

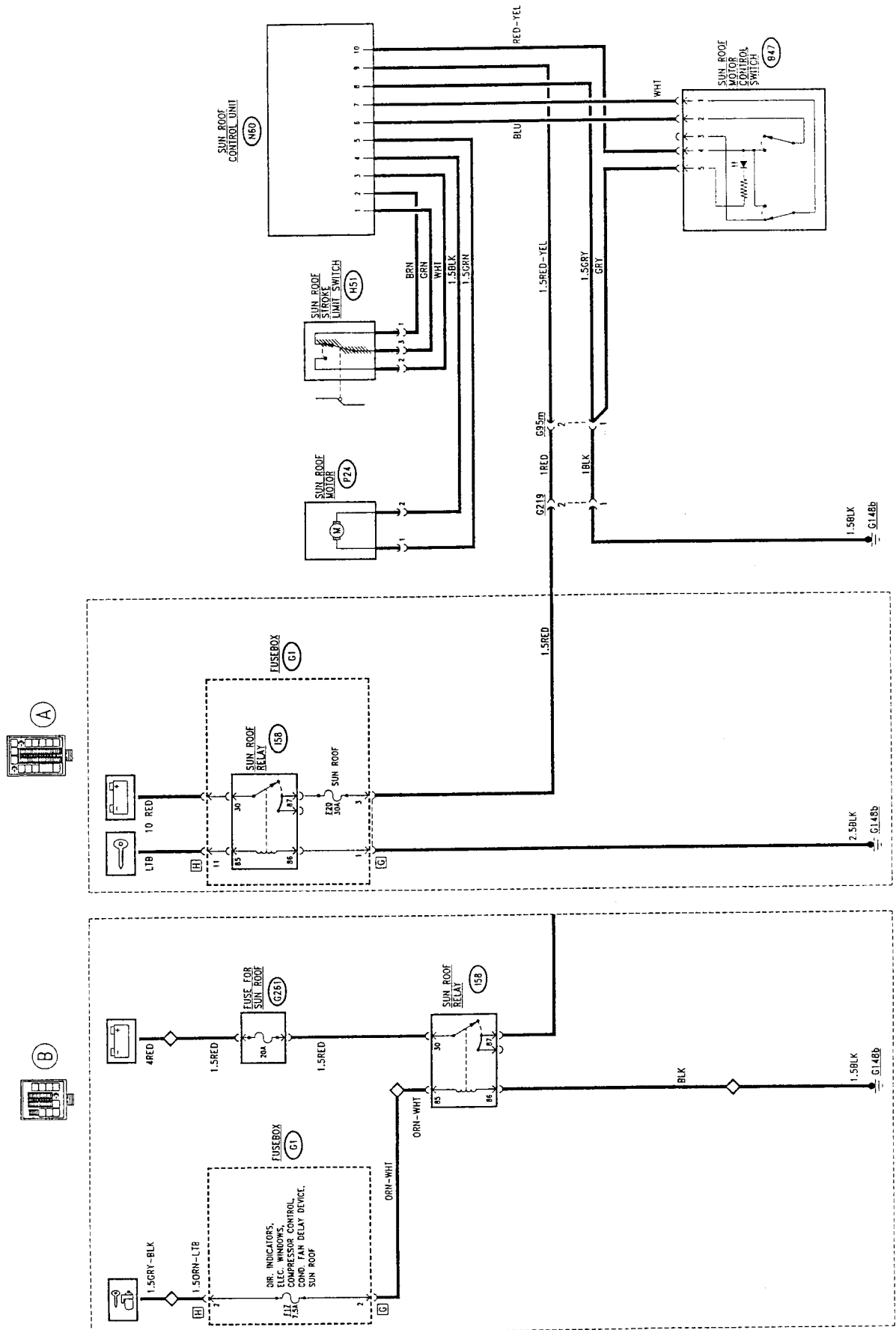
# SUNROOF

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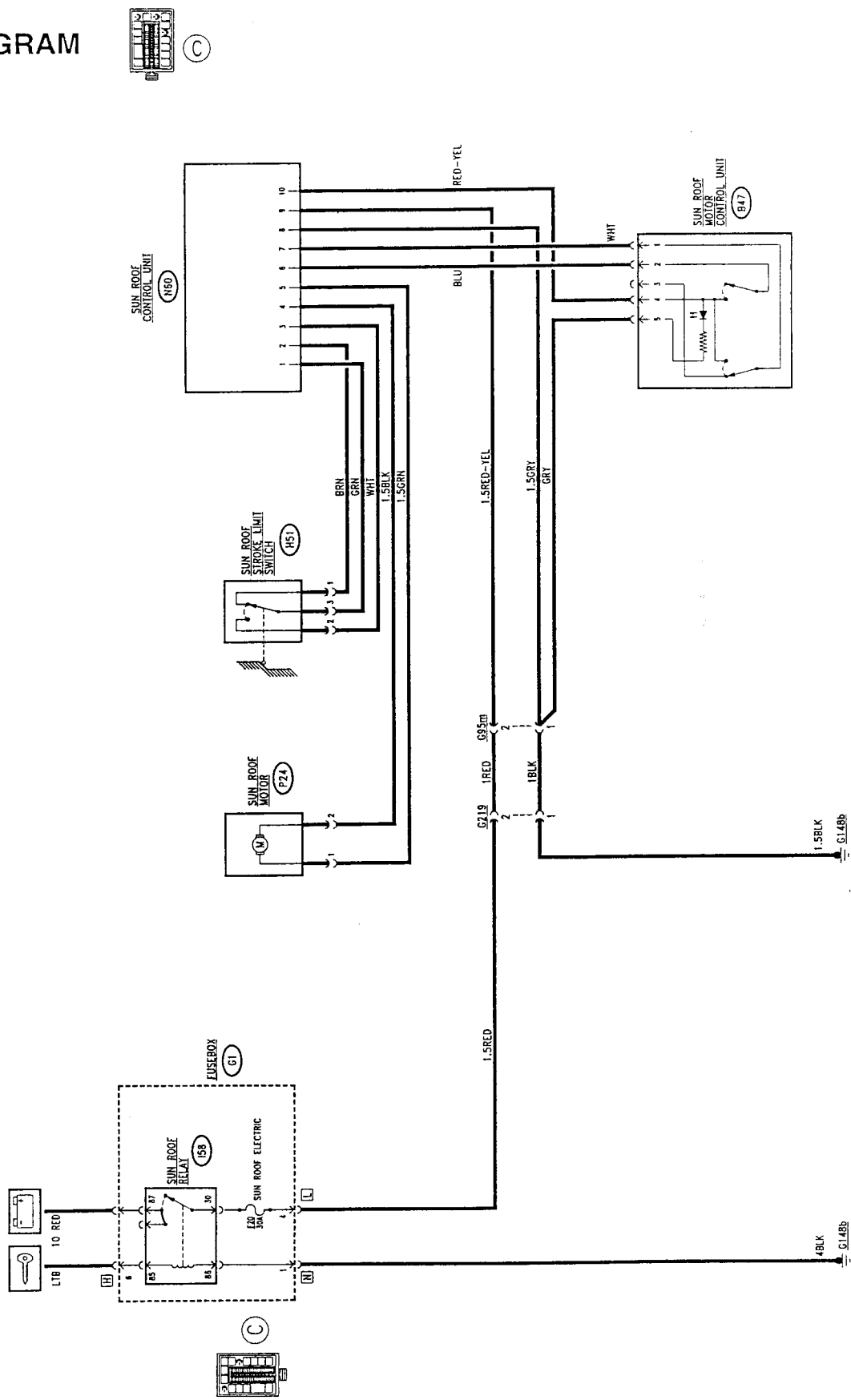
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## WIRING DIAGRAM (version INALFA)



## WIRING DIAGRAM



## GENERAL DESCRIPTION

**WARNING:** The sunroof installed on the 145 is supplied in **two** version:

- INALFA
- WEBASTO

The operating logic is the same, as also the outside appearance (the WEBASTO sunroof can be distinguished by **three notches on the front spoiler**).

The **WEBASTO version** is composed of a single unit comprising the control unit, motor and switches; the **INALFA version** has separate components.

The sliding roof allows additional ventilation of the passenger compartment during warm weather and, when necessary, quick air changing, thereby increasing passenger comfort.

The mobile part of the roof comprises a plexiglass panel and an interior sliding blind which is concealed in the roof panel trim.

A double switch located next to the front ceiling light operates a motor in two different ways: in the first, the motor raises the panel to the "quarter light" position, in the second, it opens the panel while drawing back the blind.

When the roof is subsequently closed, the blind, which can also be operated manually, is "accompanied" for a short stretch by the panel moving forwards. (For further details see GROUP 70 - "BODY-SUNROOF"). The whole system is controlled electronically by a control unit which regulates the various functions. The sunroof can only be operated with the ignition key engaged.

## FUNCTIONAL DESCRIPTION

The sunroof control system is supplied by a special relay **I58**, located in fusebox **G1** for version "A" or "C", and outside for version "B". The line is protected by a special fuse: **F20** of **G1** for fusebox "A" or "C", and by the outside wander fuse **G261** (20A) for fusebox "B". To sum up, the system is only turn-key supplied at pin 2 of connector **G95m**; pin 1 of the same connector supplies the reference earth.

### WEBASTO Version:

The system is formed of a single functional unit which comprises:

- control unit **N60**;
- control switch **B47**;
- motor **P24**;
- stroke limit contact **H51**.

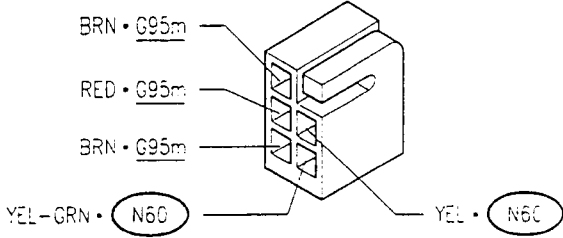
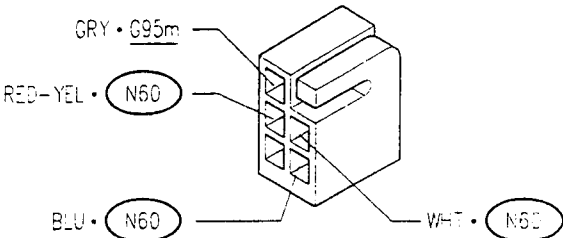
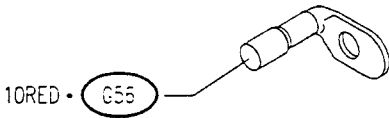

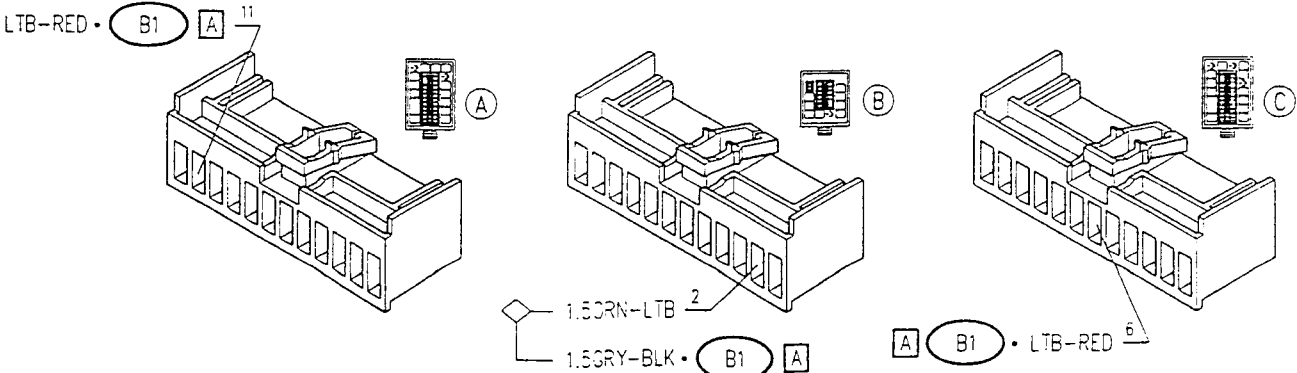
The control unit **N60** receives the actuating signals from switch **B47** (pin 2 and 5) and consequently operates the motor **P24** (pin 4 and 8), taking into account any stroke limit signal received from switch **H51** (pin 7 and 9).

### INALFA version:

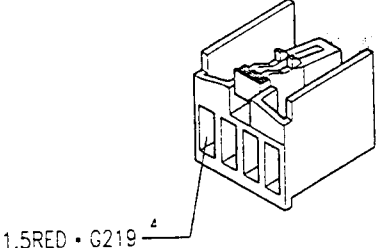
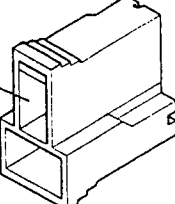
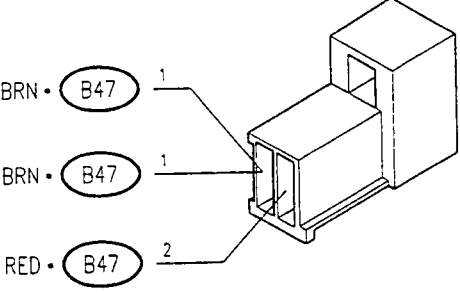
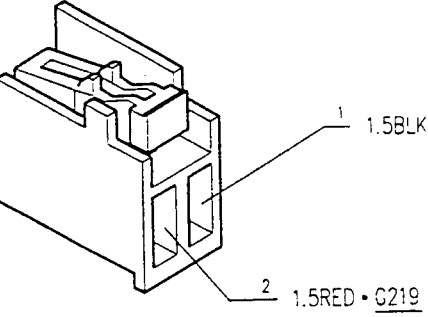
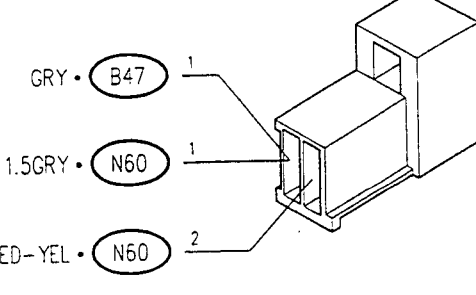
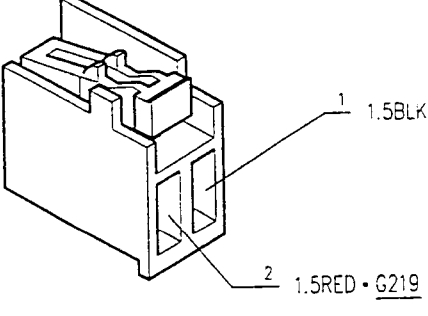
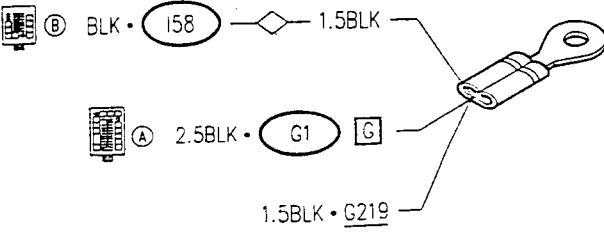
The control unit **N60**, supplied directly at pins 8 and 9, receives the actuating signals from switch **B47** (pins 6, 7 and 10), and sends the command signals to the motor **P24** (pins 4 and 5); the stroke limit switch **H51** signals the control unit (pins 1, 2 and 3) the position of the sunroof stopping the motor when necessary.



### COMPONENTS AND CONNECTORS

<p>Sun roof motor cont. switch (WEBASTO) <span style="float: right;">(B47)</span></p> 	<p>Sun roof motor control switch (INALFA) <span style="float: right;">(B47)</span></p> 
<p style="text-align: center;">Fusebox <span style="float: right;">(G1)</span></p> 	
<p style="text-align: center;">Fusebox <span style="float: right;">(G1) (G)</span></p> 	
<p style="text-align: center;">Fusebox <span style="float: right;">(G1) (H)</span></p> 	

### COMPONENTS AND CONNECTORS (cont.d)

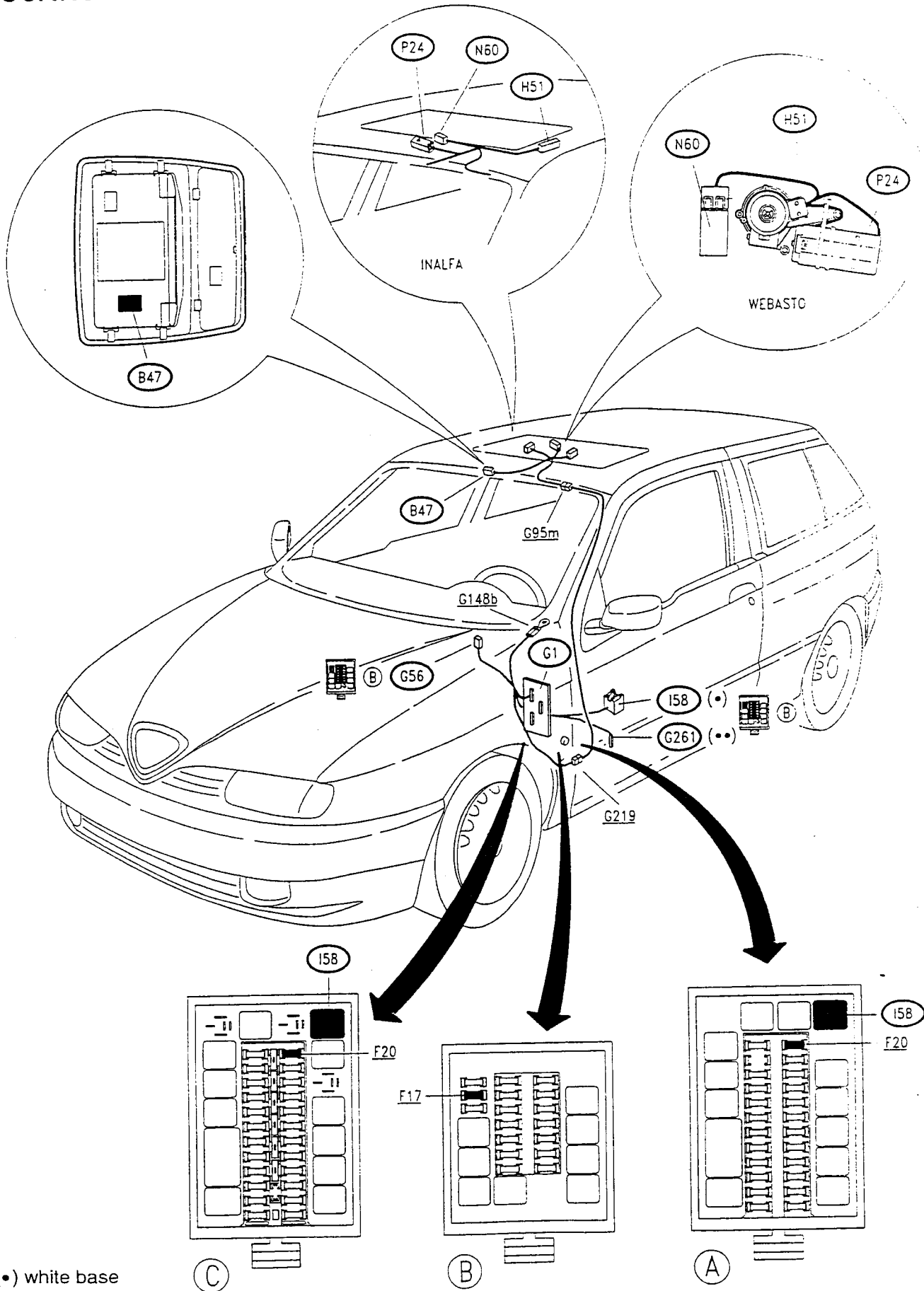
<p>Fusebox</p>  <p>1.5RED • G219<sup>4</sup></p>	<p>Fusebox</p>  <p>4BLK • G148b<sup>1</sup></p>	
<p>Sun roof connector (WEBASTO)</p>		<p>G95m</p>
 <p>BRN • B47<sup>1</sup></p> <p>BRN • B47<sup>1</sup></p> <p>RED • B47<sup>2</sup></p>	 <p>1.5BLK • G219<sup>1</sup></p> <p>1.5RED • G219<sup>2</sup></p>	
<p>Sun roof connector (INALFA)</p>		<p>G95m</p>
 <p>GRY • B47<sup>1</sup></p> <p>1.5GRY • N60<sup>1</sup></p> <p>1.5RED-YEL • N60<sup>2</sup></p>	 <p>1.5BLK • G219<sup>1</sup></p> <p>1.5RED • G219<sup>2</sup></p>	
<p>Earth under LH dashboard</p>		<p>G148b</p>
 <p>BLK • I58<sup>ⓑ</sup></p> <p>2.5BLK • G1<sup>Ⓐ</sup></p> <p>1.5BLK</p> <p>1.5BLK • G219</p>		



## COMPONENTS AND CONNECTORS (cont.d)

Connector for sunroof		<b>G219</b>
Sunroof fuse	<b>G261</b>	Sun roof stroke limit switch (INALFA)
Sunroof relay		<b>I58</b>
Sunroof control unit (WEBASTO)	<b>N60</b>	Sun roof motor (INALFA)

## LOCATION OF COMPONENTS



- (•) white base
- (••) yellow fuse holder

## FAULT-FINDING TABLE

Failure	Component to be checked							
	F17 (B)	F20 (A)	G261 (B)	I58	N60	P24*	B47	H51*
Sunroof fails to operate	•	•	•	•	•	•	•	
Sunroof fails to close properly					•			•

(\*) WEBASTO version: **P24** and **H51** are together in a single sunroof control unit **N60** which must be changed completely in the event of a failure to a component.

(A) only fusebox "A"

(B) only fusebox "B"

