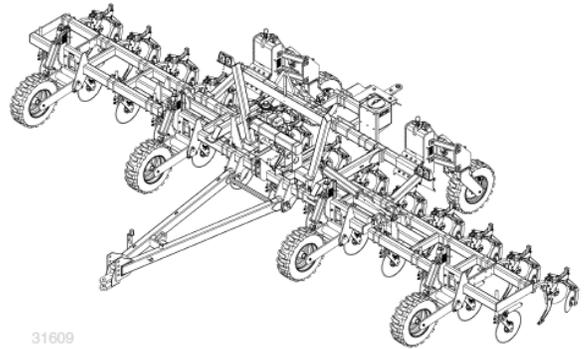


FIELD ADJUSTMENTS

Nutri-Pro NH₃ Applicators

NP30A & NP40A



ADJUSTMENTS BEFORE GOING TO THE FIELD

General Maintenance:

- 1) Refer to the operator's manual for proper lubrication and maintenance schedules.
- 2) Inspect the tire pressure of all tires.

Tire Pressure		
Pull Type (All)	265/70B16.5	60 psi
2-Point Lift	265/70B16.5	60 psi
2 or 3-Point Gauge Wheels	20.5X8.0-10	90 psi

General Information:

- 1) Be certain that the unit is properly hitched to the tractor and that all safety lighting is properly installed and functioning correctly.

2- and 3-Point Hitching

NOTE: This implement is factory set for Category III tractors. Category II requires an option hitch pin kit (part # 596-060A). In addition, the following bushings (not supplied by Great Plains) may be needed to fit a quick hitch or 3-Point arms.

Upper Link (Full 3-Point only) - 1" ID X 1-1/4" OD

Lower Links – 1-1/8" X 1-7/16"

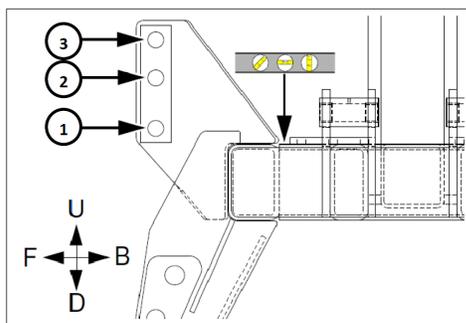
- a) Adjust tractor lower links to maximize lifting height.
- b) Normally the lower arms engage pins in the lower holes of the applicator's three point lugs. You may use the upper holes if necessary.
- c) Set the tractor sway blocks to minimize side sway. Set the tractor hitch lift control to Float.
- d) Back tractor up to implement. Align lower links with the lower hitch clevis on implement. Adjust hitch bushings and spacers supplied with implement according to the category of tractor. Lock pins in place.
- e) Set hitch for depth control mode.

NP30A & NP40A Field Adjustments – *continued*

f) For full 3-Point hitching, refer to the chart and diagram below

Full 3-Point Hitching Top Link Locations	
Upper Hole (3)	Category III
Middle Hole (2)	Category III Quick Hitch
	Category III
	Category II*
Lower Hole (1)	Category II*

*Requires hitch pin kit (part # 596-060A).



2) Hook up hydraulics. Nutri-Pro implements require one hydraulic outlet if built as a full 3-Point and two hydraulic outlets if built as a 2-Point or pull type implement.

Hydraulic Hookup			
Outlet	System	Flow (gal./min.)	Timer
1	Fold	6	Full Cycle
2	Lift (if 2-point or pull type)	6	Full lift plus 2 sec.

3) **Refer to Operator’s Manual for instructions on the use of the Emergency Shut-Off Rope and proper handling of NH₃.**

Initial Implement Leveling

- 1) Set application depth.
 - a. Knife release depth is set by toolbar height. Design shoe operating depth is 4 to 6 inches. Operation at or below 8 inches is not recommended. Control of height depends on hitch type. Refer to the Operator’s Manual for instructions specific to the model being used.

Meter Setup

- 1) Before first field use of the Raven SCS 450, it must be programmed with data specifying the system configuration. This consists of various “CAL” numbers and user selected “RATE” numbers. See the Raven SCS 450 manual for the procedure to enter these values.

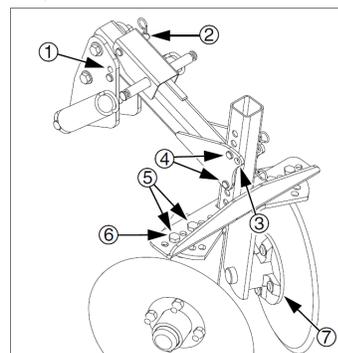
Note: Nutri-Pro has only one “boom section” (BOOM 1, whether single or dual cooler). The BOOM CAL number is simply the implement swath in inches.

NP30A & NP40A Field Adjustments – *continued*

Sealer Setup

1) Depending on the type of sealer installed, there are four to six adjustments available. Refer to the Operator's manual for adjustment procedures.

1. Down stop (shown at maximum)
2. Down pressure (shown at minimum)
3. Wheel/disc mount tilt (shown at wheels aft)
4. Wheel/disc mount height (shown at factory default)
5. Wheel arm spacing (shown at factory default)
6. Wheel arm angle (shown at maximum)
7. Disc direction (shown dished out)



- 2) The sealer down stop factory setting (1) allows for the maximum range of motion. Moving the pin to the upper hole will increase the ground clearance of the sealer when in transport.
- 3) Sealer down pressure is factory set (2) at the minimum setting. Additional down-force is available by moving the spring adjustment weldment to the rear.
- 4) Sealer tilt (3) is used to compensate for large changes in sealer height which can cause undesired changes in sealer arm angle.
- 5) Sealer height (4) needs to be changed whenever changing knife depth. Always try to keep the vertical tube near vertical and the sealer arm level in working position.
- 6) Sealer Disc/Wheel Spacing (5 & 6) along with angle will have the most effect on trench closing and berm control. Changing one will likely require changing the other
- 7) Sealer Disc Direction (7) applies to disc sealers only, and is simply changed by dismounting the disc from the hub, inverting and remounting it.

General Operating Instructions

- 1) Unfold the implement as outlined in the Operator's Manual. With tractor set at half throttle, adjust the flow control for the fold circuit to allow the wings to fold/unfold at a reasonable rate. If the flow is set too high, there is a risk of overheating the oil.
- 2) If operating a pull-type applicator, raise the lift cylinders fully and continue to hold the hydraulics in the raise position for 5 to 10 seconds beyond full extension to phase the lift system.
- 3) **NOTE: DO NOT USE A TRACTOR WITH OPEN CENTER HYDRAULICS ON THIS IMPLEMENT.** For hydraulic down pressure preparation and setup, please follow these steps:

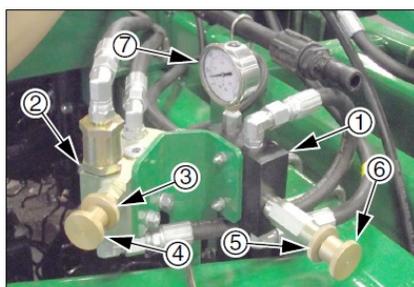


Figure 34
Weight Transfer Adjustment

31595

- a) Lower implement and pull forward to set the implement in the ground.
- b) Put tractor in park and set parking brake.
- c) Release the bypass valve lock disk (3). Turn the bypass valve knob (4) fully clockwise to shut-off all bypass oil flow. Tighten lock disc.
- d) Set the tractor for half throttle and leave the tractor running for the following steps.

NOTE: On 2-point implements, fold and unfold are followed by lift and lower operations.

NP30A & NP40A General Operating Instructions – *continued*

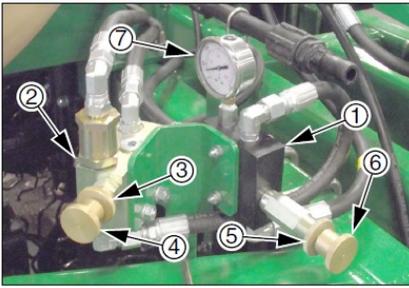


Figure 34
Weight Transfer Adjustment

31595

- e) Set tractor remote circuit for unfold. Lock lever for continuous operation.
 - f) At the pressure reducing valve (1), release the lock disc (5).
 - g) Adjust the knob (6) for an initial value of 800 psi on the gauge (7). Tighten the lock disc.
 - h) At the bypass valve (2), release the lock disc (3). Adjust the bypass valve knob counter-clockwise until the pressure reading just begins to fall from the value set at step g. Turn the knob clockwise 1/4 turn. Tighten the lock disc.
 - i) Observe implement operation, and re-adjust down-pressure as necessary after oil warm-up. Repeat step e through step h. The bypass valve needs to be closed prior to any adjustment to increase weight transfer.
- 4) Hitching a nurse tank to the implement should be done only at the field and not prior to transport. Strictly follow the Operator's Manual for the implement and the nurse tank for hitching and hose connection procedures.
 - 5) Perform a "dry run" before activating the NH₃ delivery. Make a turn in each direction as well as raising and lowering of the implement to ensure adequate slack exists for all hoses and harnesses. This will also create an opportunity to recheck knife depth, hydraulic function, and proper tracking of the nurse tank.
 - 6) Plan field passes to be in a cross-wind direction and turns to be in an up-wind direction to minimize exposure to NH₃ vapor.
 - 7) Follow Operator's Manual to activate the NH₃ vapor.
 - 8) Enter the cab and check that the emergency shut-off rope is within reach.
 - 9) Set the console power switch to the ON position.
 - 10) Set the master switch to the ON position.
 - 11) Set the boom 1 switch to the ON position.
 - 12) Select the desired rate preset.
 - 13) Lower the implement to operating depth and begin first pass.
 - 14) Be aware of wind direction whenever pausing or stopping an operation. Follow the Operator's Manual for procedures on bleeding hoses or changing nurse tanks.