

Manual Wheelchair Maintenance Guide

A USER-FRIENDLY GUIDE TO
LEARNING HOW TO MAINTAIN
YOUR MANUAL WHEELCHAIR



-- DISCLAIMER --

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**Contact Manitoba Wheelchair Program to request a
full reference list for this resource**

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Introduction

Manitoba Possible

Manitoba Possible provides wheelchairs to community-dwelling Manitobans through a provincial wheelchair loan program called the **Manitoba Wheelchair Program (MWP)**.

Why maintain your manual wheelchair?

If your wheelchair is not maintained:

- You are at increased risk of injury from a wheelchair-related accident
- You may miss work, school, or appointments if your wheelchair is not working properly
- Your mobility and ability to participate in activities may be limited

The benefits of a well-maintained wheelchair include:

- Reduced risk of your wheelchair breaking down
- Increased safety and comfort when using your wheelchair
- Maintaining your freedom and independence

Your MWP wheelchair loan agreement identifies that you are responsible for maintaining your wheelchair

Who can do wheelchair maintenance?

Wheelchair users, caregivers, friends, and family can all do maintenance. Keep detailed records of any maintenance done to your chair.

Being educated about wheelchair maintenance is even more important if you live where there is limited access to repair services

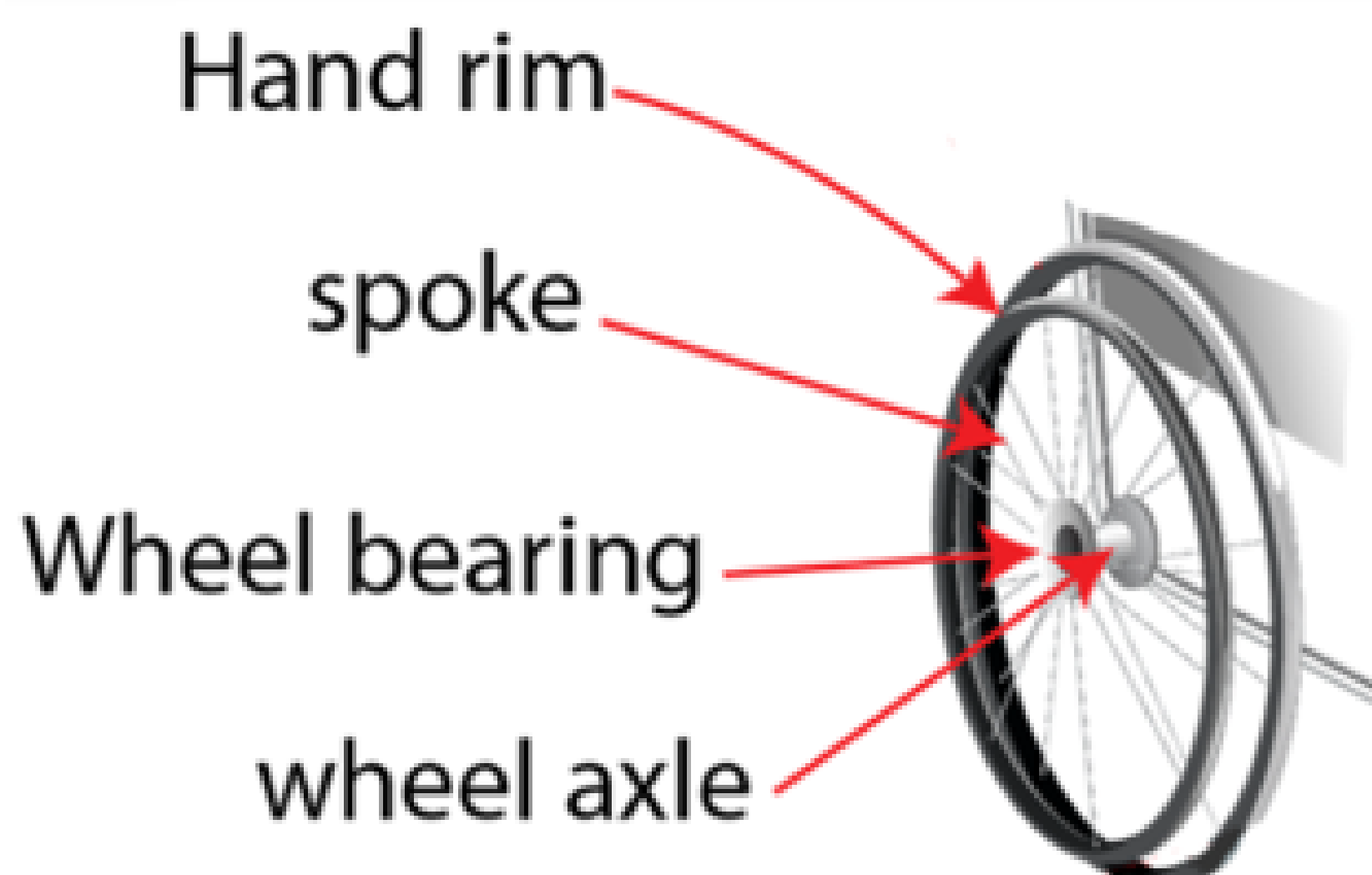
Do not do any maintenance tasks or repairs beyond your skill set; instead, contact the MWP.

Wheelchair Pictures

PARTS OF A WHEELCHAIR



PARTS OF THE DRIVE (REAR) WHEEL



Checklist

The following checklist is intended to help you manage daily, weekly, monthly, and yearly routine inspection and maintenance tasks on your wheelchair. If you notice any issues with your wheelchair while going through the checklist, refer to the **Wheelchair Parts** section that follows: it will provide you with detailed step-by-step instructions for conducting specific wheelchair maintenance tasks on various wheelchair components.

Checklist legend:

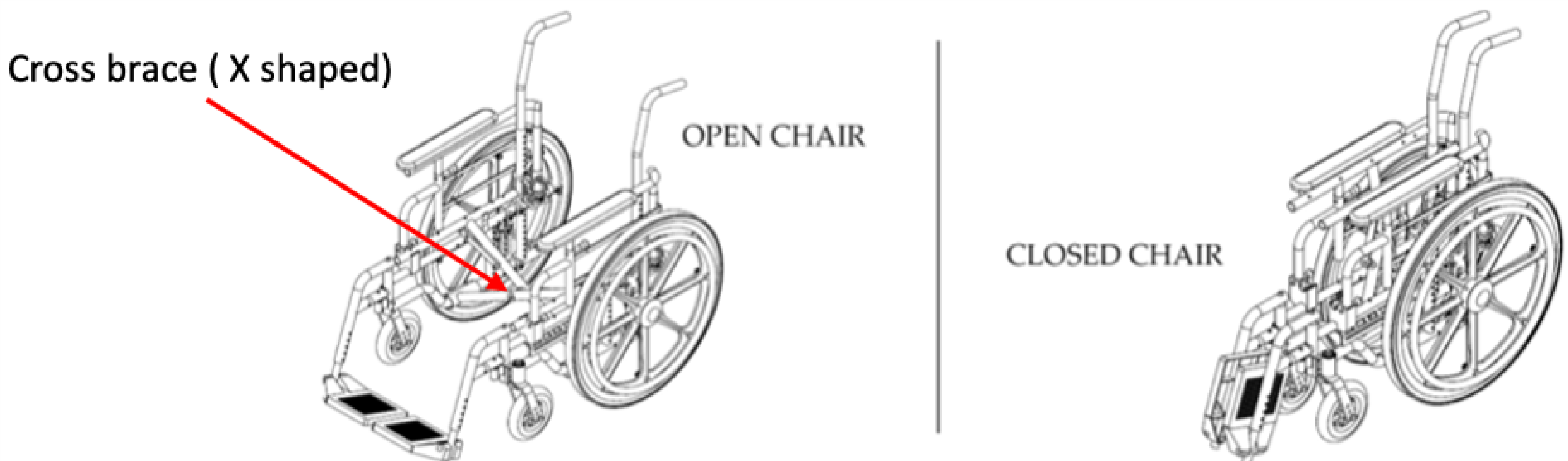
D = Daily W = Weekly M = Monthly Y = Yearly

Wheelchair Part	Maintenance Task	D	W	M	Y
Frame	Check the entire wheelchair frame for cracks			X	
	Clean the wheelchair frame			X	
Drive Wheels	Inspect for flat spots	X			
	Ensure the wheels roll smoothly	X			
	Ensure the hand rims do not have rough edges	X			
	Ensure the wheels point straight forward (not in or out)			X	
	Ensure the bearings are functioning smoothly			X	
Casters	Ensure that both casters are evenly touching a flat surface	X			
	Remove hair and debris			X	

Wheelchair Part	Maintenance Task	D	W	M	Y
Seat	Clean the seat and cushion		X		
Wheel locks	Ensure wheel locks firmly contact with the drive wheels		X		
Armrests, leg rests and footplates	Inspect the armrests for any sharp edges			X	
	Ensure the leg rests and arm rests swing away easily		X		
	Ensure the footplates lock securely in place		X		
Backrest	Check backrest upholstery for tears, rips, or damage	X			
Anti tippers	Ensure the anti-tippers are in place (if appropriate)	X			
	Ensure the anti-tipper wheels roll easily and the locking pins click in place		X		
Whole wheelchair	Wipe off any debris	X			
	Inspect for wear and tear and signs of damage	X			
	Check for vibrations and irregular noises	X			
	Inspect for loose nuts and bolts			X	
	Lubricate all pivot points of the wheelchair				X
	Have the wheelchair inspected by MWP every 2 years				X

Frame

What To Look For	What To Do
Inspect the frame for any cracks.	If there are cracks, contact MWP
Dust or dirt on your wheelchair.	Wipe down the entire frame with a clean damp soft cloth. A mixture of dish soap and water is recommended. Use an old toothbrush for cleaning hard-to-reach spots. Do not use a power washer or hose. Do not use sharp or pointed tools as this can cause damage.
Rust on the frame.	Keep your wheelchair indoors or in a dry spot; do not leave it outside in the rain to avoid rust and damage.
Check if your wheelchair can open and close easily. See the diagram below for what this should look like.	If unable to fold your wheelchair, lubricate the cross brace. An oil, silicone, or Teflon-based spray is recommended. If your wheelchair is still unable to fold, contact MWP.



Drive Wheels

Wheelchair Part	What To Look Out For	What To Do
Hand rims (also called push rims)	Look for dents or scratches.	If present, contact MWP.
	Check if the bolts that hold the hand rim to the wheel are loose.	If loose, tighten bolts using an open-end wrench or screwdriver. Do not remove the hand rims from your wheelchair. If bolts are missing or you are unable to tighten them, contact MWP.
Spokes	Check for broken or loose spokes by squeezing two spokes together comparing tightness. The spokes should not be wobbly and should make a "ping" noise when squeezed (like a guitar string). If a spoke is loose, it will vibrate or make a dull sound.	If a spoke is loose, it needs to be tightened using a special spoke wrench. Do not try this yourself. Contact your local bicycle shop or MWP to have loose or broken spokes repaired.
Wheel Alignment	Ensure the chair rolls straight and listen for any squeaky sounds when you are turning in the wheelchair.	Have someone push and release the wheelchair (without anyone sitting in it) through a puddle of water, letting it coast. See if the water lines left by the wheelchair are straight. If they start to turn, there may be many reasons for this and you should contact MWP.

Wheelchair Part	What To Look Out For	What To Do
Regular (fixed) and Quick Release (removable) Axles	Check for dirt/hair in the axle.	Using tweezers or pliers, carefully remove the dirt/hair. Clean and dry the axle using a Teflon-based spray. If unable to remove dirt/hair, contact MWP.
	Hold the wheel in the hub and slowly wiggle it in all directions, checking how much it moves.	For a regular (fixed) axle, there should be no movement . For quick-release axles, a little bit of movement is all right. If there is too much movement, contact MWP.
	For quick-release axles, check if the wheel can be taken out and put back into the hub smoothly and stays in place once in the hub.	If the wheel does not slide in and out smoothly or doesn't stay in place, the axle might not be working properly and you should contact MWP
	Listen for knocking or squeaking when you push the wheelchair. It may only happen at certain speeds but can get worse over time.	Lift one side of the wheelchair off the ground, spin the wheel, and let it come to a stop. If it stops very quickly, the axle may be too tight. If it stops and then spins backward, it may be too loose. Click on this video link to see how to adjust it (watch from 3:15 to 4:44) If you are unable to adjust it, contact MWP.

Wheelchair Part	What To Look Out For	What To Do
Pneumatic Tires	<p>Check your tires for air loss if the wheelchair is difficult to push or the wheel locks don't hold properly. Push your thumb firmly into the tire and see how far you can push: if the tire compresses more than the thickness of three pennies (1/4" or 5mm), it may be low on air. You can also check this with a tire pressure gauge (if you have one).</p>	<p>A tire low on air can be inflated it using a tire pump or compressor; the recommended tire pressure is printed on the sidewall of the tire. Do not use the air pumps at a gas station - the pressure is too high and can cause your tire to explode. If you don't feel comfortable inflating the tire yourself, take it to your local bicycle shop to have it inflated to the correct pressure.</p>
	<p>Check for a flat tire.</p>	<p>If the tire is flat and won't stay inflated, the inner tube must be repaired or replaced. You can take it to your local bicycle shop. MWP can replace tubes at the Winnipeg warehouse (by appointment only) with a service charge for the parts.</p>
	<p>The Manitoba Possible Pneumatic Tire Agreement can be found by clicking this link.</p>	
Solid Tires	<p>Check if tires are dirty or cracked.</p>	<p>Wipe down tires with a thick brush or microfiber towel and mild soapy water to remove any dirt. If cracks are observed in the tread, contact MWP.</p>

Casters

Wheelchair Part	What To Look Out For	What To Do
Casters	Check for dirt, dust or debris.	<p>Many casters have a bolt and nut holding the axle in place. Using two wrenches, hold the bolt securely and undo the nut. Pull the axle bolt out - the wheel and spacers/washers will come out of the caster fork. Clean the spacers and caster wheel as described for the rear wheels. Slowly push the bolt through the fork; slide one spacer onto the bolt, then the caster wheel, then the second spacer, and finally guide the axle bolt through the other side of the fork. You can then tighten the nut.</p> <p>Click on this link for a video (from 4:46 - 6:50) about removing the caster.</p>
	Noise coming from the casters. This may be a sign of a caster bearing breakdown.	If you hear knocking, squealing, or squeaking from the casters, contact MWP .
	If your caster wheels are not spinning.	<p>Lift up one side of the wheelchair, spin the caster wheel, and let it come to a stop. If it stops too quickly, the bearings might be too tight. If it stops and then spins backward, it may be too loose.</p> <p>Use two wrenches to loosen or tighten the nut as described above.</p>

Seating

The **seating** on your wheelchair includes any **seat cushion** and **backrest** other than the upholstery (back and seat) on the wheelchair frame. The MWP does not supply seat cushions or backrests as part of the wheelchair loan program; you must purchase these separately from a private vendor or another source. If you notice any issues with your seating (seat cushion or backrest), contact the vendor from whom you received the seat cushion and backrest. The vendor's name is often labeled somewhere on the seat cushion or backrest.

Wheel Locks

Wheelchair Part	What To Look Out For	What To Do
Tires	Inspect the tires for wear and tear and correct inflation pressure.	If there is significant wear and tear, contact MWP. If tire pressure is low, inflate as described in the Wheels section.
Wheel locks (also called brakes)	<p>Activate the wheel locks and check if they hold the tires so they don't move.</p> <p>Ensure the wheel locks are securely attached to the frame.</p> <p>When activated, the wheel locks should press into the tire surface about 1/8" to 1/4" deep.</p>	<p>To adjust the wheel lock :</p> <ul style="list-style-type: none"> • The only tool required is the proper size Allen key. • Find the bolts on the wheel lock bracket that attach to the frame. • Loosen the two bolts just enough that you can slide the wheel lock without removing it from the frame. • Reposition the wheel lock so it tightly grips the wheel, without being too difficult to engage. • Confirm the desired location and then tighten the bolts.



Armrests

Wheelchair Part	What To Look Out For	What To Do
Armrests	<p>Ensure the armrests easily secure, release (if applicable), reposition, return, and latch in place.</p> <p>Look out for any sharp edges that could pose a safety hazard.</p>	<p>If you observe any loose parts, securely tighten any bolts or screws on the armrests</p> <p>Lubricate any moving parts of the armrest. An oil, silicone, or Teflon-based spray is recommended.</p> <p>If the armrests are not working properly, contact MWP.</p>



Leg Rests and Footplates

Wheelchair Part	What To Look Out For	What To Do
Leg rest	Check if the leg rests can be properly secured and easily swing away and remove (if applicable).	Use tools such as a screwdriver, wrench, or Allen key to tighten any loose parts. Contact MWP for improperly functioning leg rests and footplates.
Footplates	Ensure the footplates can be flipped up and down when the wheelchair is folded. Inspect the swing-away footplates for wear or other damage.	



Backrest

Wheelchair Part	What To Look Out For	What To Do
Upholstery backrest	<p>Check for signs of wear and tear, and stretched upholstery.</p> <p>Check for protruding metal parts.</p> <p>Inspect all the rivets or screws to ensure they are not tearing the upholstery. Loose upholstery may not provide you with adequate support, leading to poor posture and discomfort.</p>	<p>If any of these issues arise, contact MWP to have the upholstery repaired or replaced.</p>

Anti-tippers

Wheelchair Part	What To Look Out For	What To Do
Anti tippers	<p>Ensure the anti-tipper pins press and release easily, and you can secure or remove the anti-tippers.</p> <p>Ensure the anti-tipper wheels roll smoothly.</p> <p>Ensure the anti-tipper wheels do not produce any squeaking or dragging sounds.</p> <p>Inspect the anti-tipper wheels for any signs of cracking or excessive wear.</p>	<p>Use an Allen key to tighten any screws on the wheels until they are snug but can still turn.</p> <p>If you detect any issues, contact MWP to repair or replace the anti-tippers.</p>



Tools

Allen Keys

- Used to tighten or loosen hexagonal bolts or hexagonal screws.
- Allen keys come in sets with different sizes, both imperial (inches) and metric (mm).
- Other names: Hex keys or Allen wrenches.
- Click on [**this link**](#) for more information on Allen keys.



Hex bolts



Hex nuts



Set of Allen Keys

Wrenches

- Used to tighten or loosen fasteners or hex nuts.
- Wrenches do the same job as a ratchet or socket (as mentioned on the next page).
- They come in sets with different sizes, both imperial (inches) and metric (mm).
- There are different types of wrenches:
 - Open-ended wrenches: open on both ends that fit around the nut/fasteners
 - Close-ended wrenches: closed on both ends. These are also called box-end wrenches.
 - Combination wrenches: open on one end, closed on the other end.
 - Adjustable wrenches: moveable jaw that can be adjusted to any size. They are also called crescent wrenches.



Open- ended wrench



Close- ended wrench



Combination wrench



Adjustable wrench

Tools

Socket Wrenches

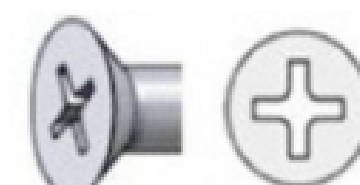
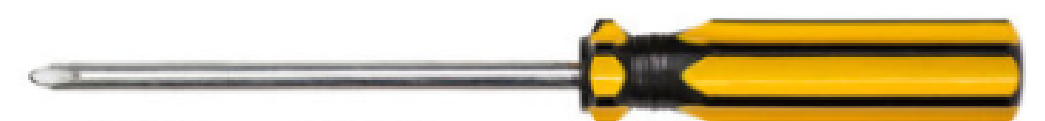
- Used to tighten or loosen fasteners or hex nuts.
- Socket wrenches do the same job as regular wrenches but also have a "ratcheting" mechanism that lets you tighten or loosen a nut without having to lift the tool after each turn - a regular wrench needs to be lifted and repositioned after every turn.
- Socket wrenches make the job easier and faster, especially in tight spaces.
- CAUTION: Socket wrenches can over-tighten a nut (compared to a regular wrench) which can cause damage.
- Socket wrenches come in sets with different sizes, both imperial (inches) and metric (mm)
- Other names: ratchets or ratcheting wrenches.
- Click on [**this link**](#) for more information on socket wrenches.



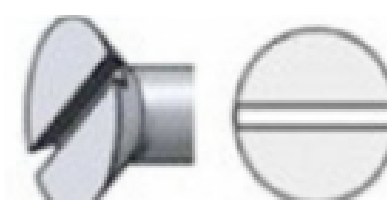
Socket wrench and set of sockets

Screwdrivers

- Used to put in or take out screws.
- There are many different types of screwdrivers, but the most common ones are:
 - Phillips - also called cross-head. They are used for screws with a cross-shaped slot at the top.
 - Flathead - also called slot screwdrivers. They are used for screws with a slot shaped like a line at the top.



Phillips screwdriver and screws



Flathead screwdriver and screws

Manitoba Wheelchair Program Contact Information

Toll-Free: 1-800-836-5551

MB residents only

Monday - Friday (8am - 4pm)

Emergency repair line: 204-975-3250

Winnipeg, Middlechurch & St. Norbert residents only

Monday - Friday (4pm - 8pm)

**Youtube channel: Manitoba Possible
@TheSmdfoundation**

[https://www.youtube.com/playlist?
list=PLUUKqRwSwejl0_Z9frGtuS2ewNjuLupu6](https://www.youtube.com/playlist?list=PLUUKqRwSwejl0_Z9frGtuS2ewNjuLupu6)



Scan this with the camera on your phone or tablet.
Tap on the link that appears to go directly to the website!

<https://www.manitobapossible.ca/wheelchair-services>

Call log

This log is provided to track any contact you have with MWP.

Date	Purpose of call	Details of call