

TARTER®

FARM AND RANCH EQUIPMENT

ROTARY CUTTER

OPERATION AND ASSEMBLY MANUAL



**For more information and questions, please contact:
Tarter Customer Service
1-800-RED-GATE (1-800-733-4283)**

Tarter products are sold through Authorized Retailers.

INTRODUCTION

THANK YOU.

Tarter Farm and Ranch Equipment has been improving life on your land since 1945. Thank you for choosing Tarter. You have purchased a dependable Tarter implement. You can expect many years of service when you maintain and use our implement according to this manual and additional information that may be provided at Tarterusa.com.

READ THIS MANUAL BEFORE ASSEMBLING OR OPERATING YOUR TARTER IMPLEMENT.

REQUIRE ALL OPERATORS TO READ THIS MANUAL.

OBSERVE ALL SAFETY INFORMATION IN THIS MANUAL AND SAFETY DECALS ON THE TARTER IMPLEMENT.

If replacement parts are needed, use only genuine Tarter parts, as substitute parts will VOID THE WARRANTY and may not meet standards required to insure dependable use and safe operation.

CUSTOMER INFORMATION

Name _____

Purchased From _____

Date Purchased _____

Model _____

Serial # _____

PREPARATION CHECKLIST

Verify the following before operating your Rotary Tiller

- | | |
|---|--|
| <input type="checkbox"/> 1. implement is completely assembled. | <input type="checkbox"/> 6. Check PTO driveline. Make sure it is the correct length to operate rotary tiller with intended tractor. |
| <input type="checkbox"/> 2. Gearbox is filled with oil and checked for possible leaks. | <input type="checkbox"/> 7. All decals in place and legible. |
| <input type="checkbox"/> 3. All fittings are lubricated. | <input type="checkbox"/> 8. Overall condition good (i.e. paint, welds) |
| <input type="checkbox"/> 4. All shields in place and in good condition. | <input type="checkbox"/> 9. Operator's manual has been given to owner and the owner has been instructed on the safe and proper use of the Rotary Cutter. |
| <input type="checkbox"/> 5. All fasteners torqued to specifications in torque chart. (Pg. 35) | |

For more information and questions, please contact:

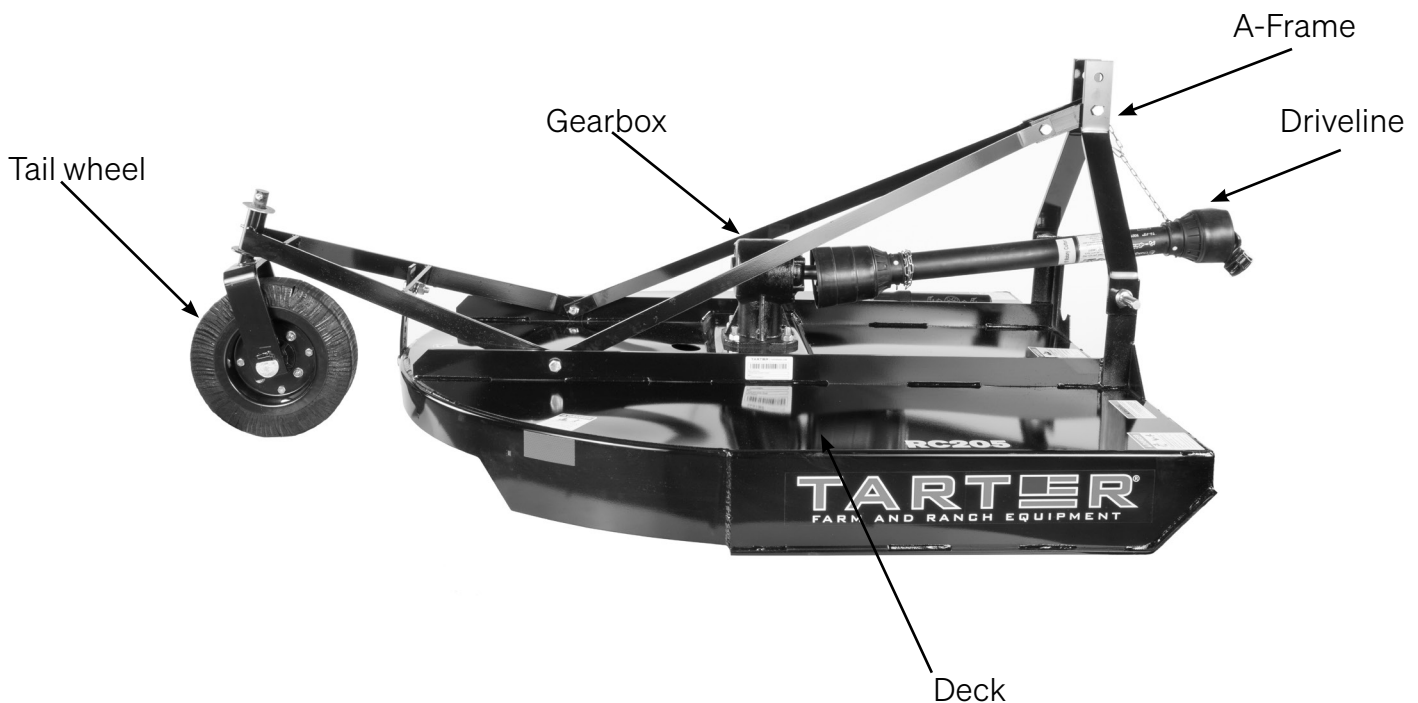
Tarter Customer Service

1-800-RED-GATE (1-800-733-4283)

GENERAL DESCRIPTION

Your Rotary Cutter has been carefully designed for cutting grass and small brush. This manual is provided to give you the necessary operation and maintenance instructions for keeping your rotary tiller in excellent operating condition. Please read this manual thoroughly. Understand the purpose of the controls and how to use them. Observe all safety precautions on the machine and as noted throughout this manual. If any assistance or additional information is needed, contact us at 1-800-RED-GATE.

Major components



NOTICE

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publication. Because we are always striving to improve our products, the images could differ slightly from actual equipment. Specifications are subject to change without notice. We also reserve the right to make changes at any time without notice.

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SAFETY



IMPORTANT SAFETY MESSAGE FOR OWNERS/OPERATORS OF ROTARY CUTTERS



From members of the Farm Equipment Manufacturers Association

Rotary Cutter Manufacturer Product Council

Safety is a primary concern in the design, manufacture, sale, and use of rotary cutters. As manufacturers of rotary cutters, we want to confirm to you, our customers, our concern for safety. We also want to remind you about the simple, basic, and common sense rules of safety when using a rotary cutter. Failure to follow these rules can result in severe injury or death to operators or bystanders.

It is essential that everyone involved in the assembly, operation, transport, maintenance, and storage of this equipment be aware, concerned, prudent, and properly trained in safety. The majority of accidents involve entanglement on the driveline or thrown objects. These risks become greater when you do not use proper shielding specified by the manufacturer.

Our current production machines include, as standard equipment, guards or shields for drivelines and input shafts, safety signs and operators manuals. If you have an older machine which does not have current standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.

Below are some of the most important safety rules to be understood and followed by anyone who works with rotary cutters:

Before operating a rotary cutter, an operator must read and understand all the information in the owner's manual and in the safety signs attached to the product. A person who has not read or understood the owner's manual and safety signs is not qualified to operate the cutter. Accidents occur often on machines that are loaned or rented to someone who has not read the owner's manual and is not familiar with a rotary cutter. If you do not have an owner's manual or current production safety signs, contact the manufacturer or your dealer immediately.

Rotary cutters are designed for one-man operation. Never operate the cutter with anyone near, or in contact with, any part of the implement or PTO driveline. Be sure no one else, including bystanders, is near you when you operate this product

If operation of a rotary cutter around bystanders, animals, or property that may sustain damage (such as highway, park, or airport) is absolutely necessary, use safety guarding recommended by the manufacturer for thrown object prevention.

Following these simple, basic safety rules, as well as others identified in the owner's manual and in product safety signs, will help minimize the possibility of accidents and increase your productivity in using this product. Be careful and make sure that everyone who operates the cutter knows and understands that it is a very powerful piece of machinery, and if used improperly, serious injury or death may result. The final responsibility for safety rests with the operator of this machine.



A safety manual for Rotary Cutters is available through the FEMA office.

Phone: 314.878.2304
E-mail: staff@FarmEquip.org

**THE BEST SAFETY DEVICE IS AN INFORMED, CAREFUL OPERATOR.
WE ASK YOU TO BE THAT KIND OF OPERATOR.**

YOUR SAFETY is our concern. We design and manufacture our implements with this in mind. Our design can't eliminate an operator's careless actions. Hazard control and accident prevention are dependent upon the awareness, concern, judgment, 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**

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe procedures can cause damage to equipment. The terms **CAUTION, WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.



This Safety-Alert Symbol indicates a hazard and means ATTENTION!
BECOME ALERT! YOUR SAFETY IS INVOLVED!

! DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

! WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.

! CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

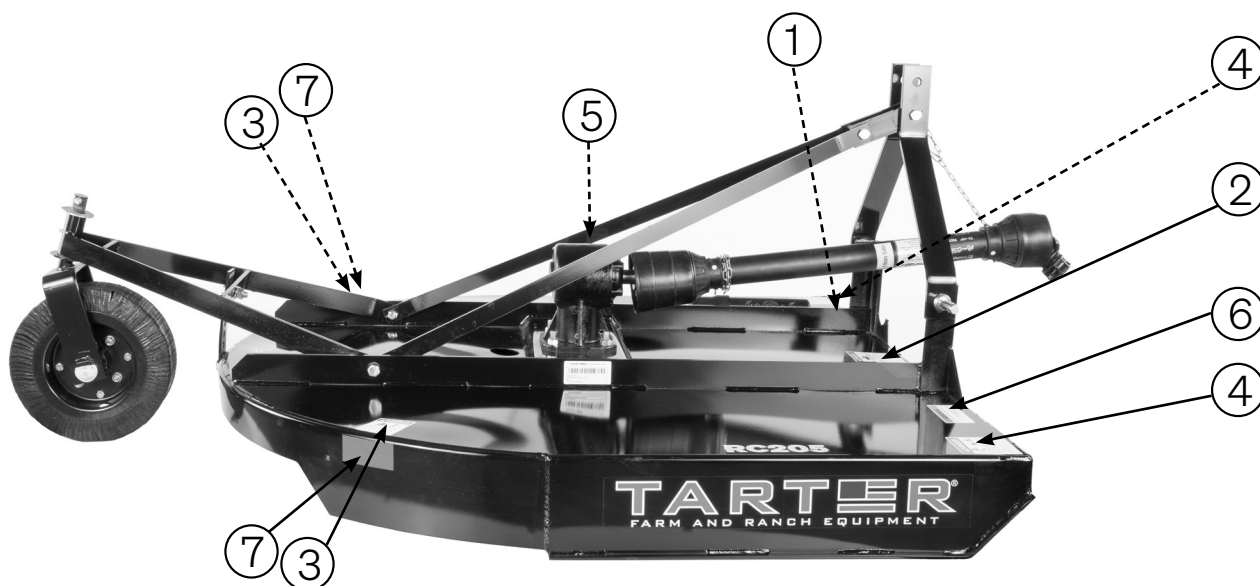
IMPORTANT

Indicates that failure to observe can cause damage to equipment.

NOTE

Indicates helpful information.

SAFETY and INSTRUCTIONAL DECALS
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
Replace Immediately if Damaged!



SAFETY and INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately if Damaged!



① **SERIOUS INJURY**



② **ROTATING DRIVELINE**



(2 needed)

③ **THROWN OBJECT**

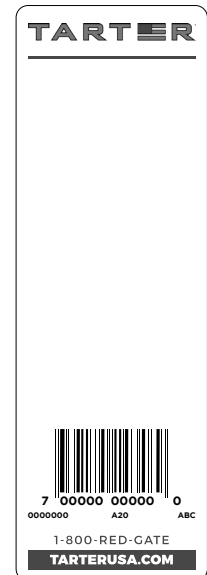


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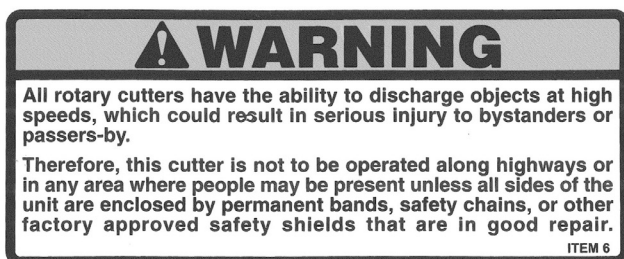
④ **ROTATING BLADES**



⑤ **NEEDS OIL**



UPC LABEL



⑥ **THROWN OBJECT**



⑦ **RED REFLECTOR**

Warning Label Sheet - Reorder Part #'s
Decals 1-6 (part # RC-DECALS) & Decal 7 (part # FT4003)

SAFETY GUIDELINES

At Tarter, we care about your safety. Most accidents can be avoided by a few seconds of thought and a careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions and insist those working with you follow them too.

If you need assistance or a replacement manual and safety decals, go to tarterusa.com or call 1-800-RED-GATE.

PLEASE READ YOUR TRACTOR/AUV/UTV (POWER UNIT) MANUAL BEFORE ASSEMBLING OR OPERATING YOUR TARTER IMPLEMENT.

In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, a Tarter implement should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

Replace any safety decal that is illegible or missing. Location of such safety decals are indicated in this manual.

Never use alcoholic beverages or drugs that can hinder alertness or coordination while operating the power unit or the Tarter implement. Consult your doctor about operating this machine while taking prescription medications.

Under no circumstances should children under the age of 18 be allowed to operate the power unit or the Tarter implement. Do not allow persons to operate or assemble the Tarter implement until they have read this manual and have developed a thorough understanding of the safety precautions and how it works. Review the safety instructions with all users annually.

This Tarter implement can be dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this Tarter implement's operations.

Always use a power unit equipped with a Roll Over Protective System and seat belts (ROPS). Keep your seat belt securely fastened because falling off can result in your death from being run over or crushed. Always keep a foldable ROPS system in the "locked up" position at all times.

Never exceed the limits of any piece of machinery, whether the power unit of the Tarter implement. If its ability to perform a job safely is in question **DO NOT TRY IT.**

Do not modify the Tarter implement in any way. Unauthorized modification could result in serious injury or death and may impair the function and life of the implement.

In addition to the design of this implement, including safety signs and safety 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 the Tarter implement. Refer also to safety messages and operation instruction in each of the appropriate sections of the power unit and Tarter implement manuals. Heed the safety signs affixed to both the power unit and Tarter implement.



DANGER: Failure to follow instructions or safety rules can result in serious injury or death.

Follow all safety rules and safety decal information.

Your Tarter implement is attached to a power unit. You must know the controls of your power unit and how to stop the engine and implement quickly in an emergency. All operators must be capable to safely operate the power unit, its attachments, and all controls.



DANGER: DO NOT allow anyone to operate the power unit or the Tarter implement without proper instruction.

PREPARATION

Always wear relatively tight and belted clothing to avoid getting caught in any moving part. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, ears, and head. Wear respirator or filter mask when appropriate.

Before using the Tarter implement, check all driveline guards for damage and replace any damaged guards. Make sure all guards rotate freely on all drivelines. Inspect chain or rubber guards before each use and replace any that are damaged.

Check that all hardware is properly installed.

Always tighten to torque chart specifications unless instructed otherwise in this manual.

SAFETY

Make sure the Tarter implement is properly secured, adjusted and in good operating condition.

Before using the Tarter implement, check and adjust PTO driveline length as instructed in this manual. The driveline must not bottom out or pull apart throughout the full range of the tractor hitch.



IMPORTANT: DO NOT operate PTO until driveline length is correct.

Make sure PTO driveline shield safety chain is attached as shown in this manual and replace if damaged or broken. Make sure collar slides freely and is seated firmly in tractor PTO spline groove.

A minimum of 20% of tractor weight must be on the tractor's front wheels when Tarter implements are in use. Without this weight, the tractor could tip over, causing personal injury or death. The weight may be attained with a loader, front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and Tarter implement.

DO NOT ESTIMATE.

STARTING AND STOPPING

Check the Tarter implement master shield over the PTO (power take off) stub shaft. Make sure it is in good condition and fastened securely to the power unit. Purchase a new shield if old shield is damaged or missing.

All power units that are not equipped with a "live" power takeoff (PTO) must be equipped with an over-running PTO clutch. These are available through most farm equipment stores.



NOTE: The addition of an over-running PTO clutch may change the length of the PTO driveline required. Be sure to refer to the instructions on the PTO driveline installation. Be sure that the driveline system guarding is adequate.

The Tarter implement is operated from power supplied from the power unit PTO. Refer to the power unit manual for PTO engagement and disengagement instructions.

Understand how to stop the power unit and Tarter implement quickly in case of an emergency.

When engaging the PTO, the engine RPM should always be at idle speed. Once engaged and ready to start, raise PTO speed to 540-RPM and maintain throughout operation.

TRANSPORTATION

Never transport the power unit or the Tarter implement while under the influence of alcohol or drugs.

Always comply with all federal, state and local laws regarding lighting, marking requirements and transportation of farm equipment on a public roadway.

Transport only in daylight or satisfactory artificial light.

Be aware of overhead utility lines.

Never allow riders on the power unit or Tarter implement. Do not operate PTO during transport.

Watch for hidden hazards on the terrain during transport.

Do not operate or transport on steep slopes.

Do not stop, start or change directions suddenly on slopes.

Use extreme care and reduce ground speed on slopes and rough terrain. When encountering rough terrain during transport, reduce the power unit speed to minimize the horizontal movement of the Tarter implement.

Stabilizer bars should be used during transport to reduce lateral movement of the Tarter implement.

Ensure the towing vehicle and trailer are safely capable of transporting the Tarter implement and that everything is properly secured.

OPERATION

Never operate the power unit or the Tarter implement while under the influence of alcohol or drugs.

Operate only in daylight or satisfactory artificial light.

Do not allow bystanders in the area when operating, attaching, removing, assembling or servicing the power unit or Tarter implement.

Never discharge directly toward people, animals or property.

Ensure the rear-guard assembly is in place to reduce the possibility of objects being thrown.

This Tarter implement is intended for agricultural applications only. Do not operate within 300 feet of bystanders or public roads or highways.

(Safety continued on next page)

(Safety continued from previous page)

Keep hands, feet, hair and clothing away from the power unit and Tarter implement while the power unit engine is running. Stay clear of all moving parts.

Always sit in the power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake and ensure all other controls are disengaged before starting the power unit engine.

DO NOT EXCEED the power unit PTO at 540 RPM.

Look down and to the rear and make sure area is clear before operating in reverse. **REVERSE OPERATION IS NOT RECOMMENDED.**

Be aware that turning the power unit tightly may cause the Tarter implement to come in contact with the rear wheels of the power unit and cause damage or injury.

Watch for hidden hazards on the terrain during operation.

Do not operate on steep slopes.

Do not stop, start or change directions suddenly on slopes.

Use extreme care and reduce ground speed on slopes and rough terrain. When encountering rough terrain, reduce the power unit speed to minimize the horizontal movement of the Tarter implement.

Stop the power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.

MAINTENANCE

Make certain all movement of the power unit and Tarter implement components has stopped before approaching for service.

Before detaching the power unit from the Tarter implement or performing any service or maintenance, follow these steps: disengage power to the power unit, lower the 3-point hitch and all raised components to the ground, set parking brake, stop engine, remove key and unfasten seat belt. Before performing any service or maintenance, disconnect driveline from tractor PTO.

Before working underneath the power unit or a Tarter implement, carefully read this manual's instructions, disconnect driveline, raise implement, securely block up all corners with jack stands, and check stability. Secure blocking prevents a Tarter implement from dropping

due to hydraulic leak down, hydraulic system failures or mechanical component failures.

Never go underneath a Tarter implement (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath the power unit or a Tarter implement or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause a Tarter implement to drop or rotate unexpectedly and cause severe injury or death. Follow the power unit and Tarter implement manual for working underneath and blocking procedures.

Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, ears, and head. When appropriate wear a respirator or filter mask.

Keep all persons away from you while performing adjustments, service or maintenance.

Frequently check blades/tines/shanks. They should be sharp, free of nicks and cracks and securely fastened. Do not handle blades/tines/shanks with bare hands. Careless or improper handling may result in serious injury.

Do not modify, alter or permit anyone else to modify or alter the power unit, the Tarter implement or any of their components in any way, except as outlined in this manual.

STORAGE



WARNING: Never attempt to move Tarter implement by hand.

Always use a power unit to position a Tarter implement for storage.

Block the Tarter implement securely for storage.

Keep children and bystanders away from storage area.

OPERATING INSTRUCTIONS

1. Before each use, perform all necessary maintenance described in the maintenance section.
2. Read, understand, and follow the safety information pertaining to training, preparation, starting and stopping, operation, transportation, maintenance, and storage at the beginning of this manual.

ASSEMBLY

TOOLS REQUIRED

- TIN SNIPS
- SCREWDRIVER
- VICE GRIPS
- RATCHET
- PLIERS
- SOCKETS AND WRENCHES: 9/16", 3/4", 15/16", 7/8" AND 1-5/16". (Impact wrench is preferred)

1. Cut the zip ties and remove the PTO Shaft from the backside of the rotary cutter.



2. Remove 3/8" – 16 x 2" bolt and nut from the tailwheel holder on the shipping boot, using a 9/16" wrench.



DO NOT DISCARD HARDWARE!

3. Remove the tailwheel and 3" washer.



4. Place the rotary cutter on a level spot. Block up the front and back of the rotary cutter.



5. Install the tailwheel with 3" washer on top. Secure with 3/8" – 16 x 2" bolt and nut. Tighten.



6. Using 1-5/16" wrench/socket, remove the CAT I pins from the shipping boots.





NOTE: Set aside the CAT 1 pins, bolts, washers and bushings.



CAUTION: Shipping boots may fall off.

- Once the CAT 1 pins are removed, lift up on the cutter to remove from the shipping boots.



- Line up the holes on the A-frame and re-insert CAT 1 pins, bushing, washer and nut. Hand tighten only.



- Remove the two zip ties from the tailwheel assembly and back braces.



- Raise the lift arms in the upright position, using the bottom pivot point.



CAUTION: Possible pinch point.

- Remove nut on one side of the A-frame using 15/16" wrench.



- Place the backstrap brace on the bolt, as pictured, using the locknut. Hand tighten. Repeat for other side.



- Pull lift arms until they are into place.



ASSEMBLY

14. Go back and tighten the CAT I pins, on both sides, using a 1-5/16" wrench/socket.



15. Tighten the nuts on the backstraps.



16. Remove the warning label on the gearbox.

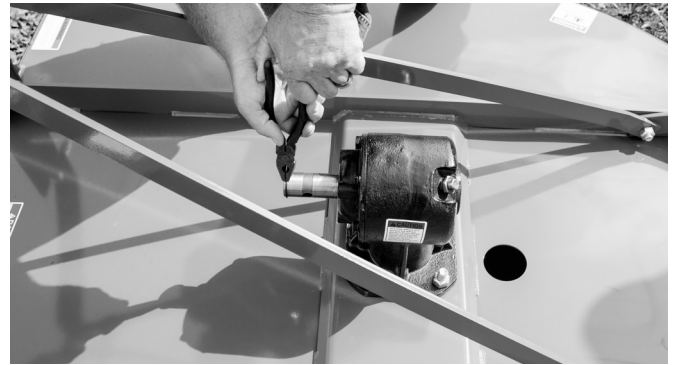


ADD GEAR OIL
TO GEARBOX
BEFORE FIRST
USE!

17. Remove the shaft boot on the gearbox.



18. Remove the snap ring.



19. Slide the PTO shield back by using a screwdriver to apply pressure and release the locking collar. (There will be 3 tabs on the locking collar) Once the locking collar is released, slide the PTO shield back.



20. Remove the PTO shear bolt.



21. Slide the PTO shaft onto the gearbox shaft.



22. Replace the snap ring.



23. Align the shear bolt holes, install, and tighten PTO shaft shear bolt.



24. Assembly of your Rotary Cutter is not complete. Please read the next section of this manual for filling the gearbox with oil, lubricating instructions, and sizing your PTO (if applicable).

ASSEMBLY

BEFORE PUTTING YOUR ROTARY CUTTER INTO SERVICE



IMPORTANT: This Rotary Cutter was shipped without oil in the gearbox and without grease in the grease fittings. **UNIT MUST BE SERVICED BEFORE USE.**

NOTE: Fill the gearbox using EP 85-90W gear oil. For all grease fittings use TYPE/Grade II tube grease.

1. Grease the two fittings on the PTO shaft. There is one on each end of the shaft in the universal joint.



2. Grease the two fittings on each end of the PTO Shield.



3. Re-install the PTO shield by sliding the shield over the universal joint making sure the shield locks in place.



4. Grease the two fittings in the rear tailwheel assembly.



5. Using a 7/8" wrench, remove the fill plug and using a 7mm wrench, remove the drain plug. Both are located on the backside of the gearbox.



6. Fill the gearbox with 80W/90 or 85W/140 gear oil until level with the drain plug. (Holds approx. 1 quart)



7. Replace and tighten both plugs on the gearbox.



ATTACHING TO A TRACTOR



DANGER: To avoid bodily injury or machine damage whenever Rotary Cutter is attached, put transmission in PARK position and check the full range of hitch for interference, binding, or PTO separation. Do not stand between tractor and Rotary Cutter.

1. Back up tractor to cutter with hitch points approximately in alignment.
2. Engage tractor parking brake and/or place transmission in Park.
3. Shut off tractor engine and remove key.
4. Remove center link mounting hardware and hitch pin assemblies at both hitch masts.
5. Install tractor draft links on hitch pins. Secure with quick lock pins (stored on tractor draft links.)



NOTE: If the tractor draft links will not open wide enough to fit over hitch pin assemblies in their normal configuration the hitch pins can be inverted so that the draft links can hook up to the inside.

6. Align center link with upper hole in cutter mast straps and install center link mounting hardware.



DANGER: Shut off tractor engine before attaching PTO driveline. Entanglement in rotating driveline can cause serious injury or death.



IMPORTANT: Keep driveline and powershaft splines clean of paint, dirt and chaff. Apply grease to tractor PTO shaft before attaching PTO driveline.

7. Shut off tractor engine.
8. Raise tractor PTO shield, if equipped.



IMPORTANT: Do not use shielding bell on driveline to lift driveline into position. Damage to shielding can occur.

9. Support driveline, cradling it in your hand.
10. Pull pin back toward cutter. Align splines by rotating cutter driveline. Push driveline onto tractor PTO shaft until pin snaps into place.
11. Pull back on shield to make sure driveline is locked.

12. Do not pull back on pin this will release latch.
13. Lower tractor PTO shield, if equipped.

CHECKING DRIVELINE/CUTTER CLEARANCE



IMPORTANT: Prevent driveline damage from contact with frame or machine damage from contact with tractor tires. Raise cutter slowly and check for interference. If necessary, shorten center link or lengthen lift links to provide clearance to full lift height.

1. Raise cutter slowly and check for clearance between driveline shield and cutter deck.
2. Check clearance between tractor tires and foot guards or chain deflector.
3. Check to see if hitch height position will provide clearance desired.



NOTE: Final adjustments should be made before operating cutter. See ADJUSTING CUTTING HEIGHT AND ANGLE in Operating the Cutter section. Center link should be installed in lowest hole at tractor end if there are multiple holes. Lift height may also be limited by installing stops on rockshaft control lever bracket.

4. Shorten center link or lengthen lift links to provide clearance. (See your tractor Operator's manual.)



IMPORTANT: PTO driveline may be too long for some tractor models, causing tractor transaxle damage. Hold driveline sections parallel to each other and check for a minimum of 6 inches overlap.

5. Raise and lower cutter slowly to check for binding or interference. Check cutter-to-tractor driveline telescoping length to ensure that it does not bottom out. Modify driveline if necessary. (See MODIFYING PTO DRIVELINE in Assembly section.)

MODIFYING PTO

Final Inspection and Adjustments

IMPORTANT: PTO driveline may be too long for some tractor models, causing tractor transaxle damage. Modify driveline if necessary.

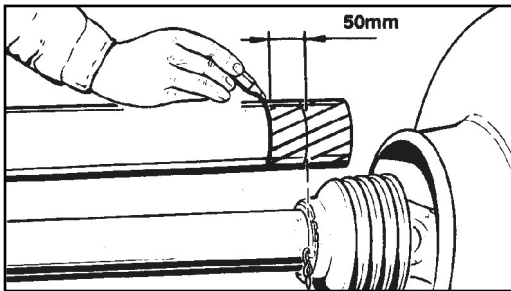
Attach Rotary Cutter to tractor and check cutter-to-tractor driveline telescoping length clearance.

(See MAINTENANCE BEFORE EACH USE in Lubrication and Maintenance section.)

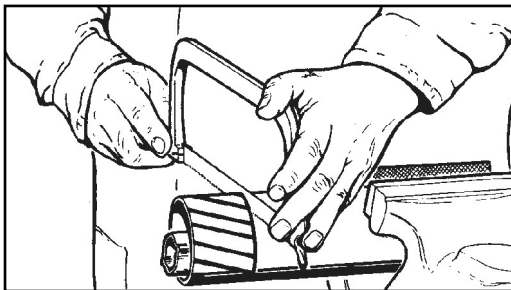
MODIFY PTO DRIVELINE

• Modify PTO Driveline (If Necessary)

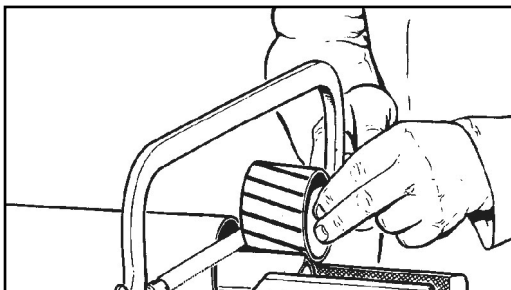
1. To adjust the length, hold the half-shafts next to each other in the shortest working position and mark them.



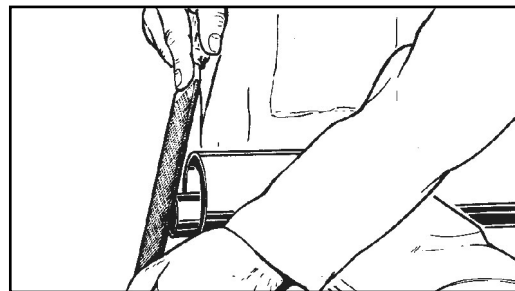
2. Shorten inner and outer guard tubes equally.



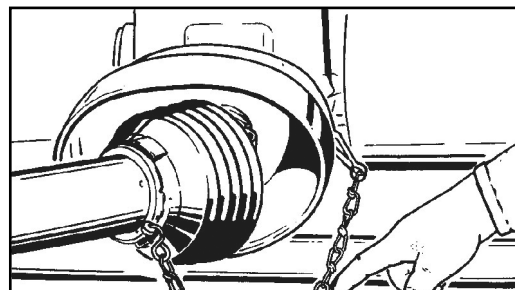
3. Shorten inner and outer sliding profiles by the same length as the guard tubes.



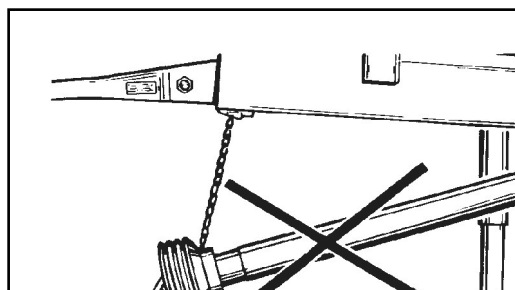
4. Round off all sharp edges and remove burrs. Grease sliding profiles. No other changes may be made to PTO drive shaft and guard.



5. Chains must be fitted so as to allow sufficient articulation of the shaft in all working positions.



6. The PTO drive shaft must not be suspended from the chains!



SIZING THE PTO SHAFT

Refer to Figure 1

1. Detach the driveline from tractor PTO shaft and pull outer and inner drivelines apart.
2. Reattach outer driveline to tractor PTO shaft. Pull on inner and outer drivelines to ensure universal joints are properly secured.
3. Hold inner and outer drivelines parallel to each other:
 - a. Measure 1" ("B" dimension) back from outer driveline universal joint shield and make a mark at this location on the inner driveline shield.
 - b. Measure 1" ("B" dimension) back from inner driveline universal joint shield and make a mark at this location on the outer driveline shield.
4. Remove driveline from tractor and gearbox shafts.
5. Measure from end of inner shield to scribed mark ("X" dimension). Cut off inner shield at the mark. Cut same amount off the inner shaft ("X1" dimension).
6. Measure from end of outer shield to scribed mark ("Y" dimension). Cut off outer shield at the mark. Cut same amount off the outer shaft ("Y1" dimension).
7. Remove all burrs.
8. Continue with "Check Driveline Maximum Length".

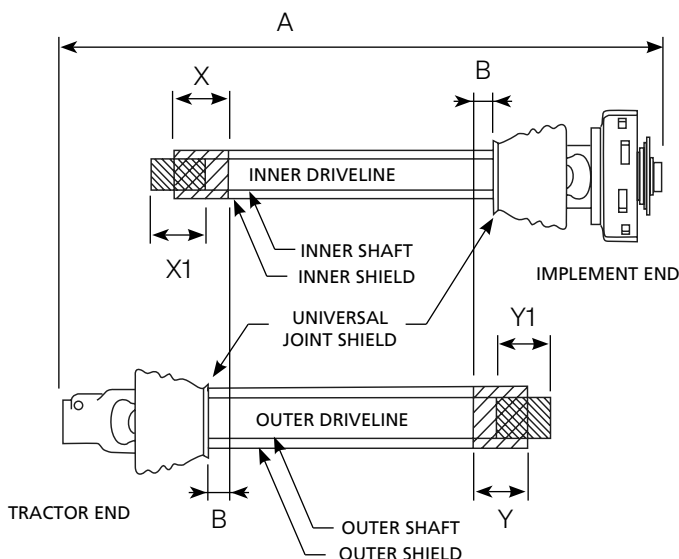


Figure 1 - Driveline Shortening

CHECK DRIVELINE MAXIMUM LENGTH

Refer to Figure 2

Make sure driveline's collapsible length is acceptable.

The driveline maximum allowable length must, when fully extended, have a minimum overlap of the profile tubes by not less than 1/3 the free length with both inner and outer profile tubes being of equal length.

1. Apply multi-purpose grease to the inside of the outer shaft and reassemble the driveline.
2. Assemble the two driveline profiles together with 1/3 of the profile tubes overlapping as shown below. Once assembled, measure and record the maximum allowable length for future reference.
3. Attach inner driveline yoke to the cutter's gearbox shaft. Attach outer driveline yoke to the tractor's PTO

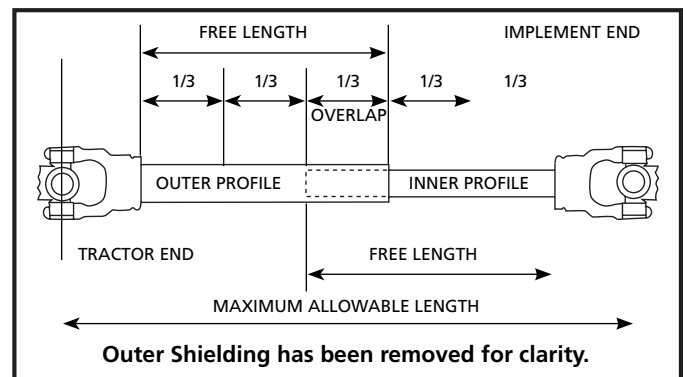


Figure 2 - Driveline Maximum Extended Length

shaft.

4. Move yoke ends of driveline back and forth to insure they are secured to the tractor and cutter shafts. Reattach any end that is loose.



IMPORTANT: Small chains are supplied with the driveline. They must be attached to the inner and outer driveline shields and to the tiller and tractor to restrict shield rotation.

5. Hook driveline safety chain on the tractor end of driveline to cutter frame. Re-latch safety chain to the driveline shield.
6. Hook driveline safety chain on the rotary cutter end of driveline to the tiller frame. Re-latch safety chain to driveline shield.

MODIFYING PTO

7. Start tractor and raise rotary cutter just enough to remove support blocks.
8. Slowly engage tractor hydraulic 3-point control lever to lower the cutter while checking for sufficient drawbar clearance. Move drawbar in, aside or remove if required.
9. Raise and lower implement to find maximum extended driveline length. Check to make certain the driveline does not exceed maximum allowable length recorded in step 2.
10. If needed, set tractor 3-point lift height to stop driveline from exceeding maximum allowable length.
11. Continue with "Check Driveline Maximum Angle".

CHECK DRIVELINE MAXIMUM ANGLE

Refer to Figure 3



IMPORTANT: To avoid premature driveline breakdown, do not exceed an angle of 25° up or down with the driveline while driveline is rotating. If needed, set tractor 3-point left lever to limit driveline angle at a maximum of 25° up.

1. Raise and lower implement to find maximum driveline angle. Check to make certain the driveline does not exceed 25° up or down.
2. If needed, set tractor 3-point lift height to keep driveline from exceeding 25° up.

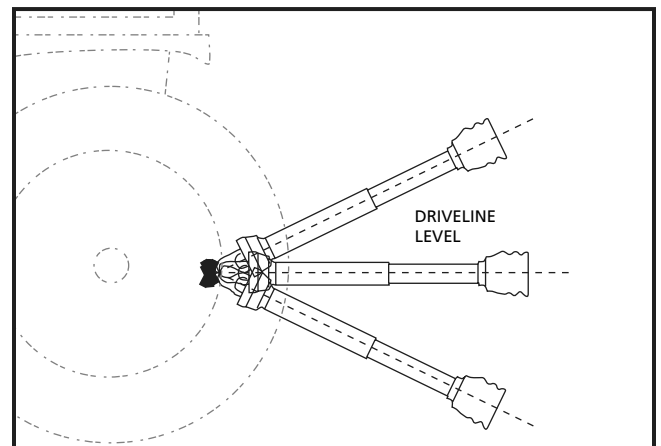


Figure 3 - Check Driveline Maximum Angle

PREPARING CUTTER FOR OPERATION

DANGER: To help prevent severe injury or death to you or someone else:



- a. Do not engage tractor PTO when cutter is in fully raised position transport position).
- b. Keep all persons away from machine when raising and lowering cutter.

IMPORTANT: To avoid damaging the machine from impact on ground when lowering, adjust rate at which hitch will lower.



1. Adjust tractor rockshaft rate-of-drop. Allow at least two seconds for machine to lower from full lift height to the ground. (See your tractor Operator's manual.)
2. If equipped, disengage tractor hitch/rockshaft control lever from transport lock position and lower cutter to the ground. (See your tractor Operator's manual.)
3. Adjust tractor lift links to level machine side-to-side. (See your tractor Operator's manual.)
4. Adjust cutting height and angle. (See Adjusting Cutting Height and Angle in this section.)

ADJUSTING CUTTING HEIGHT AND ANGLE

DANGER: Help prevent bodily injury or death caused by entanglement in rotating driveline or blades. Entanglement in rotating driveline or being struck by blades can cause serious injury or death.



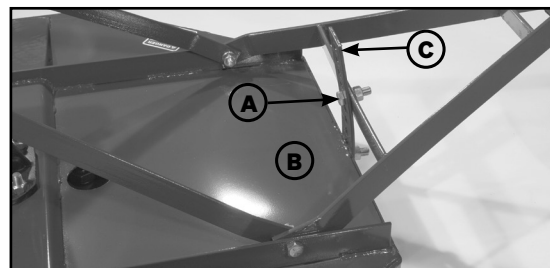
- a. Lower machine until rear wheel just touches or is slightly above ground.
- b. Engage tractor parking brake and/or place transmission in PARK.

- c. Disengage PTO.
- d. Shut off tractor engine and remove key.
- e. Wait until all moving parts have stopped.
- f. Disconnect PTO driveline from tractor.
1. Loosen bolt and lock nut (B), remove bolt, washers and lock nut (A), raise tail wheel to highest position and install bolt, washer and lock nut (A).
2. Using rockshaft control lever, position front of cutter at desired cutting height at location.
3. Adjust depth stop. (See your tractor Operator's manual.)
4. Adjust center link so rear of cutter is approximately 2 inches (51 mm) higher than front.

NOTE: The rotary cutter should be operated at the highest position for optimal cutting results. This will help prevent the blades from striking the ground, reducing blade wear and placing undue strain on the cutter. For best results under heavier cutting conditions, always tilt the rotary cutter approximately 2 inches (51mm) lower in the front. This tilt decreases horsepower requirements and increases potential ground speed. When fine shredding is desired, adjust rotary cutter deck level to slightly lower in the rear. This will keep the foliage under the rotary cutter until thoroughly shredded. More power is required for shredding.

5. Lower tail wheel to support rear of the cutter.
6. Install bolt, washers and lock nut (A) into one of seven holes (C) that aligns with hole in wheel support.
7. Reinstall bolt, washers and lock nut. Tighten lock nut. (A)

NOTE: The tail wheel supports the rear of the machine and the draft links support the front to allow the cutter to follow the ground contour.



A-B Lock Nut, Washers, Bolt C- Adjustment holes

(continued on next page)

OPERATION

(continued from previous page)

Each rotary cutter can be adjusted to several cutting heights from 1.5 inches to 9 inches of cutting height by moving the rockshaft control lever in conjunction with moving the tail wheel adjustment bolt among the height adjustment holes (see photo on previous page).



IMPORTANT: Loosening the center link may allow the driveline to contact the cutter frame or tractor tires in order to contact the foot guards or chain shield. Raise the cutter slowly and check for interference. Lengthen tractor lift links to provide clearance to full height.



NOTE: Lift height may also be limited by installing stops on rockshaft control lever bracket.

8. Lengthen tractor lift links, if necessary, to provide clearance.

FOLLOW SAFE OPERATING PROCEDURES

1. BEFORE EACH USE, perform maintenance as required in the Lubrication and Maintenance section.
2. Start tractor per tractor operator's manual.
3. Raise/lower 3-point hitch to place cutter in working position.
4. Look to be sure no one is near cutter.
5. With tractor at idle speed, slowly engage PTO drive.



DANGER: Stay clear of rotating driveline. Do not operate without driveline shields in place and all equipment in good condition. Failure to heed these warnings may result in personal injury or death.

6. Set the tractor throttle for appropriate PTO speed (540 RPM).



DANGER: Rotating cutter blades. Stand clear until all motion has stopped. To avoid an accidental fall from tractor and possible injury by mower, it is recommended that tractor be equipped with rollover protective system (ROPS) and that a seatbelt be used by the operator for all mowing operations.

7. Place the tractor in gear and proceed forward.



NOTE: Tractor forward speed should be controlled by gear selection, not engine speed. For maximum cutting efficiency, forward speed should allow cutter to maintain a constant, maximum blade speed. If cutter stalls or tractor engine bogs, disengage PTO. Before re-engaging PTO, position cutter in a cut area and reduce tractor throttle to idle. If rotary cutter continuously stalls, select lower gear and/or increase cutting height.

KEEP RIDERS OFF MACHINE



DANGER: Keep riders off. Riders are subject to injury or death such as being struck by foreign objects and being thrown off the machine. Riders may also fall off and be run over by machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

FOLLOW SAFETY OPERATING PROCEDURES



DANGER: To help prevent severe injury or death to you or someone else: Never operate cutter when other people are in the vicinity. Debris can be thrown hundreds of feet. Keep all deflectors in place, including those on discharge opening at front and rear of deck. Before starting machine, lower to the ground. Engage tractor PTO and gradually increase the speed. Operate tractor at rated PTO speed. If engine speed is too slow or too fast, machine may not perform properly. Where conditions make it necessary to slow ground speed, shift to a lower gear rather than reducing engine speed. The engine will maintain rated speed and keep cutter running at optimum cutting speed. Operate machine from tractor seat only. Never adjust machine while in motion. Slow down when turning or traveling over rough ground. Avoid holes when operating on hillsides. Tractor roll-over could result. Shut off tractor engine and engage tractor parking brake and/or place transmission in Park when leaving tractor. Remove key when leaving tractor unattended. Components behind shields may rotate several minutes after power is shut off. Look and listen for evidence of rotation before removing shielding.

LUBRICATING AND MAINTAINING MACHINE

SAFELY



DANGER: Help prevent bodily injury or death caused by entanglement in rotating driveline or blades. Entanglement in rotating driveline or being struck by blades can cause serious injury or death.

Components will be hot after operation. Let all components cool before servicing. Replace all shields after lubricating or servicing.

MAINTENANCE CHECK LIST

Perform scheduled maintenance as outlined below. Lower machine to ground, turn off tractor and set parking brake before doing maintenance inspections or work. All bolts should be torqued as recommended in the Torque Specifications unless otherwise indicated.

MAINTENANCE BEFORE EACH USE



CAUTION: Do not clean, lubricate, or adjust machine while it is in motion.

1. Check tractor tire air pressure. Refer to tractor Operator's manual.
2. Check blades and spindles to be sure that no foreign objects such as wire or steel strapping bands are wrapped around them.
3. Check blade bolts for tightness. Locate blade hardware under hole in deck behind gear box.
(Tighten to 425 ft./lbs.)



IMPORTANT: Operating with loose blade hardware will damage the blade holder and blades.

4. Inspect blades for wear. (See SERVICE SECTION Checking Blade Wear). Always replace both blades and bolts on blade holder at the same time.
5. Make certain driveline shields are in place and in good repair.
6. Inspect tail wheel for wear, damage, or foreign objects.
(Repair or replace if necessary.)

7. Before each use, see the Rotary Cutter photo for lubrication intervals and locations in this section.
8. During operation, listen for abnormal sounds, which might indicate loose part, damaged bearings, or other damage.

MAINTENANCE AFTER EACH USE

1. Clean all debris from rotary cutter especially underside of deck. When cleaning underside of deck, securely block machine into position.



IMPORTANT: To help prevent structural damage caused by loose hardware, check all hardware after first eight (8) hours of use and tighten all hardware to specifications.

LUBRICATION AND MAINTENANCE

OBSERVE LUBRICATION SYMBOLS

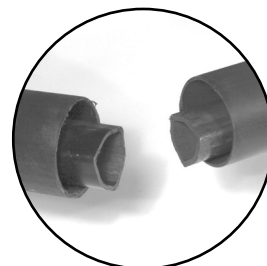
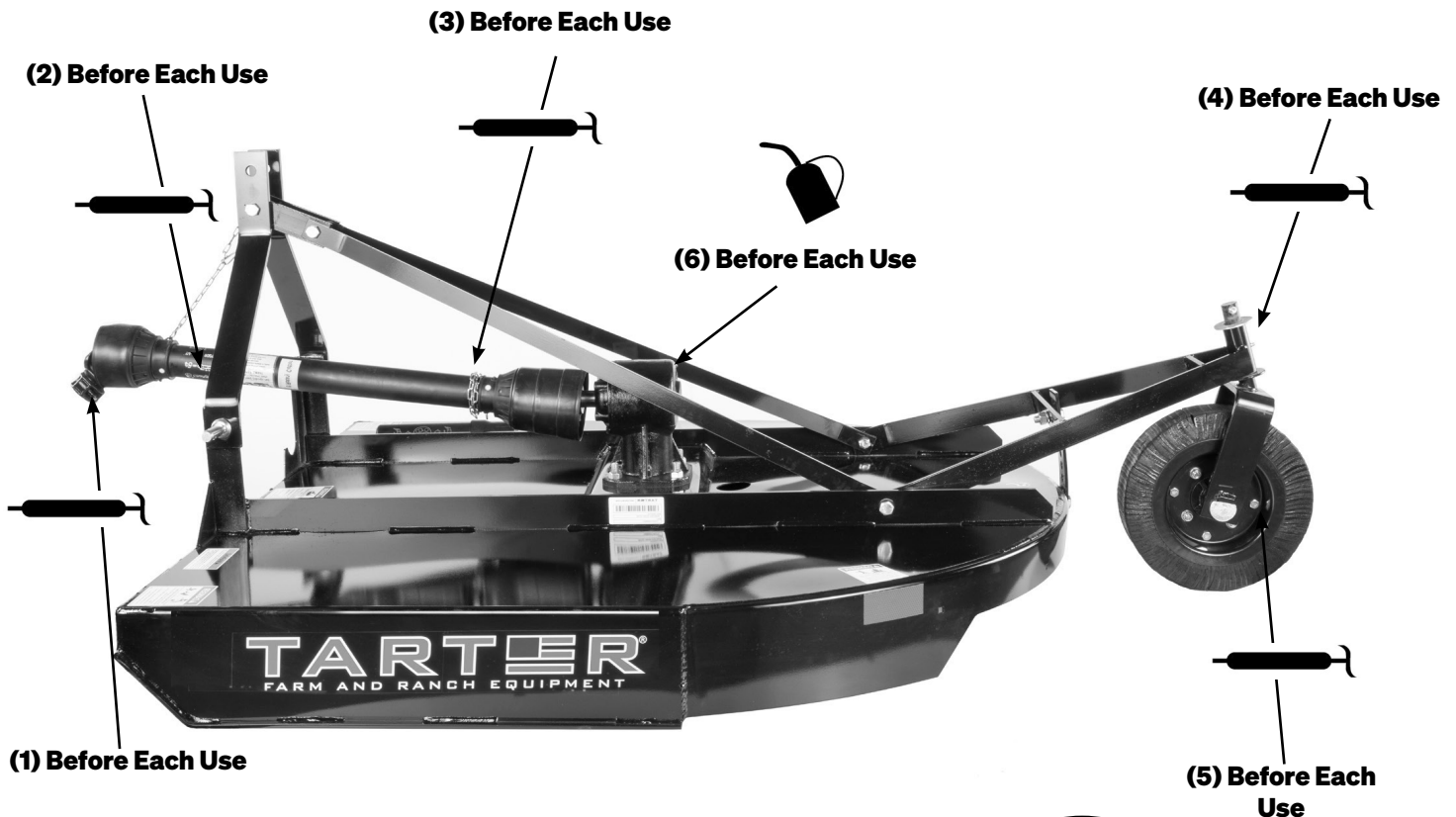
Lubricate with multipurpose grease.



LUBRICATION BEFORE EACH USE

1. Driveline Universal Joints
 - a. Apply multi-purpose grease with a grease gun.
2. Driveline Guard
 - b. Apply 2-3 shots of multipurpose grease with grease gun to plastic fitting.
3. Driveline Profile
 - c. Disconnect PTO Driveline.
 - d. Pull two sections apart.
 - e. Apply thin coat of multi-purpose grease to inside of female section.
 - f. Re-assemble sections.

- NOTE:** Pull each section to be sure driveline and shields are securely connected. Make certain PTO shielding is in good condition. Do not grease outer or inner plastic shields.
4. Tail wheel Pivot Tube
 - g. Apply multi-purpose grease with grease gun.
 5. Tail wheel
 - h. Apply multi-purpose grease with grease gun.
 6. Gearbox
 - i. Check oil level by removing oil level check plug on side of gearbox.
 - j. Add 80W/90 or 85W/140 gear oil if necessary to bring oil level to check plug hole.



3d. Pull two sections apart.

PRACTICE SAFE SERVICE PROCEDURES



CAUTION: To help prevent personal injury caused by unexpected movement, be sure to service machine on a level surface.

Before servicing or adjusting machine connected to a tractor:

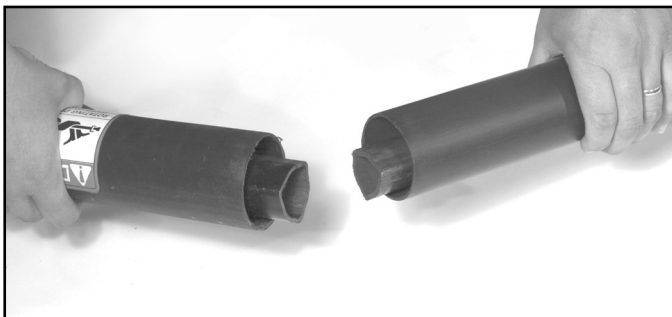
1. Lower machine to the ground.
2. Engage tractor parking brake and/or place transmission in Park.
3. Disengage PTO.
4. Shut off tractor engine and remove key.
5. Wait until all moving parts have stopped.
6. Disconnect PTO driveline from tractor.

The blades and blade pan may rotate for several minutes after PTO is shut off. Look and listen for rotating driveline to stop before working on the cutter.

When servicing blades or blade pan, it will be necessary to work underneath cutter. Be sure to support cutter frame at all four corner locations with safety shop stands to prevent accidental lowering. Do not position safety stands under wheel support because these components can rotate.

DISASSEMBLING DRIVELINE SHIELD

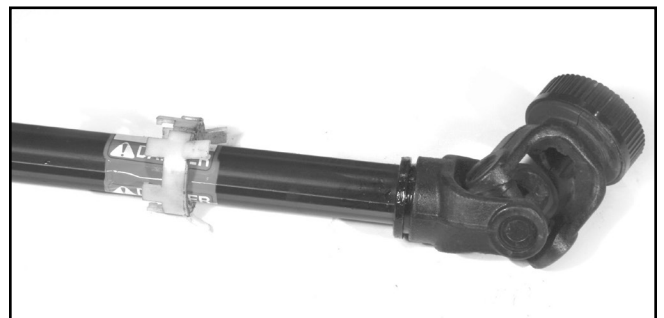
1. Unhook driveline safety chain from one end of driveline.
2. Separate driveline into two (2) pieces.



3. Slide the PTO shield back by using a screwdriver to apply pressure and release the locking collar. (There will be 3 tabs on the locking collar) Once the locking collar is released, slide the PTO shield back.



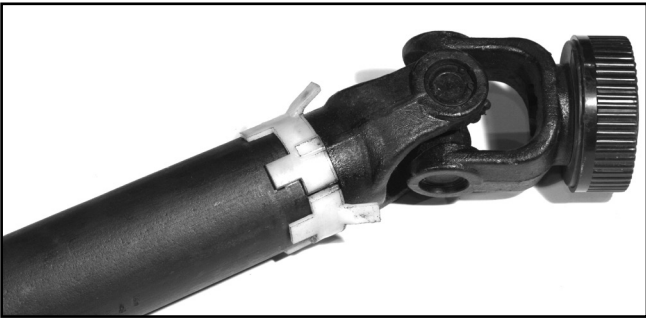
4. If needed, separate white tab collar and slide shield tube back.



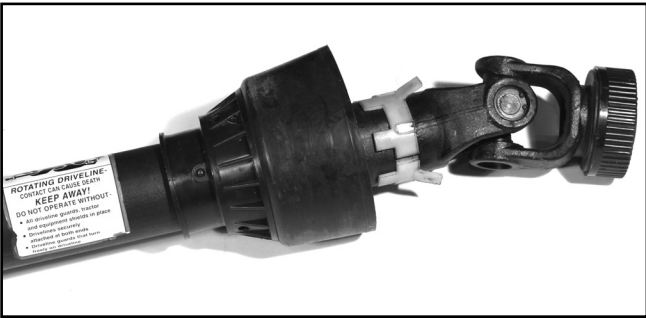
CAUTION: DO NOT operate PTO shaft without shielding installed.

RE-ASSEMBLING DRIVELINE SHIELD

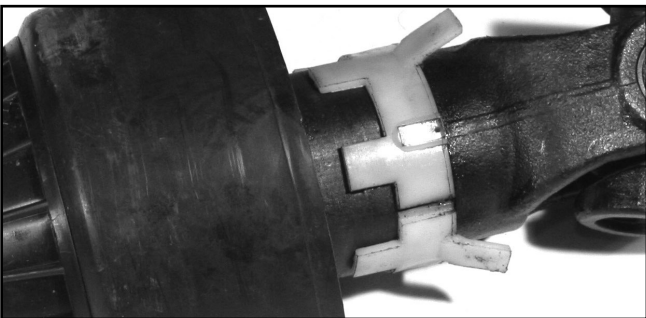
1. Replace white tabbed collar in groove of PTO shaft.



2. Slide driveline shield tube over white tab collar. Align slots/holes with holes in tube.



3. Slide universal joint cover up tube toward universal joint. Align grease fitting on shield with white square tabs on collars. This will properly align the position notch and all three (3) tabs.



4. Slide collar shield into place until locked.

REMOVING AND INSTALLING DRIVE-LINE (SHEAR BOLT)

1. Disconnect driveline shield chain.
2. Bend back driveline shield cone.
3. Remove shear bolt and lock nut.
4. Push driveline onto input shaft toward gearbox and remove snap ring.
5. Pull driveline from gearbox shaft.
6. Replace or repair as necessary.
7. Install in reverse order of removal.

REPLACING DRIVELINE SHEAR BOLT



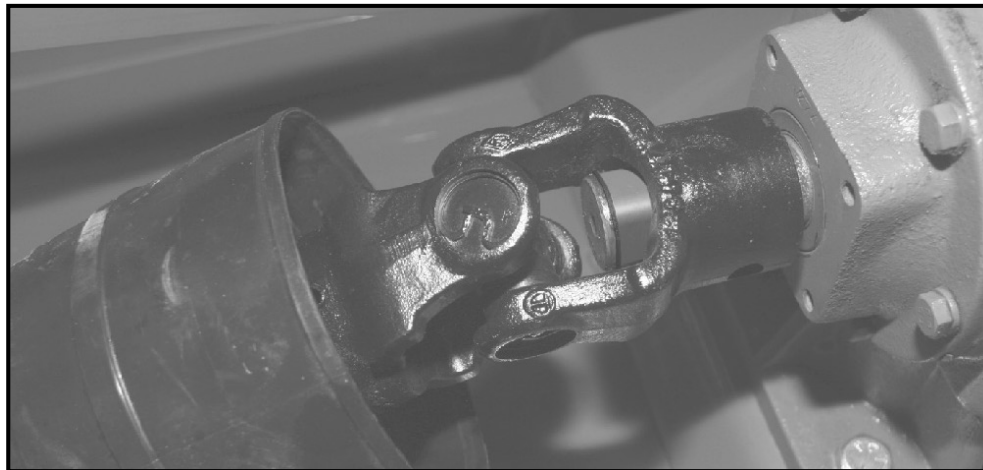
IMPORTANT: Avoid shear bolt failure at start up by engaging the PTO slowly at low engine RPMs.

If shear bolt fails:

1. Bend back driveline shield cone.
2. If necessary remove sheared bolt with hammer and punch and realign holes in yoke and shaft.
3. Replace with 1/2" x 3 1/2" **Grade 2 bolt** and lock nut.



IMPORTANT: Failure to use correct shear bolt may damage gearbox and/or PTO Shaft, thus voiding the warranty.

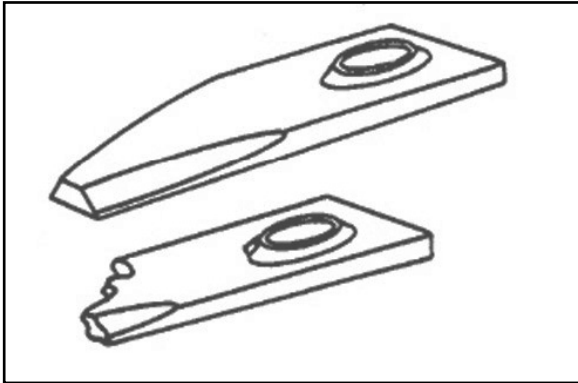


NOTE: Driveline shield pulled back for illustration purposes. Cutter drive components are protected from shock loads by a shear bolt.

CHECKING BLADE WEAR



IMPORTANT: Operating with blades that are not alike will cause vibration. Always replace worn or broken blades in pairs. Never replace a single blade. Check blades regularly for wear or breakage.



REPLACING BLADES



IMPORTANT: Operating with loose blade hardware will damage the blade pan and blades. Whenever the blades have been removed or replaced, blade hardware **MUST** also be replaced. Check blade hardware torque after one hour of operation and every eight (8) hours thereafter.

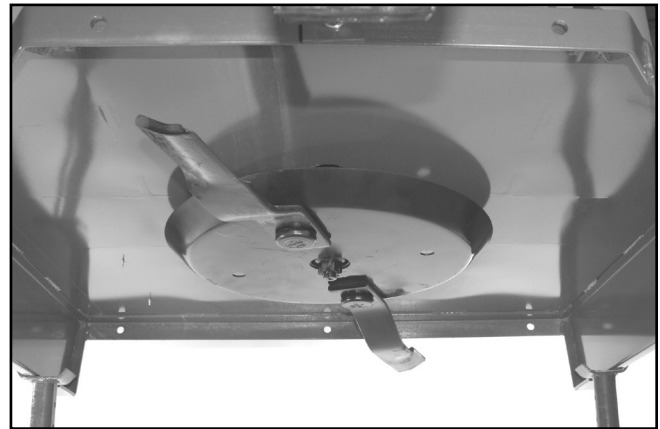


NOTE: Suction blades have cutting edge on one side only. Take note of blade rotation when installing blades. (See **DIRECTION OF BLADE ROTATION** in this section.)



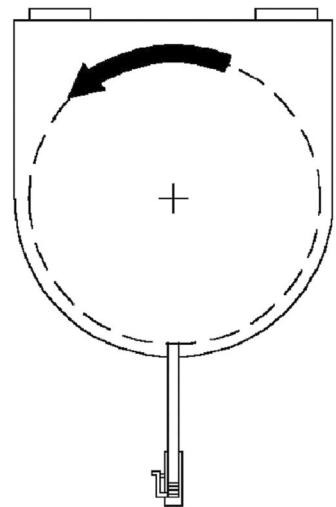
CAUTION: When replacing blades, blade hardware, and blade pan it will be necessary to work underneath cutter. Be sure to support cutter frame at all four corner locations with safety shop stands, blocks, or other firm supports to prevent accidental lowering. Do not position safety stands under wheel support because these components can rotate.

1. Manually rotate driveline to align blade lock nut with access hole in top of deck behind gearbox.
2. Remove old blade bolts and blades.
3. Use new blade bolt hardware to install new blades.
4. Tighten blade bolt lock nuts to 425 ft-lbs.



DIRECTION OF BLADE ROTATION

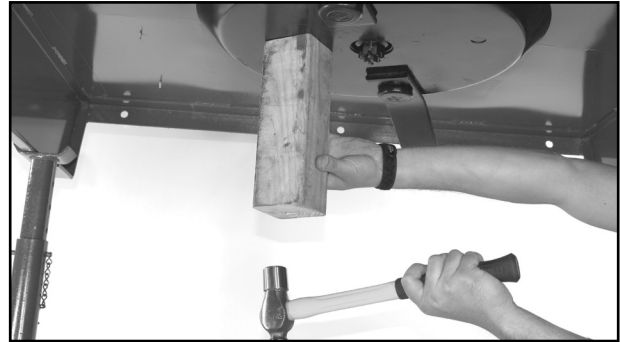
IMPORTANT: Cutter shown is viewed from the top. Take special note of blade rotation shown by the arrow.



REPLACING BLADE PAN



CAUTION: When replacing blades, blade hardware and blade pan it will be necessary to work underneath cutter. Be sure to support cutter frame at all four corner locations with safety shop stands to prevent accidental lowering. Do not position safety stands under wheel support because these components can rotate.

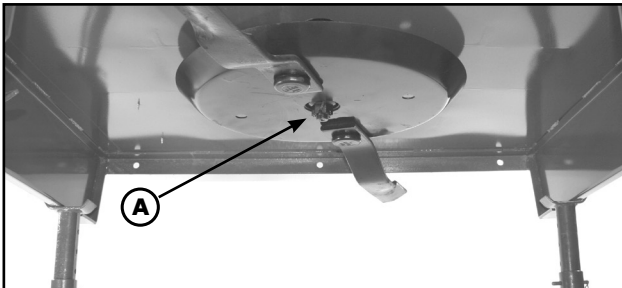


1. Remove the blades. (See Replacing Blades in this section.)
2. Remove cotter pin from output shaft of the gearbox underneath cutter.
3. Loosen castle nut to the bottom of the output shaft (A). Do not remove castle nut as it must hold the blade pan when it becomes loose.
4. Tap with a hammer around the hub using a block of wood as shown in photo.



NOTE: The output shaft of the gearbox is tapered. A few taps around the hub will loosen the blade pan.

5. Remove castle nut slowly and allow the blade pan to be removed.
6. Remove blade pan.



7. To reinstall blade pan, reverse the above steps. Be sure to tighten the castle nut and replace the cotter pin.
8. Replace blades. (See Replacing Blade in this section.)

DETACHING/STORAGE

DETACHING CUTTER FROM TRACTOR

CAUTION: To prevent personal injury caused by unexpected movement:



- a. Park machine on a level surface.
- b. Engage tractor parking brake and/or place transmission in Park.
- c. Disengage PTO.
- d. Shut off tractor engine and remove key.

1. Park cutter on a level surface, or block tail wheel so machine cannot roll after detaching from the tractor.
2. Slowly push hitch control lever to lower cutter close to the ground.
3. Engage tractor parking brake and/or place transmission in Park.

DANGER: Shut off tractor engine before detaching PTO driveline. Entanglement in rotating driveline can cause serious injury or death.



4. Shut off tractor engine and remove key.
5. Raise tractor PTO shield, if equipped.

DANGER: Help prevent bodily injury or death caused by entanglement in rotating driveline or blades. Entanglement in rotating driveline or being struck by blades can cause serious injury or death.



IMPORTANT: Do not use plastic shield on driveline to hold driveline in position. Damage to shielding can occur.



6. Push pin in and slide driveline off tractor shaft.
7. Support and collapse driveline completely and lower onto PTO holder or onto mower deck.
8. Lower tractor PTO shield, if equipped.

TRACTOR WITH THREE-POINT HITCH

1. Remove quick-lock pins from hitch pins and install in storage position on tractor draft links.
2. Remove and lower tractor draft links from hitch pins.
3. Disconnect center link from mast straps. Position tractor center link in transport location. Reinstall center link pin/hardware.
4. Carefully drive tractor away.

STORAGE

AT THE END OF YOUR CUTTING SEASON

IMPORTANT: When the unit is going to be stored for an extended amount of time please perform the following steps to keep the oil seals from deteriorating.



1. Spray shaft extensions with a suitable dry film or similar preservative
2. Pack grease around seal to prevent drying and cracking
3. Fill the gearbox with enough oil so that it covers the top of the input seal
4. Remember to drain the oil back to the correct level before using again
5. Check (and replace where necessary) blades, bolts, and nuts on the cutter.
6. Clean cutter and touch up any rust spots that may have appeared.
7. Replace any safety decals if damaged.
8. Store rotary cutter in a clean dry location.

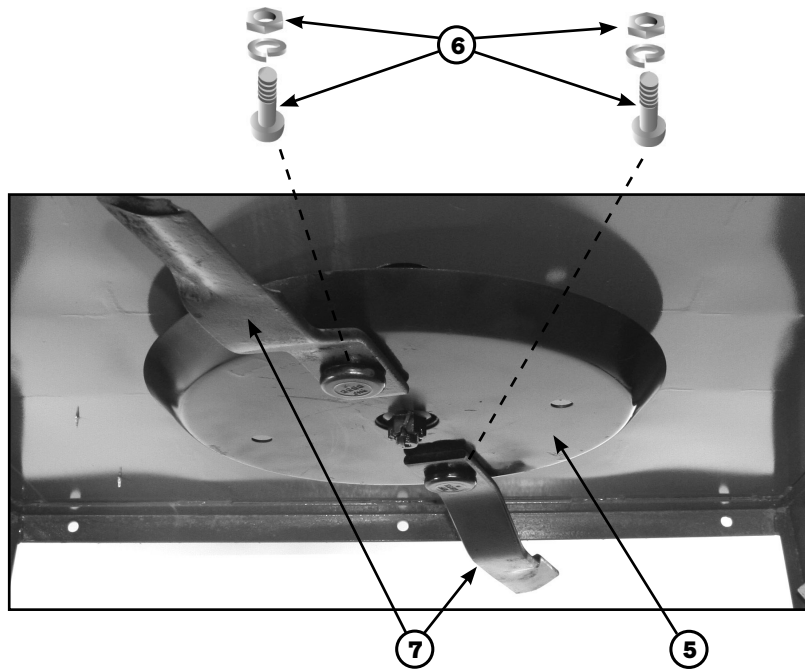
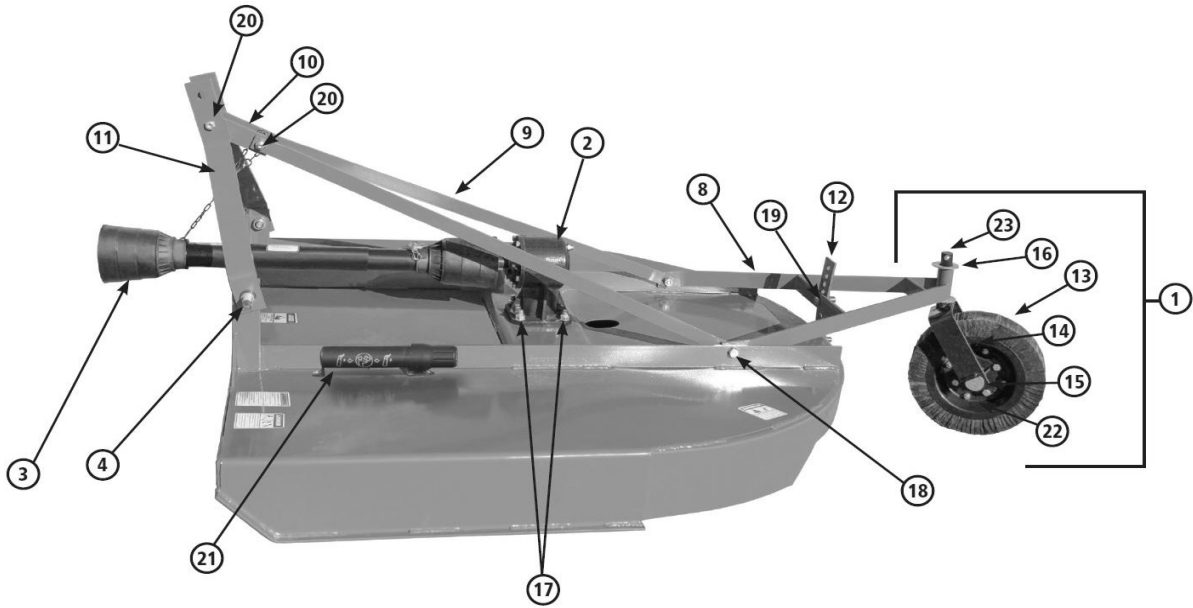
CAUTION: Always use a tractor to position equipment for storage. Never attempt to move equipment by hand.



PRODUCT SPECIFICATIONS

	RC104BL	RC205BL	RC206BL
Weight	463 lbs.	530 lbs.	623 lbs.
Hitch	Cat 1/ quick hitch compatible	Cat 1/ quick hitch compatible	Cat 1/ quick hitch compatible
Cutting Width	48"	60"	72"
Overall Width	51"	64"	75"
Overall Length (Including Tailwheel)	77"	86"	93"
Deck Height	7.5"	7.5"	7.5"
Cutting Height	1.5-9"	1.5-9"	1.5-9"
Cutting Capacity	up to 1"	up to 1"	up to 1"
Horsepower	18-45	20-50	25-65
power Take-Off Speed	540	540	540
Gearbox	45 hp cast iron housing, precision forged steel gears	45 hp cast iron housing, precision forged steel gears	45 hp cast iron housing, precision forged steel gears
Gearbox Lubrication	80W/90 or 85W/140	80W/90 or 85W/140	80W/90 or 85W/140
Gearbox Lubrication Capacity	23 ounces.	23 ounces.	23 ounces.
Deck Material Thickness	12 Ga.	12 Ga.	12 Ga.
Stump Jumper	1/8" Thick, Round 22.3" pan-type	1/8" Thick, Round 22.3" pan-type	1/8" Thick, Round 22.3" pan-type
Blades	1/2"x3" Heat Treated Free Swinging w/ Suction Lift	1/2"x3" Heat Treated Free Swinging w/ Suction Lift	1/2"x3" Heat Treated Free Swinging w/ Suction Lift
Blade Tip Speed	9,982 ft./min.	12,478 ft./min.	14,974 ft./min.
Driveline	ASAE Cat 4 Shear Bolt Protection	ASAE Cat 4 Shear Bolt Protection	ASAE Cat 4 Shear Bolt Protection
Driveline Protection Options	Shear Bolt	Shear Bolt	Shear Bolt
Tailwheel	15" Laminated Tire	15" Laminated Tire	15" Laminated Tire
Safety Guards	Optional Rubber Front/ Metal Rear	Optional Rubber Front/ Metal Rear	Optional Rubber Front/ Metal Rear
Blade Bolt Size	42mm socket	42mm socket	42mm socket
Shear Bolt	1/2" x 3-1/2" Grd 2 Hex Bolt	1/2" x 3-1/2" Grd 2 Hex Bolt	1/2" x 3-1/2" Grd 2 Hex Bolt
Castle Nut on Gearbox	38mm socket	38mm socket	38mm socket

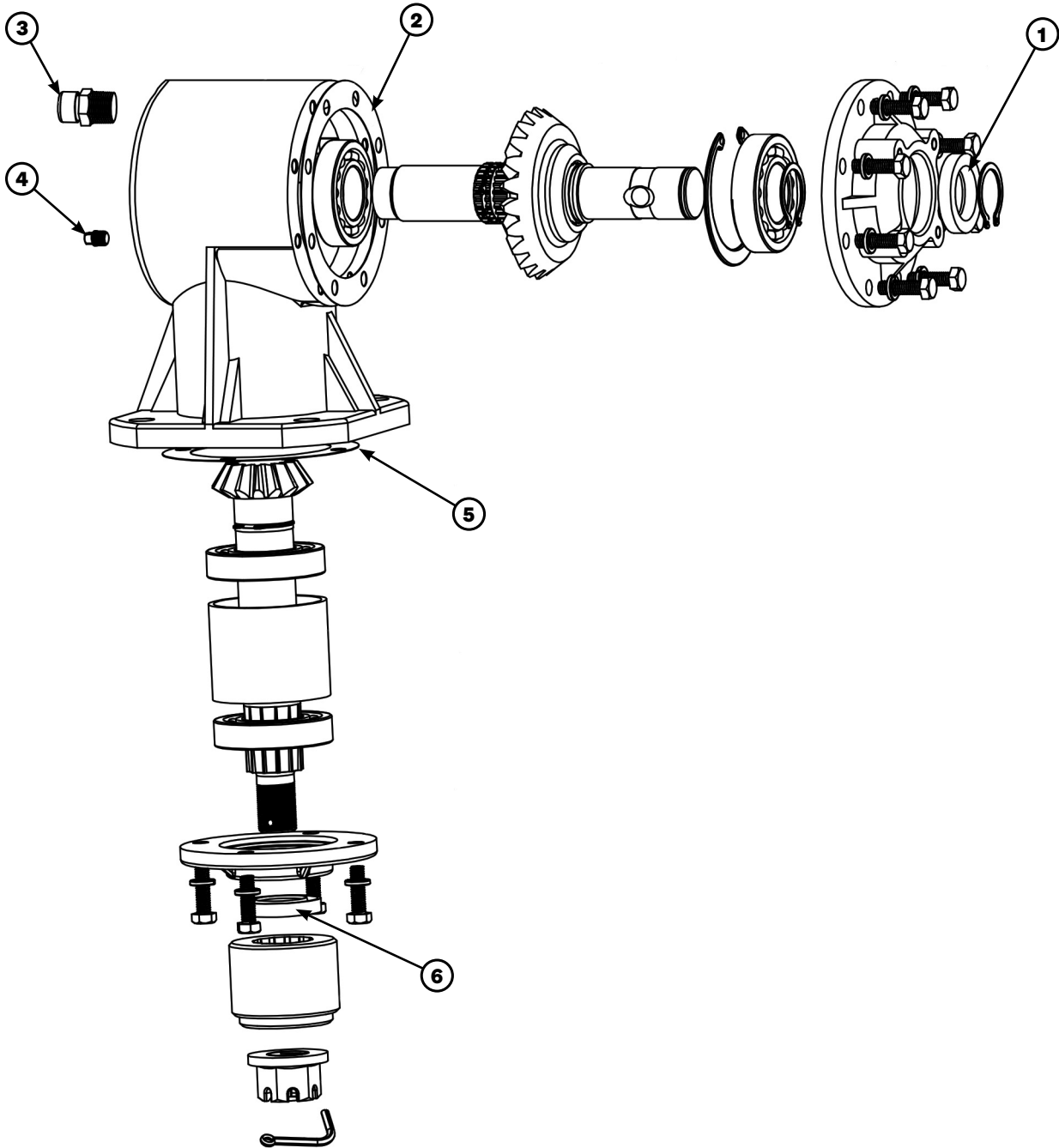
Parts Overall View
RC104BL, RC205BL, RC206BL



Parts Overall View
RC104BL, RC205BL, RC206BL

Item #	Part #	Description			
1	RCTA	Rotary Cutter Tire/Wheel & Fork Assembly	Not Shown	9000197	Inner Pivot Plate Bushing (2pk) (black)
2	2000029	Rotary Cutter Gearbox w/ Castle Nut & Cotter Pin	Not Shown	9000198	Outer Pivot Plate Bushing (2pk) (black)
3	RCS45A	4' PTO Shaft w/ hardware	Not Shown	PTOBWS	Shear Pin PTO Shaft Hardware Kit
3	9000372	5' PTO Shaft w/ hardware	Not Shown	SR	Tarter/TSC Rotary Cutter Snap Ring (3pk)
3	RCS6A	6' PTO Shaft w/ Hardware	Not Shown	GZ	Grease Zerk (5pk)
4	C1L	Category 1 Lift Pin	Not Shown	PTOGZ	PTO Shaft Grease Zerk w/ 45 degree bend
5	RCBH	Rotary Cutter Blade Holder	Not Shown	9000199	4' Pin Bushing (2pk) (black)
6	RCBBWW	Blade Bolt Set (2pk)	Not Shown	9000200	5' & 6' Pin Bushing (2pk) (black)
7	RCBL4	4' Rotary Cutter Blades (2pk)	Not Shown	9000148	RBRC402 Front Rubber Guard Kit (Black)
7	RCBL5	5' Rotary Cutter Blades (2pk)	Not Shown	9000149	RBRC502 Front Rubber Guard Kit (Black)
7	RCBL6	6' Rotary Cutter Blades (2pk)	Not Shown	9000150	RBRC602 Front Rubber Guard Kit (Black)
8	9000187	4' Rotary Cutter A-Frame Assy (black)	Not Shown	9000151	RBRC402 Rear Metal Guard Kit (Black)
8a	9000188	5' & 6' Rotary Cutter A-Frame Assy (black)	Not Shown	9000152	RBRC502 Rear Metal Guard Kit (Black)
9	9000189	RBRC402 Back Brace (2pk) (black)	Not Shown	9000153	RBRC602 Rear Metal Guard Kit (Black)
9a	9000190	RBRC502 Back Brace (2pk) (black)	Not Shown	9000154	RBRC402 Front Rubber & Rear Metal Guard Kit (Black)
9b	9000191	RBRC602 Back Brace (2pk) (black)	Not Shown	9000155	RBRC502 Front Rubber & Rear Metal Guard Kit (Black)
10	9000192	4' Pivot Plate (2pk) (black)	Not Shown	9000156	RBRC602 Front Rubber & Rear Metal Guard Kit (Black)
10a	9000193	5'&6' Pivot Plate (2pk) (black)			
11	9000194	New Style 4' Lift Arms (2pk) (black)			
11a	9000195	New Style 5' & 6' Lift Arms (2pk) (black)			
12	9000196	Rotary Cutter A-Frame Height Adjuster (black)			
13	LTWWB	Laminated Tire & Wheel w/ Bolts			
14	RCWF	RC Wheel Fork			
15	FHBWN	Fork & Hub Bolt w/ Nut			
16	114W	1-1/4" Flat Washer			
17	RCGBH	Rotary Cutter Gearbox Hardware (4pk)			
18	NSRCBSH	New Style RC Backstrap Hardware (4pk)			
19	RCAFHAH	RC A-Frame Height Adjuster Hardware (4pk)			
20	RCPPH	Rotary Cutter Pivot Plate Hardware (2pk)			
21	RBRC56MHHW	RBRC manual Holder w/ Hardware			
22	HUB	Wheel Hub for Tarter/TSC Rotary Cutters			
23	WFBWN	Wheel Fork Bolt w/ Nut			

Gearbox Parts List RC104BL, RC205BL, RC206BL



Item Number	Part Number	Description
	2000029	Gearbox Assembly
1	S-201	Input Seal
2	H-R0141	Input Gasket
3	S-502	Vent Plug
4	S-503	Pipe Plug-Sq. Head
5	H-R0144	Output Gasket
6	S-202	Output Seal

TORQUE SPECIFICATIONS

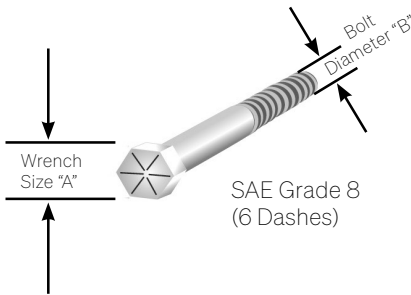
AMERICAN Bolt Head Markings



SAE Grade 2
(No Dashes)



SAE Grade 5
(3 Dashes)

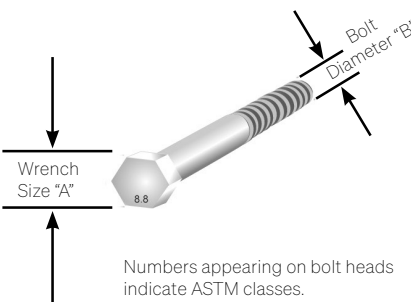


SAE Grade 8
(6 Dashes)

Proper torque for American fasteners used on manufactured implement.
Recommended Torque in Foot Pounds (Newton Meters).*

WRENCH SIZE(IN.)"A"	BOLT DIAMETER (IN.)"B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 24 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144(195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (406)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1-8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1-14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288 (1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

METRIC



Numbers appearing on bolt heads indicate ASTM classes.

Proper torque for metric fasteners used on manufacturer implement.
Recommended Torque in Foot Pounds (Newton Meters).*

WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
31	27		821 (1112)		138(1542)
46	30	418 (566)	1119 (1516)		1547(2096)

*Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque values for lubricated fasteners.

TROUBLE SHOOTING

Problem	Possible Cause	Possible Remedy
Leaves a streak of uncut or partially cut grass.	<ol style="list-style-type: none"> 1. Rotary cutter not level, side to side. 2. Blade dull or bent. 3. Blades unable to cut that part of grass pressed by path of tractor 4. Possible build up of material under rotary cutter. 	<ol style="list-style-type: none"> 1. Level 3-pt. hitch linkage on tractor. 2. Sharpen or replace blades. 3. Slow ground speed of tractor but keep engine running at full PTO rpm. Cutting lower will help. 4. Clean rotary cutter.
Blade cuts grass lower in center of swath than at the edge.	<ol style="list-style-type: none"> 1. Height of rotary cutter lower at rear or at front. 	<ol style="list-style-type: none"> 1. Adjust rotary cutter height and altitude so that rotary cutter rear and front are within 1/2" of same height.
Material discharges from cutter unevenly, or discharges clumps of grass.	<ol style="list-style-type: none"> 1. Grass or brush may be too high or thick. 2. Grass wet. 	<ol style="list-style-type: none"> 1. Reduce ground speed but maintain 540 rpm at tractor PTO, or make two passes over material. Raise rotary cutter for the first pass and lower for the second pass, preferably cutting 90° to the first pass. Raise rear of rotary cutter high enough to permit material to discharge. 2. Allow grass to dry before mowing. Slow ground speed of tractor but keep engine running at full PTO rpm. Cutting lower will help.
Gearbox overheating.	<ol style="list-style-type: none"> 1. Low on lubricant. 2. Improper lubricant type. 3. Excessive trash build up around gearbox. 	<ol style="list-style-type: none"> 1. Fill to proper level. 2. Replace with proper lubricant. 3. Remove trash.
Rotary cutter will not cut.	<ol style="list-style-type: none"> 1. Shear bolt sheared 	<ol style="list-style-type: none"> 1. Install new shear bolt. (Grade 2 Shear Bolt)
Excessive vibration.	<ol style="list-style-type: none"> 1. Possible build up of material on blade 2. Blades locked into position. 3. Check for even wear on each blade tip. 4. Broken blade. 5. New blade or bolts not matched with worn blade or bolts. 	<ol style="list-style-type: none"> 1. Clean blade pan. 2. Free blades so they swing free. 3. Weigh each blade. Weight should be within 1 oz. 4. Replace broken blade(s), Always replace in set. 5. Replace blades or bolts in sets.
Gearbox noisy.	<ol style="list-style-type: none"> 1. Low oil in gearbox. 	<ol style="list-style-type: none"> 1. Check oil level. Add oil.

MANUFACTURER'S LIMITED WARRANTY

Tarter Farm and Ranch Equipment warrants to the original purchaser that the purchased product is free from defects in material and workmanship for a period of one (1) year commencing on the date of original purchase, as evidenced by the original receipt, and will, at its option, repair, replace or issue credit for any product or part found to be defective.

This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial or industrial use, neglect, improper maintenance, alteration, or accident or which has been used for a purpose for which the product was not designed. Damage resulting from the installation or use of any part, accessory, or attachment not approved by Tarter Farm and Ranch Equipment, for use with the product covered by the Operator's Manual, shall void the warranty as to any resulting damage.

This limited warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this warranty does not transfer to the third party in any manner.

HOW TO MAKE A CLAIM:

To obtain warranty service through a local authorized retailer, a customer must present the following within thirty (30) days of implement failure:

1. Proof of purchase within one (1) year of purchase date.
2. Photographs of or return of the actual product in question.
3. Photograph of UPC label.

After receipt of the above information, if the product is alleged to be defective, Tarter Farm and Ranch Equipment will process the claim and issue a Return Manufacturers Authorization number (RMA). Once an RMA number is issued, Tarter Farm and Ranch Equipment will pick up the product from the authorized retailer and return to its facility for inspection. Tarter Farm and Ranch Equipment will replace, repair, or issue credit for any product after examination which is determined to be defective due to defects in material and workmanship.

For additional Warranty questions, please call 1-800-RED-GATE or email warranty@tarterusa.com for assistance.

WARRANTY

WARRANTY DISCLAIMER:

This limited warranty is in lieu of, and Tarter Farm and Ranch Equipment disclaims and excludes any express and implied warranties with respect to the product including, without limitation, merchantability, and fitness for a particular purpose. No other express warranty, whether written or oral, given by any person or entity, including a retailer, with respect to any product, shall bind Tarter Farm and Ranch Equipment.

Tarter Farm and Ranch Equipment's exclusive liability for breach of the limited warranty, as set forth above, on the product shall be to repair or replace the implement within the warranty period in accordance with the terms of this limited warranty. The choice of remedy shall belong solely to Tarter Farm and Ranch Equipment. In no event shall Tarter Farm and Ranch Equipment be liable for any loss or damages of any other kind, whether direct, incidental, consequential including lost profits, exemplary, special, or otherwise, including without limitation, expenses incurred for substitute or replacement implement or for rental expenses to temporarily replace a warranted product.

Under no circumstance shall recovery, of any kind, be greater than the amount of the purchase price of the product purchased. Customer assumes all risk and liability for loss, damage, or injury to customer or customer's property and/or the property of others arising out of the misuse or inability to use the product.

LEGAL RIGHTS

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

KEEP FOR YOUR RECORDS

Record the model number, serial number, and the date of purchase with the original sales receipt. This information will be helpful to the retailer if parts or service are required.

Model Number _____

Serial Number _____

Date of Purchase _____

Retailer _____

TARTER[®]
FARM AND RANCH EQUIPMENT

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