MaxEmerge® 2 Split Row Planting Attachment

JOHN DEERE

OPERATORS MANUAL

MaxEmerge® 2 Split Row
Planting Attachment

OMH135386 B7 English

John Deere Plow & Planter Works
OMH135386 B7

LITHO IN U.S.A.
ENGLISH

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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.

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

The machine is of metric design.

For your convenience, most specifications are given in metric measurement with the customary U.S. measurement following.

Some specifications cannot be converted. These appear in metric only.

Most hardware is metric. Specified metric hardware must be used for replacement.

CAUTION: Use only metric tools on metric hardware and standard tools on standard hardware. Otherwise tools may not fit properly. They may slip and cause injury.

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

Checklists

TO THE DEALER

Predelivery service is the service John Deere recommends that a dealer perform on a machine before delivering it to a customer. This includes assembly, adjustment and test. The service assures that the split row attachment will be delivered to the customer in good condition and that the customer will be fully satisfied with its performance right from the start.

The illustrations and instructions on the following pages give the proper sequences for assembling the John Deere Split Row Planting Attachment.

References to right-hand and left-hand sides in these instructions are determined by standing at the rear of the split row attachment and facing in the direction of travel.

On the next page is a Predelivery Check List. This list is a reminder of the points to inspect and test on this split row attachment to be sure it has been properly assembled and is in good working condition before delivering it to your customer.

The Delivery Check List is a reminder of items that should be covered when the split row attachment is delivered to your customer.

The operator's manual, which contains important operating, lubricating and service information, is for your customer. Acquaint the customer with its contents.

After the split row attachment has been assembled, inspect it thoroughly to be sure it is functioning properly before delivering it to the customer. The following check list is a reminder of points to check. Check off each item as it is found satisfactory or after proper adjustment has been made.

The John Deere Delivery Receipt, when properly filled out and signed by the dealer and customer, verifies that the predelivery and delivery services were satisfactorily performed. When delivering this split row attachment, give the customer a copy of the delivery receipt and the operator's manual. Explain their purpose.

Be certain to retain your copy of the packing list for shipping bundle information.

PREDELIVERY CHECK LIST

The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- ☐ Attach planting units and attachments desired by customer.
- ☐ Be sure all grease fittings are in place and lubricated.
- ☐ Inflate 7.60 x 15 6PR tires and 116-15 8PR tires to 280 kPa (2.8 bar) (40 psi) of air pressure.
- ☐ Paint all parts scratched in shipment.
- ☐ This split row planting attachment has been thoroughly checked and, to the best of my knowledge, is ready for delivery to the customer.

_____

(Date Set Up)

_____

(Signature of Set-Up Person)

OWNER REGISTER

Name _____
Post Office _____
County _____
City _____ State _____
Model _____
Serial No. _____
Date Sold _____

DELIVERY CHECK LIST

The following check list is a reminder of very important information which should be conveyed directly to the customer at the time the split row attachment is delivered. Check off each item as it is fully explained to the customer.

- ☐ Advise the customer that the life expectancy of this or any other machine is dependent on regular lubrication as directed in the operator's manual.
- ☐ Tell the customer about all safety precautions that must be observed while using the split row attachment.
- ☐ When the split row attachment is transported on a road or highway at night or during the day, accessory lights and devices should be used for adequate warning to operators of other vehicles. In this regard, tell customer to check local government regulations.
- ☐ Give the operator's manual to the customer and explain all operating adjustments.
- ☐ To the best of my knowledge this split row attachment has been delivered ready for field use and customer has been fully informed as to proper care and operation.

_____

(Date Delivered)

_____

(Signature of Delivery Person)

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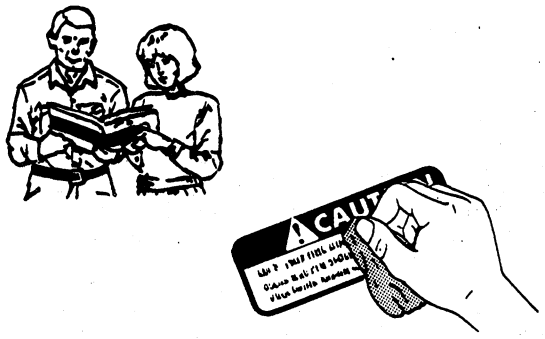
H16;I 240387

Safety Signs

FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.



AB6;TS188 053;SIGNS 071085

UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

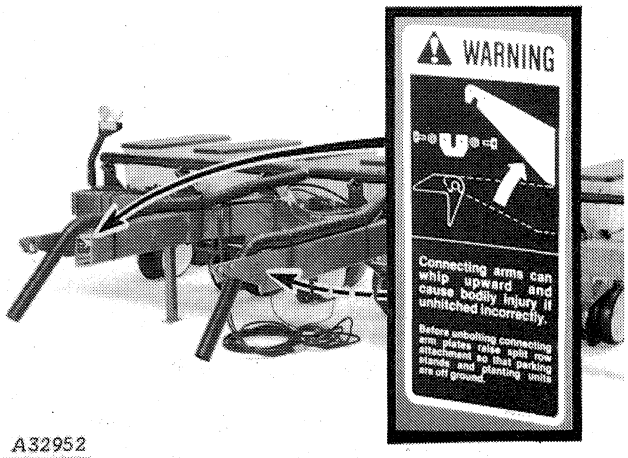
General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

⚠ DANGER

⚠WARNING

⚠CAUTION

AB6;TS187 053;SIGNAL 071085



Connecting Arms

A32952

050;A32952 B21;;15SS -C 230387

H16;P001 240387

OPERATE THE SPLIT ROW ATTACHMENT SAFELY

Be careful when operating split row attachment to avoid injury.

If the split row attachment must be in raised position while working on or near it, be certain transport locks are installed.

Never ride or permit others to ride on the drawbar of the tractor or on the split row attachment.

Serious injury or death can result from contact with electric lines. Use care when moving or operating this machine near electric lines to avoid contact.

Be careful when operating on hillsides; tractor can tip sideways if it strikes a hole, ditch or other irregularity.

Permit only one person, the operator, on tractor platform while tractor and split row attachment are in operation.

Lower split row attachment completely to the ground before unhitching from the tractor. Be sure split row attachment is on a level and firm surface.

B21;;15SA -A 230387

TRANSPORT SAFELY

Engage and secure transport locks before transporting.

The maximum transport speed for the split row attachment is 20 mph (32 km/h). DO NOT EXCEED. Never travel at any speed which does not permit adequate control of steering and stopping.

While transporting the split row attachment on public roads, follow safety instructions outlined under "Transporting".

Use care when transporting across rough ground.

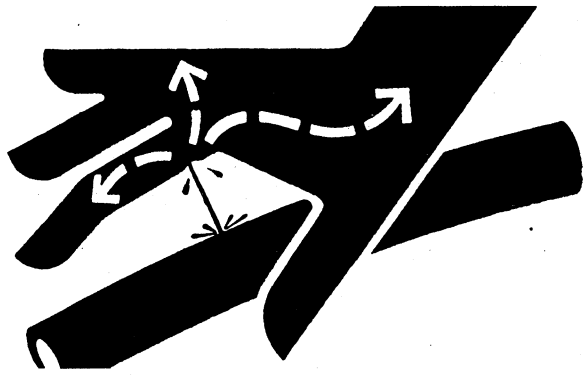
Serious injury or death can result from contact with electric lines. Use care when moving or operating this machine near electric lines to avoid contact.

B21;;15SA -B 230387

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.



AB6;X9811 053;FLUID 010586

LUBRICATE THE SPLIT ROW ATTACHMENT SAFELY

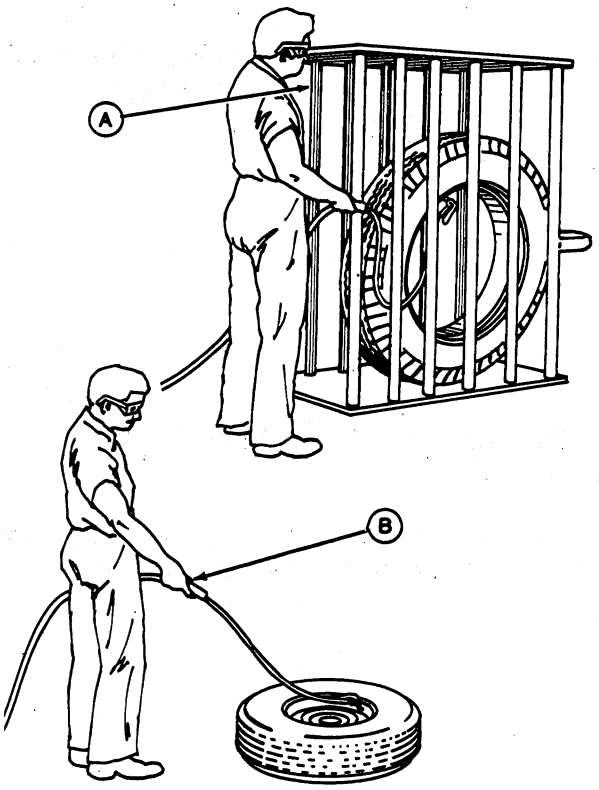
Do not grease, oil or adjust the split row attachment while it is in motion.

B21;;15SA -C 230387

SERVICE TIRES SAFELY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When sealing tire beads on rims, never exceed 35 psi (241 kPa) (2.4 bar) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead and reinflate.



A—Use a Safety Cage if Available.
B—Do Not Stand Over Tire. Use a Clip-on Chuck and Extension Hose.

AB6;TS123 053;TIRE 160486

USE IMPLEMENT WARNING LIGHTS

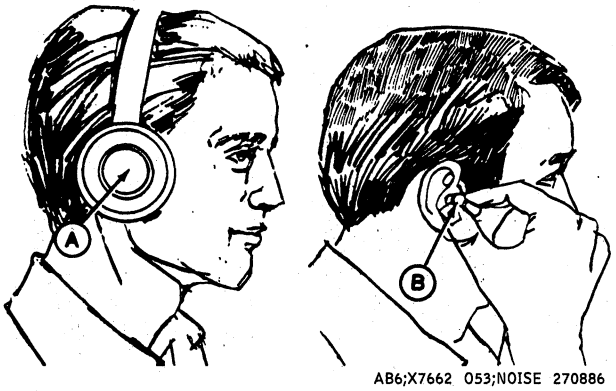
When transporting the equipment on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard, check local governmental regulations. Various safety devices are available from your John Deere dealer.

AT6; B06;;14SA F 030284

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 noises.



AB6;X7662 053;NOISE 270886

DISPOSE OF SPRAY CANS SAFELY

If spray can paint is used for protecting the machine to be put in storage, be careful when discarding empty cans. Do not incinerate or puncture can.

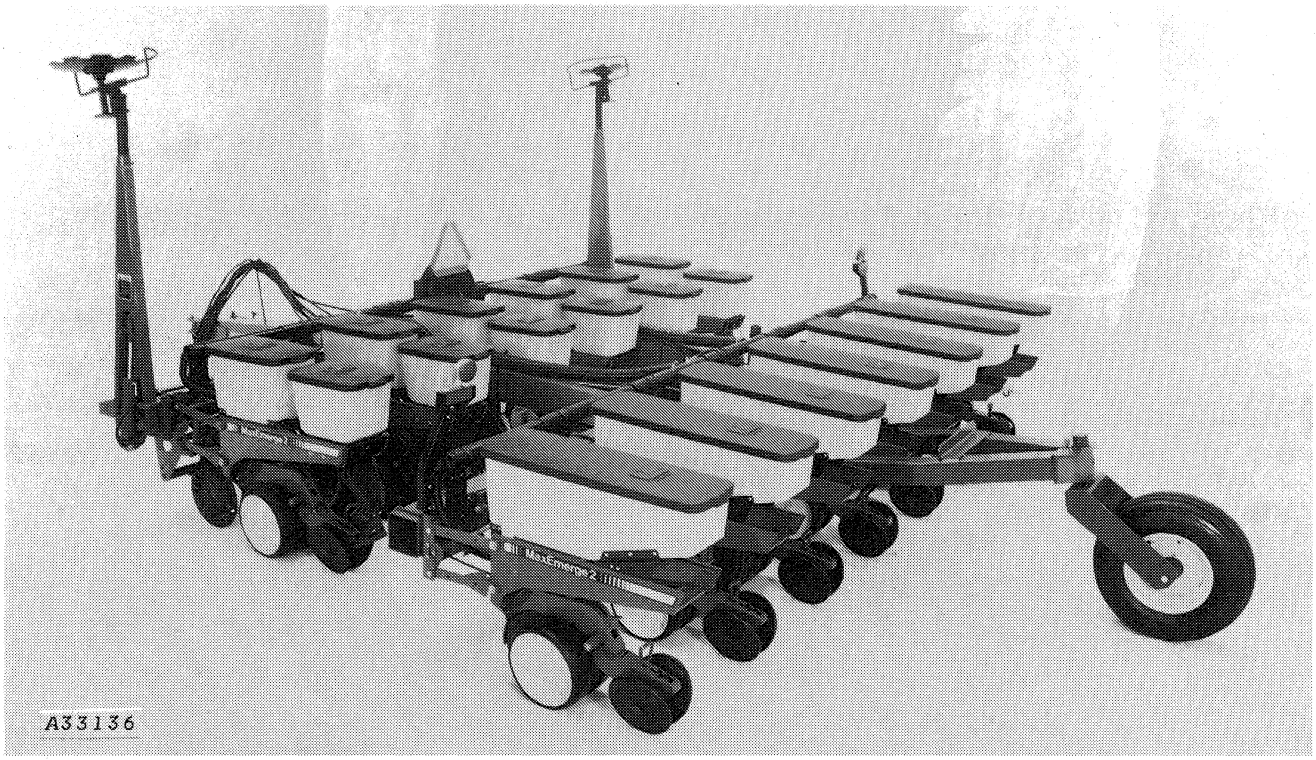
B21;;3SA A 140886

DO NOT MODIFY THE SPLIT ROW ATTACHMENT

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

B21;;15SA -D 230387

Identification View



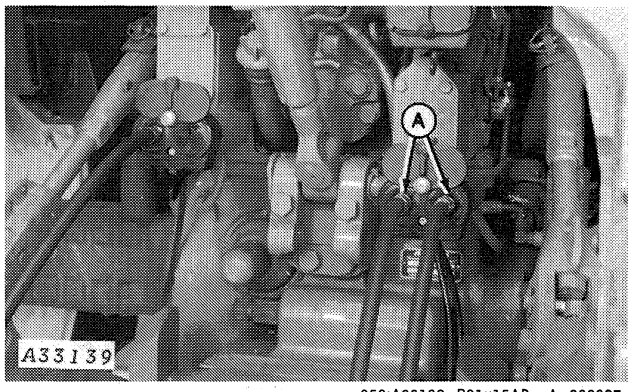
MaxEmerge® 2 Split Row Planting Attachment

050;A33136 B21;;15ID -A 300387

ATTACHING SPLIT ROW ATTACHMENT TO PLANTER

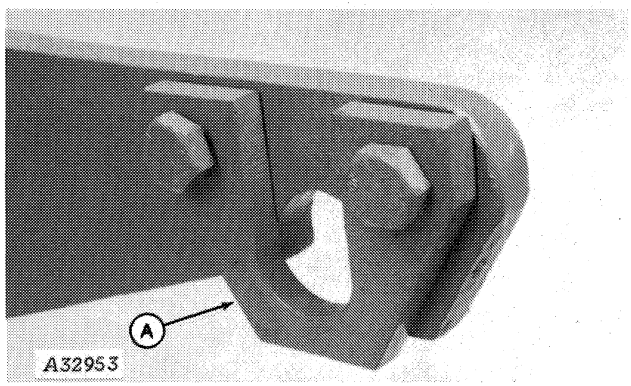
Attach planter to tractor as explained in your planter operator's manual.

Back tractor and planter up to Split Row Attachment and connect hydraulic hoses (A) from Split Row Attachment into tractor breakaway couplers.

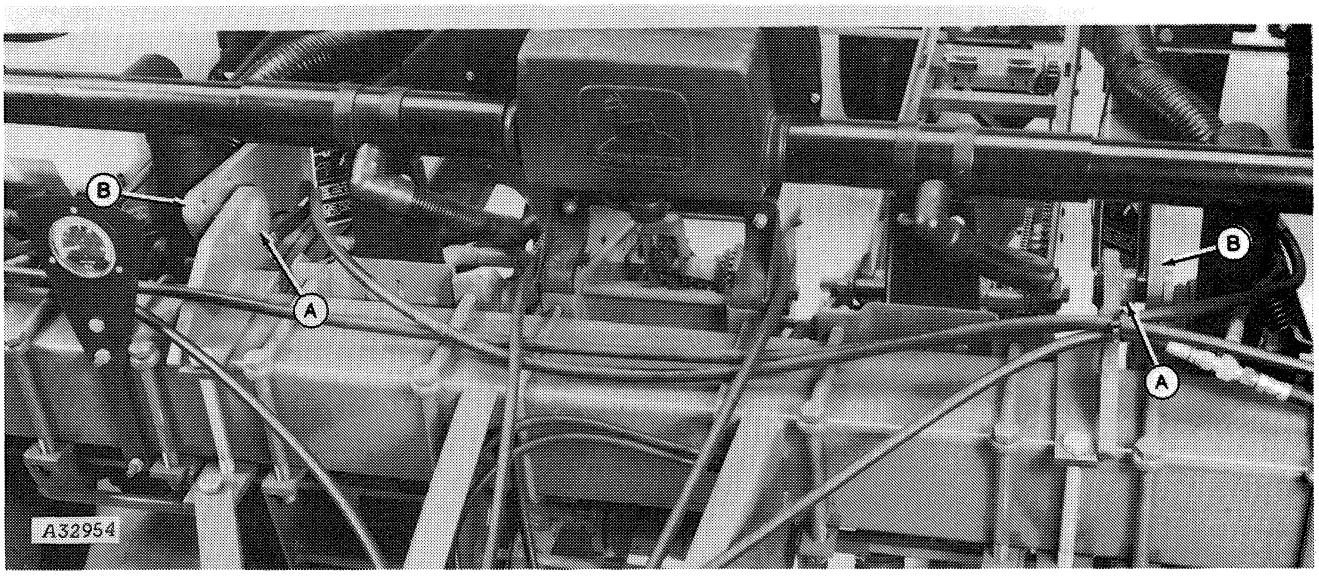


050;A33139 B21;;15AD -A 230387

Remove nuts, cap screws and plate (A) from Split Row Attachment connecting arms.



050;A32953 B21;;15AD -B 090387



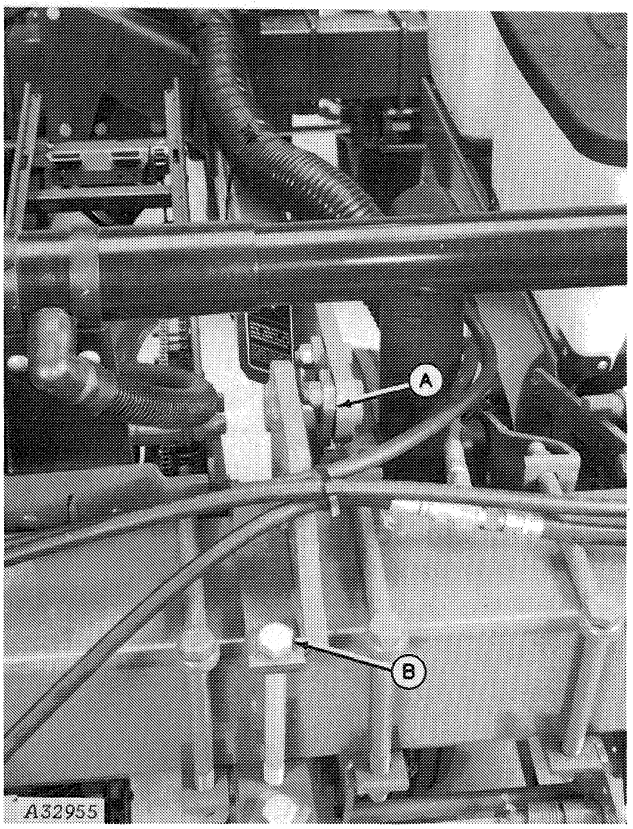
To avoid damage to planter hoppers, and improve visibility during attaching, remove two center hoppers from planter.

Align pivots (A) with connecting arms (B) while backing planter to Split Row Attachment.

050;A32954 B21;;15AD -C 090387

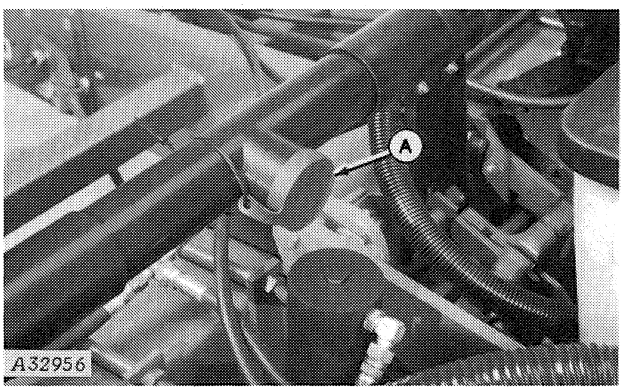
Raise pivots into connecting arms with remote cylinder operating lever and secure with plates (A). Secure plates with cap screws and nuts. Torque cap screws to 85 lb-ft (115 N·m).

If attaching Split Row Attachment to planter for the first time, torque cap screws (B) securing pivots to planter to 300 lb-ft (410 N·m).



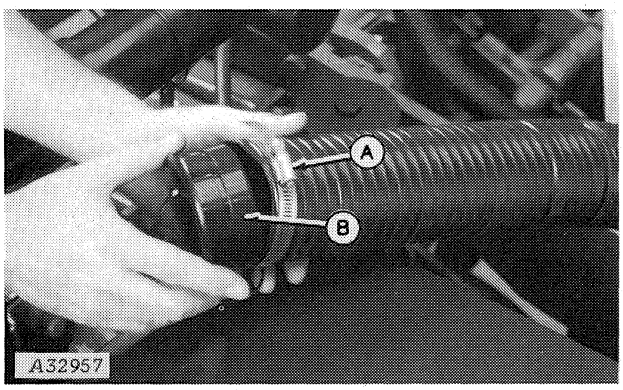
050;A32955 B21;;15AD -D 230387

(Planters and Split Row Attachment with Vacuum Meters Only) Remove dust cover (A) from vacuum manifold.



050;A32956 B21;;15AD -E 090387

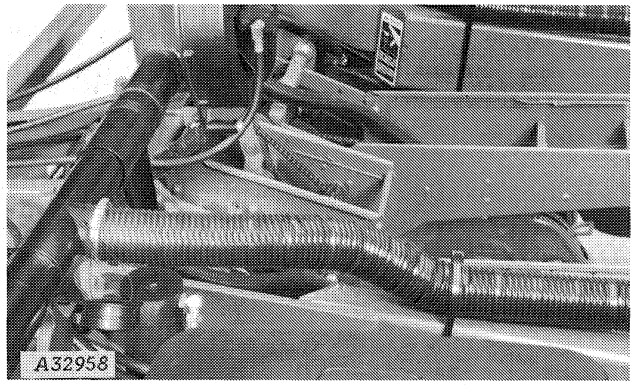
(Planters and Split Row Attachment with Vacuum Meters Only) Loosen hose clamp (A) and remove dust cover (B) from flex hose.



050;A32957 B21;;15AD -F 090387

(Planters and Split Row Attachment with Vacuum Meters Only) Secure flex hose to manifold with hose clamp.

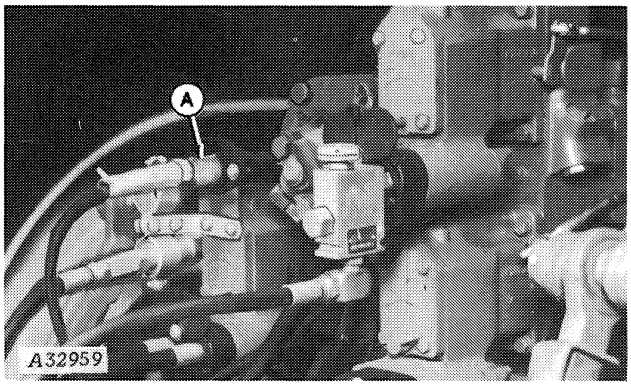
(Not Illustrated) Replace seed hoppers on planting units.



050;A32958 B21;;15AD -G 230387

Connect Split Row Attachment light harness (A) into seven pin connector on the tractor.

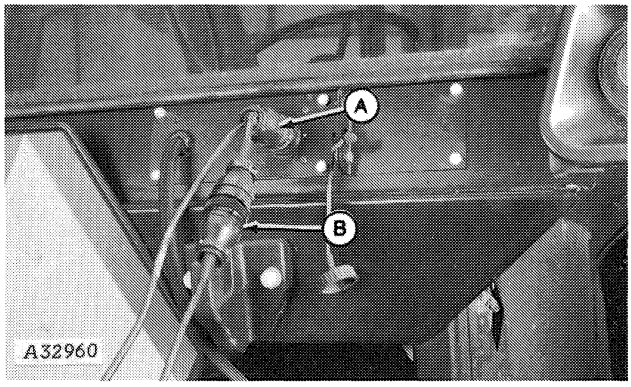
NOTE: If your tractor is not equipped with a seven-pin connector, order kits AR75694 and AR78052 from your John Deere dealer.



050;A32959 B21;;15AD -H 090387

If equipped, connect Split Row monitor harness adapter (A) into power module. Connect planter monitor harness (B) into Split Row monitor harness adapter.

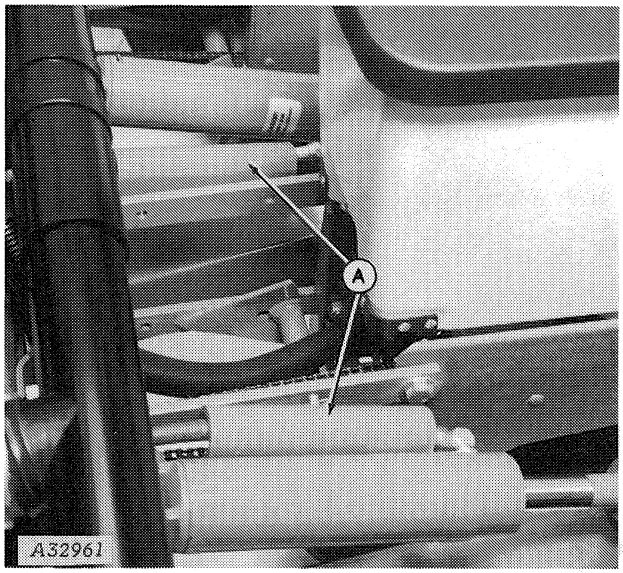
NOTE: Computer-Trak™ 100 Seed Monitors are not compatible with 7200 8-Row Narrow Planters equipped with 5-or 7-Row Split Row Attachment.

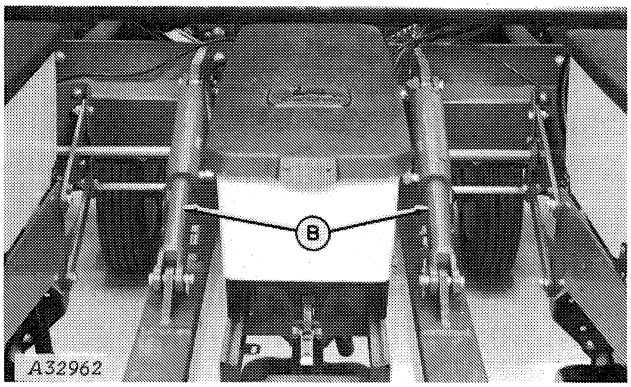


050;A32960 B21;;15AD -I 090387

Raise planter and Split Row Attachment completely.

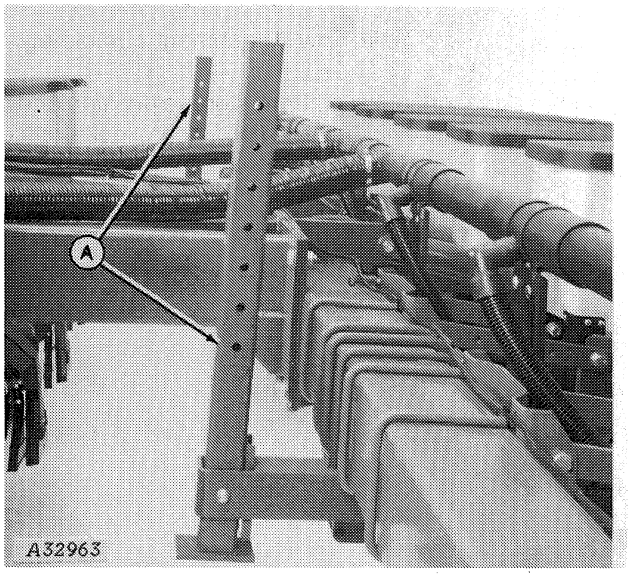
Remove transport locks (A) from storage position and install locks on hydraulic cylinder rods (B). Secure locks with drilled pins and spring locking pin.





050;A32961 A32962 B21;;15AD -J 090387

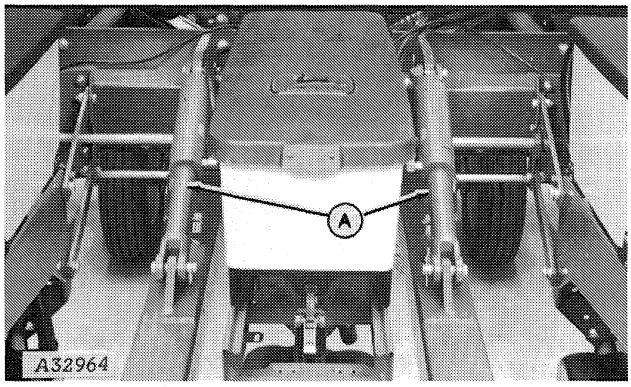
Raise and secure stands (A) with drilled pins and spring locking pins.



050;A32963 B21;;15AD -K 090387

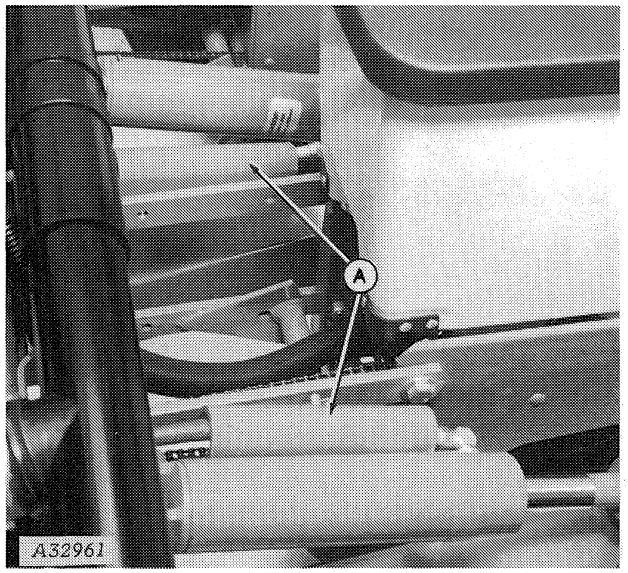
DETACHING SPLIT ROW ATTACHMENT FROM TRACTOR

Remove transport locks (A) from Split Row Attachment hydraulic cylinders.



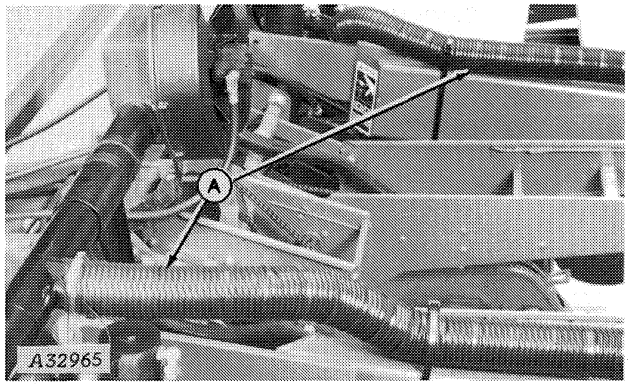
050;A32964 B21;;15AD -L 090387

Install transport locks (A) in storage position.



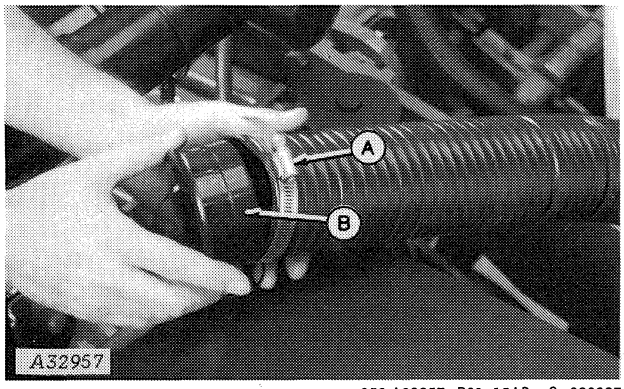
050;A32961 B21;;15AD -M 090387

(Planters and Split Row Planters with Vacuum Meters Only) Disconnect flex hoses (A) from planter vacuum manifold.



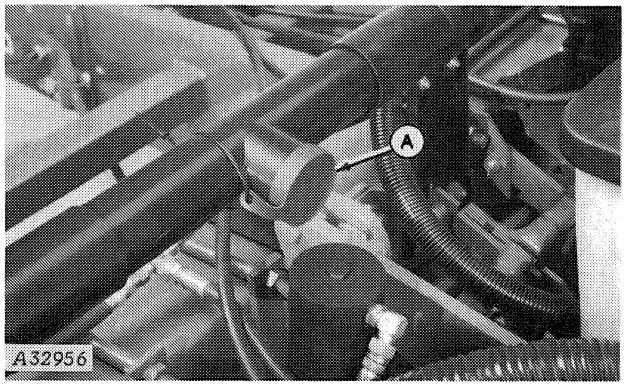
050;A32965 B21;;15AD -N 090387

(Planters and Split Row Attachment with Vacuum Meters Only) Insert dust cap (B) into flex hose and secure with hose clamp (A).



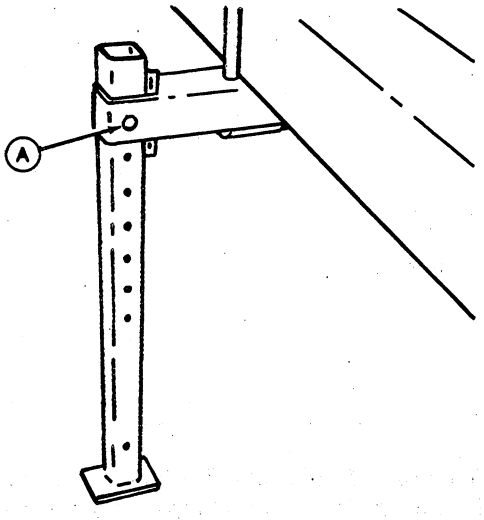
050;A32957 B21;;15AD -O 090387

(Planters and Split Row Attachment with Vacuum Meters Only) Install cap (A) on planter vacuum manifolds.



050;A32956 B21;;15AD -P 090387

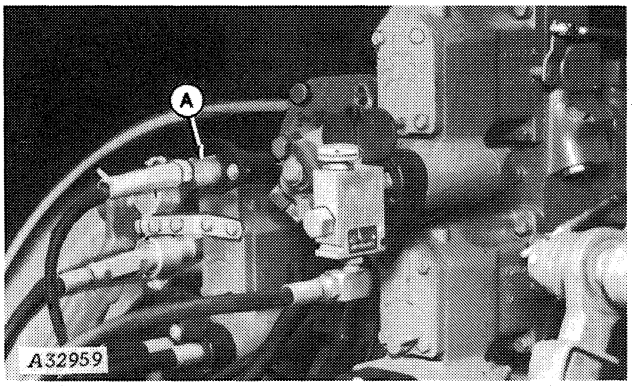
Secure parking stands in the "down"position with drilled pins (A) and spring locking pins.



A32966

050;A32966 B21;;15AD -Q 090387

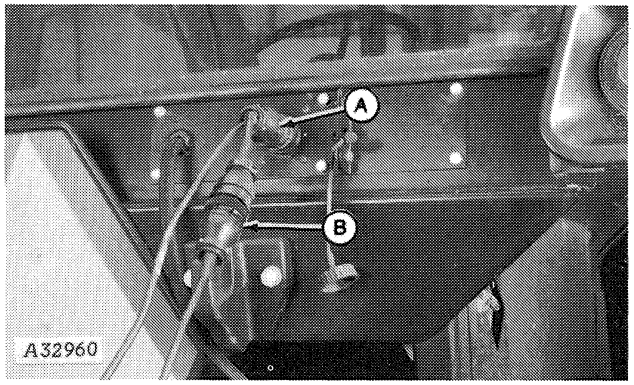
Disconnect wiring harness (A) from tractor seven pin connector.



050;A32959 B21;;15AD -R 230387

If equipped, disconnect Split Row monitor harness (A) from power module. Disconnect planter monitor harness (B) from Split Row monitor harness.

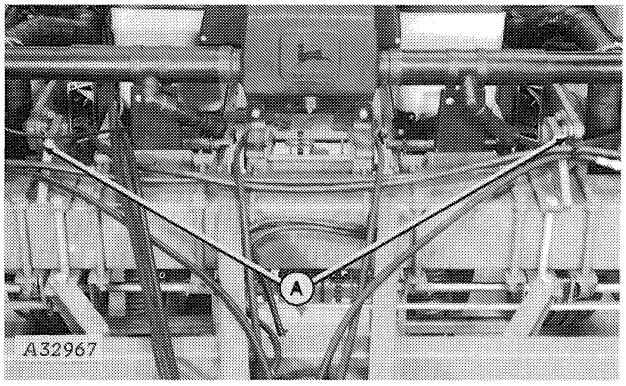
If you wish to use your planter without the Split Row Attachment, connect planter monitor harness to power module.



050;A32960 B21;;15AD -S 090387

CAUTION: Connecting arms can whip upward and cause bodily injury if unhitched incorrectly. Before unbolting connecting arm plates, raise Split Row Attachment so that parking stands and planting units are off ground.

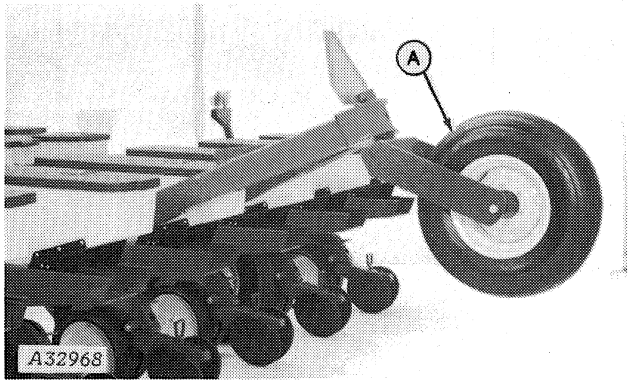
Remove plates (A) securing pivots to connecting arms.



050;A32967 B21;;15AD -T 230387

Raise connecting arms by raising Split Row liftwheel (A) with remote cylinder operating lever. Carefully drive tractor forward until hitch tubes are clear of pivots on planter.

IMPORTANT: Be careful not to stretch or pinch hydraulic hoses by driving tractor too far forward.

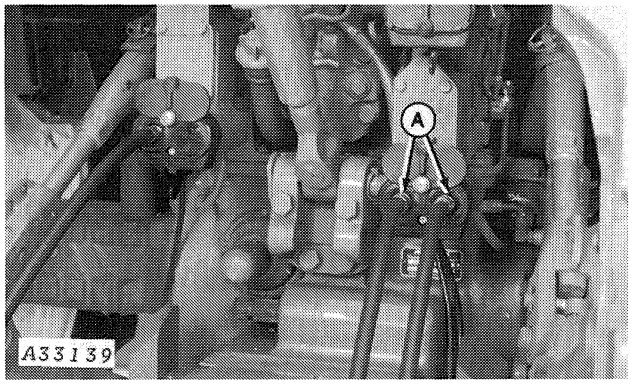


050;A32968 B21;;15AD -U 090387

CAUTION: To avoid injury from escaping hydraulic oil under pressure, turn engine off and relieve the pressure in the system by moving remote cylinder operating levers in both directions before attaching or detaching hoses from breakaway couplers.

NOTE: Not necessary to turn off tractor if planter is attached to John Deere 50 Series Tractor.

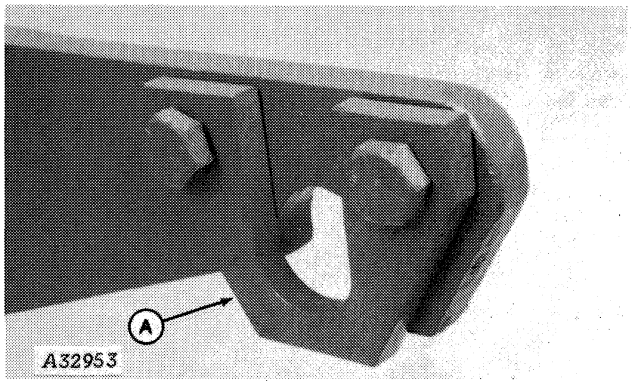
Remove hoses (A) from tractor breakaway couplers.



050;A33139 B21;;15AD -V 230387

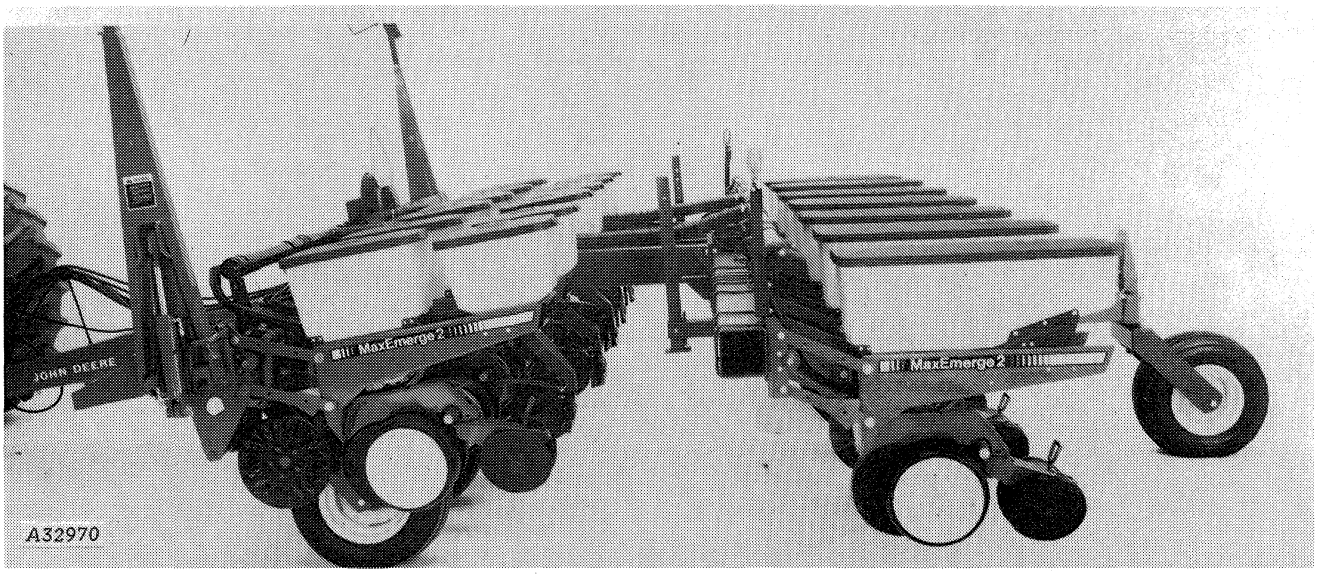
Attach plates (A) on Split Row connecting arms.

Carefully drive tractor and planter away from Split Row Attachment.



050;A32953 B21;;15AD -W 090387

Transporting

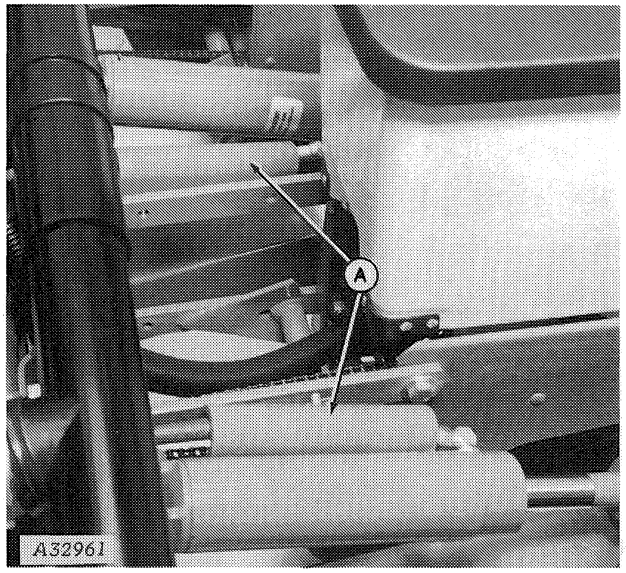


CAUTION: When transporting the planter and Split Row Attachment on a smooth surface road, do not exceed 32 km/h (20 mph) tractor speed. Reduce speed considerably when traveling over rough ground or when turning.

CAUTION: Use of flashing warning lights and turn signals are recommended when towing this equipment on public roads unless prohibited by state or local regulations.

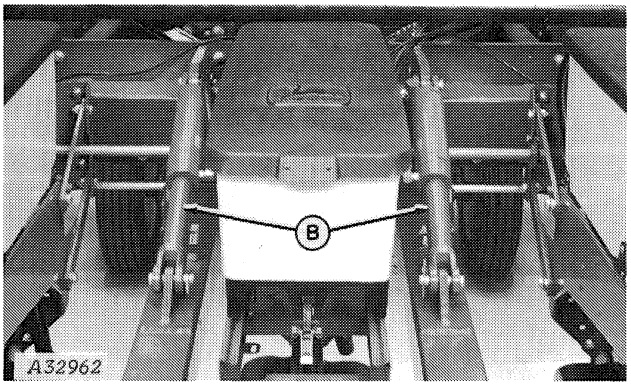
050;A32970 B21;;15TR -A 230387

Before transporting, remove transport locks (A) from storage position.



050;A32961 B21;;15TR -B 090387

Raise Split Row Attachment fully with tractor remote cylinder operating lever. Install transport locks (A) on cylinders and secure with drilled pins and spring locking pins.



050;A32962 B21;;15TR -C 090387

If transporting the planter and Split Row Attachment any great distance, empty all hoppers.

Disconnect planter drive wheel cams (see your planter operator's manual).

Remove the split row attachment drive wheel chains.

Remove the planter marker extension arms for added height clearance.

See the "Transporting" section in your planter operator's manual for more information on transporting.

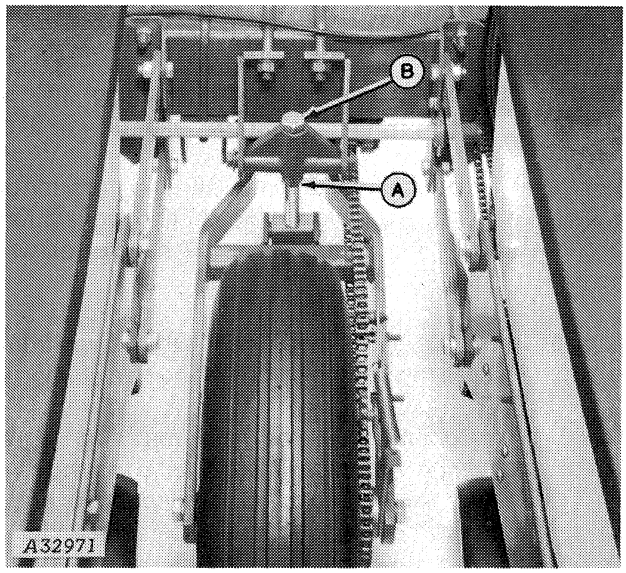
B21;;15TR -D 230387

Operating the Split Row Attachment

LEVELING

Adjust the drive-gauge wheels by loosening lock nut (A) and turning bolt (B) until the bottom of the frame is 510 mm to 560 mm (20 to 22 in.) above the ground.

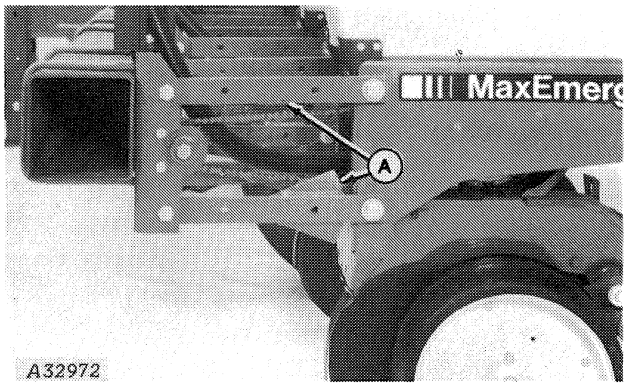
Turn the bolt clockwise to lower the Split Row Attachment frame or counterclockwise to raise the frame. Tighten lock nut.



050;A32971 B21;;150I -A 230387

Check to see if parallel arms (A) are approximately parallel to the ground when in the field.

If necessary, loosen lock nut on drive-gauge wheel bolts and adjust bolts until parallel arms are approximately parallel to the ground. Tighten lock nut.



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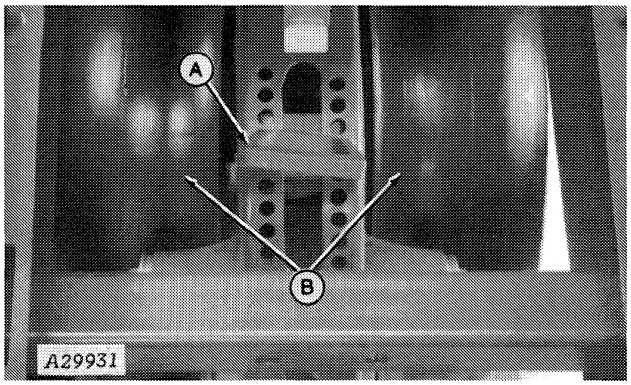
CHANGING PLANTING DEPTH



Planting depth is controlled by the planting unit gauge wheels (B). Adjust planting depth as follows:

Raise split row attachment to remove weight from unit gauge wheels. Lift depth adjusting handle (A) and move it forward to decrease planting depth. Move the handle rearward to increase planting depth.

If small increments are desired, "walk" the handle from side to side. Adjust all rows to the same setting as a starting point.

NOTE: When operating in the field, lower the split row attachment only when the tractor is moving forward. This will prevent the planting unit openers and seed tubes from clogging in moist soil conditions.

Lower split row attachment and drive at normal planting speed. Check the planting depth of all rows.

Manufacturing variations in the planting units may require that the depth adjusting handles be positioned differently from row to row to achieve the same planting depth.

NOTE: Closing wheel down force can affect seed placement and depth. Do not use more force than is necessary to close the seed furrow, especially in light soils.

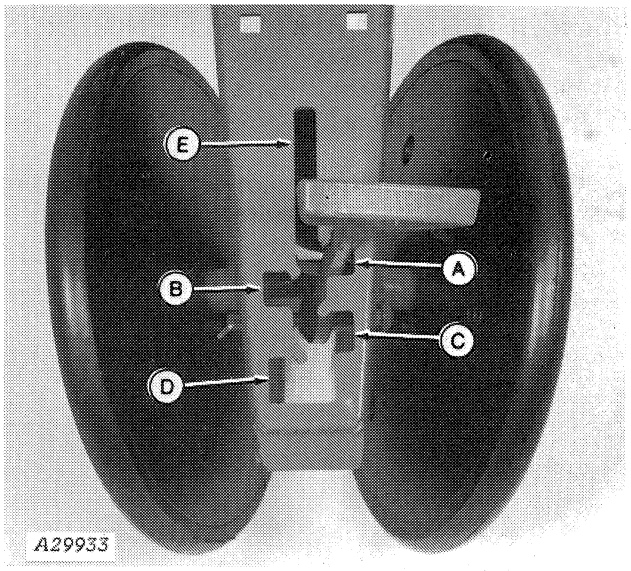
Do not consider the entire center ridge left by the closing wheels as part of the seed depth. The loose soil in this ridge serves as mulch.

050;A29931 B21;;150I -G 230387

ADJUSTING CLOSING WHEEL DOWN FORCE

Angled closing wheels (A) trail behind the seed opener and close the seed trench left by the opener. Adjustable spring force permits proper closing of the seed trench by firming soil on each side of the seed, not directly over the seed.

The closing wheel down force can be adjusted by placing the handle in slots (A), (B), (C) and (D) for varying ground conditions. Placing the handle in the middle slot (E) will allow the closing wheels to "FLOAT" with only the weight of the closing wheel system itself on the soil surface.



026;A29933 B21;;70I U 301086

CENTERING CLOSING WHEELS

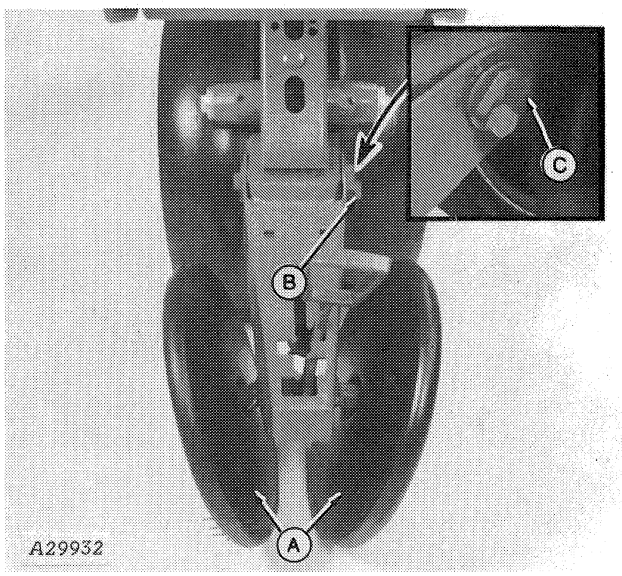
If closing wheels are not centered over the seed trench or furrow, proceed as follows:

Raise the split row attachment.

Loosen cap screw (B). Turn adjusting cam (C) clockwise to move the closing wheels to the right or counterclockwise to move the closing wheels to the left. Visually center as required.

NOTE: Make sure top front edge of closing wheel frame contacts top of casting all the way across top surface.

Tighten cap screws.



AP0;A29932 B21;;150I -H 310387

H16;P019 240387

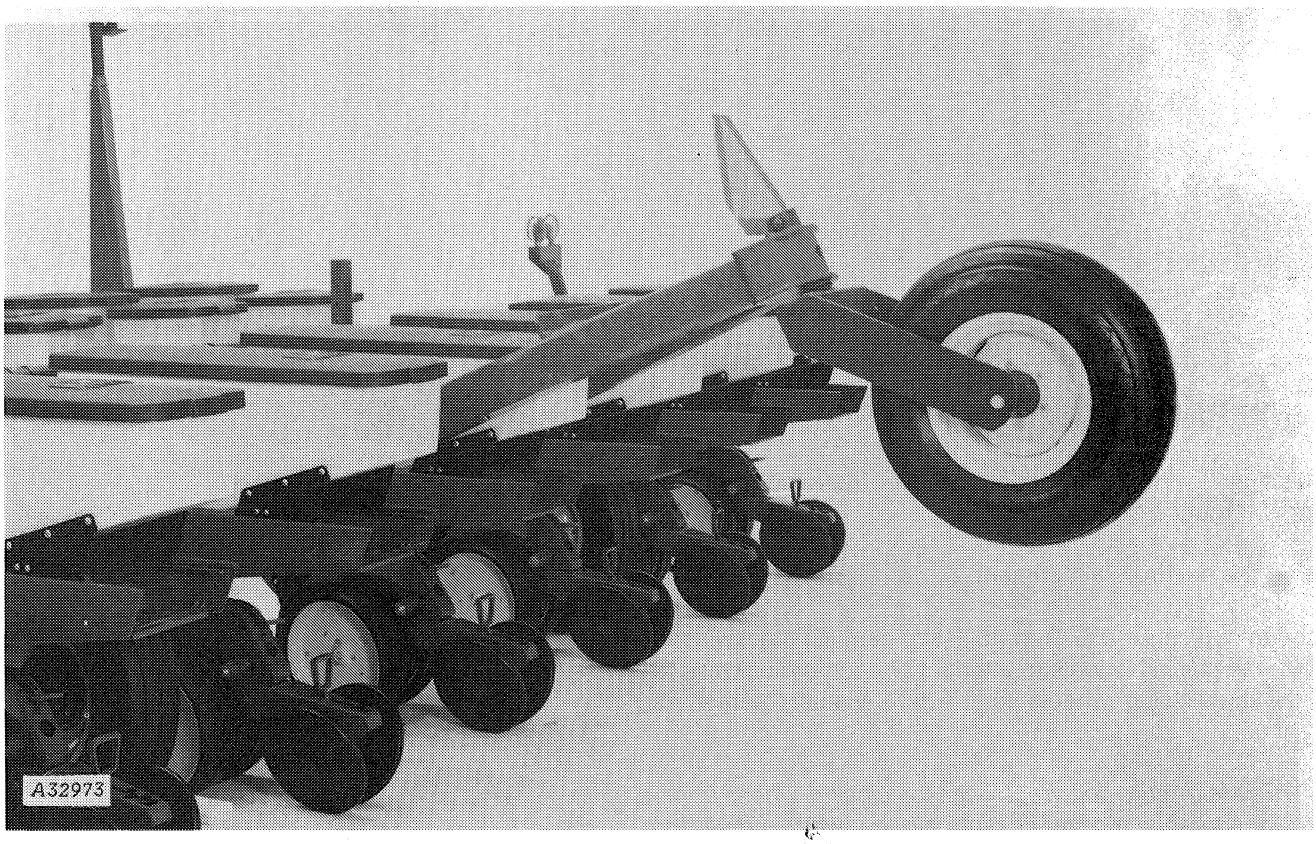
PLANTING RATES AND METERING UNITS

For planting rates, operation and service, see your seed meter operator's manual.

IMPORTANT: Be sure sprocket combinations on 7200 planter and Split Row Attachment transmissions are the same.

B21;;150I -C 230387

LIFTWHEEL



The liftwheel is used for transport only.

When planting, be sure to raise liftwheel off the ground with remote cylinder operating lever.

050;A32973 B21;;150I -D 090387

H16;P020 240387

ADDING BALLAST

See ''Insufficient Planting Depth'' in "Troubleshooting" section.

B21;;150I -E 230387

TIRE INFLATION

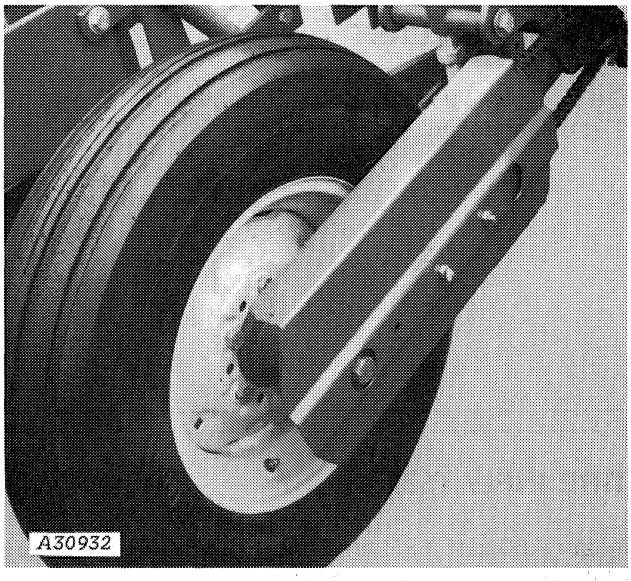
Inflate 7.60 x 15 6PR tires and 116-15 8PR tire to 280 kPa (2.8 bar) (40 psi) of air pressure.

B21;;150I -F 230387

WHEEL CHAIN TRASH DEFLECTOR

The wheel chain trash deflector protects the chain and spring loaded idlers from damage caused by trash, stones and clods.

For assembly instructions, see Attachment Assembly section.

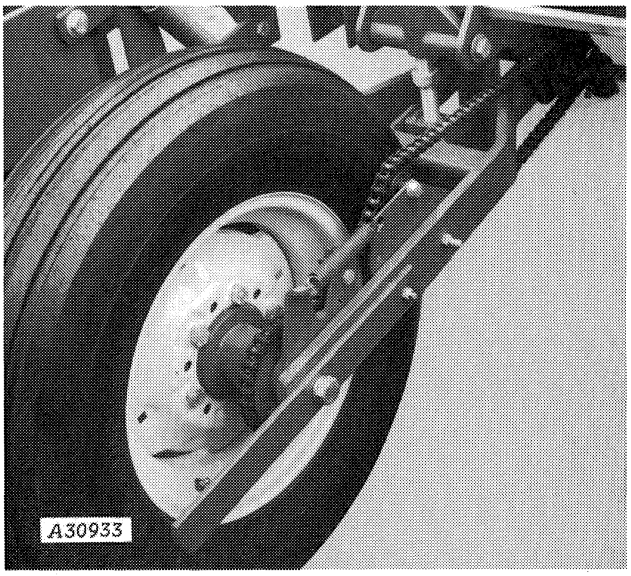


006;A30932 B22;;1AT A 271086

DRIVE WHEEL ROCK GUARD

The drive wheel rock guard (A) reduces possibility of larger rocks and clods from wedging between Tru-Vee Gauge Wheel and carrying wheels and flipping onto the chain and idler.

For assembly instructions, see Attachment Assembly section.



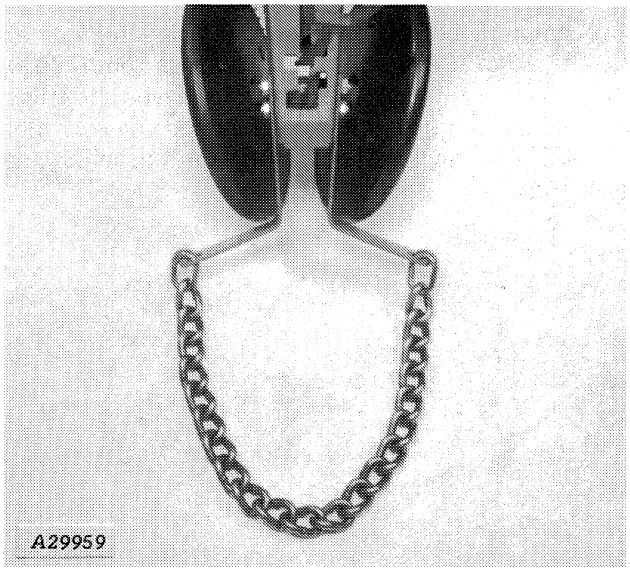
006;A30933 B22;;1AT B 210486

ROW LEVELER CHAIN

The row leveler chain smooths the slight "W" effect left by the firming wheels and reduces the tendency of some soils to crust.

It is not recommended for use with granular herbicide, rear mounted insecticide spreader, and liquid herbicide attachments.

See Attachment Assembly section for assembly instructions.



026;A29959 B21;;7AT BH 210286

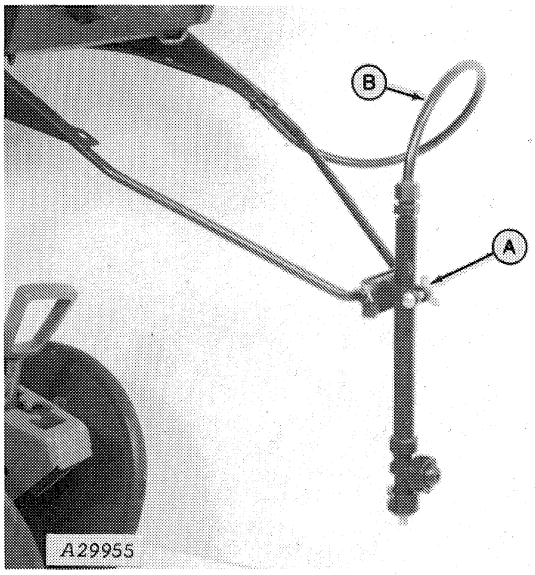
LIQUID HERBICIDE PRE-EMERGE SPRAY ATTACHMENT

The planter sprayer attachment provides the necessary equipment to mount and position the spray nozzles (not provided) behind the planter unit and the hoses and manifolds to connect to a tractor mounted sprayer system. The planter sprayer system may be used with the John Deere 220 Tractor-Mounted Sprayer or similar sprayers.

Adjust plastic tubing (B) to provide spring tension on the nozzle holder. Tension will aid in keeping nozzle in operating position when it is hit by an obstruction.

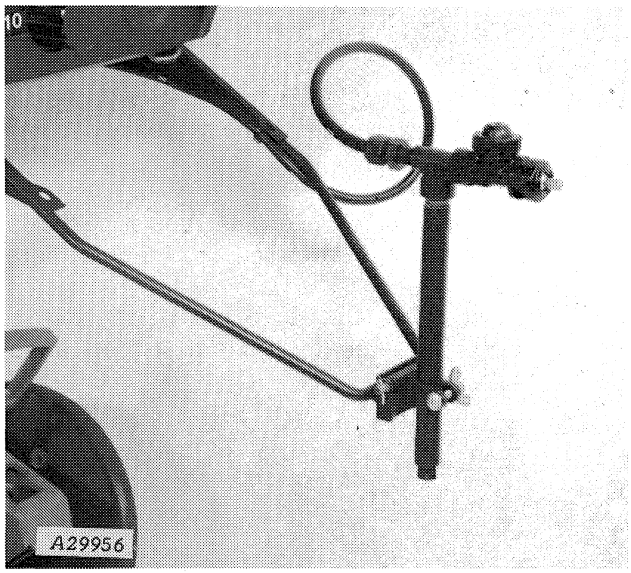
To adjust the height of the nozzle, loosen wing nut (A).

"Even" type spray tips are recommended for spraying in bands from 180 to 430 mm (7 to 17 in.) with the nozzle in the lower position as shown at right.



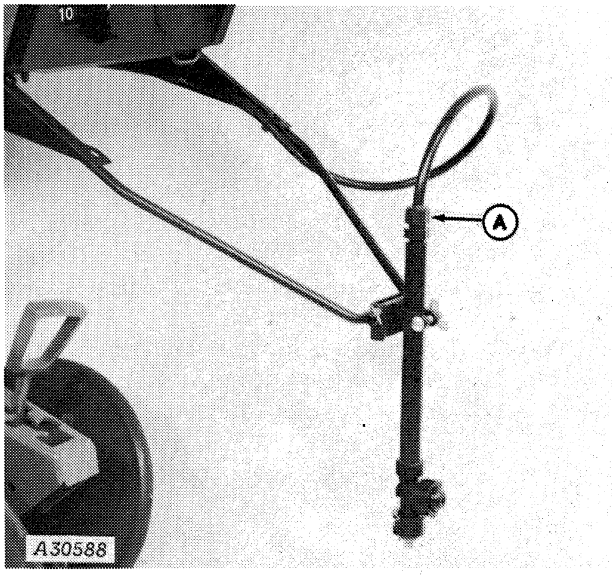
026;A29955 B21;;7AT BI 180686

The support tube may be inverted, placing the nozzle in the "up" position. Coverage in this position is from 1270 to 2285 mm (50 to 90 in.) wide when using flood type spray tips. This type of coverage is not recommended for less than 1/2 gallon per minute flow. To invert the spray assembly for flood spray, proceed as follows:



026;A29956 B21;;7AT BJ 180686

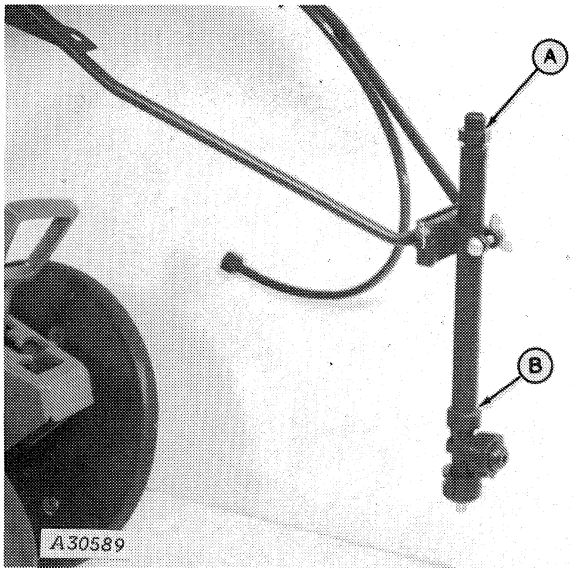
1. Unscrew delivery hose (A) from union fitting.



026;A30588 B21;;7AT BK 210286

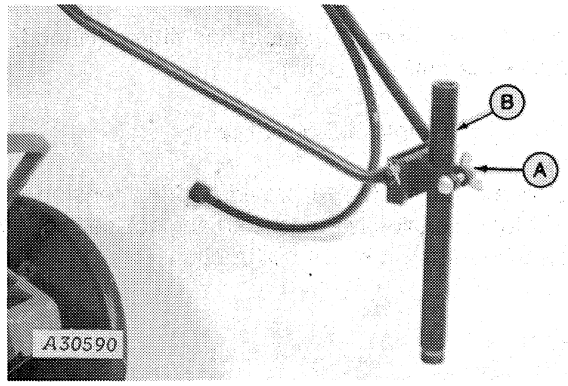
2. Unscrew union fitting (A) from tube.

3. Unscrew nozzle assembly (B) from tube.



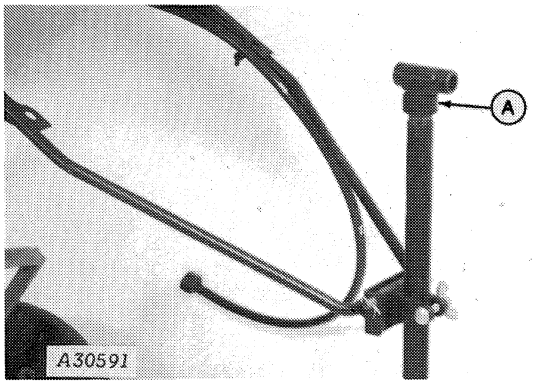
026;A30589 B21;;7AT BL 210286

4. Loosen wing nut (A) and remove and invert tube (B).



026;A30590 B21;;7AT BM 210286

5. Screw fitting (A) onto tube. (Hand tighten tube plus one-half turn only.)



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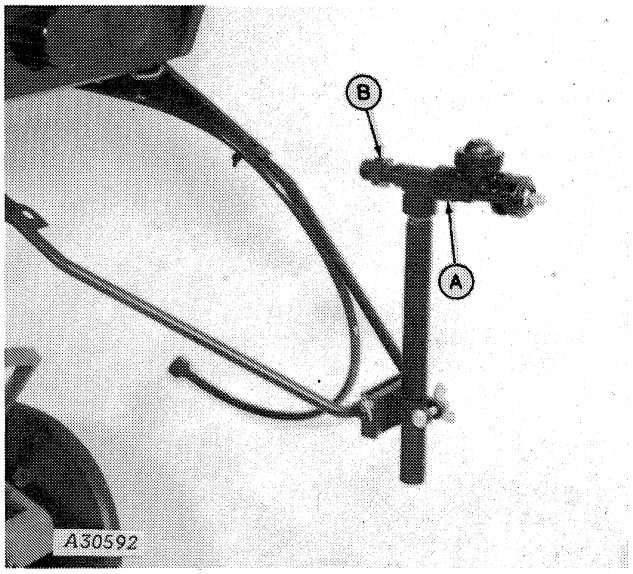
6. Screw nozzle assembly (A) onto tee fitting.

7. Screw union fitting (B) onto fitting. (Hand tighten fitting plus one-half turn only.)

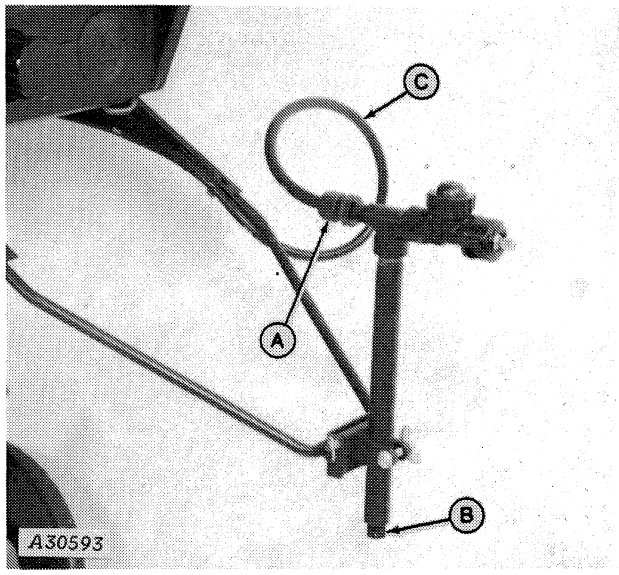


026;A30592 B21;;7AT BO 180686

8. Screw delivery hose (A) onto union fitting. (Hand tighten fitting plus one-half turn only.)

9. Screw plug (B) into bottom of tube.

Adjust plastic tubing (C) to provide spring tension on the nozzle holder. Tension will aid in keeping nozzle in operating position when it is hit by an obstruction.



006;A30593 B21;;7AT BP 030786

To help you select the correct nozzle, proceed as follows:

1. Refer to the chemical label for recommended application rate.

2. Select the speed you wish to plant.

3. Select the spray band width you desire.

Use the formula below for obtaining the gallons per minute per nozzle.

IMPORTANT: Gallons per acre refers to gallons per acre of band width, not acres of ground planted.

$$\frac{\text{Gallons per acre} \times \text{miles per hour} \times \text{spray band width}}{5940} = \text{gallons per minute per nozzle.}$$

Example: Suppose the chemical manufacturer recommended application rate is 10 gal. per acre and you wish to plant at 6 miles per hour using a spray band width of 10 in.

$$\frac{10 \times 6 \times 10}{5940} = \frac{600}{5940} = .10 \text{ gal. per minute per nozzle.}$$

See your John Deere dealer for the desired nozzle.

Because delivery rate (gallons per minute) is a function of pressure, it is recommended the following application rate check be used.

B21;;7AT BQ 210286

Check application rate at the beginning of the season and periodically during the season because nozzle tips wear and change their flow rate.

Partially fill spray tanks with water.

Place a quart container under a nozzle.

Turn the spray pump on and time how long it takes to fill the quart container. See the chart below for the rate of flow.

It may be necessary to adjust pump pressure to compensate for small variations between calculated and actual flow.

Seconds to Collect One Quart	**Gallons Per Minute**	**Seconds to Collect One Quart**	**Gallons Per Minute**
300	.05	75	.20
250	.06	67	.225
214	.07	60	.25
188	.08	50	.30
167	.09	43	.35
150	.10	38	.40
136	.11	30	.50
125	.12	25	.60
115	.13	21	.70
107	.14	19	.80
100	.15	17	.90
88	.17	15	1.0

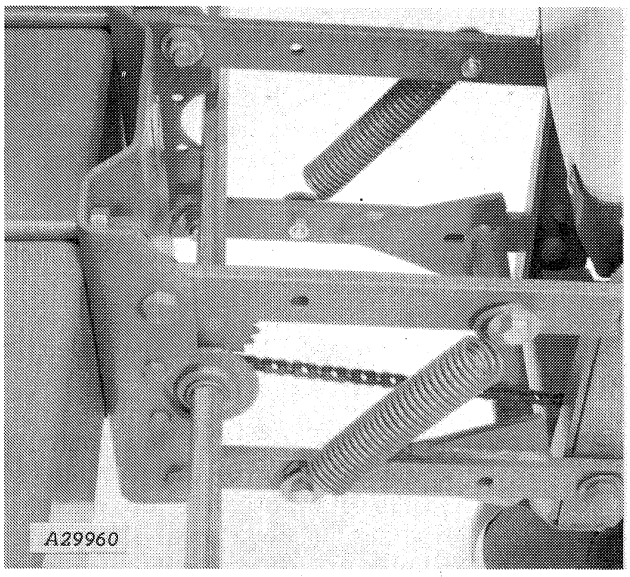
B21;;7AT BR 171086

UNIT DOWN FORCE SPRINGS

The unit down force springs transfer weight from the main frame to planting unit to increase opener penetration and help to minimize bounce in rough soil surface conditions.

The springs are non-adjustable with 400 N (90 lbs.) of down force when the parallel arms are in the horizontal position. Two sets per row may be used for 800 N (180 lbs.) of down force.

See Attachment Assembly section for assembly instructions.



026;A29960 B21;;7AT BS 060586

HEAVY-DUTY DOWN FORCE SPRINGS

The heavy duty adjustable down force spring system is recommended when planting in rough field conditions and when the soil or soil residue is difficult to penetrate. The spring system will transfer main frame weight to the planting unit to minimize bounce and to assist the opener to penetrate heavy soil conditions. The amount of force transfer is adjustable from 0 to 1335 N (0 to 300 lbs.) of down force. Never use more down force than is necessary to prevent excessive drive wheel slip.

To adjust the down force springs, proceed as follows:

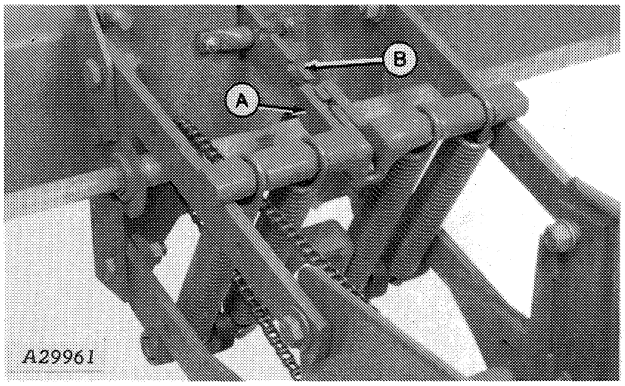
Raise the planter.

Lift the spring support (A) off the strap (B).

Place the spring support in front slot for MINIMUM down force.

Place the spring support in the rear slot for MAXIMUM down force.

See Attachment Assembly section for assembly instructions.



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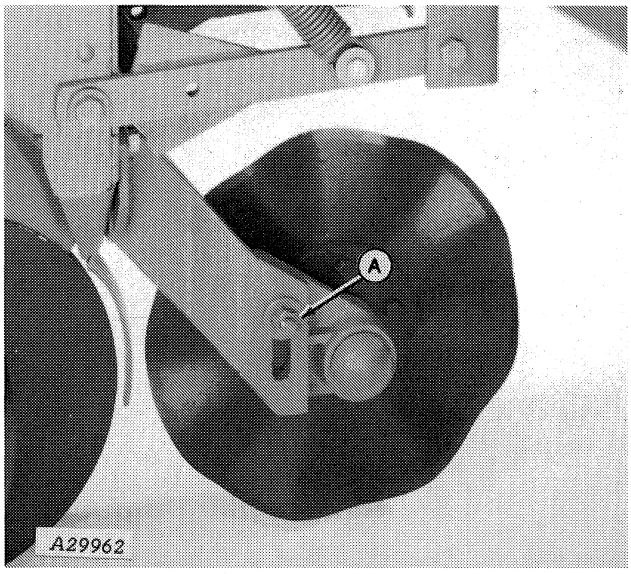
UNIT MOUNTED COULTER



The unit mounted coulter can be used to assist the Tru-Vee opener to penetrate in tough soil conditions and to cut or displace residue commonly found in reduced tillage conditions.

The penetration depth of the coulter blade is controlled by the opener gauge wheels.

Planting unit down force springs are recommended with this attachment.

IMPORTANT: The bottom edge of the coulter blade should be approximately 10 mm (3/8 in.) above the bottom edge of the seed openers. (Check this dimension with planter in planting position on any level surface.) This dimension will minimize the force required for penetration and help maintain a constant seed depth. In heavy straw, penetration and cutting action may be improved by running the bottom edge of the coulter blade slightly below the bottom edge of the seed openers.

As blade wear occurs, loosen nut (A) and lower arm to the next notch and tighten nut.

NOTE: Do not operate coulter deeper than the seed opener when soil penetration is the limiting factor.

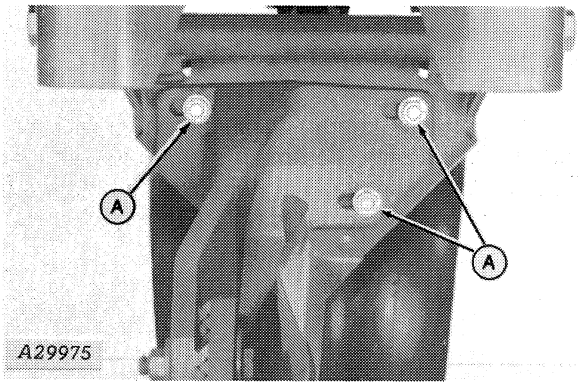
026;A29962 B21;;7AT BU 060586

The coulter blade should be adjusted to align with the Tru-Vee opener.

Adjust the coulter blade so it is directly in front of the Tru-Vee opener and is not running at an angle to the direction of travel.

To align side-to-side, loosen bolts (A) and slide coulter. If coulter blade is running at an angle relative to direction of travel, remove bolts (A) and add washers as required between back surface of coulter casting and front of planting unit.

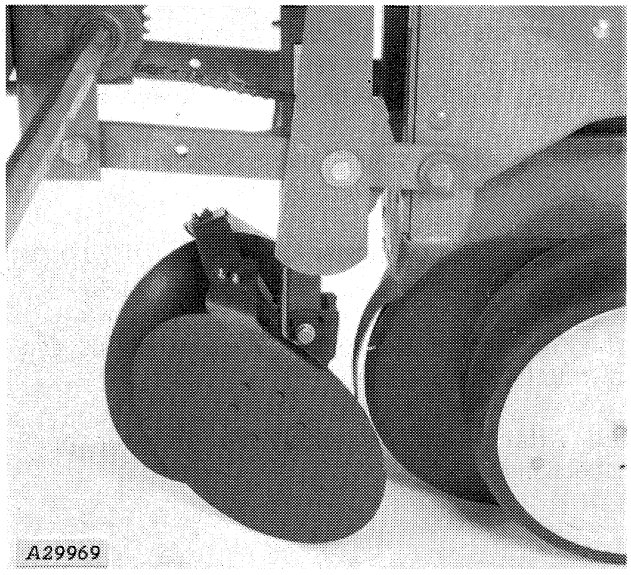
See Attachment Assembly section for assembly instructions.



026;A29975 B21;;7AT -BV 210387

CONSERVATION FURROWERS

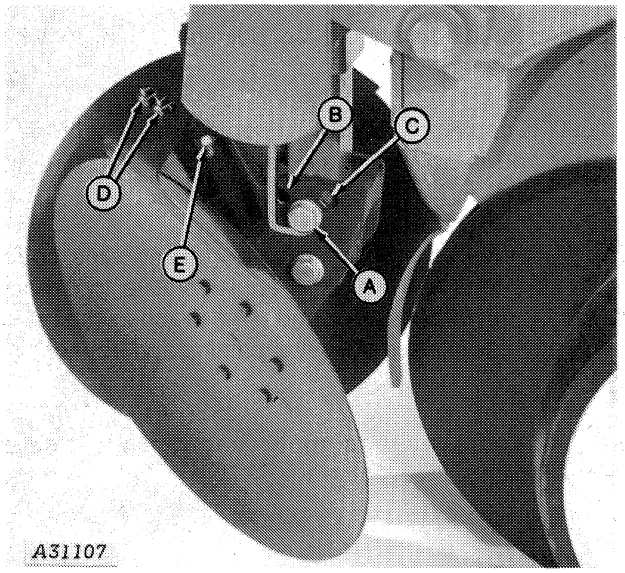
The furrower can be equipped with smooth or cut-out edges. The smooth edged blades are recommended in dry soil or clod conditions. The cut-out blades are recommended in reduced tillage conditions with surface residue.



026;A29969 B21;;7AT CB 060586

Adjust scrapers with cap screws (D) and (E) so they lightly contact the furrower blades.

Blade pitch affects lateral displacement, width of area cleared and soil profile. To obtain a sharper V-shaped soil profile, install cap screw (A) in hole (B). To obtain a flatter soil profile, place cap screw in hole (C).



006;A31107 B21;;7AT CC 280986

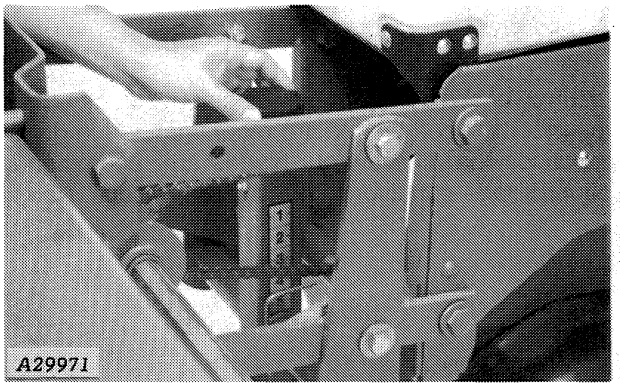
Height affects width and depth of area cleared. To adjust the height of the furrower blades, raise and turn the adjustment knob on the tillage support bracket.

The tillage support bracket has a scale and pointer to help you adjust all the furrowers evenly.

For most conditions, adjust furrower to lightly contact soil surface when planting unit is in the planting position.

When adjustment is complete, back handle up and push down to lock in position.

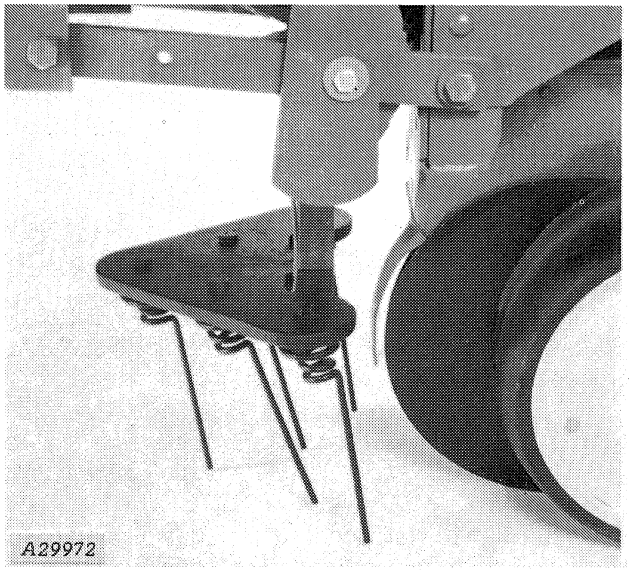
See Attachment Assembly section for assembly instructions.



026;A29971 B21;;7AT CD 280986

TINE-TOOTH TILLAGE ATTACHMENT

The Tine-Tooth Tillage Attachment is recommended for soil conditions with light clods or to break light crust. It smooths an area ahead of the unit and breaks up and moves clods out of the path of the seed opener. It is not recommended for trashy soil conditions or heavy tillage.



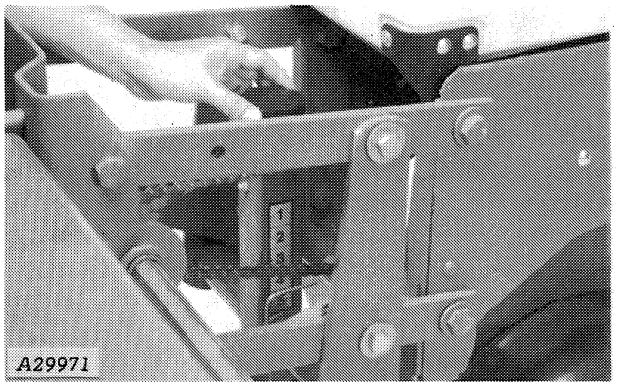
026;A29972 B21;;7AT CE 180686

To adjust the height of the tine-teeth, raise and turn the adjustment knob on the tillage support bracket. The tillage support bracket has a scale and pointer to help you adjust all the tine teeth evenly.

Adjust tine teeth to lightly contact soil surface when planting unit is in the planting position.

When adjustment is complete, back handle up and push down to lock in position.

See Attachment Assembly section for assembly instructions.



026;A29971 B21;;7AT CF 210286

HEAVY-DUTY CLOSING WHEELS

In hard to penetrate soils or seed beds with considerable residue, it may be difficult to completely close the seed furrow with the regular closing wheels. Heavy-duty closing wheels are made of heavy cast material and have an aggressive edge to more effectively close the seed furrow in more severe soil conditions.

For the best seed-soil contact, make certain that closing wheels are centered over the seed furrow. To adjust, proceed as follows:

NOTE: The heavy-duty closing wheels are not recommended for conventional planting conditions.

Raise the planter until closing wheels lightly contact soil and closing wheel frame rests on top of casting (H).

Place handle in slot (G).

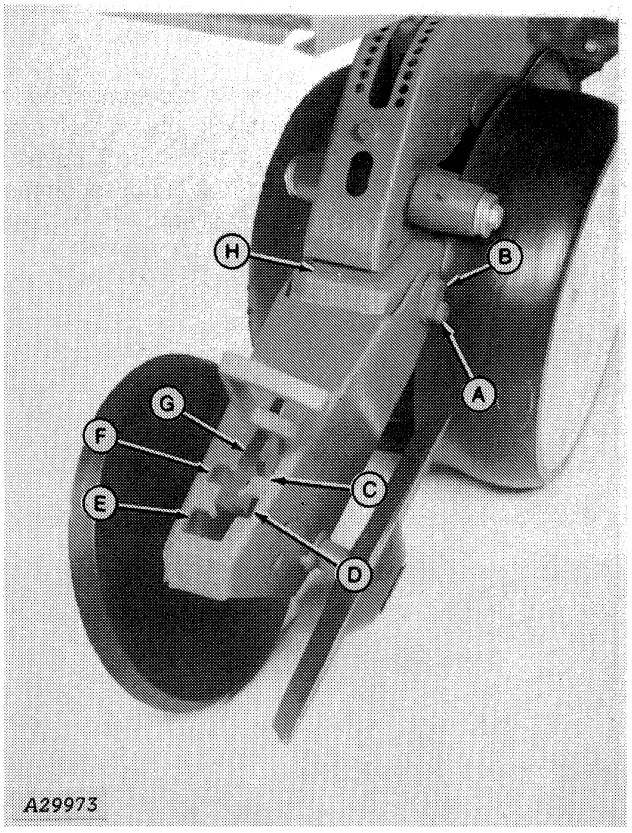
Loosen cap screw (A). Turn adjusting cam (B) clockwise to move the closing wheels to the right or counterclockwise to move the closing wheels to the left. Tighten cap screws.

Reposition handle as required.

Angled closing wheels trail behind the seed opener and close the seed trench left by the opener. Adjustable spring force permits proper closing of the seed trench by firming soil on each side of the seed, not directly over the seed.

The closing wheel down force can be adjusted by placing the handle in slots (C), (D), (E) or (F) for varying soil conditions. Placing the handle in the middle slot (G) will allow the closing wheels to FLOAT with only the weight of the closing wheel system itself on the soil surface. Closing wheel down force increases as the handle is moved rearward.

See Attachment Assembly section for assembly instructions.



A—Cap Screw
B—Cam
C—Slot C
D—Slot D
E—Slot E
F—Slot F
G—Slot G
H—Casting

026;A29973 B21;;7AT CG 180686

H16;P034 240387

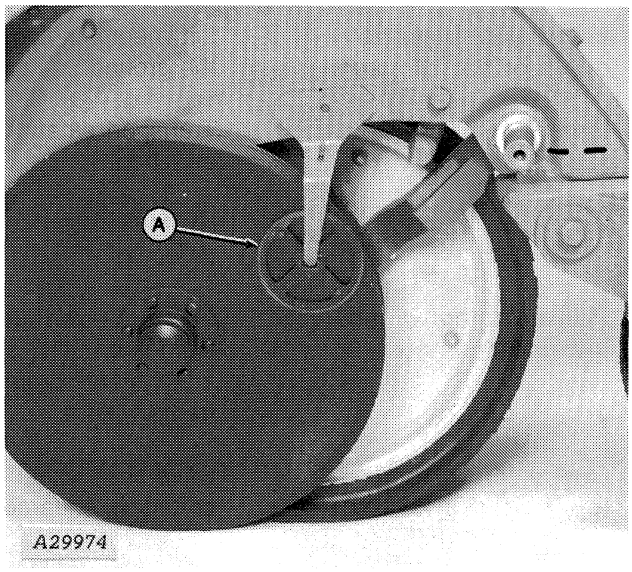
ROTARY SCRAPER

The spring-loaded rotary scraper (A) is recommended for moist, sticky soils to assist the depth gauging wheels in keeping the Tru-Vee opener blades clean.

NOTE: The scraper is not recommended in dry abrasive soil conditions.

At the start of the season and periodically during the season, inspect the scraper insert for wear.

See Attachment Assembly section for assembly instructions.



Gauge Wheel Removed for Clarity

026;A29974 B21;;7AT -CH 030387

Troubleshooting

Insufficient planting depth or tire slippage.	Liftwheel is riding on the ground.	Raise liftwheel off the ground.	—
Planter will not lower.	Transport safety links attached.	Reposition transport safety links.	15
	Hydraulic hose coupler defective.	Check hydraulic hose.	
Planter frame will not lower completely.	Force of down pressure springs on units and attachments greater than frame weight.	Reduce spring tension on units and attachments.	—
Row units on right-or left-hand side of transmission not planting.	Drive shaft shear bolt or cotter pin sheared.	Repair cause of pin shearing and replace shear bolt or cotter pin.	46
No seed being planted.	Hopper empty.	Fill hopper.	—
		Transmission drive chain off of drive sprocket or broken.	—
Closing wheels running in seed trench.	Closing wheel not centered over seed.	Adjust closing wheels.	18
Irregular or incorrect seed spacing.	Driving too fast.	Check chart in seed meter operator's manual for correct speed.	—
	Drive wheels slipping.	Reduce down pressure on unit down pressure springs.	—
	Wrong tire pressure.	Inflate tires to 280 kPa (2.8 bar) (40 psi) air pressure.	—
	Seed tube not positioned properly.	Check seed tube.	47
	Wrong sprockets.	Check charts in seed meter operator's manual for correct sprocket combination.	—

B21;;15TS -A 230387

H16;P036 240387

Seed spacing not as indicated in charts.	Wrong tire pressure.	Inflate tires to 280 kPA (2.8 bar) (40 psi) air pressure.	—
	Inconsistent seed size.	—	—
	Wrong sprockets.	Check charts in seed meter operator's manual for correct sprocket combination.	—
	Down force spring too tight, removing weight from drive wheels.	Loosen down force on springs	—
Scattering of seeds.	Planting too fast.	Reduce planting speed.	—
	Seed tube improperly installed.	Check seed tube.	47
Seed tubes or openers plugging.	Allowing planter to roll backward when lowering.	Lower planter only when tractor is moving forward.	—
	Turning tractor steering wheel (four-wheel drive only) when planter is lowered and stationary.	Avoid turning tractor steering wheel when planter is lowered and stationary.	—
Inconsistent seed depth.	Rough seed bed.	Use down force springs on planting units.	28
		Use tine tooth row tillage attachments on planting units.	32
		Reduce planting speed.	—
	Partially plugged seed tube.	Inspect and clean.	—
	Seed tube improperly installed.	Install properly. Be certain seed tube hook is secured in shank.	47
Closing wheels leave severe imprint in soil.	Too much spring pressure.	Adjust closing wheel spring.	18
Closing wheels not firming soil around seed.	Insufficient spring pressure.	Adjust closing wheel spring.	18
Consistent shearing of right-hand drill shaft shear bolt.	Drill shaft not aligned properly.	Loosen bearing and align shaft.	46
	Drive binding or interference.	Inspect all drive chains.	—

B21;;15TS -B 230387

H16;P037 240387

ADDING BALLAST

If the Split Row Attachment is equipped with heavy-duty down pressure springs and coulter attachment, you may need to add ballast to the liftwheel frame.

Add ballast as follows:

B21;;15TS -C 090387

The maximum ballast that can be added to a 5-row Split Row Attachment is 91 kg (200 lb) or two tractor front end weights.

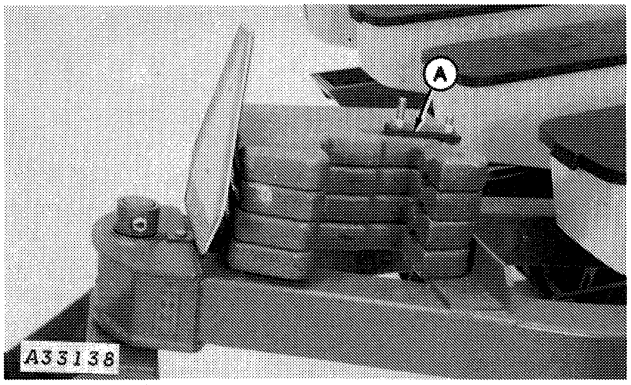
The maximum ballast that can be added to a 7-row Split Row Attachment is 227 kg (500 lb) or five tractor front end weights.

If ballast is added to Split Row Attachment, you may need to add ballast to front planter frame.

If necessary, order R51680 or R58823 tractor weights from your John Deere dealer. (Tractor weights weigh 45 kg (100 lb) each.)

NOTE: If you wish to add maximum ballast to 7-row Split Row Attachment, you must order R58823 tractor weights.

Secure weights to liftwheel frame with plate (A) and 5/8 x 10-1/2 in. cap screws and lock nuts.



050;A33138 B21;;15TS -D 090387

GENERAL PURPOSE GREASE

John Deere Multipurpose Grease is recommended in all grease fittings at hourly intervals indicated on the symbols.

Depending upon the expected air temperature range during the service interval, use grease as shown on the adjoining temperature chart.

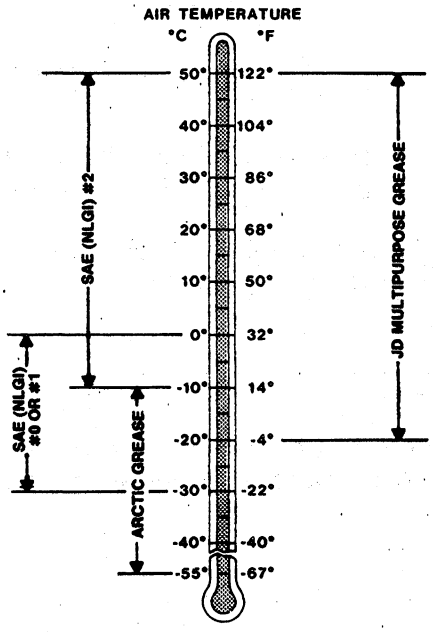
John Deere Multipurpose Grease is recommended. If other greases are used, use:

•SAE Multipurpose Grease.

•SAE Multipurpose Grease containing 3 to 5 per cent molybdenum disulfide.

At temperatures below −30°C (−22°F), use arctic greases such as those meeting Military Specification MIL-G10924C.

NOTE: All hourly intervals can be doubled if SAE Multipurpose Grease containing 3 to 5 per cent molybdenum disulfide is used.



AD0;X9326 B04;;14LU A 130583

HIGH TEMPERATURE/EXTREME PRESSURE GREASE

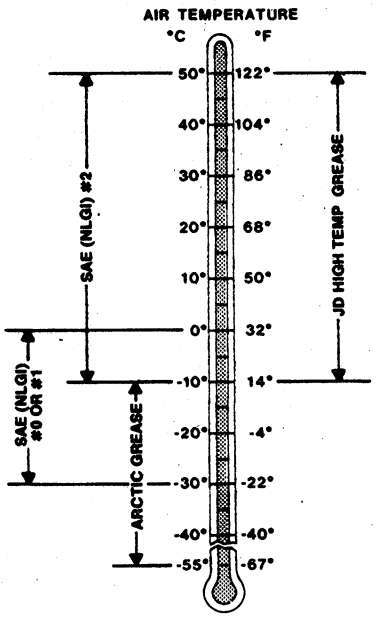
Depending upon the expected air temperature range during the service interval, use grease as shown on the adjoining temperature chart.

John Deere High Temperature/Extreme Pressure Grease is recommended.

If other greases are used, they must be greases meeting SAE Multipurpose High Temperature Grease with Extreme Pressure (EP) Performance and capable of operating at compartment temperatures above 150°C (302°F).

At temperatures below −30°C (−22°F), use Arctic greases such as those meeting Military Specification MIL-G-10924C.

NOTE: Repack wheel bearings once a year with wheel bearing grease.



AD0;X9328 B04;;14LU B 160583

H16;P039 240387

LUBRICATION SYMBOLS

Lubricate with general purpose grease at hourly interval indicated on symbol.

Pack wheel bearings with axle bearing grease at hourly interval indicated on symbol.

Lubricate with SAE 10W oil at hourly interval indicated on the symbol.

8A6; N04;;655N C 090484

Lubricate with John Deere TY6350 Multipurpose spray lube as required.

B21;;3LU B 111086

ALTERNATIVE LUBRICANTS

Conditions in certain geographical areas may require special lubricants and lubrication practices which do not appear in this operator's manual. If you have any questions, consult your John Deere dealer to obtain the latest information and recommendations.

AD0; B04;;14LU C 160583

ROLLER CHAIN AND PESTICIDE GEAR LUBRICATION

The most effective roller chain lubrication routine varies, depending on the environmental conditions and/or condition of the chain. The goal is to maintain complete freedom at every chain link joint.

Lubricate all planter roller chains with John Deere Multipurpose Spray Lube, TY6350 (or equivalent) at intervals sufficient to maintain free chain movement.

When roller chains remain unused for several days, moisture in the air will accumulate on the chain, causing the chain to rust. This can and will become serious enough in time to cause the chain joints to become stiff, restricting their normal free movement. While very difficult to detect, this stiffness can disturb the smooth rotation of seed meter components and cause a deterioration in performance.

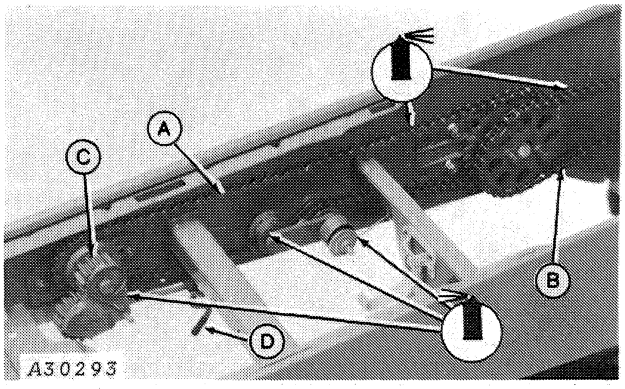
If the planter is not to be used for several days, thoroughly lubricate the chains with John Deere Multipurpose Spray Lube, TY6350, at the beginning of the idle period. If the roller chains have become rusty or stiff during the idle period, lubricate prior to continued usage and operate or "work" the chains sufficiently to ensure all chain joints move freely before normal planter operation is resumed.

Lubricate pesticide drive chain (A) and seed meter drive chain (B) with John Deere Multipurpose Spray Lube, TY6350.

Lubrication of the chains will loosen any stiff or tight links which might cause poor engagement of the chain on the sprockets and poor seed meter performance.

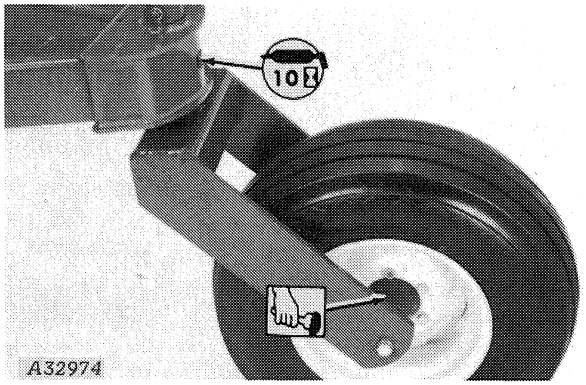
Lubricate the pesticide drive gears (C) with John Deere Multipurpose Spray Lube, TY6350. Move the drive disconnect handle (D) back and forth while spraying. This will loosen any paint or dirt buildup and help allow the gears to turn freely. In adverse conditions it may be necessary to lubricate these gears daily.

IMPORTANT: Do not use chain lube or any other heavy petroleum base lubricant that may cause a buildup of dust or dirt in the sprocket or gear teeth.



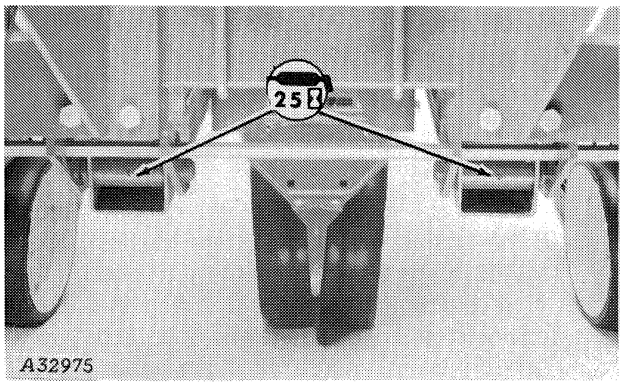
007;A30293 B21;;3LU C 040287

Liftwheel Frame and Liftwheel



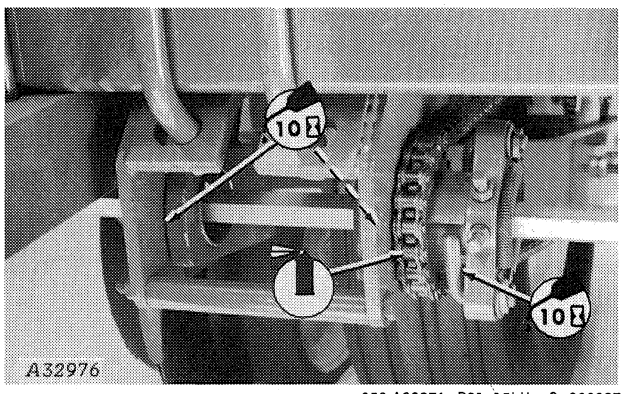
050;A32974 B21;;15LU -A 230387

Liftwheel Frame



050;A32975 B21;;15LU -B 230387

Drive-Gauge Wheels



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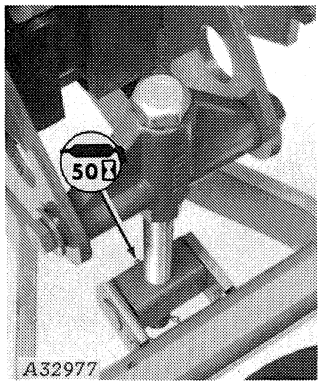
Drive-Gauge Wheels



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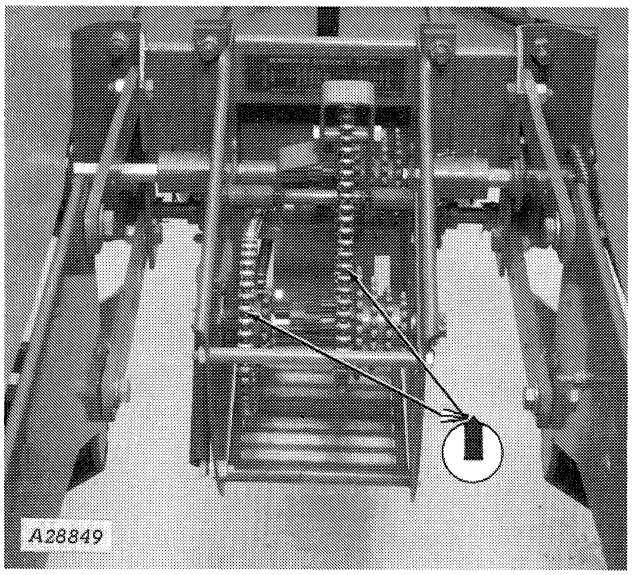
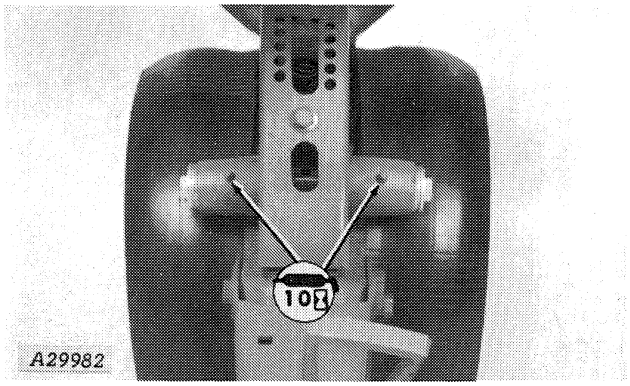


Seed Transmission Drive Chains

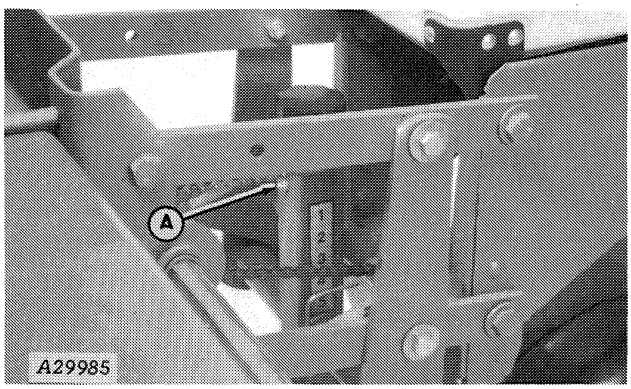
004;A28849 B21;;2AS BD 211086



Gauge Wheels

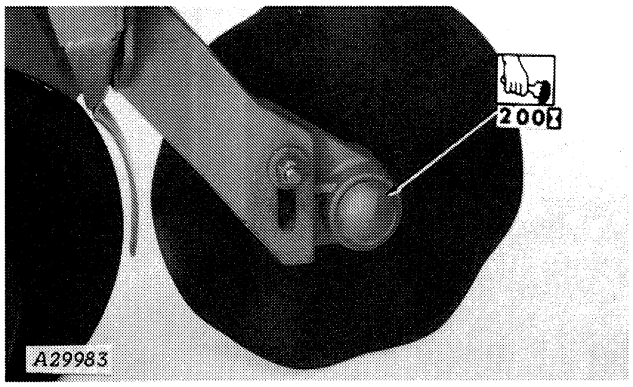
026;A29982 B21;;7LU H 161285

A—Lubricate at beginning and end of planting season with John Deere Multi-Purpose Lubricant or an equivalent SAE multi-purpose-type grease.



Tillage Support Bracket

050;A29985 B21;;7LU -K 230387



Unit Mounted Coulter

026;A29983 B21;;7LU I 161285

BOLT TORQUE (METRIC)

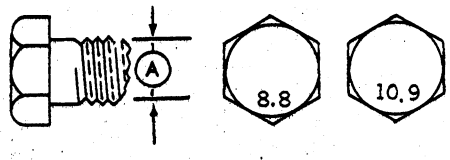
Tighten all bolts to the torques specified in the chart. Keep bolts tight at all times. Loose bolts can cause breakage of parts.

Check the tightness of bolts periodically and keep them tightened to specified torques. When bolts are replaced, be sure they are replaced with bolts of equal strength.

Metric bolts furnished with the planter are identified by 8.8 or 10.9 on the head. Metric nuts may be identified by 8 or 10 stamped on the top or bottom of the nut.

NOTE: Bolts having lock nuts with plated and wax finish should be tightened to approximately 50 per cent of amounts shown in chart.

CAUTION: Use only metric tools on metric hardware. Other tools may not fit properly. They may slip and cause injury.



Bolt Diameter "A"	Wrench Size Metric	8.8 N·m	8.8 (Lb-Ft)	10.9 N·m	10.9 (Lb-Ft)
5 mm	8 mm	6.5	(5)	9.2	(7)
6 mm	10 mm	11.1	(8)	15.6	(12)
8 mm	13 mm	27	(20)	38	(30)
10 mm	16 mm	53	(39)	75	(55)
12 mm	18 mm	93	(70)	130	(96)
16 mm	24 mm	230	(170)	325	(238)
20 mm	30 mm	450	(332)	635	(468)
24 mm	36 mm	780	(575)	1100	(811)
30 mm	46 mm	1550	(1143)	2180	(1608)
36 mm	55 mm	2710	(1999)	3810	(2810)

A28608

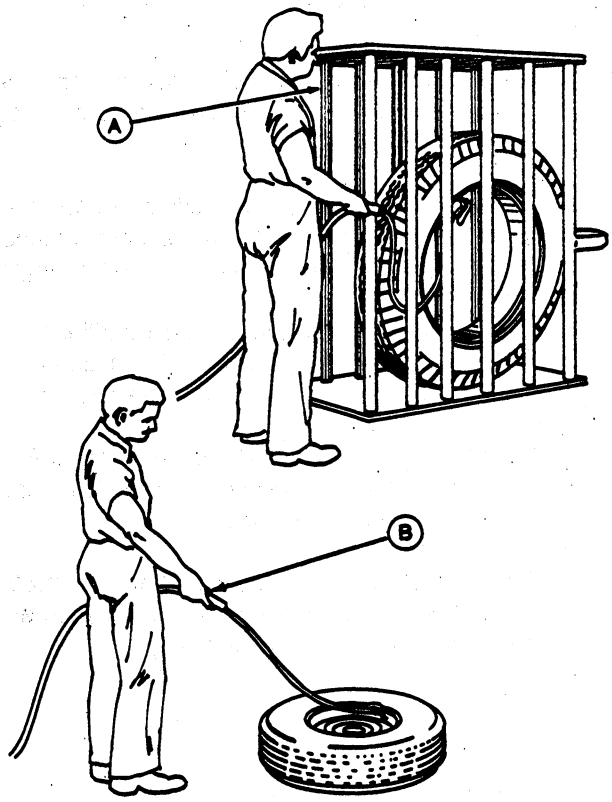
AP0;A28608 B05;;13SE C 011184

MOUNTING TIRES

CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When sealing the beads on rims, never exceed 35 psi (241 kPa) (2.4 bar) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead, and reinflate.

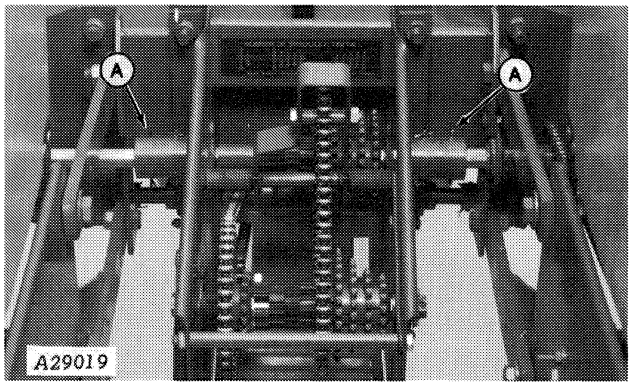
Detailed tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, Tires and Tracks, available through your John Deere dealer. Such information is also available from the Rubber Manufacturers Association and from tire manufacturers.



A—Use a safety cage if available.
B—Do not stand over tire. Use a clip-on chuck and extension hose.

AD0;TS0123 B04;;14SE C 160583

REPLACING DRILL SHAFT COTTER PINS



The cotter shear pins (A), which connect the drill shaft to the transmission, will shear when an excessive load is put on the drill shaft.

NOTE: If drill shaft binds due to misalignment, loosen bolts on drill shaft bearings on planting units. Make certain shaft turns freely and tighten bolts.

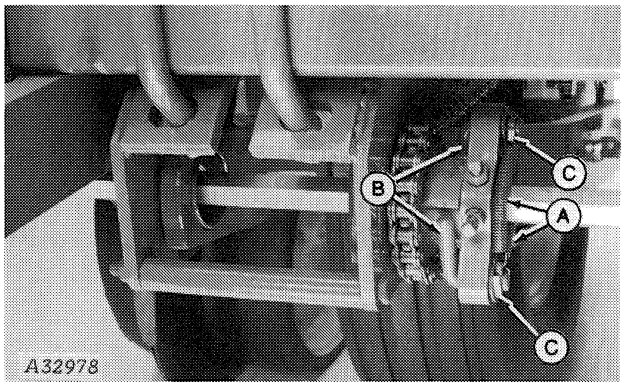
Infrequent or improper lubrication causes "binding"of moving parts within the planter. This "binding"will cause the cotter shear pins to shear, thus preventing breakage of planter parts.

If either cotter pin shears, turn the drill shaft by hand to locate where the binding is occurring. When the drill shaft can be turned freely by hand, replace the cotter pin.

NOTE: Replace the cotter shear pins only with cotter shear pins of the same size. Do not replace with other type pins.

004;A29019 B21;;1SE B 140886

RATCHET DRIVE

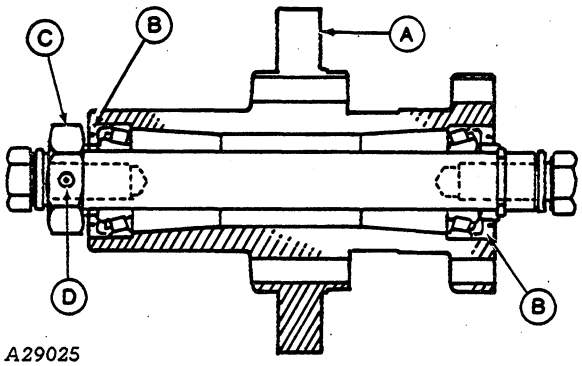


The ratchet assembly must operate freely and the springs (A) must bring the dogs (B) back against the ratchet.

If the springs do not bring the dogs back against the ratchet, push the cotter pins (C) all the way in and spread the cotter pins.

050;A32978 B21;;15SE -A 090387

DRIVE WHEELS



Should the wheel hub (A) be disassembled for any reason, clean and repack the bearing with wheel bearing grease and assemble on the axle. Be careful not to damage seals (B). Install the special jam nut (C) on the axle shaft. While turning the hub, adjust the jam nut until a slight drag is felt. Once this drag is established, tighten the set screw (D) on the jam nut.

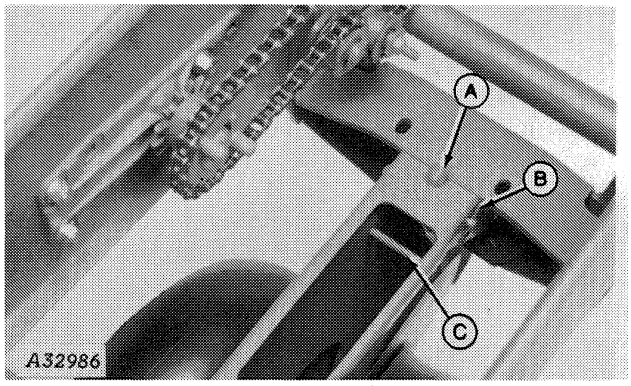
004;A29025 B21;;1SE -H 250287

SMALL AND LARGE SEED TUBES

If seed tubes must be removed or replaced, proceed as follows:

1. Remove shank cover (A) by removing drilled pin and spring locking pin (B).

2. Remove spring locking pin and drilled pin (C) from front tab on seed tubes.



050;A32986 B21;;15SE -B 090387

3. Remove seed tube (A).

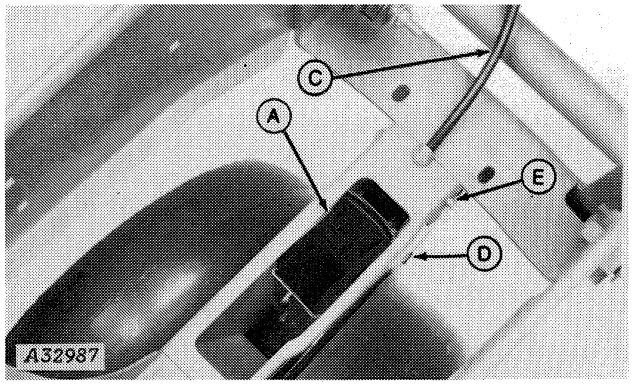
4. Position new seed tube in shank, making certain it is engaged on pin (B).

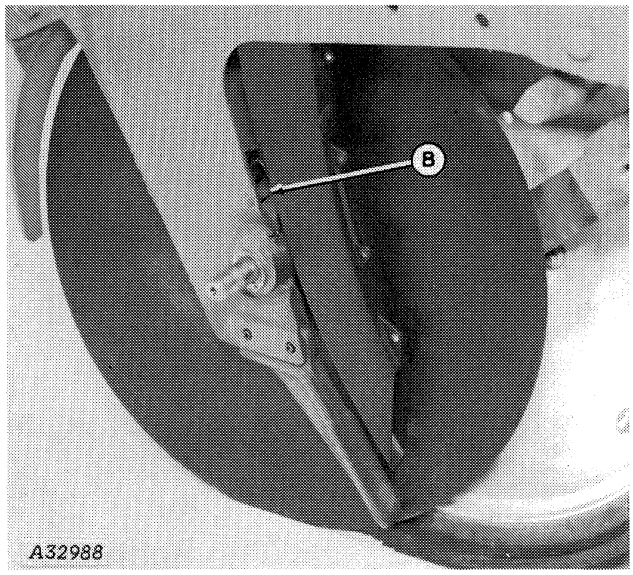
IMPORTANT: If seed tube is not properly located on aligning pin, inaccurate seed metering and/or damage to the seed tube may occur.

5. Install drilled pin (D) and spring locking pin removed in step 2.

6. If seed tube is equipped with seed sensor, route sensor lead out of shank as shown.

7. Replace shank cover and secure with drilled pin (E) and spring locking pin.





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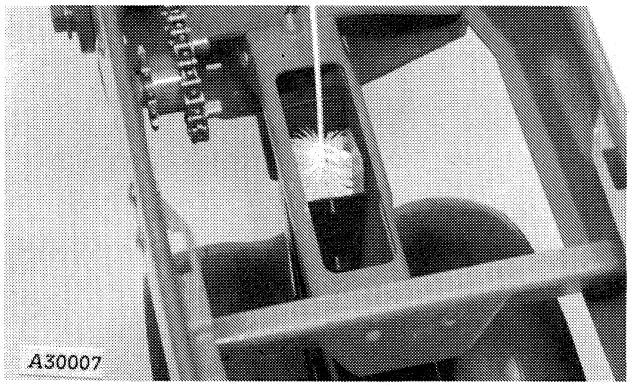
CLEANING SEED SENSOR



In extremely dusty operating conditions, dust can build up on the seed sensor. Even in normal operating conditions, seed treatments can build up in the sensor. Eventually this buildup may become sufficient to disturb the sensor signal light, causing low population counts or low warnings to be indicated.

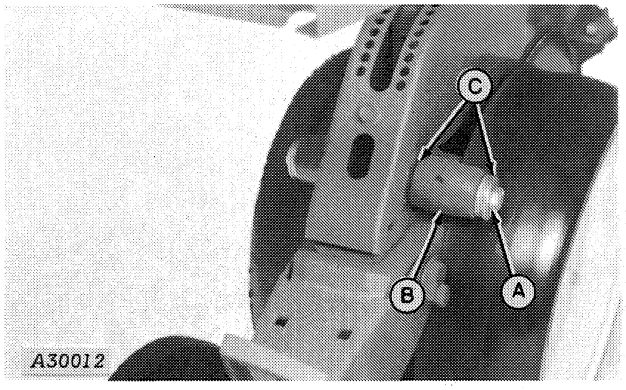
Periodically clean the seed sensor with the brush (dry) provided.

The sensor may also be cleaned with the brush, using mild detergent and water.

IMPORTANT: Do not plant again until the entire seed tube and sensor surfaces are dry.

026;A30007 B21;;7SE -Q 210387

ADJUSTING GAUGE WHEELS



To prevent a buildup of dirt or trash between gauge wheels and opener, be certain wheels are positioned correctly against disk blades.

Gauge wheel tires should just touch the blades, or be no more than 1.5 mm (1/16 in.) away from the blades at their closest point.

To move a gauge wheel in or out from the blade, remove bolt (A), gauge wheel (B), and washers (C) from pivot shaft. Add or remove 0.048 in. thick spacer washers between shank and wheel arm as required. Place any remaining spacer washers on the outside of the wheel arm and replace lock washer and 1/2 x 1-1/4 in. bolt.

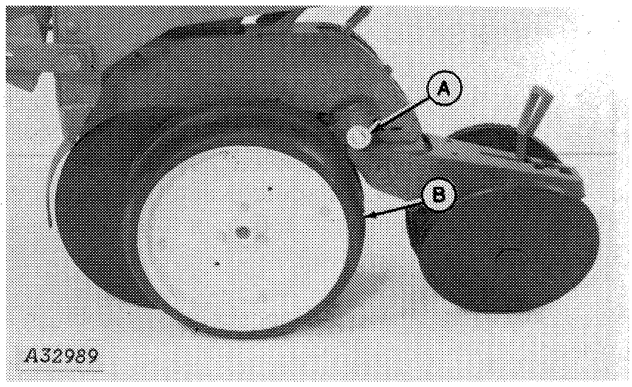
NOTE: When assembled, gauge wheels and disk blades must be free to turn with minimal resistance.

026;A30012 B21;;7SE U 161285

REPLACING SEED OPENER BLADES AND SEED TUBE GUARD

If opener blades must be replaced for any reason, be certain they are replaced with the correct amount of blade contact. To replace blades, proceed as follows:

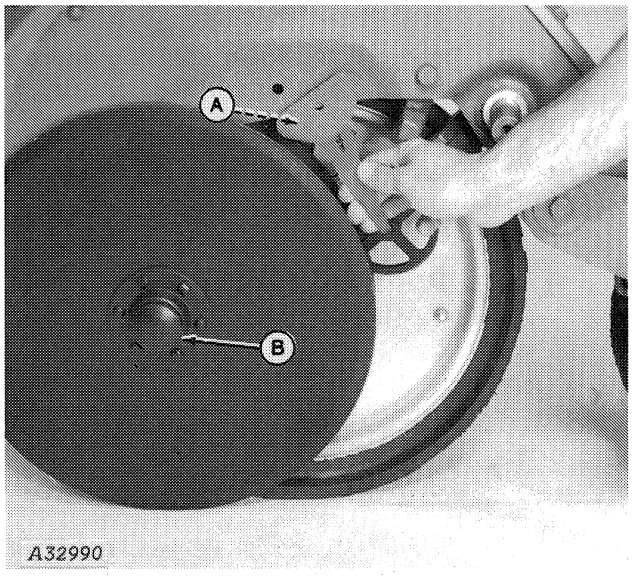
1. Remove cap screw (A) and gauge wheel (B) from pivot shaft making certain to leave inside washers in place.



050;A32989 B21;;15SE -D 230387

2. (Planting unit equipped with rotary scraper) Pull front engagement pin (A) outward, disengage it from the shank panels, rotate and insert scraper between opener blades.

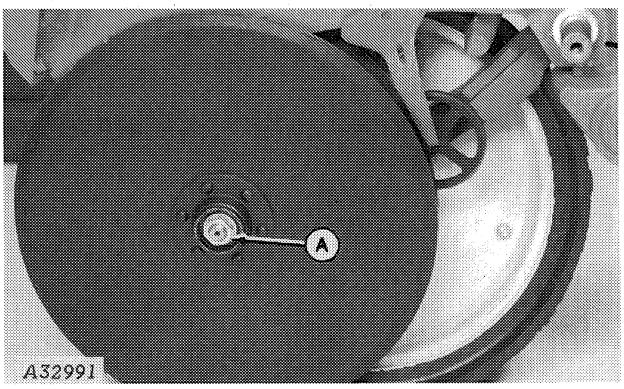
3. Remove hub cap (B).



050;A32990 B21;;15SE -E 090387

4. Remove nut, washer from outside of bearing, disk blade and hardened washers from shaft (A).

NOTE: Nut on left-hand side of opener has left-hand thread.



050;A32991 B21;;15SE -F 090387

5. To properly replace blade assembly, add or remove hardened washers behind blade bearing to obtain up to 55 mm (2 in.) of blade edge contact at point (A).

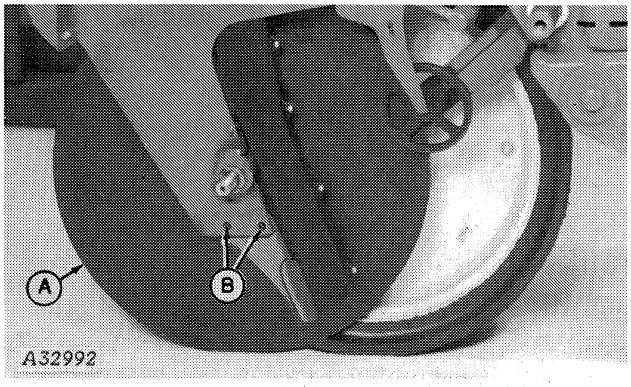
NOTE: Inserting a piece of paper at point (A) will help verify this dimension.

Replace blade, bearing washer, nut and cap.

NOTE: Nut on left-hand side of opener has left-hand thread.

Replace seed tube guard (B) if excessively worn.

When assembled, the blades should turn with minimal resistance.



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BEGINNING OF THE SEASON SERVICE

Before using the planter after it has been stored, inspect the seed hoppers for cleanliness to be certain the seed will flow from hoppers freely.

Thoroughly inspect the planter unit for loose parts and adjust as necessary.

Clean any dirt or grease that may have accumulated on moving parts, gears and chains before operating the planter. This will prevent abrasive action that could cause excessive wear.

When roller chains remain unused for several days, moisture in the air will accumulate on the chain, causing the chain to rust. This can, and will, become serious enough in time to cause the chain joints to become stiff, restricting their normal free movement. While very difficult to detect, this stiffness can encourage the chains to operate abnormally and disturb the smooth rotation of important meter components, causing deterioration in performance.

If the planter is not used for several days, or if oil has been removed from chains, etc. while cleaning the planter, thoroughly lubricate chains with John Deere Multipurpose Spray Lube, TY6350.

IMPORTANT: Do not use chain lube or any other heavy petroleum base lubricant that may cause a buildup of dust or dirt in the sprocket or gear teeth.

B21;;15ST -A 090387

SERVICE AT THE END OF THE SEASON

When planting is completed for one season, store the split row attachment under cover with all parts in operating condition.

Paint all parts which are chipped or worn and require repainting.

Clean the split row attachment thoroughly to remove dirt and trash which would hold moisture and cause rusting.

Lubricate the split row attachment as outlined in the Lubrication section and grease exposed cylinder rods.

If the split row attachment is not to be used for several days, or if oil has been removed from chains, etc. while cleaning the split row attachment, thoroughly lubricate chains with John Deere Multipurpose Spray Lube, TY6350, at the beginning of the idle period. If roller chains have become rusty or stiff during the idler period, lubricate prior to continued usage and operate or "work" chains sufficiently to insure all chain joints move freely before normal split row attachment operation is resumed.

Empty and clean seed hoppers.

Inspect the split row attachment for worn or broken parts. See your John Deere dealer during the off season so that parts or service can be acquired when the split row attachment is not needed in the field.

Store the split row attachment in a clean, dry place with the planting unit gauge wheels and firming wheels out of the sun and off the floor.

Place handle for closing wheel down force in long slot to relieve tension on closing wheels.

Thoroughly flush liquid herbicide system with clean water. Disconnect from tractor and completely drain all lines and components to prevent damage from freezing.

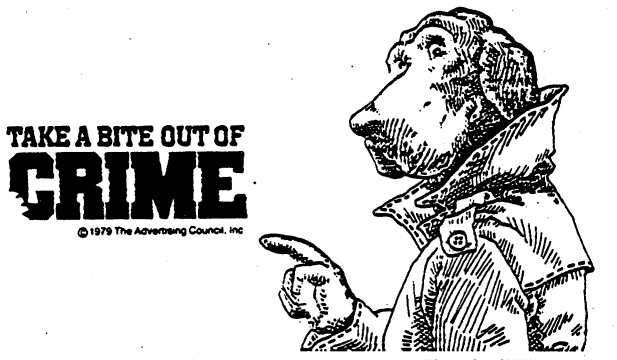
B21;;15ST -B 230387

Crime Prevention Tips

GOOD ADVICE

Keep your machine damage-free and YOURS!

Follow the advice on these pages to reduce vandalism, discourage theft, and help recover your machine if it is stolen.



AB6;TS140 053;CRPRV A. 130586

RECORD IDENTIFICATION NUMBERS

1. Record Product Identification Number (PIN) of unit and identification numbers of engine, component, attachment, etc. EXACTLY as they appear on the plates.

2. Check that the complete and correct numbers appear on all documentation (insurance, financial, warranty, manufacturer's certificate of origin, etc.). Keep all documents in a safe location.

3. If available, participate in an "Owner Applied Numbering Program" and mark your own machines.

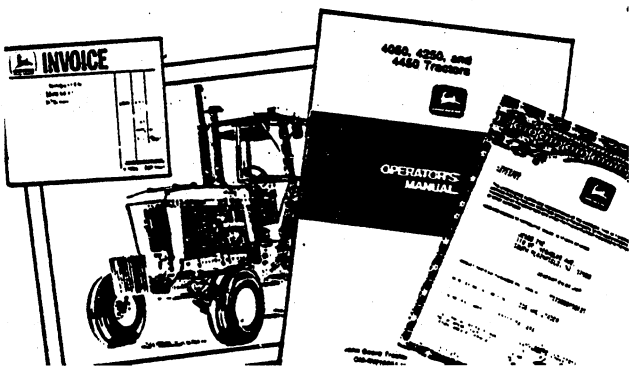
AB6;TS161 053;CRPRV B 091283

MAINTAIN DOCUMENTED PROOF OF OWNERSHIP

1. Keep in a safe location all documents (invoices, warranty cards, manufacturer's certificate of origin, if available, etc.) that accompanied your machines at the time of purchase.

2. Take color photographs of each machine from several angles.

3. Maintain an up-to-date inventory of all machines. Check regularly to insure no machines have been stolen.



AB6;TS142 053;CRPRV C 181183

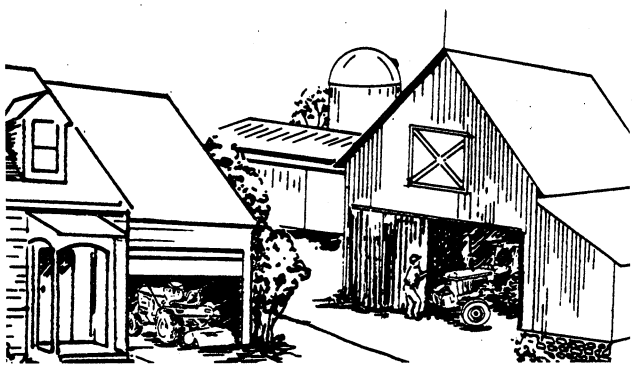
PARK INDOORS OUT OF SIGHT

1. Lower all equipment making the machine harder to move.

2. Remove ignition key. If so equipped, lock cab doors, windows and any vandal protection devices. Place hard-to-move equipment in front of exits.

3. If machine is being stored, remove the battery or any essential component in the electrical system.

4. Set wheels in widest position making loading more difficult. Secure all openings to storage buildings.



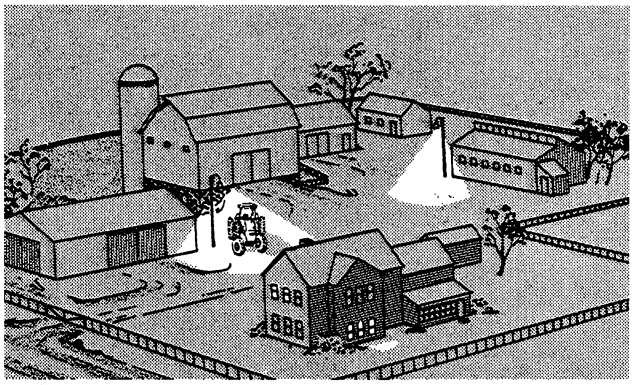
AB6;TS143 053;CRPRV D 100184

PARKING OUTDOORS

1. Park machine in a fenced, well-lighted, locked area. Lower equipment, remove ignition key and lock cab doors, windows, and any vandal protection devices, if so equipped.

2. Make law enforcement aware of your presence in an area and provide them with a contact person to assist them in dealing with suspicious activity.

3. Solicit assistance from neighbors or merchants who permanently reside near the parking area.



AB6;TS155 053;CRPRV E 091283

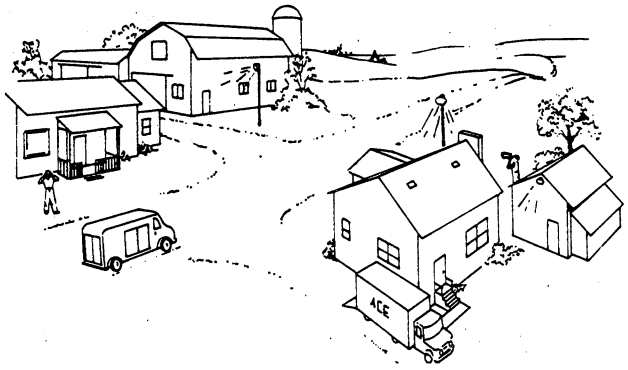
REDUCE VANDALISM

1. Install vandal protection devices especially if parking machine in high-risk areas.

2. Solicit assistance for watching machine from individuals residing in the area.

3. Take written notes and report to law enforcement all suspicious vehicles or persons.

4. Participate in a "Neighborhood Watch Program."



AB6;TS145 053;CRPRV F 100184

REPORT THEFT

1. If a theft occurs, notify the law enforcement agency having jurisdiction and the insurance carrier immediately.

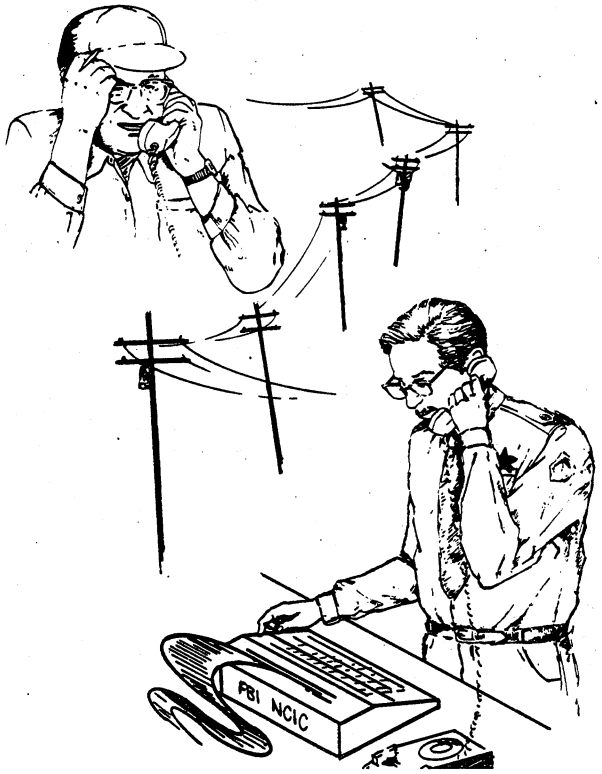
2. Give a full description and a complete identification number(s) to the investigating officer and insurance carrier.

3. If available, provide the investigating officer with photographs of the actual machine, manufacturer's literature and knowledge of any identifiable marks that would assist in identifying the machine.

4. Ask for verification that the stolen machine has been entered into the National Crime Information Center (NCIC) operated by the FBI in Washington D.C.

5. Notify your John Deere dealer of the theft and request that, if possible, a notice be posted that provides the description and identification information.

6. Regularly check the identification plates on all machines and report any removed plates to law enforcement immediately. Promptly contact your dealer and order a duplicate identification plate.

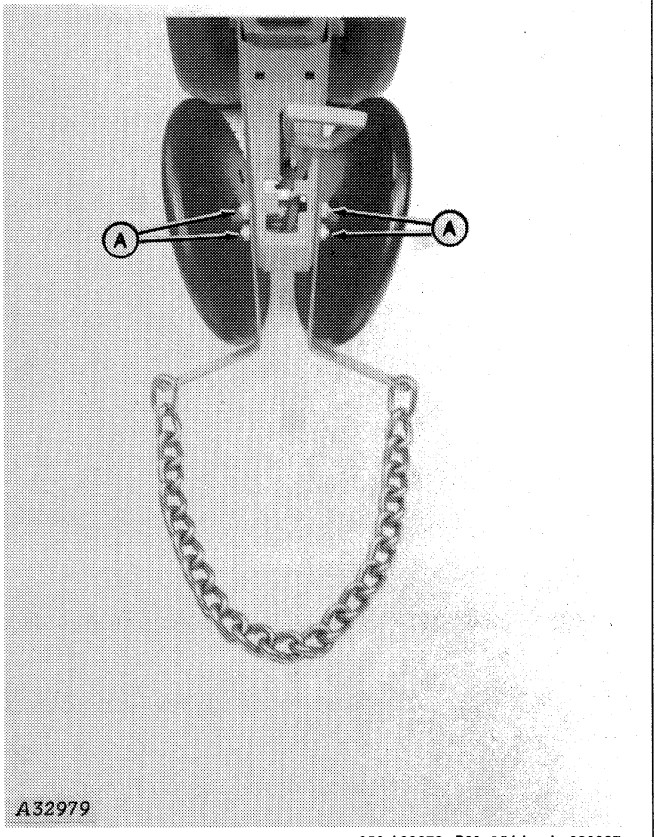


AB6;TS146 053;CRPRV G 181183

H16;P055 240387

ROW LEVELER CHAIN

1. Attach row leveler chain with M10 x 20 round head bolts (A) and nuts.

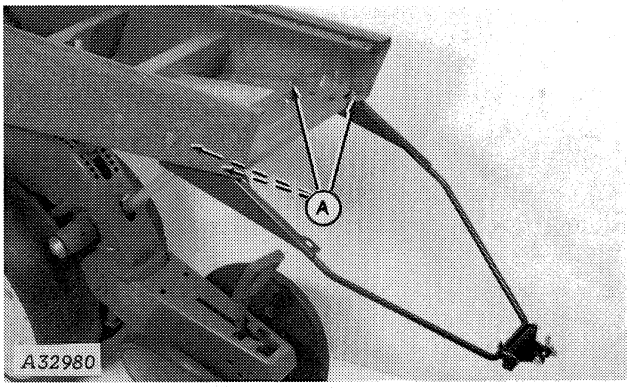


050;A32979 B21;;15AA -A 090387

LIQUID HERBICIDE PRE-EMERGE SPRAY ATTACHMENT (Bracket and Nozzle Assembly)

NOTE: The following instructions are for band spraying. If flood spraying is desired, see "LIQUID HERBICIDE PRE-EMERGE SPRAY ATTACHMENT" in the Attachment section of this manual.

1. Attach bracket to planting unit with M6 x 16 cap screws (A) and lock nuts.

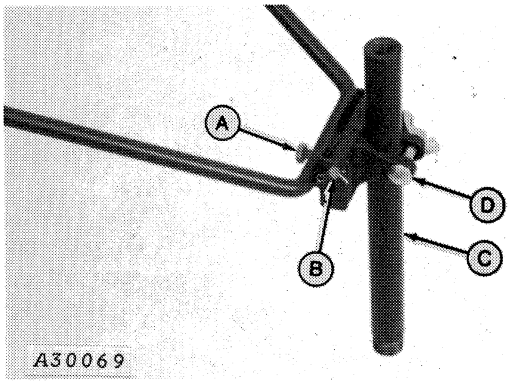


050;A32980 B21;;15AA -B 230387

2. Screw jam nut on M6 x 25 cap screw (A). Screw cap screw through bracket and secure with second jam nut.

3. Secure pivot to bracket with drilled pin (B) and cotter pin.

4. Insert tube (C) (outside threaded end down) into pivot and secure tube with M6 x 35 round head bolt (D) and wing nut. Turn adjusting screw (A) until tube is straight up and down and tighten jam nuts.

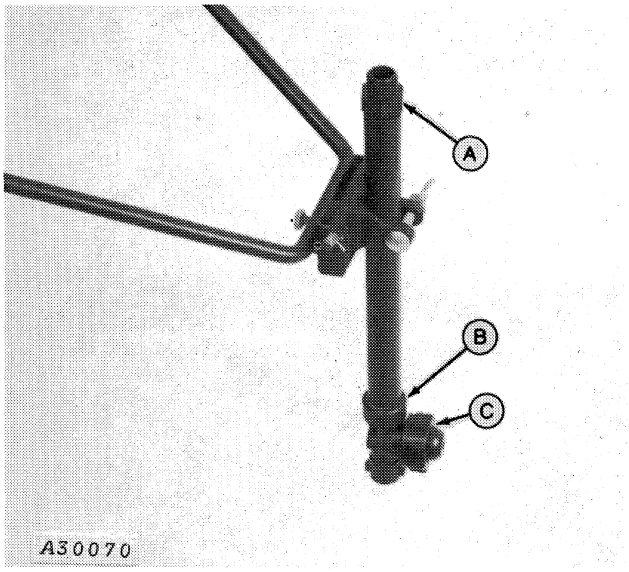


026;A30069 B21;;3AA DH 280986

H16;P056 240387

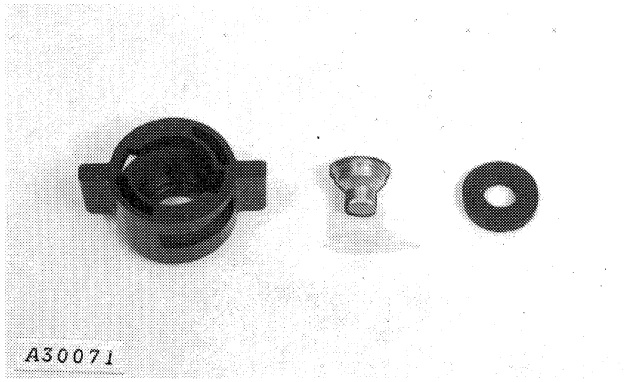
5. Screw union fitting (A) on tube (hand tighten fitting plus one-half turn only).

6. Screw nozzle body (B) on tube (hand tighten only). Position nozzle body on tube with check valve (C) facing rearward by loosening wing nut and rotating tube.



026;A30070 B21;;3AA DI 280986

7. Insert desired spray nozzle tip and then washer into cap.



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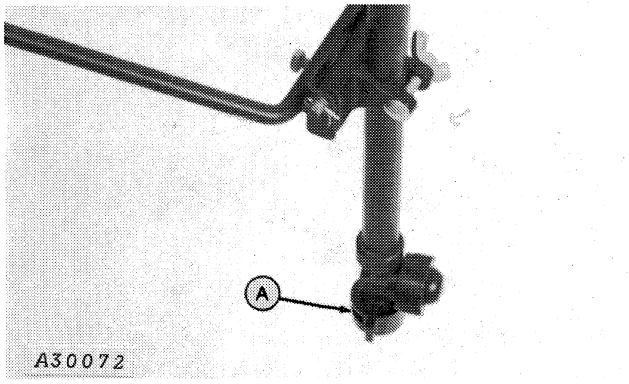
8. Attach cap (A) onto nozzle body. Make certain nozzle tip is perpendicular to direction of travel.



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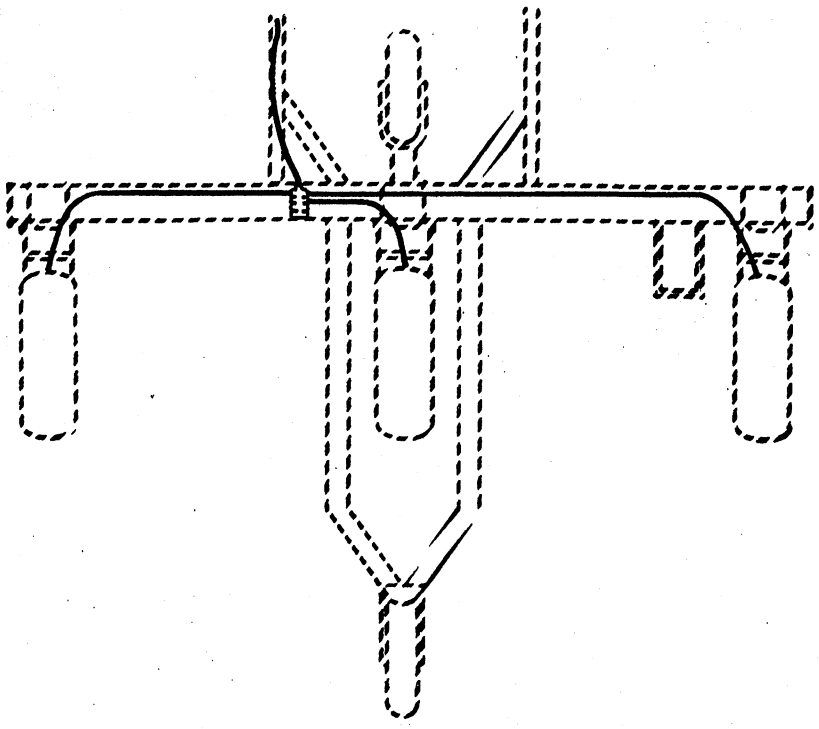
LIQUID HERBICIDE PRE-EMERGE SPRAY ATTACHMENT (Manifolds and Delivery Hoses)



A32981

3-Row Skip

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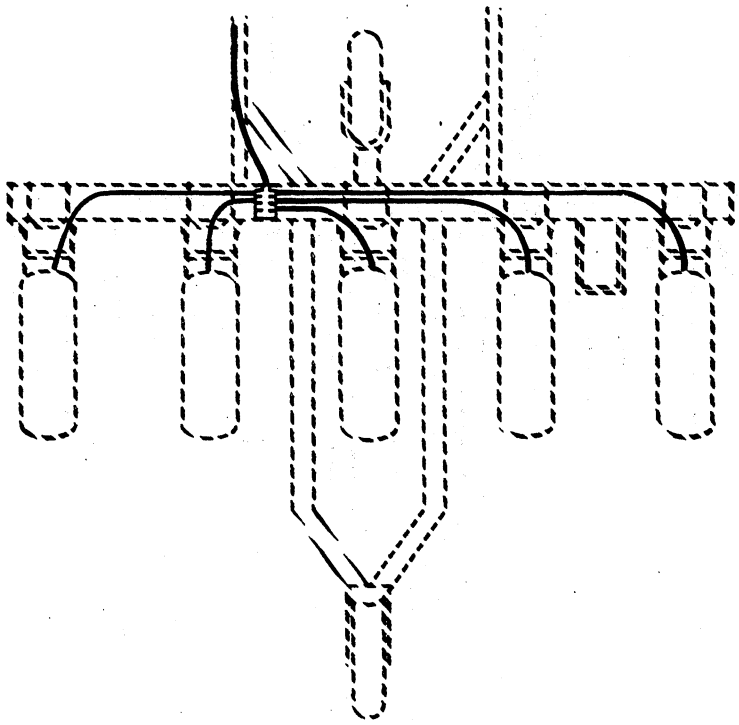

A32982

5-Row Solid

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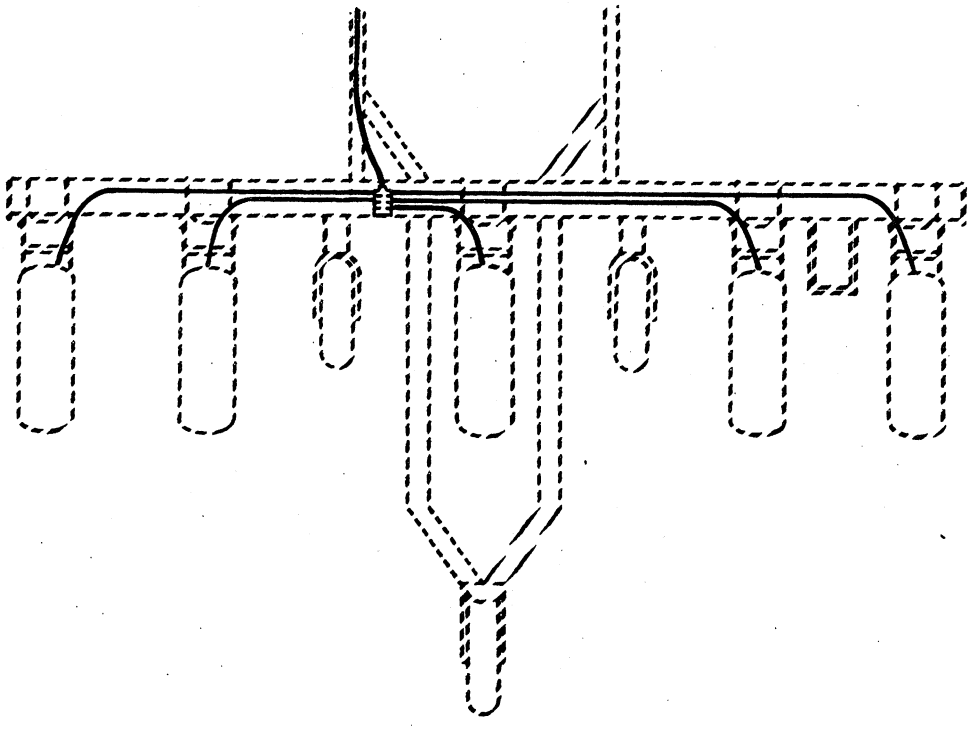

A32983

5-Row Skip

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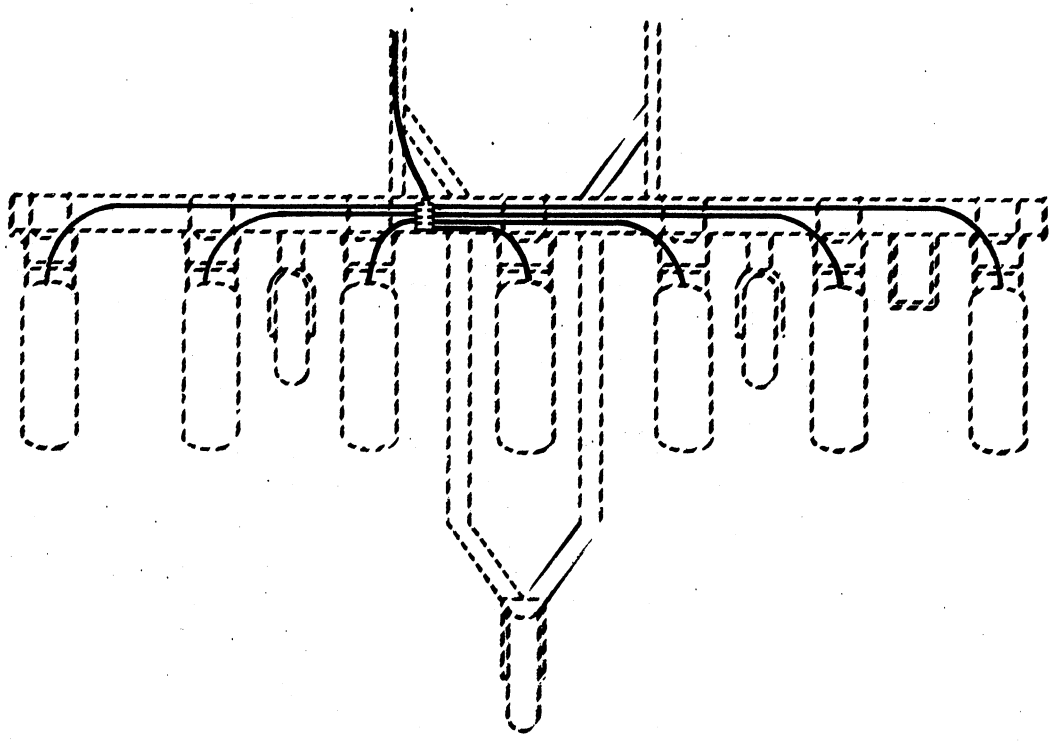
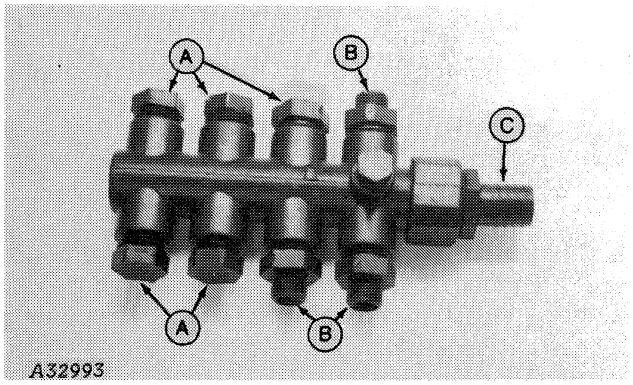


7-Row Solid

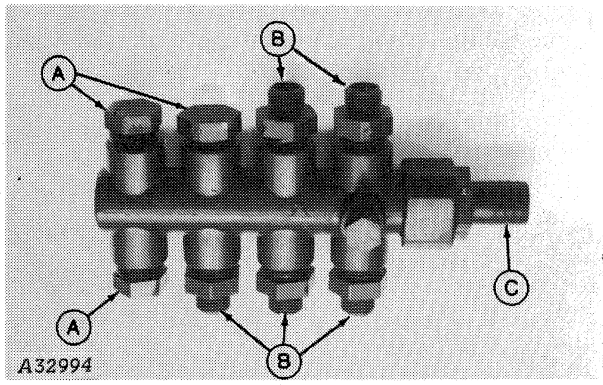
050;A32984 B21;;15AA -F 090387

1. Install plugs (A), union fittings (B) and hose barbs (C) on manifolds as shown.

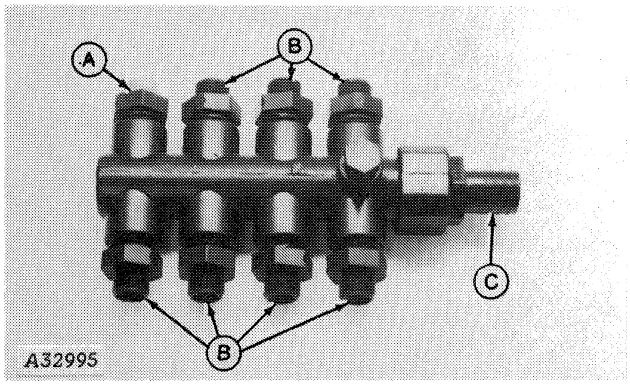
NOTE: Use teflon tape on all threaded fittings going into manifold only.



3-Row Skip



5-Row Skip or
5-Row Solid



7-Row Solid

050;A32993 A32994 A32995 B21;;15AA -G 090387

2. Position manifold on frame approximately next to left-hand connecting arm. Secure manifold with large tie straps (A).

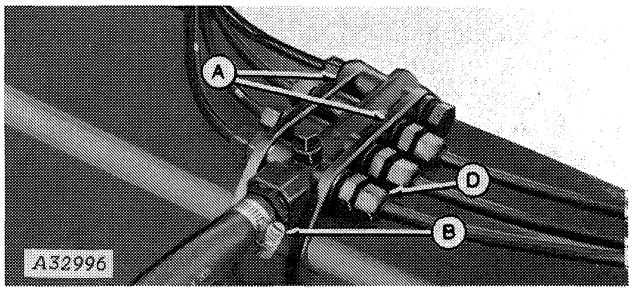
3. Attach 19 mm (3/4 in.) hose to front hose barb with clamp (B).

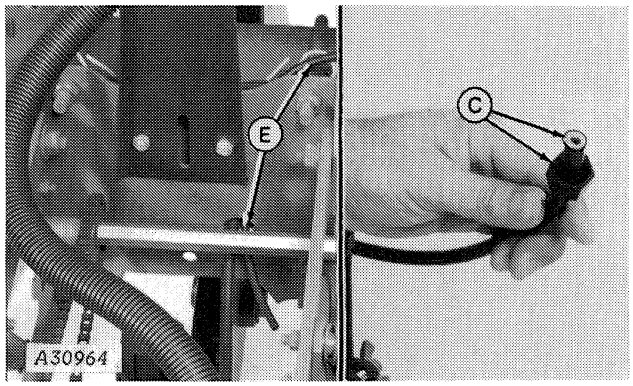
4. (Not Illustrated) String hose from planter up to approximately the rear window of the tractor or desired length, then cut hose. Install hose barb, nut and washer on tractor end of hose and secure with hose clamp. Attach hose to control valve on tractor.

5. Install nut and insert (C) on end of 6 mm (1/4 in.) bulk hose.

6. Screw nut onto union fitting (D) on manifold as shown.

7. String 6 mm (1/4 in.) bulk hose (E) along top of frame. Insert hose through hole in mounting bracket on left-hand side of end planting unit.

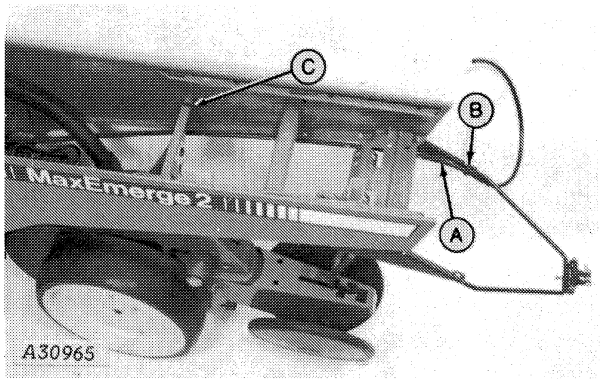




050;A32996 A30964 B21;;15AA -H 230387

8. Pull hose (A) through, and approximately 710 mm (28 in.) past the end of the planting unit. Cut hose and secure to rear hole only of bracket with tie strap (B). Secure hose to bottom panel (C) with tie strap.

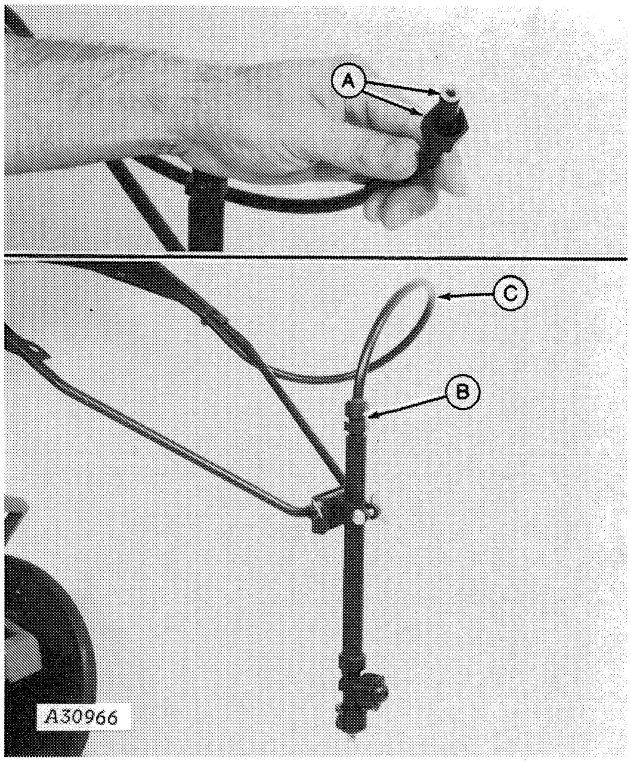
Make sure hose is installed UNDER ALL supports.



9. Install nut and insert (A) on end of hose.

10. Screw nut (B) onto fitting.

11. Adjust plastic tubing (C) to provide spring tension on the nozzle holder. Tension will aid in keeping nozzle in operating position when it is hit by an obstruction.



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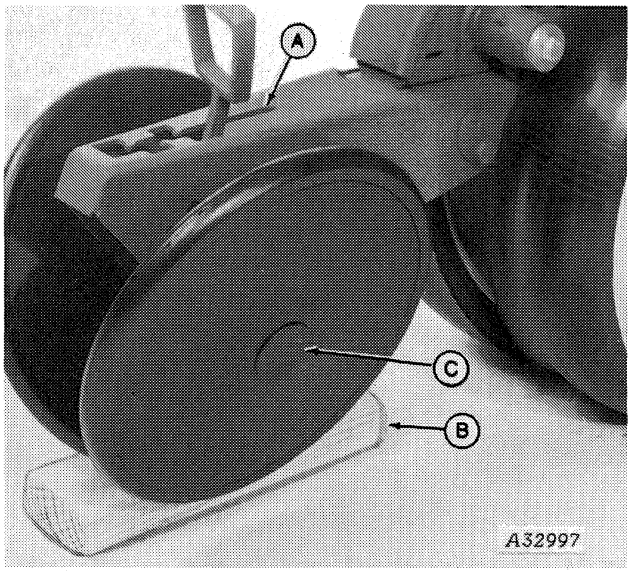
HEAVY-DUTY CLOSING WHEEL

NOTE: Install the heavy-duty closing wheel either by placing a wooden block under the wheels or by raising the planter. If you raise the planter, be certain to install the transport locks on the liftwheel hydraulic cylinders. If you place a block under the wheels, place the down force handle in the middle slot (A) to relieve down force.

1. Place a block (B) under one of the wheels.

2. Remove hub cap (C).



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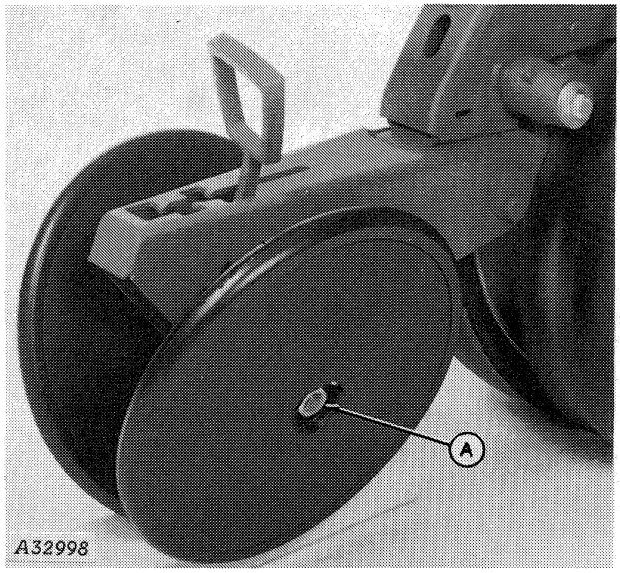
3. Remove nut (A) (right-hand side wheel has right-hand thread and left-hand side wheel has left-hand thread). Remove rubber closing wheel from axle.



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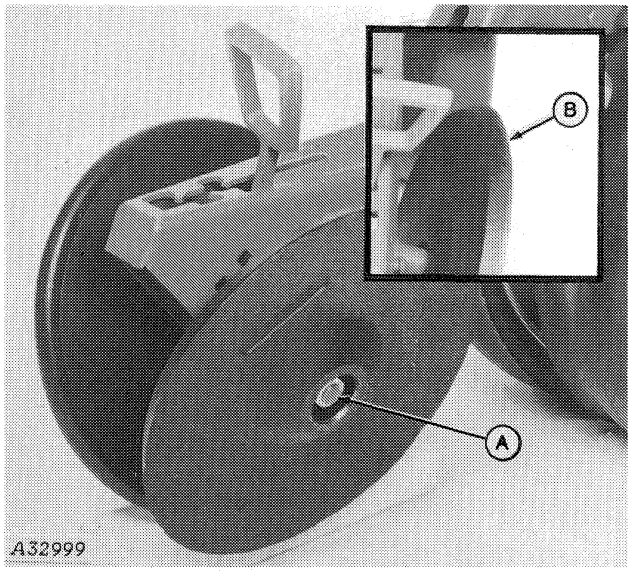
4. Install heavy-duty closing wheel (A) on axle with the tapered edge (B) to the inside.

Replace nuts and tighten to 125 N·m (92 lb-ft) of torque.



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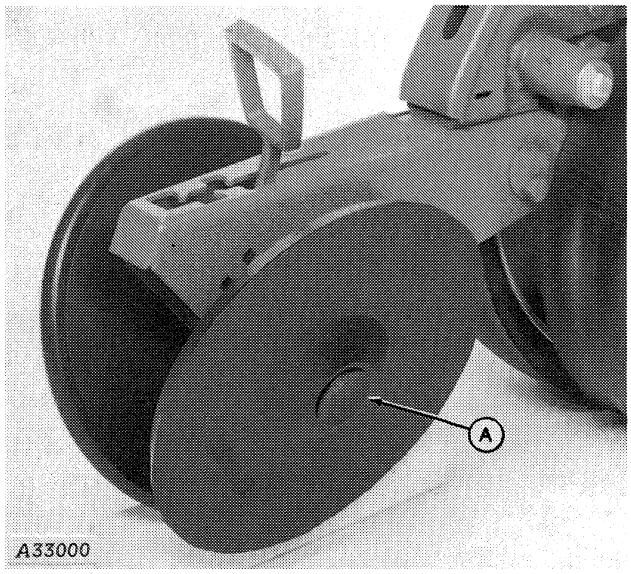
5. Install hub cap (A).

6. (Not Illustrated) Place block under heavy-duty closing wheel and remove other rubber wheel. Install other heavy-duty wheel in the same manner.



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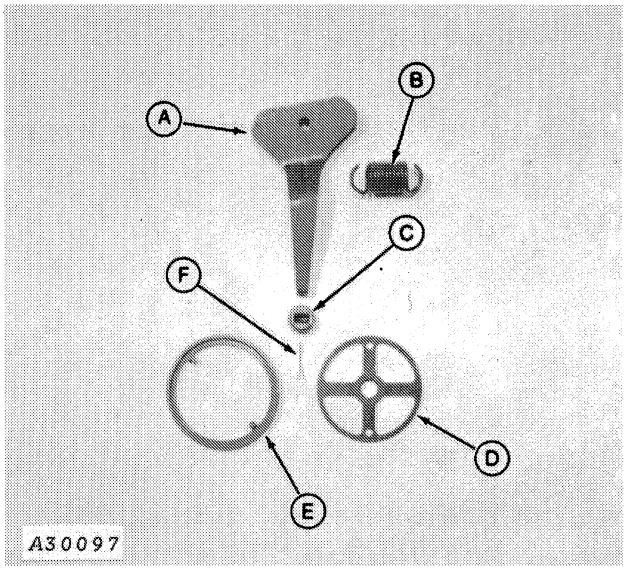
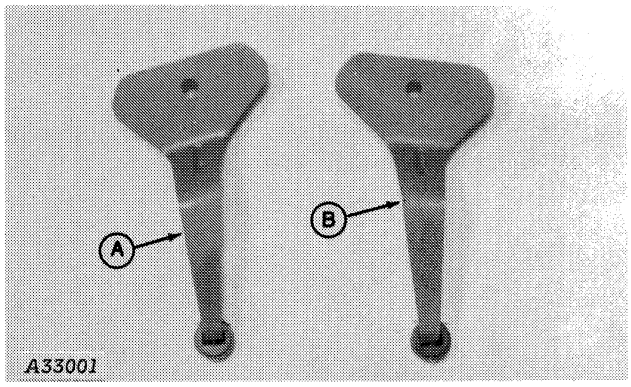
ROTARY SCRAPER

A—Arm
B—Spring
C—Pivot
D—Scraper
E—Insert
F—Cotter Pin



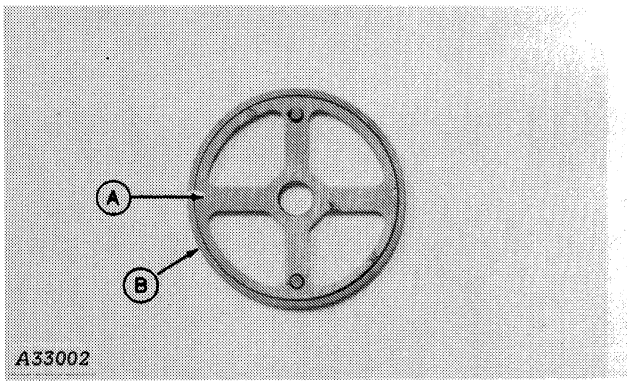
050;A30097 B21;;15AA -M 230387

1. Attach pivot to left-hand scraper arm (A) and right-hand scraper arm (B) with cotter pin.



050;A33001 B21;;15AA -N 090387

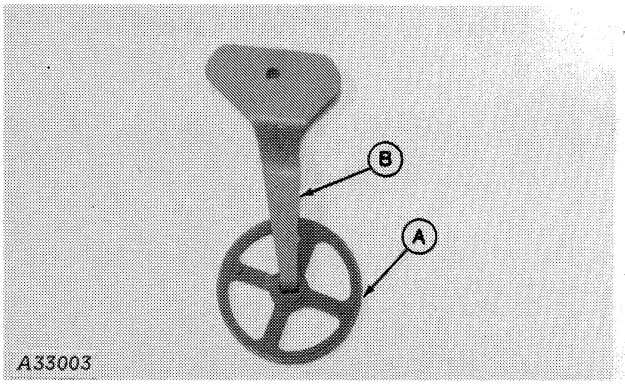
2. Snap scraper support (A) into scraper insert (B).



050;A33002 B21;;15AA -O 090387

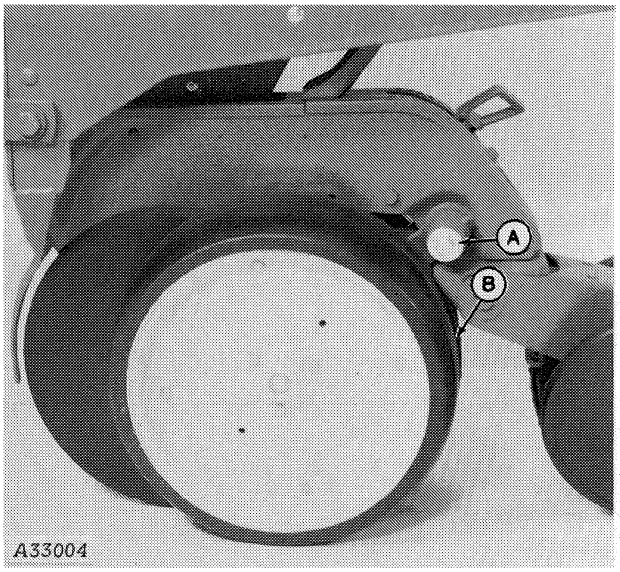
H16;P066 240387

3. Snap scraper assembly (A) onto pivot (B).



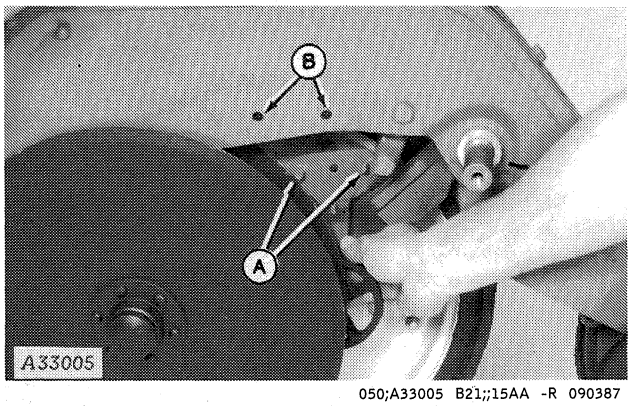
050;A33003 B21;;15AA -P 090387

4. Remove cap screw (A) and left gauge wheel (B).



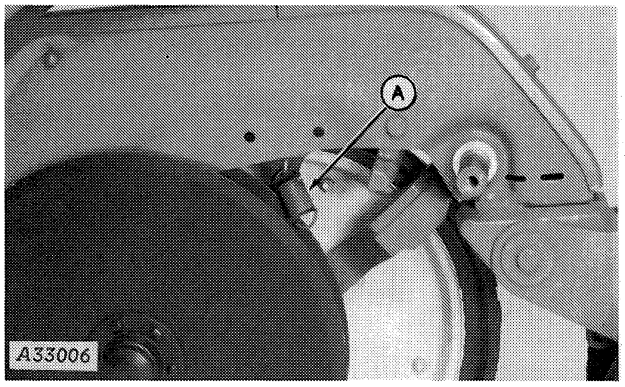
050;A33004 B21;;15AA -Q 090387

5. Install right-hand scraper by placing the scraper behind both double-disk opener blades. Insert pins (A) on scraper arm into two holes (B) on right-hand side of shank.



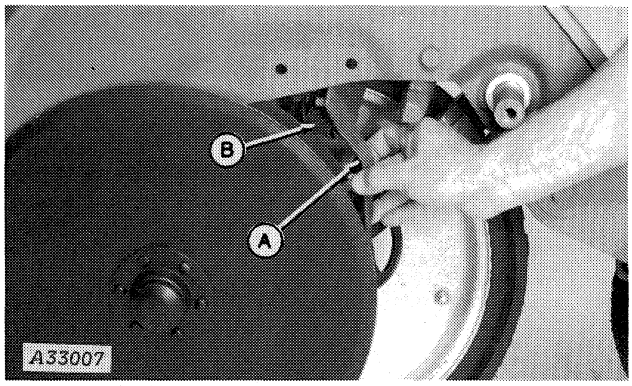
050;A33005 B21;;15AA -R 090387

6. Install spring (A) on right-hand scraper.



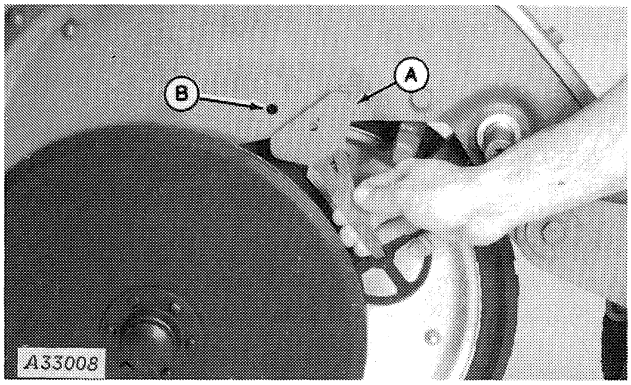
050;A33006 B21;;15AA -S 090387

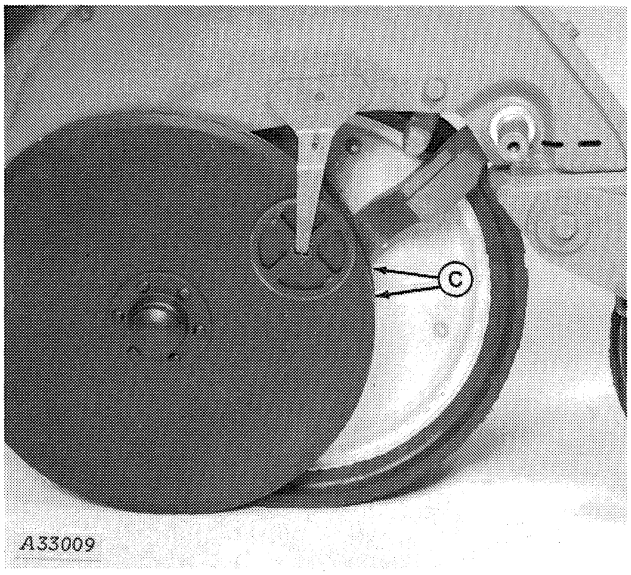
7. Attach left-hand scraper arm (A) to other end of spring (B).



050;A33007 B21;;15AA -T 090387

8. Pull left-hand scraper toward you and insert scraper arm into rear hole (A). Rotate scraper and insert other pin into front hole (B). Both scraper assemblies should rest firmly on the outside of the opener blades (C).





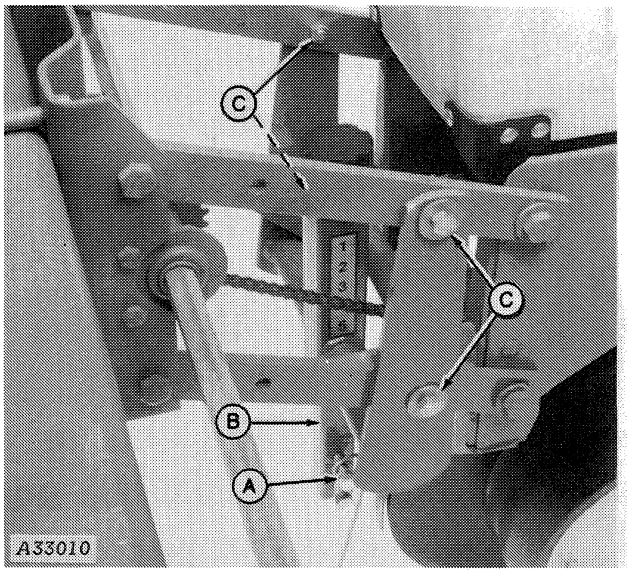
050;A33008 A33009 B21;;15AA -U 090387

CONSERVATION FURROWER ATTACHMENT

NOTE: Raise the planter and install transport locks.

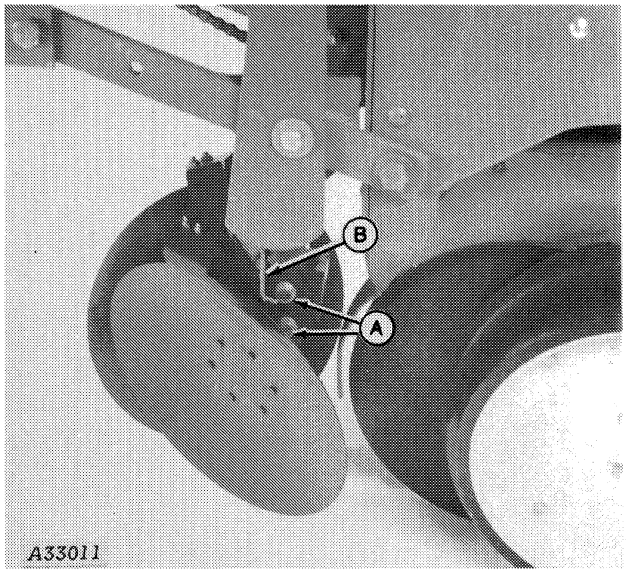
1. Remove cap screws and pointer (A) from support bracket (B). Additional hardware is inside support bracket.

2. Attach row tillage support bracket to rear holes (C) in the planting unit parallel arms with spacers, M12 x 50 cap screws, washers and lock nuts.



050;A33010 B21;;15AA -V 090387

3. Attach furrower and pointer to support bracket with cap screws (A) and pointer (B).



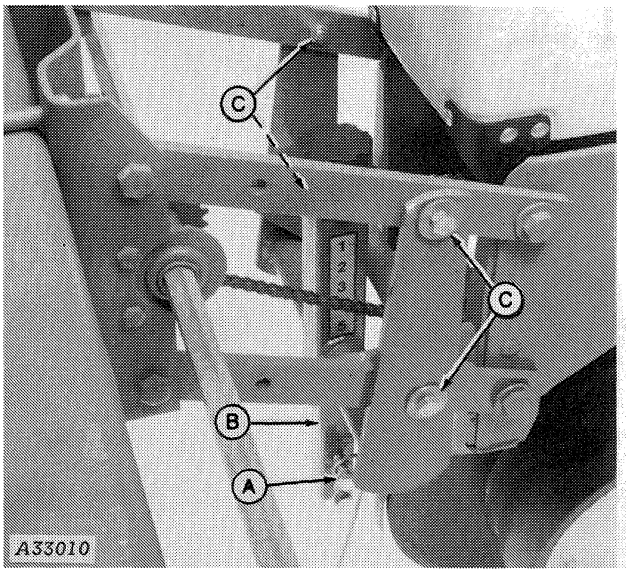
050;A33011 B21;;15AA -W 090387

TINE-TOOTH TILLAGE ATTACHMENT

NOTE: Raise the planter and install the transport locks.

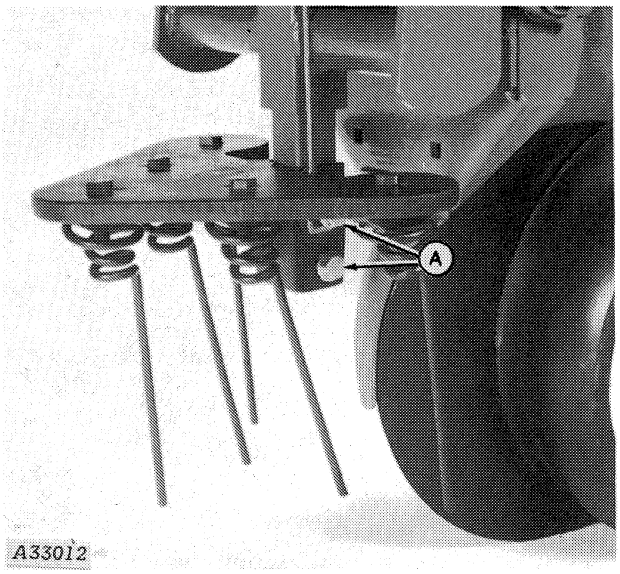
1. Remove cap screws and pointer (A) from support bracket (B). Additional hardware is inside the support bracket.

2. Attach row tillage support bracket to rear holes (C) in the planting unit parallel arms with spacers, M12 x 50 cap screws, washers and lock nuts.



050;A33010 B21;;15AA -X 090387

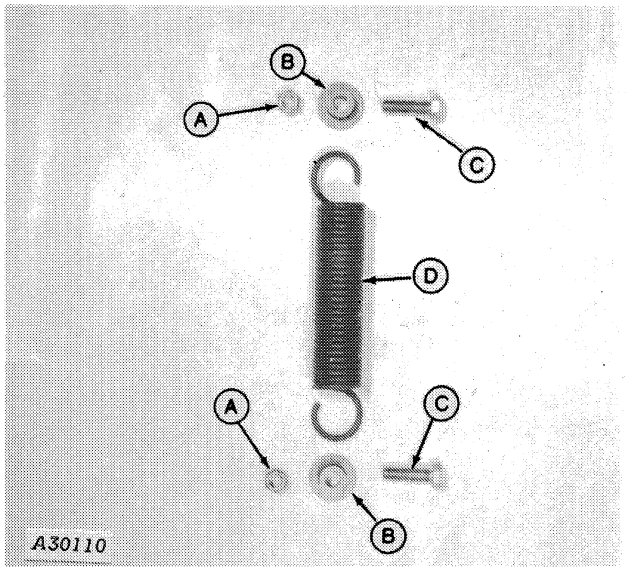
3. Attach tine teeth and pointer to support bracket with cap screws (A).



050;A33012 B21;;15AA -Y 090387

REGULAR DOWN FORCE SPRINGS

A—Lock Nut
B—Spacer
C—Cap Screw
D—Spring



026;A30110 B21;;7AA -BZ 210387

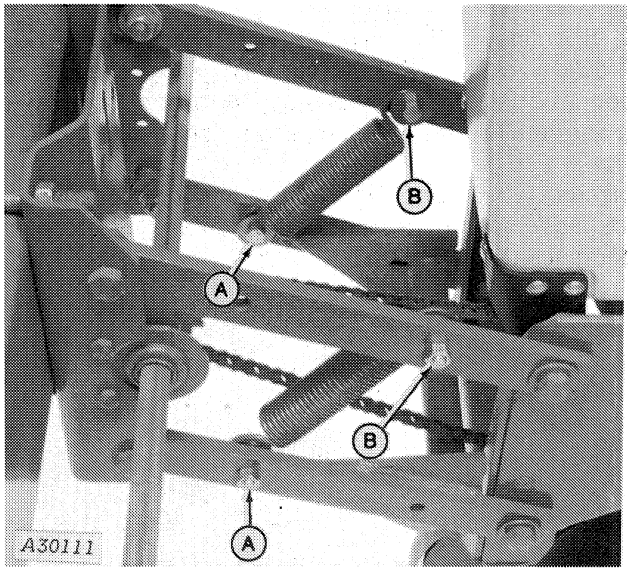
The unit down force springs can be mounted inside or outside of the parallel arms and are compatible with all tillage attachments.

To install a single set of springs, proceed as follows:

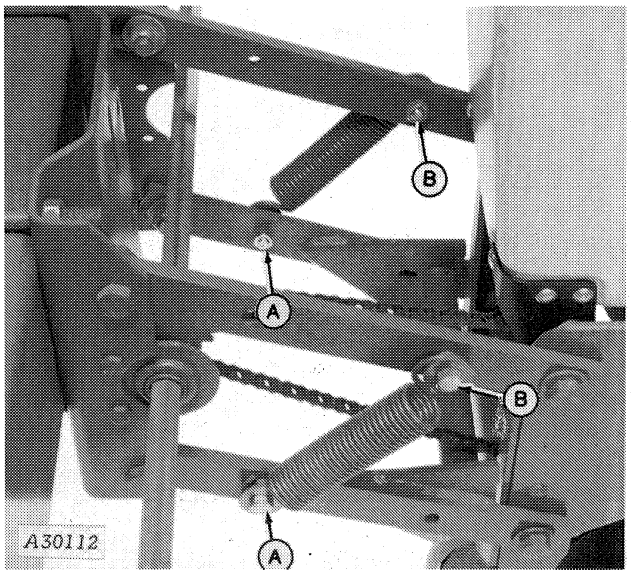
NOTE: Raise the planter and install the service locks.

1. Attach one end of the spring to the lower front hole (A) in the lower parallel arm with M12 x 40 cap screws, spacers and lock nuts.

2. Insert M12 x 40 cap screw and spacer through top of spring and attach spring to rear hole (B) in upper parallel arm and secure with lock nut.



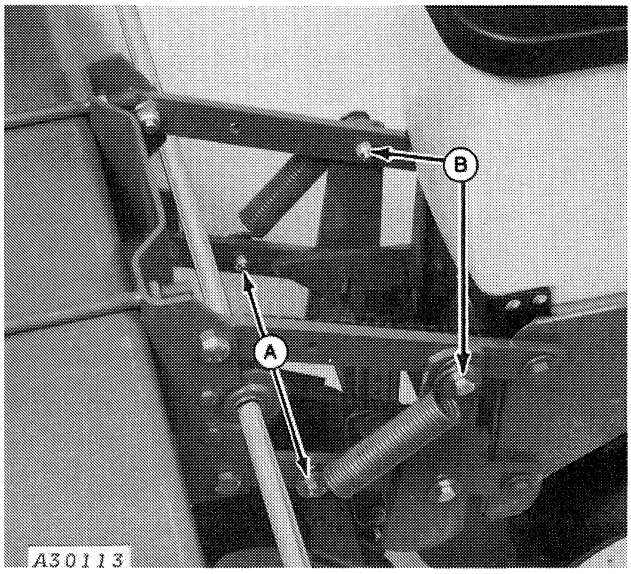
Unit Down Force Springs on Inside of Parallel Arms



Unit Down Force Springs on Outside of Parallel Arms

3. (Planting Unit Equipped with Row Tillage Support Bracket) Insert M12 x 40 cap screw and spacer through bottom of spring and attach spring to front hole (A) in the lower parallel arm and secure with lock nut.

Insert M12 x 60 cap screw and spacer through top of spring and attach spring to rear hole (B) in the upper parallel arm and secure with lock nut.



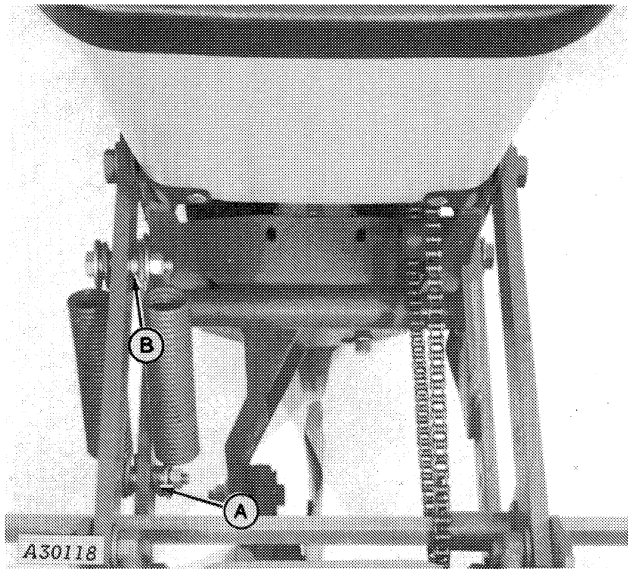
026;A30113 B21;;7AA CB 020186

To install two sets of springs, proceed as follows:

NOTE: Raise the planter and install transport locks.

1. Insert M12 x 60 cap screw and spacers through one end of two springs and attach springs to front hole (A) of lower parallel arm. Secure springs with lock nut.

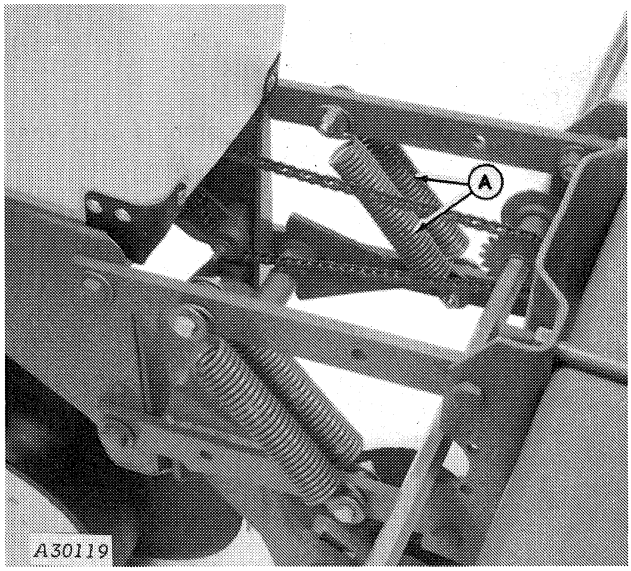
Insert M12 x 60 cap screw and spacers through opposite end of springs and attach springs to rear hole (B) of upper parallel arm. Secure springs with lock nut.



026;A30118 B21;;15AA -AA 090387

H16;P074 240387

2. Repeat step 1 and install second set of springs (A).

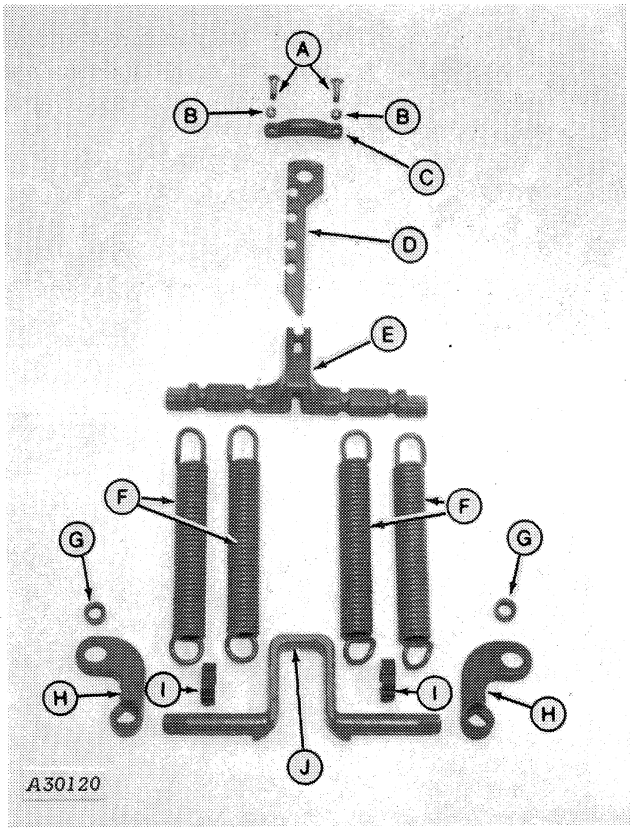


026;A30119 B21;;7AA CD 020186

HEAVY-DUTY ADJUSTABLE DOWN FORCE SPRINGS

NOTE: Raise the planter and install transport locks.

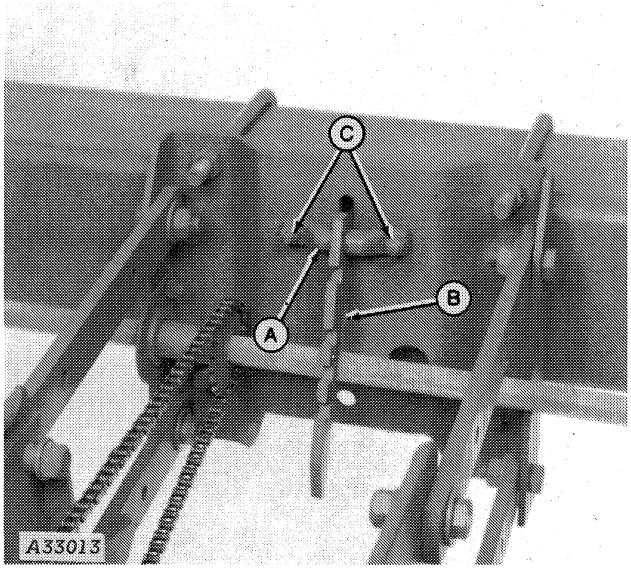
A—Round Head Bolts
B—Nuts
C—Anchor
D—Strap
E—Upper Support
F—Spring
G—Bushing
H—Support Anchor
I—Rubber Spacer
J—Lower Support



026;A30120 B21;;15AA -AB 230387

1. Attach anchor (A) and strap (B) to planting unit with M10 x 30 round head bolts (C) and nuts.

NOTE: If vacuum seed metering system is used, manifold support should be installed at this time.

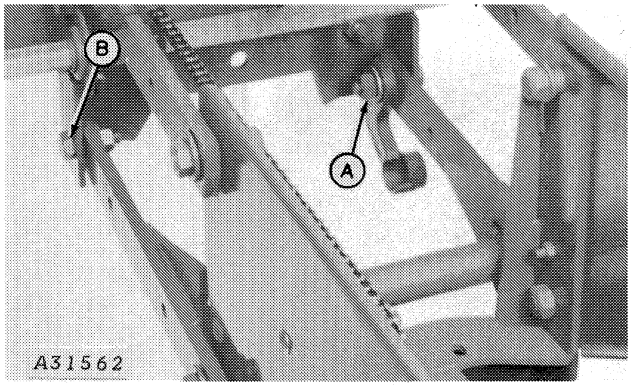


050;A33013 B21;;15AA -AC 090387

2. Remove lock nut, flat washer and cap screw and attach support anchor (A) loosely to lower right-hand side parallel arm with M16 x 60 cap screw, bushing, flat washer and lock nut. (See step 6 for diagram.)

NOTE: M16 x 60 cap screws are located inside of the right outside spring.

3. Remove lock nut, flat washer and cap screw from lower left-hand side parallel arm (B).



006;A31562 B21;;7AA CG 111086

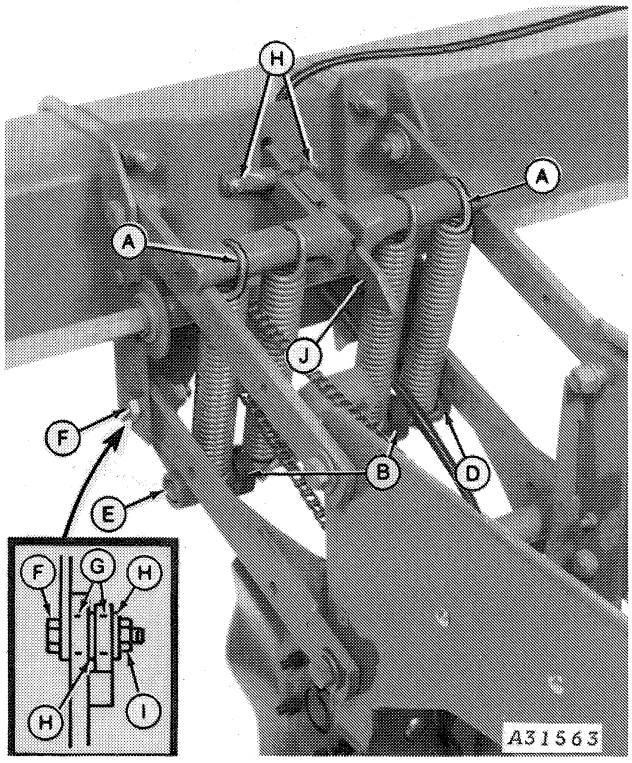
4. Lower spring assembly down through parallel arms until lower spring support is past the bottom drive chain and monitor wire (if so equipped).

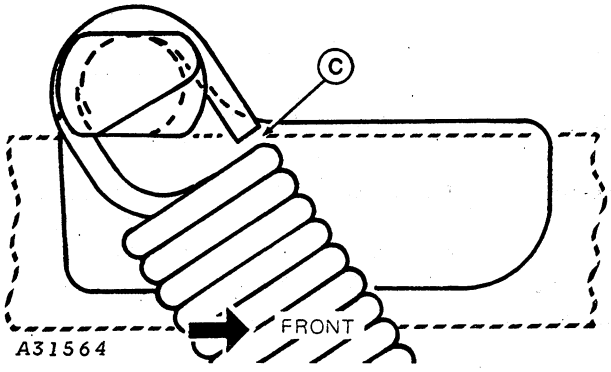
NOTE: Make certain springs (A) are assembled with open ends to the front (C) as shown.

5. Install right end of lower spring support into anchor (D). Position rubber spacers (B) between springs as shown.

6. Install anchor on left end of support (E) and secure anchor to parallel arm with M12 x 60 cap screw (F), bushings (G), flat washers (H) and lock nut (I). Tighten hardware.

7. Install strap (J) through upper spring support.

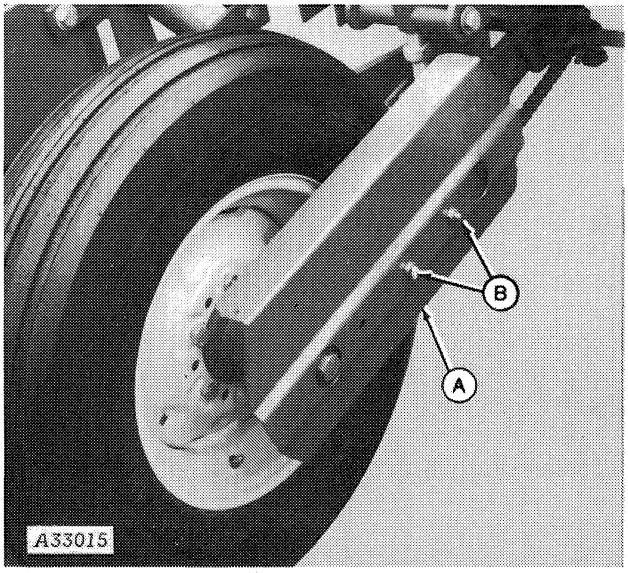




006;A31563 A31564 B21;;7AA CH 171086

WHEEL CHAIN TRASH DEFLECTOR

1. Install trash deflector (A) on cap screws and nuts (B) on wheel arm. Secure with M10 nuts.



050;A33015 B21;;15AA -AE 230387

UNIT MOUNTED COULTER

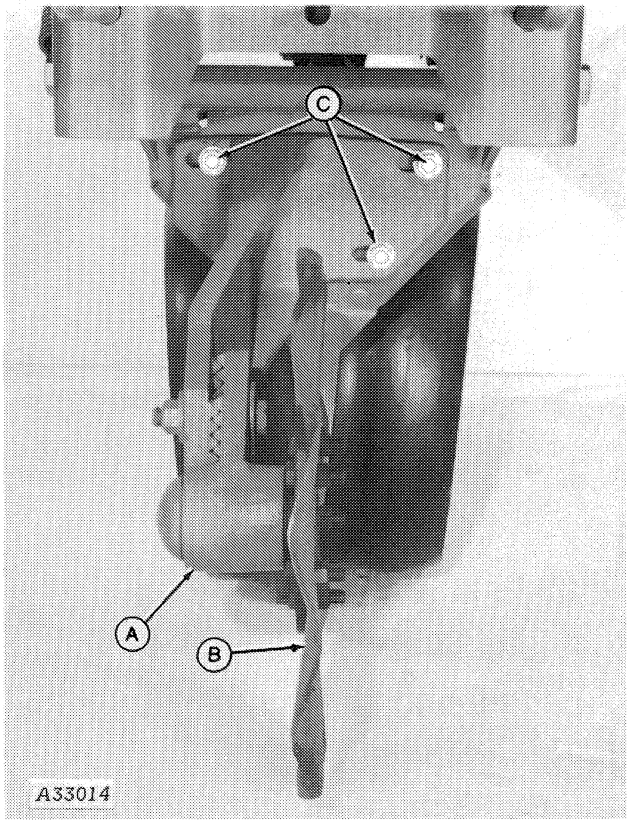
NOTE: Raise the planter and install service locks.

1. Insert coulter blade (B) in a vise and attach coulter arm assembly (A) to blade (B) with cap screws from coulter arm assembly.

2. Attach coulter assembly to shank with M12 x 35 round head bolts (C), flat washers and nuts.

For the most efficient operation, and to keep the planting unit running in the desired plane, it is important to adjust the coulter blade so it is directly in front of the Tru-Vee opener and is not running at an angle to the direction of travel.

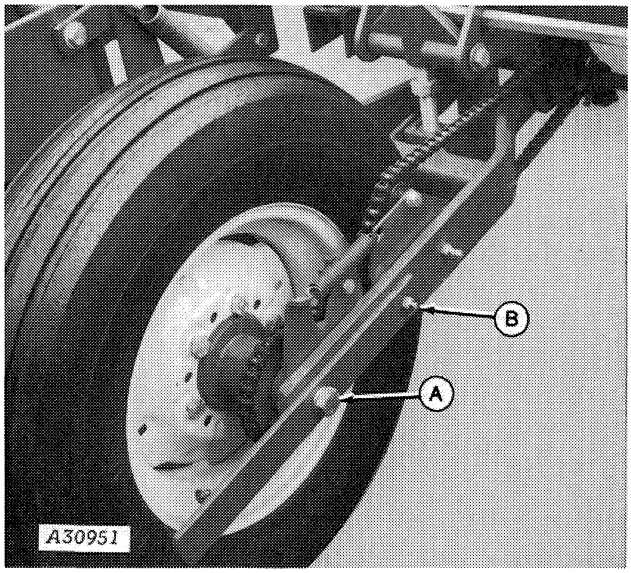
To align side-to-side, loosen bolts and slide coulter. If coulter blade is running at an angle relative to direction of travel, remove bolt, add washers between back surface of coulter and front of planting unit.



050;A33014 B21;;15AA -AD 310387

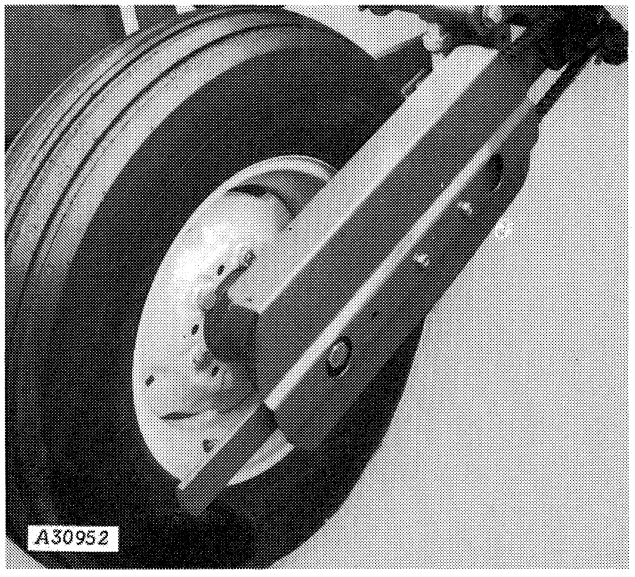
DRIVE WHEEL ROCK GUARD

1. Remove wheel bolt (A) and nut (B) from cap screw on wheel arm. Attach rock guard with wheel bolt and nut. If rock guard and chain deflector are to be used together, do not install nut (B). See step 2.



006;A30951 B22;;1AA N 271086

2. Attach wheel chain trash deflector with nut removed in step 1 and M10 nut supplied with deflector.

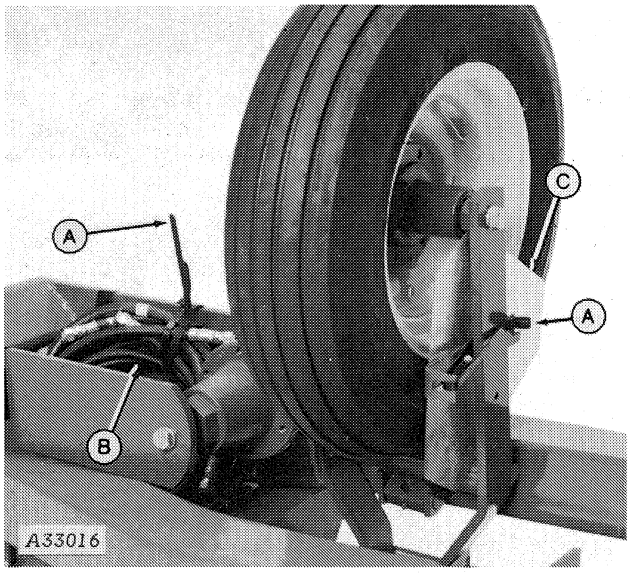


006;A30952 B22;;1AA O 271086

5-ROW SOLID OR 3-ROW SKIP SPLIT ROW FRAME (SHIPPING BUNDLES)

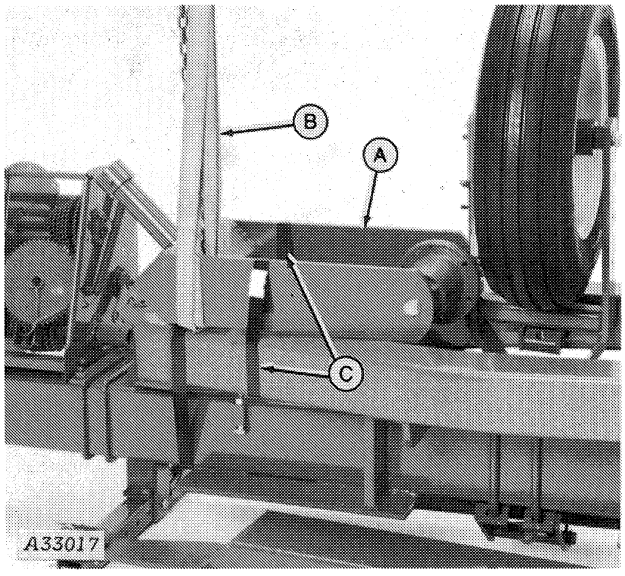
NOTE: For assembly instructions for 7-Row Solid or 5-Row Skip Split Row Frame, turn to page 88.

1. Press tab on tie strap and remove tie straps (A), hydraulic hoses (B) and SMV emblem (C).



050;A33016 B21;;15AS -A 300387

2. Support lift wheel arms (A) with lifting straps (B) or chains. Cut bundling straps (C) and remove wheel arms.



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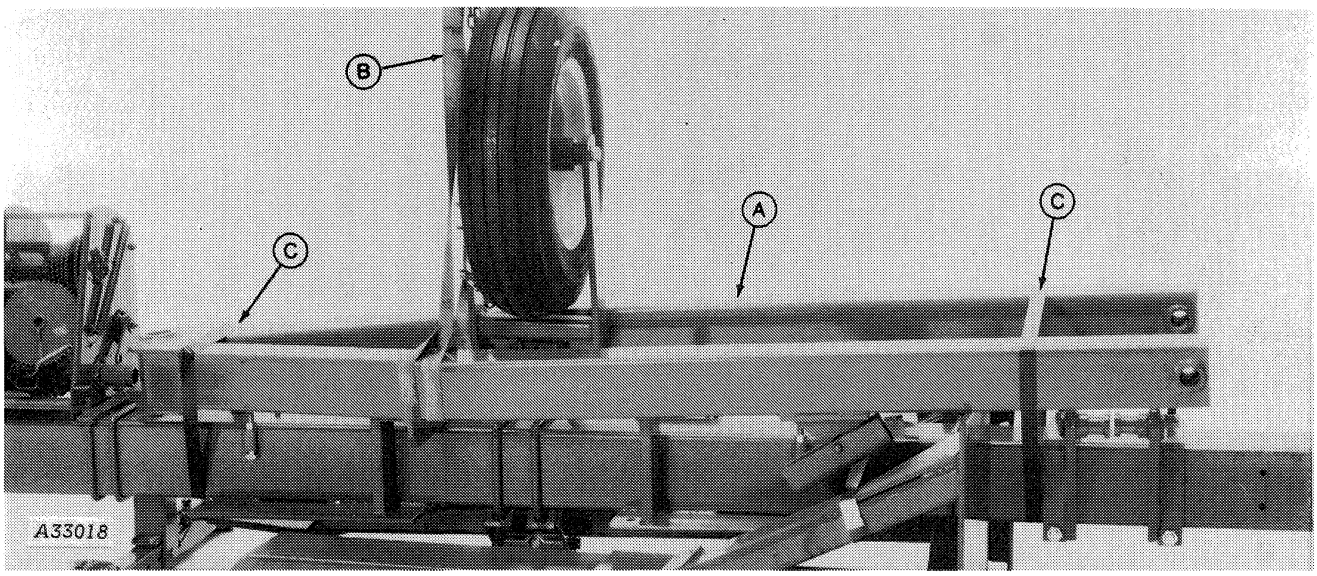
H16;P080 240387

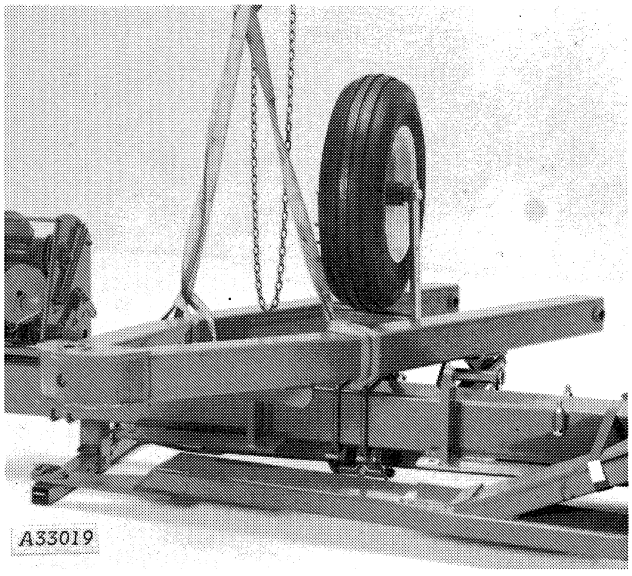


3. Support lift wheel frame (A) with lifting straps (B) or chain.

4. Cut bundling straps (C).

050;A33018 B21;;15AS -C 090387

5. Pivot and remove lift wheel frame.



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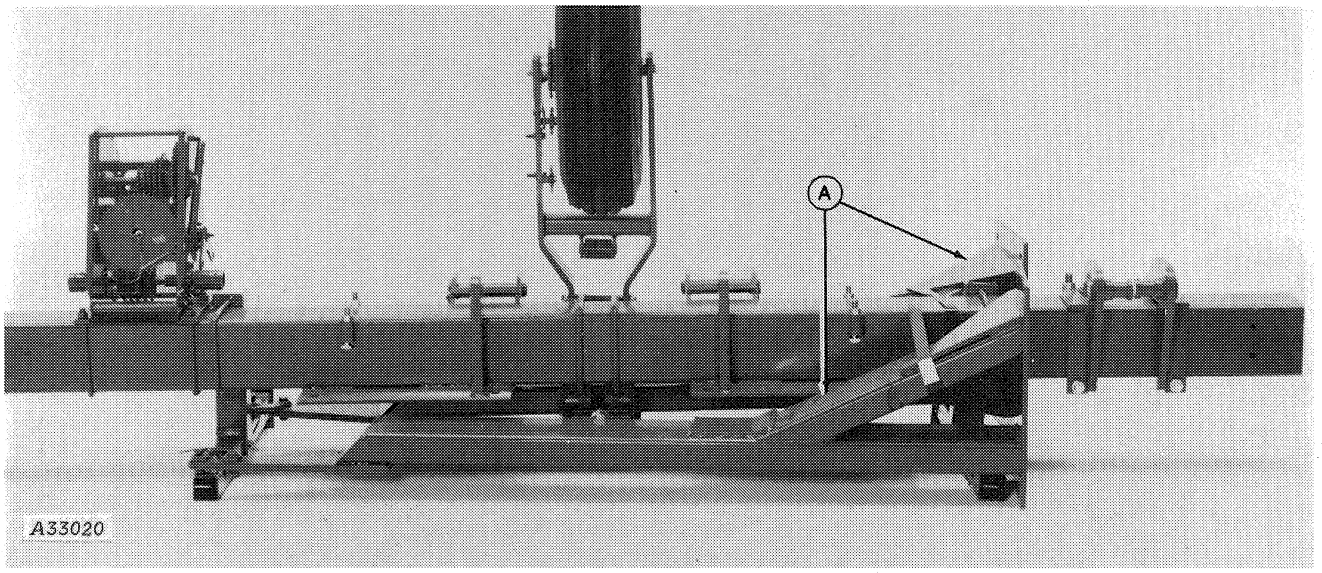
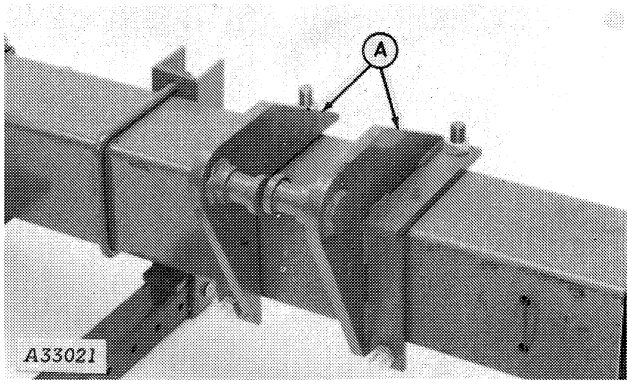


6. Cut bundling straps and remove left-and right-hand hitches (A).

050;A33020 B21;;15AS -E 090387

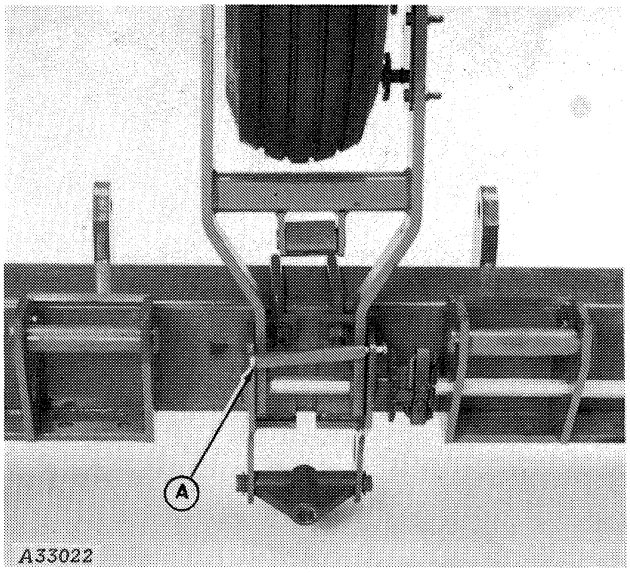
7. Remove left-and right-hand pivots (A).



050;A33021 B21;;15AS -F 090387

DRIVE WHEEL

1. Remove lock nut (A) from cap screw securing spacer.



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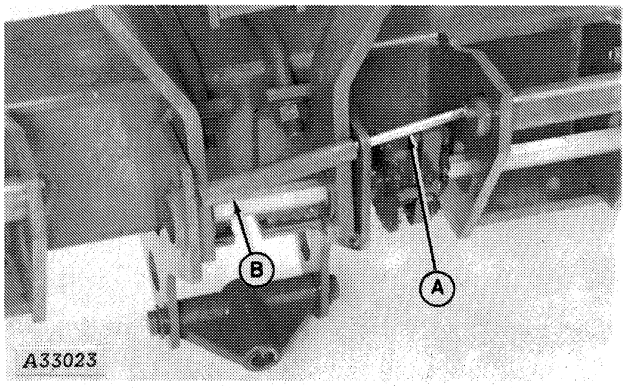
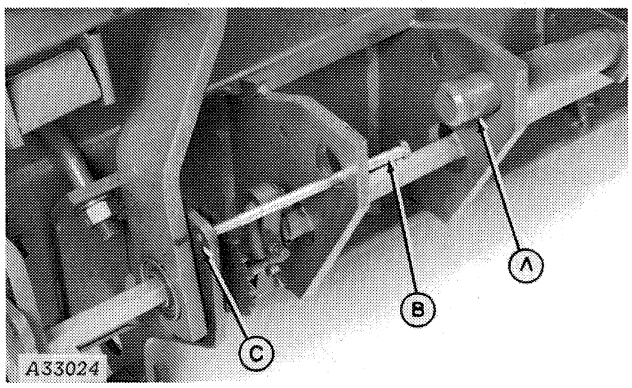
2. Pull cap screw (A) to the right as far as possible and remove spacer (B).



050;A33023 B21;;15AS -H 090387

3. Remove hitch pin (A). Insert cap screw (B) through hole in hitch plate until opposite end of screw is free from drive wheel plate (C).



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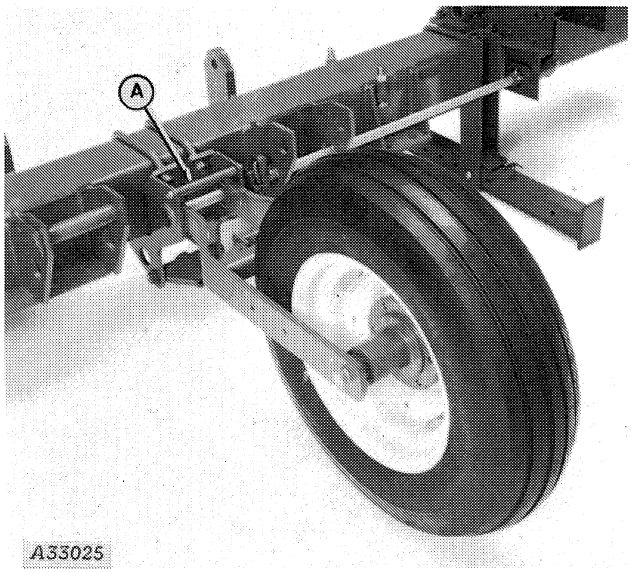
4. Lower drive wheel to the ground. Replace spacer (A), cap screw and lock nut.



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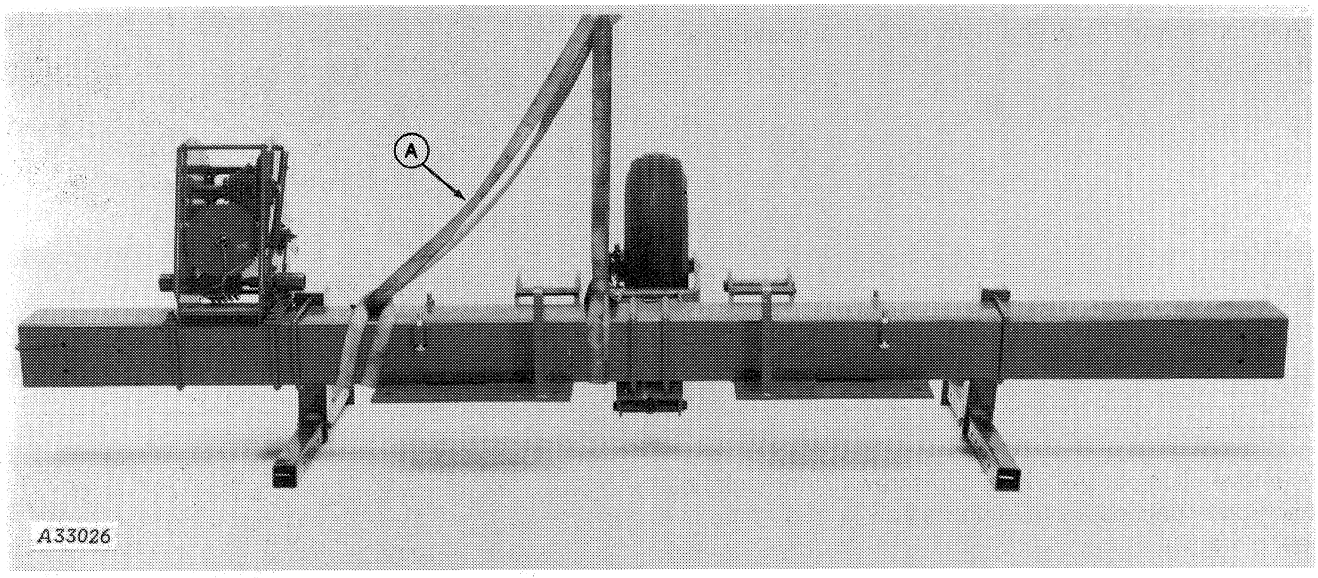
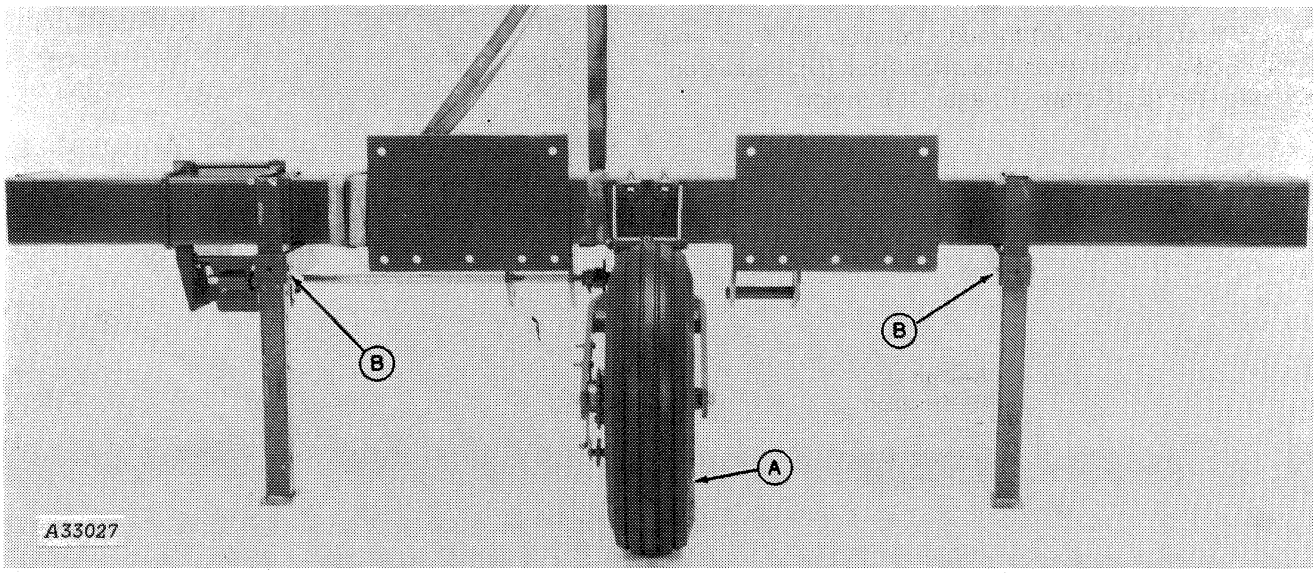


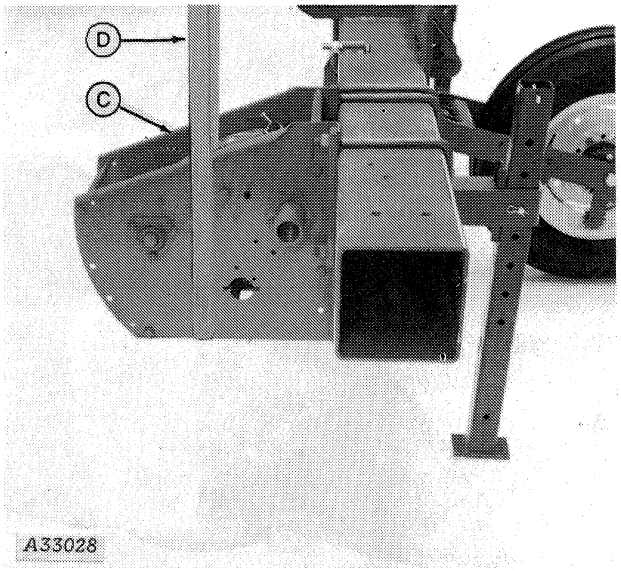
5. Place lifting straps (A) or chains around frame approximately as shown and raise frame. The frame must be raised high enough to be able to pivot the drive wheel to the front of the frame.

050;A33026 B21;;15AS -K 230387



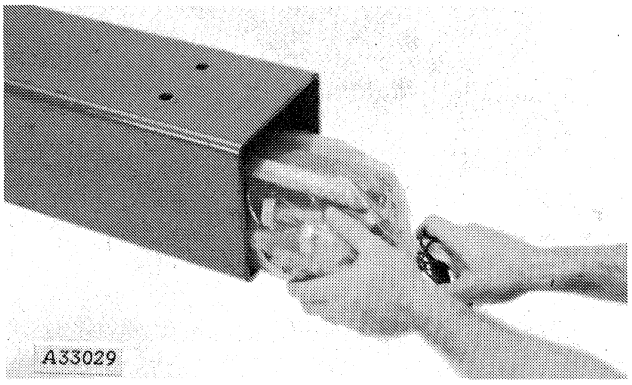
6. Pivot drive wheel (A) forward. Install pin (B) in stands in third hole from the top. Lower frame to the ground.

7. Support the seed transmission (C) with lifting straps (D) or floor jack.



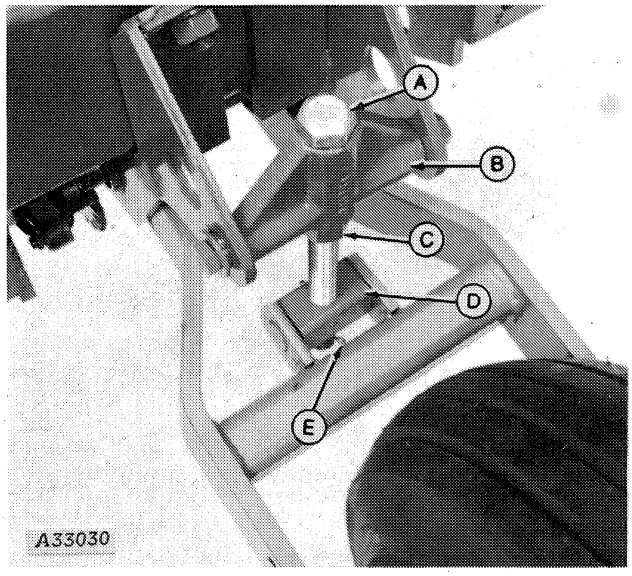
050;A33027 A33028 B21;;15AS -L 230387

8. Cut bundling wire and remove parts and hardware from both ends of frame.



050;A33029 B21;;15AS -M 090387

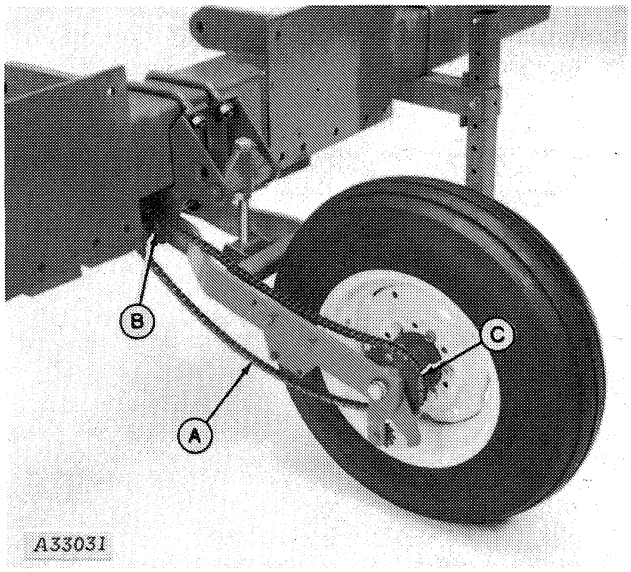
9. Insert threaded bolt (A) through trunnion (B). Screw nut (C) onto bolt and screw bolt into pivot block (D). Secure bolt with cotter pin (E). Screw nut against trunnion.



A—Bolt
B—Trunnion
C—Nut
D—Pivot Block
E—Cotter Pin

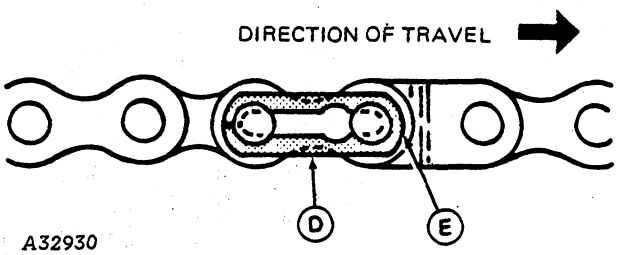
050;A33030 B21;;15AS -N 230387

10. Install 114 link chain (A) around sprocket (B) on countershaft and sprocket (C) on drive wheel.



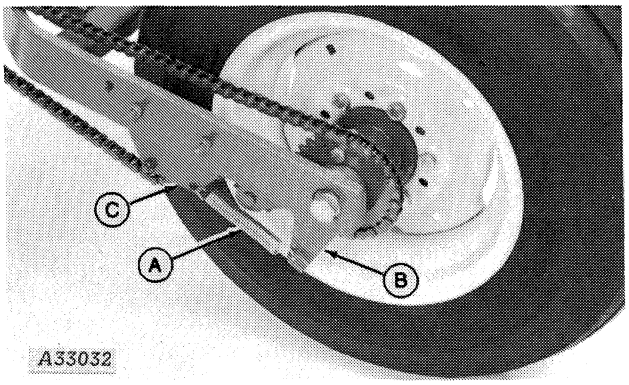
A—Chain
B—Sprocket
C—Sprocket
D—Link Spring
E—Closed End of Link Spring

NOTE: Be certain master link spring lock (D) is installed with closed end (E) toward direction of travel.



050;A33031 A32930 B21;;15AS -O 230387

11. Attach spring (A) to idler arm (B) and bracket (C).



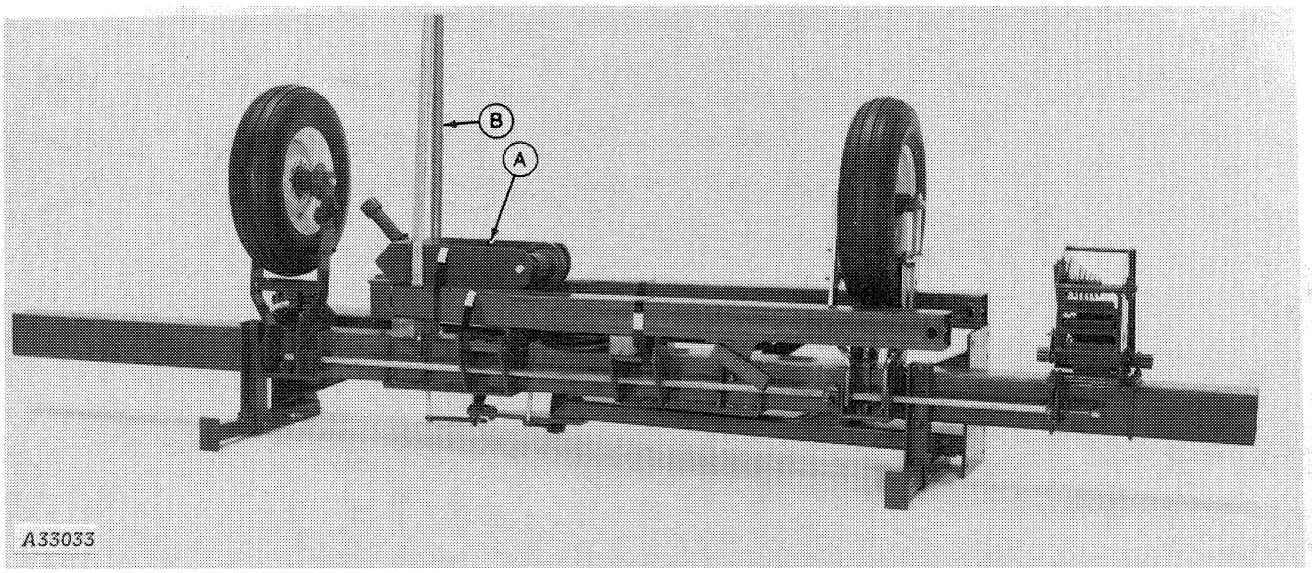
050;A33032 B21;;15AS -P 090387

The assembly instructions for the seed transmission, lift wheel, planting units, drill shafts and vacuum system are shown on the 7-Row Solid or 5-Row Skip Split Row Attachment. The assembly instructions are the same for the 5-Row Solid or 3-Row Skip Split Row Attachment except where noted.

Turn to page 96 for further assembly instructions.

B21;;15AS -Q 300387

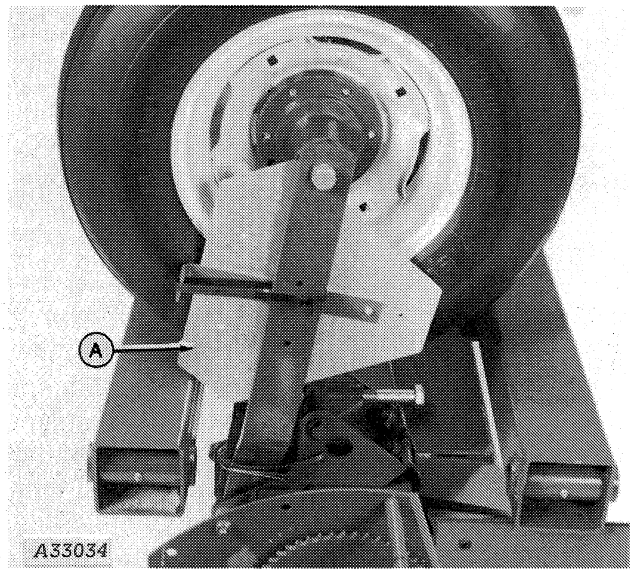
7-ROW SOLID OR 5-ROW SKIP SPLIT ROW FRAME (SHIPPING BUNDLES)



1. Support lift wheel arms (A) with lifting straps (B) or chains. Cut bundling wire and remove wheel arms.

050;A33033 B21;;15AS -R 230387

2. Press tab on tie strap and remove tie strap and SMV emblem (A).



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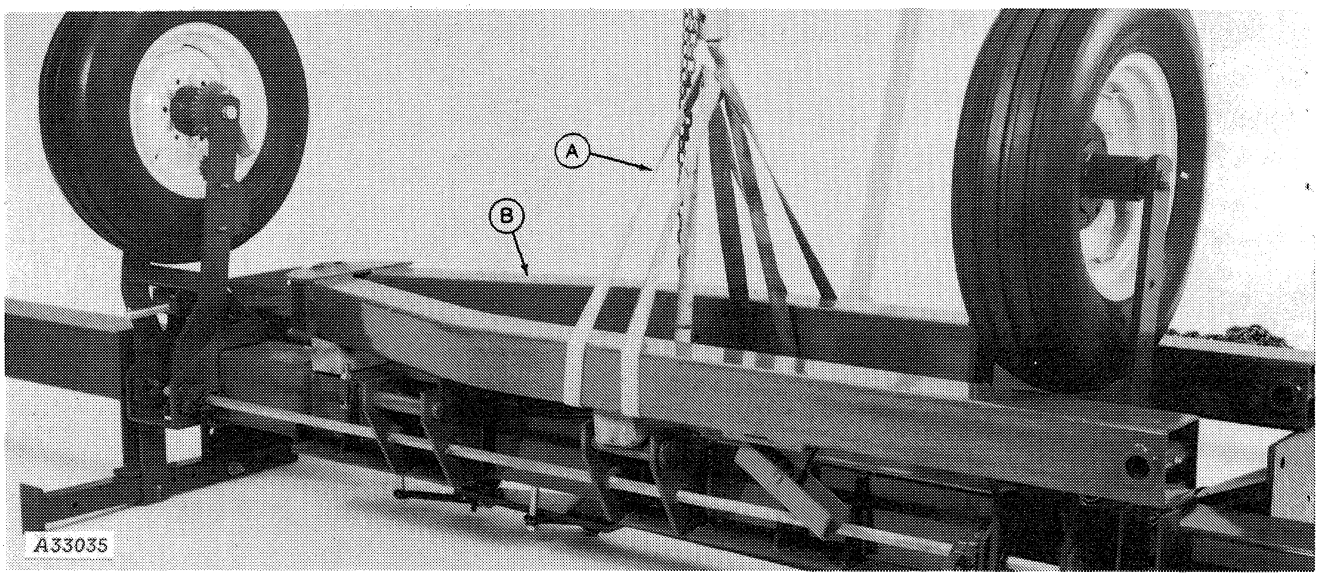
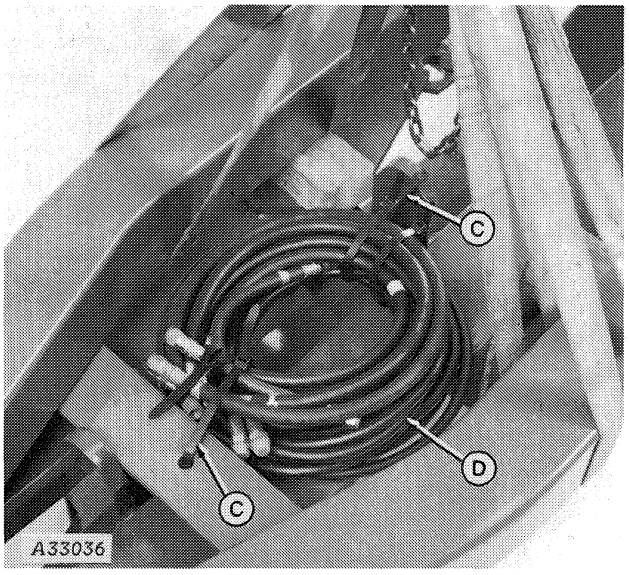
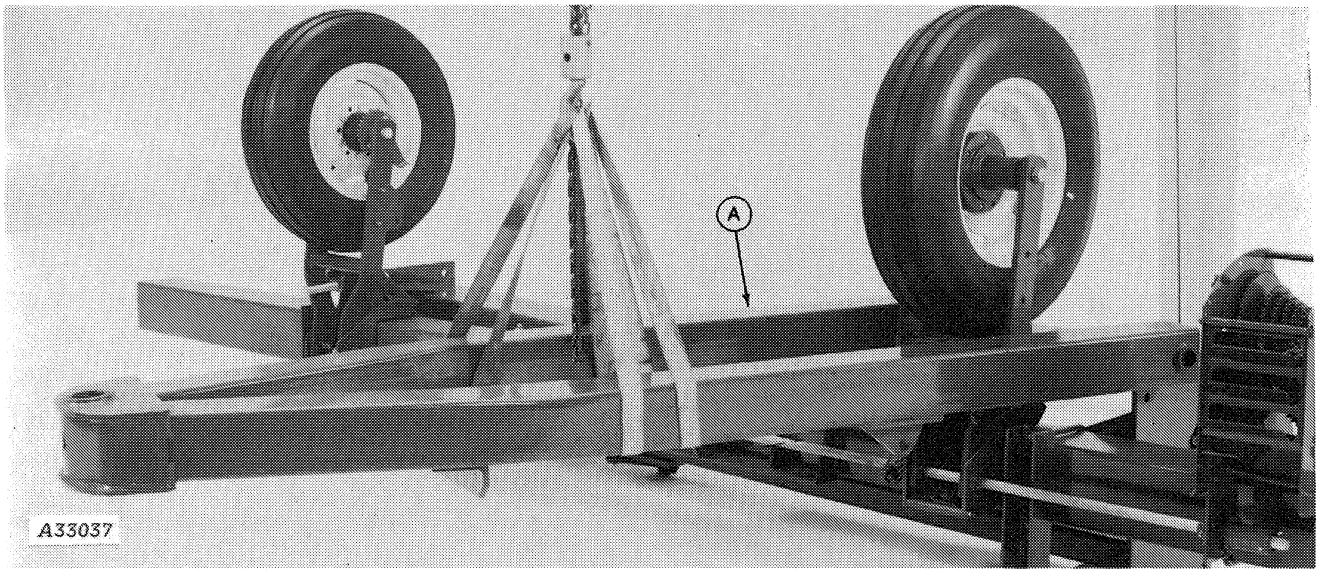


3. Place lifting straps (A) or chains around lift wheel frame (B) as shown.

4. Press tabs on tie straps (C) and remove tie straps and hydraulic hoses (D) from inside of lift wheel frame.

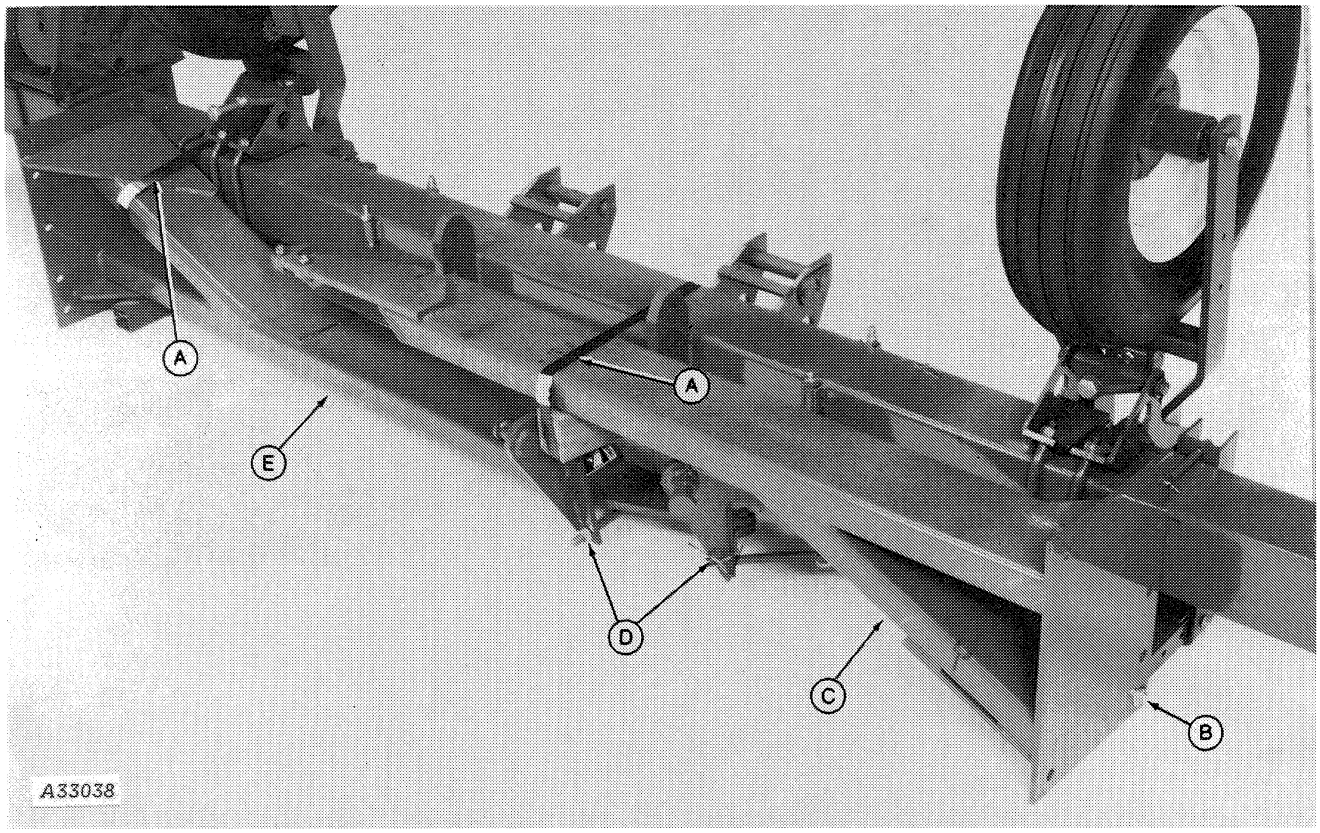


050;A33035 A33036 B21;;15AS -T 090387



5. Cut bundling straps, pivot and remove lift wheel frame (A).

050;A33037 B21;;15AS -U 090387



A—Bundling Wires **C—Hitch** **D—Pivots** **E—Hitch**
B—Cap Screw

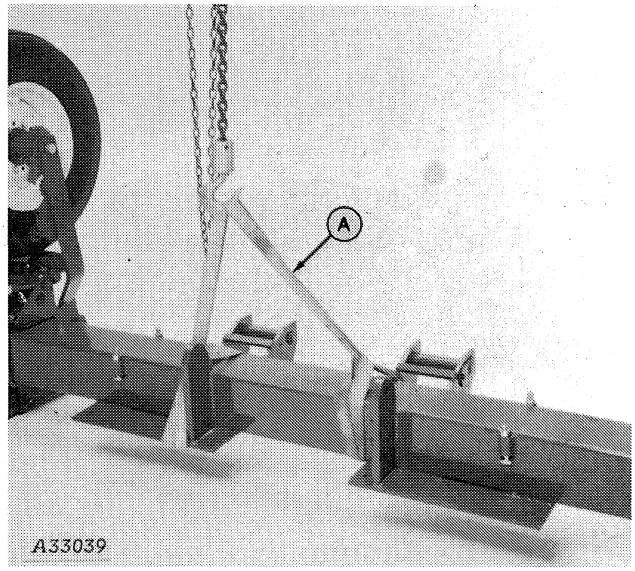
6. Cut bundling wires (A). Remove cap screw (B) securing hitch (C) to stand and remove hitch.

7. Remove pivots (D).

8. Remove hitch (E).

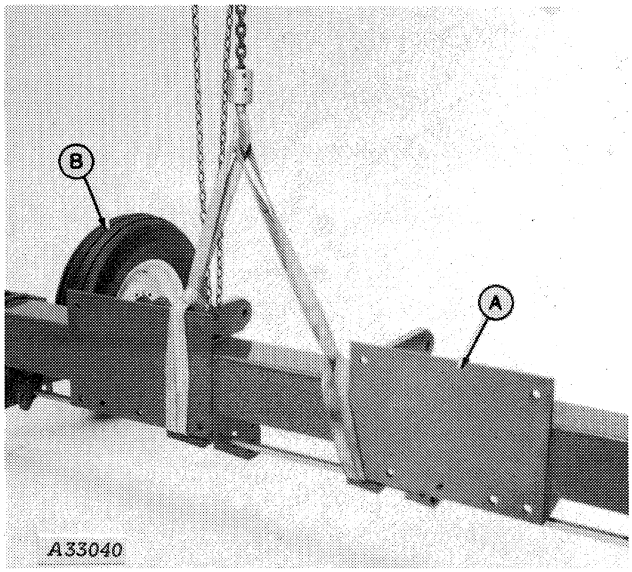
050;A33038 B21;;15AS -V 090387

9. Install lifting straps (A) or chains around frame as shown.

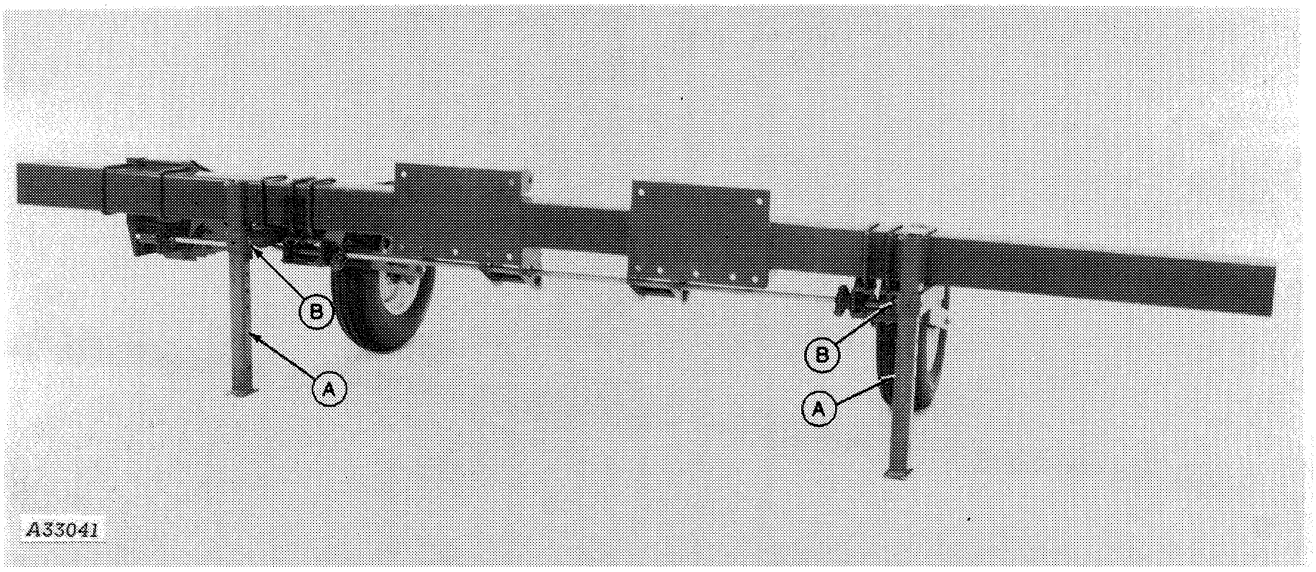


050;A33039 B21;;15AS -W 090387

10. Raise frame (A) and carefully pivot frame rearward until wheels (B) touch the ground.



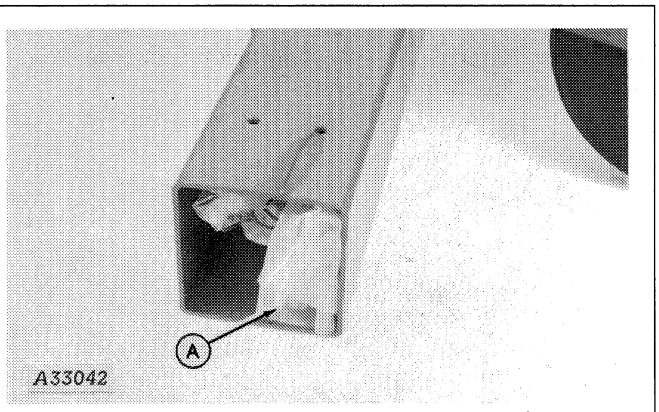
050;A33040 B21;;15AS -X 090387



11. Secure stands (A) with drilled pins (B) in third hole from the top. Lower frame to the ground.

050;A33041 B21;;15AS -Y 090387

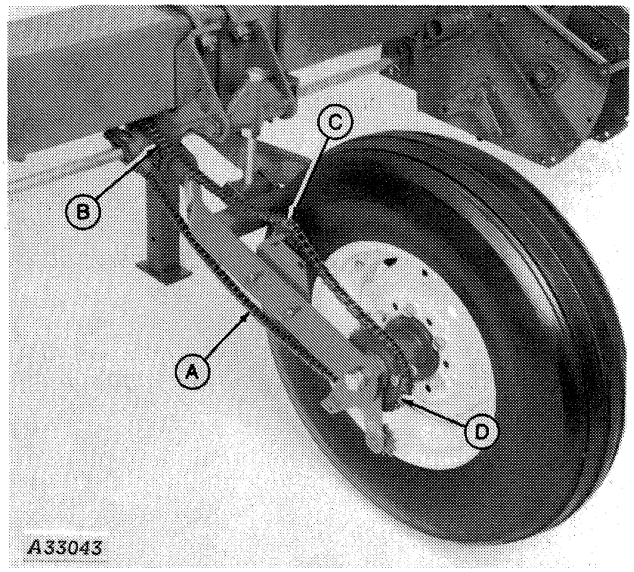
12. Cut bundling wire and remove parts (A) from both ends of frame.



050;A33042 B21;;15AS -Z 090387

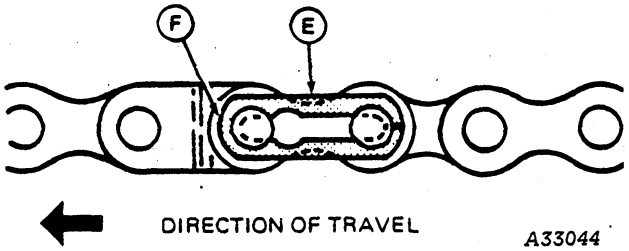
DRIVE WHEELS

1. Install 114 link chain (A) around sprocket (B) on countershaft, sprocket (C) on bracket and sprocket (D) on drive wheel.



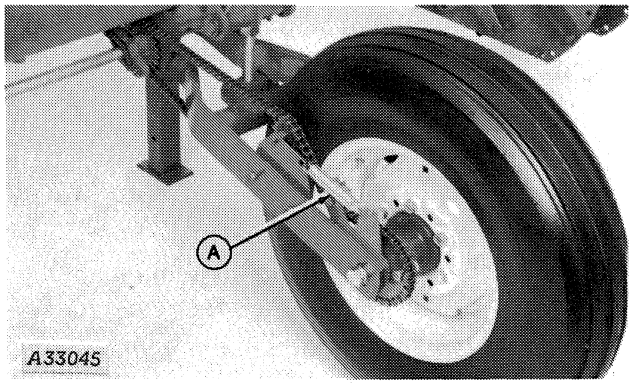
A—Chain
B—Sprocket
C—Sprocket
D—Sprocket
E—Link Spring
F—Closed End of Link Spring

NOTE: Be certain master link spring lock (E) is installed with closed end (F) toward direction of travel.



050;A33043 A33044 B21;;15AS -AA 230387

2. Attach spring (A) to idler arm and bracket.



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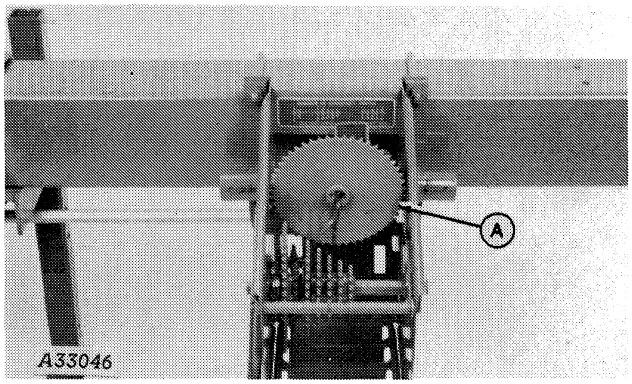
H16;P095 240387

SEED TRANSMISSION

3. Remove extended drilling sprocket (A).

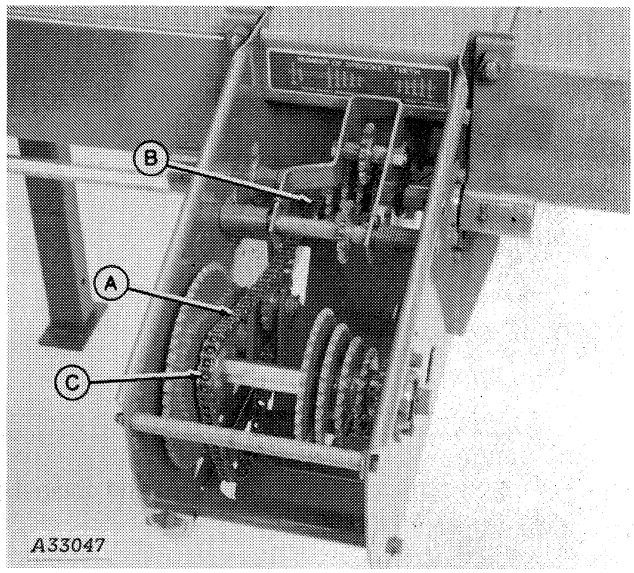
NOTE: This sprocket is provided for 7000 Drawn Planters only. Should you desire lower planting population rates, assemble this sprocket to the 7000 Planter transmission. See your 7000 Max Emerge operator's manual for installation instructions.

The extended drilling sprocket is not used if the split row attachment is connected to a 7000 Max Emerge Planter.



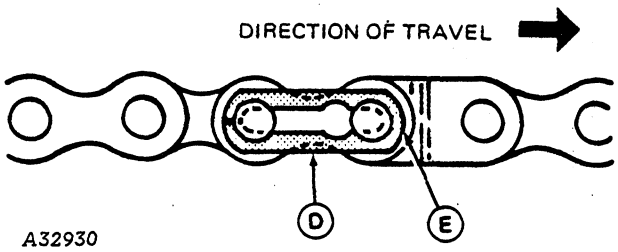
050;A33046 B21;;15AS -AC 300387

4. Install 105 link chain (A) around countershaft sprocket (B), through sprockets on chain tightener and around 18-tooth sprocket (C).



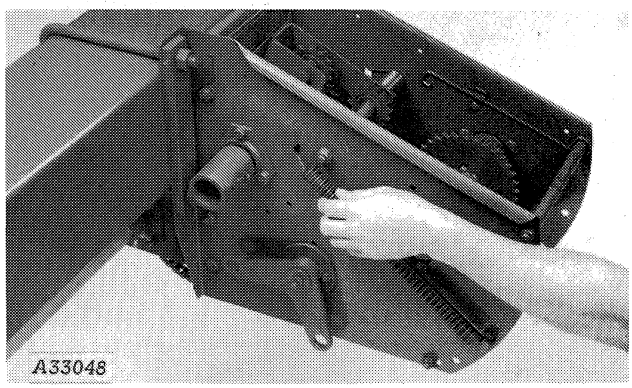
A—Chain
B—Sprocket
C—Sprocket
D—Link Spring
E—Closed End of Spring Link

NOTE: Be certain chain master link spring link (D) is installed with closed end (E) toward direction of travel.



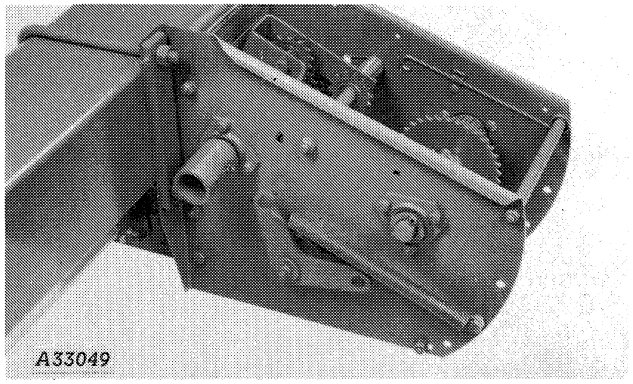
050;A33047 A32930 B21;;15AS -AD 230387

5. Unhook spring from storage position.



050;A33048 B21;;15AS -AE 090387

6. Install spring on chain tightener.



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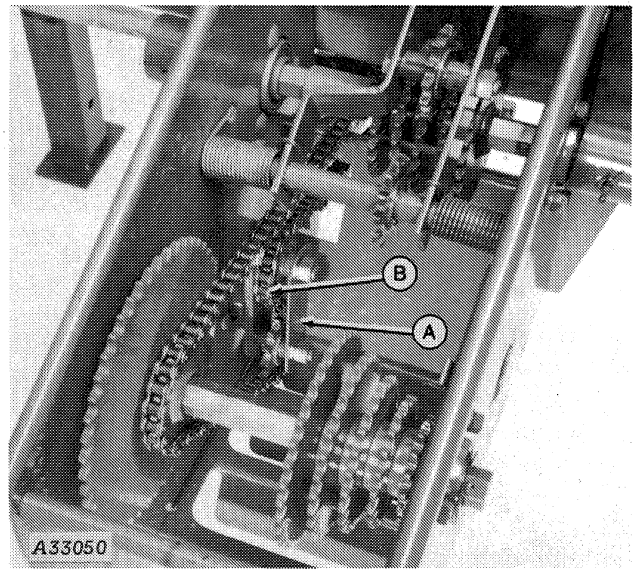
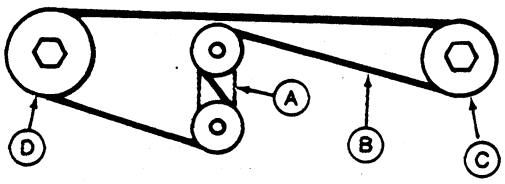
7. Check to be certain chain tightener (A) and chain (B) are positioned as shown in line art.



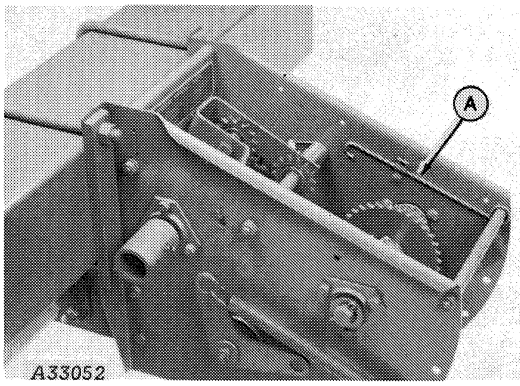
A—Chain Tightener
B—Chain
C—Countershaft Sprocket
D—Seed Transmission Sprocket



A33051

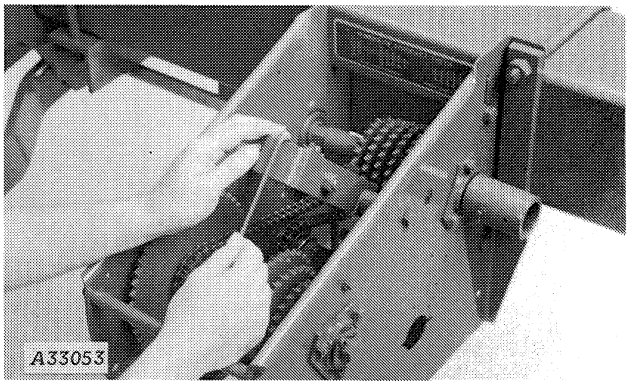
050;A33050 A33051 B21;;15AS -AG 090387

8. Raise hook (A) from storage position.



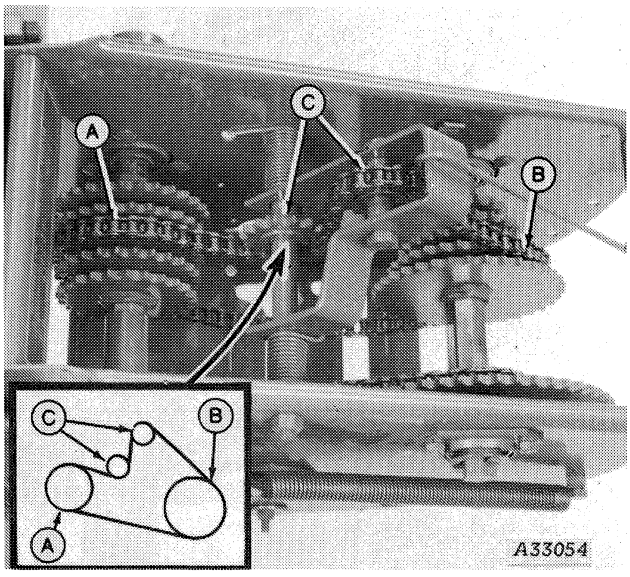
050;A33052 B21;;15AS -AH 090387

9. Pull down on chain tightener and secure with hook.



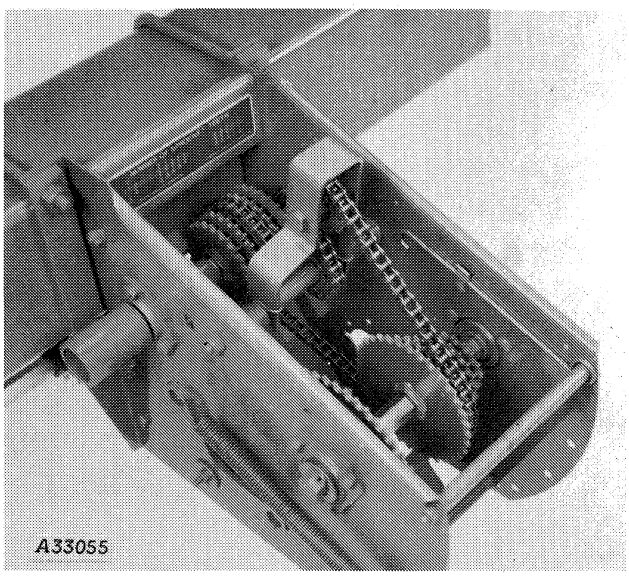
050;A33053 B21;;15AS -AI 090387

10. Install 86 link chain around driver sprocket (A), driven sprocket (B) and chain tightener sprockets (C) as shown.



050;A33054 B21;;15AS -AJ 090387

11. Release chain tightener and place hook in storage position.



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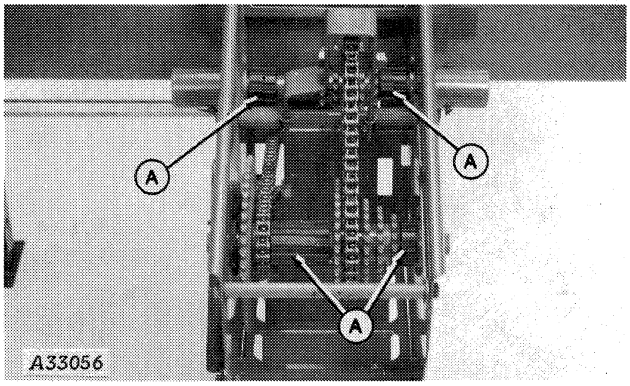
12. Install rubber sprocket spacers (A) on upper and lower drive shafts.



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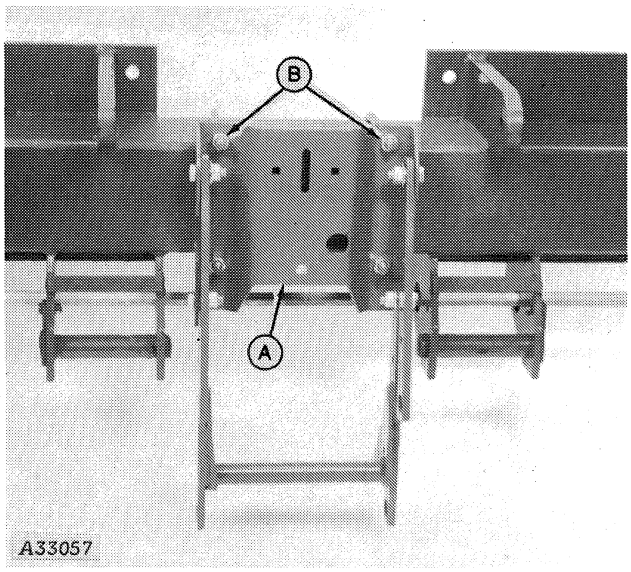
LIFT WHEEL

NOTE: Before attaching the lift wheel frame, attach a planting unit to the center of the frame. See "PLANTING UNITS" for assembly instructions.

1. Attach parallel arm support (A) to frame with U-bolts (B) and nuts. Check to be certain U-bolts are straight. Tighten nuts on U-bolts.



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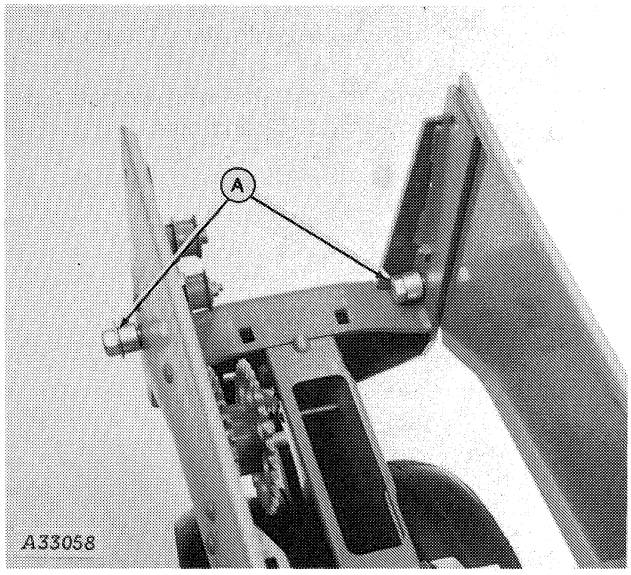
2. Remove cap screws (A), bushings, flat washers and lock nuts from planting unit.



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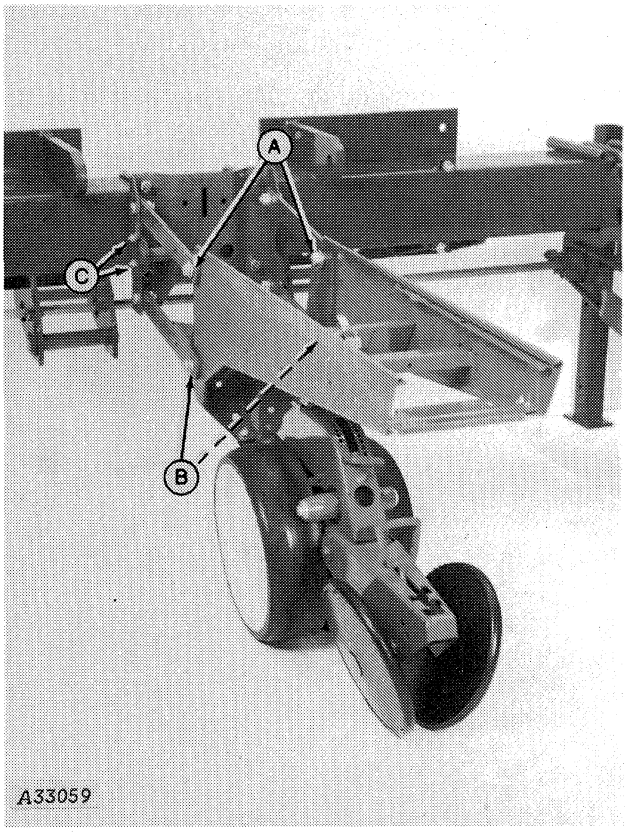
3. Attach planting unit to parallel arms with cap screws (A), bushings, flat washers and nuts from upper parallel arms and cap screws (B), bushings, flat washers and nuts removed in step 2.

4. Attach sprocket (C) to parallel arm support with M10 x 25 cap screws and nuts.



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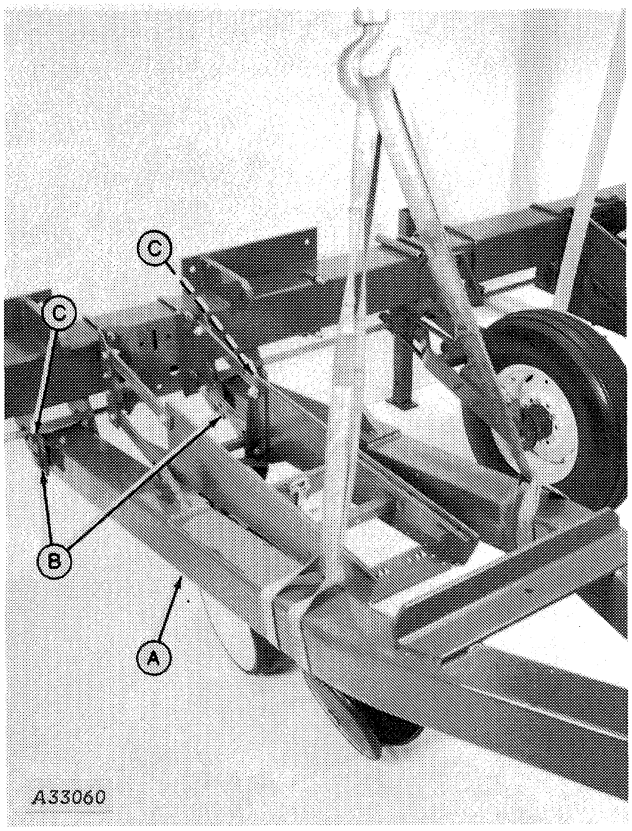
5. Support lift wheel frame (A) with lifting straps or chains.

6. Attach lift wheel frame to frame with welded pins (B). Secure pins with cap screws (C) and nuts.



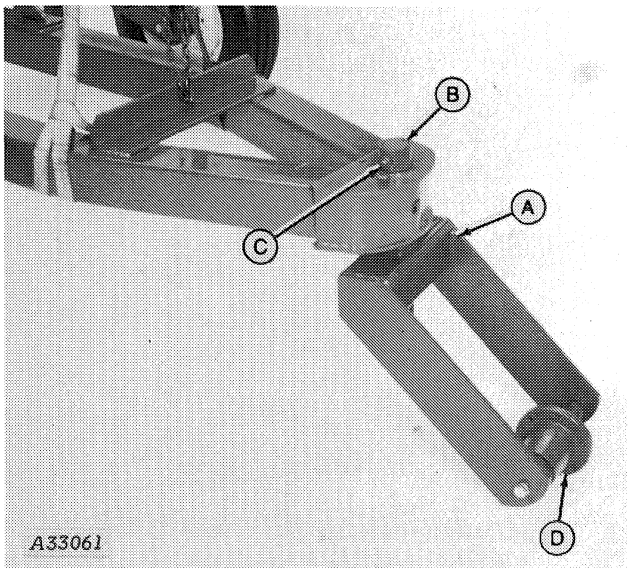
050;A33060 B21;;15AS -AP 090387

7. Attach lift wheel support arms (A) to frame with bushing (B), 5/8 x 3-1/2 in. cap screw (C) and nut.

IMPORTANT: Remove paint from wheel arm shaft and bushing. Grease shaft and bushing before assembling. After assembly grease shaft through grease fitting.

8. Remove cap screws, lock washers and hub (D) from support arms.

A—Support Arms
B—Bushing
C—Cap Screw
D—Wheel Hub



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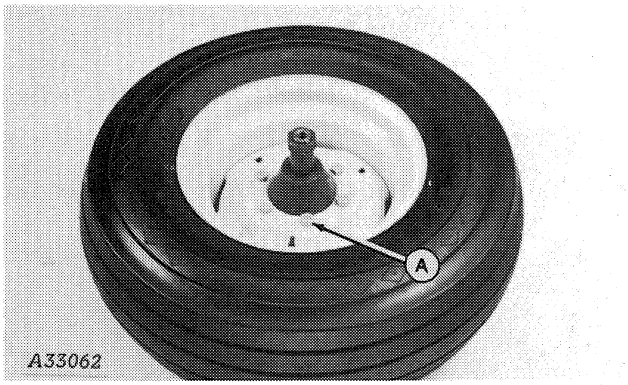
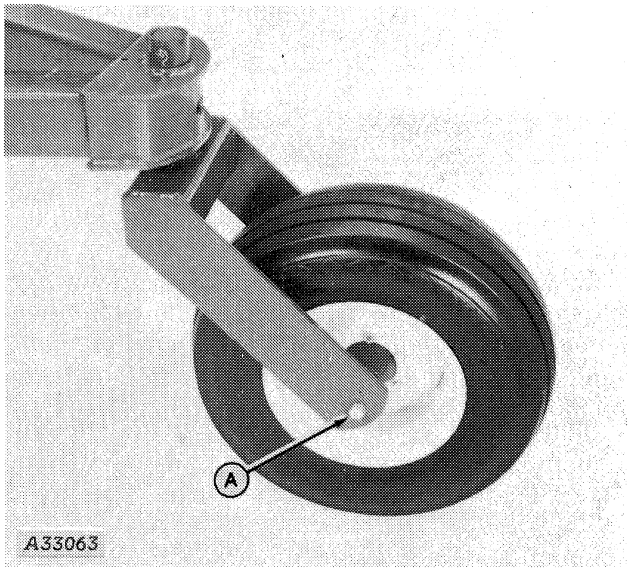
9. Attach wheel to hub with wheel bolts (A).



050;A33062 B21;;15AS -AR 090387

10. Attach wheel and hub to support arms with cap screws (A) and lock washers removed in step 8.

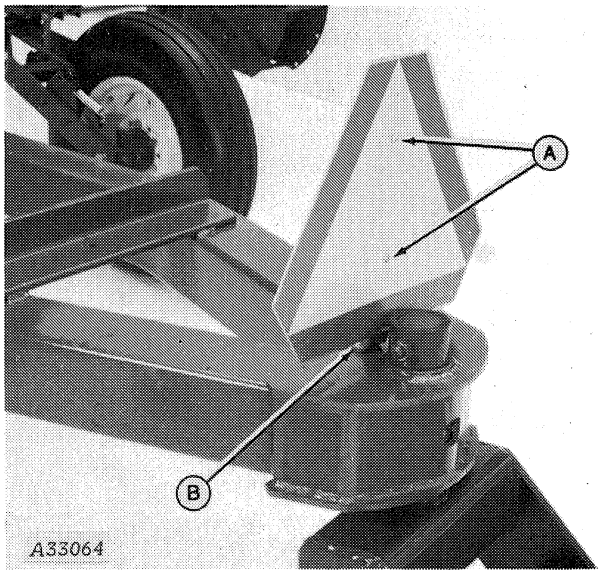


050;A33063 B21;;15AS -AS 090387

SMV EMBLEM

1. Attach SMV emblem to bracket with M6 x 16 cap screws (A), flat washers and nuts.

2. Attach bracket to frame with 5/8 x 1-1/4 in. cap screw (B), flat washer and nut.



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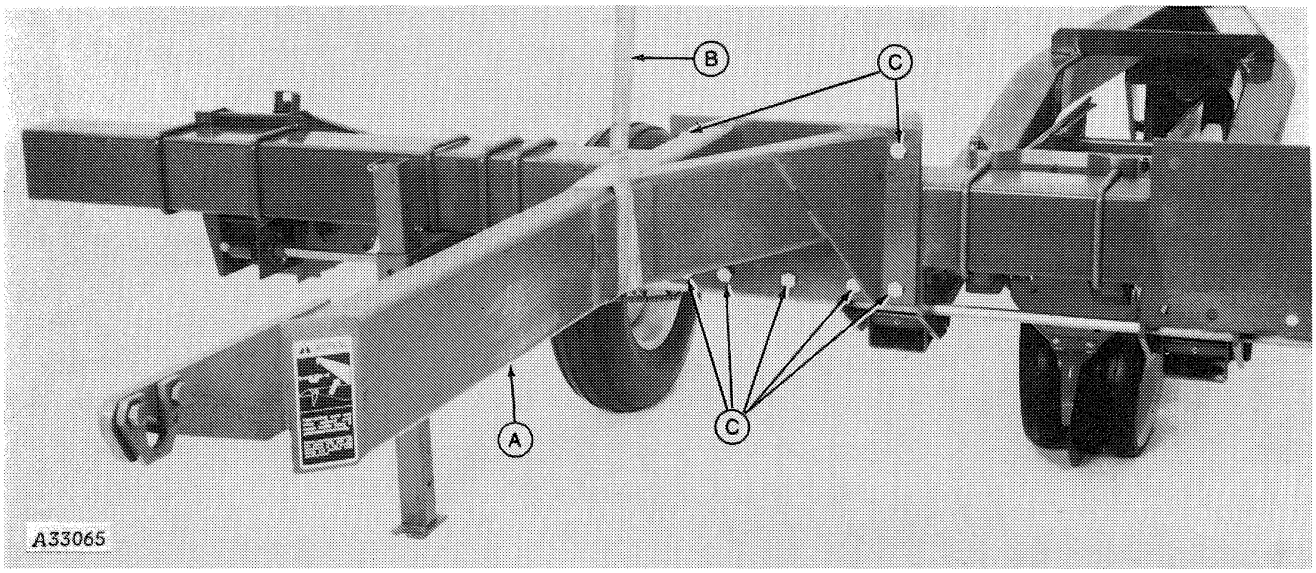
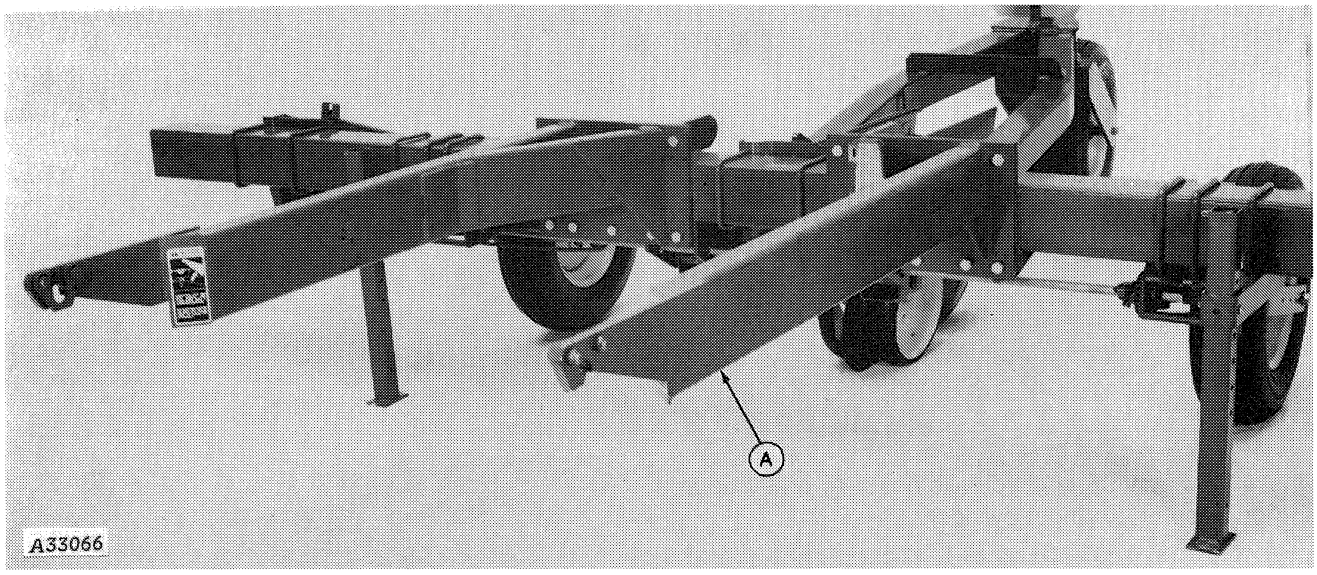
HITCH



1. Support right-hand hitch (A) with lifting straps (B) or chains.

2. Attach hitch to frame with M20 x 50 cap screws (C) and nuts.

050;A33065 B21;;15AS -AU 090387

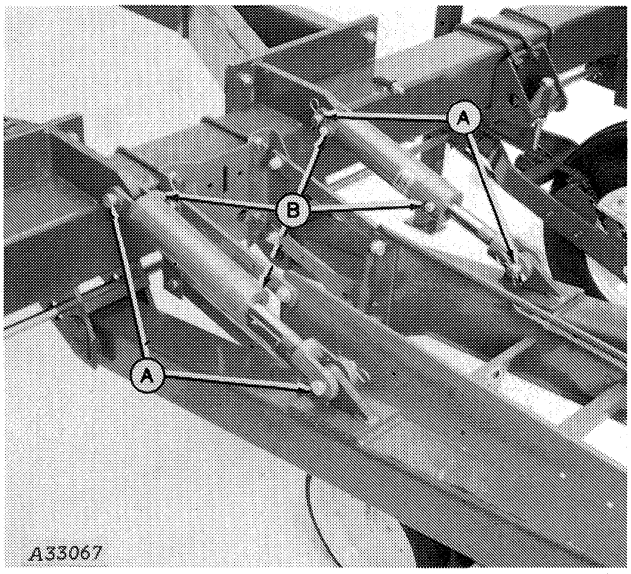


3. Repeat steps 1 and 2 and attach left-hand hitch (A).

050;A33066 B21;;15AS -AV 090387

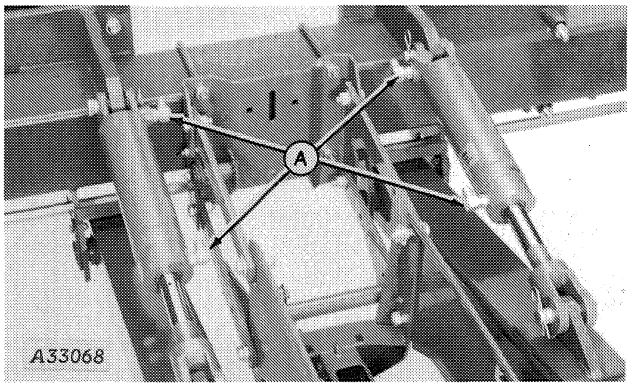
HYDRAULIC CYLINDERS AND HOSES

1. Attach hydraulic cylinders to frame with drilled pins (A) and spring locking pins with ports (B) to inside.



050;A33067 B21;;15AS -AW 090387

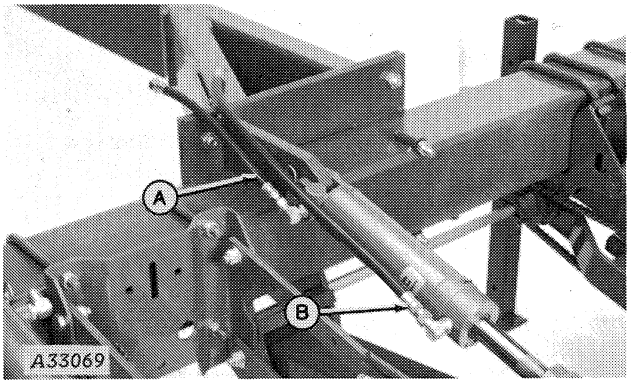
2. Install O-rings on 90 degree elbow fittings (A) and screw fittings into hydraulic cylinders.



050;A33068 B21;;15AS -AX 230387

3. Install 457 mm (18 in.) hydraulic hose (A) on 90 degree fitting on base end of right cylinder.

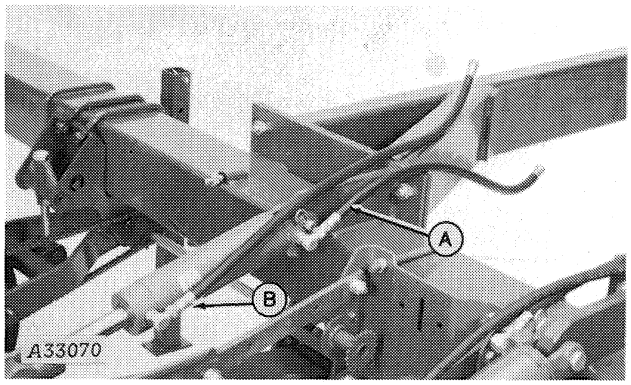
4. Install 813 mm (32 in.) hydraulic hose (B) on 90 degree fitting on rod end of right cylinder.



050;A33069 B21;;15AS -AY 090387

5. Attach 927 mm (36-1/2 in.) hydraulic hose (A) on 90 degree fitting on base end of left-hand cylinder.

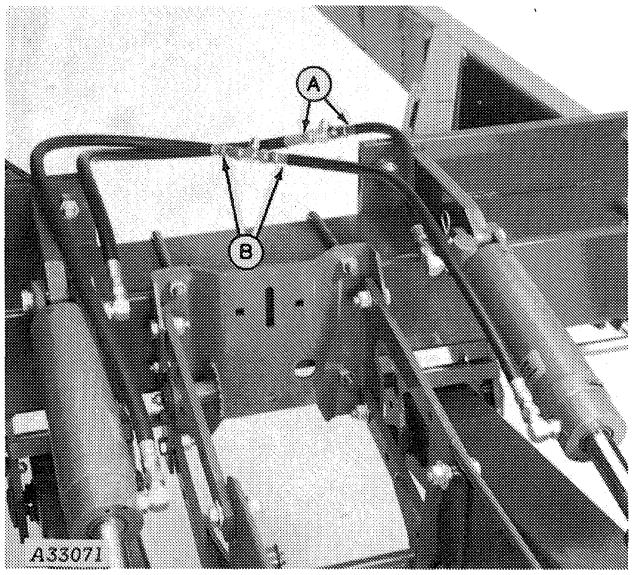
6. Attach 1170 mm (46 in.) hydraulic hose (B) on 90 degree fitting on rod end of left-hand cylinder.



050;A33070 B21;;15AS -AZ 090387

7. Connect hoses (A) from base end of cylinders to tee.

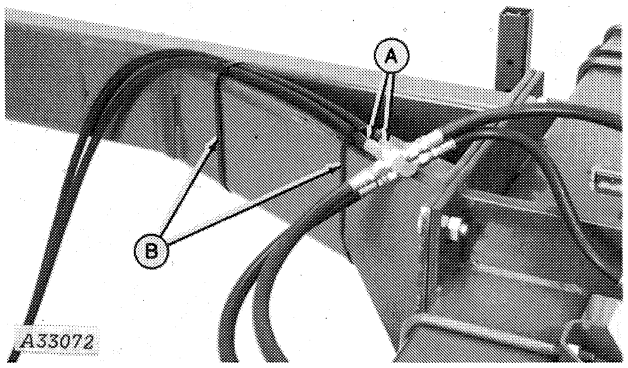
8. Connect hoses (B) from rod end of cylinders to tee.



050;A33071 B21;;15AS -BA 230387

9. Connect 6900 mm (271-3/4 in.) hoses (A) to tees. Secure hoses to right-hand hitch with tie straps (B).

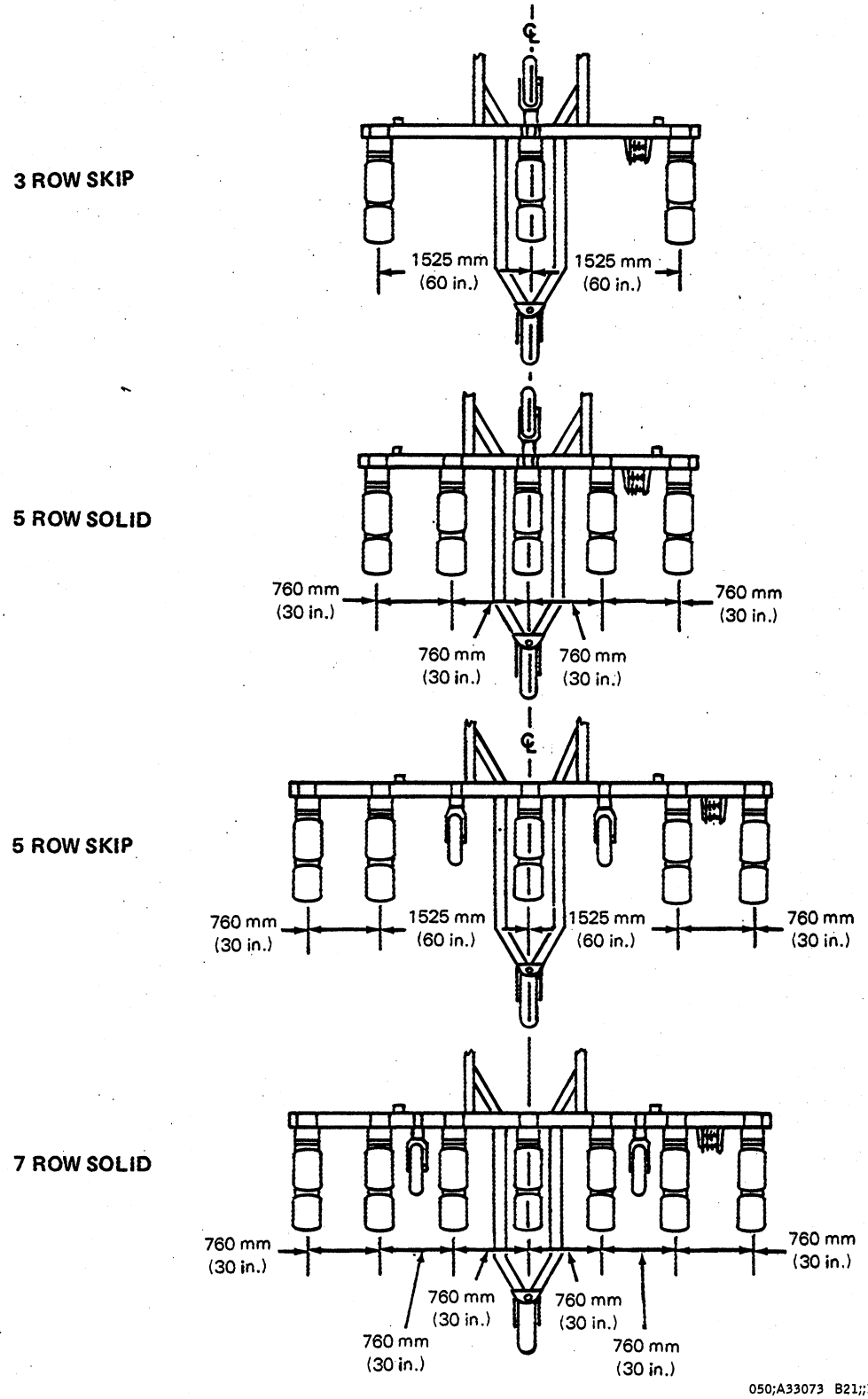
10. (Not Illustrated) Install tractor couplers on ends of hoses.



050;A33072 B21;;15AS -BB 230387

PARALLEL ARM SUPPORTS

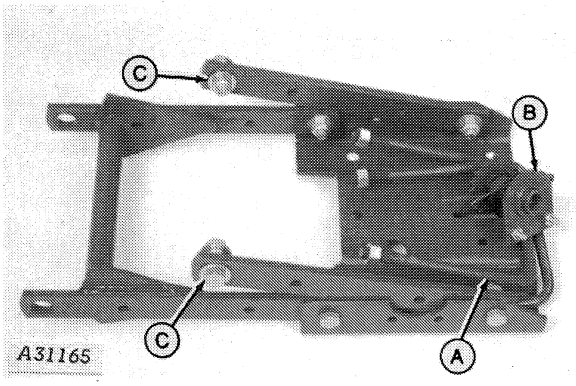
Refer to this illustration for positioning parallel arm supports.



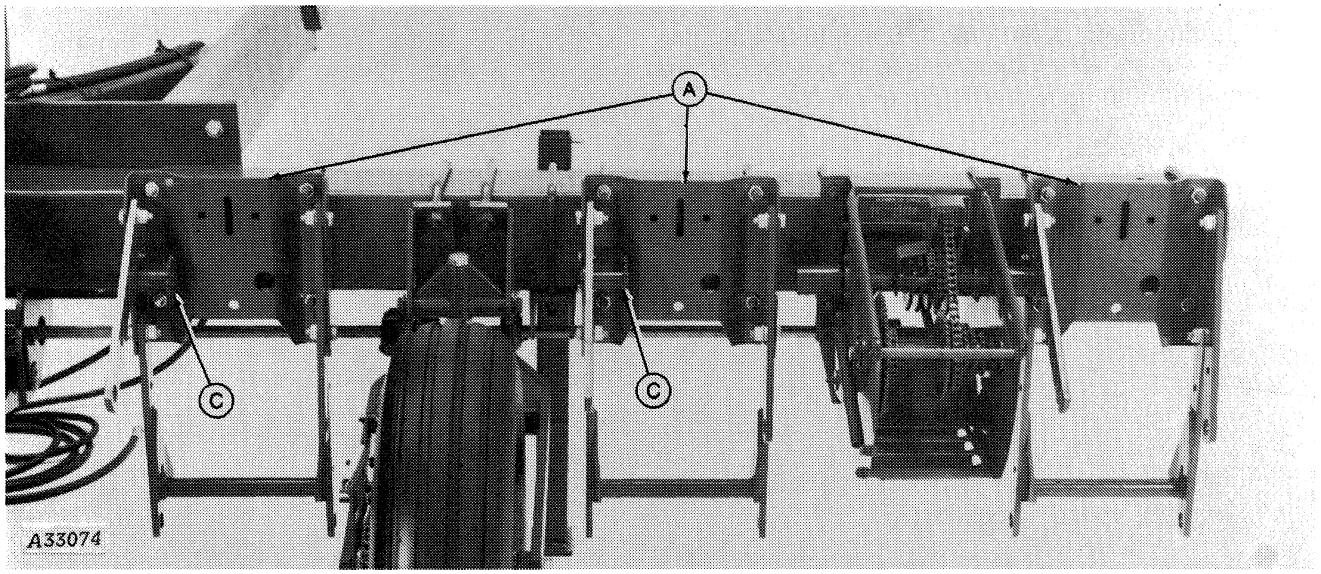
050;A33073 B21;;15AS -BC 230387

H16;P108 240387

1. Cut bundling wire and remove U-bolts (A), bearing (B) and cap screws (C) from parallel arm support.

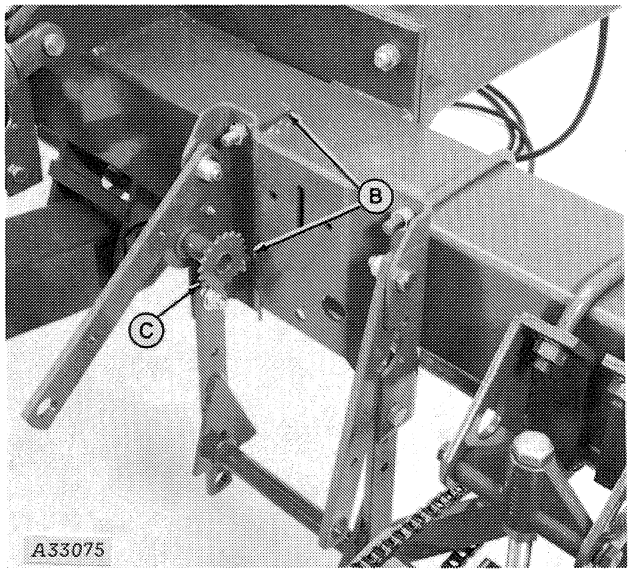


050;A31165 B21;;15AS -BD 230387



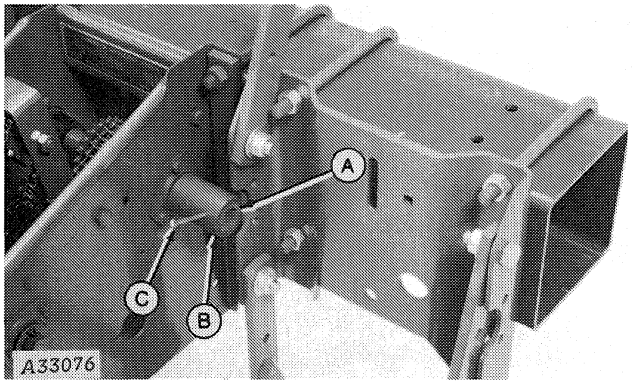
2. Attach parallel arm supports (A) to frame with U-bolts and nuts. Be certain U-bolts are straight, then tighten nuts. On rows 2 and 4 (5-Row Solid) or rows 3 and 5 (7-Row Solid), attach planting units to frame with T-bolts (B), U-bolt and nuts.

3. Install bearing sprockets (C) loosely on supports with M10 x 25 cap screws and nuts. Do not install bearing sprocket on right-hand side end support at this time.



050;A33074 A33075 B21;;15AS -BE 230387

4. Insert driver (A) into coupler (B). Align holes in driver and coupler and insert cotter pin (C).

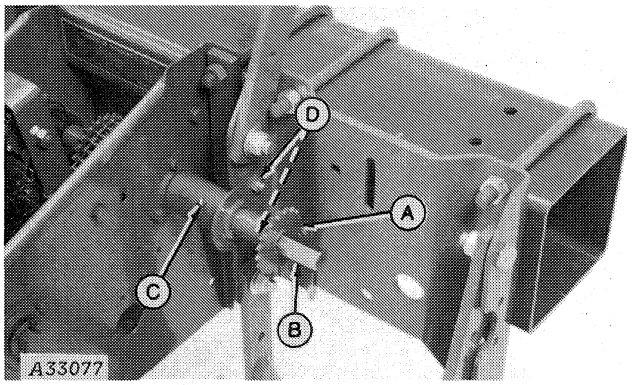


050;A33076 B21;;15AS -BF 230387

5. Slide bearing sprocket (A) onto 170 mm (6-3/4 in.) drill shaft (B). Insert drill shaft (hole end first) into driver. Secure drill shaft, driver and coupler with cotter pin (C).

6. Secure bearing sprocket to parallel arm support with M10 x 25 cap screws (D) and nuts.

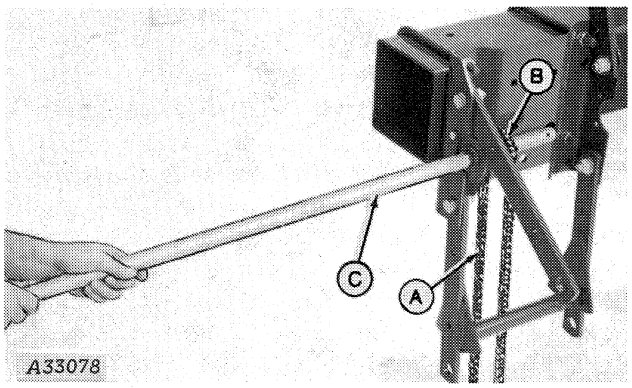
A—Sprocket
B—Drill Shaft
C—Cotter Pin
D—Cap Screws



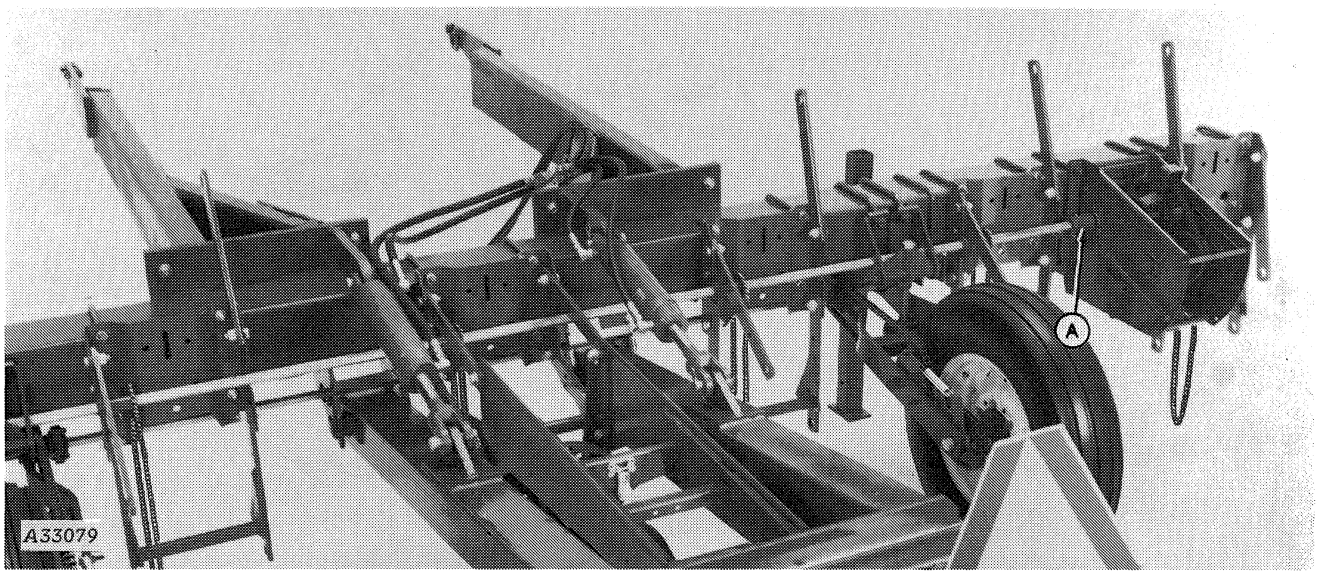
050;A33077 B21;;15AS -BG 090387

7. Install 102 link (plateless meters) or 112 link (vacuum meters) chain (A) around sprockets (B).

8. Insert 2690 mm (105-7/8 in.) (5-Row Solid or 3-Row Split) or 4210 mm (165-7/8 in.) (7-Row Solid or 5-Row Split) drill shaft (C) (hole end first) through bearing sprocket at left-hand side end parallel arm support.



050;A33078 B21;;15AS -BH 230387



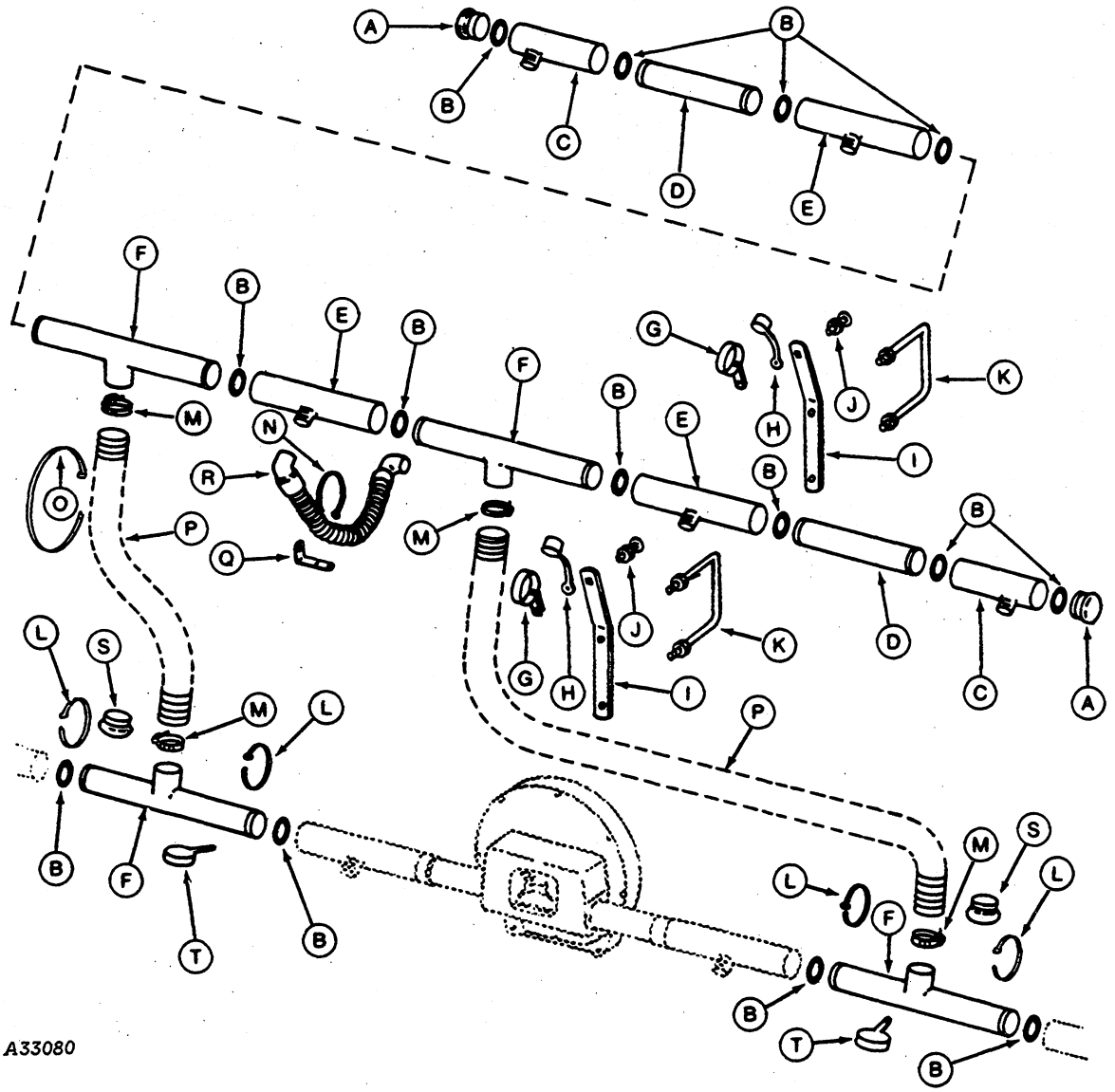
9. Insert drill shaft through remaining bearing sprockets. Secure drill shaft, driver and coupler with cotter pin (A).

050;A33079 B21;;15AS -BI 230387

VACUUM METERING SYSTEM

Use the following instructions as reference for assembling the vacuum manifold system.

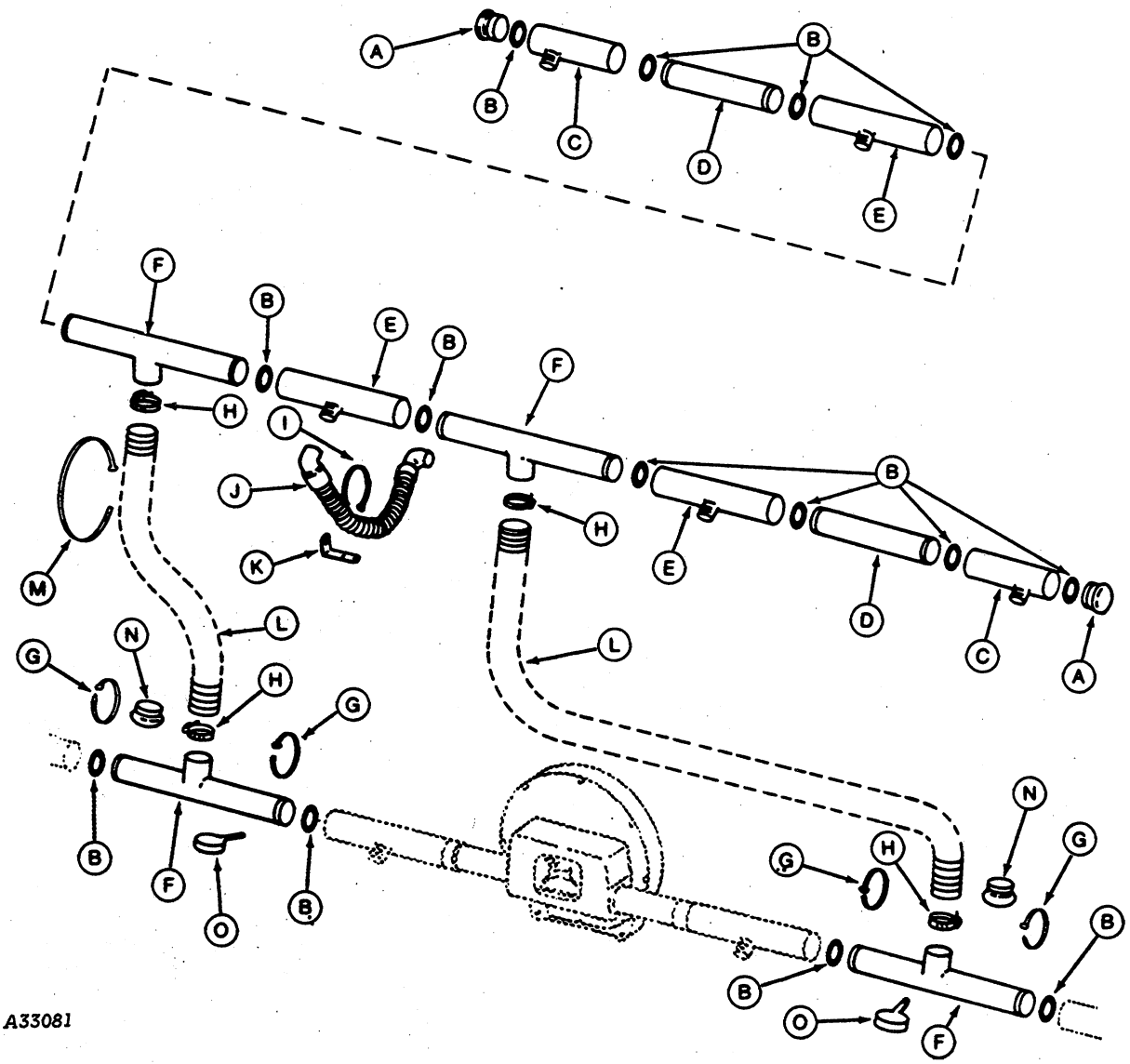
B21;;15AS -BJ 090387



A—Plug
B—O-Ring
C—Manifold
D—Air Duct
E—Manifold
F—Air Duct
G—Clamp
H—Cap
I—Bracket
J—Bolt
K—U-Bolt
L—Tie Strap
M—Hose Clamp
N—Tie Strap
O—Tie Strap
P—Flex Hose
Q—Strap
R—Hose
S—Plug
T—Cap

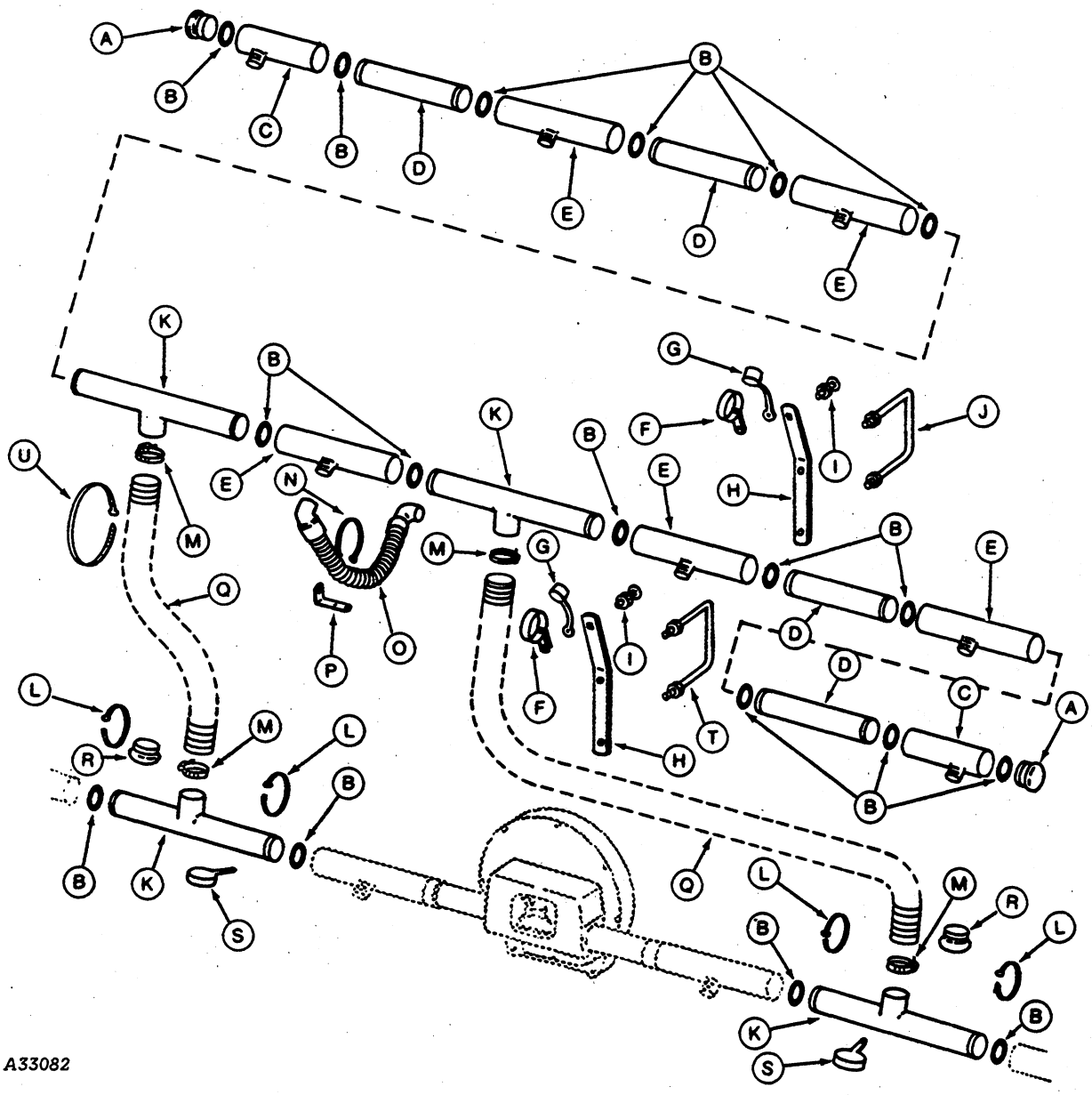
3-Row Split

050;A33080 B21;;15AS -BK 230387



A—Plug
B—O-Ring
C—Manifold
D—Air Duct
E—Manifold
F—Air Duct
G—Tie Strap
H—Hose Clamp
I—Tie Strap
J—Hose
K—Strap
L—Flex Hose
M—Tie Strap
N—Plug
O—Cap

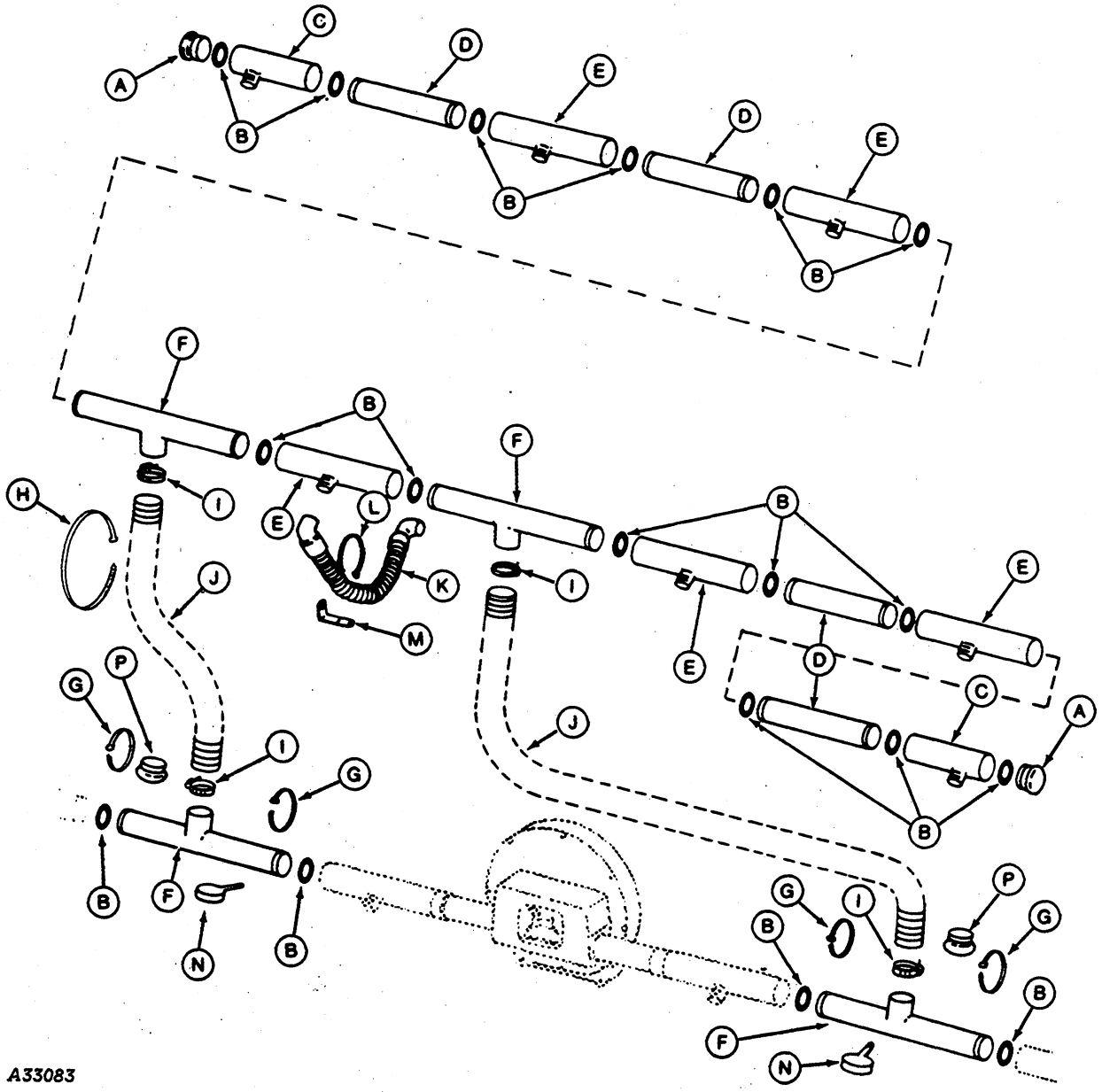
5-Row Solid



A—Plug
B—O-Ring
C—Manifold
D—Air Duct
E—Manifold
F—Clamp
G—Cap
H—Bracket
I—Bolt
J—U-Bolt
K—Air Duct
L—Tie Strap
M—Hose Clamp
N—Tie Strap
O—Hose
P—Strap
Q—Flex Hose
R—Plug
S—Cap
T—U-Bolt
U—Tie Strap

5-Row Skip

050;A33082 B21;;15AS -BM 230387



A—Plug	E—Manifold	I—Hose Clamp	M—Strap
B—O-Ring	F—Air Duct	J—Flex Hose	N—Cap
C—Manifold	G—Tie Strap	K—Hose	
D—Air Duct	H—Tie Strap	L—Tie Strap	

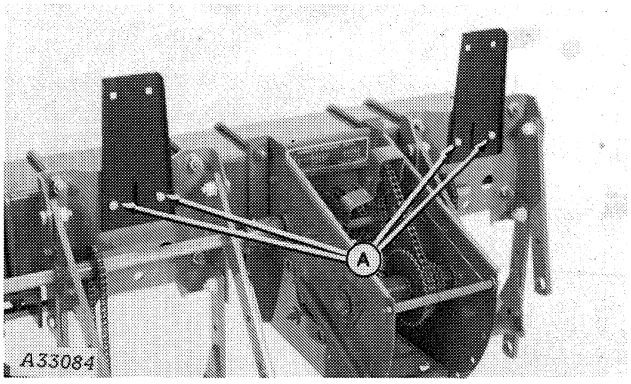
7-Row Solid

050;A33083 B21;;15AS -BN 230387

H16;P115 240387

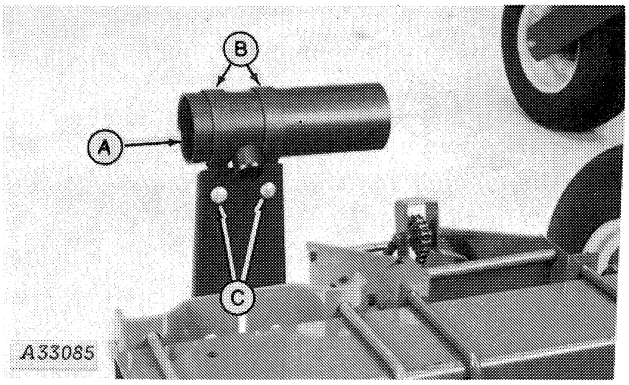
NOTE: The following assembly instructions are illustrated on a 7-Row Solid Split Row Attachment. The assembly instructions are basically the same for other size planters except where noted.

1. Attach brackets to parallel arm supports with M10 x 20 round head bolts (A) and nuts.



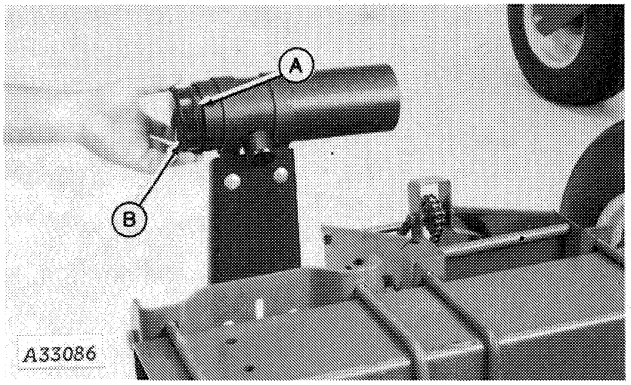
050;A33084 B21;;15AS -BO 090387

2. Attach manifold (A) to right-hand side end bracket with clamps (B) and M10 x 20 round head bolts (C) and nuts.



050;A33085 B21;;15AS -BP 090387

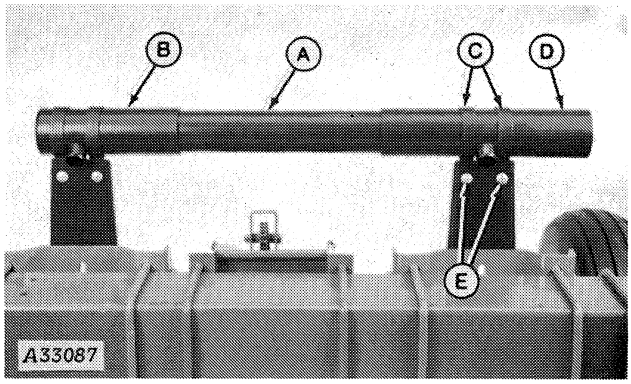
3. Install O-ring (A) onto end cap (B) and insert end cap into manifold.

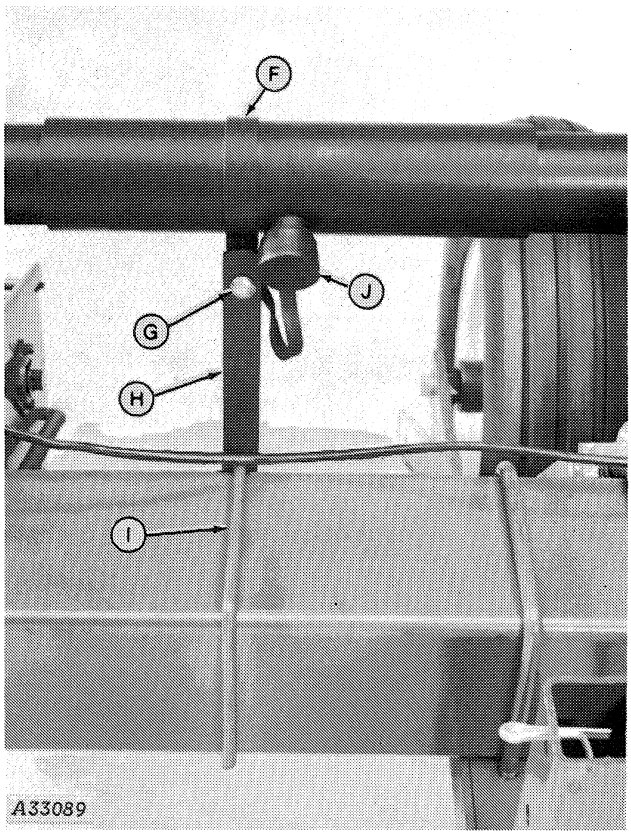


050;A33086 B21;;15AS -BQ 090387

4. Install O-rings on ends of air duct (A) and insert air duct into manifold (B). Install clamps (C) on manifold (D) and slide manifold onto air duct. Secure manifold to bracket with M10 x 20 round head bolts (E).

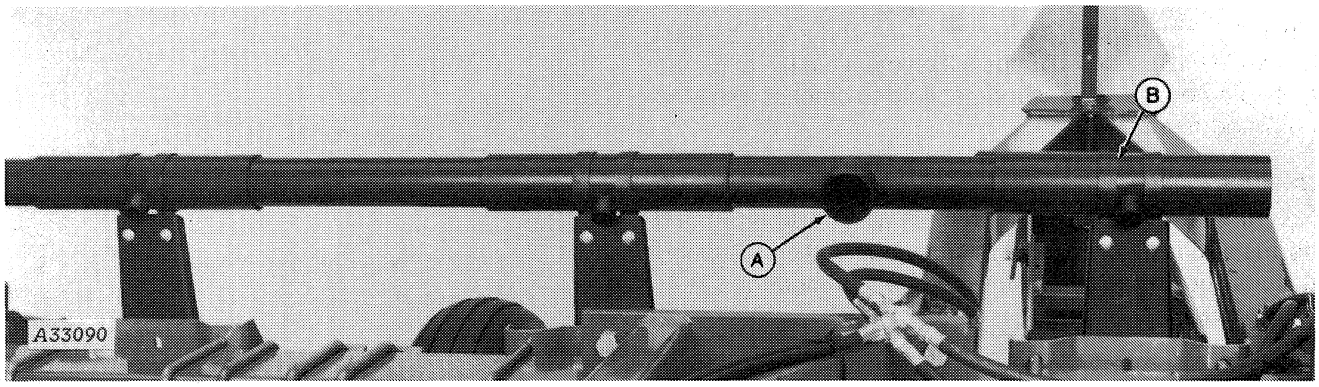
(3-Row and 5-Row Split Only) Secure manifold with clamp (F), M10 x 20 round head bolt (G), strap (H), U-bolt (I) and nuts. Install cap (J) on manifold and round head bolt. Support manifold where planting units would be mounted for 5-Row or 7-Row Solid.

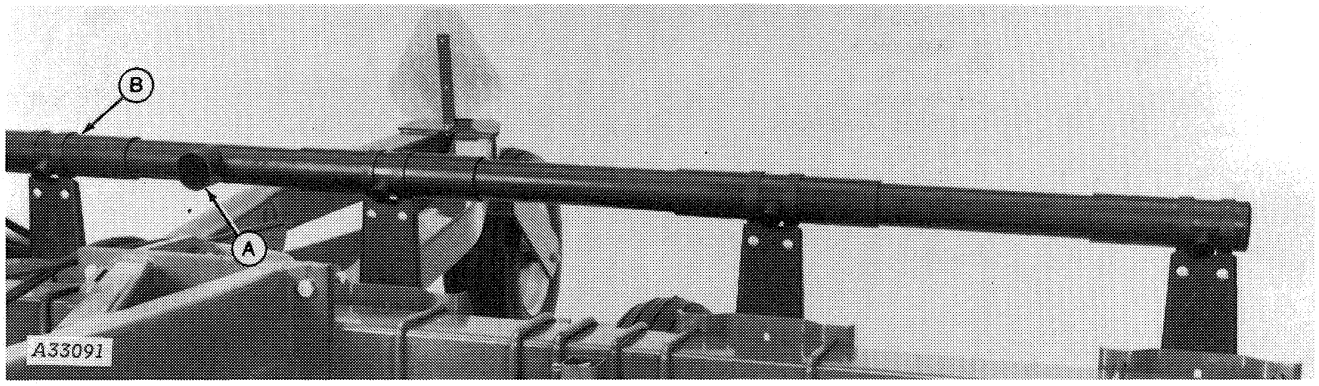




A—Air Duct
B—Manifold
C—Clamps
D—Manifold
E—Round Head Bolts
F—Clamp
G—Round Head Bolt
H—Strap
I—U-Bolt
J—Cap

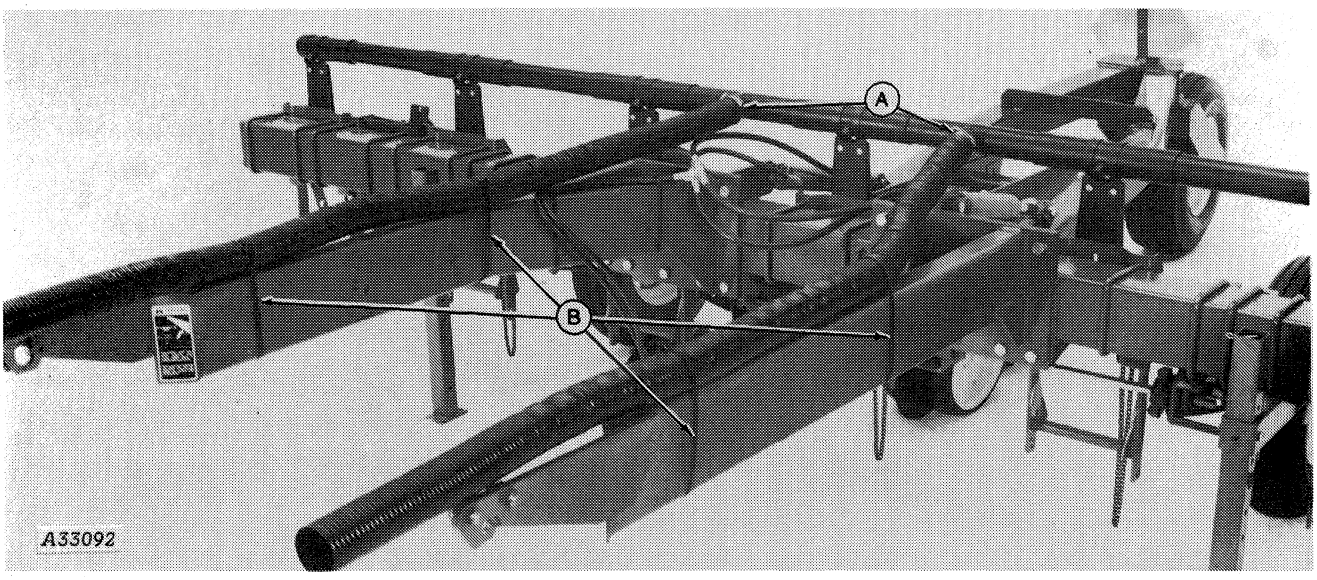
050;A33087 A33089 B21;;15AS -BR 090387





5. Install remaining manifolds on brackets. Install manifolds (A) with large opening on both sides of center manifold (B).

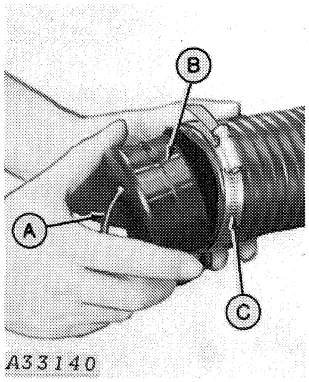
050;A33090 A33091 B21;;15AS -BS 090387



6. Attach flex hoses (A) to manifolds with hose clamps. Secure flex hose to hitch with tie straps (B).

050;A33092 B21;;15AS -BT 090387

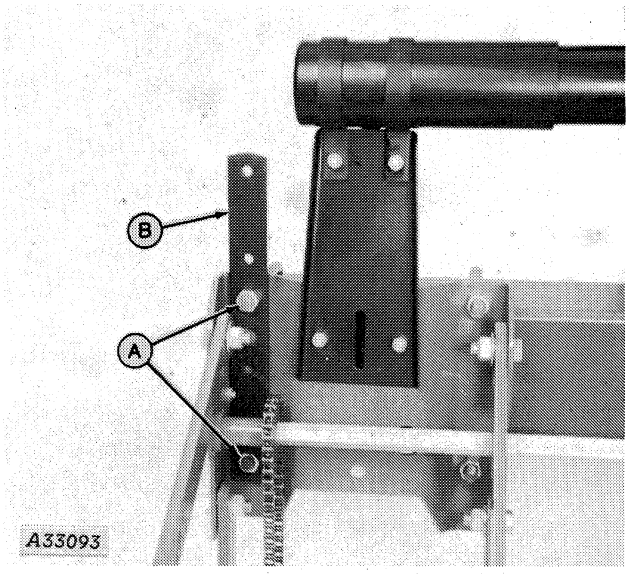
7. Insert tie strap (A) through holes in plug (B). Insert plug into flex hose and secure tie strap to hose clamp (C).



050;A33140 B21;;15AS -CX 230387

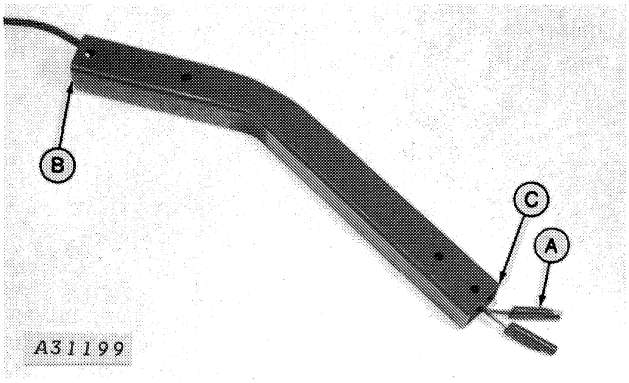
WARNING LAMPS

1. Remove nuts (A) from left-hand outside U-bolt. Install strap (B) on U-bolt and secure with nuts.



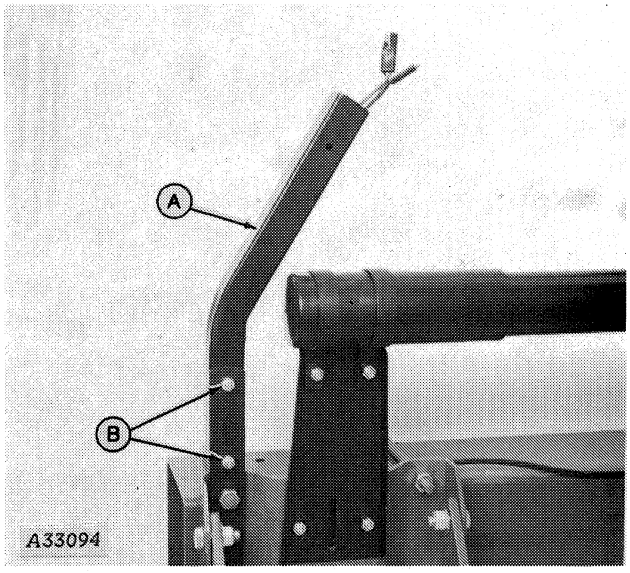
050;A33093 B21;;15AS -BU 090387

2. Insert harness (A) through bottom end (B) of tube and out through top end (C).



026;A31199 B21;;12AS AL 130886

3. Attach support tube (A) to strap with M10 x 65 cap screws (B), lock washers and nuts.

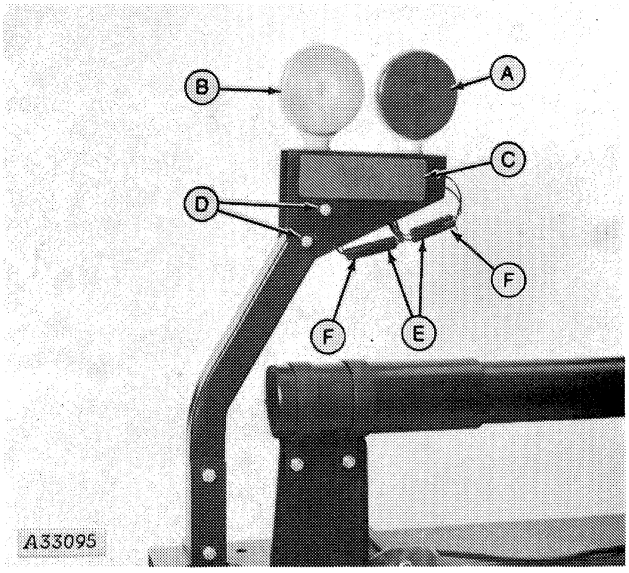


050;A33094 B21;;15AS -BV 090387

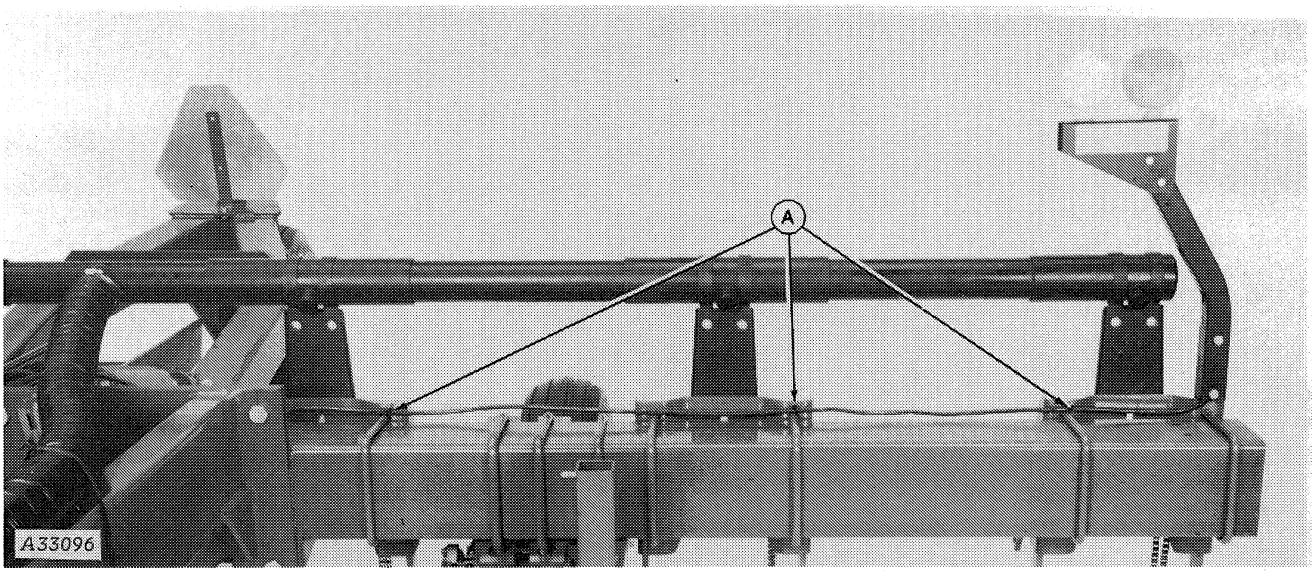
4. Attach red lamp (A) and amber lamp (B) to support with flat washers, lock washers and nuts.

5. Attach support to tube (red reflective tape (C) facing rearward) with M8 x 60 cap screws (D) lock nuts.

6. Plug lamp terminals (E) into harness terminals (F) matching amber and red dots on harness and lamp terminals.



050;A33095 B21;;15AS -BW 230387



7. Route harness along top of frame and secure harness to parallel arm supports with tie straps (A).

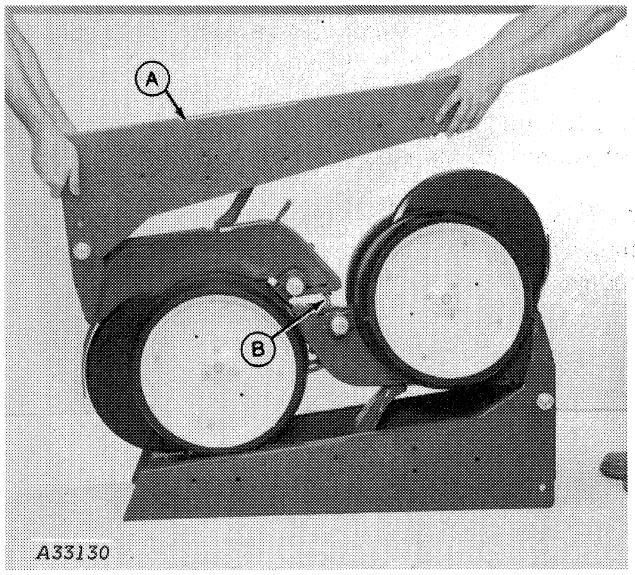
8. (Not Illustrated) Attach warning lamps to opposite side of frame.

050;A33096 B21;;15AS -BX 090387

PLANTING UNITS

1. (Not Illustrated) Cut carton away from planting units.

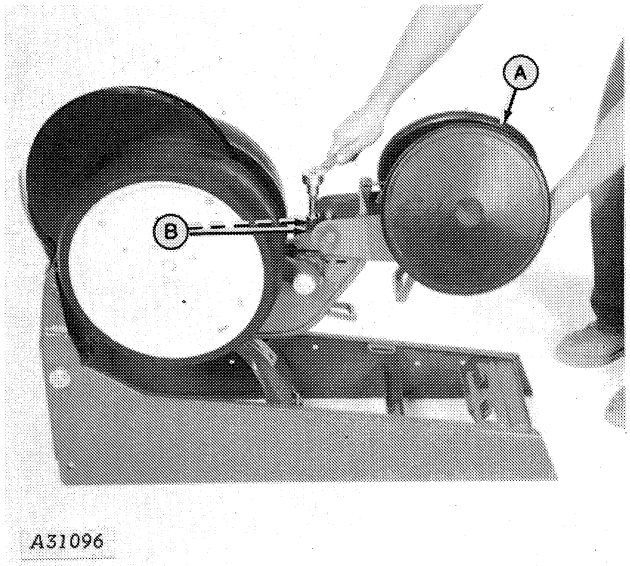
2. Disengage the top planting unit (A) from cap screw (B) by pulling unit rearward then upward.



050;A33130 B21;;15AS -CV 230387

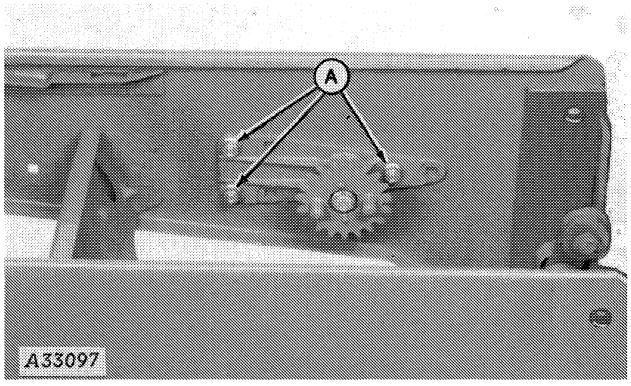
3. Position planting unit upside down as shown.

4. Attach closing wheel assembly (A) to shank with two M12 x 25 cap screws (B).

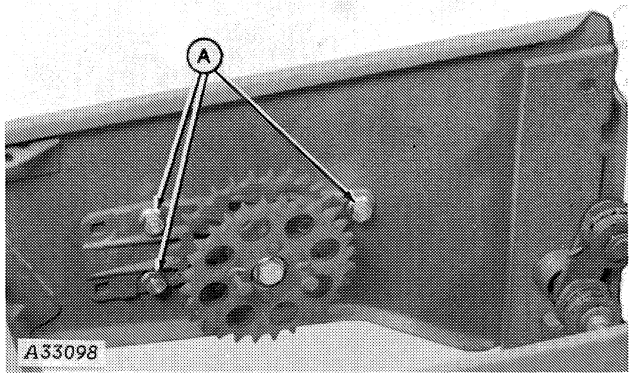


050;A31096 B21;;15AS -BY 230387

5. Turn planting unit over on its wheels and remove round head bolts (A) from sprocket assembly. Attach sprocket assembly to side panel with round head bolts and flange nuts. Be certain round head bolts are installed in the holes on the sprocket assembly as shown at right.



Sprocket for Plateless Meters



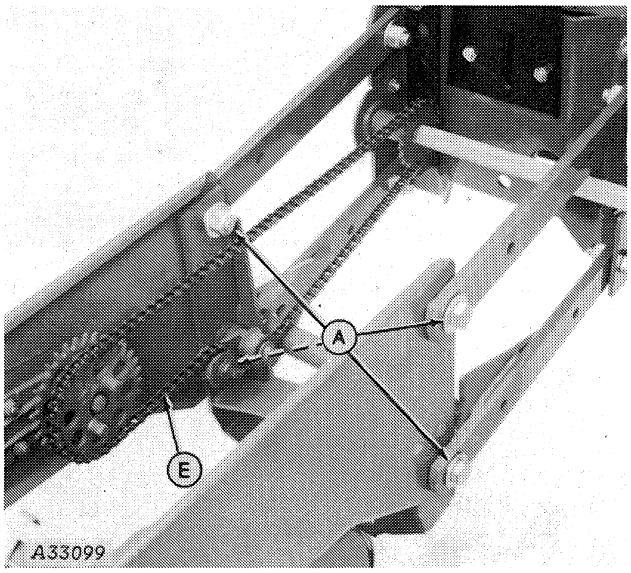
Sprocket for Vacuum Meters

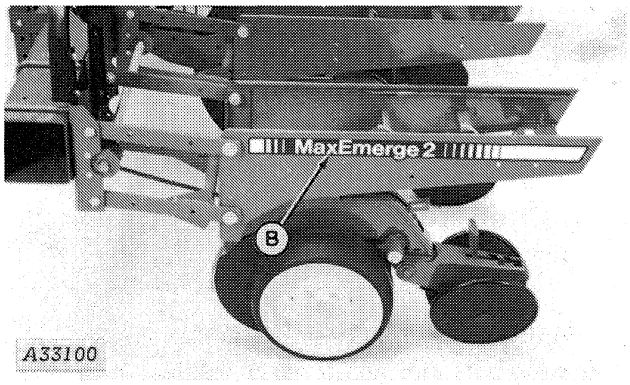
050;A33097 A33098 B21;;15AS -BZ 230387

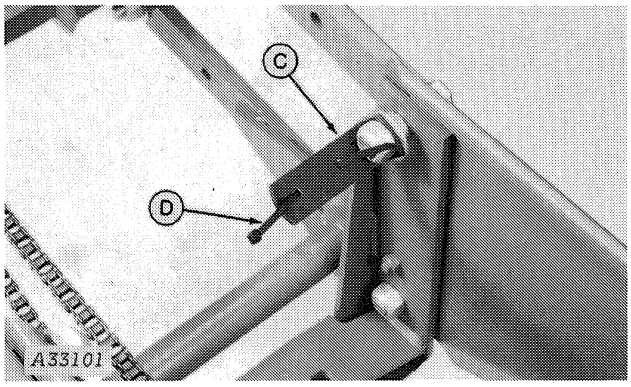
6. Attach planting units to parallel arms (A) with cap screws, bushings, flat washers and nuts. Be certain to install planting units with "Max Emerge 2" decal (B) on both ends of frame.

If planter is equipped with vacuum system, install bracket (C) on upper right-hand cap screw. Insert tie strap (D) through holes in bracket.

7. Install chain (E) on sprocket and chain tightener.



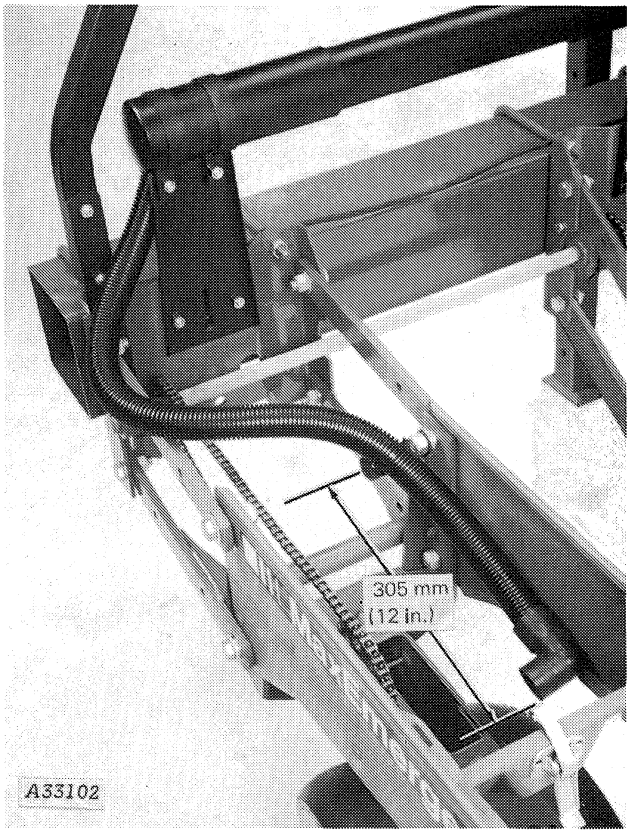




A—Parallel Arms
B—Decal
C—Bracket
D—Tie Strap
E—Chain

8. (Vacuum Meters Only) Install hose on air duct and route hose around left side of bracket. Secure hose to bracket with tie strap approximately 305 mm (12 in.) from end of hose.

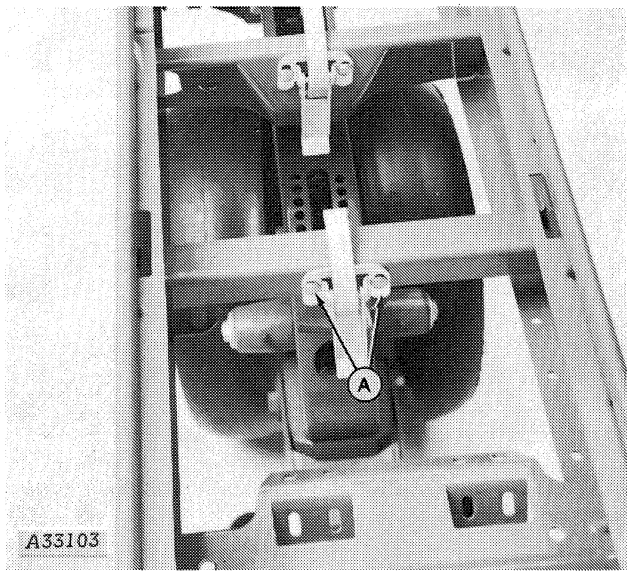
NOTE: For seed tube installation instructions, see your service shop copy of COMPUTER TRAK 100, 200 and 300 Planter Monitor operator's manual.



050;A33102 B21;;15AS -CB 230387

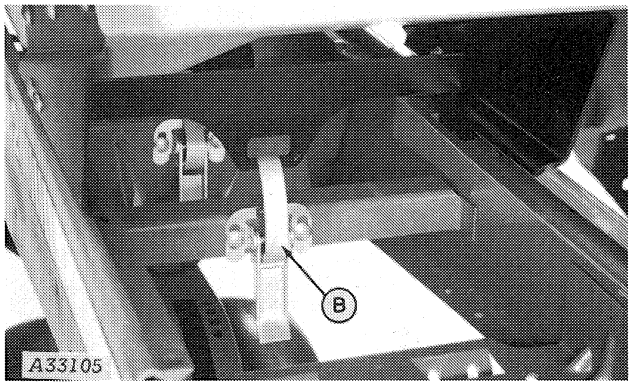
SEED HOPPERS

1. Install latch assembly on rear hopper support with M6 x 16 round head bolts (A) and nuts.



050;A33103 B21;;15AS -CC 090387

2. Install seed hopper (A) and secure with hopper latch (B). Raise or lower latch assembly as required to hold the hopper securely. Tighten nuts on latch assembly.



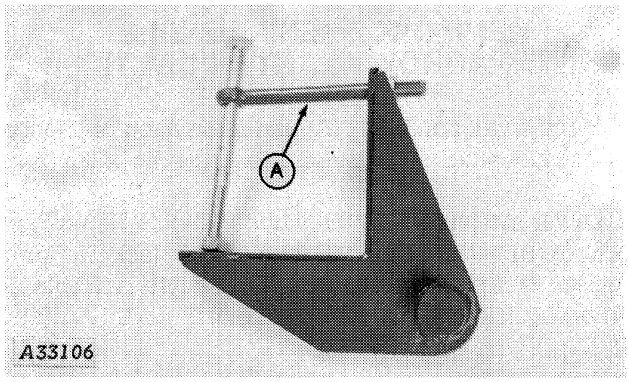
050;A33104 A33105 B21;;15AS -CD 090387

3. (Vacuum Seed Meter Hoppers Only) Install vacuum hose on seed meter.

005;A30740 B21;;8AS GL 060286

INSTALL PIVOTS ON PLANTER FRAME

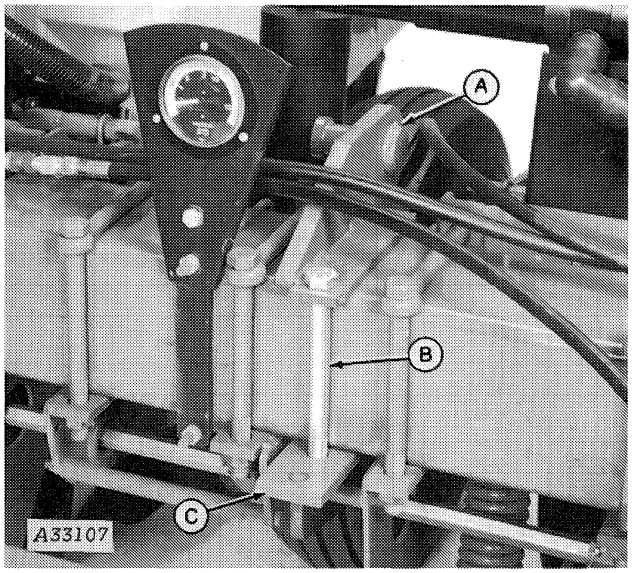
1. Remove and discard eyebolt (A) from pivot assembly if attaching split row attachment to 6-Row Narrow planter. The eyebolt is used if attaching to 8-Row Narrow planter.

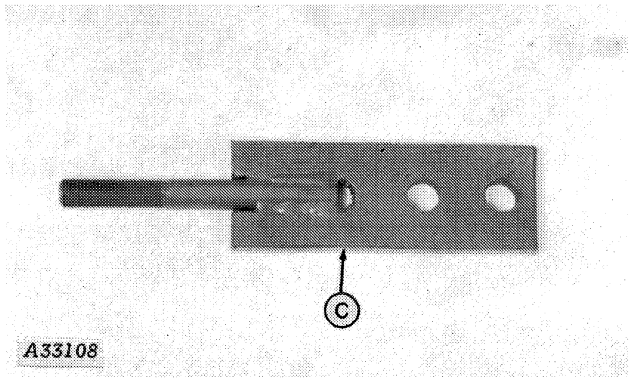


050;A33106 B21;;15AS -CE 230387

2. Position right-hand pivot (A) next to inside wheel module support. Secure pivot with cap screw (B), strap (C) (6-Row Planter) or eyebolt (8-Row Planter) and nuts. Do not tighten nuts at this time.

3. (Not Illustrated) Attach left-hand pivot on left-hand side of frame.



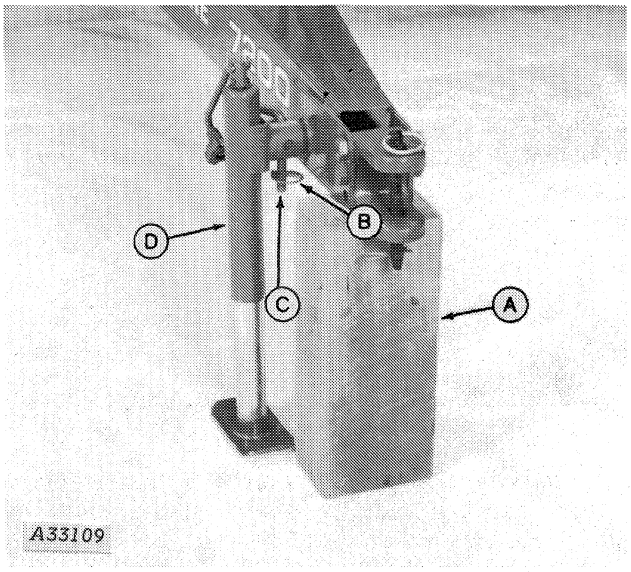


050;A33107 A33108 B21;;15AS -CF 230387

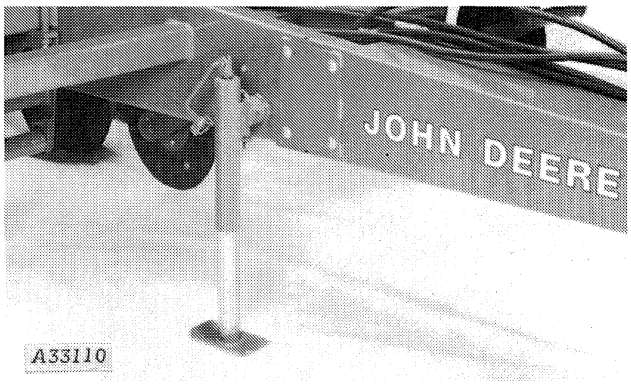
HITCH REINFORCEMENT BUNDLE (6-ROW NARROW PLANTER ONLY)

1. Place a wooden block (A) under the hitch or support the end of the hitch.

2. Lower the hitch onto the wooden block. Remove quick-lock pin (B) and drilled pin (C) and remove jack (D) from front position and place in rear position. Secure jack with drilled pin and quick-lock pin.



A33109



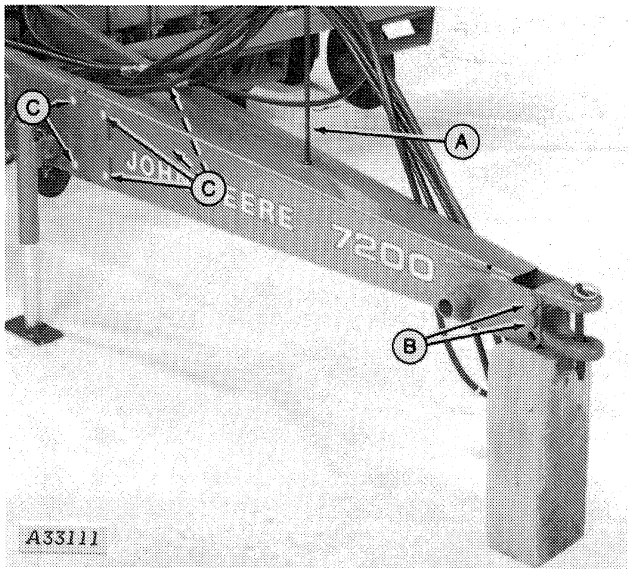
A33110

050;A33109 A33110 B21;;15AS -CG 230387

3. Pull hydraulic hoses back through hose holder (A) and remove hose holder from hitch.

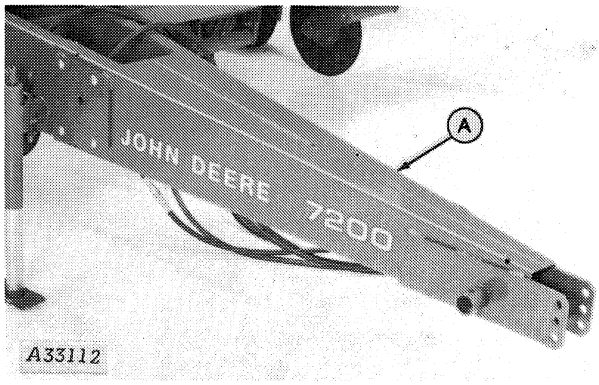
4. Remove nuts and cap screws (B) securing clevis to hitch. Remove clevis.

5. Remove cap screws (C) securing hitch and remove hitch.



050;A33111 B21;;15AS -CH 230387

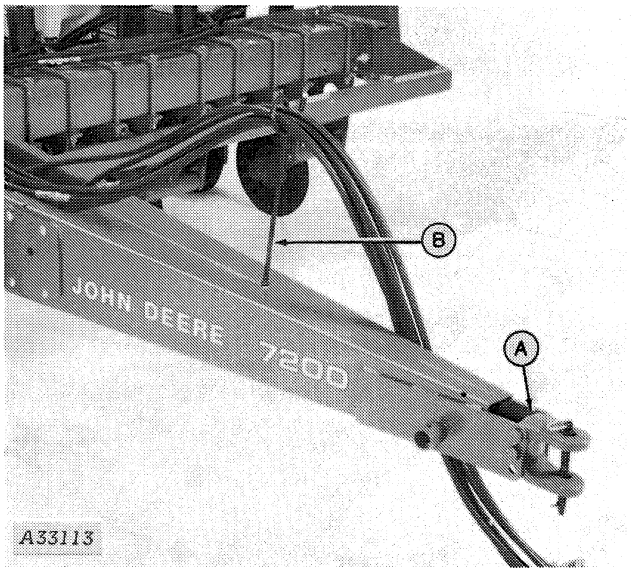
6. Attach new hitch (A) to frame with cap screws and nuts removed in step 5.



050;A33112 B21;;15AS -CI 300387

7. Install clevis (A) on hitch with cap screws and nuts removed in step 4.

8. Install hose holder (B) on hitch.



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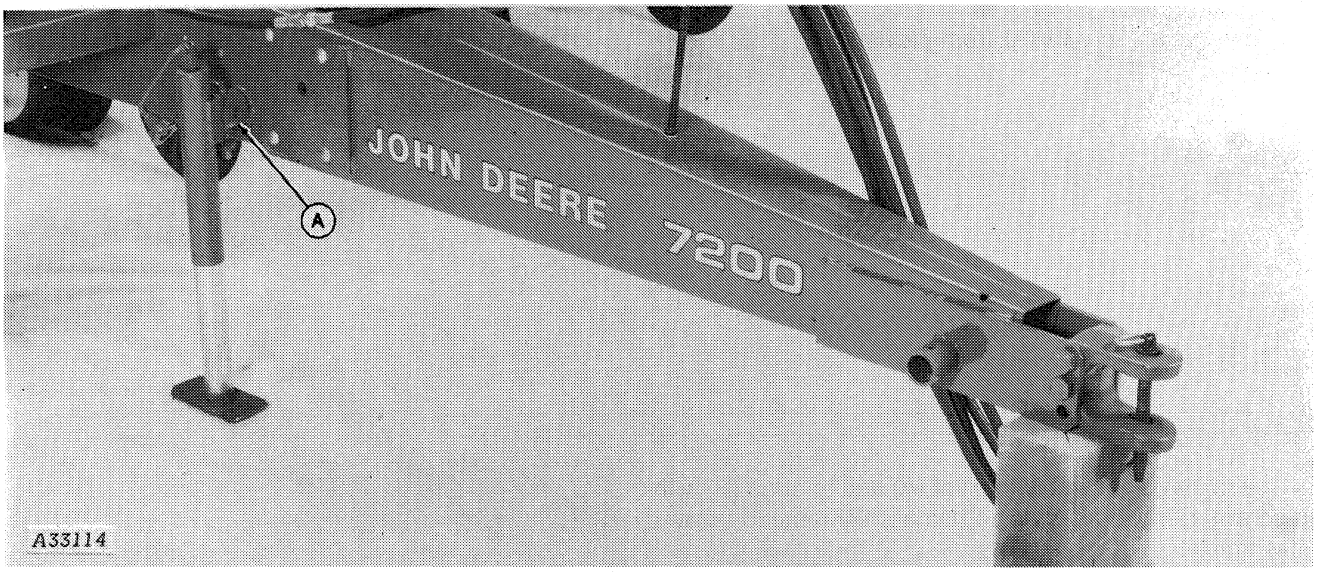
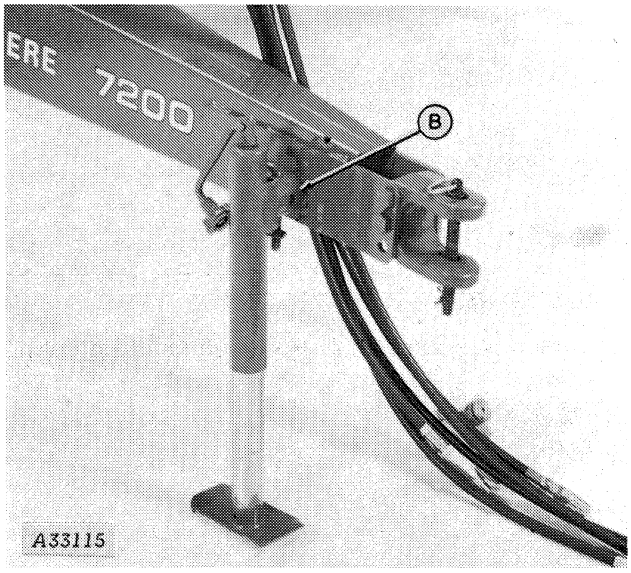
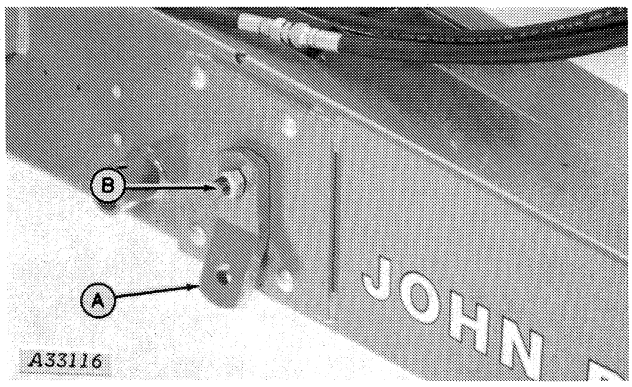


9. Support end of hitch. Move jack from rear position (A) to front position (B).



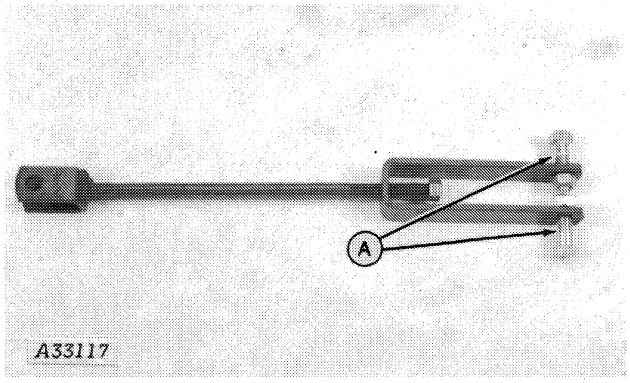
050;A33114 A33115 B21;;15AS -CK 230387

10. Attach strap (A) to both sides of hitch with 415 mm (16-1/4 in.) stud (B) (threaded on both ends) and nuts. Do not tighten nuts at this time.



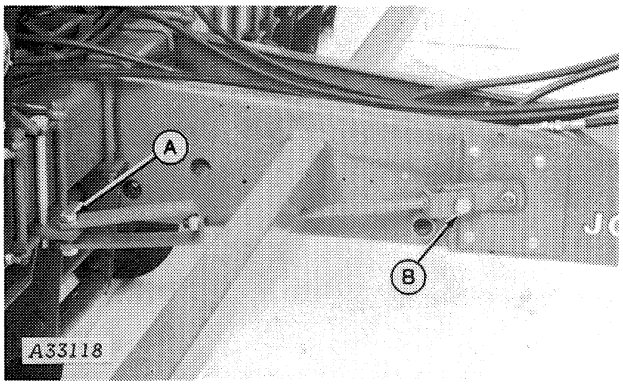
050;A33116 B21;;15AS -CL 230387

11. Remove cap screws (A) from clevis.



050;A33117 B21;;15AS -CM 230387

12. Attach clevis assembly to pivot (A) and to strap (B) with cap screws removed in step 11. Do not tighten cap screws at this time.



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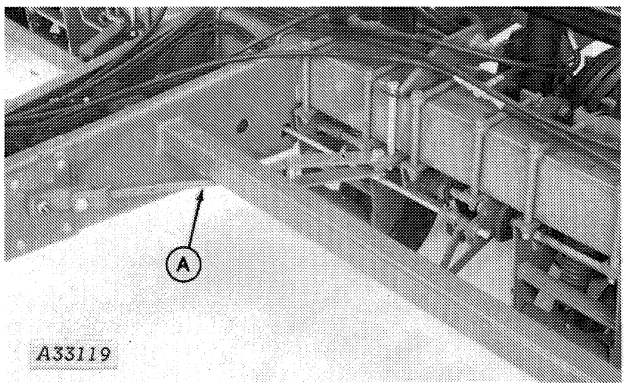
13. Attach clevis assembly (A) to left-hand side of hitch.



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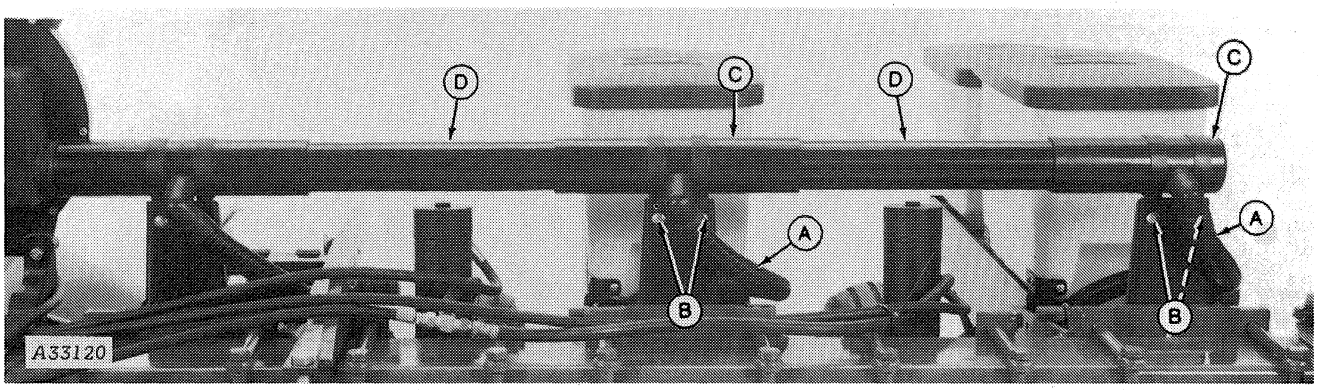
PLANTER VACUUM MANIFOLD

NOTE: The following steps are for planters equipped with vacuum metering system.



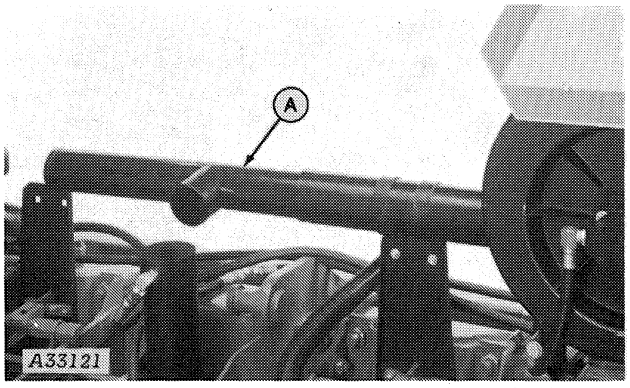
1. Remove hoses (A) from manifolds on left-hand side of planter.

2. Remove round head bolts (B) securing clamps to brackets.

3. Remove manifolds (C) and air ducts (D).

050;A33120 B21;;15AS -CP 230387

4. Replace inner air duct with air duct (A) with large opening.



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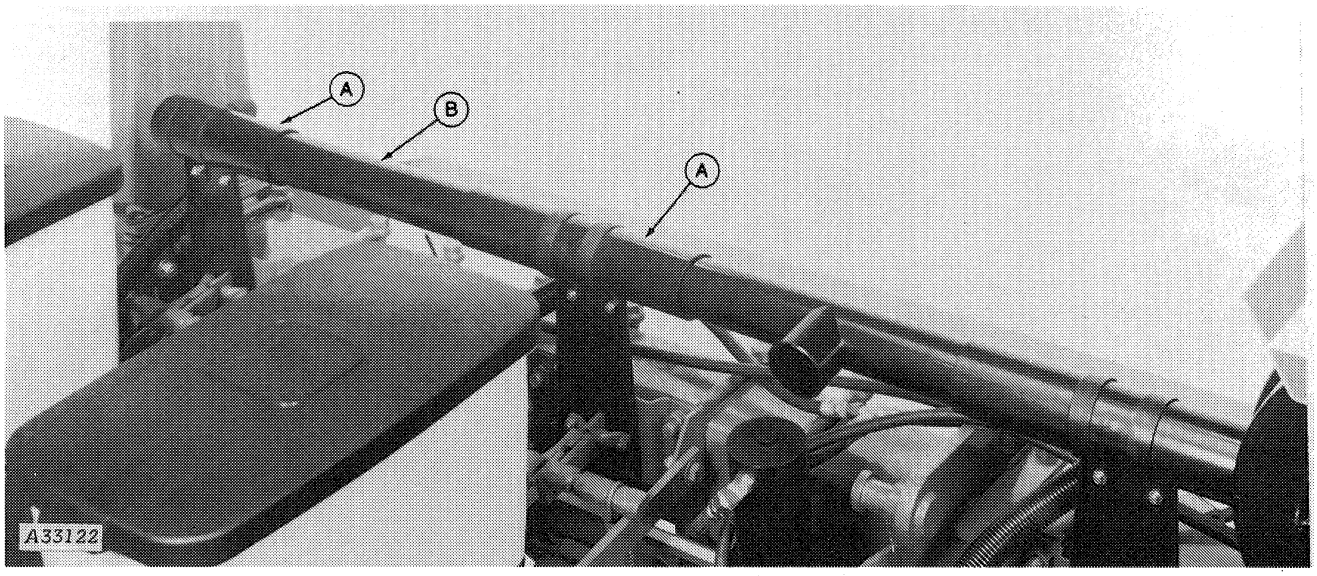
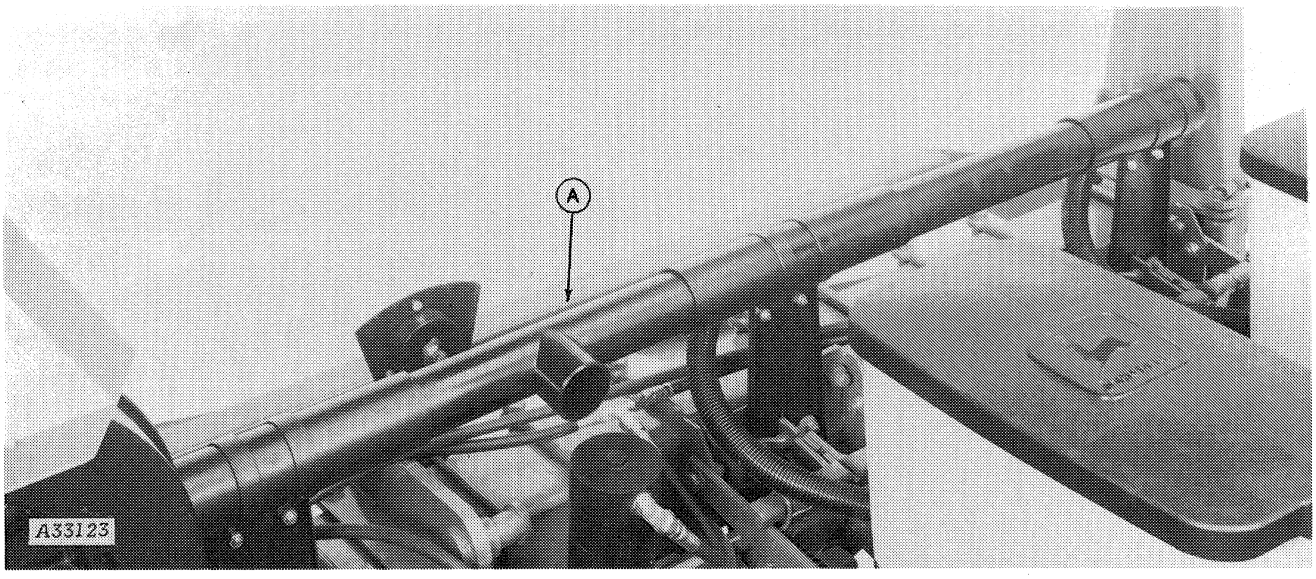


5. Attach manifolds (A) and remaining air duct (B) to brackets with clamps and round head bolts removed in step 2.

050;A33122 B21;;15AS -CR 090387



6. Replace inner air duct with new air duct (A) on right-hand side manifold.

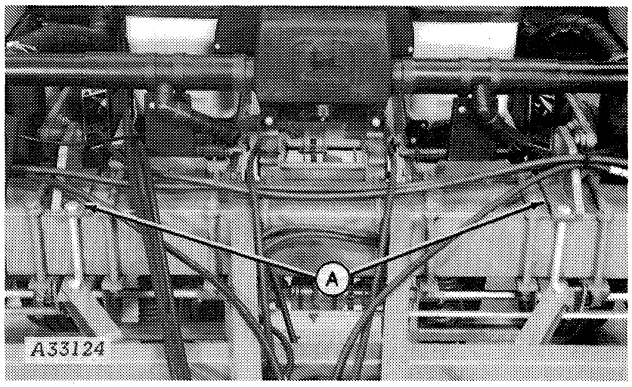
050;A33123 B21;;15AS -CS 090387

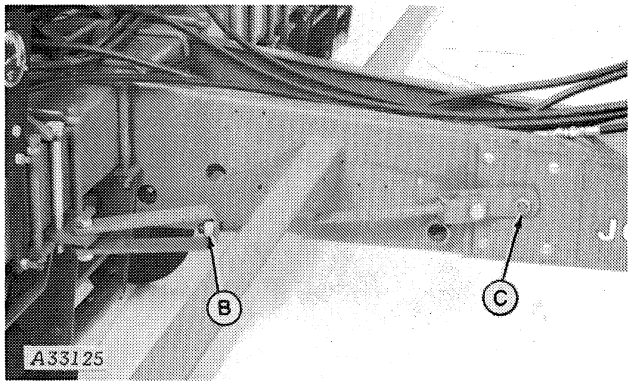
ATTACHING TO PLANTER (FIRST TIME)

1. After attaching the split row attachment to the planter for the first time (see ATTACHING AND DETACHING), tighten nuts securing pivots (A) to frame.

2. Tighten nut (B) until clevis assembly is taut.

3. Tighten nut (C) securing straps.





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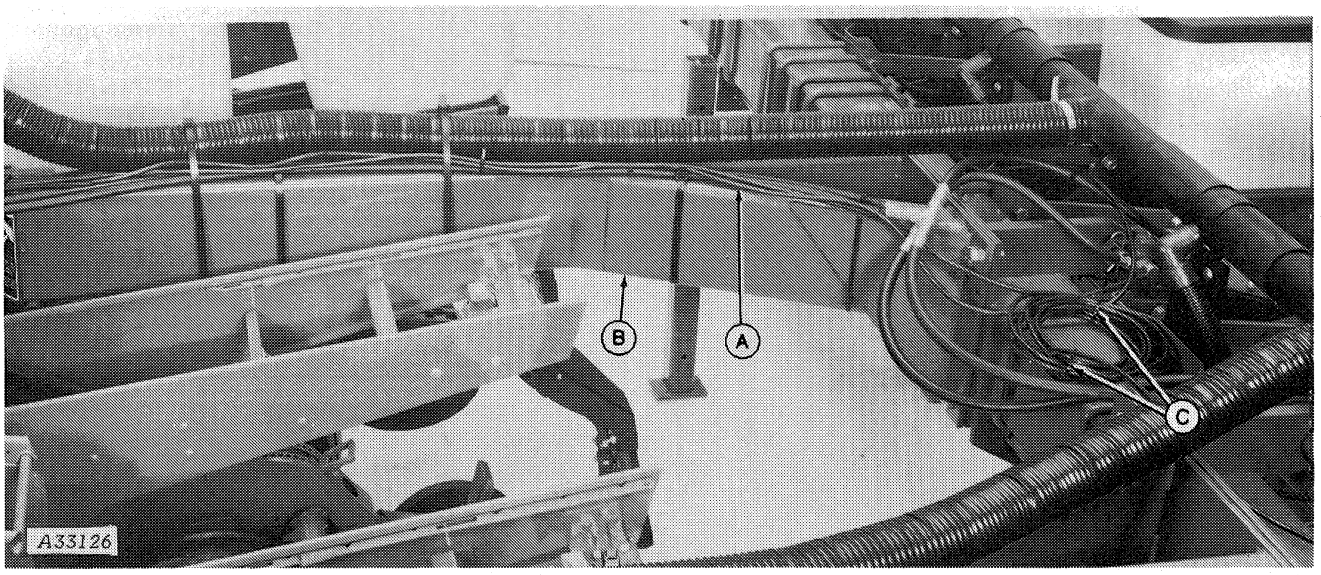
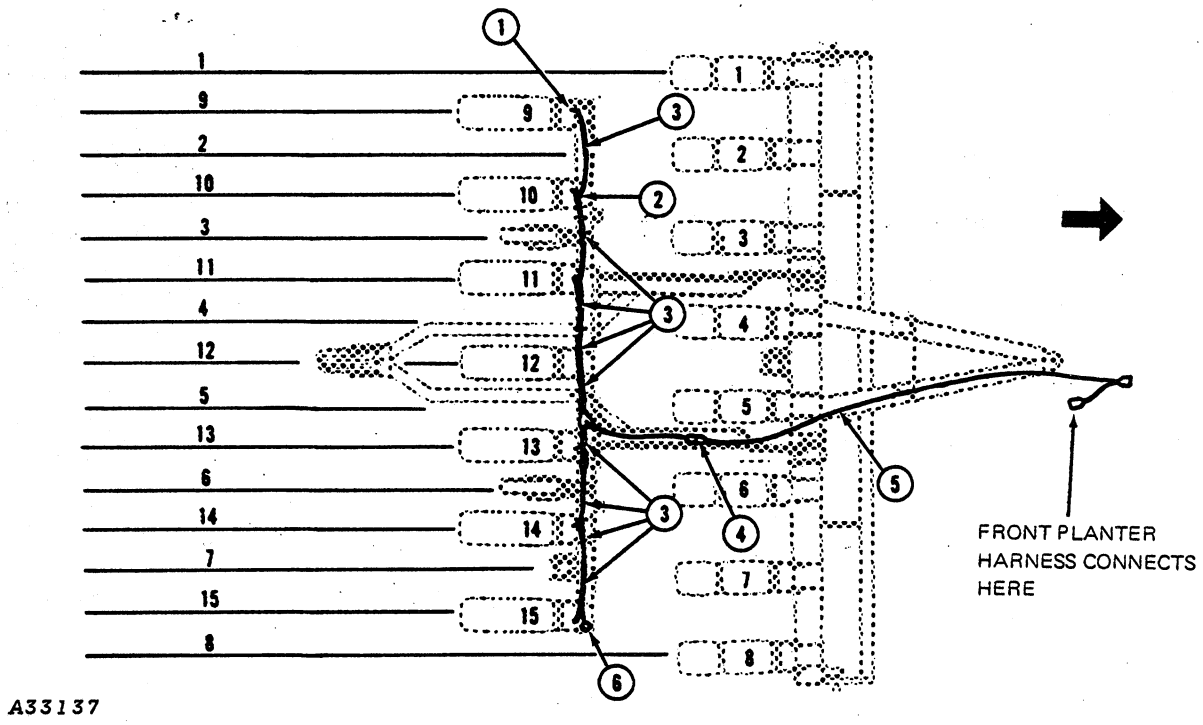


4. String warning lamp harness (A) and monitor harness (if so equipped) along the top and behind tie straps securing flex hose on right-hand hitch (B). String harness over planter hitch and through hose holder and connect to seven pin connector.

5. Loop excess harness on center of frame and secure with tie straps (C).

050;A33126 B21;;15AS -CU 090387

COMPUTER TRAK MONITOR HARNESS ON SPLIT ROW FRAME



7-Row Split Row Attachment Illustrated.

1. Connect the left row sensor to the harness lead marked "No. 1".

2. Connect the harness lead marked "No. 2" to the next row sensor lead and continue for remaining rows.

3. Secure harness to frame with tie straps.

4. Connect harness and adapter together.

5. Loosely fasten harness along 22 ft. (6.7 m) hoses with tie straps. After attaching Split Row Attachment to front planter and tractor, tighten tie straps to secure harness to hydraulic hoses. Neatly loop any excess harness and secure to Split Row Frame.

6. When required, insert plugs contained in adapter package into any harness leads that are not used; distance wheel frame lead, No. 8 lead on seven row frame, and Nos. 6, 7, and 8 on 5-row solid frame.

NOTE: Monitor console will consecutively display the total number of rows starting with the front left row being No. 1 and the rear right row being displayed as the highest row number.

Specifications

PLANTING UNIT TYPES . . Plate, Plateless or Vacuum Meter

SEED OPENERS . . . . . Tru-Vee double disk

ROW SPACING . . . . . 5-and 7-Row Solid
3-and 5-Row Split

TYPE OF LIFT . . . . . Wheel lift with hydraulic cylinders

TYPE OF DRIVE Sprocket and chain from gauge wheels

TIRES . . . . . 11L -15-8 implement tire -lift wheel
7.60 x 15 8PR rib implement tire -gauge wheel

SEED HOPPERS . . . . . 106 L (3 bu.) capacity

ATTACHMENT WIDTH

5-Row Frame . . . . . 3.5 m (11 ft. 6-1/2 in.)
7-Row Frame . . . . . 5.0 m (16 ft. 4 in.)

B21;;15SP -A 230387

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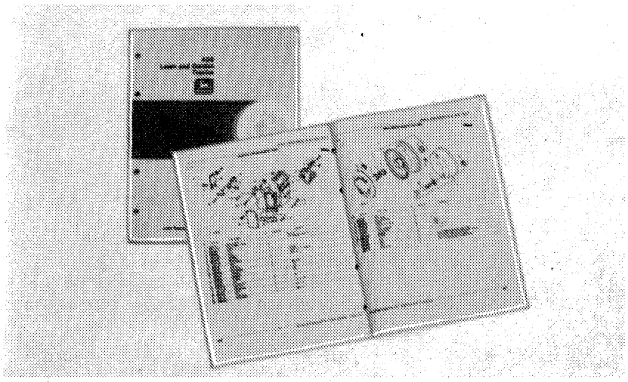
John Deere Service Literature Available

PARTS CATALOG

The parts catalog lists service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.

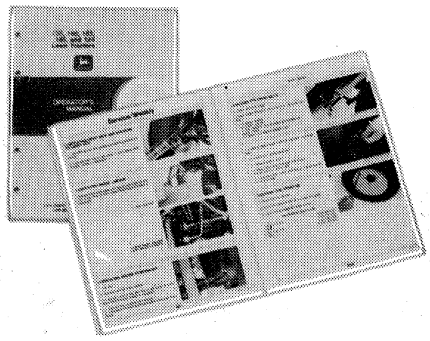


AB6;TS189 053;PARTS 271185

OPERATOR'S MANUAL

The operator's manual provides safety, operating, maintenance, and service information about John Deere machines.

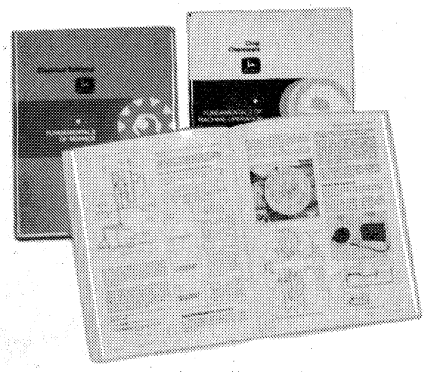
An extra copy of the operator's manual is important if the copy furnished with your machine is misplaced.



AB6;TS190 053;OM 271185

FMO AND FOS MANUALS

These are basic manuals covering most 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.



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Operator's Manual MaxEmerge® 2	OM-H135386		x	=
Split Row Planting Attachment			x	=
			x	=
			x	=
			x	=
			x	=
FMO Manual—Tractors	FMO-10102B		x	=
FMO Manual—Tillage	FMO-11102B		x	=
FMO Manual—Planting	FMO-12102B		x	=
FMO Manual—Crop Chemicals	FMO-13102B		x	=
FMO Manual—Hay & Forage Harvesting	FMO-14102B		x	=
FMO Manual—Combine Harvesting	FMO-15102B		x	=
FMO Manual—Preventive Maintenance	FMO-16103B		x	=
FMO Manual—Machinery Management	FMO-17102B		x	=
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FOS Manual—Bearings and Seals	FOS-5404B		x	=
FOS Manual—Tires and Tracks	FOS-5505B		x	=
FOS Manual—Mowing and Spraying Equipment	FOS-5604B		x	=
FOS Manual—Air Conditioning	FOS-5705B		x	=
FOS Manual—Fuels, Lubricants & Coolants	FOS-5805B		x	=
FOS Manual—Fiber Glass	FOS-5902B		x	=
FOS Manual—Fasteners	FOS-6002B		x	=
FOS Manual—Iden. of Parts Failures	FOS-6102B		x	=
SET OF 11 FOS MANUALS (above)	FOS-71 Set		x	=
SET OF ALL 15 FOS MANUALS	FOS-181 Set		x	=
Conservation Farming	FC-10101B		x	=
Machinery Maintenance	FMW-10101B		x	=
Farm Business Management	FBM-10101B		x	=
Catalogs of Available Service Publications: Agricultural Product Publications	CPC-1703			
Industrial Product Publications	CPC-1852			
Consumer Product Publications	CPC-1704			
		Subtotal		

John Deere Service Keeps You On The Job

JOHN DEERE PARTS

We help minimize downtime by putting the right parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

AB6;TS100 053;IBC A 030985

THE RIGHT TOOLS

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.

AB6;TS101 053;IBC B 030985

WELL-TRAINED TECHNICIANS

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!

AB6;TS102 053;IBC C 030985

PROMPT SERVICE

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances.
See us.
Depend on us.

John Deere Service Superiority: We'll be around when you need us.

AB6;TS103 053;IBC D 030985