

2022

PRODUCT CATALOGUE

**Seeding Openers
Fertilizer Openers
Tillage Tools
Specialty Parts**



Fits Any Color. Fits Your Farm.



Products Added



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Offset Seed Opener**
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Share Your Experience

Your feedback is important! It provides valuable insight on how we can improve existing products, helps us identify new opportunities, tells us what we're doing right and where to improve.

Fill in our customer satisfaction survey and your name is also entered into our monthly draw for BTT swag!

A member of our team may contact you using the information you provide to further discuss your comments.

Access The Survey

Fill out the form online by visiting tillagetools.ca/company/customer-feedback/

OR

Scan the QR code below.

1. Open the camera app on your smart phone.
2. Point your phone at the QR code and hold steady for a few seconds to scan it.
3. When a notification appears at the top of your screen, tap on it. This will take you to the online entry form.
4. If a notification doesn't appear, go to Settings on your phone, enable QR code scanning under Camera, and then scan the QR code again.



SCAN USING YOUR SMART
PHONE CAMERA

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This year was a successful one overall, and with this being our **30th anniversary, it's one for the record books!**



Ryan Olson, General Manager, and Joseph Bourgault, President, in front of the first press at the BTT plant in St. Brieux, Saskatchewan, Canada.

Diversifying and growing with new partnerships and products.

Many people will want to bury 2021 and the global COVID-19 pandemic deep in their scrapbooks. However, in agriculture manufacturing, this year was a successful one overall, and with this being our 30th anniversary, it's one for the record books!

We are proud to announce over 50 new products for the 2022 catalogue, along with several new patents, design registrations, and strategic partnerships. Here are some of the product highlights this year.

Original Degelman Parts

BTT has historically supplied many original parts to Degelman Industries and has collaborated to offer Degelman's "Engineered Tough" original manufactured parts to our customers through BTT's dealer network. Products include *Niaux* 200 Disk Blades and *MAX LIFE™* Scrapers that fit Degelman Pro-till and the Strawmaster X Disc Harrow, along with *MAX LIFE™* Harrow Tines designed to fit on all Degelman heavy harrows.

Richmond Brothers Equipment Tillage Tools

In addition to our already extensive tillage product line, we're excited to introduce Ultimate Tillage Tools manufactured by Richmond Brothers Equipment. This suite of products is available to fit many OEM models and includes ripper points, cast cultivator sweeps, chisel plow points, shank savers, bearing protectors, and nuggets.

Like our company, Richmond Brothers developed these products on their farm through a necessity for longer-lasting and higher performing wear parts. We strongly feel that a new standard will be set in wear and performance once these products are out in the field. Richmond Brothers have also begun distributing our products further into the United States, allowing us to reach Michigan, Indiana, Ohio, Illinois, Iowa, and Wisconsin.

Bourgault Product Innovations

Last year, BTT began providing aftermarket support for the Bourgault Mid Row Bander® disk blades. Since then, we've worked with Bourgault Industries to co-develop and test several new products, including various options for the 3330SE/3335QDA TriMax™ drills. This includes a long-wear 1/2" fertilizer knife, the Trimax Tip double shoot opener, and multiple inline options. We also tested a 1/2" Mid Row Shank fertilizer knife with positive customer feedback. Limited sets will be offered in the field for 2022 as we continue perfecting these products.

We're incredibly excited about developing the patented TriMax™ tip option which allows farmers to separate starter fertilizer from the seed without the straw management challenges that historically occur with dual knife machines. This tip is strategically designed to place starter fertilizer below and to the side of the seed, enhancing uptake of the

starter nutrients and providing additional seed protection. This product will continue to see action in the field this coming spring and we expect it will develop into a differentiated option that will maximize yield on Bourgault machines in the future.

WearIQ Research & Development

In 2021, we invested heavily in product development and our R&D Department by expanding our team, equipment, robotics, and testing capabilities. We've developed several new products, including *MAX LIFE™* Scrapers, Power Hiller Tines, and Threshing Pins, along with our traditional products.

Through in-house testing, farm and OEM partnerships, and leveraging our teams' experience in wear, precision, and quality, we've been able to speed up product development, getting new and improved products to your field faster.

Investing Locally & Partnering Globally

Product supply was a significant concern for most farmers and manufacturers in 2021. An additional 7,800 square feet of warehouse and storage space was constructed to combat future supply concerns, ensuring we're in an excellent position to continue delivering high-quality parts when you need them the most.

A subsidiary, BTT UK, was also opened in the United Kingdom, expanding our presence, inventory, and warehousing capacity from our new base at Peterborough in Cambridgeshire. This investment allows us to adapt to local farm conditions while leveraging our R&D capabilities to enhance the experience for farmers in the UK.

Your Choice Has An Impact

The value of buying and supporting local became more apparent over the past couple years as companies struggle to recover from the impacts of the pandemic.

When you choose to buy from BTT, you can be assured that your well-earned dollars are being spent in the communities where you work and play. You're also contributing to economic stability and jobs, not only within our company but across the network of suppliers we work with.

Our purchasing is focused on quality, supply and value. We strive to purchase our materials in North America, understanding our choice has an impact too.

Thank you for your support over the last 30 years! We appreciate the opportunity to be a vital part of your farming operation. Have a great 2022, and we'll see you in the field!

Ryan Olson,
General Manager

Helping You Succeed

At Bourgault Tillage Tools (BTT), we think you should expect a lot. We strive to deliver that with exceptional customer service, on-farm visits, high-quality North American-made products, and the best Warranty and Performance Guarantee in the market.

The demands and needs of each farm are unique. Our objective with on-farm visits is to help farmers become more efficient and profitable. We take the time to learn about your operation, discover what products you're currently using, and discuss seeding, fertilizing, and tilling challenges.

After getting a clear picture of existing practices, we review our product line to discuss options and solutions for your operation. Talking directly with our customers is valuable for our team also as it influences product development and helps us uncover opportunities for new projects.

We call this **The BTT Difference**, and these are just a few of the ways we go the extra mile to keep your operation growing.



Located in St. Brieux, Saskatchewan, Canada.



Dealer network stretching across 500+ locations.



An independent business, separate from Bourgault Industries since 1991.



Global distribution across Europe, UK, Australia, and North America.



A team of more than 65 employees in Canada, USA, and the UK.



RICK EBERLE, USA TERRITORY MANAGER

BTT Performance Guarantee

BTT guarantees the product you purchase will perform to its designed specification under normal conditions. Under some adverse conditions, the performance of the product may be affected.

If the product does not perform its designed task within the first season of use, please inform us of the issue immediately and grant us the opportunity to visit your farm to assess the situation.

If we cannot correct the situation, we will guarantee you a 100% refund.

Failure to follow our recommendations will render the Performance Guarantee void.

To learn more about adverse seeding conditions, see page 18.

Warranty

Warranty only covers defects in materials and workmanship and is limited to replacement of the failed part. It does not cover any consequential damages.

Warranty will not be provided on any BTT parts that have been used with non-original BTT parts.

To obtain warranty, the part must be returned to the dealer to complete the warranty claim form. An invoice must be provided.

All products (with the exception of harrow tines and disk blades) have a 3 Year Limited Warranty, at our discretion, from the date of purchase as follows:

- 1st year prorated to a maximum of 100%
- 2nd year prorated to a maximum of 70%
- 3rd year prorated to a maximum of 40%

Sweeps, Chisels & Spikes

These parts are warrantied (prorated based on wear) against failure due to breakage or bending unless worn excessively.

Excessive wear means:

- The wing of the sweep measures 60% or less of its original width.
- The material thickness is 60% or less of the original thickness. (Example: a new Bourgault sweep that is 0.250" thick x 0.60 = 0.150. At this point, and after that, warranty is void).

Quick Change Products

Effective January 1st, 2001, all products used on the 100 and 400 Series adapters will not be warrantied against loss. All products used on 200 and 410 Series adapters will be warrantied against loss.

Chrome & Carbide Tips

Carbide is warrantied for loss only. Chipping of carbide is normal. If the brazing fails and the carbide falls off, return the part to the dealer.

Products with a chrome or carbide tip will not be warrantied against chipping related to installation issues unless the appropriate driver has been used.

Niaux 200 Disk Blades

Our disk blades have a lifetime warranty on breakage due to manufacturer defect.

MAX LIFE™ Harrow Tines

Harrow tines are warrantied from the date of purchase against breakage for three years, prorated to a maximum of 100%.

Trip Strength Considerations

Our seed openers need to perform in some challenging conditions, and we design our products with durability in mind. The end-user has the responsibility to make sure the machine is best suited to the operating conditions.

Proper trip strength will save you time and money. When determining the appropriate trip strength, some factors to consider are soil type, amount of rock, and type of seed opener used.

A heavy trip is not "one size fits all." Buying a seeding machine with heavier trips than required for proper penetration may result in:

- broken or damaged seed openers
- broken or bent shanks
- more rocks pulled to the surface

BTT reserves the right to limit warranty claims on trip strengths greater than 400 pounds.

Questions?

Please ask your Territory Manager or contact our Service & Warranty Manager directly at 1.800.878.7714.

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High Quality. Great Value. North American-Made.



High Chrome Material

Replaceable tips are cast with high chrome material, increasing the life span of the tip.

Tungsten Carbide Inserts

The highest quality tungsten carbide is placed on our tips in-house. Extra-long carbide is used in extremely abrasive conditions, ensuring the longevity of the tip while maximizing seed bed utilization.

North American-Made

All of our primary wearing replaceable tips are made in North America, giving you the superior wear resistance you've come to expect from us.

Easy Installation

Quickly and easily install new tips with our bolt and nut combos, proven to work when roll pins won't.



600-BNC-5000



200-BNC-3100

Canadian Partners

Replaceable tips are cast by Leth Iron in Lethbridge, Alberta, Canada using only the best materials available. Look for their mark on BTT products!



Replaceable Tips

- Single Shoot
- Paired Row
- Side Band
- Fertilizer

Single Shoot Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation.



200-TIP-0511

CARBIDE TIP

1/2" (13mm) tip with carbide insert on the nose. **Not recommended in highly abrasive conditions.**



200-TIP-0800

CHROME TIP

3/4" (19mm) tip. **Not recommended in highly abrasive conditions.**



200-TIP-0801

CARBIDE TIP

3/4" (19mm) tip with carbide insert on the nose.



200-TIP-0802

CARBIDE TIP

3/4" (19mm) tip with extra long carbide on the nose for highly abrasive conditions.



EXTRA
CARBIDE ON
THE SIDE

200-TIP-0803

CARBIDE TIP

3/4" (19mm) tip with extra long carbide on the nose and sides for highly abrasive conditions. The same as 200-TIP-0802, with the addition of side carbide inserts.



200-TIP-0811

VERTICAL CARBIDE TIP

3/4" (19mm) vertical tip with extra long carbide on the nose for highly abrasive conditions.



200-TIP-1011

VERTICAL CARBIDE TIP

1" (25mm) vertical tip with double carbide insert. Recommended for rocky and highly abrasive conditions.



200-TIP-2011

CARBIDE SPREAD TIP

2" (51mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.

**200-TIP-3000**

CHROME SPREAD TIP

3" (76mm) tip. **Not recommended in highly abrasive conditions.**

**200-TIP-3001**

CARBIDE SPREAD TIP

3" (76mm) tip with carbide insert on the nose and hard facing on the underside of the wings.

**200-TIP-3011**

CARBIDE SPREAD TIP

3" (76mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.

**200-TIP-4011**

CARBIDE SPREAD TIP

4" (102mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.

**610-TIP-0802**

CARBIDE SPREAD TIP

3/4" (19mm) long-wearing single shoot tip with extra long carbide on the nose for highly abrasive conditions. Used for seeding or fertilizing (not for double shooting).

Fits VOS (Versatile Opener System). See page 56-57.

200-NUT-3101



200-BLT-3102

200-BNC-3100

BOLT & NUT COMBO

Single shoot tips require this bolt and nut combo for installation.

Do not over tighten the bolt. Turn bolt in by hand until the shoulder of the bolt makes contact with the nut before torquing to 84 in/lbs or 7 ft/lbs (9.5Nm). **Over torquing will result in difficulty when removing.**

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut.

Paired Row Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation.



610-TIP-4041

CARBIDE TIP

4" (102mm) paired row cast chrome tip with carbide insert on the nose for excellent penetration and wear resistance.

Carbide inserts on the underside of the wing to maintain a sharp cutting edge.

This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.



610-TIP-3581

CARBIDE TIP

3-1/2" (89mm) paired row cast chrome tip with 3/4" (19mm) vertical separation of liquid, granular, or aqua NH3 fertilizer.

Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge.

Carbide inserts at the back underside of the wings seal the fertilizer trench prior to seed placement.

Fits VOS (Versatile Opener System). See page 56-57.

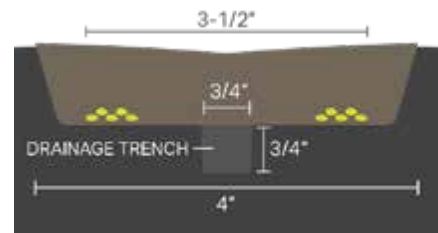


610-TIP-4030

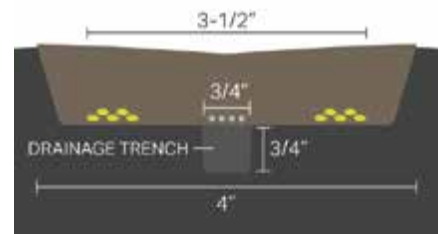
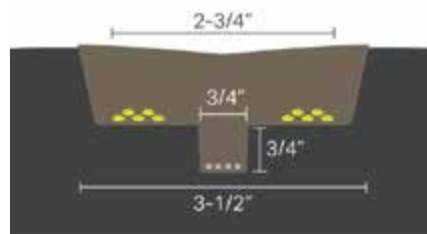
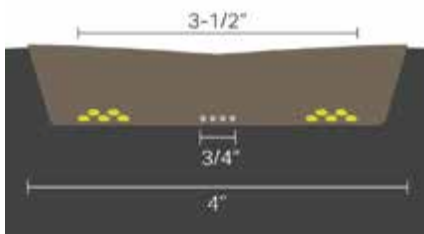
CARBIDE TIP

4" (102mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance.

Carbide inserts on the underside of the wing to maintain a sharp cutting edge. This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.



SHOWN WITH SINGLE SHOOT HOLDER 688-HLD-1000



SHOWN WITH DOUBLE SHOOT HOLDER 688-HLD-2000

**610-TIP-4081 / 4082****CARBIDE TIP**

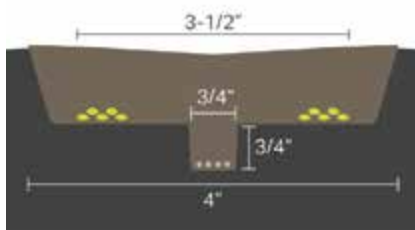
4" (102mm) paired row cast chrome tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have 3/4" (19mm) vertical separation of granular, liquid, aqua NH₃ or aqua NH₃ + phos fertilizer.

Carbide inserts on the underside of the wing maintain a sharp cutting edge. Carbide inserts on the back underside of the wings seal the fertilizer trench prior to seed placement.

610-TIP-4082 has additional carbide below the wings, along the sides of the fertilizer trench, to provide extra-wear life.

Not recommended for use on Case IH 800/900 or NH P2070.

Fits VOS (Versatile Opener System).
See page 56-57.



● SEED
● FERTILIZER

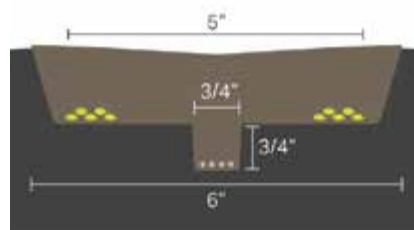
Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, fan speeds, application rates, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

**610-TIP-6082****CARBIDE TIP**

6" (152mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have 3/4" (19mm) vertical separation of liquid, granular, aqua NH₃ or aqua NH₃ + phos fertilizer.

Carbide inserts on the underside of the wing maintain a sharp cutting edge. Carbide inserts on the back underside of the wings seal the fertilizer trench prior to seed placement. Additional carbide is placed along the sides of the fertilizer trench, below the wings, to provide extra-wear life.

Fits VOS (Versatile Opener System).
See page 56-57.

**200-BNC-3100****BOLT & NUT COMBO**

Paired row tips require this bolt and nut combo for installation.

Do not over tighten the bolt. Turn bolt in by hand until the shoulder of the bolt makes contact with the nut before torquing to 84 in/lbs or 7 ft/lbs (9.5Nm). **Over torquing will result in difficulty when removing.**

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut.

Side Band Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation.



612-TIP-0711

612-TIP-0711
612-TIP-0712

CHROME TIP

Side band cast chrome tip with carbide inserts on the nose and the wing for excellent penetration and wear resistance.

The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. Fertilizer is delivered in a band off to the side (right or left) on the same level as the seedbed.

612-TIP-0711 LEFT WING
612-TIP-0712 RIGHT WING



614-TIP-2711

614-TIP-2711
614-TIP-2712

CARBIDE TIP

Side band cast chrome tip with carbide inserts on the nose and the wing for excellent penetration and wear resistance. A carbide wafer on the bottom of the fertilizer trough prevents bottom wear and keeps the fertilizer trench open.

The seed is placed in a 1-1/2" (38mm) band 3/4" (19mm) above and to the side of the fertilizer row after the fertilizer trench has been closed by the wing.

614-TIP-2711 LEFT WING
614-TIP-2712 RIGHT WING



200-NUT-3101

200-BLT-3102

200-BNC-3100

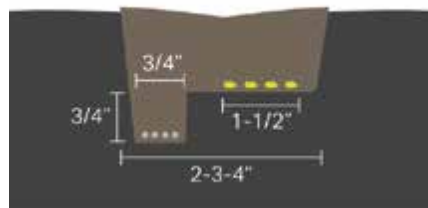
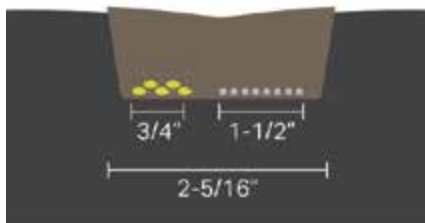
BOLT & NUT COMBO

Side band tips require this bolt and nut combo for installation.

Do not over tighten the bolt. Turn bolt in by hand until the shoulder of the bolt makes contact with the nut before torquing to 84 in/lbs or 7 ft/lbs (9.5Nm). **Over torquing will result in difficulty when removing.**

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



SEED FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

Fertilizer Replaceable Tips

These tips use bolt and nut combo 600-BNC-5000 for installation.



600-TIP-3011

CHROME TIP

3/4" (19mm) chrome tip.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7500

CARBIDE TIP

3/4" (19mm) chrome tip with carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7501

CARBIDE TIP

3/4" (19mm) chrome tip with extra long carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7502

CARBIDE TIP

3/4" (19mm) chrome tip with extra long carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.

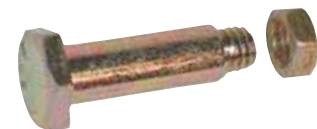


600-TIP-7507

CARBIDE TIP & WING

3/4" (19mm) carbide tip and wing for liquid application. This allows vertical and horizontal separation when double-shooting with liquid.

Only used with 600-KNH-7562.
See page 24.



600-BNC-5000

BOLT & NUT COMBO

Used to secure 600 series tips onto the 410, 599, 600 & 602 Series fertilizer knife holders.

The nut (600-NUT-3754) and bolt (600-BLT-5004) can be ordered separately.

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

Multi-Shoot Opener Precautions & Risk Factors

The development and increased use of multi-shoot openers for one-pass seed and fertilizer placement often brings up the question of how much fertilizer can be safely placed with the seed without causing germination problems or seedling damage. The answer to this question is very complex. In less than ideal conditions, mixing between seed and fertilizer may occur.

It is our company's policy not to recommend or endorse specific "safe" rates of fertilizer for multi-shoot openers due to the wide variance in the precautions and risk factors listed below. Most of our openers are tested at independent research facilities to verify only the placement of seed and fertilizer. We suggest that producers consult their local agronomist to establish acceptable fertilizer rates for their unique seeding conditions.

Consider These Factors When Using Multi-Shoot Openers:

FERTILIZER SOURCE: Depending on the type of fertilizer used, damage can occur either through NH₃ toxicity, salt effects, or a combination of both, as in the case with blended fertilizer.

FERTILIZER RATES: Typically, the risk of crop seedling injury increases with higher fertilizer rates.

CROP TYPE: Crops vary in their ability to tolerate seed-placed fertilizer with cereals being able to withstand more than oilseeds, and pulses falling somewhere in between.

SEED QUALITY: With everything else being equal, seed with poor vigor will suffer more damage from seed-placed fertilizer than seeds with high vigor. If seed vigor is questionable, have it tested.

SOIL MOISTURE: With soil at or near saturation point, the toxic effects of fertilizer are diluted and seeds can germinate, and develop, with few problems. If conditions are very dry, reduce the amount of fertilizer placed near the seed.

SOIL TEXTURE: Fine textured soils such as clay or clay loam tend to reduce toxic effects over coarse or sandy soils because of their ability to hold more water and absorb toxic free NH₃.

ORGANIC MATTER: Higher levels of organic matter (OM) in a soil lessen the risk of damage. For example, when there are reduced levels of OM on dry, eroded hilltops, seedlings are more prone to injury.

SEEDBED UTILIZATION (SBU): This is the proportion of the seedbed used for seed and fertilizer placement. As SBU increases, the crops tolerance to higher rates of seed-placed fertilizer increases. Ex: 2" openers on 10" row spacing have a SBU of 20%.

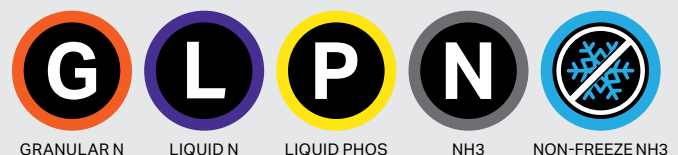
SEEDING DEPTH, PACKING & SPEED: These may compromise seed and fertilizer placement as well as the overall quality of the seeding operation.

ADVERSE SEEDING CONDITIONS: Excessively wet or dry soil at time of seeding can cause erratic seed placement, poor seed-to-soil contact and poor separation, which will also affect the amounts of seed placed fertilizer you can apply.

EXCESS AIR VOLUME: Higher air volumes can result in seed and fertilizer being blown out of the trench or mixing of seed and fertilizer in the trench.

If any of the above conditions are less than ideal, it is advisable to reduce your fertilizer rate accordingly.

FERTILIZER TYPES



Openers to Fit C-Shank

Single & Multi-Shoot Options



047-ASY-1000
047-KNH-1000

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44 - 64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Seed is delivered through the precision funnel opening. The front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts sold separately.** **047-ASY-1000** uses Grade 8 carriage bolts and **047-KNH-1000** uses plow bolts. See page 108. For an expanded view of this opener see page 114.

047-KNH-1000 is only used directly beside the Bourgault MRB® for improved trash clearance. **Not sold as a complete set, must be ordered separately.** Customers must look at the machine to determine what quantity of shanks are directly beside the MRB®.

50° shanks require 880-WDG-0300 or 880-WDG-0301. See page 106.



047-ASY-1005P

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with **880-ASY-1010**. See page 106.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44 - 64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Liquid Phos is delivered onto the seed bed, below the seed. The seed is delivered through the precision funnel opening. Front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 108.

50° shanks require either 880-WDG-0300 or 880-WDG-0301. See page 106.

For an expanded view of this opener see page 114.



047-VRT-1040

SINGLE SHOOT OPENER

FITS: 47° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" (44mm)

TIP OPTIONS: Comes with 1" (25mm) welded tip with extra carbide for long-lasting wear life.

OVERVIEW: The vertical approach of this opener reduces rock pulling and soil throw.

NOTES: **Installation bolts sold separately.** Use plow bolts. See page 108.

Interested in BTT Products?

With the BTT Demo Program you can try before you buy.

See page 53 for details.

**050-KNH-0812**

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Starter Fertilizer w/ Seed Only**TUBE SIZE:** 1-1/4" (32mm) O.D.**BOLT HOLE SPACING:** 1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.**TIP OPTIONS:**

- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3000
- 200-TIP-3001
- 200-TIP-3011
- 200-TIP-4011

Tips sold separately. See pages 12-13.**OVERVIEW:** The rear delivery of this opener provides extra trash clearance.**NOTES:** **Installation bolts sold separately.** Use Grade 8 hex head bolts. See page 112.**Due to plugging, this opener is not recommended with tips:**

- 200-TIP-0511
- 200-TIP-0800
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

**599-KNH-7540**

SINGLE SHOOT OPENER

FITS: 47° C-shank**FERTILIZER TYPE:** Starter Fertilizer w/ Seed Only**TUBE SIZE:** 1-1/4" (32mm) O.D.**BOLT HOLE SPACING:** 1-3/4" (44mm)**TIP OPTIONS:**

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

- 3" (76mm) tip:
- 600-TIP-3011

Tips sold separately. See page 17.**OVERVIEW:** This opener is designed for a better fit on the Bourgault Shank. The larger tip provides extra long wear while reducing wear on the holder.**NOTES:** **Installation bolts sold separately.** Use Grade 8 hex head bolts. See page 111 & 112.**600-KNH-7540**
600-KNH-7640

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Starter Fertilizer w/ Seed Only**TUBE SIZE:****600-KNH-7540:** 1-1/4" (32mm) O.D.**600-KNH-7640:** 1-1/2" (38mm) O.D.**BOLT HOLE SPACING:** 1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.**TIP OPTIONS:**

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

- 3" (76mm) tip:
- 600-TIP-3011

Tips sold separately. See page 17.**OVERVIEW:** The larger tip on these holders provides extra long wear while reducing wear on the holder.**410-KNH-7540** is also available to fit the 410 Series *Speed-Loc™*. See page 67.**NOTES:** **Installation bolts sold separately.** Use Grade 8 hex head bolts. See page 111 & 112.

**610-ASY-4020**

PAIRED ROW OPENER

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

DISTURBANCE: Ultra-low draft, low disturbance and smoother fields.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44 - 64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Replaceable cast chrome tip (610-TIP-4041) with carbide inserts on the nose and narrow carbide on the cutting edges of the wings for great penetration.

Assemblies on this page include the tip.

PACKER RECOMMENDATION: 4" (102mm) or wider.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with Liquid Phos options. Please call the factory for more information.

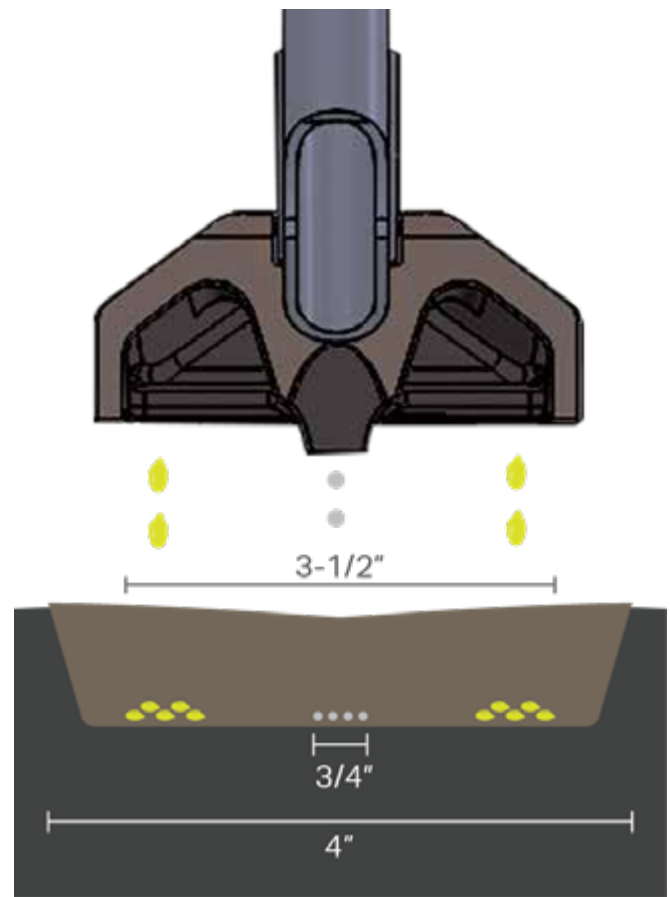
NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 108.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 106.

For an expanded view of these openers see page 120.

**610-ASY-4026**

PAIRED ROW OPENER



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.



610-ASY-2712G



610-ASY-2712L

610-ASY-2711G
610-ASY-2712G

SIDE BAND OPENER

610-ASY-2711L
610-ASY-2712L

SIDE BAND OPENER

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44 - 64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Replaceable cast chrome tip with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts providing excellent wear resistance. **Assemblies on this page include the tip.**

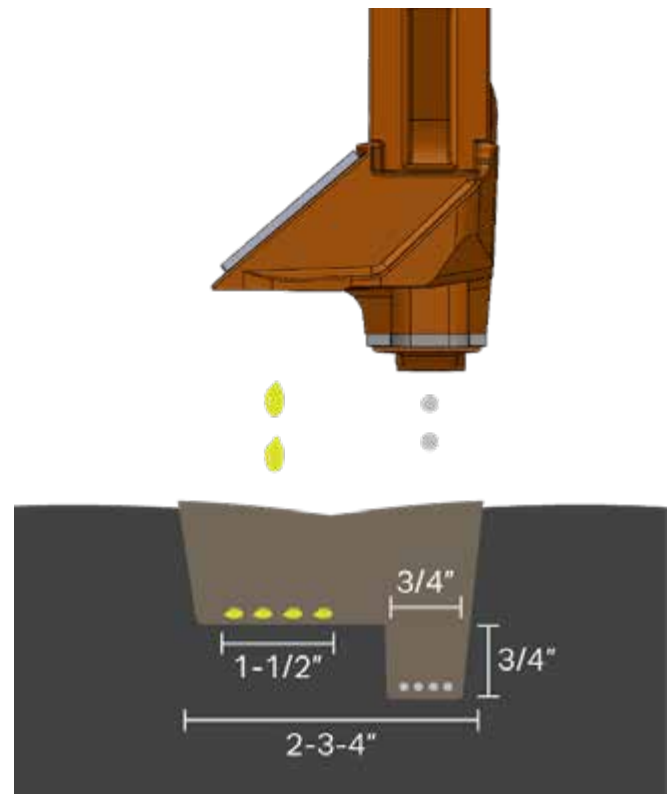
PACKER RECOMMENDATION: 3" (76mm) or wider. **V-Packer not recommended with these openers.**

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 108.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 106.

For an expanded view of these openers see page 118.



SEED FERTILIZER REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



612-ASY-0711

G



610-ASY-0711GP

G P



612-ASY-0711LP

L

L P

NOT AVAILABLE	610-ASY-0711GP 610-ASY-0712GP	NOT AVAILABLE	610-ASY-0711LP 610-ASY-0712LP
612-ASY-0711 612-ASY-0712	612-ASY-0711GP 612-ASY-0712GP	612-ASY-0711L 612-ASY-0712L	612-ASY-0711LP 612-ASY-0712LP

SIDE BAND OPENERS

SEED PLACEMENT: The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The 610 GP & LP openers deliver the liquid phos below the seed. The 612 GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

DISTURBANCE: Unique design of the tip provides low disturbance, low draft and smoother fields.

TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose of the tip and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

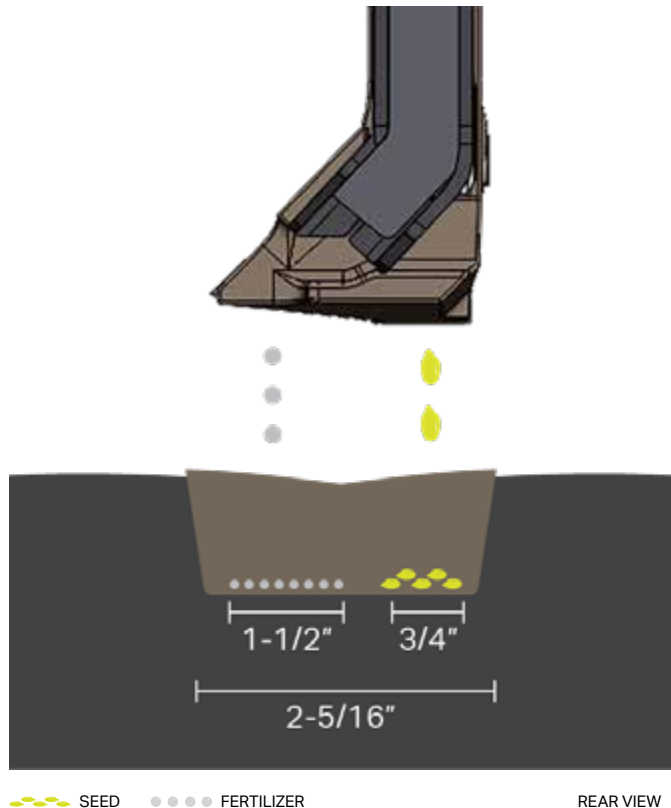
PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 108.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 106.

For an expanded view of these openers see page 117.



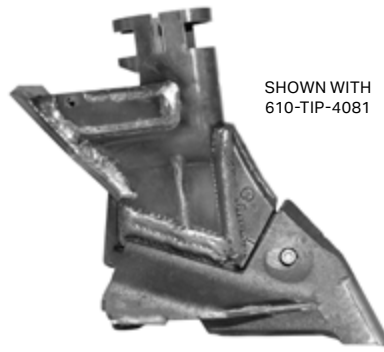
SEED FERTILIZER REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.

**600-KNH-7562**

SIDE BAND OPENER

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Liquid N**TUBE SIZE:****Granular:** 1-1/4" (32mm) O.D.**Liquid:** 1/4" (6mm) O.D.**BOLT HOLE SPACING:** 1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.**TIP OPTIONS:** Replaceable high-chrome tip (600-TIP-7507) is protected with a carbide insert on the nose and a solid carbide wing. The carbide placement provides sharp cutting edges for excellent penetration.**Tip sold separately.** See page 17.**OVERVIEW:** These unique side band openers provide good horizontal separation with a slight vertical seed/fertilizer separation. They work well when used with a pressurized liquid system. The replaceable tips ensure high-wear points can be replaced at a lower cost.**NOTES: Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 112.**610-HLD-2080HD**

VOS (VERSATILE OPENER SYSTEM)

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Multiple options. See pages 56-57.**OVERVIEW:** This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs.

Designed for use in rocky conditions, this opener has two plates welded to the sides of the funnel to help strengthen it, making it stiffer and less prone to bending in extreme conditions.

Components and tip sold separately. See pages 56-57.**NOTES: Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 108.**When installing on 50° shanks other than Bourgault or Ezee-On,** you will require 880-WDG-0300 or 880-WDG-0301. See page 106.**620-HLD-5000**

TITAN OPENER SYSTEM

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Multiple options. See pages 54-55.**OVERVIEW:** This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs.**Components sold separately.** See pages 54-55.**NOTES: Installation bolts sold separately.** Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 112.

MAX LIFE

HARROW TINES

6X
LONGER WEAR

3YR
LIMITED WARRANTY



We manufacture harrow tines to fit most makes and models whether it's grey, blue, red, yellow or green.

Improved Wear. Exceptional value.

The *MAX LIFE*[™] process infuses tungsten carbide onto the harrow tine creating the toughest and most economical option available. BTT applies its *MAX LIFE* coating to tines manufactured by S3 Wireform, which are known for consistency and longer coil life. Field tests have proven that *MAX LIFE* tines outlast regular tines by a minimum of 6X.

SEE *MAX LIFE* HARROW TINE OPTIONS ON PAGE 94-95.

Openers to Fit Bourgault

Bourgault PHD, 3330SE Series PLD & 3335QDA Series PLD



333-KNF-1000 333-KNF-1010

FERTILIZER KNIFE

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This is the replacement fertilizer knife portion as supplied by the OEM for this drill. Carbide applied to the nose for longer wear.

333-KNF-1000 replaces OEM #9366-49.

333-KNF-1010 has extra hard surfacing on the sides for long wear and replaces OEM #9366-99.

NOTES: Installation bolts sold separately. Use 5/8" x 2-1/2" Grade 8 hex head bolts and locking nuts. See page 112.

333-KNF-2000

SINGLE SHOOT SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This is the replacement seeding knife portion as supplied by the OEM for this drill. Replaces OEM #9366-25.

Long wear back swept carbide approach angle for minimal soil disturbance around the opener.

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 112.

333-KNF-0511 333-KNF-0512

INLINE BENT OFFSET SINGLE SHOOT SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This inline fully welded replacement single shoot seeding opener has carbide and hard surfacing for extra long wear life.

333-KNF-0511 LEFT
333-KNF-0512 RIGHT

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 112.

333-ASY-0711 333-ASY-0712

INLINE OFFSET SINGLE SHOOT SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS:

- 612-TIP-0711 (LEFT)
- 612-TIP-0712 (RIGHT)

OVERVIEW: This inline single shoot seeding opener has a replaceable tip with extra long wear life. Seed is placed to the side of the opener.

333-ASY-0711 LEFT
333-ASY-0712 RIGHT

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 112.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



1/2" WIDE
050-MRS-5030

050-MRS-5030
050-MRS-5031

MID ROW SHANK FERTILIZER KNIFE

FITS: Bourgault MRS

FERTILIZER TYPE:

Granular + NH₃, Granular + Liquid

TUBE SIZE:

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D. stainless steel

Granular: 1-3/4" (44mm) O.D.

BOLT HOLE SPACING: 1-3/4" (44mm) shank bolt hole spacing.

TIP OPTIONS: N/A

OVERVIEW: This 1/2" wide low disturbance Mid Row Shank fertilizer knife is a low maintenance alternative to Mid Row Banders. It has double carbide on the nose as well as hard facing above the carbide and on the sides for longer wear.

050-MRS-5030 applies both NH₃ and Granular.

050-MRS-5031 applies both Liquid and Granular.

NOTES: Installation bolts included.



680-ASY-1000

680-ASY-1000
680-HLD-1000

SINGLE SHOOT OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Seed is delivered through the precision funnel opening. Front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: Installation bolts sold separately. Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108. When installing use bolt holes pictured in Fig. 1.

680-HLD-1000 does not have a bushing.

For an expanded view of this opener see page 115.



FIG. 1



680-ASY-1000P

680-ASY-1000P
680-HLD-1000P

SINGLE SHOOT OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Liquid phos is delivered onto the seed bed, below the seed. Seed is delivered through the precision funnel opening. Front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: Installation bolts sold separately. Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108. When installing use bolt holes pictured in Fig. 1.

680-HLD-1000P does not have a bushing.

For an expanded view of this opener see page 115.



Check out scraper options to fit Bourgault packers on page 92.





680-ASY-0711GP



680-ASY-0711LP



680-ASY-0711G
680-ASY-0712G



680-ASY-0711GP
680-ASY-0712GP



680-ASY-0711L
680-ASY-0712L



680-ASY-0711LP
680-ASY-0712LP

SIDE BAND OPENERS

FITS: Bourgault PHD

SEED PLACEMENT: Seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The GP & LP openers deliver the liquid phos below the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

DISTURBANCE: Unique design of the tip provides low disturbance, low draft and smoother fields.

TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

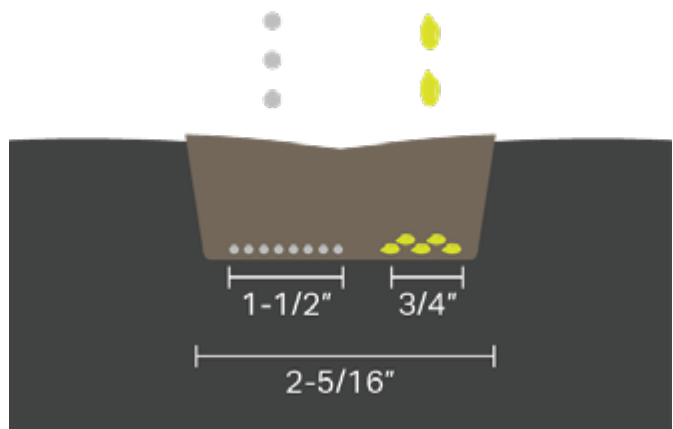
NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

When installing use bolt holes pictured in Fig. 2.

For an expanded view of these openers see page 117.



FIG. 2



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.

680-ASY-2711G



680-ASY-2711LP



G

680-ASY-2711G
680-ASY-2712G

G P

680-ASY-2711GP
680-ASY-2712GP

L

680-ASY-2711L
680-ASY-2712L

L P

680-ASY-2711LP
680-ASY-2712LP

SIDE BAND OPENERS

FITS: Bourgault PHD

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip (614-TIP-2711 & 614-TIP-2712) with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 4-1/2" (114mm) Semi-Pneumatic Packer recommended. **V-Packer not recommended with these openers.**

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

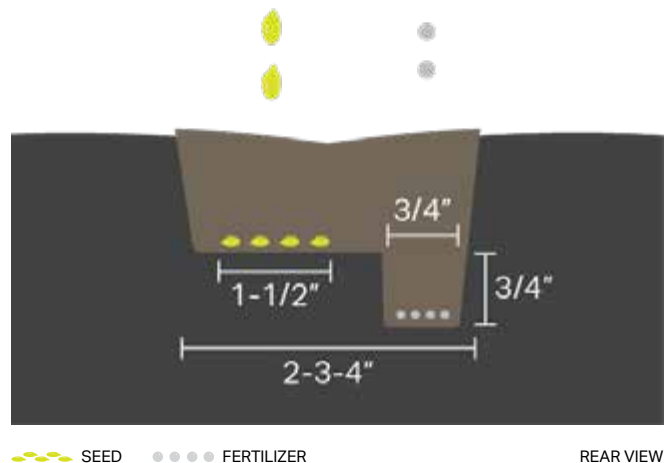
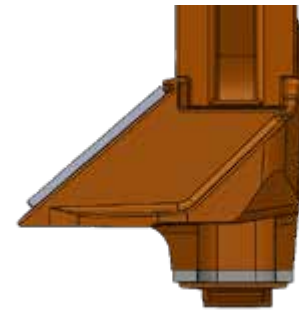
NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

When installing use bolt holes pictured in Fig. 3.

For an expanded view of these openers see page 118.



FIG. 3



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



682-ASY-2063
682-ASY-2064

SIDE BAND OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Double Shoot Liquid N. **For Pressurized NH₃ please see your pressurized system dealer for more information on tube sizing and inserts.**

SEED PLACEMENT: The slim body provides a low draft and low soil disturbance for better trash clearance, while ensuring great seed placement. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Liquid N or Pressurized NH₃ openers are fitted with a 1/4" (6mm) O.D. stainless steel tube which places fertilizer behind the wing and 1-1/2" outward to the side away from the seed band. This provides increased separation of seed and fertilizer. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Cast chrome tip with extra long carbide inserts on the nose of the tip provides excellent penetration and wear resistance. Top face of the wing is covered with two carbide inserts providing a longer wear life. The tip is non-replaceable and welded to the seed boot.

PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

LIQUID PHOS OPTIONS: The P opener delivers liquid phos on top of the seed row. A 1/4" (6mm) stainless steel tube is welded to the back of the seed boot.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108. When installing on a Bourgault PHD use bolt holes pictured in Fig. 4.

For an expanded view of these openers see page 116.



FIG. 4

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



Original Degelman Wear Parts

Built by BTT for Degelman and now available at BTT dealers!



AVAILABLE SPRING 2022

Degelman Pro-Till *Niaux* 200 Disks

Page 99 & 100



Concave disks do an excellent job of tilling and inverting the soil. The action of the disc depends on the speed. The biggest advantage this disk offers is durability and longevity.



Notched concave disks provide a very aggressive cutting edge that is well suited for soil penetration. These disks are a good choice for residue management.

MAX LIFE™ Scrapers

Page 92



MAX LIFE scrapers will significantly increase the life and performance of your roller scrapers. The tungsten carbide tipped scrapers maintain their original length and shape, resulting in a clean roller and a more consistent field finish.

MAX LIFE™ Harrow Tines

Page 95

The MAX LIFE process infuses tungsten carbide onto the harrow tine creating the toughest and most economical option available. Aftermarket MAX LIFE Harrow Tines last 6X longer than competitor tines and fit Degelman Heavy Harrows.



Degelman

Openers to Fit CNH

Case IH, New Holland, Flexi-Coil & Concord



684-KNH-1010

SINGLE SHOOT OPENER

FITS: Case IH 800 / 900, New Holland P2070 / 2075, Flexi-Coil PD5700 / 7200

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: This single shoot opener is designed to clear heavy trash build up, the narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder has an extra set of bolt holes on the body for deeper seed placement where required.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.

Standard installation uses the bottom holes (pictured red in Fig. 5). For 1.5" more depth use the top holes (pictured yellow in Fig. 5).



FIG. 5



694-KNH-1000

SINGLE SHOOT OPENER

FITS: (84° Shanks Only) Case IH ATX 700, Flexi-Coil 5500, New Holland P2060

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. Tip should not be wider than packer. **Tips sold separately.** See pages 12-13.

OVERVIEW: This single shoot opener applies Liquid Phos on top of the seed, the narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 112.



Check out scraper options to fit CNH packers on page 92.





694-ASY-4020G

PAIRED ROW OPENER

FITS: Case IH ATX 700, New Holland P2060, Flexi-Coil 5500, Concord (84° shanks only)

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

DISTURBANCE: Ultra-low draft, low disturbance and smoother fields.

TIP OPTIONS: Replaceable cast chrome tip (610-TIP-4041) with carbide inserts on the nose and narrow carbide on the cutting edges of the wings for great penetration.

Assemblies on this page include the tip.

PACKER RECOMMENDATION: 4" (102mm) or wider.

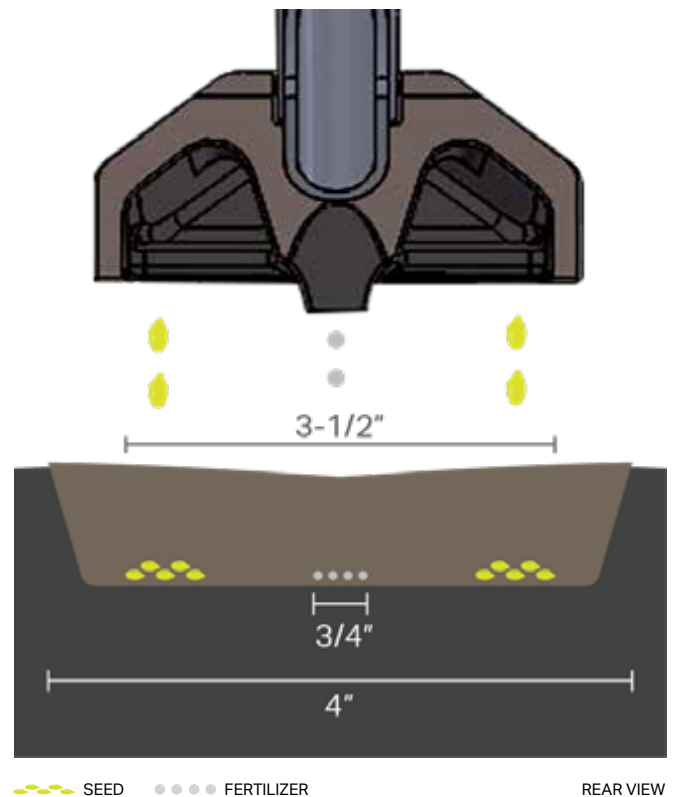
OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose.

These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with liquid phos options. Please call the factory for more information.

NOTES: **Installation bolts sold separately.**

Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 112.

For an expanded view of these openers see page 120.



SEED ●●●● FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

694-ASY-2711LP



684-ASY-2711L



G

G P

L

L P

684-ASY-2711G¹
684-ASY-2712G¹

684-ASY-2711GP¹
684-ASY-2712GP¹

684-ASY-2711L¹
684-ASY-2712L¹

684-ASY-2711LP¹
684-ASY-2712LP¹

694-ASY-2711G²
694-ASY-2712G²

694-ASY-2711GP²
694-ASY-2712GP²

694-ASY-2711L²
694-ASY-2712L²

694-ASY-2711LP²
694-ASY-2712LP²

SIDE BAND OPENERS

FITS: ¹Case IH 800 / 900, NH P2070 / P2075, Flexi-Coil PD5700 / 7200, ²Case IH ATX 700, NH P2060, Flexi-Coil 5500, Concord (84° shanks only)

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench and firms up the seed bed. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 3" (76mm) or wider. **V-Packer not recommended.**

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: **Installation bolts sold separately.**

684 openers use 1/2" x 2" Grade 8 hex head bolts. **694 openers** use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 112.

When installing 684 openers use bottom holes for standard installation (pictured red in Fig. 6). Use top holes to add 3° more pitch (pictured yellow in Fig. 6).

For an expanded view of these openers see page 119.



FIG. 6

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.

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SHOWN WITH
620-TIP-0510 &
620-SSH-1000



694-HLD-5000

TITAN OPENER SYSTEM

FITS: (84° Shanks Only) Case IH ATX 700, Concord, New Holland P2060, Flexi-Coil 5500

FERTILIZER TYPE: Multiple options. See pages 54-55.

OVERVIEW: This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs. **Shown with 620-TIP-0510 and 620-SSH-1000.**

Components sold separately. See pages 54-55.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2-12" Grade 8 hex head bolts. See page 112.



I recently purchased a new 900 Case IH drill and was having some issues with the CASE openers plugging. I was also looking at options for replacing just the tips and not the whole opener. After trying a few BTT openers with vertical seed/fertilizer separation, I switched over to a full set and have been very happy with them so far. There was no more plugging and horsepower to pull the drill dropped by about 10%.

Glen Kratchmer, Saskatchewan, Canada



Openers to Fit Horsch

VOS (Versatile Opener System) Fits Horsch Sprinter & Co



Sustainable Farming. **Reduced Input Costs.**

1. Drill into a wide variety of situations across a range of soil types.
2. Minimized soil disturbance and draft due to low rake angle design.
3. Less draft and reduced wear rates at a lower cost per hectare.
4. Even crop establishment due to greater consistency in seed and fertilizer placement.
5. Increased moisture retention.



"In 2018 we changed to VOS and it was a real game changer! We thought that the knock-on points we were using previously created low disturbance, but the VOS single shoot is something else. I had to check that the field had been drilled, and even questioned the student to make sure he had done the job!"



The main reason we changed was because of how VOS distributes the fertilizer; alternative openers just spray the fertilizer on the soil after the coulters. I wanted the fertilizer to be under the seed or at least under the soil. VOS does just this, plus I can go straight from rape seed to beans without changing anything on the drill leg."

Leigh Donger,
Peacock Farm



"We'd been min-tilling OSR ground and found that producing satisfactory seedbeds that would allow for the timely and reliable establishment of the crop without them drying out and losing moisture was becoming more and more difficult to achieve. I'd looked at a number of competing drill coulters but was always drawn back to the level of low disturbance of the VOS."



We spent a few hours with Stuart discussing how the coulters would work and the types of soil conditions we'd expect to be working in, and we finally concluded the VOS would suit our needs. We have to date achieved an acreage of 4,655 and believe we will successfully break the 5,000 acre barrier."

James Mayes,
Bentfield Bury Farms (Sentry Ltd)



SHOWN WITH
200-TIP-0802

688-HLD-1000 W/ 200-TIP-0802

SINGLE SHOOT OPENER

FITS: Horsch 84° Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS:

- 200-TIP-0802
- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3011
- 610-TIP-4030

Tips sold separately. See pages 12-15.

OVERVIEW: This single shoot opener has a narrow design allowing for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.

NOTES: **Installation bolts sold separately.** Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 7), for 4° more pitch use the top holes (pictured yellow in Fig. 7).

Hose clamps used to secure seed hoses from drill are sold separately.



FIG. 7

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SHOWN WITH
610-TIP-4030

688-HLD-1000 W/ 610-TIP-4030

SINGLE SHOOT OPENER

FITS: Horsch 84° Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TIP OPTIONS:

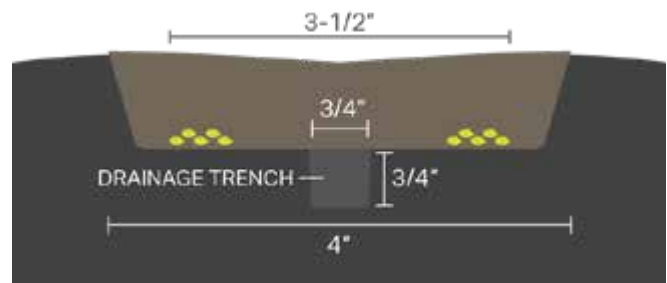
- 200-TIP-0802
- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3011
- 610-TIP-4030

Tips sold separately. See pages 12-15.

OVERVIEW: This single shoot opener has a narrow design allowing for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.** Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 7), for 4° more pitch use the top holes (pictured yellow in Fig. 7).



SEED FERTILIZER

610-TIP-4030

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

SHOWN WITH
610-TIP-4030**688-HLD-2000**

PAIRED ROW OPENER

FITS: Horsch 84° Shank**SEED PLACEMENT:** Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.**FERTILIZER PLACEMENT:**Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.****TIP OPTIONS:**

- 610-TIP-4041
- 610-TIP-4030

Tips sold separately.

See pages 14-15.

OVERVIEW: Hard facing is placed on critical wear points. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. These openers provide the flexibility to easily switch between granular and liquid fertilizer.**NOTES: Installation bolts sold separately.** Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 8), for 4° more pitch use the top holes (pictured yellow in Fig. 8).

FIG. 8

SHOWN WITH
610-TIP-4082**688-HLD-2080
W/ 610-TIP-4082**

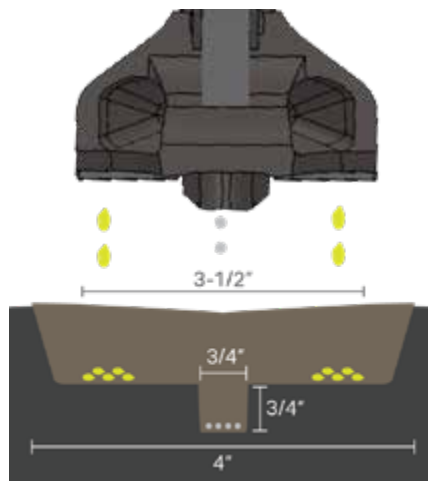
VOS (VERSATILE OPENER SYSTEM)

FITS: Horsch 84° Shank**FERTILIZER TYPE:** Multiple options. See pages 56-57.**TIP OPTIONS:**

- 610-TIP-0802
- 610-TIP-3581
- 610-TIP-4082
- 610-TIP-6082

Tips sold separately. See pages 12-15.**OVERVIEW:** This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.**Components sold separately.**

See pages 56-57.

NOTES: Installation bolts sold separately. Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 8), for 4° more pitch use the top holes (pictured yellow in Fig. 8).

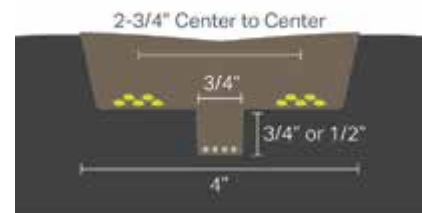
610-TIP-4082

SHOWN WITH
620-TIP-0510 &
620-SSH-1000**688-HLD-5000**

TITAN OPENER SYSTEM

FITS: Horsch 84° Shank**FERTILIZER TYPE:** Multiple options. See pages 54-55.**OVERVIEW:** This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs.**Components sold separately.**

See pages 54-55.

NOTES: Installation bolts sold separately. Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts.

SEED FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

Ultimate Tillage Tools

Now available through BTT dealers!

Dig deep into the dirt, not your wallet.

Products manufactured by Richmond Brothers Equipment are built rugged using a chrome-cast formula with superior abrasion and impact-resistant qualities. Their line of ultimate tillage tools withstands long-term wear and tear, reducing your cost per acre.



Chisel Plow Points

Page 88



Cast Sweeps

Page 88



Deep Rippers

Page 89



Nuggets

Page 90



Shank Savers

Page 90

MANUFACTURED BY



EQUIPMENT LLC

Fertilizer Knives to Fit John Deere

John Deere P500 & 1870 Conserva Pak Air-Hoe Drill

TIP OPTIONS:

- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips Sold Separately. See page 12.

OVERVIEW: The body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

650-ACC-1000 bracket is required on single fertilizer knives and limits the tripping distance of the knives.

650-ACC-1010 bracket is required for 650-HLD-1000GN and 650-HLD-1000GL. Required on units prior to 2017.

Brackets sold separately. Mounting bolts included. See page 122.

NOTES: Use roll pins to install. Must be purchased through your John Deere dealer. For an expanded view of these openers see page 122.



L

OR

N



SHOWN WITH
200-TIP-0802

650-HLD-1001

FERTILIZER TYPE: Liquid or NH3
TUBE SIZE: 0.4" O.D. stainless steel pipe
NOTES: Use with 650-ACC-1000.

G



650-HLD-1000G

FERTILIZER TYPE: Granular
TUBE SIZE: 1-1/4" (32mm) O.D.
NOTES: Use with 650-ACC-1000.

L



650-HLD-1000L

FERTILIZER TYPE: Liquid
TUBE SIZE: 1/4" (6mm) O.D. stainless steel pipe
NOTES: Use with 650-ACC-1000.

N



650-HLD-1000N

FERTILIZER TYPE: NH3
TUBE SIZE: 1/2" (12mm) O.D. NH3 pipe
NOTES: Use with 650-ACC-1000.

G L



650-HLD-1000GL

FERTILIZER TYPE: Granular & Liquid
TUBE SIZE: 1/4" (6mm) O.D. stainless steel and 1-1/4" (32mm) O.D. granular pipe
NOTES: Use with 650-ACC-1010

G N



650-HLD-1000GN

FERTILIZER TYPE: Granular & NH3
TUBE SIZE: 1/2" (12mm) O.D. NH3 and 1-1/4" (32mm) O.D. granular pipe
NOTES: Use with 650-ACC-1010

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Seed Openers to Fit John Deere

John Deere P500 & 1870 Conserva Pak Air-Hoe Drill



650-ASY-0711

650-ASY-0711
650-ASY-0712

650-ASY-0711P
650-ASY-0712P

SIDE BAND OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D. **Liquid Phos:** 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: Cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose and the wing for excellent penetration and wear resistance. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seed bed. **Assembly includes the tip.**

OVERVIEW: The seed is directed to the side through the holder which places the seed in one row off to the side on a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

650-ASY-0711 LEFT / **0712** RIGHT

650-ASY-0711P LEFT / **0712P** RIGHT - Liquid phos option

NOTES: **Installation bolts sold separately.** Use M8x30 Class 10.9 carriage head bolts. Purchase through your John Deere dealer. For an expanded view of this opener see page 123.



650-ASY-3011

650-ASY-3011
650-ASY-3011P

PAIRED ROW OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D. **Liquid Phos:** 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: 3" (76mm) cast chrome tip (200-TIP-3011) with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings maintain a sharp cutting edge. **Assembly includes the tip.**

OVERVIEW: The seed is directed rearward through the holder which places the seed in two rows onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder. **For Liquid Phos option order 650-ASY-3011P.**

NOTES: **Installation bolts sold separately.**

Use M8x30 Class 10.9 carriage head bolts (purchase through your John Deere dealer). For an expanded view of this opener see page 123.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.

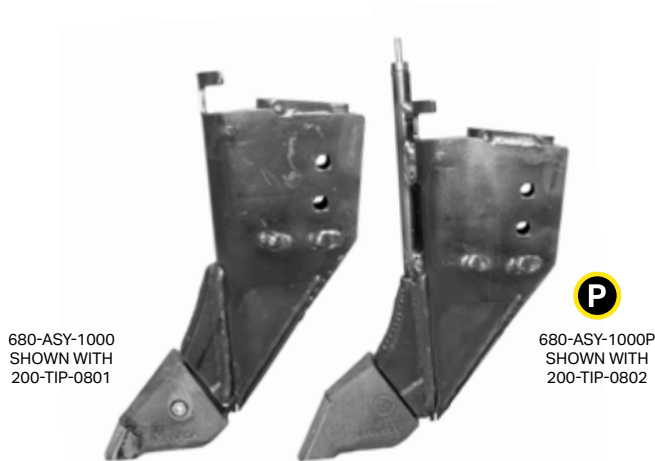


Check out scrapers to fit John Deere packers on page 92.



Openers to Fit Morris

Morris Maxim Edge On, Contour I, Contour II & Quantum



680-ASY-1000
SHOWN WITH
200-TIP-0801

680-ASY-1000P
SHOWN WITH
200-TIP-0802

680-ASY-1000
680-HLD-1000

680-ASY-1000P
680-HLD-1000P

SINGLE SHOOT OPENER

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Liquid phos is delivered onto the seed bed, below the seed. Seed is delivered through the precision funnel opening. Front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

680-HLD-1000 and 680-HLD-1000P do not have bushings.

For an expanded view of this opener see page 115.



683-ASY-1000P

693-ASY-1000P

683-ASY-1000P¹
683-KNH-1000¹

693-ASY-1000P^{2, 3}
693-KNH-1000^{2, 3}

SINGLE SHOOT OPENER

FITS: ¹Morris Contour I, ²Morris Contour II, ³Morris quantum

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: This single shoot opener applies liquid phos on top of the seed, the narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder.

683-KNH-1000 and 693-KNH-1000 are available without the liquid phos tubes.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.



673-HLD-2080
SHOWN WITH
610-TIP-0802



683-HLD-2080
SHOWN WITH
610-TIP-4081



693-HLD-2080
SHOWN WITH
610-TIP-4081

673-HLD-2080

VOS (VERSATILE OPENER SYSTEM)

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Multiple options. See pages 56-57.

OVERVIEW: This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.**
Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

683-HLD-2080¹ 693-HLD-2080^{2, 3}

VOS (VERSATILE OPENER SYSTEM)

FITS: ¹Morris Contour I, ²Morris Contour II, ³Morris Quantum

FERTILIZER TYPE: Multiple options. See pages 56-57.

OVERVIEW: This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.**
Use 1/2" x 2" Grade 8 hex head bolts. See page 112.



680-ASY-0711GP



680-ASY-0711LP

G

G P

L

L P

680-ASY-0711G
680-ASY-0712G

680-ASY-0711GP
680-ASY-0712GP

680-ASY-0711L
680-ASY-0712L

680-ASY-0711LP
680-ASY-0712LP

SIDE BAND OPENERS

FITS: Morris Maxim Edge On

SEED PLACEMENT: The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

DISTURBANCE: Unique design of the tip provides low disturbance, low draft and smoother fields.

TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose of the tip and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

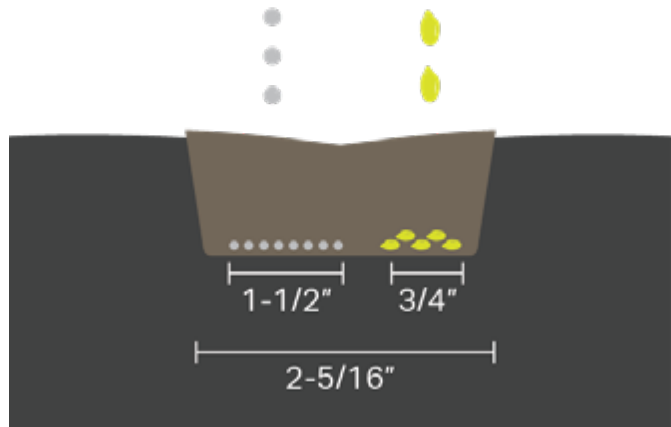
PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

OVERVIEW: Hard facing is placed on critical wear areas to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (31 mm) O.D. hose. Bushings available for larger hoses. See page 106.

NOTES: **Installation bolts sold separately.**

Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

For an expanded view of these openers see page 117.



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



680-ASY-2711LP



683-ASY-2711G

G	G P	L	L P
680-ASY-2711G ¹ 680-ASY-2712G ¹	680-ASY-2711GP ¹ 680-ASY-2712GP ¹	680-ASY-2711L ¹ 680-ASY-2712L ¹	680-ASY-2711LP ¹ 680-ASY-2712LP ¹
683-ASY-2711G ² 683-ASY-2712G ²	683-ASY-2711GP ² 683-ASY-2712GP ²	683-ASY-2711L ² 683-ASY-2712L ²	683-ASY-2711LP ² 683-ASY-2712LP ²

SIDE BAND OPENERS

FITS: ¹Morris Maxim Edge On, ²Morris Contour I

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

TIP OPTIONS: Replaceable cast chrome tip (614-TIP-2711 & 614-TIP-2712) with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life. **Assemblies on this page include the tip.**

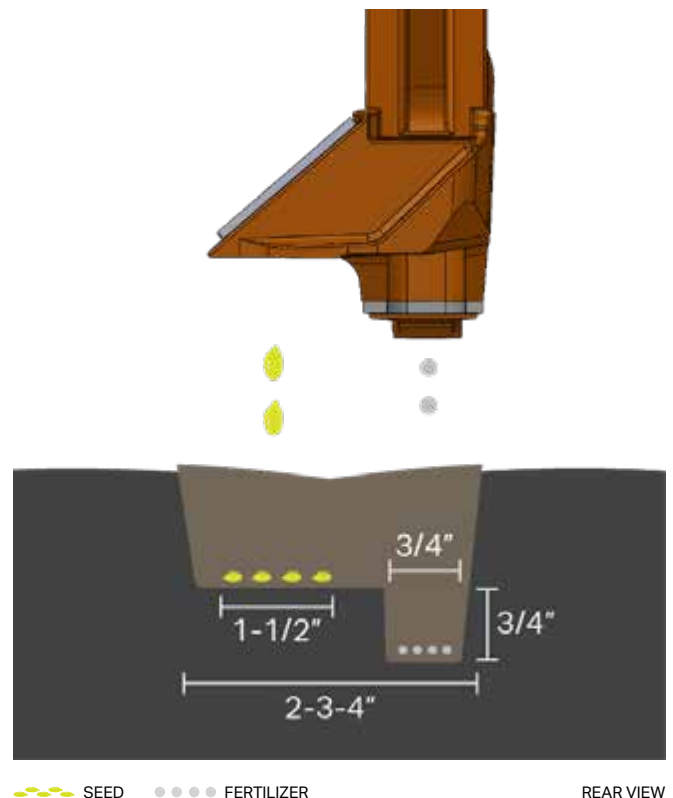
PACKER RECOMMENDATION: 3" (76mm) or wider.

V-Packer not recommended.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (31mm) O.D. hose. Bushings available for larger hoses. See page 106.

NOTES: **Installation bolts sold separately.** **680 openers** use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108. **683 openers** use 1/2" x 2" Grade 8 hex head bolts. See page 112.

For an expanded view of these openers see page 118.



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.



682-ASY-2063
682-ASY-2064

SIDE BAND OPENER

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Double Shoot Liquid N. **For Pressurized NH₃ please see your pressurized system dealer for more information on tube sizing and inserts.**

SEED PLACEMENT: The slim body provides a low draft and low soil disturbance for better trash clearance, while ensuring great seed placement. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Liquid N or Pressurized NH₃ openers are fitted with a 1/4" (6mm) O.D. stainless steel tube which places fertilizer behind the wing and 1-1/2" outward to the side away from the seed band. This provides increased separation of seed and fertilizer. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

TIP OPTIONS: Cast chrome tip with extra long carbide inserts on the nose of the tip provides excellent penetration and wear resistance. Top face of the wing is covered with two carbide inserts providing a longer wear life. The tip is non-replaceable and welded to the seed boot.

PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

LIQUID PHOS OPTIONS: The P opener delivers liquid phos on top of the seed row. A 1/4" (6mm) stainless steel tube is welded to the back of the seed boot.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 108.

For an expanded view of these openers see page 116.

NOTE All wings on side band openers must be pointing inward to center of seeding unit to prevent plugging when turning. Customers should order half left wing and half right wing openers.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

683-ASY-4020G¹693-ASY-4020G²

PAIRED ROW OPENERS

FITS: ¹Morris Contour I, ²Morris Contour II & Morris Quantum

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

DISTURBANCE: Ultra-low draft, low disturbance and smoother fields.

TIP OPTIONS: Replaceable cast chrome tip (610-TIP-4041) with carbide inserts on the nose and narrow carbide on the cutting edges of the wings for great penetration. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 4" (102mm) or wider.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder. The streamlined holder design reduces plugging and allows for better trash clearance.

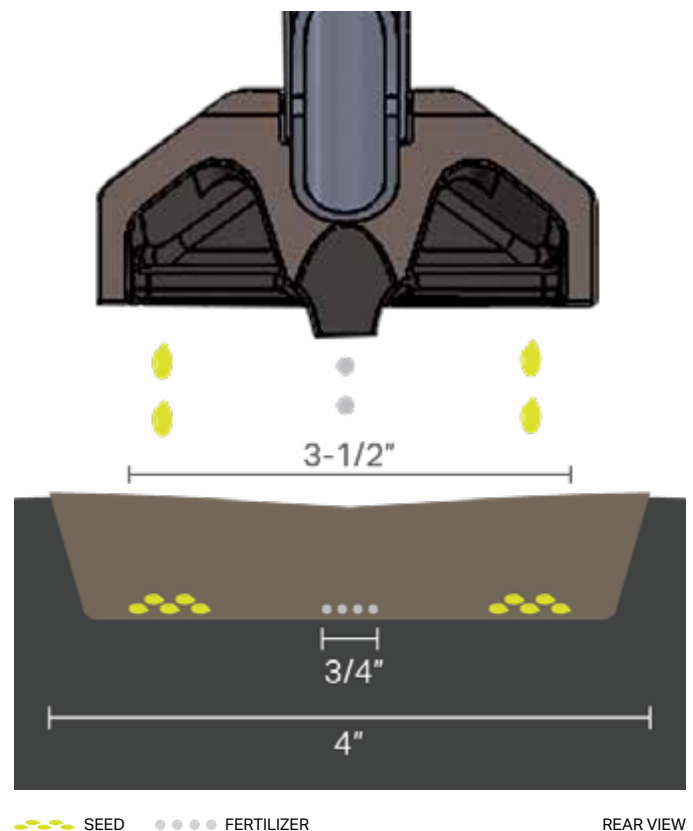
Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for larger hoses.

These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with liquid phos options. Please call the factory for more information.

NOTES: **Installation bolts sold separately.**

Use 1/2" x 2" Grade 8 hex head bolts. See page 112.

For an expanded view of these openers see page 120.



SEED ●●●● FERTILIZER REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

*All product and company names are trademarks™ or registered® trademarks of their respective holders. Use of them does not imply any affiliation with or endorsement by them. Morris, Morris Contour I, Morris Contour II, Morris Quantum, Morris Maxim and any other use and/or mentions of their name and/or product designations are the property and registered trademarks of Morris Industries Ltd.

Fertilizer Knives to Fit Salford

Salford Independent Series

FERTILIZER TYPES: Granular N, NH₃,
Liquid N, Granular N + NH₃,
Granular N + Liquid N

TUBE SIZE:

Granular: 1-1/2" (38mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D. stainless steel

Non-Freeze NH₃: 1/2" (12mm) O.D.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

- 600-TIP-3000
- 600-TIP-3001
- 600-TIP-3011

Tips sold separately. See page 17.

OVERVIEW: Fits 84° shanks. Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder. This opener features adjustment holes that allow you to adjust the height of the opener by 1.375" (35mm).

NON-FREEZE VERSION: NH₃ is delivered through a nylon insert, insulating the NH₃ from the knife. This prevents the moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. Designed to work with Cold Flow NH₃ units.



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Openers to Fit Seed Master

Fertilizer Knives & Single Shoot Seed Openers



689-HLD-1000G
689-HLD-1000L
689-HLD-1000N

689-HLD-1000GL
689-HLD-1000GN

FERTILIZER KNIVES

FERTILIZER TYPES: Granular N, NH₃, Liquid N, Granular N + NH₃, Granular N + Liquid N

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

NH₃: 1/2" (12mm)

Liquid: 1/4" (6mm) O.D. stainless steel

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: These fertilizer knives are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" lock nut and 3/8" x 1-3/4" Grade 8 carriage bolts. See page 112. For an expanded view of these openers see page 121.

689-KNF-1000

SINGLE SHOOT SEED OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

OVERVIEW: The narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" lock nut and 3/8" x 1-1/2" Grade 8 carriage bolts. See page 112.

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Fertilizer Knives to Fit Väderstad Seed Hawk

Granular N, Liquid N, NH₃, Granular + Liquid N, Granular + NH₃

FERTILIZER TYPES:

Granular N, Liquid N, NH₃,
Granular + Liquid N, Granular + NH₃

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D.

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips sold separately. See page 12.

OVERVIEW: Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

686-HLD-1010 holders will apply granular plus Liquid N or NH₃.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.

For an expanded view of these openers see page 124.



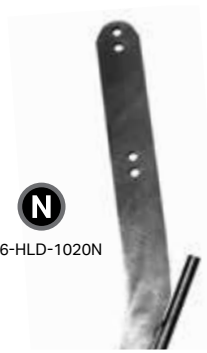
686-HLD-1020G
SHOWN WITH
200-TIP-0802



686-HLD-1010GL



686-HLD-1020L



686-HLD-1020N



686-HLD-1010GN



Fertilizer Knives to Fit Väderstad Seed Hawk

1/2" Wide Granular N, Liquid N, NH₃, Granular + Liquid N, Granular + NH₃

FERTILIZER TYPES:

Granular N, Liquid N, NH₃,
Granular + Liquid N, Granular + NH₃

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D.

TIP OPTIONS: N/A

OVERVIEW: Carbide insert on the nose to fracture the ground. Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

NOTES: Installation bolts sold separately. Use 1/2" x 2" Grade 8 hex head bolts. See page 112.



1/2" WIDE
686-KNH-5020G



1/2" WIDE
686-KNH-5020GL



1/2" WIDE
686-KNH-5020L



1/2" WIDE
686-KNH-5020N



1/2" WIDE
686-KNH-5020GN



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Seed Openers to Fit Väderstad Seed Hawk

Single Shoot & Paired Row Options



1/2" WIDE
686-KNH-5010

P
1/2" WIDE
686-KNH-5010P

686-KNH-5010
686-KNH-5010P

1/2" WIDE SINGLE SHOOT OPENERS

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: N/A

OVERVIEW: This 1/2" opener directs seed downward through the holder, placing the seed in a single row onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

For liquid phos option order 686-KNH-5010P.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.



P
686-KNH-1001
SHOWN WITH
200-TIP-0802

686-KNH-1001
686-KNH-1001P

SINGLE SHOOT OPENER

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Seed Tube: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions.

Tips sold separately. See pages 12-13.

OVERVIEW: The seed shank is offset to the fertilizer shank.

686-KNH-1001 is available without the liquid phos tube.

686-KNH-1001P is a single shoot opener that applies liquid phos on top of the seed. The narrow design allows for more accurate seed placement behind the tip.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.

For an expanded view of this opener see page 125.



P
686-ASY-3011

686-ASY-3011
686-ASY-3011P

PAIRED ROW OPENER

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 106.

TIP OPTIONS: 3" (76mm) cast chrome tip (200-TIP-3011) with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings maintain a sharp cutting edge.

Assembly includes the tip.

OVERVIEW: The seed is directed rearward through the holder which places the seed in two rows onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

For liquid phos option order 686-ASY-3011P.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 112.

For an expanded view of this opener see page 125.

BTT Demo Program

Try Before You Buy!



Through the BTT Demo Program, we offer you the opportunity to try a few of our parts and compare how they perform against products you're currently using.

No pressure. No obligation to buy. Talk to a BTT dealer or contact us.



**MAX LIFE™
Harrow Tines**



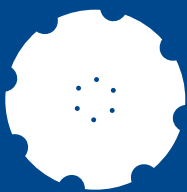
**Speed-Loc™
Adapters**



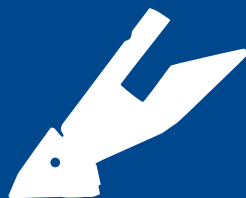
Replaceable Tips



**Ultimate Tillage
Tools**



**Niaux 200
Disks**



**Seed Openers &
Fertilizer Knives**



Seed Boots



**Specialty
Parts**

Titan Opener System

This system provides both horizontal and vertical separation between seed and fertilizer.

1 CHOOSE YOUR HOLDER



620-HLD-5000

FITS: 47° and 50° C-shank
Installation bolts and nuts included.



688-HLD-5000

FITS: Horsch 84° shank (see note on page 126).
Installation bolts and nuts included.



694-HLD-5000

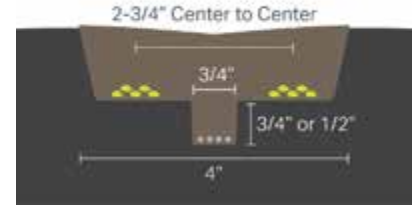
FITS: Case IH ATX 700, NH P2060, Flexi-Coil 5500 & Concord Edge On (84° shanks only).
When installing on units other than Concord, insert **694-ACC-1000** is needed. See page 106.
Installation bolts and nuts included.

2 CHOOSE YOUR SEED SHOE



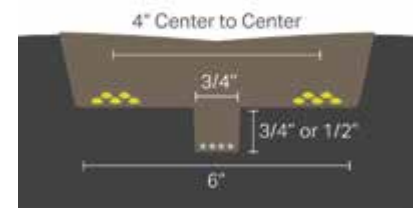
620-SSH-1000

4" outside to outside (2-3/4" center to center) seed spread is placed above the center placed fertilizer trench.



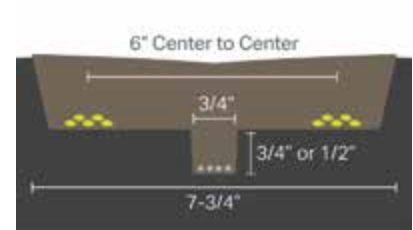
620-SSH-4000

6" outside to outside (4" center to center) seed spread is placed above the center placed fertilizer trench.



620-SSH-6000

7-3/4" outside to outside (6" center to center) seed spread is placed above the center placed fertilizer trench.



Use bolt and nut combo 620-BNC-3100 to install shoes to holder.
For a more detailed view of these components see pages 126-127.



Before using BTT openers, we were running an OEM opener and having issues with excessive component wear and breakage. We switched to the Titan Series Openers and have changed one assembly in about 7,000 acres. Which is remarkable in itself, but honestly, we could hardly see a difference in wear from new to old. Great product! Well worth the investment.

Trevor Smith, Washington, USA

3 CHOOSE YOUR TIP



620-TIP-0510

Standard tip for **620, 688 & 694** holders. Carbide inserts are placed on the nose. Hard facing is placed on critical wear points for extended life of the tip. Use bolt and nut combo 620-BNC-3100 (5/16" x 1-1/2") to install shoe to holder.

NOTES: Use bolt and nut combo 200-BNC-3100 to install tips.



620-TIP-4060

Triple shoot unibody tip and seed shoe. Extra-long carbide inserts placed on the nose of the tip. The nose carbides have a continuous roofed profile, producing exceptional soil flow with minimal disturbance. The seed is placed in a distinct paired row, 2-3/4" center to center. The seed is deposited prior to the Aqua NH3 + Liquid Phos being placed 3/4" deeper, between the seed rows. The tip helps prevent skewing on hill sides. The shoe portion is 4" wide, with carbide fully covering the leading edges.

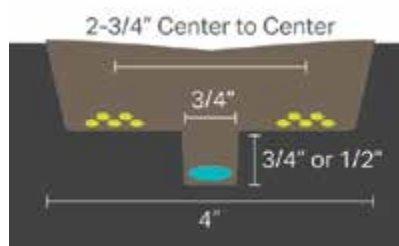
NOTES: This tip replaces the standard tip, seed shoe, fertilizer tube combinations, and is to be used with **620, 688 & 694** holders.

Use bolt and nut combo 200-BNC-3100 to install tips.



FRONT VIEW

REAR VIEW



●●● SEED
●●● FERTILIZER ● FERTILIZER

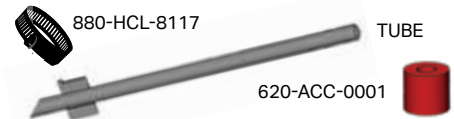
Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

4 CHOOSE YOUR FERTILIZER

620-TUB-1021*

N

1/2" (12mm) O.D. NH3 tube for **620, 688 & 694** holders. For pressurized NH3 order this tube and consult your pressurized system dealer for tubing inserts.



620-TUB-1070

N P

1/4" (6mm) O.D. Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



620-TUB-4000

N L

0.4" O.D. Stainless Steel Liquid or NH3 tube for **620, 688 & 694** series holders.



620-TUB-4040

N P

0.4" O.D. Stainless Steel Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



628-TUB-1021*

N

1/2" (12mm) O.D. NH3 tube for **628** holders.



NOTES: The tube assemblies include all accessories shown. *For pressurized NH3 Systems (including MaxQuip) you will be given the standard NH3 tube and then must consult with your pressurized system dealer for tubing inserts.

VOS (Versatile Opener System)

Choose the holder, tip, and fertilizer suitable for your situation and soil type.

1 CHOOSE YOUR HOLDER



610-HLD-2080HD

FITS: 47° and 50° C-shank
When installing on a 50° shank other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 106.



673-HLD-2080

FITS: Edge On, Bourgault PHD, Morris Maxim Edge On. When installing on Bourgault PHD, this holder is only recommended for use with 3/4" single shoot tip 610-TIP-0802.



683-HLD-2080

FITS: Morris Contour I

2 CHOOSE YOUR TIP



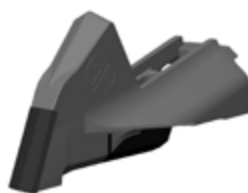
610-TIP-0802

SINGLE SHOOT TIP

3/4" (19mm) long-wearing single shoot tip with long carbide insert on the nose for highly abrasive conditions.

FERTILIZER OPTIONS: Used for seeding only.

PACKER RECOMMENDATION: 3/4" (19mm) or wider.



610-TIP-3581

PAIRED ROW TIP

3-1/2" (89mm) cast chrome paired row tip with 3/4" (19mm) vertical seed/fertilizer separation. Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge and provide extra-wear life. Carbide inserts at the back of the underside of the wings seals up fertilizer trench prior to seed placement.

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH3 or Aqua NH3 + Phos

PACKER RECOMMENDATION: 3" (76mm) or wider.



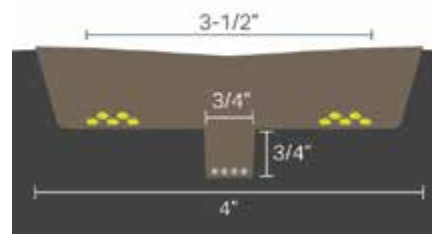
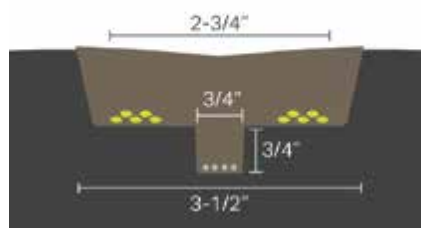
610-TIP-4081 & 610-TIP-4082

PAIRED ROW TIP

4" (102mm) paired row tip with 3/4" (19mm) vertical seed/fertilizer separation. Extra long nose carbide, narrow carbide on the cutting edges of the wings and under the wing to seal the fertilizer trench, and firm up the seed bed prior to seed placement. **610-TIP-4082** has additional carbide along the sides of the fertilizer trench, to provide extra wear life. **Not recommended for use on Case IH 800 / 900 or NH P2070.**

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH3 or Aqua NH3 + Phos

PACKER RECOMMENDATION: 4" (102mm) or wider.





688-HLD-2080

FITS: Horsch 84° shank. Use the bottom two holes when installing this holder for standard installation. To add 4° more pitch, use the top two holes on the holder.



693-HLD-2080

FITS: Morris Contour II & Morris Quantum



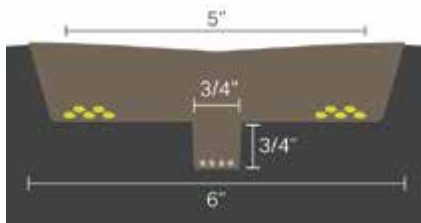
610-TIP-6082

PAIRED ROW TIP

OVERVIEW: 6" (152mm) paired row cast tip with 3/4" (19mm) vertical seed/fertilizer separation. Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge and provide extra-wear life. Carbide inserts at the back of the underside of the wings seals up fertilizer trench prior to seed placement.

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH3 or Aqua NH3 + Phos

PACKER RECOMMENDATION: 5-1/2" (140mm) or wider.



SEED FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

3 CHOOSE YOUR FERTILIZER

880-TUB-1003¹
880-TUB-1004²

L

PRECISION DRILLS LIQUID 1/4" (6mm) O.D. stainless tube



880-BSH-1000

880-TUB-1009¹
880-TUB-1010²

N L

PRECISION DRILLS LIQUID OR AQUA NH3 0.40" (10mm) O.D. stainless tube



880-BSH-1000

880-TUB-1011¹
880-TUB-1012²

N P

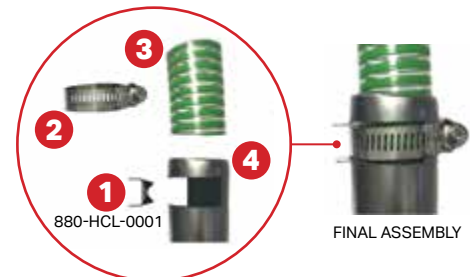
PRECISION DRILLS AQUA NH3 + PHOS 1/4" (6mm) O.D. stainless tube



880-BSH-1003

NOTES: All tubes come with bushings as pictured above. ¹880-TUB-1003, 1009 & 1011 are for everything other than C-shank. ²880-TUB-1004, 1010 & 1012 are for C-shank openers, and are 1" longer. Pipes can be made for the 673-HLD-2080 on request. Call the factory for more details.

PROPER INSTALLATION:



FINAL ASSEMBLY

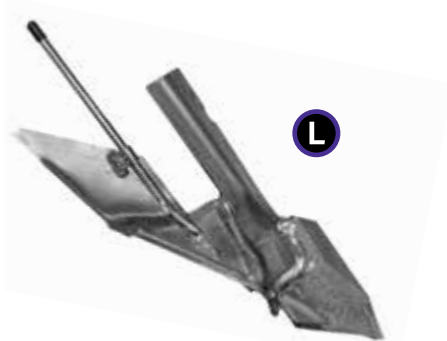


The main reason we changed to VOS was because of how it distributes the fertilizer. Alternative openers just spray the fertilizer on the soil after the coulters. I wanted the fertilizer to be under the seed or at least under the soil. VOS does just this, plus I can go straight from rape seed to beans without changing anything on the drill leg.

Leigh Donger, Peacock Farm, UK

Seeding Openers to Fit *Speed-Loc™*

Single & Multi-Shoot Options



200-KNF-0863

SIDE BAND OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Liquid N

TUBE SIZE: 1/4" (6mm) O.D.

TIP OPTIONS: The welded high-chrome tip is protected with a carbide insert on the nose and a solid carbide wing. The carbide placement provides sharp cutting edges for excellent penetration.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: This is the only multi-shoot opener available for use with the *Speed-Loc™* system. It provides all of the benefits of the *Speed-Loc™* System with the seed placement you trust.

This unique side band opener provides good horizontal separation with a slight vertical seed/fertilizer separation.

These openers work very well when used with a pressurized liquid system.



200-HOE-1700

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: Long-wearing welded high-chrome tip.

INSTALLATION DRIVER:
100-DRV-1020

OVERVIEW: This opener runs through the ground at a fairly vertical angle to provide less rock pulling. Provides 1-1/2" to 1-3/4" (38 – 44mm) seed spread.

Works best with the 1" (25mm) single tube seed boot. See pages 62-63.



200-KNF-0810 200-KNF-0811

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS:
3/4" (19mm) weld-on tip
• 200-KNF-0811 (with carbide)
• 200-KNF-0810 (without carbide)

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: Low disturbance, low draft opener provides easy pulling.

Works with 300-ATM-1035 of the Seed Boot System. See pages 62-63.



We use the *Speed-Loc™* Quick Change System on our deep tillage equipment. Very handy and don't have to worry about losing any shovels. All we use is Bourgault Tillage Tools. The openers on our 8810 have hardly had any wear in the 1,500 acres we did and will be able to use them for next season too. Tough, rugged and reliable!

Trevor Nolan, Elkhorn, Manitoba, Canada



200-KNF-0813

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: 3/4" (19mm) weld-on tip with extra-long nose carbide for longer wear life.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: The more vertical approach of this opener reduces rock pulling.

Works with 300-ATM-1035 of the Seed Boot System. See pages 62-63.



200-KNF-7501

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: The high-chrome welded tip has a carbide insert on the nose for a sharp cutting edge and extra wear life.

INSTALLATION DRIVER:

100-DRV-1010

OVERVIEW: Designed for use with the Technotill System.



200-KNF-7511

200-KNF-7510 200-KNF-7511

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Seed with Granular starter

TUBE SIZE: N/A

TIP OPTIONS:

- 200-KNF-7511 (with carbide)
- 200-KNF-7510 (without carbide)

INSTALLATION DRIVER:

100-DRV-1010

OVERVIEW: Precise seed placement due to the funnel being close to the tip and to the bottom of the furrow. The funnel is reinforced with hard surfacing for longer wear life.

Works with the square tube seed boot of the Seed Boot System. It also fits the Bourgault or Flexi-Coil square tube seed boot. See pages 62-63.

200-ASY-7511P is available with a liquid phos tube.



To ensure proper installation of **Speed-Loc™** products, use the appropriate driver listed with each product. For a chart of all drivers see page 76.



The **Speed Release** tool must be used when removing openers, sweeps & spikes from the **Speed-Loc™** Adapters. For more information see page 76.



200-KNF-7542

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Granular

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: The high-chrome welded tip is long lasting and provides good penetration.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: This single shoot opener is perfect for heavy gumbo soils. The extra space between the tip and tube reduce plugging.



410-KNF-0801

SINGLE SHOOT OPENER

FITS: 410 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: 3/4" (19mm) weld-on tip with carbide.

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: Low disturbance, low draft opener provides easy pulling.

Works with 300-ATM-1031 of the Seed Boot System. See pages 62-63.



200-KNH-4010

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

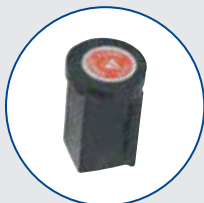
TUBE SIZE: N/A

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

INSTALLATION DRIVER:
Depends on tip used. See page 76.

OVERVIEW: This funnel is reinforced with hard surfacing for longer wear life.

Works with the square tube seed boot of the Seed Boot System. It also fits the Bourgault or Flexi-Coil square tube seed boot. See pages 62-63.



To ensure proper installation of **Speed-Loc™** products, use the appropriate driver listed with each product. For a chart of all drivers see page 76.



The **Speed Release** tool must be used when removing openers, sweeps & spikes from the **Speed-Loc™** Adapters. For more information see page 76.



200-KNH-4000

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

INSTALLATION DRIVER:

Depends on tip used. See page 76.

OVERVIEW: Works with **300-ATM-1035** of the Seed Boot System. See page 62-63.



200-VRT-1040

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Granular

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: 1" (25mm) weld-on tip with nose carbide for long-lasting wear life and excellent penetration.

INSTALLATION DRIVER:

200-DRV-1030

OVERVIEW: The vertical approach of this opener reduces rock pulling and soil throw.



200-SPN-0200 200-SPN-0208

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:

400-DRV-1000

OVERVIEW: These spoons have a 2" (51mm) spread. **200-SPN-0200** has 1/4" (6mm) material. **200-SPN-0208** has 5/16" (8mm) material for increased wear life.



200-SPN-0300 200-SPN-0308

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:

400-DRV-1000

OVERVIEW: These spoons have a 3" (76mm) spread. **200-SPN-0300** has 1/4" (6mm) material. **200-SPN-0308** has 5/16" (8mm) material for increased wear life.



410-SPN-0300 410-SPN-0308

SINGLE SHOOT OPENER

FITS: 410 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:

400-DRV-1000

OVERVIEW: These spoons have a 3" (76mm) spread. **410-SPN-0300** has 1/4" (6mm) material. **410-SPN-0308** has 5/16" (8mm) material for increased wear life.

Interested in BTT Products?

With the BTT Demo Program you can try before you buy.

See page 53 for details.

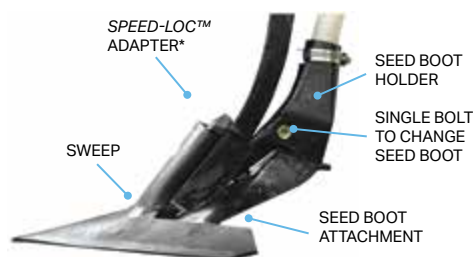
Quick Change Seed Boot System

Match seed spread to opener width.

The quick-change seed boot system consists of two parts: the seed boot holder, which bolts onto the back of the shank, and the seed boot attachment, which fits into the holder. A nut and bolt secure the attachment.

There are seven different interchangeable attachments to choose from, each giving a different seed spread pattern. This system allows you to match your seed spread to the width of the opener you are using.

It is perfect for producers who want to switch back and forth from a wide seed spread behind a sweep to a narrow seed band behind a knife.



SEED BOOT HOLDER



300-HLD-4700

FITS: Bourgault & Ezee-On 47° shanks

OVERVIEW: 1-3/4" (45mm) bolt hole spacing. The bolt hole section is designed flat.

NOTES: Use a hose clamp to secure the air hose into the seed boot holder.



300-HLD-4710

FITS: 47° shanks except the Bourgault & Ezee-On

OVERVIEW: 1-3/4" (45mm) bolt hole spacing. The bolt hole section is curved.

NOTES: Use self tapping screw (911-SCR-1051) to secure the air hose into the seed boot holder.



300-HLD-5000

FITS: Bourgault chisel plow shanks, LH755 shank used on the Morris Magnum III and the Morris Concept 2000

OVERVIEW: 2-1/4" (57mm) bolt hole spacing. The bolt hole section is flat and has two sets of holes. The top set of holes should be used in almost all cases when mounting this holder to the shank.

NOTES: Use self tapping screw (911-SCR-1051) to secure the air hose into the seed boot holder.



300-HLD-5010

FITS: Any chisel plow shank except the Bourgault and the Morris LH755 shank

OVERVIEW: 2-1/4" (57mm) bolt hole spacing. The bolt hole section is curved.

NOTES: Use a hose clamp to secure the air hose into the seed boot holder.

NOTES:

- All holders on this page only accept 1-1/8" (29mm) O.D. hose.
- Bushing 300-BSH-1200 is required for 1-1/4" (32mm) O.D. hose. See page 106.
- A self-tapping screw 911-SCR-1051 should be used to hold the air hose or the bushing into the seed boot holder.
- A 3/8" (9mm) screw 911-SCR-1038 is also available to secure the air hose into the top of the bushing.

SEED BOOT ATTACHMENTS

**300-BNC-4414**

This bolt and nut secure the quick change seed boot attachments into the holders.

**300-ATM-1000**

This spreader attachment will distribute the seed evenly in a 3" to 4" (76 - 102mm) band. Seed spread may vary depending on sweep size, soil type and fan speed.

**300-ATM-1006**

This spreader attachment will distribute the seed evenly in a 6" (152mm) row. Seed spread may vary depending on sweep size, soil type and fan speed. **Works well for organic operations because of the wide seed spread.**

**300-ATM-1010**

This splitter attachment will place the seed into two distinct rows approx. 6" (152mm) apart. Seed spread may vary depending on sweep size, soil type and fan speed.

**300-ATM-1020**

This straight attachment will spread the seed approx. 2-1/2" (63mm). It works well with the quick change spoons, spikes or any size of sweep.

SEED BOOT ATTACHMENTS

**300-ATM-1031**

This knife attachment places the seed in a very narrow band.

Designed to be used behind:

- 200-VRT-1000
- 410-VRT-1000
- 410-HLD-7500
- 410-KNF-0800
- 410-KNF-0801

**300-ATM-1035**

This knife attachment places the seed in a very narrow band.

Designed to be used behind:

- 200-KNF-0810
- 200-KNF-0811
- 200-KNF-0813
- 200-KNH-4000

**300-ATM-1036**

For use in Europe. This knife attachment places the seed in a band. **There is hard facing on the side.** The slot is wider than the 300-ATM-1035.

Designed to be used behind 200-KNF-0813.

**300-SQR-1500**

Slotted top hole to fit 1-3/4" to 2-1/4" (45 - 57mm) bolt spacing. Accepts 1-1/4" (32mm) O.D. air hose.

Designed to fit curved bottom shanks.

**300-SQR-1505**

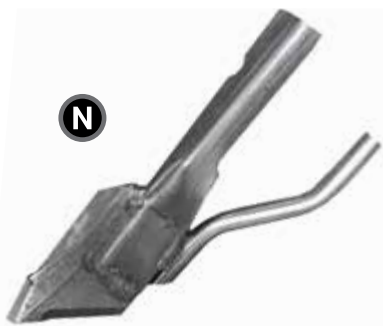
Slotted top hole to fit 1-3/4" to 2-1/4" (45 - 57mm) bolt spacing. Accepts 1-1/4" (32mm) O.D. air hose.

Designed to fit flat bottom shanks.

SEED BOOT SQUARE TUBE

Fertilizer Knives

- *Speed-Loc™*
- Bolt-On
- Non-Freeze



200-KNF-7521

SPEED-LOC™ FERTILIZER KNIFE

FITS: 200 Series Speed-Loc™

FERTILIZER TYPE: Cold Flow NH₃

TUBE SIZE: 1/2" (12mm) O.D.

TIP OPTIONS: 3/4" (19mm) welded tip with carbide which provides extra wear life and better penetration.

INSTALLATION DRIVER:

100-DRV-1010

OVERVIEW: The shorter tube length on this knife makes it better for cultivators and chisel plows. The welded tip is better for rocky conditions.

Can be converted to pressurized NH₃ or liquid system. Call for details.



200-KNF-7525

SPEED-LOC™ FERTILIZER KNIFE

FITS: 200 Series Speed-Loc™

FERTILIZER TYPE: Cold Flow NH₃

TUBE SIZE: 1/2" (12mm) O.D.

TIP OPTIONS: 3/4" (19mm) welded tip with carbide which provides extra wear life and better penetration.

INSTALLATION DRIVER:

100-DRV-1010

OVERVIEW: The longer tube length on this knife makes it better for air seeders and air drills that have seed boots on the back of the shank. **Not to be used with seed at the same time.** The welded tip is better for rocky conditions.

Can be converted to pressurized NH₃ system. Call for details.



200-KNF-7531

SPEED-LOC™ FERTILIZER KNIFE

FITS: 200 Series Speed-Loc™

FERTILIZER TYPE: Hot Gas NH₃

TUBE SIZE: 3/8" (9mm) O.D.

TIP OPTIONS: 3/4" (19mm) welded tip with carbide which provides extra wear life and better penetration.

INSTALLATION DRIVER:

100-DRV-1010

OVERVIEW: The shorter tube length on this knife makes it better for cultivators and chisel plows. The welded tip is better for rocky conditions.

Can be converted to pressurized NH₃ or liquid system. Call for details.



Stabilize Your NH₃ Hose

This stainless steel hose holder mounts on any C-shank to hold the NH₃ hose in place and is completely height adjustable. See page 106.



To ensure proper installation of Speed-Loc™ products, use the appropriate driver listed with each product. For a chart of all drivers see page 76.



The Speed Release tool must be used when removing openers, sweeps & spikes from the Speed-Loc™ Adapters. For more information see page 76.

**200-KNF-7560**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 200 Series
*Speed-Loc™***FERTILIZER TYPE:**
NH3 + Liquid Phos**TUBE SIZE:** 0.400"
stainless steel tube**TIP OPTIONS:**
3/4" (19mm) welded tip
with extra carbide for
long lasting wear life and
better penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** This fertilizer
knife is designed for use
with Aqua NH3 and Liquid
Phos. The welded tip is
better in rocky conditions.**410-KNF-0825
410-KNF-0826**

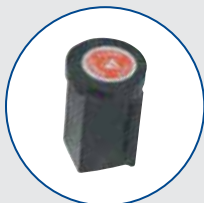
SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
410-KNF-0825:
Cold Flow NH3
410-KNF-0826:
1/4" (6mm) NH3 PSI
or Liquid N**TUBE SIZE:**
410-KNF-0825: 1/2"
(12mm) O.D.
410-KNF-0826: 1/4"
(6mm) O.D.**TIP OPTIONS:** 3/4"
(19mm) welded tip with
carbide provides extra
wear life and better
penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed
for heavy-duty use. The
welded tip makes it better
in rocky conditions.**410-KNF-0831**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
Hot Gas NH3**TUBE SIZE:**
3/8" (9mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded tip
with carbide provides
extra wear life and better
penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
heavy-duty use with Hot
Gas NH3 kits. The welded
tip makes it better in rocky
conditions.**Can be converted to a
Liquid system.** Call for
details.**410-KNF-7551
410-KNF-7553**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
Granular + Cold Flow or
Hot Gas NH3**TUBE SIZE:**
Granular: 1-1/4" (32mm)
O.D. For different hose
sizes a bushing may be
used. See page 106.**410-KNF-7551:** Cold Flow
NH3, 1/2" (12mm) O.D.**410-KNF-7553:** Hot Gas
NH3, 3/8" (9mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded tip
with nose carbide for
long-lasting wear life and
excellent penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Granular fertilizer
and either Cold Flow or
Hot Gas NH3 kits.**Not recommended for
seeding.****To ensure proper installation of
Speed-Loc™ products,** use the
appropriate driver listed with each
product. For a chart of all drivers
see page 76.**The Speed Release tool must be
used when removing openers,
sweeps & spikes from the
Speed-Loc™ Adapters.** For more
information see page 76.

**410-KNF-7560**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™**FERTILIZER TYPE:**
NH3 + Liquid Phos**TUBE SIZE:**
0.400" stainless steel tube**TIP OPTIONS:**
3/4" (19mm) welded tip
with extra carbide for
long lasting wear life and
better penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Aqua NH3 and
Liquid Phos. The welded
tip is better in rocky
conditions.**410-KNH-7524
410-KNH-7526**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™**FERTILIZER TYPE:**
Cold Flow NH3 or NH3 PSI**TUBE SIZE:**
410-KNH-7524: 1/2"
(12mm) O.D. for use with
Cold Flow Kits**410-KNH-7526:** 1/4"
(6mm) O.D. PSI**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-75023" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed
for use with NH3 with
the flexibility of using a
replaceable tip, allowing
you to choose the right
tip for your conditions.**Can be converted to a
pressurized NH3 or liquid
system.** Call for details.**410-KNH-7540**

SPEED-LOC™ FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™**FERTILIZER TYPE:**
Granular**TUBE SIZE:** 1-1/4" (32mm)
O.D. For different hose
sizes a bushing may be
used. See page 106.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-75023" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Granular fertilizer
with the flexibility of using
a replaceable tip, allowing
you to choose the right tip
for your conditions.**200-KNH-4020**

SPEED-LOC™ FERTILIZER KNIFE

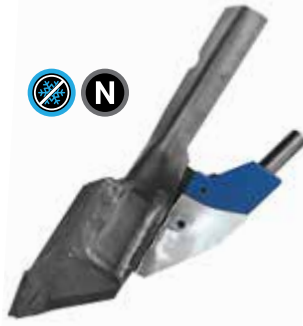
FITS: 200 Series
Speed-Loc™**FERTILIZER TYPE:**
Cold Flow NH3**TUBE SIZE:**
1/2" (12mm) O.D.**TIP OPTIONS:** Any Single
Shoot Replaceable Tip,
allowing you to choose
the right tip for your
conditions. **Tips sold
separately.** See pages
12-13.**INSTALLATION DRIVER:**
Depends on tip used.
See page 76.**OVERVIEW:** This
fertilizer knife is only
recommended on light
duty units with light trips.
**Not recommended
for rocky areas.** It is
designed for use with
Cold Flow NH3 kits.**Can be converted to a
pressurized NH3 or liquid
system.** Call for details.**Stabilize Your NH3 Hose**This stainless steel hose holder mounts
on any C-shank to hold the NH3 hose
in place and is completely height
adjustable. See page 106.

**200-ASY-0001**

NON-FREEZE
FERTILIZER KNIVES

FITS: *Speed-Loc™*
Non-Freeze NH3 Knives

OVERVIEW: Non-Freeze
NH3 knife rear assembly

**200-ASY-7523**

SPEED-LOC™
FERTILIZER KNIFE

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE:
1/2" (12mm) O.D.

TIP OPTIONS:
3/4" (19mm) welded tip
with extra carbide for
long lasting wear life and
better penetration.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: NH3 is
delivered through a nylon
insert, insulating the knife
from the NH3, preventing
moist soil from freezing
and building up on the
knife, keeping it narrow
to reduce disturbance
with minimal gassing off.
**Not suggested for rocky
conditions.**

**410-ASY-0823**

SPEED-LOC™
FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE:
1/2" (12mm) O.D.

TIP OPTIONS:
3/4" (19mm) welded tip
with extra carbide for long
lasting wear life and better
penetration.

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: NH3 is
delivered through a nylon
insert, insulating the knife
from the NH3, preventing
moist soil from freezing
and building up on the
knife, keeping it narrow
to reduce disturbance
with minimal gassing off.
**Not suggested for rocky
conditions.**

**410-ASY-7523**

SPEED-LOC™
FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE:
1/2" (12mm) O.D.

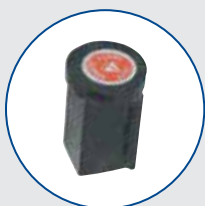
TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

3" (76mm) tip:
• 600-TIP-3011

Tips sold separately.
See page 17.

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: NH3 is
delivered through a nylon
insert, insulating the knife
from the NH3, preventing
moist soil from freezing
and building up on the knife,
keeping it narrow to reduce
disturbance with minimal
gassing off. **Not suggested
for rocky conditions.**



**To ensure proper installation of
Speed-Loc™ products,** use the
appropriate driver listed with each
product. For a chart of all drivers
see page 76.



**The Speed Release tool must be
used when removing openers,
sweeps & spikes from the
Speed-Loc™ Adapters.** For more
information see page 76.



600-ASY-7523

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:

Non-Freeze NH3

TUBE SIZE: 1/2" (12mm) O.D.

BOLT HOLE SPACING:

1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

- 600-TIP-3011

Tips sold separately.

See page 17.

OVERVIEW: NH3 is delivered through a nylon insert, insulating the knife from the NH3, preventing moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. **Not recommended for rocky conditions.**

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts.

See page 112.

For 43° shank use a 7° wedge. See page 106.

600-HLD-7500



600-HLD-7500 602-HLD-7500

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:

N/A

TUBE SIZE: N/A

BOLT HOLE SPACING:

1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

- 600-TIP-3011

Tips sold separately.

See page 17.

OVERVIEW: This knife uses replaceable tips. Choose the right tip for your conditions.

600-HLD-7500 regular use
602-HLD-7500 heavy duty use in tough conditions and high shank trip forces.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.

For 43° shank use a 7° wedge. See page 106.



050-KNH-0820

FERTILIZER KNIFE

FITS: 47° & 50° C-Shank

FERTILIZER TYPE:

Cold Flow NH3

TUBE SIZE: 1/2" (12mm) O.D.

BOLT HOLE SPACING:

1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS: Any 200

Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions.

Tips sold separately.

See pages 12-13.

OVERVIEW: This fertilizer knife is only recommended for use on light duty units with light trips. Not recommended for rocky areas.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.

Can be converted to a pressurized NH3 or liquid system. Call for details.



599-KNH-7540

FERTILIZER KNIFE

FITS: 47° C-Shank

FERTILIZER TYPE:

Granular

TUBE SIZE: 1-1/4" (32mm) O.D. For different hose sizes a bushing may be used. See page 106.

BOLT HOLE SPACING:

1-3/4" (45mm)

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

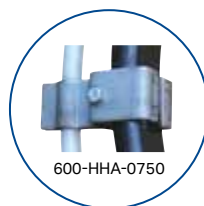
- 600-TIP-3011

Tips sold separately.

See page 17.

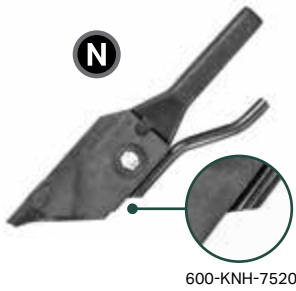
OVERVIEW: This fertilizer knife is designed to fit on the Bourgault Shank with 1-3/4" bolt hole centers with 47° shanks on air seeder units.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.



Stabilize Your NH3 Hose

This stainless steel hose holder mounts on any C-shank to hold the NH3 hose in place and is completely height adjustable. See page 106.



600-KNH-7520
602-KNH-7520

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:
Cold Flow NH3

TUBE SIZE: 1/2" (12mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

- 3" (76mm) tip:
- 600-TIP-3011

Tips sold separately.

See page 17.

OVERVIEW: Designed for use with Cold Flow NH3 kits. The replaceable tip gives you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112. **For 43° shank use a 7° wedge.** See page 106.

600-KNH-7520 regular use
602-KNH-7520 heavy duty use in tough conditions and high shank trip forces.

Can be converted to a pressurized NH3 or Liquid system. Call for details.



600-KNH-7522

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:
Cold Flow NH3

TUBE SIZE:
Dual 1/2" (12mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

- 3" (76mm) tip:
- 600-TIP-3011

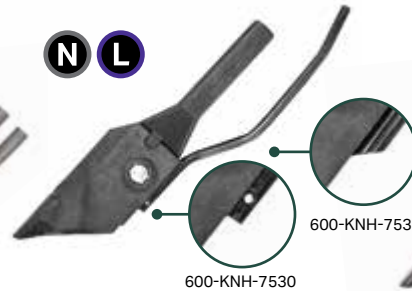
Tips sold separately.

See page 17.

OVERVIEW: Designed for use with Cold Flow NH3 kits. The second 1/2" pipe is used for venting. The replaceable tip gives you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.

For 43° shank use a 7° wedge. See page 106.



600-KNH-7530
600-KNH-7531

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:
Hot Gas NH3, Liquid or Aqua NH3

TUBE SIZE:
600-KNH-7530 3/8" (9mm) O.D.

600-KNH-7531 0.400" stainless steel

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

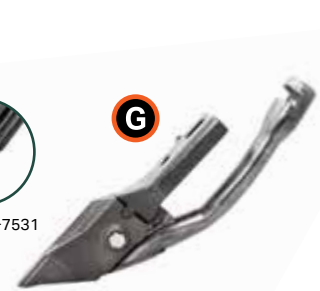
- 3" (76mm) tip:
- 600-TIP-3011

Tips sold separately. See page 17.

OVERVIEW: Designed for use with the replaceable tip, giving you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.

For 43° shank use a 7° wedge. See page 106.



600-KNH-7540

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:
Granular

TUBE SIZE:
1-1/4" (32mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44 - 64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

- 3/4" (19mm) tips:
- 600-TIP-7500
 - 600-TIP-7501
 - 600-TIP-7502

- 3" (76mm) tip:
- 600-TIP-3011

Tips sold separately.

See page 17.

OVERVIEW: This knife uses replaceable tips. Choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 112.

For 43° shank use a 7° wedge. See page 106.

G N



600-KNH-7552

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:**
Granular + Cold Flow NH3**TUBE SIZE:**
Granular: 1-1/4" (32mm)
O.D. For different hose
sizes a bushing may be
used. See page 106.
NH3: 1/2" (12mm)**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44 - 64mm)
slotted bolt hole spacing
providing the ability to fit
many different makes and
models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502
3" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**OVERVIEW:** Designed
for use with Granular and
Cold Flow NH3 kits. The
replaceable tip gives you
the flexibility to choose the
right tip for your conditions.**NOTES: Installation bolts
sold separately.** Use 1/2"
Grade 8 hex head bolts.
See page 112. **For 43°
shank use a 7° wedge.**
See page 106.**Can be converted to a liquid
system.** Call for details.

G



602-KNH-7585

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:**
Granular**TUBE SIZE:**
1-3/4" (44mm) O.D.**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44 - 64mm)
slotted bolt hole spacing
providing the ability to fit
many different makes and
models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502
3" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**OVERVIEW:** This granular
fertilizer knife is used
with a replaceable tip,
giving you the flexibility
to choose the right tip for
your conditions.**NOTES: Installation bolts
sold separately.** Use 1/2"
Grade 8 hex head bolts.
See page 112.**For 43° shank use a 7°
wedge.** See page 106.

G L



602-KNH-7586

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:**
Granular + Liquid or NH3**TUBE SIZE:**
Granular: 1-3/4" (44mm)
O.D.**Liquid NH3:** 1/4" (6mm)
O.D. Liquid or PSI**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44 - 64mm)
slotted bolt hole spacing
providing the ability to fit
many different makes and
models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502
3" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**OVERVIEW:** This liquid
fertilizer knife is used
with a replaceable tip,
giving you the flexibility
to choose the right tip for
your conditions.**NOTES: Installation bolts
sold separately.** Use 1/2"
Grade 8 hex head bolts.
See page 112.**For 43° shank use a 7°
wedge.** See page 106.

G N



602-KNH-7587

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:**
Granular + Cold Flow NH3**TUBE SIZE:**
Granular: 1-1/4" to 1-3/4"
(32 - 44mm) O.D.
NH3: 1/2" (12mm) O.D.**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44 - 64mm)
slotted bolt hole spacing
providing the ability to fit
many different makes and
models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502
3" (76mm) tip:
• 600-TIP-3011**Tips sold separately.**
See page 17.**OVERVIEW:** This NH3
fertilizer knife is used
with a replaceable tip,
giving you the flexibility
to choose the right tip for
your conditions.**NOTES: Installation bolts
sold separately.** Use 1/2"
Grade 8 hex head bolts.
See page 112.**For 43° shank use a 7°
wedge.** See page 106.



602-KNH-7640

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:** Granular**TUBE SIZE:** 1-1/2" (38mm) O.D.**BOLT HOLE SPACING:** 1-3/4" to 2-1/2" (44 - 64mm)
slotted bolt hole spacing providing the ability to fit many different makes and models.**TIP OPTIONS:**

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

- 600-TIP-3011

Tips sold separately. See page 17.**OVERVIEW:** This knife uses replaceable tips. Choose the right tip for your conditions. For heavy duty use in tough conditions and high shank trip forces.**NOTES:** **Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 112.**For 43° shank use a 7° wedge.** See page 106.670-ASY-7523
SHOWN WITH
600-TIP-7502670-HLD-1000G
SHOWN WITH
600-TIP-7501

670-HLD-1000
670-HLD-1000G
670-HLD-1000GL
670-HLD-1000GN

670-HLD-1000N
670-HLD-1000L
670-ASY-7523

FERTILIZER KNIFE

FITS: 84° and Salford Independent Series**FERTILIZER TYPES:** Granular N, Granular N + NH₃,
Granular N + Liquid N, NH₃, Liquid N**TUBE SIZE:****Granular:** 1-1/2" (38mm) O.D.**NH₃:** 1/2" (12mm) O.D.**Liquid:** 1/4" (6mm) O.D. stainless steel**Non-Freeze NH₃:** 1/2" (12mm) O.D.**TIP OPTIONS:**

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tip:

- 600-TIP-3000
- 600-TIP-3001
- 600-TIP-3011

Tips sold separately. See page 17.**OVERVIEW:** Fits 84° shanks. Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder. This opener features adjustment holes that allow you to adjust the height of the opener by 1.375" (35mm).**670-ASY-7523 NON-FREEZE VERSION:** NH₃ is delivered through a nylon insert, insulating the NH₃ from the knife. This prevents the moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. Designed to work with Cold Flow NH₃ units.**Stabilize Your NH₃ Hose**This stainless steel hose holder mounts on any C-shank to hold the NH₃ hose in place and is completely height adjustable. See page 106.

Speed-Loc™

Consistent Depth Control

The upper stop on the *Speed-Loc™* adapters ensures that your tillage or seeding tools are always running at the same depth.

Peace Of Mind

The spring-loaded locking pin ensures that the tools will stay securely in place in all conditions, and we back that up with a 100% guarantee.

Trouble-Free Operation

The *Speed-Loc™* adapters are designed with durability in mind. The cast adapters are heat-treated for increased strength and wear resistance.

- Quick Change Adapters
- Accessories & Replacement Parts
- Installation Instructions
- Adapter Chart

200 Series Quick Change Adapters

See the *Speed-Loc™* adapter chart on pages 78-79.



200-QCA-4700

FITS: 47° Shanks, Bourgault & Ezee-On field cultivators, air seeders and air drills

BOLT HOLE SPACING: 1-3/4" (45mm) center to center

BOLTS: 1/2" (12mm) hex head bolts. See page 110.



200-QCA-4710

FITS: 47° Shanks (except Bourgault & Ezee-On)

BOLT HOLE SPACING: 1-3/4" (45mm) center to center.

BOLTS: 7/16" (11mm) shank holes use oversized head plow bolts. See page 110.

1/2" (12mm) shank holes use regular plow bolts.



200-QCA-5000

FITS: 50° Shanks, Morris Concept 2000 & Bourgault

BOLT HOLE SPACING: 2-1/4" (57mm) center to center.

BOLTS: 1/2" (12mm) hex head bolts. See page 110.

NOTES: Use for seeding only. Not recommended for primary tillage.



200-QCA-5010

FITS: 50° Shanks (except Bourgault Chisel Plows)

BOLT HOLE SPACING: 2-1/4" (57mm) center to center.

BOLTS: 1/2" (12mm) plow bolts.

NOTES: Not recommended for deep, heavy tillage.

Can be used on a 43° shank with a 7° wedge. See page 106.



200-QCA-5020

FITS: European built shanks

BOLT HOLE SPACING: 63 - 80mm center to center.

BOLTS: M12-Din608 10.9 plow bolts.

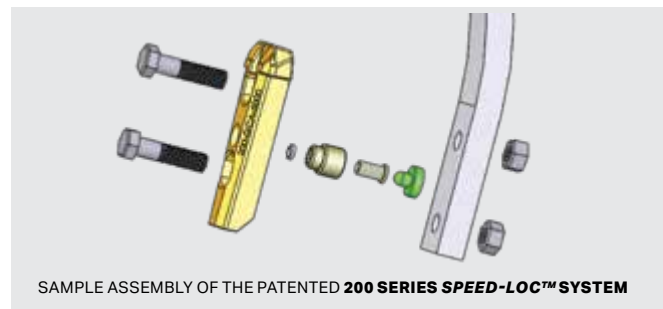


200-QCA-5030

FITS: Horsch shanks

BOLT HOLE SPACING: 2-1/4" (57mm) center to center.

BOLTS: M12-Din608 10.9 plow bolts.



SAMPLE ASSEMBLY OF THE PATENTED 200 SERIES SPEED-LOC™ SYSTEM

Don't forget the Speed Release Tool!

The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from the *Speed-Loc™* Adapters. See page 76.

Not sure which adapter or bolts you need? See the *Speed-Loc™* adapter chart on pages 78-79. For a complete list of bolt lengths, see page 110.



410 Series Quick Change Adapters

Speed Release Tool 200-REL-1010 must be used to remove product from all adapters.



410-QCA-5000

FITS: 50° Shanks on Bourgault chisel plows and Morris Concept 2000 with 755 lb trip.

BOLT HOLE SPACING: 2-1/4" (57mm) center to center.

BOLTS: 1/2" (12mm) hex head bolts. See page 111.

NOTES: On a Bourgault four-hole shank, the center hole of the adapter should be plugged to protect the spring ball from NH₃ gases when used as a NH₃ applicator.

When installing 410 Series Speed-Loc™ Adapters for use with NH₃, fill the hole behind the spring ball with plumber's putty to protect from degradation caused by NH₃.



410-QCA-5010

FITS: 50° Shanks on all chisel plows except Bourgault, Morris Concept 2000 with 755 lb trip, and some John Deere models.

Can be used on a 43° shank with a 7° wedge. See page 106.

BOLT HOLE SPACING: 1-3/4" to 3" (45 - 76mm) center to center slotted bolt hole spacing providing the ability to fit many different makes and models.

BOLTS: 1/2" (12mm) hex head bolts. See page 111.

NOTES: In rocky or abrasive conditions, the bottom nut may experience excessive wear or damage. This problem is alleviated by placing the bottom bolt in from the back of the shank and putting the nut inside the slot in front of the adapter.



410-QCA-5020

FITS: Lemken shanks

BOLT HOLE SPACING: 1-3/4" (45mm) center to center.

BOLTS: M12-DIN 608 10.9 plow bolts.



410-QCA-5060

FITS: Köckerling

BOLT HOLE SPACING: N/A

BOLTS: M12-DIN 608 12.9 plow bolts.



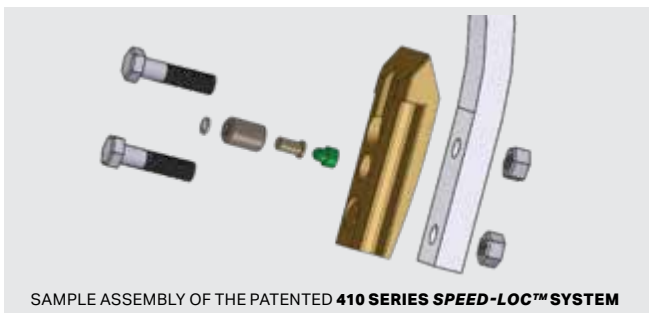
410-QCA-5080

FITS: 50° Shanks on some older and current model John Deere 2410 and 2430 chisels plows, and Summers Superchisel.

BOLT HOLE SPACING: 2-1/4" (57mm) center to center.

BOLTS: For John Deere 1-1/4" shank use 1/2" x 3" Grade 8 hex head bolt prevailing torque lock nuts.

NOTES: Use bushing 880-BSH-2000 for installation on all John Deere shanks that have a split bottom bolt hole, and for Summers chisel plows. See page 106.



SAMPLE ASSEMBLY OF THE PATENTED 410 SERIES SPEED-LOC™ SYSTEM

Speed-Loc™ Accessories & Replacement Parts

Speed Release Tool 200-REL-1010 must be used to remove product from all adapters.



200-SLC-1001

Replacement bushing for all 200 Series adapters. Comes complete with dust seal.



200-SLC-1010

Replacement dust seal for all 200 & 410 Series adapters.



200-SLC-1020

Replacement locking pin for all 200 & 410 Series adapters purchased after Nov 1, 2008.



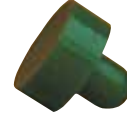
200-SLC-1030

Replacement spring ball for 200-QCA-4700 adapters.



200-SLC-1035

Replacement spring ball for 200-QCA-4710, 200-QCA-5000, 200-QCA-5010 adapters.



200-SLC-1037

Replacement spring ball for 200-QCA-5020 adapters.



200-SLC-1038

Replacement spring ball for 200-QCA-5020 adapters. For special applications.



200-SLC-1039

Replacement spring ball for 200-QCA-5030 adapters.



410-SLC-1001

Replacement bushing for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020 adapters. Comes complete with dust seal.



410-SLC-1022

Replacement locking pin for all 410 Series adapters purchased prior to Nov 1, 2008. **If 410 Series adapter was purchased after Nov 1, 2008 use 200-SLC-1020.**



410-SLC-1030

Replacement spring ball for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020 adapters.



410-SLC-1050

Replacement package for 410 Series adapters. Includes pin, bushing, spring ball, dust seal.



100-HAM-4000

This 4lb (1.8kg) hammer is ideal for installing all quick change products.



200-REL-1010

The speed release tool must be used to remove 200 and 410 Series sweeps and opens off the Speed-Loc™ adapters.

Speed-Loc™ Drivers

Choose the correct driver to install Speed-Loc™ products.

PART #	100-DRV-1010	100-DRV-1020	200-DRV-1013	200-DRV-1030	400-DRV-1000	400-DRV-1010
200-ASY-7523	■					
200-HOE-1700		■				
200-KNF-0800, 0801, 0810, 0811, 0813, 7560						■
200-KNF-0863, 7501, 7510, 7511, 7511P, 7512, 7521, 7525, 7531, 7542	■					
200-KNH-7551						■
200-TIP-0511, 0801, 0802, 0803, 0811 when used on 200-KNH-4000, 4010 OR 4020						■
200-TIP-1011				■		
200-TIP-2011, 3000, 3001, 3011, 4011 when used on 200-KNH-4000, 4010 OR 4020			■			
200-VRT-1040				■		
410-ASY-0823, 7523						■
410-KNF-0801, 0825, 0826, 0831, 7551, 7553, 7560						■
410-KNH-7524, 7526, 7540						■
SWEEPS & SPOONS					■	



100-DRV-1010



100-DRV-1020



200-DRV-1013



200-DRV-1030



400-DRV-1000



400-DRV-1010

Speed-Loc™ Installation & Removal

Scan the QR codes with your smart phone camera to watch the how-to videos.

Preparation

Before installing a new set of seeding openers, fertilizer knives, sweeps or spikes on new or existing adapters, ensure that you visually inspect each adapter for the following signs of damage:

- broken, damaged or missing locking pin
- completely depressed locking pin that will not retract back out (damaged spring ball)
- loose bolts, cracks and other signs of wear

Scan the QR code on the right with your smart phone camera to watch the video on how to replace a ball spring on Speed-Loc™ Quick Change adapters.



SCAN WITH SMART
PHONE CAMERA

Installation

When installing any product always use safety glasses and specified driver. See page 76.

- 1** Firmly install product by sliding it onto the adapter by hand, over the locking pin, until it will no longer travel on the adapter.
- 2** Place the appropriate driver over the product being installed to prevent damage to the nose or leading edge. With a 4 lb. (1.8 kg) hammer, strike the driver with the hammer several times driving the product upward onto the adapter until it contacts the top stopper.
- 3** Product being driven on should be over the locking pin and snapped or locked into place in the hole of the product being driven on. Pin should be visible through the hole (see illustration). **Product must be driven all the way on!** Putting the product on part way and going into the field will NOT place the product onto the adapter.
- 4** Verify the pin has sprung into place of the hole in the product. **Failure to do so will cause loss of product.**
- 5** After a few hundred acres of work, check adapters. If they are loose on the shank re-torque the bolts.



SCAN WITH SMART
PHONE CAMERA

New product may move slightly on the adapters. This is normal wear. If you notice any damage to the product or pin, replace damaged parts and return damaged parts to dealer. If product installs very hard and will not drive over the locking pin, do not use the product. Return it to dealer for replacement and warranty.

Scan the QR code above with your smart phone camera to watch the video on how to install products onto Speed-Loc™ Quick Change adapters.

Removal

When removing the product always use safety glasses and Speed-Release Tool (200-REL-1010). See page 76.

- 1** Strike the product sharply with a hammer on both sides of the product to loosen the rust and dirt between the adapter and product.
- 2** Place the hook of the release tool on top of the product stem; pressing down on the handle to depress the locking pin.
- 3** While depressing the locking pin strike the top driving plate of the release tool with a hammer to move the product downward to clear the pin on the adapter and STOP. Driving the release tool beyond the pin will result in damaging the release tool, locking pin and spring ball. See illustration.
- 4** Remove the release tool; strike the top of the stem to remove the product the remainder of the way off the adapter body.
- 5** Clean and inspect the adapter and locking pin for damage. Follow installation instructions for reinstalling products.



SCAN WITH SMART
PHONE CAMERA

Scan the QR code on the right with your smart phone camera to watch the video on how to remove products from Speed-Loc™ Quick Change adapters.

Speed-Loc™ Adapter Chart

For North America & Australia

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES				410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080
AFM											
180, 200, 250, 880	43°	7/16	1-3/4	■		¹					
150, 2300, 310, 300	50°	1/2	2-1/4								
350 SCARICHISEL	50°	1/2	2-1/4								
ANDERSON											
FIELD CULTIVATORS	47°	3/8	1-3/4	■							
CHISEL PLOWS	50°	1/2	2-1/4								
BOURGAULT											
FIELD CULTIVATORS 6200, 6800, 8800, 8810, 8910	47°	1/2	1-3/4	■							
SPS 270, 360	50°	1/2	2-1/4								
5710, 5810 AIR DRILL	47°	1/2	1-3/4	■							
CHISEL PLOWS 9200, 9400, 9500, 9800	50°	1/2	2-1/4								
BRADY											
FIELD CULTIVATORS	43°	3/8	1-5/8								(NO ADAPTER FOR THIS APPLICATION)
CHISEL PLOWS	50°	7/16	2-1/4								
BRILLION											
HFCT MO	47°	7/16	1-5/8	■							
BUSH HOG											
FIELD CULTIVATORS	47°	3/8	1-3/4	■							
CHISEL PLOWS	50°	7/16	2-1/4								
CASE											
FC, FCW, FCM, 10, 50, 55, 645	47°	3/8	1-3/4	■							
4700, 4900, 5000, 645	43°	1/2	2-1/4								
CASE IH											
255 TIGER-MATE II	47°	7/16	1-3/4	■							
45, 4300, 4500, 4600, 4700, 4800, 4900	47°	7/16	1-3/4	■							
VIBRASHANK	47°	7/16	1-3/4	■							
VIBRACHISEL 5600, 5700	43°	1/2	2-1/4								
5800, 5850, 5900	50°	1/2	2-1/4								
PTX 300, PTX 600	50°	1/2	2-1/4								
ATX 400, 700 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4								
CONCORD											
C-SHANKS	50°	1/2	2-1/4								
EDGE-ON SHANKS											(NO ADAPTER FOR THIS APPLICATION)
CCIL											
202, 179, 279, 379	47°	3/8	1-3/4	■							
203, 204, 205	43°	1/2	2-1/2								
806, 807, 808	43°	1/2	2-1/2								
CHISEL PLOW (THICK SHANK)	50°	7/16	2-1/4								
CNH (DMI)											
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
DEGELMAN											
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
500	50°	7/16	2-1/4								
3000-2	50°	7/16	2-1/4								
DEMSTER											
CHISEL PLOWS	54°	7/16	2-1/4								(NO ADAPTER FOR THIS APPLICATION)
EDWARDS											
CHISEL PLOWS	50°	7/16	2-1/4								
FORWARD											
BOURGAULT TYNE											
280, 2700, 2800, 8800	47°	1/2	1-3/4	■							
FUSION DELTA	47°	1/2	1-3/4	■							
3000 & 400 SERIES C/P	50°	1/2	2-1/4								
EZEE-ON											
FIELD CULTIVATORS 3500, 3550, 5550	47°	1/2	1-3/4	■							

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES				410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080
6000 WITH FIELD CULTIVATOR SHANK OPTION	47°	1/2	1-3/4	■							
6000 WITH CHISEL PLOW SHANK OPTION	50°	1/2	2-1/4								
ALL CHISEL PLOWS INCLUDING 7450	50°	1/2	2-1/4								
7560, 7550	47°	1/2	1-3/4	■							
FLEXI-COIL											
200, 400, 800	47°	7/16	1-3/4	■							
300, 340, 600	50°	1/2	2-1/4								
820 & ST820 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4	■							
820 & ST820 WITH 550 LB & 650 LB TRIPS	50°	1/2	2-1/4								
5000 & 7500 DEPENDING ON SHANK OPTION	47°	1/2	1-3/4	■							
5000 & 7500 DEPENDING ON SHANK OPTION	50°	1/2	2-1/4								
5000HD & 5500 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4								
FRIGGSTAD											
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
CHISEL PLOWS (OLDER MODELS)	50°	7/16	2-1/4								
CHISEL PLOWS	50°	1/2	2-1/4								
GASON											
5100 SERIES	46°	7/16	1-3/4	■							
SCARITILL & EH SCARITILL	47°	1/2	BOTH	■							
7100 ECOTILL	50°	1/2	2-1/4								
GESSNER											
HR 1200	50°	1/2	2-1/4								
GLENCOE											
PC, MPC, PCMW	47°	3/8	1-3/4	■							
CHISEL PLOWS	47°	7/16	2-1/4								
HIGH CLEARANCE	50°	7/16	1-2/4								
GRAHAM											
CHISEL PLOWS	50°	1/2	2-1/4								
400, 500, 1600, 2600	54°	7/16	2-1/4								(NO ADAPTER FOR THIS APPLICATION)
GREAT PLAINS											
8000, 7000	47°	7/16	1-3/4	■							
GYRAL IMPLEMENTS											
PENETRATOR T23, T25	43°	1/2	BOTH								
AG BNOSS T30	43°	7/16	BOTH								
GYSLER											
CHISEL PLOWS	47°	7/16	2-1/4								
HESSTON											
FIELD CULTIVATORS	47°	1/2	1-3/4	■							
CHISEL PLOWS	50°	1/2	2-1/4								
HINIKER											
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
CHISEL PLOWS	50°	1/2	2-1/4								
HORWOOD BAGSHAW											
350 SCARIBAR EDGE-ON	47°	1/2	1-3/4	■							
HORWARD											
CHISEL PLOWS ²	50°	9/16	2-1/4								
INTERNATIONAL											
45, 46, 47	47°	7/16	1-3/4	■							
10, 50, 55, 75, 509, 645	43°	1/2	2-1/4								
JANKE											
UNIV DIRECT DRILL	50°	1/2	2-1/4								
U/D DRILL (HYD) EARLY	50°	1/2	2-1/4								

NOTES: 200 Series adapters should not be used on a chisel plow or heavy duty cultivator unless being used for seeding.
¹Sweeps will not work with this combination, for knife openers only. ²Bolt sizes will require adapting.

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES				410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080
JEFFROY											
450	47°	3/8	1-3/4	■							
JOHN DEERE³											
1000, 1010, 1050	43°	3/8	1-5/8	(NO ADAPTER FOR THIS APPLICATION)							
726, 2200, 2210, 2230	47°	7/16	1-3/4	■							
940, 960, 985	47°	7/16	1-3/4	■							
730	47°	7/16	1-3/4	■							
735, 737, 610, 655, 680, 685, 1600, 1610, 1650	50°	1/2 ⁵	2-1/4		4■			5■	6■		
1810, 1820, 1830, 1835 WITH 350 LB TRIPS	47°	1/2	1-3/4	■							
1810, 1820, 1830, 1835, H500, H500F WITH 500 LB TRIPS	50°	1/2 ⁵	2-1/4					5■	6■		
2400, 2410, 2430	50°	1/2 ⁵	2-1/4					5■	6■		
JOHN SHEARER											
UNIVERSAL CULTIVATOR	47°	7/16	1-3/4	■							
CHISEL PLOWS	50°	1/2	2-1/4								
KONGSKILDE											
C-SHANK	47°	1/2	1-3/4	■							
S-TINE	47°	7/16	1-5/8	■							
KRAUSE											
600, 900, 3100, 4200	47°	7/16	1-3/4	■							
4000	50°	1/2	2-1/4								
5630, 5635	47°	1/2	1-3/4	■							
LEON											
CP77	43°	7/16	2-1/4			■	■			■	■
ALL OTHER LEON CHISEL PLOWS	50°	1/2	2-1/4			■					
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
MASSEY FERGUSON											
160	47°	3/8	1-3/4	■							
259	47°	7/16	1-3/4	■							
124, 125, 126, 128, 133	54°	7/16	2-1/4	(NO ADAPTER FOR THIS APPLICATION)							
MF 7300 CHISEL PLOW	50°	1/2	2-1/4								
MORRIS											
L225, L233, L240, L320	47°	3/8	1-3/4	■							
CHALLENGER II, 9000, 9100	47°	1/2	1-3/4	■							
MAXIM, MAXIM II	47°	1/2	1-3/4	■							
MAXIM III	47°	1/2	1-3/4	■							
CONCEPT 2000 WITH 400 LB TRIP	47°	1/2	1-3/4	■							
CONCEPT 2000 WITH 550 LB TRIP	47°	1/2	1-3/4	■							
CONCEPT 2000 WITH LH 755 LB TRIP	50°	1/2	2-1/4								
220, 4, 5, 6, 7	43°	7/16	2-1/4			■	■				■
MAGNUM I	43°	1/2	2-1/4			■	■				■
912, 8900, 9000, MAGNUM II	50°	1/2	2-1/4			■					
MAGNUM III WITH LH 755 LB TRIP	50°	1/2	2-1/4			■					
CHALLENGER L2 480	47°	3/8	1-3/4	■							
NEW HOLLAND											
SD 440A, SD 550A AIR HOE DRILL (DEPENDING ON SHANK OPTION)	47°	1/2	1-3/4	■							
SD 440A, SD 550A AIR HOE DRILL (DEPENDING ON SHANK OPTION)	50°	1/2	2-1/4								
ST 540 CHISEL PLOW	50°	1/2	2-1/4								
ST 250	47°	1/2	1-3/4	■							
ST 830 WITH 350 LB TRIP	47°	1/2	1-3/4	■							

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES				410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080
ST 830 WITH 550 LB TRIP (DEPENDING ON SHANK OPTION)	47°	1/2	1-3/4	■							
ST 830 WITH 550 LB TRIP (DEPENDING ON SHANK OPTION)	50°	1/2	2-1/4								
ST 830 WITH 650 LB TRIP	50°	1/2	2-1/4								
P2050, P2060 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4								
NOBLE											
XR20	50°	7/16	2-1/4								
8000, 4000 MULTI-TOOL	50°	1/2	2-1/4								
QUINSTAR											
FIELD FINISHER	47°	7/16	1-3/4	■							
FALLOW MASTER III	50°	1/2	2-1/4								
RYAN (RFM)											
1000 SERIES	47°	7/16	1-3/4	■							
SALFORD											
FIELD CULTIVATOR	47°	7/16	1-3/4	■							
SCHULTE											
1000 SERIES	50°	7/16	2-1/4								
SMALE											
MULTIVATOR	47°	7/16	1-3/4	■							
CHISEL PLOWS	50°	1/2	2-1/4								
SUMMERS											
SUPERCHISEL	50°	1/2	2-1/4								
SUNFLOWER											
CHISEL PLOWS	50°	1/2	2-1/4								
5000, 6000, 7000	47°	7/16	1-3/4	■							
TAYLOR											
FIELD CULTIVATORS	47°	3/8	1-3/4	■							
UNVERFERTH											
PERFECTA II FIELD CULTIVATORS	47°	7/16	1-3/4	■							
VERSATILE											
DH730, DH750 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4	■							
C500 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4	■							
C600 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4	■							
C600 WITH 600 LB TRIP	50°	1/2	2-1/4								
C700 WITH 650 LB TRIP	50°	1/2	2-1/4								
VICTORY											
CHISEL PLOWS	50°	1/2	2-1/4								
WIL-RICH											
FIELD CULTIVATORS	47°	7/16	1-3/4	■							
CHISEL PLOWS (1993 & OLDER)	43°	7/16	2-1/4								
CHISEL PLOWS (1994 & NEWER)	50°	1/2	2-1/4								
XL2, QX2	47°	7/16	1-3/4	■							
YEOMANS GRAHAM HOEMES											
US CHISEL PLOWS	50°	1/2	2-1/4								

NOTES: *880-BSH-2000 should be used with all split John Deere shanks. ⁴Use wedge 880-WDG-0300 to correct pitch. ⁵Shanks that are mounted with a vertical bolt (28" standard). ⁶Shanks that are mounted with a horizontal bolt (32" standard).

Tillage

- Sweeps & Spikes
- Harrow Tines
- Disks
- Chisel Plow Points
- Deep Rippers
- Shank Savers & Nuggets
- Scrapers



24-30% LONGER WEAR LIFE

INCREASED DURABILITY

REDUCED STEM WEAR

BETTER VALUE = MORE ACRES PER DOLLAR

A number of field tests have been conducted in North America and Europe. Results have shown that Blue Armour improves wear life by 24-30%. The variation in these results is attributed to the variety of soil and field conditions encountered during testing.

The sweeps, as shown in the photos to the right, were taken from a test conducted by an OEM in Germany on a small 4 metre machine. These tests substantiate that Blue Armour has raised the bar in wear life and overall value.



BTT REGULAR SWEEP
105 HA WORKED

BTT BLUE ARMOUR™ SWEEP
140 HA WORKED

Blue Armour is available in select products within our bolt-on, 200 and 410 Series Speed-Loc™ Quick Change sweeps and spoons. It is unavailable in anything that has a wear pad welded to it.

LOOK FOR THE BLUE ARMOUR SHIELD. 

200 Series Speed-Loc™

Blue Armour options available. Look for the blue shield.



BLUE ARMOUR

SIZE	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	200-PWV-0400
5" (140mm)	1/4" (6mm)	200-PWV-0500
5" (140mm)	5/16" (8mm)	200-PWV-0508
7" (180mm)	1/4" (6mm)	200-PWV-0700
7" (180mm)	5/16" (8mm)	200-PWV-0708
9" (230mm)	1/4" (6mm)	200-PWV-0900
9" (230mm)	5/16" (8mm)	200-PWV-0908
10" (254mm)	1/4" (6mm)	200-PWV-1000
10" (254mm)	5/16" (8mm)	200-PWV-1008
11" (280mm)	1/4" (6mm)	200-PWV-1100
11" (280mm)	5/16" (8mm)	200-PWV-1108
12" (305mm)	1/4" (6mm)	200-PWV-1200
12" (305mm)	5/16" (8mm)	200-PWV-1208
13" (330mm)	1/4" (6mm)	200-PWV-1300
13" (330mm)	5/16" (8mm)	200-PWV-1308
14" (355mm)	1/4" (6mm)	200-PWV-1400
14" (355mm)	5/16" (8mm)	200-PWV-1408
16" (406mm)	5/16" (8mm)	200-PWV-1608*
18" (457mm)	5/16" (8mm)	200-PWV-1808*



4" (200-PWV-0400)



5" (200-PWV-0500)



7" (200-PWV-0700)



9" (200-PWV-0908)



10" (200-PWV-1000)



11" (200-PWV-1108)



12" (200-PWV-1208)



13" (200-PWV-1308)



14" (200-PWV-1408)

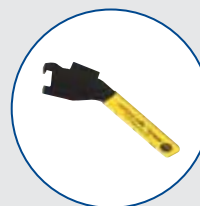


16" (200-PWV-1608)

*THESE SWEEPS ARE ONLY AVAILABLE IN 5/16" (8MM) THICKNESS AND WERE DEVELOPED FOR WESTERN EUROPE. IT IS NOT RECOMMENDED FOR MOST NORTH AMERICAN FIELD CONDITIONS.



To ensure proper installation of all 200 & 410 Series Speed-Loc™ sweeps and spikes use driver 400-DRV-1000.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from the Speed-Loc™ Adapters. See page 76.



BLUE ARMOUR



200-GFO-0308

GOOSEFOOT

This "Goosefoot" tillage tool is 5/16" (8mm) thick by 2-1/2" (63mm) wide.

Designed specifically for vibrating S-tine cultivators.



200-PWV-0405

SWEEP W/ HARDENED WEAR PAD

This sweep is 1/4" (6mm) thick by 4" (100mm) wide with a 3/8" hardened wear pad (52-56 HRC) which increases the life expectancy. The nose runs 1/2" (12mm) lower than the other 200 Series sweeps. This increased pitch improves penetration in hard or compacted ground and increases disturbance. Ideal for primary tillage or banding fertilizer.



200-PWV-0405ML

MAX LIFE™ SWEEP W/ HARDENED WEAR PAD

The same as 200-PWV-0405 with the addition of heat applied, embedded carbide on the underside. See page 93.



200-PWV-0428
200-PWV-0528

SWEEP W/ HARDENED WEAR PAD

These sweeps are 5/16" (8mm) thick with a 3/8" x 2" hardened wear pad (52-56 HRC) which increases the life expectancy.

200-PWV-0428 is 4" (100mm) wide.

200-PWV-0528 is 5" (127mm) wide.

Designed mainly for fall tillage or deep working.



200-PWV-0928

SWEEP W/ HARDENED WEAR PAD

This sweep is 5/16" (8mm) thick by 9" (230mm) wide. It has a 3/8" x 2" hardened wear pad (52-56 HRC) that extends up the entire stem which increases its life expectancy.



200-SPK-0200

SPIKE

This quick change spike is 5/8" (15mm) thick by 2-1/4" (57mm) wide by 6" (150mm) long. It has a hardened wear pad (52-56 HRC) for extra life. This tool is ideal for primary tillage or banding fertilizer.



200-SPK-0200ML

MAX LIFE™ SPIKE

The same as 200-SPK-0200 with the addition of heat applied, embedded carbide on the nose. See page 93.



200-SPK-0215

SPIKE

This quick change spike is 5/8" (15mm) thick by 2-1/4" (57mm) wide by 6" (150mm) long. It has a hardened wear pad (52-56 HRC) that extends to the top of the stem to prevent wear in abrasive soil or when working at greater depths.



200-SPK-0230

SPIKE

This sweep is 5/8" (15mm) thick by 2" (50mm) wide by 4" (102mm) long with a hardened wear pad (52-56 HRC) for extra life.

This tool is made specifically for slurry injection.

410 Series Speed-Loc™

Blue Armour options available. Look for the blue shield.



BLUE ARMOUR



4" (410-PWV-0400)



6" (410-PWV-0600)
(410-PWV-0608)



8" (410-PWV-0800)
(410-PWV-0808)



10" (410-PWV-1000)
(410-PWV-1008)



12" (410-PWV-1200)
(410-PWV-1208)



14" (410-PWV-1400)
(410-PWV-1408)

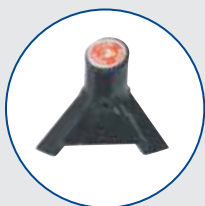


16" (410-PWV-1600)
(410-PWV-1608)



18" (410-PWV-1800)
(410-PWV-1808)

SIZ	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	410-PWV-0400
6" (150mm)	1/4" (6mm)	410-PWV-0600
6" (150mm)	5/16" (8mm)	410-PWV-0608
8" (200mm)	1/4" (6mm)	410-PWV-0800
8" (200mm)	5/16" (8mm)	410-PWV-0808
10" (254mm)	1/4" (6mm)	410-PWV-1000
10" (254mm)	5/16" (8mm)	410-PWV-1008
12" (305mm)	1/4" (6mm)	410-PWV-1200
12" (305mm)	5/16" (8mm)	410-PWV-1208
14" (355mm)	1/4" (6mm)	410-PWV-1400
14" (355mm)	5/16" (8mm)	410-PWV-1408
16" (406mm)	1/4" (6mm)	410-PWV-1600
16" (406mm)	5/16" (8mm)	410-PWV-1608
18" (457mm)	5/16" (8mm)	410-PWV-1808



To ensure proper installation of all 200 & 410 Series Speed-Loc™ sweeps and spikes use driver 400-DRV-1000.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from the Speed-Loc™ Adapters. See page 76.

**410-PWV-0418**

SWEEP W/ HARDENED WEAR PAD

This sweep has a 3/8" by 2" hardened wear pad (52-56 HRC) for longer life. The sweep is 5/16" (8mm) thick and 4" (100mm) wide.

This sweep runs at a 13° pitch, which is steeper than the regular 410 Series sweep and provides more disturbance.

This tool is ideal for primary tillage or banding fertilizer.



EMBEDDED CARBIDE ON UNDERSIDE

410-PWV-0418ML

MAX LIFE™ SWEEP W/ HARDENED WEAR PAD

The same as **410-PWV-0418** with the addition of heat applied, embedded carbide on the underside. See page 93.

**410-PWV-0518**

SWEEP W/ HARDENED WEAR PAD

This sweep is 5/16" (8mm) thick by 5" (127mm) wide. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life.

It runs at a 3° pitch, the same as a standard sweep.

**410-SPK-0200**

SPIKE

This heavy-duty quick change spike is 5/8" (15mm) thick by 2" (50mm) wide by 9" (230mm) long. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for extra life. This tool is ideal for primary tillage or banding fertilizer.



EMBEDDED CARBIDE ON UNDERSIDE

410-SPK-0200ML

MAX LIFE™ SPIKE

The same as 410-SPK-0200 with the addition of heat applied, embedded carbide on the underside. See page 93.



It was a tough spring for wear on sweeps but the BTT sweeps are a good product. I think they wore more evenly and slightly longer than the John Deere sweep, hard to tell how much longer they lasted due to the dry soil.

I liked the longer neck on them as well. The bottom bolt gets wear on it before they need to be changed but the longer neck seems to minimize that.

**Kyle Jorgenson,
North Dakota, USA**

Bolt-On Sweeps, Spikes & Chisels

Blue Armour options available. Look for the blue shield.

The Extended Stem Advantage

Bolt-on sweeps fit all makes and models of tillage equipment. The stem, or neck, on these bolt-on sweeps are longer than that of our competitors. This extended stem allows us to punch the bolt holes higher than on any other brand of sweep.

The results are reduced stem breakage, less wear on the shank, and less wear and stone damage to the bottom bolt. Less wear on the shank extends the useful life of the sweep, while less stone damage on the bottom bolt means fewer problems when changing shovels.

The extended stem feature saves you time and money.



043 Series

FITS: Heavy-duty chisel plows with 43° shanks and 2-1/4" to 2-1/2" (57 - 64mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.
8" (200mm)	1/4" (6mm)	043-PWV-0800
10" (254mm)	1/4" (6mm)	043-PWV-1000
12" (305mm)	1/4" (6mm)	043-PWV-1200
14" (355mm)	1/4" (6mm)	043-PWV-1400
16" (420mm)	1/4" (6mm)	043-PWV-1600
18" (460mm)	1/4" (6mm)	043-PWV-1800

047 Series

FITS: Field cultivators with 47° shanks and 1-3/4" (45mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	047-PWV-0400
7" (180mm)	5/16" (8mm)	047-PWV-0708
9" (230mm)	1/4" (6mm)	047-PWV-0900
9" (230mm)	5/16" (8mm)	047-PWV-0908
10" (254mm)	1/4" (6mm)	047-PWV-1000
10" (254mm)	5/16" (8mm)	047-PWV-1008
11" (280mm)	1/4" (6mm)	047-PWV-1100
12" (305mm)	1/4" (6mm)	047-PWV-1200
13" (330mm)	1/4" (6mm)	047-PWV-1300
13" (330mm)	5/16" (8mm)	047-PWV-1308

050 Series

FITS: Heavy-duty chisel plows with 50° shanks and 2-1/4" (57mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.	SIZE	THICKNESS	PRODUCT NO.
6" (150mm)	1/4" (6mm)	050-PWV-0600	14" (355mm)	1/4" (6mm)	050-PWV-1400
8" (200mm)	1/4" (6mm)	050-PWV-0800	16" (420mm)	1/4" (6mm)	050-PWV-1600
10" (254mm)	1/4" (6mm)	050-PWV-1000	16" (420mm)	5/16" (8mm)	050-PWV-1608
12" (305mm)	1/4" (6mm)	050-PWV-1200	18" (460mm)	1/4" (6mm)	050-PWV-1800



070-RCH-0451

REVERSIBLE CHISEL

This reversible chisel is 5/16" (8mm) thick and 4" (100mm) wide. It has 1-3/4" (45mm) bolt hole spacing to fit light- and medium-duty field cultivators.

It is used mostly for primary tillage in the fall or early spring.



070-RCH-0452

REVERSIBLE CHISEL

This reversible chisel is 5/16" (8mm) thick and 4" (100mm) wide. It has 2-1/4" to 2-1/2" (57 - 63mm) bolt hole spacing.

It is used mostly for primary tillage in the fall or early spring.



070-RSP-0200A

REVERSIBLE SPIKE

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 14-1/2" (368mm) long. It has 1-3/4" to 2" (45 - 57mm) bolt hole spacing.

It is shorter than our other two reversible spikes, and is designed for light- to medium-duty field cultivators or for chisel plows where ground clearance in transport is a concern.



070-RSP-0210A

REVERSIBLE SPIKE

FITS: Bourgault chisel plow and Morris LH 755 shank.

On 43° machines the shank curvature may interfere with installation.

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 17" (431mm) long.

It has 2-1/4" (57mm) bolt hole spacing and is flat through the bolt hole section.



070-RSP-0220A

REVERSIBLE SPIKE

FITS: Any chisel plow shank except Bourgault chisel plow and Morris LH 755 shank.

On 43° machines the shank curvature may interfere with installation.

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 16-1/2" (419mm) long.

It has 2-1/4" to 2-1/2" (57 - 63mm) bolt hole spacing and is curved at the bolt hole section.



SHOWN WITH
200-TIP-0802

030-HLD-2000

HOLDER

FITS: John Deere 2210 47° shank, Salford Curved Flat S-Tine two piece shank.

This holder allows the use of our 200 Series tips, thus providing a much longer wearing alternative to what is currently common in the industry.

Tips sold separately. See pages 12-13.



Cast Sweeps & Chisel Plow Points

Manufactured by Richmond Brothers Equipment



810-SIH-0700

CAST SWEEP

FITS: Case IH

SIZE: 7"

OVERVIEW: 47°, 1-3/4"
Centers, 7/16" Bolt

RICHMOND BROS PART #:
RB7IH



810-SIH-0900

CAST SWEEP

FITS: Case IH

SIZE: 9"

OVERVIEW: 47°, 1-3/4"
Centers, 7/16" Bolt

RICHMOND BROS PART #:
RB9IH



810-SJD-0700

CAST SWEEP

FITS: John Deere

SIZE: 7"

OVERVIEW: 47°, 1-3/4"
Centers, 7/16" Bolts

RICHMOND BROS PART #:
RB7JD



810-SJD-0900

CAST SWEEP

FITS: John Deere

SIZE: 9"

OVERVIEW: 47°, 1-3/4"
Centers, 7/16" Bolts

RICHMOND BROS PART #:
RB9JD



810-CPP-0200

CHISEL PLOW POINT

SIZE: 2"

OVERVIEW: Reversible,
1-3/4" - 2-3/4" Hole
Centers

RICHMOND BROS PART #:
RBDC



810-CPP-0750

CHISEL PLOW POINT

SIZE: 7-1/2"

OVERVIEW: Wing, 50°,
2-1/4" Hole Centers, 1/2"
Bolts

RICHMOND BROS PART #:
RBPR



810-SKG-0275

CHISEL PLOW POINT

FITS: Kongskilde

SIZE: 2-3/4"

OVERVIEW: Single 7/16"
Bolt

RICHMOND BROS PART #:
RB234K



810-SKG-0400

CHISEL PLOW POINT

FITS: Kongskilde

SIZE: 4"

OVERVIEW: Duck Foot,
Single 7/16" Bolt

RICHMOND BROS PART #:
RB4K



Deep Rippers

Manufactured by Richmond Brothers Equipment



815-RIH-0300

DEEP RIPPER

FITS: Case IH/DMI

SIZE: 3"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB3C



815-RIH-0500

DEEP RIPPER

FITS: Case IH/DMI

SIZE: 5"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB5C



815-RIH-0700

DEEP RIPPER

FITS: Case IH/DMI

SIZE: 7"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB7C



815-RIH-1000

DEEP RIPPER

FITS: Case IH/DMI

SIZE: 10"

DESCRIPTION: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB10C



815-RIH-1400

DEEP RIPPER

FITS: Case IH/DMI

SIZE: 14"

DESCRIPTION: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB14C



815-RJD-0300

DEEP RIPPER

FITS: John Deere/Dom

SIZE: 3"

DESCRIPTION: 1-1/4" Parabolic,
2 Hole Ripper Point

RICHMOND BROS PART #: RB3



815-RJD-0500

DEEP RIPPER

FITS: John Deere/Dom

SIZE: 5"

DESCRIPTION: 1-1/4" Parabolic,
2 Hole Ripper Point

RICHMOND BROS PART #: RB5



815-RJD-0700

DEEP RIPPER

FITS: John Deere/Dom

SIZE: 7"

DESCRIPTION: 1-1/4" Parabolic,
2 Hole Ripper Point

RICHMOND BROS PART #: RB7



815-RJD-1000

815-RJD-1000 & 1400

DEEP RIPPER

FITS: John Deere/Dom

SIZE: 815-RJD-1000 10"
815-RJD-1400 14"

DESCRIPTION: 1-1/4" Parabolic,
2 Hole Ripper Point

RICHMOND BROS PART #:
815-RJD-1000 RB10, 815-RJD-1400 RB14



Shank Savers & Nuggets

Manufactured by Richmond Brothers Equipment



815-RSS-0011



815-RSS-0020

815-RSS-0011

SHANK SAVER

FITS: CASE/IH 870/875

OVERVIEW: Nugget style design double shank saver. Designed to fill with dirt first so that your tillage tools remain protected.

815-RSS-0020

SHANK SAVER

FITS: Krause Dominator

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.

815-RSS-0030

SHANK SAVER

FITS: John Deere

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.



815-RNW-0010

NUGGET

OVERVIEW: Half moon shape weld-on nugget, old style.



815-RNW-0011

NUGGET

OVERVIEW: Triangle shape weld-on nugget, new style.



815-RNW-0020

NUGGET

OVERVIEW: Landoll Wedge



MAX LIFE

Extend the life of your wear parts.

The *MAX LIFE™* process infuses tungsten carbide onto wear parts, creating the toughest, most economical, and longest-lasting tillage tools available. *MAX LIFE* tungsten carbide hard facing is cost effective and increases the useful life of wear parts longer than other hard facing processes.

Years of rigorous field tests consistently show that the useful life is extended many times over, depending on the application.

LEARN MORE AT maxlifeproducts.ca



MAX LIFE™ Scrapers

Keep disks and packer wheels clean and free of debris.



015-JDS-2680

FITS: John Deere, Norwood

REPLACES OEM#:
John Deere 55-4-01605,
5NS55401716



015-SRC-0001

FITS: Bourgault 3310,
3320 & 3420, SE, QDA &
XTC, John Deere 1870
Conserva Pak

REPLACES OEM#:
Bourgault N/A
John Deere A88182

NOTES: This packer scraper
is sized to fit multiple
mounting brackets. Scraper
arm assembly is required on
Bourgault machines.



015-SRC-0004

FITS: Wishek Tandem
Disk Model 814NT, 842NT
& 862NT

REPLACES OEM#:
Wishek W105216
Flaman PWI105216



015-SRC-0005

015-SRC-0005
015-SRC-0006

FITS: Case IH 800 & 900,
NH P2070 & 2075

REPLACES OEM#:
CNH Precision Scraper RH
84336698
CNH Precision Scraper LH
84336699

015-SRC-0006 LEFT
015-SRC-0005 RIGHT



010-DEG-1001

FITS: Degelman Pro-Till

REPLACES OEM#:
572955



010-DEG-1001ML

FITS: Degelman Pro-Till

REPLACES OEM#:
572957

NOTES: This scraper has
MAX LIFE™ tungsten
embedded carbide applied
to wear edges.



015-ASY-0012

015-ASY-0011
015-ASY-0012

Bourgault SE & QDA scraper
arm assembly.

NOTES:
015-ASY-0011 LEFT
015-ASY-0012 RIGHT



015-ASY-0022

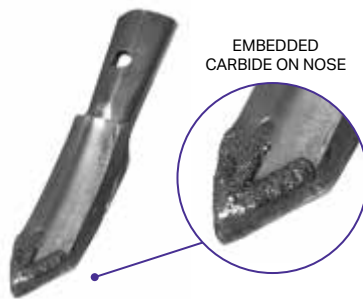
015-ASY-0021
015-ASY-0022

Bourgault XTC scraper arm
assembly.

NOTES:
015-ASY-0021 LEFT
015-ASY-0022 RIGHT

MAX LIFE™ Sweeps, Spikes & Chisels

Speed-Loc™ & Bolt-On Options



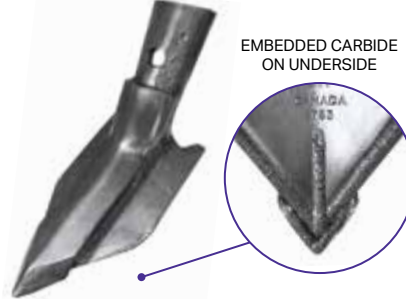
200-SPK-0200ML

QUICK CHANGE SPIKE

FITS: 200 Series Speed-Loc™ (47° shank)

The spike is 5/8" (15mm) thick, 2-1/4" (57mm) wide and 6" (150mm) long. It has a hardened wear pad (52-56 HRC) for extra life.

Heat applied, embedded carbide has been added to the nose. Ideal for primary tillage or banding fertilizer.



200-PWV-0405ML

QUICK CHANGE SWEEP

FITS: 200 Series Speed-Loc™ (47° shank)

The sweep is 1/4" (6mm) thick and 4" (100mm) wide. It has a hardened wear pad (52-56 HRC) which increases the life expectancy.

Heat applied, embedded carbide has been added to the underside. The sweep nose runs 1/2" (12mm) lower than the other 200 Series sweeps. The increased pitch improves penetration in hard or compacted ground. Ideal for fall tillage or deep working.



410-SPK-0200ML

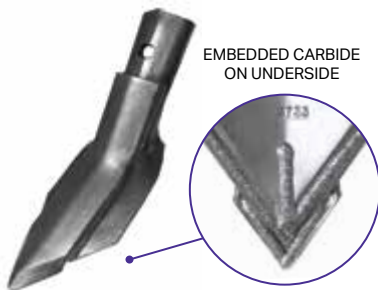
QUICK CHANGE HD SPIKE

FITS: 410 Series Speed-Loc™ (47° shank)

The spike is 2" (50mm) wide, 5/8" (15mm) thick and 9" (230mm) long.

It has a hardened wear pad (52-56 HRC) for extra life.

Heat applied, embedded carbide has been added to the underside. Ideal for primary tillage or banding fertilizer.



410-PWV-0418ML

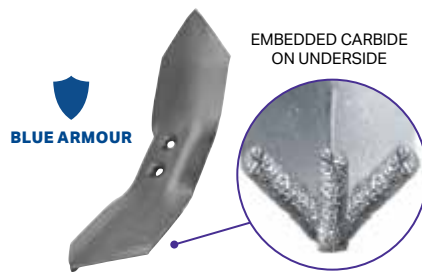
QUICK CHANGE SWEEP

FITS: 410 Series Speed-Loc™ (47° shank)

Heat applied, embedded carbide has been added to the underside.

The sweep has a 3/8" hardened wear pad (52-56 HRC) for longer life. The sweep is 5/16" (8mm) thick and 4" (100mm) wide.

This sweep runs at a 13° pitch, steeper than the regular 410 Series sweep.



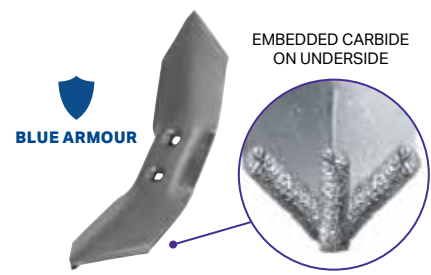
070-RCH-0451ML

REVERSIBLE CHISEL

This reversible chisel has heat applied, embedded carbide added to the underside.

It is 5/16" (8mm) thick and 4" (100mm) wide. It has 1-3/4" (45mm) bolt hole spacing to fit light- and medium-duty field cultivators.

It is used mostly for primary tillage in the fall or early spring.



070-RCH-0452ML

QUICK CHANGE HD SPIKE

FITS: 410 Series Speed-Loc™ (47° shank)

The spike is 2" (50mm) wide, 5/8" (15mm) thick and 9" (230mm) long. It has a hardened wear pad (52-56 HRC) for extra life.

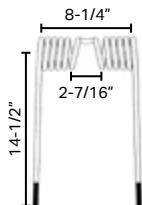
Heat applied, embedded carbide has been added to the underside. Ideal for primary tillage or banding fertilizer.

MAX LIFE™ Tungsten Carbide Harrow Tines

Ask your BTT dealer for the latest additions to our lineup.

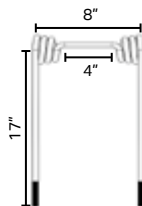
010-HAR-3814ML

COIL I.D.: 1-15/16"
DIMENSIONS: 3/8" X 8-1/4" X 14-1/2"
FITS:
 Summers/Herman (OEM #8H1110S)



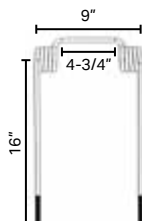
010-HAR-3817ML

COIL I.D.: 1-13/16"
DIMENSIONS: 3/8" X 8" X 17"
FITS:
 Bourgault (OEM #2070-27)



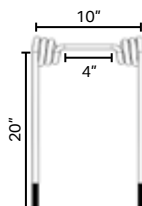
010-HAR-4309ML

COIL I.D.: 2-1/16"
DIMENSIONS: 7/16" X 9" X 16"
FITS:
 John Deere (OEM #N236890)



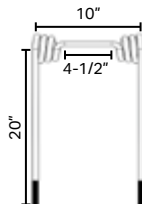
010-HAR-4375ML

COIL I.D.: 2-1/8"
DIMENSIONS: 7/16" X 10" X 20"
FITS:
 Bourgault 6000/Delmar 5500
 (OEM #2070-77, #2070-77-01)



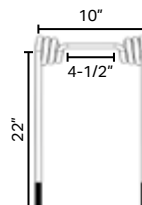
010-HAR-5000ML

COIL I.D.: 2-9/16"
DIMENSIONS: 1/2" X 10" X 20"
FITS:
 Salford (OEM #R60000)



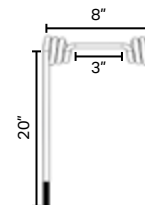
010-HAR-5001ML

COIL I.D.: 2-11/16"
DIMENSIONS: 1/2" X 10" X 22"
FITS:
 Bourgault XR770 (OEM #2070-79,
 2070-79-01)



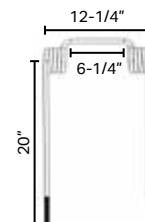
010-HAR-5008ML

COIL I.D.: 2-5/8"
DIMENSIONS: 1/2" X 8" X 20"
FITS:
 Bourgault 8800/8810/8910 series
 Cultivator, SPS 270/360/365, and
 9000 Series CP (OEM #2070-76)



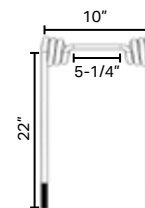
010-HAR-5020ML

COIL I.D.: 2"
DIMENSIONS: 1/2" X 12-1/4" X 20"
FITS:
 John Deere (OEM #N236516)



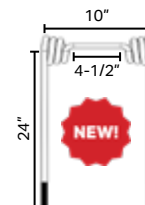
010-HAR-5022ML

COIL I.D.: 2-3/4"
DIMENSIONS: 1/2" X 10" X 22"
FITS:
 Elmer's (OEM #21370, 12137000)



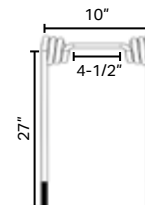
010-HAR-5024ML

COIL I.D.: 2-3/4"
DIMENSIONS: 1/2" X 10" X 24"
FITS:
 Rite Way (OEM #404-0039)



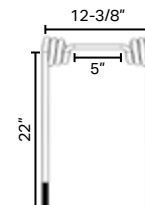
010-HAR-5027ML

COIL I.D.: 2-5/8"
DIMENSIONS: 1/2" X 10" X 27"
FITS:
 Morris (OEM #H27900)



010-HAR-5028ML UNIVERSAL

COIL I.D.: 2-9/16"
DIMENSIONS: 1/2" X 12-3/8" X 22"
FITS:
 CNH/Flexi-Coil (OEM #87505461)
 Summers/Herman (OEM #8H1180S)



3 YEAR Limited Warranty

From the date of purchase against breakage for three years prorated to a maximum of 100%.

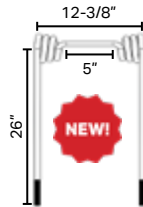
010-HAR-5029ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 12-3/8" X 26"

FITS:

Summers (OEM #8H1184S)



010-HAR-6250ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

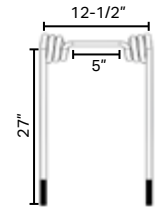
Bourgault (OEM #2070-70, 8606-13)

Brandt (OEM #B021751, C516584)

Gates (OEM #120229, 120230)

Rite Way (OEM #404-0030)

Summers/Herman (OEM #8H1195S)



010-HAR-5625ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 12" X 26"

FITS:

Bourgault/Delmar (OEM #2070-28)

Brandt (OEM #B021750)

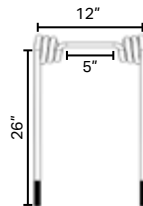
Flexi-Coil (OEM #90081C, 87445314)

Gates (OEM #120240, 120241)

Pillar (OEM #212-033, 212-145)

Rite Way (OEM #404-0010, 404-0028)

Summers/Herman (OEM #8H1190S)



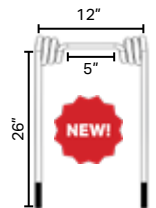
010-DEG-5626ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 12" X 26"

FITS:

Degelman (OEM #143112, 143516)



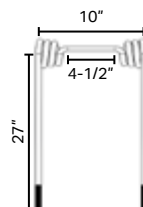
010-HAR-5627ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 10" X 27"

FITS:

Morris (OEM #H49499)



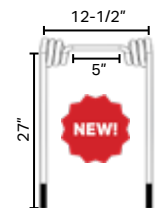
010-DEG-6227ML

COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

Degelman (OEM #143113, 143507, 143517)



MAX LIFE™ Harrow Tines have outperformed regular tines by up to 6X.

There is no more need to worry about excessive tine wear in dry soil conditions before the fall rain. People tend to put off harrowing when the soil is too dry. Harrowing behind the combine as soon as possible maximizes the benefits of straw management and even next year's germination.

This product changes the harrowing/time management decision, and there is a good chance the life of this tine will be close to the life of the harrow bar itself. I wouldn't hesitate to recommend the MAX LIFE tine to anyone.

Shawn Blandin, Synergy Farms, St. Brieux, SK



10,000 ACRES OF WEAR COMPARING A MAX LIFE TINE TO A REGULAR TINE.

MAX LIFE™ Harrow Tine Quick Reference

Ask your BTT dealer for the latest additions to our lineup.

OEM	OEM NUMBER	DIMENSIONS	BTT PART NUMBER
BOURGAULT / DELMAR			
BOURGAULT	#2070-27	3/8" x 8" x 17"	010-HAR-3817ML
BOURGAULT / DELMAR	#2070-28	9/16" x 12" x 26"	010-HAR-5625ML Universal
BOURGAULT	#2070-70	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
BOURGAULT 9500CP	#2070-76	1/2" x 8" x 20"	010-HAR-5008ML
BOURGAULT 6000 / DELMAR 5500	#2070-77	7/16" x 10" x 20"	010-HAR-4375ML
BOURGAULT / DELMAR	#2070-77-01	7/16" x 10" x 20"	010-HAR-4375ML
BOURGAULT XR770	#2070-79	1/2" x 10" x 22"	010-HAR-5001ML
BOURGAULT XR770	#2070-79-01	1/2" x 10" x 22"	010-HAR-5001ML
BOURGAULT	#8606-13	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
BRANDT			
	#B021750	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#B021751	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
	#C516584	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
CNH / FLEXI-COIL			
	#87505461	1/2" x 12-3/8" x 22"	010-HAR-5028ML Universal
	#90081C	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#87445314	9/16" x 12" x 26"	010-HAR-5625ML Universal
DEGELMAN			
	#143112	9/16" x 12" x 26"	010-DEG-5626ML
	#143516	9/16" x 12" x 26"	010-DEG-5626ML
	#143113	5/8" x 12-1/2" x 27"	010-DEG-6227ML
	#143507	5/8" x 12-1/2" x 27"	010-DEG-6227ML
	#143517	5/8" x 12-1/2" x 27"	010-DEG-6227ML
ELMER'S			
	#21370	1/2" x 10" x 22"	010-HAR-5022ML
	#12137000	1/2" x 10" x 22"	010-HAR-5022ML
GATES			
	#120240	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#120241	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#120229	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
	#120230	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
JOHN DEERE			
	#N236516	1/2" x 12-1/4" x 20"	010-HAR-5020ML
	#N236890	7/16" x 9" x 16"	010-HAR-4309ML
MORRIS			
	#H27900	1/2" x 10" x 27"	010-HAR-5027ML
	#H49499	9/16" x 10" x 27"	010-HAR-5627ML
PILLAR			
	#212-033	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#212-145	9/16" x 12" x 26"	010-HAR-5625ML Universal
RITE WAY			
	#404-0039	1/2" x 10" x 24"	010-HAR-5024ML
	#404-0010	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#404-0028	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#404-0030	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
SALFORD			
	#R60000	1/2" x 10" x 20"	010-HAR-5000ML
SUMMERS / HERMAN			
	#8H1110S	3/8" x 8-1/4" x 14-1/2"	010-HAR-3814ML
	#8H1180S	1/2" x 12-3/8" x 22"	010-HAR-5028ML Universal
	#8H1184S	1/2" x 12-3/8" x 26"	010-HAR-5029ML Universal
	#8H1190S	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#8H1195S	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal

Why consider fall tillage?

It can improve your bottom line.

- Incorporates organic matter back into the soil, feeding soil microbes and improving soil health.
- Breaks up hard-pan to encourage strong root growth and allow spring snow melt to soak in.
- Suppresses stubborn weeds and reduces the possibility of chemical resistance.
- Aerates the soil, allowing oxygen and nutrients to flow through and feed microbes.
- Exposes black soil, warming soil quicker in the spring and promoting faster germination.
- Smooths uneven ground and wheel ruts while drying out wet fields.
- Saves time in the spring by applying fertilizer with fall tillage.

Check out our fall tillage products to fit any color and fit your farm.

With the BTT Demo Program you can even try a few parts before you buy. No pressure. No obligation to buy.



Blue Armour Sweeps
Page 82-87

MAX LIFE™ Harrow Tines
Page 94-95

Non-Freeze Fertilizer Knives
Page 68-69

Spikes
Page 83-87

Niaux 200 Disks
Page 98-103

NIAUX 200

Boost Your Performance



The research and development efforts in metallurgy and heat treatment have resulted in a line of coulters and disk blades that outperform the competition. Special boron-carbon steel along with patented transitional heat treatment results in a consistently longer wearing blade with less dulling on the leading edge without sacrificing durability.

LONG-LASTING

Thanks to increased hardness in the working area, *Niaux 200* disks have a 20-40% longer lifespan than other disks on the market.

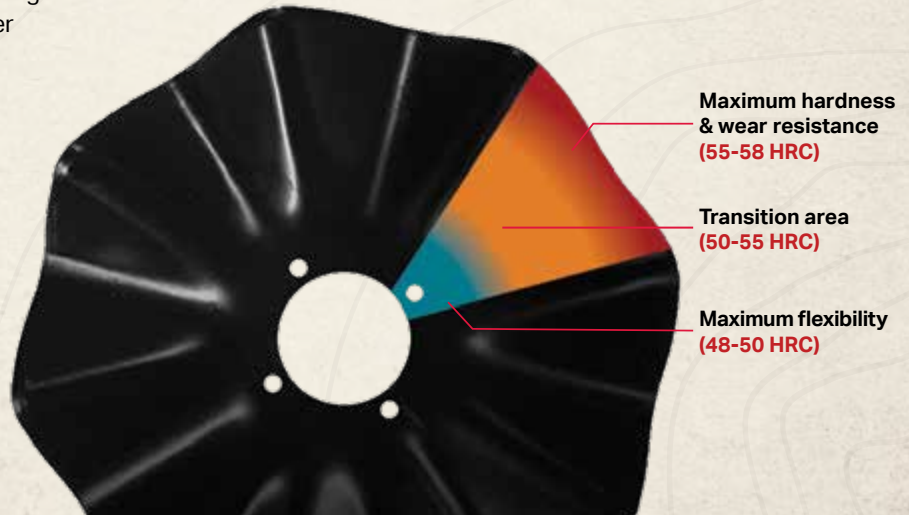
EFFECTIVE

Niaux 200 disk blades ensure a perfect cutting quality throughout their lifetime.

ROBUST

Niaux 200 disk blades are very resilient and are designed to resist extreme shocks and deformations.

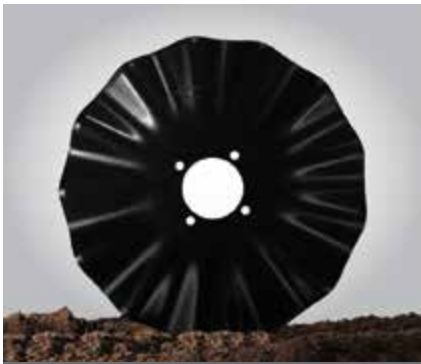
Life time replacement warranty against breakage.



TO LEARN MORE VISIT forgesdeniaux.com or tillageertools.ca/niaux-200-disk-blades/

500-200-1000		500-200-1015		500-200-1035		500-200-1040	
FITS: BOURGAULT		FITS: BOURGAULT		FITS: BOURGAULT		FITS: BOURGAULT	
Bourgault MRB® III, 3720 Coulters Drill Original Manufacturer's Part		Bourgault 3820 Coulters Drill Original Manufacturer's Part		Bourgault MRB® I / Series 20 Original Manufacturer's Part		Bourgault MRB® II / Series 25 Original Manufacturer's Part	
Replaces OEM Part #	2085-04	Replaces OEM Part #	2085-05	Replaces OEM Part #	6407-25	Replaces OEM Part #	6717-99
Disk Type	Flat Coulters Single Bevel	Disk Type	Flat Coulters Single Bevel	Disk Type	Flat Coulters Double Bevel	Disk Type	Flat Coulters Double Bevel
Dimensions	20-1/2" x 5mm	Dimensions	20-1/2" x 5mm	Dimensions	18-3/8" x 4.5mm	Dimensions	20-3/8" x 4.5mm
Pilot Hole Size	3.660"	Pilot Hole Size	3.660"	Pilot Hole Size	3.645"	Pilot Hole Size	3.645"
# of Bolt Holes	4 Beveled Holes	# of Bolt Holes	4	# of Bolt Holes	4	# of Bolt Holes	4

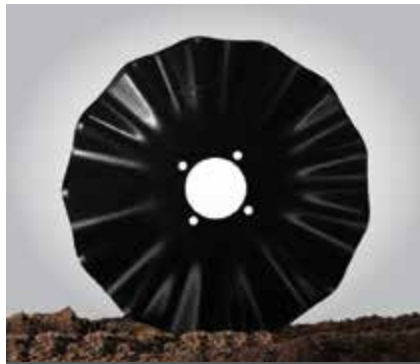
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500-200-1025

FITS: AMITY/CONCORD

Replaces OEM Part #	34354
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3-5/8"
# of Bolt Holes	4



500-200-1005

FITS: CNH

Case: IH 500, 500T
NH: P2080 & NH P2085

Replaces OEM Part #	87488385
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3.5"
# of Bolt Holes	4



517-200-1020

FITS: CNH

CIH, DMI: 530C, 730C

Replaces OEM Part #	87457566
Disk Type	Plain Concave
Dimensions	24-3/4" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5



517-200-1005

FITS: DEGELMAN

AVAILABLE SPRING 2022
Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143556
Disk Type	Plain Concave
Dimensions	20" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



517-200-1010

FITS: DEGELMAN

AVAILABLE SPRING 2022
Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143550
Disk Type	Plain Concave
Dimensions	18" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



517-200-1025

FITS: DEGELMAN

AVAILABLE SPRING 2022
Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143566
Disk Type	Plain Concave
Dimensions	22" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

AVAILABLE SOON!
BLADES TO FIT

AMAZONE
Notched
20" x 5mm

SPEED-TILLER / CASE IH
Notched
24" x 6.5mm

WISHEK
Smooth
28" x 8mm

**522-200-1010****FITS:** DEGELMAN**AVAILABLE SPRING 2022**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143557
Disk Type	U Notch Concave
Dimensions	20" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1030****FITS:** DEGELMAN**AVAILABLE SPRING 2022**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143563
Disk Type	U Notch Concave
Dimensions	22" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1020****FITS:** DEGELMAN**AVAILABLE SPRING 2022**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143553
Disk Type	Double V Notch Concave
Dimensions	20" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1025****FITS:** DEGELMAN**AVAILABLE SPRING 2022**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143566
Disk Type	Double V Notch Concave
Dimensions	22" X 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**510-200-1000****FITS:** GREAT PLAINS

Turbo Chopper, Turbo-Max , Turbo Till & Turbo Till II

Replaces OEM Part #	820-011C
Disk Type	20 Wave RT Coultter
Dimensions	20-1/2" x 6.5mm
Pilot Hole Size	1-3/4" Round
# of Bolt Holes	N/A

**511-200-1000****FITS:** GREAT PLAINS

Vantage I Fertilizer Coultter, Zone Coultter & HD Utility Coultter

Replaces OEM Part #	820-215C
Disk Type	20 Wave RT Coultter
Dimensions	18" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**Interested in
BTT Products?**

With the BTT Demo Program you can try before you buy.
See page 53 for details.



500-200-1010

FITS: JOHN DEERE

JD 750, 752, 1560, 1590, 1690, 1850, 1860, 1890, 1890 CCS, 1895, 1990 & 1835 SFP Air Hoe, N500, N500F & H500F

Replaces OEM Part #	N283804
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3"
# of Bolt Holes	4



517-200-1030

FITS: JOHN DEERE & NORWOOD

JD: 2680H
Norwood: Kwik-Till

Replaces OEM Part #	JD NS90340003 NW 18199A & 19028A
Disk Type	Plain Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



522-200-1040

FITS: JOHN DEERE & NORWOOD

JD: 2680H
Norwood: Kwik-Till

Replaces OEM Part #	JD NS90340002 NW 18354A
Disk Type	Notched Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



522-200-1000

FITS: LEMKEN

Heliodor 8

Replaces OEM Part #	3490471
Disk Type	Notched Concave
Dimensions	18" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	6



522-200-1005

FITS: LEMKEN

Rubin 9

Replaces OEM Part #	3490467
Disk Type	Notched Concave
Dimensions	24-5/8" x 6mm
Pilot Hole Size	N/A
# of Bolt Holes	5

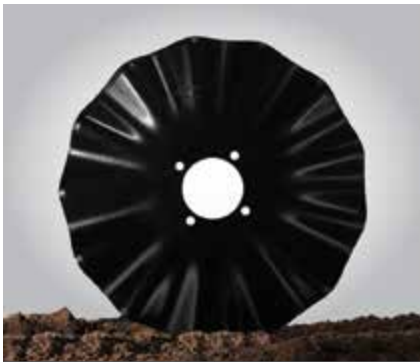


522-200-1035

FITS: LEMKEN

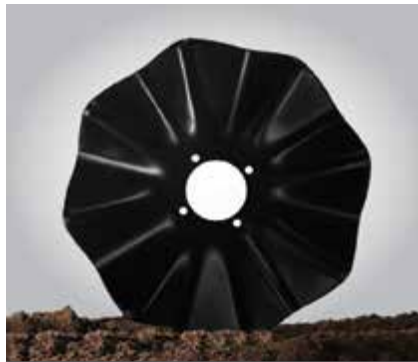
Heliodor 9

Replaces OEM Part #	34910027
Disk Type	Notched Concave
Dimensions	20" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**500-200-1020****FITS: PILLAR**

DH Series

Replaces OEM Part #	206-007
Disk Type	Flat Coultter
Dimensions	18" x 5mm
Pilot Hole Size	3-5/8"
# of Bolt Holes	4

**505-200-1000****FITS: SALFORD**

Salford I-1100 & Salford I-1200

Replaces OEM Part #	10010764 & CT512008
Disk Type	8 Wave Coultter
Dimensions	20" x 4.5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1005****FITS: SALFORD**

Salford I-1100 & Salford I-1200

Replaces OEM Part #	10010766 & CT512013
Disk Type	13 Wave Coultter
Dimensions	20" x 4.5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1010****FITS: SALFORD**Salford I-2100, I-2200 (all)
Salford I-4100 (back 2 rows)
Salford I-4200 (all but front row)

Replaces OEM Part #	10010768 & CT512208
Disk Type	8 Wave Coultter
Dimensions	21-3/4" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1015****FITS: SALFORD**Salford I-2100, I-2200 (all)
Salford I-4100 (back 2 rows)
Salford I-4200 (all but front row)

Replaces OEM Part #	CT512213 & 10010769
Disk Type	13 Wave Coultter
Dimensions	22-3/4" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1015 & 1017****FITS: SALFORD & SUNFLOWER**Salford I-4100 (first 2 rows), I-4200 (front row) & I-5100 (all)
Sunflower 4410, 4411, 4412, 4510, 4511 & 4530

Replaces OEM Part #	CT512250 & 10010771
Disk Type	Plain Concave
Dimensions	
517-200-1015	22-1/4" x 5mm
517-200-1017	22-1/4" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1020****FITS: SALFORD**

Optional on Salford I-5100 & 5200

Replaces OEM Part #	CT503059 & 10010727
Disk Type	Plain Concave
Dimensions	24-3/4" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1020****FITS: SUMMERS**

Summers Super Coulters & Coulters Chisel

Replaces OEM Part #	8J1020
Disk Type	8 Wave Coulters
Dimensions	20" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**505-200-1025****FITS: SUMMERS**

Summers Super Coulters & Coulters Chisel

Replaces OEM Part #	8J1021N
Disk Type	8 Wave Notch Coulters
Dimensions	22-1/2" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**515-200-1000****FITS: SUMMERS**

Summers DK Series Disk

Replaces OEM Part #	8K5026
Disk Type	Plain Concave
Dimensions	26-1/4" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**521-200-1000****FITS: SUMMERS**

Summers DT Series Disk

Replaces OEM Part #	8K5025N
Disk Type	Notched Concave
Dimensions	25" x 8mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**500-200-1030****FITS: YETTER & AGPRO**

Replaces OEM Part #	Yetter 2571-169
Disk Type	Flat Coulters
Dimensions	18" x 4.5mm
Pilot Hole Size	3-15/16" Round
# of Bolt Holes	4

Can't find the disk you're looking for?
Contact us to chat with a BT T team member.

For the most current list of disk options,
visit tillagetools.ca.

Unique Farms. Unique Needs.

Our line of specialty products is always expanding. Tell us what you'd like to see!

MAX LIFE™ Threshing Pins



010-BTP-0750

FITS: Pickett Equipment Bean Combine

OVERVIEW: A milled pocket on the threshing pin keeps the MAX LIFE™ embedded carbide deposit close to flush with the profile of the pin, preventing seed damage. The fine grit of the carbide coating handles crops gently but wears much longer than standard threshing pins.

NOTES: Use existing hardware to install pins.

MAX LIFE™ Wear Tips



702-DEG-0012

FITS: Degelman M SERIES Manure Spreader

REPLACES OEM#: 246693

OVERVIEW: Wear tip with MAX LIFE™ embedded carbide is applied to high wear areas.



We ran the MAX LIFE™ Threshing Pins as a demo for 800 acres, switched out competitors' twice, and were still running the MAX LIFE ones. Using the MAX LIFE pins means better quality thrashing with less time and cost on maintenance.

Tim van der Hoek, Alberta, Canada

MAX LIFE™ Power Hiller Tines



010-PHT-9010 UNIVERSAL

FITS: Struik and Baselier

SIZE: 8-3/4"

OVERVIEW: Bolt-on, universal short length tine is more durable than tile carbide in rocky conditions. MAX LIFE™ embedded carbide is applied to the leading edge for a longer wear life.

NOTES: Install using existing hardware.



010-PHT-9015 UNIVERSAL

FITS: Baselier and AVR

SIZE: 11"

OVERVIEW: Bolt-on, universal medium length tine is more durable than tile carbide in rocky conditions. MAX LIFE™ embedded carbide is applied to the leading edge for a longer wear life.

NOTES: Install using existing hardware.



ADDITIONAL OPTIONS

Power Hiller Tines are available in a variety of lengths to fit Struik, AVR, Baselier, Grimme, Bau-Man and more.

Our line-up is always expanding. Ask your BTT Dealer about current power hiller tine options or contact our team with your suggestions.

Accessories & Reference

- Accessories
- Bolt Size & Fastener Charts
- Expanded Opener Drawings
- Installation Notes
- Product Depth Chart
- Replacement Parts



047-ACC-1001	047-ACC-1002	047-CAP-1001	100-WDG-0700	200-WDG-0206	200-WDG-0506	200-WDG-1000
Helps direct the flow of seed in a focused row behind the 047-ASY-1000, 047-ASY-1005P, or 675 Series openers.	2-1/4" center to center hole spacing. Allows you to adapt to any shank with an open bottom hole. Keeps the bottom bolt in place on the John Deere 1820, 1830 & 2410.	This cap is a replacement cap for 047-ASY-1000 and 047-ASY-1005P. See expanded assemblies for the right cap for your opener.	This 7° urethane wedge is designed to correct the pitch of 100-QCA-5010 and 200-QCA-5010 adapters on 43° shanks.	This 2° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 5° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 10° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.










200-WDG-1006	400-WDG-0300	400-WDG-0700	880-WDG-0300	880-WDG-0301	600-HHA-0750	614-ACC-1000
This 10° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 3° urethane wedge is designed to correct the pitch of 410-QCA-5010 adapters on a 47° chisel plow shank, as well as the 50° bolt-on sweeps.	This 7° urethane wedge is designed to correct the pitch of 410-QCA-5010 adapters when installing on a 43° shank. It should also be used with the 600 Series knives when installing on a 43° shank.	This cast wedge adapter is designed for our 047, 610 and 612 seeding openers on all John Deere shanks.	This cast wedge adapter is designed for our 047, 610 and 612 seeding openers on all 50° curved bottom shanks, excluding John Deere.	This stainless steel hose holder mounts on any C-shank to hold the NH3 hose in place. It is completely height adjustable.	This bushing is necessary when using NH3 with the 614-TIP-2711 and 614-TIP-2712.

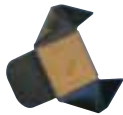


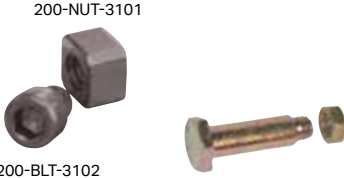



650-ACC-1000	650-ACC-1010	680-ACC-0001	680-ACC-0002	680-ACC-0003	680-ACC-0004	680-ACC-1000
This bracket limits the tripping distance of 650 fertilizer knives on JD 1870 Conserva Pak drills. Use with all fertilizer knives excluding the 650-HLD-1000GL & 650-HLD-1000GN knives.	This bracket limits the tripping distance of 650 fertilizer knives on JD 1870 Conserva Pak drills. Use with 650-HLD-1000GL & 650-HLD-1000GN knives.	This spacer plate is required for the Concord when installing any edge on product.	Spacer required when mounting the 680-ASY-4026 on a Bourgault 3310 & 3320 PHD Drill.	Spacer required when mounting the 680-ASY-4020 on a Bourgault 3310 & 3320 PHD Drill.	This conversion tab replaces the fertilizer tube on the 680-HLD-2000 so it can be converted to a single shoot opener.	Helps direct the flow of seed in a focused row behind the 680-ASY-1000 openers. Use with openers prior to 2012.



694-ACC-1000	880-ASY-1010	300-BSH-1200	300-BSH-1205	880-BSH-1000	880-BSH-1130	880-BSH-1150
This spacer is required when installing Titan Openers on anything except Concord.	This assembly is required to convert the standard 3/16" (5mm) O.D. liquid phos hose to 1/4" I.D. liquid phos delivery hoses on the 047-ASY-1005P and 680-ASY-1000P.	This bushing adapts from a 1-1/8" (28mm) O.D. air hose up to a 1-1/4" (32mm) O.D. air hose.	This bushing adapts from 1-1/8" (28mm) O.D. air hose to 1-1/8" (28mm) O.D. air hose.	This bushing is to be used with all VOS tips.	This bushing is needed when you are using 1-1/8" (28mm) O.D. hose.	This bushing adapts from 1-1/4" (32mm) O.D. air hose up to a 1-1/2" (38mm) O.D. air hose.

						
880-BSH-1170	880-BSH-2000	880-CPL-1010	880-CPL-2500	880-ORF-0001	880-GRD-1000	880-GRD-1010
This bushing adapts 1-1/2" (38mm) O.D. hose to 1-1/4" (32mm) hose.	This bushing is to be used on John Deere split shanks with bolt ons and QCAs.	This barb and compression fitting are used when going from 1/4" (6mm) I.D. liquid phos tube to 3/16" stainless steel liquid phos tubes.	This coupler is used to attach a 1/4" (6mm) O.D. liquid phos tube. Included with all new liquid phos openers.	This orifice is used to concentrate and direct the flow of liquid fertilizer on the 200-VRT-1061 and 200-KNF-0863.	This guard is used to protect liquid hose on all side band liquid openers in heavy trash conditions.	This guard is used to protect liquid phos tubes on 047 & 680 liquid phos openers in heavy trash conditions.

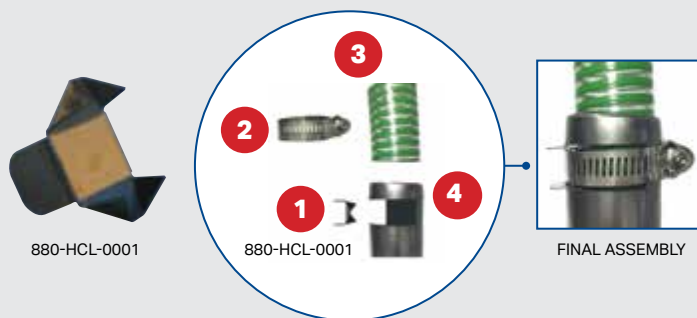
				
880-HCL-0001	880-HCL-0002	880-HCL-0004	200-BLT-3102	200-NUT-3101
600-BNC-5000				
This clip eliminates hose movement, as the sharp corners embed into the granular pipe.	Spacer clip may be required on the rear tube of the following side band openers: 683, 684, 686, 693, 694 where 1-1/8" (29mm) hose is used.	This 3/4" ear clamp is used to secure the rubber sleeve to the 1/2" pipe to protect the liquid phos tube.	Bolt and nut combine used to secure single shoot, paired row and side band tips onto holders. The bolt and nut should be changed when changing the tip. Over torquing will result in difficulty when removing.	Bolt and nut combo used to secure 600 series tips onto the 410, 599, 600 & 602 Series knife holders. Nut (600-NUT-3754) and bolt (600-BLT-5004) can be ordered separately. The bolt and nut should be changed when changing the tip to maintain locking ability of the nut.

Hoses popping out?

Don't forget the hose clip.

This clip eliminates hose movement, as the sharp corners embed into the granular pipe.

See illustration to right for proper installation.



C-Shank

For 600 & 620 Series Openers

- Use 1/2" hex head Grade 8 bolt.
- Blue Loctite is also recommended

Torque shank bolts to 120 - 130 ft/lbs.

For 047-ASY-1000, 610 & 612 Series Openers

- **1" shanks** use 1/2" x 2" Grade 8 carriage bolt (961-CRG-2005)
- **1-1/4" shanks** use 1/2" x 2-1/4" Grade 8 carriage bolt (961-CRG-2255)
- **50° shanks other than Bourgault or Ezee-On** require a cast wedge adapter (880-WDG-0300 or 880-WDG-0301). See page 106.

When using wedges, different bolt lengths are required

- **1" shanks** use 1/2" x 2-1/4" Grade 8 bolt (961-CRG-2255)
- **1-1/4" shanks** use 1/2" x 2-1/2" Grade 8 bolt (961-CRG-2505)
- **1/2" stover lock nuts** (906-NPT-5005)

Torque shank bolts to 80 - 100 ft/lbs.

For 047-VRT-1040 & 047-KNH-1000 Openers

- **1" shanks** use 1/2" x 2" Plow bolts c/w lock washer and regular nut
- **7/8" and 3/4" shanks** use 1/2" x 1-3/4" Plow bolts c/w lock washer and regular nut

Installing & Changing Tips

One of our most popular innovations is the replaceable tip. The tongue and groove configuration allows customers to change tips as they wear out, instead of the whole opener. You can also change tip sizes if conditions change in your operation. There are several things to keep in mind when changing or installing new tips:

1 When installing new tips it is important to use a new bolt and nut combination. Before installing a new tip, clean the tongue of the holder of any rust or debris with a wire brush.

2 The nut is placed in a pocket in the tongue.

3 The bolt is installed through the hole in the side of the replaceable tip.

4 **TIP REMOVAL** If a worn out tip is seized on the tongue, you can use two 3lb hammers, one to support the side of the boot and the other to strike the opposite side of the tip to break the side wall.

5 When installing a knife on the *Speed-Loc™* adapter, always use the correct driver.

NOTE: Over torquing will result in difficulty removing. Torque to 84 in/lbs or 7ft/lbs.

Always wear safety glasses!

Edge on

For Bourgault 3310 & 3320 Edge On Shank

- **Use 3/8" x 2-1/4" Grade 8 Carriage bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (906-NPT-3755)
- **680-ASY-4020** openers require a spacer (680-ACC-0003)
- **680-ASY-4026** openers require a spacer (680-ACC-0002)

For Morris Maxim

- **Use 3/8" x 2-1/4" Grade 8 carriage bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (906-NPT-3755)

For more detailed installation instructions refer to the individual part pages.

Packing Considerations

On-row packing is recommended to achieve good soil to seed contact for even germination. Generally, the packer wheel width should be equal to, or greater than, the width of the tip on the opener. The ideal result is a uniform depth of firm soil over the full seed row.



047 Series Bolt-On Sweeps

Light & Medium-Duty Cultivators

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2-1/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Degelman shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Flexi-Coil shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, no lock washer, regular nut
1/2" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
5/8" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
5/8" John Deere shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, no lock washer, regular nut
9/16" CIL shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
1/2" Case IH shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, no lock washer, regular nut

043 & 050 Series Bolt-On Sweeps

Heavy-Duty Chisel Plows

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault splitter seed boot #6505-42	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1-1/4" Bourgault shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1-1/4" Bourgault shank w/ Bourgault splitter seed boot #6505-42	1/2" x 2-1/2"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1" John Deere shank w/o seed boot	1/2" x 1-3/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
3/4" Degelman shank (50°) w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
1-1/4" Flexi-Coil shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1" Morris shank (43°) w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
7/8" Shulte shank w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1-1/4" CIL shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1-1/4" IH shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
3/4" Case IH Vibra shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut

NOTES: 1) All Bourgault sweeps come with 1/2" holes. Shanks with 3/8" and 7/16" holes require special oversize (O/S) head plow bolts. **2)** When bolting a seed boot, it's usually the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section where the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section where the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths.

200-QCA-4700 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2-1/4" no lock washer	Hex head bolts
1" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
1" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2" no lock washer	1/2" x 2-1/2" no lock washer	Hex head bolts, Grade 8 required
7/8" Bourgault shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Hex head bolts
7/8" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
7/8" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
3/4" Bourgault shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Hex head bolts
3/4" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2" c/w with lock washer	1/2" x 1-3/4" no lock washer	Hex head bolts
3/4" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2-1/4" w/ lock washer	1/2" x 1-3/4" no lock washer	Hex head bolts
3/4" Ezee-On shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Hex head bolts ³
7/8" Ezee-On shank w/o seed boot	7/16" x 2"	7/16" x 2"	Hex head bolts ³

NOTES: **1)** Above bolt lengths are determined using prevailing torque side lock nuts – Grade C. This special locknut is necessary to keep the adapter tight. It is very important to use it, especially in stony or hard ground conditions. **2)** Grade 8 bolts are required with the Bourgault 7/8" and 1" shanks where seed boots are involved. If not used, bolt loosening may occur. **3)** Shanks with 7/16" holes require the special oversize (O/S) head hex bolt.

200-QCA-4710 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
3/4" and 7/8" Flexi-Coil shank w/o seed boot	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
7/8" Flexi-Coil shank w/ 5649 seed boot	7/16" x 2-1/2" no lock washer	7/16" x 3-7/8" no lock washer	Plow bolt ²
1/2" Morris Challenger shank w/o seed boot	3/8" x 1-3/4" no lock washer	3/8" x 1-3/4" no lock washer	Plow bolt ²
5/8" Morris Challenger shank w/o seed boot	3/8" x 2" no lock washer	3/8" x 2" no lock washer	Plow bolt ²
7/8" Morris shank w/o seed boot	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
9/16" CIL shank w/o seed boot	3/8" x 2" no lock washer	3/8" x 2" no lock washer	Plow bolt ²
5/8" John Deere shank w/o seed boot	7/16" x 2" no lock washer	7/16" x 2" no lock washer	Plow bolt ²
3/4" Degelman shank	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
9/16" Wil-rich shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Plow bolt

200-QCA-5010 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" shank w/o seed boot or wedge	1/2" x 2-1/2" w/ lock washer	1/2" x 2-1/2" w/ lock washer	Plow bolt
1-1/4" shank w/o seed boot or wedge	1/2" x 2-3/4" w/ lock washer	1/2" x 2-3/4" w/ lock washer	Plow bolt

NOTES: **1)** Above bolt lengths are determined using prevailing torque side lock nuts – Grade C. This special locknut is necessary to keep the adapter tight. **2)** Shanks with 3/8" and 7/16" holes require special oversize (O/S) head plow bolts. **3)** When bolting a seed boot, usually it is the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section at the point the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section at the point the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths.

410-QCA-5000 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head
1" Bourgault shank w/ Bourgault splitter seed boot 6505-42	1/2" x 2-1/2"	1/2" x 2-3/4"	Hex head
1-1/4" Bourgault shank w/o seed boot	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head
1-1/4" Bourgault shank w/ Bourgault splitter seed boot 6505-42	1/2" x 2-3/4"	1/2" x 3"	Hex head

410-QCA-5010 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
1" shank w/o seed boot or wedge	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head
1-1/4" shank w/o seed boot or wedge	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head

NOTES: **1)** Above bolt lengths are determined using prevailing torque side lock nuts – grade C. This special locknut is necessary to keep the adapter tight. **2)** When bolting a seed boot, usually it is the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section at the point the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section at the point the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths. **3)** When bolting an adapter using a wedge, a wedge will only be used when using the 410-QCA-5010 adapter on 43° and 47° chisel plows. Measure the cross section of the wedge at both bolt holes and add this amount to the above numbers. Remember that the measured cross section will be different at each hole in the wedge.

600 & 602 Series Replacement Tip Fertilizer Knives

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
FOR 47° & 50° APPLICATIONS NO WEDGE IS REQUIRED			
1-1/4" Bourgault shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
1" Bourgault shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
7/8" Bourgault shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
3/4" Bourgault shank	1/2" x 2-1/4"	1/2" x 2-1/4"	Hex head bolt, regular nut & lock
1-1/4" Flexi-Coil shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
1-1/4" Morris shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock ¹
1" John Deere shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
1-1/4" John Deere shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
7/8" Shulte shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
3/4" Degelman shank	1/2" x 2-1/4"	1/2" x 2-1/4"	Hex head bolt, regular nut & lock
FOR 43° APPLICATIONS WEDGE 400-WDG-0700 IS REQUIRED			
1" Morris shank for NH3 knives	1/2" x 3" no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1" Morris shank for granular knives	1/2" x 3" no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1-1/4" CIL shank, 2-1/2" hole center-to-center	1/2" x 3-1/4" c/w no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1-1/4" IH shank	1/2" x 3-1/4"	1/2" x 3"	Hex head bolt, regular nut & lock ²
3/4" Case IH Vibra chisel shank	1/2" x 2-3/4"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock

NOTES: **1)** Some material may have to be ground off the bottom of the 1-1/4" Morris shank (front face) to get the knife holder to seat down tight against the shank. **2)** The 1-1/4" IH shank will fit the NH3 knives, but not the granular knife. **3)** All knives come with holes to accommodate 1/2" bolts. If cultivator shanks have 7/16" holes, substitute 7/16" bolts for 1/2" and use a flat washer on the bolt head.

Bolt & Nut Part Numbers

DESCRIPTION	SIZE	PART #
Carriage Bolt – Grade 8	3/8" x 1-1/2"	960-CRG-1505
Carriage Bolt – Grade 8	3/8" x 1-3/4"	960-CRG-1755
Carriage Bolt – Grade 8	3/8" x 2-1/4"	960-CRG-3755
Carriage Bolt – Grade 8	1/2" x 2"	961-CRG-2005
Carriage Bolt – Grade 8	1/2" x 2-1/4"	961-CRG-2255
Carriage Bolt – Grade 8	1/2" x 2-1/2"	961-CRG-2505
Hex Head Bolt	1/4" x 3/4"	942-HRG-0754
Hex Head Bolt	1/4" x 2"	942-HRG-2004
Hex Head Bolt	1/2" x 1-3/4"	946-HRG-1754
Hex Head Bolt	1/2" x 2-3/4"	946-HRG-2754
Hex Head Bolt	1/2" x 3"	946-HRG-3004
Hex Head Bolt	1/2" x 3-1/4"	946-HRG-3254
Hex Head Bolt	1/2" x 3-1/2"	946-HRG-3504
Hex Head Bolt – Grade 8	1/2" x 2"	946-HRG-2005
Hex Head Bolt – Grade 8	1/2" x 2-1/4"	946-HRG-2255
Hex Head Bolt – Grade 8	1/2" x 2-1/2"	946-HRG-2505
Hex Head Bolt – Grade 8	5/8" x 2-1/2"	948-HRG-2505
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 1-3/4"	933-HOS-1754
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 2"	933-HOS-2004
Lock Nut – Stover	1/4"	906-NPT-2505
Lock Nut – Stover	3/8"	906-NPT-3755
Lock Nut – Stover	7/16"	906-NPT-4375
Lock Nut – Stover	1/2"	906-NPT-5005
Lock Nut – Stover	5/8"	906-NPT-6255
Lock Nut – Nylon Insert	1/4"	908-NNI-2504
Lock Washer	1/2"	902-LWS-5000
Nut – Grade 5	3/8"	904-NRG-3754
Nut – Grade 5	7/16"	904-NRG-4374
Nut – Grade 5	1/2"	904-NRG-5004
Plow Bolt	1/2" x 1-3/4"	926-PRG-1754
Plow Bolt	1/2" x 2"	926-PRG-2004
Plow Bolt	1/2" x 2-1/4"	926-PRG-2254
Plow Bolt	1/2" x 2-1/2"	926-PRG-2504
Plow Bolt	1/2" x 2-3/4"	926-PRG-2754
Plow Bolt	1/2" x 3"	926-PRG-3004
Plow Bolt	1/2" x 3-1/2"	926-PRG-3504
Plow Bolt – O/S Hd Low Shld	3/8" x 1-1/2"	922-POL-1504
Plow Bolt – O/S Hd Low Shld	3/8" x 1-3/4"	922-POL-1754
Plow Bolt – O/S Hd Low Shld	3/8" x 2"	922-POL-2004
Plow Bolt – O/S Hd	3/8" x 2-1/4"	922-POR-2254

DESCRIPTION	SIZE	PART #
Plow Bolt – O/S Hd Low Shld	7/16" x 1-3/4"	924-POL-1754
Plow Bolt – O/S Hd	7/16" x 2"	924-POR-2004
Plow Bolt – O/S Hd	7/16" x 2-1/4"	924-POR-2254
Plow Bolt – O/S Hd	7/16" x 2-1/2"	924-POR-2504
Plow Bolt – O/S Hd	7/16" x 2-3/4"	924-POR-2754
Plow Bolt – O/S Hd	7/16" x 3"	924-POR-3004
Plow Bolt – O/S Hd	7/16" x 3-7/8"	924-POR-3874
Screw – Pan Head	3/8"	911-SCR-1038
Screw – Self Drill	1/2"	911-SCR-1051

LEGEND:

O/S Hd = Oversized Head; Low Shld = Low Shoulder; Shld Blt = Shoulder Bolt

Common Torque Values USS/SAE Grade 8

BOLT DIAMETER	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.
1/4"	12	9
5/16"	24	18
3/8"	45	35
7/16"	70	50
1/2"	110	80
9/16"	150	110
5/8"	210	160
3/4"	380	280
7/8"	600	450
1"	910	680

This chart lists some of the more common bolt sizes and their calculated torque values. To ensure proper installation and the integrity of the bolts, it is recommended that you follow these values. **All highlighted values are common bolt sizes used for our products.**

Common Torque Values Metric

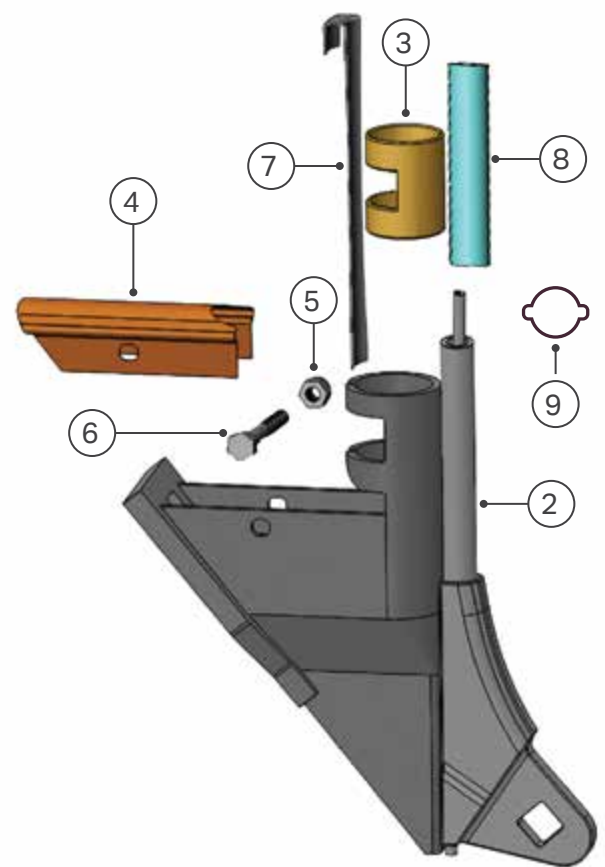
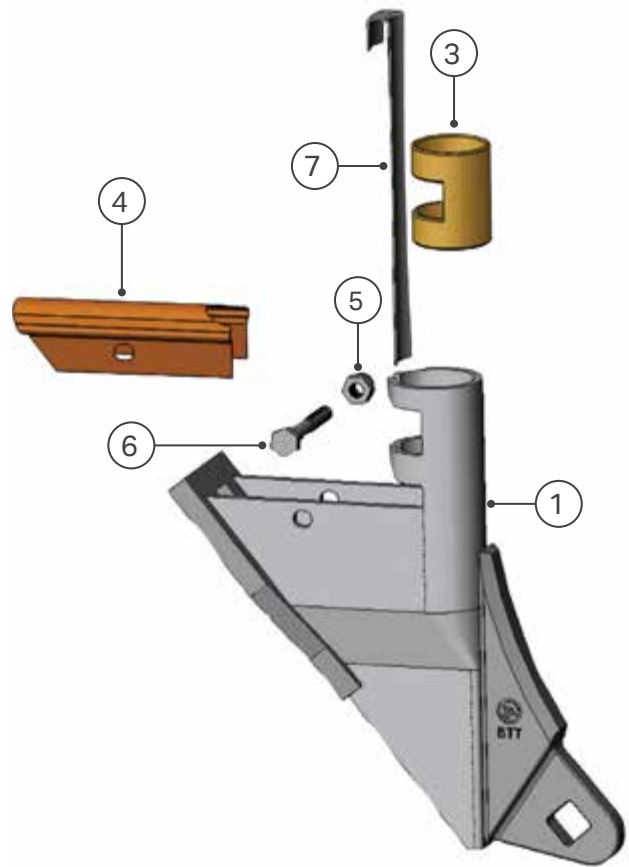
BOLT DIAMETER	CLASS 10.9		CLASS 12.9	
	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.
M4	3.2	2.4	3.8	2.8
M5	6.5	4.9	7.6	5.7
M6	11.1	8.3	13	9.7
M7	18.5	13.9	21.7	16.3
M8	26.9	20.2	31.4	23.6
M10	53.2	39.9	62.2	46.7
M12	92.8	69.6	108.5	81.4
M14	148.4	111.3	173.4	130
M16	230	173	269	202
M18	318	239	372	279

047-ASY-1000

Single Shoot Seed Opener (Page 19)

047-ASY-1005P

Single Shoot Seed Opener (Page 19)



PART		047-ASY-1000	047-ASY-1005P
1	047-HLD-1000	■	
2	047-HLD-1005P		■
3	880-BSH-1130	■	■
4	047-CAP-1001	■	■
5	908-NNI-2504	■	■
6	942-HRG-2004	■	■
7	047-ACC-1000*	■	■
8	680-HOS-1000**		■
9	880-HCL-0004		■

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0800
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811
- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3000
- 200-TIP-3001
- 200-TIP-3011
- 200-TIP-4011

Tips sold separately. See pages 12-13.

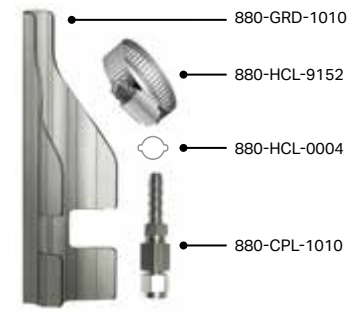
NOTES: Curved 50° shanks require either 880-WDG-0300 or 880-WDG-0301. **Sold separately.** See page 106.

*Use focus strip 047-ACC-1000 for more concentrated seed placement.

**680-HOS-1000 is a 6" x 1/2" I.D. NH3 hose.

880-ASY-1010 REQUIRED

This assembly is required to convert the standard 3/16" O.D. liquid phos tube to 1/4" I.D. liquid phos delivery hoses. **Sold separately.**

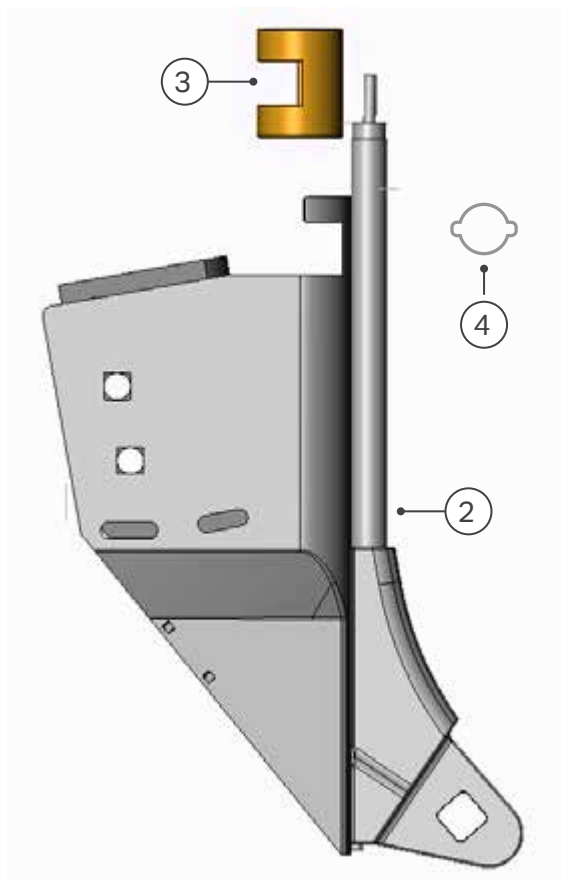
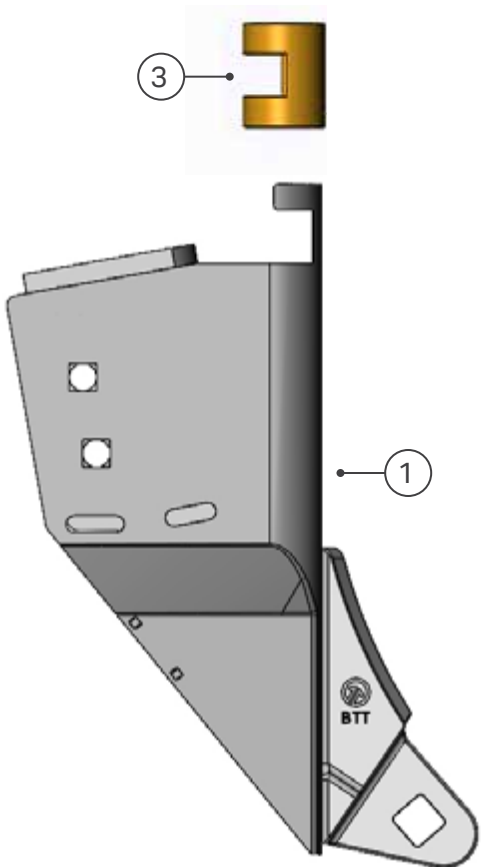


680-ASY-1000

Single Shoot Seed Opener (Page 27 & 42)

680-ASY-1000P

Single Shoot Seed Opener (Page 27 & 42)



PART		680-ASY-1000	680-ASY-1000P
1	680-HLD-1000	■	
2	680-HLD-1000P		■
3	880-BSH-1130	■	■
4	880-HCL-0004		■



TIP OPTIONS:

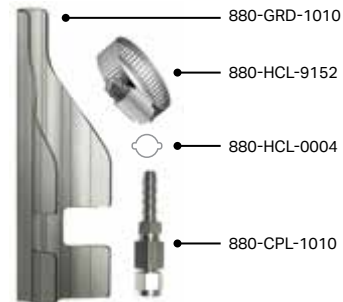
- 200-TIP-0511 200-TIP-1011
- 200-TIP-0800 200-TIP-2011
- 200-TIP-0801 200-TIP-3000
- 200-TIP-0802 200-TIP-3001
- 200-TIP-0803 200-TIP-3011
- 200-TIP-0811 200-TIP-4011

Tips sold separately. See pages 12-13.

NOTES: *680-HOS-1000 is a 6" x 1/2" I.D. NH3 hose.

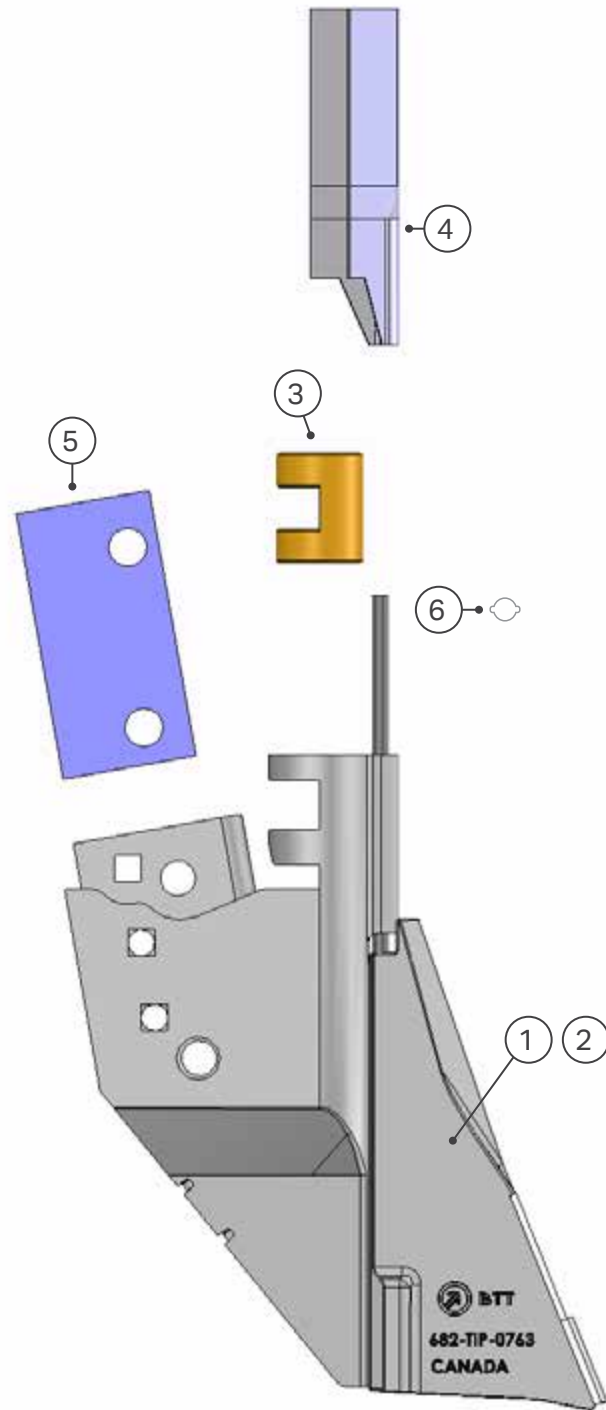
880-ASY-1010 REQUIRED

This assembly is required to convert the standard 3/16" O.D. liquid phos tube to 1/4" I.D. liquid phos delivery hoses. **Sold separately.**



682-ASY-2063 & 2064 Assemblies

Side Band Seed Openers (Page 30 & 46)



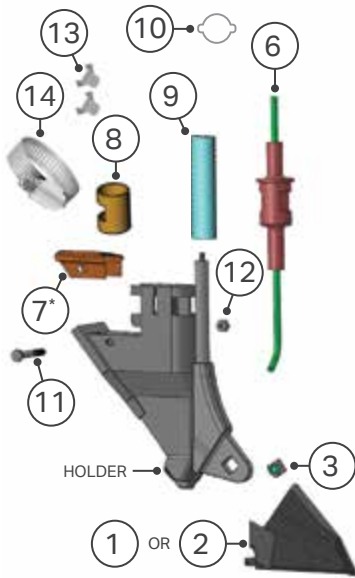
PART		682-ASY-2063	682-ASY-2064
1	682-KNF-2063	■	
2	682-KNF-2064		■
3	880-BSH-1130	■	■
4	682-DEF-1000	■	■
5	680-ACC-0001*	■	■
6	695-HCL-1220	■	■

NOTES:
 Accessory 680-ACC-0001 is needed when used for Edge On Concord. See page 106.

682-ASY-2063 (LEFT)
682-ASY-2064P (RIGHT SHOWN)

612-TIP-0711 & 0712 Assemblies

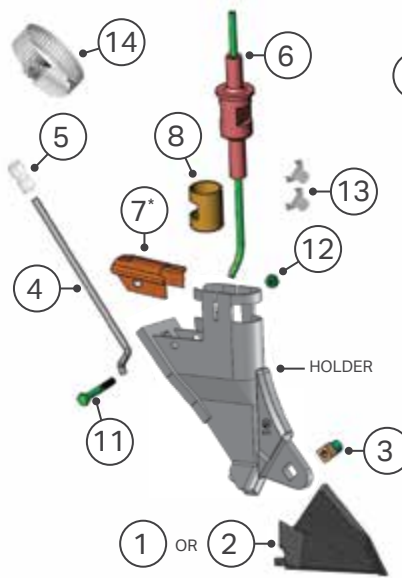
Side Band Seed Openers (Assemblies on these pages include the tip)



610-ASY-0711
610-ASY-0712 (SHOWN)

HOLDERS:
610-HLD-0711
610-HLD-0712 (SHOWN)

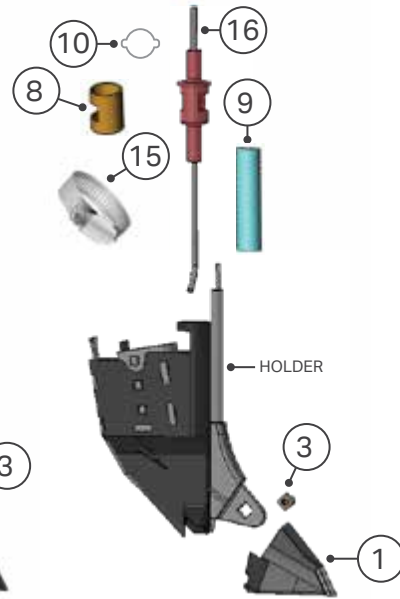
FITS: C-shank (page 23)



612-ASY-0711
612-ASY-0712 (SHOWN)

HOLDERS:
612-HLD-0711
612-HLD-0712 (SHOWN)

FITS: C-shank (page 23)



680-ASY-0711
680-ASY-0712 (SHOWN)

HOLDERS:
680-HLD-0711
680-HLD-0712 (SHOWN)
680-HLD-0711P
680-HLD-0712P

FITS: Bourgault PHD (page 28)
Morris Maxim Edge On (page 44)

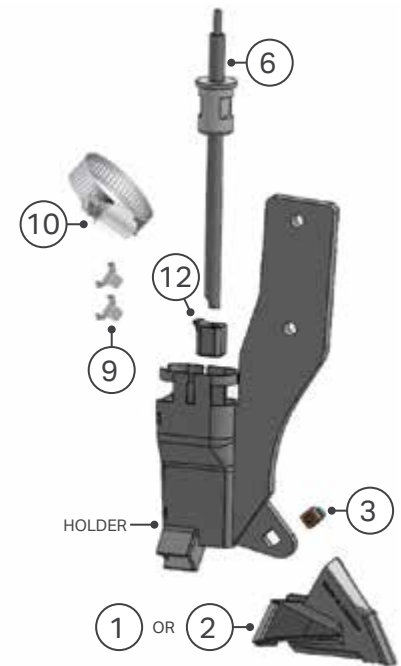
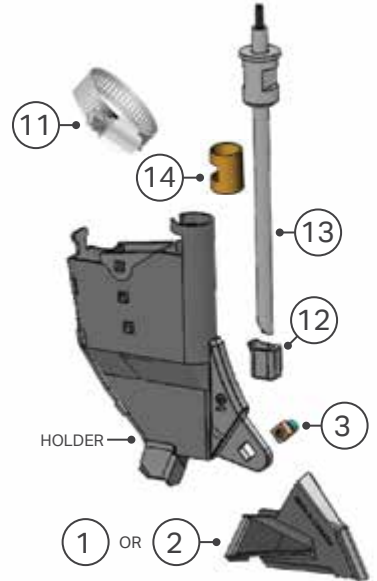
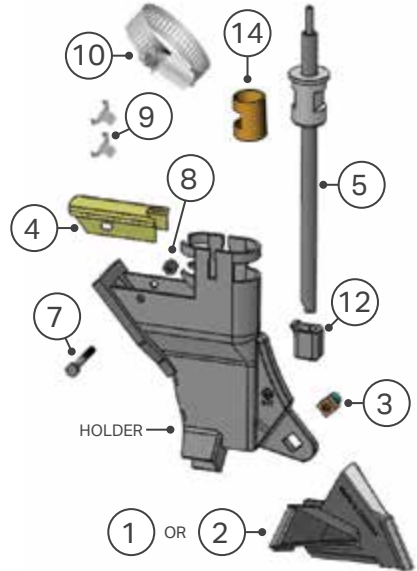
NOTES: If your C-shank holder looks different than those pictured above, you have a pre-2014 style holder.

These holders require the galvanized steel cap 612-CAP-1001.

PART		G	L	G	L	G	G	L	L	G	G	L	L	G	G	L	L	G	G	L	L
1	612-TIP-0711																				
2	612-TIP-0712 (SHOWN)																				
3	200-BNC-3100																				
4	047-TUB-2540																				
5	880-CPL-2500																				
6	612-TUB-6061																				
7	612-CAP-1002																				
8	880-BSH-1130																				
9	680-HOS-1000*																				
10	880-HCL-0004																				
11	942-HRG-2004																				
12	908-NNI-2504																				
13	880-HCL-0001 (x2)																				
14	880-HCL-1828																				
15	880-HCL-8117																				
16	682-TUB-6061																				

614-TIP-2711 & 2712 Assemblies

Side Band Seed Openers (Assemblies on these pages include the tip)



610-ASY-2711 (LEFT)
610-ASY-2712 (RIGHT SHOWN)

HOLDERS:
 610-HLD-2711
 610-HLD-2712 (SHOWN)

FITS: C-shank (page 22)

680-ASY-2711 (LEFT)
680-ASY-2712 (RIGHT SHOWN)

HOLDERS:
 680-HLD-2711
 680-HLD-2712 (SHOWN)

FITS: Edge On, Bourgault PHD (page 29)
 Morris Maxim (page 45)

683-ASY-2711 (LEFT)
683-ASY-2712 (RIGHT SHOWN)

HOLDERS:
 683-HLD-2711
 683-HLD-2712 (SHOWN)

FITS: Morris Contour I (page 45)

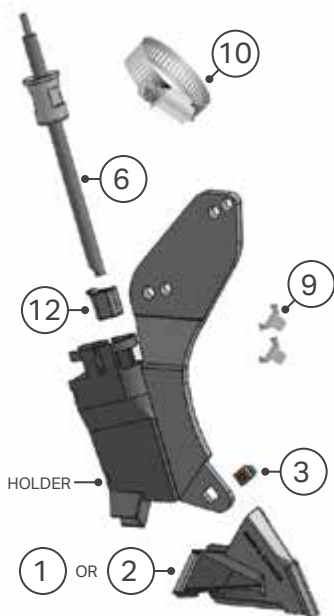
PART		610-ASY-2711G	610-ASY-2711L	610-ASY-2712G	610-ASY-2712L	680-ASY-2711G	680-ASY-2711GP	680-ASY-2711L	680-ASY-2711LP	680-ASY-2712G	680-ASY-2712GP	680-ASY-2712L	680-ASY-2712LP	683-ASY-2711G	683-ASY-2711GP	683-ASY-2711L	683-ASY-2711LP	683-ASY-2712G	683-ASY-2712GP	683-ASY-2712L	683-ASY-2712LP			
1	614-TIP-2711																							
2	614-TIP-2712 (SHOWN)																							
3	200-BNC-3100																							
4	610-CAP-1080																							
5	880-TUB-2701																							
6	880-TUB-2711																							
7	942-HRG-2004																							
8	908-NNI-2504																							
9	880-HCL-0001 (x2)																							
10	880-HCL-1828																							
11	880-HCL-8117																							
12	614-ACC-1000																							
13	680-TUB-2701																							
14	880-BSH-1130																							

NOTES: Two 880-HCL-0001 are included with the granular openers only. They are intended to provide additional security to installed hoses.

See page 107 for proper hose clip installation.

When ordering liquid phos openers call the factory for tube sizes.

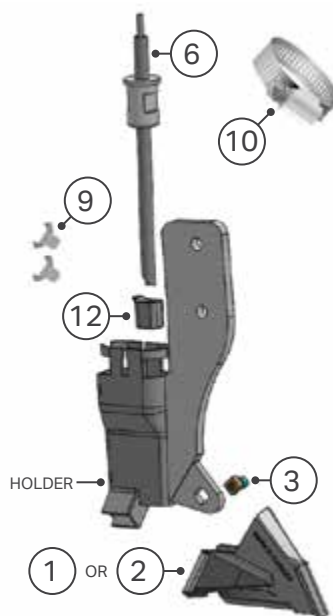
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684-ASY-2711 (LEFT)
684-ASY-2712 (RIGHT SHOWN)

HOLDERS:
 684-HLD-2711
 684-HLD-2712 (SHOWN)

FITS: Case IH 800/900, NH P2070, Flexi-Coil PD5700 & 7200 (page 34)



694-ASY-2711 (LEFT)
694-ASY-2712 (RIGHT SHOWN)

HOLDERS:
 694-HLD-2711
 694-HLD-2712 (SHOWN)

FITS: Case IH ATX 700, NH P2060, Flexi-Coil 5500 & Concord (page 34)



STANDARD INSTALLATION
 3° MORE PITCH

NOTES: Two 880-HCL-0001 are included with the granular openers only and are intended to provide additional security to installed hoses. **See page 107 for proper hose clip installation.**

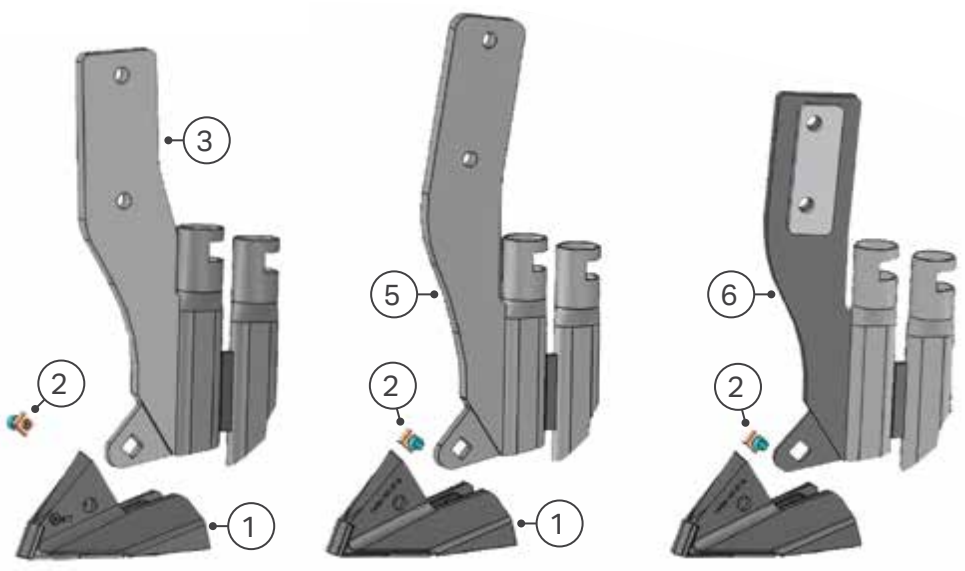
When ordering liquid phos openers call the factory for tube sizes.

When installing openers on Case IH 800 & 900, New Holland P2070 & 2075, and Flexi-Coil PD5070 you have two options as shown in the diagram above.

PART		684-ASY-2711G	684-ASY-2711GP	684-ASY-2711L	684-ASY-2711LP	684-ASY-2712G	684-ASY-2712GP	684-ASY-2712L	684-ASY-2712LP	694-ASY-2711G	694-ASY-2711GP	694-ASY-2711L	694-ASY-2711LP	694-ASY-2712G	694-ASY-2712GP	694-ASY-2712L	694-ASY-2712LP
1	614-TIP-2711	■	■	■	■					■	■	■	■				
2	614-TIP-2712 (SHOWN)					■	■	■	■					■	■	■	■
3	200-BNC-3100	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6	880-TUB-2711			■	■			■	■			■	■			■	■
9	880-HCL-0001 (x2)	■	■			■	■			■	■			■	■		
10	880-HCL-1828	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
12	614-ACC-1000			■	■			■	■			■	■			■	■

610-TIP-4041 Assemblies

Paired Row Seed Openers (Assemblies on these pages include the tip)



683-ASY-4020

FITS: Morris Contour I (page 47)

693-ASY-4020

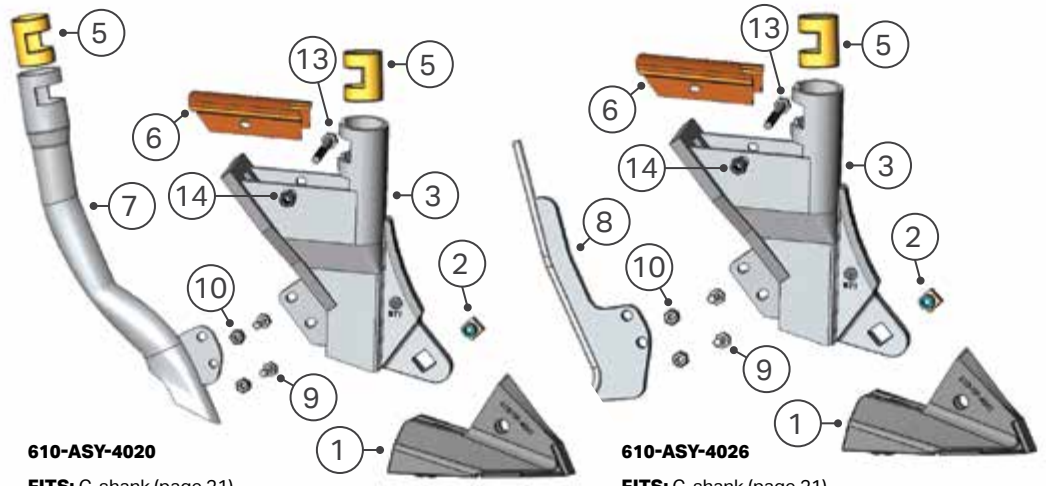
FITS: Morris Contour II & Morris Quantum (page 47)

694-ASY-4020

FITS: Case IH ATX 700, NH P2060, Flexi-Coil 5500 & Concord (page 33)

PART				
1	610-TIP-4041	■	■	■
2	200-BNC-3100	■	■	■
3	683-HLD-2000	■		
5	693-HLD-2000		■	
6	694-HLD-2000			■

PART			
1	610-TIP-4041	■	■
2	200-BNC-3100	■	■
3	610-HLD-2000	■	■
4	680-HLD-2000		
5	880-BSH-1130 (x2)	■	■
6	047-CAP-1000	■	■
7	610-TUB-1001	■	
8	610-TUB-2526		■
9	942-HRG-0754 (x2)	■	■
10	906-NPT-2505 (x2)	■	■
11	680-ACC-0002 ¹		
12	680-ACC-0003 ²		
13	942-HRG-2004	■	■
14	908-NNI-2504	■	■



610-ASY-4020

FITS: C-shank (page 21)

610-ASY-4026

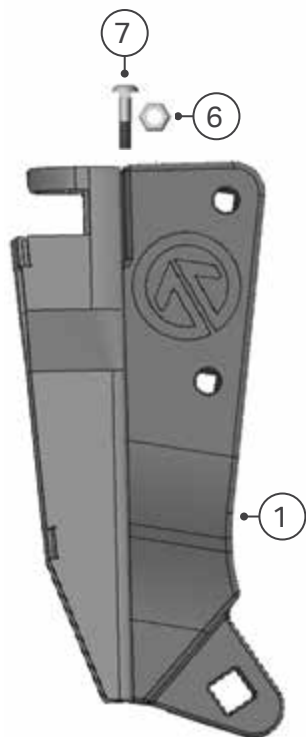
FITS: C-shank (page 21)

NOTES: 680-ACC-0004 is a conversion tab to replace the fertilizer tube on the 680-HLD-2000 making it a single shoot opener. See page 106. ¹680-ACC-0002 is a spacer plate required for Bourgault 3310 & 3320 only, not included in assembly. See page 106. ²680-ACC-0003 is a spacer plate required for Bourgault 3310 & 3320 only, not included in assembly. See page 106.

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Seed Master

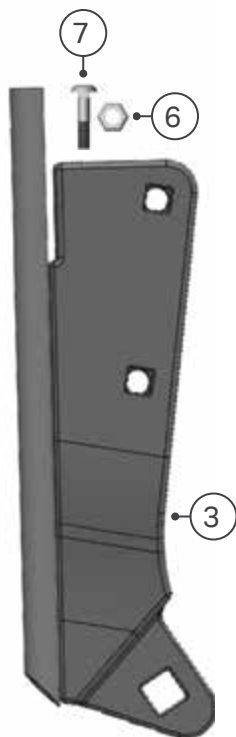
Fertilizer Knives (Page 49)



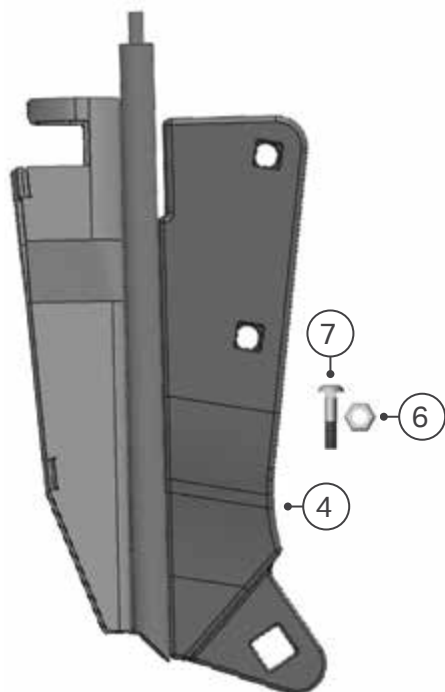
689-HLD-1000G



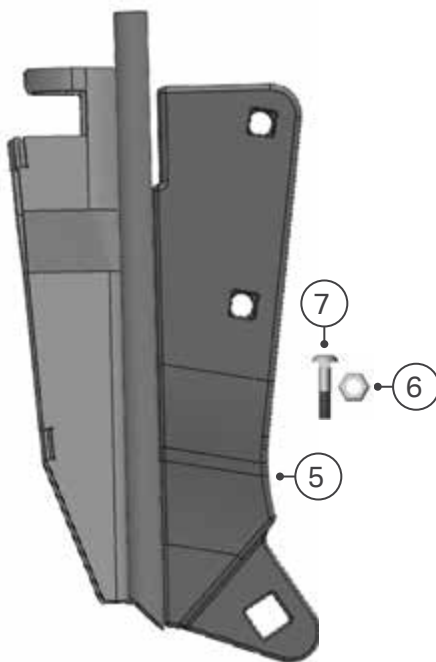
689-HLD-1000L



689-HLD-1000N



689-HLD-1000GL



689-HLD-1000GN

PART		G	L	N	G	G
1	689-HLD-1000G	■				
2	689-HLD-1000L		■			
3	689-HLD-1000N			■		
4	689-HLD-1000GL				■	
5	689-HLD-1000GN					■
6	906-NPT-3755	■	■	■	■	■
7	960-CRG-1755	■	■	■	■	■

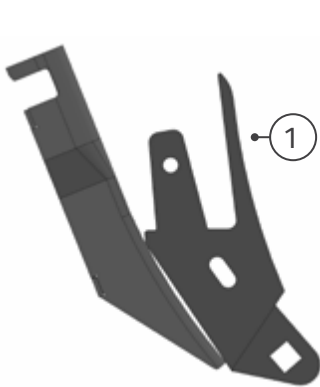
TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

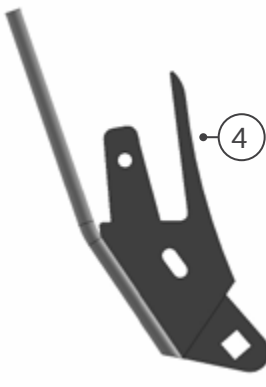
Tips sold separately. See pages 12-13.

John Deere 1870 Conserva Pak

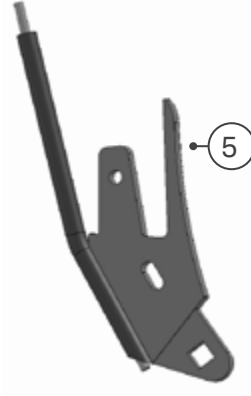
Fertilizer Knives (Page 40)



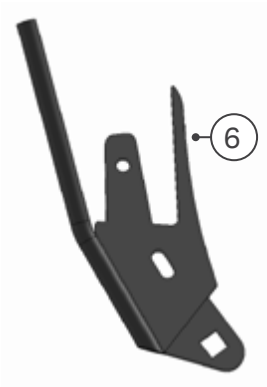
650-HLD-1000G



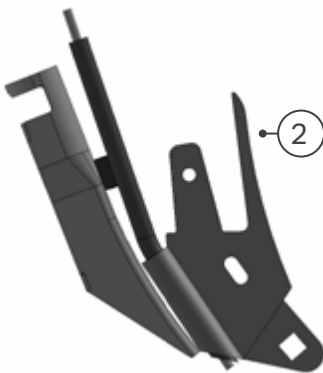
650-HLD-1001



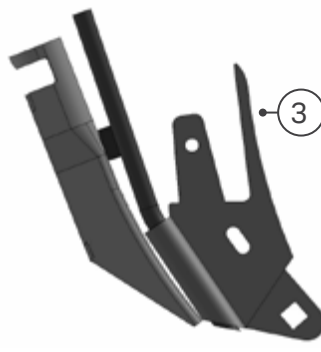
650-HLD-1000L



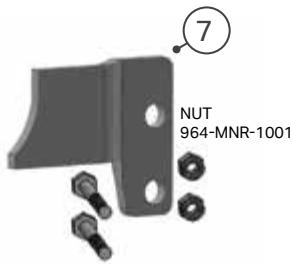
650-HLD-1000N



650-HLD-1000GL

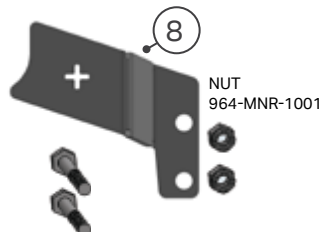


650-HLD-1000GN



BOLT
964-MHR-1030

650-ACC-1000



BOLT
964-MHR-1030

650-ACC-1010

	G	L	N	G	G	N
650-HLD-1000G	■					
650-HLD-1000L		■				
650-HLD-1000N			■			
650-HLD-1000GL				■		
650-HLD-1000GN					■	
650-HLD-1001						■

PART		650-HLD-1000G	650-HLD-1000L	650-HLD-1000N	650-HLD-1000GL	650-HLD-1000GN	650-HLD-1001
1	650-HLD-1000G	■					
2	650-HLD-1000GL				■		
3	650-HLD-1000GN					■	
4	650-HLD-1001						■
5	650-HLD-1000L		■				
6	650-HLD-1000N			■			
7	650-ACC-1000 ¹	■	■	■			■
8	650-ACC-1010 ²				■	■	

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0803
- 200-TIP-0800
- 200-TIP-0802
- 200-TIP-0811

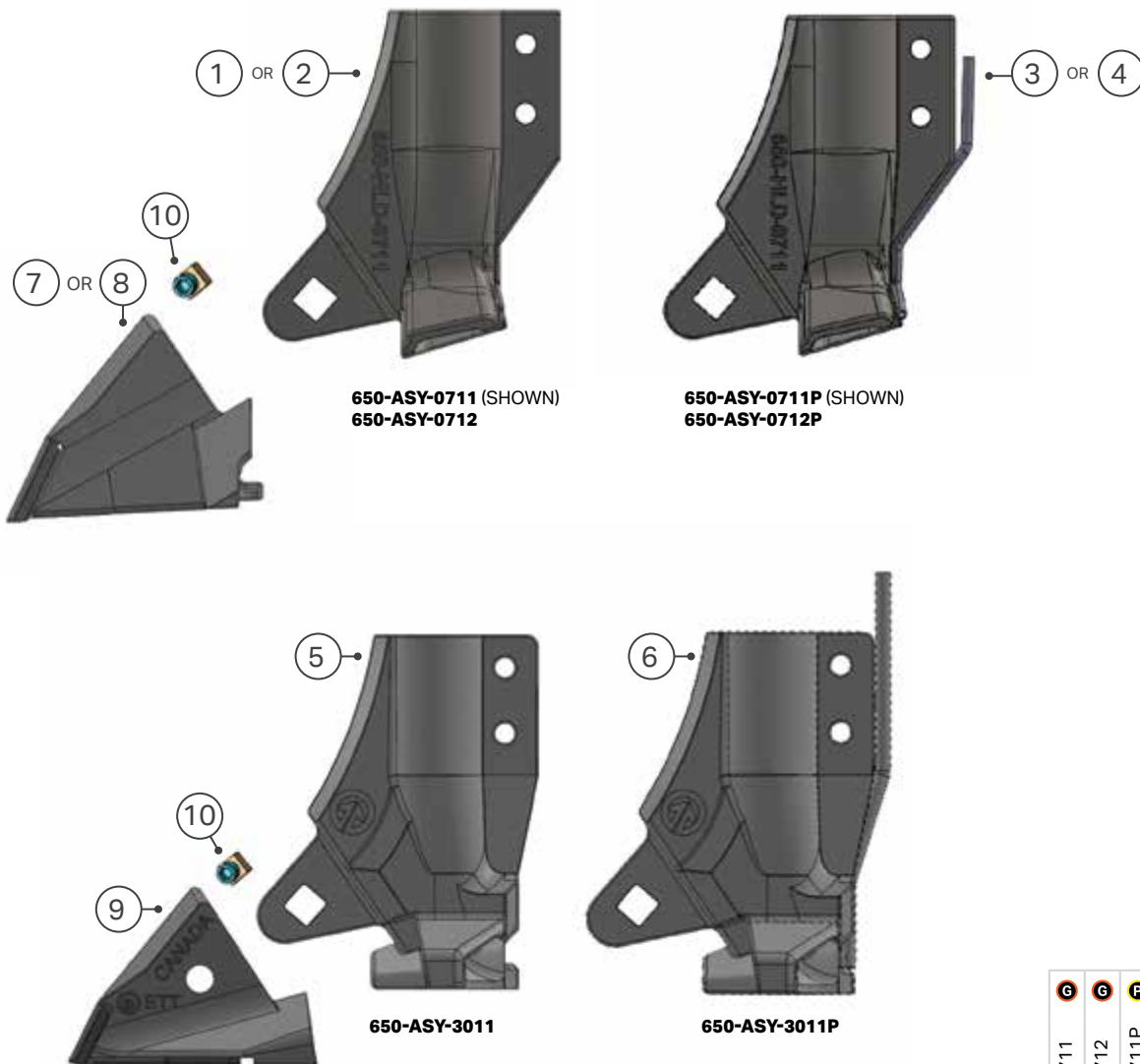
Tips sold separately. See pages 12-13.

NOTES: ¹650-ACC-1000 bracket is required on single fertilizer knives. ²650-ACC-1010 bracket is required for 650-HLD-1000GN and 650-HLD-1000GL. Required on units prior to 2017. **They are not included in the assembly and must be ordered separately.**

The metric bolts needed for installation of these bracket are included. Correct bracket installation is shown on page 40.

John Deere 1870 Conserva Pak

Seed Openers (Page 41). Assemblies on this page include the tip.

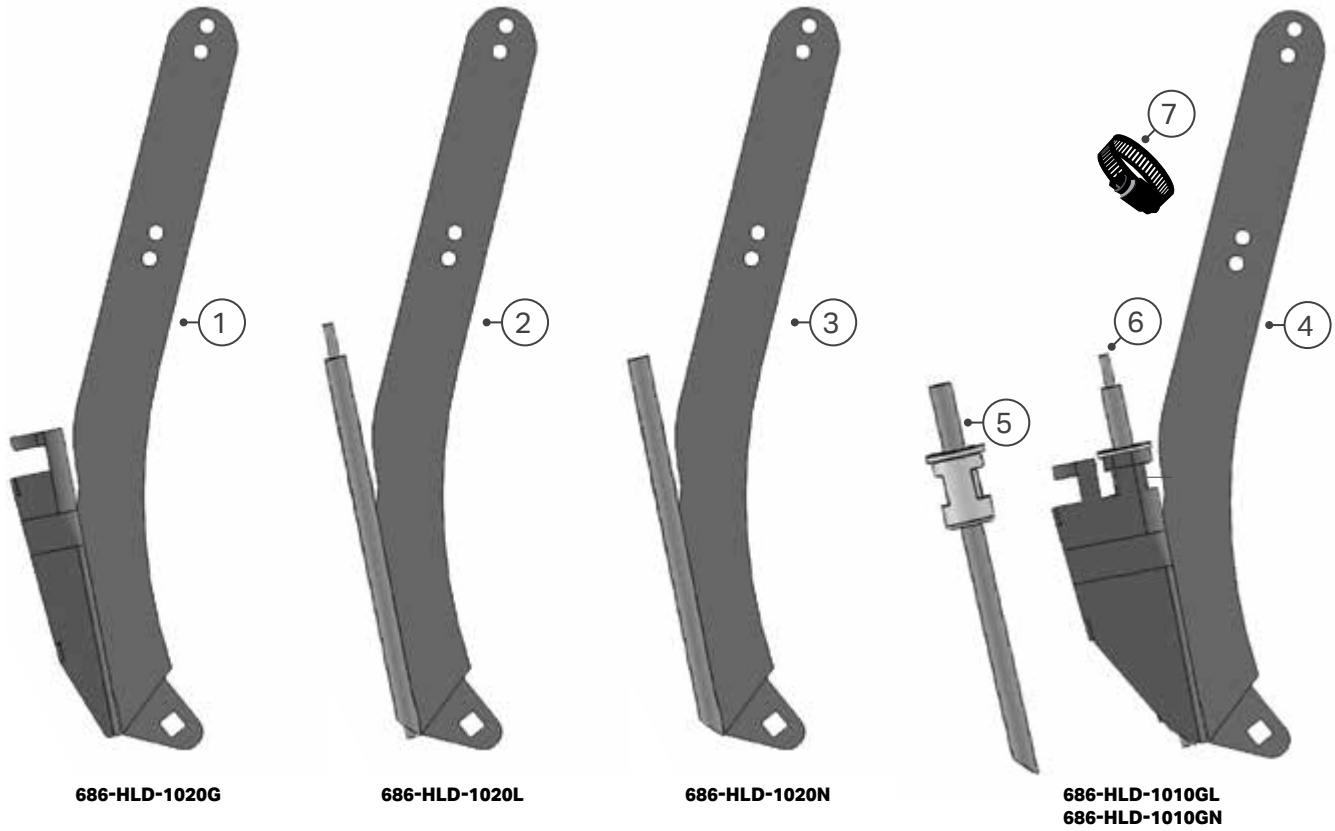


PART		G	G	P	P	G	P
		650-ASY-0711	650-ASY-0712	650-ASY-0711P	650-ASY-0712P	650-ASY-3011	650-ASY-3011P
1	650-HLD-0711	■					
2	650-HLD-0712		■				
3	650-HLD-0711P			■			
4	650-HLD-0712P				■		
5	650-HLD-3000					■	
6	650-HLD-3000P						■
7	612-TIP-0711 (SHOWN)	■		■			
8	612-TIP-0712		■		■		
9	200-TIP-3011					■	■
10	200-BNC-3100	■	■	■	■	■	■

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Väderstad Seed Hawk

Fertilizer Knives (Page 50)



PART		686-HLD-1020G	686-HLD-1020L	686-HLD-1020N	686-HLD-1010GL	686-HLD-1010GN
1	686-HLD-1020G	■				
2	686-HLD-1020L		■			
3	686-HLD-1020N			■		
4	686-HLD-1010				■	■
5	880-TUB-8375					■
6	880-TUB-8375L				■	
7	880-HCL-1828				■	■

TIP OPTIONS:

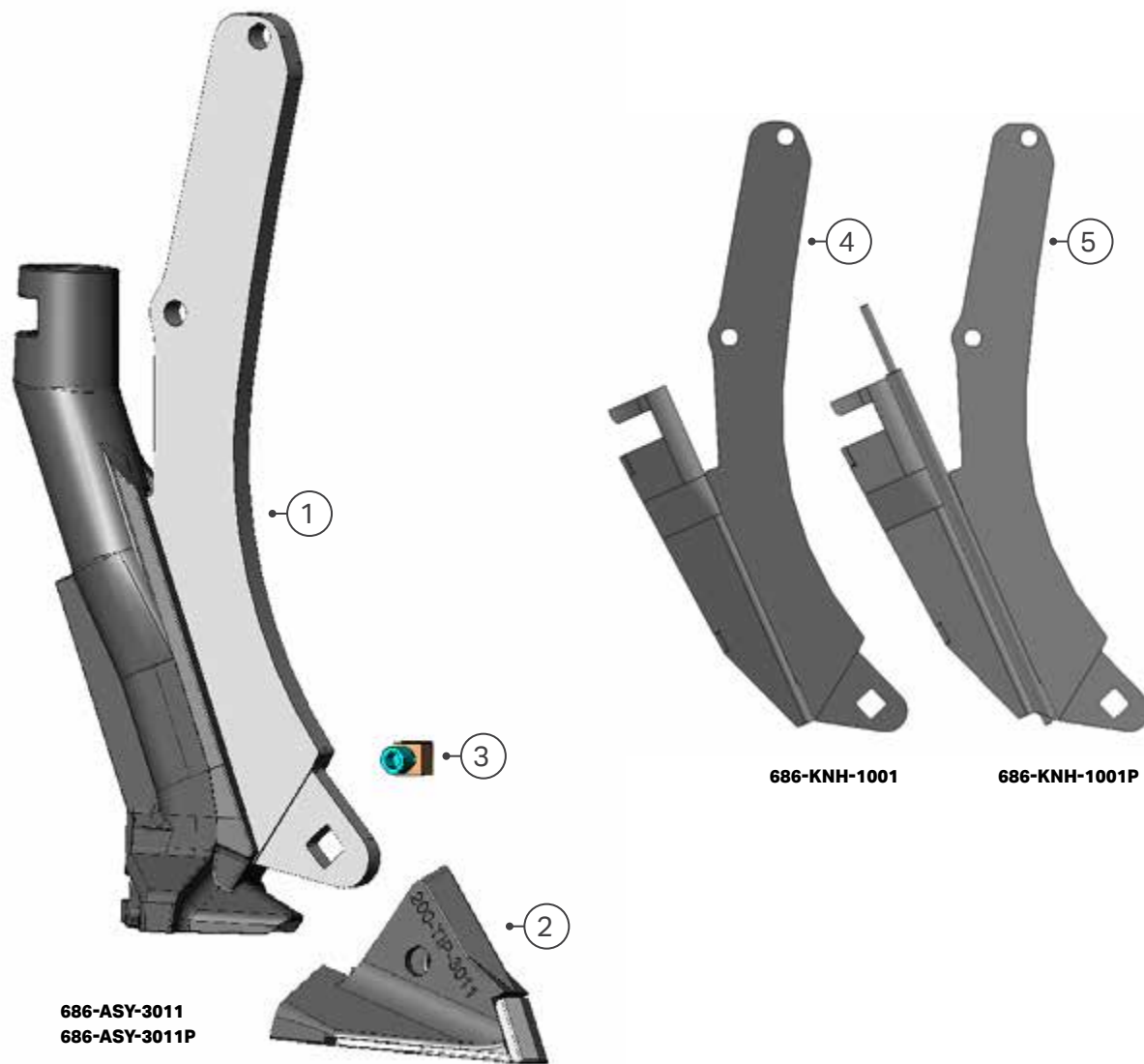
- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips sold separately. See pages 12-13.

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Väderstad Seed Hawk

Seed Openers (Page 52)



686-ASY-3011
686-ASY-3011P

686-KNH-1001

686-KNH-1001P

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0800
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips sold separately. See pages 12-13.

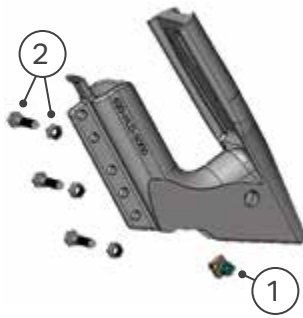
NOTES: These openers are available with liquid phos options, please call the factory for more details.

PART		P	G	P
	686-ASY-3011			
	686-KNH-1001			
	686-KNH-1001P			
1	686-HLD-3000	■		
2	200-TIP-3011	■		
3	200-BNC-3100	■		
4	686-KNH-1001		■	
5	686-KNH-1001P			■

Titan Opener System

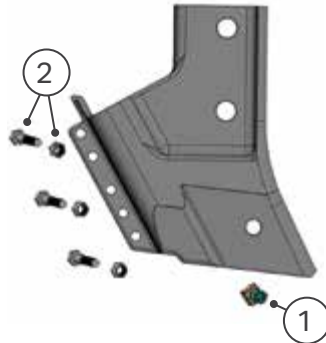
Page 54-55

1 CHOOSE YOUR HOLDER



620-HLD-5000

FITS: 47° and 50 ° C-shank



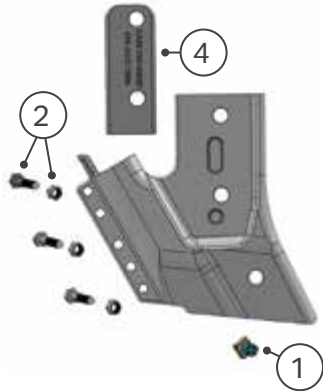
688-HLD-5000

FITS: Horsch 84° Shank

NOTES: On older drills, customer needs to verify mounting bolt holes.

1/2" bolt hole requires **694-HLD-5000** (does not require 694-ACC-1000)

5/8" bolt hole requires **688-HLD-5000**



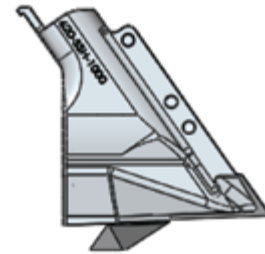
694-HLD-5000

FITS: Case IH AXT 700, NH P2060, Flexi-Coil 5500 & Concord Edge On (84° shanks only)

NOTES: 694-HLD-5000 requires 694-ACC-1000 (included). Not required when installing on the Concord.

PART		620-HLD-5000	688-HLD-5000	694-HLD-5000
1	200-BNC-3100	■	■	■
2	620-BNC-3100	■	■	■
3	628-BSH-1000			
4	694-ACC-1000			■

2 CHOOSE YOUR SEEDSHOE



620-SSH-1000

2-3/4" Paired Row



620-SSH-4000

4" Paired Row



620-SSH-6000

6" Paired Row

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3 CHOOSE YOUR TIP



620-TIP-0510



620-TIP-4060

880-CPL-2500 is required (included).

4 CHOOSE YOUR FERTILIZER



620-TUB-1021*

1/2" (12mm) O.D. NH3 tube for **620, 688 & 694** holders.



620-TUB-1070

1/4" (6mm) O.D. Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



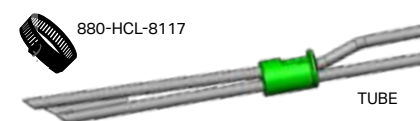
620-TUB-4000

0.4" O.D. Stainless Steel Liquid or NH3 tube for **620, 688 & 694** series holders.



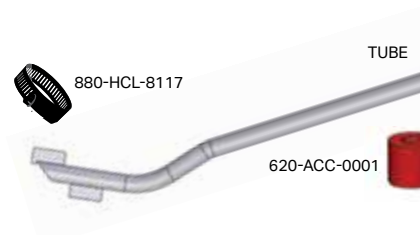
620-TUB-4040

0.4" O.D. Stainless Steel Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



628-TUB-1021*

1/2" (12mm) O.D. NH3 tube for **628** holders.



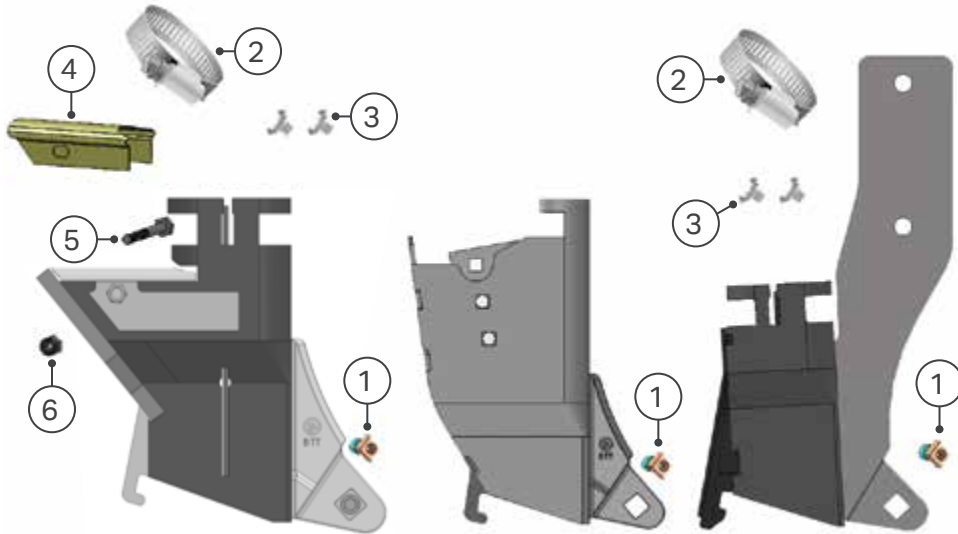
NOTES: The tube assemblies include the tube and any accessories shown.

*For pressurized NH3 Systems (including MaxQuip) you will be given the standard NH3 tube and then must consult with your pressurized system dealer for tubing inserts.

VOS (Versatile Opener System)

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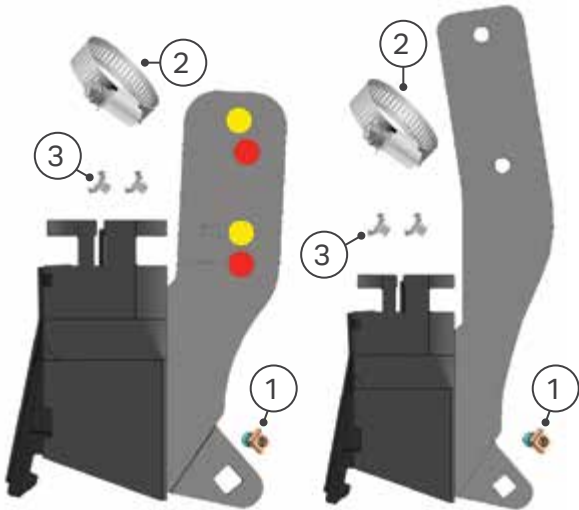
1 CHOOSE YOUR HOLDER



610-HLD-2080HD
FITS: 47° and 50° C-shank

673-HLD-2080
FITS: Edge On, Bourgault PHD and Morris Maxim

683-HLD-2080
FITS: Morris Contour I



688-HLD-2080
FITS: Horsch 84° Shank

NOTE: When installing openers on Horsch 84° Shanks you have two options shown above.

- STANDARD INSTALLATION
- 4° MORE PITCH

693-HLD-2080
FITS: Morris Contour II and Morris Quantum

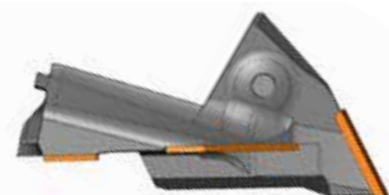
PART		610-HLD-2080HD	673-HLD-2080	683-HLD-2080	688-HLD-2080	693-HLD-2080	694-HLD-2080
1	200-BNC-3100	■	■	■	■	■	■
2	880-HCL-1828	■		■	■	■	■
3	880-HCL-0001 (x2)	■	■	■	■	■	■
4	610-CAP-1080	■					
5	942-HRG-2004	■					
6	908-NNI-2504	■					

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2 CHOOSE YOUR TIP



610-TIP-0802
Single Shoot Tip



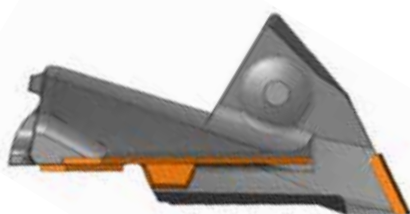
610-TIP-3581
Paired Row Tip



610-TIP-4081
Paired Row Tip



610-TIP-4082
Paired Row Tip



610-TIP-6082
Paired Row Tip

3 CHOOSE YOUR FERTILIZER

L

880-TUB-1003¹ / 880-TUB-1004²

Precision Drills Liquid 1/4" (6mm) O.D. stainless tube



880-BSH-1000

N L

880-TUB-1009¹ / 880-TUB-1010²

Precision Drills Liquid or Aqua NH₃ 0.40" (10mm) O.D. stainless tube



880-BSH-1000

N P

880-TUB-1011¹ / 880-TUB-1012²

Precision Drills Aqua NH₃ + Phos 1/4" (6mm) O.D. stainless tube



880-BSH-1003

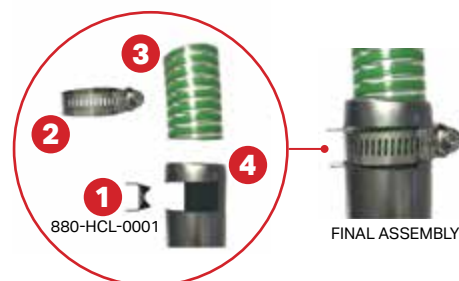
NOTES: All tubes come with bushings pictured.

¹ 880-TUB-1003, 1009 & 1011 are for everything other than C-shank.

² 880-TUB-1004, 1010 & 1012 are for C-shank openers, and are 1" longer.

Pipes can be made for the 673-HLD-2080 on request. Call the factory for more details.

PROPER INSTALLATION:



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