

EAR-CORN HARVESTING UNITS



JOHN DEERE

OPERATORS MANUAL EAR-CORN HARVESTING UNITS

OME73484 A4 English

**JOHN DEERE OTTUMWA WORKS
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Introduction



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.

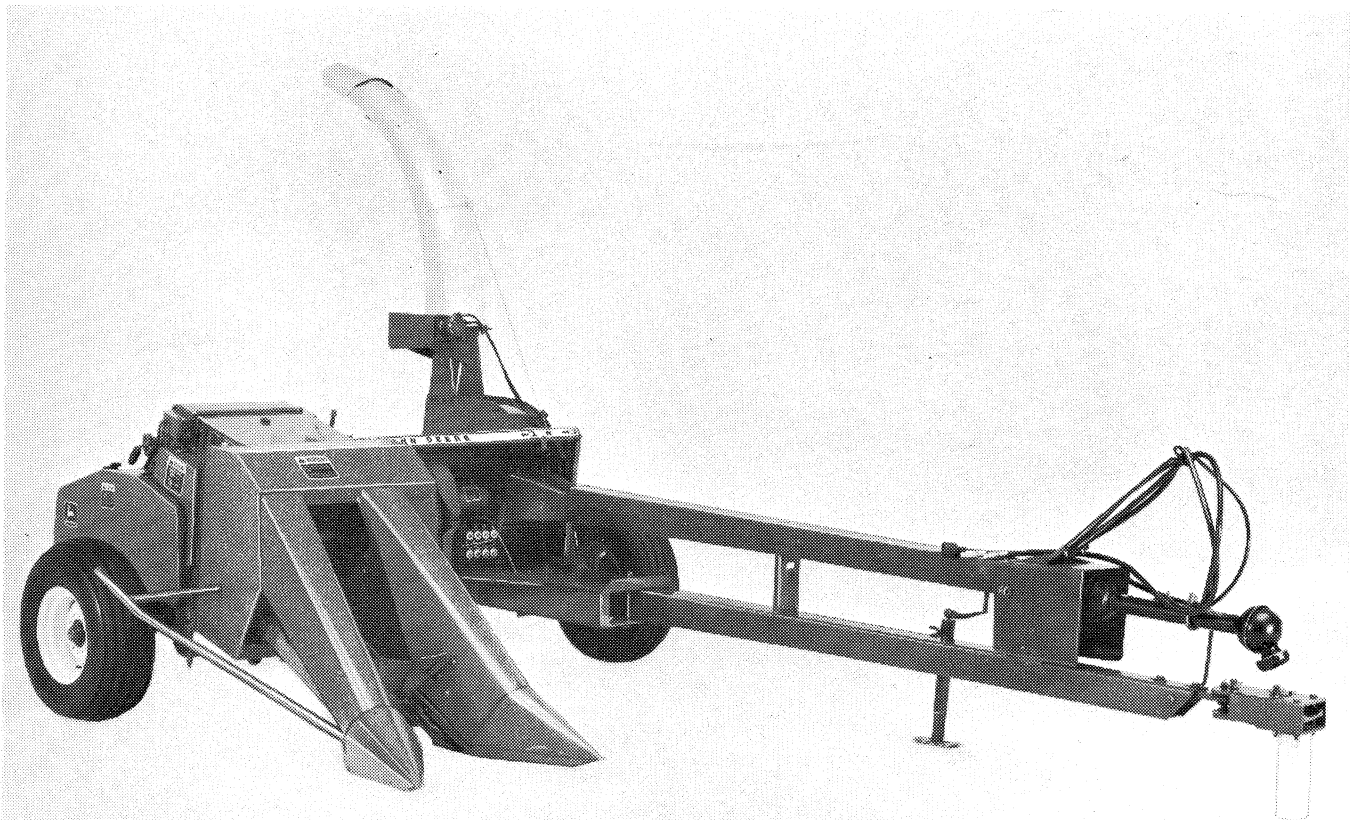
This operator's manual contains SI Metric equivalents which follow immediately after the U.S. customary units of measure.

"Right-hand" and "left-hand" sides are determined by facing in the direction the Ear-Corn Harvesting Unit will travel when in use.

Your warranty appears on your copy of the purchase order which you should have received from your dealer.

Record your model and serial numbers on page 51.

NOTE: See the 40 Series Corn Head Operator's Manual for service information on 2 and 3-Row Corn Heads.



Ear Corn Harvesting Units

PREDELIVERY CHECK LIST

After the ear-corn harvesting unit has been completely assembled and lubricated, inspect it thoroughly to be certain it is in good running order before delivering it to the customer. The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment has been made. Consult this operator's manual for proper adjustments.

- ☐ Ear-corn harvesting unit has been properly assembled. (See page 39.)
- ☐ Nuts on all bolts have been tightened.
- ☐ Gatherer chain is properly tensioned and working freely. (See page 32.)
- ☐ Ear-corn harvesting unit has been lubricated. (See page 20.)
- ☐ Feeder drive chain has been adjusted properly. (See page 36.)
- ☐ All moving parts are working freely.
- ☐ Slip clutch has been checked for specified slip-page. (See page 31.)
- ☐ Gather points have been checked for proper adjustment. (See page 14.)
- ☐ Ear-corn harvesting unit has been cleaned and touched-up wherever paint has been nicked or scratched.
- ☐ Deck plates and trash knives have been checked and set for proper clearance. (See pages 34 and 35).

This ear-corn harvesting unit has been tested and, to the best of my knowledge, is ready for delivery to the customer.

(Date set up)

(Signature)

0A6 E03 CNHDPD A/121283

OWNER REGISTER

Name

Rural Route No.

City State..... Zip.....

Serial Number

Operator's Manual No. OM-E73484

Date Sold

0A6 E03 CNHDPD B/121283

DELIVERY CHECK LIST

Items in the Delivery Check List should be performed when delivering the ear-corn harvesting unit to the customer. Customer satisfaction will be further insured if the items in the "After Sales Check List" are performed as listed.

- ☐ Discuss proper harvesting management practices.
- ☐ Give the operator's manual to the customer and fully explain all operating adjustments.
- ☐ Advise customer of procedure used to set up the harvester and removal to allow installation of another harvesting unit.
- ☐ Advise the customer of the importance of regular lubrication at scheduled intervals and point out all lubrication points.

- ☐ Advise the customer of safety precautions that must be observed while using the ear-corn harvesting unit.
- ☐ Advise the customer to come and discuss any problems that may be encountered while operating the ear-corn harvesting unit or harvester.
- ☐ Advise the customer to record the serial number in the space provided in the Specification Section.

(Date delivered)

(Signature)

0A6 E03 CNHDPD C/121283

AFTER-SALE CHECK LIST

It is suggested that the following items be checked sometime during the first season's operation.

- ☐ Go over entire machine for loose or missing nuts and bolts.
- ☐ Inspect the trash knives to be sure they are properly adjusted.
- ☐ Feeder drive chain is properly adjusted.
- ☐ All safety shields are in place and fastened securely.
- ☐ Check for broken or damaged parts.
- ☐ If possible, run the ear-corn harvesting unit to see if it is functioning properly.

- ☐ Check for worn gatherer chains and guides.
- ☐ Check with the customer as to the performance of the ear-corn harvesting unit thus far. Make sure the customer understands the best methods of row crop operation.
- ☐ Review the entire operator's manual with the customer and stress the importance of proper and regular lubrication and safety precautions.

(Date checked)

(Signature)

0A6 E03 CNHDPD D/121283

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Safety

OBSERVE SAFETY SIGNS AND MESSAGES



CAUTION: This message is used for general reminders of good safety practices or to direct attention to unsafe practices. The message will appear in your operator's manual and/or the sign will appear on the machine with the color combination of yellow and black.

WARNING: This message denotes a specific potential hazard. The sign will be displayed on the machine in areas of potential hazard. The sign will have the color combination of yellow and black.

DANGER: This message denotes the most serious specific potential hazard. The sign will be displayed on the machine in areas of potential hazard. The sign will have the color combination of red and white.



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OBSERVE "IMPORTANT" MESSAGES

Messages labeled "Important" will appear in your operator's manual and/or on the machine to provide specific instructions for performing adjustments, services, etc. If these instructions are not followed, it could result in damage to the machine.

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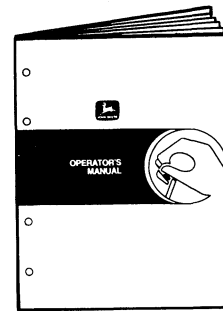
DO NOT MODIFY MACHINE

Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

0A6 E03 CNHDSA C/121283

BEFORE OPERATING

1. Read operator's manual, machine decals, and SAFETY section of this manual.
2. Remove foreign objects from machine.
3. All shields must be in place and secure.
4. Become familiar with all controls affecting machine functions.



OA6 E23482 E03 CNHDSA D 121283

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable or uncomfortable loud noise.

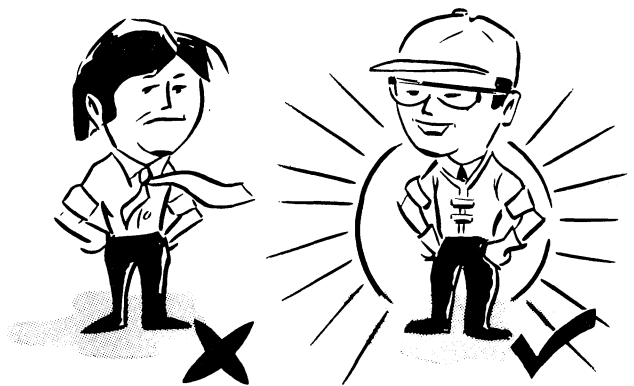
A—Earmuffs
B—Earplugs



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OPERATE SAFELY

Keep all shields in place when operating machine. Wear relatively tight and belted clothing to prevent catching on some machine parts. Never clean, lubricate or adjust ear-corn harvesting unit when it is running. Stand clear of gatherer chains and oscillating knives. DO NOT hand feed material into ear-corn harvesting unit.



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Always operate machine at rated speed. Drive slowly over rough ground.

OA6 E03 CNHDSA G 121283

SERVICE EAR-CORN HARVESTING UNITS SAFELY

Before servicing, adjusting, or removing material from the ear-corn harvesting units:

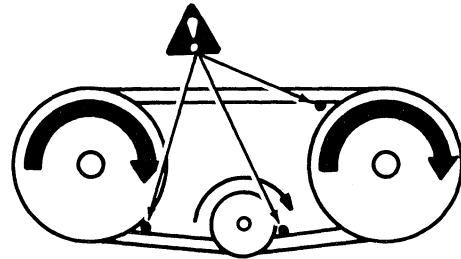
1. Disengage all power.
2. Shut off engine.
3. THEN WAIT until all moving parts have stopped moving.

OA6 E03 CNHDSA H 121283

AVOID CONTACT WITH MOVING PARTS

Keep hands, feet, and clothing away from power-driven parts.

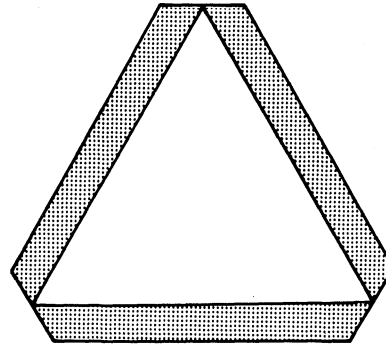
Never clean, lubricate or adjust the machine when it is running.



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DRIVING ON PUBLIC ROADS

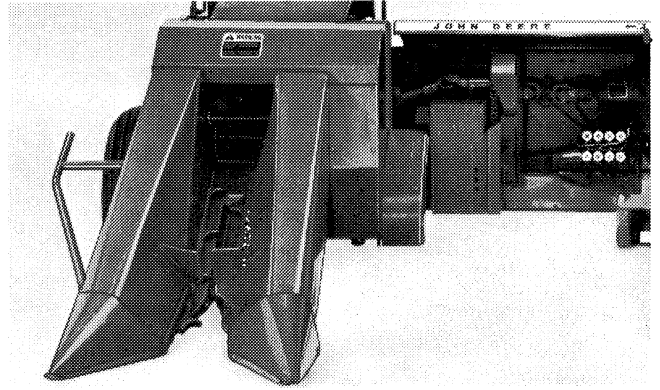
When transporting the ear-corn harvesting units, raise the unit to the highest position to prevent damage. When transporting the equipment on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard, check local governmental regulations. Various safety devices are available from your John Deere dealer.



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To avoid injury or death by being pulled into the machine:

1. Disengage drives and shut off engine before attempting to unplug the harvesting unit or machine. The feed rolls can feed crop material faster than you can release your grip on the material.
2. Never use your hands or feet to feed crop into the forage harvester, with or without a harvesting unit.
3. This harvesting unit is intended for mobile field operation only. Never use or modify machine to be used in a stationary operation.



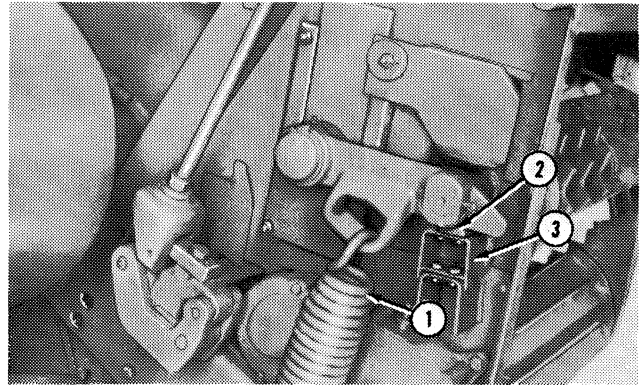
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Preparing the Harvester

PREPARING CUTTERHEAD HOUSING FOR USE WITH EAR-CORN HARVESTING UNIT (Self-Propelled and 4720 Pull-Type) FORAGE HARVESTERS

Use this procedure to convert from other harvesting units to the ear-corn harvesting unit or when installing on the harvester for the first time.

1. Loosen or remove feedroll springs. Raise feedrolls to the top and secure.
2. Remove feedroll downstop bumpers.
3. Attach front roll filler/downstop riser to right-hand cutterhead housing using two carriage bolts and nuts.



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4. Attach front-roll downstop riser to left-hand cutterhead housing using two carriage bolts and nuts.

5. Attach front roll filler to left-hand frame using existing hardware.

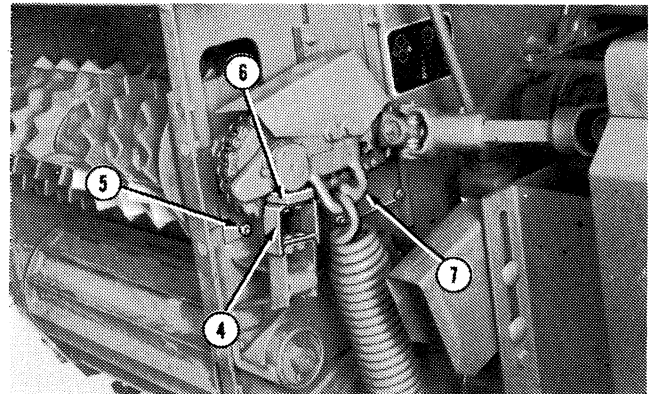
6. Install bumpers, removed in step 2, on the top of feedroll risers.

7. Install rear roll fillers on both sides of the cutterhead using existing hardware.

8. Reinstall feedroll springs, (see Cutterhead Housing Section) and adjust.

9. Assemble lower feedroll pan. See Assembly Section of harvester operator's manual.

10. Install proper harvesting unit drive sprocket and idler. See chart in Attaching and Detaching Section.

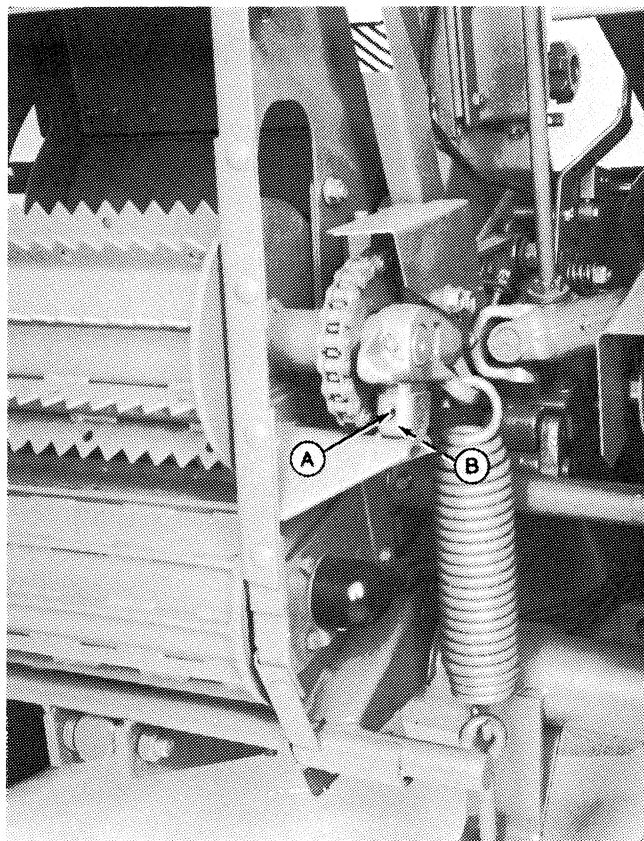


OA6 E20414 E03 CNHDPH B/121283

PREPARING CUTTERHEAD HOUSING FOR USE WITH EAR-CORN HARVESTING UNIT (3940-3950-3960-3970)

Use this procedure to convert from other harvesting units to the ear-corn harvesting unit or when installing on the harvester for the first time.

1. Loosen or remove feedroll springs.
2. Raise feedrolls to the top and secure.
3. Remove cotter pins (A) and downstops.
4. Add or remove shims (B) on each side of cutterhead until clearance is obtained between upper and lower feedrolls.
5. Secure with cotter pins removed in step 3.
6. Install ear-corn harvesting unit covers using capscrews and nuts.
7. Reinstall feedroll springs and adjust.
8. Assemble lower feedroll pan. See Assembly Section of harvester operator's manual.



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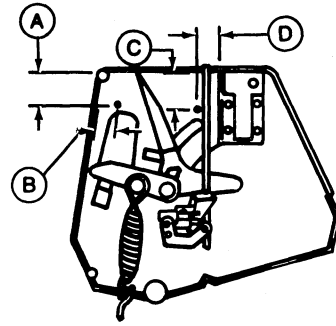
9. Install proper harvesting unit drive sprocket and idler. See chart in Attaching and Detaching Section.

OA6 E03 CNHDPH D/121283

INSTALL FEEDROLL COVERS AND DOWNSTOPS (3940, 3950, 3960 and 3970 FORAGE HARVESTERS)

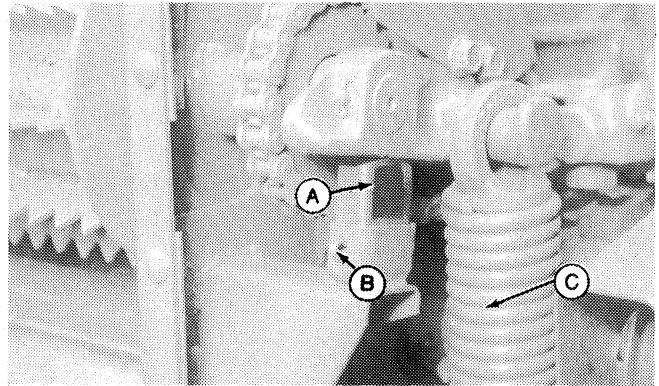
1. Locate, using template provided with ear corn unit, and drill two 13/32-in. (10 mm) holes. (1st setup).
2. Loosen or remove both feedroll springs.
3. Raise upper rear feed roll 1-in. (25 mm) by adjusting bolt. See forage harvester operator's manual.

A—5-5/16-in. (135 mm)
B—3-1/32-in. (77 mm)
C—5-63/64-in. (152 mm)
D—3-3/8 in. (86 mm)



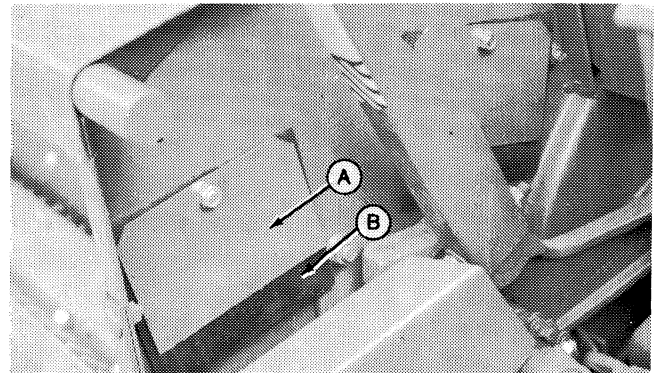
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4. Remove cotter pins (B) and short downstops. Replace with long downstops (A). Secure with cotter pins (B).
5. Lower the front feedroll and attach feedroll springs (C). Adjust for very slight tension on springs.



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6. Install feedroll covers (A) over rubber shields (B) and secure using 3/8 x 3/4-in. cap screws and lock nuts.



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Attaching and Detaching

BASIC MACHINE DRIVE SPROCKETS

The following drive sprockets shown in the chart at right are required when installing ear-corn harvesting units on forage harvesters.

Harvester	Drive Sprocket
35-38	42-Tooth RC60
3800	30-Tooth RC60
3940-3960	17-Tooth RC60
3950-3970	17-Tooth RC60 (1-2 Rows) 16-Tooth RC80 (3 Row)
5200-5400	28-Tooth RC80
5440-5460	21-Tooth RC80
5720-5820	16-Tooth RC80

OA6 E03 CNHDAD A/121283

ATTACHING EAR-CORN HARVESTING UNIT TO HARVESTER (PULL-TYPE FORAGE HARVESTER)

1. (Not Illustrated.) Move tongue to extreme left-hand position.

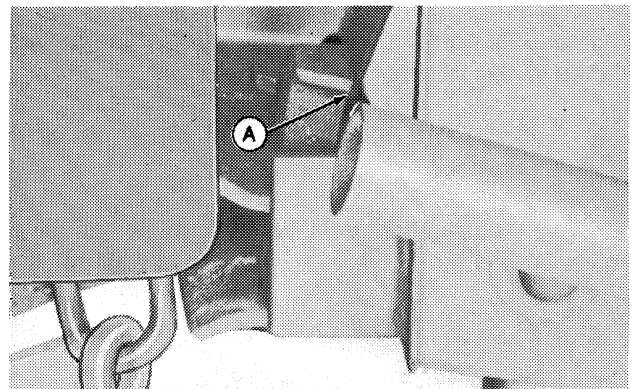


CAUTION: To prevent harvester from tipping over, do not attach any harvesting unit until tongue has been installed. See basic machine operator's manual.

OA6 E03 CNHDAD B/121283

2. Extend or retract the lift cylinder until the lower attaching points on the harvester align with the lower attaching clips on the harvesting unit. Secure the unit at the two lower points with two rectangular, tapered pins (A).

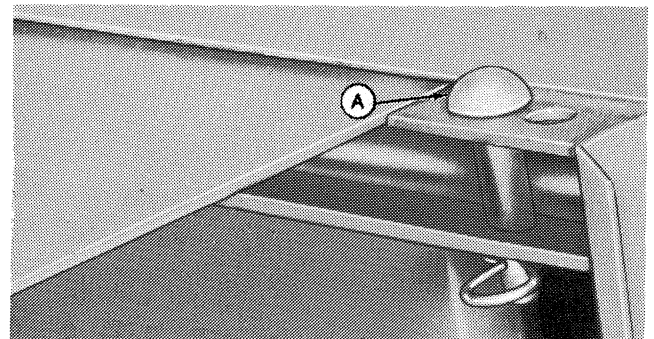
NOTE: If cutterhead will not lower without harvesting unit, shut tractor off. Move control lever (manual) or toggle switch (remote controls) to lower housing.



OA6 E23119 E03 CNHDAD C/121283

3. Extend the lift cylinder slightly to remove weight from support stands. Put support stands in storage location.

4. Slowly retract the lift cylinder until the two upper attaching points are aligned. Secure with two round drilled pins (A) and spring locking pins.

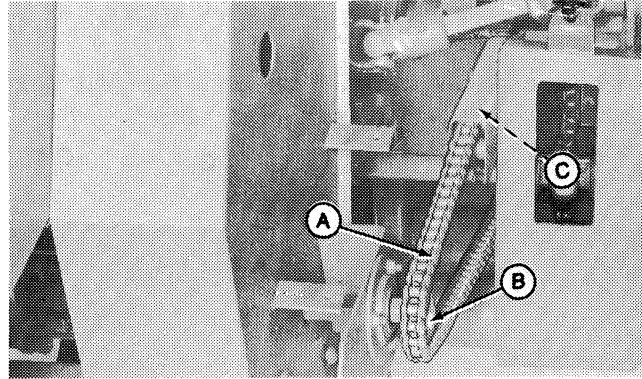


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NOTE: Shield removed for illustration purposes.

5. Loop the harvesting unit drive chain (A) around the sprockets (B). The chain must go over the idler (C).

Align the idler; then connect the chain and adjust the idler to give 1/4 to 1-in. (6 to 25 mm) "free movement" on the lower strand.



OA6 E23121 E03 CNHDAD E/121283

ATTACHING EAR-CORN HARVESTING UNIT TO HARVESTER (SELF-PROPELLED FORAGE HARVESTER)

1. Move the harvester unit height control lever until the lower attaching points align with the lower attaching clips on the ear-corn harvesting unit. Secure on both sides with a rectangular, tapered pin. Right-hand side shown in picture.

OA6 E03 CNHDAD F/121283

2. Raise ear-corn harvesting unit slightly, and move support stands to the transport position.



CAUTION: Be sure pins are seated and stands are secure.

3. Move the height control lever until the two upper attaching points are seated in the clips. Install two round drilled pins.

OA6 E03 CNHDAD G/121283

4. Loop the ear-corn harvesting unit drive chain (A) around the drive sprocket. The chain must go over the idler (B).

Align the idler and chain cover. Connect the chain and adjust the idler to give 1/4 to 1-in. (6 to 25 mm) "free movement" on the lower strand.

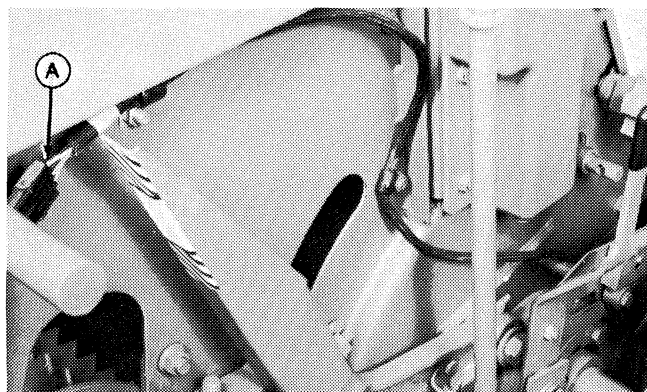


CAUTION: DO NOT run harvester without chain cover and clutch shield in place.

IMPORTANT: When removing ear-corn harvesting unit; the feedroll bumper spacers and covers on the cutterhead housing side sheet must be removed before installing a pickup, row-crop or mower bar unit. See your harvester operator's manual.

OA6 E03 CNHDAD I/121283

5. If ROW-TRAK Guidance is installed, connect ear-corn harvesting unit harness to connector (A) on forage harvester.



OA6 E23484 E03 CNHDAD J/121283

See your forage harvester operator's manual for the following:

- Adjusting harvester downstop
- Adjusting harvester rate of drop
- Rear wheel spacing
- Front wheel spacing
- Wheels, tires, and ballast
- Suitcase ballast weights

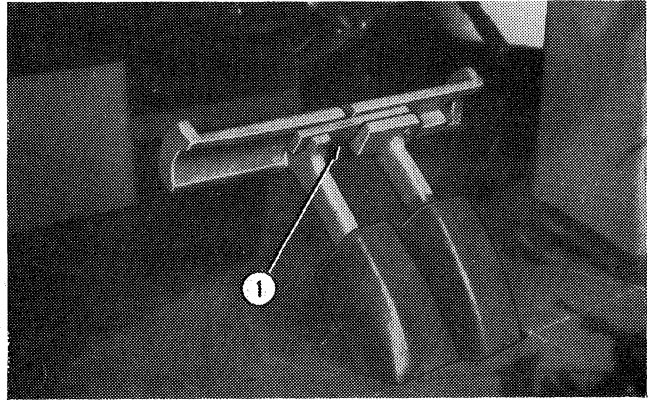
For 3940, 3950, 3960, 3970, 4720, 5200, 5400, 5440, 5460, 5720 and 5820 Harvesters, see the following section for information concerning rear wheel ballast and suitcase ballast weights.

OA6 E03 CNHDAD K/121283

Transporting

SELF-PROPELLED FORAGE HARVESTERS

1. Couple harvester brake pedals together.
2. Turn on harvester warning lamps.
3. Raise ear-corn harvesting unit to highest position.

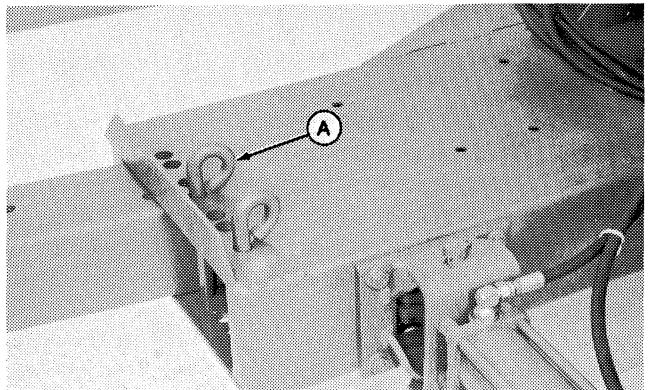


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PULL-TYPE FORAGE HARVESTERS



CAUTION: If harvester is equipped with hydraulic tongue positioner, use pin (A) as a mechanical locator to hold tongue in transport position when transporting on road.

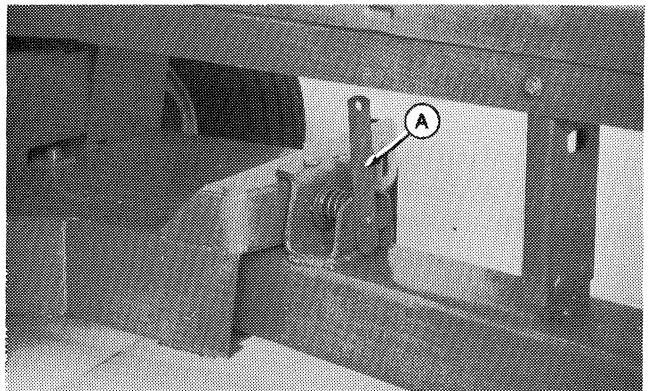


(3940)

OA6 E23078 E03 CNHDTR B/121283

NOTE: Without hydraulic tongue positioner, move the tongue to the extreme right-hand position by placing a block behind the right-hand wheel of the harvester and backing the tractor toward the right-hand side. Be sure the tongue locating pin(s) are removed before moving tongue with tractor or damage could result to harvester main frame and tongue.

(3950, 3960, and 3970)

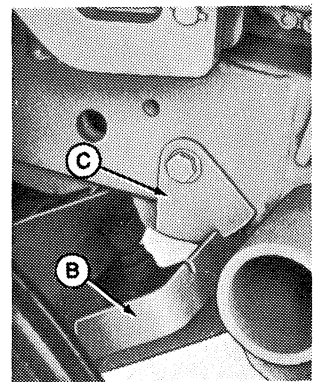
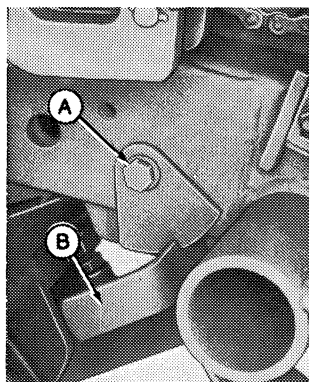


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1. Raise harvesting unit to extreme upper position.
2. Rotate lever stop out of way and push handle (B) in until lever stop engages locked position (A).

IMPORTANT: Before operating machine, raise harvesting unit to extreme upper position and move handle to unlocked position (C).

A—Locked
B—Handle
C—Unlocked



OA6 E22736 E22737 E03 CNHDTR D 121283

Operating the Ear-Corn Harvesting Unit

USING THE CORRECT RECUTTER SCREEN

If product from the machine is not satisfactory, check the following before installing a recutter screen:

1. Condition and adjustment of cutterhead knives.
2. Condition and adjustment of stationary knife.
3. Correct length of cut.

Always use the largest screen slot size possible to achieve a satisfactory product and to get maximum productivity with minimum power.

The chart recommends the screen size for various crops:

This chart is only a starting point. For example, if harvesting shelled corn (A), it would be possible to use a 1/2-in (13 mm), or 3/4-in. (19 mm) recutter screen and receive an acceptable sample. The larger screen should be installed first. If not satisfactory, work down to a smaller screen. In many crops, satisfactory results can be obtained without the use of a recutter screen.

A—Shelled Corn
B—Ear Corn
C—Whole Plant Corn

1/2" (13 mm)	A		
3/4" (19 mm)		B	
1" (25 mm)			
1-1/2" (38 mm)			C
2" (51 mm)			

OA6 E23113 E03 CNHDOP A/121283

ADJUSTING GATHERER POINTS

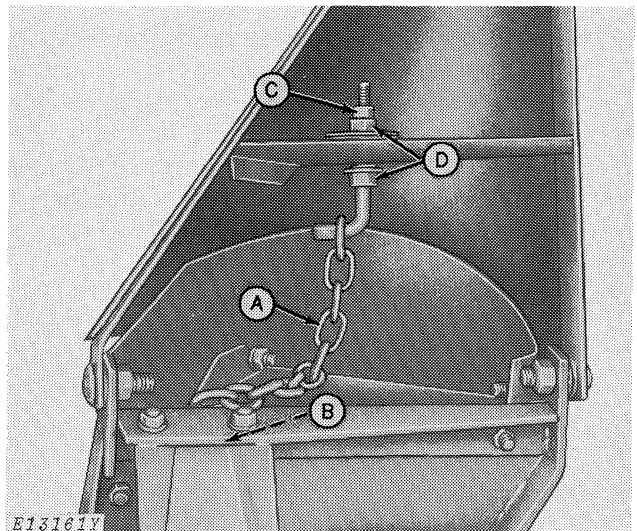


CAUTION: Before working underneath ear-corn harvesting unit; lower support stands to the ground and pin to reduce the risk of accidental lowering of unit. Disengage power and make sure all moving parts have stopped before servicing machine.

1. To adjust for desired height, insert chain (A) link through point support and secure with spring-locking pin (B).
2. To level points, loosen lock nut (C) and tighten or loosen adjusting nuts (D).
3. Repeat procedures on remaining point until both are equal.

IMPORTANT: Be certain to tighten adjusting nuts (D) securely after gatherer points have been adjusted, then tighten lock nut (C) against adjusting nut.

A—Chain
B—Spring Locking Pin
C—Lock Nut
D—Adjusting Nuts



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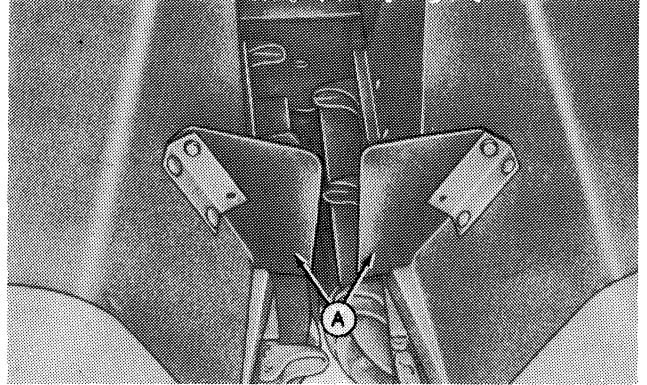
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USING EAR SAVERS

Ear savers (A) prevent loose ears from sliding over the gatherer chains to the ground at the end of the rows.

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

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



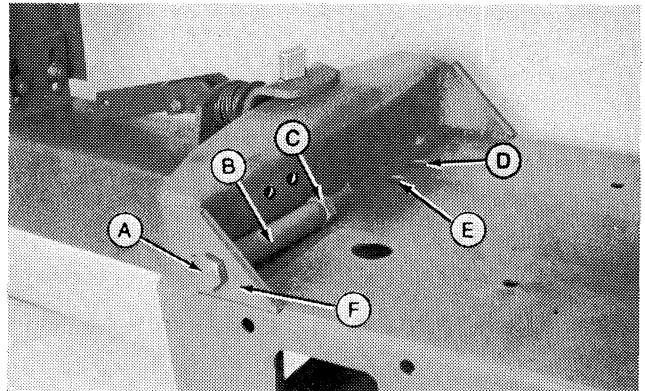
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USING TONGUE STOP BOLT

Use the tongue stop bolt (A), spacer (B) and locknut (C) on harvesters equipped with long tongue when using ear-corn harvesting unit.

Two positions are provided for operation with narrow (D) or wide (E) rows.

When not in use, stop bolt, spacer and nut should be kept in storage location (F) as shown.

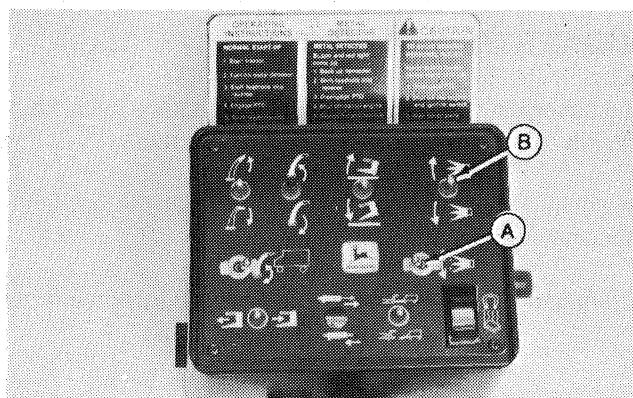


- A—Stop Bolt
- B—Spacer
- C—Lock Nut
- D—Narrow Row Location
- E—Wide Row Location
- F—Storage Location

OA6 E23579 E03 CNHDOP D/121283

OPERATING ROW-TRAK GUIDANCE

1. Turn ROW-TRAK switch (A) "on" at the control console. This activates the row-crop sensors which keep the ear-corn harvesting unit centered on rows.
2. Switch (B) can be activated at anytime to override ROW-TRAK Guidance.
3. Release switch (B) to return automatically to the ROW-TRAK Guidance system.

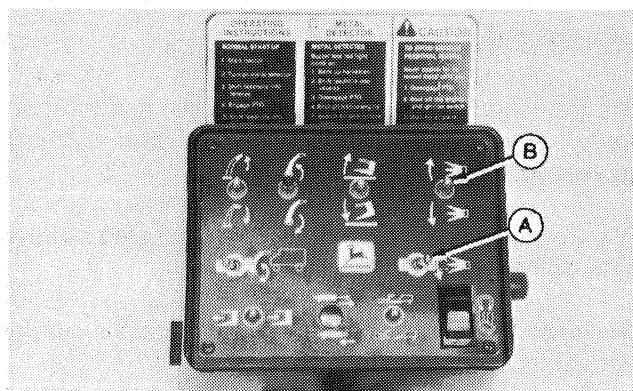


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CONDITIONS FOR NOT OPERATING ROW-TRAK GUIDANCE

In some conditions such as very weedy fields or fields with a large amount of volunteer corn, the ROW-TRAK sensors may constantly guide the ear-corn harvesting unit off the row. In these certain conditions, it may be desirable to turn the ROW-TRAK Guidance system off.

1. Turn ROW-TRAK switch (A) "off" at the control console.
2. Use switch (B) to line up the ear-corn harvesting unit on rows.

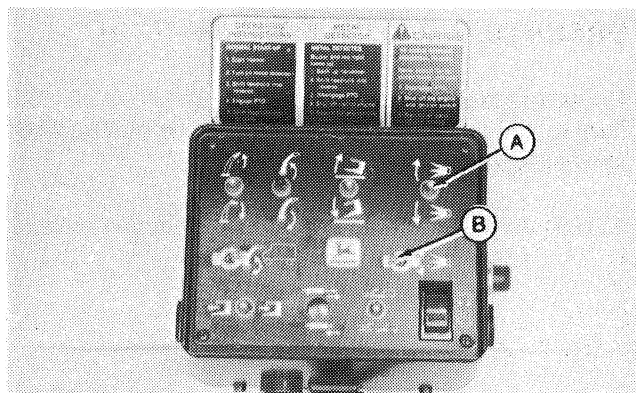


OA6 E23622 E03 CNHDOP F/121283

FUNCTIONAL CHECK FOR ROW-TRAK GUIDANCE

NOTE: Ear-corn harvesting unit must be attached to harvester.

1. Start tractor engine. Do not engage PTO.
2. Activate tongue switch (A) to insure the tongue moves in the direction indicated on the control console.
3. Turn row guidance switch (B) on.

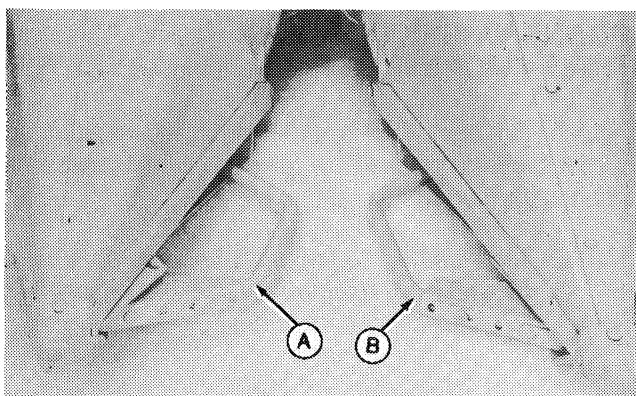


OA6 E23731 E03 CNHDOP G 131283



CAUTION: Stand beyond the points of ear-corn harvesting unit and use a stick to activate sensors.

4. Activate the right-hand row sensor (A) on the point. The ear-corn harvesting unit should move to the right.
5. Activate the left-hand row sensor (B) on the point. The ear-corn harvesting unit should move to the left.
6. When both row sensors are activated at the same time, the ear-corn harvesting unit should not move.



OA6 E23732 E03 CNHDOP H 131283

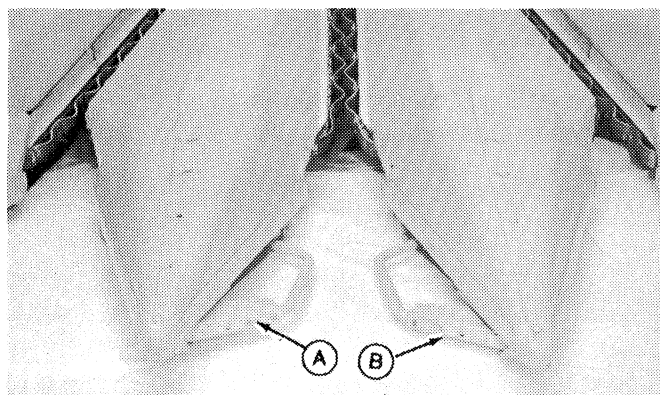
CHECK OVERRIDE FEATURE

NOTE: Two people are required in checking the override feature.

1. One person should activate the right-hand row sensor (A) on the point. At the same time, the other person in the tractor should activate the tongue positioner switch to the left. This switch will override the ear-corn harvesting unit sensor and the ear-corn harvesting unit should move to the left.



CAUTION: Stand beyond the points of ear-corn harvesting unit and use a stick to activate sensors.



OA6 E23732 E03 CNHDOP I 131283

2. One person should activate the left-hand row sensor (B) on the point. At the same time the other person in the tractor should activate the tongue positioner switch to the right. This switch will override the ear-corn harvesting unit sensor and the ear-corn harvesting unit should move to the right.

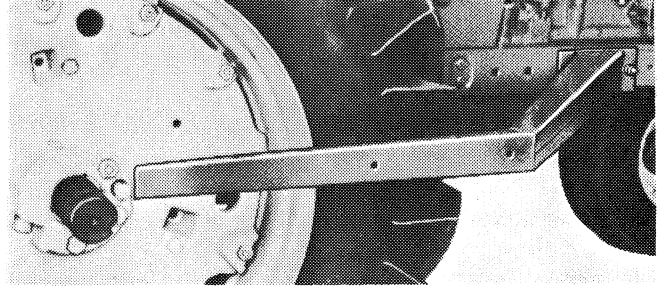
OA6 E03 CNHDOP J 131283

Attachments

TRACTOR AXLE GUARD

Recommended for tractors with axle length of 98 inches (2489 mm) to 130 inches (3302 mm) maximum. Not required for one and two-row ear corn harvesting units.

NOTE: Axle guard may need to be shimmed or extended for some tractors.

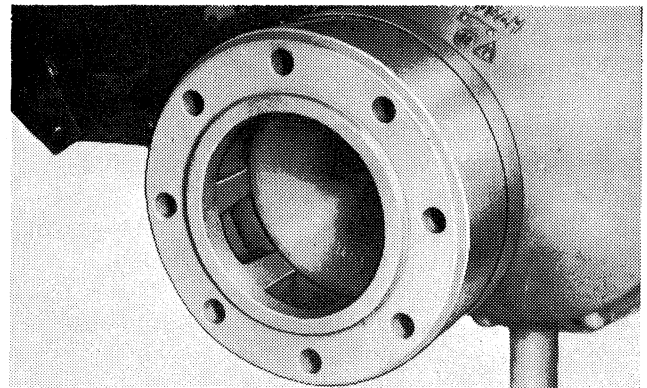


OA6 E22980 E03 CNH DAT A 131283

FRONT WHEEL SPACERS (SELF-PROPELLED FORAGE HARVESTERS)

Two-in. (51 mm), four-in. (102 mm), and eight-in. (203 mm) wheel spacers are available to space wheels accurately when harvesting row crops.

NOTE: The eight-in. (203 mm) spacers are obtained by using two, four-in. (102 mm) spacers. See Assembly Section for installation instructions.

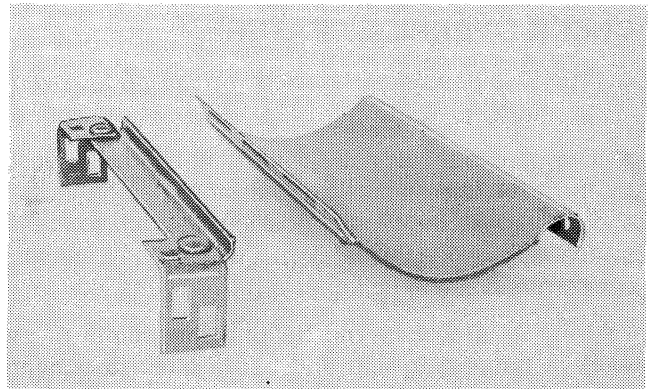


OA6 E18832 E03 CNH DAT B 131283

FEED ROLL PAN

The harvesting of ear corn, grain sorghum, and dry whole plant corn needs a pan under the lower feed rolls to prevent crop loss.

Pull-type forage harvesters parts



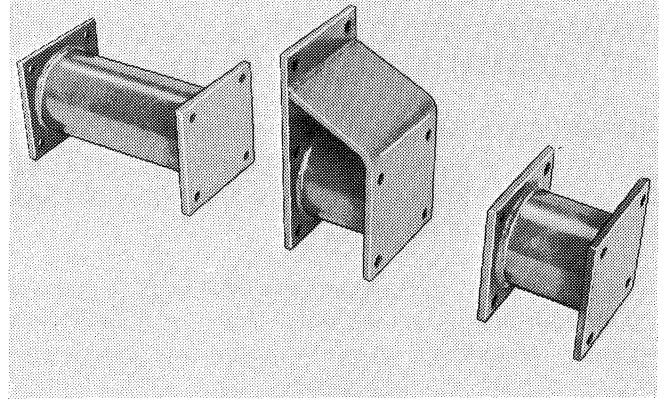
Self-propelled forage harvesters installed



OA6 E23102 E18836 E03 CNH DAT C 131283

AXLE EXTENSIONS HORIZONTAL AND VERTICAL (PULL-TYPE FORAGE HARVESTERS)

Extensions are available in 6 or 13 in. (152.4 or 330.2 mm) lengths. See forage harvester operator's manual for correct extension and row combination.



OA6 E23633 E03 CNHDAT D 131283

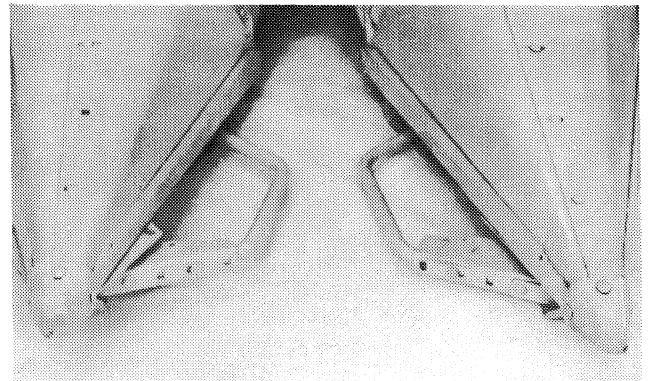
ROW-TRAK GUIDANCE

Keeps ear-corn harvesting unit centered on rows through turns, contours and down crop for increased field efficiency.

Ideal for articulated tractors (150 horsepower or less for 3950; 190 horsepower or less for 3970).

Hydraulic tongue positioner must also be installed for ROW-TRAK Guidance.

Refer to ordering codes for base machine.



OA6 E23887 E03 CNHDAT E 131283

Lubrication and Maintenance

PERFORM LUBRICATION AND MAINTENANCE AT RECOMMENDED INTERVALS

IMPORTANT: The intervals recommended are based on normal conditions; severe or unusual conditions may require more frequent lubrication or oil changes.

Clean grease fittings before using grease gun. Replace any lost or broken fittings immediately. If a new fitting fails to take grease, remove and check for failure of adjoining parts.



CAUTION: Do not clean, lubricate, or adjust your ear-corn harvesting unit while it is running.

Perform each lubrication and service illustrated in this section.

OA6 E03 CNHDL M A/121283

OBSERVE LUBRICATION SYMBOLS



Lubricate with John Deere Multipurpose Lubricant or an equivalent SAE multipurpose-type grease (unless otherwise specified) at hourly intervals indicated on the symbols.



Lubricate with SAE 30 or heavier oil at hourly intervals indicated on the symbols.



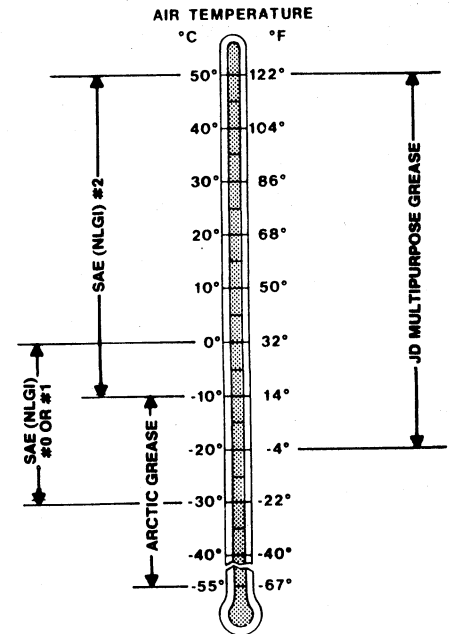
Brush periodically with John Deere Multipurpose Lubricant or an equivalent SAE multipurpose-type grease.

OA6 E03 CNHDL M B 121283

CHOOSING A GREASE

John Deere Multipurpose Grease is recommended in all grease fittings at hourly intervals indicated. If other greases are used, use:

- SAE Multipurpose Grease
- SAE Multipurpose Grease containing 3 to 5 percent molybdenum disulfide.



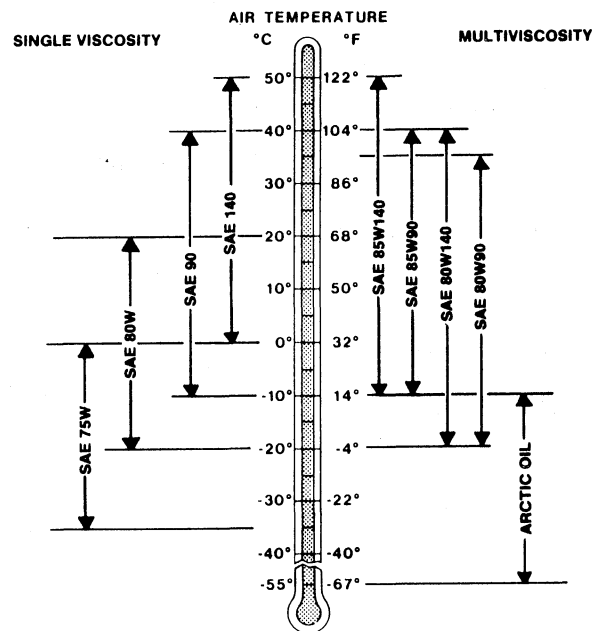
OA6 X9326 E03 CNHDL M C/121283

CHOOSING GEAR CASE LUBRICANTS

Use these recommended lubricants:

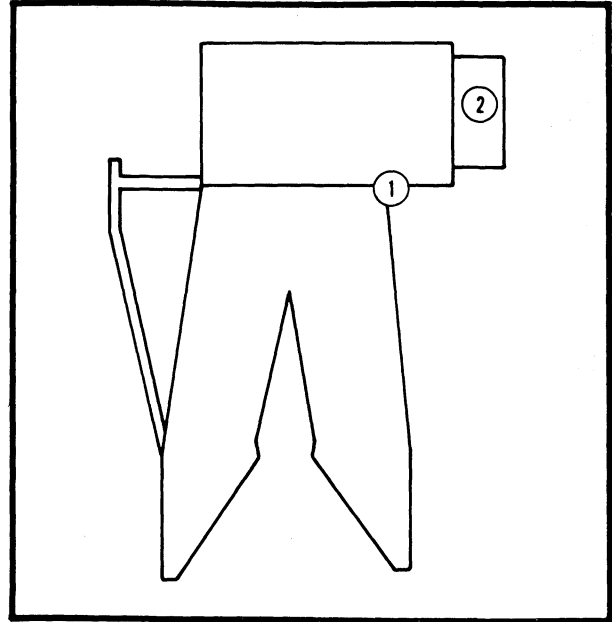
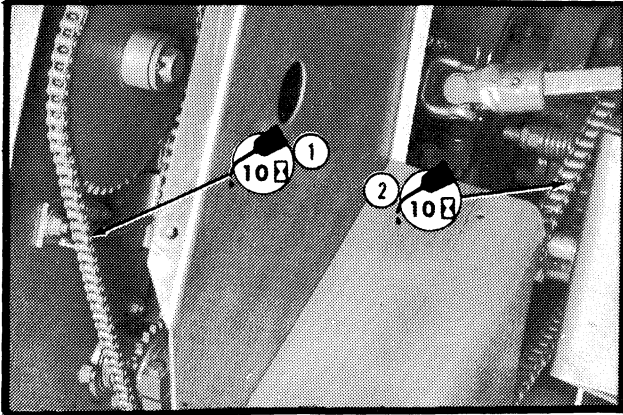
- John Deere SAE 85W140 API or GL-5 Gear Oils
- Oil meeting performance requirements of:
API Service Classification GL-5
Military Specification MIL-L-2105C

Depending on the expected prevailing temperature for the fill period, use oil of viscosity as shown in the chart.



OA6 X9322 E03 CNHDL M D/121283

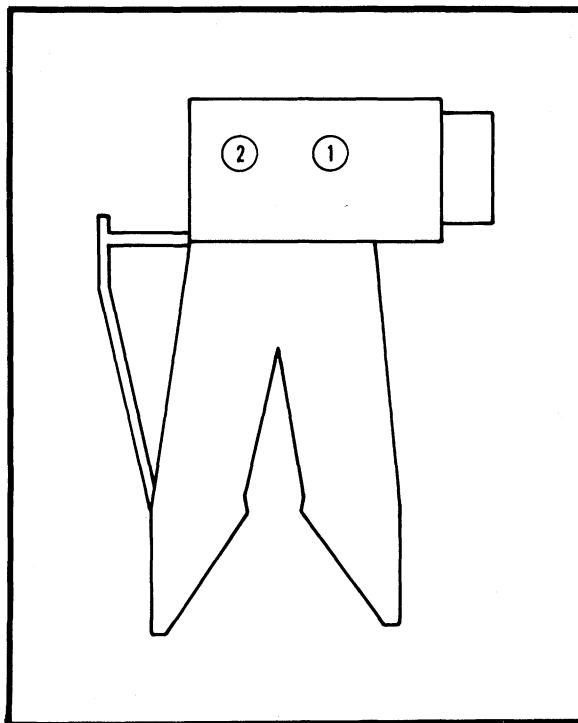
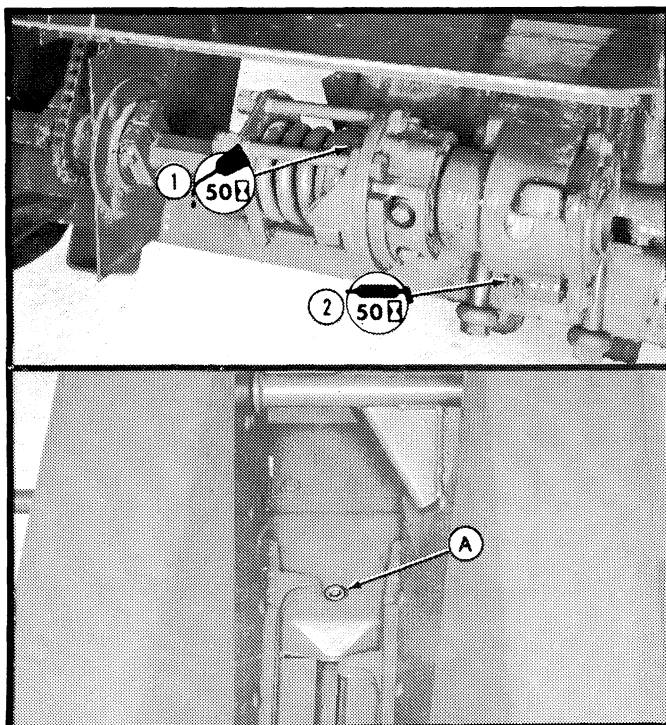
EVERY 10 HOURS



CAUTION: Do not clean, lubricate, or adjust your ear-corn harvesting unit while it is running.

1. Main Drive Chain—(Shield removed for illustration).
2. Ear-Corn Harvesting Unit Drive Chain—

EVERY 50 HOURS



1. Slip Clutch Jaws—Oil thrust washer in row unit slip clutches.

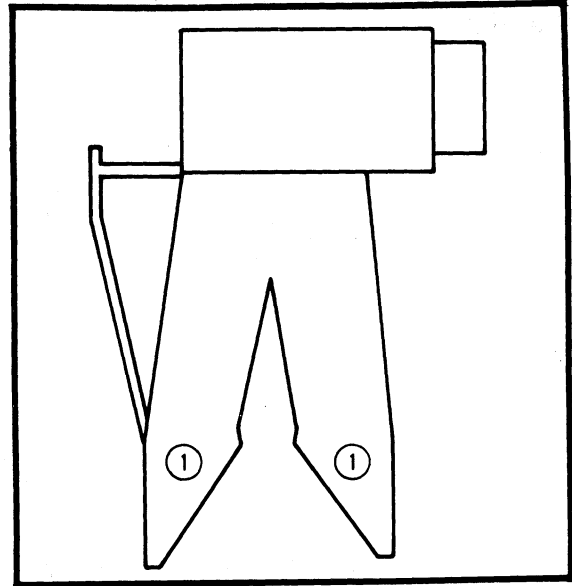
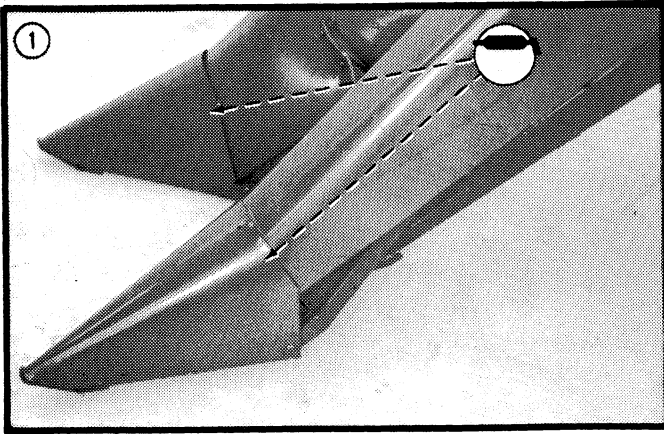
2. Gear Case—Inspect the row unit gear case and check to be sure it is adequately filled with lubricant. Lubricant should be approximately 1-1/2-in. (38 mm) below inspection plug (A).

IMPORTANT: If lubricant needs to be added, use John Deere gear case lubricant or its equivalent (type “0” [Zero] extreme pressure) and fill through grease fitting. This special high-pressure lubricant is available in a 14-1/2-ounce (0.4 kg) tube, AN102562, or a 35-pound (16 kg) pail AH80490.

IMPORTANT: Loosen the inspection plug (A) on top of the gear case while the gear case is being lubricated to prevent blowing of grease seals.

Before removing inspection plug, clean area around plug and blow dust from under frame to prevent dust from getting into gear case.

EACH SEASON



1. Idler Bearings—(Both sides).

OA6 E23166 E03 CNHDLM G 131283

Troubleshooting

Problem	Cause	Remedy	Page
Loss of Ear Corn in the Field	Gatherer points set too high.	Adjust gatherer points so the tips just touch the ground when row unit skid plate is 1-inch above ground.	14
		When picking low hanging ears, raise front tip of gatherer points and run corn head with the skids close to the ground.	
	Ground speed too fast or too slow.	Operate at a speed to meet field and ground conditions. Excessive ground speed can bend stalks forward and cause ears to fall ahead of gatherer chains. Too slow ground speed can cause gatherer chains to jerk stalks and snap off ears allowing them to slide out forward.	—
		Operate at a speed where the gatherer chains merely help guide the stalks into the rolls.	—
	Not picking planter rows.	Pick rows as they were planted. It will be easier to follow the rows and eliminate loss of ears.	—
	Row units not centered on rows.	Adjust corn head row spacing to equal row spacing of corn in field being harvested.	—
	Ears sliding out over gatherer chains.	Use ear savers and center shield extensions.	—
	Outer gatherer sheet extensions needed	Install outer gatherer extensions.	—
Ear Shelling At Stalk Rolls	Deck plates not adjusted properly.	Adjust deck plates	34
	Machine operating too high.	Raise point tip and run head lower.	
Ears Sliding Out Through the Throat	Ear savers not properly adjusted.	Adjust ear savers.	31
	Ear savers worn out.	Replace ear savers.	31

Problem	Cause	Remedy	Page
Plugging	Stalks breaking in stalk rolls or deck plates.	Adjust the opening of deck plates. Check the stalk roll timing so stalk roll flutes do not break stalks. Also make sure deck plates are set equidistant and centered over center of rolls.	34-35
	Trash winds around stalk rolls.	Set trash knives closer to stalk rolls.	32
	Loose gatherer chains.	Check gatherer chain mechanism.	
	Not picking planter rows.	Pick rows as they were planted. It will be easier to follow the rows, reduce plugging, and eliminate loss of ears.	—
	Material catching on sheet metal.	Check for broken or bent sheet metal that may prevent flow of material.	—
	Ground speed too fast, causing too much material to go into corn head too fast.	Slow down. Operate to meet the yield and ground conditions. Faster speeds will cause plugging.	—
	Material not flowing through auger.	Check auger housing for obstructions and roughness. Check auger for adjustment of 7/8-inch (22 mm) clearance.	—
	Auger plugs up from worn or curved paddles.	Reverse, double up (with cupping to center) or replace.	—
	Corn stalks plugging in gatherer throat opening.	Remove ear savers and center shield extensions.	—
	Worn stalk rolls.	Replace stalk rolls.	—
Loss of Ear Corn From Weakened or Broken Stalks.	Contact of stalk with center sheet extension and ear savers.	Remove center sheet extensions and ear savers.	—
	Ground speed too fast.	Reduce ground speed.	—
	Ground speed and feed roll speed not coordinated.	Change sprockets to speed up feed rolls.	
	Stalks and ears badly "down" or "lodged" or loose ears on the ground.	Retime gatherer chains so the flights are directly opposite each other.	32
	Worn stalk rolls.	Replace stalk rolls.	—

Problem	Cause	Remedy	Page
Pulling Up Cornstalks	Deck plates set too close together.	Spread deck plates, a little at a time, until stalks feed through rolls more freely.	34
	Traveling too fast for gatherer chain speed.	Slow down to meet crop conditions or increase row unit drive speed.	
	Improper harvester drive sprocket.	See drive sprocket chart.	9
	Gatherer chain lugs digging into cornstalk roots.	Lower gatherer points.	14
	Corn extremely dry or down.	Remove ear savers.	31
	Worn stalk rolls.	Replace stalk rolls.	—
Corn Head Feeds Poorly, Auger Churns Ears	Corn head center gatherer chains not aggressive enough.	Retime lugs.	
	Corn head speed too high.	Reduce head speed.	
	Corn head speed too low.	Increase head speed.	
Short Gatherer Chain Life	Gatherer chain too tight.	Adjust gatherer chain.	32
	Using old sprockets with new gatherer chain.	Replace sprockets if worn.	*
	Chains not being oiled.	Oil with SAE 30 or heavier oil.	20
Material Falling From Gatherer Chains	Gatherer chains loose.	Adjust gatherer chains.	32
Harvesting Unit Will Not Lower to Ground	Harvesting unit downstop not properly adjusted.	Adjust down stop valve.	**
	Float springs are too tight.	Loosen float springs.	**
	Heavy duty float springs being used with light harvesting unit.	Install correct float springs.	**
	Extensions for upper attaching shaft for the pickup when used with large tires are not installed.	Install extensions for attaching pickup to upper shaft.	**
	Too much air in the large front tires.	Adjust air pressure in tires.	**

* See your John Deere dealer.

**See your forage harvester operator's manual.

Problem	Cause	Remedy	Page
Harvesting Unit Digs Into Ground	Float springs set too loose.	Tighten float springs.	**
	Downstop set too low.	Correct downstop setting.	**
	Gauge wheels or shoes set too high.	Lower gauge wheels or shoes.	**
Harvesting Unit Will Not Raise or Lower	Hydraulic pump does not function.	Check hydraulic pump.	-
	Engine at slow idle.	Increase engine speed to 1500 rpm.	-
	Hose to left-hand lift cylinder poppet(s) failed.	Replace hose.	-
	Control valve linkage out of adjustment.	Check harvesting unit lift control lever and linkage.	**
	Faulty base module for rear outlet valve (electric solenoid controlled valve).	See your John Deere dealer.	*
Harvesting Unit Drops Too Fast or Too Slow	Harvesting unit drop rate screw out of adjustment.	Adjust drop rate on 3 spool valve.	**
	Control lever linkage out of adjustment.	Check control lever and linkage.	**
	Poppet stop not in 3-spool valve outlet port.	See your John Deere dealer.	*
	Low oil supply in hydraulic tank.	Fill system with proper oil to sight glass.	**
	Clogged suction line to hydraulic pump.	Clean line.	-

* See your John Deere dealer.

**See your forage harvester operator's manual.

Problem	Cause	Remedy	Page
ROW-TRAK GUIDANCE			
One Side or Both Sides of ROW-TRAK Fail to Function but Control Console Tongue Positioner Switch Does Work	Broken switch or switches in ear-corn harvesting unit points.	Replace.	12
	Wires loose at switches in row-crop points.	Tighten.	
	Failed relay.	Replace.	
	ROW-TRAK harness not fully plugged in.	Check connection between harvester and ear-corn harvesting unit and connection between the ear-corn harvesting unit and the point.	
Tongue Positioner Switch Does Not Override Automatic ROW-TRAK Operation	Wires loose or disconnected at solenoid.	Check connections.	*
	Failed relay.	Replace.	
	Failed diode.	Replace.	
Ear-Corn Harvesting Unit Does Not Center On Rows	Row sensors not adjusted properly.	Adjust sensors.	

* See your John Deere dealer.

OA6 E03 CNHDT5 E 131283

Service



CAUTION: Before servicing or adjusting any areas of the ear-corn harvesting units always:

1. Disengage all power.
2. Shut off engine.
3. Wait until all moving parts have stopped.

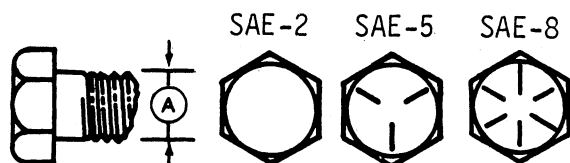
0A6 E03 CNHDSV P 131283

BOLT TORQUE CHARTS

The tables shown below give correct torque values for various bolts and cap screws. Check tightness of bolts periodically, using bolt torque chart as a guide.

U.S. MEASUREMENT

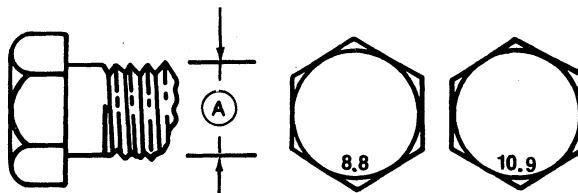
Bolt Diameter "A"	Bolt Torque in Ft-Lbs (N·m)					
	SAE 2		SAE 5		SAE 8	
1/4"	Not	Used	14	(10)	19	(14)
5/16"	Not	Used	27	(20)	41	(30)
3/8"	23	(31)	35	(47)	50	(68)
7/16"	35	(47)	55	(75)	80	(108)
1/2"	55	(75)	85	(115)	120	(163)
9/16"	75	(102)	130	(176)	175	(237)
5/8"	105	(142)	170	(231)	240	(325)
3/4"	185	(251)	300	(407)	425	(576)
7/8"	160	(217)	445	(603)	685	(929)
1"	250	(339)	670	(910)	1030	(1396)
1-1/4"	330	(450)	910	(1235)	1460	(1979)



Replace hardware with the same strength bolt.

METRIC MEASUREMENT

Bolt Diameter "A"	Bolt Torque in Ft-Lbs (N·m)			
	8.8		10.9	
5 mm	5	(6)	7	(9)
6 mm	9	(11)	13	(17)
8 mm	20	(28)	30	(40)
10 mm	40	(55)	59	(80)
12 mm	70	(95)	103	(140)
16 mm	173	(235)	258	(350)
20 mm	350	(475)	498	(675)
24 mm	608	(825)	863	(1170)
30 mm	1201	(1630)	1712	(2320)

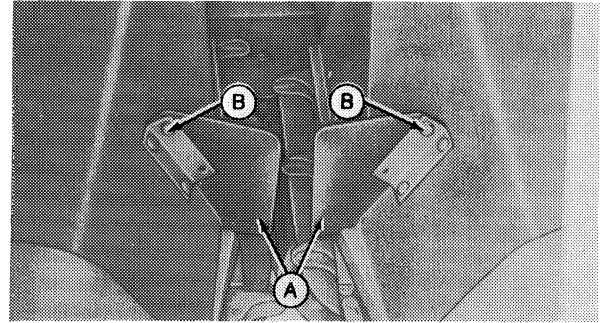


NOTE: Bolts having lock nuts should be torqued to approximately 65% of amounts shown in above chart.

0A6 E19562, E19563 E03 CNHDSV R 160184

REPLACING EAR SAVERS

Install ear savers (A) with inside edges parallel to each other using existing hardware (B). (One-Row illustrated.)



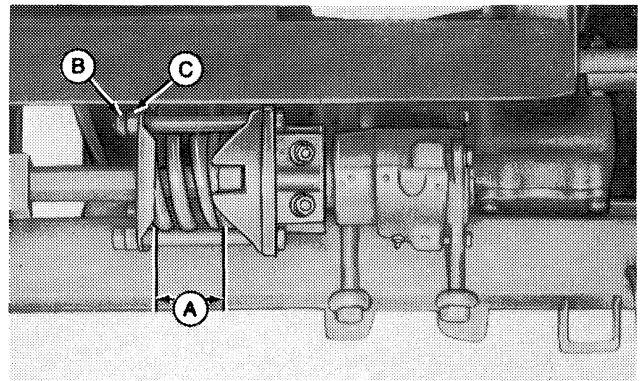
0A6 E23803 E03 CNHDSV A 131283

ADJUSTING SLIP CLUTCH

IMPORTANT: The slip clutch protects the drive train; over-tightening will lessen this protection.

A new slip clutch is properly adjusted when dimension (A) is 2-13/16-in. (71 mm).

1. Loosen locking nuts (B).
2. Turn adjusting nut (C) until the proper spring dimension is attained.
3. Retighten lock nut (B).



0A6 E23118 E03 CNHDSV B 131283

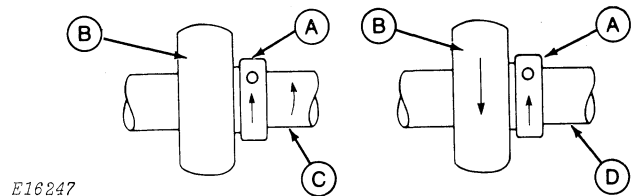
TIGHTENING BEARING LOCKING COLLARS

Keep all locking collars (A) tight on bearings (B).

1. Tighten all locking collars on running shafts (C) in the direction of the shaft rotation.
2. Tighten all locking collars on stationary shafts (D) in the opposite direction from that of the bearing rotation.

A—Locking Collar
B—Bearing

C—Running Shaft
D—Stationary Shaft



E16247

0A6 E16247 E03 CNHDAS S 160184

REPLACING AND REPAIRING GATHERER CHAIN

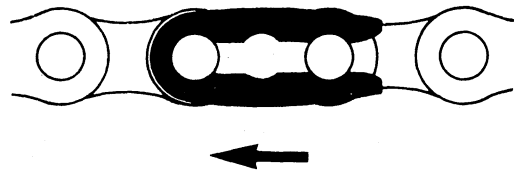
If gatherer chain breaks, roller links, offset links, flight links, and riveted connectors are available from your John Deere dealer to repair the chain. Use only the riveted-type connector when repairing chain.

If the gatherer chain is badly worn, replace with a new chain.

0A6 E03 CNHDSV C 131283

COUPLING CHAINS

When securing a chain coupler link, be sure the closed end of spring lock faces in the direction the chain will run.



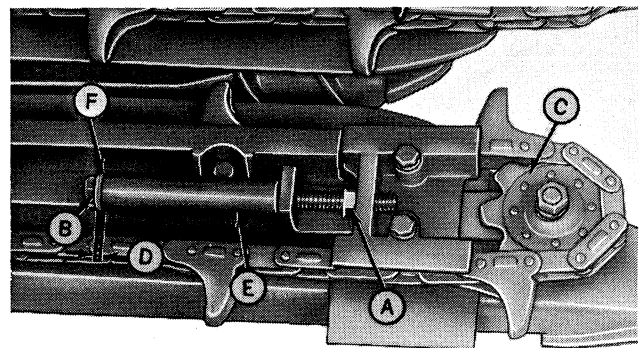
E11025

0A6 E11025 E03 CNHDSV J 131283

ADJUSTING GATHERER CHAIN TENSION

1. Loosen nut (A) and turn bolt (B).
2. To prevent gatherer chain from running off idler sprocket (C), maintain 3/16-in. (5 mm) space between spacer tube (E) and washer (F). The 3/16-in. (5 mm) clearance will allow the idler sprocket to move back if an obstruction is encountered.

- A—Locking Nut
- B—Tensioning Bolt
- C—Idler Sprocket
- D—3/16-in. (5 mm) Space
- E—Spacer Tube
- F—Washer



E13166Y

Fender Removed For Illustration Purposes Only

0A6 E13166Y E03 CNHDSV E 131283

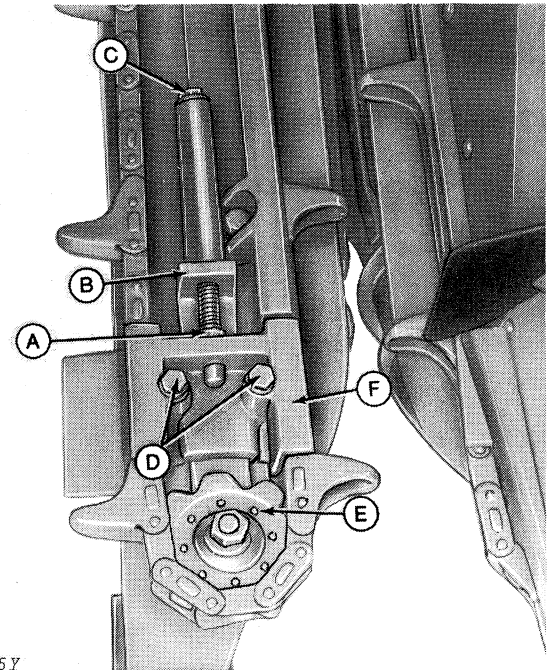
REMOVING GATHERER CHAIN

NOTE: Fender and gatherer point must be removed to remove gatherer chain.

1. Turn nut (A) until it is against the leg of idler support strap (B).
2. Loosen bolt (C) until tension is off chain.
3. Remove cap screws (D). This will allow idler sprocket (E) to move back so gatherer chain can be removed.
4. After servicing gatherer chain, reverse above procedure to install chain.
5. Adjust gatherer chain tension.

IMPORTANT: Never service any part of the mechanism or idler sprocket until you have nut (A) tight against the leg of the idler support strap (B).

E13165Y



- A—Locking Nut
- B—Leg of Idler Support Strap
- C—Tensioning Bolt
- D—Cap Screws
- E—Idler Sprocket
- F—Idler Sprocket Bracket

ADJUSTING DECK PLATES AND GATHERER CHAIN GUIDES

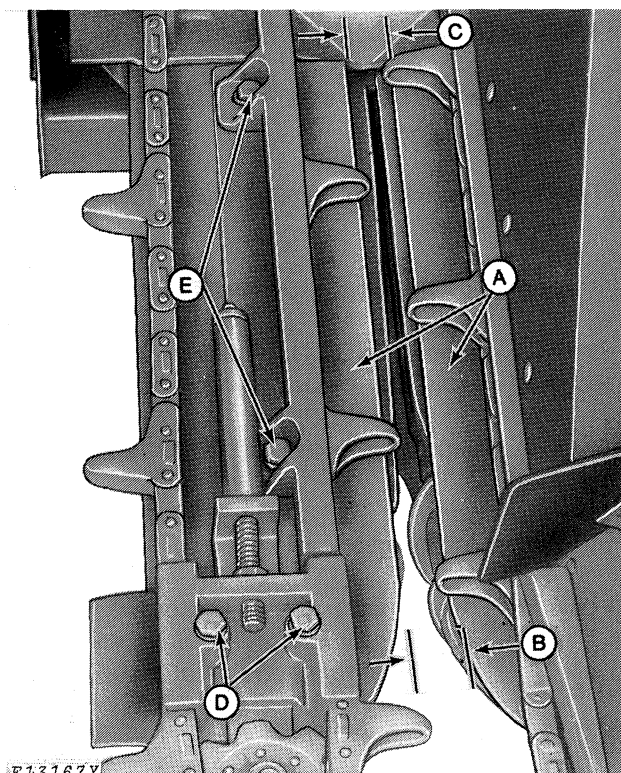
NOTE: To minimize the amount of trash and stalks taken into the harvester, the deck plates (A) should be open as far as possible without causing shelling.

1. Loosen the front two cap screws (D) and rear cap screw (E).
2. Position deck plates so the center space between the edge of the deck plates is located over the center space between the stalk rolls.

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

3. Adjust gatherer chain guides by loosening cap screws (E) and adjusting until guides are just touching gatherer chains.
4. Torque cap screws (D and E) to 85 ft-lbs (115 N·m).

A—Deck Plates
 B—1-3/8 Inches (35 mm) Apart
 C—1-1/2 Inches (38 mm) Apart
 D—Cap Screws
 E—Cap Screws



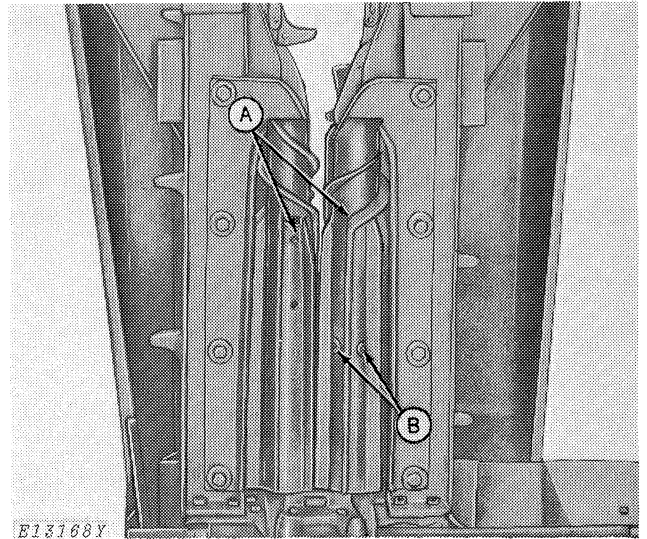
E13167Y

Fender Removed For Illustration Purposes Only

CHECKING STALK ROLL CAPSCREWS

The stalk rolls (A) are attached to the stalk roll shaft by two special twelve-point cap screws and a double spring pin. Periodically check to be sure the cap screws (B) are tightened to 110 to 130 ft-lbs (149 to 176 N·m) torque.

IMPORTANT: If cap screws are replaced, use only special twelve-point cap screws (part number N104293) obtained from your John Deere dealer.



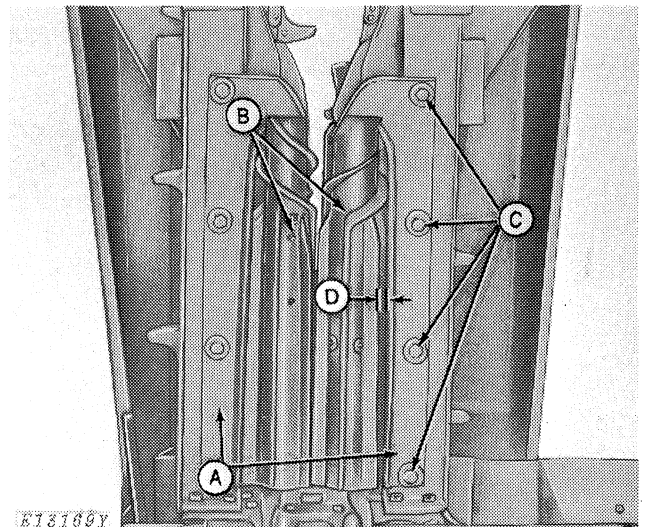
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ADJUSTING TRASH KNIVES

The trash knives (A) prevent weeds and trash from wrapping around stalk rolls (B).

1. Loosen knife attaching cap screws (C) and adjust knives to within 1/16-in. (1.5 mm) (D) of the highest flute on the stalk roll.
2. Tighten cap screws (C) to 85 ft-lbs (115 N·m).

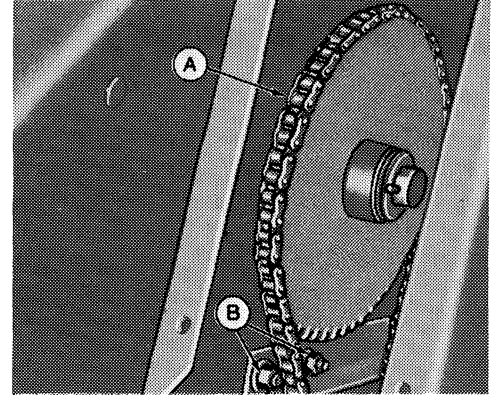
A—Trash Knives
 B—Stalk Rolls
 C—85 ft-lbs (115 N·m) [12 kgm]) Torque
 D—1/16-in. (1.5 mm) Clearance



0A6 E13169 E03 CNHDSV H 131283

ADJUSTING FEEDER DRIVE CHAIN (1 Row Unit)

1. Loosen mounting nuts (B).
2. Adjust chain (A) to give 1/4 to 1-in. (6 to 25 mm) "free movement" on the side opposite the adjusting bracket.
3. Tighten mounting bolts.

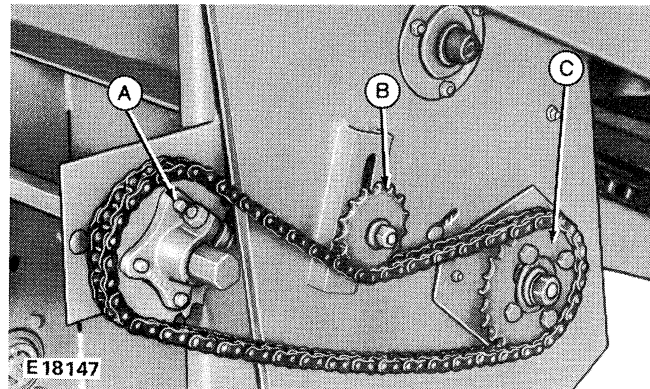


0A6 E23183 E03 CNHDSV K 131283

ADJUSTING CORN HEAD DRIVE SPEED (243 and 244 Corn Heads)

1. Change drive speed by reversing the position of the two sprockets.
2. Align drive sprocket (A) with driven sprocket (C).
3. Readjust idler (B).

NOTE: Shield removed for illustration purposes.



E 18147

0A6 E18147 E03 CNHDSV I 131283

The chart gives the approximate harvester travel speed that should be used with each sprocket combination.

NOTE: The approximate harvester travel speed given in the chart is only a guide to use and is based on average conditions. Your particular field condition will determine which sprocket should be used.

	Adapter Plate Shaft Sprocket (Drive)	Corn Head Shaft Sprocket (Driven)	Approx. Ground Speed Suggested
2 Row	30T	30T	3-5 mph (Std) (5-8 km/h)
	30T	24T	Over 5 mph (8 km/h)
3 Row	24T	30T	Under 3 mph (Std) (5 km/h)
	30T	30T	3-5 mph (5-8 km/h)
	30T	24T	Over 5 mph (8 km/h)

0A6 E03 CNHDSV L 131283

ADJUSTING CORN HEAD DRIVE SPEED (343, 443, 444 and 643 Corn Heads)

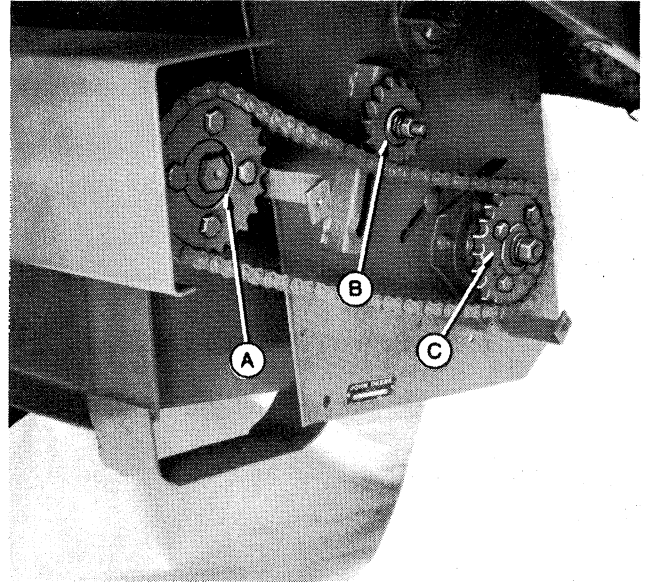
The 343 Corn Head drives from the right-hand side. Speeds can be changed by reversing the position of the sprockets. (A second 30-tooth sprocket must be purchased to obtain front corn head shaft medium speed.)

443 and 444 Corn Heads (serial number 466450 and below) are driven from both sides. Speeds can be changed by reversing the position of the sprockets. 443 and 444 Corn Heads (serial number 466451 and above) are driven from the right-hand side. Speeds can be changed by reversing the position of the sprockets.

The 643 Corn Head is driven from each side. Speeds can be changed by reversing the position of the sprockets.

1. Change drive speed by reversing the position of the two sprockets.
2. Align drive sprocket (A) with driven sprocket (C).
3. Readjust idler (B).

NOTE: Shield removed for illustration only.



0A6 E19039 E03 CNHDSV M 131283

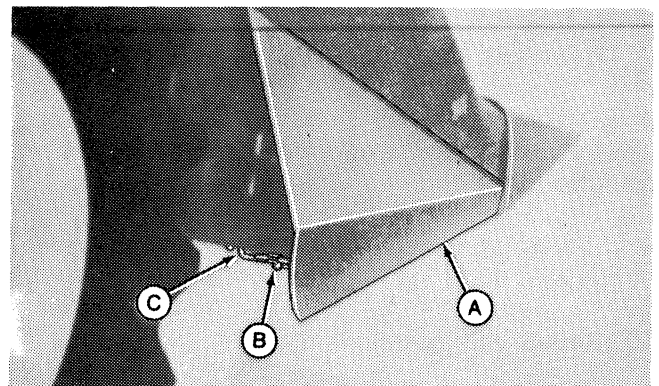
Use the following chart to determine approximate ground speed for each sprocket combination. The chart is only a guide. Your field condition will determine which sprocket should be used.

	Adapter Plate Shaft Sprocket (Drive)	Corn Head Shaft Sprocket (Driven)	Approx. Ground Speed Suggested
4 Row	24T	30T	Under 3 mph (5 km/h)
6 Row	30T	30T	3-5 mph (5-8 km/h)
	30T	24T	Over 5 mph (8 km/h)

0A6 E03 CNHDSV N 131283

ADJUSTING CROP DEFLECTOR (343 Corn Heads Only)

1. Loosen the clamp (B) bolt on the support rods (C).
2. Adjust the deflector (A) until it is at the desired setting.
3. Tighten the clamp bolt securely to maintain adjustment. (Chain drive shield not shown for illustration.)



0A6 E20263 E03 CNHDSV O 131283

Storage

END OF SEASON SERVICE

1. Clean the corn head thoroughly. Chaff and dirt will draw moisture and cause rust.
2. Lubricate the corn head. Grease the threads on adjusting bolts.
3. Paint all parts from which paint has worn.
4. If possible, shelter the corn head in a dry place.
5. Store with support stands lowered on firm, level ground.
6. Order repair parts needed for next season.

0A6 E03 CNHDST A 131283

BEGINNING OF SEASON SERVICE

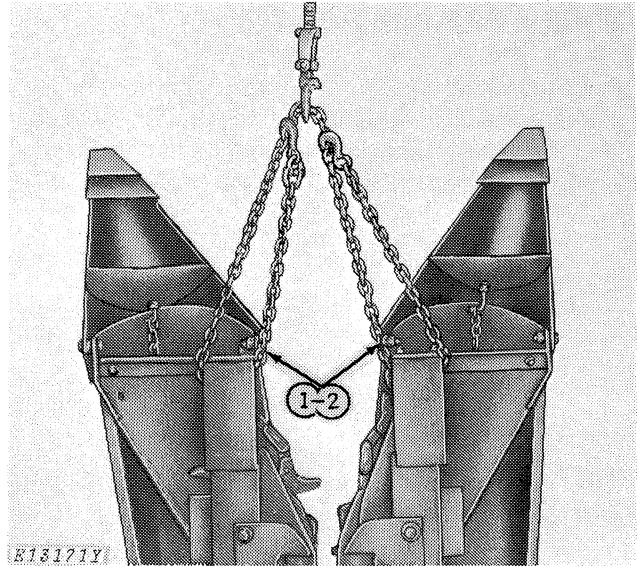
1. Clean the corn head thoroughly.
2. Adjust gatherer chains and check tension.
3. Adjust chains to proper tension.
4. Lubricate corn head completely.
5. Go over complete corn head and see that all bolts are tight and cotter pins are spread.
6. Adjust spring tension on slip clutch.
7. Check gear case and refill as necessary.
8. Run corn head at half-speed for a few minutes. Check bearings for overheating or excessive looseness. Be sure slip clutch operates freely.
9. If any major moving parts have been replaced, they should be run in.
10. Review your operator's manual.

0A6 E03 CNHDST B 131283

Assembly

UNLOAD 1-ROW EAR-CORN UNIT

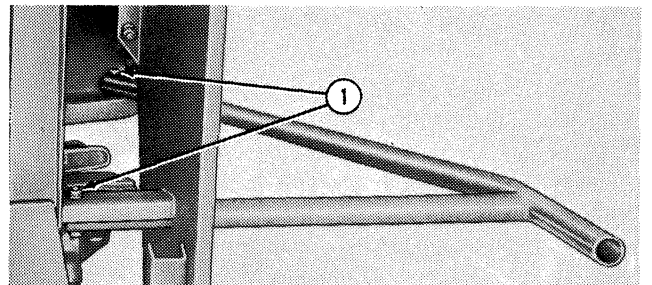
1. A hoist with a capacity of at least 1000 pounds (454 kg) can be used to lift the ear-corn harvesting unit, using a chain attached at the row unit frame. The lift must have a height of over 7 feet (2.1 m) to lift the ear-corn harvesting unit off the floor.
2. A fork lift with the same lifting capacity (1000 pounds [454 kg]) can be used to lift the ear corn harvesting unit. Attach chain to row unit frame and center forks.
3. Install both support stands using existing hardware.



0A6 E13171 E03 CNHDAS A 131283

INSTALL CROP DEFLECTOR

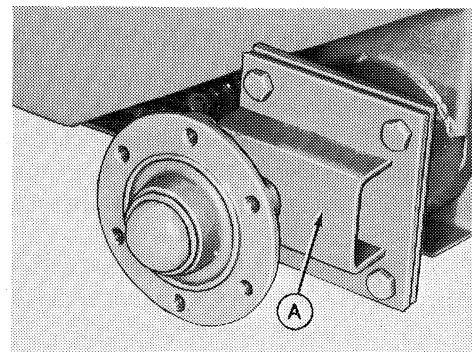
1. Discard shipping bolt and attach crop deflector using existing hardware.



0A6 E23103 E03 CNHDAS B 131283

WHEEL SPINDLE POSITION (1-ROW)

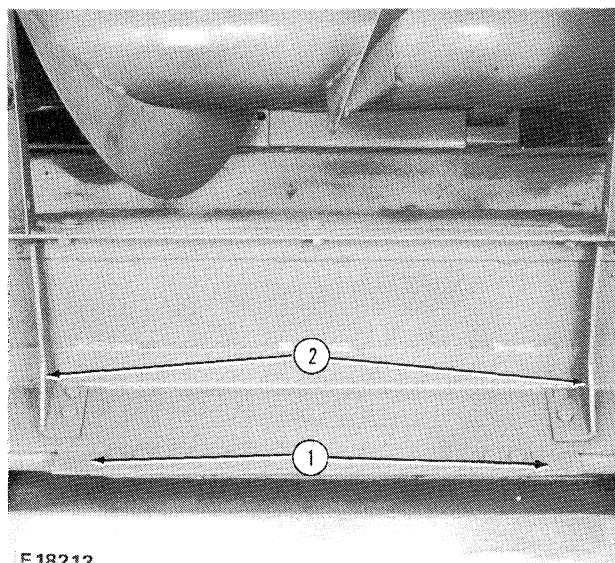
Place the wheel spindles in the center or lower position to raise the harvester. This will maintain the proper row unit angle with respect to the ground and help protect the trash knives and still keep the gatherer points down for efficient gathering.



0A6 E23576 E03 CNHDAS F 131283

INSTALL THROAT OPENING FILLERS (243 and 244 CORN HEADS)

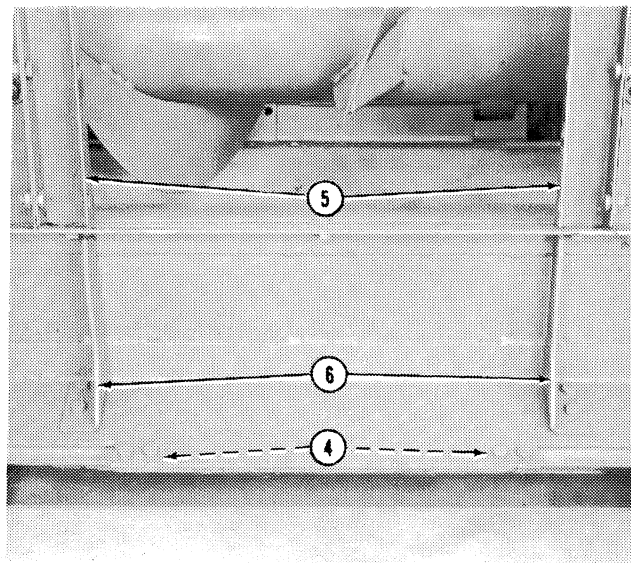
1. Install lower attaching beam fillers in wide position so that a portion of the notched beam opening is covered.
2. Install angled lower roll filler in wide position so that vertical leg is in line with the sides of opening sheets.
3. The channel throat opening fillers are not required.



E 18213

(3960 - 3970)

4. Install lower attaching beam fillers in the narrow position so that all of the notched beam opening is exposed.
5. Install channel throat opening fillers on both sides of the opening.
6. Install angled lower roll fillers in narrow position so that vertical leg is in line with inner leg of channel fillers installed in step 5.

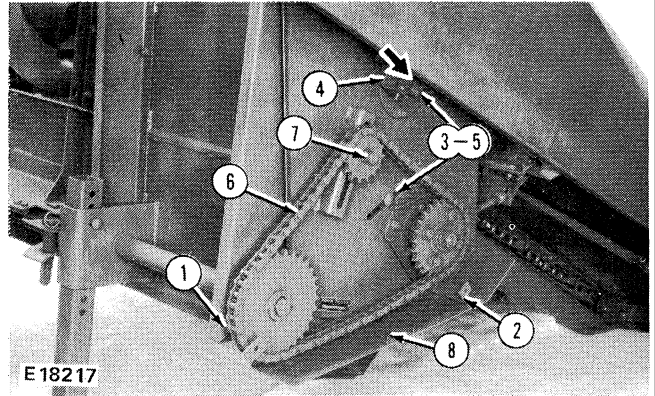


(3950)

0A6 E18213. E23886 E03 CNHDAS M 160184

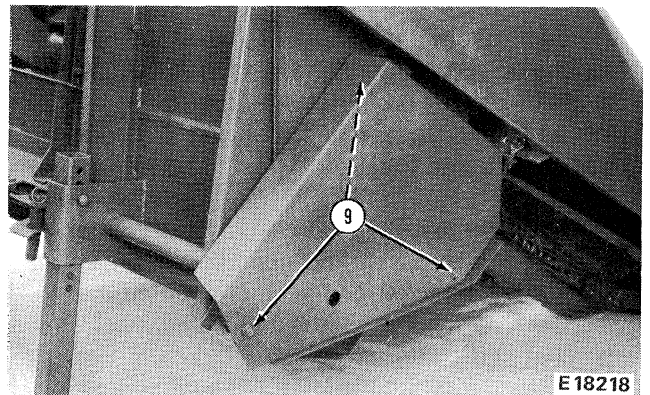
INSTALL CHAIN SHIELDS (243 AND 244 CORN HEADS)

1. Remove one nut and attach rear bracket. Secure, using nut removed.
2. Remove carriage bolt and discard. Insert $\frac{3}{8}$ x 1-1/4-in. carriage bolt and nut. Attach lower front bracket and secure with nut.
3. Loosen auger shaft nut and idler. Slide auger to left-hand side and remove carriage bolt (arrowed).
4. Insert $\frac{3}{8}$ x 1-1/4-in. carriage bolt and secure with nut. Attach upper front bracket and secure with lock nut.
5. Tighten auger shaft nut and adjust idler.
6. Install drive chain.
7. Adjust chain tension. Apply enough pressure to idler sprocket to prevent chain from slipping or climbing sprockets. Tighten mounting bolt.
8. Install chain shield using two $\frac{5}{16}$ x $\frac{3}{4}$ -in. cap screws, $\frac{11}{32}$ x $\frac{11}{16}$ x 0.060-in. flat washers and nuts.



0A6 E18217 E03 CNHDAS N 131283

9. Attach chain shield using three self-tapping screws and tighten securely.

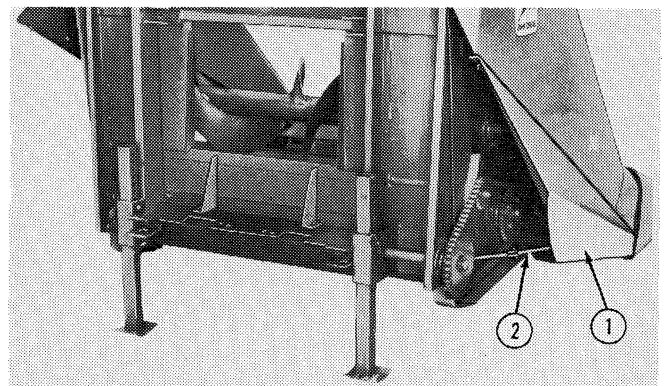


0A6 E18218 E03 CNHDAS O 131283

INSTALL RIGHT-HAND WHEEL SHIELD (243 AND 244 CORN HEADS)

1. Secure wheel shield to corn head right-hand outer gatherer sheet with spin-lock screws, flat washers, and lock nuts.
2. Install support rod in wheel shield and secure with spring pin as shown. Adjust wheel shield after corn head is mounted on harvester.

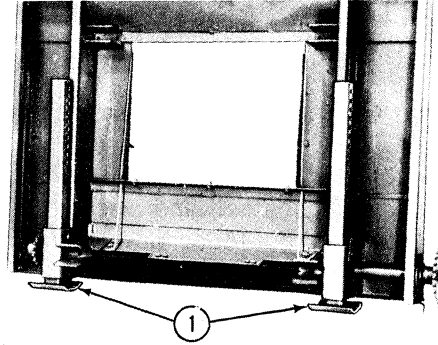
NOTE: Chain drive shield removed for illustration only.



0A6 E23109 E03 CNHDAS P 131283

INSTALL ATTACHING PLATE (243 AND 244 CORN HEADS)

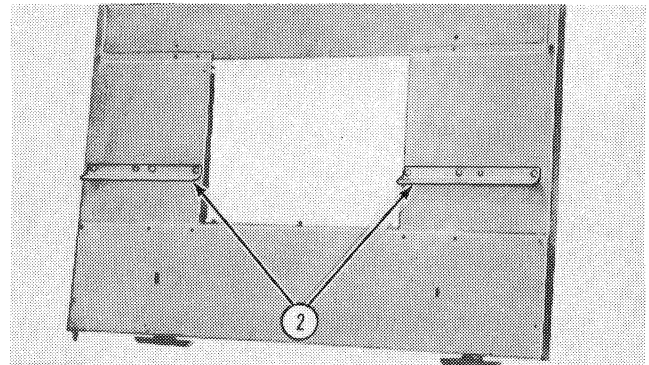
1. Remove and install stands as shown.



E17992

0A6 E17992 E03 CNHDAS J 131283

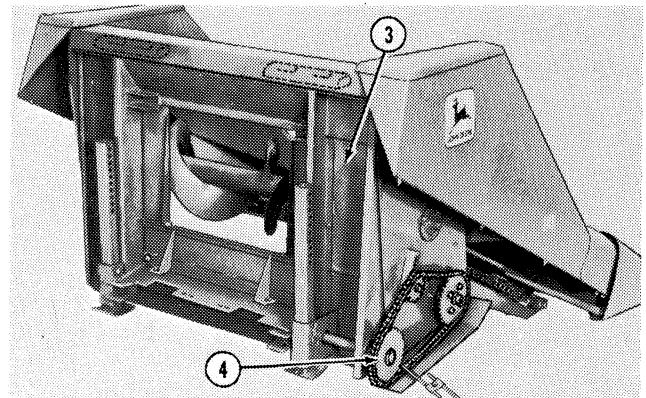
2. Install strippers on attaching plate with cap screws and two flat washers.



0A6 E23107 E03 CNHDAS K 131283

3. Install attaching plate with two carriage bolts and flat washers. The bolts go through the corn head first, with the nuts and flat washers against the attaching plate. The attaching plate blocks must engage the depressions in the bottom side of corn head main frame tube.

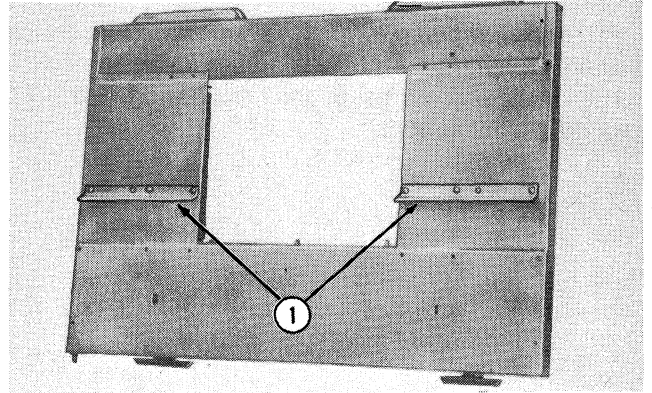
4. Align drive sprocket with idler and driven sprocket by increasing or decreasing the number of spacing washers between drive sprocket and shaft bearing. The excess spacing washers are stored on the drive shaft between the drive sprocket and cotter pin.



0A6 E23108 E03 CNHDAS L 131283

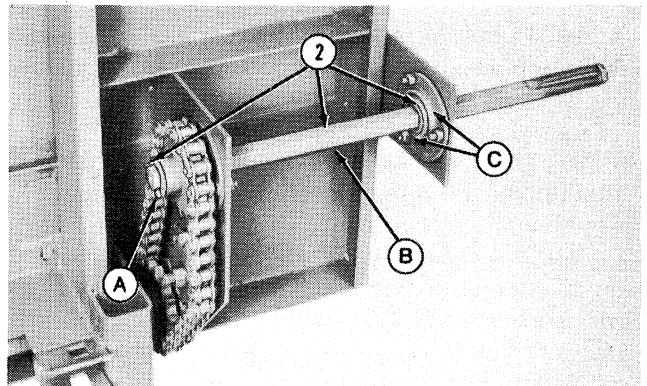
INSTALL ATTACHING PLATE AND DRIVE (343 CORN HEAD)

1. Install strippers on attaching plate with cap screws, two flat washers, and lock nuts.



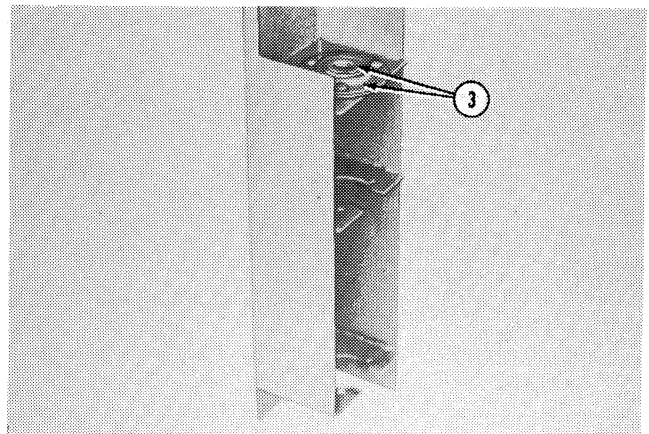
0A6 E19137 E03 CNHDAS Q 131283

2. Remove cotter pin (A) from left-hand of countershaft (B). Slide countershaft (B) out of sprocket and bearings. Remove bearing mounting bolts and bearings and flangettes from mounting (C).



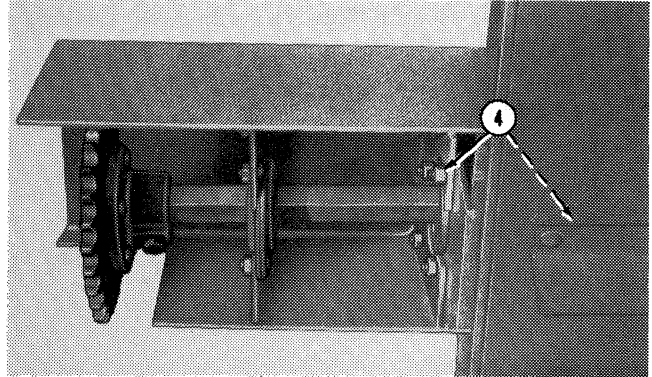
0A6 E19138 E03 CNHDAS R 131283

3. Attach bearing and flangettes, removed in Step 2, to the countershaft housing.



0A6 E16193 E03 CNHDAS S 131283

4. After sliding countershaft through bearings, attach countershaft housing to attaching plate using carriage bolts and nuts. Replace shaft in sprocket and reinstall cotter pin. Tighten flange mounting bolts.



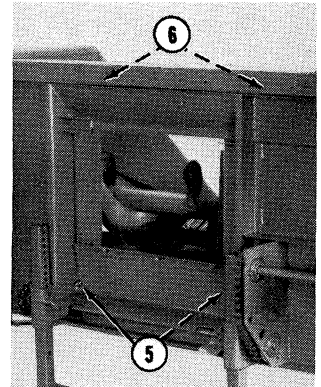
0A6 E16194 E03 CNHDAS T 131283

5. Install attaching plate with two carriage bolts and flat washers. The bolts go through the corn head first, with the nuts and flat washers against the attaching plate.

6. The attaching plate blocks must engage the depression in the bottom side of corn head main frame tube.

7. Align drive sprocket with idler and drive sprocket by increasing or decreasing the number of spacing washers between drive sprocket and shaft bearing. The excess spacing washers are stored on the drive shaft between the drive sprocket and cotter pin.

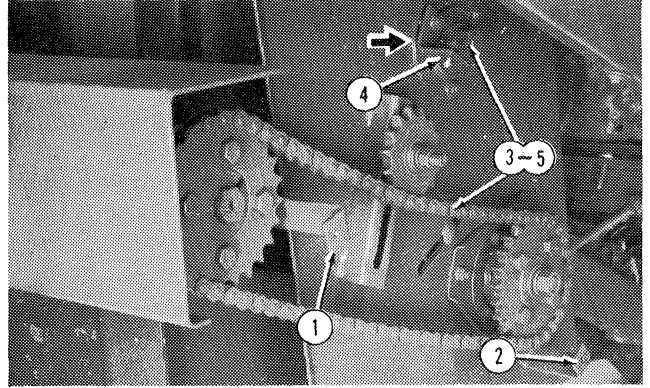
8. Install and align corn head drive and driven sprockets.



0A6 E19139 E03 CNHDAS U 131283

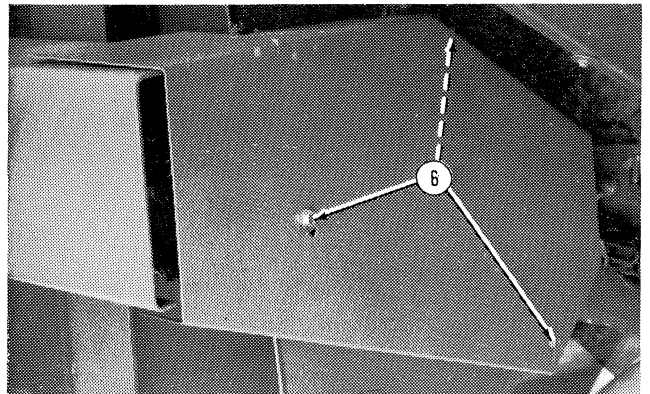
INSTALL CHAIN SHIELD (343 CORN HEAD)

1. Remove nut and attach rear bracket. Secure using nut removed.
2. Remove carriage bolt and discard. Insert $\frac{3}{8}$ x 1-1/4-in. carriage bolt and secure with nut. Attach lower front bracket and secure with nut.
3. Loosen auger shaft nut and idler. Slide auger to left-hand side and remove carriage bolt (arrowed).
4. Insert $\frac{3}{8}$ x 1-1/4-in. carriage bolt and secure with nut. Attach upper front bracket and secure with nut.
5. Tighten auger shaft nut, install drive chain and adjust idler.



0A6 E18221 E03 CNHDAS V 131283

6. Attach chain shield using three self-tapping screws and tighten securely.
7. Remove 21-tooth RC60 sprocket and idler from harvester drive. Replace with 16-tooth RC80 sprocket and RC80 idler.

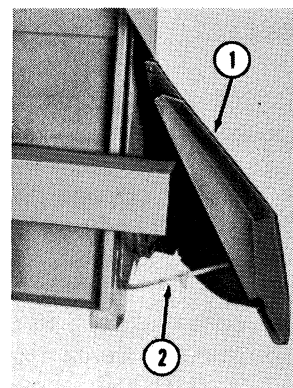


0A6 E18220 E03 CNHDAS W 131283

INSTALL WHEEL SHIELDS (343 Corn Heads)

1. Secure wheel shield to corn head right-hand outer gatherer sheet with spin-lock screws, flat washers, and lock nuts.
2. Insert support rod in wheel shield and secure with spring pin as shown. Adjust wheel shield after corn head is mounted on harvester.

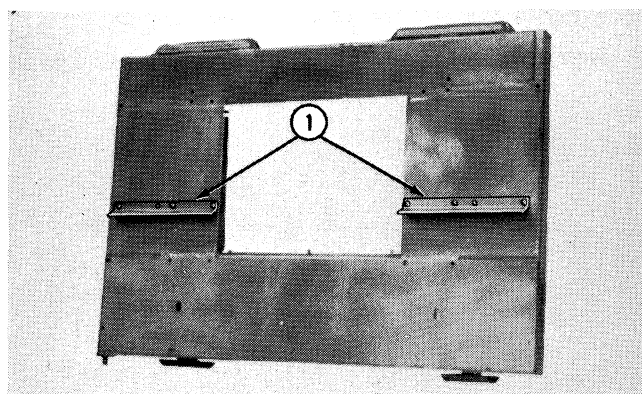
NOTE: Chain drive shield removed for illustration purposes only.



0A6 E19140 E03 CNHDAS X 131283

INSTALL ATTACHING PLATE (443, 444 and 643 Corn Head)

1. Install strippers on attaching plate with cap screws, two flat washers and lock nuts.
2. (Not illustrated.) Install attaching plate with two carriage bolts, flat washers and lock nuts. The bolts go through the corn head first, with the nut and flat washer against the attaching plate. The attaching plate blocks must engage the depression on the bottom side of corn head main frame tube.



0A6 E19141 E03 CNHDAS Y 131283

INSTALL DRIVE (443, 444 and 643 Corn Heads)

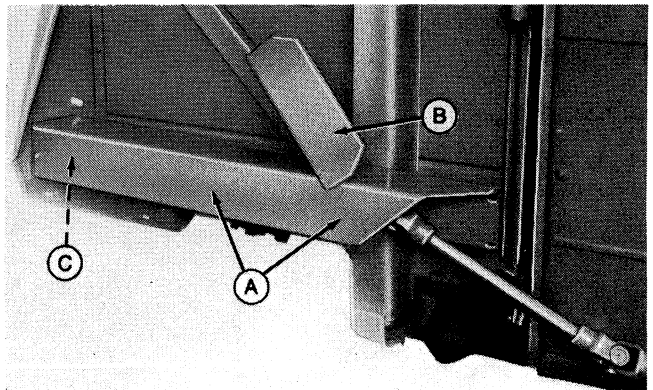
IMPORTANT: 443 and 444 Corn Heads (serial number 466450 and below) are driven from both sides. 443 and 444 Corn Heads (serial number 466451 and above) are driven only from the right-hand side. The 643 Corn Head is driven from each side. Row unit speeds can be changed by reversing the position of the sprockets.

1. (Not Illustrated.) On left-hand end of corn head, remove the 24-tooth, main drive sprocket from drive shaft.

0A6 E03 CNHDAS Z 131283

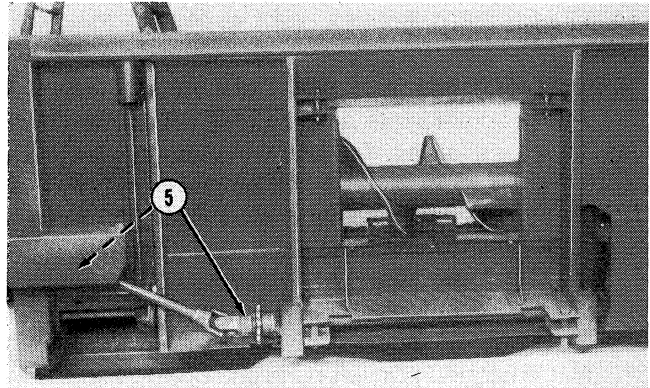
2. Remove left-hand drive shield with drive shaft.
3. Slide drive shaft (without sprocket) into new shield with bearing (A) and attach new shield to corn head. Install new shield cover (B) and attach to new shield with existing hardware.
4. Reinstall 24-tooth, main drive sprocket (C) on drive shaft.

NOTE: The corn head can be converted back for use on a combine by ordering N103656 coupler sprocket and two 1/2 x 2-1/2-in. cap screws, lock washers, and nuts.



0A6 E19142 E03 CNHDAS AA 131283

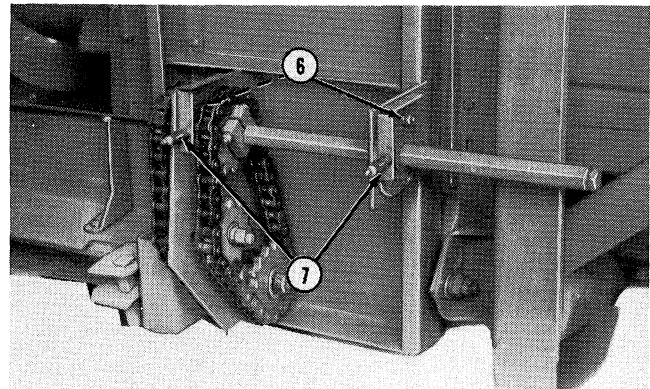
5. Attach U-joint assembly to left-hand shaft on corn head and left-hand end of attaching plate drive shaft. Reinstall washers as needed and secure yoke with spring pin.



0A6 E19143 E03 CNHDAS AB 131283

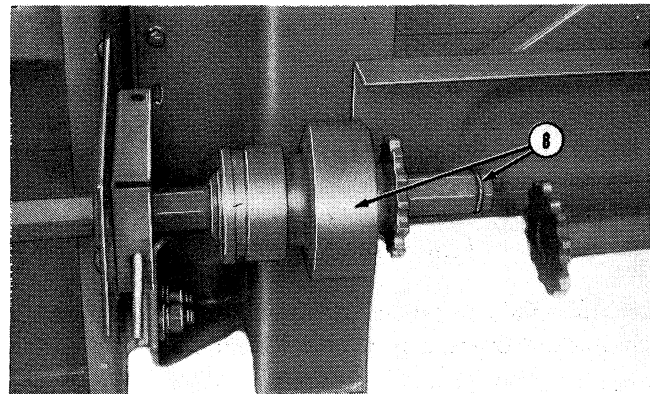
6. Attach countershaft shield mounting brackets using existing hardware in bearing mountings.

7. Install bolt, spacer, and nut on each shield mounting bracket.



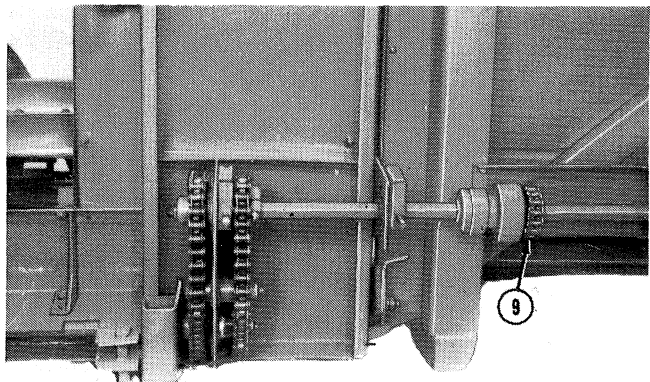
0A6 E19144 E03 CNHDAS AC 131283

8. Install coupler assembly on countershaft and secure with snap ring.



0A6 E19145 E03 CNHDAS AD 131283

9. Slide coupler assembly forward and install coupler chain as shown. Slide collar over chain until it snaps into position.

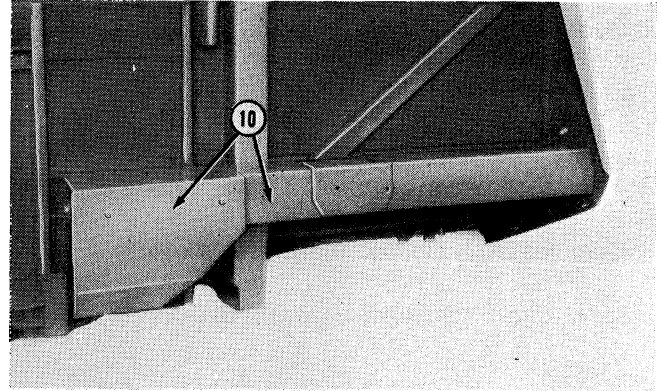


0A6 E19146 E03 CNHDAS AE 131283

10. Install countershaft shields to mounting brackets installed in step 6.

11. Attach corn head to harvester. See procedure for "Installing Harvesting Units".

NOTE: See operating speeds of corn head.



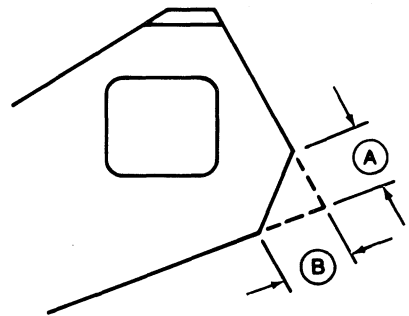
0A6 E19147 E03 CNHDAS AF 131283

243, 244 AND 343 CORN HEADS ON (3950, 3960 and 3970 Pull-Type Forage Harvesters)

NOTE: This is necessary on corn heads (serial number 380601 and above) only.

IMPORTANT: Right-hand drive shield must be opened before attaching 343 Corn Head.

1. Trim left-hand fender of corn head as illustrated above to eliminate interference with front main drive cover.



A—5.00 Inches (127 mm)
B—5.00 Inches (127 mm)

0A6 E23110 E03 CNHDAS AG 131283

Specifications

Gatherer Points	Low-profile floating type hinged above gatherer chains
Type of Gatherer Chains	Heavy-duty 555 endless steel roller chain (no master connecting link)
Minimum Clearance Between Gatherer Chains and Ground	1-1/4 inches (32 mm)
Distance Gatherer Chains Ahead of Stalk Rolls	11 inches (279 mm)
Gatherer Chain Adjustment	Spring loaded—self-adjusting
Stalk Rolls	Spiral-pointed, flute-type
Length of Stalk Rolls	21-7/8 inches (556 mm)
Row Unit Drive	Enclosed gear case with precision gears submerged in lubricant; driven by single input hex. shaft
Deck Plate Adjustment	Bolt adjusted
Slip Clutch	One-row unit drive
Trash Knives	Full length one piece heat-treated steel
Trash Knife Adjustment	Bolt adjusted
Weight (One Row)	Approximately 545 lbs. (247 kg)
Approximate overall storage dimensions (One Row):	
Length	6 ft. 4 in. (1 930 mm)
Width	3 ft. 10 in. (1 168 mm)
Height	2 ft. 8 in. (813 mm)

(Specifications and design subject to change without notice.)

SERIAL NUMBER

When ordering parts, always furnish the model and serial number as given on the serial number plate located on the left-hand side of the ear-corn harvesting unit. By doing so, you will assist your John Deere dealer in giving you prompt, efficient service. For your convenience, a space is provided below for recording this number.

The Ear-Corn Harvesting Unit serial number is located on the right-hand side below the crop divider.

Ear-Corn Harvesting Unit Serial No.

Date of Purchase 19....
(To be filled in by purchaser)

0A6 E03 CNHDSP B 131283

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ROW-TRAK Guidance	12, 19		

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Title	Order No.	Qty.	Price Each
Parts Catalog 1-Row Ear Corn Unit	PC-1584		
Operator's Manual Ear-Corn Harvesting Unit	OM-E73484		
Technical Manual Harvesting Units	TM-1295		

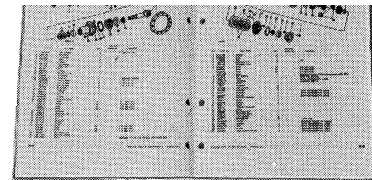
NOTE: If you want manuals or catalogs for equipment not shown on this list, list the model number, serial number and name of the equipment below.

FMO Manual - Tractors	FMO-10102B		
FMO Manual - Tillage	FMO-111B		
FMO Manual - Planting	FMO-12102B		
FMO Manual - Crop Chemicals	FMO-13102B		
FMO Manual - Hay & Forage Harvesting	FMO-14102B		
FMO Manual - Combine Harvesting	FMO-15102B		
FMO Manual - Preventive Maintenance	FMO-16102B		
FMO Manual - Machinery Management	FMO-17102B		
FMO Manual - Machine Safety	FMO-18102B		
FMO Set of 9 Manuals above	FMO-394 Set		
FOS Manual - Hydraulics	FOS-1003B		
FOS Manual - Electrical Systems	FOS-2004B		
FOS Manual - Engines	FOS-3005B		
FOS Manual - Power Trains	FOS-4004B		
FOUR FOS MANUALS (above)	FOS-90 Set		
FOS Manual - Shop Tools	FOS-5103B		
FOS Manual - Welding	FOS-5204B		
FOS Manual - Belts and Chains	FOS-5303B		
FOS Manual - Bearings and Seals	FOS-5403B		
FOS Manual - Tires and Tracks	FOS-5505B		
FOS Manual - Mowing and Spraying Equipment	FOS-5603B		
FOS Manual - Air Conditioning	FOS-5704B		
FOS Manual - Fuels, Lubricants and Coolants	FOS-5804B		
FOS Manual - Fiber Glass	FOS-5902B		
FOS Manual - Fasteners	FOS-6002B		
FOS Manual - Iden. of Parts Failures	FOS-6102B		
SET OF ELEVEN FOS MANUALS FOS-51B, 52B, 53B, 54B, 55B, 56B, 57B, 58B, 59B, 60B and 61B	FOS-71 Set		
SET OF ALL FIFTEEN FOS MANUALS	FOS-181 Set		
Conservation Farming	FC-10101B		
Machinery Maintenance	FMW-10101B		

Check or money order in U.S. Dollars enclosed Total
(Do not send cash or stamps)

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SP-319 Litho in U.S.A. OCT-83



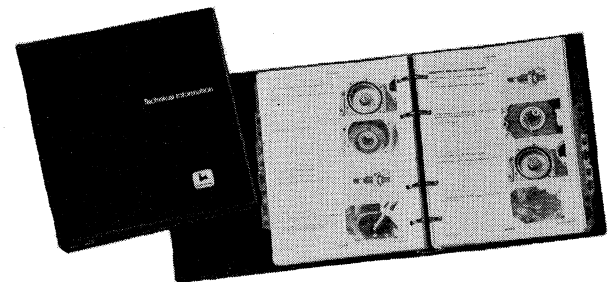
A parts catalog containing exploded view illustrations and lists of all parts is useful when purchasing service parts. Helps identify the correct parts. Useful in assembling and disassembling.

OPERATOR'S MANUAL



An extra copy of the operator's manual may be important if the copy furnished with your machine is misplaced.

TECHNICAL MANUAL



The technical manual is a service guide for your machine. Included in the manual are specifications, diagnosis and adjustments, illustrations of special assembly and disassembly procedures, hydraulic oil flows, and wiring diagrams.

FMO AND FOS MANUALS



These are basic manuals covering most all types and makes of agricultural machinery. FMO manuals tell you how to *operate* machines; FOS manuals tell you how to *service* machines. Each manual starts with basic theory and is fully illustrated with colorful diagrams and photographs. Both the "whys" and "hows" of adjustments and repairs are covered in this reference library.

To order these publications fill out this form and the payment information and mail it to the address above. Make checks payable to Deere & Co. Service Publications. Please allow three weeks for delivery. No COD orders, please. Do not send cash or stamps. To place credit card orders, call **1-800-522-7448**. If you want manuals or catalogs for equipment not shown on this list, provide the model number, serial number, and name of the product.

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