410 CORN ATTACHMENT (EFFECTIVE SERIAL NO. 410-677)

JOHN DEERE

OPERATORS MANUAL

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(EFFECTIVE SERIAL NO. 410-677)

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TO THE PURCHASER

This book will give you useful information on how to operate your new John Deere 410 Corn Attachment.

The 410 Corn Attachment is built to handle a wide range of conditions. Average conditions can be handled with the regular equipment and wide range of adjustments built into the corn attachment. Unusual conditions may require use of some special equipment.

A careful study of the various adjustments on your corn attachment and what they accomplish under varying conditions will help you do a better job of picking and shelling corn.

If you need information not covered in this manual, see your John Deere dealer. He has the latest information on how to get the best service from your corn attachment.

When in need of parts, go to your John Deere dealer. Be sure to give him the serial number of the corn attachment. This information should be recorded immediately in the space provided below.

Serial Number .....

Date Purchased .....

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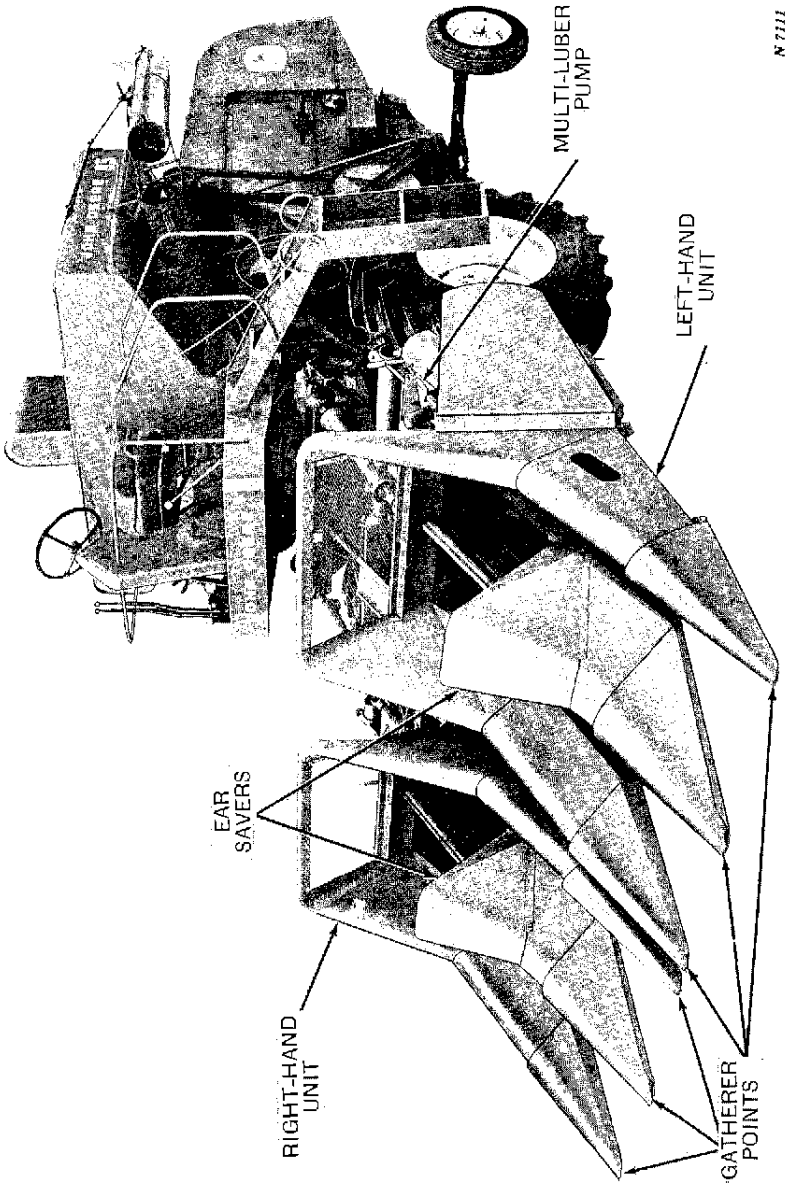
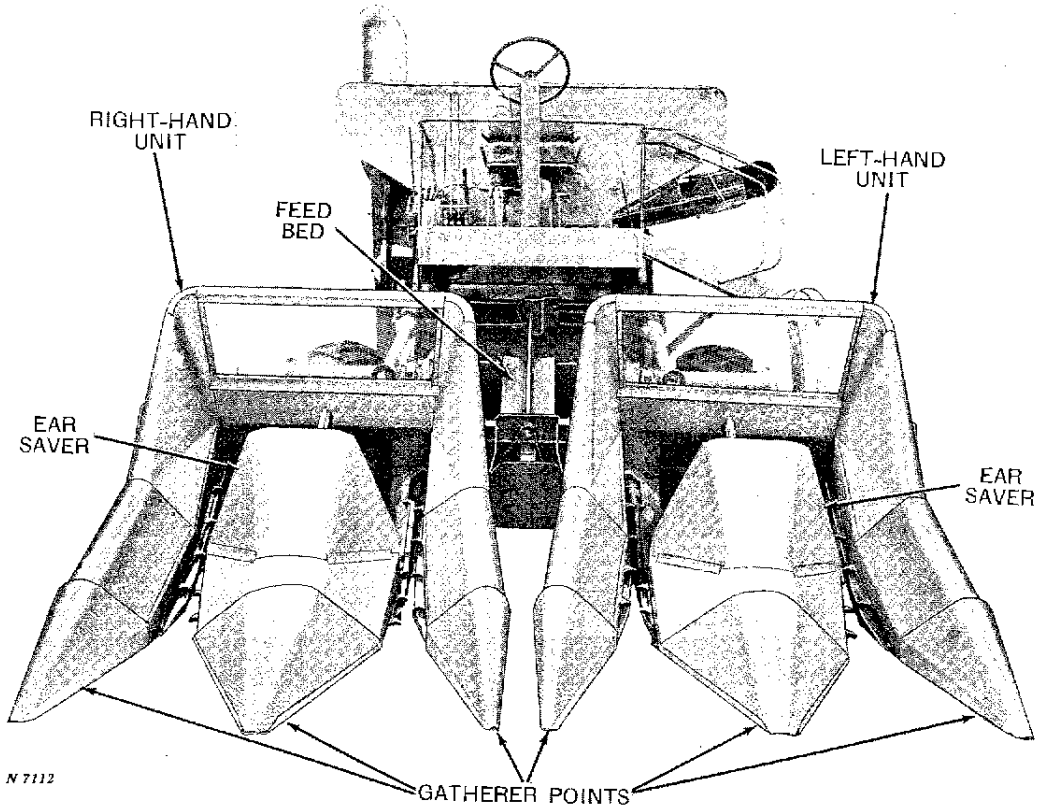


John Deere 410 Corn Attachment on 95 Self-Propelled Combine



John Deere 410 Corn Attachment on 95 Self-Propelled Combine

SPECIFICATIONS

Combine used	John Deere 95 or 105
No. of rows	4
Center-to-center distance between snapping units	40 inches
Row widths handled	38 to 42 inches
Gatherer points	Hinged above gatherer chains
No. of gatherer chains per snapping unit	2
Type of gatherer chains	Steel roller chain
Minimum clearance between gatherer chains and ground	0 inches and up
Distance gatherer chains ahead of fluted traction roll entry	7-1/2 inches
Length of fluted stalk rolls	38 inches
Fluted stock roll adjustment	Selected by operator
Snapping bar adjustment	Selected by operator
Picking unit lift	Units controlled independently from operator's platform
Conveyor from gatherers to combine	Augers
Over-all width	13 feet 4 inches
Over-all length for storage	11 feet 6 inches
Over-all length (On 95 Combine)	26 feet 4 inches
Shipping weight	4200 pounds (approx.)

(Specifications and design subject to change without notice.)

OPERATION

PROPER INSTALLATION

Improper installation of the corn attachment on the combine can cause inferior work and damage to corn attachment and combine. Be sure it is properly installed. After corn attachment is completely installed, go back over the entire machine, being sure shields, sprockets, chains, and different units are properly attached and adjustments made as illustrated and directed. Be sure all nuts, pins, and keys are tight and cotter pins are spread.

BEFORE OPERATION

Before putting corn attachment into the field for the first time, lubricate it thoroughly and operate slowly for ten minutes, making sure that all parts are working freely. If there is no binding or heating, run at fast idle speed for approximately 30 minutes, if this has not already been done by the dealer. Next, go over the entire machine to be sure that all bolts are tight and that lubricant is reaching all bearings. Be sure to check the tension of all chains.

IN THE FIELD

Successful operation, quality of work, and the length of life of the John Deere 410 Corn Attachment depends very largely upon thorough lubrication, and upon making best use of the simple adjustments that are provided to meet varying crop conditions.

With the 410 Corn Attachment you may harvest early when the moisture content of the corn is as high as 32 percent. This will eliminate many of the problems that accompany frozen ground, extremely cold weather, and dried out, frozen and rotten cornstalks.

In average crop conditions, the corn attachment will do best work when traveling at a moderate rate of speed. Be sure to have the combine adjusted properly to do the best job of shelling and cleaning.

Combine should travel in same direction that field was last cultivated.

Listen for slipping clutches and watch for deep furrows, rocks, or other obstructions which gatherer points may strike.

Drive combine carefully so the gatherer points will follow the row. When crossing the end of field, raise gatherer points.

If the unit is beginning to plug, do not slow down the combine engine. Keep the combine engine at operating speed and decrease the ground speed with the variable speed control or by disengaging the clutch until the unit has cleared itself.

Do not use a cornstalk or stick to clean stalk rolls of an ear or trash while corn attachment is in motion. If for any reason the corn attachment should become clogged, **stop** combine engine and then remove obstacle from corn attachment. **Keep hands completely away from stalk rolls when machine is in motion.**

Never clean, lubricate or adjust corn attachment or combine while either is in operation. Be sure to stop the combine engine. Too much care cannot be taken keeping hands and clothing away from all moving parts.

If trouble is experienced, determine where it exists before making adjustments. Make no slip clutch adjustments until all paint is worn off the slip clutches and working parts are smooth.

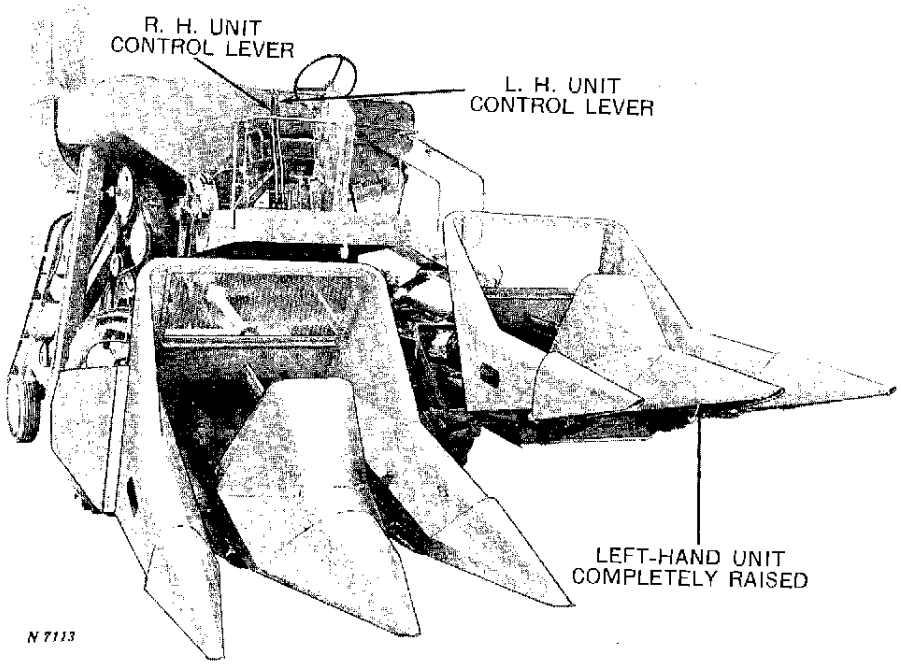
Be sure to drain water from combine engine at night during freezing weather if the cooling system is not protected with an anti-freeze solution.

Keep all nuts, pins, and keys tight. Keep cotter pins spread. carry a wrench when lubricating machine so loose nuts and bolts may be tightened as they are discovered.

Take pride in doing the best work possible under all conditions. Follow the rows carefully; set gatherer points and tilt machine to pick up the down and leaning stalks; set stalk rolls so that corn is not mutilated or shelled excessively; and to meet damp or dry conditions of corn. Handy adjustments are provided to meet these conditions.

Attachments and special equipment for the corn attachment and combine are shown on pages 43 to 45.

PICKING UNIT LIFT



INDEPENDENT LIFT

Each unit can be raised or lowered independently of the other, by the control levers on the combine operator's platform.

Pull the lever to the rear to raise the unit. Push the lever forward to lower the unit. After the desired height is obtained, release the lever. The lever will return to the center, and the unit will stay at the desired position.

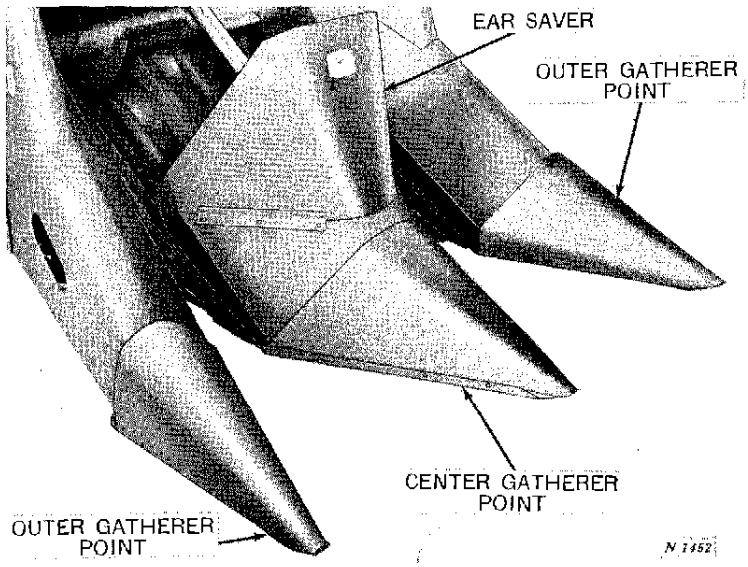
To raise or lower both units at the same time, operate both control levers together.

The purpose of the individual lift feature is to allow positive control of each unit while picking corn. When picking on uneven ground, each unit can be kept at the correct height at all times.

SIMULTANEOUS LIFT

If corn attachment is equipped for simultaneous lift, the picking units are controlled by the platform hydraulic control lever.

GATHERERS



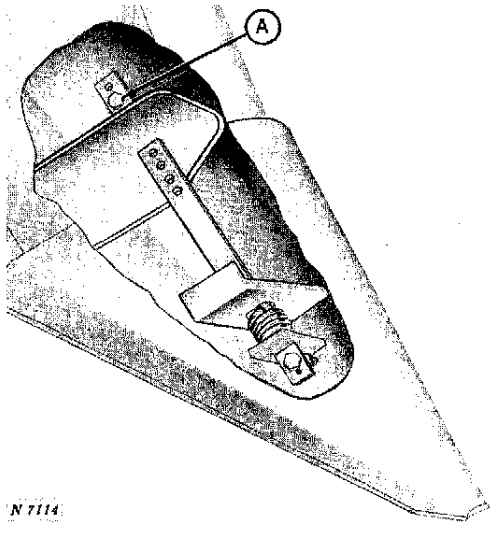
GATHERER POINTS

The gatherer points are hinged to follow the contour of the ground. They can also be raised and locked in any one of a number of positions by repositioning bolt "A."

When operating, have the gatherer points just touching the ground so they can pick up down stalks.

Generally in fields where the corn is down, place bolt in the rear hole of the adjusting strap.

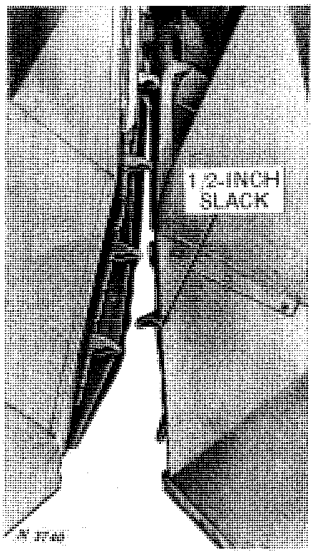
In muddy conditions or in snow, raise and lock gatherer points high enough to prevent the points from scooping material into throat opening, thereby clogging the opening.



EAR SAVER

The ear saver is designed for picking in corn that is standing well. It must be removed for picking in down corn, by taking out ten machine bolts.

GATHERER CHAINS



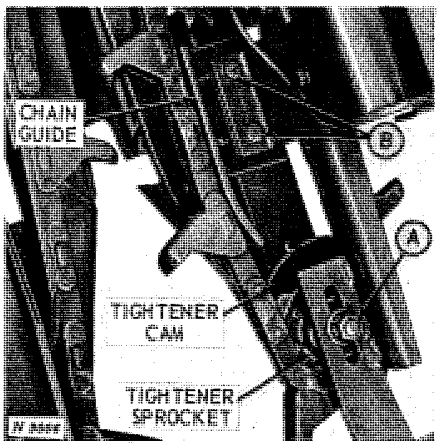
The gatherer chains run well beyond the points of the fluted stalk rolls to pull cornstalks into the unit. Gatherer chains can be run touching the ground if necessary to bring low hanging ears and down stalks into the fluted stalk rolls.

Both the inner and outer gatherer chains are adjustable to permit spacing with the rows in the field.

The chain guides can be adjusted so the paths of the chains will intersect each other, if desired. This is normally done in fields where the cornstalks are tangled or down. In fields where the corn is standing good, adjust the chain guides away from the row.

Gatherer chains should be lubricated at frequent intervals with SAE 10 or 20 engine oil. (See page 27.)

Adjusting Inner Gatherer Chain.

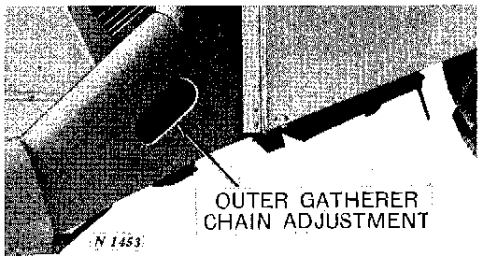


To adjust the inner gatherer chain, raise the gatherers and loosen nut "A" on the bolt through the tightener sprocket and nuts "B" on the chain guide attaching bracket. Slide the front of the chain guide and chain out to the desired position and tighten two nuts "B." Move the tightener cam until proper chain tension is obtained and tighten nut "A." Proper tension is 1/2-inch slack in the chain midway along the chain guide as shown at the top of the page. If chains are too loose, they may climb sprockets, break the links, and wear the chains and sprockets rapidly.

CAUTION: Do not attempt to set the chain tension by adjusting the chain guide.

Adjusting Outer Gatherer Chain and Chain Guide

A hole is provided in the outer gatherer sheet for access to the outer gatherer chain tightener.

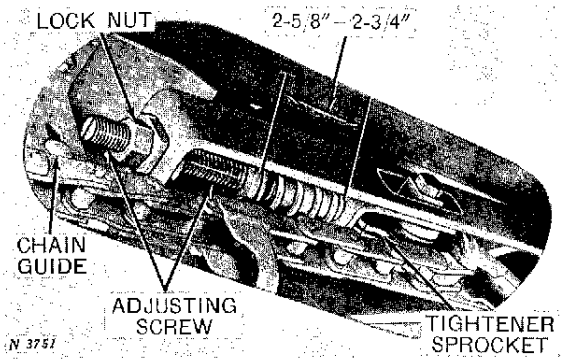


To adjust outer gatherer chain, loosen lock nut and turn adjusting screw until spring length is 2-5/8 inches to 2-3/4 inches. Tighten lock nut to maintain the setting. The chain will then have the proper tension.

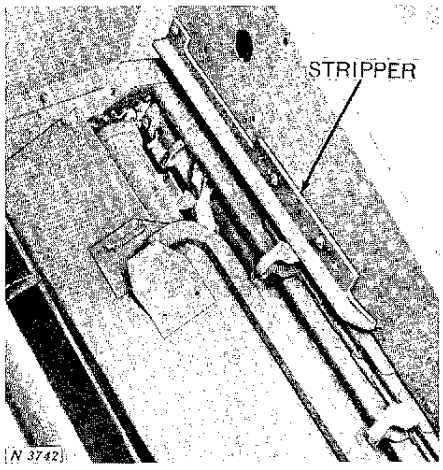
Adjust the outer gatherer chain guide so the chain flights will extend about 1/2-inch past the deck plate.

If the gatherer throat is clogging the guide may be adjusted to move the chain farther out.

Do not move the chain out so far that the flights will strike the flights on the inner gatherer chain.



Adjusting Outer Gatherer Chain Stripper

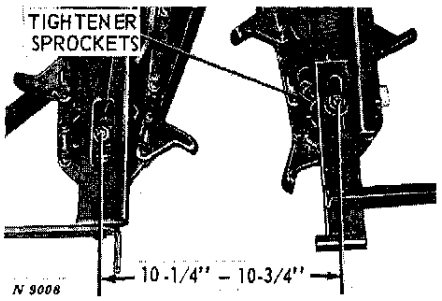


The stripper is used to strip material from the gatherer chain and to hold the chain down.

It should be adjusted so there is about 1/8-inch clearance between the stripper and the chain. Make the adjustment by loosening the nuts and moving the stripper in the slots.

ADJUSTING OUTER GATHERER

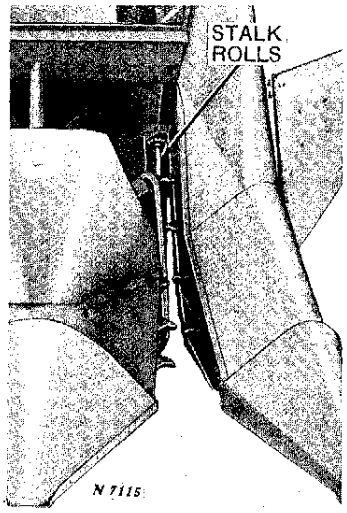
Faulty adjustment can result in having either too much or too little space between the inner gatherers and the outer gatherers. The distance between the centerlines of inner and outer gatherer tightener sprockets should be within the limits of 10-1/4 and 10-3/4 inches. The distance on one unit should be within 1/4-inch the distance of the other unit.



To adjust the gatherer spacing, loosen the outer gatherer adjusting bolts that secure the lower idler bracket to the frame. Move the lower idler bracket until the tightener sprockets are the correct distance apart. Install trash knife shims to maintain the adjustment.

Before tightening the nuts, sight along the stalk rolls, with the stalk rolls closed. See page 12. The flutes should be parallel with each other. Move the lower idler bracket up or down until the flutes on the stalk rolls are parallel.

STALK ROLLS

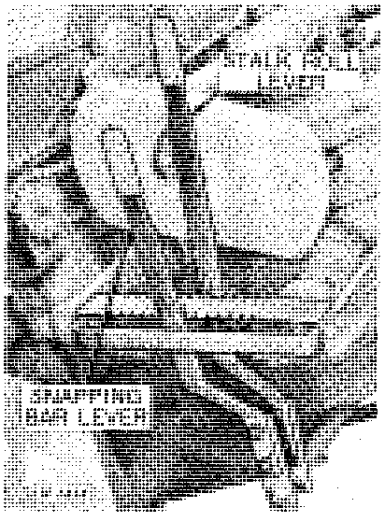


The fluted stalk rolls pull the cornstalks down so ears will be snapped at the snapping bar. The fluted rolls have aggressive lugs and a pair of cams at the upper end. This aggressive area forces tangled and delayed stalks through the upper end of rolls. The points of both rolls are carried close to the ground and are spiral ribbed. They assist in augering the corn safely into the rolls.

ROLL SPACING

As a general rule, run the rolls as close together as possible without breaking the cornstalks. The supports for the lower bearings on the outer rolls should be kept tight to minimize roll shake.

SPACING ADJUSTMENT



The spacing is easily changed by the adjusting lever which is normally located on each unit. Move the adjusting lever forward to close the rolls and rearward to open the rolls.

On some machines, as special equipment, the stalk roll levers are located on the combine operator's platform. The lever on the left-hand side controls the stalk roll spacing on the left-hand unit while the right-hand lever controls the stalk roll spacing on the right-hand unit.

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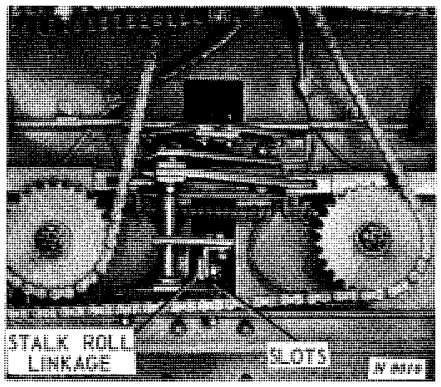
LINKAGE ADJUSTMENT.

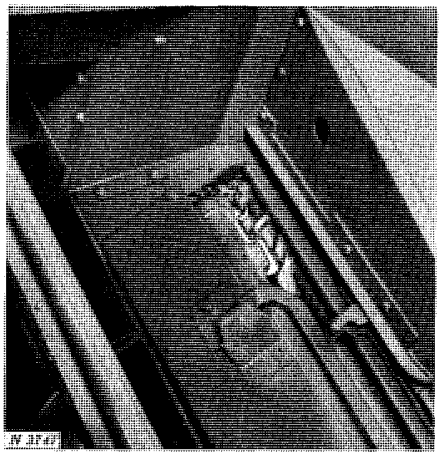


The stalk roll adjusting lever should not move beyond the notches in the quadrant. The linkage can be moved forward or rearward at the slotted connection for any necessary adjustment.

If the lever goes beyond the notches, loosen the bolts in the slots and reposition the linkage. Tighten the nuts after the desired position is obtained.

When properly adjusted the stalk roll adjusting lever will set in the rear notch of the quadrant when the stalk rolls are closed.

TIMING STALK ROLLS.



If the stalk rolls are not in time, the flutes may break off stalks. When timed properly, the S-shaped cams at the upper end of each pair of rolls will be 180 degrees apart. The flutes will alternate and there will be no clashing when the rolls are turned.

To adjust, loosen the bearing retainers at the rear of the rolls so the gears can be moved apart. Tighten the nuts after the rolls are timed.

STALK ROLL SPEED

The speed of the stalk rolls with the regular sprocket is 1200 rpm. This speed can be reduced to 1000 rpm to reduce stalk breakage, by replacing the 12-tooth stalk roll drive sprocket with N13235N 14-tooth sprocket.