

# Unitized Braking System For Curbside Delivery Carts

P&H Casters



## Challenge:

A grocery retailer presented an issue with their curbside delivery program. When loading groceries directly into the customer vehicle, brake mechanisms were failing and disengaging. This created a safety and liability concern.

The goal was to retro-fit an existing fleet of curbside delivery carts with a new braking system. P&H identified four independent issues to address:

- Operator weight was crushing and deforming the existing brake mechanisms.
- The pedal size was too small and cumbersome to engage.
- Harsh environmental conditions of Canadian winters rapidly deteriorated caster plating.
- Both brakes on the rear of the cart needed to be engaged to reduce retailer liability.

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***“Our customer required a cart with an outdoor lock brake. After much searching of various offshore options, we found that P&H Casters, an American manufacturer, had the best solution and longevity of any caster out there”***

**John Barlock**

**Alnor Material Handling Ltd.**

## Growth & Impact



**Solve 4  
Issues with  
1 Solution**



**Improve  
Safety and  
Reduce  
Liability**



**Innovate an  
Existing  
Asset**

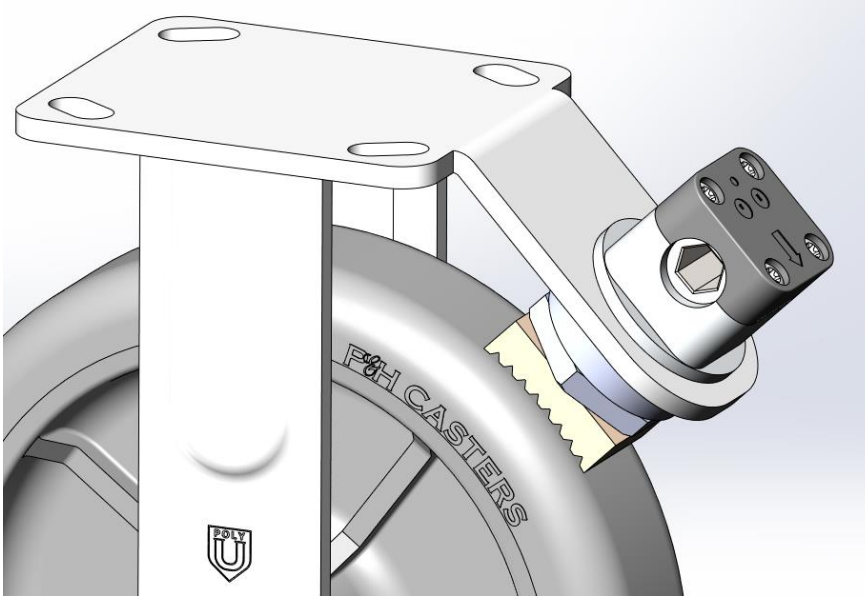
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The new brake design allowed grocers to safely and efficiently service customers.

## Solutions:

P&H was able to use an existing brake concept and apply it to the rigid plate casters used on the rear of the delivery cart. The new design required minimal tooling which allowed it to be rapidly brought to market.

The retailer was provided a solution that was easily installed on the existing fleet while maintaining a low cost of ownership. The operator could safely operate the cart and easily engage the braking mechanism ultimately reducing product delivery time and improving efficiency.



- A more robust brake design was implemented to withstand greater abuse and avoid brake deformation.
- A linkage bar was added so both brake mechanisms could be engaged by activating one pedal. A singular pedal ensured both brakes
- In order to address the plating deterioration, a zinc plating that was 15x more durable was added to the component. This provided a lot of the longevity benefits of stainless steel but avoided a significant cost increase.
- The brake pedal was redesigned by the cart manufacturer and welded to linkage on the rear of the cart. The new pedal was wider and more easily accessible.

*“Upon completion and delivery of the carts to the customer, they were extremely happy with the end result”*

John Barlock

Alnor Material Handling Ltd.