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Quickie
Q400M-Q500M

Service Instructions

If you have any queries about the use, maintenance or safety of your seating system, please contact your local approved Sunrise Medical service agent. If you do not know of an approved dealer in your area or have any other questions please write or telephone your local Sunrise Medical office (Contact information can be found on the back page of this document or on the website).

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1.0 Introduction

1.1 This user manual

This manual contains the instructions for repairs and general maintenance of the Q400M and Q500M Base.

Mechanics who do repairs on this wheelchair base must be well trained and familiar with the repair methods and the maintenance of the seating wheelchair base.

Always make sure that the work is carried out safely, particularly with respect to procedures requiring the wheelchair to be lifted up. We advise that you contact our service department before doing repair work on a wheelchair base that has been involved in an accident.

The following specifications are important when ordering parts:

- Model
- Year of manufacture
- Identification number
- Part number
- Name of the part concerned

This information is provided on the identification plate. See 'Identification of the product'.

If you have any queries about the use, maintenance or safety of your wheelchair base, please contact your local approved Sunrise Medical service agent. If you do not know of an approved dealer in your area or have any other questions please write or telephone:

Available documentation

The following technical documentation is available / required to service this wheelchair base:

- User manual
- Service manual

Service and technical support

For information concerning specific settings, maintenance or repair works please contact your supplier. They are always prepared to help you.

Ensure you have at hand:

- Model
- Year of manufacture
- Identification number

This information is provided on the identification plate. See 'Identification of the product'.

1.2 Identification of the product

The identification plate contains the following data:

SN Barcode
Example: 2081701001

Model Type
Q100R or Q200R

Date of Manufacture
2017-10-02

Serial Number Example
S/N: 208170101001

Chassis Number - Match Chassis I.D. Plate
For Q100R - 1R00001, 1R00002, etc
For Q200R - 2R00001, 2R00002, etc

4 x R2

Max User Weight
Q100R = 125KG
Q200R = 136KG

Max Total Weight
Q100R = 220KG
Q200R = 240KG

Max Speed
Q100R = 6KM/H
Q200R - 22600200 = 10KM/H
Q200R - 22600250 = 6KM/H

Max Slope
Q100R = 8°
Q200R = 10°

Max Axle Load
Q100R = 160/105KG
Q200R = 170/115KG

Serial Number Example

208	17	01	01	001
S.M Spain Code	Year	Month	Day	Product on Day

1.3 Symbols used in this manual



Warning symbol

Follow the instructions next to this symbol closely. Not paying careful attention to these instructions could result in physical injury or damage to the wheelchair base or the environment.



Reference symbol

The symbol refers to a separate user manual. This reference will indicate the specific user manual and the section to which is being referred.

2.1 Personnel qualification

Service technicians:

- Repairs may only be carried out by trained and authorised service technicians.
- During the execution of their work, they are at all times fully responsible for the fulfilment of locally applicable safety guidelines and standards.
- Temporary employees and persons in training may only carry out repair and replacement work under the supervision of an authorised service technician.

2.2 Cautions and warning statements



Safety

Safety information is indicated with the warning symbol.

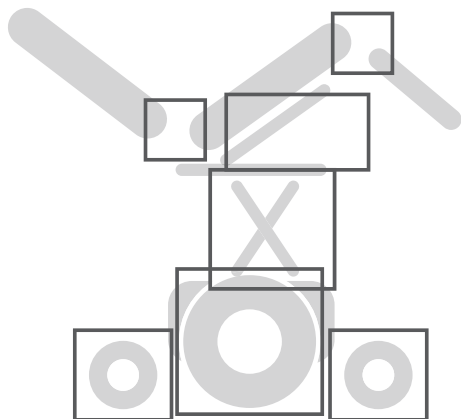
Follow the instructions carefully next to these warning symbols! Not paying careful attention to these instructions could result in physical injury or damage to the wheelchair base or the environment. Where ever possible, safety information is provided in the relevant chapter.



Temperature

- Avoid physical contact with the wheelchair base's motors at all times. Motors are continuously in motion during use and can reach high temperatures. After use, the motors will cool down slowly. Physical contact could cause burns.

If you do not use the wheelchair, ensure that it is not exposed to direct sunlight for lengthy periods of time. Certain parts of the wheelchair, such as the seat, the back and the armrests can become hot if they have been exposed to full sunlight for too long. This may cause burns or allergic reactions to the skin.



Moving parts

- The wheelchair has moving and rotating parts. Contact with moving parts may result in serious physical injury or damage to the seating system. Contact with the moving parts of the seating system should be avoided.
- Electrical backrest adjustment
- Electrical elevating legrests

Decals and instructions on the wheelchair

The signs, symbols and instructions affixed to the wheelchair base comprise part of the safety facilities. They must never be covered or removed. They must remain present and clearly legible throughout the entire lifespan of the wheelchair base.

Replace or repair all illegible or damaged signs, symbols and instructions immediately. Please contact your supplier for assistance.

2.3 Used decals on the wheelchair

The signs, symbols and instructions affixed to the wheelchair base comprise part of the safety facilities. They must never be covered or removed. They must remain present and clearly legible throughout the entire lifespan of the seating system.

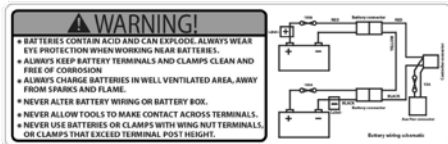
Replace or repair all illegible or damaged signs, symbols and instructions immediately. Please contact your supplier for assistance.



This decal indicates that there are moving parts and therefore potential trap hazards. When undertaking any service or maintenance the product must always be switched off beforehand and ideally the joystick disconnected.



This decal indicates that you should read the manual for undertaking any operation.



Electrical wiring diagram



Freewheel operation label



Warning: hot surface (located on motor)



Karabiner symbol - indicates location for fixing transit tie-downs

3.0 Tools, parts and components

3.1 Tools

The tools below are needed for various mechanical settings and maintenance:

Quantity	Description	Size (mm)
1	Screwdriver, flathead	-
5	Ring spanner	10, 13, 15, 16, 17
7	Hex Key	1.5, 2.5, 3, 4, 5, 6, 10
1	Screwdriver, crosshead	-
1	Gear puller	-

Use only high-quality tools for the adjustment(s) described.

Make sure that the hexagon of the spanner is attached securely to the hexagon of the fastening article. This prevents the 'rotation' of hexagons of fastening articles and spanners that may affect proper adjustment.

4.0 Spare parts

For spare parts please refer to separate manuals.

Please only use genuine spare parts supplied by Sunrise Medical, failure to do so may result in the invalidation of your warranty.

Service technicians:

Repairs may only be carried out by trained and authorised service technicians.

During the execution of their work they are at all times fully responsible for the fulfilment of locally applicable safety guidelines and standards.

Temporary employees and persons in training may only carry out repair and replacement work under the supervision of an authorised service technician.

5.0 Maintenance & cleaning

The wheelchair's lifespan is dependent on it being well maintained.

For information concerning specific settings, maintenance or repair work, please contact your authorized Sunrise dealer. Always be sure to mention the model, year of manufacture and identification number provided on the identification plate of the wheelchair when contacting your dealer.



CAUTION!

The wheelchair should be serviced by your authorized Sunrise dealer once a year or, in the case of intensive use, every six months. For a list of approved authorised dealers in your area please contact Sunrise Medical Service Centre.

The contact details of your local Sunrise medical service centre can be found on the inside front cover of this booklet.

National and International Website addresses are on the back cover.

5.1 Maintenance



WARNING!

- Loose fasteners should be re-tightened according to the installation instructions. Please refer (unless otherwise specified) to the general table below for needed Torques.

Torque Setting Guide	
M4	3.0Nm
M5	5.9Nm
M6	10Nm
M8	25Nm
M10	48Nm
M12	84Nm

Note: it will be necessary to use a torque wrench.

- Chest straps should be replaced at the first indication of damage and/or excessive wear.
- If a broken or loose component is found, discontinue use immediately and contact your authorised Sunrise Medical supplier for replacement.
- Check all Velcro fastening straps for correct adhesion when pressed together.
- Ensure that any contamination, such as fluff, hair, etc is removed from the Velcro straps. Such contamination may affect adhesion.



WARNING!

- If you are in any doubt about the performance requirements of your wheelchair contact your Sunrise Medical authorised dealer.
- After performing any maintenance or repairs on the wheelchair you must make sure that it is functioning correctly before it is used.
- All fasteners must be replaced like for like using the correct length, tensile strength and materials.
- When replacing self-locking nuts, or nuts/studs secured with a thread locking solution, ensure that a suitable thread locking solution is reapplied to the fastener.


Daily checks

Perform the daily check routine before driving:


Checking wheels & tyres

- Are the tyres sufficiently inflated (Chapter 8.2 of the owner's manual).

Checking batteries

- Before using your vehicle for the very first time, please charge your batteries for a period of 24 hours.
- Are the batteries sufficiently charged? The green lights on the battery indicator must be on.  Controller

Checking lights and indicators

- Ensure that the lights and indicators are functioning correctly and lens are clean before going outdoors at night.  Controller

Checking remote

- With the control system switched off, check that the joystick is not bent or damaged and that it returns to the centre when you push and release it.

Checking free wheel lever

- Ensure that the free wheel lever has been set to 'drive'. (Chapter 5.8 of the owner's manual).

Checking seating

- Ensure that all the cushions are in place.
- Make sure that the backrest is correctly fitted and adjusted.
- Visually inspect the wheelchair to make sure the leg rests, armrests etc. are correctly positioned and attached to the wheelchair and all fasteners are sufficiently tightened.
- Ensure that the seat interface knobs are tight and secure.

Checking clothing on potential entrapment

- When operating the wheelchair, ensure that your clothing does not hamper the wheelchair (i.e. too long). Before use, always check if your clothing or accessories do not come into contact with the wheels or any other moving and/or rotating parts in which they could become entangled.

Checking weather conditions

- In winter, batteries have a reduced capacity. During a period of light frost, the capacity is roughly 75% of the normal capacity. At temperatures below -5°C this will be roughly 50%. This will reduce your range of action.

Weekly checks

Perform the weekly check routine before driving as described below.

Checking Parking brake:

This test should be carried out on a level floor with at least one meter clearance all around the chair.

- Switch on the control system.
- Check that the battery gauge remains on, or flashes slowly, after one second.
- Push the joystick slowly forwards until you hear the parking brakes operate.
- The chair may start to move.
- Immediately release the joystick. You must be able to hear each parking brake operate, (click), within a few seconds.
- Repeat the test a further 3 times, pushing the joystick slowly backwards, left and right.

Checking connectors & cables:

- Make sure that all connectors are securely mated.
- Check the condition of all cables and connectors for damage.

Checking controller:

- Check the thin rubber gaiter or boot around the base of the joystick shaft for damage or splitting. Check visually only, do not handle the gaiter.
- Make sure that all components of the control system are securely mounted. Do not over-tighten any securing screws.

Checking controls:

- Switch on the hand control – Do the lights flash? This signifies that there is a fault in the electronic system. Refer to chapter 9 for basic troubleshooting
- Operate all of the electric options, including lights and indicators, (if fitted), to make sure that they work correctly.
- With the seating in an elevated position, drive the wheelchair to make sure that the 'creep' mode works which will slow the wheelchair.
- Drive the wheelchair in each of the drive profiles to make sure the wheelchair performs as it did before.



WARNING!

- If you are in any doubt about the performance requirements of your wheelchair contact your Sunrise Medical authorised dealer.
- After performing any maintenance or repairs on the wheelchair you must make sure that it is functioning correctly before it is used.
- A complete inspection, safety check and service should be made by a Sunrise Medical authorised dealer at least once per year.
- All fasteners must be replaced like for like using the correct length, tensile strength and materials.
- When replacing self-locking nuts, or nuts/studs secured with a thread locking solution, ensure that a suitable thread locking solution is reapplied to the fastener.
- Check all Velcro fastening straps for correct adhesion when pressed together.
- Ensure that any contamination, such as fluff, hair, etc is removed from the Velcro straps. Such contamination may affect adhesion.

Monthly checks

Perform the monthly check routine before driving as described below.

- All fasteners should be checked monthly for wear, such as loose bolts or broken components.
- Check all straps monthly for fraying, ripped seams or other indications of excessive wear damage. Discontinue use if damage is found.

5.2 Tyre maintenance and pressures

5.2.1 Tyre pressure



If pneumatic tyres are fitted to your wheelchair it is important to regularly check the air pressure and for signs of wear.

The maximum tyre pressures are listed in Section 8.3 of the owner's manual, if in doubt check the markings on the side of the wheelchair tyre for guidance.


NOTE: It is important that drive wheels are inflated to equal pressures as a pair, and likewise the rear. The inflator pump provides the safest method of inflating your wheelchair tyres and the pressure can be checked with a standard motor vehicle pressure gauge.



- Do not inflate beyond the maximum allowed tyre pressure.
- Always use the pump that is supplied with the chair,

5.2.2 Tyre wear

When inspecting the tyres for signs of wear, look for significant scuff marks, cuts and a diminished tyre tread. Tyres will need to be changed when the tread cannot be seen over the complete surface of the tyre.

Maintenance & Inspection Schedule	Daily*	Weekly	Monthly	Annually
Daily check routine as described in chapter 5.1 of the owner's manual	*			
Weekly check routine as described in chapter 8.1 of the owner's manual		*		
Clean wheelchair upholstery  Seating system		*		
Complete inspection, safety check and service should be made by a Sunrise Medical authorised dealer.				*

5.3 Wheels & tyres maintenance

To ensure that your wheelchair functions properly, it is essential that the tires are kept at the correct pressure. The correct tyre pressure is indicated on the side of the tyre.

Tyres that are too soft will have a negative effect on the wheelchair's performance. Moving the wheelchair will require more energy, making more demands on the batteries. Furthermore, wear on under inflated tyres is increased

When inspecting the tyres for signs of wear, look for significant scuff marks, cuts and a diminished tyre tread. Tyres will need to be changed when the tread cannot be seen over the complete surface of the tyre.

Castor wheel		Max. tyre pressure	
6"	Q400 M	Solid wheels	
9" (2.80/2.50-4)	Q400 F Q400 R	2.4 bar max.	35 PSI
10" (3.00-4)	Q400 F Q400 R	2.4 bar max.	35 PSI
Drive wheel		Max. tyre pressure	
13" (2.50-8)	Q400 M Q400 F Q400 R	2.4 bar max.	35 PSI max.
14" (3.00-8)	Q400 F Q400 R	3.5 bar max.	50 PSI max.



DANGER!

- Do not inflate beyond the maximum allowed tyre pressure.
- Never use a forecourt pump
- Before tyres are repaired they must first be fully deflated!

5.4 Lighting maintenance:



Maintaining lights and indicators is a safety critical task. If your lights and indicator system shows a defect, please contact your Sunrise Medical Approved Dealer.

All lights and indicators are state of the art LED low energy, no maintenance units. There are no light bulbs used. The high intrinsic reliability of these units means that they are extremely unlikely to fail under normal usage. If a failure should occur, (may be as a result of an impact), the damaged light assembly must be replaced in its entirety. The individual LED's cannot be replaced.



- We recommend the use of Sunrise Medical authorized spare parts only.
- Be advised that all lighting circuits are electronically protected. In the event of a short circuit current will be limited to a safe level. Once the fault is removed the system resets automatically.

5.5 Cleaning and disinfection

The wheelchair should be wiped over once per week with a slightly damp, not wet, cloth and any fluff or dust that has accumulated around the motors should be blown or dusted away.



Make sure that you dry all parts of your wheelchair if it becomes wet or damp after cleaning or if it is used in a wet or damp atmosphere.



It is important that should the wheelchair be used by more than one person it is cleaned thoroughly to ensure there is no cross infection.

Hygiene measures when being re-used:

Prior to the wheelchair being re-used, it must be carefully prepared. All surfaces which come into contact with the user must be treated with a disinfection spray.

To do this, you must use a suitable disinfectant for rapid alcohol-based disinfection of medical products and medical devices.

Please take into account the manufacturer's instructions for the disinfectant you are using.



- Do not use solvents, bleaches, abrasives, synthetic detergents, wax polishes or aerosols.
- Disinfectants may be used in dilution as specified by their manufacturer.
- Ensure surfaces are rinsed with clean water and dried thoroughly.



- Always read the label on any commercial or domestic cleaning substances.
- Always follow the instructions carefully.

6.0 Service Instructions

6.1 Assembly, replacement and adjustment instructions

Assembly, replacement and adjustment instructions

The paragraphs 6.2 (Q400M - Q500M) cover illustrated assembly and replacement instructions.

Every separate visual instruction is prefaced with:

- Preparation remarks
- Instructions
- Tools used
- Notice (if applicable): extra notes covering information you need when executing the specific task)

6.2 Assembling and replacement instructions - Q400M - Q500M

Removal of castor wheel from castor fork

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the castor wheel from the castor fork.
- Rebuild the wheelchair in reverse order once completed.

Tools used

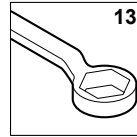


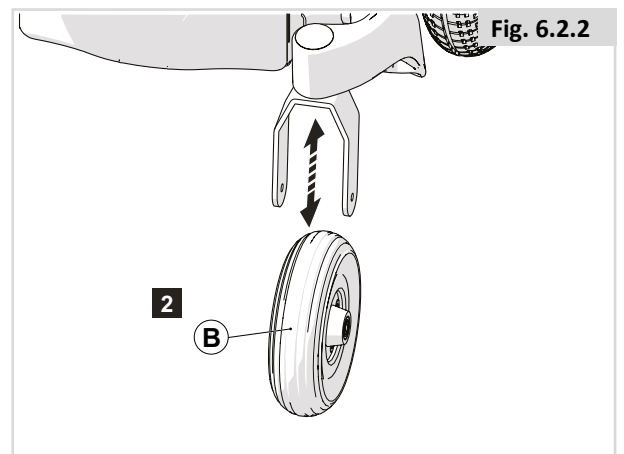
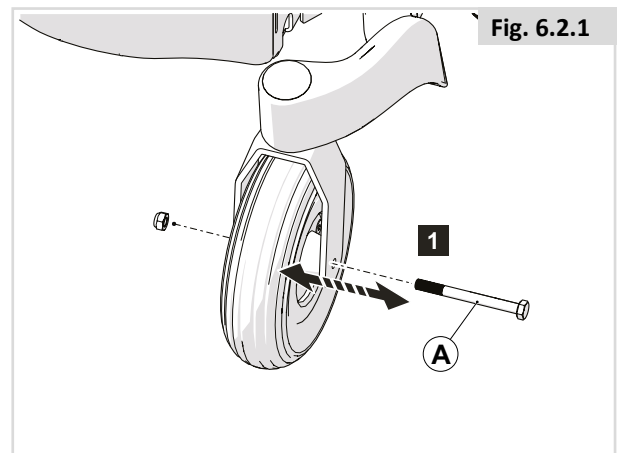
Fig. 6.2.1

1. Remove bolt (A) using 13mm spanner

Tightening torque for (A) bolt is 20Nm.

Fig. 6.2.2

2. Wheel assembly (B) will fall from the castor fork when bolt is removed



Removal of castor fork from castor arm

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the castor fork from the front or rear castor arm.
- Rebuild the wheelchair in reverse order once completed.

Tools used

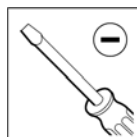
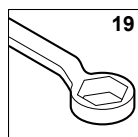


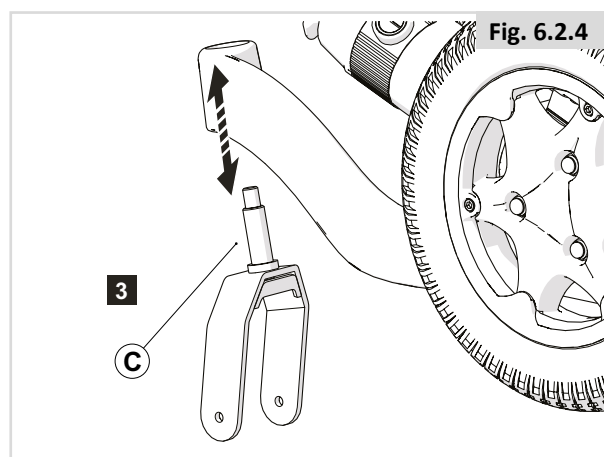
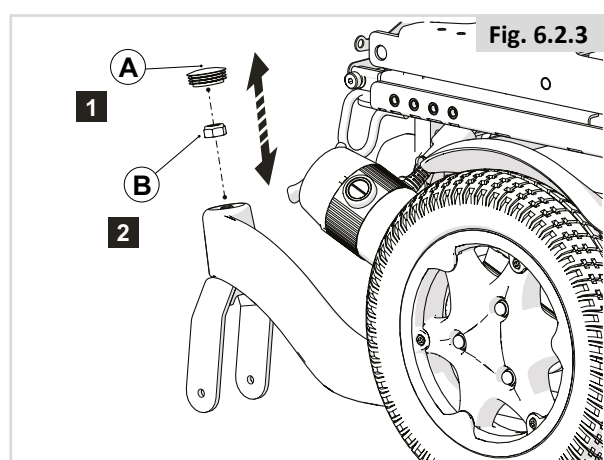
Fig. 6.2.3

1. Using the screwdriver, remove the plastic coloured cap from the castor arm
2. Unscrew and remove nut (B) using the 19mm spanner from inside the castor assembly

Tightening torque for (B) bolt is 6.5Nm - 13.5Nm.

Fig. 6.2.4

3. Remove the castor fork from the castor arm



Removal of drive wheel from wheelchair base

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the drive wheel from the wheelchair base
- Rebuild the wheelchair in reverse order once completed.

Tools used

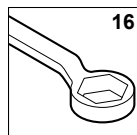


Fig. 6.2.5

1. Remove the 3 (A) nuts from the centre of the drive wheel

Tightening torque for (A) bolt is 34Nm.

Fig. 6.2.6

2. Remove drive wheel (B) from base

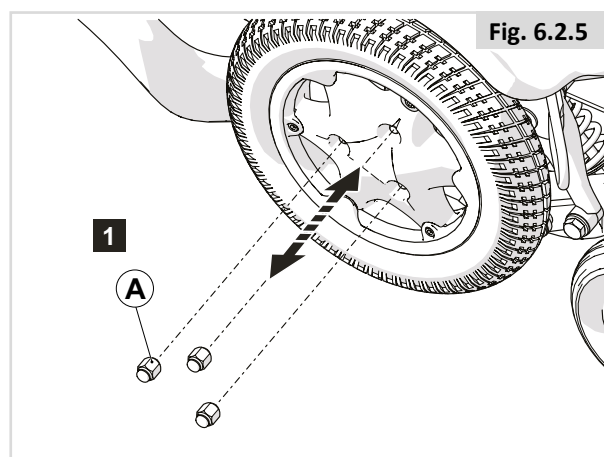


Fig. 6.2.5

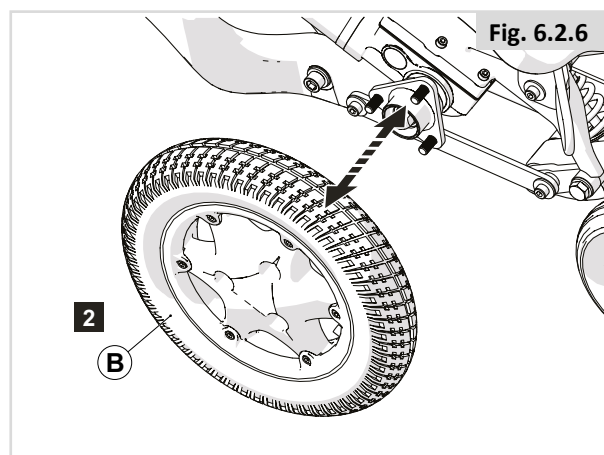


Fig. 6.2.6

Removal of front castor arm from base

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the front castor arm from the wheelchair base.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first remove the drive wheel, motor mount and suspension spring.

Tools used

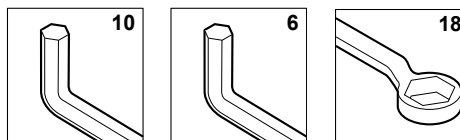


Fig. 6.2.7

1. Remove 2 (A) bolts from the midlink (B)
2. Remove midlink (B) from the base of the chair. (This can be achieved by raising and lowering the rear castor arm simultaneously to release pressure)

NOTE: There are several washers that will become loose

Tightening torque for (A) bolts is 13Nm.

Fig. 6.2.8

3. Unscrew and remove bolt (C) using 18mm spanner
4. Unscrew and remove bolt (D) using 10mm hex key

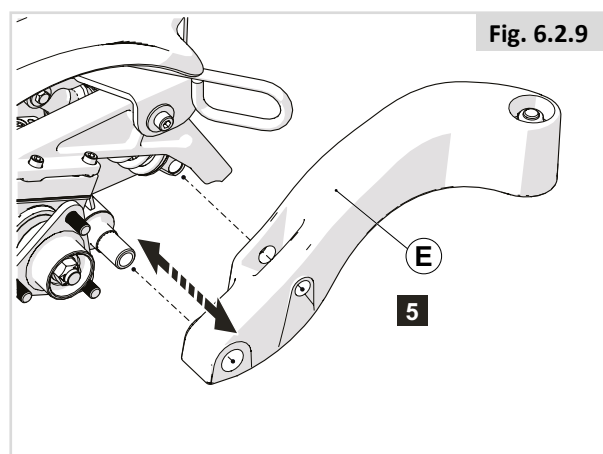
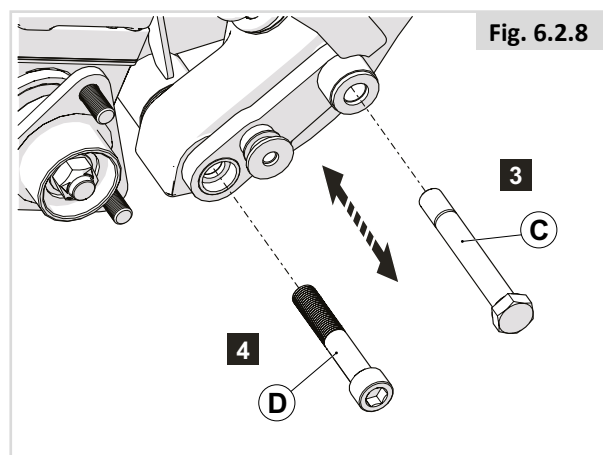
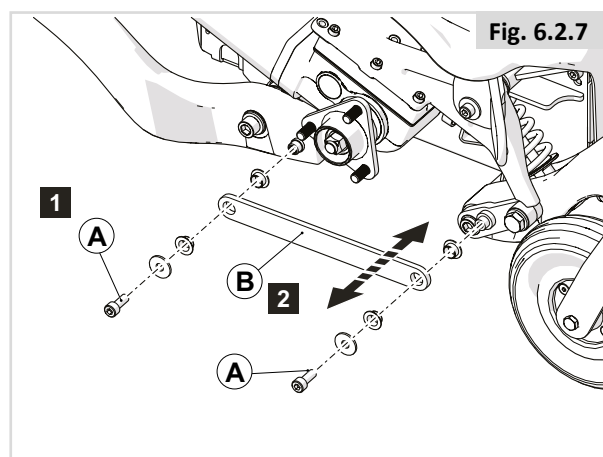
Tightening torque for (C) + (D) bolt is 50Nm.

Fig. 6.2.9

5. Remove front castor arm (E) from wheelchair base

NOTE: When refitting front castor arm, it is better to do so with the motor mount removed. With motor mount removed, relocate suspension spring into castor arm then add bolt and tighten

NOTE: If your midlink has headed bushes fitted to just one side then orient the heads of the bushes to the inside. Upon refitting the midlink, the rear should be refitted first. Then by raising and lowering the rear castor arm align the front of the midlink with the front pivot



Removal of rear castor arm from base

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the rear castor arm from the wheelchair base.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first remove the drive wheel and midlink.

Tools used

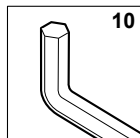


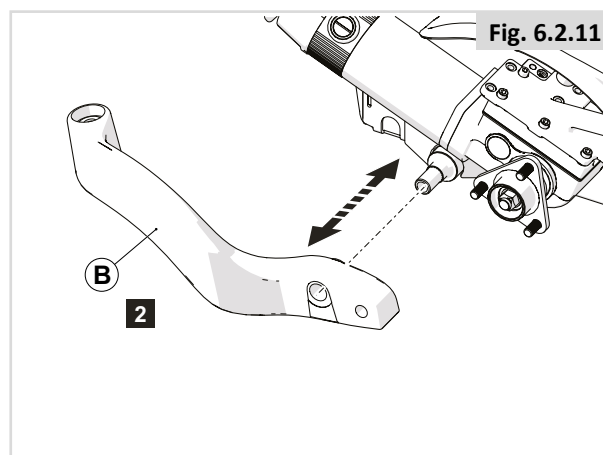
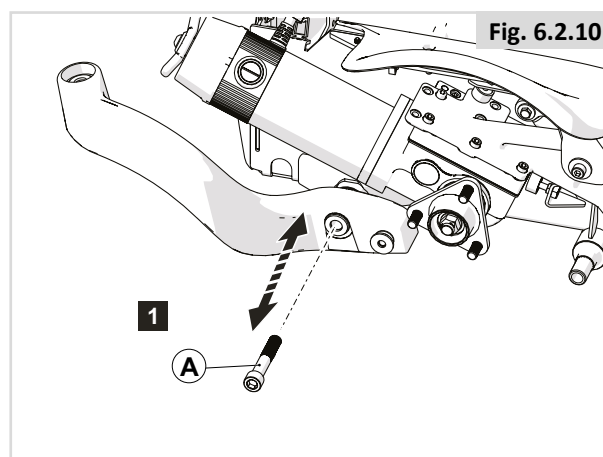
Fig. 6.2.10

1. Unscrew and remove bolt (A)

Tightening torque for (A) bolts is 50Nm.

Fig. 6.2.11

2. Remove rear castor arm (B) from wheelchair base



Removal of crash bracket from wheelchair base

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instructions for removing the crash bracket from the wheelchair base.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first remove the drive wheel and the front castor arm.

Tools used

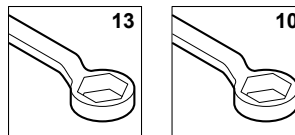


Fig. 6.2.12

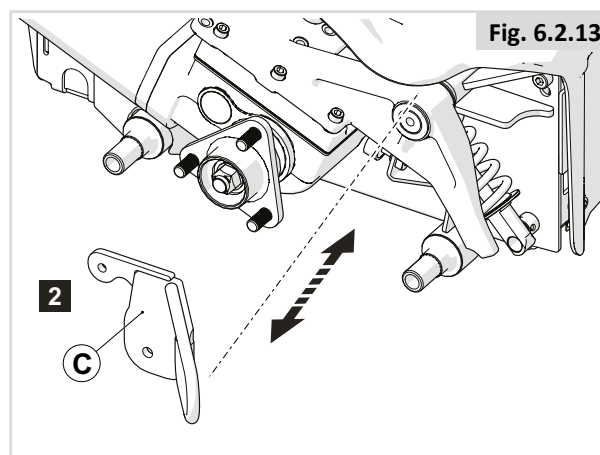
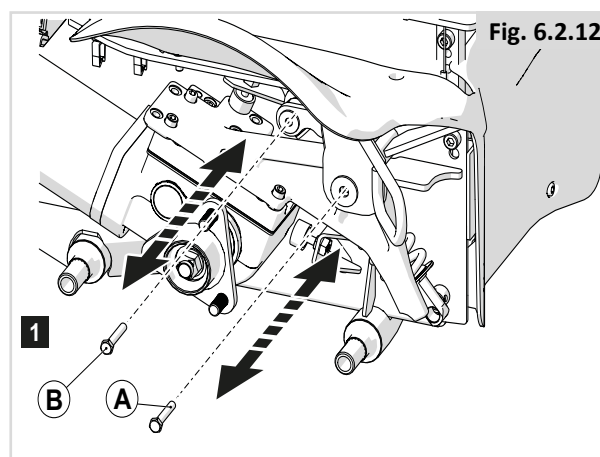
1. Unscrew and remove (A) with the 13mm spanner and (B) using the 10mm spanner

Tightening torque for (A) bolt is 13Nm.

Tightening torque for (B) bolt is 9Nm.

Fig. 6.2.13

2. Remove the crash bracket (C) from the wheelchair base



Removal of suspension spring from suspension assembly

Preparation

Note! Switch off the wheelchair via remote control

Tools used

N/A

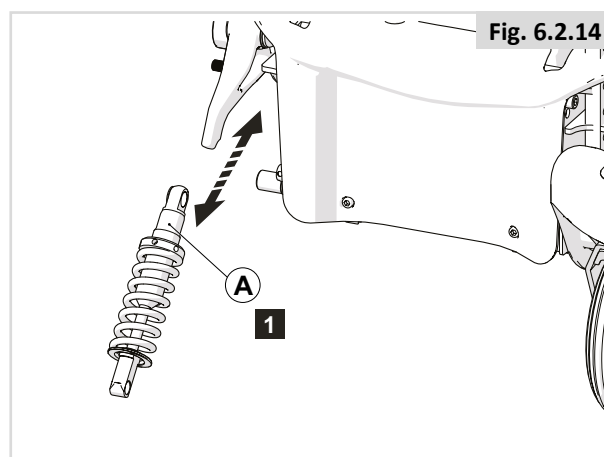
Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the suspension spring from the suspension assembly
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first remove the drive wheel, the front castor arm and the crash bracket.

Fig. 6.2.14

1. Pull and remove suspension spring assembly (A) from the base



Removal of front, side and rear shrouds

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the front, side and rear shrouds from the wheelchair.
- In order to complete this, you must first tilt back chair, remove the battery cover and electrically disconnect the power

Tools used

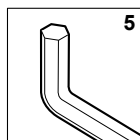


Fig. 6.2.15

1. Unscrew and remove 4 (A) bolts from the top of the shroud

NOTE: Early models may have plastic washers fitted beneath the shroud that will become loose when the bolts are removed. Be careful not to lose these and to re-fit them when refitting the shroud.

(Please re-tighten by hand to avoid shroud splitting).

Fig. 6.2.16

2. Unscrew and remove 2 bolts (B) from the front of the shroud

Fig. 6.2.17

3. Remove front shroud (C)

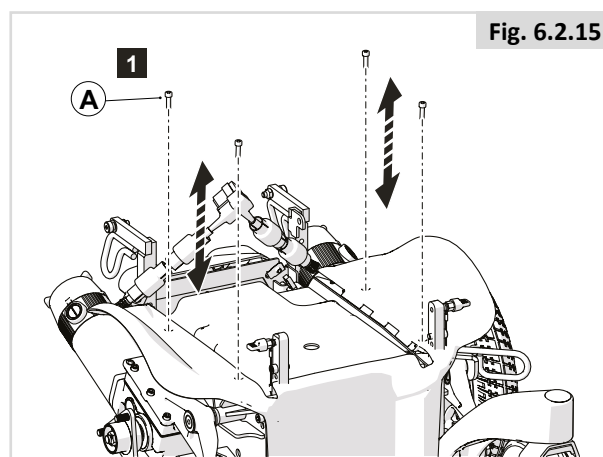


Fig. 6.2.15

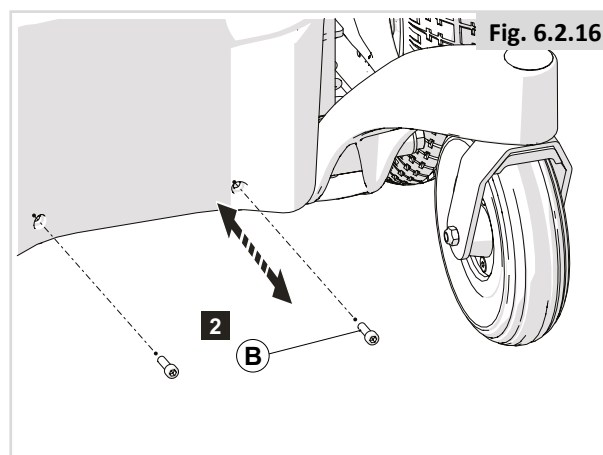


Fig. 6.2.16

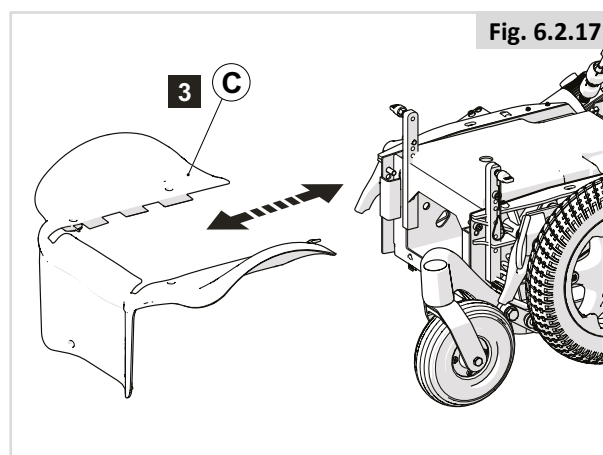


Fig. 6.2.17

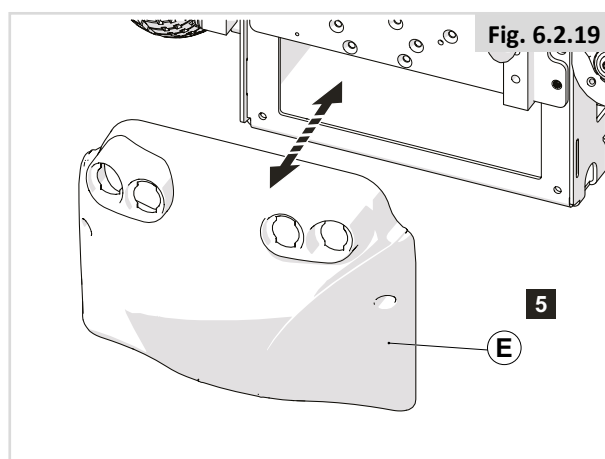
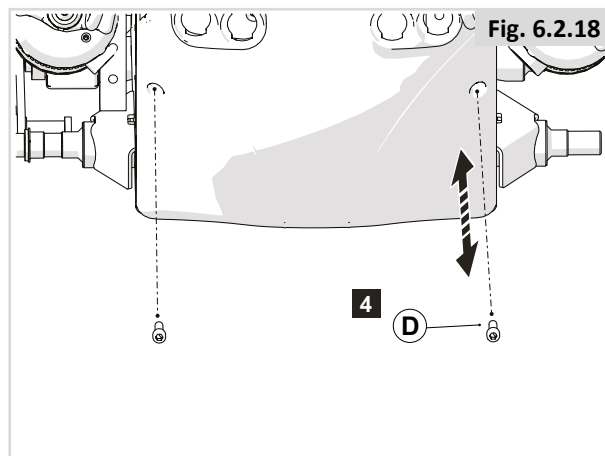
To remove rear shroud

Fig. 6.2.18

4. Unscrew and remove 2 (D) bolts from the rear shroud

Fig. 6.2.19

5. Remove rear shroud (E)



Removal of battery cover

Preparation

Note! Switch off the wheelchair via remote control

Tools used

N/A

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the battery cover.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first tilt the chair back.

Fig. 6.2.20

1. Lift off battery cover (A) which is loose on the base

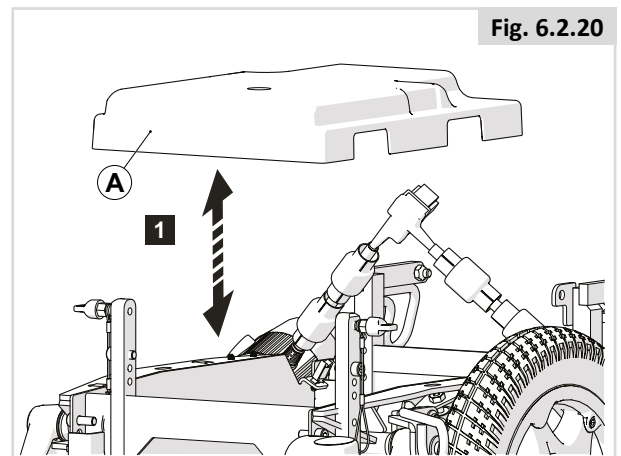


Fig. 6.2.20

Removal of motor and motor mount

Preparation

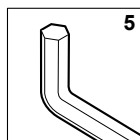
Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the motor and motor mount from the base.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first tilt the chair back, remove battery cover, remove shrouds and crash bracket.

Tools used



Before following these instructions you should, unclip cables from the power module and disconnect left-hand or right-hand motors accordingly from the power module.

Fig. 6.2.21

1. Once everything has been completed in the instructions section above, manoeuvre the motor (A) off the pivot shaft

Fig. 6.2.22

2. Unscrew and remove screws (B) from the top of the motor mount (Depending on motor type, this dictates the amount of screws used)

Tightening torque for (B) bolts is 12Nm.

NOTE: Please note location of the screws in the motor mount as this will vary between motor types. When fitting new motor, please reinstall screws in the same locations

Fig. 6.2.23

3. Remove motor mount (C) from the motor (D)

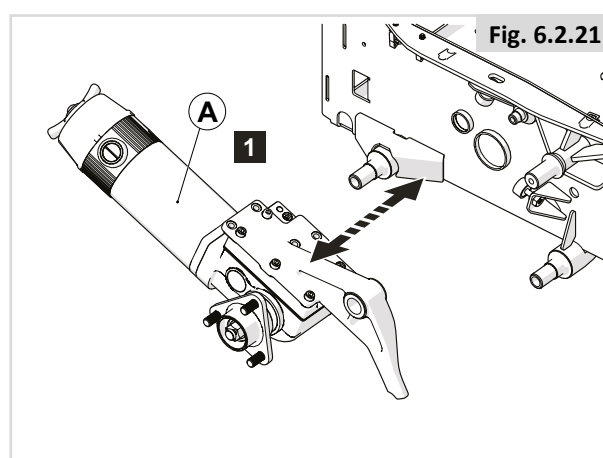


Fig. 6.2.21

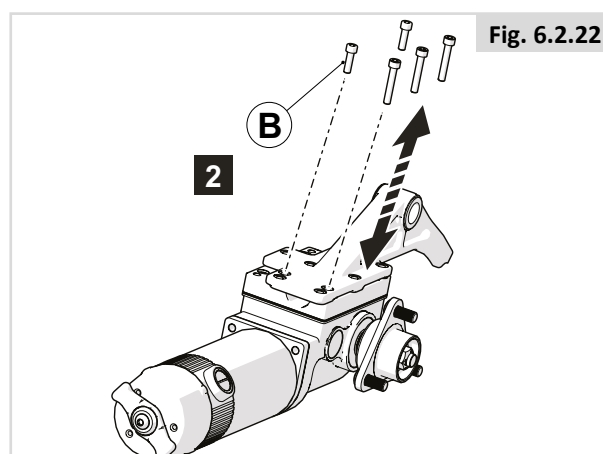


Fig. 6.2.22

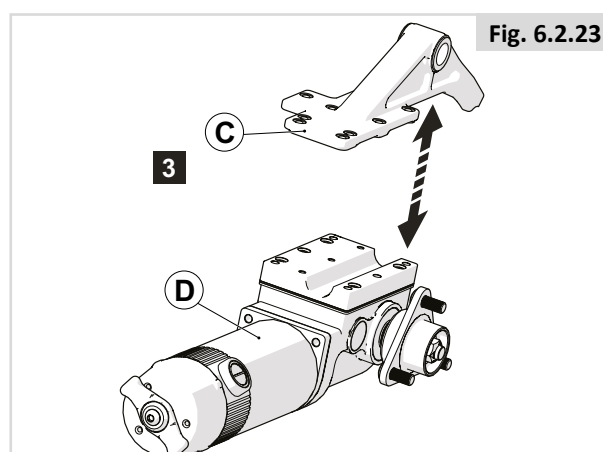


Fig. 6.2.23

Removal of brake lever from 4-pole and 2-pole performance motors

Preparation

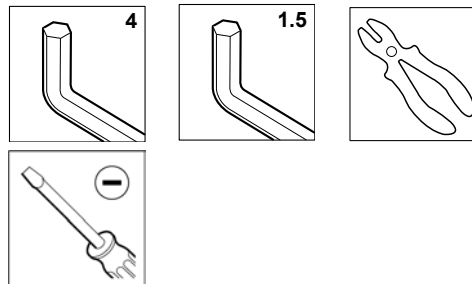
Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the brake lever from the motor.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first tilt the chair back, remove battery cover and remove shrouds.

Tools used



NOTE: This applies to the 4-pole motors and the 2-pole performance motors.

Fig. 6.2.24

1. Unscrew and remove (A) from the back of the motor

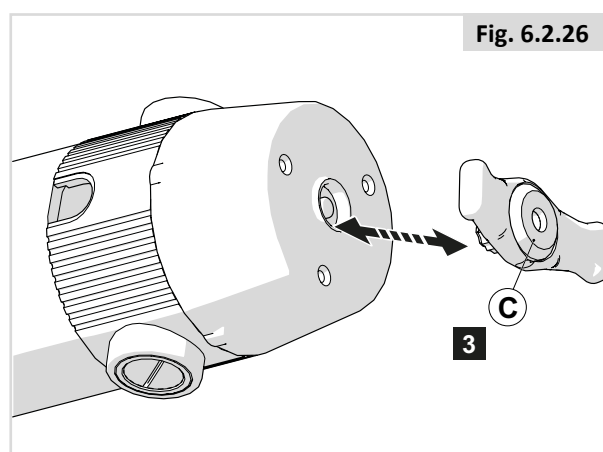
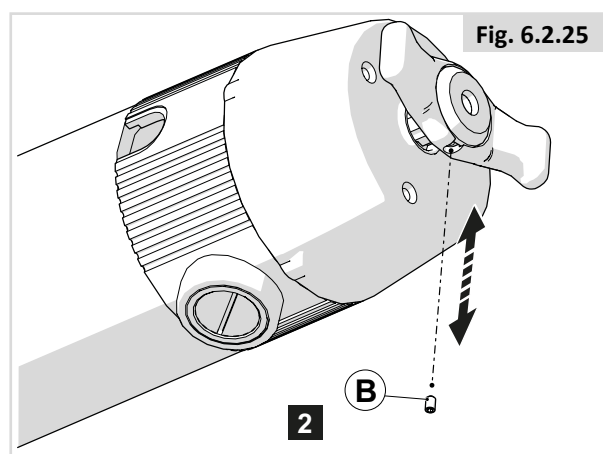
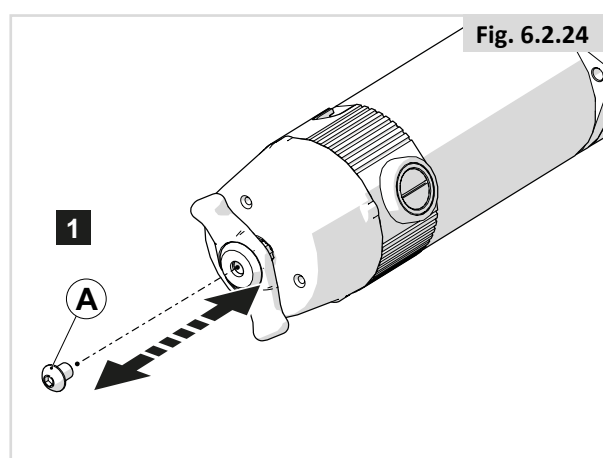
Tightening torque for (A) bolt is 6Nm - 10Nm

Fig. 6.2.25

2. Unscrew and remove small screw (B) using the 1.5mm Hex Key from the brake lever and remove C-clip attached to the bolt using the flathead screwdriver (using the pliers to refit the C-clip)

Fig. 6.2.26

3. Remove brake lever (C) off the brake



Removal of brake lever from 2-pole standard motors

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the brake lever from the motor.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first tilt the chair back, remove battery cover and remove shrouds.

Tools used



NOTE: This applies to the 2-pole standard motors.

Fig. 6.2.27

1. Unscrew and remove (A) from the brake lever

Fig. 6.2.28

2. Remove brake lever cover (B), O-ring and plastic clip (C)

Fig. 6.2.29

3. Unscrew and remove 4 (D) bolts from the main brake cover

4. Remove main brake cover (E) from the motor assembly

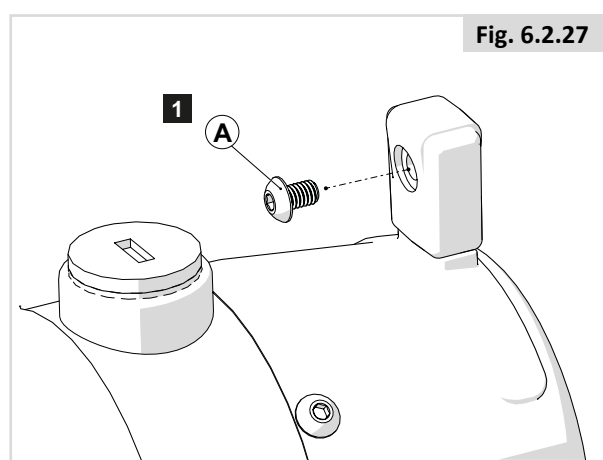


Fig. 6.2.27

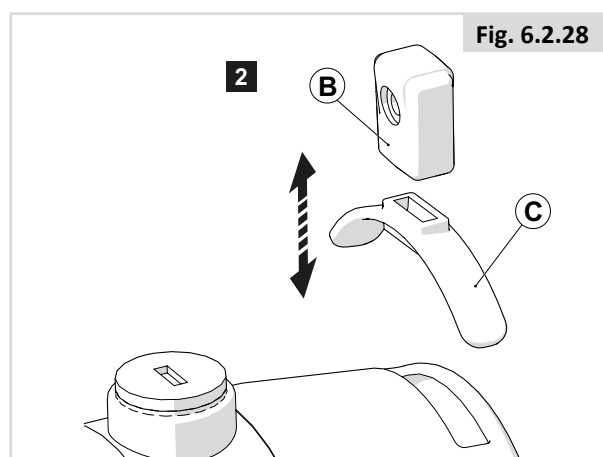


Fig. 6.2.28

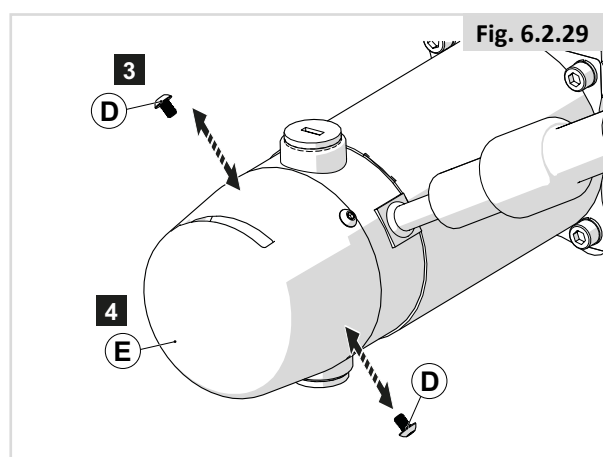


Fig. 6.2.29

Removal of brake from motor assembly

Preparation

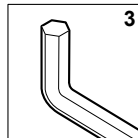
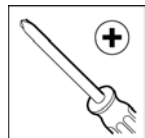
Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for the brake from the motor assembly.
- In order to complete this, you must first tilt back chair, remove the battery cover and electrically disconnect the power
- Please remove brake lever first in order to remove the brake.

Tools used



NOTE: This applies to the 4-pole motors and the 2-pole performance motors.

Fig. 6.2.30

1. Unscrew and remove 3 (A) bolts from the main brake cover using the crosshead screwdriver (Please re-tighten by hand)

Fig. 6.2.31

2. Remove main brake cover (B) from motor

NOTE: Disconnect electrical connector after main brake cover has been removed

Fig. 6.2.32

3. Unscrew and remove 4 (C) bolts

Tightening torque for (C) bolts is 3Nm

Fig. 6.2.30

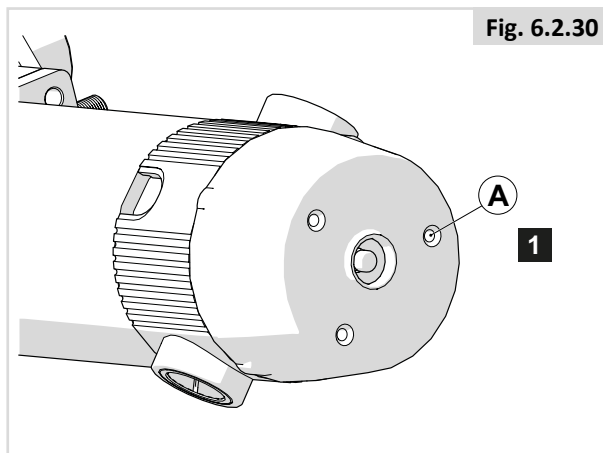


Fig. 6.2.31

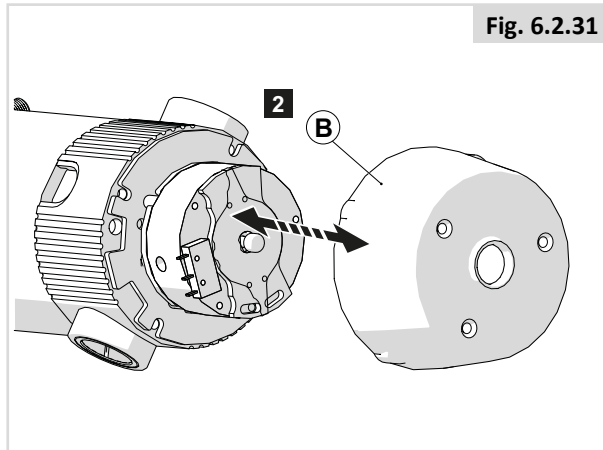


Fig. 6.2.32

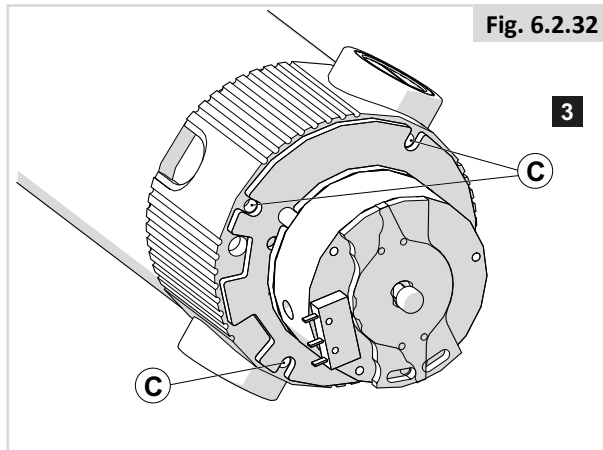


Fig. 6.2.33

4. Remove brake (D) from the motor assembly

NOTE: For the standard 2-pole motor (once the brake lever and main brake cover have been removed):

1. Disconnect electrical connector
2. Unscrew and remove 2 screws through the access holes in brake using the 3mm Hex Key
3. Remove brake from the motor assembly

NOTE: If finding your old brake doesn't have the connector but is hardwired then take the following steps:

1. Cut cable to remove old brake leaving enough to reconnect new brake.
2. Either add new connector to cables from existing motor or remove connector from new brake and solder wires from existing motor.
3. Cover soldered joint with heat shrink using heat gun.

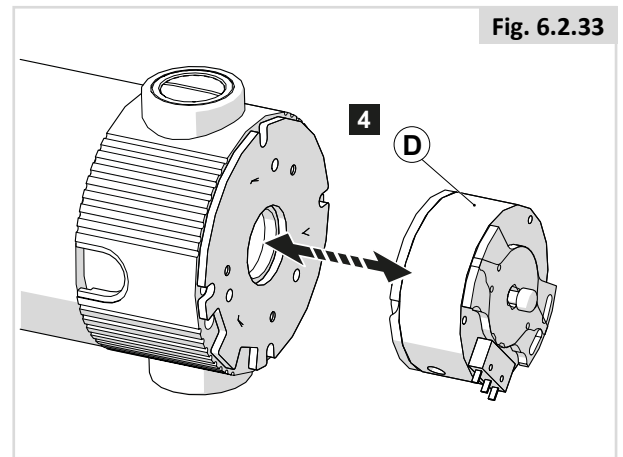


Fig. 6.2.33

Removal of motor brush

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the motor brush from the motor.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first tilt the chair back, remove battery cover and remove shrouds.

Tools used

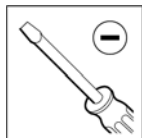
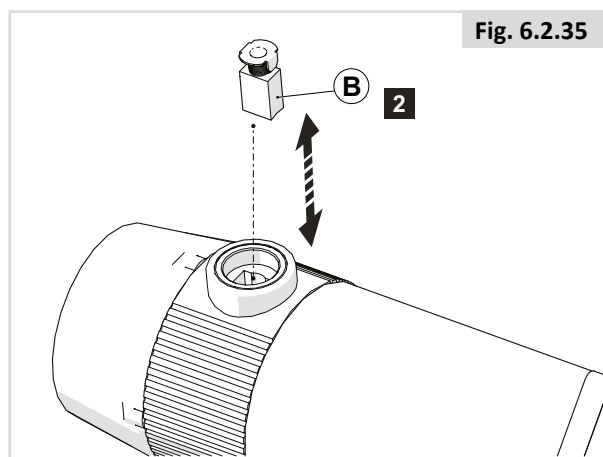
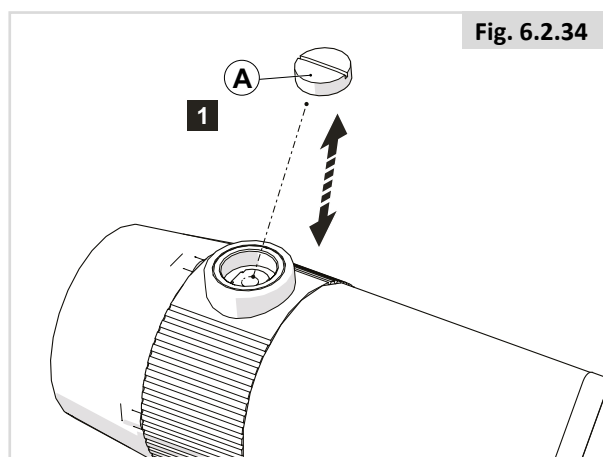


Fig. 6.2.34

1. Remove cap (A) using a flathead screwdriver in the groove

Fig. 6.2.35

2. Pull out and remove motor brush (B) and replace components accordingly



Removal of motor hub

Preparation

Note! Switch off the wheelchair via remote control

Instructions

Note! Suitable work area required!

- Follow the illustrated instruction for removing the motor hub from the base of the wheelchair.
- Rebuild the wheelchair in reverse order once completed.
- In order to complete this, you must first remove the drive wheel

Tools used

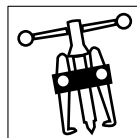
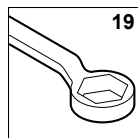


Fig. 6.2.36

1. Unscrew and remove nut (A) and washer

Tightening torque for (A) bolts is 60Nm.

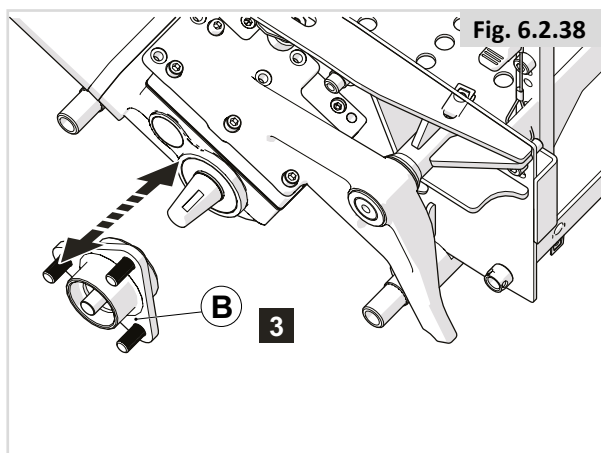
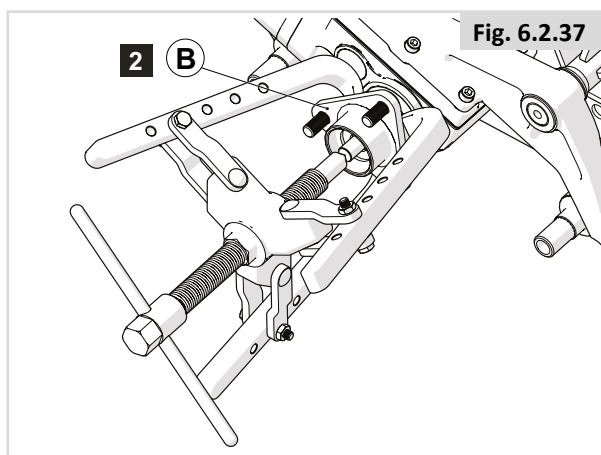
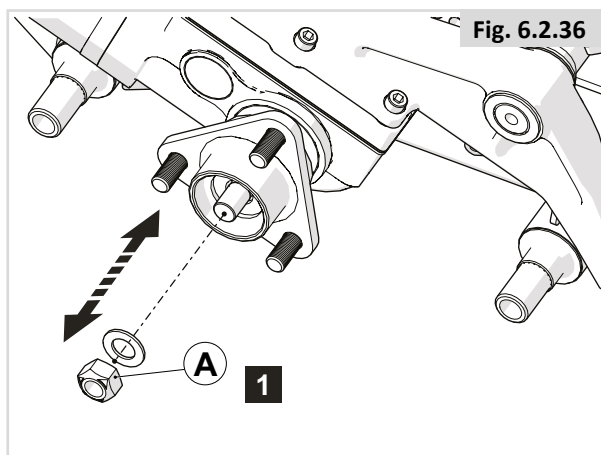
Fig. 6.2.37

2. Using the gear puller, pull the hub (B) away from the tapered shaft of the motor

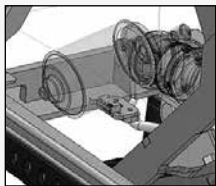
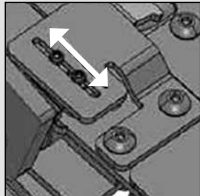
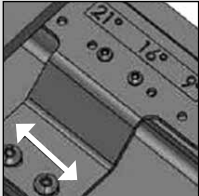
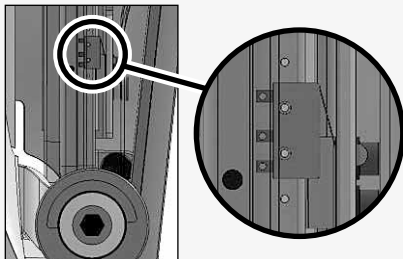
Fig. 6.2.38

3. Remove motor hub (B)

NOTE: When refitting motor hub, please slide motor hub onto motor shaft aligning the key way, fit washer and nut and then tighten



Default Positions/Location Micro Switch

Type	MWD	FWD	RWD	HWD	Location
Lift (300mm)	25mm	25mm	25mm	25mm	At rear of power module, below the lift actuator 
Tilt (30°/50°)	16°	16°	9°	9°	On top, at the rear of power module Type A (1)  Type B 
Recline 130° power back / 150° anti shear)	40°/60°	40°/60°	40°/60°	40°/60°	Behind backrest cover, on the lefthand side 

7.0 Trouble shooting

If the Q400M / Q500M is not working or not working as it should, contact your supplier.

8.0 Guarantee / Warranty

THIS GUARANTEE DOES NOT AFFECT YOUR LEGAL RIGHTS IN ANY WAY.

Sunrise Medical* provides a guarantee, as set out in the warranty conditions, for wheelchairs to its customers covering the following.

Warranty conditions:

1. Should a part or parts of the wheelchair require repair or replacement as a result of a manufacturing and/or material fault within 24 months or for frame and cross-braces within 5 years after delivery to the customer, then the affected part or parts will be repaired or replaced free of charge. The warranty will only cover manufacturing defects
2. To enforce the warranty, please contact Sunrise Medical Customer Service with the exact details of the nature of the difficulty. Should you be using the wheelchair outside the area covered by the Sunrise Medical customer service agent, repairs or replacement will be carried out by another agency as designated by the manufacturer. The wheelchair must be repaired by a Sunrise Medical designated Customer Service agent, (dealer).
3. For parts, which have been repaired or exchanged within the scope of this warranty, we provide a warranty in accordance with these warranty conditions for the remaining warranty period for the wheelchair in accordance with point 1).
4. For original spare parts which have been fitted at the customer's expense, these will have a 12 months guarantee, (following the fitting), in accordance with these warranty conditions.
5. Claims from this warranty shall not arise, if a repair or replacement of a wheelchair or a part is required for the following reasons:
 - a. Normal wear and tear, which include batteries, armrest pads, upholstery, tyres, brakes shoes, etc.
 - b. Any overloading of the product, please check the EC label for maximum user weight.
 - c. The product or part has not been maintained or serviced in accordance with the manufacturer's recommendations as shown in the user instructions and/or the service instructions.
 - d. Accessories have been used which are not specified as original accessories.
 - e. The wheelchair or part having been damaged by neglect, accident or improper use.
 - f. Changes/modifications have been made to the wheelchair or parts, which deviate from the manufacturer's specifications.
 - g. Repairs have been carried out, before our Customer Service has been informed of the circumstances.
6. This guarantee is subject to the law of the country in which the product was purchased from Sunrise Medical"

* Means the Sunrise Medical facility from which the product was purchased.

Additional Notes For Australia Only:

- i. For goods provided by Sunrise medical Pty Ltd in Australia, our goods come with a guarantee by Sunrise Medical that cannot be excluded under Australian Consumer Law.
- ii. You are entitled to a replacement or refund for a major failure and for compensation for any foreseeable loss or damage.
- iii. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- iv. The benefits to you given by this warranty are in addition to your other rights and remedies under a law in relation to the goods to which the warranty relates.



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