Pull-Type Digger-Inverters

ADI-836PT, 838PT, 840PT, ADI-1236PT

Addendum MAN138

AMADAS

Read this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death.

July 2014

Digger-Inverters are manufactured by AMADAS Industries*.*

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Pull-Type Digger-Inverters Set Up/ Operation

Note that this supplement contains information specific to the pull-type digger-inverter and is to be used in conjunction with the main user manual. For information not covered in this supplement, refer to the user manual, MAN138, AMADAS Digger-Inverters.

PLEASE READ!

Before setting up your digger, please read Chapter 1, *Safety*, in MAN138, AMADAS Digger-Inverters. Pay close attention to all safety recommendations and to the safety signs on the machine.

This addendum contains the additional information needed for setting up and operating the AMADAS Pull-Type 8- and 12-Row Digger-Inverters. Complete instructions on using and maintaining all Digger-Inverters can be found in MAN138, AMADAS Digger-Inverters.

For any information not contained in this addendum or your manual, please contact your dealer.

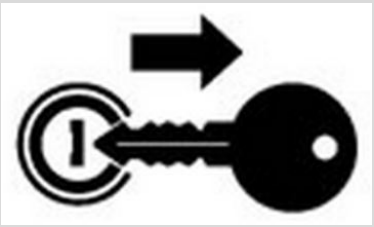
⚠CAUTION

Use care when handling plow blades and vine cutters. Edges are sharp.

⚠WARNING

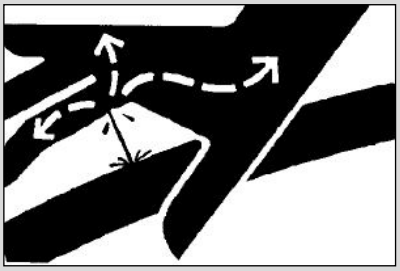
Do NOT attempt to lift the digger, as serious injury could result. Use an appropriate lifting means such as the tractor to raise the machine.

⚠CAUTION



Once the digger-inverter is attached to the tractor, make sure the tractor is in park, with the ignition turned off, and the key removed before any adjustments are made.

⚠WARNING



Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

See Chapter 1, *Safety*, for more information on safe handling of hydraulics and for instructions in the event of a hydraulic injury.

Requirements

Tractor requirements for the digger-inverters are:

- 8-row pull-type digger-inverter: CAT III pin hitch. 25 gallons per minute hydraulic capacity minimum.
- 12-row pull-type digger-inverter: CAT III pin hitch. 25 gallons per minute hydraulic capacity minimum.
- For all models: The tractor must have a hydraulic connection that returns hydraulic fluid directly back to the tank.

Dimensions

Dimensions for the digger-inverters are in the chart below.

NOTE! The weight of the machine may vary due to the choice of plow patterns.

MODEL NAME	# OF ROWS	ROW WIDTHS (IN)	HORSEPOWER SUGGESTED	CONVEYOR WIDTH (IN)	# OF BARS	OVERALL WIDTH (IN)	HEIGHT (IN)	LENGTH (IN)	HITCH REQUIREMENTS
ADI-8PT	8	36	170+	64	116	300	82	254	CAT III Pin Hitch
		38		68		316			
		40		68		332			
ADI-8PTF	8	36	170+	64	116	300	82 open	265	CAT III Pin Hitch
							144 open		
ADI-12PT	12	36	200+	64	174	447 open	82 open	265	CAT III Pin Hitch
						312 folded	144 folded		

Setup Instructions

The folding pull-type diggers are shipped in three separate pieces: a center section, and left and right wings. These three pieces must be pinned together before other setup work is done.

NOTE! Only the folding pull-type digger-inverters require the wings to be installed.

Preparing the Wings: On each wing, one wheel is attached with U-bolts and the other is clamped on with a plate and two ½" bolts. Remove the wheel assemblies clamped on with the ½" bolts. These wheels will be installed on the front toolbar later as gauge wheels, using the ½" bolts.

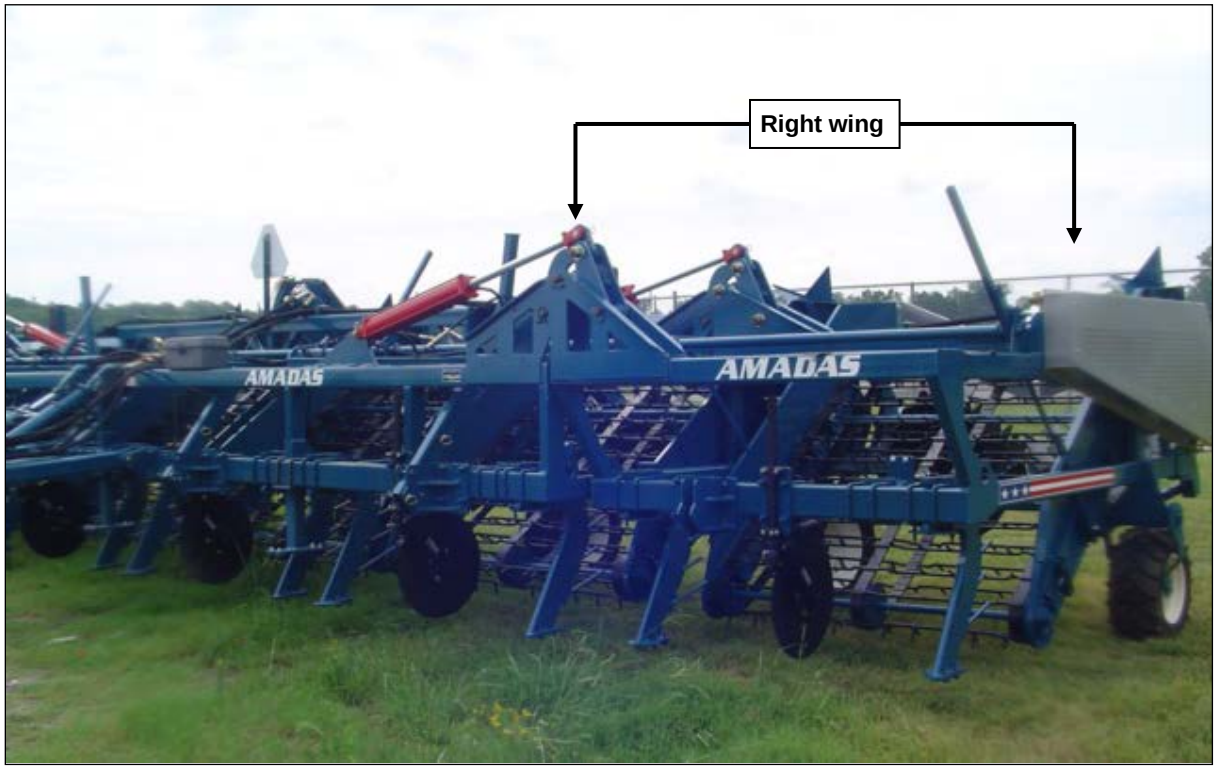
NOTE! Block up the digger-inverter once the wheels are removed so the machine does not tip over.

Preparing to Assemble

To properly align the center section for assembly, put 2x4s under the plow shank on the left and right side, raising the front of the digger approximately 2".

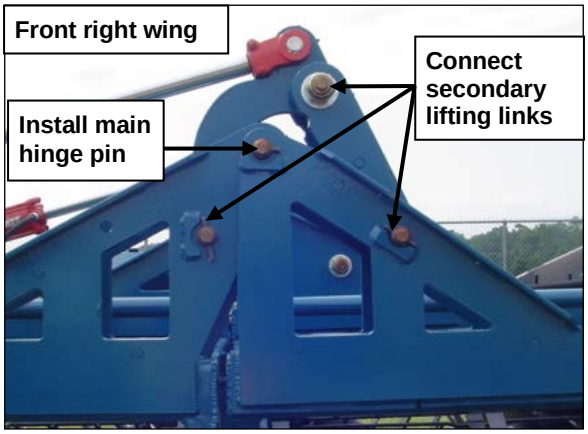
⚠WARNING

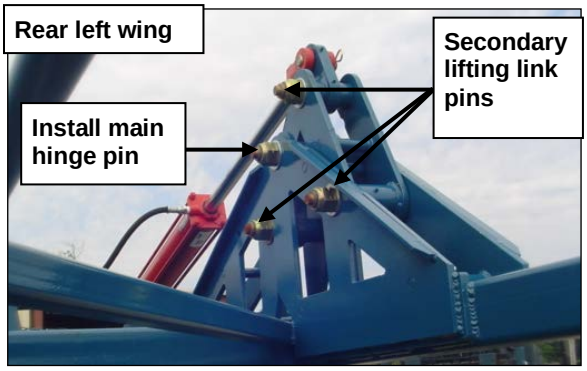
Do NOT attempt to lift the digger, as serious injury could result. Use an appropriate lifting means such as the tractor to raise the machine.



Digger Frame Assembly
(Folding Pull-Type)

1. Move each wing into place and install using the main hinge pins (part #20991).



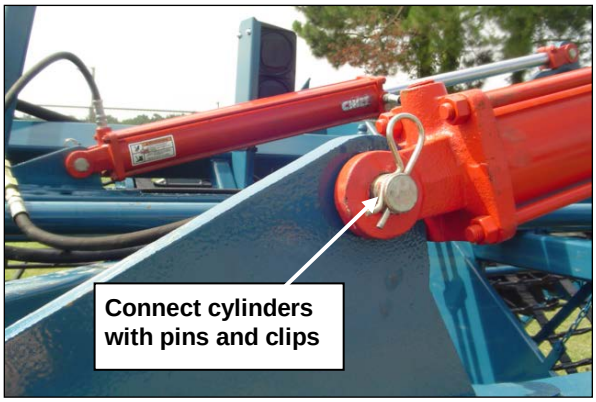


2. Once the pin is installed, insert the roll pin and position the pin so the anti-rotation lug catches the pin.

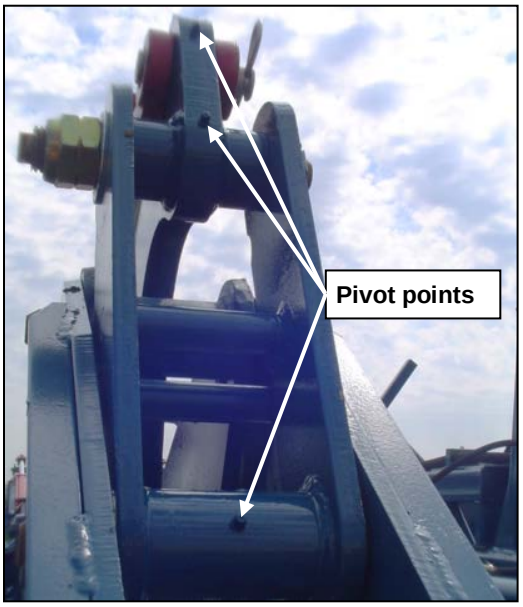
3. Tighten the provided Nylock nut tight enough to prevent the pin from slipping the anti-rotation lug.

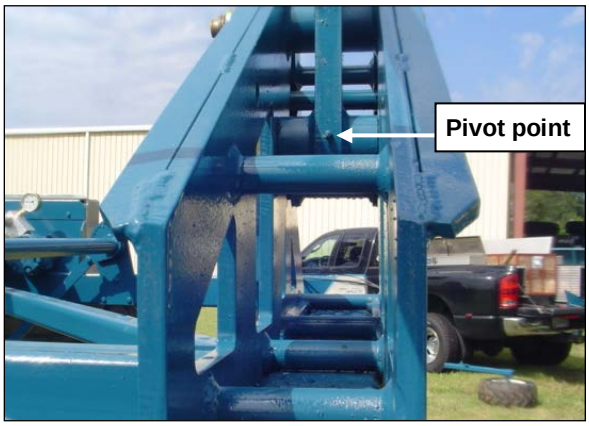
4. After the front and rear main hinge pins are installed, connect the secondary lifting links (part #S62319 and S62320) as shown. Make sure all pins are oriented properly with the anti-rotation lug.

5. Connect all four hydraulic cylinders (part #S62319)



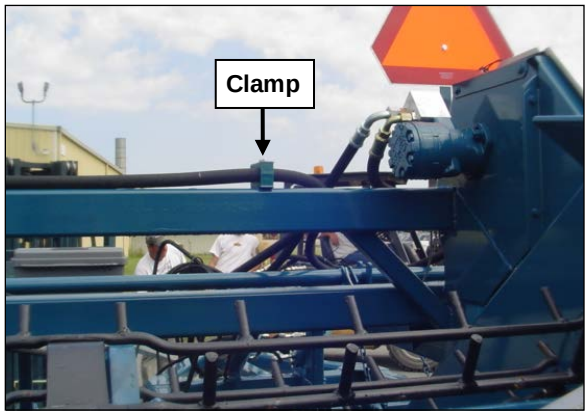
6. After all pin connections have been made, grease all pivot points (see photos) until grease is seen escaping the joint.

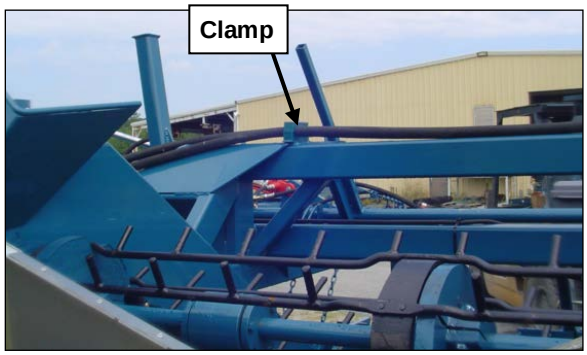


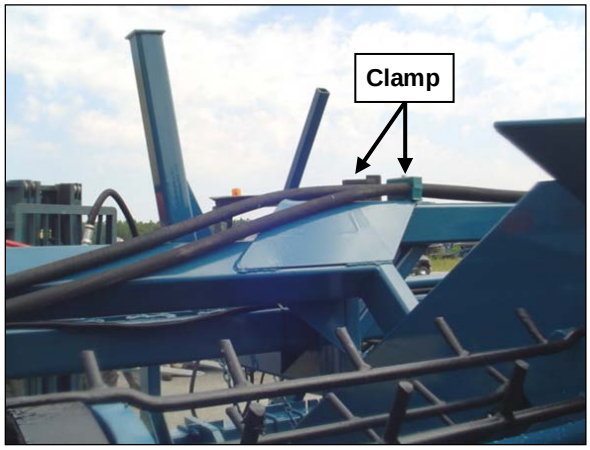


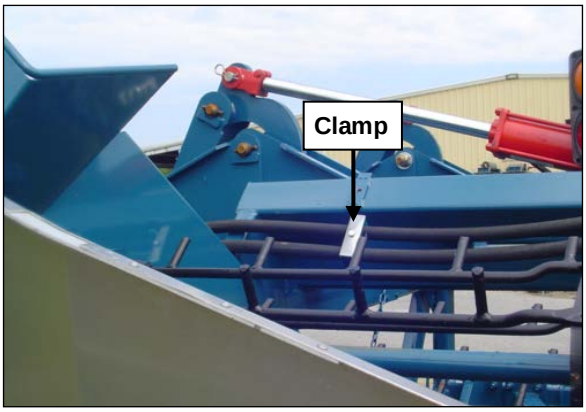
Digger Frame Assembly (Folding Pull-Type), Cont'd.

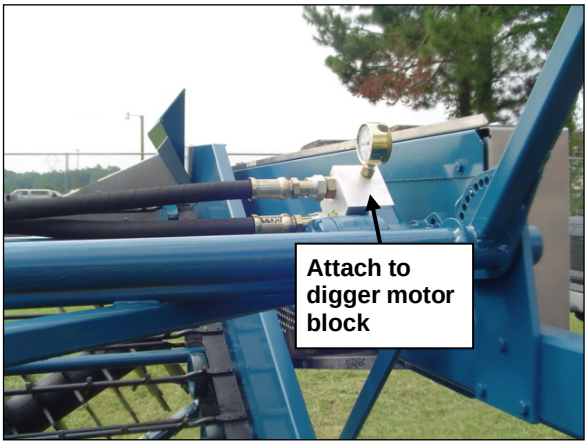
7. Finish the frame assembly by connecting the ¾" hydraulic digger drive hoses. The pressure hose will be marked with red tape, and this hose will go to the "A" port on the digger motor block. Be sure to route the hoses in the provided clamps and leave the slack in the hoses over the hinge as shown. Refer to the photos on this page and the following one.











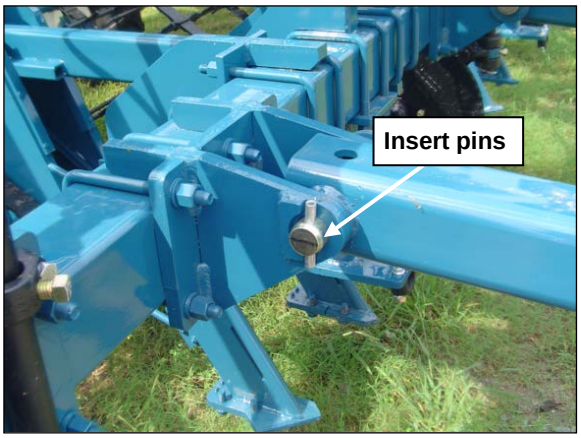
Tongue

CAUTION

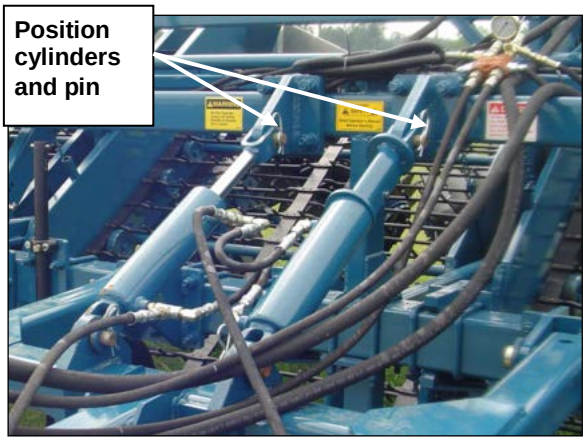
The tongue and front gauge wheels are heavy. Use a helper to avoid injury.

The tongue and front gauge wheels are packaged separately from the machine.

1. Unpack the tongue from the shipping pallet and check for damages. Report any damage to your AMADAS representative.
2. Remove the pins from the lower hitch.
3. Position the tongue as shown so the pins may be put back in to secure the tongue.



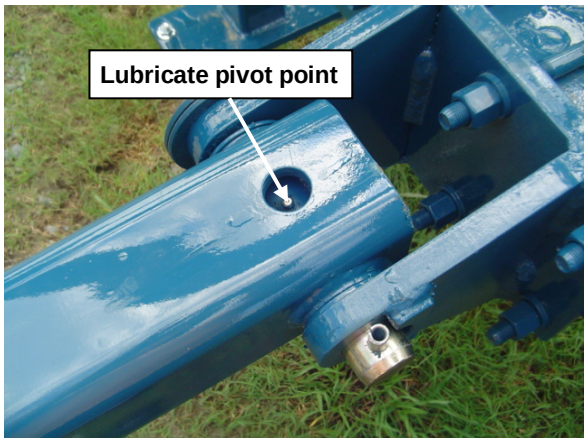
4. Raise the end of the tongue so the two hydraulic cylinders can be pinned to the upper frame mounts as shown.



5. Route the hydraulic lines through the hydraulic hose holder.

Tongue, Cont'd.

6. Use a grease gun to lubricate both pivot points.



Front Gauge Wheels

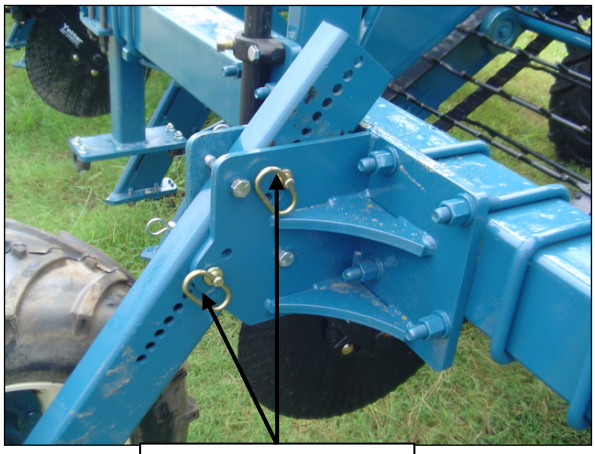
CAUTION

The tongue and front gauge wheels are heavy. Use a helper to avoid injury.

Note that the front gauge wheels are packaged separately from the digger.

1. Unpack the front gauge wheels from the shipping pallet and inspect for possible shipping damage. Report any damage to your AMADAS representative.

2. Using the ½" pull pins provided, mount the front gauge wheels as shown, taking care to keep them properly oriented.



Insert pins and clips

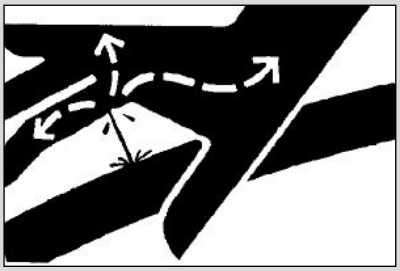
3. Position the gauge wheels so they are approximately 4" above the edge of the plows.

NOTE! After a test run, the height of the gauge wheels will need to be adjusted to meet your digging conditions.

4. Lubricate grease point as needed.

Tractor Hookup

⚠WARNING



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Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

See Chapter 1, *Safety*, for more information on safe handling of hydraulics and for instructions in the event of a hydraulic injury.

The 8- and 12- row pull-type digger-inverters are designed to be used with a CAT III pin hitch mounted to the tractor draw bar.

1. Install the ball hitch provided on the tractor draw bar. If the bar is offset, turn it so the ball is roughly 18" from the ground. This will insure optimum depth control and ground clearance.

NOTE! This is a suggested height. Actual height will vary based on your wheels and drawbar configuration.

2. Back the tractor up to the digger-inverter.

3. Hook up the hydraulic lines that control the hitch cylinders on the digger.

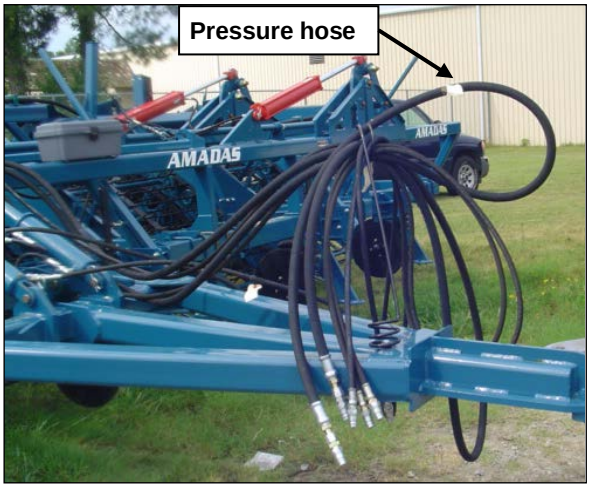
4. Lubricate hitch (middle photo).

5. Using the tractor hydraulics, move the cylinders to adjust the tongue height and hook digger-inverter to the tractor.

6. Once the digger tongue is securely hitched, install the drawbar safety latch on the drawbar.

Tractor Hookup

7. Connect the main ¾" hydraulic hoses to the tractor. For proper operation, it is imperative that the pressure hose be connected to the tractor remote forward pressure port. The pressure hose is marked with tape. The return must be connected to a direct return to the reservoir and not to the remote.



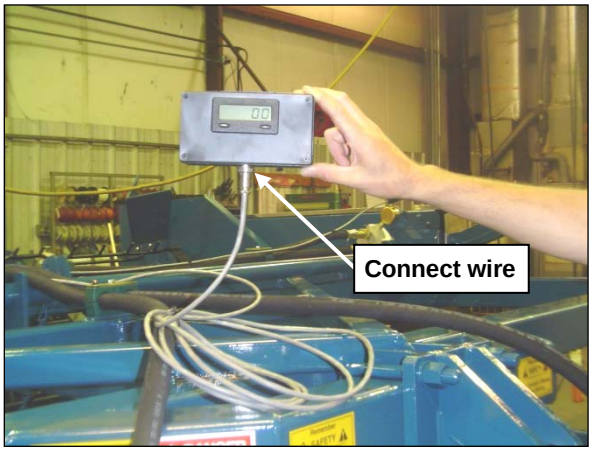
NOTE! If your tractor is not equipped with a direct return to the tank valve, one needs to be installed. This should be similar to the procedure used for running an air planter. This reduces the heat in the hydraulic system and ensures the conveyor cannot be reversed, which can cause machine damage.

8. Connect the second set of 3/8" hydraulic hoses that will be used to fold the digger for transport.

9. Uncoil the conveyor speed sensor wire shown in the bottom photo and route to the cab of the tractor. Be sure to keep the wire away from hydraulic hoses or anything else that could damage it.

10. Using the Velcro provided, mount the conveyor speed display unit to a clean surface in a convenient area of the tractor cab.

11. Connect the wire to the bottom of the display.

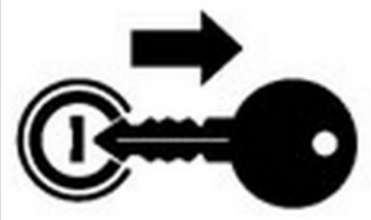


Adjustments

Conveyor Pickup Height - Wing Adjustment

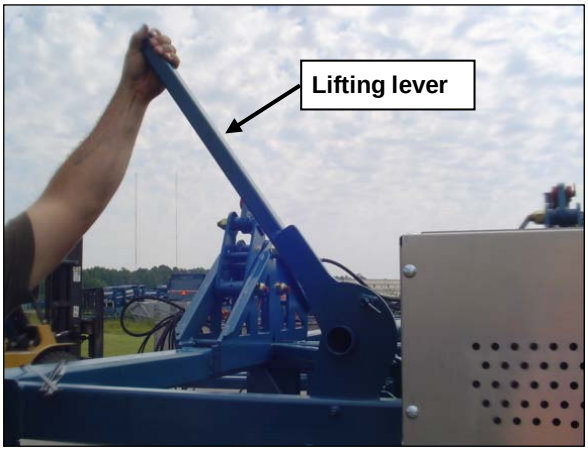
(Folding Pull-Type Only)

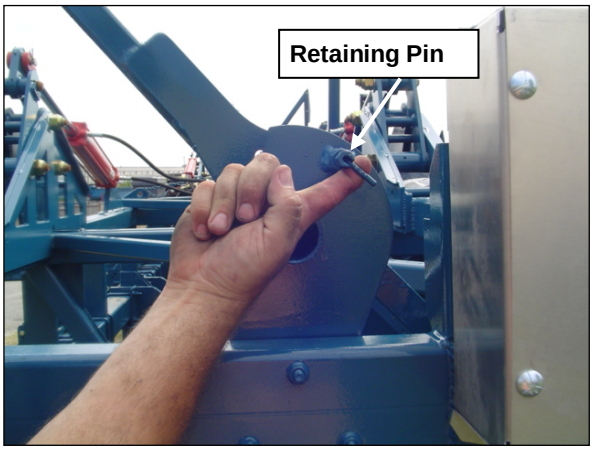
⚠CAUTION



Once the digger-inverter is attached to the tractor, make sure the tractor is in park, with the ignition turned off, and the key removed before any adjustments are made.

1. Adjust the conveyor height pickup by pulling down on the lifting lever, then pulling out the 3/8 retaining pin.

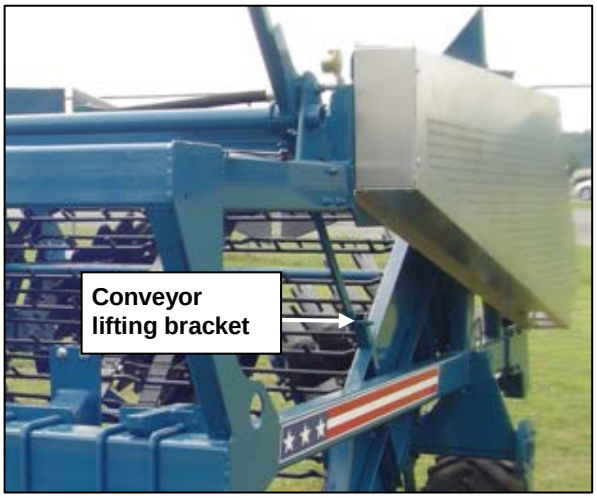




2. Raise or lower the conveyor to the desired height.

3. Reinsert the retaining pin to lock the conveyor height.

NOTE! If simply adjusting the position of the lifting lever does not yield satisfactory positioning, the conveyor may be mounted in a higher or lower set of holes on the conveyor lifting bracket.



Operation

Startup Procedure

It is important that you go through the startup procedure and check the operation of the digger-inverter. You will need a helper to assist you.

1. Clear everyone from around the digger-inverter.
2. Slowly raise the hydraulic flow until 1 MPH is displayed.
3. Have your helper observe the conveyor. It should be running smoothly and tracking in a straight path. If not, make any adjustments needed. The top and middle photos show the conveyor belt correctly tracking on the conveyor shaft.
4. Have your helper observe the inverter rotor(s). They should run smoothly without noise or hesitation. If not, correct as needed.
5. Slowly increase the flow until the speed at which you will be running the tractor is displayed (for example, if you plan to run the tractor at 3 MPH, increase to 3 MPH).
6. After setting the hydraulic flow, stop the conveyor and lower the digger-inverter back to the ground. Shut off the tractor.
7. Observe the height of the conveyor pick-up. The pickup pins on the rods should be about three inches off the ground. If not, adjust as needed.
8. Once these checks have been performed, have everyone clear away from the digger-inverter. Start the tractor and raise the digger-inverter.
9. Move to a flat, level soil area where no peanuts are present.
10. Start the conveyor and verify the speed setting. Lower the digger-inverter and pull forward a few feet, then stop. The plows should take ground immediately.
11. AMADAS recommends that you run the digger tongue hydraulics in “float” in the field. However, it may be necessary to apply additional down pressure to get the digger to take the ground at the beginning of a row.

> **NOTE!** If you take the tractor out of float and apply direct ground pressure and the digger still does not take ground, you may need to flip the blades so that the bevel is up. This is extremely rare and will only be necessary in extremely hard ground.

12. Once the plows do take ground, observe how deeply the plow is in the ground. Typically, you will need (4”-6”) of the shank in the ground to dig properly. If you have less shank in the ground than this amount, raise the front gauge wheels. If you have more shank than this in the ground, lengthen lower the front gauge wheels.

    After adjusting the gauge wheels, retest until the depth is set.
13. After proper plow depth has been set, observe the relation of the conveyor pickup pins to the ground. With the conveyor height properly adjusted, the rods should be raking the ground but not the sub-soil. Adjust as needed.
14. Once initial start-up is completed, proceed with the “First Run” section in your User Manual.

Checklist for Pull-Type Digger-Inverters

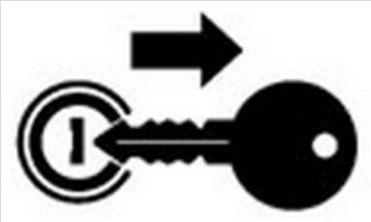
- ✓ Make sure the peanut plants are inverted.
- ✓ Inspect the tap roots. The plow should have cut below the peanuts but not low enough to include the entire tap root with fibers and dirt.

  If too much of the root has been included, lower the gauge wheels so that the plows are raised up higher.

  If peanuts have been cut off, raise the gauge wheels so the plows cut deeper into the soil.
- ✓ The tap root cut length should be consistent across the width of the digger. If not, the digger is not running level. Check the gauge wheel position, tire pressure (both front and rear), to correct the problem. A bent plow or one that is not level can also cause this problem if only one row is affected.
- ✓ Inspect the wheels. There should be obvious tracks in the soil behind the gauge wheels.
- ✓ Make sure all tap roots have been laid in a uniform line. They should be lying within 30 degrees of vertical.
- ✓ Make sure peanut plants are transferring from plow to conveyor smoothly. It may be necessary to adjust conveyor height and/or speed, or the vine guide rods to ensure this.

Maintenance Schedule

⚠CAUTION



Once the digger-inverter is attached to the tractor, make sure the tractor is in park, with the ignition turned off, and the key removed before maintenance is performed.

ITEM	ACTION	INTERVAL			
		Daily	Weekly or 50 hours	As Required	Yearly
Grease Ball Hitch	Lubricate (2 to 3 pumps grease)		X		
Grease Tongue Pivots	Lubricate (2 to 3 pumps grease)		X		
Grease Digger Wing Pivots	Lubricate (2 to 3 pumps grease)		X		
Front Gauge Wheels	Lubricate (2 to 3 pumps grease)		X		