

FOR INFORMATION

DANFOSS SOLENOID VALVE

AIR CONDITIONING (REFRIGERATION) SYSTEM

Two different types of solenoid valve are used in Rolls-Royce and Bentley air conditioning (refrigeration) systems :

Valve UD.6175 is used on Standard Steel Saloons fitted with the Underwing Unit and on coachbuilt cars which have a Rolls-Royce Boot Unit. It contains a rubber diaphragm designed for use in liquid lines only.

The valve may be distinguished by the letter 'F' stamped on the brass body.

Valve UD.5707 is used on cars which are destined for the U.S.A. and are therefore fitted with the O.M.C. Unit. This valve contains a 'Teflon' diaphragm suitable for installation in hot gas lines.

The letters FXMW or FXM stamped on the valve body provide a means of identification. Later versions of UD.5707 will also be distinguishable by the absence of a name plate on the top of the solenoid cover.

CATEGORY 3AINTAKE WHISTLE - UNDERWING A.C.U.

When the intake grilles in the front wings were changed from rubber mouldings to plated wire gauze, air flow in the upper system was increased, as intended, but in some cases gave rise to an obtrusive whistling noise whenever the upper flap was fully open.

The whistle is not evident until the flap passes the two thirds open position and as there is no appreciable difference in air flow between the two thirds open and the fully open positions, the whistle can be avoided simply by eliminating the fully open position, as described below.

MODIFICATION PROCEDURE

Disconnect one battery terminal.

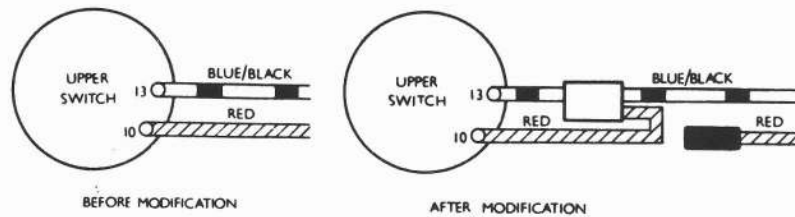
Remove the instrument panel finisher and the knobs of the 'Upper' and 'Lower' air conditioning switches together with their picture plate. Withdraw the 'Upper' switch from the instrument panel.

Remove the red wire from terminal 10 of the switch and tape it back.

Remove the blue/black wire from terminal 13 of the switch and cut the wire approximately one inch from the Lucar socket. Fit connector nipples (UD.2141) to the two cut ends and plug them both into a double connector (UD.1806). Fit a three inch length of red 14/.012 wire to the same connector and fit a Lucar socket (UD.6072) and sleeve (UD.6119) to the free end of the wire.

Reconnect the blue/black wire to terminal 13 of the switch and connect the new red wire to terminal 10.

Continued....



**Fig. 1 Modification of the wiring of the 'Upper' (Ventilation) Switch.**

Refit the switch, picture plate, switch knobs and the instrument panel finisher.

Remove the red wire from terminal 1 of the upper flap actuator and tape it back to the loom.

Reconnect the battery terminal.

**MATERIAL REQUIRED**

UD.2141	Nipple	3 off
UD.1806	Double connector	1 off
UD.6072	Lucar socket	1 off
UD.6119	Sleeve - Lucar socket	1 off
14/.012	Cable (red sleeve)	3 in.

Insulating tape as required.

CATEGORY 2

SUPPORT CLIP FOR COOLANT CONNECTION

In order to increase the support of the water pipe from the rear of the 'A' Bank (right-hand) cylinder head to the Summer/Winter water tap it has been necessary to fit a clip

APPLICABLE TO

Silver Cloud II L W B

Bentley S2 L W B

Bentley Continental S2

Phantom V

METHOD OF FITTING THE SUPPORT CLIP

Unscrew and remove the setscrew and plain washer securing the ignition harness clip to the rear of the 'A' Bank cylinder head. Place the support clip around the water pipe and then secure both the existing ignition harness clip and the support clip to the cylinder head with the plain washer and setscrew.

After the support clip has been fitted, a check should be made to ensure that sufficient slack remains in the rubber bleed connecting hose between the water tap and the bottom of the vacuum tap mounted on the valance plate, this is necessary to allow for engine movement on the mountings. A dimension of 10 in. from the right-hand valance plate to the centre of the Summer/Winter tap will produce the correct amount of slack. Also ensure that the quadrant on the Summer/Winter tap is at least  $\frac{1}{2}$  in. away from the connections of the resistance mounted on the bulkhead to prevent contact between these parts. If necessary the pipe should be re-set to give these dimensions.

Parts Required

RE 17294	Support Clip	1 off
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FOR INFORMATION

S2 CARS FITTED WITH THE  
TECUMSEH REFRIGERATION COMPRESSOR

On S2 cars fitted with the Tecumseh refrigeration compressor, a hard fouling is liable to occur between the lower end of the engine top coolant hose and the metal fittings on the refrigeration system hot gas line: the metal fittings are adjacent to the compressor delivery service valve.

ACTION REQUIRED

The simple remedy in the event of fouling taking place is as follows.-

Slacken the generator mounting bolts and release the driving belt tension.

Slacken the bolts securing the compressor and compressor bracket.

Ease the compressor away from the top coolant hose coupling and whilst holding the compressor in this position re-tighten the bolts.

Re-adjust the driving belt tension.

CATEGORY 3A

FRESH AIR DUCT - S2 CARS

There is a possibility that dirty water may enter the fresh air duct which is positioned under the left-hand front wing on Standard S2 cars.

The leak may be due to poor sealing between the flange joint and the scuttle; this can be rectified as follows:-

Jack up the front of the car taking care not to damage the steering power cylinder.

Remove the front left-hand road wheel.

Clean the immediate area around the joint on the scuttle and duct.

Liberaly apply a coating of underseal compound to ensure that a complete external sealing is effected.

Fit the road wheel.

Lower the car and remove the jack.

UNDERWING AIR CONDITIONING UNIT

Adjustment of the Heater and Evaporator Flaps and Actuators and the Water Tap Actuator.

Evaporator Flap (Top) Actuator - To Adjust

1. Slacken the two pinch bolts securing the crank levers to the flap extension spindle and the actuator gear shaft. Also slacken the grubscrew securing the collar to the extension spindle.
2. Push the extension spindle into the flap coupling tube, then tighten the pinch bolt securing the crank lever to the extension spindle.
3. Withdraw the extension spindle and crank lever about 1/16 in., then tighten the grubscrew securing the collar against the end face of the spindle bearing tube.
4. Remove the crank lever from the actuator gear shaft and check that the extension spindle is free to rotate through 90°. Any movement through more than 90° indicates that the flap coupling tube is not engaged with the extension spindle dogs and requires rectification.
5. Switch on the ignition and turn the upper and lower airstream switches to their 'OFF' position. Allow approximately 30 seconds for the actuator motors to return to the fully closed position.
6. Position the actuator crank lever so that it points to the No. 1 position on the motor casing. Tighten the pinch bolt.
7. Slacken the pinch bolt securing the crank lever on the flap extension spindle. Turn the extension spindle anti-clockwise (when viewed over the left-hand wing) to close the flap valve. With the flap valve held closed, adjust the position of the extension spindle crank lever so that the link arm between the two crank levers can just be fitted under slight tension. Fit new split pins on the link arms.

- 2 -

Heater Flap (Bottom) Actuator - To Adjust

Repeat operations 1 - 5 as described for the evaporator flap.

6. Position the actuator crank lever so that it points to the No. 3 position on the motor casing. Tighten the pinch bolt.
7. Slacken the pinch bolt securing the crank lever on the flap extension spindle. Turn the extension spindle clockwise (when viewed over the left-hand wing) to close the flap valve. With the flap valve held closed adjust the position of the extension spindle crank lever so that the link arm between the crank levers can just be fitted under slight tension. Fit new split pins on the link arms.

Water Tap Opening - To Check

To ascertain that the water tap is closed, turn the left-hand facia switch (lower airstream) anti-clockwise, wait 30 seconds to allow the actuator motor to operate, then turn the switch to the 'off' position. If the tap is closed then, with a warm engine, the two pipes passing under the right-hand wing should be cold; if the tap is leaking then the pipes will be warm.

1. Drain the coolant into a suitable storage container, or disconnect the two hoses to the water tap and plug them with suitable wooden pegs to prevent any loss of coolant.
2. Close the water tap by turning the lower airstream switch anti-clockwise waiting 30 seconds, then turning the switch back to the 'off' position.
3. If the coolant has been drained disconnect the two hoses to the water tap. Remove the four bolts securing the tap and the actuator motor to the wing valance and lift out the tap.
4. Check whether the tap is open or closed by passing air into it from the inlet side.
5. If the tap is not properly closed, slacken the clamping bolt on the actuator and push the tap lever to the closed position. Hold the lever in the closed position and tighten the clamping bolt so that tension is put into the linkage.
6. Check the functioning of the tap then fit it on the valance.

CATEGORY C

AIR CONDITIONING CONTROLS

APPLICABLE TO:

All Rolls-Royce Silver Cloud I and II motor cars and all Bentley SI and SII motor cars.

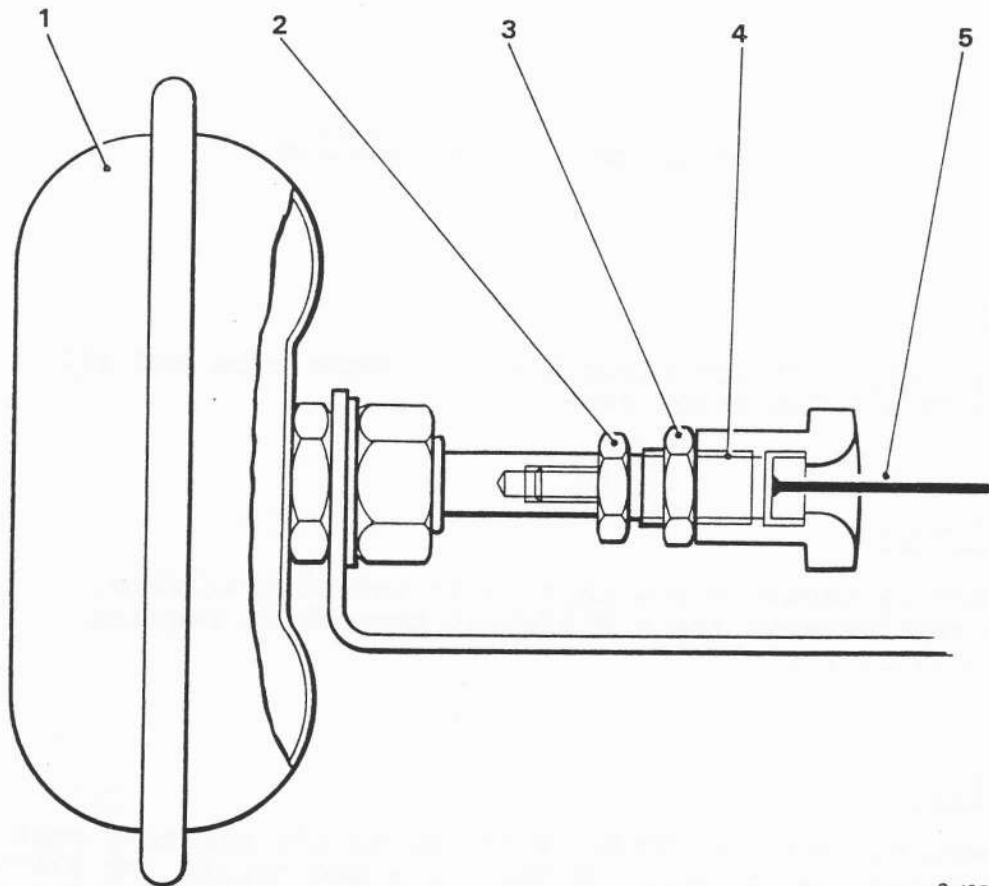
INTRODUCTION:

The existing vacuum valve unit is no longer available. Future replacements are a different type which require additional parts.

DESCRIPTION:

A screwed adapter (RH 9098) is fitted to the existing push rod on the vacuum valve unit. A new cable and nipple (RH 9100) is fitted, this being attached by means of a retainer (RH 9099) and retaining lock-nut (RE 22430). These are screwed and locked to the adapter (refer, Fig. 1).

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S 435

Figure 1 - Vacuum valve assembly

1. RH 9103 - Assy - Vacuum Valve Unit
2. RH 9098 - Screwed Adapter
3. RE 22430 - Nut - Lock
4. RH 9099 - Retainer - Cable
5. RH 9100 - Assy - Cable and Nipple