

205 Corn Attachment



OPERATORS MANUAL

205 Corn
Attachment

OMN97525 (01APR61) English

OMN97525 (01APR61)

LITHO IN U.S.A.
ENGLISH



TO THE PURCHASER

This manual contains useful information on how to operate your new John Deere 205 Corn Attachment.

A corn attachment must be built to handle a wide range of conditions. Average conditions can be handled by the 205 Corn Attachment with regular equipment. Unusual conditions can be handled by installing special equipment.

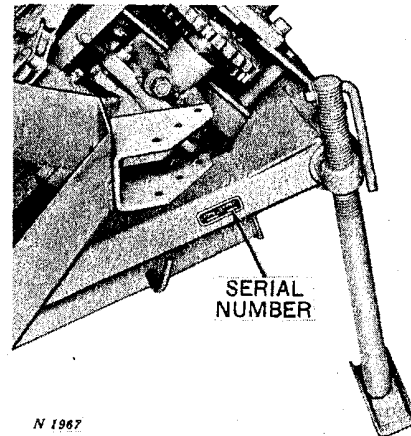
Field conditions vary from year to year, from day to day, and even from hour to hour. Different varieties of corn present widely different picking problems. A careful study of adjustments on your corn attachment and what they accomplish under varying conditions will allow you to reap many benefits and economies that a corn attachment can provide.

Your new corn attachment will do quality work in direct proportion to the care you use in operating it. Operate and service the attachment according to the instructions in this manual.

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 and can give you prompt service in the field or in his shop.

When in need of parts, go to your John Deere dealer. He carries genuine John Deere parts for your 205 Corn Attachment.

Be prepared to give him the serial number of your corn attachment and the year purchased. This information should be recorded below on this page as soon as you have received your corn attachment.



Serial Number.....

Date Purchased.....

You will find the serial number plate on the left-hand main frame as illustrated above.

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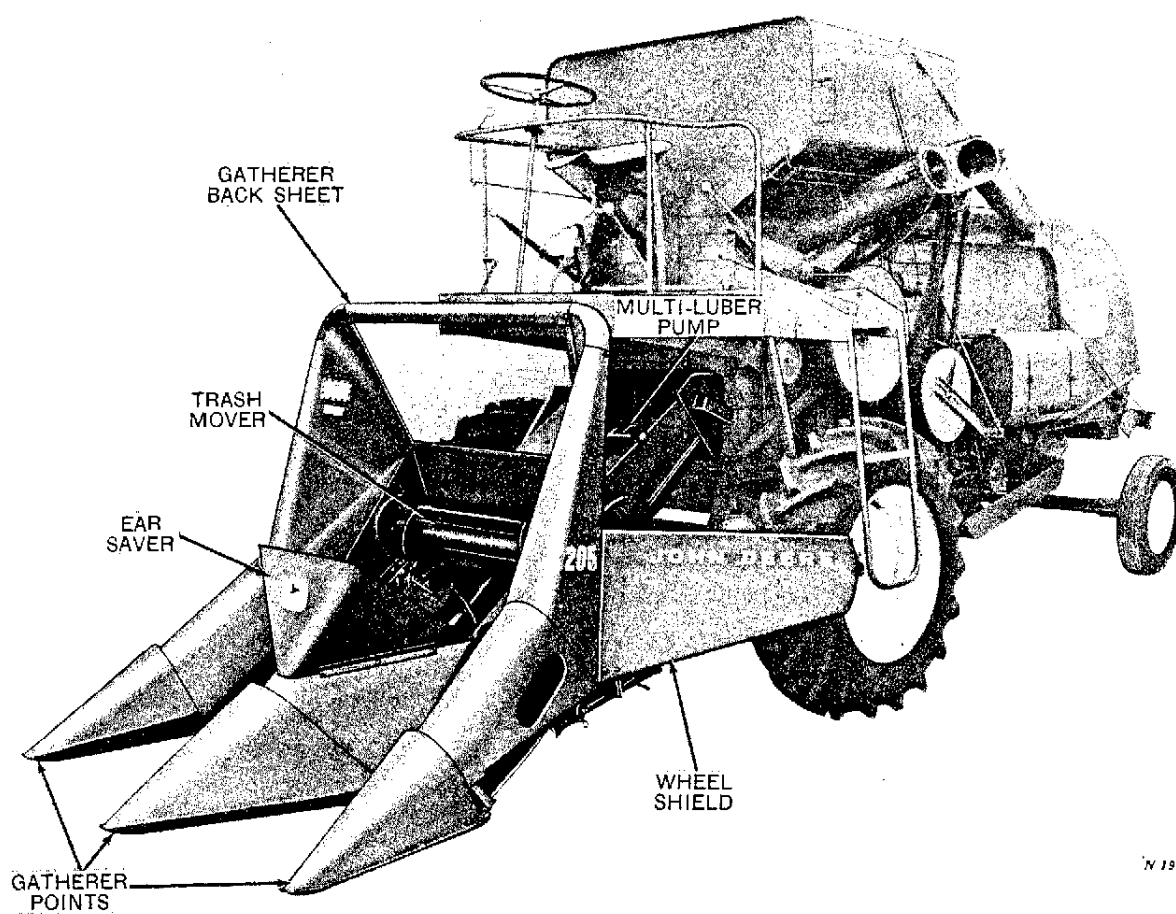
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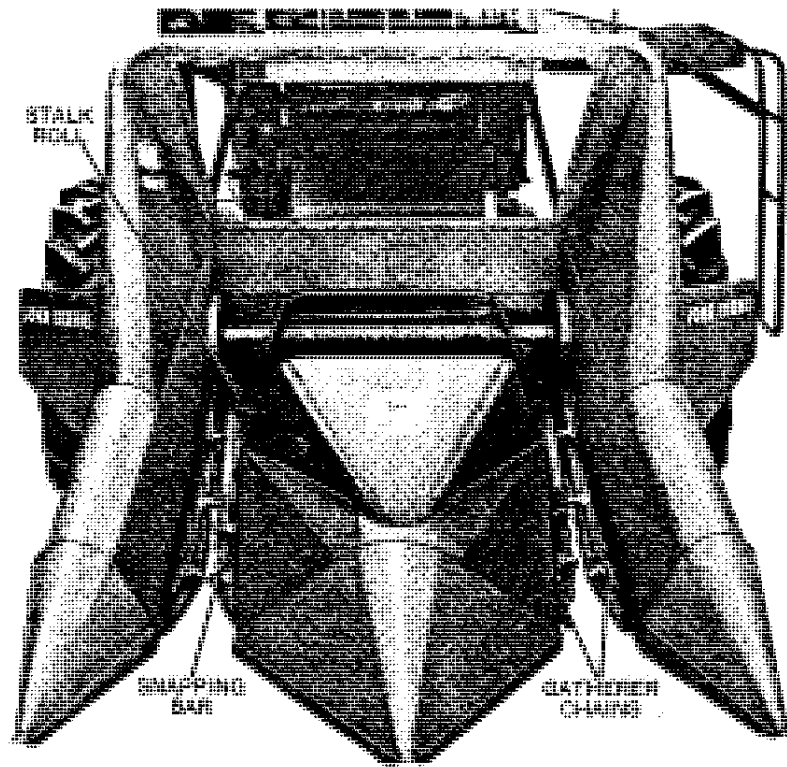
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N 1368

John Deere 205 Corn Attachment on 40 Self-Propelled Combine



N 1969

John Deere 205 Corn Attachment on 40 Self-Propelled Combine

SPECIFICATIONS

Number of Rows.....	2
Center-to-center distance between snapping units.....	40 inches
Row widths handled.....	38 to 42 inches
Gatherer points.....	Hinged above gatherer chains
Number 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 stalk rolls.....	8 inches
Length of fluted stalk rolls.....	27-1/2 inches
Fluted stalk roll adjustment.....	Adjusting nut
Snapping bar adjustment.....	Adjusting slots
Conveyor from gatherers to combine cylinder.....	Augers
Over-all width (storage).....	5 feet 4-1/2 inches
Over-all width with wheel shields.....	8 feet 6 inches
Over-all length (storage).....	9 feet 2 inches
Over-all length including 40 Combine.....	22 feet 10 inches
John Deere Combine required.....	40, 42, or 45

(Specifications and design subject to change without notice.)

OPERATION

GENERAL INSTRUCTIONS

PROPER INSTALLATION

Improper installation of the corn attachment on the combine can cause inferior work and damage to the corn attachment.

Be sure the attachment is properly installed. After the corn attachment is completely installed on the combine, go back over the entire machine, to be sure shields, sprockets, chains, and other parts are properly attached and adjustments made as illustrated and directed.

Be sure all nuts, pins, and keys are tight, and cotter pins are spread.

IN THE FIELD

Successful operation, quality of work, and length of life of the John Deere 205 Corn Attachment depend largely on proper lubrication and wise use of adjustments built into the machine.

Harvest early to avoid troubles that accompany frozen ground, extremely cold weather, and dried-out, frozen, and rotten corn stalks.

Early harvest of corn at 25 to 30 per cent moisture content will minimize field losses from down stalks, ear drop, and shelling at the stalk rolls.

In average conditions, the corn attachment will do the best work when traveling at a medium rate of speed. Avoid excessive ground speed and combine cylinder speed.

Generally, a fast cylinder speed is recommended for wet corn, and a slower cylinder speed for dry corn.

Listen for slipping clutches and watch for deep furrows, rocks or other obstructions that the gatherer points might strike.

The combine should travel in the same direction that the field was last cultivated. Drive the combine carefully so the gatherer points will follow the

row. When crossing the end of the field, raise the gatherer points by tilting the corn attachment with the combine hydraulic system.



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



Never clean, lubricate or adjust the corn attachment or combine while either is running. Be sure to stop the combine engine. Too much care cannot be taken to keep 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 clutch jaws and working parts are smooth.

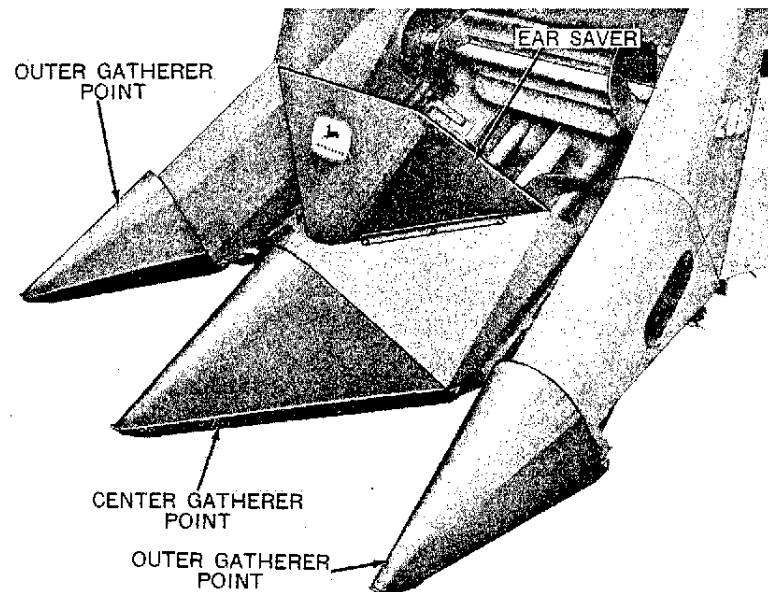
Before putting corn attachment into the field for the first time, lubricate it thoroughly and operate slowly for ten minutes, making sure all parts are working freely. If there is no binding or heating of bearings, run at fast idle speed for about 10 minutes.

Go over the entire machine to be sure that all bolts are tight and lubricant is reaching all bearings. Be sure to check the tension of all chains.

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 corn stalks are pulled down and corn snapped effectively at the stalk rolls. Handy adjustments are provided to meet various conditions. They are explained in this manual.

GATHERERS



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GATHERER POINTS

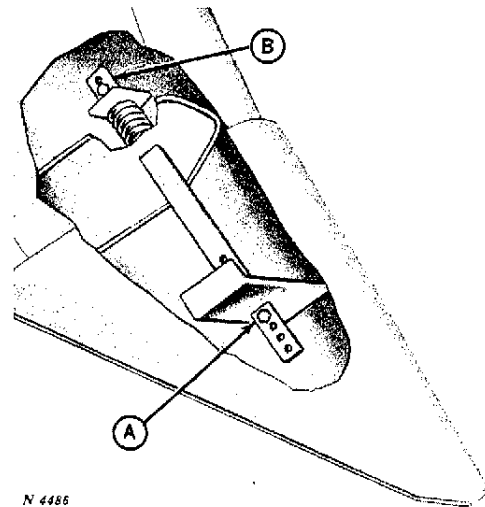
The gatherer points are hinged to follow the contour of the ground.

They can be raised and locked in any one of a number of positions with bolt "A." To obtain a fine adjustment reposition bolt "B" in one of the two holes in the front of the strap.

When picking corn, have the gatherer points just touching the ground. In muddy conditions or in snow, raise and lock the gatherer points high enough to prevent them from scooping material into the throat opening.

EAR SAVER

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



N 4486

BE SAFE

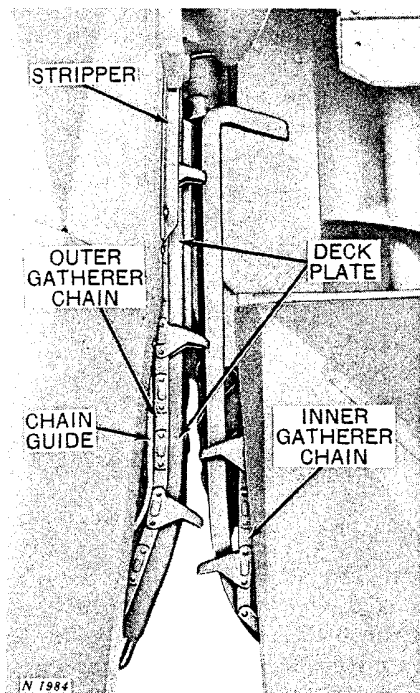
It pays to be careful,

It costs to be careless!

GATHERER CHAINS

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

The gatherer chains should be lubricated at frequent intervals (except in dusty conditions) with SAE 30 motor oil.

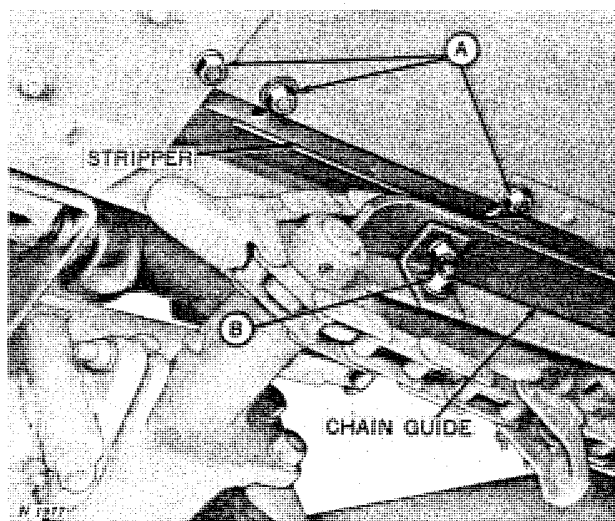


ADJUSTING STRIPPER AND UPPER GATHERER CHAIN GUIDE

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 nuts "A" and moving stripper in the slots.



Chain Guide

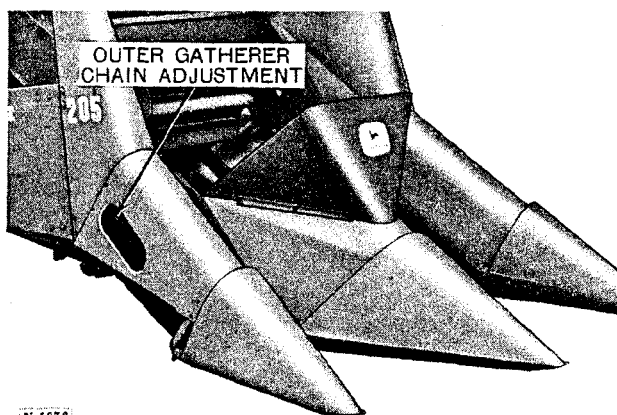
In extremely wet or weedy conditions the stalk rolls will perform more efficiently if the upper chain guide is moved back away from the stalk rolls.

In exceptionally trashy conditions better picking will result if the upper chain guide is adjusted closer to the stalk rolls so the gatherer chain flights will carry the trash back to the snapping section of the stalk rolls.

Adjust chain guide by loosening nut "B" and moving chain guide.

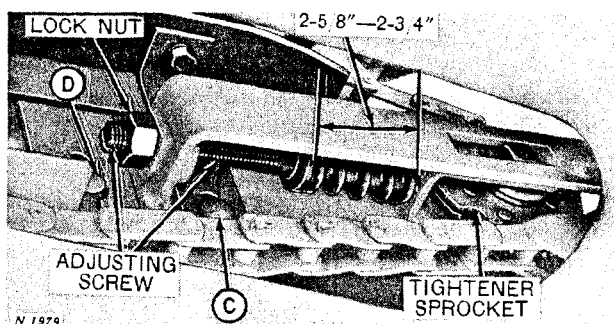


ADJUSTING OUTER GATHERER CHAIN, LOWER CHAIN GUIDE, AND DECK PLATE



N 1978

A hole is provided in the outer gatherer sheet for access to the outer gatherer chain tightener, chain guide and deck plate.



Chain Tightener

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

Chain Guide

In extreme conditions if the gatherer throat is clogging, the lower gatherer chain guide can be moved closer to the stalk roll points to drag the material past the throat.

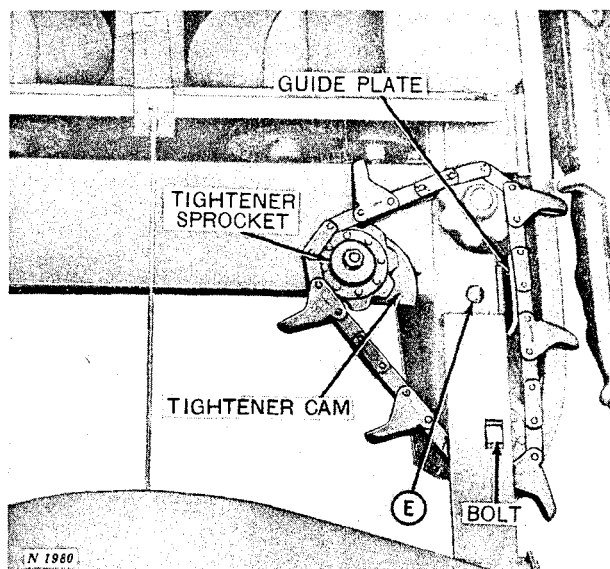
Adjust the chain guide by loosening the nut on bolt "C" and sliding the chain guide in or out.

Deck Plate

The deck plate should be adjusted so the spirals and part of the barrel on the stalk roll point are exposed. If too much of the point is exposed the spirals will strike the deck plate.

To adjust deck plate, loosen nut on bolt "D" and slide plate until adjustment is obtained. Tighten nuts after all adjustments are made.

ADJUSTING INNER GATHERER CHAIN



Chain Tightener

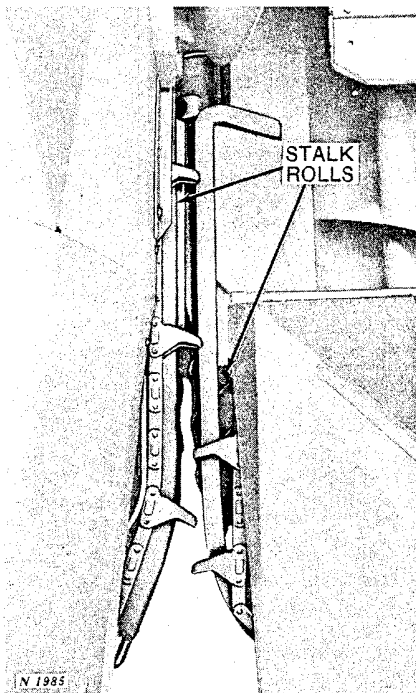
To adjust the inner gatherer chain loosen the nut on the tightener sprocket and move tightener cam until the bolt is approximately in the center of the square slot. This allows the spring to keep a constant tightening pressure on the chain idler sprocket. (Center shield removed for purposes of illustration.)

Chain Guide

The guide can be moved out to obtain more aggressive action of the gatherer chain. To adjust chain guide, loosen nut on bolt "E" and slide guide until desired adjustment is obtained. Tighten nut after adjusting.

Keeping your equipment in proper adjustment will help to keep it operating efficiently and economically.

STALK ROLLS



The fluted stalk rolls pull the corn stalks down so ears will be snapped at the snapping bar.

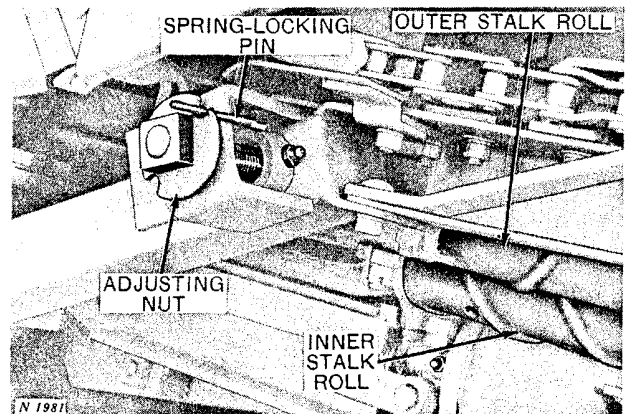
They have aggressive lugs and a pair of cams at the upper end to force tangled and delayed stalks through the upper end of the rolls.

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 ADJUSTMENT

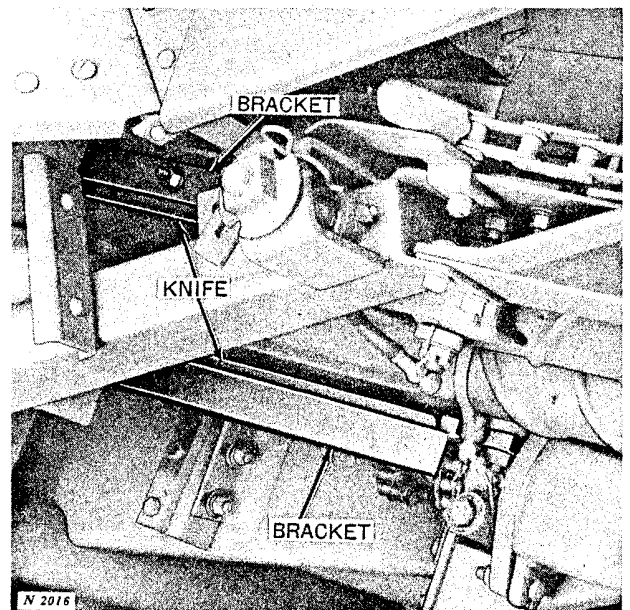
When corn is damp or wet and hard to snap, the rolls should be run close together, but not touching. When corn is dry or frozen, run the rolls farther apart.

The spacing of the stalk rolls is changed by an adjusting nut that moves the outer roll in or out.



To adjust the roll spacing, remove the spring-locking pin and turn the adjusting nut clockwise to open the rolls or counter-clockwise to close the rolls.

TRASH KNIVES

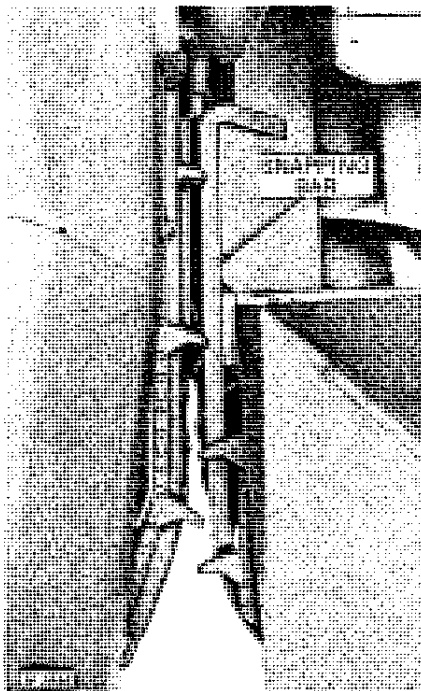


Trash knives can be installed as special equipment (see page 43), to prevent weeds and trash from wrapping around the stalk rolls.

The knives should be set as close to the stalk rolls as possible without striking the flutes.

The trash knives can be adjusted closer or farther from the rolls by using shims between the knife and the bracket.

SNAPPING BAR



The snapping bar snaps ears from the corn stalks as the stalks are pulled down by the stalk rolls. The snapping bar spacing is adjustable to meet varying crop conditions.

The snapping bar opening should be just wide enough to snap the small ears. However, if there is excessive stalk breakage, open the bar farther to permit stalk rolls to carry away more material.

Do not adjust snapping bar wide enough to permit small ears to be carried into the stalk rolls.

A good starting setting is 1-1/4-inch. When stalks are heavy or you are picking in extremely weedy or trashy conditions, open the bars farther.

The snapping bar should be set as close to the stalk roll as possible without striking the roll.

IMPORTANT: The snapping bar should always be parallel with the outer gatherer chain deck plate.

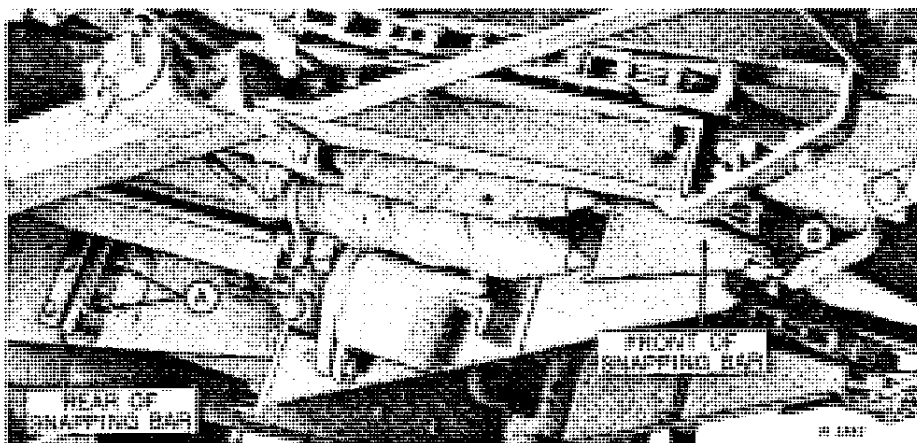
ADJUSTING SNAPPING BAR

To adjust the rear of the snapping bar for spacing from the deck plate, loosen bolts "A" and slide snapping bar in or out.

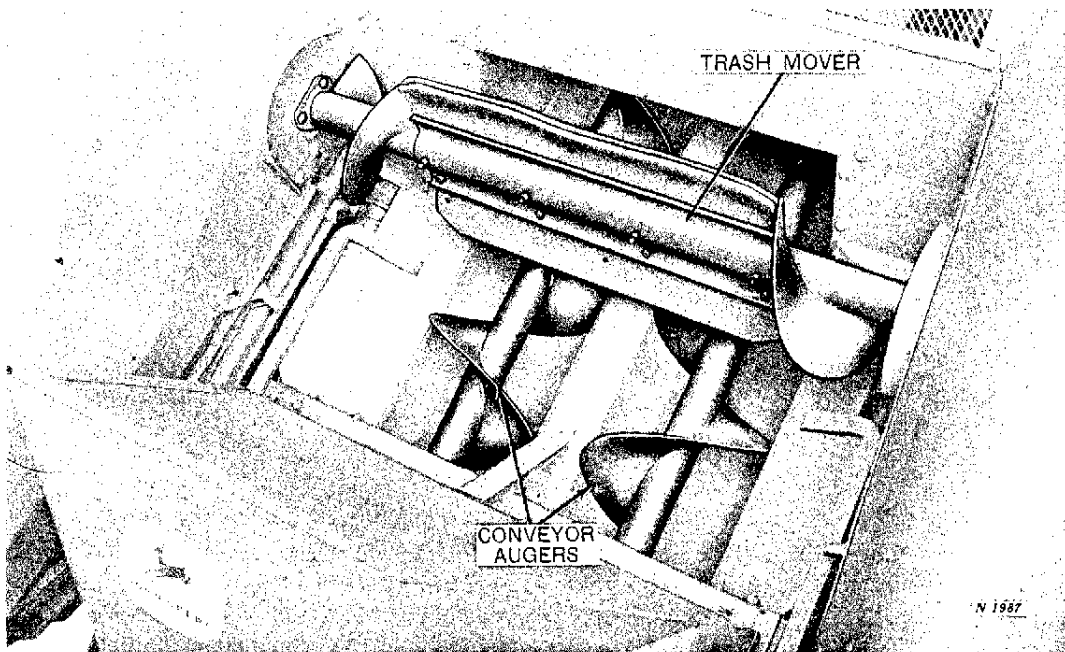
To adjust the snapping bar for distance from the stalk roll, loosen bolts "A" and move snapping bar up or down.

To adjust the front of the snapping bar for spacing from the deck plate, loosen bolt "B" and slide snapping bar in or out.

Tighten all nuts after proper adjustment is obtained.

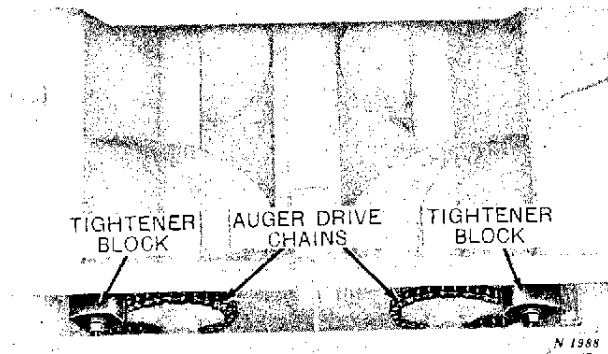


CONVEYOR AUGERS AND TRASH MOVER



CONVEYOR AUGERS

Two large diameter augers convey the corn from the stalk rolls directly to the combine cylinder. **CAUTION:** In freezing weather, at the end of each day's operation, run the corn attachment slowly for a few minutes to clean the auger housing. In rainy seasons, clean material away from drain holes so water will not collect in the housing.



The conveyor auger drive chains are located at the bottom of the augers ahead of the bulkhead.

A wooden block acts as a tightener for each auger drive chain. The tightness of these chains should be checked periodically.

To adjust the chain tightness, loosen the nut on the wooden block and move the block until the proper tightness is obtained.

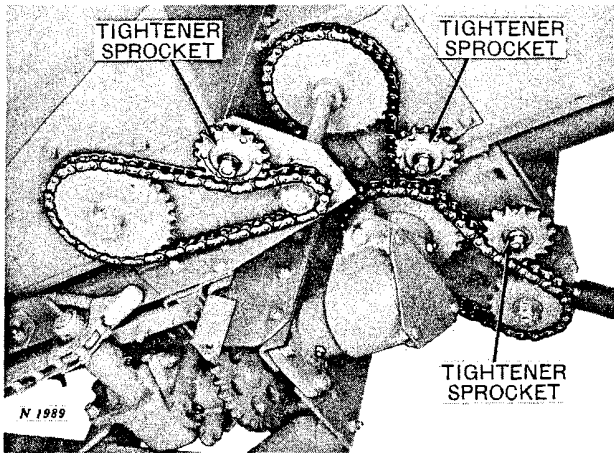
When one side of the tightener block becomes worn, the block can be turned over and the other side used against the chain.

TRASH MOVER

The trash mover is located directly above the conveyor augers to start trash and broken stalks into the conveyor housing.

The tire carcass type paddles keep material moving into the augers. The augers on either end of the trash mover take material away from the upper ends of the stalk rolls and force it into the conveyor augers.

ROLLER CHAINS



The roller chains on your corn attachment will give long, satisfactory service if cared for properly.

Chains should be cleaned regularly. Remove the chain and clean it thoroughly by soaking in a safe solvent. Dry well and oil chain before installing on corn attachment.

Before storing the machine, clean and oil the chains with heavier oil. When they are to be used again, clean and lubricate with a light oil.

Chains should be lubricated frequently except when operating in extremely dusty conditions. Dust will collect and cause the chains to wear more than if they were not lubricated.

Check the tightness of the roller chains frequently. They should not be run too tight, but they should not be run so loose that they slap.

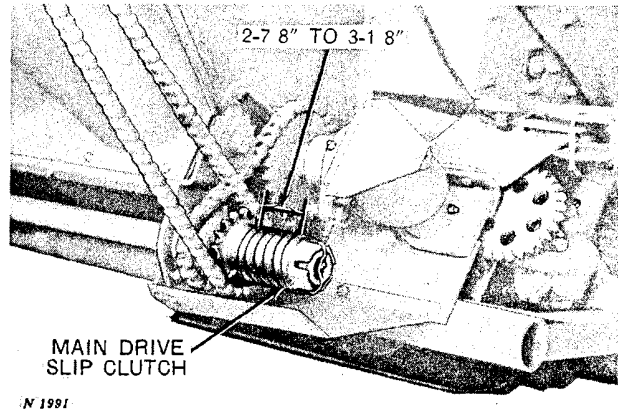
Extra offset or half-links are furnished in each chain to permit shortening as chains wear or stretch.

When removing chain links from roller chains be sure to assemble chain with closed end of spring clip in the same direction the chain is traveling.

CHAIN ADJUSTMENT

To adjust chain tightness, loosen nut on tightener sprocket and slide tightener sprocket in the slot until the desired tightness is obtained. Chains on the right-hand side of the unit are adjusted in the same manner as those shown above.

SLIP CLUTCH



The slip clutch on the main drive jackshaft acts as a safety device to reduce breakage. The spring controlling the clutch should have enough compression to hold the clutch to its normal work load.

If the clutch slips when the corn attachment is in operation, stop immediately, determine the cause and correct it. Do not set the clutch under greater compression to correct the difficulty.

The slip clutch should be set tight enough for ordinary work without slipping, but loose enough to slip easily if there is clogging. If the slip clutch does not slip easily, take it apart and clean.

The slip clutch should be taken apart and cleaned once each season.

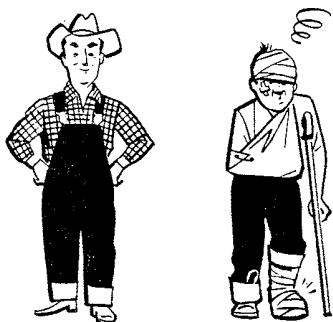
ADJUSTING THE SLIP CLUTCH

Adjust the slip clutch by turning the adjusting nut to increase or decrease the clutch spring compression. The normal length of the clutch spring is 2-7/8 to 3-1/8 inches. Measure the length of the spring only.

CAUTION: Do not tighten the adjusting nut to the point where the clutch will not slip.



SAFETY SUGGESTIONS



Mr. Careful⁵⁶⁸⁷¹ Mr. Careless

It Pays To Be Careful

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

Study these suggestions carefully, and insist that they be followed by those working with you and for you.

Only the operator should be allowed on the operator's platform when the combine is moving.

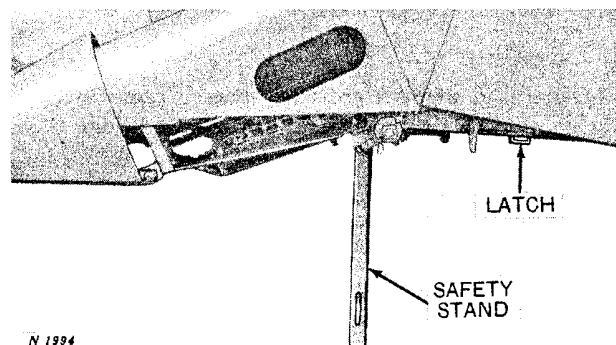
Do not use a cornstalk or stick to clean the stalk rolls of an ear or trash while the corn attachment is in motion. If, for any reason, the corn attachment becomes plugged, stop the combine engine and remove obstacle from corn attachment. Keep hands completely away from the stalk rolls when the machine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

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

Be sure shields and guards are in place and in good condition before starting in the field.

When transporting on a highway, keep as far to the right as possible. Hang a red flag prominently on the rear of the combine when transporting during the day. Combine must be equipped with head lights and warning lights for night transporting.

SAFETY STAND



N 1994



A safety stand is provided on the left-hand side of the corn attachment to protect the operator from accident while servicing the machine. Always lower the safety stand before working around the machine. When not in use the stand swings up and attaches to a latch on the frame.

SUGGESTED COMBINE SETTINGS FOR COMBINING CORN

The settings listed below are recommended settings for the combine when picking in average conditions.

In some conditions it may be necessary to vary the settings. Your combine operator's manual includes directions for making the various settings.

Consult your combine operator's manual frequently when preparing the combine for corn harvesting.

Cylinder Speed 542, 473, or 394 rpm

Rasp-Bar Cylinder to Concave

Clearance Front—1-inch
Rear—5/8-inch

Setting of Adjustable Cleaning Sieve. 1/2 Open

Setting of Adjustable Chaffer 2/3 Open

Setting of Adjustable Cleaning Fan Sheave Open

Position of Lower Windboard

Lever Center Position

Setting of Shutters at Sides of Fan Open

COMBINE CYLINDER SPEEDS AND DRIVE SPROCKETS

Combine cylinder speed is an important factor in harvesting corn.

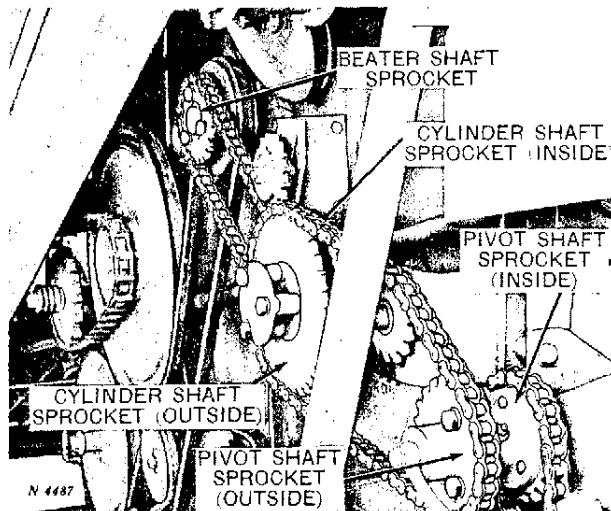
Generally, a slower cylinder speed is recommended for combining dry corn, and a higher cylinder speed is recommended for combining wet corn.

Low-moisture corn will have less tendency to crack when a slower cylinder speed is used. A higher cylinder speed will do a better job of stripping high-moisture corn off the cob than a slow cylinder speed.

IMPORTANT: The cylinder speed has no relation to the ground speed for combining corn. Ground speed is governed by how the corn is feeding through the unit and how much grain is being carried through the combine.

In most crop conditions the 473 cylinder speed is satisfactory.

See the chart below to determine the correct sprocket arrangement for the speed at which you wish to operate the cylinder.



40 OR 42 COMBINE

Cylinder Speed	Beater Shaft Sprocket	Cylinder Shaft Sprockets		Pivot Shaft Sprockets	
		Outside	Inside	Outside	Inside
394 rpm	(3) 20T (P46439H)	(2) 37T (AN11251N)	(3) 33T (P46429H)	(1) 20T (P46439H)	(1) 22T (N12222N)
473 rpm	(2) 24T (P46430H)	(2) 37T (AN11251N)	(3) 33T (P46429H)	(1) 22T (N12222N)	(1) 20T (P46439H)
542 rpm	(3) 20T (P46439H)	(2) 37T (AN11251N)	(4) 24T (P46430H)	(1) 24T (P46430H)	(1) 20T (P46439H)

45 COMBINE WITH 3/4-INCH PITCH ROLLER CHAIN FROM BEATER SPROCKET TO CYLINDER SPROCKET

394 rpm	(3) 20T (P46439H)	(3) 33T (P46429H)	(2) 26T (AJ10398N)	(1) 30T (J20693N)	(1) 34T (J20652N)
473 rpm	(3) 24T (P46430H)	(3) 33T (P46429H)	(2) 26T (AJ10398N)	(1) 34T (J20652N)	(1) 30T (J20693N)
542 rpm	(3) 20T (P46439H)	(3) 24T (P46430H)	(2) 26T (AJ10398N)	(4) 39T (J21477N)	(1) 30T (J20693N)

45 COMBINE WITH 1-INCH PITCH ROLLER CHAIN FROM BEATER SPROCKET TO CYLINDER SPROCKET

274 rpm	(3) 16T (P47812H)	(4) 38T (P47815H)	(2) 26T (AJ10398N)	(4) 23T (BN10018N)	(1) 34T (J20652N)
386 rpm	(4) 19T (P47813H)	(4) 32T (P47814H)	(2) 26T (AJ10398N)	(1) 30T (J20693N)	(1) 34T (J20652N)
476 rpm	(4) 19T (P47813H)	(3) 26T (P47996H)	(2) 26T (AJ10398N)	(1) 34T (J20652N)	(1) 30T (J20693N)
547 rpm	(3) 16T (P47812H)	(4) 19T (P47813H)	(2) 26T (AJ10398N)	(4) 39T (J21477N)	(1) 30T (J20693N)
	(4) 32T (P47814H)	(4) 38T (P47815H)	(2) 26T (AJ10398N)	(4) 39T (J21477N)	(1) 30T (J20693N)
445 rpm	(3) 26T (P47996H)	(4) 38T (P47815H)	(2) 26T (AJ10398N)	(1) 34T (J20652N)	(1) 30T (J20693N)
528 rpm	(3) 26T (P47996H)	(4) 32T (P47814H)	(2) 26T (AJ10398N)	(4) 39T (J21477N)	(1) 30T (J20693N)

NOTE: A regular hub sprocket on the cylinder shaft must be used to get 476 rpm at the cylinder.

- (1) The corn attachment is regularly equipped with these sprockets.
- (2) Furnished with the corn attachment for use on combine.
- (3) The combine is regularly equipped with these sprockets.
- (4) Order part number shown.



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LUBRICATION

The economical and efficient operation of any machine depends on regular and proper lubrication of all moving parts with a quality lubricant.

This is especially true of farm equipment which must operate in adverse conditions much of the time. Neglected lubrication quickly leads to reduced efficiency, heavy draft, wear, breakdown, and costly replacement of parts.

Regular and systematic lubrication is the best assurance against breakdown and delays. It will provide better service from your corn attachment and save on your repair bills.

OIL CAN POINTS

Lubricate all clevises, linkages, and other pivot and sliding parts once each day or every 10 hours of operation with SAE 30 engine oil. Lubricate both storage stand screw threads twice a season with SAE 30 engine oil.

CHAINS

Lubricate roller drive chains and gatherer chains daily with SAE 30 engine oil. Do not oil gathering chains when operating in extremely dusty or sandy conditions. Dust and sand will stick to the oiled chain and act as an abrasive.

CAUTION: Do not attempt to lubricate chains while corn attachment is running.

MACHINES WITH MULTI-LUBER SYSTEM

The Multi-Luber System on the 205 Corn Attachment provides a fast, convenient system for lubricating the machine.

The system consists of a reservoir, pump, feed lines, and connections. The reservoir is filled, and the system is primed and ready for operation when your new corn attachment is delivered.

Each outlet port on the pump is connected to a grease point by a separate shielded nylon feed line tube. The lubricant is metered at the pump so each bearing receives the same amount of lubricant under the same pressure.

RESERVOIR

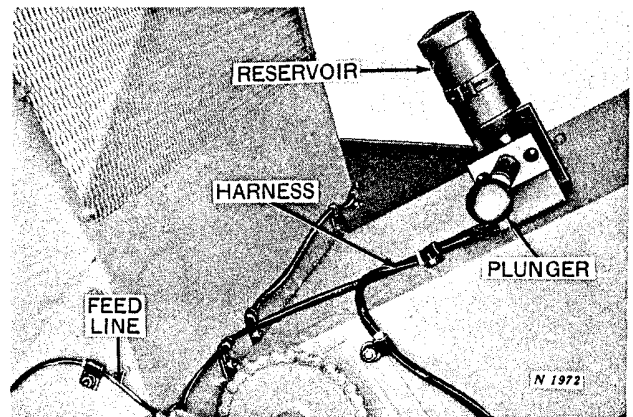
The reservoir holds a supply of lubricant for approximately one week of normal operation. Check the reservoir periodically to be sure the lubricant is always available to the system. A dip stick in the top of the reservoir is provided for checking. Never let the system run dry.

Refill the reservoir with John Deere Multi-Luber lubricant. This lubricant can be purchased from your John Deere dealer in 32-ounce cans as part AN11100N.

PUMP

Depress the plunger handle manually to operate the system. Move the plunger forward through all the ports so all points on the machine will be lubricated. The measuring plunger is filled from the reservoir as the spring-loaded plunger returns to its normal position. If the plunger stops going by all ports it is an indication of trouble. See page 37 for servicing the Multi-Luber system.

OPERATION



Lubricate the corn attachment by operating the plunger at least five times every two hours of operation. **Be sure to press the plunger through all ports so all points on the machine will be lubricated.**

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