

STOP-LIGHTS

INDEX

WIRING DIAGRAM 9-2

GENERAL DESCRIPTION 9-3

FUNCTIONAL DESCRIPTION 9-3

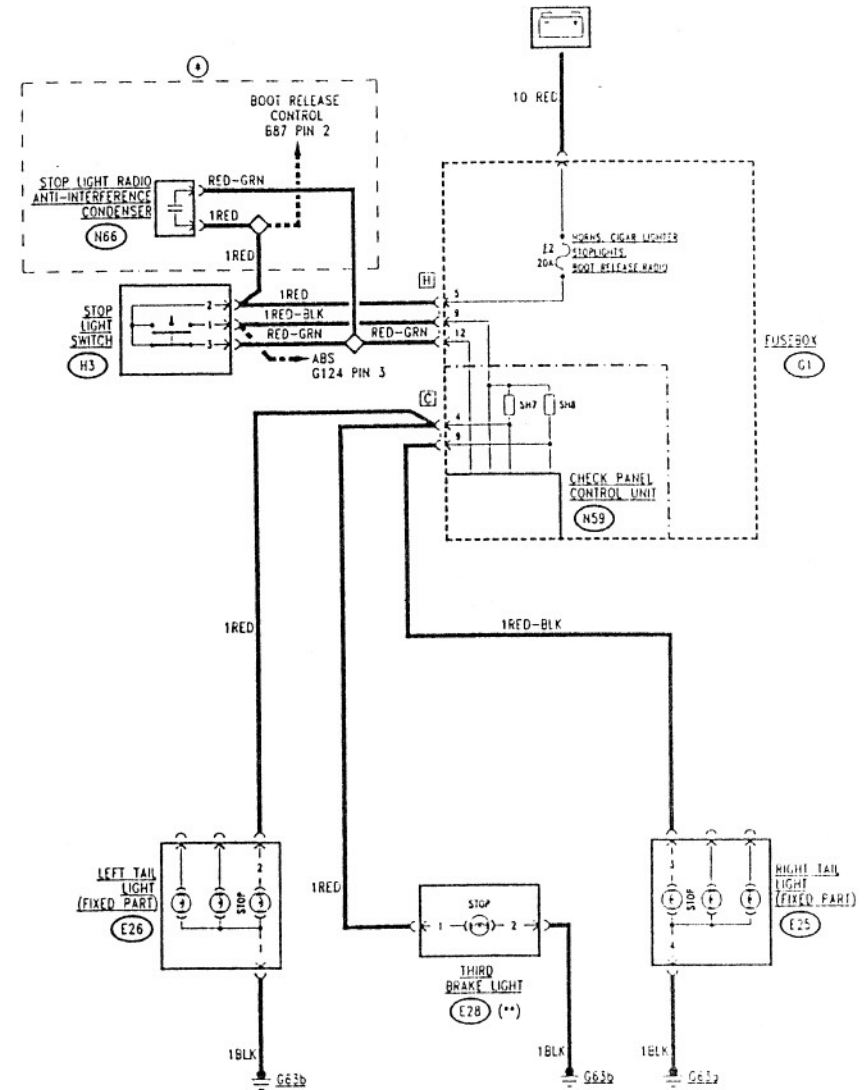
TROUBLESHOOTING TABLE 9-3

COMPONENTS AND CONNECTORS 9-4

LOCATION OF COMPONENTS 9-6

TROUBLESHOOTING 9-7

WIRING DIAGRAM



--- Only for versions with Check Panel
 (*) variation from chassis N 2521
 (**) present for some markets only

GENERAL DESCRIPTION

The lights indicating that the vehicle is braking ("stop-lights") are operated each time the brake pedal is depressed; they are located at the rear of the vehicle in the side light assemblies. A third, central brake light is fitted for some markets. The lights are illuminated automatically by a switch located on the brake pedal and operate under all conditions, even when the ignition key is disengaged. The circuit is protected by its own fuse.

The correct functioning of the stop-lights is - for some versions - verified by the Check Panel which immediately alerts the driver in the event of a malfunction in the circuit. This is vital to safety. (see "Check Panel").

The braking signal from the switch is also sent to the ABS system control unit which recognizes the situation and as a consequence controls the braking parameters (see "A.B.S. System").

A radio anti-interference condenser has been fitted to vehicles from chassis N.2521 to prevent disturbances from the brake switch.

FUNCTIONAL DESCRIPTION

The stop-light circuit is supplied directly by battery voltage through fuse F2 (20A) in the fusebox G1.

The stop-lights switch H3 is formed by two contacts: the "rest position" contact is closed when the brake pedal is not

depressed and signals the continuity of the circuit to the Check Panel control unit N59.

By depressing the brake pedal the "operating position" contact is closed and the stop lights located in the rear light assemblies E25 (right) and E26 (left) and for markets where applicable - in the central brake light E28. From these supply circuits the signals (both direct and by "SH" shunt) are then sent to the control unit N59 which verifies the line load (see "Check Panel").

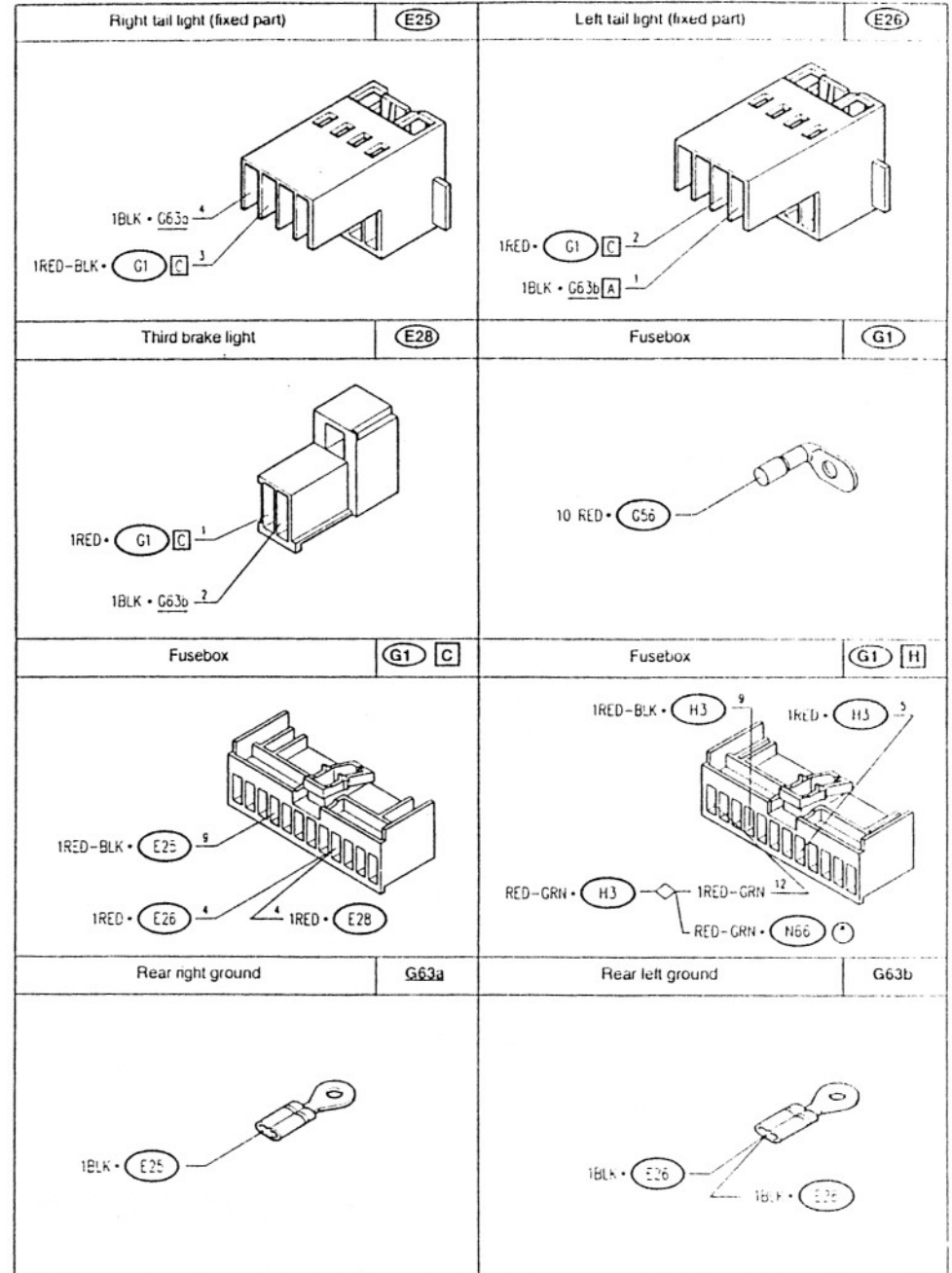
A radio anti-interference condenser N66 is connected in parallel to switch H3.

TROUBLESHOOTING TABLE

Malfunction	Component					Test
	E2	H3	E26	E25	E28	
All brake lights	•	•				A
RH stop-light				•		B
LH stop-light			•			C
"Third brake light" (*)						D

(*) Present for some markets only.

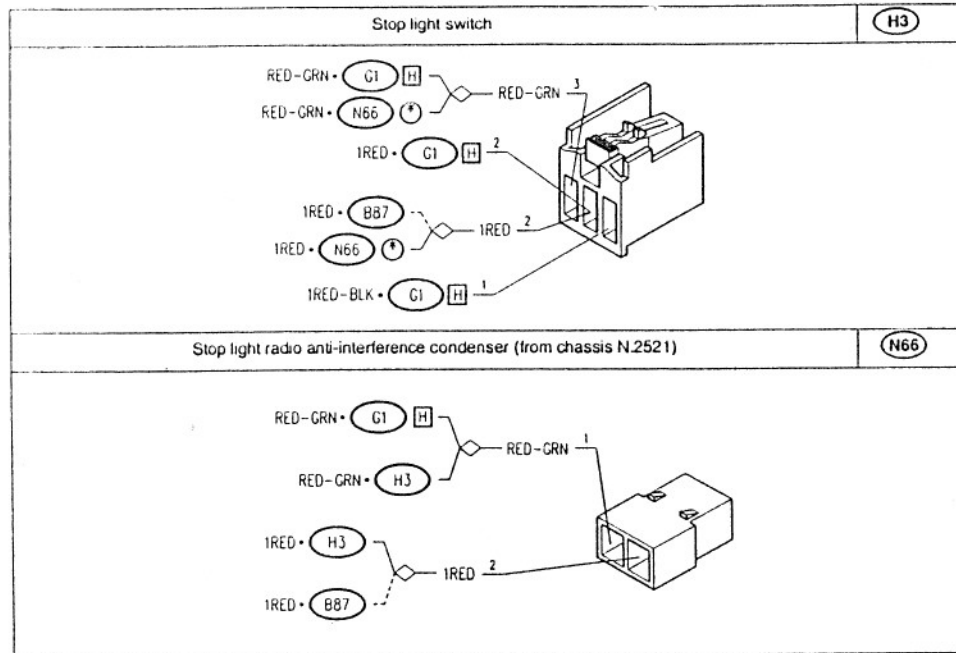
COMPONENTS AND CONNECTORS



(*) from chassis N. 2521

STOP-LIGHTS

9-5

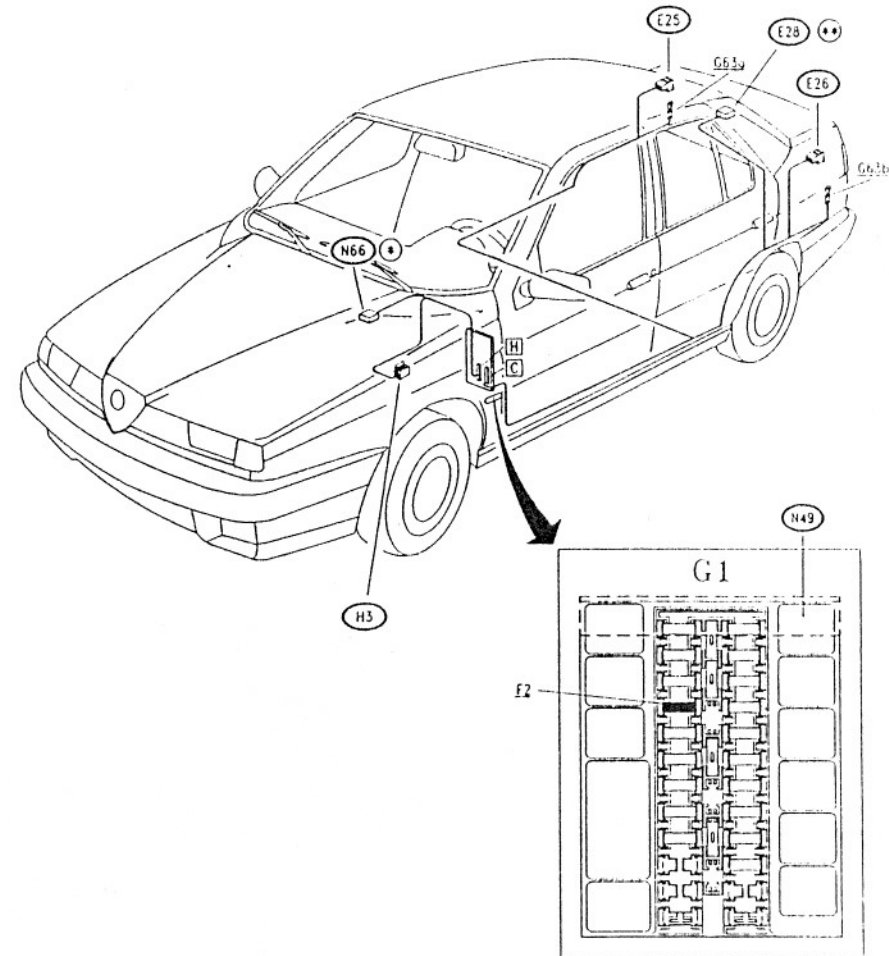


(* from chassis N. 2521

9-6

STOP-LIGHTS

LOCATION OF COMPONENTS



(* from chassis N.2521
(**) present for some markets only

TROUBLESHOOTING

NONE OF STOP-LIGHTS WORKING

TEST A

NOTE for versions equipped with the Check Panel device, refer to section: "Check Panel - Stop-lights check" before carrying out the following checks.

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
A1 CHECK FUSE – Check for damage of fuse F2 in fusebox G1	<input checked="" type="radio"/> OK ▶	Carry out step A2
	<input type="radio"/> OK ▶	Replace fuse (20A)
A2 CHECK VOLTAGE – Verify 12V at pin 2 of the switch H3	<input checked="" type="radio"/> OK ▶	Carry out step A3
	<input type="radio"/> OK ▶	Restore wiring between pin H5 of G1 and pin 2 of the switch H3 (RED)
A3 CHECK SWITCH – Check for correct functioning of the switch: • with brake pedal released verify 12V at pin 3; • with brake pedal depressed verify 12V at pin 1	<input checked="" type="radio"/> OK ▶	Carry out step A4
	<input type="radio"/> OK ▶	Replace switch H3
A4 CHECK VOLTAGE – With brake pedal depressed, verify 12V at pin H9 of G1	<input checked="" type="radio"/> OK ▶	Carry out step A5
	<input type="radio"/> OK ▶	Restore wiring between pin H9 of G1 and pin 1 of the switch H3 (RED-BLK)
A5 CHECK VOLTAGE – With brake pedal released, verify 12V at pin H12 of G1	<input checked="" type="radio"/> OK ▶	See "Check Panel - Stop-lights check".
	<input type="radio"/> OK ▶	Restore wiring between pin H12 of G1 and pin 3 of the switch H3 (RED-GRN) (from chassis N.2521 also across solder)

RIGHT-HAND STOP-LIGHT NOT WORKING

TEST B

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
B1 CHECK VOLTAGE – With brake pedal depressed, verify 12V between pin 3 and pin 4 of the light assembly E25	<input checked="" type="radio"/> OK ▶	Carry out step B2
	<input type="radio"/> OK ▶	Carry out step B3
B2 CHECK BULB – Check for damage of stop light bulb, located in the rear light assembly E25 (the first towards the centre)	<input checked="" type="radio"/> OK ▶	Check and if necessary replace the complete light assembly E25
	<input type="radio"/> OK ▶	Replace the bulb
B3 CHECK VOLTAGE – With brake pedal depressed verify 12V at pin 3 of light assembly E25	<input checked="" type="radio"/> OK ▶	Restore wiring between pin 4 of E25 and ground G63a (BLK)
	<input type="radio"/> OK ▶	Restore wiring between pin C9 of G1 and pin 3 of E25 (RED-BLK)

LEFT-HAND STOP-LIGHT NOT WORKING

TEST C

TEST PROCEDURE	RESULT	CORRECTIVE ACTION
C1 CHECK VOLTAGE – With the brake pedal depressed, verify 12V between pin 2 and pin 1 of the light assembly E26	<input checked="" type="radio"/> OK ▶	Carry out step C2
	<input type="radio"/> OK ▶	Carry out step C3
C2 CHECK BULB – Check for damage of the stop-light bulb, located in the rear light assembly E26 (the first towards the centre)	<input checked="" type="radio"/> OK ▶	Check and if necessary replace the complete light assembly E26
	<input type="radio"/> OK ▶	Replace the bulb
C3 CHECK VOLTAGE – With the brake pedal depressed, verify 12V at pin 2 of light assembly E26	<input checked="" type="radio"/> OK ▶	Restore wiring between pin 1 of E26 and ground G63b (BLK)
	<input type="radio"/> OK ▶	Restore wiring between pin C4 of G1 and pin 2 of E26 (RED)

"THIRD BRAKE" LIGHT NOT WORKING		TEST D	
TEST PROCEDURE		RESULT	CORRECTIVE ACTION
D1	CHECK VOLTAGE	OK ►	Carry out step D2
- With brake pedal fully depressed check for 12V between pin 2 and pin 1 of light unit E28		OK ►	Carry out step D3
D2	CHECK BULB	OK ►	Check and if necessary replace the complete light assembly E28
- Check the brake light bulb located in central light unit E28 for damage		OK ►	Replace the bulb
D3	CHECK VOLTAGE	OK ►	Restore wiring between pin 2 of E28 and ground G63b (BLK)
- With the brake pedal pressed check for 12V at pin 1 of light unit E28		OK ►	Restore wiring between pin C4 of G1 and pin 1 of E28 (RED)