



2N-24 & 2N-30 Drills

Hydraulic Depth Stop Update

Used with:

- 24' and 30" Folding No-Till Drill
- 20 Series Folding Drill



When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

Before You Start

These update instructions provide information on how to modify the 2N-24 and 2N-30 drills. These modifications will improve the performance, reliability and/or safety of the original equipment. A detailed Operator's Manual was supplied with the main unit when it was purchased. Refer to the Operator's Manual for information on safety, operation, adjustment, troubleshooting, and maintenance pertaining to this equipment (some of these sections do not apply to all equipment).

A separate Parts Manual for replacement parts can be purchased from your dealer. Have model and serial numbers handy when placing an order.

Manual Part Numbers:

- Folding No-Till Operator's Manual 196-126M
- Folding No-Till Parts Manual 196-126P
- 20 Series Folding Drill Operator's Manual 196-164M
- 20 Series Folding Drill Parts Manual 196-164P

General Information

These update instructions apply to the 2N-24 and 2N-30 Depth Stops listed below:

196-189A 2SNT DEPTH STOP UPDATE KIT

Starting on page 4 is a detailed listing of parts included in these kits. Use this list as a checklist to inventory parts received.

Instructions

The existing hydraulic depth stop valve is being upgraded. With the new valve the coupler depth is adjusted by means of a knob on the valve assembly (remove bushings before operation).



CAUTION!

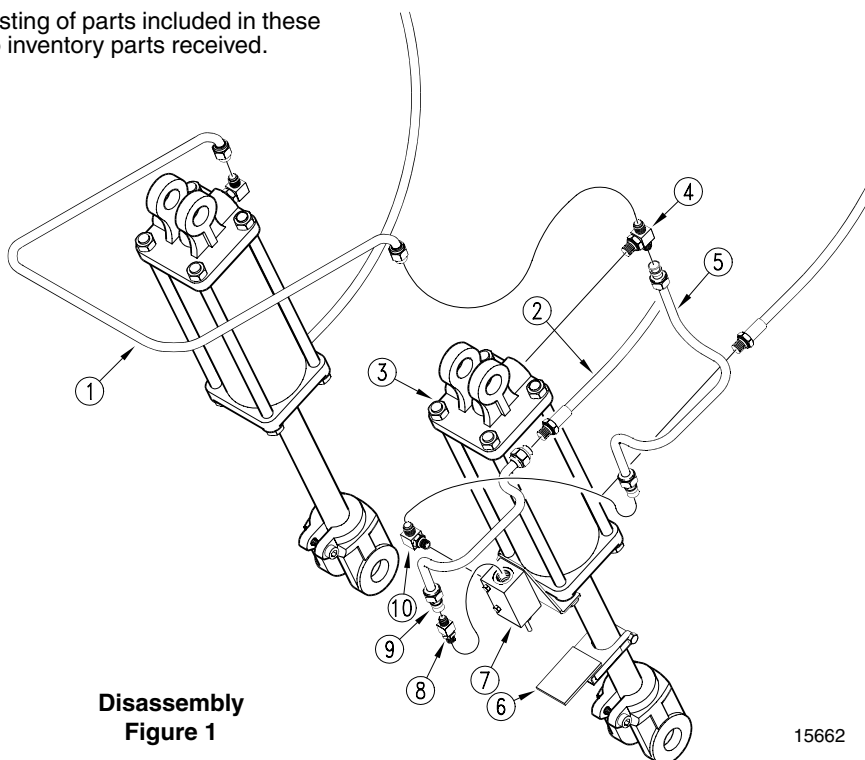
Escaping fluid under pressure can have sufficient force to penetrate the skin. Check all hydraulic lines and hoses before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.

IMPORTANT: When using sealant on pipe threads the friction between the threads is reduced; therefore, be certain not to over tighten which may cause damage to a valve, cylinder port or fitting.

Disassembly of Existing Depth Stop

Refer to Figure 1:

With the drill attached to the tractor, unfold and lower the drill into field position and relieve the cylinder pressure on the field lift cylinders. Remove the hard line (#1) and disconnect the hose (#2) from the rod end of the left hand cylinder which the depth stop valve is attached to. Unpin and remove the cylinder (#3). Remove and discard parts 4 through 10 from the cylinder.



Disassembly
Figure 1

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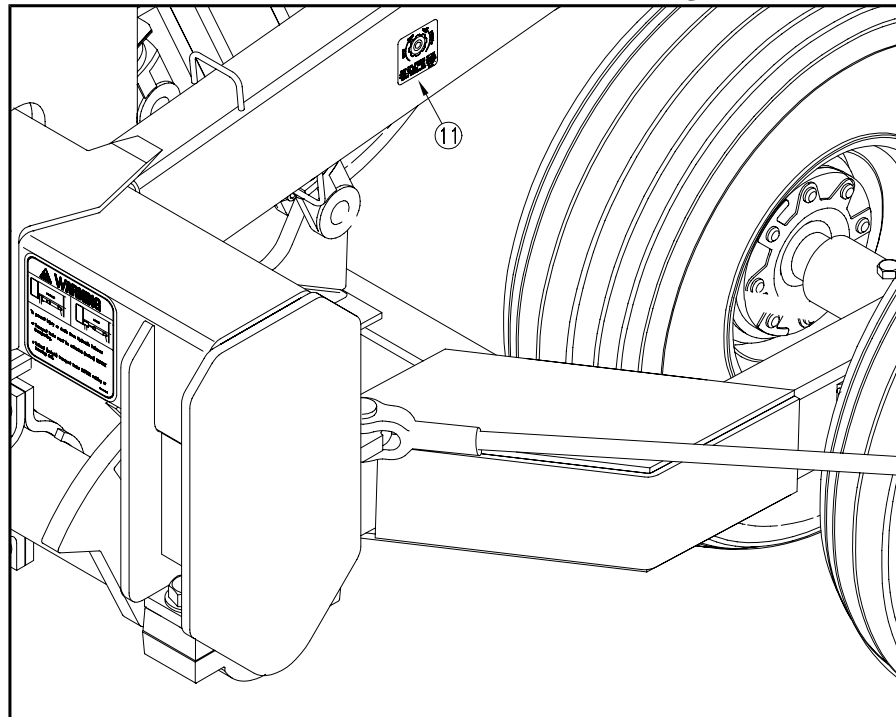
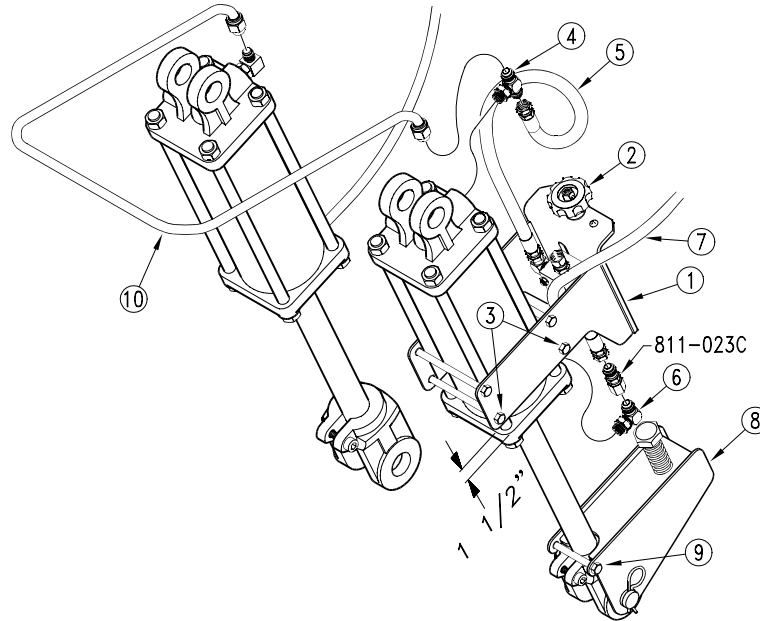
Assembly Instructions

Depth Stop Assembly

Refer to Figure 2:

Torque the cylinder rod bolts to their proper settings. Install the valve mount assembly (#1) over the cylinder body on the port side. The plastic knob (#2) on the assembly must be installed in the direction of the cylinder base. The assembly is held in place with four 3/8" x 5 3/4" bolts (#3), 3/8" lock washers and 3/8" nuts, locating it at the specified distance from the head cap (1 1/2"). Install the tee (#4) into the base end of the cylinder. Loop the 30" hose (#5) which is attached to the valve assembly and install it onto the tee (#4) at the cylinder base. Install the 3/4" o-ring x 3/4" male jic elbow (#6) into the rod end port with the jic end pointing toward the base end. Insert the long hose (#7), from the base

end of the left hand gauge wheel cylinder through the mount and attach it to the elbow (#6). Slip the clevis assembly (#8) over the cylinder rod clevis and retain it in place with the 3/8" x 3 3/4" long bolt (#9), 3/8" lock washer and 3/8" nut. Install and re-pin the base end of this cylinder assembly back onto the main frame with the valve side of the cylinder toward the drill boxes. The rod end is to be repinned through both the clevis assembly and the clevis. Reattach the hard line (#10) between the fittings on the base end of the lift cylinders. Apply the depth stop decal (#11) to the side of the main frame tube where shown.



Depth Stop Assembly
Figure 2

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Lifting System

Bleeding the Field Lift Hydraulics

This folding drill is equipped with rephasing type hydraulic lift cylinders that require a special procedure for bleeding air from the hydraulic system. If your dealer has not already prepared the cylinders for transport use, read the following information carefully. The rephasing cylinders will not function properly if this bleeding procedure is not followed. Do not crack hose fittings in order to bleed air from this system.

1. Put the tractor in park and activate its parking brake. If the tractor does not have these features, block 2 or 3 of its wheels to positively prevent the tractor from rolling during this bleeding operation.
2. Back up and support the main frame and the outboard ends of both boxes. Raise and support these 3 areas just high enough to take the weight off of all four lift cylinders. If the gauge wheel cylinders have previously been engaged, they may be used to assist in raising the drill.
3. With the drill blocked and supported, unpin both ends of all four wheel cylinders. Remove and safely position the cylinders so the base end of the cylinder is lower than the rod end port. Also, make sure there is enough room for the rods of each cylinder to fully extend without contacting anything.



4. With the tractor at idle, hold the remote lever on to put fluid into the lifting circuit. When the slave cylinders on both wing drill boxes have completely extended, hold the remote lever on for one minute.
5. Retract the cylinder rods. Extend the rods again and hold the remote lever on for one more minute. Repeat this step two more times to completely bleed the system.
6. Retract and reattach the hydraulic cylinders.
7. Add oil to the tractor's hydraulic reservoir to fill it to the proper level.

Operation

Coulter Depth Adjustments using the Coulter Depth Control Valve

The "master-slave" field lift cylinders on your drill control the depth of the coulters. A depth stop valve on the line which feeds the base end of the master hydraulic cylinders, regulates the retracted length of these cylinders. One clockwise revolution of the knob lowers the coulters approximately 3/32". Depth adjustments are best made with the drill slightly raised with the depth stop engagement arm on the clevis end of the cylinder rod not touching the valve. After adjusting the valve, raise and lower the drill a few times and recheck the depth.

196-189A**2SNT DEPTH STOP UPDATE KIT***Your Kit Includes:*

Qty.	Part No.	Part Description
1	196-187K	2SNT DEPTH STOP VALVE ASSY
1	196-188M	MANUAL 2SNT DEPTH STOP UPDATE KIT
1	196-190K	2SNT DEPTH STOP CLEVIS ASSY
1	802-026C	HHCS 3/8-16X3 3/4 GR5
4	802-616C	HHCS 3/8-16X5 3/4 GR5
5	803-014C	NUT HEX 3/8-16 PLT
5	804-013C	WASHER LOCK SPRING 3/8 PLT
1	811-023C	AD 1/2MNPT 3/4FORB
1	811-077C	TE 3/4MORB 3/4MJIC 3/4MJIC
1	811-280C	EL 1/2FNPT 3/4MORB
1	811-324C	AD 3/4MORB 3/4FJIC
1	818-748C	DECAL 2SNT DEPTH STOP