Reflex PM Checklist

Reflex Serial Number_____
Date:_____

1. General condition of the chair

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	A	C	C	C	C	A

Required tools

- Touch- up pen Sikkens A77A2

- Visually check if the log, the instructioncart and the user manual are available. When it's not available, report this by the user. *Available? Y____ N____*

- Visually check if all stickers are present and legible . Can you read the serial number yet? _____

- The CE Sticker should be present and clearly legible . This also applies to the sticker with inspection date. *Present Y____ N____ Date Visible Y_____ N_____*

- Visually check all painted parts for damage and corossion. Touch up if necessary . _____

- Chairs before production year 2005 hasto be checked extra good at corrosion on the seat carriers (under the PUR) and corrosion on the chassis (especially between the square turrets where the batteries are, don't remove the caps). *(See figure 1 and 2).* Remove the actuator cap.

  _____

Figure 1 Chair supports

- Check PUR parts for severe discolouration (Brown in particular) and damage. _____
- Are all the screws present and securely fitted? Also that of the guide?

  Screws Present : Y____ N____

For reasons of hygiene, it is strongly recommended to replace the seat, lid and back once every 5 years.

Present :

- Foot support (not a failure item) *Present____ Not Present___*
- Head support (not a failure item) *Present____ Not Present___*
- Lid of seat (not a failure item) *Present____ Not Present___*
- Key for emergency lowering device (not a failure item) *Present____ Not Present___*
- Charger *Present____ Not Present___*

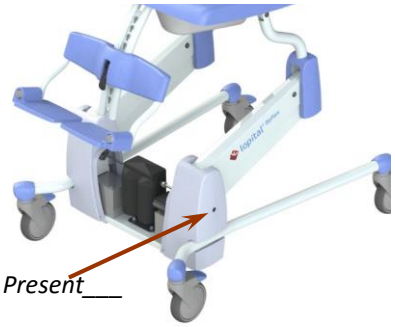

Figure 2 Colums

2. Batteries

Month	12	24	36	48	60	72	84	96	108	120
	C	C	A	C	C	A	C	C	A	C

Required tools

- Battery tester
- Contactspray
- Screwdriver

- A battery can be checked only when it is charged! Measure batteries individually.
- Replace if ≤ 4,5Ah (≤ 65%)
- Always replace both batteries.
- Write the replacement date on the battery (waterproof pen) and put a new sticker on the rear of the motor cover.

It is strongly recommended to replace the battery once every 3 years.

Method:

1. Put the chair in a high position.
Unscrew screws (4x) and lift cover. *(See figure 3)*

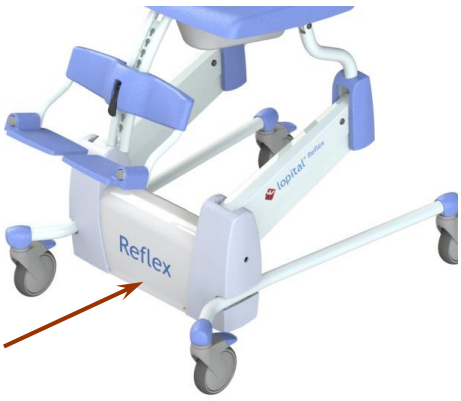

Figure 3 Cap

2. Disconnect battery cables (the red plus pole first)

Figure 4 Batteries

3. Detach M6 bolts under the motors.
Tilt the motors. *(See figure 5)*

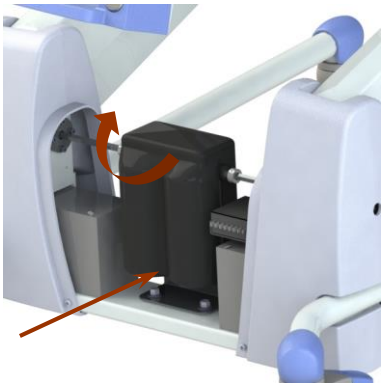

Figure 5 Motor

4. Replace batteries

Write the replacement date on the battery. Tilt the motor back and refasten the M6 bolt.

Note: Before the batteries are reconnected and the cap is replaced, you need to clean the controller, see Chapter 3 Control.

*Battery Check Complete*_____

*Batteries Replaced Y*_____*N*_____

Date Noted _____

3. Controller Service

Month	12	24	36	48	60	72	84	96	108	120
	R	R	R	R	R	R	R	R	R	R

Required tools

- Electrical cleaner
- Flat nose pliers
- Screwdriver
- Cleaning cloth

Method:

1. Cut the tyraps of the cables so that the cables are disconnected. Please note that the battery cables are not connected, the controller is energized.

Figure 6 Control

2. Remove the plugs of the controller.

Figuur 7 Disassemble plugs

3. Disassemble the control.

Figure 8 Disassemble the control

4. Clean the control well with Electrical cleaner, both the terminals and the bottom. Also clean the casing of the connectors

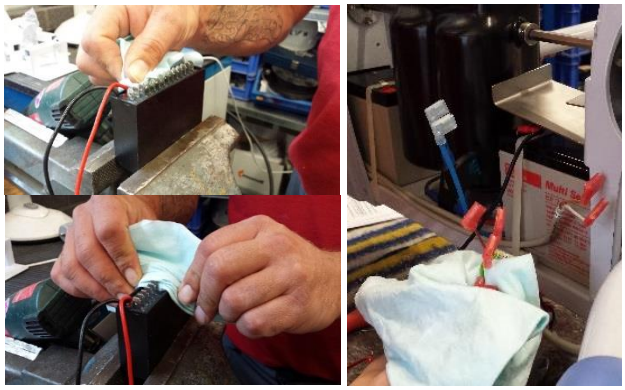

Figure 9 Cleaning control+ casing connectors

5. Place the control back and connect the control. Pay attention to the coding of the cables (M.E.D.A.B.). Squeeze the shells of the connectors firmly with pliers.

Figure 10 Connect control

6. Connect the battery cables. The red positive terminal last. Replace the cover and tighten the screws.

   Test the operation of the chair.

Controller Service completed per Instruction_____

Function: Pass_____ Fail_____

4. Battery charger

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	C	C	C	C	C	C

Required tools

- NEN 3140 test equipment

- The charger must be tested each year in accordance with NEN 3140 and provided with an identification sticker and NEN 3140 sticker.
- Check charger for any damage (plug + cable + contact); if the cable is damaged, replace the whole charger.
- Check the charging voltage; it should be at least the value as indicated on the charger, and be more than 27 Volt.
- Check whether there is too much corrosion on the connectors; also check the charger connector on the chair.

Figure 11 Charger

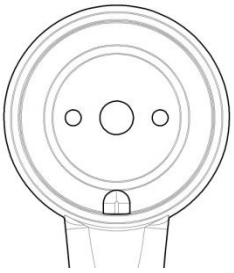

Figure 12 charge plug

Battery Charger Tested:
Pass_____ Fail_____

Battery Charger Replaced
Yes_____ No_____

Sticker Updated_____
If Pre April 2016 Design, Not Applicable, see below.

Older version, before April 2016

The following version charger / charging cable should be checked at the same points as the charger above. If the charger does not comply with the control points, it will be replaced with a new charger. To do this, the entire back shell have to be replace.

Figure 13 Charger

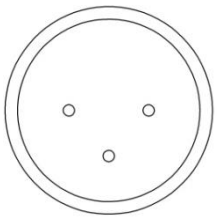

Figure 14 charge plug

Battery Charger Tested:
Pass_____ Fail_____

Battery Charger Replaced
Yes_____ No_____

Sticker Updated_____
If Post April 2016 Design, Not Applicable, see above

5. Operation and Lock button

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	C	C	C	C	C	C

Required tools

-

- Check whether the back cover is not torn and still fits properly.
- Check operating panel for any damage.
- Check whether all the buttons are working (both left and right from the head support).
- Check all functions. Also pay attention to any noise (rattling /squeaking) and any jolting/faltering.
    - Fully up/down (controls switching off at maximum position).
    - Fully tilting.
    - Operation of lock button + LED + reset lock button.
- The chair should go into "sleep mode" when the charger is connected.
- Check functioning of lowering safety device.

Method:

- Put the chair on the brake.
- Block the downward movement of the chair by putting something (e.g. a beam) between the floor and the chair support / scissor mechanism, and check whether the chair switches itself off (you should hear a "click").
- Ensure that the downward movement stops.
- Check the left and right section of the scissor mechanism separately.

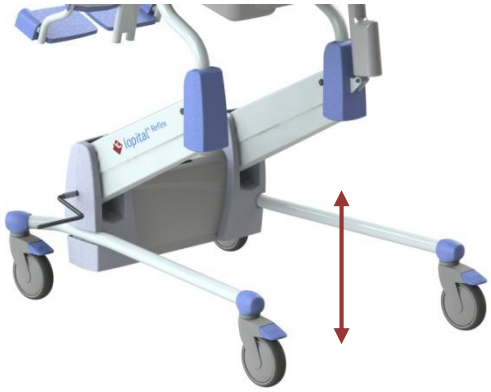

Figure 15

Operation Check Complete:
Pass_____ Fail_____

6. Wheels

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	C	C	C	C	C	C

Required tools

- Allen key 8mm

Figure 16 Wheel

Figure 17 wheel exploded

- Check the attachment of the wheel (Tolerance) _____
- Check freewheel function + brakes. _____
- Do all four the wheels touch the floor on a flat surface? If not, check the chair right course. _____
- Brake lip intact? _____
- Check the tread. _____

Replace the wheels if they are damaged or worn. Wheels Replaced Y____ N_____

Older wheels, before July 2014

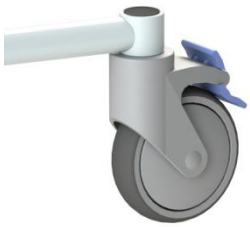

Figure 18 Wheel

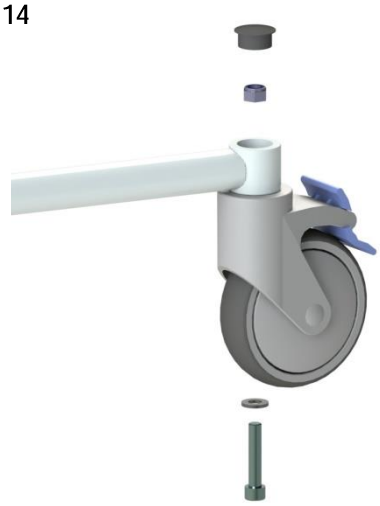

Figure 19 Wheel exploded view

Required tools

- Boxspanner 17 mm
- Allen key 8 mm

- Check the attachment of the wheel (Tolerance) _____
- Check freewheel function + brakes. _____
- Do all four the wheels touch the floor on a flat surface? If not, check the chair right course. _____
- Brake lip intact? _____
- Check the tread. _____

Replace the wheels if they are damaged or worn. Wheels Replaced Y____ N_____

Chairs that are made before July 2014 are equipped with steel wheel clots. For those clots we have a cover to protect against damage.

Place the cover on the steel wheel clots, is it is not done already.

- Remove the decorative plug
- Is there corrosion on the wheel clots?
- Remove loose corrosion with a wirebrush.
- Treat the wheel clots with rust converter Noverox.
- Paint the wheel clots.
- Let the paint dry.
- Place the cover over the wheel clots.

Required tools

- Plastic hammer
- Rust converter Noverox

Figure 20 Cover

Steel Clot Service Complete_____

7. Arm rests (front closure)

Month	12	24	36	48	60	72	84	96	108	120
	C	V	C	V	C	V	C	V	C	V

Required tools

- Allen key 6mm

- Inspect its functioning, and check for any damage, corrosion.
- Check its room for motion, measured at the front point (replace if it is more than 4 cm.) *(See figure 21).*
- Always treat corossion.
- Are the arm supports evenly positioned?
- Slide PUR back if necessary.

Arm Rest Check Complete_____

Bolts Replaced Y_____ N_____ Date_____

- The stainless-steel (A2) bolts should always be replaced by M8x12 DIN912 Zincflake.
- Fastly secure bolts. *(See figure 22)*

Replace bolts once every 2 years.

Look for an exploded view on www.lopital.nl

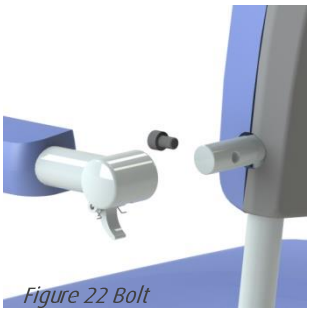

Figure 22 Bolt

Figure 21 Armrest

8. Chair support/scissor mechanism/main lever

Month	12	24	36	48	60	72	84	96	108	120
	C	VC	C	VC	C	VC	C	VC	C	VC

Required tools

- Crosshead screwdriver
- Spanner 8 mm
- Allen key 5 mm

Up to serial number RFL 080501099-CO:

- Check for any damages
- Check M6 bolt (head /nut sleeve) (under PUR cover).

Replace M5 bolts once every other year (at the top of chair support). *(See figure 23)*

If the holes in the chair support have been worn away to an extreme level, replace the bolts by brass tilting levers.

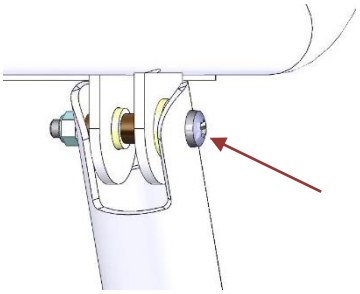

Figure 23 Bolt chair support

1. 1 Unscrew the bolt and remove all the bearings, including those from the chair frame.

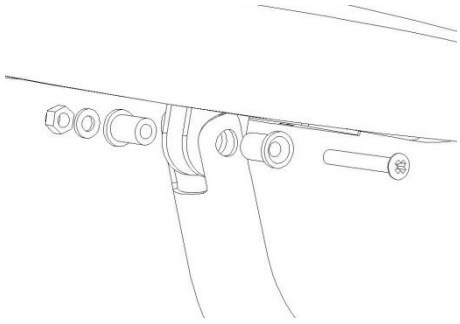

Figure 24 Mounting chair support

2. Drill the hole in the chair support to ø11.
   PLEASE NOTE: a cable runs through the left chair support!
   Remove all chips after drilling.

3. Fit the tilting bearings (70560028) into the chair support and the frame. Fit the bolt, washer and lock nut. M6x45 DIN966. Check whether the chair tilts smoothly.

From serial number RFL080501099-CO:

Required tools

- Crosshead screwdriver
- Spanner 8 mm

Chairs from serial number RFL080501099 have a chair support fitted with an axle and plastic sleeves.

The way in which the top hinge point in the chair support is services has changed, see next pages.

- Check whether the scissor mechanism and main levers leave any room for motion. Room for motion may occur on the left in particular. **When there is excessive room for motion, the part causing that room should be replaced.**
- This is necessary in order to maintain the structural quality. Whether or not there is excessive room for motion should be assessed by the mechanic.
- Check retaining rings (10 in total).

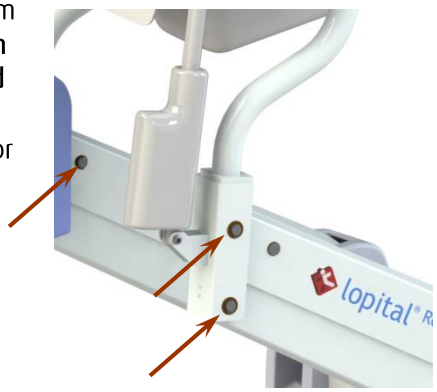

Figure 25 Axis, retaining rings en plastic bushes

Chair Support Inspection Complete_____

M5 Support Bolts Replaced Y_____ N_____ Date_____

Hinge point

Month	12	24	36	48	60	72	84	96	108	120
	S	S	V	S	S	V	S	S	V	S

Required tools

- Crosshead screwdriver
- Spanner 8mm

Endurance tests shows us that in the hinge point where the seat carrier and the seat frame are connected to each other, the brass bearing begin to show a groove wear after some time.

Therefore, this should be checked and lubricated bearing every year, and are **replaced every three years** to ensure the safety and quality.

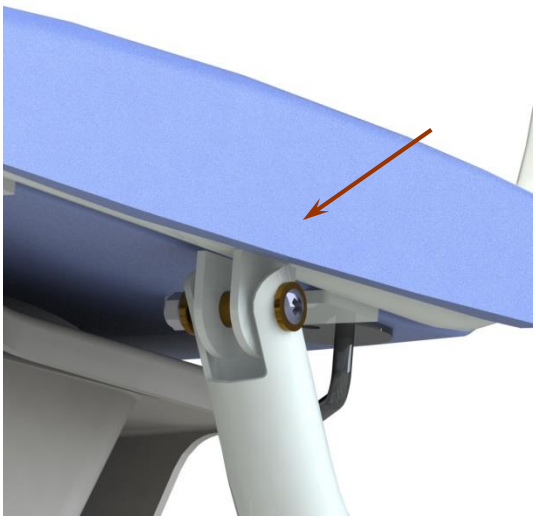

Figure 26 Hinge point

Hinge Point Bearing Inspected_____

Hinge Point Bearing replaced Y_____N_____

Date_____

9. Tilt actuator

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	C	C	C	C	C	C

Required tools

- Crosshead screwdriver
- Spanner 8mm

- Check actuator for any damage.
- Check cable for any damage.
- Check bolts + nuts.

Room for motion more than 5 mm: replace actuator. Don't test in top position *(See figure 27)*

Method:

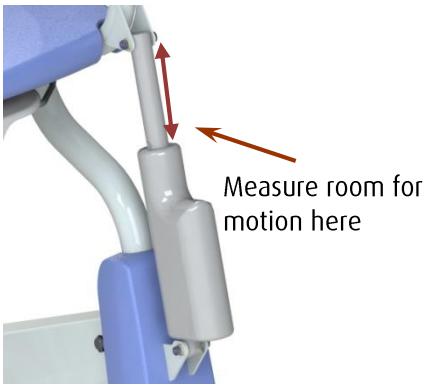

Figure 27 Room for motion

Figure 28 Tilt actuator

- Cut tiewrap.
- Unscrew screws.
- Detach plastic bearings.
- Detach actuator (NB: cable).
- Fit new actuator.
- Fit sleeve bearings.
- Tighten screws.
- Fit new tiewrap.
- Test tilting function.

Tilt Actuator Inspected_____

Pass_____ Fail_____

If Fail- Actuator replaced?
Yes_____ No _____

10. Leg/foot support

Month	12	24	36	48	60	72	84	96	108	120
	C	C	C	C	C	C	C	C	C	C

Required tools

- Allan key 4mm

- Check for any damage.
- Fold up foot plates (should be stiff and stay upright). (They should remain in the folded position, without falling back automatically)
- Are the foot plates evenly fitted and slanting upwards a little towards the middle?
- Is the leg support securely fastened at different heights? Try different heights.
- Is the tightening handle present? (Art. No. 70560009).
- Since August 2009, the tightening handle has been replaced by a new, black, aluminium grip, without a cover.
- Check M5x10 (bottom of plate), and replace stainless-steel bolts with ELVZ 8.8 bolts. *(See figure 29)*

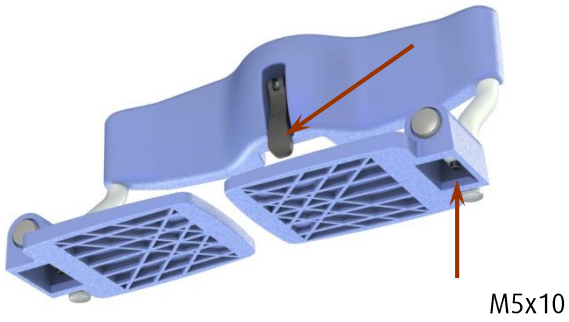

Figure 29 Foot rest

Foot Plate Inspected_____

Date /Time PM Completed_____

Reflex Serial Number_____

Replacement Date for Arm Rest Bolts _____

Replacement Date for M5 Bolts_____

Replacement Date for Seat Carrier Seat Hinge point bearing_____

Technition Signature