JOHN DEERE
40 SERIES
CORN HEADS

JOHN DEERE

OPERATORS MANUAL

JOHN DEERE 40 SERIES
CORN HEADS

OMH95662 J6 English

JOHN DEERE HARVESTER WORKS
OMH95662 J6

LITHO IN THE U.S.A. (REVISED)
ENGLISH

To the Purchaser

This new corn head 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, or service. Read the Table of Contents to learn where each section is located.

This manual includes model 243, 244, 343, 344, 443, 444, 543, 546, 642, 643, 644, 645, 842, and 843 Corn Heads.

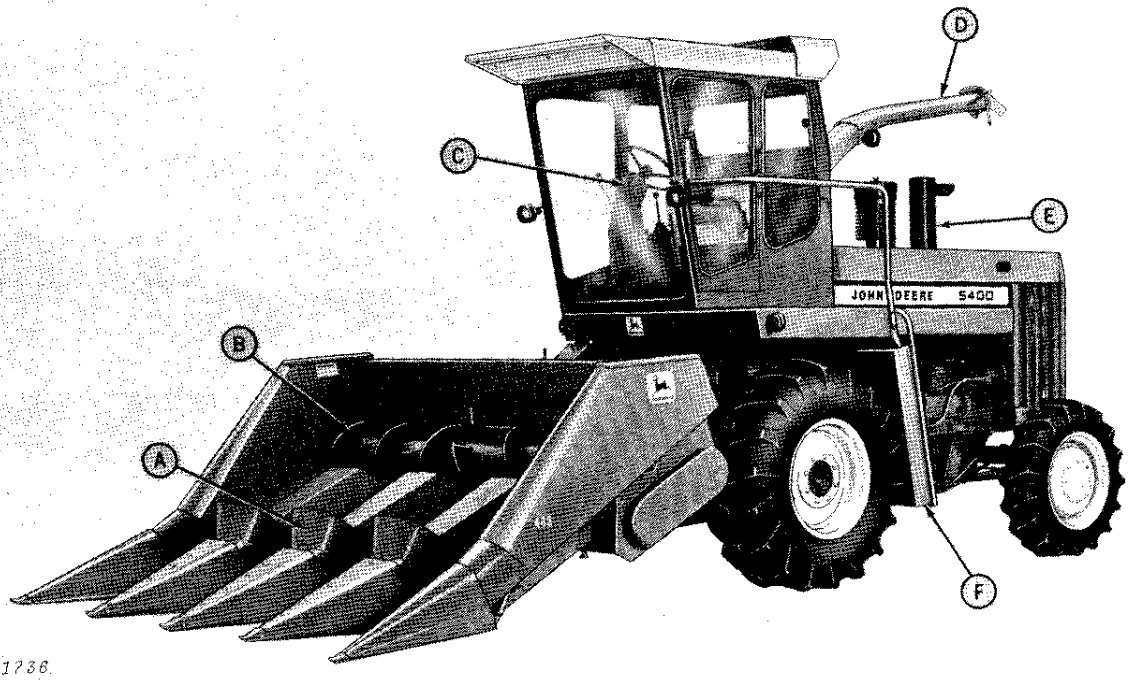
This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

Your operator's manual contains SI Metric equivalents which follow immediately after the U.S. customary units of measure.

"Right-hand" and "left-hand" sides are determined by facing in the direction the corn head will travel when in use.

Record your corn head serial number in the space provided on page 43. Your dealer needs this information to give you prompt, efficient service when you order parts. If your corn head requires replacement parts, go to your John Deere dealer where you can obtain Genuine John Deere parts—accept no substitutes.

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



E11736

A—Corn Head
B—Corn Head Auger
C—Steering Column
D—Discharge Spout
E—Muffler
F—Ladder

5400 Forage Harvester with 443 Corn Head Unit

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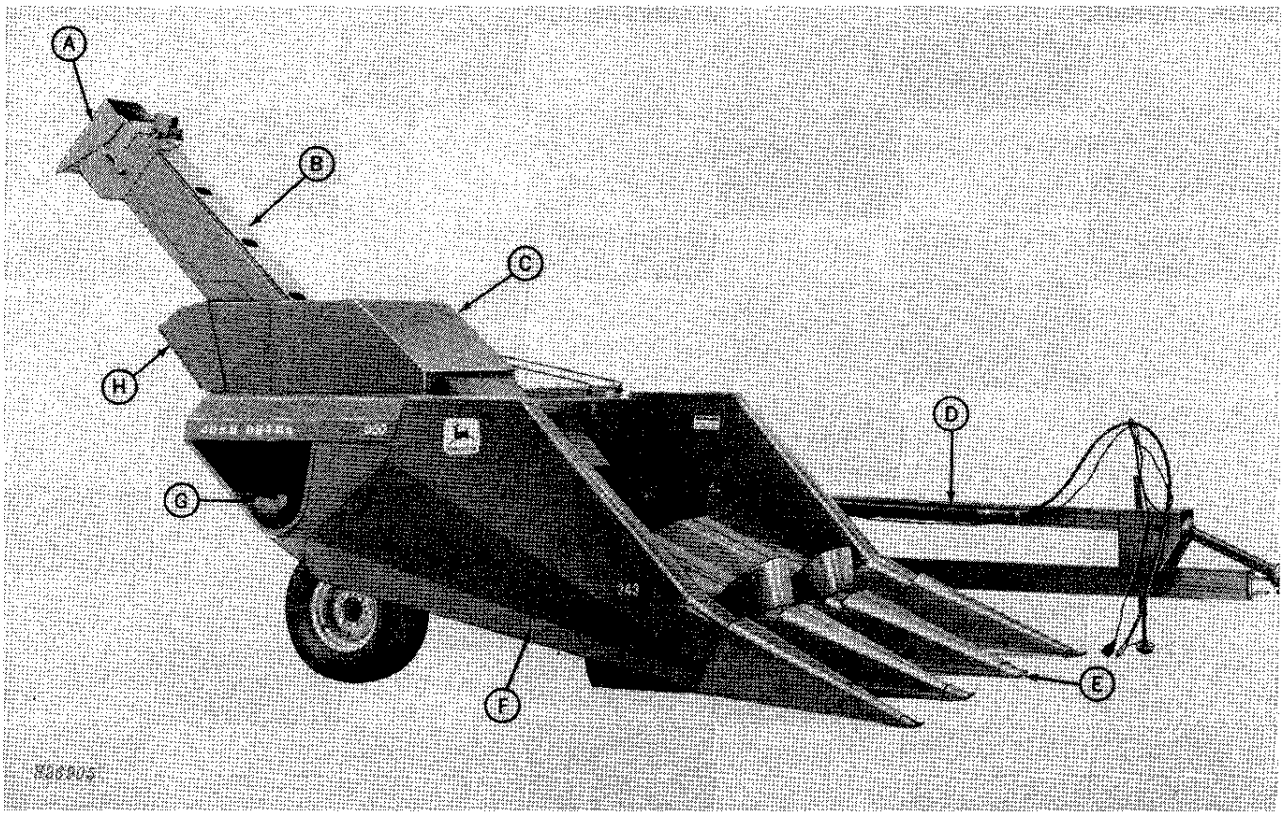
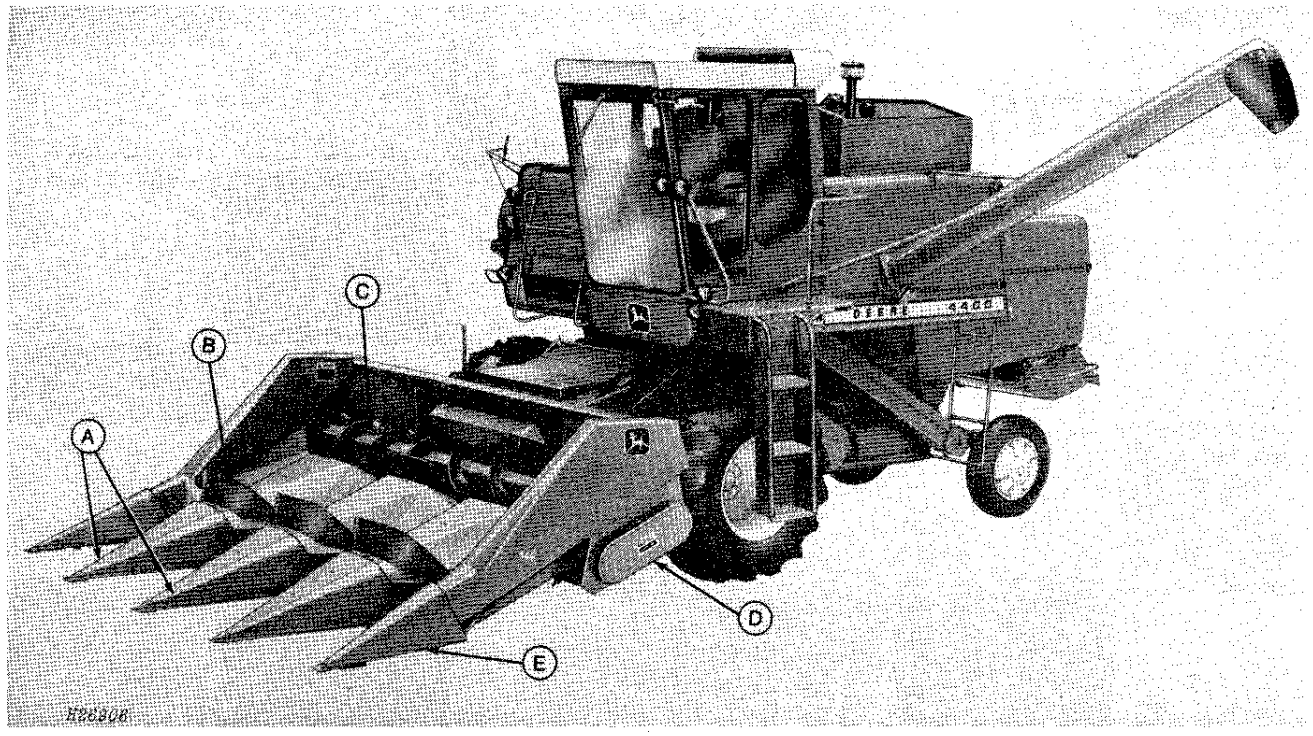


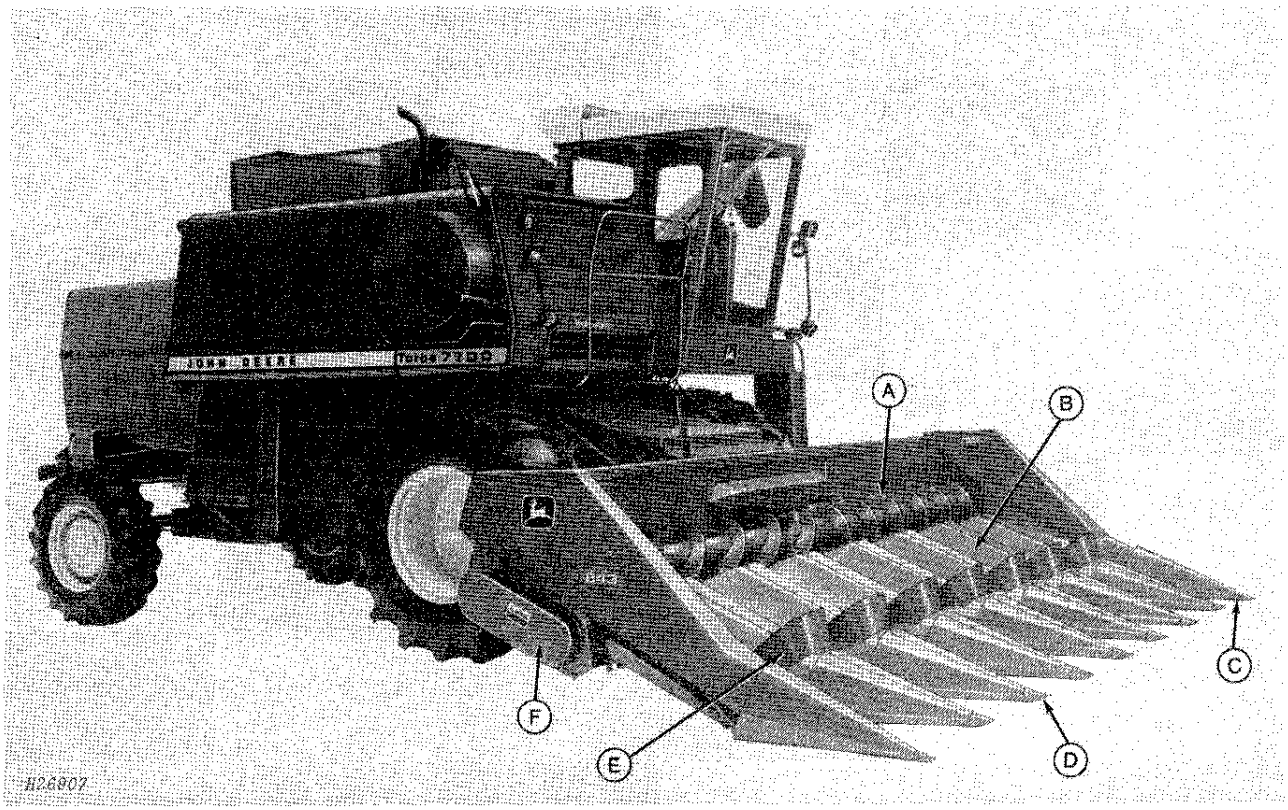
A—Hood
B—Wagon Elevator
C—First Elevator Hood
D—Powershaft Shield
E—Gatherer Points
F—Wheel Shield
G—Trash Auger
H—Exhaust Hood

John Deere 343 Corn Head on 300 Corn Husker



A—Inner Gatherer Points
B—Center Shields Extensions
C—Cross Auger
D—Row Unit Drive Shield
E—Outer Gatherer Point

444 Corn Head on 4400 Combine



A—Cross Auger
B—Center Shield
C—Outer Gatherer Points
D—Inner Gatherer Points
E—Center Shield Extension
F—Row Unit Drive Shield

843 Corn Head on 7700 Combine

Safety Suggestions

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

The safety of the operator was one of the prime considerations in the minds of John Deere engineers when these corn heads were designed.

All machinery must be operated only by responsible persons who have been delegated to do so.

Riders must not be allowed on the operator's platform when the combine is in operation.

Never clean, lubricate, or adjust the corn head or combine while either is running or in motion. Keep hands, feet, and clothing away from all moving parts.

Clothing worn by operator must be fairly tight and belted. Loose jackets, shirts, or sleeves should never be worn because of the danger of getting into moving parts.

Everyone must be clear of the combine before starting the combine engine so no one can be struck by moving parts.

Shields and guards must be in place and in good condition before starting in field.

Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, relieve all pressure. Before applying pressure to the system, all connections must be tight and lines, pipes and hoses not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping hydraulic fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Never use a cornstalk or stick to clean the stalk rolls of an obstruction while the corn head is running. If, for any reason, the corn head should become clogged, stop the combine engine and remove the obstruction from the corn head.

When transporting the corn head and combine on a road or highway at night or during the day, use lights and devices for adequate warning to operators of other vehicles. In this regard, check local governmental regulations.

Red reflective tape is attached to the rear of the outer gatherer sheets. Amber reflective tape is attached to the front of the left-hand main frame tube. When transporting the combine and corn head on a road or highway, reflective tapes must be clean and in place.

Provide a first aid kit for use in case of accident. Use proper antiseptics on scratches and cuts without delay, to prevent the possibility of infection.

When the corn head is raised, never crawl under the corn head until you have lowered the combine hydraulic cylinder safety stop. The cylinder safety stop prevents the corn head from lowering. To lower safety stop, first extend hydraulic cylinders. Disconnect support chain from safety stop and position safety stop on piston rod. After completing the work on the corn head, attach safety stop to support chain for storage.

If spray can paint is used, be careful when discarding empty can. Do not incinerate or puncture can.

Finally, remember this: An accident is usually caused by someone's carelessness, neglect, or oversight.

Operation

ASSEMBLY AND INSTALLATION

Proper assembly and installation of the corn head will insure long life and less service problems for you. Improper assembly and installation can cause inferior work and damage to corn head. After assembly and installation, check over entire machine, being certain shields, sprockets, chains, and all other parts are properly attached.

STARTING IN THE FIELD

Pick end rows first and then disk down end rows for a smoother ride and ease of handling. Operate the combine or tractor in a lower gear until you become familiar with corn head. Pick rows of corn as they were planted so it will not be necessary to pick odd or guess rows.

After picking several rounds, stop corn head and shut off combine or tractor engine. Check all bearings for heating. Check to see all bolts are tight and chains are adjusted to proper tension.

Adjust Machine Properly

Successful operation, quality of work, and length of life of any machine depends greatly upon proper adjustments to meet specific field conditions.

After making several rounds, check adjustments on corn head to see that you are getting the best possible sample.

A few kernels lost behind the combine does not call for numerous adjustments on the combine, see "Corn Kernel Loss Chart" on next page.

Drive Carefully

Drive carefully so corn head will stay on rows. In well standing corn, operate corn head so front of gatherer points are just touching the ground. This will eliminate the amount of trash taken in and help to eliminate the possibility of gatherers picking up stones or other foreign objects that can cause damage to corn head.

Listen for slipping clutches or other unusual noises. If unit begins to plug, do not slow down combine or tractor engine. Keep engine at operating speed and decrease ground speed with variable speed control or disengage foot clutch until unit has cleared itself.

Operate At Proper Ground Speed

The corn head will do its best job if you operate at a moderate ground speed. Never force corn head to the extent of overload. To do so may result in breakdowns or trouble. Start out in a lower gear and work up until you find the proper ground speed in which to operate.

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

If ground speed is too fast, gatherer chains push stalks forward and knock ears off stalks. If ground speed is too slow, gatherer chains jerk stalks back into unit, possibly shearing off stalks or knocking off ears of corn.

FIELD LOSSES

During normal harvesting conditions, most field losses are created by a careless operator who neglects to adjust the machine periodically. However, a few kernels lost behind the combine does not call for numerous adjustments. See corn kernel loss chart on next page.

As the season progresses, field losses will increase due to corn becoming drier and stalks rotting out. Field losses can be reduced to a minimum by keeping the corn head, combine, forage harvester, or cornhusker in proper adjustment. A few minutes spent each day checking for proper adjustments will repay you great dividends in service and long life as well as eliminating field losses.

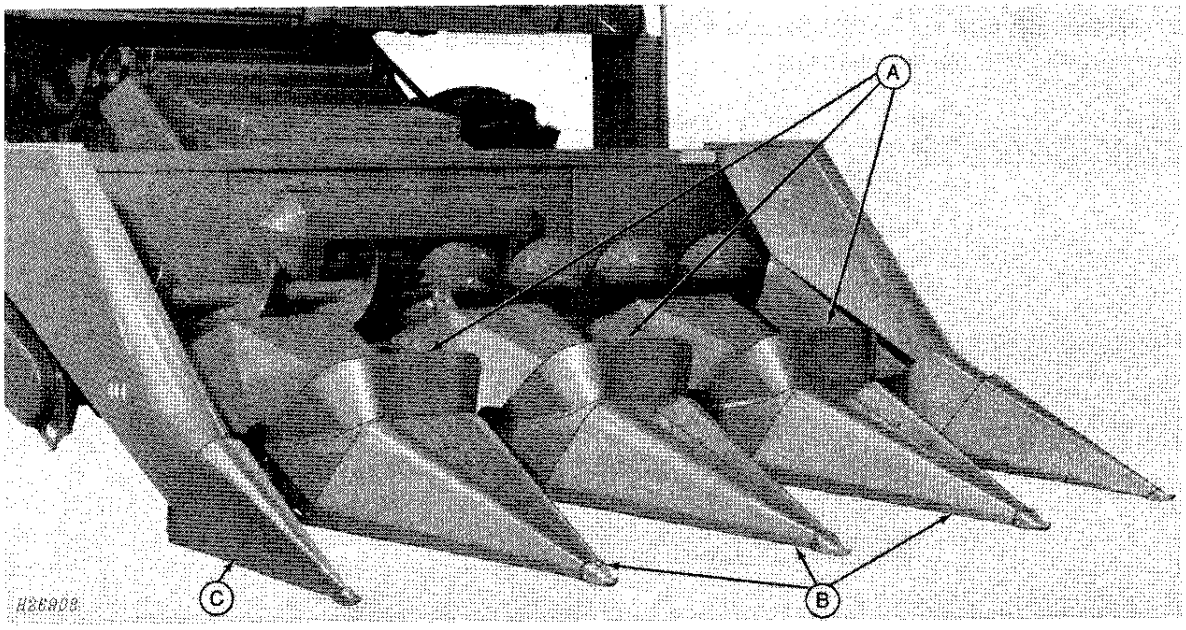
COMBINE CORN KERNEL LOSS CHART

The following kernel loss chart shows the largest number of kernels that must be lost per square foot before a total of 1 bushel per acre is lost. It also points out that a few kernels lost behind the combine does not call for numerous adjustments on the combine.

Corn Head Number	Row Spacing (Inches)	Number of Rows	* Kernels Per Sq. Ft. For 1 Bushel Loss Per Acre Combines			
			3300	4400	6600	7700
244	36 (914 mm)	2	4.6	. . .	. . .	. . .
	38 (965 mm)	2	4.9	. . .	. . .	. . .
	40 (1016 mm)	2	5.1	. . .	. . .	. . .
343	28 (711 mm)	3	5.4	. . .	. . .	. . .
	30 (762 mm)	3	5.8	. . .	. . .	. . .
	32 (813 mm)	3	6.2	. . .	. . .	. . .
344	36 (914 mm)	3	6.9	5.2	4.5	. . .
	38 (965 mm)	3	7.3	5.5	4.8	. . .
	40 (1016 mm)	3	7.7	5.8	5	. . .
443	28 (711 mm)	4	. . .	5.4	4.7	. . .
	30 (762 mm)	4	. . .	5.8	5	. . .
	32 (813 mm)	4	. . .	6.2	5.4	. . .
444	36 (914 mm)	4	. . .	7	6	4.8
	38 (965 mm)	4	. . .	7.3	6.4	5.1
	40 (1016 mm)	4	. . .	7.8	6.7	5.4
543	28 (711 mm)	5	. . .	. . .	7.5	6
	30 (762 mm)	5	. . .	. . .	7.5	6
546	36 (914 mm)	5	. . .	. . .	7.5	6
642	20 (508 mm)	6	. . .	. . .	5	. . .
643	28 (711 mm)	6	. . .	. . .	7	5.6
	30 (762 mm)	6	. . .	. . .	7.5	6
644	36 (914 mm)	6	. . .	. . .	. . .	7.3
	38 (965 mm)	6	. . .	. . .	. . .	7.7
645	40 (1016 mm)	6	. . .	. . .	. . .	8
842	20 (508 mm)	8	. . .	. . .	. . .	5.4
843	28 (711 mm)	8	. . .	. . .	. . .	7.5
	30 (762 mm)	8	. . .	. . .	. . .	8

** The figures are approximate and could vary with seed variety. Separator width of the combines used to determine chart was 28.74 inches (730 mm) for 3300, 38.11 inches (968 mm) for 4400, 44.06 inches (1119 mm) for 6600 and 54.92 inches (1395 mm) for 7700. Kernels were gathered directly behind separator. No spreading device such as straw spreader or straw chopper was used.*

GATHERERS



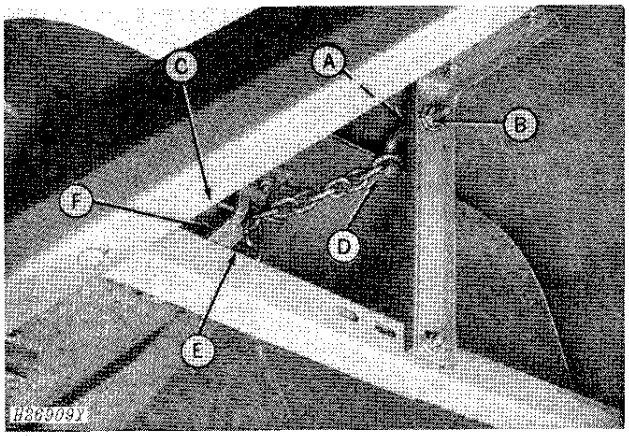
A—Center Shield Extensions **B—Center Gatherer Points** **C—Outer Gatherer Point**

For most conditions operate front of gatherer points just touching the ground.

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

Adjust all gatherer points level with one another.

Adjusting Gatherer Points



A—Nut **C—Spring Locking Pin** **E—Chain**
B—Nut **D—Hook Bolt** **F—Point Support**

All gatherer points are hinged to follow contour of ground.

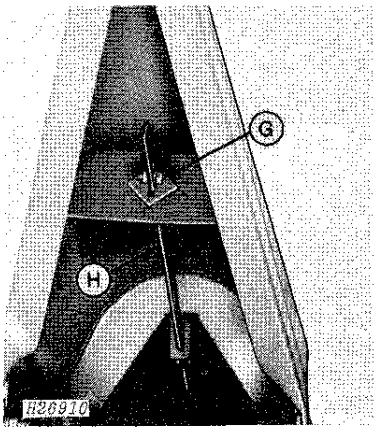
⚠ CAUTION: Always lower cylinder safety stop on combine before attempting to make any adjustment on corn head when it is raised in position. See page 25.

To adjust gatherer points for desired operating height, insert chain link through point support and secure with spring locking pin.

After all gatherer points are adjusted for desired operating height, start with one of the outer gatherer points and level all other points the same.

To level gatherer points, except the center gatherer points on the 642 and 842 Corn Heads, adjust nuts "A" and "B" on hook bolt. To raise gatherer point, loosen nut "A" and tighten nut "B." To lower gatherer point, loosen nut "B" and tighten nut "A."

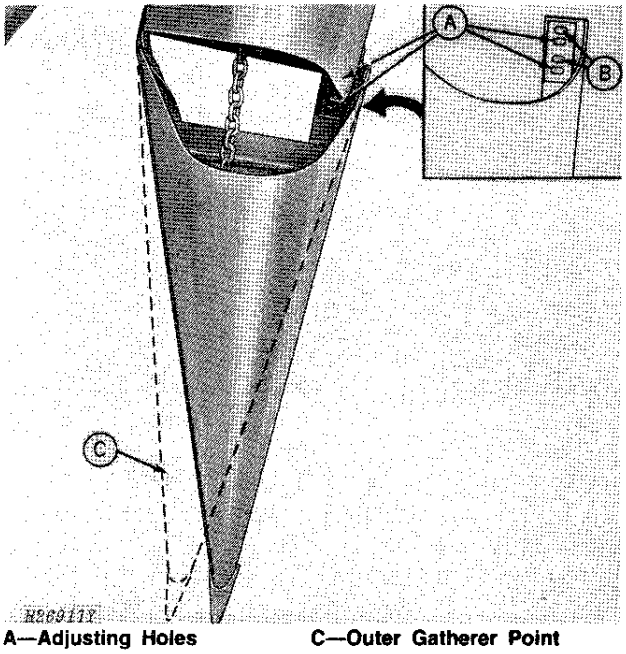
IMPORTANT: Lock nuts "A" and "B" against spacer in reinforcement brace after gatherer point has been adjusted. Tighten to 50 ft-lbs (68 Nm or 362 mkg) torque.



Illustrated on 642 or 842 Corn Heads

To adjust the center gatherer points on the 642 and 842 Corn Heads, remove bolt "G" and relocate in the hole in strap "H" at the position desired.

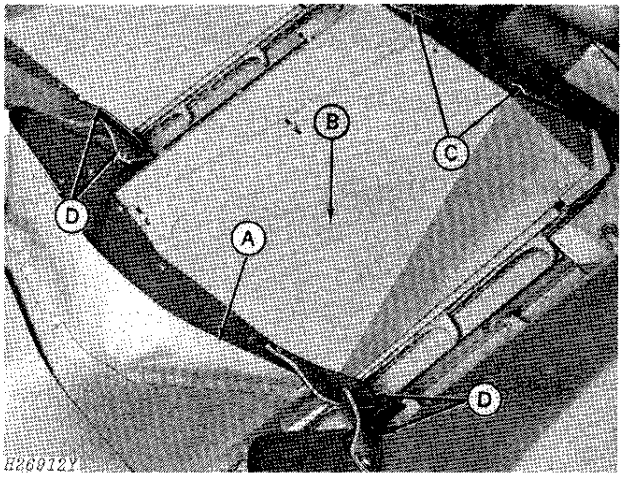
Outer Gatherer Points



A—Adjusting Holes
B—Adjusting Holes
C—Outer Gatherer Point Moved In

The outer gather points are shipped attached to hinge pin at holes "A." In down corn or 30-inch (762 mm) row corn, it may be necessary to move gatherers in to improve function. To do so, attach at holes "B."

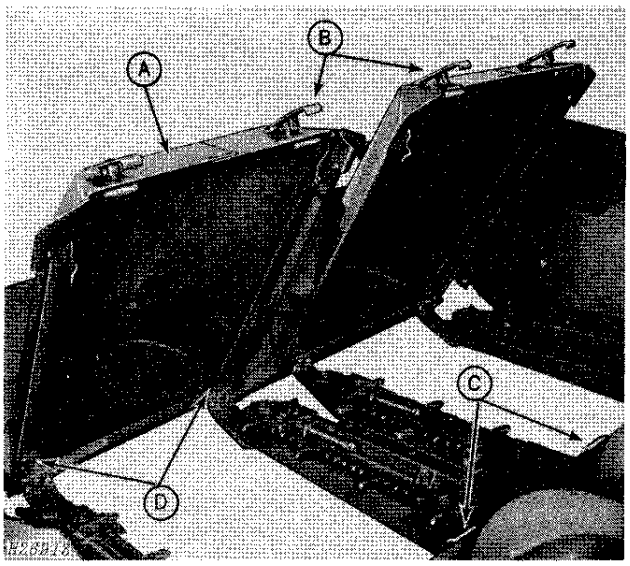
Center Shield Extension, Center Shield, and Ear Savers



A—Center Shield Extension
B—Center Shield
C—Center Shield Latches
D—Ear Savers

Center shield extensions "A" are designed to catch falling ears in well-standing corn. When picking in down corn, remove extensions to prevent interference with flow of material into gatherer throat opening.

The center shield "B" is held in place by two latches "C". The latches must be secured in position shown while operating. To adjust latches, see page 25.

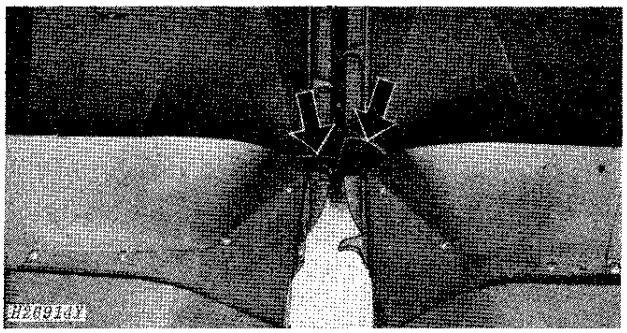


A—Center Shield
B—Center Shield Latches
C—Latch Attaching Points
D—Hinge Points

To tip the center shield "A" forward as shown, first start the combine or tractor engine and raise the corn head as high as possible. Lower hydraulic cylinder safety stop and shut off engine.

Release the center shield latches "B" from their attaching points "C" and tip center shield "A" forward.

⚠ CAUTION: Never run the corn head with the center shields "A" removed or tipped up. Always shut the engine off before dismounting combine, or tractor.



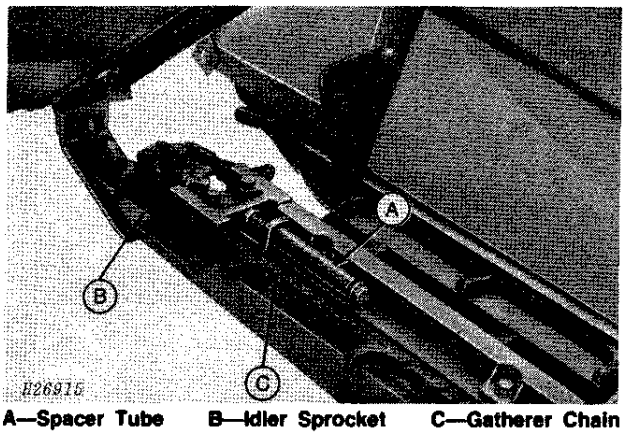
Ear savers are located above gatherer chains. Ear savers prevent loose ears from sliding over the gatherer chains to the ground at the end of rows and ~~other~~ times when stalks are not being fed through the corn head.

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

In standing corn, replace ear savers to prevent ear loss.

When replacing ear savers, the inside edges must be parallel to each other before tightening lock screws.

Gatherer Chains

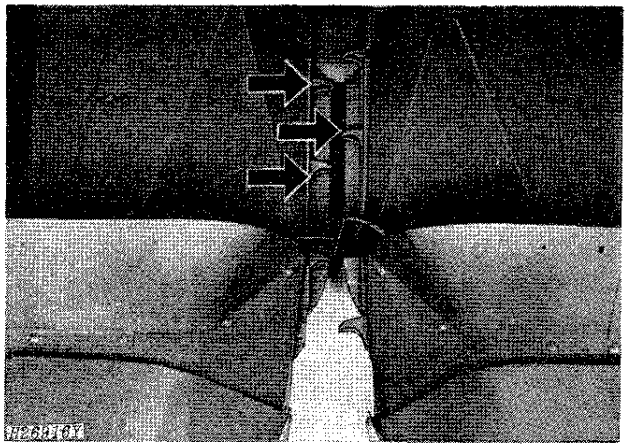


A—Spacer Tube B—Idler Sprocket C—Gatherer Chain

Gatherer chain tension is maintained by a spring-loaded tightener. The spring is shielded by a spacer tube "A" that also serves as a stop to prevent the idler sprocket "B" from retracting too far.

An adjustment is provided to compensate for normal gatherer chain wear. This adjustment should only be made when gatherer chains "C" have worn. See page 26.

Gatherer Chain Flights



The gatherer chains are assembled at the factory with the chain flights staggered between one another as shown above.

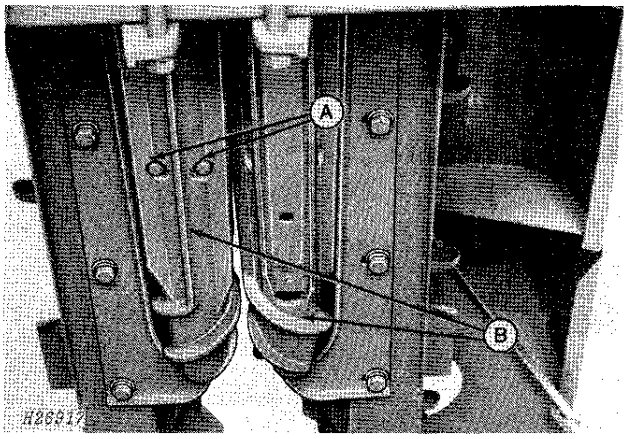
If operating in unusual field conditions, the gatherer chain flights can be positioned opposite one another for more aggressiveness. See page 26 for information on servicing gatherer chains.

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

STALK ROLLS

CAUTION: Keep hands and feet away from stalk rolls.

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



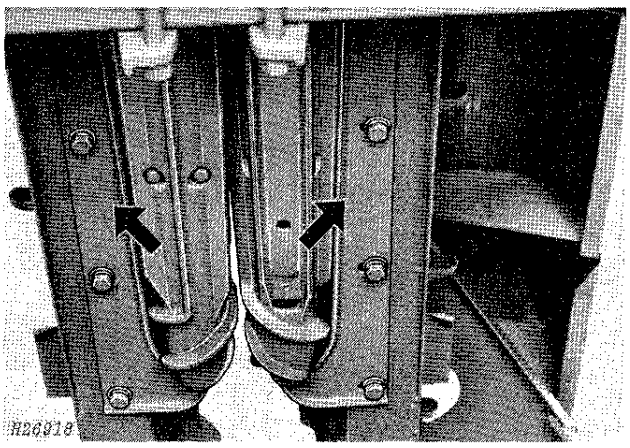
A—Cap Screws B—Stalk Rolls

Each stalk roll is attached to the stalk roll shaft by two 1/2 x 2-inch cap screws and a double spring pin. Periodically check to be certain that the bolts are tightened to 110 to 130 ft-lbs (149 Nm to 176 Nm or 795 mkg to 940 mkg) torque.

Timing Stalk Rolls

If the gear case is removed from the corn head for service to the stalk roll shafts, the stalk rolls could be re-installed incorrectly timed. The spring pin holes in the ends of the stalk roll shafts should be timed 90 degrees apart to insure the stalk rolls are in time when replaced on the stalk roll shafts. See page 25 for instructions and illustration of correctly timed stalk roll shafts.

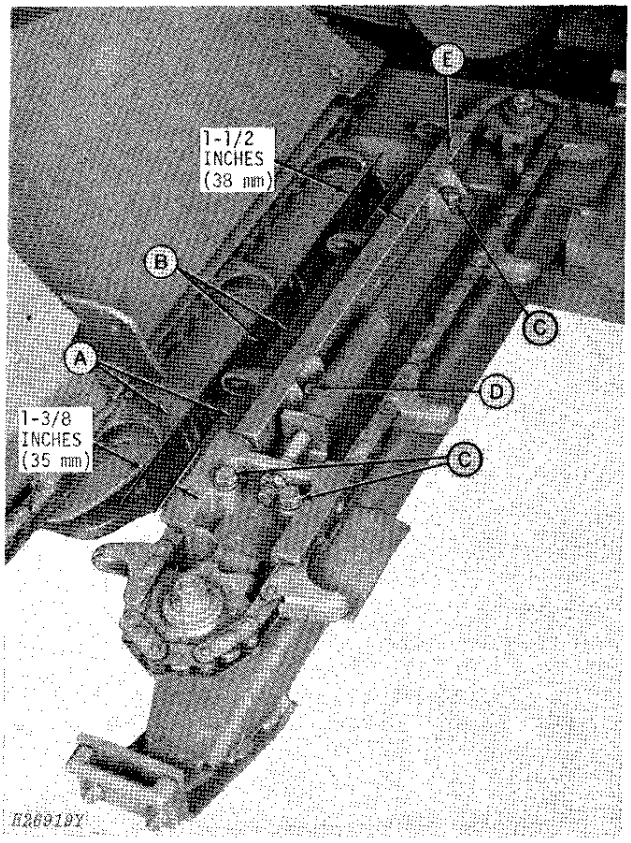
TRASH KNIVES



The trash knives prevent weeds and trash from wrapping around stalk rolls.

The knives should be set as close as possible to the rolls without striking the flutes. To adjust, see page 28.

DECK PLATES AND GATHERER CHAIN GUIDES



A—Deck Plates
B—Stalk Rolls
C—Bolts
D—Bolts
E—Gatherer Chain Guide

The deck plates "A" snap ears from the stalks as the stalks are pulled down by the stalk rolls "B".

The corn head is shipped from the factory with the deck plates spaced 1-3/8 inches (35 mm) apart at the front and 1-1/2 inches (38 mm) apart at the rear. This spacing covers a wide range of field conditions. However, due to different varieties of corn and varying field conditions, the deck plates can be adjusted to meet your particular conditions. The size of the ears, stalks, and amount of trash taken in by the gatherers determines the deck plate spacing.

NOTE: To minimize the amount of trash and stalks taken into the combine, the deck plates must be open as far as possible without causing shelling.

Adjusting Deck Plates and Gatherer Chain Guides

To adjust the deck plate spacing, tip the center shields forward as explained on page 7. Next loosen three bolts "C" on both deck plates. If the chain guides require adjusting, loosen bolts "D."

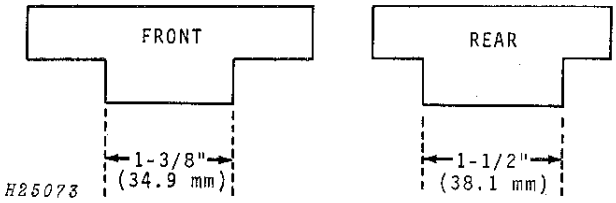
Position the deck plates so the center space between the edge of the deck plates is located over the center space between the stalk rolls.

Adjust the gatherer chain guides "E" in until they are just touching the gatherer chains.

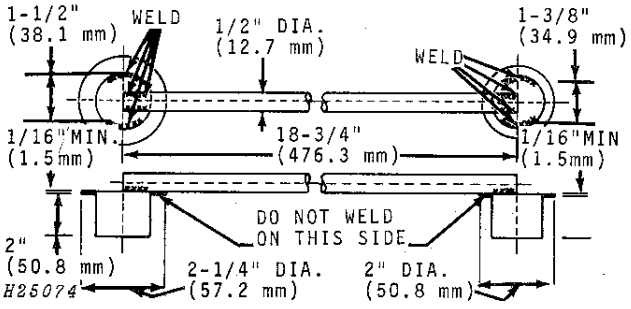
Tighten bolts "C" and "D" on guides and deck plates to 85 ft-lbs (109 Nm or 615 mkg) torque.

NOTE: Deck plates must be spaced 1/8 inch (3 mm) wider apart at the rear than at the front. The center of space between the deck plates must be located over the center of space between the stalk rolls.

A handy gauge, for deck plate spacing, can be made by one of the following methods.

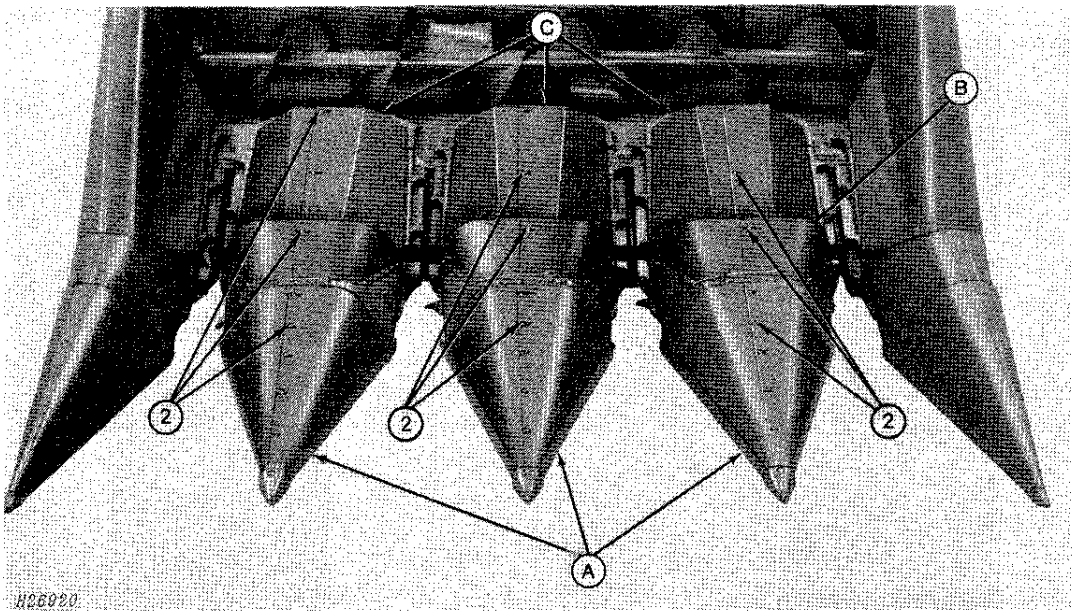


Wood Gauge



Metal Gauge

ROW SPACING

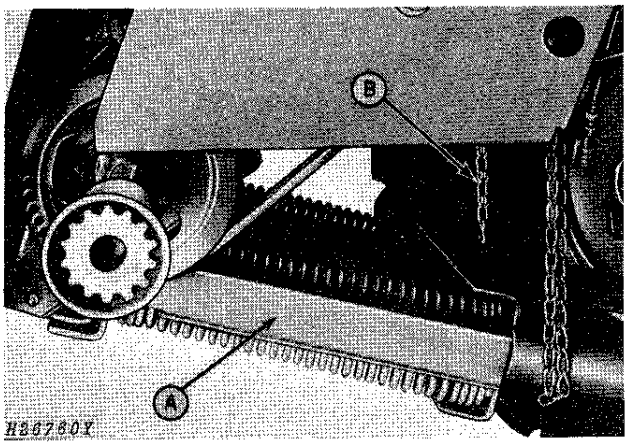


A—Center Gatherer Points **B—Center Shield Extension** **C—Center Shields**

443 Corn Head Set to Pick Corn Planted on 30-Inch (762 mm) Rows

ROW SPACING

Corn Head	Inches	(Millimetres)
243	28, 30, 32	(711, 762, 813 mm)
244	36, 38, 40	(914, 965, 1016 mm)
343	28, 30, 32	(711, 762, 813 mm)
344	36, 38, 40	(914, 965, 1016 mm)
443	28, 30, 32	(711, 762, 813 mm)
444	36, 38, 40	(914, 965, 1016 mm)
543	28, 30	(711, 762 mm)
546	36	(914 mm)
642	20	(508 mm)
643	28, 30	(711, 762 mm)
644	36, 38	(914, 965 mm)
645	40	(1016 mm)
842	20	(508 mm)
843	28, 30	(711, 762 mm)



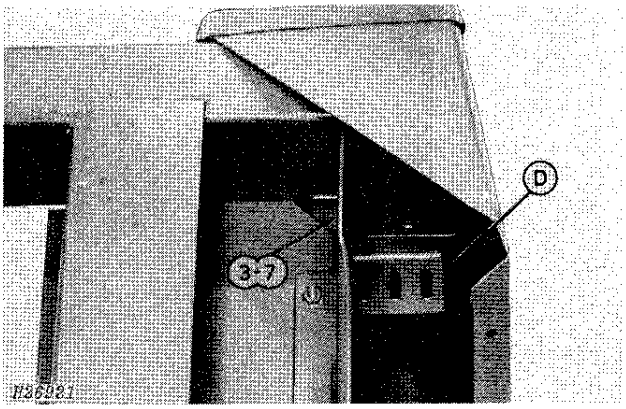
A—Safety Stop **B—Support Chain**

Safety Position - Illustrated on 4400 Combine

⚠ CAUTION: Lower cylinder safety stop on combine to prevent corn head from lowering.

To change row spacing:

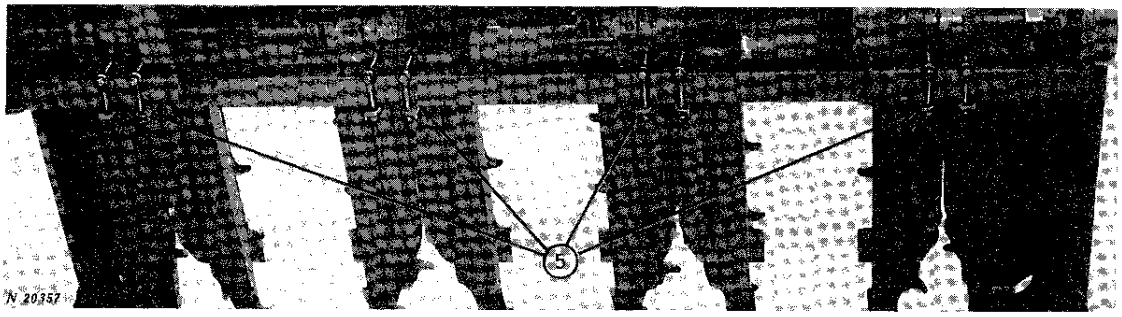
1. Start combine engine and raise corn head as high as possible.

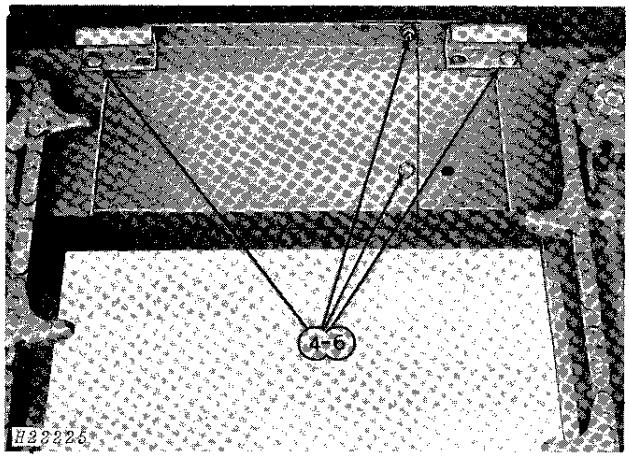


D—Outer Gatherer Sheet Support

2. Loosen all bolts attaching halves of center gatherer points "A," center shield extensions "B," and center shields "C" together. Adjust halves of center shields, extensions, and gatherer points for row spacing desired.

3. Remove outer gatherer sheet support "D" attaching bolt on both outer gatherer sheet supports.





4. Remove bolts from row unit drive shields and outer center shield latch brackets.

5. Both row units on the 243 and 244 Corn Heads are moved when changing row spacing. The outside row units are moved when changing row spacing on the 343 and 344 Corn Heads while the center row remains stationary. On 443, 444, 643, 644, and 843 Corn Heads, all row units are moved when changing row spacing. Loosen nuts on row unit attaching bolts and move units to desired row spacing. Tighten unit attaching bolts to 110 ft-lbs (149 Nm or 796 mkg) torque.

6. Reinstall bolts in row unit drive shields and outer center shield latch brackets.

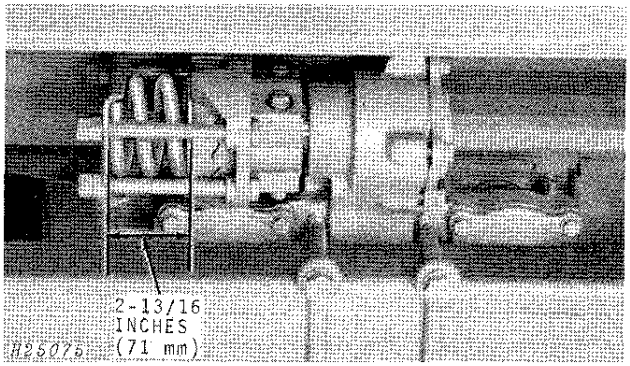
7. Reinstall outer gatherer sheet support attaching bolts on both outer gatherer sheets.

8. Install center shields, extensions, and points back on corn head. See page 26 and adjust center shield latches.

Raise hydraulic cylinder safety stop and hook to chain.

Start combine engine and engage corn head drive slowly.

SLIP CLUTCHES



Slip clutches act as safety devices to protect the drives on the corn head. Each row unit drive and cross auger drive have a slip clutch.

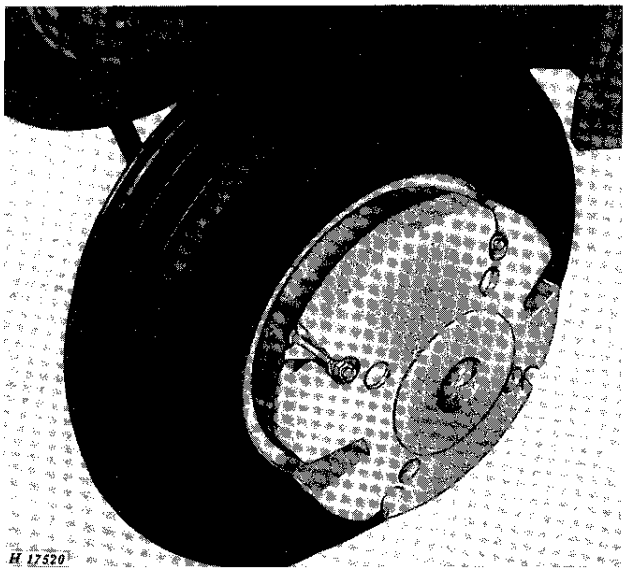
Should a clutch slip when the corn head is in operation, stop immediately, determine the cause, and correct it. All slip clutches are properly adjusted at the factory. The only time slip clutches will require adjusting is when they are disassembled for service. The length of the row unit slip clutch spring when correctly adjusted should be 2-13/16 inches (71 mm). The cross auger drive slip clutch is non-adjustable.

IMPORTANT: Do not tighten nuts to the point where the clutch will not slip. The two nuts used to compress the spring must be jammed together. Tighten to 55 ft-lbs (75 Nm or 398 mkg) torque. Do not grease clutch facings.

Slip clutches must slip properly before operating in the field.

See storage of corn head page 41.

COMBINE STEERING WHEEL WEIGHTS AND FLUID



Steering wheel weights are required to help stabilize the combine by equalizing weight distribution when attaching the corn head to the combine.

Refer to the following charts for correct weights required on the 3300, 4400, 6600, and 7700 Combines. Corn heads are shown with or without the additional weight of the straw chopper. Because of the light weight of the straw spreader, it shall be considered the same as "without straw chopper."

Calcium chloride solution can be added to the steering wheel tires for more weight. See your John Deere dealer for weight requirements and service when adding calcium chloride solution to steering wheel tires.

Use the weight code with the description below to determine weight requirements for your particular need.

Code	Description
1	Inside wheel weights only.
2	Inside wheel weights and outside wheel weights.
3	Inside wheel weights, outside wheel weights, and auxiliary wheel weights.
3T	Bundle of 3 T-Weights.
4T	Bundle of 4 T-Weights.
6T	Bundle of 6 T-Weights.
9T	Bundle of 9 T-Weights.

3300 COMBINE

Corn Head		Without Calcium Chloride In Tires Weight Code	With Calcium Chloride In Tires Weight Code
244	without straw chopper	0	0
	with straw chopper	0	0
343	without straw chopper	1	0
	with straw chopper	0	0
344	without straw chopper	1	0
	with straw chopper	0	0

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

4400 COMBINE—REGULAR AND LONG FEEDER HOUSE

Corn Head		Without Calcium Chloride In Tires Weight Code	With Calcium Chloride In Tires Weight Code
344	without straw chopper	0	0
	with straw chopper	0	0
443	without straw chopper	2	1
	with straw chopper	1	0
444	without straw chopper	2	1
	with straw chopper	1	0

6600 COMBINE

	Wheels Without Calcium Chloride				Wheels With Calcium Chloride					
	16 In. Wheels		24 In. Wheels		11L-16 Tire		11-16 Tire		24 In. Wheels	
Corn Head	Without Straw Chopper	With Straw Chopper	Without Straw Chopper	With Straw Chopper	Without Straw Chopper	With Straw Chopper	Without Straw Chopper	With Straw Chopper	Without Straw Chopper	With Straw Chopper
344	2	1	1	1	1	0	0	0	0	0
443	3	2	3	2	2	1	2	0	1	1
444	3	2	3	2	2	2	2	1	2	1
543	3+4T	3	3	2	3	2	2	2	2	1
642	3+9T	3+4T	3+4T	3	3+4T	3	3	2	3	2
546	3+9T	3+4T	3+9T	3+4T	3+4T	3	3	2	3	2
643	NR	3+9T	3+9T	3+4T	3+9T	3+4T	3+4T	3	3+4T	3

7700 COMBINE

Corn Head		Without Calcium Chloride In Tires Weight Code	With Calcium Chloride In Tires 11L-16Tire Weight Code	With Calcium Chloride In Tires 9.20-24 Tire 11.00-16 Tire Weight Code
444,543	without straw chopper	1	0	0
	with straw chopper	0	0	0
546,642	without straw chopper	2	2	1
	with straw chopper	1	1	0
643	without straw chopper	3	2	2
	with straw chopper	2	1	1
644,645,842	without straw chopper	3 & 9T	3 & 4T	3
	with straw chopper	3 & 4T	3	2
843	without straw chopper	Not Recommended	Not Recommended	3 & 9T
	with straw chopper	3 & 9T	3 & 9T	3 & 4T

NOTE: Wheel weights are not required with power rear wheel drive.