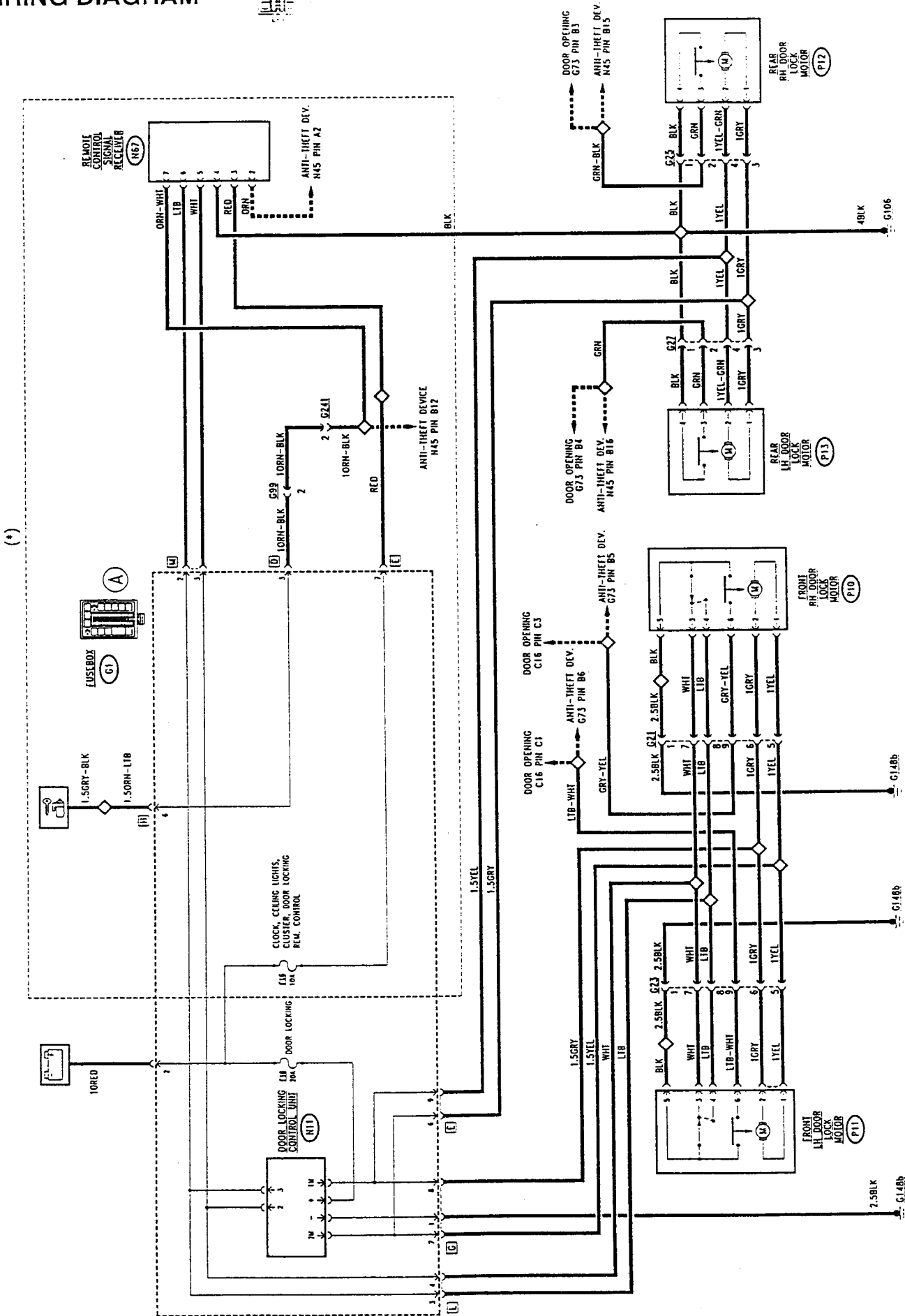


DOOR LOCKING SYSTEM

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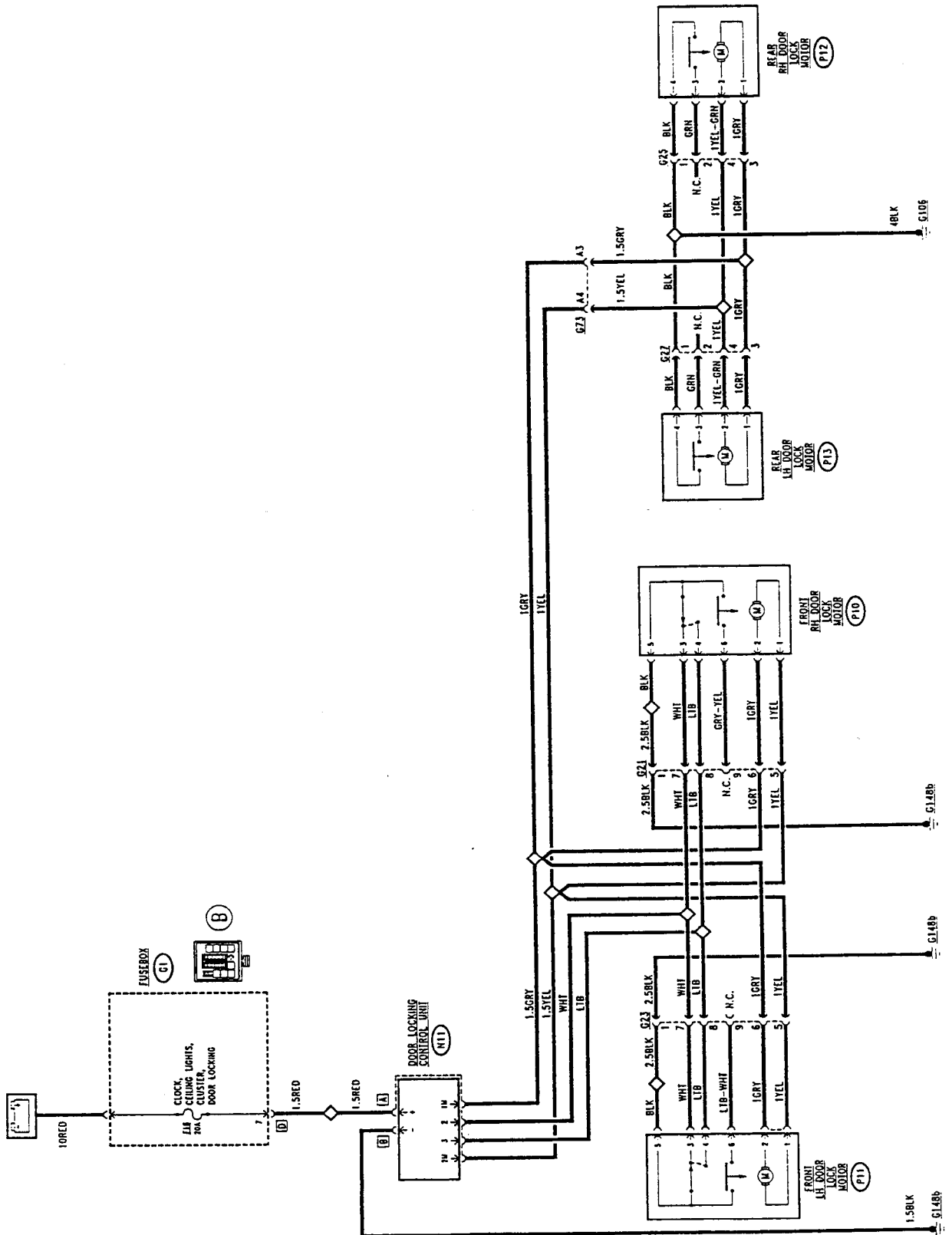
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WIRING DIAGRAM

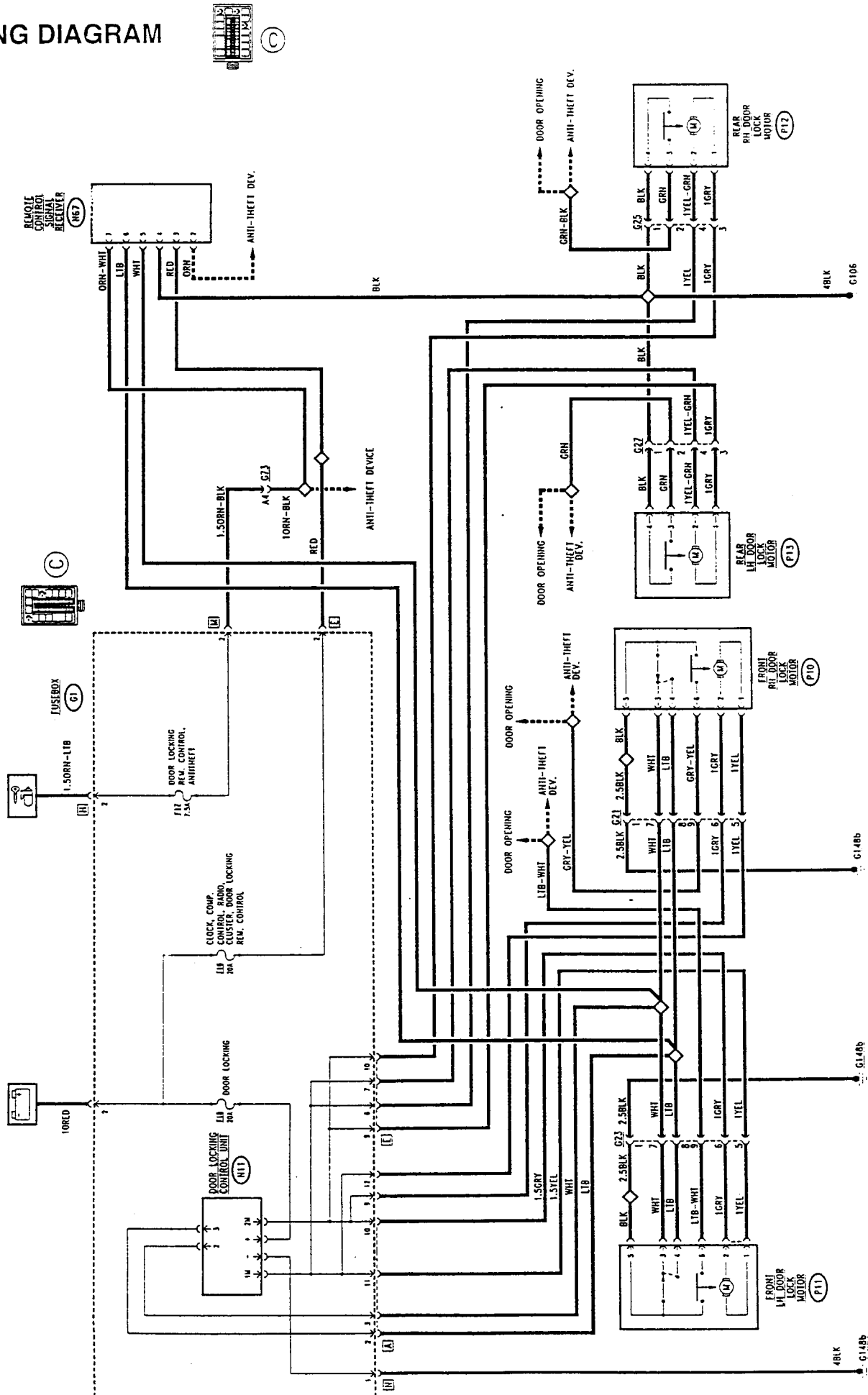


(*) only for versions with anti-theft device

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 (connected to the electric circuit only for the front doors) 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 "Anti-theft device").

The gear motors are operated simultaneously by acting on one of the control switches of the front door either from inside through the knobs or from the outside using the key. Due to safety reasons the devices for the rear doors are mechanical only (they work closing the door concerned) and do not operate as an electric lock/release command.

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").

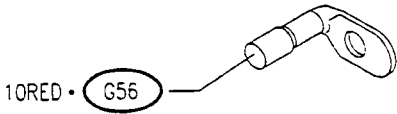
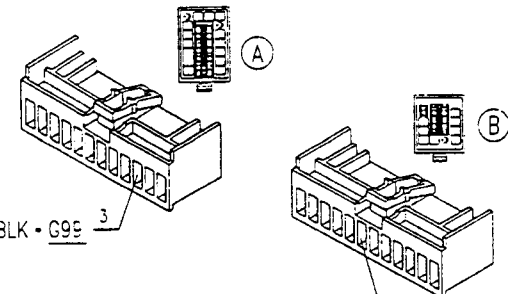
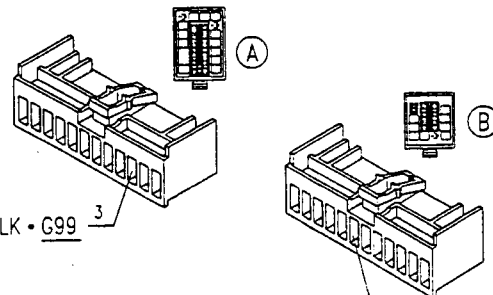
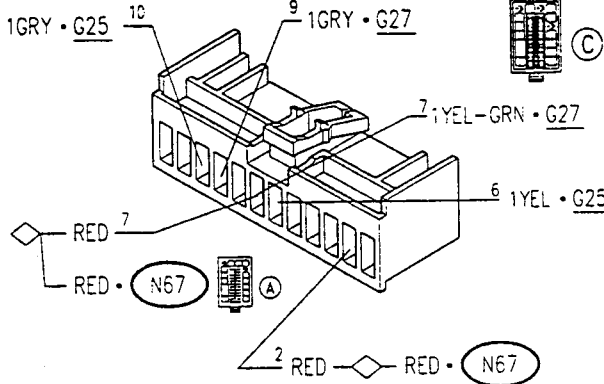
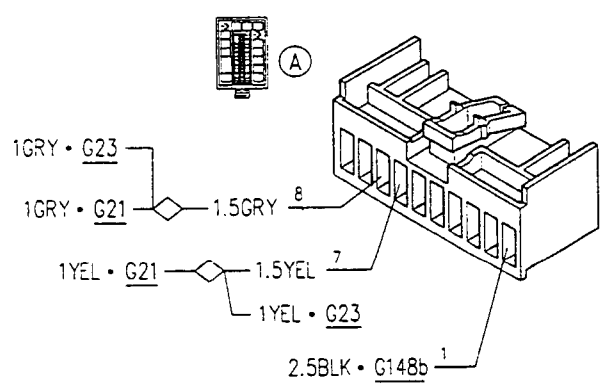
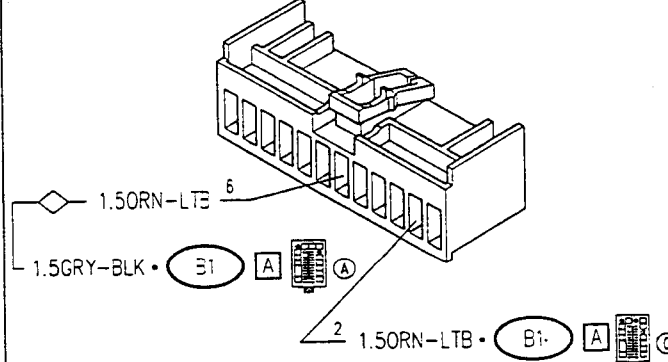
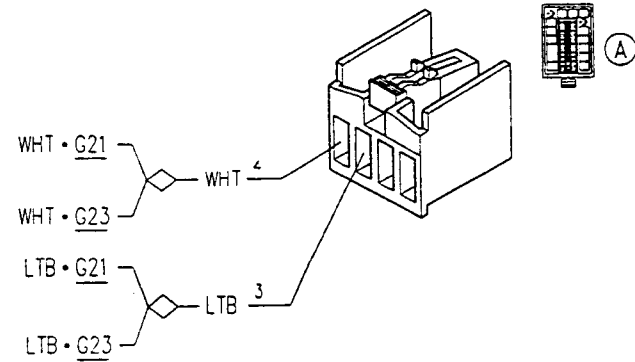
It is supplied by the battery voltage (pin +) through fuse **F18** (fusebox "A" and "C") or by fuse **F16** (fusebox "B"), while it is connected to earth (pin -).

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**:

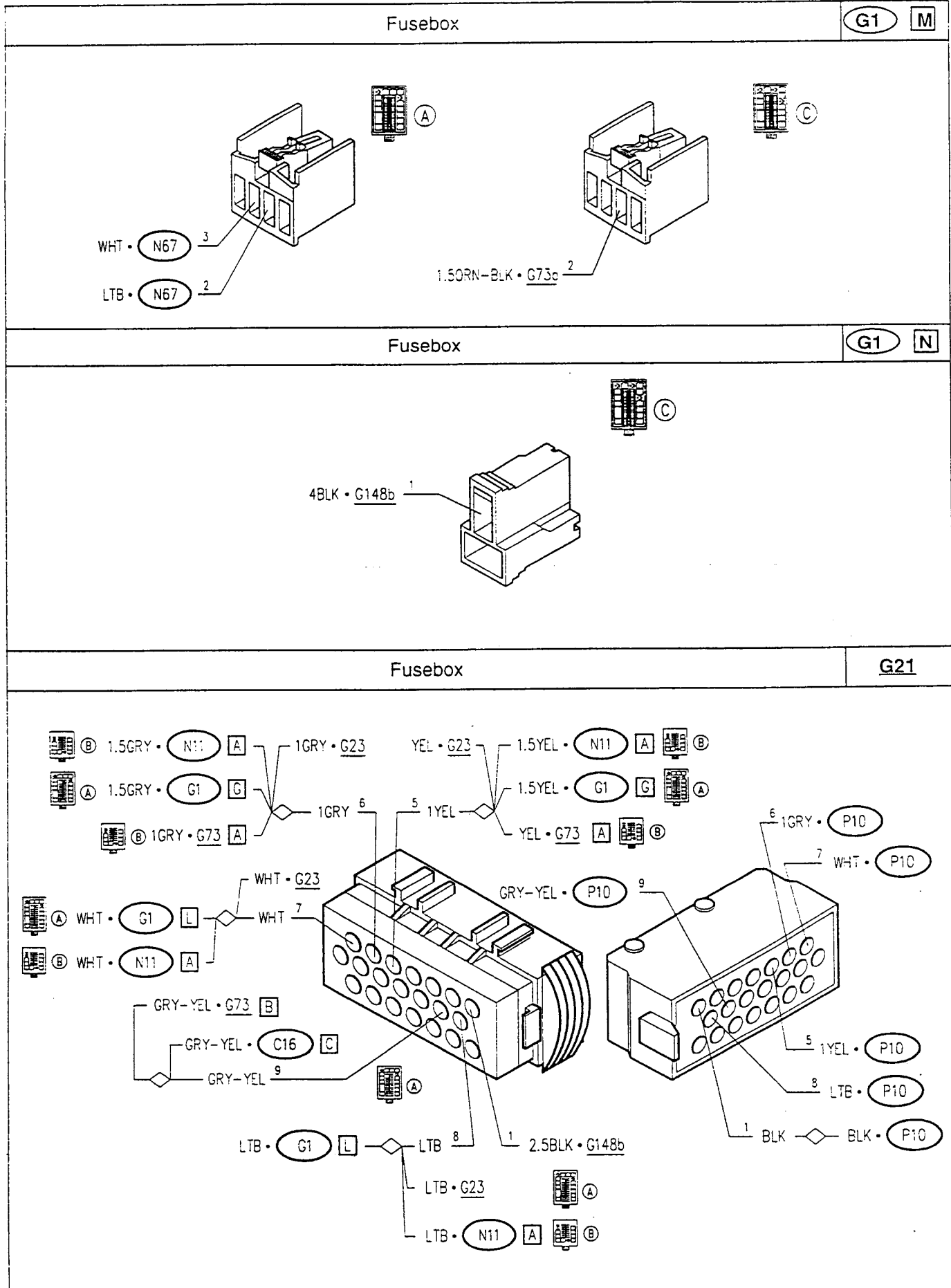
- **locking signal:** if the earth passes from pin 2 to pin 3;
- **releasing signal:** viceversa from pin 3 to pin 2.

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**, **P11**, **P12** and **P13**.

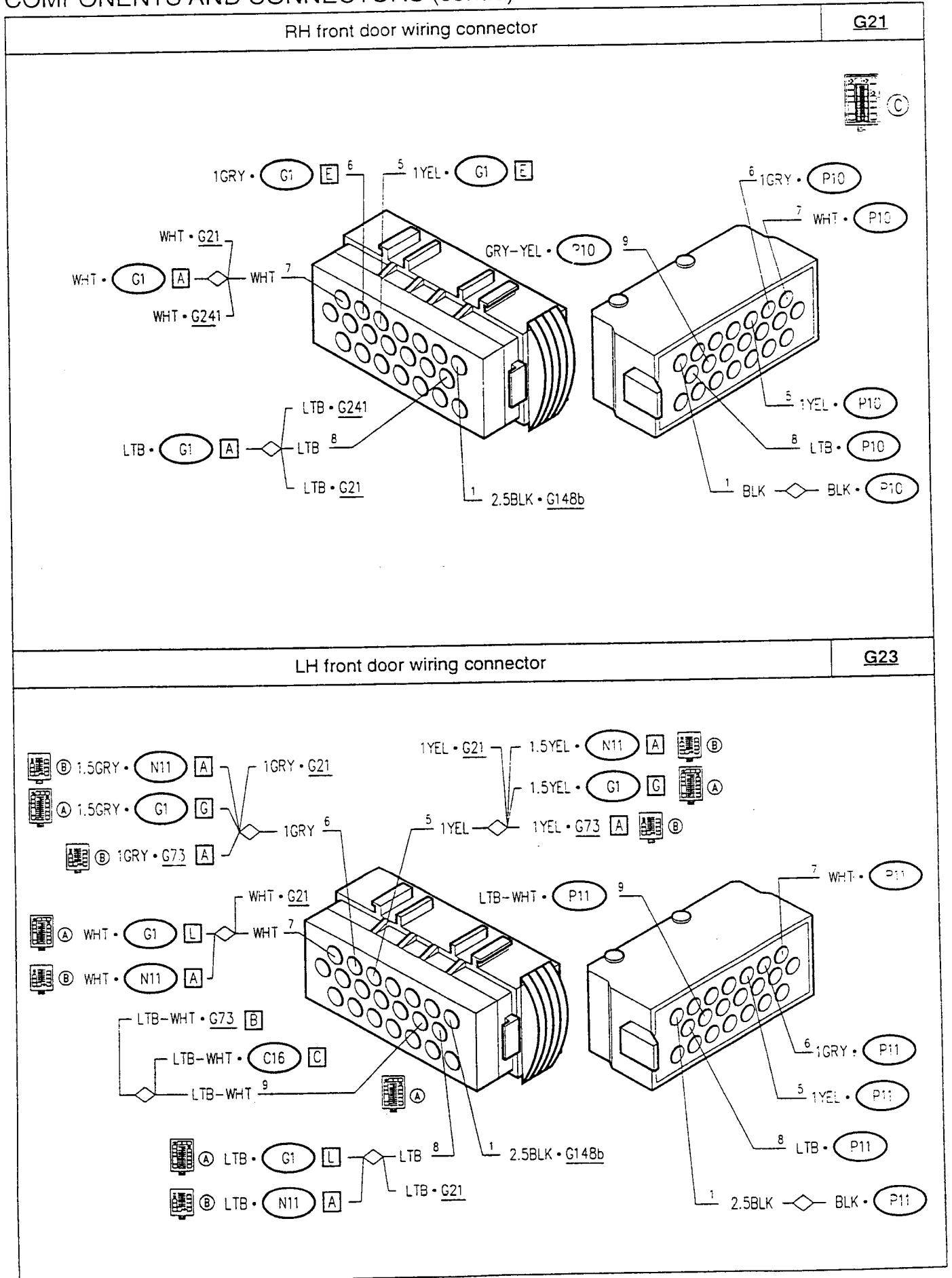
COMPONENTS AND CONNECTORS

Fusebox	G1	Fusebox	G1 A
 <p>10RED • G56</p>		 <p>10RN-BLK • G99 3</p> <p>1.5RED • N11 A 1.5RED 7</p>	
Fusebox	G1 D	Fusebox	G1 E
 <p>10RN-BLK • G99 3</p> <p>1.5RED • N11 A 1.5RED 7</p>		 <p>1GRY • G25 10</p> <p>1GRY • G27 9</p> <p>1YEL-GRN • G27 7</p> <p>1YEL • G25 6</p> <p>RED 7</p> <p>RED • N67 A</p> <p>2 RED - RED • N67</p>	
Fusebox	G1 G	Fusebox	G1 H
 <p>1GRY • G23</p> <p>1GRY • G21 1.5GRY 8</p> <p>1YEL • G21 1.5YEL 7</p> <p>1YEL • G23</p> <p>2.5BLK • G148b 1</p>		 <p>1.5ORN-LTB 6</p> <p>1.5GRY-BLK • B1 A</p> <p>2 1.5ORN-LTB • B1 A C</p>	
Fusebox		G1 L	
 <p>WHT • G21</p> <p>WHT • G23</p> <p>LTB • G21</p> <p>LTB • G23</p> <p>WHT 4</p> <p>LTB 3</p>			

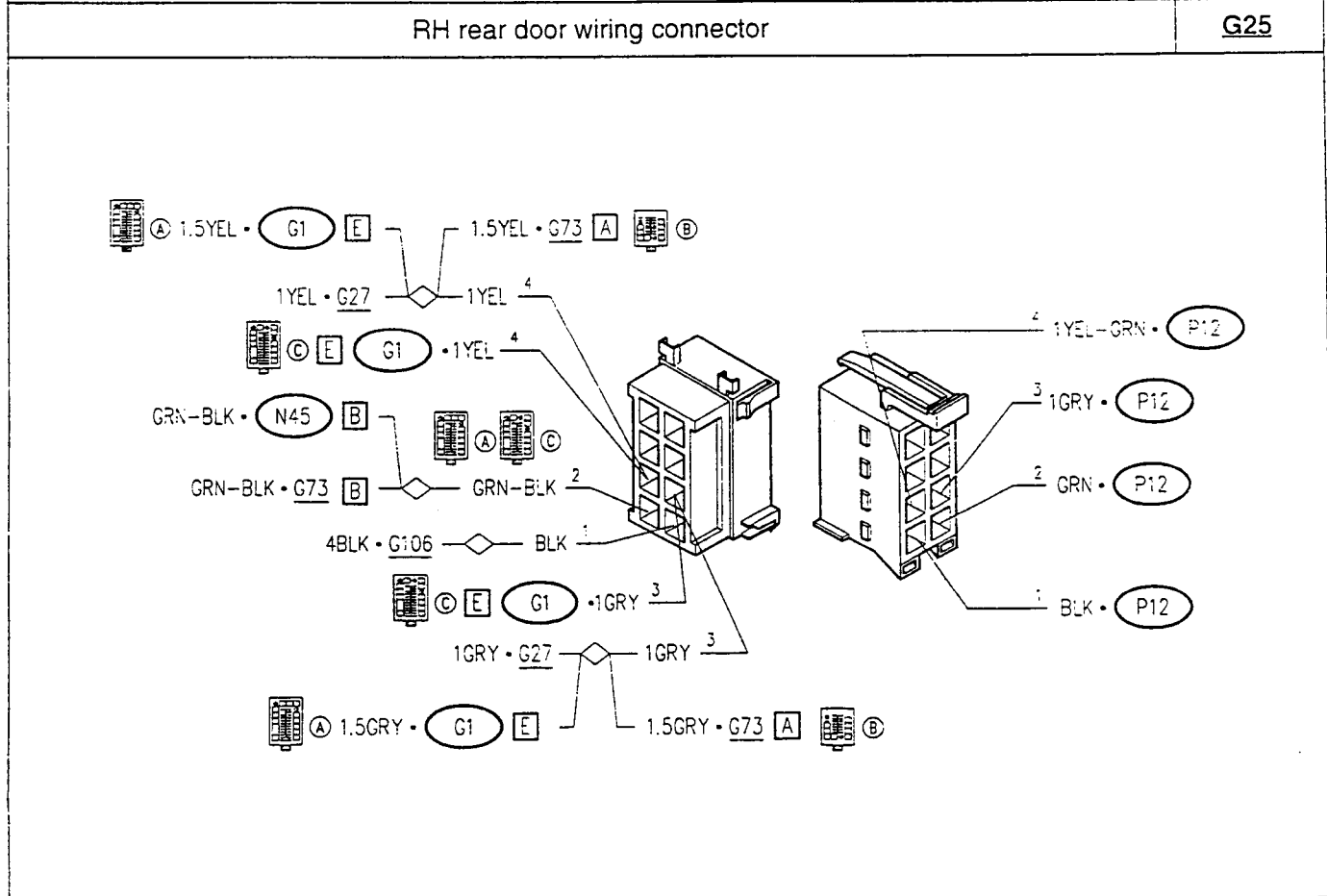
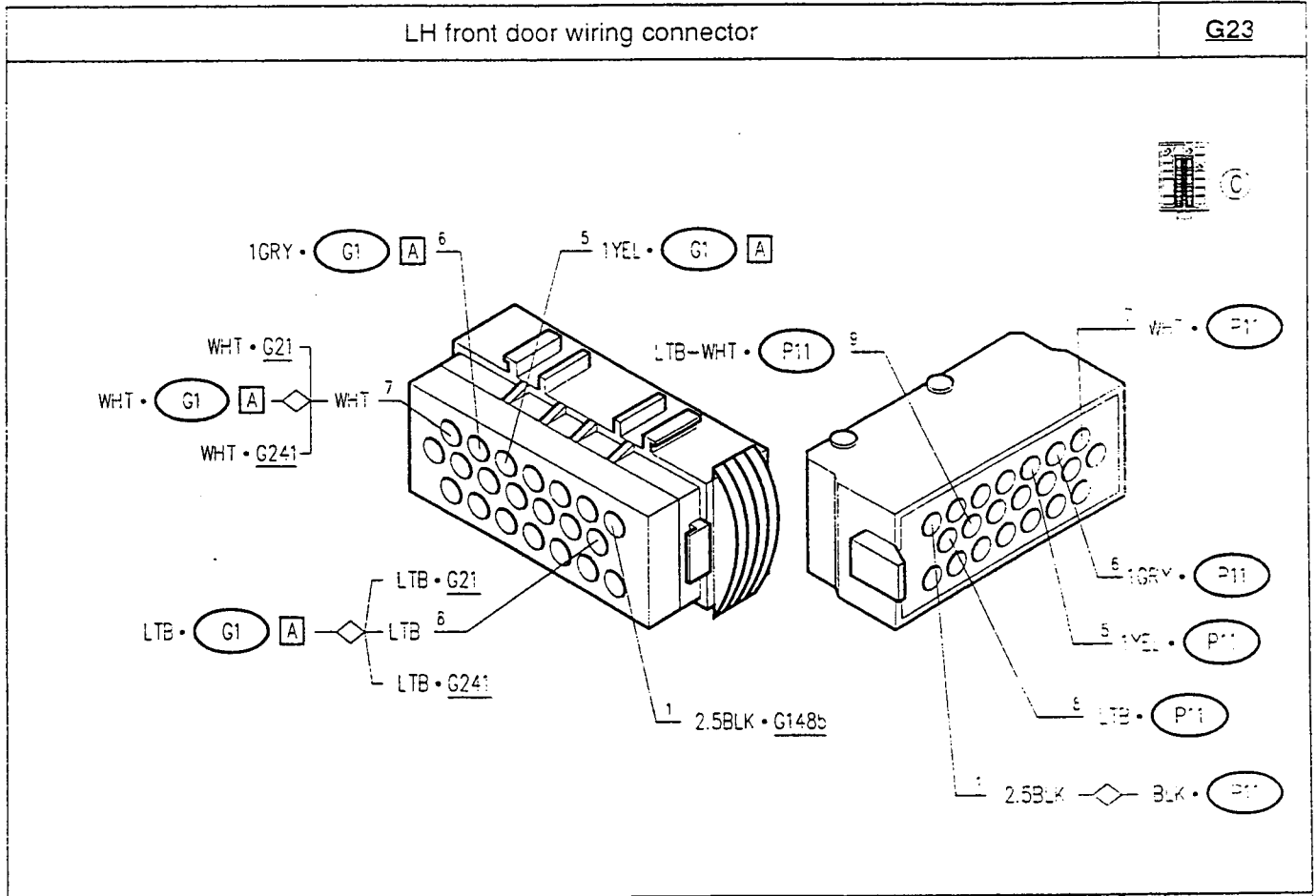
COMPONENTS AND CONNECTORS (cont.d)



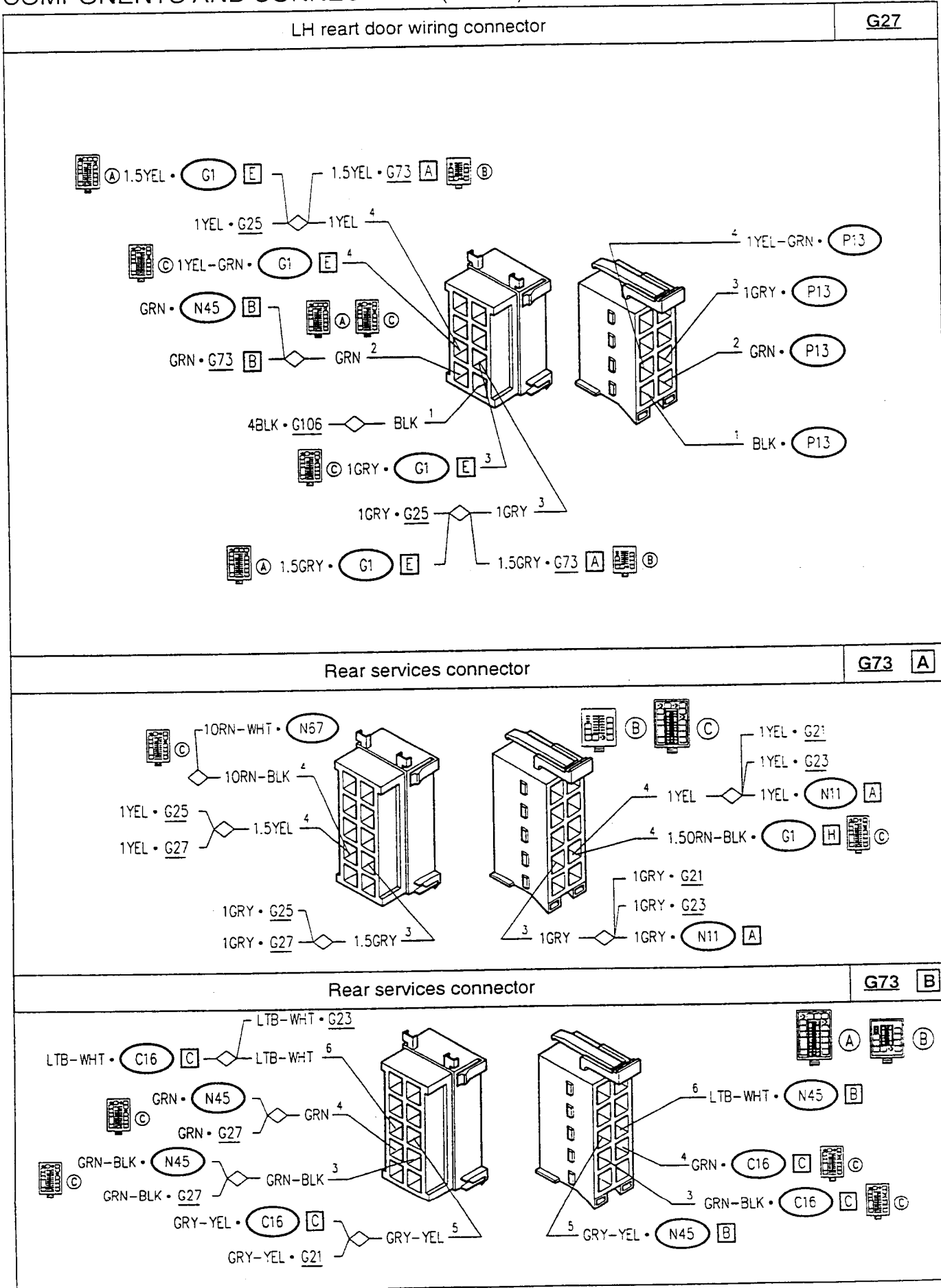
COMPONENTS AND CONNECTORS (cont.d)



COMPONENTS AND CONNECTORS (cont.d)



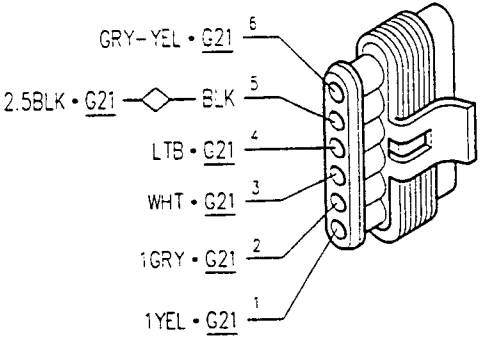
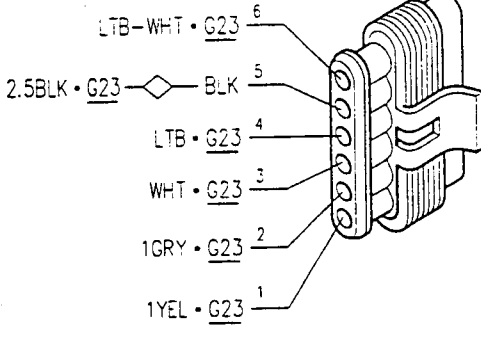
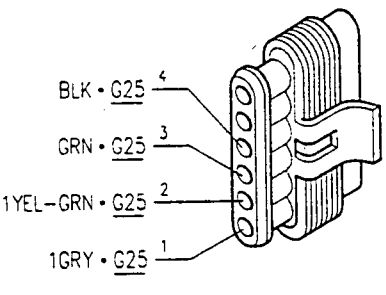
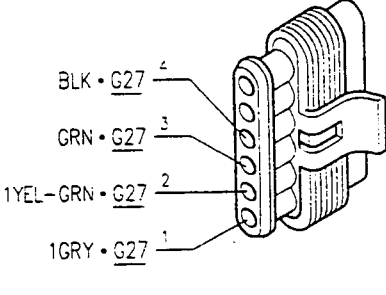
COMPONENTS AND CONNECTORS (cont.d)



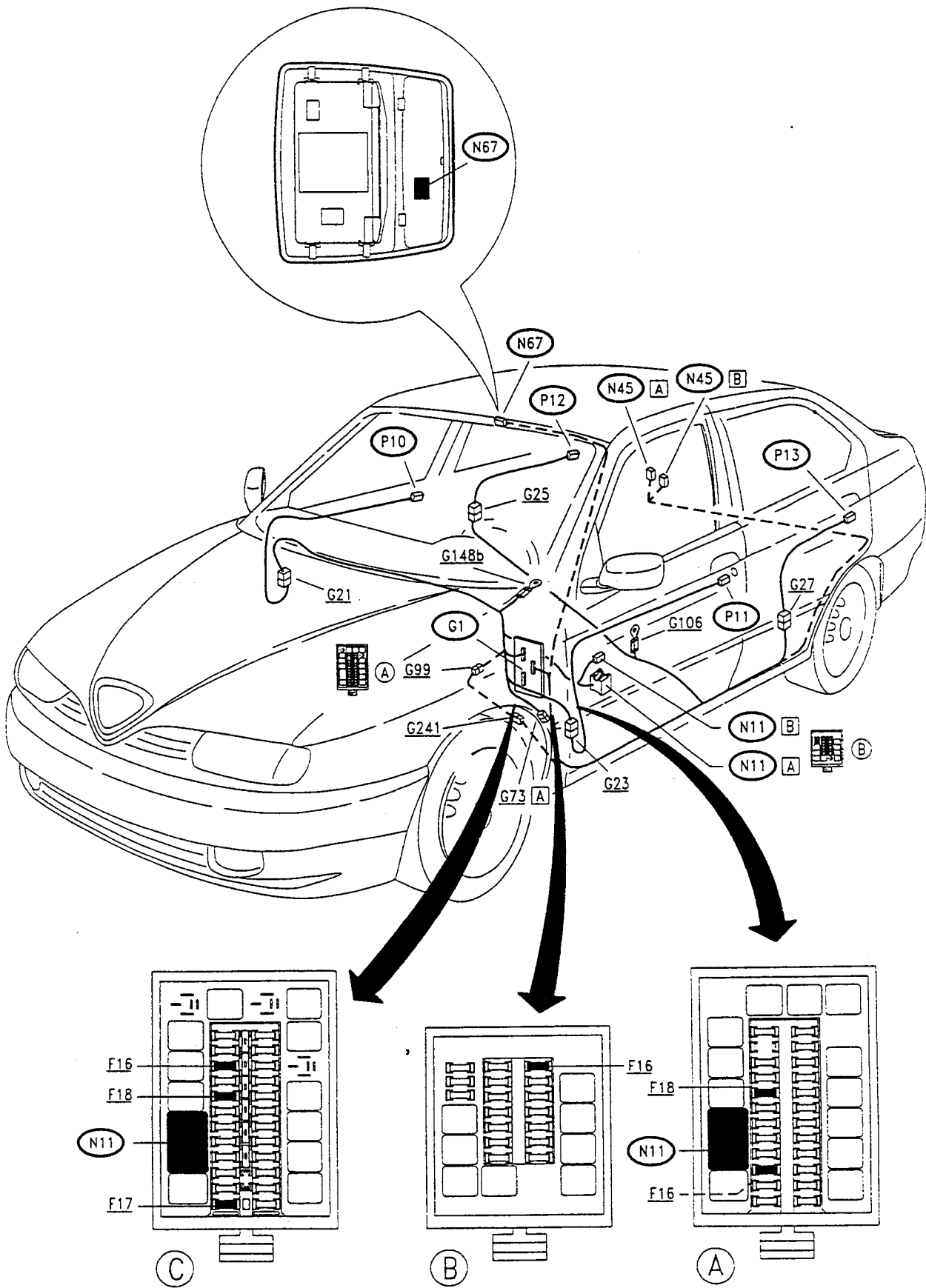
COMPONENTS AND CONNECTORS (cont.d)

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	Remote control signal receiver	N67

COMPONENTS AND CONNECTORS (cont.d)

RH front door lock motor	P10	LH front door lock motor	P11
 <p> GRY-YEL • G21 6 2.5BLK • G21 —◇— BLK 5 LTB • G21 4 WHT • G21 3 1GRY • G21 2 1YEL • G21 1 </p>		 <p> LTB-WHT • G23 6 2.5BLK • G23 —◇— BLK 5 LTB • G23 4 WHT • G23 3 1GRY • G23 2 1YEL • G23 1 </p>	
RH rear door lock motor	P12	LH rear door lock motor	P13
 <p> BLK • G25 4 GRN • G25 3 1YEL-GRN • G25 2 1GRY • G25 1 </p>		 <p> BLK • G27 4 GRN • G27 3 1YEL-GRN • G27 2 1GRY • G27 1 </p>	

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.

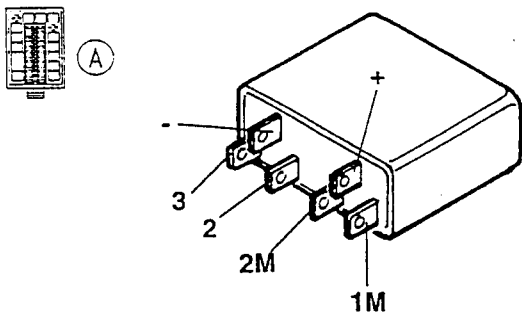
Failure	Component to be checked						
	F16 (B)	F18 (A)	N11	P10	P11	P12	P13
Whole door locking system	•	•	•				
LH front door					•		
RH front door				•			
LH rear door							•
RH rear door						•	

(A) Only fusebox "A"

(B) Only fusebox "B"

CHECKING COMPONENTS

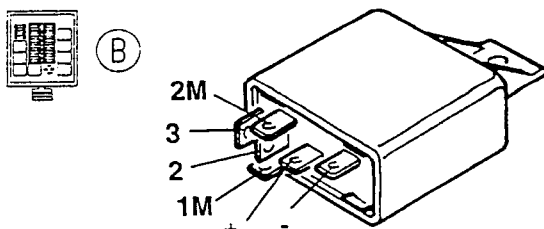
Door locking control unit **N11**



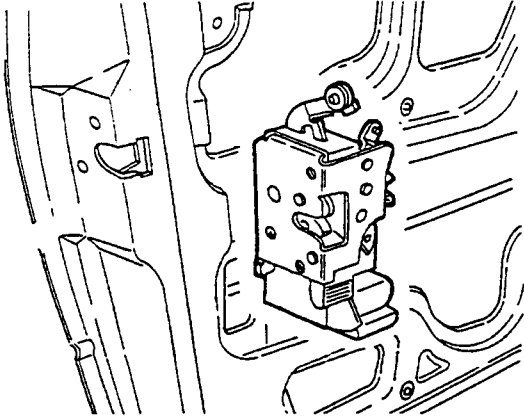
Checking the device:

TEST A (for fusebox "A")

TEST B (for fusebox "B")

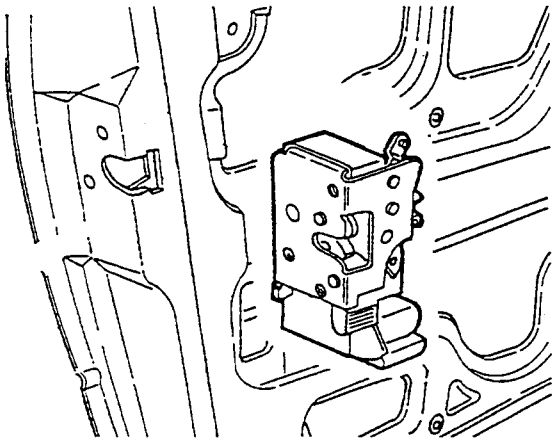


Front door lock gear motor (P10) - (P11)



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

Rear door lock gear motor (P12) - (P13)



SPECIFICATIONS	
door closed	continuity between pin 3 and 4
door open	a.c. between pin 3 and 4
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) ▶ (OK) ▶	Carry out step A2 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) ▶ (OK) ▶	Insert device N11 on the base of G1 and continue with step A3 Restore the wiring between N11 (G1) and the door lock motor (P10, P11, P12 or P13) 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) ▶ (OK) ▶	DEVICE N11 IS WORKING PROPERLY: Check the door lock motor P10 , P11, P12 or P13 and the corresponding connections 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) ▶ (OK) ▶	Carry out step B2 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) ▶ (OK) ▶	Insert device N11 on the corresponding base and continue with step B3 Restore the wiring between N11 and the door lock motor (P10, P11, P12 or P13) 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) ▶ (OK) ▶	DEVICE N11 IS WORKING PROPERLY: Check the door lock motor P10 ,P11, P12 or P13 and the corresponding connections Change device N11

