

WHEELCHAIR REFURBISHING CHECKLIST

DATE:		
WHEELCHAIR MODEL:		
WHEELCHAIR SERIAL NUMBER:		
RETURNED FROM:		
	YES	NO
1. Clean and disinfect the chair in the Aqua Phase.		
2. Now observe the chair.		
a. Does the chair have both footrests?		
1. Are they fully functional?		
2. Do they flip up?		
3. Do heel or toe straps need to be replaced?		
NOTES:		
3. Examine the front wheels, axles and bearings.		
a. Spin front wheels to make certain they are turning smoothly.		
b. If you notice that the wheel is not spinning freely, remove the wheel and use your finger to turn the bearings to feel for a 'catch' – or perhaps the bearings will not turn at all. If you note much of a 'catch', you need to consider replacing this wheel.		
c. But before thinking of replacing the wheel, examine the axle to determine if there is any hair, string, or carpet fragments which need to be removed. If yes, this may be the reason for the "catch" you are feeling.		
NOTES:		
1. Now 'face' the chair by tipping it forward and upside down.		
a. Examine the cross braces of the chair for any cracks or breaks.		
b. Examine the back tires and axles. If the wheels are of the 'quick-release' type, remove the axles, clean them, and spray them with WD-40 before putting them back in place.		
NOTES:		
2. Return the chair to its original upright position.		
a. Examine the handrims for 'tightness'.		
b. Are both antitippers for the chair in place? Are they clearly functioning as 'anti-tippers'?		
c. Determine if both brakes are functional. Do grips on the handles need to be replaced?		
d. Examine the seat belt. Does it need to be replaced?		
NOTES:		

WHEELCHAIR REFURBISHING CHECKLIST

PROGRAM OPERATIONS

PROCEDURE: REPAIR MANUAL WHEELCHAIR

PURPOSE

The objective of this procedure is to provide information to employees/ volunteers who perform basic repairs on donated manual wheelchairs, and to teach basic maintenance practices to users of manual wheelchairs. See separate procedures for *Cleaning Manual Wheelchairs*.

CHECKLIST FOR INCOMING ITEM OR PREPARATION FOR NEW WHEELCHAIR OWNERS

- ✓ Assemble a repair kit that can be carried with the chair (see *Helpful Tools* below.)
- ✓ Read owner's manual or other manufacturer information if possible. Become familiar with the names of the parts of the wheelchair.
- ✓ Learn how to change or repair a tire, if the tires are inflatable.
- ✓ Learn to clean the wheelchair. See separate procedure in Sanitization Module, *Cleaning Your Manual Wheelchair*.

HELPFUL TOOLS

Assemble a wheelchair maintenance kit that could be used by the owner of a manual wheelchair. This kit should fit into a bag or container that can be fastened to the wheelchair to have it readily accessible. The kit should include:

- 1) Flat and Phillips head screwdrivers
- 2) An adjustable wrench
- 3) A spoke wrench
- 4) A set of Allen wrenches to fit the components on the chair (English or metric or both)
- 5) A tire repair kit if tires are inflatable
- 6) Owner's manual (or information from manufacturer web site)

In addition to the tools, the owner should have at home (and the center should have available:)

- A lubricant recommended by the manufacturer
- Matching touch-up paint
- Cleaning supplies
- A hand pump, if tires are inflatable

WEEKLY MAINTENANCE

Clean debris from casters and axles.

Wheels are prone to pick up hair, string and other small debris easily. It is important to use a pick or tweezers to pull all debris from the wheel casters and axles. This kind of debris, and dirt and mud, will impair the functioning of the wheels. If possible, remove the wheels and clean around the axle to prevent problems. Wipe the axle with a cloth with a couple of drops of oil on it.

Check tire pressure (if tires are inflatable.)

Use a pressure gauge to insure that both tires have the pressure indicated on the side of the tire. Use a hand pump, a bicycle pump, or electric pump to inflate the tire.

Pressure gauges aren't usually necessary to detect an under-inflated tire. The user will notice that the chair is more difficult to push and it may prevent the brakes from holding properly against the frame. This can cause increased wear. Wheelchairs with inflatable tires can have flats. Wheelchairs with solid or airless foam inserts don't have this issue. The user needs to keep a patch kit and learn to repair the pneumatic rubber tubes. Most patches are self-adhering, so the biggest repair problem is removing and replacing the tube.

When the tread becomes worn, cracked or loose, replace the tire. After replacing the tire, ensure that the brakes hold the tires firmly in place when set. Adjust as necessary to keep the brakes from interfering with the tire as it rolls.

Inspect front casters to ensure that they are aligned properly and don't wobble.

Casters are the small front wheels. They should not be loose or wobbly.

Examine the wheels carefully to ensure that the rims are not bent and that spokes are not damaged.

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The spokes should be intact and straight from axle to rim. The rims should not be bent. Wheels should be parallel to each other. If there are problems with the spokes or rims, a bicycle shop may be able to assist with the repair.

MONTHLY MAINTENANCE

Clean chair thoroughly following the procedure outlined in the 'Cleaning Manual Wheelchairs' procedure.

Check nuts and bolts to ensure proper tightness.

If a loose nut or bolt is found, use the proper Allen wrench or screwdriver to tighten it. If a nut or bolt is missing or damaged, it should be replaced. Nuts and bolts should be replaced with one having the same strength grade and configuration. The strength grade is indicated by a number on the head of a bolt. The configuration means the kind of bolt: all threaded (a screw) or a lag bolt (partly threaded and partly solid.) Replace with matching bolts.

Check the chair frame for cracks.

A crack in the wheelchair frame poses a serious safety risk. Frames are made of different types of metal, and this may determine the repair. Simple cracks usually can be welded. However, a crack in a load-bearing part of the frame may require replacement of the frame.

Check wheel alignment.

Alignment keeps the chair traveling in a straight line when coasting. If the chair tends to veer to one side, spokes may be loose or damaged, or the wheels out of alignment. If the problem is serious, it may require the attention of a trained technician.

Ensure that quick-release axles are working properly.

The patients should not have squeaking, binding or wobbly motion in the wheels when the chair is rolling. The quick-release axles should slide through the axle housing and click into place, or if they are threaded, they should thread easily and latch properly.

Ensure that all removable parts can be released, removed and replaced easily.

Remove all the parts that were designed to be removable: footrests or leg rests, for example. Clean the elements/ areas that connect, and replace the parts. If there is a problem with ease of removal or replacement, determine the cause and try to remedy the problem.

Ensure that folding wheelchairs can be opened and folded easily.

Wheelchairs come in rigid and folding styles. Chairs that fold are designed to be transported more easily. Check the folding mechanism to ensure that it is working properly. Lubricate the folding mechanism. The frequency of lubrication depends on the climate. Once a year may do if the climate is dry, but more frequent lubrication is necessary in wet or humid climates (whether snowy or tropical!)

ANNUAL MAINTENANCE

Lubricate pivot points and the folding mechanism.

The pivot points are locations where parts (such as wheels) turn, and the folding mechanism permits the chair to be collapsed for transport. Use the manufacturer's suggested lubricant to add oil/lubricant to these areas. Clean up carefully afterward.

The ball bearings in the wheels of most wheelchairs are sealed to protect them from dirt and water damage. If bearings require lubrication, it should be done by a trained service specialist (perhaps someone trained by a manufacturer.)

TRAINING FOR WHEELCHAIR TECHNICIANS

Training in the repair of wheelchairs is available through vendors and private individuals.