CHECK PANEL

INDEX

GENERAL DESCRIPTION

The vehicle efficiency check device, the "Check Panel", continually verifies the correct operation of the most important electrical systems, particularly those connected with safety.
A display immediately alerts the driver if a malfunction or anomaly is detected in one of the controlled systems and the relative led-warning light then comes on.
When the ignition key is engaged an initial check of the controlled systems is carried out.

OPERATING LOGIC
The Check Panel device is formed by:

- a display **C16**, located in the centre of the dashboard;
- an electronic control unit **N59**, located in the fusebox **G1**;
- a series of sensors which measure the controlled values.

The operations are based on the capability of determining certain conditions of certain electrical functions:

- inappropnate electrical charge
- anomalous opening or closing of a circuit.

These functions are carried out, for a few of the controlled systems, by the electronic control unit **N59**, while the other signals reach the display **C16** straight from the sensors.

The controlled systems are the following:

- insufficient windscreen washer fluid indicator;
- insufficient engine oil level indicator;
- insufficient engine coolant indicator;
- stop-light malfunction indicator;
- rear fog light malfunction indicator;
- sidelights malfunction indicator;
- number plate light malfunction indicator;
- door open indicator.

A digital clock with relative buttons for adjustment and setting are also incorporated in the display.

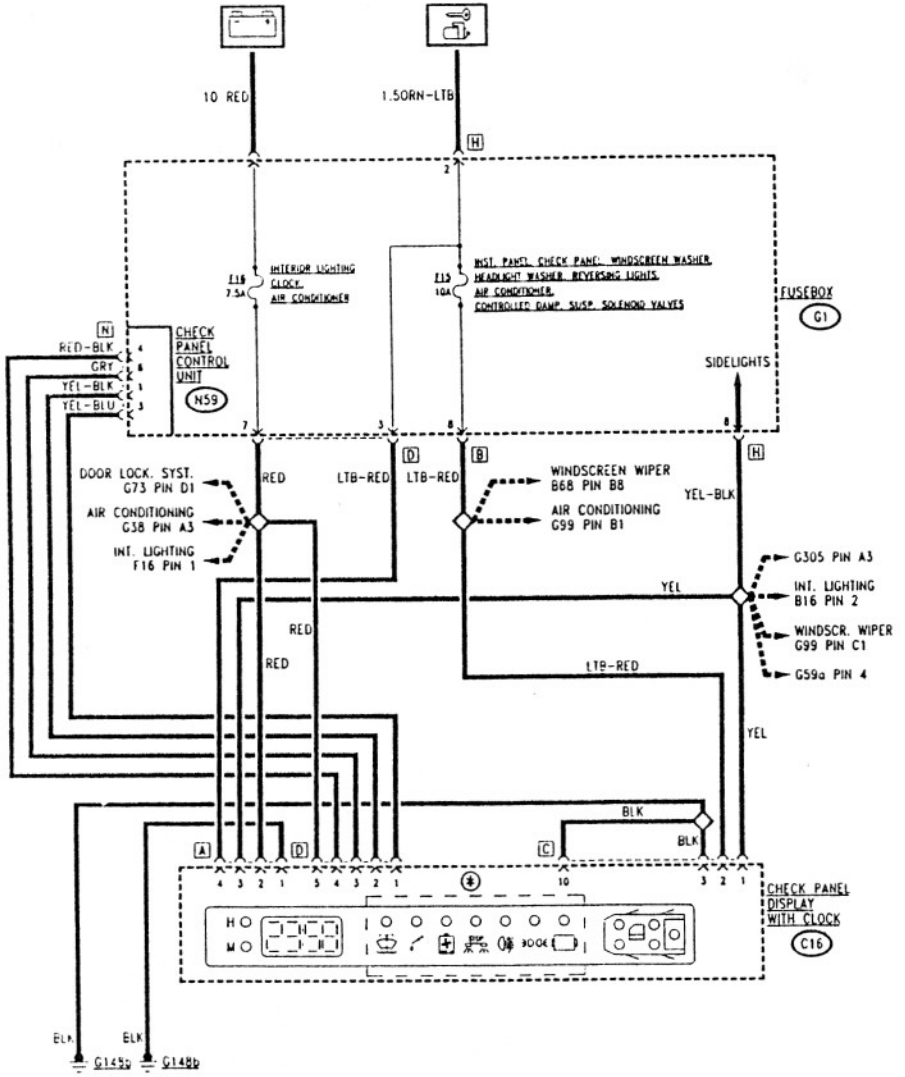
N.B. Models not equipped with the complete Check Panel device are however fitted with a display with clock and the leds signalling "door open". For these models only the diagrams relative to

- power supply and clock
- door open indicator

should be considered

POWER SUPPLY AND CLOCK

Wiring Diagram



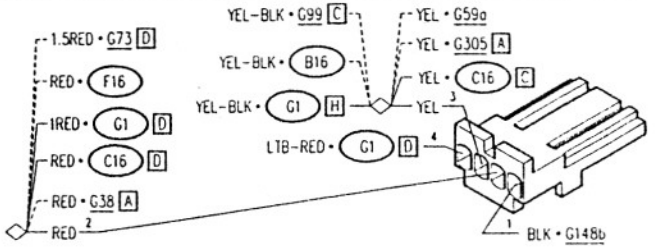
(*) Only for versions with Check Panel

Functional Description

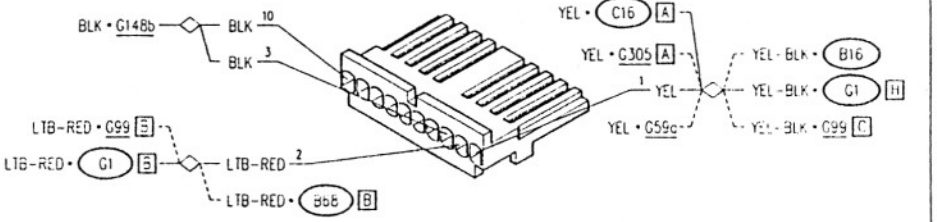
The display **C16** is supplied by battery voltage via fuse **F16** (7.5A) of fusebox **G1** which is connected to pin 5 of connector D of the display itself.
Pins 1,2,3,4 of connector D connect the display to the control unit **N59**.
Pin 1 of connector C receives a power supply signal from the sidelights circuit which, when the lights are on, lights up the ideograms on the display.
Pin 2 is turn-key supplied via fuse **F15** (10A) in fusebox **G1**, while pin 3 and pin 10 are grounded.
The clock is also directly supplied by battery voltage through fuse **F16** of fusebox **G1**, to pin 2 of connector A. Pin 1 of the connector is grounded while pin 4 reaches the turn-key supply which lights up the digits of the clock itself; a sidelights signal reaches pin 3 which lowers the light intensity of the display.

Components and Connectors

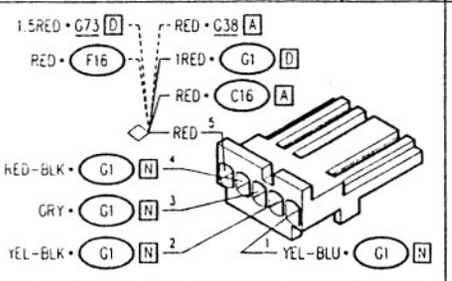
Check panel display with clock — C16 A



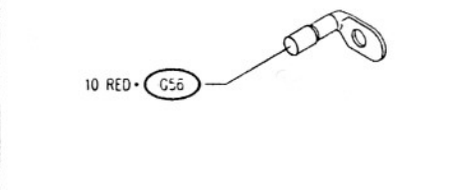
Check panel display with clock — C16 C



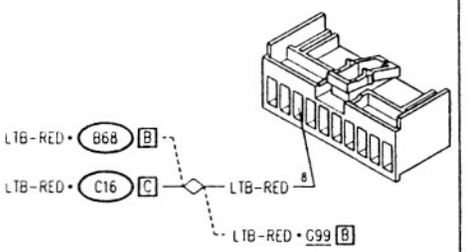
Check panel display with clock (C16) [D]



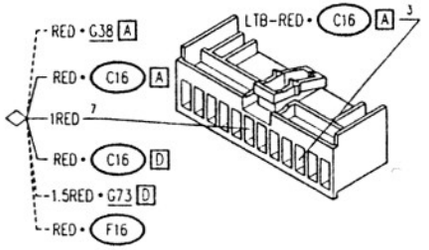
Fusebox (G1) [D]



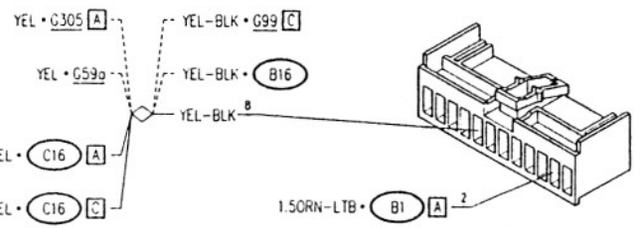
Fusebox (G1) [B]



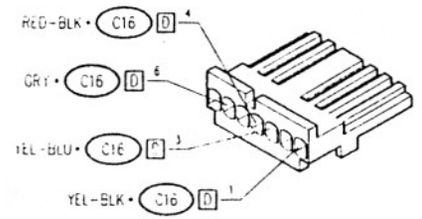
Fusebox (G1) [D]



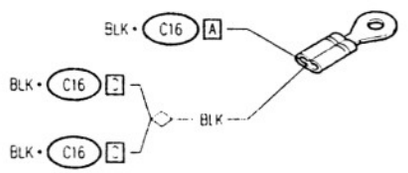
Fusebox (G1) [H]



Fusebox (G1) [N]

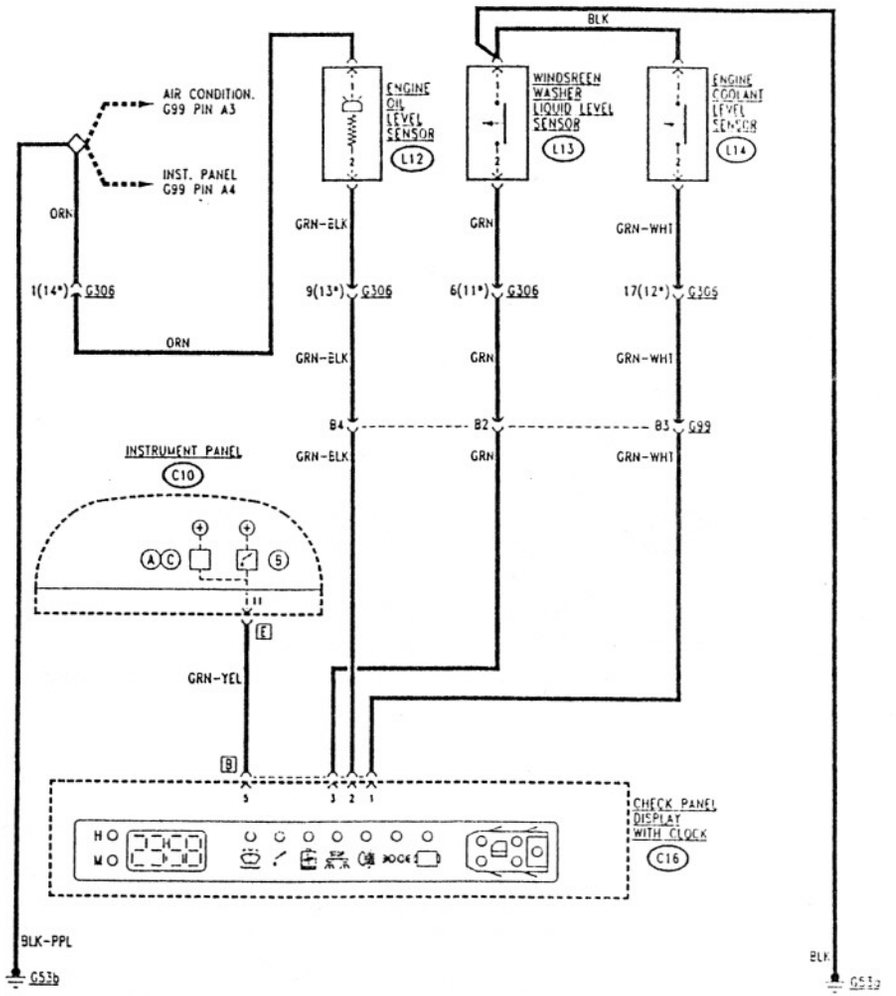


Under-dashboard ground-left side G148b



LEVELS CHECK

Wiring Diagram



(A) Basic instrument panel
(B) Sports-type panel
(C) Simplified panel
(*) from chassis N.____

Functional Description

Three special sensors, with a ground signal sent directly to display **C16**, alert the driver that the level of some of the fluids is insufficient.

The engine coolant level sensor **L14** is located in the relative reservoir. It is formed by a float which, when the level of the liquid falls, closes a contact of a hermetically sealed switch and sends a ground signal to display **C16**, at pin 1 of connector B.

The windscreen washer liquid sensor **L13**, also located in the relative reservoir, like sensor **L14**, is composed of a contact which is closed by a float and sends a ground signal to pin 3 of connector B of display **C16**.

The engine oil level sensor **L12** is located at the tip of a rod immersed in the sump oil. It is composed of a pair of contacts located at the ends of a bimetal strip which is heated by a resistance. The heat generated is normally dissipated by the oil and the contacts stay closed; when the oil level falls the heat causes the circuit to open and interrupts the signal sent to pin 2 of connector B of display **C16**.

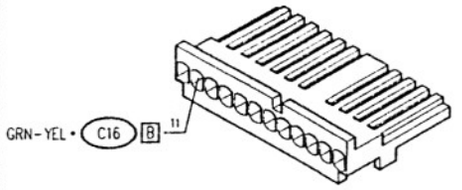
NOTE: The signal is analyzed by the Check Panel device only when the engine is started

The same signal is sent by pin 5 to pin 11 of connector E of the instrument panel **C10** to light up the "Engine oil minimum level" warning lamp (in the basic A version or in the simplified C version of the instrument panel this warning lamp is a simple amber light and has no ideograms).

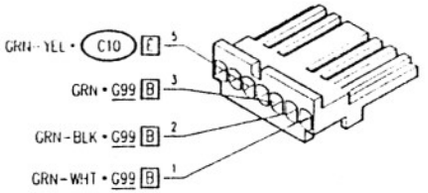
NOTE: The intervention logic ensures that even a brief signal is sent to the instrument panel to switch on the warning lamp, while the led on the Check Panel stays on continuously only when the signal persists.

Components and Connectors

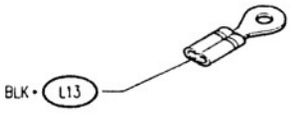
Instrument panel — C10 E



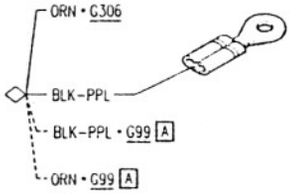
Check panel display with clock — C16 B



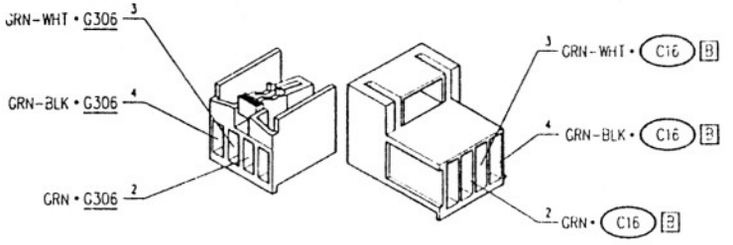
Engine compartment ground-right side — G53a



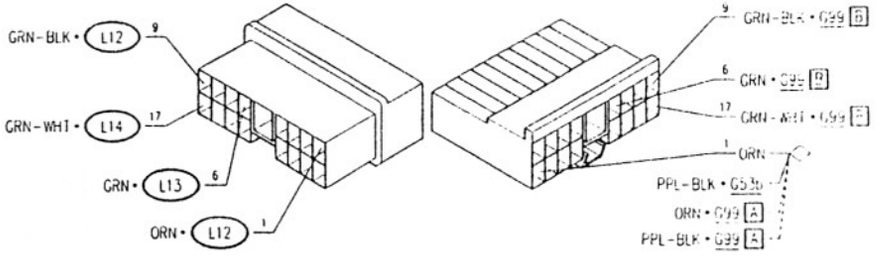
Engine compartment ground-left side — G53b



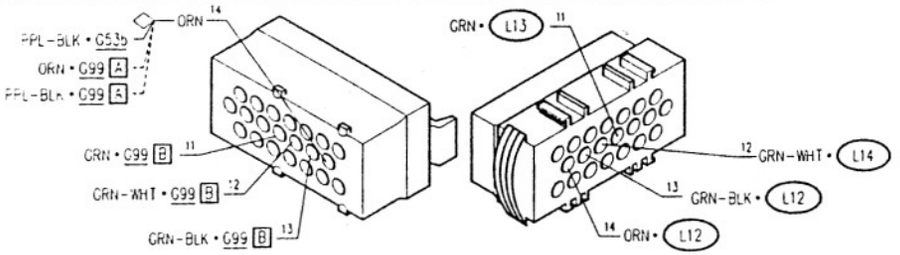
Dashboard/engine connection — G99 B



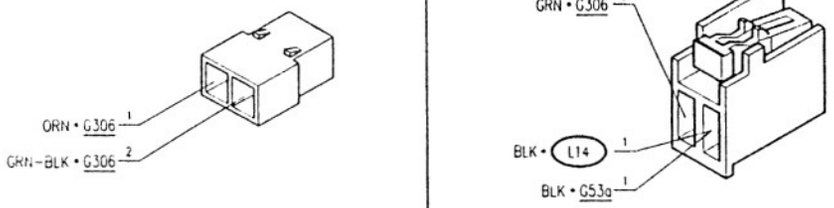
Engine wiring/right engine wiring connection (up to chassis N.___) — G306



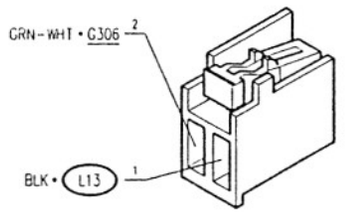
Engine wiring/right engine wiring connection (from chassis N.___)	G306



Engine oil level sensor	L12	Windscreen washer liquid level sensor	L13

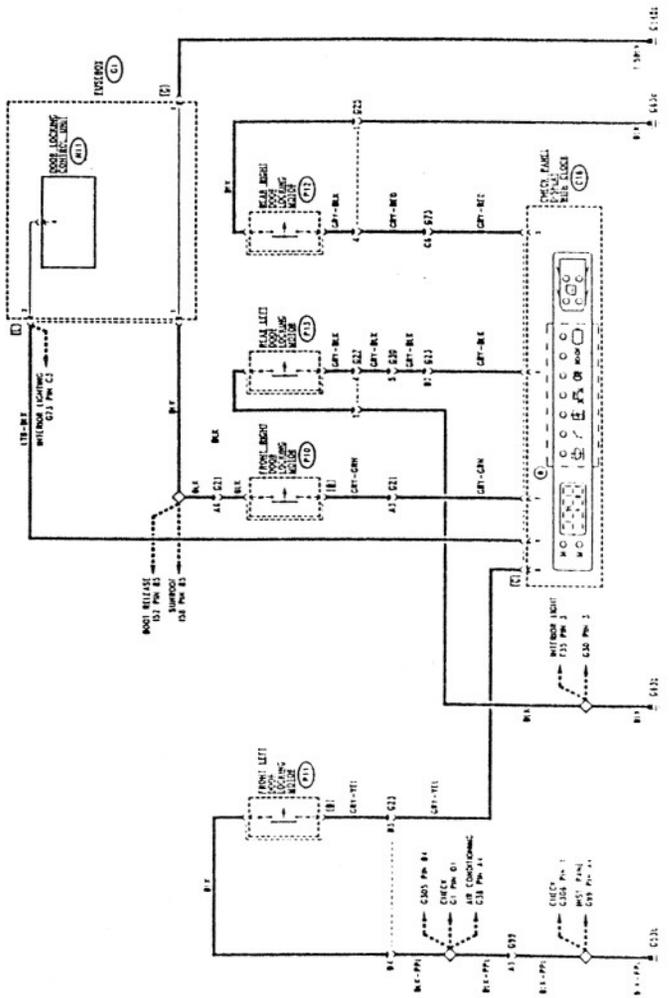


Engine coolant level sensor	L14



DOOR OPEN INDICATOR

Wiring Diagram



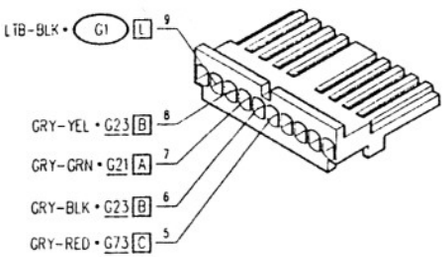
Functional Description

The door locking device - **P10, P11, P12, P13** - located on each door near the locks, also contains a microswitch which closes when the door itself is open, and sends a ground signal to the display **C16** at pins 5,6,7 and 8 of connector C.

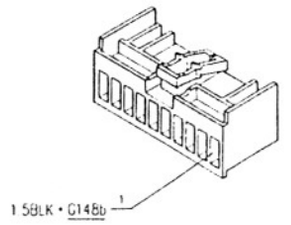
Pin 9 is connected to the door lock control unit **N11** and to the Check Panel control unit **N59**, located inside fusebox **G1**, in order to signal the incorrect closure of the doors and prevent locking/unlocking of the locks (see "Door locking system").

Components and Connec

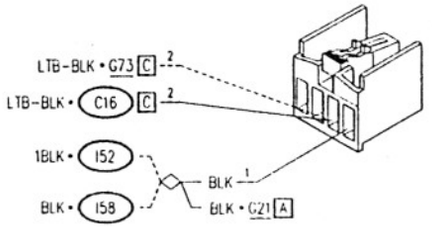
Check panel display with clock — C16 C



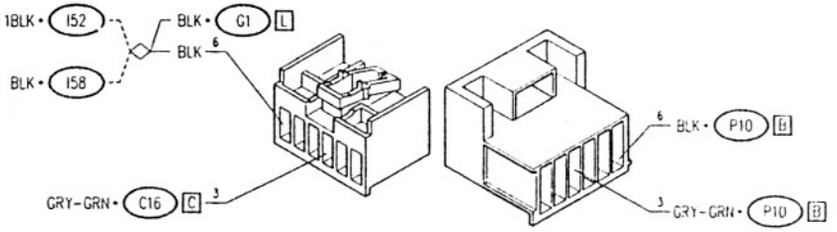
Fusebox — G1 G



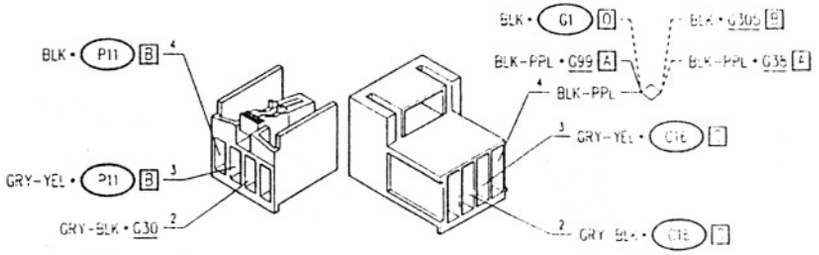
Fusebox — G1 L



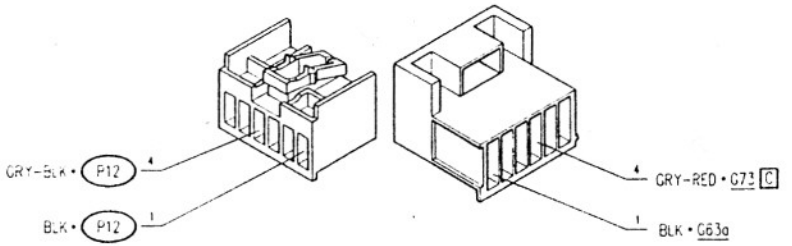
Connector for front right door wiring — G21 A



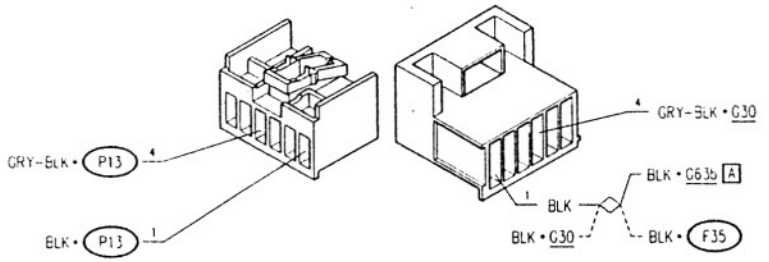
Connector for front left door wiring — G23 B



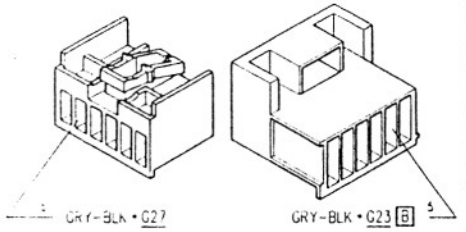
Connector for rear right door wiring — G25



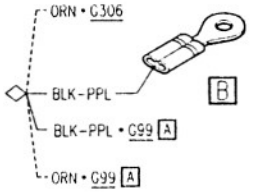
Connector for rear left door wiring — G27



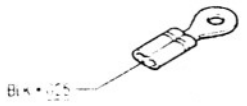
Connector for door lock — G30



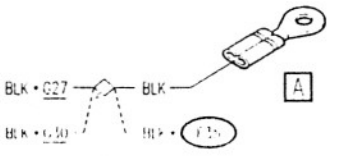
Engine compartment ground-left side — G53b



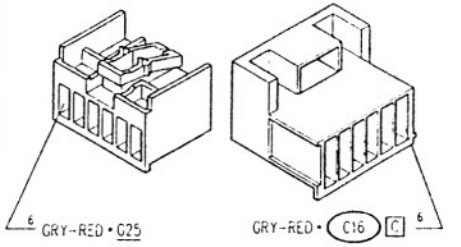
Rear right ground — G63a



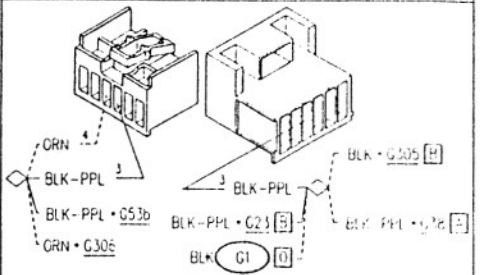
Rear left ground — G63b



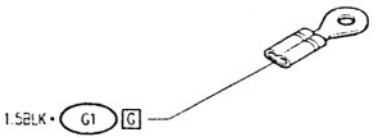
Connector for rear services — G73 C



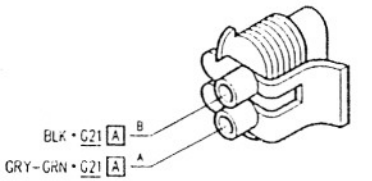
Dashboard/engine connection — G99 A



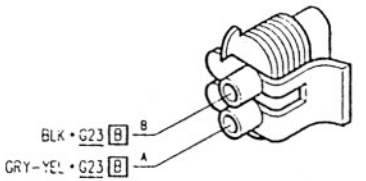
Under-dashboard ground-left side — G148b



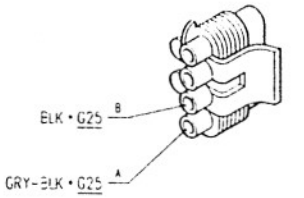
Front-right door locking motor — P10 B



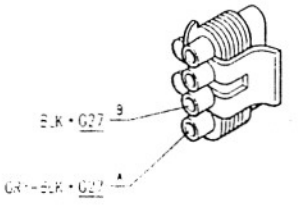
Front-left door locking motor — P11 B



Rear-right door locking motor — P12

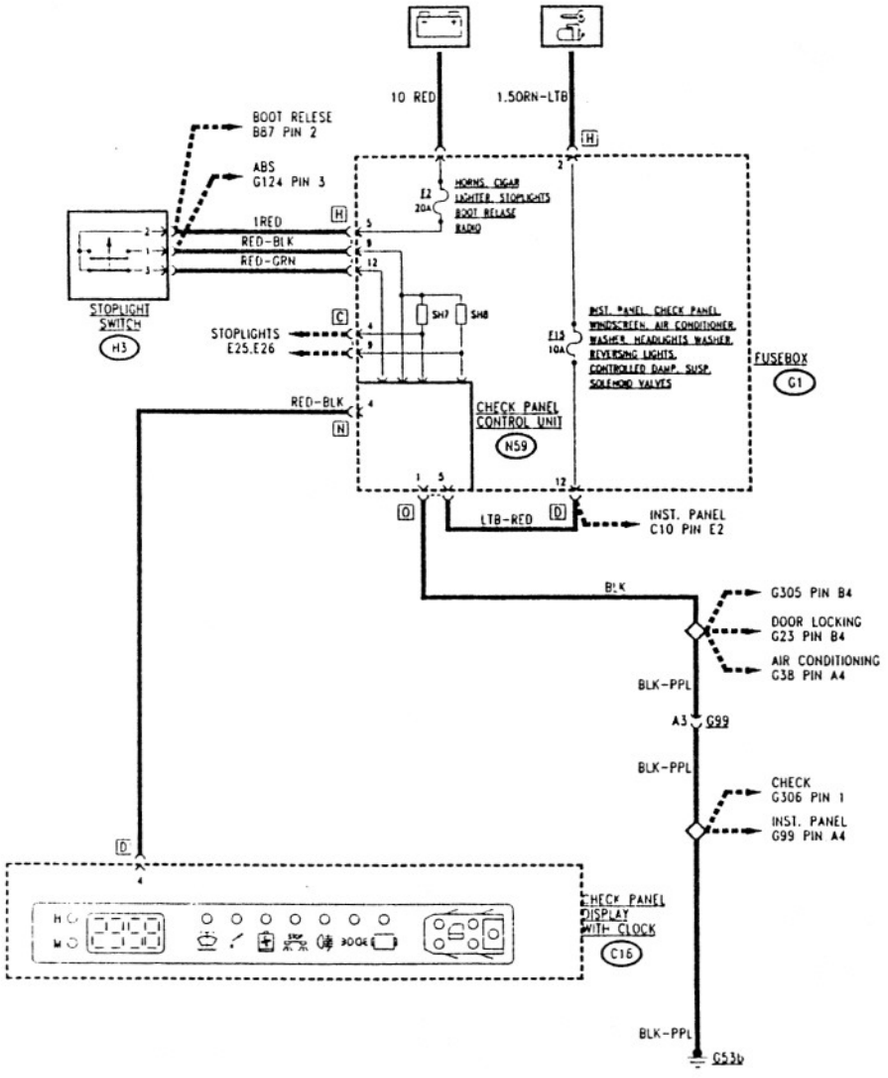


Rear-left door locking motor — P13



STOP LIGHTS CHECK

Wiring Diagram



Functional Description

Check Panel control unit

The Check Panel **N59** processes the various signals and sends them to the display **C16** throught the lines that exit pins 1, 3, 4 and 6 of connector N of the fusebox **G1** where the control unit **N59** is located.

The control unit is turn-key supplied via fuse **F15** (10A) to pin 5 of connector O of **G1**, while a ground reaches the control unit from pin 1 of the connector.

The control unit checks the electrical charge in the controlled circuits by way of a shunt ("SH1", "SH2"...) inserted in the circuits of fusebox **G1** on the lines carrying the signals to be checked by the control unit **N59**.

In the following three charts the control unit **N59** connections are illustrated along with the various controlled functions:

Stop light check

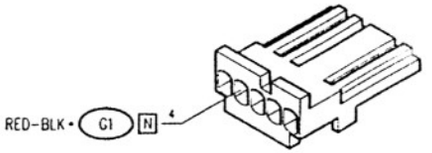
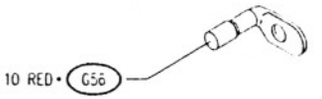
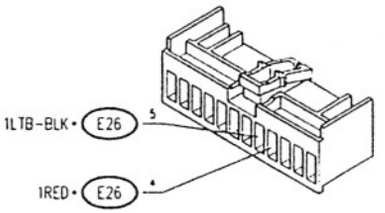
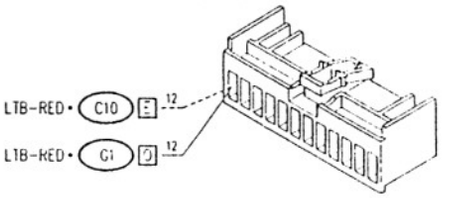
The control unit **N59** is connnected to the two contacts of the stop light switch **H3** via pins 9 and 12 of connector H in **G1**.

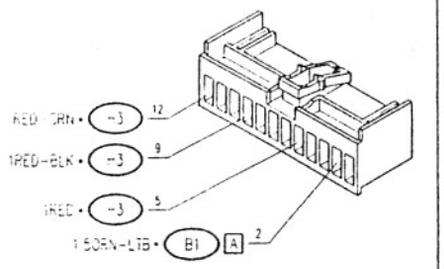
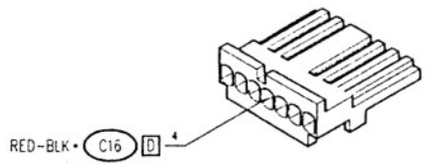
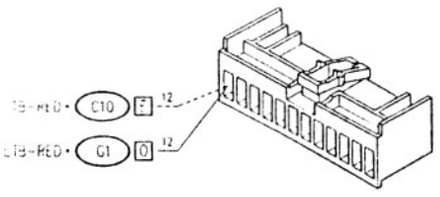
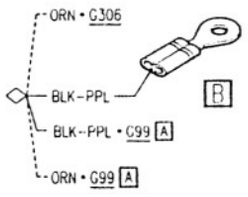
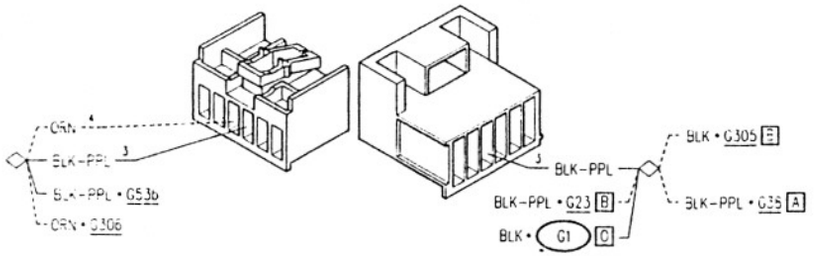
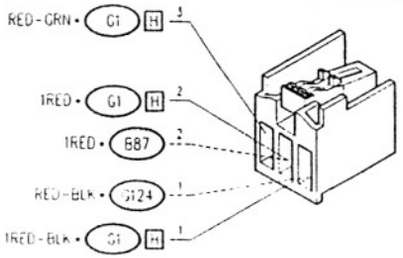
The control unit carries out two distinct checks through this signal:

- the first (only carried out when the brake pedal is depressed) checks for a possible anomaly in a single bulb or relative circuit, and the correct operation of the "working" contacts (N.O.) of switch **H3** (see "Stop-Lights");
- the second (continuous operation) controls the supply to the circuit (fuse **F2** of fusebox **G1**) and the correct operation of the contacts "at rest" (N.C.) of switch **H3** (see "Stop-Lights").

In both cases, if an anomaly is discovered, the control unit sends a signal to pin 4 of connector D of **C1b** to light up the relative warning lamp.

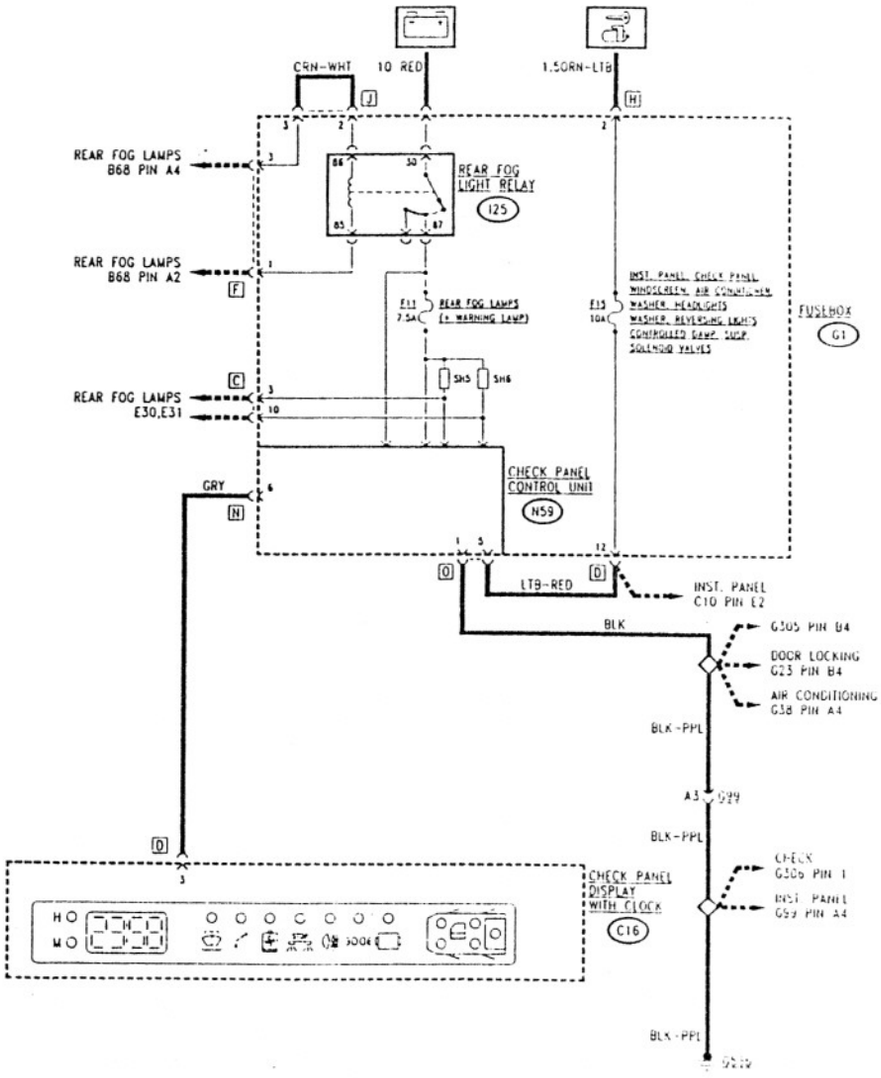
Components and Connectors

Check panel display with clock C16 D	Fusebox G1
	
Fusebox G1 C	**Fusebox G1 D**
	

Fusebox G1 H	Fusebox G1 N
	
Fusebox G1 O	**Engine compartment ground-left side G53b**
	
Dashboard/engine connection G99 A	
	
Stop light switch H3	
	

REAR FOG LIGHTS CHECK

Wiring Diagram



Functional Description

Control Unit

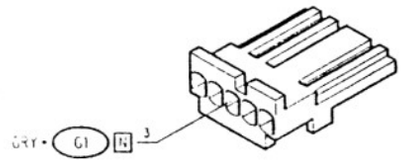
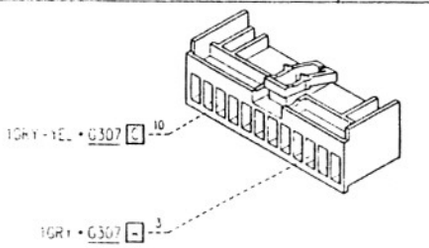
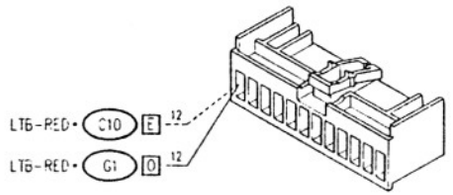
See "Stop lights check".

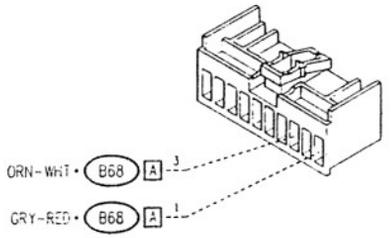
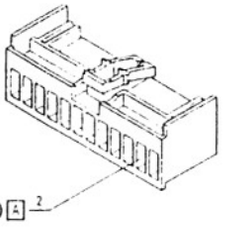
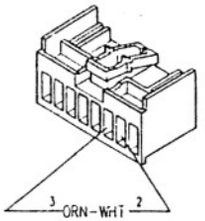
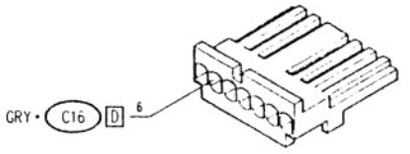
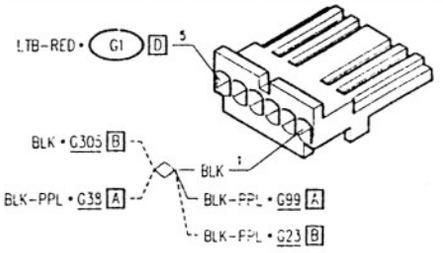
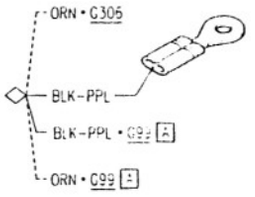
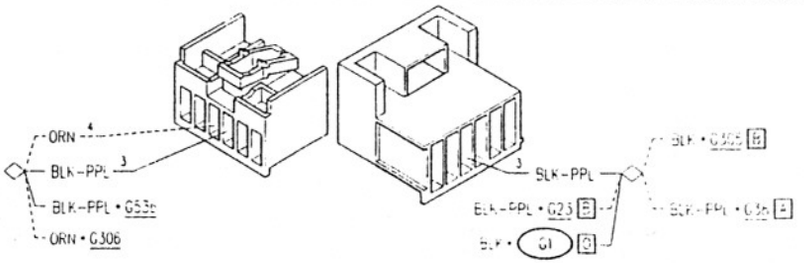
Rear fog lights check

Control unit **N59** is connected to the rear fog light power supply - fuse **F11** and relay **I25**, both in the fusebox **G1** - and to the rear fog lamp through pins 3 and 10 of connector C in fusebox **G1** (see "Rear and Front Foglamps").

Through these signals the control unit checks for a possible malfunction of a single bulb or a failure in the power supply to fuse **F11**. If an anomaly is detected, the control unit sends a signal to pin 3 of connector D of **C16** and lights up the relative warning lamp.

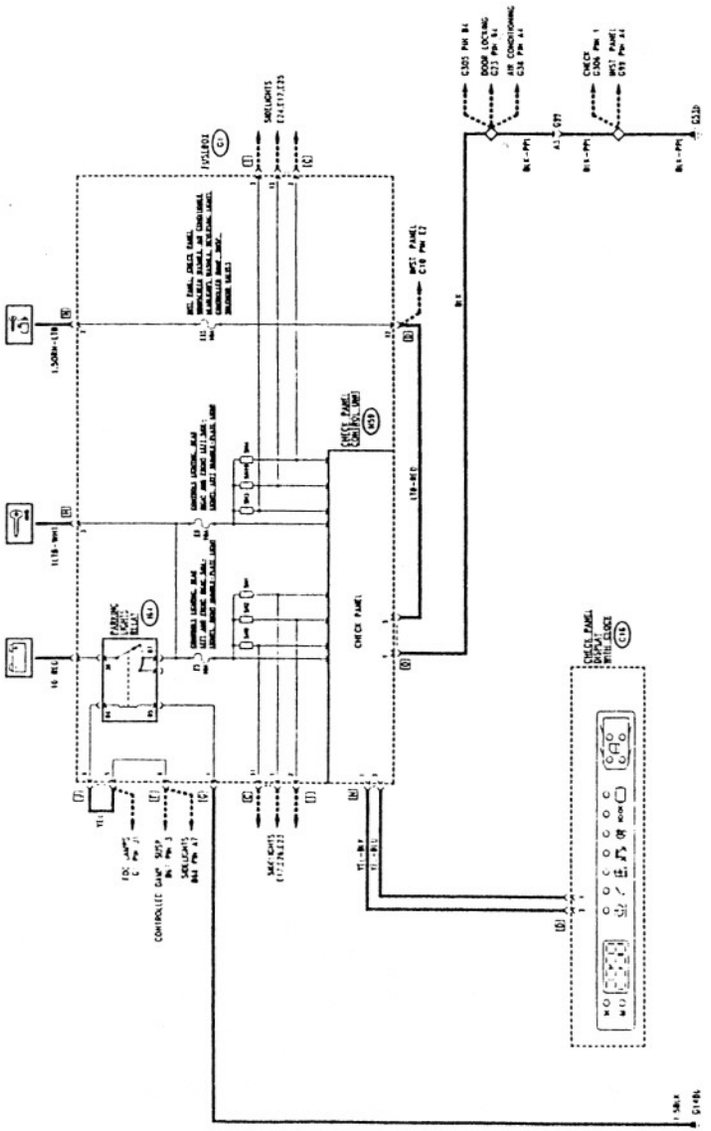
Components and Connectors

Check panel display with clock (C16 D)	Fusebox (G1)
	
Fusebox (G1 C)	**Fusebox (G1 D)**
	

Fusebox (G1 F)	Fusebox (G1 H)
	
Fusebox (G1 J)	**Fusebox (G1 N)**
	
Fusebox (G1 O)	**Engine compartment ground-left side G53b**
	
Dashboard/engine connection G99 A	
	

NUMBERPLATE LIGHTS AND SIDELIGHTS CHECK

Wiring Diagram



Functional Description

Check Panel control unit

See "Stop lights check".

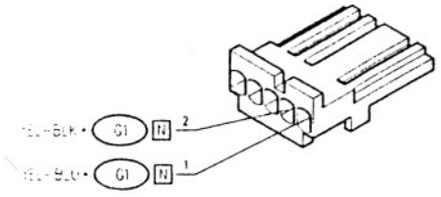
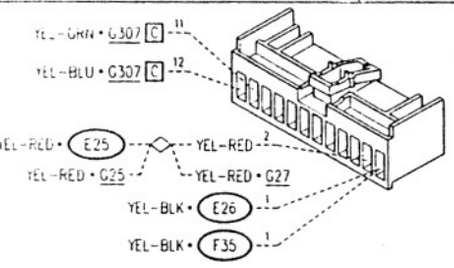
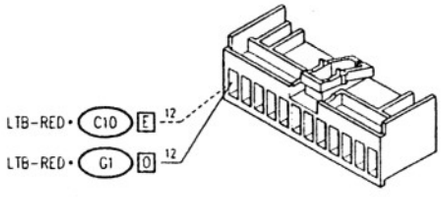
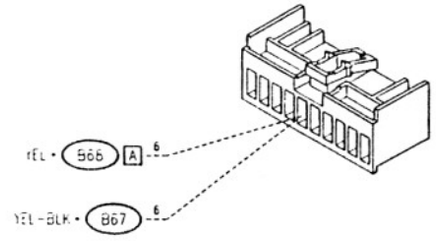
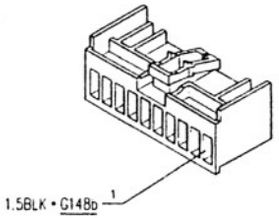
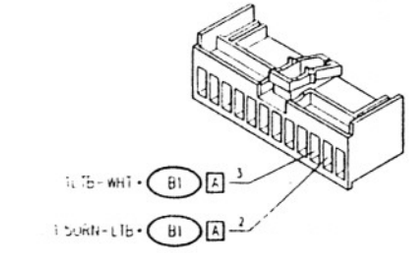
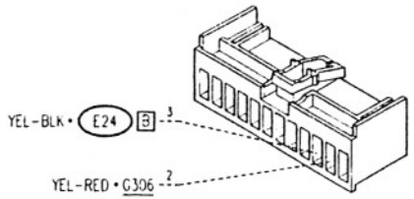
Numberplate lights and sidelights check

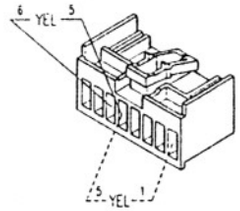
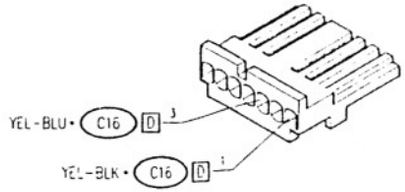
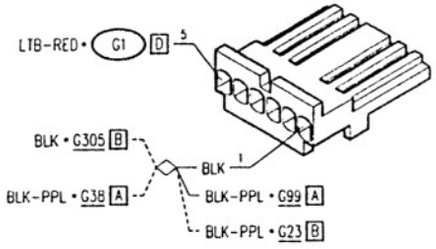
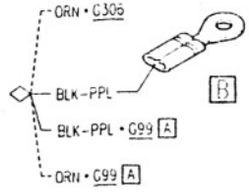
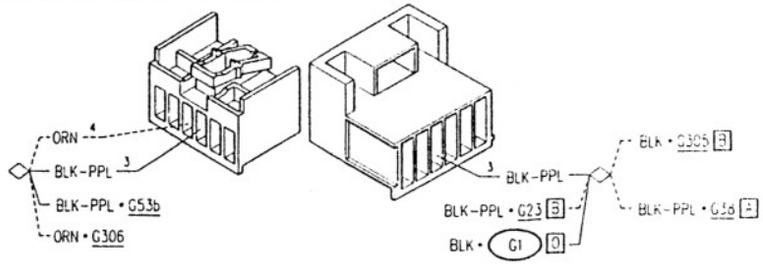
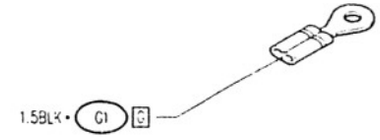
Control unit **N59** is connected to the sidelights power supply - fuses **F5** and **F6** and relay **I64** located in fusebox **G1** - and also to the sidelights bulbs both front and rear via pins 2 and 3 of connector I of **G1** and pins 1 and 2 of connector C of of **G1**, and to the numberplate lights through pin 11 and 12 of connector C of **G1** (see "Sidelights").

Through this signal the control unit checks for a possible malfunction of a single bulb or an interruption in the power supply to fuses **F5** and **F6**.
If an anomaly is detected, the control unit sends two signals to connector D of C16 (pin 1 for numberplate lights and pin 2 for the sidelights) to illuminate the relative warning lamps.

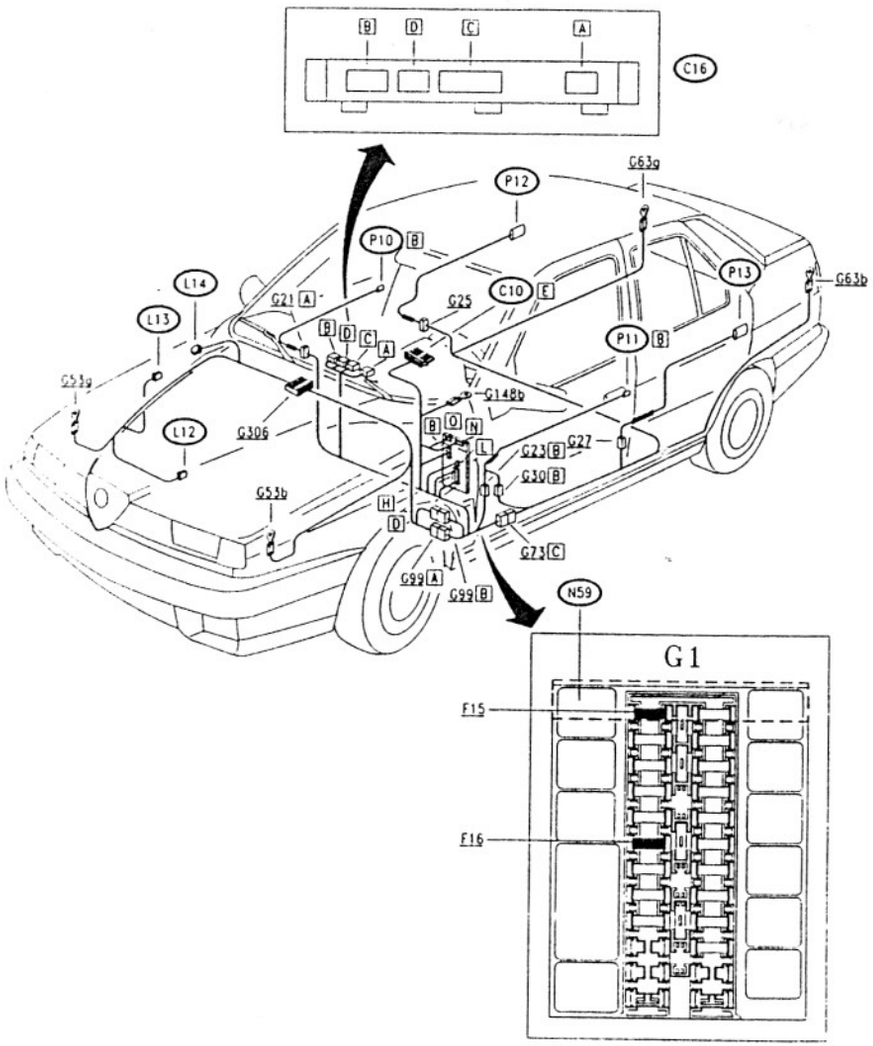
NOTE: the simultaneous interruption of both fuse **F5** and fuse **F6** is not signalled: in this event though, as the sidelights are completely out, the relative "sidelights on" warning lamp on the instrument panel C10 will be out.

Components and Connectors

Check panel display with clock (C16) D	Fusebox (G1)
	
Fusebox (G1) C	**Fusebox (G1) D**
	
Fusebox (G1) F	**Fusebox (G1) G**
	
Fusebox (G1) H	**Fusebox (G1) I**
	

Fusebox (G1) J	Fusebox (G1) N
	
Fusebox (G1) O	**Engine compartment ground-left side G53b**
	
Dashboard/engine connection G99 A	
	
Under-dashboard ground-left side G148b	
	

LOCATION OF COMPONENTS



TROUBLESHOOTING TABLE

Malfunction	Component												Test
	F15	F16	C16	N59	P10	P11	P12	P13	L14	L13	L12	C10	
Display out	•	•	•										A
Clock		•	•										B
Display not lit up.			•										C
Front RH door open			•			•							D
Front LH door open			•		•								E
Rear RH door open			•					•					F
Rear LH door open			•				•						G
Water level			•						•				H
Oil level			•								•	•	I
Windscreen washer fluid level			•							•			J
Stop lights check			•	•									K
Rear fog lamps check			•	•									L
Numberplate lights and side-lights check			•	•									M

NOTE: The tests from **A** to **G** are valid for all models. The tests from **H** to **M** are only valid for models fitted with the complete Check Panel.

TROUBLESHOOTING

CHECK PANEL DISPLAY IS OUT — TEST A

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
A1 CHECK FUSE – Check for damage of fuse **F15** in fusebox **G1**	OK ▶	Carry out **step A2**
	NOT OK ▶	Replace the fuse (10A)
A2 CHECK FUSE – Check for damage of fuse **F16** in fusebox **G1**	OK ▶	Carry out **step A3**
	NOT OK ▶	Replace the fuse (7.5 A)
A3 CHECK VOLTAGE – Verify 12V at pin D5 of display **C16**	OK ▶	Carry out **step A4**
	NOT OK ▶	Restore wiring between pin D7 of **G1** and pin D5 of display **C16**, across the solder (RED)
A4 CHECK VOLTAGE – With ignition key engaged, verify 12V at pin C2 of display **C16**	OK ▶	Carry out **step A5**
	NOT OK ▶	Restore wiring between pin B8 of **G1** and pin C2 of display **C16**, across the solder (LTB-RED)
A5 CHECK GROUND – Check that pins C10 and C3 of display **C16** are grounded (0V)	OK ▶	Replace the display **C16**
	NOT OK ▶	Restore wiring between pin C10 and pin C3 of display **C16** and ground **G148b**, across the solder (BLK)

CLOCK NOT WORKING — TEST B

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
B1 CHECK FUSE – Check for damage of fuse **F16** in fusebox **G1**	OK ▶	Carry out **step B2**
	NOT OK ▶	Replace the fuse (7.5 A)
B2 CHECK VOLTAGE – Verify 12V at pin A2 of display **C16**	OK ▶	Carry out **step B3**
	NOT OK ▶	Restore wiring between pin D7 of **G1** and pin A2 of display **C16**, across the solder (RED)
B3 CHECK VOLTAGE – With ignition key engaged, verify 12V at pin A4 of display **C16**	OK ▶	Carry out **step B4**
	NOT OK ▶	Restore wiring between pin D3 of **G1** and pin A4 of display **C16** (LTB-RED)
B4 CHECK GROUND – Check that pin A1 of display **C16** is grounded (0V)	OK ▶	Replace display **C16**
	NOT OK ▶	Restore wiring between pin A1 of display **C16** and ground **G148b** (BLK)

CHECK PANEL DISPLAY DOES NOT LIGHT UP — TEST C

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
C1 CHECK VOLTAGE – With sidelights on, verify 12V at pin C1 of display **C16**	OK ▶	Carry out **step C3**
	NOT OK ▶	Carry out **step C2**
C2 CHECK VOLTAGE – With sidelights on, verify 12V at pin H8 of **G1**	OK ▶	Restore wiring between pin H8 of **G1** and pin C1 of display **C16**, across the solder (YEL-BLK and YEL)
	NOT OK ▶	Check the sidelights circuit (see section "Sidelights")
C3 CHECK VOLTAGE – With sidelights on, verify 12V at pin A3 of display **C16**	OK ▶	Replace the display **C16**
	NOT OK ▶	Restore wiring between pin H8 of **G1** and pin A3 of display **C16**, across the solder (YEL-BLK and YEL)

ON OPENING THE FRONT LEFT DOOR, THE RELATIVE LED DOES NOT WORK — TEST D

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
D1 CHECK GROUND – Opening the front left door, verify 0V at pin BA of door locking device **P11**	OK ▶	Carry out **step D3**
	NO ▶	Carry out **step D2**
D2 CHECK GROUND – Verify 0V at pin BB of door locking device **P11**	OK ▶	Replace the door locking device **P11**
	NO ▶	Restore wiring between pin BB of **P11** and ground **G53b**, across pin B4 of connector **G23**, pin A3 of connector **G99** and the two solders (BLK)
D3 CHECK GROUND – Opening the front left door, verify 0V at pin C8 of Check Panel display **C16**	OK ▶	Replace the display **C16**
	NO ▶	Restore wiring between pin BA of **P11** and pin C8 of display **C16**, across pin B3 of connector **G23** (GRY-YEL)

ON OPENING THE FRONT RIGHT DOOR, THE RELATIVE LED DOES NOT WORK — TEST E

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
E1 CHECK GROUND – Opening the front right door, verify 0V at pin BA of door locking device **P10**	OK ▶	Carry out **step E3**
	NO ▶	Carry out **step E2**
E2 CHECK GROUND – Verify 0V at pin BB of door locking device **P10**	OK ▶	Replace the door locking device **P10**
	NO ▶	Restore wiring between pin BB of **P10** and pin L1 of **G1**, across pin A6 of connector **G21** and the solder (BLK)
E3 CHECK GROUND – Opening the front right door, verify 0V at pin C7 of Check Panel display **C16**	OK ▶	Replace the display **C16**
	NO ▶	Restore wiring between pin BA of **P10** and pin C7 of display **C16**, across pin A3 of connector **G21** (GRY-GRN)

ON OPENING THE REAR LEFT DOOR, THE RELATIVE LED DOES NOT WORK — TEST F

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
F1 CHECK GROUND – Opening the rear left door, verify 0V at pin A of door locking device **P13**	OK ▶	Carry out step F3
	NO ▶	Carry out step F2
F2 CHECK GROUND – Verify 0V at pin B of door locking device **P13**	OK ▶	Replace the door locking device P13
	NO ▶	Restore wiring between pin B of **P13** and ground G63b, across pin 1 of connector **G27** and the solder (BLK)
F3 CHECK GROUND – Opening the rear left door, verify 0V at pin C6 of Check Panel display **C16**	OK ▶	Replace the display **C16**
	NO ▶	Restore wiring between pin A of **P13** and pin C6 of display **C16**, across pin 4 of connector **G27**, pin 5 of connector **G30** and B2 of connector **G23** (GRY-BLK)

ON OPENING THE REAR RIGHT DOOR, THE RELATIVE LED DOES NOT WORK — TEST G

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
G1 CHECK GROUND – Opening the rear right door, verify 0V at pin A of door locking device **P12**	OK ▶	Carry out step G3
	NO ▶	Carry out step G2
G2 CHECK GROUND – Verify 0V at pin B of door locking device P12	OK ▶	Replace the door locking device P12
	NO ▶	Restore wiring between pin B of P12 and ground G63a, across pin 1 of connector G25 (BLK)
G3 CHECK GROUND – Opening the rear right door, verify 0V at pin C8 of Check Panel display **C16**	OK ▶	Replace the display C16
	NO ▶	Restore wiring between pin A of P12 and pin C5 of display **C16**, across pin 4 of connector G25, pin C6 of connector **G27** (GRY-BLK and GRY-RED)

WATER LEVEL LED NOT WORKING	TEST H

NOTE: "the led not working", means that it lights up to indicate and insufficient level while in reality the level is correct, or vice- versa it does not light up when the level is too low

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
H1 CHECK SENSOR – Check for correct functioning of engine coolant level sensor **L14**: • removing the sensor from the reservoir, there must be continuity between pins 1 and 2 of sensor **L14** itself	OK ▶ ~~OK~~ ▶	Carry out **step H2** Replace the sensor **L14**
H2 CHECK GROUND – Check that pin 1 of sensor **L14** is grounded (0V)	OK ▶ ~~OK~~ ▶	Carry out **step H3** Restore wiring between pin 1 of **L14** and ground **G53a**, across pin 1 of sensor **L13** (BLK)
H3 CHECK SIGNAL – With the sensor removed from the reservoir but still connected to the relative wiring, check for a ground signal (0V) at pin B1 of Check Panel display **C16**	OK ▶ ~~OK~~ ▶	Replace the Check Panel display **C16** Restore wiring between pin 2 of **L14** and pin B1 of **C16**, across pin 17(12*) of connector **G306** and pin B3 of connector **G99** (GRN-WHT)

(*) from chassis N.___

ENGINE OIL LEVEL LED NOT WORKING	TEST I

NOTE: "the led not working", means that it lights up to indicate and insufficient level while in reality the level is correct, or vice- versa it does not light up when the level is too low

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
I1 CHECK SENSOR – Check for correct functioning of engine oil level sensor **L12** • removing the sensor from the engine block but without disconnecting the relative wiring, the contact must open between pins 1 and 2 of sensor **L12** itself	OK ▶ ~~OK~~ ▶	Carry out **step I2** Replace the sensor L12
I2 CHECK GROUND – Check that pin 1 of sensor **L12** is grounded (0V)	OK ▶ ~~OK~~ ▶	Carry out **step I3** Restore wiring between pin 1 of **L12** and ground **G53b**, across pin 1(14*) of connector **G306** and the solder (ORN and BLK-PPL)
I3 CHECK SIGNAL – Removing the sensor from the engine block without disconnecting the relative wiring check that the signal at pin B2 of Check Panel display **C16** **(•)** is interrupted	OK ▶ ~~OK~~ ▶	Replace the Check Panel display **C16** Restore wiring between pin 2 of **L12** and pin B2 of **C16**, across pin 9(13*) of connector **G306** and pin B4 of connector **G99** (GRN-BLK)

(•) NOTE: warning lamp on instrument panel:
removing the sensor from the engine block, also check for a ground signal at pin E11 of instrument panel C10: otherwise replace the relative lamp in the instrument panel **C10**, or restore the wiring between pin B5 of **C16** and pin E11 of **C10** (GRN-YEL).

(*) from chassis N.___

WINDSCREEN WIPER LIQUID LEVEL LED NOT WORKING	TEST J

NOTE: "the led not working", means that it lights up to indicate and insufficient level while in reality the level is correct, or vice- versa it does not light up when the level is too low

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
J1 CHECK SENSOR – Check for correct functioning of the windscreen wiper liquid level sensor **L13**: • on removing the sensor from the reservoir, ther should be continuity between pins 1 and 2 of sensor **L13** itself	OK ▶ ~~OK~~ ▶	Carry out **step J2** Replace the sensor **L13**
J2 CHECK GROUND – Check that pin 1 of sensor **L13** is grounded (0V)	OK ▶ ~~OK~~ ▶	Carry out **step J3** Restore wiring between pin 1 of **L13** and ground **G53a** (BLK)
J3 CHECK SIGNAL – With the sensor removed from the reservoir but still connected to the relative wiring, check that a ground signal (0V) reaches pin B3 of Check Panel display **C16**	OK ▶ ~~OK~~ ▶	Replace the Check Panel display **C16** Restore wiring between pin 2 of **L13** and pin B3 of **C16**, across pin 6(11*) of connector **G306** and pin B2 of connector **G99** (GRN)

(*) from chassis N.____

STOP LIGHT CHECK LED NOT WORKING	TEST K

N.B: The malfunction described as "led not working" can be grouped into three categories:

1. the led lights up normally when there is a malfunction in the stop light system.
In this case proceed to the tests indicated in the section "Stop-lights".

2. the led lights up but no malfunction is discovered in the stop light system (the tests indicated in the section "Stop-lights" have been carried out without a positive outcome) .
In this case carry out **test K**.

3. the led does not light up, but a malfunction in the stop light system has been discovered.
In this case, first carry out the tests indicated in the section "Stop-lights" to restore the correct functioning of the circuit, and then carry out **test K**

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
K1 CHECK FUSE – Check for damage of fuse **F15** in fusebox **G1**	OK ▶ ~~OK~~ ▶	Carry out **step K2** Replace the fuse (10A)
K2 CHECK CONTROL UNIT – Disconnect switch **H3** for example, or a bulb and, with the ignition key engaged, check for an output signal at pin N4 of **G1** (Check Panel control unit **N59**)	OK ▶ ~~OK~~ ▶	Carry out **step K5** Carry out **step K3**
K3 CHECK VOLTAGE – With ignition key engaged, verify 12 V at pin O5 of **G1** (Check Panel control unit **N59**)	OK ▶ ~~OK~~ ▶	Carry out **step K4** Restore wiring between pin D12 and pin O5 of **G1** (LTB-RED)
K4 CHECK GROUND – Verify 0V at pin O1 of **G1** (Check Panel control unit **N59**)	OK ▶ ~~OK~~ ▶	Replace the control unit **N49** Restore wiring between pin O1 of **G1** and ground **G53b**, across the solders and pin A3 of connector **G99** (BLK and BLK- PPL)
K5 CHECK DISPLAY – Disconnect switch **H3** for example, or a bulb and, with the ignition key engaged, check for an output signal at pin D4 of display **C16**	OK ▶ ~~OK~~ ▶	Replace the display **C16** Restore wiring between pin N4 of **G1** (Check Panel control unit **N59**) and pin D4 of display **C16** (RED-BLK)

REAR FOG LIGHTS CHECK LED NOT WORKING — TEST L

N.B: The malfunction described as "led not working" can be grouped into three categories:
1. the led lights up normally when there is a malfunction in the rear fog light system.
In this case proceed to the tests indicated in the section "Rear and front fog lights".
2. the led lights up but no malfunction is discovered in the rear fog light system (the tests indicated in the section "Rear and front fog lights" have been carried out without a positive outcome) .
In this case carry out **test L**.
3. the led does not light up, but a malfunction in the rear forg light system has been discovered.
In this case, first carry out the tests indicated in the section "Rear and front fog lights" to restore the correct functioning of the circuit, and then carry out **test L**

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
L1 CHECK FUSE – Check for damage of fuse **F15** in fusebox **G1**	OK ▶	Carry out **step L2**
	~~OK~~ ▶	Replace the fuse (10A)
L2 CHECK CONTROL UNIT – Disconnect relay **I25** for example, or a bulb and, with the ignition key engaged, check for an output signal at pin N6 of **G1** (Check Panel control unit **N59**)	OK ▶	Carry out **step L5**
	~~OK~~ ▶	Carry out **step L3**
L3 CHECK VOLTAGE – With ignition key engaged, verify 12 V at pin O5 of **G1** (Check Panel control unit **N59**)	OK ▶	Carry out **step L4**
	~~OK~~ ▶	Restore wiring between pin D12 and pin O5 of **G1** (LTB-RED)
L4 CHECK GROUND – Verify 0V at pin O1 of **G1** (Check Panel control unit **N59**)	OK ▶	Replace the control unit **N49**
	~~OK~~ ▶	Restore wiring between pin O1 of **G1** and ground **G53b**, across the solders and pin A3 of connector **G99** (BLK and BLK- PPL)
L5 CHECK DISPLAY – Disconnect relay **I25** for example, or a bulb and, with the ignition key engaged, check for an output signal at pin D3 of display **C16**	OK ▶	Replace the display **C16**
	~~OK~~ ▶	Restore wiring between pin N6 of **G1** (Check Panel control unit **N59**) and pin D3 of display **C16** (GRY)

SIDELIGHTS AND NUMBERPLATE LIGHTS CHECK LED NOT WORKING — TEST M

N.B: The malfunction described as "led not working" can be grouped into three categories:
1. the led lights up normally when there is a malfunction in the sidelights or numberplate lights system.
In this case proceed to the tests indicated in the section "Sidelights".
2. the led lights up but no malfunction is discovered in the sidelights or numberplate lights system (the tests indicated in the section "Sidelights" have been carried out without a positive outcome) .
In this case carry out **test M**.
3. the led does not light up, but a malfunction in the sidelights or numberplate lights system has been discovered.
In this case, first carry out the tests indicated in the section "Sidelights" to restore the correct functioning of the circuit, and then carry out **test M**

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
M1 CHECK FUSE – Check for damage of fuse **F15** in fusebox **G1**	OK ▶	Carry out step **M2**
	~~OK~~ ▶	Replace the fuse (10A)
M2 CHECK CONTROL UNIT – **Sidelights led:** Disconnect relay **I64** for example, or a bulb from the sidelights and, with the ignition key engaged, check for an output signal at pin N1 of **G1** (Check Panel control unit **N59**) **Numberplate lights led:** Disconnect a bulb from the numberplate light for example, and with the ignition key engaged, check for an output signal at pin N3 of **G1** (Check Panel control unit **N59**).	OK ▶	Carry out **step M5**
	~~OK~~ ▶	Carry out **step M3**
M3 CHECK VOLTAGE – With ignition key engaged, verify 12 V at pin O5 of **G1** (Check Panel control unit **N59**)	OK ▶	Carry out **step M4**
	~~OK~~ ▶	Restore wiring between pin D12 and pin O5 of G1 (LTB-RED)
M4 CHECK GROUND – Verify 0V at pin O1 of **G1** (Check Panel control unit **N59**)	OK ▶	Replace the control unit **N49**
	~~OK~~ ▶	Restore wiring between pin O1 of **G1** and ground G53b, across the solders and pin A3 of connector G99 (BLK and BLK- PPL)
M5 CHECK DISPLAY – **Sidelights led:** disconnect relay **I64** for example or a bulb from the sidelights and, with the ignition key engaged, check for a signal at pin D2 of display **C16** **Numberplate lights led:** disconnect a bulb from the numberplates light for example, and with the ignition key engaged, check for a signal at pin D1 of display **C16**	OK ▶	Replace the display **C16**
	~~OK~~ ▶	Restore wiring between: • **sidelights led:** pin N1 of **G1** (Check Panel control unit **N59**) and pin D2 of display **C16** (YEL-BLK) • **numberplate lights led:** pin N3 of **G1** (Check Panel control unit **N59**) and pin D1 of display **C16** (YEL-BLU)