

Owner's Manual

RASCAL Series Models

Infield Pro | MVP



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 left side of the frame above the Scarifier/Profile Blade mounting tubes 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

Table of Contents

General Info & Warranty.....	3
Safety.....	4
SafetyLabels.....	7
Unpacking Instructions.....	8
Setup	9
Operartion Guide.....	12
Components.....	16
PartsDescription.....	18
Replacement Parts.....	27
Options.....	29
TroubleShooting&FAQs.....	57
Maintenance.....	58
Footnotes.....	59

Product Manual Information

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General Information



LIMITED WARRANTY

Infield Rascal Models

36 Month Consumer, 12 Month Commercial, & 3 Month Rental

TERMS & CONDITIONS

“ABI” means ABI Attachments, Inc. 520 S Byrkit Ave, Mishawaka, Indiana 46544, 877.788.7253. The above referenced models are warrantied 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 and 3 months for rental use. Options are warranted for 12 months (3 months rental). This limited warranty is only valid on new equipment to the original purchaser with proof of purchase. Non-transferable.

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, abuse, accidents, or damage due to inadequate maintenance, storage, or exposure to corrosive materials including airborne salt. However, a 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 purchasing and performing replacement of normally wearing parts at own expense.

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 and direction. During the warranty period, warranty replacement 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 costs or international shipping costs (Outside of US or Canada) 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, in writing, for warranty consideration within the applicable warranty term 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 in 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 express or implied, including any warranty of merchantability, fitness for a particular purpose, or arising from 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, loss of time, loss of wages, or cost of hiring services to perform tasks normally performed by this product. 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.

Publish Date: 3/1/2021

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.

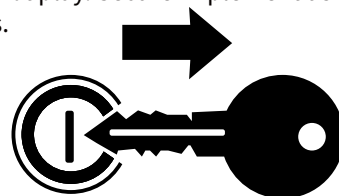
SAFETY PRECAUTIONS FOR CHILDREN

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 or implement, 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.

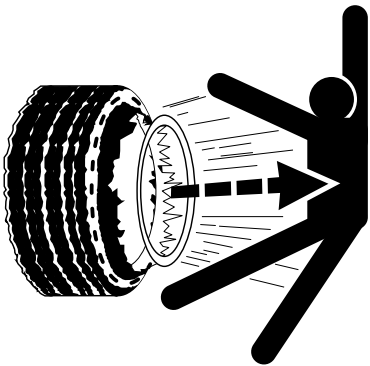
SHUTDOWN & STORAGE

- 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.

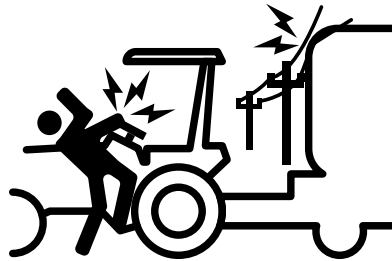


OPERATION SAFETY

- Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
- Stop implement immediately upon striking an obstruction. Turn engine off, remove key, inspect and repair any damage before resuming operation.
- Never operate tractor and implement under trees with low hanging limbs. Operators can be knocked off the tractor and then run over by implement.

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.



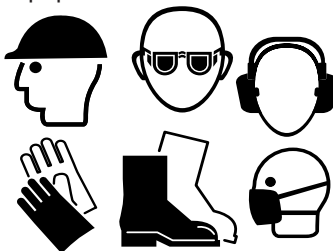
AVOID UNDERGROUND UTILITIES

- **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.



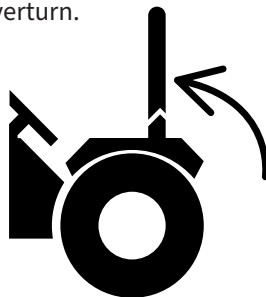
WEAR PERSONAL PROTECTION EQUIPMENT (PPE)

- 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.



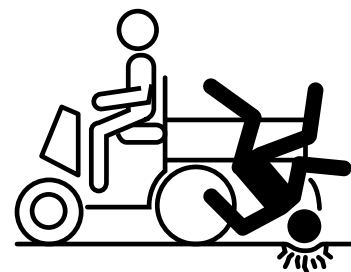
AVOID HIGH PRESSURE FLUIDS HAZARD

- 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.



Safety Labels

		⚠ WARNING 10-10976
<p style="text-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 style="text-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 style="text-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

Tools Needed:

- Gloves
- Safety Glasses
- Safety Shoes
- (2) 3/4" wrench or Socket set
- (2) 15/16" wrench or Socket set
- Razor Blade or knife
- Tin Snips / wire cutters
- Rubber Mallet or hammer
- Punch or 6" long (or longer) 3/8" ratchet extension

The unit may be shipped with several additional packages stacked on the skid depending on how many options were purchased (**Fig 1 and 2**).

Cut the banding securing the Rascal and packaging to the pallet. **Please be cautious when cutting the banding.** Cut the bands keeping your body out of the way to prevent injury due to shifted components falling during shipping (**Fig 3**).

Remove the plastic wrap holding the topline to hitch support assembly (**Fig 4**).

Remove zipties securing hitch bar assembly to finish rake assembly (**Fig 4**).

Do **NOT** remove the zipties holding the topline and front jack bolt to mat bracket bolt at this time (**Fig 5**). This will be done in the Setup section.

Make sure the delivery driver stays while you remove the individual packages so you can verify all parts are present and there is no damage. If there is any damage make sure to mark it on the bill of lading.



Fig 1.



Fig 2.



Fig 3.

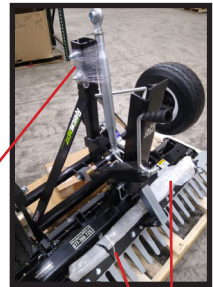


Fig 4.

Remove plastic wrap securing topline.

Remove zipties securing hitch bar assembly.



Fig 5.

Do **NOT** remove these zipties at this time.

Setup

1. Locate the hitch bar sent with the Rascal (**Fig 6**). The hitch bar is shipped ready to use for a ball hitch (**Fig 7**) but can be altered to be a pin hitch by removing the ball joint coupler using (2) 3/4" wrenches (or socket set) and set aside. Rotate the (2) plates that are on the underside of the tongue tube so the hitch pin holes are facing forward. Place (1) of the plates on the underside of the tongue tube and the other on top of the of the tongue tube (**Fig 8**) and replace the bolts, washers and nuts. Tighten nuts using (2) 3/4" wrenches (or socket set) (**Fig 9**).

2. The hitch bar will go into the slotted end of the tongue assembly on the frame (**Fig 10**). Remove the two bolts and nuts already installed on the tongue assembly (**Fig 10**). Slide the hitch bar into the slotted portion of the tongue assembly until the holes in the hitch bar line up with the holes in the tongue assembly (**Fig 11**). If the holes in the hitch bar do not line up properly with the holes in the tongue assembly because the tube is too tight, Slide the hitch tube into the slot and tap the end of the hitch tube with a rubber mallet or hammer until all the holes line up. Insert a punch or 6" long 3/8" ratchet extension into (1) of the holes of the hitch bar and tongue assembly to keep the holes aligned (**Fig 12**). Re-insert a bolt (with washer) into (1) hole before removing punch (or ratchet extension) (**Fig 13**). Remove punch and re-insert second bolt (with washer). Slide remaining washers and lockwashers back onto each bolt and thread nuts and tighten using (2) 3/4" wrenches (or socket). Hitch coupler lever should be facing the same direction as the labels on the Rascal when installed (**Fig 14**).

Note: For safety reasons, it is recommended to complete this step with two people.

3. To hook up the Toplink controlling the Finish rake, the (2) remaining zipties securing the toplinek will need to be removed. **Hold onto the tongue bar while removing the zipties to prevent tongue bar tipping forward and possibly causing injury** (**Fig 15 and 16**). Lower tongue bar to the ground (**Fig 17**). Remove nut, washer and lockwasher from bolt securing mat bracket to finish rake assembly using (2) 15/16" wrenches or socket set and slide bolt out until tip of bolt is keeping the mat bracket from falling (**Fig 18**).

The Toplink may be shipped with the threads on both ends of the toplinek not showing the same amount of threads (**Fig 19**). If both ends are not showing equal amounts of thread, hold the center section of the toplinek firm and spin the free end of the toplinek in or out until both ends have equal amounts of thread showing (**Fig 20**).



Fig 6.



Fig 7.



Fig 8.



Fig 9.

Remove hardware from tongue assembly to install Hitch Bar.

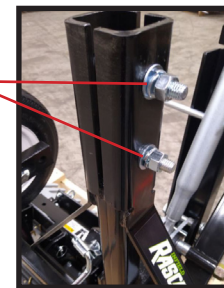


Fig 10.

Tongue assembly.

Hitch Bar.

Slide punch or 3/8" ratchet extension into (1) hole.

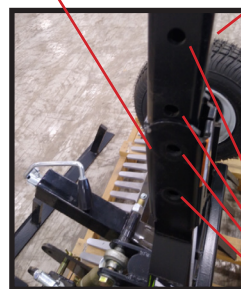


Fig 11.



Fig 12.

Slide Hitch Bar into tongue assembly until holes line up.

Setup (cont'd)

4. Line up the free end of the toplink with the loose bolt on the mat bracket by holding the end of the toplink to keep it from rotating while rotating the handle on the toplink counterclockwise (to extend the toplink ends) (**Fig 21 and 22**). Once the hole in the toplink lines up with the bolt holes in the mat bracket, slide bolt thru the toplink end and other end of brackets. Replace washer, lockwasher and nut onto bolt and tighten using (2) 15/16" wrenches or socket set (**Fig 22**).

5. To remove the unit from the skid, crank the front jack clockwise to lower the wheels as far as they will go. This may cause the unit to start to roll off the skid (**Fig 23**). Next, crank the rear jack counterclockwise to adjust the finish rake to be horizontal so as not to drag on the skid when removing the unit from the skid (**Fig 24**).

6. Attach the Rascal to the tow vehicle and pull away from the skid (**Fig 25**).

Add bolt to (1) hole then remove punch or 6" long 3/8" ratchet extension to add 2nd bolt.



Fig 13.

Make sure hitch coupler lever and label are facing the same direction when hitch bar is installed.



Fig 14.



Fig 15.

Hold tongue bar while removing zipties to avoid injury if tongue bar falls forward.



Fig 16.

Remove these zipties at this time.



Fig 17.



Fig 18.

After removing washer, lockwasher and nut from bolt, slide bolt out until end of bolt keeps the mat bracket from falling.

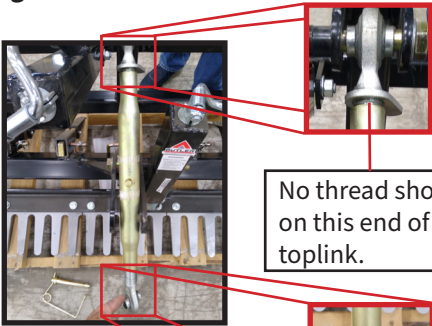


Fig 19.

No thread showing on this end of the toplink.

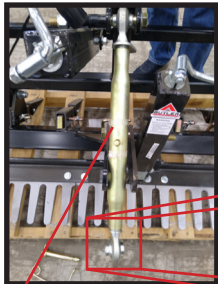
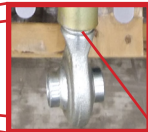


Fig 20.

Thread showing on this end of the toplink.



Hold center portion of toplink and turn free end of toplink until the same amount of thread is showing on both ends of toplink.

Rotate handle on toplink counterclockwise to expand the toplink to line end of toplink with mat bracket bolt.

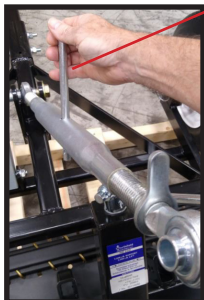


Fig 21.

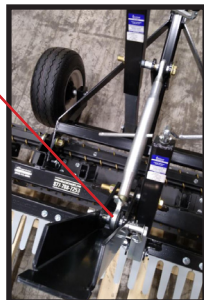


Fig 21.

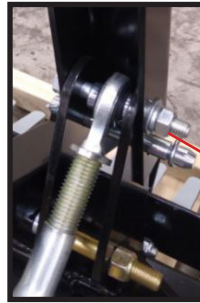


Fig 22.

Tighten nut to secure end of toplink.

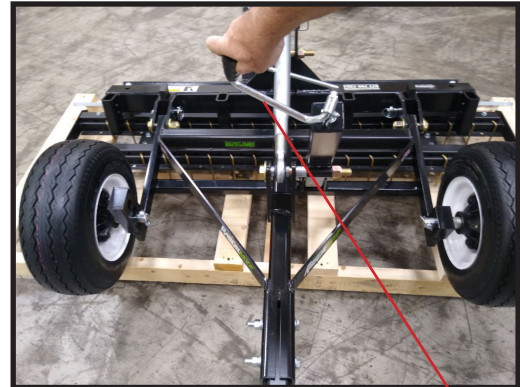


Fig 23.

Crank front jack clockwise to lower wheels.

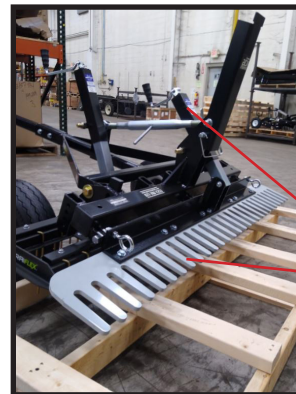


Fig 24.

Crank rear jack counterclockwise to raise the finish rake.



Fig 25.

Operation Guide

Attaching the Rascal to a tow vehicle

1. Back up the tow vehicle within close range of the Rascal tongue. Put the tow vehicle in park, block the wheels and turn off the tow vehicle. Move the Rascal as needed to allow the tongue of the Rascal to sit closer to the ball hitch (pin hitch if hitch bar has been altered) receiver on the tow vehicle.
2. If the hitch bar is set up for a ball hitch, lower the wheels of the Rascal using the square hand jack located on the front of the Rascal until the ball hitch on the Rascal is above the ball hitch receiver. Raise the ball hitch lever on top of the ball hitch. Raise the wheels on the Rascal to lower the ball hitch onto the ball hitch receiver on the tow vehicle until fully resting on the receiver then lower ball hitch lever. The Rascal is ready for transport and use.
3. If the hitch bar is set up for a pin hitch, raise or lower the wheels of the Rascal using the square hand jack located on the front of the Rascal until the tongue of the Rascal is sitting level to the pin hitch receiver. The tongue may need to be pushed down slightly to fully line up. Slide the Rascal tongue over the pin hitch receiver until the holes on the tongue and the pin hitch receiver line up. Insert a 1/2" hitch pin in the holes and secure using a lynch pin. Once the tongue is fully secured to the pin hitch receiver, confirm the hitch pin is secured using a lynch pin. Lower the wheels to raise ground engaging components. The Rascal is ready for transport and use.

Disconnecting the Rascal from a tow vehicle

Use caution when disconnecting the Rascal from a tow vehicle. Below is the recommended disconnect procedure for the Rascal.

1. If the hitch bar is set up for a ball hitch, raise the ball hitch lever on top of the ball hitch. Lower the wheels of the Rascal, using the square hand jack located on the front of the Rascal until the tongue of the Rascal lifts off the ball hitch receiver. The Rascal is ready for transport and use.
2. If the hitch bar is set up for a pin hitch, use the square hand jack on the back of the Rascal to lower the finish rake down until it is in a grading position (Fig 23). Using the square hand jack located on the front of the Rascal, raise the wheels until the weight of the Rascal is sitting either on the finish rake, scarifiers or profile blades. Continue to raise the wheels on the Rascal until the square hand jack can slide from side to side without binding up. This will indicate that the weight off the Rascal is off the tires. The hitch pin connecting the Rascal to the tow vehicle can be removed. The Rascal is now free from the tow vehicle.

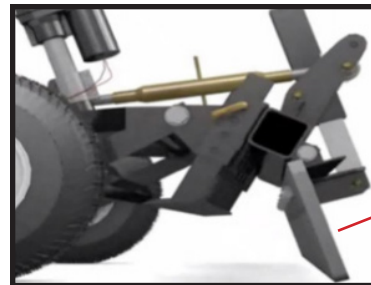


Fig 23.

Approximate grading position for the Finish Rake.

Setting up for use with Scarifiers

The scarifiers may be mounted to the Rascal when shipped. If not, crank the front wheel jack to lower the tires and raise the frame high enough to insert each scarifier into the frame pockets. Pin each scarifier into the 3rd hole from the top on the frame pockets. The flat side of the scarifier tips should be facing forwards on the Rascal (Fig 25). Adjust the toplinek to set the cutting angle. For the best ripping angle, the toplinek should have about 2" of thread on both ends of the toplinek (Fig 24). This will give the scarifiers the proper angle for ripping (Fig 25). The scarifier angle can be adjusted later if a different angle works for your usage. If the toplinek is showing more thread on one end than the other, disconnect one end from the Rascal and rotate the end of the toplinek so each side is showing the same amount of thread.

Note: Use caution when disconnecting top link this as the Rascal may shift in the process.

Rotate toplinek body until there is approximately 2" of thread showing on both ends of the toplinek for proper scarifier angle.

Flat side of scarifiers facing forward.

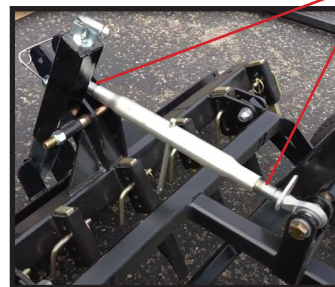


Fig 24.

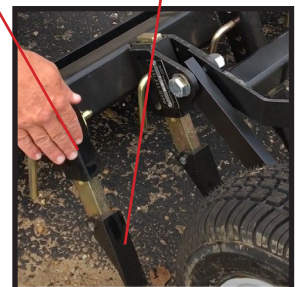


Fig 25.

To set the scarifier depth, have both the scarifier tips and tires touching the ground, then crank the front wheel jack to raise the tires to the desired depth (if the desired depth of the scarifiers are 2", raise the tires up 2"). If the footing of the area your ripping is soft, the tires may sink into the footing up to 1/2" so minor height adjustments may be necessary to get the desired depth.

Setting up for use with Profile Blades

On a flat surface, raise the Rascal high enough to remove the scarifiers (if attached) and insert the profile blades into position. The outside profile blade mounting bar must be in the mounting pocket that is farthest out on both sides of the unit (**Fig 26**). Pin the profile blades thru the 3rd hole from the top in the mounting pocket. Crank the front wheel jack so that both the wheels and profile blades resting on the ground. The bottom surface of the profile blades must be parallel to the ground (**Fig 27**). If the blades are tilted upwards, this will cause the Rascal to “ski” upward, causing waves in the footing. If the blades are tilted downwards, this will cause the Rascal to dig in more, endangering the base. Use the topline to adjust the pitch of the blades by rotating it clockwise or counterclockwise as needed to make the bottom surface of the blades parallel to the ground.

The wheels maintain the depth of the profile blades. Crank the front jack wheel up so the wheels rise off the ground to the desired depth the profile blades are to go. If the blades are 2” below the bottom of the wheels, that is how deep the blades will run in the footing. **HINT:** If some blocks are available that are the same height as the depth the profile blades are to dig into the footing, the blocks can be put under each tire then crank the front wheel jack as need until the profile blades are resting on the ground then remove the blocks (**Fig 28**).

If the footing of the area your ripping is soft, the tires may sink into the footing up to 1/2” so minor height adjustments may be necessary to get the desired depth.

Once the Rascal has been setup for a particular depth and ready for transportation to a worksite for use, use a marker to mark that depth on the non-painted portion of the wheel jack (**Fig 29**). After using the Rascal for other jobs at different depths and it's time to set the height again for a previous setting, just crank the wheel jack until the bottom of the black portion of the wheel jack lines up with the mark to avoid the time it takes to go thru the setup procedure.

Adjusting the Finish Rake

The finish rake will be adjusted with the Rascal in use. Take the Rascal to the area where it will be used. Raise the wheels to allow the scarifiers/profile blades to enter the surface at the desired depth. Pull the Rascal forward several feet and come to a slow stop. Adjust the finish rake to rest firmly on the surface of the material by cranking the rear jack up or down as needed to get about 1/2” of penetration into the material (**Fig 30**).

For further information, check out these videos:

https://www.youtube.com/watch?v=_uS5SmIDRCU

<https://www.abiattachments.com/videos/infield-rascal-pro-infield-groomer-by-abi-sports-turf/>



Fig 26.

Outside profile blade mounting bar must be in the mounting pocket that is farthest out on both sides of the unit.



Fig 27.

Bottom surface of Finish Blades parallel to footing.



Fig 28.

Blocks under the wheels can help the depth setup and help visually see if the bottom surface of the profile blades are parallel to the footing.



Fig 29.

Use a marker to mark that depth on the non-painted portion of the wheel jack.

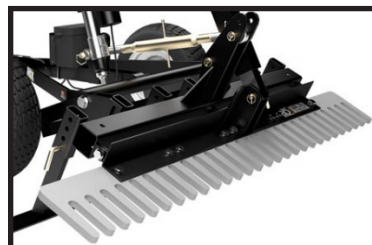


Fig 30.

Operation Guide (cont'd)

Setup & Guide for Grooming Gravel Parking Areas, Sidewalks & Driveways

One of the many uses for a Rascal is for grooming/repairing gravel parking areas, sidewalks and driveways, or maintenance. The setup and maintenance is covered in the setup guide. This section will cover how to manage problems that may come up on the gravel areas. One of the most frequent issues with the Rascal happens when the operator uses an inconsistent speed, i.e. stopping and starting, speeding up and slowing down.

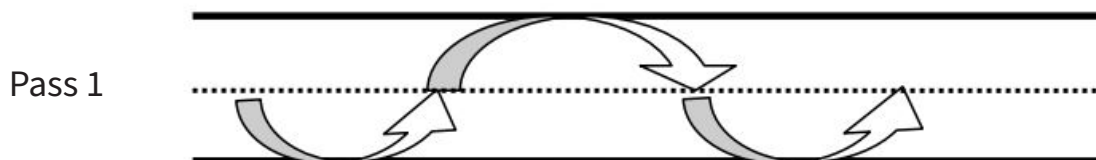
Removing Pot holes and Washouts – These are the easiest to handle. Lower the scarifiers down to the desired ripping depth. Start the first pass with the wheels down, to help stabilize for the initial loosening. Travel at a slow consistent speed, allowing the Rascal to dig in while traveling in the gravel area. With each pass raise the wheels more and drag the area till the washouts or potholes are gone. To give the gravel area a finished look, go back over for a last pass, setting the Profile Blades (as mentioned on the previous page "**Setting up for use with Profile Blades**") about 1/2" below the surface and the finish rake digging into the surface about 1" to pack the area and give it a clean finish. If more weight is required for deeper ripping, the weight rack and weights for the Rascals are available (see "Options" section below). The weight rack holds suitcase weights, giving more weight for deeper dragging/ripping.

Putting in a Crown – To use the Gravel Rascal to put a crown into a driveway or sidewalk, drag the area as normal so the scarifiers loosen the gravel as well as the edge of each side of the driveway/sidewalk, then put the Rascal into a grading position. To setup the Rascal in grading position, adjust the scarifiers out of play by flipping each scarifier up so the tips are on top (the scarifiers will be upside down). Pin the right wheel into either the middle hole or top hole (depending on the desired amount of angle of the crown) as shown on page 17 (**Fig 31**). Adjust the finish rake down to a 90 degree angle. Lower the wheels so the right side of the finish rake tips are down into the gravel about 1/2". Pull material to the center of the driveway/sidewalk, raise the Rascal and leave the material behind in the center of the driveway. This will need to be repeated down both sides of the driveway. Lowering the wheels slightly after each pass down the driveway/sidewalk may be necessary until the desired crown height is achieved. This is much easier with the Electric Actuator attached, but may result in battery drainage. Using the box blade option helps prevent some gravel from rolling off the end of the Finish rake back out into the yard by capturing it within the box and moving it to the center of the driveway/sidewalk.

Dragging with a Crown – To keep the crown, drag only the outside of the crown at a slow steady pace. Avoid the crown and allow the Rascal to rip the soil on the sides only.

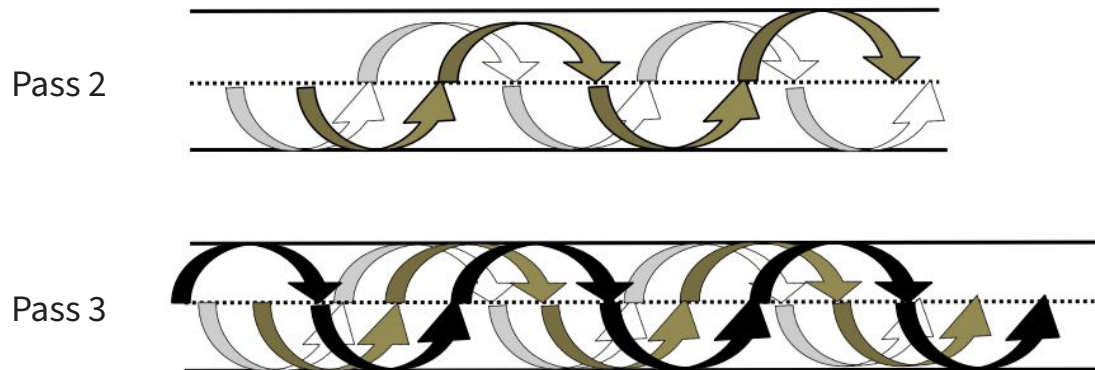
Common things that cause Wash boarding - One of the most common causes of wash boarding is inconsistent speed. Using an inconsistent speed can cause a "bump" in the gravel. When multiple bumps occur, it becomes what is classified as a washboard effect. Dragging at a higher speed may cause the Rascal to bounce or give it a hopping motion, leaving behind bumps as it goes. Washboarding can also be caused by sudden acceleration, or by starting and stopping. Once there is a bump that is not immediately cared for, it will continue to cause more bumps as the Rascal travels over it. Eventually this will give the gravel area a washboard effect.

Removing Washboard effect from a gravel area – When finished dragging the gravel parking area, sidewalk or driveway and notice a washboard effect, it will take more time to fix now but easier to fix while the groomed driveway is fresh rather than after it has been driven on and repacked. If it has been driven on, or repacked, the area may need to be ripped again. Once the material is loose, set up the Rascal in a grading position with the wheels down, and the scarifiers out of play. This is done by moving the finish rake down more at a 90 degree angle. Going at a very slow speed, perform a serpentine pattern to remove the waves. The illustrations below show one of ABI's serpentine patterns that can remove the washboard effect:



The dotted line indicates the center or "crown" of the driveway/sidewalk.

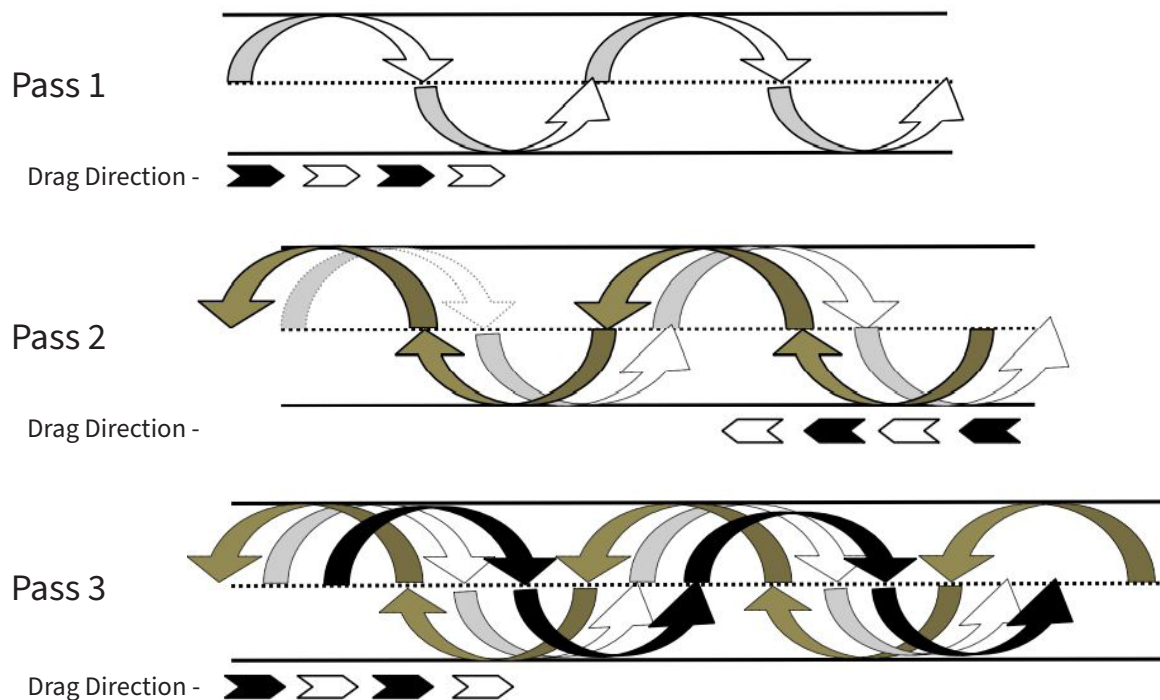
Setup and Guide for Grooming Driveways/Sidewalks (cont'd)



The dotted line indicates the center or "crown" of the driveway/sidewalk.

This pattern will need to be run a few times at a very slow steady speed. While going down the driveway/sidewalk, make sure to overlap the pattern. Overlap should be about 6" or enough to remove the ribbon from the previous pass. When finished running the pattern, go back over it again using the finish rake at a slow and steady speed to give a finished look.

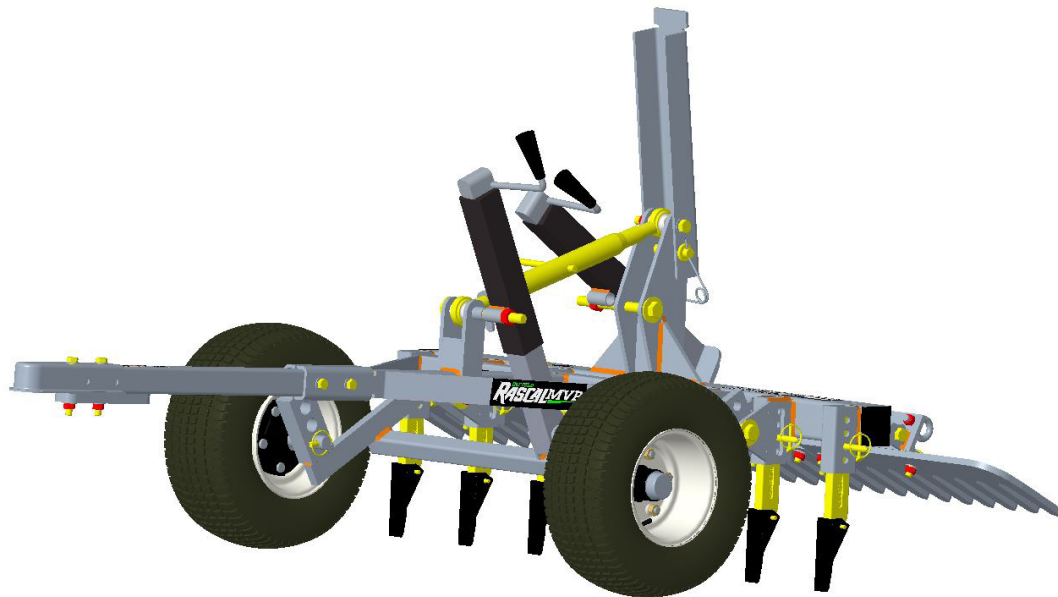
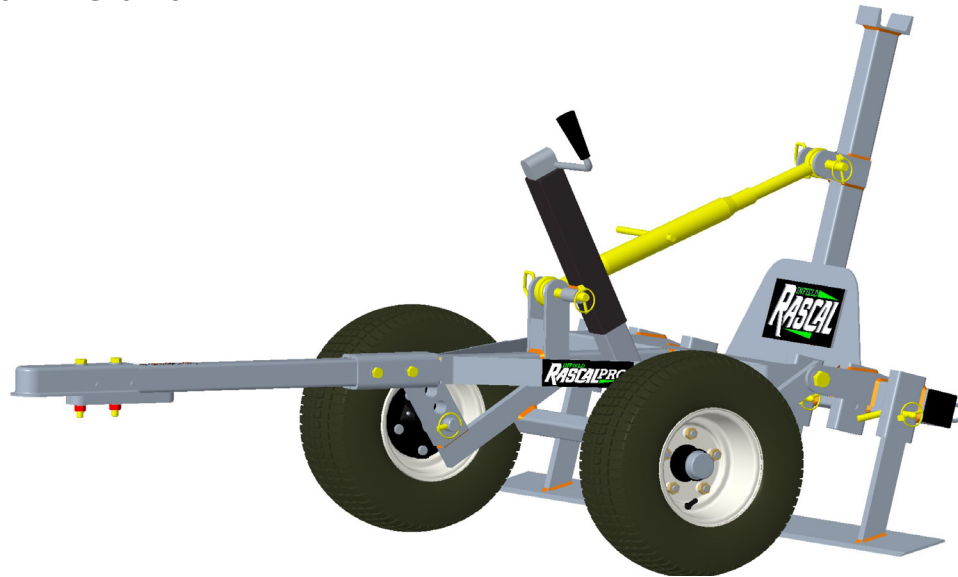
Another pattern to use is the Crossover Serpentine Pattern. This is the same as the pattern above, but now work the driveway/sidewalk from each side. This is a down and back pattern. The pattern is illustrated below:



The white arrows indicate the first pass. The gold arrows are the second, and the black arrows the third. Go down the driveway/sidewalk in the same slow serpentine pattern, then starting at the bottom, repeat the pattern continuing up and down the driveway/sidewalk until the waves are fully removed.

Components

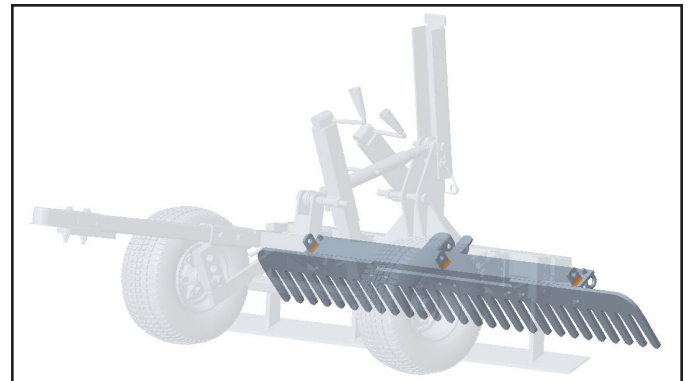
Rascal Infield PRO and MVP



Finish Rake/Comb

Breaks up clumps of material and leaves a beautiful signature finish. By adjusting the rear manual jack, the 1/2" thick hardened-steel-rake, can pivot up to 90° into a variety of finishing and grading positions. This adjustability enables the rake to pulverize clods of material, level and finish no matter the material consistency. Finish Rakes are made up of smaller sections that can be individually ordered to decrease cost when needing to replace a worn/damaged tooth.

FINISH RAKE



Profile Blades

The profile blades can operate at a depth of up to 4" and are adjustable at ½" increments. This attachment cuts parallel to the infield 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 finish rake can then break up the loose material as it flows through the tool.

Scarifying Teeth (Ripping Teeth)

The scarifying teeth loosen the ground to eliminate hard spots and easily penetrate compacted gravel parking areas and gravel driveway/sidewalk material or soil. They are primarily used to break up compaction and can be used in conjunction with the finish rake. During daily infield maintenance, the scarifiers will be removed in order to use the profile blades and or vibraflex.

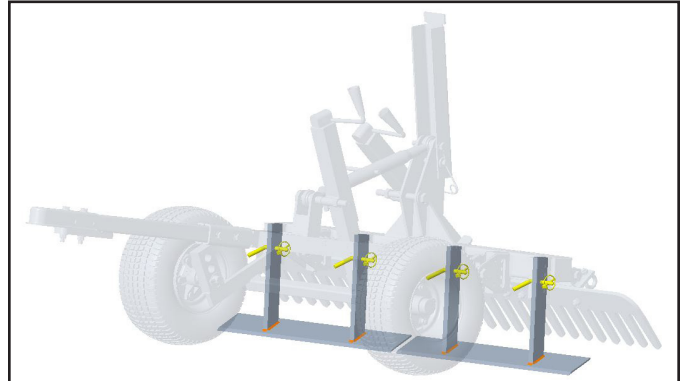
The scarifying teeth have replaceable bolt on tips. This feature not only ensures affordable and easy maintenance of this wear part, but also ensures peak ground penetration no matter the ground condition. If the tips wear to the point that performance is diminished, simply replace them, restoring optimal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

Wheels

The large tires serve four important functions. First, they allow for quick and easy transport. Second, they stabilize the Infield Rascal from pitching side-to-side ensuring consistency of grooming depth, the width of the unit, especially when maneuvering tight turns. Third, they enable the Infield Rascal to "float" on loosened or wet material to minimize "sinking" into these soft material situations, which otherwise would alter grooming depth. This is a common problem for most competitive groomers. Forth, they gauge or control how deep the ground contact components go into the ground and hold a consistent grooming depth.

NOTE: The operating positions of the right wheel can be pinned higher for crowning driveways/sidewalks or creating drainage swales to remove water (**Fig 31**).

PROFILE BLADE



SCARIFIER



WHEELS

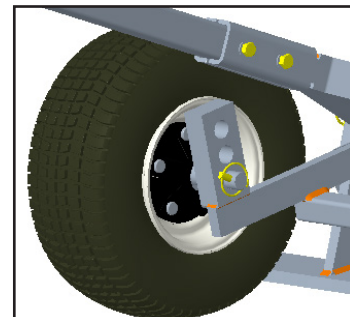
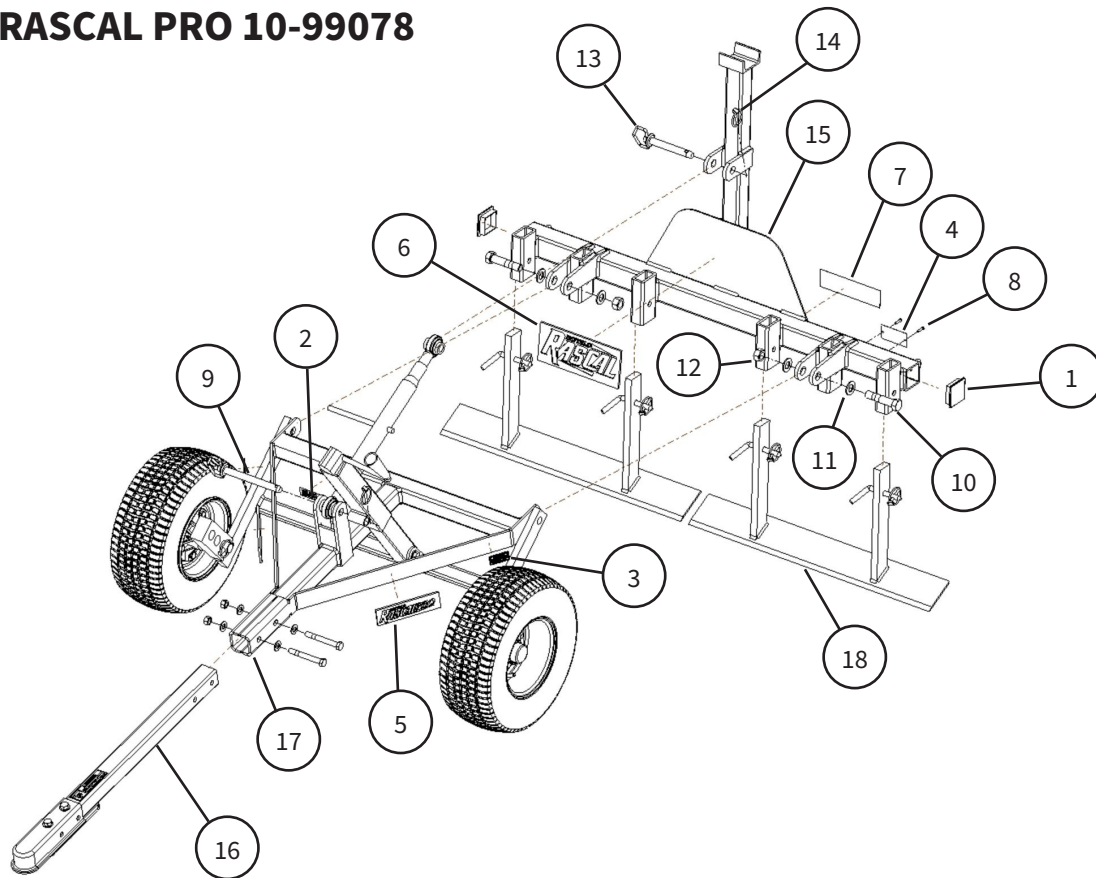


Fig 31.

Parts Description

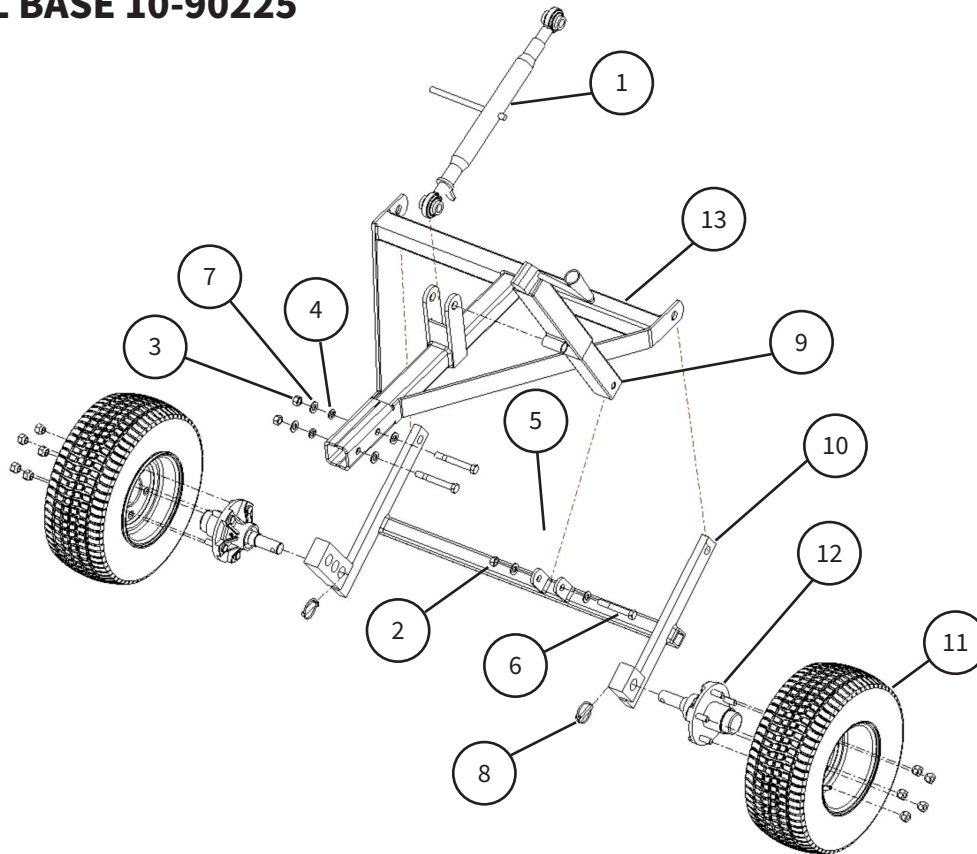
INFIELD RASCAL PRO 10-99078



ITEM	PART #	DESCRIPTION
1	10-10017	CAP:SQR 2.5" TUBE END:BLACK PLASTIC
2	10-10095	LBL:NO PUSH BACK: 1" X 4"
3	10-10096	LBL:PINCH POINT A 1" X 2"
4	10-10161	ABI SERIES SERIAL NUMBER PLATE
5	10-10207	Infield Rascal Pro 1.75 x 8.375
6	10-10208	Infield Rascal Pro 4.5 x 11
7	10-10861	LBL: CONTACT INFO: ABI: FOR GLOSS TOOLS
8	10-20104	RIVET: .5-.625 GRIP: SHOP SUPPLY
9	10-20152	HITCH PIN:3/4" x 6 1/4":ZINC

ITEM	PART #	DESCRIPTION
10	10-20167	HX HD BOLT:3/4-10 X 3.5":ZINC YEL GR8
11	10-20197	FLT WSHR:3/4 SAE GR5:ZINC
12	10-20206	NYLOCK NUT:3/4-10:ZINC YEL GR 8
13	10-20220	HITCH PIN:3/4"x4.25":ZINC
14	10-20232	LYNCH PIN:1/4"x1.25":ZINC
15	10-40041	WLDMT:PRO FRAME: 5'
16	10-40374	ASM: HITCH TUBE: RASCAL
17	10-90225	ASM: RASCAL BASE
18	10-90253	KIT: PROFILE BLADE: RASCAL FORCE

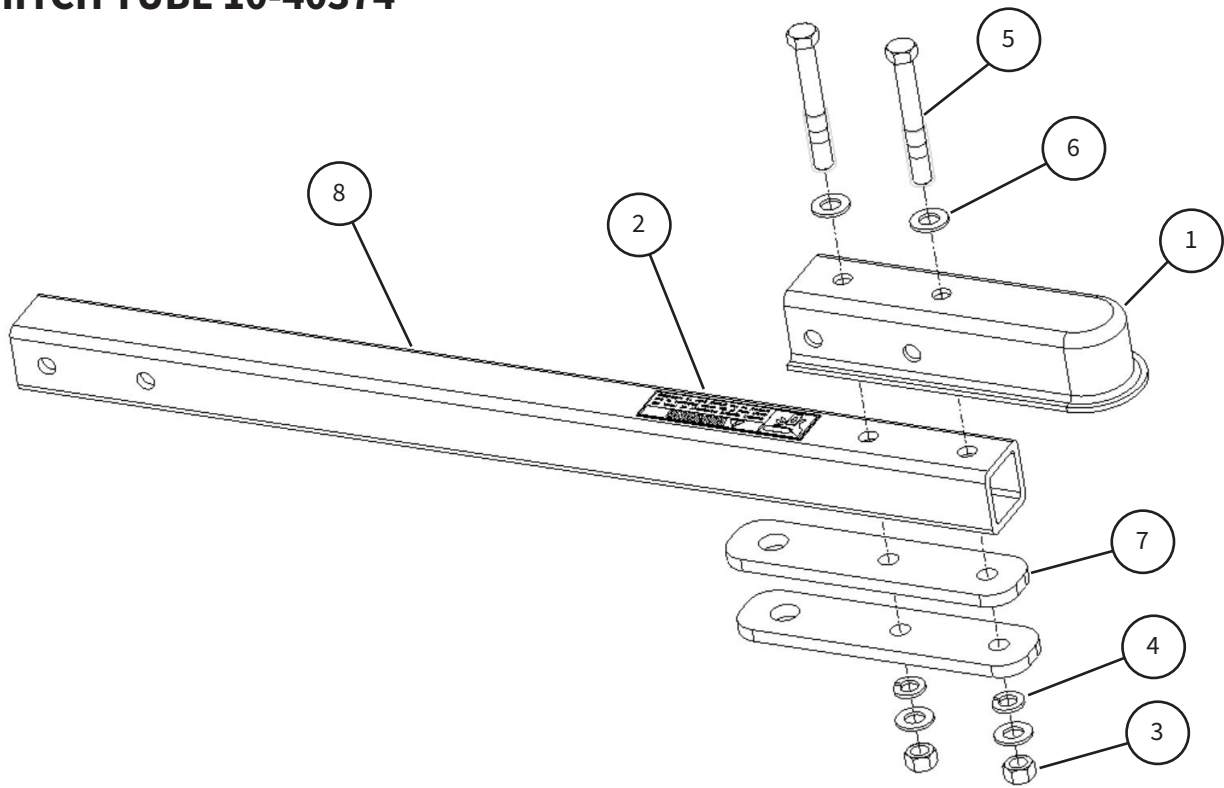
ASM: RASCAL BASE 10-90225



ITEM	PART #	DESCRIPTION
1	10-10078	LBL: HAND CRUSH: DECAL
2	10-20050	NUT: 1/2-13 HEX FIN: GR 5 ZINC
3	10-20138	1/2" SPLIT LOCKWASHER: ZINC
4	10-20139	HX HD BOLT: 1/2-13 X 4": ZINC GR5
5	10-20141	FLT WSHR: 1/2 SAE: CL ZINC
6	10-20172	HITCH PIN: 5/8" X 5": ZINC
7	10-20194	LYNCH PIN: 1/4" X 1.25": ZINC
8	10-20233	PLATE: RASCAL PIN HITCH
9	10-40043	RASCAL MANUAL JACK
10	10-40293	ASM: WHEEL AXLE WITH PITCH: RASCAL
11	10-60006	TIRE:16.5 x 6.50 x 8 TURF:5 ON 4.5 WH OFFSET RIM
12	10-60058	HUB ASM:5 ON 4.5":1" ID BRNG
13	16-50000	ASM: HITCH HARNESS: RASCAL

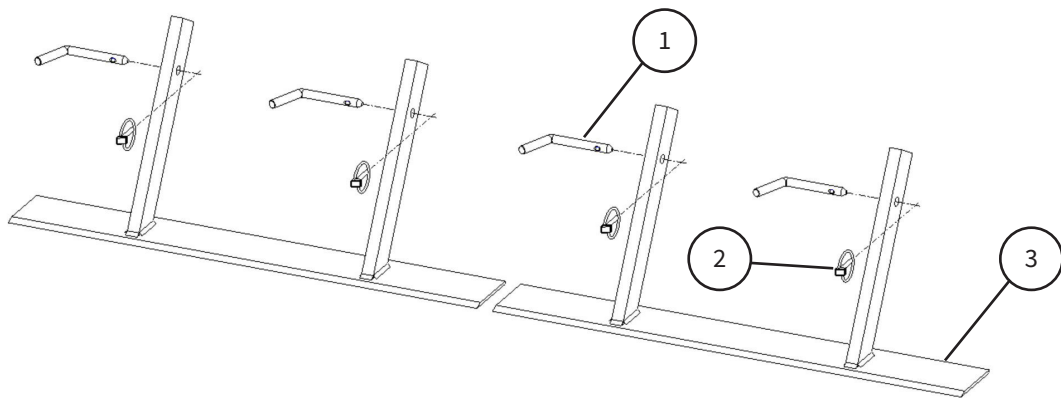
Parts Description (cont'd)

ASM: HITCH TUBE 10-40374



ITEM	PART #	DESCRIPTION
1	10-10072	2' BALL JOINT COUPLER
2	10-10090	LBL: HAND CRUSH: DECAL
3	10-20138	NUT: 1/2-13 HEX FIN GR 5 ZNC
4	10-20139	1/2" SPLIT LOCKWASHER ZNC
5	10-20141	HX HD BOLT: 1/2-13 X 4": ZINC GR5
6	10-20194	FLT WSHR: 1/2 SAE: CL ZINC
7	10-30048	PLATE: RASCAL PIN HITCH
8	10-50002	PLTUBE:2" SQ X .25" WALL: RASCAL TONGUE 30" L

KIT: PROFILE BLADE RASCAL 10-90253

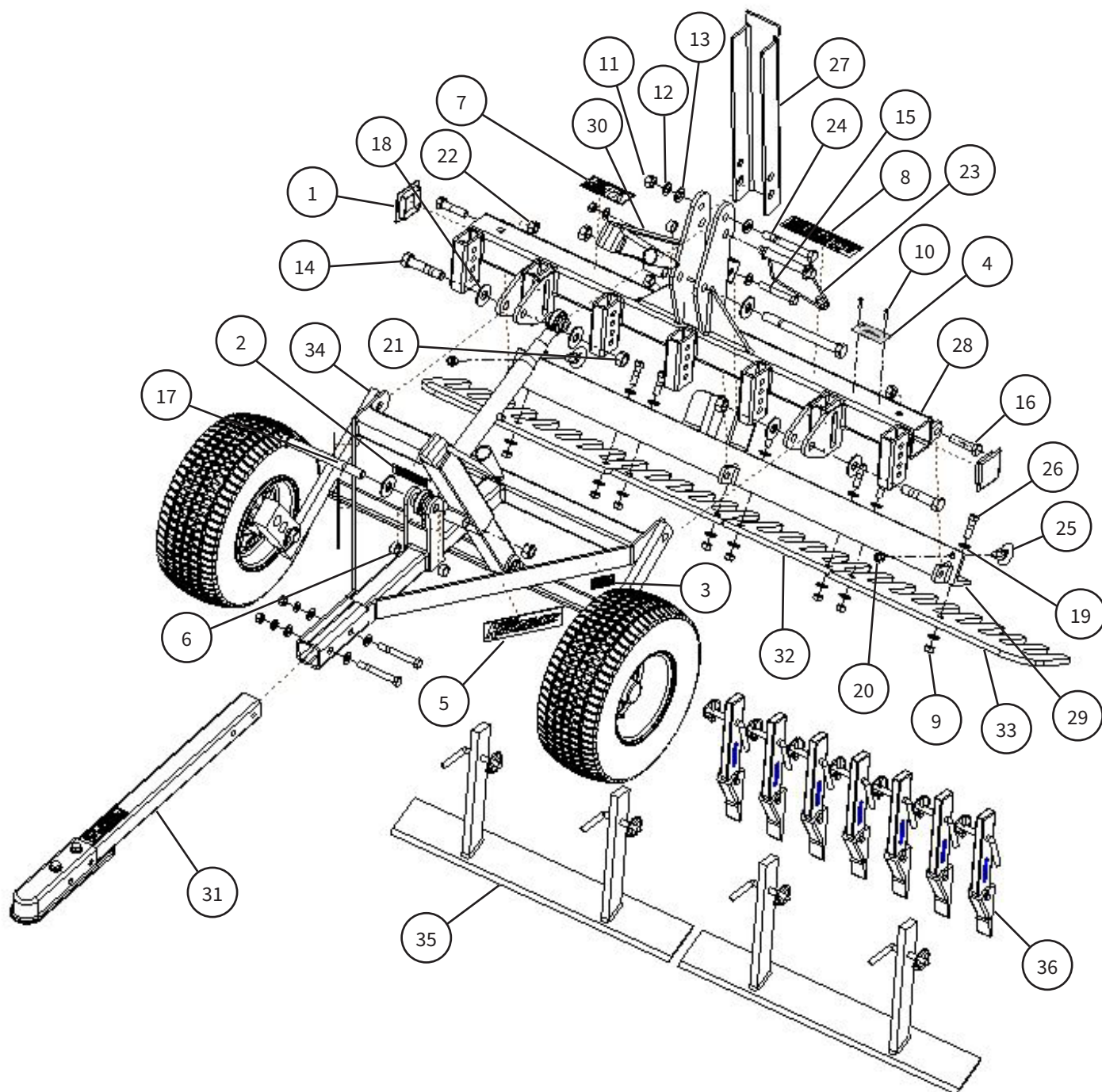


ITEM	PART #	DESCRIPTION
1	10-20221	BENT PIN: 1/2" X 3.5": ZINC
2	10-20232	LYNCH PIN: 1/4" X 1.25" ZINC
3	10-50000	BLADE: PROFILE: BASEBALL



Parts Description (cont'd)

INFIELD RASCAL MVP 10-99077



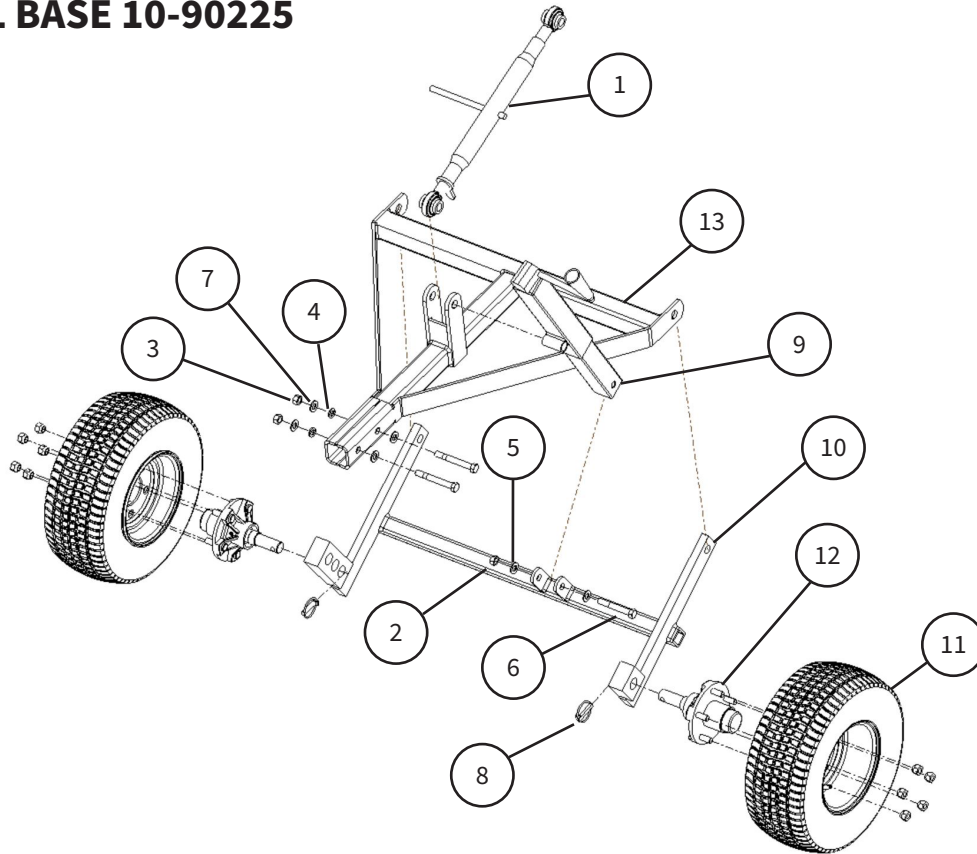
INFIELD RASCAL MVP 10-99077

ITEM	PART #	DESCRIPTION
1	10-10018	SQR 3" BLK PLUG FOR MVP FRAME
2	10-10095	LBL:NO PUSH BACK: 1" X 4"
3	10-10096	LBL:PINCH POINT A 1" X 2"
4	10-10161	ABI SERIES SERIAL NUMBER PLATE
5	10-10209	INFIELD RASCAL MVP 1.75 X 8.375
6	10-10343	BUSHING:3/4" ID X 1/2":ZINC
7	10-10345	LABEL:FOOT CRUSH:CAUTION
8	10-10861	LBL: CONTACT INFO: ABI: FOR GLOSS TOOLS
9	10-20050	1/2-13 TOP LKGRC
10	10-20104	RIVET: .5-.625 GRIP: SHOP SUPPLY
11	10-20143	5/8-11 HEX FIN NUT GR 5 ZNC
12	10-20144	5/8" SPLIT LOCKWASHER ZNC
13	10-20145	5/8 SAE F/W ZNC
14	10-20167	HX HD BOLT:3/4-10 X 3.5":ZINC YEL GR8
15	10-20172	HX HD BOLT:1/2-13 3.5":ZINC GR5
16	10-20178	HX HD BOLT:5/8-11 2.5":ZINC GR5
17	10-20186	HX HD BOLT:3/4-10 8":ZINC GR8
18	10-20192	FLT WSHR:3/4 USS GR8: YEL ZINC

ITEM	PART #	DESCRIPTION
19	10-20194	FLT WSHR:1/2 SAE: CL ZINC
20	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
21	10-20206	NYLOCK NUT:3/4-10:ZINC YEL GR 8
22	10-20209	NYLOCK NUT:5/8-11:ZINC CL
23	10-20229	HITCH PIN:3/4" X 4" SAFETY LOCK:ZINC
24	10-20300	HX HD BOLT:5/8-11 5.0":ZINC GR5
25	10-20301	EYE BOLT: 1/2 - 4.25 SHORT STEM
26	10-20359	HX HD BOLT:1/2-13 1.75":ZINC GR5
27	10-30700	UPRIGHT:RASCAL DRAGMAT BRKT
28	10-40030	WLDMT:MVP SCAR TUBE 5.5'
29	10-40031	RASCAL MVP FINISH RAKE BRKT 5.5
30	10-40043	RASCAL MANUAL JACK
31	10-40374	ASM: HITCH TUBE: RASCAL
32	10-50001	12" COMB .5" THICK
33	10-50002	21" COMB .5" THICK
34	10-90225	ASM: RASCAL BASE
35	10-90253	KIT: PROFILE BLADE: RASCAL FORCE
36	10-99131	RIPPING TEETH: 9" SCARIFIER: SET OF 7 BOXED

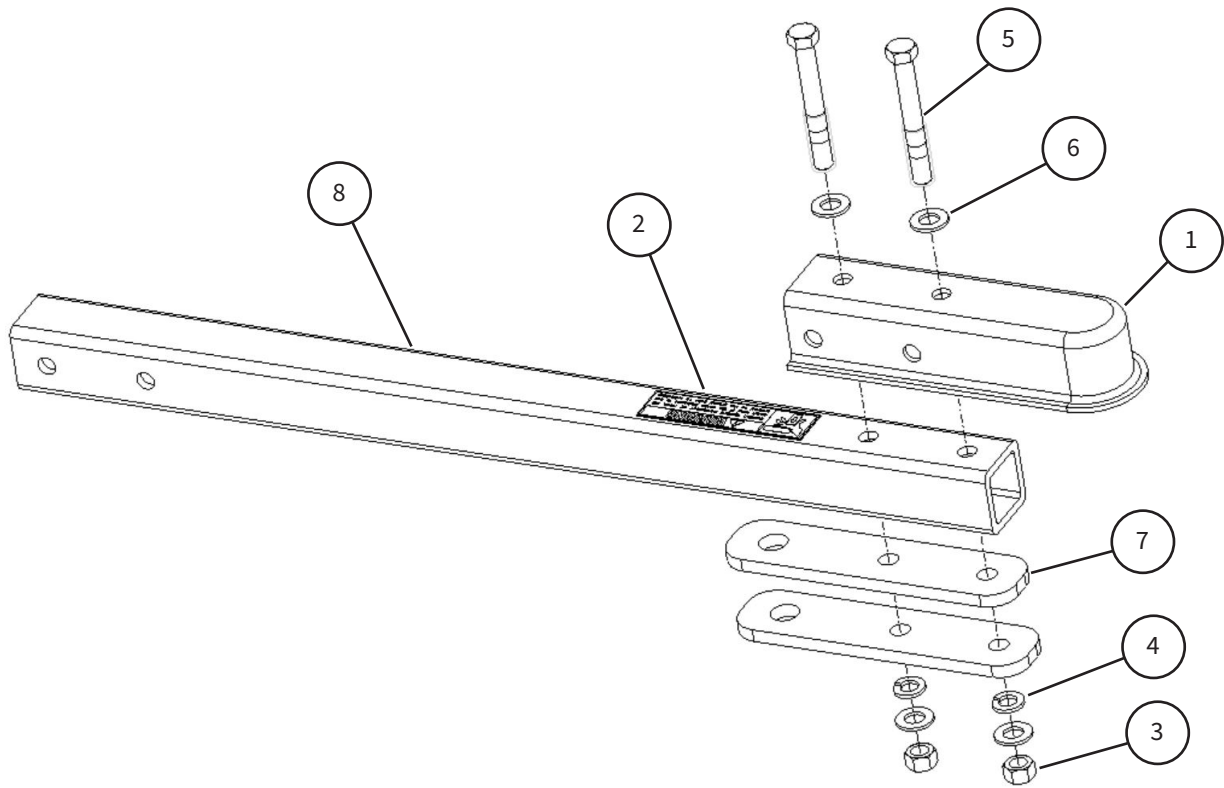
Parts Description (cont'd)

ASM: RASCAL BASE 10-90225



ITEM	PART #	DESCRIPTION
1	10-10078	LBL: HAND CRUSH: DECAL
2	10-20050	NUT: 1/2-13 HEX FIN: GR 5 ZINC
3	10-20138	1/2" SPLIT LOCKWASHER: ZINC
4	10-20139	HX HD BOLT: 1/2-13 X 4": ZINC GR5
5	10-20141	FLT WSHR: 1/2 SAE: CL ZINC
6	10-20172	HITCH PIN: 5/8" X 5": ZINC
7	10-20194	LYNCH PIN: 1/4" X 1.25": ZINC
8	10-20233	PLATE: RASCAL PIN HITCH
9	10-40043	TUBE: 2" SQ X .25" WALL: RASCAL TONGUE 30" L
10	10-40293	PLATE: RASCAL PIN HITCH
11	10-60006	PLATE: RASCAL PIN HITCH
12	10-60058	PLATE: RASCAL PIN HITCH
13	16-50000	PLATE: RASCAL PIN HITCH

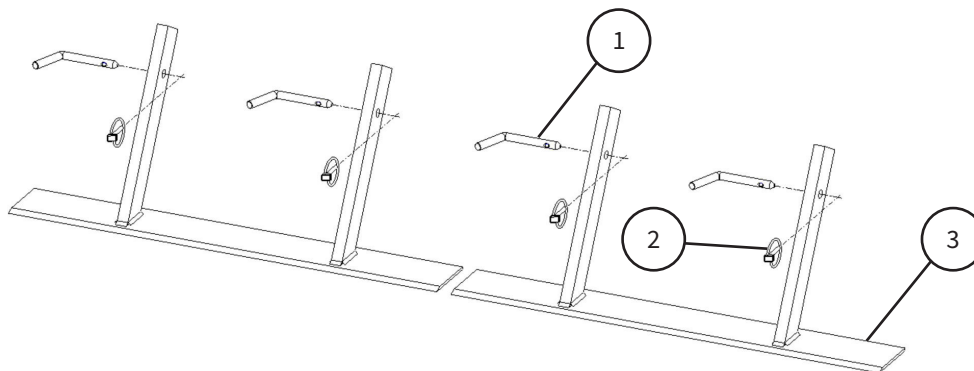
ASM: HITCH TUBE 10-40374



ITEM	PART #	DESCRIPTION
1	10-10072	2' BALL JOINT COUPLER
2	10-10090	LBL: HAND CRUSH: DECAL
3	10-20138	NUT: 1/2-13 HEX FIN GR 5 ZNC
4	10-20139	1/2" SPLIT LOCKWASHER ZNC
5	10-20141	HX HD BOLT: 1/2-13 X 4": ZINC GR5
6	10-20194	FLT WSHR: 1/2 SAE: CL ZINC
7	10-30048	PLATE: RASCAL PIN HITCH
8	10-50002	PLTUBE:2" SQ X .25" WALL: RASCAL TONGUE 30" L

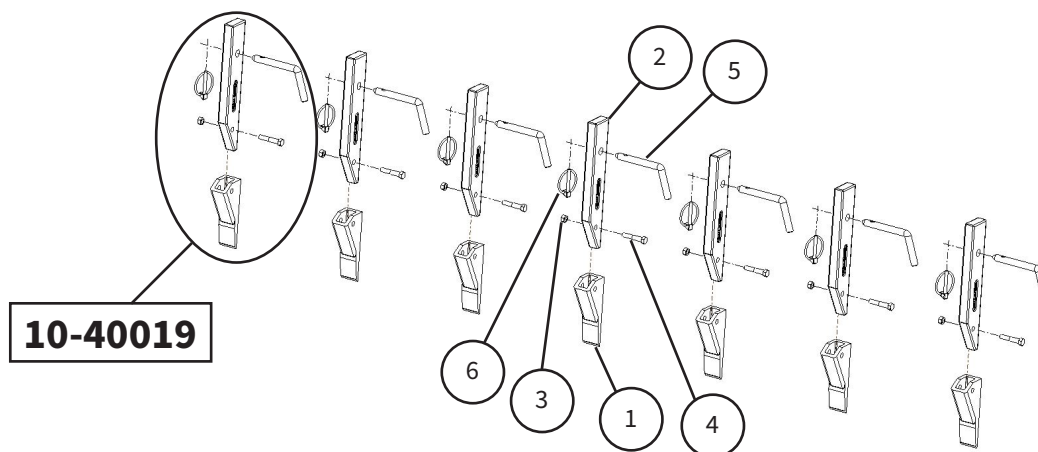
Parts Description (cont'd)

KIT: PROFILE BLADE RASCAL 10-90253



ITEM	PART #	DESCRIPTION
1	10-20221	BENT PIN: 1/2" X 3.5": ZINC
2	10-20232	LYNCH PIN: 1/4" X 1.25" ZINC
3	10-50000	BLADE: PROFILE: BASEBALL

RIPPING TEETH: 9" SCARIFIER 10-99131 (7 SETS OF 10-40019)



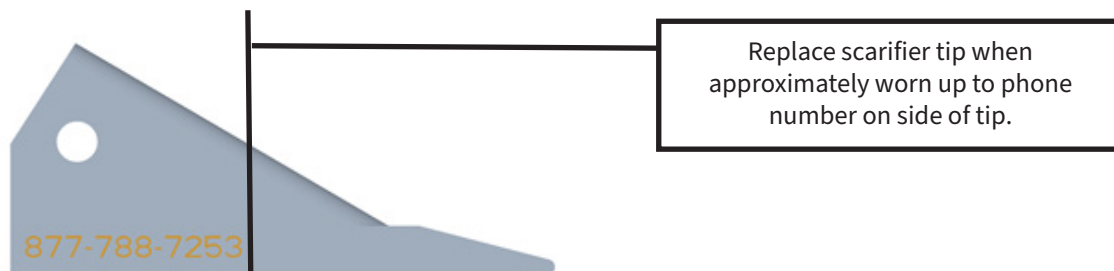
ITEM	PART #	DESCRIPTION
1	10-10047	TIP: SCARIFIER: ALL TOOLS
2	10-10048	9" SCARIFIER SHANK
3	10-20096	NUT: 5/16-18 SER FLANGE LOCK, GR8 ZINC
4	10-20121	HEX HD SCREW: 5/16-18 X 1 3/4 C/S GR8 YELLOW ZINC
5	10-20221	BENT PIN: 1/2" X 3.5": ZINC
6	10-20232	LYNCH PIN: 1/4" X 1.25" ZINC

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.

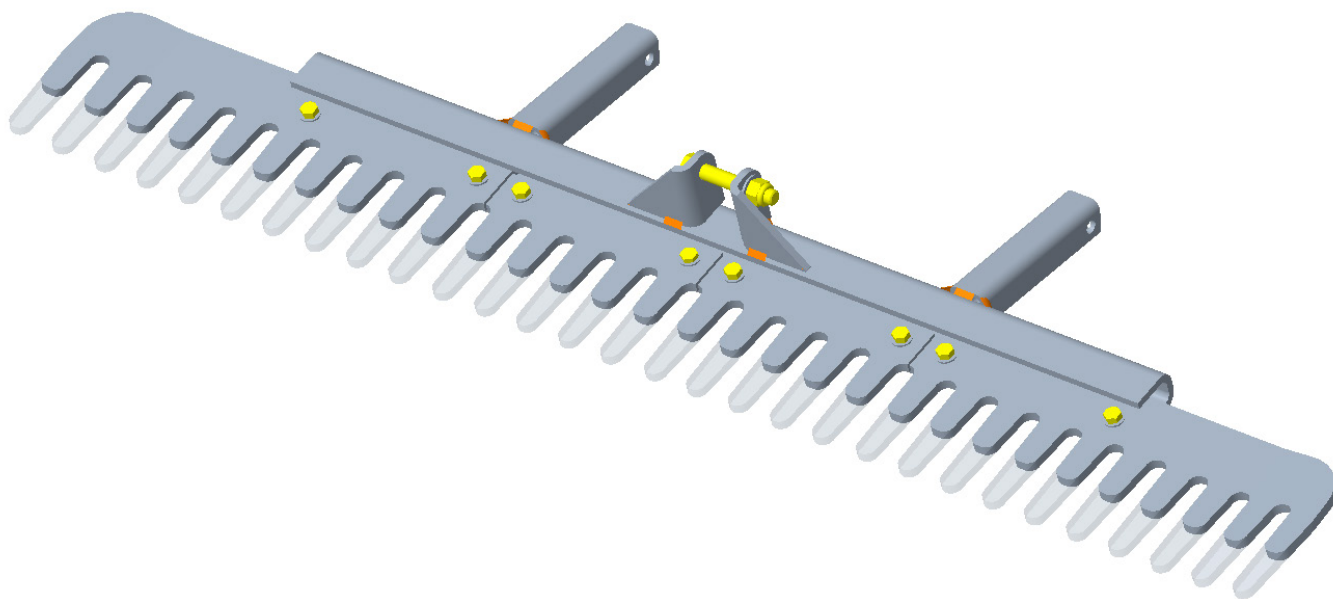
Scarifier Tips

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) ½" wrenches to remove.



Finish Rake

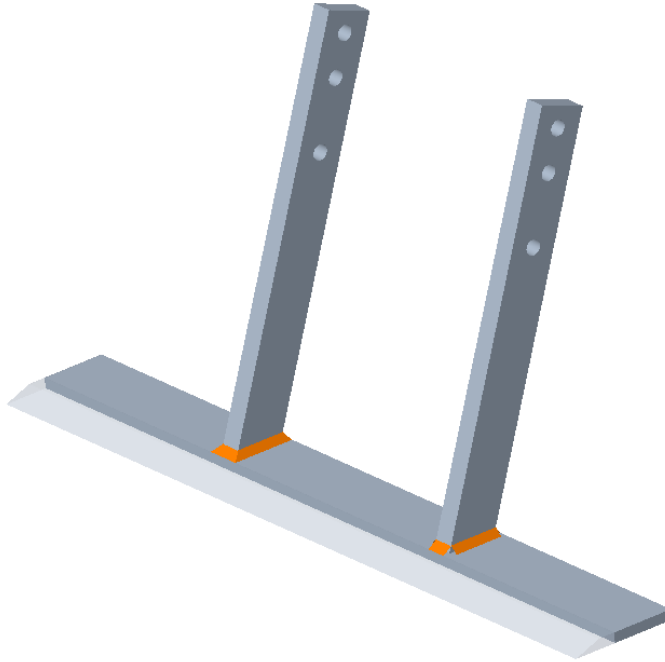
As the teeth of the finish rake wear, angle adjustment of the rake is required to maintain a nice finish of the material. If the angle of the finish rake no longer provides the required finish due to excessive rake wear, replacement is required.



Replacement Parts (cont'd)

Profile Blade

Profile Blades should be replaced when the edge of the blade has worn down to the weld on the angled shanks.



Options

OPTION LIST

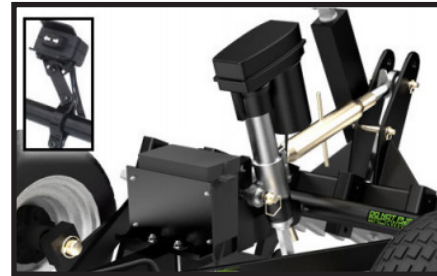
OPTION AVAILABILITY	PRO	MVP
10-90282 RASCAL ELECTRIC ACTUATOR AND CONTROLS	YES	YES
2036 WIRING HARNESS TOW VEHICLE SIDE WITH ROCKER SWITCH	YES	YES
ABI-WCK2 WIRELESS CONTROL KIT AND REMOTE FOR ELECTRIC ACTUATOR	YES	YES
10-90167 6' RIGID DRAG MAT W/LEVELING BAR	YES	YES
10-90259 6'W x 3'L - XD FLEXIBLE DRAG MAT	YES	YES
10-90260 8'W x 3'L - XD FLEXIBLE DRAG MAT	YES	YES
10-90104 6' COCO MAT AND LEVEL BAR	YES	YES
10-90165 VIBRAFLEX 5' INFIELD DRAG (MODEL 3800)	YES	YES
10-90166 VIBRAFLEX 5' INFIELD DRAG (MODEL 5800)	YES	YES
10-10083 VIBRAFLEX PIN, BLACK, 3/8"	YES	YES
10-10085 VIBRAFLEX PIN, GOLD, 1/4"	YES	YES
10-10082 VIBRAFLEX PIN, SILVER, 1/8"	YES	YES
10-40020 SCARIFIER TIP, COMPLETE, SINGLE	YES	YES
10-90298 7' FINE FINISH BROOM (MANUAL LIFT)	YES	YES
10-99031 5.5' RASCAL MINI-BOX BLADE W/SOLID BLADE	NO	YES
10-90232 MINI-SCARIFIER "TOOTH BAR"	YES	YES
RA3PTHTCH 3-POINT HITCH	YES	YES

Options (cont'd)

10-90282 KIT: ELECTRIC ACTUATOR



The optional electric actuator kit replaces the manual square hand jack to raise and lower the wheel system on the Rascal. This allows the ability to raise and the unit from the seat of the tow vehicle using a switch secured to the handlebars.



An installation video and set up guide as well as troubleshooting videos can be found on the support page at abisupport.com:
<https://www.abiattachments.com/wp-content/uploads/2019/06/Actuator-Setup-Guide2-2013.pdf>
<https://www.abiattachments.com/guides/rascal-product-manual/#section-3>
<https://www.youtube.com/watch?v=SEhCApqXQIY>
https://www.youtube.com/watch?v=j2K_guT1zo8

NOTE: TO AVOID ELECTRICAL DAMAGE TO THE UNIT BY SPLICING THE RASCAL WIRE HARNESS INTO THE TOW VEHICLE WIRING SYSTEM AND POSSIBLY REVERSING THE WIRES, OR THE TOW VEHICLE HAVING A POSITIVE GROUND RELAY SYSTEM, CONNECT THE WIRING HARNESS DIRECTLY TO THE TOW VEHICLE BATTERY (BLACK TO GROUND AND RED TO POSITIVE).

2036 WIRING HARNESS TOW VEHICLE SIDE WITH ROCKER SWITCH



ABI-WCK2 WIRELESS REMOTE W/2 KEY FOBS



If 10-90282 Electric Actuator Kit is ordered, the wireless remote can also be ordered to run the actuator remotely. Open the Black Box from 10-90282 kit. (**Fig 32**). **NOTE:** Black box does NOT need to be removed from Rascal to install the wireless system - black box in views is only removed for installation demonstration.

Locate the preinstalled 4 pole connector inside the Black Box, which has yellow, green, black, and white wires connected to it (**Fig 33**).

Connect the Wireless Receiver plug to the 4 pole connector in the Black Box. Plug will only fit one way. Push the connectors together until it clicks (**Fig 34**).

Carefully place the new Wireless Receiver in the black plastic box. Close black box (**Fig 35**).

Press the buttons on the key fob to raise and lower the Rascal wheels.

Preinstalled 4 pole connector
inside the Black Box.



Fig 32.

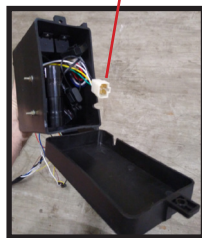


Fig 33.

Gently place the new Wireless Receiver
in the black plastic box.

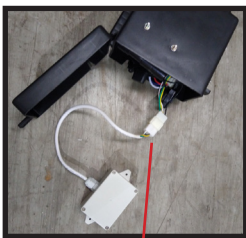


Fig 34.

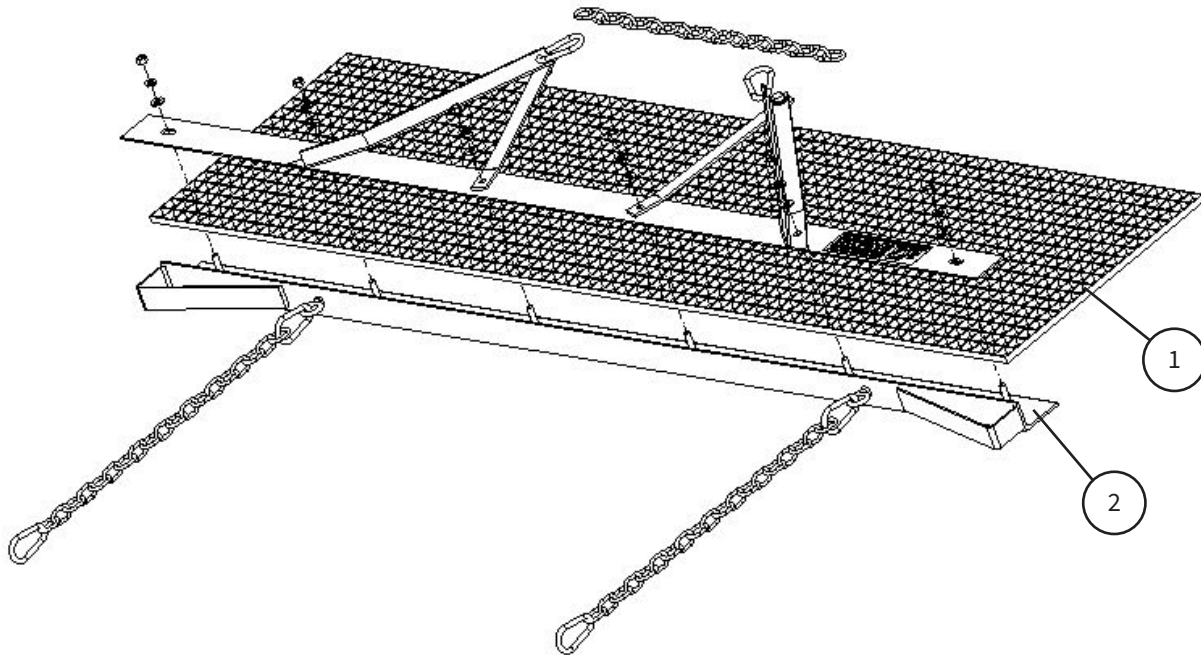


Fig 35.

Plug the connectors
together until it clicks.

Options (cont'd)

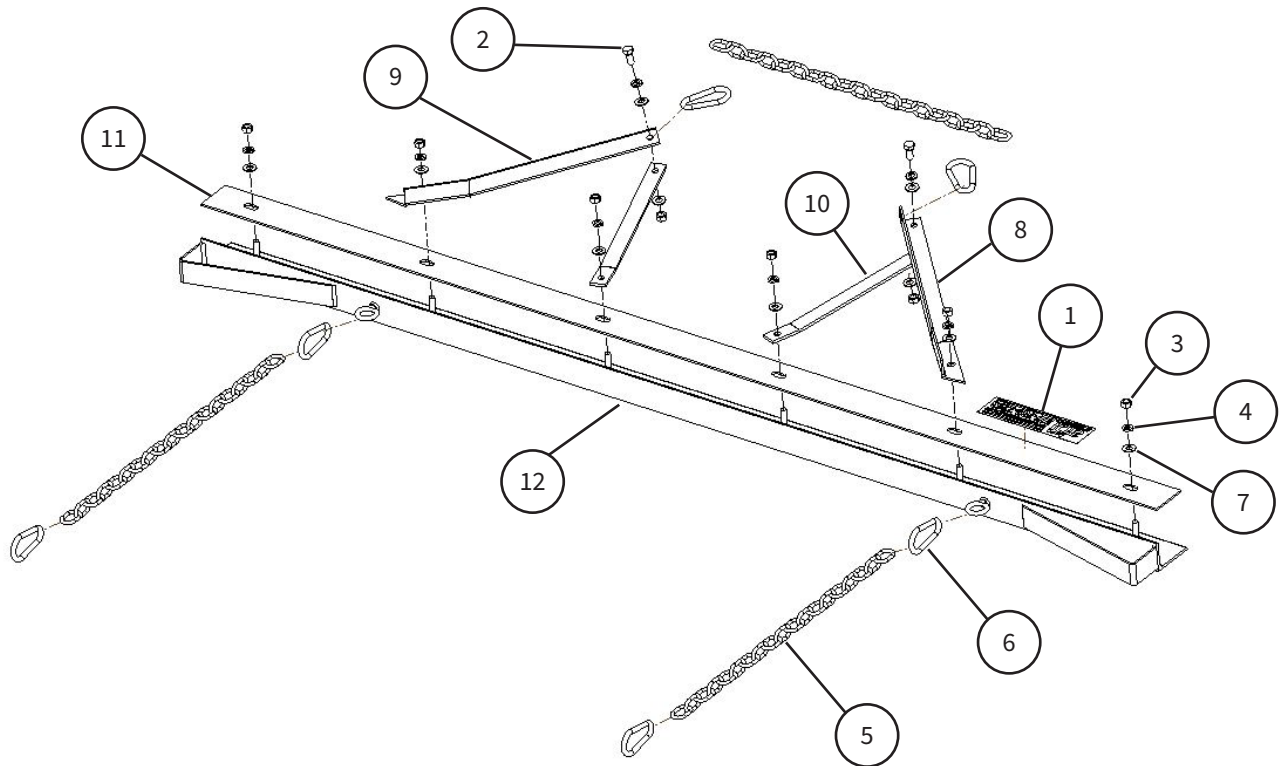
10-90167 - 6' RIGID DRAG MAT W/LEVELING BAR



ITEM	PART #	DESCRIPTION
1	10-90336	RIGID DRAG MAT 6' X 18" - (MAT ONLY)
2	10-90339	LEVEL BAR, TOP PLATE AND BRACKETS FOR DRAG MAT

The 6' wide Rigid Drag Mat with integrated leveling bar. This rigid drag mat is the all-purpose attachment that will float material to fill low areas and drag the surface ready for play. Because of its rigid design, this drag mat levels and smooths WITHOUT following small contours of the ground ensuring a level playing surface. The innovative integrated leveling bar floats materials from high areas into low areas, is a nearly indestructible tow bar, and allows the steel mesh to be replaced once worn.

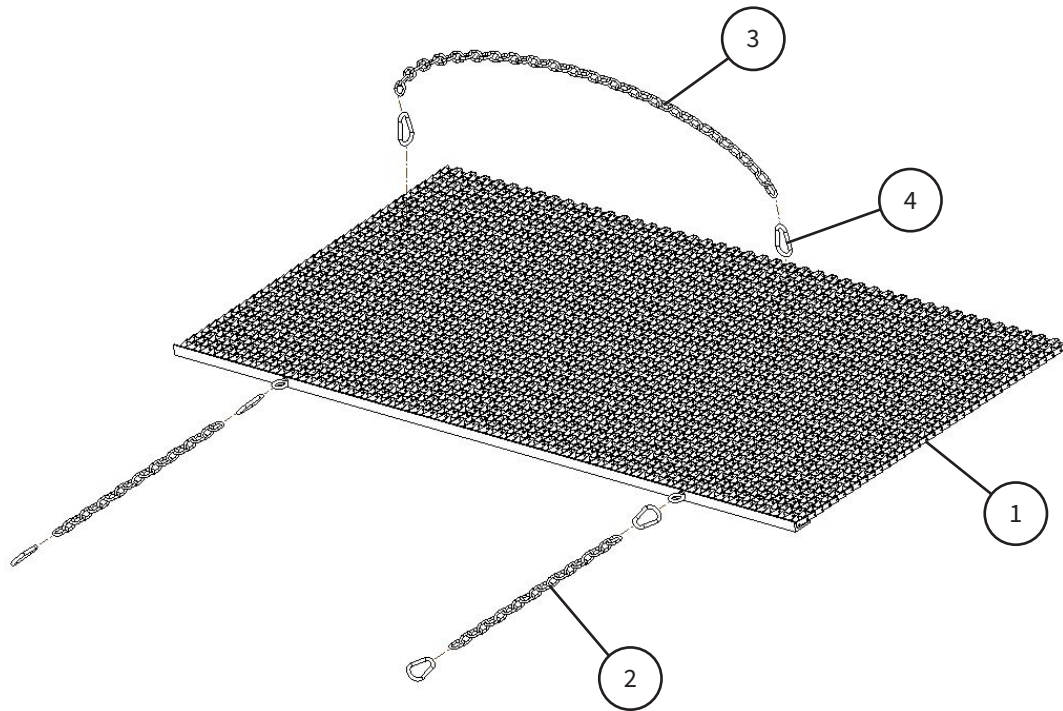
10-90339 - LEVEL BAR, TOP PLATE AND BRACKETS FOR DRAG MAT



ITEM	PART #	DESCRIPTION
1	10-10657	LBL: ABI: CONTACT INFO: TEXTURED TOOLS
2	10-20044	HCS 3/8-16 X 7/8: Z5
3	10-20130	3/8 HEX FIN NUT ZINC GR 5
4	10-20133	3/8" SPLIT LOCKWASHER ZNC
5	10-20146	CHAIN: PICK UP: 19 LINKS
6	10-20154	5/16" SNAP HOOK
7	10-20195	FLT WSHR: 3/8 SAE: CL ZINC
8	10-30237	BRKT:CHAIN DRAGMAT:LH
9	10-30238	BRKT:CHAIN DRAGMAT:RH
10	10-30239	BRKT: DRAGMAT CHAIN SUPPT
11	10-30241	PLATE: DRAGMAT TOP
12	10-40042	WLDMT: LEVEL BAR

Options (cont'd)

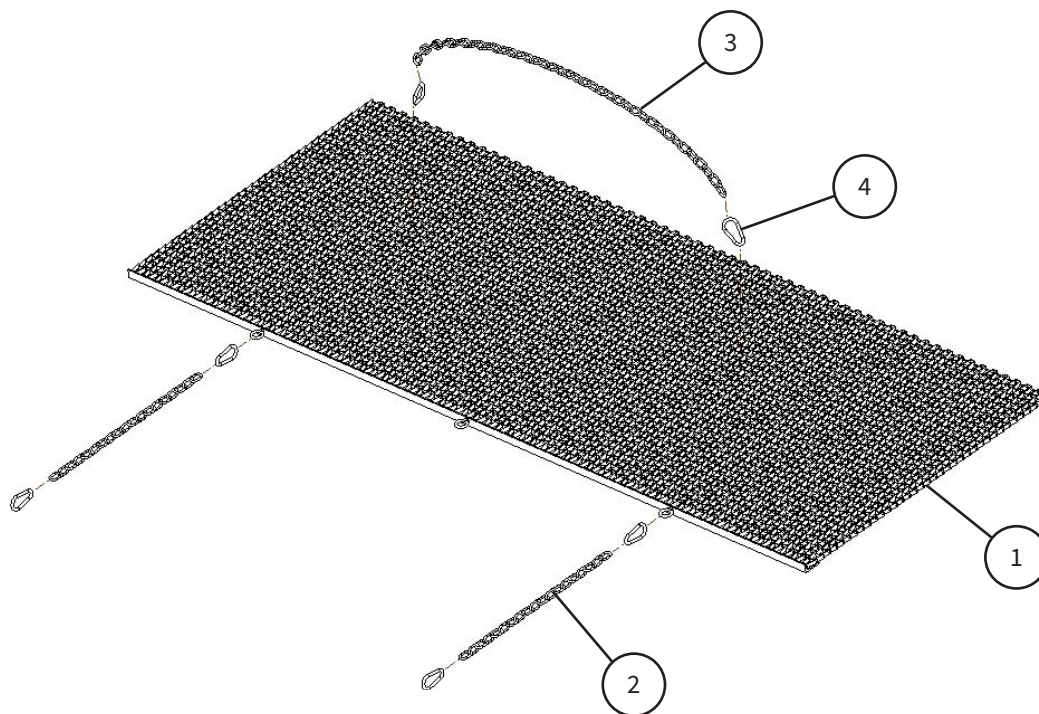
10-90259 - 6'W x 3'L - XD FLEXIBLE DRAG MAT



ITEM	PART #	DESCRIPTION
1	10-10064	XD DRAGMAT: 72" X 36"
2	10-20146	CHAIN: 3/16": 19 LINKS
3	10-20146	CHAIN: 3/16": 41 LINKS
4	10-20154	5/16" SNAP HOOK

The XD Flexible Steel Mesh Drag Mat is 6' wide by 3' long and is the most extreme duty drag mat on the market. It is ideal to finish and reset the surface ready for play after heavy maintenance work. The steel mesh is made of extremely thick rust resistant galvanized steel. The rods are an impressive 6 Gauge and the ends are welded to protect the edges from fraying as it hits bases, fencing and other obstacles. The drag bar is 1/8" thick angle iron to eliminate bending. Ideal for all ball diamonds, trail maintenance, breaking-up aeration cores, leveling cleat prints in turf fields and more.

10-90260 - 8'W x 3'L - XD FLEXIBLE DRAG MAT

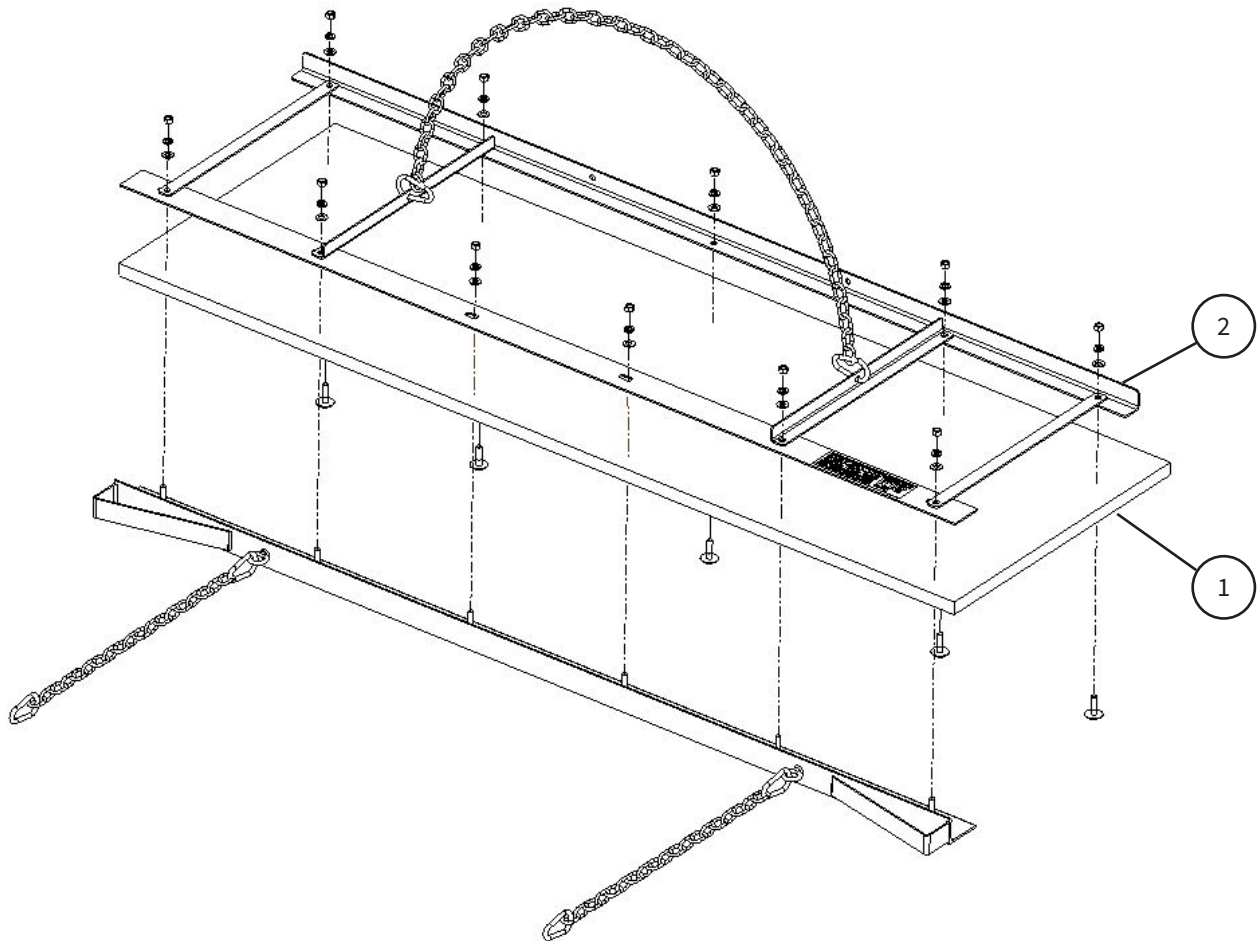


ITEM	PART #	DESCRIPTION
1	10-10065	XD DRAGMAT: 96" X 36"
2	10-20146	CHAIN: 3/16": 19 LINKS
3	10-20146	CHAIN: 3/16": 41 LINKS
4	10-20154	5/16" SNAP HOOK

The XD Flexible Steel Mesh Drag Mat is 8' wide by 3' long and is the most extreme duty drag mat on the market. It is ideal to finish and reset the surface ready for play after heavy maintenance work. The steel mesh is made of extremely thick rust resistant galvanized steel. The rods are an impressive 6 Gauge and the ends are welded to protect the edges from fraying as it hits bases, fencing and other obstacles. The drag bar is 1/8" thick angle iron to eliminate bending. Ideal for all ball diamonds, trail maintenance, breaking-up aeration cores, leveling cleat prints in turf fields and more.

Options (cont'd)

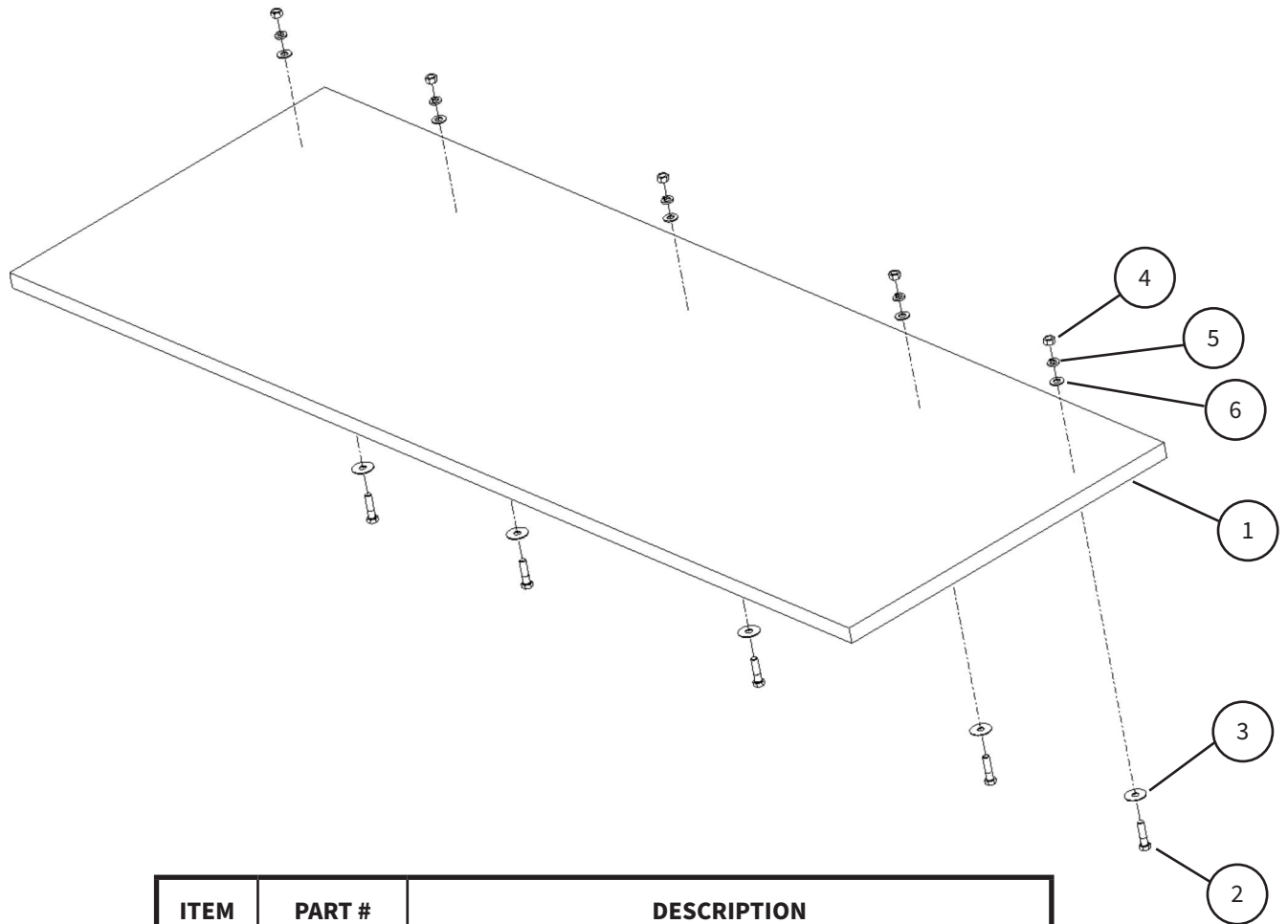
10-90104 - 6' COCO MAT AND LEVEL BAR



ITEM	PART #	DESCRIPTION
1	10-90334	COCO MAT AND HARDWARE
2	10-90340	LEVEL BAR, TOP PLATE AND BRACKETS FOR COCO MAT

The Coco Drag Mat with Leveling Bar is 6' wide and 2' long and is ideal for adding a fine finish to an infield skin even in high moisture conditions. The innovative integrated leveling bar floats materials from high areas into low areas, is a nearly indestructible tow bar (for use behind a tow vehicle) and allows the coco matting to be replaced once worn.

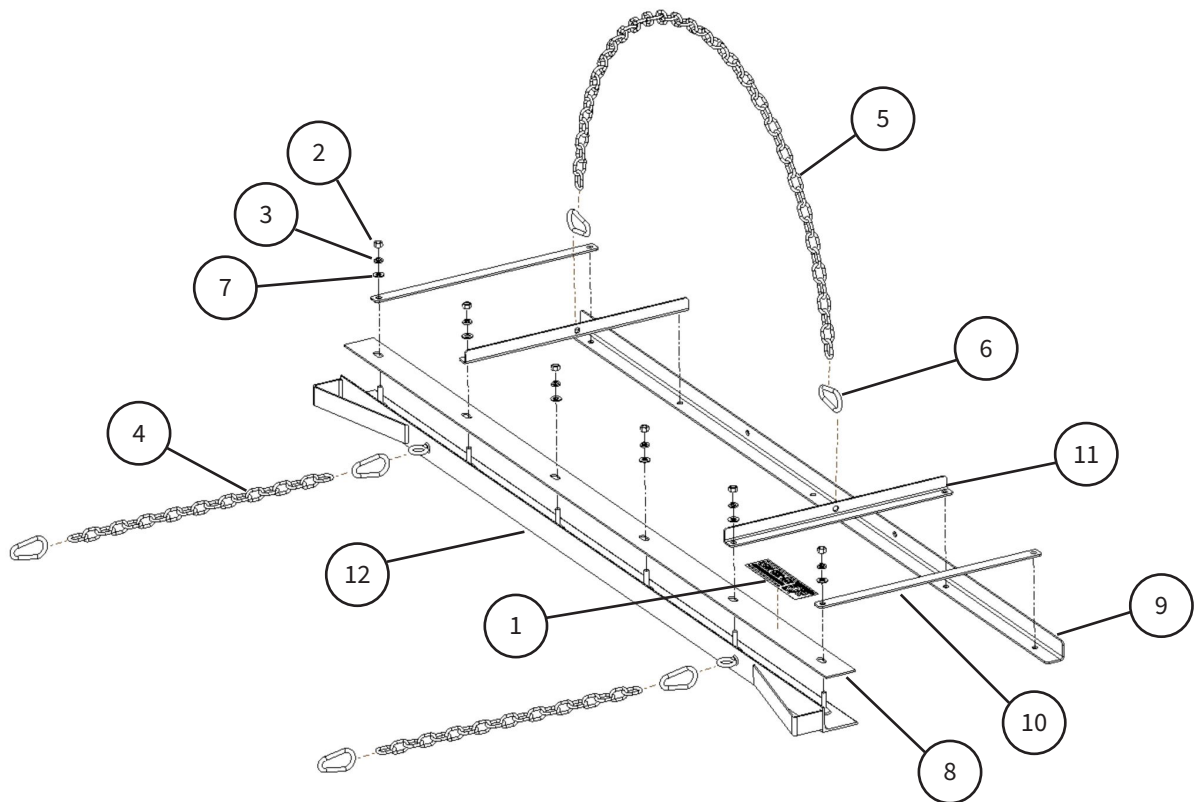
10-90334 - COCO MAT AND HARDWARE



ITEM	PART #	DESCRIPTION
1	10-10000	NATURAL VB COCO MAT 24" x 72" x 1"
2	10-20043	HX HD BOLT:3/8-16 1.5": ZINC GR5
3	10-20046	WASHER: FEND: 3/8" x 1.25" ZINC
4	10-20130	NUT: 3/8" HEX FIN: ZINC GR 5
5	10-20133	LOCKWASHER: 3/8" SPLIT: ZINC
6	10-20195	FLT WSHR: 3/8" SAE:CL ZINC

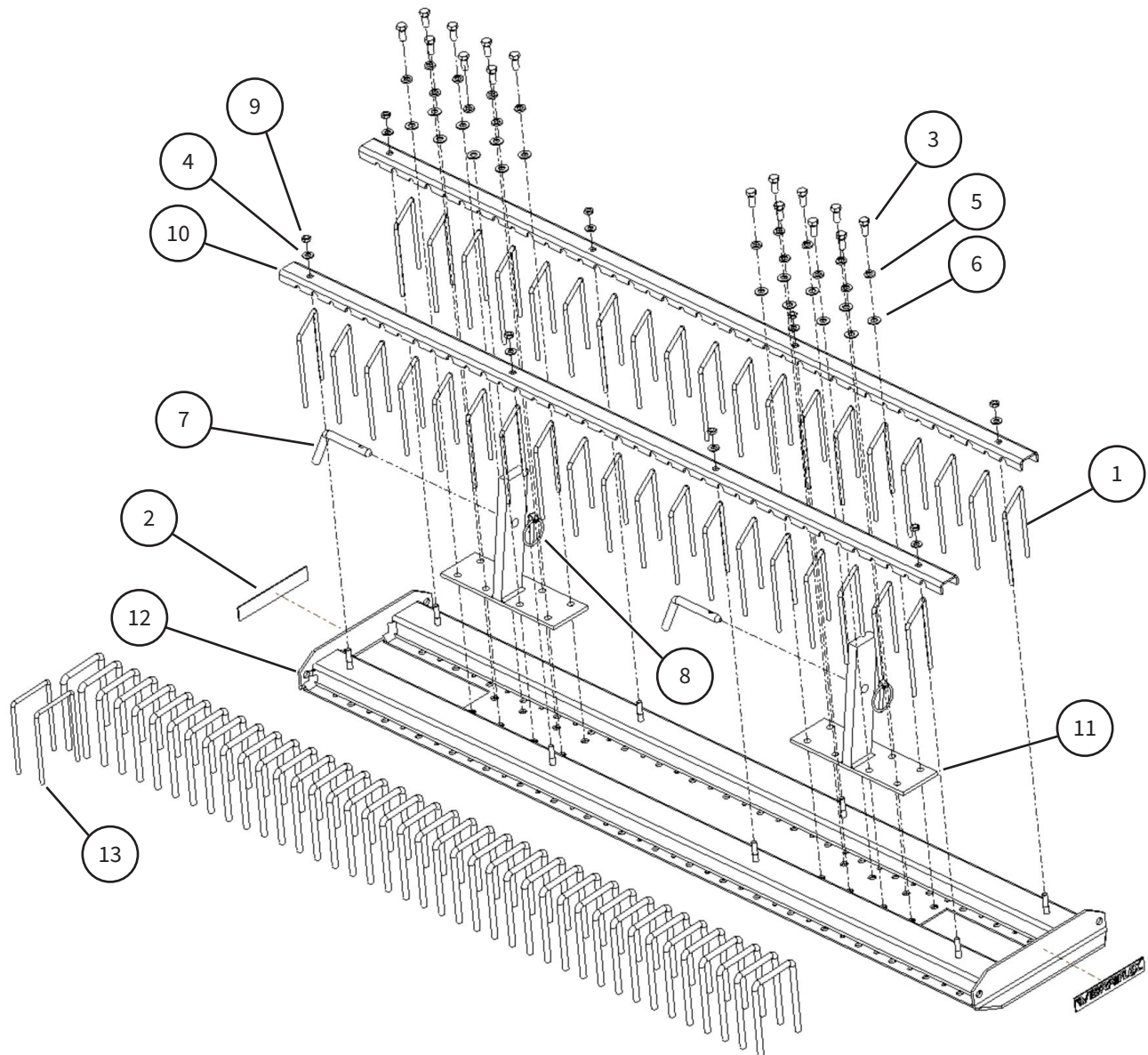
Options (cont'd)

10-90340 - LEVEL BAR, TOP PLATE AND BRACKETS FOR COCO MAT



ITEM	PART #	DESCRIPTION
1	10-10861	LBL: CONTACT INFO: ABI: FOR GLOSS TOOLS
2	10-20130	3/8" HEX FIN NUT ZINC GR 5
3	10-20133	3/8" SPLIT LOCKWASHER ZNC
4	10-20146	CHAIN: 3/16": 19 LINKS
5	10-20146	CHAIN: 3/16": 51 LINKS
6	10-20154	5/16" SNAP HOOK
7	10-20195	FLT WSHR: 3/8" SAE: CL ZINC
8	10-30241	PLATE: DRAGMAT TOP
9	10-30376	BRKT: COCO MAT FRM
10	10-30377	BRKT: COCO MAT CONNECT
11	10-30469	BRKT: COCO MAT CONNECT 19" ANGLE
12	10-40042	WLDMT: LEVEL BAR

10-90165 - VIBRAFLEX 5' INFIELD DRAG (MODEL 3800)



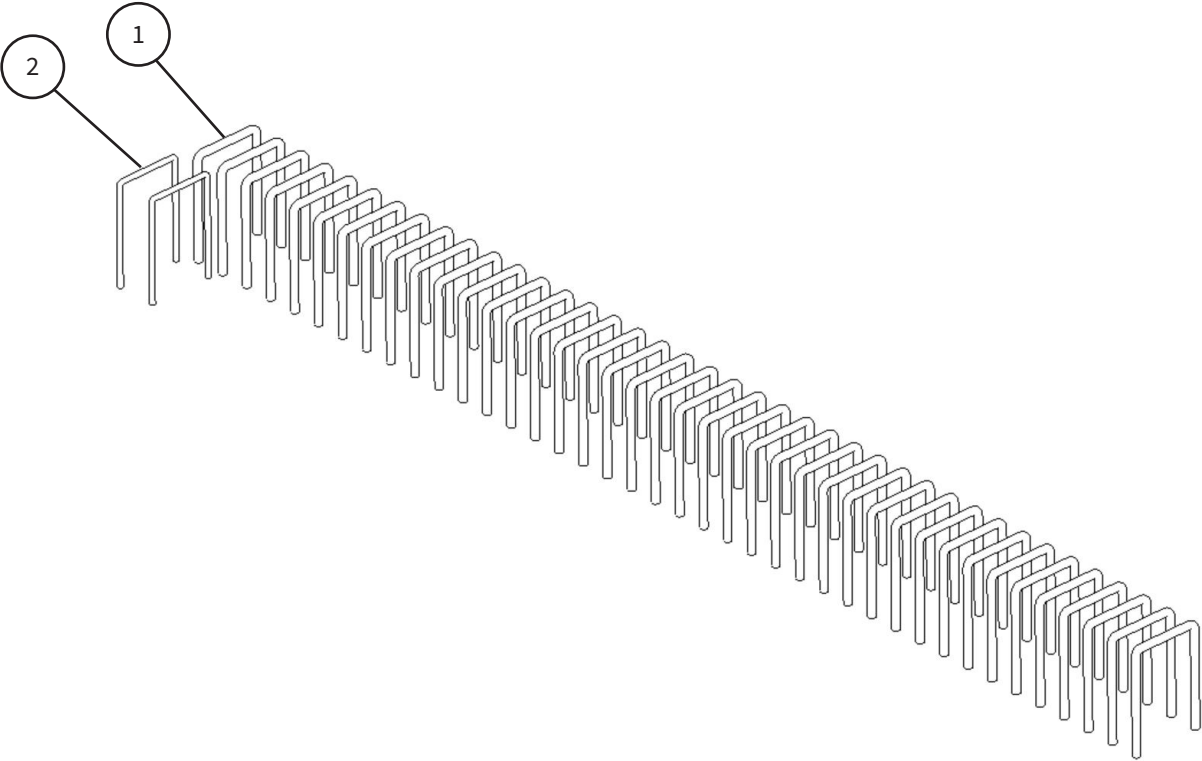
Options (cont'd)

10-90165 - VIBRAFLEX 5' INFIELD DRAG (MODEL 3800) (cont'd)

ITEM	PART #	DESCRIPTION	ITEM	PART #	DESCRIPTION
1	10-10085	1/4 VIBRAFLEX PIN	8	10-20232	LYNCH PIN:1/4"X1.25":ZINC
2	10-10094	LBL:VIBRA FLEX 1" X 6"	9	10-20335	NYLOCK NUT: THIN :5/16-18:ZINC GR 5
3	10-20044	HCS 3/8-16x7/8 Z5	10	10-30993	CHANNEL: PIN HOLDER: 3800 VIBRAFLEX
4	10-20128	5/16 SAE WASHER ZNC	11	10-40246	WLDMT: SHANK VIBRAFLEX
5	10-20133	3/8" SPLIT LOCKWASHER ZNC	12	10-40247	WLDMT: 3800 VIBRAFLEX
6	10-20195	FLT WSHR:3/8 SAE:CL ZINC	13	10-90333	PKG: EXTRA PINS: SHIPS WITH VIBRAFLEX
7	10-20221	BENT PIN:1/2"X3.5":ZINC			

The model 3800 VibraFlex groomer is for daily grooming on recreational fields. The VibraFlex attachment is a complete re-imagining of infield grooming. Four evenly staggered rows of 1/4" or 3/8" U-shaped pins creating 3/4" spacing to transfer vibration & flex from front to back, dancing along the surface, shattering surface-tension to properly groom any infield. The 1/4" or 3/8" pins are easy to replace or exchange and are mounted at an angle to create the best suit surface conditions. ABI recommends the vibraflex should be pulled in a circular motion while only penetrating the surface 1/4- 1/2 inches for daily grooming, and deeper based off the end users' goals.

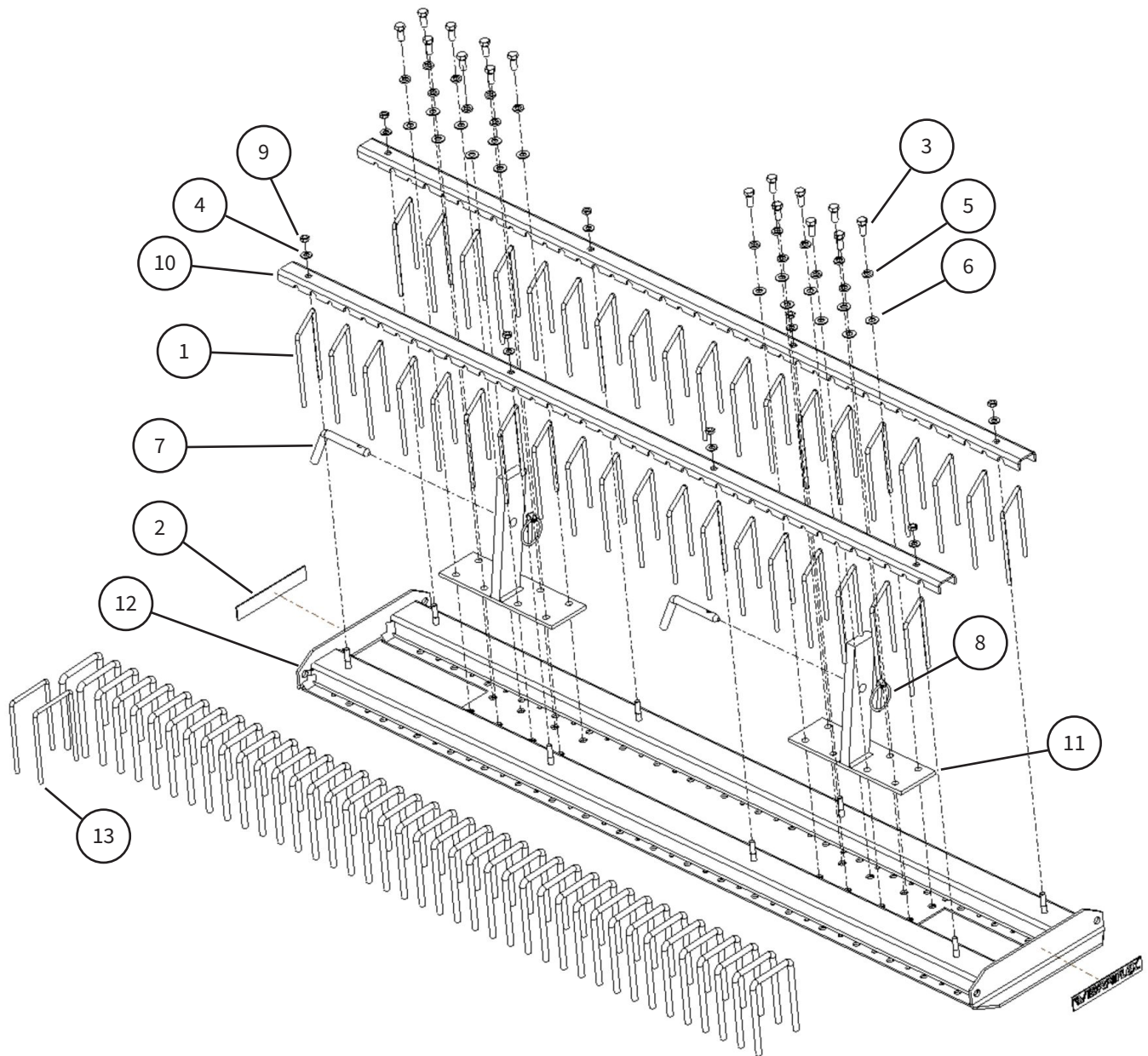
10-90333 - PKG: EXTRA PINS: SHIPS WITH VIBRAFLEX



ITEM	PART #	DESCRIPTION
1	10-10083	3/8" VIBRAFLEX PINS
2	10-10085	1/4" VIBRAFLEX PIN

Options (cont'd)

10-90166 - VIBRAFLEX 5' INFIELD DRAG (MODEL 5800)



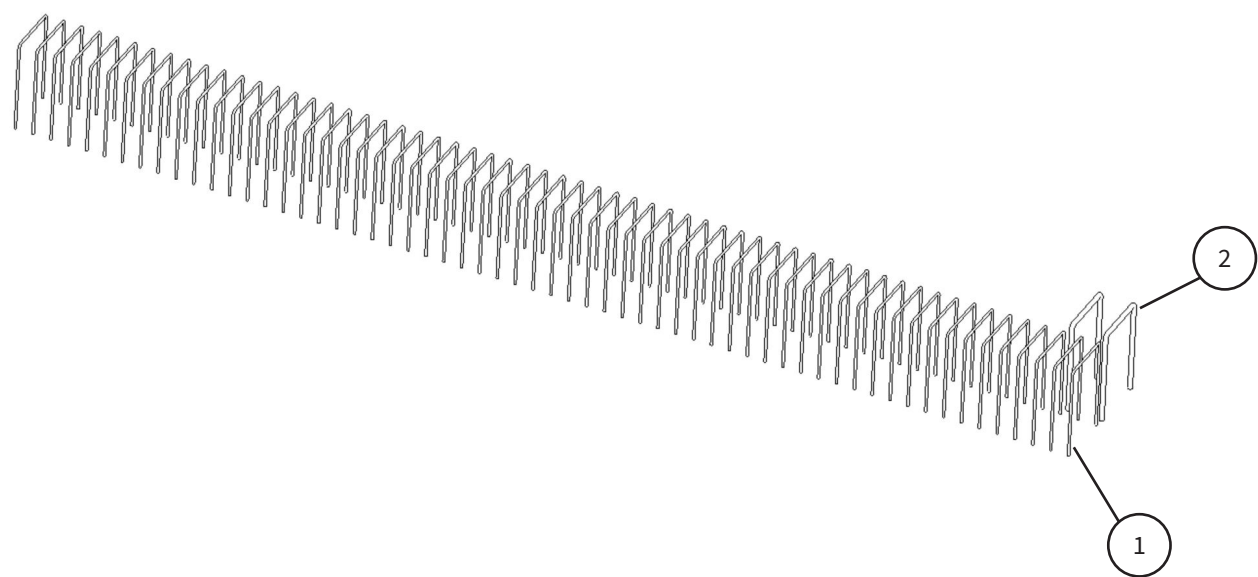
ITEM	PART #	DESCRIPTION
1	10-10085	1/4 VIBRAFLEX PIN
2	10-10094	LBL:VIBRA FLEX 1" X 6"
3	10-20044	HCS 3/8-16x7/8 Z5
4	10-20128	5/16 SAE WASHER ZNC
5	10-20133	3/8" SPLIT LOCKWASHER ZNC
6	10-20195	FLT WSHR:3/8 SAE:CL ZINC
7	10-20221	BENT PIN:1/2"X3.5":ZINC

ITEM	PART #	DESCRIPTION
8	10-20232	LYNCH PIN:1/4"X1.25":ZINC
9	10-20335	NYLOCK NUT: THIN :5/16-18:ZINC GR 5
10	10-30994	CHANNEL: PIN HOLDER: 5800 VIBRAFLEX
11	10-40246	WLDMT: SHANK VIBRAFLEX
12	10-40248	WLDMT: 5800 VIBRAFLEX
13	10-90445	KIT: 60 SILVER AND 2 GOLD PINS: BOXED

The model 5800 VibraFlex™ groomer functions just like the standard model 3800 but is designed for higher clay content (higher end) infield surfaces. This drag includes both an 1/8" and 1/4" thick set of u-shaped pins that are mounted at an angle to create four staggered rows with a 1/2" spacing. The 1/8" pins are specifically designed for the world's most pristine playing surfaces. This VibraFlex™ Technology is simply the pinnacle choice for frequent infield surface maintenance. ABI recommends the vibraflex should be pulled in a circular motion while only penetrating the surface 1/4- 1/2 inches for daily grooming, and deeper based off the end users' goals.

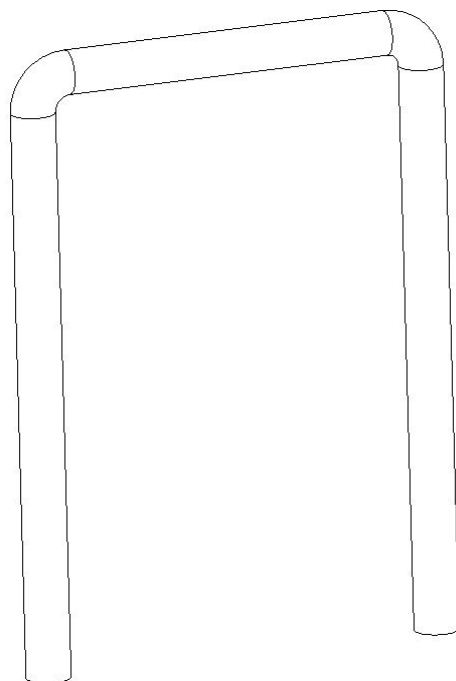
Options (cont'd)

10-90445 - KIT: 60 SILVER AND 2 GOLD PINS: BOXED

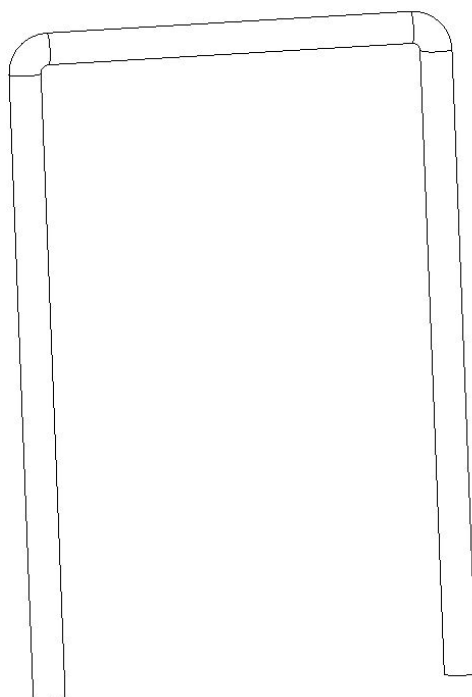


ITEM	PART #	DESCRIPTION
1	10-10082	1/8" VIBRAFLEX PINS
2	10-10085	1/4" VIBRAFLEX PIN

10-10083 - VIBRAFLEX PIN, BLACK, 3/8"

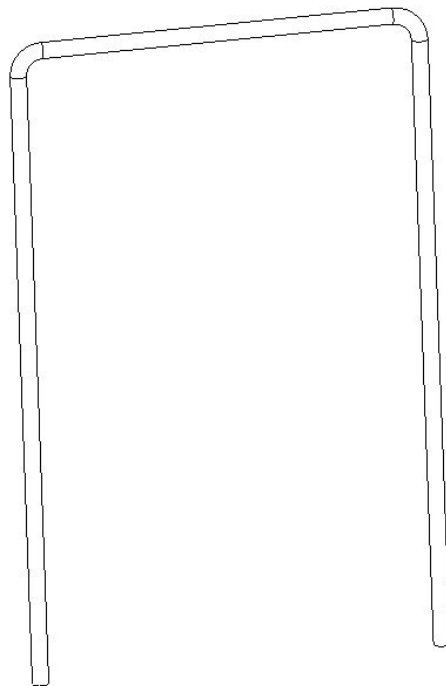


10-10085 - VIBRAFLEX PIN, GOLD, 1/4"

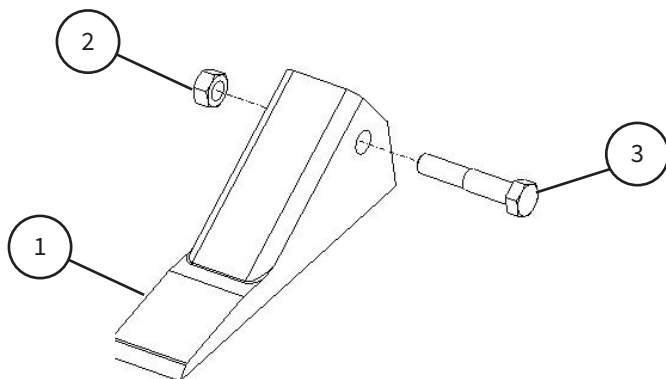


Options (cont'd)

10-10082 - VIBRAFLEX PIN, SILVER, 1/8"

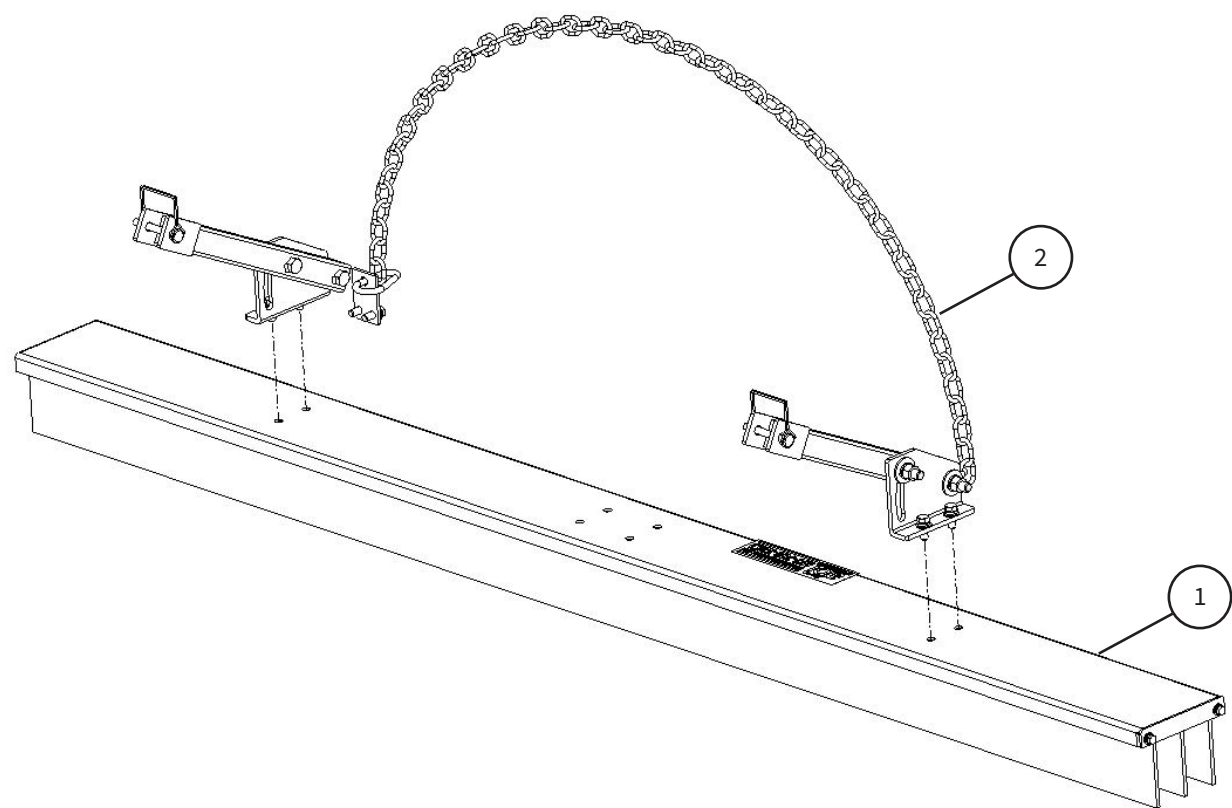


10-40020 KIT: TIP SCARIFIER



ITEM	PART #	DESCRIPTION
1	10-10047	TIP: SCARIFIER: ALL TOOLS
2	10-20096	NUT: 5/16-18 SER FLANGE LOCK, GR8, ZINC
3	10-20121	HX HD BOLT: 5/16-18 X 1 3/4"L, C/S GR8, YELLOW ZINC

10-90298 - 7' FINE FINISH BROOM (MANUAL LIFT)

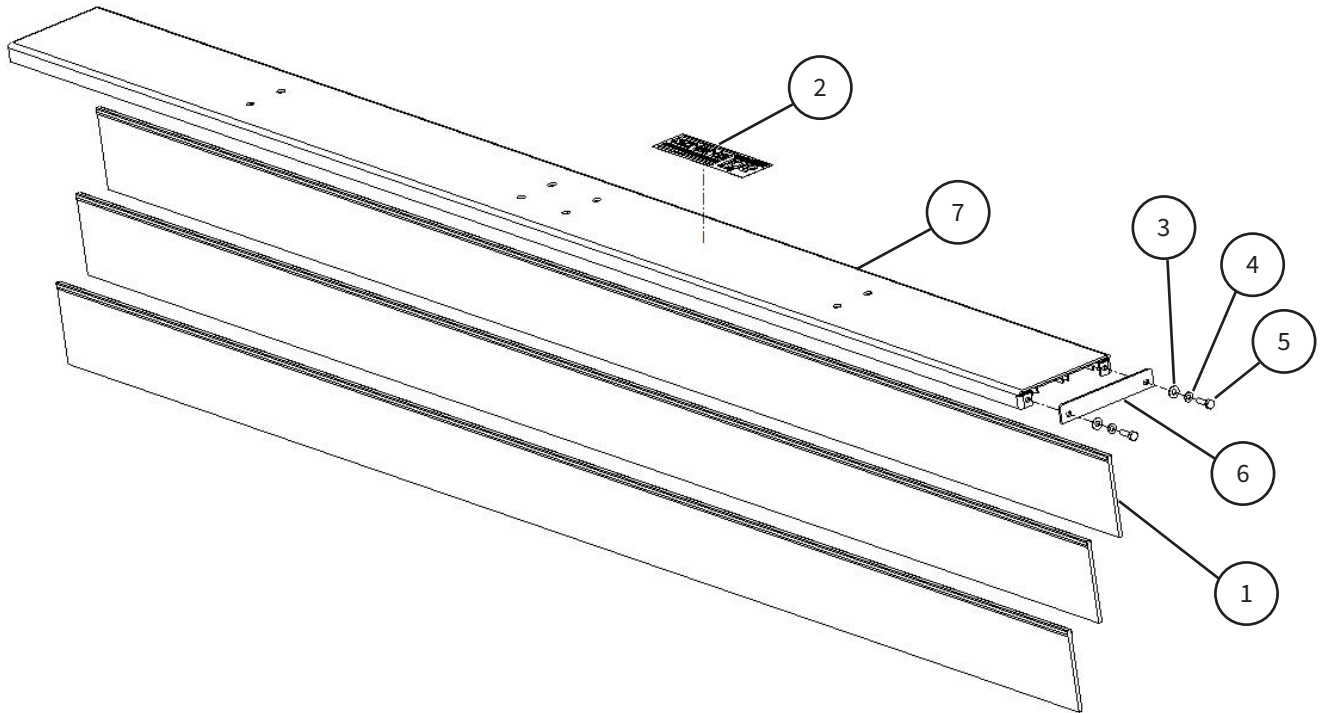


ITEM	PART #	DESCRIPTION
1	10-90335	BROOM: BRUSHES; FRAME AND END STOP
2	10-90342	BROOM ARMS AND HARDWARE: HYD LIFT

The Fine Finish Broom is 7' wide and offers 3 rows of bristles. The mounting arms are adjustable to set the exact working angle desired, yet the broom will float independently from the Infield Rascal® frame. The broom has an ideal weight for the perfect amount of down pressure needed for beautiful performance. If the surface is already clod-free and level, then the Fine Finish Broom creates the best finish in both high and low moisture conditions. The 3 ideally spaced rows of easily replaceable bristles, will help to float a small amount of material into low areas and finish the infield in a pristine “major-league” manner.

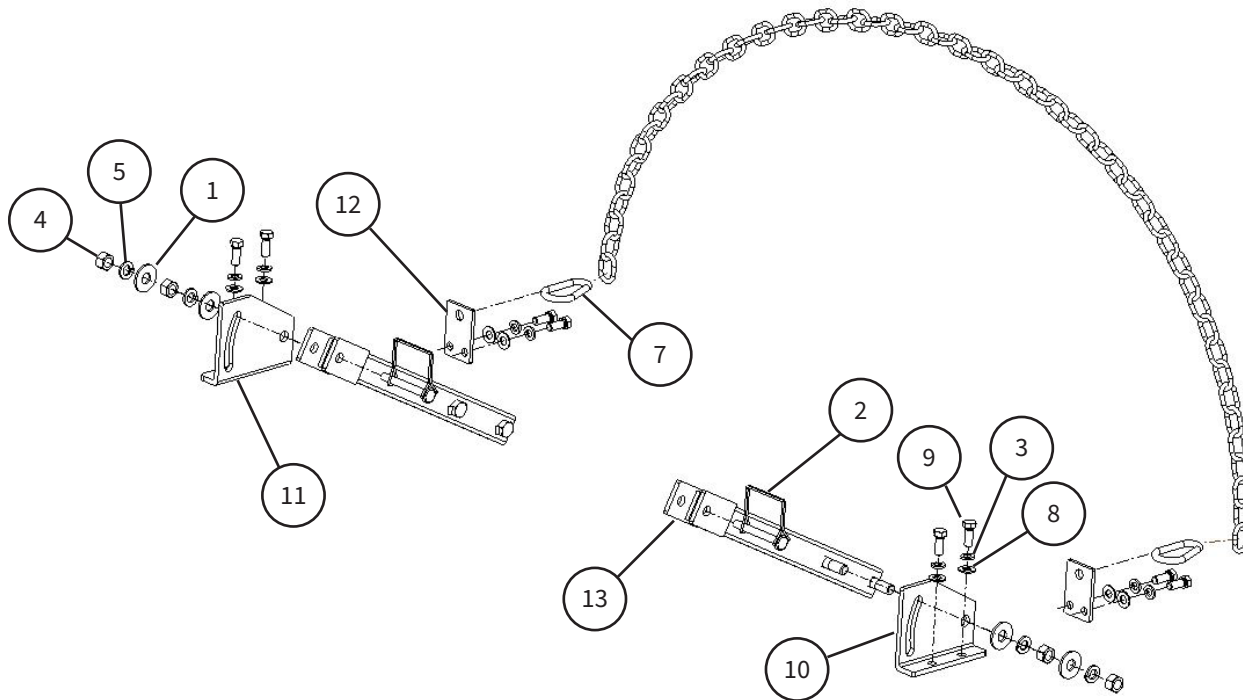
Options (cont'd)

10-90335 - BROOM: BRUSHES; FRAME AND END STOP



ITEM	PART #	DESCRIPTION
1	10-10203	BRUSH:4.5" TRIM X 84" OAL:#7 X .028 POLY
2	10-10657	LBL: ABI: CONTACT INFO: TEXTURED TOOLS
3	10-20196	FLT WSHR:1/4 SAE:CL ZINC
4	10-20277	LOCK WASHER: 1/4
5	10-20295	HX HD BOLT:1/4-20 7/8":ZINC GR5
6	10-30972	PLATE:END STOP:BROOM
7	10-40433	WLDMT: BROOM FRAME: ART. REAR HITCH

10-90342 - BROOM ARMS AND HARDWARE: HYD LIFT



ITEM	PART #	DESCRIPTION
1	10-20100	USS 1/2 FLAT WASHER, ZINC
2	10-20125	PIN:3/8" SQ WIRELOCK:3.75 OAL
3	10-20133	3/8" SPLIT LOCKWASHER ZNC
4	10-20138	1/2-13 HEX FIN NUT GR 5 ZNC
5	10-20139	1/2" SPLIT LOCKWASHER ZNC
6	10-20146	CHAIN: PICK UP: 56 LINKS
7	10-20154	5/16" SNAP HOOK
8	10-20195	FLT WSHR:3/8 SAE: CL ZINC
9	10-20279	HX HD BOLT:3/8-16 1.0 ZINC GR5
10	10-30970	BRKT:LH MOUNT: BROOM
11	10-30971	BRKT:RH MOUNT: BROOM
12	10-30973	PLATE:CHAIN MNT: BROOM
13	10-40133	WLDMT: BROOM ARM:FORCE

Options (cont'd)

KIT: MINI BOX BLADE W/SOLID BLADE

The Mini Box Blade w/Solid Blade kit attaches to the Finish Rake and is used to move material from high spots and fill in low spots.

To attach the Mini Box Blade to the Rascal, Unscrew and remove the two wing nuts and remove the two T-clamp plates (**Fig 43**).

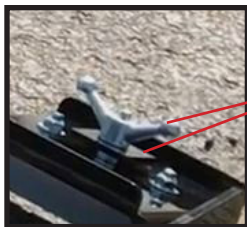
Slide the Mini Box Blade assembly under the Finish rake so that the bolts the wing nut threads onto is in the second comb slot from the end of the comb (**Fig 44 and 45**).

Lower the unit onto the Mini Box Blade assembly by cranking the front wheel jack counterclockwise (**Fig 46**).

Replace T-Clamp plates and tighten wing nuts back onto both bolts (**Fig 47**).

Use the closed end of a box wrench large enough to fit over one wing of the wing nut to use as leverage to tighten the wing nut tighter (**Fig 48**).

The unit is now ready to use as a mini box blade. The End plates (**Fig 49**) keep the material within the blade area to help move the material from high spots and fill in low spots.



Remove wing nut and T-Clamp plate from both ends.

Fig 43.



Fig 44.



Fig 45.

Slide Mini Box Blade assembly under Finish Rake so that the bolts that T-Clamp plate and wing nut go onto slides in second slot from comb end on both ends.



Fig 46.

Crank wheel jack counterclockwise to lower finish rake onto Mini Box Blade assembly.



Fig 47.

Replace T-Clamp plates and tighten wing nuts back onto both bolts.



Fig 48.

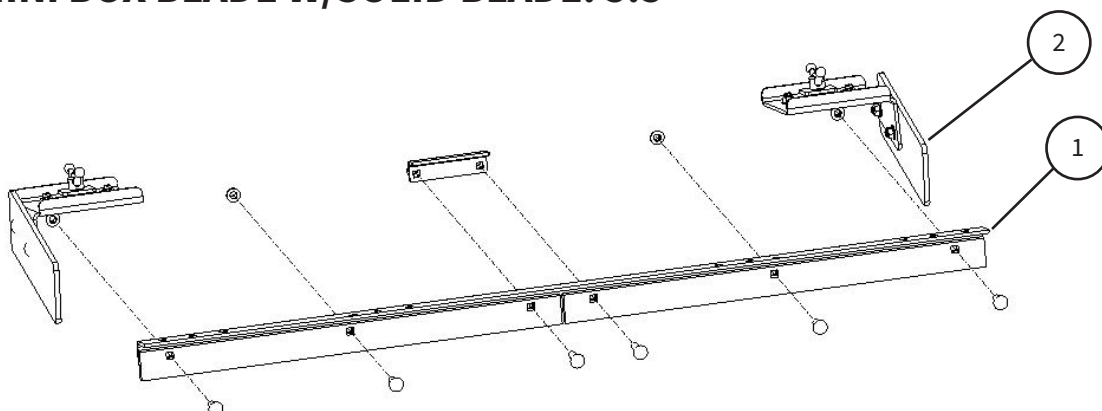
Use the closed end of a box wrench large enough to fit over one wing of the wing nut to use as leverage to tighten the wing nut tighter.



Fig 49.

The End plates keep the material within the blade area to help move the material from high spots and fill in low spots.

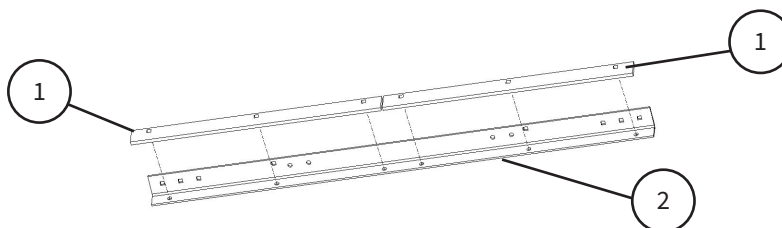
10-99031 - KIT: MINI BOX BLADE W/SOLID BLADE: 5.5



ITEM	PART #	DESCRIPTION
1	10-90337	KIT: STRAIGHT BLADE: 5.5
2	10-90343	ASM: HARDWARE KIT AND ENDS: 5.5

The Mini-Box Blade gives the Infield Rascal MVP extra earth-moving muscle and unmatched versatility. Paired with the optional electric actuator, the operator can quickly and effectively carry material, collect loosened debris & rocks, grade, and level with finesse! It can effectively reset the grade around home plate, sliding areas, along base paths, and warning tracks.

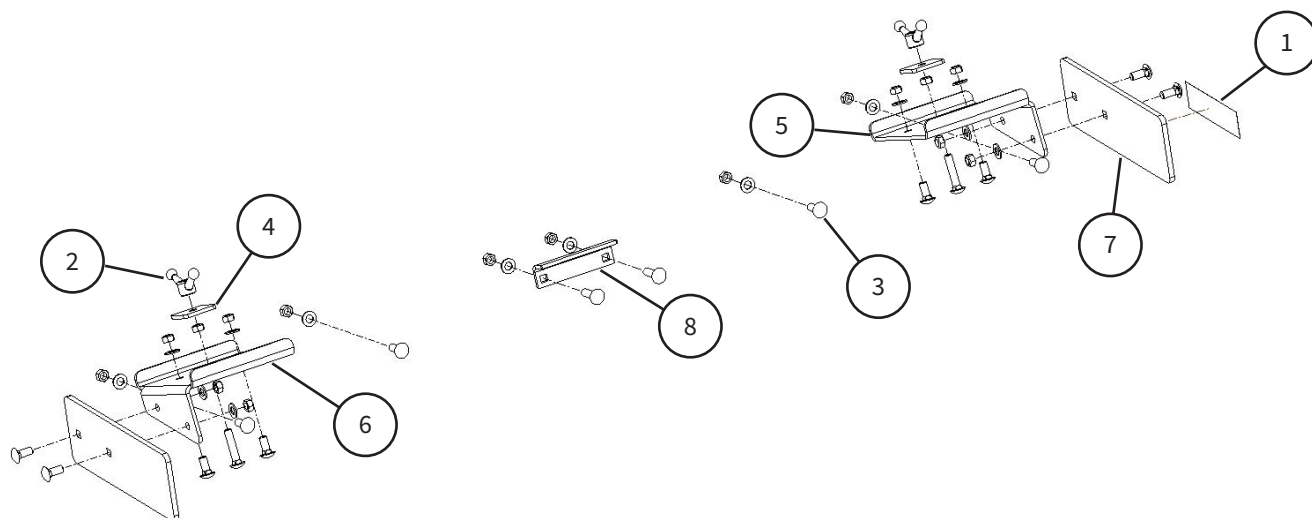
10-90337 - KIT: SOLID STRAIGHT BLADE: 5.5



ITEM	PART #	DESCRIPTION
1	10-30870	PLATE: 32" SOLID BLADE: FINISH BLADE: 5.5
2	10-30907	ANGLE: GRADE BLADE FRM: 5.5

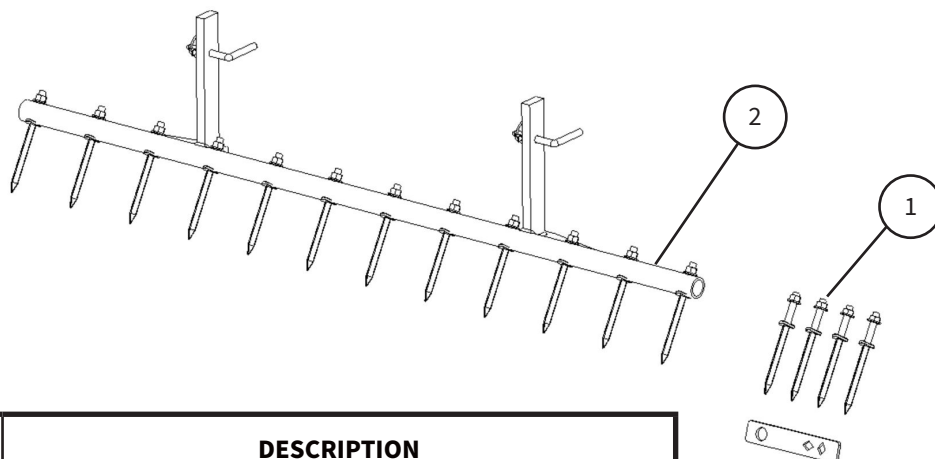
Options (cont'd)

10-90343 - ASM: HARDWARE KIT AND ENDS: 5.5



ITEM	PART #	DESCRIPTION
1	10-10657	LBL: ABI: CONTACT INFO: TEXTURED TOOLS
2	10-20212	WING NUT: 1/2"-13:ZINC
3	10-20338	RASCAL MINI BOX BLADE 5.5 HARDWARE PACKET
4	10-30843	PLATE: T-CLAMP:FORCE
5	10-30904	BRKT: LH FRM END: GRADING BOX
6	10-30905	BRKT: RH FRM END: GRADING BLADE
7	10-30910	PLATE: CONTAINMENT: RASCAL
8	10-30911	PLATE: BLADE SUPPT: RASCAL

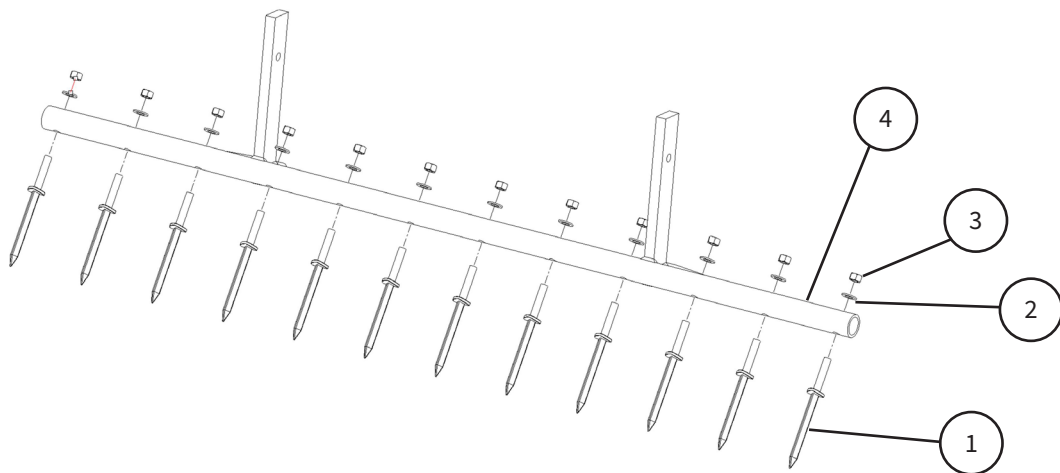
10-90232 - MINI SCARIFIER "TOOTH BAR"



ITEM	PART #	DESCRIPTION
1	10-90400	KIT: BOXED COMPONENTS: TOOTHBAR
2	10-90457	ASM: TOOTHBAR: STOCKED SUB-ASSEMBLY

The mini-scarifiers work in tandem with the separately sold mini-box blade. These replaceable mini-scarifiers loosen material to feed the mini-box during the infield grading process.

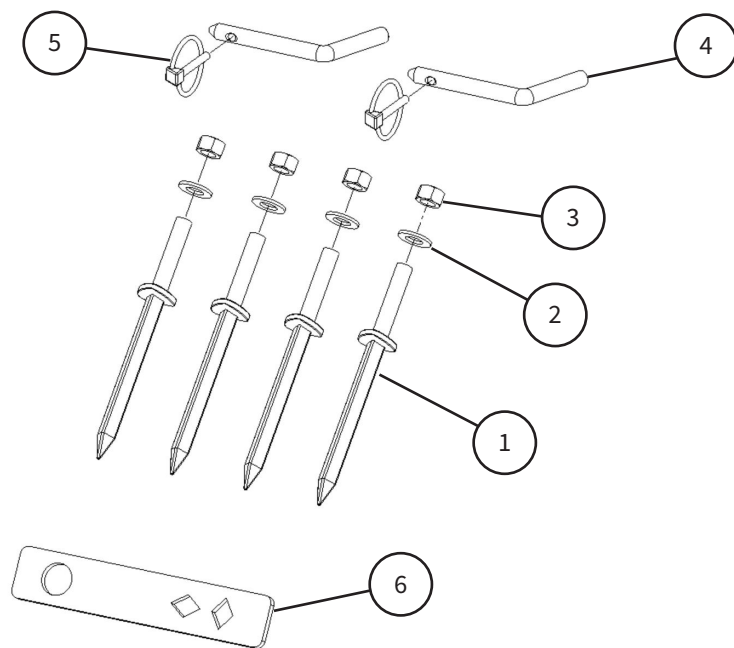
10-90457 - ASM: TOOTHBAR: STOCKED SUB-ASSEMBLY



ITEM	PART #	DESCRIPTION
1	10-10506	SCARIFIER: THREADED: HARROW TOOTH
2	10-20194	FLT WSHR:1/2 SAE: CL ZINC
3	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
4	10-40289	WLDMT: TOOTHBAR: FORCE

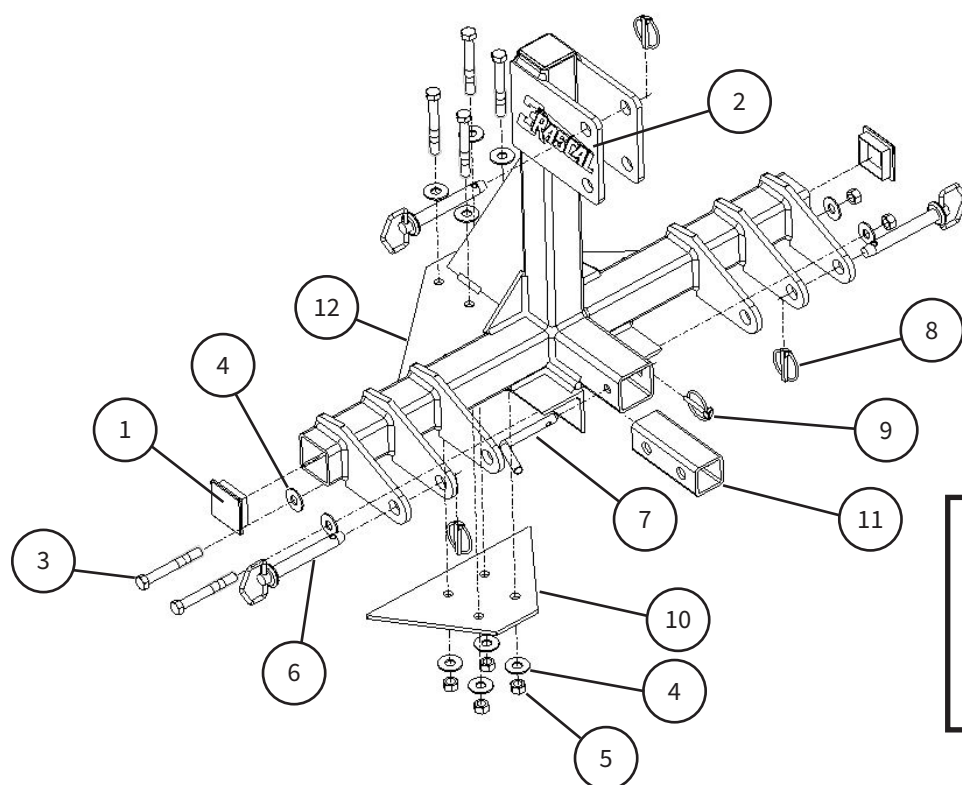
Options (cont'd)

10-90400 - KIT: BOXED COMPONENTS: TOOTHBAR



ITEM	PART #	DESCRIPTION
1	10-10506	SCARIFIER: THREADED: HARROW TOOTH
2	10-20194	FLT WSHR:1/2 SAE: CL ZINC
3	10-20201	NYLOCK NUT:1/2-13:ZINC GR 5
4	10-20221	BENT PIN:1/2"X3.5":ZINC
5	10-20232	LYNCH PIN:1/4"X1.25":ZINC
6	10-31159	PLATE: SMALL SCAR WRENCH

RA3PTHTCH KIT: 3PT HITCH



The 3-Point conversion kit can be installed in place of the removable tow bar tongue, allowing the Rascal to be compatible with both category 0 and category 1 3-point hitch types for tractors under 35 horse power.

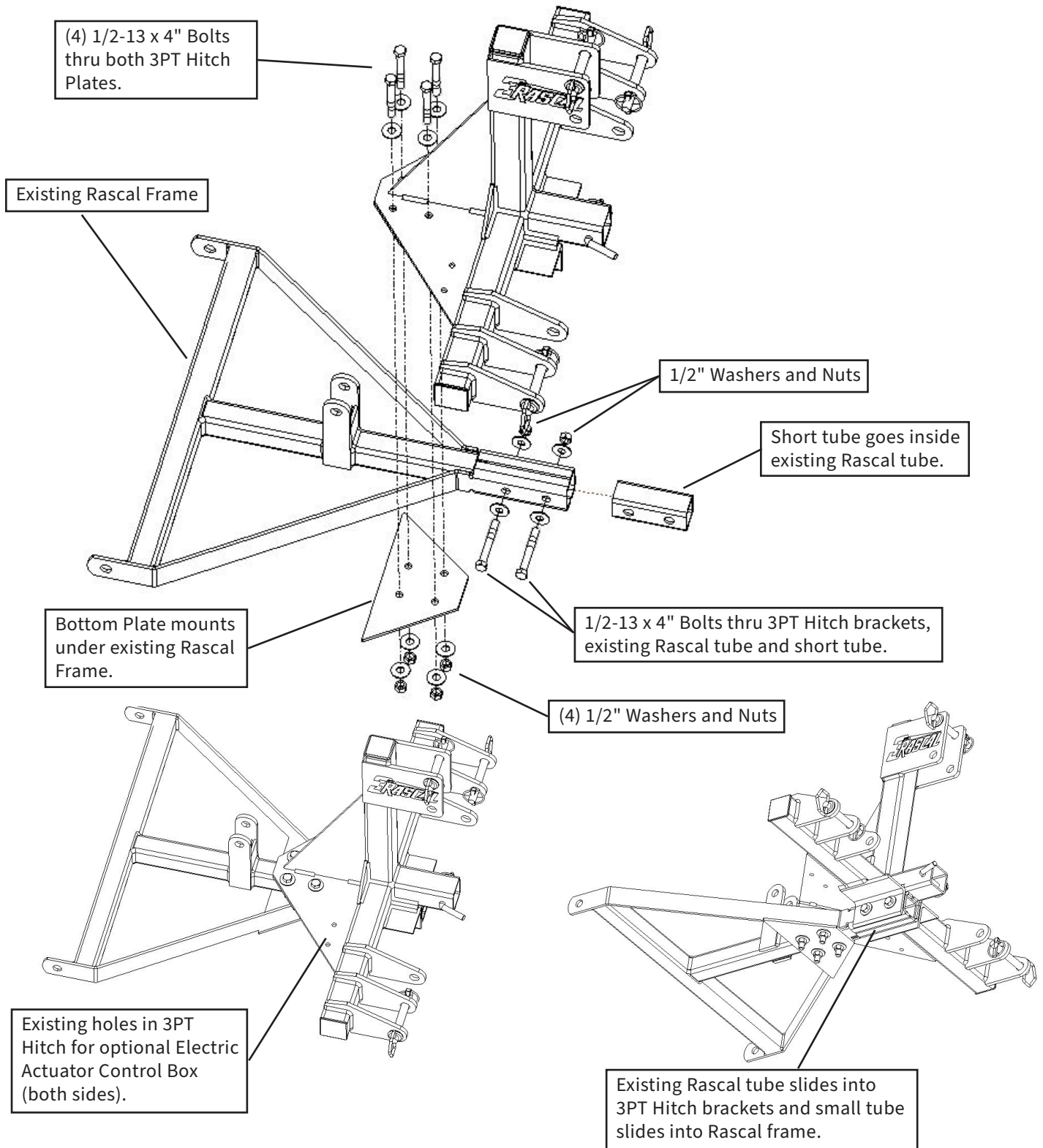
ITEM	PART #	DESCRIPTION
1	10-10017	CAP: SQR 2.5" TUBE END: BLACK PLASTIC
2	10-10092	LBL:RASCAL 3PT LOGO
3	10-20141	HX HD BOLT: 1/2-13 X 4":ZINC GR5
4	10-20191	1/2 USS FLAT WASHER GR 8 Z/YEL
5	10-20201	NYLOCK NUT: 1/2-13: ZINC GR 5
6	10-20220	HITCH PIN: 3/4" X 4.25": ZINC

ITEM	PART #	DESCRIPTION
7	10-20221	BENT PIN: 1/2" X 3.5": ZINC
8	10-20231	LYNCH PIN: 3/8" X 1.5": ZINC
9	10-20232	LYNCH PIN:1/4"X1.25":ZINC
10	10-30041	PLATE: BOTTOM: RASCAL3PT
11	10-30127	TUBE: 2" SQ X .2" WALL: FILLER
12	10-40010	WLDMT: 3PT ADAPTER: RASCAL

The 3-point hitch converts the standard Infield Rascal MVP into the ultimate 3-point groomer tool for sub-compact and compact tractors. Now Infield Rascal MVP owners, that also own the 3-point option, may in under 1 minute, swap back and forth between a pull behind tool for ATVs or a 3-point tool for small tractors; with no tools required. This amazing versatility for one tool to work with both ATVs and 3-point tractors is ideal for facilities that prefer to use a different tow vehicle for varying jobs . Compatible with both category 0 and category 1 3-point hitch types.

Options (cont'd)

ASSEMBLING 3PT HITCH TO EXISTING RASCAL FRAME



Troubleshooting & FAQs

Pinning Scarifiers or Profile Blades to the Rascal

When pinning the scarifiers or profile blades to the Rascal, clip the Lynch pin from the bottom up so rocks and debris don't cause the Lynch pin to be knocked off and lose a Bent pin and scarifier or possibly damage profile blade (**Fig 56**).



Fig 56.

Marking the wheel Jack for a particular depth

Once the Rascal has been setup for a particular depth, use a marker to mark that depth on the non-painted portion of the wheel jack. After using the Rascal for other jobs at different depths and it's time to set the height again for a previous setting, just crank the wheel jack until the bottom of the black portion of the wheel jack lines up with the mark to avoid the time it takes to go thru the setup procedure. (**Fig 57**).



Fig 57.

Troubleshooting electrical and mechanical issues with Electric Actuator.

Refer to the video links below if the Electrical Actuator is not functioning properly.

<https://www.youtube.com/watch?v=SEhCApqXQIY>

https://www.youtube.com/watch?v=j2K_guT1zo8

NOTE: TO AVOID ELECTRICAL DAMAGE TO THE UNIT BY SPLICING THE RASCAL WIRE HARNESS INTO THE TOW VEHICLE WIRING SYSTEM AND POSSIBLY REVERSING THE WIRES, OR THE TOW VEHICLE HAVING A POSITIVE GROUND RELAY SYSTEM, CONNECT THE WIRING HARNESS DIRECTLY TO THE TOW VEHICLE BATTERY (BLACK TO GROUND AND RED TO POSITIVE).

Further informational videos for the use of the PRO and MVP models

<https://www.youtube.com/watch?v=m4gxh8ZkVPI>

https://www.youtube.com/watch?v=_uS5SmIDRCU

<https://www.abiattachments.com/videos/infield-rascal-pro-infield-groomer-by-abi-sports-turf/>

Maintenance

Wheels and Hubs

Make sure to check the pressure in the tires to ensure they are properly inflated. If the tires look to be low on air, fill them until they reach the manufacturer's suggested PSI. The proper PSI for the tire can be located on the side wall of the tire.

General information on the PSI for the Rascal tires:

4-ply Rascal Tire: 45 PSI

2-ply Rascal Tire: 50-60 PSI

Information on the ply of the tire can be found on the side wall of the tire.

Be sure to grease the hubs, either using a grease gun or by manually packing the bearings every 2-3 months, or more frequently for high volume use of the Rascal. The hubs will also need to be greased before any period of storage and prior to use after a period of storage.

Cleaning the Rascal

Clean the Rascal using soap and water as needed. Avoid using any strong chemicals as it may damage the paint on the Rascal. A pressure washer may be used to remove built up material on the Rascal. If using a pressure washer, be sure to stand away from the Rascal as the pressure may remove paint from the Rascal. If cleaning the Rascal with the optional electric actuator attachment, do not spray water directly on the wiring harness or control box. This may damage the electric actuator, control box, or wiring harness.

Removing Rust from the Rascal/Paint Touch Up

Remove rust from the Rascal using a wire brush or piece of fine sand paper. Wash area with soap and water, rinse, and allow area to dry. Spray the area with a rust inhibiting spray paint and allow to dry before use. If desired, a primer can be used before painting the surface with the finished color. Black semi-gloss or gloss spray paint may be used.

Checking Hardware

Before each use, check to make sure none of the attaching hardware on the Rascal is loose or damaged (i.e. nuts, bolts, pins). If any is found to be loose, make sure it is properly secured or tightened prior to using the Rascal. If hardware is damaged, replace it prior to operation. All hardware on the Rascal is standard SAE Grade 5 hardware.

TopLink

Be sure to keep the threaded bolts on your topline greased so they do not seize over time.

Finish Rake

Occasionally over the life of the tool, there may be a bent finger on the finish rake. If this occurs, place a pipe over the bent finger and use the pipe to straighten the finger back out.

Foot Notes

[illegible]

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 Rascal Infield Pro and Infield MVP or by following this link: <https://www.abiattachments.com/guides/rascal-product-manual/>

For additional information on the use or setup of the Rascal Infield Pro and Infield MVP, 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.

