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Hamilton Medical AG will make available on request component parts lists, descriptions, calibration instructions, or other information that will assist the user’s appropriately trained personnel to repair those parts of the equipment designated by Hamilton Medical AG to be repairable.

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Warnings, Cautions, Notes

⚠️ WARNING
A WARNING alerts the user to the possibility of injury, death or other serious adverse reactions associated with the use or misuse of the device. It also describes potential serious adverse reactions and safety hazards.

⚠️ CAUTION
A CAUTION alerts the user to the possibility of a problem with the device associated with its use or misuse, such as device malfunction, device failure, damage to the device, or damage to other property.

⚠️ NOTICE
A NOTE emphasizes information of particular importance.

For more information consult Chapter 2 of the HAMILTON-MR1 Operator’s Manual.
1 Inventory, Tools

HAMILTON-MR1
PN 161010

High pressure oxygen connector (incl. nut & nipple connector)
① PN 160470 DISS or
② PN 160471 NIST

Coaxial breathing set including flow sensor
PN 260145

Inspiratory Filter
PN 279963

Filter Set (Additional)
PN 161825

Screwdriver T10
PN 239615

Power Supply
PN 161840

Demonstration lung
PN 151815

Language Kit
PN 161020 English
PN 161021 Spanish
PN 161022 German
PN 161023 French
PN 161024 Italian
PN 161026 Russian
PN 161027 Chinese
PN 161028 Portuguese

Powercord
PN 355271 USA
PN 355272 GB
PN 355269 CH
PN 355270 EU

Feature Icons Positioning Guides
PN 161975
2 Packaging

1: Store the original packaging for later use. This will protect the equipment if you have to move it.
3 Install the DISS/NIST Connector

1: Remove the yellow cap.

2: Insert the NIST or DISS connector supplied.

3: Make sure both screws are tight.

⚠️ CAUTION
Take care when you install the NIST or DISS connector. The connector must be flush with the connector plate. See the Installation Guide, PN 612219.03 for detailed installation instructions.
4 Check the O2 Cell

1: Remove the seven screws which hold the air filter cover then remove the cover.

2: Check that there is an O2 cell inserted.

3: Disconnect the plug from the O2 cell and check that the O2 cell is tight.

4: If the cell feels loose or moves in the socket then turn it to the right (clockwise) until it is tight.

5: If no cell is inserted you must obtain one before completing the installation. Contact Hamilton Medical for assistance.

6: Re-connect the plug into the O2 cell.

**NOTICE**

Do not attach the air filter cover yet as you must first check the batteries.
5 Check the batteries

Read the Operator’s Manual, Section 2.7 About the batteries for more information on the batteries.

1: Check that both batteries are inserted fully and correctly.

2: Using the seven screws, attach the air filter cover removed in Step 4-1.
6 Connecting to AC Power

Read the Operator’s Manual, Section 2.6 Connecting to a primary power source before you begin.

**CAUTION**

The HAMILTON-MR1 requires protective earth grounding, because it is a class I device, as classified according to IEC 60601-1.

**NOTICE**

Install the ventilator in a location where the primary power can be easily disconnected.

1: Connect the right-angled connector of the power cable to the MR1 and secure it using the knurled ring on the power cable connector.

2: Use the Powercord to connect the HAMILTON-MR1 power supply to an outlet that supplies AC power between 100 and 240 V, at 50 or 60 Hz.

**NOTICE**

There is no need to disconnect the MR1 power cable at the power supply. The connector is factory assembled.
3: When you switch the power on, the AC power symbol in the bottom right corner of the screen is displayed with a frame around it.
7 Switch on the TeslaSpy

1: The TeslaSpy switch is located on the underside of the MR1 ventilator. Use a pen or any other thin object to gently push the switch and activate the TeslaSpy.

2: When the TeslaSpy is active the green LED on the front panel flashes.
8 Attach the Feature Icons

1: Attach one feature icons positioning guide to the front of your ventilator (as shown).

2: Attach the appropriate feature icons (as shown).

3: Remove and discard the positioning guide.
9 Document History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision 00</td>
<td>July 2012.</td>
<td></td>
</tr>
<tr>
<td>Revision 01</td>
<td>November 2014.</td>
<td></td>
</tr>
<tr>
<td>Revision 02</td>
<td>February 2016.</td>
<td>Feature icons added, illustrations updated.</td>
</tr>
</tbody>
</table>
### 10 Testing & Acceptance

**HAMILTON-MR1 Initial Install Report**

Date in YYYY-MM-DD: 
Name of person who performed installation: 
Serial number of HAMILTON-MR1: 
Location of installation: 

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Verify...</th>
<th>Notes</th>
<th>Performed and verified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verify that the DISS or NIST connector is mounted correctly.</td>
<td>Connector is mounted correctly.</td>
<td>For details see Section 3.1 in this Installation Guide.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Make sure an O2 cell is inserted.</td>
<td>O2 cell is inserted and tight.</td>
<td>For details see Section 4.8 in the HAMILTON-MR1 Service Manual.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Connect the ventilator to an AC power supply and an oxygen supply.</td>
<td>Breathing circuit is correctly assembled.</td>
<td>For details see Section 2.2 in the HAMILTON-MR1 Operator’s Manual.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Assemble the patient breathing circuit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switch on the power.</td>
<td>When the ventilator is switched on the buzzer sounds and the red alarm lamp flashes. After the self test is passed the alarm lamp flashes again.</td>
<td>The buzzer sounds only briefly, at the beginning.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Use the configuration setting to choose the language.</td>
<td>Appropriate language is set OK.</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Set the date and time correctly.</td>
<td>Time and date are set OK.</td>
<td>For details see Section 4.3.5 in the HAMILTON-MR1 Operator’s Manual.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Perform the electrical safety tests.</td>
<td>Document the measured values.</td>
<td>For details see Section 8 in the HAMILTON-MR1 Service Manual.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Perform the Preop checks.</td>
<td></td>
<td>For details see Section 9.17 in the HAMILTON-MR1 Service Manual and Section 4.2 in the Operator’s Manual.</td>
<td>![ ]</td>
</tr>
<tr>
<td>Perform the Tightness test and the Flow Sensor calibration.</td>
<td>These tests pass.</td>
<td>For details see Section 4.3 in the HAMILTON-MR1 Operator’s Manual.</td>
<td>![ ]</td>
</tr>
</tbody>
</table>
### Procedure

<table>
<thead>
<tr>
<th>Perform or observe...</th>
<th>Verify...</th>
<th>Notes</th>
<th>Performed and verified</th>
</tr>
</thead>
<tbody>
<tr>
<td>If necessary perform the O2 cell calibration. Close the window.</td>
<td>This test passes.</td>
<td>For details see Section 4.3.2.3 in the HAMILTON-MR1 Operator's Manual.</td>
<td>☐</td>
</tr>
<tr>
<td>Check that the TeslaSpy is switched on.</td>
<td>Green LED is blinking.</td>
<td>For details see Section 7 in this Installation Guide.</td>
<td>☐</td>
</tr>
<tr>
<td>Generate an alarm situation (e.g. disconnect the mains power).</td>
<td>Corresponding alarm message in message bar (e.g. loss of external power).</td>
<td>During standby, patient alarms are suppressed. For details see Section 4.5 in the HAMILTON-MR1 Operator's Manual.</td>
<td>☐</td>
</tr>
<tr>
<td>Resolve the alarm situation (e.g. re-connect the mains power).</td>
<td>Alarm is reset.</td>
<td></td>
<td>☐</td>
</tr>
<tr>
<td>Check that the feature icons are attached to the front of your ventilator.</td>
<td>Feature icons attached.</td>
<td></td>
<td>☐</td>
</tr>
</tbody>
</table>