867 M-TYPE

Additional Instructions

Needle area cover interrogator
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1 General information

Fig. 1: General information (1)

This kit has been designed for CLASSIC and PREMIUM machines of the M-TYPE series.

During sewing, the cover (1) in front of the needle is at its regular position (see figure). When the cover (1) is swiveled to the side, e.g. during a needle change, the proximity switch will detect this condition and lock the machine. On CLASSIC machines, the display will show the message 3109, while the display on PREMIUM machines will show the message Service Stop 9922. Sewing is not possible during this time. The machine will remain locked even if you press the pedal forward (position 1) or press a button. This lock is an additional measure intended to prevent injuries.

Components of the kit
Check whether the scope of delivery for kit 0867 592244/0867 592344 is correct prior to installation.

Kit 0867 592244 (CLASSIC)

<table>
<thead>
<tr>
<th>Part number</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0667 105164</td>
<td>1</td>
<td>Head cover</td>
</tr>
<tr>
<td>H867 V93298 001</td>
<td>1</td>
<td>Mounting bracket</td>
</tr>
<tr>
<td>H867 V93298 002</td>
<td>1</td>
<td>Holder</td>
</tr>
<tr>
<td>9205 102467</td>
<td>1</td>
<td>Threaded pin</td>
</tr>
<tr>
<td>9301 102541</td>
<td>1</td>
<td>Cylinder pin</td>
</tr>
<tr>
<td>H867 V93298 005</td>
<td>1</td>
<td>Sleeve</td>
</tr>
<tr>
<td>9400 000168</td>
<td>1</td>
<td>Pressure piece</td>
</tr>
<tr>
<td>Part number</td>
<td>Quantity</td>
<td>Description</td>
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<td>------------------------</td>
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<td>1</td>
<td>Nut</td>
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<tr>
<td>9202 042327</td>
<td>2</td>
<td>Cylinder-head bolt</td>
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<tr>
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<td>Disk</td>
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<tr>
<td>1001 009243</td>
<td>4</td>
<td>Disk</td>
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<tr>
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<td>Holder</td>
</tr>
<tr>
<td>0867 592250</td>
<td>1</td>
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<td>9204 431657</td>
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<tr>
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<td>9840 120025</td>
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<tr>
<td>9204 201657</td>
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**Kit 0867 592344 (PREMIUM)**

<table>
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</thead>
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<td>Mounting bracket</td>
</tr>
<tr>
<td>H867 V93298 002</td>
<td>1</td>
<td>Holder</td>
</tr>
<tr>
<td>9205 102467</td>
<td>1</td>
<td>Threaded pin</td>
</tr>
<tr>
<td>9301 102541</td>
<td>1</td>
<td>Cylinder-head bolt</td>
</tr>
<tr>
<td>H867 V93298 005</td>
<td>1</td>
<td>Sleeve</td>
</tr>
<tr>
<td>9400 000168</td>
<td>1</td>
<td>Pressure piece</td>
</tr>
<tr>
<td>9231 000397</td>
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<td>Nut</td>
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<tr>
<td>9202 042327</td>
<td>2</td>
<td>Cylinder-head bolt</td>
</tr>
<tr>
<td>9330 000087</td>
<td>2</td>
<td>Disk</td>
</tr>
<tr>
<td>1001 009243</td>
<td>4</td>
<td>Disk</td>
</tr>
<tr>
<td>0867 592290</td>
<td>1</td>
<td>Holder</td>
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<tr>
<td>0867 592250</td>
<td>1</td>
<td>Cover</td>
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<tr>
<td>9204 431657</td>
<td>2</td>
<td>Cylinder-head bolt</td>
</tr>
<tr>
<td>0867 592300</td>
<td>1</td>
<td>Mounting plate</td>
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<tr>
<td>9203 003637</td>
<td>2</td>
<td>Cylinder-head bolt</td>
</tr>
<tr>
<td>9815 710221</td>
<td>1</td>
<td>Inductive transmitter</td>
</tr>
<tr>
<td>0798 120401</td>
<td>1</td>
<td>Cable clip</td>
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</tbody>
</table>
Important

To install the interrogator for the needle area cover on the machine, you will need another kit: Adapter 0867 592224.

The circuit board included in the kit can accommodate up to 4 interrogator units (the needle area cover interrogator is one of them).
2 Setting up the needle area cover interrogator

2.1 Preparing assembly

**WARNING**

Risk of injury!
Crushing, cutting and punctures are possible.
Do not assemble the needle area cover interrogator unless the machine is switched off.

**NOTICE**

Property damage may occur!
The cables may be crushed, kinked and cut.
Make sure not to guide the cables over sharp edges and moving parts and do not kink or crush the cables.

**Order**

1. Prepare assembly.
2. Assemble the needle area cover interrogator (p. 10).
3. Connect the needle area cover interrogator (p. 14).
4. Test functionality (p. 19).

To prepare the assembly of the needle cover area interrogator:

**Replacing the head cover (CLASSIC)**

**Information**

CLASSIC machines are missing the two holes in the head cover that are needed for the assembly of the needle area cover interrogator. This is why the kit for CLASSIC machines includes a new head cover.

You do not need to replace the head cover on PREMIUM machines.
Fig. 2: Preparing assembly (1)

1. Loosen the 2 screws (2).
2. Remove the head cover (3).
3. Tighten the new head cover using 2 screws.

Removing the arm cover (CLASSIC and PREMIUM)
4. Loosen the cable of the control panel (PREMIUM).
5. Loosen the screws (1).
6. Remove the arm cover (4).

Preparing the head cover (PREMIUM)

Fig. 3: Preparing assembly (2)

7. Take out both plugs (5) and keep them in a safe place.
Removing the valve cover (CLASSIC and PREMIUM)

Fig. 4: Preparing assembly (3)

8. Loosen the screws (7).
9. Remove the valve cover (6).

Information

The circuit board to which the needle area cover interrogator is connected is found behind the valve cover and behind the cover on the side, respectively, on CLASSIC and PREMIUM machines.

Removing the handwheel (PREMIUM)

Fig. 5: Preparing assembly (4)

10. Loosen the screws (8).
11. Remove the handwheel (9).
Removing the cover on the side (PREMIUM)

Fig. 6: Preparing assembly (5)

12. Loosen the screws (11).

13. Remove the cover on the side (10) and set it down carefully on the tabletop next to the machine.

⚠️ The cover on the side (10) is still connected to the machine via the switch housed in the cover. Do not pull on the cable.

You can now assemble the needle area cover interrogator (p. 10).
2.2 Assembling the needle area cover interrogator

**WARNING**

Risk of injury!
Faulty wiring can cause the entire machine to malfunction.
Only qualified specialists may assemble the needle area cover interrogator.
Do not assemble the needle area cover interrogator unless the machine is switched off.

**NOTICE**

Property damage may occur!
The cables may be crushed, kinked and cut.
Make sure not to guide the cables over sharp edges and moving parts and do not kink or crush the cables.

**Order**

1. Prepare assembly (p. 6).
2. **Assemble the needle area cover interrogator.**
3. Connect the needle area cover interrogator (p. 14).
4. Test functionality (p. 19).

*Fig. 7: Assembling the needle area cover interrogator (1)*

The needle area cover interrogator ships fully pre-assembled (see figure above).
Only the parts necessary for assembling the head cover are included as loose single items.
To assemble the interrogator of the needle area cover:

1. Assemble the holder (3) to the head cover (2) using 4 disks (1), 2 screws (4) and 2 washers (5) (see figure).

**Information**

Do not tighten the screws (4) all the way yet to ensure that you can still align the needle area cover interrogator.
2. Align the needle area cover interrogator in such a way that it does not come into contact with any other part of the machine when swung open and closed.

3. Tighten the screws (4).

4. Carefully remove the protective film from the disk (8).

5. Check if the distance between the proximity switch (7) and the holder (3) is approx. 0.5 mm.

   This distance has been preset at the factory.

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(3) - Holder
(4) - Screw
(6) - Cable
(7) - Proximity switch
(8) - Disk
(10) - Cable clamp
(9) - (Adhesive) clip
(6) - Cable
6. PREMIUM: Apply the adhesive clip (9) to the head cover.

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**Information**

On CLASSIC machines, a cable clamp has been tightened to the head cover at the factory.

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7. Lay the cable (6) to the circuit board by inserting it through the (adhesive) clip (9) and the cable clamps (10) and guiding it up and towards the rear.

⚠️ You have successfully assembled the needle area cover interrogator.

You can now connect the needle area cover interrogator (p. 14).
2.3 Connecting the needle area cover interrogator

**WARNING**

Risk of injury from moving parts!
Crushing, cutting and punctures are possible.
Do not connect the needle area cover interrogator unless the machine is switched off and de-energized. Disconnect the machine from the power supply before connecting the interrogator.

**NOTICE**

Property damage may occur!
The cables may be crushed, kinked and cut.
Make sure not to guide the cables over sharp edges and moving parts and do not kink or crush the cables.

**Order**

1. Prepare assembly (p. 6).
2. Assemble the needle area cover interrogator (p. 10).
3. Connect the needle area cover interrogator.
4. Test functionality (p. 19).

**Information**

If not yet present on the machine, the adapter (part no. 0867 592224) must be assembled first.

The plug connection X6 (IN) of the circuit board MUST ALWAYS be connected to the machine distributor. The corresponding cable is included.

Depending on the type of machine distributor, the plug connection and setting must be established:

<table>
<thead>
<tr>
<th>Machine distributor</th>
<th>Plug</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9850 688001 (DA178)</td>
<td>X15</td>
<td>J1 must be open (OFF)</td>
</tr>
<tr>
<td>9850 867000 (DA174)</td>
<td>X26</td>
<td>J2 must be open (OFF)</td>
</tr>
<tr>
<td>9850 867020 (DA289)</td>
<td>X29</td>
<td>S2 must be open (OFF)</td>
</tr>
<tr>
<td>9850 838000 (DA199)</td>
<td>X23</td>
<td>S2 in position 1-OFF; 2-ON; 3-OFF</td>
</tr>
</tbody>
</table>
To connect the interrogator of the needle area cover:

Assembling the circuit board (CLASSIC)

Fig. 11: Connecting the needle area cover interrogator (1)

1. Loosen the screw (3).
2. Tighten the bracket (1) as shown using screw (3).
3. Tighten the circuit board (4) to the bracket (1) using screw (2).
Assembling the circuit board (PREMIUM)

Fig. 12: Connecting the needle area cover interrogator (2)

4. Position the socket (6) on the plastic housing (behind the cover on the side and next to the sewing motor).
5. Position the circuit board (4) over top.
6. Tighten the circuit board (4) through the plastic housing using the screw (7) and the socket (6).

- Circuit board
- Plug (of interrogator cable)
- Socket (not visible)
- Screw
Assembling the circuit board (shoe machines)

Fig. 13: Connecting the needle area cover interrogator (3)

7. Assemble the circuit board (4) at the top left on the back of the machine arm using the socket (6) and the screw (7).

Connecting the needle area cover interrogator

Fig. 14: Connecting the needle area cover interrogator (4)

(8) - Circuit board
(9) - Plug connection \textbf{X13}
(10) - Slot on the machine distributor

9. Connect the corresponding slot on the machine distributor (depending on the machine) to plug connection X6 (12).

10. When the circuit board (8) is connected to the machine, connect plug connection X13 (9) with plug connection X1 (14).

11. Set all DIP switches (13) whose slots X1-X5 are NOT occupied to position ON.

**Information**

The ON position of the DIP switches signifies that no interrogator is connected at the corresponding slot or that the function of the respective interrogator is switched off.

- The DIP switches (13) shown in the figure below MUST be set to the following position:
  - DIP switch 1: ON
  - DIP switch 2: OFF
  - DIP switch 3: OFF
  - DIP switch 4: ON
  - DIP switch 5: ON

The needle area cover interrogator has been successfully assembled and connected.

Proceed by testing the functionality of the needle area cover interrogator (p. 19).
2.4 Testing the functionality

Order

1. Prepare assembly (p. 6).
2. Assemble the needle area cover interrogator (p. 10).
3. Connect the needle area cover interrogator (p. 14).
4. Test functionality.

To test the functionality of the needle area cover interrogator:

1. PREMIUM: Place the cover on the side and the handwheel.
2. Place the valve cover.
3. Place the arm cover.
4. PREMIUM: Connect the control panel.
5. Connect the machine to the power supply.
6. Set the main switch on the control to position 1.
   ✑ The machine is switched on.
7. Press the pedal to position 1 with the needle area cover interrogator closed.
   ✑ The machine sews.

Fig. 16: Testing the functionality

8. Open the needle area cover interrogator (1).
   ✑ The machine is now locked and not sewing.
   The display of the corresponding control panel shows the following message:
   • CLASSIC machines: 3109 (operation lock)
   • PREMIUM machines: Service Stop 9922
   You have successfully set up the needle area cover interrogator (1).