

# **B, DF-B, AND FB-B GRAIN DRILLS**



**JOHN DEERE**

## **OPERATORS MANUAL**

**B, DF-B, AND FB-B  
GRAIN DRILLS**

OMN159296 G2    English

**JOHN DEERE DES MOINES WORKS  
OMN159296 G2**

LITHO IN THE U.S.A.  
ENGLISH





## To the Purchaser

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Your grain drill 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, trouble shooting, or service. Read the Table of Contents to learn where each is located. Use the alphabetical index for fast reference.

Should your grain drill require replacement parts go to your John Deere dealer where you can obtain Genuine John Deere Parts—accept no substitutes. Genuine John Deere Parts fit properly and insure satisfactory service because they are made from the original patterns and from the same materials as used in the new machines.

“Right-hand” and “left-hand” sides are determined by facing the direction the grain drill will travel when in use.

Record your grain drill serial number in the space provided on page 70. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments.

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

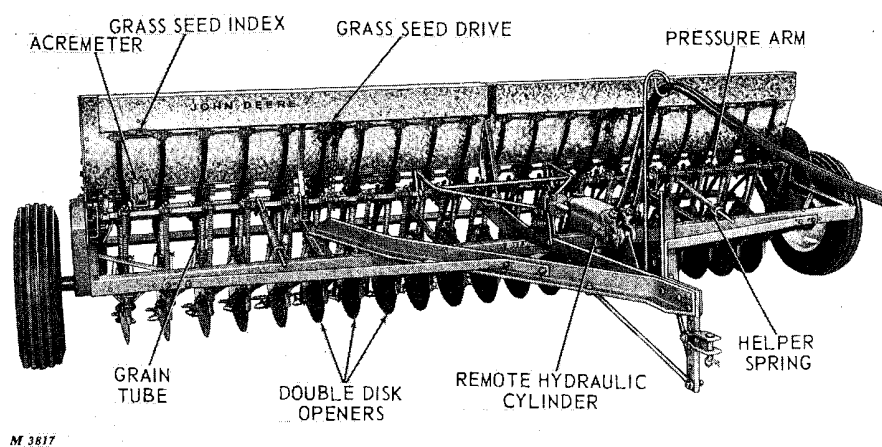


This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



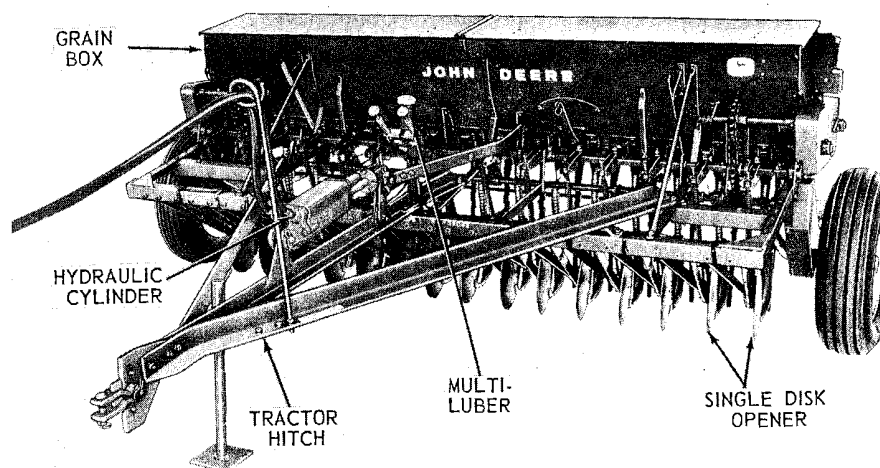
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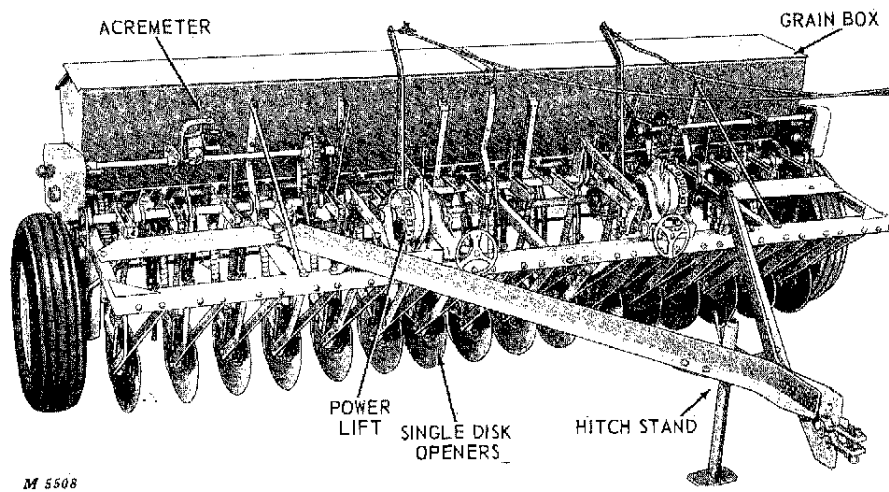
M 3817

John Deere 20 x 7B Plain Drill



M 3809

John Deere FB157B Fertilizer Drill



*John Deere DF168B Fertilizer Drill*



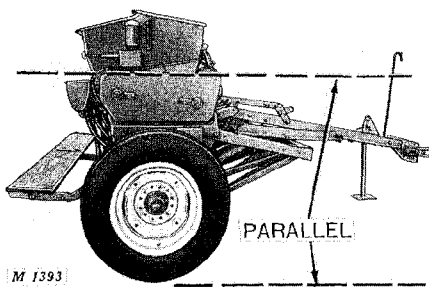
# Operation

## GENERAL OPERATION

### PREPARING DRILL FOR USE

Before taking the drill to the field, refer to removal from storage, page 35, and follow the procedure as outlined.

#### HITCHING DRILL



It is important to hitch the drill properly. The proper hitch height is determined by standing at one end of the drill after it is hitched to the tractor and observing that the drill grain box is level or parallel with the ground.

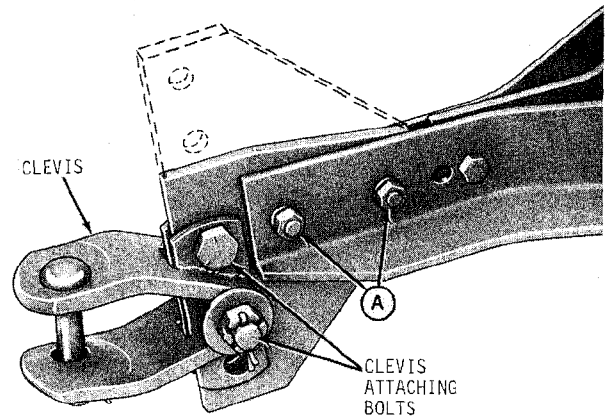
**NOTE:** When planting in hard or trashy seedbeds, hitch drill so box is tilted slightly forward to obtain greater penetration and trash clearance.

Hitching the drill so the box is tilted too far forward causes furrow openers to swing back and up. This results in the seed openings in boots being above the ground line. The disks must then cut deep in order for seed to be placed in furrow trench.

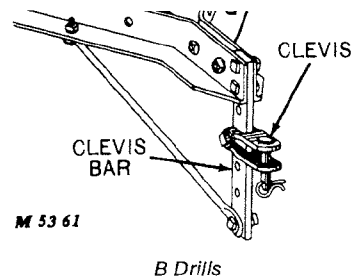
Hitching the drill so the box is tilted back causes furrow openers to swing forward and under. This results in seed openings becoming clogged, openers wearing excessively, and seed and fertilizer being improperly placed.

**CAUTION:** Before filling grain or fertilizer boxes, properly hitch drill to tractor to prevent possibility of drill tipping over backward.

### Clevis Adjustment



#### FB-B and DF-B Drills



If adjustment is necessary after proper hitch height is determined, remove the clevis attaching bolts and move clevis to upper or lower holes in clevis plate. Replace the bolts. When possible, invert the tractor drawbar to obtain proper hitch height.

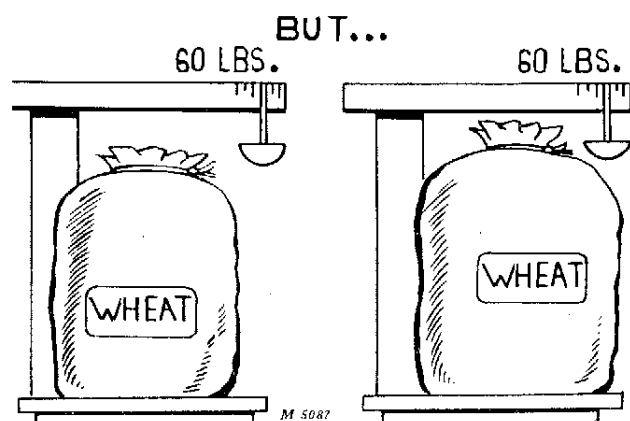
On FB-B and DF-B Drills, additional adjustment may be obtained by removing bolts "A" and reversing the hitch plate (dotted lines).

**NOTE:** When hitching drill to tractor with one inch hitch pin, drill a larger hole in the drill clevis.

## SEED QUANTITIES DRILLED

### Importance of Checking Quantities

The grain drill feeds are "the heart" of your drill. Precision, built into each feed cup, is one of the reasons John Deere grain drills have become famous for accurate and dependable seeding.



When you buy a bushel of seed, wheat for instance, you may receive either the large or small bag . . . both weigh 60 pounds.

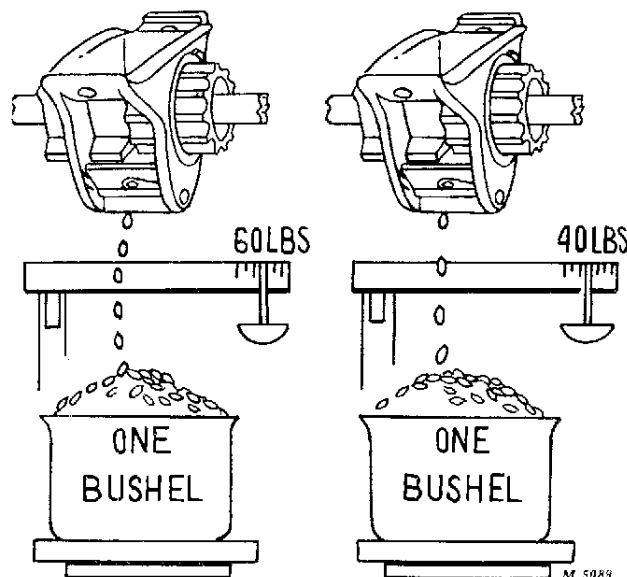
Let's look at the seed to see why—



The seed from the small bag is compact and heavy.

The seed from the large bag may not only be larger but lighter in weight than the seed from the small bag. It may have a lower moisture content or have unfilled kernels or it could contain more trash than the seed in the small bag.

This is what happens when the seed is put into your drill—



When each feed is turned the same number of revolutions, the feeds meter exactly the same volume of both the small and large wheat seeds. They both fill the bushel.

But, notice the scale. the Bushel of seed from the small bag weighs 60 pounds. The bushel of seed from the large bag weighs only 40 pounds.

This is the weight (pounds per acre) you are drilling.

The difference in the pounds per acre drilled is due to the difference in the seed; that is, weight, size, type, variety, moisture content, and kind of seed.

The rate calculator for the drill isn't wrong—it's based on a standard weight per bushel which varies by states.

**ALWAYS REMEMBER:** Your grain drill feeds meter volume and not weight. In this case, one bushel. Therefore, always check the quantity drilled as explained on page 6 before beginning to drill your crops.

## 6 Operation

### How To Check Quantities Drilled

The general method for checking quantities drilled is as follows:

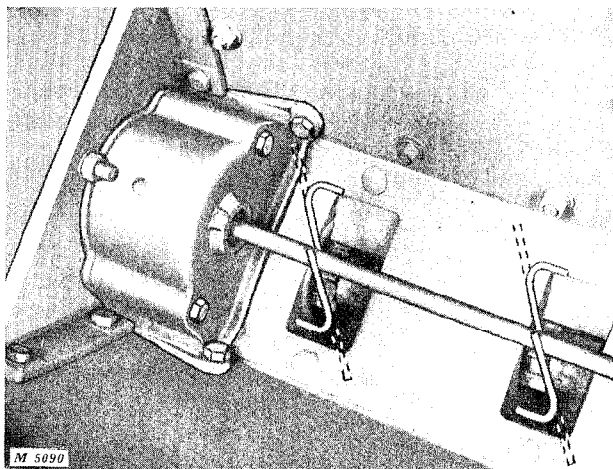
1. Make all feed adjustments as shown on the grain drill seed chart.
2. Fill the box level-full in the field and pull the drill a short distance to settle the seed. Refill the box so that it is exactly level-full.
3. Drill a calculated one acre.
4. Carefully weigh the seed required to refill the box level-full.
5. Compare the weight of seed required to fill the box with that shown on the seed chart.
6. Adjust the feed cup setting accordingly to compensate for any variation between the chart and the amount actually drilled.

If a more accurate check is required, the drill should be jacked up off the ground and checked in the following manner:

1. Place seed in drill box and a container under each feed.
2. Make feed cup settings on drill for desired quantity per acre as shown on seed chart.
3. Revolve drill wheels the required number of revolutions for one acre, or fraction thereof, as shown on page 72.
4. Carefully weigh the seed in all the containers and compare that to the weight shown on the seed chart.
5. Adjust the feed cup setting to compensate for any variation and repeat the test until the desired quantity is obtained.

**NOTE:** These tests may be used for fertilizer as well as grain and grass seeds.

### PLANTING BROME GRASS



Brome grass is frequently used as part of a grain, grass, and legume mixture.

Brome mixed with cover crops or in the absence of a cover crop mixed with cracked corn or sawdust, can be planted through the grain feeds of the drill. The drill should be equipped with a grain agitator to prevent separation of the brome grass and cover crop, cracked corn, or sawdust.

In rice producing territories, a mixture of brome grass seed and rice hulls, seeded through the grain feeds, has proven satisfactory.

When planting brome grass through the grain feeds, the bent fingers on the grain agitator should be straightened so they dip down into the feed openings to assure a constant flow of seed to the feed roll.

Determine quantity index setting by checking quantities drilled as outlined at left.

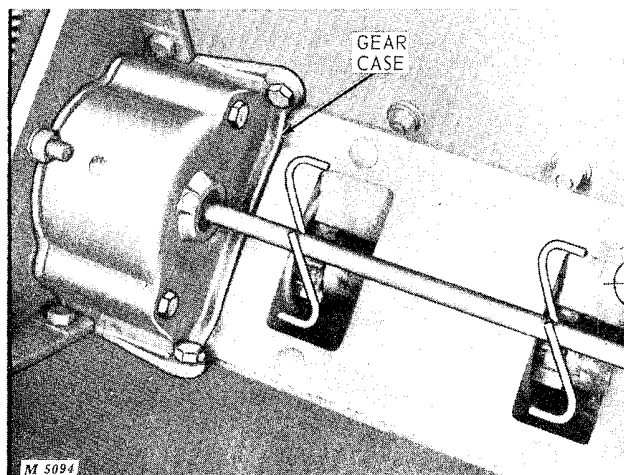
For FB157B and FB177B Drills, see Brome Seed Attachment, pages 31 and 32.



## GRAIN AGITATOR

Agitators are recommended when drilling trashy, inoculated or very light seeds. Keep agitators out of gear when not needed.

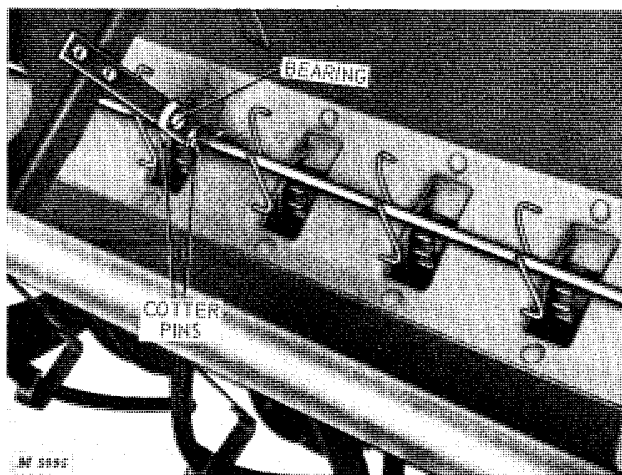
### Engaging Agitator Drive



Agitator Drive Gear Case

The agitator is driven through the gear case on each end of the drill. Engage each agitator by fitting the end of the agitator rod into the gear case. Insert and spread a cotter pin through agitator rod on each side of bearing to hold the agitator in gear.

### Disengaging Agitator Drive



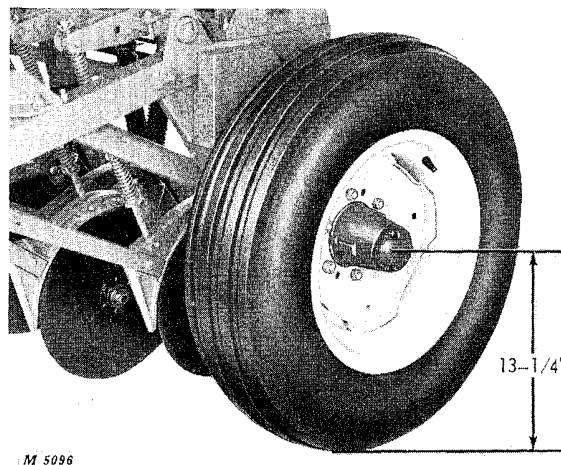
Agitator Rod in Drive Position

Remove cotter pin and pull square end of agitator rod out of gear case. Insert and spread cotter pin through rod on opposite side of bearing.

## TIRES

Good used automotive tires may be used in place of implement tires. These tires should be of the same size as recommended on page 72. They may be either 4-ply or 6-ply.

### Tire Inflation



Check tire pressure each day before using the drill.

When the drill is equipped with 15-inch wheels, inflate the tires so that the distance from the floor or ground to the center of the axle is exactly 13-1/4 inches. Grain, fertilizer and grass seed boxes should be half full for this measurement.

Drills equipped with fertilizer attachments must have 20-inch wheels and tires for maximum drill flotation.

Inflate 7.50 x 20 ribbed implement and double-ribbed, concave tread, 4-ply tires to 24 psi. DO NOT OVERINFLATE. This pressure provides proper drill cushioning and maintains accuracy of seeding.

## DRILLING ROW CROPS

Soybeans, common beans, corn, sugar beets, and many other row crops can be planted with your John Deere drill.

Furrow openers not used do not have to be removed but may be left on the drill to work the soil or tied up to prevent unnecessary wear.

Cover all of the grain and fertilizer feed openings not being used with grain and fertilizer feed stops shown on page 68. Markers, page 64, are recommended for row-crop work.

Refer to the following row-crop charts, for the proper drill setting to use for the row spacing desired. These charts are for drills with fluted feeds only.

When drilling row crops with double-run feed drills, make an estimated setting; then check quantities drilled as explained on page 5.

Determine your own index setting by checking quantities drilled, as instructed on page 5, when quantity required is not on the chart or the desired seed is not on the chart or for settings required for drilling row crops with drills having double-run feeds.

CHART FOR DRILLING IN POUNDS PER ACRE (IN ROWS)  
7-INCH SPACED FLUTED FEED DRILLS

Notches on Seed Index		4	8	12	16	20	24	28	32
	Row Spacing								
KIDNEY BEANS	18"				39	47	58	67	
" "	24"				29	35	43	51	
" "	30"				23	28	34	40	
SOYBEANS or COMMON BEANS	18"		17	26	39	51	64		
" "	24"		13	20	29	39	48		
" "	30"		10	16	23	31	39		
CORN	24"			12	17	25	31	38	46
" "	30"			9	14	20	25	31	37
" "	36"			8	12	17	21	26	31
KAFIR CORN	24"	3	8	12	16				
" "	30"	2	5	9	13				
" "	36"	1	4	6	8				
BEETS	12"				12	17	21	26	32
" "	18"				8	11	14	18	23
" "	24"				6	8	10	13	17
TURNIP or RADISH	24"	3	4-1/2	5-1/2	7-1/4	12			
" "	30"	2-1/2	4	5	6-3/4	10-1/2			

**CHART FOR DRILLING IN POUNDS PER ACRE (IN ROWS)  
8-INCH SPACED FLUTED FEED DRILLS**

Notches on Seed Index	Row Spacing	4	8	12	16	20	24	28	32
KIDNEY BEANS	24"				34	41	51	59	
" "	32"				26	31	38	45	
" "	40"				20	25	30	35	
SOYBEANS or COMMON BEANS	24"		15	23	34	45	56		
" "	32"		11	18	26	34	42		
" "	40"		9	14	20	27	34		
CORN	32"			11	15	22	27	33	40
" "	40"			8	12	18	22	27	33
" "	48"			7	11	15	18	23	27
KAFIR CORN	32"	3	7	11	14				
" "	40"	2	4	8	11				
" "	48"	1	4	5	7				
BEETS	16"				11	15	18	23	28
" "	24"				7	10	12	16	20
" "	32"				5	7	9	11	15
TURNIP or RADISH	32"	3	4	5	6-1/2	11			
" "	40"	2	4	4	6	9			

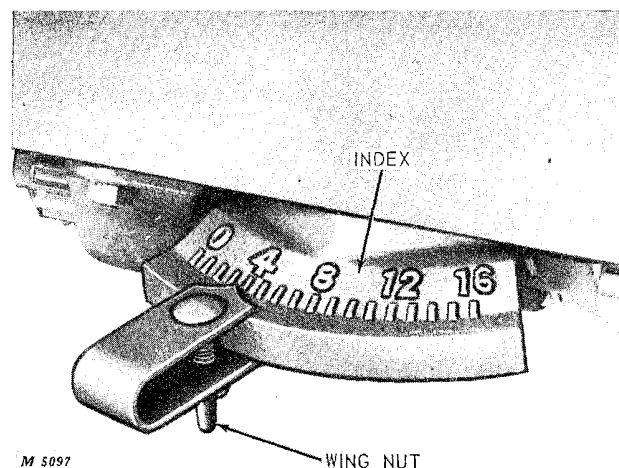
## GRASS SEED FEEDS AND DRIVE

The grass seeder on your drill has precision built feeds for accurate seeding. Protect it from the drifting or blowing of fertilizer dust and excessive weathering by removing it from the drill when not in use. Store it inside, out of the weather.

**IMPORTANT**—Before starting the drill each day and especially at the beginning of each drilling season, it is important to turn the grass seed feed shaft with a wrench and loosen the feeds with diesel fuel.

**CAUTION:** Be careful when using diesel fuel so that it does not ignite. Use only in a well ventilated area away from any sparks and flames.

### Setting Grass Seed Feeds



Before adjusting feeds, refer to seed chart in the grass seed box. Select the proper setting for distributing or drilling the quantity desired. Loosen the wing nut on the shifter lever. Shift the lever so the pointer lines up with selected setting; then tighten the wing nut.

**NOTE:** If grass seed box is filled and shifter lever moved to zero or closed position, turn feed shaft with wrench while doing so.

## 10 Operation

Frequently, a mixture of grass seeds and legumes is used. To arrive at the feed shaft shifter setting, select the setting from the drilling chart that will give the desired quantity for each kind of seed and add them together. If a particular seed is not listed, use the setting for a seed having similar size and weight.

Example:

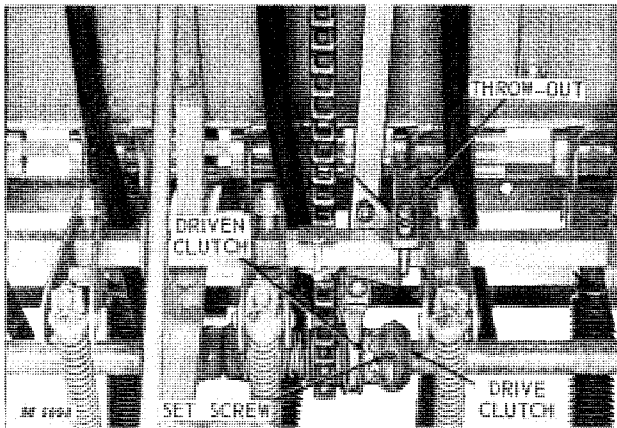
<u>Seed</u>	<u>Quantity per Acre</u>	<u>Notch</u>
Alfalfa .....	7 Lbs.	2
Alsike Clover .....	3-1/4 Lbs.	1/2
Timothy .....	3-1/2 Lbs.	1
Birdsfoot Trefoil .....	5 Lbs.	1
TOTAL		4-1/2

Set the shifter in the notch that represents the total of all the settings. In the example, the shifter lever would be set on 4-1/2; however, a larger or smaller quantity setting might be used. Check quantities drilled as explained on page 5.

### Band Seeding

Band seeding brackets are available, page 62, for distributing grass and legume seed on or near the surface of the ground and directly above the band of fertilizer being drilled.

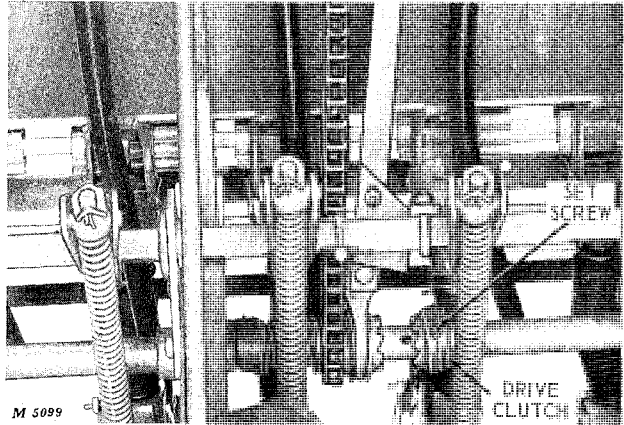
### Grass Seed Drive (FB-B and DF-B Drills)



Grass Seed Drive Engaged

When the furrow openers are lowered, the driven clutch automatically engages with the drive clutch.

The drive for the grass seed feeds should be kept out of gear when the grass seed attachment is not being used, or the attachment can be removed from the drill.

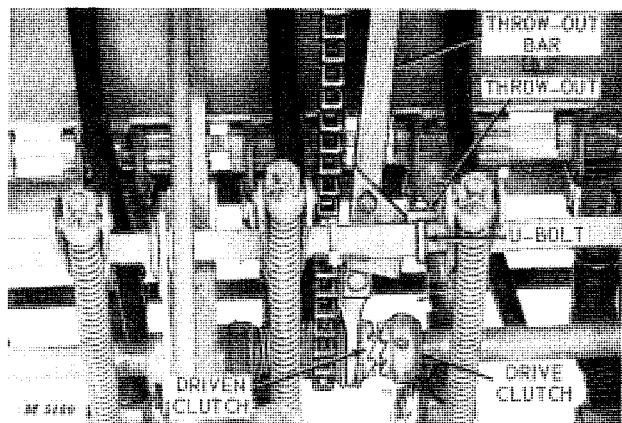


Grass Seed Drive Disengaged (Not Being Used)

To disengage the drive, loosen the set screw in driving clutch and move the clutch to the side. Tighten the set screw.

To re-engage the drive, loosen set screw in driving clutch and slide driving clutch against driven clutch with the furrow openers lowered. Tighten the set screw.

### Adjusting Throw-Out



Grass Seed Drive Disengaged (Automatically)

When furrow openers are raised, the teeth on the driven and driving clutch should be 1/8 inch apart. Adjust the throw-out as required and tighten nuts on U-bolt firmly. When properly adjusted, the throw-out automatically disengages the driven clutch when the furrow openers are raised.

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