



107cm Rear Discharge Mower and 132cm Side Discharge Mower Wheel Horse® XT Series Garden Tractor Attachment

Model No. 78291—230000001 and Up

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Operator's Manual

This manual only applies when Decal Kit, 107-3699, is installed onto the machine. Order the Decal Kit from the Toro Parts Department.



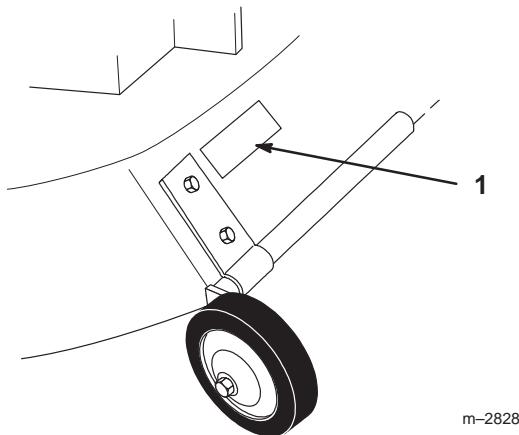
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Introduction

Read this manual carefully to learn how to operate and maintain your product properly. The information in this manual can help you and others avoid injury and product damage. Although Toro designs and produces safe products, you are responsible for operating the product properly and safely.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. Figure 1 illustrates the location of the model and serial numbers on the product.



m-2828

Figure 1

1. Location of the model and serial numbers

Write the product model and serial numbers in the space below:

Model No. _____

Serial No. _____

This manual identifies potential hazards and has special safety messages that help you and others avoid personal injury and even death. **Danger**, **Warning**, and **Caution** are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

Danger signals an extreme hazard that *will* cause serious injury or death if you do not follow the recommended precautions.

Warning signals a hazard that *may* cause serious injury or death if you do not follow the recommended precautions.

Caution signals a hazard that may cause minor or moderate injury if you do not follow the recommended precautions.

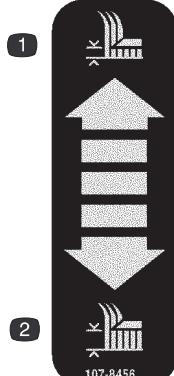
This manual uses two other words to highlight information.

Important calls attention to special mechanical information and **Note:** emphasizes general information worthy of special attention.

Safety and Instruction Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



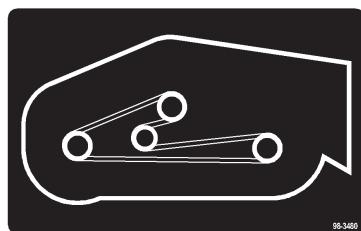
107-8456

1. Reduce the height of cut.
2. Increase the height of cut

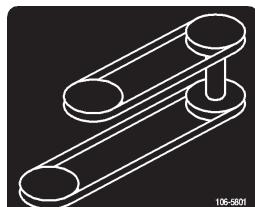


93-7009

1. Warning—do not operate the mower with the deflector up or removed; keep the deflector in place.
2. Cutting/dismemberment hazard of hand or foot, mower blade—stay away from moving parts.



98-3480

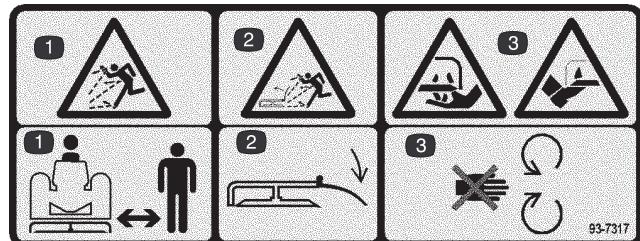


106-5801



107-9200

1. Warning—do not touch the hot surface.



93-7317

1. Thrown object hazard—stay a safe distance from the machine.
2. Thrown object hazard, mower—keep the deflector in place.
3. Cutting/dismemberment of hand or foot—stay away from moving parts.



93-7316

1. Thrown object hazard—stay a safe distance from the machine.
2. Thrown object hazard, mower—keep the deflector in place.
3. Cutting/dismemberment of hand or foot—stay away from moving parts.

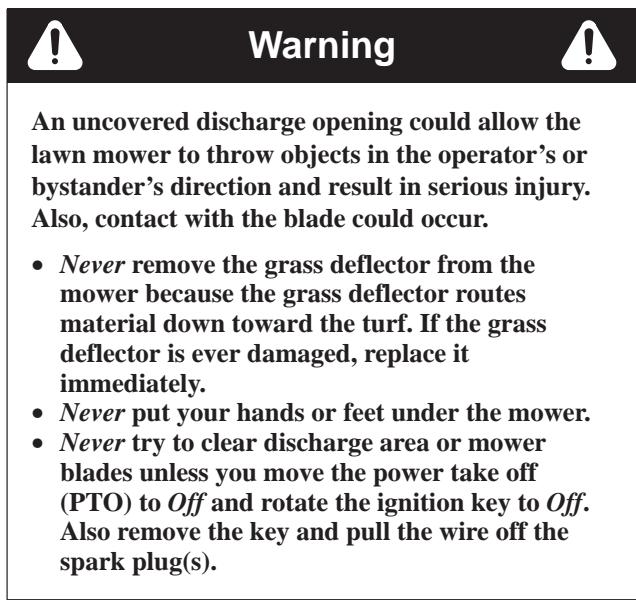
Setup

Note: Determine the left and right sides of the machine from the normal operating position.

Loose Parts

Note: Use the chart below to identify parts used for assembly.

DESCRIPTION	QTY.	USE
Grass deflector	1	
Spring	2	Installing the grass deflector on 132cm mowers
Bolt, 3/8 x 3-1/2 inch	2	
Locknut, 3/8 inch	2	
Belt, PTO Drive	1	
Belt, Mower Drive	1	Installing the mower
Pulley box assembly	1	
Operator's Manual	1	Read before operating



Installing the Grass Deflector on 132cm Mowers

- Place the springs into the brackets on mower with the hooked ends over the raised back (Fig. 2).
- Align the grass deflector with the holes in the brackets and the spring straight end in the space under the hinge and above the deflector (Fig. 2).
- Secure the deflector to the bracket with 2 bolts (3/8 x 3-1/2 inch) and 2 locknuts (3/8 inch) (Fig. 2).

- Lift grass deflector and check that it is spring loaded and pivots freely to the full down position.

Important Grass deflector must be spring loaded in the down position. Lift the deflector up to test that it snaps down to the full down position.

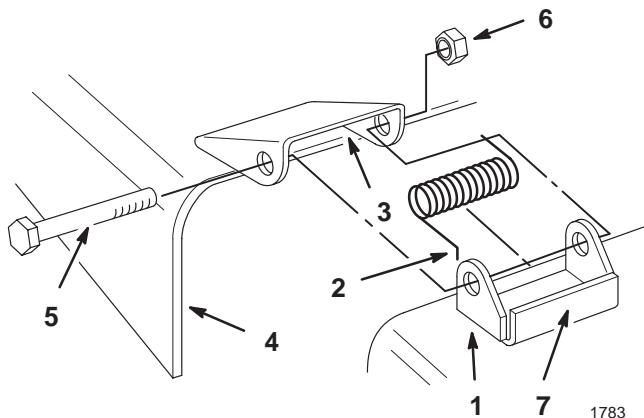


Figure 2

- Bracket
- Spring hook end
- space for spring
- Grass deflector
- Bolt, 3/8-3-1/2 inch
- Lock nut, 3/8 inch
- Raised back

Installing the Mower

- Disengage the PTO and set the parking brake.

2. Stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Position the mower on the right side of the tractor.
4. Turn the front wheels fully to the left and raise attachment lift lever or electric lift all the way up. Refer to the tractor *Operator's Manual*.
5. Open the mid-mount hitch by pulling out the J-pin and moving the lock handle rearward (Fig. 3).

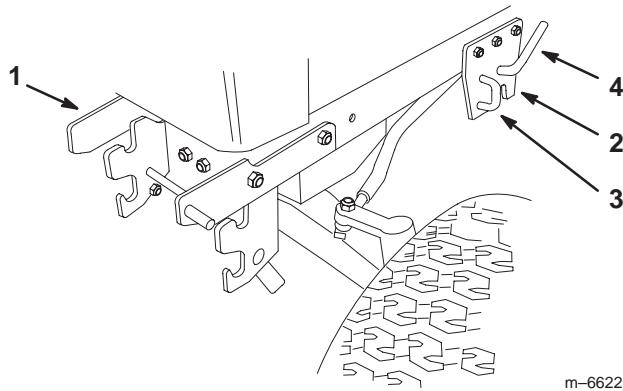


Figure 3

1. Front hitch	3. J-pin
2. Mid-mount hitch	4. Lock handle

6. Slide the mower under the tractor from the right side and slide the attachment lift between the center and left side level bar (Fig. 4).
7. Straighten the front wheels and lower the attachment lift lever or electric lift to the mounting position; refer to the tractor *Operator's Manual*.
8. Place the attachment lift pin into the slot in the center lever bar and secure it with a washer (3/4 inch) and a hairpin cotter (Fig. 4).

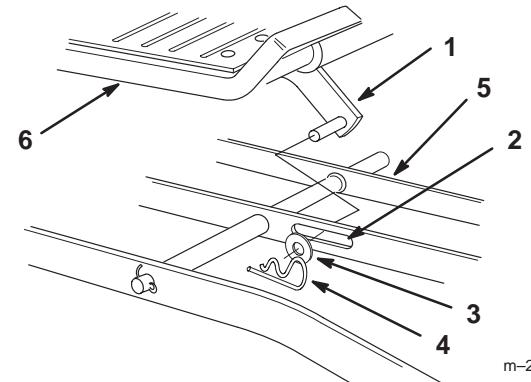


Figure 4

1. Attachment lift	4. Hairpin cotter pin
2. Slot in center level bar	5. Left level bar
3. Washer	6. Right footrest

9. Rotate the front mounting shaft so the fork faces straight up and aligned so the spacers are between the mid-mount hitch plates (Fig. 5).
10. Lift the mower with the attachment lift lever or electric lift and guide the fork to capture the hitch rod (Fig. 5).
11. Close the mid-mount hitch lock handle by rotating it forward (Fig. 3).

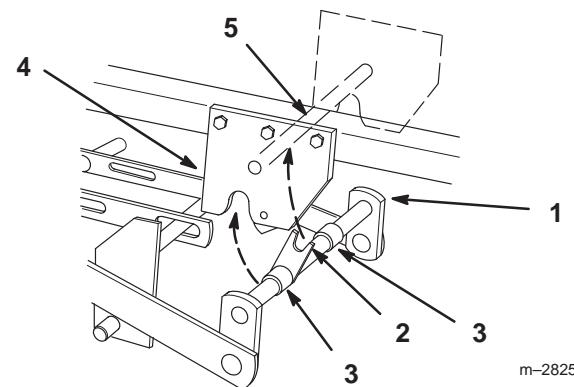


Figure 5

1. Front mounting shaft	4. Mid-mount hitch plate
2. Fork	5. Hitch rod
3. Spacer	

Installing the Front Pulley Box

Install the front pulley box if it is not already installed.

1. Rotate the knobs to adjust the idler pulleys so there is a 1/4 inch (7 mm) clearance between the idler arms and the mounting pins.

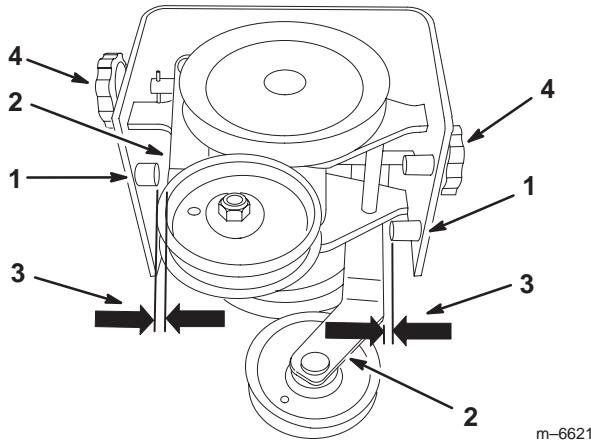


Figure 6

1. Mounting Pins	3. 1/4 inch (7 mm) clearance
2. Idler arm	4. Knob

2. Make sure the front latches are open and then slide the pulley box into the front hitch.

Note: Make sure the pulley box engages and closes the latches.

3. Adjust both idler pulleys until they are totally to the outside by turning the knobs.

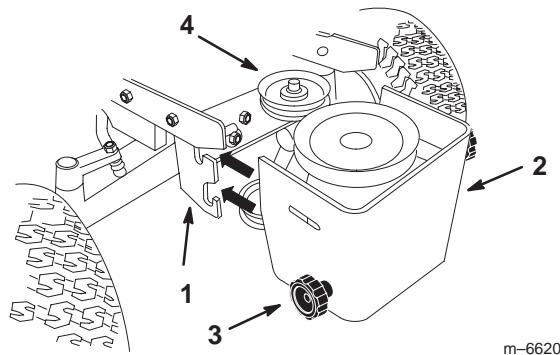


Figure 7

1. Front hitch	3. Knob
2. Pulley box	4. Idler pulley

Installing the PTO Belt



Warning



Components around engine will be hot if the machine has been running. Touching hot components can cause burns.

- Do not touch the engine components or the muffler when hot.
- Allow the engine to cool before performing maintenance.

If desired, remove the hood for better access to the upper pulleys in the pulley box. Refer to Removing the Hood on page 16.

1. Install the PTO belt onto the clutch pulley (Fig. 8).
2. Install the PTO belt onto the upper pulley and upper idler pulley in the pulley box (Fig. 8).
3. Turn the left knob on the front pulley box to tighten the PTO drive belt (Fig. 8). There needs to be a 1/2 inch (13 mm) deflection in the belt.

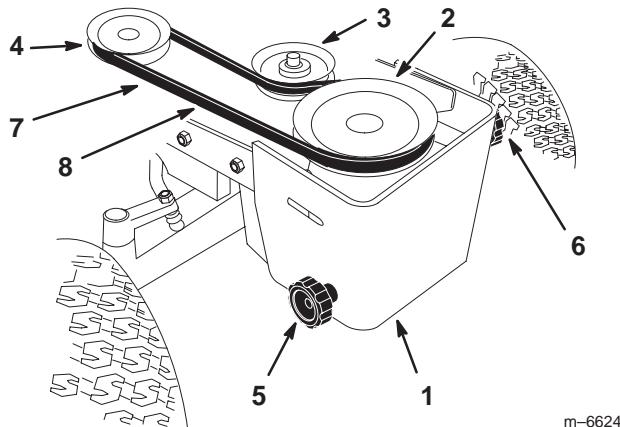


Figure 8

1. Pulley box	6. Left knob
2. Upper pulley	7. PTO belt
3. Upper idler pulley	8. Check 1/2 inch deflection here
4. PTO clutch pulley	
5. Right knob	

Installing the Mower Drive Belt

1. Adjust the mower height-of-cut to the middle position; refer to Adjusting the Height-of-Cut, page 10.

- Install the mower drive belt onto the mower center pulley (Fig. 9). Ensure that it is on the upper center pulley.
- Install the mower drive belt onto the lower pulley and the lower idler pulley in the pulley box (Fig. 9).
- Turn the right knob on the front pulley box to tighten the mower drive belt (Fig. 8). There needs to be a 1/2 inch (13 mm) deflection in the belt.

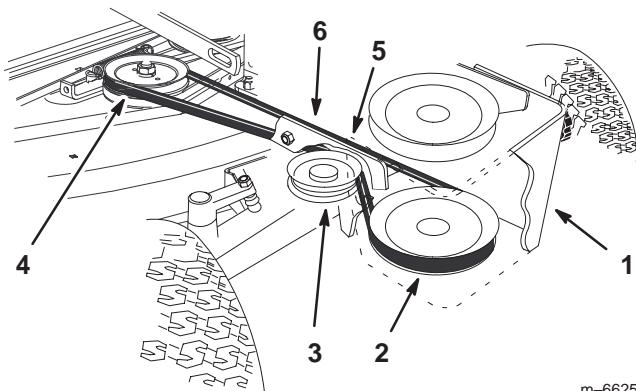
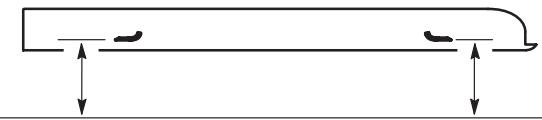


Figure 9

1. Pulley box	5. Mower drive belt
2. Lower pulley	6. Check 1/2 inch deflection here
3. Lower Idler pulley	
4. Mower center pulley	

m-6625



MEASURE FROM
CUTTING EDGE TO
A LEVEL SURFACE

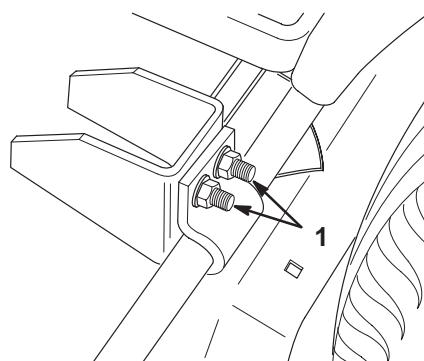
m-2550

Figure 11

Adjusting the Side-to-Side Blade Cut

This adjustment is available if necessary to compensate for uneven side-to-side cut.

- Adjust the side-to-side cut by adjusting the two carriage bolts (Fig. 12) on the rear left of the mower.
- After adjusting the carriage bolts, check the side-to-side blade cut. Refer to Checking the Side-to-Side Blade Cut (Fig. 12).
- Repeat steps 1 and 2 until the difference is no more than a 1/4 inch.



m-3459

Figure 12

- Side-to-side adjustment bolts

Checking the Side-to-Side Blade Cut

- Check the tire pressure on the tractor. Refer to the tractor operator's manual.
- Position the blades side-to-side (Fig. 10). Measure at **A** and **B** locations (Fig. 10) from a level surface to the cutting edge of blade tips (Fig. 11).
- The difference between measurements **A** and **B** should be no more than a 1/4 inch (6 mm).

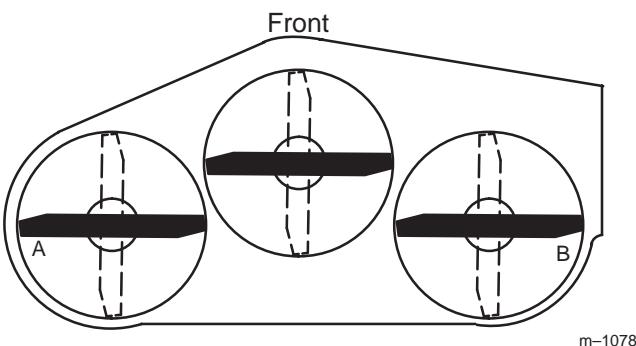


Figure 10

Checking the Front-to-Rear Blade Slope

Check the front-to-rear blade slope any time you install the mower.

- Check the tire pressure on the tractor. Refer to the tractor operator's manual.
- Position one blade front-to-rear (Fig. 13). Measure at **C** and either **D** location (Fig. 13) from a level surface to the cutting edge of the blade tips (Fig. 14).
- The mower blade should be **1/8–1/4 inch (4–7 mm)** lower in front at **C** than in the rear at **D**. Rotate the blades and repeat for the other blades.

- If it is not correct, proceed to Changing the Front-to-Rear Blade Slope; page 8.

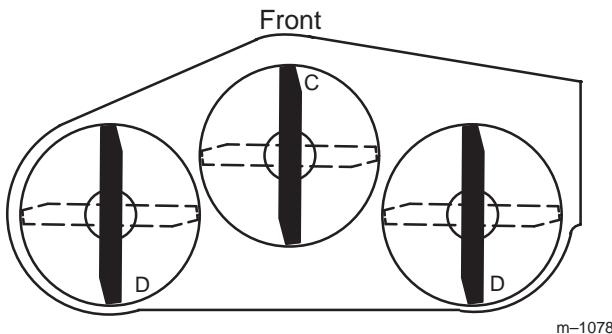


Figure 13

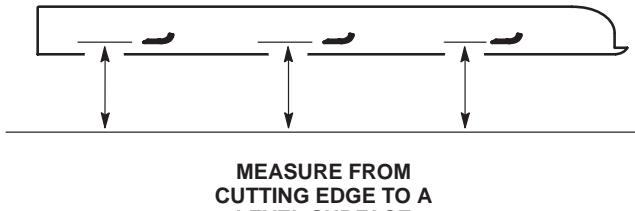


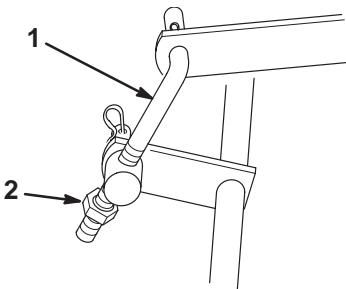
Figure 14

Changing the Front-to-Rear Blade Slope

- To adjust the front-to-rear blade slope turn the locknut on rear adjustable link (Fig. 15).

Note: To raise the front of the mower, turn locknut clockwise, to lower front turn counterclockwise.

- After adjusting, check the front-to-rear blade slope. Refer to Checking the Front-to-Rear Blade Slope; page 7.
- Repeat steps 1 and 2 until the difference is no more than a 1/4 inch.



m-3499

Figure 15

1. Adjustable link
2. Locknut

Transport Height Adjustment

Transport height is adjusted to stabilize the mower in the up, locked position.

- Raise the mower to the highest height-of-cut (Fig. 22) and check if the transport level stops contact the bottom of the draft bars (Fig. 16).
- If needed, loosen and adjust the transport level stops so they just contact the bottom of the draft bars (Fig. 16).

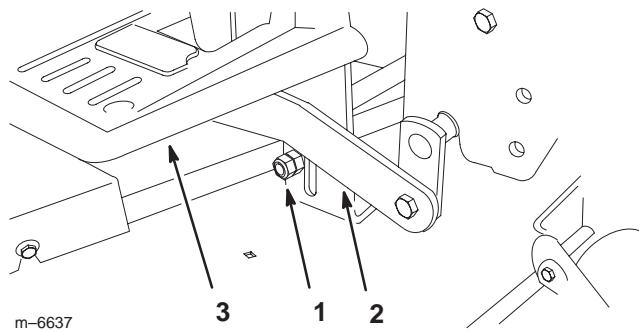


Figure 16

1. Transport level stop—right side shown
2. Draft bar
3. Right side footrest

- Raise the attachment lift lever or electric lift all the way up. Check if bumpers, on rear of mower draft bars contact under footrests (Fig. 17).

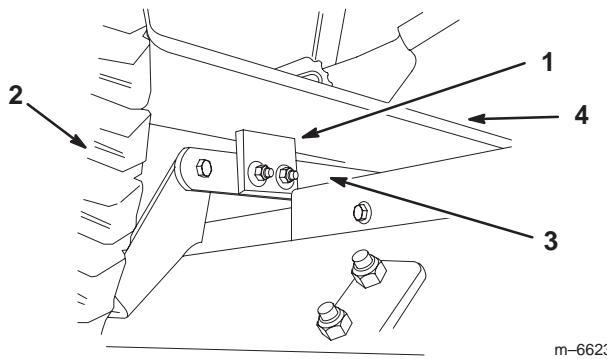


Figure 17

m-6623

1. Bumper
2. Right rear tire
3. Draft bar
4. Footrest

- If the bumpers do not contact footrests, adjust the lift chain by turning the nut on the eyebolt in the rear hole of tractor lift (Fig. 18). Turn the nut clockwise to raise the mower or counterclockwise to lower it.
- If one of the bumpers does not contact the footrest, adjust the appropriate transport level stop (Fig. 16).

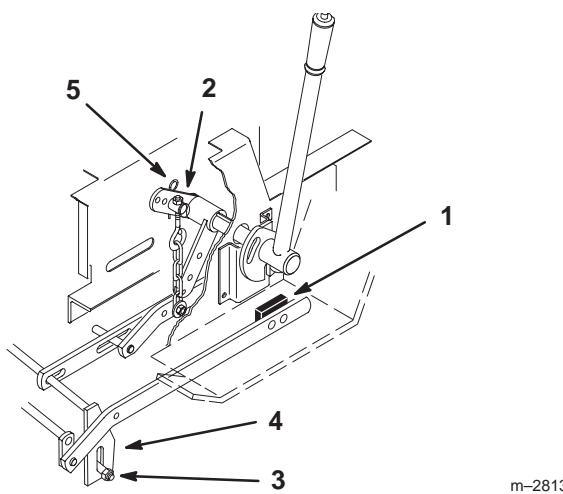


Figure 18

m-2813

1. Bumper
2. Trunnion
3. Leveling bolts
4. Transport level stop
5. Hairpin cotter

Operation

Note: Determine the left and right sides of the machine from the normal operating position.

Using the Side Discharge



Warning

An uncovered discharge opening could allow the lawn mower to throw objects in the operator's or bystander's direction and result in serious injury. Also, contact with the blade could occur.

- Never remove the grass deflector from the mower because the grass deflector routes material down toward the turf. If the grass deflector is ever damaged, replace it immediately.
- Never put your hands or feet under the mower.
- Never try to clear discharge area or mower blades unless you move the power take off (PTO) to *Off* and rotate the ignition key to *Off*. Also remove the key and pull the wire off the spark plug(s).

- The mower has a hinged grass deflector that disperses clippings to the side and down toward the turf.

Operating the Power Take Off (PTO)

The power take off (PTO) switch engages and disengages power to the electric clutch.

The PTO light, in the Indicator Module, will be on when the ignition key is in run or the lights position and the power take off (PTO) is engaged. When this light is on, it is a reminder the starter will not crank and to turn the off PTO before getting off the tractor.

Engaging the Power Take Off (PTO)

- Move the throttle to the fast position.
- Pull the power take off (PTO) to the **on** position (Fig. 19).

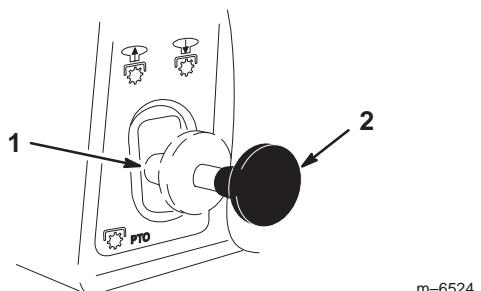


Figure 19

1. PTO—Off
2. PTO—On

Disengaging the Power Take Off (PTO)

1. Push the power take off (PTO) to the **off** position (Fig. 19).

Using the Attachment Power Lift

The attachment power lift (Fig. 20) is used to raise and lower attachments.

Raising Attachments

1. Turn key to the **on** or **run** position (Fig. 20).
2. Push the lift switch in the **up** direction to raise the attachment lift (Fig. 20). This will lift and hold the attachment in the up, or raised position.

Lowering Attachments

1. Turn key to the **on** or **run** position (Fig. 20).
2. Push the lift switch in the down direction to lower the attachment lift (Fig. 20). This will lower the attachment lift.

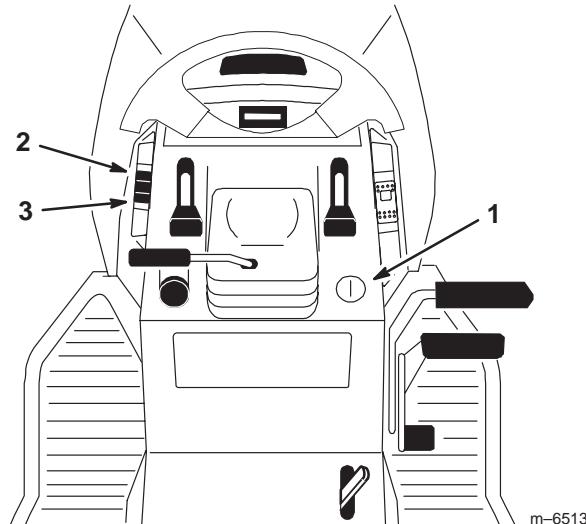


Figure 20

1. Key
2. Lift switch —up
3. Lift switch —down

Operating the Attachment Lift Lever

The attachment lift lever (Fig. 21) is used to raise and lower various attachments.

Raising an Attachment

1. Depress the brake pedal to stop the machine.
2. Pull the attachment lift lever rearward until the latch locks. In this position the lift will hold the attachment in the up, or raised position.

Lowering an Attachment

1. Depress the brake pedal to stop the machine.
2. Pull the attachment lift lever rearward, to release the lift pressure, and push the button on top to release the latch. Move the lift lever forward to lower the attachment.

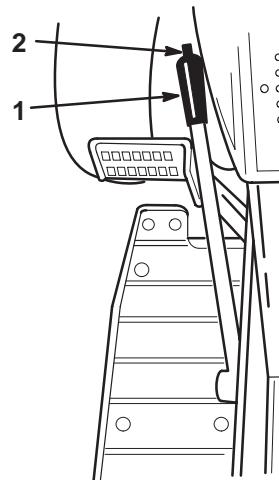


Figure 21

1. Lift lever
2. Button

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Adjusting the Height of Cut

The rear support wheels adjust for different heights of cut, between 1-1/2 and 4-1/2 inch (4 to 11 cm).

1. Disengage the PTO and set the parking brake.
2. Stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.

- Pull the height-of-cut lever out to disengage it from the quadrant (Fig. 22).

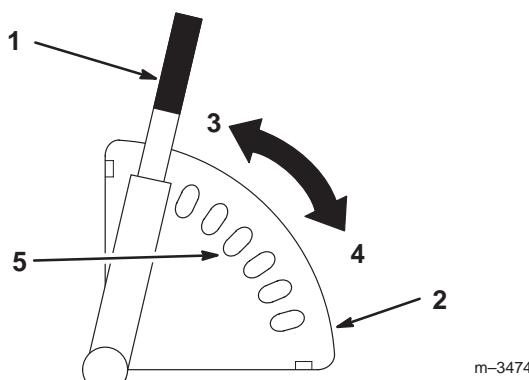


Figure 22

1. Height-of-cut lever	4. Low
2. Quadrant	5. Medium position
3. High	

- Adjust the height-of-cut to the desired level (Fig. 22).
- Release the lever inward to lock it into the quadrant (Fig. 22).

Removing the Mower

- Disengage the PTO and set the parking brake.
- Stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
- Lower the mower.
- Remove the washer (3/4 inch) and a hairpin cotter from the attachment lift pin into the slot in the center lever bar (Fig. 4).
- Open the mid-mount hitch by pulling out the J-pin and moving the lock handle rearward (Fig. 23).
- Turn the right knob on the front pulley box to loosen the mower drive belt (Fig. 8).
- Remove the mower drive belt from the mower (Fig. 9).
- Remove the mower drive belt from the lower pulley and lower idler pulley in the pulley box (Fig. 9).
- Turn the front wheels fully to the left and raise the attachment lift lever or electric lift all the way up.

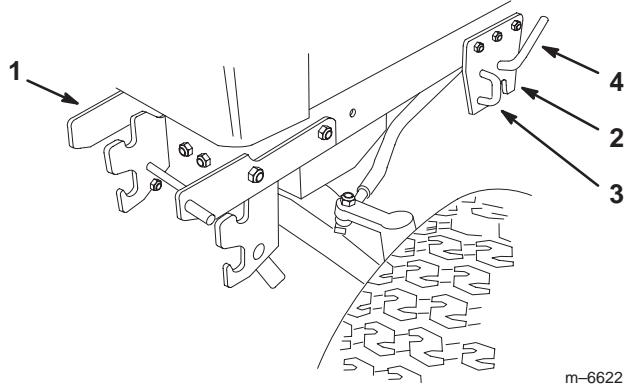


Figure 23

1. Front hitch	3. J-pin
2. Mid-mount hitch	4. Lock handle

- Slide the mower from under the chassis to the right side of the tractor (Fig. 4).
- If needed, remove the pulley box by pushing on the release lever and removing the pulley box (Fig. 23).

Tips for Mowing Grass

Fast Throttle Setting

For best mowing and maximum air circulation, operate the engine at fast. Air is required to thoroughly cut grass clippings, so do not set the height-of-cut so low, as to totally surround the mower by uncut grass. Always try to have one side of the mower free from uncut grass, which allows air to be drawn into the mower.

Cutting a Lawn for the First Time

Cut grass slightly longer than normal to ensure the cutting height of the mower does not scalp any uneven ground. However, the cutting height used in the past is generally the best one to use. When cutting grass longer than six inches tall, you may want to cut the lawn twice to ensure an acceptable quality-of-cut.

Cut 1/3 of the Grass Blade

It is best to cut only about 1/3 of the grass blade. Cutting more than that is not recommended, unless grass is sparse or it is late fall when grass grows more slowly.

Mowing Direction

Alternate mowing direction to keep the grass standing straight. This also helps disperse clippings which enhances decomposition and fertilization.

Mow at Correct Intervals

Normally, mow every 4 days. But remember, grass grows at different rates at different times. So to maintain the same cutting height, which is a good practice, mow more often in early spring. As the grass growth rate slows in mid summer, mow less frequently. If you cannot mow for an extended period, first mow at a high cutting height; then mow again 2 days later at a lower height setting.

Ground Speed

To improve cut quality, use slower ground speed.

Avoid Cutting Too Low

If the cutting width of the mower is wider than the mower you previously used, raise the cutting height to ensure uneven turf is not cut too short.

Long Grass

If the grass is ever allowed to grow slightly longer than normal, or if it contains a high degree of moisture, raise the cutting height higher than usual and cut the grass at this setting. Then cut the grass again using the lower, normal setting.

When Stopping

If the machine's forward motion must be stopped while mowing, a clump of grass clippings may drop onto your lawn. To avoid this:

1. With the blade(s) engaged, move onto a previously cut area.
2. To disperse the clippings evenly, raise the mower one or two height-of-cut settings while driving forward with the blade(s) engaged.

Keep the Underside of the Mower Clean

Clean clippings and dirt from the underside of the mower after each use. If grass and dirt build up inside the mower, cutting quality will eventually become unsatisfactory.

Blade Maintenance

Maintain a sharp blade throughout the cutting season because a sharp blade cuts cleanly without tearing or shredding the grass blades. Tearing and shredding turns grass brown at the edges, which slows growth and increases the chance of disease. Every 30 days, check the cutter blade(s) for sharpness and file down any nicks.

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
Each Use	<ul style="list-style-type: none">• Mower Housing—clean
5 Hours	<ul style="list-style-type: none">• Cutter Blade—check• Mower Housing—clean
25 Hours	<ul style="list-style-type: none">• Mower deck—grease
At Storage	<ul style="list-style-type: none">• Cutter Blade—check• Mower deck—grease• Belts—check for wear/cracks• Mower Housing—clean• Chipped Surfaces—paint• Tires—check pressure

Important Refer to your engine operator's manual for additional maintenance procedures.



Caution



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition and disconnect the wire from the spark plug(s) before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.

Servicing the Cutting Blades

To assure a superior quality of cut, keep the blade(s) sharp. For convenient sharpening and replacement, you may want to have an extra blade(s).



Danger



A worn or damaged blade can break, and a piece of the blade could be thrown into the operator's or bystander's area, resulting in serious personal injury or death.

- Inspect the blade periodically for wear or damage.
- Replace a worn or damaged blade.



Warning



A blade that is bent or damaged could break apart and could seriously injure or kill you or bystanders.

- Always replace bent or damaged blade with a new blade.
- Never file or create sharp notches in the edges or surfaces of blade.

Inspecting the Blade(s)

Inspect the blades every 5 hours.

1. Remove the mower; refer to Removing the Mower, page 11.
2. Carefully tip the mower over.

3. Inspect the cutting edges (Fig. 24). If the edges are not sharp or have nicks, remove the blade(s) and sharpen them; refer to Sharpening the Blade(s), page 15.
4. Inspect the blade(s), especially the curved area (Fig. 24). If you notice any damage, wear, or a slot forming in this area (Fig. 24), immediately install a new blade.

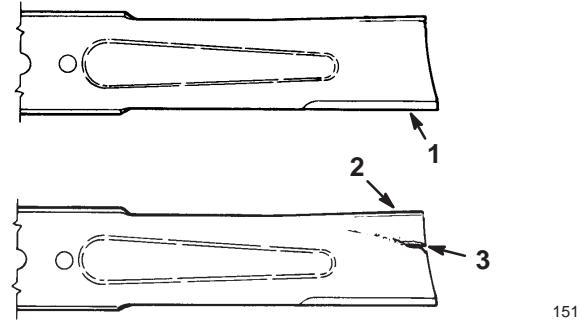


Figure 24

1. Cutting edge	3. Wear/slot forming
2. Curved area	

Removing the Blades for a 42 inch Side or Rear Discharge Mower

Note: Make sure the blade and hardware are install in the positions shown in Figure 25.

1. Remove the mower; refer to Removing the Mower, page 11.
2. Carefully tip the mower over.
3. Remove the nut, flat washer, blade and washer (thick) (Fig. 25). A block of wood may be wedged between the blade and the mower to lock the blade when you are removing the bolt.
4. Inspect all parts. If damage is noticed, install new parts.

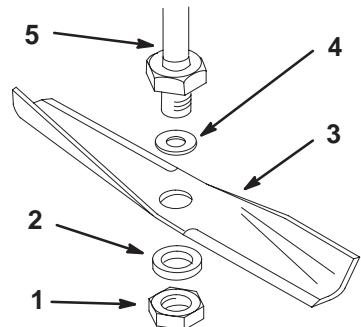


Figure 25

m-6659

1. Nut	4. Flat washer – thin
2. Washer – thick	5. Spindle
3. Blade	

Removing the Blades for a 48 inch Mower

Note: Make sure the blade and hardware are install in the positions shown in Figure 26.

1. Remove the mower; refer to Removing the Mower, page 11.
2. Carefully tip the mower over.
3. Remove the nut, washer (thick), blade and flat washer (Fig. 26). A block of wood may be wedged between the blade and the mower to lock the blade when you are removing the bolt.
4. Inspect all parts. If damage is noticed, install new parts.

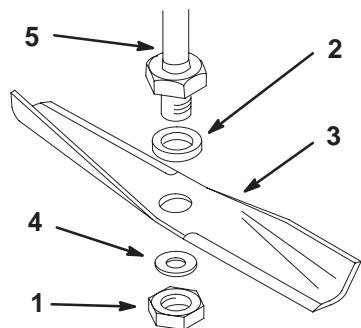


Figure 26

m-5617

1. Nut	4. Flat washer – thin
2. Washer – thick	5. Spindle
3. Blade	

Removing the Blades for a 52 Inch Mower

1. Remove the mower; refer to Removing the Mower, page 11.
2. Carefully tip the mower over.
3. Remove the bolt, blade stiffener and blade (Fig. 27). A block of wood may be wedged between the blade and the mower to lock the blade when you are removing the bolt.
4. Inspect all parts. If a defect or damage is noticed, install new parts.

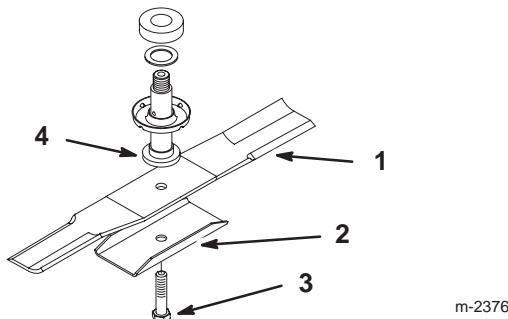


Figure 27

1. Blade	3. Bolt
2. Blade stiffener	4. Spindle

Sharpening the Blades

1. Use a file to sharpen the cutting edge at both ends of the blade (Fig. 28). Maintain the original angle. The blade retains its balance if the same amount of material is removed from both cutting edges.

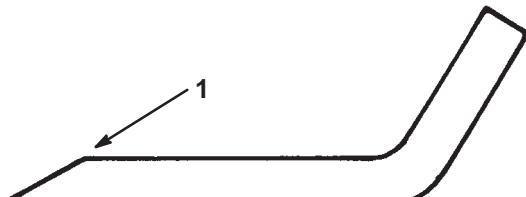


Figure 28

1. Sharpen at original angle

2. Check the balance of the blade by putting it on a blade balancer (Fig. 29). If the blade stays in a horizontal position, the blade is balanced and can be used. If the

blade is not balanced, file some metal off the back side of the blade. Repeat this procedure until the blade is balanced.

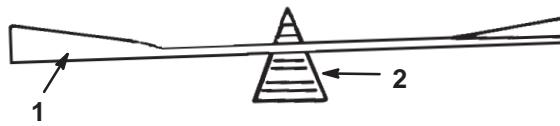


Figure 29

1. Blade	2. Balancer
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Installing the Blade(s)

1. Install the washer, blade, flat washer, and the blade nut (Fig. 25).

Important The curved part of the blade must be pointing toward the inside of the mower to assure proper cutting.

2. Tighten the blade nut to 80–100 ft-lb (109–136 N·m).

Greasing and Lubrication

Service Interval/Specification

Grease the mower after every 25 operating hours or once a year, whichever occurs first. Grease more frequently when operating conditions are extremely dusty or sandy.

Grease Type: General-purpose grease.

How to Grease

1. Disengage the power take off (PTO), set the parking brake, and turn the ignition key to off. Remove the key
2. Clean the grease fittings with a rag. Make sure to scrape any paint off the end of the fitting(s).
3. Connect a grease gun to the fitting. Pump grease into the fittings.
4. Wipe up any excess grease.

Where to Add Grease

1. Lubricate the blade spindles (Fig. 30). The side discharge model is shown, the rear discharge model will have the same spindles to grease.

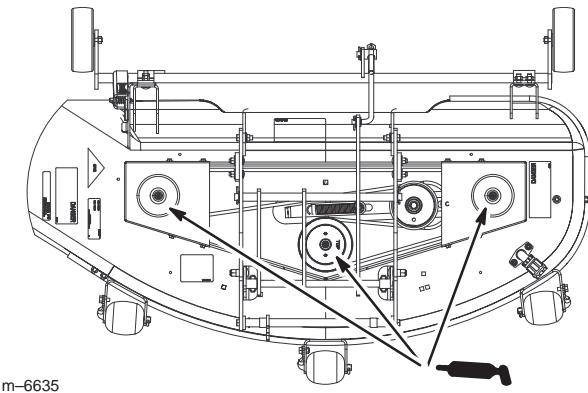


Figure 30

Removing the Hood

If desired, remove the hood for better access to the upper pulleys in the pulley box.

1. Rotate the hood fully forward (Fig. 31).
2. Disconnect the wire harness at the front left of the machine. The harness leads up to the head lights (Fig. 31).
3. Slide the hood to the left side of the machine and off of the pivot pegs (Fig. 31).

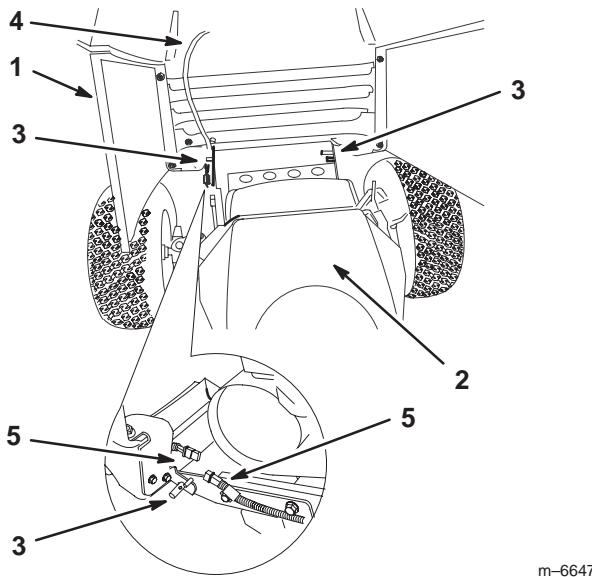


Figure 31

1. Hood—open position	4. Wire harness
2. Engine	5. Harness connector
3. Pivot peg	

4. To install the hood, install the hood onto the pegs and connect the harness (Fig. 31).
5. Close the hood.

Servicing the Mower Belt

Removing the Mower Belt

1. Remove the mower; refer to Removing the Mower, page 11.
2. Remove the pulley cover mounting screws and both pulley covers.
3. Push on the idler to release the tension and remove the belt from the pulleys (Fig. 32).

Installing the Mower Belt

1. Install the new belt around the blade pulleys and the idler pulley (Fig. 32). The rear discharge model will have the same belt routing.

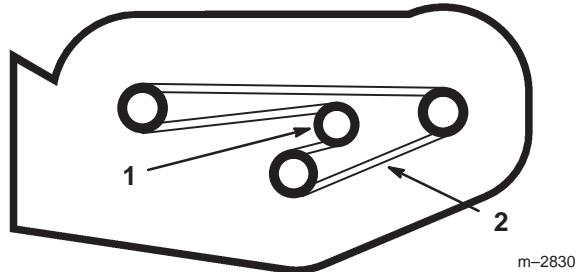


Figure 32

1. Idler	2. Mower belt
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2. Install the left and right pulley covers with previously removed mounting screws.
3. Install the mower; refer to Installing the Mower, page 4.

Replacing the Power Take Off (PTO) Belt



Warning



Components around engine will be hot if the machine has been running. Touching hot components can cause burns.

- Do not touch the engine components or the muffler when hot.
- Allow the engine to cool before performing maintenance.

Note: If desired, remove the hood for better access to the upper pulleys in the pulley box. Refer to Removing the Hood on page 16.

1. Turn the left knob on the front pulley box to loosen the PTO drive belt (Fig. 33).
2. Remove the PTO belt from the clutch pulley (Fig. 33).
3. Remove the PTO belt from the upper pulley and upper idler pulley in the pulley box (Fig. 33).
4. Install the PTO new belt onto the clutch pulley (Fig. 33).
5. Install the PTO belt onto the upper pulley and upper idler pulley in the pulley box (Fig. 33).
6. Turn the left knob on the front pulley box to tighten the PTO drive belt (Fig. 33). There needs to be a 1/2 inch (13 mm) deflection in the belt.

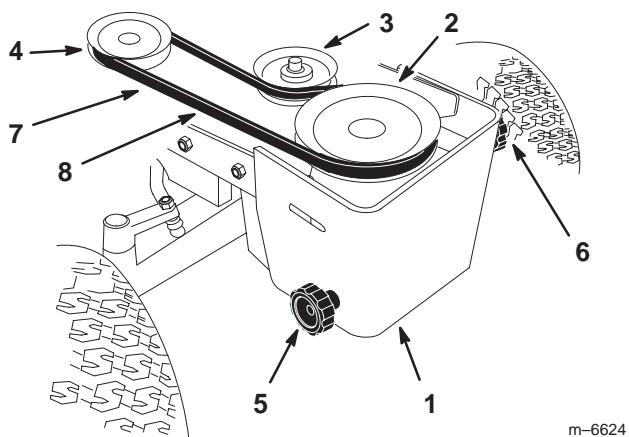


Figure 33

1. Pulley box	6. Left knob
2. Upper pulley	7. PTO belt
3. Upper Idler pulley	8. Check 1/2 inch deflection here
4. PTO clutch pulley	
5. Right knob	

Replacing the Mower Drive Belt

1. Turn the right knob on the front pulley box to loosen the mower drive belt (Fig. 8).
2. Remove the mower drive belt from the mower center pulley (Fig. 9).
3. Remove the mower drive belt from the lower pulley and the lower idler pulley in the pulley box (Fig. 9).
4. Install the new mower drive belt onto the mower center pulley (Fig. 9). Ensure that it is on the upper center pulley.
5. Install the mower drive belt onto the lower pulley and the lower idler pulley in the pulley box (Fig. 9).
6. Turn the right knob on the front pulley box to adjust the mower drive belt (Fig. 8). There needs to be a 1/2 inch (13 mm) deflection in the belt.

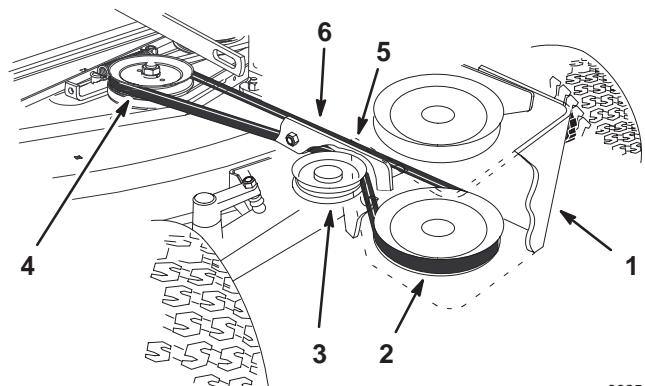


Figure 34

1. Pulley box	5. Mower drive belt
2. Lower pulley	6. Check 1/2 inch deflection here
3. Lower Idler pulley	
4. Mower center pulley	

Cleaning and Storage

1. Clean dirt and chaff from the outside of the engine's cylinder head fins and blower housing. Also remove grass clippings, dirt, and grime from the external parts of the entire machine, especially the engine, shrouding, and the top of the mower.

Important You can wash the machine with mild detergent and water. Do not pressure wash the machine. Avoid excessive use of water, especially near the control panel, lights, engine, and the battery.

2. Scrape heavy buildup of grass and dirt from the underside of the mower. Then wash the mower with a garden hose.
3. Check the condition of the blade(s); refer to Servicing the Cutting Blades, page 13.
4. Check the condition of all belts.
5. Grease the mower deck; refer to Greasing and Lubrication, page 15.
6. Check and tighten all bolts, nuts, and screws. Repair or replace any part that is damaged or defective.
7. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
8. Store the machine in a clean, dry garage or storage area. Remove the key from the ignition switch and keep it in a memorable place. Cover the machine to protect it and keep it clean.

Troubleshooting

Problem	Possible Causes	Corrective Action
Abnormal vibration.	<ol style="list-style-type: none">1. Cutting blade(s) is bent or unbalanced.2. Blade mounting bolt is loose.3. Engine mounting bolts are loose.4. Loose engine pulley, idler pulley, or blade pulley.5. Engine pulley is damaged.	<ol style="list-style-type: none">1. Install new cutting blade(s).2. Tighten blade mounting bolt.3. Tighten engine mounting bolts.4. Tighten the appropriate pulley.5. Contact Authorized Service Dealer.
Blade(s) does not rotate.	<ol style="list-style-type: none">1. Blade drive belt is worn, loose or broken.2. Blade drive belt is off pulley.3. PTO belt is worn, loose or broken.	<ol style="list-style-type: none">1. Install new blade drive belt.2. Install blade drive belt and check idler pulley and belt guides for correct position.3. Install new PTO belt.
Uneven cutting height.	<ol style="list-style-type: none">1. Tire pressure is incorrect.2. Mower is not level.3. Underside of mower is dirty.	<ol style="list-style-type: none">1. Set tire pressure.2. Level mower from side-to-side and front-to-rear.3. Clean the underside of the mower.

