LANTS49410

Installation Instructions

Controllable Tipping Spout for JD® Combine "NON HUR" 13.5" Unloading Augers

NOTE: Lankota DOES NOT warrant any OEM components with their aftermarket components installed.

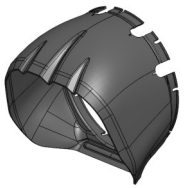
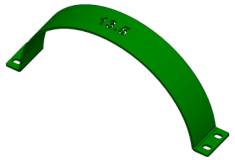
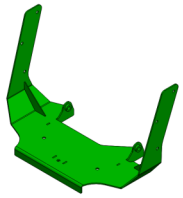
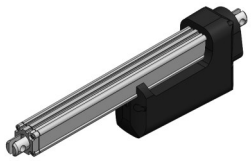
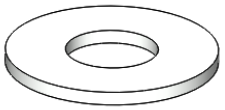
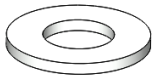
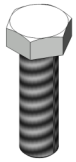
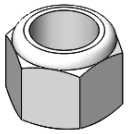
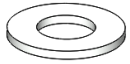
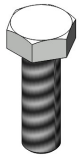
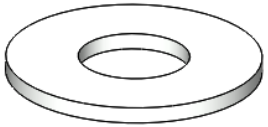
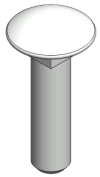
LANKOTA®

270 West Park Avenue
Huron, SD 57350
866-526-5682

Numerical Parts List

Part Numbers	Description	Qty
LANHXE169395SC	Tippy Spout—Inner	1
LANHXE170706SC	Tippy Spout—Outer	1
LANTS494A	Tippy Spout Actuator Saddle	1
LANTS494B	Tippy Spout Top Bracket	1
LANTS494C	Tippy Spout Saddle Band	1
LANTS106	Spout Pivot Bracket	1
LANTSACT01	Linear Actuator	1
LANTSWIRE01	Wiring Kit for Tippy Spout	1
Included Hardware		
LAN18000	3/8” Flat Washer	15
LANFWS53	3/8” SAE Flat Washer	4
LANFB305	3/8”-16 X 1-1/4” Grade 5 Hex Head Bolt	2
LANF00QF	1/2”-13 X 2-1/4” Grade 5 Hex Head Bolt	2
LAN1618000	3/8”-16 Nylon Lock Nut	17
RED1F30	1/2”-13 Top Lock Nut	2
LANFWS52	5/16” SAE Flat Washer	24
REDB204	5/16”-18 X 1” Grade 5 Hex Head Bolt	9
LAN1616	5/16”-18 Nylon Lock Nut	15
LANFWS55	1/2” SAE Flat Washer	4
RED305K	3/8” -16 X 1.25” Carriage Bolt	15
LAN4A16A16	5/16” -18 X 1.25” Carriage Bolt	6
LAN44302	11” Zip Ties	20

Pictorial Parts List

 LANHXE169395SC (1)	 LANHXE170706SC (1)	 LANTS494A (1)	 LANTS494B (1)	 LANTS494C (1)
 LANTS106 (1)	 LANTSACT01 (1)	 LANTSWIRE01 (1)	 LAN18000 (15)	 LANFWS53 (4)
 LANFB305 (2)	 LANF00QF (2)	 LAN1618000 (17)	 RED1F30 (2)	 LANFWS52 (24)
 REDB204 (9)	 LAN1616 (15)	 LANFWS55 (4)	 RED305K (15)	 LAN4A16A16 (6)
		 LAN44302 (20)		

LANTSWIRE01 Components

			
CONTROL HARNESS (1)	AUGER HARNESS (1)	CAB EXTENSION HARNESS (1)	FOOT PEDAL (1)

Preparation

1. **Park combine on hard, level surface.**
2. **Set the parking brake on the combine.**
3. **Turn off the combine engine and remove the key.**

Kit Installation

Refer to Figure 1

1. Attach the Spout Pivot Bracket (LANTS106) to the Outer Tippy Spout (LANHXE170706SC) with the provided 5/16”-18 x 1” Hex Head Bolts (REDB204), 5/16” SAE Flat Washers (LANFWS52), and 5/16”-18 Nylon Lock Nuts (LAN1616). Be sure to place the washers on the bolt head inside of the plastic spout with the nylon nut on the outside of the metal Spout Pivot Bracket.

Figure 1

Refer to Figures 2 & 3

2. Remove the factory grain spout and grain saver door from the end of the combine unloading auger. If equipped with a light and/or camera, loosen the band and wiring and set back out of the way. Retain all hardware.

Figure 2

Figure 3

Refer to Figures 4 - 6

3. Fasten the Tippy Spout Actuator Saddle (LANTS494A) to the bottom of the auger tube. Loosely fasten existing hardware to attach the mount at the end of the auger tube. Use the Tippy Spout Top Bracket (LANTS494B) on the top side of the auger to tighten the Tippy Spout Actuator Saddle with included 3/8”-16 x 1-1/4” Carriage Bolts (RED305K), 3/8” SAE Flat Washers (LAN18000), and 3/8”-16 Nylon Lock Nuts (LAN1618000).
4. Take Tippy Spout Saddle Band (LANTS494C) and install on top side of auger tube attaching to back side of Tippy Spout Actuator Saddle (LANTS494A) using provided 5/16” -18 x 1-1/4” Carriage Bolts (LAN4A16A16), 5/16” SAE Flat Washers (LANFWS52), and 5/16” -18 Nylon Lock nuts (LAN1616).

Figure 4

Figure 5

Figure 6

Refer to Figures 7 & 8

5. Slide the Inner Tippy Spout (LANHXE169395SC) over the end of the auger and use the factory hardware to fasten it to the auger. You will tighten the lower hardware in the Spout Pivot Mount to hold on both the plastic spout and the mount at this time. Make sure to use a washer under each nut and tighten the hardware from the bottom of the auger to the top making sure to minimize any gaps between the plastic spout and metal auger tube.

Figure 7

Figure 8

Refer to Figures 9 & 10

6. Attach the assembled outer spout over the inner spout using the provided 3/8”-16 x 1-1/4” Grade 5 Hex Head Bolts (LANFB305), 3/8” Flat Washers (LAN18000), and 3/8” Nylon Lock Nuts (LAN1618000). Be sure to use a washer on both the bolt and nut side.

IMPORTANT: **Make sure the welded in bushings on the Spout Pivot Bracket are properly seated into the holes on the Spout Pivot Mount prior to tightening hardware.**

Figure 9

Figure 10

Refer to Figure 11

7. Connect the Linear Actuator (LANTSACT01) between the Spout Pivot Mount and Spout Pivot Bracket using the provided 1/2”-13 x 2-1/4” Hex Head Bolts (LANF00QF) and 1/2”-13 Top Lock Nuts (RED1F30).

IMPORTANT: **Make sure the base end of the actuator (with the wires) is attached to the Spout Pivot Mount and the rod end is attached to the Spout Pivot Bracket (plastic boot side).**

Figure 11

Refer to Figures 12 & 13

8. Route the wires through the Spout Pivot Mount and to the top of the auger tube and secure with provided zip ties (LAN44302).

Figure 12

Figure 13

Refer to Figures 14 - 16

9. Locate the Auger Harness from the Tippy Spout Wiring Kit (LANTSWIRE01) and plug it into the linear actuator.
10. Secure the harness along the top side of the unloading auger.
11. With the auger swung completely out, route the harness down the elbow of the auger and secure in a place that it will not get pinched when the auger is folded in. At this moment, let the harness hang straight down from the elbow, inside of the hydraulic cylinder.

IMPORTANT: **If the auger is not fully swung out when the wire is routed, it may get too tight when the auger is fully out, incurring damage to the wire harness!**

Figure 14

Figure 15

Figure 16

Refer to Figures 14 - 16

12. Locate the Control Harness from the Wiring Kit as well as the combine's unloading system relay (S780 pictured below). There are two relays beside each other on the left side of the engine. The unloading auger relay is the outer one.

NOTE: **The wire harness has a couple styles of plugs to fit different combines. Only one set will be used on your particular combine.**

13. Using the appropriate plugs on the wiring harness, plug it in series with the combine's unloading system relay. The unused plugs can be plugged into each other to keep them free of dust and debris.

IMPORTANT: **If your combine is equipped with a Lankota Cross Auger Shut Off Kit, that wiring will already be tied into the combine unloading auger relay. Simply plug the Control Harness in series with the Cross Auger Shut Off Kit to the same relay.**

Figure 17

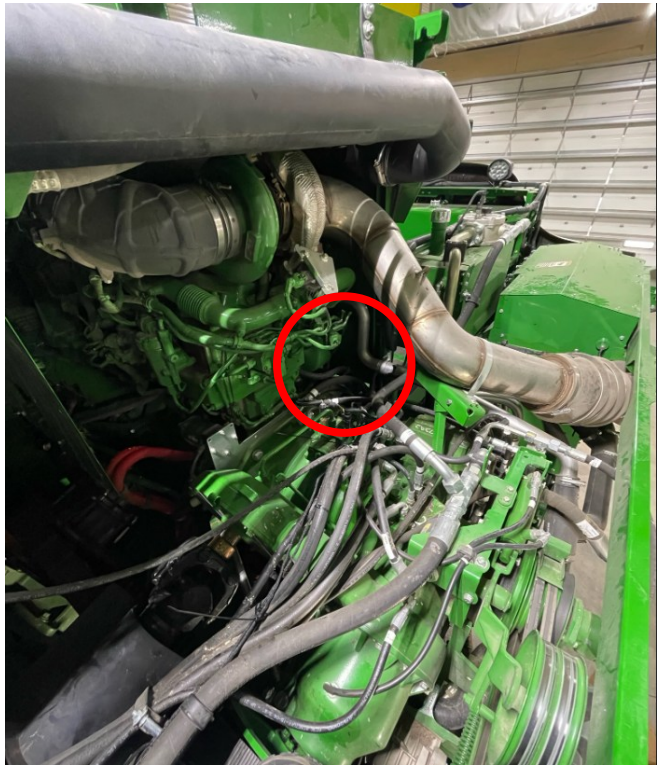
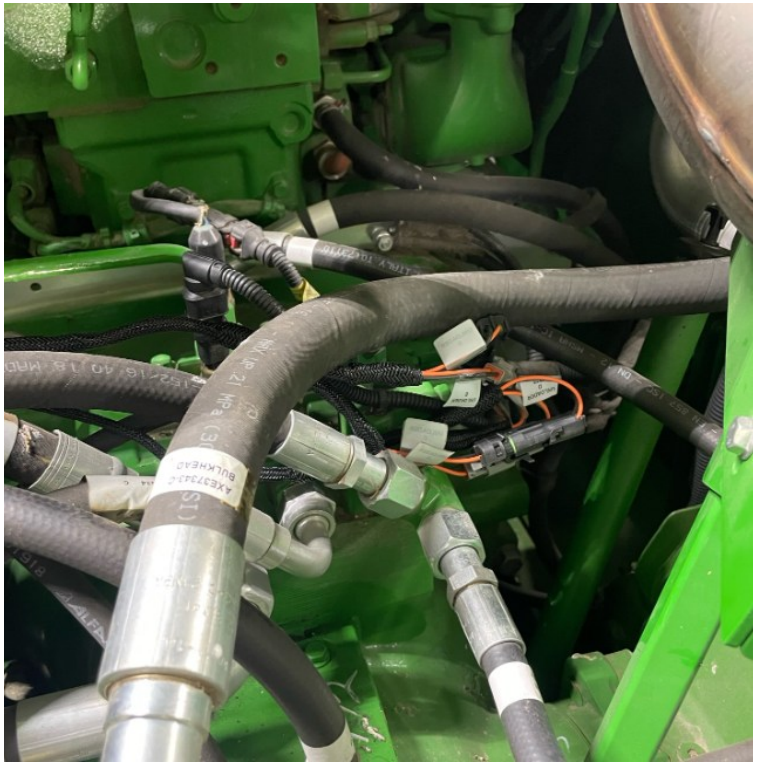


Figure 18



Refer to Figures 17 & 18

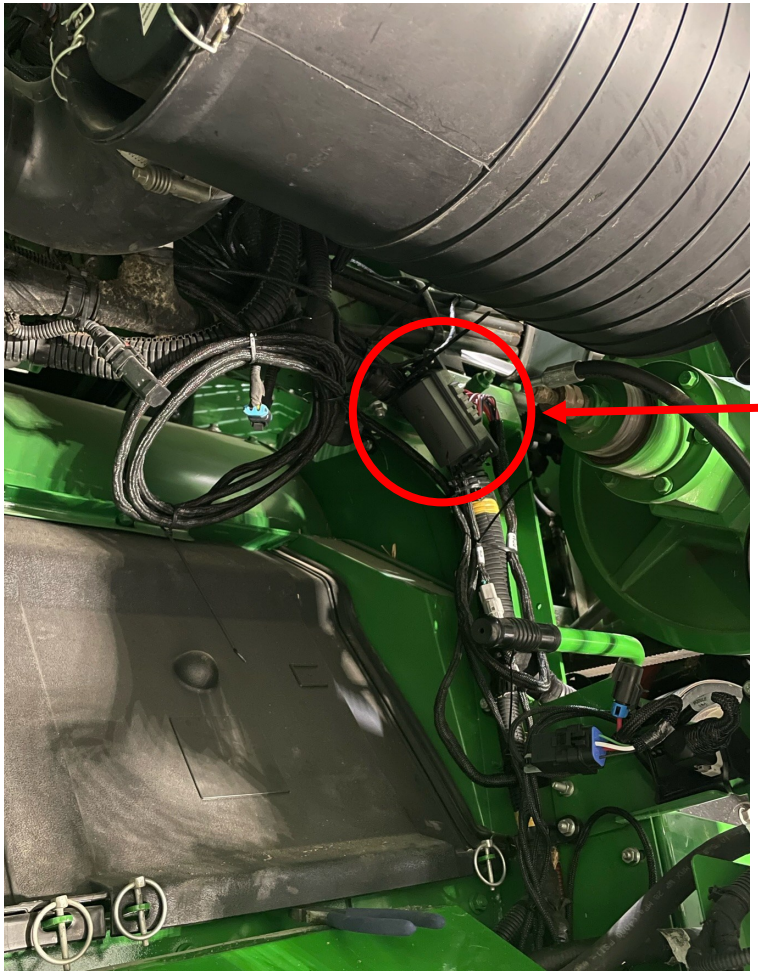
14. The eyelets of the Control Harness need to be attached directly to the battery posts.

15. Using the provided zip ties, mount the control module close by, allowing easy access to the cover. In the event of system failure, there is a 30amp fuse inside the control module box.

16. Secure wires away from moving parts using the provided zip ties.

Figure 17

Figure 18



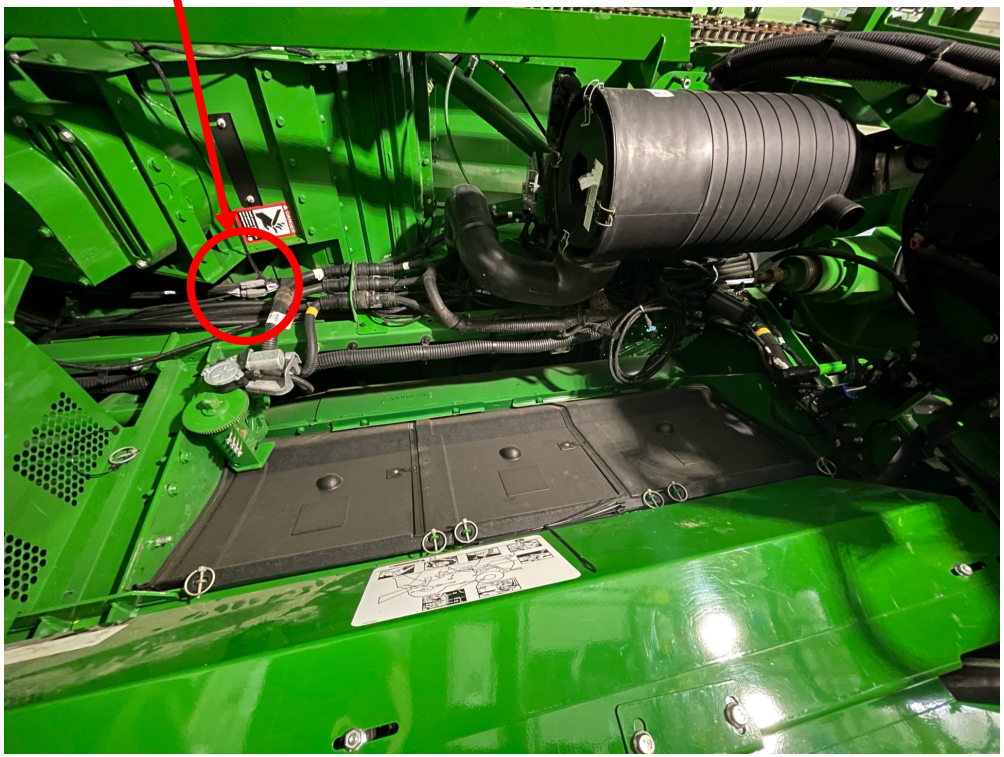
Kit Installation

Refer to Figures 19 & 20

17. Another set of plugs on the Control Harness will attach to the Auger Harness that was left hanging from the elbow of the unloading auger.
18. The remaining plug on the Control Harness should be routed toward the cab of the combine and plugged into the Cab Extension Harness.
19. Secure wires away from moving parts using the provided zip ties.

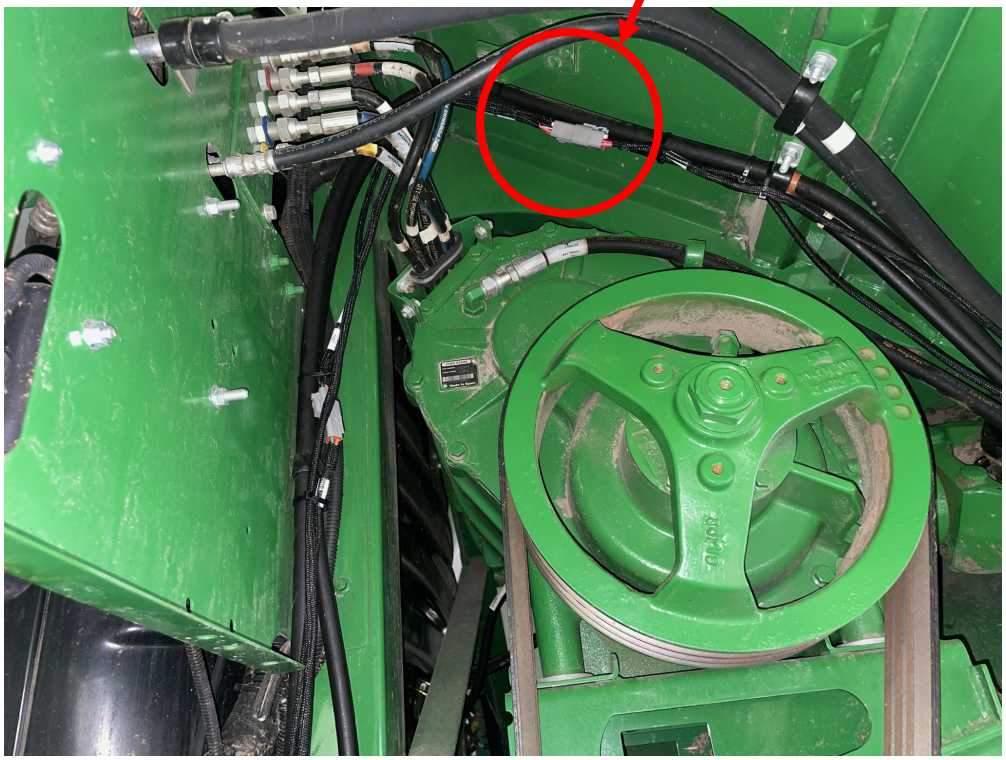
Control Harness to Auger Harness

Figure 19



Control Module to Cab Extension Harness

Figure 20



Refer to Figures 21

20. Locate an access point into the cab of the combine and route the Cab Extension Harness into the cab and under the floor mat.
21. Plug the foot pedal into the Cab Extension Harness and the accessory power port in the cab.
22. Secure wires away from moving parts using the provided zip ties.

Figure 21

The LANTS49410 kit can be operated any time the ignition switch of the combine is switched to the ON position. There are two "modes" to be aware of:

- **MANUAL MODE:** Refers to any time the combine switch is in the **ON** position and the unloading auger of the combine is **OFF.**
  - ◊ The foot pedal in the cab of the combine can be used to move the plastic spout anywhere from fully extended (UP) to fully retracted (DOWN under the auger tube). The DOWN position allows access to the auger flighting and makes the auger slightly shorter for storage.

- **AUTO MODE:** Refers to any time the combine unloading system is **ON.**
  - ◊ The linear actuator will automatically move to the "Home" unloading position, which is roughly 40-45 degrees below the axis of the auger
  - ◊ The foot pedal in the cab of the combine can be used to override the "Home" unloading position between pre-set voltage limits. These limits do NOT allow you to move the spout to the fully UP position or fully retract the spout to the DOWN position noted in the MANUAL MODE. This prevents grain leakage in the DOWN position and keeps grain flowing properly in the UP position.
  - ◊ Upon turning OFF the unloading system, the spout will automatically go to the "Auto Mode" DOWN position for 3 seconds to dump any remaining grain from the spout before automatically returning to the fully UP position. Any grain leaking from the end of the auger during transport will be caught in the "Grain Trough" in the plastic spout which will empty out the next time the spout is tipped down over a grain cart.
  - ◊ The system is now back in "Manual Mode"

IMPORTANT: **Any time an automatic function is occurring during the "Auto Mode," the function can be overridden with a touch of the foot pedal which will in turn cancel that particular automatic function.**

IMPORTANT: **After installation, check all "Manual Mode" and "Auto Mode" functions *WITH THE COMBINE RUNNING* and ensure the system is operating properly.**

For further technical assistance,

Call Lankota Inc. at:

1-866-526-5682