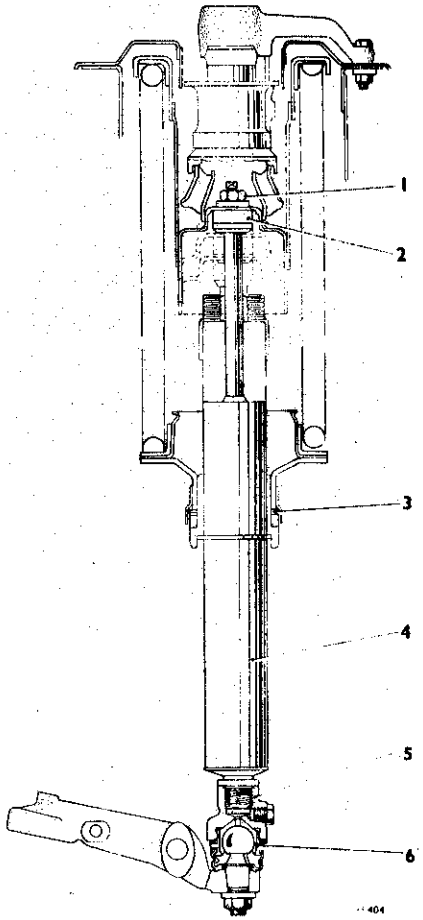


FIG.2 Front Suspension Damper Arrangement - Current Type

1 SECURING NUT
2 DISTANCE PIECE
3 PACKING PIECES AS REQUIRED
4 REPLACEMENT DAMPER
5 BALL JOINT HOUSING
6 BALL JOINT - COMMON TO BOTH ARRANGEMENTS

Continued...

The arrangement shown in Figure 2 which supersedes the Figure 1 dispenses with the fine screwed adjustment. However, fine adjustment can still be achieved by utilising a new packing piece which is 0.064 in. (1,59 mm.) thick. It is permissible to position a maximum of six of these packings, if required, with the existing thicker packings beneath each front spring seat.

IDENTIFICATION

To determine which arrangement is fitted to a particular car, a visual check at the lower ball joint housing will suffice. If there is a lock nut present above the ball joint housing next to the shock damper casing, then the arrangement is the earlier type as shown in Figure 1.

The absence of a lock nut denotes the current arrangement shown in Figure 2 which means that no screwed adjustment should be attempted when setting the car front height.

PROCEDURE

Whenever a current type shock damper is supplied as a replacement for the earlier type, it will be necessary to utilise part of the ball joint assembly from the earlier type damper which is to be removed. The part to be utilised is the ball joint which will have to be unscrewed from within its obsolete housing.

When removed, the ball joint should be screwed into the new housing supplied with the shock damper, and the assembly adjusted. The complete ball joint assembly should then be screwed onto the end of the new shock damper.

Instructions for adjusting the ball joint pre-load in its housing are detailed in Section H4, page H22 of the Workshop Manual.

To fit the damper, use the distance piece and securing nut provided, conforming to the arrangement illustrated in Figure 2.

FOR INFORMATION

INCREASED FRONT WHEEL TRAVEL

APPLICABLE TO:

Rolls Royce Silver Shadow Standard and Coachbuilt cars
Bentley T Series Standard and Coachbuilt cars

DESCRIPTION

The increase in front wheel vertical travel, described in the previous Bulletin SY/H , has resulted in further detail changes now incorporated on cars from the following numbers.

Standard cars	1529 less 1531 and onwards
Coachbuilt cars	1646 and onwards

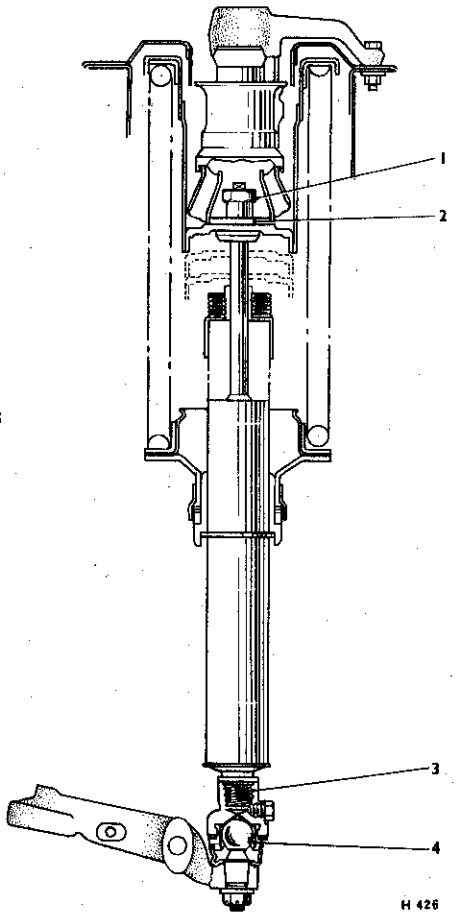
The securing arrangement at the top of the front suspension dampers fitted to the above cars (see Fig.1 overleaf), varies from those illustrated in Bullet n SY/H1. This means that three different arrangements may be observed in Service, the two previously illustrated, and that which is common to all cars after those with the above numbers.

Whenever the new arrangement is encountered, it is essential that existing fittings are retained and utilised whenever a damper is renewed. Under no circumstances should a distance collar and standard nut be fitted to the damper spindle such as those illustrated in Figure 2 (items 1 and 2) of the previous Bulletin.

Continued...

Fig.1 Front suspension damper arrangement
Standard cars from number 1529 less 1531 and onwards
Coachbuilt cars from number 1646 and onwards

1 REACH NUT
2 LARGE DIAMETER WASHER FOR ISOLATOR LOCATION
3 BALL JOINT HOUSING - COMMON TO FIGURE 2 OF PREVIOUS BULLETIN
4 BALL JOINT - COMMON TO BOTH ARRANGEMENTS OF PREVIOUS BULLETIN



No. SY/H 8
Circulation - All Retailers

CATEGORY C

SUSPENSION NOISES ON STEERING FULL LOCK

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

Should the above cars be driven on a bumpy surface with the steering on full lock it is possible that a 'grunting' noise will be heard from the area of the front suspension. This will be particularly apparent if the car is driven over a high kerb while turning on full lock, such as may occur when the car is being parked.

The noise is caused by small relative movements which occur between the abutting lock stop faces as deflections of the suspension take place.

Should this noise cause a customer to complain, the lock stop faces on both sides of the car should be wiped clean and smeared with grease.

No. SY/H12
Circulation - All Distributors
and Retailers

This bulletin cancels previous issue
of Service Bulletin SY/H12 dated 23.1.69

CATEGORY C

THE REAR HUB DRIVE-SHAFT NUT

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

In order to increase the torque capacity of the rear hub drive-shaft taper, a drive-shaft nut of a different specification is now available.

The purpose of this Service Bulletin is to inform Distributors and Retailers, that this new nut should be used as a replacement whenever it is necessary to remove the existing nut from one of the above cars in service.

It should be noted that before fitting the new nut to any car the threads and abutment faces of the nut and drive-shaft should be cleaned and smeared with Molytone 265 grease; a portion of this grease is supplied with each new nut. The new nut should be fitted so that the plain identification diameter of the nut is away from the yoke. The new nut can be identified by its greater depth and by the plain identification diameter, the old nut being unmarked.

It is most important that the nut is torque tightened to the correct figure, as detailed in Service Bulletin SY/H7, and as shown below.

Cars Produced Prior to Car Serial Numbers SRX 1916 and CRX 1937

	Part No.	Torque Figure
Displaced nut	UA 360/Z	450 lb.ft. to 475 lb.ft. (62,22 kgm. to 65,67 kgm.)
New nut and portion of grease	RH 2453	450 lb.ft. to 475 lb.ft. (62,22 kgm. to 65,67 kgm.)

Continued...

Cars Produced After And Including Car Serial Numbers SRX 1916 and CRX 1937

	Part No.	Torque Figure
Displaced nut	UA 360/Z	500 lb.ft. to 525 lb.ft. (69,10 kgm. to 72,58 kgm.)
New nut and portion of grease	RH 2453	475 lb.ft. to 500 lb.ft. (65,67 kgm. to 69,10 kgm.)

CATEGORY C

'MONITUBE' SHOCK DAMPERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The purpose of this Service Bulletin is to advise Distributors and Retailers of certain precautions to be observed when handling or disposing of 'Monitube' shock dampers fitted to the above cars.

The volume inside the damper tube is divided into two separate chambers by a diaphragm. One of the chambers contains damping fluid, immersed in which is the piston connected to the damper rod. The other chamber is pressurised with nitrogen.

This means that a constant force is exerted on the piston and rod by the nitrogen pressure. When a damper is removed from the car, this constant force is contained by the damper rod guide which is retained in the damper tube by a snap ring. Should the shock damper be gripped in a vice or struck a heavy blow, it is possible that the snap ring could be dislodged, allowing the piston and rod to be ejected from the damper tube with considerable force.

It is known that when changing a front damper, difficulty is sometimes experienced in removing the suspension spring support sleeve from the damper and that dampers have been held in a vice and the sleeve struck with a hammer. This practice is not recommended and in future, if the support sleeve is seized it should be left on the old damper and a new sleeve used.

As the 'Monitube' dampers cannot be repaired they are not a Service Exchange part and Distributors and Retailers should dispose of them. However, before disposing of a scrap 'Monitube' shock damper a small hole should be drilled in the damper outer tube, 1 in. (25,4 mm.) from the closed end of the tube. This will release the nitrogen pressure and render the damper safe for disposal.

No.SY/H15
Circulation - All Distributors
and Retailers

CATEGORY C

REAR SUSPENSION DAMPER MOUNTS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to car serial numbers:-

SRH 4168	-	Standard Cars
CBH 4160	-	Coachbuilt Cars
SRX 6122	-	Standard Cars) Cars built to meet the American
CRX 6102	-	Coachbuilt Cars) Federal Safety Standard requirements.

DESCRIPTION

Service replacement rear suspension dampers supplied by the factory are now fitted with two metal cup washers and two rubber mounting bushes to each end of the damper. This is because current production cars have a cup washer welded onto the isolator at the top and another cup washer welded onto the support bracket at the bottom, in order to improve the damper noise isolation properties of the mounts. However, although the cup washers and rubbers supplied are suitable for fitting the damper to current production cars, earlier cars which do not have cup washers welded in position require four cup washers at each end of the damper.

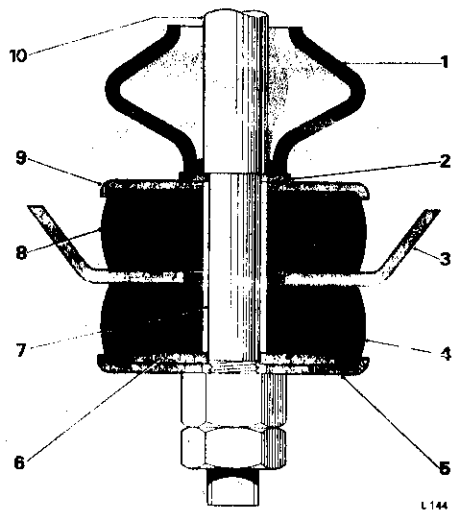
Therefore, it will be necessary when fitting a replacement damper to one of the above cars to salvage four cup washers from the removed damper and use these four washers, together with the four new ones supplied, to mount the new damper. The correct arrangement of these washers and rubbers is shown in Figure H36, Chapter H of the Workshop Manual.

In the case of cars fitted with the softer mounting rubbers at the top and bottom of the damper, (refer to Service Bulletins SY/H11 and SY/H14), the lower 'soft' mounting may be retained providing that it is arranged as shown in Figure 1 of this Service Bulletin. NO attempt must be made to provide the upper mounting of the new damper with the softer rubbers. The upper mounting should be reverted to the original damper mounting arrangement on that car using two standard Girling rubbers and four cup washers as shown in Figure H36, Chapter H of the Workshop Manual, the extra cup washers required being taken from those supplied with the damper at its lower end.

Continued ...

FIG.1 Arrangement for the lower 'soft' mounting on the rear damper

1 Sealing boot
2 Original abutment washer
3 Damper lower support bracket
4 Rubber bush (RH 8134)
5 Cup washer (RH 8135)
6 Washer (RF 8917)
7 Existing distance piece
8 Rubber bush (RH 8140)
9 Cup washer (RH 8135)
10 Damper spindle



In all cases the nut and lock-nut on the damper mounting spindles should be tightened such that the outer face of the lock-nut is flush with the end of the damper stem threads.

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CATEGORY C

MECHANICAL STANDING HEIGHT

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars prior to Car Serial Number SRH 8170.

DESCRIPTION

For some time new motor cars leaving the Crewe factory have had their mechanical standing height set higher than standard at the rear. This extra height has been incorporated to allow for the settling which is known to take place in the rear suspension during the first few thousand miles of service.

The increase in mechanical standing height has been achieved by the use of thick packing rings beneath the rear springs.

It must be noted that this new increased standing height is used ONLY on initial build in the Crewe factory and never for re-setting in service. Whenever a car has to have its standing height reset, the figures quoted in the Workshop Manual TSD 2476 Chapter H must be used.

To obtain the correct standing height, additional packing washers may be required up to a maximum of 20. However, in certain circumstances 20 may not be sufficient. In such a case it is permissible to use one of these new thick packing rings as detailed in the following procedure.

NOTE.
Selecting the correct arrangement of packing washers and resetting the rear mechanical standing height is a simple, straightforward process once the procedure is understood. This Bulletin must, therefore, be read very carefully in order that a full understanding may be obtained of how to choose and arrange the packing washers required. A chart is attached to this Service Bulletin to assist in the procedure.

PROCEDURE.

THE REAR MECHANICAL STANDING HEIGHT - TO CHECK AND SET

1. The car should first be run some distance on the road to remove flats from the tyres and 'loosen' up the suspension. After this no time must be lost in putting the car on the checking surface and carrying out the following procedure.

2. The car must be in its 'showroom' condition, that is, unladen with 10 gallons (12 U.S. gall., 45 litres) of petrol in the tank and

Continued....

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should be positioned on a ramp or over a pit with a suitably prepared level surface.

3. Do not apply the handbrake.

4. These checks and settings must be made with the automatic height control system inoperative, i.e. with either the hydraulic system valve linkages disconnected and the rams discharged or the hydraulic system depressurised.

   Cars fitted with front height control should be loaded with 150 lb. (68 kg.) between the front seats and those not fitted with front height control with 300 lb. (136 kg.) between the front seats.

5. To measure the rear height of the car the distance from the level surface on which the car stands to the rearmost bottom bolt which secures the forged brackets of the rear suspension cross-member to the body sill must be measured. This measurement must be subtracted from the height above the level surface of the rearmost bottom bolt which secures the rear hub assembly to the trailing arm (See Figure 1).

6. The difference in heights must be between 0.625 in. and 0.875 in. (15,875 mm. and 22,225 mm.) for the rear mechanical standing height to be correct. If this measurement is found to be incorrect then packing washers will have to be fitted above the rear springs to correct it.

THE MECHANICAL STANDING HEIGHT - TO ADJUST

1. Remove the rear road springs as described in the Workshop Manual TSD 2476 Chapter H Page H42.

2. Ensure that the rubber/canvas seatings are in good condition - renew if necessary.

3. Determine the number of packing washers necessary to correct the standing height and their arrangement at the top and bottom of the spring.

METHOD OF DETERMINING NUMBER AND TYPE OF PACKING WASHERS REQUIRED

1. The rear standing height measurement must lie within the range 0.625 in. to 0.875 in. (15,875 mm. to 22,225 mm.) for it to be correct. A number of packing washers will have to be added or subtracted to the rear springs to bring the height measured into the correct range.

To determine this number, a simple formula can be used where 'h' represents the height measured on the car prior to adjustment. 0.75 in. (19,050 mm.) is the middle of the range for correct standing height and 0.085 in. (2,16 mm.) is the effect of one packing washer on the standing height. The number of washers required to the nearest whole number greater than or equal to:

$\frac{(h - 0.75)}{0.085}$ ('h' in inches) $\frac{(h - 19,050)}{2,16}$ ('h' in mm.)

The number of washers required to correct the standing height must then be added to the number of washers already fitted with the spring.

2. If the total number of these washers is greater than 20 a thick packing ring must be used. One thick packing ring and its rubber/canvas seat is equivalent to 12 packing washers. When 7 or more packing washers are to be used with a spring, with or without a thick packing ring, then an extra rubber/canvas seat will have to be used at the top of the spring. This rubber/canvas seat replaces two packing washers. The remaining washers are used at the top of the spring.

To assist with the selection of packing pieces a Chart is included with this Service Bulletin which gives details of the packing pieces to be added or subtracted from those packings already in use with the spring. The measured height 'h', measured prior to adjustment, is given in the left-hand column of the chart.

Arrangement of the Spring and Packing Washers (see Figure 2(a) and 2(b))

1. Fit the lower rubber/canvas seat (5) UR.15076 into the spring pots on the trailing arms.

2. If a thick packing ring is to be used it must be fitted at this stage. Fit the thick packing ring (6) UR.16872 into the rubber/canvas seat already fitted and then fit a second rubber/canvas seat UR.15076.

3. Where two canvas seats are required at the top of the spring first fit the one with the shallower spigot (2) UR.14568 over the shoulder of the metal spring seat (1) UR.13754.

Continued....

4). Then fit the packing washers to be used at the top of the spring onto the canvas seat (2) before fitting a standard upper rubber/canvas seat (4) UR 13760 over the shoulder of the metal springs seat (1).

5). If only one canvas seat is to be used at the top of the spring then the standard upper rubber/canvas seat (4) should be first fitted over the shoulder of the metal spring seat (1). The washers to be used at the top of the spring are fitted over the spigot of the rubber/canvas seat.

6). To prevent the packings moving during assembly, they should be clipped together with 3 equally spaced thin pipe clips X 9027/R.

7). Fit the spring and spring isolator into position.

8). Pass the damper through the spring and lock it in position at the top end only.

Refit the ram to the isolator and spring housing as described in the Workshop Manual TSD 2476 Section H 12.

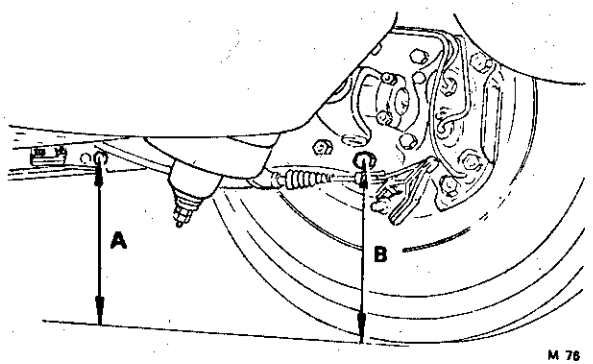

Figure 1 Car rear height checking points

A Datum to centre of forging securing bolt
B Datum to centre of axle yoke securing bolt

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9). Lower the car and connect the rebound straps, the lower ends of the dampers and the drive-shafts.

10). Check the mechanical standing height.

11). It is advisable to now check and reset if necessary the hydraulically levelled height using the procedure described in the Workshop Manual TSD 2476 Chapter G Page G 37.

SUMMARY OF IMPORTANT POINTS:

The standing height measurement	-	0.625 in. to 0.875 in. (15,875 mm. to 22,225 mm.)
Number of packing washers allowed	-	20 maximum
Increase given by one washer	-	0.085 in. (2,16 mm.) approx
Number of packing rings allowed	-	1 (in the lower spring pot with its own canvas seat)
1 thick packing ring and seat is equivalent to	-	12 washers

When 7 or more washers are fitted, an extra spring seat UR 14568 must be used at the top.

The extra spring seat UR 14568 is equivalent to 2 washers.

Continued...

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EXAMPLE

A car has been checked and the following found.

	LEFT-HAND SIDE	RIGHT-HAND SIDE
Standing height	1.25 in (31.75 mm.)	1.125 in (28.58 mm.)
No. of packing washers already fitted	10	16
No. of washers required to correct standing height	$\frac{1.25 - 0.75}{.085}$	$\frac{1.125 - 0.75}{.035}$
	= 5.9	= 4.4
	approx. 6 washers	approx. 5 washers
TOTAL NUMBER OF WASHERS TO BE FITTED WITH SPRING	16	21
	This number is permissible	This number is NOT permissible
	It is greater than 7, therefore an extra rubber/ canvas seat will be used at the top. This is equal to 2 washers	It will be necessary to use a thick packing ring. This ring with its canvas seat is equal to 12 washers.
	14 washers and an additional rubber/ canvas seat will be used at the top.	1 packing ring will be used at the bottom of the spring. 7 washers and an additional rubber/canvas seat will be used at the top of the spring.

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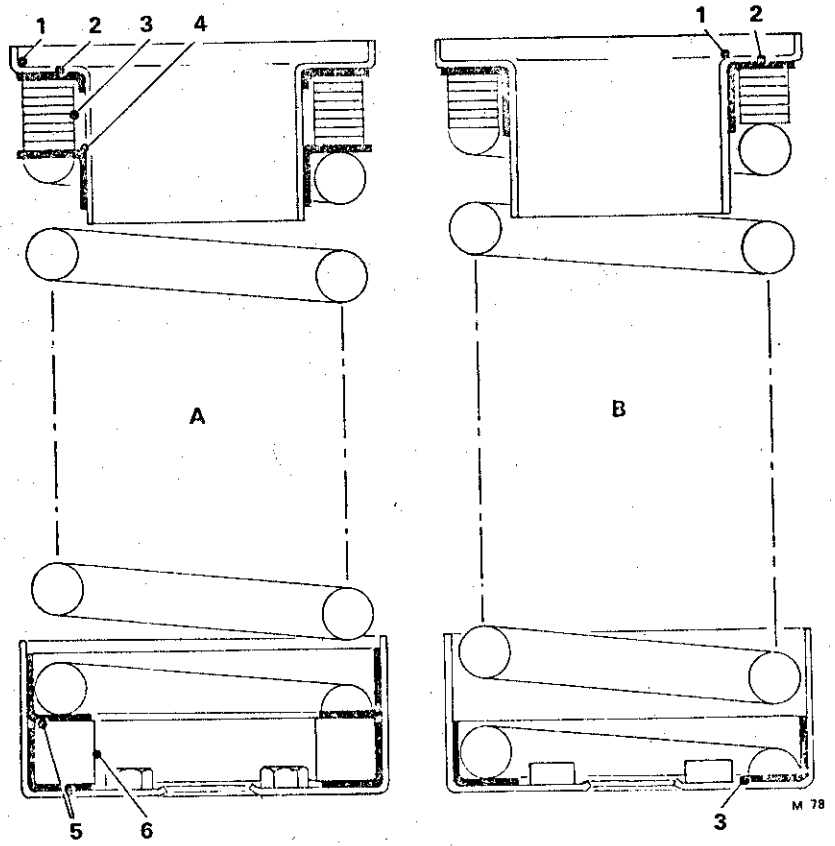

Figure 2 – Spring seatings in position

A – Showing the arrangement of spring, spring and packing pieces when a packing ring and 7 or more packing washers are being fitted with spring.

1. Metal spring seat (UR.13754)
2. Shallow canvas/rubber seat (UR. 14568)
3. Packing washers
4. Standard canvas/rubber seats (UR. 13760)
5. Lower rubber/canvas seat (UR. 15076)
6. Thick packing ring (UR.16872)

B – Showing the arrangement of spring, spring seats, rubber/canvas seats and packing washers when less that 7 packing washers are being fitted with the spring.

1. Metal spring seat (UR.13754)
2. Standard canvas/rubber seat (UR. 13760)
3. Lower rubber/canvas seat (UR. 15076)

continued ...

CHART INDICATING PACKING PIECES REQUIRED OR SUBTRACTED TO OBTAIN CORRECT STANDING HEIGHT

KEY

w = packing washers
s = extra shallow canvas seat at top of spring
r = packing ring with its seat
-w = subtract packing washers

NEAR STANDING HEIGHT REQUIRED IN INCHES (mm)	1w	2w	3w	4w	5w	6w	1s 5w	1s 6w	1s 7w	1s 8w	1s 9w	1s 10w	1s 11w	1s 12w	1s 13w	1s 14w	1s 15w	1s 16w	1s 17w	1s 18w	1s 19w	1s 20w
0.9375 (28,812)	3w	3w	3w	1w 1s	1w 1s	1w 1s	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	-7w -1s 1r	-7w -1s 1r	-9w 1r
1.000 (25,399)	3w	3w	3w	1w 1s	1w 1s	1w 1s	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	3w	-7w -1s 1r	-7w -1s 1r	-9w 1r
1.0625 (26,986)	4w	4w	2w 1s	2w	2w	2w	4w	4w	4w	4w	4w	4w	4w	4w	4w	4w	4w	1w	-6w -1s 1r	-6w -1s 1r	-8w -1s 1r	-8w 1r
1.125 (28,573)	5w	5w 1s	3w 1s	3w 1s	3w 1s	3w 1s	5w	5w	5w	5w	5w	5w	5w	5w	5w	5w	5w	-5w -1s 1r	-5w -1s 1r	-7w -1s 1r	-7w -1s 1r	-7w 1r
1.1875 (30,160)	4w 1s	4w 1s	4w 1s	4w 1s	4w 1s	4w 1s	6w	6w	6w	6w	6w	6w	6w	6w	6w	6w	-1w -1s 1r	-4w -1s 1r	-6w -1s 1r	-6w -1s 1r	-6w -1s 1r	-6w 1r
1.250 (31,749)	4w 1s	4w 1s	4w 1s	1w 1s	4w 1s	4w 1s	6w	6w	6w	6w	6w	6w	6w	6w	6w	6w	-3w -1s 1r	-4w -1s 1r	-5w -1s 1r	-5w -1s 1r	-5w -1s 1r	-5w 1r
1.3125 (33,336)	5w 1s	5w 1s	5w 1s	5w 1s	5w 1s	5w 1s	7w	7w	7w	7w	7w	7w	7w	7w	7w	7w	-1s 1r	-2w -1s 1r	-4w -1s 1r	-4w -1s 1r	-4w -1s 1r	-4w 1r
1.375 (34,924)	6w 1s	6w 1s	6w 1s	6w 1s	6w 1s	6w 1s	8w	8w	8w	8w	8w	8w	8w	8w	8w	8w	-1w -1s 1r	-3w -1w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r
1.4375 (36,511)	7w 1s	7w 1s	7w 1s	7w 1s	7w 1s	7w 1s	9w	9w	9w	9w	9w	9w	9w	-1w -1s 1r	-1s -1s 1r	-1w -1s 1r	-1w -1s 1r	-5w -1w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r
1.500 (38,099)	7w 1s	7w 1s	7w 1s	7w 1s	7w 1s	7w 1s	9w	9w	9w	9w	9w	9w	9w	-1w -1s 1r	-1w -1s 1r	-1w -1s 1r	-1w -1s 1r	-5w -1w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r	-5w -3w 1r
1.5625 (39,686)	8w 1s	8w 1s	8w 1s	8w 1s	8w 1s	8w 1s	10w	10w	10w	10w	10w	10w	-1s 1r	-1s 1r	-2w 1r	-2w 1r	-2w 1r	-2w 1r	-2w 1r	-2w 1r	-2w 1r	-2w -2w 1r
1.625 (41,274)	9w 1s	9w 1s	9w 1s	9w 1s	9w 1s	9w 1s	11w	11w	11w	11w	11w	-1w -1s 1r	-1s 1r	-1w 1r	1r	1r	1r	1r	1r	1r	1r	1r
1.6875 (42,861)	10w 1s	10w 1s	10w 1s	10w 1s	10w 1s	10w 1s	12w	12w	12w	12w	12w	1r	1r	1r	1r	1r	1r	1r	1r	1r	1r	1r
1.750 (44,449)	10w 1s	10w 1s	10w 1s	10w 1s	10w 1s	10w 1s	12w	12w	12w	12w	12w	1r	1r	1r	1r	1r	1r	1r	1r	1r	1r	1r

PACKING PIECES ALREADY FITTED WITH SPRING

Service Bulletin issued for
Circulation All Distributors
and Retailers

CATEGORY C

LONGER FRONT SHOCK DAMPERS

APPLICABLE TO

All Rolls-Royce Silver Shadow and Corniche cars, and all Bentley T Series and Corniche cars from Car Serial Number SRH 11466 and onwards.

DESCRIPTION

Longer front shock dampers have been introduced on the above cars to reduce the damper bearing side load. This reduction in load is effected by increasing the span of the rod guide and piston bearing.

At the same time the opportunity has been taken to simplify the upper mounting point, deleting the ram and the isolator etc. The longer shock damper now mounts directly into a top cover plate bolted to the spring pot tower (see Fig. 1). The methods of attaching the spring to the shock damper and the shock damper body to the lower triangle remain unchanged.

It is possible to replace a short shock damper by a long shock damper provided:

(a) The new top cover (UR 17050) is used to replace the old top cover, ram and isolator.

(b) Earlier cars fitted with front height control have the levelling system blanked off as described in Service Bulletin SY/G37.

PROCEDURE

Long type shock damper - To remove

1. Position the car on a ramp, firmly apply the handbrake and chock the rear wheels.

2. Remove the gear range selector thermal cut-out switch.

Continued...

Service Bulletin issued for
Circulation All Distributors
and Retailers

3. Position a hydraulic jack and extension fitted with a protective hardwood block beneath the pivot points of the lower front triangle levers; raise the car.

4. Position suitable blocks to support the shaped wooden beams (RH 8920) placed beneath the sill of the body just rearward of the front wheels.

5. Carefully lower the car onto the sill boards.

6. Remove the nut, washer and spigotted bush from the top of the shock damper push rod.

7. Fit the road spring compressing tool (RH 7889) (see Fig. 2) in position. It is most important that each long bolt of the compressor is screwed fully into the base plate of the tool.

8. Secure the halves of the base plate by fitting the 5/16 in. UNF setscrews provided.

9. Using the nuts, thrust races and special washers provided compress the spring sufficiently to enable the split adjusting washers to be removed.

10. Remove the split pin, castellated nut and washer which secures the shock damper ball pin to the lower triangle levers.

11. Use the extractor tool (RH 8100) to separate the seal between the taper of the shock damper ball pin and the taper of the ball joint housing.

12. Remove the bolt which locates the lower triangle levers adjacent to the lower ball joint lever.

13. Slacken the dowel bolt which also serves to align and secure the lower triangle levers to the lower ball joint lever. The lower ball joint lever will then swivel clear.

Continued...

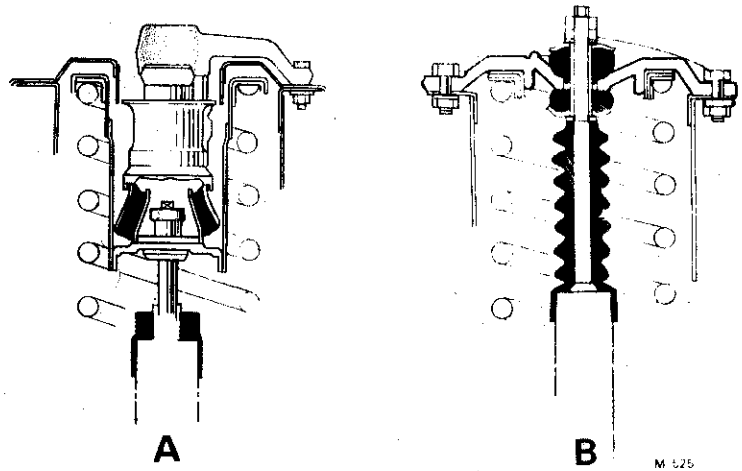

Fig. 1 Displaced and new shock dampers

A. Displaced shock damper arrangement

B. New shock damper arrangement

14. Push the shock damper upwards until the ball pin is clear of the mating bore in the lever, then lower the shock damper from the car by moving it sideways and downwards to clear the lever, retain the split washer(s).

Long type shock damper - To fit

To fit a new shock damper reverse the procedure for its removal noting the points in the Workshop Manual TSD 2476 Chapter H, Section H2 - Front Shock Damper - To fit.

Fitting a long type shock damper in place of a short shock damper

In the event of it being necessary to replace a short damper with a longer damper the following procedure should be followed.

1. Remove and dismantle the front road spring assembly as described in the Workshop Manual TSD 2476 Chapter H, Section H4 - Front Road Spring - To remove.

Retain the spring and the spring support assembly. If the spring support assembly is seized onto the shock damper it must be renewed. Examine the spring seatings and renew if necessary.

2. Fit the spring seating onto the new top cover.

3. Using the compressing tool (RH 7909) compress the top cover, spring and spring support assembly to enable the road spring compressing tool (RH 7889) to be fitted.

Continued...

4. Place the shock damper washer and non-spigotted rubber on the shock damper stem. Slide the shock damper sleeve over the shock damper body and push the shock damper through the spring support assembly until the end of the spindle protrudes through the top cover; fit the spigotted rubber (spigot downwards) top washer, nut and tighten.

5. Inspect the bottom ball joint as described in the Workshop Manual TSD 2476 Chapter H, Section H2 - Shock Damper Ball Joint - To maintain; Renew the ball joint if necessary.

6. Fit the ball joint to lower end of the shock damper and torque tighten.

7. Lower the entire assembly into the spring pot tower and bolt down the top cover.

8. Bolt the bottom ball joint housing to the lower triangle lever attachment.

9. Fit the split adjusting washer (s) and decompress the spring. When fitting the spring assembly the following points should be noted:-

   (a) Care should be taken to avoid any side loading when fitting the shock damper and the assembly to the car, as this could result in permanent damage to the piston rod and seal.

   (b) It is important that the front rebound stops are in position when fitting the road spring assembly. Over-travelling the suspension ball joints can result in damage to the ball joint seals.

   (c) After fitting the assembly the car should be 'bounced' to settle the spring.

   (d) The mechanical standing height must then be checked as described in Workshop Manual TSD 2476 Chapter H, Section H8 - Suspension Settings.

   (e) The circlip, which is fitted to the front shock dampers, carries the lower spring support sleeves. When assembling these sleeves, liberally coat the mating surfaces of the sleeves and shock dampers with an approved grease. This will assist fitting and any subsequent removal of the sleeves.

Continued...

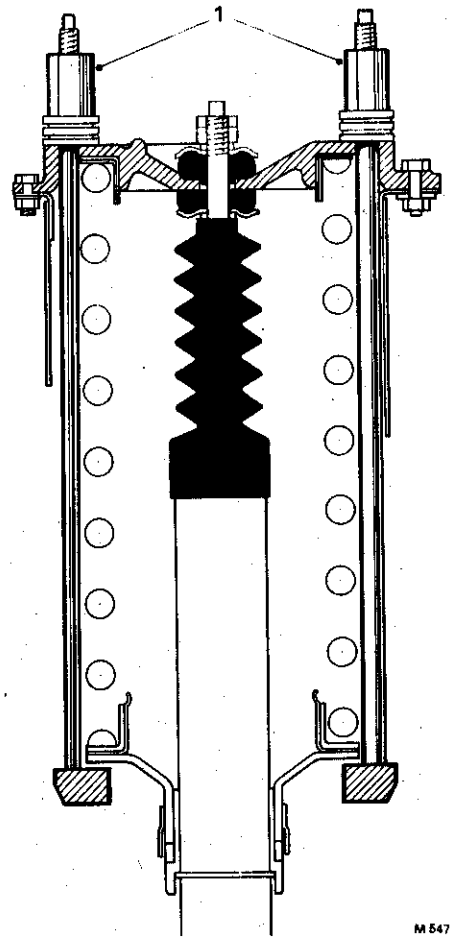

Fig. 2 Spring compressing tool in position

1 Compressing tool comprising long studs and split base plate

Continued...

(f) Cars fitted with front levelling which has not yet been blanked off should have the front levelling deleted as described in Service Bulletin SY/G37.

(g) The existing parts should be replaced by the parts given in the following list, when replacing shorter shock dampers with the new longer shock dampers.

Description	New
Bolt (8 off)	UA 156/Z
Bolt (8 off)	UA 104/Z
Cover (2 off)	UR 17050
Shock damper (2 off)	UR 17051
Heavy duty shock damper (2 off)	UR 17406
Spiggoted rubber (2 off)	UR 17646

Note:

It would appear from past experience that shock dampers have been changed in an attempt to rectify complaints of suspension noise and soft suspension. On inspection the displaced shock dampers have been found to be operating satisfactorily and were obviously not the source of trouble.

It is therefore stressed that in such complaint cases all possible sources of trouble should be investigated rather than immediately assuming the fault to lie in the shock dampers.

After Car Serial Number SRH 11466 shock damper changes will not be accepted under Warranty without prior authority from either the Factory or the Service Representative.

TIME ALLOWED

To renew one long front shock damper - 2.25 hrs. (4.25 hrs. for two).

To replace two short shock dampers by two long shock dampers - 5.5 hrs.

Arr/JCl/Hly

CATEGORY C

FRONT AND REAR SHOCK DAMPER MOUNTING RUBBERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche cars, and all Bentley T Series and Corniche cars after Car Serial Number LRX 11600.

DESCRIPTION

A new spigotted shock damper end rubber has been introduced on production. Its introduction coincided with the advent of the longer front shock dampers. However it is also fitted to the rear shock dampers. This rubber replaces the 'O' ring (Part No. CK 612/3) and the present end rubber (Girling Part No. 64540478) in order to eliminate the metal-to-metal foul caused by the 'O' ring becoming trapped beneath its adjacent end rubber.

In the event of a complaint of a metallic noise, as a result of the 'O' ring having become displaced, the offending shock damper should be identified and the outer most end rubber and 'O' ring should be removed. In their place the new spigotted rubber should be fitted.

NOTE: It is not possible to fit spigotted rubbers in place of the rubbers where the mounting arrangement employes the use of four cup washers. It is therefore only possible to fit a spigotted rubber in place of a plain rubber and 'O' ring.

The spigotted rubber should always be the outermost rubber fitted to the shock damper with the spigot facing towards the damper body.

PARTS REQUIRED

Description	Part No.	No. required
Spigotted rubber	UR.17646	1 off per front damper 2 off per rear damper

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Arr/JCl/Hly

M.657 T.S.D. 2859 February 1972 Printed in England

Chapter J
Final Drive

M.658 T.S.D. 2859 February 1972 Printed in England

Chapter K

Fuel System and Carburetters

No. SY/K2
Circulation - North America only.

CATEGORY C

FLEXIBLE FUEL HOSE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars built to comply with the Federal Safety Regulations produced from Chassis Number SRX 6001 and onwards.

DESCRIPTION

This Service Bulletin has been issued to advise Distributors, Retailers and Service Personnel that should it be necessary to disturb the flexible fuel hose which runs between the engine and the body, it is most important that the hose is refitted in the correct position as shown in Figure 1.

The dimension 'A' shown in Figure 1 is measured from the weld line on the underside of the floor vertically downwards to the centre of the fuel pipe. This measurement should be 3.0 in. (7,62 cm.).

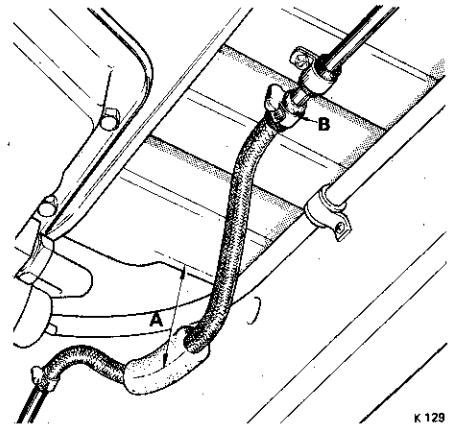

Fig.1 Flexible fuel hose

Continued...

The rear end of the hose should be vertically below the swage line of the floor as shown by arrow 'B' in Figure 2.

Should it be necessary to alter the run of the hose to obtain the correct position, this can be achieved by adjusting the position of the forward end of the hose.

No. SY/K3
Circulation - All Distributors and Retailers

(Re-issue)
This Service Bulletin cancels all previous Bulletins numbered SY/K3

CATEGORY C

S.B.N. FUEL TANK INHIBITORS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.
All Rolls-Royce Phantom VI cars.

DESCRIPTION

During recent checks a number of cars have been found with small quantities of water in the fuel tank which had entered from the commercial fuel supplies.

It is a known chemical fact that, when water and fuel are mixed, a slightly acid solution is formed due to the effect of the additives present in modern fuels. In order to prevent this solution affecting the component parts of the fuel system, S.B.N. inhibitors are now available which can be placed in the fuel tank during a normal service operation.

The S.B.N. inhibitors normally lie dormant in the fuel, but in the event of water entering the fuel tank the inhibitors disperse and prevent the formation of an acid solution.

Four (4) S.B.N. inhibitors should be placed in the fuel tank on the first occasion the car is seen, either during a service schedule or customer complaint work. This quantity should then be sufficient to inhibit the fuel system for its service life.

If excessive quantities of water are present in the fuel system then the fuel tank should be drained and four more inhibitors added.

Excessive quantities of water in the fuel system are usually denoted by engine running problems or water in the fuel filter.

Continued ...

No. SY/K3
(Re-issue)

Since the amount of water which becomes present in fuel tanks is entirely dependent upon the water present in the commercial fuel supply, any work involved in draining and cleaning fuel systems should be charged to the customer. It should also be noted that as fitting S.B.N. inhibitors to the fuel tank is a normal service operation, this too is chargeable to the customer.

MATERIAL REQUIRED

PART NO.	DESCRIPTION	QUANTITY
MS/262 (Pack of 100)	S.B.N. Inhibitors	4 off per car

Printed in England
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T.S.D. 2859
M.659

Chapter L

Engine Cooling System

No.SY/L4
Circulation - All Distributors
and Retailers

CATEGORY C

COOLING SYSTEM - THERMOSTATS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

This Service Bulletin has been issued to advise Distributors, Retailers and Service Personnel that the wax operated thermostats fitted to the above cars, have a service life of two years.

These thermostats should therefore be replaced every two years, the cost being chargeable to the owner.

PROCEDURE

It is recommended that the thermostat should be changed at the 2 Years Service Schedule, as this schedule calls for the removal of the thermostat to enable the cooling system to be reverse flushed.

- When a thermostat has been replaced, one of the labels provided with the thermostat should be completed to show the date of the next change, and attached to the engine in a conspicuous position. These labels are available from the Spares Department at Crewe, part number RH 8147, and read as follows.

Replace thermostat every
two years

Next change due:

ROLLS-ROYCE LIMITED

Continued...

It is emphasised that the 2 Years Service Schedule will only be carried out at the request of the owner and it is the responsibility of the Service Manager to advise the owner that the Service is due.

The part number of the thermostat which should be used for all replacements in the T series cars is UE 34003.

IMPORTANT Should an engine be suspected of overheating it is essential that the thermostat be changed.

CATEGORY C

ENGINE COOLANT ANTI-FREEZE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.
All Rolls-Royce Phantom VI cars.

DESCRIPTION

The Ford Motor Company have recently begun to market a new anti freeze solution under the trade name 'Ford Anti Freeze'.

Only anti-freeze solutions conforming to British Standard Specification 3150 : 1959 are approved by Rolls-Royce Limited and since the Ford anti freeze does not conform to this standard, it should NOT be used in the cooling system of any Rolls-Royce or Bentley manufactured car.

No SY/L9
Circulation - All Distributors and Retailers except those in the U.S.A. and Canada

CATEGORY C

ANTI-FREEZE MIXTURE STRENGTH

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars. All Rolls-Royce Phantom VI cars.

DESCRIPTION

All cars are now being delivered with a 50% anti-freeze mixture strength in the engine cooling system. This gives a slightly higher coolant boiling point and gives protection against frost down to a temperature of -36.5°C. (-33.7°F.).

It is recommended that a 50% anti-freeze mixture is used in the cooling system of all the above cars in service whenever the coolant requires to be replaced, either during repair work or when the coolant system Seasonal Service is being completed. It should be noted that the additional anti-freeze is chargeable to the customer, who should be advised of these recommendations before the coolant is changed.

Rolls-Royce Limited only approve anti-freeze mixtures conforming to British Standard Specification 3150 : 1959 and this specification number will be marked on the container.

Service Bulletin issued for
Circulation All Distributors and Retailers

Section L
Bulletin No SY/L11
Page No 1
Date 9.9.71

CATEGORY C

FASTER RUNNING COOLING FAN

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars after Car Serial Numbers

SRH 11224 (Four-door Saloons)
DRX 11288 (Long Wheelbase Saloons)

All Rolls-Royce and Bentley Corniche cars after Car Serial Number CRX 11284.

All Rolls-Royce and Bentley Corniche cars fitted with the increased performance engine.

DESCRIPTION

A faster running fan has been introduced to improve the performance of the cooling system at low engine speeds. The fan speed at idle has been increased in the ratio 1.2 : 1 by fitting a smaller diameter water pump pulley.

The fan is still fitted with a viscous drive unit to reduce fan roar at high engine speed, and to improve the warm-up rate of the engine, but the viscous unit is now larger to cope with the increased speed.

A smaller water pump impeller is used to prevent cavitation at the higher speeds.

The method of mounting the pulley on the coolant pump has been changed to a four bolt fixing and the fan is slightly modified to accommodate the larger viscous drive unit.

Thus it may be seen that none of these parts are interchangeable. However it is physically possible when reconditioning a coolant pump to fit a smaller impeller to an earlier pump or a larger impeller to a later pump. It is essential that great care is taken to ensure that this does not occur since severe damage will result from inadequate cooling due to insufficient coolant flow or cavitation.

Obviously the smaller coolant pump pulley necessitates the use of different drive belts from the crankshaft to the coolant pump and coolant pump to the alternator.

Continued...

Service Bulletin issued for
Circulation All Distributors
and Retailers

Section L
Bulletin No SY/L11
Page No 2
Date 9.9.71

The new belts required are:

Description	Part No.
Crankshaft pulley - coolant pump pulley - 'vee' belt	UE.36361 UE.37810
Coolant pump pulley - alternator - 'vee' belt	UE.37079
*Coolant pump pulley - air pump - 'vee' belt	UE.36360 UE.36363

*Cars fitted with Exhaust Emission Control System only.

Arr/JCl/Hly

Printed in England

M.660 T.S.D. 2859 February 1972 Printed in England

Chapter M
Electrical System

FOR INFORMATION

ELECTRICAL FAILURES

APPLICABLE TO:

Rolls-Royce Silver Shadow
Bentley T Series

DESCRIPTION

A number of electrical complaints have occurred in Service due to a poor connection or an open circuit between the toeboard sockets and plugs. This Service Bulletin is issued to advise Retailers of this possibility.

The failures occur because the wires to the plugs and sockets are constantly in tension and due to road shock, vibration or carpet movement, plugs and sockets can pull out. Up to nine different circuits are dependent upon a good electrical contact between any one socket and plug and as will be realised, complaints of this nature are extremely difficult to locate and would make a roadside diagnosis and repair virtually impossible.

When an electrical failure in Service is encountered and the reason is not apparent or the cause is an open circuit in the feed wire, the relevant toeboard socket should be examined to ensure that an efficient electrical contact is being made. If the socket is under stress or not pushed fully home the loom should be repositioned within the confines of the clips to relieve the stress and the socket pushed home.

The twelve different sockets and the circuits they serve are noted in the following list. The position of the sockets on the car is shown in Figure 1.

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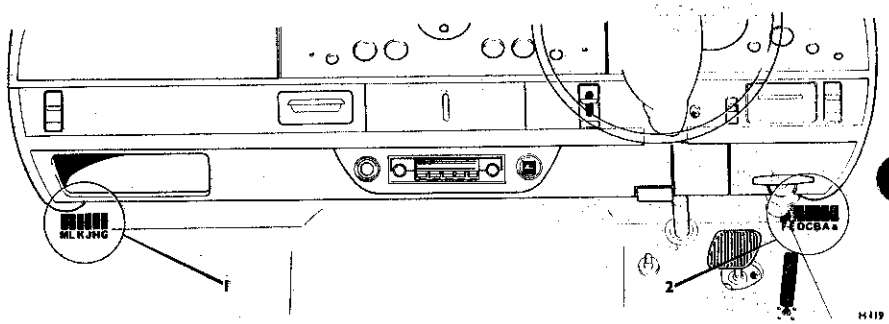

Fig.1 Position of electrical sockets beneath facia - Right-hand drive cars

1 Socket group No.1 2 Socket group No.2

SOCKET GROUP NO.1

Socket (G)

Actuators

Socket (H)

Actuators	Flasher repeater lamps

Socket (J)

Starter override switch	Side lamps	Main beam
Flashers		Wiper motor

Socket (K)

Air conditioning system resistances	Wiper motors

Continued...

FOR INFORMATION

ELECTRICAL FAILURES

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Bentley T Series

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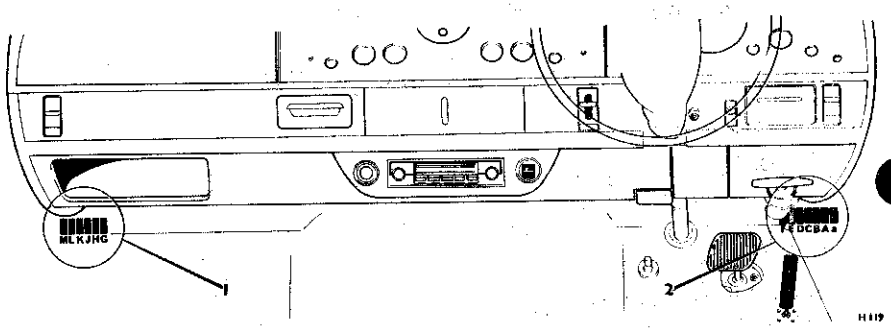

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1 Socket group No.1 2 Socket group No.2

SOCKET GROUP NO.1

Socket (G)

Actuators

Socket (H)

Actuators — Flasher repeater lamps

Socket (J)

Starter override switch — Side lamps — Main beam
Flashers — Wiper motor

Socket (K)

Air conditioning system resistances — Wiper motors

Continued...

Socket (L)

Dip beam — Horns — Blower motors
Height control switch — Wiper motor

Socket (M)

Electric gearchange mechanism

SOCKET GROUP NO.2

Socket (a) 60 amp. connection right-hand valance

On left-hand drive cars this socket is positioned on the left-hand side of the car.

Upper connection - Charging system
Centre connection - Ammeter
Lower connection - Fuse board

Socket (A)

Right-hand tail lights — Front flasher lamps — Blower motors
Windscreen washers — Flasher repeaters — Stop lamps

Socket (B)

Ignition warning light — Coolant level indicator — Horns
Headlamp flick relay — Interior lights

Socket (C)

Fuel pumps — Horns — Headlamp flick
Blower motors — Headlamp safety relay

Socket (D)

Water tap relay — Heater and demister control system — Parking lights

Continued...

Socket (E)

Refrigeration system (if fitted)	Gearbox control circuit (GM400 left-hand drive cars only)	Alternator (if fitted)

Socket (F)

Ignition coil	Coolant temperature indicator	Oil pressure switch
Sump oil level indicator	Oil pressure transmitter	Brake pressure relay

CATEGORY 2

COOLANT LEVEL INDICATOR

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars prior to chassis numbers SRH 1286, SRX 1285 and CBH 1355.

DESCRIPTION

It is possible for the coolant level warning lamp to be illuminated each time the ignition is switched on, even with a correct coolant level. This is caused by the output transistor of the indicator unit being damaged by the high voltage surge currents which can be induced into the inductive components.

A modification has now been introduced to prevent induced surge currents from passing through the coolant level indicator unit. This modification comprises a diode fitted in the coolant level indicator feed cable.

Cars produced prior to chassis number SRX 1114 and CBX 1149 (see Fig. 1, stage 1) have the coolant level indicator unit feed cable incorporated in the fuseboard branch loom, whilst cars produced after these chassis numbers (see Fig. 1, stage 2) have a link cable breaking out of the fuseboard branch loom.

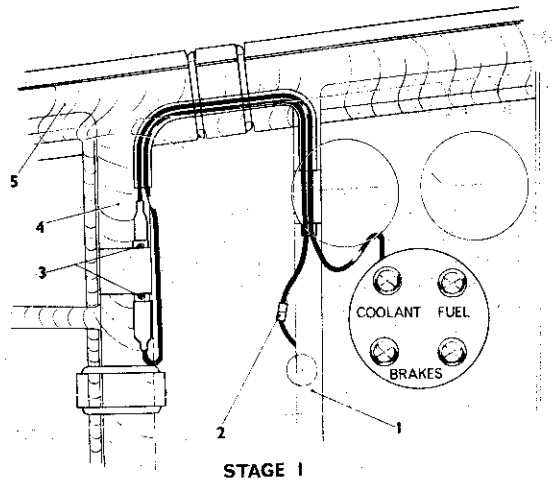
Both stages shown in Figure 1 are applicable to left-hand drive cars; right-hand drive cars are symmetrically opposite.

All cars produced prior to the applicable chassis number should be modified at the earliest opportunity, service schedules etc., or in complaint cases.

PROCEDURE

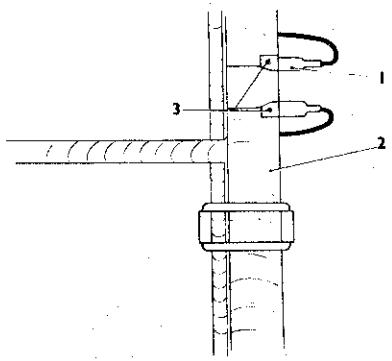
Before any work is undertaken, it should be ascertained whether this modification has been carried out previously. This can be checked by lowering the fuseboard and tracing the fuseboard branch loom upwards; the diode, if fitted, will be taped to the fuseboard branch loom as shown in Figure 1.

Check the coolant level and top-up if necessary, then disconnect the battery.



STAGE 1

1 Instrument branch loom
2 New terminal of green feed cable
3 Diode assembly
4 Fuseboard branch loom
5 Instrument loom



STAGE 2

H121

1 New terminal of upper link cable
2 Fuseboard branch loom
3 Diode assembly

Fig. 1 Modified circuit for coolant level indicator

This Service Bulletin cancels Service Bulletin No. SY/M3 dated 2.6.66.

CATEGORY C

ELECTRICAL CONNECTIONS TO GM 400 TRANSMISSION

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series cars fitted with the GM 400 transmission.

DESCRIPTION

The GM 400 transmission unit incorporates two solenoid valves, one for stator control and one for detent control. The two feed cables for the solenoid valves enter the transmission casing via a plastic moulded plug which is 0.625 in. (1.59 cm.) in diameter and is located on the left-hand side of the transmission casing. Passing through this plug are two identical blade connectors at right angles to each other, the uppermost connector being horizontal. A loom consisting of two cables is routed down the side of the transmission casing; a white/brown cable is connected to the upper horizontal terminal which serves the stator solenoid, and a white/purple cable or, on later cars, a white/green cable, is connected to the lower terminal which serves the detent solenoid.

Whenever it is necessary to disconnect the two cables in Service (e.g. during removal of the transmission unit) care must be exercised when reconnecting since the similarity between the terminals permits the possibility of an incorrect connection.

If the cables are incorrectly connected the transmission upchanges will be delayed and kickdown will occur at half throttle, also, engine braking will not be available in top gear.

If a car exhibits these symptoms it should be checked for correct connection of the solenoid cables.

CATEGORY A

INTERIOR LAMP CIRCUIT

APPLICABLE TO:

H.J. Mulliner, Park Ward Limited Coachbuilt Rolls-Royce Silver Shadow and Bentley 'T' series cars produced prior to car number CRH 1612.

DESCRIPTION

Due to the inter-connection between the interior lamp circuit and the fast levelling solenoid circuit, switching on the interior lamp using either one of the two facia control switches, will cause the car to be in a condition of fast levelling, even when the car is in gear. This is an undesirable feature, particularly when the car is in motion, and corrective action has recently been taken to eliminate this on cars after the above mentioned number.

Cars produced prior to CRH 1612 should be modified by fitting two diodes into the interior lamp circuit; these diodes will prevent the operation of the fast levelling solenoid when the interior lamp is operated from a facia control switch. It should be noted that if a bulb of higher wattage than is recommended is fitted to the interior lamp, the diodes may be damaged.

Before any work is undertaken, it should be ascertained whether the modification has been incorporated previously. To check, sit in the car, and with all the doors closed and the ignition switched off, operate the interior lamp using one of the two control switches mounted on the facia board. If the car is unmodified the fast levelling solenoid will be heard to click each time the switch is operated. The solenoid is located beneath the car on the forward member of the rear sub-frame.

PROCEDURE

1. Disconnect the battery.

2. Withdraw the right-hand ashtray which is located below the facia board on the right-hand side.

Continued..

Printed in England

CATEGORY A

INTERIOR LAMP CIRCUIT

APPLICABLE TO:

H.J. Mulliner, Park Ward Limited Coachbuilt Rolls-Royce Silver Shadow and Bentley 'T' series cars produced prior to car number CRH 1612.

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PROCEDURE

1. Disconnect the battery.

2. Withdraw the right-hand ashtray which is located below the facia board on the right-hand side.

Continued .

Printed in England

3. Remove the six screws which secure the ashtray support bracket to the facia board and withdraw the bracket. It will now be possible to draw the right-hand interior lamp switch loom downwards.

4. Locate the purple and white cotton covered cable which is connected to the interior lamp switch and is interrupted approximately three inches from the switch by Lucar terminals and a connecting blade.

5. Remove the Lucar terminals of the purple and white cable from the blade connector.

6. Connect the Lucar terminals to the terminals of one of the diode assemblies provided such that the blue sleeve of the diode assembly is nearest to the switch.

7. Fit the ashtray support bracket and the ashtray.

8. Apply the procedures 2 to 7 to the left-hand ashtray and interior lamp switch.

9. Connect the battery.

MATERIAL REQUIRED

Part Number	Description	Quantity
RH 8011	Diode assembly	2 off

TIME ALLOWED

0.75 of an hour per car.

Printed in England

CATEGORY C

IGNITION SYSTEM

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series produced after car number 1838 - left-hand drive cars, 1948, less1949, 1954 and 1975 - right-hand drive cars.

DESCRIPTION

The ignition coil and starter switch solenoid have recently been changed on current production cars. The ignition system has also been modified by the

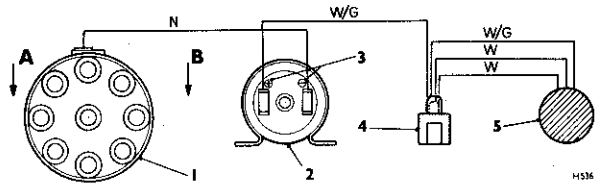

Fig.1 B.A.7 coil and ballast resistor (plan view)

A 'A' bank of engine
B 'B' bank of engine
1 Distributor
2 B.A.7 Coil
3 Note new positions of terminals
4 Ballast resistor
Top terminal: W/G to engine loom
W/G to coil '+'
Lower terminal: Twin W to engine loom (dotted)
5 Engine loom
Colour Coding N - Brown
W/G - White/green
W - White

Continued...

introduction of a ballast resistor. These changes have been made to enhance the performance of the ignition system and the purpose of this Bulletin is to inform Service Personnel and Retailers of the changes in detail.

The new ignition coil can be identified by the twin blade terminals and the markings '+' and '-', as opposed to the previous coil which has stud terminals and the markings 'SW' and 'CB'. It should be noted also that the terminal positions of the new coil have been rotated through 180° such that the contact breaker terminal of the coil (marked '-') is now on the left-hand side of the coil, away from the distributor.

Mounted adjacent to the left-hand side of the coil is a wire wound ballast resistor (see Fig. 1). This resistor takes the form of a white porcelain block with two blade terminals.

The new starter switch solenoid (see Fig. 2) is similar in appearance to the previous unit, except that the single stud terminal has been replaced by two separate blade terminals.

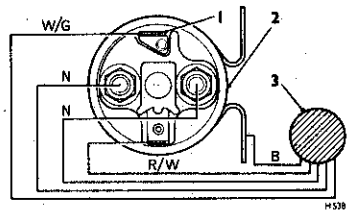

Fig. 2 2ST starter switch solenoid

1 Additional blade connector and cable
2 2ST starter switch solenoid
3 Engine loom
Colour coding W/G - White/green
N - Brown
R/W - Red/white
B - Black

Continued...

Important It should be noted that the ignition coil and the starter switch solenoid of the current system are not interchangeable with those previously fitted.

Under no circumstances should a car fitted with the current system be run with the ballast resistor disconnected.

For full details of the new part numbers see Spares Information Sheets 4.L.38. and 4.L.21.

Circulation - Countries with right-hand drive cars

This Service Bulletin cancels Service Bulletin SY/M10 issued on 2.2.67.

CATEGORY B

MANUAL OPERATION OF THE STARTER SWITCH SOLENOID

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series cars produced between the following two series of numbers

Standard cars - SRH 1948 to SRH 2181 less SBH 1954, SRH 2025, SBH 2043, SBH 2060, SRH 2068, SBH 2069, SBH 2097, SRH 2098, SRH 2099, SRH 2101, SRH 2109, SRH 2122, SBH 2123, SBH 2124, SBH 2135, SRH 2136, SBH 2138, SRH 2139, SRH 2140, SBH 2141, SBH 2143, SRH 2144, SBH 2146, SRH 2147, SBH 2156, SRH 2157, SRH 2158, SBH 2161, SRH 2163, SRH 2165, SRH 2168, SRH 2173, SRH 2174, SRH 2177, SRH 2178

Coachbuilt cars - CRH 1976 to CBH 2150 including CRH 1936

DESCRIPTION

The ignition coil and starter switch solenoid were changed on production cars some time ago, and the ignition system was also modified by the introduction of a ballast resistor. These modifications were to enhance the performance of the ignition system.

The starter switch solenoid is capable of being manually operated by depressing the rubber boot which shrouds the end of the solenoid plunger but, it should be noted that due to the manner in which this solenoid is connected into the ignition and starter motor circuits, manual operation of the solenoid will cause the engine to start and run as long as the plunger is depressed irrespective of whether the ignition is switched on or not.

In view of this, the starter switch solenoids which are being fitted to present production cars, have been modified by the introduction of a metal cap fitted inside the rubber boot which shrouds the end of the solenoid plunger. This metal cap prevents the solenoid plunger from being manually depressed. The purpose of this Service Bulletin is to advise Retailers and Service Personnel that all cars fitted with the 2ST solenoid which has a plunger capable of being

Continued...

Circulation - Countries with
left-hand drive cars

operated manually, should be modified by the introduction of a blocking cap. The work should be carried out on the next occasion that the car comes in for a normal scheduled service or, to have any other work carried out on it.

PROCEDURE

1. Disconnect the battery.

2. Remove the rubber boot which is fitted to one end of the starter switch solenoid.

3. Ensure that the internal surface of the rubber boot is clean and dry.

4. Apply a coat of Bostik 1261 adhesive to the internal surface of the rubber boot and to the external surface of the blocking cap (UD 14915) provided.

5. Fit the blocking cap inside the rubber boot.

6. Fit the rubber boot to the starter switch solenoid.

7. Connect the battery.

PARTS REQUIRED

Part No.	Description	Quantity
UD 14915	Blocking cap	1 off

TIME ALLOWED

0.2 of an hour

This Service Bulletin supercedes
Bulletin SY/M12 dated 8. 6. 67.

Circulation - All Retailers

CATEGORY C

FLASHING OF THE COOLANT LEVEL WARNING LAMP

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series Standard and Coachbuilt Cars

DESCRIPTION

A small number of complaints have been received of the coolant level lamp flashing when the car is negotiating a sharp bend in the road.

The coolant level lamp is a warning device, to provide an indication should any coolant be lost, and is activated by an electronic probe which is fitted into the cooling system expansion tank. The probe has two electrodes, the circuit between which is normally completed by the coolant but, should the forces set up by cornering cause the coolant to surge away from these electrodes, the warning lamp will flash momentarily.

In order to overcome this feature a capacitor is now available which can be fitted into the coolant level warning lamp circuit. This additional component will prevent the warning lamp from flashing during cornering without interfering with the normal operation of the device. The capacitor can be fitted to the flange which forms the base of the relay box cover.

It should be remembered however, that if an Owner complains of the coolant level warning lamp flashing, this could well be caused by either a minor loss of coolant or, by normal usage. The system should, therefore, be refilled and all hoses and connections checked for leaks. If the flashing persists then modify the coolant level warning lamp circuit.

PROCEDURE

1. Disconnect the battery.

2. Remove the front cover of the relay box as described in Section M10, Page M60 of the Workshop Manual.

Continued...

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3. Using the mounting clip provided (RH 8057), mount the capacitor to the underside of the flange which forms the base of the relay box cover.

4. Connect one terminal of the capacitor to a good earth point using a suitable length of 14/.012 black cable.

5. Using a length of green/black 14/.012 cable temporarily connect the remaining terminal of the capacitor to terminal C3 of the coolant/probe relay, which is shown in Figs. M55 and M57 in Section M10 of the Workshop Manual.

6. Connect the battery.

7. Operate the fuel/oil level switch. Should any delay occur in the illumination of the coolant warning lamp, the green/black cable should be removed from terminal C3 of the coolant probe relay and connected to terminal C2.

8. Using the connector (UD 11874) and sleeve (UD 8888) provided, permanently connect the existing cable and the new cable to the relay terminal.

9. Fit the relay box front cover.

PARTS REQUIRED

Part No.	Description	Quantity
RH 8049	Capacitor	1 off
UD 11874	Connector	1 off
UD 8888	Sleeve	1 off
RH 8057	Mounting clip	1 off

TIME ALLOWED

0.5 of an hour

Stage 1

1. Lower the steering column by removing the two Allen screws then remove the centre facia panel and the panel surrounding the instruments.

2. Remove the warning lamp cluster. If the coolant level warning lamp remained illuminated with the coolant level correct, renew the coolant level indicator unit.

3. Connect the green and black coolant level probe cable to the larger terminal of the coolant level indicator unit.

4. Remove the original terminal and sleeve from the existing green feed cable and replace with a UD 5406 Lucar and a UD 6119 sleeve (2).

5. Lower the fuseboard and tape the diode assembly (3) to the fuseboard branch loom (4) with the smaller terminal uppermost.

6. Lead the diode loom up the fuseboard branch loom (4), along the instrument loom (5) and down the warning lamp loom (1), taping as shown in Figure 1.

7. Connect the larger terminal of the loom to the new connector of the green feed cable (2) using a UD 6074 double blade connector.

8. Connect the smaller loom terminal to the smaller terminal of the coolant level indicator unit.

9. Fit the warning lamp cluster.

10. Fit the facia panels.

11. Fit the steering column support.

12. Connect the battery.

Stage 2

If the coolant level warning lamp remained illuminated with the coolant level correct it will be necessary to renew the coolant level indicator unit as described in the Procedure for Stage 1 modification and then re-connect the original cables.

After renewing the coolant level indicator unit, fit the warning lamp cluster, facia panels and steering column support then carry out the following.

1. Lower the fuseboard and locate the link cable which breaks out of the fuseboard branch loom (2).

2. Disconnect the link terminals and replace the uppermost terminal with a UD 12235 Lucar and a UD 2100 sleeve (1).

3. Tape the diode assembly (3) to the fuseboard branch loom (2) with the smaller terminal uppermost.

4. Connect the new link terminal (1) to the smaller connector of the diode (3).

5. Connect the original link terminal to the larger connector of the diode (3).

6. Secure the fuseboard.

7. Connect the battery.

MATERIALS REQUIRED

	Part No.	Description	Quantity
Stage 1	RH 7944	Diode assembly	1
	RH 7945	Loom assembly	1
	UD 5406	Terminal	1
	UD 6119	Terminal sleeve	1
	UD 1740	Black P.V.C. tape	As required
Stage 2	UD 13632	Diode assembly	1
	UD 12235	Terminal	1
	UD 2100	Terminal sleeve	1
	UD 1740	Black P.V.C. tape	As required

CATEGORY C

CAUSES OF BATTERIES BECOMING DISCHARGED

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

A small number of cases have occurred where a car has suffered from a flat battery although the battery and its charging system have been free from fault. In these instances the flat battery was caused by the presence of a constant current leakage from the battery when the car was parked with the ignition switched off.

Although the various items of electrical equipment which are not controlled by the ignition switch have a fuse in their own circuits it is possible that a current leakage can occur through some of these components, should they become faulty.

The purpose of this Service Bulletin is to advise Retailers and Service personnel of the checks which should be carried out if a car is suffering from a flat battery and the normal charging system and battery checks reveal no faults.

The components which are not controlled by the ignition switch and through which it is possible that a current leakage could occur are as follows:

1. The window lift switches and looms
2. The cigar lighters
3. The boot and interior lamps
4. The starter motor solenoid

ELECTRICAL CHECK OF THE WINDOW LIFTS

The electric window lifts should be checked to ensure that no current leakage is present. This could occur due to faults such as a chafed or trapped loom or a sticking window lift switch.

Continued...

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Should a damaged loom be found this may be repaired by binding the affected area with a sufficient amount of tape in order to afford extra protection against a recurrence of the damage.

A sticking window lift switch can be cured by fitting a length of sponge rubber between each side of the switch spindle and the mounting bracket of the switch, such that the rubber assists the return action to the off position. The instructions necessary to fit this rubber are detailed in the following procedure.

PROCEDURE

Rear Door Looms

1) Open a rear door and locate the window lift loom which passes from the body centre pillar to the door.

2) Remove the grommet which locates the loom in the body centre pillar.

3) Ease the loom and grommet out of the body pillar as far as possible.

4) Examine the loom for damage, paying particular attention to the underside of the loom. Rectify any damage if necessary, replacing any cut cables and re-taping the loom with sufficient tape to prevent further damage.

4a) Replace the loom and grommet in the body pillar.

5) Repeat the foregoing for the other rear door.

Front Door Looms

6) Remove the trim pad and the dust cover from one of the front doors.

7) Trace the route of the window lift loom from its connection block forward to its point of exit from the door.

8) Examine this area of the loom for any signs of damage, re-taping the loom if necessary.

9) Replace the dust cover and trim pad.

10) Repeat the foregoing for the other front door.

Continued. .

Window Lift Switches

11) Check the window lift switches for signs of sticking in either of their 'On' positions, any that are not positive in their return action should be modified as follows:

12) Remove the window lift switch escutcheon plate.

13) Fit two lengths of foam rubber strip to the switch between the black plastic knob and the switch mounting bracket as shown in Figure 1. Secure the rubber strip with a suitable adhesive.

14) Fit the window lift switch escutcheon.

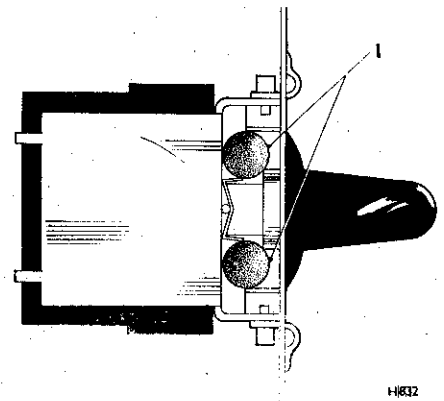

Fig.1 Electric Window Lift Switch fitted with rubber strips 1

Continued...

MATERIAL REQUIRED

Part Number	Description	Quantity
UB.15971	Rubber strip	2 off per single switch
UB.15970	Rubber strip	2 off per master switch

ELECTRICAL CHECK FOR THE CIGAR LIGHTERS

The cigar lighters can be operated with the ignition switch in the 'Off' position and therefore should a cigar lighter remain in the 'On' position a continual current discharge will take place which may in time cause the battery to be discharged.

PROCEDURE

1) Operate each cigar lighter in turn. The lighters should return to the outer position within a period of twelve seconds. Should a lighter remain in the 'On' position for a longer period, the cigar lighter holder should be replaced.

2) Remove all the cigar lighters and check the holders for the presence of foreign matter which may be causing a partical short circuit between the spring blades which feed the lighter element and the casing of the holder.

ELECTRICAL CHECK OF THE BOOT AND INTERIOR LAMPS CIRCUIT

The interior lamps and the boot lamp may also cause a drain on the battery should they be inadvertently left switched on or the switches become faulty.

PROCEDURE

1) Check that the boot lamp is extinguished before the boot lid reaches its closed position. This can be done by lying in the boot and slowly lowering the boot lid noting the point at which the boot lamp switches off. Should the boot lid be too close to its closed position before the lamp is extinguished, the boot lamp switch should be repositioned to correct this.

2) Check that the interior lamp switches on the facia panel are in the 'Off' position.

Continued...

3) Open one of the car doors and ensure that when closing the door the roof lamp is extinguished before the door lock mechanism comes into contact with the striker plate.

4) Repeat procedure number three for the other car doors.

ELECTRICAL CHECK OF THE STARTER MOTOR SOLENOID

In the unlikely event of water finding its way into the starter solenoid which is bolted to an extension of the starter motor casing, it is possible that electrolytic corrosion of the solenoid positive contact will occur, as this contact is connected directly to the battery positive terminal. Should this corrosion be particularly severe, sufficient debris may be produced to form a conductive path between the positive terminal and the interior surface of the solenoid casing thus providing a means for a constant current leakage from the battery.

This current leakage may be sufficient to completely discharge the battery should the car be parked for any prolonged period of time.

A 500 volt Meggar or a 0 to 50 M/A (½ amp) ammeter may be used to check the solenoid for the effects of corrosion; a separate procedure being provided for each instrument.

PROCEDURE (with ammeter)

1) Remove the cables and the battery positive lead from the positive terminal of the starter solenoid. The positive terminal is the one which has one cable connected to it.

2) Connect the negative terminal of the ammeter to the positive terminal of the solenoid.

3) Connect the positive terminal of the ammeter to the battery positive lead.

4) Should any reading now be observed on the ammeter, this indicates the presence of a leak path, and the solenoid should be replaced.

Continued...

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PROCEDURE (with 500 volt Meggar)

1) Disconnect the cables and the battery positive lead from the solenoid positive terminal and ensure that the exterior surfaces of the solenoid are free from water, oil or road dirt.

2) Connect one of the Meggar leads to the solenoid positive terminal.

3) Connect the remaining Meggar lead to the solenoid casing ensuring a good electrical connection is achieved.

4) Operate the Meggar and observe the reading. Should this be less than one meg-ohm, the starter motor solenoid should be replaced.

CATEGORY C

IGNITION COIL CONTACTS

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series cars produced between the following numbers

Right-hand drive cars	-	SRH 1948 and SRH 2971
Left-hand drive cars	-	SRX 1838 and SRX 2968

DESCRIPTION

A small number of ignition coils have been discovered on which the two low tension contact blades have not been securely anchored to the bakelite moulding.

The contact blades are rivcted to a contact post secured in the bakelite moulding, but in some cases the riveting operation has not been sufficient to prevent the blades from moving on the rivet.

In the absence of an efficient joint between the rivet and the blade, an electrical resistance will be present which will reduce the output of the ignition coil and may cause a complete ignition failure.

The purpose of this Service Bulletin is to inform Retailers and Service personnel of this defect and to advise that any car which is suffering from ignition troubles should be checked for loose ignition coil contacts.

Should a loose contact be encountered a remedy can be effected by thoroughly cleaning the rivet head and the adjacent area of the contact blade and soldering the blade to the rivet.

Printed in England

No SY/M18
Circulation - All Retailers

CATEGORY C

PROTECTION OF ELECTRICAL CIRCUITS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars.

DESCRIPTION

There are a number of electrical components fitted to the above cars which can be damaged or destroyed by voltages in excess of the normal working voltage of the car.

Excessively high voltages can be induced by disconnecting one of the battery terminals with the ignition switch in either of the 'ON' positions or, by using a battery boost charger without disconnecting the battery or, any form of electric welding equipment with the battery connected.

The purpose of this Service Bulletin is, therefore, to advise Retailers and Service Personnel that when charging or using electric welding equipment on the car, the battery must be disconnected.

No SY/M20
Circulation - North America only

CATEGORY C

BEZEL PLATE MOUNTING SCREWS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars built to comply with the Federal Safety Regulations produced from chassis number SRX 6001 and onwards.

DESCRIPTION

The switches and warning lamps on the above cars are fitted to the instrument board by bezel plates secured with screws. The eight screws on the two bezel plates as shown at 'A' in Fig.1 are fitted with distances pieces and should these screws be removed on cars produced immediately after the above chassis number, the distance pieces must be supported, otherwise they may fall behind the instrument board, and can only be retrieved by removing the board.

By pressing the bezel plate towards the instrument board the distance pieces will be held and the screws can then be removed and replaced with suitable lengths of stiff wire. It will then be possible to remove the switches, bezel plate and distance pieces by sliding them along the wires. A similar procedure can be used to refit these components.

On later cars the distance pieces have been adhered to the instrument board and the bezel plates can therefore be removed leaving the distance pieces in place.

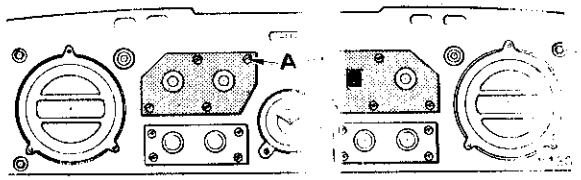

Fig.1 Instrument board, with facia removed

No. SY/M21
(Re-issue of Pages 1 and 3)
This cancels all previous issues of Pages 1 and 3 of this Bulletin

Circulation - All Retailers

CATEGORY B

STARTER MOTOR SOLENOID MODIFICATION

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to car numbers SBX 2951, less SRX 2957 and SBH 2955 - Standard Cars and CRH 3094 - Coachbuilt Cars.

DESCRIPTION

It is possible that water may enter the engagement solenoid of the starter motor on cars produced prior to the above car numbers.

Should the ingress of water cause corrosion of the solenoid contacts it is possible that an electrical leak will occur, resulting in the battery being discharged, and severe contact corrosion may cause starter motor failure.

The purpose of this Service Bulletin is to inform Distributors, Retailers and Service Personnel that the starter motors of these cars should be modified on the next occasion that the car is serviced or receives other attention. The modification consists of a drain slot across the solenoid mounting face of the starter motor and fitting an improved type of solenoid.

PROCEDURE

1. Disconnect the negative lead from the battery and remove the starter motor from the car as described in Section M4 of the Workshop Manual.

2. Remove the solenoid and the feed strap from the starter motor.

   Disconnect the solenoid plunger from the engaging lever.

3. Clamp the starter motor in a vice such that the nose cone is pointing downwards.

Continued...

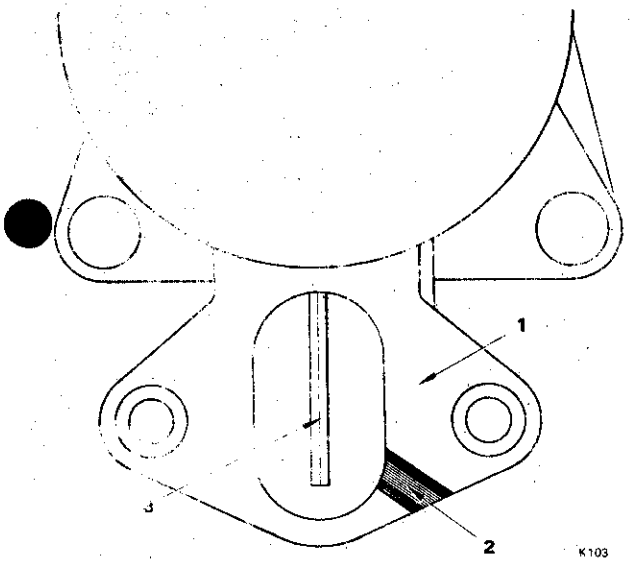

Fig.1 Starter motor with slot

1 SOLENOID MOUNTING FACE
2 DRAIN SLOT
3 ENGAGEMENT LEVER

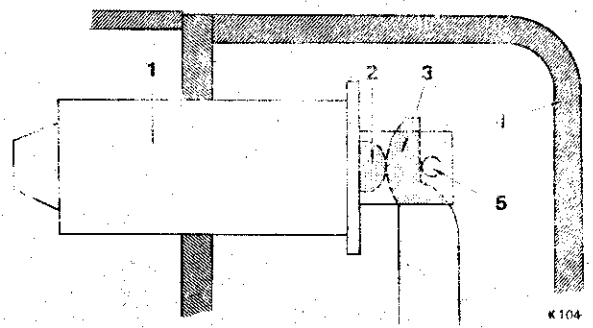

Fig.2 Solenoid plunger fitted to engaging lever

1 PLUNGER
2 SPRING LOADED PIN
3 ENGAGEMENT LEVER
4 BOSS
5 BAR

Continued...

4. Push a clean piece of cloth into the solenoid mounting boss such that the engaging lever will be protected from filings.

5. Using a 0.250 in. (6,40 mm.) round file, cut a slot 0.250 in. (6,40 mm.) in depth across the solenoid mounting face, as shown in Figure 1.

6. Remove the cloth from the mounting boss and ensure that no filings have entered the boss.

7. Clean the solenoid plunger and fit it to the engaging lever ensuring that the lever is gripped between the bar and the spring loaded pin of the plunger, as shown in Figure 2.

8. Fit the new solenoid provided to the starter motor, such that the blade terminal of the solenoid is adjacent to the starter motor casing.

9. Fit the new feed strap between the motor terminal post and the nearest solenoid terminal, tightening the nuts to 20 lb.in. (0,23 kgm.) only.

   Note Do not disturb the nuts which secure the stud terminals to the solenoid end casing.

10. Check that the pinion engagement travel is correct, adjusting if necessary as described in Section M4 of the Workshop Manual.

11. Fit the starter motor to the car, and connect the brown cable fitted with a Lucar terminal to the blade terminal of the solenoid, using a suitable length of 28/0.012 brown cotton covered cable as a link lead.

12. Connect the brown cable(s) followed by the battery cable, to the upper stud terminal, tightening the nut to 20 lb.in. (0,23 kgm.) only. Ensure that the battery cable is clear of the sub-frame and that the brown cable(s) are clear of the steering column bonded coupling.

PARTS REQUIRED

CD 5145	Starter Motor Solenoid	1 off
CD 5146	Feed strap	1 off

TIME ALLOWED

1.30 hours.

CATEGORY C

QUARTZ IODINE HEADLAMP UNITS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

A number of customers have requested that Quartz Iodine headlamp units be fitted to the above cars. Suitable Marchal Quartz Iodine lamp units are now available as a replacement for the existing lamp units.

This Service Bulletin has been issued to advise Service Personnel of the correct method to fit these units, such that the headlamp safety circuit is retained.

It should be noted that these lamp units should be fitted at the Customer's expense only and that no allowance will be given in respect of the displaced lamp units. The Marchal headlamp unit is not available from Rolls-Royce Limited and should be obtained from an Official Marchal Stockist.

PROCEDURE

1. Disconnect the battery and remove the existing four lamp units as described in 'Section M9 of the Workshop Manual'.

2. Remove 4.0 in. (10,16 cm.) of cable from both the black and the white flying leads attached to each of the new lamp units, and attach a snap connector nipple, Rolls-Royce part number UD 11977, to each of the flying leads.

3. Remove the socket from the loom in each of the four headlamp backshells by cutting the cables as close to the socket as possible.

4. Locate the blue/white cable in each of the outer backshells and tape these cables to the looms, as they are not required.

Continued...

Printed in England

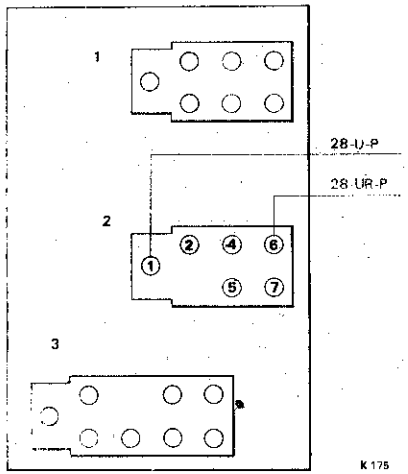

Fig.1 Relay box viewed on underside

1 SOCKET T
2 SOCKET U (PRIOR TO MODIFICATION)
3 SOCKET V

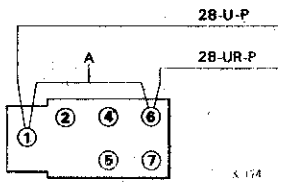

Fig.2 Socket 'U' after modification

A NEW CABLE 28-UR-P

Continued..

5. Fit a snap connector nipple, Rolls-Royce part number UD 11977, to the two cables in each of the four backshells.

6. Using snap connectors, Rolls-Royce part number RD 7050, join the four new lamp units to the backshells.

7. Replace the headlamp rims, seals and surrounds.

8. Remove the headlamp safety relay from the relay printed circuit board as described in 'Section M 10 of the Workshop Manual'.

9. Remove the blue plastic covered cable and the blue/red plastic covered cable from cavities 1 and 6 respectively in the relay board socket 'U' as shown in Figure 1.

10. Prepare a new cable 3.0 in. (7,62 cm.) long using 14/.010 blue/red plastic covered cable. Link the end of the cable removed from cavity 6 of socket 'U' to one end of the new cable, using a terminal, Rolls-Royce part number UD 11874. Fit this terminal to cavity 6 of socket 'U' as shown in Figure 2.

11. Using a terminal, Rolls-Royce part number UD 11874, connect the other end of the new cable to the cable removed from cavity 1 of socket 'U'. Fit this terminal to cavity 1 of socket 'U' as shown in Figure 2.

12. Replace the relay box cover as described in 'Section M 10 of the Workshop Manual'.

Material Required

Part Number	Description	Number Required
UD 11977	Snap Connector Nipple	16 off
RD 7050	Snap Connector	8 off
UD 11874	Lucar Terminal	2 off

Continued...

No. SY/M24
Re-issued
This sheet cancels previous issue of sheet 4 dated 30.5.68.

Part Number	Description	Number Required
5239/222	Marchal Optique Main Unit - All Cars	2 off
5538/222 TG	Marchal Optique Dip Unit - R.H. Drive Cars Only	2 off
5538/222 TD	Marchal Optique Dip Unit - L.H. Drive Cars Only	2 off

NOTE The numbers quoted for the lamp units are Marchal part numbers as the lamps are not available from Rolls-Royce Limited.

No.SY/M25
Circulation - All Distributors and Retailers

CATEGORY C

THE WINDSCREEN WIPER MOTOR MOUNTINGS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to numbers:

SRH.4231 - Standard Cars

CRH.5005 - Coachbuilt Cars

SRX.6158 - Standard Cars) Cars built to meet the American
CRX.6149 - Coachbuilt Cars) Federal Safety Standard Requirements

DESCRIPTION

The windscreen wiper motor is fastened to its mounting bracket by four studs which pass through four rubber grommets in the bracket. Cars produced prior to the above numbers are fitted with either two or three washers between the wiper motor casing and the grommet whilst later cars have only one washer in this position. The number of washers fitted will affect the stiffness of the mountings.

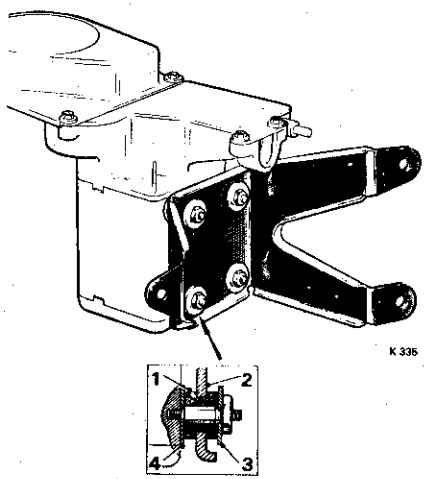

Fig. 1 Wiper motor to mounting bracket securing arrangement

1 RUBBER GROMMET
2 MOUNTING BRACKET
3 WASHER
4 WASHER
(four mounting points as shown in inset)

Continued...

Printed in England

The purpose of this Service Bulletin is to advise Service Personnel that in the event of a customer complaint of excessive wiper mechanism noise on an early car a considerable reduction in motor noise level can be made by reducing the number of washers fitted between the motor casing and the grommet to one, as shown in Figure 1. This will increase the flexibility of the mountings and reduce the noise level.

CATEGORY C

SETTING THE NEUTRAL START SWITCH

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The control switch which prevents the starter motor from being used unless the gearbox is in the Neutral or Park position, is mounted on the side of the gearbox and is operated by a cam attached to the gearbox actuator linkage. On early cars a boss was provided on the side of the neutral start switch housing to enable the cam to be set accurately. This boss has now been deleted from production cars.

The purpose of this Service Bulletin is to inform Distributors, Retailers and Service Personnel of an accurate method that can be used to set the neutral start switch cam on both early and late cars.

PROCEDURE

1. Ensure that the gearbox actuator lever is in the Neutral position.

2. Remove the clevis pins from the neutral start switch operating lever.

3. Connect a 12 volt test lamp between a positive supply and the white/black cable connected to pin number 4 of socket P.1. which is located beneath the brake fluid reservoir. This action will cause the test lamp to be illuminated when the neutral start switch is on the peak of the cam.

4. Push the switch operating lever forward and note the position at which the lamp is extinguished. Move the lever rearwards and again note the position at which the lamp is extinguished.

Continued...

5. Set the switch operating lever to a position midway between the two points at which the lamp was extinguished.

6. Adjust the length of the rod connected to the cam operating lever, until the clevis pin can be fitted without disturbing the lever setting.

7. Tighten the 2 B.A. locking nut and fit a new split pin to the clevis pin.

CATEGORY C

THE NEUTRAL START SWITCH HOUSING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars fitted with the Torque converter transmission unit and produced between the following car numbers:

SRX 4014 and SRX 4339 - Standard cars

CRX 3941 and CRX 6315 - Coachbuilt cars

SRX 6066 and SRX 6294 - Cars built to meet the American Federal Safety Standard Requirements

DESCRIPTION

There have been some reported failures in service of the 'neutral start' and 'fast levelling' control switches. This Service Bulletin is issued to point out the possible cause of the failure of these switches, and the action to be taken by Service Personnel to prevent a recurrence of the failure.

The 'neutral start' and the 'fast levelling' control switches are mounted in a cast aluminium casing, the cover of this casing being bolted to a bracket attached to the left-hand side of the torque converter transmission casing. The cover is secured to the switch casing by eight setscrews and the heads of these setscrews, although being countersunk, may protrude above the surface of the cover. Therefore, when the housing assembly is bolted to the support bracket, the cover will be distorted. If the cover is distorted in this way it will then be possible for water to enter the housing, thus causing the switches to fail.

Continued...

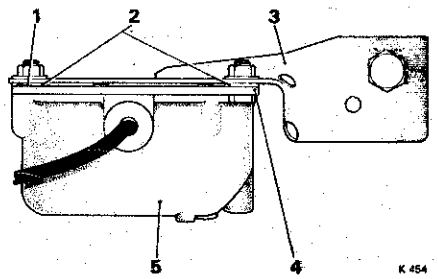

Fig. 1 The Neutral Start Switch Housing

1 COVER TO HOUSING SECURING SCREW
2 WASHERS ADDED AS DISTANCE PIECES
3 MOUNTING BRACKET
4 COVER
5 HOUSING

PROCEDURE

Should either or both of the switches fail, on any of the cars listed, due to the ingress of water the switch housing should be rebuilt with new switches installed. Two 0.250 in. (6,35 mm.) plain washers should be inserted between the cover and the support bracket, as shown in Figure 1 (one washer in each position).

These washers will act as spacers and so prevent distortion of the cover.

CATEGORY C

BATTERY CHARGING

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T Series and Rolls-Royce Phantom VI cars.

DESCRIPTION

The time taken between a new car leaving the factory and delivery into the Customers hands can in certain cases be quite considerable and without regular attention the battery may suffer enough to result in an early failure.

The following procedure is to be adopted by all Distributors and Retailers on receipt of a new car to ensure that the battery is in its best condition when the car is handed over to the Customer. To aid this procedure all cars will be fitted with a label inside the boot by the charging socket and on the label will be written the date the battery condition was last checked by Rolls-Royce Limited.

PROCEDURE

1. On receipt of a new car the Distributor or Retailer should check the specific gravity of each cell. The readings taken for a fully charged battery will lie within the ranges quoted below.

Note Due to the recessed position of the battery, care must be taken to avoid spillage of the acid when checking the specific gravity.

	If ambient air temperature is generally below 32°C. (90°F.) figures as below	If ambient air temperature is frequently above 32°C. (90°F.) figures as below
Specific gravity of the acid in a fully charged battery	1.270 to 1.280	1.240 to 1.255

Continued...

In cases where the specific gravity reading is low when compared with the above figures the battery must be recharged. This can be done by connecting directly to the battery or by recharging through the two pin socket at the normal charging rate of 7 amp. The battery top must be left off during the charging period.

IMPORTANT All electrical systems in the car must be switched OFF to avoid any damage to switches and contacts during charging. If the battery is recharged at more than the normal 7 amp. charging rate the battery leads must be disconnected.

On completion of the recharge the specific gravity of the acid should be in the ranges quoted.

The acid levels must also be checked and the battery topped-up if necessary with distilled water.

This check on the state of charge of the battery and any necessary corrections MUST BE CARRIED OUT WITHIN 28 DAYS of the date shown on the label and thereafter must be repeated every 28 days whilst the car is in storage or in the showroom.

Printed in England

CATEGORY C

THE MODEL 16W WIPER MOTOR

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars fitted with the Model 16W permanent magnet wiper motor.

DESCRIPTION:

A number of complaints have been received regarding incorrect operation of the blade parking mechanism on the 16W wiper motor. This motor can be identified by the circular motor housing as opposed to the flat sided housing fitted to earlier motors.

Incorrect operation of the parking mechanism results in one of the following conditions.

A. When the wiper switch is turned to the 'off' position, the motor continues to run.

The tag breaking off the upper drive plate of the parking mechanism is the cause of this condition. The tag is shown in Figure 1.

B. The wiper blades strike the windscreen surround at the end of each wiping stroke.

This condition is usually caused by a foul occurring between the detent lever and the parking mechanism as shown in Figure 2. The friction caused by the foul will be sufficient to prevent the eccentric from turning, causing the blades to strike the windscreen surround at the end of each wiping stroke.

This Service Bulletin has been issued to advise Distributors and Retailers that replacement drive plates are now available and should a complaint be received of a wiper motor continuing to operate when switched off, as described in (A), the upper drive plate should be replaced.

Continued...

The Service Bulletin also details a corrective action which should prevent the blades from striking the windscreen surround as described in (B).

It should be noted that there is no adjustable parking switch on this type of motor. Any adjustment to the parking position of the wiper blades must be carried out by adjusting the wiper blade position on the splined boss of the wheelbox.

PROCEDURE A

To rectify the condition of the wiper motor not switching off.

1. Remove the plastic cover from the wiper motor.

   Note Do not remove the metal cover, for if the motor is operated with this cover removed, severe damage to the parking mechanism and rack will occur.

2. Retrieve the tag which has broken away from the upper drive plate. The tag is likely to be found in the grease surrounding the crank gear.

3. Remove the wiper blades to reduce the load on the wiper operating rack.

4. Switch on the ignition and allow the wiper motor to operate until the crankpin and connecting rod are in the position shown in Figure 1. Switch off the ignition.

5. Turn the eccentric assembly by hand in an anti-clockwise direction to the extended or park position as shown in Figure 1.

Continued...

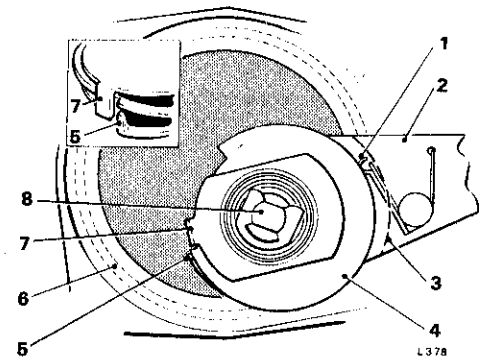

Fig. 1 Crankpin, connecting rod and eccentric in correct position for upper drive plate renewal.

1. Detent lever
2. Connecting rod
3. 'Wipe' position of eccentric
4. Wave washer
5. Tag on eccentric
6. Crank gear
7. Tag on upper drive plate
8. Crankpin

6. Remove the circlip from the top of the crankpin. Remove the plain washer, spring and broken drive plate; leave the brass bush in position on the crankpin.

7. Fit a new drive plate to the brass bush ensuring that the tag protrudes downwards through the recess in the wave washer and rests against the left-hand side of the tag on the eccentric as shown in Figure 1. Ensure that the drive plate and brass bush are adequately greased and that the drive plate is free to slide axially on the flats of the brass bush.

Continued...

Note Care should be taken when positioning the connecting rod and the eccentric and when fitting the new drive plate as the drive plate tag will be broken when the motor is operated if the relative position of these three items is not correct.

8. Fit the spring, plain washer and circlip to the top of the crankpin.

9. Fit the plastic cover to the motor.

The wiper blades should be fitted as follows:

Note The procedure given is for right-hand drive cars on which the blades park towards the left-hand side. Left-hand drive cars are similar but are a mirror image, with the blades parking towards the right-hand side.

10. Switch on the wipers without blades and arms fitted, allow them to complete four cycles and then switch off.

11. Fit the wiper blades to the spindles so that the tips of the right-hand blade, and the outboard tip of the left-hand blade, just contact the rubber windscreen surround. If the splines do not line up in this position, the nearest position for neat parking should be selected.

12. Having checked that the screen is clean, the wipers should be operated for four cycles, with the windscreen washer operating continuously.

The wiper blades should not contact the rubber surround while in operation.

13. Switch the wiper motor off: the blades should return to a neat parking position, with the blades either in light contact with the rubber surround, or just above it.

14. If the blades touch the rubber during their sweep, or park incorrectly, the offending arm should be rotated one spline in the appropriate direction, and the above checks repeated.

Continued...

Printed in England

MATERIAL REQUIRED

PART NO.	DESCRIPTION	QTY.
CD 5429	Drive plate	1 off

TIME ALLOWED

To replace upper drive plate 0.5 hours

PROCEDURE B

To rectify the blades striking the windscreeen surround at the end of each wiping stroke.

1. Ensure that the wiper blades are in the parked position.

2. Remove the plastic cover from the motor.

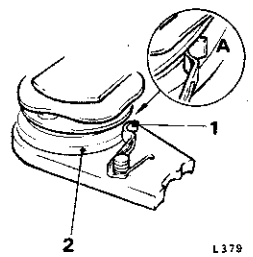

Fig. 2 Windscreen wiper motor detent lever and eccentric

1. Detent lever
2. Eccentric
A = Inset shows point at which foul may occur

Continued...

3. Examine the upper edges of the detent lever for signs of fouling as shown in Figure 2.

Should there be any signs of fouling, the upper edge of the lever should be carefully filed until clearance exists between the lever and the upper plate of the eccentric as shown in Figure 2.

Care should be taken not to allow metal filings to enter the motor.

4. Fit the plastic cover to the motor.

5. Test the operation of the wiper blades on both a wet screen and a drying screen. If the blades still strike the windscreen surround this is caused by excessive friction within the eccentric assembly and as this cannot be rectified the wiper motor should be replaced.

MATERIAL REQUIRED

-

TIME ALLOWED

To correct defective eccentric 0.5 hours

Printed in England

Circulation - U.S.A. and Canada only

CATEGORY C

THE IDEAL CORPORATION FLASHER UNIT

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley 'T' Series Cars built to comply with the American Federal Safety Standards.

DESCRIPTION

A new type of direction indicator flasher unit is now fitted to all cars manufactured for use in North America. This flasher unit is the model 550 manufactured by the Ideal Corporation and is identified by two circular indentations on the top of the unit.

This unit will in future be supplied for all replacement purposes on the above cars.

If the Ideal flasher unit is not held squarely when being pushed into the fuseboard socket, it is possible that damage will occur to the protective lacquer with which the fuseboard is coated. To prevent possible damage from happening, a protective washer is fitted between the base of the flasher unit and the fuseboard.

Before fitting the flasher unit ensure that the protective washer is in good condition and correctly fitted to the flasher unit.

PART NUMBERS

Ideal Flasher Unit - UD 17601

Protective washer - UD 17635

SECTION M

Circulation - All Distributors Retailers

Bulletin No. SY/M33

Date: 15.9.70

Sheet No. 1

CATEGORY C

RADIO INTERFERENCE

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars built from Car Serial Number 6000.

DESCRIPTION

Criticism has been received of radio interference induced by electrical components fitted to the car. Current production cars are being fitted with additional suppression to prevent radio interference. A kit of parts is now available containing the necessary components to prevent radio interference to cars already in service.

The kit of parts comprises a Filter unit, a Capacitor and an Earth bonding strap (see Figure 1). The components should be fitted as described under the appropriate headings, and only in the event of customer criticism.

However this additional suppression does not eliminate radio interference from sources external to the car such as other vehicles, overhead electricity cables and other electrical installations. The degree of external sources of interference will be amplified if the radio selector knob is turned away from a station. These factors should be considered when assessing the degree of interference.

It should be noted also that if an F.M. (Frequency Modulated) radio receiver is fitted to the car, the quality of reception will depend upon the local signal strength and the type of terrain through which the car is moving. Any sounds or alterations in signal quality due to these facts should not be confused with interference.

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SECTION M

Circulation - All Distributors and Retailers

Bulletin No. SY/M33

Date: 15.9.70

Sheet No. 2

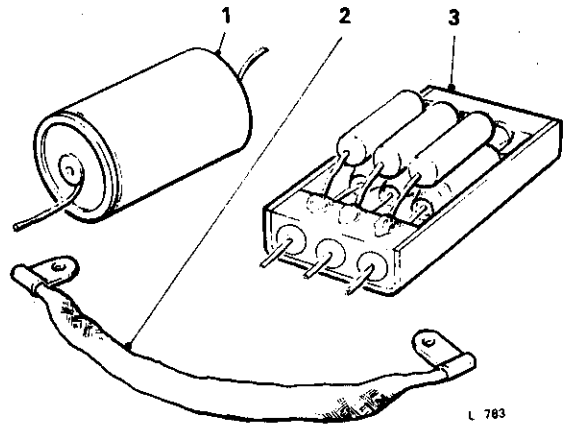

Fig. 1 - Contents of kit

1. Capacitor
2. Earth Bonding Strap
3. Filter Unit

PROCEDURES

Filter Unit - To fit

On cars which do not have the radio fitted in the standard position in the centre console, the filter unit must be electrically connected as described in the following procedure. The filter unit must be attached to some convenient position as near as possible to the radio. Ensure that the filter unit casing is properly earthed.

1. Disconnect the battery.

2. Remove the triangular shaped trim pads situated either side of the centre console by using a thin flat tool and prising the pad away from the console. Take care not to mark the trim.

3. Attach the filter unit to the left-hand side radio mounting bracket with a self-tapping screw as shown in Figure 2. Ensure that a good earth is made between the filter casing and radio bracket.

   It is imperative that when fitting the filter unit, that the earthed ends of the three red capacitors are fitted to the radio input cables. The earthed ends of the three red capacitors are those soldered directly to the body of the filter unit as shown in Figure 3.

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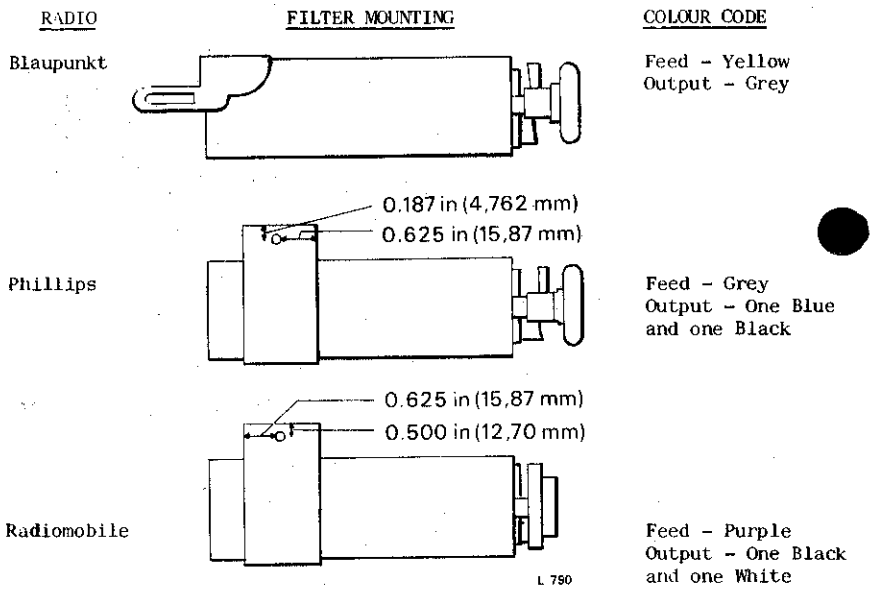

Fig. 2 – Mounting points

Note When carrying out the next three procedures, it is important that the following points are noted.

(a) The cables from the filter unit to the radio should be kept as short as possible.

(b) When soldering the cables to the filter unit avoid the excessive build up of heat, otherwise the capacitors will be irreparably damaged.

4. Cut the two radio output cables to a suitable length and solder them to the filter unit as shown in Figure 3.

5. Cut the radio feed supply cable to a suitable length and solder to the filter unit as shown in Figure 3.

6. Solder the remaining three cables to the opposite end of the filter unit. Ensure that matching colours are soldered opposite each other e.g. red to red, as shown in Figure 3.

7. Fit the centre console triangular trim pads, by aligning each clip opposite its socket and firmly pressing into position until a positive click is heard.

Do not re-connect battery at this point.

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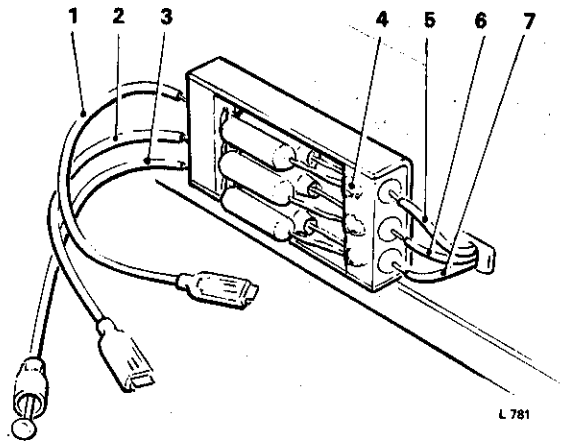

Fig. 3 – Fitting cables to filter unit

1. Output 1
2. Output 2
3. Radio feed
4. Earthed end of capacitor
5. Output 1
6. Output 2
7. Radio feed

Capacitor - To fit

The capacitor is fitted to the underside of the fuseboard, and is connected into the gearchange thermal cut-out switch feed cable as shown in Figure 4.

On early cars the electrical connection is made into the cable entering the five-way socket on the underside of the fuseboard.

On later cars the electrical connection is made into the same cable, which does not enter the socket (see Fig. 4).

1. Lower the fuseboard, and remove the six screws securing the printed circuit.

Continued...

BP/Eck

2. Locate the two Brown/Black cables on the underside of the fuseboard. On early cars, these will be located in the five-way socket between the indicator flasher unit and the gearchange thermal cut-out switch. Later cars have the Brown/Black cables looped beneath the fuseboard and are each fitted with an in-line Lucar connector.

3. Using suitable terminals, connect the positive (+) red end of t capacitor to the thinner Brown/Black cable. Keep the capacitor lead as short as possible.

4. Using suitable connectors and a length of Black cable, connect the negative end of the capacitor to the nearest 0.250 in. (6,35 mm.) diameter bolts adjacent to the fuseboard pivot pins. Ensure that a clean contact is made.

5. Tape the capacitor and its two cables securely to one of the larger fuseboard looms. This will ensure that the capacitor connections are not stressed.

6. Fit the fuseboard printed circuit, and close the fuseboard.

7. Connect the battery.

Bonding strap - To fit

1. Fit one end of the bonding strap to one of the screws securing the top cover of the windscreen wiper motor.

2. On Right-hand drive cars connect the remaining end of the bonding strap to the uppermost bolt securing the windscreen wiper motor mounting bracket to the scuttle.

   On Left-hand drive cars the bonding strap is connected to the uppermost bolt securing the windscreen wiper motor mounting bracket to the valance.

MATERIAL REQUIRED

Kit Number RH.8352 — 1 off

Continued...

BP/Eck

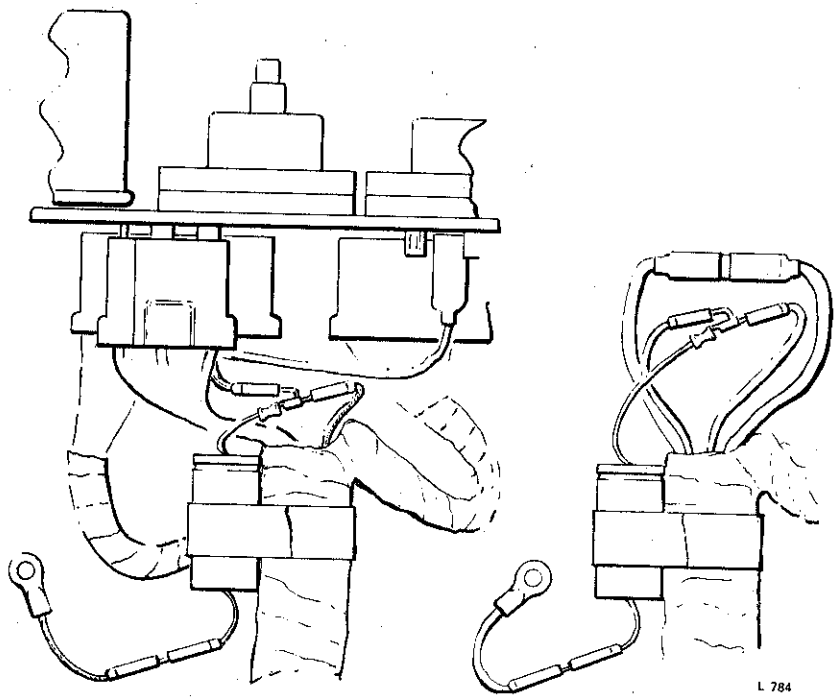

Fig. 4 Fitting the Capacitor

A. Early cars
B. Later cars

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BP/Eck

SECTION M

Circulation - All Distributors and Retailers

Bulletin No. SY/M33

Date: 15.9.70

Sheet No. 7

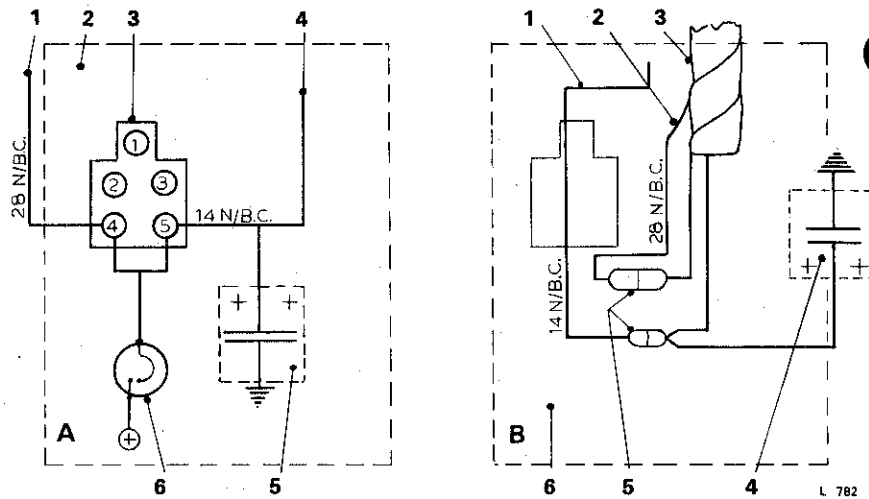

Fig. 5 Theoretical Wiring Diagrams showing the Capacitor fitted.

A. Early cars
1. To gear change actuator
2. Fuse panel printed circuit
3. 5-way connector plug
4. To gearchange switch
5. Capacitor
6. Thermal switch

B. Later cars
1. To gear change switch
2. To gear change actuator
3. Loom
4. Capacitor
5. In-line 'Lucar' connections
6. Fuse panel printed circuit.

Continued...

BP/Eck

SECTION M

Circulation - All Distributors and Retailers

Bulletin No. SY/M33

Date:

Sheet No. 8

TIME ALLOWED

Fitting the complete kit 2–4 hours

BP/Eck

CATEGORY C

SPECIAL ELECTRICAL EQUIPMENT

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

A number of items of special electrical equipment are being fitted to Rolls-Royce Silver Shadow and Bentley T series cars at customer request. These items which include television receivers, cassette tape players and radio telephones are not warranted by Rolls-Royce Limited and are, therefore, subject to the manufacturers warranty.

Should trouble be experienced with any of this equipment it should be returned directly to the manufacturer or official Dealers for repair and warranty consideration

In territories other than the United Kingdom the local Dealer of the equipment manufacturer should be consulted or if there is no local Dealer the manufacturer should be contacted at the address shown in this Service Bulletin.

If service facilities are required for equipment other than that mentioned overleaf, the appropriate manufacturer should be contacted directly.

The information given in this Service Bulletin is to the best of our knowledge correct at the date of issue. It is not intended to keep the list of service Dealers up to date and Distributors and Retailers are recommended to check details from time to time with their local Dealers for special Eletric Equipment.

Continued...

SLOT STEREO CASSETTE PLAYERS

These are marketed and serviced by.

Metro-Sound Group of Companies,
Audio Works,
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Service Manager Mr. M.G. Stoot

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Telephone 01 452 0171

Service Manager Mr. M.G. Stoot

Service is available overseas from the Voxson Dealers listed on Pages 8 and 9.

CATEGORY C

ENGINE IGNITION TIMING

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars from Car Serial number SRH 8742 onwards.

DESCRIPTION

Current production cars are fitted with the Lucas 35 D8 type of distributor which has only one set of contact points.

The ignition timing on these cars is 5^{O} B.T.D.C. set at 800 rpm.

Those cars after the above Car Serial Number built to comply with 1970 American Federal Safety standards are fitted with a Vehicle Emission Control information plate on which it is stated that the ignition timing is T.D.C. at 500 rpm with the vacuum retard disconnected.

Although correct, the information is now superseded by this Service Bulletin because it has been found that more consistent results can be obtained if the ignition setting is made at the higher engine speed.

Both the settings represent the same advance curve on this distributor.

When setting or checking the ignition timing on any of the above cars the following procedure should be adopted.

PROCEDURE

1. All cars after Car Serial Number SRH 8742 other than those built to comply with the American Federal Safety Standards.

a) Examine the condition of the contact points and clean or renew as necessary.

Continued...

b) Start the engine and allow to idle.

c) Using an impulse tachometer/dwell angle meter set the dwell angle to between 26° and 28° by means of the adjusting screw.

d) Run the engine until the normal operating temperature is reached and the choke is fully open.

e) Switch off the engine.

f) Connect a stroboscope and start the engine.

g) Set the engine speed to 800 rpm by means of the throttle stop screw.

h) Adjust the distributor to set the ignition timing to 5° B.T.D.C. Tighten the clamp bolt and check the timing.

2. Cars built to comply with the 1970 American Federal Safety Standards

a) Examine the condition of the contact points and clean or renew as necessary.

b) Start the engine and allow to idle.

c) Using an impulse tachometer/dwell angle meter set the dwell angle of the distributor points to 26° and 28° by means of the adjusting screw.

d) Run the engine until the normal operating temperature is reached and the choke is fully open.

e) Switch off the engine.

f) Disconnect the vacuum pipe from the vacuum retard tap and blank off the connection on the tap.

g) Connect a stroboscope and start the engine.

h) Set the engine speed to 800 rpm by means of the throttle stop screw.

i) Adjust the distributor to set the ignition timing at 5° B.T.D.C. Tighten the clamp bolt and check the timing.

Continued...

j) Reconnect the vacuum pipe to the vacuum retard tap.

k) Ensuring that the gearbox is in neutral and that the refrigeration is switched off, set the idling speed of the engine to 600 rpm using the adjusting screw and tighten the locknut.

Printed in England

SECTION

Circulation - All Distributors and Retailers
Date: 1.9.70.

Bulletin No. SY/M36
Sheet No. 1

CATEGORY C

THE LUCAS 16 P 6 IGNITION COIL

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars fitted with the Lucas BA 7 ignition coil.

DESCRIPTION:

The Lucas BA 7 ignition coil, Rolls-Royce part number UE 34104 has been superseded by the Lucas 16 P 6 ignition coil.

In future the 16 P 6 coil will be supplied as a replacement for the BA 7 coil. The Rolls-Royce part number of the new coil is RH 8402.

The two ignition coils are identical except that the BA 7 coil has a screwed type of H.T. lead and the new 16 P 6 coil has a push-in type of H.T. connector. When replacing a BA 7 coil it will therefore be necessary to replace the existing connector on the high tension lead with the push-in type of connector which is supplied with the 16 P 6 coil.

PROCEDURE:

After fitting the 16 P 6 ignition coil and connecting the low tension cables, proceed as follows:-

1. Remove and discard the washer and screwed connector from the H.T. lead.
2. Cut the length of bared H.T. wire, so that it is flush with the lead, and fit the rubber cover.
3. Push the connector up the centre of the H.T. lead as shown in Figure 1A.
4. Push the lead into the coil H.T. socket until the connector clicks into the socket groove.
5. Pull the rubber cover over the coil chimney as shown in Figure 1B.

Continued...

SECTION M

Circulation - All Distributors and Retailers
Date: 1.9.70

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Sheet No. 2

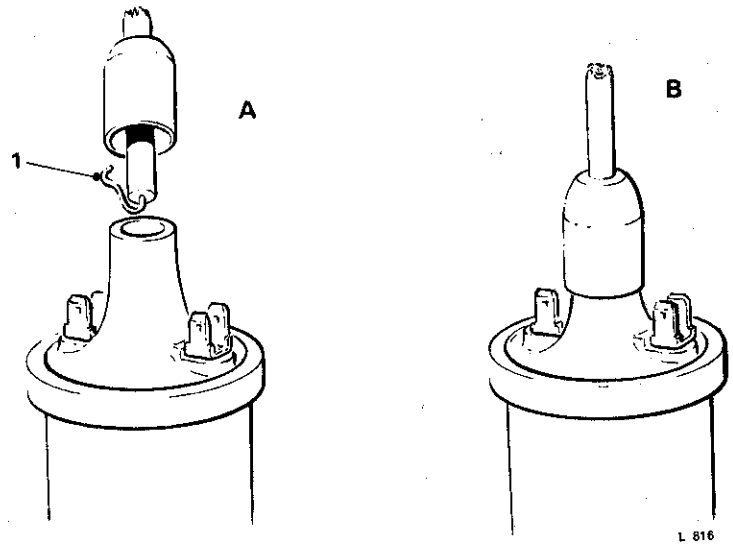

Figure 1 Lucas 16 P6 Ignition Coil.

A. Push H.T. cable down into coil H.T. extension.
B. Pull cover down over coil H.T. extension.
1. Connector pushed into centre of H.T. lead.

LOW TENSION CONNECTORS

Coil Terminal	Cable	Destination
+	W/G-P	Coil Suppressor
+	W/G-P	Ballast resistor
-	N-C	Contact breaker

SECTION M

Circulation - All Distributors and Retailers

Bulletin No. SY/M37

Date: 20.11.70

Sheet No. 1

CATEGORY C

THE IGNITION SWITCH

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars produced from Car Serial Number 9000.

DESCRIPTION

The ignition switches fitted to the above cars are equipped with a device which prevents the key from being turned to the 'lock' position until the gear selector lever has been moved to the 'park' position; in the 'lock' position the key can be withdrawn from the switchbox.

The device includes a solenoid which is operated by a switch in the transmission actuator. Although the solenoid operates very quickly when energised, it may be possible to mechanically lock the solenoid before it had time to operate, if the ignition key is turned very rapidly. In the event of a customer complaint concerning key withdrawal, it should first be demonstrated that the key must be operated at a normal speed, particularly if it is suspected that the battery voltage is low.

The solenoid is designed to operate at all normal battery voltages, but it is possible that a battery which is completely flat will not have sufficient energy to operate the solenoid. In the event of the battery being unable to operate the solenoid, an unsuccessful attempt to start the car would then mean that the ignition key could not be withdrawn from the switchbox and if the boot were locked there would be no means of access to the battery, unless a master key were available.

This Service Bulletin gives the correct procedure to adopt in such a situation, using a 'slave' battery to energise the solenoid thus permitting withdrawal of the key.

Continued...

BP/ECk

SECTION M

Circulation - All Distributors and Retailers

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Date: 13.11.70

Sheet No. 2

PROCEDURE

1. Ensure that the gear selector lever is in the 'park' position and the handbrake firmly applied.

2. Turn the ignition key to the 'off' position.

3. Lower the fuseboard.

4. Connect the Negative lead of a 'slave' 12 Volt battery to a clean earth point such as the kick-down stop situated beneath the accelerator pedal.

5. Using a suitable length of cable fitted with a 10 amp. fuse, connect the Positive lead of the 'slave' battery to the left-hand end of the instrument and facia lamp fuse (fuse number eight). The location of this fuse is shown on the fuseboard identification panel.

   Note: It is of the utmost importance that the correct battery polarity is observed. Otherwise severe damage to the electrical system will occur.

6. The ignition switch solenoid will now be energised allowing the ignition key to be turned to the 'lock' position, and then withdrawn.

7. Disconnect the 'slave' battery and close the fuseboard.

BP/ECk

SECTION M

Circulation - All Distributors and Retailers

Date: 12.11.70

Bulletin No. SY/M38

Sheet No. 1

CATEGORY C

THE LUCAS 35D8 DISTRIBUTOR CAP

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series motor cars from Car Serial Number 8742 onwards.

DESCRIPTION

Should the distributor cap on the Lucas 35D8 Distributor be disturbed for any reason, it is most important to note the following points when fitting the cap to the distributor.

1. First ensure that the carbon brush is located positively in the cap. This is achieved by pushing the carbon brush down the hole in the cap with a thin piece of wood until the spring becomes 'coil-bound', then gently releasing it.

2. Hold the cap down firmly and squarely on the distributor while fastening the clips.

BP/JC

SECTION

Circulation - All Distributors and retailers

Date: 10/12/70

Bulletin No. SY/M39

Sheet No. 1

CATEGORY C

THE ELECTRICAL CENTRALISED DOOR LOCKING SYSTEM.

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series produced from Car Serial Number SRH 8741.

DESCRIPTION.

All cars are now equipped with an electrical centralised door locking system and this Service Bulletin is issued to give a brief description of the components used, the principle of operation and a fault diagnosis chart.

The system is an electrical circuit capable of locking all of the doors by the operation of a control switch fitted to each of the front doors, immediately above the arm rests.

The control switches are connected to electrical solenoids, one of which is mounted adjacent to each door lock mechanism. The solenoids contain twin electrical windings and are therefore double acting which means that the solenoid armature is capable of being extended or retracted depending on which winding is energised by the control switch.

The armatures are mechanically linked to the door lock operating rod such that movement of the armature will cause the door to be locked or unlocked.

As the windings of the solenoids are designed for intermittent operation they are protected from electrical overload by a thermal cut-out switch identical to that used in the electric gearchange circuit. The thermal switch for the door locking system is mounted on the inside forward surface of the glove box situated immediately in front of the front passenger's knees.

In the event of one of the control switches being held in the 'ON' position or if a solenoid winding draws too much current, the thermal switch will cut-out before damage to the winding occurs. To reset the thermal switch it will be necessary to depress the red button on the top of the switch. If the thermal switch cuts out again the cause should be investigated.

BP/ECk

Continued...

The following chart anticipates problems which could be experienced with the centralised door locking system.

CENTRALISED DOOR LOCKING FAULT FINDING DIAGNOSIS		
SYMPTOM	CAUSE	ACTION
1. System Inoperative	1. Thermal switch has cut out.	1. Depress the red button on the switch. If the switch cuts out again check for a sticking switch or a solenoid drawing too much current.
2. "	2. One control switch is stuck in ON position	2. Locate and remove the switch, free off or renew if necessary.
3. One solenoid not operating.	3. Solenoid armature stuck in position	3. Remove the solenoid and check for surface corrosion of the armature. Also ensure that the armature is not jamming at the extremities of its travel.
4. "	4. Solenoid linkage mechanically jammed.	4. Examine the linkage for signs of jamming which may be caused by the linkage having insuffient clearances to tolerate the movements of the armature.

BP/ECk

CATEGORY C

THE ELECTRICAL CENTRALISED DOOR LOCKING SYSTEM.

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series produced from Car Serial Number SRH 8741.

DESCRIPTION.

All cars are now equipped with an electrical centralised door locking system and this Service Bulletin is issued to give a brief description of the components used, the principle of operation and a fault diagnosis chart.

The system is an electrical circuit capable of locking all of the doors by the operation of a control switch fitted to each of the front doors, immediately above the arm rests.

The control switches are connected to electrical solenoids, one of which is mounted adjacent to each door lock mechanism. The solenoids contain twin electrical windings and are therefore double acting which means that the solenoid armature is capable of being extended or retracted depending on which winding is energised by the control switch.

The armatures are mechanically linked to the door lock operating rod such that movement of the armature will cause the door to be locked or unlocked.

As the windings of the solenoids are designed for intermittent operation they are protected from electrical overload by a thermal cut-out switch identical to that used in the electric gearchange circuit. The thermal switch for the door locking system is mounted on the inside forward surface of the glove box situated immediately in front of the front passenger's knees.

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Continued...

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The following chart anticipates problems which could be experienced with the centralised door locking system.

CENTRALISED DOOR LOCKING FAULT FINDING DIAGNOSIS

SYMPTOM	CAUSE	ACTION
1. System Inoperative	1. Thermal switch has cut out.	1. Depress the red button on the switch. If the switch cuts out again check for a sticking switch or a solenoid drawing too much current.
2. "	2. One control switch is stuck in ON position	2. Locate and remove the switch, free off or renew if necessary.
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4. "	4. Solenoid linkage mechanically jammed.	4. Examine the linkage for signs of jamming which may be caused by the linkage having insuffient clearances to tolerate the movements of the armature.

CATEGORY C

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Printed in England

CATEGORY C

THE ELECTRICAL CENTRALISED DOOR LOCKING SYSTEM.

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series produced from Car Serial Number SRH 8741.

DESCRIPTION.

All cars are now equipped with an electrical centralised door locking system and this Service Bulletin is issued to give a brief description of the components used, the principle of operation and a fault diagnosis chart.

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Continued...

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The following chart anticipates problems which could be experienced with the centralised door locking system.

CENTRALISED DOOR LOCKING FAULT FINDING DIAGNOSIS

SYMPTOM	CAUSE	ACTION
1. System Inoperative	1. Thermal switch has cut out.	1. Depress the red button on the switch. If the switch cuts out again check for a sticking switch or a solenoid drawing too much current.
2. "	2. One control switch is stuck in ON position	2. Locate and remove the switch, free off or renew if necessary.
3. One solenoid not operating.	3. Solenoid armature stuck in position	3. Remove the solenoid and check for surface corrosion of the armature. Also ensure that the armature is not jamming at the extremities of its travel.
4. "	4. Solenoid linkage mechanically jammed.	4. Examine the linkage for signs of jamming which may be caused by the linkage having insuffient clearances to tolerate the movements of the armature.

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SECTION

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Date: 10/12/70

Sheet No. 2

The following chart anticipates problems which could be experienced with the centralised door locking system.

CENTRALISED DOOR LOCKING FAULT FINDING DIAGNOSIS		
SYMPTOM	CAUSE	ACTION
1. System Inoperative	1. Thermal switch has cut out.	1. Depress the red button on the switch. If the switch cuts out again check for a sticking switch or a solenoid drawing too much current.
2. "	2. One control switch is stuck in ON position	2. Locate and remove the switch, free off or renew if necessary.
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4. "	4. Solenoid linkage mechanically jammed.	4. Examine the linkage for signs of jamming which may be caused by the linkage having insuffient clearances to tolerate the movements of the armature.

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Section

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Page No 1

Date 16.2.71

CATEGORY C

IGNITION CONTACT BREAKER POINTS

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars produced after Car Serial Number SRX 8742.

DESCRIPTION

On several recent occasions, Service Personnel have expressed concern about the appearance of the faces of the contact breaker points of cars in service fitted with the 35 D8 type distributor. In a number of cases this concern has led to contact breaker points being unnecessarily renewed or reset.

This has been caused by the fact that the contact breaker points, used in the 35 D8 type distributor, whilst operating in a normal and efficient manner will show a tendency to form a 'pitting' and 'piling' effect at a quicker rate than the contact breaker points fitted to the 20 D8 distributor. However, it should be pointed out that 'pitting' and 'piling' on the contact faces in no way detracts from the efficiency of the contact breaker points providing they are correctly set. Contact breaker points should not be removed or reset due to the presence of the 'pitting' and 'piling'.

As this 'pitting' and 'piling' effect becomes visible early in the life of the contact breaker points, it is impossible to accurately set the contact breaker points by means of a feeler gauge as the gap between the points, whilst being parallel, no longer follows a straight path as shown in Figure 1. It is therefore imperative that any adjustments are made using a proprietary dwell angle meter.

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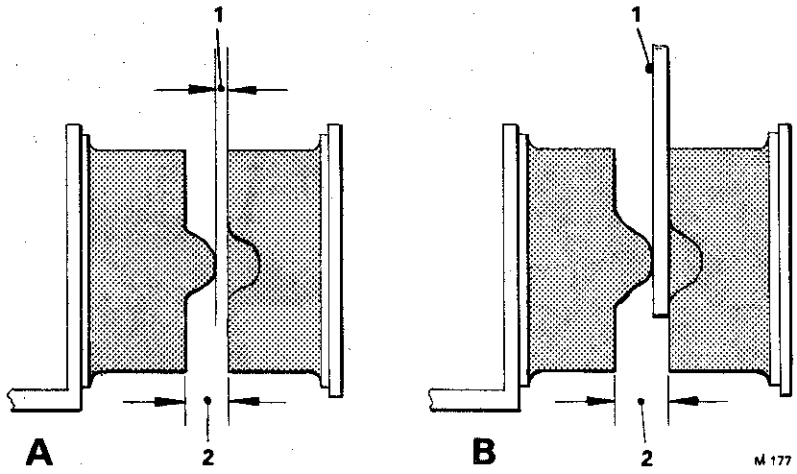

Figure 1 - Contact breaker points

A - Correct setting with dwell meter
1 Apparent gap between points unimportant
2 Actual setting 26° to 28° dwell
B Incorrect setting - with feeler gauge
1 Feeler gauge (0.015 in. (0,39 mm.))
2 Actual setting produced = 0.015 in. (0,39 mm.) + height of 'pile' equivalent to less than 26° dwell

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CATEGORY C

WASH/WIPE SYSTEM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche cars, and all Bentley T Series and Corniche cars produced after Car Serial Numbers:

Standard	SRX 10236-10355, SRH 10390, SRH 10392, SRH 10303, SRH 10304, SRH 10305, SRH 10306, SRH 10307, SRX 10308, SRH 10309, SRH 10400, SRX 10401, SRH 10402, SRH 10403, SRH 10405, SRH 10407, SRX 10423 and onwards.
Coachbuilt	DRH 10376, CRX 10406, DRH 10416 and onwards.
Long Wheelbase	LRH 10410/11/12/13/14

DESCRIPTION

A Lucas Wash/Wipe system is now fitted to all cars. This device consists of a transistorised delay unit which is connected into the existing wiper motor circuit. This delay circuit will operate the wiper motor and the washer motor for as long as the washer switch is depressed. On releasing the switch the washers will cease to function while the wiper motor will continue operating for some six seconds. This allows the windscreen to be washed and dried by a single operation of the wiper/washer switch.

The wash/wipe control is built into a black plastic housing, which is fitted immediately behind the wiper switch. Access to the control unit can be gained by removing the top roll.

A theoretical wiring diagram of the wash/wipe system is shown in Figure 1.

NOTE: It should be noted that the control unit contains a transistor which can be damaged beyond repair by high voltages or incorrect connections.

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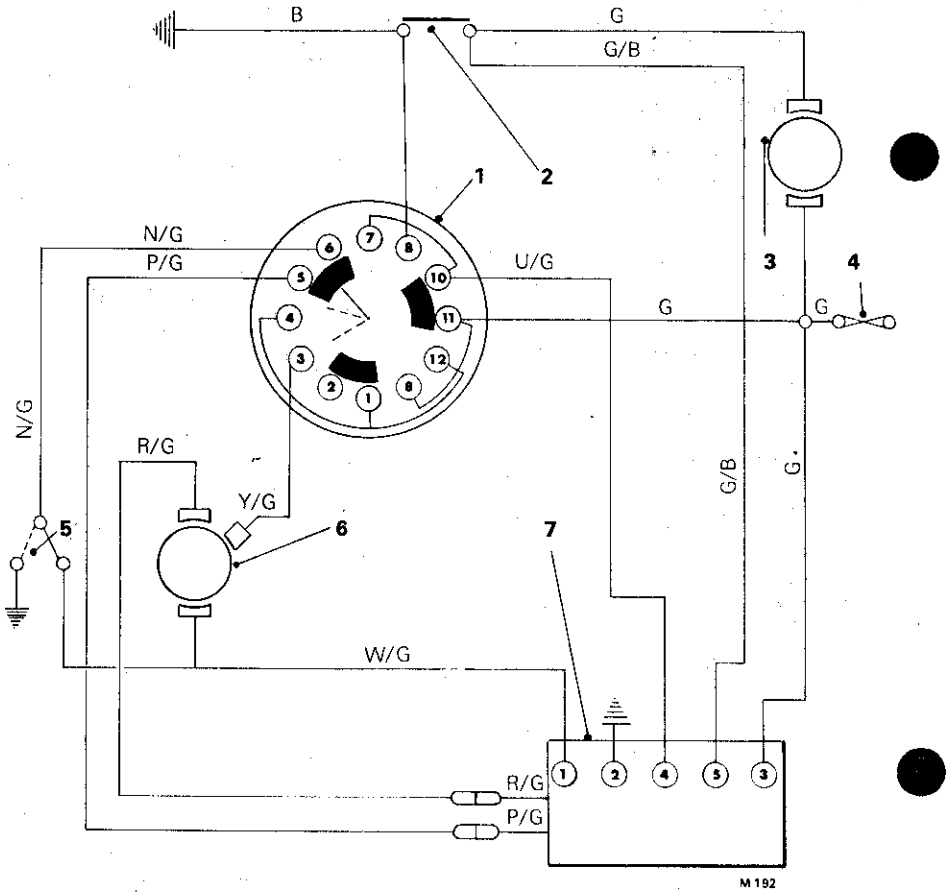

Fig. 1 Theoretical Wiring Diagram of Wash/Wipe system fitted to permanent magnet wiper motor (Lucas 16W) circuit

1 Wiper switch
2 Washer switch
3 Washer motor
4 Fuse 2
5 Park switch
6 Wiper motor
7 Control unit

Arr/JC1/ECk

RADIO RECEIVERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T Series and Rolls-Royce and Bentley Corniche Motor Cars.

DESCRIPTION

With the increasing number of FM radio sets which are being fitted to the above motor cars, a number of complaints have been received concerning poor reception and interference.

This Service Bulletin has been issued to advise that poor reception and interference can be and often is caused by factors other than the radio receiver or the electrical installation of the car. In addition these factors cannot be altered or influenced by any corrective work.

The AM/FM radios and AM/FM stereo radio receivers have advantages and limitations that must be explained to owners who are not familiar with the operations of FM units.

The frequencies at which FM stations operate create much shorter wave lengths than those produced in AM broadcasting. Unlike AM signals, FM signals do not 'bend around' the horizon. This limits the distance at which FM signals can be received and the dependable range of FM reception in a motor car is a radius of approximately twenty miles from the transmitting antenna.

When the FM radio receiver moves out of range of the FM transmitter, it enters what is referred to as the 'fringe area'. In the fringe area, the strength of the FM signal may vary rapidly, causing a 'flutter' or a series of noise bursts as the car moves between high and low level signal points.

A second effect found in the fringe area is the presence of ignition interference from adjacent vehicles. In both instances, it may be possible to improve reception by re-tuning - however, it may be necessary to change to a different station, if reception still is not good.

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Re-tuning should be necessary only in those few instances when reception becomes slightly noisy while driving through areas such as the centre of a large city and a weak signal is being received from a station located away from the centre of the city. The interference can be reduced by adjusting the tone control to give more bass and by adjusting the balance control such that more output is gained from the rear speaker.

While these adjustments will slightly diminish stereo effect on cars so equipped, they will substantially reduce background noise interference.

An FM radio installation therefore has advantages and limitations and these limitations should be considered before deciding what action should be taken in the event of customer complaint.

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Page No 1
Date 27.4.71.

CATEGORY C

WIPER MOTORS

APPLICABLE TO:

All Corniche, Silver Shadow and Bentley T Series cars.

DESCRIPTION:

A number of 16W wiper motors have recently been removed from cars in service following complaints that after switching the wiper motor 'ON' during the initial few wiper arm strokes the wiper blades strike the windscreen surround at the end of each wiping stroke.

This condition is caused by excessive friction within the anti-streak mechanism of the wiper motor. As the anti-streak mechanism is an assembly held together by rivets it is not possible to open the anti-streak device to correct this condition.

However, it is possible to overcome this extra friction by increasing the force applied by the spring to the wave washer of the anti-streak mechanism. This is achieved by fitting a packing piece between the top of the spring and the existing washer as shown in Figure 1.

In the event of a customer complaint of the wiper blades striking the windscreen surround, a packing washer should be fitted to the mechanism as described in this Service Bulletin.

PROCEDURE

1. Remove the plastic cover from the wiper motor.

   NOTE: Do not remove the metal cover, for if the motor is operated with this cover removed severe damage to the parking mechanism and rack will occur.

2. Remove the circlip from the top of the crankpin.

3. Fit the packing washer underneath the existing washer.

4. Fit the circlip to the crankpin.

5. Fit the plastic cover to the wiper motor.

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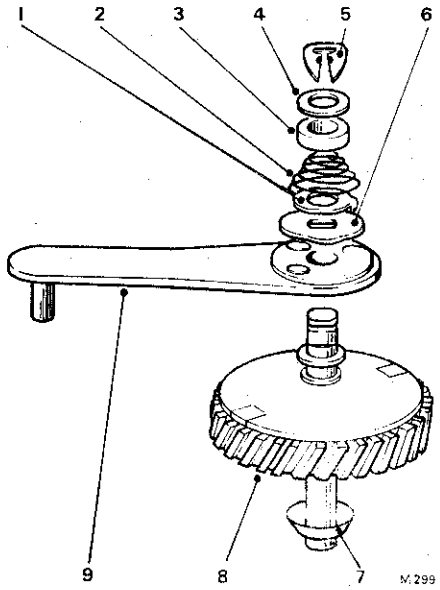

Fig. 1 - Position of spacer

1. Wave washer
2. Spring
3. New spacer (RH.8473)
4. Existing flat washer
5. Circlip
6. Friction plate
7. Dish washer
8. Gear
9. Connecting rod

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TOTAL TIME ALLOWED

0.25 hours

PARTS REQUIRED

DESCRIPTION	PART NUMBER	NUMBER REQUIRED
Packing Washer	RH. 8473	1

Arr/JC1/ECk

CATEGORY C

ALTERNATOR CONNECTIONS

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley T Series cars, and Rolls-Royce and Bentley Corniche cars.

DESCRIPTION

In the event of it being necessary to remove or disturb an alternator on a car in service, it is imperative that when re-making the various electrical connections, that they are connected to the correct alternator terminals and are correctly routed to remove the risk of short circuits occuring.

Particular attention should be paid to the fitting and routing of the alternator earth strap. Should this be incorrectly routed it is possible that a short circuit may occur with the alternator output terminal, which would cause damage to the electrical system.

When re-fitting an alternator, therefore, ensure that all connections are fitted correctly and that the earth strap is routed as shown in Figure 1.

Continued...

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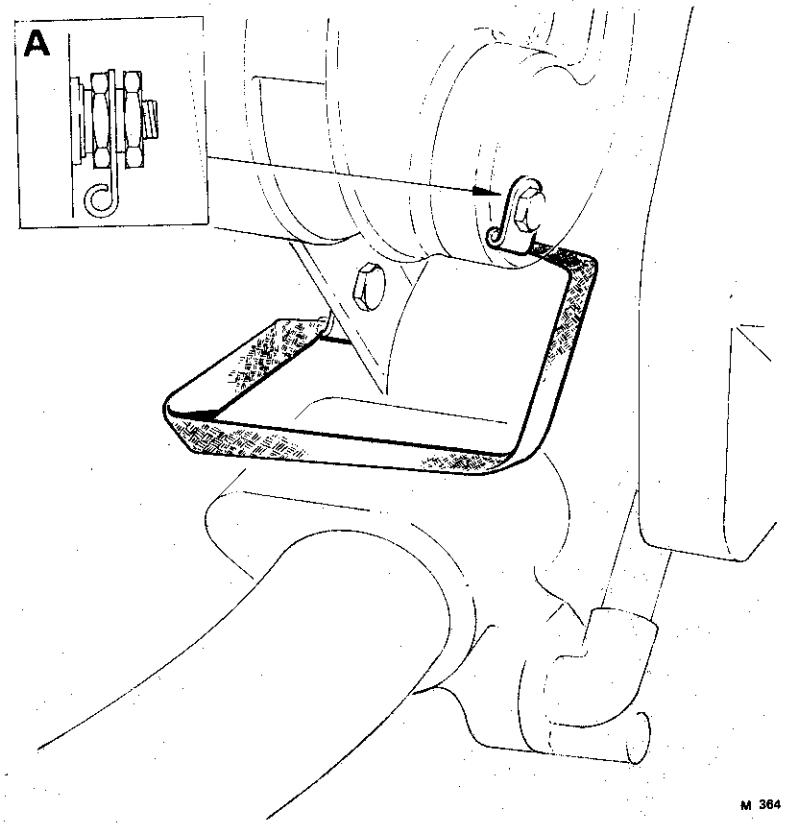

Fig.1 Position of alternator earth strap
Inset A - Terminal connection

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Date 13.7.71

CATEGORY C

THE LUCAS 35 D8 IGNITION DISTRIBUTOR

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T series and Rolls-Royce and Bentley Corniche motor cars:

Four door Saloons	SRH 11188, SRH 11197, SRH 11191, SRH 11198, SRH 11192, SRH 11202, SRX 11196, SRH 11203, SRH 11204, SRH 11219, SRH 11212, SRH 11224, SRH 11213, SRX 11235 and all subsequent cars.
Corniche	CRH 11236, DRH 11240, DRH 11237, CRH 11241, CRX 11238, DRX 11242, DRX 11239, CRX 11253, DRX 11210 and all subsequent cars.
Long Wheelbase Saloons	LRX 11246, LRX 11284, LRH 11285, LRX 11286, LRH 11287, LRH 11288, LRH 11289, LRH 11338 and all subsequent cars.

DESCRIPTION

The specification of the ignition distributor fitted to the motor cars listed under 'APPLICABLE TO' has been changed. The new distributor is equipped with a cap having eight breather slots, a cam lubricating pad and two breather holes in the distributor body.

Other differences are that the point size of the ignition contact breaker points has been increased, and the distributor is now fitted with a balanced rotor arm.

NOTE It is important when adjusting the dwell angle that the final setting is approached from a higher setting of more than 32^{o}, and not from a setting below that specified of 26^{o} - 28^{o}. This is to ensure that any back-lash in the adjusting mechanism is taken up, thereby preventing it from causing variations in the setting as the car is used.

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Circulation All Distributors and Retailers

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Bulletin No SY/M47
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Date 23.9.71

CATEGORY C

IGNITION TIMING

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley T Series, and Rolls-Royce and Bentley Corniche cars after Car Serial Number SRH 8742 except cars in or destined for North America and Canada.

DESCRIPTION

The present long stroke engine is only available with a 9 : 1 compression ratio. In many overseas countries the octane value of the best fuel available is too low for 9 : 1 compression ratio at the standard ignition timing setting of T.D.C. (static) or 5^{o} B.T.D.C. (at 800 r.p.m.).

It has been found that when an engine is run on fuel of a lower octane rating than 100 (R.O.N.) at the standard ignition timing of 5^{o} B.T.D.C. (at 800 r.p.m.) detonation may occur which can result in irrepairable engine damage.

It is most important in the event of a complaint of 'pinking' (the result of detonation) that the timing be checked and reset as necessary in accordance with the following table.

CAR SERIAL NUMBER	FUEL OCTANE RATING (R.O.N.)	IGNITION TIMING SETTING STATIC	IGNITION TIMING SETTING AT 800 r.p.m.
SRH 8742 onwards	99 and above	T.D.C.	5^{o} B.T.D.C.
SRH 8742 onwards	97 - 99	5^{o} A.T.D.C.	T.D.C.
	94 - 96	7^{o} A.T.D.C.	2^{o} A.T.D.C.

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CATEGORY C

THE LUCAS 35 D8 IGNITION DISTRIBUTOR

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T series and Rolls-Royce and Bentley Corniche motor cars:

Four door Saloons	SRH 11188, SRH 11197, SRH 11191, SRH 11198, SRH 11192, SRH 11202, SRX 11196, SRH 11203, SRH 11204, SRH 11219, SRH 11212, SRH 11224, SRH 11213, SRX 11235 and all subsequent cars.
Corniche	CRH 11236, DRH 11240, DRH 11237, CRH 11241, CRX 11238, DRX 11242, DRX 11239, CRX 11253, DRX 11210 and all subsequent cars.
Long Wheelbase Saloons	LRX 11246, LRX 11284, LRH 11285, LRX 11286, LRH 11287, LRH 11288, LRH 11289, LRH 11338 and all subsequent cars.

DESCRIPTION

The specification of the ignition distributor fitted to the motor cars listed under 'APPLICABLE TO' has been changed. The new distributor is equipped with a cap having eight breather slots, a cam lubricating pad and two breather holes in the distributor body.

Other differences are that the point size of the ignition contact breaker point has been increased, and the distributor is now fitted with a balanced rotor arm.

The function of the cam lubricating pad is to ensure that the thin film of lubricant on the cam is maintained, and the existing servicing recommended action of lightly smearing the cam with an approved grease at the 12 000 miles (20 000 km.) 12 months Service Schedule should be followed.

Midland Silicones MS4 or Shell Retinax A grease are approved for this application.

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NOTE It is important when adjusting the dwell angle that the final setting is approached from a higher setting of more than 32^{0}, and not from a setting below that specified of 26^{0} - 28^{0}. This is to ensure that any back-lash in the adjusting mechanism is taken up, thereby preventing it from causing variations in the setting as the car is used.

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NOTE All cars in North America and Canada must have the ignition timing set to 5° B.T.D.C. at 800 r.p.m. with the vacuum retard disconnected. The use of any other settings may alter the composition of the exhaust gases which could result in the vehicle not meeting the Federal Exhaust Emission Requirements.

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Section M
Bulletin No SY/M48
Page No 1 of 3
Date 16.9.71

CATEGORY C

CHANGES TO THE ELECTRICAL SPECIFICATION

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley T Series, and all Rolls-Royce and Bentley Corniche cars produced after the following car serial numbers:

Four door saloon	SRX 11882 and onwards
Long Wheelbase cars	LRH 11867 and onwards
Corniche cars	CRH 11878 and onwards but including CBX 11837

DESCRIPTION

A number of the electrical features on cars produced after the above car serial numbers have been changed. The purpose of this Service Bulletin is to advise of the changes which are likely to affect service personnel.

Thermal Switch Integration

The thermal switches which protect the Gearchange Actuator, the Headlamp Circuit, and the Centralised Door Locking mechanism have been incorporated in a single housing which is plugged into the printed circuit fuse board. The housing has a single red reset button which, when depressed, is capable of resetting two of the switches. The third switch, being in the headlamp circuit, is of the automatic reset type as on previous cars.

Engine Temperature Warning

These cars are now equipped with a device which will indicate when the temperature of the cylinder head metal is approaching a critical level. The warning is activated by a sensing unit which is mounted on the right-hand cylinder head ('A' bank) adjacent to the exhaust manifolding.

When activated the sensing unit causes a relay to 'buzz' and the coolant lamp is illuminated.

The operation of the 'buzzer' can be tested by pressing the warning lamp test button.

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Section M
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Date 16.9.71

Wash/Wipe Device Control Switch

The switching arrangement for the washer motor and wiper motor has been revised.

The rotary switch on the instrument board is now used to control the normal operation of the wiper motor only.

A frutehr switch has been incorporated into the end of the direction indicator switch on the steering column. This switch, when operated by depressing the end button, will activate the wash/wipe sequence, or if the wipers are already in use, will activate the windscreen washer motor.

By activating the wash/wipe sequence, the washer and wiper motors will operate for as long as the switch is depressed. On releasing the switch, the washer motor will stop and the wiper motor will continue for some four strokes before stopping. Thus the windscreen can be washed, cleaned and dried without removing the hands from the steering wheel.

Side Marker Lamps

The circuit which controls the side marker lamps, fitted to the front and rear wings, have been changed such that these lamps are illuminated whenever the lighting switch is turned to the 'Park' position (with the split parking switch, if fitted, in the central position).

Air Conditioning System

Alterations have been made to the air conditioning circuit which results in the following improvements:

1. The upper quantity flap can be activated, by withdrawing the control knob, when the Upper Switch is rotated to the first fridge position.

   This means that air which has been slightly cooled can be passed over the screen, the flow of air depending upon the amount of boost provided by the blower motors.

2. The circuitry of the Lower Switch has been altered such that the lower quantity flap is automatically closed whenever the Upper Switch is rotated to the 'full fridge' position. This ensures that when the full fridge effect is required, all air entering the saloon will have passed through the fridge evaporator and will not by-pass the system by passing through the lower quantity flap.

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Air Conditioning Unit - Diodes

The diodes which are a part of the air conditioning unit circuit and are fitted to the fuse board, have been increased in electrical rating. Whilst the new diodes can be used for all replacement purposes, the older type of diode must not be used to replace a diode of the higher rating.

Radio Speakers

The former practise of connecting one of the radio output leads, and one of the speaker leads, directly to a convenient earth point has been discontinued in favour of using a separate insulated earth return system.

Centralised Door Locking Switch

This assembly has been simplified and now consists of two switches as opposed to the four micro-switches of the earlier type.

Hazard Warning Device

The flasher unit which is mounted on the fuse board is no longer common to both the direction indicators and the hazard warning system. There is now a separate unit which operates the hazard warning system and this is mounted on a spring clip on the instrument board bracket immediately above the handbrake barrel.

Arr/JC1/ECk

M.661 T.S.D. 2859

February 1972

Printed in England

Chapter N

Power Assisted Steering

No. SY/N6
Circulation - All Distributors
and Retailers

CATEGORY A

STEERING MECHANISM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars built prior to the chassis numbers listed below:-

Standard cars:- SRH 5512
Coachbuilt Coupe and Drophead Cars:- CRH 6685
Cars built to the North American Federal
Safety Standards:- SRX 6665

DESCRIPTION

Recent experience has shown that under exceptional overload conditions a situation may arise that can cause the side steering lever securing setscrews to relax their torque tightness.

It is a policy of the Rolls-Royce Company to cater for the exceptional circumstance, and a decision has been made to modify all Silver Shadow and 'T' Series cars in service.

No immediate danger is involved, but retrospective action is essential to prevent the possibility of a dangerous situation developing after a considerable length of time.

The modification consists of a stainless steel lock plate fitted under the heads of the two setscrews as shown in Fig. 1.

The modification is to be carried out on a Category 'A' recall basis and it is the responsibility of the Distributor or Retailer to contact each owner of a 'T' series car in his territory to arrange a suitable programme to modify all those cars.

The new lock plates will be supplied direct to each Distributor or Retailer in sufficient quantities to cover the cars in his territory.

All cars produced after the chassis numbers previously listed will be fitted with lock plates before leaving the factory.

Continued...

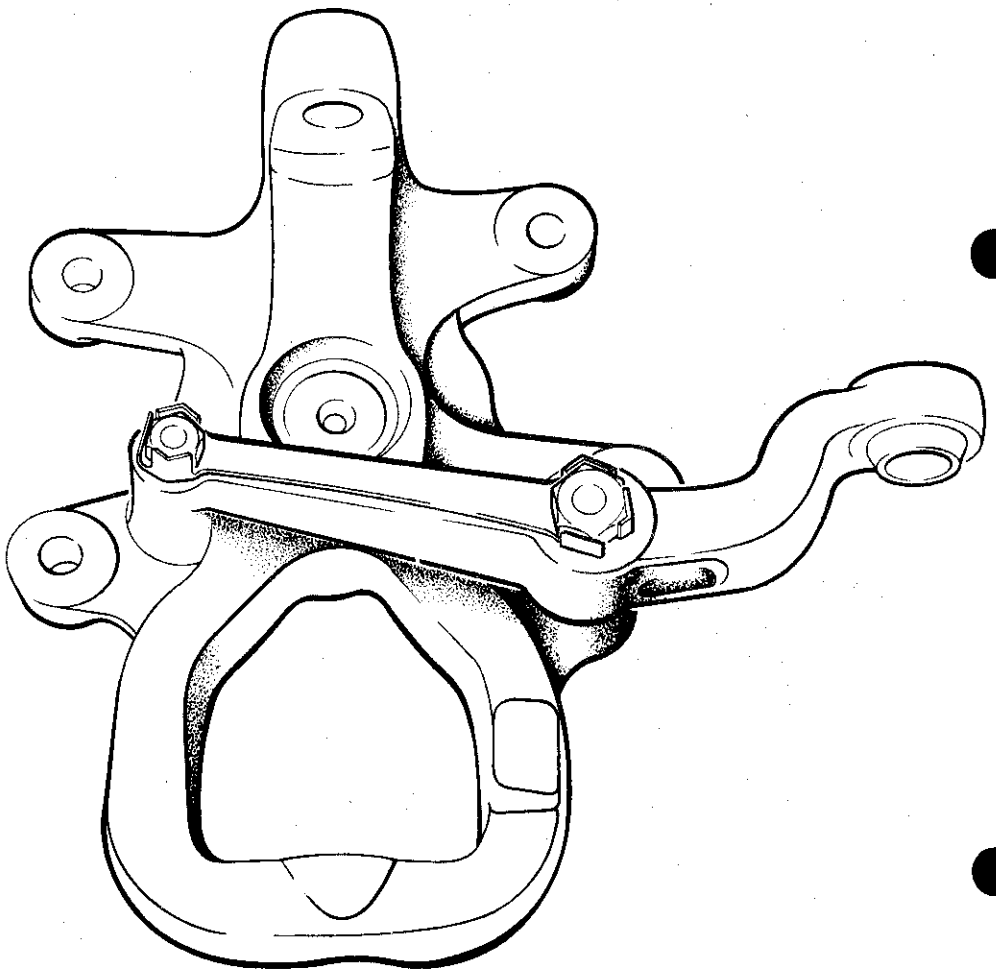


Fig.1 Lockplate in fitted position

REPORTING

The pink card supplied with each set of lock plates should be completed and returned to:

TECHNICAL SERVICES DEPARTMENT,
ROLLS-ROYCE LIMITED,
PYM'S LANE,
CREWE, CHESHIRE.

Any communications concerning the campaign should be addressed to the Service Promotion Manager at the Crewe factory.

PROCEDURE

It is recommended that this operation be carried out on the floor with the front of the car raised and supported by jacks.

This procedure applies to both the L.H. and R.H. side steering lever.

1. Remove the front road wheels.

2. Remove the two ¼ UNF setscrews which secure the brake pipe support bracket to the side steering lever.

3. Remove the side steering lever securing setscrews.

4. Slide the side steering lever forward and away from the stub-axle.

5. Cleaning - Using a wire brush and emery cloth clean the following mounting faces:-

   5.1 The two spot faces on the stub-axle against which the side steering lever is clamped.

   5.2 The mounting faces on both sides of the side steering lever.

   When finished these faces should be free from rust, paint, grease and burrs.

   5.3 Clean the threads and under the heads of the original setscrews making sure that these are clean and dry when finished.

   5.4 Clean the threaded holes into which the setscrews are fitted ensuring that they are free from grease or any other contamination.

Continued...

Printed in England

This can be achieved by first cleaning the threads with a cloth and then by screwing the setscrew in and out a number of times thoroughly cleaning the setscrew threads after each operation.

It is most important to note that this cleaning operation is done by mechanical means as described, and not by washing or spraying with a cleaning fluid since the hub bearing seals are located immediately behind the holes.

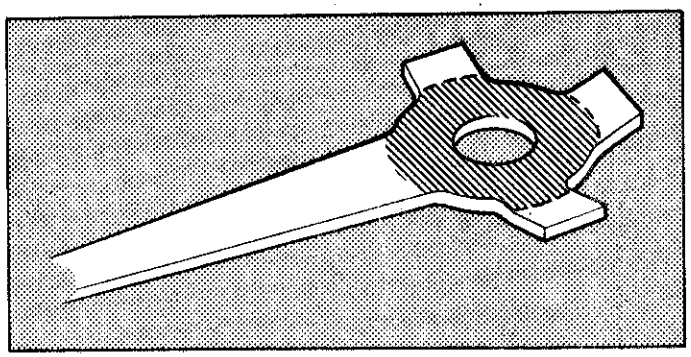


Fig.2 Lock tabs - Pre-bent
(Shaded area to remain flat)

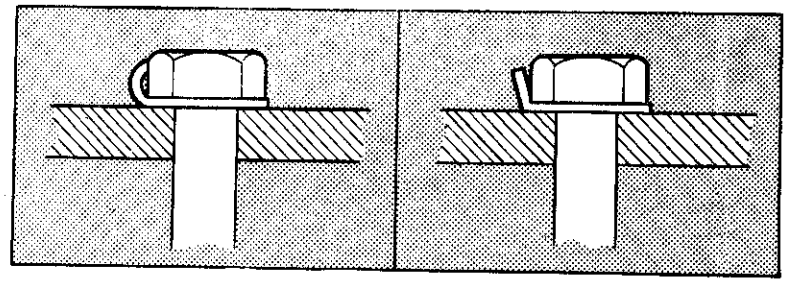
6. Refit the side steering lever using the original setscrews and one of the lock plates provided.

To facilitate the tabbing operation the end of the tabs may be bent upwards slightly before fitting as shown in figure 2. As shown in the diagram, only the ends of the tabs should be bent upwards and it is important to note that the shaded area should remain flat.

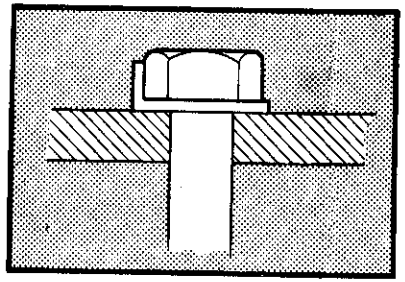
Torque tighten the setscrews to the following figures:-

9/16 in. A/F Setscrew 30-35 lb.ft. (4.15-4.8 kg.m.)
3/4 in. A/F Setscrew 60-65 lb.ft. (8.3-9.0 kg.m.)

Continued...



INCORRECT INCORRECT



CORRECT

Fig.3 Method of locking tab

7. Bend up the three tabs at each end of the lock plate. Bend up the locking strip nearest to a full flat first and then bend up the remaining two tabs as shown in figure 1. It is permissible to form the tabs around the corners of the hexagon, but it should be noted that in these cases the tab should be clear at the corners of the hexagon but in full face contact alongside each of the flats. The tab should in all cases be flush with the head of the setscrew as shown in figure 3.

8. Refit the brake pipe support bracket.

9. Refit the road wheels.

Continued...

MATERIAL REQUIRED

PART NO.	DESCRIPTION	QTY.
UR 16355	Lock Plate	2 per car

TIME ALLOWED

1 hour.

Service Bulletin issued for
Circulation All Distributors and Retailers

Section N
Bulletin No SY/N8
Page No 1
Date 8.9.71

CATEGORY C

THE STEERING MECHANISM

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Corniche cars, and all Bentley T Series and Corniche cars as listed below:

Left-hand drive cars

All Four door saloons from Car Serial Number SRX 11215.
All Long Wheelbase cars from Car Serial Number LRX 11290.
All Corniche cars from Car Serial Number DRX 11277, but including DRH 11210.

Right-hand drive cars

All Four door saloons from Car Serial Number SRH 11501.
All Long Wheelbase cars from Car Serial Number LRH 11551, but including LRH 11535, LRH 11548 and LRH 11549.
All Corniche 2-door saloons from Car Serial Number CRH 11596, but including CRH 11434 and CRH 11573.
All Corniche Convertible cars from Car Serial Number DRH 11597, but including DRH 11570.

DESCRIPTION

The steering boxes fitted to cars produced after the above Car Serial Numbers are of a higher ratio than the previous boxes. This change in ratio means that the steering wheel movement from lock-to-lock is reduced from 3.5 turns to 3.2 turns.

The new steering box can be identified by the shoulder which is formed on the outside of the box housing adjacent to the front end. Earlier boxes did not have this shoulder.

The higher ratio steering box is used in conjunction with a steering pump having an increased output pressure and the new box is also fitted with a new shape pendulum lever. To cope with the increase in pump pressure a new hydraulic hose is used.

It should be noted that the old and new steering pumps, steering boxes and pendulum levers are not interchangeable. However, the new hose can be used for all replacement purposes.

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Chapter P

Torque Tightness Figures

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Chapter P

Torque Tightness Figures

M663 T.SD.2859 February 1972 Printed in England

Chapter Q
Exhaust System

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Chapter Q
Exhaust System

Printed in England

February 1972

M664 TSD2859

Chapter R
Wheels and Tyres

No. SY/R1
(Re-issue)

This Service Bulletin cancels
all previous Bulletins
numbered SY/R1.

Circulation - All Retailers

CATEGORY C

REPLACEMENT TYRES

APPLICABLE TO:

Rolls-Royce Silver Shadow
Bentley T Series

INTRODUCTION

This Service Bulletin has been re-issued to emphasise the importance of fitting and balancing replacement tyres on Silver Shadow and 'T' series cars.

With the sophisticated type of suspension fitted on 'T' series cars, the balance and radial run-out of the wheel/tyre unit is very critical if smooth and vibration-free running is to be obtained. For this reason Service Bulletin SY/R1 was issued which advised the correct fitting procedure utilising the 'high' spot marked on the wheel and the 'low' spot marked on the tyre.

These instructions are still applicable and Retailers and Service Personnel should ensure that the people involved in fitting and balancing wheel/tyre units work to these instructions. This applies not only to Retailers own employees but to the specialised Tyre Fitting Agents who are sometimes employed to fit tyres and in these cases the Retailer should make it his responsibility to inform the Agent of the correct fitting procedure.

DESCRIPTION

Manufacturing tolerances on wheels and tyres, if accumulated, will create sufficient radial 'run out' to cause undesirable vibrations and seriously impair the ride characteristics of the car. Therefore, it is important that a replacement tyre should be fitted to a wheel in such a position to ensure that the tolerances on the wheel and tyre are not accumulated.

With this object in view, arrangements have been made with the manufacturers to mark the lowest point of the tyre bead with a red spot, approximately ⅜ in. diameter, on the side wall **and the highest point of the** wheel shoulder with the letter 'H' inscribed in a **5/16 in. diameter circle** stamped on the wheel inner rim as shown in Figure 1.

Continued...

PROCEDURE

When fitting a tyre to a wheel, the red spot on the tyre should be aligned with the encircled H on the inner wheel rim (see Fig.1). In addition to the red spot, some tyres may be marked with either a green, yellow or white spot but these other markings should be ignored as they are used by the manufacturer for inspection purposes.

Some of the early wheels and tyres will not be marked with the high and low spots and in these cases a 'trial and error' method of fitting should be adopted as follows.

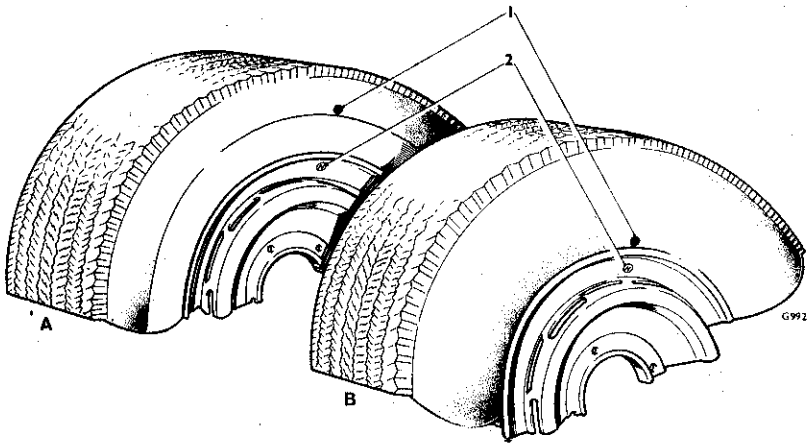

Fig.1 Wheel and tyre markings

A WHITEWALL TYRE
B BLACKWALL TYRE
1 RED SPOT MARKING
2 'H' MARKING

Continued...

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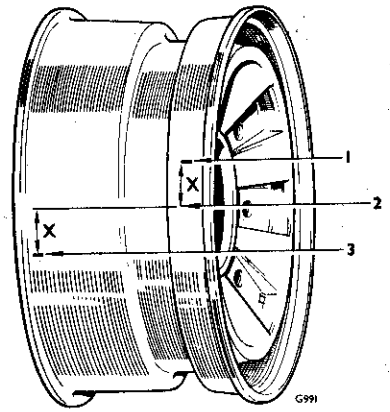

Fig.2 Method of determining the high spot on the wheel shoulder

1 HIGH SPOT
2 ACTUAL HIGH SPOT
3 HIGH SPOT

To determine the high spot on a wheel shoulder, rotate the wheel on a balancing machine and mark the high spot with a piece of chalk; each side of the wheel should be marked (see Fig. 2) as the high spot on one side of the wheel may vary slightly from the high spot on the other side of the wheel. In this case, the mean distance between the two spots should be taken as the actual high spot (see Fig.2).

To determine the low spot on a tyre, mount the tyre on a rim which is known to be true and rotate it on a balancing machine.

After fitting a tyre to a wheel, the wheel should be balanced in the normal manner.

BALANCING WHEELS AND TYRES

Before removing the wheels from a car for balancing purposes, the flats which form on the tyres due to standing should be removed by driving the car for some ten miles. After this the car should be jacked up immediately, the wheels removed and balanced in the normal manner.

If an 'on the car' wheel balancing machine is available, this should be used to finesse the balance of the front wheels after they are again fitted to the car. These machines enable the small amounts of run-out which exist in the tyre, wheel, hub and brake disc to be virtually balanced out.

Note Spigotted road wheels are fitted to cars produced after and including the following Car Serial Numbers:

SRH 8387 SRX 9075 DRH 8421 LRX 9113

(Also to the front hubs only on SRX 9068 and DRX 9102.

The spigotted wheels are located to the hub by a machined centre bore in the wheel and a machined spigot on the hubs, and it is important that when balancing these wheels on a conventional balancing machine, the wheel is located on the machine by the centre bore.

The correct procedure for this is detailed in Service Bulletin SY/R22.

CATEGORY C

DUNLOP SP 41 TYRES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars

DESCRIPTION

An additional tyre, the Dunlop SP 41 with radial ply construction, has been added to the list of currently approved tyres for replacement purposes in service. This tyre has a number of advantages and disadvantages when compared with the conventional cross-ply tyre, the main ones being as follows:

The radial tyre provides a somewhat harsher ride at slow speeds which may induce rattles over uneven surfaces. Cornering squeal is more apparent and tyre road noise is modified from that experienced with cross-ply tyres in that the higher frequencies are less prominent and the lower frequencies more prominent.

The advantages offered by the radial ply tyre are an increase in tyre life over that offered by cross-ply tyres and an improvement in straight-line stability and handling characteristics. Steering response and self-centring are also improved.

The details of the tyre are:-

Make	Type	Casing Material	Size	Sidewall Colour
Dunlop	SP41 Radial TL	Rayon	205 x 15	Black only

These tyres should always be fitted in sets of four and with inner tubes.

Continued...

Should an Owner request a set of Dunlop SP41 tyres to be fitted to his car, he should be made aware of the disadvantages as well as the advantages, which these tyres offer.

Tyre pressures

The tyre pressures should be as follows:

Front and rear	26 lbs/sq.in. (1.83 Kg/sq.cm.)	Set COLD for normal motoring
Front and rear	28 lbs/sq.in. (1.97 Kg/sq.cm.)	Set COLD for fast motoring

CATEGORY C

TUBELESS TYRES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

There has recently been a certain amount of discussion in the Press concerning the advisability of fitting inner tubes to tubeless tyres and this Service Bulletin has been issued to state the safety precautions to be observed when fitting tubes to tubeless tyres on any of the above cars.

SAFETY PRECAUTIONS

1. Tubes should not be employed if there is any damage exceeding 1/16 in. (1,58 mm.) in length to the internal casing of the tyre in the area of the tyre tread.

2. The internal surface of the tyre casing and the surfaces of the road wheel must be free from grit and foreign matter.

3. Should a request be made to fit tubes to a tubeless tyre, it must be pointed out that in the event of a puncture the deflation will be far more rapid than with a tubeless tyre without a tube.

It should be noted that before fitting radial ply tubeless tyres Service Bulletin SY/R17 should be consulted.

Printed in England

No. SY/R23
Circulation - All Distributors
and Retailers

CATEGORY C

COACHBUILT CAR TYRES

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series coachbuilt cars:-

Car Serial Numbers:

CBX 9201	CRX 9234
CRH 9235	CBX 9240 and onwards

DESCRIPTION

All coachbuilt cars produced with the above Car Serial Numbers and onwards, will be fitted with an anti-roll bar to the rear suspension, an increased diameter anti-roll bar to the front suspension and equipped with radial-ply tyres.

It is advisable that only radial-ply tyres be used for replacement purposes on these cars.

The correct tyre pressures for the above mentioned cars remain unchanged and appear in the following Service Bulletins:-

SY/R24 - All countries except U.S.A., Canada and the Federal Republic of Germany

SY/R25 - U.S.A. and Canada

SY/R26 - Federal Republic of Germany

No. SY/R24
Circulation - All Territories except
U.S.A, Canada and the
Federal Republic of Germany.

CATEGORY C

CURRENTLY APPROVED TYRES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The following tyres are approved for use on the above cars:

Make	Type	Casing and Construction	Size	Sidewall Colour
Dunlop	Roadspeed RS 5C	Nylon-Cross Ply	8.15 x 15	Black or White
Firestone	Orb Deluxe	Nylon-Cross Ply	8.15 x 15	Black or White
Avon	Turbospeed R/R B	Nylon-Cross Ply	8.15 x 15	Black or White
Dunlop	Weathermaster	Nylon-Cross Ply	8.15 x 15	Black
Dunlop	SP41 TL	Rayon-Radial Ply	205 x 15	Black or White
Firestone	F100	Rayon-Radial Ply	205 x 15	Black
Avon	Radial T	Rayon-Radial Ply	205 x 15	Black
Dunlop	Weathermaster SP44	Rayon-Radial Ply	205 x 15	Black
Dunlop	SP68	Rayon-Radial Ply	205 x 15	Black or White

IMPORTANT

1. Radial ply tyres must be fitted in sets of four.

Continued...

2. When fitting radial ply tyres to the earlier type of road wheel, inner tubes should be used. With flat ledge rim wheels, inner tubes are not necessary. Both Wheels are described in Service Bulletin SY/R17.

3. Winter tyres, such as the Dunlop Weathermaster cross ply and radial ply tyres, are not intended for continual high speed motoring and it is recommended that the following maximum speeds are observed.

	Tyre pressure	Maximum speed
Dunlop Weathermaster-cross ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	75 m.p.h. (120 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
Dunlop Weathermaster-radial ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	95 m.p.h. (152 k.p.h.)

Dunlop Weathermaster tyres of either type should be fitted to the rear wheels only, or on all four wheels. Cars fitted with radial ply tyres at the front SHOULD NOT BE FITTED WITH WEATHERMASTER CROSS PLY TYRES to the rear. These tyres are also drilled to accept tyre studs. If studs are required, Secomet P2-140 are recommended. These have a protrusion from the tyre of 1,5 mm. - 2,0 mm. These studs are not available from Rolls-Royce Limited, and the local tyre dealer should therefore be consulted.

If a set of four Weathermaster tyres are fitted, it may be necessary to remove a small portion of the front underwing shield as described in Service Bulletin SY/R5.

When fitting new tyres to a car, new tyre valves should also be fitted, and the wheels balanced as described in Service Bulletin SY/R1 and SY/R22. It is also important to subject new tyres to a short running-in period. It is recommended therefore that hard cornering or sustained speeds of over 90 m.p.h. (145 k.p.h.) should not be undertaken for at least the first 500 miles (800 km.). This recommendation does not apply to Dunlop Weathermaster tyres where the maximum speeds recommended above should be noted.

Continued...

Printed in England

It is also important when fitting replacement tyres, that only a tyre fitting lubricant recommended or marketed by one of the Rolls-Royce approved tyre manufacturers be used. Under no circumstances should the tyre be lubricated with soft or liquid soap, since these liquids contain quantities of caustic potash which has the effect of causing the paint to strip and subsequently, corrosion to take place.

The correct tyre pressures for all the recommended tyres listed on page 1, remain unchanged and are as follows:

Cars other than Long Wheelbase

26 lb/sq.in. (1,83 kg/sq.cm.) Front and Rear
For continuous high speed motorway driving the tyre pressures should be increased by 2 lb/sq.in. (0,14 kg/sq.cm.), i.e. 28 lb/sq.in. (1,97 kg./sq.cm.).

Long Wheelbase Cars

1 - 3 occupants	28 lb/sq.in. (1,97 kg/sq.cm.)	Front
	30 lb/sq.in. (2,11 kg/sq.cm.)	Rear
4 - 5 occupants	28 lb/sq.in. (1,97 kg/sq.cm.)	Front
	32 lb/sq.in. (2,25 kg/sq.cm.)	Rear
5 occupants and luggage	28 lb/sq.in. (1,97 kg/sq.cm.)	Front
	34 lb/sq.in. (2,39 kg/sq.cm.)	Rear

All pressures set when cold.

CATEGORY C

CURRENTLY APPROVED TYRES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The following tyres are approved for use on the above cars:

Make	Type	Casing and Construction	Size	Sidewall Colour
Dunlop	Roadspeed RS 5C	Nylon-Cross Ply	8.15 x 15	Black or White
Firestone	Orb Deluxe	Nylon-Cross Ply	8.15 x 15	Black or White
Avon	Turbospeed R/R B	Nylon-Cross Ply.	8.15 x 15	Black or White
Dunlop	Weathermaster	Nylon-Cross Ply	8.15 x 15	Black
Dunlop	SP41 TL	Rayon-Radial Ply	205 x 15	Black or White
Firestone	F100	Rayon-Radial Ply	205 x 15	Black
Avon	Radial T	Rayon-Radial Ply	205 x 15	Black
Dunlop	Weathermaster SP44	Rayon-Radial Ply	205 x 15	Black
Dunlop	SP68	Rayon-Radial Ply	205 x 15	Black or White

IMPORTANT

1. Radial ply tyres must be fitted in sets of four.

Continued...

2. When fitting radial ply tyres to the earlier type of road wheel, inner tubes should be used. With flat ledge rim wheels, inner tubes are not necessary. Both wheels are described in Service Bulletin SY/R17.

3. Winter tyres, such as the Dunlop Weathermaster cross ply and radial ply tyres, are not intended for continual high speed motoring and it is recommended that the following maximum speeds are observed.

	Tyre pressure	Maximum speed
Dunlop Weathermaster-cross ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	75 m.p.h. (120 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
Dunlop Weathermaster-radial ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	95 m.p.h. (152 k.p.h.)

Dunlop Weathermaster tyres of either type should be fitted to the rear wheels only, or on all four wheels. Cars fitted with radial ply tyres at the front SHOULD NOT BE FITTED WITH WEATHERMASTER CROSS PLY TYRES to the rear. These tyres are also drilled to accept tyre studs. If studs are required, Secomet P2-140 are recommended. These have a protrusion from the tyre of 1,5 mm.-2.0 mm. These studs are not available from Rolls-Royce Limited and the local tyre dealer should therefore be consulted.

If a set of four Weathermaster tyres are fitted, it may be necessary to remove a small portion of the front underwing shield as described in Service Bulletin SY/R5.

When fitting new tyres to a car, new tyre valves should also be fitted, and the wheels balanced as described in Service Bulletin SY/R1 and SY/R22. It is also important to subject new tyres to a short running-in period. It is recommended therefore that hard cornering or sustained speeds of over 90 m.p.h. (145 k.p.h.) should not be undertaken for at least the first 500 miles (800 km.). This recommendation does not apply to Dunlop Weathermaster tyres where the maximum speeds recommended above should be noted.

Continued...

It is also important when fitting replacement tyres, that only a tyre fitting lubricant recommended or marketed by one of the Rolls-Royce approved tyre manufacturers be used. Under no circumstances should the tyre be lubricated with soft or liquid soap, since these liquids contain quantities of caustic potash, which has the effect of causing the paint to strip and subsequently, corrosion to take place.

The correct tyre pressures for all the recommended tyres listed on page 1, remain unchanged and are as follows:

Four-door Standard Sedan

1 - 5 occupants	28 lb/sq.in. (1,97 kg/sq.cm.) Front and Rear
5 occupants and luggage	28 lb/sq.in. (1,97 kg/sq.cm.) Front 32 lb/sq.in. (2,25 kg/sq.cm.) Rear
	All pressures set when cold for normal and fast motoring.

Two-door Coupé and Convertible

1 - 4 occupants	28 lb/sq.in. (1,97 kg/sq.cm.) Front and Rear
4 occupants and luggage	28 lb/sq.in. (1,97 kg/sq.cm.) Front 32 lb/sq.in. (2,25 kg/sq.cm.) Rear
	All pressures set when cold for normal and fast motoring.

Long Wheelbase Formal Sedan

1 - 3 occupants	28 lb/sq.in. (1,97 kg/sq.cm.) Front 30 lb/sq.in. (2,11 kg/sq.cm.) Rear
4 - 5 occupants	28 lb/sq.in. (1,97 kg/sq.cm.) Front 32 lb/sq.in. (2,25 kg/sq.cm.) Rear
5 occupants and luggage	28 lb/sq.in. (1,97 kg/sq.cm.) Front 34 lb/sq.in. (2,39 kg/sq.cm.) Rear
	All pressures set when cold for normal and fast motoring.
Important	Only tyres with a maximum permissible inflation pressure of 36 lb/sq.in. (2,53 kg/sq.cm.) must be used.

CATEGORY C

CURRENTLY APPROVED TYRES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The following tyres are approved for use on the above cars:

Make	Type	Casing and Construction	Size	Sidewall Colour
Dunlop	Roadspeed RS5C	Nylon-Cross Ply	8.15 x 15	Black or White
Firestone	Orb Deluxe	Nylon-Cross Ply	8.15 x 15	Black or White
Avon	Turbospeed R/R B	Nylon-Cross Ply	8.15 x 15	Black or White
Dunlop	Weathermaster	Nylon-Cross Ply	8.15 x 15	Black
Dunlop	SP41 TL	Rayon-Radial Ply	205 x 15	Black or White
Firestone	F100	Rayon-Radial Ply	205 x 15	Black
Avon	Radial T	Rayon-Radial Ply	205 x 15	Black
Dunlop	Weathermaster SP44	Rayon-Radial Ply	205 x 15	Black
Dunlop	SP68	Rayon-Radial Ply	205 x 15	Black or White

IMPORTANT

1. Radial ply tyres must be fitted in sets of four.

Continued...

Printed in England

2. When fitting radial ply tyres to the earlier type of road wheel, inner tubes should be used. With flat ledge rim wheels, inner tubes are not necessary. Both wheels are described in Service Bulletin SY/R17.

3. Winter tyres, such as the Dunlop Weathermaster cross ply and radial ply tyres, are not intended for continual high speed motoring and it is recommended that the following maximum speeds are observed.

	Tyre pressure	Maximum speed
Dunlop Weathermaster-cross ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	75 m.p.h. (120 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
Dunlop Weathermaster-radial ply	28 lb/sq.in. (1,97 kg/sq.cm.) front and rear	85 m.p.h. (136 k.p.h.)
	32 lb/sq.in. (2,25 kg/sq.cm.) front and rear	95 m.p.h. (152 k.p.h.)

Dunlop Weathermaster tyres of either type should be fitted to the rear wheels only, or on all four wheels. Cars fitted with radial ply tyres to the front SHOULD NOT BE FITTED WITH WEATHERMASTER CROSS PLY TYRES to the rear. These tyres are also drilled to accept tyre studs. If studs are required, Secomet P2-140 are recommended. These have a protrusion from the tyre of 1,5 mm. - 2,0 mm. These studs are not available from Rolls-Royce Limited, and the local tyre dealer should therefore be consulted.

If a set of four Weathermaster tyres are fitted, it may be necessary to remove a small portion of the front underwing shield as described in Service Bulletin SY/R5.

When fitting new tyres to a car, new tyre valves should also be fitted, and the wheels balanced as described in Service Bulletin SY/R1 and SY/R22. It is also important to subject new tyres to a short running-in period. It is recommended therefore that hard cornering or sustained speeds of over 90 m.p.h. (145 k.p.h.) should not be undertaken for at least the first 500 miles (800 km.). This recommendation does not apply to Dunlop Weathermaster tyres where the maximum speeds recommended above should be noted.

Continued...

It is also important when fitting replacement tyres, that only a tyre fitting lubricant recommended or marketed by one of the Rolls-Royce approved tyre manufacturers be used. Under no circumstances should the tyre be lubricated with soft or liquid soap, since these liquids contain quantities of caustic potash which has the effect of causing the paint to strip and subsequently corrosion to take place.

The correct tyre pressures for all recommended tyres listed on page 1, remain unchanged and are as follows:

Cars other than Long Wheelbase

28 lb/sq.in. (1,97 kg/sq.cm.) Front and Rear

Set when cold for normal and fast motoring.

Long Wheelbase Cars

28 lb/sq.in. (1,97 kg/sq.cm.) Front
34 lb/sq.in. (2,39 kg/sq.cm.) Rear

Both pressures set when cold for normal and fast motoring.

Circulation All Distributors and Retailers

Section R
Bulletin No SY/R27
Page No 1
Date 25.1.71.

CATEGORY C

SPIGOTTED ROAD WHEELS

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley T Series cars produced after and including the following Car Serial Numbers.

SRH 8387 SRX 9075 DRX 8421 LRX 9113

DESCRIPTION

As described in Service Bulletin SY/R21, current production cars are fitted with road wheels that are located on to the hubs by spigots. As these wheels are a close fit on the hub spigot it is possible that when fitting a wheel onto the spigot the paint will be removed from the machined bore of the wheel. If the paint is removed, surface corrosion will occur and this corrosion may increase the tightness of the wheel onto the hub, thereby impeding subsequent removal.

To prevent this, the spigotted portion of the hub is lightly smeared with grease before the wheel is fitted and it is recommended that this practice is followed in service to ensure that the wheels can always be removed easily.

BP/ECk

Printed in England
February 1972
T.S.D. 2859
M.665

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Chapter S
Body

FOR INFORMATION

INSTRUCTIONS FOR FITTING 'BRITAX' INERTIA REEL SAFETY BELTS

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard Saloons
Rolls-Royce Silver Shadow Long Wheelba e Saloons (without division)
Bentley T Series Standard Saloons
Bentley T Series Long Wheelbase Saloons (without division)

DESCRIPTION

'BRITAX' inertia reel safety belts are designed to conform to British Standards Specification 3254 1960. They are in ended solely for fixing to cars with METAL floors and must not be attached to a wooden floor r to car seats.

The instructions given in thi s Bulletin are intended for the fitting of seat belts to the front seats only f the above mentioned cars.

The belts are supplied together with all necessa y brackets etc., in kit form under the following part numbers.

Part No. RH 2399 - Bentley T
Part No. RH 2400 - R lls-Royce Silver Shadow

The belts can be supplied in the fo owing colours - Grey, Red, Green, Fawn or Black.

A list of the part supplied in the abo mentioned kits is contained in Spares Information Sheet No. 4 N.45.

PROCEDURE

Remove the front seats as descr bed in Section S4 of the Workshop Manual.

Remove the floo carpeting and underfelt.

Working to the dimension given in Figure 1, mark out the section f sill to be removed, also the ho es to be drilled. Note that these dimensions are taken from the cent e of the existing safety belt moun ing point (see 2, Fig.1).

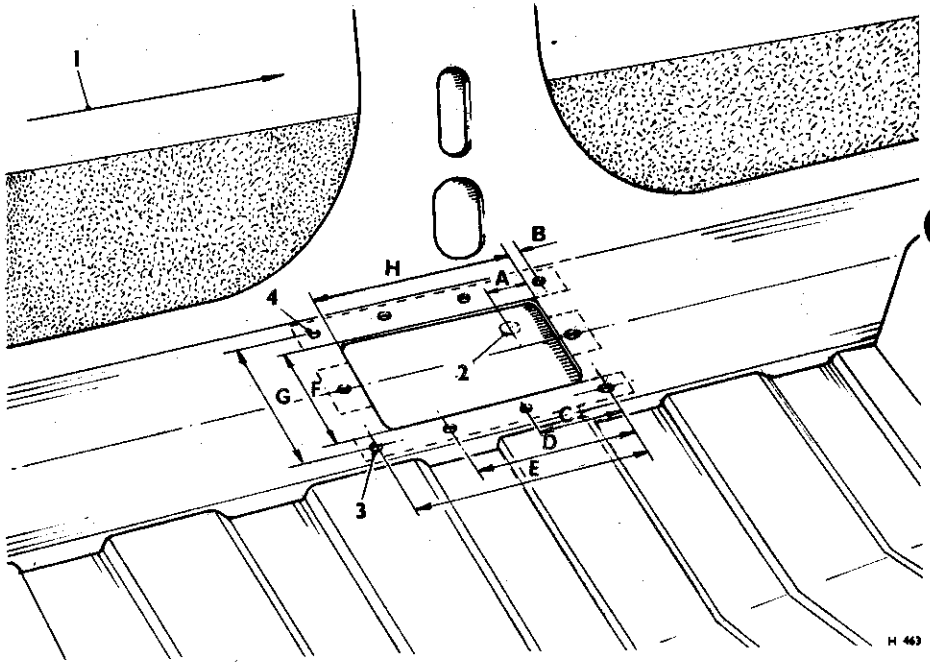

Fig.1 Inner sill L.H. - Drilling dimensions
(R.H. symmetrically opposite)

1 To front of car
2 Original seat belt mounting point
3 Ten holes 0.4062 in. dia. (10,32 mm.)
4 Hole for countersunk headed screw

A 1.250 in. (3,175 cm.)
B 0.312 in. (7,90 mm.)
C 2.312 in. (5,870 cm.)
D 4.625 in. (11,747 cm.)
E 6.250 in. (15,875 cm.)
F 2.875 in. (7,350 cm.)
G 3.500 in. (8,890 cm.)
H 5.625 in. (14,290 cm.)

Continued...

Drill a series of small holes just inside the scribed lines of the marked out section then join these holes using a small file or saw until the section is free; discard the section.

Carefully file the section to its final shape. Using a 0.4062 in. (10,32 mm.) diameter drill, drill the ten holes surrounding the section cut into the sill.

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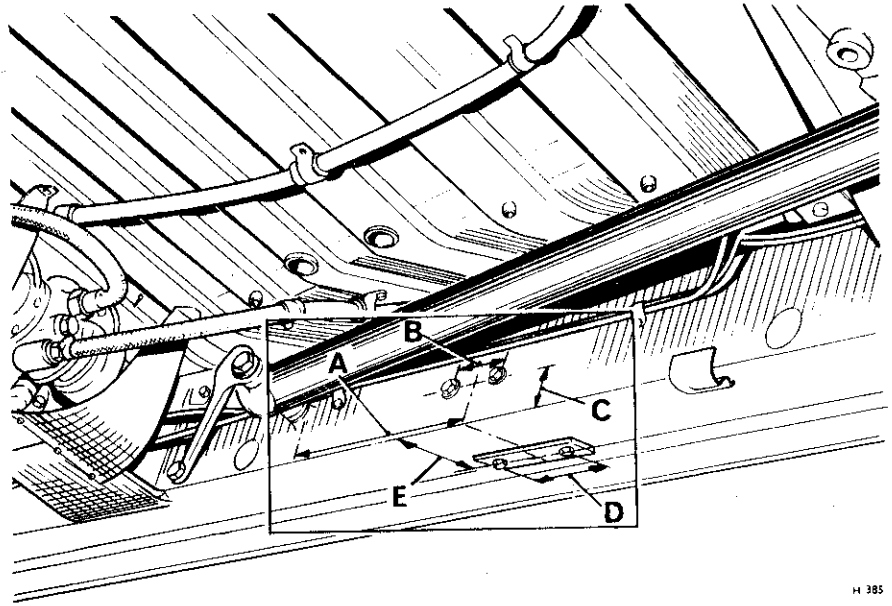

Fig.2 Bottom sill drilling dimensions

A 7.1875 in. (18,256 cm.)
B 1.875 in. (3,762 cm.)
C 1.720 in. (3,865 cm.)
D 1.975 in. (5,016 cm.)
E 3.344 in. (8,494 cm.)

Continued...

Remove any swarf and filings from inside the sill, then to prevent rusting, coat any bare metal with zinc rich primer.

Fit the backing plates Part Nos. UB.14677 and UR.15025 to the underside of the floor, then align the spot welded nuts on the backing plates with the ten holes in the floor. A 'pop' rivet fitted at either end of each backing plate will hold then to the floor to facilitate assembly.

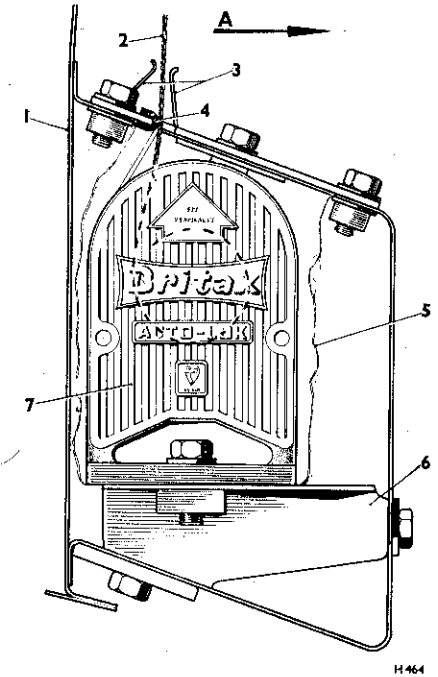

Fig.3 Section through sill (inertia reel installed)

A To centre-line of car
1 Door pillar side
2 Seat belt
3 Belt guide brackets
4 Flange finisher
5 Plastic bag
6 Support beam
7 Inertia reel unit

Continued...

To facilitate drilling, lower the torque tubes, then drill four holes in the underside of each sill (see Fig.2). Note that the centres of the holes have been taken from the centre of the front torque tube mounting.

Fit the seat belt into the plastic bag Part No. UB.14995 with the sealed end of the bag at the bottom (see Fig.3).

Fit the support beam Part No. UB.13793 and secure it to the belt unit with setscrews UA.154/Z and washers UA.1252/Z passing the bolts through the plastic bag.

Note The belt unit must be fitted so that the belt 'runs-off' on the side of the roller nearest to the outside of the car (see Fig.3).

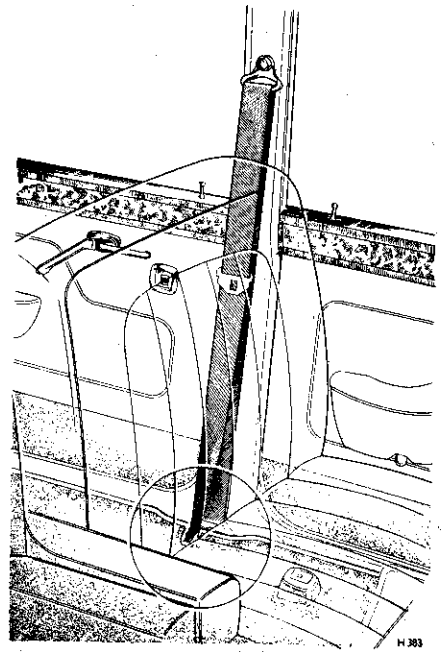

Fig.4 Seat belts installed

Continued...

The open end of the plastic bag should be pulled out of the sill and spread around the aperture so that when the cover plates Part No. UB.14607 and UB.14608 are fitted (left-hand and right-hand respectively) they will clamp the bag to the floor and seal off the sill to the car interior (see Fig.3).

Thread the safety belt into the cover plate ensuring that when the plate is fitted to the car and the belt has no twist, the belt 'runs-off' on the side of the roller nearest to the outside of the car.

Fit the flange finisher Part No. UB.14665 to the door pillar side of the top plate (see Fig.3).

Using two Philips screws UA.7371/Z, fit and secure the safety belt guides Part No. UB.14609 to the top plate.

Using nine setscrews UA.103/Z and washers UA.1251/Z fit and secure the cover plate to the sill. Fit a countersunk headed screw to the hole marked '4' in Figure 1.

Trim the edges of the plastic bag so that the bag is not visible around the cover plate.

Ensure that the belt is free from twists then fit the seat belt anchorage bracket to the top cover plate; position the belt run as shown in Figure 4.

There are three distance pieces supplied in the kit, two of equal thickness and one thicker.

The thicker distance piece should be fitted to the door pillar mounting.

Remove the chrome headed setscrew from the door pillar then fit the remaining belt support bracket. The assembly of the washers etc. is clearly illustrated in the Workshop Manual TSD 2205 - Chapter S - Figure 535.

Remove the chrome headed setscrew from the transmission tunnel, then using the setscrew, fit the short seat belt to the tunnel.

Refit the carpets. It will be necessary to cut slots in the carpet and to cut the carpets away from the centre door pillar in order to allow free movement of the belt (see Fig.4).

Continued...

To prevent fraying after cutting the carpets, the edges should be bound with leather.

Fit the seats following the instructions given in the Workshop Manual TSD 2205 - Section S4.

After fitting, the belts should be tested as follows.

INERTIA REEL BELTS - TO CHECK OPERATION

Select an open stretch of road then when the road is free from any potential danger accelerate the car to 15 m.p.h. Check the operation of the belts by braking sharply from this speed.

Note The belts should be sensitive to fierce car braking and hard cornering. Note that the belts should not lock by pulling or jerking the straps by hand pressure.

Printed in England

FOR INFORMATION

FRONT VENTILATOR REAR VIEW MIRROR

APPLICABLE TO:

Rolls-Royce Silver Shadow
Bentley T Series

DESCRIPTION

We have received requests for details of fitting a front ventilator rear view mirror to cars in service and the purpose of this Bulletin is to provide Retailers with sufficient information to carry out the necessary work.

PROCEDURE

1. Disconnect the battery which is situated in the left-hand side of the luggage compartment.

2. Dismantle the driver's door in accordance with Chapter S, Section S2 of the Workshop Manual (T.S.D. 2205) until the black dust cloth is removed.

3. Note the position of the lock-nut on the sill control rod. Slacken the nut, then unscrew and withdraw the control rod.

4. Remove the setscrews securing the waist rail finisher and carefully withdraw the finisher assembly.

5. Remove the existing striker plate and gently ease out the rubber vent seal in the vicinity of the lower rear corner.

6. Unscrew the small nut, remove the washer and bolt which passes through the base of the channel. Collect the frame to waist connector.

7. Drill out and remove the rear hank bush (see Fig.1).

Continued...

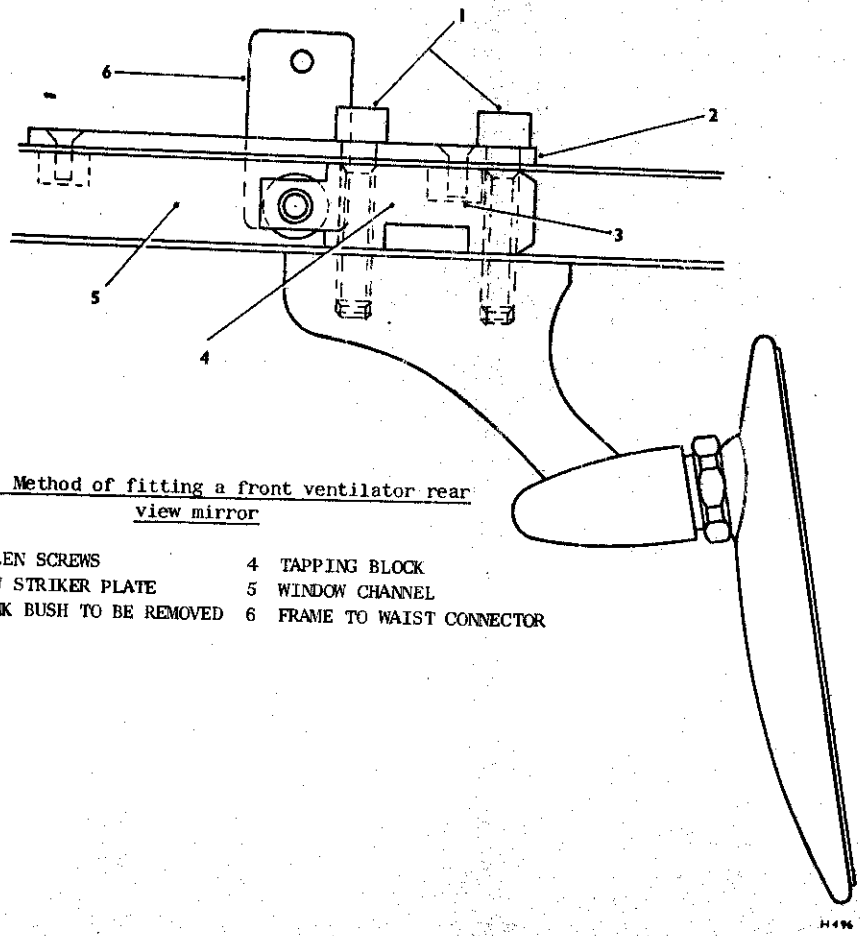

Fig.1 Method of fitting a front ventilator rear view mirror

1 ALLEN SCREWS
2 NEW STRIKER PLATE
3 HANK BUSH TO BE REMOVED
4 TAPPING BLOCK
5 WINDOW CHANNEL
6 FRAME TO WAIST CONNECTOR

Continued...

8. Position the tapping block in the channel and refit the frame to waist connector; the two assemblies are located by a new setscrew which passes through the connector and channel frame and screws into the front (underside) of the tapping block (see Fig.1).

9. Fit the new striker plate securing it with the two countersunk screws. The front screw fits into the original hank bush, while the rear one passes through the hole in the vent frame and screws into the tapping block.

10. Using the striker plate as a guide, drill through the inner section of the window frame into the hole through the tapping block; this will then provide a suitable guide for drilling the outer section of the frame. Repeat the operation for the second hole.

11. Any rough edges around the two holes should now be removed and the complete area cleaned with the aid of compressed air.

12. Offer the mirror into position and secure with the two Allen screws provided.

13. Before replacing the rubber vent seal, it will be necessary to cut away small sections along the base; this is to allow the seal to seat properly in the channel and around the tapping block. The rubber vent seal should then be glued into the channel using a small quantity of Bostik No. 2402 Parts 1 and 2.

14. When refitting the waist rail finisher it will be necessary to cut two recesses in the underside to accommodate the heads of the Allen screws.

To assemble the remainder of the door reverse the procedure given for dismantling in Chapter S, Section S2 of the Workshop Manual (T.S.D. 2205). Finally, connect the battery.

MATERIAL REQUIRED

Part No.	Description
RH 2407	Rear view mirror kit - L.H. door - flat glass
RH 2408	Rear view mirror kit - L.H. door - convex glass
RH 2409	Rear view mirror kit - R.H. door - flat glass
RH 2410	Rear view mirror kit - R.H. door - convex glass

FOR INFORMATION

PAINTWORK MAINTENANCE

APPLICABLE TO:

Rolls-Royce Silver Shadow and Bentley T Series Standard and Coachbuilt cars

INTRODUCTION

The Body and Coachwork Chapter of the Owner's Handbook has recently been revised to include the latest information on the care and maintenance of car paintwork.

The object of this Bulletin is to acquaint Retailers with the need for this change and to supply information which will enable them to understand, perhaps more fully, what happens to the paintwork of the cars under normal service conditions.

GENERAL INFORMATION

The paint which is used on all Rolls-Royce and Bentley cars is of the highest quality, but even so it is unable to withstand 'weathering' indefinitely without some care and attention.

Weathering occurs gradually and can be detected by a slight surface film (chalking) which results in a reduction of the gloss and a tendency to show rain spot marks. This can be overcome and the paintwork restored to its original condition by suitable maintenance polishing.

Paintwork should be washed with clean cold water. Mud and dirt must not be removed when dry. Apply water with a sponge and remove with a chamois leather. Automatic car washes are not recommended as, due to the detergents and methods used, the paintwork may become stained or lightly scratched.

The thermo-plastic types of nitrocellulose lacquers which are used on Rolls-Royce and Bentley cars readily respond to friction polishing, due to the surface flow encouraged by the heat which is generated during the polishing

Continued...

Printed in England

process. The period of time during which the restored paintwork will remain in good condition will vary according to the type of exposure to which it is subjected. If the paintwork is polished every three months as suggested in the Owner's Handbook it should be sufficient for the average British climate. Under more severe conditions such as are encountered overseas, and even places in the British Isles which enjoy more than average sunshine, more frequent polishing may be necessary.

Note Polishing should not be carried out in a dusty, gritty atmosphere. Grit, which is present in an atmosphere such as may be found outdoors where the ground surface is loose, is harder than the surface of the paint, and scratching will result.

If regular polishing is not carried out in the manner described in the Owner's Handbook, the original gloss will become obscured and 'rain spotting' may reach objectionable proportions. Therefore, Owners should be encouraged to make sure that friction emulsion polishing is carried out as soon as the gloss begins to fade, and not wait until the paintwork has become too dull and dirty.

Merely polishing with a solid wax type of polish is not sufficient, and an excessive build-up of wax polish can induce its own type of 'rain spotting' or discolouration.

A slight discolouration appearing on the polishing cloth when using a friction emulsion polish should cause no concern. It is a weathered product of the paint and is no longer an essential part of the paint film.

The Formula 2 polish and Formula 3 sealer which are supplied with each car should be used regularly to enable the initial high quality of finish to be maintained.

CATEGORY C

BODY DRAIN HOLES

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The car body is provided with a number of drain holes to cater for water drainage from the body box members. Should any of these drain holes become blocked by road dirt or underseal it is possible that water may become trapped inside the box members causing a corrosion hazard, particularly when salt has been used on the roads.

The purpose of this Service Bulletin is, therefore, to advise Retailers and Service Personnel of the location of these drain holes and of the need to ensure that they remain free from obstruction.

An inspection and cleaning operation should be done Annually preferably immediately before Winter, as this will ensure that the body drainage system will cope with the harsher weather and road conditions. The drain holes can be cleaned with a suitable hard-bristled brush, taking care not to damage the surrounding paintwork and undersealing.

DRAIN HOLE LOCATION

The following text, in conjunction with the illustration and insets is intended to assist in locating the drain holes. The figures preceding the text refer to those on the illustration and insets.

(1) This drain hole is located on the lower edge of the body front sill immediately below the bolt which secures the Panhard rod.

(2) The left-hand drain hole of the two is to be found adjacent to the front inner corner of the exhaust silencer box, the other, located opposite, is obscured by the brake actuation box shield.

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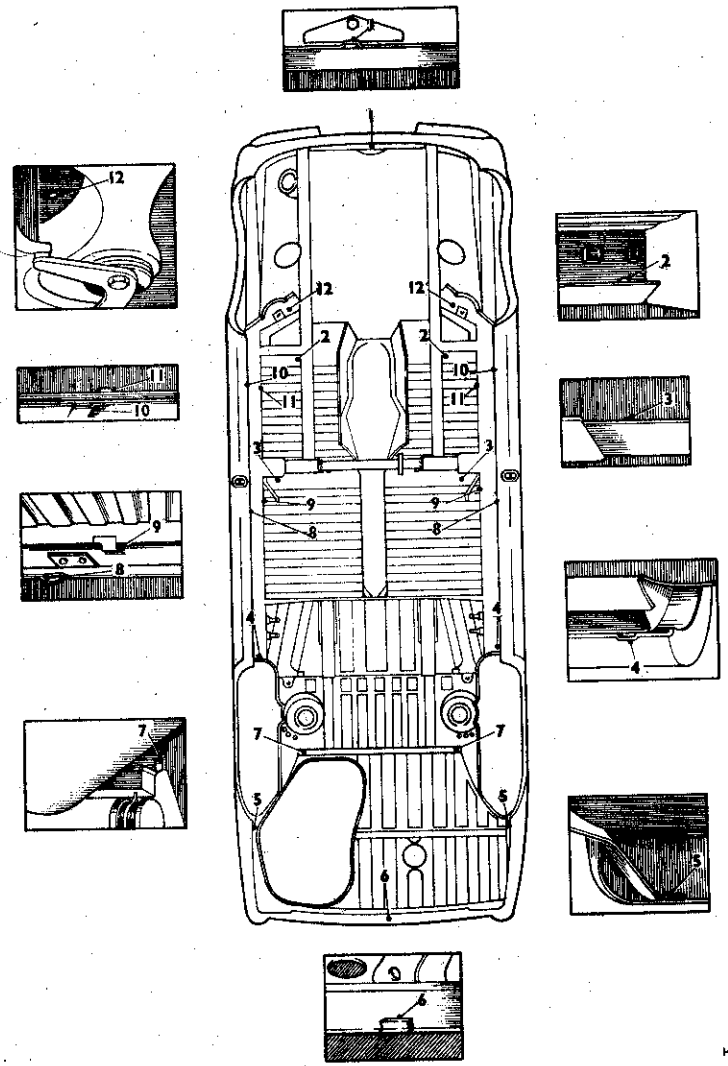

Fig.1 Location of body drain holes

Continued...

(3) The central body cross-member is drained by two holes. The left-hand hole is located immediately below the exhaust flexible mounting, the right-hand hole being obscured by one of the fuel pump suppressors.

(4) There are two drain holes on the lower edges of the body sill outer panels some 3 in. (7,62 cm.) forward of the rear wheel arches.

(5) These drain holes are located in the lower edges of the outer tonneau panel 3 in. (7,62 cm.) rearward of the rear wheel arches.

(6) Locate the point at which the spare wheel carrier operating tube locates in the boot floor the drain hole is adjacent to this point on the centre line of the body.

(7) These two drain holes are located immediately above the outer rear corners of the final drive cross-member.

(8) These two drain holes are located on the lower edges of the body sill outer panels, 12 in. (30,5 cm.) rearward of the body jacking flaps.

(9) These two drain holes are located on the body side member, some 24 in. (61 cm.) forward of the rear wheel arches.

(10) These two drain holes are located on the body sill outer panels, adjacent to two drain holes shown in position 11.

(11) These two drain holes are located on the body side member 14 in. (35.6 cm.) rearward of the front sub-frame rear mounting points.

(12) These are two circular drain holes to be found adjacent to the top of the front sub-frame rear mounting points.

No. SY/S5
Circulation - All Retailers

CATEGORY C

INSTRUCTIONS FOR FIXING LUGGAGE BOOT LID SEAL

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard Saloons
Rolls-Royce Silver Shadow Long Wheelbase Saloons
Bentley T Series Standard Saloons
Bentley T Series Long Wheelbase Saloons
James Young 2-Door Conversion Saloons

DESCRIPTION

The new seal which is made of expanded neoprene is designed to fit to the body instead of the luggage boot lid.

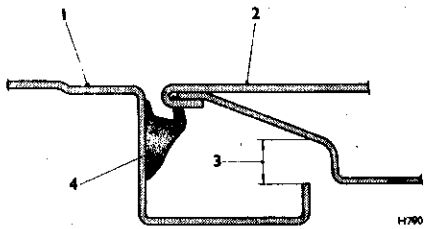

Fig.1 Trunk door seal in position

1 OUTER SKIN - BODY
2 OUTER SKIN - TRUNK DOOR
3 OLD SEAL GAP
4 NEW SEAL

Continued...

No. SY/S5
(Add. 1)
Circulation - All Retailers

CATEGORY C

INSTRUCTIONS FOR FIXING LUGGAGE BOOT LID SEAL

APPLICABLE TO:

Rolls-Royce Silver Shadow Standard Saloons
Rolls-Royce Silver Shadow Long Wheelbase Saloons
Bentley T Series Standard Saloons
Bentley T Series Long Wheelbase Saloons
James Young 2-Door Conversion Saloons

DESCRIPTION

The piece numbers of the Bostik items mentioned in the above Service Bulletin and the quantities in which they are available are as follows.

Part No.	Description	Qty.
RH 8097	Boscoprene cement No. 2402 parts 1 and 2	½ pt. tins
RH 8098	Boscotite primer No. 9252	½ pt. tins
RH 8099	Bostik cleaner No. 6001	quart containers

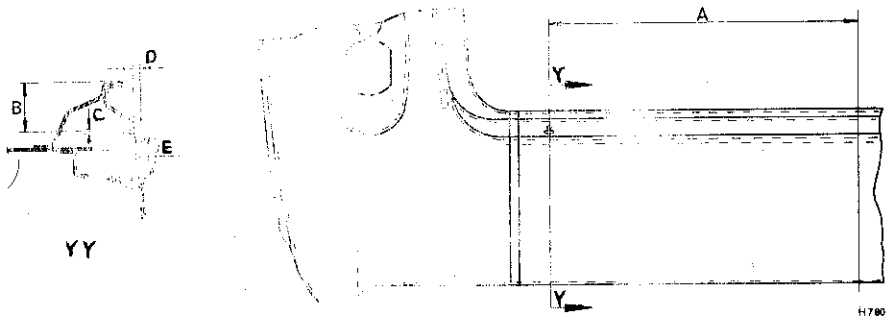

Fig 2 Luggage boot seal drain holes

A 18.125 IN TO 18.37 IN.
B 1.297 IN. TO 1.312 IN.
C 0.101 IN. DIA. TO 0.104 IN. DIA.
D 0.093 IN. TO 2.8 IN.
E 0.375 IN. DIA. TO 0.390 IN. DIA.

PROCEDURE

The bonding surfaces of the rubber and metal should be thoroughly cleaned with Bostik cleaner 6001 and allowed to stand for one hour, Bostik primer 9252 should then be applied to the metal only and allowed to stand for one hour. Boscompress cement 2402 part 1 and 2 should then be applied to the rubber and metal surface and allowed to dry for between 3 and 5 minutes before fixing firmly in position (see Fig. 1); the luggage boot lid should then remain open for a minimum of 12 hours.

Great care should be taken not to get the primer or cement onto the paintwork.

Two drain holes 0.375 in. dia. should be drilled approximately 18.125 in. on either side of the centre line at the rear of the car (see Fig. 2). A cover plate UB 15696 should then be fitted over each hole and secured with a sheet metal screw UB.755/Z.

The two buffers UB 12895 on the luggage boot lid will no longer be required.

Re-issued to amend procedure

CATEGORY C

PAINTWORK SPECIFICATIONS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars

DESCRIPTION

This Service Bulletin is issued to advise that before any rectification work is done to the paintwork, the original paintwork specification of the car must be checked. This is to ensure that the correct paints and thinners are used.

The paintwork specification is included in the car handbook on the page preceding the index.

No. SY/S7
Circulation - All Retailers

CATEGORY C

PAINT THINNERS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

Each paint manufacturer develops thinners to suit the individual requirements of the finishes produced. It is therefore essential that the co rect amount of the specified thinners is used with each paint.

This is important, as a poor finish may result if the correct thinner is not used.

No. SY/S8
Circulation - All Retailers

CATEGORY C

'MIDNIGHT BLUE' PAINTS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T series cars.

DESCRIPTION

The purpose of this Service Bulletin is to inform Distributors, Retailers and Service Personnel that I.C.I. 'Midnight Blue' paint is no longer available, and that Mason's 'Midnight Blue' and Thornley and Knight's 'Midnight Blue' should be used for any paintwork rectification in Service.

Mason's 'Midnight Blue' can be used for complete resprays of cars originally finished with the I.C.I. paint providing the existing finish is prepared correctly. It should not be used on the I.C.I. paint for touching in or local repair purposes, due to differences in colour.

Thornley and Knight's 'Midnight Blue' paint should only be used for touching in chip marks on cars finished with the I.C.I. paint.

It is not the policy of Rolls-Royce Limited to supply finishes for any cars other than Standard Steel Saloons. For Coachbuilt cars, enquiries should be made to the appropriate Coachbuilder.

Code and Part Numbers

Material	Code	Part Number	Use
Mason's 'Midnight Blue' Paint	LB 239/5	9510004	Respray only
Mason's Thinner for the above	LB 308/9	9503937	

Continued...

Material	Code	Part Number	Use
Thornley and Knight's 'Midnight Blue' Paint	TV 3765	RH 2421	Touch-in only
Thornley and Knight's Thinner for the above	'Tekavite'	RH 8047	

CATEGORY C

WING MIRRORS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

The purpose of this Service Bulletin is to inform Service Personnel of the easiest method of fitting wing mirrors to the above cars.

PROCEDURE

One problem in fitting wing mirrors is the difficulty in gaining access to the underside of the wing, usually necessitating the removal of the underwing shield. This can be overcome by drilling a 0.250 in. (6.40 mm.) diameter hole in the wing at the required mirror mounting point, using a drill of sufficient length to pierce the underwing shield also.

With the aid of tank cutters, holes of the required sizes can then be cut in the wing and the underwing shield. The latter hole should be large enough to enable the mirror clamping nut held in a suitable socket spanner to pass through the underwing shield and be fitted to the stem of the mirror.

After fitting and aligning the mirror the hole in the underwing shield should be sealed using a blanking plate, Rolls-Royce part number UB 14316 and eight screws. Rolls-Royce part number UA 8812/Z. It is most important that an effective seal is achieved between the shield and the blanking plate and a suitable sealing compound such as 'Bostik No. 771' or 'Seelastik' should be applied to the joint faces. When the plate is fitted a coat of underseal should be applied to the area surrounding the plate.

No. SY/S11
Circulation - All Distributors
and Retailers

CATEGORY C

PAINTWORK RECTIFICATION - THE AIR CONDITIONING SYSTEM SEALS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series cars.

DESCRIPTION

During paintwork rectification it may be necessary to place the car in a drying oven operating at high temperatures.

This Service Bulletin has been issued to advise that at these temperatures, with the air conditioning unit flaps in the fully open or fully closed positions, the various seals in the A.C.U. system may adopt a permanent 'set' thereby affecting their sealing ability. Also, it may cause the seals to stick to the flaps resulting in undue strain on the actuators and stressing of the flaps when the system is next operated.

In order to prevent these problems arising, before placing the car in a drying oven, the following procedures should be carried out.

PROCEDURE

1. With the ignition switched on, pull the upper and lower heater switch controls out two notches.
2. Turn the upper and lower heater switch controls clockwise two notches.
3. Fully open the flaps in the two circular outlets on the facia by withdrawing the knobs adjacent to each outlet.
4. Fully open the rectangular flap in the centre of the facia, or front console as applicable.

Continued...

5. Fully open the flap in the driver's side scuttle wall, also the flap in the passenger's side scuttle wall on some early cars, by withdrawing the control knob on the facia.

Note When carrying out items 1 and 2 on Long Wheelbase cars fitted with a centre division the heater change-over switch on the front console should be in the position marked 'FRONT'.

Printed in England

No. SY/S12
Circulation - All Distributors
and Retailers

CATEGORY C

HEAD RAIL CATCHES OF CONVERTIBLE CARS

APPLICABLE TO:

All Rolls-Royce Silver Shadow and Bentley T Series Convertible cars with Coachwork by H.J. Mulliner, Park Ward, produced prior to car serial number CRX 6596.

DESCRIPTION

Complaints of wind noise, rattles or rain leaks on the above Convertible cars may stem from the wood screws, which secure the safety catches of the folding hood to the hood head rail, coming loose after a period in service. An effective and permanent cure for this has been devised and should be applied in such cases of complaint.

The modification entails replacing the upper wood screw in each head rail catch with a 2 B.A. screw, screwed into a brass insert fitted in the head rail, and replacing the lower wood screws with longer, 1.50 in. (38,1 mm.) wood screws.

PROCEDURE

1. Lower the hood.
2. Remove the three wood screws holding each safety catch to the hood head rail and remove the catch.
3. Remove any packing pieces which may be fitted under the catch.
4. On cars built to American Federal Safety Standard Requirements, the head rail padding must also be removed by taking out the screws holding it in position.
5. Using the two lower wood screws as attachments, fit the guide plate provided in the modification kit to the head rail.

Continued...

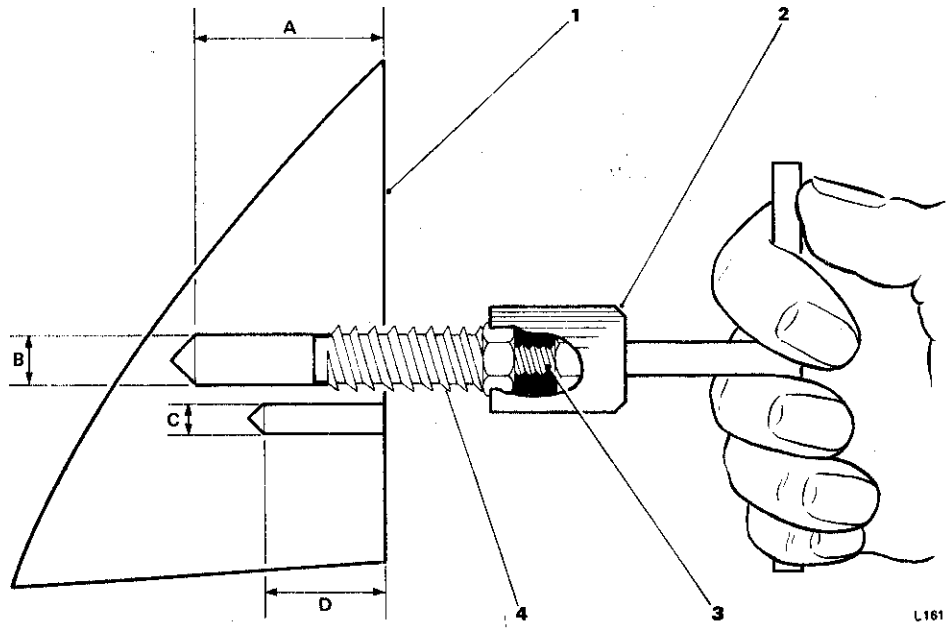

FIG. 1 Showing drilling dimensions and method of fitting the brass insert

A 1.125 in. (28,57 mm.)
B 0.312 in. (7,93 mm.) diameter
C 0.109 in. (2,77 mm.) diameter
D 0.625 in. (15,87 mm.)
1 Rear face of the hood head rail
2 'Tee' spanner, engaged on the 2 B.A. setscrew and lock-nut
3 2 B.A. setscrew and lock-nut
4 Brass insert (CBD 2904)

Continued...

6. Fit a 0.312 in. (7,93 mm.) diameter drill with a stop, and drill out the upper centre screw hole to a depth of 1.125 in. (28,57 mm.) as shown in Figure 1.

THIS DEPTH IS CRITICAL AND EXTREME CARE MUST BE TAKEN TO ENSURE THAT THE DRILL STOP IS FITTED CORRECTLY.

Note As only 0.125 in. (3,2 mm.) of wood remains between the bottom of the hole and the outside of the hood after drilling, it is recommended that this operation be carried out using a hand drill rather than an electric once since the action of the latter tends to be too vigorous.

7. Remove the guide plate and clean away all drill cuttings from the hole.

8. Take one of the brass inserts (CBD 2904) and ensure that the 2 B.A. setscrew and lock-nut, fitted to the end opposite the lead-in (see Fig. 1), is well engaged with the threads in the insert.

9. Smear the buttress thread of the insert with a suitable lubricant such as Molytone 265.

10. Using a 'Tee' spanner, engaged with the lock-nut rather than the head of the setscrew (see Fig. 1), screw the insert squarely into the 0.312 in. (7,93 mm.) diameter hole drilled out in the head rail until it is flush with the rear face of the head rail.

11. Remove the setscrew and lock-nut.

12. Drill out the remaining two screw holes for each head rail catch with a 0.109 in. (2,77 mm.) diameter drill to a depth of 0.625 in. (15,87 mm.) (see Fig. 1).

13. Clean away all drill cuttings which may be remaining.

14. On cars built to American Federal Safety Standard Requirements, fit the head rail padding.

Continued...

15. Fit the head rail safety catches, and distance pieces where applicable, using chrome plated 2 B.A. raised head screws in the top holes and 1.50 in. (38,1 mm.) long, chrome plated wood screws in the lower holes.

16. Tighten all the screws firmly and evenly.

MATERIAL REQUIRED

One Modification Kit Number 10, per car.

Printed in England

CATEGORY C

FRONT SEAT ASSEMBLIES

All Rolls-Royce Silver Shadow and Bentley T Series cars produced prior to Car Serial Number SRX 9618.

DESCRIPTION:

The mechanism which provides adjustment of the front seat bases has been modified to incorporate a fulcrum bracket which attaches the rearmost adjusting clutch directly to the floor of the car.

Complete seat assemblies incorporating the new mechanism will eventually be supplied for all replacement purposes. The mechanism can be fitted to cars produced prior to Car Serial Number SRX 9618 but this will necessitate fitting two tapping plates for each seat on the underside of the floor panel and removing a small portion of the front carpet.

The fulcrum bracket has two alternative mounting holes to increase the range of seat positions available. When fitting a new seat mechanism to an early car a similar range of seat positions will be available if the forward pair of mounting holes are used as shown in Figure 1. If the rear pair of holes are used in the range of seat positions will be moved forward by approximately 2 in. (5,08 cm.). However, unless the customer requests otherwise it is recommended that the front pair of holes are used.

It should be noted that old and new seat frames or seat mechanisms are not individually interchangeable and before ordering replacement parts, Spares Information Sheet 4.N.94 should first be read.

PROCEDURE:

1. Place the seat assembly in position on the mounting brackets.
2. Locate the two seat runner mounting holes which are exposed and place a KB 3906 washer between each seat runner and the mounting hole.
3. Using two RH 8404 screws fasten the two seat runner ends down.
4. Connect the plug and socket of the seat loom.

Continued....

BP/ECk

5. Operate the seat switch such that the rear clutch nut is at the forward end of its travel on the worm shaft.
6. Move the seat mechanism rearwards on its runners until the front edge of the lower seat runner is exposed by the upper runner to a distance of 2.0 in. (5,08 cm.). The fulcrum bracket will now be correctly positioned on the floor.
7. Remove all traces of underfelt or foreign matter from the area where the fulcrum bracket is to be placed then ensure that the rear clutch fulcrum bracket is located squarely on the floor panel.
8. Mark out the position of the four chosen mounting holes on the floor.
9. Remove the seat assembly from the car.
10. Drill four 0.281 in. (7,14 mm.) holes in the positions previously marked on the floor.
11. Remove all traces of underseal from the underside of the floor adjacent to the forward pair of holes.
12. Place a tapping plate (RH 2524) in position on the underside of the floor in line with the two forward holes and secure in position with two self-tapping screws CS 1725, ensuring that they will not obstruct the fulcrum bracket when in place.
13. As the two rearmost holes are drilled into a sealed box section, a further larger hole should be drilled to give access for the tapping plate. This access hole should be 1 in. (25,4 mm.) in diameter and should be drilled in the flat section of the floor adjacent to the two mounting holes and midway between them.
14. Drill a 0.125 in. (3,2 mm.) hole in the centre of the tapping plate and thread a length of wire through the plate. It will now be possible to guide the plate through the access hole and line it up with the mounting holes in the floor.
15. Temporarily hold the tapping plate to the floor with two 0.250 in. (6,35 mm.) bolts and then secure it using two CS 31725 self-tapping screws, ensuring that these will not obstruct the fulcrum bracket when in place.

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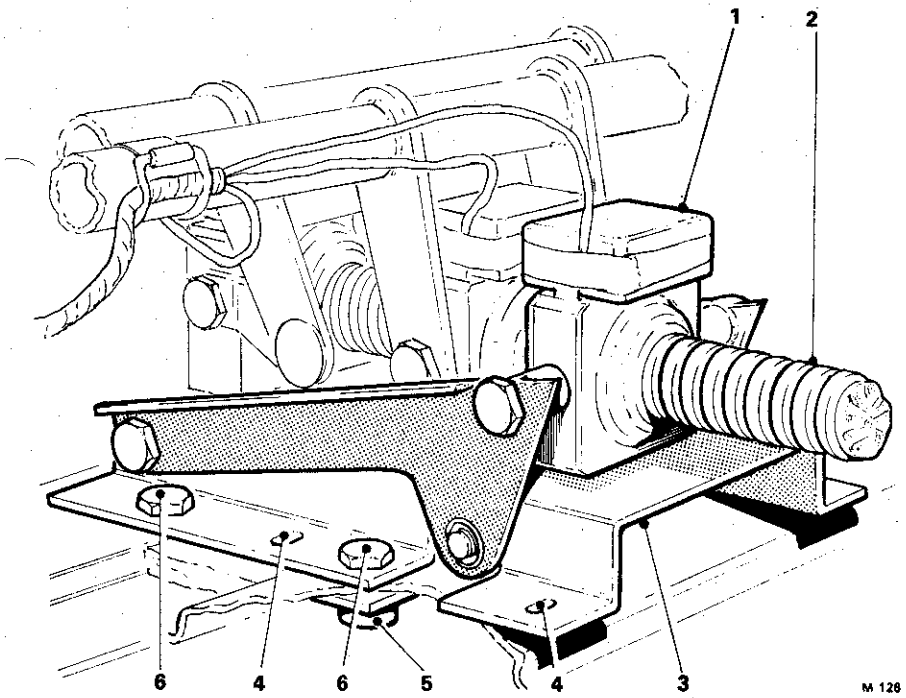

Figure 1 Seat in rearmost position

1 Rear clutch unit
2 Worm shaft
3 Fulcrum bracket
4 These two holes (if used) place the seat in the forward position
5 Tapping plates on underside of floor
6 These two holes (if used) place the seat in the rearmost position

Continued....

BP/ECk

16. Remove the two bolts and the length of wire and seal the access hole using a UG 12442 grommet and a suitable sealing compound.

17. Place a KB 3906 washer on top of each of the seat mounting brackets, place the seat assembly in position and secure using RH 8404 screws.

18. Using four 0.250 in. (6.35 mm.) bolts and plain washers secure the rear clutch fulcrum bracket to the tapping plates in the floor.

19. Apply underseal to the forward tapping plate and the adjacent area of the floor.

20. Lay the front carpet into the car and fasten down as far as possible. Mark out the area at the rear end of the carpet which is obstructed by the fulcrum bracket and carefully remove the required piece.

21. Bind the cut edges with leather or binding tape and fit the front carpet.

PARTS REQUIRED FOR EACH SEAT:

COMPONENT	PART NO.	NO. REQUIRED
Tapping plate	RH 2524	2
Screw-seat runners	RH 8404	4
Washer-seat runners	KB 3906	4
Bolts-fulcrum bracket	UA 103/2	4
Washers	UA 1251	4
Screws-self-tapping	CS 31725	4
Grommet	UG 12442	1

TIME ALLOWED:

For replacing an older seat with a new seat having the revised mechanism - 1.8 hours.

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CATEGORY C

RETENTION OF DOOR LOCK ROLLER

APPLICABLE TO

All Rolls-Royce Silver Shadow and Bentley 'T' Series cars.

DESCRIPTION

The method of retaining the 'Delrin' roller on the door lock bolt has been changed.

The roller is now retained by a cotter pin which fits through a hole in the end of the lock bolt, as shown in Figure 1. A plain washer (part number UB 19027) is fitted between the cotter pin and the roller which has a section of the outer spigot removed to facilitate fitting the cotter pin. When renewing a roller it is important that a new cotter pin (part number UB 19370) is used and that the pin is of the correct size.

If it is necessary to replace a roller which is normally retained by a circlip and the circlip groove has been damaged beyond further use then the lock bolt should be drilled as described in the following instructions and the new method of retention used.

It is also important that the cotter pin is fitted correctly otherwise it may foul the 'Delrin' roller and prevent roller rotation.

PROCEDURE

1. Remove the door lock from the car as described in Chapter S Volume 3 of the Workshop Manual - TSD 2476.

2. Remove the retaining circlip and the old 'Delrin' roller.

3. Carefully drill an 0.0625 in. (1,587 mm.) hole in the end of the lock bolt. The centre of the hole should be 0.0625 in. (1,587 mm.) from the end of the lock bolt.

4. Fit the new 'Delrin' roller and plain washer to the lock bolt.

5. Rotate the roller until the cut-out in the roller is opposite one end of the hole in the lock bolt.

Continued...

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6. Push the cotter pin through the hole until the head abuts the lock bolt. Bend both legs of the pin round as shown in Figure 1.

7. Fit the door lock to the car, smearing the 'Delrin' roller with Molytone 265 grease.

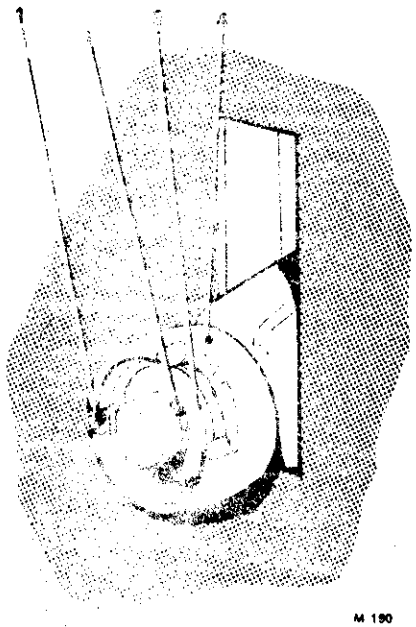

Figure 1 Method of retaining 'Delrin' roller

1. Cut-out in 'Delrin' roller
2. Cotter pin ends bent over
3. Washer
4. 'Delrin' roller

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CATEGORY C

ACRYLIC PAINTWORK

APPLICABLE TO:

Rolls-Royce and Bentley Corniche cars only.

DESCRIPTION

Until recently, all the above cars were painted with modified nitro-cellulose type paint. A number of coachbuilt cars are now being painted with Nugget Gold paint of the full thermal acrylic type. In the future the use of full thermal acrylic paints is likely to be extended to embrace an increasing number of coachbuilt cars and a larger choice of colours.

The materials used with full thermal acrylic paints differs from those used with modified nitro-cellulose paint. Therefore, if a coachbuilt car finished in full thermal acrylic paintwork requires any attention to the paintwork, it is most important that the correct materials be used as described in this Service Bulletin.

It is imperative that non-acrylic paints, stoppers or fillers are not used for any purpose on a car which has been finished with full acrylic paint.

COMPOSITION OF PAINT FILM

All areas of bare metal must be thoroughly cleaned and treated with acid etch paint.

The first coats should consist of Rinshed Masons Green Primer/ Surfacer number U34 AV001. This should be applied at a viscosity equivalent to 24 seconds using a B4 cup, thinning as necessary, using Rinshed Masons Primer Surfacer Thinners number L18 CV005. Following this, any build-up required should be achieved with Valentines Air Drying Super Surfacer, number PG1. The viscosity of this surfacer can be varied according to the amount of build-up required.

As formerly noted, at present the only acrylic paint in use is Nugget Gold. This paint is made by Rinshed Masons, the part number being L58 LV004. The paint should be thinned to an equivalent viscosity of 18 seconds with a B4 cup, using Rinshed Masons Thinners number L18 CV002.

Any panel damage rectification work can be completed using ICI Grey Acrylic Repair putty, number MM2 - R901.

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CATEGORY C

DOOR HANDLE BUTTON TRAVEL

APPLICABLE TO:

All Rolls-Royce Silver Shadow, Bentley T Series and Rolls-Royce and Bentley Corniche cars.

DESCRIPTION

A number of complaints have recently been received of excessive door handle button travel before the door lock is operated. Complaints of this nature can be caused by an incorrect amount of free travel between the button adjusting screw and the lever which operates the door lock.

In the event of a complaint being received of excessive button travel to operate the door lock, before undertaking any further work, the button free travel should be checked and adjusted, if necessary, so that the button operates the door lock whilst it is more than 0,0625 in. (1,58 mm.) from the button surround.

PROCEDURE

1. Remove the trim pad from the door as described in the Workshop Manual - Chapter S, to gain access to the door handle.

2. Remove the handle and button assembly and turn the adjusting screw until a clearance of 1/32 in. (0,79 mm.) exists between the head of the adjusting screw and the contact lever, as shown in Figure 1.

Continued...