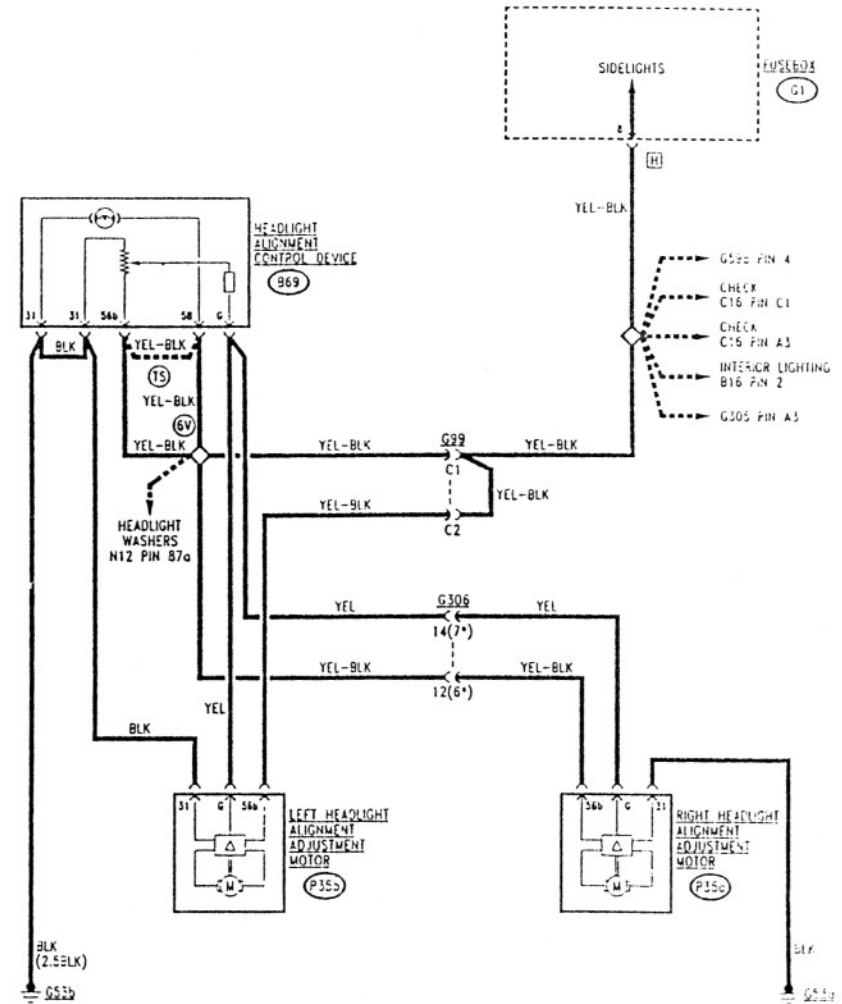


# ADJUSTING HEADLIGHT ALIGNMENT

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## WIRING DIAGRAM



(\*) from chassis N. . . . .

**GENERAL DESCRIPTION**

On some versions it is possible to adjust the orientation of the headlight beam to the weight load directly from the driver's seat.

In this way the problem of incorrect headlight direction is avoided and the delicate task of direct adjustment of the lamps simplified (this is not substituted by the electric mechanism, but only integrated with it). For further details see "REPAIR MANUAL - BODY", Group 40.

The adjustment device consists of a motor mounted on each of the two lamps which tilts them in order to raise the beam when the vehicle is fully loaded and lower it when the load is lightened.

The driver acts directly on the system by rotating a handle located on the dashboard which allows four positions to be chosen ("0" = vehicle unloaded; "3" =

vehicle with full load of passengers and luggage).

The system can be operated only when the sidelights are on; if they are not selected it is completely deactivated.

**NOTE:** for safety reasons the system is designed so that in the event of a malfunction, it cannot be moved to a higher position than it already is.

**FUNCTIONAL DESCRIPTION**

The headlight alignment control device B69 is supplied through pin 56b by a line originating from the sidelights circuit; this line is live only when the lights are on.

The same supply (pin 58) illuminates the lamp located inside the device B69 itself which illuminates the ideogram identifying the function.

The 31 pins of the device B69 are grounded, while the adjustment signal obtained by acting on the four-position selection wheel originates from pin G. This signal varies the output voltage through a potentiometer (100% voltage at position "0" with voltage decreasing for the successive positions).

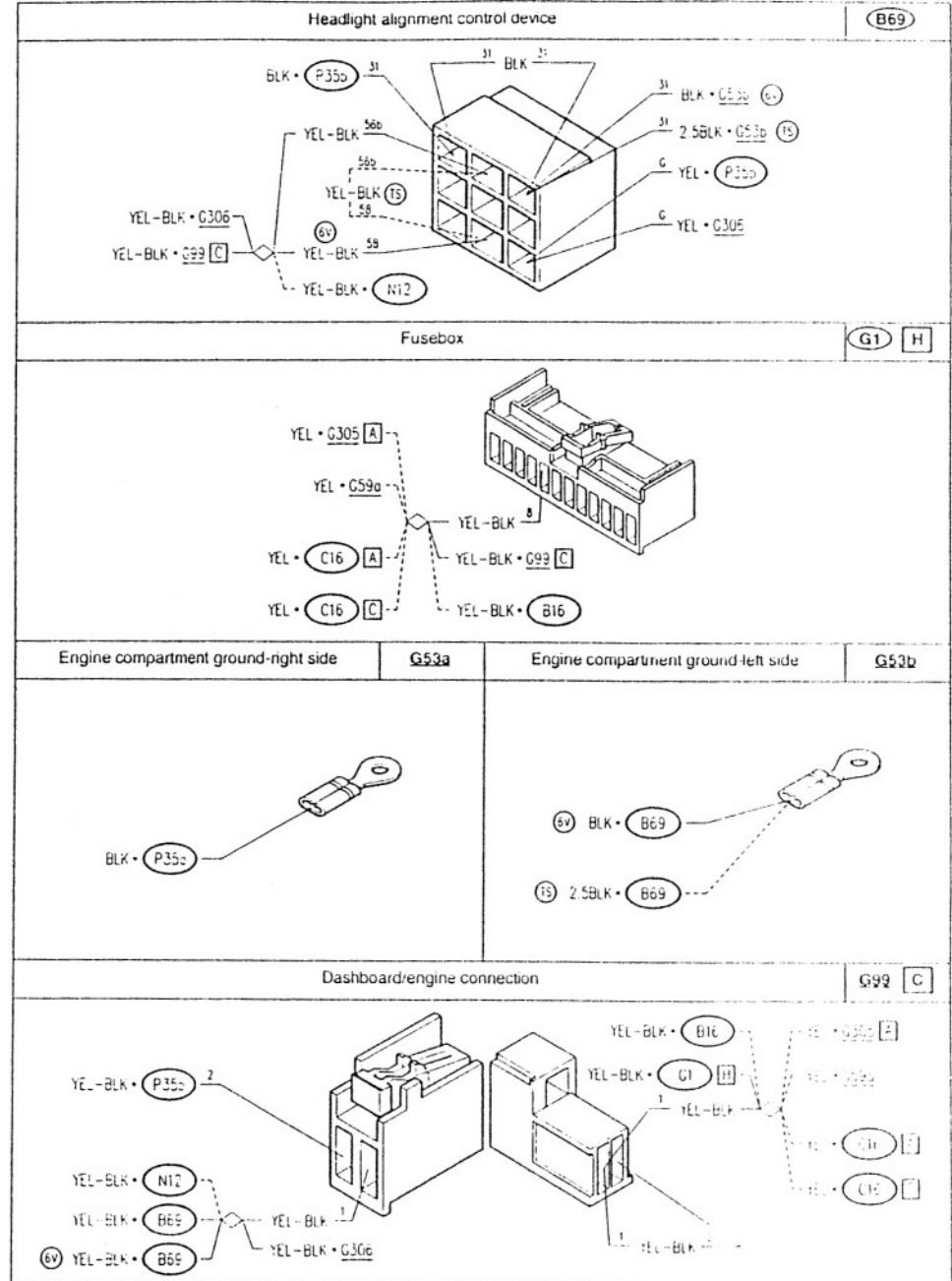
Motors P35a and P35b are formed by a motor in the strict sense of the word, controlled by a transducer which establishes the movement on the basis of the voltage of the adjustment signal reaching pins G from the device B69.

The transducers are supplied at pins 56b, by the same line which supplies the device B69; the 31 pins are grounded.

**TROUBLESHOOTING TABLE**

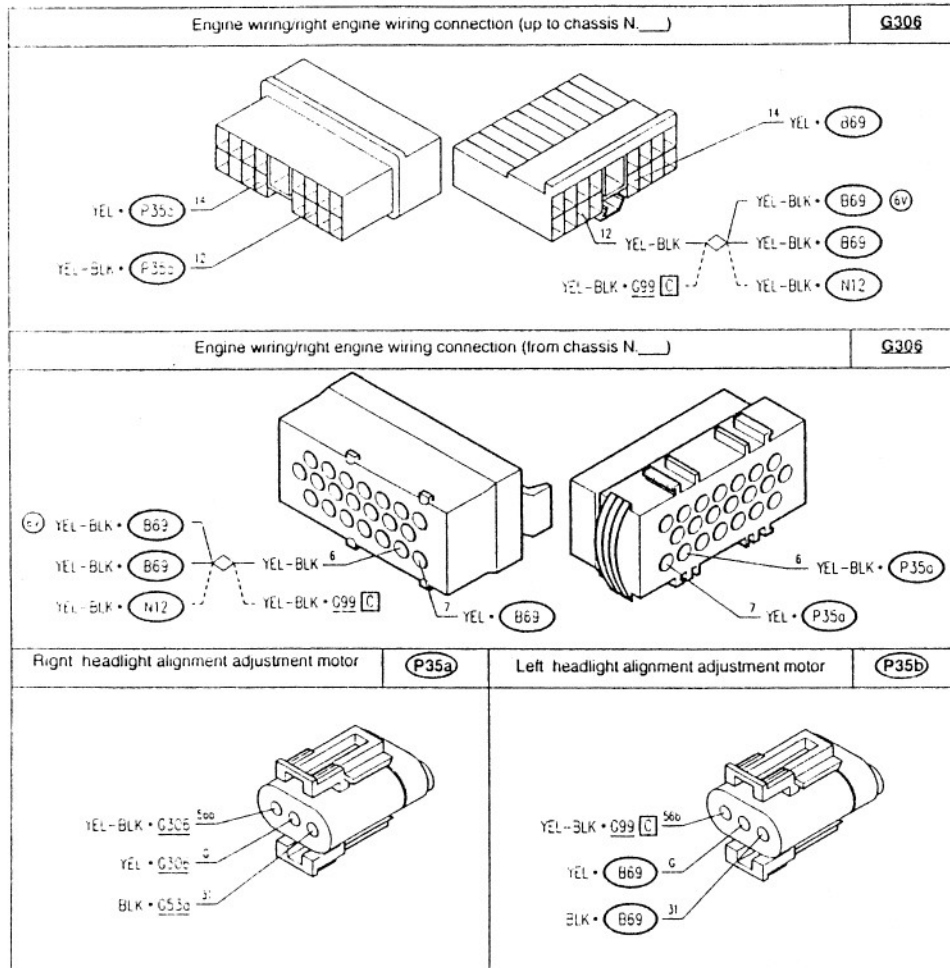
Malfunction	Component			Test
	B69	P35a	P35b	
Adjustment not working	•			A
RT headlight		•		B
LT headlight			•	C

**COMPONENTS AND CONNECTORS**



ADJUSTING HEADLIGHT ALIGNMENT

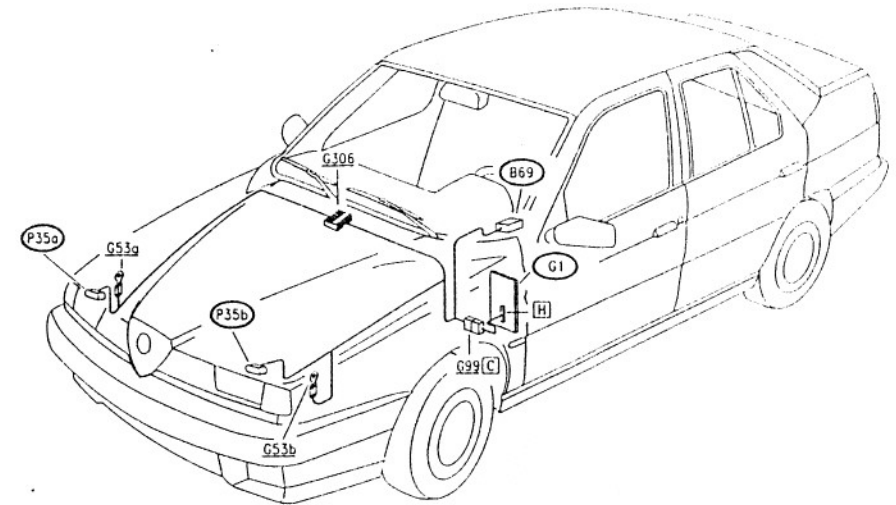
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6-6

ADJUSTING HEADLIGHT ALIGNMENT

LOCATION OF COMPONENTS



TROUBLESHOOTING

HEADLIGHT ADJUSTMENT NOT WORKING (BOTH HEADLIGHTS)	TEST A
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NOTE: Check that the sidelights are working correctly; if not, refer to section "Sidelights"

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
<b>A1</b> CHECK VOLTAGE - With sidelights on, verify 12V between pins 56b and 31 of the headlight alignment control device B69	(OK) → Carry out step A4 (X) → Carry out step A2	
<b>A2</b> CHECK GROUND - Verify 0V at pin 31 of device B69	(OK) → Carry out step A3 (X) → Restore wiring between pin 31 of B69 and ground G53b (BLK)	
<b>A3</b> CHECK CONTINUITY - Check continuity between pin 56b of B69 and pin H8 of G1	(OK) → Carry out step A4 (X) → Restore wiring between pin 56b of B69 and pin H8 of G1, across pin C1 of connector G99 and the two solders (YEL-BLK)	
<b>A4</b> CHECK CONTROL DEVICE Check for correct functioning of the headlight alignment control device B69. • with sidelights on, act on the handle and check that the voltage between pin 56b and pin G of B69 varies as a consequence	(OK) → Carry out tests B and C (X) → Replace the device B69	

HEADLIGHT ADJUSTMENT NOT WORKING (RIGHT-HAND HEADLIGHT)	TEST B
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TEST PROCEDURE	RESULT	CORRECTIVE ACTION
<b>B1</b> CHECK VOLTAGE - With sidelights on, verify 12V between pins 56b and 31 of the right-hand headlight alignment motor P35a	(OK) → Carry out step B2 (X) → Carry out step B3	
<b>B2</b> CHECK CONTINUITY - Check continuity between pin G of the motor P35a and pin G of the device B69	(OK) → Replace the motor P35a (X) → Restore wiring between pin G of B69 and pin 14(7*) of G306, and between pin 14(7*) of G306 and pin G of P35a (YEL)	
<b>B3</b> CHECK VOLTAGE - With sidelights on, verify 12V at 56b of P35a	(OK) → Restore wiring between pin 31 of P35a and ground G53a (BLK) (X) → Restore wiring between pin 56b of B69 and pin 12(6*) of G306 across the solder and between pin 12(6*) of G306 and pin G of P35a (YEL-BLK)	

(\*) from chassis N.\_\_\_\_

HEADLIGHT ADJUSTMENT NOT WORKING (LEFT-HAND HEADLAMP)	TEST C
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TEST PROCEDURE	RESULT	CORRECTIVE ACTION
<b>C1</b> CHECK VOLTAGE - With sidelights on, verify 12V between pins 56b and 31 of the left-hand headlight alignment motor P35b	(OK) → Carry out step C2 (X) → Carry out step C3	
<b>C2</b> CHECK CONTINUITY - check continuity between pin G of the motor P35b and pin G of the device B69	(OK) → Replace the motor P35b (X) → Restore wiring between pin G of B69 and pin G of P35b (YEL)	
<b>C3</b> CHECK VOLTAGE - With sidelights on, verify 12V at 56b of P35b	(OK) → Restore wiring between pin 31 of P35b and ground G53b, across pin 31 of device B69 (BLK) (X) → Restore wiring between pin 56b of P35b and pin H8 of G1, across pins C2 and C1 of connector G99 and the solder (YEL-BLK)	