

Operator's Manual

# MR770

Reel Mower





500 Venture Drive  
Orrville, OH 44667  
www.ventrac.com

### To the Owner Contact Information and Product Identification

If you need to contact an authorized Ventrac dealer for information on servicing your product, always provide the product model and serial numbers.

Please fill in the following information for future reference. See the picture(s) below to find the location of the identification numbers. Record them in the spaces provided.

Dealer \_\_\_\_\_ Date of Purchase: \_\_\_\_\_

Dealer Address: \_\_\_\_\_  
\_\_\_\_\_

Dealer Phone Number: \_\_\_\_\_ Dealer Fax Number: \_\_\_\_\_

With your mobile device, you can scan the QR code on the serial number plate to access manuals, warranty, and other product information.



Model # \_\_\_\_\_

Serial # \_\_\_\_\_



Venture Products Inc. reserves the right to make changes in design or specifications without obligation to make like changes on previously manufactured products.

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# INTRODUCTION

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Venture Products Inc. is pleased to provide you with your new Ventrac reel mower! We hope that Ventrac equipment will provide you with a ONE Tractor Solution.



## Product Description

The Ventrac MR770 reel mower is designed to be the ultimate trim and surround mower. The MR770 features a 196 cm (77 inch) cutting width and variable speed hydraulics. The eight blade reel units provide exceptional quality of cut, along with ease of set up and maintenance.

The MR770 cutting units can be fitted with various optional components, such as front and rear roller options, roller brushes, etc. Refer to the MR770 Reel Fit-Up Chart in the Specifications chapter for standard cutting unit fit-up and optional components.

## Why Do I Need an Operator's Manual?

This manual has been created to help you gain the important knowledge of what is needed to safely operate and maintain your machine, and to avoid injury and product damage. It is divided into chapters for convenient reference of the appropriate information.

You must read and understand the operator's manual for each piece of Ventrac equipment you own. Reading the operator's manual will help you become familiar with each specific piece of equipment. If this manual becomes damaged or unreadable, it should be replaced immediately. Contact your local Ventrac dealer for a replacement.

When using a Ventrac attachment, be sure to read and follow the safety and operating instructions of both the power unit and the attachment being used to ensure the safest operation possible.

The information in this manual provides the operator with the safest procedures to operate the machine while getting the maximum use out of the unit. Failure to follow the safety precautions listed in this manual may result in personal injury and/or damage to the equipment.

# INTRODUCTION

## Using Your Manual

This manual identifies potential hazards and safety concerns to help you, as well as others, avoid personal injury and/or damage to the equipment.

Safety should always be the first priority when working on or operating equipment. Accidents are more likely to occur when proper operating procedures are not followed or inexperienced operators are involved.

## SYMBOL DEFINITIONS



This symbol identifies potential health and safety hazards. It marks safety precautions. Your safety and the safety of others is involved.

There are three signal words that describe the level of safety concern: Danger, Warning, and Caution.

## SIGNAL WORD DEFINITIONS

### **DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme cases.

### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and/or property damage. It may also be used to alert against unsafe practices.

This manual also uses two words to highlight information. **ATTENTION** calls attention to special mechanical information to prevent equipment damage and/or best practices for equipment service and care.

**NOTE** emphasizes general information that is worthy of special attention.

NOTE: Right-Hand and Left-Hand orientations may be referred to at different places throughout this manual. Right-Hand and Left-Hand is determined as if facing forward from the operator station.

## Manual Glossary

- Power Unit** A Ventrac tractor or other Ventrac engine powered device that may be operated by itself or with an attachment or accessory.
- Attachment** A piece of Ventrac equipment that requires a Power Unit for operation.
- Accessory** A device that attaches to a Power Unit or Attachment to extend its capabilities.
- Machine** Describes any "Attachment" or "Accessory" that is used in conjunction with a power unit.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



### Training Required

- The owner of this machine is solely responsible for properly training the operators.
- The owner/operator is solely responsible for the operation of this machine and for the prevention of accidents or injuries occurring to him/herself, other people, or property.
- Do not allow operation or service by children or untrained personnel. Local regulations may restrict the age of the operator.
- Before operating this machine, read the operator's manual and understand its contents.
- If the operator of the machine cannot understand this manual, then it is the responsibility of this machine's owner to fully explain the material within this manual to the operator.
- Learn and understand the use of all the controls.
- Know how to stop the power unit and the attachments quickly in the event of an emergency.

### Requirements for Personal Protective Equipment (PPE)

- The owner is responsible for ensuring that all the operators use the proper PPE while operating the machine. Whenever you use the machine, use the following PPE:
- Certified eye protection and hearing protection.
- Closed toe, slip resistant footwear.
- Long pants or trousers.
- A dust mask for dusty conditions.
- Additional PPE may be required. Refer to the product safety procedures for any additional requirements.

### Operation Safety

- Secure long hair and loose clothing. Do not wear jewelry.
- Inspect the machine before operation. Repair or replace any damaged, worn, or missing parts. Be sure the guards and shields are in proper working condition and are secured in place. Make any necessary adjustments before operating the machine.
- Some pictures in this manual may show shields or covers opened or removed in order to clearly illustrate the instructions. Under no circumstance should the machine be operated without these devices in place.
- Alterations or modifications to this machine can reduce safety and could cause damage to the machine. Do not alter the safety devices or operate with the shields or covers removed.
- Before each use, verify that all the controls function properly and inspect all the safety devices. Do not operate if the controls or safety devices are not in proper working condition.
- Check the parking brake function before operating. Repair or adjust the parking brake if necessary.
- Observe and follow all of the safety decals.
- All the controls are to be operated from the operator's station only.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Always wear a seat belt if the machine has a roll cage/bar installed and in the upright position.
- Ensure the attachment or accessory is locked or fastened securely to the power unit before operating.
- Ensure that all bystanders are clear of the power unit and the attachment before operating. Stop the machine if someone enters your work area.
- Always be alert to what is happening around you, but do not lose focus on the task you are performing. Always look in the direction the machine is moving.
- Look behind and down before backing up to be sure of a clear path.
- If you hit an object, stop and inspect the machine. Make any necessary repairs before operating the machine again.
- Stop operation immediately at any sign of equipment failure. An unusual noise can be a warning of equipment failure or a sign that maintenance is required. Make any necessary repairs before operating the machine again.
- If equipped with a high/low range feature, never shift between high and low range while on a slope. Always move the machine to level ground and engage the parking brake before shifting range.
- Do not leave the machine unattended while it is running.
- Always park the machine on level ground.
- Always shut off the engine when connecting the attachment drive belt to the power unit.
- Never leave the operator's station without lowering the attachment to the ground, engaging the parking brake, shutting off the engine, and removing the ignition key. Make sure all moving parts have come to a complete stop before dismounting.
- Never leave the machine unattended without lowering the attachment to the ground, engaging the parking brake, shutting off the engine, and removing the ignition key.
- Only operate in well-lit conditions.
- Do not operate when there is a risk of lightning.
- Never direct the discharge of any attachment in the direction of people, buildings, animals, vehicles, or other objects of value.
- Never discharge material against a wall or obstruction. The material may ricochet back toward the operator.
- Use extra caution when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.
- Do not run the engine in a building without adequate ventilation.
- Do not touch the engine or the muffler while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.
- Do not change the engine governor settings or over-speed the engine. Operating the engine at excessive speeds may increase the hazard of personal injury.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, excessive grease, and other flammable materials.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Clear the working area of objects that might be hit or thrown from the machine.
- Keep people and pets out of the working area.
- Know the work area well before operation. Do not operate where traction or stability is questionable.
- Reduce speed when you are operating over rough ground.
- Equipment can cause serious injury and/or death when improperly used. Before operating, know and understand the operation and safety of the power unit and the attachment being used.
- Do not operate the machine if you are not in good physical and mental health, if you will be distracted by personal devices, or if you are under the influence of any substance which might impair your decisions, dexterity, or judgment.
- Children are attracted to machine activity. Be aware of children and do not allow them in the work area. Turn off the machine if a child enters the work area.
- Power units, attachments, and accessories are not designed or intended for travel on public roadways. Never operate or travel on public roads or highways.
- Operate with safety lights when operating near roadways.
- Slow down and be careful of traffic when operating near or crossing roadways. Stop before crossing roads or sidewalks. Use care when approaching areas or objects that may obscure vision.

### Keep Riders Off

- Only allow the operator on the power unit. Keep riders off.
- Never allow riders on any attachment or accessory.

### Operating On Slopes

- Slopes can cause loss-of-control and tip-over accidents, which can result in severe injury or death. Be familiar with the emergency parking brake, along with the power unit controls and their functions.
- If the power unit is equipped with a fold down roll bar, it must be locked in the upright position when operating on any slope.
- Use low range (if equipped) when operating on slopes greater than 15 degrees.
- Do not stop or start suddenly when operating on slopes.
- Never shift between high and low range while on a slope. Always move the power unit to level ground and engage the parking brake before shifting range or placing the power unit in neutral.
- Variables such as wet surfaces and loose ground will reduce the degree of safety. Do not drive where the machine could lose traction or tip over.
- Keep alert for hidden hazards in the terrain.
- Stay away from drop-offs, ditches, and embankments.
- Sharp turns should be avoided when operating on slopes.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Pulling loads on hills decreases safety. It is the responsibility of the owner/operator to determine loads that can safely be controlled on slopes.
- Transport the machine with the attachment lowered or close to the ground to improve stability.
- While operating on slopes, drive in an up and down direction whenever possible. If turning is necessary while driving across slopes, reduce your speed and turn slowly in the downhill direction.
- Ensure a sufficient supply of fuel for continuous operation. A minimum of one-half tank of fuel is recommended.

### Truck Or Trailer Transport

- Use care when loading or unloading the machine into a truck or trailer.
- Use full width ramps for loading the machine into a truck or trailer.
- The parking brake is not sufficient to lock the machine during transport. Always secure the power unit and/or attachment to the transporting vehicle securely using straps, chains, cables, or ropes. Both the front and rear straps should be directed down and outward from the machine.
- Shut off the fuel supply to the power unit during transport on a truck or trailer.
- If equipped, turn the battery disconnect switch to the Off position to shut off electrical power.

### Maintenance

- Keep the safety decals legible. Remove all grease, dirt, and debris from the safety decals and instructional labels.
- If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.
- When new components are installed, be sure that the current safety decals are affixed to the replacement components.
- If any component requires replacement, use only original Ventrac replacement parts.
- Always turn the battery disconnect to the Off position or disconnect the battery before performing any repairs. Disconnect the negative terminal first and the positive terminal last. Reconnect the positive terminal first and the negative terminal last.
- Keep all bolts, nuts, screws, and other fasteners properly tightened.
- Always lower the attachment to the ground, engage the parking brake, shut off the engine, and remove the ignition key. Make sure all moving parts have come to a complete stop before cleaning, inspecting, adjusting, or repairing.
- If the power unit, attachment, or accessory requires repairs or adjustments not instructed in the operator's manual, the power unit, attachment, or accessory must be taken to an authorized Ventrac dealer for service.
- Never perform maintenance on the power unit and/or attachment if someone is in the operator's station.
- Always use protective glasses when handling the battery.
- Check the fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- To reduce the hazard of fire, keep the battery compartment, engine, and muffler areas free of grass, leaves, and excess grease.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



- Do not touch the engine, the muffler, or other exhaust components while the engine is running or immediately after stopping the engine. These areas may be hot enough to cause a burn.
- Allow the engine to cool before storing and do not store near an open flame.
- Do not change the engine governor settings or over-speed the engine. Operating engine at excessive speeds may increase the hazard of personal injury.
- Springs may contain stored energy. Use caution when disengaging or removing springs and/or spring loaded components.
- An obstruction or blockage in a drive system or moving/rotating parts may cause a buildup of stored energy. When the obstruction or blockage is removed, the drive system or moving/rotating parts may move suddenly. Do not attempt to remove an obstruction or blockage with your hands. Keep your hands, feet, and clothing away from all power-driven parts.

### Fuel Safety

- To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.
- Do not refuel the machine while smoking or at a location near flames or sparks.
- Always refuel the machine outdoors.
- Do not store the machine or fuel container indoors where the fumes or fuel can reach an open flame, spark, or pilot light.
- Only store fuel in an approved container. Keep out of the reach of children.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place the containers on the ground away from your vehicle before filling.
- Remove the machine from the truck or trailer and refuel it on the ground. If this is not possible, refuel the machine using a portable container, rather than from a fuel dispenser nozzle.
- Never remove the fuel cap or add fuel with the engine running. Allow the engine to cool before refueling.
- Never remove the fuel cap while on a slope. Only remove the fuel cap when parked on a level surface.
- Replace the fuel tank cap and the container cap securely.
- Do not overfill the fuel tank. Only fill to the bottom of the fuel neck, do not fill the fuel neck full. Overfilling of the fuel tank could result in engine flooding, fuel leakage from the tank, and/or damage to the emissions control system.
- If fuel is spilled, do not attempt to start the engine. Move the power unit away from the fuel spill and avoid creating any source of ignition until the fuel vapors have dissipated.
- If the fuel tank must be drained, it should be drained outdoors into an approved container.
- Check the fuel lines for tightness and wear on a regular basis. Tighten or repair them as needed.
- The fuel system is equipped with a shut-off valve. Shut off the fuel when transporting the machine to and from the job, when parking the machine indoors, or when servicing the fuel system.

# SAFETY

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## General Safety Procedures for Ventrac Power Units, Attachments, & Accessories



### Hydraulic Safety

- Make sure the hydraulic connections are tight and all hydraulic hoses and tubes are in good condition. Repair any leaks and replace any damaged or deteriorated hoses or tubes before starting the machine.
- Hydraulic leaks can occur under high pressure. Hydraulic leaks require special care and attention.
- Use a piece of cardboard and a magnifying glass to locate suspected hydraulic leaks.
- Keep your body and hands away from pinhole leaks or nozzles that eject high pressure hydraulic fluid. Hydraulic fluid escaping under high pressure can penetrate the skin causing serious injury, leading to severe complications and/or secondary infections if left untreated. If hydraulic fluid is injected into the skin, seek immediate medical attention no matter how minor the injury appears.
- The hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, remove any attachments, engage the parking brake, disengage the weight transfer system (if equipped), shut off the engine, and remove the ignition key. To relieve pressure on the auxiliary hydraulic system, shut off the power unit engine and move the hydraulic control lever left and right before disconnecting the auxiliary hydraulic quick couplers.

# SAFETY

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## MR770 Safety Procedures



- The attachment hydraulic system may contain stored energy. Before performing maintenance or repairs on the hydraulic system, the attachment's auxiliary hydraulic hoses must be disconnected from the power unit. Lower the attachment to the ground, shut off power unit engine, move the secondary SDLA lever left and right to relieve auxiliary hydraulic pressure, and disconnect the auxiliary hydraulic quick couplers.

### Cutting Unit Safety

- Contact with the reel, bed knife, or other sharp objects may result in personal injury. Keep hands and feet away.
- Never perform adjustments or maintenance to the cutting units with the power unit's engine running.
- Rotation of one reel may cause the other reels to rotate.
- When removing a cutting unit blockage, hydraulic pressure or tension in the steel cutter reel may cause the reel blades to rotate. Never use your hands or feet to remove a blockage.
- Disengage the PTO to stop the reels whenever you are not mowing.

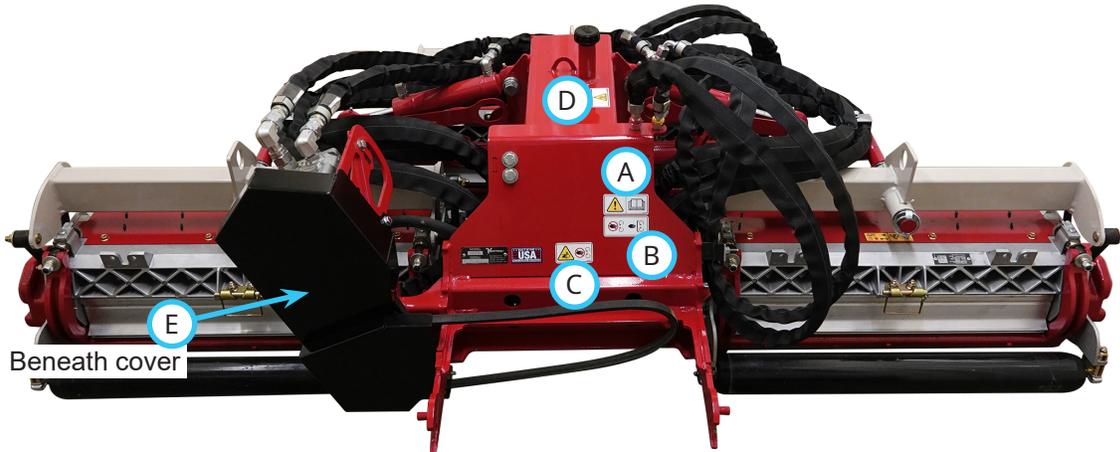
# SAFETY

## Safety Decals

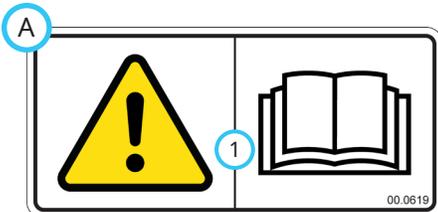
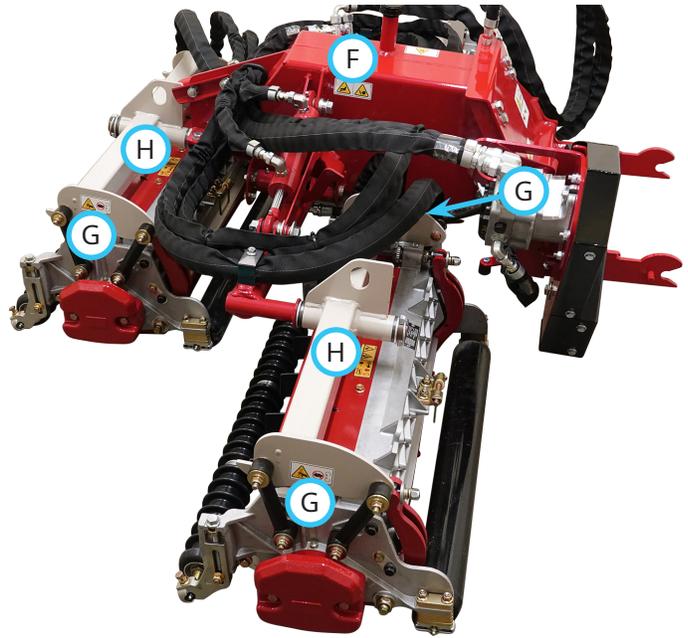
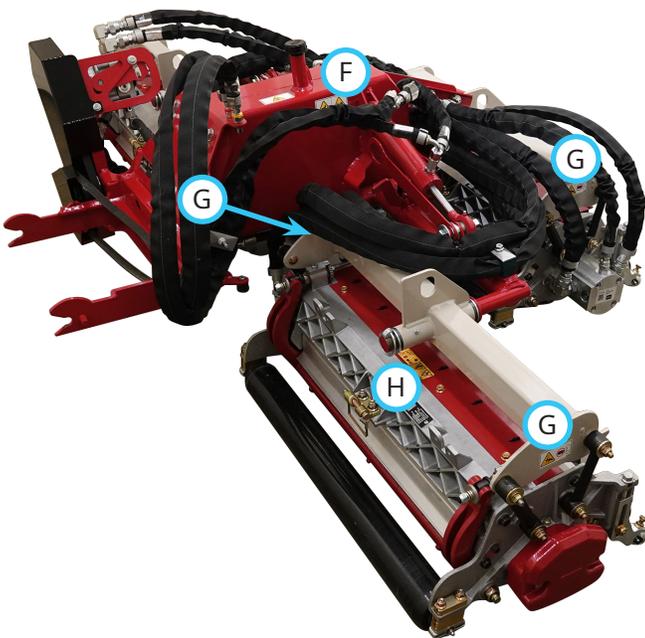
The following safety decals must be maintained on your attachment.

Keep all safety decals legible. Remove all grease, dirt, and debris from safety decals and instructional labels. If any decals are faded, illegible, or missing, contact your dealer promptly for replacements.

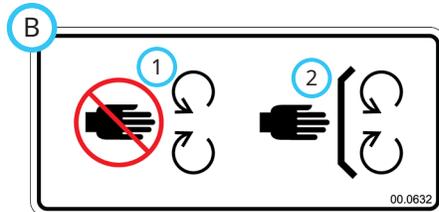
When new components are installed, be sure that current safety decals are affixed to the replacement components.



Beneath cover



1. Read the operator's manual.



1. Stay away from moving parts.  
2. Keep all guards and shields in place.

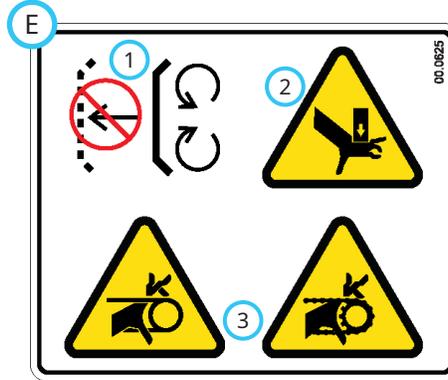


1. Finger or hand entanglement hazard.  
2. Stay away from moving parts.

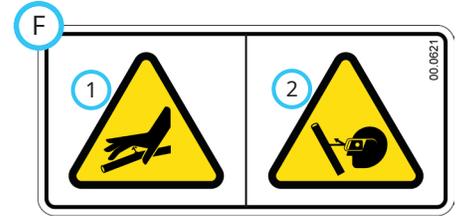
# SAFETY



1. Hot surface. Do not touch.



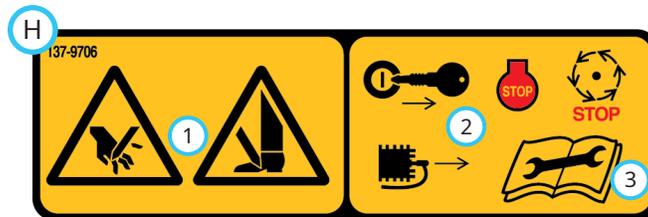
1. Shield missing - do not operate.
2. Pinching or crushing hazard.
3. Finger or hand entanglement.



1. Keep your body and hands away from suspected hydraulic leaks.
2. Wear eye protection when inspecting the hydraulic system for leaks.



1. Caution - pinch point. Stay away from moving parts.



1. Cutting hazard of the hand or foot.
2. Shut off the engine, remove the key, and wait for all moving parts to stop.
3. Read the Operator's Manual before performing maintenance.

Decal	Description	Part Number	Quantity
A	Read Operator's Manual	00.0619	1
B	Moving Parts Hazard	00.0632	1
C	Finger/Hand Entanglement	00.0631	1
D	Hot Surface	00.0374	1
E	Shield Missing	00.0625	1
F	High Pressure Fluid Hazard	00.0621	2
G	Warning, Pinch Point	00.0364	6
H	Warning, Cutting Hazard	137-9706	3

# OPERATIONAL CONTROLS

## Reel Speed Control Lever

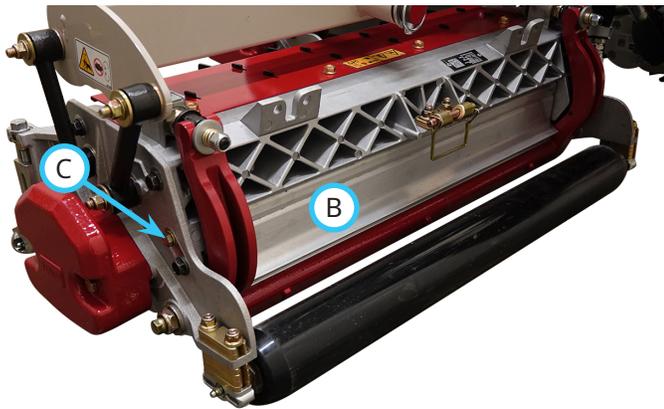
The position of the reel speed control lever (A) determines the reel speed.



To determine the correct reel speed setting, refer to the reel speed section in the General Operation chapter.

## Rear Shield

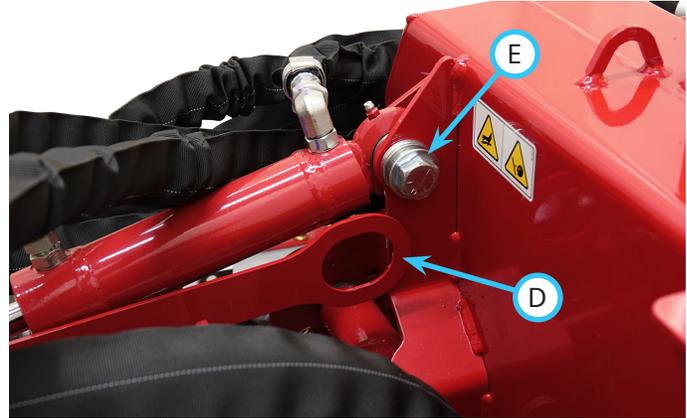
Under most conditions, you can attain the best clipping dispersion when the rear shield (B) is closed (front discharge). When conditions are heavy or wet, you may open the rear shield.



To open the rear shield, loosen the bolt (C) securing the shield to the left side plate, rotate the shield to the open position, and tighten the bolt.

## Lift Arm Locking Links

The lift arms for the left and right reel assemblies are equipped with lift arm locking links (D) and locking bolts (E) for securing the lift arms in the raised position. This can be useful for both the transport and storage of the reel mower.



## Primary SDLA Control Lever

The power unit's primary SDLA lever\* raises and lowers the reel mower. Pull the lever to the left to raise the reel mower. Push the lever to the right to lower the reel mower. Place the primary SDLA lever in the float position during operation of the reel mower.

## Secondary SDLA Control Lever

The power unit's secondary SDLA lever\* raises and lowers the left and right reel assemblies. Pull the lever to the left to raise the reel assemblies. Push the lever to the right to lower the reel assemblies. The secondary SDLA lever must be in the float (detent) position during operation of the reel mower.

NOTE: the power unit must be equipped with an auxiliary float kit. Contact your authorized Ventrac dealer for the correct float kit for your power unit.

\*Refer to power unit operator's manual for operation of power unit controls.

# GENERAL OPERATION

## Daily Inspection

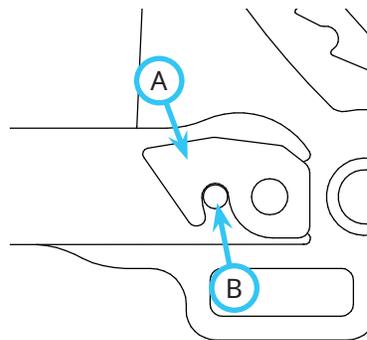
### **⚠ WARNING**

Always engage the parking brake, shut off the power unit engine, remove the ignition key, and ensure that all moving parts have come to a complete stop before inspecting the components, or attempting any repair or adjustment.

1. Park the machine on a level surface, with the engine shut off and all fluids cold.
2. Perform a visual inspection of both the power unit and the attachment. Look for loose or missing hardware, damaged components, or signs of wear.
3. Inspect the hydraulic hoses and the hydraulic fittings to ensure tight, leak free connections.
4. Inspect the belts for damage or excessive wear. Refer to the Belt Inspection section of this manual.
5. Check the reel mower hydraulic oil level.
6. Check for proper bedknife-to-reel contact and adjust the bedknife for optimal cutting performance. Refer to the Checking the Cutting Unit and Adjusting the Bedknife to the Reel sections in the reel cutting unit manual included with your reel mower or scan the QR code on the reel cutting unit serial plate to view or download the manual.

## Attaching

1. Drive the power unit slowly forward into the hitch arms of the attachment. Align the lift arms of the power unit with the attachment hitch arms by raising or lowering the front hitch and complete the engagement.
2. Once completely engaged, move the front hitch latch lever\* to the locked position. The latch (A) must lock over the attachment's hitch arm pin (B).
3. Engage the parking brake\* and shut off the engine.



4. Place the attachment belt onto the PTO drive pulley on the power unit. Ensure the belt is properly seated in each pulley.
5. Engage the PTO belt tensioner rod.
6. Wipe the hose ends clean and connect to the power unit's hydraulic quick couplers. If equipped, connect the hoses and the quick couplers so the colored indicators are paired together (red to red, etc.).
7. Engage the power unit's weight transfer\* system. Maximum weight transfer is recommended for most mowing applications. Adjust the weight transfer as required by the mowing conditions.

## Detaching

1. Park the power unit on a level surface and engage the parking brake.\*
2. Disengage the power unit's weight transfer.\*
3. Lower the attachment to the ground and place the primary SDLA lever\* in the float position.
4. Lower the left and right reels to the ground and place the secondary SDLA lever\* in the float position to ensure all the reels are sitting on the ground.
5. Shut off the power unit engine.
6. Disengage the PTO belt tensioner rod.
7. Remove the attachment belt from the PTO drive pulley of the power unit.
8. Disconnect the hydraulic quick couplers from the power unit and store the hose ends in the top frame holes on the attachment.
9. Disengage the front hitch locking lever.\*
10. Restart the power unit and slowly back away from the attachment. A side to side movement of the steering wheel may aid in disengagement.

\*Refer to power unit operator's manual for operation of power unit controls.

# GENERAL OPERATION

## Operating Procedure

Before operation, perform the daily inspection and confirm the reel speed and cutting heights are set properly. Confirm the power unit's weight transfer is engaged in the desired setting.

Lower the reel cutting units to the ground and place the primary and secondary SDLA levers in the float position by pushing them to the right until the detents engage.

With the power unit engine running between 2,000 and 3,000 RPM, engage the PTO switch. Adjust the throttle to the desired engine RPM.

Begin forward motion in the desired mowing path. Avoid obstacles and remove debris as necessary. Mowing in a back and forth pattern, where each mowing pass is made in the opposite direction of the grass next to it, will create a stripe pattern in the grass. The full length roller behind each cutting unit rolls the grass in the direction of travel.

When the edge of the mowing area is reached, raise the cutting units, turn around, and align the mower for the next pass.

## Transport of the Attachment

Transport the attachment with the power unit front hitch and attachment fully raised to reduce wear of the equipment. Travel slowly when transporting over undulating and rough surfaces to maintain control of the power unit and to reduce the shock to the power unit and the attachment. Always disengage the power unit PTO before transporting the attachment.

The lift arm locking links can be used to lock the lift arms in the raised position. This may be desired when carrying the power unit and mower on a truck or trailer.

To engage the lift arm locking links:

1. Park the power unit on a level surface and engage the parking brake.
2. Raise the left and right cutting units.
3. Place the locking links onto the locking bolts.
4. Lower the left and right cutting units until the locking links stop the motion of the lift arms.

To disengage the lift arm locking links:

1. Park the power unit on a level surface and engage the parking brake.
2. Raise the left and right cutting units and remove the lift arm locking links from the locking bolts.

## Reel Speed

In order to achieve a consistent, high quality of cut and a uniform after-cut appearance, it is important that the reel speed be matched to the height of cut. The frequency of clip should match the height of cut. Use the following formulas to determine the starting reel speed setting. There is also a calculator on the reel mower product page of the Ventrac website.

Reel Speed (RPM) Calculator (English)	
Inches per minute (1,056 x mph)	= Reel RPM
Number of blades x height of cut (inch)	
Example for 1-1/4 inch height of cut at 5 mph mowing speed: 1,056 x 5 (mph) divided by 8 (number of blades) x 1.25 = 528 RPM	

Reel Speed (RPM) Calculator (Metric)	
Centimeters per minute (1,667 x km/h)	= Reel RPM
Number of blades x height of cut (cm)	
Example for 3 cm height of cut at 8 km/h mowing speed: 1,667 x 8 (km/h) divided by 8 (number of blades) x 3 = 556 RPM	

After operating the reel mower for several days, examine the cut quality and adjust the reel speed if necessary. NOTE: if the reel speed is too slow, you may notice visible clip marks. If the reel speed is too fast, the cut may have a fuzzy appearance.

## Cutting Unit Setting Adjustments

For adjustments to the cutting units, refer to the reel cutting unit manual included with your reel mower or scan the QR code on the reel cutting unit serial plate to view or download the manual.

# SERVICE

## ⚠ WARNING

Always engage the parking brake, shut off the power unit engine, remove the ignition key, and ensure that all moving parts have come to a complete stop before inspecting the components, or attempting any repair or adjustment.

## ATTENTION

If any component requires replacement, use only original Ventrac replacement parts.

### Cleaning and General Maintenance

For best results, and to maintain the finish of the reel mower, clean or wash the mower to remove accumulated grass clippings, leaves, and dust when the job is finished. If washing the mower, do not direct spray directly into bearings or seals.

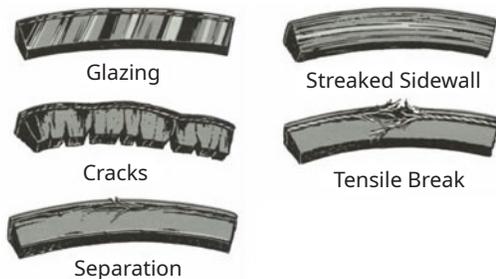
### Cutting Unit Service

For servicing instructions for the cutting units, refer to the reel cutting unit manual included with your reel mower or scan the QR code on the reel cutting unit serial plate to view or download the manual.

### Belt Inspection

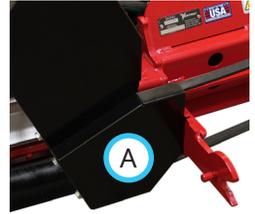
Inspecting the drive belts of the attachment can prevent sudden belt failure by finding problems before they cause a belt to break.

Typical wear on a drive belt may result in the conditions shown in the diagram. If any of these conditions occur, the drive belt will require replacement.



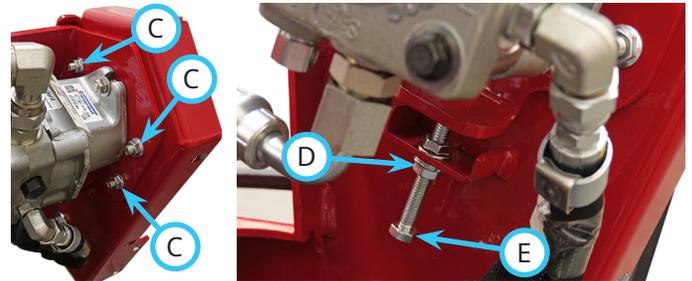
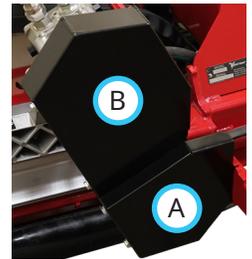
### Attachment Drive Belt Replacement

1. Detach the mower from the power unit.
2. Remove the attachment belt cover (A).
3. Remove the old drive belt and install the new drive belt over the pulley.
4. Reinstall the attachment belt cover and torque the mounting bolts to 24 Nm (210 in-lbs).



### Pump Drive Belt Replacement

1. Detach the mower from the power unit.
2. Remove the attachment belt cover (A) and the attachment belt from the reel mower.
3. Remove the pump belt cover (B) from the reel mower.
4. Loosen the four nuts (C) on the motor mount plate.

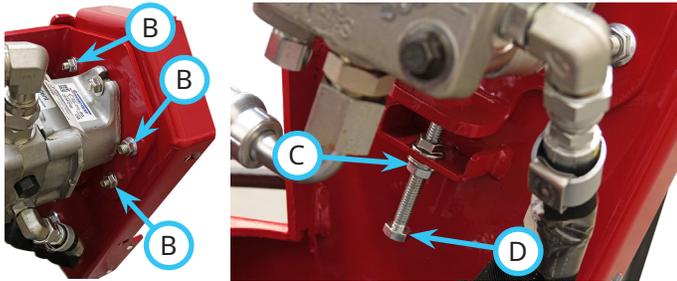
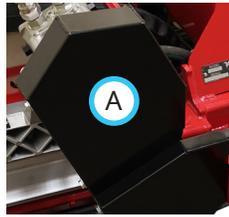


5. Loosen the locking nut (D) and adjust the belt tension bolt (E) to loosen the belt tension.
6. Remove the old pump drive belt and install the new pump drive belt onto the pump and drive-shaft pulleys.
7. Adjust the belt tension and reinstall the belt covers as specified in the following Pump Drive Belt Tension Adjustment section.

# SERVICE

## Pump Drive Belt Tension Adjustment

1. Remove the pump belt cover (A) from the reel mower.
2. Loosen the four nuts (B) on the motor mount plate.



3. Loosen the locking nut (C) and adjust the belt tension bolt (D) until the proper belt tension is achieved. The belt should deflect 3.5 - 4 mm (1/8 - 5/32 inch) with 2 -2.5 kg (4.5 - 5.5 pounds) of force applied to center of the span between the pulleys.
4. Once the belt tension is set, tighten the locking nut to secure the belt tension bolt in place.
5. Torque the nuts on the motor mount plate to 42 Nm (31 ft-lbs).
6. Reinstall the pump belt cover and torque the bolts to 24 Nm (210 in-lbs).

## Checking the Hydraulic Oil Level

Check the hydraulic oil level before operating when the hydraulic system is cold. If the hydraulic system is warm when the oil level is checked, it will produce an inaccurate oil level reading. If the hydraulic system is warm, allow the hydraulic system to cool for one hour before checking the oil level.

1. Park the reel mower on a level surface and allow to cool if the hydraulic system is warm.
2. Remove the dipstick (A) from the hydraulic tank and wipe with a clean cloth.
3. Set the dipstick back in place without threading it into the tank.
4. Remove the dipstick and check the oil level. The level should be between the two notches on the dipstick.
5. If the hydraulic oil level is low, add HydroTorq XL synthetic hydraulic oil until the proper level is reached.
6. Reinstall the dipstick into the hydraulic oil tank.



## Changing the Hydraulic Oil

1. Park the reel mower on a level surface and detach it from the power unit.
2. Place a large drain pan under the drain plug on the bottom of the oil tank.
3. Remove the plug to drain the oil.
4. After the oil has drained, reinstall the drain plug.
5. Remove the dipstick from the oil tank and add HydroTorq XL synthetic hydraulic oil until the proper level is reached.
6. Reinstall the dipstick into the hydraulic oil tank.
7. Clean up any spilled oil and dispose of the used oil in accordance with local laws.

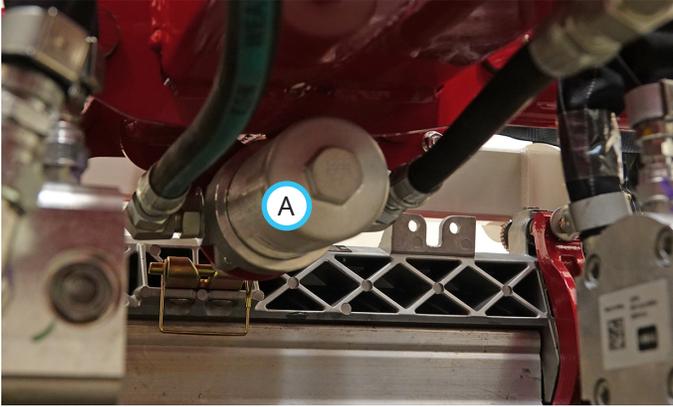
## ATTENTION

Oil is hazardous to the environment. Drain the oil into an approved container and dispose of used oil in accordance with local laws.

# SERVICE

## Changing the Hydraulic Filter

1. Place a drain pan beneath the filter area to catch any oil leakage.
2. Remove the oil filter bowl (A) from the filter assembly and unscrew the filter element from the filter head.



3. Screw the new filter onto the filter head.
4. Reinstall the oil filter bowl onto the filter assembly and torque to 61 Nm (45 ft-lbs).
5. Clean up any spilled oil and dispose of the used oil and filter in accordance with local laws.

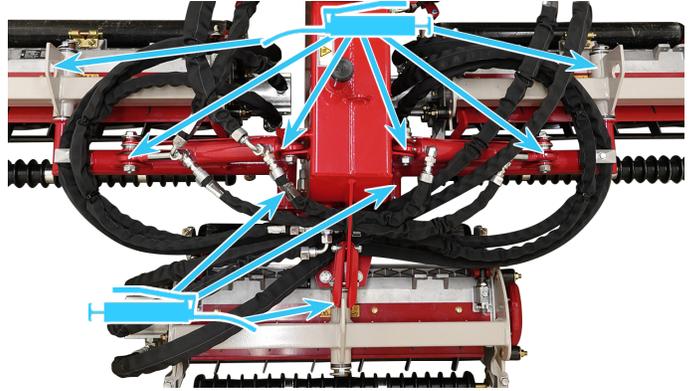
## Lubrication Locations

Lubrication is required at the following locations using a lithium complex NLGI #2 grease.

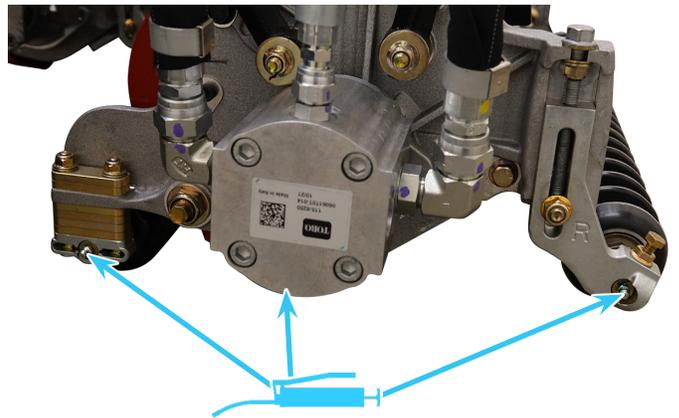
Wipe the grease fittings clean before applying grease to the grease fittings.

Refer to the maintenance schedule for service intervals and the amount of grease.

Grease the lift arm pivots, the reel carrier pivots, and the cylinder ends.

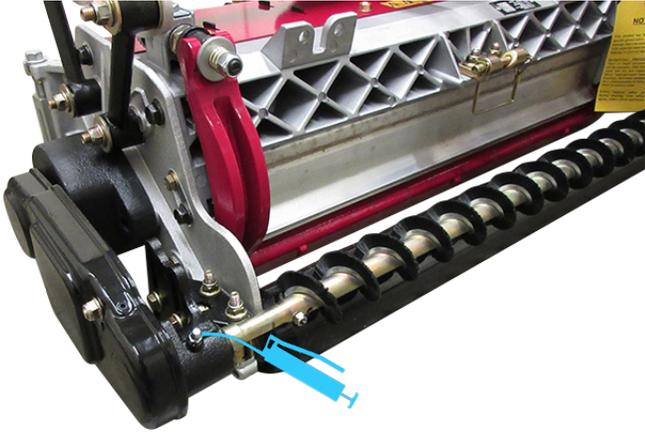


Grease the rear roller bearings (6 places), the front roller bearings (6 places), and the motor shaft (3 places). Grease the motor shaft until excess grease comes out the grease vent at the top of the motor side plate.



# SERVICE

If equipped with an optional brush kit, grease the brush shaft bearings (6 places).



## Storage

### Preparing the Attachment for Storage

1. Clean the attachment to remove accumulated grass clippings and dust.
2. Inspect for loose or missing hardware, damaged components, or signs of wear. Repair or replace any damaged or worn components.
3. Inspect the safety decals. Replace any decals that are faded, illegible, or missing.
4. Inspect the belts for signs of damage or wear and replace as needed.
5. Inspect the hydraulic hoses and fittings for damage or wear. Connections must be tight and leak free. Replace damaged or worn components.
6. Apply grease to all grease points and wipe off any excess grease.
7. Check the reel mower hydraulic oil level.
8. Inspect the painted components for chips, scratches, or rust. Clean and touch up the surfaces as needed.
9. Apply a light coat of oil on the exposed surface of the lift cylinder rods.
10. Apply a light coat of oil on the reel blades and the bed knife of each cutting unit.

### Removing the Attachment from Storage

1. Clean the attachment to remove any accumulated dust or debris.
2. Inspect the attachment as instructed in the Daily Inspection section of this manual.
3. Test the attachment to ensure that all the components are working properly.

# SERVICE

## Maintenance Schedule

	# of locations	# of pumps	As Needed	Daily	At 50 hours	At 100 hours	At 150 hours	At 200 hours	At 250 hours	At 300 hours	At 350 hours	At 400 hours	At 450 hours	At 500 hours	At 550 hours	At 600 hours	At 650 hours	At 700 hours	At 750 hours	At 800 hours	At 850 hours	At 900 hours	At 950 hours	At 1,000 hours	5 Years or 2,000 Hrs.
Grease and Lubrication: See Lubrication Section																									
Front Roller Bearing	6	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rear Roller Bearing	6	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor Shaft	3	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lift Arm Pivot	2	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reel Carrier Pivot	3	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lift Arm Cylinder End	4	^			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydraulic System																									
Check the Hydraulic Oil Level				✓																					
Change the Hydraulic Oil and Filter																									✓
Inspection																									
Inspect for Loose, Missing, or Worn Components				✓																					
Inspect the Belts and Pulleys				✓																					
Inspect the Cutting Unit				✓																					
Adjust the Bedknife to the Reel				✓																					
Inspect the Safety Decals				✓																					
^Grease until fresh grease is visible.																									

## Maintenance Checklist

	# of locations	# of pumps	As Needed	Daily	At 50 hours	At 100 hours	At 150 hours	At 200 hours	At 250 hours	At 300 hours	At 350 hours	At 400 hours	At 450 hours	At 500 hours	At 550 hours	At 600 hours	At 650 hours	At 700 hours	At 750 hours	At 800 hours	At 850 hours	At 900 hours	At 950 hours	At 1,000 hours	5 Years or 2,000 Hrs.
Grease and Lubrication: See Lubrication Section																									
Front Roller Bearing	6	^																							
Rear Roller Bearing	6	^																							
Motor Shaft	3	^																							
Lift Arm Pivot	2	^																							
Reel Carrier Pivot	3	^																							
Lift Arm Cylinder End	4	^																							
Hydraulic System																									
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Inspect the Cutting Unit																									
Adjust the Bedknife to the Reel																									
Inspect the Safety Decals																									
^Grease until fresh grease is visible.																									

# SPECIFICATIONS

## Dimensions

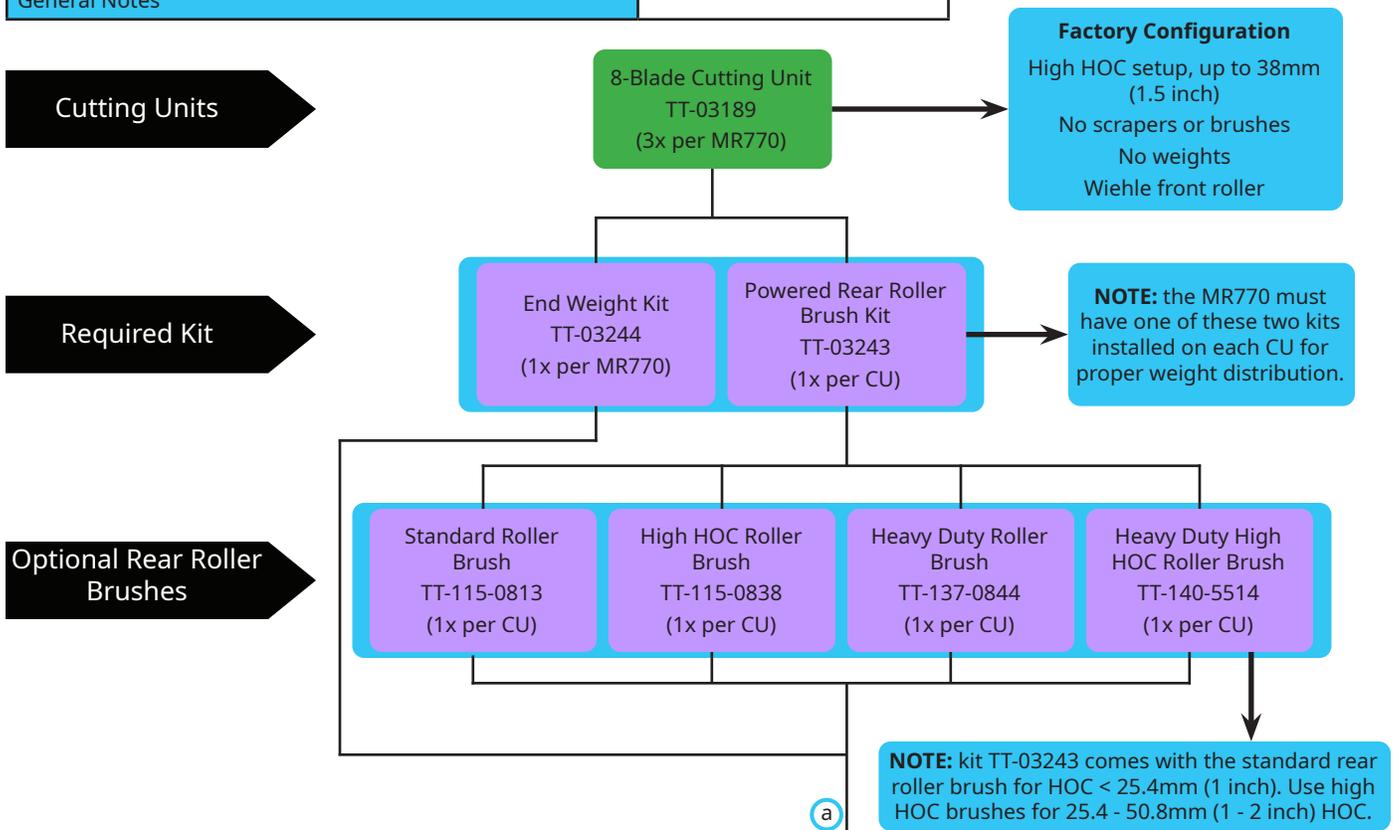
Overall Height . . . . .	66 cm (26 inches)
Overall Length . . . . .	132 cm (52 inches)
Overall Width . . . . .	212 cm (83-1/2 inches)
Weight . . . . .	351.5 kg (775 pounds)
Cutting Width . . . . .	195.6 cm (77 inches)
Cutting Width, Individual Reel . . . . .	68.6 cm (27 inches)
Cutting Height Range . . . . .	9.5 - 63.5 mm (0.375 x 2.50 inches)
Reel Diameter . . . . .	17.8 cm (7 inches)
Hydraulic Oil Capacity . . . . .	.20 liters (5.25 gallons)

## Features

- Full front and rear rollers
- Variable speed hydraulic reel drive
- 8 blade reel assembly
- Dual precision bedknife adjustment

## MR770 Reel Fit-Up Chart

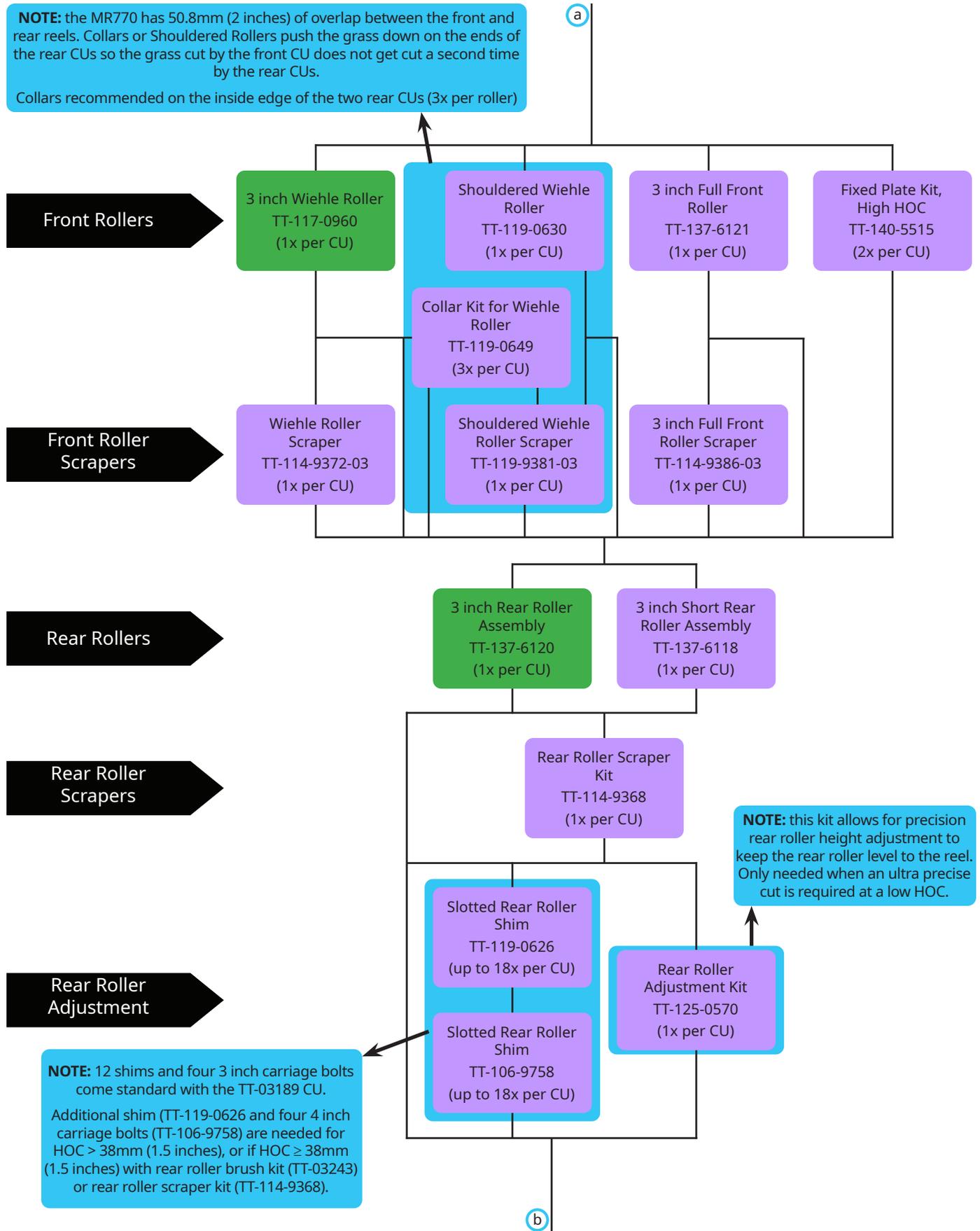
Color Key	Abbreviations
Standard on the MR770	HOC = Height of Cut
Options available through Ventrac	CU = Cutting Unit
Cutting unit options that are incompatible with the MR770	
General Notes	



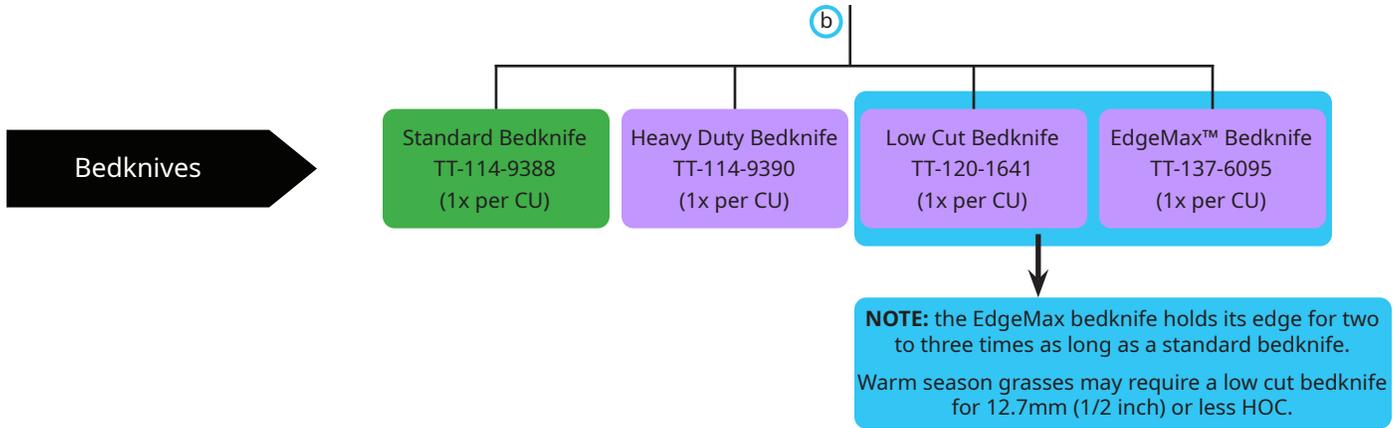
# SPECIFICATIONS

**NOTE:** the MR770 has 50.8mm (2 inches) of overlap between the front and rear reels. Collars or Shouldered Rollers push the grass down on the ends of the rear CUs so the grass cut by the front CU does not get cut a second time by the rear CUs.

Collars recommended on the inside edge of the two rear CUs (3x per roller)



# SPECIFICATIONS



## Items Not Compatible with the MR770

