



Dismantled plastic vacuum actuator. The outer ridge on the smaller part on the right just snap-fits into the inner groove on the larger part on the left that has the attachment lugs moulded on it, so it's just brute force to separate them! (Photos: Derek Squires)



You can see here the **rubber diaphragm splits along the edge**. Using Superglue would only be a temporary fix.



RV8 aircon heater cut-off flap vacuum actuator

A query posted on the V8 Bulletin Board by Derek Squires said "the rubber diaphragm on my RV8 has perished and split in the heater cut-off flap vacuum actuator. Does anyone have one that they've removed while taking the aircon system out of their car and would be willing to sell to me? Alternatively, has anyone had and solved this problem, as the actuators are no longer obtainable. It's the black unit that sits in front of the heater box under the bonnet and moves a lever to shut off the normal airflow when aircon is selected, with 'ACTS Ltd 01685' moulded on it".

Gavin Brown in Australia responded with "somebody who repairs distributors might be able to replace the diaphragm in it for you. The other option is to Superglue the crack up. I have done this before. It is split in the middle where the ridge is." Derek replied the Superglue option had crossed his mind, so if Gavin had done it successfully then he would give it a try!

Derek Squires later posted "further to this discussion, I can now confirm that the heater cut-off flap vacuum actuator on the RV8 is the same unit as **RTC 6696** "Heater Blower Vacuum Actuator Range Rover Classic & Discovery 1 '86-'91, which is readily available from Land Rover specialists and on eBay. The only difference is the metal push-rod which is a different length and shape, so that needs to be swapped with the one from the RV8, easily done, as both of them are held in place by a small circlip."

Anthony David Marchington in France then posted a query "fine to repair with Superglue, but how do I open valve to get at the diaphragm?" Derek Squires clarified it by saying "it is split in the middle where the ridge is".

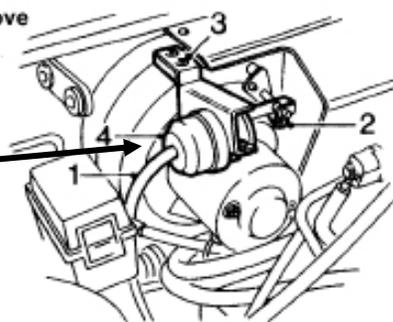
Nic Houslip added "I do feel that trying to repair the vacuum valve diaphragm will only produce a very short-term solution. The diaphragm is under considerable stress when subject to manifold vacuum, with atmosphere on the other side. The diaphragm flexes every time it is operated and there is probably no adhesive that will stand the flexing that causes the diaphragm to split in the first place. Air leakage here will possibly affect the engine idle speed and perhaps the mixture".

Derek Squires later mentioned that to avoid confusion, as there are three vacuum valves in the system, it is the plastic **Heater Cut-Off Flap Vacuum Actuator** that can be replaced with the **RTC 6696** unit, and this does not require any dismantling of the heater box or fascia. As he was over in the UK at the time he mentioned that on returning home to Spain he would send some photos of his old unit dismantled so fellow members could see how it fits together and can be opened for repairing the rubber diaphragm. The useful photos alongside were subsequently sent in by Derek.

HEATER CUT - OFF FLAP VACUUM ACTUATOR

Service Repair No. 82.22.99

Remove



Gavin Brown has also confirmed that the vacuum actuator in the distribution box is a completely different and more robust metal unit, and he has never known one of those to fail.

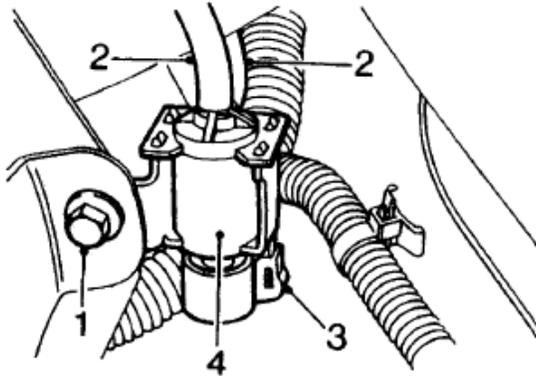
See page 3 below for full copy of Service Repair 82.22.99 (left).

Extracts from the RV8 Repair Manual AKM7144ENG

VACUUM SOLENOID VALVE

Service Repair No. 82.20.97

Remove



82M0137

1. Remove bolt securing vacuum solenoid valve to expansion tank bracket.
2. Disconnect 2 vacuum hoses from valve.
3. Disconnect multiplug.
4. Remove valve.

Refit

1. Position valve; connect multiplug and 2 vacuum hoses.
2. Align valve to expansion tank bracket; fit and tighten bolt.

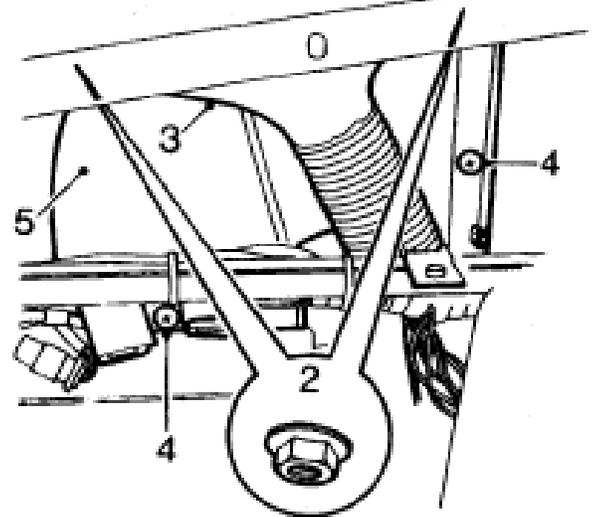
DISTRIBUTION BOX AND VACUUM ACTUATOR

Service Repair No. 82.25.53 - Distribution box

Service Repair No. 82.20.98 - Vacuum actuator

Remove

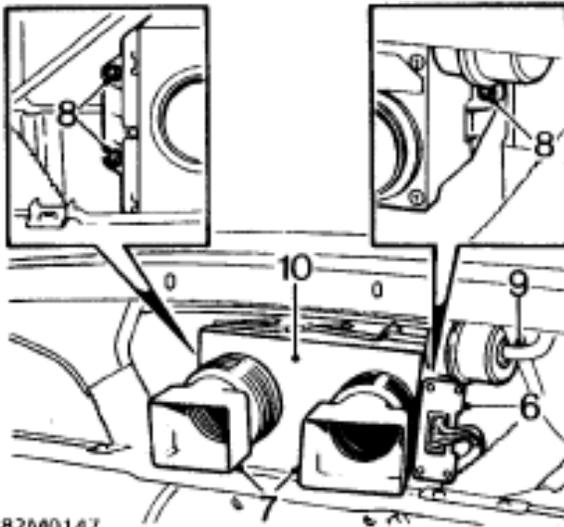
1. Remove fascia assembly, see **BODY**



82M0138

2. Remove 2 nuts securing L.H. heater duct.
3. Remove duct.
4. Remove 2 scrivet fasteners securing air duct; evaporator to distribution box.

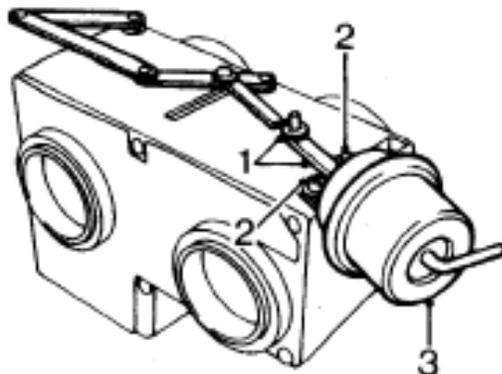
5. Remove air duct.



82M0147

6. Release engine immobiliser control unit from distribution box.
7. Remove 2 hoses; distribution box to fascia
8. Remove 3 nuts securing distribution box to body.
9. Disconnect vacuum hose from vacuum actuator.
10. Remove distribution box and vacuum actuator assembly.

Vacuum actuator



82M0140

1. Remove clip securing vacuum actuator link rod to flap lever; disconnect rod.
2. Remove 2 bolts securing vacuum actuator to distribution box.
3. Remove vacuum actuator.
4. Fit vacuum actuator to distribution box; fit and tighten 2 bolts.
5. Connect vacuum actuator link rod to flap lever; fit clip.

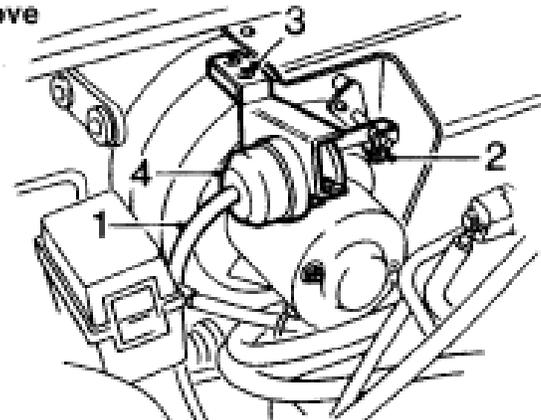
Refit

1. Fit distribution box to body; fit and tighten 3 nuts.
2. Connect vacuum hose to vacuum actuator.
3. Fit 2 hoses; fascia to distribution box.
4. Secure engine immobiliser control unit to distribution box.
5. Fit air duct; evaporator to distribution box and secure with 2 scrivers.
6. Fit L.H. heater duct; fit and tighten 2 nuts.
7. Refit fascia assembly, see **BODY**

HEATER CUT - OFF FLAP VACUUM ACTUATOR

Service Repair No. 82.22.99

Remove



82M0155

1. Disconnect vacuum hose
2. Remove clip securing vacuum actuator to flap lever.
3. Remove 2 screws securing vacuum actuator.
4. Remove vacuum actuator.

Refit

1. Fit actuator and connect link.
2. Fit and tighten 2 screws securing actuator.
3. Fit clip securing actuator to flap lever and connect vacuum hose.