

Assembly Manual

**Preparation of the 3-brush system
for Citymaster 1600 (148949) / Citymaster 1650 (148948)**

Introduction

Foreword

The installation procedures described in this assembly manual should only be undertaken by a Hako service centre or a workshop authorised by Hako. Members of staff with the required level of training and expertise are only guaranteed in the said workshops. This assembly manual may be used only in conjunction with the operating manual of the machine.

Safety instructions

Please observe the general safety regulations of the corresponding machine in the relevant operating manual. Place the machine on a level surface. Switch off the machine prior to assembly. Secure the machine with the parking brake.

We would expressly advise you that no legal claims may be asserted based on the contents of this manual. In the case of necessary repair work, please make sure that only original spare parts are used. Only original spare parts guarantee constant and reliable operational readiness of the device. We reserve the right to make changes in the interests of further technical development.

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Preparation of the 3-brush system

1 Preparation of the 3-brush system

The “preparation of the 3-brush system” module is needed to operate the Citymaster 1600 with the 3-brush system attachment.

1.1 Parts list

- 1 Hydraulics
 - Supply line (A)
 - Pressure sensing line (B)
 - Bulkhead screw connections (C)
 - Check valve (D)
 - Pipe clamp (E)
 - 2 Suction mouth sensor
 - 3 Cable loom W19 with:
 - Plugs X30 and X35
 - Relay K07
 - Fuses F25 and F26
 - Ring eye for F19
 - 4 Cable loom W33 with plugs X21 and X66
- Fastening material
Assembly manual

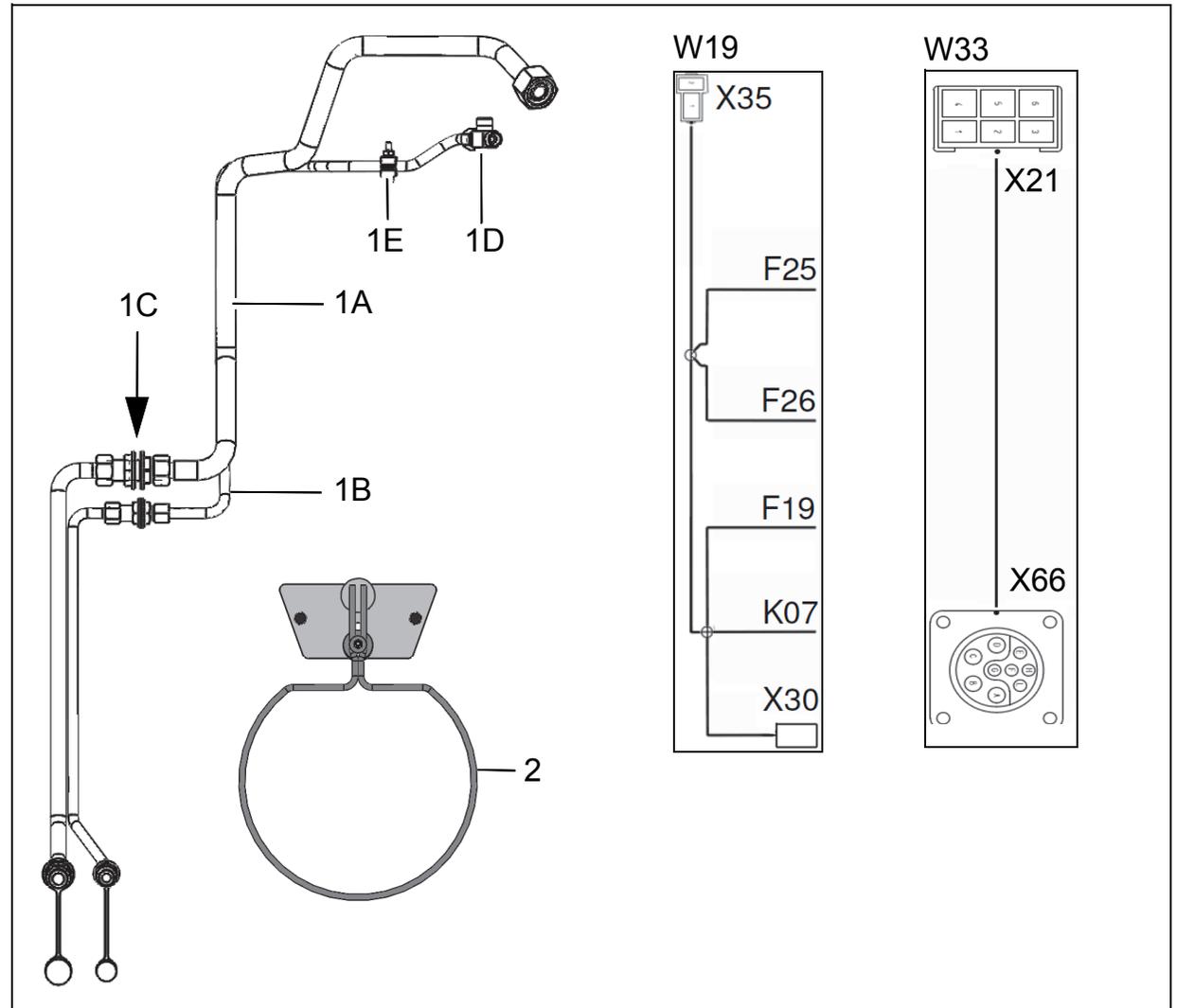


Fig. 1

Preparation of the 3-brush system

1.2 Preparation for fitting the 3-brush system

1.2.1 Cable loom W33

1. Park the vehicle on a level surface and switch off the engine. Disconnect the battery.
2. Remove the right-hand side console (Fig. 2/1) in the driver's cab.
3. Route cable loom W33 from the plug panel (Fig. 2/2) through the hole (Fig. 2/3) into the driver's cab.

Note: The hole (Fig. 2/3) for leading through plug X21 is too small. Remove plug before routing. Pay attention to the pin assignments of the plug when doing this, see section entitled circuit diagrams.

4. Connect plug X21 to the relevant plug of cable loom W1.
5. Secure cable loom W33 using cable ties.

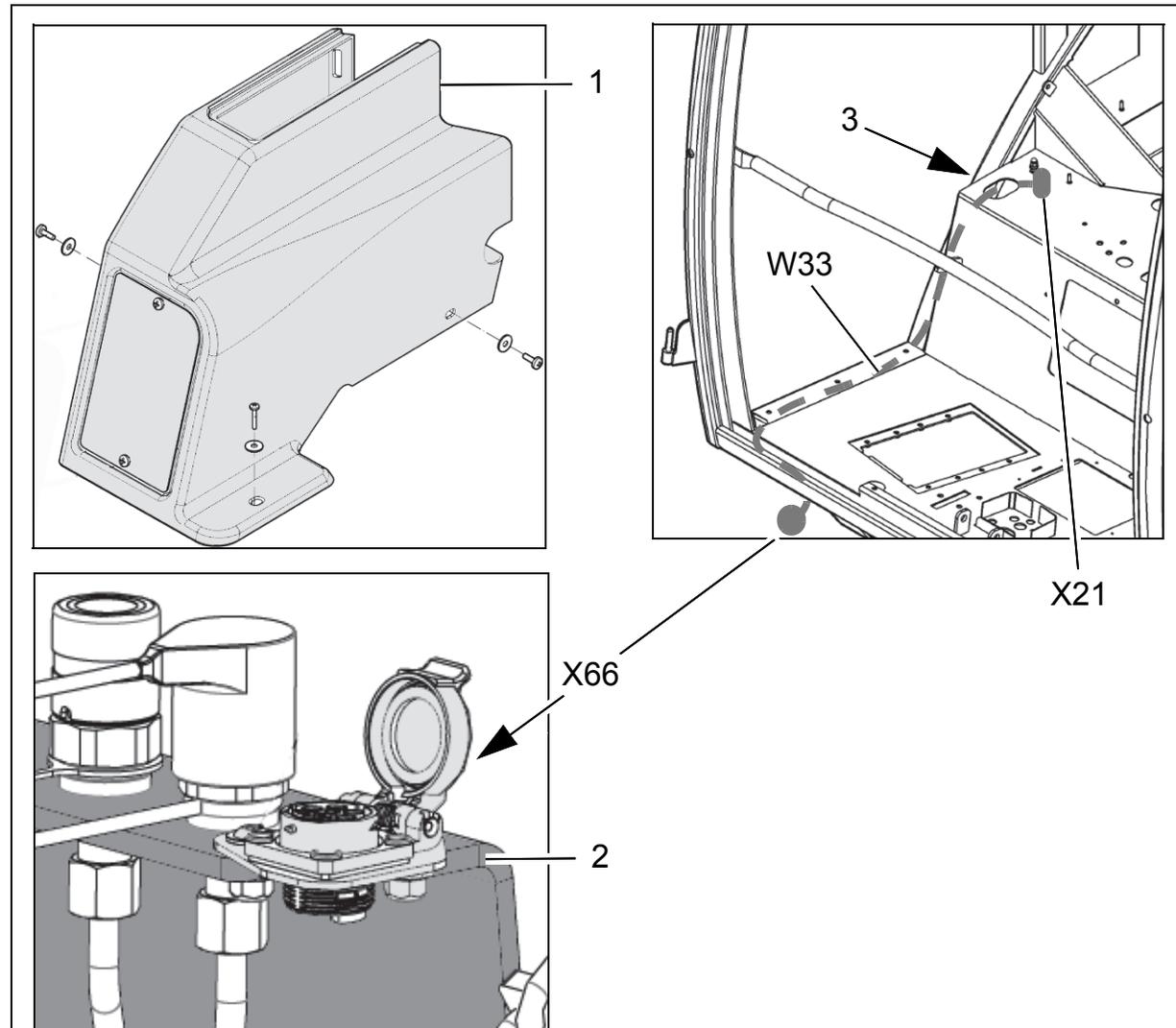


Fig. 2

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1.2.2 Cable loom W19

Route cable loom W19 into the electrical box of the rear wagon.

1. Slide on relay socket (Fig. 3/1) at existing relay housing (Fig. 3/2) and secure using a Philips screw.
2. Secure the fuse housing (Fig. 3/3) to the panel (Fig. 3/4) using a Philips screw.
3. Connect plug X30-W19 to the existing plug X30-W9.
4. Connect plug X35-W19 to the existing plug X35-W1.
5. Route cable with ring eye from cable loom W19 to upper connection of fuse F19.
6. Fix cable loom W19 to existing cabling using cable ties.

1.2.3 Fuses F25 and F26

Left-hand fuse (Fig. 3/5) = F25

Right-hand fuse (Fig. 3/6) = F26

1.2.4 Insert relay K07

Insert the relay (Fig. 3/7) into the relay socket.

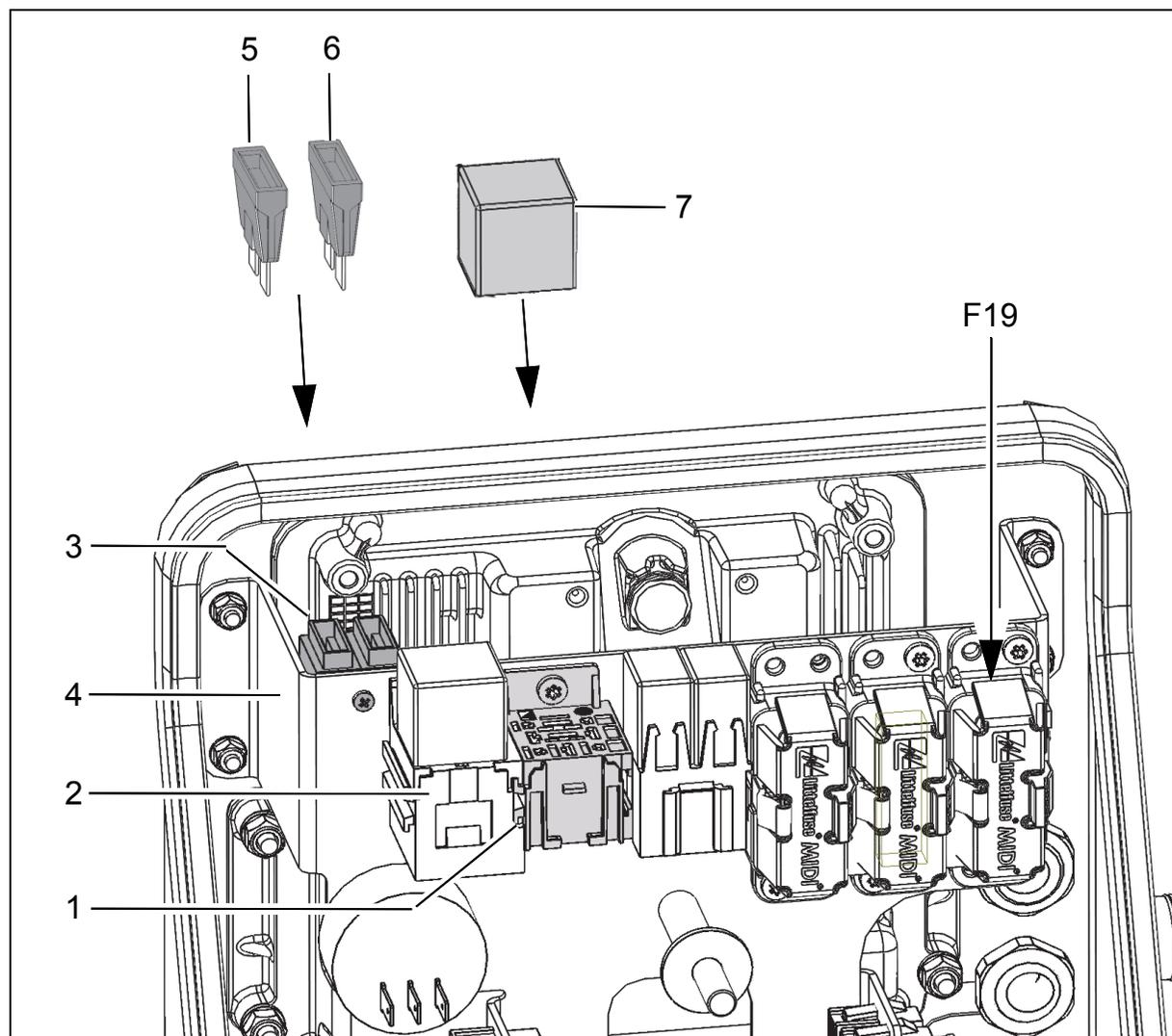


Fig. 3

Preparation of the 3-brush system

1.2.5 Installing the suction mouth sensor

1. Remove the existing centring ring from the four springs (Fig. 4/1).
2. Hook the provided centring ring (Fig. 4/2) into the four springs (Fig. 4/1). The forks of the centring ring must point in the driving direction.
3. Fit the sensor plate (Fig. 4/3) to the holder (Fig. 4/4). Make holes if necessary, see sketches A and B (view: front of vehicle from below).
4. In the upper end position the forks of the centring ring (Fig. 4/2) are in contact with the rubber buffer (Fig. 4/7), see sketch C.
5. The position of the sensor (Fig. 4/5) must be aligned in relation to the magnet (Fig. 4/6). Set air gap between magnet and sensor to approx. 5 mm, see sketch C.
6. Connect the existing cable loom W10-B17 to the suction mouth sensor and fix with cable ties.
7. Function test: If the suction mouth is not in the upper end position, the warning symbol (Fig. 4/8) appears on the multifunction display.

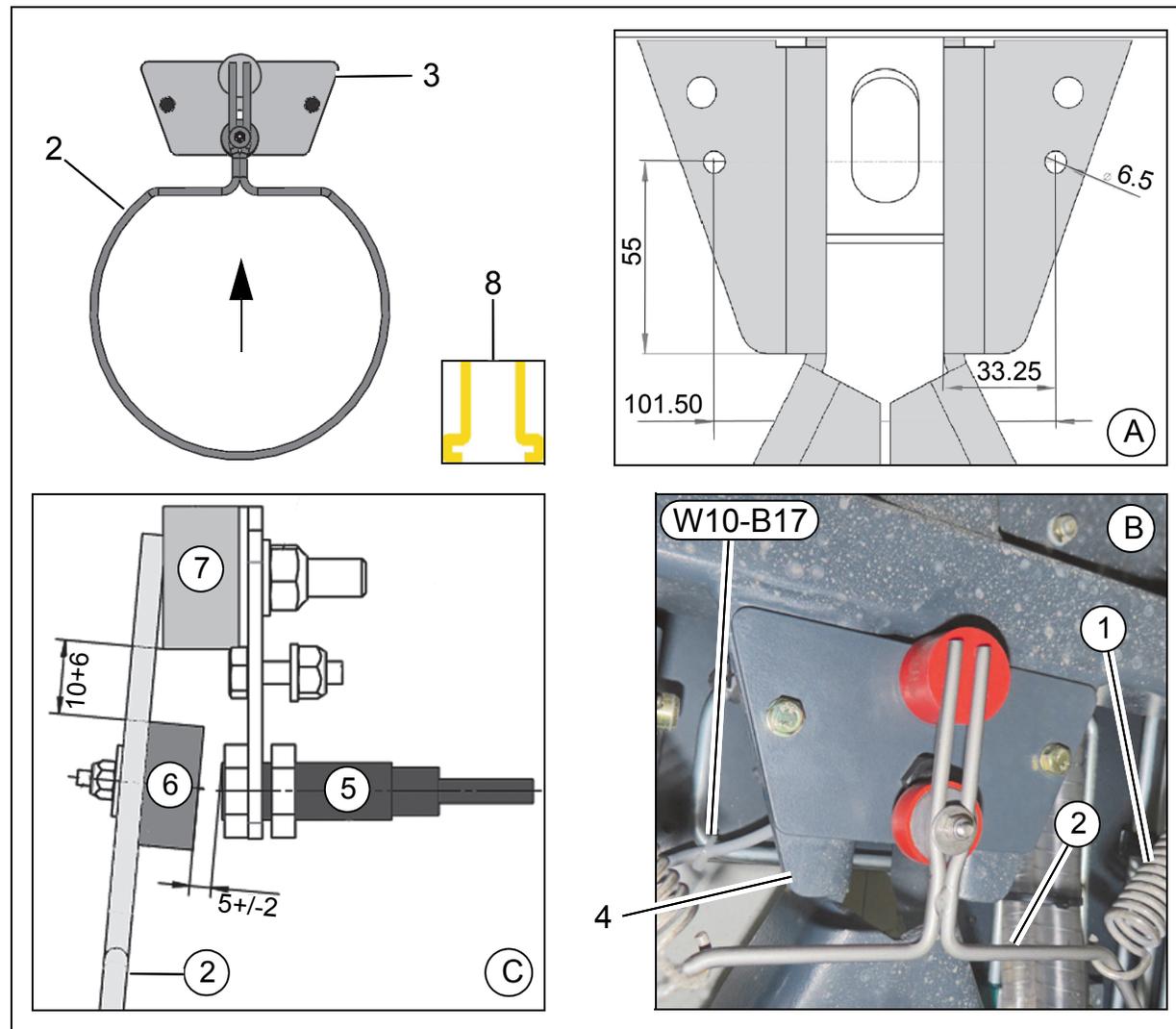


Fig. 4

Preparation of the 3-brush system

1.2.6 Routing the hydraulics

The control block of the 3-brush system also requires a supply line and a pressure sensing line (LS).

Risk of injury! The hydraulic lines must be depressurised.

- Install the supply line (Fig. 5/1) between the screw-on panel (Fig. 5/3) and the right-hand retaining frame (Fig. 5/4).
- Install the pressure sensing line (Fig. 5/2) between the screw-on panel (Fig. 5/3) and the right-hand retaining frame (Fig. 5/4).
- Fit the supply line and the pressure sensing line to the right-hand retaining frame with a bulkhead screw.

View: front of vehicle, right side

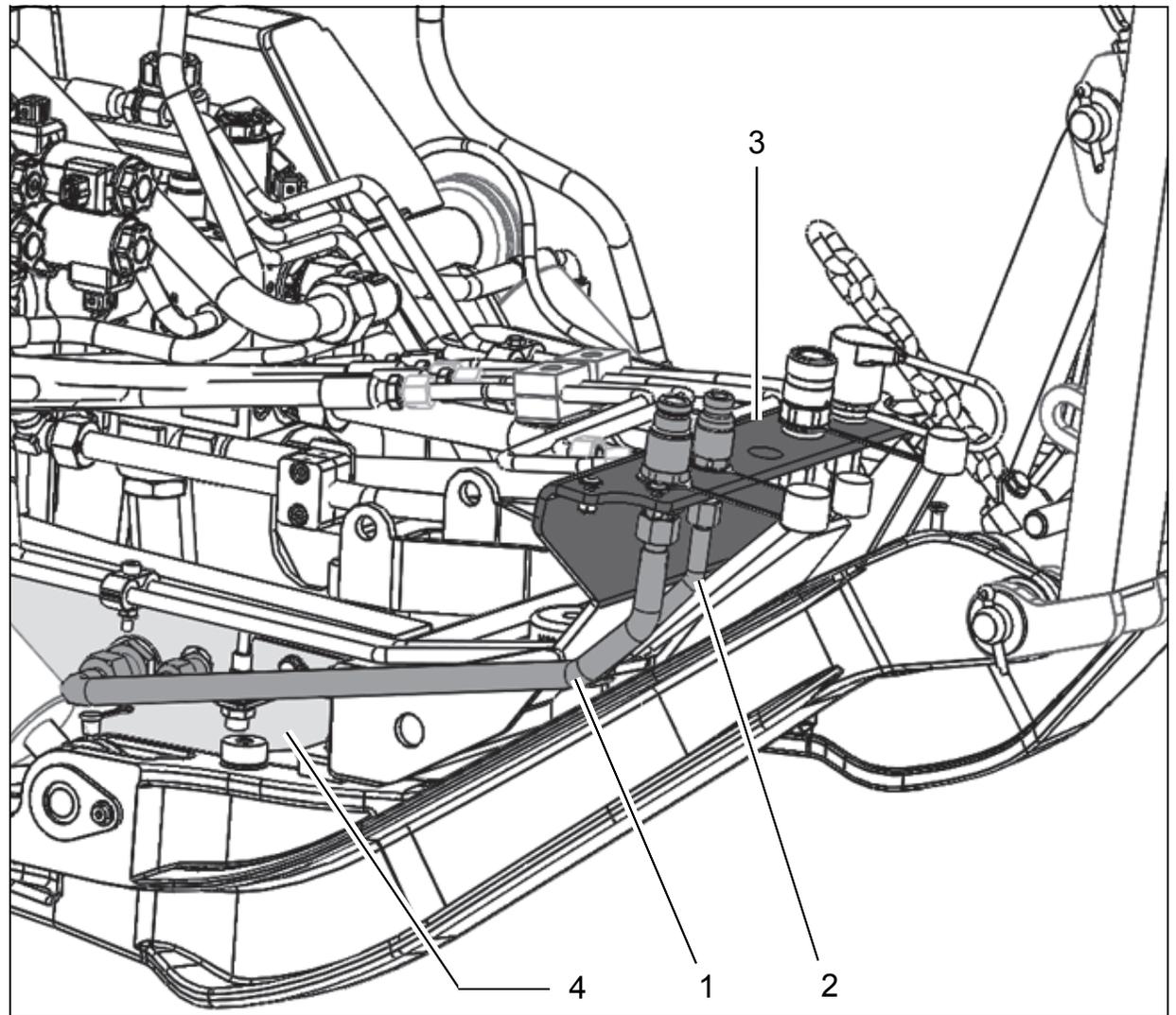


Fig. 5

Preparation of the 3-brush system

Routing the hydraulics (continued)

- Remove the sealing plug of the L-screw connection (Fig. 6/3).
- Fit the supply line (Fig. 6/1) to the right-hand retaining frame (Fig. 6/2) and the L-screw connection of the rotary control block (Fig. 6/3).
- Remove the existing elbow union and replace with the check valve (Fig. 6/5).
- Install the pressure sensing line (Fig. 6/4) between the right-hand retaining frame (Fig. 6/2) and the check valve (Fig. 6/5).
- Attach the pressure sensing line to the adjacent hydraulic line using the provided pipe clamp (Fig. 6/6).

View: front of vehicle from below

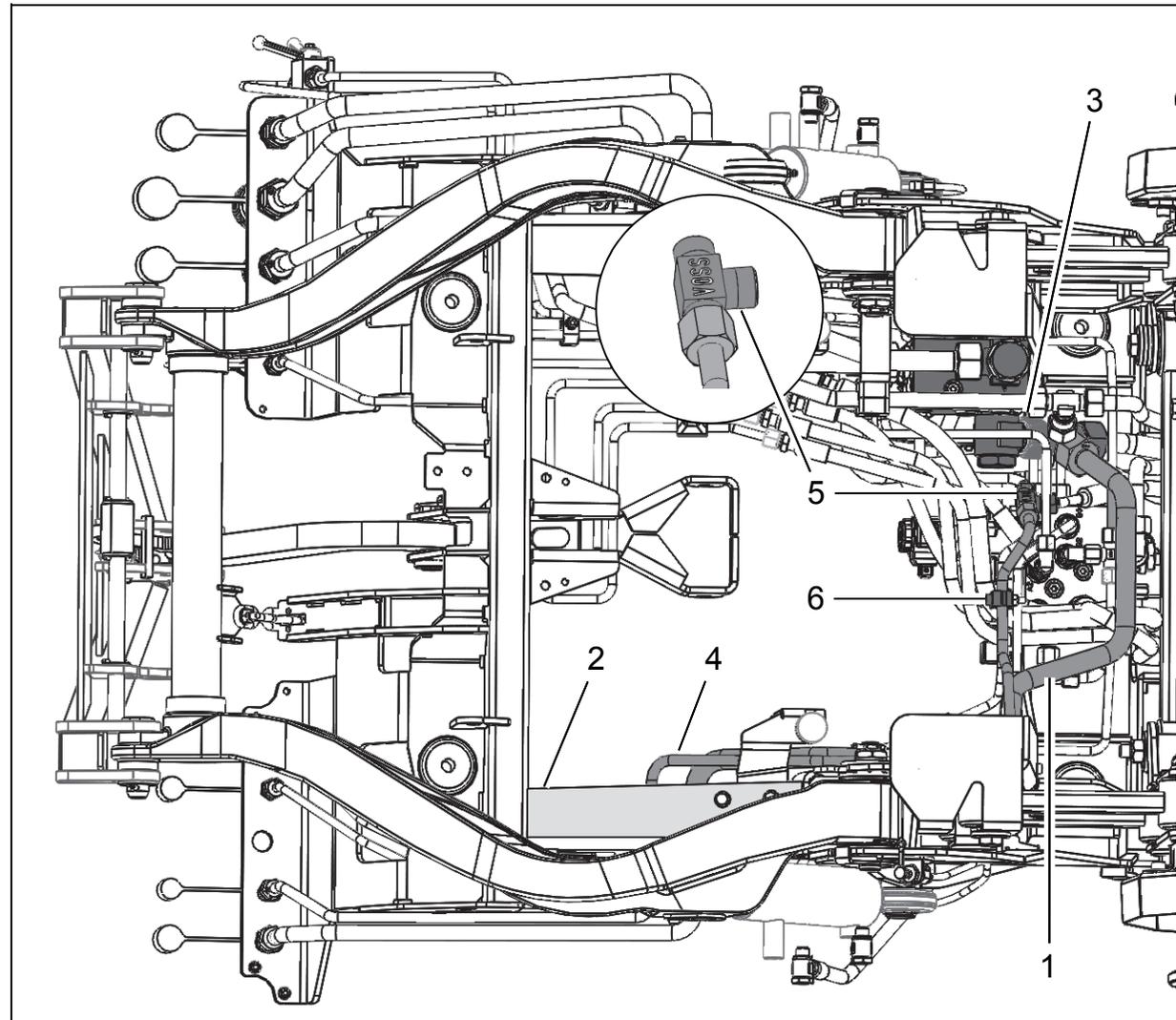


Fig. 6

Spitzentechnik für eine saubere und schönere Umwelt

Advanced Technology for a Cleaner, Better Environment



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