Permobil C3
Docking system for Power wheelchair in vehicle
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Permolock C3
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Important information about the user manual

Congratulations on choosing Permolock C3. Our aim is for you to feel satisfied with your choice of supplier and product.

Before you start using your Permolock C3, it is important to read and understand this user manual and in particular the section on safety.

The user manual is primarily designed to inform you about the Permolock C3, its functions and capabilities, and to advise you on the best way of using it. It also contains important safety information and describes some of the problems which might arise in use.

Always keep the user manual in your vehicle, as you may need to consult its important information on use, safety and maintenance.

You can also find information on our products on our website. You will find us at www.permobil.com.

All the information and the pictures, illustrations and specifications are based upon the product information that was available at the point in time this user manual was printed.

Pictures and illustrations that appear in the user manual are typical examples and are not intended to be exact depictions of different parts of the product.

We reserve the right to make changes to the product without prior notification.
TECHNICAL SUPPORT

In the event of technical problems, you should contact your dealer or Permobil Inc USA at 1-800-736-0925.

Always state the chassis serial number when contacting Permobil to ensure that the correct information is provided.

SPARE PARTS & ACCESSORIES

Spare parts and accessories must be ordered through your dealer.

WARRANTY & SERVICE

Permolock C3 is supplied with a 12-month warranty.

Service can be carried out in our own workshops or at authorized workshops.

You should only carry out servicing and maintenance designated by the user manual as suitable for being carried out by the user. All other servicing and maintenance must be carried out by persons with sufficient knowledge to give a competent result.

Contact Permobil Inc for further information.

PRODUCT APPROVAL

This product fulfills the requirements of ISO 10542-1 and ISO 10542-3
Safety instructions - General

Permolock C3 is a docking system for fixing Permobil electric wheelchairs in place and is designed for use in vehicles.

It is important to read and follow the instructions and safety guidelines given in this user manual before starting to use your Permolock C3, as mistakes in use could lead to risk of injury to the user or passengers, or damage to the wheelchair, the Permolock C3 or the vehicle.

Any unauthorized alterations to Permolock C3 could lead to increased risk of accident. Follow closely the recommendations in the section on Operation, in order to avoid risk of accident during use.

Warning labels

You will see the following “warning labels” in the user manual. They are intended to draw attention to situations which could lead to problems, near-accidents, personal injury or damage to the wheelchair, etc.

⚠️ NB
Take care here.

⚠️ WARNING
Take extra care here.
Risk of personal injury or damage to the wheelchair and its surroundings.

⚠️ NB
Permobil AB accepts no liability for personal injury or damage to property which may arise from the failure of the user or other persons to follow the recommendations, warnings and instructions given in this user manual.
Safety instructions

⚠️ WARNING

To be checked before first use
Before using your wheelchair with Permolock C3, you must check that the chair has been suitably adjusted. Contact your supplier for information.

To be checked before setting off
Check that the light on the control button in the vehicle is green after locking has been activated.

Fitting
Permolock C3 should be fitted by a competent service engineer or a person with adequate knowledge to perform the adjustment in an expert manner.

Maintenance and service
Carry out only the service and maintenance activities indicated in this user manual. All other servicing, alterations and changes to the vital systems of Permolock C3 and its accessories must be carried out by a competent service engineer or a person with adequate knowledge to perform the adjustment in an expert manner. In case of doubt, always contact a competent service engineer or Permobil.

Use only spare parts or accessories approved or recommended by Permobil. All other use could lead to changes which might impair the function and safety of the docking system. It could also lead to the warranty for your Permolock C3 becoming invalid.

⚠️ WARNING

Recycling of electronic items
Obsolete electronics should be disposed of responsibly in accordance with local recycling regulations.

EMC requirements
The electronics in the vehicle locking system may be affected by external electromagnetic fields. Likewise the electronics in the locking system themselves may emit electromagnetic fields which could affect the surrounding area.

The threshold values for Electro-Magnetic Compatibility (EMC) relating to electric wheelchairs and their accessories are laid down in harmonized standards under EC Directive 93/42/EEC Medical Devices.

Permolock C3 meets these threshold values.
Design & function

Permolock C3 is designed for use together with Permobil’s electric wheelchairs approved for this purpose. Permolock C3 consists of two interacting units: Two pins are fitted to the underside of the wheelchair chassis, along with a locking plate fitted to the vehicle. During use, the locking plate’s locking mechanisms mechanically hook around the pins on the wheelchair, locking it securely in place.

If the chassis in its original form does not have the spring pins, they must be fitted. When fitting to a C350 chassis, the chassis must be supplemented with two reinforcement plates so that the chair can be used together with the docking device. (See the section Fitting.)

Permolock C3 is designed so that the user can either run or reverse the wheelchair into the docking device on the driver or passenger side. Permolock C3 can also be used as a transport docking system and is then positioned sideways behind the driver’s seat. The user parks the wheelchair behind the driver’s seat, locks the chair in position using Permolock C3, turns the driver’s seat 90 degrees and then moves across to the driver’s seat.
Operation

General
Permolock C3 is designed to ensure that, in the event of a collision or other sudden movements of the vehicle, the wheelchair does not break free and cause personal injury or material damage.

Permolock C3 must only be used together with Permobil electric wheelchairs approved for this purpose and with the chair base available as an accessory.

It may be necessary to have your wheelchair adjusted to work with Permolock C3. A test docking must always be performed in the presence of the person fitting the docking system.
Operation

General
Permolock C3 consists of two interacting units: Two spring pins are fitted to the underside of the wheelchair chassis, along with a locking plate fitted to the vehicle.

A control button is fitted in the vehicle. This button is available in two designs, standard and advanced. The location of the control button can vary, depending on the vehicle and the user’s needs. The picture shows an example of the usual location of a standard button.

The control button gives various sound and light signals depending on the status of the docking system. (See pages 17-19).

The docking system can be controlled in three ways:
- via the control button located inside the vehicle (1).
- via a manual release lever fitted inside the vehicle next to the seat (2).
- via a manual emergency control on the front of the lock (3).
Operation

Docking the wheelchair
The wheelchair is locked in place by moving the chair in towards the locking mechanisms, which then hook securely to the two pins.

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always fasten the feet securely to the foot plates before starting your journey. This reduces the risk of personal injury in the event of a collision.</td>
</tr>
<tr>
<td>Be careful of the feet when moving the wheelchair into the docking system. Risk of personal injury.</td>
</tr>
<tr>
<td>Check that the light on the control button is green after docking has been activated.</td>
</tr>
</tbody>
</table>

If the ignition is turned on before the wheelchair is locked in position using Permolock C3, the lock plate’s control button will shine orange and a five-second sound signal will be emitted. This is a safety function to remind the user that the wheelchair must always be locked in position before the vehicle is started.

1. Run the wheelchair straight over the docking system so that the two pins on the wheelchair engage in the locking mechanism and mechanical stop. If this takes longer than 15 seconds, the control button will indicate that there is a problem. The system will then need to be reset, see pages 18-19.

2. Turn on the vehicle’s ignition. The control button shines green, which indicates that the wheelchair is correctly secured in position.

Run the wheelchair in over Permolock C3.
Operation

Releasing the wheelchair
The wheelchair is released electronically and activated using the control button.

1. In order to open the locking mechanism of the docking system, press the control button until it changes to red. This indicates that the locking mechanism has been opened and that the wheelchair can be moved out of the docking system.

   If the vehicle’s ignition is still switched on, a warning signal will also be emitted.

2. When the wheelchair is moved out of the docking system, the control button’s light will continue to shine red.

   After 15 seconds, the docking system will return to its original position and is then ready for relocking. If the vehicle’s ignition is still switched on, the light on the control button will change to orange.
Operation

Manual release of wheelchair
If the vehicle battery is flat, it will still be possible to release the wheelchair manually. This is done using the release lever available as an accessory to the docking system. The location of the manual release control in the vehicle varies, depending on the type of vehicle and the user’s requirements.

1. To open the locking mechanism manually, move the lever to its open position (see picture).

   The locking mechanism is opened so that the wheelchair can be moved out of the docking system.

   **NB**
   In the event of manual release on a steep upwards gradient, the wheelchair may simultaneously be carefully “driven” into the docking system to facilitate release.

2. When the wheelchair is moved out of the docking system, the locking mechanism is reset to the locked position by moving the release control to the locked position.

   The docking system is then ready to be used again.

   **NB**
   Always reset the locking mechanism to the locked position after moving the wheelchair out of the docking system.
Operation

Emergency release of the wheelchair
In an emergency, the locking mechanism can be opened manually using the emergency handle on the front edge of the locking plate.

1. Pull the control for emergency unlocking directly forward forcefully (see picture) until the locking mechanism opens and the wheelchair is released.

2. Hold the control in the extended position while the wheelchair is moved out of the docking system.

NB

The user will need assistance in operating the manual emergency locking control.
Operation

Overview, control button
The following pages explain the different indications the control button may display when using Permolock C3. There are also suggestions for possible causes and action. (see the section Troubleshooting as well.)

Before docking

<table>
<thead>
<tr>
<th>INDICATION</th>
<th>POSSIBLE CAUSE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>No indication</td>
<td>The ignition is not switched on.</td>
<td>No action. If required, the wheelchair is released as normal by pressing the control button.</td>
</tr>
<tr>
<td>The light is orange</td>
<td>The ignition is on, but there is no wheelchair in the docking system. The docking system is ready for use. This indication is a safety function to remind the user that the wheelchair must always be locked in position before the vehicle is started.</td>
<td>No action. The docking system is ready for use.</td>
</tr>
<tr>
<td>The light is shining orange and a five-second long sound signal is heard.</td>
<td>The ignition is being switched on, but there is no wheelchair in the docking system. The docking system is ready for use. This indication is a safety function to remind the user that the wheelchair must always be locked in position before the vehicle is started.</td>
<td>No action. The docking system is ready for use.</td>
</tr>
</tbody>
</table>
Operation

When docking

<table>
<thead>
<tr>
<th>INDICATION</th>
<th>POSSIBLE CAUSE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The light is shining green</td>
<td>The ignition is on. The wheelchair is correctly secured. Once the ignition has been turned off, the light will shine green for a further 15 seconds.</td>
<td>No action.</td>
</tr>
<tr>
<td>The light flashes red and a five-second long audio signal is heard</td>
<td>The ignition is on. The wheelchair is not docked correctly.</td>
<td>Reset the system by pressing the control button for ten seconds. Move the wheelchair out of the docking system and try again.</td>
</tr>
</tbody>
</table>
## Operation

### When docking

<table>
<thead>
<tr>
<th>INDICATION</th>
<th>POSSIBLE CAUSE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The light is shining red</td>
<td>The ignition is not on. The locking mechanism is closing.</td>
<td>If the light does not change to green, reset the system by pressing the control button for ten seconds. Move the wheelchair out of the docking system and try again.</td>
</tr>
<tr>
<td>The manual release lever is not in the locked position.</td>
<td></td>
<td>Make sure the release lever is in the locked position and that the wheelchair is fully in or out of the docking system.</td>
</tr>
<tr>
<td>The light is shining red and a five-second long audio signal is heard.</td>
<td>The lock has opened while the ignition is on. This indication is a safety function to remind the user that the wheelchair must always be locked during transport.</td>
<td>Reset the system by pressing the control button for ten seconds. Move the wheelchair out of the docking system and try again.</td>
</tr>
</tbody>
</table>

Make sure the release lever is in the locked position and that the wheelchair is fully in or out of the docking system.
Accessories

Chair base
Permits use of original car seat in Permolock C3.
Art. no: 1824275

Adjustable Chair base
Permits use of original car seat in Permolock C3.
Art. no: 1821551

Manual release handle
Makes it possible to release the wheelchair manually if, for instance, the vehicle’s electrical system does not function as it should.
Art. no: 102841-99-0

Quick release for Manual handle
Used for rapid and simple fitting/removal of the release lever.
Art. no: 102859-99-0
Accessories

**Control button, advanced design.**
Art. no: 1824735

**Reinforcement plates**
Art. no: 104637-99-0

**Extension cable**
Used, when required, to extend the cabling for Permolock C3.
Art. no: 1823604

**Spring pins**
Art. no: 104626-99-0

**Floor spacers**
When fitting Permolock C3 to a slanted surface, it may be necessary to use spacers on the vehicle floor in order to make it easier to move the wheelchair in and out.
Art. no: 104707-99-0
Maintenance

Cleaning
The following is general advice recommended by Permobil. For severe soiling or damage to surface finish, contact Permobil for information.
For normal cleaning proceed carefully with a soft cloth/sponge, hot water and a mild detergent.

⚠️ WARNING
Never hose the docking mechanism down as the electronics may be damaged.

Technical specifications

<table>
<thead>
<tr>
<th>DATA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Permobil C3</td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Dimensions and weight</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>12”</td>
</tr>
<tr>
<td>Width</td>
<td>11”</td>
</tr>
<tr>
<td>Height</td>
<td>3”-4”</td>
</tr>
<tr>
<td>Weight</td>
<td>22 Pounds.</td>
</tr>
<tr>
<td>Electrical system</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>12V</td>
</tr>
</tbody>
</table>
Permolock C3

Docking system for electric wheelchair in vehicle
Fitting

Identification of prepared chassis

In order to be able to fit reinforcement plates and pins in the wheelchair’s chassis, the chassis must be prepared for this. A prepared chassis has two holes for the pins on the underside, see picture.

Fitting reinforcement plates in the wheelchair’s chassis (C350)

Read through the user manual before commencing fitting.

1. Remove the wheelchair’s chassis cover. For a detailed description, see the chassis service manual.

2. Remove the two battery holders (1). Cut away the bottom sections by the narrowest part (2) if the battery holders are of this type.

3. Position the reinforcement plates (1 and 2) in the grooves on both sides of the battery and push them firmly against the shaft (see picture).

4. Secure the reinforcement plates using the accompanying screws and washers.

5. Refit the battery holders (3 and 4), see picture.

NB

It is not necessary to remove the battery when fitting reinforcement plates, but it may make the work easier.
Fitting

Fitting of pins in the wheelchair chassis

Read through the instructions before starting fitting.

1. Remove the wheelchair’s chassis cover. For a detailed description, see the service manual for the chassis in question.

2. Lift/angle the wheelchair so that the underside of the chassis can be accessed.

⚠️ WARNING

The wheelchair is heavy, so ensure it remains stable after the chassis has been lifted/angled.

3. Lift out the cabling and electronics that are in the way.

4. Push in the pin (1) and spring (2) from the underside of the chassis (see picture).

5. Press the pin in and check that it springs back.

6. Press in the pin against the chassis underside and screw the lock nut securely (3) onto the pin’s thread. There is a recess in the pin for an allen key. Check that the pin can be pressed in and that it returns to its outer position.

7. Press the cable protection (4) securely into the holes, if these are not factory fitted.

8. Put the wheelchair down on all four wheels again.

9. Refit the wheelchair’s chassis cover.
Fitting

Fitting a docking system to the vehicle - General

NOTE

To ensure that the wheelchair pins end in the correct position for locking, it is important that the locking plate is mounted correctly in relation to the wheelchair chassis. The height of the locking plate can therefore be adjusted to six different height positions. The docking system is sprung to make moving in and locking on a sloping surface easier (see example below). The docking system should not be fitted on a sloping surface if the wheelchair is to be backed in.

In some cases, it may be necessary to fit spacers to the vehicle floor in order to be able to lock the wheelchair securely, see 29.

The docking system must be anchored in a manner that is safe for the type of vehicle involved and which conforms to the relevant country’s regulations.

The docking system must be anchored in such a way that other components are not damaged and the strength of the vehicle floor is not impaired.

NOTE

Check after installation that the docking system is not warped and that the docking system functions correctly.

The docking system must be tested with the user sitting in the wheelchair.

Check that the wheelchair shock absorbers are set for the right user weight – see the chassis service manual. Permobil recommends that solid tires are used for the wheelchair.
Fitting

Fitting Permolock C3

Read through the instructions before starting fitting.

1. Position the docking system in the right position in the vehicle.

2. Fit the docking system in the car using a screw, minimum quality M10 8.8, through the vehicle floor. The screw must go right through and have the required reinforcement washer and nut on the underside.

3. Connect the locking plate’s cabling to the vehicle’s electrical system. Connect the red cable to the fused +12V (10A).

   Red cable  -  12V (10A)
   Black cable -  Earth
   Orange cable  -  Ignition

Height adjustment of locking plate

The height of the locking plate can be adjusted to six different positions by fixing the central element to different holes in the bottom section of the docking system. The lowest part has two holes on one side (high – low) and three holes on the other side (1, 2 and 3).

If Permolock C3 is fitted to a level surface, it can be fixed in a level position with screws that go through the lock’s middle and top sections. The hole to be used for locking varies for the different positions - see pages 28-29.

![Holes in the lowest part of the docking system.](attachment:diagram.png)
Fitting

Height adjustment of locking plate (cont.)

Position 1
(low – 1): Height 72 mm. If the wheelchair needs to be backed in, this position must be locked securely in a level position.

Position 2
(low – 2): Height 76.5 mm. If the wheelchair needs to be backed in, this position must be locked securely in a level position.

Position 3
(low – 3): Height 81.5 mm. Standard fitting for Permobil C300 on a level surface. If the wheelchair needs to be backed in, this position must be locked securely in a level position.

Position 4
(high – 1): Height 87 mm. Standard fitting for Permobil C350 on a level surface. If the wheelchair needs to be backed in, this position must be locked securely in a level position.

Position 5
(high – 2): Height 92 mm. Only used for fitting on a sloping surface. This position cannot be locked securely and may not be used if the wheelchair is to be backed into the docking system.
Fitting

Position 6  
(high – 3): Height 97 mm. Only used for fitting on a sloping surface. This position cannot be locked securely and may not be used if the wheelchair is to be backed into the docking system.

Setting adjustment screws
If the docking system is fitted to a sloping surface, the adjustment screws in the front of the docking system must be screwed to the highest possible position when the chair is in the docking position. This is so the top section of the docking system cannot spring forward.

1. Move the wheelchair into the docking system.
2. Note the position of the docking system’s top section and move the wheelchair out of the docking system.
3. Unscrew the screws so they are level with the top section of the docking system (see picture) when the wheelchair is moved into the docking system again.
4. Move the wheelchair into the docking system and check that the screws are at the right level.

Fitting floor spacers
When fitting the lock on a sloping surface, it may be necessary to use spacers under the wheelchair’s wheels in order to make it easier to move the wheelchair in and out.

1. Secure the spacers to the vehicle floor using a screw of a suitable length depending on the thickness of the floor.
Fitting

Fitting of manual release lever in vehicle

Read through the instructions before starting fitting.

The manual release lever must be installed so that the user can easily operate it when necessary. The lever is intended for use where the vehicle’s electrical system is not functioning optimally.

Remove the plastic cover from the lever by manually unclipping the sides of the cover at the bottom edge, see picture.

Preliminary adjustment

The release mechanism can be turned to suit installation on either the right or left side.

WARNING

The handle must always be fitted so that the stop screw (2) is located in front of the release lever (1), see page 31. This prevents the release lever opening by itself in the event of a collision.

1. Move the stop screw between positions 2 and 7, see picture.

2. Remove the cable bracket (5) from the release arm (10) (see picture).

3. Turn the release arm (10) and move it between attachment points 4 and 9.

4. Refit the cable bracket (5) to the release arm (10) (see picture).

Fitting

1. Install the release lever using three M4 screws with countersunk heads through holes 3, 6 and 8 (see picture).

2. Refit the plastic cover.
Fitting
Correct fitting

\[ \text{Max } 45^\circ \quad \text{Max } 90^\circ \]

O = Position of the stop screw

Prohibited fitting

Fitting the release lever
Permolock C3
Docking system for electric wheelchair in vehicle
Spare parts
### Spare parts

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>ART. NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>1</td>
<td>314036-99-0</td>
<td>MAN. CONTROL</td>
</tr>
<tr>
<td>02</td>
<td>1</td>
<td></td>
<td>HOLDER</td>
</tr>
<tr>
<td>03</td>
<td>1</td>
<td></td>
<td>HANDLE</td>
</tr>
<tr>
<td>04</td>
<td>1</td>
<td>612837-02-0</td>
<td>PLASTIC KNOB 4x13</td>
</tr>
<tr>
<td>05</td>
<td>1</td>
<td></td>
<td>SCREW ISO 7380 M6x25 10.9 Fe/Zn 5 C1</td>
</tr>
<tr>
<td>06</td>
<td>1</td>
<td></td>
<td>BUSHING</td>
</tr>
<tr>
<td>07</td>
<td>1</td>
<td></td>
<td>WASHER ISO 7089 6 200 HV Fe/Zn 5 C1</td>
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<tr>
<td>08</td>
<td>1</td>
<td></td>
<td>LOCKING NUT ISO 7040 M6 Fe/Zn 5 C1</td>
</tr>
<tr>
<td>09</td>
<td>1</td>
<td></td>
<td>WASHER ISO 7089 4 200 HV Fe/Zn 5 C1</td>
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<td>10</td>
<td>1</td>
<td></td>
<td>SCREW ISO 4762 M4x5 8.8 Fe/Zn 5 C1</td>
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<tr>
<td>11</td>
<td>1</td>
<td></td>
<td>HOOK</td>
</tr>
<tr>
<td>12</td>
<td>3</td>
<td></td>
<td>COTTER</td>
</tr>
<tr>
<td>13</td>
<td>6</td>
<td></td>
<td>WASHER 5 Fe/Zn 5 C1 (SRB 5.3x12x1)</td>
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<tr>
<td>14</td>
<td>3</td>
<td>603083-99-0</td>
<td>LOCK LOOP</td>
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<tr>
<td>15</td>
<td>1</td>
<td>313997-00-0</td>
<td>COVER</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>314526-99-0</td>
<td>WIRE</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>612885-99-0</td>
<td>SPRING DF 0.5x8x60</td>
</tr>
</tbody>
</table>
# Spare parts

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY.</th>
<th>ART. NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>1</td>
<td></td>
<td>PERMOLOCK C3</td>
</tr>
<tr>
<td>02</td>
<td>1</td>
<td>1824224</td>
<td>COVER INCL. STICKER</td>
</tr>
<tr>
<td>03</td>
<td>2</td>
<td></td>
<td>SPACER</td>
</tr>
<tr>
<td>04</td>
<td>2</td>
<td>600830-99-0</td>
<td>SCREW M10x30 GALV.</td>
</tr>
<tr>
<td>05</td>
<td>2</td>
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<td>PLATE BOTTOM</td>
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<tr>
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<td></td>
<td>PLATE LEFT</td>
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Spare parts
## Spare parts

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<td>HOOK, RIGHT</td>
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<td>SLIDE BEARING</td>
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<td></td>
<td>SHIM WASHER</td>
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<td>SCREW MC6S 8x30 GALV.</td>
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</tbody>
</table>
The following troubleshooting guide describes a number of errors and events which could occur when using your Permolock C3, together with suggested remedies. Please note that this guide does not describe all the problems and incidents that may arise. You should always contact your service contact or Permobil in the event of uncertainty.

<table>
<thead>
<tr>
<th>EVENT</th>
<th>POSSIBLE CAUSE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The light on the locking plate control button flashes red.</td>
<td>Electronics fault</td>
<td>Reset system by pressing the control button for 10 seconds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact service</td>
</tr>
<tr>
<td>The light on the locking plate control button shines red during manual release.</td>
<td>The locking mechanism is not in the locked position.</td>
<td>Make sure the locking mechanism is in locked position and that the wheelchair is fully in or out of the docking system.</td>
</tr>
<tr>
<td></td>
<td>Electronics fault</td>
<td>Reset system by pressing the control button for 10 seconds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact service</td>
</tr>
<tr>
<td>The docking system does not unlock when its control button is pressed.</td>
<td>The tension spring is broken.</td>
<td>Contact service</td>
</tr>
<tr>
<td>(The docking system can always be unlocked using the manual release handle).</td>
<td>The locking mechanism's locking arm is loose.</td>
<td>Contact service</td>
</tr>
<tr>
<td>The wheelchair is not locked in position in Permolock C3.</td>
<td>The manual release lever is in open position.</td>
<td>Move the manual release lever to the closed position.</td>
</tr>
<tr>
<td></td>
<td>The locking mechanism’s adjustment device is broken.</td>
<td>Contact service</td>
</tr>
<tr>
<td></td>
<td>The spring pins have got stuck in the chassis.</td>
<td>Contact service</td>
</tr>
<tr>
<td>The wheelchair does not fit into Permolock C3 when driven in over the docking system.</td>
<td>The height has been incorrectly adjusted on Permolock C3.</td>
<td>Adjust the height of Permolock C3, see pages 27-29.</td>
</tr>
</tbody>
</table>
Volvo Cars Safety Centre test report

Research, Development & Purchasing
Volvo Cars Safety Centre
Dept 91445 PV22
SE-405 31 Göteborg
Sweden
Phone: +46 31 59 00 00
Fax: +46 31 59 09 22

A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a tiedown docking system, Permolock C3, used together with a Permobil C300 wheelchair according to SAE J2249 JANG99. One uninstrumented Hill 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to SAE J2249 JANG99.

Customer test number: 08-1376
VCSC test number: 08009704

Day of test
2008-02-20

Test Engineer
Emma Nielsen +46 (0) 31 3256383

Customer
Torbjörn Renlund
Permobil AB
Box 120
S- 861 23 Timrå
Sweden
Volvo Cars Safety Centre test report

Research, Development & Purchasing
Volvo Cars Safety Centre
Dept 91445 PV22
SE-405 31 Göteborg
Sweden
Phone  +46 31 59 00 00
Telefax  +46 31 59 59 22

A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a docking tiedown system, Permolock C3, used together with a Permobil C300 wheelchair according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E). One uninstrumented Hill 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E).

Customer test number: 08-1376
VCSC test number: 0809704

Day of test
2008-02-20

Test Engineer
Emma Nielsen +46 (0) 31 3256383

Customer
Torbjörn Renlund
Permobil AB
Box 120
S - 861 23 Timrå
Sweden
Volvo Cars Safety Centre test report

Research, Development & Purchasing
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Dept 91445 PV22
SE-405 31 Göteborg
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Telefax: +46 31 59 59 22

Summary
A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a docking tiedown system, Permolock C3, used together with a Permobil C350 Corpus R-net wheelchair according to SAE J2249 JAN99. One uninstrumented Hill 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to SAE J2249 JAN99.

Customer test number: 08-1417
VCSC test number: 08015003

Day of test
2008-07-01

Customer
Marita Brundin
Permobil AB
Box 120
S - 861 23 Timrå
Sweden

Test Engineer
Emma Nielsen +46 (0) 31 3256383

This report was issued
2008-09-11

Test performed by:

Emma Nielsen

Test approved by:

Martin Segerström

Volvo Cars Safety Centre
Volvo Cars Safety Centre test report

Research, Development & Purchasing
Volvo Cars Safety Centre
Dpt 91445 PV22
SE-405 31 Göteborg
Sweden
Phone: +46 31 59 00 00
Telefax: +46 31 59 59 22

Summary
A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a docking tiedown system, Permolock C3, used together with a Permobil C350 Corpus R-net wheelchair according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E). The wheelchair was reversed into the docking device. One uninstrumented HIII 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E).

Customer test number: 08-1417
VCSC test number: 08015003

Day of test: 2008-07-01
Test Engineer: Emma Nielsen +46 (0) 31 3256383

Customer
Marita Brundin
Permobil AB
Box 120
S - 861 23 Timrå
Sweden

This report was issued
2008-08-27

Test performed by:

Test approved by:

Emma Nielsen

Martin Segerström

Volvo Cars Safety Centre
Volvo Cars Safety Centre test report

Research, Development & Purchasing
Volvo Cars Safety Centre
Dept 91445 PV22
SE-405 31 Göteborg
Sweden
Phone +46 31 59 00 00
Telefax +46 31 59 59 22

Summary
A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a docking tiedown system, Permolock C3, used together with a Permobil C350 Corpus R-net wheelchair according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E). The wheelchair was driven forward in to the docking device. One uninstrumented HIII 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to ISO 10542-1:2001(E) and ISO 10542-3:2005(E).

Customer test number: 08-1418
VCSC test number: 08015904

Day of test: 2008-07-01
Test Engineer: Emma Nielsen +46 (0) 31 3256383

Customer
Marita Brundin
Permobil AB
Box 120
S - 861 23 Timräl
Sweden

This report was issued
2008-08-27

Test performed by
Emma Nielsen

Test approved by
Martin Segerström

Volvo Cars Safety Centre
Volvo Cars Safety Centre test report

Research, Development & Purchasing
Volvo Cars Safety Centre
Dept 91443 PV22
SE-405 31 Göteborg
Sweden
Phone: +46 31 59 00 00
Fax: +46 31 59 59 22

Summary
A sled test simulating a 48 km/h full frontal impact was performed on a sled platform. The purpose of the test was to investigate the performance of a docking tiedown system, Permolock C3, used together with a Permobil C350 Corpus R-net wheelchair according to SAE J2249 JAN99. One uninstrumented HIll 50% dummy was positioned in the wheelchair.

The equipment fulfilled all applicable design and performance requirements according to SAE J2249 JAN99.

Customer test number: 08-1418
VCSC test number: 08015004

Day of test
2008-07-01

Customer
Marita Bruadin
Permobil AB
Box 120
S - 861 23 Timrå
Sweden

Test Engineer
Emma Nielsen +46 (0) 31 3256383

This report was issued
2008-09-11

Test performed by:

Emma Nielsen

Test approved by:

Martin Segerström

Volvo Cars Safety Centre
Permolock C3

Art. no.: 205237-US-0