

820R Walk-Behind Tiller

(Serial No. 010001 –)

OPERATOR'S MANUAL

**John Deere
Worldwide Commercial and
Consumer Equipment Division**

OMM134173 H7

North American Version
Litho in U.S.A
English

INTRODUCTION

THANK YOU for purchasing a John Deere product.

Read this manual and your attachment manuals thoroughly. Failure to do so could result in personal injury or equipment damage.



C WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
CALIFORNIA Proposition 65 Warning

This manual should be considered a permanent part of your machine and should remain with the machine when you sell it. Measurements in this manual are metric units and their U.S. customary equivalents. RIGHT-HAND and LEFT-HAND sides are determined by facing in the direction the machine will travel when going forward. When you see a broken line arrow (---) it indicates the part it is pointing to is hidden.

Record identification numbers below. Be sure to record all the numbers to help in tracing the machine if it is stolen. You also need to give these numbers to your dealer when you order parts.

Date of Purchase:

Dealer Name: _____ **Phone:** _____

Engine Serial Number:
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □



Machine Serial Number:
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

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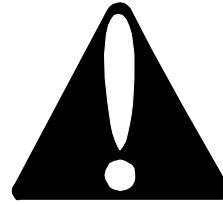
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SAFETY SIGNS

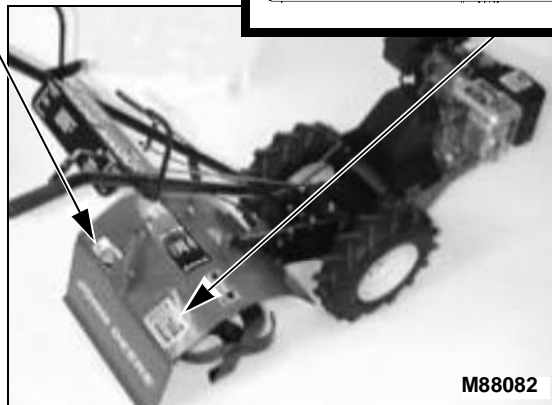
Safety-Alert Symbol

Read and recognize safety information. Be alert to the potential for personal injury when you see this safety-alert symbol.

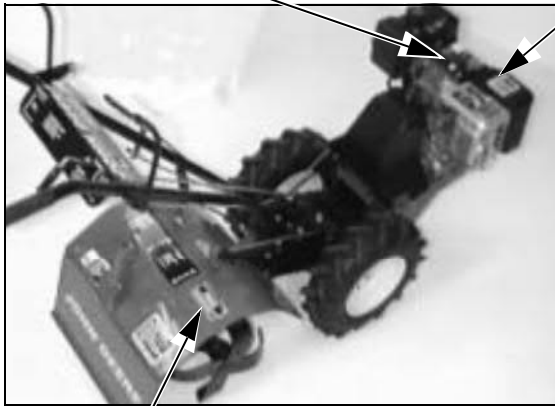
On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards. In this manual, the word CAUTION and this symbol call attention to safety messages.



Machine Safety Labels



SAFETY SIGNS



SAFETY SIGNS

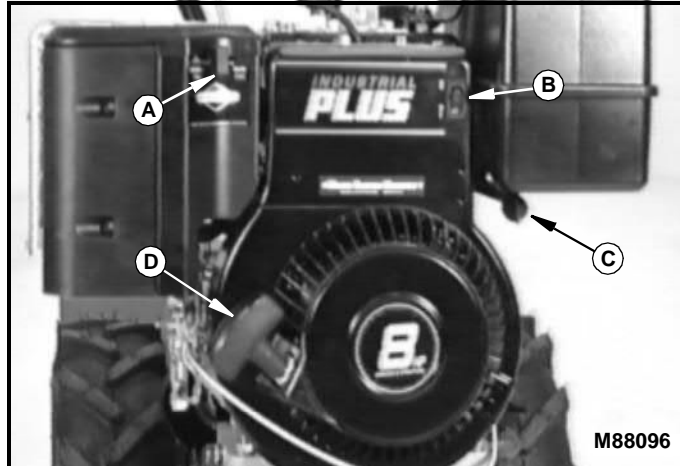
Certification Label

This OPEI label on your tiller indicates that this model has been certified by an independent laboratory for compliance with American National Standard B-71.8-1996, "Safety Specifications" for Tillers.

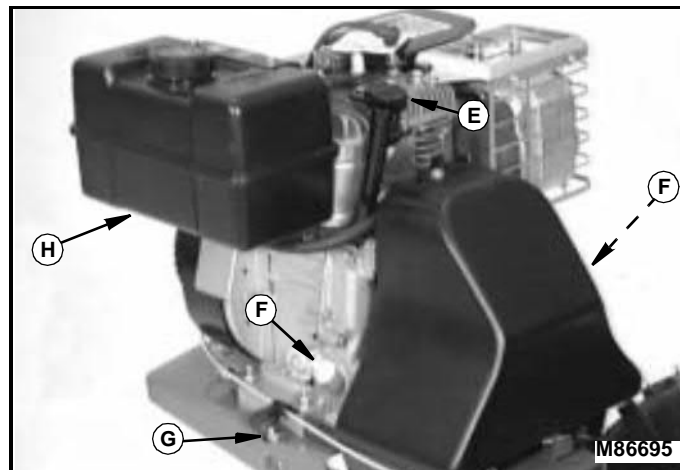


CONTROLS

Engine Controls



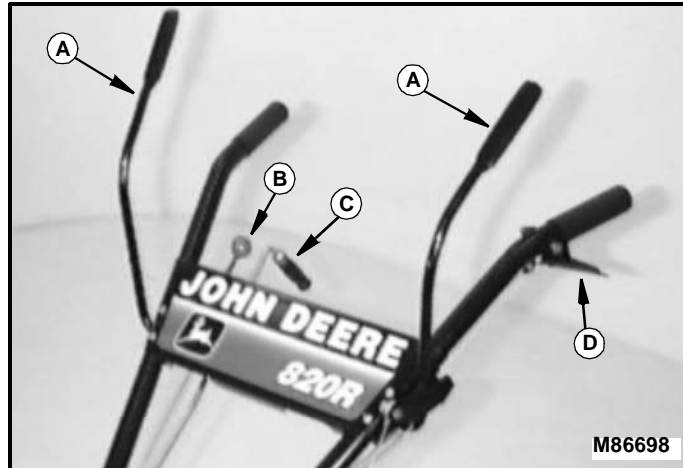
- A - Choke Lever..... Chokes fuel system for starting engine
- B - On / Off SwitchAllows engine to be turned On / Off
- C - Fuel Shut-Off Valve Controls fuel supply to engine
- D - Starter Handle Pull to start engine



- E - Engine crankcase dipstick..... Shows amount of engine oil
- F - Engine oil fill plug Allows engine oil to be installed
- G - Engine oil drainAllows engine oil to be drained
- H - Fuel tank Contains engine fuel

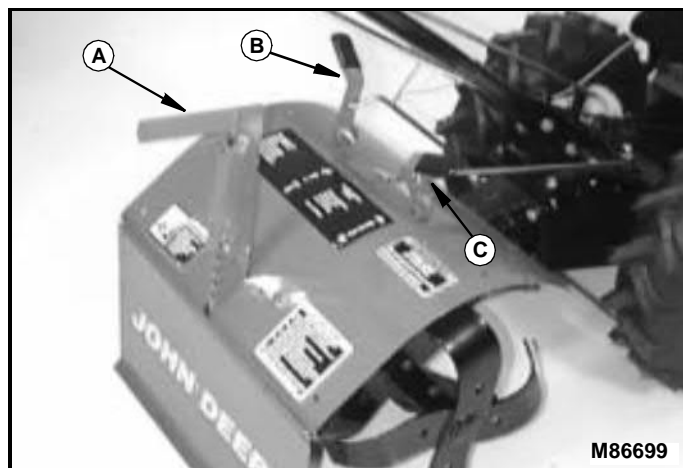
CONTROLS

Handlebar Controls



- A - Main Clutch (Forward Levers) Controls forward drive
- B - Engine Throttle Controls engine speed
- C - Handlebar Swivel Lock..... Allows handlebars to be swiveled
- D - Main Clutch (Reverse Lever) Controls reverse drive

Gearbox Controls



- A - Tine Depth Control Controls tine depth
- B - Tine Clutch Engage / disengage tines
- C - Wheel Drive Speed Selector 2-Speed transmission

OPERATING

SAFETY



Operate Safely

- Inspect machine before you operate. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. Be sure all safety protective devices are in good condition and fastened in place. Make any necessary adjustments before you operate.
- Clear work area of objects that might be thrown. Keep people and pets out of the work area. Stop machine if anyone enters the area.
- If you hit an object, stop the machine and inspect it. Make repairs before you operate. Keep machine properly maintained and in good working order.
- DO NOT leave machine unattended when it is running.
- Only operate during daylight or with good artificial light.
- Be sure of footing. Be especially careful when you pull machine backwards with the engine running.
- Stay behind the barrier on the handlebar when operating on the side of the machine.
- DO NOT attempt to force the tines down by hanging on the handlebar.
- Till across a hill - not up and down. Be careful when you change direction on a slope. DO NOT till excessively steep slopes.
- Keep a firm hold on the machine handle.
- Do not wear radio or music headphones while operating the machine. Safe operation requires your full attention.

OPERATING

Rotating Tines are Dangerous - Protect Children and Prevent Accidents



PROTECT CHILDREN:

- Never assume that children will remain where you last saw them. Stay alert to the presence of children.
- Keep children in the house when you are operating the machine.
- Turn machine off if a child enters the area.
- Use extra care when you come to blind corners, or other objects that may block your vision.
- DO NOT let children or an untrained person operate the machine.

HELP PREVENT SERIOUS OR FATAL ACCIDENTS:

- Be alert at all times, people especially children can move quickly into the area before you know it.
- Stop the tines when crossing gravel drives, walks, or roads.
- Shut off tiller when you are not tilling.
- Keep hands, feet, and clothing away from rotating tines.

Wear Appropriate Clothing



- Wear close fitting clothing and safety equipment appropriate for the job.
- Loud noise can cause impairment or loss of hearing, wear a suitable protective device such as earplugs.
- DO NOT operate the equipment when barefoot or wearing open sandals. Always wear substantial footwear.

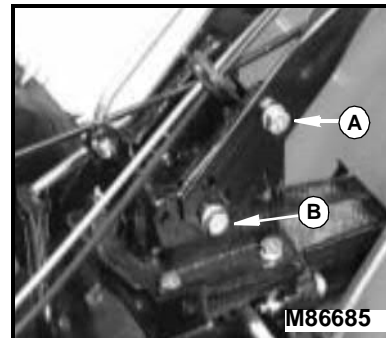
OPERATING

ADJUSTMENTS

Adjust Handlebar Height

Adjust handlebar height by using three holes at bottom of handlebar legs.

1. Loosen cap screws (A).
2. Remove cap screws, and lock washers (B).
3. Position handlebars at a safe comfortable tilling height.
4. Align holes and secure with cap screws and lock washers (B).
5. Tighten cap screws (A).

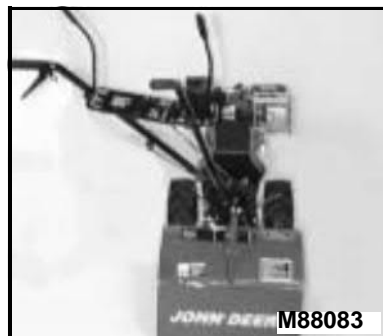
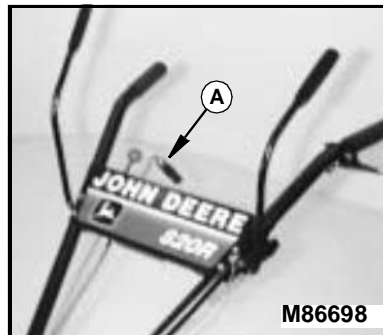


Adjust Handlebar Swivel

Handlebars may be positioned center, right or left.

1. To move handlebars, pull back on handlebar swivel (A) until lock releases.
2. Swing handlebars left or right.
3. Release handlebar swivel and latch will lock in position by spring tension.

If the latch will not lock in position, it may be necessary to lubricate the handlebar swivel lock. See Lubricating Handlebar Swivel in the Service section.



OPERATING

Adjust Depth Control

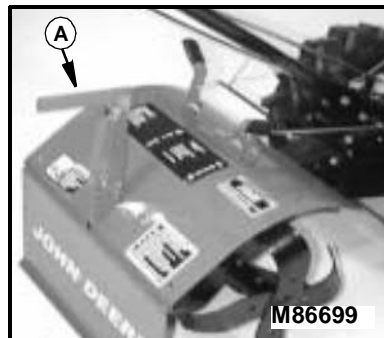
C **CAUTION:** Do not adjust tilling depth with tine rotating. Place main clutch drive in “Neutral” before changing tilling depth.

IMPORTANT: DO NOT over load tiller by attempting to till too deep at too fast a rate.

This tiller is equipped with a eight position depth control handle (A).

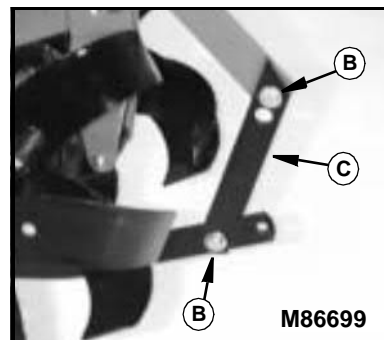
Change depth control:

- Grasp tiller depth control handle and squeeze trigger.
- Increase tilling depth: Raise depth control handle.
- Decrease tilling depth: Lower depth control handle.
- Release trigger to engage appropriate notch in bar.



For transporting: Push depth control handle down to the lowest position and engage bottom notch.

If you need to till at a deeper or shallower depth, remove hardware (B) and reposition bracket (C) in different mounting holes. Install and tighten hardware.



OPERATING

OPERATING

Using Wheel Drive Speed Selector

C

- CAUTION:**
- **DO NOT** engage Tine Clutch unless Wheel Drive is engaged, tiller may run away propelled on the high speed tines.
 - **DO NOT** engage Wheel Drive with main clutch engaged.
 - **Put Wheel Drive in “N” neutral position before starting engine and when transporting tiller.**

This tiller is equipped with a 2-speed transmission, slow and fast. Both wheels of tiller turn at same rate of speed because solid-axle provides them equal power. When the engine is running and the “t” or “r” speed is selected, wheels will turn after main clutch is engaged.

IMPORTANT: **DO NOT** force Wheel Drive Lever when shifting. For easier shifting, roll tiller back and forth while moving the Wheel Drive lever.

Slow Position: Move Wheel Drive lever (A) forward to the “t” position. This will be your SLOW speed.

“N” Neutral Position:

- Use this “N” position when starting the engine.
- In this position, gears in the transmission are disengaged and the tiller may be moved by hand without engine power.



Fast Position: Move Wheel Drive lever (A) rearward to the “r” position. This will be your FAST speed.

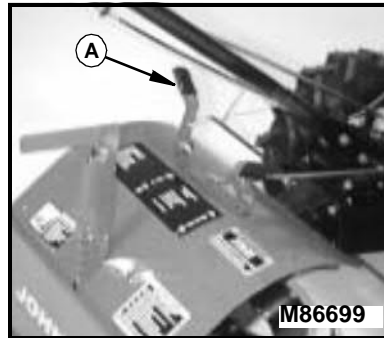
OPERATING

Engage Tine Clutch

- C** **CAUTION:**
- **DO NOT** engage Tine Clutch unless Wheel Drive is engaged, tiller may run away propelled on the high speed tines.
 - **DO NOT** engage Tine Clutch with main clutch engaged.
 - **Disengage Tine Clutch** before starting engine and when transporting tiller.

Engage Tines: Move Tine clutch lever (A) forward (over center) to the “IN” position.

- In this position, when the engine is running, this will allow the tiller tines to spin.
- Clutch is spring loaded and will engage as main clutch is engaged.
- Do not force lever.



Disengage Tines: Move Tine clutch lever (A) rearward (over center) to the “OUT” position.

- In this position, when the engine is running, the tiller tines will STOP spinning.
- Use this “OUT” position when starting the engine or when transporting tiller.

If the tine clutch lever does not shift smoothly or stay in the “IN” engaged position, it may be necessary to adjust the tine clutch linkage. See Adjusting Tine Clutch in the Service section.



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OPERATING

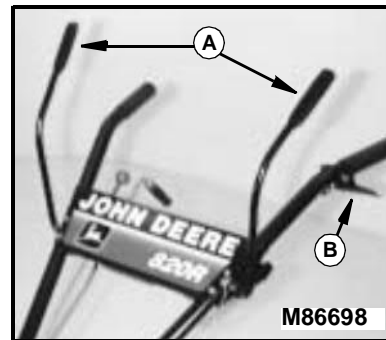
Using Main Clutch

- C** **CAUTION:**
- Main Clutch **MUST** be in “N” neutral (disengaged) before starting engine.
 - Avoid injury to feet. Keep feet away from around tine guard when the tiller is traveling in REVERSE.

The main clutch system consists of one set of “F” (forward) Top Levers (A) and one “R” (reverse) Bottom Lever (B).

Forward:

- Pull “F” Top Levers (A) down to the handlebars. In this position, when the engine is running, the tiller tines will start spinning and the drive wheels will turn.
- The “F” Top Levers are one piece and can be operated with one hand. It is advised to operate this unit with both hands whenever possible.
- If forward drive is sluggish or will not fully engage. See Adjusting “Forward” Drive Belts Tension in the Service section.



“N” neutral:

- Both “F” Top Levers (A) and “R” Bottom Lever (B) are spring loaded to the “N” neutral position. The tiller will STOP.
- Use this “N” position when starting the engine.

Reverse:

- Release “F” Top Lever (A) before engaging “R” Bottom Lever (B).
- Pull “R” Bottom Lever (B) up to the handlebars. In this position, when the engine is running, the tiller tines and the drive wheels will start spinning in reverse.
- If reverse drive is sluggish or will not fully engage. See Adjusting “Reverse” Drive Belt Tension in the Service section.

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