

Section C7

**System test and
fault diagnosis**

Mode flap inoperative

Fig. C46

Start

Are both actuators inoperative?

NO

Using a test lamp, test for 12 volts at the faulty actuator and if it is the right-hand actuator that is faulty, also test for 12 volts on the orange/slate or orange/green cables as appropriate at the diode board. Check the earth connections at the 'A' post.

YES

At the recirculation relay, connect a test lamp between the red/brown cable on C2 and a good earth. Is the lamp lit?

NO

Test for a live feed on the red/brown cable at the ACU switch socket and the fuseboard.

YES

Set the ACU switch to OFF. At the recirculation relay, connect the test lamp between earth and the orange/brown cable. At the servo, disconnect the blue/pink 'flying lead'. Is the test lamp lit?

NO

The recirculation relay is faulty.

YES

Set ACU switch to LOW. At the recirculation relay, connect a test lamp between earth and the orange/light green cable. Connect the blue/pink flying lead from the relay to earth. Is the test lamp lit?

YES

The recirculation relay and the voltage supply to it are satisfactory.

NO

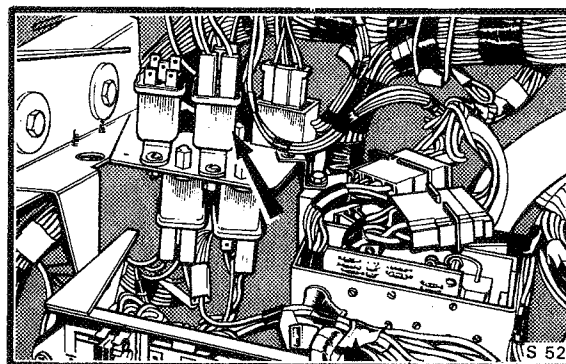
Connect the test lamp between earth and the brown/pink cable at the relay. Is the lamp lit?

NO

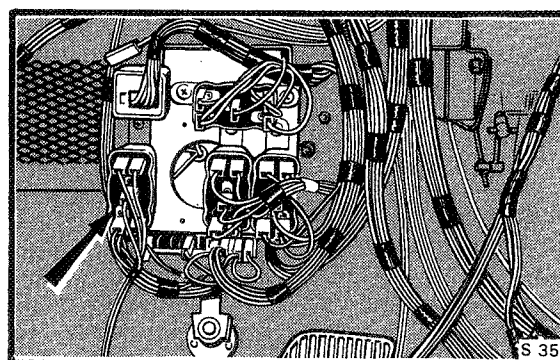
Referring to the actuator wiring diagram, test for 12 volts on the brown/pink cable at the ACU switch (in the LOW position) and the fan switch-off relay.

YES

The recirculation relay is faulty.



Recirculation relay right-hand drive cars

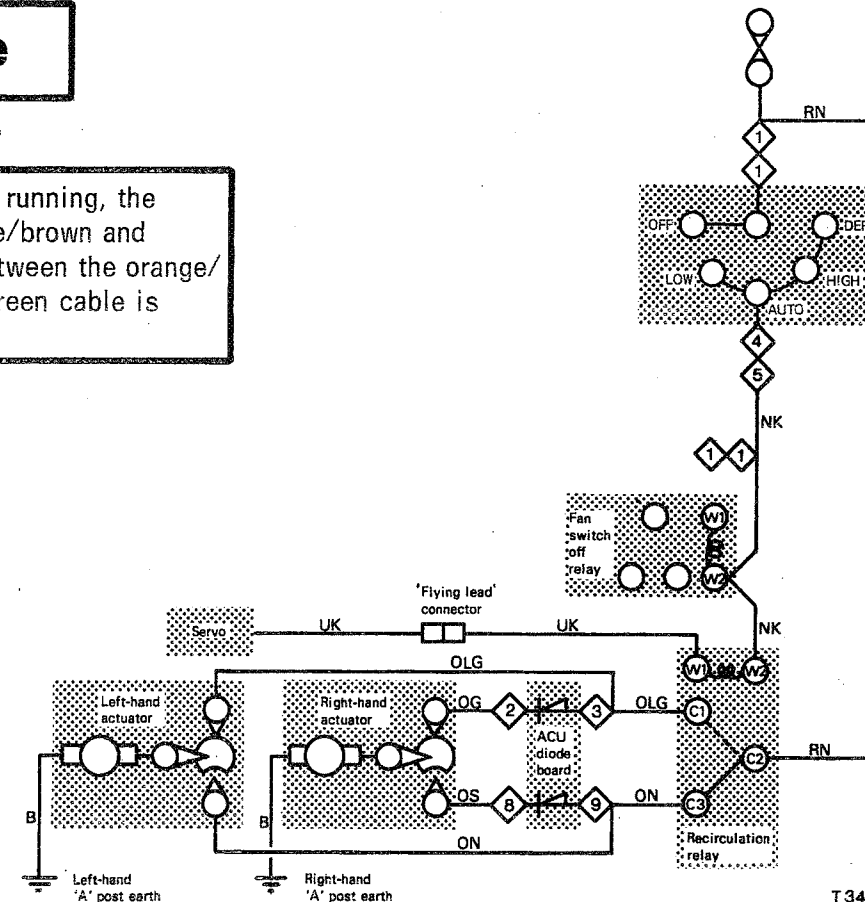


Recirculation relay left-hand drive cars

These are landmarks. They show which part of the system has been proved correct.

Note

If the actuators continue running, the diode between the orange/brown and orange/slate cable or between the orange/light green and orange/green cable is short circuit.



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Have the actuators moved from the 'Recirculation' to the 'Fresh' position?

NO

Check the continuity of the orange/light green cable between the relay and diode block.

YES

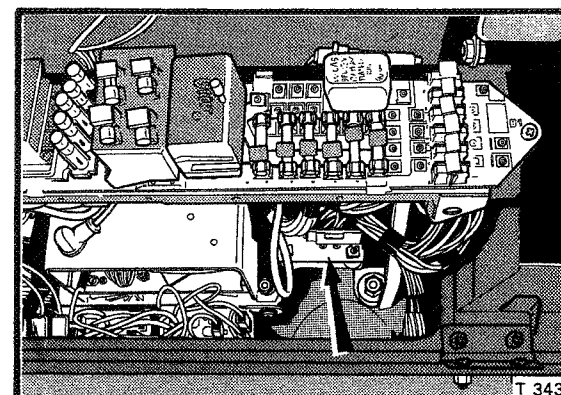
Remove the earth link from the blue/pink 'flying lead' but do not connect the leads. Have the actuators moved to the 'Recirculation' position?

YES

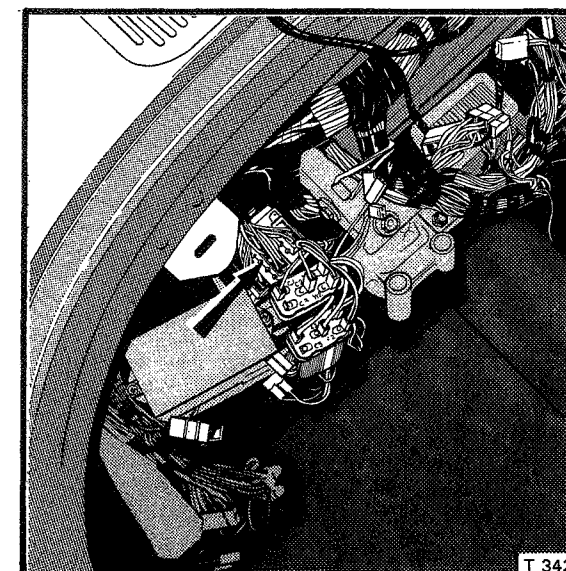
The recirculation circuit is satisfactory. The fault is probably in the servo, refer to servo fault diagnosis.

NO

Check the continuity of the orange/brown cable between the relay and the diode block.



Diode board right-hand drive cars



Diode board left-hand drive cars viewed with top roll removed

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**System test and
fault diagnosis**

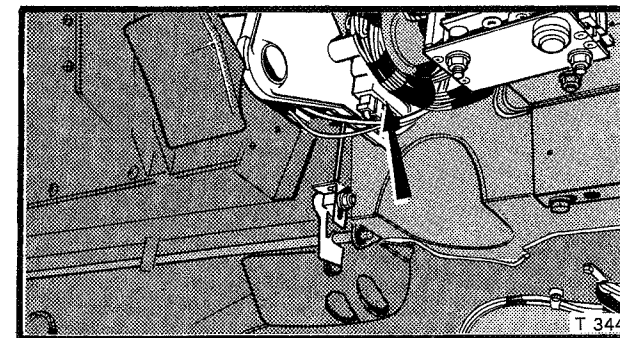
Recirculation flaps inoperative

Fig. C47

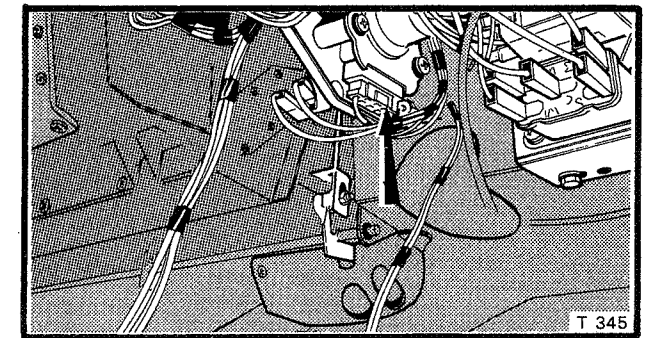
Start

Switch on the engine. Set the ACU switch to DEFROST. At the lower quantity flap actuator, connect a 12 volt test lamp between the green/pink cable and earth.
Does the lamp light?

Verify that the orange/blue cable at the ACU switch is live and also that the green/pink cable from the diode block is live. If the green/pink is not live, the diode is faulty.



Lower quantity flap actuator right-hand drive cars.

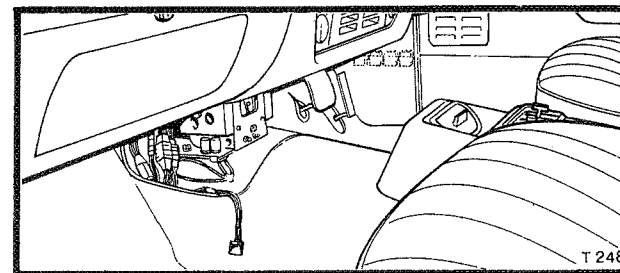


Lower quantity flap actuator left-hand drive cars.

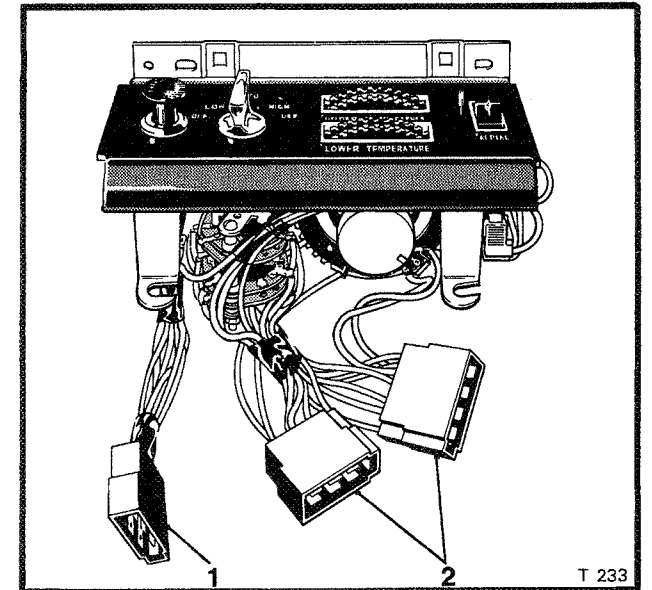
Set the ACU switch to AUTO. Remove the sensor chain socket (servo moves to screen mode). Disconnect the fan delay thermostat.
Is the test lamp extinguished?

At the lower quantity relay, connect a test lamp between the blue/black cable and earth.
Does the lamp light?

An incorrect live feed to the actuator is being supplied from the orange/black cable at ACU switch or the green/pink cable at upper servo plug. Replace the appropriate faulty component. (ACU switch or servo).



Location of sensor chain socket.

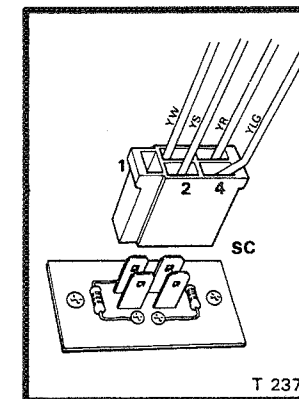


1. Hazard switch socket
2. A.C.U. sockets

After the previous instruction, did the actuator operate?

Is there a live feed on the orange/white cable at the actuator?

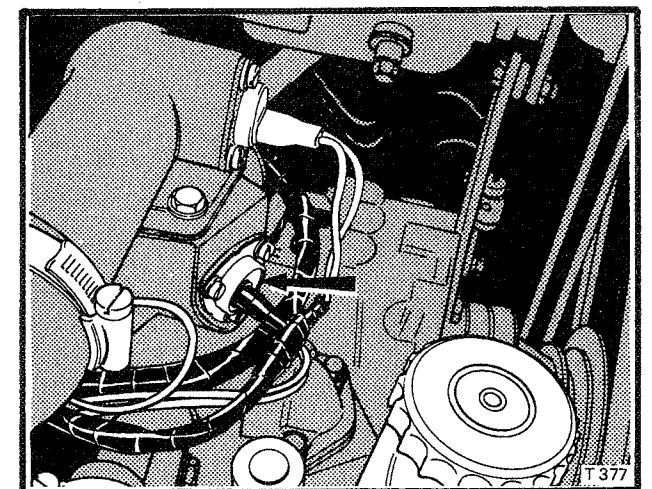
Go to
sheet
2



Sensor chain socket.

Set the ACU switch to DEFROST.
Does the actuator operate?

Connect an external earth cable between the black cable at the actuator and a good earth. If the actuator does not move it is faulty.



Fan delay thermostat.

The actuator is satisfactory.

During instructions 2 and 3, did the lower quantity flap fully open and fully close & did the microswitch operate?

The flap and actuator are satisfactory.

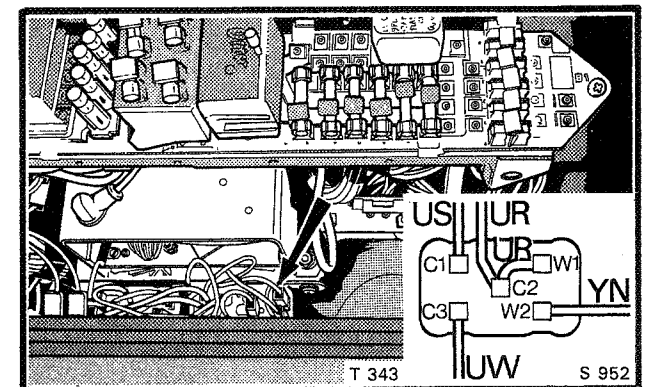
Reconnect the sensor chain socket & connect the yellow/white cable to earth. (Servo moves to 'Facia' mode). Switch to AUTO.
Does the test lamp light?

2 faults or incorrect diagnosis.

Adjust the flap and tighten the pinch-bolt so that the flap will fully open and fully close. Ensure that the microswitch operates correctly.

These are landmarks. They show which part of the system has been proved correct.

15% microswitch on upper servo faulty, check for live feed on green/pink cable at servo plug.



Lower quantity relay.

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**System test and
fault diagnosis**

Lower quantity flap inoperative

Sheet 1 of 2

Fig. C48

From sheet 1

Connect a test lamp between the blue/red cable at lower quantity relay and earth.
Does the lamp light?

NO

At the upper servo plug, connect a test lamp between the blue/green cable and earth.
Does the lamp light?

NO

Servo is probably faulty. Refer to Servo Fault Diagnosis.

YES

Connect the test lamp between the blue/white cable at the lower quantity relay & earth.
Does the lamp light?

NO

Lower quantity relay faulty.

YES

At the diode block, connect a test lamp between the blue/white cable and earth.
Does the lamp light?

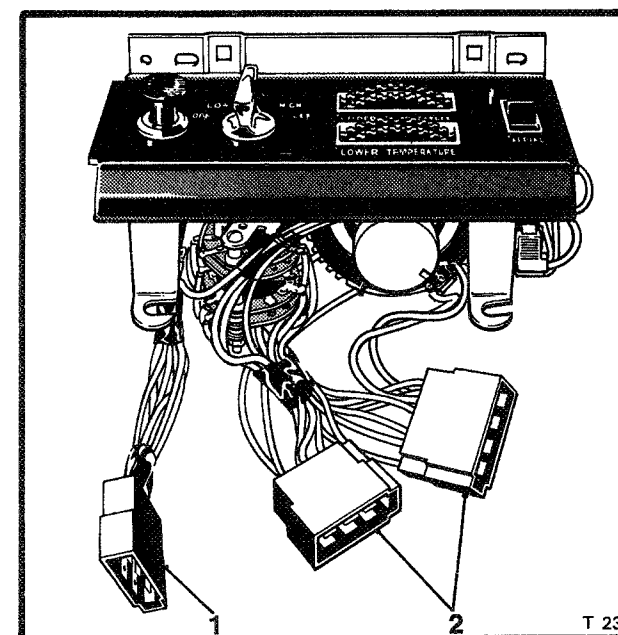
YES

Faulty diode between blue/white and orange/white cables, replace diode block.

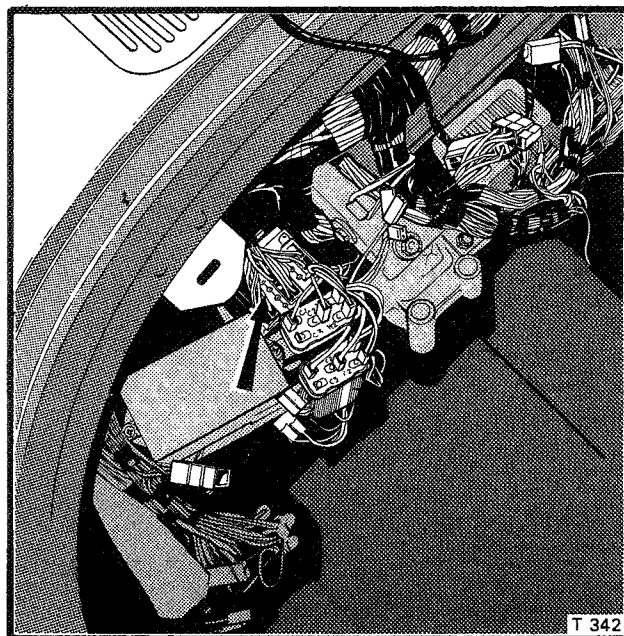
NO

Open circuit in blue/white cable between relay and diode block.

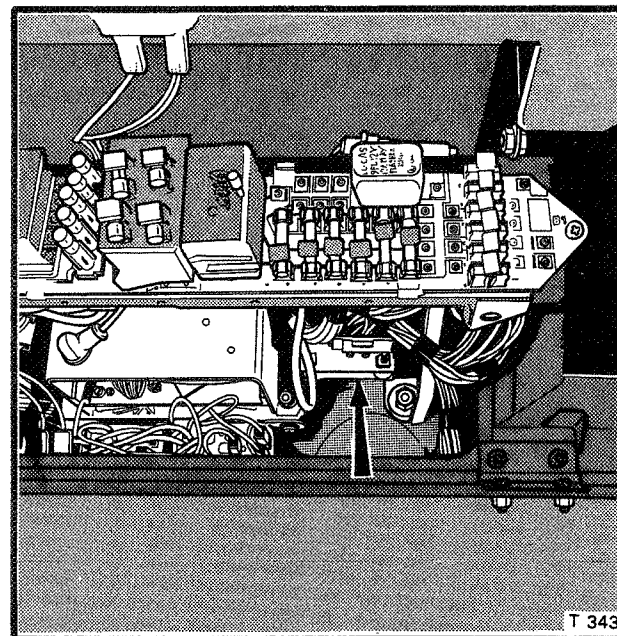
Open circuit in blue/green cable between servo and ACU switch, open circuit in blue/red cable between ACU switch & lower quantity relay or ACU switch faulty. Test for live feed using test lamp.



1. Hazard switch socket
2. A.C.U. sockets



Diode board, left-hand drive cars, viewed with top roll removed.



Diode board, right-hand drive cars.

Section C7

**System test and
fault diagnosis**

Lower quantity flap inoperative

Sheet 2 of 2

Fig. C48 continued

The air temperature surrounding the car must be above 24 °C before this diagnosis can be carried out.

