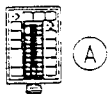
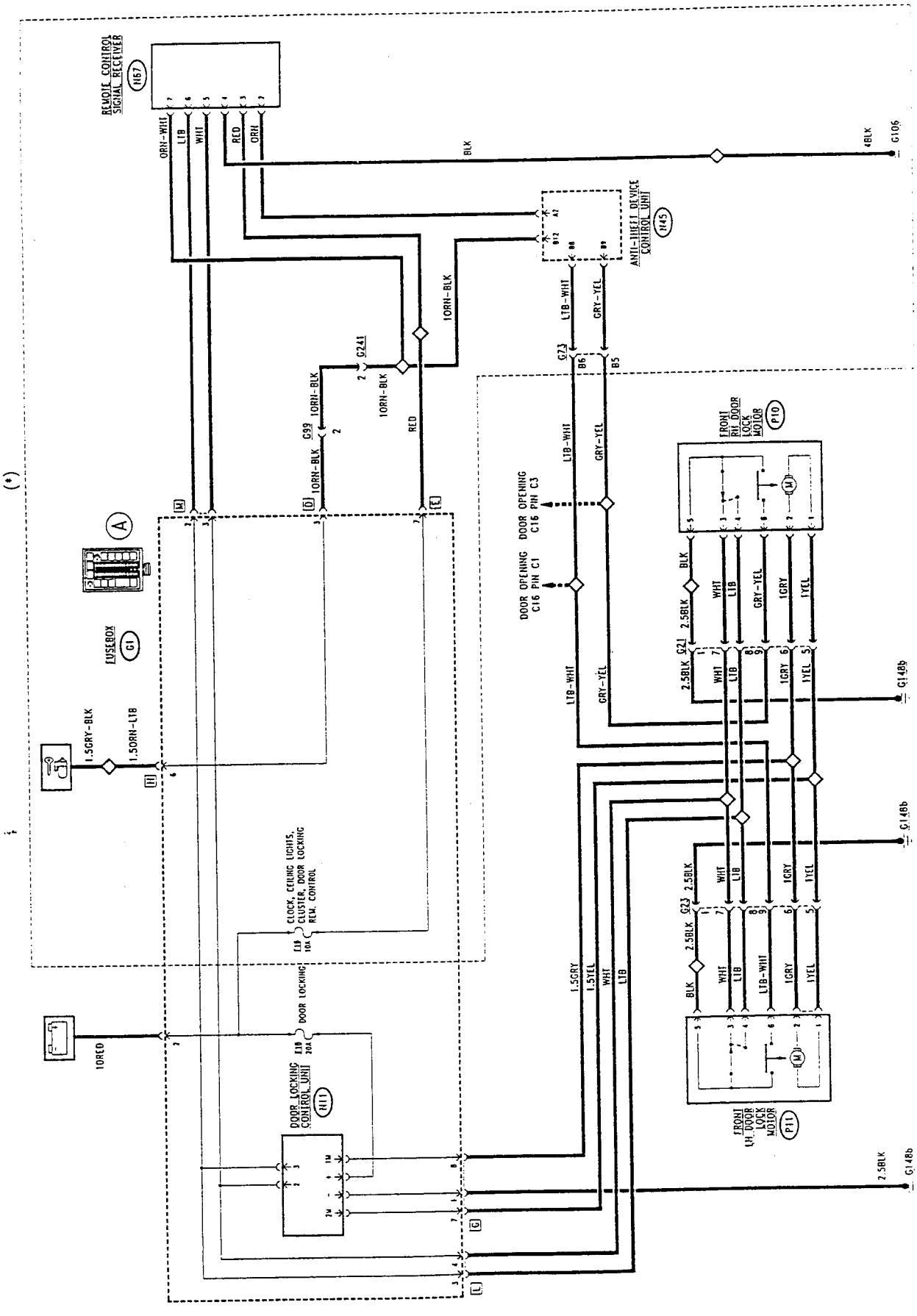
DOOR LOCKING SYSTEM

INDEX

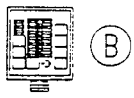
WIRING DIAGRAM

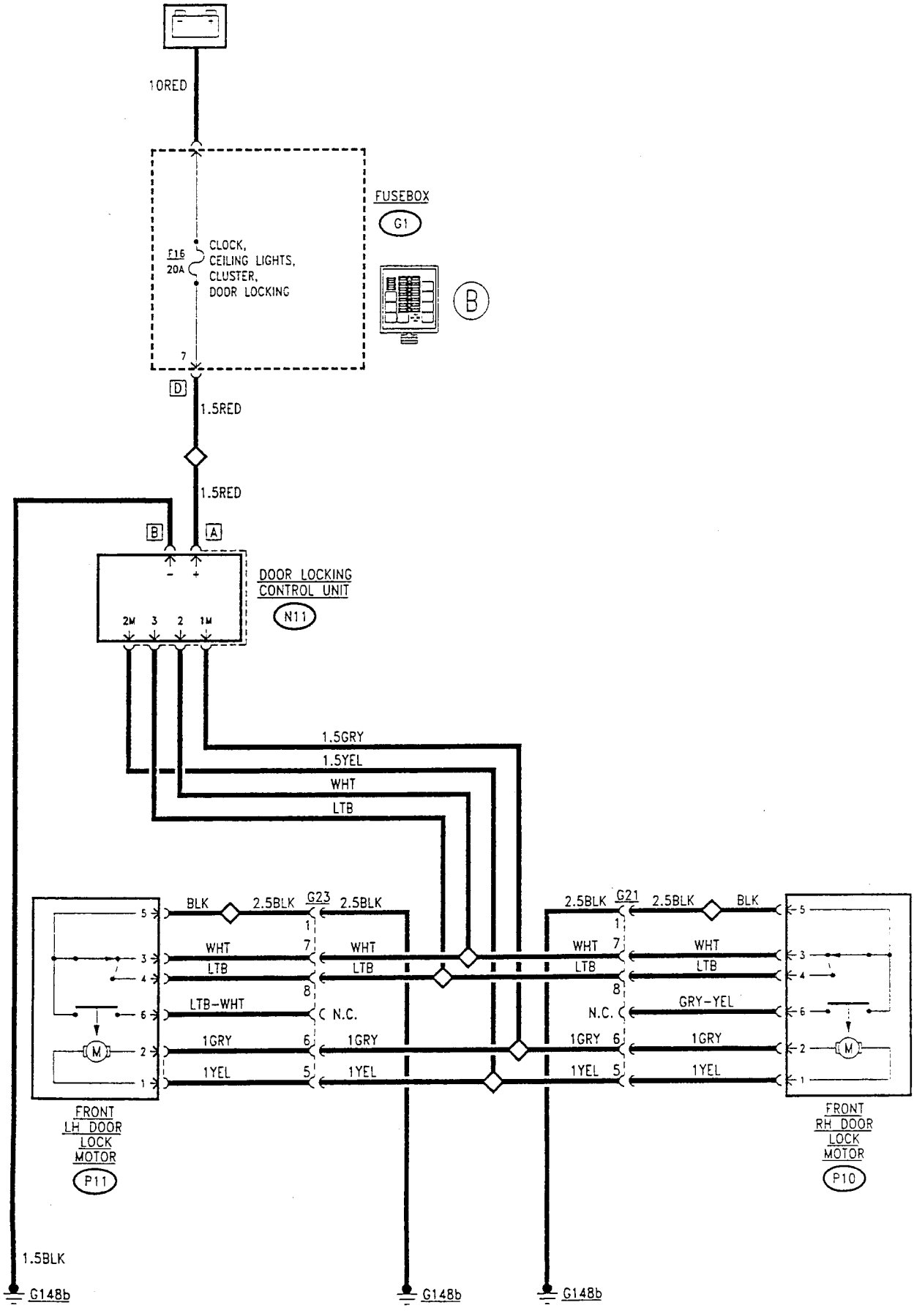




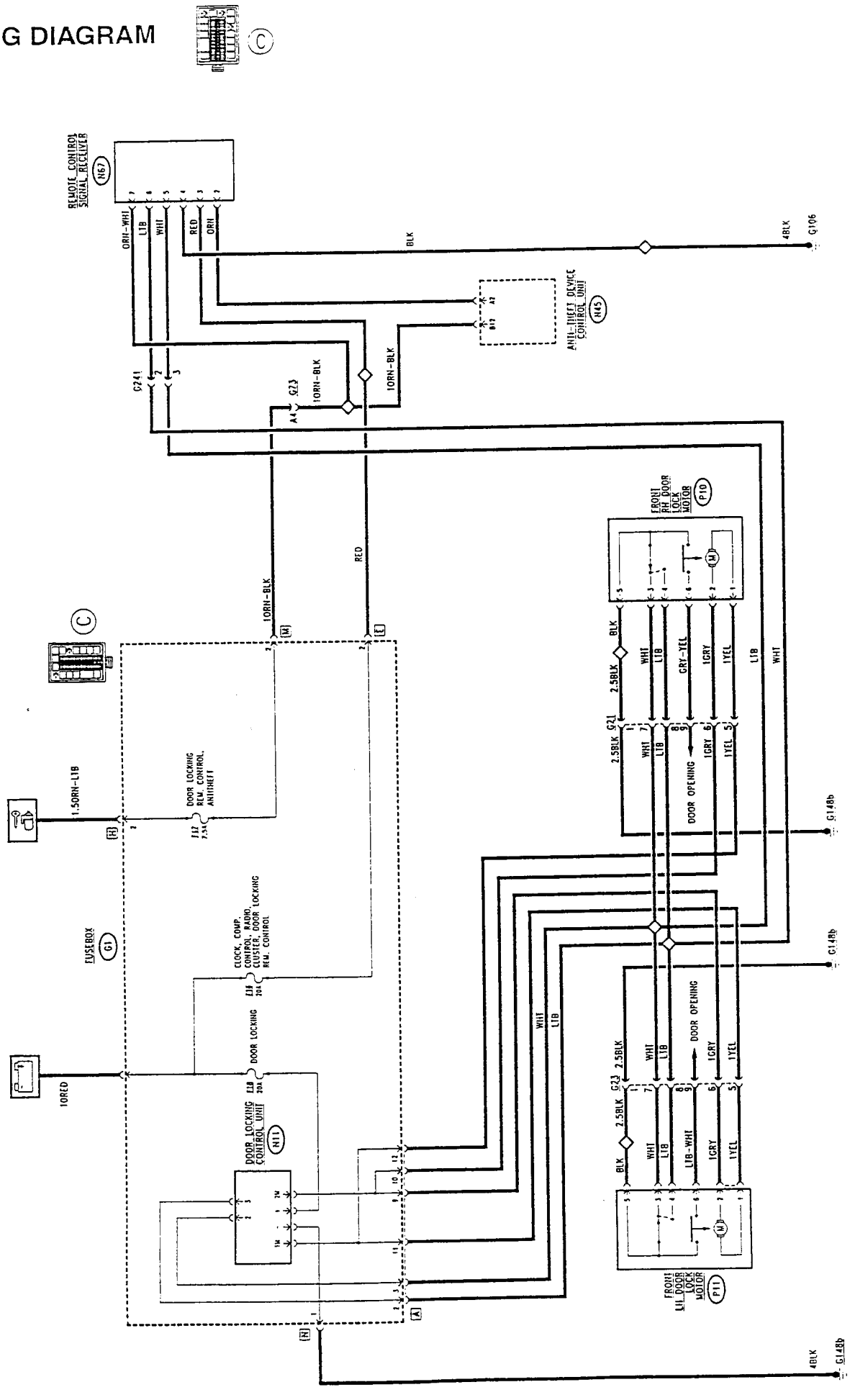
(*) only for versions with anti-theft device

WIRING DIAGRAM





WIRING DIAGRAM



GENERAL DESCRIPTION

The door locking system comprises an electronic control unit which controls and commands the door locks; each lock comprises a gear motor for locking/releasing the door lock, a control switch and a switch signalling that the doors are open.
The latter is used by the Check Panel (see "Doors open signalling") and by the anti-theft device (see "Antitheft device").
The gear motors are both operated simultaneously by acting on one of the control switches either from inside through the knobs or from the outside using the key.

NOTE: the control unit logic comprises a series of check and security operations:

- if the power supply is cut off, the locked doors are not released and they will only open when the supply has been restored;
- during release, if one of the control switches is mechanically impeded, release is cut off;
- if a failure causes the supply to the motors to last for over 4 seconds, this supply is cut off (only version for fusebox "A" and "C");
- if several opening/closing commands are received by the control unit from the key, only the last one to be sent will be considered;
- in the event of contrary commands (e.g. one with the key and one with the inside knob) the control unit will oscillate: oscillation ends after 8 consecutive commands (only for version for fusebox "A" and "C").

N.B.: In the **versions with anti-theft device** the door locking device is also operated via the remote control which works in the same way as manual locking/releasing. For further details see "Anti-theft device".

FUNCTIONAL DESCRIPTION

The door lock control unit **N11** is located in fusebox **G1** (fusebox "A" and "C") or on the bracket next to the fusebox (fusebox "B").
It is supplied by the battery voltage (pin +) through fuse **F18** (fusebox "A" and "C") or by fuse **F16** (fusebox "B"), while it is connected to earth (pin -).

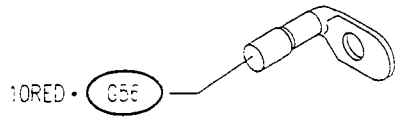
It receives an earth signal at pins 2 and 3 which represents the locking or release command leading from the control switches of the right front lock **P10** and the left one **P11**:

- **locking signal**: if the earth passes from pin 2 to pin 3;
- **releasing signal**: viceversa from pin 3 to pin 2.

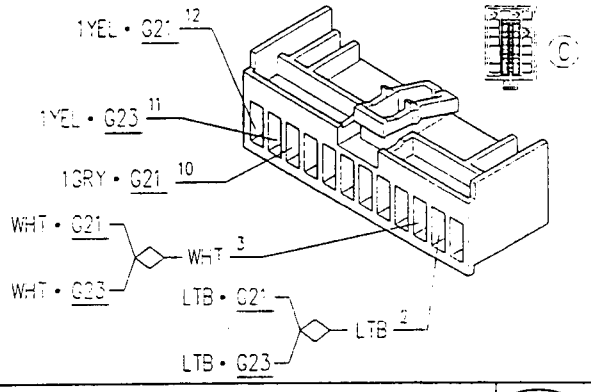
The logic of the control unit **N11** carries out the checks mentioned previously and sends the locking signal (pin 2M: 12V and pin 1M: earth) or releasing signal (pin 1M: 12V and pin 2M: earth) simultaneously to the door lock gear motors **P10** and **P11**.

COMPONENTS AND CONNECTORS

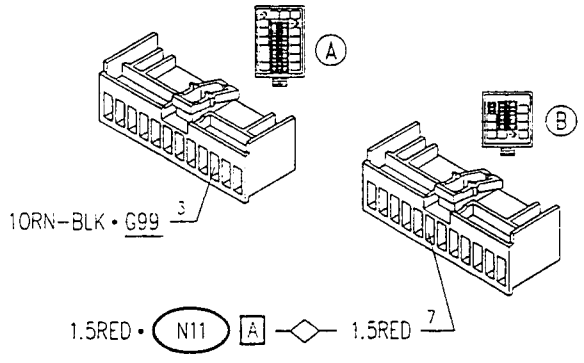
Fusebox G1



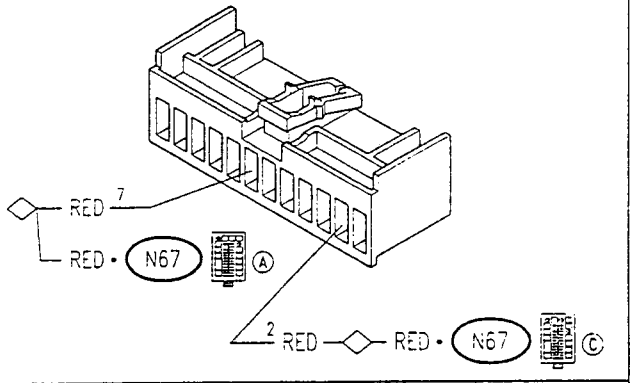
Fusebox G1 A



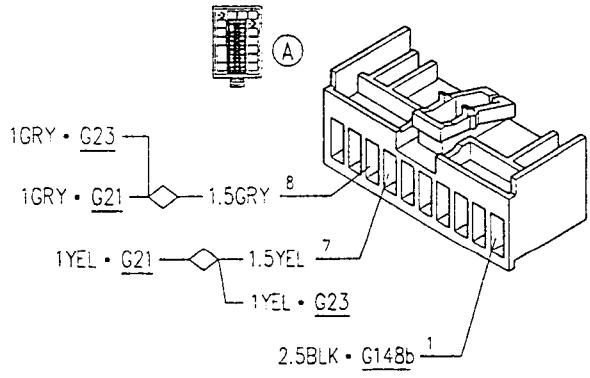
Fusebox G1 D



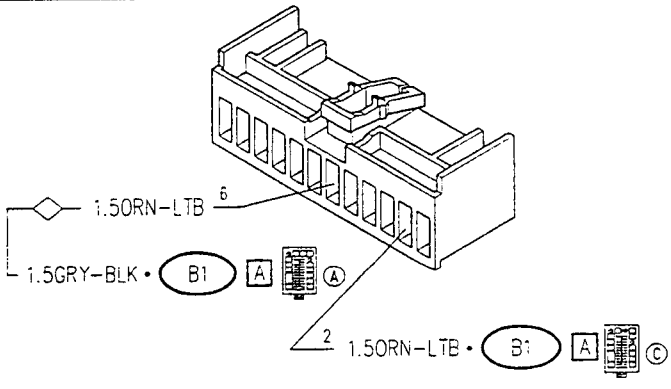
Fusebox G1 E



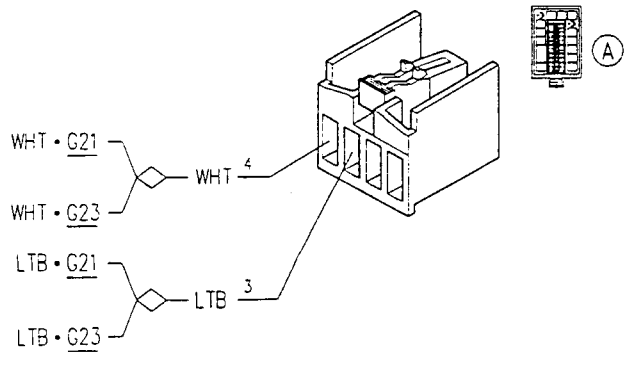
Fusebox G1 G



Fusebox G1 H

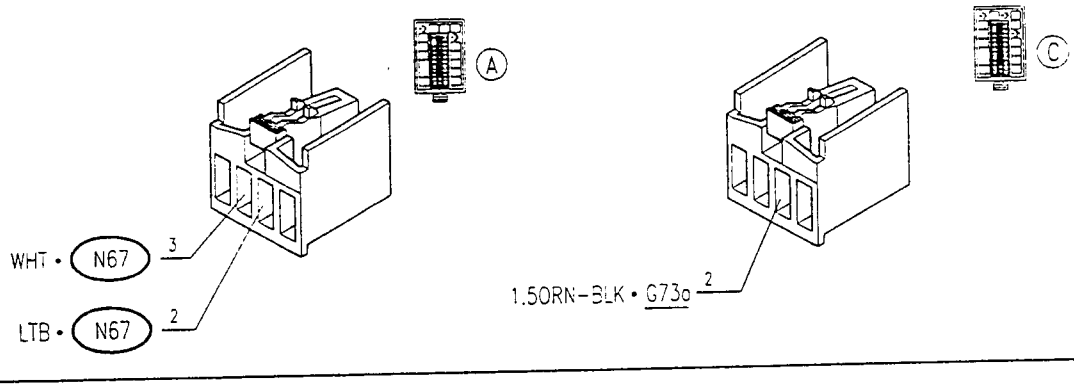


Fusebox G1 L

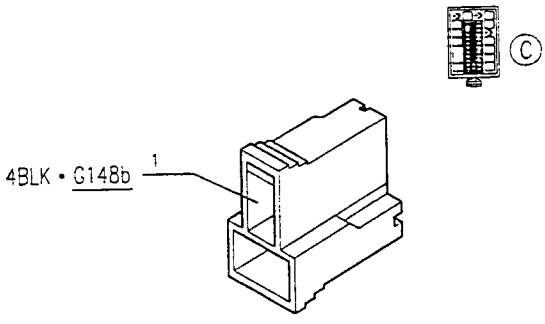


COMPONENTS AND CONNECTORS (cont.d)

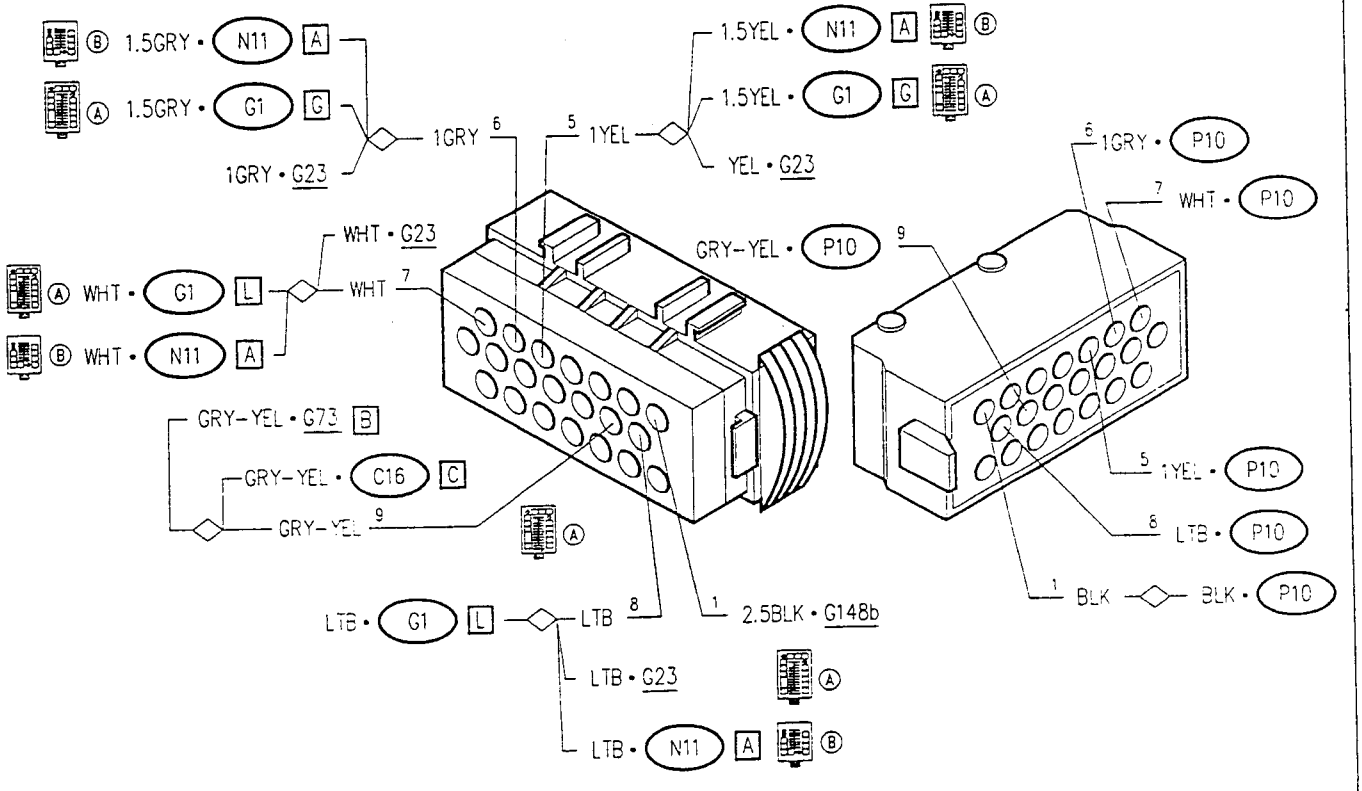
Fusebox — G1 M



Fusebox — G1 N

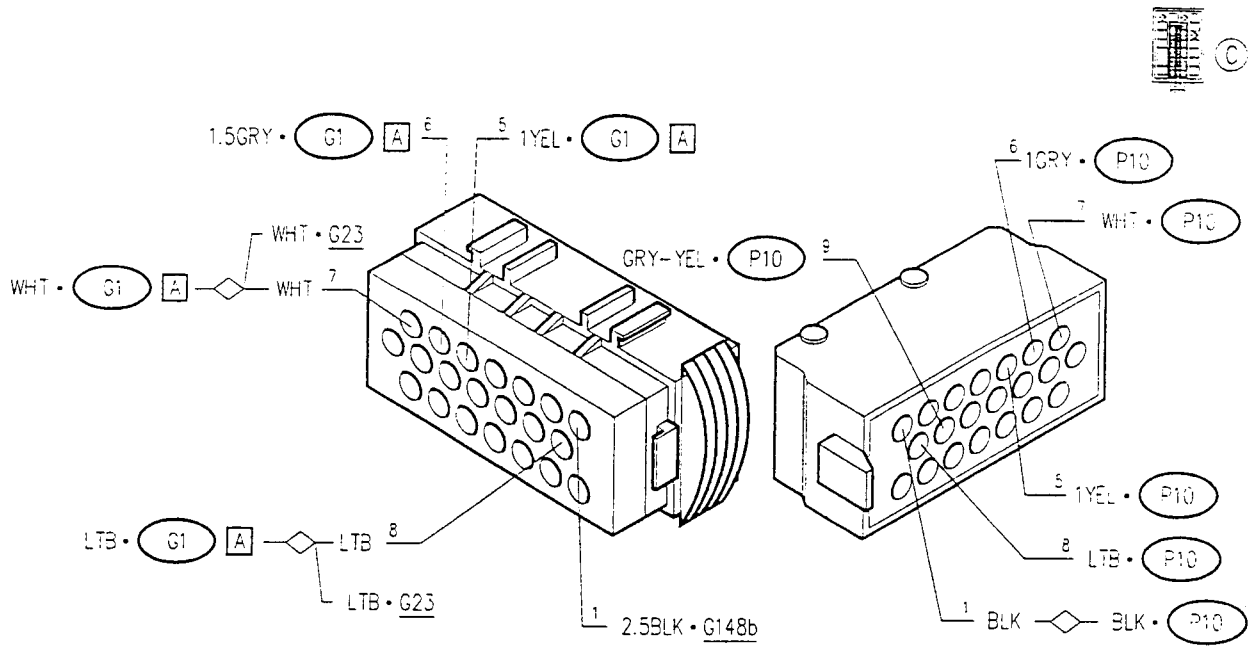


RH front door wiring connector — G21

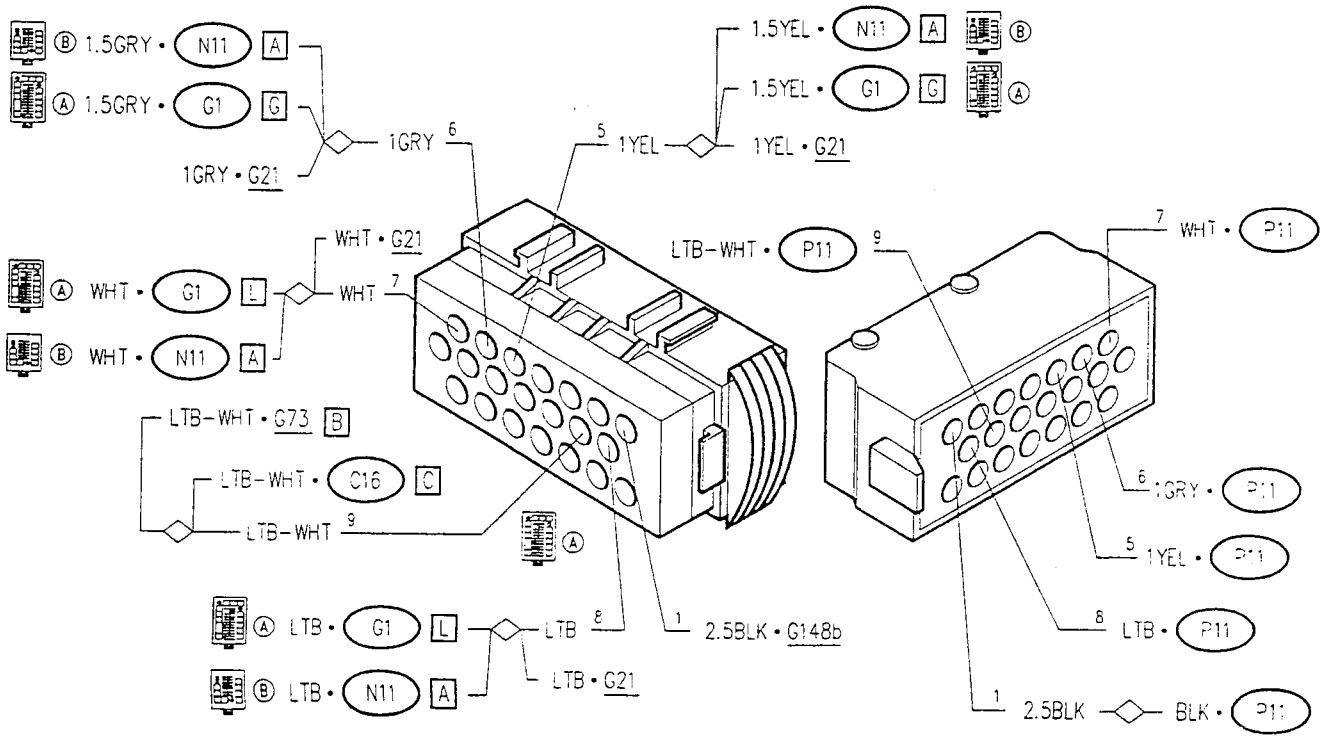


COMPONENTS AND CONNECTORS (cont.d)

RH front door wiring connector	G21

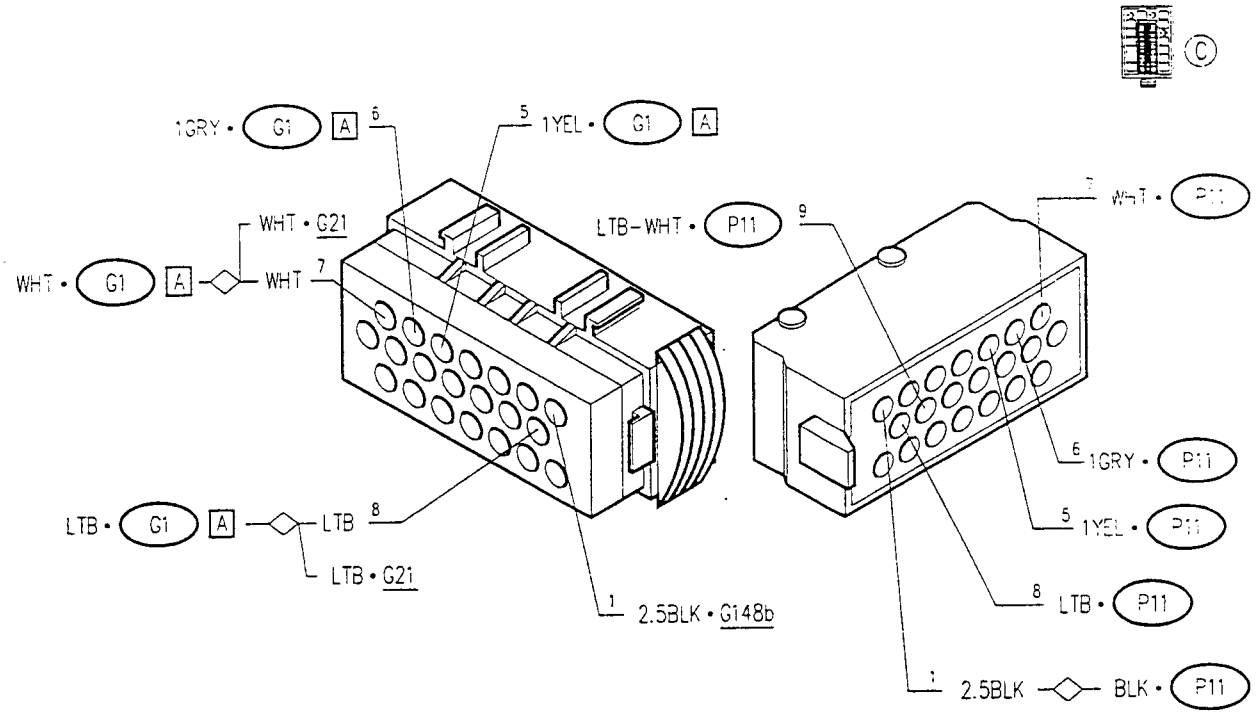


LH front door wiring connector	G23

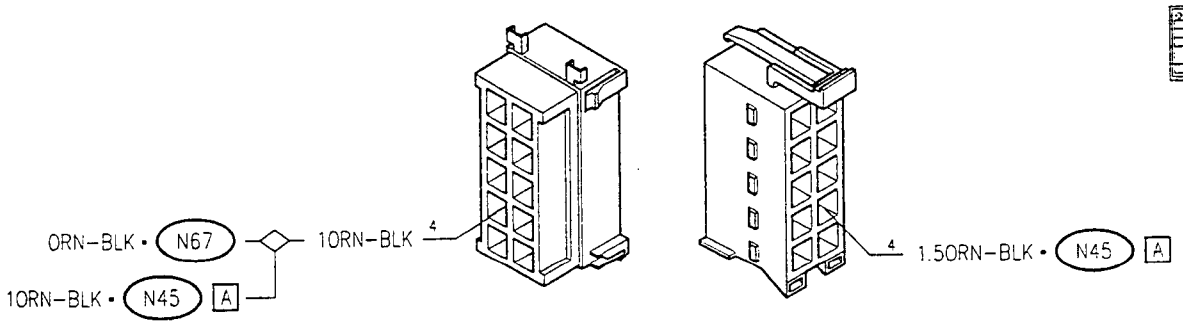


COMPONENTS AND CONNECTORS (cont.d)

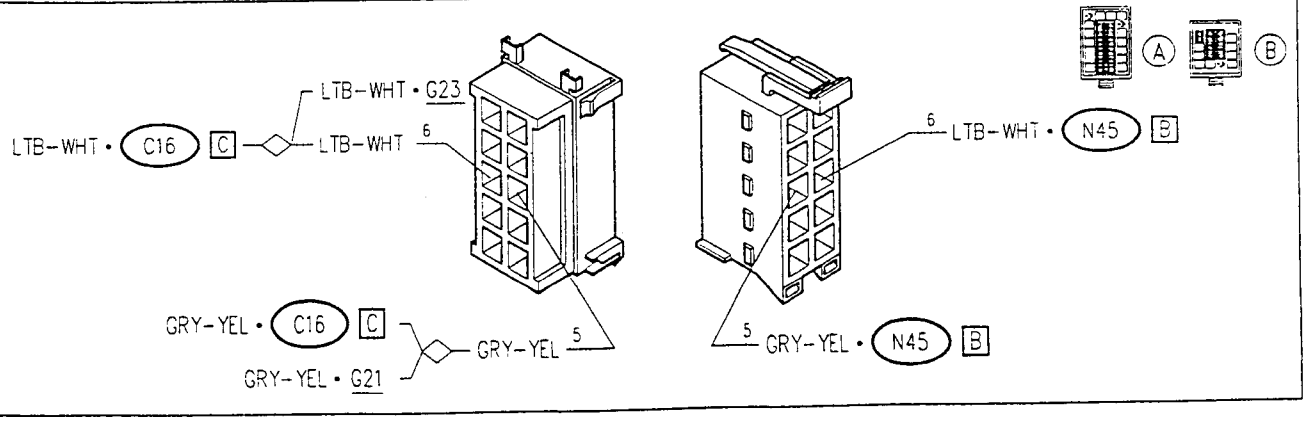
LH front door wiring connector	G23



Rear services connector	G73 A

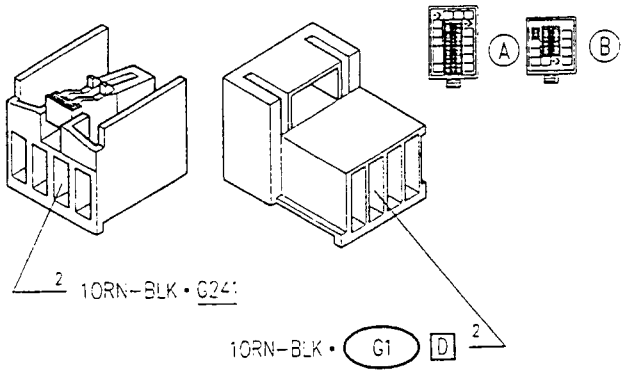


Rear services connector	G73 B

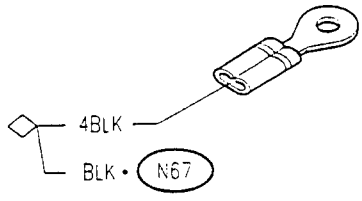


COMPONENTS AND CONNECTORS (cont.d)

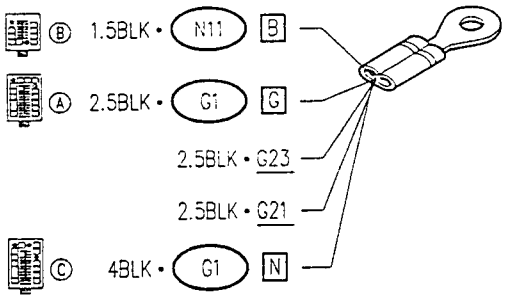
Connector for dashboard wiring/engine wiring	G99



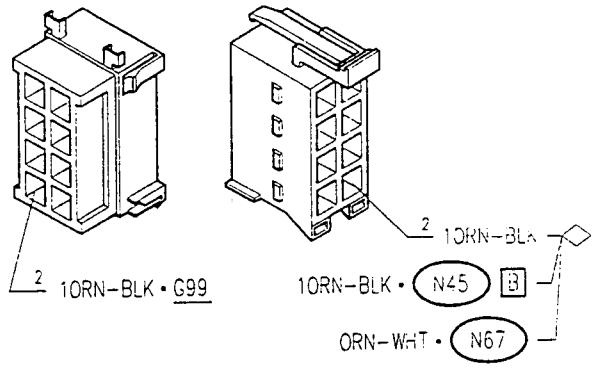
Seat crossmember earth	G106



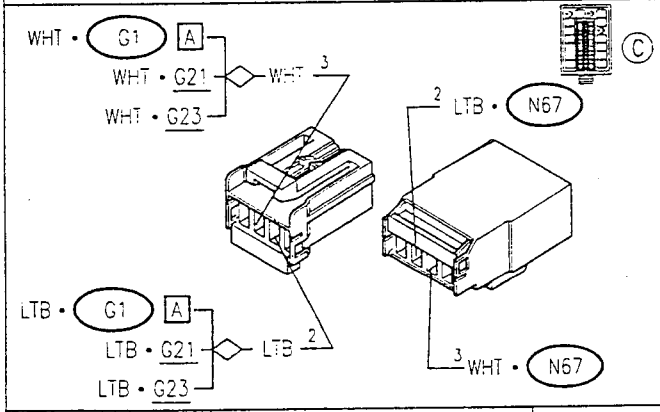
Earth under LH dashboard	G148b



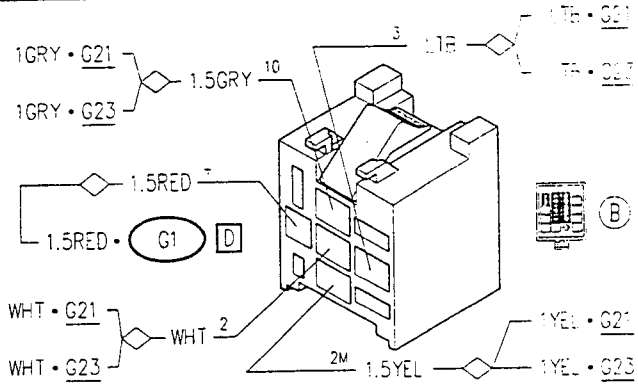
Anti-theft device wiring connector	G241



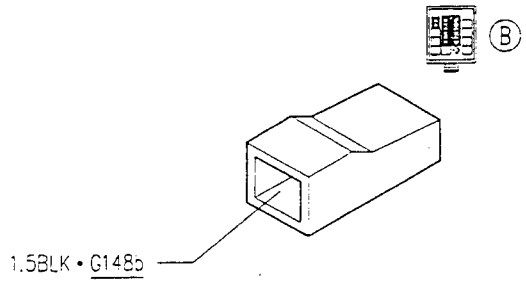
Anti-theft device wiring connector	G241



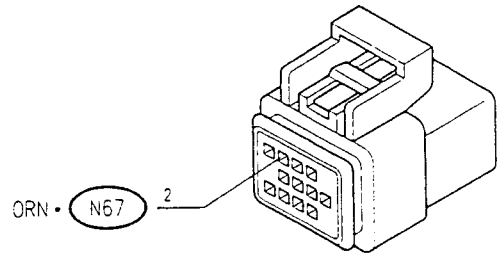
Door lock control unit	N11 A



Door lock control unit	N11 B

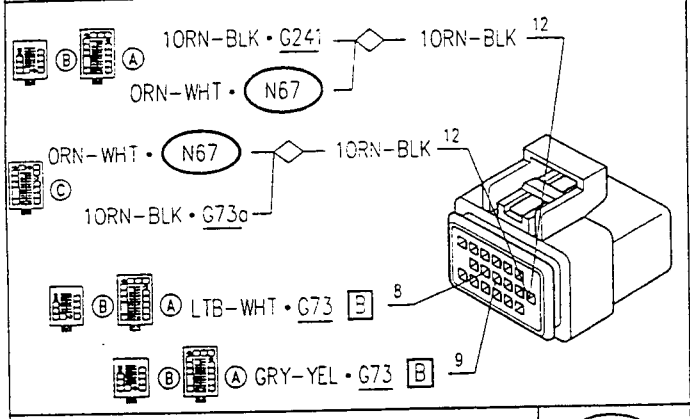


Anti-theft device control unit	N45 A

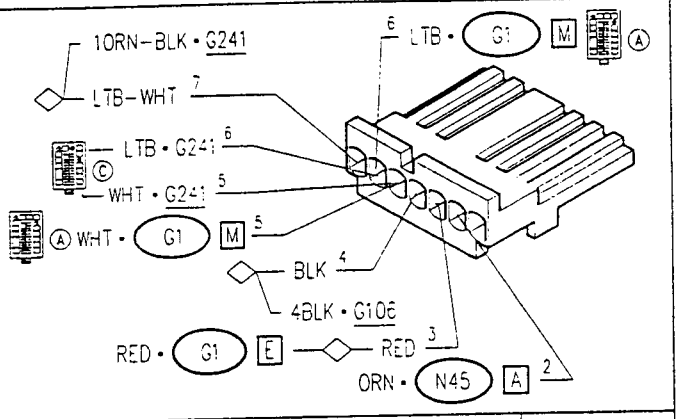


COMPONENTS AND CONNECTORS (cont.d)

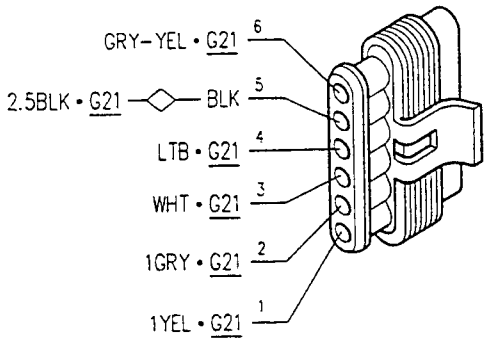
Anti-theft device control unit (N45) B



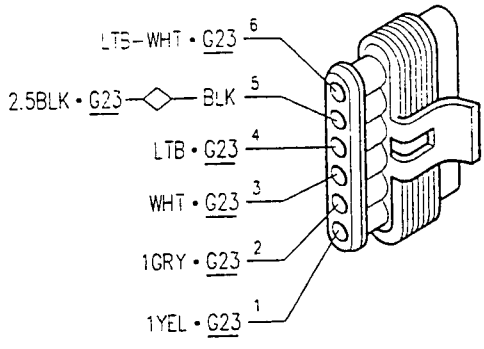
Remote control signal receiver (N67)



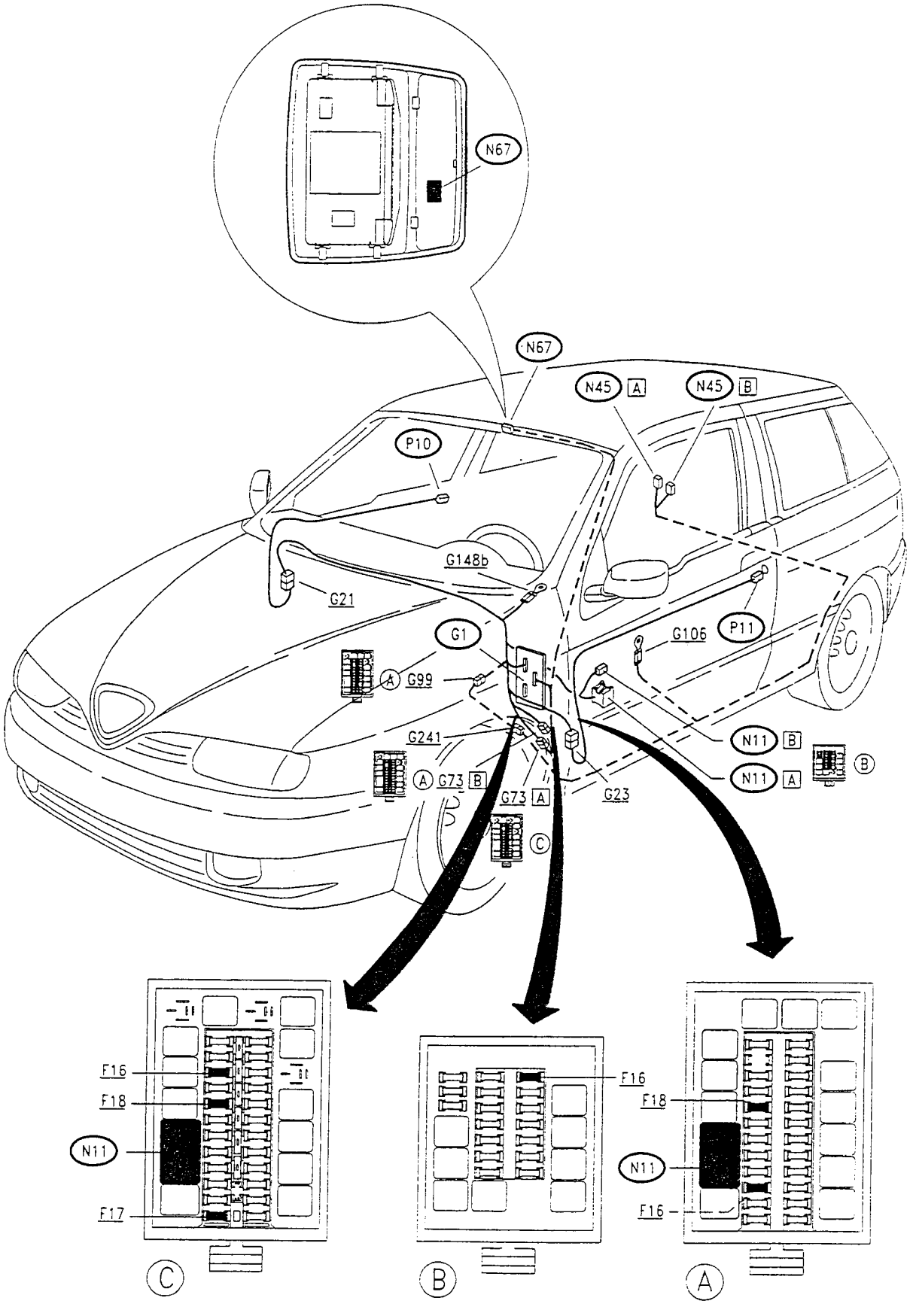
RH front door lock motor (P10)



LH front door lock motor (P11)



LOCATION OF COMPONENTS



– – – only for versions with anti-theft device

FAULTFINDING TABLE

CAUTION:
In the event of a mechanical failure on one of the door lock devices integrated with the lock, the control unit safety logic makes **the lock itself stay open**. In the unlikely event that the doors stay shut and locked, it is however still possible to open the lock manually: using the key from outside or raising the knob from inside.

N.B.: cutting off the supply does not "unlock" locked doors!! Locked doors will only open when the supply is received again.

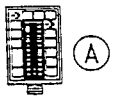
Failure	Component to be checked				
	F16 (B)	F18 (A)	(N11)	(P10)	(P11)
Whole door locking system	•	•	•		
LH front door					•
RH front door				•	
Key not working in the LH front door			•		•
Key not working in the RH front door			•	•	

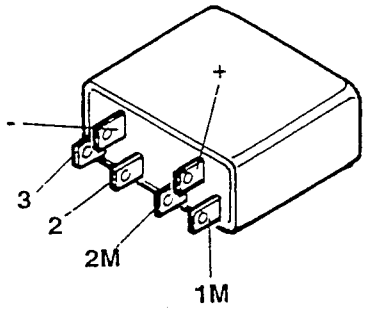
(A) Only fusebox "A"

(B) Only fusebox "B"

CHECKING COMPONENTS

Door locking control unit (N11)

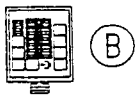


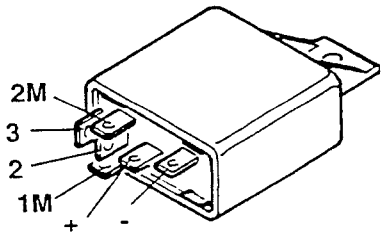


Checking the device:

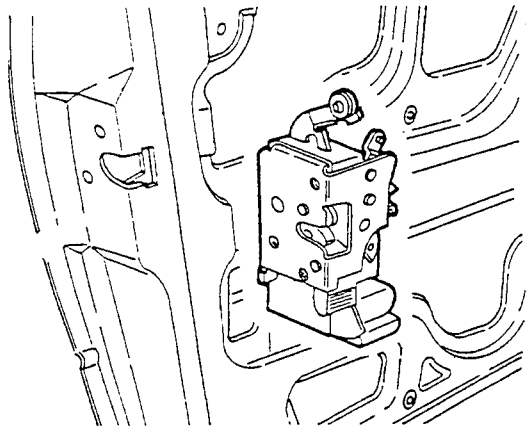
TEST A (for fusebox "A")

TEST B (for fusebox "B")





Door lock gear motor (P10) - (P11)



SPECIFICATIONS	
door closed	continuity between pin 5 and 6
door open	a.c. between pin 5 and 6
lock command	cuts off continuity between pin 5 and 3 and establishes it between pin 5 and 4
release command	cuts off continuity between pin 5 and 4 and establishes it between pin 5 and 3
motor operation	applying 12V between pins 1 and 2

CHECKING THE DOOR LOCK CONTROL UNIT (N11) (version for fusebox "A")

TEST A

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
A1 CHECK VOLTAGE – Disconnect device **N11** and check on the base of fusebox **G1**: 12V between the + and - pins of **N11**	OK ▶	Carry out **step A2**
	~~OK~~ ▶	Check fuse **F18** of fusebox **G1**. Check that **G1** is connected to earth: from pin 1 of connector G towards earth **G148b**
A2 CHECK LOCK/RELEASE COMMAND – Operate the door locking or release and check that an earth passes from pin 2 to pin 3 of **N11** or viceversa	OK ▶	Insert device **N11** on the base of **G1** and continue with **step A3**
	~~OK~~ ▶	Restore the wiring between **N11** (**G1**) and the door lock motor (**P10** RH or **P11** LH) or change the latter
A3 CHECK LOCK/RELEASE ACTUATION – Operate the door lock or release device and check for 12V between pin 7 and 8 of connector G of fusebox **G1**	OK ▶	DEVICE **N11** IS WORKING PROPERLY: Check the door lock motor **P10** or **P11** and the corresponding connections
	~~OK~~ ▶	Change device **N11**

CHECKING THE DOOR LOCK CONTROL UNIT (N11) (version for fusebox "B")

TEST B

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
B1 CHECK VOLTAGE – Disconnect device **N11** and check on the base for 12V between the + and - pins of **N11**	OK ▶	Carry out **step B2**
	~~OK~~ ▶	Check fuse **F16** of fusebox **G1**. Check the connection between **N11** and fusebox **G1**
B2 CHECK LOCK/RELEASE COMMAND SIGNAL – Operate the door lock or release and check for the passage of an earth signal from 2 to pin 3 of **N11** or viceversa	OK ▶	Insert device **N11** on the corresponding base and continue with **step B3**
	~~OK~~ ▶	Restore the wiring between **N11** and the door lock motor (**P10** RH or **P11** LH) or change the latter
B3 CHECK ACTUATION OF LOCK/RELEASE – Operate the door lock or release and check for 12V between pin 1M and 2M of **N11**	OK ▶	DEVICE **N11** IS WORKING PROPERLY: Check the door lock motor **P10** or **P11** and the corresponding connections
	~~OK~~ ▶	Change device **N11**