

JOHN DEERE 400 GRINDER-MIXER



OPERATORS MANUAL JOHN DEERE 400 GRINDER-MIXER

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ENGLISH





TO THE PURCHASER

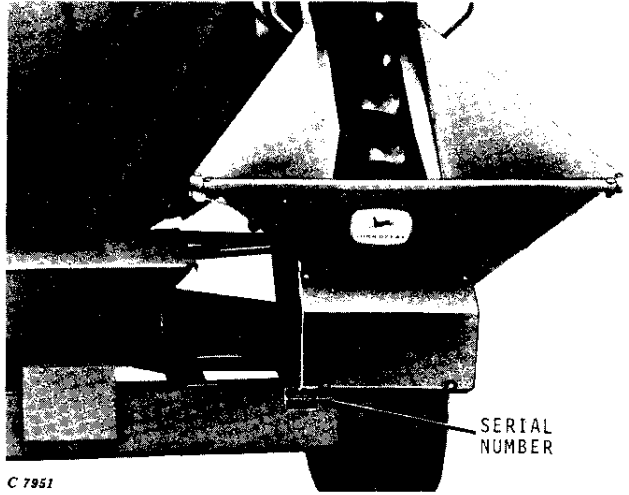
Make this manual your guide and do what it recommends for operating, lubricating, and servicing your new John Deere 400 Grinder-Mixer. These instructions have been written specifically for this grinder-mixer; other grinder-mixers may operate differently.

Long life and satisfactory performance of this grinder-mixer will depend upon your following the instructions given in this manual. Be sure to keep the manual in a safe, convenient place so you can refer to it quickly. Be sure to read the Safety Suggestions on page 18. Insist that they be followed by those working with you and for you.

When not grinding, mixing, or delivering feed with the grinder-mixer, it should be stored in a shed or covered so rain, snow, and dirt cannot get into the machine.

INFORMATION CONCERNING WARRANTY

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



PARTS AND SERVICE

When in need of new parts or service, see your John Deere dealer. He is equipped to provide genuine John Deere replacement parts; his servicemen have the training and experience to service your equipment efficiently.

SERIAL NUMBER

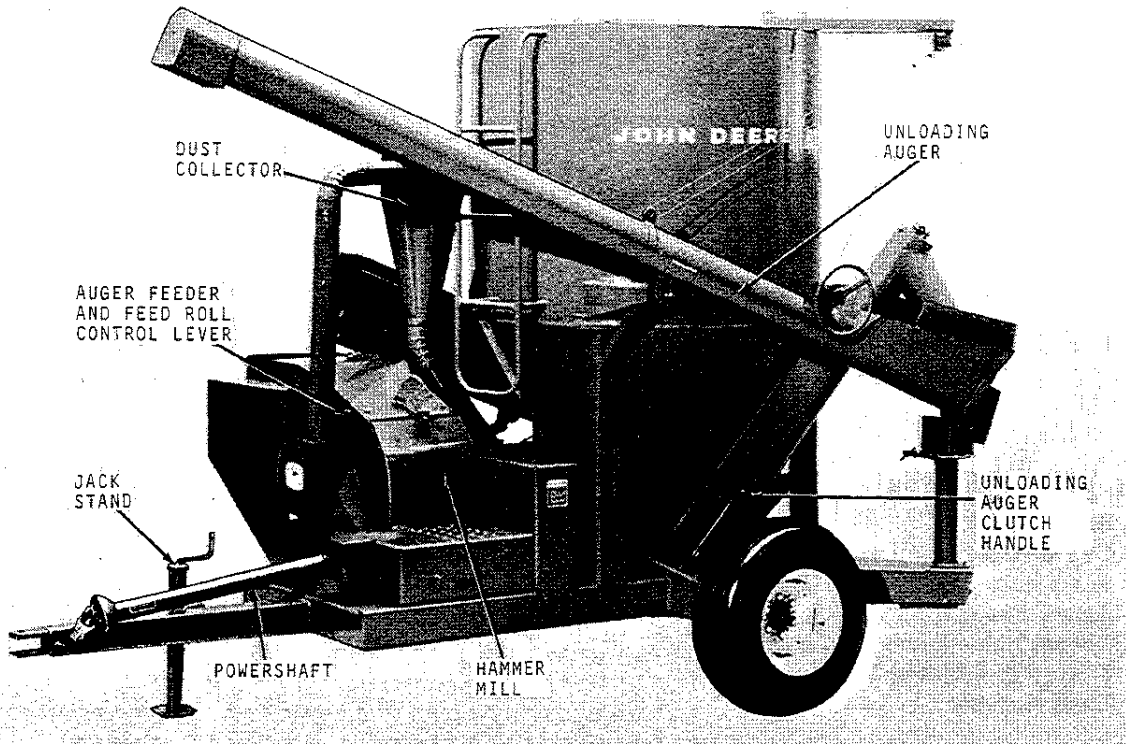
The serial number of your new 400 Grinder-Mixer is located on the frame as shown in the illustration. Record this number in the space below for reference when requesting information or ordering parts.

JOHN DEERE 400 GRINDER-MIXER	
Serial No.
Date Purchased19.....
<i>(To be filled in by Purchaser)</i>	

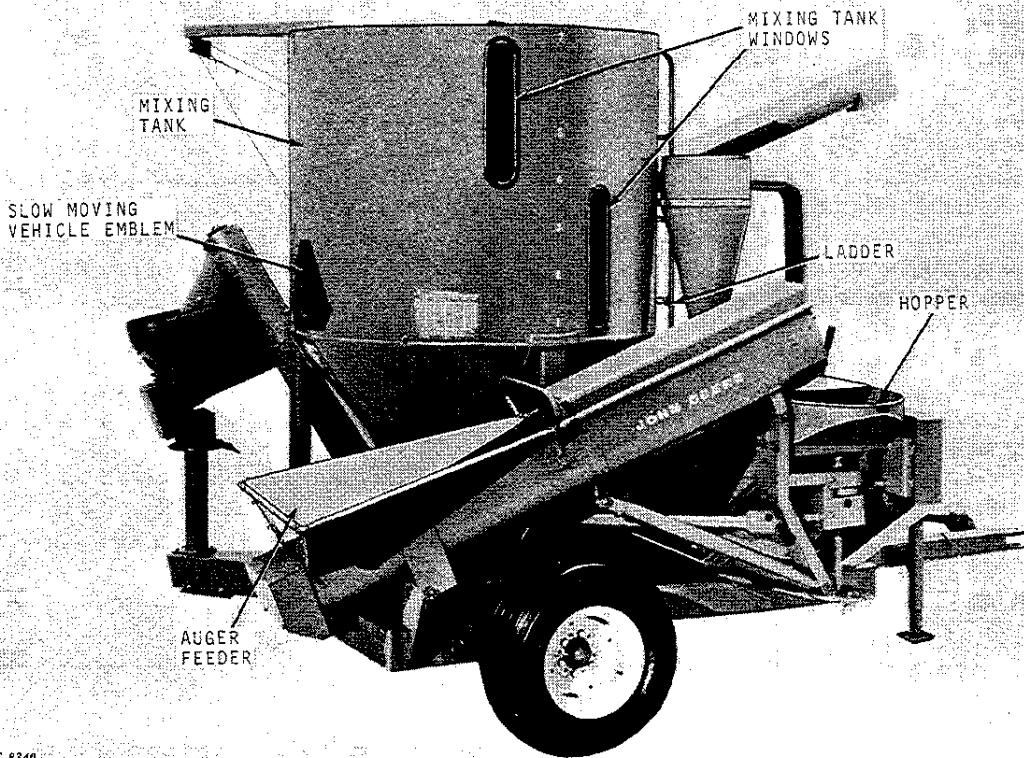


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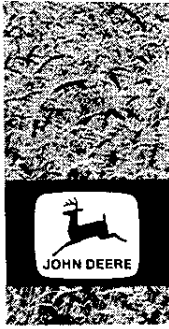
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Left-Hand Front View of John Deere 400 Grinder-Mixer



Right-Hand Rear View of John Deere 400 Grinder-Mixer



SPECIFICATIONS

Grinder-Mixer (With 540 rpm Drive, Auger Feeder and Feed Roll):
 Mixing Tank Capacity 82 Bushels (2 Tons)
 Height 107-1/2 Inches
 Length 161-5/16 Inches
 Width 96 Inches
 Weight 2666 Pounds
 Mixing Auger Diameter 12 Inches
 Unloading Auger:
 Diameter 6 Inches
 Length 13 Feet
 Pedestal Height 45 Inches
 Discharge Rate 16-1/2 Bushels per Minute

Hammer Mill:
 Hammers 26 4-Way Reversible
 Size 17 Inches with 20-Inch Throat
 Screen Area 506 Square Inches
 Screens Available . . . 12 with hole diameters from 3/16 to 1-1/2 Inches
 Operating Speed 2200 rpm
 Drive 4-1/2-Inch, 24-Groove, Poly-V Belt
 Tire Size 7:50-16 10-Ply
 11:00L-15 8-Ply (optional)
 Auger Feeder:
 Diameter 10 Inches
 Speeds 29, 55, or 103 rpm

(Specifications and design subject to change without notice.)

DESCRIPTION

The 400 Grinder-Mixer is a portable feed grinder and mixer. It is PTO driven at either 540 or 1000 rpm. The drive is designed for tractors with a maximum of 90 hp at the rated PTO speed.

All types of grain as well as hay can be ground with the Grinder-Mixer. The concentrate hopper allows concentrates to be added directly to the mixing tank.

The mixing tank auger continually mixes the feed as it is transported to the feedlot for unloading into the feeder.

The bulk of the ground feed goes directly from the hammer mill into the horizontal auger which carries it to the mixing tank. A suction fan takes off the air pressure developed in the hammer mill and delivers the fine feed through the dust collector into the horizontal auger.

The unloading auger pivots 225 degrees around its high base and will unload the tank in 5 minutes to heights up to 12 feet.

The concentrate hopper, protected by water-tight cover, is conveniently located at the rear of the machine.

The feed level in the tank is visible through the two safety glass windows staggered along the side of the mixing tank.

A ladder on the front of the tank gives access to the spring-release door on the top of the tank.

The optional auger feeder is spring counter-balanced for easy handling and can operate throughout its 120-degree pivot arc. The auger feeder is equipped with a safety clutch so it can be started or stopped independently of the mill.

A feed roll, available as extra equipment, helps pull baled hay slices into the grinder, gives a smoother flow of all materials into the mill, and also increases the mill capacity when grinding small grains.

A magnet can be added to the mill to help protect the machine and the feed from tramp iron particles.

Fenders also are available to protect the grinder-mixer and the operator when transporting the grinder-mixer in wet, muddy conditions.

A double sacking spout, available as extra equipment, is easily attached to the unloading auger to aid in bagging ground feed.

Twelve screens are available in hole sizes from 3/16 to 1-1/2 inches.



OPERATION

PREPARING THE GRINDER-MIXER

Before operating the 400 Grinder-Mixer, read the safety suggestions on page 18 and check the machine thoroughly, especially these areas:

Lubrication. Be sure the grinder-mixer has been lubricated as shown on pages 19 through 22.

Belts. Check the tension of the Poly-V drive belt as shown on page 16. Check the tension of the auger feeder drive belt (optional equipment) as shown on page 16.

Chains. Check the chain adjustment as shown on page 17.

Tire Inflation. Check to be sure the tires recommended for use with the 400 Grinder-Mixer are properly inflated. Inflate the 7.50-16, 10-ply tires to 56 psi air pressure. Inflate the 11:00L-15 8-ply tires to 36 psi air pressure.

PREPARING THE TRACTOR

TRACTOR REQUIREMENTS

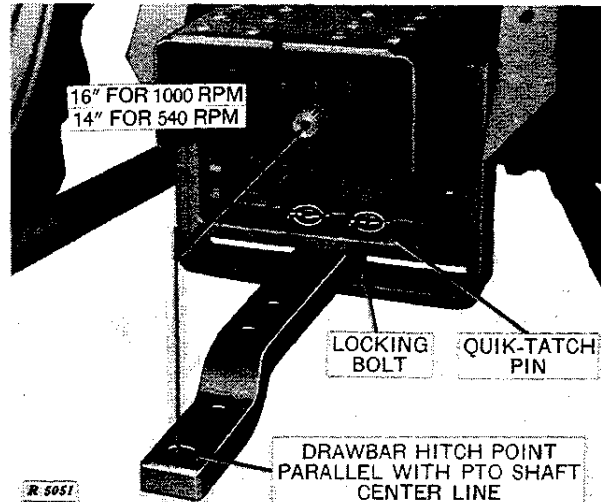
The John Deere 400 Grinder-Mixer may be used with John Deere 2020, 2520, 3020, 4000 and 4020 Tractors. Other tractors with horsepower equal to or greater than the John Deere 2020 Tractor may also be used.

A regular 540 rpm PTO can be used with tractors up to 70 hp having 540 rpm power take-offs. A heavy-duty 540 rpm PTO is recommended for use with tractors over 70 hp.

IMPORTANT: Many tractors are equipped with a PTO drive train designed to operate at 1000 rpm. For improved performance and longer tractor and implement life, this grinder-mixer should be operated by the 1000 rpm PTO shaft, whenever such a PTO speed is available on the tractor.

CAUTION: Regardless of the tractor used, always transport a loaded grinder-mixer at a slow speed (10 mph or less) and be extra careful when transporting in hilly country.

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, placing the locking bolts on either side of the drawbar.

NOTE: If the tractor has an offset drawbar, offset should always be down for PTO work.

FRONT END WEIGHTING

Provide sufficient weighting to stabilize front end of tractor when operating on hilly land or other adverse conditions. See your tractor operator's manual for front end weighting information.

REAR WHEEL SPACING

For maximum stability in hilly land or other adverse conditions, adjust wheel spacing to widest setting as shown in the tractor operator's manual.

TIRE INFLATION

Check front and rear tractor tires to be sure they are inflated according to the recommendations given in the tractor operator's manual.

ATTACHING TO TRACTOR

ATTACHING HITCH



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

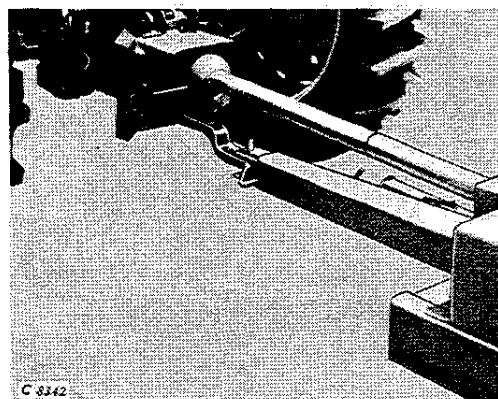
The drawbar must be between the upper and lower plates of the hitch clevis. Carefully back the tractor into position and insert the hitch pin through the upper clevis plate, drawbar, and lower clevis plate. Secure the hitch pin with the spring locking pin.

CAUTION: Do not transport the grinder-mixer unless the spring locking pin is installed in the hitch pin.



Place jack stand in transport position.

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.

IMPORTANT: Be sure grinder-mixer is equipped with 1000 rpm drive when operating with a tractor equipped with 1000 rpm PTO drive. See pages 25 through 27.

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

DETACHING FROM TRACTOR

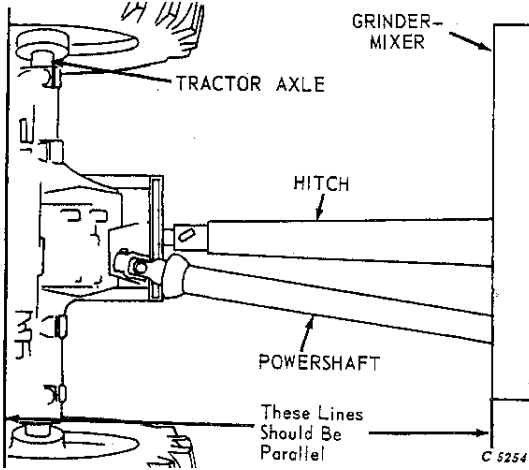
CAUTION: To avoid possible backward tip of the grinder-mixer with load in tank, always block rear of chassis before unhitching the grinder-mixer from the tractor. Do not remove the block while the grinder-mixer is unhitched from the tractor.

Disconnect the powershaft from the tractor and return it to the storage bracket. Lower the jack stand and install jack stand retaining pin and "Quik-Lock" pin. Use the jack stand handle to raise the grinder-mixer off the tractor hitch.

Remove the spring locking pin and 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.

OPERATING THE GRINDER-MIXER

ALIGNING POWERSHAFT



Whenever grinding, be sure the tractor axle and the front of the grinder-mixer hitch frame are parallel as shown above.

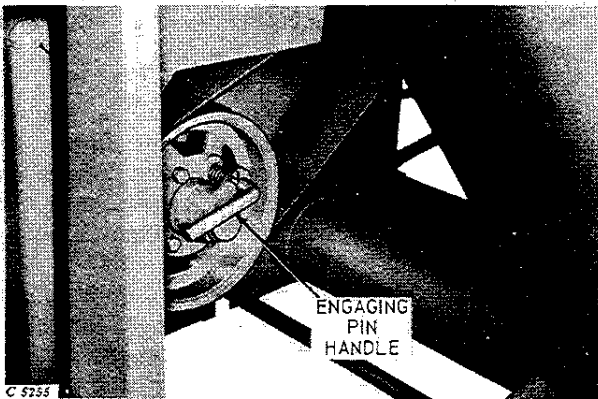
IMPORTANT: Whenever mixing while transporting, avoid sharp turns which may damage the powershaft.

For information regarding proper power take-off operation, see your tractor operator's manual.

HAMMER MILL

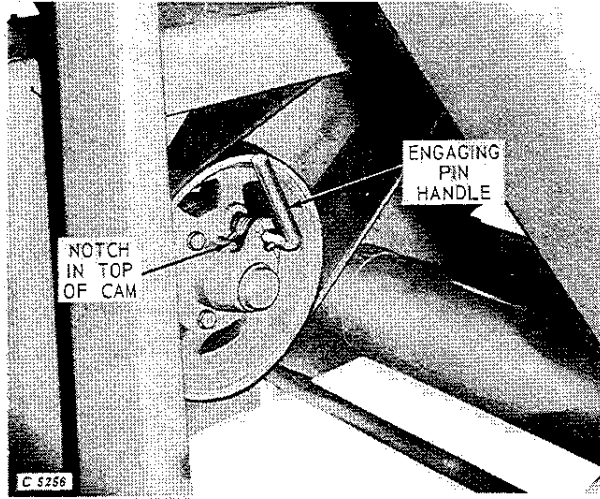
CAUTION: Disengage all drives and shut off tractor engine before engaging or disengaging the hammer mill.

ENGAGING HAMMER MILL



To engage the hammer mill, rotate the engaging pin handle in a clockwise direction. Turn the pulley until the pin engages one of the holes in the drive hub.

DISENGAGING HAMMER MILL



To disengage the mill, rotate the engaging pin handle in a counterclockwise direction. Be sure spring pin engages notch at top of cam.

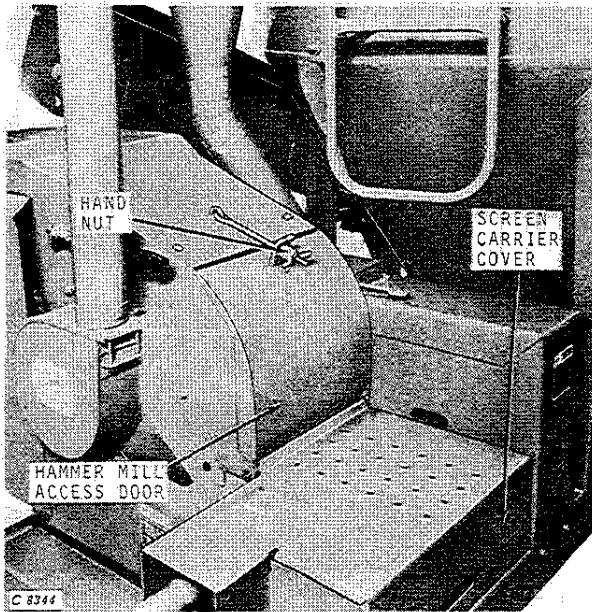
INSTALLING HAMMER MILL SCREENS

CAUTION: Disengage all drives and shut off tractor engine before installing or changing hammer mill screens.

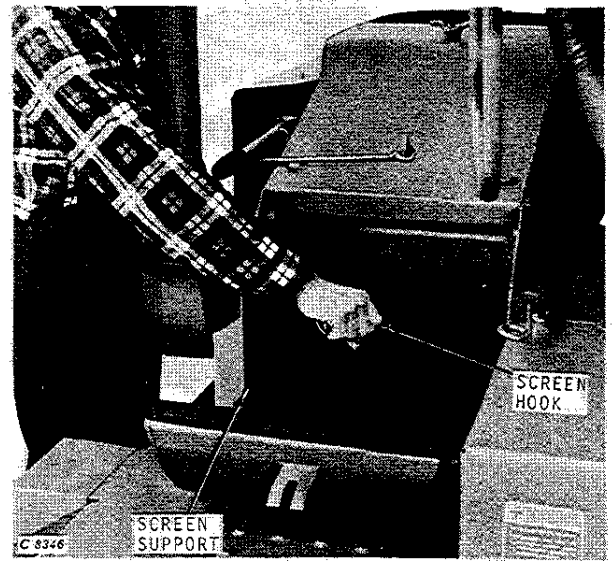


Extra screens may be carried in the convenient carrier.

To remove a screen, raise the cover and secure it with the catch. Remove a screen from the carrier and replace the cover.



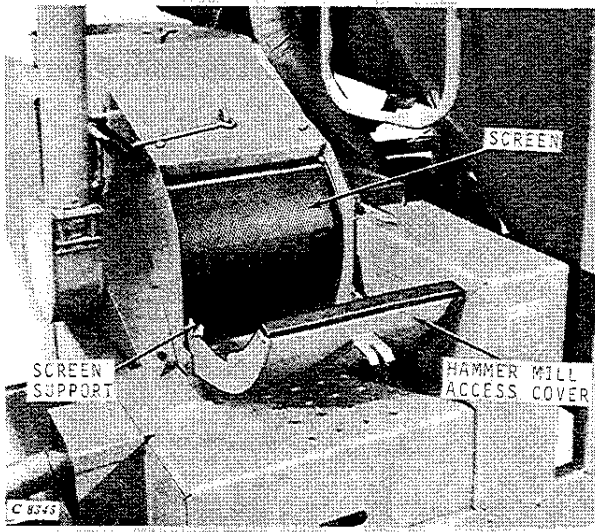
Loosen hand nut on hammer mill access cover retaining bolt. Swing bolt out of locking lugs and lower the mill cover.



To change a screen, open the hammer mill as described previously and push the screen support down.

Insert screen hook as low as possible on screen and pull up and out. Install the new screen as described previously.

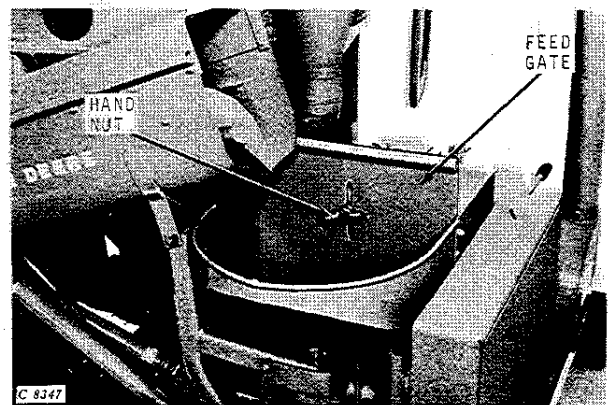
Place screen removed from hammer mill in screen carrier as shown on page 6.



Push screen support down and drop screen into hammer mill.

Close mill cover and secure with retaining bolt and hand nut.

FEED GATE



The feed gate may be raised or lowered to govern the flow of material to the mill.

Loosen the hand nut and raise or lower the feed gate to the desired height and retighten the hand nut.

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