

John Deere 700 and 750 Grinder-Mixers



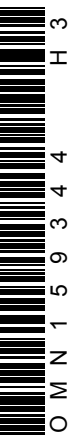
JOHN DEERE

OPERATORS MANUAL John Deere 700 and 750 Grinder-Mixers

OMN159344 H3 English

OMN159344 H3

LITHO IN U.S.A.
ENGLISH






To the Purchaser

This new Grinder-Mixer 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, adjustments, lubrication, service, attachments, trouble shooting, assembly, or specifications. Read the Table of Contents to learn where each section is located.

"Right-hand" and "left-hand" sides are determined by standing behind the machine and facing in the direction that the machine will be towed when transporting.

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

 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.

Record your Grinder-Mixer serial number in the space provided on page 42. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your Grinder-Mixer requires replacement parts, go to your John Deere dealer.

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

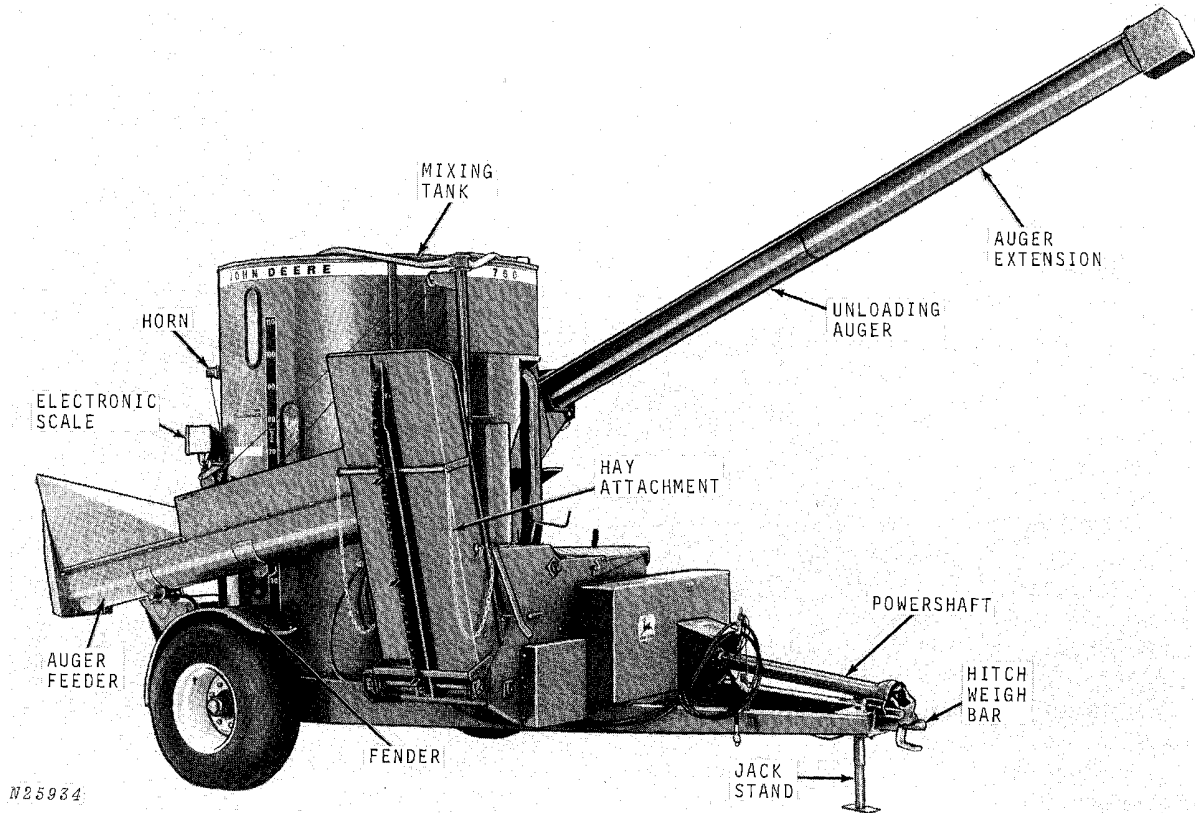




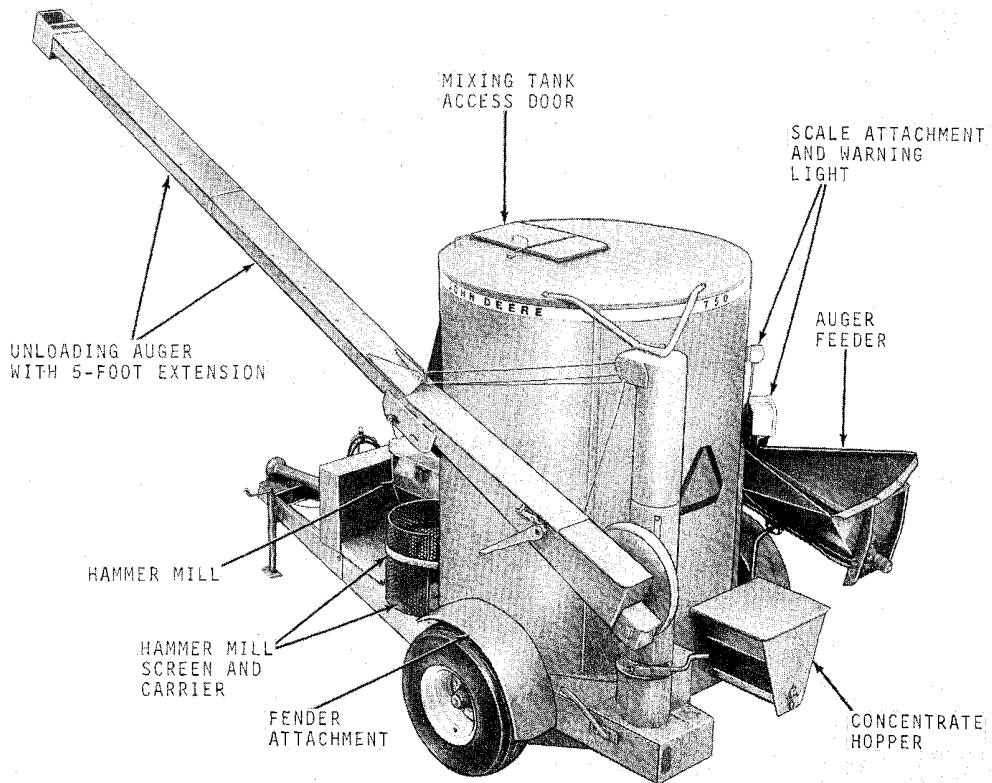
Contents

	Page		Page
IDENTIFICATION VIEWS	2	Vertical Auger Drive Chain	27
OPERATION	3-20	Wheel Bearings	27
Introduction	3	Variable Speed Auger Feeder Lever	27
Preparing the Grinder-Mixer	3	Mixing Tank Auger Vertical Alignment	27
Preparing the Tractor	4-5	Bolt and Nut Torque Specifications	28
Attaching Grinder-Mixer to Tractor	5-7	Reversing or Replacing Hammers	28
General Operation	7-8	Replacing Main Drive Belts	29
Hammer Mill	9-11	Aligning Main Drive and Driven Sheaves	29
Concentrate Hopper	11	Adjusting Feed Auger Clearance	30
Unloading Mixing Tank with Unloading Auger	11-12	Adjusting Kicker Drive Chain	30
Hydraulic Variable Speed Auger Feeder	13-15	ATTACHMENTS	31-33
Hay Attachment (Optional Equipment)	15-19	Screens	31
Hay Conveyor	15	Magnet	31
Hay Feeding Position	16	Hydraulic Control Parts	31
Air Adjustment	17	Bagging Attachment	32
Grain Feeding Position	18-19	Unloading Auger Extension	32
Transporting	20	Fenders	32
SAFETY SUGGESTIONS	21	Slow-Speed Auger Feeder Attachment	32
LUBRICATION	22-23	Electronic Scale Attachment	33
Wheels	22	TROUBLE SHOOTING	34-37
PTO Shaft and Rotating Shields	22	Powershaft	34
Main Drive Gear Case and Chain	22	Hammer Mill	34-35
Unloading Auger Housings and Hand Crank	23	Mixing Tank	36
Main Drive Shaft and Gear Housing	23	Unloading Auger	36
Hammer Mill Rotor and Fan	23	Hydraulic Variable Speed Auger Feeder	36-37
SERVICE	24-29	ASSEMBLY	38-40
Main Drive Belts	24	Hay Attachment Conveyor	38
Main Drive Slip Clutch	25	Fender Attachment	38
Unloading Auger Slip Clutch	25	Unloading Auger Extension	39
Unloading Auger Throw-Out Lever Rod	25	Magnet Attachment	40
Unloading Auger Drive Chain	25	SPECIFICATIONS	41-42
Feeder Auger Balance Spring	26	700 and 750 Grinder-Mixers	41
Hammer Mill Screen Door	26	Tractor Requirements	42
Unloading Auger Driven Chain	26	Grinder-Mixer Serial Number	42
Hay Attachment Conveyor Chain	26		

2 Identification Views



John Deere 750 Grinder-Mixer Equipped with Auger Feeder, Unloading Auger Extension, Fender, and Hay Attachments



John Deere 750 Grinder-Mixer Equipped with Optional Hydraulic Auger Feeder, Scale, and Fender Attachments



Operation

INTRODUCTION

The John Deere 700 and 750 Grinder-Mixers are portable feed grinders and mixers. They are shipped from the factory with either a 540 or 1000-rpm PTO drive. The 540-rpm PTO drive is designed for use with tractors having a maximum of 90 horsepower. The 1000-rpm PTO drive is designed for use with tractors having a maximum of 150 horsepower.

CAUTION: Never operate a 540 rpm grinder-mixer with a 1000 rpm tractor PTO.

All types of grain may be ground with the grinder-mixer. Hay slices may be fed into the plain hopper individually, or the optional hay attachment may be used to feed hay bales. Grinding loose hay is not recommended.

A concentrate hopper with bag opener at the rear of the grinder-mixer allows addition of concentrate prior to grinding. The mixture of grain or hay and concentrate is fed into the hammermill and ground until it will pass through the screen.

The bulk of the ground feed is delivered directly to the mixing tank by the horizontal auger. The finely ground feed is drawn by a suction fan through the dust collector into the horizontal auger.

After the grinding operation is performed, the hammer mill can be disengaged and the mixing tank auger run to mix the feed while it is transported to the feed lot or unloading area.

CAUTION: Never attempt to engage or disengage the drive on the grinder-mixer while the tractor is running. Disengage tractor PTO lever, shut off tractor engine and make sure the powershaft on the grinder-mixer has stopped before performing any operational adjustment on the grinder-mixer.

The unloading auger pivots 225 degrees on its pedestal and will unload the tank at the rate of 22 bushels per minute.

The feed level or quantity in the mixing tank is visible through the three safety glass windows staggered along the side of the mixing tank. Mounting steps at the front of the tank give access to the door on top of the tank.

Your grinder-mixer may be equipped with the optional hydraulically driven auger feeder. The auger feeder drive is operated by the tractor hydraulic system. The drive speed can be varied from 0 to 150 rpm by positioning the variable speed lever on the auger feeder. The auger feeder is spring balanced or winch-operated for ease in handling and will pivot through a 120 degree arc.

The hay grinding option makes it possible to power feed bales of hay or straw into the grinder-mixer. The twine on the bales may be removed or left on the bale as the operator desires.

The hay attachment is available with or without the feeding auger.

Additional attachments for special operations are illustrated on pages 31 through 33.

PREPARING THE GRINDER-MIXER

Bolts and Nuts

Before starting to operate the grinder-mixer, check to be sure that all nuts on bolts are tight and that all cotter pins are spread. After the grinder-mixer has been operated several hours, check to be sure that bolts are tightened to the torque specifications in the chart on page 28.

All bolts used in the grinder-mixer are "high-strength" bolts, and when replaced, bolts of equal or higher strength should be used. "High-strength" bolts are identified by three radial dashes on the bolt head.

Tire Inflation

Check tires for proper inflation pressure. See page 19 for recommended care of tires and inflation pressures.

Lubrication

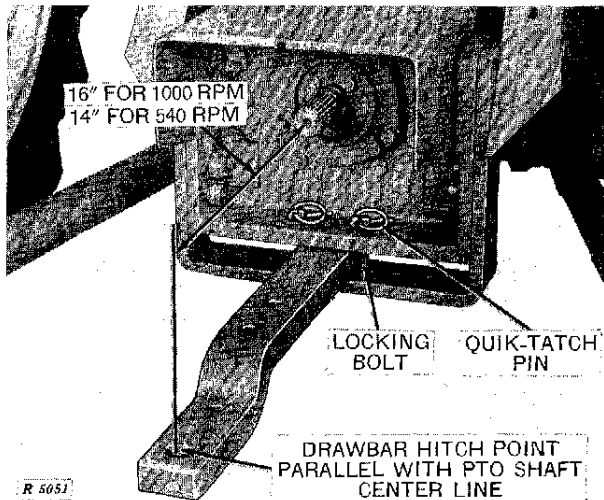
Lubricate the grinder-mixer at regular intervals as instructed on pages 22 and 23.

PREPARING THE TRACTOR

The 700 or 750 Grinder-Mixer may be used with tractors having either a 540 or 1000-rpm PTO drive provided the grinder-mixer is equipped with the same speed drive.

A 540-rpm PTO must be limited to use with tractors having a maximum of 90 horsepower. A 1000-rpm PTO can be used with tractors having a maximum of 150 horsepower

Adjusting Tractor Drawbar



Place the drawbar in the extended position with the hole in the end of the drawbar 14 inches (540-rpm operation) or 16 inches (1000-rpm operation) from the end of the PTO shaft.

Lock the drawbar in its crossbar, parallel with the centerline of the powershaft. Place the locking pins on either side of the drawbar.

IMPORTANT: If the tractor has an offset drawbar, the offset should always be down for PTO work. Possible damage to the powershaft universal joints on the grinder-mixer can be avoided if the drawbar adjustment is made before attaching and operating the grinder-mixer.

Front End Ballast

Provide sufficient front end ballast to stabilize the front end of the tractor when operating on uneven terrain or other adverse conditions. See your tractor operator's manual for front end ballast information.

Tractor Hydraulic System

When the Grinder-Mixer is equipped with the optional hydraulic variable speed auger feeder and will be operated on a tractor equipped with an open-center hydraulic system, refer to pages 14 through 17 for instructions.

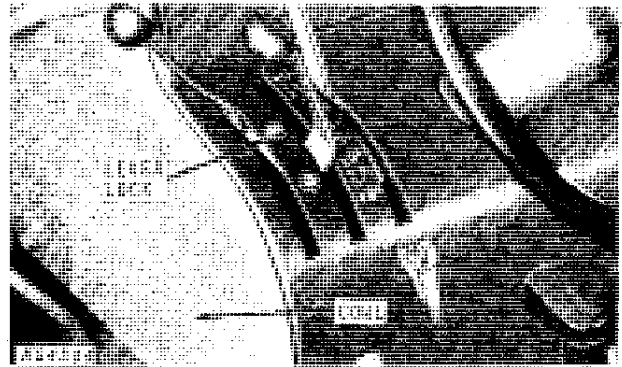
Remote Cylinder Lever Lock

(For Tractors Equipped with a Closed-Center Hydraulic System)

If your grinder-mixer is equipped with the optional hydraulic auger feeder, a remote cylinder lever lock is provided and should be installed on the tractor before operating the hydraulic auger feeder. Refer to installation instructions received with the lever lock.

The lever lock keeps the lever in operating position during operation of the hydraulic auger feeder.

Installing Remote Cylinder Lever Lock on 3020 Tractors Below Serial No. 123,000, 4020 Tractors Below Serial No. 201,000, and 5020 Tractors



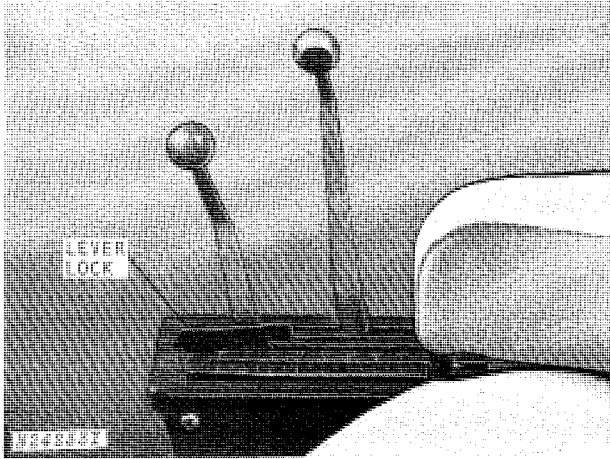
Remove tractor cowl and install lever lock as shown. Replace cowl.

Push lever forward past the lever lock to hold it in the operating position. Pull lever to the left and toward the rear past the lever lock to stop the hydraulic motor.

To remove clip, remove tractor cowl and unbolt clip. Replace cowl.

NOTE: The lever lock must be removed when operating other implements which require regular detent action.

Installing Remote Cylinder Lever Lock on 2520 and 3020 Tractors Serial No. 123,000 and above, 4000 and 4020 Tractors Serial No. 201,000 and above, and all 4320, 4520, 4620, and 6030 Tractors

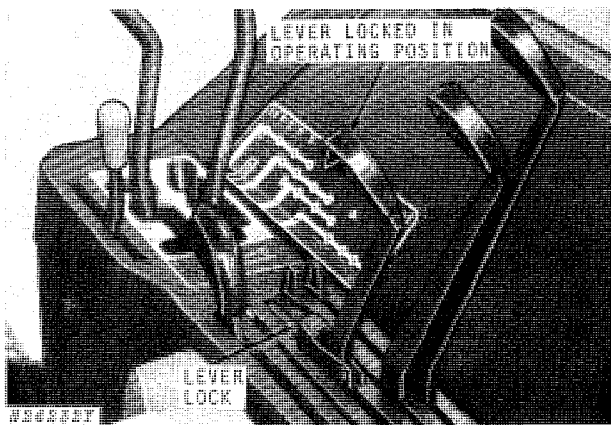


Insert front hook of clip into hole in console, then push rear tab down into front of slot in console.

Push lever forward into lever lock to operate motor.

To remove clip, pull tab up and out of slot in console, then unhook from hole in console.

4230, 4430, and 4630 Tractors



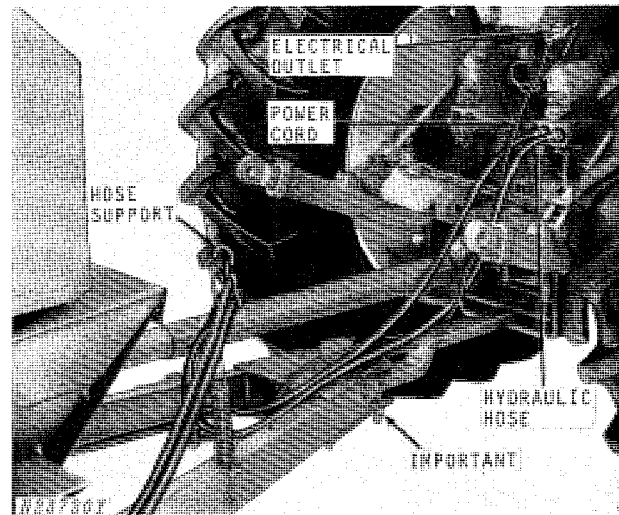
Squeeze the clip together slightly and insert it in the quadrant slot just behind the float lockout stop. Raise the stop slightly and slide the clip forward into position, then push the stop down to lock the clip in place.

Push the lever forward into the lever lock to operate the hydraulic motor.

To remove the clip, raise the float lockout stop first, then slide the clip rearward and remove it from the stop.

ATTACHING GRINDER-MIXER TO TRACTOR

Grinder-Mixer with Hydraulic Auger Feeder and Electronic Scale Attachment



Back the tractor up to the hitch. Use the jack stand to raise or lower the grinder-mixer hitch into position to engage the tractor drawbar.

Obtain a 3/4-inch diameter pin (C14832 or equivalent) from your John Deere dealer.

NOTE: If a 3/4-inch diameter bolt with nut is used, DO NOT tighten the nut until it touches the underside of the weigh bar clevis.

Install and secure the hitch pin.

CAUTION: Do not transport grinder-mixer until the hitch pin is secured.

Plug the electronic scale attachment power supply cord into the electrical outlet on the tractor.

NOTE: Complete installation and operating instructions are included with the electronic scale attachment.

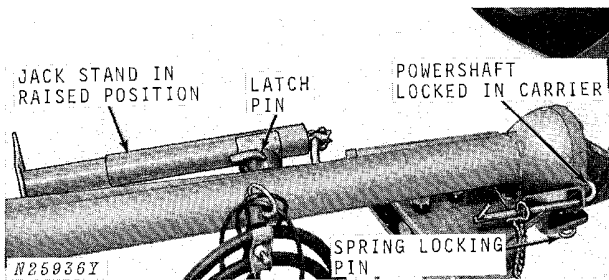
Plug the hydraulic auger feeder hydraulic hoses into the tractor outlets as shown. Make sure hoses are plugged so the auger feeder rotates in the proper direction for feeding material into the hammer mill.

Grinder-Mixer without Hydraulic Auger Feeder and Electronic Scale Attachment

Attach drawbar in same manner as noted above. The power cord for electronic scale attachment and hydraulic hoses for hydraulic auger feeder are not used.

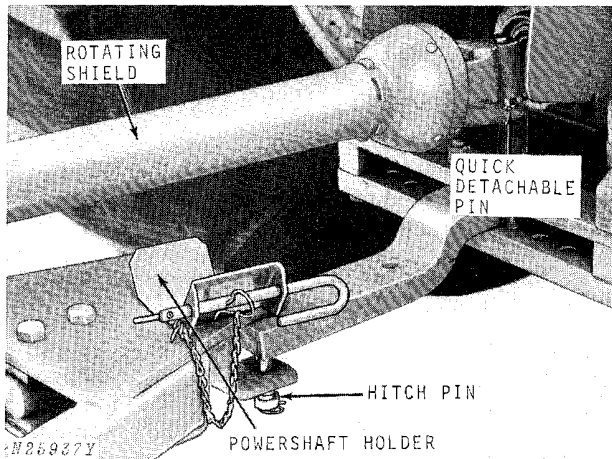
ATTACHING GRINDER-MIXER TO TRACTOR—Continued

Jack Stand



Turn jack stand crank to remove weight of grinder-mixer from stand. Remove latch pin and pivot stand to raised position. Replace latch pin.

Connecting Powershaft

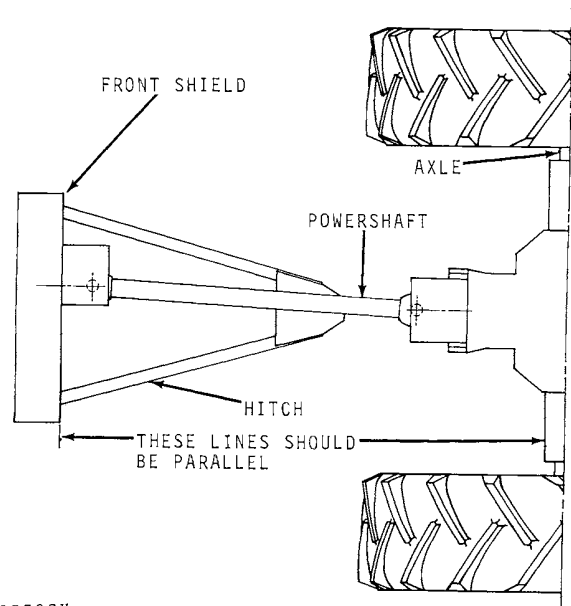


The PTO operating speed of the tractor and grinder-mixer must be the same. The tractor half of the powershaft is equipped with six splines for 540 rpm operation or 21 splines for 1000 rpm operation.

CAUTION: Never operate a 540 rpm grinder-mixer with a 1000 rpm tractor PTO.

Connect the powershaft to the tractor power take-off shaft. After making the connection, check to be sure the rotating shields are free to rotate.

Powershaft Alignment

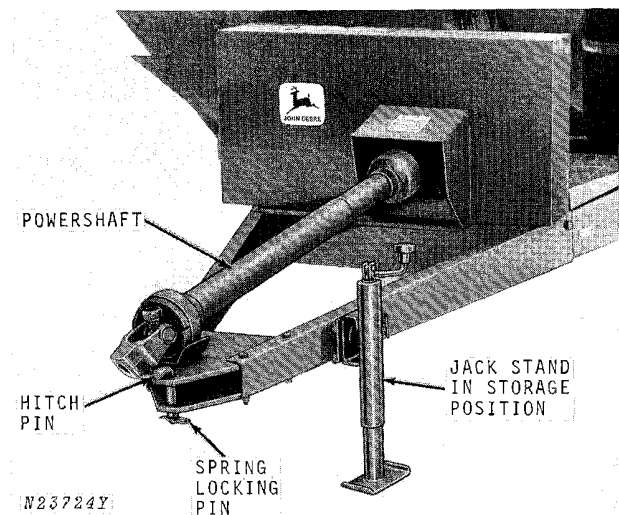


Before grinding, be sure the tractor axle and front shield of the grinder-mixer hammer mill are parallel as shown above.

CAUTION: Never engage or disengage the hammer mill while the tractor engine is running. (See page 9.)

IMPORTANT: When mixing while transporting, avoid sharp turns which may damage the powershaft.

DETACHING FROM TRACTOR



Jack Stand In Storage Position

CAUTION: To avoid possible backward tip of the grinder-mixer with a load in the tank, always block rear of chassis before unhitching the grinder-mixer from the tractor. Do not remove the block while the grinder-mixer is unhitched from the tractor.

Disconnect the powershaft from the tractor and return it to the powershaft holder.

Lower the jack stand to its storage position. Turn the jack stand handle to raise the grinder-mixer off the tractor hitch.

Remove the hitch pin from the grinder-mixer hitch clevis. Drive the tractor away from the grinder-mixer and replace the hitch pin in the grinder-mixer hitch clevis.

GENERAL OPERATION

Hammer Mill Capacity

The hammer mill capacity depends on six factors; rate of feed, type of material, moisture content of material, tractor horsepower, hammer mill rotor speed, and screen hole size.

Underfeeding of material reduces capacity, preventing the optimum operation of the hammer mill. Overfeeding tends to slow the tractor rpm, and reduces the capacity of the hammer mill. Uneven feeding is a combination of both underfeeding and overfeeding.

When grinding small grain, the feed gate on the hammer mill (not equipped with hydraulic auger feeder) should be adjusted for steady, even, feeding of material. If grain has high-moisture content, it is more difficult to grind and reduces the capacity of the hammer mill.

When grinding hay slices without the hay attachment, follow suggestions noted above for small grain. For convenient, power-assisted feeding of bales, use the hay attachment. (See page 15.)

The rotor shaft speed (2600 rpm for 540 rpm PTO and 2750 rpm for 1000 rpm PTO) must be maintained. This speed is obtained when the tractor PTO speed is adjusted properly with the tractor engine speed.

NOTE: The tractor engine speed may have to be adjusted to maintain PTO rpm speed. Refer to your tractor operator's manual.

Any reduction of rotor shaft speed greatly reduces the capacity of the hammer mill.

Screen Selection

It is important to use the correct size screen. The larger the hole size in the screen, the greater the hammer mill capacity. The smaller the hole size in the screen, the lesser the capacity.

Screen sizes range from 3/32 inch up to 1-1/2 inches. (See page 31.) The following screen sizes are suggested as a guide for starting points in grinding various types of feed:

3/32" Screen	↑	Barley for hogs and cattle Oats for hogs
1/8" Screen		
5/32" Screen	↓	Maize or milo for hogs and cattle (1/4" and smaller)
3/16" Screen		
1/4" Screen	↑	Shelled corn for cattle (3/8" and smaller or larger)
5/16" Screen		
3/8" Screen	↓	Ear corn for dairy cattle (5/8" and smaller or larger)
7/16" Screen		
1/2" Screen	↑	Ear corn for fat cattle (3/4" and smaller or larger)
5/8" Screen		
3/4" Screen	↓	Hay (1" and larger)
1" Screen		
1-1/4" Screen	↑	
1-1/2" Screen		

NOTE: In the above chart, when grinding barley, oats, maize or milo an accepted procedure is to start with the larger screen (1/4-inch) and then go to smaller ones for finer grind.

When grinding hay, an accepted procedure is to start with the smaller screen (1-inch) then go to the larger ones for coarse grind.

When grinding shelled corn, go either way from 3/8-inch.

For ear corn, go either way from 5/8-inch or 3/4-inch.

GENERAL OPERATION—Continued

Operating Sequence

It is important that a definite grinding and mixing cycle be performed. The recommended procedure can be changed to fit your particular operating condition. However, we recommend that you follow the steps recommended below when operating the grinder-mixer:

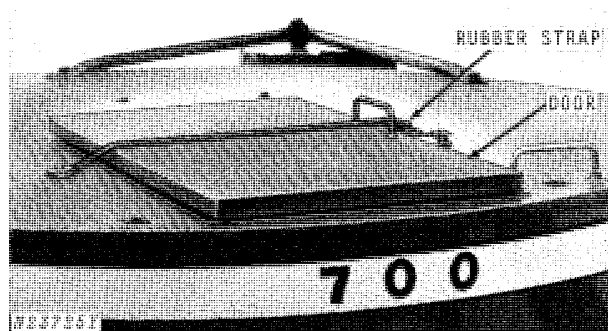
1. Close the mixing tank discharge door. (Page 12).
2. Before grinding, add concentrate, supplements, or dried molasses through the concentrate hopper. (Page 11).
3. When adding micro-ingredients, best results are obtained when added in a pre-mixed form.
4. When adding micro-ingredients without pre-mixing, add micro-ingredients through the door on top of the mixing tank. Add the micro-ingredients slowly after a few bushels of feed are ground into the tank.
5. Complete the grinding operation.
6. When supplements and concentrates are added at the end of the grinding operation, run mixer 5 minutes to be sure of complete mixing. When adding supplements or concentrates during grinding, allow 5 minutes of mixing time (including the grinding time) after adding concentrates.
7. Liquids, such as molasses, should be added through door on top of mixing tank only after the feed starts recirculating inside of mixing tank.
8. If hay is ground with other grains, grind the grain first and the hay last. (See pages 11 and 15-19.)

NOTE: The flat bottom mixing tank handles a complete tank full of ground hay without bridging.

Mixing Tank Capacity

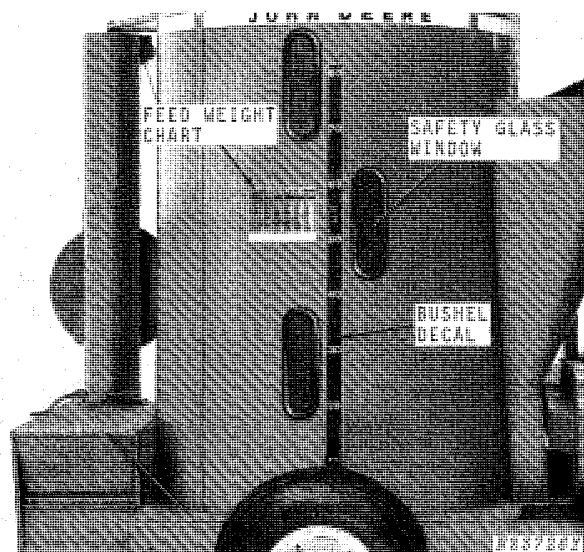
When grinding and mixing, avoid overfilling the mixing tank. The mixing tank for the 700 Grinder-Mixer has a capacity of 95 bushels (approximately 2 tons) of feed and the mixing tank for the 750 Grinder-Mixer has a capacity of 130 bushels (approximately 3 tons) of feed.

Mixing Tank Door



The mixing tank is equipped with a door at the top. The door is primarily designed to prevent damage to the unit should the mixing tank be over filled. A rubber strap holds the door in place. If over filling should occur, the rubber strap will allow the door to rise with the pressure of feed build up. The door also allows access to the inside of the mixing tank. Keep it in place and latched down with the rubber strap at all times.

Feed Weight Chart and Bushel Capacity Decal



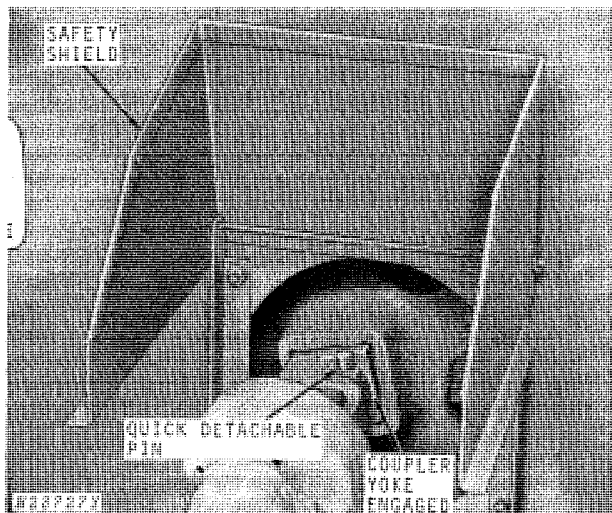
A feed weight chart and bushel capacity decal is attached to the side of the mixing tank to serve as a guide when mixing different feeds. Use the feed weight chart to determine pounds of supplement or other material necessary to give proper mix. The bushel capacity decal lets you know the quantity of bushels of material in the mixing tank. The three safety glass observation windows show amount of material in the tank.

HAMMER MILL

Engaging Hammer Mill

The hammer mill is engaged by inserting the powershaft coupler yoke into the main drive sheave

CAUTION: Shut off tractor engine before engaging hammer mill. The hammer mill must be completely stopped before attempting to engage the coupler yoke.



A safety shield covers the coupler yoke and main drive sheave. The shield should be up only when engaging or disengaging the hammer mill. The shield should remain down at all times when operating.

To engage the hammer mill, press down on the quick detachable pin and insert coupler yoke into main drive sheave as shown above.

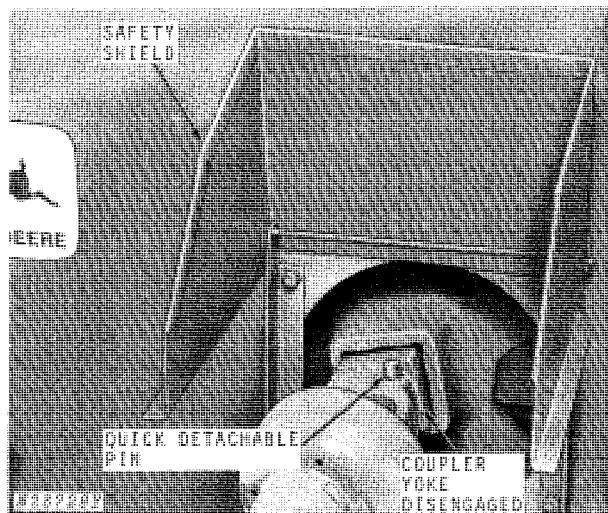
IMPORTANT: Check to be sure the quick detachable pin is locked in place before operating.

NOTE: Before engaging the hammer mill, check to be sure the mixing tank door lever is in the closed position and the unloading auger lever is disengaged. See page 12.

Disengaging Hammer Mill

The hammer mill is disengaged by removing the coupler yoke from the main drive sheave.

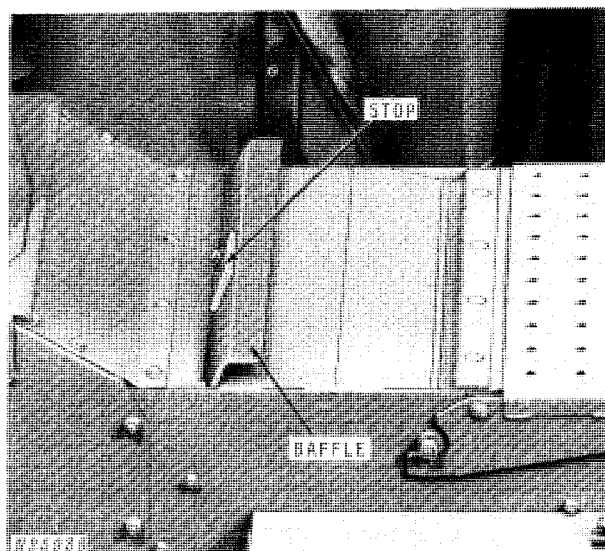
CAUTION: Never attempt to disengage the hammer mill until the tractor engine is shut off and the hammer mill has completely stopped.



To disengage the hammer mill, push down on the quick detachable pin and pull the coupler yoke out of the main drive sheave as shown above. Lower the safety shield.

IMPORTANT: Check to be sure quick detachable pin is locked in release position before operating.

Adjusting Baffle



Grinder-Mixer Without Hay Attachment

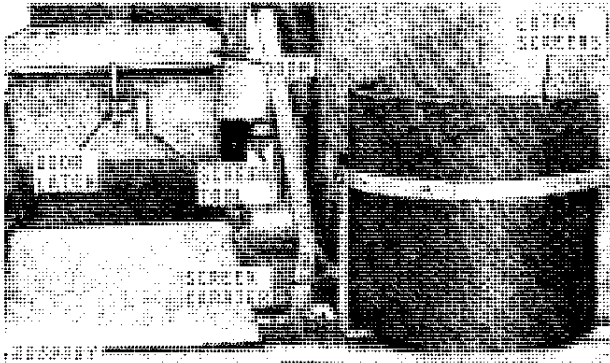
The hammer mill baffle should be down (as illustrated above) for most grinding operations.

When grinding hay, raise the baffle and turn the stop to hold it in the raised position. If grinder-mixer is equipped with hay attachment, see pages 16 and 18 for adjustment procedure.

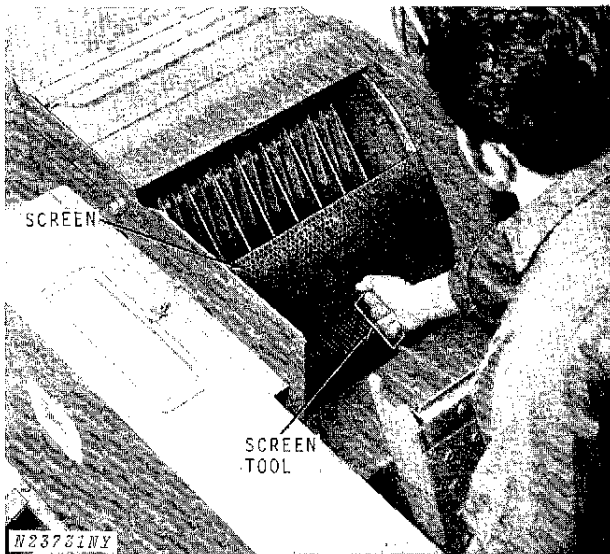
Installing Hammer Mill Screens

⚠ CAUTION: Disengage all drives and shut off tractor engine before installing or changing hammer mill screens. Never open the hammer mill cover until the hammer mill has completely stopped running.

Extra screens are carried in the screen carrier attached to the mixing tank. (See page 31.)



To install or change the screen, release the door latch and remove the screen tool from its storage position. Raise and pull out on the door to gain access to the hammer mill area.

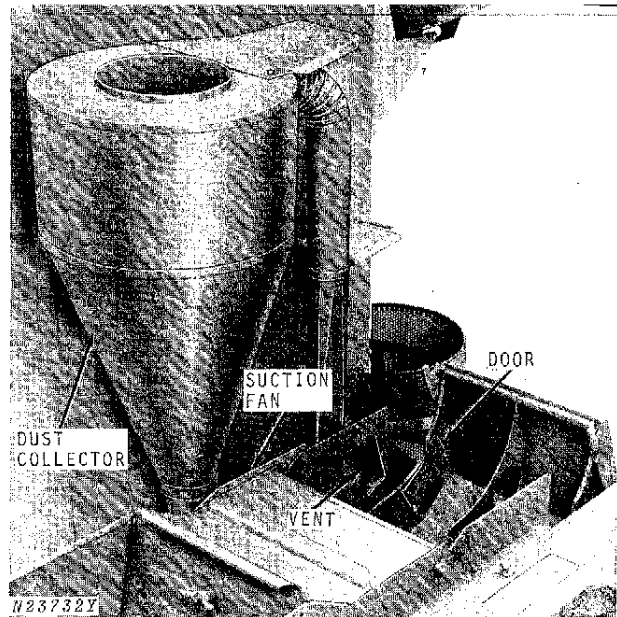


To remove screen, use screen tool provided and lift screen up and out as shown above.

Install the screen by lowering it between the screen supports on each side of the hammer mill as shown above.

Close door and replace screen tool in its storage position.

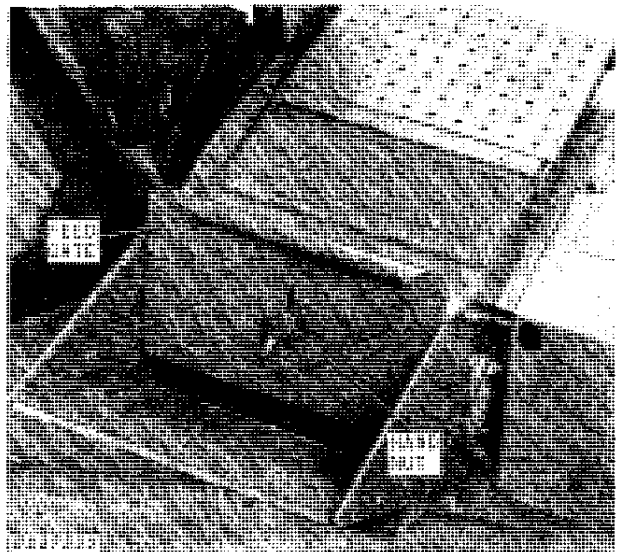
Dust Collector Suction Fan Door Vent



A suction fan draws off the air pressure developed in the hammer mill and exhausts it from the top of the dust collector.

An adjustable door in the hammer mill controls the amount of material going through the dust collector. It is recommended for most grinding operations that the door be positioned wide open thereby allowing full capacity of the hammer mill. Refer to pages 17 and 34 for additional instructions on adjusting the door.

Feed Gate for Grinder-Mixers Without Hydraulic Auger Feeder



Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com