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H17 - J17 Hydraulic PTO and Model H70 Tiller

Operator's Manual No. 9-99753

J I Case
A Tenneco Company

This manual covers recommended operating procedures, safety suggestions, adjustments, maintenance information, and installation instructions. Read this manual carefully before operating your hydraulic tiller and hydraulic PTO kit. Your J I Case Compact Tractor Dealer is well qualified to answer any further questions you might have concerning this tiller and hydraulic PTO kit. Also, if the need should arise, his Service Department with factory trained technicians, genuine Case replacement parts and the required facilities is in a position to provide proper repairs in the shortest time possible.

The definitions "Right, Left, Front and Rear" as used throughout this manual relate to the tractor, hydraulic tiller and hydraulic PTO kit when the operator is seated facing forward in the normal operating position on the tractor.

NOTE The Model H70 hydraulic tiller requires the tractor to be equipped with hydraulic lift for raising.

On Model 220 and 222 tractors, the tiller is mounted on the Model H22 Sleeve Hitch. For Model 442 and 444 tractors, the Model H24 Sleeve Hitch or Model H26 3-Point Hitch with H27 Sleeve Adapter are required.

The Model H17 hydraulic PTO kit can be left on the tractor even though the tiller is removed from the hitch. This allows use of the tractor's mobile hydraulic power for driving other attachments such as pruners, hydraulic chain saws and elevators.

All front, center and rear mounted attachments can be operated on the tractor without interference with the hydraulic PTO kit.

Look for this symbol to point out important safety precautions.

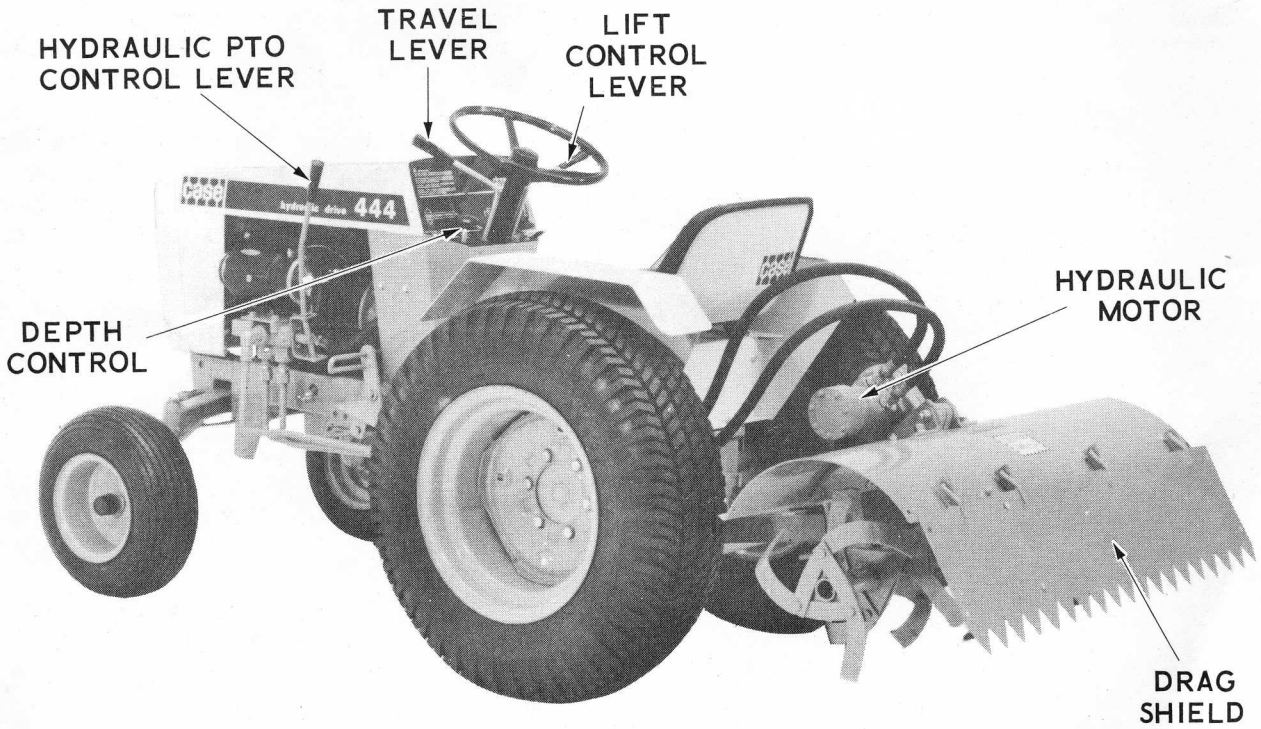

Figure 1. Case Model H17 Hydraulic Power Take Off Kit and Model H70 Hydraulic Tiller Shown on Model 444 Tractor

TILLING, GENERAL

The H70 hydraulic drive rotary tiller is an unusually versatile attachment. Complete familiarity with its capabilities and operating characteristics will enable you to secure maximum benefits for your garden. This rotary tiller has been thoroughly field-tested under a wide variety of operating conditions, and the final combination of tine geometry, tine spacing, shaft speed and control system has been proven to be the most suitable for varied field conditions. You will find this attachment highly durable and productive in your gardening activities.

A tiller is simply a mechanism for changing the condition of soil. The familiar moldboard plow performs a tilling function, but where the plow turns the soil in long folds or furrows the rotary tiller turns the soil in chunks or small particles....and therein lies the secret of the tillers' versatility. A rotary tiller can be used to perform any of the following functions:

1. Change soil physical conditions, such as in plowing, cultivating and aerating.

2. Control weeds by chopping and churning them into the soil.

3. Preparing seed beds by tilling the soil to a fine texture.

4. Mix chemicals or organic matter such as fertilizer, manure, herbicides and insecticides into the soil.

5. Manage crop residue by turning it under to form mulch.

6. Modify soil topography such as in landscaping.

7. Cultivate or level ground around trees, hedges, or in orchards.

8. Blend various soils and soil modifiers for landscaping and greenhouse work.

AERATION

For aeration purposes the tiller should simply disturb the soil surface without completely turning it over....in much the same manner as inserting a spade each few inches and loosening the soil in clumps. The surface of the soil should be left very rough, with occasional holes and deep fractures to several inches. This permits ready penetration of air and moisture with minimum danger of erosion or crusting. Previously tilled garden areas can be aerated by operating the tiller at comparatively rapid travel speeds....wherein the tiller almost "walks" with the tractor....tines should enter and exit the soil with minimum tearing and churning.

SEEDBED PREPARATION

Tilling for seedbed preparation requires a more thorough working of the soil structure to break it up into small enough particles to provide intimate contact between soil and seed. The ideal structure provides a relatively fine grained soil structure down to seed depth, with progressively coarser grained structure down to the full tilling depth. The interface between tilled and untilled strata should be rough to permit percolation of water.... a smooth, interface, like hardpan, tends to serve as a barrier to deep water and root penetration.

When preparing seedbeds it is generally necessary to use successive passes over the same area to achieve desired depth and texture....each successive pass provides a finer texture to the upper layers while adding to depth of penetration. Allow the tiller to "work" its way into the soil by keeping the tractor travel speed slow but steady, and offset your tilling path a few inches over from the previous path so that tines will till out the trail left by the chain case.

CULTIVATION AND WEED CONTROL

Set the tiller for a shallow depth of one to two inches for cultivating and weed control activities. Avoid over-pulverization of the soil since this tends to "crust" with rain or "dust" away with wind.

Several exclusive features of the CASE hydraulic drive tiller permit custom soil preparation to suit your needs:

1. Tine Rotation: Tine rotation can be instantly reversed to dislodge stones without leaving your operator's seat. Stony and trashy ground can be tilled with minimum effort.

2. Tine Reversing: Tines can be reversed on the hubs and the tiller operated with reverse rotation. This results in undercutting the soil for finer pulverizing, and part of the tilled soil will be translated to the sides of the tiller to form a hill along a plant row. See "Tine Section" for details on "reversing" the tines.

3. Removable Drag Shield: The drag shield in its normal position serves as an additional bounce shield for breaking up the soil to a finer, uniform texture. The trailing serrations even out the tilled soil to leave a smooth surface, ready for lawn seeding or garden planting. The shield is easily removable for tilling in paddies, for rough tilling or aerating as you prefer.

4. Offset Mounting: Alternate hole locations in the hitch permits offsetting the tiller 3 inches to the right. This allows more precise control of the tiller when operating along plant rows or fence lines. The offset can be quickly accomplished by removing the hitch pins, slide the tiller over the 3", then replace the pins.

5. Adjustable Size: Some soils are very hard, or dense with root structures resulting in extremely difficult tilling conditions. The left hand shaft and shield assemblies can be easily removed to reduce the tiller width to 32 inches for such difficult tilling conditions. At this reduced width the tiller will penetrate faster and will use tractor horsepower more efficiently.

   The extension can be replaced after initial surface tilling has been completed. See Figures 4 and 8 for details on how to remove the left extension assemblies.

6. Transferable Extension: The extension shields and tine sections 3 and 4 can be removed, reversed (see Figures 4, 5, 6 and 7) and reinstalled on the right hand side of the tiller. In the normal hitch location the right hand extension arrangement results in an 8 inch extension beyond the right hand side of the tractor to allow tilling under overhanging foliage. Using the alternate hole locations in the hitch results in a total of 11 inches of tiller extension for even further reach beyond the right side of the tractor.

ORCHARD CULTIVATION

Periodic cultivation between hedgerows or tree rows will provide a continuous rough surface for greatest absorption of water.

The offset mounting feature and the transferable extension feature are particularly valuable for tilling under overhanging branches without "barking" the trees with the tractor.

Several passes with the tiller under nut trees, just prior to harvesting, will provide a smooth and clean surface for easiest harvesting....the nuts can be easily swept or raked up without having to drag through weeds or grass.

LANDSCAPING

Using the rotary tiller for landscaping purposes involves tilling the soil to a very fine texture to allow leveling or removal to another area. Several passes are usually required for this operation, particularly if the old lawn or field is well compacted and threaded with a dense root structure. Reducing the tiller width to 32" will also aid in initial surface penetration.

Fill ground should be tilled just prior to the application of top soil to aid in forming an interlaced structure between top soil and fill soil....to aid in water and root penetration.

MIXING, BLENDING

Fertilizers, chemicals, manure, humus, old sawdust, compost or other growth producing soil additives can be effectively mixed into the soil by dispersing this material over the ground just prior to tilling. If the area to be tilled is tough then broadcast the additives between successive tiller passes to obtain most effective blending. Special purpose soil blends for potting, hothouse, greenhouse, or other applications can be quickly and easily developed with this tiller. Similarly, soil structure modifiers such as sand, gravel, sawdust and wood chips can be tilled into the soil to form a desired soil base.

SUMMARY

The Case H70 tiller is truly a remarkable tool with versatility limited only by the ingenuity of the operator. All tilling functions can be enhanced by exercising reasonable care when tilling in tough or rocky soils, and reasonable care in maintaining the attachment when not in use. Removing large rocks, bottles and sticks from the tilling area, and mowing or burning of excessive vegetation will greatly simplify the tillers tasks . . . similarly, keeping the hose ends capped, and painting bare metal areas will greatly lengthen the tiller life when in storage.

OPERATION

BASIC FUNCTION

The CASE H70 rotary tiller is hydraulically powered by the tractor pump which is directly coupled to the engine crankshaft. The oil from this pump is routed through a high pressure tube and hose to the tiller directional control valve. This valve controls the flow of oil to the hydraulic motor on the tiller chain case. The hydraulic motor shaft is connected to the tine shaft by a needle bearing supported drive sprocket and roller chain. From the tiller motor, the oil is routed back through the tiller control valve to the tractor valve.

FORWARD-REVERSE

When the tiller directional control valve is in the center or neutral position, the oil circulates freely without operating the tiller. When the control lever is pushed forward, the oil is directed to the hydraulic motor on the chain case to operate the tines in forward rotation. To reverse the tine rotation, simply move the control lever to the rear from the neutral position . . . this directs the oil through the hydraulic motor in the opposite direction. The control valve can be shuttled from full forward through neutral to full reverse without adverse effect . . . permits instant dislodging of rocks, roots or other objects.

LIFT LEVER

The tiller is raised and lowered with the hydraulic lift control lever. Since the tiller is a heavy attachment, hydraulic lift is necessary on the tractor.

Pull back on the lift control lever, Figure 2, to raise the tiller. To lower the tiller and apply "down pressure", push the lever ahead to the first stop position. The control valve has a centering spring which returns the lever to neutral from either the "raise" or the "lower" and "down pressure" positions.

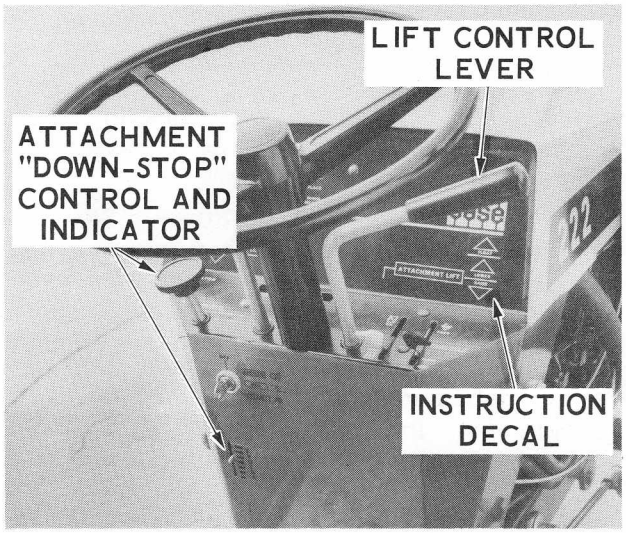

Figure 2. Tilling Depth Adjustment

Push the lever further ahead to the second stop position to provide "floating" action for the tiller. The control lever will remain in the "float" position until it is manually returned to neutral. The "float" position is recommended for tilling operations. "Down pressure" can be used to advantage when tilling to reach desired depth and then place the control lever in "float."

DEPTH ADJUSTMENT

Maximum tilling depth can be adjusted with the "Down-Stop" control on the tractor. Turning the control upward increases the operating depth. Adjusting the control downward will decrease the maximum tilling depth. The position of the "Depth Indicator" on the lower dash panel provides a visual reference to the "Down-Stop" control setting.

HYDRAULIC PTO KIT

With the tiller removed, the Hydraulic PTO Kit can be used to operate other hydraulic

driven attachments such as pruners, chain saws, elevators, hydraulic motors, etc. When purchasing such attachments, a hydraulic motor in particular, keep in mind that the pump on these tractors delivers approximately 9 G.P.M. (gallons of oil per minute) at 3600 engine R.P.M. and 2000 P.S.I. (pounds pressure per square inch).

The PTO valve does not have a relief (bypass) valve so full engine horsepower is available to the attachment. Always check with the supplier before purchasing hydraulic driven attachments to determine if a separate relief valve is required to prevent overload.

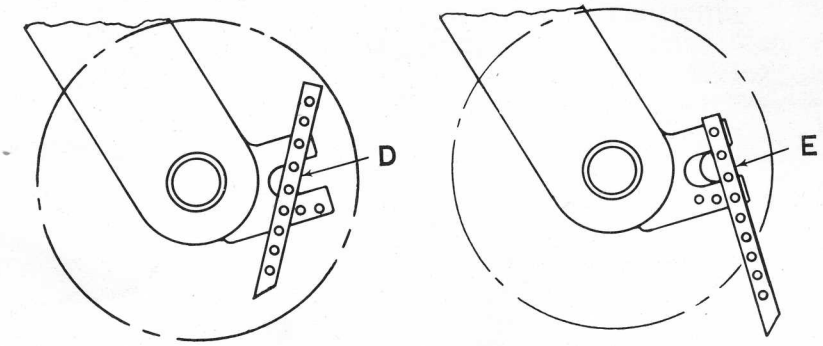

Figure 3. Applications for Retarding Chisel

RETARDING CHISEL

A retarding chisel is included with the tiller for mounting behind the chain case. This chisel aids in tractor speed control for some tilling conditions. By installing this chisel angled ahead and slightly above the cutting level of the tiller tines, it will help to prevent the tiller from driving the tractor too fast, and it will also break up the ridge under the chain case (Reference "D", Figure 3). The chisel can also be used for limiting tillage depth by setting it under the tine cutting level and angling it to the rear (Reference "E"). There is little need for the chisel when using the tiller for normal tilling, weed control and aeration or if operating the tiller in reverse rotation.

TINES

This tiller is assembled at the factory with precise placement of each tine to achieve proper radial timing and overlapping of cutting paths. Tine timing and overlapping are critical ingredients to optimum tiller production and smooth operation, therefore, removing individual tine blades is not recommended except for replacement or reverse rotation tilling purposes.

All three tines on each outer hub plate point in toward the center of the tiller. This provides a smooth, well defined edge of cut, reduces the amount of "kick out"

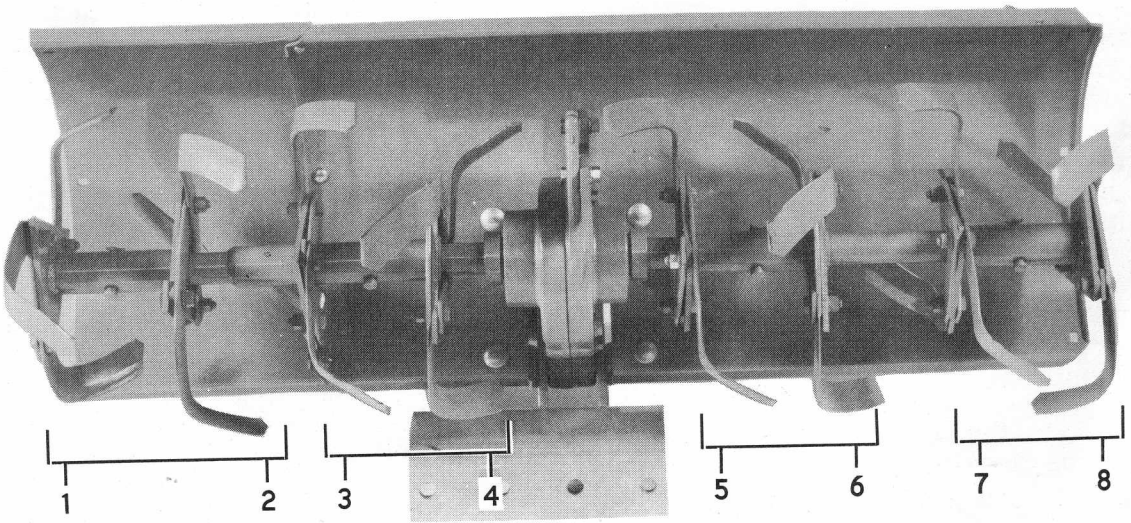

Figure 4. Tine Sections as Assembled at the Factory with Extension on Left Side to Till Out Both Wheel Tracks

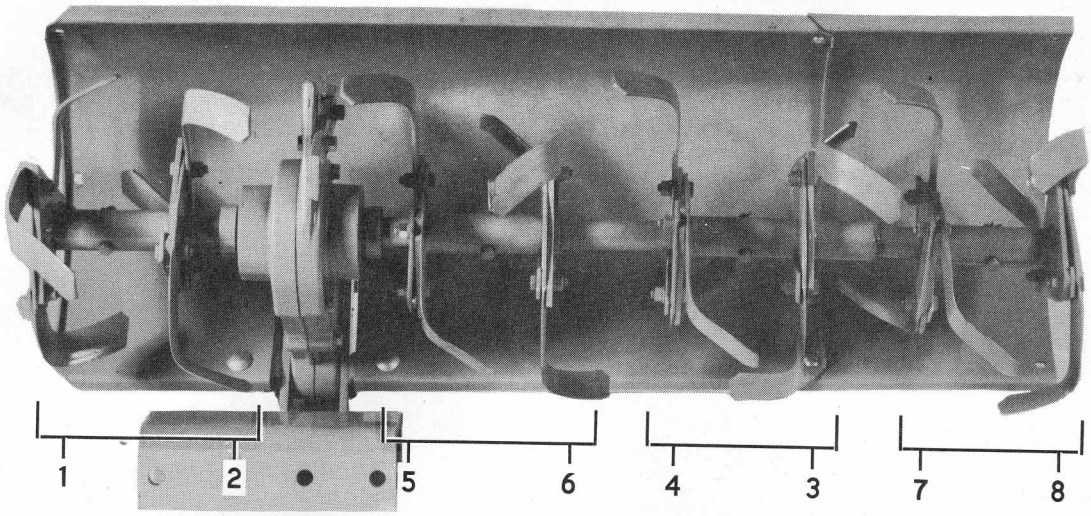

Figure 5. Tine Section 3 and 4 Converted to Right Side for Offset Tilling

of material and permits closer tilling and cultivating to plants without catching foliage on the tine ends.

The tiller, including extension, consists of four individual sections, each having six removable tines and two welded triangular mounting plates. One of the corners on each mounting plate has a "flat" (Reference "A", Figure 6) where an identification number is stamped. With the extension on the left side as shipped from the factory the mounting plates from left to right are numbered in sequence "1" through "8" as shown in Figure 4. Operating in this manner results in 41" width and both wheel tracks will be removed if the tiller is centered on the hitch.

If required, tine section "3" and "4" can be removed, converted and installed as the center section on the right side as shown in Figure 5 for offset tilling. Remove, reverse and reassemble the tines as illustrated in Figure 6. When returning this section to left side, reassemble the tines as shown in Figure 7.

If fine mulching and side hilling are desired, the tines can be unbolted from their mounting plates and reinstalled so they will cut with reverse rotation. When reversing the tine mountings, interchange the tines between mounting plates "1" and "8" so the end tines will all point inward. For all other mounting plates, arrange the tines for maximum distance between them and each plate should have one "R" with two "L" tines, or two "R" with one "L" . . . . do not install three "R's" or three "L's" on the same mounting plate. Use Figure 4 for reference when converting back to "forward rotation."

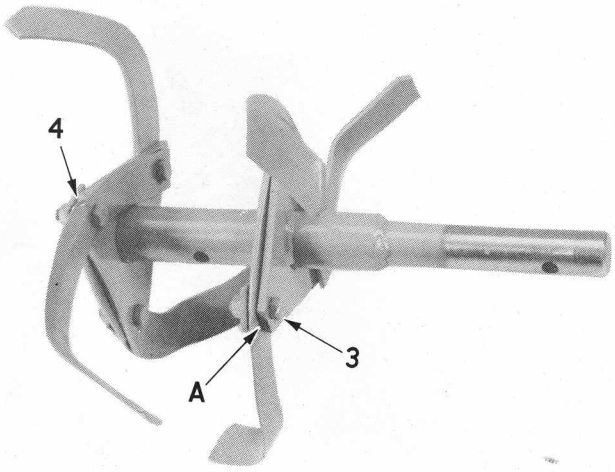

Figure 6. Sections 3 and 4 Illustrating Tines Converted for Offset Mounting to Right Side of Basic Tiller

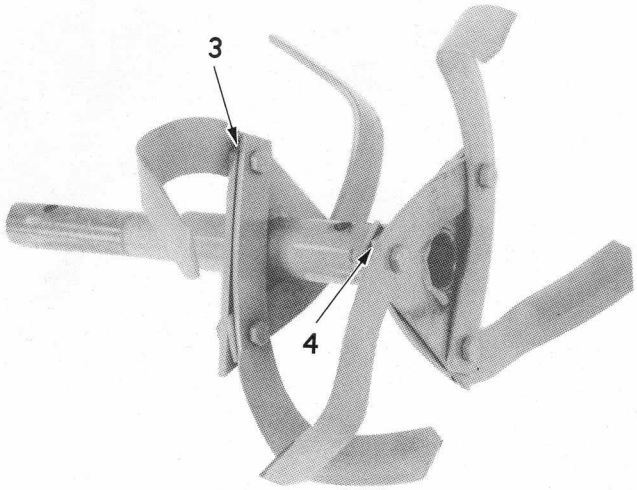

Figure 7. Sections 3 and 4 with Tines as Originally Assembled for Mounting on Left Side of the Tiller Chain Case

TILLER WIDTHS

Figures 4 and 5 illustrate the tiller at full 41" cutting width. Very tough tilling conditions, or narrow crop row widths will often require reducing the tiller width from the maximum 41". Individual tine sections can be removed or shifted, resulting in a variety of combinations.

1. 32" Tilling Width - Remove tine section "3 and 4" and relocate section "1 and 2" next to left side of chain case as shown in Figure 8. This reduces the tiller to a basic 32" cutting width with the right wheel track tilled out.

2. 19" Tilling Width - Remove both tine sections from either side of the chain case. This results in 19" of cutting width and tills out the wheel track on whichever side the remaining two sections are mounted.

3. 27" Tilling Width - Remove section "1 and 2" altogether. Convert section "3 and 4" as shown in Figure 5 and relocate to the right side of the chain case using Figure 4 as a guide. This results in 27" of cutting width with tine section "7 and 8" offset.

NOTE This is an ideal width adjustment where the job calls for offset tilling and conditions are too severe for full 41" cutting width. In addition to obtaining 27" of cutting width with this tine arrangement there will not be an untilled strip left under the chain case.

4. Several other "spacing" combinations can be arranged to match your gardening requirements. Always replace worn tines with genuine CASE replacement parts.

IMPORTANT Use the two bolts furnished with the Sleeve Hitch or 3-Point Hitch Sleeve Adaptor to stabilize the tiller whenever it is remounted or repositioned.

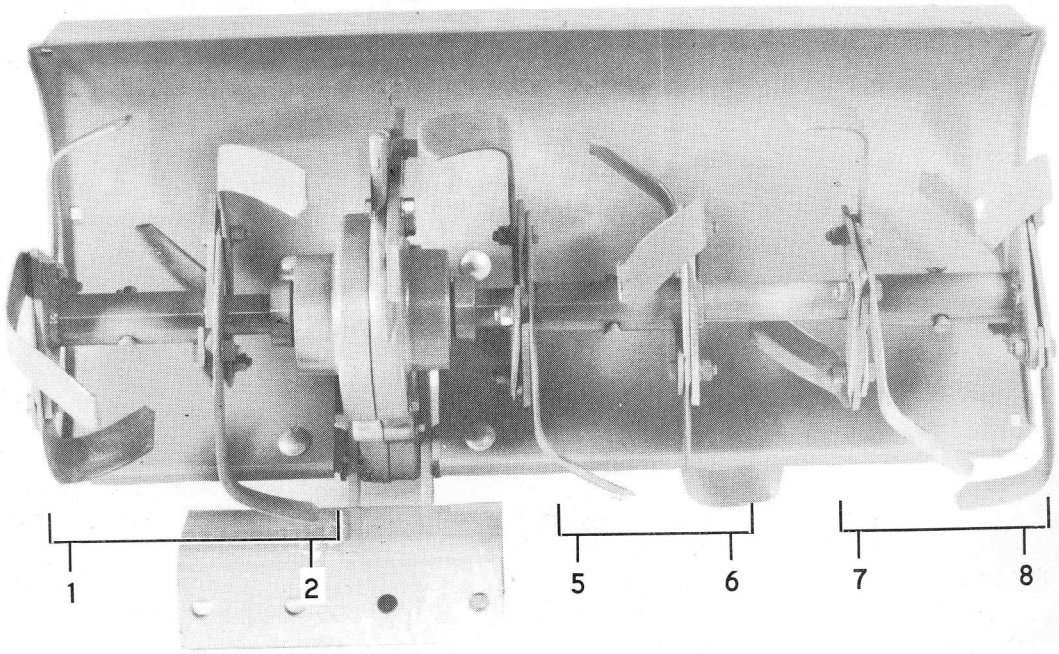

Figure 8. Tiller Reduced to Basic 32" Width (Tine Section 3 and 4 is Removed)

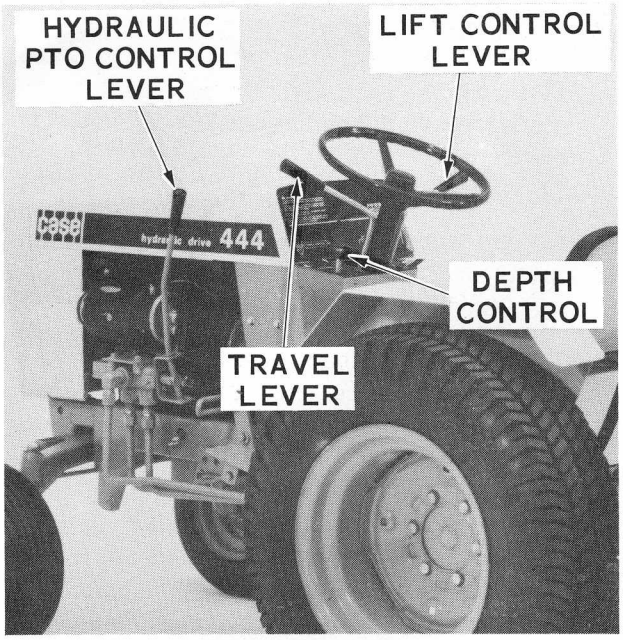

Figure 9. Operating Controls

A rotary tiller, under full load, consumes most of the available engine horsepower, therefore, always operate the tiller at high engine RPM's to provide high horsepower and adequate engine cooling. Lugging the engine down to low RPM's results in inadequate cooling and additional loss of horsepower through excessive internal heat. High engine RPM's also provide high tine speeds for most effective tilling.

To operate the tiller in "forward" rotation, shift the hydraulic PTO lever to the LEFT of the NEUTRAL (center) position and push it ahead. When operating the tiller in "reverse" or to dislodge stones or sticks, shift the lever the RIGHT of the NEUTRAL (center) position and pull it to the rear.

For most tilling conditions, leave the transaxle shift in LOW range and the tractor travel lever in neutral. This permits the tiller to push the tractor at its own desired speed, and transmits all of the engine horsepower into the ground where it is needed. Occasionally applying the brake or nudging the control lever will compensate for alternate soft and hard ground conditions. To stop tiller operation, move the hydraulic PTO control lever to neutral.

Under tough tilling conditions, best results will be obtained by allowing the tiller to make initial surface penetration to a shallow depth on the first pass, then increase tilling depth with successive passes until desired depth is reached.

In soft ground or if operating on slopes and inclines, it may be helpful to add weight to the front end of the tractor. Cast iron weights as well as a "Front Counterweight Mounting Kit" are available for your tractor. The same cast iron weights can also be mounted on the tractor rear wheels.

CAUTION Do not back the tractor with the tiller in motion or with the drag shield in contact with the ground. DAMAGE TO THE SHIELD CAN RESULT.

SAFETY PRECAUTIONS

1. Before starting the engine, be sure all operating controls are in NEUTRAL and the tractor is on a flat, level surface.
2. Never operate any of the controls from any position other than seated in the operator's seat.
3. Be extra careful when going up or down steep grades.
4. Never leave the engine running while the tractor is unattended.
5. Never dismount from a tractor when it is in motion.
6. Never permit persons other than the operator to ride on the tractor.
7. Do not oil, grease or make adjustments when the engine is running.
8. Do not wear loose fitting clothing which may catch in the moving parts.

9. Keep hands and feet well away from the tines while either the tiller or engine are running.

10. Always lower the tiller to ground level when parking the tractor.

11. REMEMBER A CAREFUL OPERATOR IS ALWAYS THE BEST INSURANCE AGAINST AN ACCIDENT.

12. Always inspect tiller and tractor for damage after hitting a solid object.

MAINTENANCE

NOTE Before operating the tiller for the first time each season and again after the first few hours of operation, recheck all bolts, retainers and hydraulic connections to be sure they are properly secured.

HYDRAULIC OIL LEVEL -

Check the oil level in the tractor hydraulic reservoir. Maintain oil level between two and three inches from the top of the filler opening. The reservoir is located just inside the front of the tractor hood. Refer to the tractor Operator's Instruction Manual for the proper oil specifications.

TILLER CHAIN HOUSING -

The chain housing is properly filled with lubricant at the factory and will normally not require further servicing. An inspection plug is located on the upper right side of the chain housing and lubricant can be added at this point if necessary. Check the chain housing for lubricant at the start of each season or if there should be any evidence of leakage.

ENGINE AND HEAT EXCHANGER -

Tilling is one of the more demanding operations which your tractor will be used for. Consequently more frequent preventive maintenance is necessary to maintain high engine and hydraulic system efficiency. The following daily checks will help to keep your tractor performance level high.

a. Air Cleaner - Daily and more often under severe conditions, remove and carefully tap on a flat surface to dislodge dust and other foreign particles. Replace the element when there is evidence that it has become saturated with dust which will not tap out. A precleaner (part number KO237421) is available and will extend the life of the air cleaner element.

b. Front Air Intake Screen - Check and brush off all dirt and debris.

c. Heat Exchanger - Check and brush or blow all dirt or debris away from the grille and cooling fins.

d. Engine Oil - Check level every eight (or oftener when indicated) hours of operation. Keep oil level between marks on gauge. Do not overfill. Change the engine oil every twenty-five hours or as conditions warrant.

e. Ignition - At the beginning of each season and as conditions warrant, check condition of plug wire, inspect for cracks, dirt and connection at spark plug. If engine condition warrants point inspection; inspect, clean, regap or replace. Upon breaker point replacement, replace condenser and reset engine timing in accordance with the tractor Operator's Instruction Manual. Inspect, clean, regap or replace the spark plug if needed.

f. Fuel System - Use only a good grade of REGULAR gasoline. At the end of each season or if the tractor will be out of use for more than a month, run all gas out of the engine to prevent fuel decomposition and subsequent plugging of the carburetor fuel jets. Keep the fuel-air mixture properly adjusted as covered in the tractor Operator's Instruction Manual. Check and clean filter screen in the fuel tank as conditions warrant.

g. Upon completion of a period of tilling, allow the engine to idle for several minutes to cool-down before turning it off.

REMOVAL AND STORAGE

When dismounting the tiller, it is not necessary to remove the control valve or hydraulic lines leading to the rear of the tractor since these items will not interfere with other mounted attachments. To prevent dirt, moisture or damaging foreign material from entering the tiller valve and hydraulic motor, the exposed ports and line ends must be sealed off. The two hoses between the tiller valve lines and the hydraulic motor are ideal for this purpose. Use one of the two hoses removed with the tiller to join the two line ends and use the other hose to join the two hydraulic motor ports. This procedure can be facilitated by disconnecting alternate hose ends at the valve and motor when removing tiller for storage.

Check the condition of all painted surfaces and touch up as necessary to prevent rusting. CASE touch-up enamel is available through your Compact Tractor Dealer. Clean off the tines, hubs, and shaft and apply a coat of heavy oil or grease. Store in a dry sheltered location.

CAUTION DO NOT CAP OR BLOCK OFF THE ENDS OF THE OIL LINES UNDER ANY CIRCUMSTANCES. THIS WILL RESULT IN A CLOSED CIRCUIT AND CAUSE SERIOUS DAMAGE TO THE HYDRAULIC PUMP AND DRIVE COUPLING IF THE PTO VALVE LEVER IS INADVERTENTLY MOVED.

INSTALLATION

NOTE The Model H17 Hydraulic PTO Kit is recommended for dealer installation only.

A. The Model H17 Hydraulic PTO Kit is specifically designed for mounting and operating on CASE Model 220, 222, 442 and 444 Compact Tractors, serial number 9646800 and after. This PTO Kit can be mounted on tractors between serial numbers 9641000 and 9646800 by ordering tube, part number C14588 as a service part, for installation between the PTO valve and tractor valve. If the PTO Kit is installed on Model 220, 222, 442 and 444 tractors prior to serial number 9641000, valve tube, part number C14588 and pump tube, part number C14585 are required. If mounting the PTO Kit on Model 444 tractors prior to serial number 9646800, adaptor bracket, part number C14520 is also required.

B. This tiller has been preassembled to the furthest extent practical in order to minimize your installation time. As a result of shipping vibrations and initial operation, bolts and hydraulic connections will sometimes loosen. Check all connections carefully during initial installation and operation and again after the first few hours of use.

C. For tiller application, your tractor must be equipped with HYDRAULIC LIFT.

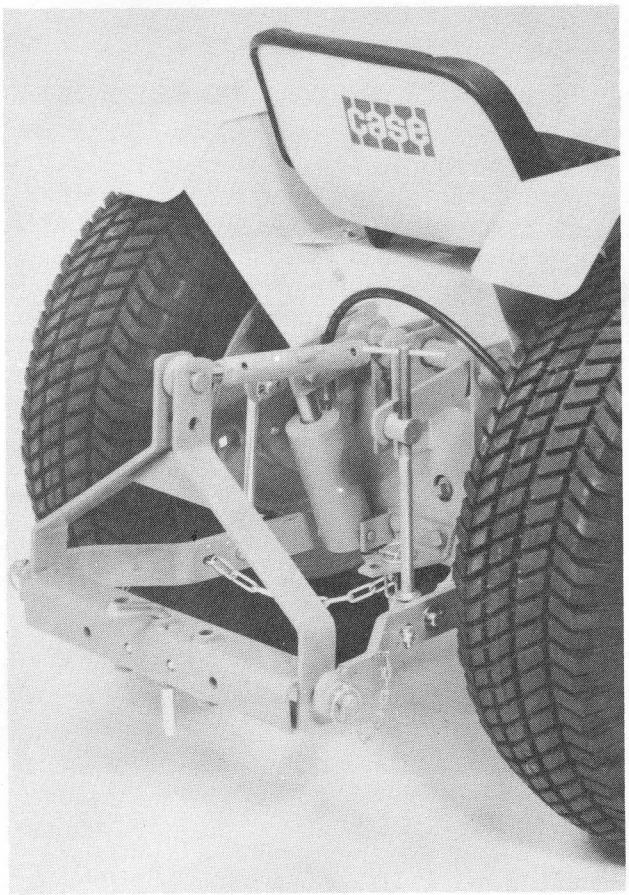

Figure 10. Model H26 3-Point Hitch with Model H27 Sleeve Adaptor Attached

D. The tiller is designed to mount on either the Model H22 or H24 Sleeve Hitches, or will mount on the Model H26 3-Point Hitch with the Model H27 or F27 Sleeve Adaptor. The Model H22 Sleeve Hitch for 220 and 222 tractors is shown in Figure 15. The Model H26 3-Point Hitch and Model H27 Sleeve Adaptor 442 and 444 tractors are illustrated in Figure 10.

E. A Model F18 Front Counterweight Mounting Kit is available for tractors prior to serial number 9646800. The Model H18 Front Counterweight Kit is available for tractors serial number 9646800 and after. Either the Model D8 Rear Wheel Weights for Model 220 and 222 Tractors or Model D10 Rear Wheel Weights for Model 442 and 444 tractors can be used. These weights can then be later transferred to the rear wheels of the tractor if desired.

F. Locate the tractor on a clean and level surface. Lay the components of the carton on a clean surface and leave the hoses, tubes and hydraulic fittings plugged until they are installed to keep dirt or foreign material from entering.

G. Terms "Right, Left, Front and Rear" as used in this manual are related to the tractor and attachments as the operator sits in the seat.

H. THE NUMERICAL REFERENCES ON THE ILLUSTRATIONS CORRESPOND TO THE INSTALLATION INSTRUCTION PARAGRAPH NUMBERS.

INSTALLING THE MODEL H17 OR J17 HYDRAULIC PTO KIT

1. Tractors above serial number 9646800 - Remove the battery and battery tray.

2. Place a clean pan under the tractor to prevent oil from dripping on the floor.

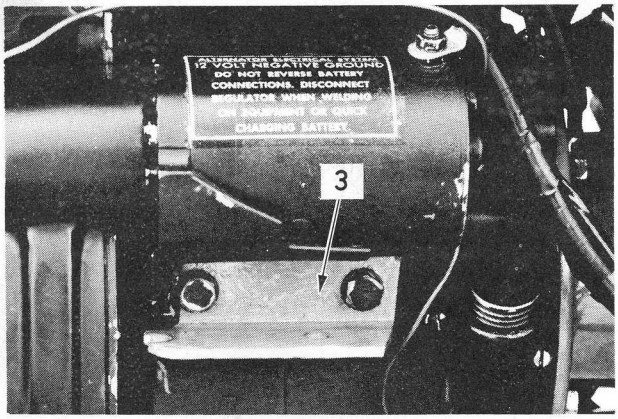

Figure 9. Optional PTO Valve Adaptor Bracket for Model 444 Tractor prior to S/N 9646800 Only

3. Model 444 tractors below serial number 9646800 require the optional PTO Valve Adaptor Bracket, part number C14520. See Figure 11. Loosen the front bolt and remove the rear bolt on the starter mounting. Install the PTO valve adaptor bracket as illustrated.

4. Remove the original pressure line between the tractor pump and travel valve. Tractors above serial number 9641000 also remove the fitting from the pump.

5. Loosen the generator mounting bolts and remove the belt from the generator pulley.

6. Pivot the generator away from the engine for clearance and secure the PTO valve mounting plate to the underside of the generator bracket with the two preassembled 3/8" bolts, nuts and lockwashers. The nuts and lockwashers are easier to install if they are placed above the generator bracket. Install and tighten the generator belt.

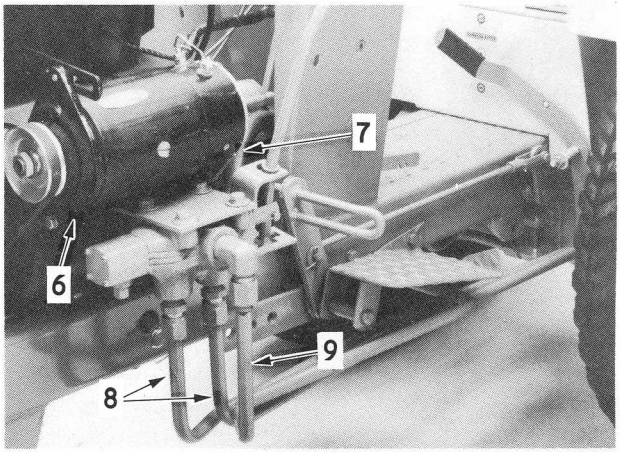

Figure 12. Installing the Hydraulic PTO Kit

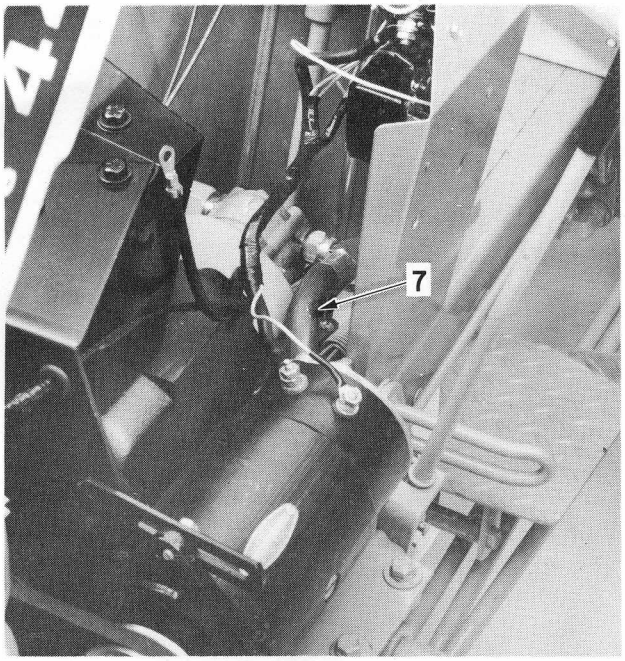

Figure 13. Installing the Hose Between PTO Valve and Tractor Pump

7. See Figures 12 and 13. Secure the straight end of the hose to elbow at the inside of the PTO valve and connect the elbow end to the pump.

NOTE Tractors prior to serial number 9641000 - Install the optional pump tube, part number C14585.

8. Secure the two long tubes to the bottom fittings on the PTO valve. The tube with the formed offset goes to the front valve port and is located to the inside as shown in Figure 12.

9. Connect one end of the shortest tube to the tractor travel valve and secure the other end to outside elbow on the PTO valve.

NOTE Tractors prior to serial number 9646800 - Install optional valve tube, part number C14588.

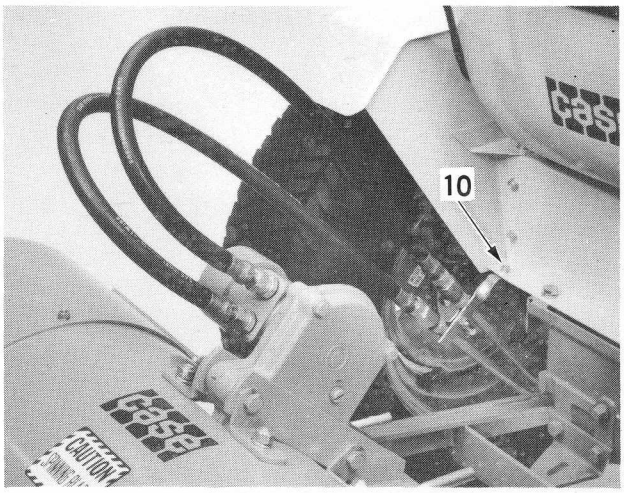

Figure 14. Installing the Tube Clamp

10. See Figure 14. Clamp the PTO tubes to the rear of the seat support using the preassembled bolts, nuts and lockwashers.

IMPORTANT Check all bolts and hydraulic connections for tightness.

11. After careful straining, any oil which may have dripped in the pan can be poured back into the tractor hydraulic reservoir.

INSTALLING THE MODEL H70 TILLER

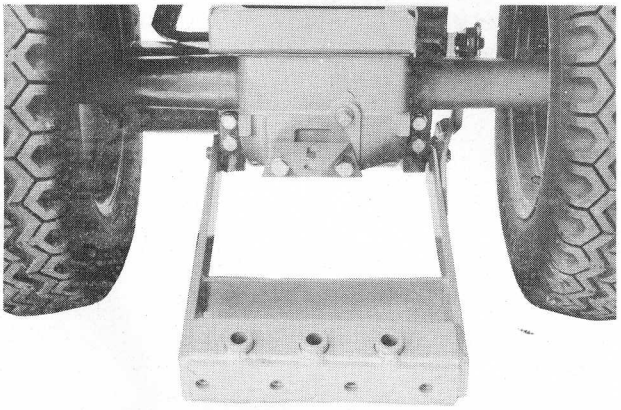

Figure 15. Model H22 Sleeve Hitch Mounted on Model 222 Tractor

NOTE If the sleeve or 3-point hitch with sleeve adaptor attachments are not already on the tractor, install it at this point. See Figure 15. Installation Instructions are provided with the hitches.

1. Position the tiller on the hitch and anchor with the two "L" shaped anchor pins.

NOTE One anchor pin is supplied with the tiller and the other comes with the sleeve hitch or 3-point hitch sleeve adaptor.

2. Tighten the "solid" (longer) end of the two female-female adaptor unions to the fittings on the PTO tubes. See Figure 16.

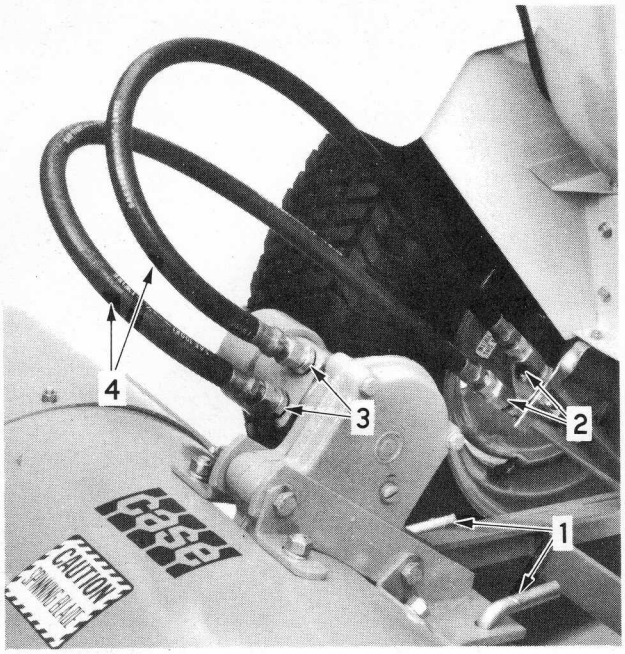

Figure 16. Installing the Tiller to the Hitch and PTO Kit

3. Connect the male end of the two female-male adaptor unions to the hydraulic motor ports.

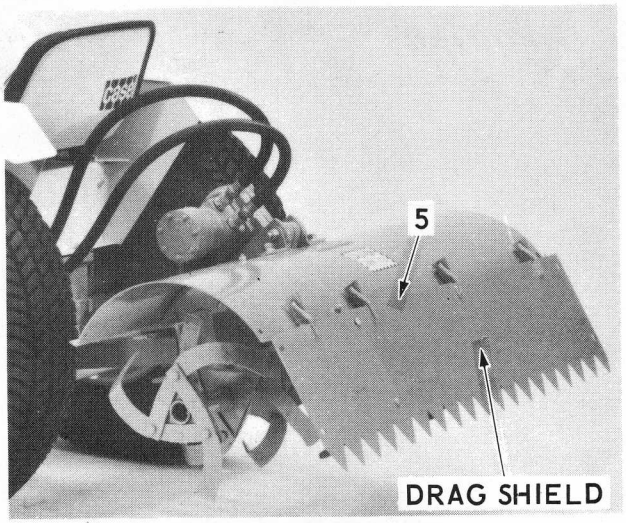

Figure 17. Tiller Assembled to Sleeve Hitch and Hydraulic PTO Kit

4. Install the two tiller hoses as shown in Figure 16 by connecting the upper motor port to the upper PTO tube and joining the lower motor port with the lower PTO tube.

5. Connect the drag shields to the mounting lugs on the tine shields as shown in Figure 17 and secure with the two plain washers and cotter pins.

6. Start the tractor and raise the tiller off the floor and check for proper tine rotation. When the PTO valve lever is moved ahead, the tines should turn in forward rotation. Should rotation be opposite, reverse the hoses on the hydraulic motor fittings.

7. Check all hydraulic connections for leaks and all valve and tine mounting bolts for tightness.

8. Check the oil level in the tractor hydraulic reservoir. Add, as necessary, to bring between 2 and 3 inches from the top of the filler opening. Refer to Tractor Operator's Manual for proper oil specifications.

NOTE Two stabilizer bolts are supplied with the Sleeve Hitch and 3-Point Hitch Sleeve Adaptor. With the tiller in desired position, tighten the bolts through the hitch and against the tiller mounting bracket.

NOTE

The J I Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Figure 18. Model H70 Tiller on Model 444 Tractor shown with recommended Tire Chains, Rear Wheel Weights and Front Counterweights.

NOTE

Front Counterweights and Tire Chains will greatly improve tractor stability and tilling efficiency.

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