

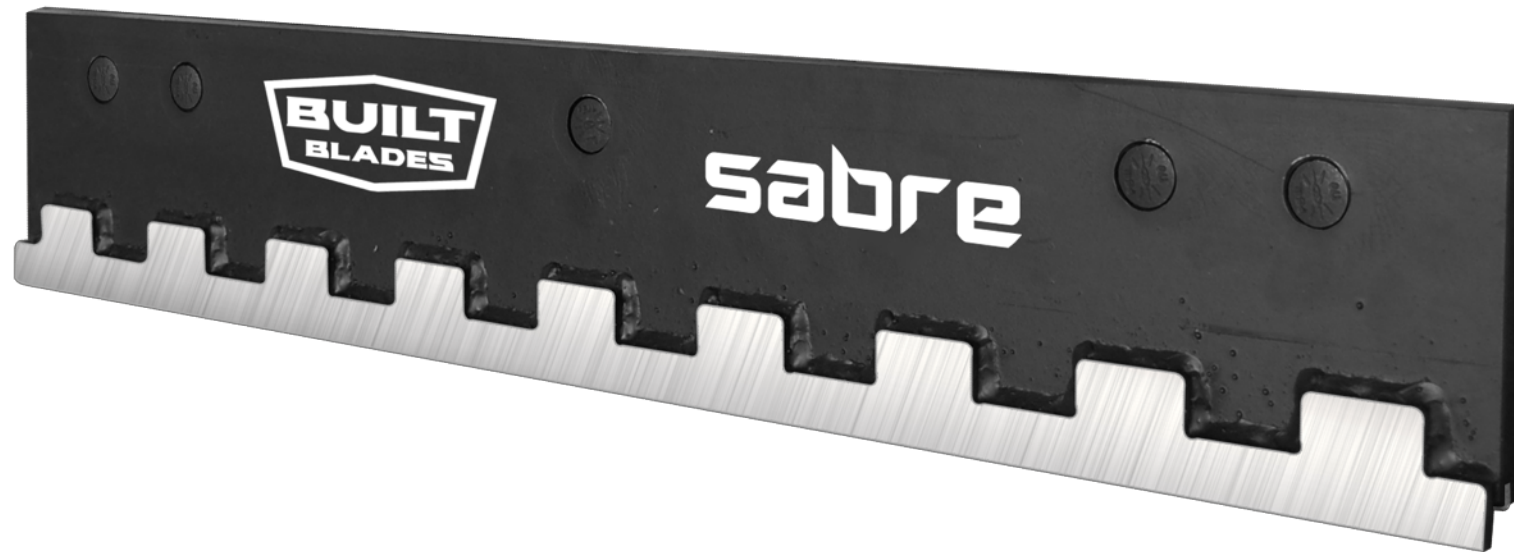
# sabre<sup>®</sup>



***ARMORED CARBIDE SNOWPLOW BLADE***

**EVOLUTION  
EDGES™**

A DIVISION OF CHEMUNG SUPPLY



# Outline

- Introduction & Company History
- Carbide Plow Blades
- Steel Cover Blades
- Sabre Blade
- Sabre Photos
- New Innovations



# Evolution Edges



## Manufacturer & Distributor of Snow Plow Wear Parts

- *Steel Blades*
- *Carbide Blades*
- *Rubber Blades*
- *Hybrid Blades*
- *Wear Shoes*
- *Curb Guards*
- *Custom Parts*

## A Division of Chemung Supply Corporation

- *Founded in 1931*
- *Based in Elmira, NY*
- *Premier Municipal Supply Distributor*



# Built Blades



- **2016:** Built Blades, LLC. was founded in Fairport, NY and the patent for the Sabre blade was filed.
- **2016-2020:** Sabre blade spread across 18 States (DOT, County, Town, Village, & Private).
- **2020:** Built Blades, LLC. & patents acquired by Evolution Edges (A Division of Chemung Supply Corporation) based in Elmira, NY.
- **2022:** the Sabre Blade is being used across 31 states, including 25 DOTs - more innovations on the way.



# Carbide History

- Carbide Inserts = Tungsten Carbide Powder (WC) mixed with metallic Cobalt and sintered to shape.
- First discovered in the 1920s and used in various industries; cutting tools, mining equipment, armor piercing ammunition, jewelry, and even nuclear neutron deflectors.
- Commercially introduced in Wear Parts industry around the 1970s.
- Global Consumption
  - 1930 = 10 Tons
  - 2021 = 79,000 Tons
- 80% of Global WC Consumption is mined in China.



# Carbide Plow Blades

- Carbide inserts are wear-resistant, but brittle.
- Carbide inserted blades can provide 10-20x more wear life than steel blades, if the inserts remain intact.
- Plowing impacts can fracture the inserts, causing them to fall out of the blade and result in premature wear.

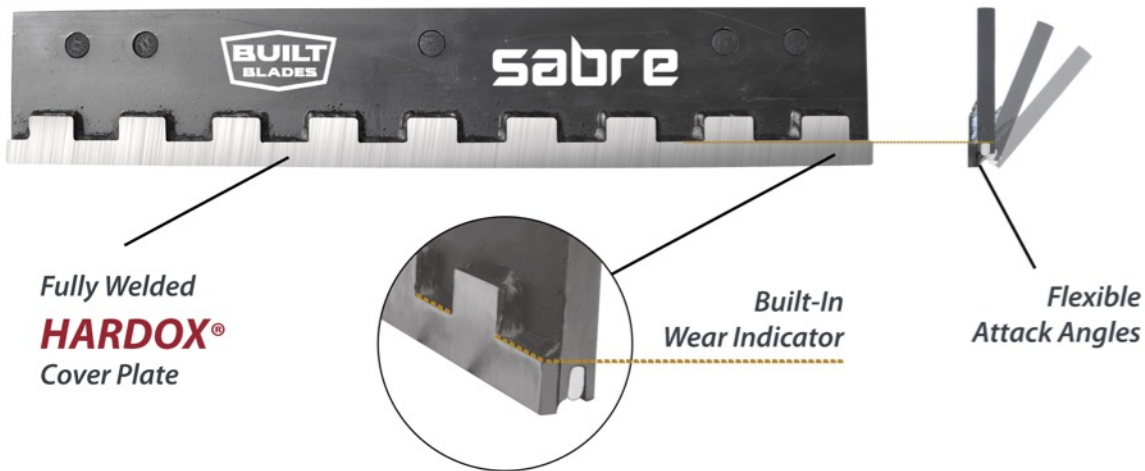


# Carbide & Cover Blade

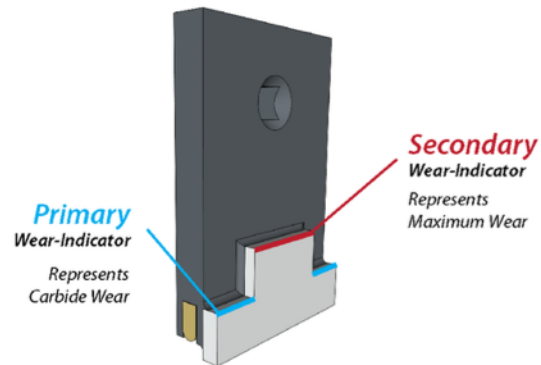
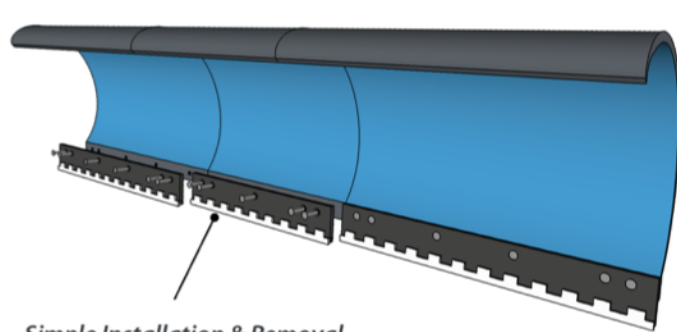
- To protect carbide inserts from impacts, steel cover blades are commonly used in conjunction with carbide blades.
- Steel cover blades cover the entire length of the plow, and need to be handled by multiple people or by machine.



# Sabre Blade



U.S. Patent# 10,138,607



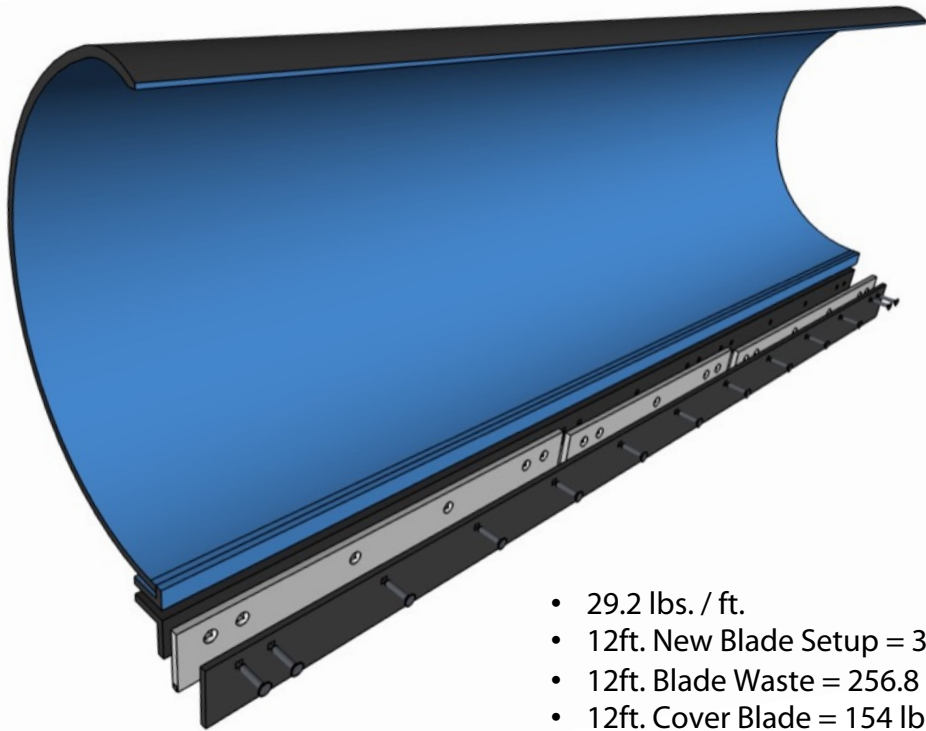
- The Sabre is a carbide blade with a built-in cover plate.
- Compared to standard cover blades, Sabre's Hardox is:
  - 2X more abrasion-resistant
  - 3X more impact-resistant
- The crenelated plate is fully-welded to the frame.
  - 30" of Weld / Ft.
- Built-in Wear Indicators
  - 7 Wear Indicators / Ft.





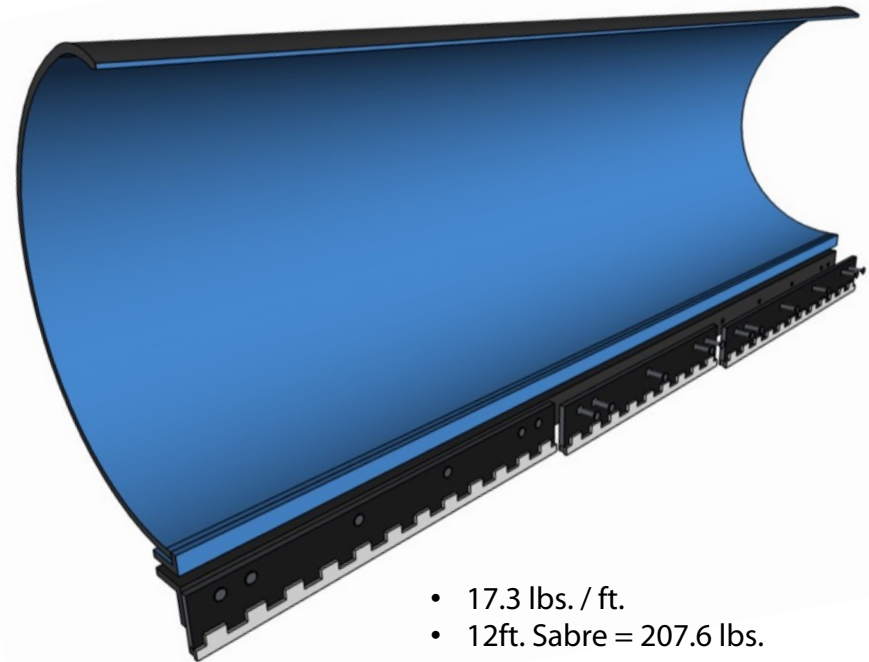
# Carbide & Cover Blade vs. Sabre

## Carbide & Cover Blade



- 29.2 lbs. / ft.
- 12ft. New Blade Setup = 350 lbs.
- 12ft. Blade Waste = 256.8 lbs.
- 12ft. Cover Blade = 154 lbs.

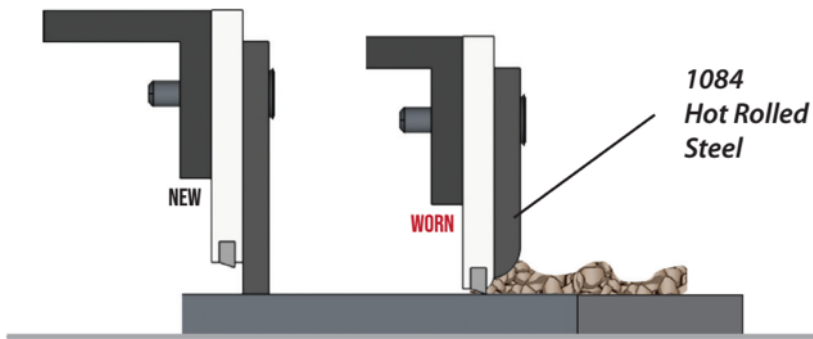
**sabre**<sup>®</sup>



- 17.3 lbs. / ft.
- 12ft. Sabre = 207.6 lbs.
- 12ft. Blade Waste = 144 lbs.
- 4ft. Sabre = 69.2 lbs.

# Carbide Protection

## Carbide & Steel Cover Blade



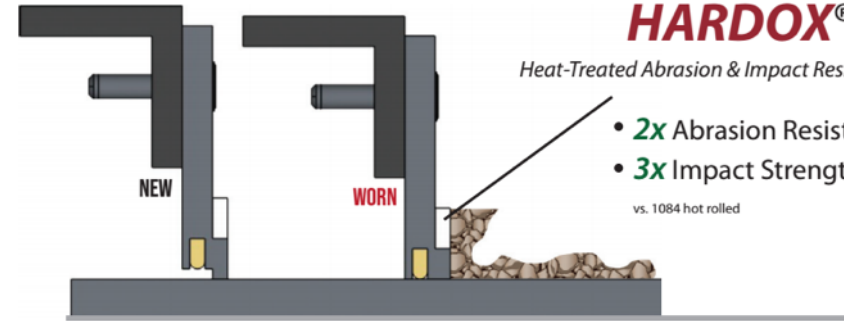
sabre®

**HARDOX®**

Heat-Treated Abrasion & Impact Resistant Steel

- 2x Abrasion Resistance
- 3x Impact Strength

vs. 1084 hot rolled



# Carbide Protection

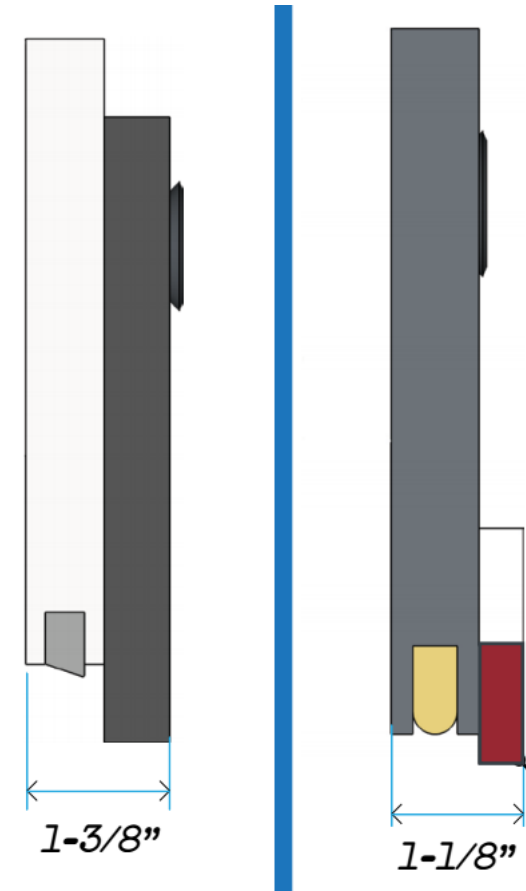


# Cutting Ability

- The Sabre's Hardox cover plate delivers superior abrasion and impact protection with a smaller footprint.
- Sabre's 3/8" armor is 25% thinner than its 5/8" steel cover blade counterpart.
- Thinner blade = better cut = less salt

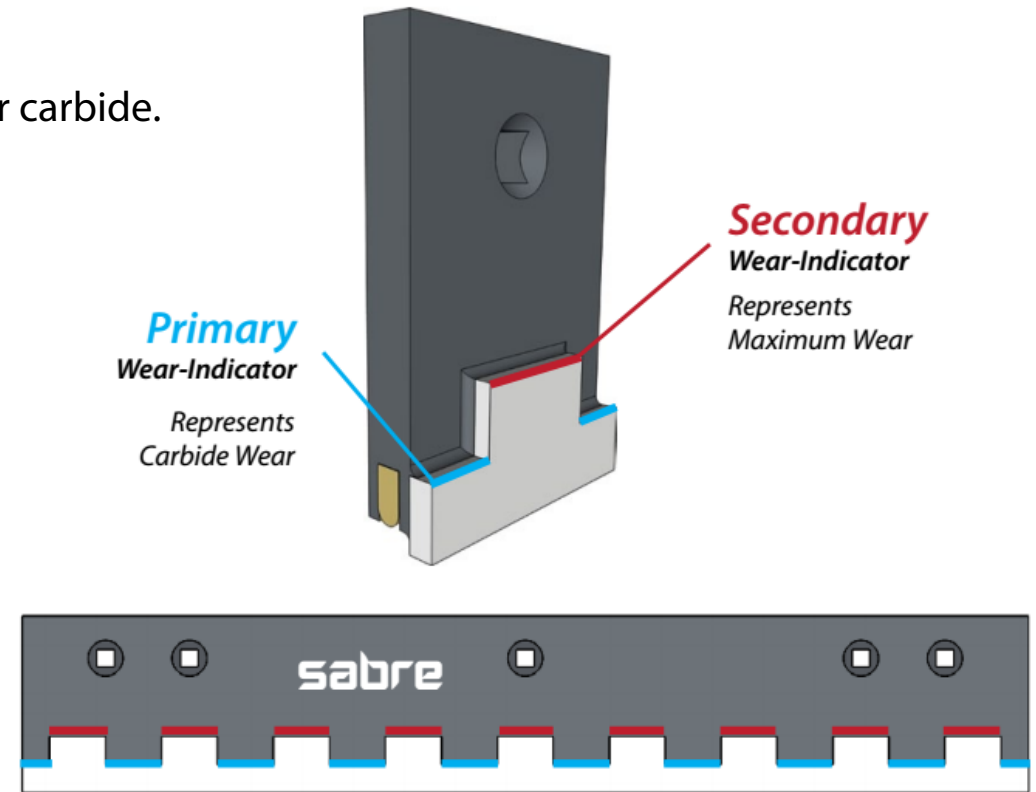


Hardox cover plate is 2x more abrasion resistant than steel, helping keep a sharper leading edge.



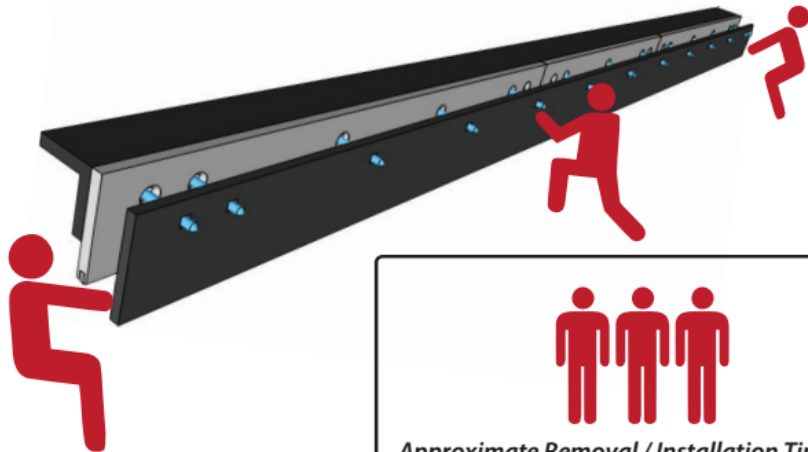
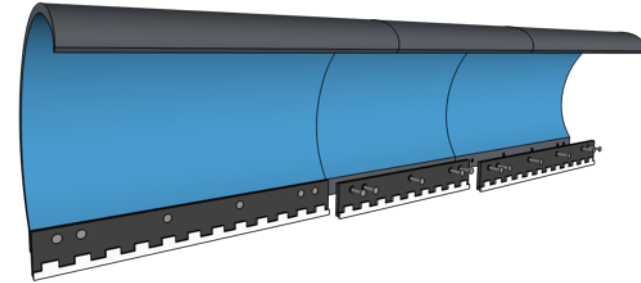
# Wear Indicators

- Quick, safe, and accurate.
- No more guesswork, no more climbing under plow to “feel” for carbide.
- Pinpoint uneven wear patterns and fix them.



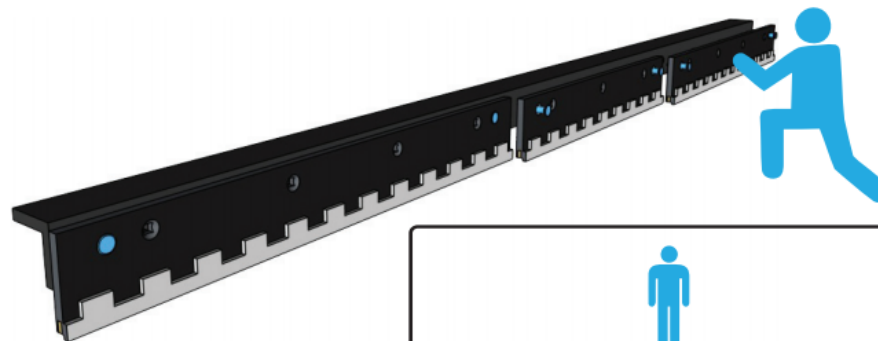
# Safer & Faster Installation


- Sectional Sabre blades can be handled by one person.
  - 4ft. Sabre Blade = **69lbs.**
- Cover blades require multiple people and/or equipment to handle.
  - 12ft Cover Blade = **154 lbs.**  
(5/8"x6")



  
Approximate Removal / Installation Time  
**3 Worker @ 1 Hour = 3 Man Hours**

**INSTALLATION**



  
Approximate Removal / Installation Time  
**1 Worker @ 3/4 Hour = 3/4 Man Hour**  
**75% Less Time vs.**  
Carbide & Steel Cover Blade

# Storage

- Sabre blades are built in 3 foot & 4 foot lengths.
- Easily stackable, and can be shipped with up to 45 blades per pallet.



**Represents Approx. (40) 11ft. Cover Blades**  
Approx. Dimensions : 140"x48"x24"



**Represents ( 100 ) 11ft. Blade Setups**  
Approx. Dimensions : 140"x33"x36"

# Storage



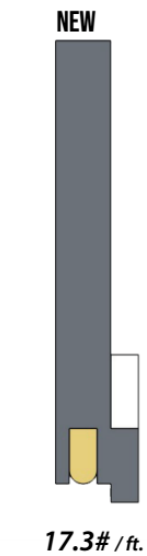
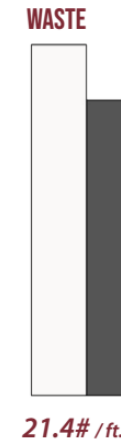


# Waste

- Fully-welded cover plate allows for All wear material (carbide & hardox) to be used in life cycle.
- Sectional Sabre blades are easier to dispose / recycle than full length cover blades.



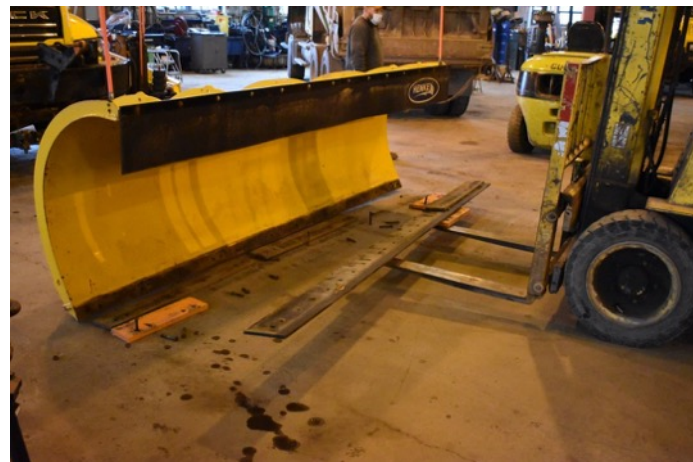
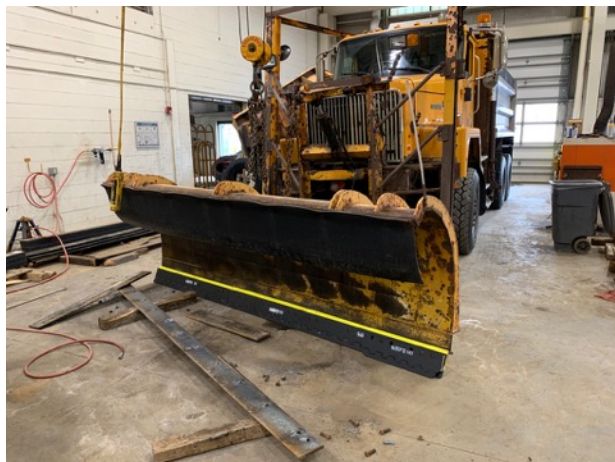
**New 11ft. Blade / 321.2 lbs.**  
**11ft. Blade Waste / 235.4 lbs.**



**New 11ft. Blade / 190.3 lbs.**  
**11ft. Blade Waste / 132 lbs.**



# Cover Blade Waste



# Sabre Field Photos



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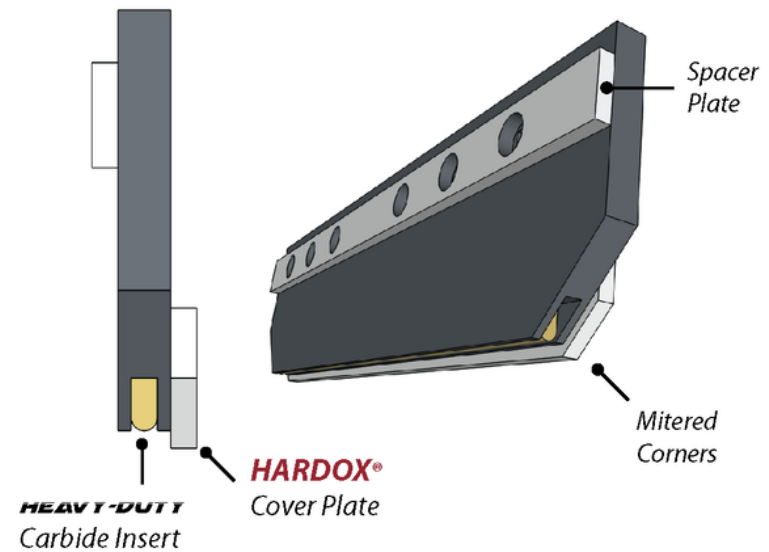
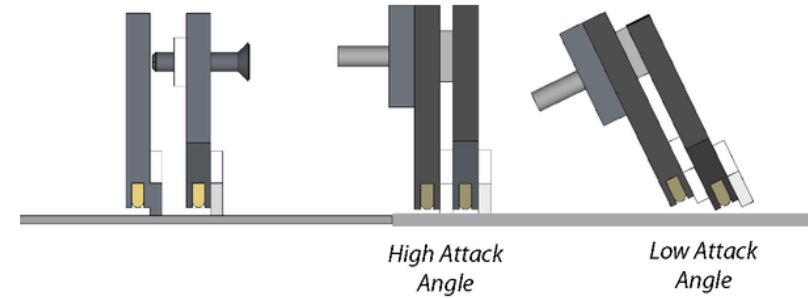
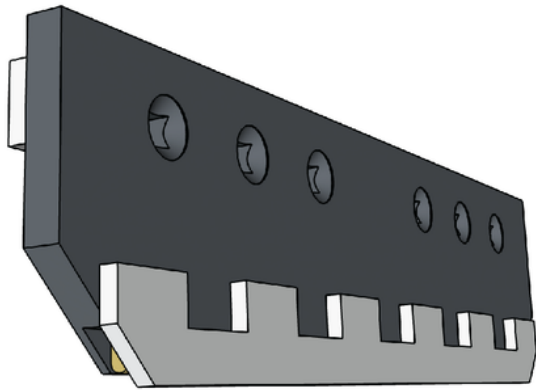
# Sabre Field Photos



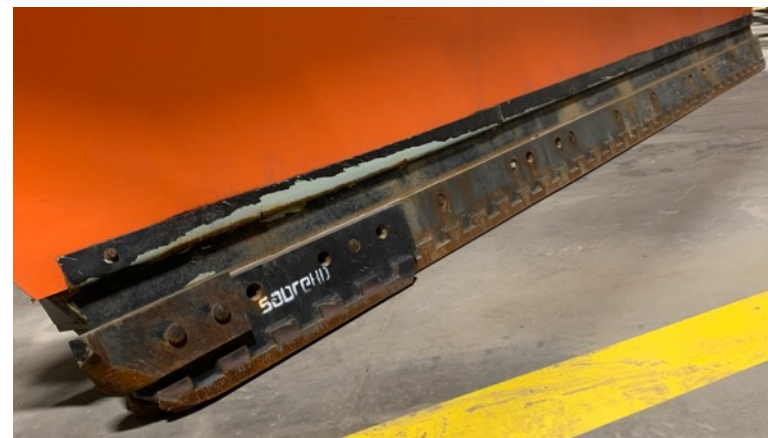
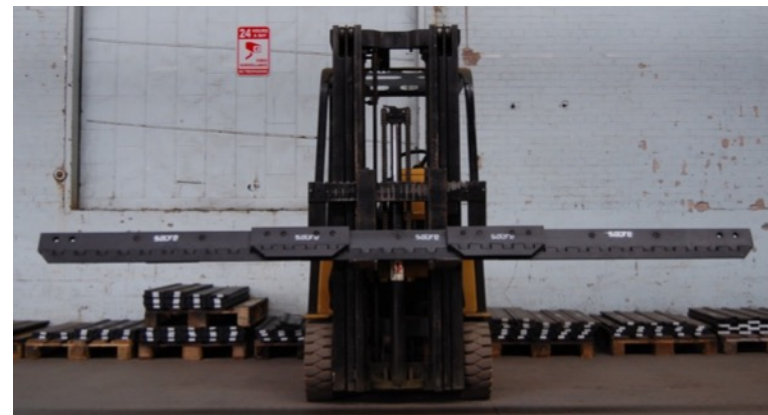
# Sabre Field Photos



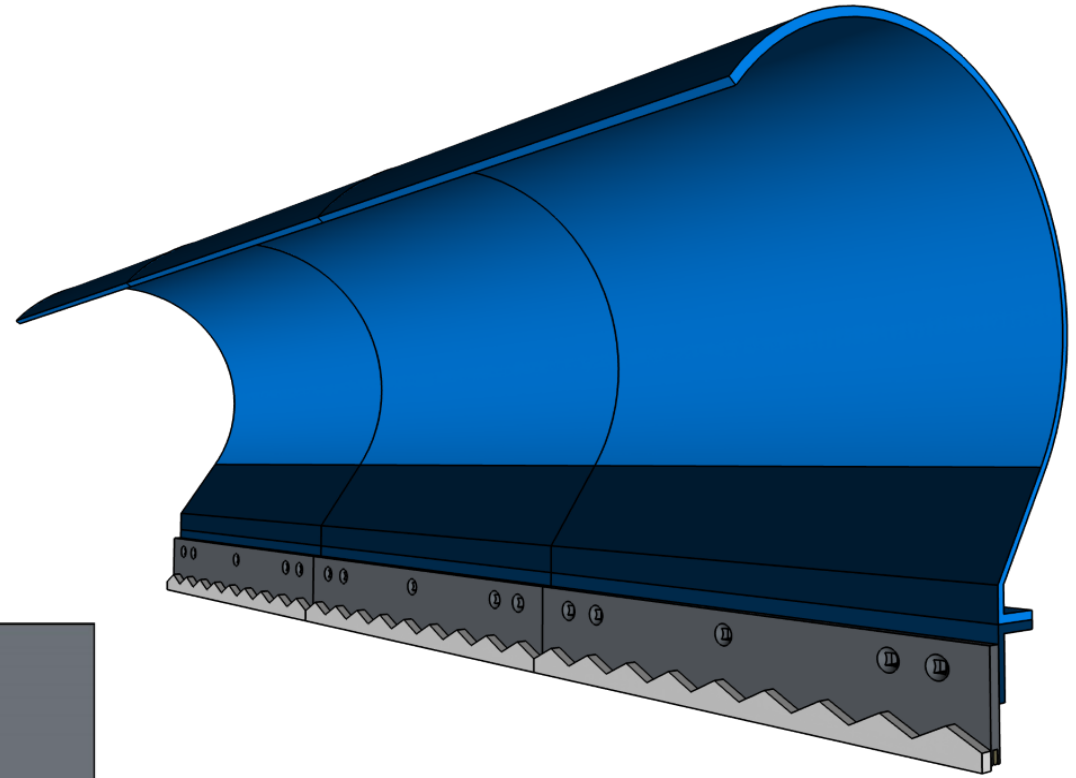
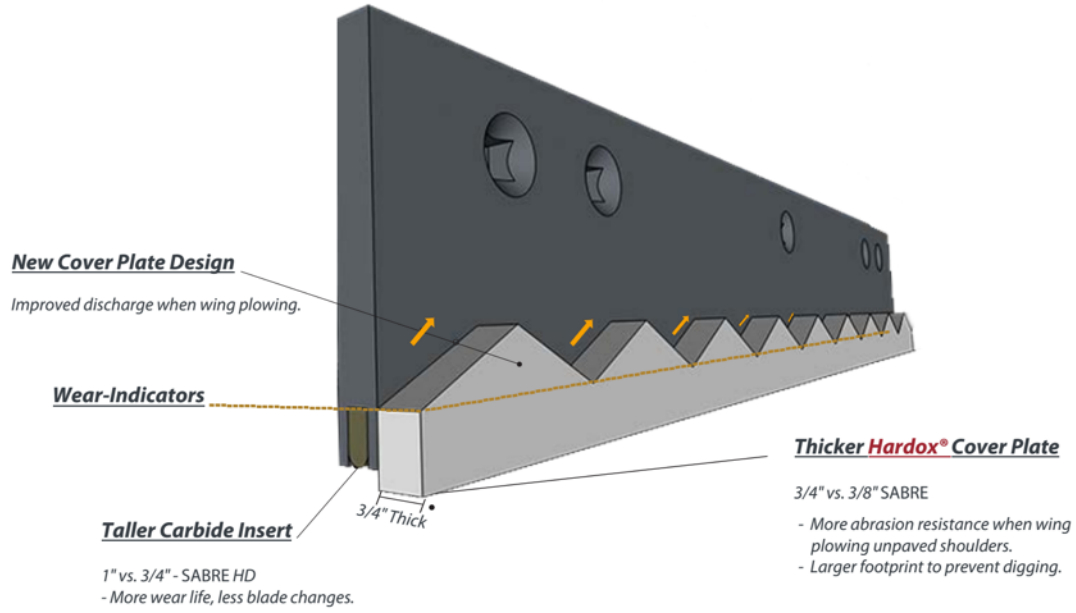
# Sabre Wear Plates



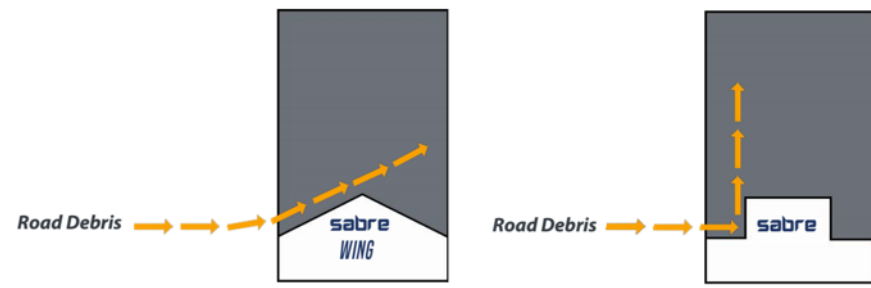
# Sabre Wear Plates



# Sabre Wing Blade



➔  
**Direction of Travel  
(Wing Plows Only)**

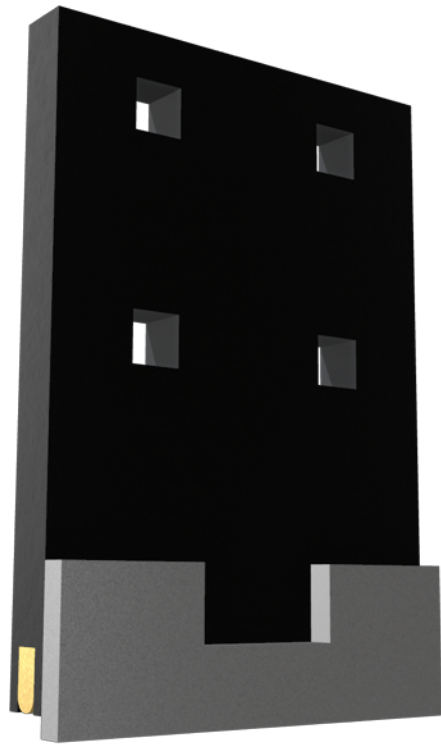




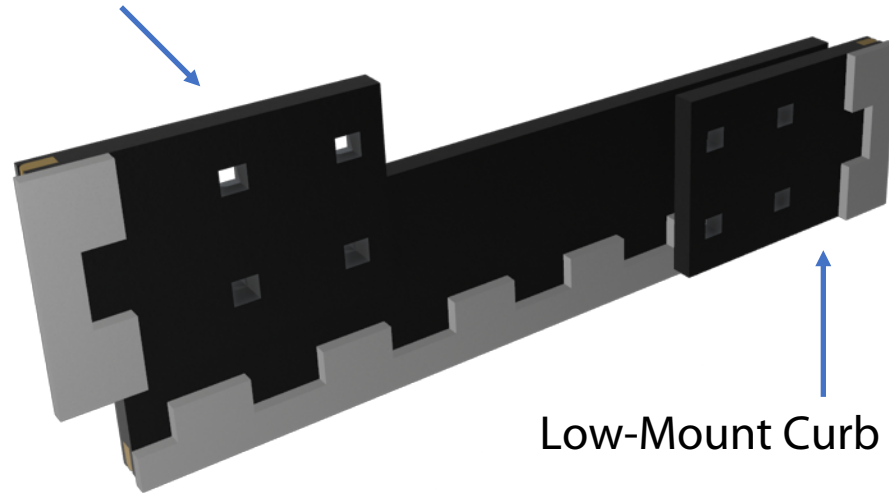
# Sabre Wing Blade



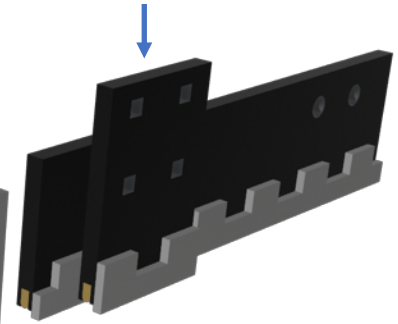
# Sabre Multi-Tool



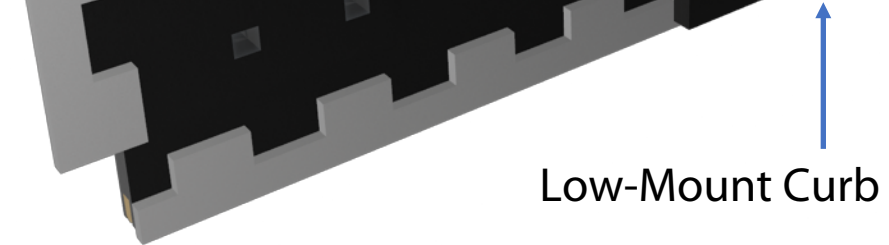
High-Mount Curb Guard (L/R)



Small Wear Plate



Low-Mount Curb Guard (L/R)



# Contact



A DIVISION OF CHEMUNG SUPPLY



## SAVE TIME AND MONEY

No bidding needed! Our cooperative purchasing contracts with Onondoga, Sourcewell, and NASPO provide the opportunity to purchase Sabre products without having to duplicate the bidding process because it has already been done for their members.

**ONONDOGA  
CONTRACT**  
Bid #0010660

