Important If possible, blow dirt out (Fig. 9), rather than washing it out. If water is used, keep it away from electrical items.

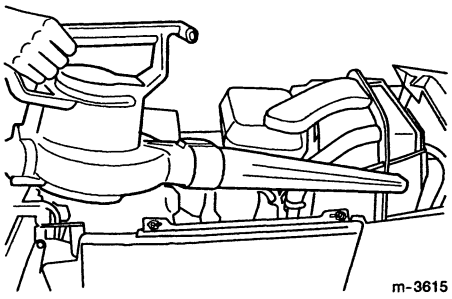


Figure 9

Important Do not clean the machine using pressurized water. High-pressure washing can damage the electrical system or deplete grease.

6. Clean debris from the rear transaxle cover (Fig. 10).

Note: The rear transaxle cover is an air-intake area for cooling the transaxle.

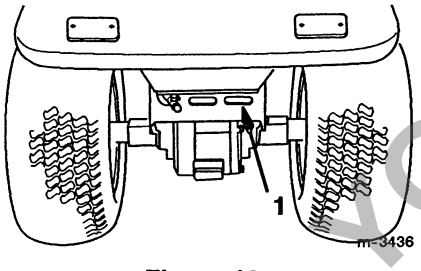


Figure 10

1. Rear transaxle cover

Check the Safety Interlock System

Always check the interlock system before operating the tractor. Instructions for checking the interlock system are found in the Operation section, page 13.

Check the Brake

Refer to Checking and Adjusting the Brake, page 24.

Operation

Think Safety First

Please carefully read all the safety instructions on pages 3 through 7. Knowing this information could help you, your family, pets, or bystanders avoid injury.

Controls

Become familiar with all the controls (Fig. 11) before you start the engine and operate the machine.

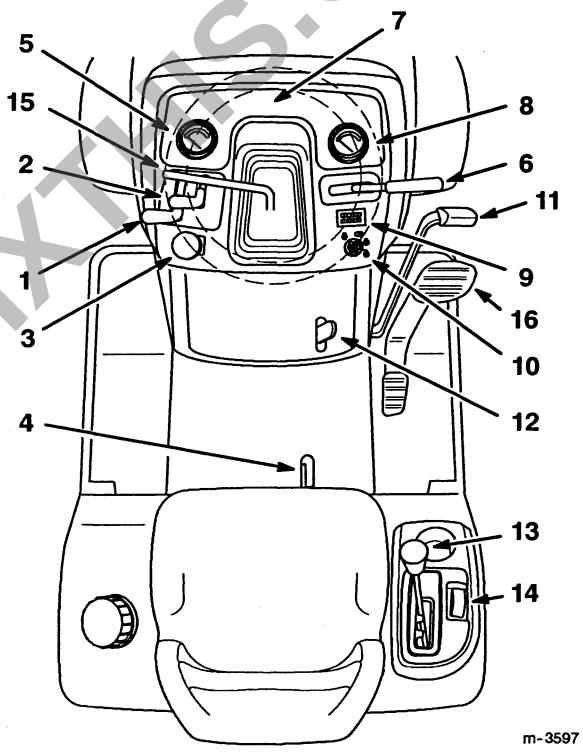


Figure 11

1. Throttle
2. Choke
3. PTO switch
4. Seat adjustment lever
5. Engine water temperature gauge
6. Attachment lift lever
7. Indicator lights
8. Fuel gauge
9. Hour meter
10. Ignition switch
11. Brake pedal
12. Parking brake lever
13. High-Low range lever
14. Cruise control switch
15. Steering wheel tilt lever
16. Traction control pedal

Using the Parking Brake

Set the parking brake when you stop the machine or leave it unattended.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Warning

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Important This engine is not equipped with a spark arrester muffler. It is a violation of California Public Resource Code Section 4442 to use or operate this engine on any forest-covered, brush-covered or grass-covered land. Other states or federal areas may have similar laws.

This spark ignition system complies with Canadian ICES-002.

Ce système d'allumage par étincelle de véhicule est conforme à la norme NMB-002 du Canada.

The enclosed Engine Owner's Manual is supplied for information regarding The U.S. Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance and warranty.

Keep this engine Owner's Manual with your unit. Should this engine Owner's Manual become damaged or illegible, replace immediately. Replacements may be ordered through the engine manufacturer.

Contents

	Page
Introduction	2
Safety	3
Safe Operating Practices	3
New Holland Riding Mower Safety	5
Slope Chart	6
Safety and Instruction Decals	7
Check Before Operating	8
Opening the Hood	8
Closing the Hood	8
Removing the Side Panels	8
Adding Fuel	9
Check the Engine Oil Level	9
Check for Debris	10
Check the Safety Interlock System	11
Check the Brake	11
Operation	11
Think Safety First	11
Controls	11
Using the Parking Brake	11
Starting and Stopping the Engine	12
Operating the Power Take Off (PTO)	12
The Safety Interlock System	13
Gauges and Indicator Lights	14
Driving Forward or Backward	15
Stopping the Machine	16
Using the Cruise Control	16
Raising and Lowering Attachments	17
Positioning the Seat	17
Lights	17
Positioning the Tilt Steering Wheel	18
Centering the Steering Wheel (Power Steering Models)	18
The Automatic Speed Reduction Feature	18
Pushing the Machine by Hand	18
Maintenance	19
Recommended Maintenance Schedule	19
Servicing the Air Cleaner	20
Servicing the Engine Oil	21
Changing Spark Plugs	22
Greasing the Tractor	23
Maintaining the Tire Pressure	24
Servicing the Brake	24
Draining the Fuel Tank	25
Replacing the Fuel Filter	26
Servicing the Front Wheel Toe-In	26
Changing Transaxle Fluid	27
Cleaning the Power Steering Filter (Power Steering Models Only)	28
Replacing Fuses	29
Replacing Headlights	29
Replacing Taillights	29
Servicing the Battery	30
Cleaning and Storage	32
Wiring Diagram	34
Troubleshooting	35

Introduction

Thank you for purchasing a New Holland product.

All of us at New Holland want you to be completely satisfied with your new product, so feel free to contact your local Authorized Service Dealer for help with service, genuine replacement parts, or other information you may require.

© 2000 by The Toro Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196

All Rights Reserved
Printed in the USA

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Whenever you contact your Authorized Service Dealer or the factory, always know the model and serial numbers of your product. These numbers will help the Service Dealer or Service Representative provide exact information about your specific product. You will find the model and serial number plate at the location shown in Figure 1.

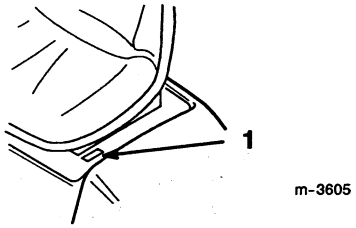


Figure 1

1. Model and serial number plate

For your convenience, write the product model and serial numbers in the space below.

Model No: _____

Serial No. _____

Read this manual carefully to learn how to operate and maintain your product correctly. Reading this manual will help you and others avoid personal injury and damage to the product. Although we design, produce and market safe, state-of-the-art products, you are responsible for using the product properly and safely. You are also responsible for training persons, who you allow to use the product, about safe operation.

The warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, 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 the recommended precautions are not followed.

Warning signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

Caution signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.

Two other words are also used to highlight information. *Important* calls attention to special mechanical information, and *Note* emphasizes general information worthy of special attention.

Determine the left and right side of the machine from the normal operating position.

Safety

This machine meets or exceeds the B71.1-1998 specifications of the American National Standards Institute, in effect at the time of production. However, improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert ⚠ symbol, which means CAUTION, WARNING, or DANGER—"personal safety instruction." Failure to comply with the instruction may result in personal injury or death.

Safe Operating Practices

The following instructions are from ANSI standard B71.1—1998.

This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.

General Operation

- Read, understand, and follow all instructions in the operator's manual and on the machine before starting.
- Allow only responsible adults who are familiar with the instructions to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop the machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop the engine before removing the grass catcher or unclogging the chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.

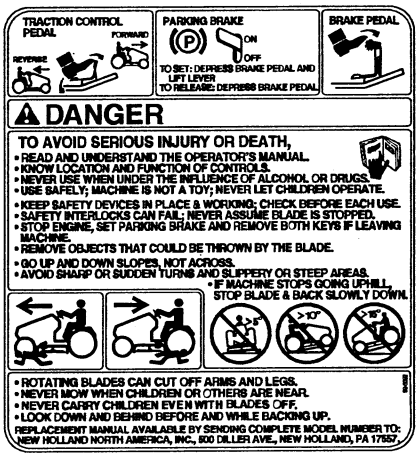
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

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 the Drive Shaft Cover (Part No. TR99D6092)



On the Seat Bracket (Part No. TR99D2985)



On the Drive Shaft Tunnel (Part No. TR80D8760)



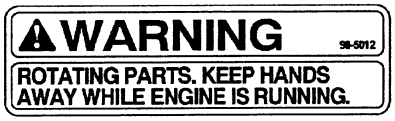
Under the Side Shield (Part No. TR98D5014)



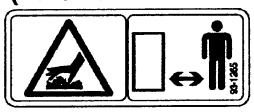
On the Seat Bracket (Part No. TR99D8894)



On the Engine Bulkhead (Part No. TR98D5012)



On the Battery Strap (Part No. TR93D1265)



On the Battery (Part No. TR104D4163)



On the Battery (Part No. TR104D5091)



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Setting the Parking Brake

1. Push the brake pedal (Fig. 11) down and hold it.
2. Lift the parking brake lever (Fig. 11) up and gradually take your foot off the brake pedal. The brake pedal should stay down.

Releasing the Parking Brake

1. Push down on the brake pedal (Fig. 11).

   The parking brake lever should release.
2. Release the brake pedal.

Starting and Stopping the Engine

Starting

1. Sit down on the seat.
2. Push the brake pedal down.

Note: The engine will not start unless you push the brake pedal down fully.

3. Push the PTO switch to the off position (Fig. 12).

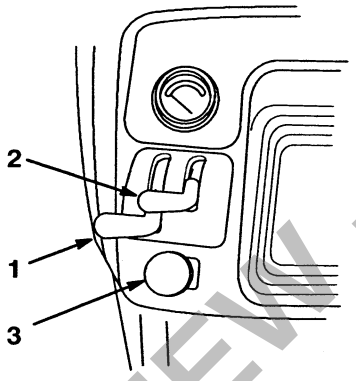


Figure 12

1. Throttle
2. Choke
3. PTO switch

4. Move the choke lever to the on position (if the engine is cold) (Fig. 12).
5. Move the throttle lever halfway to the fast position (Fig. 12).
6. Turn the ignition key clockwise and hold it in the start position (Fig. 13).

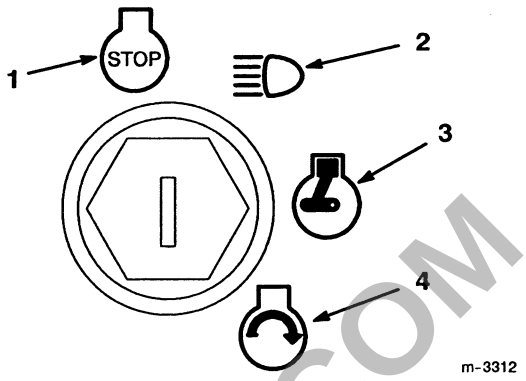


Figure 13

1. Stop
2. Run with lights
3. Run
4. Start

7. When the engine starts, release the key.

Important Do not crank the engine continuously for more than 10 seconds at a time. If the engine does not start, allow a 60 second cool-down period between starting attempts. Failure to follow these guidelines can burn out the starter.

8. After the engine starts, move the choke lever to the off position (Fig. 12).

   If the engine stalls or hesitates, move the choke lever back to the on position for a few seconds. Then, move the throttle lever to the desired setting. Repeat this as required.
9. Allow the engine to warm up before using it.

Stopping

1. Move the throttle lever to the slow position (Fig. 12).
2. Allow the engine to run for a short time to cool down.
3. Turn the ignition key to the stop position (Fig. 13).
4. Remove both the ignition and reverse interlock keys when the equipment is not in use or unattended.

Operating the Power Take Off (PTO)

The power take off (PTO) runs the various powered attachments such as mowers, snowthrowers, and tillers.

If the ignition key is in the run or lights position and the PTO is engaged, the PTO indicator light will be on. When this light is on, it is a reminder: the implement is being powered and the starter will not crank while the PTO is engaged. Always turn off the PTO before getting off the seat.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Raising and Lowering Attachments

Raise and lower attachments using the attachment power lift lever. This lever is located to the right of the steering wheel (Fig. 19).

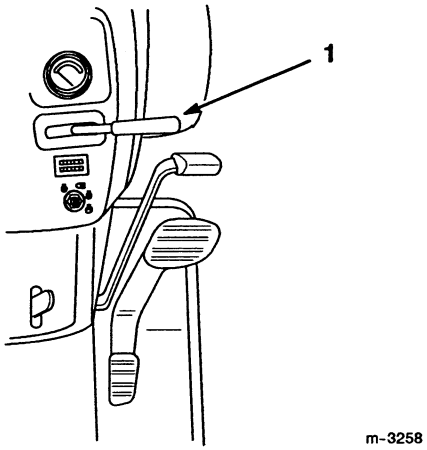


Figure 19

1. Attachment power lift lever

Raising Attachments

1. Start the tractor.
2. Pull the lift lever up to raise the attachment (Fig. 20).

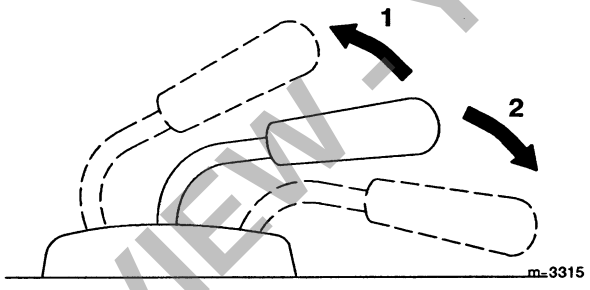


Figure 20

1. Lift lever, Up
2. Lift lever, Down

3. Release the lever when the attachment has reached the desired height.

   The attachment will remain in the raised position until you lower it again.

Warning

When the engine is off, attachments in the raised position may gradually lower, possibly pinning or injuring you or a bystander.

Lower the attachment lift before stopping the engine.

Lowering Attachments

1. Start the tractor.
2. Push the lift lever down to lower the attachment (Fig. 20).

Positioning the Seat

You can move the seat forward and backward. Position the seat where you have the best control of the machine and are most comfortable.

1. Move the adjustment lever sideways to unlock seat (Fig. 21).
2. Slide the seat to the desired position and release the lever to lock the seat into position.

Important Ensure that the seat is locked in position before operating.

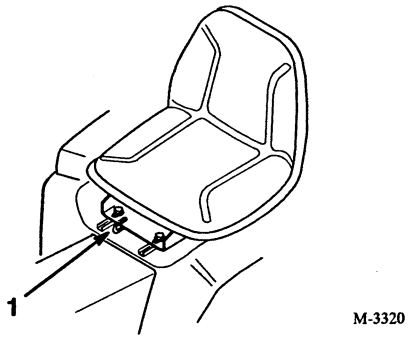


Figure 21

1. Adjustment lever

Lights

The lights turn on whenever you turn the ignition key to or past the lights position (Fig. 22). You can turn then on even if the engine is not running; therefore remove the

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

1. Remove the battery from the chassis; refer to Removing the Battery, page 30.
2. Check the electrolyte level; refer to Checking the Electrolyte Level, page 31.
3. Make sure the vent caps are installed in the battery. Charge the battery for 10 to 15 minutes at 25 to 30 amps or 30 minutes at 4-6 amps. Do not overcharge the battery.
4. When the battery is fully charged, unplug the charger from the electrical outlet, then disconnect the charger leads from the battery posts (Fig. 56).

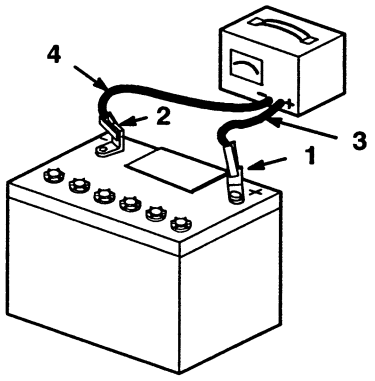


Figure 56

1. Positive Battery Post
2. Negative Battery Post
3. Red (+) Charger Lead
4. Black (-) Charger Lead

5. Install the battery in the tractor and connect the battery cables; refer to Installing the Battery

Note: Do not run the tractor with the battery disconnected, electrical damage may occur.

Installing the Battery

1. Place the battery onto the chassis (Fig. 54).

Important Always connect the positive (red) cable first.

2. Using the bolt, washer and locknut, connect the positive (red) cable to the positive (+) battery post (Fig. 54).
3. Using the bolt, washer and locknut, connect the negative (black) cable to the negative (-) battery post (Fig. 54).
4. Replace the battery shield and secure to the chassis with the hold-down rods and wing nuts.

Important Keep the battery shield in place to protect the battery from heat.

5. Replace the grill.

Cleaning and Storage

1. Disengage the PTO, set the parking brake, stop the engine, and remove the ignition and reverse interlock keys.
2. Remove grass clippings, dirt, and grime from the external parts of the entire machine, especially the engine.
3. Clean dirt and chaff from the outside of the engine's cylinder head fins and blower housing; refer to Check for Debris, page 10.

Important You can wash the machine with mild detergent and water. **Do not** use **high pressure water** to wash the machine. Pressure washing may damage the electrical system or wash away necessary grease at friction points. Avoid excessive use of water, especially near the control panel, lights, engine, and the battery.

4. Check the brake; refer to Servicing the Brake, page 24.
5. Service the air cleaner; refer to Servicing the Air Cleaner, page 20.
6. Grease the chassis; refer to Greasing the Tractor, page 23.
7. Change the crankcase oil; refer to Servicing Engine Oil, page 21.
8. Check the tire pressure; refer to Maintaining the Tire Pressure, page 24.
9. For storage over 30 days, prepare the tractor as follows:

   A. Add a petroleum based stabilizer/conditioner to fuel in the tank.

      Follow mixing instructions from stabilizer manufacturer. (1 oz. per gallon). **Do not use an alcohol based stabilizer (ethanol or methanol).**

   Note: A fuel stabilizer/conditioner is most effective when mixed with fresh gasoline and used at all times.

   B. Run the engine to distribute conditioned fuel through the fuel system (5 minutes).

   C. Stop the engine, allow it to cool and drain the fuel tank; refer to Draining the Fuel Tank, page 25.

   D. Restart the engine and run it until it stops.

   E. Choke the engine.

   F. Start and run the engine until it will not start again.

   G. Dispose of fuel properly. Recycle as per local codes.

Important Do not store stabilizer/conditioned gasoline over 90 days.

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 7 of 42 pages

The full manual includes:

- All 42 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

New Holland GT22 Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual