McCormick - Deering HM-238 Model Farmall Cultivator

Operators Manual

1006552R4

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.

M171F

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





STOR

if used, are RED.



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.

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OWNER'S MANUAL

SETTING UP INSTRUCTIONS
PARTS LIST

McCORMICK-DEERING

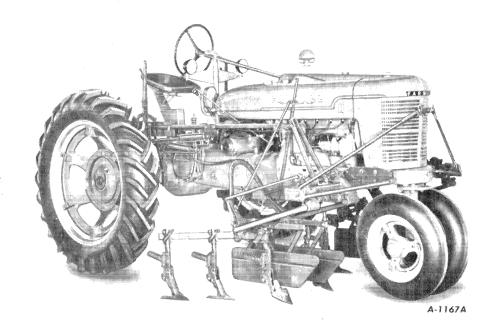
Farmall Cultivator HM-238

This manual contains information which will be valuable to you during the entire life of your equipment. Rely on your manual for operating and maintenance information . . . and rely on your International Harvester dealer when in need of skilled mechanical service or IH parts.

INTERNATIONAL HARVESTER COMPANY

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CHICAGO 1, ILLINOIS, U.S.A.



HM-238 Cultivator with No. 14 Tool Equipment.

The HM-238 is a two-row Farmall Cultivator that can be used on Farmall-H, M or MD Tractors, and will cultivate rows spaced from 28" to 48". The beams are of flat steel stock which combines strength with light weight.

Regular equipment includes Power Lift connecting parts for use with tractors having Lift-All Hydraulic Power Lift equipment. On special order, Delayed or Selective Power Lift connections are also available. The Delayed Power Lift raises the front gangs first upon leaving the rows at the ends of the field. The Selective Power Lift raises the right or left cultivator gangs independently for point rows, cultivating end rows, etc. A wide variety of shovel equipment is available. Disk hillers, potato hillers, potato hoe attachment, peanut digger attachment, etc., are also available.

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.

INSTRUCTIONS FOR ADJUSTING AND OPERATING

(Setting Up Instructions are on page 5)

LUBRICATION

Keep all bearings and working parts well lubricated.

WIDTH OF ROWS

This cultivator is adjustable for cultivation of 28" to 48" rows.

On the front section, adjustment for different row widths may be made by sliding the gang coupling in or out on front frame pipes.

On the rear section, adjustment for different row widths may be made by sliding the outside gang beams in or out on rear cross arch as illustrated and described on page 23.

PRESSURE ROD SPRINGS

For ordinary working conditions, the pressure springs (see "5", Illustrations hos. 5 to 8 and 10 to 16) should be operated under a slight pressure by setting the set collars on rods so that the spring is slightly compressed.

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

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

PRESSURE SPRINGS ON POWER LIFT CYLINDER

The pressure springs on cylinder lifts (see "R". Illustration No. 19) 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 gangs lift at the same speed.

SHIELDS

The shields are adjustable in height from the ground by means of the chain on the shield. All the ends of the "S" hooks on the chain are closed except the end on the upper "S" hook where the chain is attached. This is closed partially with just enough opening to allow the chain to slip over for adjusting the chain. These shields should run parallel with the ground line or with the front end slightly higher than the rear. Adjustment is made on the lower end of the rear shield strap. Three holes are provided in the shield stiffener. The shield strap is assembled at the factory in the middle hole. To raise the front end, move the strap to the front hole. To lower the front end, move the strap to the rear hole. The shield may be adjusted toward or away from the shovel by placing the shield support bar on the inside or outside of the support bracket or by turning the offset in the support bar in. (See Illustrations Nos. 17 and 171.)

When the crop reaches a height where the shields are no longer necessary, the shield support, complete with shields, may be removed from the standard clamps.

POWER LIFT CYLINDERS AND HOSE

A sealer should be used on the threads and the joints of the power lift hose connections so they do not leak, regardless of the pressure.

The elbows on the tractor should face as follows:

- a. The elbow on the right side of the tractor should face toward the rear of the tractor, parallel with the channels. The rearward elbow on the left side of the tractor should face toward the rear of the tractor and upward at an angle of approximately eighteen degrees (18°). The forward elbow on the left side of the tractor should face rearward and upward at an angle of approximately thirty-eight degrees (38°).
- b. It should never be necessary to disturb the position of these elbows unless the power lift is to be removed from the tractor.
- c. When mounting the machine on the tractor, these elbows should not be disturbed or the position changed.
- d. The street elbows which fit into the cylinder for the connection of the hose should always be assembled so that the elbows face the piston rod end of the cylinder, and sealer should be used as above mentioned.
 - e. The hose furnished with the cylinders is 34" long.

ADJUSTABLE WIDE FRONT AXLE ATTACHMENT

If the tractor is equipped with the Adjustable Wide Front Axle Attachment, it is necessary that it be mounted in the long wheel base position. This setting is explained in the Owner's Manual furnished with the attachment.

DETACHING CULTIVATOR FRONT SECTION FROM TRACTOR

- 1. FOR POWER LIFT CULTIVATORS: Detach at points indicated by "X" in Illustration No. 19.
- 2. Detach truss rods from radiator grille and remove front frame from tractor sill.

DETACHING CULTIVATOR REAR SECTION FROM TRACTOR

- 1. Swing stand, or stands, down into position.
- 2. FOR POWER LIFT CULTIVATORS: Detach at points indicated by "X" in Illustrations Nos. 27, 29, 30 and 31.
- 3. FOR DELAYED POWER LIFT: Detach at points indicated by "X" in Illustrations Nos. 22 and 23.

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.

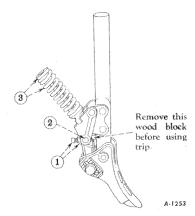


Illustration No. 1 - Spring Trip.

To Change Adjustment

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

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, will be too tight to operate after it has been in use awhile.

Spring can be used in either notch, according to position of beam.

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

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

ATTACHING SWEEPS TO SPRING TEETH

JOYCE OR McGREGOR SWEEPS

1. Remove bolts from end of spring tooth and attach sweep and adjusting block with bolts through 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 lower end of spring tooth.

Adjustment of Sweep

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

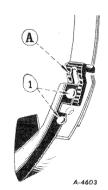


Illustration No. 2

NOTE: Sweep has been cut away in Illustration to show adjusting block.

I H SWEEPS

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

Adjustment of Sweep

To adjust the pitch of the sweep, loosen bolts in spring tooth and slide the sweep adjusting block (A) up or down on 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.

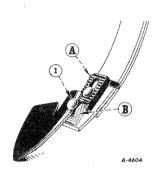


Illustration No. 3

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

INSTRUCTIONS FOR SETTING UP

(Adjusting and Operating Instructions are on page 1)

Remove all wires and arrange parts conveniently.

Lubricate all bearings and moving parts as you proceed and see that they work freely.

Bolts must be used in the holes in which they are found, or in parts to which they are attached, unless otherwise shown.

Shaded portions in the illustrations show parts to be assembled; these must be placed on the machine in the order numbered.

Wherever the terms "right" and "left" are used, it should be understood to mean from a position behind and facing the machine.

We reserve the right to make changes or improvements in the design or construction of any part without incurring the obligation to install such changes on any machine previously delivered.

NOTE: The No. HM-238 Cultivator is designed for use on Farmall-H, Farmall-M or Farmall-MD Tractors having rear wheels equipped with maximum tire size of 10.00 x 40" full round or 12-38" wide base tires.

IMPORTANT: The following instructions apply to Power Lift and Delayed Power Lift Cultivators unless otherwise mentioned.

The No. 14 Tool Equipment is furnished "Regular" and is used on the front section only.

. The Nos. 10, 11, 12, 15, 24, 56, 57, 74 and 75 Tool Equipments are furnished "Special" and are used on both the front and rear sections.



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