

**AT400 4-ROW  
AT600 6-ROW  
AT800 8-ROW  
ROW-CROP  
CULTIVATORS**



**JOHN DEERE**

**OPERATORS MANUAL**

**AT400 4-ROW AT600 6-ROW AT800  
8-ROW ROW-CROP CULTIVATORS**

OMN159066 J5 English

**OMN159066 J5**

LITHO IN THE U.S.A.  
ENGLISH



## To the purchaser



N 3211

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.

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.

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 AT400 FOUR-ROW, AT600 SIX-ROW AND AT800 EIGHT-ROW CULTIVATORS

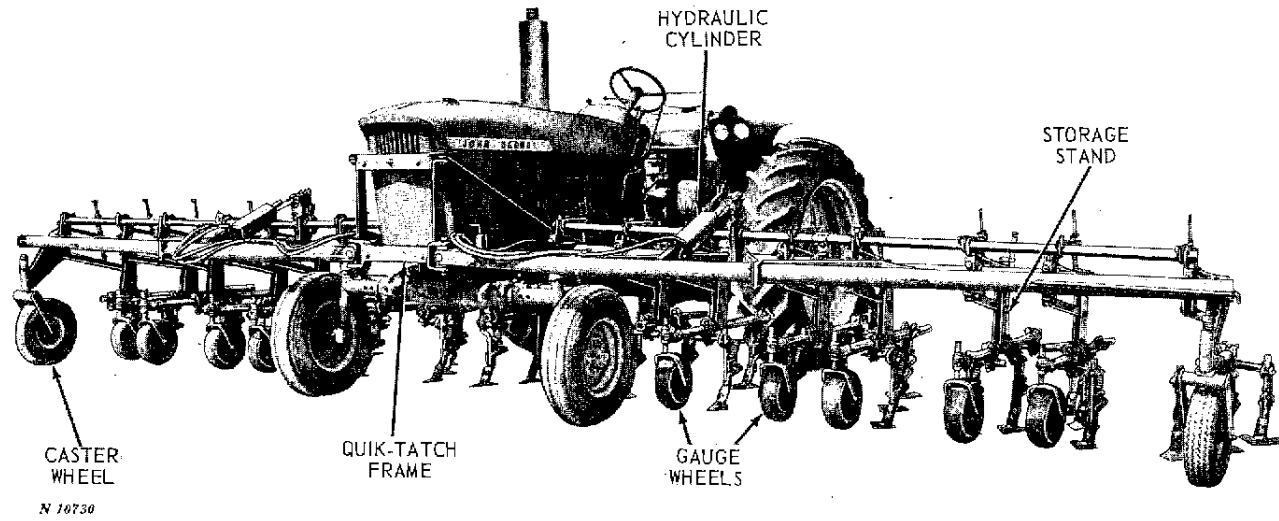
Cultivator Model . . . . .

Date Purchased . . . . . 19 . . . . .

*(To be filled in by Purchaser)*

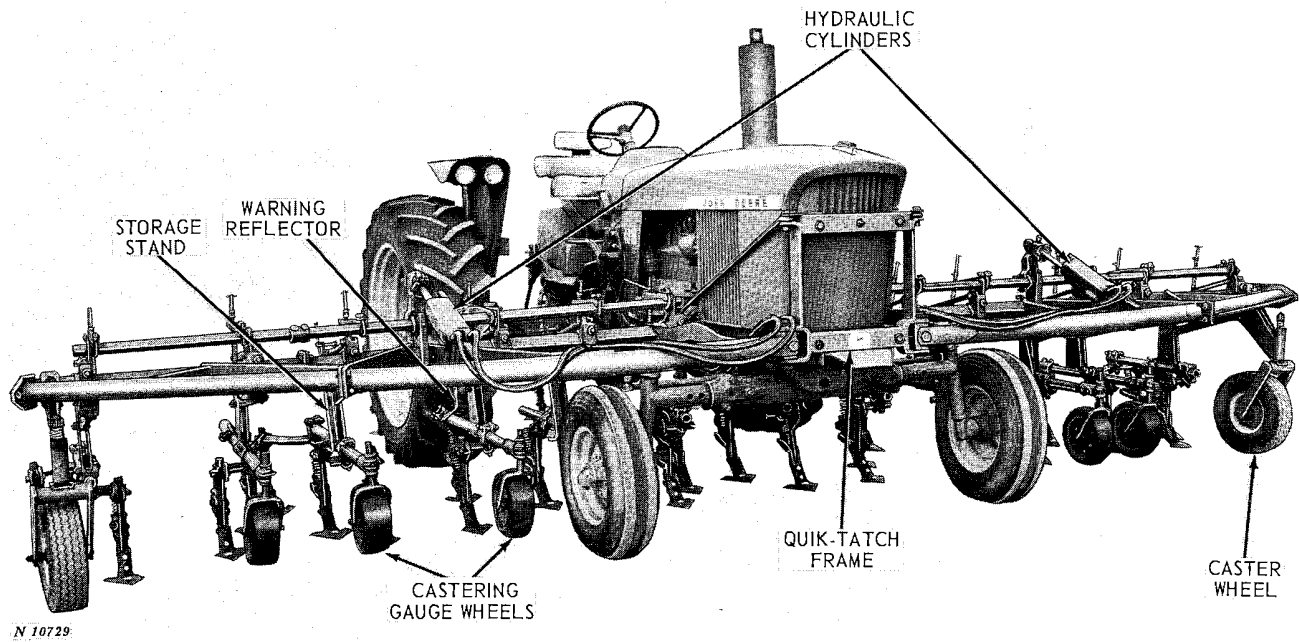
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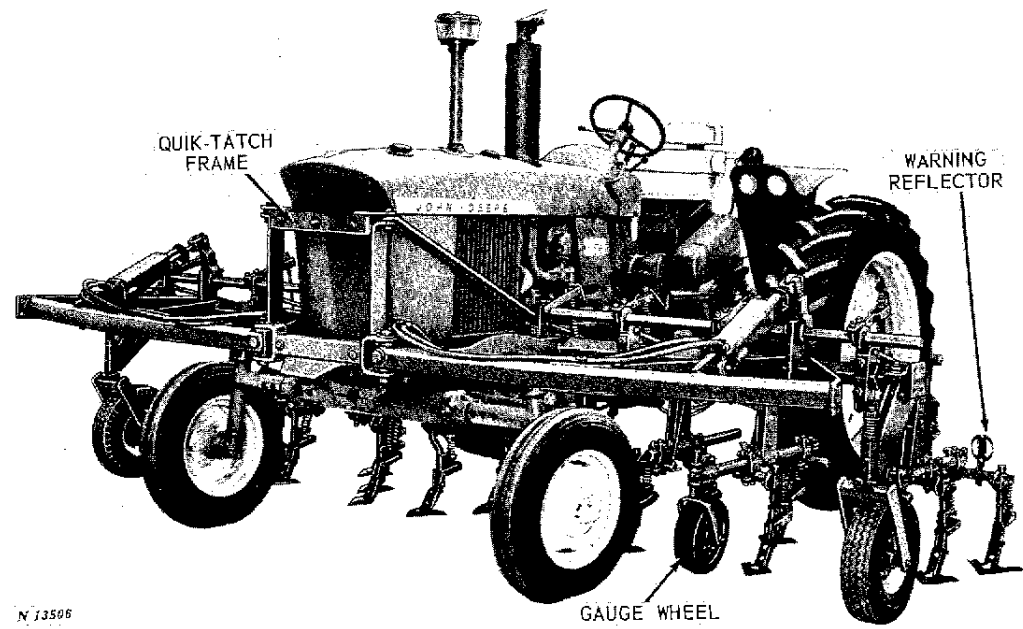
N 10730

*John Deere AT800 Cultivator on John Deere 4010 Tractor  
with Adjustable Tread Front Axle*



N 10729

*John Deere AT600 Cultivator on John Deere 4010 Tractor  
with Adjustable Tread Front Axle*



N 13506

*John Deere AT400 Cultivator on John Deere 3020 Tractor  
with Adjustable Tread Front Axle*

## Specifications

### Tractor

AT400 and AT600 Cultivators will mount on 3020, 4020, 3010, and 4010 Row-Crop Tractors.  
AT800 Cultivator will mount on 4020 and 4010 Row-Crop Tractors only.

The tractors must be equipped with two 3 x 8-inch remote hydraulic cylinders and dual remote cylinder control valves.

Tractors may be equipped with adjustable tread front axle, double front wheels (with or without Roll-O-Matic), or a single front wheel.

### Tire requirements

On all tractors, if Roll-O-Matic is used with 7.50 x 15, 6-ply front tires, the Roll-O-Matic must be the heavy-duty model.

If the tractor is equipped with a single front wheel, an 11.00 x 12, 12-ply front tire must be used.

3020 and 3010 Tractors for AT400 and AT600 Cultivators must be equipped with 6.00 x 14, 6-ply, 6.00 x 16, 6-ply or 7.50 x 15, 6-ply front tires.

4020 and 4010 Tractors for AT400 and AT600 Cultivators must be equipped with 6.00 x 16, 6-ply or 7.50 x 15, 6-ply front tires.

4020 and 4010 Tractors for AT800 Cultivators must be equipped with 7.50 x 15, 6-ply front tires.

### Row spacing

36 - 40-inch rows.

### Cultivator weight

AT400 — 2080 pounds (approximately)  
AT600 — 2825 pounds (approximately).  
AT800 — 3570 pounds (approximately).

### Width of cultivator and tractor in cultivating position (approximate).

AT400 — 14 feet, 2 inches  
AT600 — 20 feet, 10 inches.  
AT800 — 27 feet, 6 inches.

### Width of cultivator in transport position (AT600 and AT800 cultivators)

With Spring-Trip Shanks—14 feet, 10 inches.  
With Quick-Adjustable Shanks—14 feet, 5 inches.

### Length of cultivator and tractor in transport position (approximate).

AT600 — 23 feet.  
AT800 — 26 feet, 4 inches.

### Caster wheel tire size

5.70/5.00 x 8, 4-ply implement tire.

### Front rig equipment

Regular spring-trip shanks with universal sweeps.  
Quick-adjustable spring-trip shanks with universal sweeps.

Eighteen used on AT400 Cultivator  
Twenty-eight used on AT600 Cultivator

Thirty-eight used on AT800 Cultivator

## 6 Specifications

### Gauge wheels

Castering (regular)  
Rigid with plain bearing (optional)  
Rigid with anti-friction bearing (optional)

### Rear rigs

Various types are available.

#### 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

#### With Drawbar Mounted Center Rig

120A and 120B Series Parallel Lift Type  
140A and 140B Series Straight Lift Type

The "B" Series (except 50B Series) or 50A Series Rear Rigs are recommended for tractors equipped with cane and rice tires.

### Shank equipment for rear rigs

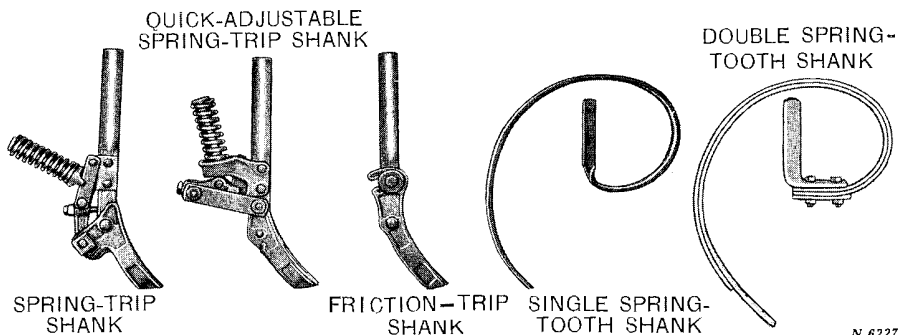
Regular Spring-Trip Shanks  
Long Regular Spring-Trip Shanks (57A Rear Rig only)  
Quick-Adjustable Spring-Trip Shanks  
Long Quick-Adjustable Spring-Trip Shanks (58A Rear Rig only)  
Single Spring-Tooth Shanks  
Friction-Trip Shanks  
Double Spring-Tooth Shanks (56A Rear Rig only)

### Sweeps and shovels

A wide variety of types and sizes available.

### Special equipment

Rig Mounted Shields  
Rig Bar  
Two Castering or Rigid Gauge Wheels (can be used only when cultivator is on a double or single front wheel tractor)  
Rotary Hoe  
Rear Rig Stop  
18 Unit Planter  
Weeding Knife Shanks  
Storage Support Stands  
No. 4 Minimum Tillage Attachment (38 or 40-inch rows only)  
No. 6 Minimum Tillage Attachment (38 or 40-inch rows only)

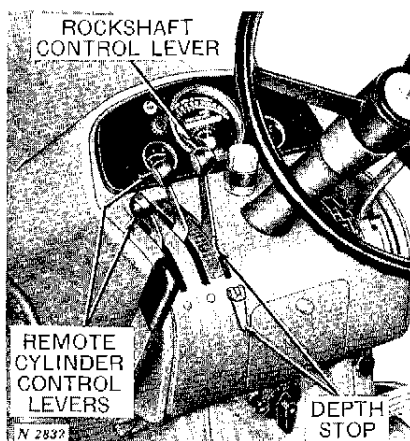


(Specifications and design subject to change without notice.)



## Operation

### Controls



The front rigs are raised and lowered by the remote cylinder control levers on the tractor. The rear rigs of the cultivator are raised and lowered by the rockshaft control lever.

The front rigs of the cultivator will raise when the levers are pushed forward if the hose on the stop rod side of the cylinder is connected to the left-hand or lower receptacle of the breakaway or front couplers. The gauge wheels control working depth of front rigs.

Adjust the depth stop on the rockshaft control lever quadrant to control the working depth of the rear rigs.

See your tractor operator's manual for complete tractor control instructions.

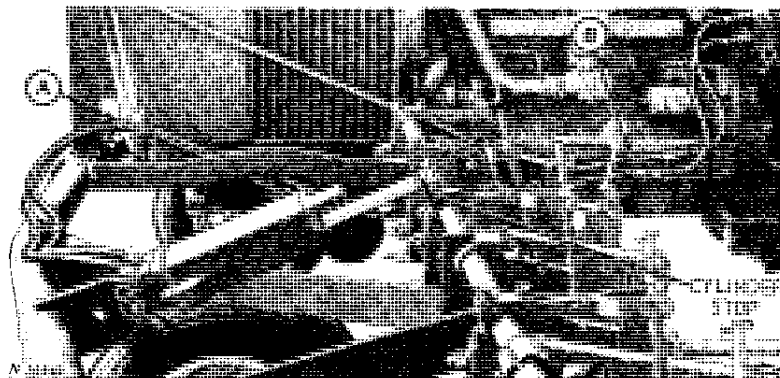
### Hydraulic cylinder and hoses

The cultivator rigs are raised and lowered by a hydraulic cylinder on each side of the cultivator. Adjust cylinder stop for maximum cylinder stroke.

Attach hydraulic hoses firmly in all the hose clamps. Be sure hose is fairly tight between attaching points "A" and "B" to avoid interference between the hoses and frame parts when the cultivator is swung from transport position into working position.

### Removing air from cylinder and hoses

Due to the addition of the extra hoses, air may become trapped in the hose line. If necessary, bleed air from cylinder and hoses according to instructions in tractor manual.



### Gauge wheels

The gauge wheels determine the depth of cultivation. Set all gauge wheels to operate at the same depth.

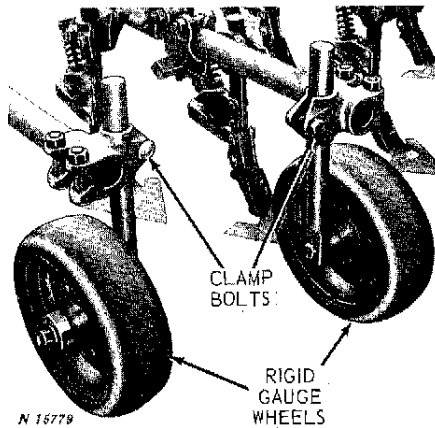
Normally set the gauge wheels 1 to 2 inches above the ground with the cultivator sweeps or shovels resting on the ground.

However, if the cultivator is working in soft or sandy soil, set the gauge wheels 1/2-inch off the ground. This should provide sufficient penetration.

#### Rigid gauge wheels

Adjust the rigid gauge wheels by loosening the clamp bolt and moving the shank to the desired position.

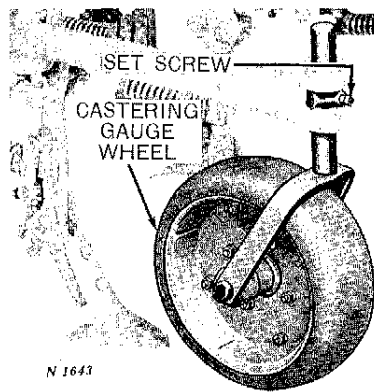
The rigid gauge wheels should be attached so that the wheels are under the rig pipes and the shanks are positioned to the right and left of the rig as shown below.



*Rigid Gauge Wheels with Plain Bearings*

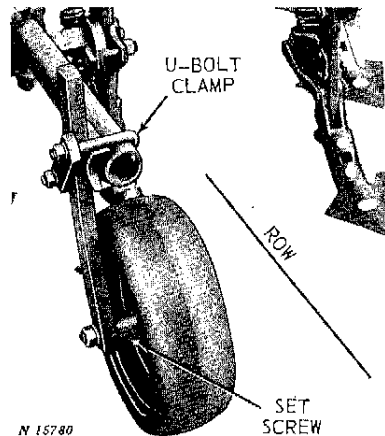
On gauge wheel with anti-friction bearing keep set screw and set screw jam nut tight.

#### Castering gauge wheels



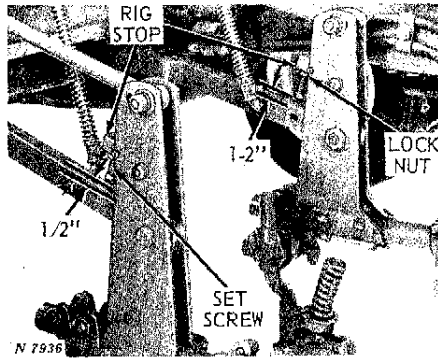
*Castering Gauge Wheel*

To set the castering gauge wheels, loosen the set screw and raise or lower the gauge wheels to the desired position.



*Rigid Gauge Wheel with Anti-Friction Bearing*

### Rig depth stops



There are rig depth stops in place of gauge wheels on the four inside rigs and on the outside rig at each end of the cultivator. 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. This distance controls the depth of cultivation. For a greater depth, 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.

If a gauge wheel is used on the number 3 and 4 rigs, remove the set screw from the rig stop.

### Storage stands

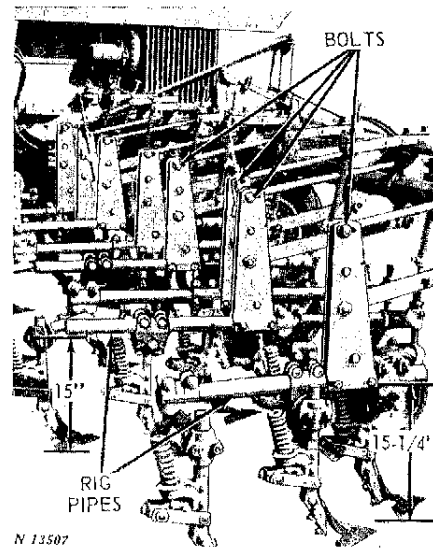


Make sure all the storage stands are secured behind the clip against

the rig coupling plates before raising or operating the cultivator. The nut on the clip should be tight.

If this precaution is not observed, the cultivator may be damaged when it is raised.

### Tilting rig pipes



Each rig is adjustable. Loosen bolt and adjust rigs so rig pipes are about 1/4-inch higher in front. The rigs will then run level while cultivating.

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

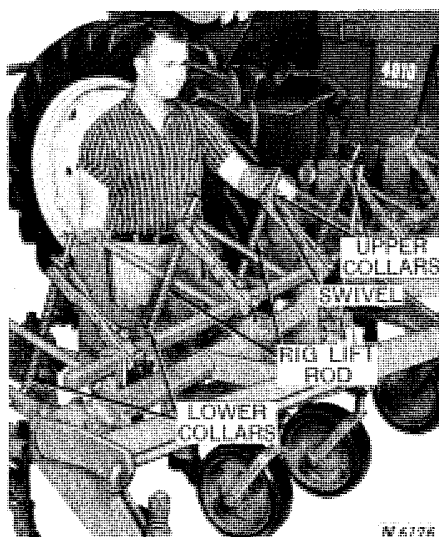
### Height of lift of front rigs

The height of lift of the front rigs is controlled mainly by the location of the upper collars on the rig lift rods. To check the height of lift, raise the cultivator rigs by using the tractor hydraulic system.

## 10 Operation

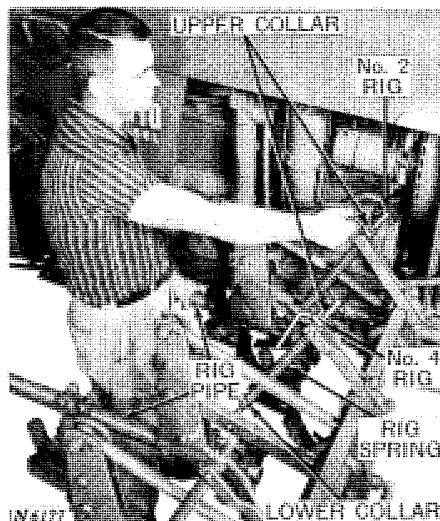
When raising the cultivator for the first time, raise it slowly making sure the rig pipes do not hit the lower rig links and the shanks do not strike the underside of the tractor.

If the cultivator does hit at either one of these places, loosen these upper collars on the rig lift rods and then continue to raise the cultivator to its fully raised position.



If after the cultivator is fully raised, additional lift is needed and obtainable, raise the rig pipes that are controlled by gauge wheels by hand. Raise them as high as possible and set the upper collars down next to the swivels as shown above.

On the number 3 rig (left-hand side) and 4 rig (right-hand side) and the outside rigs that are not controlled by gauge wheels, raise the rigs by hand until the rig pipes are slightly higher than the rig pipes with gauge wheels. Secure the upper collars down next to the swivels.



On the inside rigs (number 1 on left-hand side and 2 on right-hand side), raise the rig pipes until the shanks strike the tractor and then set the upper collars in place as shown.

Once these upper collars are set, be careful when changing this setting. Changing this setting could cause the cultivator to damage the tractor when the cultivator is raised or it could cause the cultivator not to raise high enough.

### Adjusting down pressure on front rigs

To increase down pressure on the front rig sweeps or shovels, raise the cultivator. Then raise the lower collars on the rig lift rods to increase spring tension and force the shovels downward. (If no down pressure is desired, loosen the collars, let them slide to the bottom of the rod, and tighten set screw.)

Down pressure is desirable when soil conditions do not allow proper sweep penetration.

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