

# 47 HEAVY-DUTY POWER MOWER



# **OPERATORS MANUAL**

47 HEAVY-DUTY POWER MOWER

OMH47358 (01MAR58) English

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## TO THE OWNER

This manual contains valuable information on the operation and care of your new John Deere 47 Heavy-Duty Power Mower. Follow the suggestions in the manual and you will get many years of satisfactory service.

Difficulties with this mower or any other quality mower are largely due to lack of proper care and regular lubrication. How long the mower will last and continue to give good service depends upon the care you give it.

See your John Deere dealer for service. His skilled mechanics are especially trained to service John Deere machines.

# SERIAL NUMBER

Record the serial number of your mower in space provided below.

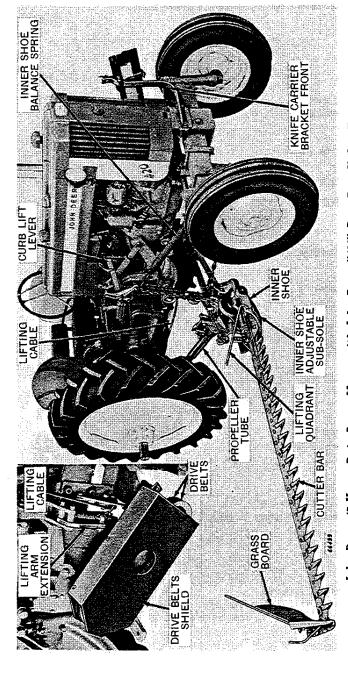
The mower serial number is stamped on the name plate, located on the front end of the left-hand main frame.

SERIA	L NUMBER		 <i>.</i>	 	 	 	 	
		,						
DATE	PURCHASED.		 	 	 	 	 	•••

THE COMPLETE OBSERVANCE of one simple rule would prevent many thousand serious injuries each year. THAT RULE IS: "NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION."

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Push Button Switch and Upper Wiring Harness.....



John Deere 47 Heavy-Duty Power Mower with John Deere "420" Row-Crop Utility Tractor

# SPECIFICATIONS

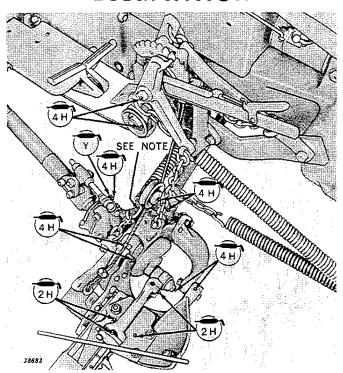
Length of Cutter Bar..5., 6., and 7-Foot

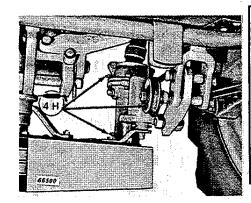
Type of Power......Power Take-Off on Tractor Fl
Type of Drive......Double V-Belt
W
Tractor Hook-Up.....Mounted on Tractor

Main Drive Shaft Bearings, Front and Rear....Timken Roller Flywheel Shaft Bearings, Front and Rear......Timken Roller Wrist Pin Bearings, Front and Rear......Timken Roller Approximate Shipping Weight less Cutter Bar...350 lbs.

(Specifications and design subject to change without notice.)

# LUBRICATION





# SYMBOLS



Grease every two hours of operation.



Grease every four hours of operation.



Grease once a year.

Note: Lubricate frequently enough to allow drag bar to turn freely in yoke.

Use a good grade of lubricant. Wipe all fittings clean before greasing. Replace any missing fittings immediately. Thorough and regular lubrication is the largest single factor contributing to longer and more satisfactory mower performance.

# **OPERATION**

Keep the mower lubricated, cutting parts sharp and in good condition, and lifting springs properly adjusted for clean cutting, light draft, trouble-free operation, and low upkeep cost.

#### STARTING MOWER IN THE FIELD.

Be sure mower is assembled properly and all nuts are tight and cotter pins spread.

Run mower slowly and observe knife, pitman connections, and other moving parts to see that they operate freely. Carefully raise and lower cutter bar several times to see that it works properly. Check V-belt drive tension and sheave alignment.

#### SAFETY FIRST.

Never attempt to clean, lubricate, or adjust mower without first disengaging power take-off and shutting off tractor engine. A careful operator is the best insurance against an accident.

# OPERATING SPEED.

Under most conditions, drive in second gear at full throttle. Avoid excessive speeds. Various mowing conditions require different mowing speeds. Operate at the travel speed that will meet crop and field conditions and provide the smoothest mowing action.

Always run tractor engine at full throttle. Running the engine slowly reduces the knife speed and may cause clogging. When necessary to slow down travel speed of tractor, shift to a lower gear, rather than throttle down. By shifting to a lower gear, and continuing at full throttle, you will keep the knife running at proper speed for best results.

# APPROXIMATE NUMBER OF ACRES CUT PER HOUR.

The following is a table showing the number of acres that can be cut with the 47 Power Mower in one hour of continuous cutting at various speeds.

Miles per Hour	1	1-1/2	1-3/4	2	2-1/4	2-1/3	2-1/2	2-3/4	3	3-1/4	3-1/2	3-3/4	4
5-Foot Cut 6-Foot Cut 7-Foot Cut	5/8 3/4 7/8	7/8 1-1/8 1-1/4	1 1-1/4 1-1/2	1-1/2	1-5/8	1-1/2 1-3/4 2	1-7/8	1-5/8 2 2-3/8	2-1/8	2-3/8	2-1/8 2-1/2 3	2-3/4	2-3/8 3 3-3/8

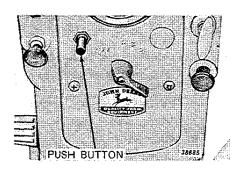
# GUMMY TRASH ON CUTTER BAR.

To remove gummy trash from wearing plates and guards, operate mower slowly and pour water on bar. Do not let trash harden.

4

#### IGNITION CUT-OUT SAFETY SWITCH.

If the cutter bar strikes an obstruction, the ignition cut-out safety switch cuts the ignition, stopping the engine and forward travel of the tractor. This feature prevents damage to the cutter bar and mower.



The push button switch on the tractor instrument panel closes the ignition circuit so the tractor engine can be started.

Simply press the button, start the engine, and raise the cutter bar to clear the obstruction. Then lower the cutter bar, release the button, and continue mowing.

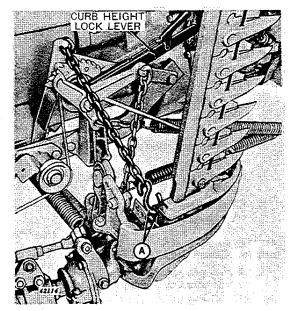
#### CURB HEIGHT LOCK LEVER.

After cutter bar has been raised with Touch-o-matic, this lever can be locked to hold inner shoe at a desired height when mowing over curbs or over edges of concrete highways, preventing excessive wear on the inner shoe.

#### TRANSPORTING.

When traveling any considerable distance, place the cutter bar in transport position according to the following:

Raise cutter bar to its highest position with Touch-o-matic and move lock lever all the way forward. Hook transport chain to inner shoe as shown at "A." Push forward slowly on Touch-o-matic lever and allow transport chain to take weight off cutter bar gently without jerking. Then push Touch-o-matic lever all the way forward.



# COMMON MOWER TROUBLES AND THEIR CAUSES

#### Heavy Draft.

- 1. Improper assembly.
- 2. Lack of lubrication.
- 3. Lagging of cutter bar.
- Worn knife head, guides, knife holders or wearing plates.
- 5. Knife out of register.
- 6. Guards loose or out of line.
- 7. Dull, broken, nicked or loose sections or guard plates.
- 8. Knife holders binding.
- 9. Too much tilt of cutter bar.
- 10. Lips of guards bent down too far.
- 11. Not enough tension on balance springs.

#### Side Draft and Uneven Stubble.

- 1. Guards loose or out of line.
- 2. Dull, broken, nicked or loose sections and guard plates.
- Worn knife head, guides, knife holders or wearing plates.
- 4. Knife out of register.
- 5. Knife holders not properly set.
- 6. Uneven adjustment of shoe soles.
- 7. Improper tension on balance springs.
- Cutter bar lifting parts out of adjustment.

#### Heating of Pitman Box, Drive Shaft or Crankshaft Bearings.

- 1. Wrist pin crooked in flywheel after repairing.
- 2. Lack of lubrication.
- 3. Dirt or metal in bearings.
- 4. Cutter bar need of repairing.

## Knife and Knife Head Breakage.

- Worn knife head, guides, knife holders and wearing plates.
- 2. Guards loose or out of line.
- 3. Dull sections and guard plates.
- 4. Broken or nicked sections.
- 5. Worn pitman box.
- 6. Crooked knife.
- 7. Loose pitman ball caps.
- 8. Too much tilt of cutter bar.
- 9. Lagging of cutter bar.

### Choking Down.

- 1. Lagging of cutter bar.
- 2. Knife out of register.
- 3. Lack of lubrication.
- 4. Guards loose or out of line.
- 5. Too much tilt of cutter bar.
- 6. Worn cutter bar parts.
- 7. Cutter bar lifting parts out of adjustment.
- 8. Balance springs not properly adjusted.
- 9. Knife head guide bolts loose.
- Knife holders not properly set.
- 11. Lips of guards bent down too far.
- 12. Dull cutting parts.

#### Lost Motion.

- 1. Loose V-belts.
- 2. Loose pitman bearing.
- 3. Loose pitman connections.
- 4. Loose pitman ball caps.
- 5. Loose drive shaft or crankshaft bearings.

# SAFETY SUGGESTIONS



The safety of the operator was one of the prime considerations in the minds of John Deere engineers when this mower was designed. Shielding, simple adjustments, and other safety features were built into the mower wherever possible.

However, investigation of thousands of farm accidents shows that careless use of farm machinery causes nearly 1/3 of all farm accidents. You can make your farm a safer place to live and work if you observe the safety suggestions given below. Study these suggestions carefully and insist that they be followed by those working with you and for you.



All machinery should be operated only by responsible persons who have been delegated to do so.

Never clean, oil, or adjust the mower when it is running.

Clothing worn by operator should be fairly tight and belted. Loose jackets, skirts, shirts, or sleeves should never be worn because of the danger of getting into moving parts.

Make sure everyone is clear of the mower and tractor before starting so no one can be struck by moving parts.

When transporting on a highway, keep as far to the right as possible. Hang a red flag prominently on the rear of the mower when transporting during the day. Never transport at night unless the tractor is equipped with lights and they are in good working condition. When transporting on a public road at night or during other periods of low visibility, use a warning lamp on the tractor.

Always shut off the tractor engine before cleaning a clogged cutter bar.

# ADJUSTMENT AND SERVICE

#### **V-BELTS**

# V-Belt Adjustment.

Loosen lock nut "A," and turn adjusting bolt "B," until belt flexes 1/2-inch at a point midway between sheaves. Tighten lock nut.

#### Care of V-Belts.

- 1. When installing belts, do not pry over sheaves.
- 2. Promptly take up the initial stretch that naturally occurs in new

belts. Check tension frequently during first few days.

- 3. Promptly wipe off any grease or oil that falls onto belts.
- 4. A little castor oil on a belt makes envelope fabrics more pliable.

# IGNITION CUT-OUT SAFETY SWITCH.

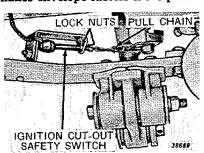
The pull chain, which is hooked to the drag bar and the ignition cut-out safety switch, must be kept at proper working length at all times. With the cutter bar on the ground this chain should be tight, yet not

pulling on safety switch enough to cut out ignition.

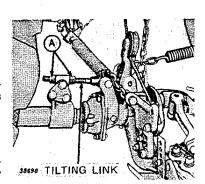
To adjust chain, loosen lock nuts on both sides of ignition cut-out safety switch support bracket, and move safety switch in or out of support bracket until proper working length on pull chain is obtained. Tighten lock nuts.

# CUTTER BAR TILT ADJUSTMENT.

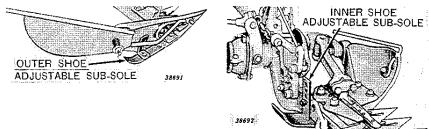
Cutter bar should run level with ground for most conditions. Cutter bar can be tilted for short cutting or when cutting in lodged hay. Adjust tilt at "A."



1/2-INCH

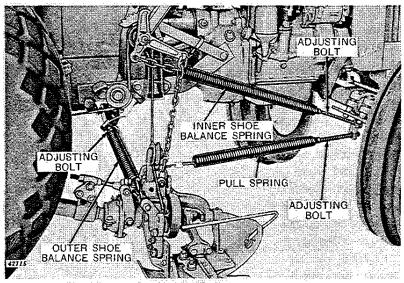






## ADJUSTABLE SUB-SOLES.

These sub-soles under inner and outer shoes regulate the height of cut. They will carry the bar to cut as high as 3 inches. Be sure cutter bar is at the same height at both ends.



# CUTTER BAR ANGLE.

When operating, the cutter bar should always be at right angles to the line of travel of the tractor.

The cutter bar is held in proper position by the pull spring. The tension on the spring must be set for crop and field conditions to maintain proper cutter bar position. Do not overtighten. Adjust just tight enough to

maintain this position. If adjusted too tight, the inner shoe will rise off the ground.

To adjust the pull spring, loosen lock nut and turn adjusting bolt until proper tension is obtained. Tighten lock nut.

#### BALANCE SPRINGS.

There should be enough tension on balance springs so cutter bar will rise easily and float rather than drag. When properly adjusted the balance springs will carry most of the weight of the cutter bar and reduce friction of the bar on the ground.

Inner Shoe Balance Spring. With mower running, adjust spring until the weight of the inner shoe is between 60 and 90 pounds.

Outer Shoe Balance Spring. Adjust so outer shoe floats yet follows contour of ground.

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