

A. Subsequent Installation of Windshield Washer with Hand Pump (Optional Extra, SA 1440 — 120)

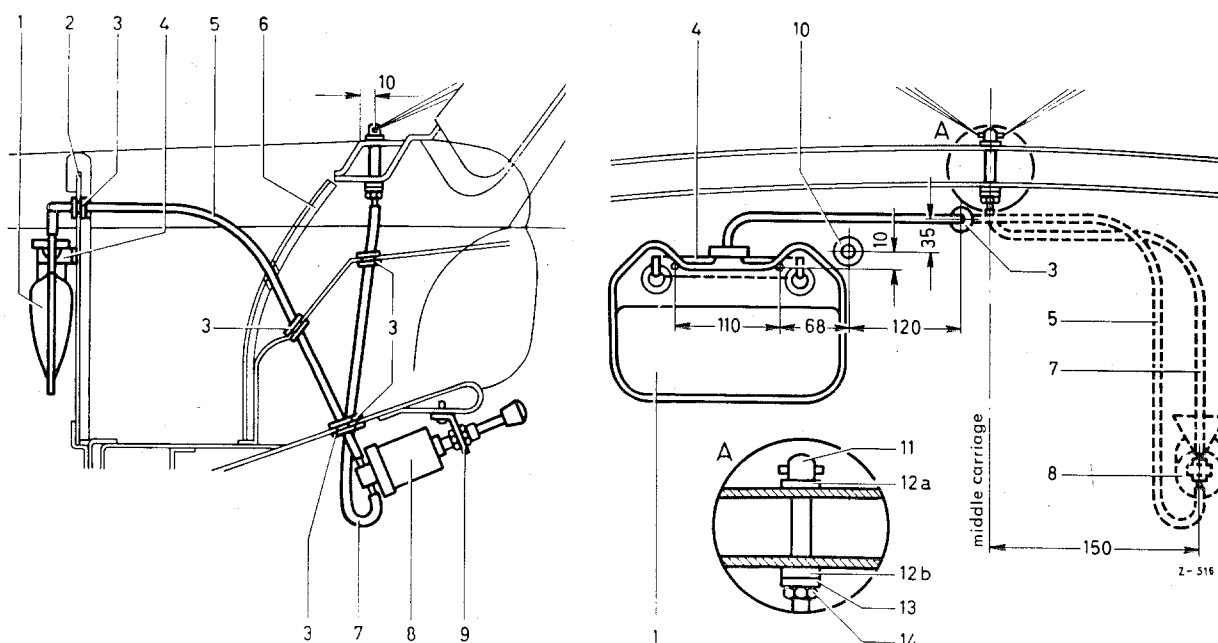


Fig. 67 — 5/1

- | | |
|--|--|
| 1 Water reservoir | 9 Bracket for hand pump |
| 2 Right engine compartment panel | 10 Battery cable opening in right engine compartment panel |
| 3 Rubber grommet | 11 Spray nozzle |
| 4 Bracket for water reservoir | 12a Rubber washer, top, with cup |
| 5 Water hose from water reservoir to hand pump | 12b Rubber washer, bottom |
| 6 Insulating panel (cardboard) | 13 Cup |
| 7 Water hose from hand pump to spray nozzle | 14 Hexagon nut |
| 8 Hand pump | |

1. Remove the upper center cowl insulating panel (6). In accordance with the specified locating dimensions, drill a 9.5 mm ϕ hole in the center line of the car for the installation of the spray nozzle. Deburr the hole (see Fig. 67 — 5/1).
2. Remove the clock (see Job No. 54 — 12). Slide the rubber washer (12a) and chromium-plated cup onto the spray nozzle and insert the spray nozzle (11). Slide on the rubber washer (12b), the cup (13), and screw on the hexagon nut (14). Then push on the water hose (7).

Note: The spray nozzle is tightened through the aperture for the clock.

3. Drill the 15 mm ϕ holes required for the installation of the water hoses, i.e. one hole in the engine compartment center panel, and 4 holes in the cowl; deburr the holes and install a rubber grommet (3) in each hole (see Fig. 67 — 5/1).

Apply a little tallow to the rubber grommets before installing. Then either drill or stamp a 12 mm ϕ hole in the insulating panel (6).

4. In accordance with the specified dimensions, mark the 2 fixing holes for the bracket (4) of the water reservoir on the right engine compartment panel (see Fig. 67 — 5/1) and drill them with a 5.5 mm ϕ drill.

Note: On cars with right-hand drive, the position of the water reservoir (1) is reversed and the hand pump (8) must be arranged according to the space available.

5. Screw the bracket (4) to the engine compartment panel (2) by means of the 2 oval-head screws AM 5 × 12 DIN 7985 together with lock washers and hexagon nuts, and place the water reservoir in the bracket.
6. Hold the bracket (9) for the hand pump (8) against the reinforcement plate under the instrument panel approx. 150 mm to the left of the car center line (see Fig. 67 — 5/1), mark the 2 holes for the cheese-head tapping screws, and drill the holes to 3.4 mm ϕ .
7. Screw the bracket (9) for the pump to the instrument panel by means of the 2 cheese-head tapping screws Z 4.2 × 16 DIN 7871.
8. Place the hand pump (8) in the bracket (9) and fix it by tightening the hexagon nut.
9. Install the water hose (5) from the water reservoir (1) to the hand pump and the water hose (7) from the hand pump (8) to the spray nozzle (11) and connect them up (see Fig. 67 — 5/1).
10. Reinstall the upper center cowl insulating panel.

11. Reinstall the clock (see Job No. 54 — 12).

12. Dilute 1 part of the Mercedes Benz Windshield Cleaning Fluid with 12 parts of water and mix thoroughly.

Pour this solution into the water reservoir (1) (water reservoir capacity approx. 0.75 liters).

Note: In winter the reservoir of the windshield washer should be filled with the following mixture:

1 part Mercedes Benz Windshield Cleaning Fluid diluted in 6 parts of water and mixed well. This mixture does not freeze at temperatures down to —9° C.

Even smeared greasy windshields can be satisfactorily cleaned with this solution.

Caution! The concentration should be as specified, since higher concentrations will attack the car finish.

13. Check the proper functioning of the windshield washer system.

Adjust the spray nozzles by means of a screw driver till the water jet strikes approximately the center of the windshield.

After adjustment, lock the spray nozzles by means of the knurled nuts.

List of Available Parts:

Number	Designation	Part No.
1	Windshield washer, consisting of:	10 180 860 00 90
1	hand pump, water reservoir, spray nozzle and water hoses	
1	Bracket for the hand pump	10 120 869 00 14
2	Cheese-head tapping screw	Z 4.2 × 16 DIN 7971
1	Bracket for water reservoir	40 121 869 00 32
2	Oval-head screw	AM 5 × 12 DIN 7985
2	Lock washer	B 5 DIN 127
2	Hexagon nut	M 5 DIN 934
5	Rubber grommet	000 997 21 81
The whole kit can be ordered from our works under order No. 10 180 860 99 90.		

B. Subsequent Installation of Electric SWF 12-Volt Windshield Washer with Gear-Type Pump (Optional Extra, SA 55142/4)

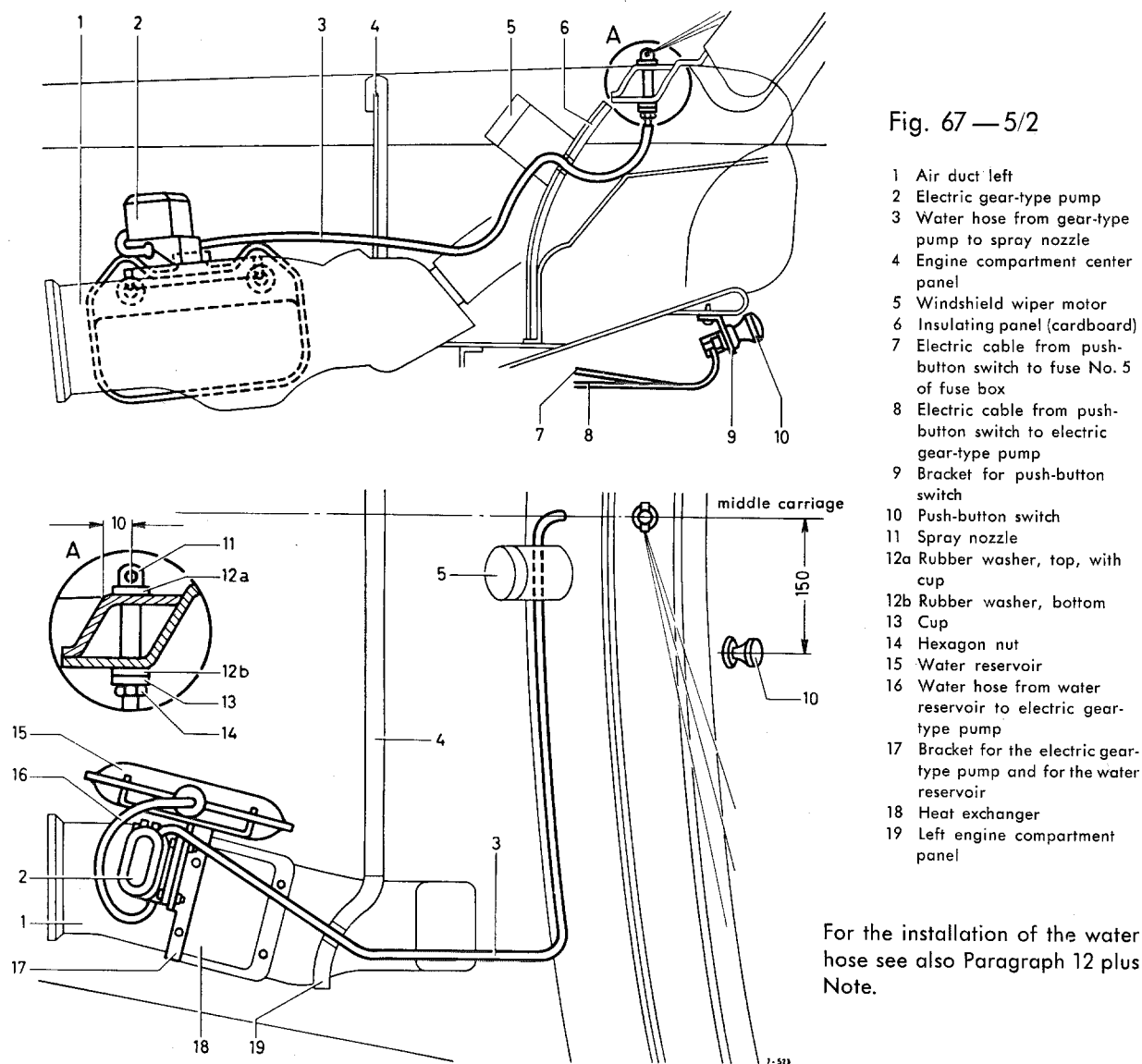


Fig. 67 — 5/2

- 1 Air duct left
- 2 Electric gear-type pump
- 3 Water hose from gear-type pump to spray nozzle
- 4 Engine compartment center panel
- 5 Windshield wiper motor
- 6 Insulating panel (cardboard)
- 7 Electric cable from push-button switch to fuse No. 5 of fuse box
- 8 Electric cable from push-button switch to electric gear-type pump
- 9 Bracket for push-button switch
- 10 Push-button switch
- 11 Spray nozzle
- 12a Rubber washer, top, with cup
- 12b Rubber washer, bottom
- 13 Cup
- 14 Hexagon nut
- 15 Water reservoir
- 16 Water hose from water reservoir to electric gear-type pump
- 17 Bracket for the electric gear-type pump and for the water reservoir
- 18 Heat exchanger
- 19 Left engine compartment panel

For the installation of the water hose see also Paragraph 12 plus Note.

1. Disconnect the ground cable at the negative terminal of the battery.
2. Carry out the procedures listed in Section A, Paragraphs 1 and 2.
3. Hold the bracket (9) for the push-pull switch (10) against the reinforcement plate under the instrument panel approx. 150 mm to the left from the car center line (see Fig. 67 — 5/2), mark the 2 holes for the cheese-head tapping screws and drill the holes to 3.4 mm \varnothing .
4. Screw the bracket (4) to the reinforcement plate by means of the 2 cheese-head tapping screws Z 4.2 \times 16 DIN 7971 (see Fig. 67 — 5/2).
5. Install the bracket (17) at the left air duct (1); to do this, unscrew the 2 front fixing screws for the heat exchanger (18), fit the bracket (17), and screw the fixing screws in again (see Fig. 67 — 5/2).
6. Screw the electric gear-type pump (2) to the bracket (17) by means of the 2 cheese-head screws AM 6 \times 20 DIN 84.
7. Connect the two black electric cables 750 mm and 1400 mm long to the push-pull switch (10). Place the push-pull switch (10) in the bracket (9) and fix it by tightening the escutcheon by means of Hook Wrench 136 589 02 05.

8. Place a rubber grommet 000 997 18 81 in the 10 mm ϕ hole in the cowl under the right tension spring for the instrument cluster.
Drill a 10 mm hole in the reinforcement panel, approx. 90 mm from the push-pull switch toward the front, and install another rubber grommet 000 997 18 81.
 9. Pull an insulating sleeve B 6 \times 7.2 DIN 40 621 over each of the two electric cables and connect the short cable (7) to fuse No. 5 of the fuse box and the long cable (8) to the electric gear-type pump (2) (to the positive terminal).
 10. Connect the brown cable (ground) to the electric gear-type pump (2) (negative terminal), pull an insulating sleeve B 4 \times 5 DIN 40 621 over the cable and connect the other end of the cable to ground at a suitable point (e. g. cable connector, blower, or windshield wiper motor).
 11. Hang the water reservoir (15) in the bracket (17).
 12. Drill a 12 mm ϕ hole for the water hose (3) in the **right** cowl insulating panel (6) (card-board) to the right of the windshield wiper motor in the car center line and clean the bore.
- Note:** An alternative method to that shown in Fig. 67 — 5/2, is to install the water hose through the center cowl insulating panel, i. e. to the left of the windshield wiper motor. To do this, a 12 mm ϕ hole should be stamped in the center cowl insulating panel at a distance of approx. 180 mm from the windshield wiper motor center and approx. 50 mm from the lower edge.
13. Push the water hose (3) through the hole in the right or center cowl insulating panel (6). Install the water hose (3) by pushing it through the left engine compartment panel (19) at the cut-out for the regulating valve cable and connect it to the electric gear-type pump (2).
 14. Connect the short water hose (16) to the electric gear-type pump (2) and to the water reservoir (15).
 15. Dilute 1 part Mercedes Benz Windshield Cleaning Fluid with 12 parts of water and mix thoroughly.
Pour this solution into the water reservoir (water reservoir capacity approx. 0.75 liters).
- Note:** In winter the reservoir of the windshield washer should be filled with the following mixture:
1 part Mercedes Benz Windshield Cleaning Fluid diluted in 6 parts of water and mixed well. This mixture does not freeze at temperatures down to -9° C.
- Even smeared greasy windshields can be satisfactorily cleaned with this solution.**
- Caution!** The concentration should be as specified, since higher concentrations will attack the car finish.
16. Connect the ground cable to the negative terminal of the battery.
 17. Check the proper functioning of the windshield washer system. Adjust the spray nozzles by means of a screw driver till the water jet strikes approximately the center of the windshield.
After adjustment, lock the spray nozzle by means of the knurled nuts.

List of Available Parts:

Number	Designation	Part No.
1	Windshield washer consisting of: gear-type pump, water reservoir, spray nozzle and water hoses	11 120 860 00 90
1	Bracket for gear-type pump and water reservoir	10 186 860 01 14
2	Cheese-head screw	AM 6 × 20 DIN 84
2	Hexagon nut	M 6 DIN 934
2	Lock washer	B 6 DIN 127
1	Push-pull switch	000 545 06 11
1	Washer	8.4 DIN 433
1	Escutcheon	136 545 06 72
1	Knob	136 302 09 01
1	Felt ring	000 997 20 40
1	Bracket for push-pull switch	120 869 00 14
2	Cheese-head tapping screw	Z 4.2 × 16 DIN 7971
1	Electric cable, black, 1400 mm long	B 1.5 DIN 72 551
1	Electric cable, black, 750 mm long	B 1.5 DIN 72 551
1	Electric cable, brown, 750 mm long	B 1.5 DIN 72 551
1	Insulating sleeve, 650 mm long	B 4 × 5 DIN 40 621
1	Insulating sleeve, 650 mm long	B 6 × 7.2 DIN 40 621
4	Cable socket	4 × 0.8 N 261
2	Rubber grommet	000 997 18 81
The whole kit can be ordered from our works under Order No. 11 120 860 90 90.		