

# **PROSERIES<sup>®</sup>**

## **Manual Change Cart Battery Handling Equipment**



# **OWNER'S MANUAL**

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# INTRODUCTION

## **PROSERIES**<sup>®</sup>

The information contained in this document is critical for safe handling and proper use of the Manual Change Cart. It contains a global system specification as well as related safety measures, codes of behavior, a guideline for commissioning and recommended maintenance. This document must be retained and available for users working with and responsible for the battery handling equipment. All users are responsible for ensuring that all applications of the system are appropriate and safe, based on conditions anticipated or encountered during operation.

This owner's manual contains important safety instructions. Read and understand the sections on safety and operation of the battery before operating the battery and the equipment into which it is installed.

It is the owner's responsibility to ensure the use of the documentation and any activities related thereto, and to follow all legal requirements applicable to themselves and the applications in the respective countries.

This owner's manual is not intended to substitute for any training on handling and operating the Manual Change Cart that may be required by local laws and/or industry standards. Proper instruction and training of all users must be ensured prior to any contact with the battery system.

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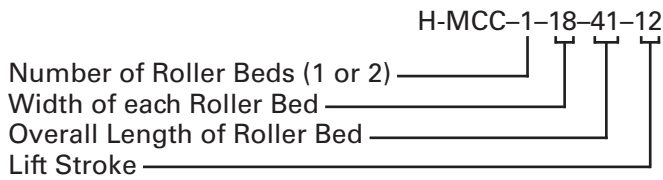
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**Your Safety and the Safety of others is Very Important**

**⚠ WARNING** You can be killed or seriously injured if you don't follow these instructions.

# SYMBOL IDENTIFICATION



## Symbol Identification Chart

	Refer to accompanying documentation		Refer to Manual
	Do not operate without all guards and covers in place		Crush Hazard – Keep Hands Clear
	Eye Protection Required		Pinch Point Hazard
	Slip Hazard		Crush Hazard – Keep Feet Clear
	Protective Clothing Required		Safety Shoes Required
	Rubber Gloves Required		Heavy Object – Do not exceed the recommended load weight
			Face Shield Required

This manual contains important information to help you properly operate and maintain your Manual Change Cart for maximum performance, economy, and safety. By practicing correct operating procedures and by carrying out the recommended preventive maintenance suggestions, you will experience long, dependable, and safe service.

# LABELS & COMPONENTS

## Warnings and Caution Labels

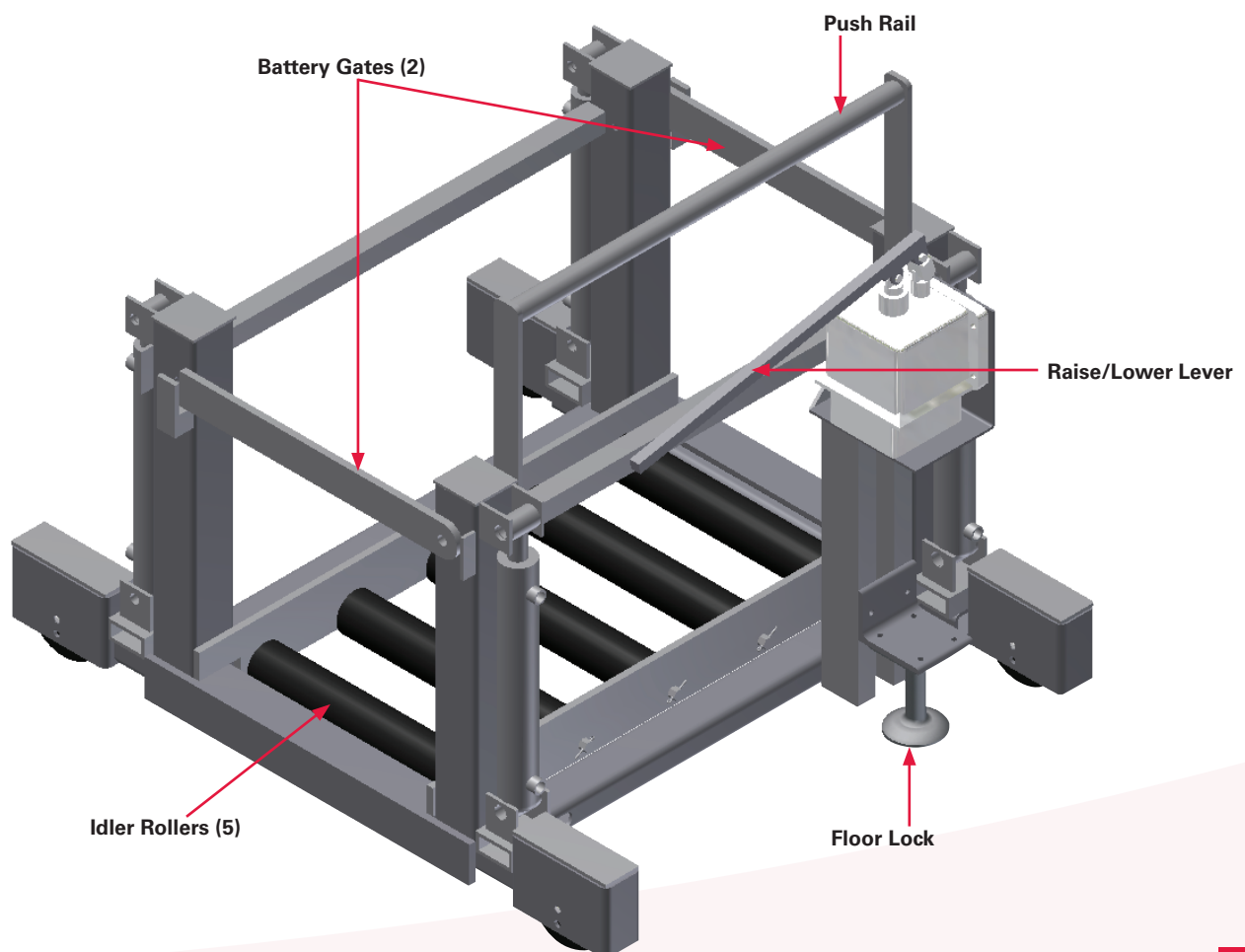
<b>! WARNING!</b>	
	Crush Hazard! Keep hands clear.

<b>! CAUTION!</b>	
	Do not operate without all guards, covers, and panels in place.

<b>! CAUTION!</b>	
	Pinch Hazard! Keep hands clear.

<b>! WARNING!</b>	
	Crush Hazard! Keep feet clear.

## Manual Change Cart Components



# OPERATING INSTRUCTIONS

## Operating Instructions



- **DO** be familiar with the Manual Change Cart operating instructions, warnings, and cautions.
- **DO** maintain firm footing when using the Manual Change Cart.
- **DO** make sure that the Manual Change Cart is free to move and will clear all obstructions.
- **DO** promptly report any damage to the Manual Change Cart to authorized personnel.
- **DO** inspect the Manual Change Cart regularly, replace missing, damaged, or worn parts, and keep appropriate records of maintenance.
- **DO** use common sense and best judgment whenever using the Manual Change Cart.
- **DO** keep hands and feet clear of the load at all times.
- **DO** secure the Floor Lock when the Manual Change Cart is not in use.
- **DO NOT** lift more than the rated load.
- **DO NOT** use the Manual Change Cart if any components are missing or not working properly.
- **DO NOT** use the Manual Change Cart if any components are damaged or worn.
- **DO NOT** allow your attention to be diverted from the Manual Change Cart during use.
- **DO NOT** use the Manual Change Cart to lift, support, or transport people.
- **DO NOT** allow personnel not physically fit, properly qualified, or impaired (ill, under the influence of medication, alcohol, etc.) to use the Manual Change Cart.



Before operating Manual Change Cart, it is important that the operator thoroughly reviews and understands the proper safety procedures and instructions as outlined in the Owner's Manual.



All operators must be trained or certified (if required) in the use of the Manual Change Cart.



Safety shoes, safety glasses, and protective clothing are mandatory in battery rooms. Be sure to wear them at all times. Rubber gloves, rubber aprons, and full face shields are required when washing and servicing forklift batteries. Always use **caution** and **common sense**.

### Preparation:

1. Park the LiftTruck in a parallel position adjacent to the Manual Change Cart, leaving approximately 5 cm clearance (a painted reference line on the floor will ensure the correct LiftTruck position every time).
2. Prepare the LiftTruck for battery removal as follows:
  - Lower the forks until they sit flat on the floor.
  - Engage the parking brake.
  - Remove any protective covers.
  - Remove the battery retaining gate.
  - Unplug the battery and position the connector plug and cable to prevent snagging or pinching during the battery removal process.
3. Lift the appropriate Battery Gate of the Manual Change Cart.
4. Move the Manual Change Cart alongside the LiftTruck so that the center line of the Roller Bed is in the center of the battery in the LiftTruck, and engage the Floor Lock.
5. Raise or lower, the Manual Change Cart so the rollers are approximately 1/2" below the bottom of the battery in the LiftTruck.
6. Pull/push the battery from the LiftTruck until the battery is over the first roller.
7. Raise the Manual Change Cart until the battery just lifts off the LiftTruck.
8. Completely pull/push the battery from the LiftTruck, then close the Battery Gate and release the floor lock.
9. Maneuver the Manual Change Cart to the next required fully charged battery in the system.
10. Align the empty Roller Bed on the Manual Change Cart with the selected fully charged battery.
11. Engage the Floor Lock, open the Battery Gate, and pull/push the battery over the first roller of the Manual Change Cart.
12. Raise the Manual Change Cart until the roller begins to lift the battery; then pull the battery fully onto the Manual Change Cart and close the Battery Gate.
13. Release the Floor Lock and move the Manual Change Cart so that the discharged battery is in line with the empty Roller Stand.

# SPECIFICATION

## Operating Instructions (cont.)

14. Engage the Floor Lock, raise or lower the roller bed to match the height of the roller stand, open the Battery Gate, and push the battery into the Roller Stand. Engage the Roller Stand Safety Stop and plug in the battery to the charger.
15. Release the Floor Lock, move the Manual Change Cart alongside the LiftTruck so that the center line of the Roller Bed is the center of the LiftTruck Roller Bed and reengage the Floor Lock.
16. Raise or lower the Manual Change Cart until the bottom of the battery is approximately 1.27 cm above the LiftTruck Roller Bed.
17. Open the appropriate Battery Gate and push the battery into the LiftTruck.
18. Release the Floor Lock, move the Manual Change Cart to its designated spot and reengage the Floor Lock to park it.
19. Prepare the LiftTruck for use as follows:
  - Plug the battery in.
  - Install the battery Retaining Gate.
  - Install all protective covers.

## Manual Change Cart Specification

General Specifications		Imperial Units	Metric Units
1	Hydraulic System	Manual Pump	
2	Capacity	3500 lb	1587.0 kg
3	Service Weight (MCC-1-18)	530 lb	240.0 kg
4	Roller Diameter	3"	76.2 mm
5	Roller Shaft Size	11/16" Hex	17.3 mm
6	Minimum Service Aisle Width	46-1/2"	1181.1 mm
7	Model Color	Orange/Blue	

Dimensional Data		Imperial Dimensions	Metric Dimensions
8	Overall Length (MCC-1-18)	49-1/4"	1251.0 mm
9	Overall Width	40-1/2"	1028.7 mm
10	Overall Height: Raised	40"	1016.0 mm
11	Ground to Roller Height (Lowered Position)	4-1/2"	114.3 mm
12	Ground to Roller Height (Raised Position)	16-1/2"	419.1 mm
13	Wheel Base (MCC-1-18)	41-1/4"	1047.8 mm
14	Centerline of Drive Wheel	37-1/2"	952.5 mm
15	Ground Clearance	1"	25.4 mm
16	Battery Compartment Length	39-1/2"	1003.3 mm
17	Battery Compartment Width (MCC-1-18)	18"	457.2 mm

# MAINTENANCE CHECKLIST

## Regular Maintenance Checklist

### Repairs Required

Inspection Performed	Yes	No	Repairs Performed	Completed Date
1. Visual inspection of unit for damage or missing parts.				
2. Check/change hydraulic oil/filter.				
3. Check hydraulic system for leaks.				
4. Grease travel wheels.				
5. Check wheel wear.				
6. Tighten any loose bolts, etc.				
7. Check Battery Gate bushings.				
8. Check rollers and hex shafts.				
9. Check Floor Lock for wear and adjustment.				

## Recommended Oil and Lubricant

Hydraulic Oil	4021 PARADENE 32 AW or equivalent
Grease	ROTANIUM Blue Grease (Waterproof)



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