

335, 435 and 635 Corn Attachments



OPERATORS MANUAL

**335, 435 and 635
Corn Attachments**

OMN159163 B8 English

**John Deere Des Moines Works
OMN159163 B8**

LITHO IN U.S.A.
ENGLISH





TO THE PURCHASER

This manual contains useful information about operating your new John Deere Corn Attachment.

This corn attachment is built to handle a wide range of conditions. Field conditions vary from year to year, from day to day, and even from hour to hour. Different varieties of corn present 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.

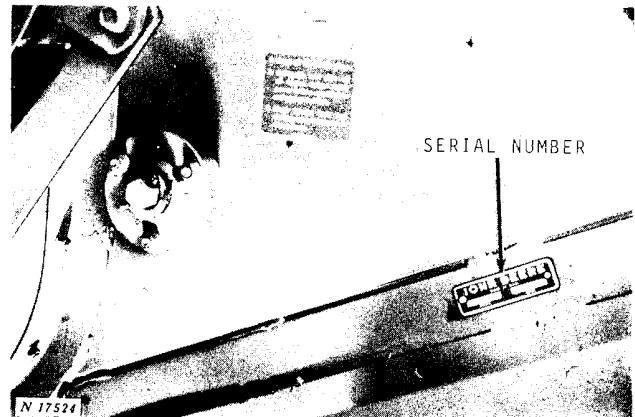
Your new corn attachment will do quality work in direct proportion to the care you use in operating it. Operate, adjust and service the attachment according to instructions in this manual.

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

Serial Number
Date Purchased

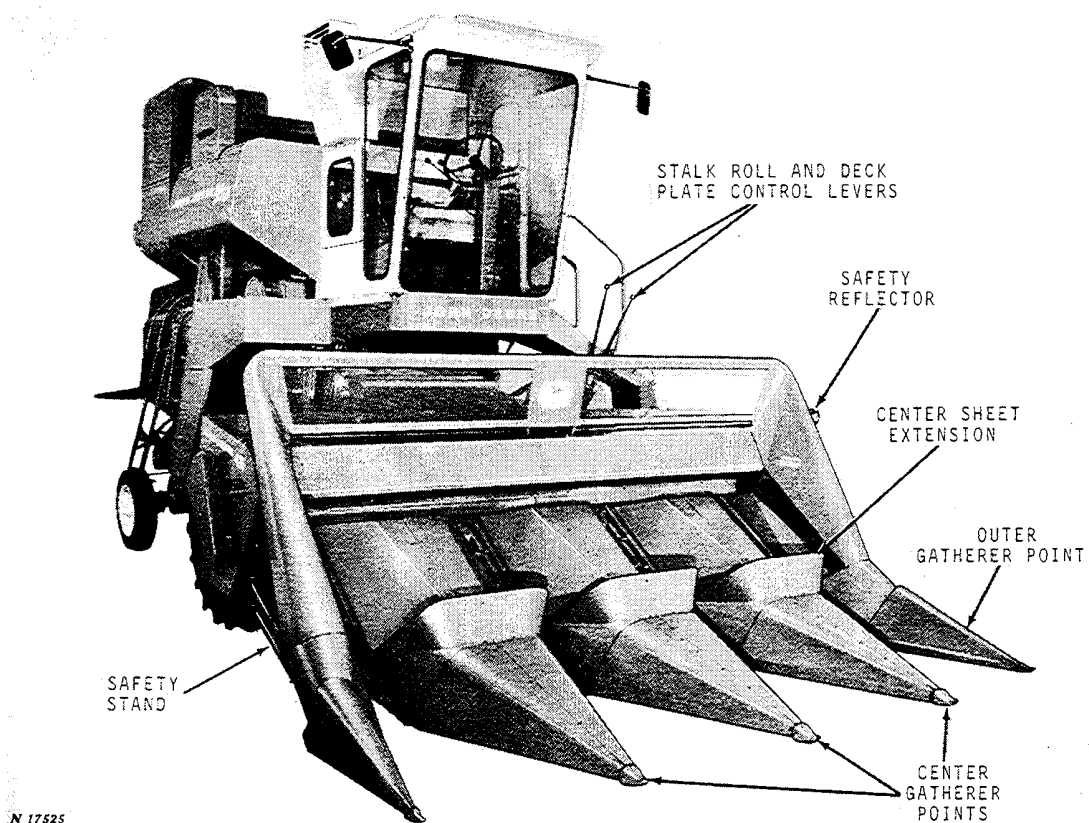
You will find the serial number plate on the left-hand auger housing as shown.



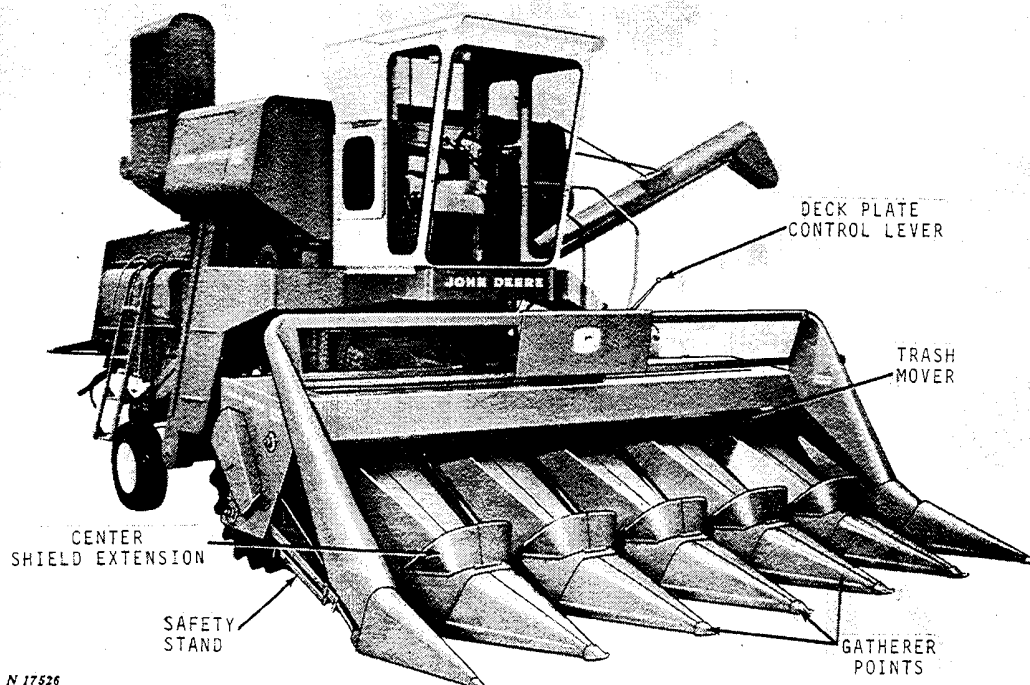
The warranty on this corn attachment appears on your copy of the purchase order which you should have received from your dealer when you purchased the corn attachment.

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John Deere 435W Corn Attachment on 95 Combine



John Deere 635N Corn Attachment on 105 Combine

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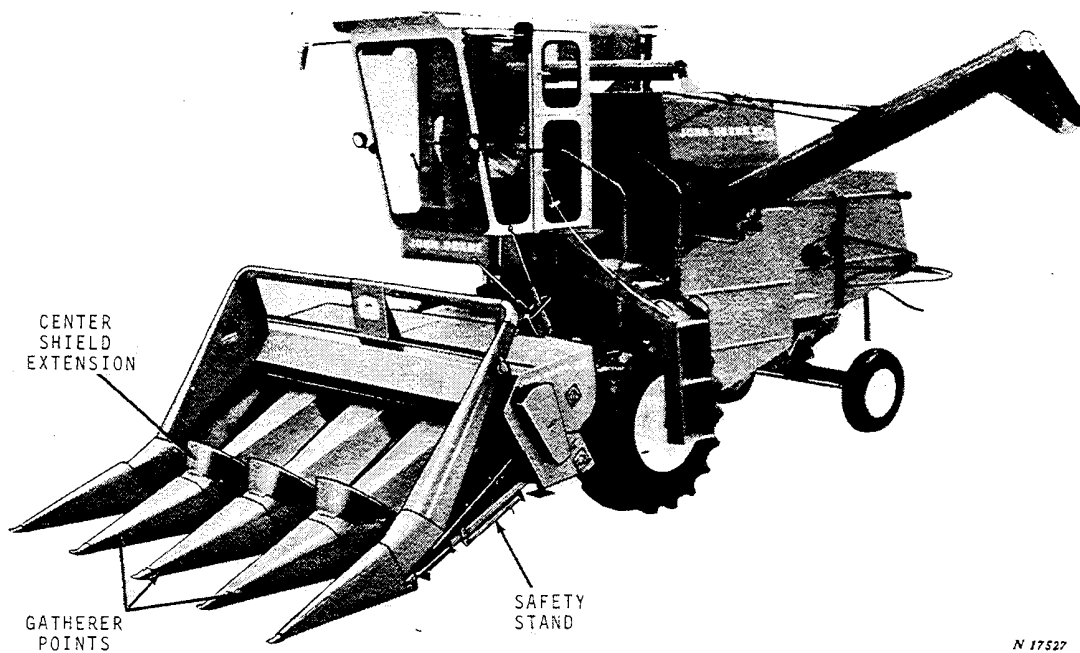
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Thank you very much for reading.

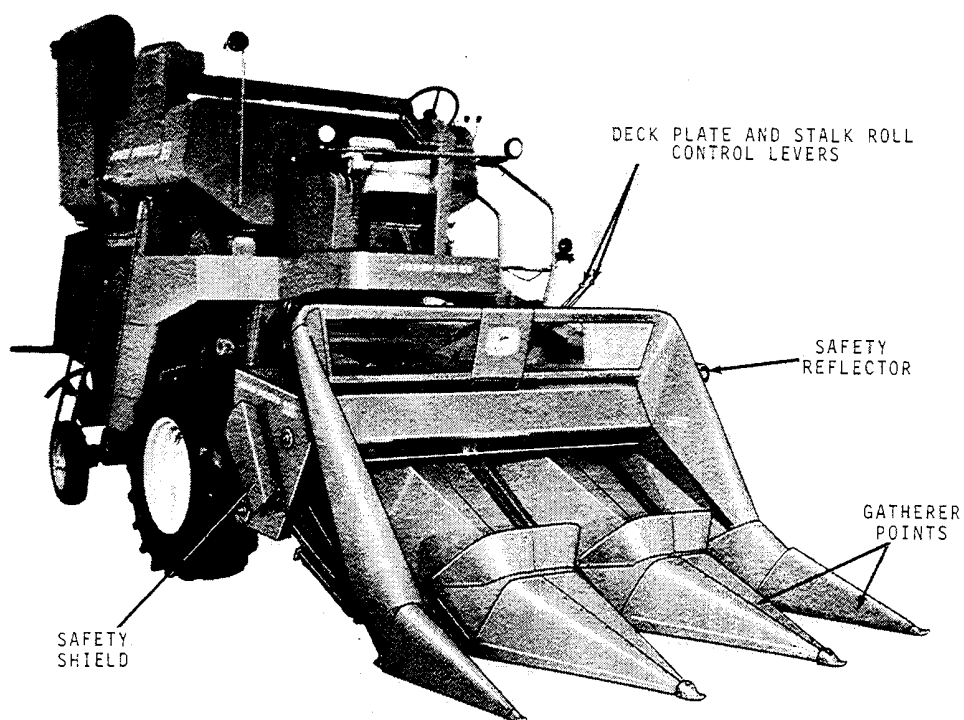
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John Deere 435N Corn Attachment on 95 Combine



John Deere 335 Corn Attachment on 55 Combine



SPECIFICATIONS

John Deere Combine required-

335	55, 95, or 105*
435W and 435N	95 or 105
635N	105**

Number of Rows-

335	3
435W and 435N	4
635N	6

Row Widths Handled-

335	30, 36, 38, and 40 inches
435N	28 and 30 inches
435W	36, 38, 39, and 40 inches
635N	28 and 30 inches

Gatherer points—Floating type, hinged above gatherer chains

Number of gatherer chains per snapping unit. 2

Type of gatherer chains—Endless steel roller chain (no master connecting link)

Speed of gatherer chains—Shipped set for 279 fpm (feet per minute). Additional sprocket provided for 326 fpm.

NOTE: A sprocket can be obtained from your dealer for 373 fpm (feet per minute).

Minimum clearance between gatherer chains and ground. 0 inches and up

Distance gatherer chains ahead or fluted stalk roll points. 10 inches

Length of fluted stalk rolls less points. 30 inches

**The 335 Corn Attachment should not be mounted on a 105 Combine when the 335 is set for 30-inch rows, because the drive wheels will run over unpicked corn.*

***The 105 Combine must be equipped with 23.1 x 26 front tires.*

(Specifications and design subject to change without notice.)

Length of fluted stalk rolls including points 38-1/2 inches

Fluted stalk roll adjustment By operator from combine platform on 335 and 435 only

Deck plate adjustment By operator from combine platform

Gatherer chain adjustment. ... Spring loaded-self adjusting

Conveyor from gatherers to combine .. Full width cross auger and trash movers, and full length feed bed augers.

Approximate over-all width for storage-

335	9 feet 8 inches
435N	11 feet 5 inches
435W	13 feet
635N	15 feet 10 inches

Approximate over-all length for storage 12 feet 4 inches

Approximate weight of corn attachments only-

335 for 55 Combine	3160 pounds
335 for 95 Combine	3218 pounds
335 for 105 Combine	3261 pounds
435N for 95 Combine	3871 pounds
435N for 105 Combine	3914 pounds
435W for 95 Combine	3956 pounds
435W for 105 Combine	4000 pounds
635N for 105 Combine	5020 pounds

ATTACHMENTS

Row Spacing Parts (see page 23).

Corn-Cob Mix (see page 23).

For other attachments available for the Combine, see your John Deere dealer.



OPERATION

PROPER INSTALLATION

Be sure corn attachment is properly installed on the combine. Improper installation can cause inferior work and damage to the corn attachment and combine. After the corn attachment is completely installed, check over the entire machine, being sure shields, sprockets, chains, and all other parts are properly attached, and adjustments made as instructed. Be sure all nuts, pins, and keys are tight and cotter pins are spread. Make sure the slip clutches are set properly and free from paint or grease.

IN THE FIELD

Take pride in doing the best job possible under all conditions. Pick end rows first and then disk down the end rows for a smoother ride and ease of handling. Follow the rows carefully; set the gatherer points and lower the corn attachment to pick up down and leaning stalks. Pick so it will not be necessary to pick odd or guess rows.

After picking several rounds, stop the corn attachment and check to be sure grease is reaching all bearings. Check machine to be sure that all bolts are tight and chains are adjusted to proper tension.

ADJUST MACHINE PROPERLY

Successful operation, quality of work, and length of life of the corn attachment depend greatly upon adjusting the corn attachment and combine to meet your specific field conditions, and on proper lubrication.

After several rounds, check adjustments on corn attachment and combine to be sure you are getting the best possible sample of corn in grain tank.

HARVEST EARLY

Early harvesting, before corn gets too dry, is one way to keep field losses low. Agricultural engineers suggest that when early maturing corn reaches 26 to 27 percent moisture, farmers with dryers can start harvesting.

If corn is to be sold without drying, it is best to wait until moisture content is down slightly below 20 percent. For safe storage in anything but an air tight silo, moisture should not exceed 14 percent.

Early harvesting will also eliminate troubles and disagreeable features that accompany frozen ground, extremely cold weather, and dried out, frozen, and rotten cornstalks.

DRIVE CAREFULLY

The combine should travel in the same direction that the field was last cultivated.

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

Drive the combine carefully so the corn attachment will stay on the rows. Raise the corn attachment when crossing the end of the field.

If the corn attachment begins to plug, do not slow down the combine engine. Keep the engine at operating speed and decrease the ground speed with the variable speed control or by disengaging the foot clutch.

CORN ATTACHMENT HEIGHT CONTROL

(55 Combine Serial 83001 and Up, 95 Combine Serial 35001 and Up, 105 Combine Serial 10001 and Up).

The combine has an adjustment to control the lowering speed of the corn attachment. If the corn attachment is lowering at too slow or fast a rate of speed, refer to your combine operator's manual for instructions on adjusting the control valve that controls the speed of drop.

CAUTION: Never clean, lubricate, or adjust the corn attachment or combine while either is in motion. Be sure to stop the combine engine. Keep hands and clothing away from moving parts!

CHECK GROUND SPEED

In average conditions, the corn attachment will do best work when traveling at a moderate rate of speed.

In well standing corn, the forward movement of the machine should be approximately the same as the rearward movement of gatherer chain flights, so the flights can assist guiding the stalks into the stalk rolls.

If ground speed is too fast, the chains push stalks forward and knock off the ears. If the ground speed is too slow, chains jerk the stalks back into the unit, possible breaking stalks or knocking off ears.

FIELD LOSSES

As the season progresses, field losses will increase. The corn dries out causing more shelling, and stalks become brittle causing more ear drop.

Field losses can be reduced to a minimum by keeping your machine in proper adjustment, following rows carefully, and picking at proper speed according to the yield and field conditions.

ESTIMATING SHELLED CORN LOSS

Count the number of kernels around a hill in a square 40 by 40 inches. Make a count several places in field and then average the count.

If you find an average of 20 kernels per square, you are losing one bushel per acre; 80 kernels per square would mean a loss of four bushels per acre.

Be sure to clear away all husks and leaves and shake any remaining kernels from husks.

ESTIMATING EAR CORN LOSS

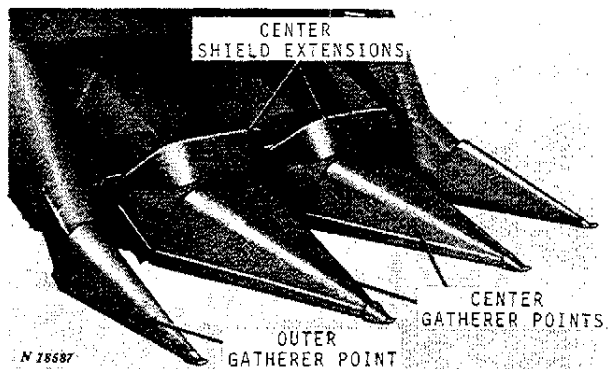
Mark off 133 feet (about 43 normal walking steps for an adult man) along one row. Each good sized ear (about 3/4 pound) represents one bushel of ear corn lost per acre.

Make this test several places throughout field for a more accurate check. Be sure to kick husks and stalks to find ears that are hidden.

To get the most accurate check on efficiency of your corn attachment, estimate the ear corn loss before as well as during and after the field is picked.

GATHERERS

GATHERER POINTS AND CENTER SHIELD EXTENSION



In normal conditions operate with the gatherer points just touching the ground.

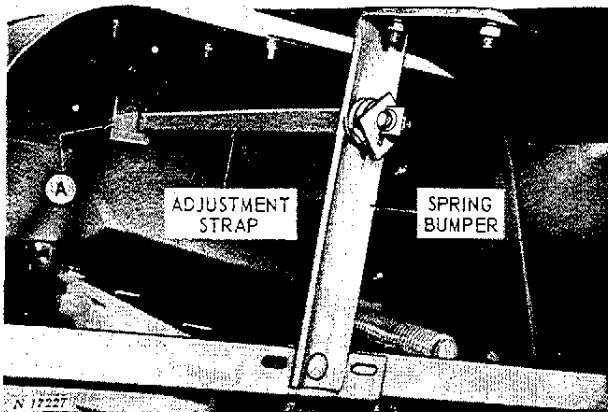
The center shield extension is designed to catch falling ears in well-standing corn. When picking in down corn, the center shield extension can be removed if it is interfering with the flow of material into the unit.

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

On all gatherer points, make sure the spring is located on adjustment straps just below spring bumper. The spring helps absorb the shock loads.

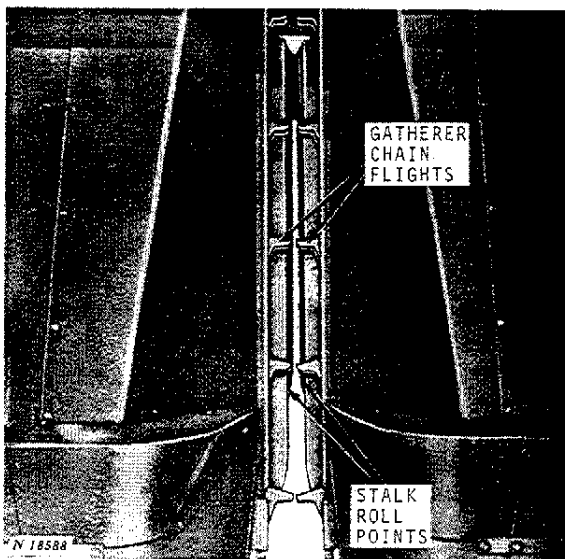
6 Operation

ADJUSTING GATHERER POINTS



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

GATHERER CHAINS



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

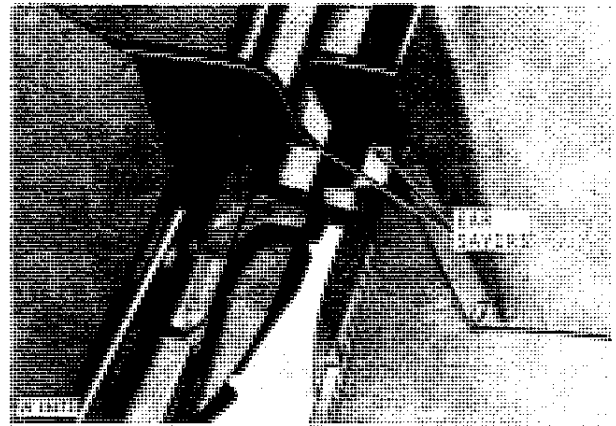
Maximum efficiency is obtained from gatherer chains, when the gatherer flights are approximately opposite one another as shown above.

CAUTION: Be careful to avoid rocks and other obstructions in the row when running gatherers close to the ground.

To replace worn or broken gatherer chain links see page 36 for instructions.

Oil the gatherer chains daily. See page 25.

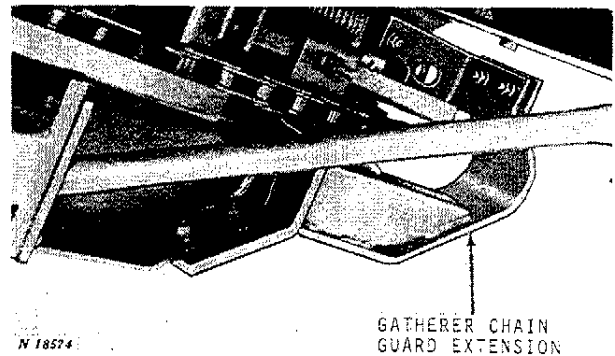
EAR SAVERS



Ear savers prevent loose ears from sliding out over the gatherer chains.

In down corn or if stalks tend to plug up at the gatherer throat opening, remove ear savers from the corn attachment.

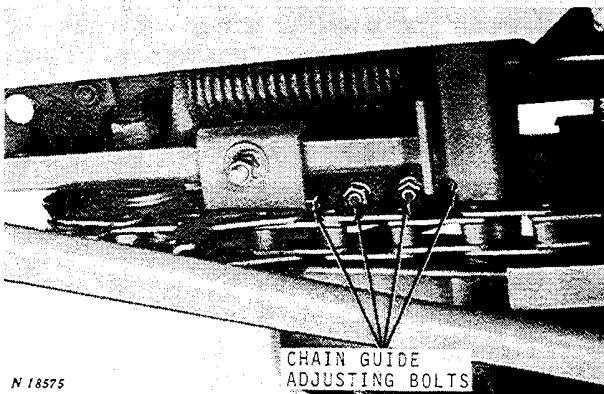
GATHERER CHAIN GUARD EXTENSIONS (Special Equipment)



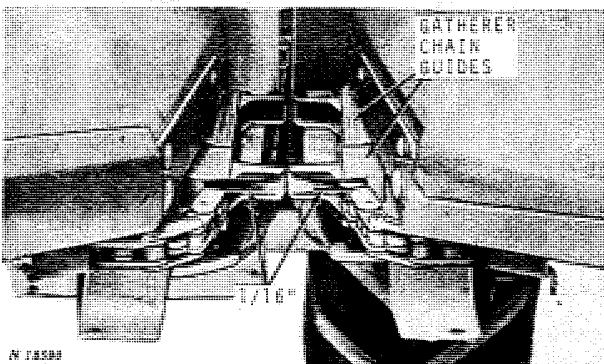
Gatherer chain guard extensions are available as special equipment.

The extensions keep the gatherer chains from striking the ground. Installation instructions are provided with the extensions.

ADJUSTING GATHERER CHAIN GUIDES



N 18575

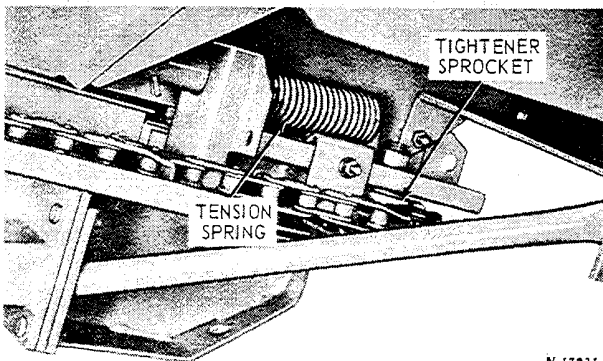


N 18588

The gatherer chain guides are designed to help keep the gatherer chains in alignment.

To adjust the gatherer chain guides, loosen the gatherer chain guide adjusting bolts on the gatherer support frame. The lip of the outer edge of each guide should be adjusted to clear the gatherer chain approximately 1/16-inch in vertical position. The guides should also be in alignment with one another and moved in until they just touch the side bars of the gatherer chain.

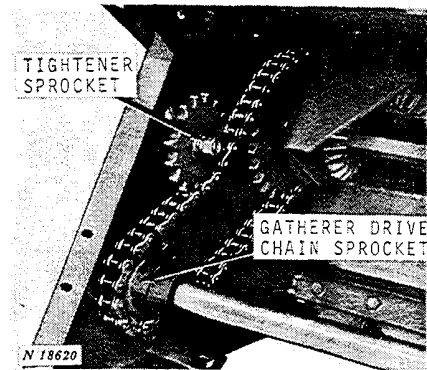
GATHERER CHAIN TENSION



N 17231

The gatherer chain tension is automatically controlled by a spring loaded mechanism. Keep the sliding mechanism free from dirt and foreign material which could restrict the tightener sprocket movement. See page 37 for relieving tension on gatherer chains.

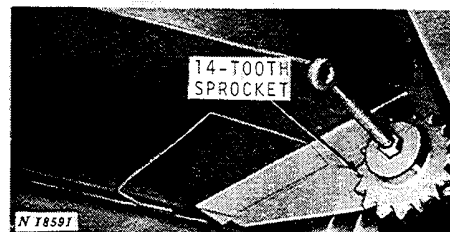
GATHERER DRIVE CHAIN SPROCKETS



N 18620

Gatherer chain speed should closely approximate the ground travel speed of the combine. Adjust gatherer chain tension with the tightener sprocket.

The corn attachment is equipped with a 12-tooth gatherer drive chain sprocket when shipped from factory. This sprocket is recommended for use when traveling at approximately 2-1/2 miles per hour.



N 18591

In addition, a 14-tooth gatherer drive chain sprocket is provided with the corn attachment to increase the gatherer chain speed. This sprocket is attached to the rear of the outer gatherer sheet. When changing sprockets, keep the sprocket removed in this location for future use. To change gatherer drive chain sprocket, see instructions on page 36.

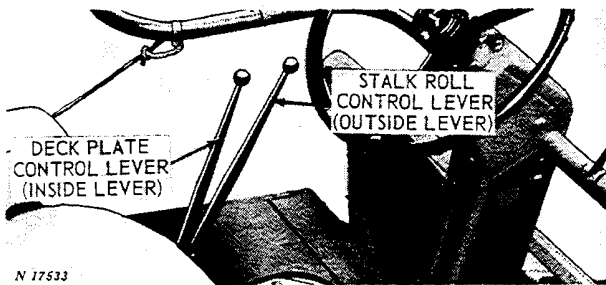
IMPORTANT: In down corn conditions, it is recommended that combine travel speed be reduced and the 12-tooth gatherer drive chain sprocket be used.

8 Operation

ADJUSTING STALK ROLLS ON 335 AND 435 CORN ATTACHMENTS

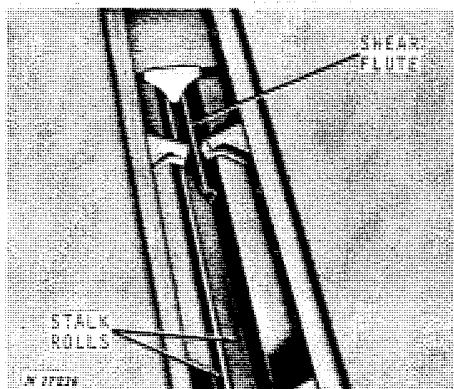
Stalk rolls pull the cornstalks down so ears will be snapped on deck plates.

IMPORTANT: Proper adjustment of stalk rolls and deck plates is necessary to obtain maximum performance from the corn attachment and to hold field losses to a minimum. Deck plate adjustment is explained on pages 11 through 13.



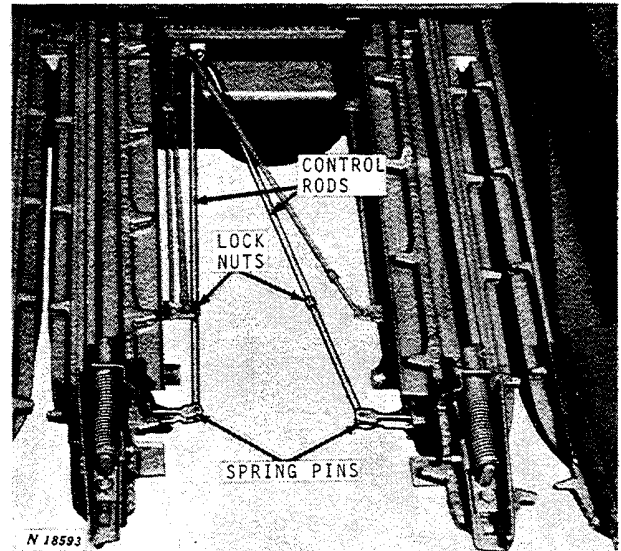
Stalk roll spacing can be changed from combine operator's platform with stalk roll adjusting lever. The outside lever controls and operates all adjustable rolls simultaneously.

Push lever forward to open rolls; pull lever rearward to close rolls.



IMPORTANT: Stalk roll spacing can be changed while the machine is in operation. Stalk rolls should be open far enough so ears are normally snapped off approximately one-half way or farther up the deck plates.

ADJUSTING STALK ROLL SPACING



Illustrated with Shields Removed

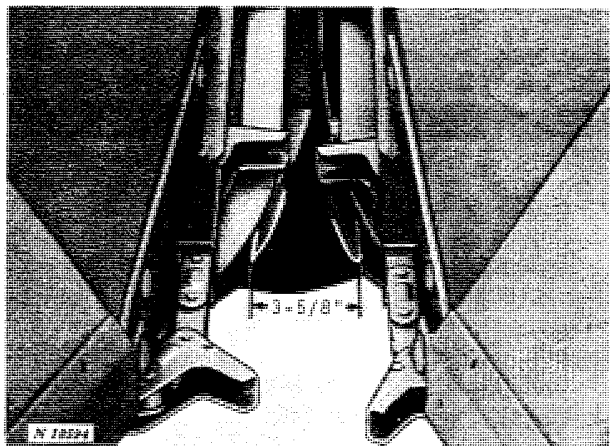
It is very important that the spacing of all stalk rolls is the same. To check spacing, pull lever rearward as far as it will go. All rolls should have the same space between stalk roll points (see illustration on page 9). If one or more of the rolls are not the same as others, adjustments are provided so all rolls can be set the same.

Raise corn attachment and lower safety stands.

From under corn attachment, loosen lock nut on stalk roll adjusting rod that needs adjusting. Remove spring pin, holding control rod to stalk roll control linkage. Turn control rod until distance between stalk roll points is the same as others.

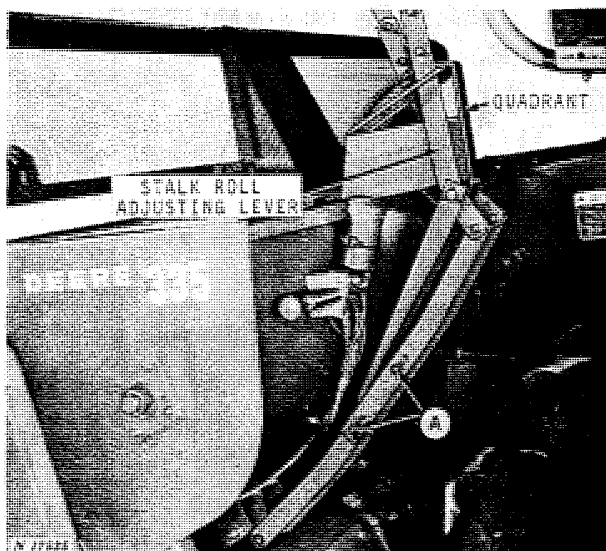
Replace spring pin. Secure new stalk roll setting by tightening lock nut.

CAUTION: Always be sure that safety stands are lowered before working underneath the corn attachment, when corn attachment is in raised position.



Normal stalk roll point spacing is 3-5/8 inches at the front, center-to-center of points as shown.

ADJUSTING STALK ROLL ADJUSTING LEVER



Stalk rolls should be spaced 3-5/8 inches at the front, center-to-center of points, when the stalk roll adjusting lever is all the way back to the rear of quadrant.

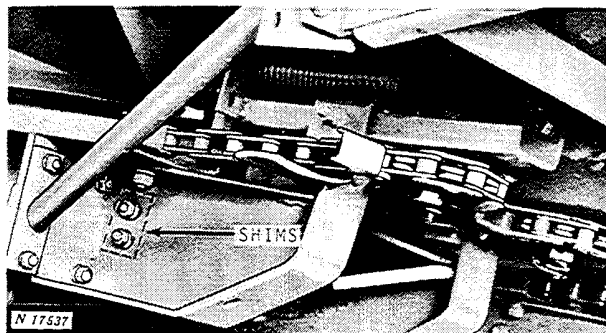
IMPORTANT: To avoid clashing of the stalk rolls, do not operate with stalk rolls closer than 3-5/8 inches at the front, center-to-center of points.

If the distance is more than 3-5/8 inches between points with lever at rear of quadrant, loosen bolts at "A." Move lever forward three or four notches in quadrant. Tighten bolts at "A."

If distance is less than 3-5/8 inches between points, push lever forward until the 3-5/8 inches between points is obtained. Loosen bolts at "A." Pull lever to rear of quadrant. Make sure bolts at "A" are loose enough so spacing between points is not changed. After lever is pulled all the way back, check point spacing. If points are 3-5/8 inches apart, tighten lever linkage bolts.

NOTE: If stalk roll spacing is changed, it may be necessary to adjust trash knives to prevent weeds and trash from wrapping on stalk rolls. See instructions for adjusting trash knives on page 17.

ADJUSTING STALK ROLLS ON 635N CORN ATTACHMENT



The stalk roll openings can be increased or decreased by removing or adding shims. Normal stalk roll spacing is 3-5/8 inches at the front, center-to-center of points.

The shims are located between the outer gatherer support and stalk roll bearing support.

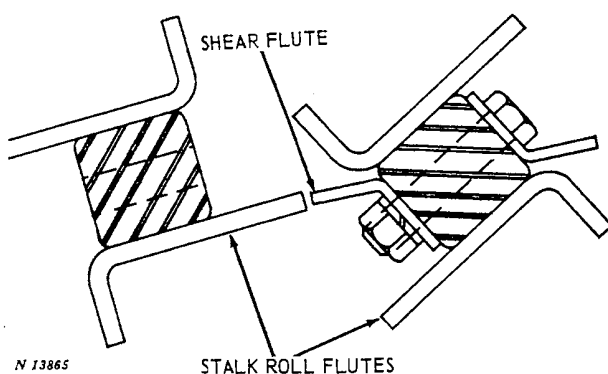
NOTE: When adding or removing shims, it may be necessary to adjust trash knives. See page 17 to adjust trash knives.

STALK ROLLS

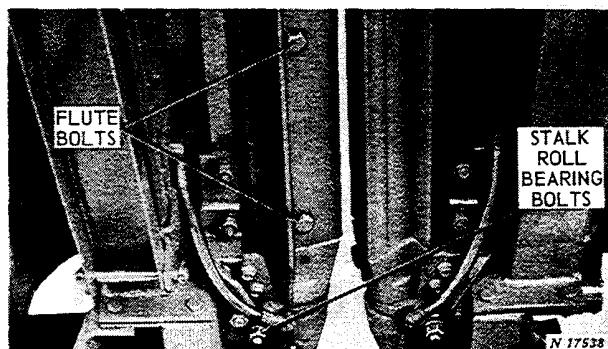
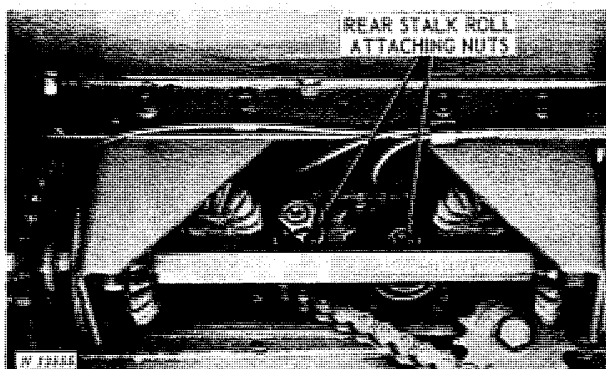
TIMING STALK ROLLS

If stalk rolls are not in time, the stalk roll flutes may break off stalks. When timed properly, flutes on the rolls will alternate smoothly and there will be no clashing when the rolls turn.

10 Operation



Shear flutes on the stalk rolls are designed to cut off any stalks that may have reached the end of the stalk rolls. The shear flute must be positioned so it is opposite a stalk roll flute as shown above. If not, flutes must be timed.



To time shear flutes on the stalk rolls, remove two nuts from rear end of either roll (preferably roll without drive sprocket). Remove bearing bolt at front of the same roll. Pull the free roll downward until gears are out of mesh.

When rolls are positioned properly, slide the roll back into place. Replace lower stalk roll bearing bolt and nut. Replace the two nuts on upper end of stalk rolls. Torque these two nuts 200 ft-lbs. Tighten all nuts and bolts.

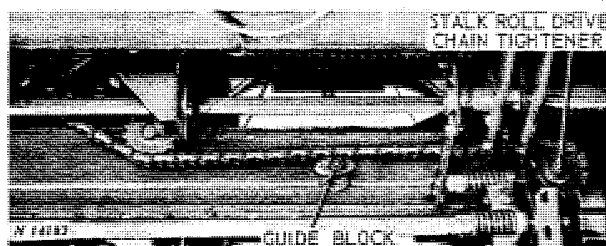
STALK ROLL BOLTS

Periodically check to be sure stalk roll bearing bolts are tight. If bolts are loose, tighten to a minimum of 85 ft-lbs torque.

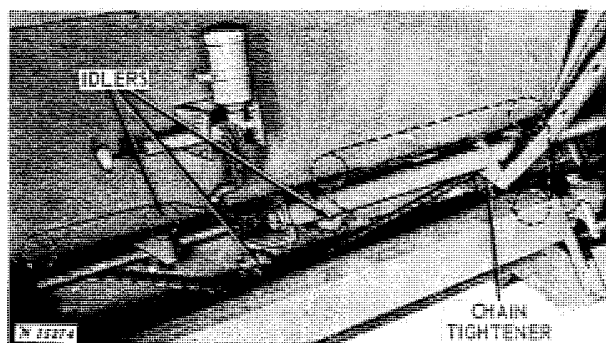
Check stalk roll flute bolts to be sure they are tight. Tighten flute bolts to 85 ft-lbs torque.

IMPORTANT: Use only 1/2 x 2-1/4-inch high-strength bolts to hold flutes to rolls.

ADJUSTING STALK ROLL DRIVE CHAIN



335 and 435 Corn Attachments

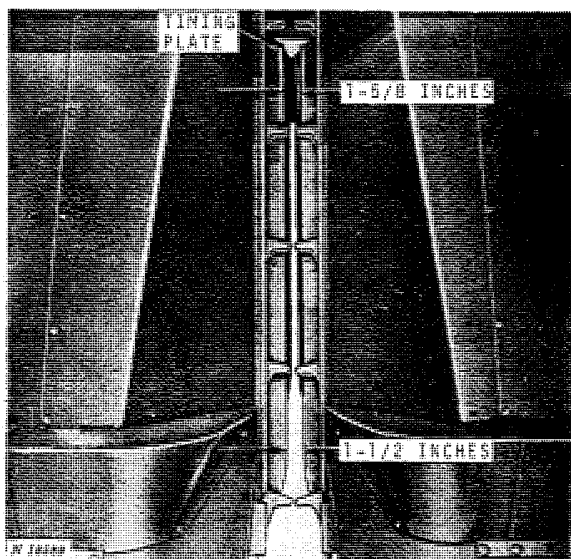


635N Corn Attachment

Adjust stalk roll drive chain with the tightener sprocket in front of the main gear case. See page 18 for correct chain tension.

Adjust the guide block so it just carries the chain and prevents it from slapping.

DECK PLATES



Deck plates snap ears from the stalks as the stalks are pulled down by the stalk rolls. Deck plate spacing can be adjusted, to meet varying crop conditions, by moving the inside lever from the combine operator's platform.

The deck plate lever controls and operates simultaneously one deck plate per row. Move adjusting lever forward to open the deck plates and rearward to close the deck plates.

NOTE: The center of the space between deck plates should be located over the center of space between stalk rolls.

Increase deck plate spacing if stalks and ears are larger than average. Decrease spacing if stalks and ears are smaller than average. If spacing is too wide for a given condition, ears will contact stalk rolls causing ear butt and tip shelling.

A good method of checking to see if deck plates are set too far apart is to take the tip of an average size ear of corn and see if it will fit far enough between deck plates to come in contact with the stalk rolls. If it does, decrease the deck plate opening.

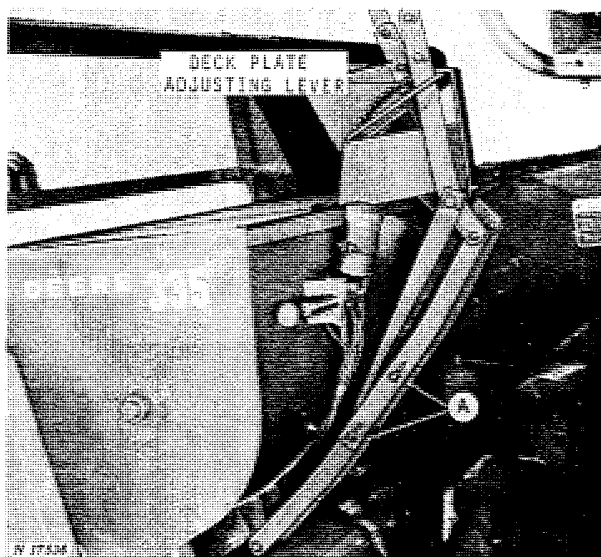
CAUTION: Shut off combine engine before placing hands or feet near stalk rolls.

If spacing is too narrow, stalks may tend to break off and plug gatherer throat opening.

IMPORTANT: Deck plates should be set so each deck plate is the same distance from center of the timing plate when control lever is in the center of the quadrant. Spacing between all deck plates for all rows must be set the same.

Space between deck plates should be 1/8-inch wider at the rear than at the front. However, in extreme down-corn conditions, set front of deck plates so they have the same space openings as at the rear of the deck plates.

ADJUSTING DECK PLATE ADJUSTING LEVER



335 and 435 Corn Attachment

Adjusting lever should be in middle of quadrant when deck plates are spaced 1-5/8 inches at the rear and 1-1/2 inches at the front.

NOTE: Operator should not use dimensions given for the deck plate spacing under all operating conditions. Operate with the deck plates spaced properly for your particular condition.



Suggest:

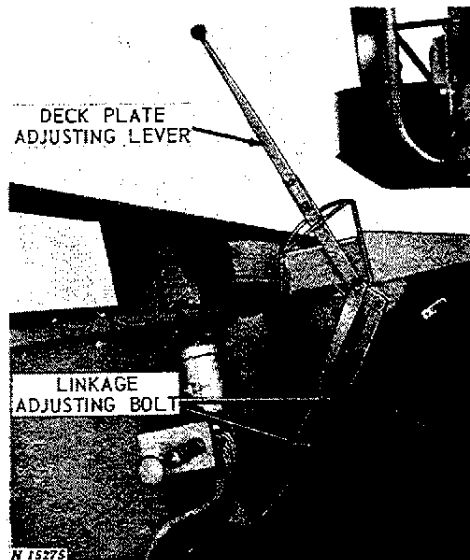
If the above button click is invalid.

Please download this document first, and then click the above link to download the complete manual.

Thank you so much for reading

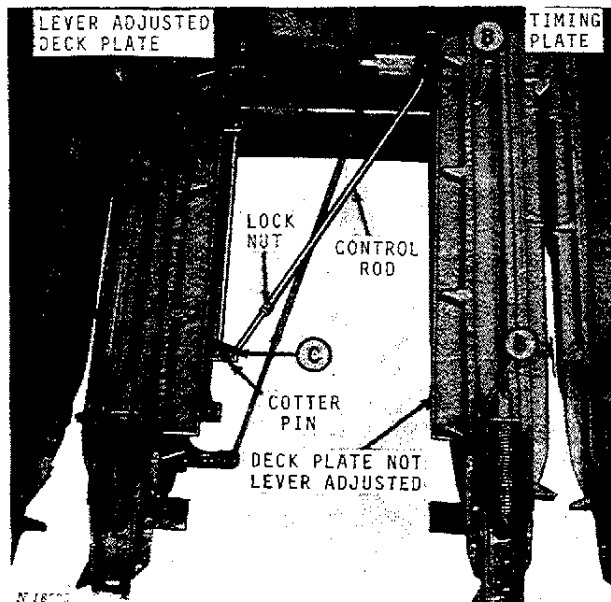
ADJUSTING DECK PLATE LEVER—Continued

To adjust the deck plate lever so it will be in the center of quadrant when deck plates are properly spaced, move lever until plates are at 1-5/8 and 1-1/2-inch spacing. Loosen bolts at "A." Move lever to center of quadrant without disturbing 1-5/8 and 1-1/2-inch spacing of plates. Tighten linkage bolts.



635N Corn Attachment

ADJUSTING DECK PLATES



335 Corn Attachment

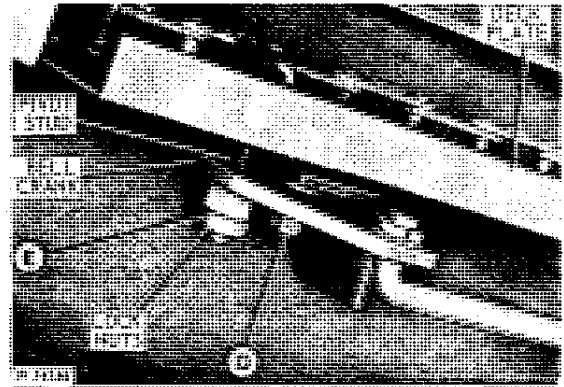
The deck plates that are not adjusted by the deck plate adjusting lever are adjusted by loosen-

ing bolts at "B" and moving deck plates necessary amount.

Set rear of deck plates approximately 11/16-inch from center of timing plate. Adjust front of the plate so they are parallel with the stalk roll flutes. Tighten bolts to a minimum of 85 ft-lbs torque.

The lever-adjusted deck plates for each row are adjusted by control rods. To decrease spacing between the individual deck plates, loosen lock nuts and remove cotter pin at "C." Turn the rod so it shortens the over-all length of the linkage. To increase spacing between the deck plates, turn the rod so it increases the over-all length of linkage.

The space between all the deck plates must be equal (1-1/2 inches at front, 1-5/8 inches at rear) with the deck plate adjusting lever in center of quadrant. Adjust the control rods equally until above dimensions are obtained.



To obtain the 1/8-inch greater spacing between the rear of the deck plates position the deck plate control lever in the middle of the quadrant. Then loosen the bolt at "D" and move the rear of the deck plate in or out to obtain the 1/8-inch greater spacing. After correct spacing is obtained, tighten bolt.

Check deck plate for free movement by moving control rod back and forth manually. If the deck plate does not move freely, check locknuts on front and the rear deck plate pivot studs at "E." If jam nut is too tight against bell crank, binding will occur. Make sure jam nut is just snug against bell crank.

NOTE: During operation the deck plates can strike the stalk rolls. If this occurs, it is probably due to either the front or rear or both of deck plate pivot stud and bell crank support bolts coming loose. Keep lock nut tight against jam nut on pivot stud at all times. Keep bell crank support bolt tight at all times.

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