Farmall Fast-Hitch with Traction Control for McCormick Farmall 300, 350, 400, and 450 Tractors

Operator's Manual

1004495R2

Reprinted

CASE IH

INTRODUCTION

Fast-Hitch with Traction Control provides a fast and convenient means of attaching rear-mounted implements. Traction control utilizes the draft or pull of the implement to apply down pressure on the rear wheels and reduce slippage. It also adds to the flexibility afforded by the combination of Hydra-Touch and Hydraulic Remote Control.

Coupling, uncoupling, depth control, traction control, and leveling of implements all can be done from the tractor seat. Other adjustments as outlined on the following pages are available to the operator.

The operation and appearance of both Fast-Hitch Attachments is the same on all tractor models listed but the units are not interchangeable due to the difference in the width of the rear frames of the tractors

Fast-Hitch has reduced the attachment of implements to the tractor to a simple "line-up, back up, and go" procedure. It is the quickest and easiest way to hitch implements ever devised. The operator remains on the tractor seat and backs in with the socket latches of the hitch either open or closed. Coupling is automatically completed on contact, hydraulic power raises the implement from the ground, and the operator drives off to the work area. Practically all of the manual labor previously required for attaching inplements has been eliminated. Fast-Hitch permits the operator to have maximum time for work in the field, where his profit is made.

The Farmall Fast-Hitch consists of a simple bail, with a hinged socket at each end, suspended under the tractor from a rockshaft. The bell-mouthed sockets receive a pair of coupling beams on the implement. The beams on all Fast-Hitch implements have the same shape and spacing. The bail therefore provides a common hitch-frame for all implements.

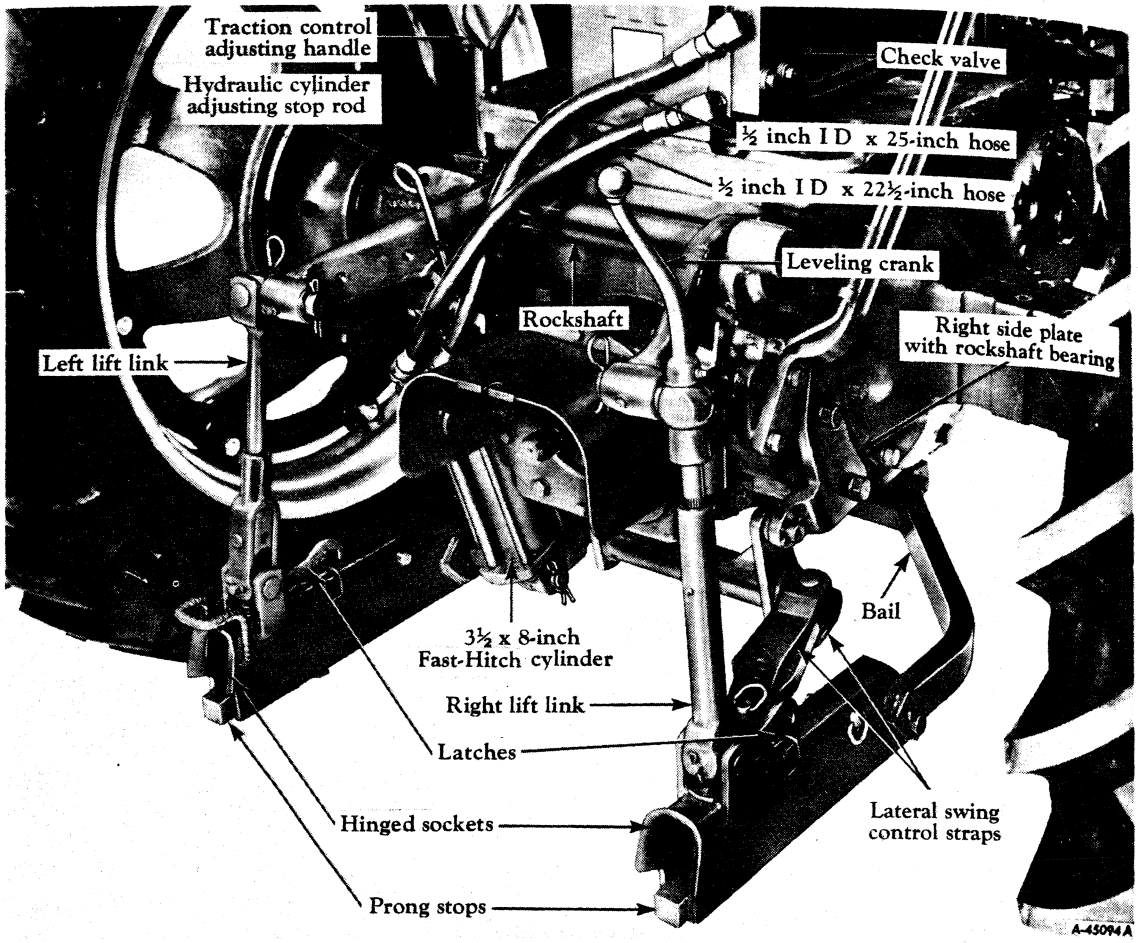
Most controls are built into the hitch rather than on each implement. The Fast-Hitch mounting frame is common for all implements and remains on the tractor. This practically eliminates the need for separate, special pieces formerly required for each implement. This, in turn, keeps the customer's initial investment to a minimum.

Flexibility of the Fast-Hitch and versatility of controls assures top quality work from every implement. Field performance is not sacrificed for ease and speed of hitching. The Fast-Hitch can be made rigid or free-floating, horizontally, vertically, or even diagonally. Depth adjustment and the raising and lowering of the implement is controlled with a hydraulic cylinder. Leveling of the hitch is done manually with a crank-type adjusting screw.

Traction control is accomplished entirely by mechanical means. A linkage system operated by the draft load causes the cylinder to apply an upward thrust on the rockshaft. The reaction of this force puts additional weight on the rear wheels of the tractor thus reducing wheel slippage. As the operator lifts up on the traction control handle, loading of the rear wheels is increased. In all settings, except the first or top notch, of the traction control handle, the amount of weight transferred to the rear wheels increases in direct proportion to the draft load, thus increasing traction only as needed.

A slip-in type drawbar, furnished as regular equipment with the Fast-Hitch, is quickly and easily attached when trailing implements are to be used.

DESCRIPTION

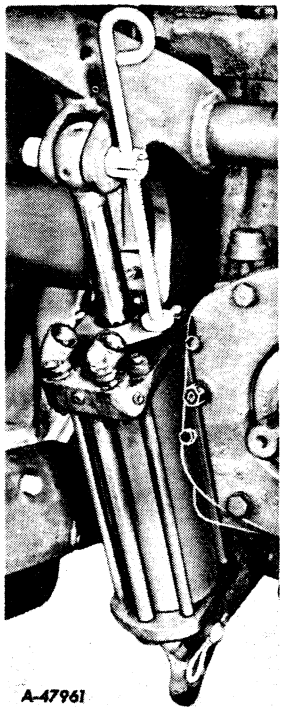


Illust. 2
Fast-Hitch with Traction Control.

Hydraulic Cylinder

The Fast-Hitch is operated by a single 3-1/2 x 8-inch hydraulic cylinder.

The hydraulic cylinder is attached to the cylinder bellcrank. The end of the cylinder piston rod is pinned directly to the rockshaft. The hydraulic cylinder adjusting stop rod can be set by the operator to control the retracted cylinder length. The new Hydra-Touch valve provided on the tractor is designed to give finer adjustment to the cylinder.



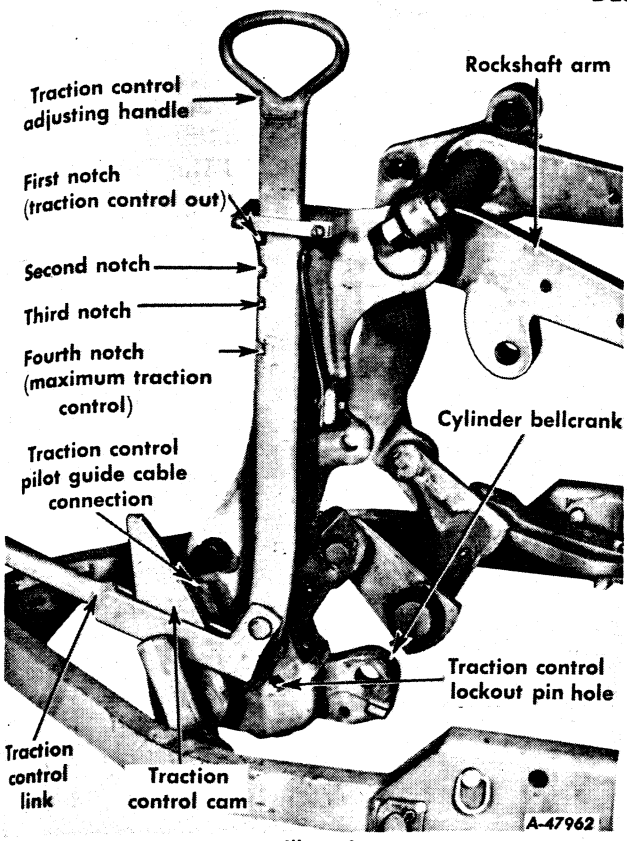
Illust. 3
Hydraulic cylinder.

Traction Control Adjusting Handle

The traction control handle has four notches. In the first or top notch traction control is inoperative. The second and third notches are intermediate traction control positions. The fourth notch permits maximum traction control.

The draft load of the implement converted to down pressure on the tractor wheels can be varied by changing the setting of the traction control adjusting handle.

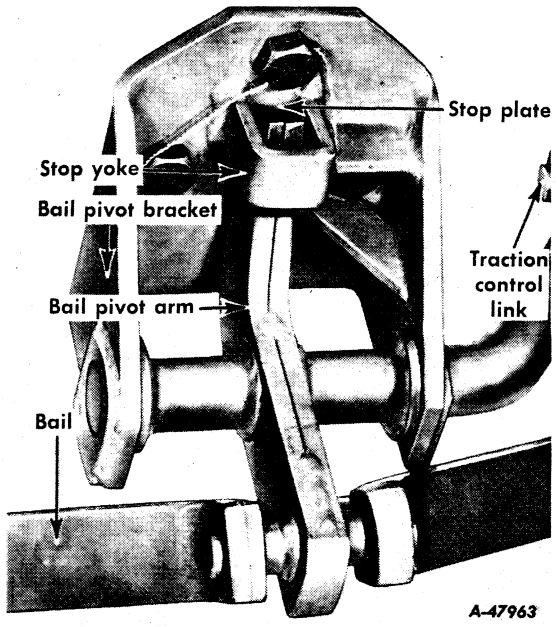
Use as little traction control as needed to keep wheel slippage to a minimum.



Illust. 4
Traction control adjusting handle.

Hitch Bail

The bail is the connection between the implement, by means of the sockets, and the hitch point on the tractor. It is attached to the tractor well ahead of the rear axle.



Illust. 5
Front mounting of bail.

Hitch Sockets

The implement attaching sockets are flexibly mounted on the hitch bail so they can either pivot vertically or be pinned rigidly as desired.

When used in the hinged position, they provide flexibility that will permit moldboard plows, listers, disc plows, and other tools to enter the ground more quickly and to maintain a more uniform working depth in fields of uneven contour. Leaf springs hold the hinged sockets so they will line up with the implement prongs when attaching.

Lift Links and Leveling Crank

The lift links are used to raise or lower the hitch sockets. The right lift link incorporates the leveling screw. The leveling crank is turned to obtain the desired position of the hitch sockets relative to one another.

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 the position of the float lock-out pin.

When the lift links are "free to float", they allow oscillation of the hitch which is required by the disc harrow and implements having wide spaced gauge wheels. The lift links are used "rigid" for implements such as plows.

Pilot Guides

Guides are provided to aid the operator in selecting the proper traction control setting for the condition encountered and to assist in the selection of the desired working depth.

The Piston Rod Extension Guide (Left Pointer) (*see Illust. 10*) indicates the extension of the hydraulic cylinder piston rod and may be used in returning the implement to the same working position when re-entering the field after turning or after changing working position. The graduations do not correspond to the working depth of any one implement.

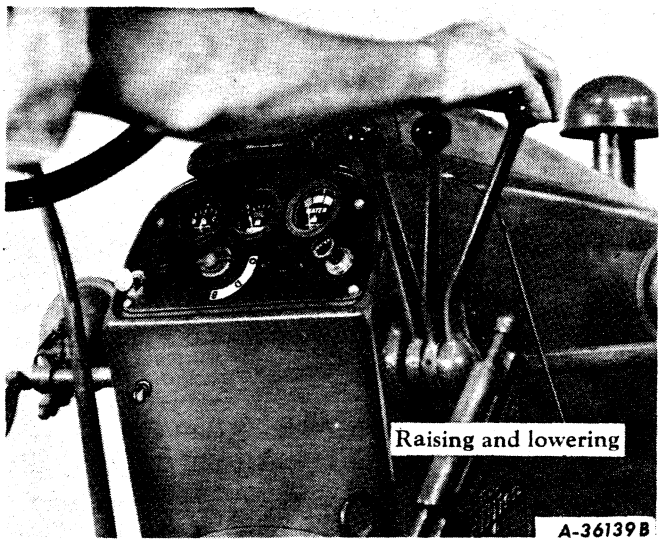
The Traction Control Guide (Right Pointer) (*see Illust. 10*) assists the operator in selecting the amount of weight transfer for most effective operation. When the traction control handle is in the second, third, or fourth notch, traction control is in effect even though there is no visible movement of the linkage and the traction control guide pointer may remain near or at the lower line on the guide.

Then, when tougher soil is encountered additional weight will be automatically transferred to the rear wheels of the tractor and the pointer will reflect this by moving upward. When the tough spot is passed the pointer will return to its former position.

OPERATING THE FAST-HITCH

Caution! If the Fast-Hitch is to be used for drawbar work or for raising the tractor wheel off the ground (*Illust. 14*), the hitch vertical float lock pin must be placed in the hole in the cylinder bellcrank, locking it to the left side plate. To do this, fully extend the cylinder piston rod. Extending the piston rod makes it easy to insert the pin and assures going through the hole in the left side plate. If the Fast-Hitch is to be used with Fast-Hitch rear mounted implements, the hitch vertical float lock pin must be stored in a hole in the drawbar. *See Illust. 7.*

The Fast-Hitch is operated with the right Hydra-Touch control handle. *See Illust. 6.* Pull the control handle to the rear when lowering the implement to the working position. Push the control handle forward when raising the implement to the transport position.



Illust. 6
Hydra-Touch control for Fast-Hitch.

Hitch Adjustments (Illusts. 7 and 8)

Socket pivot lock-out pins are carried in storage (rear) holes in the sockets, when the sockets are free-floating, and can be moved to the front holes to make the attaching sockets rigid with the hitch yoke.

The lateral swing of the hitch is controlled by a welded pin moving within the confines of a slot in the lateral limit plate and can be made rigid by inserting the lateral swing lock-out pin in the forward hole of the lateral swing control straps. *See Illust. 8.*

The right lift link may be set rigid or free-floating by the position of the lift link float lock-out collar. When half of the knurled line or groove on the leveling crank is above the top of the leveling crank screw housing (*Illust. 2*), the hitch sockets are level.

The left lift link is rigid or free-floating depending on the position of the lift link float lock-out pin.

The hitch vertical float lock pin is used to lock the cylinder bellcrank and left side plate together when a rigid hitch (no traction control) is desired. **Note:** Be sure the pin goes through the side plate and not behind it. Fully extending the cylinder piston rod makes it easy to insert the pin and assures going through the hole in the left side plate. The pin is stored in the drawbar, when traction control is desired.

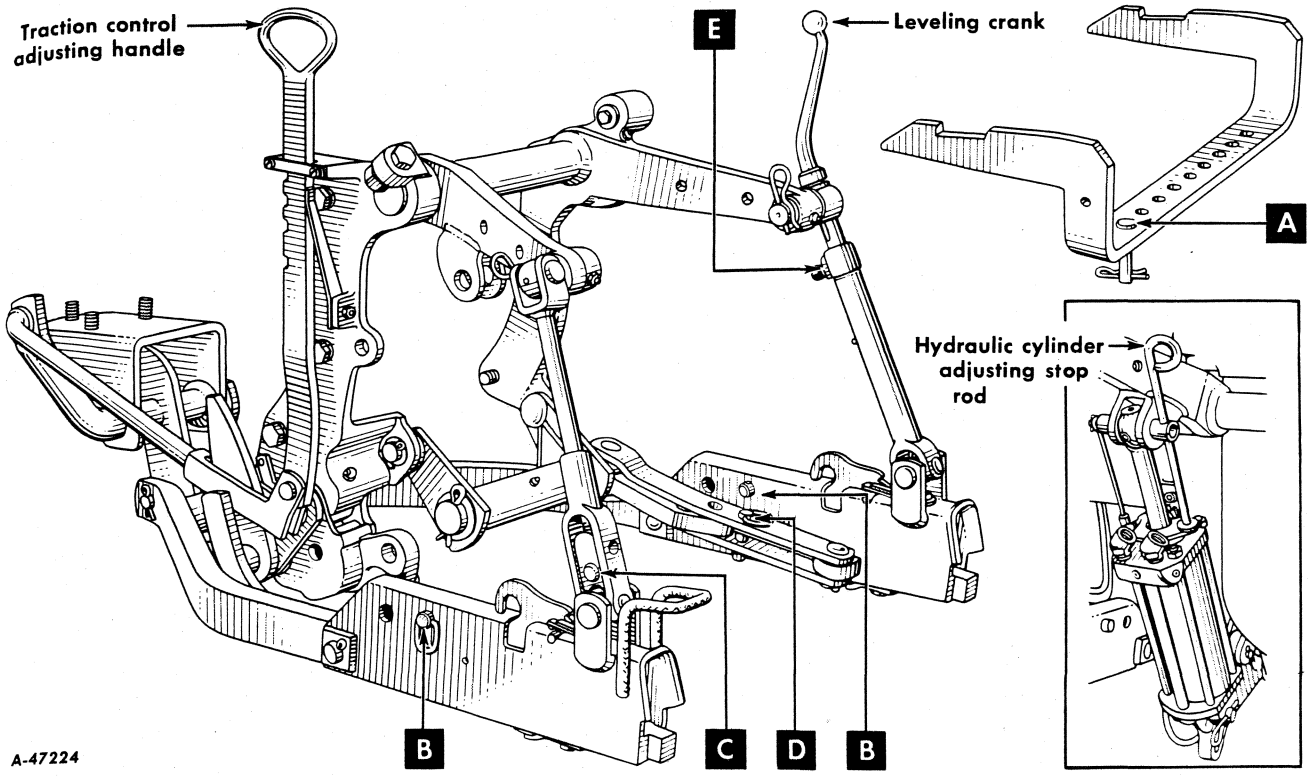
Traction Control

In general traction control is provided to minimize wheel slippage. The notch in which the traction control handle is set by the operator is determined by the implement being used and the operating and soil conditions.

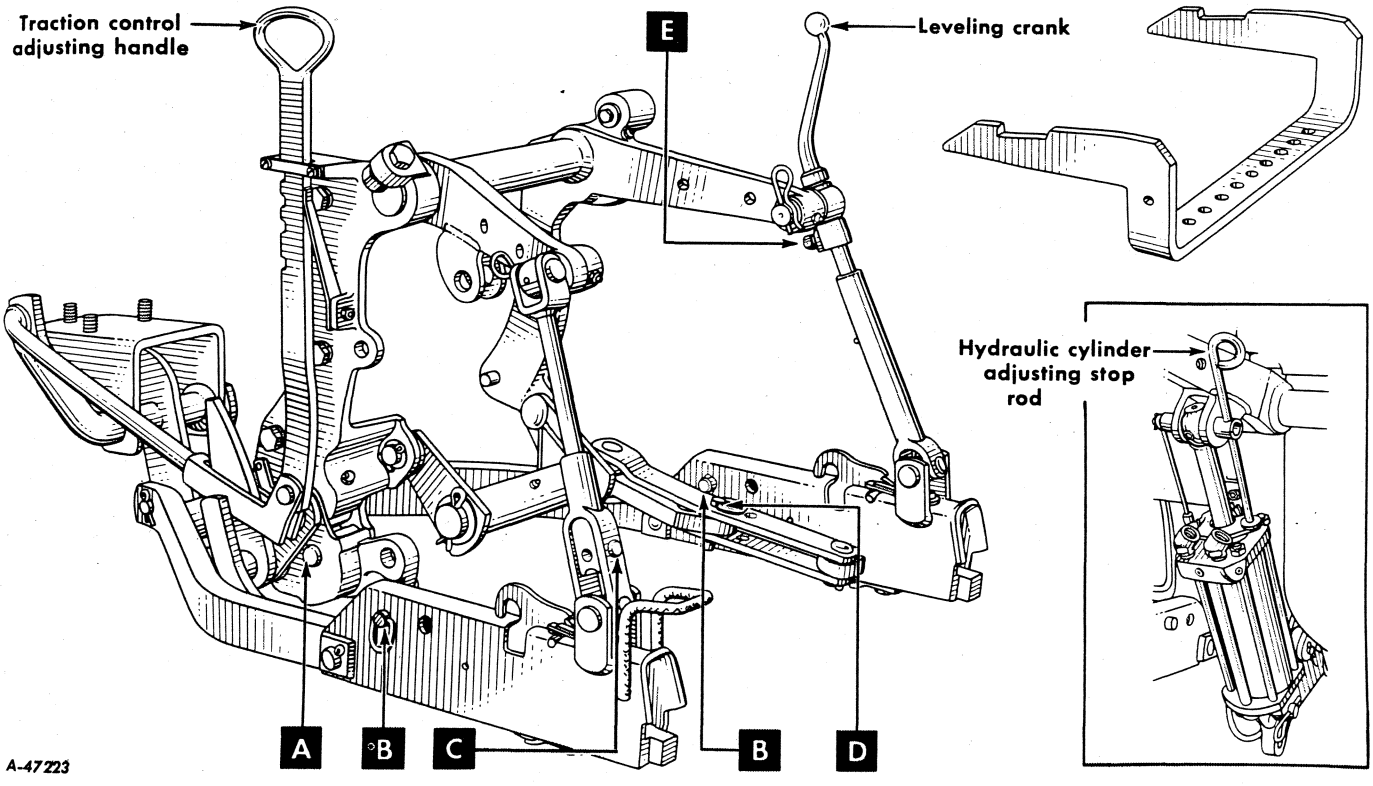
Under most operating conditions, use only as much traction control as is necessary to obtain minimum wheel slippage. The traction control handle may be set in the second or third notch. In loose, mellow soil the fourth notch may give the best results.

When the handle (*Illust. 4*) is set in the first notch, traction control is not being used. This may be desirable for plowing in hard, dry soil where penetration is difficult.

Three operating conditions can make it advisable to add weight to the tractor in the form of liquid in the tires, wheel weights, and/or front frame channel weights as follows: When pulling any heavy draft implement or load; when a heavy, rear-mounted implement is being used; and when operating over rough terrain.



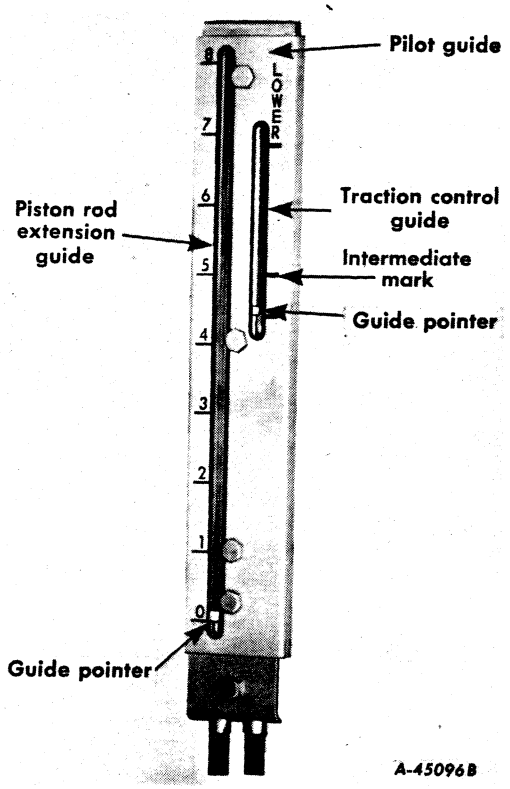
Illust. 7
Fast-Hitch in "free-to-float setting.



Illust. 8
Fast-Hitch in "rigid" setting.

Pilot Guide

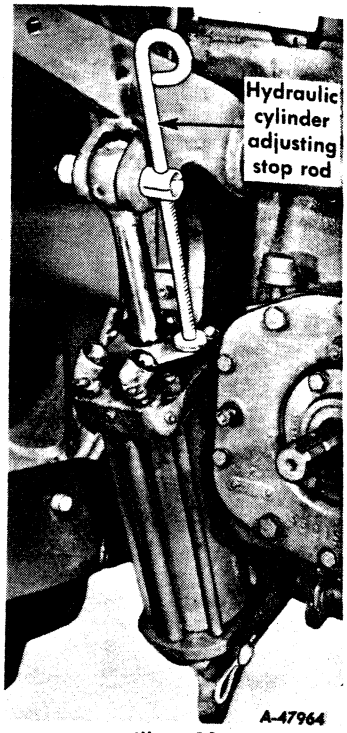
The purpose of the pilot guide is to inform the operator whether or not he has set the traction control handle in the proper notch to obtain the best results and whether he has lowered the implement to the desired working depth. In general, the traction control handle should be set in the notch required to keep the traction control guide pointer working in the lower range of its scale if the most efficient use is to be made of the traction control system. The hydraulic cylinder which raises and lowers the Fast-Hitch, by operating the right Hydra-Touch control handle, is provided with an adjusting stop rod. *See Illust. 10.* Raising or lowering the rod sets the cylinder piston travel to obtain the desired working depth of the implement. When the cylinder piston rod has reached this setting, it will be indicated by the piston rod extension guide pointer. *See Illust. 9.*



Illust. 9
Pilot guide.

Hydraulic Controls

The hitch is raised and lowered with a 3-1/2 x 8-inch stroke Fast-Hitch hydraulic cylinder at the rear of the tractor. *See Illust. 10.* RAISING AND LOWERING is controlled with the RIGHT HYDRA-TOUCH CONTROL HANDLE. The hydraulic cylinder adjusting stop rod may be set to limit the lowering of the rockshaft arms. To raise or lower the rod turn it 90 degrees, push or pull the rod, then



Illust. 10
Hydraulic cylinder adjusting stop rod.

turn it back 90 degrees so the rod locks in position. This enables the operator to obtain the same depth setting each time an implement is lowered. *See Illust. 6.*

Note: After making a change in the traction control setting, it may be necessary to change the hydraulic cylinder adjusting stop rod to give the desired depth.

A check valve block assembly is located in the hydraulic lines between the Hydra-Touch control valve and the Fast-Hitch cylinder. This prevents the possibility of implements dropping during transport or while parked. *See Illust. 22.*

Fast-Hitch Drawbar

Do not attempt to pull any loads other than implements adaptable to the Fast-Hitch system unless the Fast-Hitch drawbar is in place.

Insert the Fast-Hitch drawbar prongs into the hitch sockets so the latches snap in place. *See Illust. 11.* When the drawbar is in use for trail-behind implements the hitch should be pinned rigid. *See Illust. 8.*

To obtain a rigid hitch: Locate the set collar "E" on the leveling crank in the upper position as shown *in Illust. 8.* Make certain the point of the set screw is located in the spot hole.

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