

Planter Bar Best Practices 40' & 60'



Tractor Connection — 40' & 60' Toolbar

Hydraulic Circuit	Flow Requirements
Lift Lower circuit	12–15 gpm to lift, Float lower
Frame Fold / Marker Circuit (if equipped)	6 gpm (40') 8 gpm (60')
Bulk Fill Blower (if equipped)	15–20 gpm (14–25 psi on gauge)
Vacuum fans (tractor hydraulics)	14 gpm
Vacuum fans (PTO pump)	14 gpm

Electrical Connections

- Hydraulic Cooler Fan
- Transport Lighting
- Frame Control

Vacuum Fans (Tractor Hydraulics)



- Connect the vacuum supply hose to the hydraulic remote valve. Ensure that the coupler is selected that has the ability to be put in the float position when the hydraulic remote valve is placed in neutral.
- Connect the vacuum return hose to the motor return on the tractor. This will reduce return pressure on the vacuum motor hydraulic circuit. Doing so will help keep the hydraulics from overheating and reduce potential damage to the hydraulic cooler in that circuit
- Connect the **case drain** to the case drain of the tractor. The case drains from the bulk fill blower (if equipped) and the vacuum motors are combined into a single case drain line.

Vacuum Fans (PTO pump)

- Install the PTO pump on the PTO shaft with the appropriate coupler. Attach / adjust the pump support bracket so the pump is fully supported and held from rotating.

Lift / Lower Circuit



- Connect the hoses for lift and lower.

Frame Fold / Marker Circuit



- Connect the supply and return hoses to a hydraulic remote valve. The Frame Fold function and Marker function will be controlled by the same hydraulic remote valve. The hydraulic remote valve function is changed by selecting the function on the frame control box.

Bulk Fill Circuit (if equipped)



- Connect the Supply and return hoses to a hydraulic remote valve. The case drains from the bulk fill blower and the vacuum motors are combined into a single case drain line.

Note: It is good practice to label the hose connections with Outback hose wrap. This can make connecting to the tractor and remembering hydraulic remote assignment easier.

Frame Control Box

- Connect the frame control box to the frame control box harness. Connect the frame control box harness to the planter's frame control harness at the hitch at Connector "C2 Fold Control". A 15' extension harness (PN 7007314245) is available if needed.
- With the addition of an auxiliary power put harness, connector "C3 Aux Output" can provide three auxiliary 10 amp outputs to the planter. The Three bottom buttons on the frame control box would control the outputs. Three different harness lengths are available.

N856960 — 40'

N856962 — 120"

N856961 — 270"



Note: Raising / Lowering and folding cannot be done without the frame control box installed.

Hydraulic cooler power harness

- The power harness can be powered by an APEX outlet on the PDM (if one is open) or directly to the tractor battery.

Transport Lighting

- Connect the transport lighting harness to the transport lighting connection on the tractor



Start up

Vacuum fans (tractor hydraulics)

Setting the vacuum setting for the first time

- Start with the vacuum adjust valves on the planter wide open.
- Start with the tractor's hydraulic remote valve at a low setting and the tractor at a low engine rpm until hydraulic oil has reached operating temperature. This will help protect the hydraulic system from damage.
- Once the hydraulic oil is warmed up, slowly increase the hydraulic remote valve output until the slightly above desired vacuum levels are achieved.
- Use the adjustment valves on the planter to equalize vacuum settings between the two vacuum fans.
- When turning off the hydraulic circuit, put the hydraulic remote valve in the float position.

Note: Not following this procedure can damage the hydraulic cooler.

Vacuum fans (PTO pump)

Setting the vacuum setting for the first time.

- Start with the vacuum adjust valves on the planter wide open.
- Engage the PTO with the tractor at a low engine rpm and let the hydraulic oil reach operating temperature. This will help protect the hydraulic system from damage.
- After the hydraulic oil has reached operating temperature, slowly increase engine rpm until the desired vacuum levels are achieved.
- Use the adjustment valves on the planter to equalize vacuum settings between the two vacuum fans.

Note: Not following this procedure can damage the hydraulic cooler.

Note: Some Tractors with Economy PTO will engage the PTO higher than expected and can cause a pressure spike through the system

Starting the vacuum circuit during daily use

- With the tractor at a low engine rpm, engage the PTO. Let the hydraulic oil reach operating temperature before increasing engine rpm. This will help protect the hydraulic system.

Note: Not following this procedure can damage the hydraulic cooler

Bulk Fill Circuit (if equipped)

Setting the bulk fill circuit for the first time.

- Start with the tractor's hydraulic remote valve at a low setting and the tractor at a low engine rpm until hydraulic oil has reached operating temperature. This will help protect the hydraulic system from damage.
- Once operating temperature is reached, slowly increase the hydraulic remote valve output until the desired blower pressure is achieved. Suggest starting a blower pressure of 15 — 20 inches.
- When turning off the hydraulic circuit, put the tractor's hydraulic remote valve in the float position.
- With the bulk fill running, check for air leaks at the bulk fill lids and cleanout doors. Adjust as needed to seal the system.
- Before adding seed, add graphite to the bulk tanks to precoat the seed delivery system.

Note: Planters with factory mounted liquid tank will also include a needle valve that can be used to adjust bulk fill settings.

Lift Circuit

New planter startup

- After the planter is unfolded and in the plant position, it is recommended that the lift and lower cylinders are rephased. The cylinders rephase when fully retracted (planter lowered).
- To properly rephase, fully raise and lower the planter 10 — 15 times followed by holding the planter in the down position for 60 — 90 seconds with the hydraulics in full continuous flow.
- After the rephasing process is complete, raise and lower the tool bar to ensure that the frame is level. If the frame is not level, continue the rephasing process.

Note: If the frame becomes unlevel during daily use, following the rephasing procedure until it is level.

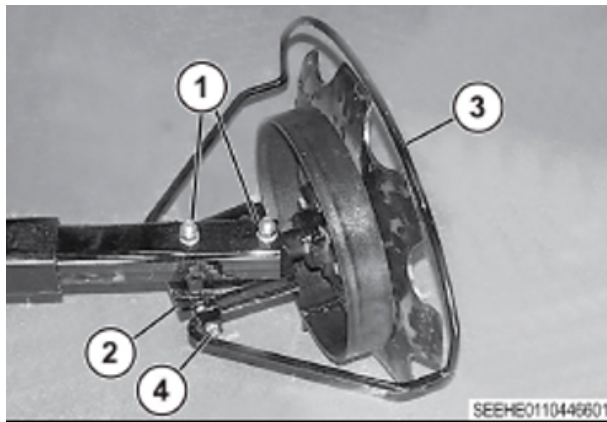
Daily Use

- Do not run the lift/lower circuit in continuous flow while planting. Doing so can damage the cylinders rephasing system.
- When lowering the planter to plant position, use the hydraulic remote valve to completely lower the planter. Once the planter is completely lowered, place the remote valve into the float position. If the frame becomes unlevel, follow the rephasing instructions.

Marker Disc Adjustment

Procedure

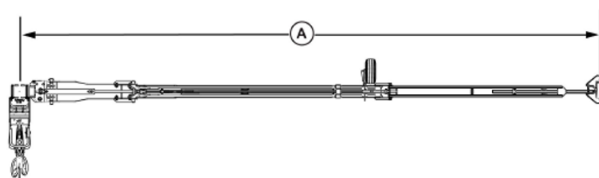
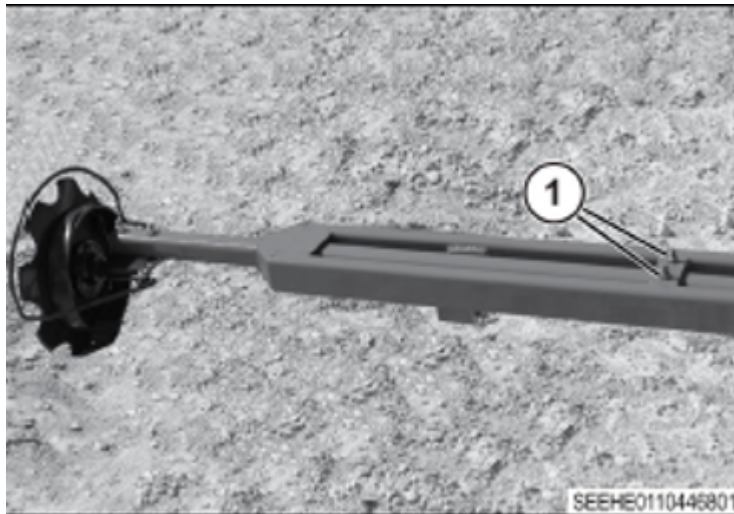
1. Park the machine on a solid, level surface.
2. Fully extend the marker.
3. Apply the parking brake, stop the engine. and take the key with you.
4. Block the wheels.
5. Install the cylinder stops.
6. Loosen the hardware (1)
7. Rotate the marker disc (2)
 - Forward to increase the mark size.
 - Rearward to decrease the mark size.
8. Tighten the hardware.
9. Align the disc guard (3) and the marker disc.
 - Loosen the set screws (4) on each side
 - Move the disc guard to align with the marker disc.
 - Tighten the set screws.



Marker Arm Length Adjustment

Produce

1. Park the machine on a solid, level surface.
2. Fully extend the marker.
3. Apply the parking brake, stop the engine, and take the key with you
4. Block the wheels.
5. Install the cylinder stops
6. Loosed the nuts (1)
7. Move the arm to the correct length
8. Tighten the nuts.



The measurement (A) is made from the center of the outer row unit to the center of the marker disc.

Model	Row Width	Measurement
16 — row	76 cm (30 in)	648 cm (255 in)
24 — row	76 cm (30 in)	953 cm (375 in)

Marker Operation

The marker cylinders operate off of the tractor remote hydraulic system. A hydraulically operated sequence valve permits the markers to alternately raise and lower each time the tractor remote lever is moved.

Before operating the markers:

- Press the POWER (!) button on.

- Press the PLANT/TRANSPORT (2) button to PLANT
- Press the MARKERS (3) button to on.



WARNING: Crushing hazard.
Personal injury or death can occur.
Stay clear of machine while the machine components are being operated.



If both markers must be lowered, lower one marker to the ground. Move the tractor remote lever to raise and as the cylinder for the lowered marker starts to extend, move the tractor remote lever to lower. This will lower the second marker

Note: If marker starts to raise, the marker has been fully raised. On tractors with pressure detents remote valves, the remote lever will have to be held until the marker is fully raised or lowered.

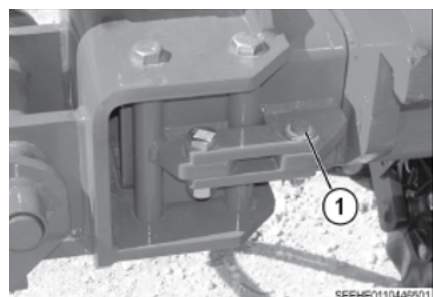
The markers will not operate if the planter frame is folded.

Marker shear Bolt Protection

The markers are protected with a shear bolt (1). When replacing the shear bolt, use the flat washer next to the head on the bolt and next to the lock nut. Install the lock nut until the threads on the shear bolt.

IMPORTANT:

Use only the correct size and the grade.



Shear Bolt Part Numbers (Part number quantity is one per side unless noted.)

Description	40'	60'
Bolt	SN3806	SN16789
Nut	7704141	SN9683
Bushing	SN13130 qty 2, SN13131 qty 1	SN13615 qty 2, SN13614 qty 1
Washer	700702916	SN486

Frame Unfold

Before starting the procedure

Make sure there is 10.5 m (35 ft.) of clearance in all directions from the tractor and machine.

WARNING: Crushing hazard.

Personal injury or death can occur.

Stay clear of machine while the machine components are being operated

WARNING: Machine movement hazard.

Personal injury or machine damage can occur.

1. Remove the wing transport pins (1).
2. Park the machine on a solid, level surface.
3. Press the POWER button to on.
4. Press the PLANT/TRANSPORT button to TRANSPORT.
5. Press the MARKER button to off.
6. Raise the machine.
 - Three point hitch — use the hydraulic valve to fully raise the machine.
 - Drawbar hitch — press and hold the TONGUE/HEIGHT button and use the tractor hydraulic valve to fully raise the machine.
7. Remove the wheel cylinder lookup stops.
8. Press and hold the WINGS WHEELS button to lower the wing wheels. As the wing wheels lower, the wings raise and disengage from the receiver.
9. If necessary, lower the hitch slightly to help disengage the wings from the receiver.
10. Press and hold the WING FOLD button and use the marker/fold hydraulic valve to unfold the machine.
11. Continue to hold the WING FOLD button and use the marker/fold hydraulic valve to unfold the machine.
12. Press the PLANT/TRANSPORT button to PLANT.