

# Invacare

## Refurbishment Guidelines

Invacare is pleased to present the guidelines for the refurbishment of ***Flo-tech, Essential, Propad Original*** and ***Propad Revolve*** cushion ranges, in preparation for re-use.



# Product Considerations

It is recommended that the re-use of cushions be considered at the point of purchase to ensure longevity of cushion stock.

## Features to consider include:

- ▶ Wipe-down cover
- ▶ Two way stretch PU vapour permeable outer cover
- ▶ Zip flap
- ▶ Platilon liner

These features will significantly reduce the risk of fluid ingress and provide protection for the foam core.

Black Smooth Ingress Resistant cover - Two way stretch vapour permeable cover treated with a fluorocarbon-based fluid repellent finish which allows fluid to "roll off" the cover. A welded zip flap is fitted as standard to reduce the risk of fluid ingress through the zip. A wipeable cover both black and coloured are also suitable to avoid ingress (see Fig. 1).

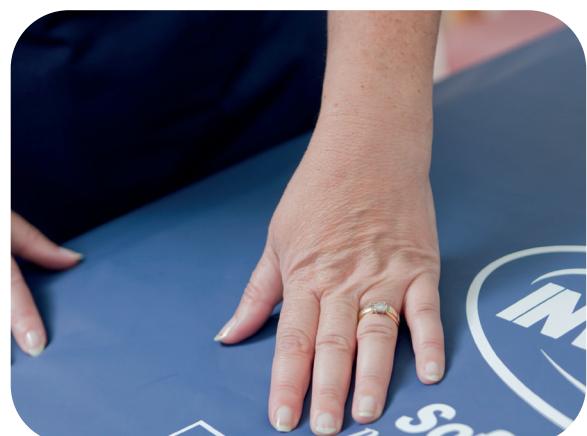
Platilon Liner - Green two way stretch inner cover that provides an additional layer of moisture protection.



**Fig. 1.** Ingress Resistant Material

## Cushion Use

To prevent accidental cover damage, do not place sharp objects onto the cushion. In domestic settings pets should be discouraged from sleeping on the cushion as clawing can puncture the cushion cover, allowing fluid ingress. Clients using the cushion should be advised that items such as keys in pockets may damage the cushion cover and increase their risk of pressure ulcers.



## Cleaning the Covers

(removal of contaminants such as dust and organic matter)

It is recommended that a solution of neutral detergent and hot water using a single use wipe is used to clean Invacare Cushions. Ensure that the cover is rinsed with clean water using a damp single use wipe and thoroughly dried.

The removable outer cover for **Matrix**, **Pro-pad**, **Flo-tech** and **Essential** cushions can be laundered at 80°C using a dilute detergent solution.



**N.B. After laundering of the Black Smooth Ingress Resistant cover, it is necessary to reactivate the fluorocarbon finish by tumble drying on a low heat setting. Other types of cushion cover should not be tumble dried.**

## Disinfecting the Covers

(reduction of the number of micro-organisms to a level not harmful to health)

Ensure that any residual detergent has been removed prior to disinfection. The cover can be wiped down with a 0.1% Chloride Solution (1,000 ppm). Alternatively, where required, a 1% Chloride Solution (10,000 ppm) can be used. Ensure that the cover is rinsed with clean water using a damp single use wipe, and thoroughly dried.

Where combined cleaning and disinfection products are used, ensure that the cover is rinsed with clean water or wiped with a damp single use wipe and thoroughly dried.

**N.B. An intact water-resistant outer cover and platilon liner should protect the cushion foam and gel on the Matrix, Pro-pad, Flo-tech and Essential cushion ranges from contamination and therefore it should not be necessary to separately disinfect cushion foams. Chloride Solution may discolour the foam surface and will not adequately disinfect areas inside the foam core. Contaminated cushion foams should not be re-issued.**

Do not use phenol's, alcohols or bleaches. Do not iron.



# Cushion Inspection

(See below check list)

1

## Check the label on the cushion matches the cushion type.

The cushion's name label should be on the front left- or right-hand side of the cushion cover (Fig. 2). Check that this matches the name of the cushion printed onto the back of the cushion foam.

**N.B. The use of a combination of cover and foam that are not from the same manufacturer, may affect the cushion's pressure care properties.**



Fig. 2. Cushion Name Label

2

## Check for cover damage.

Check the cushion thoroughly for signs of damage...

- a. Check the surface of wipe-down covers for a matt sheen or cracked areas that may indicate delamination from ageing, the use of incorrect cleaning fluids or abrasive cleaning techniques. If unsure, compare to a new cover or cover material swatch.
- b. Rips, tears, punctures or burns. If unsure, stretch the material and hold up to the light.
- c. Check stitching and welded seams are intact, especially around the zip area.
- d. Check for staining to the inside of the outer cover as this indicates ingress. Invacare cushions that are designed specifically for hospital use, i.e. Matrx and Flo-tech range with coloured covers and Propad Original, as well as Propad Revolve cushion covers, have a light coloured underside to the cover making it easier to identify fluid ingress.
- e. If concern remains regarding the integrity of the cushion cover, a water test can be carried out. Place a paper towel under the cover and pour a small amount of water onto the top surface of the cushion (e.g. using a medicine tot or similar receptacle). Using another couple of paper towels press down onto the top surface of the cover to absorb the water. Inspect the paper towel on the inside of the cushion cover. If dampening is present, ingress has occurred.

**3**

### Check platiol liner for evidence of rips, tears, punctures and burns.

N.B. Small manufacturing holes are normal and allow air to escape from the cushion when in use.

**4**

### Check date of manufacture.

On foam cushions, this should be printed on the back edge of the cushion foams and most cover labels (see Fig. 3 & 4). Take care not to confuse this with the fire standard compliance date (see Fig. 4).



Fig. 3. Barcode



Fig. 4. Cushion label

N.B. It should be noted that Invacare cushions carry the following warranties:

- ▶ **Flo-tech** – 3 years
- ▶ **Essential 3"** – 1 year
- ▶ **Essential 2"** – 1 year
- ▶ **Propad Original** – 1 year
- ▶ **Propad Revolve V** – 3 years
- ▶ **Propad Revolve Si** – 3 years

Under normal conditions a 5+ year lifespan is expected on Flo-tech cushions, and 3+ years on Essential, Propad Original, Propad Revolve V and Propad Revolve Si cushions. However, cushion lifespans vary from user to user, the level of use as well as the care and maintenance.



5

## Check gel sack

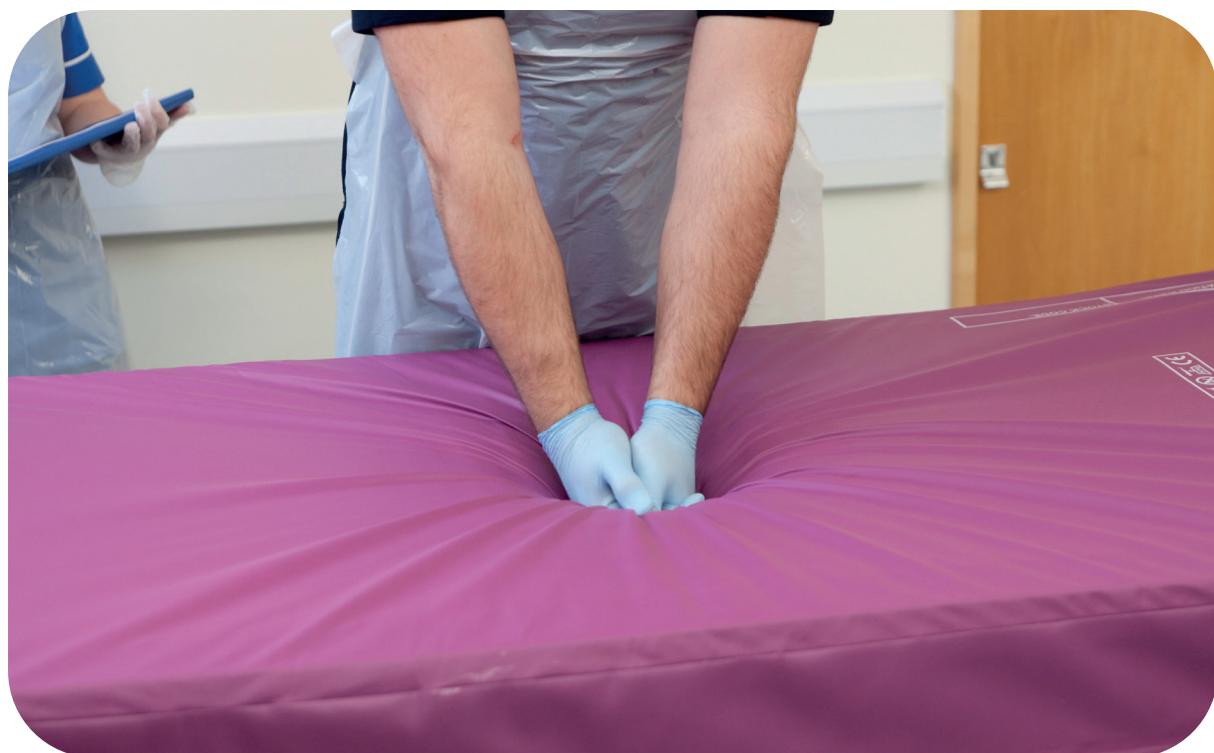
Any gel sack should be inspected for signs of leakage or flattening (loss of gel volume). Leaked silicon gel will appear white and sticky.

6

## Check foam

- a. Inspect the foam for any dampness or offensive smells which indicate contamination. Contaminated cushions should not be re-used.
- b. If the cover is damaged, it should be assumed that the foam is contaminated.
- c. Check the cushion continues to maintain its original shape. If unsure, check a new cushion as a benchmark. There should be no dips in the surface of cushions that are manufactured to be flat.
- d. Check the foam is still serviceable. Polyurethane Foam that has a low resistance should spring back readily, foam that only slowly regains its original shape after deformation is considered to be "dead" foam. To check this, you can carry out the fist test. This subjective test is intended to simulate the bony prominence of a light user, commonly used in mattress audits.
  - i. Make sure the top of the cushion is level with the tester's greater trochanter.
  - ii. Link hands to form a fist, keep elbows straight.
  - iii. Lean forward and push the fist into the cushion foam, using a similar amount of force as that used in CPR.

You should feel some resistance from the foam and when you release, the foam should spring quickly back into shape. A slow return to shape is normal for visco-elastic type foam (memory foam), however, they should return to shape within a couple of minutes of release. This test is only suitable for testing foam and is not intended to test gel.



**Fig. 5.** Fist test

## After Cleaning and Inspection

After cleaning and inspecting the cushion, ensure the cover is replaced the correct way around:

- ▶ **Propad Original** (Castellated Foam) - The Castellation should be on the top surface.
- ▶ **Flo-tech** (Anatomically Shaped Foam) – The shaped surface should be on the top surface with the thigh troughs at the front. The printed edge of the foam should be at the rear of the cushion.
- ▶ **Essential Visco** (Layered Foam) - The white visco-elastic foam layer should be face up.
- ▶ **Propad Revolve V** – Visco core insert can be placed into cushion cover in any direction.  
N.B. This is dependent on the ratio of the width to the depth.
- ▶ **Propad Revolve Si** – Silicone insert – insert can be placed into cushion cover in any direction.  
N.B. This is dependent on the ratio of the width to the depth.

All cushion cover name labels should be placed text upwards, with the zip positioned towards the back of the cushion.

**N.B. on the Flo-tech Solution Xtra, there is a label clearly indicating the back of the cushion and the zip runs across the front and sides of the cushion. The exception to this is cushions that have zips along 2 sides of the cushion – which can be placed in any direction.**



## Reference

Department of Health Circular. Decontamination of Equipment Prior to Inspection, Service or Repair.  
DOH HSG (93)26. June 1993.  
MHRA - DB2006(05) Managing Medical Devices

**Invacare UK & Ireland**  
**Pencoed Technology Park Bridgend**  
**CF35 5AQ - United Kingdom**  
**Tel: +44 1656 776 222**  
**E-mail: [uk@invacare.com](mailto:uk@invacare.com)**  
**[www.invacare.co.uk](http://www.invacare.co.uk)**

