



ADDITIONAL HEATER

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ADDITIONAL HEATER - Description

The climate control via the heater unit is insufficient when the engine is cold, especially in Diesel engines which are slow to warm up.

These engines may optionally be fitted with a supplementary heater system. This remains active from the moment when the engine is turned on until a certain temperature is reached.

The system consists of an additional heater, located in the heater unit: the device contains three resistances (PTC).

The operation of the resistances is controlled by the climate control unit which either operates only one, two or three of them, providing gradual heating, with a maximum power of 700 W following a logic which depends on:

- I the temperature of the engine coolant (about 60° ?);
- I the engine speed (which should be above 700 rpm).
- I the battery voltage (which should not go below 12.2 V).

For more details 5040 AIR CONDITIONING CASING AND COMPONENTS .

The heater coil supply line is protected by a special maxifuse and two special shunt fuses located on the engine compartment partition.

ADDITIONAL HEATER - Functional description

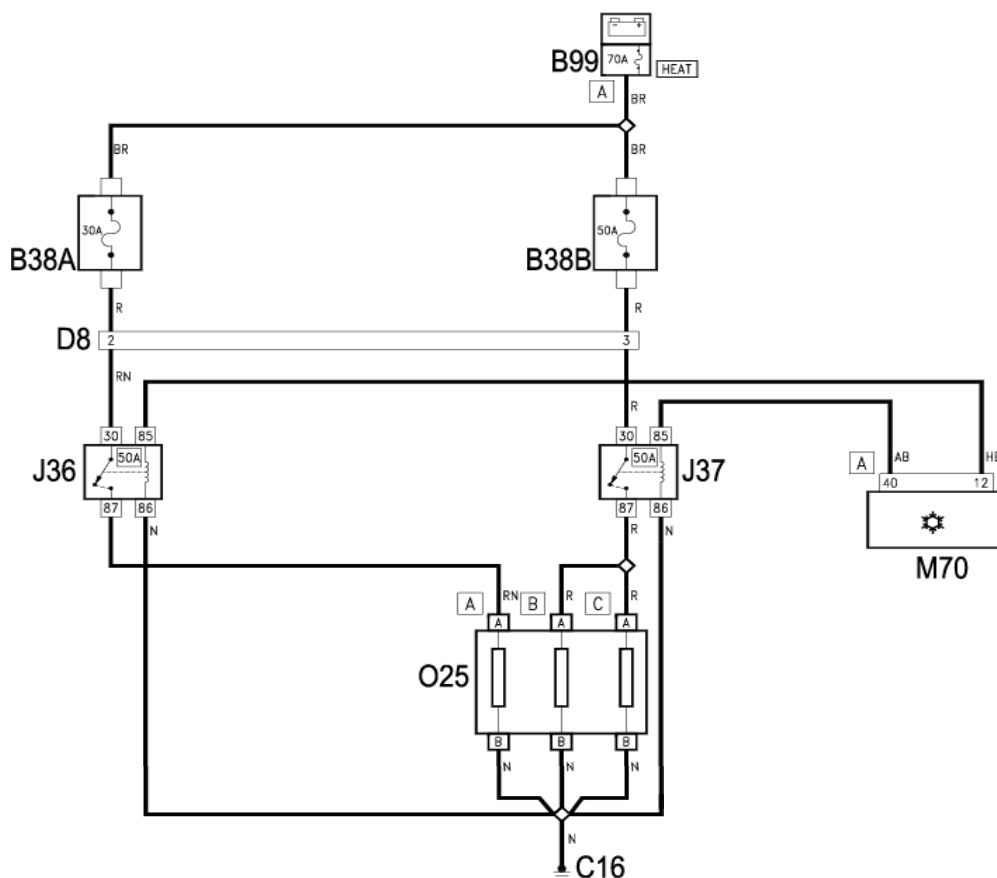
Relays J36 and J37 control the engagement of the resistors O25 .

The power supply to heating coils O25 reaches the battery from the line of the HEAT maxifuse located directly on battery A1 - connettore D,

The relay J36 controls the engagement of the first additional heater coil: the relay power supply is received from shunt fuse B38A; The climate control unit M70 sends the enabling signal for engaging the first resistance O25A from pin 12 of connector A: this signal excites relay J36.

The relay J37 controls the engagement of the other two additional heater coils. The relay power supply is received from shunt fuse B38B The control unit M70 sends a signal for enabling the engagement of the two resistances O25B and O25C from pin 40 of connector A: this signal energizes the relay J37.

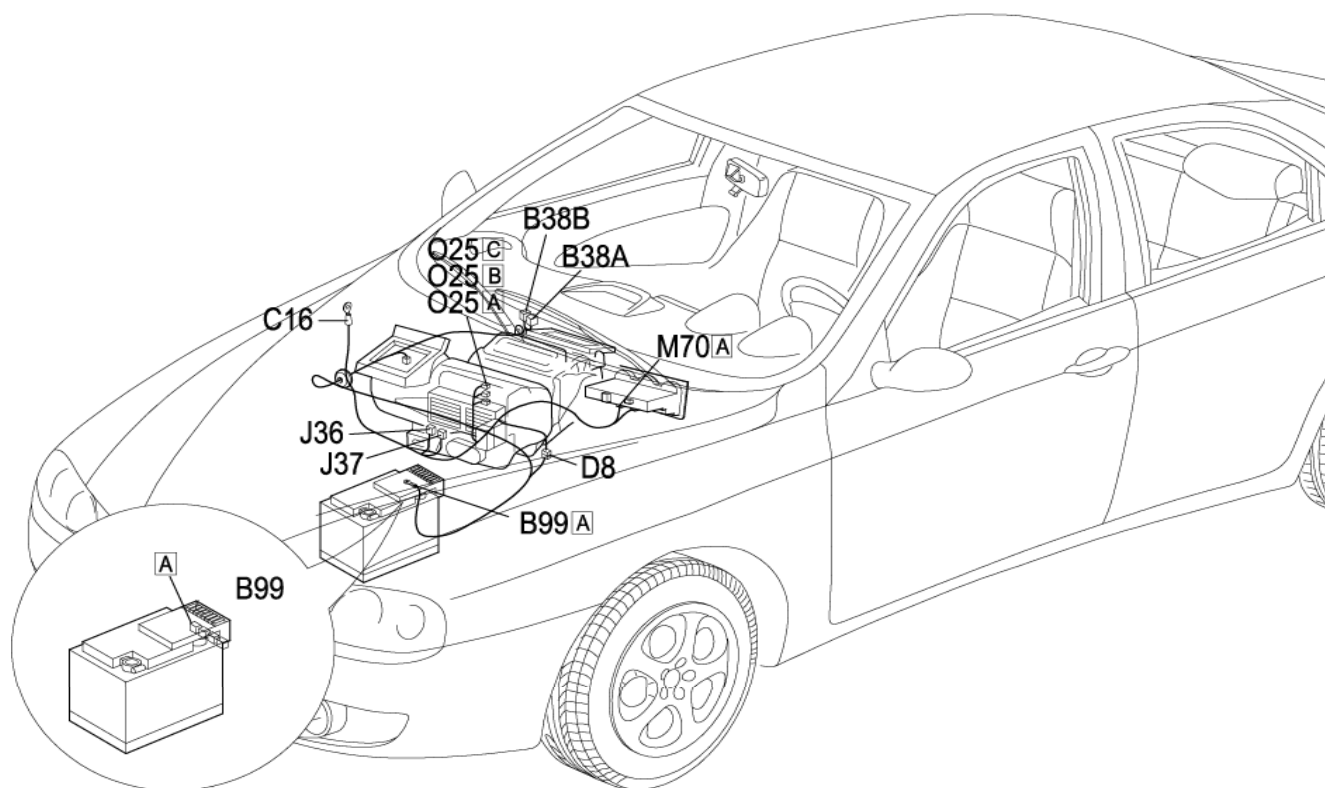
ADDITIONAL HEATER - Wiring diagram



Component code	Name	Assembly
A1	Battery	-
A1	Battery	5530B
B1	Junction unit	5505A
B5	MAXI FUSE box-1	-
B5	MAXI FUSE-1 box	-
B10	Fuse controlled by ignition (INT/A)	-
B10	Key-dependent supply fuse (INT/A)	-
B38	Additional heater fuse	-
B98	Supplementary fuse box	5505A
B99	Maxifuse box on battery	-
B99	Maxifuse box on battery	5530B
C1	Battery earth	-
C1	Battery earth	5530B
C10	Front left earth	5505A
C16	Air conditioning earth	-
C20	Passenger side dashboard earth	5505A
C41	Earth cable loom for additional heater	-
D4	Front/engine connection	-
D8	Front / air conditioning - heater coupling	-

D8	Front coupling / air conditioner - with heating	-
D21	Dashboard/air conditioning-heater connection	-
D21	Dashboard/air conditioning-heater coupling	-
D22	Additional heater junction	-
D22	Front./dashboard coupling for additional heater	-
D22	Front/dashboard connection for additional heater	-
J36	Additional heater relay - 1	-
J36	Additional heater relay -1	-
J36	Additional heater relay	-
J37	Additional heater relay - 2	-
J37	Additional heater relay	-
J38	Additional heater safety relay	-
K80	Additional heater temperature sensor	-
K80	Additional heater temperature sensor	1004B
M10	Engine management control unit	1060G
M70	Climate control system control unit	5040D
M75	Additional heater control unit	5020L
O25	Additional heater resistance	5020L
O25	Additional heater resistance	5020L
O25	Additional heater resistor	5020L
O25	Additional heater resistor	5020L

ADDITIONAL HEATER - Location of components



Component code	Name	Assembly
A1	Battery	-
A1	Battery	5530B
B1	Junction unit	5505A
B5	MAXI FUSE box-1	-
B5	MAXI FUSE-1 box	-
B10	Fuse controlled by ignition (INT/A)	-
B10	Key-dependent supply fuse (INT/A)	-
B38	Additional heater fuse	-
B98	Supplementary fuse box	5505A
B99	Maxifuse box on battery	-
B99	Maxifuse box on battery	5530B
C1	Battery earth	-
C1	Battery earth	5530B
C10	Front left earth	5505A
C16	Air conditioning earth	-
C20	Passenger side dashboard earth	5505A
C41	Earth cable loom for additional heater	-
D4	Front/engine connection	-
D8	Front / air conditioning - heater coupling	-

D8	Front coupling / air conditioner - with heating	-
D21	Dashboard/air conditioning-heater connection	-
D21	Dashboard/air conditioning-heater coupling	-
D22	Additional heater junction	-
D22	Front./dashboard coupling for additional heater	-
D22	Front/dashboard connection for additional heater	-
J36	Additional heater relay - 1	-
J36	Additional heater relay -1	-
J36	Additional heater relay	-
J37	Additional heater relay - 2	-
J37	Additional heater relay	-
J38	Additional heater safety relay	-
K80	Additional heater temperature sensor	-
K80	Additional heater temperature sensor	1004B
M10	Engine management control unit	1060G
M70	Climate control system control unit	5040D
M75	Additional heater control unit	5020L
O25	Additional heater resistance	5020L
O25	Additional heater resistance	5020L
O25	Additional heater resistor	5020L
O25	Additional heater resistor	5020L