BPR Engineering PTY LTD T/A Aricks Australia
86 076 070 481

PRODUCT GUIDE

QUALITY AFTER MARKET JD DISC SEEDER PARTS AND EQUIPMENT

Aricks Australia

We are an engineering firm with a robust agricultural heritage, dedicated to the design, production, and supply of advanced equipment aimed at optimizing the no-till seeding performance of John Deere disc seeders. Our portfolio includes a range of precision-engineered replacement parts that ensure superior seed placement, enhanced emergence rates, reduced maintenance requirements, longevity and a seamless sowing experience—all while keeping cost-effectiveness in mind. We offer on-site maintenance services across NSW, VIC, QLD, and SA, annually servicing over 150 disc seeders. Our team possesses in-depth expertise in all aspects of disc seeder technology and is eager to share this knowledge, ensuring a flawless and economical sowing operation.

Fundamentals of Seed Placement

Vigorous crops depend on you. In addition to controlling depth and spacing, your seeding equipment determines the uniformity of seed-to-soil contact and the condition of the soil placed over the seed. These influence the rate of air and water exchange during germination and early growth, as well as the resistance the seedling encounters during emergence and while developing roots.

Germination requirements

Seed requires several external factors to germinate, these include water, oxygen, correct temperatures and sometimes varying degrees of light. Seed contact with residue does not normally provide these required factors and the seed will more than likely fail to germinate. Soil provides moisture, oxygen and varying degrees of temperature and it is this reason that seed to soil contact is imperative to germination.

Matt Hagny (dec) Exapta Solutions Inc.

"Emergence, early growth, yield, and profit all hinge on proper seed placement – seeds are pressed (embedded) into the moist furrow bottom at a consistent depth, and the furrow sidewalls are shattered to cover seeds uniformly with loose factured soil. With the seed securely firmed into the surrounding soil, it draws moisture easily for germination and establishment. Mulch cover prevents drying out of the seed zone prematurely."

The Problem with Disc Seeders

Hairpinning has long been a problem that is synonymous with disc seeders. While discs may very well cut the residue when new and sharp, this does not last long. In most circumstances it may seem that the disc has cut the stubble, but in reality, it has only pushed the stubble deeper into the furrow. Pictured top right, known as plugging.

This inhibits seed to soil contact and increases the risks of the seed springing back with the straw or seed rot. Seed will not germinate if the correct conditions are not met. Residue managers can be a valuable addition in these circumstances.

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Non-Germinating

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Row Cleaners/Residue Managers

PRIMARY FUNCTION:
Residue managers on a disc seeder clear crop residue from the soil surface, ensuring better soil-to-seed contact and reducing blockages. This helps improve seed placement, germination, and overall seeding efficiency. Additionally, effective residue management enhances carbon retention in the soil, contributing to healthier soil structure and improved long-term soil fertility.

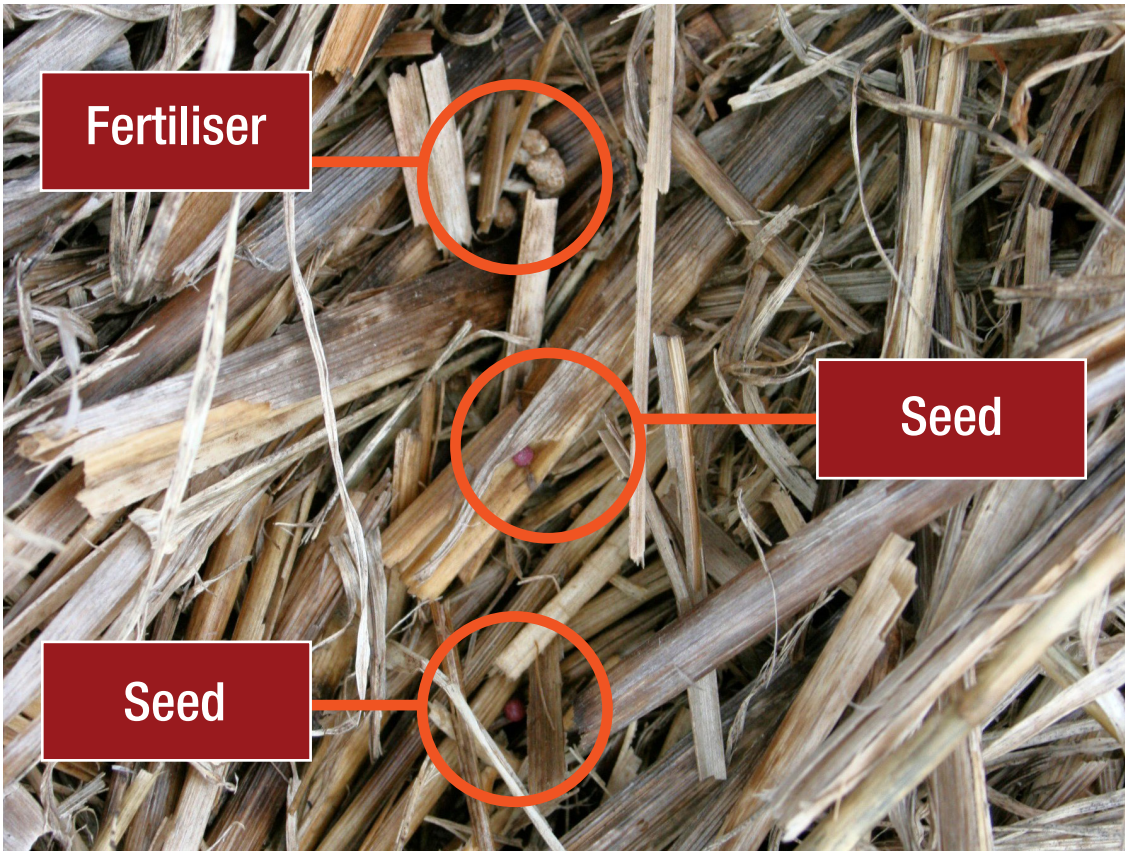
Residue management begins at harvest with stubble being cut to a maximum height of 400mm*, and being spread through a chopper or spinner on the header**

* This figure is based on our own trials.
** Header trails will inhibit the ability to manage heavy residue

EXTENSIVE FAMILY FARM IN THE MALLEE / WIMMERA REGION

Operating 2 x 60ft John Deere 1890 disc seeders (5 years), sowing small seeds (canola) & fitted with aricks residue managers. *"After using the Aricks wheels we would not operate the seeders without them. They are also advantageous for chemical incorporation".*

"We also use the Aricks non-greasing bush kits in our closing and press wheel pivots and have just replaced them after 50,000 acres per seeder. It was debatable whether they even needed changing at this time. These bushes work flawlessly and save enormous amounts of time in not having to constantly grease these 2 machines".



The image above shows typical hairpinning, where the seed and fertilizer are pushed into the residue rather than the soil, greatly reducing germination chances.

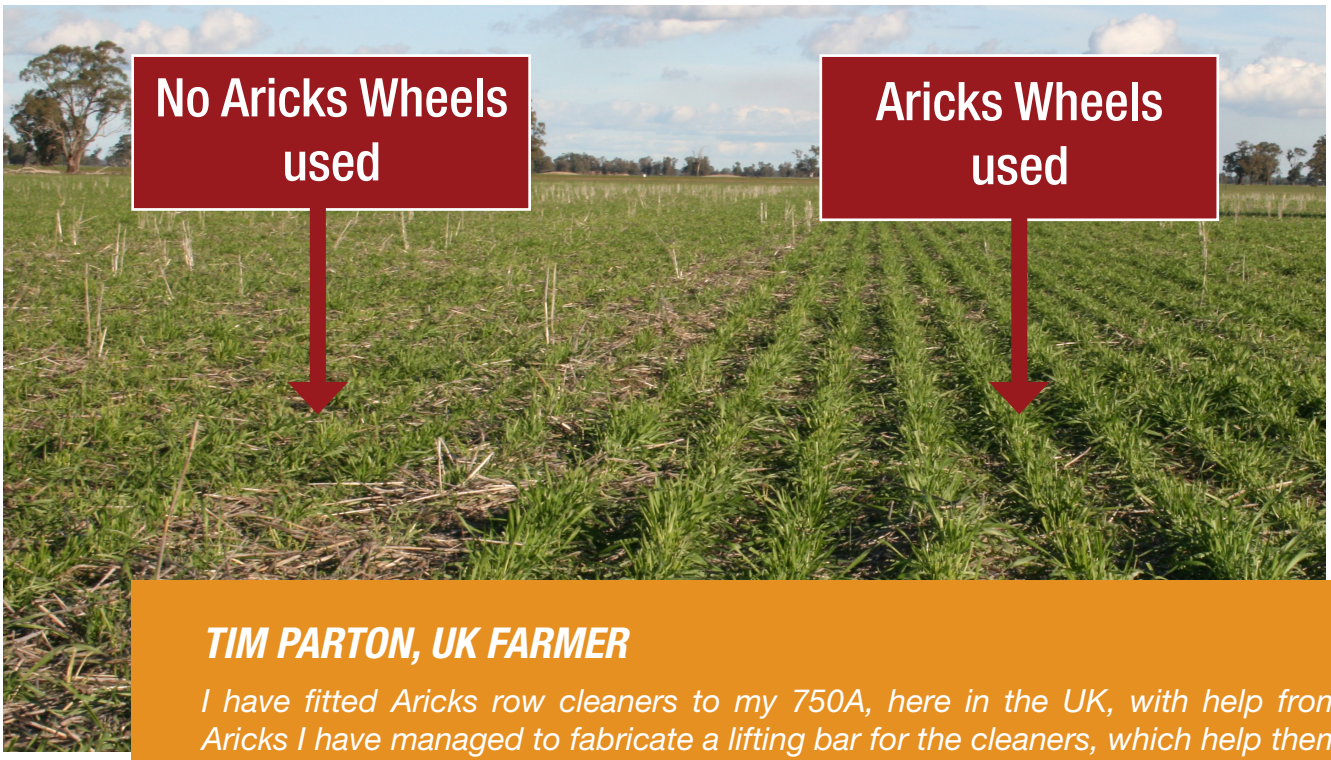
Aricks Residue Manager

Advantages of Use

- Reduces the risk of “hair pinning”: Ensures that seeds and fertilizers are placed in the soil, not the residue.
- Streamlines processes: Eliminates the need for burning off and working up.
- Enhances seed placement: Provides more consistent and even seed distribution.
- Minimizes soil disturbance: Leads to less new weed growth and reduced need for chemical applications.
- Easy installation: Compatible with John Deere 90 & Pro series openers.
- Optimal for small seeds: Ideal for Canola, Lucerne, Clover, and Fertilizers.
- Boosts germination rates: Dramatically increases germination, which in turn enhances soil carbon levels.
- Improves seed-to-soil contact: Ensures better contact for optimal growth.
- Efficient handling of damp conditions: Moves damp straw from rain or heavy dews, reducing downtime from wet conditions.

AUSTRALIAN MADE AND OWNED

AW001LHC
AW002RHC



TIM PARTON, UK FARMER

I have fitted Aricks row cleaners to my 750A, here in the UK, with help from Aricks I have managed to fabricate a lifting bar for the cleaners, which help them to lift high enough for good ground clearance when turning, the cleaners have done a superb job, with not moving too much soil while working, which stops any unwanted germination of grass weeds, they have plenty of adjustment for depth control so easily set up to the right depth, they are a strong device so I have no problem with stones, so in trashy conditions I would recommend them.

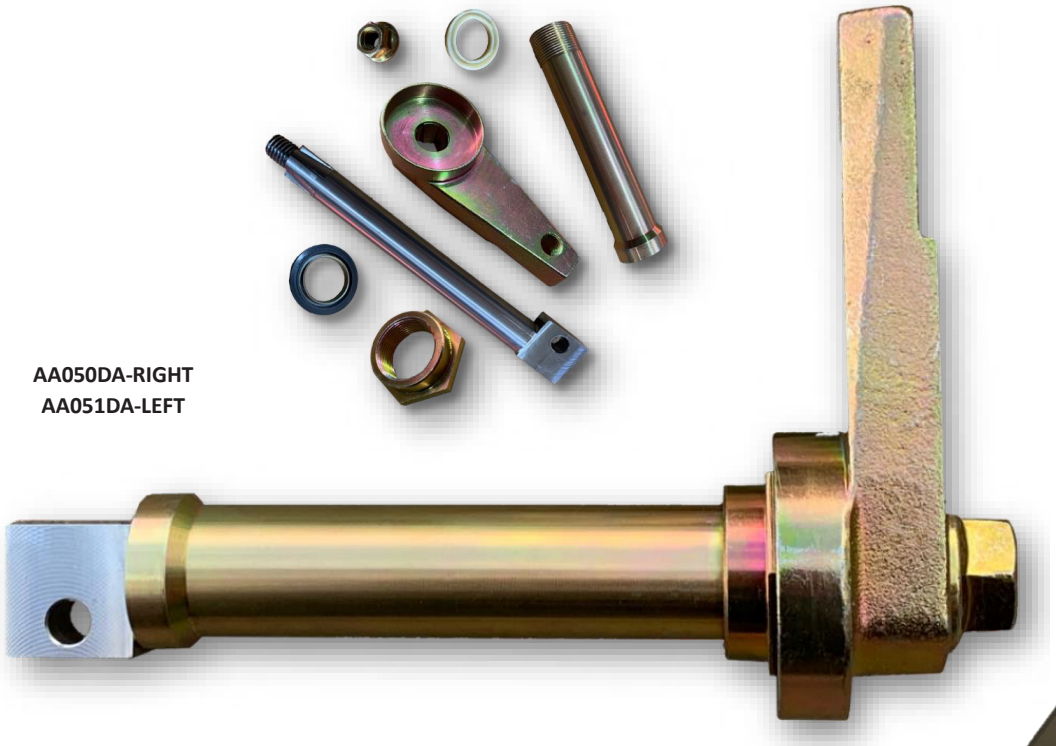
Gauge Wheel Axles/arms

PLEASE NOTE:
Installation manual comes with the product and is also available on the website

PRIMARY FUNCTION

The primary function of a gauge wheel axle on a John Deere air seeder is to provide the necessary pivot and connection points for the gauge wheels. This allows for precise depth adjustment and smooth operation of the gauge wheels, ensuring that the seeding depth remains consistent at the desired depth.

ARICKS NON-GREASING GAUGE WHEEL AXLE KIT



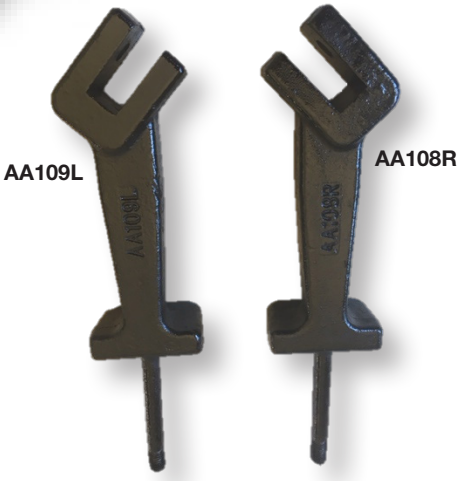
AA050DA-RIGHT
AA051DA-LEFT

We have incorporated high quality bushing material into the axle spindle and an extremely effective and durable seal to keep the axle shaft dust free and running smoothly for many acres to come. The solid axle shaft attachment point has been beefed up to make greater surface contact and allow for reuse of worn depth adjustment arms.

Patents and Applications AU2020227043, US11653586, CA3091876

"How much grease do you need when greasing OEM gauge wheel axles?"

We get asked this question a lot, we grease until it is visibly coming out of the other end of the axles! YES, it needs this much.



AA109L AA108R

Depth Adjustment Arms

Wear Guide for Gauge Wheel Axles

☐ **Initial Feel:**
New axles should be firmly connected to the depth adjustment arm. They should move smoothly through the range of motion as dictated by the cover plate, feeling like a singular piece.

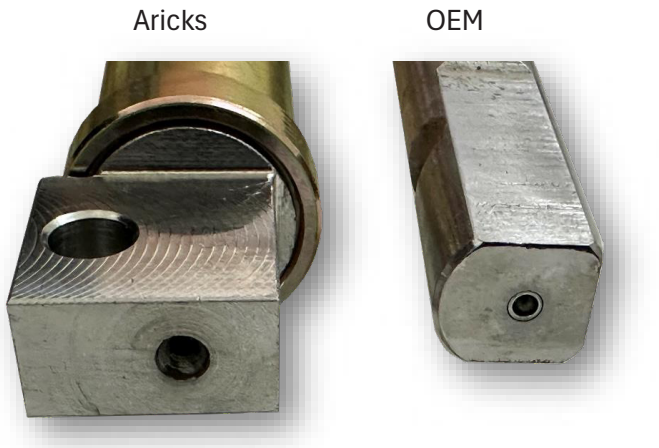
☐ **Common Failure - Axle Seizure:**
Cause: Axle seizes to the spindle due to grease combining with dust, leading to solidified grease.
Signs: Axle unable to move without hammers or leverage bars.
Prevention: Regularly clean and lubricate to prevent congealed grease.

☐ **Failure of 'O' Ring:**
Cause: The 'O' ring at the flanged end of the spindle wears down and lets in dust.
Signs: Grease coming out between the spindle flange and the depth adjuster arm, increased abrasion inside the axle.
Prevention: Ensure proper lubrication and replace worn 'O' rings.

☐ **Tack Welds Failure:**
Cause: On early 90 series axles, tack welds securing the cap to the arm can break.

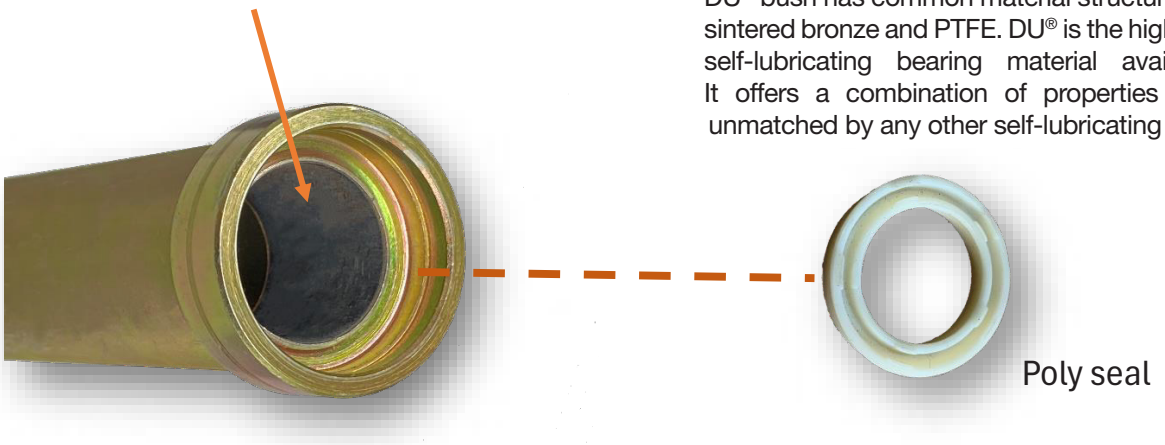
Adjacent is a comparison between Aricks and OEM Axle head profile.

The increased surface area of the Aricks Axle head provides better protection against wallering, guaranteeing Depth adjustment arm preservation and longevity.



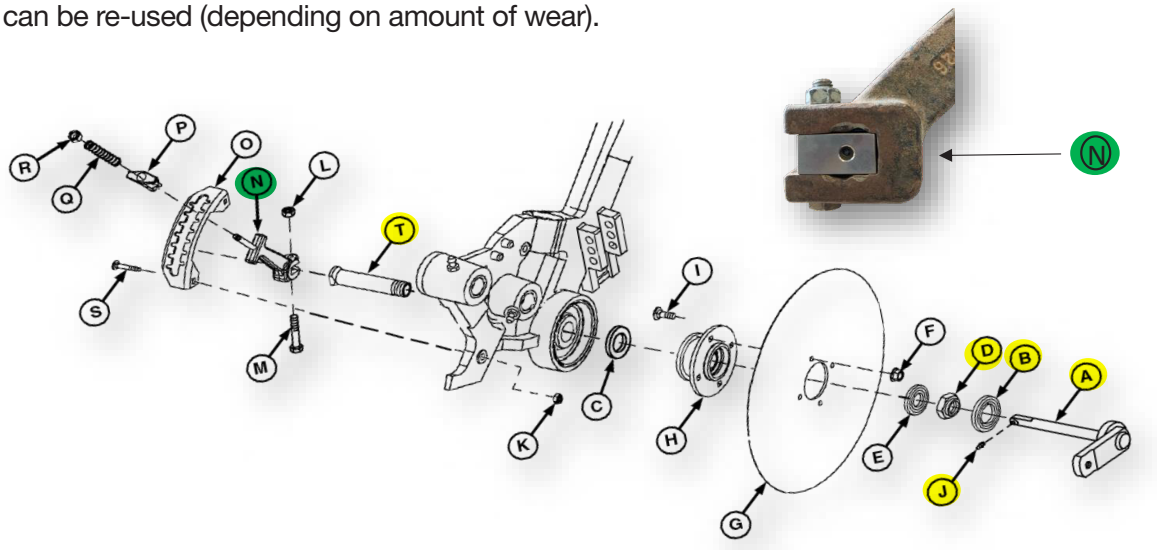
Self-lubricating bush inserts DU®

DU® bush has common material structure with steel back, sintered bronze and PTFE. DU® is the highest performance self-lubricating bearing material available anywhere. It offers a combination of properties and capabilities unmatched by any other self-lubricating bearing material.



Our new product will replace the following parts - A, B, D, J & T.

Normally part N is also replaced but with our new system your damaged/worn depth adjustment arm can be re-used (depending on amount of wear).



Signs: Loose caps compromising the triple lip seal.
Solution: Weld the cap back onto the arm if possible.

☐ **Inevitable Failure**
Reality: Gauge wheel axles will eventually seize up due to solidified grease.
Recommendation: Avoid pressing out the axles unless necessary, as the wear on the shaft and spindle often leads to quick re-seizing.

☐ **Maintenance Advice:**
Monitor: Regularly check for signs of wear and proper lubrication.
Action: Replace components as needed to prevent major failures.

T Handles and Cover Plates

PRIMARY FUNCTION:
The primary function of the Cover plates and 'T' handles are designed to precisely set and maintain the required depth of the gauge wheel. Their function ensures that the selected depth setting remains consistent with minimal movement between the cover plate and the 'T' handle, allowing for accurate and stable seeding operations.

AA710HD

ARICKS HEAVY DUTY T HANDLES & COVER PLATES

Our T Handle and Cover plate design has longevity and value for money in mind. Our aim was to produce a product that would reduce rattle wear and pin snap whilst retaining the depth adjustment as set. Seed placement depth, is an important factor in germination success, sowing too deep or too shallow can have extreme implications on crop emergence. Unstable depth hold can also cause damage to other integral parts of your drill through vibration and unwanted rotation.

AA120F

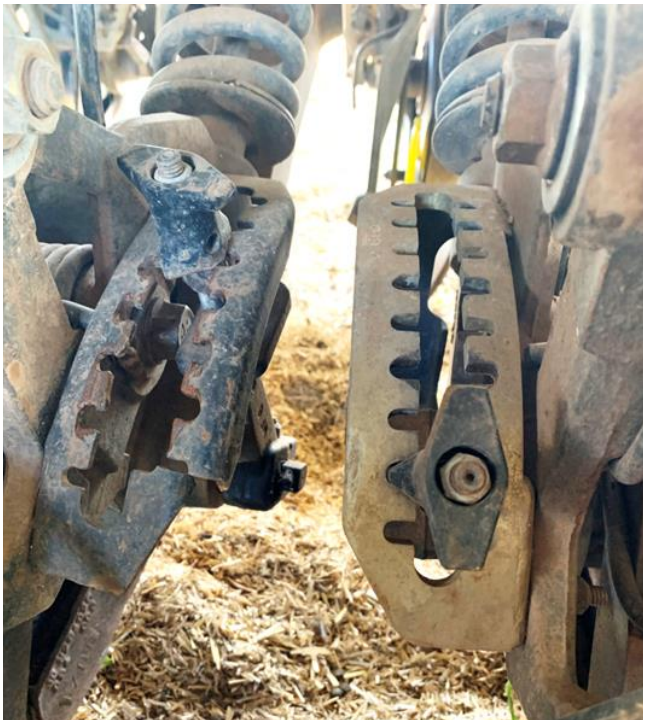
Aricks T Handles have a solid tab which increases the contact area with the coverplate, reducing the ability to rattle and wear. We also beefed up the coverplate and introduced horizontal slotting to further strengthen the engagement between these two components.

Side by side comparison supplied by customer

Common Wear Issues with OEM

"Aricks on left after 4000ha 11m machine, JD on right fitted same time, throw away"

Trevor Elliot
Elmore Victoria



Another side by side comparison supplied by customer, OEM left, Aricks right

Wear Inspection Guide for T Handles & Cover Plates

1. Initial Wear Inspection:
☐ Check the top face of the cover plates for wear.
☐ Inspect the slotting for rounding and wear.
☐ Assess the type and quality of cover plates and 'T' handles, as these factors influence wear speed

2. Check 'T' Handle Posts:
☐ Inspect the points where the 'T' handle posts contact the cover plate.
☐ Notice if the posts are getting thinner over time due to wear.
☐ Remember to check the 'T' handle posts seasonally.

3. Post Failure Indicators:
☐ If the posts snap off, you will be unable to set or maintain the depth of your furrow.
☐ This results in very inconsistent seed placement.

4. Evaluate Movement and Play:
☐ The more play and range of movement between the 'T' handle and cover plates, the more seed depth placement will vary.
☐ A rounded and loose depth adjuster arm can result in up to 1 inch of vertical movement in both directions.

5. Impact on Seed Placement:
☐ Excessive movement leads to extremely inconsistent seed placement depth and inconsistent emergence rates.
☐ Durable, firm, and strong cover plates and 'T' handles are essential for maintaining consistent seed depth.

6. Regular Maintenance:
☐ Regularly inspect and maintain the cover plates and 'T' handles to ensure minimal movement and wear.
☐ Replace components as necessary to prevent significant wear and ensure accurate seeding operations.

SEED BOOTS

PRIMARY FUNCTION:
The Primary function of the seed boot is to ensure true, consistent and unobstructed passage and placement of the seed into the furrow.

AW010BLT
AW010NUT

ARICKS SEED BOOTS

Aricks new line of Seed Boot is genuine extended wear and universal fit. We based our new Seed Boot on the existing 90 series boot, making adjustments to accommodate the John Deere ProSeries opener. Keeping the wide seed passage was a key design point along with maintaining the wear face to offer further protection from narrowing the seed passage against the disc. Used in conjunction with our specially designed shouldered bolt system, Aricks seed boots can virtually eliminate the vertical play often synonymous with these opener attachments. Ensuring correct seed placement plays an integral role in achieving a high germination rate.

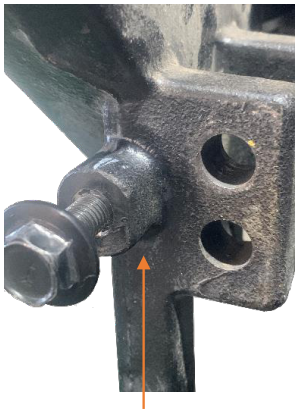
As evident in the photos adjacent and below, excessive movement in the seed boots can be very damaging to your machine. Our aim is to eliminate this unwanted movement and preserve the integrity of the structural components of the drill whilst maintaining accurate seed placement.

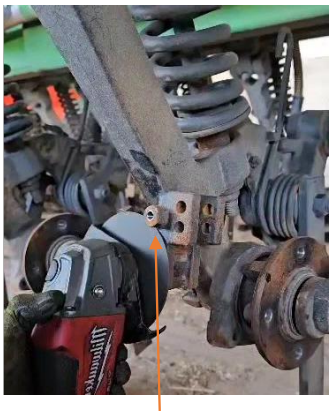
AA24R
AA25L

Wear Inspection Guide for Seed Boots

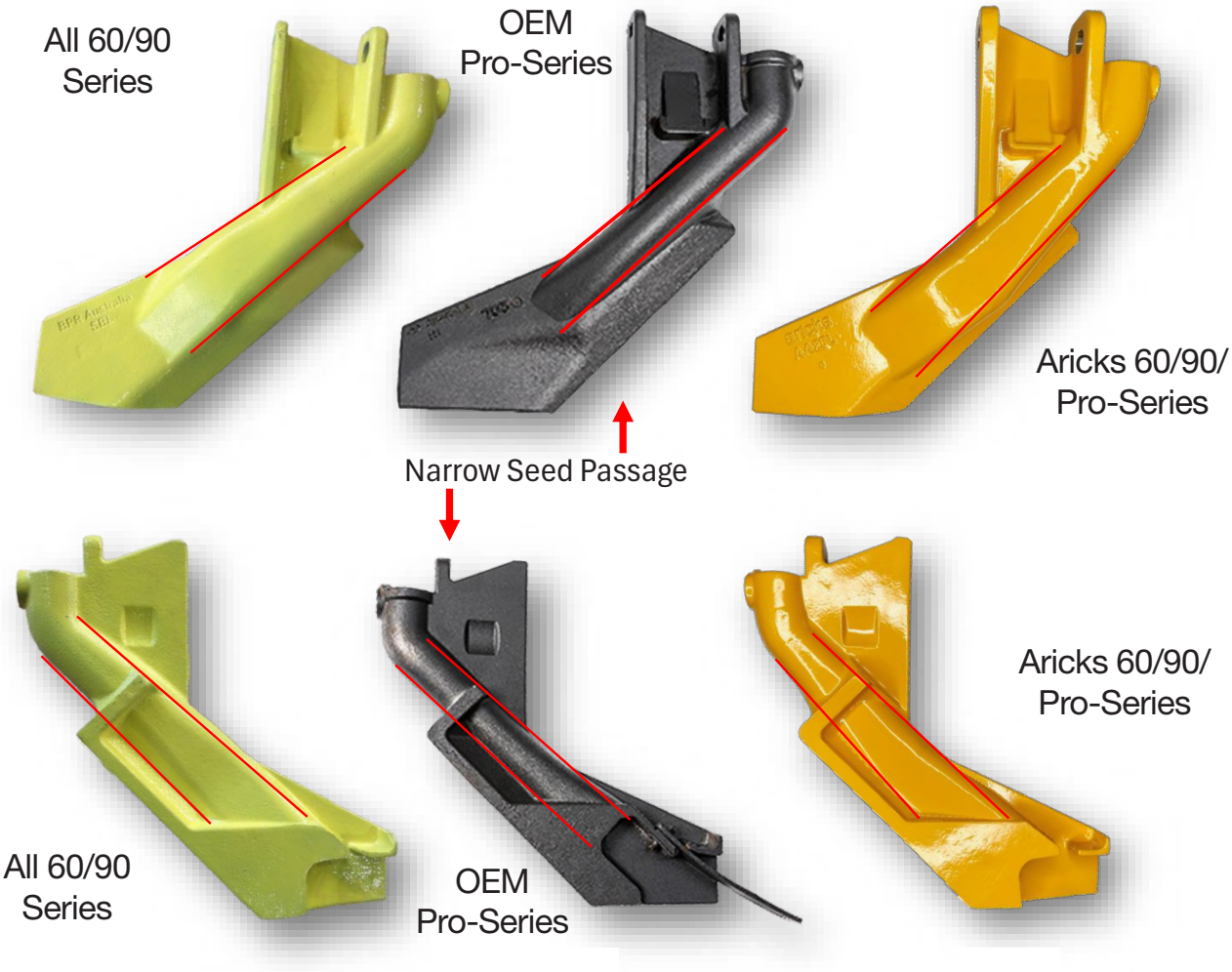
1. Monitor Disc Size:
☐ Observation: As the discs become smaller, the pressure on the bottom of the seed boot increases.
☐ Issue: When discs are run below 17” in diameter, the seed boot is too close to the bottom of the furrow and contacts a larger portion of soil.
☐ Result: This increased contact wears down and deforms the bottom of the seed boot, putting unnecessary force on the seed tab, leading to inaccurate seed placement and excessive wear on the seed boots.

2. Check the Inner Wall Against the Disc:
☐ Observation: The inner wall of the seed boot that sits against the disc can wear down.
☐ Method: with your fingers feel the remaining thickness of the inner wall of the seed boot.
☐ Issue: As the inner wall wears down to a knife’s edge, it can start to fracture and chip away, contributing to poor seed placement.
☐ Action: Replace the seed boot once the inner wall has worn down significantly to avoid fracturing.





*ProSeries openers require the flag pin mount to be removed to fit Aricks Seed Boots, see above. OEM boots can be reinstalled by using a 90 series bolt.



3. Inspect Mounting Holes and Seed Boot Bolt:

☐ Initial State: A new JD disc drill with JD boots will have significant slop/play between the seed boot, boot bolt, and mounting holes.

☐ Issue: This slop invites wear right from the start.

☐ Effects: The mounting holes on the shank casting will wear and warp, and the bolt's surface area in contact with the holes will also wear.

☐ Result: Increased play leads to larger impact forces, escalating wear, and potentially causing the cast mounting holes to crack off from the shank.

4. Proactive Disc Swap:

Action: Regularly check and swap out discs to avoid rounding out and destroying the bottom of your seed boots.

5. Inspect the Bottom of the Boot:

☐ Observation: A fresh seed boot will have clearly defined angles and edges, appearing very square.

☐ Issue: As it wears, the bottom of the seed boot will become rounded, with smooth, curved, and worn surfaces.

☐ Action: Regularly inspect the bottom of the boot for these signs of wear and replace it if these symptoms are observed.

EXTENDED WEAR UNIVERSAL SEED BOOTS

When installing Aricks Seed Boots, we strongly recommend the use of Loctite or similar thread locking compound be used on the Seed Boot Bolt Thread. Failure to use thread locking compound may result in the fixture becoming loose and disengaging.

Disclaimer:

Aricks Seed boots are designed to sit rigid against the disc with very little to no play. Due to this design, they are not recommended for use in conditions such as rocks and hard uneven ground or with worn out discs. They will take the full impact of protrusions and do not have the ability to flex. They have been designed this way to eliminate flogging of the mounting hole due to vibration.

Hardness V's Wearability facts:

Hardness of steel is an outcome of a heat treatment process where you can get a lower or higher hardness of steel depending on parameters like heating temperature, method of cooling etc. The hardness of steel is not a measure of its wearability. We should look at the toughness of steel as the goal, which is a balance between wearability and hardness. So, a higher hardness does not mean that steel has better wearability. Wearability is achieved by balancing the chemical composition of material and the hardness to get the best result.

Our seed boots are made with Nihard 4-ASTM-A-532-74A class 01 type D, where the amount of nickel and chrome used is on the higher side. As a result, the hardness is very high, which makes the boots brittle, so we have to control the hardness to balance it, while remaining within the standard. The actual measure of the boots performance should therefore be based on its wearability or toughness not just hardness.

ARICKS SEED TUBES

- Stainless Steel - powder coated
- Competitive pricing
- 60/90 and ProSeries available
- Box drill series also available

AA407 AA406 AA825

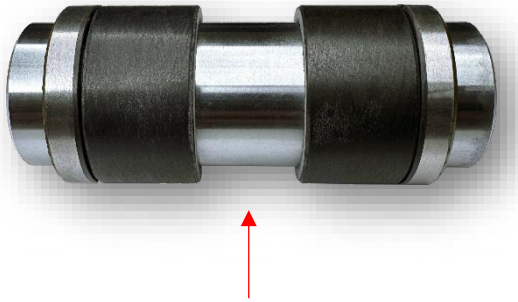
*Air Seeder units shown

Press and Closing Wheel Pivots

PRIMARY FUNCTION:

The primary function of the closing and press bushing kits is to allow vertical movement, enabling the mechanical (spring) and gravitational (weight) downforces to be applied to the press and closing wheels. These bushings absorb horizontal impact forces, ensuring the arms remain aligned with the opener's operations. This alignment allows the firming wheel to run true in the furrow, while the closing wheel runs accurately beside the furrow, achieving precise closing and maximum seed-to-soil contact.

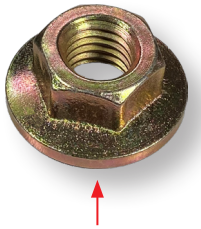
ARICKS NON-GREASING BUSH KITS



AANG84P – ProSeries
AANG86 – 60/90 Series
Closing wheel bushing kit

AA849OS
Closing wheel washer oversized.
Required for the AANG86 kit

AANG63P – ProSeries
AANG62 – 60/90 Series
Press/firming wheel bushing kit



AA024OS
Closing wheel Flange nut oversized.
Required for the AANG86 kit

Seized opener bushes and hard packed grease inhibits the operation of your machine. Dust seems to always make its way past the seal and into the grease causing it to set hard like concrete. Our non greasing bushing kits are self lubricating and run smoothly without the need for grease, therefore eliminating this issue entirely

Hard packed grease in siezed OEM bushes

"The bush material we use is a High Strength fibre encapsulated with Teflon. Our Bushes provide a significantly higher load capacity and a higher shock resistance than any Nylon bush. Our bushes do not absorb water the way that Nylon does, (which leads to swelling and component seizure with nylon Bushes).

The Teflon PTFE is also self-lubricating and provides much lower "coefficients of friction" than the Nylon. While our Bushes also provides excellent contamination and wear resistance, Nylon is generally quite soft and not so durable in this application."

Wear Guide

- **Initial Inspection:**
Ensure the equipment is clean and free from dirt and debris. Check for any obvious signs of wear or damage on the pivot, pins, bushes, and seals.
- **Lateral Movement Check:**
Firmly grasp the arm and attempt to move it laterally (left and right). Newly installed bush-kits should exhibit no lateral movement. If there is play, note its extent.
- **Vertical Movement Check:**
Move the arm vertically to ensure it moves smoothly without resistance.There should be no stiffness in the bush-kit, and the arms should be easy to move vertically.
- **Check for Play Development:**
Monitor for any developing left and right play over time. Note any gradual increase in play, as this indicates wear.
- **Inspect Bushings and Grease Points: - (Greaseable Pivots only)** Check greaseable bushings for any solidified

Ed Whitechurch, Temora NSW

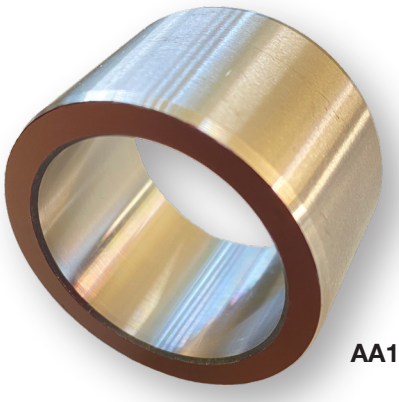
After 8 years and 20,000 acres (30" JD 1890):
Bought a new 1890 JD disc seeder, after hearing about our bushes he decided he wanted them installed on his new machine before he picked it up. Those non greaseable bushes on his press and closing wheels served him for 8 years and covered 8000 hectares of sowing. Ed says' "They were good the whole way through, I never had any problems with them at all. I would recommend them to anyone" Ed not only sowed his own crops but also contracted which saw him cover all types of soils from Granite, black soil, rocky ground and red soils. He said, "I normally sow around 10.5k/hr, you just have to be sensible and drive to the conditions".

Main pin and Bushes

PRIMARY FUNCTION:
The primary function of the main pin and bushing on the opener arm of a John Deere 1890 disc seeder is to create a pivot point between the bar and the unit. This pivot allows for vertical movement and some degree of flexibility, accommodating the hydraulic and mechanical downforce applied by the hydraulic rams and individual spring packs. Moreover, the main pin and bush kit ensure that the opener maintains accurate alignment by preventing side-to-side pivoting. In essence, they keep the opener shank running straight and true.

ARICKS MAIN PIN AND BUSH KITS - HEAVY DUTY
Aricks Main pin and bush kits, made from hardened, precision-ground steel, offer a long wear life and a cost-effective alternative to OEM parts.

Engineer specs: Pin EN 31 HRC 60, Bush EN 19 HRC 4.



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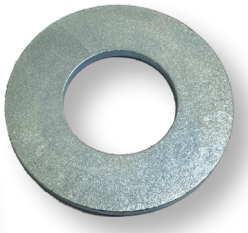
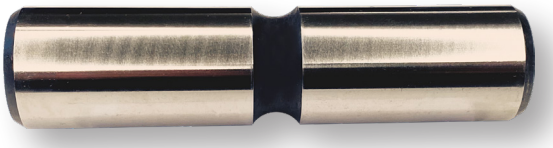
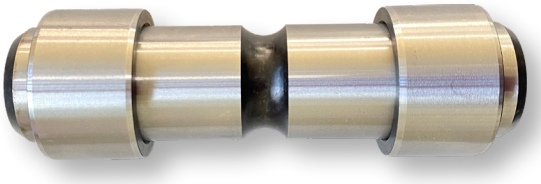


AA568
(included in kit)



AA133PH



AAMPBH

grease that could cause stiffness. Ensure grease points are clean and properly lubricated.

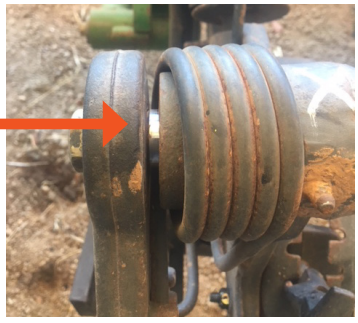
- **Check Pivot for Firmness:**
Assess the firmness of the pivot. It should feel solid with no excessive movement.
- **Inspect Washer and Nut:**
Check the washer and nut on the closing pivot. Replace them if worn. Ensure the nut and washer are not allowing any lateral sliding play.
- **Assess Arm and Bushings:**
If the arm can be moved in a circular motion, the bushes are beyond their lifespan. Excessive wear can lead to major damage to the bush housings.
- **Look for Housing Damage:**
Inspect the bush housings for any damage that might prevent them from holding the bushings, pin, and seals. If the housing is damaged, consider replacing it to avoid further issues.

Closing Wheel Nut and Washer

Closing wheel nuts and washers often get overlooked, this creates a few issues with wobbly closing wheel arms which often miss the mark and leave furrows open and the spring may dislocate from its operating position and become ineffective.

Below: left worn nut & washer, right new

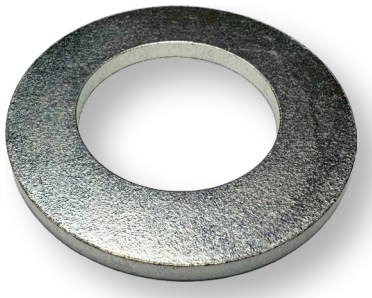
Below: left worn nut & washer, right new



We stock a wide variety of new and aftermarket parts including new closing wheel nuts and washers

Notice the gap with the worn washer

AA024OS



AA849OS

Our own closing wheel nuts and washers, are a fraction of the cost of OEM

Speed

Speed is a factor that has a great impact on

- Placement of seed
- Wear and tear on your machine

JD owners manuals operating speed recommendations below:

Operate at a ground speed of 5km/h to 11 km/h (3 mph to 7 mph)

Anything above this may be counterproductive and whilst you may finish sowing quicker, your yield and machine may suffer immensely.

Through our many visits to farming properties, we have come to believe that a speed between 8-10kph is optimal, depending obviously on the conditions.

Closing Wheels

PRIMARY FUNCTION

The primary function of the closing/cruiser wheel is to engage with the soil and push it into the furrow, effectively closing it. By gently disturbing the soil from the sidewall and directing it into the furrow, the closing wheel ensures the furrow is properly closed with the ideal amount of soil covering the topside of the seed. This finalizes the seed-to-soil contact process, creating optimal conditions for seed germination and growth. This method ensures that seeds are securely enclosed in the soil, aiding in moisture retention and protection from environmental stressors.

ARICKS 20-POINT CLOSING WHEEL

AA20CWC

**** Fits JD 60, 90 and Pro-Series openers only ****

Benefits

- Increased seed slot coverage
- Improved closure in all conditions
- Improved germination
- Reduce component fatigue - less bounce
- Structurally tough for our Aussie conditions
- Made from hardened bisalloy steel
- Utilises existing fixing components
- Bolts straight on to any JD 60, 90 and Pro-series opener

Eddie Hallam, Beulah VIC

"I've been using just one of these 20-point closing wheels for 2 years now and I can see the difference it has made to the crop emergence in this row, especially when I had heavy wet stubble. I have now ordered 2 full sets and regret not doing it sooner."

Wear Inspection Guide for Closing Wheels

1. Inspect the Contact Face:

☐ Observation: Over time, the contact face of both standard OEM round closing wheels and spiked/toothed closing wheels will wear down.

☐ Symptoms: Look for the contact face wearing down and the overall diameter becoming smaller.

☐ Impact: This wear results in the contact face receding away from the furrow, making it more difficult to achieve effective furrow closure and impacting results.

2 Check the Connecting Bolt:

☐ Observation: The bolt connecting the closing wheel to the arm can bend out of shape under force.

☐ Method: Spin the closing wheel and observe its circular motion. A bent bolt will cause the wheel to wobble.

☐ Action: If any level of bending is detected, replace the bolt immediately to ensure the closing wheel runs straight and true beside the furrow.

3. Check the Bearings:

☐ Type: There is a double roller bearing (same dimensions as your gauge wheels and newer press wheels) in the arm.

☐ Symptoms: Bearings can become dry, worn, and eventually collapse.

☐ Method: Hold the arm and spin the closing wheel. Listen for a rumble sound indicating a dry or worn bearing.

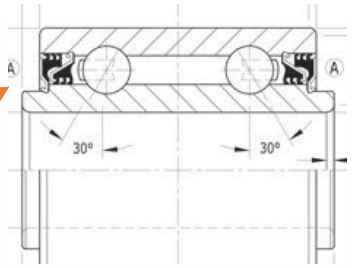
4. Inspect for Bearing Collapse:

☐ Method: Stabilize the arm with one hand and grab the outer perimeter of the wheel with the other. Try to wiggle the wheel.

☐ Symptoms: There should be no play at all. Any detected movement indicates the bearing is collapsed or beginning to collapse and should be replaced.

Aricks Closing Arm

- Cast Steel
- Competitive pricing
- 60/90 and ProSeries available
- Complete with 6 lipped seal bearing

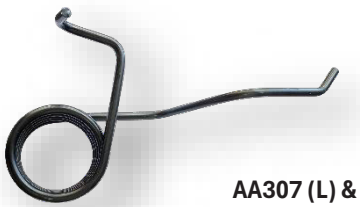


AA5203 6LP

AA170(R) & AA171(L)
60/90 Series

AA392(R) & AA393(L)
Pro-Series

Closing Wheel Springs



AA307 (L) & AA308 (R)

Press Wheel Springs

AA429 (L) & AA430 (R)

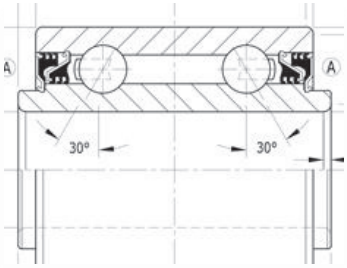
Press Wheels

PRIMARY FUNCTION:

The primary function of the press wheel, also known as the firming wheel, on a John Deere air seeder is to ensure seeds are properly pressed into the soil. By applying downward pressure on the soil surface after the seeds are sown, the press wheel enhances seed-to-soil contact, which is essential for good germination and seedling emergence.

ARICKS PRESS WHEEL

- Narrow profile to fit seed slot
- Flexible and smooth surface for mud shedding
- Wide bearing for added strength & durability
- UV resistant material for longevity
- 6 lip sealed bearing
- Fits 60/90* and ProSeries openers



Single row bearing used in OEM 60/90 series Press

Double row bearing used in Aricks Press Wheels

90 series openers require M16 x 80bolt & lock nut, 1 x 3mm washer/spacer

Wear Inspection Guide for Press Wheel

1. Bearing Type:

☐ Identify Bearing: Determine if the press wheel has a single roller bearing (older style) or a double roller bearing (newer style).

☐ Lifespan Insight: Double roller bearings generally have a longer lifespan compared to single roller bearings.

2. Check for Bearing Wear:

☐ Movement Test: Grab the press wheel with one hand and the arm with the other to stabilize. Check for any left or right play.

☐ Noise Test: Listen for a knocking noise. If movement or noise is detected, the bearing is starting to collapse. Replace the bearing promptly to prevent failure.

3. Spinning Test:

☐ Dry Rumble Sound: Spin the press wheel and listen for a dry rumble sound, indicating dry and worn bearing internals.

☐ Resistance Check: If the wheel spins too freely with little resistance, it suggests worn and dry bearings.

4. Structural Integrity:

☐ Tire Inspection: Regularly check the structural integrity of the press wheel tires. Look for wear, warping, or brittleness.

☐ Rim and Tire Fit: Ensure no dirt is getting between the rims and tires, which can cause the tire to walk off the rim.

5. Consistency in Seed Firming:

☐ Impact of Wear: Worn bearings or tires can cause inconsistent seed firming and poor seed-to-soil contact, affecting seeding operations.

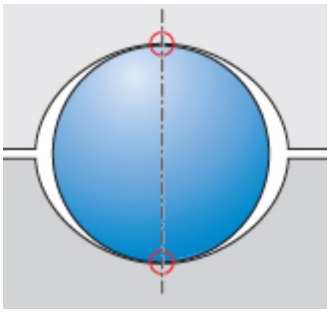
6. Maintenance and Replacement:

☐ Regular Checks: Conduct regular inspections for signs of wear.

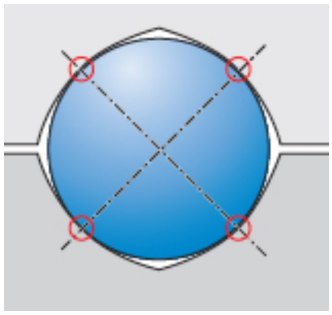
☐ Prompt Maintenance: If any of the above symptoms are identified, perform maintenance or replacements as needed to prevent press wheel failures.

Press Wheel Bearing

Another area of concern is the premature wearing of the press wheel bearing. This again is sometimes due to the incorrect bearing being fitted. Most bearing suppliers will supply you with a similar bearing that is not designed to put up with the directional force of the wheels. The internal bearing race is usually incorrect and has only 1 external seal. The correct bearing should have a gothic arch race and triple lipped seals, see examples adjacent



Normal bearing



Gothic Arch Race bearing

Note the different shoulder profiles

Incorrect bearing with single internal seal

AA357
Aricks Press Wheelbearing

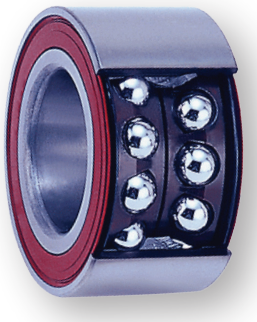
Gothic arch race bearing with triple lip seal

Disc Hub Bearings

Whilst you can buy something similar from most bearing shops, 90% of the time it will be a double row ball bearing. The bearing required is a **double taper roller bearing**. The double row angular ball bearing will not handle the loads that the disc hub is subject to and will fail. We have the correct bearing and seals in stock.

The OEM disc hub bearings are not available to purchase through JD, the complete disc hub must be purchased.

AA306037
Double Taper Roller NTN Bearing

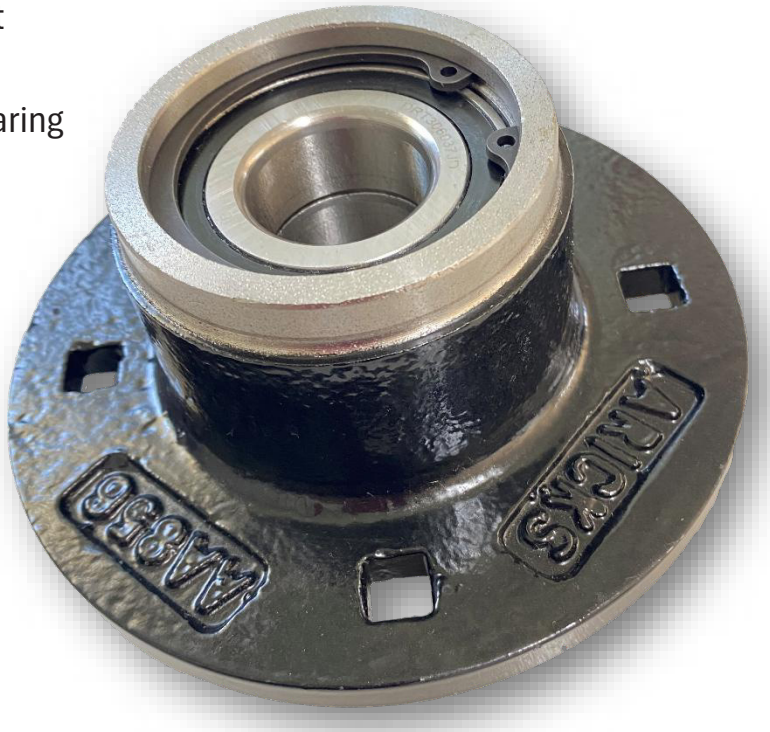


Double Row Angular Ball Bearing

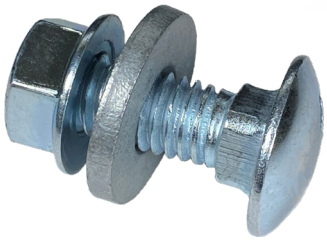
Aricks Disc Hub

- Quality replacement part
- Cast steel composition
- Includes Taper Roller Bearing
- Competitive pricing

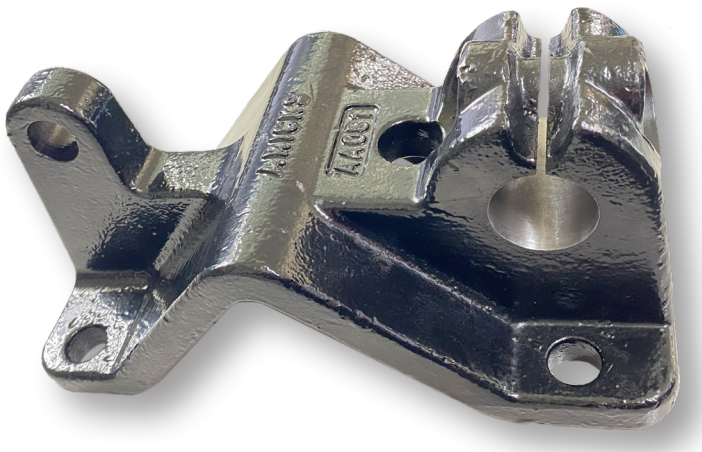
AA306037JD
Also available separately



AA856
(Pro-series also available)



AW033B
High tensile disc hub bolt



AA081
Rockshaft Anchor.

Companion Parts

AA241
Large triple lip seal & wear ring

AA32194
Small triple lip seal

AA219
Small wear ring

Disc Wear

We get asked a lot about disc wear and when should discs be replaced?

It depends on a number of factors including, ground conditions, sowing speed and how deep your pockets are haha. Before 16" is an absolute must, if you don't want to end up replacing your boots too. How many acres are you going to sow? Are you prepared to change in the middle of sowing? 17" is typically a good time to replace your discs otherwise you risk poor seed placement and unnecessary wear on your boots. Getting one more season out of your disc's may seem like a good idea at the time, but the resulting cost of having to replace all of your boots due to excessive wear may not go down well after the fact. Ultimately the decision is of course yours, but if you use hard boots, you may just decide to replace your disc's sooner than later to save money in the long run.

50 x JD discs = $5,915 inc

50 x JD ProSeries hard boots = $19,964 inc

50 x Aricks discs = $4,125 inc

50 x Aricks hard boots = $11,550 inc

Prices correct at time of printing

Disc Orientation

Disc orientation is not always clear in one's mind so here's a tip from us "Bevel to Boot". We do find the odd machine with the discs on backwards which is an easy mistake to make, so don't be too hard on yourself. For reference the picture, right, has the correct orientation of bevel to boot.

As the circumference of an 18-inch disc on a disc seeder decreases due to wear, it must complete more rotations to cover the same distance. This increased rotational frequency accelerates the wear rate of the disc, causing it to wear out faster as it gets smaller

DISCS

There are a lot of Disc's available today, but which one should you choose? Quality should always win out over price. Choosing cheap discs usually ends like this

CHOOSE WISELY

AADISC

Matt Hagny (dec) from Exapta Solutions USA says:

"When the blade gets so worn that the original bevel isn't visible, it almost begins to look like the bevel is on the opposite side. People copy that. Regardless of brand or whether it's fertilizer or seed openers: single-disc and offset-disc openers must always, ALWAYS have the bevel towards the furrow. If you want them to cut, that is"

Stub Axles

These points of the machine are often overlooked, in favour of concentrating solely on the openers. While it is important to make sure your openers are running correctly, the machine isn't much use without functioning caster & rear transport wheels. So, add this to your maintenance regime and keep your machine operating like it should……downtime is not a luxury many can afford at the height of the sowing season.

Stub axles available in both single and double ended

Pictured (above) are the worn main frame rear transport wheel axles from an 1890-disc seeder

STUBAXD

Checking Transport Wheels

Raise/jack your wheel off the ground, check for side to side movement of the wheel. This would indicate the bearing requires adjusting or replacing. Ensure there is no noise/vibration/rumble when you free rotate the wheel. If necessary, adjust bearing to remove any side movement and grease the hub whilst turning the wheel. Grease should be visibly seeping from the back of the hub, past the seal. This means the bearing hub is 100% packed with grease and the seal is lubricated. Wipe away excess grease.

We can supply your Transport Wheel Hubs
Pictured: H/Duty Hub
R49841

Transport wheel bearing kits available in light and heavy duty

WBKITH/D

Gauge Wheels

PRIMARY FUNCTION:
The primary function of the gauge wheel is to control, maintain, and set the depth of the furrow which directly relates to the seed placement. It works in conjunction with other parts, including the gauge wheel axle, the depth arm, and the T handle, which contacts the cover plate. This consistency is essential for ensuring uniform seed placement and optimal growing conditions.

MUDSMITH SPOKED GAUGE WHEELS
Used in conjunction with the Aricks Wheel as pictured below

AA5203

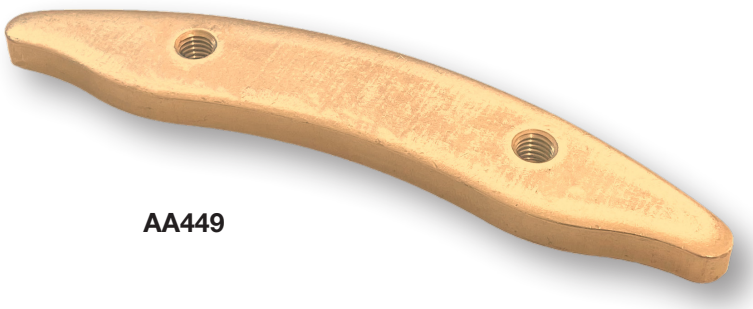
The rubber lip should be kept against the disc for optimum performance, this will stop the soil lifting with the disc rotation and disturbing the seed slot wall.

Wear Inspection Guide for Gauge Wheels

1. Inspecting the Rubber Lip:
☐ Initial State: New gauge wheels have a distinct squared-off rubber lip on the side facing the disc, with a firm rubber compound. They come with one or multiple shims to adjust the distance from the disc.
☐ Wear Over Time: The inside face of the rubber tire will gradually wear down, creating a larger gap between the tire and the disc. This gap invites foreign matter like mud and residue, accelerating wear and potentially seizing operations.
2 Shim Adjustment:
☐ Close Monitoring: As the rubber lips wear down, adjust the shims on the gauge wheel bolt to close the gap between the gauge wheel and the disc.
☐ Minimum Shim Requirement: Always run a minimum of one shim. Running with no shims causes the bearing housings to contact the gauge wheel axle arm directly, damaging both the bearing housing and axle arm.
3 Detecting Severe Wear:
☐ One Shim and Gap Presence: If you're down to one shim and still see a significant gap, the rubber lip on the tire has likely deteriorated completely. The surface will be almost smooth compared to a fresh rubber tire. Replace the rubbers on your rims if they reach this point.
4 Inspecting the Rubber Compound:
☐ Brittleness Over Time: The rubber compound will wear down and become brittle, losing firmness and developing soft, squishy spots.
☐ Splits in Rubber: Severe wear may cause the rubber tire to develop splits, allowing water, dirt, and mud inside, which further wears and creates uneven surfaces.
5 Monitoring Inner Tire Surface Contact:
☐ Mud Accumulation: Especially in muddy conditions, mud can build up between the tire and rim, pushing the tire off the rim. This causes the gauge wheel to move up and down instead of in a circular motion, increasing wear on connected parts (axle, depth adjustment arm, 'T' handles, cover plates) and resulting in uneven seed depth placement.
6 Checking Bearings:
☐ Plastic Bearing Housing: In older OEM gauge wheels with half solid tin and half solid plastic rims, it's common for the plastic bearing housing to warp and distort, causing the bearing to move inside the housing. This can be deceptive and requires careful inspection.
☐ Side-to-Side Wobble: Check for side-to-side wobble, any wobble indicates bearing wear.
☐ Dry or Rumbly Bearings: Spin the closing wheel and listen for a dry rumble sound, indicating dry or worn bearing internals. Bearings should spin smoothly without noise.

Closed Rim Wheel	Mudsmith Wheel
Causes friction between rubber and planting disc causing faster rubber wear	Allows for separation between rubber and planting disc prolonging rubber life
2 piece bearing casing causes friction and wheel wobble No Bearing Support	Single piece cast iron casing keeps wheel stable. Supporting Bearing
Changing bearings is a long tedious process	Saves time with 3 bolt system
Standard rubber thickness	Thicker rubber lasts 20% longer

On our travels, we have seen a lot of gear that has not quite lasted as it should, we thought we'd share a recent sighting of the new JD Spoked gauge wheel. As you can see the photo on the left contains a JD spoked wheel at the foreground and a mudsmith gauge wheel at the rear. The Mudsmith wheel is a quality product built to withstand the harsh Australian conditions.

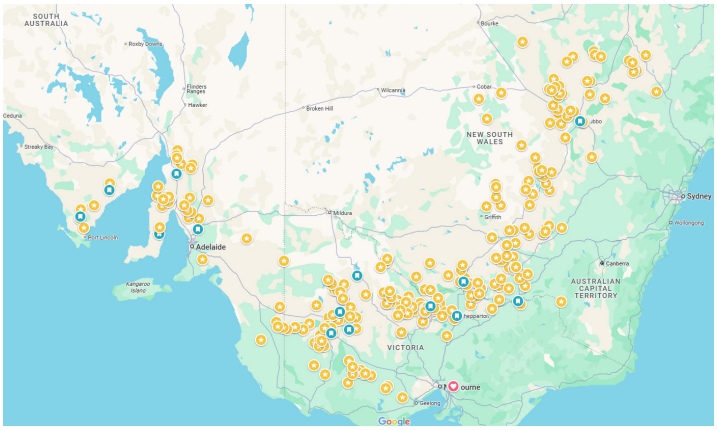


AA449

JD Spoked Gauge Wheel backing plates provide extra support to prevent rim cracking

Maintenance

Aricks Australia cover quite a bit of ground performing JD Disc seeder maintenance. We can overhaul your machine within a matter of days, using custom made tools and a lot of knowledge and previous experience. Check out our youtube videos showcasing how quickly we can remove and replace your pivot bushes.



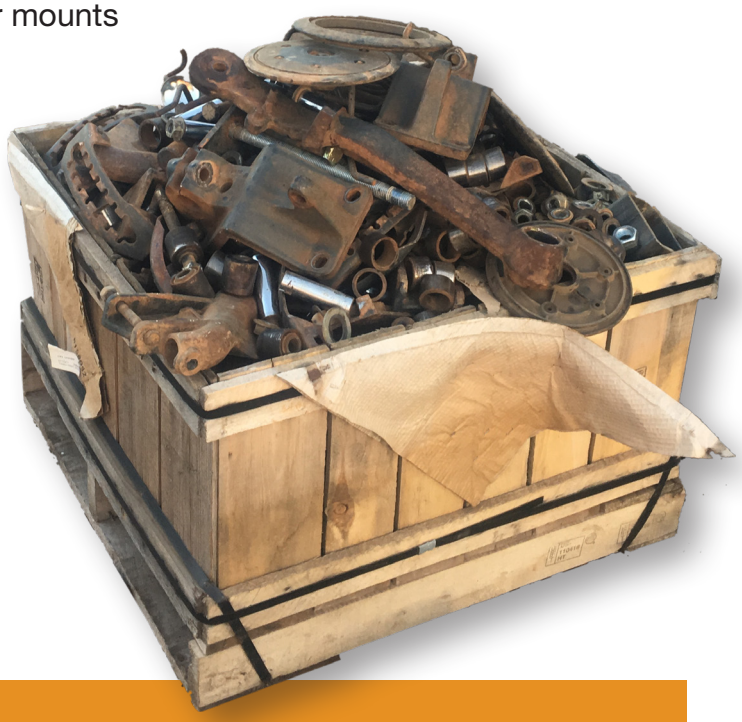
We remove, replace and/or repair components on JD disc seeders, including but not limited to

- closing/press/main pin – pivot bushings/wheels/bearings
- gauge wheel axles/tyres/rims/depth adjustment arms
- seed boots/springs/seed tabs/seed tubes
- discs/disc hub bearings/seals
- aricks wheels/duralok press wheels
- coverplates/t handles
- transport wheel stub axles/bearing kits/anchor mounts

Marked above are some of the locations we cover to perform onsite maintenance.

"I am a firm believer in utilising the best support available to assist our operation. Recently Colin and Andrew from BPR Engineering serviced my disc seeder. Their attention to detail and quality of work was first class. The tools, parts and knowledge they utilised combined with their proficiency made the choice of outsourcing them one that I am very pleased with. I will definitely be using them again.."

Scotts Angus, Henty NSW



"We were lucky enough to have our disc machine looked over and repaired by Colin and Andrew from BPR Engineering / Aricks Australia. These guys arrived one day and finished the next. They achieved more in a couple of short days, than what we would have achieved in a couple of weeks. They carry everything with them, all parts, tools, and most importantly knowledge of how to repair and replace almost anything on the disc machine.

We have also used the Aricks Wheels for many years, and have enjoyed the backup service, along with the updates to improve their performance. We were very happy with everything both Colin and Andrew achieved and repaired on our machine and would recommend their company to any disc owner."

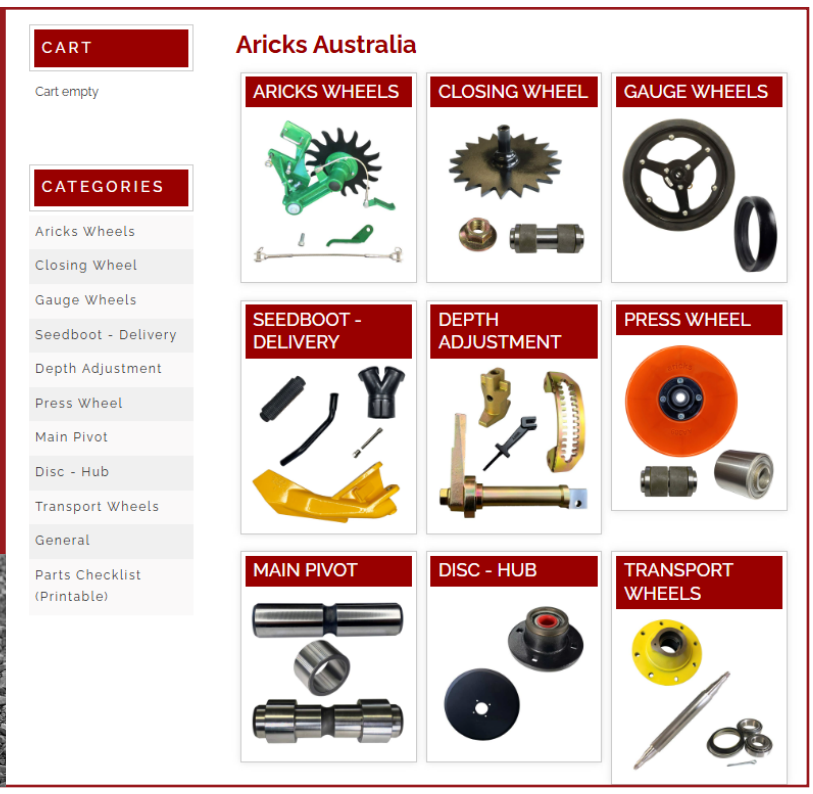
Christopher Drum

Service Trucks in action

South Australia Depot and Parts Container

Online Shop

Visit our online store to order!
https://aricks.com.au/shop.html



Parts Range

We are constantly increasing our aftermarket product range to help make your machine as reliable as we can. We don't intend to stop there either. If you have an issue with the longevity of a JD product on your 1590, 1890 or 1895, let us know and we will see if we can help.