

SERVICE MANUAL

TRUCKS

L 385

Export Service Department

AKTIEBOLAGET

VOLVO

GÖTEBORG, SWEDEN

FUSES

The fuses are fitted in a fuse-box attached to the instrument panel.

The fuses, which are of the thermo-type consisting of wires over porcelain bases, are intended to protect the cables and units in the electrical system from dangerous overloading. A fuse is designed so that the thermo-wire melts when there is a short circuit or excessive current consumption either on a cable or on one of the units. The source of the fault is thus isolated from the remainder of the electrical system.

NOTE. Never replace burnt-out fuses with nails, copper wire etc.

REPAIR INSTRUCTIONS

BATTERIES

Removing

1. Remove the cover from the battery container.
2. Disconnect the cables from the batteries. Use a puller if the cable clamps have stuck on the terminals.
3. Loosen the retainer and lift out the batteries.
4. Clean the batteries with water externally.
5. Clean the battery container and the cable clamps.

Fitting

1. Fit the batteries in the container and tighten the retainer.
2. Tighten the cable clamps on the battery terminals and smear them with vaseline.
Make sure that the cables are correctly connected. See the Wiring Diagram and Fig. 10-8.

GENERATOR

Removing

1. Disconnect the ground cable from the battery.
2. Disconnect the cables from the generator.
3. Loosen the belt tensioner and lift off the belts.
4. Loosen the tensioner bolts and lift off the generator.

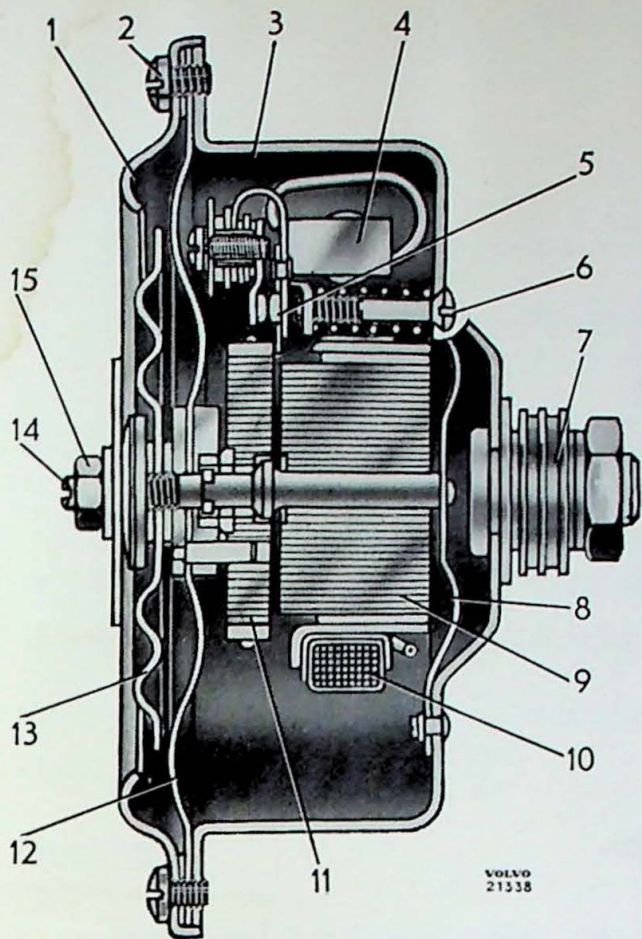


Fig. 10—5. Horn.

1. Cover
2. Screw
3. Housing
4. Condenser
5. Contact breaker
6. Adjuster screw for contact breaker
7. Attachment
8. Spring
9. Iron core
10. Field coil
11. Armature
12. Diaphragm
13. Vibrator disk
14. Adjuster screw
15. Lock nut

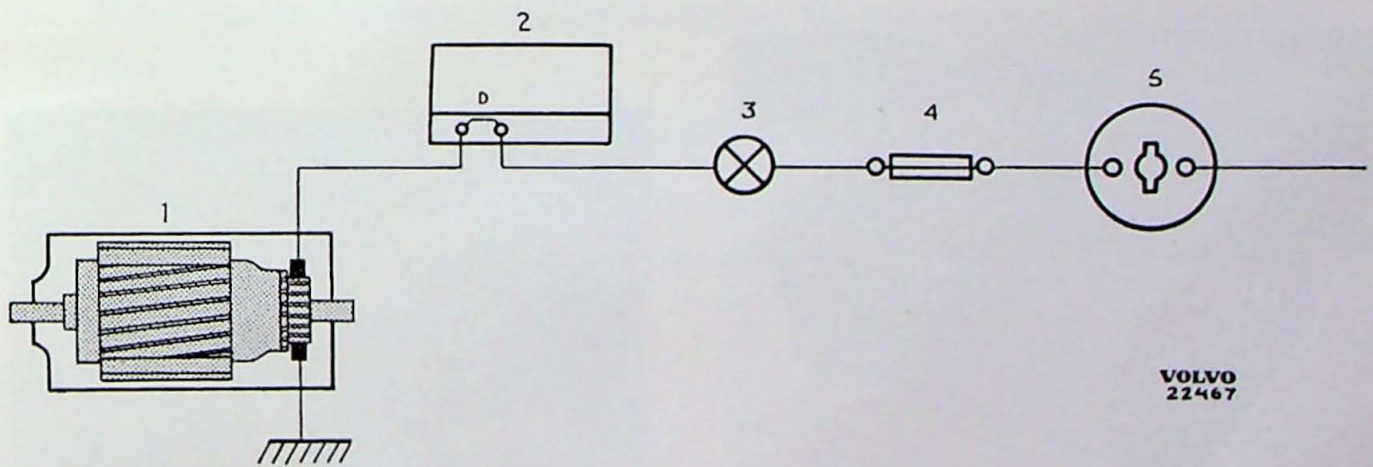


Fig. 10—6. Control lamp circuit.

1. Generator
2. Generator regulator
3. Charging control lamp
4. Fuse
5. Main switch

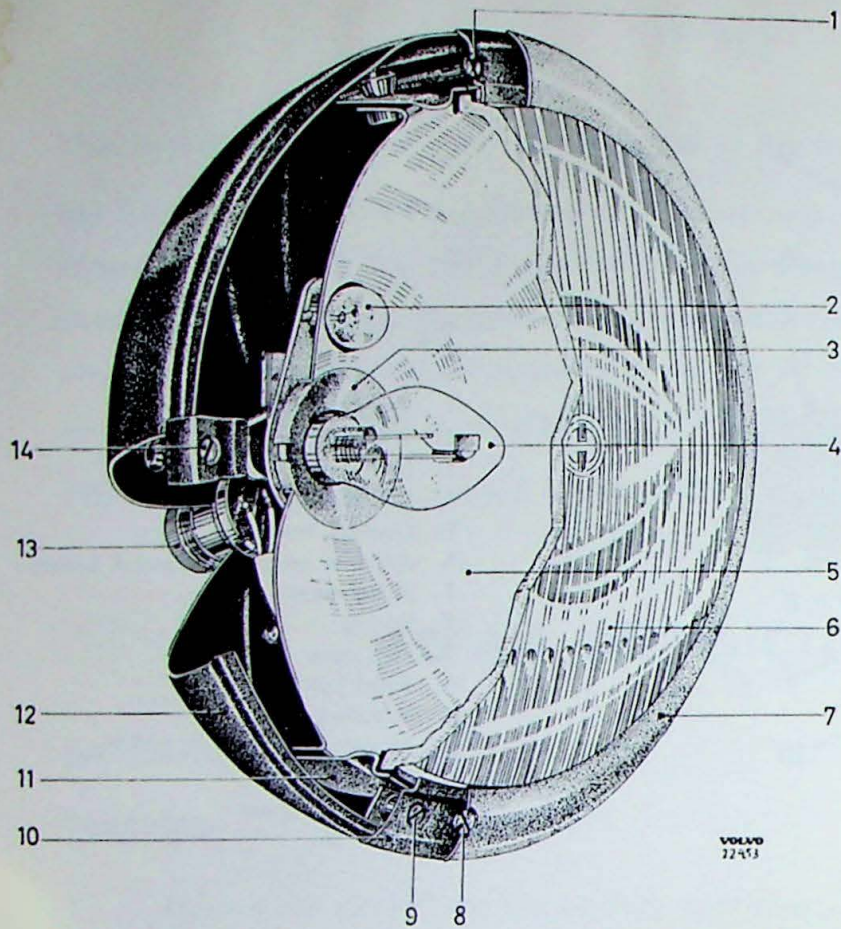


Fig. 10—7. Headlamp.

1. Adjuster screw, vertical adjustment
2. Parking lamp
3. Lamp socket
4. Bulb for full and dipped headlamps
5. Reflector
6. Glass
7. Outer ring
8. Intermediary ring
9. Inner ring
10. Headlamp housing
11. Connector
12. Adjuster screw, lateral

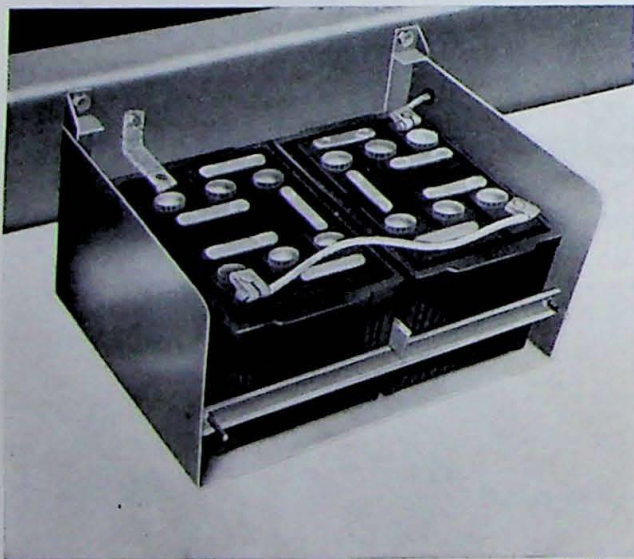


Fig. 10—8. The batteries in position.

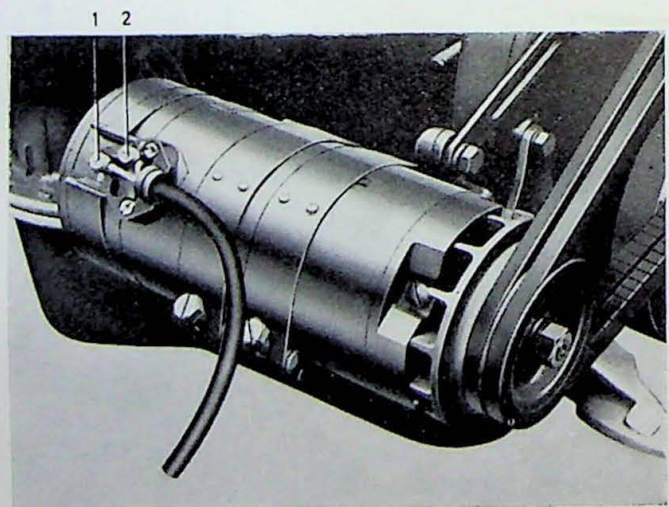


Fig. 10—9.

1. Terminal for cable to "D" on regulator
2. Terminal for cable to "F" on regulator.

5. Clean off the generator externally with gasoline.

As far as reconditioning of the generator is concerned, see under the heading "Generator" in the General Part.

Fitting

Fitting is carried out in the reverse order to that used when removing.

Do not tension the drive belts too hard. It should be possible to push them in about 10 mm (1/2") at a point midway between the pulleys.

Make sure that the cables are correctly connected, see Fig. 10-9

GENERATOR REGULATOR

Removing

1. Disconnect the ground cables from the battery.
2. Disconnect the cables from the generator regulator.
3. Disconnect the generator regulator from the bulkhead.

Fitting

1. If the regulator has been replaced check that the new regulator is of the correct type.
2. Screw the regulator in position on the bulkhead.
3. Connect the cables. The cable from the generator feed terminal should be connected to the contact marked D, the cable from the field terminal to F and the cable from the battery to B.
4. Fit the ground cable.

STARTER MOTOR

Removing

1. Disconnect the ground cable from the battery.
2. Disconnect the cables from the starter motor.
3. Unbolt the starter motor from the flywheel housing and lift it out.
4. Clean the starter motor externally with gasoline.

Fitting

1. Bolt the starter motor in position on the flywheel housing.
2. Connect the cables.
3. Connect the ground cable to the battery.

HEADLAMPS

Replacing a Headlamp

1. Make sure that the lighting switch is in the "off"-position.
2. Disconnect the cables from the headlamp. This is done by separating them at the 3-pole connector behind the headlamp. See Fig. 10-12.
3. Remove the headlamp from the bracket.
4. The new headlamp is fitted in the reverse way to that used when removing the old one.

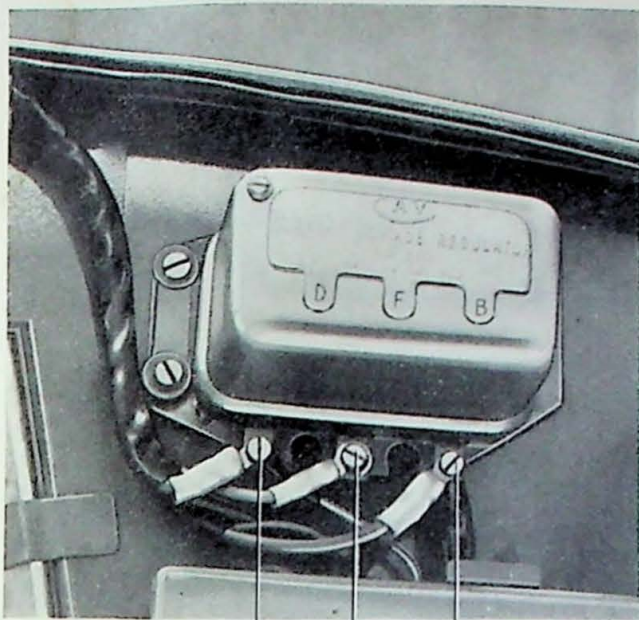
Replacing the Headlamp Bulbs

1. Make sure that the lighting switch is in the "off"-position.
2. Loosen the screws retaining the headlamp element and remove the element. Take out the bulb holder from the element.
3. Replace the faulty bulb. Do not touch the bulb with the fingers when fitting but protect it by using the carton in which the bulb was delivered. See Fig. 10-13. The reason for this is the fact that dirt and oil on the glass surface of the bulb become oxidized and can cause smoke damage to the reflector. This means that the power of the headlamp will be considerably reduced.
4. Screw the headlamp element back in position.

Adjusting Headlamp Alignment

Headlamp alignment is adjusted by loosening the attachment in the headlamp bracket, Fig. 10-14 and by means of the adjuster screws under the outer ring (1 and 2 on Fig. 10-7).

The screws under the outer ring are used for fine adjustment while the nut in the bracket is used for rough adjustment.



1
2
3
Fig. 10—10.

1. Terminal for cable from generator armature (D)
2. Terminal for cable from generator field coil (F)
3. Terminal for battery cable

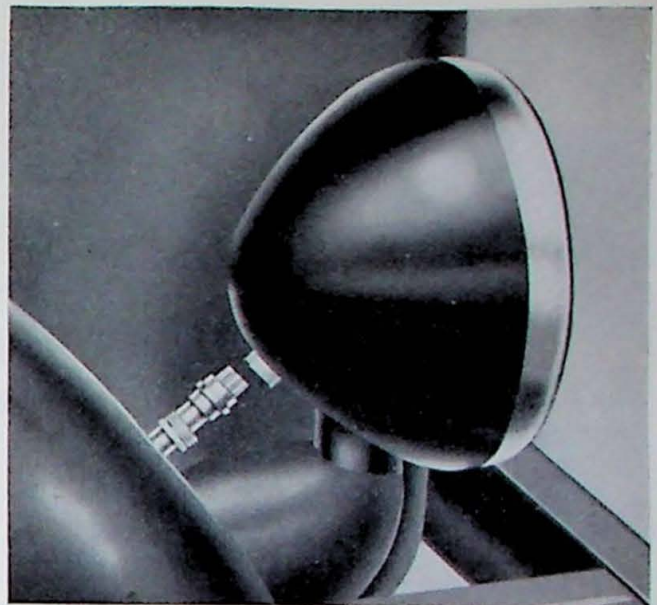


Fig. 10—12. The headlamp connector.

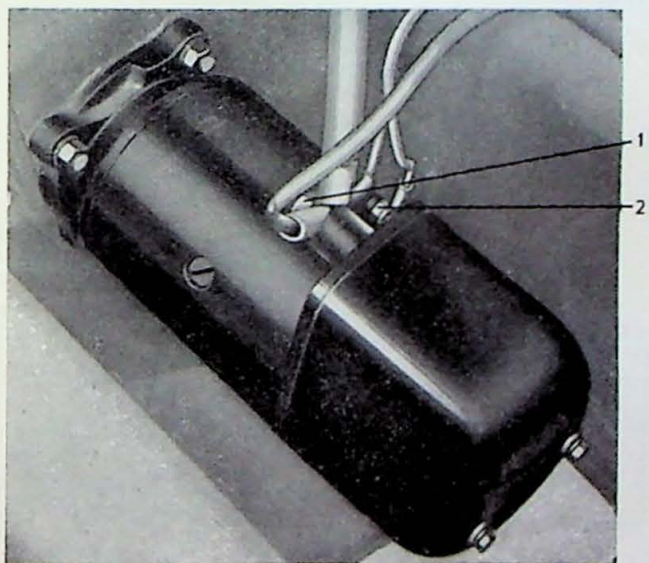


Fig. 10—11. The starter motor in position.

1. Terminal for: Battery, positive
2. Terminal for: Starter switch

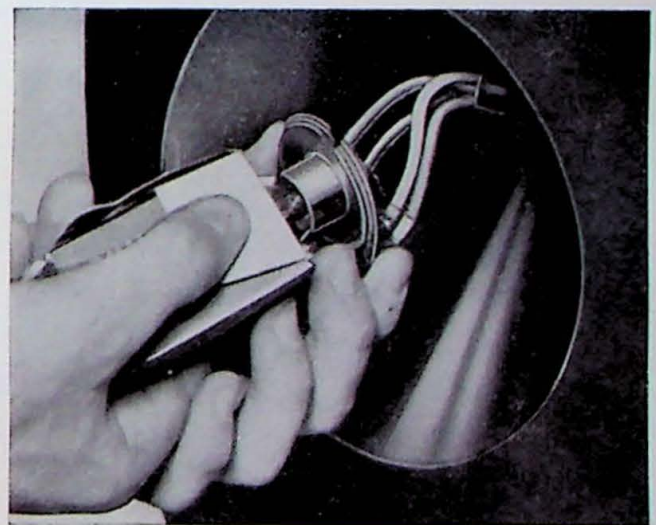
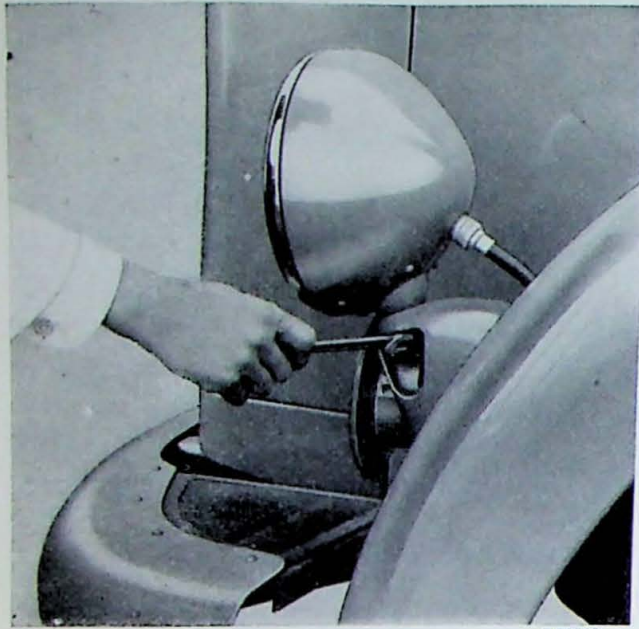


Fig. 10—13.



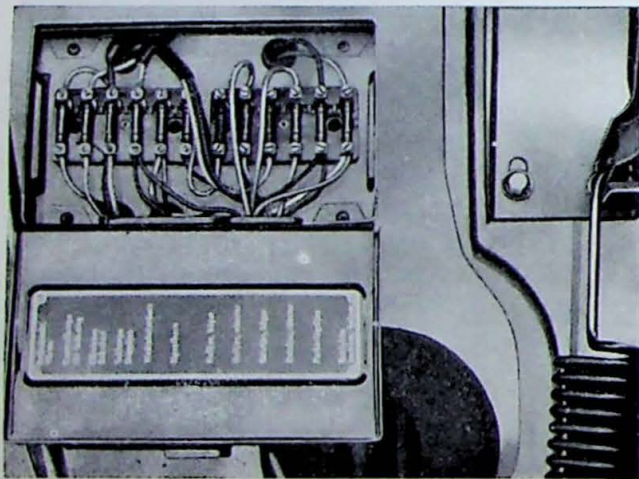
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Fig. 10—14.



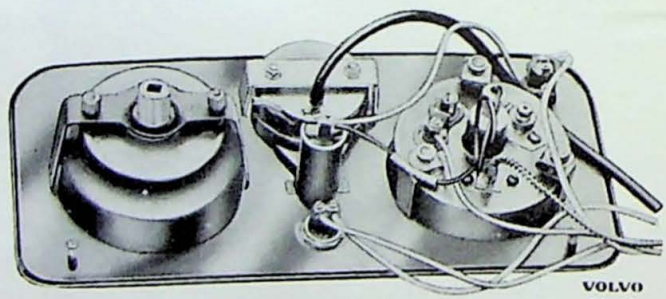
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Fig. 10—16.



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Fig. 10—15. Fuse-box.



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Fig. 10—17.

NUMBER PLATE LIGHTING, STOPLIGHTS AND TAIL LAMPS

Replacing the Bulbs

1. Remove dust and dirt from the lamp housing and the glass.
2. Remove the lamp housing and clean it internally.
3. Replace the faulty bulb. Do not touch the bulb glass with the fingers but use the carton in which the bulb was delivered. Dirt and oil on the glass of the lamp reduce its strength.

HORN

Removing and Fitting

1. Remove the fuse for the horn.
2. Disconnect the cables from the horn.
3. Remove the screws retaining the horn and lift it off.

Fitting is carried out in the reverse way to that used above.

INSTRUMENT LIGHTING

The bulbs are fitted in bulb holders which are attached to the instruments. All bulbs are accessible for replacement from the reverse side of the instrument panel.

LIGHTING SWITCHES

The lighting switches must be in good condition if the lights are to produce their full power. Damaged or burned switches must be replaced. If one of the lights appears to be weak, the switch and foot-dimmer switch should be examined by measuring the voltage fall across them.

This voltage fall should not exceed 0.1 volt.

See General Part for measurements on the electrical system.

ELECTRICAL CABLES

If there is any breakage or short circuit in a cable, this cable should be replaced. The new cable fitted should have the same cross-section as the old cable. The insulation must also be in good condition. If a cable is used with too small a cross-section, this means that the cable is subject to overloading. The smallest cross-sections which may be used are shown in the Wiring Diagram.

FUSES

Fit a new fuse when an old one is burnt out. All the fuses are 8 amp. In the cover on each fuse-box there is a plate showing which circuit each fuse protects. This may also be seen in the Wiring Diagram. If a new fuse is fitted and it immediately burns out, the circuit in question must be checked. The fuse-box and its connections are shown in Fig. 10-15.

INSTRUMENTS

If all the instruments together with the instrument panel or just an individual instrument is to be removed the following procedure should be followed:

1. Disconnect the ground cable from the battery.
2. Carry out the following operation:

Speedometer: Disconnect the speedometer drive cable from the instrument and pull out the lighting unit. If the instrument is to be removed from the instrument panel, the nut and clamps should be loosened.

Vacuum gauge: Pull the hose off the vacuum gauge nipple. Loosen the lighting unit. The instrument can then be lifted out after the nut and clamps have been removed.

Combined instrument: Loosen the pipe from the oil pressure gauge and the cables from the fuel gauge. Mark the cables so that they are replaced correctly.

Disconnect the pipe for the temperature gauge at the rear end of the engine.

Disconnect the lighting unit. If the instrument is to be removed from the instrument panel, the three nuts and the clamps are removed.

3. Disconnect the cables from the instrument lighting switch and the charging control lamp.
4. Remove the four nuts as well as the clamps and lift out the instrument panel complete with instruments.
5. Fit in the reverse order to that used above. Make sure that the pipe for the oil pressure gauge is tightened well before the engine is started. Make sure that the cables to the fuel gauge is correctly connected. Otherwise the instrument will be ruined.

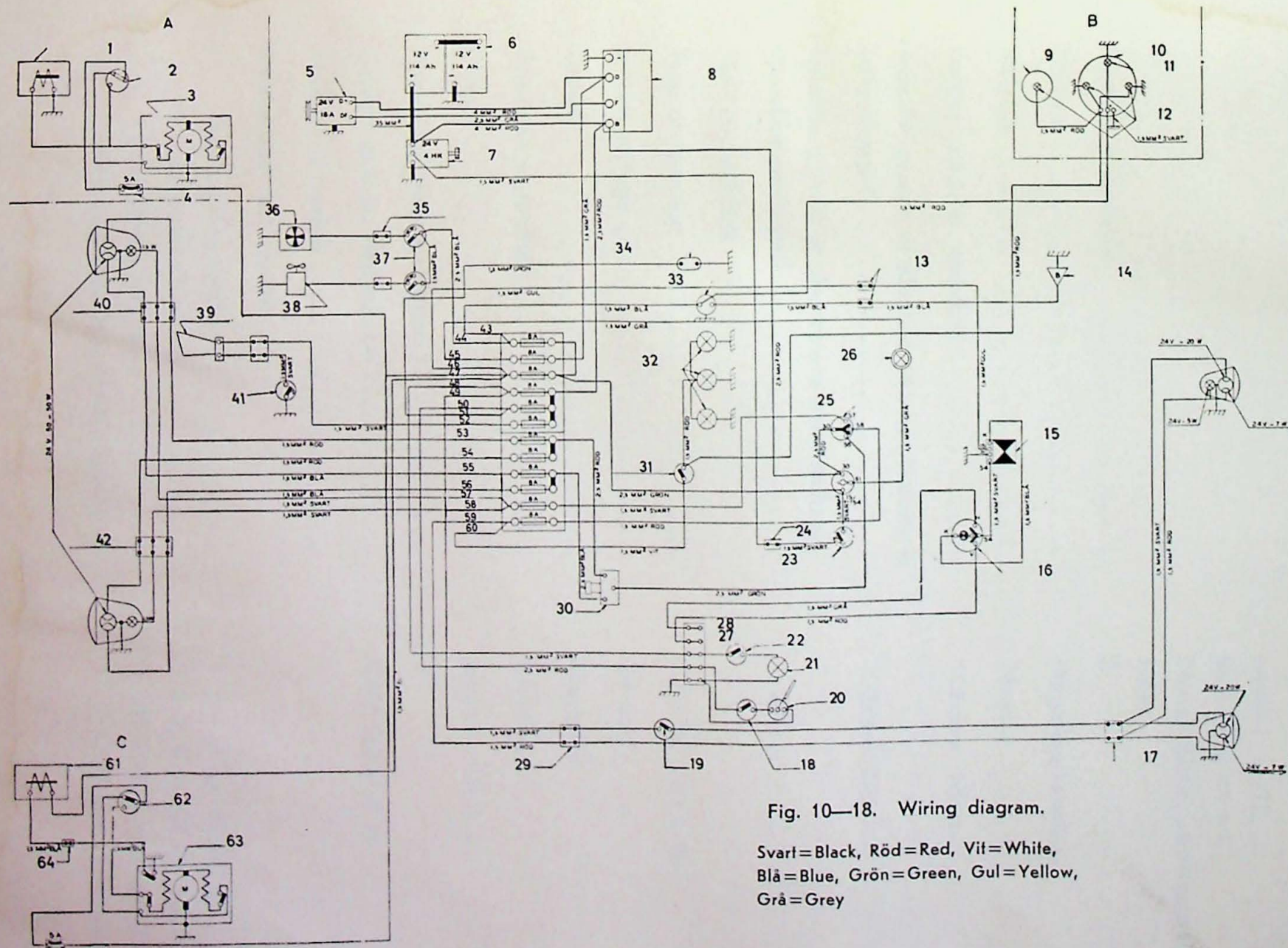


Fig. 10—18. Wiring diagram.

Svart=Black, Röd=Red, Vit=White,
Blå=Blue, Grön=Green, Gul=Yellow,
Grå=Grey

A. Two-speed rear axle

1. Solenoid for speedometer gear
2. Gear selector
3. Gear-change motor
4. Thermal overload cutout

5. Generator
6. Battery
7. Starter motor
8. Charging regulator

B. Time-speed recorder circuit

9. Pressure gauge
10. Time-speed recorder
11. Warning light
12. Instrument lighting

13. Connectors
14. Fuel gauge tank unit

15. Flasher impulse unit
16. Directional signal switch
17. Connector
18. Switch
19. Brake contact
20. Windshield wipers
21. Roof light
22. Switch
23. Starting switch
24. Connector
25. Lighting switch
26. Control light
27. Directional signal, left
28. Directional signal, right
29. Connector
30. Foot-dim实施 switch
31. Switch
32. Instrument
33. Fuel gauge
34. Plug for inspection lamp
35. Connector
36. Heater
37. Rheostat switches
38. Defroster fan
39. Horn
40. Connector
41. Horn button
42. Connector
43. Fuel gauge fuse
44. Heater fuse
45. Control lamp fuse
46. Directional signal fuse
47. Two-speed rear axle fuse
48. Roof light fuse
49. Brake warning light fuse
50. Windshield wiper fuse
51. Inspection light fuse
52. Horn fuse
53. Headlamp, full, right-fuse
54. Headlamp, full, left-fuse
55. Headlamp, dipped, right-fuse
56. Headlamp, dipped, left-fuse
57. Parking light, right-fuse
58. Parking light, left-fuse
59. Tail light fuse
60. Instrument lighting fuse

C. Two-speed rear axle on trucks fitted time-speed recorder

61. Solenoid for speedometer gear
62. Gear selector
63. Gear-change motor
64. Connector