

McCormick M-448 Farmall Cultivator

Operator's Manual

1008002R6

Reprinted








THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

M171B

If Safety Decals on this machine use the words **Danger, Warning or Caution**, which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as   and  if used, are RED.



WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

Owner's Manual



**SETTING UP INSTRUCTIONS
PARTS LIST**

McCORMICK

(Also McCormick-Deering)

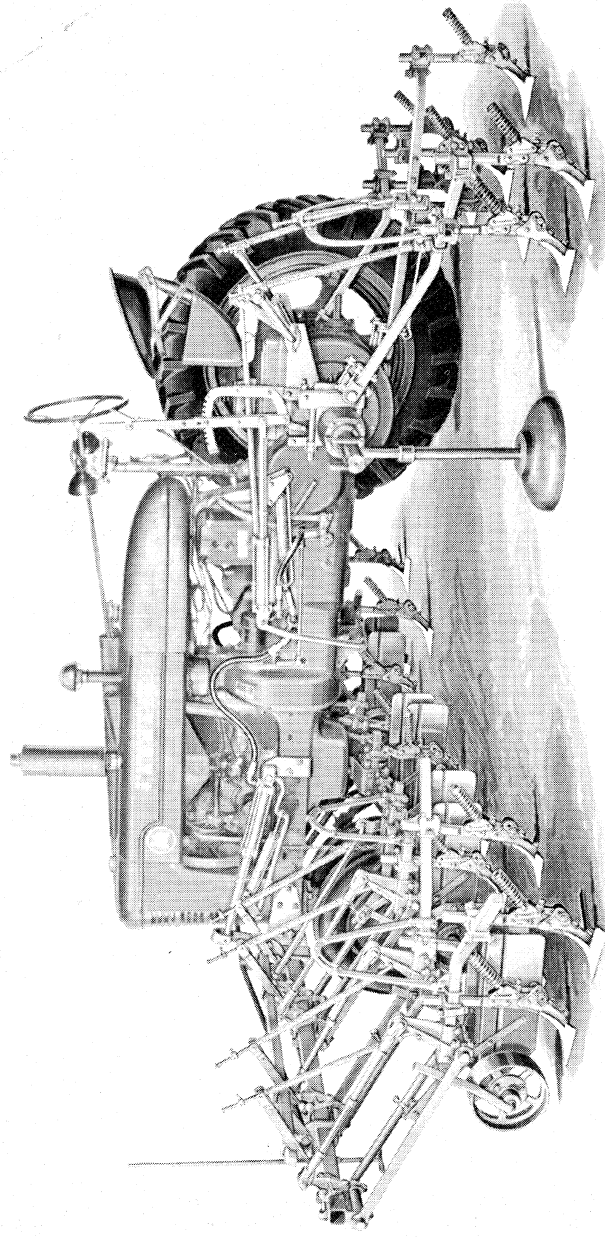
M-448

Farmall Cultivator

INTERNATIONAL HARVESTER COMPANY

180 North Michigan Ave.

Chicago 1, Illinois, U.S.A.



No. M-448 Cultivator with No. 16 Tool Equipment.
(Left rear tractor wheel has been removed for better illustration.)

TO THE OWNER

You are urged to read the following suggestions and information, checking each item referred to in the various illustrations to acquaint yourself with the parts requiring periodical lubrication, and how to make adjustments if required. The result will be longer life and more trouble-free operation of your machine.

The M-448 is a four-row Farmall Cultivator for use on the Farmall-M or Farmall-MD Tractor and will cultivate rows spaced 36" to 42" apart. The front gangs are the parallel acting type which means the sweeps are always at the proper angle regardless of the depth they are working. The upper parallel rods permit leveling the gangs to change the suction of the sweeps

The cultivator is designed for tractors equipped with the "Lift-All" Hydraulic Power Lift. Delayed Power Lift Connections for the rear section are furnished as regular equipment.

A variety of tool equipment is available, including pipe tool bars in place of the square steel tool bars which are finished regular, moldboard hillers, spring tooth attachments, special standard tilting clamps, etc.

On special order, No. 16 Style spring trips will be furnished in place of No. 9 Style with the exception of trips having 6" offset standards.

NOTE: Unless otherwise mentioned the instructions in this manual apply to all the tool equipments listed below:

The No. 16 Tool Equipment (square tool bars) is furnished "Regular" with twelve sweeps for the front section and seven sweeps for the rear section.

The No. 17 Tool Equipment (pipe tool bars) is furnished "Special" with twelve sweeps for the front section and seven sweeps for the rear section.

The No. 18 Tool Equipment (pipe tool bars) is furnished "Special" with sixteen sweeps for the front section and three sweeps for the rear section.

The No. 19 Tool Equipment (square tool bars) is furnished "Special" with eighteen sweeps for the front section and seven sweeps for the rear section.

The No. 21 Tool Equipment (square tool bars) is furnished "Special" with eighteen sweeps for the front section and three sweeps for the rear section.

The No. 76 Tool Equipment (square tool bars) is furnished "Special" with twelve sweeps for the front section and seven spring teeth and sweeps for the rear section.

VERY IMPORTANT!

Make all adjustments and see that the implement works freely before operating the power lift.

NOTE: The M-448 Cultivator is designed for use on the Farmall M or Farmall MD Tractor having rear wheels equipped with a maximum tire size of 10:00 x 40" full round tires or 12 x 38" wide base tires.

INSTRUCTIONS FOR ADJUSTING AND OPERATING

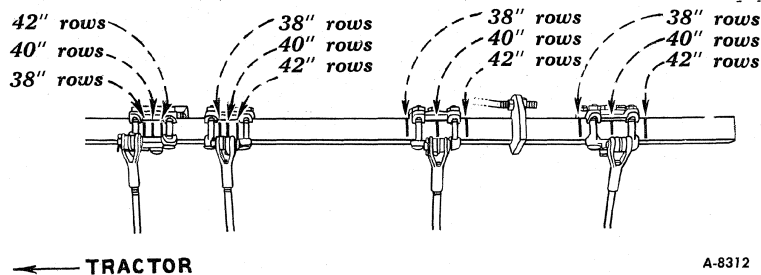
(Setting Up Instructions are on page 9)

LUBRICATION

Keep all bearings and working parts well lubricated.

WIDTH OF ROWS

This cultivator is adjustable for cultivation of 36", 38", 40" and 42" rows. When shipped from the factory, the cultivator is set for cultivating 40" rows with 14" between the centers of the inside shovels. To set the cultivator for cultivating different width rows, see *Illust. 1* and the *Instructions following*. This applies to all tool equipments except No. 18 for which the gangs must be set wider apart for shield clearance.



ILLUST. 1

40" Rows: The above illustration shows the cultivator set for 40" rows, that is, with the center of each gang coupling set at the stripe on the frame pipe that is indicated for 40" rows.

42" Rows: Slide each gang coupling out on the frame pipe until the center of the coupling castings lines up with the stripe indicated for 42" rows.

38" Rows: Slide each gang coupling in on the frame pipe until the center of the coupling castings lines up with the stripe indicated for 38" rows.

36" Rows: Slide each gang coupling in on the frame pipe until the center of the coupling castings sets in the same distance from the stripe for 38" rows as there is between the stripes for 38" and 40" rows for each of the couplings.

When it is desired to run the sweeps or shovels closer to the row than 14" spacing between center of shovels, move the gang couplings in the direction wanted but use the stripes as a gauge and set each pair of gangs the same distance apart.

IMPORTANT: Whenever the front gang couplings (see *Illust. 1*) are moved in or out on the front frame pipe to change the row width, be sure to move all the pressure rod arms (see "A" *Illust. 10*) in or out on the lifting bail so that the pressure rods will line up with the gang beam. This is important and will prevent binding of the pressure rods in the pressure rod arms when the cultivator is raised or lowered.

When the front gangs are adjusted closer or farther from the row, be sure to readjust the jockey arches also so that the gangs will extend back parallel and allow them to work freely in the front couplings. If the gangs are moved in or out and the jockey arches are not readjusted, it will cause the gang beams to extend back out of line and bind in the front bearings.

LIFTING RODS

Set all the set collars on the pressure rods up as far as they will go. Then raise the power lift.

With the power lift in the raised position, raise the inside gangs to the desired height, or until they strike the tractor frame, and then place the upper set collars down against the pressure rod arms. See "B", *Illust. 8*.

The other gangs should now be raised to the desired height and the upper set collars set down against the pressure rod arms. See "C", *Illust. 8*.

The set collars on the lifting rods for the rear section should be set to the desired height. See "D", *Illust. 17*.

PRESSURE SPRINGS

The ordinary working conditions, the pressure springs should be operated under a slight pressure by setting the lower set collars on the rods so that the spring is slightly compressed.

In hard ground, it may be necessary to increase the pressure of the pressure springs by setting the lower set collars so as to compress the springs more. This can be done easily when the gangs are in a raised position.

To control the depth of the inside gangs when cultivating soft ground, set the depth control chains to the depth desired. See "F", *Illust. 9*.

If the gangs do not penetrate properly after making these adjustments, it is advisable to check the setting of the shovels.

SHIELDS

The shields may be raised or lowered as desired by means of the shield adjusting eyebolt in the shield bracket. See "E", *Illust. 10*.

PRESSURE SPRINGS ON POWER LIFT CYLINDER

The pressure springs on the cylinder lifts (see "H", *Illusts. 7 and 14*) should be tensioned just enough to allow the power lift to come to a closed position when the cultivator enters the ground. If one side of the cultivator lifts faster than the other, increase the spring tension on the side lifting fast and decrease the tension on the opposite side until all the gangs lift at the same speed.

HYDRAULIC CONNECTIONS TO THE POWER LIFT

A sealer should be used on all threads and joints so they do not leak regardless of pressure.

The hoses and fittings should be arranged as follows:

The elbow on the right side of the tractor and the front elbow on the left side should face upward and forward at an angle of approximately 45° . The rear elbow on the left side of the tractor should face rearward and upward at an angle of approximately 18° .

The street elbows which fit into the front cylinders for the hose connections should always be assembled so they face rearward. The Delayed Lift Valve for the rear section cylinder should be set so that the hose is connected to it from the rear.

If these instructions are followed, the front hoses will extend in a curve upward and forward to the front cylinders and the rear hose will extend rearward in a reverse curve to the rear cylinder.

SPRING TRIPS

It is important to operate with all spring trips in a directly forward position, as in this position the trip will function properly should an obstruction be struck with the tools. More accurate spacing of the tools can also be obtained if the trips are set as mentioned. A perpendicular position of the spring trips is necessary to make the tools run level.

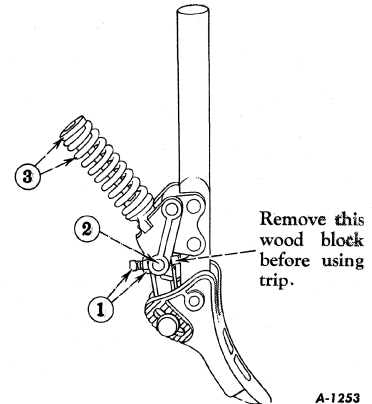
Spring trips are adjusted at the factory to trip properly and will work under all ordinary conditions without changing the spring tension. Adjustment should not be changed unless absolutely necessary.

To make the trip break more easily, loosen the lock nut on set screw (1) and turn the set screw farther in until link (2) is pushed away from the standard. Then tighten the lock nut.

The trip can be made to break harder by tightening spring (3).

CAUTION: This should rarely be done the first day or two the cultivator is in operation because the trip will break much harder after it has been in use some time and, if the spring is tightened down at first, it will be too tight to operate after it has been in use awhile.

The spring can be used in either notch, according to the position of the beam.



Illust. 2 - Spring trip.

If the trip becomes rusty and refuses to break, loosen it up by oiling all pivot points with kerosene.

IMPORTANT: Be sure to remove the wood block between the adjusting bar and standard before using the trip.

ATTACHING SWEEPS TO SPRING TEETH

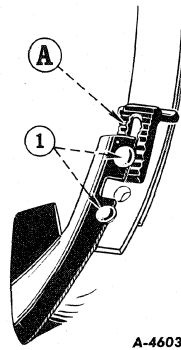
Joyce or McGregor Sweeps

1. Remove the bolts from the end of the spring tooth and attach the sweep and the adjusting block with bolts through the top and bottom holes in both sweep and spring tooth.

NOTE: When Joyce or McGregor sweeps are used on spring teeth, it is not necessary to use the corrugated washer bolted to the lower end of the spring tooth.

Adjustment of Sweep

To adjust the pitch of the sweep, loosen the bolts in the sweep and slide the sweep adjusting block (A) up or down on the spring tooth to raise or lower the top of the sweep as needed to set the sweep at the desired angle. After making any adjustment, be sure to tighten both bolts securely.



Illustr. 3

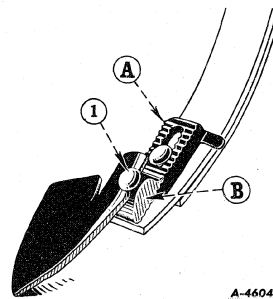
NOTE: The sweep has been cut away in the illustration to show the adjusting block.

I H Sweeps

1. Remove the bolt from the end of the spring tooth and attach the sweep and the corrugated washer to the spring tooth with the top of the washer in the corrugations in the sweep adjusting block. Replace the bolt and tighten the nut securely.

Adjustment of Sweep

To adjust the pitch of the sweep, loosen the bolts in the spring tooth and slide the sweep adjusting block (A) up or down on the spring tooth to raise or lower the adjusting washer (B) as needed to set the sweep at the desired angle. After making any adjustment, be sure to tighten both bolts securely.



Illustr. 4

NOTE: The sweep has been cut away in the illustration to show the corrugated washer and adjusting block.

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