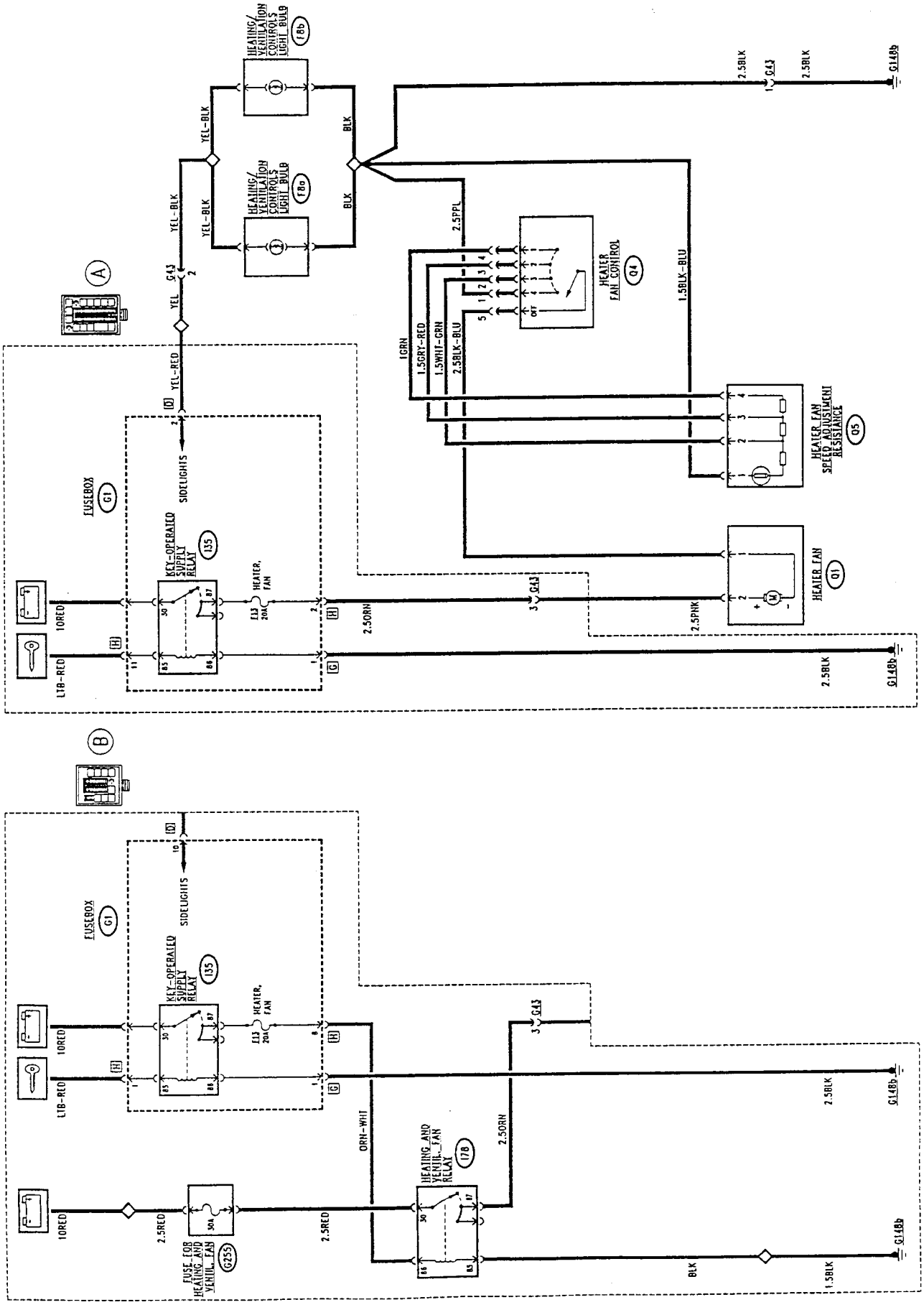
MANUALLY OPERATED RECIRCULATION

Wiring Diagram



Functional Description

Fan:

The heating and ventilation fan **Q1** is supplied with battery voltage via the key-operated services relay **I35** - located in fusebox **G1** -; in addition to the relay, the supply line also crosses fuse **F13** of fusebox **G1**.

In the versions with fusebox "B" there is a specific relay **I78** which exploits the previous line in terms of energization and supplies the fan as a direct line protected by fuse **G255** (30A).

The fan motor **Q1** is operated with an earth signal from the control knob **Q4**. This signal crosses the speed regulator **Q5**, comprising three resistances in series, the crossing of which determines the four different speeds, depending on the signal from the knob **Q4**: from pin 1 (1st speed) , from pin 2 (2nd speed), from pin 3 (3rd speed) and lastly from pin 4 (4th speed) with a direct signal that does not cross the regulator **Q5**.

The regulator **Q5** has a built-in thermal safety fuse which deactivates the circuit if the temperature exceeds 98°C.

Recirculation:

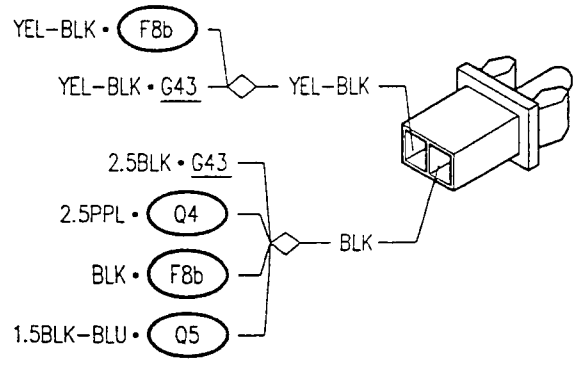
N.B. recirculation is operated mechanically through a special cable.

Controls lighting:

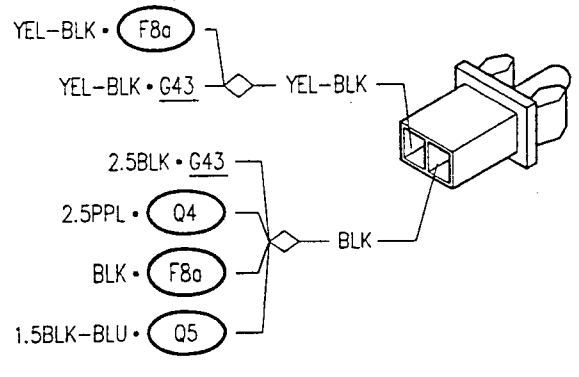
Lights **F8a** and **F8b**, inside the control panel are supplied by the sidelights circuit - connector D of fusebox **G1** (also see "Lighting of controls and Indicators").

Components and Connectors

Heating/ventilation controls light bulb	F8a

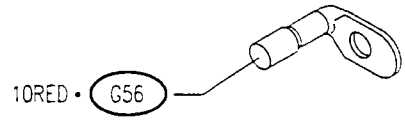


Heating ventilation controls light bulb	F8b

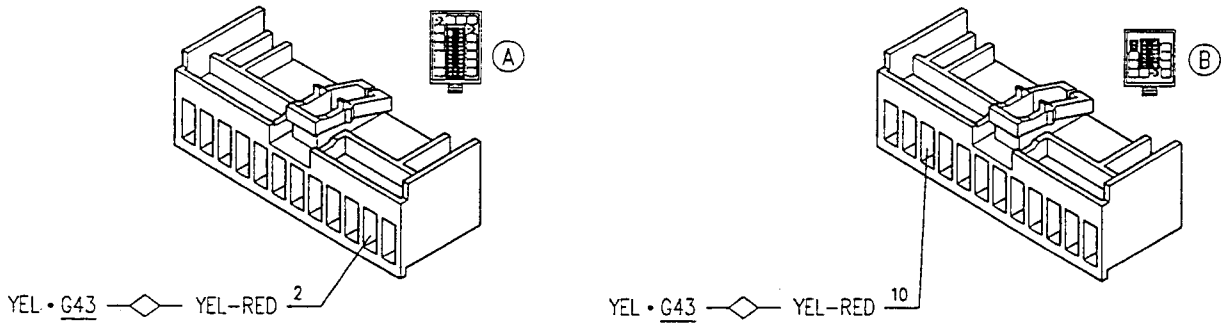


Components and Connectors (cont.d)

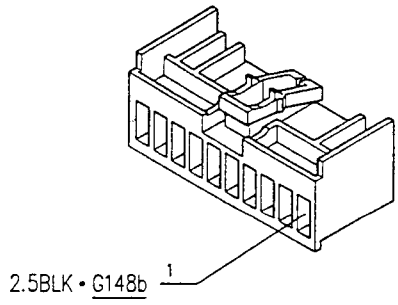
Fusebox	G1



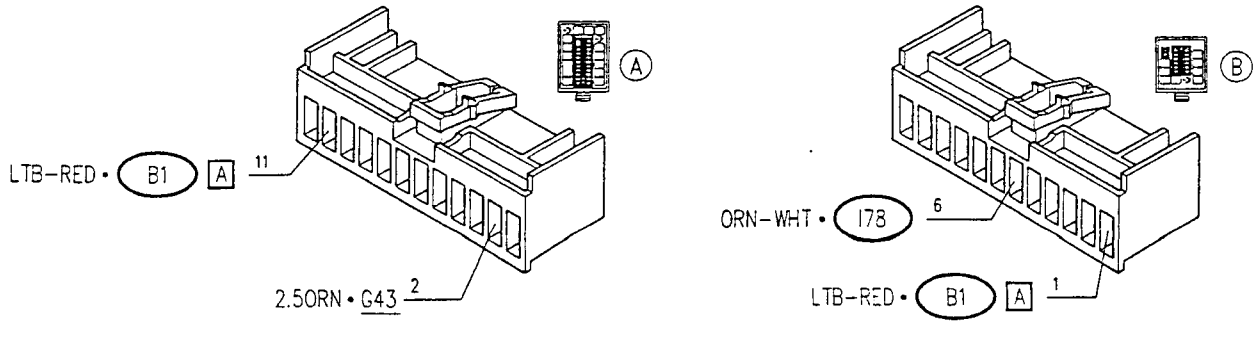
Fusebox	G1 D



Fusebox	G1 G

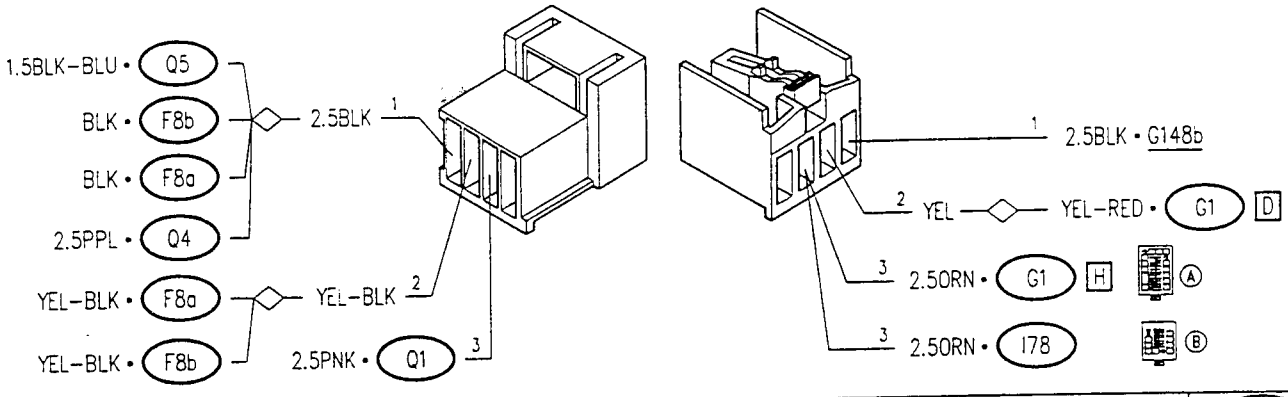


Fusebox	G1 H

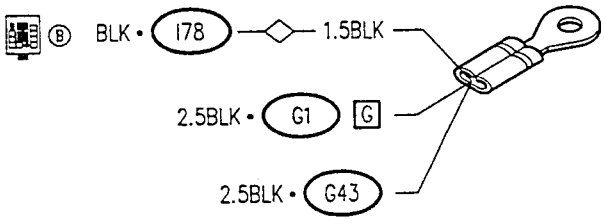


Components and Connectors (cont.d)

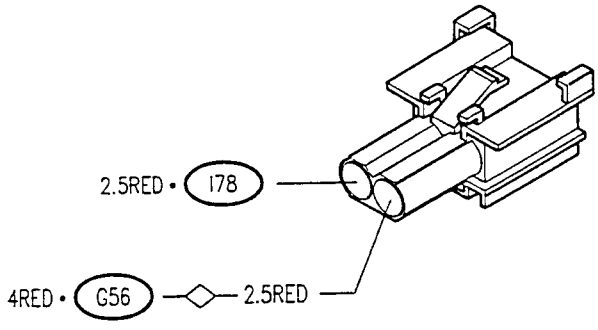
Connector for heating and ventilation control wiring — G43



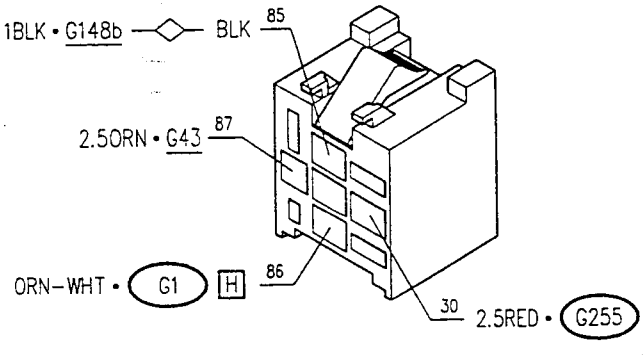
Earth under LH dashboard — G148b



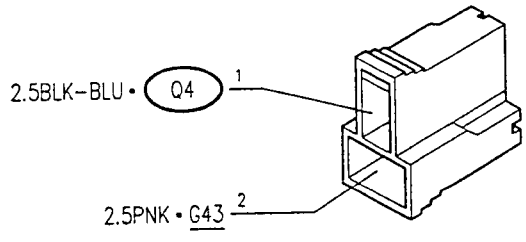
Heater fan fuse — G255



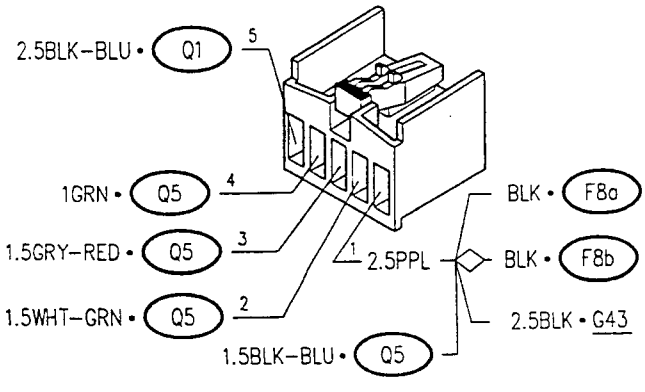
Heater fan relay — I78



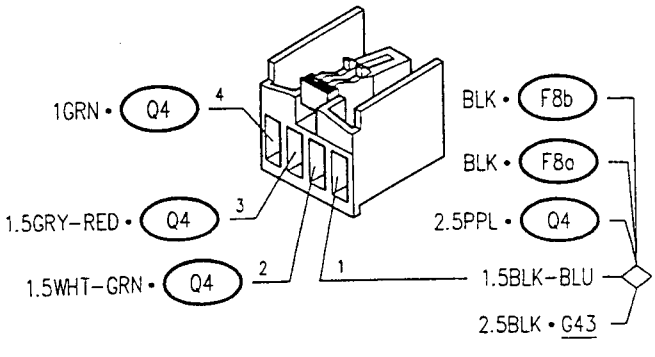
Heater fan — Q1



Heater fan control — Q4

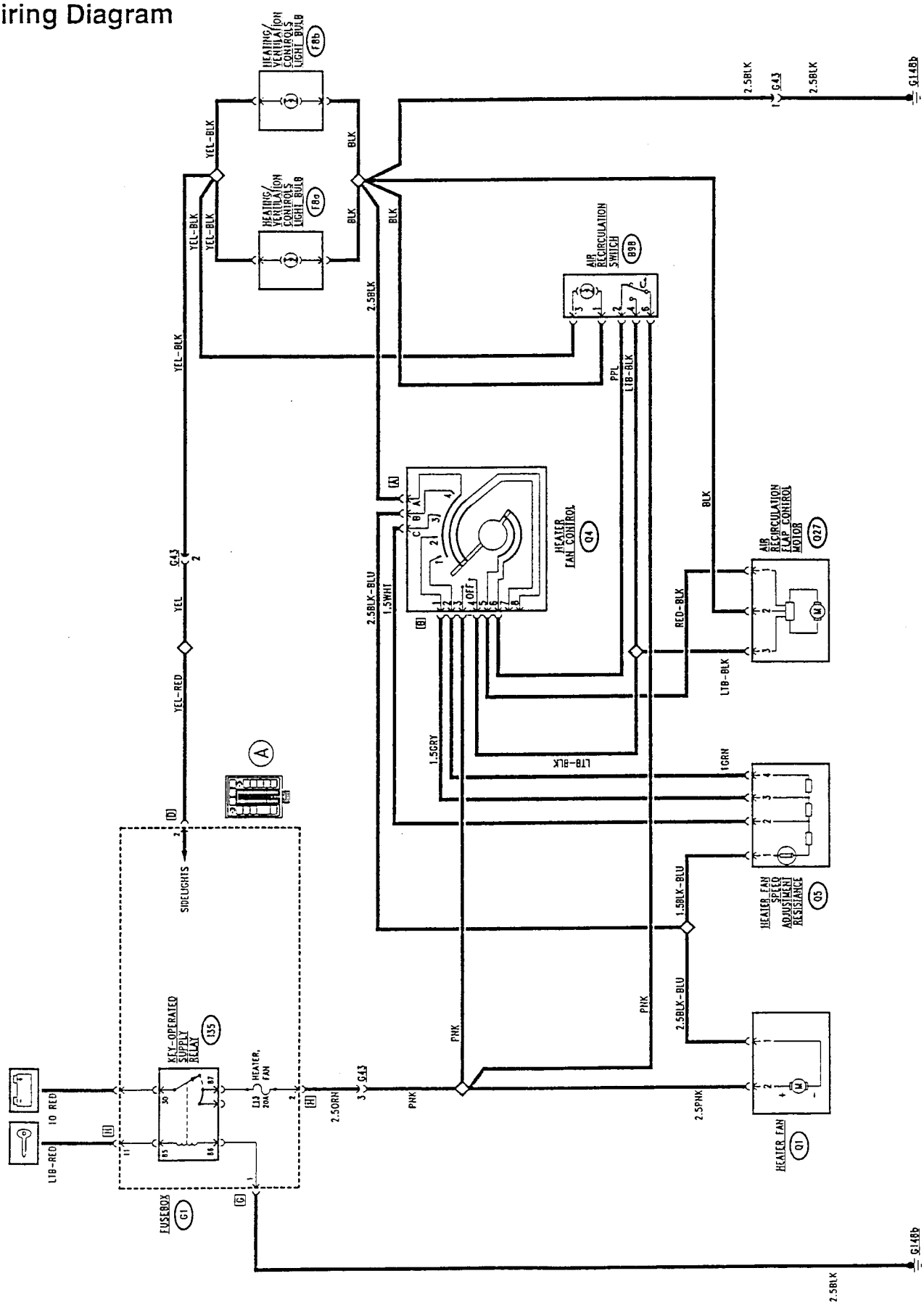


Heater fan speed adjustment resistance — Q5



ELECTRICALLY OPERATED RECIRCULATION (only for certain Markets)

Wiring Diagram



Functional Description

Heater fan:

The heater fan **Q1** is supplied with battery voltage through the key-operated services relay **I35** - located in fusebox **G1** -; in addition to the relay, the supply line also crosses fuse **F13** of fusebox **G1**.

The fan motor **Q1** is operated with an earth signal from the control knob **Q4**. This signal crosses the speed regulator **Q5**, comprising three resistances in series, the crossing of which determines the four different speeds, depending on the signal from the knob **Q4**: from pin 2 of connector B (1st speed), from pin 1 of connector B (2nd speed), from pin C of connector A (3rd speed) and lastly from pin B of connector A (4th speed) with a direct signal that does not cross the regulator **Q5**.

The regulator **Q5** has a built-in thermal safety fuse that deactivates the circuit for temperatures above 98°C.

Recirculation:

The recirculation function is operated by the motor **Q27**, according to the following logic:

- pin 2 of **Q27** always earthed;
- 12 V at pin 3 of **Q27**: the motor turns cutting in recirculation;
- 12 V at pin 1 of **Q27**: the motor turns cutting out recirculation;

Cutting in takes place via switch **B98**, but with switch **Q4** on "0", "1", etc...:

- switch **B98** not pressed: recirculation not operational;
- switch **B98** pressed: recirculation operational.

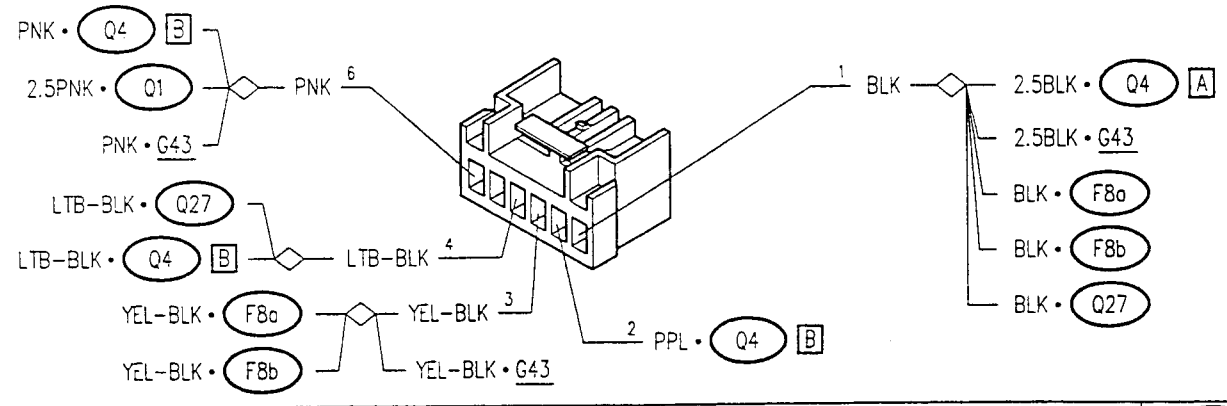
N.B. : With switch **Q4** at "OFF" recirculation is still engaged regardless of the position of switch **B98**

Controls lighting:

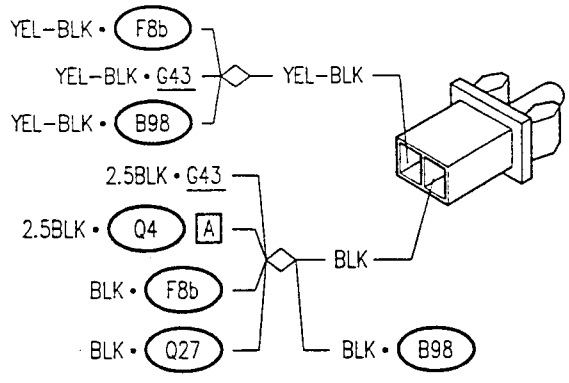
Lights **F8a** and **F8b**, inside the control panel, together with the leds next to switch **B98** are supplied by the sidelights circuit - connector D of fusebox **G1** (also see "Lighting of controls and indicators").

Components and Connectors

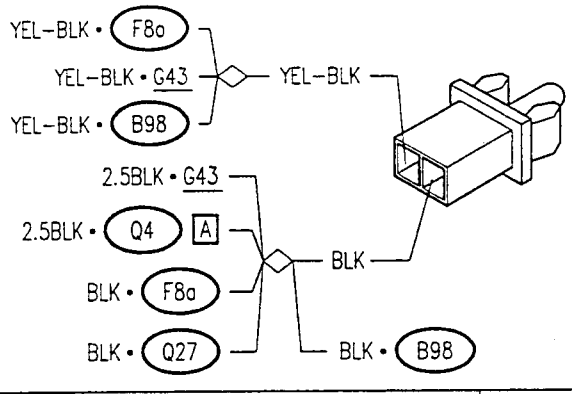
Air recirculation switch — B98



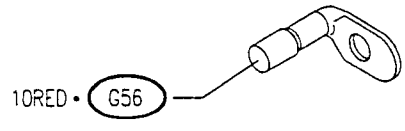
Heating/ventilation controls light bulb — F8a



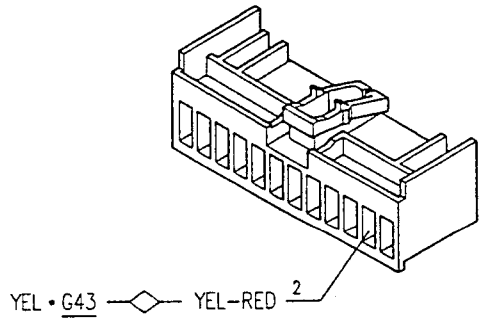
Heating ventilation controls light bulb — F8b



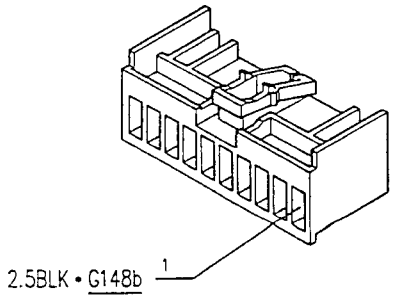
Fusebox — G1



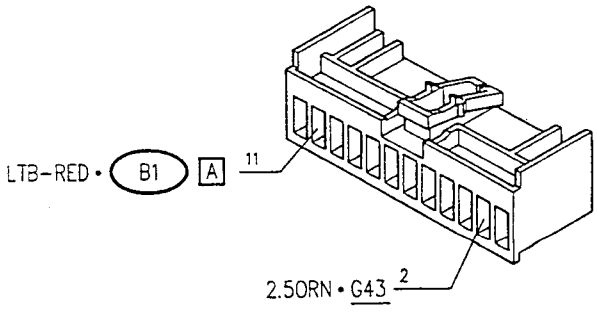
Fusebox — G1 D



Fusebox — G1 G

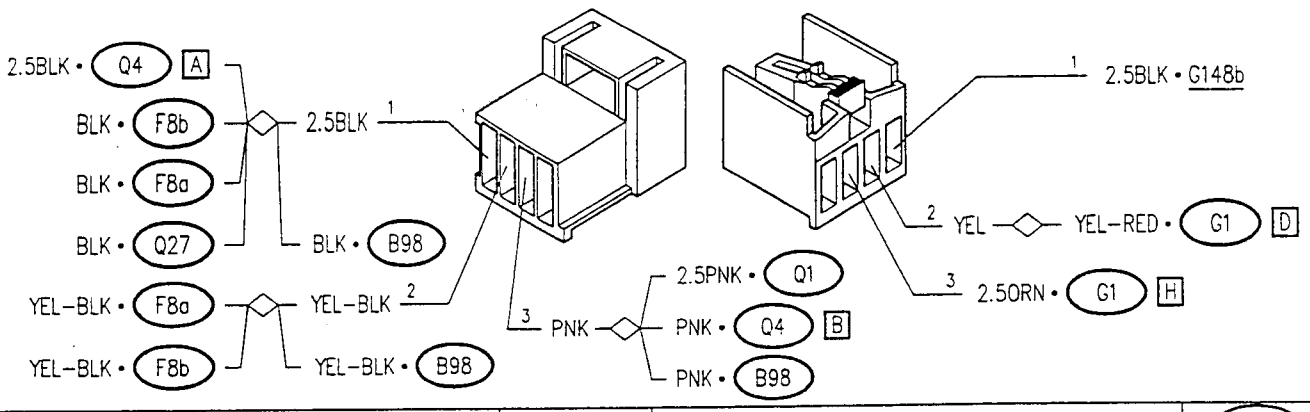


Fusebox — G1 H

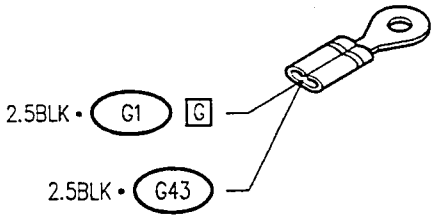


Components and Connectors (cont.d)

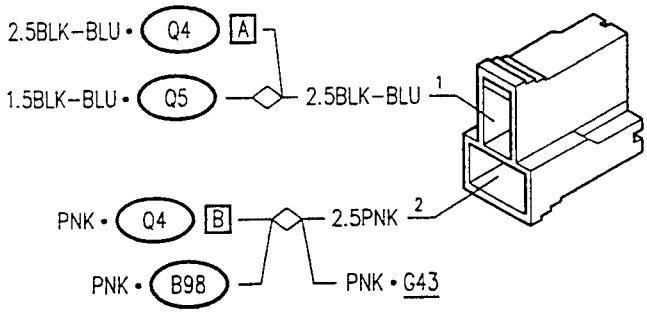
Connector for heating and ventilation control wiring — G43



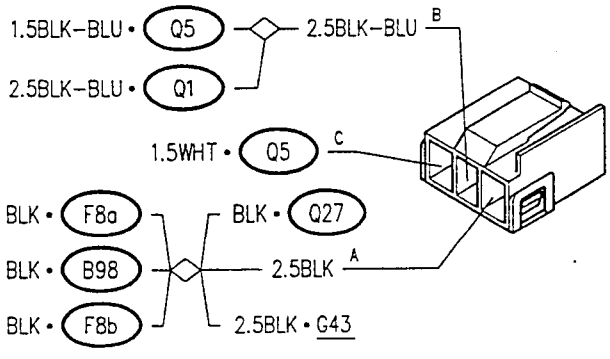
Earth under LH dashboard — G148b



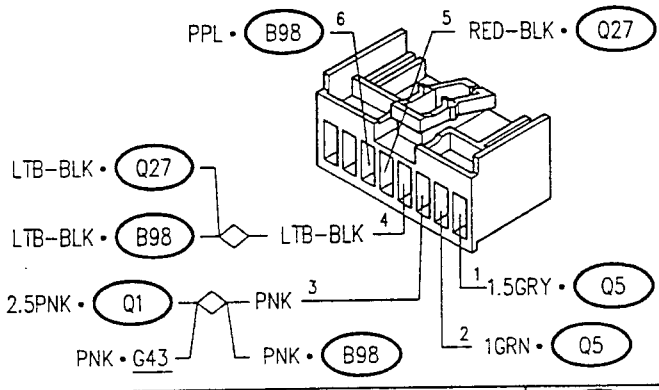
Heater fan — Q1



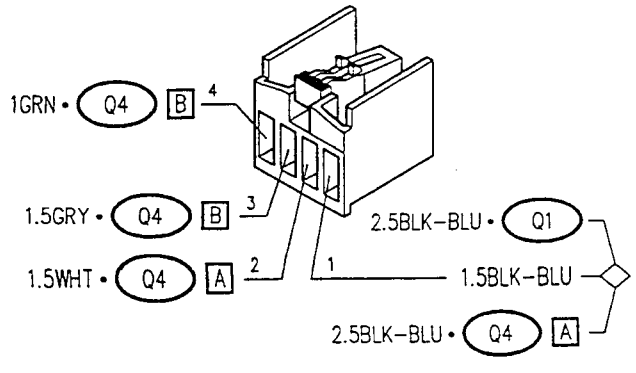
Heater fan control — Q4 A



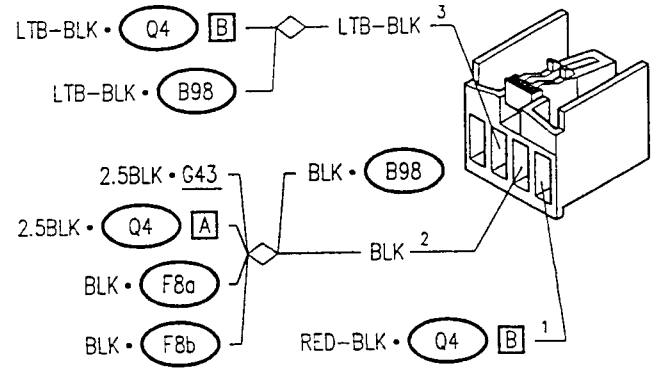
2Heater fan control — Q4 B



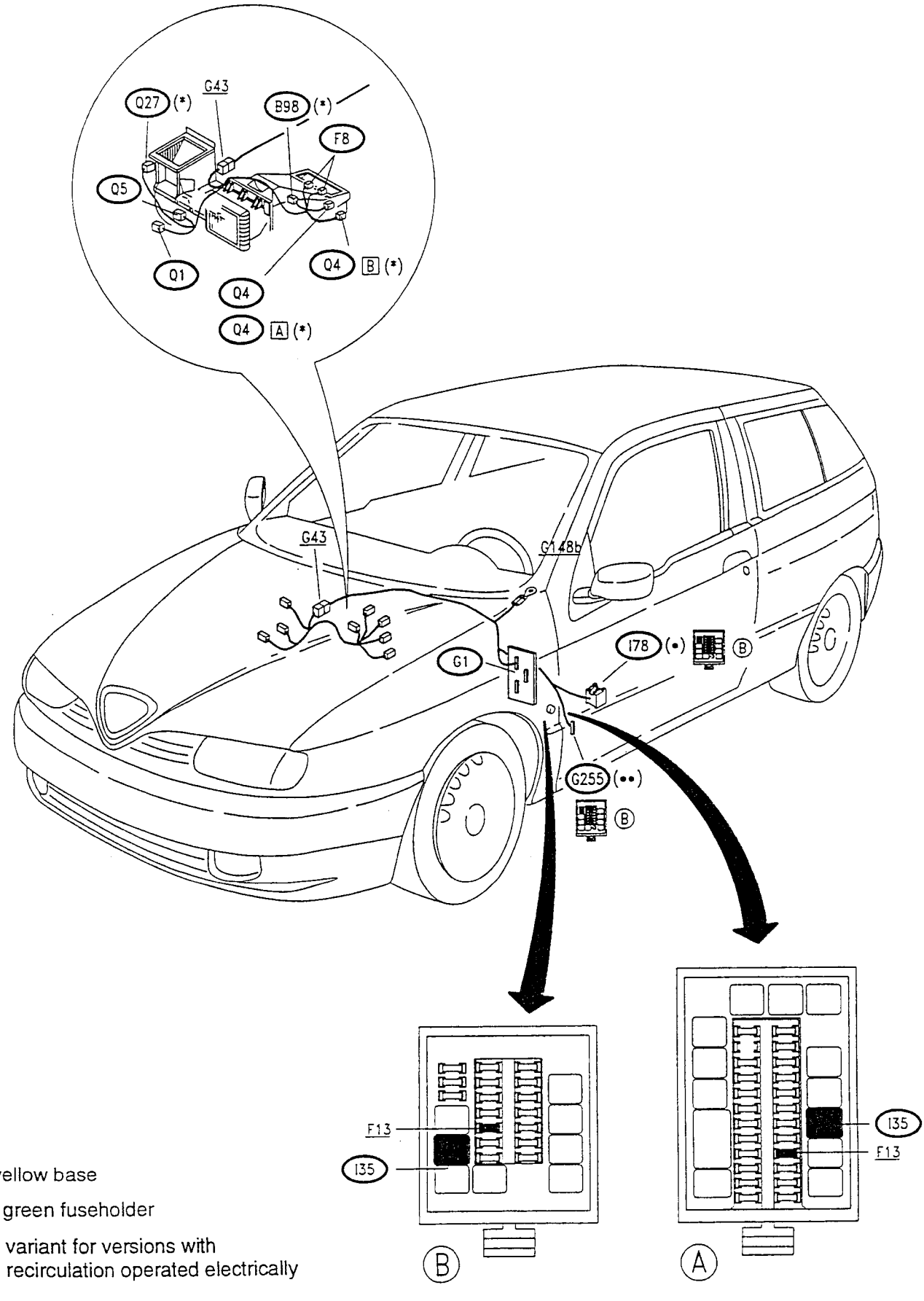
Heater fan speed adjustment resistance — Q5



Air recirculation port control motor — Q27



LOCATION OF COMPONENTS



(•) yellow base

(••) green fuseholder

(*) variant for versions with recirculation operated electrically

FAULT-FINDING TABLE

NOTE: air distribution to the passenger compartment and air heating/cooling are controlled mechanically. Therefore for failures such as the lack of heating/ventilation, incorrect air distribution, etc...., see Group 50 "HEATING AND VENTILATION"

Fault	Component to be checked									
	F13	G255 (B)	Q1	I78 (B)	Q5	Q4	Q27	B98	F8a (2)	F8b (2)
Fan engagement	•	•	•	•		•				
Fan engagement at different speeds					•	•				
Recirculation function (1)						•	•	•		
Control panel lighting									•	•

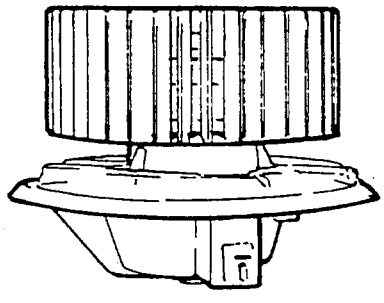
(1) only for certain Markets: in other versions this function is controlled mechanically.

(2) it is possible to change individual bulbs with their bulb holder.

(B) only for fusebox "B"

CHECKING COMPONENTS

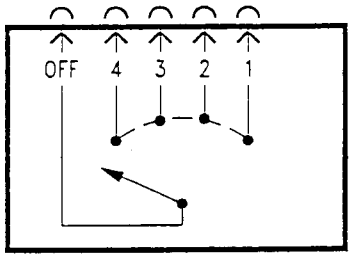
Heater fan Q1

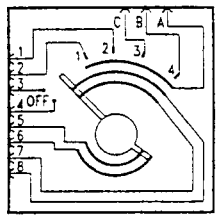


SPECIFICATIONS	
Nominal voltage	12V
Speed at 12V/25°C in free air with impeller and support	3400 $^{+200}_{-100}$ rpm
Power yielded at 12V/25°C at above-mentioned speed	110 W
Motor direction of rotation	leftwards impeller side

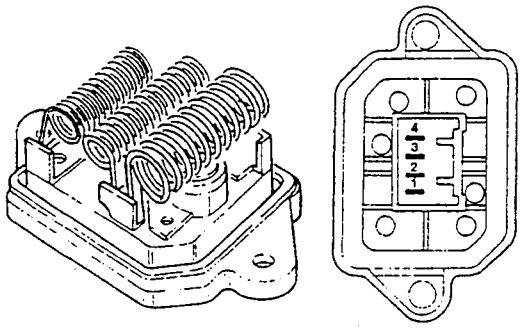
Heating/ventilation fan control (Q4)

Check the contacts corresponding to the different positions of the knob.





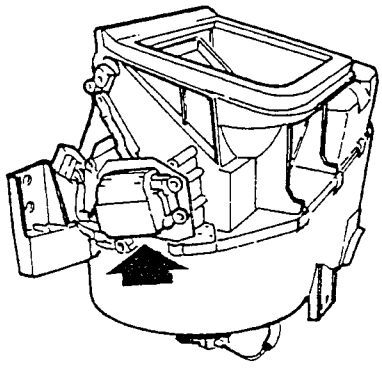
Heating/ventilation fan speed adjustment resistance (Q5)



SPECIFICATIONS		
Piece crossed	Total resistance	Fan speed
4-1 3-1 2-1 none	3.55 Ω 1.35 Ω 0.35 Ω -	1st 2nd 3rd 4th
Thermal fuse cut in temperature		98°C

Recirculation flap control motor (Q27)

(only for certain versions)



SPECIFICATIONS
12 V at pin 1 and 0 V at pin 2 = **counterclockwise** rotation of output shaft
12 V at pin 3 and 0 V at pin 2 = **clockwise** rotation of output shaft