Three-Point Industrial Hitch with Tel-A-Depth for International 340 and 460 Series Utility Tractors Operator's Manual

1014117R1 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.

M171E

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







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.

Operator's Manual



INSTALLING INSTRUCTIONS

Three-Point Industrial Hitch

with

Tel-A-Depth

for

INTERNATIONAL®

340 and 460 Series Utility

Tractors

INTERNATIONAL HARVESTER COMPANY

180 North Michigan Ave.

Chicago 1, Illinois, U.S.A.

It is the policy of International Harvester Company to improve its products whenever it is possible and practical to do so. We reserve the right to make changes or add improvements at any time without incurring any obligation to make such changes on products sold previously.

All illustrations and descriptive matter in this publication apply to International Harvester products sold under the International, McCormick. McCormick-International, McCormick-Deering or McCormick-Deering International trade na

As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to point out more clearly the safety precautions in this manual.

ORDERING NUMBERS

* 373 131 R92 Three-Point Industrial Hitch for International 340 Utility Tractors * 373 130 R92 Three-Point Industrial Hitch for International 460 Utility and 460 Diesel

Utility Tractors.

Note: The package numbers above are for tractors without a Hydra-Touch system. It is also possible to install the Three-Point Industrial Hitch on tractors already equipped with a Hydra-Touch system. However, the hitch should be ordered as parts instead of as a package to avoid duplication of hydraulic parts already on the tractor.

*Note: The hydraulic power supply must be ordered if the tractor is not already so equipped.

HYDRAULIC POWER SUPPLY

The hydraulic power supply is available for tractors with either planetary-type or clutchtype independent power take-off. The planetary-type independent power take-off can be identified externally by a brake band spring sleeve (see Illust. 2) which the clutch-type does not

> For tractors either with or without 540 r.p.m. independent power take-off or torque amplifier.

370 947 R92 For International 340 Utility Tractors (includes 9 gallon-per-minute externally-mounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).

> For tractors with 540 r.p.m. planetary-type independent power take-off or torque amplifier.

- 370 948 R91 For International 340 Utility Tractors (includes 12 gallon-per-minute internally-mounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).
- 371 333 R91 For International 340 Utility Tractors (includes 17 gallon-per-minute internally-mounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).
- 370 903 R91 For International 460 Series Utility Tractors (includes 12 gallon-per-minute internallymounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).
- 370 905 R91 For International 460 Series Utility Tractors (includes 17 gallon-per-minute internallymounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).

For tractors with 540 r.p.m. clutch-type independent power take-off or torque amplifier.

373 723 R91 For International 340, 460 and 460 Diesel Utility Tractors (includes 12 gallon-per-minute internally-mounted pump, manifold assembly, fluid filter assembly, brackets, clamps, etc.).

Note: When the Three-Point Industrial Hitch is to be installed on a tractor with Independent Power Take-Off, the power take-off must be equipped with the parts necessary for belt pulley mounting which are utilized for mounting the restraining chain front bracket. If the tractor is not so equipped, the following must be ordered:

364 708 R2 Independent Power Take-Off housing cover (one used).

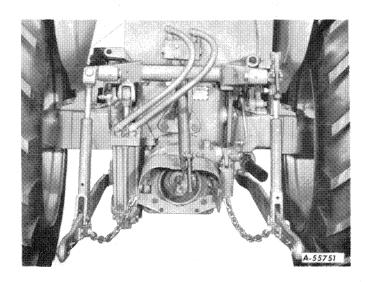
Independent Power Take-Off housing cover gasket (one used). 360 154 R1

359 054 R2 Rear bearing retainer gasket (one used).

364 712 R12 Master shield (one used).

364 713 R1 Master shield bolt (three used).

INTRODUCTION



Illust. 1
Three-Point Industrial Hitch.

Three-Point Industrial Hitch with Tel-A-Depth provides a fast and convenient means of attaching rear-mounted equipment. Depth control, and leveling of equipment can be done from the tractor seat. Other adjustments as outlined on the following pages are available to the operator.

With the Three-Point Industrial Hitch you can mount International Harvester Company three-point equipment or most Category I three-point equipment of other manufacturers.

The Category I designation means the hitch lower links are spaced to fit equipment hitching pins spaced 28 inches center to center, the swivel sockets in the ends of the lower hitch links are the correct size to fit the 7/8-inch diameter equipment hitching pins, and the swivel socket on the hitch upper link is the correct size to fit the 3/4-inch hitching pin in the equipment mast.

The Three-Point Industrial Hitch consists of two hitch lower links and a hitch upper link, with hitch points at either end, to connect the equipment to the tractor.

The left and right hitch lower links, connected to the hitch lower link stud plates attached to the rear frame of the tractor, are suspended by lift links from a rock-shaft.

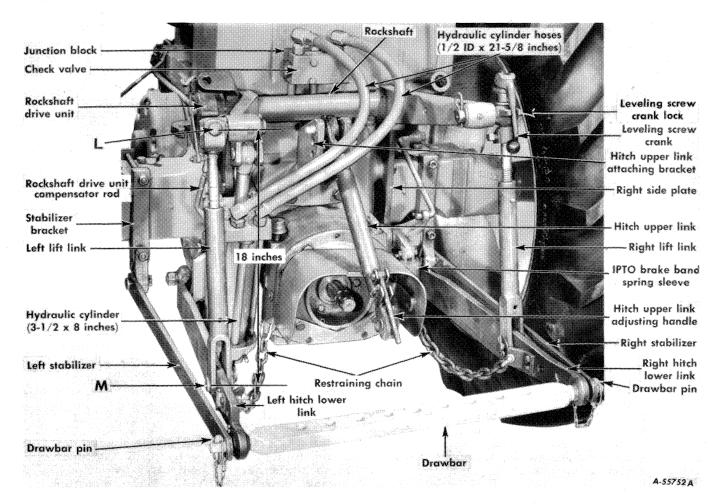
The hitch upper link, at the top of the tractor rear frame, is lengthened or shortened by use of the adjusting handle. It is attached to the tractor rear frame by means of a bracket. The hitch upper link can be pinned to the bracket at various heights, allowing the operator to quickly set the pitch of blades, scoops, or other equipment.

Raising and lowering of the equipment is accomplished with a hydraulic cylinder. Depth adjustment is controlled by an adjustable stop on the Tel-A-Depth quadrant. Leveling of the hitch is done manually with a crank-type adjusting screw.

Most controls are built into the hitch. The hitch mounting frame is common for all equipment and remains on the tractor. Flexibility of the hitch and versatility of controls assures top quality work from all equipment. The hitch can be made rigid or free-floating, horizontally, vertically, or in both directions.

A drawbar is quickly and easily attached when trailing-type equipment is to be used.

DESCRIPTION



Illust. 2 Principal parts.

TEL-A-DEPTH SYSTEM

The Tel-A-Depth system consists of a Tel-A-Depth valve, a Tel-A-Depth valve control handle and quadrant, a rockshaft drive unit, a follow-up cable enclosed in conduit, hydraulic hoses, a check valve, and necessary attaching and connecting parts.

The rockshaft drive unit consists of a set of planetary gears in an aluminum housing attached to the left end of the rockshaft. When the Tel-A-Depth valve input lever is moved by the Tel-A-Depth handle, the hydraulic cylinder is actuated. The piston end of the cylinder moves the rock-

shaft and the opposite end of the cylinder exerts force against the cylinder bellcrank, moving the compensator rod.

The motion of the rockshaft and the compensator rod is transmitted by the planetary gears to the cable and by the cable to the follow-up lever on the Tel-A-Depth valve to return the valve to the neutral position.

The result of the movement of this system is to keep the positions of the Tel-A-Depth handle and hydraulic cylinder piston properly coordinated.

DESCRIPTION

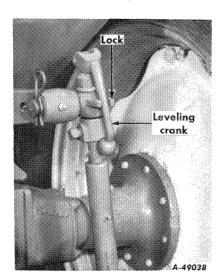
HYDRAULIC CYLINDER

The hitch is operated by a single $3-1/2 \times 8$ -inch hydraulic cylinder.

The hydraulic cylinder is attached to the cylinder bellcrank. The cylinder piston rod is pinned directly to the rockshaft. The adjustable stop (Illusts. 5 and 6) on the Tel-A-Depth quadrant is set by the operator to control the retracted cylinder length and is used in returning the equipment to the same working position. The new Tel-A-Depth valve provided with the hitch is designed to give finer adjustment to the cylinder.

LIFT LINKS AND LEVELING CRANK

The lift links are used to raise or lower the hitch lower links. The right lift link incorporates the leveling screw which is



Illust. 3
Leveling crank in locked position.

adjusted by means of the leveling screw crank. The leveling screw crank is turned to obtain the desired position of the hitch lower links relative to one another. A leveling screw lock is provided to prevent the leveling screw from working down while operating.

The right lift link is made "rigid" or "free-to-float" by the position of the float lock-out collar. The left lift link is made "rigid" or "free-to-float" by reversing the position of the lower yoke end of the left lift link. Note: Be sure to reverse the yoke when making a change. To move the float lock-out pin without reversing the yoke will misalign the parts.

When the lift links are "free-to-float", they allow a swinging movement of the hitch.

HITCH LOWER LINKS

The hitch lower links are the connection between the equipment hitching pins, by means of the swivel sockets at the rear of the links, and the hitch point on the tractor. They are attached to the tractor at the stud on the hitch lower link stud plate attached to the rear frame.

HITCH UPPER LINK

The length of the hitch upper link can be adjusted from 17-3/4 inches to 26-1/2 inches to allow the operator to adjust for varying heights of equipment masts. It also aids in setting the pitch of blades, scoops, and other equipment. See Illust. 9.



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