NO. 4 BIG ENCLOSED GEAR MOWER (HIGH LIFT)

JOHN DEERE

OPERATORS MANUAL

NO. 4 BIG ENCLOSED GEAR MOWER
(HIGH LIFT)

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FOREWORD

The purpose of this manual is to give you useful information about your new John Deere No. 4 Big Enclosed Gear Mower.

The following pages have been carefully prepared in order to give you all the possible information to assure full efficiency of your mower. We suggest you make it your guide. Study it carefully and follow the suggestions it offers. At any time additional information is desired, consult your John Deere dealer who has trained servicemen available to assist you.

The mower is one of the pioneer implements of the farm—as simple as a pair of shears—as efficient as a safety razor, and still a machine in which causes for trouble are often overlooked, even though apparent. These troubles are usually expressed in terms of poor work, though they are largely due to natural wear or parts not being in original adjustment or condition. Most of these difficulties are not real troubles, but can be taken care of easily and quickly **if the operator knows how to locate and remedy them.** This manual tells you how. If you will read and carefully apply the information it contains you should have no difficulty in keeping your mower the fine machine it is today. Remember, how long the mower will last and continue its good work is a matter entirely in your hands.

The exploded views and parts list are all listed for your model, making it easy to get repairs at all times. When making repairs, always see your John Deere dealer—John Deere parts are duplicate originals of parts now on your mower, therefore, fit properly, wear better and last longer.

Save this book. Put it away where you can find it for quick reference. It will save you time, trouble and money—Don't lose it!

Date of Purchase.....

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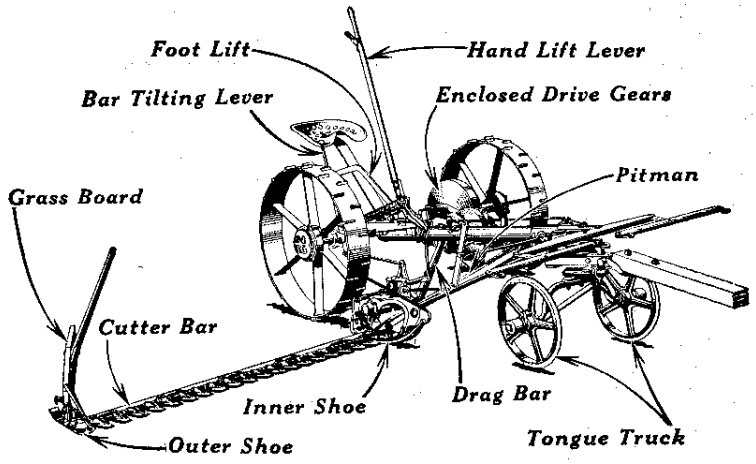

Figure 1—Complete View of John Deere No. 4 Mower

SPECIFICATIONS AND DATA

Length of Cutter Bar	3-1/2′, 4-1/2′, 5′, 6′, and 7′
Type of Power	Ground Driven
Type of Drive	2-Step Enclosed Gears
Diameter of Axle	1-1/2″
Type of Wheels	Cast-Iron or Pneumatic Tire
Axle Bearings	Hyatt Roller
Flywheel Shaft Bearings, Rear	Ball
Front	Bronze

Lubrication of:

Main Gears	Enclosed in Oil
Pawl Plates	Enclosed in Oil
Drive Clutch	Enclosed in Oil

Pneumatic Tire Size:

Main Wheel	5.00 x 21
Tongue Truck	4.00 x 9

Approximate Shipping Weight with 5′ Cutter Bar	827 Lbs.

(Detail design subject to change without notice)

LUBRICATION

The economical and efficient operation of any machine is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. The use of the proper lubricating oil in the gear case of your mower is just as vital to its service life as it is in the crankcase of an automobile or tractor. Neglect leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

Gear Case.

Oil in gear case lubricates the main axle, crankshaft, countershaft, gears and bearings. **Keep 6 quarts of S.A.E. 40 or 50 lubricating oil in gear case.** Oil must cover countershaft at all times when tongue is at operating height (see Page 5) to insure proper lubrication of pitman shaft bearings.

To Test: Remove filler plug and wipe gauge. Insert gauge, but **do not screw plug into case**—oil should show up to mark on gauge at all times with front end of tongue at the correct height. **Never permit oil to get so low that it does not register on gauge.**

First Week Service: Drain and strain oil after the first week's run. Put this oil back into case after it has been carefully strained.

Yearly Service: New oil should be put into case at the beginning of each year's cutting. **Do not use burned-out crankcase oil from automobile or tractor.**

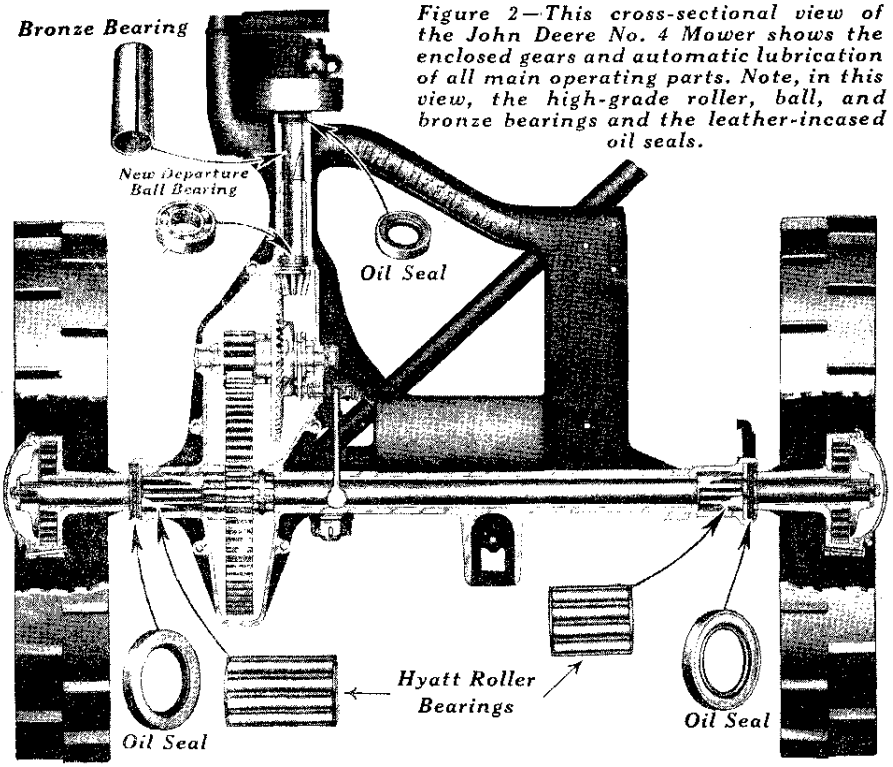

Figure 2—This cross-sectional view of the John Deere No. 4 Mower shows the enclosed gears and automatic lubrication of all main operating parts. Note, in this view, the high-grade roller, ball, and bronze bearings and the leather-incased oil seals.

Pawl Plate Housings.

Use one (1) pint of S.A.E. 40 or 50 lubricating oil in each pawl plate housing. Drain and put **new** oil in each housing at the beginning of each year's cutting.

Grease Fittings.

All major moving parts not enclosed in oil are equipped with grease fittings for grease-gun lubrication. Wipe dirt from fittings before greasing. Use plenty of high-grade grease in grease gun. Replace all missing grease fittings immediately. Grease each fitting periodically as specified:

Main Wheels	Once Daily
Pitman Bearing Box	4 Times Daily
Drag Bar, Yoke End	Once Daily

Oiling:

Use a good grade of heavy machine oil in oil can. Oil lifting mechanism bearings and cutter bar hinge pins occasionally. Lubricate pitman connections often. Keep cutting parts oiled **except** in dry, dusty, and sandy conditions, when cutting parts work best without oil.

OPERATION AND ADJUSTMENTS

Read every word of these instructions. You will like this John Deere No. 4 Mower. With proper care, it will give years of satisfactory service. You will agree that careless setting up, careless operation and neglect are the causes of most troubles. **This machine will continue to cut like a new Mower** if properly oiled and kept in good repair. Cutting parts must be kept sharp; knife head guides, knife holders, and wearing plates must be replaced when badly worn, and carefully set; guards must be kept in alignment; adjustments to restore alignment of knife and pitman and for registering knife sections in guards should be used if ever necessary; lifting spring should be properly adjusted and pole or tractor hitch hitched at correct height. Proper attention to these essentials insures clean cutting, light draft, continuous operation and low upkeep cost. The responsibility for this kind of service rests with the owner and operator.

Upkeep costs will be reduced by good storage and by replacing worn parts promptly.

TONGUE

Front end of tongue, measuring from underneath, should be **32 inches** from the ground when team is hitched to Mower. **This is important.** At this height, the Mower is in the **correct** working position. For Tractor-Drawn Mowers, the extension drawbar should be 21-1/2 inches from the ground.

SEAT SPRING

Two holes at lower end of spring provide adjustment in main frame for convenience of operator and for reducing neck weight.

CUTTER BAR

(See Figures 3 and 4) The cutter bar of the mower, in principle, is nothing more than a multiple set of shears—the blades of shears, to cut properly, must be sharp and have a shear cut; likewise, the sections and ledger plates of a mower must be sharp and have a shear contact. Cutting edges of the ledger plates must line up the full length of the bar if ledger plates and sections are to have a shear cut, and knife holders must be set to hold front part of sections down against ledger plates and heel of sections against wearing plate but must permit knife to run without binding. Wearing plates under knife holders should be replaced when worn enough to cause sections to raise from contact with ledger plates at points. Always look for cutting troubles in the cutter bar: guards out of alignment, worn wearing plates, bent knife back, dull knife and ledger plates, and worn, improperly-set knife holders.

Aligning Guards.

Aligning the guards is an important and exacting operation. A new knife or a straight one that is not badly worn, should be used in testing and setting the guards. Insert knife and set each guard up or down as necessary, to obtain a shear cut between knife section and ledger plate. Raise knife holders so knife will have clearance and will not bind or be bent when aligning guards. Have guards bolted tight and then be sure to strike them at the thick part just in front of ledger plate. Pound down high guards first and then bring up the low ones. Be sure to tighten nut on guard bolt each time after using hammer on guard. Remove knife several times as you work in order to look across the ledger plates and be sure you are getting them in line. Guard wings should also be aligned, making a smooth surface for knife back to work against. Position of guard points should not be considered—the ledger plates and wings are the important units that must be aligned.

Keep points of guards sharp. **Do not pound down lips of guards**—choking will result. The lip of the guard is the portion that covers the ledger plate.

Adjusting Wearing Plates.

Wearing plates under knife holders should be set ahead or replaced to take up wear on knife back, and reduce play of knife back in neck of guards. In setting wearing plates ahead, there should be enough clearance left at front of sections so sections do not strike guards. Turned-down edges of wearing plates must line up with one another to give knife back a straight bearing along its entire length. Be especially careful to properly line up new plates.

ALIGNING CUTTER BAR

When aligning cutter bar, **pound down the high guards first**, and **then bring up the low ones. Tighten guard bolts before and after aligning guards.** Cutting troubles are usually located between the two shoes.

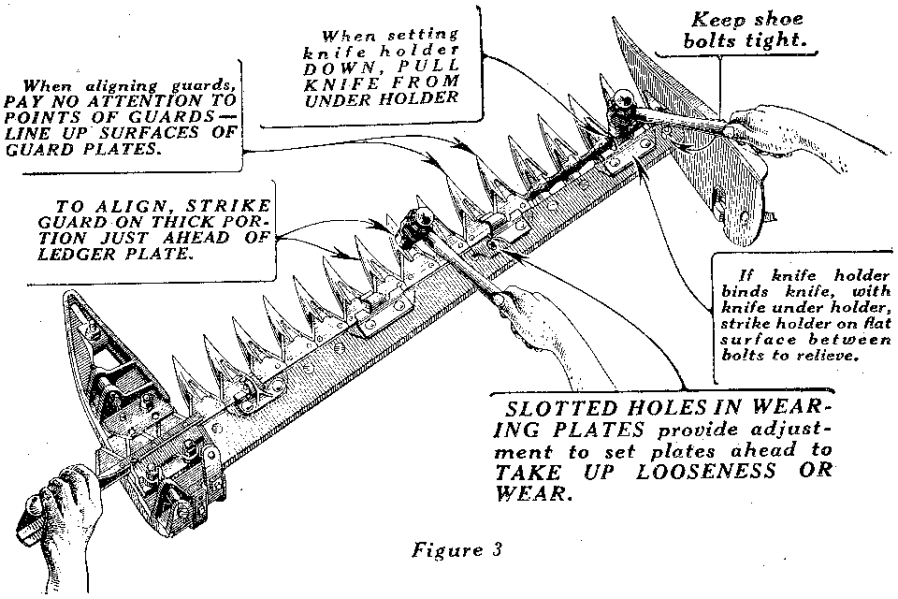

Figure 3

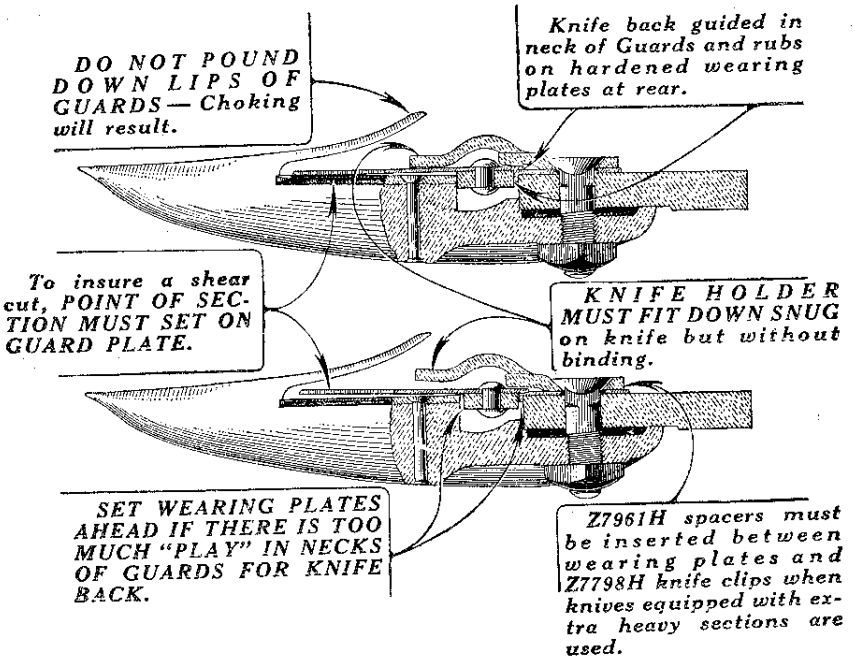

Figure 4

Z7961H spacers must be inserted between wearing plates and Z7798H knife holders when knives equipped with extra heavy sections are used.

Setting Knife Holders.

Never bend a knife holder down with knife under holder. Start at outer end of bar by pulling knife from under each holder and tapping holder down. Keep trying the knife until holder sets so knife works freely and at the same time is down on knife. Then work each holder in the same manner. If holder is too tight on knife, strike holder between the bolts while knife is under holder. A knife working tight on bar will cause heavy draft. Knife holders should not be set until after guards are aligned. Be sure all guard bolts are tight. After setting knife holders, try knife, put oil on ledger plates and be sure knife is working freely.

Replacing Ledger Plates.

Ledger plates should be replaced when worn dull. Replating guards with the John Deere Mower Guard and Knife Repair Block (see page 26) does away with the hard work and makes it an easy job to keep cutter bar in good working order.

With the Mower Guard Block, you do not take the bar from the mower or the guards from the bar. Set the guard repair block under the bar. The only tools needed are two punches (a heavy one and a light one), a hammer and a chisel. Drive the rivet through ledger plate with heavy punch and follow rivet with small punch and drive through guard. Put on new ledger plate. Put rivet in from underside, set riveting post under head of rivet and rivet over with hammer. Chisel off end of rivet flush with ledger plate to leave a smooth surface for knife. Batter boss on rear of plate to hold plate more securely.

Knife Head Guides.

Knife head guide, front, Z8977H, should be replaced if worn badly. Worn wearing plate and ledger plate on inner shoe should be replaced promptly to avoid knife head breakage.

6- and 7-Foot Cutter Bars.

A crown or dish is built into the 6-foot and 7-foot cutter bars (Z6698H regular bar, 6-foot; Z6439H, regular bar, 7-foot) to compensate for the added weight of the outer shoe and guards. The 6-foot bar has a 9/16-inch dish in the center; the 7-foot has a 15/16-inch dish in the center. This automatically straightens out when the cutter bar is attached to the mower and proper lifting spring tension is applied.

Gummy Trash on Cutter Bar.

Use water to remove gummy trash that packs on wearing plates and guards (operate mower slowly and pour water on bar). **Do not let it harden.**

Repairing of Cutter Bar.

The repairing of the mower cutter bar is generally put off too long. The mower does not give satisfactory service and is abused more than necessary. This neglect is generally due to lack of proper tools and necessary repairs to make a quick, easy job. Many times new guards are put on when new ledger plates only are needed. Note the helpful suggestions for repairing in Figures 3 and 4.

CUTTER BAR TILT ADJUSTMENT

Cutter bar should be run level to the ground whenever possible. Should it be necessary to change tilt of cutter bar for short cutting or when cutting in hay that is lodged, cutter bar can be tilted by means of convenient tilting lever.

ADJUSTABLE SUBSOLES

These soles under inner and outers hoes should be adjusted to regulate the height of cut for different field conditions. They will set bar to cut as high as three inches. Be sure to have cutter bar same height at both ends. On rough or stony land, the cutting parts should be protected by adjusting the subsoles to raise cutter bar.

KNIVES

The two knives packed with the bar should remain with it and be handled so they will not be bent. In sharpening knives, try to maintain angle of bevel and cutting edge of the new knife.

If knife becomes bent in rough cutting or storage, straighten it on level pole or block.

A Guard and Knife Repair Block provides the easiest and quickest way for replating guards, replacing worn or broken sections and straightening knives (Figure 29, page 26).

PITMAN

The knife head connection of the automatic pitman requires no attention from the operator to keep in proper adjustment. Wear on knife head is automatically taken up by spring tension, see Figure 5.

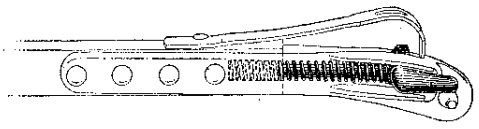

Figure 5

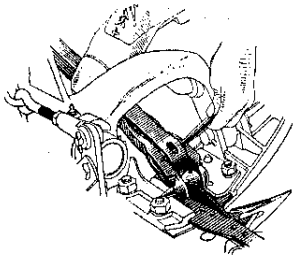

Figure 6

To Attach Pitman. Hold pitman down with foot and use punch to pry up the spring, allowing pitman straps to close over knife head. (Figure 6).

To Remove Pitman. Insert punch through hole in flat spring and into yoke plunger, and force yoke plunger back, and the flat spring down between the straps, to spread them and release the knife head (Figure 7).

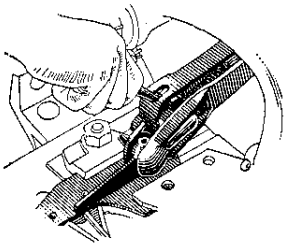

Figure 7

REGISTERING KNIFE

The knife registers if sections center in guards when pitman is at the inner or outer end of its stroke. A knife off register will not cut clean. Adjustable (forked) washers are provided at inner and outer ends of drag bar bearing in yoke. Knife is registered by transferring one or more washers from one end of yoke to the other and by lengthening or shortening the Brace Bar **"A"** at Flywheel Bowl (see Figure 8). One turn of Brace Bar gives bar 1/8-inch movement. **When checking knife for register, be sure that pitman connections are adjusted as directed above. Be sure that tongue is 32 inches from the ground at front end** (see page 5). Be sure that lifting spring has proper tension (see page 13).

To Make Registering Adjustment. Unhook lifting spring from lifting

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