

# Electrical System

Job No.

54—0

## A. General

The voltage of the electrical system is 12 v. The individual electrical assemblies are supplied with current from the battery or generator by various wiring harnesses:

- the battery cable,
- the main wiring harness,
- the rear light wiring harness,
- the wiring harness for the steering tube,
- the wiring harness from the generator to the regulator,
- the wiring harness for the reversing light,
- the ignition cable from the ignition coil to the distributor, and
- the ignition cable harness from the distributor to the spark plugs.

The various harnesses contain a complete set of the necessary electric leads. For easy recognition, the individual cables are marked with various colors, each of them having one basic and two color code colors, in the latter case taking the form of narrow spiral strips around the cable. In order to simplify work on the electrical system, the main wiring harness, which contains a considerable number of cables, is shown schematically in Fig. 54—1/1, the rear light harness in Fig. 54—2/1, the steering tube harness in Fig. 54—3/1, and the harness from the generator to the regulator in Fig. 54—4/1.

Whenever work is done on the electrical system, the ground cable at the negative terminal of the battery must always be disconnected in order to avoid the possibility of shorts.

Checking of the harnesses for ground shorts can be carried out either with a testing lamp or with a hand magneto. All earth connections must be checked to see that the contact surfaces are well tinned. This is in order to avoid transient resistance and voltage drop.

The circuit diagram (see Fig. 54—0/1) shows the whole lay-out of the electrical assemblies and instruments.

## B. Set of Bulbs

	Number	Wattage each	Remarks
Upper beam / lower beam	2	35/35	
Fog lights (optional)	2	35	
Parking beam	2	5	
License plate and trunk compartment lights	2	5	tubular
Tail light	2	5	tubular
Brake light	2	15	tubular
Instrument and clock lights	4	2	
Beam indicator	1	2	
Charge indicator	1	3	tubular
Choke control indicator	1	2	
Signal indicator	1	2	
Flash signal, front	2	15	
Flash signal, rear	2	15	tubular
Reversing light	1	15	tubular
Parking light right (front)	1	2	
Parking light right (rear)	1	2	tubular
Parking light left (front)	1	2	
Parking light left (rear)	1	2	tubular
Interior lighting	1	5	tubular

## C. Circuit Diagram

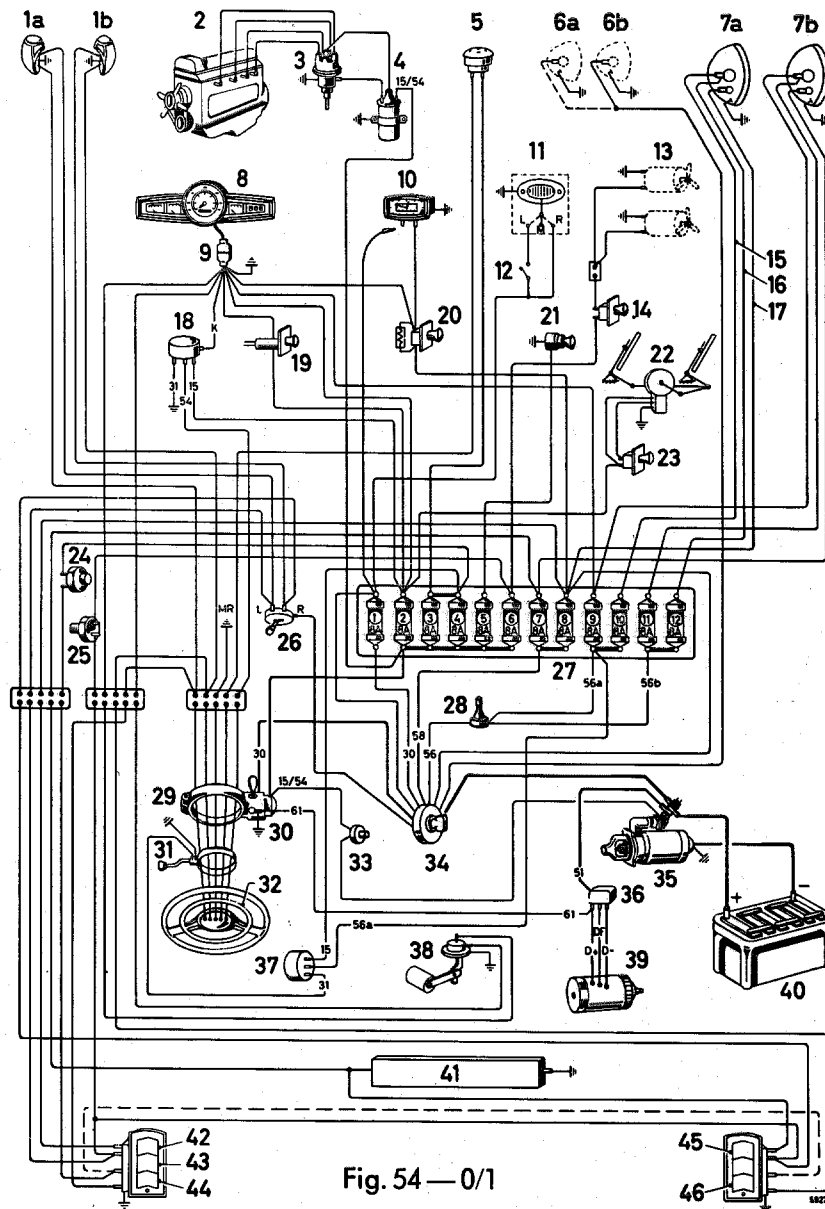


Fig. 54—0/1

The small numbers shown on the leads denote the numbers of the corresponding terminals. The terminals are in the appendix to the main wiring harness (see Job No. 54—1, Section B) opposite the appropriate description of the cable function. The number of the individual electric leads in the main wiring harness does not correspond to the numbering of the terminals.

- |  |   |   |
|--|---|---|
| 1a Parking light and flash signal light, left  | 18 Flash signal mechanism   | 36 Regulator  |
| 1b Parking light and flash signal light, right | 19 Starter cable  | 37 Upper beam flash mechanism   |
| 2 Engine                                       | 20 Switch for instrument lighting   | 38 Fuel gage  |
| 3 Distributor                                  | 21 Cigar lighter  | 39 Generator 12 V   |
| 4 Ignition coil                                | 22 Windshield wipers  | 40 Battery 12 V, 56 Ah  |
| 5 Horn   | 23 Switch   | 41 License plate and trunk compartment lighting   |
| 6a Fog light, left                             | 24 Reversing light switch   | 42 Tail light - brake light - parking light left  |
| 6b Fog light, right                            | 25 Brake light switch   | 43 Reversing light left   |
| 7a Headlight, left                             | 26 Parking light changeover switch  | 44 Flash signal left  |
| 7b Headlight, right                            | 27 Fuses  | 45 Tail light - brake light - parking light right                                       |
| 8 Instrument cluster                           | 28 Foot dimmer  | 46 Flash signal right   |
| 9 Junction box                                 | 29 Ignition switch and steering lock  | 47 Cable connector for tail light harness (consisting of two five-way cable connectors) |
| 10 Clock                                       | 30 Charging light   | 48 Cable connector for steering tube harness  |
| 11 Interior lighting with switch               | 31 Headlight upper beam interruptor switch  |   |
| 12 Door contact                                | 32 Horn ring and flash signal switch  |   |
| 13 Heater blower motors                        | 33 Starter button   |   |
| 14 Switch                                      | 34 Light switch (rotary, with positions for parking light and pull switch for fog lights) |   |
| 15 Headlight, upper beam                       | 35 Starter 12 V   |   |
| 16 Headlight, lower beam                       |   |   |
| 17 Headlight parking bulb                      |   |   |

## D. Connections at Fuse Box

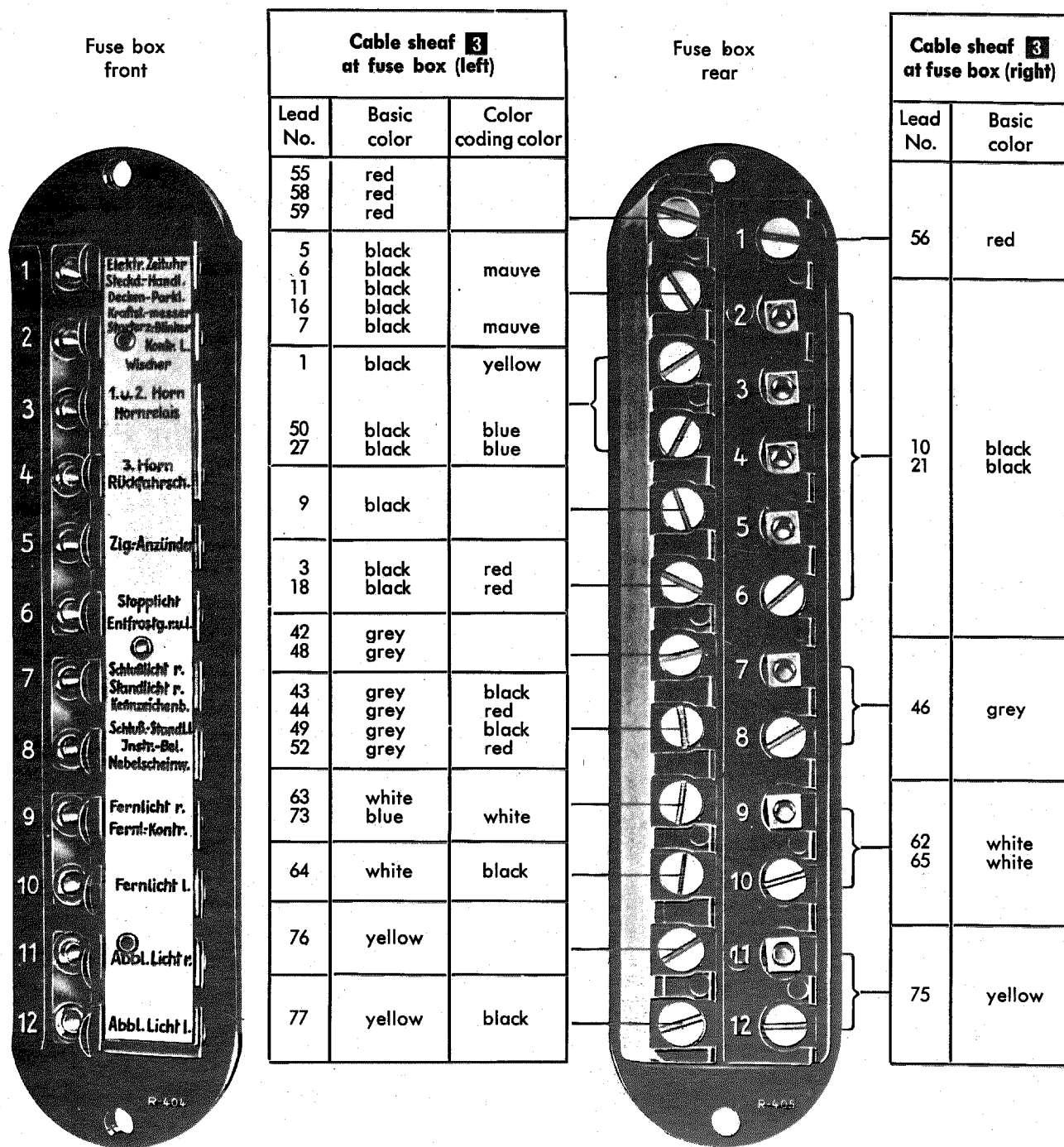


Fig. 54 — 0/2

- 1 Elektrische Zeituhr  
Steckdose-Handlampe  
Decken-Parklicht
- 2 Kraftstoffmesser  
Starterzug  
Blinker Kontrolllicht  
Wischer
- 3 1. und 2. Horn  
Hornrelais
- 4 3. Horn  
Rückfahrleuchte
- 5 Zigarren-Anzünder
- 6 Stopplight  
Entfroster rechts und links

- Electric clock  
Extension light plug  
Roof light-Parking light
- Fuel gage  
Starter cable  
Flash signals Indicator  
Windshield wipers
- Horns Nos. 1 and 2  
Horn relay
- Horn No. 3  
Reversing light switch
- Cigar lighter
- Brake light  
Defrosters right and left

- 7 Schlußlicht rechts  
Standlicht rechts  
Kennzeichenbeleuchtung
- 8 Schluß-Standlicht links  
  
Instrumenten-Beleuchtung  
Nebelscheinwerfer
- 9 Fernlicht rechts  
Fernlicht-Kontrolle
- 10 Fernlicht links
- 11 Abblendlicht rechts
- 12 Abblendlicht links

- Tail light right  
Headlight parking bulb right  
License plate lighting
- Tail light and headlight parking  
bulb left  
Instrument lighting  
Fog lights
- Upper beam right  
Upper beam indicator
- Upper beam left
- Lower beam right
- Lower beam left

**Note:** The lead numbers shown correspond to the numbering of the main wiring harness (see Job No. 54-1).