POTATO PLANTERS NO. 112 ONE-ROW & NO. 212 TWO-ROW

JOHN DEERE

OPERATORS MANUAL

POTATO PLANTERS NO. 112
ONE-ROW &
NO. 212 TWO-ROW

OMD36955 (01SEP55) English

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TO THE OWNER

The John Deere Potato Planter you have just purchased will give you many years of satisfactory performance. It is economical to operate, extremely accurate, and properly balanced for light draft. It will allow you to plant at maximum speed, get your crop in quickly, and assures you of a perfect stand.

For harvesting your potato crop, investigate the modern and complete line of John Deere Potato Diggers.

For Quality Equipment and Genuine Parts, go to your JOHN DEERE DEALER. He and the JOHN DEERE Branch House behind him are in business for your service.

"Right" and "Left" refer to the operator's right or left when facing in the same direction the machine will travel.

Save this Manual. It has been carefully prepared. Refer to it for Operating Instructions and Accurate Parts Information.

Fill in the date of purchase and owner's name in the space below. This information wlll help your John Deere Dealer supply you with the correct replacement parts.

PLANTER No.

.....

DATE OF PURCHASE

.....

OWNER

.....

.....

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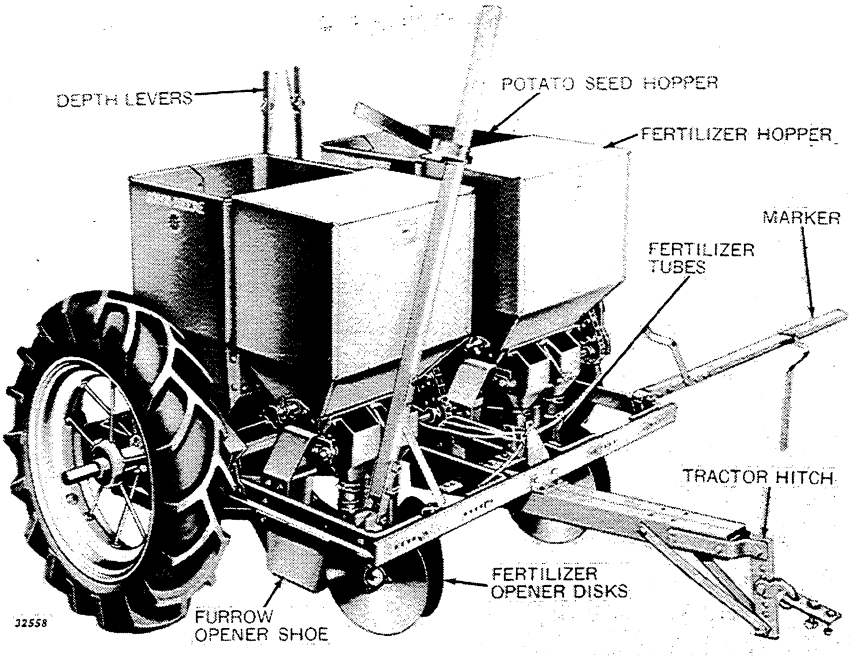
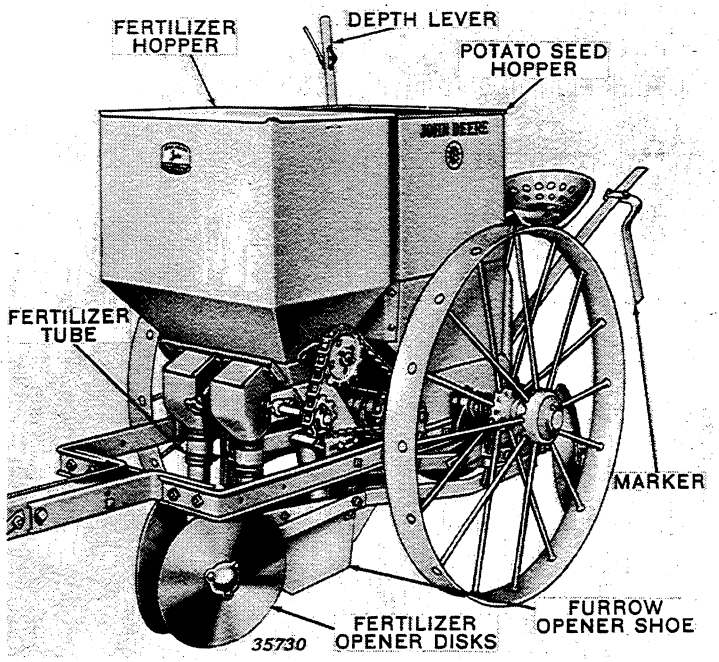


John Deere No. 212 Two-Row Tractor Potato Planter with No. 20 Fertilizer Attachment



John Deere No. 112 One-Row Potato Planter with No. 20 Fertilizer Attachment

SPECIFICATIONS AND DATA

SERIES	No. 12, consisting of two models of one-row drawn planters and twelve models of two-row drawn planters.
MODELS	No. 112-A-1 One-Row Planter with 40 x 4-Inch Steel Wheels and Hand Lift No. 112-A-2 One-Row Planter with 40 x 4-Inch Steel Wheels, Hand Lift, and Fertilizer Attachment. No. 212-A-1 Two-Row Planter with 40 x 6-Inch Steel Wheels and Hand Lift. No. 212-A-2 Two-Row Planter with 9 x 24—4-Ply Rubber Tires and Hand Lift. No. 212-A-3 Two-Row Planter with Wheels for Tires and Hand Lift. No. 212-A-4 Two-Row Planter with 40 x 6-Inch Steel Wheels and Power Lift. No. 212-A-5 Two-Row Planter with 9 x 24—4-Ply Rubber Tires and Power Lift. No. 212-A-6 Two-Row Planter with Wheels for Tires and Power Lift. No. 212-A-7 Two-Row Planter with 40 x 6-Inch Steel Wheels, Hand Lift, and Fertilizer Attachment. No. 212-A-8 Two-Row Planter with 9 x 24—4-Ply Rubber Tires, Hand Lift, and Fertilizer Attachment. No. 212-A-9 Two-Row Planter with Wheels for Tires, Hand Lift, and Fertilizer Attachment. No. 212-A-10 Two-Row Planter with 40 x 6-Inch Steel Wheels, Power Lift, and Fertilizer Attachment. No. 212-A-11 Two-Row Planter with 9 x 24—4-Ply Rubber Tires, Power Lift, and Fertilizer Attachment. No. 212-A-12 Two-Row Planter with Wheels for Tires, Power Lift, and Fertilizer Attachment.
FERTILIZER ATTACHMENT	Available for Any of the Above Models When So Ordered.
MARKERS	Disk Marker or Scratch Marker Available as Ordered.
COVERING DISK	Regular with 16-Inch Disks. 12-Inch Disk Available on Order.
LIFT	Power Lift or Hand Lift Available as Ordered for All Models.
WHEELS	Steel Wheels, Wheels and Tires, or Wheels less Tires, Available as Ordered.
ROW WIDTH	Adjustable 32 Inches Through 42 Inches.
SEED SPACING	Variable by Changing Spacing Sprocket.
FERTILIZER APPLICATION	Variable from 100 Pounds to 3,500 Pounds per Acre by Adjusting Fertilizer Gate.

OPERATION

Your John Deere Potato Planter has been designed to plant your crop and give greatest possible accuracy of planting, fertilizing and hilling under varying field conditions to assure a maximum yield.

By availing yourself of the various possible adjustments hereafter described, your planting operation can be performed with greatest efficiency.

SUGGESTIONS

Built rugged and strong in every part, your John Deere Potato Planter will give maximum efficiency if you follow these suggestions:

1. Potatoes should be planted in a deep-plowed and thoroughly pulverized seedbed.

2. For the greatest possible planting accuracy, the seed should be of uniform size.

3. Picker points can be easily adjusted for various sizes of seed pieces. Use this adjustment! The short time involved will be well repaid in planting accuracy. See page 5.

4. Picker arm parts should be kept free and flexible by regular cleaning and lubrication of the arm bushings.

5. Carry plenty of seed in the picker bowl.

6. Chains should be kept tight by the chain tighteners and only lubricated sufficiently to maintain flexibility.

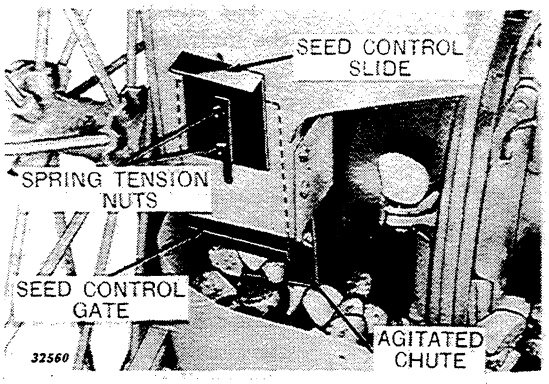
7. Clutch parts should be kept well lubricated.

8. Grease planter regularly. See Lubrication Chart on pages 16 and 17.

9. The fertilizer attachment should be thoroughly cleaned and oiled after the planting season is over to prevent rusting of parts during storage.

10. Opener shoe, fertilizer furrow openers, and covering disks should be greased before storing.

SEED CONTROL GATE ADJUSTMENT



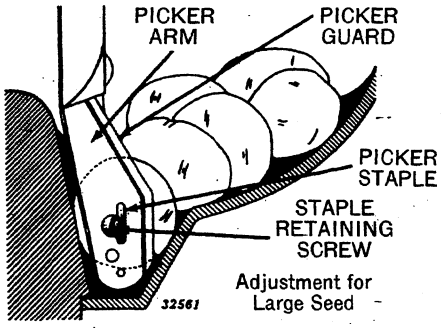
The automatic gravity feed is assisted by the agitated chute.

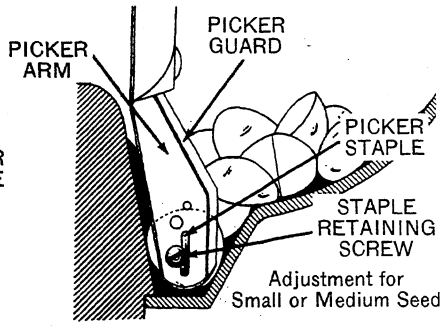
Flow of seed to the bowl is controlled by the amount of opening given by the sliding seed control gate. The gate is operated by the seed control slide on the outside of the hopper.

The nuts control the spring tension on the gate and slide.

Carry plenty of seed in the picker bowl to adequately "back up" the seed piece being picked.

PICKER POINT ADJUSTMENT





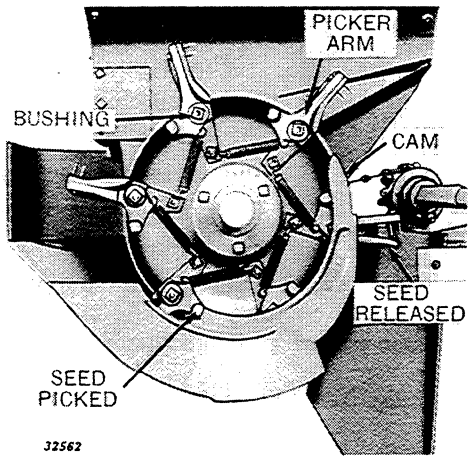
Because of the seed lying in the "V" shaped trough, it is only necessary to adjust the staple in a vertical direction for various sizes of seed pieces.

Large seed will rest high in the "V" trough and the staple picker points should be located in the upper holes in the picker arm as shown above.

Small or medium seed will rest low in the "V" trough, and the staple picker points should be located in the lower holes in the picker arm as shown above.

Keep picker points straight and sharp. When they become short and dull, replace them for maximum efficiency.

PICKING WHEEL

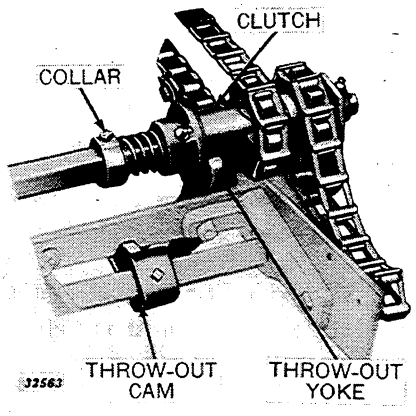


The illustration shows the interior of one-half of the picker wheel to illustrate the picking and releasing action of the picking mechanism.

As the wheel rotates in a clockwise direction, the spring controlled picker arms contact the cam to release the seed piece. The arms continue to ride the cam until they reach the drop off point, which causes the arm to snap shut and pick the seed. The picker arm is provided with a renewable bushing. This bearing point should be kept free acting. The shield covering mechanism is held in place by a brass screw and can be easily removed for inspection or lubrication of parts.

Be sure to apply oil **FREQUENTLY** to the face of the cam and also the contact face of the picker arms. These parts are chilled for long life but lubrication aids materially in their operation and life.

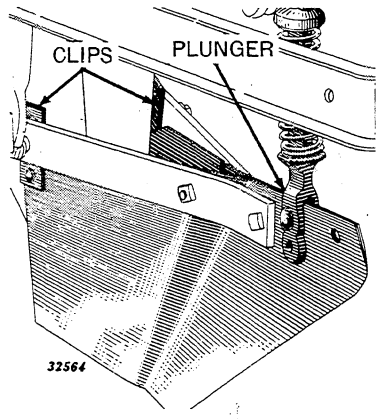
CLUTCH ADJUSTMENT



To adjust the amount of clutch throw-out move the clutch throw-out cam on the square shaft to right or left to cause more or less travel of the clutch throw-out yoke.

Spring tension on the clutch can be increased by moving the clutch spring collar toward the clutch member.

OPENER SHOE ADJUSTMENT

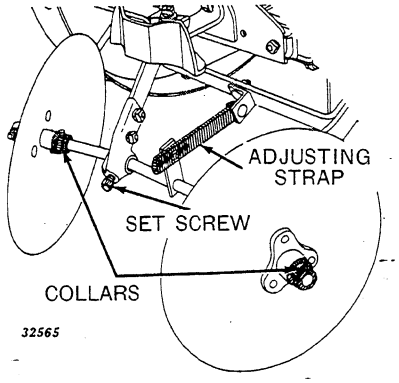


The lower hole in the plunger is used for deep planting or compensation for wear.

The heel of the shoe may be set lower by using the top holes in the clips at the rear of the shoe.

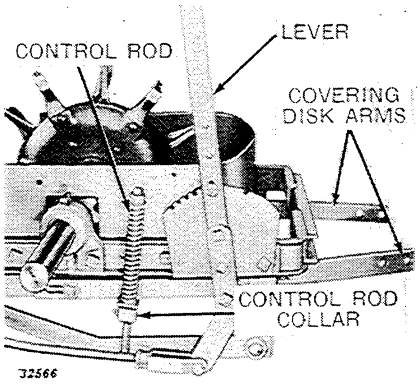
For best operation, the front of the opener shoe should be lower than the rear. This makes a "V" trench and centers the seed pieces on the row. It also locks the seed in place more quickly.

COVERING DISK ADJUSTMENT



The height of the hill is regulated by the adjusting strap to get the desired throw of the disks. Hold axle in position with set screws.

The distance between the covering disks can be adjusted by sliding them in or out on the axle. They are held in position with the collars on each side of the disk.



To assure maximum transport clearance of the covering disks, raise the covering disk arms until they touch the frame. Move lever slightly forward and slide the control rod collar up on the rod as far as possible. Secure with set screw.

NOTE: The flat side of the control rod collar should always be to the outside.

In stony or hard ground or where deep covering is desired, the pressure of the covering disks against the ground may be increased by turning down the nuts on the control rods.

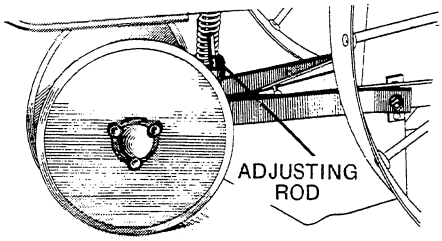
FERTILIZER DEPTH ADJUSTMENT

The depth of fertilizer in relation to the seed can be altered by adjustment of the coulters.

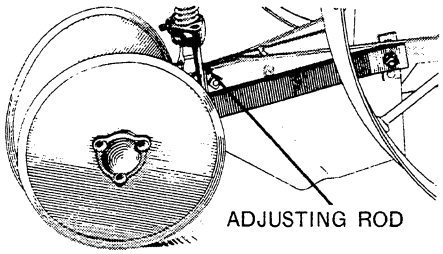
Adjust the coulters by loosening the set screws holding the adjusting rods. Tighten again when coulters are at desired depth.

The illustrations show the maximum and minimum adjustments and three different positions of the fertilizer in relation to the seed.

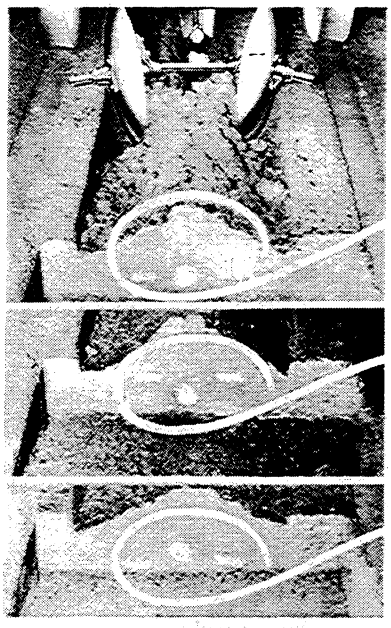
Fertilizer depth adjustment should not be judged by relation of the disks to the opener shoe, but by trial in the field.



MINIMUM DEPTH



32567 MAXIMUM DEPTH



Fertilizer level with seed

Fertilizer above seed

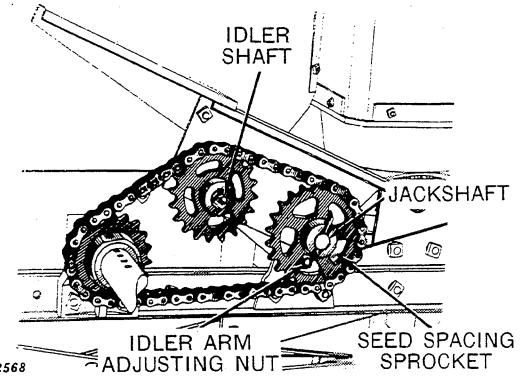
Fertilizer below seed

CHANGING SPACING SPROCKETS

Use sprocket desired (see Chart below) on jackshaft and any other spacing sprocket on idler shaft to take up the slack in the drive chain. The idler arm is adjustable for this purpose. Loosen nut to adjust idler arm. The normal way to run the idler sprocket is with the chain over the top of the sprocket. With some spacing sprockets it may be necessary to run the chain under the idler.

Always keep chain tight.

When RN86FD—31-tooth — spacing sprocket is used, five links of chain are added to the standard length of drive chain and the guards over the drive chain are removed.



SEED SPACINGS

REGULAR ARRANGEMENT

With 40″ Steel Wheels or 900—24″ Rubber Tires

Using Regular (RN123FD) 8 Tooth Picker Drive Sprocket

Spacing Sprocket No.	No. Teeth	Spacing in Row
RN 60 FD	13	7½″
RN 37 FD	16	9″
RN 87 FD	18	10″
RN 38 FD	20	11″
RN 138 FD	21	12″
RN 39 FD	23	13″
RN 40 FD	26	15″
RN 86 FD (Extra only)	31	18″

SPECIAL ARRANGEMENT

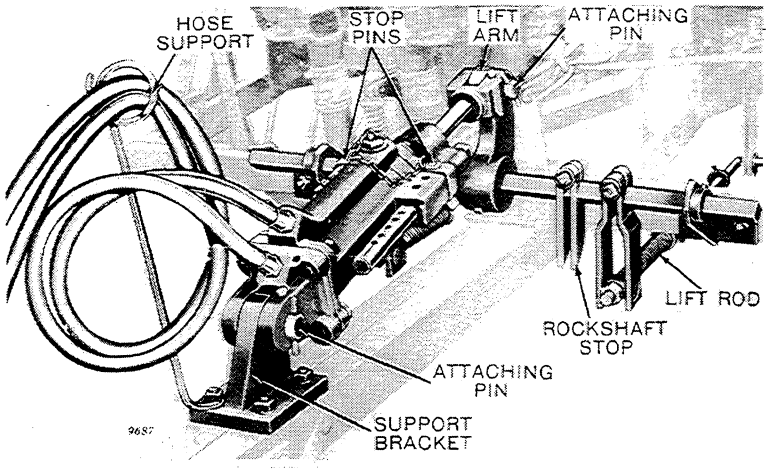
With 40″ Steel Wheels or 900—24″ Rubber Tires

Using Special (RN133FD) 10 Tooth Picker Drive Sprocket

Spacing Sprocket No.	No. Teeth	Spacing in Row
RN 60 FD	13	6″
RN 37 FD	16	7″
RN 87 FD	18	8″
RN 38 FD	20	9″
RN 138 FD	21	9½″
RN 39 FD	23	10½″
RN 40 FD	26	12″
RN 86 FD (Extra only)	31	15″

NOTE: When 48″ diameter wheels are used on Planters, the above "Spacing in Row" figures are increased by 20%.

POWR-TROL
(Two-Row Only)



The Two-Row Planter can be equipped for hydraulic operation with John Deere Powr-Tool or the hydraulic system of any tractor having sufficient capacity and utilizing a remote cylinder that conforms with A.S.A.E.—S.A.E. standards.

To install hydraulic cylinder on planter, pull both attaching pins, and mount cylinder in support bracket and lift arm. Place hose in hose support, and reinstall two attaching pins.

To remove the cylinder, reverse procedure described above.

WARNING: Before operating Powr-Trol cylinder, be sure to move the rockshaft stop to the left and lock in position so it will clear the pole angles in operation. Serious damage may result if this is not done.

Refer to your Tractor Operator's Manual for operation and maintenance of Powr-Trol cylinder.

OPENER SHOE DEPTH ADJUSTMENT

The Powr-Trol cylinder is fully adjustable to give a wide range of planting depths for the opener shoes. To change the depth of the opener shoes, simply adjust the operating stroke of the piston rod until the opener shoe is at the desired depth, and secure the stop in that position. See the appropriate tractor operator's manual for detailed information on Powr-Trol operation and adjustment.

POWR-TROL—Continued

OPENER SHOE TRANSPORT CLEARANCE

The height of transporting clearance of each opener shoe can be equalized by the hexagon nut on the lift rod.

To obtain maximum transport clearance, turn hexagon nut on the lift rod so that when the Powr-Trol cylinder is in the maximum lift position, the opener shoes are in their uppermost position.

RUBBER TIRE CARE AND INFLATION

The tires used on the two-row planter are 9:00 x 24 and should normally be inflated to 12 pounds.

Keep rubber tires away from fuel or oil. Oil softens and deteriorates rubber, shortening the life of the tire.

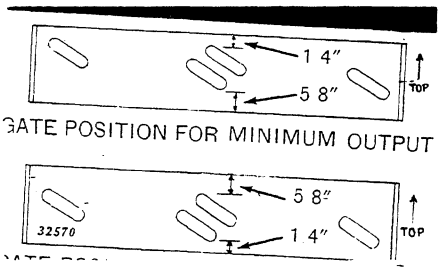
The planter tires should always be stored in a cool, dark place out of the sunlight. Sunlight causes the tire surface to check and harden. If planter is to be stored for long periods of time, it should be jacked up and the load taken off the tires.

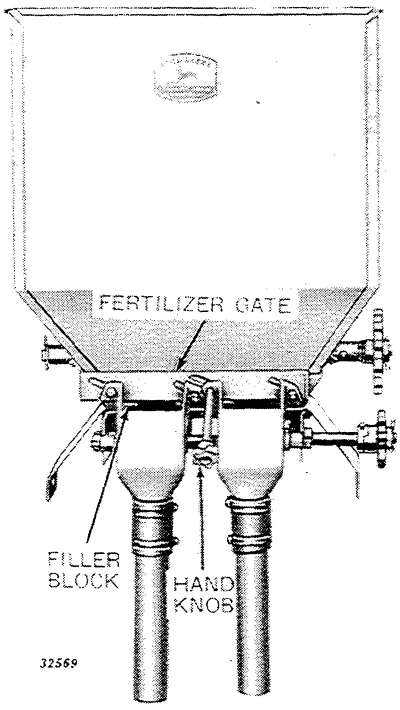
No. 20 FERTILIZER ATTACHMENT

The No. 20 Belt Feed Fertilizer Attachment assures you of positive and accurate placement of the fertilizer in relation to the seed piece. The No. 20 Attachment can be adjusted so that almost any quantity of fertilizer can be applied. It has a range of from 100 pounds per acre to 3500 pounds per acre and can be regulated so that any amount in between these two extremes can be applied. Large 350 lbs. capacity hoppers reduce the need for stopping to refill. A steady flow of fertilizer is assured by the fertilizer agitator inside the hopper. Cleaning and servicing is easily accomplished.

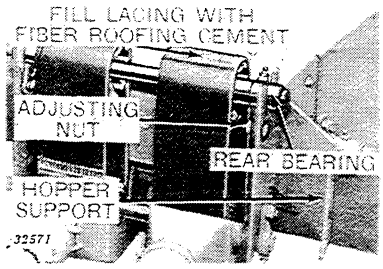
GATE ADJUSTMENT

The fertilizer gate is assembled at the factory for maximum distribution, but the gate may be turned upside down for a minimum range of distribution. The output will vary with the type of fertilizer used. Loosen the hand knob and move gate to the right to increase output and to the left to decrease output. When low output is desired the filler blocks will have to be removed.

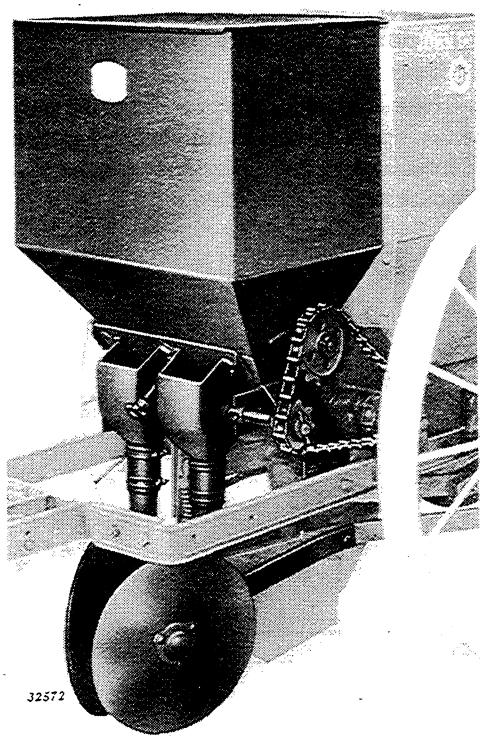




BELT ADJUSTMENT



The feed belts are tightened by moving the rear idler shaft bearings at the rear of the fertilizer attachment. Loosen the nut, place a pry or bar between the shaft bearing and the hopper support and push the bearing to the rear. Hold the bearing in this position and retighten the nut. Repeat this operation on the other side. The bearings should be moved the same amount on each side so that the distance between the driving shaft and the idler shaft is the same on both sides.



Caution: The belts should only be tight enough to drive without slipping. In high humidity areas the belts will shrink, therefore, lacing should be checked daily to prevent damage in operation.

NOTE: When replacing belts, a fiber roofing cement should be worked all the way through the lacing to prevent the fertilizer from drifting through to the inside of the belt.

CARE OF FERTILIZER HOPPER

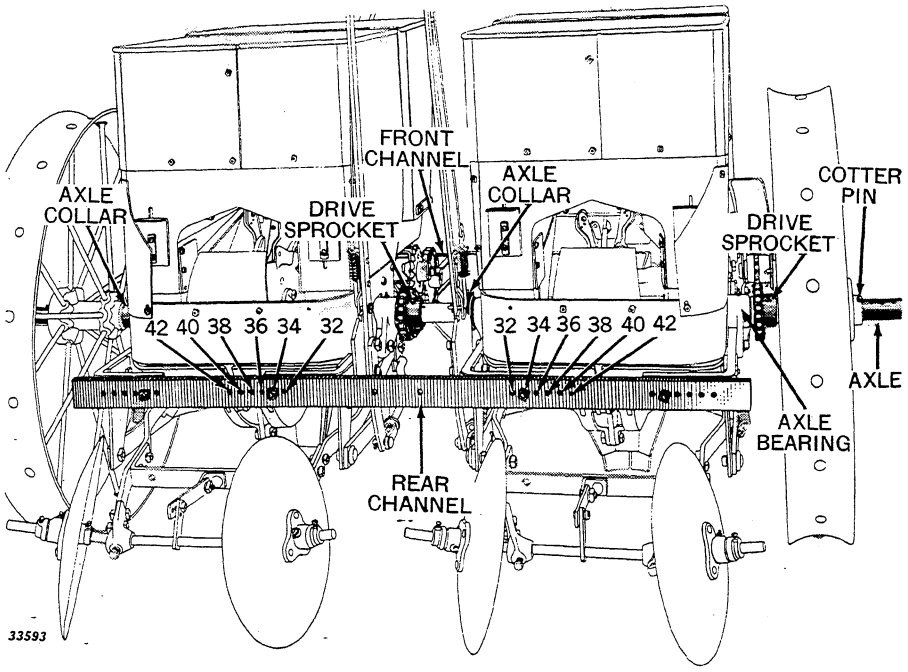
After the season's planting is done, the fertilizer hopper should be thoroughly cleaned of all fertilizer to prevent rusting of the parts during the storage season.

Remove the fertilizer agitator and clean the inside of the hopper thoroughly. The feed belts should be removed and cleaned before storing.

ROW WIDTH ADJUSTMENT

Two-row planters are shipped from the factory assembled for 34-inch row widths. However, they can be adjusted to fit row widths from 32 to 42 inches.

Holes in the axle are spotted one inch apart to accommodate the set screws in drive sprockets and drilled one inch apart to accommodate the cotter pins. Holes in the front and rear channels are spaced one inch apart to accommodate the machine bolts.



Changing row spacing requires the following adjustments.

Loosen set screw in main drive sprockets.

Loosen set screws in collars on axle.

If wheels have been assembled, remove cotter pins from axles.

Remove front frame channel.

Remove rear frame channel and shift planter units to spacing desired.

Replace rear frame channel. Replace front frame channel.

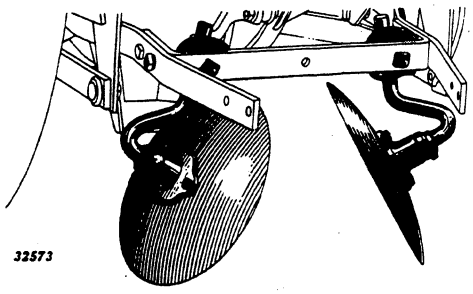
Replace all cotter pins, set screws and bolts in their proper holes.

NOTE: Be sure that bronze bushing in axle bearing fits with lug on bushing in recess in bearing.

SPECIAL EQUIPMENT

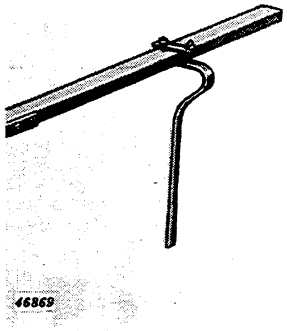
12-INCH COVERING DISKS

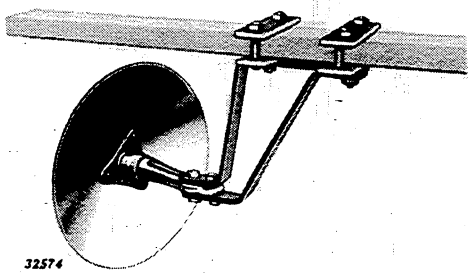
Special 12″ covering disks are available for shallow covering or hillside work.



MARKERS

Disk markers, or scratch markers, are available when ordered and can be used on regular marker arms as shown.



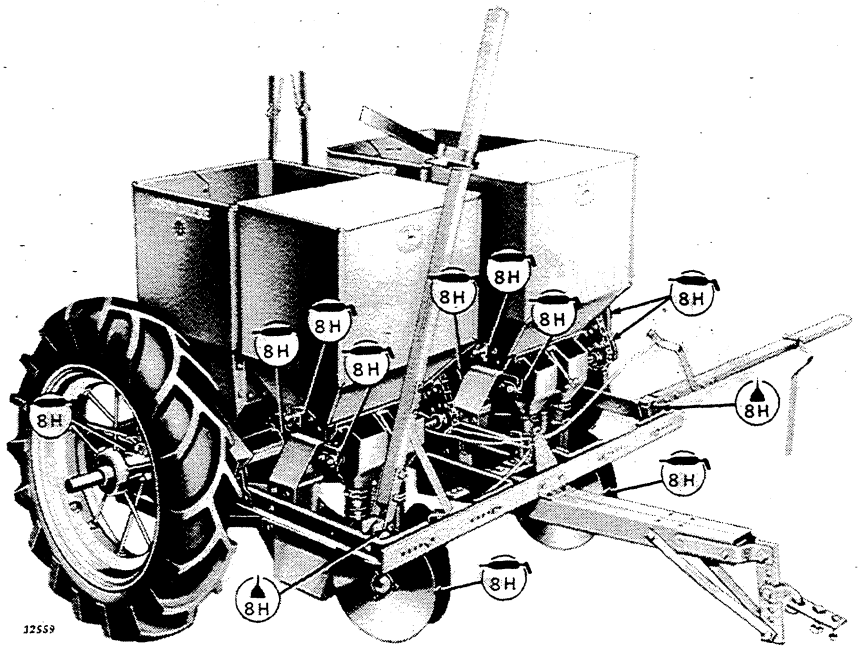


LUBRICATION

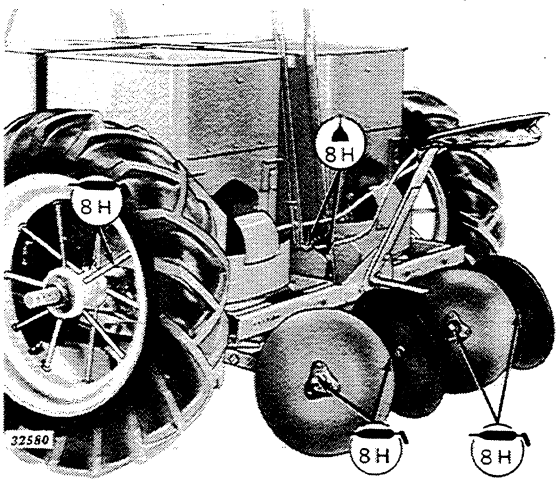
The economical and efficient operation of any machine depends on regular and proper lubrication of all moving parts with a quality lubricant. This is especially true of farm equipment which must operate in hot and dusty conditions over rough ground. Neglected lubrication quickly leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

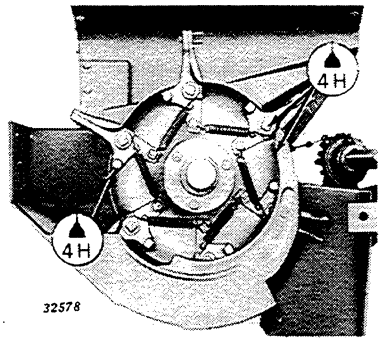
Illustrations on the following pages are provided with symbols to detail lubrication instructions. Follow them carefully.

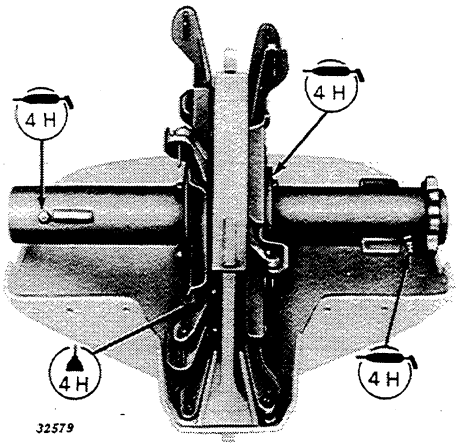
SYMBOLS	
4H	GREASE EVERY 4 HOURS OF OPERATION
8H	GREASE EVERY 8 HOURS OF OPERATION
4H	OIL EVERY 4 HOURS OF OPERATION
8H	OIL EVERY 8 HOURS OF OPERATION

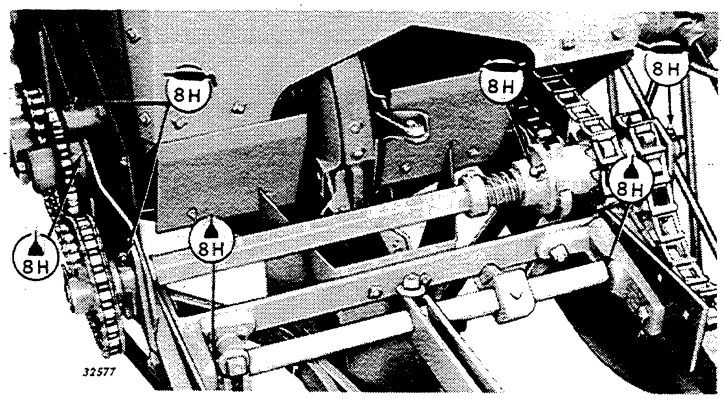


LUBRICATION—Continued









MEMORANDA

MEMORANDA

MEMORANDA

As a Member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Farm Safety, but to point out more clearly the safety precautions in this manual.

Farm Accidents Can Be Prevented

with Your Help

NO accident prevention program can be successful without the whole-hearted cooperation of the person who is directly responsible for the operation of equipment.

To read accident reports from all over the Country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the harvest field, or in the industrial plant, can be safer than the man who is at the controls. If farm accidents are to be prevented—and they can be prevented—it will be done by the operators who accept a full measure of their responsibility.

It is true that the designer, the manufacturer, the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that "*the best kind of a safety device is a careful operator.*" We ask you to be that kind of an operator.

NATIONAL SAFETY COUNCIL