Form No. 3319–565 Rev B

36″ Tiller

Wheel Horse® Lawn and Garden Tractor Attachment

Model No. 79271—8900001 and Up

Operator’s Manual

Contents

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.

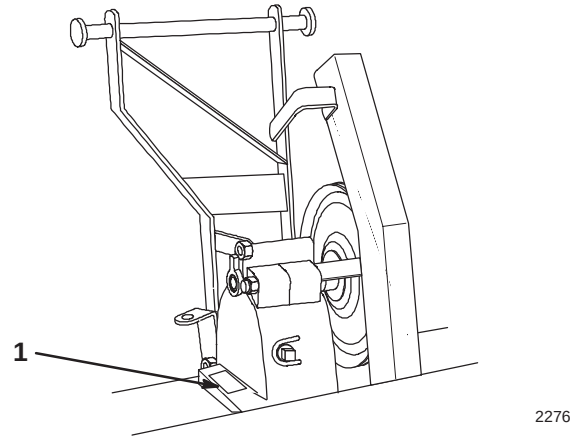


Figure 1

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.

8111 Lyndale Avenue South
Bloomington, MN 55420-1196

Safety

Danger

Rotating tines can cut hands, feet or other body parts.

- **Keep away from the rotating tines while operating the tiller.**
- **Keep your hands, feet, and any other part of your body or clothing away from rotating parts.**
- **Before adjusting, cleaning, repairing and inspecting the tiller, lower the tiller and loader arms to the ground and stop the engine. Remove the key.**

Warning

Contact with buried power, gas, and/or telephone lines, in the tilling area, can cause shock or explosion.

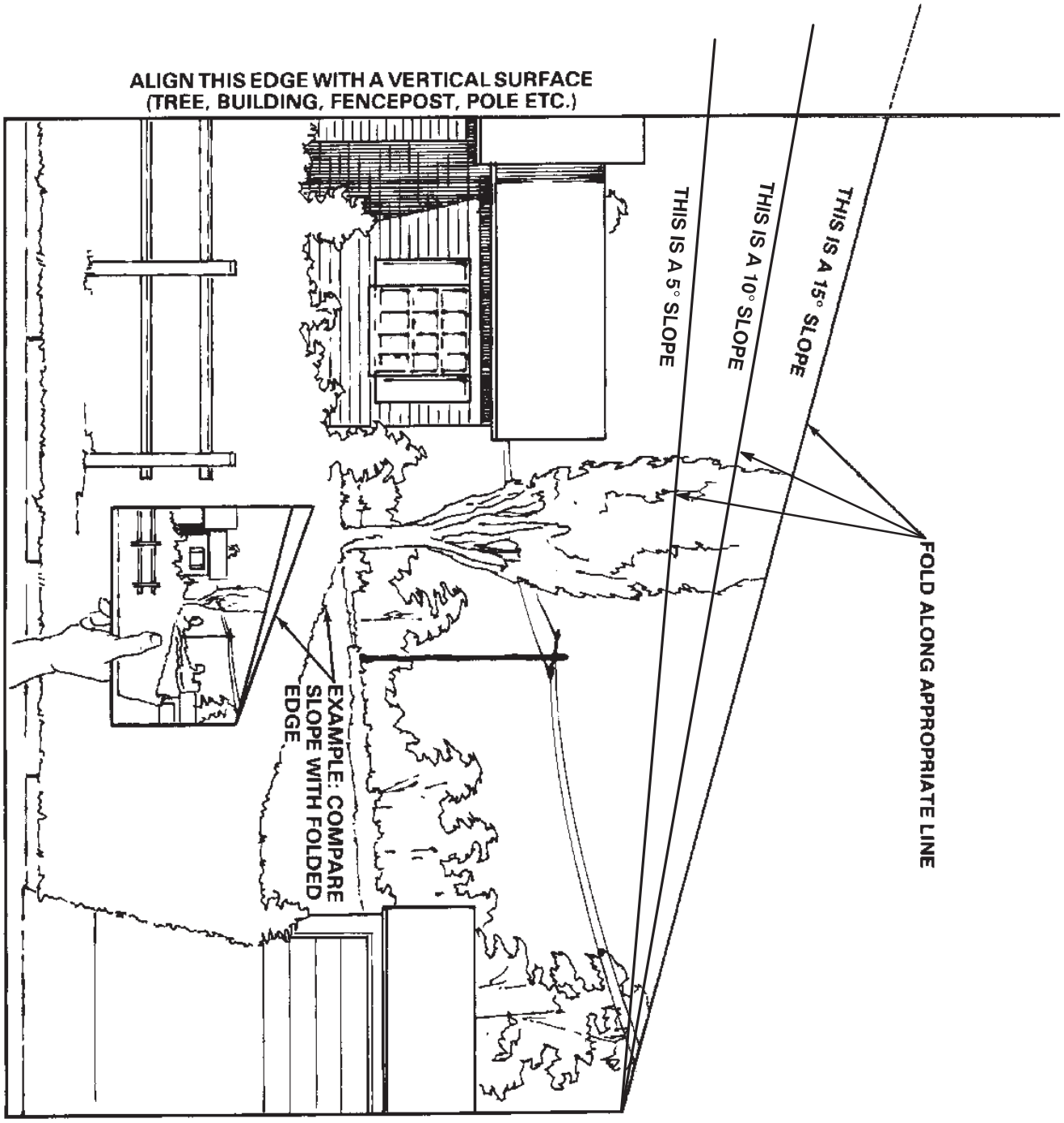
- **Have the property or area to be tilled marked for buried lines.**

Warning

Stones and other foreign objects can be picked up and thrown. This can cause serious personal injury to operator or bystanders.

- **Run the tiller so that debris is thrown away from the traction unit.**
- **Keep all bystanders away from the work area.**

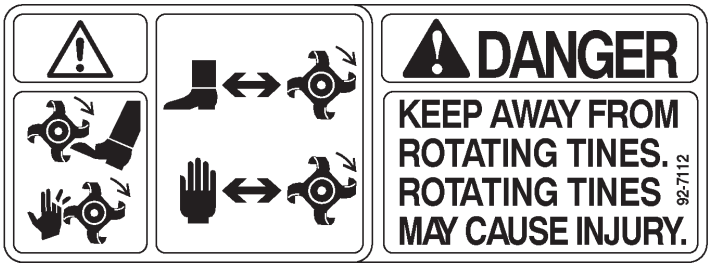
Slope Chart


ALIGN THIS EDGE WITH A VERTICAL SURFACE
(TREE, BUILDING, FENCEPOST, POLE ETC.)
THIS IS A 5° SLOPE
THIS IS A 10° SLOPE
THIS IS A 15° SLOPE
FOLD ALONG APPROPRIATE LINE
EXAMPLE: COMPARE SLOPE WITH FOLDED EDGE

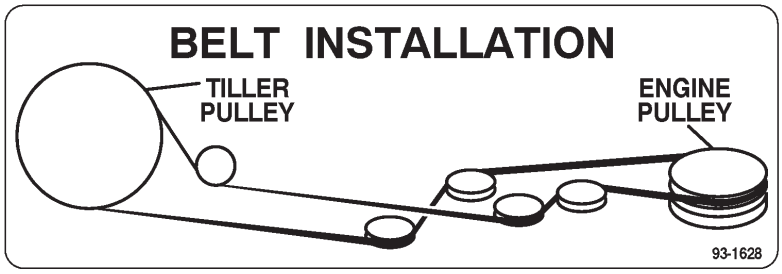
Safety and Instruction Decals

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.

ON TINE SHIELD
LEFT and RIGHT SIDE
(Part No. 92–7112)
(Part No. TR92D7112)



ON FRONT OF TINE SHIELD
(Part No. 93–1628)
(Part No. TR93D1628)



Assembly

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

Loose Parts

Note: Use the chart below to verify all parts have been shipped

DESCRIPTION	QTY.	USE
Hitch	1	Install tiller hitch to tiller gear case.
Spring bracket	1	
Pulley	1	Install drive pulley to tiller gear case.
Key	1	
Set screw 15/16 in.	2	

DESCRIPTION	QTY.	USE
Idler pulley	1	Install idler pulley and belt guard.
Spacer	1	
Belt guide	1	
Belt guard	1	
Bolt 3/8 x 2-1/4 in.	1	
Lock nut 3/8 in.	1	
Rear shield	1	Install rear shield to tiller.
Cotter pin 1 in.	3	
Lift chain	1	Install lift chain to tiller.
Clevis	1	
Clevis pin	1	
Cotter pin 3/4 in.	1	
Lift lever	1	Install lift to tractor.
Bushing	2	
Shim washer	4	
E-ring	2	
Lift rod	1	
Trunnion	1	
Hairpin cotter	1	
Washer 3/8 in.	2	
Cotter pin 3/4 in.	1	
Mounting plate	1	Assemble mounting plate.
Latch lever	2	
Carriage bolt 3/8–16 x 1 in.	2	
Washer 3/8in.	2	
Lock nut 3/8 in.	2	
Clevis pin	2	
Hairpin cotter	2	
Mounting plate assembly	1	Install mounting plate to tractor.
Bolt 1/2 x 1-1/4 in.	3	
Lock nut 1/2 in.	3	
Spring catch	1	Install lift assist spring to tractor.
Bolt 3/8 x 1-1/2 in.	1	
Spacer	1	
Washer 3/8 in.	1	
Lock nut 3/8 in.	1	

DESCRIPTION	QTY.	USE
Spring	1	Install lift assist spring to tiller.
Eye bolt	1	
Lock nut 3/8 in.	1	
Idler pulley assembly	1	Install idler pulley assembly to tractor.
Bracket	2	
Belt	1	
Bolt 1/4 x 3/4 in.	1	
Jam nut 1/4 in.	1	
Carriage bolt 5/16 x 1 in.	4	

Assemble Tiller

Note: Make sure the bolts are installed as shown in Figure 2.

1. Tip tiller onto back and support in an upright position. Remove 3/8 x 5-1/2 in. and 3/8 x 4-1/2 in. bolts. (Fig. 2). Discard extra nuts used as spacers for shipping.
2. Fasten hitch and spring bracket with bolts and nuts as shown in (Fig. 2). Tighten bolts securely.
3. Install pulley with hub 1/4 in. in from the end of drive shaft (Fig. 2). Secure with square key and (2) 5/16 in. square head set screws.

Important Key must be located under a set screw to be retained.

4. Assemble the idler, the spacer and the belt guide into the lower hole of belt guard and install it onto the hitch through upper hole with a 3/8 x 2-1/4 in. bolt and a 3/8 in. lock nut (Fig. 2).

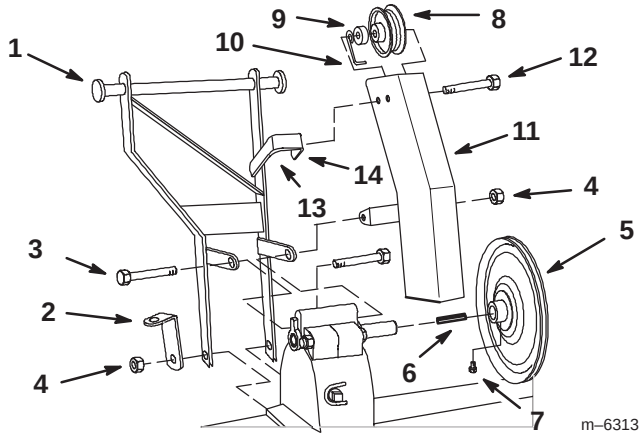


Figure 2

1. Hitch
2. Spring bracket
3. Bolt (in tiller case)
4. Nut (on tiller bolt)
5. Pulley
6. Key
7. Set screw 5/16 in.
8. Idler
9. Spacer
10. Belt guide
11. Belt cover
12. Bolt, 3/8 x 2-1/4 in.
13. Lock nut, 3/8 in.
14. Upper hole

5. Rotate tiller down and hook rear shield into slots at rear of tine shield. Secure with (3) 1 in. cotter pins (Fig. 3).

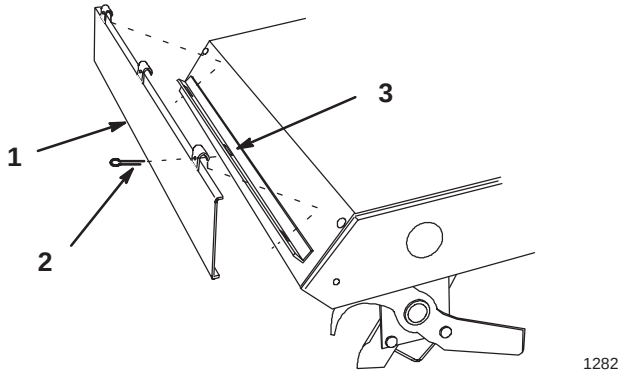


Figure 3

1. Rear shield
2. Cotter pin 1 in.
3. Slot

6. Attach lift chain, short link end, to lift bracket with clevis, clevis pin and secure with 3/4 in. cotter pin (Fig. 4).

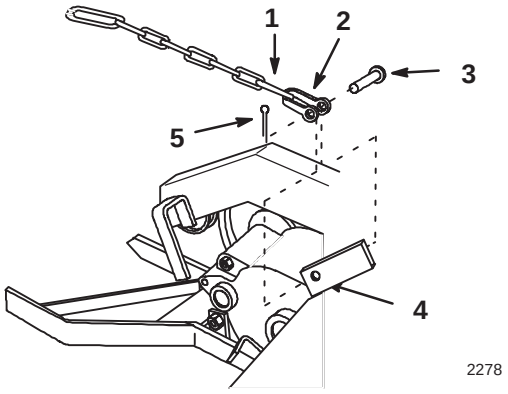


Figure 4

1. Short link
2. Clevis
3. Clevis pin
4. Bracket
5. Cotter pin 3/4 in.

Tractor Set-Up

1. Remove and save carriage bolts at fender mount under the seat and attaching footrests. (Fig. 5).

2. Unplug seat wiring harness connector and remove wire harness from wire clip.

3. Remove the fender\seat pan from the tractor.

Note: Save all hardware for use when re-installing fenders.

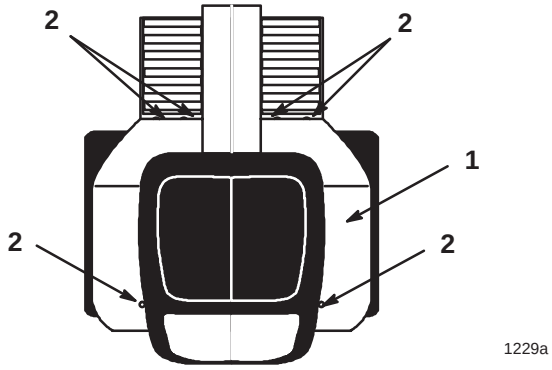


Figure 5

1. Fender\seat pan
2. Carriage bolt

4. Remove rear panel behind gas tank (Fig. 6). Save all hardware for use when installing rear panel.

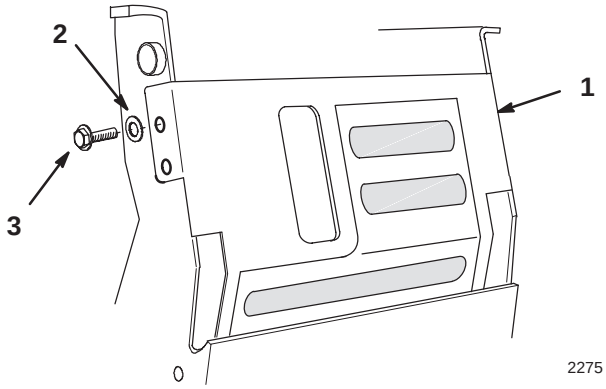


Figure 6

1. Rear panel
2. Washer
3. Bolt

5. Remove screws, washers and spacers (some models only) at front of fuel tank. Lift front of fuel tank and slide forward for clearance (Fig. 7).

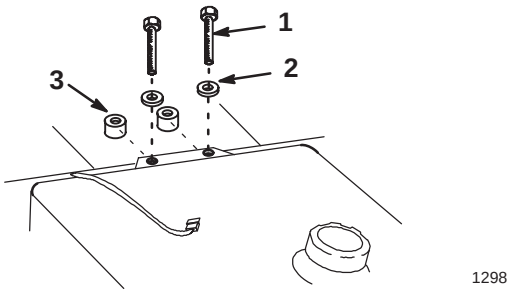


Figure 7

1. Screw
2. Washer
3. Spacer (some models only)

6. Slide a shim washer and bushing onto ends of lift lever rod. (Fig. 8).

Important Check that bushings slide easily onto rod ends and into frame. Remove paint if necessary.

7. Position lift lever into frame and slide bushings and shim washers outward into frame holes. Secure in position with E-rings (Fig. 8).

Important Lift lever must not have excessive end play (more than .015 inch). Use extra shim washers (.015 and .020 thick) to reduce end play.

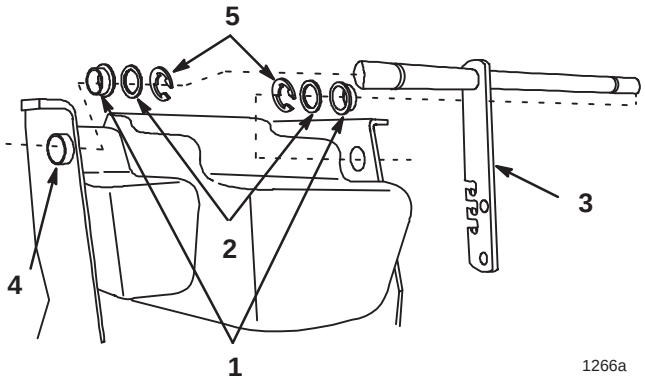


Figure 8

1. Bushing
2. Shim Washer (as required)
3. Lift lever
4. Frame hole
5. E-ring

8. Slide attachment lift rod from the rear through opening in fuel tank and slot in fender support.

Note: Lift rod must go below fuel and hydro lines(if so equipped).

9. Looking under tractor frame on left side, slowly raise and lower attachment lift and slide lift rod into hole in attachment lift. Secure with 3/8 in. washer and 3/4 in. cotter pin. (Fig. 9).

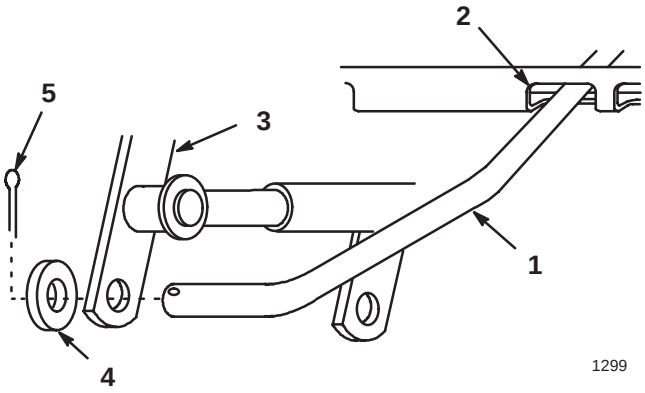


Figure 9

1. Lift rod
2. Fender support slot
3. Attachment lift
4. Washer 3/8 in.
5. Cotter pin 3/4 in.

10. Thread trunnion 1 in. into lift rod. Insert into upper hole of lift lever. Secure with 5/8 in. washer and hairpin cotter (Fig. 10).

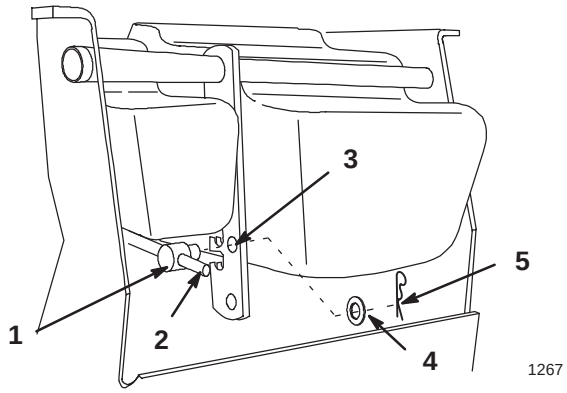


Figure 10

1. Trunnion
2. 1 in. from end
3. Upper hole in lift lever
4. Washer 5/8 in.
5. Hairpin cotter

11. Install latch levers to mounting plate with (2) 3/8 x 1 in. carriage bolts, 3/8 in. washers and 3/8 in. lock nuts (Fig. 11).

Note: Tighten nuts so latch levers move, but hold in position for ease of tiller mounting to tractor.

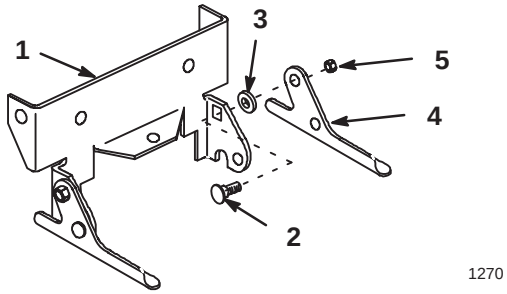


Figure 11

1. Mounting plate
2. Carriage bolt 3/8 x 1 in.
3. Washer 3/8'
4. Latch lever
5. Lock tut 3/8 in.

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12. Install lift assist spring mounting with 3/8 x 1-1/2 in. bolt, spacer, 3/8 in. washer and 3/8 in. lock nut into left frame member upper hole as shown (Fig. 12).

13. Install rear mounting plate under and inside of rear frame member with short tongue rearward (Fig. 12). Secure with three 1/2 x 1-1/4 in. bolts and 1/2 in. lock nuts at holes in frame side members and front hole of hitch plate (Fig. 12).

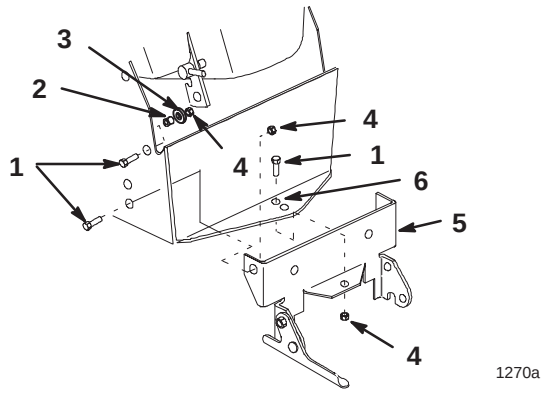

Figure 12

1. Bolt 1/2 x 1-1/4 in.
2. Spacer
3. Washer 3/8 in.
4. Lock nut 1/2 in.
5. Mounting plate
6. Front hole

---

14. Slide fuel tank rearward into position and secure with previously removed hardware (Fig. 7).

15. Route seat switch wire harness through center hole and install fender\seat pan with previously removed hardware (Fig. 5).

16. Plug seat switch into wire harness connector and secure to opening with wire clip.

17. Install rear panel included with tiller using previously removed hardware (Fig.).

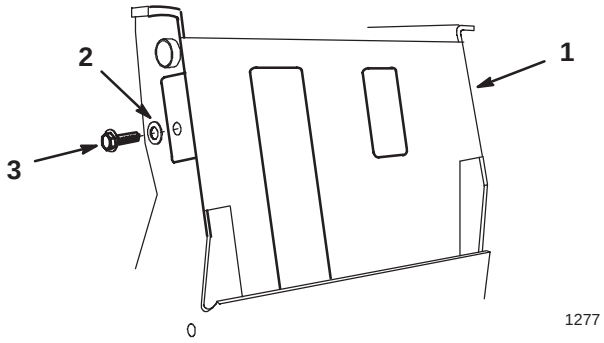

Figure 13

1. Rear panel–from tiller
2. Washer
3. Bolt

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18. Pry up (3) rivets at the front of footrest mats (Fig. 14). Save rivets for securing mats.

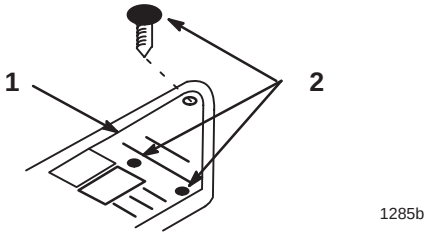

Figure 14

1. Mat
2. Rivet

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19. Remove lock nuts from foot rest cross shaft (Fig. 15). Save lock nuts for use when installing brackets.

20. Replace existing carriage bolts, under mats, with (4) 5/16 x 1 in. carriage bolts (Fig. 15).

21. Locate brackets under foot rests with 90 degree bend to inside (Fig. 15). Secure with previously removed lock nuts. Discard short carriage bolts.

22. Secure mats to foot rests, pressing previously removed rivets into place (Fig. 14).

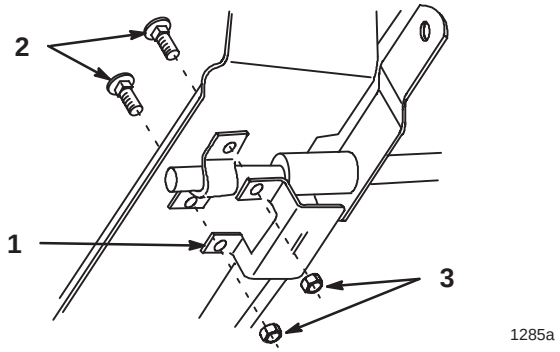

Figure 15

1. Bracket
2. Carriage bolt 5/16 x 1 in.
3. Lock nut (re-use)

Installing Tiller to Tractor

1. Park the machine on a level surface, disengage the power take off (PTO), set the parking brake, and turn the ignition key to “OFF” to stop the engine. Remove the key.

2. Position tiller behind and under rear tractor hitch with idler pulley bracket above right latch lever. Lift latch levers and install frame mounting rod. Center tiller between hitch latches (Fig. 16).

3. Secure latch levers closed with clevis pins and hairpin cotters (Fig. 16).

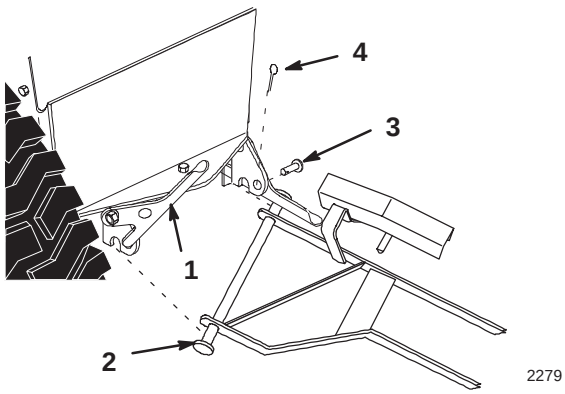

Figure 16

1. Latch lever
2. Mounting rod
3. Clevis pin
4. Hairpin cotter

4. Set Dial-a-Height to the Mounting Position, and lower attachment lift all the way; refer to Setting Height-of-Cut.

5. Slide long link of lift chain under attachment lift arm and hook into lower notch (Fig. 17).

6. Raise attachment lift lever to the transport position and place a block under tiller gear case.

7. Hook spring catch over rear tractor frame and under bolt spacer (Fig. 17). Hook lift assist spring through spring catch and eye bolt and install eye bolt to bracket with 3/8 in. lock nut (Fig. 17). Adjust lock nut so there is light spring tension in the fully raised position.

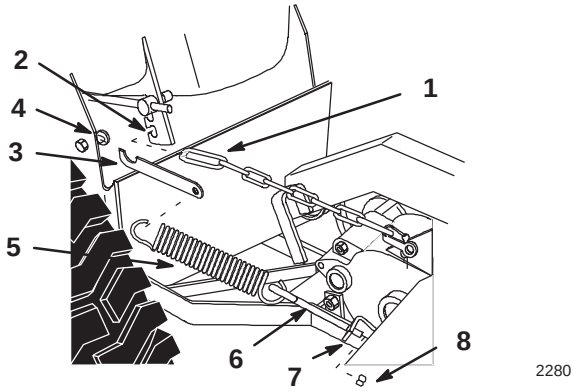

Figure 17

1. Long link
2. Notch
3. Spring catch
4. Spacer
5. Lift assist spring
6. Eye bolt
7. Bracket
8. Lock nut 3/8 in.

8. Position idler pulley assembly front tabs above brackets and hook onto tractor lift shaft at rear (Fig. 18).

9. Secure with 1/4 x 3/4 in. bolt and 1/4 in. jam nut at rear hook (Fig. 18).

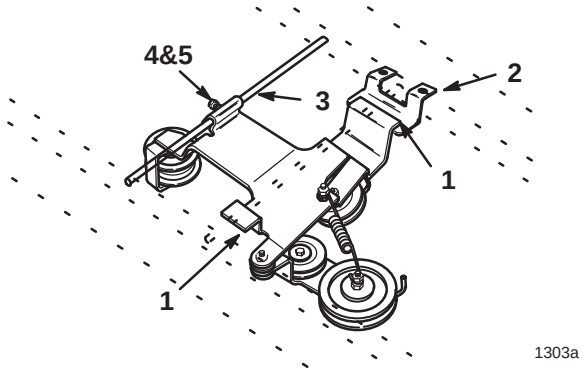

Figure 18

1. Front tab
2. Bracket
3. Tractor lift shaft
4. Bolt 1/4 x 3/4 in.
5. Jam nut 1/4 in.

10. Route belt around upper pulley groove of electric clutch and idler pulleys (Fig. 19).

11. Hold the belt in the tiller drive pulley groove and rotate the pulley to install belt (Fig. 19).

12. Check that belt is properly routed around all pulleys and belt guides (Fig. 19).

Important Belt must be properly routed behind all belt guides to prevent jumping off and premature failure.

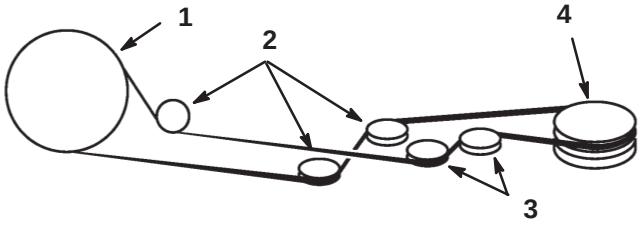

Figure 19

1. Tiller pulley
2. Idler
3. Spring loaded idler
4. Upper groove of (PTO) power take off, electric clutch

Removing the Tiller

Note: Save all hardware, washers and hairpin cotters for reuse when installing tiller.

1. Park the machine on a level surface, disengage the power take off (PTO), set the parking brake, and turn the ignition key to "OFF" to stop the engine. Remove the key.

2. Turn the Dial-a-Height knob counterclockwise, all the way and lower the attachment lift lever to the mounting position; refer to Lowering Attachment.

3. Rotate tiller drive pulley and slide belt out of groove (Fig. 20).

4. Loosen jam nut and bolt on idler assembly (Fig. 20). Unhook idler assembly from tractor lift shaft and slide to clear tabs at brackets to remove (Fig. 20).

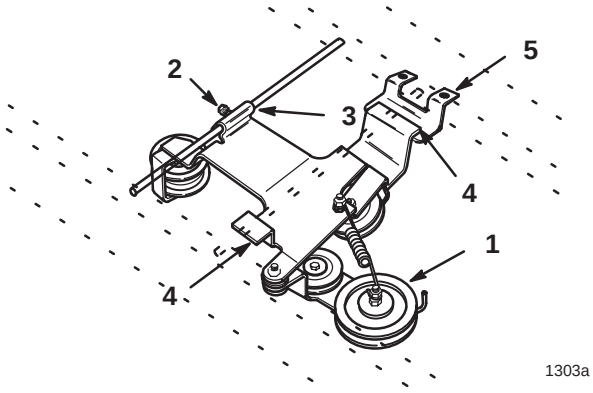

Figure 20

1. Spring loaded idler
2. Bolt and jam nut
3. Rear hook
4. Tabs
5. Bracket

5. Raise attachment lift to the transport position and place a block under tiller gear case.

6. Unhook lift assist spring and spring catch from tractor (Fig. 21).

7. Turn the Dial-a-Height knob counterclockwise, all the way, remove block and lower the attachment lift lever to the mounting position; refer to Lowering Attachment.

8. Unhook long link of lift chain from lift arm (Fig. 21).

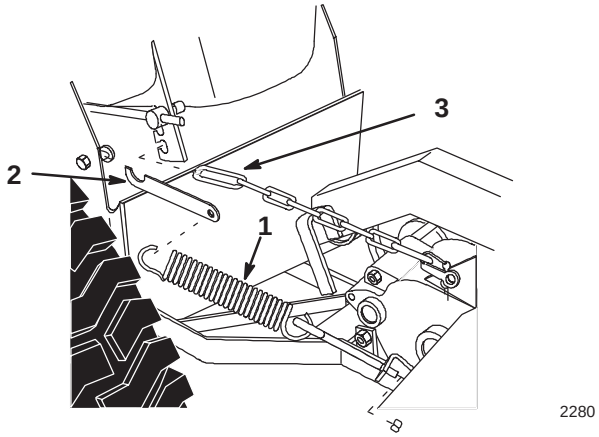

Figure 21

1. Lift assist spring
2. Spring catch
3. Long link

9. Remove hairpin cotters and clevis pins from latch levers (Fig. 22). Open latch levers and remove mounting rod.

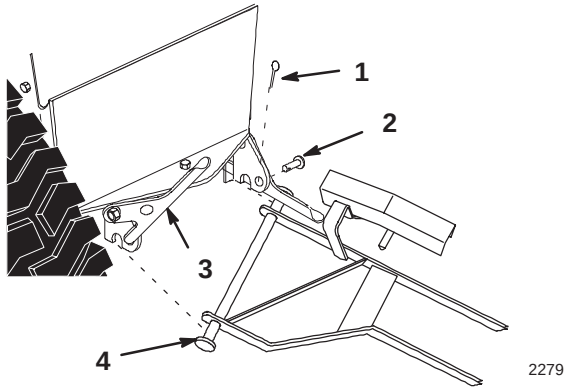

Figure 22

1. Hairpin cotter
2. Clevis pin
3. Latch lever
4. Mounting rod

Note: Save all hardware, washers and hairpin cotters for reuse when installing tiller.

Operation

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

Danger

Rotating tines can cut hands, feet or other body parts.

- **Keep away from the rotating tines while operating the tiller.**
- **Keep your hands, feet, and any other part of your body or clothing away from rotating parts.**
- **Before adjusting, cleaning, repairing and inspecting the tiller, lower the tiller and loader arms to the ground and stop the engine. Remove the key.**

Operating the Power Take Off (PTO)

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

While the ignition key is in the "RUN" or "LIGHTS" positions and the power take off (PTO) is engaged "ON", the PTO light, in the Indicator Module, will be "ON". When this light is "ON" it is a reminder; the starter will not crank and to turn off the PTO before getting off.

Engaging the Power Take Off (PTO)

1. Depress the brake and/or clutch pedal(s) to stop the machine.
2. Pull the power take off (PTO) to "ON" (Fig. 23).

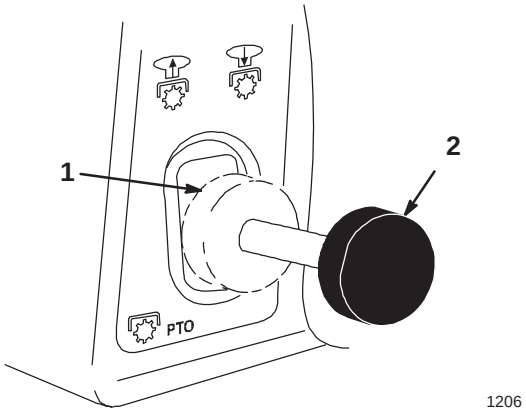

Figure 23

1. Off-Disengaged
2. On-Engaged

Disengaging the Power Take Off (PTO)

1. Depress the brake and/or clutch pedal(s) to stop the machine.
2. Push the power take off (PTO) to "OFF" (Fig.23).

Attachment Lift Lever

The attachment lift lever (Fig. 24) is used to raise and lower various attachments.

Raising Attachments

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

Lowering Attachments

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

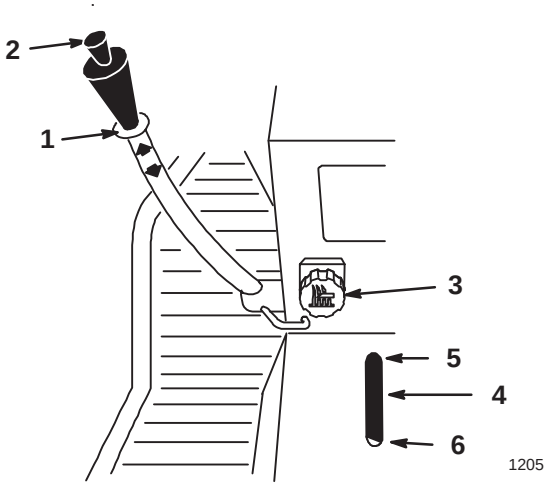

Figure 24

1. Lift lever
2. Button
3. Dial-A-Height
4. Indicator
5. High
6. Mounting position

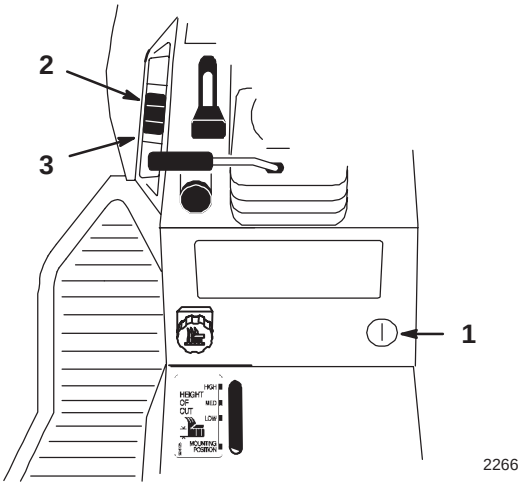

Figure 25

1. Key
2. Lift switch UP
3. Lift switch DOWN

Attachment Power Lift

The attachment power lift (optional on some models) (Fig. 25) is used to raise and lower attachments.

Raising Attachments

1. Turn key to the “ON” or “RUN” position (Fig. 25).

2. Push the lift switch in the “UP” direction to raise the attachment lift (Fig. 25). 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. 25).

2. Push the lift switch in the “DOWN” direction to lower the attachment lift (Fig. 25). This will lower the attachment lift.

Adjusting Dial-A-Height

The Dial-A-Height control (Fig. 24) is used to limit the downward travel of the attachment. The Dial-A-Height knob is rotated to change the location of this stop, up or down.

1. Raise the attachment lift lever: Refer to Raising Attachments. In the raised position the Dial-A-Height knob (Fig. 24) can be rotated to change the stop location. Turn clockwise to raise and counterclockwise to lower the height of the attachment.

2. The Dial-A-Height indicator (Fig. 24) will show the change, high to low, in attachment lift height as adjustment is made.

Adjusting Lift Chain

Danger

Rotating tines can cut hands, feet or other body parts.

- **Keep away from the rotating tines while operating the tiller.**
- **Keep your hands, feet, and any other part of your body or clothing away from rotating parts.**
- **Before adjusting, cleaning, repairing and inspecting the tiller, lower the tiller and loader arms to the ground and stop the engine. Remove the key.**

Changing the lift chain link at the clevis, affects maximum tilling depth and transport lift height. These links can be changed at the clevis (Fig. 26).

1. For maximum tilling depth, but reduced transport lift height locate last link of lift chain in the clevis (Fig. 26).
2. For greater lift height, locate the second last link of lift chain in the clevis (Fig. 26). This position will have reduced tilling depth.

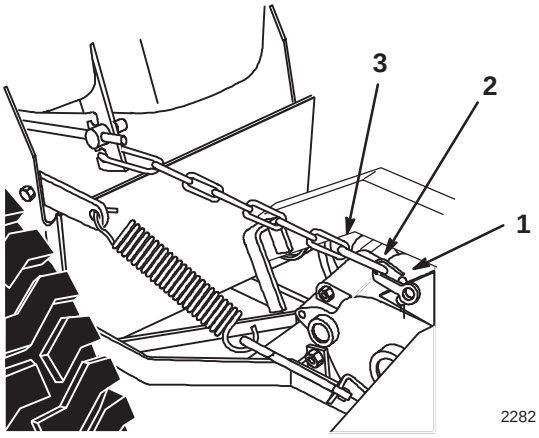

Figure 26

1. Clevis
2. Last link
3. Second last link

3. For variations of less than a link in range disconnect the lift rod from the lift arm and rotate the trunnion (Fig. 27) Turning clockwise increases lift height and tilling depth and counter clockwise reduces lift height and increases tilling depth.

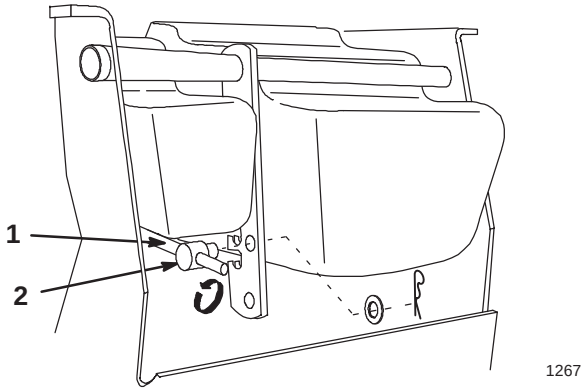

Figure 27

1. Lift rod
2. Trunnion

Tips for Tilling

Clean area of trash, branches and rocks before tilling to prevent equipment damage.

Always begin tilling with the slowest ground speed possible. Increase speed if conditions permit.

Always use full throttle (maximum engine speed) when tilling.

Always engage the power take off (PTO) with tiller in the raised position.

Till in long straight passes. Do not make turns while tiller is in the ground, as equipment damage may result.

A small center area will not be tilled due to the gear case. Overlapping with a second pass will eliminate this condition.

Avoid excessive tilling of the soil, as finely tilled soil will not absorb moisture easily and puddles of water or run-off may occur.

When tilling hard packed, very dry or virgin soil, raise tiller so only the very top of the soil is penetrated. On succeeding passes the depth may be lowered. This reduces the tendency of the tiller to push the tractor. If this happens, disengage power take off (PTO) and reduce forward speed.

Maintenance

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

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
25 Hours	• Oil–check level
Fall service	• Oil–check level • Belt–check for wear/cracks
At storage service	• Oil–check level • Belt–check for wear/cracks • Chipped Surfaces–paint

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

Caution

If you leave the key in the ignition switch, someone could accidently 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.

Greasing and Lubrication

Service Interval/Specification

Check the gear lube level in the gear case after every 25 operating hours or once a year, whichever occurs first. Gear lube changes are not required.

Gear lube type: SAE 90-140 API service GL-4 or GL-5.

Refill capacity: 1 qt.

Checking Gear Lube

1. Position the tractor and tiller on a level surface and lower the attachment lift so that the tiller tines are on the ground. Set the parking brake and turn the ignition key to "STOP" to stop the engine. Remove the key.
2. Clean the area around the lower pipe plug (Fig. 28).
3. Remove the pipe plug carefully because the oil level may be above the level of the pipe plug.
4. If gear lube runs from the case when the plug is removed, the lube in the case is sufficient. Oil may be added as necessary.

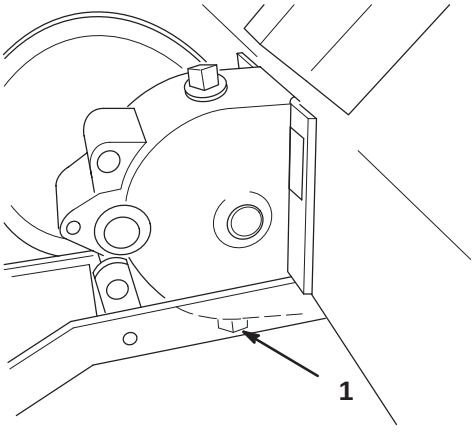

Figure 28

Left side of tiller shown in operating position

1. Pipe plug (hidden)

Adjusting Drive Belt Tension

The drive belt is spring loaded and needs only periodic adjustment, to maintain proper spring tension.

Checking Drive Belt Tension

1. Disengage the power take off (PTO), set the parking brake, and turn the ignition key to “OFF” to stop the engine. Remove the key.
2. As the drive belt wears, and the tiller is raised and lowered, the spring loaded idler arm moves.(Fig. 29).
3. Raise the tiller and observe the spring loaded idler pulley movement as you push on the belt. The idler pulley must not contact the mounting plate. If it contacts the mounting plate adjustment is required.

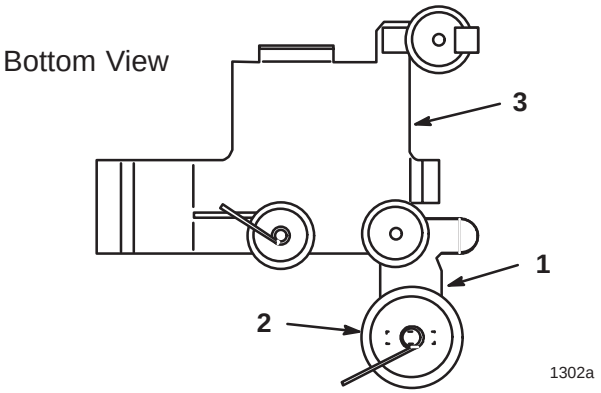

Figure 29

1. Spring loaded idler arm
2. Idler pulley
3. Mounting plate

Adjusting Drive Belt Tension

1. Disengage the power take off (PTO), set the parking brake, and turn the ignition key to “OFF” to stop the engine. Remove the key.
2. Pull on spring loaded idler pulley and remove belt from electric clutch to release tension on belt (Fig. 30).
3. Loosen bolt securing idler pulley to idler arm. Slide idler pulley in slot of idler arm to change belt tension as required. (Fig. 30).
4. Check belt guides for proper location (Fig. 30).
5. Tighten nut securely and install belt onto electric clutch.
6. Push on belt and observe that idler pulley does not contact mounting plate.

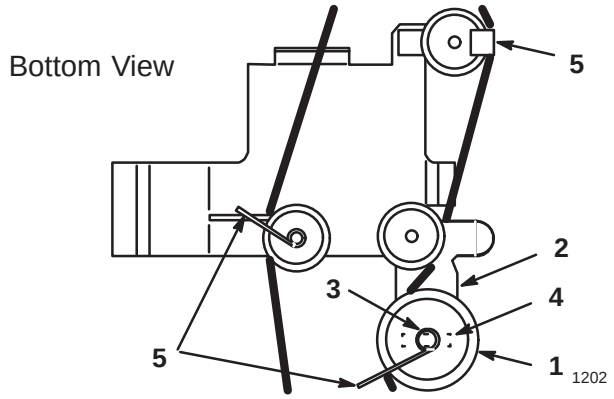

Figure 30

1. Idler pulley
2. Idler arm
3. Nut
4. Slot
5. Belt guide

Storage

1. Before long term storage wash the machine with mild detergent and water to remove dirt and grime from the entire machine.
2. Check the condition of the drive belt.
3. Check gearcase lubrication level; refer to Greasing and Lubrication, page 18.
4. Check and tighten all bolts, nuts, and screws. Repair or replace any part that is damaged or defective.
5. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
6. Store the machine in a clean, dry garage or storage area. Cover the machine to protect it and keep it clean.


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