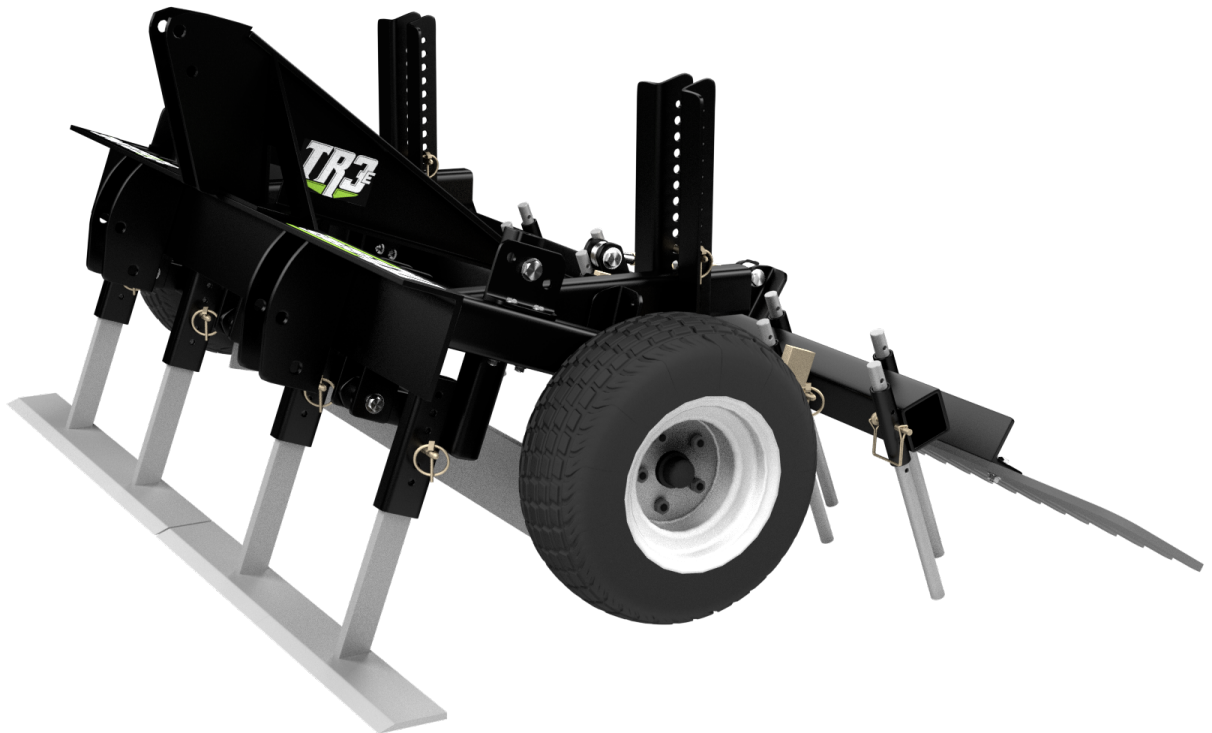


Owner's Manual

TR3-E Series Models

Equine | Property | Trevor Brazile Editions (6FT/7FT/8FT)



NOTE: This Owner's Manual covers several models. Features may vary by model. Not all features in this manual are applicable to all models and the model depicted may differ from yours.

For Your Records

Located on the front left corner of the frame is an ID plate showing the serial number. Record your machine's information and serial number in the space provided below. ABI will use this information to give you prompt, efficient service when you order parts or need product support.

Model and Serial Number

Model Number: _____

Serial Number: _____

Invoice Number: _____

Purchaser's Name: _____

Contact Information

ABI Attachments, Inc
520 S. Byrkit Ave.
Mishawaka, IN 46544

Customer Support

Email: abicutomerservice@abiattachments.com
Phone: 877-788-7253
Website: www.abisupport.com

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Product Manual Information

NOTE: This operators manual covers several models, Features may vary by model. Not all features in this manual are applicable to all models depicted may differ from yours.

General Information

36 MONTH LIMITED WARRANTY

ABI ATTACHMENTS TERMS & CONDITIONS

“ABI” means ABI Attachments, Inc. 520 S Byrkit Ave, Mishawaka, Indiana 46544, 877.788.7253. The TR3 E-Series rake is warranted for 36 months, from the original invoice date, against defects in materials and/or workmanship when put to normal and designed residential, farm, & ranch consumer use; 12 months for commercial use. This warranty is only valid on new equipment to the original purchaser with proof of purchase. This warranty is non-transferrable.

For the purpose of the warranties, “normal & designed use” refers to such uses shown in ABI marketing materials, websites, & videos specific to this product and does not include misuse, accidents, or damage due to inadequate maintenance. However, final judgment of “normal & designed use” is the sole opinion of ABI. The warranty holder is responsible for performing reasonable and proper maintenance. The warranty holder is further responsible for performing replacement of normally wearing parts. Attachments and options for these products are not covered by this warranty.

ABI’s obligation and or liability, under this warranty, of any product defect or claim for injury or damages is limited to repair or replacement of the product, or payment of the reasonable cost of repair or replacement of the product, at ABI’s sole discretion. During the warranty period, warranty parts or replacement product will ship by a standard method at no charge to the warranty holder, in the United States & Canada only. Expedited shipping of warranty parts or replacement product is the responsibility of the warranty holder.

To secure warranty service the warranty holder must, (1) report the defect immediately to ABI customer service for warranty consideration within the applicable warranty term in writing and discontinue use of the product; (2) present photographic evidence of the warranty claim and valid proof of purchase; (3) return the product or part to ABI or independent service technician within 30 days of defect discovery or failure for return, inspection or repair, if required. If ABI is unable to repair the product to conform to the warranty after a reasonable number of attempts, ABI will provide, at its option, one of the following: (a) a replacement for the product or, (b) a full refund of the purchase price. Repair, replacement, or refunds are the warranty holder’s EXCLUSIVE remedies against ABI under this limited warranty.

ABI IS NOT RESPONSIBLE FOR THE FOLLOWING: (1) Equipment purchased used; (2) Any equipment that has been altered or modified in ways not approved by ABI, including, but not limited to, unauthorized repair, and acts of God; (3) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions/recommendations; misuse, lack of proper protection during storage or use, vandalism, the elements, collision or accident; (4) Normal maintenance/wear parts and/or service, including but not limited to, tips, shanks, teeth, scarifiers, top-links, finish rakes, pins, bolts, leveling blades, profile blades, tires, rims, and bearings. Periodic replacement of normally wearing parts is the responsibility of the warranty holder.

To the extent permitted by law, **the limited warranty stated above is the exclusive warranty given by ABI, to the original purchaser, and ABI disclaims any other warranties. There are no other warranties, either expressed or implied, including any warranty of merchantability, fitness for a particular purpose, or arising from a course of dealing or trade usage. ABI shall not be liable in any event for incidental or consequential or other special damages under any theory of strict liability or negligence, or expenses of any kind, including, but not limited to, personal injury, damage to property, cost of equipment rentals, loss of profit, or cost of hiring services to perform tasks normally performed by these products.** ABI reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold.

Some jurisdictions do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from jurisdiction to jurisdiction.

Safety



WARNING! The **SAFETY ALERT SYMBOL** indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.



CALIFORNIA PROPOSITION 65

WARNING! Cancer and reproductive harm- www.P65Warnings.ca.gov

SAFETY AT ALL TIMES

Careful operation is your best assurance against an accident. All operators, no matter how much experience they may have, should carefully read this manual and other related manuals, or have the manuals read to them, before operating the tow vehicle and this implement.

- Thoroughly read and understand the “Safety Label” section. Read all instructions noted on them.
- Do not operate the equipment while under the influence of drugs or alcohol as they impair the ability to safely and properly operate the equipment.
- The operator should be familiar with all functions of the tow vehicle and attached implement and be able to handle emergencies quickly.
- Make sure all guards and shields appropriate for the operation are in place and secured before operating implement.
- Keep all bystanders away from equipment and work area.
- Start tow vehicle from the driver’s seat with hydraulic controls in neutral.
- Operate tow vehicle and controls from the driver’s seat only.
- Never dismount from a moving tow vehicle or leave tow vehicle unattended with engine running.
- Do not allow anyone to stand between tow vehicle and implement while backing up to implement.
- Keep hands, feet, and clothing away from power-driven parts.
- While transporting and operating equipment, watch out for objects overhead and along side such as fences, trees, buildings, wires, etc.
- Do not turn tow vehicle so tight as to cause hitched implement to ride up on the tow vehicle’s rear wheel.
- Store implement in an area where children normally do not play. When needed, secure attachment against falling with support blocks.

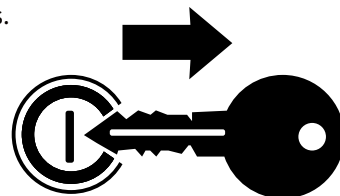
SAFETY PRECAUTIONS FOR CHILDREN

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to implements and their work.

- Never assume children will remain where you last saw them.
- Keep children out of the work area and under the watchful eye of a responsible adult.
- Be alert and shut the implement and tractor down if children enter the work area.
- Never carry children on the tractor or implement. There is not a safe place for them to ride. They may fall off and be run over or interfere with the control of the tow vehicle.
- Never allow children to operate the tow vehicle, even under adult supervision.
- Never allow children to play on the tow vehicle or implement.
- Use extra caution when backing up. Before the tractor starts to move, look down and behind to make sure the area is clear.

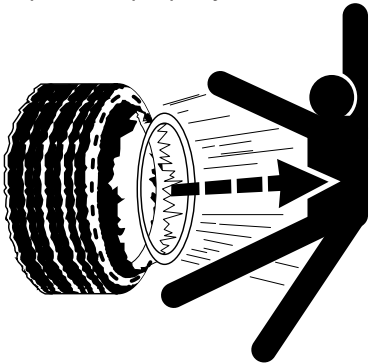
SHUTDOWN & STORAGE

- If engaged, disengage power take-off.
- Park on solid, level ground and lower implement to ground or onto support blocks.
- Put tractor in park or set park brake, turn off engine, and remove switch key to prevent unauthorized starting.
- Relieve all hydraulic pressure to auxiliary hydraulic lines.
- Wait for all components to stop before leaving operator’s seat.
- Use steps, grab-handles and anti-slip surfaces when stepping on and off the tractor.
- Detach and store implement in an area where children normally do not play. Secure implement using blocks and supports.



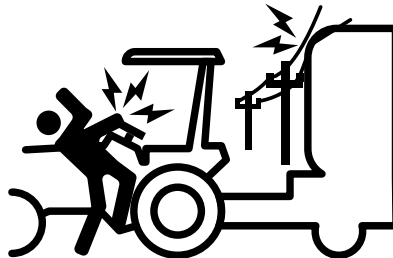
TIRE SAFETY

- Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- Always maintain correct tire pressure. Do not inflate tires above recommended pressures shown in the Operator's Manual.
- When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- Securely support the implement when changing a wheel.
- When removing and installing wheels, use wheel handling equipment adequate for the weight involved.
- Make sure wheel bolts have been tightened to the specified torque.
- Some attachments may have foam or sealant inside them and must be disposed of properly.



TRANSPORT SAFELY

- Comply with federal, state, and local laws.
- Use towing vehicle and trailer of adequate size and capacity. Secure equipment towed on a trailer with tie downs and chains.
- Sudden braking can cause a towed trailer to swerve and upset. Reduce speed if towed trailer is not equipped with brakes.
- Avoid contact with any overhead utility lines or electrically charged conductors.
- Always drive with load on end of loader arms low to the ground.
- Always drive straight up and down steep inclines with heavy end of a tow vehicle with loader attachment on the "uphill" side.



- Engage park brake when stopped on an incline.
- Maximum transport speed for an attached equipment is 20 mph. DO NOT EXCEED. Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- As a guideline, use the following maximum speed weight ratios for attached equipment:
 - **20 mph** when weight of attached equipment is less than or equal to the weight of machine towing the equipment.
 - **10 mph** when weight of attached equipment exceeds weight of machine towing equipment but not more than double the weight.
- **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle towing the load.



PRACTICE SAFE MAINTENANCE

- Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- Work on a level surface in a clean dry area that is well-lit.
- Lower implement to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- Do not work under any hydraulic supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- Use properly grounded electrical outlets and tools.
- Use correct tools and equipment for the job that are in good condition.
- Allow equipment to cool before working on it.
- Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- Inspect all parts. Make certain parts are in good condition & installed properly.
- Replace parts on this implement with genuine ABI Attachments parts only.
- Do not alter this implement in a way which will adversely affect its performance.
- Do not grease or oil implement while it is in operation.
- Remove buildup of grease, oil, or debris.
- Always make sure any material and waste products from the repair and maintenance of the implement are properly collected and disposed
- Remove all tools and unused parts before operation.



PREPARE FOR EMERGENCIES

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.



USE SAFETY LIGHTS AND DEVICES

- Slow moving tractors, skid steers, self-propelled machines, and towed equipment can create a hazard when driven on public roads. They are difficult to see, especially at night. Use the Slow Moving Vehicle sign (SMV) when on public roads.
- Flashing warning lights and turn signals are recommended whenever driving on public roads.



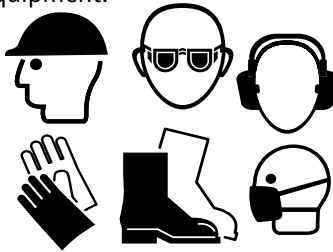
AVOID UNDERGROUND UTILITIES

- **Dig Safe, Call 811 (USA).** Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.
- Be sure to ask how close you can work to the marks they positioned.



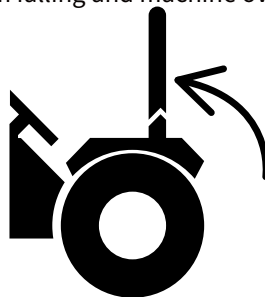
WEAR PERSONAL PROTECTION EQUIPMENT (PPE)

- Wear protective clothing and equipment appropriate for the job such as safety shoes, safety glasses, hard hat, and ear plugs.
- Clothing should fit snug without fringes and pull strings to avoid entanglement with moving parts.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment safely requires the operator's full attention. Avoid wearing headphones while operating equipment.



USE SEAT BELT AND ROPS

- ABI Attachments recommends the use of a CAB or roll-over protective structures (ROPS) and seat belt in almost all tow vehicles. Combination of a CAB or ROPS and seat belt will reduce the risk of serious injury or death if the tow vehicle should be upset.
- If ROPS is in the locked-up position, fasten seat belt snugly and securely to help protect against serious injury or death from falling and machine overturn.



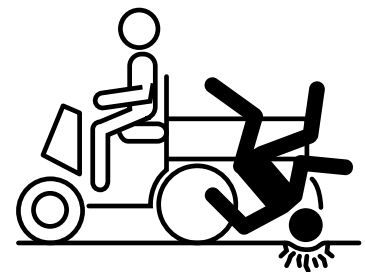
AVOID HIGH PRESSURE FLUIDS HAZARD

- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Before disconnecting hydraulic lines or performing work on the hydraulic system, be sure to release all residual pressure.
- Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- DO NOT DELAY. If an accident occurs, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.



KEEP RIDERS OFF MACHINERY

- Never carry riders on tractor or implement.
- Riders obstruct operator's view and interfere with the control of the tow vehicle.
- Riders can be struck by objects or thrown from the equipment. Never use tractor or implement to lift or transport riders.



Operation Safety

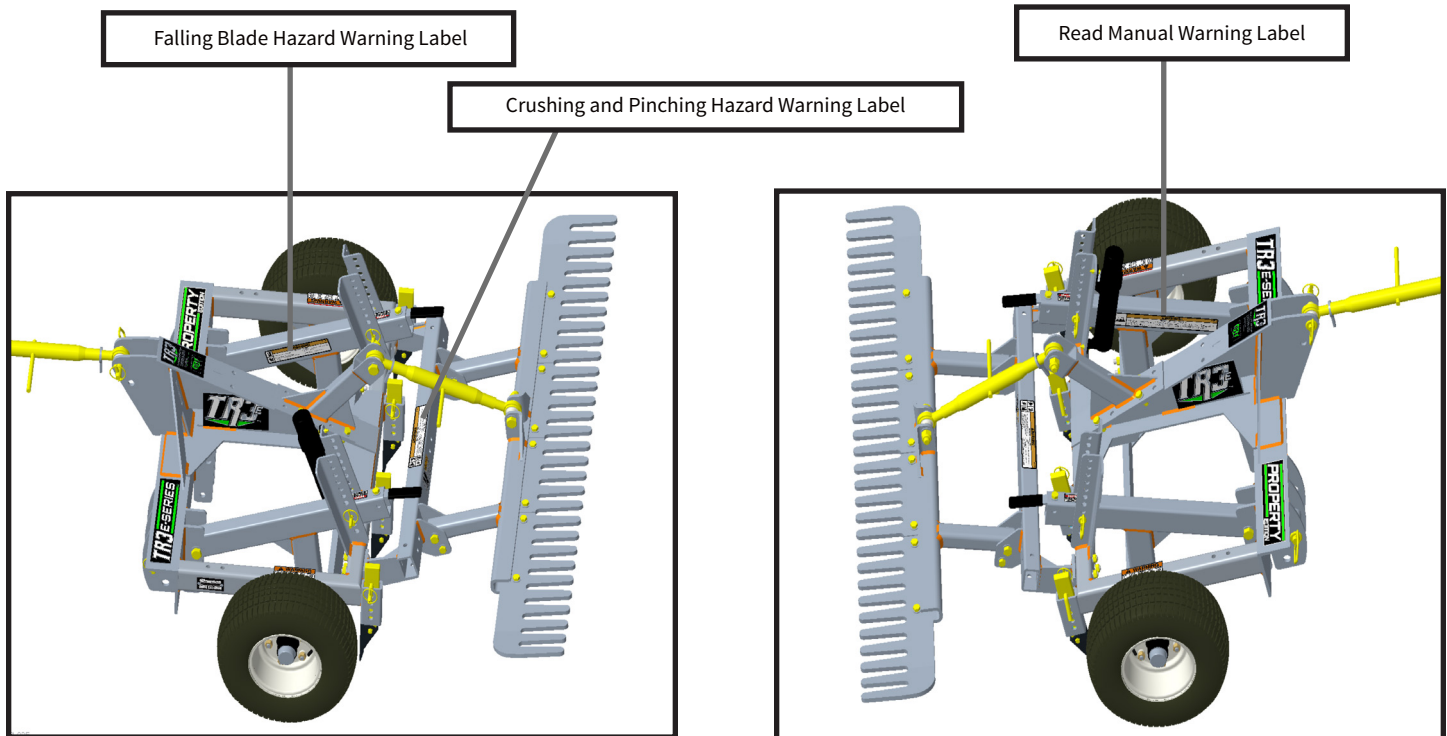
- The use of this equipment is subject to certain hazards which cannot be prevented by mechanical means or product design. All operators of this equipment must read and understand this manual, paying particular attention to safety and operating instructions, prior to using.
- Do not operate the tractor/ATV/UTV and implement when you are tired, sick, or when using medication.
- Keep all helpers and bystanders at least 50 feet away from the machine. Only properly trained people should operate this machine.
- The majority of accidents involve operators being knocked off the tractor by low hanging limbs and then being run over by the implement. Accidents are most likely to occur with machines that are loaned or rented to someone who has not read the operator's manual and is not familiar with the implement.
- Always stop the tractor, set brake, shut off the tractor engine, remove the ignition key, lower implement to the ground, and allow rotating parts to come to a complete stop before dismounting tractor. Never leave equipment unattended with the tractor running.
- Never place hands or feet under implement with tractor engine running or before you are sure all motion has stopped. Stay clear of all moving parts.
- Do not reach or place yourself under equipment until it is blocked securely.
- Do not allow riders on the implement or tractor at any time. There is no safe place for riders.
- Never place hands or feet under implement with tractor/ATV/UTV engine running or before you are sure all motion has stopped. Stay clear of all moving parts.
- Before backing up, disengage the implement from the ground and look behind carefully.
- Keep hands, feet, hair, and clothing away from moving parts.
- Never operate tractor and implement under trees with low hanging limbs. Operators can be knocked off the tractor and then run over by implement.
- Stop implement immediately upon striking an obstruction. Turn engine off, remove key, inspect and repair any damage before resuming operation.
- Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
- Use extreme care and maintain minimum ground speed when transporting over a hillside, over rough ground, and when operating close to ditches or fences. Be careful when turning sharp corners.
- Reduce speed on slopes and sharp turns to minimize tipping or loss of control. Be careful when changing directions on slopes.
- Inspect the entire machine periodically. Look for loose fasteners, worn or broken parts, and leaky or loose fittings.
- Pass diagonally through sharp dips and avoid sharp drops to prevent "hanging up" tractor and implement.
- Avoid sudden starts and stops while traveling up or downhill.
- Always use down slopes; never across the face. Avoid operation on steep slopes. Slow down on sharp turns and slopes to prevent tipping and/or loss of control.

Safety Labels

		⚠ WARNING 10-10976
<p align="center">CRUSHING AND PINCHING HAZARD</p> <ul style="list-style-type: none"> • Be extremely careful handling various parts of the machine. They are extremely heavy and hands, fingers, feet and other body parts could be crushed or pinched between tow vehicle and implement. • Adjust controls from tow vehicle seat only. • Do not stand between tow vehicle and implement when tow vehicle is in gear. • Make sure parking brake is engaged before going between tow vehicle and implement. • Stand clear of machine when in operation or being raised or lowered. 		

		⚠ WARNING 10-10977
<p align="center">FALLING BLADE HAZARD</p> <ul style="list-style-type: none"> • Can cause serious injury or death • Keep hands and feet from under raised blades/rakes/teeth unless it is properly blocked and secured. • Always put implement in lowest possible position when adjusting or repairing • Always store implement in lowered position 		

	⚠ WARNING 10-10978	
<p align="center">TO PREVENT SERIOUS INJURY OR DEATH:</p> <ul style="list-style-type: none"> • Avoid unsafe operation and maintenance. Do not operate or work on this machine without reading and understanding the operator's manual. • If manual is lost, call 877-788-7253 • Do not allow riders and keep others away during operation. • Lower implement, stop tow vehicle engine, set park brake and remove ignition key before servicing, adjusting, repairing or unplugging. • Safely support and secure implement before adjustments or repairs are made. • Park or block implement so it will not roll when disconnecting from tow vehicle. • Never place any part of the body underneath implement or between movable parts even when the engine has been turned off. • DO NOT operate or transport at high speeds. • DO NOT operate or transport on steep slopes. 		

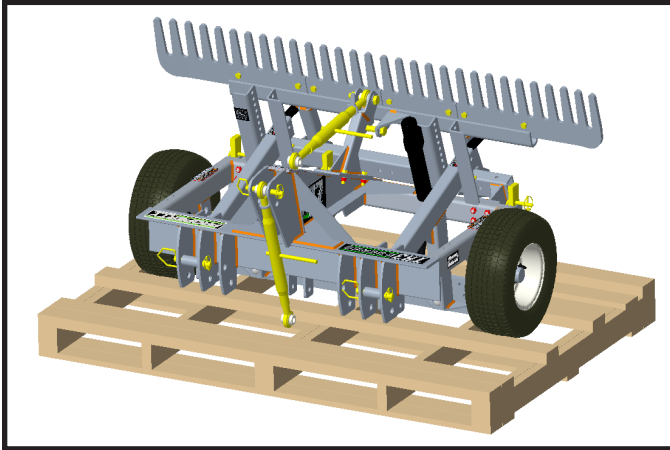


Unpacking Instruction & Setup

Initial Setup Instructions

Tools Needed:

- Gloves
- Safety Glasses
- Tin Snips
- Wire Cutters
- #2 square bit screwdriver



Removing From Shipping Crate

1. Cut metal straps (Use caution when cutting metal straps that they do not spring toward you and cause injury).
2. Cut and remove Zip-Ties.
3. If unit is wrapped in plastic, remove plastic.
4. Hook up to tractor and remove from skid (see page 11 for Setup Guide).
5. If unit is shipped with outer Rake sections removed from unit, unscrew boards securing Rake sections to skid with #2 square bit screwdriver.

Initial Setup Instructions (Property Edition)

Tools Needed:

- Gloves
- Safety Glasses
- (2) 1-1/8" wrenches (or socket set)
- (2) 3/4" wrenches (or socket set)

1. Remove bolt (1-1/8" Hex) that secures the Toplink to the Rake attachment from Rake attachment mounting bracket. Position Toplink end to line up with Rake attachment brackets holes and slide bolt thru brackets and Toplink and tighten nut (see **Figure 1**).

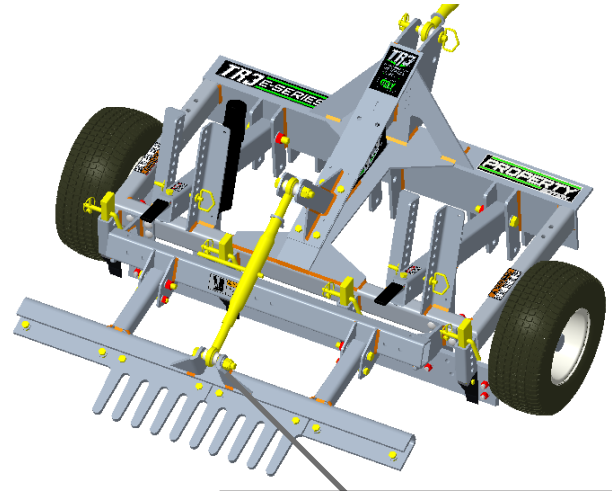


Figure 1.

Attach Toplink to mounting brackets on Finish Rake attachments

2. For Units that are shipped with outer Rake sections removed (as shown in **Figure 1**), remove bolts and nuts (3/4" Hex) from Rake support bracket. Set End Rake sections on Rake support bracket and re-insert bolts and nuts and tighten (see **Figure 2**). Bent ends of Rake Sections are to be angled upwards (see **Figure 3**).

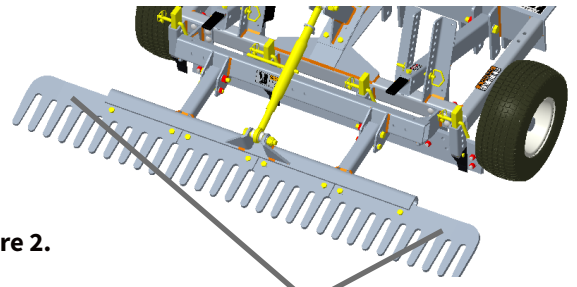


Figure 2.

Assemble outer rake sections as shown with bent ends angled upwards

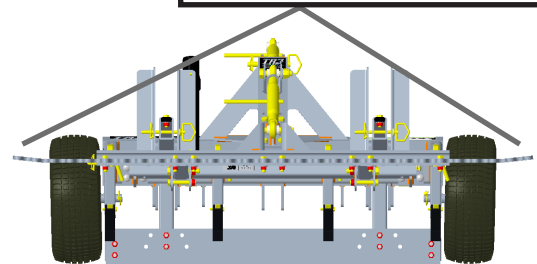


Figure 3.

Setup (cont'd)

Initial Setup Instructions (Equine Edition)

1. Use the same initial Setup Instructions as the Property Series above.

Initial Setup Instructions (Trevor Brazile Edition)

1. For Units that are shipped with outer Rake sections removed (as shown in **Figure 4**), remove bolts and nuts (3/4" Hex) from Rake support bracket. Set End Rake sections on Rake support bracket and re-insert bolts and nuts and tighten (see **Figure 5**). Bent ends of Rake Sections are to be angled upwards (see **Figure 6**).

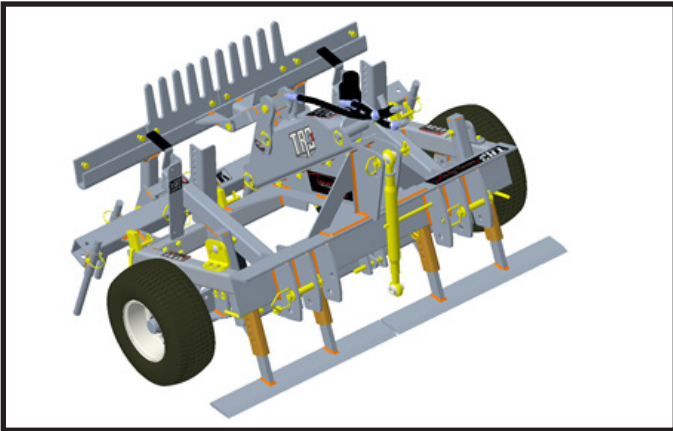


Figure 4.

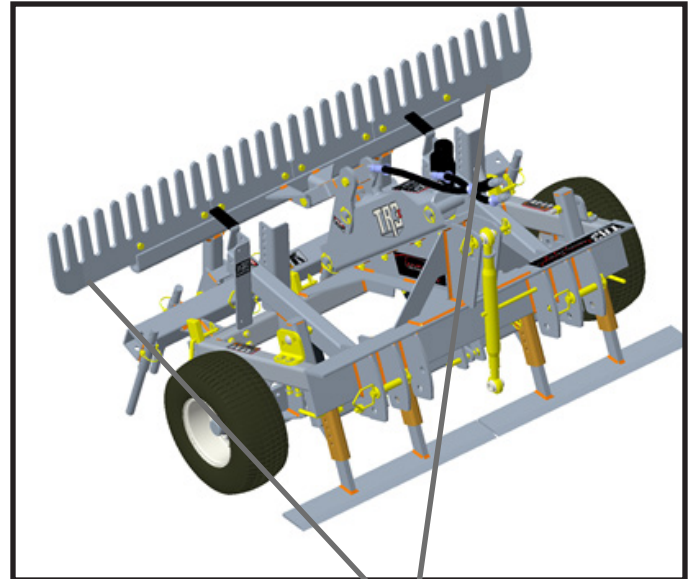


Figure 5.

Assemble out rake sections as shown with bent ends angles upward.

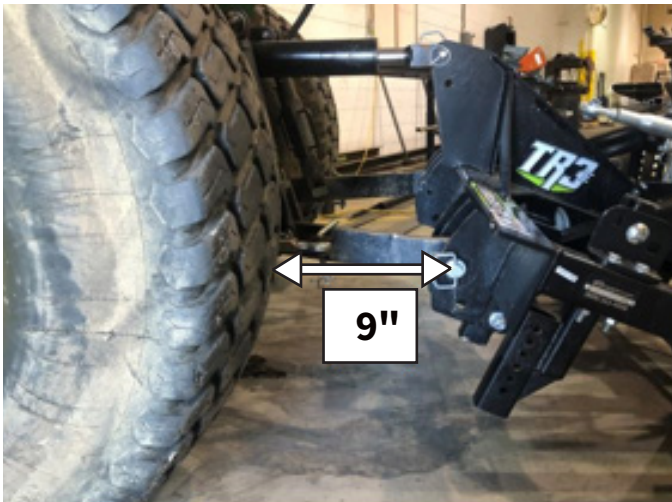


Figure 6.

Operation Guide

CAUTION: Ensure you have at least 9 inches between the rear tire and the end of the lower 3-point arm.

If tool is closer than 9", adjust Toplink to top hole on tractor and or add a "quick attach" hitch. If using a "quick attach" style hitch, use bushings (kit P/N 10-90285) supplied with your machine to prevent the tool from disconnecting unexpectedly.



3 Point Connection

- Ensure Lower arms are stabilized to prevent excessive side movement.
- Slowly back up the tractor to the TR3-E while using 3-point hydraulic control to align hitch holes in lower 3-point arms with hitch pins on the implement.
- Secure lower arms to the implement using the hitch pins provided.
- Attach the tractor to the lower arms. There are two connecting holes on the TR3-E for the bottom arms of the tractor to attach to.

If the TR3-E is connected to the bottom holes, be sure to connect the top link in the bottom hole on the mast as well. Likewise, if the lower arms of the tractor are connected to the TR3 in the top hole, connect the top link using the top hole as well. The top hole is the suggested hole for operating your TR3-E (see **Figure 7**). If the unit is regularly trailered or the tractor has limited lift height, the lower holes will give added clearance (see **Figure 8**).

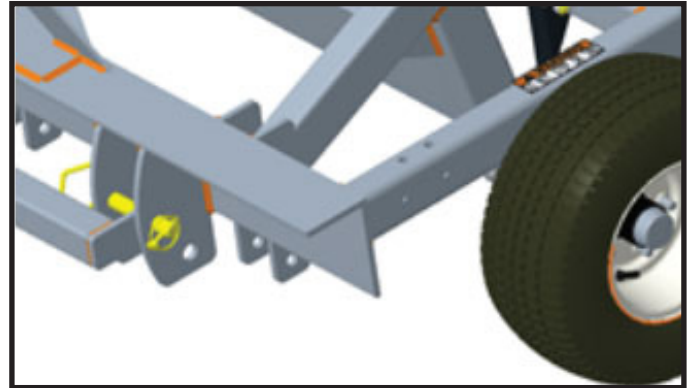


Figure 7.

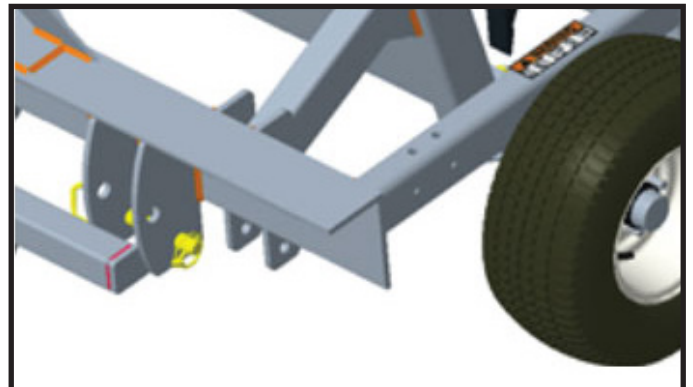


Figure 8.

Each TR3-E is shipped with a complimentary 20 inch top link. Some tractors will require a different top link, such as what came with it from the factory, or that are available for purchase at a local dealer.



Sub-Compact Tractors:

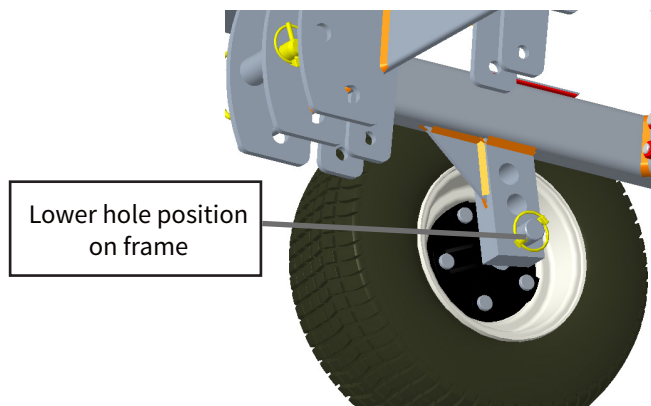
If using a sub-compact tractor without a front end loader, front mounted counterweights may be needed to be able to use the ABI tool (see **Figure 9**). This will ensure the front end of the tractor remains securely on the ground without loss of steering control. If a front end loader is installed, this may minimize the need for front mounted counterweights. Additionally, the speed of the 3 point hitch system may need to be adjusted so it runs as slow as possible. This will aid implement control while rough grading and help to ensure no material pile is left behind when lifting the tool at the exit to the work area. Please consult the tractor owner's manual for this adjustment.



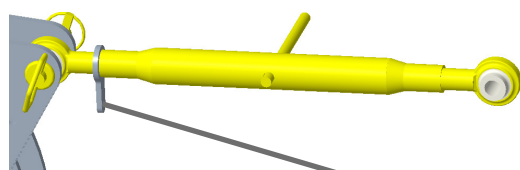
Figure 7:

Front mounted counterweights

Before setting up the tool, confirm that the wheels are set in the standard operating position (lower hole).



- Next, adjust the top link to level out the tool. A good starting point is to have around 1" of thread showing on both ends of the Toplink then turn the top link to contract or extend the linkage until the upright towers of the leveling bar are vertical.
- Once the desired pitch is set, tighten threaded lever on the Top link up tight to the mid section of Top link to prevent Top link from loosen during operation.
- This may need to be reset when the tool is in the ground with the tractor pulling forward and pressure is on the unit.

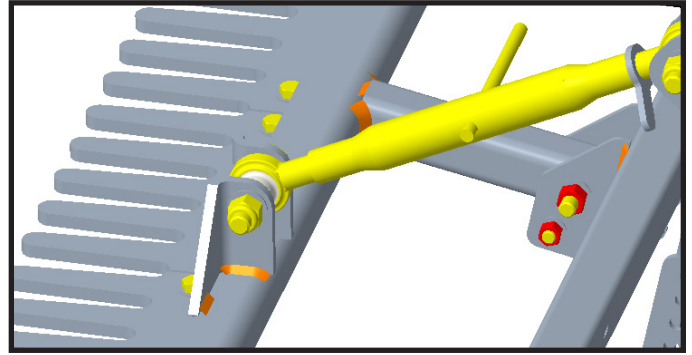


Threaded Lever



- Now, adjust the finish rake on the back of the tool. Adjust the how much material is being moved with the rake by turning the Toplink attached to the rake clockwise or counter-clockwise to desired pitch. A good starting point is to have the tips of the rake about 1/2" below the material surface so the unit always carrying some material on the rake, but not so much to cause material to consistently build up and plug or spill over top of the middle part of the rake or leave furrows off the ends of the rake.
- Then, adjust from there to achieve desired surface finish look. Adjustments may be needed accounting for moisture changes or vegetation growth in the material.

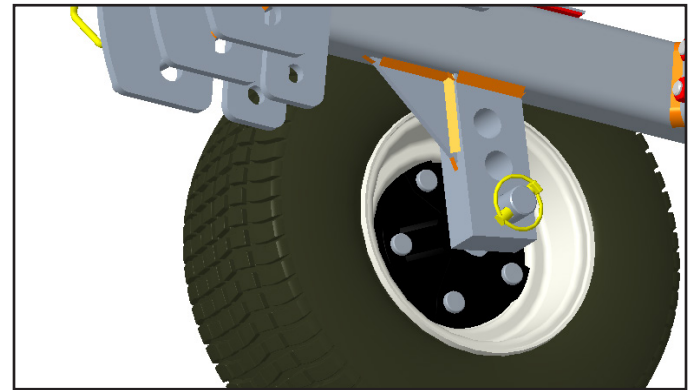
- Then, adjust from there to achieve desired surface finish look. Adjustments may be needed accounting for moisture changes or vegetation growth in the material.



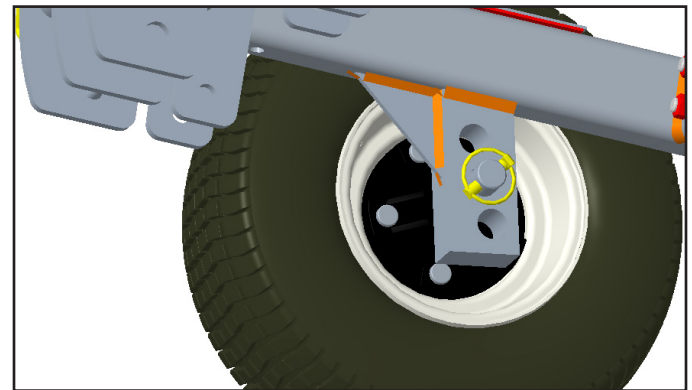
Gage Wheels (tires):

The wheels have three operating positions:

The bottom hole on the axle block is the standard operation position for general arena maintenance.

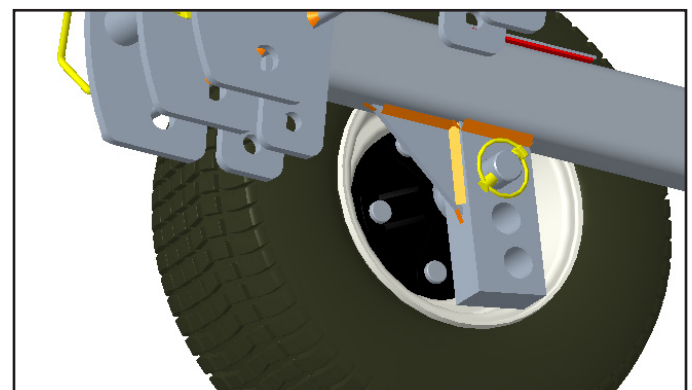


The center hole will lower the frame deeper into the material for more aggressive grading ideal for renovation work and can be used for arena and driveway renovation. When the wheel location is changed, adjustments may be needed to the leveling blade.



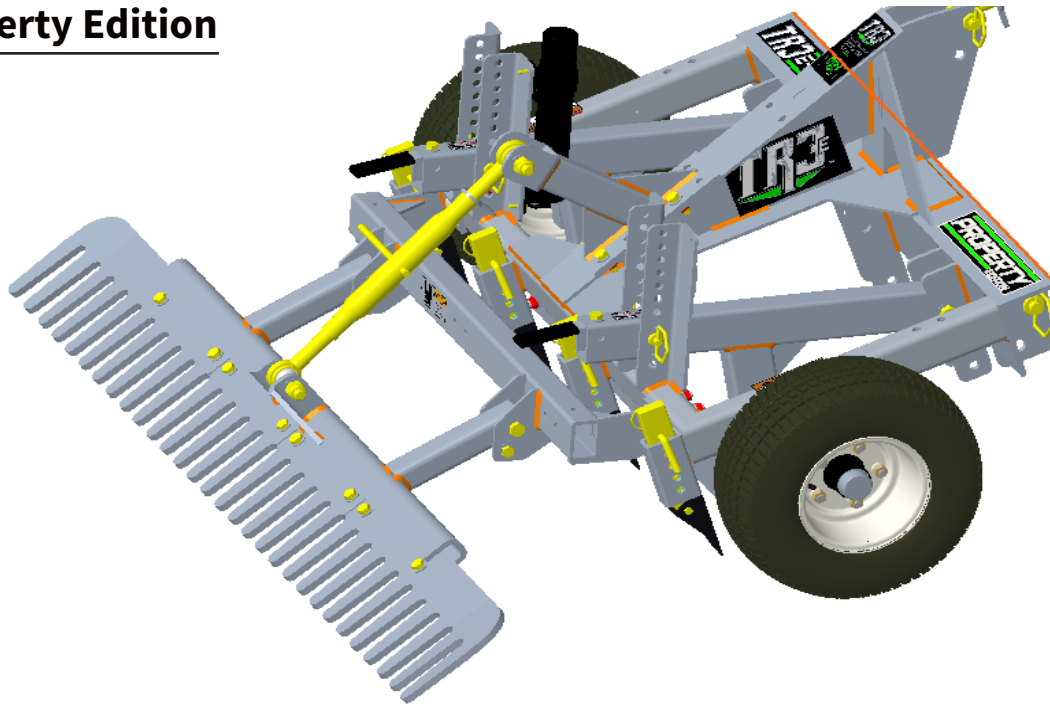
The top hole is for aggressive ripping. This setting will allow the greatest amount of depth. When the wheel location is changed, adjustments may be needed to the leveling blade.

NOTE: The operating positions of the wheels can be pinned higher on one side than the other in addition to adjusting the tractor 3pt hitch for crowning driveways or creating drainage swales to remove water.

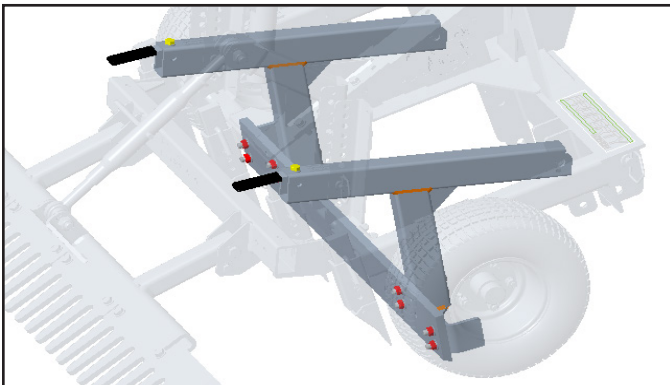


Components

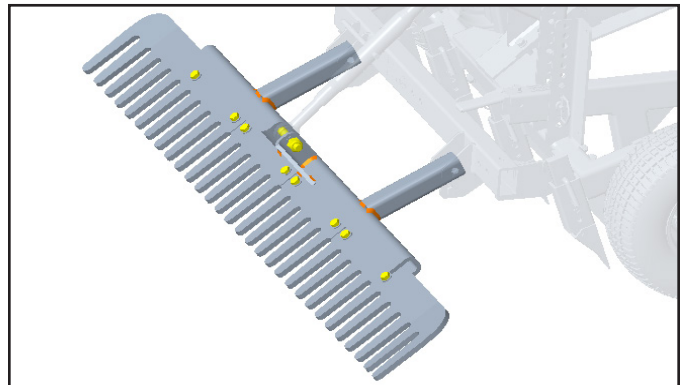
Property Edition



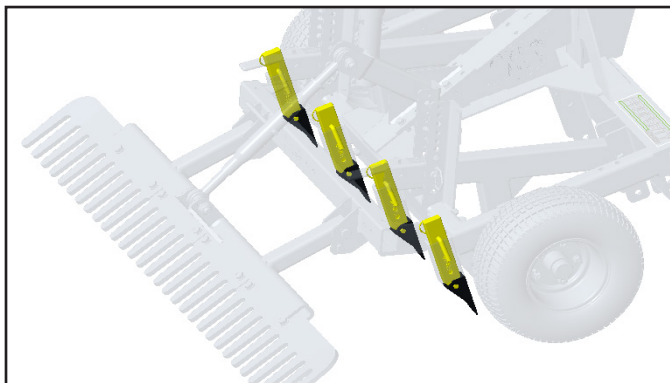
LEVELING BLADE



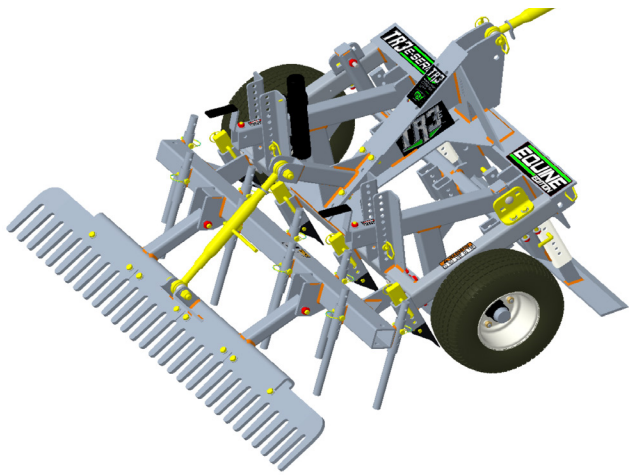
FINISH RAKE



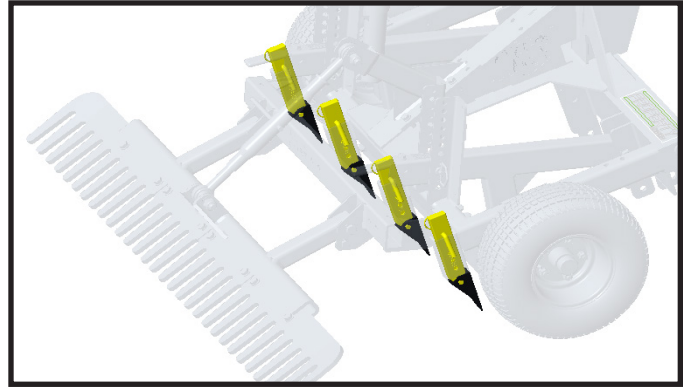
SCARIFIER



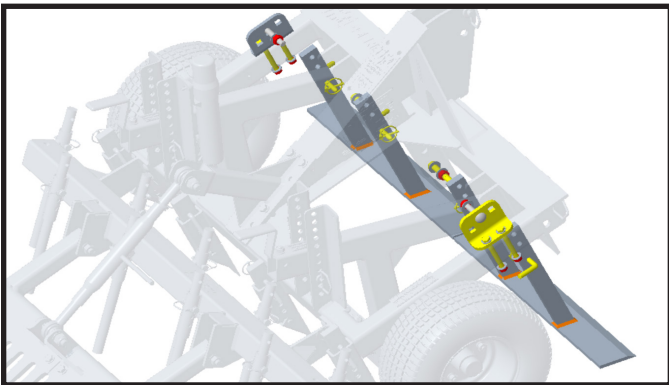
Equine Edition



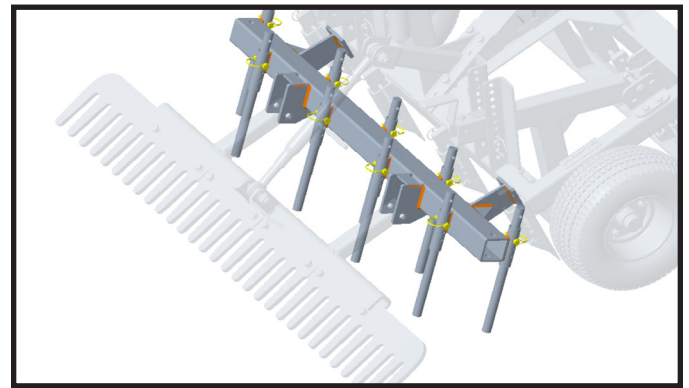
SCARIFIER



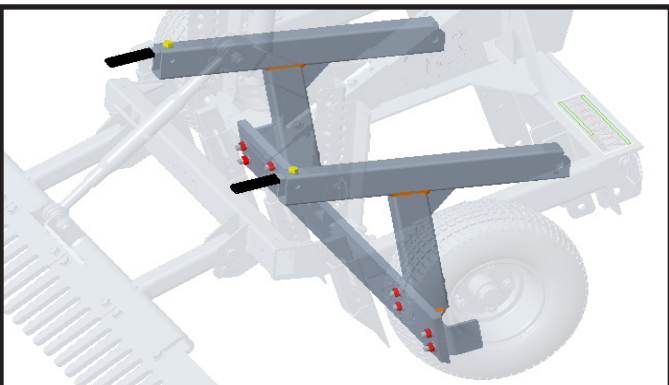
PROFILE BLADE



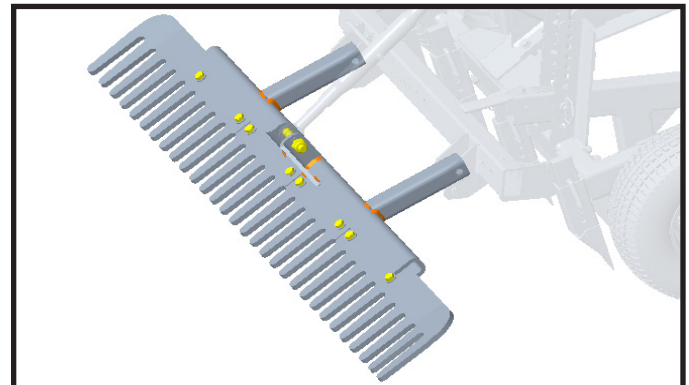
GROOMING RODS



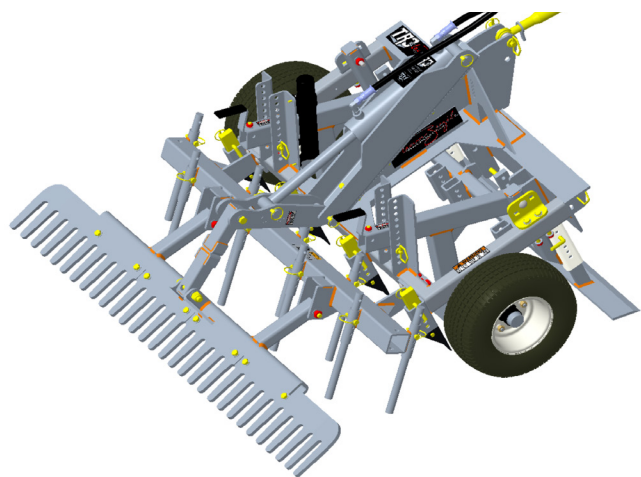
LEVELING BLADE



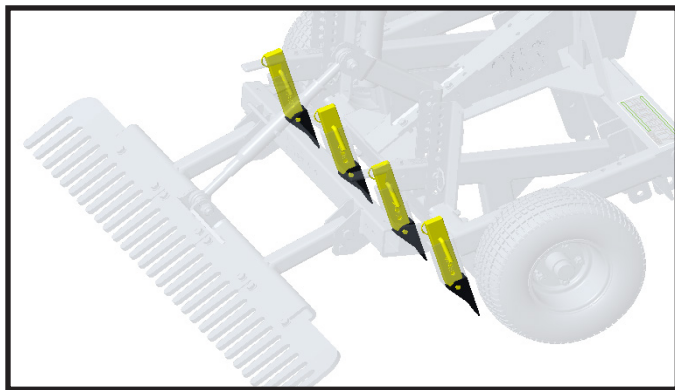
FINISH RAKE



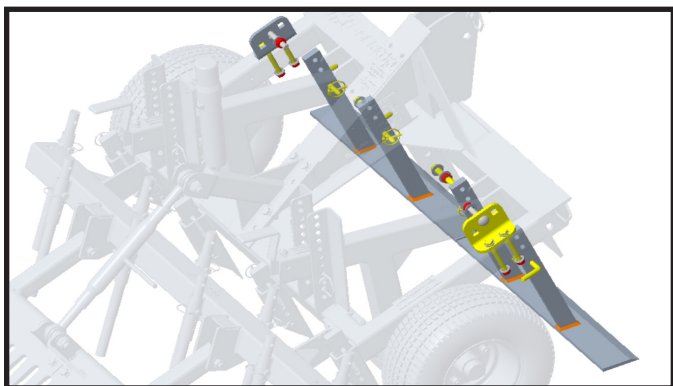
Trevor Brazile Edition



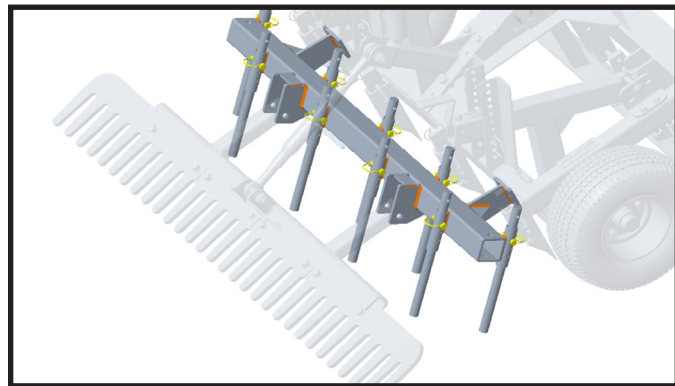
SCARIFIER



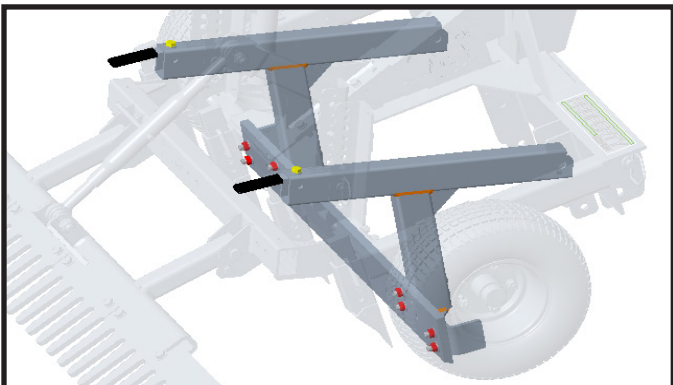
PROFILE BLADE



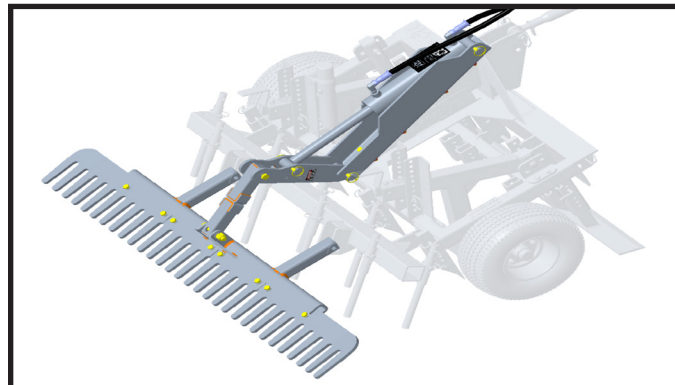
GROOMING RODS



LEVELING BLADE

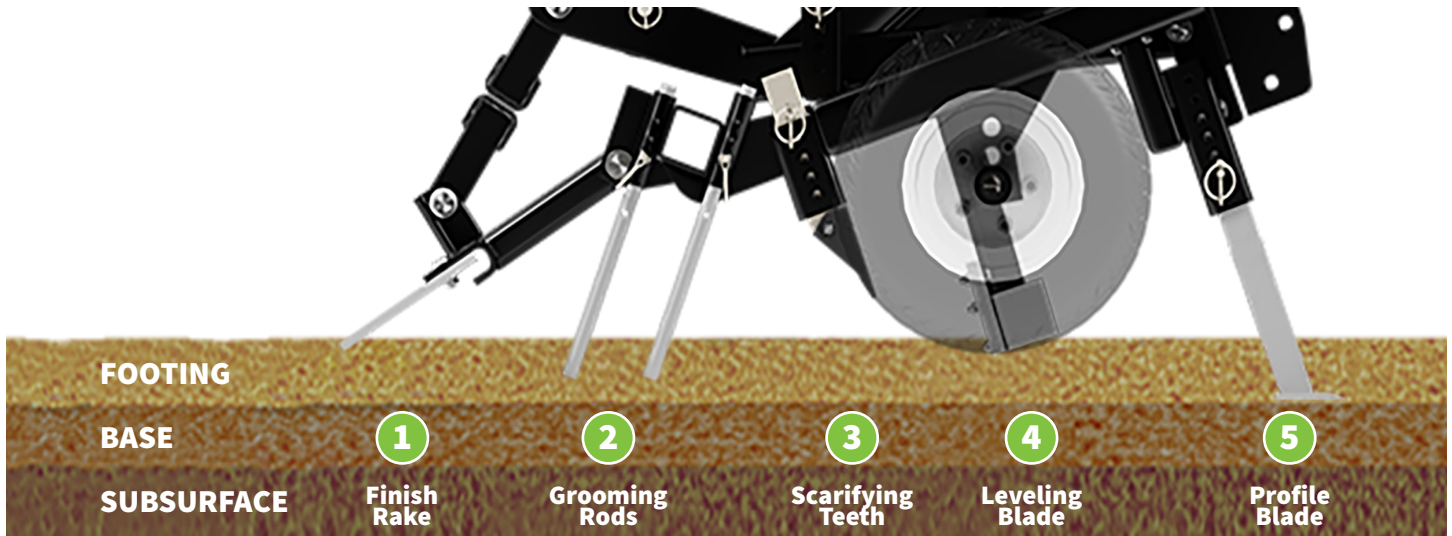


FINISH RAKE



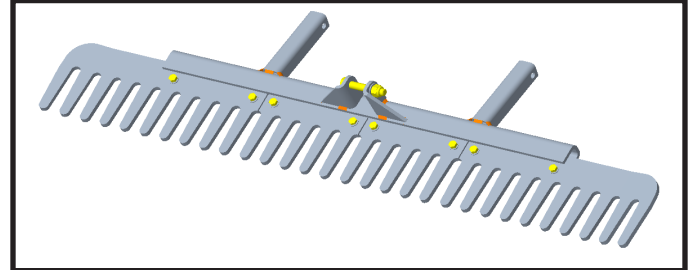
Components (cont'd)

All of the components on the TR3-E are adjustable using the compatible pins. By removing these pins, adjust the components up and down within their respective pockets. The Profile Blade (1), Leveling Blade (2), Scarifiers (3), Leveling Blade (4) and Profile Blades (5) all have multiple adjustment positions for fine tuned usage.



Finish Rake/Comb

Breaks up clumps of material and leaves a beautiful signature finish. Finish Rakes are made up of smaller sections to decrease cost when needing to replace a worn/damaged tooth. Instead of having to replace the entire rake, individual sections can be ordered.

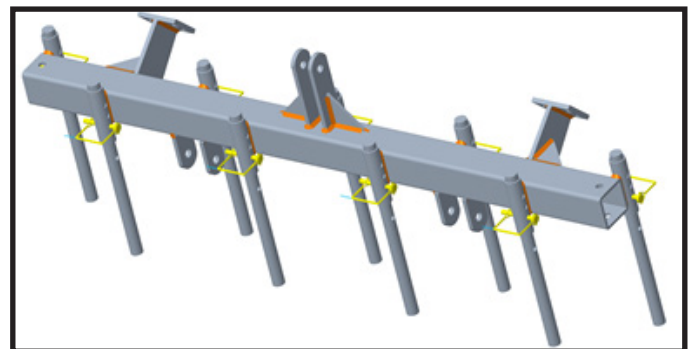


Grooming Rods

The grooming rods are used on the Equine and Trevor Brazile units and are for daily arena grooming after the original breakup of compaction by the scarifiers. The grooming rods can be adjusted by 1/2" increments to a depth of up to 6". As the grooming rods wear, they can be adjusted downward for extended life.

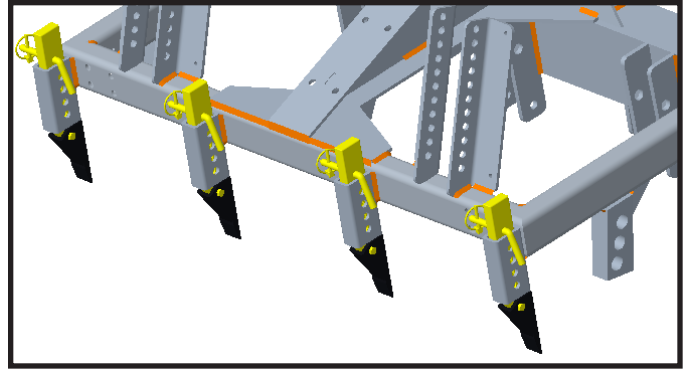
The Grooming rods are like small mixers that break up and soften the material or footing. The Grooming rods can be raised to only soften the top half of the footing and leave the bottom half of the footing firm.

NOTE: Grooming rods are NOT recommended for gravel work.



Scarifying Teeth (Ripping Teeth)

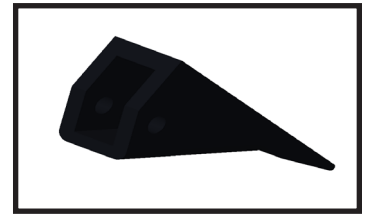
The scarifying teeth loosen the ground to eliminate hard spots and easily penetrate compacted arena footing and gravel driveway material or soil. They are primarily used to break up compaction and can be used in conjunction with the leveling blade and the finish rake. During daily arena maintenance, the scarifiers can be pinned up and out of play. Excess wear will be created by using them during daily grooming.



Bolt On Scarifier Tips

The TR3-E units have replaceable bolt on tips on the scarifying teeth. This feature not only ensures affordable and easy maintenance of this wear part, but also ensures peak ground penetration no matter the ground condition. If the tips wear to the point that performance is diminished, simply replace them, restoring optimal performance.

Bolt on Scarifier Tip



Leveling Blade

The leveling blade can be used as an auto-leveling device when it is in the float position [no pins to lock it into position] (see **Figure 9**). If the blade is carrying too much material, it can be pinned higher by inserting the pins in the upright tower underneath the handle of the leveling bar (see **Figure 10**). It can also be locked into place by using the adjustment pins above the bar to create a box blade on the tool (see **Figure 11**).

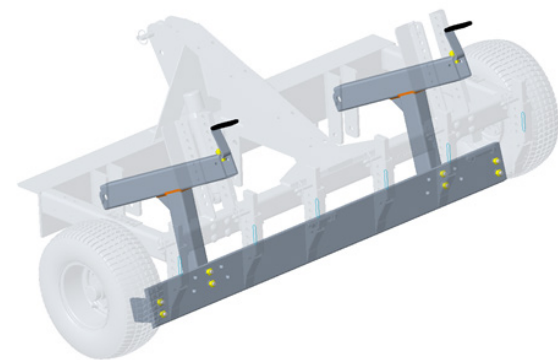


Figure 9.

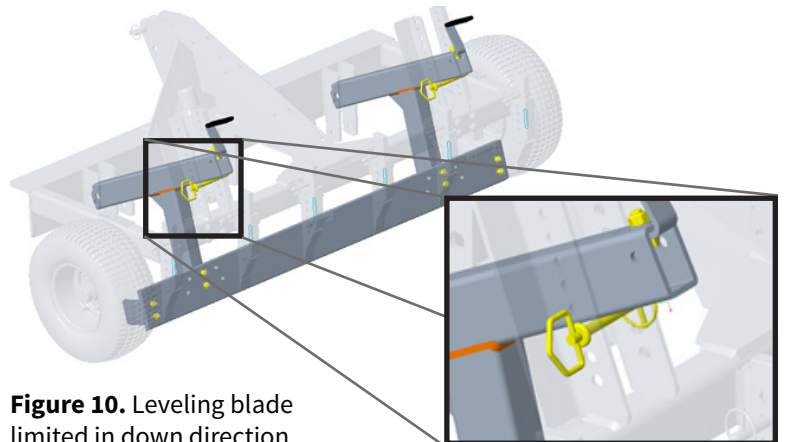


Figure 10. Leveling blade limited in down direction by pinning below the arms.

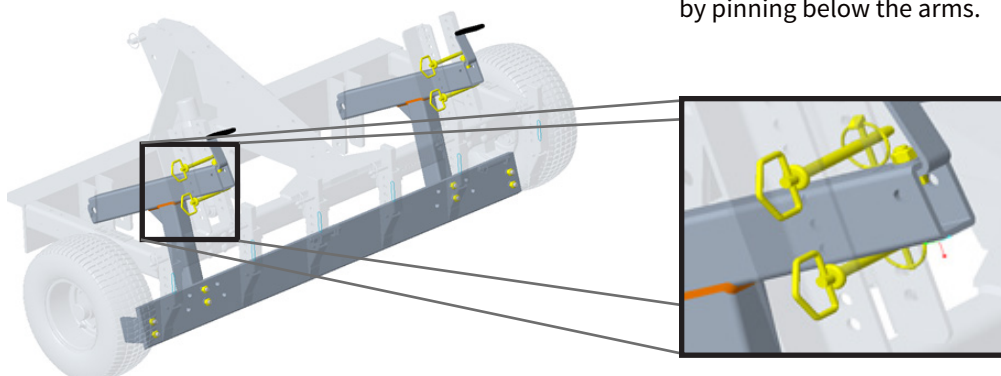
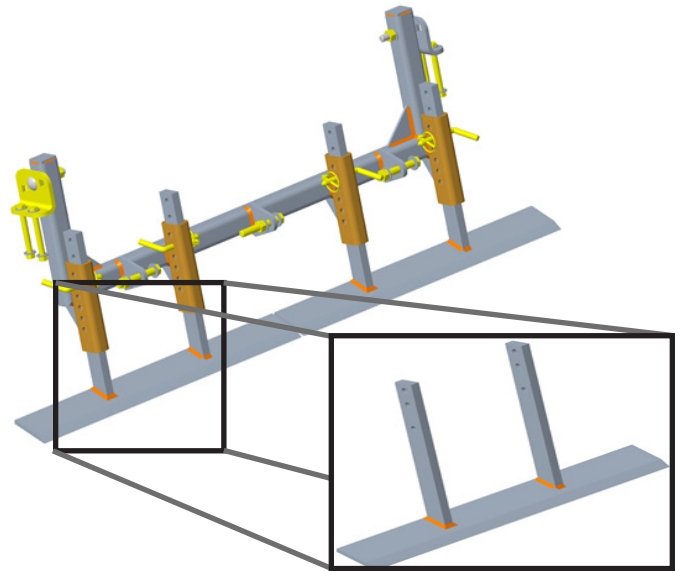


Figure 11. Leveling blade locked in place by pinning above and below the arms.

Profile Blades

The profile blades are used on the Equine and Trevor Brazile units and can operate at a depth of up to 4" and are adjustable at $\frac{1}{2}$ " increments. This attachment cuts parallel to the arena grade, while riding along just above the base, to remove dangerous compaction layers and aerify the footing. This creates a sheet of loose material. The grooming rods are then able to break up the loose material as it flows through the tool. The Profile Blade attachment ensures that what the horse and rider see on the top surface, is also what the horse feels when his hooves penetrate into the footing material. It is important to remember that the profile blades are used for grooming, not the renovation of the arena.

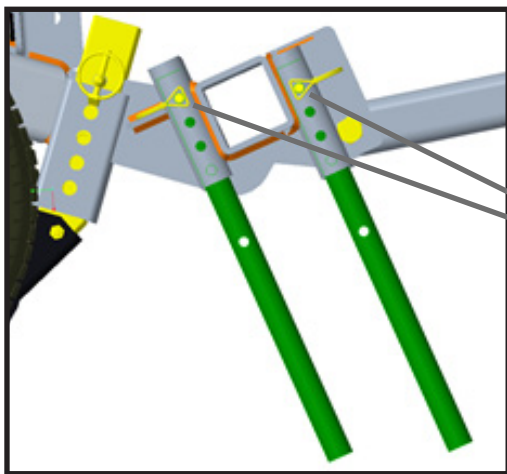
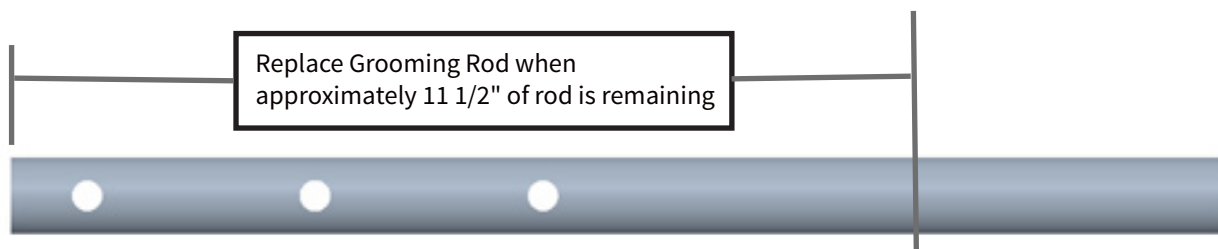


Replacement Parts

All of the ground engaging components are considered wear parts and will need to be replaced as they wear out from use. To reorder, please contact the ABI Support department at 877-788-7253.

Grooming Rods

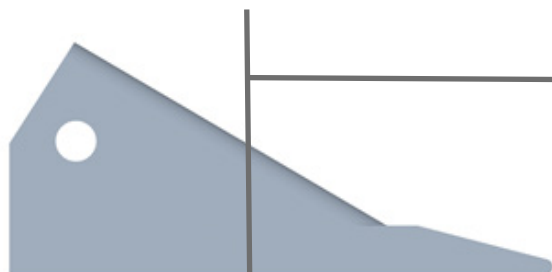
Grooming Rods should be replaced if the rod is bent beyond repair or have worn beyond the ability to function (approximately 11 1/2" of rod remaining)



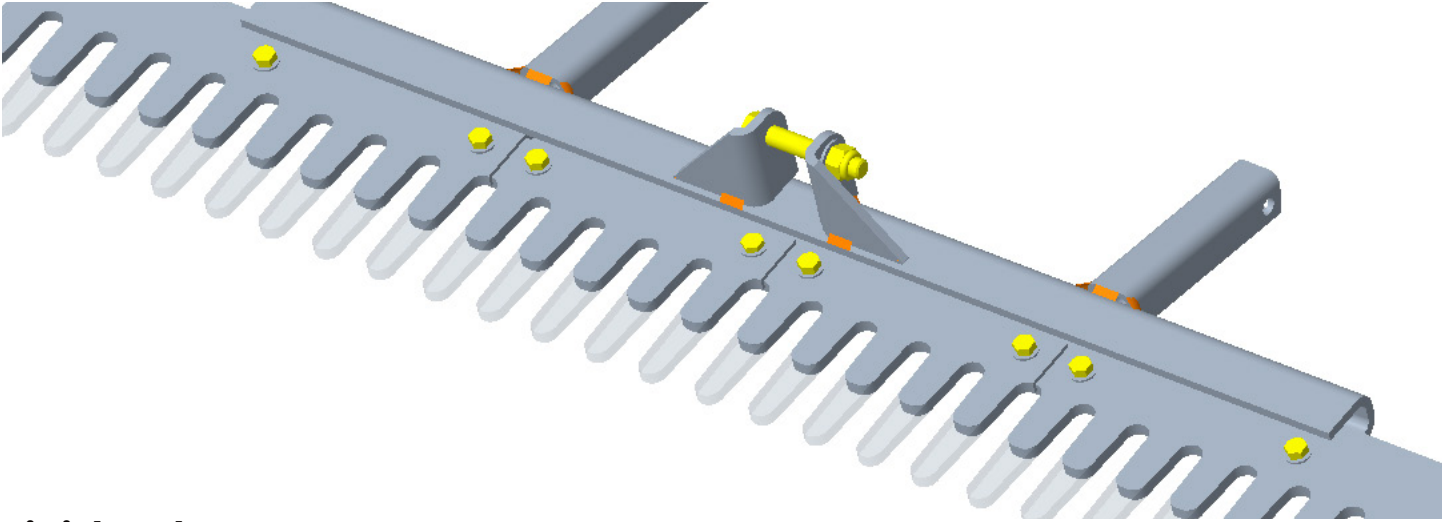
As the Grooming Rod wears, it is recommended to NOT mount the top hole in the Grooming Rod any lower than the top hole in the frame bracket - a bent rod or damage to the frame may occur.

Scarifier Tips

Scarifier Tips should be replaced when the tip is worn up to where the phone number is on the side of the Scarifier Tip. Requires (2) 1/2" wrenches to remove.



Replace scarifier tip when approximately worn up to phone number on side of tip.



Finish Rake

As the teeth of the finish rake wear, angle adjustment of the rake is required to maintain a nice finish of the material. If the angle of the finish rake no longer provides the required finish due to excessive rake wear, replacement is required.

Maintenance

Toplink - Be sure to keep the threaded parts of toplinks greased so they don't seize over time.

Finish Rake - Occasionally over the life the tool, bent finger(s) on the finish rake may appear. If this occurs, place a pipe over the bent finger and use the pipe as leverage to straighten the finger back out.

Grooming Rods - If one of the grooming rods appears to be bent, use a vice and hammer to bend it back straight.

Finish - To prevent rust from developing on a surface due to scratches on the tool, use a rust stopping primer and paint to refinish the damaged area.

Wheels and Hubs - The bearings in the hubs on the TR3-E should be greased every 3 months. They should also be greased before any long period of storage. (see **Figure 13**)

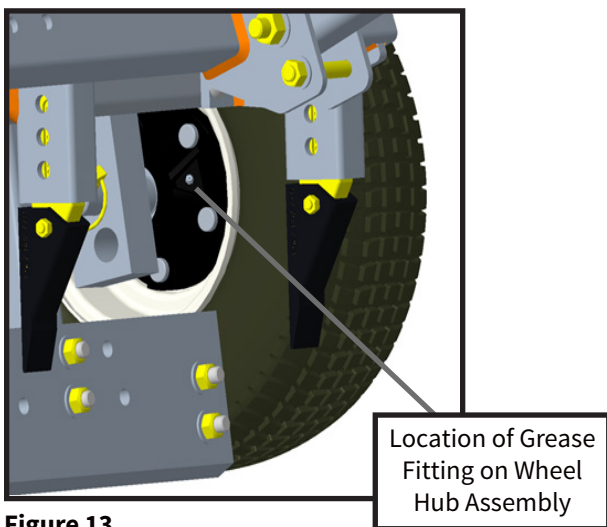


Figure 13.

Troubleshooting & FAQs

- **Profile blades are making a chattering noise when dragged.**

This is probably due to the profile blades not being level. This can cause them to chatter or create waves in the arena. To resolve this issue, double check to make sure the upright towers are vertically level when engaged in the material.

- **One of the tires is locked up or wobbling.**

Remove the hub from spindle and check the bearings. In most cases, tires lock up due to the bearings not being greased, leading to bearing failure.

- **The arena footing is too fluffy.**

Take the grooming rods out of play then lock the leveling blade in place by pinning above and below the leveling blade arms. This will create a compacting effect with the now fixed blade. The finish rake also has a compacting effect and can be adjusted to carry more material, thereby re-firming the footing.

- **Tractor is bogging down.**

First check how much material is on leveling blade. If the material is flowing over the blade, then pin the blade up a hole or two, allowing more material to pass under the blade. Check the depth of grooming rods and scarifier tips. Attempting to rip too deep in one pass, the more tension put on the tractor and the more likely the tractor is going to bog down. Suggest to start decompacting the 1st 2" until loose then drop down to 4" and so on.

- **Trouble steering.**

If the tractor is not following the front tires or lacking front-end traction, front end weights may need to be added. Check the weight requirements in the tractor's owner's manual.

- **Profile Blades riding on top of dirt compacting the footing .**

If the Profile Blade edge is angled upward due to the type of tire used on the tractor or how high the tractor sits off the ground or how long/short the 3 point hitch is, it could cause the blades to ride up on top of the dirt and compact the footing. One solution to try and correct this is to adjust the bolts (see **Figure 12**) to a different hole location – this will change the pitch of the profile blades. Another reason for Profile Blades riding on top of dirt compacting the footing is if the Leveling Blades are parallel to the ground to groom just the top ½" of the material, the blades may ride up on top of the material compacting it. Try slightly adjusting the angle of the blades by moving the bolts in **Figure 12** so that the edge of the blades are digging into the top ½" of the material. Drive 15' to 20' then check to see if the blades are at the desired depth and adjust as necessary.

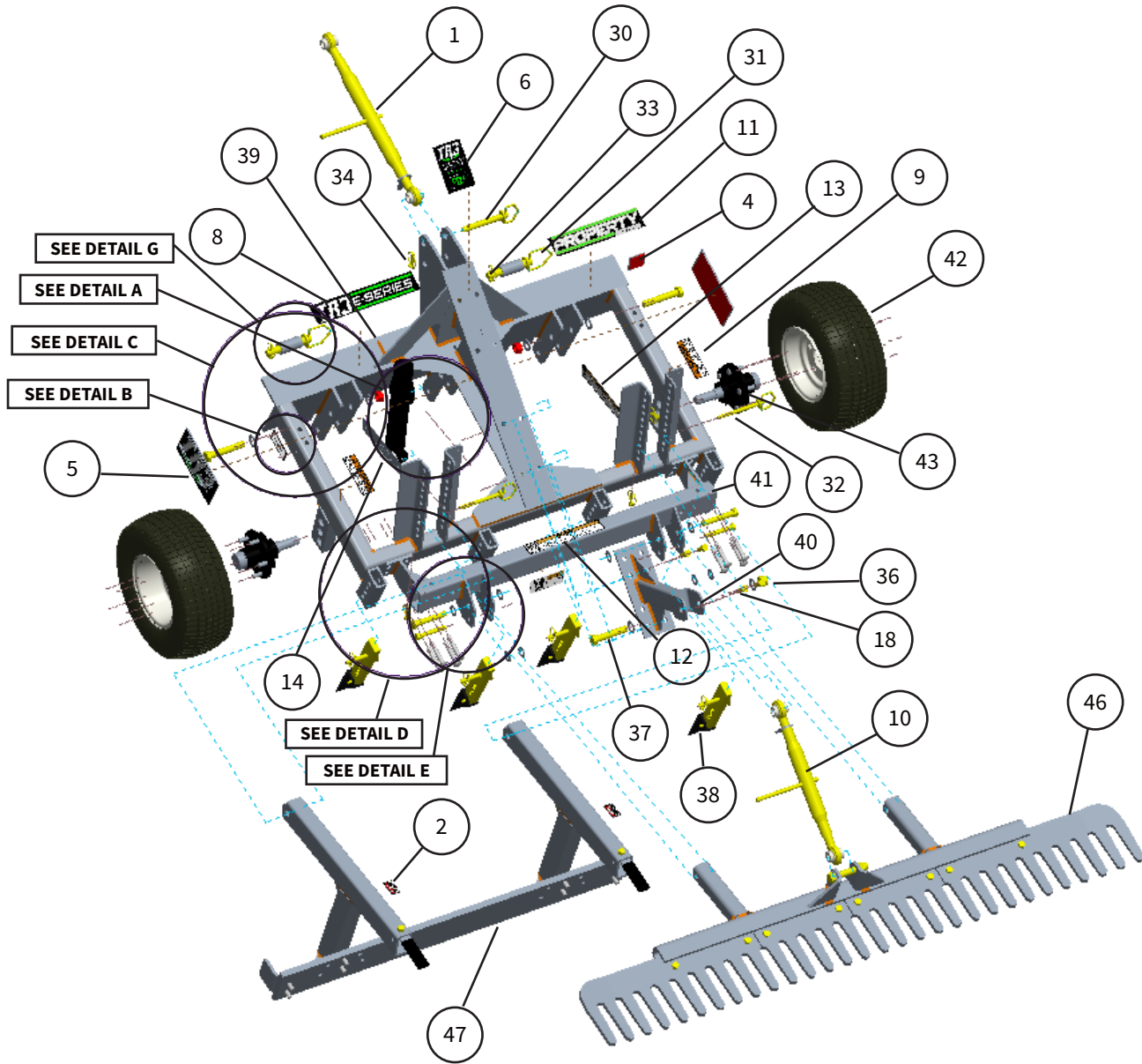


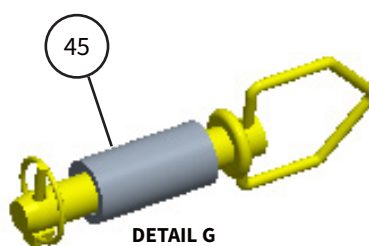
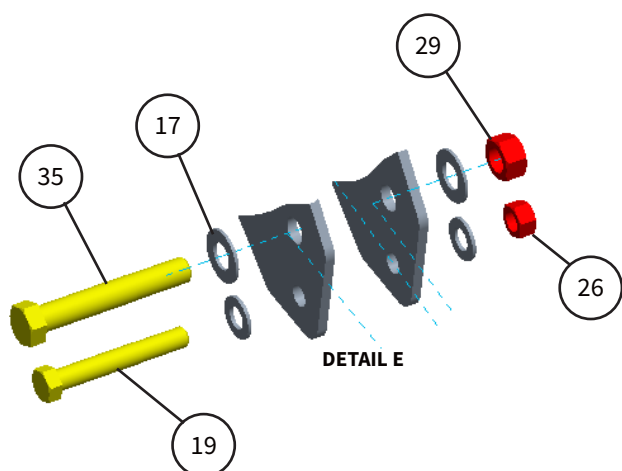
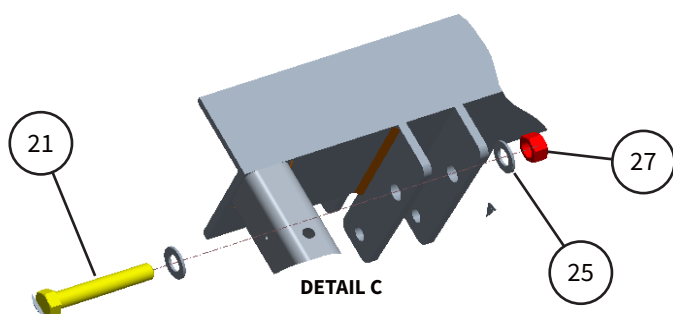
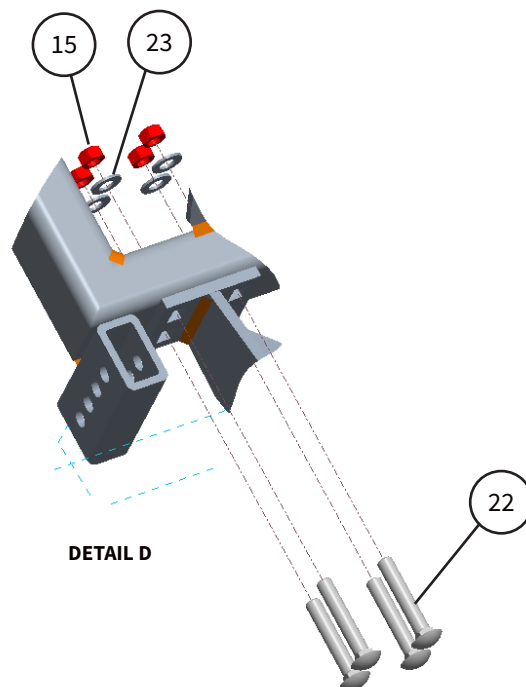
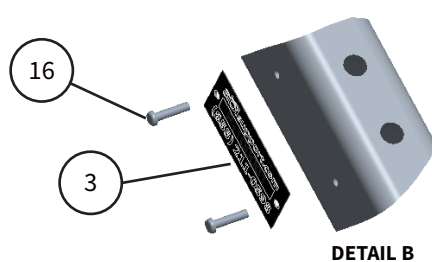
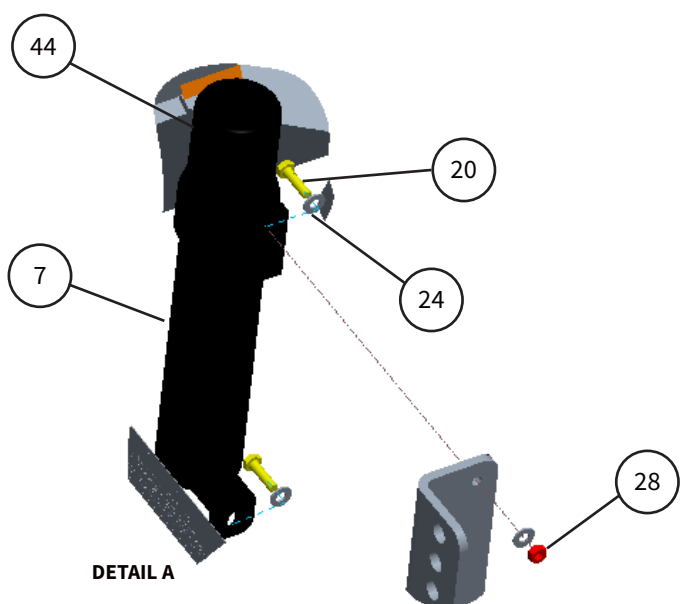
Figure 12.

3 hole positions (on both sides of the unit) to adjust pitch (angle) of Profile Blades.

Parts Description

Property Edition - 6FT/7FT/8FT



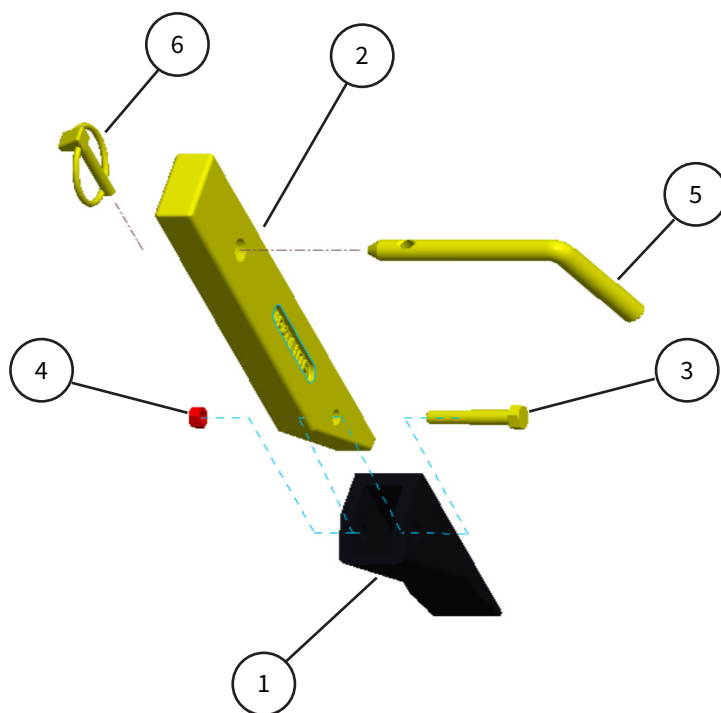


Item 45 in DETAIL G (10-90285 KIT: BUSHING QUICK HITCH: TR3 E) is only needed when a Quick Hitch is being used to attach the unit to the tractor.

ITEM	PART #	DESCRIPTION
1	10-10078	TOPLINK, 21" W/LOCK:ZINC
2	10-10096	LBL:PINCH POINT A 1" X 2"
3	10-10161	ABI SERIES SERIAL NUMBER PLATE
4	10-10444	LABEL: DO NOT PUSH BACKWARDS: TR3 E
5	10-10447	LABEL TR3 E MAST
6	10-10448	LABEL: BRANDING PHONE NUMBER: TR3 E
7	10-10449	TR3 E MANUAL CANISTER
8	10-10451	LBL: TR3 E SERIES 6' TR 3 E
9	10-10446	LBL: TR3 E SERIES 7' TR 3 E
9	10-10446	LBL: TR3 E SERIES 8' TR 3 E
9	10-10452	LABEL: DO NOT STEP ON TIRE
10	10-10588	TOPLINK: 17" CLOSED CAT I
11	10-10646	LBL: TR3 E SERIES 8' TR 3 E
12	10-10649	LBL: LARGE SUB BRAND: TR3 PROPERTY 7'
12	10-10649	LBL: LARGE SUB BRAND: TR3 PROPERTY 8'
12	10-10976	LBL: WARNING - CRUSHING-PINCHING
13	10-10977	LBL: WARNING - FALLING - BLADE
14	10-10978	LBL: WARNING - READ - MANUAL
15	10-20050	1/2-13 TOP LKGRC
16	10-20104	RIVET: .5-.625 GRIP: SHOP SUPPLY
17	10-20145	5/8 SAE F/W ZNC
18	10-20164	HX HD BOLT:1/2-13 1.5":ZINC GR5
19	10-20172	HX HD BOLT:1/2-13 3.5":ZINC GR5
20	10-20175	HX HD BOLT:1/4-20 1":ZINC GR5
21	10-20179	HX HD BOLT:3/4-10 4.5":ZINC GR5
22	10-20184	CARR BOLT:1/2-13 3":ZINC GR5
23	10-20194	FLT WSHR:1/2 SAE: CL ZINC
24	10-20196	FLT WSHR:1/4 SAE:CL ZINC
25	10-20197	FLT WSHR:3/4 SAE GR5:ZINC

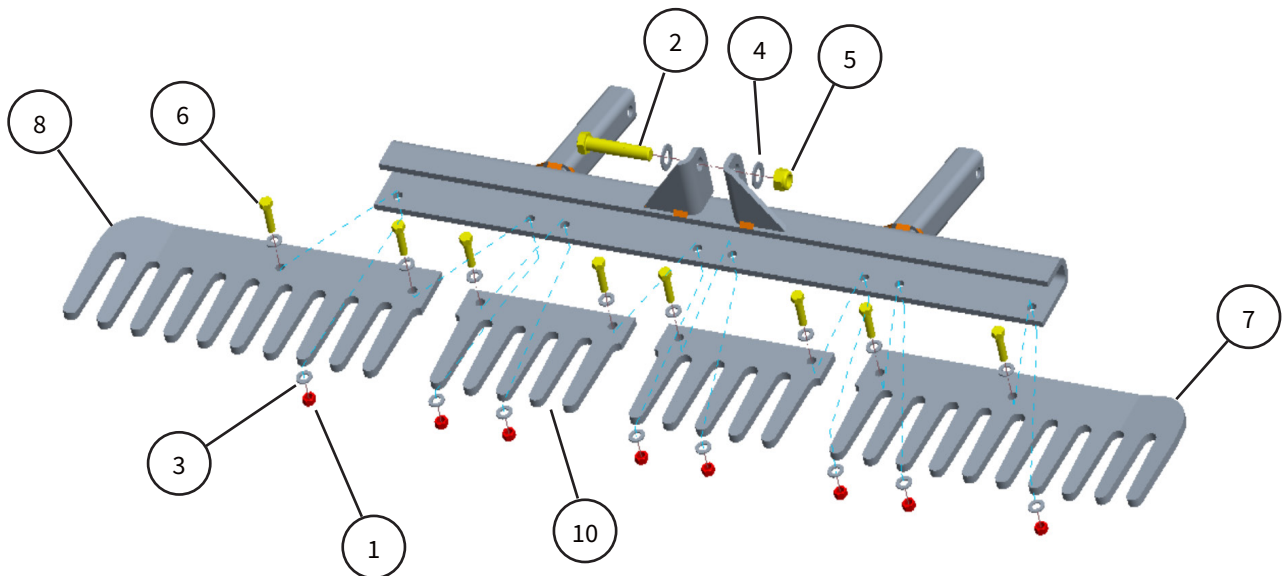
ITEM	PART #	DESCRIPTION
26	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
27	10-20206	NYLOCK NUT:3/4-10:ZINC YEL GR 8
28	10-20208	NYLOCK NUT:1/4-20:ZINC GR 5
29	10-20209	NYLOCK NUT:5/8-11:ZINC CL
30	10-20220	HITCH PIN:3/4"X4.25":ZINC
31	10-20228	HITCH PIN:7/8" X 5":ZINC
32	10-20230	HITCH PIN:1/2" X 5":ZINC
33	10-20232	LYNCH PIN:1/4"X1.25":ZINC
34	10-20233	LYNCH PIN:7/16"X1.25":ZINC
35	10-20291	HX HD BOLT:5/8-11 4.0":ZINC GR5
36	10-20344	NYLOCK NUT:3/4-10 :ZINC GR5
37	10-20361	HX HD BOLT:3/4-10 4": ZINC GR5
38	10-40019	9" SCARIFIER WITH HARDWARE
39	10-40322	WLDMT:FRM:6' TR3 E SERIES TB
40	10-40370	WLDMT: SUPP MEMBER: TR3E V2
41	10-40371	WLDMT: 6' RAKE CONNECT: TR3 PROPERTY
42	10-40372	WLDMT: 7' RAKE CONNECT: TR3 PROPERTY
42	10-40373	WLDMT: 8' RAKE CONNECT: TR3 PROPERTY
42	10-60006	TIRE:16.5x6.50x8 TURF:5 ON 4.5 WH OFFSET RIM
43	10-60058	HUB ASM:5 ON 4.5":1" ID BRNG
44	10-80049	MANUAL: TR3E: HARDCOPY
45	10-90285	KIT: BUSHINGS QUICK HITCH: TR3 E
46	10-90316	ASM:RAKE:6' TR3 E SERIES TB
46	10-90317	ASM:RAKE:7' TR3 E SERIES TB
46	10-90318	ASM:RAKE:8' TR3 E SERIES TB
47	10-90351	ASM:LEVEL BLADE:6' TR3 PROPERTY SERIES
47	10-90352	ASM:LEVEL BLADE:7' TR3 PROPERTY SERIES
47	10-90353	ASM:LEVEL BLADE:8' TR3 PROPERTY SERIES

9” Scarifier with hardware



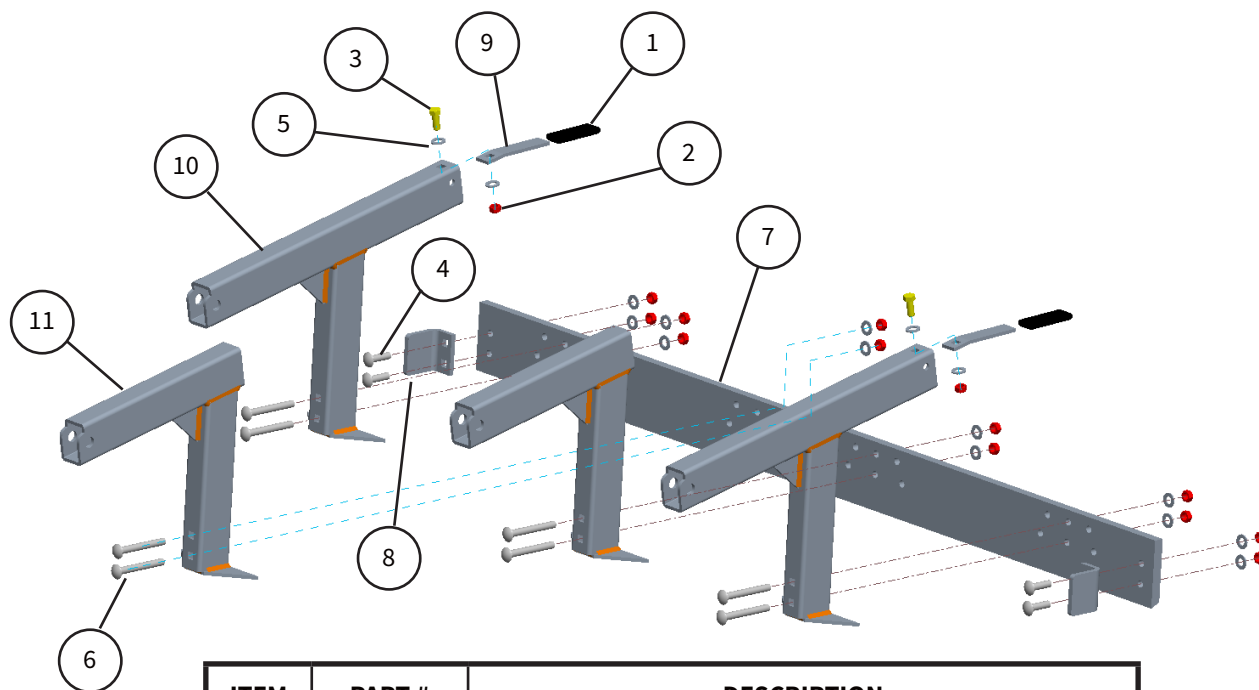
ITEM	PART #	DESCRIPTION
1	10-10047	TIP: SCARIFIER: ALL TOOLS
2	10-10048	9" SCARIFIER SHANK
3	10-20121	5/16-18 X 1-3/4 HEX C/S GR 8 Z/YEL
4	10-20200	BASE HEXNUT
5	10-20221	BENT PIN:1/2"X3.5":ZINC
6	10-20232	LYNCH PIN:1/4"X1.25":ZINC

ASM: Rake: 6FT/7FT/8FT



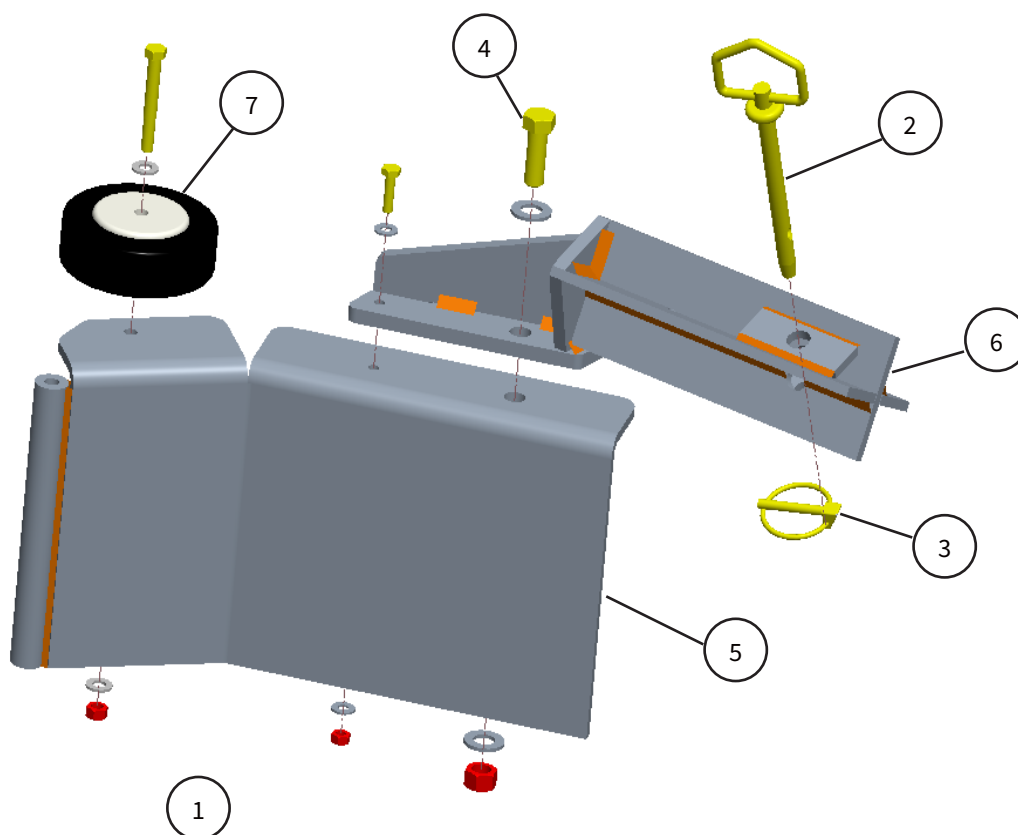
ITEM	PART #	DESCRIPTION
1	10-20050	1/2-13 TOP LKGRC
2	10-20179	HX HD BOLT: 3/4-10 4.5": ZINC GR5
3	10-20194	FLT WSHR: 1/2 SAE: CL ZINC
4	10-20197	FLT WSHR: 3/4 SAE GR5: ZINC
5	10-20344	NYLOCK NUT: 3/4-10 : ZINC GR5
6	10-20359	HX HD BOLT: 1/2-13 1.75": ZINC GR5
7	10-31074	24" FINISH RAKE EXTENSION SILVER, 1/2" RH
8	10-31075	24" FINISH RAKE EXTENSION SILVER, 1/2" LH
9	10-40358	WLDMT: RAKE 6': TR3 E V2
9	10-40359	WLDMT: RAKE 7': TR3 E V2
9	10-40360	WLDMT: RAKE 8': TR3 E V2
10	10-50001	12" COMB: .5" THICK

ASM: Level Blade: 6FT/7FT/8FT



ITEM	PART #	DESCRIPTION
1	10-10442	COVER: HANDLE DRAG BAR: TR3 E
2	10-20050	1/2-13 TOP LKGRC
3	10-20116	HX HD BOLT:1/2-13 1.25":ZINC GR5
4	10-20187	CARR BOLT:1/2-13 2":ZINC GR5
5	10-20194	FLT WSHR:1/2 SAE: CL ZINC
6	10-20333	CARR BOLT:1/2-13 4.5 ZINC GR5
7	10-31035	PLATE: DRAG BLADE 6': TR3 E
7	10-31036	PLATE: DRAG BLADE 7': TR3 E
7	10-31037	PLATE: DRAG BLADE 8': TR3 E
8	10-31053	WING:LEVEL BLADE:TR3 E
9	10-31399	PLATE: HANDLE DRAG BAR: TR3 E (6', 7' & 8' PROPERTY)
9	10-31076	PLATE: HANDLE DRAG BAR: TR3 E (6', 7' & 8' EQUINE & T.B.)
10	10-40332	WLDMT: DRAG BAR ARMS V2: TR3E
11	N/A	WLDMT: DRAG BAR ARMS MIDDLE 6' V2 : TR3E
11	N/A	WLDMT: DRAG BAR ARMS MIDDLE 7' V2 : TR3E
11	10-40333	WLDMT: DRAG BAR ARMS MIDDLE 8' V2 : TR3E

TR3 E-Series Option: 10-90266 KIT: Rail Blade Right



ITEM	PART #	DESCRIPTION
1	10-10876	INSTRUCTION SHEET: TR3 E RAIL BLADE
2	10-20230	HITCH PIN:1/2" X 5":ZINC
3	10-20232	LYNCH PIN:1/4"X1.25":ZINC
4	10-20339	KIT: TR3 E RAIL BLADE HARDWARE
5	10-40300	WLDMT: RAIL BLADE RIGHT: RASCAL
6	10-40313	WLDMT: RAIL BLADE ARM X BRACE: TR3 E
7	10-60069	WHEEL: RAIL BLADE: TR3E RASCAL

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Contact Information

ABI Attachments, Inc
520 S. Byrkit Ave.
Mishawaka, IN 46544

Customer Support

Email: support@abiattachments.com
Phone: 877-788-7253
Website: www.abisupport.com

To order parts or to speak to one of ABI's Customer Service Representatives contact us Monday to Friday 9am to 5pm EST.

The setup video for operation is available at abisupport.com under TR3 E-Series or by following this link: <https://www.youtube.com/watch?v=Fk3AJaPJNMY&feature=youtu.be>

For additional information on the use or setup of the TR3 E-Series, please contact the ABI customer support team at 855.211.0598.

Additional support videos are available at the ABI support page (abisupport.com) under each tool.

Warranty Information and Return Policy - Warranty and return policy information can also be found on the ABI support page under each tool. For additional questions regarding warranty or return policy, contact the ABI customer support team at 855.211.0598.

