

# John Deere 80 Unit Planter



JOHN DEERE

## OPERATORS MANUAL

John Deere 80 Unit  
Planter

OMA28630 Issue J4 English

**OMA28630 Issue J4**

LITHO IN U.S.A.  
ENGLISH





## To the Purchaser

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This new planter was carefully designed and manufactured to give years of dependable service. To keep it running efficiently, read the instructions in this operator's manual. Each section is clearly identified so you can easily find the information you need - whether it is operation, lubrication, or adjustments and service. Read "Contents" to learn where each section is located. Use the alphabetical index for fast reference.

In addition to the equipment furnished with your planter, attachments are available to help you do a better job in special crop conditions. These are described in the special equipment section of this manual and can be purchased from your John Deere dealer.

"Right-hand" and "left-hand" sides are determined by facing in the direction the planter will travel when in use.

Record your planter serial numbers in the space provided on page 62. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your planter requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts-accept no substitute.

The warranty on this planter appears on your copy of the purchase order which you should have received from your dealer when you purchased the planter.



This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

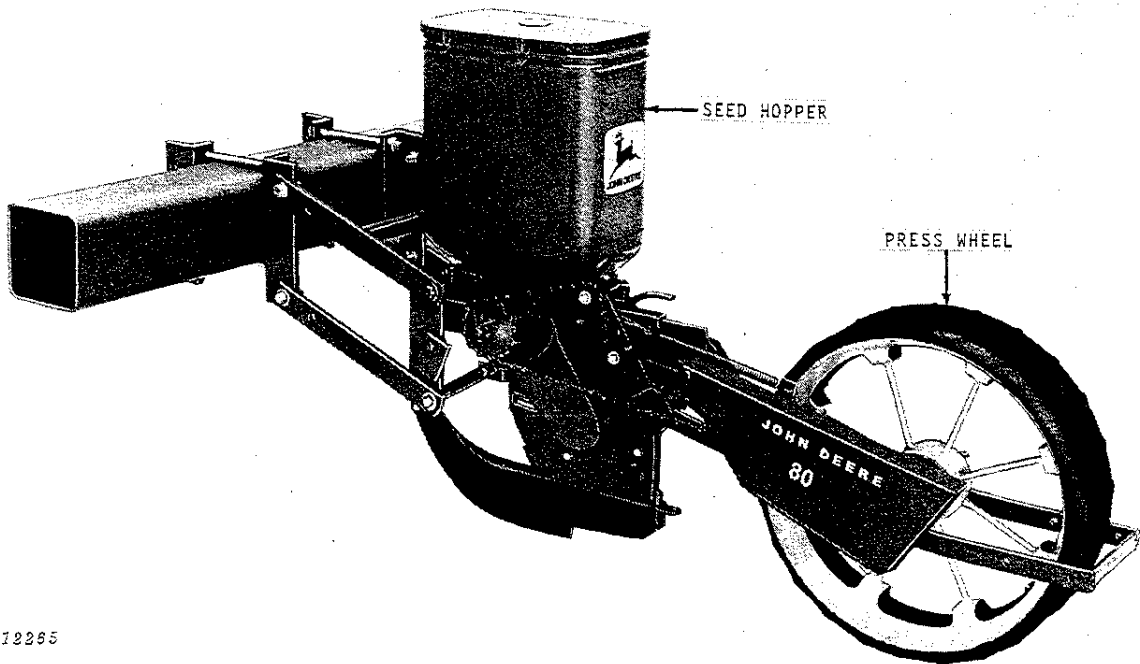
Your operator's manual contains SI Metric equivalents which follow immediately after the U.S. customary units of measure.



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John Deere 80 Planting Unit



## Safety Suggestions

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

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

Be careful when operating the planter, to avoid injury to the operator and his assistants.

Always lower the planter to the ground when not in use. Whenever possible, perform service work and adjustments with the planter on the ground.

If the planter must be in a raised position while working on or near it, support it securely with parking stand or blocks.

Permit only one person - the operator - on the tractor platform while tractor and planter are in operation.

Never ride or permit others to ride on the drawbar of the tractor or on the planter.

Never clean, lubricate, or adjust a machine that is in motion.

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

When transporting the planter on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard, check local governmental regulations. Various safety lights and devices are available from your John Deere dealer.

Be careful when operating on hillsides because the tractor may tip sideways if it strikes a hole, ditch, or other irregularity.

Agricultural chemicals can be dangerous. Improper selection or use can injure persons, animals, plants, soils, or other property. **BE SAFE.** Handle and apply it with care. Follow instructions of the chemical manufacturer.

Finally, remember this: An accident is usually caused by someone's carelessness, neglect, or oversight.



# Operation

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## PREPARING THE TRACTOR

For complete operating instructions concerning the tractor refer to the tractor operator's manual.

### Rear Wheel Tread

Set tractor wheel tread (center to center of tires) as nearly as possible twice the distance of the row width. For example: For 40-inch (102 cm) row widths, set the tractor wheel tread at 80 inches (203 cm).

### Tire Pressure

Consult your tractor operator's manual for front and rear tire pressure.

### Adjusting Speed of Rockshaft Drop

Set the speed of the rockshaft drop on the tractor which the rockshaft and implement drop can be regulated.

Adjust the throttle valve to give a smooth, slow drop of the planter.

### Front-End Weighting

Front ballast (added weight) may be required for stability and steering control when operating.

The total maximum amount of weight recommended at the front wheels for normal field operation is approximately 1/3 of the total tractor weight.

The table on page 3 was developed on this basis to provide maximum safety for the operator and maximum efficiency of the tractor-implement combination.

Add additional ballast, when needed, for safe transport stability.

**CAUTION:** Front-end ballast may not always maintain the required stability if the tractor is driven too fast over rough ground with planter in raised position. Be safe and drive slowly under these conditions.

To determine if additional front ballast is necessary for transport stability, refer to the code number listed in the chart on page 4 pertaining to your size planter. Using this number, see "Front Ballast" in your tractor operator's manual for proper weighting.

4 Operation

**IMPLEMENT CODES FOR INTEGRAL PLANTERS**

		PLANTING UNITS						
		Number of Rows						
Equipped With:		1	2	4	6	8	12	
Unit Only:		27	54	108	162	216	324	
Insecticide		32	64	128	192	256	384	
Herbicide		33	66	132	198	264	396	
Insecticide and Herbicide		37	74	148	222	296	444	
TOOLBAR, HITCH, GAUGE WHEELS AND MARKERS <sup>o</sup>								
Marker Alternatives		Gauge Wheel Mounting		Toolbar Size				
		5'6"x4"x7" (1.7m x 10 cm x 18cm)	12'6"x4"x7" (3.8m x 10 cm x 18cm)	15'x4"x7" (4.5m x 10 cm x 18cm)	18'x4"x7" (5.4m x 10 cm x 18cm)	22'x5"x7" (6.7m x 13 cm x 18cm)	26'6"x5"x7" (8m x 13cm x 18cm)	30'6"x5"x7" (9.2m x 13 cm x 18cm)
Mechanical or								
Medium Straight	To Front	34	42	45	49	-	-	-
Hydraulic	To Rear	48	56	59	63	67	76	81
Long Straight	To Front	-	43	46	50	54	63	68
Hydraulic	To Rear	-	57	60	64	68	77	82
Folding	To Front	-	-	51	55	59	68	73
Hydraulic	To Rear	-	-	65	69	73	82	87

<sup>o</sup>If endwise transport attachment is used, add 11 to total code in table.

**IMPLEMENT CODES FOR SEMI-INTEGRAL PLANTERS**

		PLANTING UNITS						
		Number of Rows						
Equipped With:		1	2	4	6	8	12	
Unit Only:		14	28	56	84	112	168	
Insecticide		17	34	68	102	136	204	
Herbicide		17	34	68	102	136	204	
Insecticide and Herbicide		19	38	76	114	152	228	
TOOLBAR, HITCH, GAUGE WHEELS, MARKERS AND HYDRAULIC LIFT ASSIST WHEELS <sup>oo</sup>								
Marker Alternatives		Toolbar Size and Number of Lift Assist Wheels						
		15'x4"x7" (1)* (4.5mx10cm x 18cm)	18'x4"x7" (1)* (5.4mx10cm x 18cm)	22'x5"x7" (2)* (6.7mx13cm x 18cm)	26'6"x5"x7" (2)* (8mx13cm x 18cm)	30'6"x5"x7" (2)* (9.2mx13cm x 18cm)		
Medium Straight Hydraulic		17	19	21	26	28		
Long Straight Hydraulic		18	20	22	27	29		
Folding Hydraulic		20	22	24	29	31		

<sup>oo</sup>If endwise transport attachment is used, add 5 to total code in table.  
( ) \*Quantity of lift assist wheels

Example:

Let's assume you have four rows of integrally mounted units with insecticide attachments. By checking the above chart you will find an implement code of 128. Add to this the implement code for your toolbar combination.

Assuming that you have a 12'6" x 4" x 7" (3.8 m x 10 cm x 18 cm) toolbar with medium, straight hydraulic markers and gauge wheels mounted to the front, your toolbar combination implement code shown in the above chart would be 42. Adding 128 and 42 would give you a total of 170.

Using this implement code, check "Front Ballast" in your tractor operator's manual to see how much front-end weight will be required.

**NOTE:** To obtain maximum front-end weighting for tractor-implement combinations where implement code information is not available, proceed as follows:

Drive tractor onto a scale so only the front wheels are on the scale and subtract this weight from 1/3 the total tractor weight. Add front-end weights to equal the difference.

## PREPARING THE TRACTOR—Continued

### Belt Pulley

The belt pulley must be removed if the tractor is so equipped.

### Sway Blocks

Sway blocks must be attached to eliminate all side sway except when contour farming.

### Setting the Rockshaft Selector Lever

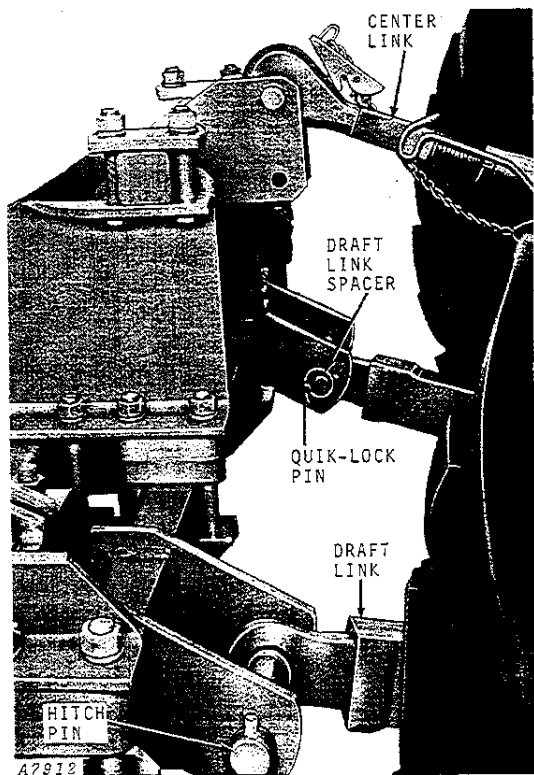
Set the selector lever in "D" position.

### Lift Links

Adjust the lift links for transport clearance and lateral float. See tractor operator's manual.

## ATTACHING TO TRACTOR

### 3-Point Hitch



Be certain rockshaft selector lever is in "D" position.

Raise draft links between inside and outside supports, line up holes, and insert hitch pins through outside hitch supports. Push hitch pins through draft link ball sockets and inside hitch supports.

Position draft link spacer on hitch pin as shown at lower left and secure with Quik-Lock pin.

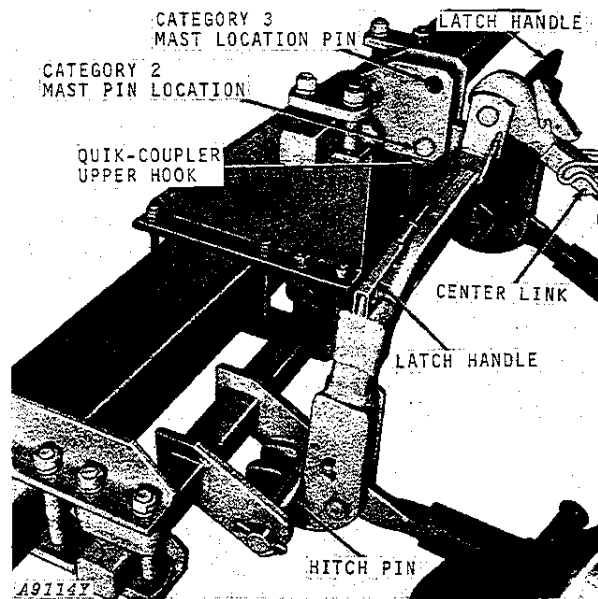
If tractor is equipped with telescoping draft links, close draft links either by raising and lowering planter with rockshaft control lever or by backing up tractor.

Be sure to lock snap pins into place.

Connect center link to mast. It may be necessary to change length of center link with adjusting handle.

When using semi-integral hitch, the center link is not used. See page 53.

### Quik-Coupler



Be certain mast pin of integral hitch is in lower hole of mast before attaching to category 2 Quik-Coupler, or in upper hole of mast before attaching to category 3 Quik-Coupler.

Be certain rockshaft selector lever is in "D" position.

Lift latch handles to vertical position to lock latches in released position. Lower Quik-Coupler until the attaching hooks are lower than the planter hitch pins.

Back tractor up until Quik-Coupler attaching hooks are in position to engage planter hitch. Slowly raise rockshaft until spring-loaded latches automatically secure hitch pins in place. Push inward on latch handles until they are flat against coupler frame to lock lower attaching hooks.

## DETACHING FROM TRACTOR

### 3-Point Hitch

With planter and tractor on firm level ground, lower planter to ground.

If planter is equipped with parking stand, secure stand in lower position. See page 8.

Continue lowering planter until weight of planter is supported by parking stand.

Remove Quik-Lock pins from planter hitch pins and remove hitch pins to free tractor draft links.

If planter is equipped with hydraulic disk marker attachment, secure marker arms with transport locking pins and disconnect hydraulic hoses from tractor.

Drive tractor forward away from planter.

Replace hitch pins and Quik-Lock pins in planter hitch.

### Quik-Coupler

With planter and tractor on firm level ground, raise tractor rockshaft far enough to reach latch handles. Raise handles to vertical position to release latches. Lower planter to ground.

If planter is equipped with parking stand, secure stand in lowered position. See page 7.

Continue lowering Quik-Coupler until coupler hooks clear planter hitch.

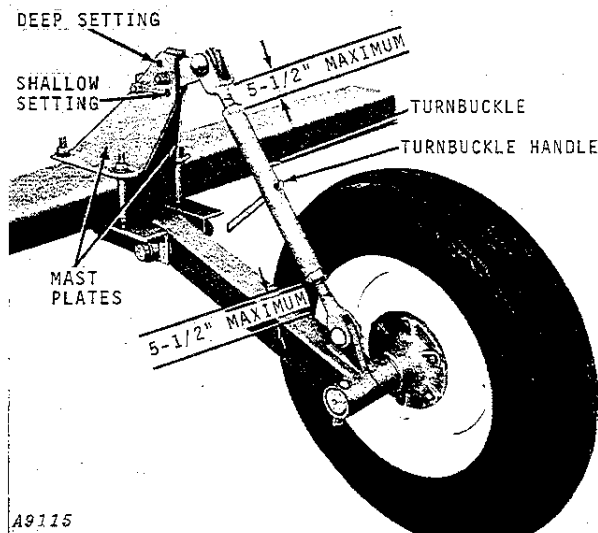
If planter is equipped with hydraulic disk marker attachment, secure marker arms with transport locking pins and disconnect hydraulic hoses from planter.

Drive tractor forward away from planter.

## PREPARING THE PLANTER

### Toolbar Gauge Wheels (4- x 7-Inch or 5- x 7-Inch [10 cm x 18 cm or 13 cm x 18 cm] Toolbar)

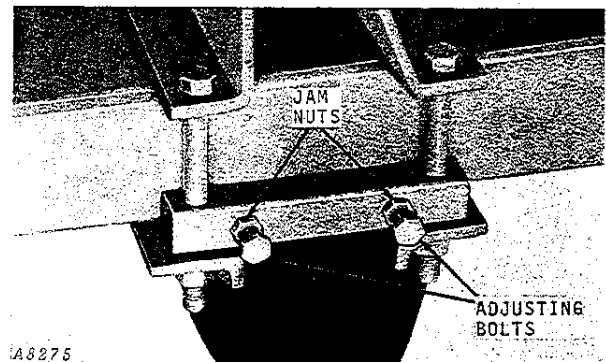
The toolbar gauge wheels regulate toolbar height. For best results, the toolbar should be held in a fixed working position 20 inches (51 cm) above the seed planting depth. As an example, if the planter unit is set for 2-inch (5 cm) planting depth, the bottom of the toolbar should be 18 inches (46 cm) above the ground.



Three holes in the mast plates provide for deep, medium, or shallow depth settings.

The turnbuckle provides fine adjustment within the three settings in the mast plates.

**CAUTION:** Do not extend turnbuckle so there is more than 5-1/2 inches (14 cm) of thread showing on either end.



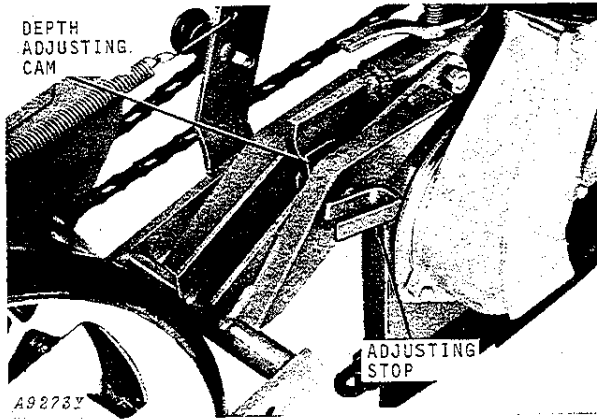
An adjuster block is used to insure the gauge wheels maintain straight-ahead alignment.

To adjust, loosen jam nuts and loosen one adjusting bolt, then tighten the remaining bolt. When gauge wheel is in the straight-ahead position, tighten jam nuts.



## Planting Depth

The planting depth is gauged by the planter press wheel.



Planting depth of each unit is determined by the setting of the depth adjusting cam. To decrease planting depth, pull out on the adjusting stop and rotate depth adjusting cam clockwise. To increase planting depth, pull out on adjusting stop and rotate depth adjusting cam counterclockwise. Each hole represents a change of approximately 3/8 inch (9.5 mm) in planting depth. Adjust all units to plant at the same depth.

*NOTE: Planting depth can also be gauged by double disk furrowers. See page 37 of special equipment.*

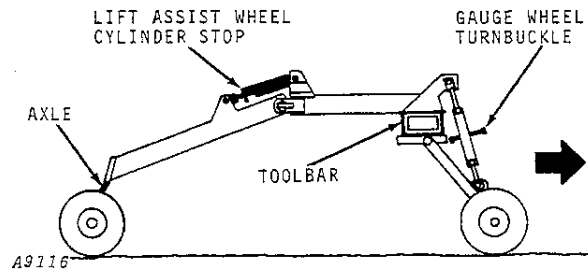
## Leveling Planter

### Integral

The integral toolbar planter is leveled by adjusting the center link of the 3-point hitch of the tractor.

The top edge of runner of the planting units must be parallel to the ground when the toolbar is lowered to the operating position.

### Semi-Integral



To level the semi-integral toolbar planter, proceed as follows:

Adjust gauge wheel turnbuckle so bottom front edge of toolbar is approximately 20 inches (51 cm) above seed planting depth.

Adjust remote cylinder stop on each lift assist wheel so with cylinder retracted the toolbar is level. Additional adjustment may be obtained by raising or lowering the lift assist wheel axle.

## Raising and Lowering Planter

### Integral

The planter is raised or lowered with the rear-mounted toolbar by the tractor hydraulic system.

### Semi-Integral

Extend remote hydraulic cylinder on the lift assist wheel to lift rear of planter, then raise rockshaft on tractor to lift front of planter.

## Markers

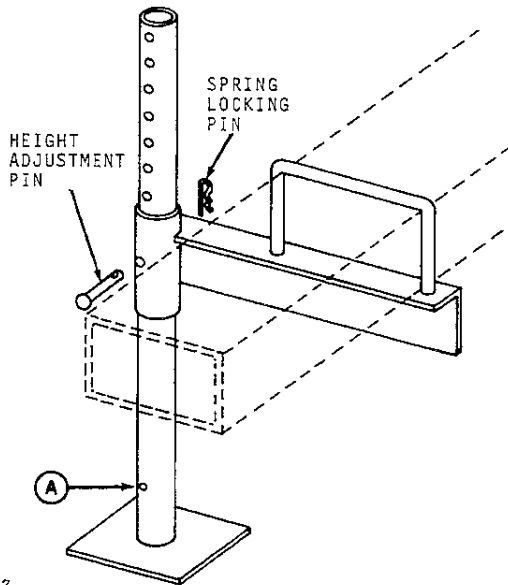
### Disk Type

Two- or four-row mechanical disk markers, or straight or folding hydraulic markers are available.

For operation and assembly instructions, see directions accompanying the marker.

## 8 Operation

### Parking Stand



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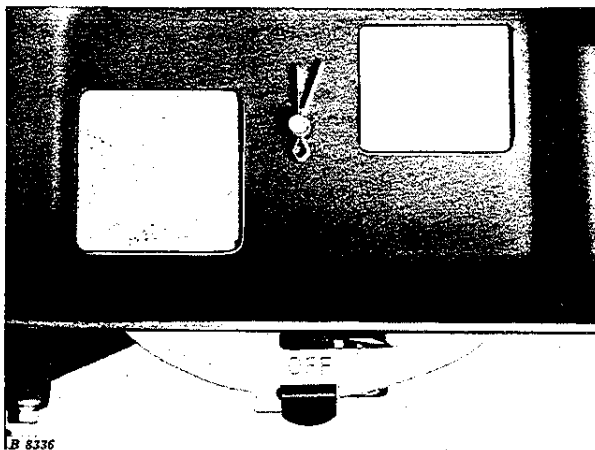
The parking stand should be used to prevent the planter from tipping when unhitching from tractor. It provides a convenient method of storing the planter at hitching height.

Remove height adjustment pin and spring locking pin from parking stand and raise or lower stand to desired height. Replace height adjustment pin and spring locking pin.

Position height adjustment pin in hole "A" for transport. Secure with spring locking pin.

### Selector Gate

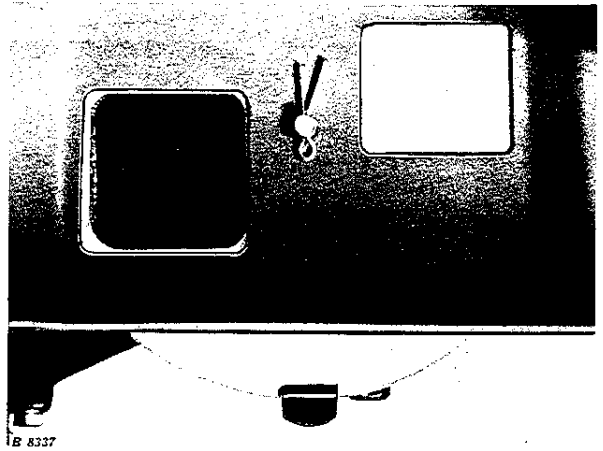
The selector gate at the bottom of the seed hopper has three positions marked as follows: "OFF", "BEANS & SORGHUM", and "CORN."



IB 8336

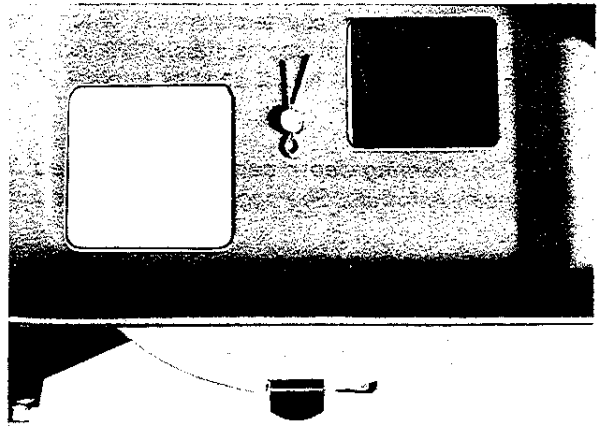
Before removing the hopper, turn the selector to the OFF position to close the openings in the hopper bottom.

*NOTE: Be certain to turn selector gate to "OFF" position for transporting.*



IB 8337

To plant corn with the finger pickup section of the planter, move the selector gate from the "OFF" position in a clockwise direction until it locks in place in the position marked "CORN."

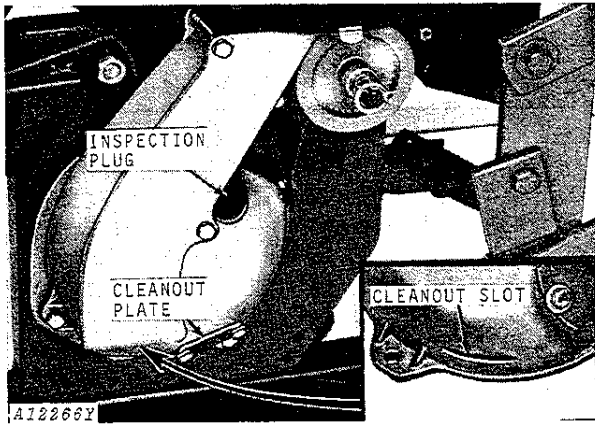


IB 8338

To plant soybeans, maize, or other small grain with the precision feed cup section of the planter, move the selector gate from the "OFF" position in a counterclockwise direction until it locks in place in the position marked "BEANS & SORGHUM." For instructions on using the precision feed cup, see page 11.

## PLANTING CORN

### Inspection and Cleanout



If seed hoppers are not empty, be certain to turn the selector gates to the "OFF" position or seed will escape from hopper through cleanout hole.

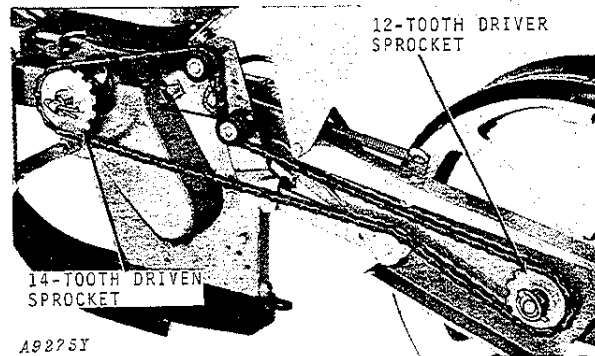
Remove INSPECTION PLUG and check fingers periodically. See "SERVICE" section, pages 22-23.

For best operation remove CLEANOUT PLATE and clean out finger pickup housing after each day's use.

Be certain the CLEANOUT SLOT on the underside of the finger pickup housing is not clogged. This will help prevent a buildup of dust and chaff inside the mechanism.

*NOTE: The planting units must always be covered with waterproof material at night or during wet weather.*

The sprocket combinations in the "DRILLING DISTANCE" chart on page 10 provide different drilling distances between seeds.



*12-Tooth Driver and 14-Tooth Driven Sprocket Combination*

**PLANT POPULATION AND APPROXIMATE DRILLING DISTANCES**  
*(Metric equivalents are given in parentheses)*

Maximum Recommended Speed in mph (km/h)	Drilling Distance in Inches (mm)	Sprocket Combinations (number of teeth) Driver Driven		Plant Population Per Acre (hectare)					
				Row Width					
				30" (76 cm)	32" (81 cm)	34" (86 cm)	36" (91 cm)	38" (97 cm)	40" (102 cm)
3 (4.8)	4-1/4 (108)	9	7	49,600 (122 500)	46,500 (114 900)	44,000 (108 700)	41,300 (102 000)	38,100 (94 100)	37,500 (92 600)
3 (4.8)	4-1/2 (114)	17	14	46,200 (114 100)	43,500 (107 400)	41,100 (101 500)	38,600 (95 300)	36,500 (90 200)	35,500 (86 500)
3 (4.8)	4-5/8 (118)	14	12	45,300 (111 900)	42,500 (105 000)	40,100 (99 000)	37,800 (93 400)	35,700 (88 200)	34,000 (83 900)
4 (6.4)	5-1/2 (140)	12	12	43,500 (107 400)	35,500 (87 700)	33,500 (82 700)	31,500 (77 800)	29,900 (73 900)	28,600 (70 600)
4 (6.4)	6-3/8 (160)	12	14	37,900 (93 600)	30,500 (75 300)	28,900 (71 400)	27,100 (66 900)	25,600 (63 200)	24,600 (60 800)
4-1/2 (7.2)	6-5/8 (168)	14	17	31,700 (78 300)	29,700 (73 400)	28,100 (69 400)	26,400 (65 200)	25,000 (61 800)	23,800 (58 800)
5 (8)	7 (178)	7	9	29,700 (73 400)	27,900 (68 900)	26,400 (65 200)	24,800 (61 300)	23,400 (57 800)	22,500 (55 600)
5 (8)	7-1/4 (184)	9	12	28,500 (70 400)	26,800 (66 200)	25,400 (62 700)	23,800 (58 800)	22,400 (55 300)	21,600 (53 400)
5 (8)	7-3/4 (197)	12	17	27,000 (66 700)	25,400 (62 700)	24,000 (59 300)	22,500 (55 600)	21,400 (52 900)	20,400 (50 400)
6 (9.6)	8-1/2 (216)	9	14	24,500 (60 500)	22,500 (55 600)	21,800 (53 800)	20,400 (50 400)	19,300 (47 700)	18,500 (45 700)
6-1/2 (10.4)	9-1/4 (235)	7	12	22,400 (55 300)	20,500 (50 600)	19,900 (49 200)	18,600 (45 900)	17,600 (43 500)	16,400 (40 500)
7 (11.2)	10-1/4 (260)	9	17	20,200 (49 900)	19,000 (46 900)	17,900 (44 200)	16,800 (41 500)	15,900 (39 300)	15,200 (37 500)
7 (11.2)	11 (279)	7	14	18,800 (46 400)	17,700 (43 700)	16,700 (41 200)	15,700 (38 800)	14,900 (36 800)	14,300 (35 300)
7 (11.2)	13-5/8 (345)	7	17	15,300 (37 800)	14,300 (35 300)	13,500 (33 300)	12,700 (31 400)	12,100 (29 900)	11,600 (28 700)

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