

AT20, AT40 and AT630 Row-Crop Cultivators



OPERATORS MANUAL AT20, AT40 and AT630 Row-Crop Cultivators

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ENGLISH



TO THE PURCHASER

This operator's manual contains information regarding operation and adjustments so that you may obtain maximum service and satisfaction from your new cultivator.



Study this manual carefully and keep it handy in a safe place for future reference.

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

If you should find that you require information not covered in this manual, consult your John Deere dealer. He will be glad to answer any question that may arise regarding the operation of your cultivator. Your John Deere dealer has trained mechanics who are kept informed of the best service methods. They will render you prompt service when needed.

Occasionally, your cultivator may need new parts to replace worn parts. If you will furnish your dealer the description and the information which should be recorded below when the cultivator is delivered, he can give you prompt and efficient parts service.

JOHN DEERE AT20, AT40, OR AT630 CULTIVATOR

Model

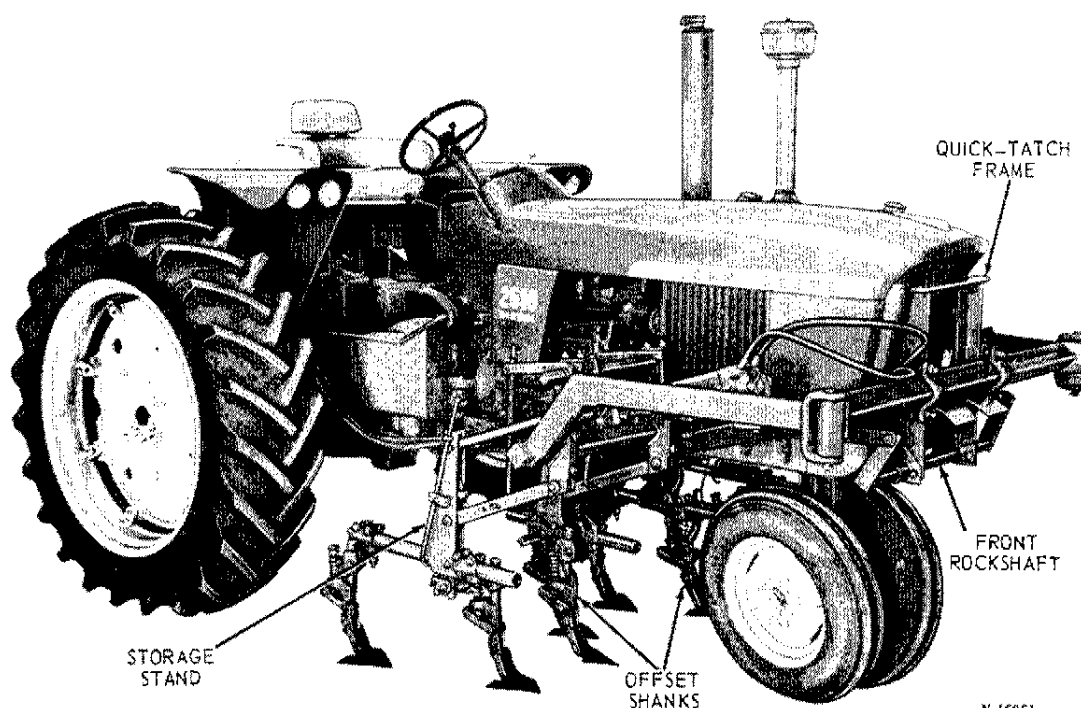
Date Purchased 19....

(To be filled in by purchaser)



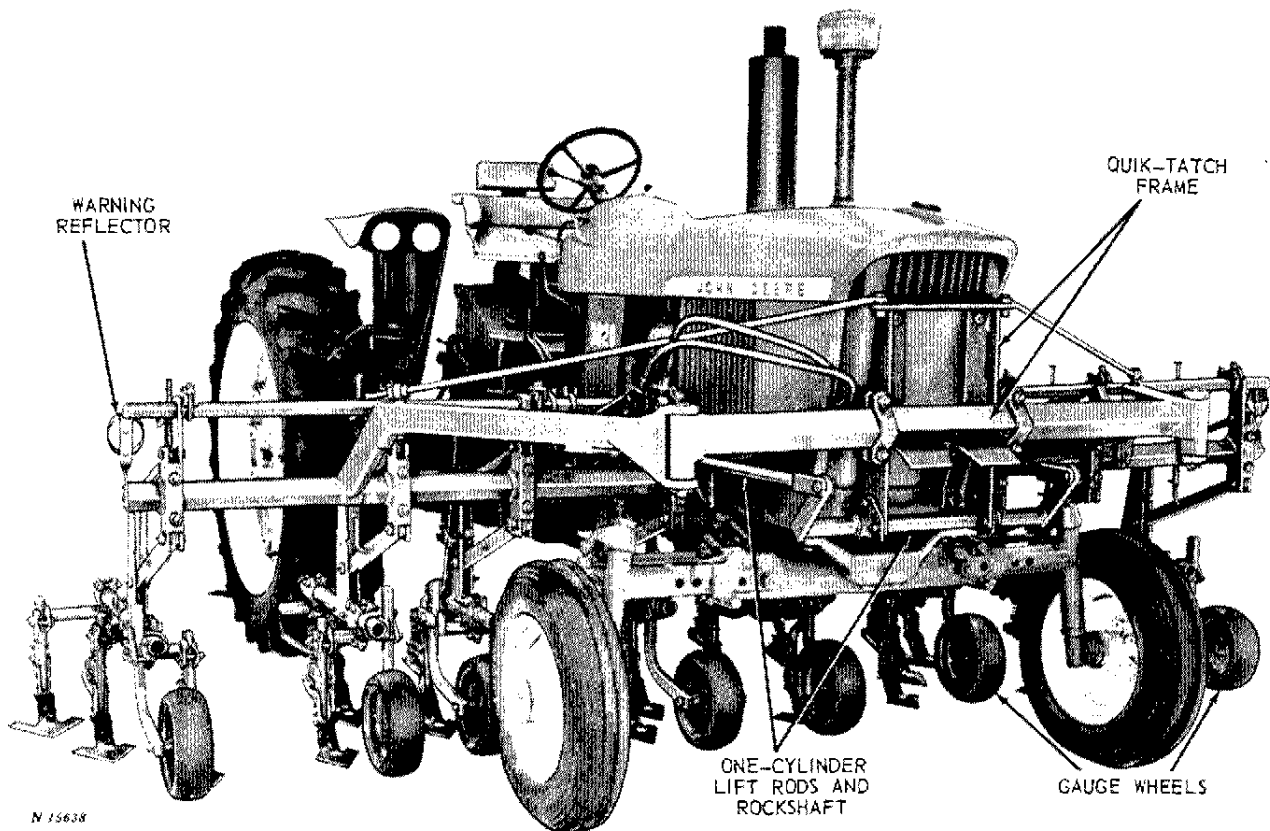
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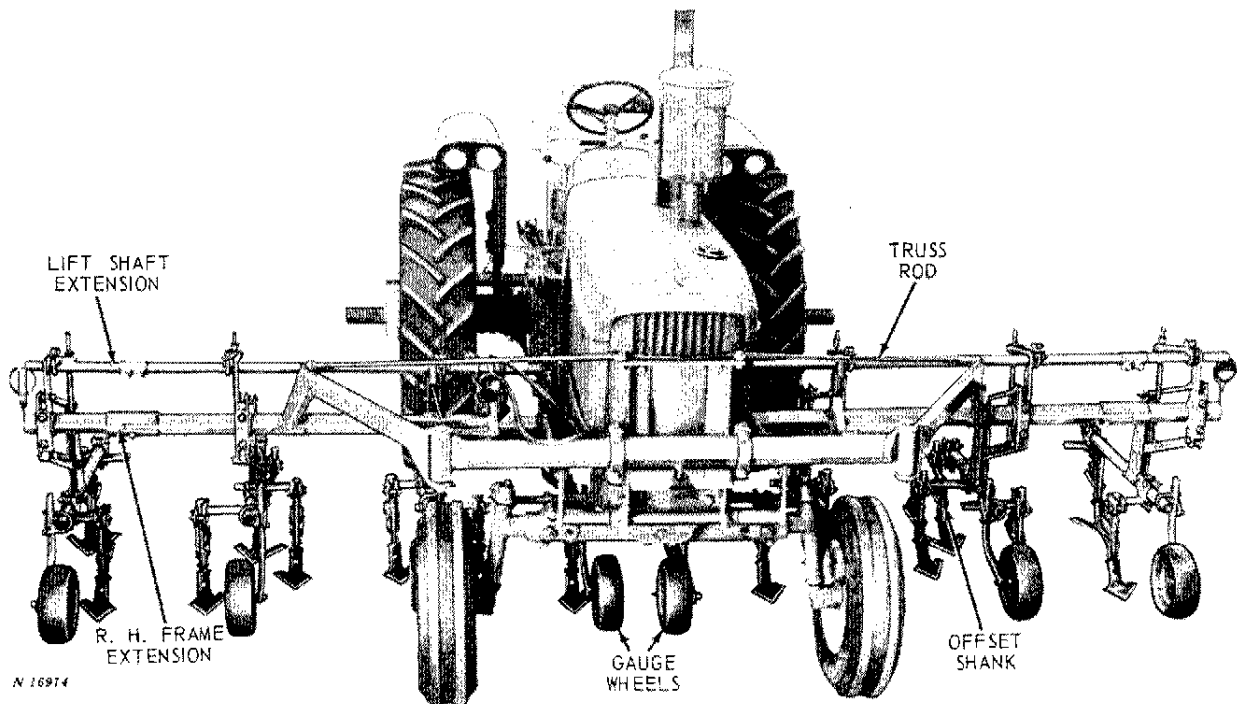


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John Deere AT20 Cultivator on 2510 Tractor



John Deere AT40 Cultivator on 3020 Row-Crop Tractor



John Deere AT630 Cultivator on 4020 Row-Crop Tractor



SPECIFICATIONS

CULTIVATOR MODELS

AT20R, AT40R, and AT630R - Operated by lift pipes from tractor rear rockshaft.

AT20F, AT40F, and AT630F - Operated by one or two remote hydraulic cylinders mounted on the cultivator frame.

TRACTORS

Both F and R Model Cultivators can be used on John Deere 2510, 3010, 3020, 4010 and 4020 Row-Crop Tractors with single or double front wheels or adjustable-tread front axle.

Only F Model Cultivators can be used on John Deere 3010 and 3020 Row-Crop Utility Tractors with adjustable-tread front axle (50 to 79 inches) and long wheel base (92-3/4 inches) and upright muffler.

Cultivators cannot be mounted on 3010 or 3020 Row-Crop Utility Tractor with a fixed-tread front axle, short wheel base (81-1/2 inches) or rear muffler and tail pipe.

ROW SPACING

AT20 and AT40 Adjustable for 36- to 42-inch rows.

AT630 Adjustable for 28- or 30-inch rows.

CULTIVATOR WEIGHT

AT20 - 980 pounds (approximately)

AT40 - 1700 pounds (approximately)

AT630 - 1550 pounds (approximately)

CULTIVATOR WIDTH

AT20 - 6 feet, 8 inches

AT40 - 14 feet, 2 inches

AT630 - 18 feet, 6 inches

GAUGE WHEELS

Anti-friction rigid type. Two can be used on AT20 Cultivator for tractors with adjustable tread front axle or four can be used for tractors with single or dual front wheels. Four gauge wheels are regular on AT40 and AT630 Cultivators. Two additional gauge wheels can be used for tractors with dual or single front wheels and four additional gauge wheels can be used for tractors with adjustable tread front axle.

FRONT RIG EQUIPMENT

Regular Spring-Trip Shanks with Universal Sweeps

Quick-Adjustable Spring-Trip Shanks with Universal Sweeps.

Friction-Trip Shanks with Universal Sweeps
Single Spring-Tooth Shanks with Double-Pointed Shovels

Heavy-Duty Single Spring-Tooth Shanks with Single-Pointed Shovels

Double Spring-Tooth Shanks with Single-Pointed Shovels

Heavy-Duty Double Spring-Tooth Shanks with Single-Pointed Shovels

REAR RIG EQUIPMENT

250A Series for tractor 3-point hitch

250B Series for tractor 3-point hitch

NOTE: Only 250A Series (except 257A and 285A) and 250B Series rear rigs can be used on 3010 or 3020 Row-Crop Utility Tractor.

AXLE-MOUNTED TYPE 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

AXLE MOUNTED 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

AXLE MOUNTED TYPE WITHOUT CENTERING

170A and 170B Series Parallel Lift Type
180A and 180B Series Straight Lift Type
190A Series Offset Beam Type

*NOTE: Only "B" Series (except 250B Series)
and 250A Series rear rigs are recommended for
use on tractors equipped with cane and rice tires.*

REAR RIG SHANK EQUIPMENT

Regular Spring-Trip Shanks
Long Regular Spring-Trip Shanks
Quick-Adjustable Spring-Trip Shanks
Long Quick-Adjustable Spring-Trip Shanks
Friction-Trip Shanks
Single Spring-Tooth Shanks
Double Spring-Tooth Shanks

SWEEPS AND SHOVELS

A wide variety of types and sizes available.
See pages 34 and 35.

SPECIAL EQUIPMENT

Rig-Mounted Shields
Hooded Shields
Shield Arm Extensions (used with No. 60 Narrow
Row Attachment)
Weeding Knife Shanks
Spread Bar
Disk Hillers - 12, 14 and 16-Inch Sizes
Gauge Wheels
No. 1 Center Attachment (For AT20 and AT40
Cultivator)
No. 3C Rotary Hoe Attachment
No. 4 Minimum Tillage Attachment (For AT40
Cultivator)
No. 10 Listed Crop Attachment (For AT20 and
AT40 Cultivator)
*No. 13 Front Rig Attachment
No. 16 Disk Hiller Attachment (For AT20 and
AT40 Cultivator)
No. 21 Spring-Tooth Attachment (For AT20 and
AT40 Cultivator)
No. 60 Narrow Row Attachment (For AT40 Cul-
tivator)
AB690E Two-Row Bean Harvester Attachment
(For AT20 Cultivator)
AB690F Four-Row Bean Harvester Attachment
(For AT20 and AT40 Cultivator)
AB690G Six-Row Bean Harvester Attachment
(For AT40 and AT630 Cultivator)
AB690H Eight-Row Bean Harvester Attachment
(For AT630 Cultivator)
96E Two-Row Peanut Digger Attachment (For
AT20 Cultivator)

Rear Rig Extra Shank Attachment (250A Series
Rear Rigs Only - except 257A and 258A)

No. 12 Rear Rig Gauge Wheel Attachment
(250A Series Rear Rigs Only)

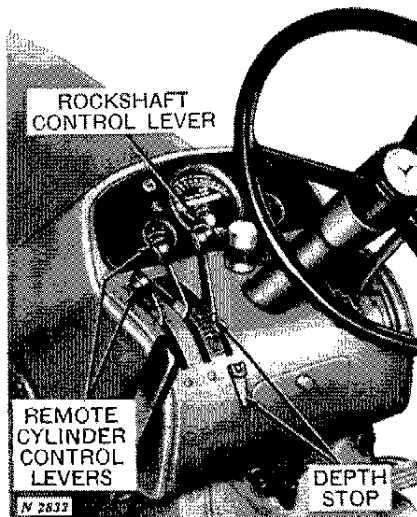
*Cannot be used if cultivator is mounted on
3010 or 3020 Row-Crop Utility Tractor.

(Specifications and design subject to change without notice.)



OPERATION

CONTROLS



AT20F, AT40F AND AT630F CULTIVATOR

Front rigs are controlled by the remote cylinder operating levers. If cultivator is equipped with one remote cylinder, one lever operates rigs on both sides of tractor. If cultivator has two cylinders, the left-hand remote cylinder lever controls rigs on left side of tractor, the right-hand remote cylinder lever controls rigs on right side of tractor.

Push lever forward to raise rigs; pull lever back to lower rigs. Reverse hoses at outlets on tractor if rigs do not respond correctly.

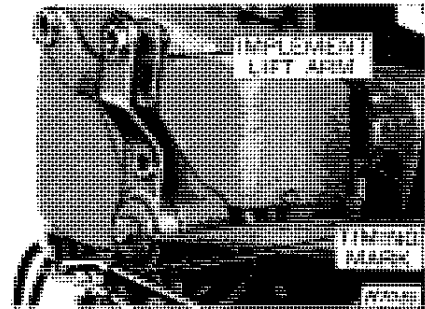
Rear rigs are controlled by the rockshaft control lever.

AT20R, AT40R AND AT630R CULTIVATOR

Both front and rear rigs are controlled by the rockshaft control lever. Push the lever forward to raise the cultivator; pull the lever back to lower the cultivator.

IMPORTANT: Do not attempt to raise cultivator unless storage stands are fastened to rig coupling plates. See page 6.

TIMING IMPLEMENT LIFT ARM (AT20R, AT40R and AT630R Cultivator Only)



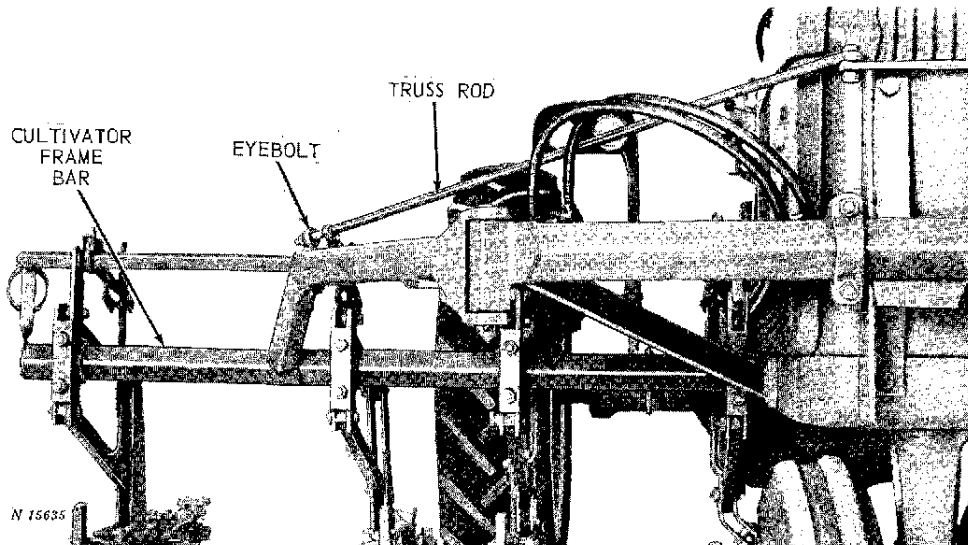
The implement lift arms, attached to tractor rear rockshaft to operate the cultivator, must be properly timed. If arms are not timed, front and rear rigs may not enter the ground at the same time or penetrate to the same depth.

To time arms, align the timing mark on the arms with the timing marks on the rear rockshaft.

TRACTOR TIRE INFLATION AND BALLAST

Refer to your tractor operator's manual for proper tire inflation pressures and rear wheel ballast with front-mounted implement.

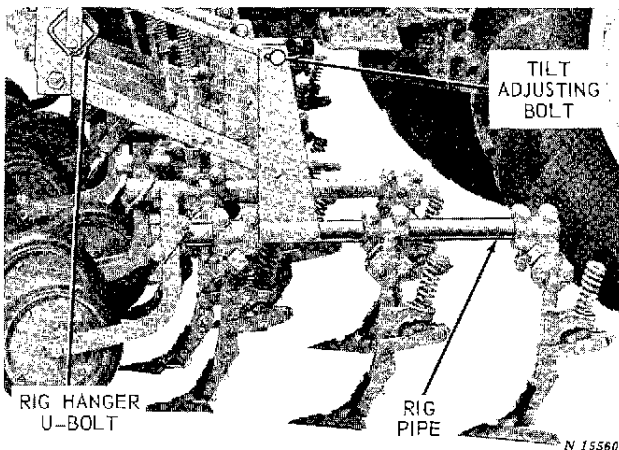
LEVELING CULTIVATOR FRAME BARS (AT40 AND AT630 CULTIVATORS)



For level cultivation, the cultivator frame bars should be one-inch higher at the outer ends than at the tractor. Check frame bar angle by sighting under frame bar and tractor rear axle or by measuring distance between frame bar and ground with tractor and cultivator on a level surface.

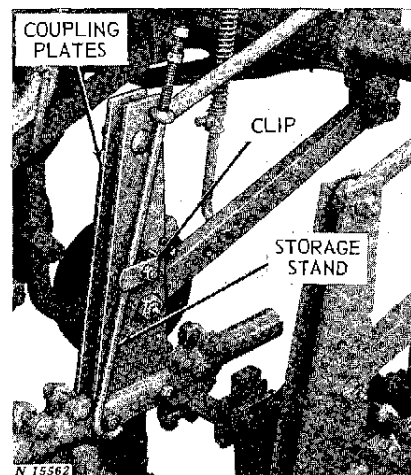
Adjust frame bar angle by tightening nuts against eyebolt on threaded end of truss rod.

RIG TILT

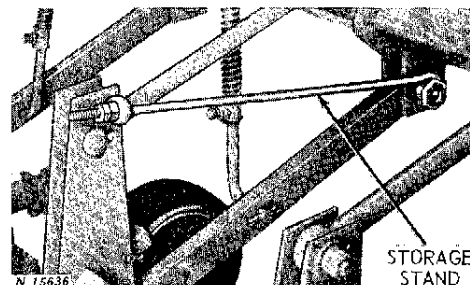


Rig pipes should be set 1/4-inch higher at the front than at the rear so they will run level when cultivating. Loosen the top bolt in the rig coupling plates to tilt rig pipes. Sight across rig pipes from side of cultivator to check level and tilt, then tighten the top bolts. If some rig pipes are high or low, check the rig hanger U-bolts. They should fit square on the frame bar.

STORAGE STANDS

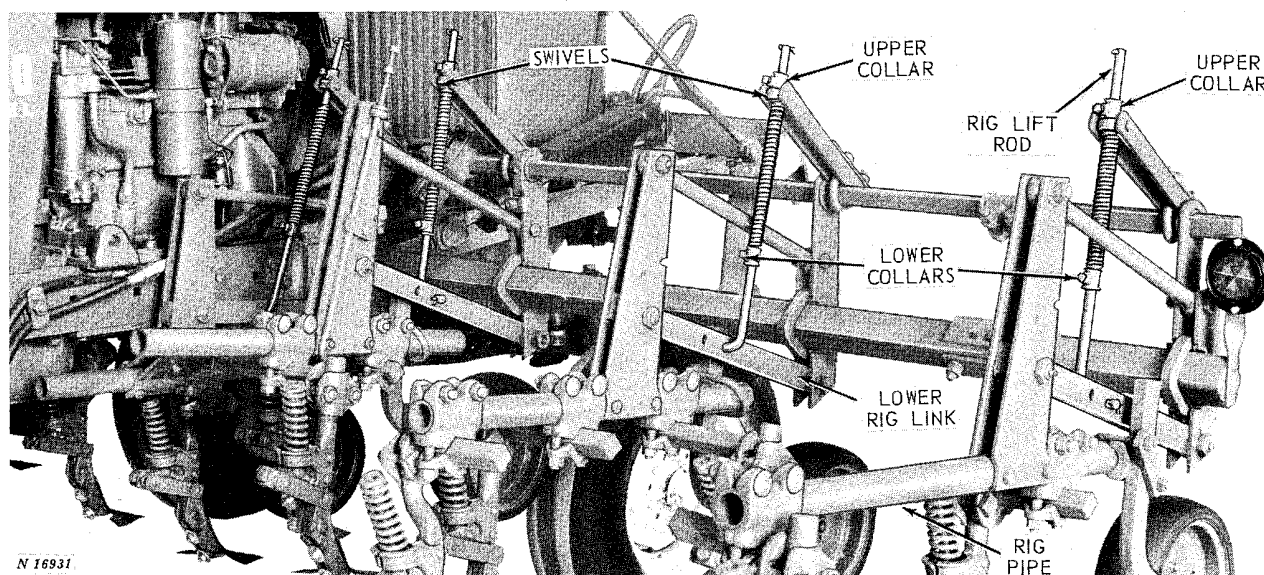


Before raising or operating cultivator, make sure the storage stands are fastened behind the clips against the rig coupling plates as shown above. Be sure the nut on the clip is tight.



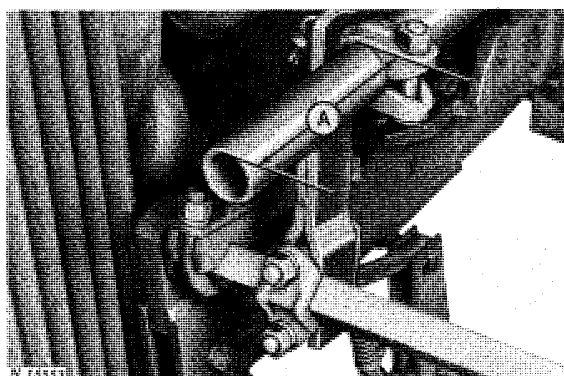
CAUTION: Do not attempt to raise cultivator with stands in storage position as shown above

RIG LIFT HEIGHT



The cultivator must be adjusted so the inner rigs do not strike the tractor and the rig pipes do not contact the lower rig links when the cultivator is raised.

To adjust the cultivator rigs for the maximum lift height, loosen the upper and lower collars on all the rig lift rods and raise the rigs as high as possible with the operating lever on the tractor.



Lift the inner rig on each side of the tractor by hand until the rig contacts the tractor. Lower the rig a half-inch and tighten the upper collar set screw. The upper collar should be resting on the lift arm swivel.

On rigs without gauge wheels, lift the rig by hand until there is about a half-inch gap between the rig pipe and the lower rig link, tighten the upper collar set screw.

On rigs equipped with gauge wheels, lift rigs by hand until there is a half-inch gap between the rig pipes and lower rig link or between the gauge wheel and rig hanger. Tighten the upper collar set screw.

On rear rockshaft operated cultivator only, the lift pipes must be correctly positioned in the lift arm clamps before rig lift height can be adjusted.

On 2510, 3010 or 3020 Tractors, set the distance "A" from the end of the pipe to the edge of the clamp at 14 inches. On 4010 Tractor, distance "A" should be 8 inches. On 4020 Tractor, distance "A" should be 7 inches.

For correct spacing of lift arms, refer to pages 16, 17 and 18.

CAUTION: Once the upper collars are set, do not change their position without repeating the adjustment procedure described above. Otherwise, changing the collar settings could cause the rigs to strike the tractor or parts of the cultivator when the cultivator is raised.

After setting the upper collars, position the lower collars so they are just touching the bottom of the lift rod spring as shown above. Tighten the set screw after adjusting.

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