

**400 SERIES
FOUR-ROW
CULTIVATORS (FOR
MODELS 50, 60, 70, A,
B, AND G TRACTORS)**



OPERATORS MANUAL

400 SERIES FOUR-ROW CULTIVATORS (FOR
MODELS 50, 60, 70, A, B, AND G TRACTORS)

OMN9755 (01JUL55) English

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ENGLISH



YOUR NEW CULTIVATOR

Behind your new cultivator is an organization that has designed and built farm implements for over 115 years. This cultivator was built in a John Deere Factory by experienced men, thus assuring the utmost in design, high-grade workmanship, and thorough inspection, so essential to the production of good cultivators.

High-quality materials, precision production methods, and accurately-controlled heat-treating assure maximum strength and long life for every part.

This manual has been carefully prepared and illustrated so that you may make the necessary adjustments for adapting your cultivator to work properly in all types of field cultivation. The adjustments such as row spacing and proper leveling of shovels or sweeps are fully covered in this manual. Study the manual carefully and make it your guide.

Occasionally your cultivator may need new parts to replace worn parts, or emergency service may be required that is not covered in this manual. If so, we suggest that you take advantage of the facilities offered by your John Deere Dealer; which assures you of genuine John Deere parts or other prompt "know-how" service in the field or shop.

If you will furnish your dealer the part number, description, and the information which should be recorded at the bottom of this page, when the cultivator is delivered, he can give you prompt and efficient service.

JOHN DEERE 400 SERIES CULTIVATORS

No. of Cultivator.....

Date of Purchase.....19...

(To be filled in by purchaser)

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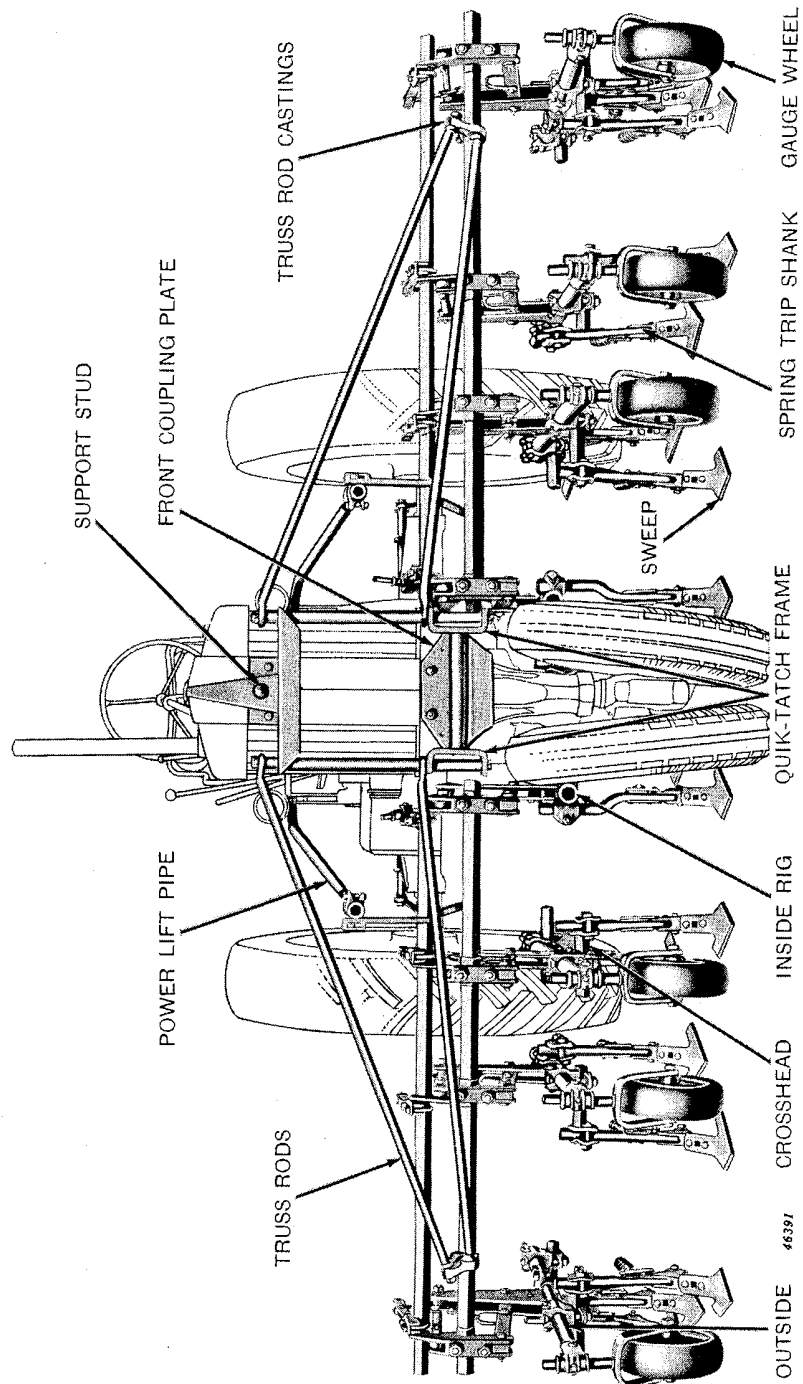


Figure 1—Front View—John Deere 402 Power Lift Row-Crop Cultivator

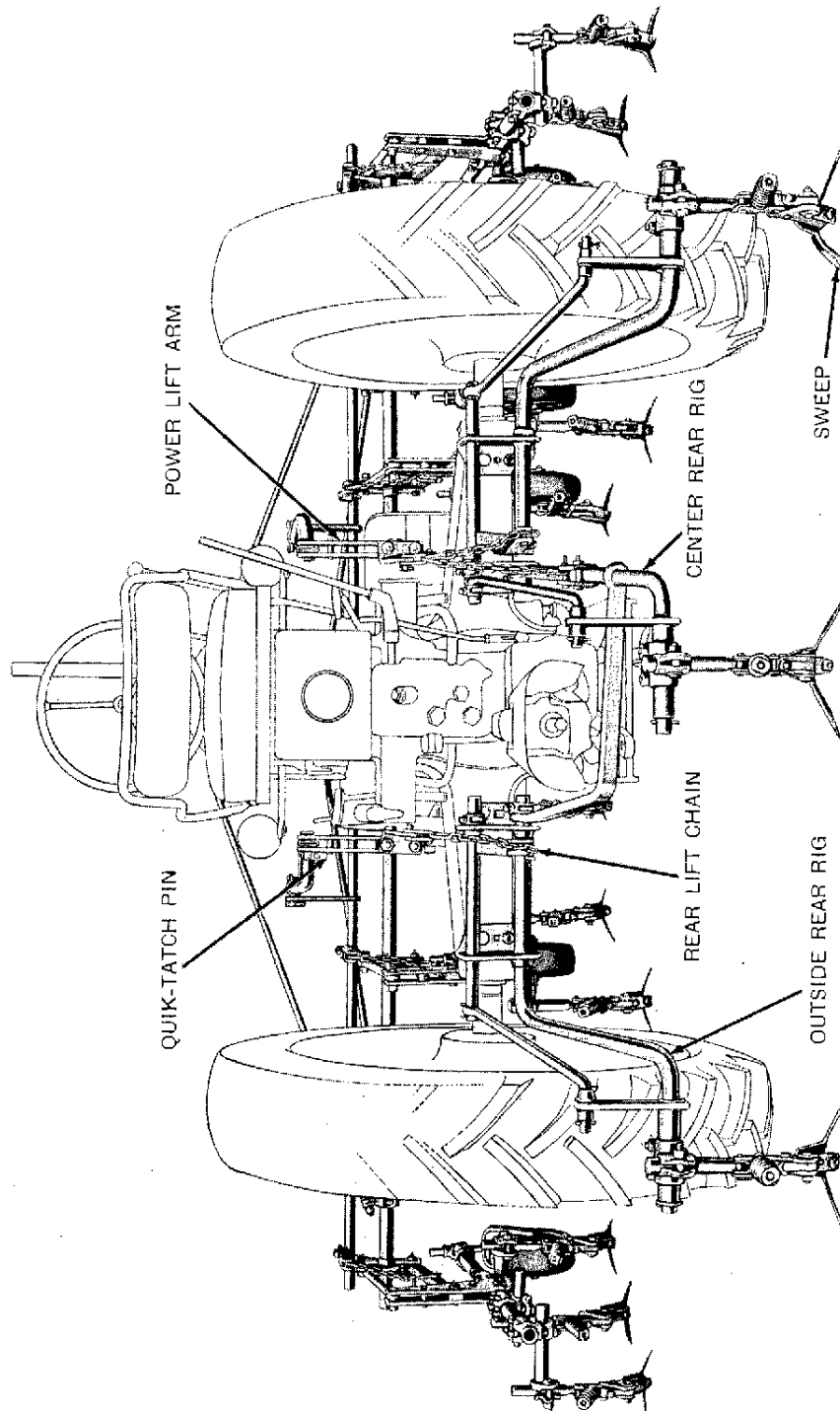


Figure 2—Rear View—John Deere 402 Power Lift Row-Crop Cultivator

SPECIFICATIONS

Description.

The 401 and 409 cultivators have 8 front rigs.

The 402, 403, 405, and 408 cultivators have 8 front rigs and 3 rear rigs.

The 411 cultivator has 6 front rigs.

Numbers and Types of Shanks

Number	Front	Rear	Total Number of Shovels or Sweeps	For Rows Spaced
401	21 Spring Trip—1-3/8" Shanks	No Rear Rig	21	36" to 42"
402	18 Spring Trip—1-3/8" Shanks	3 Spring Trip—1-3/8" Shanks	21	36" to 42"
403	18 Quick-Adjustable Spring Trip Shanks	3 Quick-Adjustable Spring Trip Shanks	21	36" to 42"
405	18 Double Spring Teeth	3 Quick-Adjustable Spring Trip Shanks	21	36" to 42"
408	18 Spring Trip—1-3/8" Shanks	6 Single Spring Teeth	24	36" to 42"
409	21 Single Spring Teeth	No Rear Rig	21	36" to 42"
411	21 Spring Trip—1-3/8" Shanks	No Rear Rig	21	28"

All cultivators are erected at the factory for 40" row spacing except the 411 Cultivator which is erected for 28" row spacing.

Location References.

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

NOTE: We do not recommend the No. 60 Series Rear Rig Section for use on Model "B" Tractors as the Rear Section overloads the power lift.



OPERATING AND ADJUSTING

Shovels and Sweeps.

Be sure shovels or sweeps are at a uniform height to insure even cultivation.

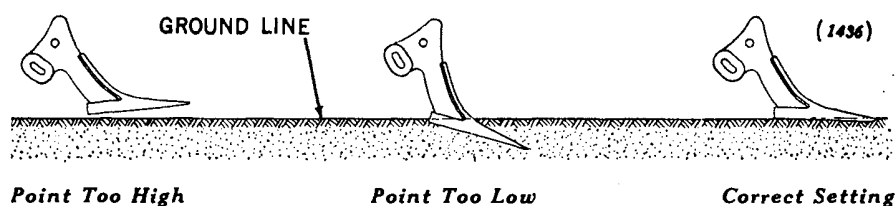


Figure 3—Setting Sweeps on Shanks

Leveling Shovels or Sweeps.

There is only a limited amount of vertical adjustment in the offset shank—therefore, first adjust the offset shank to the desired position and then **level all shovels or sweeps to the shovel or sweep on the offset shank.** All shovels or sweeps must be set in the correct setting in relation to the ground. (See Figure 3.)

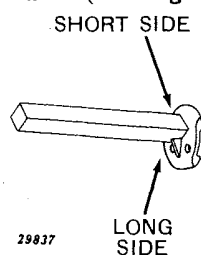


Figure 4

Caution: The clamp end of the crossarms is $\frac{3}{4}$ -inch longer on one side than on the other. (Note construction of crossheads.) The crosshead should ordinarily be installed in the clamp so that the longer side of clamp end is down, thus providing ample vertical adjustment to level shovels or sweeps. (See Figure 4.)

Power Lift Cultivators.

The front and rear rigs are raised and lowered by the hydraulic system on the tractor.

Depth Adjustment.

The following adjustments should be made so all rigs operate at the same level. The threaded adjustments "A," Figure 52, control the depth at which the two inside front rigs operate. The gauge wheels control the depth at which the six outside front rigs operate, adjust and lock with set screw collar. The lifting chains, Figure 2, control the depth of rear rigs by inserting bolt at lower end in proper chain link.

Caution: The position of the clamp collar at "B," Figure 52, determines the height of lift of the cultivator rigs. But care must

be used on making this adjustment to prevent breakage of lift parts, which might occur if collar is set too far back on pipe.

Tilting the Front Rigs.

Tilt the rigs up or down with slotted adjustment at "C," Figure 52.

Spring Trips.

Each spring trip should be tripped before starting cultivator to give assurance that they will function properly. The tension on the spring trips may be adjusted with nut "D," Figure 52, at the rear end of the spring. If additional adjustment is required, this may be procured with the set screw which is just below the spring. ("E," Figure 52.) However, this is a factory adjustment and rarely requires changing. One-half to one turn of the set screw makes a big difference in the action of the trip. To make the trip hold tighter, turn the set screw out; turn the set screw in to make the trip release more easily.

ATTACHING QUIK-TATCH CULTIVATOR

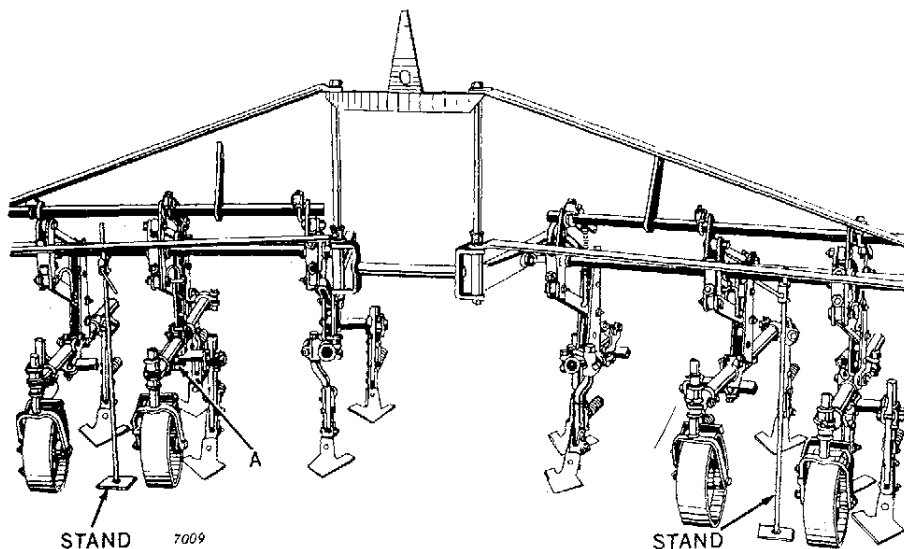


Figure 5—Quik-Tatch Cultivator on Stands

Front section of cultivator must be in position as shown in Figure 5, with support stands set at proper height. Drive tractor forward into cultivator as shown in Figure 6, until cultivator Quik-Tatch frame engages Quik-Tatch front coupling plate on tractor. Ease tractor forward slowly, causing the front sections to swing into place, then fasten with bolt as at "A," Figure 7.

Attach lifting pipes and remove stands. Stands should be carried on front sections of cultivator, permitting quick accessibility. If rear rigs are to be used, attach as explained under "Assembly," Page 51.

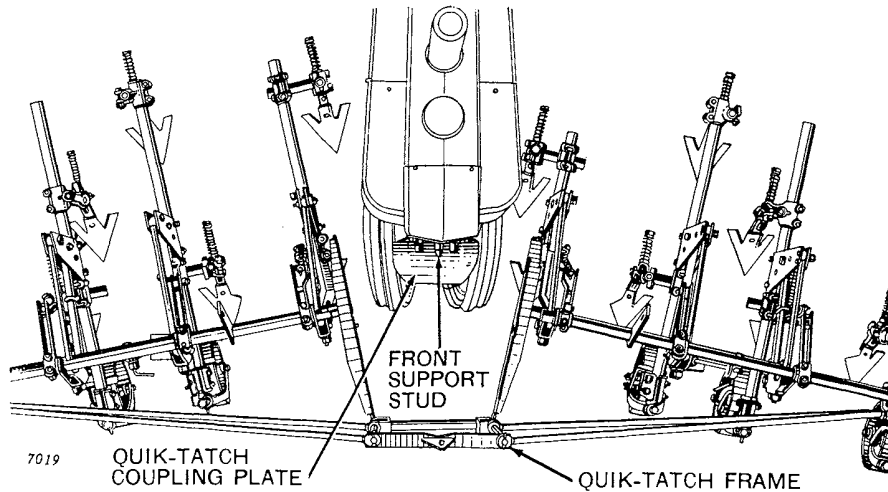


Figure 6—Driving Tractor into Quik-Tatch Cultivator

DETACHING CULTIVATOR

Cultivator with Quik-Tatch.

Lower cultivator so that shovels are resting on fairly level ground. Remove rear rigs by loosening large hexagon nuts on studs on the tractor. Also disconnect rear lift chains from arms on rockshaft.

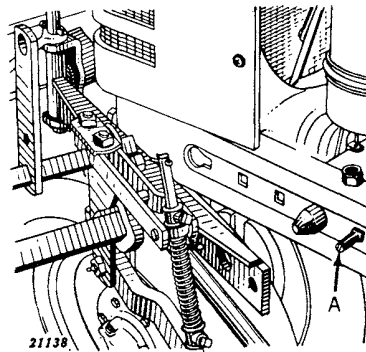


Figure 7—Attaching Quik-Tatch Frame to Tractor

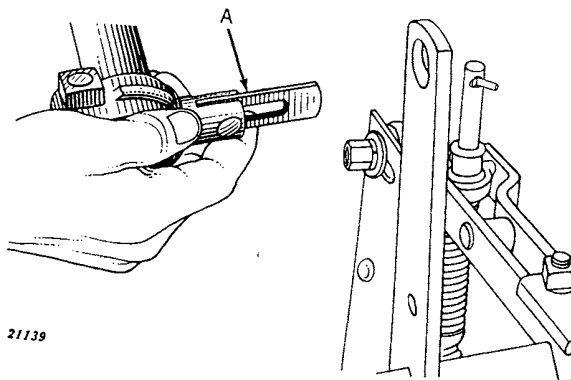


Figure 8—Lifting Pipe, Attaching or Detaching

Remove lifting pipes as shown in Figure 8. Slotted key "A" at front end of pipe and Quik-Tatch pin at rear end of pipe, Figure 2, permit easy removal.

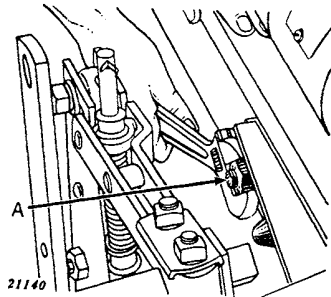


Figure 9—Detaching Cultivator with Quik-Tatch Frame

Take nut off bolt "A," Figure 9, on right and left sides of frame.

Place support stands in position on each side of main frame at an angle, the bottom of the stand slightly forward and clamp part resting firmly against the underside of the frame bar. Pull the frames away from the tractor and back the tractor away from the cultivator. (See Figure 10.)

Front coupling plate and support stud bar, Figure 10, may be left on tractor, unless the pedestal studs are needed for another attachment. The lift arms on rockshaft may also be left in place.

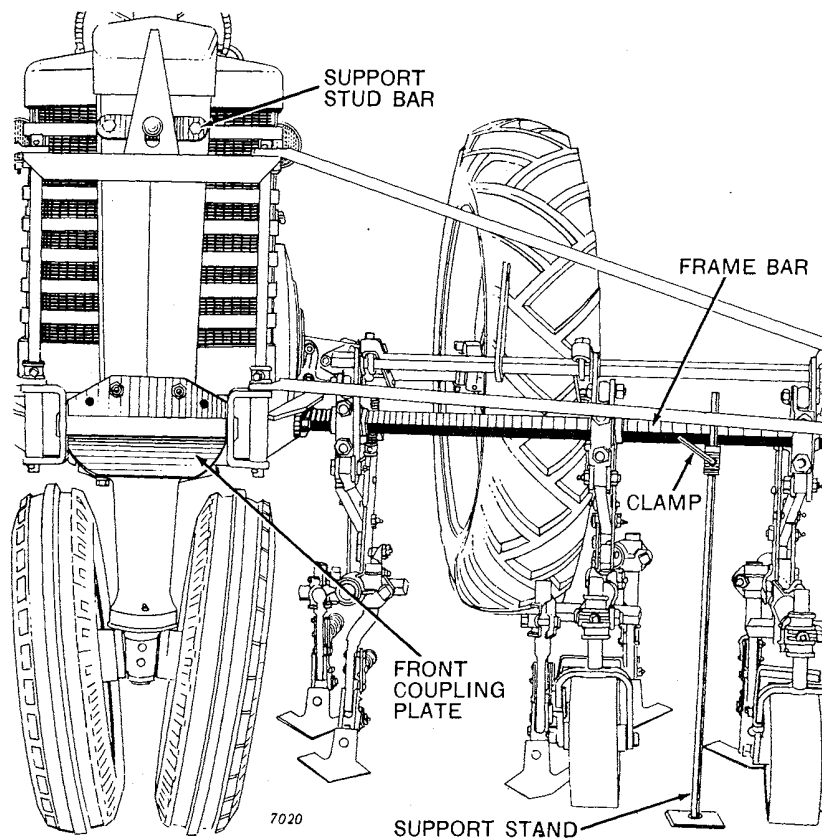


Figure 10—Removing Front Frame and Rigs

Cultivator Without Quik-Tatch.

Remove rear rigs and lifting pipes as explained under "Cultivator with Quik-Tatch" on Page 7. Detach the truss rods, Figures 44 and 45.

To remove the front rigs, it is necessary to take out only the four bolts which fasten the frame bars to the tractor. These bolts have hexagon nuts which fit the regular wrench furnished with the tractor. If tractor has buttonholes, simply loosen the nuts on the bolts, as shown in Figures 48 or 49.

Shields.

Shield arms may be attached either ahead of the frame bar, as shown in "B," Figure 58, or behind, depending on the fore-and-aft setting of the shield desired. The smooth side of the shield should be toward the shovels so dirt and trash will not catch on the straps of shields.

Shields may be adjusted for side play at "C," Figure 58. If a swinging shield is wanted, loosen bolt 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," Figure 58.

Adjust height of shields with chain.

Row Spacing.

The front rigs when shipped from factory are set on frame bars for 40-inch rows. See table on Page 4 for different row spacings for which rigs can be set.

NOTE: When moving rig hangers on frame bars for different width rows, be sure both sides of cultivator are set exactly alike.

Set front shovels in or out by adjusting crosshead at "A," Figure 5, to distance desired from row.

Rear rigs are adjustable in or out in the bearings. When making this change, shift the lifting brackets to conform. Shanks are also adjustable in or out on the rear rigs.

Pressure Springs.

Tension on the pressure springs on the rear rigs should be adjusted when the cultivator is in the ground in working position. Place only enough tension on these springs to keep the shovels down to work.

EXTRA EQUIPMENT

SPRING PRESSURE ATTACHMENT

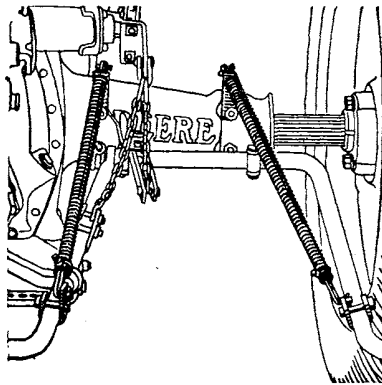


Figure 11—Spring Pressure Attachment

Spring Pressure Attachment consisting of one spring for each rear rig—for use in very hard ground (Figure 11).

SC205AN 12-INCH AND SC206AN 14-INCH DISK HILLERS

Disk Hillers are attachable to any cultivator in the 400 Series. They are used next to the rows in place of shovel shanks or spring teeth. One pair (one right-hand and one left-hand) required for each row (Figure 12).

When attached, the shank should be cranked forward or, in other words, the hub bearing should be ahead of the clamp which holds the shank at the upper end. This setting provides greater clearance and a larger range of adjustment.

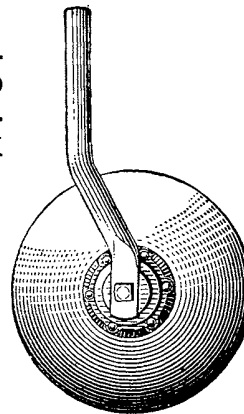


Figure 12—Disk Hiller

Additional lateral adjustment can be obtained by using crossheads for attaching the disk shanks at the front end of cultivator rig pipes.

The disks may be set for hilling (throwing dirt toward the plant row), or for barring off (throwing dirt away from the row).

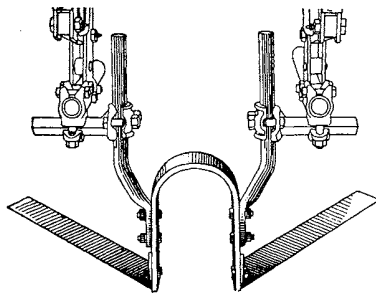


Figure 13—No. 1 Knife Attachment

KNIFE ATTACHMENT

The knife attachment is adaptable to any two- or four-row tractor cultivator rigs when ordered (Figure 13).

SC145AN SPREAD ARCH

This spread arch is adaptable to any two- or four-row row-crop cultivator rig. This attachment is desirable for use in throwing up beds with SC205AN and SC206AN Disk Hillers. It prevents rigs from spreading apart (Figure 14).

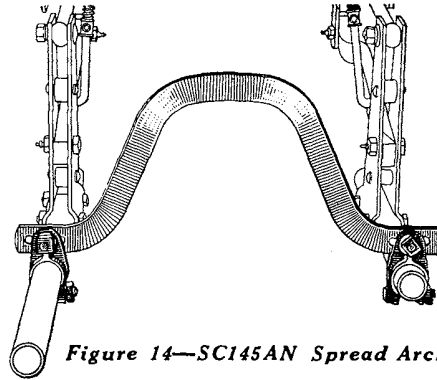


Figure 14—SC145AN Spread Arch

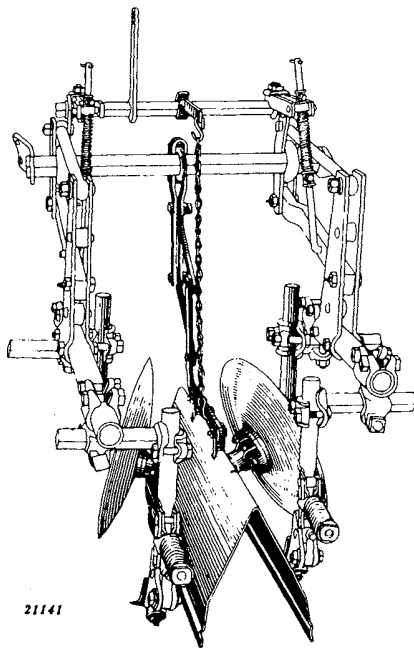


Figure 15—Listed Corn Cultivating Attachment

LISTED CORN CULTIVATING ATTACHMENT

This attachment is adaptable to any two- or four-row row-crop cultivator for listed corn (Figure 15).

SC150AN SPREAD BAR

This spread bar is used in connection with planting attachments (Figure 16).

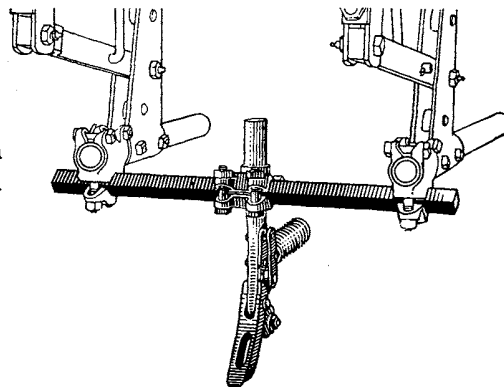


Figure 16—SC150AN Spread Bar

No. 1 CENTER ATTACHMENT

The No. 1 Center Attachment (Figure 17) is available for converting the row type cultivator to the 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.

No. 1 SPRING-TOOTH ATTACHMENT

This attachment is used for the cultivation of cotton beds in the southern territories (Figure 18).

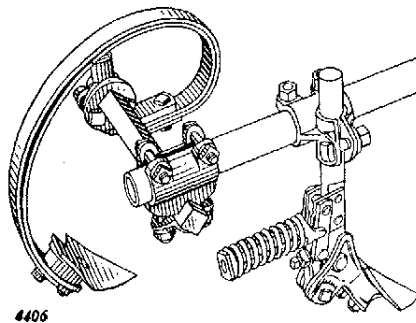


Figure 17—No. 1 Center Attachment

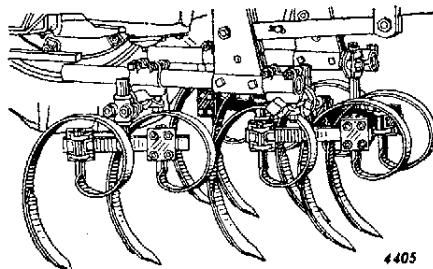


Figure 18—No. 1 Spring-Tooth Attachment

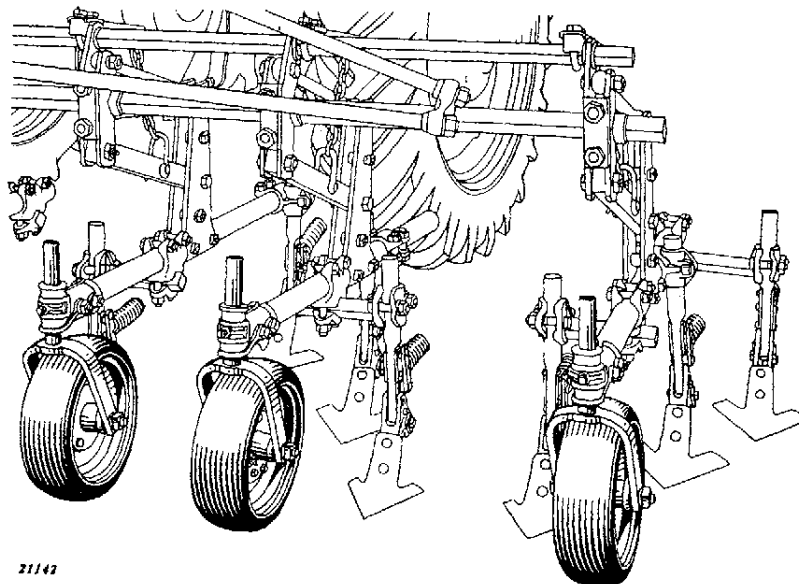
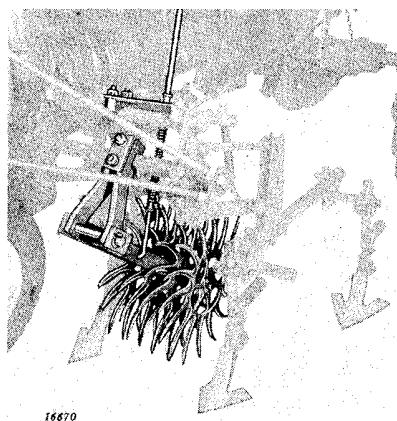
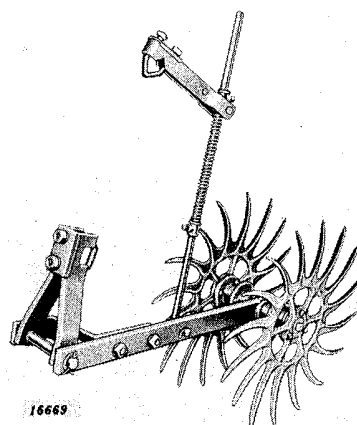


Figure 19—Semi-Pneumatic Rubber-Tired Gauge Wheels

ROTARY HOE ATTACHMENT

*Figure 20**Figure 21*

The Rotary Hoe Attachment speeds up cultivating, gets the weeds, breaks crust in the rows, reduces cultivating costs.

Note in Figure 20, how the attachment fits between the cultivator rigs, directly over the row. (The mate to this attachment is mounted on the right side of the tractor, but cannot be seen in the illustration.)

The attachment consists of four malleable 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 and rod, with pressure spring, complete the assembly. The two inside hoe wheels may be removed from the double hubs, by removing three bolts in each wheel, for cultivating after the crop is too high for safe use of the inside wheels.

Figure 21 shows the attachment equipped with spacers (which come with the attachment) in place of the two inside hoe wheels. The wheels act as shields to protect the plants, permitting the cultivator to be driven much faster than normally.

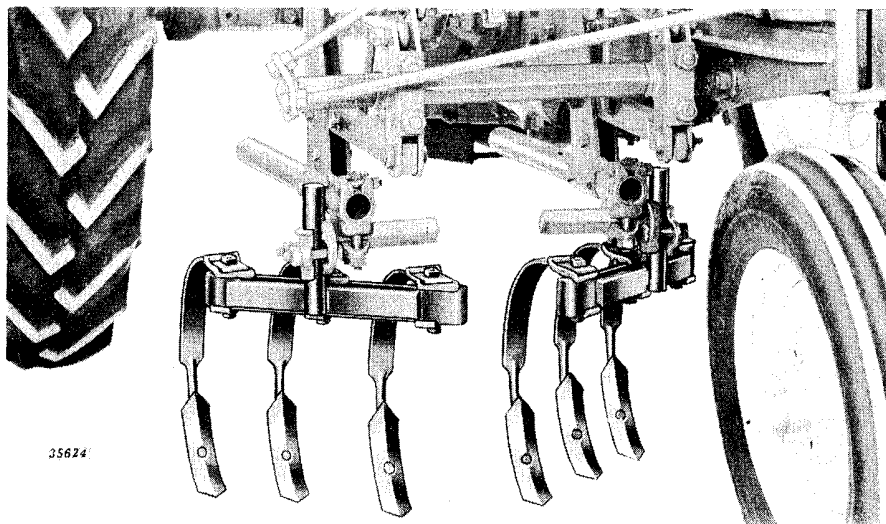
No. 21 SPRING-TOOTH ATTACHMENT

Figure 22—No. 21 Spring-Tooth Attachment

The No. 21 Spring-Tooth Attachment is designed to meet the requirements in southern territories. This attachment is considered desirable for use as a spring tooth and narrow shovel combination for cultivating row crops.

BE CAREFUL

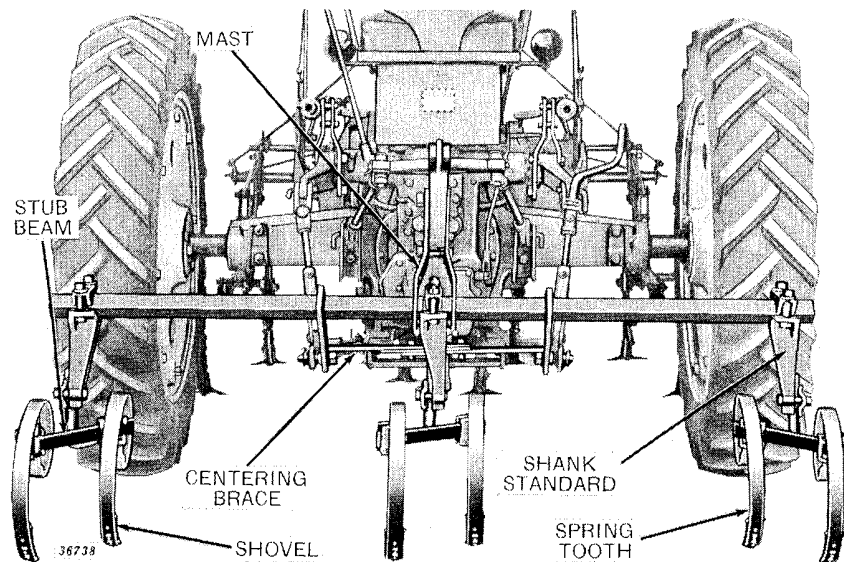
1. KEEP ALL SHIELDS IN PLACE.

2. STOP MACHINE TO ADJUST AND OIL.

3. WHEN MECHANISM BECOMES CLOGGED, DISCONNECT POWER BEFORE CLEANING.

4. KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER-DRIVEN PARTS.

5. KEEP OFF IMPLEMENT UNLESS SEAT OR PLATFORM IS PROVIDED. KEEP OTHERS OFF.

No. 50 SERIES REAR RIG SECTION*Figure 23—No. 58 Rear Rig Section*

The No. 50 Series Rear Rig Section includes 52, 53, and 58 sections. See page 39 for complete break-down of each section.

The No. 50 Series Rear Rig Section can be used with the No. 800 3-Point Hitch on John Deere Models "50," "60," and "70" Tractors. This provides a Quik-Tatch Rear Rig Section for Integral Row-Crop Cultivators.

The 50 Series Rear Rig Section may be used with a four-row cultivator in place of regular rear rig sections if the tractor is equipped with No. 800 3-Point Hitch.



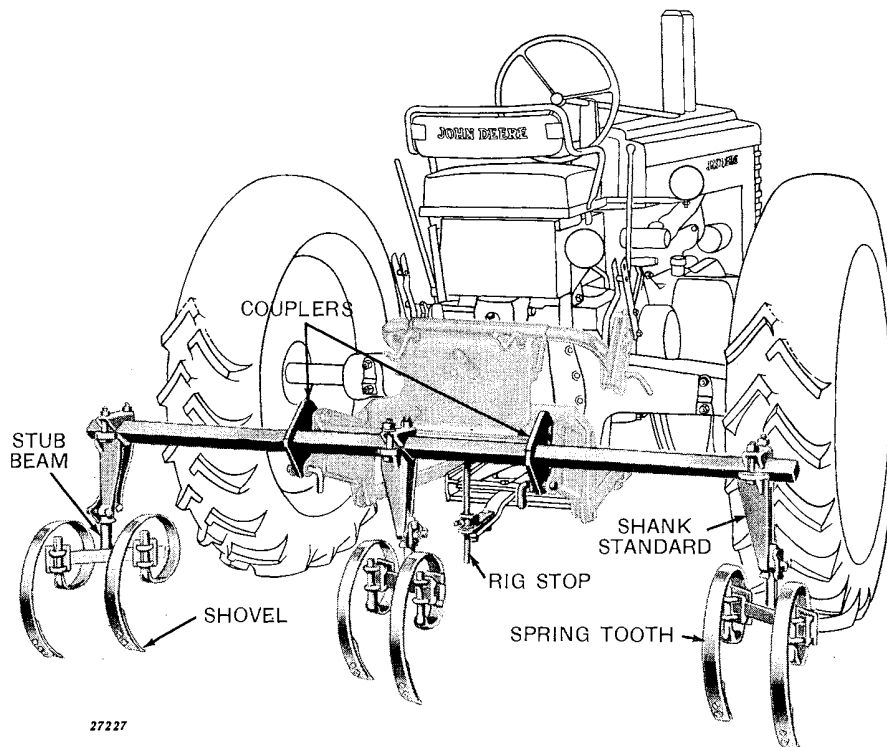
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NO. 60 SERIES REAR RIG SECTION

*Figure 24—No. 68 Rear Rig Section*

The No. 60 Series Rear Rig Sections includes 62, 63 and 68 sections. See page 40 for complete break-down of each section.

The No. 60 Series Rear Rig Section can be used with 2000 or 2100 Integral Tool Carriers which provide a Quik-Tatch Rear Rig Section for Integral Row-Crop Cultivators.

The No. 60 Series Rear Rig Section also may be used with a Four-Row cultivator in place of regular specified rear rig sections if the tractor is equipped with No. 2000 or No. 2100 Tool Carriers.

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