

DIRECTION INDICATORS AND HAZARD WARNING LIGHTS

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GENERAL DESCRIPTION

The intermittent direction indicators and hazard warning lights delineate the vehicle clearance.

The right or left direction indicators are turned on raising or lowering the lever on the steering column lever unit; the hazard warning lights (right and left indicators activated simultaneously) are switched on from the switch on the Check Panel.

The direction indicators operate when the ignition key is engaged, for the obvious safety reasons, they are supplied directly by the battery.

Two intermittent warning lights on the instrument cluster flash while the right and left indicators are operating. The hazard warning light indicates that these are operating by illuminating when they are turned on.

The circuit of the direction indicators is protected by a fuse and another fuse protects the circuit for the hazard warning lights.

FUNCTIONAL DESCRIPTION

The circuit is controlled by the hazard warning light and direction indicator flasher **N13** to be found next to the fusebox.

The flasher, earthed at pin 31, is supplied at pin 30 directly from the battery via the line of fuse **F1** of fusebox **G1**.

Pin 15R and 15L receive the signals (12V) from the lever unit **B68** when the "key-operated" supply of the line protected by fuse **F17** of box "A" and "B" is switched or from fuse **F15** of box **G1** "C", of **G1** for turning on the right direction indicator (pin 15R) and the left one (pin 15L).

Pin HWS receives a signal (earth) when the hazard warning light switch in the Check Panel **C16** is pressed.

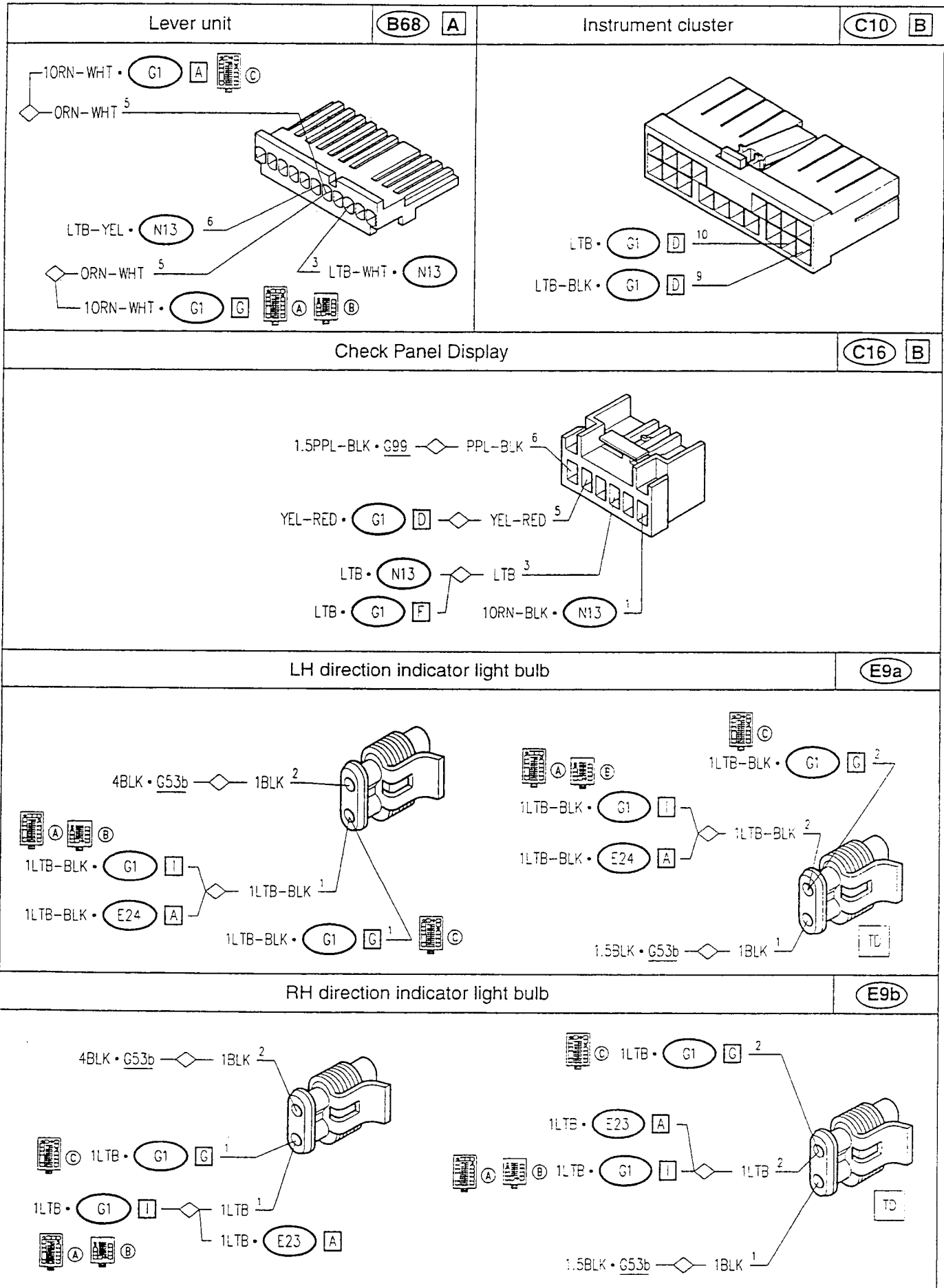
Pins R and L send the intermittent supply signals for all the indicators: from pin R for those on the right, from pin L for those on the left, according to the following logic:

- only pin R (RH) if the signal reaches pin 15R
- only pin L (LH) if the signal reaches pin 15L
- both pins R and L if the signal reaches pin HWS.

This way operating the stalk of the lever unit **B68** turns on the righthand indicators (**E23**, **E9b** and **E19**) or the left ones (**E24**, **E9a** and **E20**) and simultaneously the corresponding warning light on the instrument cluster **C10** is turned on.

When the switch on the Check Panel **C16** is pressed, the right and left direction indicators are supplied contemporaneously and also the special led (pin 3) inside **C16** is supplied which lights up when the hazard warning lights are switched on. A second led (pin 3) illuminates the ideogram of the switch when the side lights are on - see section "Lighting of Controls and Indicators".

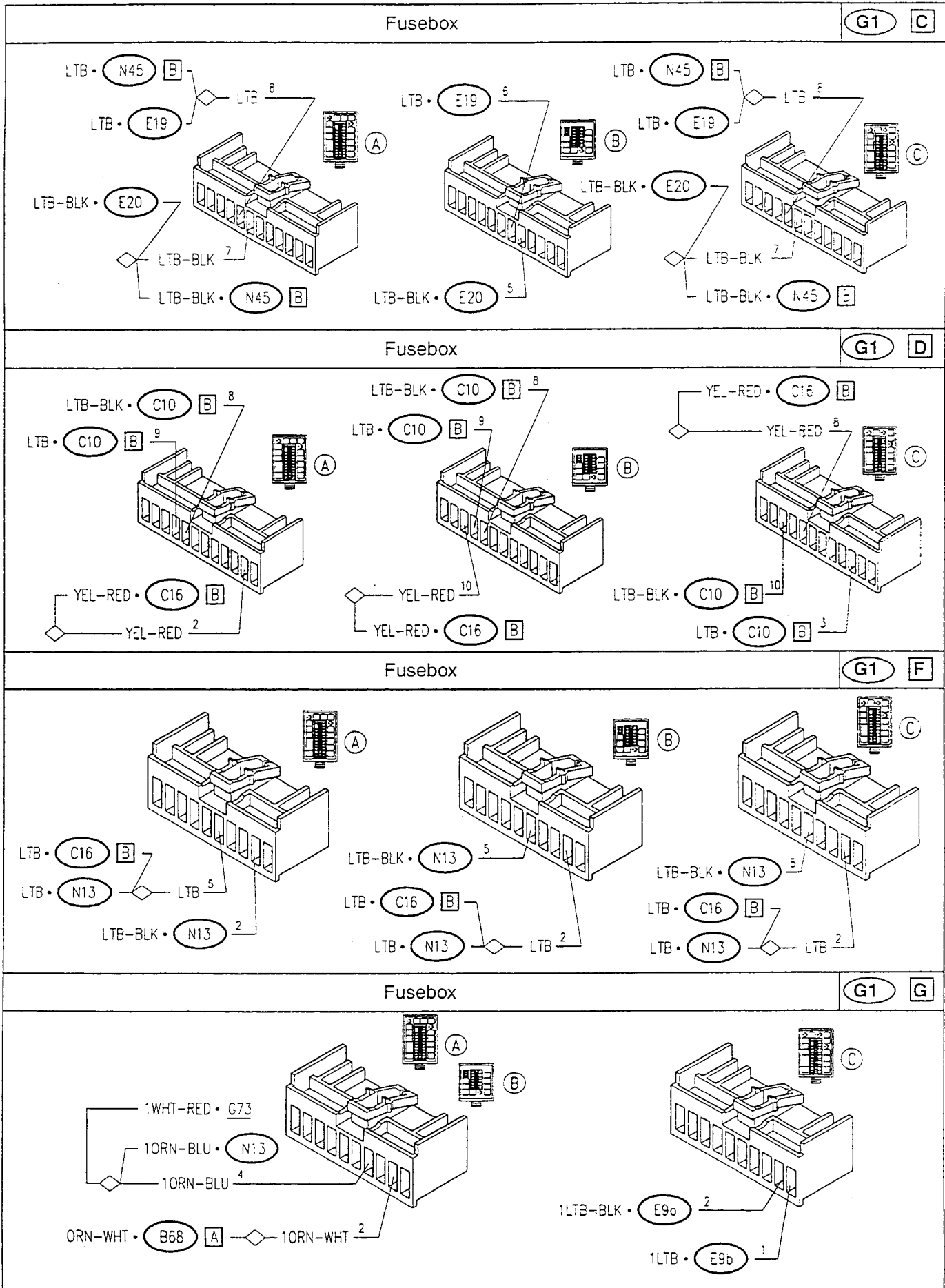
COMPONENTS AND CONNECTORS



COMPONENTS AND CONNECTORS (cont.d)

<p>RH light bulb</p>	<p>(E19)</p>	<p>LH light bulb</p>	<p>(E20)</p>
<p>RH front light cluster</p>	<p>(E23) A</p>	<p>LH front light cluster</p>	<p>(E24) A</p>
<p>Fusebox</p>			<p>(G1)</p>
<p>Fusebox</p>			<p>(G1) A</p>

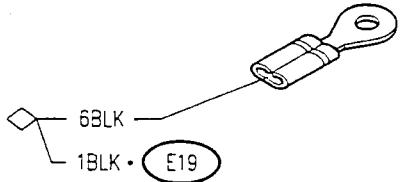
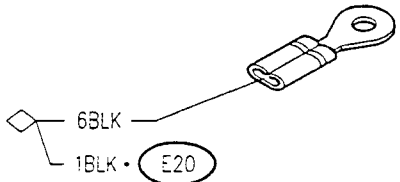
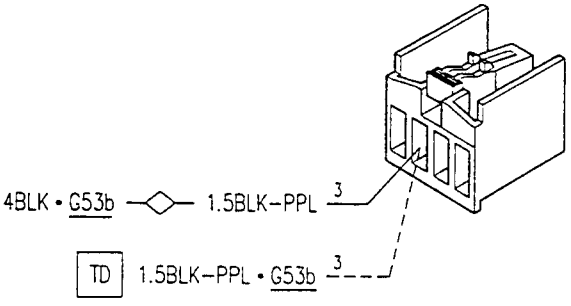
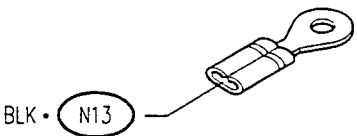
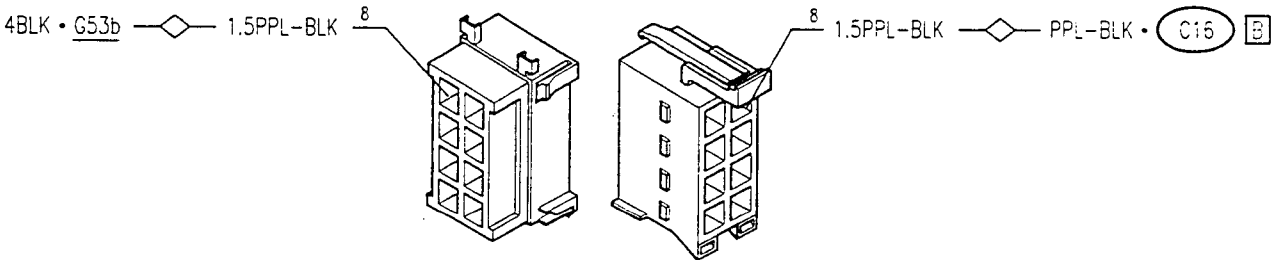
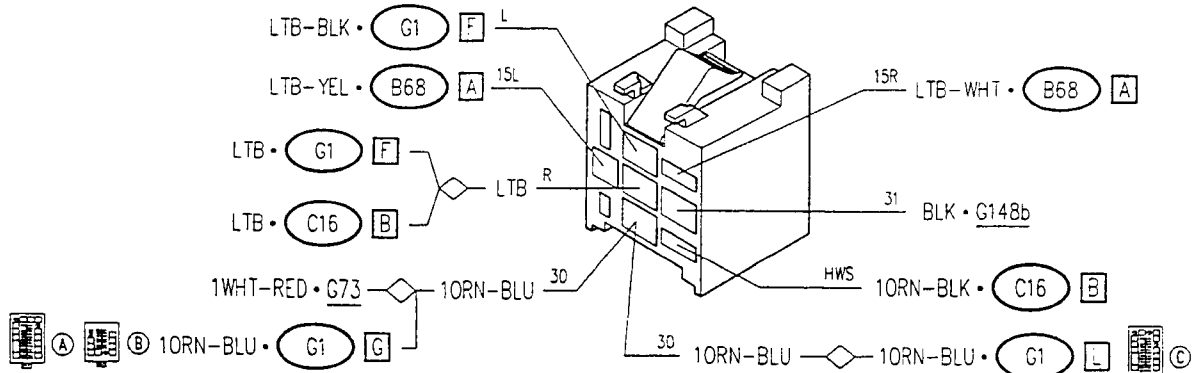
COMPONENTS AND CONNECTORS (cont.d)



COMPONENTS AND CONNECTORS (cont.d)

Fusebox		G1 H	
Fusebox		G1 I	
Fusebox	G1 L	RH engine compartment earth	G53a
LH engine compartment earth			G53b

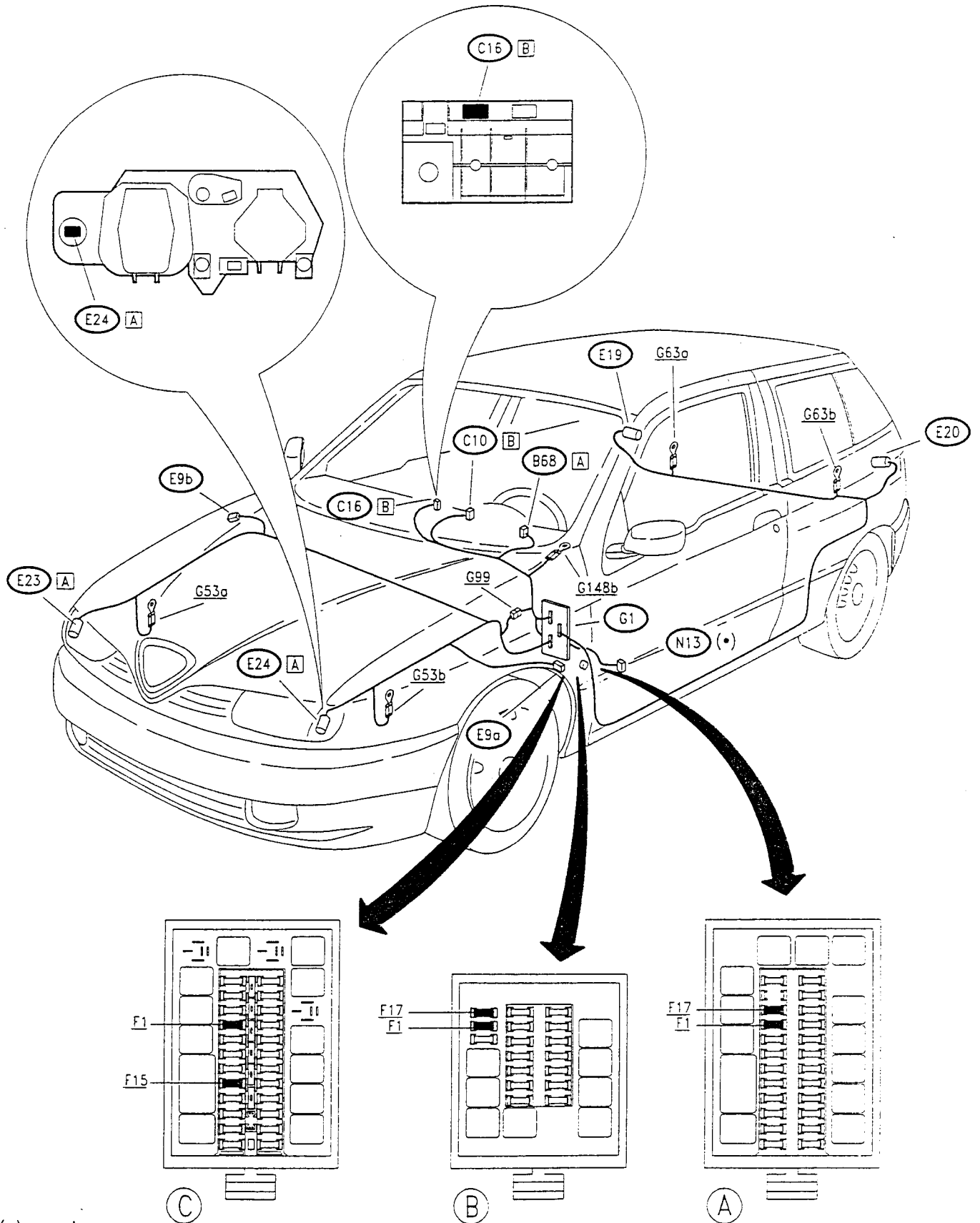
COMPONENTS AND CONNECTORS (cont.d)

RH rear earth	G63a	LH under earth	G63b
			
Dashboard/engine wiring connector (*)	G99	Earth under LH dashboard	G148b
			
Dashboard/engine wiring connector (**)			G99
			
Indicator & hazard warning light flasher			N13
			

(*) up to chassis no. ____
PA493000000008

(**) from chassis no. ____

LOCATION OF COMPONENTS



(* grey base)

FAULTFINDING TABLE

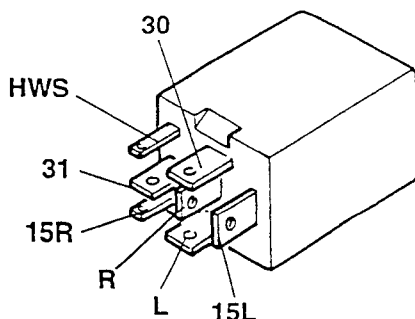
Failure	Component to be checked											
	F1	F17	E23	E24	E9a	E9b	E19	E20	N13	B68	C16 (**)	C10 (*)
All the direction indicators	•	•								•	•	
Hazard warning lights	•									•		•
All the RH direction indicators										•	•	
All the LH direction indicators										•	•	
RH front light			•									
RH side light						•						
RH rear light							•					
LH front light				•								
LH side light					•							
LH rear light								•				
RH indicator warning light												•
LH indicator warning light												•
Hazard warning light switch illuminated with lights on											•	

(*) The instrument cluster **C10** cannot be repaired. Therefore in the event of a failure it is not possible to change the single warning light and a new complete cluster must be fitted.

(**) The "Check Panel" display **C16** cannot be repaired. Therefore, in the event of a failure it is not possible to replace the hazard warning light switch and a new complete Check Panel must be installed.

CHECKING COMPONENTS

Hazard warning light and indicator flasher **N13**



Checking the device: see TEST A

HAZARD WARNING LIGHT AND INDICATOR FLASHER N13	TEST A
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TEST PROCEDURE	RESULT	CORRECTIVE ACTION
A1 CHECK VOLTAGE – Disconnect the flasher N13 and on the base check for 12V at pin 30 of N13	(OK) ► (OK) ►	Carry out step A2 Check fuse F1 from fusebox G1 . If necessary
A2 CHECK EARTH – Check for 0 V at pin 31 of N13	(OK) ► (OK) ►	Carry out step A3 Restore the wiring between N13 and earth G148b
A3 CHECK INTERMITTENT VOLTAGE – With the ignition key turned, operate the RH indicator and check for 12 V at pin 15R of N13 ; operate the LH indicator in the same way, check pin 15L of N13	(OK) ► (OK) ►	Carry out step A4 Restore the wiring between N13 and lever unit B68 , or replace the latter
A4 CHECK EARTH – Operate the hazard warning light switch and check for 0V at pin HWS of N13	(OK) ► (OK) ►	Insert device N13 on its base and continue with osequire step A5 Restore the wiring between N13 and the switch in panel C16 , or change the latter
A5 CHECK INTERMITTENT VOLTAGE – Operate the RH indicator and check for intermittent 12V at pin R of N13 ; do the same operating the LH indicator at pin L and operating the hazard warning lights at both pin R and pin L	(OK) ► (OK) ►	DEVICE N13 IS WORKING PROPERLY. Check the connections with the other components CHANGE DEVICE N13