

A2, T2 TWO-ROW A4, T4 FOUR-ROW ROW-CROP CULTIVATORS



JOHN DEERE

OPERATORS MANUAL A2, T2 TWO-ROW A4, T4 FOUR-ROW ROW-CROP CULTIVATORS

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TO THE PURCHASER



This manual contains valuable information about your new John Deere Row-Crop Cultivator. It has been carefully prepared and illustrated. In it, you will find instructions and helpful suggestions for operating, adjusting, attaching, transporting, lubricating, and servicing your new cultivator. You will also find instructions for adapting your cultivator to work properly in all types of field cultivation.

Your new cultivator was built to rigid manufacturing standards. Material and workmanship are the best.

Precision production methods, and accurately controlled heat-treating assure maximum strength and long life for every part.

Keep this manual in a convenient place for quick and easy reference. Study this manual carefully. You have purchased a dependable and sturdy implement, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

Give your cultivator proper attention during slack periods, and by doing this it will always be ready, without delay, when you need it.

Sometime in the future, your cultivator may need new parts to replace those that are worn or broken. If so, go to your John Deere dealer. Provide him with the model number of your cultivator and the date purchased. Record this information in the space provided below, so it will be readily accessible when it is needed.

LOCATION REFERENCES

Right-hand and left-hand references are determined by standing at the rear of the cultivator and facing in the direction of travel.

JOHN DEERE A2 AND T2 TWO-ROW, AND A4 AND T4 FOUR-ROW, CULTIVATORS

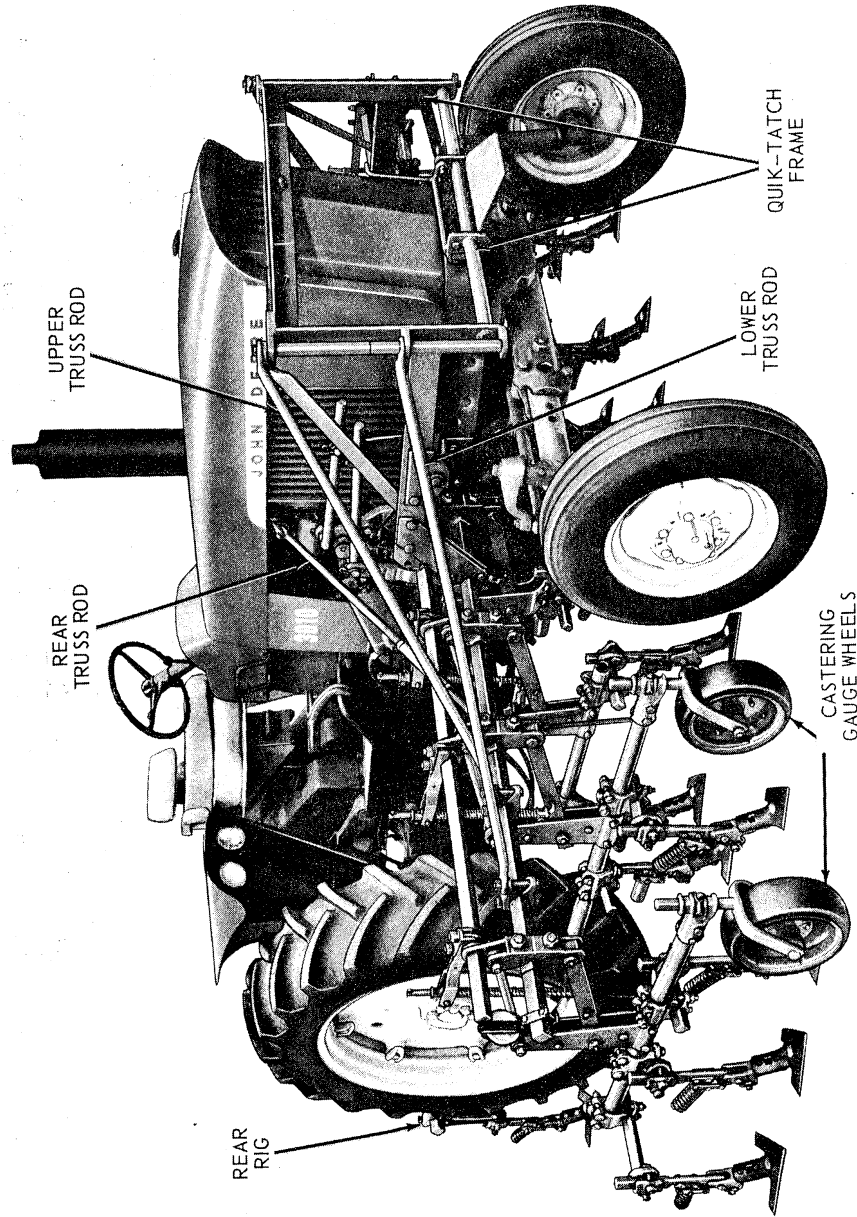
Cultivator Model

Date Purchased 19. . .

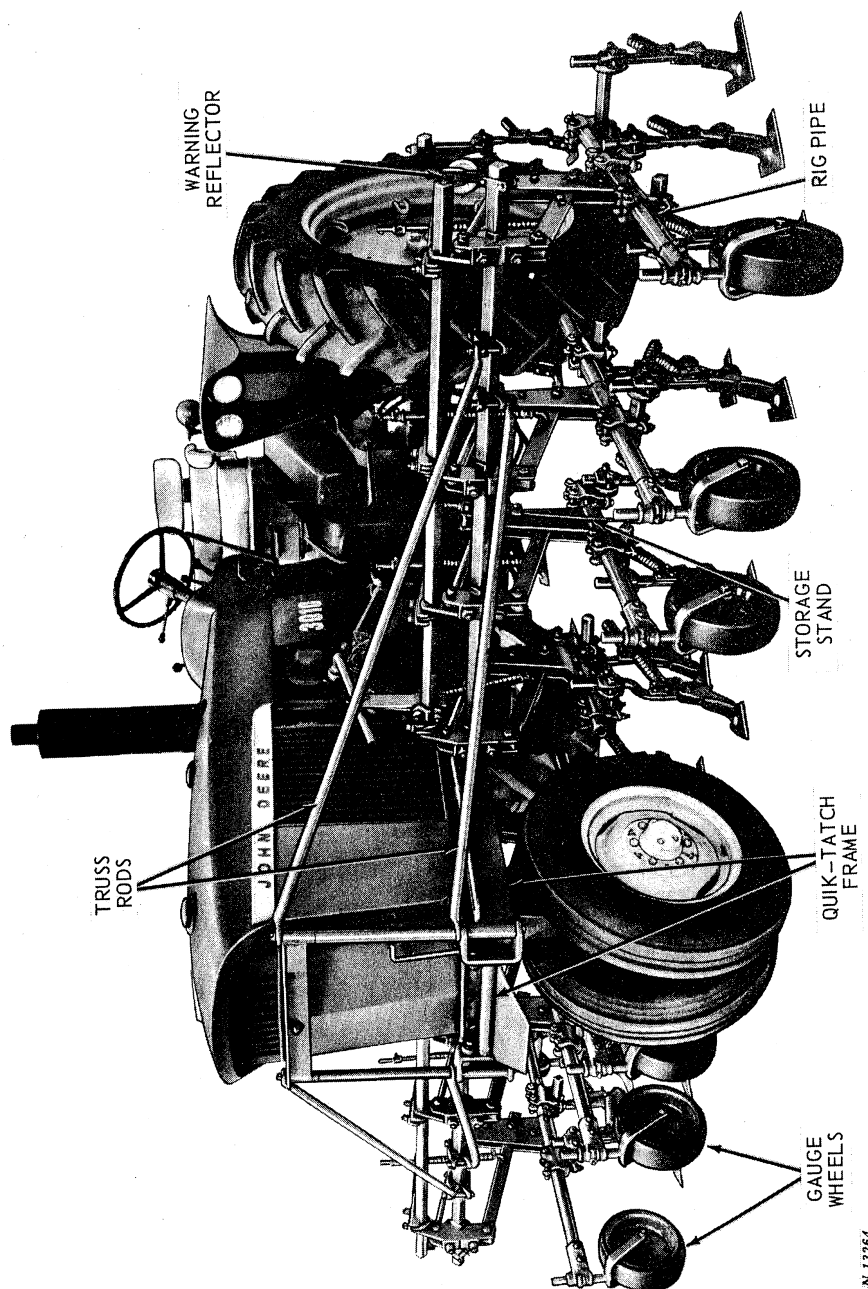
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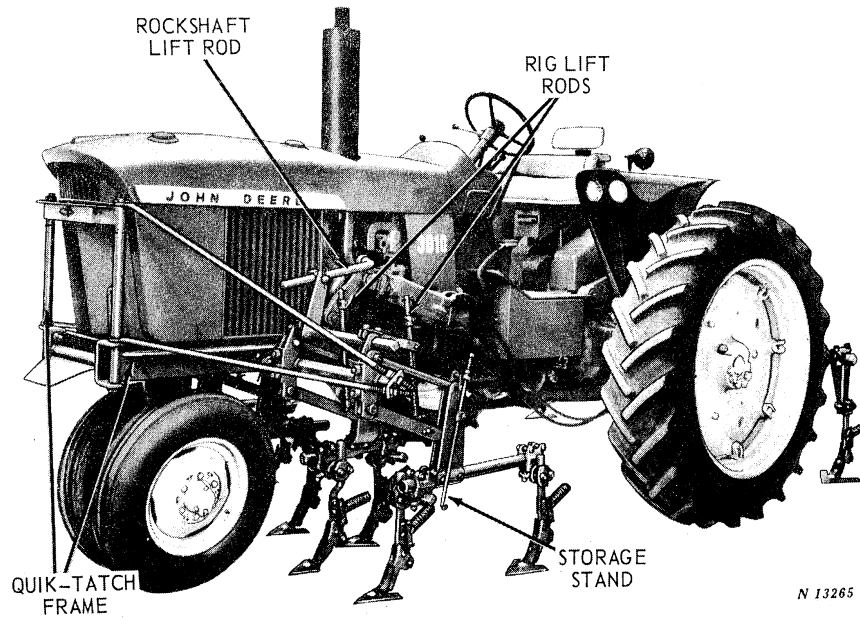


*John Deere A4F Cultivator with Regular Spring-Trip Shanks and Universal Sweeps
on 3010 Row-Crop Tractor*

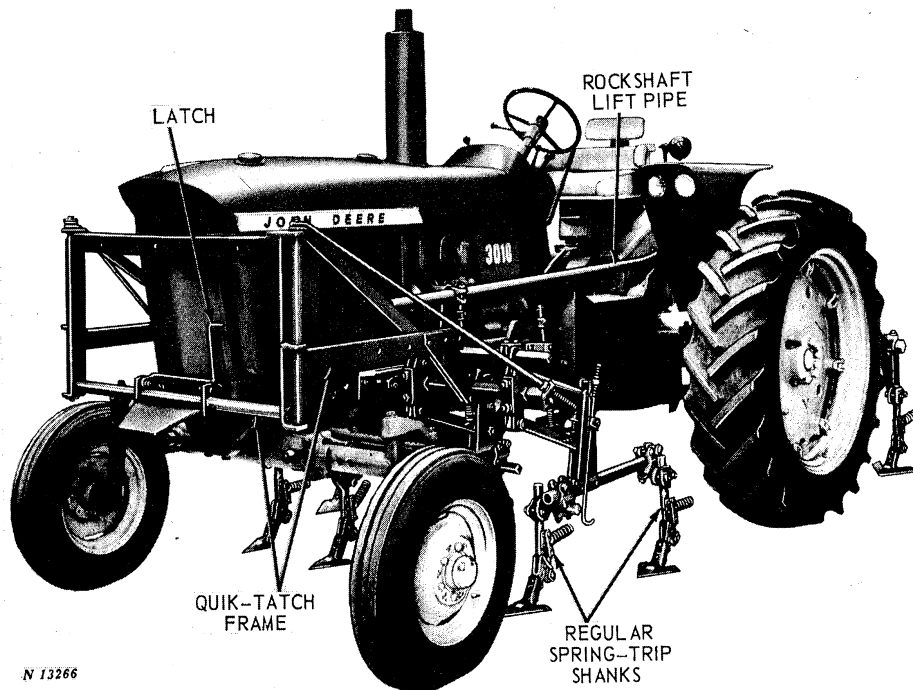


John Deere T4F Cultivator with Regular Spring-Trip Shanks and Sweeps
on 3010 Row-Crop Tractor

N 13264



John Deere T2F Cultivator with Regular Spring-Trip Shanks and Sweeps on 3010 Row-Crop Tractor



John Deere A2R Cultivator with Regular Spring-Trip Shanks and Sweeps on 3010 Row-Crop Tractor

SPECIFICATIONS

CULTIVATOR MODELS

A2R, T2R, A4R, and T4R are operated by rear rockshaft on tractor.

A2F, T2F, A4F, and T4F are operated by front rockshaft on tractor. The A2F and A4F are the only cultivators that will work on the 3020 and 3010 Row-Crop Utility Tractors. The T2F and T4F are the only cultivators that will work on the 2010 Tractor.

TRACTORS

T2 AND T4 CULTIVATORS

John Deere 2010, 2510, 3020, 4020, 3010, and 4010 Row-Crop Tractors with Single or Double Front Wheels, (except T4 on 3010 with 6.50 x 16 single wheel with 8-ply tire). The 2010 must be equipped with sway block supports when 120A, 120B, 140A, 140B, and 160A rear rigs are used.

A2 AND A4 CULTIVATORS

John Deere 2510, 3020, 4020, 3010, and 4010 Row-Crop Tractors with adjustable tread front axle.

John Deere 3020 and 3010 Row-Crop Utility Tractors with adjustable tread front axle (50 to 79 inches) and long wheel base. The tractor must also be equipped with a front-mounted rockshaft and a 3-point hitch. The cultivator cannot be mounted on a 3020 or 3010 Row-Crop Utility Tractor which has a short wheel base (81-1/2 inches), a fixed tread front axle (55-1/2 and 61 inches), or a rear muffler and tail pipe.

TRACTOR TIRE RESTRICTIONS

6.00 x 14 4-ply tires not recommended for use on double front wheel or adjustable tread front axle 2510 Tractor with A4 or T4 Cultivator.

9.00 x 10 8-ply tire not recommended for use on single front wheel 2510 Tractor with T4 Cultivator.

6.50 x 16 8-ply tire not recommended for use on single front wheel 3010 Tractor with T4 Cultivator.

ROW SPACING

A4 and T4 Cultivator — 36 to 42-inch rows.

A2 and T2 Cultivator — 28 to 42-inch rows.

CULTIVATOR WEIGHT

T2 — 600 pounds (approximately)
A2 — 860 pounds (approximately)
T4 — 1500 pounds (approximately)
A4 — 1550 pounds (approximately)

OPTIONAL EQUIPMENT

A2R AND T2R CULTIVATORS ON 3020, 4020, 3010, OR 4010 ROW-CROP TRACTORS

No. 2 Lift Pipe and Adjusting Levers.

6 Specifications

FRONT RIG EQUIPMENT

A2 AND T2 CULTIVATORS

Eight Single Spring-Tooth Shanks with Y722AN Shovels.

Eight Heavy-Duty Single Spring-Tooth Shanks with Y786AN Shovels

Eight Double Spring-Tooth Shanks with Y786AN Shovels.

Eight Friction-Trip Shanks with Universal Sweeps.

Eight Regular Spring-Trip Shanks with Universal Sweeps.

Eight Quick-Adjustable Spring-Trip Shanks with Universal Sweeps.

A4 AND T4 CULTIVATORS

Eighteen Single Spring-Tooth Shanks with Y722AN Shovels.

Eighteen Heavy-Duty Single Spring-Tooth Shanks with Y786AN Shovels

Eighteen Double Spring-Tooth Shanks with Y786AN Shovels.

Eighteen Regular Spring-Trip Shanks with Universal Sweeps.

Eighteen Friction-Trip Shanks with Universal Sweeps.

Eighteen Quick-Adjustable Spring-Trip Shanks with Universal Sweeps.

REAR RIGS

TOOL BAR TYPE

50A Series Tool Bar type for 3-point hitch.

53B Tool Bar type for 3-point hitch.

WITH 3-POINT HITCH MOUNTED CENTER RIG

110A and 110B Series Parallel Lift Type.

130A and 130B Series Straight Lift Type.

150A Series Offset Beam Type.

WITH DRAWBAR-MOUNTED CENTER RIG

120A and 120B Series Parallel Lift Type.

140A and 140B Series Straight Lift Type.

160A Series Offset Beam Type.

WITHOUT CENTER RIG (For Use with No. 3 Rig Attachment on T2 and T4 Cultivators):

170A and 170B Series Parallel Lift Type.

180A and 180B Series Straight Lift Type.

190A Series Offset Beam Type.

NOTE: All "B" Series (except 50B Series) or 50A Series Rear Rig are recommended for use when tractor is equipped with cane and rice tires.

SHANK EQUIPMENT FOR REAR RIGS

Regular Spring-Trip Shanks.
Quick-Adjustable Spring-Trip Shanks.
Single Spring-Tooth Shanks.
Friction-Trip Shanks.
Double Spring-Tooth Shanks for use on 56A Rear Rig only.
Long Regular Spring-Trip Shanks for use on 57A Rear Rig only.
Long Quick-Adjustable Spring-Trip Shanks for use on 58A Rear Rig only.

GAUGE WHEELS

Castering (Regular on A4 and T4, special on T2 Cultivator).
Rigid (Optional on A4 and T4, special on T2 Cultivator).
Anti-friction rigid (Optional on A4 and T4, special on T2 Cultivator).

SWEEPS AND SHOVELS

A wide variety of types and sizes available.

SPECIAL EQUIPMENT

A2, T2, A4, AND T4 CULTIVATORS

No. 1 Center Attachment.
No. 21 Spring-Tooth Attachment.
No. 3A Rotary Hoe Attachment.
No. 1 Listed Crop Attachment.
Spread Arch.
Spread Bar.
Rig Bar.
Disk Hillers.
Rear Rig Stop.

No. 4 Minimum Tillage Attachment (A4 and T4 only).

Storage Stands.
Shields — frame-mounted, rig-mounted, hooded.
Various planter and fertilizer attachments.
Weeding Knife Shanks.
Heavy-Duty Double Spring-Tooth Shanks.

A2 AND T2 CULTIVATORS ONLY

AB690E and AB690F Bean Harvesters.
96E Peanut Puller.

T2 CULTIVATOR ONLY

Front Rig Depth Stops (outside rigs).
12D and 14B Vine Turner Attachments.
Gauge Wheels (outside rigs).

A2 AND A4 CULTIVATORS ONLY

12E, 13B, and 14C Vine Turners.

T2 AND T4 CULTIVATORS ONLY

No. 3 Rig Attachment (2510, 3010, 3020, 4010, and 4020 Tractors only).
12D and 14B Vine Turners.

T4 AND A4 CULTIVATORS ONLY

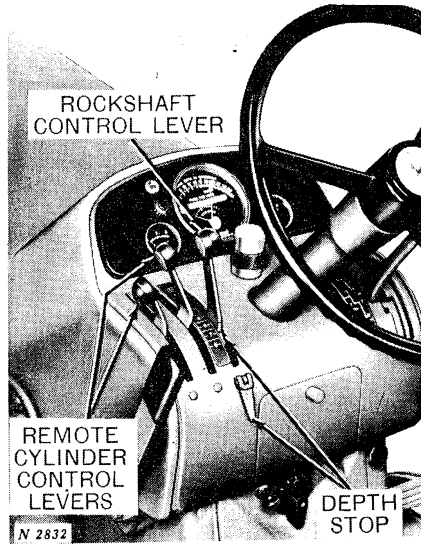
AB690G Bean Harvesters

(Specifications and design subject to change without notice.)

OPERATION

CONTROLS

2510, 3010, 3020, 4010 AND 4020 TRACTORS



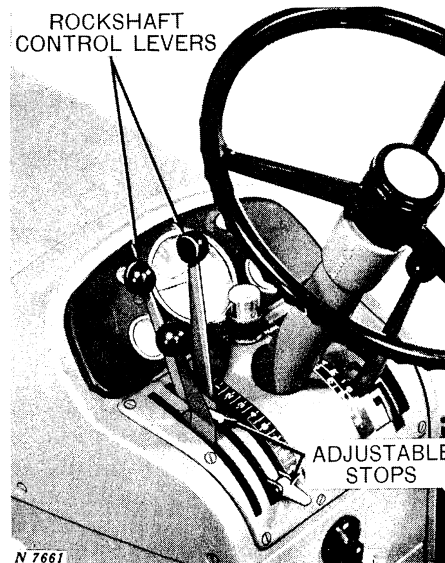
The A2R, T2R, A4R, T4R Cultivators on 2510, 3010, 3020, 4010, or 4020 Tractor are controlled by the rockshaft control lever on the tractor. Push the lever forward to raise the cultivator (both front and rear rigs) and pull it to the rear to lower the cultivator.

When the A2F, T2F, A4F, or T4F Cultivator is on 2510, 3010, 3020, 4010, or 4020 Tractor, the front rigs are controlled by the remote cylinder operating levers. The rear rigs are controlled by the rockshaft control lever.

Install hydraulic cylinders and operate the controls as instructed in your tractor operator's manual.

2010 TRACTORS

Dual Hydraulic System



The T2F or T4F Cultivator on a John Deere 2010 Tractor with a dual hydraulic system is controlled by the rockshaft control levers on the tractor.

To operate the front rigs together, but independent of the rear rig, set the tractor hydraulic system for independent lift arm operation.

Only the left-hand rod should be used from the rear rockshaft to the front rockshaft. Set the two sides of the front rockshaft for parallel operation.

The left-hand rockshaft control lever controls the front rigs and the right-hand lever controls the rear rig.

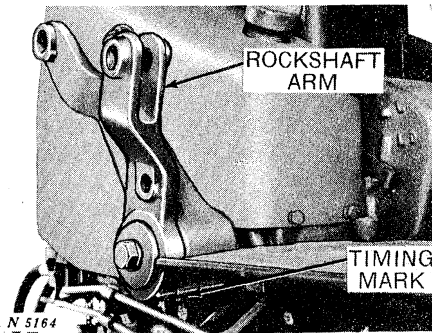
To operate the front rigs independently, set the tractor hydraulic system and front rockshaft for independent lift arm operation. The tractor must have a dual control front rockshaft. The left-hand rockshaft control lever controls the left-hand side of the cultivator and the right-hand lever controls the right-hand side of the cultivator and the rear rigs. See your tractor operator's manual.

If it is desired to have the front and rear rigs operate simultaneously, set the tractor hydraulic system and front rockshaft for parallel lift arm operation. Use the right-hand control lever to control the cultivator. See your tractor operator's manual.

Single Hydraulic System

The T2F and T4F Cultivator on a John Deere 2010 Tractor with single hydraulic system is controlled by the rockshaft control lever on the tractor. Moving the control lever rearward raises both cultivator front and rear rigs while moving the lever forward lowers the rigs. See your tractor operator's manual.

TIMING ROCKSHAFT ARM Rear Rockshaft Operated Cultivators on 2510, 3010, 3020, 4010, and 4020 Tractors



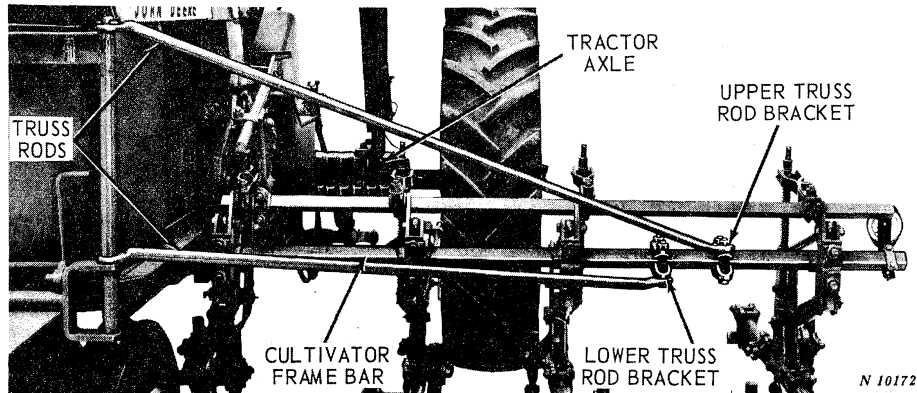
It is important that the rockshaft arms attached to the tractor to operate the cultivator are properly timed. If the cultivator is equipped with a rear rig and the arms are not timed, it could mean the front and rear rigs will not operate at the same depth.

The rockshaft arm is timed properly when the timing mark on the arm is in line with the timing mark on the tractor rockshaft.

TRACTOR TIRE INFLATION

Refer to your tractor operator's manual for operating instructions on tractor tire inflation pressures.

LEVELING FRONT CULTIVATOR FRAMES



T4 Cultivator

In order to do a good job of cultivating and to simplify attaching the cultivator to the tractor, the cultivator frame bars should be level.

To check if they are level, stand in front of the tractor and sight over the cultivator frame bar and under the tractor rear axle.

T4 CULTIVATOR

If the cultivator frame bars are not adjusted properly, loosen both truss rod brackets.

Adjust the lower truss rod bracket on the frame bar so the cultivator frame is at a right angle to the frame of the tractor.

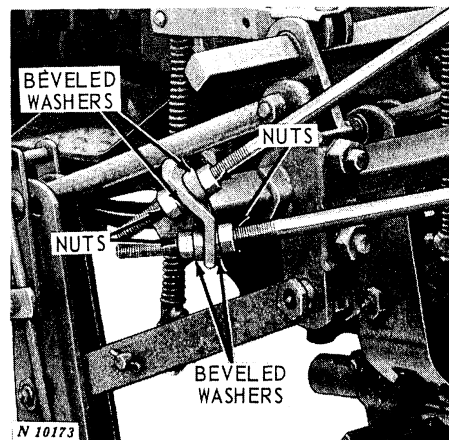
To move the frame forward, move the lower truss rod bracket away from the tractor. To move the frame to the rear, move the lower truss rod bracket toward the tractor.

If the frames are not level, move the upper truss rod bracket away from the tractor to raise the outer end of the frame. To lower the outer

end of the frame, move the upper truss rod bracket toward the tractor.

Be sure to tighten all nuts on the truss rod brackets securely.

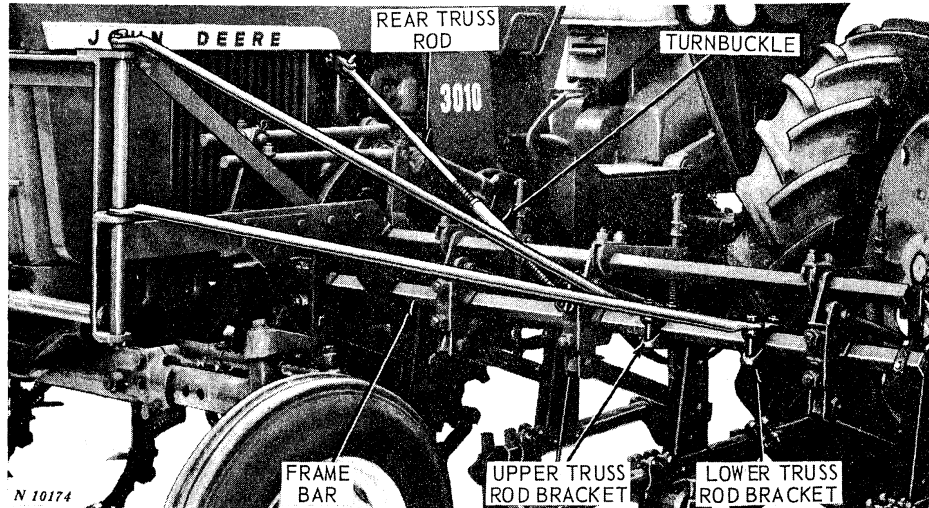
A2 AND T2 CULTIVATORS



T2 Cultivator

Adjust the nuts on the truss rods (only one rod is used on each side of A2 Cultivator) until the frames are level and parallel with the rear tractor axle. Adjust the beveled washers so the truss rods do not bend.

A4 CULTIVATOR



Leveling Front Frames on A4 Cultivator

Check to make sure the bolts holding the lower truss rod bracket are set 53 inches from the frame of the tractor on the 4010 or 4020 Tractor, 55-1/2 inches on the 2510, 3010 or 3020 Row-Crop Tractor, or 55 inches on the 3010 or 3020 Row-Crop Utility Tractor.

If these rods are not in proper position, loosen the brackets on upper and lower truss rods and remove the rear truss rod from the tractor attaching bracket. Set the lower truss rod as instructed above, and tighten the bracket. Adjust the upper truss rod until it is snug and secure in place.

Pin the rear truss rod to the tractor attaching bracket, raise the cultivator, and adjust the turnbuckle until the frame bar is level or slightly higher on the outer end.

Tighten the truss rod bracket bolts to 105 ft-lbs torque. Keep these bolts tight.

DEPTH OF CULTIVATION

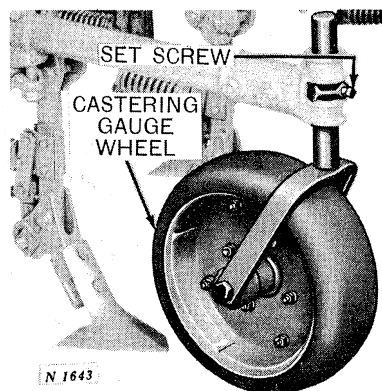
Depth of cultivation on the T2 Cultivator is controlled by rig depth stops on the two inside rigs. If the two outer rigs are not equipped with gauge wheels or rig depth stops, raise or lower the upper collar on the rig lift rods to give the desired depth of operation.

On all cultivator rigs equipped with either rig depth stops or gauge wheels, adjust the gauge wheels or rig depth stops as shown on pages 12 and 13 for desired depth of operation.

GAUGE WHEELS

The gauge wheels determine the depth of cultivation of the rigs on which they are used. Set all gauge wheels to operate at the same depth.

CASTERING GAUGE WHEEL

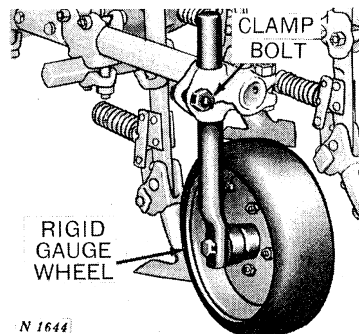


Loosen the set screw and adjust the cultivating depth by setting the gauge wheels 1 to 2 inches above the floor or ground.

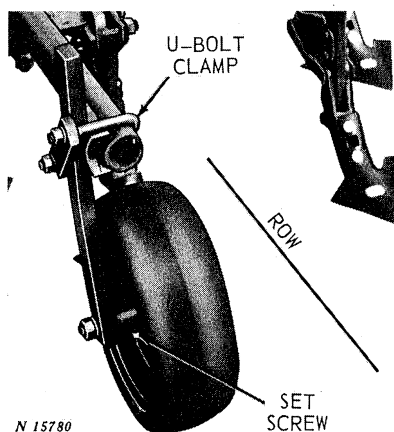
RIGID GAUGE WHEEL

Adjust the rigid gauge wheel for a working depth of approximately 1 to 2 inches by loosening the clamp bolt and moving the shank to the desired position.

The rigid gauge wheels should be attached so that the wheels are under the rig pipes as shown above and the



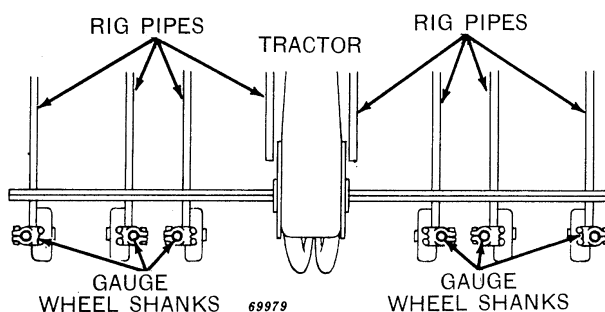
Plain Bearing Type



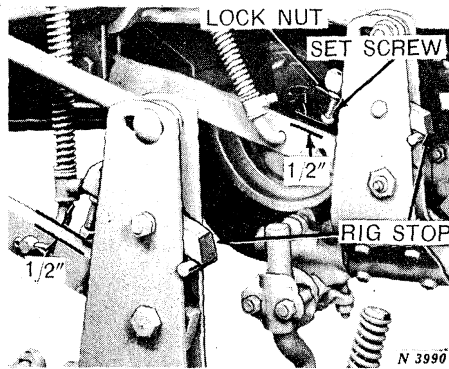
Anti-Friction Bearing Type

shanks are positioned to the right and left of the rig pipes as shown below.

Keep set screw and set screw jam nut tight on anti-friction gauge wheel.



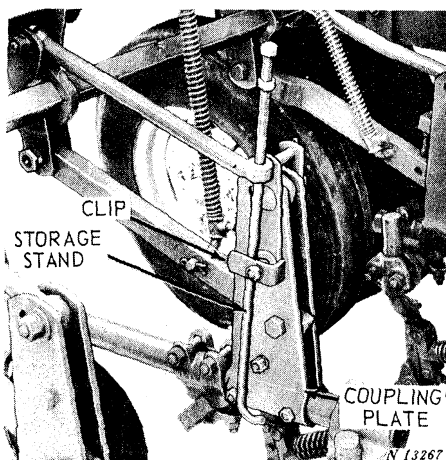
RIG DEPTH STOPS



Rig depth stops control the depth of operation of the rigs on which they are used.

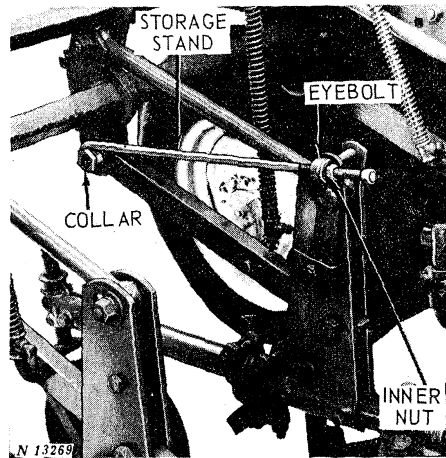
With the cultivator resting on a level surface or floor, there should be approximately 1/2-inch clearance between the head of the set screw and the lower rig link. For greater depth of cultivation, loosen the lock nut and turn the set screw in. For less depth, turn the set screw out. Be sure the lock nut is kept tight.

STORAGE STANDS



Stand in Operating Position

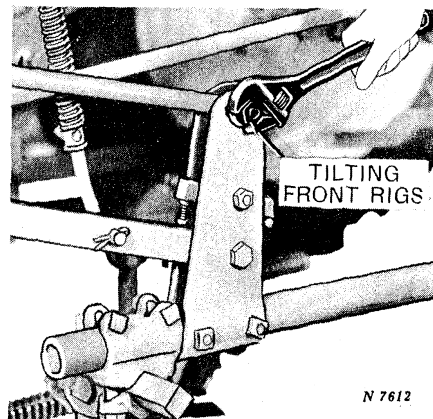
Before raising or operating cultivator, make sure the storage stands are fastened behind the clips against the rig coupling plate as shown above. Be sure the nut on the clip is tight.



Stand in Storage Position

CAUTION: Do not attempt to raise the cultivator with the stands in the storage position.

TILTING FRONT RIGS

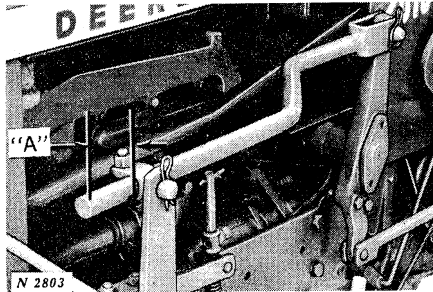


Each rig can be tilted up or down so all rig pipes will be level. The rig pipes should be about 1/4 inch higher in front so they will run level while cultivating.

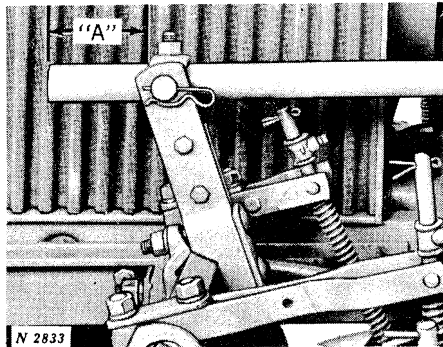
Sight across the rig pipes from the side of the cultivator to see that they are the same height and tilted the same.

HEIGHT OF LIFT OF FRONT RIGS

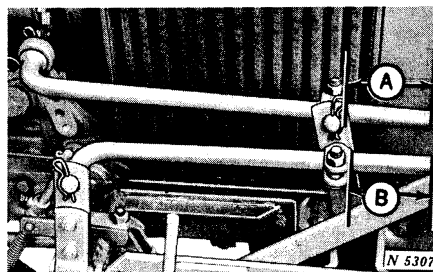
Adjustments are provided on the lift rods and lift pipes to secure the correct height of lift. Make these various adjustments on the cultivator as shown, if necessary.



Front Lift Rod for T2F and T4F Cultivators on the 2010 Tractor

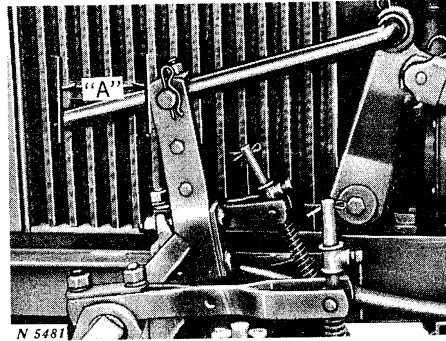


Lift Pipe for A2R, T2R, A4R, and T4R Cultivators



Front Lift Rods for A2F and A4F Cultivators

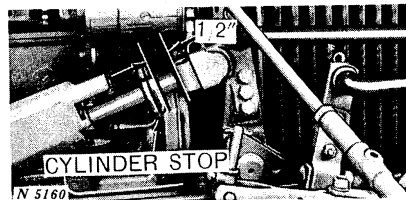
*For 86-1/2-inch lift pipes only. If 84-1/2-inch lift pipes are used, subtract 2 inches except for T2R and T4R on 4010 or 4020 Tractor. On these, subtract only 1 inch.



Front Lift Rod for T2F and T4F Cultivators on 2510, 3010, 3020, 4010 or 4020 Tractor

Set the distances "A" and "B" from the ends of the lift rods or lift pipes to the clamps as shown in the table below.

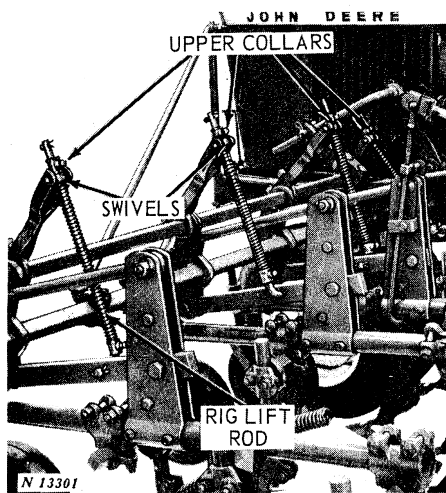
Tractor	Cultivator	"A"	"B"
2010	T2F—T4F	5"	—
2510, 3010 AND 3020	T2R—T4R	10"*	—
	T2F—T4F	5-1/2"	—
	A2R—A4R	16"*	—
	A2F—A4F	5"	4"
4010	T2R—T4R	2"*	—
	T2F—T4F	8"	—
	A2R—A4R	10"*	—
	A2F—A4F	6"	2"
4020	T2R—T4R	1"*	—
	T2F—T4F	8"	—
	A2R—A4R	9"*	—
	A2F—A4F	6"	2"



On 2510, 3010, 3020, 4010, and 4020 Tractors with front rockshaft lift, set the hydraulic cylinder stop 1/2 inch from the cylinder yoke for average conditions.

When raising the cultivator for the first time, raise it slowly. If the cultivator hits the tractor or the rig pipes hit the rig hangers, loosen the upper collars on the rig lift rods. Adjust the upper collars as instructed below before raising the cultivator again.

ADJUSTING RIG LIFT RODS



To set the cultivator for the highest possible lift, loosen all the upper collars on the rig lift rods and raise the cultivator by using the tractor control lever.

After the cultivator is fully raised, lift the inside rigs (No. 1 and 2) by hand until they come in contact with the tractor. Then secure the upper collar down next to the swivel.

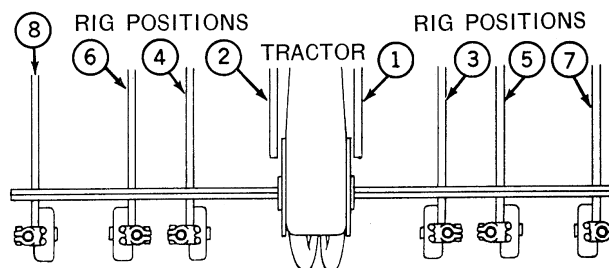
Lift the No. 3 and No. 4 rigs on the A2 and A4 Cultivators (and on the T2 Cultivator if not equipped with gauge wheels) by hand until the rig pipes are slightly higher than the rig pipes on the inside rigs. Secure the upper collars down next to the swivels.

To set the upper collars on the rigs equipped with gauge wheels, lift the rigs by hand until the rig pipe comes within 1 inch of the rig hanger. Secure the upper collar down next to the swivel.

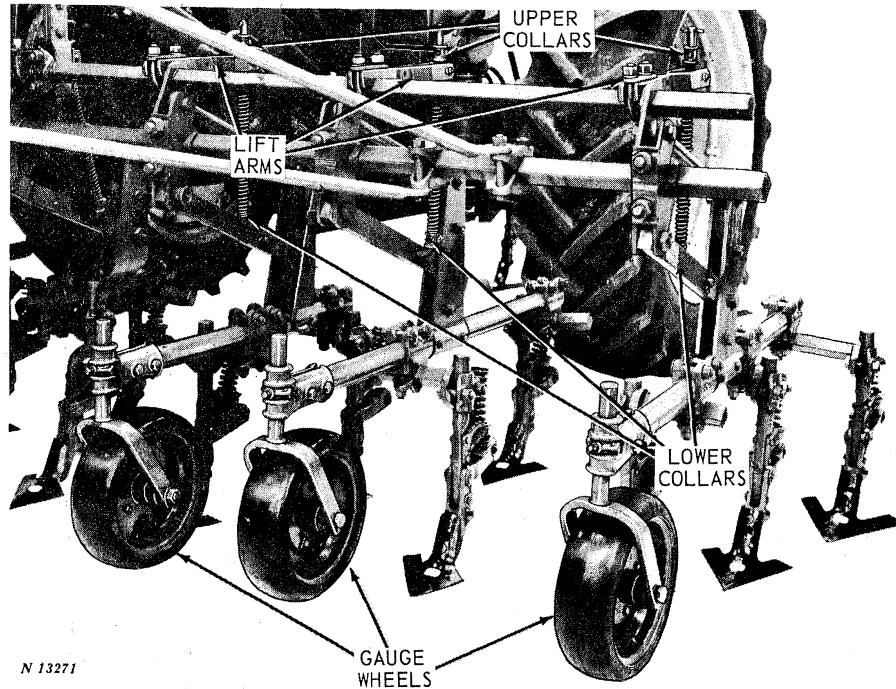
To check this setting, raise the cultivator. If additional lift is desired, lower the outside upper collars a slight amount.

This upper collar setting may require change when the cultivator is taken to the field, depending upon depth of cultivation. (See page 16.)

IMPORTANT: Once the upper collars are set, be careful when changing this setting or the setting of the clamp on the cultivator lift pipe or the cultivator lift rods. Changing one or both of these settings could cause the cultivator to damage the tractor when the cultivator is raised or it could cause the cultivator not to raise high enough.



FLEXIBILITY OF RIGS WITH GAUGE WHEELS



The front rigs of the cultivators equipped with gauge wheels are designed to float with the level of the ground.

When operating in the field, there should be about 1 inch of clearance between the upper collars on the rig lift rods and the lift arm. This will allow the rigs to "float."

On the front rockshaft operated cultivators on 2510, 3010, 3020, 4010, or 4020 Tractor, this clearance is controlled by the depth stop on the hydraulic cylinder. On all rear rockshaft operated cultivators, and on the T2F and T4F Cultivators on the 2010 Tractor, this clearance is controlled by the depth stop on the tractor rockshaft control quadrant.

To increase the clearance on front rockshaft operated cultivators

on 2510, 3010, 3020, 4010, or 4020 Tractor, move the cylinder stop forward (away from the cylinder).

To increase the clearance between the upper collar and lift arm on rear rockshaft operated cultivators, and the T2F and T4F Cultivators on the 2010 Tractor, move the control lever quadrant stop to the rear.

In either case this causes the cultivator lift shaft to rotate farther.

If there is more than 1 inch clearance, reverse the above procedure to secure the clearance needed.

Remember the depth of cultivation is controlled by the gauge wheels and the rig depth stops and not the stops on the cylinder or control lever quadrant.

ADJUSTING DOWN PRESSURE ON FRONT RIGS

To increase down pressure on the front rig sweeps, raise the lower collars on the rig lift rods to increase spring tension and force the sweeps downward. If no down pressure is desired, loosen the collars, let them slide to the bottom of the rod and tighten the collar. If the spring still comes in contact with the lower collar, remove the spring to eliminate all possible down pressure.

On front rockshaft operated rigs, down pressure can be increased by moving the hydraulic cylinder depth stop up next to the cylinder yoke.

On rear rockshaft operated front rigs, down pressure is controlled ONLY by the lower collars on the rig lift rods.

Down pressure is desirable, and should be adjusted for, when soil conditions do not allow for proper sweep penetration.

OVERRIDING STOP ON CYLINDER

When cultivating end rows or over spots of hard ground with an A2F, A4F, T2F and T4F Cultivator, (except on 2010 Tractor) it is not necessary to reset the lower collars on the rig lift rods or the cylinder depth stop to get a needed increase in down pressure.

In these conditions, hold the remote cylinder operating lever in the slow retract position to override the adjustable stop on the hydraulic cylinder piston rod. This will increase the down pressure on the shovels or sweeps.

See your tractor operator's manual for additional instructions.

SETTING FOR DEEPER CULTIVATION

When changing the depth of cultivation of the cultivator, change the settings of the front rigs first. After the front rigs have been properly adjusted, adjust the rear rigs.

To set the gauge wheel equipped rigs for deeper cultivation, raise the gauge wheels (page 12) higher in the clamps. On cultivator rigs with rig depth stops, adjust the set screw on the rig depth stops (page 13) by turning the screw in. Approximately 1/4 inch more clearance will give an additional inch of depth on the rigs controlled by rig depth stops.

If the outer rigs of the T2 Cultivator are not equipped with gauge wheels or rig depth stops, raise the upper collars on the rig lift rods to obtain the desired depth of cultivation.

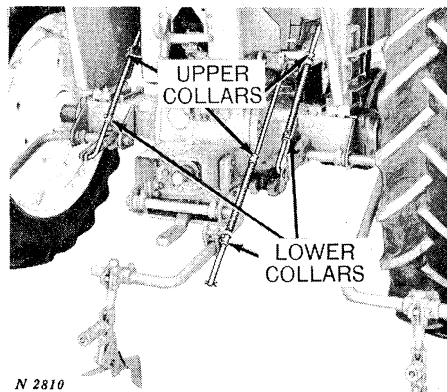
When the gauge wheels or rig depth stops are reset, the depth stop on the cylinder or rockshaft control lever quadrant must be changed accordingly, to maintain about 1 inch of clearance between the upper collar and lift arm. See page 16.

Make sure the position of the clamps on the lift rods or lift pipes is as explained on page 14. Changing these settings could cause the cultivator to raise too high, causing the rig pipes to hit the rig hangers and the shanks to hit the underside of the tractor. Or, it could have the opposite effect and cause the cultivator not to lift high enough.

REAR RIGS

The rear rockshaft operating lever controls the rear rigs. Always adjust front rigs before adjusting rear rigs.

OUTER REAR RIGS AND DRAWBAR MOUNTED CENTER RIG



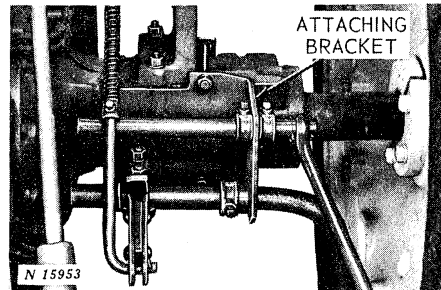
140A Series Rear Rig

Lift Height, Cultivating Depth and Down Pressure

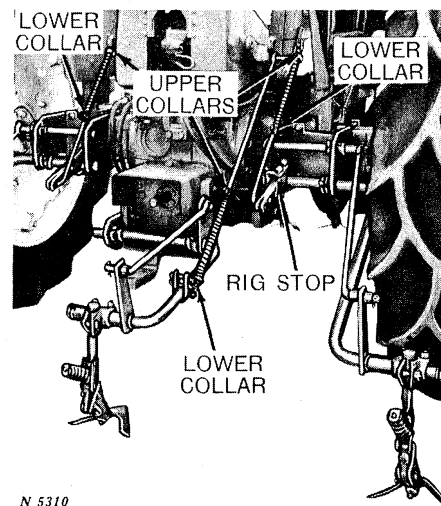
The location of upper collars on outer rig lift rods and lower collar on center rig lift rod controls rear rig lift height and cultivating depth. Adjust these collars so all sweeps touch the ground at the same time.

The location of lower collars on outer rig lift rods and upper collar on center rig lift rod controls the down pressure on the sweeps. Adjust collars for sufficient soil penetration.

Soil penetration can be improved in hard ground on "A" Series Rear Rigs by reversing the attaching brackets on the tractor axle housings. Bolt the right-hand bracket to the left-hand axle, and the left-hand bracket to the right-hand axle as shown at right above.



Rig Stops



120B Series Rear Rig

On rear rigs so equipped, rig stops limit the height of the outer rigs. When first raising rear rigs, raise them slowly. If rigs contact stops before they are fully raised, loosen upper collars and continue to raise the rigs as high as possible with tractor rockshaft. Then lift outer rigs by hand until stops contact or come close to rig beams. Set upper collars down on eyebolts. Reset collars on center rig if necessary so all sweeps touch ground at the same time.

If rear rigs do not reach the desired depth after adjustment, reposition shanks as required.

TOOL BAR TYPE REAR RIG

These instructions apply to the 50A and 50B Series Rear Rig and to the 3-point hitch mounted center rig on the other series of rear rigs.

Make sure the collars on the tractor lift links are all the way up and the sway blocks are in the category 1 "down" position.

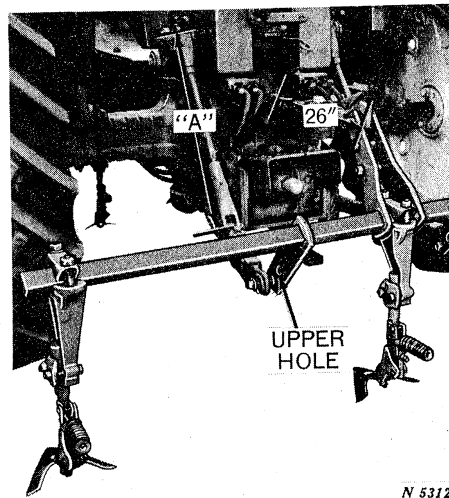
On T2R, T4R, A2R, and A4R Cultivators and T2F Cultivator on a 2010 Tractor, the working depth is controlled by the length of the lift links on the 3-point hitch and height of shanks in the standards. Check these after the working depth of the front rigs has been determined. Use the adjusting cranks to lengthen or shorten the lift links so the rear rig will operate at approximately the same depth as the front rigs. Keep the tool bar level. Lengthen or shorten the center link, as necessary, so the shanks are vertical.

On the T2F, T4F, A2F, and A4F Cultivators on 2510, 3010, 3020, 4010, or 4020 Tractor, the working depth is controlled by the adjustable depth stop on the rockshaft control quadrant in conjunction with the length of the lift links and height of shanks in the standards.

All Cultivators

The length of the lift links on the 3-point hitch can be changed for leveling the rear rig or changing the depth of cultivation.

The recommended length for the center link on 2510, 3010, 3020, 4010, and 4020 Tractors is 26 inches.



The recommended length "A" for the right- and left-hand lift links is 26-3/4 inches on the 3010 Tractor and 28-1/2 inches on the 2510, 3020, 4010, and 4020 Tractors.

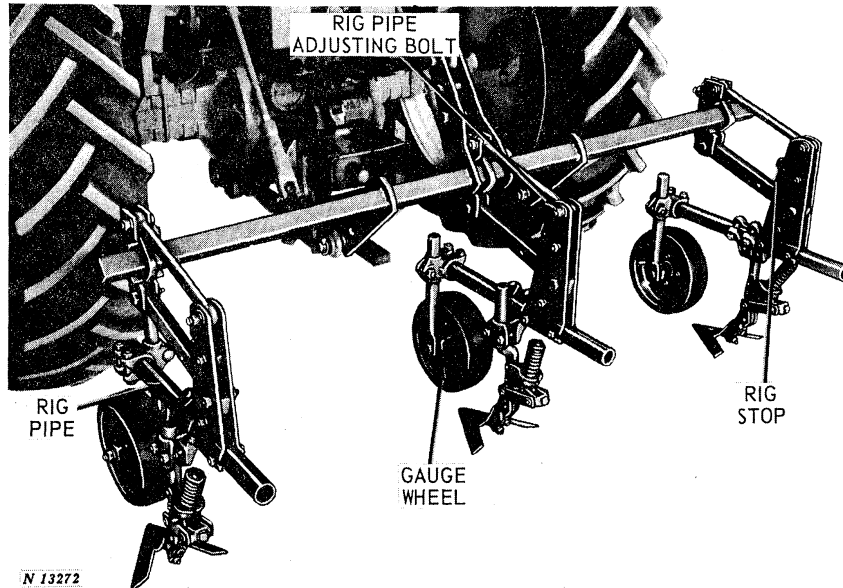
On the 2010 Tractor, set the distance at "A" to the minimum setting as stated in your tractor operator's manual.

NOTE: With the 50A, 110B, and 130B Series Rear Rigs, if greater depth of cultivation is required, move the center rig attaching pins to the upper set of holes.

Leveling Rigs

After the upper collars on the outer rear rigs have been checked as explained on page 18, lower the rear rigs. All the sweeps should touch the floor at the same time. If they don't, adjust the lift links and the center link until they do.

53B Rear Rig



The 53B Rear Rig is a heavy-duty rear rig. The depth of operation of each rig is controlled by a rubber tired, rigid gauge wheel. Each rig can float with the level of the ground, to maintain even cultivating depth. Rig stops on each rig keep the rigs raised when the cultivator is in the transport position.

Adjust the lift links and center link and level the rear rig tool bar as explained on page 19. Set the collars on the tractor lift links in the no-float position.

Make sure the rig bolts are loose enough for the rigs to be raised by hand.

Each rig pipe should be tilted until the front of the pipe is about 1/4-inch higher than the rear. Loosen the rig pipe adjusting bolt on each rig to make this adjustment. This will allow the rigs to operate level when cultivating.

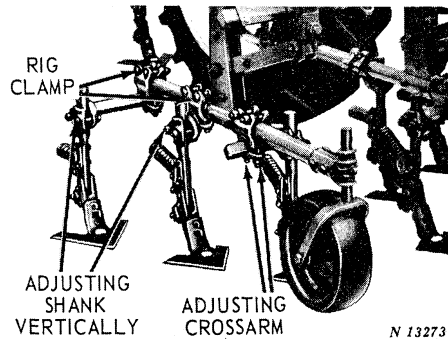
Adjust the height of the shanks so all sweeps will cultivate at the same level.

The gauge wheel shanks should be set in the clamps so the bottom of each gauge wheel is about 1 to 2 inches above the level of the sweep.

Set the rig stops so there is about one inch of clearance between the head of the set screw and the lower nut. Be sure the set screw is high enough so it does not interfere with the operation of gauge wheels when cultivating.

CLAMPS, SHANKS, AND CROSSARMS

CLAMPS AND SHANKS



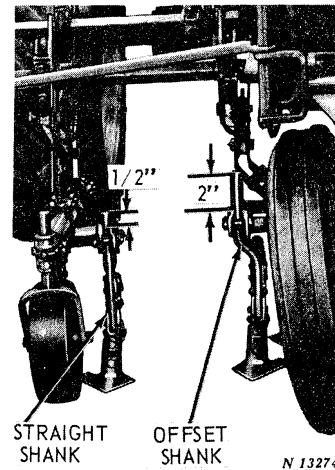
Loosen nuts holding clamp to rig pipe to turn clamp so shank will be perpendicular to ground. Tighten nuts after setting.

Loosen nuts on bolts holding crossarm to move crossarm in or out to meet the crop condition. After setting, tighten nuts. For vertical adjustment, loosen nuts on bolts holding shanks to clamps and level sweeps so all sweeps penetrate the soil to the same depth.

Position spring-tooth shanks so spring does not contact crossarm behind it when spring encounters an obstacle.

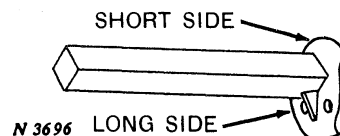
Keeping your equipment in proper adjustment will help to keep it operating efficiently and economically.

HEIGHT OF SHANKS IN CLAMPS



All shanks should be set to cultivate at the same depth. The straight shanks should extend about 1/2 inch above the head of the crossarm clamp. The offset shanks should extend about 2 inches above the head of the crossarm.

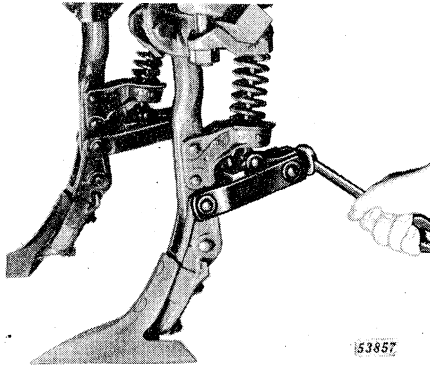
CROSSARM



The clamp end of the crossarm is 3/4 inch longer on one side than on the other. The crossarm used with straight shanks should ordinarily be installed so that the longer side of the clamp end is down. Crossarms with offset shanks on the inner, front pipes should be installed in the clamp so the longer side of the clamp end is up. All crossarms can be set with the longer side up to gain more ground clearance for transporting cultivator.

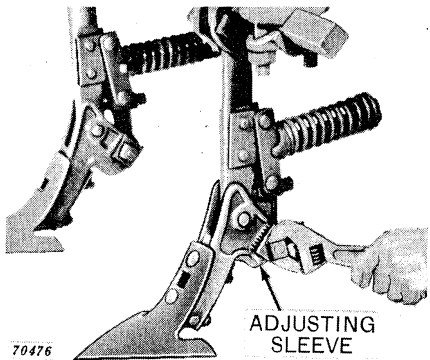
ADJUSTING TILT OF SWEEPS

SPRING-TRIP SHANKS



Adjusting Tilt of Quick-Adjustable Spring Trips

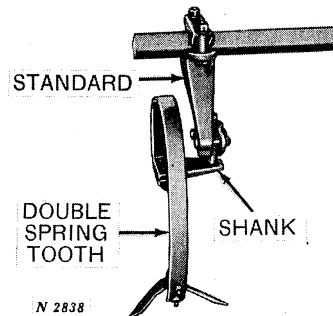
When using quick-adjustable spring-trip shanks, adjust bolt to tilt sweep so that it is in correct relationship to the ground as illustrated at bottom of this page.



Adjusting Sleeve on Regular Spring-Trip Shanks

When using spring-trip shanks, adjust sleeve to tilt sweep so that it is in correct relationship to ground as illustrated at bottom of page.

SPRING TEETH

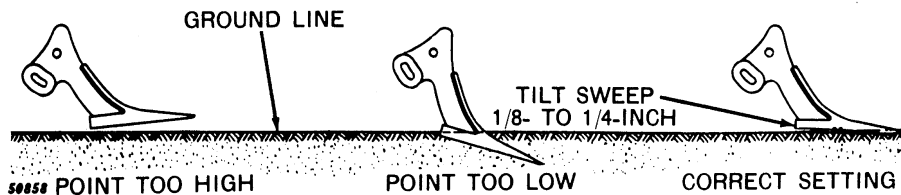


Single or double spring teeth can be used on both front and rear rigs.

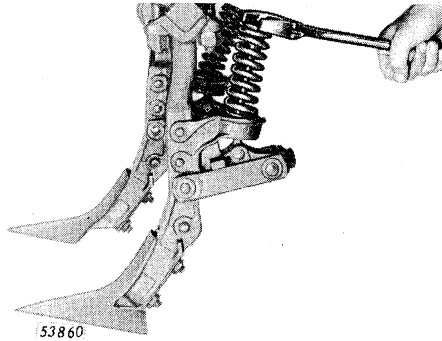
The teeth can be adjusted horizontally and vertically.

KEEP YOUR CULTIVATOR A JOHN DEERE CULTIVATOR

Genuine John Deere shovels and sweeps have more and better material in points and wearing surfaces. They fit better, stay sharp longer, and save you money. Buy your shovels and sweeps from your John Deere dealer.



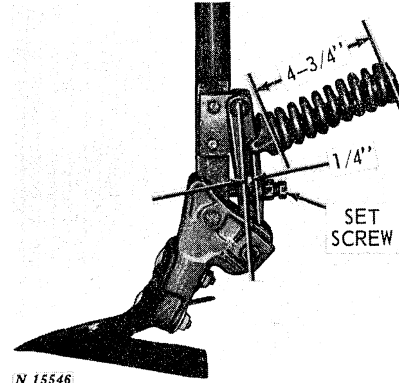
ADJUSTING SPRING TRIP



Quick-Adjustable Spring-Trip Shank

Adjust spring-trip shanks so they do not trip under ordinary cultivating conditions.

Adjust spring-trip on quick-adjustable shank by turning nut at top of spring.

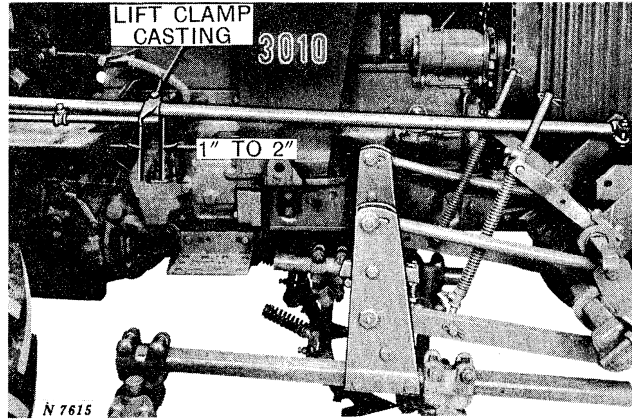


Regular Spring-Trip Shank

Adjust spring-trip on regular shank by turning the set screw. Turning set screw out causes trip to release easier. Turning set screw in causes trip to hold tighter.

IMPORTANT: Do not adjust spring-trip on regular shank by turning nut at end of spring. However, spring should be kept under slight compression.

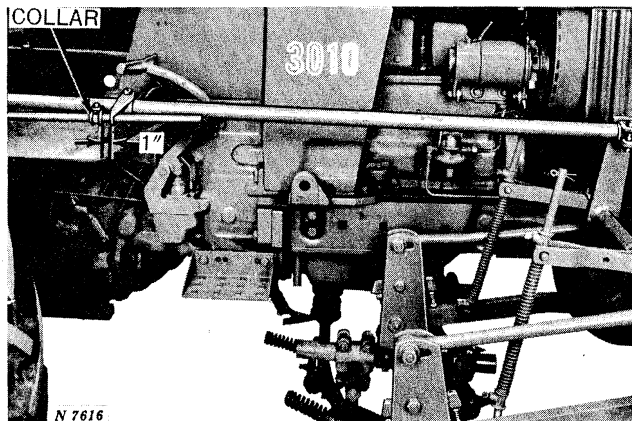
NO. 2 LIFT PIPE AND ADJUSTING LEVER



These levers give the operator individual control of each side of the cultivator.

When the lift clamp casting is properly set, there should be approximately 1 to 2 inches of the rod

extending through the casting as shown above. If not, adjust the clamp casting until this setting is obtained. To set the lift clamp casting, move the hand lift lever to the rear position in the quadrant. Raise the cultivator to its fully raised position.



To properly locate the collar on the lift rod, lower the cultivator. Place the hand lift lever in the middle position of the quadrant. For normal field conditions, set the col-

lar on the lift rod so it is approximately 1 inch from the clamp casting on the lift pipe. This setting may vary if additional depth of cultivation or height of lift is desired.

SAFETY SUGGESTIONS

The safety of the operator is one of the prime considerations in the minds of John Deere engineers when designing farming equipment. Shielding, simple adjustments, and other safety features are built into machines whenever possible.

However, investigation of thousands of farm accidents shows that careless use of farm machinery causes nearly 1/3 of all farm accidents. You can make your farm a safer place to live and work if you observe the safety suggestions given below. Study these suggestions given below carefully and insist that they be followed by those working with you and for you.

Always stop the tractor and lower all units before lubricating or adjusting the cultivator.

Never ride or allow others to ride on the cultivator or the tractor. The tractor operator should be the only person on the tractor while it is being operated.

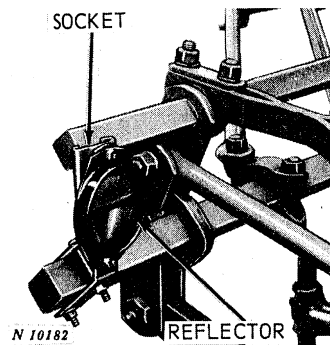
Drive at speeds slow enough to insure your safety. Reduce speed before turning quickly or applying individual brakes. Drive slowly over rough ground.

Be sure that clothing worn by tractor or machine operator is fairly tight and belted. Loose jackets, skirts, shirts, or sleeves should not be permitted because of the danger of getting into moving parts.

All women operators should wear trousers or slacks.

Always keep tractor in gear when going down steep grades.

Keep a firm grip on the steering wheel at all times when the speed is increased.



On four-row cultivators a socket is provided on the extreme left-hand side of the cultivator for use of a warning lamp in addition to the warning reflector.

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



MAINTENANCE SUGGESTIONS

The following suggestions are recommended to help keep the cultivator in good condition.

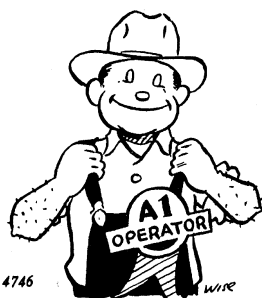
NUTS AND BOLTS

To insure trouble-free service, it is important to keep all nuts and bolts tight. If they are allowed to become loose, they may bend, strip threads, or cause parts to be lost. Check all nuts and bolts daily before operation.

It is also important that the pivot studs on the lower rig links be checked periodically and tightened, if needed, to prevent excessive wobble of the rig.

RIGS

Rig hangers should never be allowed to become loose because of wear. They can easily and quickly be tightened. Keep all nuts tight and cotter pins spread.



*Never Attempt to Clean, Oil or Adjust a Machine
While it is Motion*

SHOVELS AND SWEEPS

The life of shovels and sweeps can be increased and their work made more efficient by greasing the polished faces with a coat of multi-purpose grease or heavy oil during the periods of intermittent use and between seasons.

They will also scour much easier if they are cleaned at the end of each cultivating day.

SHARPENING SHOVELS AND SWEEPS

Dull or worn-out shovels or sweeps will not destroy weeds, nor permit an even depth of cultivation. They are expensive to operate. Keep your shovels and sweeps sharp!

Between seasons or during periods of intermittent use, inspect your cultivator for worn or damaged parts. Failure to do this may cause an expensive delay when attempting to put your cultivator back in service.

STORAGE SUGGESTIONS

Store the cultivator inside, out of the weather.

Clean the cultivator of all mud, dirt, grease, or other foreign material.

Replace the tractor attaching bolts in the cultivator so you won't have to spend valuable time looking for them when you go to put the cultivator back on the tractor.

Perform all of the maintenance suggestions listed on this page.

FRONT RIG ROW SPACING

The spacing of the front rigs on the A4 and T4 Cultivators can be adjusted to handle rows spaced 36 to 42 inches apart. On the T2 and A2 Cultivators the rigs can be adjusted for 28- to 42-inch rows. The rigs are set for 40-inch row spacing at the factory. All rig and shank spacings should agree with the illustrations below and on pages 28 to 38. Spacing on both right-hand and left-hand rigs should be the same.

SETTING RIG HANGERS AND CROSSARM CLAMPS

To change the row spacing of the cultivator from the factory setting,

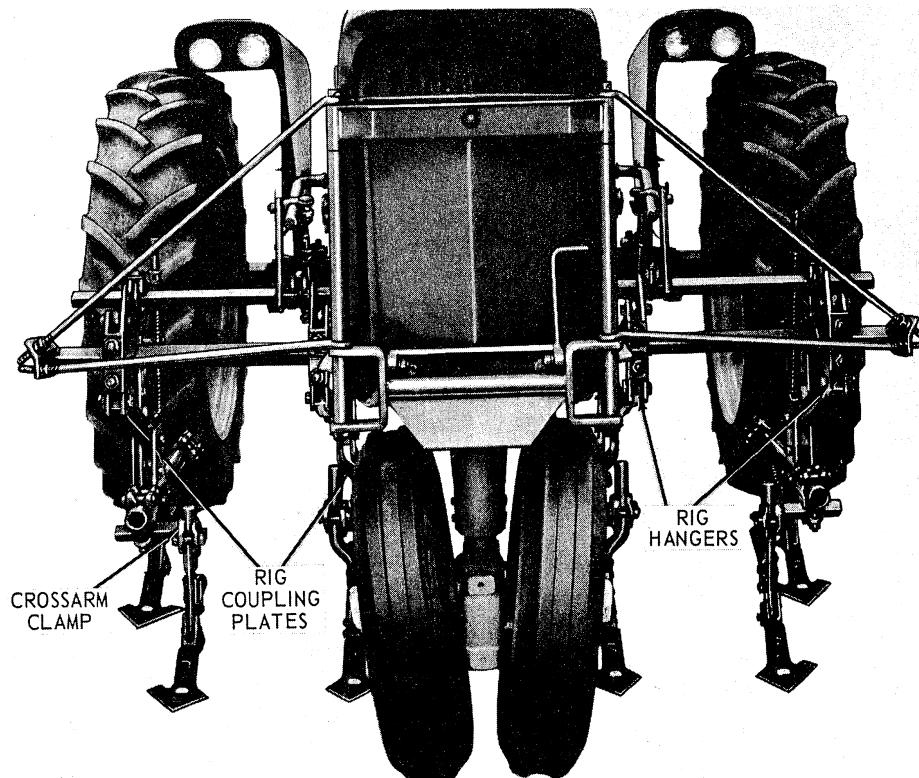
first move the rig hangers to the new position.

If not already in place, move the front crossarms against the front side of the rig coupling plate.

Stagger the second row of clamps behind the coupling plate as illustrated, if not already set correctly.

Make sure the last row of cross-arm clamps is on the rear of the rig pipes as shown.

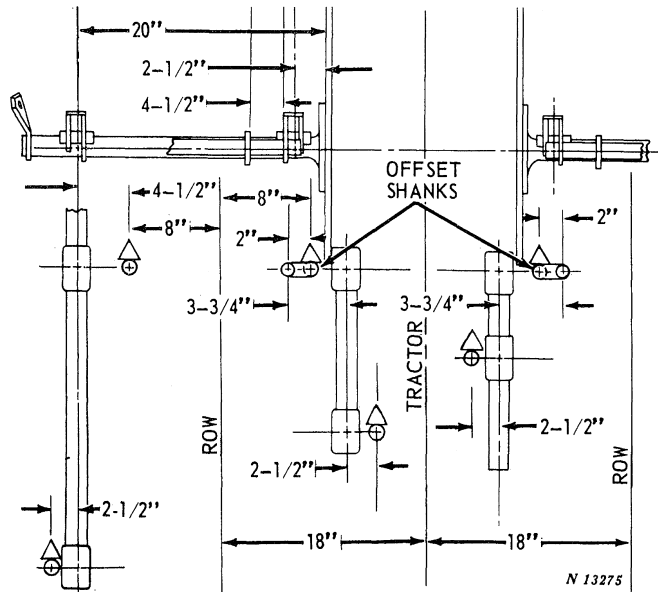
Reset the crossarms for the desired row spacing.



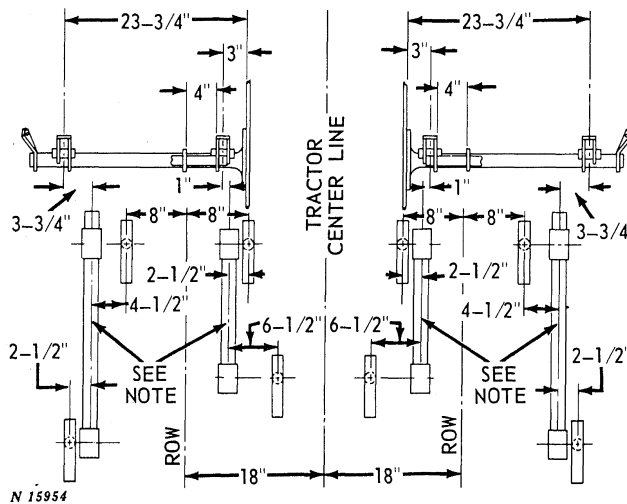
N 10184

T2 Cultivator Set for 40-Inch Rows

T2 CULTIVATOR ROW SPACING



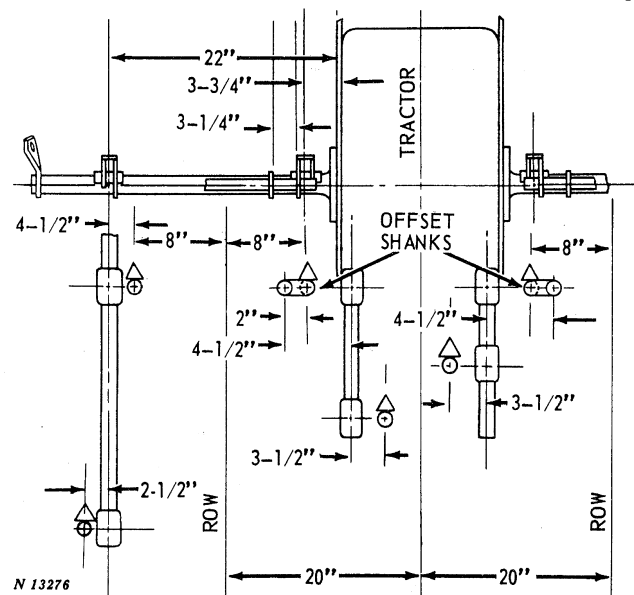
T2 Cultivator Set for 36-Inch Row Spacing



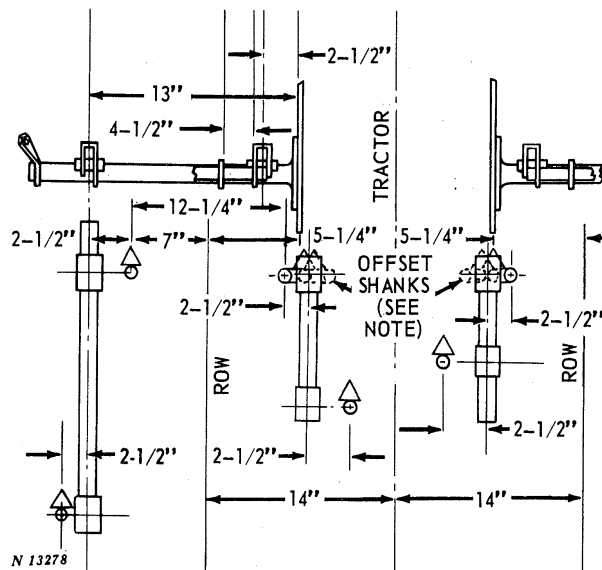
T2 Cultivator with Spring Teeth Set for 36-Inch Row Spacing

NOTE: Move straight rig coupling plates from outer rig to inner rig. Move offset rig coupling plates from inner rig to outer rig. Leave offset

links on inner rig. Check clearance above rear shanks on inner rigs when raising cultivator.



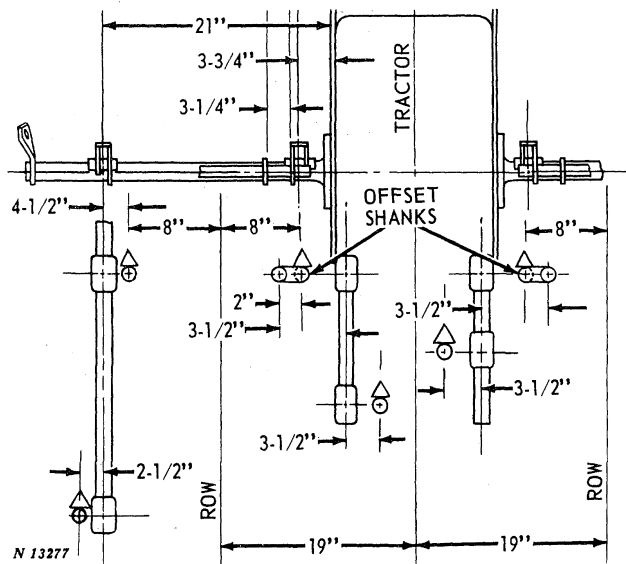
T2 Cultivator Set for 40-Inch Row Spacing



T2 Cultivator Set for 28-Inch Row Spacing

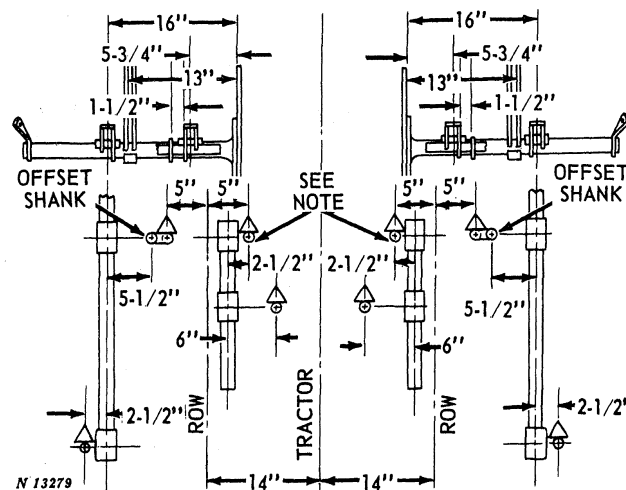
NOTE: To set the distance away from the row greater than 5-1/4 inches, move the offset shank and crossarm from the No. 2 rig to the

inside of the No. 1 rig. Move the offset shank and crossarm from the No. 1 rig to the inside of the No. 2 rig.



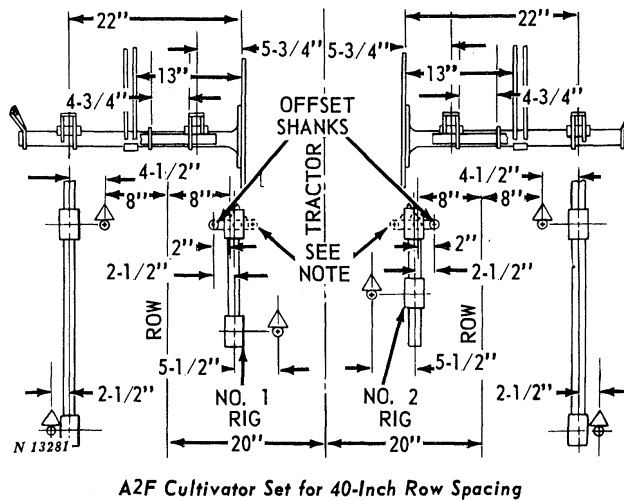
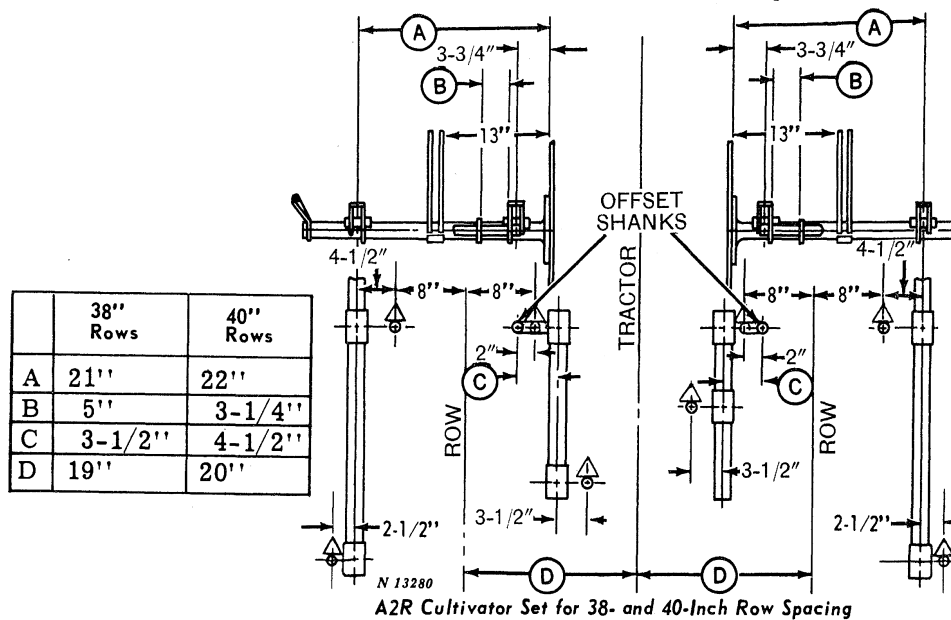
T2 Cultivator Set for 38-Inch Row Spacing

A2 CULTIVATOR ROW SPACING



A2F and A2R Cultivator Set for 28-Inch Row Spacing

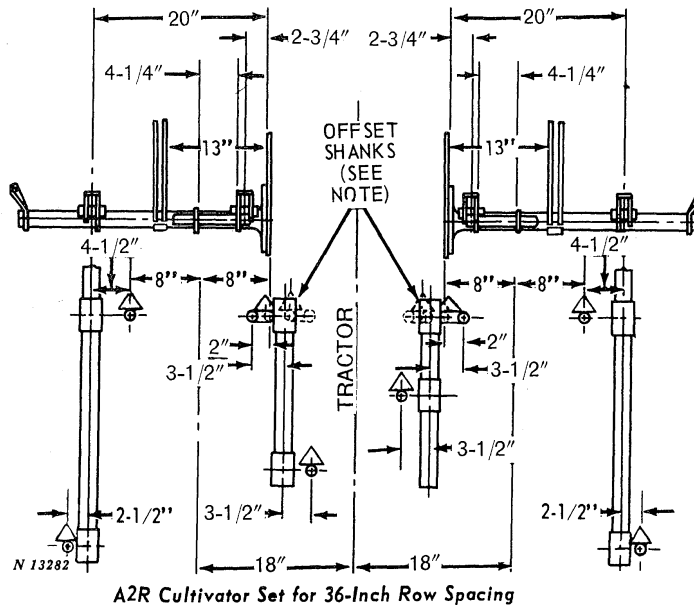
NOTE: To set the center of the sweep closer to the row than 5 inches, move the front straight shank to the other side of the rig beam and adjust the rig hanger accordingly.



NOTE: For 40-inch rows, the A2F Cultivator is normally set so the center of the sweep or shovel is 8 inches from the row. Therefore, the offset shank on the No. 1 rig is positioned on the left side of the rig pipe while the offset shank on the No. 2 rig is positioned on the right-hand side of the rig pipe.

If it is desired to have the center of the sweep or shovel more than 8 inches from the row, it is then necessary to move the offset shank and crossarm now on the No. 1 rig to the inside of the No. 2 rig. Also move the offset shank and crossarm on the No. 2 rig to the inside of the No. 1 rig pipe. This is shown by the dotted lines in the illustration above.

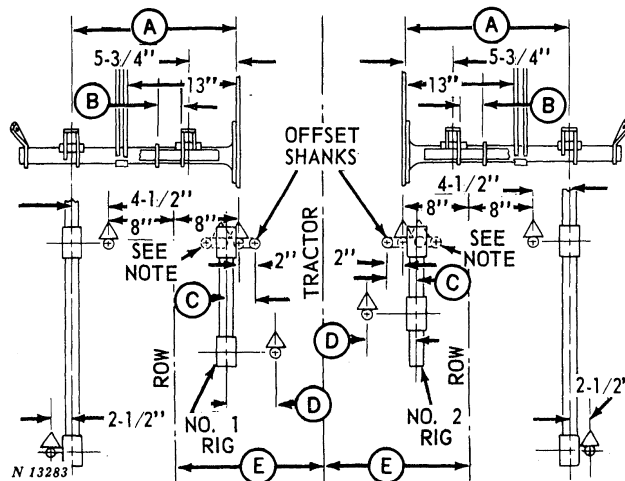
32 Operation



NOTE: If it is desired to have the center of the sweep more than 8 inches from the center of the row, move the offset shank and crossarm from the No. 2 rig to the inside of

the No. 1 rig. Move the offset shank and crossarm from the No. 1 rig to the inside of the No. 2 rig, as shown by the dotted lines in illustration above.

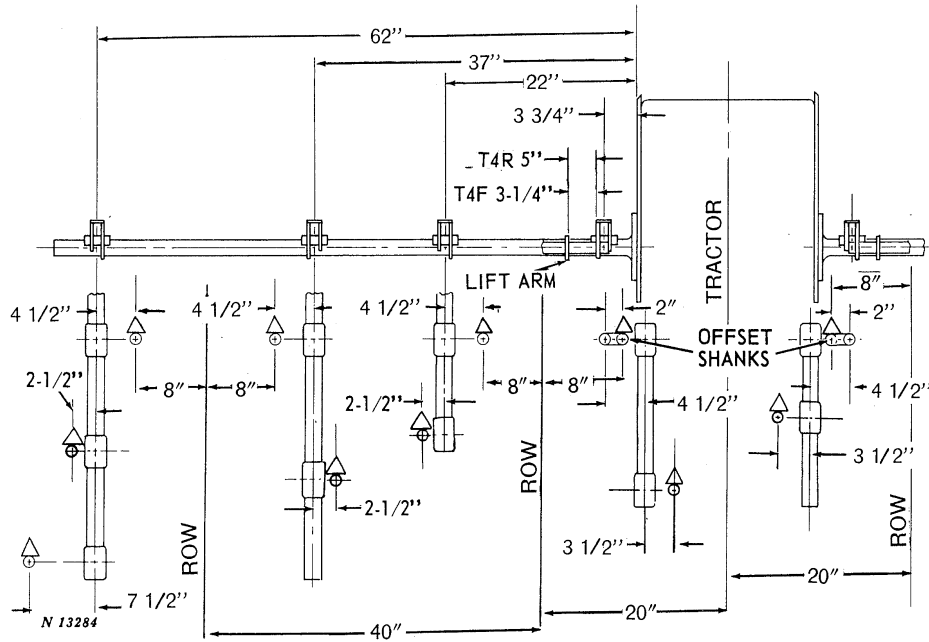
	36" Rows	38" Rows
A	20"	21"
B	2-3/4"	4-3/4"
C	3-1/2"	2-1/2"
D	6"	5-1/2"
E	18"	19"



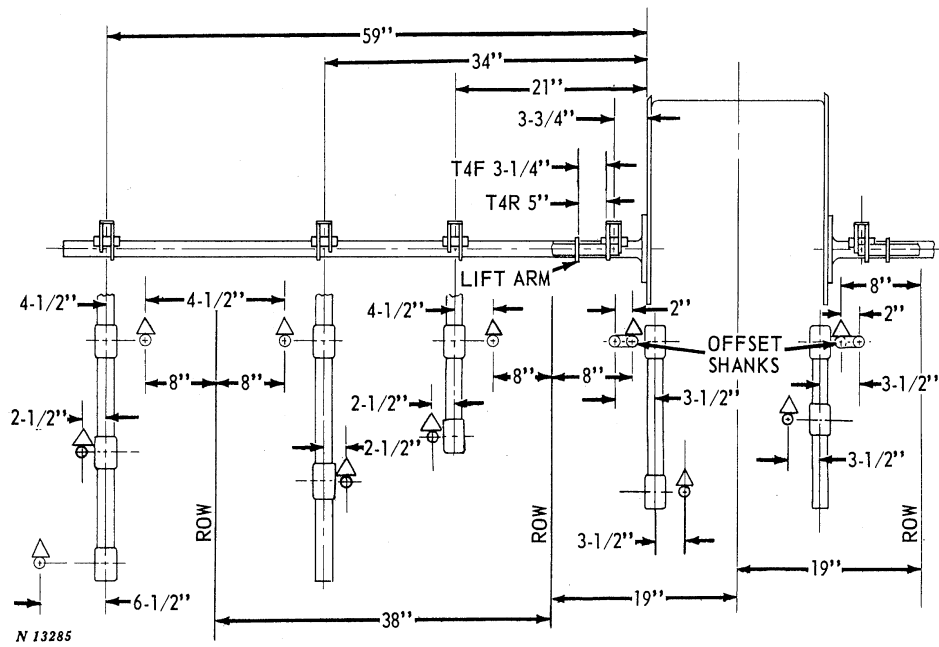
NOTE: For 36- and 38-inch rows, if it is desired to have the center of the sweep or shovel less than 8 inches from the row, move the offset shank and crossarm shown on the No. 1 rig to the outside of the No. 2

rig. Also, move the offset shank and crossarm on the No. 2 rig to the outside of the No. 1 rig pipe. This is shown by the dotted lines in the illustration above.

T4 CULTIVATOR ROW SPACING

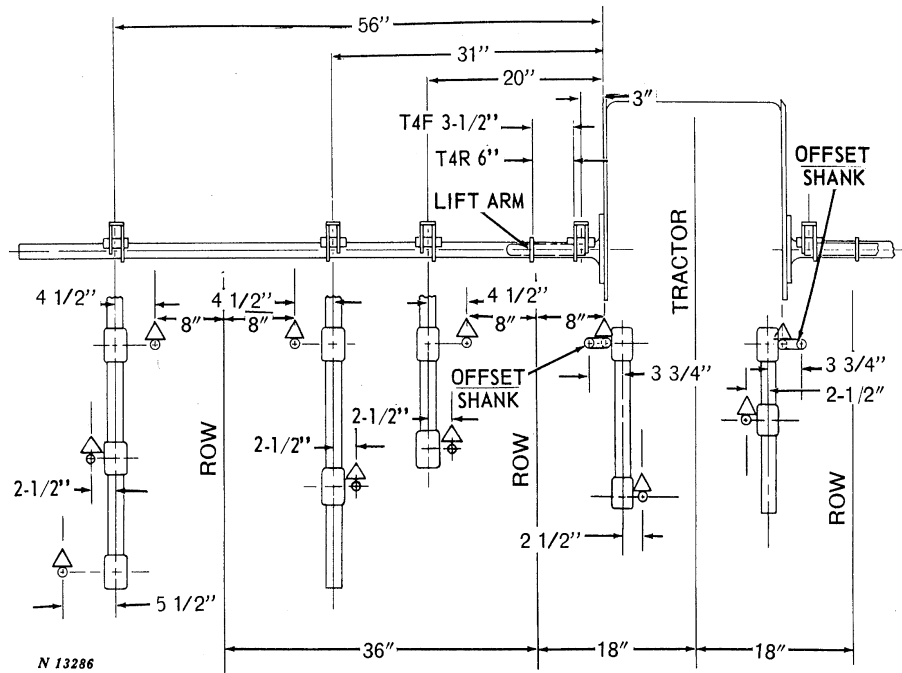


T4 Cultivator Set for 40-Inch Row Spacing



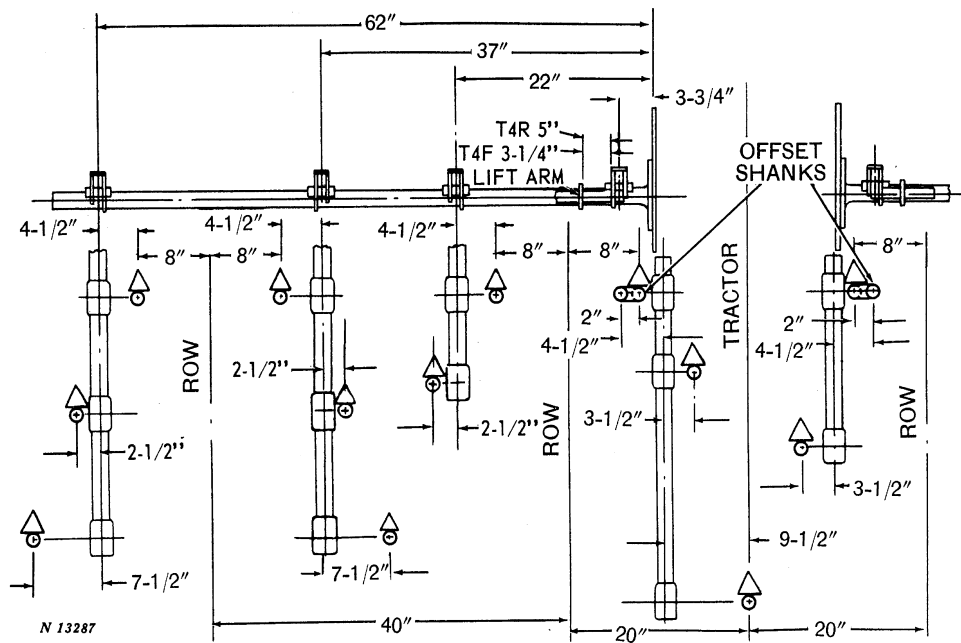
T4 Cultivator Set for 38-Inch Row Spacing

34 Operation

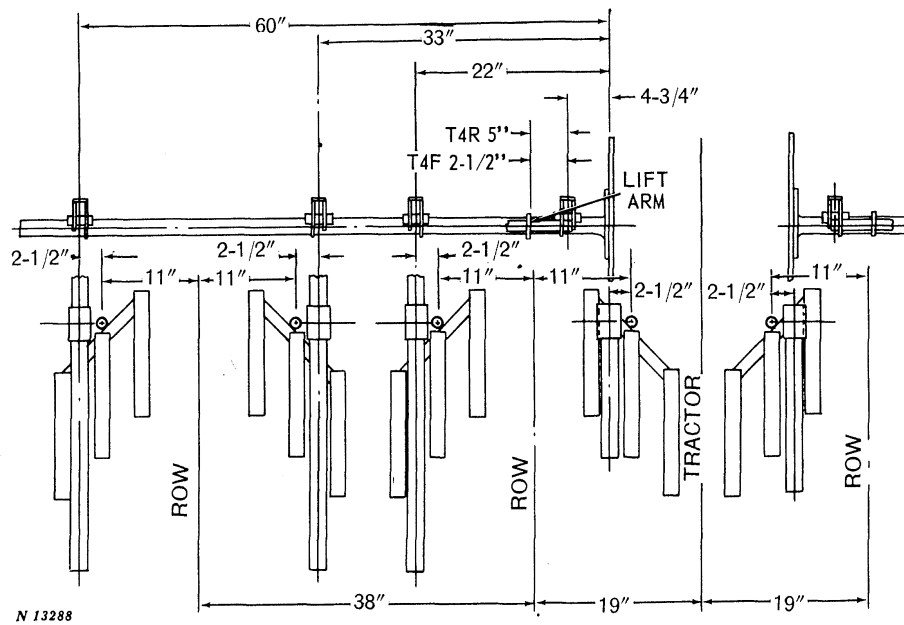


T4 Cultivator Set for 36-Inch Row Spacing

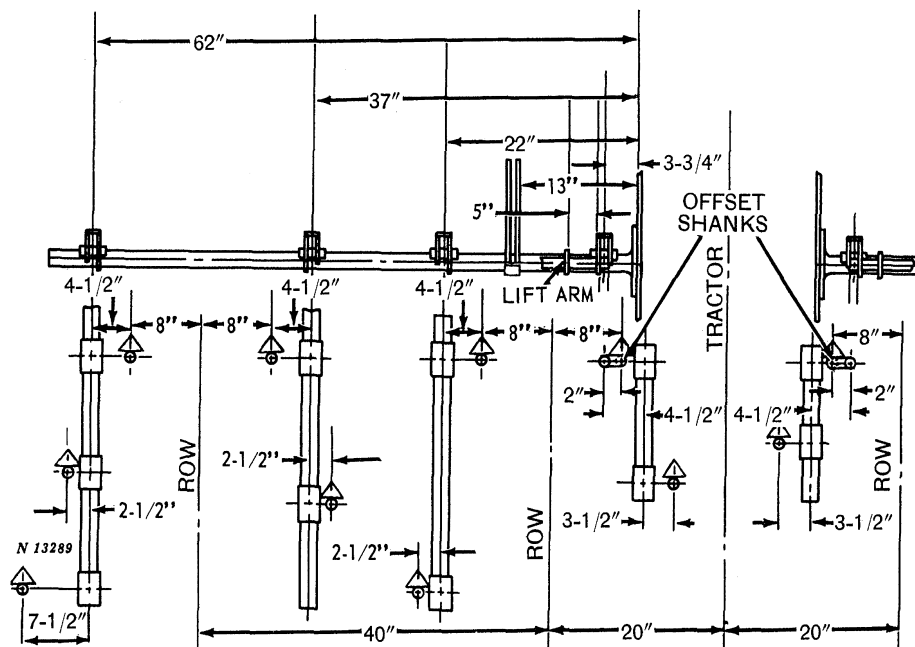
NOTE: With spring-tooth shanks, see page 28 for inner rig settings.

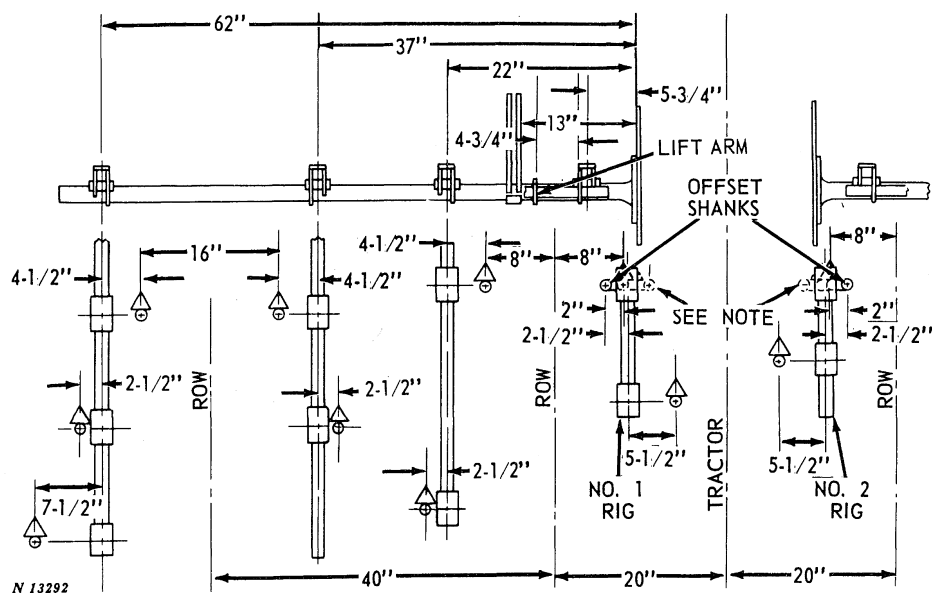


T4 Cultivator Equipped with 21 Shanks and Set for 40-Inch Row Spacing

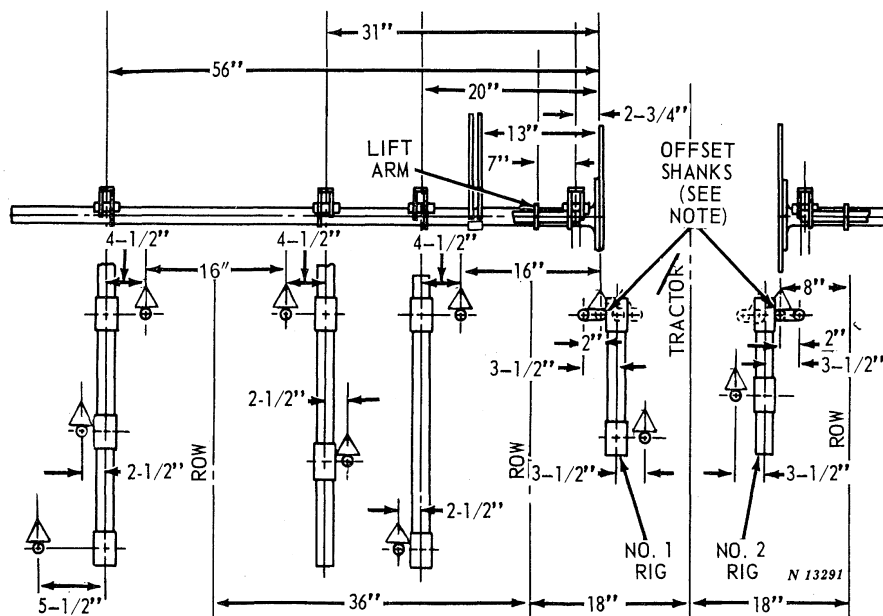


A4 CULTIVATOR ROW SPACING





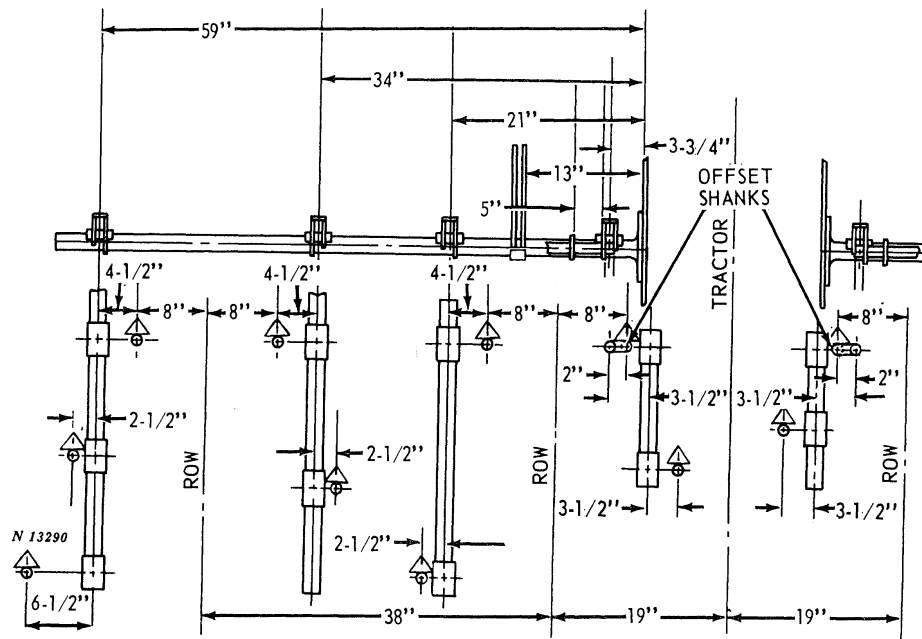
A4F Cultivator Row Spacing Set for 40-Inch Rows



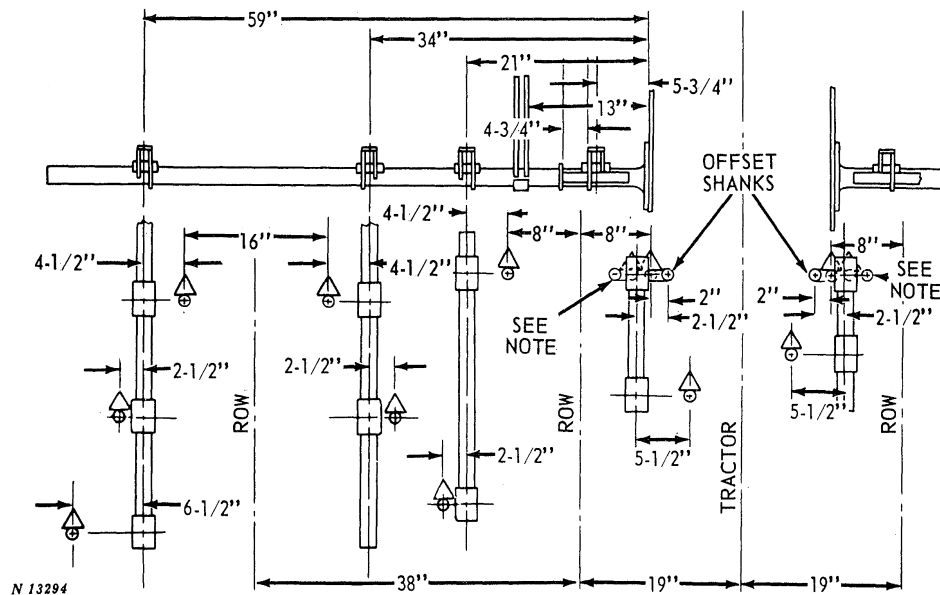
A4R Cultivator Set for 36-Inch Row Spacing

NOTE: If it is desired to have the center of the sweep or shovel more than 8 inches from the row, it is necessary to move the offset shank and crossarm on the No. 1 rig to the in-

side of the No. 2 rig. Also, move the offset shank and crossarm on the No. 2 rig to the inside of the No. 1 rig pipe. This is shown by the dotted lines in the illustration above.



A4R Cultivator Set for 38-Inch Rows



A4F Cultivator Set for 38-Inch Rows

NOTE: For 38-inch rows, the A4F Cultivator is normally set so the offset shanks on the inside rigs are positioned on the inside of the rig pipes next to the tractor.

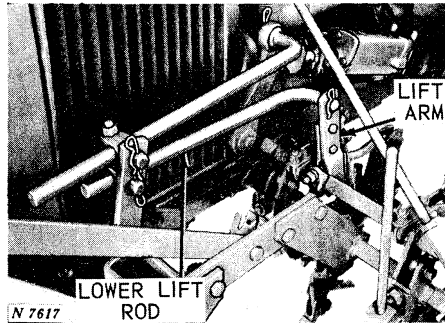
If it is desired to have the center

of the sweep or shovel less than 8 inches from the row, move the offset shank and crossarm from the No. 1 rig to the outside of the No. 2 rig. Also, move the offset shank and crossarm on the No. 2 rig to the outside of the No. 1 rig pipe.

38 Operation

A4F CULTIVATOR SET FOR 36-INCH ROWS

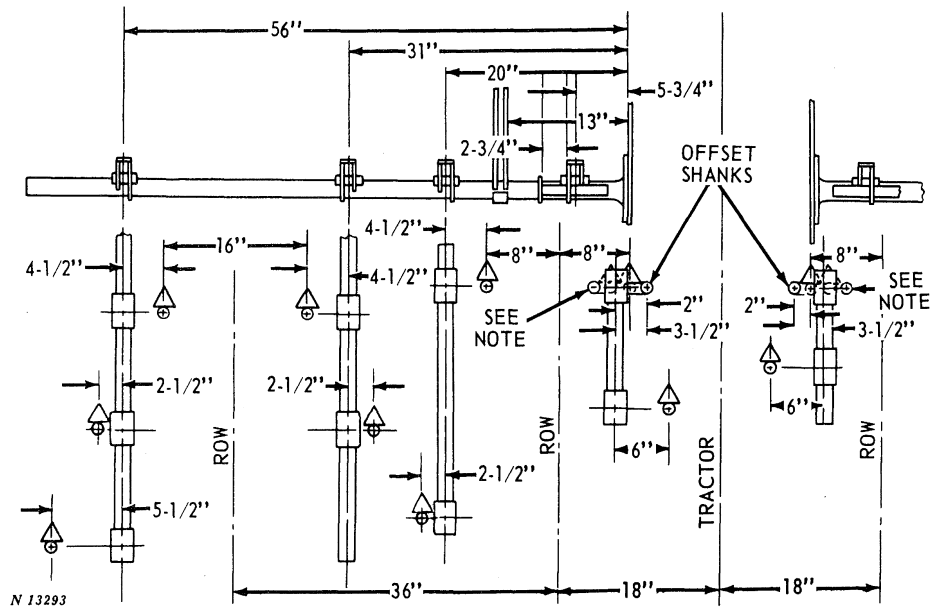
Various adjustments must be made to set the A4F Cultivator to cultivate 36-inch rows.



For 36-inch rows, the center of the lift arm must be positioned 9-1/2 inches from the side of the cultivator attaching plate.

When the lift arm is positioned this way, it is then necessary to attach the lower lift rod to the opposite side of the lift arm as shown in the illustration on the left.

Also for 36-inch rows, it is necessary to adjust the turnbuckle on the rear truss rod in order for the Nos. 5 and 6 rig hangers to be moved in to the required distance of 31 inches as shown in the illustration below.



A4F Cultivator Set for 36-Inch Row Spacing

NOTE: For 36-inch rows, the cultivator is normally set so the offset shanks on the inside rigs are positioned on the inside of the rig pipes next to the tractor.

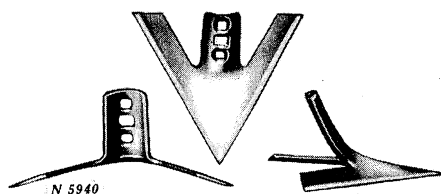
If it is desired to have the center of the sweep or shovel less than 8 inches from the row, it is then neces-

sary to move the offset shank and crossarm now on the No. 1 rig to the outside of the No. 2 rig. Also, move the offset shank and crossarm on the No. 2 rig to the outside of the No. 1 rig pipe. This is shown by the dotted lines in the illustration above.

SWEEPS AND SHOVELS

All sweeps and shovels are made from high carbon steel and heat treated to assure hardness for longer wear and toughness for greater shock resistance. A wide variety of sizes is available to meet your own needs. See your John Deere dealer.

UNIVERSAL SWEEPS



The Universal Sweeps are designed for high speed cultivation. They are highly polished and will scour in all types of soil conditions.

These sweeps have a low-wing angle, a low crown, and long, narrow shank.

The sweeps lift and stir the top soil, leaving a loose mulch on top and destroying weeds at the same time, but still throw enough soil between plants to cover the weeds.

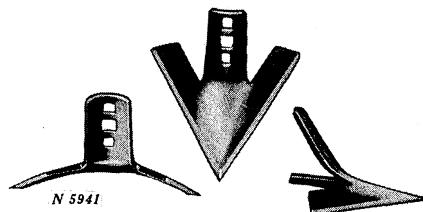
PEANUT SWEEPS



The Peanut Sweeps are designed to move a minimum amount of soil, even at high cultivating speeds.

These sweeps have a very narrow shank, narrow wings, and low profile for maximum efficiency when cultivating peanuts.

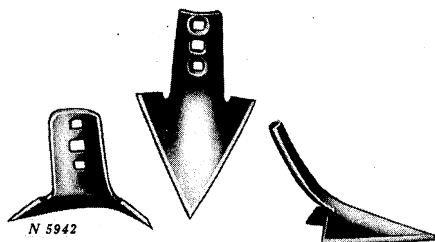
MIXED-LAND SWEEPS



The Mixed-Land Sweep is used principally for cultivation in southern soils. In the cultivation of cotton where it is necessary to hill up a cotton bed, the cultivating sweep must have a high-wing angle, high broad crown, and a wide shank.

The Mixed-Land Sweep fully meets these requirements. It is designed to ridge up the cotton beds and throw a medium amount of soil, even at slow speeds, and leave a loose mulched, mellow topsoil.

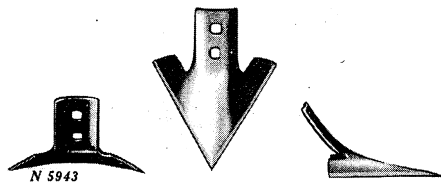
BLACKLAND SWEEPS



The husky Blackland Sweep is designed for cultivating in areas where scouring is difficult. It is excellent for hilling and ridging cotton beds as these sweeps throw a large amount of soil.

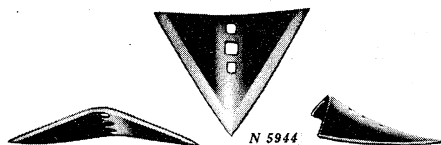
The Blackland Sweep is long and narrow with a high crown and an unusually high-wing angle which provides quick cleaning and scouring.

GENERAL-PURPOSE SWEEP



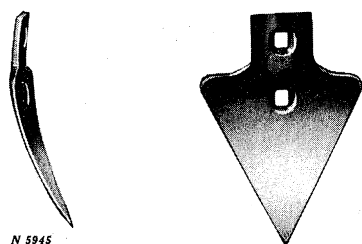
The General-Purpose Sweep is designed especially for use with a single spring-tooth standard on row-crop cultivators.

SOLID SWEEPS



The Solid Triangle-Type Sweep throws a large amount of soil and is ideal for use in southern territories for hilling up cotton beds and in irrigation ditch or furrow.

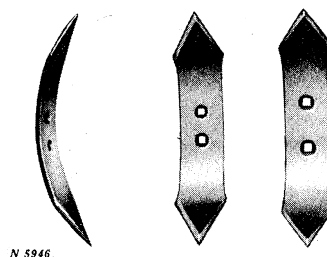
SINGLE-POINTED SHOVELS (Spear Points)



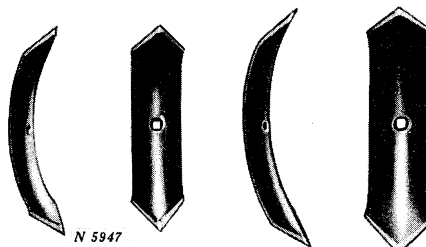
The Single-Pointed Shovel or Spear Points are particularly suitable for working in conditions where extreme care must be taken not to injure plants. These shovels are ideal for killing weeds and do an excellent job of cultivating in row-crops.

DOUBLE-POINTED SHOVELS

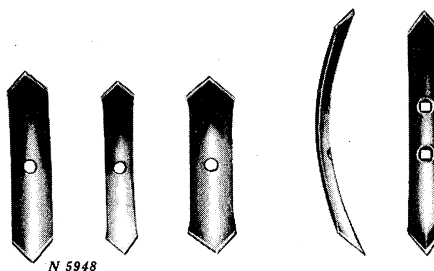
The Double-Pointed Shovels are strong and sturdy to withstand the most severe cultivating conditions; they're ideal for use where it's necessary to cultivate deep to stir up more ground. These shovels are also used to loosen the soil compacted by tractor wheels.



These shovels are available for single spring-tooth standards and double spring-tooth standards.



These shovels are used with open sleeve shanks.



These shovels are used for heavy duty cultivating.

SPECIAL EQUIPMENT

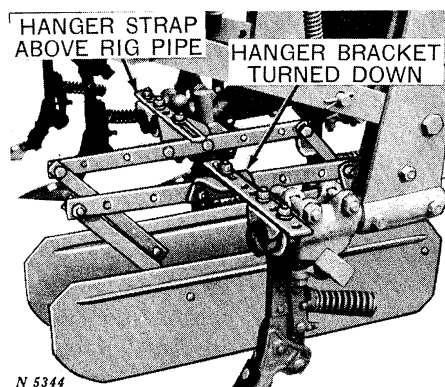
RIG-MOUNTED SHIELDS

Shields are available as special equipment and are assembled differently for specific types of field conditions.

SHIELD ASSEMBLY

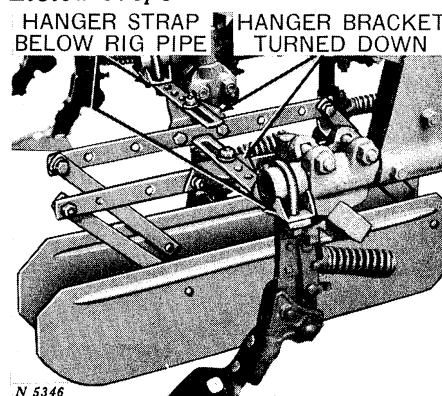
When attaching straps to rig pipes with U-bolts, use attaching holes in straps that will place shields in the best position in relation to the plants. Final adjustment can be made later using slots in inner ends of hanger straps.

Level Land



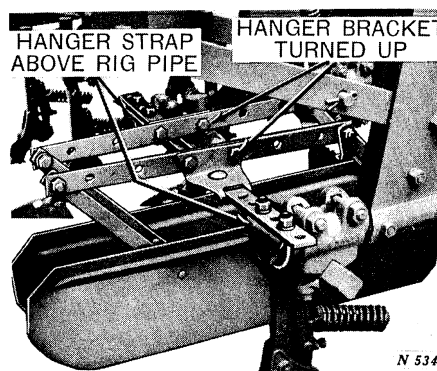
When working in crops planted on level land assemble shield as shown above, with hanger straps above rig pipes and hanger brackets turned down.

Listed Crops



When working in listed crops assemble shields as shown above, with hanger straps below rig pipes and hanger brackets turned down.

Beds

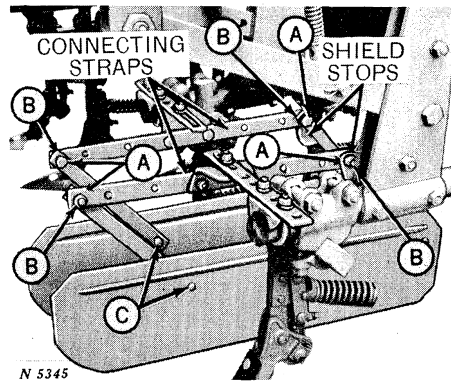


When working in crops planted on beds assemble shields as shown above, with hanger straps above rig pipes and hanger brackets turned up.

SHIELD ADJUSTMENT

Flexibility

Bolts "A" are threaded through connecting straps and locked in place with nuts "B." Do not tighten bolts "A" against pivot straps; set them loose enough to allow shields to float up and down freely. Each rivet "C" has a shoulder long enough to reach through the strap and shield. This prevents binding and allows shields to move freely. Be sure there is no bind, at rivets, that would limit the movement of shields.



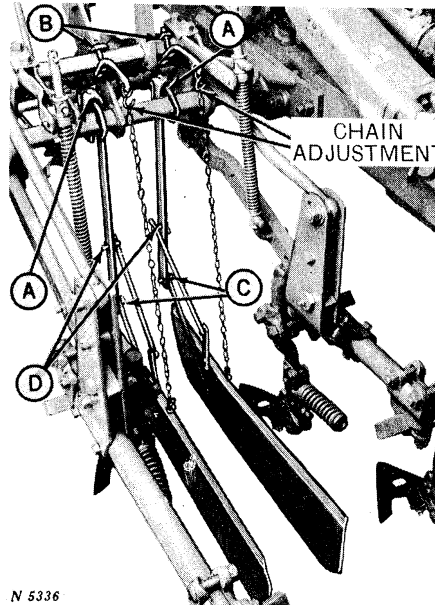
Setting Height of Shields

Shield stops determine the height at which shields are carried, by limiting the forward swing of the rear pivot straps. Stops are mounted on bolts "A" and held by nuts "B." Locate stops after bolts "A" have been adjusted for free movement as described above. Hold bolt "A" with a wrench while tightening nut "B" against the shield stop.

Positioning Shields to Plants

Slide hanger brackets in or out in hanger straps to place shields in proper relation with plants. If further adjustment is needed assemble U-bolts through different holes in straps.

FRAME-MOUNTED SHIELD



N 5336

Frame-mounted shields may be assembled differently as described below.

Attach shields at "A" and "B." Place the smooth side of the shields next to the shovels.

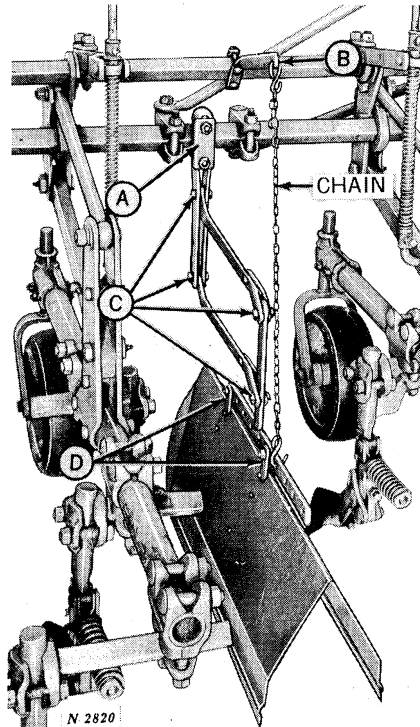
Shield arms can be attached either ahead of the frame bar (as shown above) or behind, depending on the fore-and-aft setting of the shield desired.

Shields may be adjusted for side play at "C." If a swinging shield is desired, loosen bolts until shield swings freely and tighten lock nut. If a rigid shield is desired, screw bolt up tight, then back off 1/2 turn and tighten lock nut.

Level shields by adjusting the threaded eyebolt at "D." Adjust the height of shield with chain.

Be sure all nuts are tight, cotter pins are spread, and all moving joints thoroughly oiled. Then lift the cultivator slowly the first time, checking to see that no parts bind and that everything works properly.

HOODED SHIELD

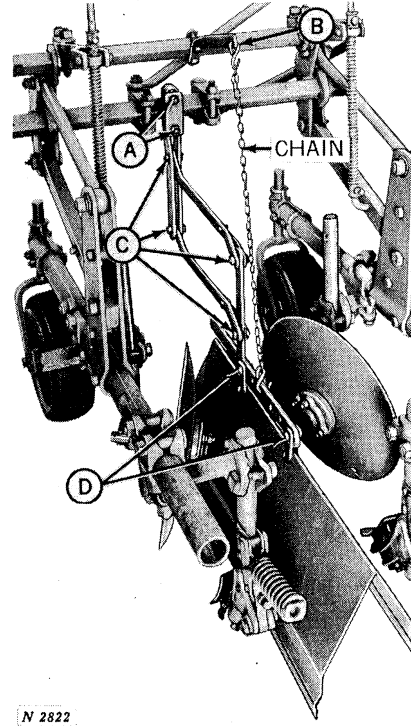


Attach the hooded shields at "A" and "B." The shield arms may be attached either ahead of the frame bar or behind (as shown above), depending on the fore-and-aft setting of the shield desired.

Shields can be adjusted for side play at "C." If a swinging shield is wanted, loosen the bolts until shield swings freely. If rigid shield is desired, screw bolts up tight.

Adjust the shields for fore-and-aft setting by resetting the bolts at "D." Adjust the height of shield with chain.

NO. 1 LISTED CROP ATTACHMENT



Attach the disks to replace the two inside shanks and sweeps. These disks can be turned either in or out (as shown) for hilling or barring off the row.

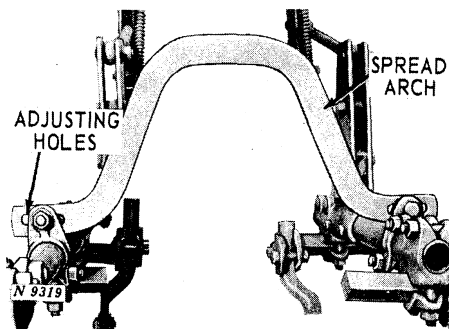
Place the inside shovels across from each other as shown.

Attach the hooded shields at "A" and "B." The shield arms may be attached either ahead of the frame bar or behind (as shown above), depending on the fore-and-aft setting of the shield desired.

Shields can be adjusted for side play at "C." If a swinging shield is desired, loosen the bolts until shield swings freely. If rigid shield is desired, screw bolts up tight.

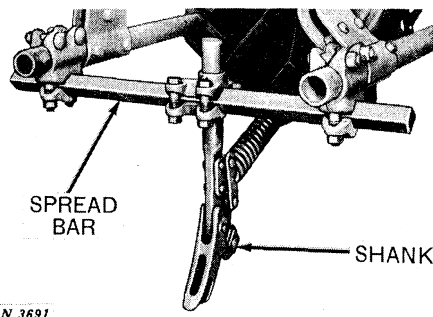
Adjust the shields for fore-and-aft setting by resetting the bolts at "D." Adjust the height of shield with chain.

SPREAD ARCH



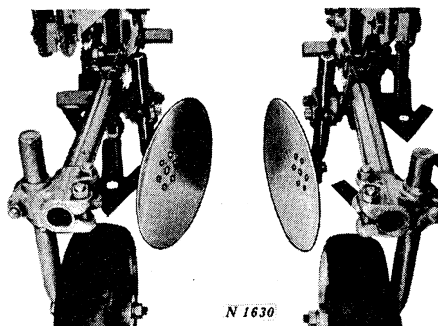
The spread arch can be used on the cultivator rigs. It is sometimes desirable for use when throwing up beds with disk hillers. It prevents the rigs from spreading apart. Holes provide for proper adjustment.

SPREAD BAR



The spread bar is used in connection with planting attachments. A sweep or some type of tool equipment can be attached to the shank to open up a furrow for the seed to be planted.

DISK HILLERS



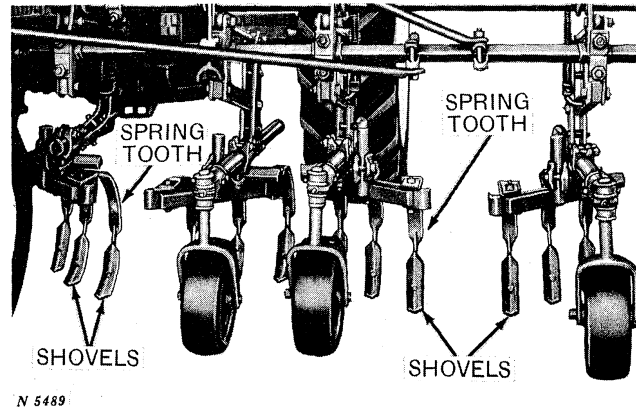
Disk hillers can be used next to the rows in place of shovel shanks or spring teeth. One pair is required for each row.

The disks may be used for hilling or barring off the row.



65173

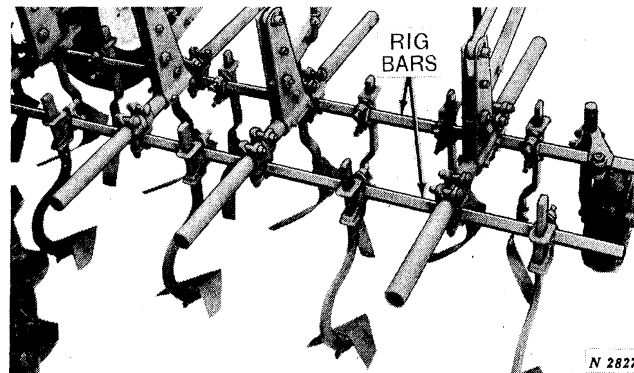
NO. 21 SPRING-TOOTH ATTACHMENT



The No. 21 Spring-Tooth Attachment is designed to meet the requirements of southern territories.

This attachment consists of a spring-tooth and narrow shovel combination.

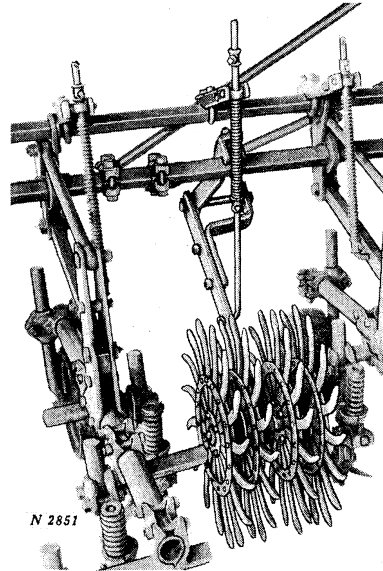
RIG BARS FOR VEGETABLE CULTIVATION



Four square bars can be installed on the cultivator in place of the regular crossarms and shanks to convert this cultivator for vegetable cultivation.

The bars are attached to the rig pipes in the same manner as the spread bar, to which the desired vegetable cultivator standards are attached.

ROTARY HOE ATTACHMENT



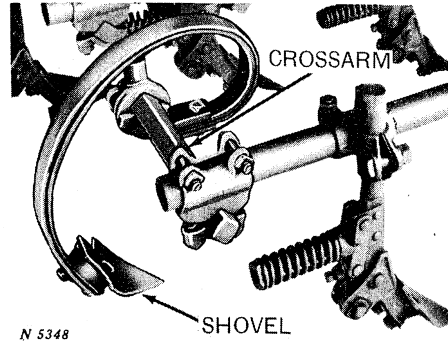
The rotary hoe attachment speeds up cultivating, gets the weeds, breaks crust in the rows, and reduces cultivating costs.

The attachment fits between the cultivator rigs, directly over each row.

The attachment consists of four steel hoe wheels, attached in pairs to white-iron hubs that turn on white-iron spindles. The spindles are securely bolted to a drawbar which is attached to the front frame bar of the cultivator by means of a pivoting attaching bracket.

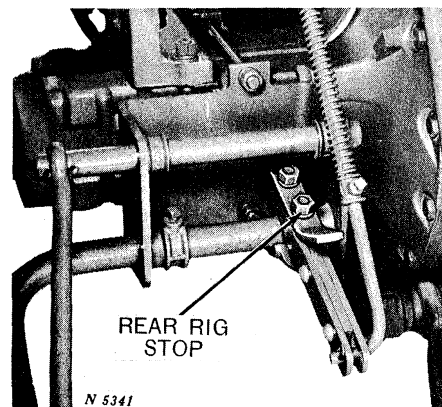
A lift arm rod with pressure spring completes the assembly. For cultivating after the crop is too high for safe use of the inside wheels, the two inside hoe wheels may be removed from the double hubs by removing three bolts in each wheel. In this manner the wheels act as shields to protect the plants, permitting the cultivator to be driven much faster than otherwise would be practical.

NO. 1 CENTER ATTACHMENT



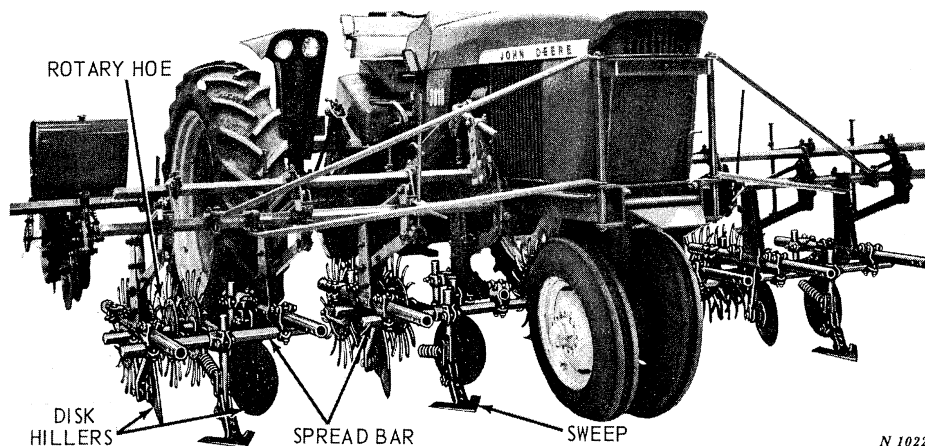
The No. 1 Center Attachment is available for converting the row-type cultivator to a field-type for use in open fields. This attachment is clamped to the pipe of the outside rigs back of the second shovel. The crossarm is adjustable and should be positioned so the shovel of the center attachment cuts out the center left between the two front shovels.

REAR RIG STOP



A rear rig stop is available for axle-mounted "A" Series Rear Rigs. This stop prevents possible interference of the rear rig sweeps with large rear tractor tires, especially cane and rice tires.

NO. 4 MINIMUM TILLAGE ATTACHMENT FOR A4 AND T4 CULTIVATORS

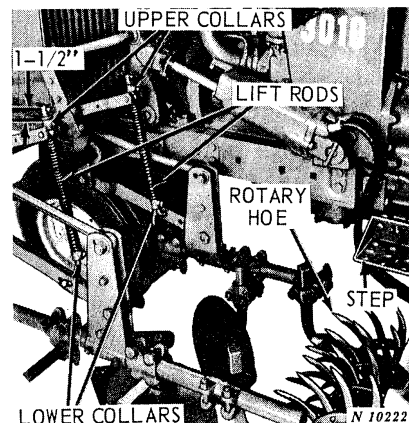


N 10221

No. 4 Minimum Tillage Attachment on T4 Cultivator

The T4 and A4 Cultivators can be equipped with the No. 4 Minimum Tillage Attachment. The attachment consists of a sweep, a pair of disk hillers, and four rotary hoe wheels for each of the four sets of rigs on the cultivator. These make row-width seedbeds for planter-fertilizer units attached to the tractor drawbar or 3-point hitch.

The rotary hoes can be assembled in the mulching position shown, or reversed for packing.



N 10222

ADJUSTING HEIGHT OF LIFT

Adjust the lift pipes or lift rods as instructed on page 14.

Set the upper collars on the rig lift rods 1-1/2 inches from the top of the rod. Raise the cultivator slowly to check for possible interference with the tractor. If there is interference, lower the cultivator and reset the upper collar in a higher position on the rig lift rod.

If there is no interference, and more transport clearance is desired, lower the cultivator and reset

the upper collars in a lower position on the lift rod.

NOTE: Set both collars for each row unit at the same height.

CAUTION: When checking for interference make sure the rotary hoe does not come in contact with the tractor step.

SHANKS AND SWEEPS

Refer to pages 22 and 23 for instructions on adjusting sweeps and shanks.

ADJUSTING DEPTH OF OPERATION

All depth stop set screws should be turned in, so they will not interfere with depth adjustments.

Depth of operation is controlled by the stops on the control lever quadrant and hydraulic cylinder on the tractor. Operate hydraulic controls as instructed in your tractor operator's manual.

ADJUSTING DOWN PRESSURE

To increase down pressure on the front rigs, raise the lower collars on the rig lift rods to increase spring tension. If no down pressure

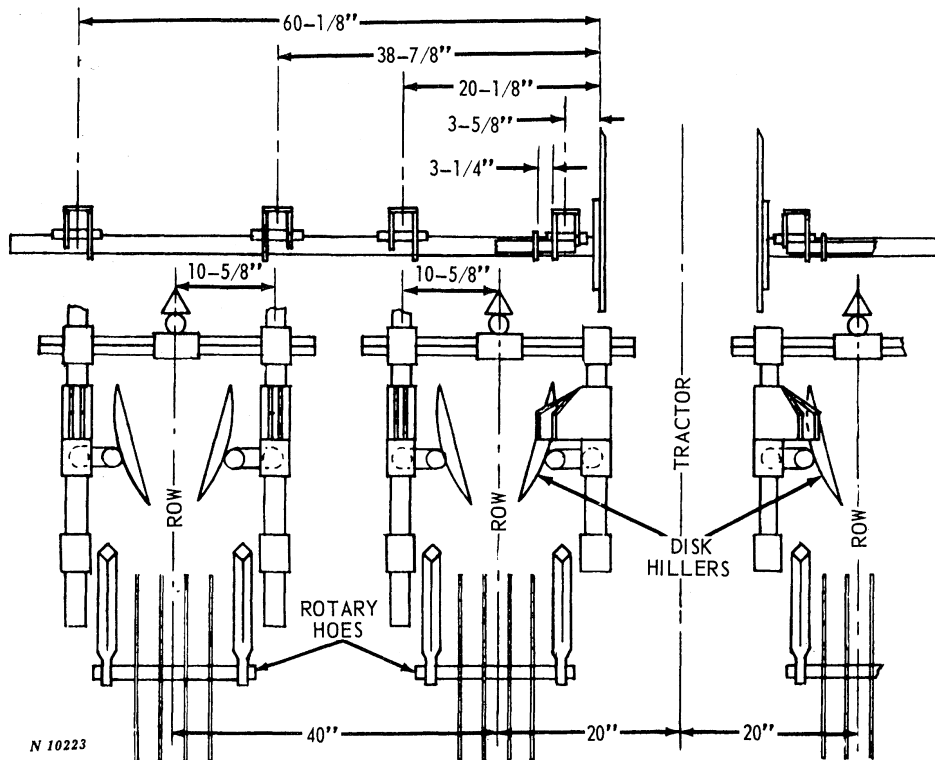
is desired, loosen the collars, let them slide to the bottom of the rod and tighten in place.

NOTE: Set both collars on each row unit the same distance from the top of the rod.

ROW SPACING

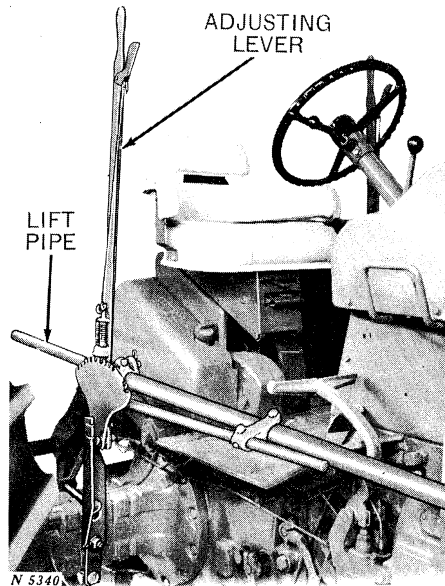
Set the rigs to the desired row spacing as shown below.

The spacing of the minimum tillage attachment on the T4 or A4 Cultivator can be adjusted to handle rows spaced from 36 to 42 inches apart. Spacing on both right- and left-hand rigs should be the same.



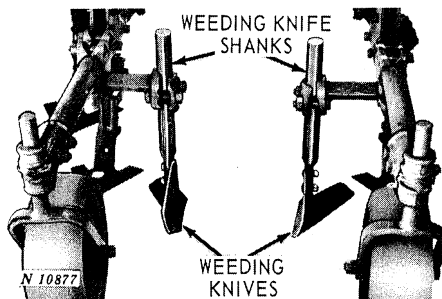
No. 4 Minimum Tillage Attachment Set for 40-Inch Rows

NO. 2 LIFT PIPE AND ADJUSTING LEVER



The No. 2 lift pipe and adjusting lever attachment is available for the A2R and T2R Cultivators on 3020, 4020, 3010 or 4010 Tractors in place of the regular lift pipes.

WEEDING KNIFE SHANKS

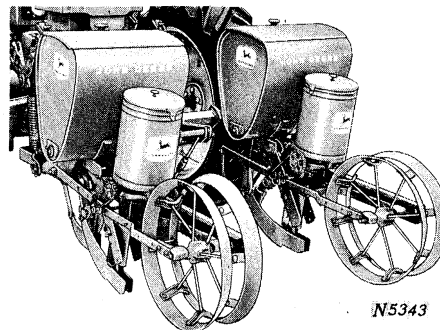


A weeding knife shank is available to use with these cultivators. This allows the operator to use beet and bean weeding knives in combination

with or in place of regular row-crop cultivator shank equipment.

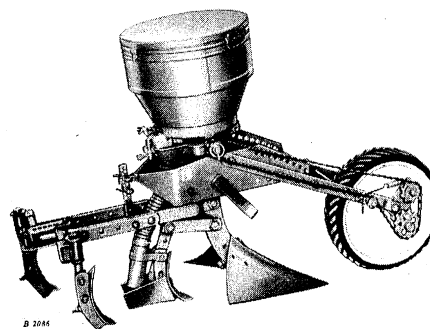
CAUTION: The weeding knife is a solid, non-trip shank. Therefore, it should not be used in stony or stumpy conditions.

UNIT PLANTERS



With shanks removed, the 50A Rear Rig becomes an ideal hitch-mounted tool bar for 24-B and 25-B planting and fertilizing units. Both are press-wheel driven, handledrill or hill-drop planting, and may be equipped for dry or liquid fertilizer. John Deere 23-R Unit Planters and 70 Series Flexi-Planters also may be used with the 50A Rear Rig.

18 UNIT PLANTERS



Four 18 Unit Planters and the 442 Fertilizer Attachment can be used on the T4 Cultivator.

NO. 3 FRONT RIG ATTACHMENT FOR T2 AND T4 CULTIVATORS ON 2510, 3010, 3020, 4010, AND 4020 ROW-CROP TRACTORS ONLY

This attachment converts the T2 Cultivator from an 8-shank cultivator to an 11-shank cultivator and T4 Cultivator from an 18-shank cultivator to a 21-shank cultivator.

On the No. 5 and No. 6 rigs of the T4 Cultivator, move the rear shank up next to the rear of the rig coupling plate. (See page 15 for rig positions.)

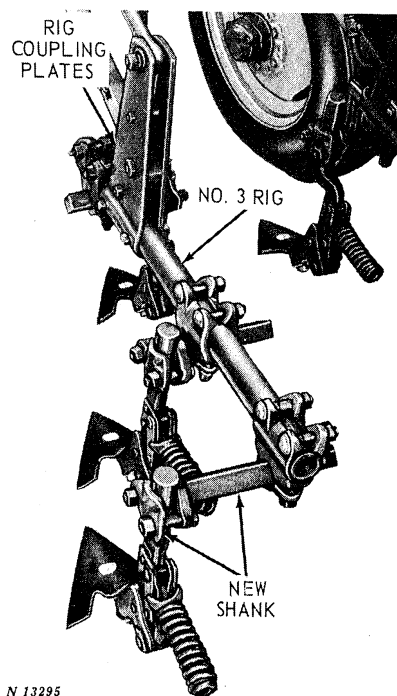
On the T2 or T4 Cultivator, position the rear shank on the No. 3 and No. 4 rigs about six inches behind the rig coupling plates.

Install the new shank on the rear of the rigs as shown at right for T2 and page 34 for T4.

On the left side of the tractor, remove the short rig pipe and install the new 40-inch rig pipe.

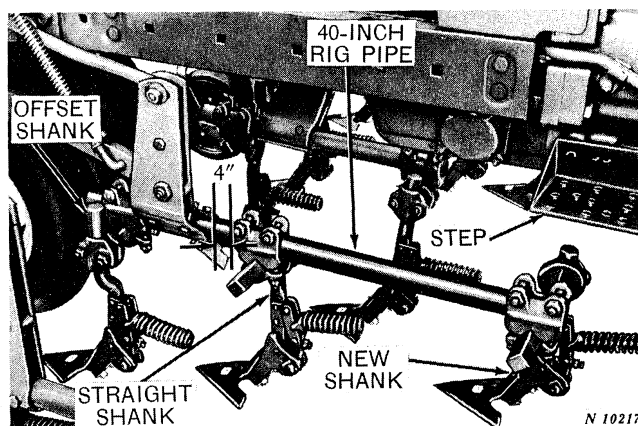
Remove the offset and straight shanks from the short rig pipe and install them on the new rig pipe. Position the straight shank approximately 4 inches back of the hanger coupling plates.

Clamp the new shank and sweep to the end of the rig pipe. See page 34 for correct position of cross-arms and shanks.

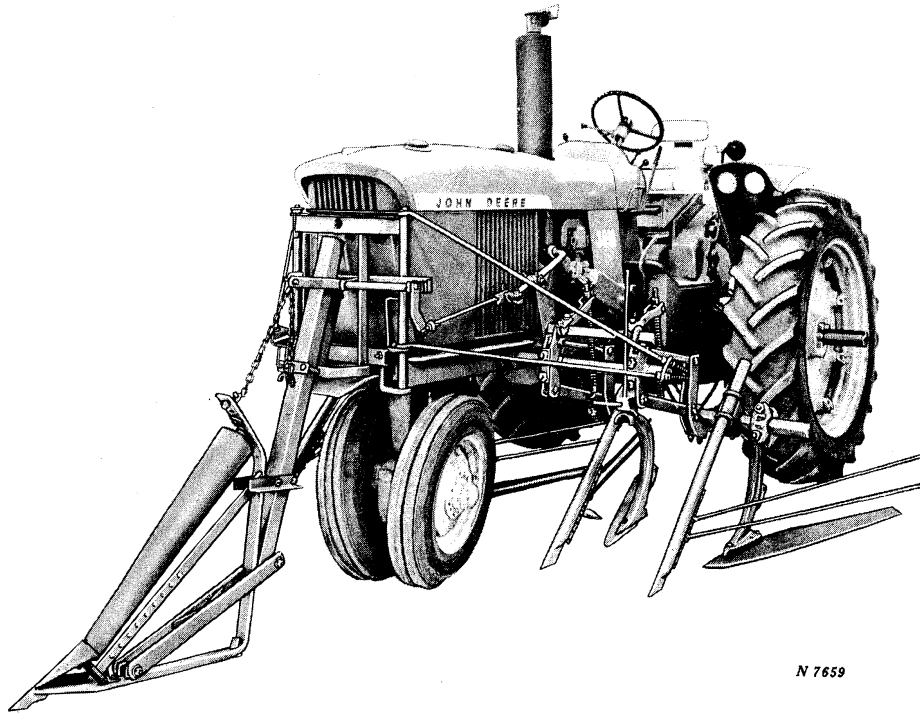


N 13295

Remove the step from the left-hand side of the 3020 and 3010 Tractors.



N 10217



John Deere T2 Cultivator with AB690F Bean Harvester and 12D Vine Turner

AB690E, AB690F, AND AB690G BEAN HARVESTERS

Either the AB690E Two-Row or the AB690F Four-Row Bean Harvester can be used on the A2 or T2 Cultivator. The AB690E can be used for 20- to 42-inch rows. The AB690F can be used for 20- to 36-inch rows.

The AB690G Six-Row Bean Harvester can be used on the T4 or A4 Cultivator. The AB690G can be used for 18- to 34-inch rows.

Large blades cut the beans and the windrow rods deposit them in windrows.

96E PEANUT PULLER

It is possible to convert the A2 or T2 Cultivator into a peanut cutting machine with the 96E Peanut Puller Attachment. Large blades cut the

peanuts from their roots and deposit the peanuts on the top of the ground for drying.

ROLLER VINE TURNERS

Vine turners may be used with the AB690E, AB690F, or AB690G Bean Harvester when attached to the A2, T2, A4 or T4 Cultivator.

Long rollers separate interwoven vine growth in front of the tractor wheels for easier harvesting.

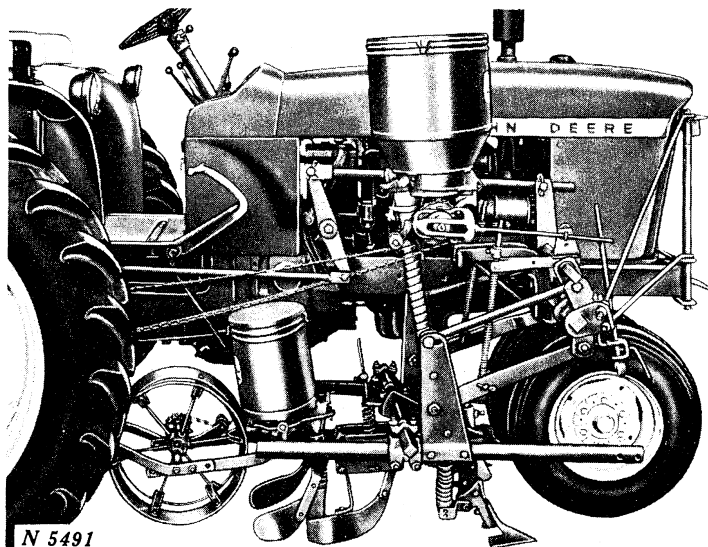
A2 AND A4 CULTIVATORS

- 12E Single Roller Vine Turner
- 13B Two-Roller Vine Turner
- 14C Three-Roller Vine Turner

T2 AND T4 CULTIVATORS

- 12D Single Roller Vine Turner
- 14B Three-Roller Vine Turner

SIDE DRESSER AND UNIT PLANTER



The 23-F unit planter with the 42 Series dry-fertilizer attachment can be mounted on the T2 Cultivator to be used for planting and fertilizing at the same time.

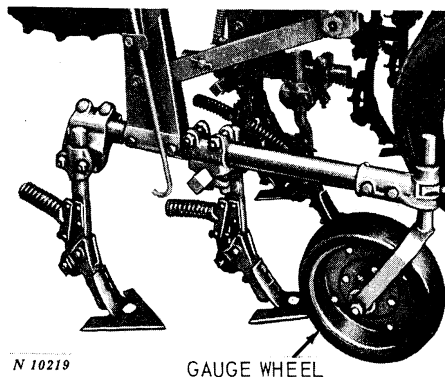
The 42 Series fertilizer attachment can also be used for side dressing while cultivating.

The 442 Series fertilizer attachment can be used on the T4 four-row Cultivator for side dressing.

RIG DEPTH STOPS

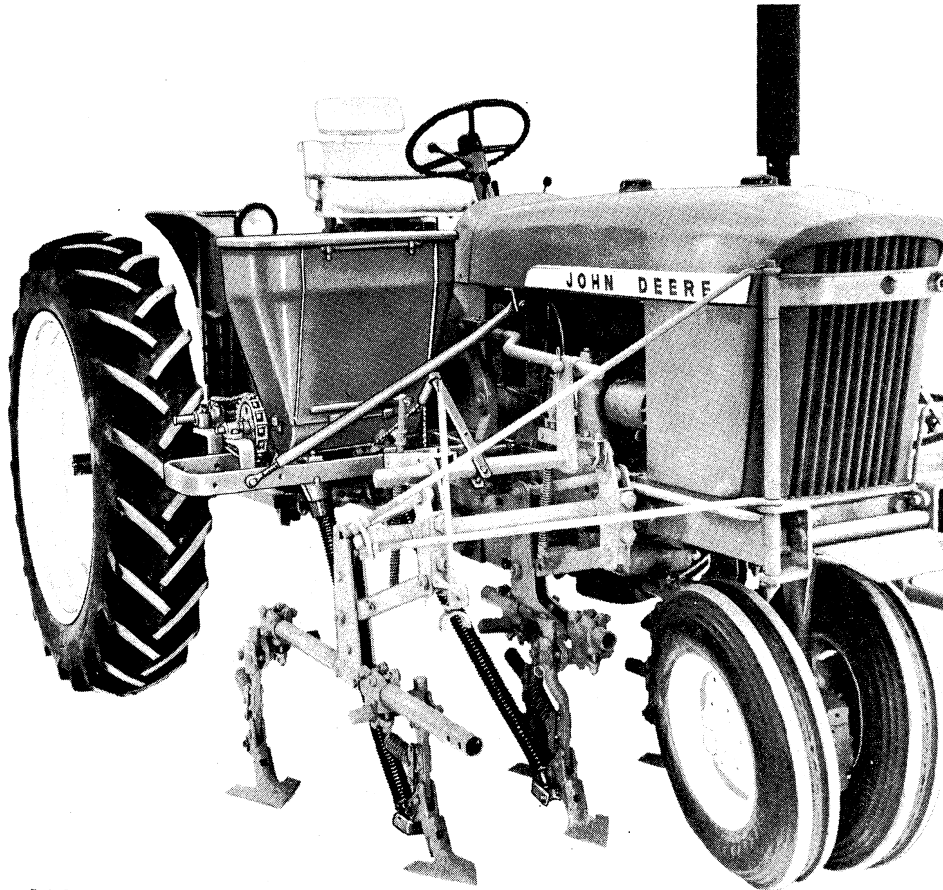
Rig depth stops are available for the outside rigs of the T2 Cultivator if it is desired to control the depth of these rigs by this method. Adjust the rig depth stops as instructed on page 13.

GAUGE WHEELS



Castering or rigid gauge wheels can be added to the outside rigs of the T2 Cultivator to control the depth of cultivation of these rigs. The outside rig pipes must be turned end-for-end in the coupling plates, and the clamps, shanks, and sweeps placed as shown when attaching the gauge wheels. See page 12 for proper adjustment of gauge wheels.

211B TWO-ROW SIDE DRESSER



B 1053

The 211B two-row side dresser can be used on the T2 Cultivator for side dressing fertilizer on growing crops.

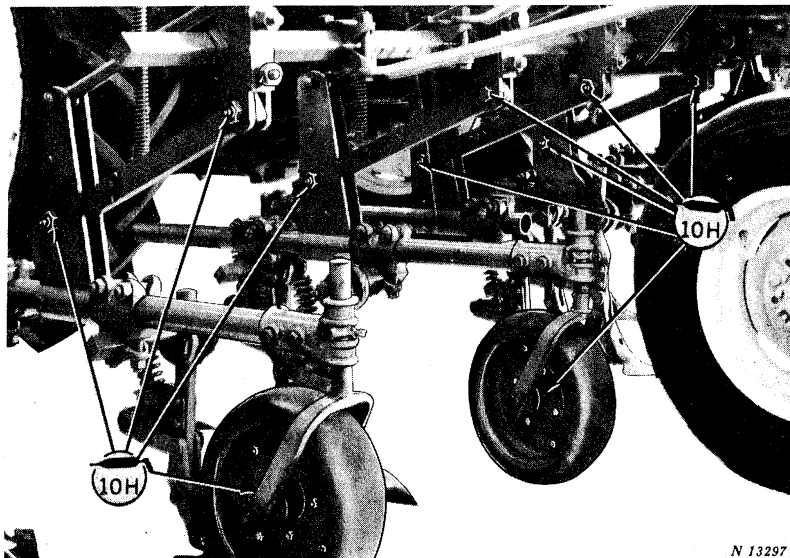
411B FOUR-ROW SIDE DRESSER



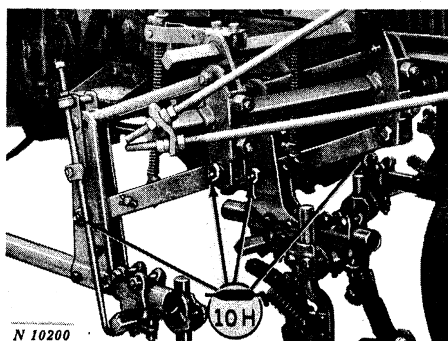
B 1054

The 411B four-row side dresser can be used on the T4 Cultivator for side dressing fertilizer on growing crops.

LUBRICATION



Rig Studs and Gauge Wheels on A4 Cultivator



Rig Studs on T2 Cultivator

SYMBOLS



Lubricate every 10 hours with SAE multipurpose-type grease.



To avoid possible injury and to insure best result always stop tractor operation and lower all units before lubricating the cultivator.

Lubricate moving parts and pivot points. Check to be sure all parts work smoothly. Lubricate grease fittings thoroughly and be sure fittings are firmly installed.

Lubricate grease fittings on disk hillers every 10 hours with SAE multipurpose-type grease.

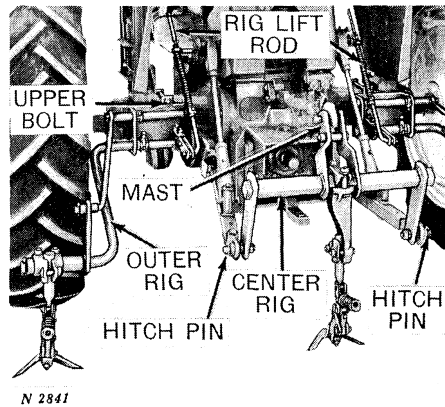
If the cultivator is equipped with a 50B Series rear rig, lubricate the grease fittings in the gauge wheels and rig studs every 10 hours of operation with SAE Multipurpose-type grease.

NOTE: Gauge wheels with anti-friction bearings do not require lubrication.

DETACHING CULTIVATOR FROM TRACTOR

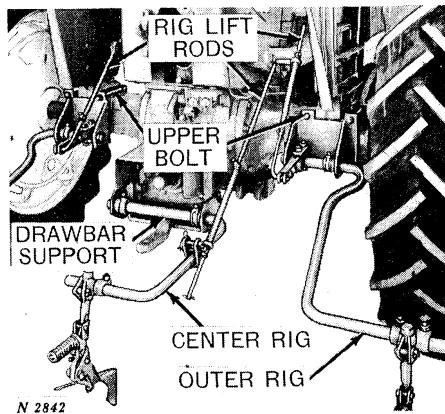
REAR RIGS

3-POINT HITCH MOUNTED RIGS



Lower the rear rig to the floor or ground. Disconnect the draft links from the hitch pins and the center link from the mast.

DRAWBAR MOUNTED REAR RIG



Remove the bolts and drop the center rig from the drawbar or sway block supports.

OUTER REAR RIGS

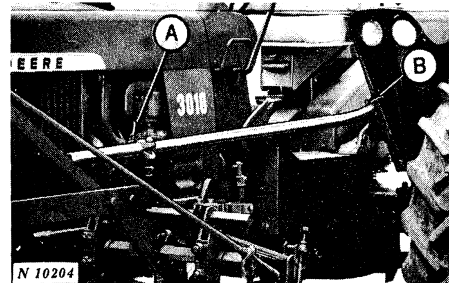
Remove the spring locking pins and disconnect the rig lift rods from the tractor rockshaft lift arms.

Remove the upper bolt and loosen the lower bolt used to attach the outer rigs to the tractor axle housings. Remove outer rigs.

FRONT RIGS

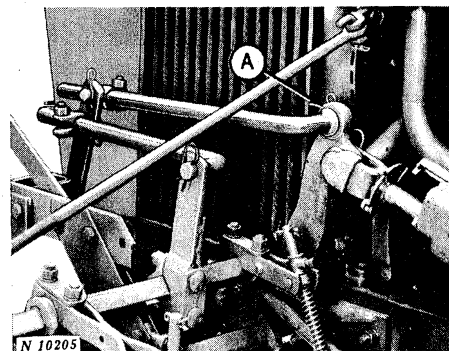
Lower the front rigs on a floor or fairly level surface.

REAR ROCKSHAFT CONTROL

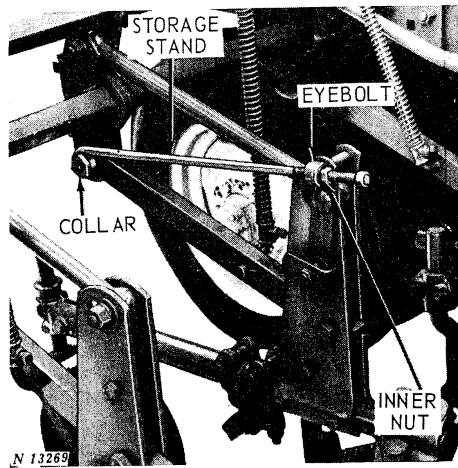


If the cultivator is operated by the rear rockshaft, remove the lift pipes, first at "A" and then at "B."

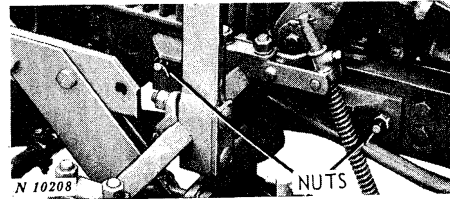
FRONT ROCKSHAFT CONTROL



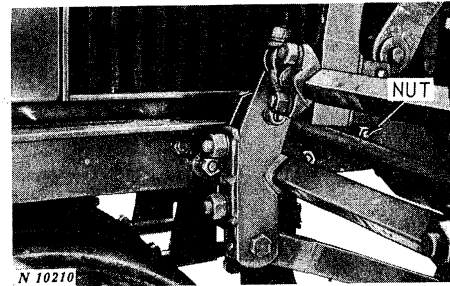
If the cultivator is operated by the front mounted rockshaft, remove the front rockshaft lift rods at "A."



Hook the end of the storage stand over the collar on the side of the rig hanger and tighten the inner nut against the eyebolt.

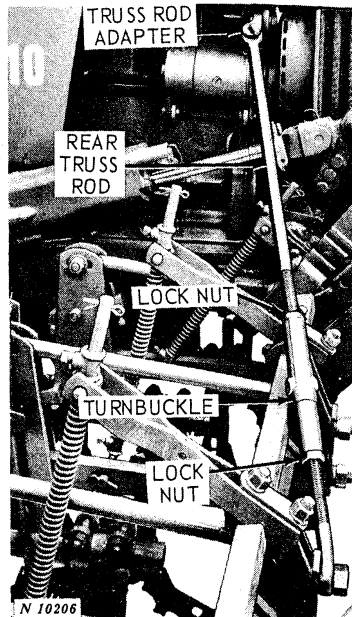


A4 Cultivator

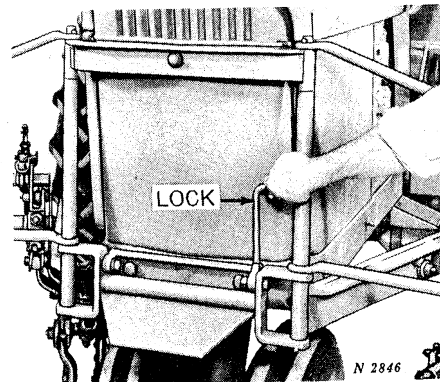


T4 Cultivator

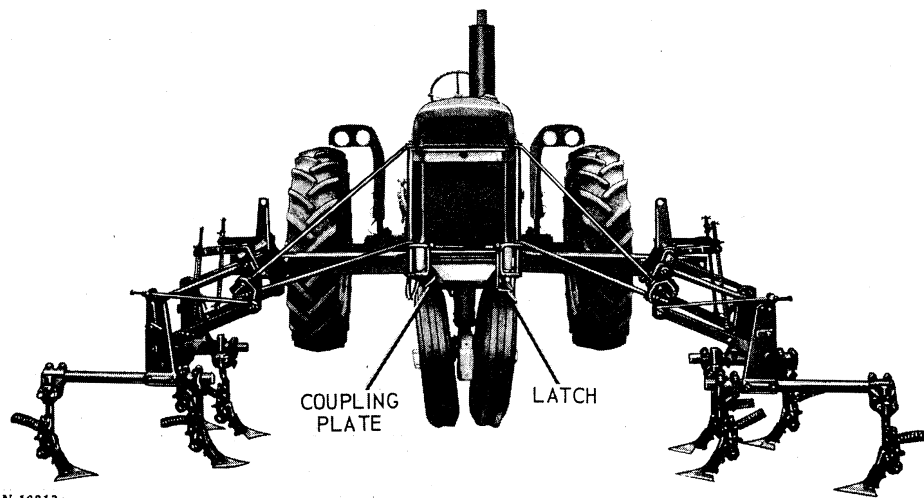
Remove the nuts from the frame bolts on both sides of the tractor.



On the A4 Cultivator, disconnect the rear truss rod from the adapter. It may be necessary to loosen the turnbuckle in order to free the truss rod.

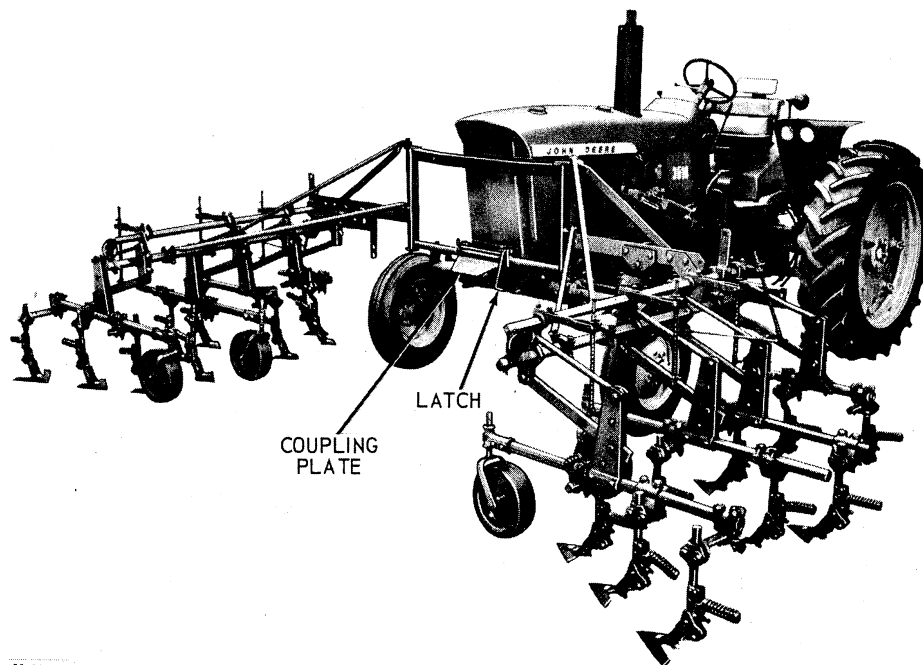


With lock in place, as shown, back the tractor until the front rigs swing out far enough to clear the tractor front wheels.



N 10213

T2 Cultivator



N 10214

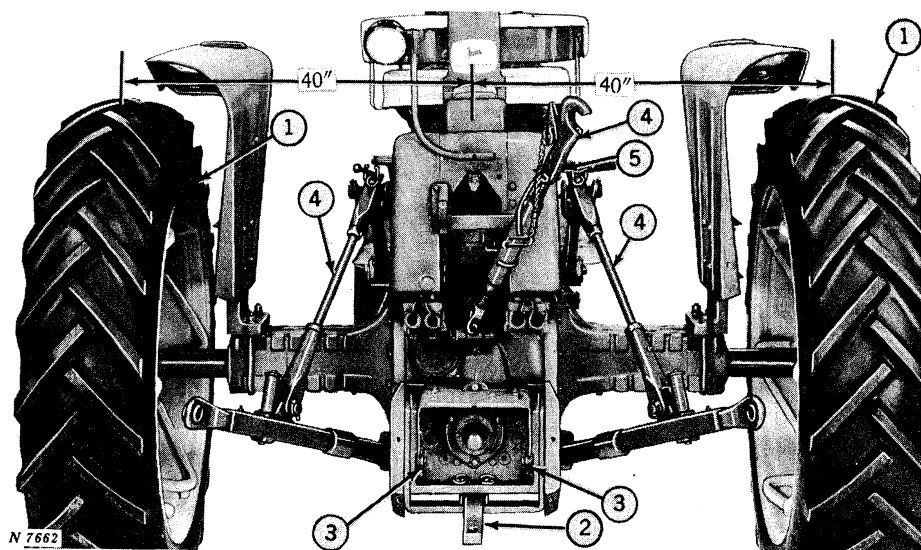
A4 Cultivator

Release Quik-Tatch latch and back tractor away from cultivator.

The front coupling plate and adapter support bracket can be left on the front of the tractor unless they interfere with other equipment.

ATTACHING CULTIVATOR TO TRACTOR

PREPARING THE TRACTOR



1. Set the tractor rear wheels for the row spacing desired. The setting shown is for 40-inch rows. See the tractor operator's manual for instructions on adjusting wheel tread.

2. Move the tractor drawbar to the extreme forward position and pin in place with the offset portion of drawbar down. Insert the locking bolts to prevent drawbar from swinging.

3. Sway blocks are required on tractors using 3-point hitch mounted rear rigs. Sway blocks are used in the category 1 operating position as shown.

4. Set the lift links to the proper length. See page 19.

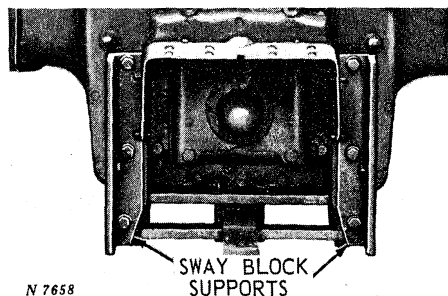
5. On 2510, 3010, 3020, 4010, and 4020 Tractors, move the load selector lever to the "D" (lower) position. On 2010 Tractor, move the load selector lever to the "D" (forward) position.

6. (Not illustrated) On tractors with adjustable tread front axles, set the front wheel tread 8 inches narrower than twice the row width being cultivated (72-inch tread for 40-inch row spacing).

Adjust front and rear rockshafts for desired simultaneous or independent lift arm operation according to instructions in tractor operator's manual.

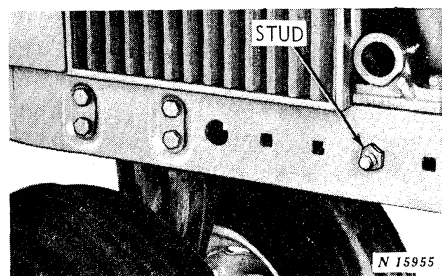
Refer to the tractor operator's manual for additional operating instructions.

2010 TRACTOR



The 2010 Tractor must be equipped with right- and left-hand tractor sway block supports (AT12346T and AT12347T) to attach the center rigs of the 120A, 120B, 140A, 140B, and 160A series rear rigs.

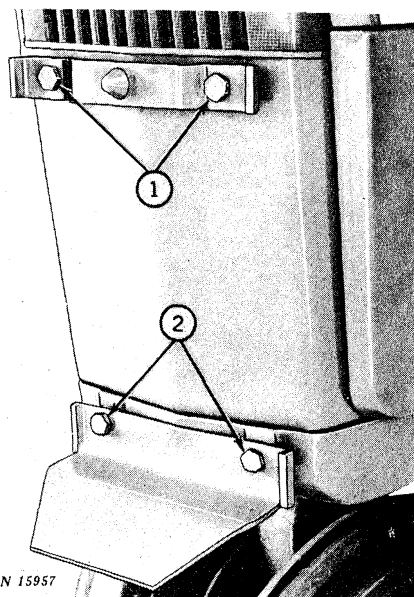
2510 TRACTOR



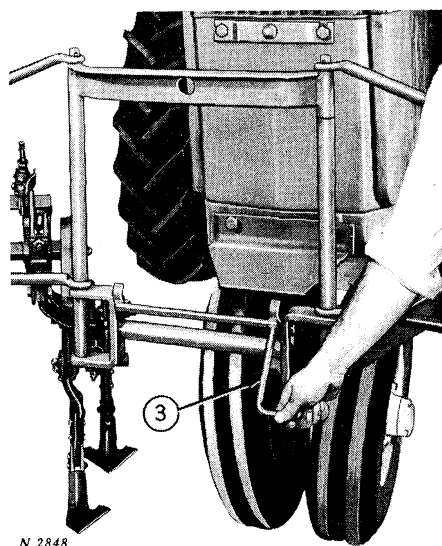
If T2 or T4 Cultivator is used on 2510 Tractor, attach stud in third square hole on each side of tractor rather than to cultivator Quik-Tatch frame.

FRONT RIGS

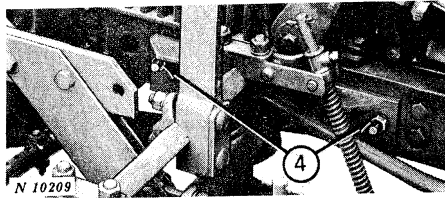
1. If removed, bolt the adapter support bracket for the upper portion of the Quik-Tatch frame to the pedestal of the tractor.



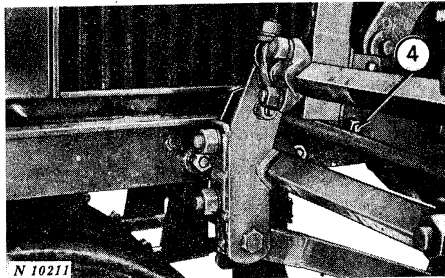
2. Bolt the front coupling plate to the front of the tractor.



3. Make sure the lock is in forward position as shown. Drive tractor firmly into the cultivator until the Quik-Tatch frame is seated on coupling plate and the cultivator frames fold back to the tractor frame.

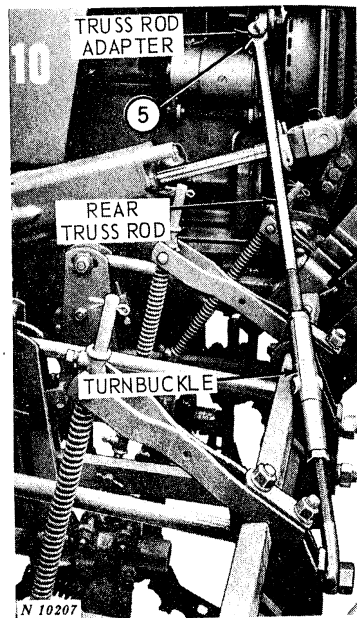


A4 Cultivator



T4 Cultivator

4. Secure the cultivator main frames to tractor with nuts and bolts on each side.

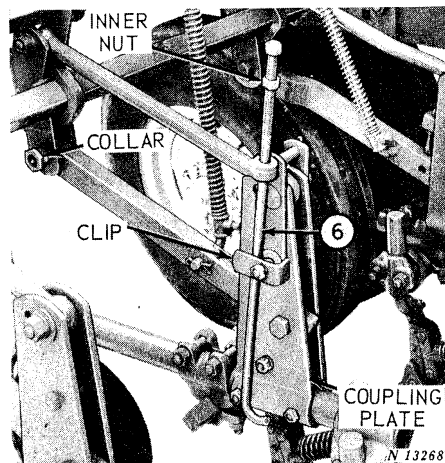


5. (A4 Cultivator only) If it was removed, replace the truss rod adapter on the tractor implement bar.

On 2510, 3010 and 3020 Tractors the adapter bolts to the front of the implement attaching bar. On 4010 and 4020 Tractors the adapter attaches to the back side of the attaching bar.

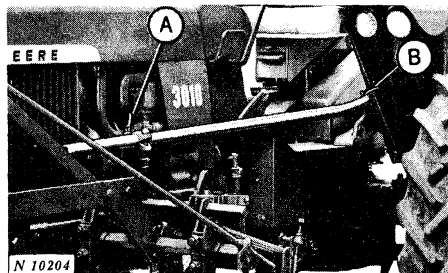
Attach the rear truss rod to the adapter.

Make sure the frame is level before securing the lock nuts against the turnbuckle. If the frame is not level, adjust as instructed on page 11.



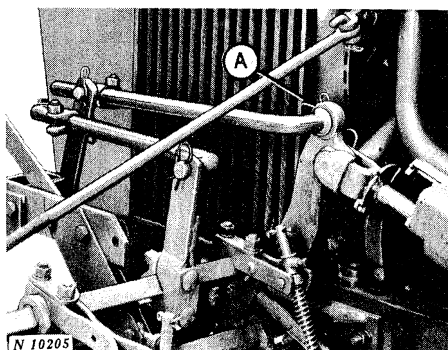
6. Loosen the inner nut on the storage stands and remove from the collar on the rig hanger. Secure it next to the rig coupling plate behind the clip as shown.

REAR ROCKSHAFT CONTROL



On cultivators controlled by the rear rockshaft, connect the lift pipe to the tractor rockshaft at "B" and then to the cultivator lift arm at "A." On the A4 Cultivator, attach the lift pipe to the inside of the lift arm.

FRONT ROCKSHAFT CONTROL

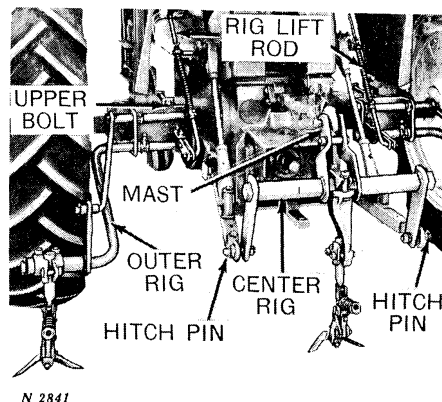


On cultivators controlled by the front mounted rockshaft, connect the lift rod to the front tractor rockshaft as shown above at "A."

Install cylinders and adjust front rockshaft as instructed in your tractor operator's manual.

REAR RIGS

3-POINT HITCH MOUNTED REAR RIGS



Connect the draft links to the hitch pins. Attach the center link to the mast.

OUTER REAR RIG

Attach the outer rigs to the tractor axle housing with long bolts and the strap at the front of the housing.

For the parallel and straight lift rear rigs (for standard rows), the bracket locating rods go in the second and fifth notches from the inside of the tractor.

The tractor fender U-bolt for the "A" Series Rear Rigs must be in the fourth notch from the inside as shown above.

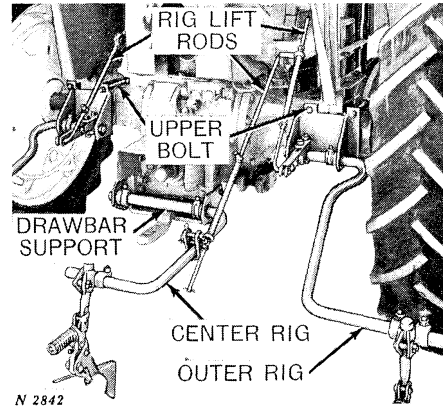
The U-bolt for the "B" Series Rear Rigs must be located in the third notch from the inside.

For 40-inch rows with the offset beam (for standard or narrow rows) rear rigs, the bracket locating rods go in the third and sixth notches on the tractor axle from the inside of the tractor. The tractor fender U-bolt must be in the fourth notch from the inside.

For 28-inch rows with the offset beam rear rigs (for standard or narrow rows), the rig locating rods go in the first and fourth notches on the tractor axle from the inside of the tractor. The tractor fender U-bolt must be in the second notch from the inside for either the "A" or "B" Series Rear Rigs.

Pin the lift rods to the tractor rockshaft arms. The lift rod from the drawbar-mounted center rig should be attached to the pin used for the right-hand lift arm.

DRAWBAR MOUNTED REAR RIG



Bolt the center rear rig to the tractor drawbar support on the 2510, 3010, 3020, 4010, and 4020 Tractors.

Bolt the center rig to the sway block supports on the 2010 Tractor.

MEMORANDA



nobody can fill them like you can!

That's what the owner of this pair of work shoes is finding out—the hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody else can wear your shoes or practice safety for you. And a needless, costly lesson to learn that safety is an everyday need.

Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly and safely; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday. Outfit yourself with a safety program now.

As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to emphasize and call attention to the safety precautions in this manual.



