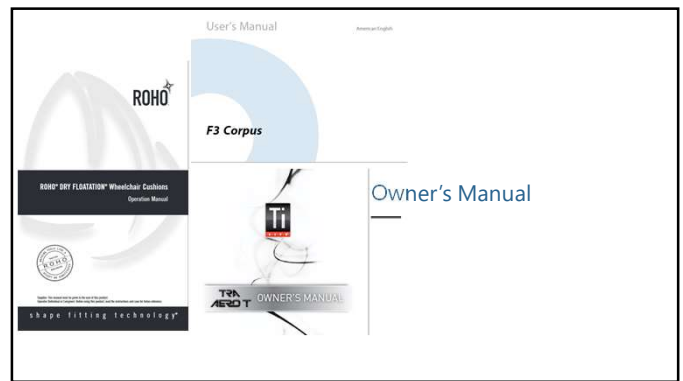
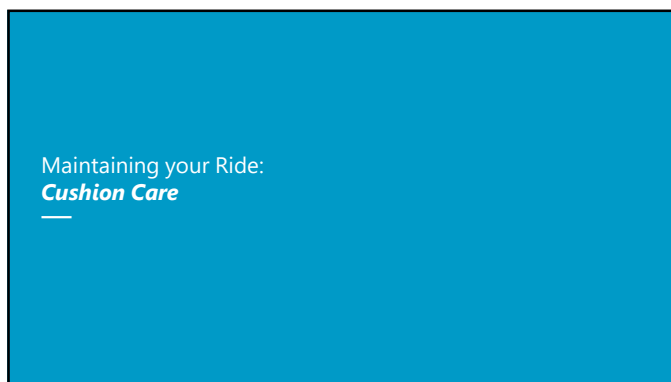


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List N: Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2  
Date Accessed: 04/14/2020

EPA Registration Number	Active Ingredient(s)	Product Name	Company	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)	Formulation Type	Surface Types for Use	Use Site	Emerging Viral Pathogen Claim?	Date Added to List N
70144-2	Quaternary ammonium; Isopropanol	Opti-Cide 3B Wipes	Micro-Scientific LLC	Rotavirus; Rhinovirus	3	Wipe	Hard nonporous	Healthcare; Institutional	Yes	04/09/2020
1677-259	Dodecylbenzenesulfonic acid; Lactic acid	CW32A-RTU	Ecotab Inc	Norovirus	0.5 (30 seconds)	RTU	Hard nonporous	Healthcare; Institutional; Residential	Yes	04/09/2020
1677-260	Dodecylbenzenesulfonic acid; Lactic acid	S&S Sanitizer	Ecotab Inc	Norovirus	0.5 (30 seconds)	Dilutable	Hard nonporous	Healthcare; Institutional; Residential	Yes	04/09/2020
91899-2	Hydrogen peroxide	MDF-200 Part B	Span-World LLC	Feline calicivirus	10	Dilutable	Hard nonporous	Healthcare; Institutional	Yes	04/09/2020

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Included a PDF in the handout tab of the webinar  
Current as of: April 14, 2020

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#### 1 Cleaning the ROHO Cushion Cover



Remove the cushion from the cover. If you have the optional hook and loop fasteners attached, remove them from the cover.



Machine wash on the gentle cycle in cold water with mild detergent, or wash by hand with neutral detergent and warm water.



Tumble dry on low or no heat, or hang to air dry.

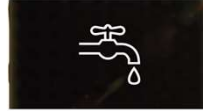
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#### 2 Disinfecting the ROHO Cushion Cover



Machine wash on the gentle cycle in hot water with mild detergent, or hand wash in warm water with a mixture of 9 parts water: 1 part bleach.



Rinse with fresh water.



Tumble dry on low or no heat, or hang to air dry.

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#### 3 Cleaning the ROHO Cushion



Close the valve(s).



Begin by rinsing and removing anything between the cushion cells.



Take care while cleaning. If a substance has dried on the cushion and sticks cells together, do not attempt to separate the cells when they are dry. This may damage the cushion.

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Check the valve(s) to make sure it is still closed. Place in a large sink. A clean shower or a tub is also acceptable. Do not allow water or cleaning solution to enter the product.

Hand wash the cushion using a mild dishwashing liquid or laundry detergent.

Use a soft plastic bristle brush, sponge or washcloth to gently scrub all cushion surfaces.

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#### 4 Disinfecting the ROHO Cushion



Repeat previous cleaning instructions using a solution of 9 parts warm water: 1 part household bleach. Most germicidal disinfectants are safe if the manufacturer's dilution directions are being followed.



Keep the clean product wet with bleach solution for 10 minutes, then rinse thoroughly with fresh water.



Hang the cushion to air dry completely.

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Once the cushion and cover are both dry, replace the cushion inside the cover. Use the directional labels on the side of the cushion cover to be sure the cushion is inserted correctly.


Zip the cover and place the cushion on the wheelchair. Again, refer to the directional labels on the side of the cushion cover to be sure it is placed properly on the wheelchair.

**Note:** Follow cushion setup instructions in the product operation manual provided with the cushion.


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### Handwashing foam cushion



- Damp cloth
- Do NOT use soap



- Air dry



**Please note**  
Disinfectants are not effective on porous surfaces such as foam

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### Disinfecting shell & hardware



- Household disinfectant
- Wipe with dampened cloth



- Rinse with clean water



- Wipe dry with cloth



- Air dry



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### Maintaining your Ride: *Wheelchair Care and Maintenance*

18

**Merriam-Webster**  
M-W.COM

**clean** adjective  
ˈkliːn

**Save Word**

**First Step: Cleaning**

**Definition of clean (Entry 1 of 4)**

**1 a** : free from dirt or pollution  
// changed to clean clothes  
// clean solar energy

**b** : free from contamination or disease  
// a clean wound

**c** : free or relatively free from radioactivity  
// a clean atomic explosion

#### Handwashing the hardware



- Warm water
- Dish Soap
- Sponges



- Rinse thoroughly with clean water



- Wipe dry with a clean cloth



- Air dry



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### Handwashing powered wheelchairs



- Hot water
- Mild detergent
- Sponge



- Rinse thoroughly with clean water



- Wipe dry with a clean cloth



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**disinfect** verb

Save Word

dis·in·fect | \,dis-in-'fekt |

disinfected; disinfecting; disinfects

**Second Step: Disinfecting**

**Disinfecting shell & hardware**

- Household disinfectant
- Wipe with dampened cloth
- Rinse with clean water
- Wipe dry with cloth
- Air dry

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**Disinfecting shell & hardware**

- Household disinfectant
- Wipe with dampened cloth
- Rinse with clean water
- Wipe dry with cloth
- Air dry

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**maintenance** noun

Save Word

main·te·nance | \ 'mānt-nānt(t)s | 'mān-tā-nānt(t)s |

**Definition of maintenance**

- the act of maintaining; the state of being maintained; SUPPORT  
// The building has suffered from years of poor maintenance.
- something that maintains  
// at least half of them are living parasitically on the other half instead of producing maintenance for themselves  
— G. B. Shaw

**New Step: Maintaining**

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**What to Do?**

Clean Power Wheelchairs Often

Tighten Hardware: Headrest Seating Components

Adjust as Needed

Inspect for Wear & Tear

Inspect Cushions and Backrests

Be Proactive with Replacement Components, including batteries

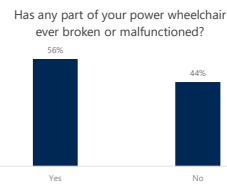
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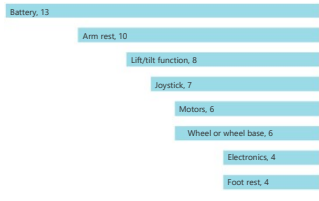
Maintenance and inspection schedule	Daily	Weekly	Monthly	Yearly
Check battery level indicator and charge if necessary.	✗			
Check that the joystick panel and other control panels are not damaged.	✗			
Make sure all removable parts are securely fastened.	✗			
Check positioning belts for wear and make sure buckles work.	✗			
Check tires and inflate as necessary.		✗		
If the wheelchair is equipped with lights and turn signals, make sure they are operational and clean.		✗		
Clean the wheelchair and upholstery.			✗	
Check upholstery, seating, headrest, arm pads and calf pads for wear.			✗	
Check that the brake release and the brake release lever work properly.			✗	
Complete inspection, safety check and service performed by an authorized wheelchair dealer.				✗

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### 56% of PWC users have had parts of their power wheelchair break or malfunction



Which part broke or malfunctioned most recently?



Online survey conducted in 2017 by PatientsLikeMe on 121 Power Wheelchair Users diagnosed with ALS, MS or SCI.

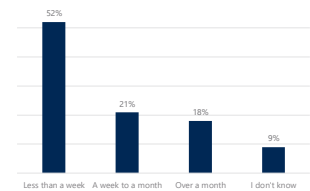
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### Half of PWC users could not use their chair at all because of the broken part

For how many days were you without the use of your power wheelchair when it broke down most recently?

Did this broken part completely prevent you from using the PWC? (n=68)	
Yes	33 (49%)
No	35 (51%)



Online survey conducted in 2017 by PatientsLikeMe on 121 Power Wheelchair Users diagnosed with ALS, MS or SCI.

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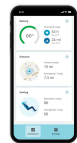
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### MyPermobil mobile application



Activation

Connectivity function needs to be activated in order to be able to use MyPermobil



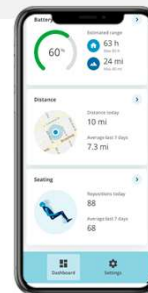
**MyPermobil**  
App that helps end-users to get the most out of their Permobil power wheelchair by providing continuous real-time information

**ConnectMe**  
Hardware unit mounted in chassis of all new M & T Corpus/Corpus VS models in US & Canada since mid-Dec 2017 (turned-off by default)

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### MyPermobil Features: <https://hub.permobil.com/mypermobil-2.0>



- Continuous real-time information
- Reliable and Permobil exclusive battery concept
- Current battery charge in %
- Battery travel range estimates (in hours and distance)
- Integrated map illustrates daily and historical travel behavior
- Seating activity tracking

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### Maintenance adverse effects

- 44.8% of full-time wheelchair users performed at least 1 wheelchair repair in a period of 6 months
- 8.7% experienced an adverse consequence resulting from a wheelchair breakdown. (being stuck in bed)

McClure et al (2009)

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### What to Do?

Clean Manual Wheelchairs Often

Tighten Hardware: Seating Components  
Caster/Forks

Adjust as Needed  
Wheel Locks  
Tire Pressure

Inspect for Wear & Tear

Inspect Cushions, Seat Sling and Backrests

Proactive Replacement  
Tires & Casters  
Upholstery

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## CHAPTER 2: SAFETY INSPECTION, MAINTENANCE & TROUBLESHOOTING

Inspection Item	Initially	Weekly	3 Months
<b>Rear Tires</b>			
• Check for proper inflation as per sidewall of pneumatic tire	✓	✓	
• Inspect for cracks, wear and flat spots	✓	✓	
<b>Camber Tube/Axle Sleeves</b>			
• Make sure camber plug clamps are securely tightened	✓	✓	
• Make sure camber plugs are secure in camber plug clamps and axle sleeves are secure in camber plugs	✓	✓	
<b>Handrims</b>			
• Inspect for signs of rough edges or peeling	✓		✓
• Make sure handrims are securely attached to rim	✓		✓

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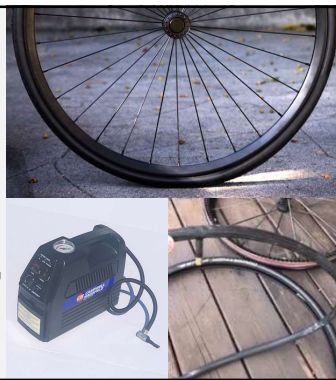
Inspection Item	Initially	Weekly	3 Months
<b>General</b>			
• Make sure chair rolls straight (does not drag or pull to one side)	✓	✓	
• Inspect for loose/missing/broken/worn/damaged hardware	✓	✓	
<b>Rear Wheels</b>			
• Inspect for cracked, bent or broken spokes	✓	✓	
• Make sure all spokes are uniformly tight	✓		✓
• Inspect hubs and rims for cracks and wear	✓	✓	
• Inspect for "trueness" (excessive side movement when wheel lifted and spun indicates lack of "trueness")	✓		✓
<b>Quick-Release/Quad-Release Axles</b>			
• Make sure axles are free of dirt and lint	✓		✓
• Wipe axle with cloth using either a "dry" silicone spray or a "dry" Teflon®-based lubricant	✓	✓	✓
• Make sure that axles lock properly in axle sleeve			

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### Rear Tires

- pressure checks are very important:
  - Low pressure robs performance
  - Increases tire wear
  - Can be a safety issue with wheel locks functioning
- wear patterns
  - Toe in will wear the outside edges of the tires
  - Toe out will wear the inside edge
- solid tire vs pneumatic



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### Rear Tires

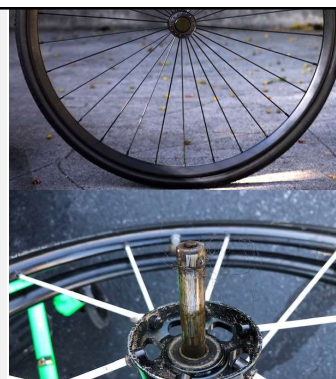
- travel tips
  - manual air pump
  - tire levers
  - tube patch kit



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### Rear Wheels

- slop in axles
- quick release button functioning
- bearings (missing)
- bearings spinning properly
  - hair in bearings
  - oil
  - damaged bearing shield



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### Center Of Gravity (COG)

- camber tube clamp
  - don't over tighten (carbon fiber)
  - check alignment (flat section perpendicular to ground)
  - bracket to frame
    - loose or missing screws
    - excessively worn?
    - replace bumper



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### Caster Tires

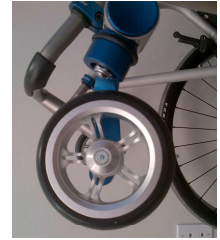
- excessive wear on tires



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### Caster Wheels

- bearing issues  
hair, needs oil, bearing seals
- loose axles  
missing screws  
hardware loose



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### Caster Forks

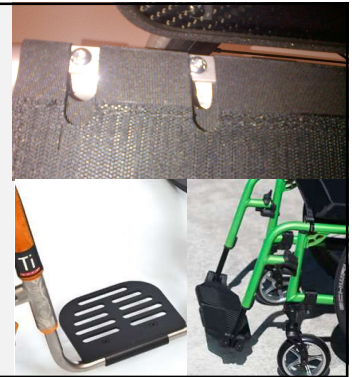
- loose forks  
bearing maintenance  
oil them  
replace if needed
- forks not spinning freely  
overtightened fork stem unit  
bent fork stem



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### Frame Components

- upholstery: seat or back  
screws  
frayed seat  
sagging sling
- footrest  
angle adjustment loose  
footrest clamps loose



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### Frame Accessories

- side guard brackets  
rattling/rubbing
- wheel locks  
adjusted correctly
- armrests  
brackets  
height adjusted  
armrest pads tight



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### WC User's Responsibility

"CMS considers it reasonable to expect that beneficiaries will perform the maintenance."

University of Pittsburg, 2017  
<http://www.upmc-sci.pitt.edu/wmtp-landing>

### Responsibilities of User

- Read and use the owner's manual
- Perform routine maintenance
- Cleaning
- Tighten wheel locks
- Tighten loose bolts and nuts



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## Provide Client Education

"Contact your supplier or manufacturer to determine the appropriate maintenance to keep your mobility device in good working order."

University of Pittsburgh, 2017  
<http://www.upmc-sci.pitt.edu/wmtp-landing>

### Education on routine maintenance

- Cleaning the chair
- Basic maintenance
- Tightening the wheel lock
- Loose bolts or nuts



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University of Pittsburgh

University of Pittsburgh  
Model Center on Spinal Cord Injury

Home About People Research Living with SCI Collaborators and Partners

## Wheelchair Maintenance Training Program

<http://www.upmc-sci.pitt.edu/wmtp-landing>

(Google: wheelchair maintenance training program)

UPMC-SCI  
University of Pittsburgh  
Model Center on  
Spinal Cord Injury

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## Web-Based Maintenance Training



Thank you for visiting our page on web-based maintenance training!

<http://www.upmc-sci.pitt.edu/wmtp-landing>

(Google: wheelchair maintenance training program)

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## Wheelchair Maintenance Training Program

Thank you for your interest in our wheelchair maintenance training materials. Below you will find materials designed for clinicians to teach wheelchair users how complete maintenance on their wheelchairs.

- Clinician reference manual (Español)
- Hands-on activity checklist for manual (Español) and power wheelchairs
- Maintenance cards for manual and power wheelchairs
- Powerpoint presentations for manual (Español) and power wheelchairs
- Manual wheelchair video (Español)
- Power wheelchair video
- Recordatorios en Español

If you have questions about these materials, please [contact us](#).

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Spinal Cord Injury

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 HERL Newsletter

 Rehab progress

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Thank you

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