NUTRI-TILLER 5310 (Pull Type)
Strip-Till Applicator

Operator's Manual

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NOTE: disc sealr, nutri-till'r, **HCS** shanks, berm build'r , berm condition'r , uni-seal'r , wagon-mate , and yield-till system are trademarks and registered products of **CNH America LLC.**

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ROW MARKER FOLD

Be sure the wings are in the unfolded position. Disconnect the rod end of each **Row Marker** cylinder. Block the cylinder so the piston rod is free to move its full stroke. Hydraulically extend and retract the tractor hydraulic lever to remove the air in the system until the cylinders operate smoothly. Reconnect the rod ends of the cylinders to the **Row Markers**. Make certain no one is near the machine and you have adequate space to operate the **Row Markers** safely.

> ⚠ **WARNING:** Never operate **Row Markers** with wings folded.
> Before folding or unfolding **Row Markers**, always make certain the entire area is completely clear. Take extreme care during field operation, allowing sufficient room for **Row Markers** when extended.

ROW MARKER SEQUENCING

NOTE: Before operating **Row Markers** for the first time, refer to Assembly Section and check to make sure that alternator valve is connected properly.

1. The alternator valve allows both **Row Markers** to be controlled with a single hydraulic circuit. The **Row Marker** hydraulic lines should be connected to the tractor so that the **Row Markers** are unfolded to the operating position by moving the control lever forward.

2. To put a **Row Marker** into operation, move the tractor hydraulic control lever forward. One **Row Marker** will unfold to the operating position. Pulling back the control lever will fold this **Row Marker**. The next time the control lever is moved forward, the opposite **Row Marker** will unfold.

NOTE: It will often be necessary to operate the **Row Markers** out of sequence. When first entering a field, for example, the first **Row Marker** desired may not be the next in sequence. The **Row Markers** need not be completely cycled to alter sequence. Simply activate the control lever until the **Row Marker** starts to unfold. Pull back on the lever to fold the **Row Marker**, and then move the control lever forward to activate the opposite **Row Marker**.

MARKER SPEED ADJUSTMENT

The sequence valve features two flow adjustments so the rate of raising and lowering the **Row Markers** can be set independently. The flow adjustments are clearly identified on the sequence valve body. Screw in the adjustment marked "Raise or Lower" to reduce the **Row Marker** speed in the desired direction. Adjust the **Row Markers** to operate just fast enough to make comfortable turns. Excessive folding and unfolding speed will cause extra wear and tear on the equipment.

BLEEDING THE REPHASING SERIES SYSTEM

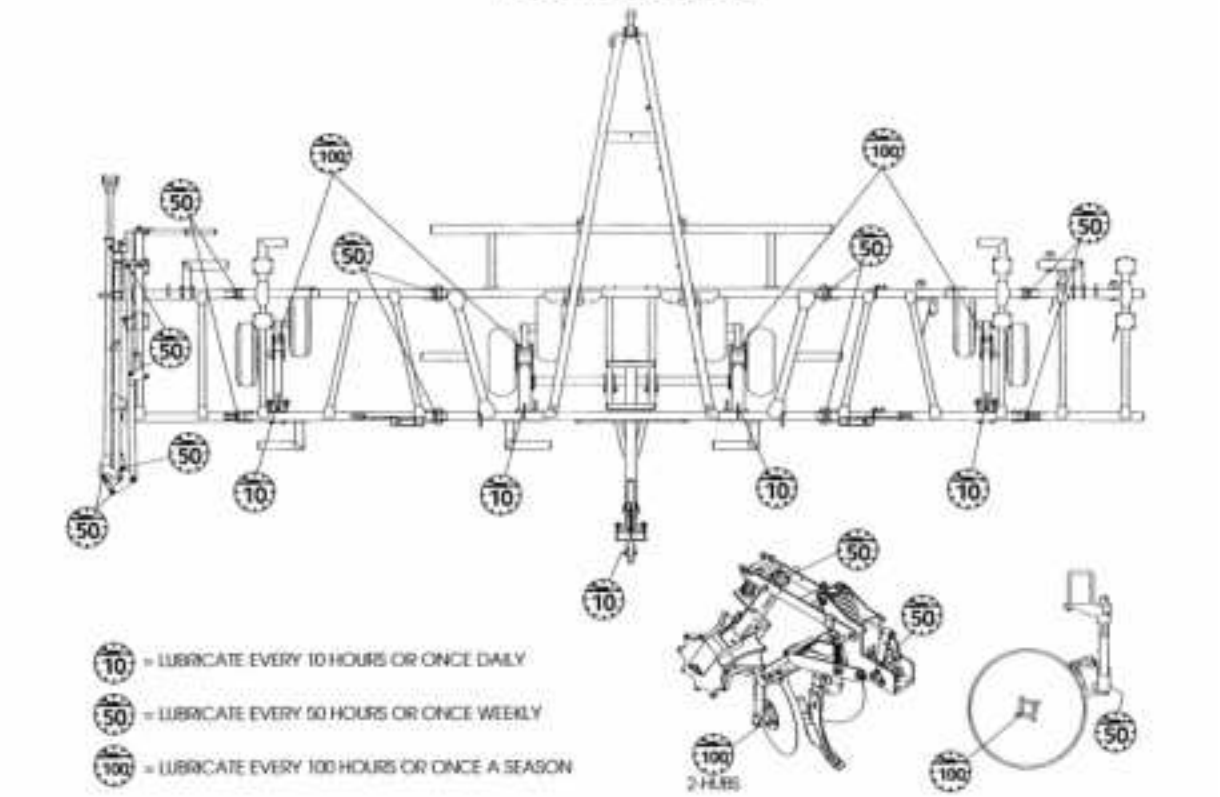
Cylinders can get out of phase (retracted length on one cylinder 1/4 - 1/2 inch (6 – 13 mm) longer or shorter than others) for a number of reasons:

1. The system is cycled many times without fully extending the cylinders. Raising the unit completely out of the ground for turning at the field ends is usually all that is necessary to keep the system synchronized.

2. If the model 5310 NUTRI-TILLER unit is allowed to sit in the raised position for a period of time, oil can leak by the piston thus allowing the cylinder to get out of phase.

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MAINTENANCE SECTION
LUBRICATION



GS06J016

(SEE NOTE "A")

Always lubricate your implement thoroughly before taking it to the field.

Always lower your implement until all shank points rest on the ground and stop the tractor engine prior to lubricating the machine.

Grease fittings are provided at all points indicated in the illustration above.

Be sure all fittings are free from dirt and paint so the lubricant is certain to enter the proper areas.

If any grease fittings are damaged or missing, replace them immediately. Clean the fittings thoroughly before using the grease gun.

Use a lubricating gun and Case 251H EP No. 2 multi-purpose lithium grease at the hourly intervals indicated on the symbols.

WHEEL AND MARKER HUBS: Clean and inspect bearings before the season and repack with wheel bearing grease.

COULTERS ARM: Lubricate grease zerks on individual coulter arms every 50 hours or once each week.

COULTER HUB: Lubricate grease zerk on individual coulter hubs every 100 hours or once a season. In muddy conditions coulter hubs should be pumped with grease to purge out dirt.

NOTE "A": Approximately 10 pumps from the grease gun will adequately lubricate hubs. (Some cases may vary.)

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The following text describes procedure for assembling the applicator. Place all bundles where they will be convenient. Part numbers are stamped on each bag. It may be helpful to open the bags for easier identification, but do not mix parts from different bags, and keep the bag number with the bundle of loose parts. Study and refer to the Assembly Drawings in this manual and proceed with the step-by-step instructions. All bolts should be torqued to the recommended torque shown on bolt torque chart on inside of cover unless otherwise specified.

5310 NUTRI-TILLER FRAME

NOTE: Crane or holster lift truck with a capacity of 1,000 lbs. (454 kg) minimum should be used in assembly of unit.

Refer to drawing and reference numbers on page 38.

1) Place main frame (#4) on stands approximately 36 inch high on level surface.

2) Place lift wheel spindle assemblies (#20) on page 38 onto main frame using the 1-5/8 inch (41 mm) pins (#17). Place the 5/8 x 2 inch (16 x 51 mm) bolt (#18) through the pin and tighten 5/8 inch (16 mm) nut (#19).

3) Install torque tube (#8) onto the lift wheel spindles using the 7/8 x 3 inch (22 x 76 mm) bolts (#1), shims (#14), and 7/8 inch nuts (#2). Torque to 450 lb-ft (610 Nm) and double nut

4) For tandem lift wheel assembly, install hub and spindle assemblies (#12) into walking axle (#9) and secure using 1/2 x 4 inch (13 x 102 mm) bolt (#10) and 1/2 inch (13 mm) lock nut (#13). See pages 76 - 78 for spindle location.

5) Mount the tire and wheel assembly (#11) to lift wheel spindle assemblies and torque wheel bolts to 90 - 100 lb-ft (122 – 136 Nm). **Re-torque after 1 hour of use.**

6) Place pull frame (#6) on top of the main frame and align the holes. Bolt the pull frame to the frame using the 7/8 x 3 inch (22 x 76 mm) bolts (#1) and 7/8 inch (22 mm) nuts (#2).

IMPORTANT: Torque 7/8 inch (22 mm) bolts of pull frame to main frame to 450 lb-ft (610 Nm) and double nut.

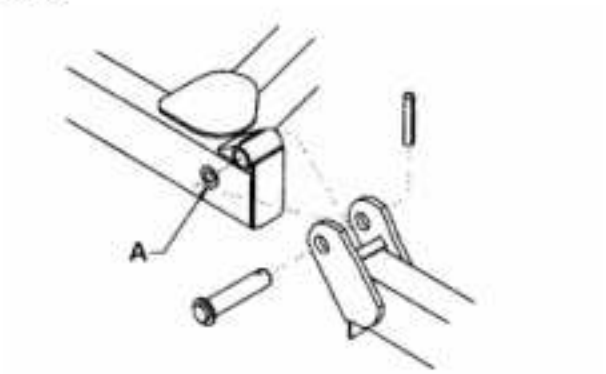
7) Place front coulter bar (#15) under pull frame and attach to main frame and pull frame using 3/4 inch (19 mm) U-bolts (#3) and nuts (#5) and 3/4 x 2-1/2 inch (19 x 64 mm) bolts (#16) and nuts (#5). Torque 3/4 inch (19 mm) hardware to 300 lb-ft (407 Nm)

8) Install hose and gauge stand (#7) into holder on pull frame with 1-1/4 inch (32 mm) machine bushing (#21).

9) Refer to page 41 for rear hitch. Mount rear wagon hitch (#1) to the front bar of the main frame using the 1-1/4 inch (32 mm) pins (#3), 1-1/4 inch (32 mm) machine bushings (#5), and cotter pins (#4), and bushings (#2) from the rear wagon hitch. Align the hole on the hitch with the slotted mounts on the torque tube and re-assemble bolts, washers, nuts, and bushings.

10) Refer to page 43 for wings. Install the inner wings (#1) by positioning onto main frame. Be sure to support the wings on the outside for stability. Place the 1-5/8 inch (41 mm) machine bushing (#2) **between the front of the main frame and the front wing hinge flat only** (shown below). Install the 1-5/8 inch (41 mm) hinge pins (#4) through the hinge flats and secure with 7/16 x 2-1/2 inch (11 x 64 mm) roll pin (#3).

11) Install the outer wings (#23) onto the inner wing using the 1-1/4 inch (32 mm) hinge pins (#12) and 1/4 x 1-1/2 inch (6 x 38 mm) cotter (#13). Attach outer wing shims (#20 and #21) to the outer wing (#23) with the 1/2 x 1-1/2 inch (13 x 38 mm) bolt (#22) and 1/2 inch (13 mm) nut (#19) to level outer wing with the inner wing.



A. Machine Bushing

12) **For 8 Row Units:**
Install left and right hand cylinder lugs (#16, page 35) on the front tube of the main frame using two 3/4 inch (19 mm) U-bolts (#14) and four 3/4 inch (19 mm) lock nuts (#12) for each side. Attach the lug strap to the main frame gusset using 5/8 x 2 inch (16 x 51 mm bolt (#10) and 5/8inch (16 mm) lock nut on each side.

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