

# LANTS24592

## Installation Instructions

Controllable Tipping Spout for 14" Augers with Extension Kits.

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

# LANKOTA®

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# Numerical Parts List

<b>Part Numbers</b>	<b>Description</b>	<b>Qty</b>
LANTS216	14" Tippy Spout Actuator Saddle	1
LANTS214	14" Tippy Spout Top Bracket	1
LANTS217	14" Tippy Spout Quarter Saddle Band	2
LANTS106BLK	Tippy Spout Pivot Bracket	1
LANHXE169395SC	Tippy Spout—Inner	1
LANHXE170706SC	Tippy Spout—Outer	1
LANTSACT01	Linear Actuator	1
<b>Included Hardware</b>		
LANF00QF	HHCS—.5"- 13 X 2.25",GR.5	2
LANFB305	HHCS—.375"- 16 X 1.25 GR.5	2
REDB204	HHCS—.3125" - 18 X 1",GR.5	9
LANFWS55	SAE Flat Washer—.5"	4
LAN18000	Flat Washer—.375"	9
LANFWS53	SAE Flat Washer—.375"	10
LANFWS52	SAE Flat Washer—.3125"	32
RED1F30	Top Lock Nut—.5" - 13,GR.5	2
RED305K	Carriage Bolt—.375" - 16 X 1.25"	13
LAN4A16A16	Carriage Bolt—.3125" - 18 x 1.25"	8
LANF206K	Carriage Bolt—.3125" - 18 x 1.5"	2
LAN204K	Carriage Bolt—.3125—18 x 1"	4
LAN1618000	NYLOC Nut—.375" - 16, GR.5	17
LAN1616	NYLOC Nut—.3125—18, GR.5	23
LAN44302	11" Zip Tie	20
LANF11LC	Button Head Cap Screw—.375"-16 X 1"	2
LANTSWIRE05	CIH Wiring Pig Tail - Foot Pedal	1
LANTSWIRE07	CIH Wiring Pig Tail - Unloading	1

# Pictorial Parts List

LANTS216 (1)		LANTS214 (1)		LANTS217 (2)	
LANTS106BLK (1)	LANHXE169395SC (1)	LANHXE170706SC (1)	LANTSACT01 (1)	LANF00QF (2)	LANFB305 (2)
REDB204 (9)	LANFWS55 (4)	LAN18000 (9)	LANFWS53 (10)	LANFWS52 (32)	RED1F30 (2)
RED305K (13)	LAN4A16A16 (8)	LANF206K (2)	LAN204K (4)	LAN1618000 (17)	LAN1616 (23)
LANF11LC (2)	LAN44302 (20)	LANTSWIRE01 (1)	LANTSWIRE05 (1)	LANTSWIRE07 (1)	

# LANTSWIRE01 Components



CONTROL HARNESS (1)



AUGER HARNESS (1)



CAB EXTENSION HARNESS (1)



FOOT PEDAL (1)

# Kit Installation when Adapting to LANKOTA and Stuart Steel 14" Auger Extension

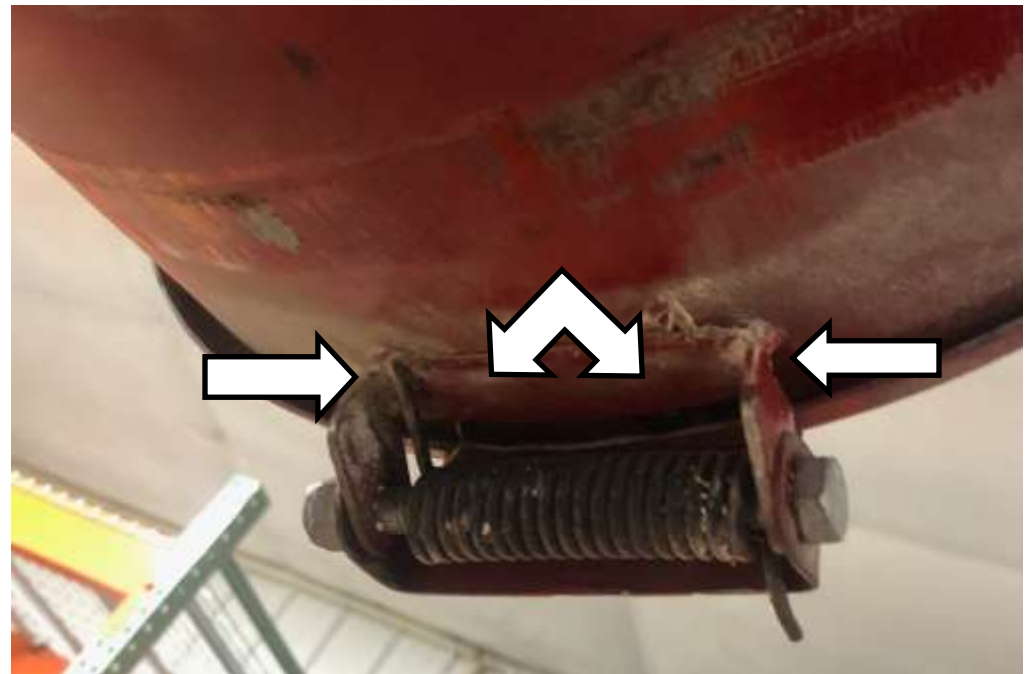
## Refer to Figures 1 & 2

1. Start by removing auger spout, grain saver door, and bands off of auger extension tube. Some grinding involved to remove grain saver door hinge off of Stuart Steel Auger Extension tube. Note: There are plug and tack welds on Stuart Steel Grain Saver Door Hinge that will need to be ground out to remove, indicated by white arrows.

Figure 1



Figure 2



# Kit Installation - When Adapting to LANKOTA Auger Extension

## Refer to Figure 3, 4 & 5

2. After spout, grain saver door, and bands are removed, take 14" Tippy Spout Actuator Saddle (LANTS216) and install on bottom side of auger tube. Use (4) 3/8" x 1.25" carriage bolts (RED305K), (4) 3/8" SAE Flat Washer (LANFWS53) and (4) 3/8" NYLOC nuts (LAN1618000) going through slotted holes in auger tube. Tighten hardware ensuring that 14" Tippy Spout Actuator Saddle is flush with end on auger tube.
3. Remove outer row of hanger bearing bolts and install the 14" Tippy Spout Top Bracket (LANTS214) using (4) 5/16" x 1" carriage bolts (LAN204K), (4) 5/16" SAE Flat Washer (LANFWS52), and (4) 5/16" NYLOC nuts (LAN1616). Take (4) 5/16" x 1.25" Carriage Bolts (LAN4A16A16), (4) 5/16" SAE Flat Washer (LANFWS52), and (4) 5/16" NYLOC nut to connect 14" Tippy Spout Actuator Saddle (LANTS216) to Tippy Spout Top Bracket (LANTS214). Once top and bottom bracket are flush to end of tube, tighten hardware.

Figure 3



Figure 4

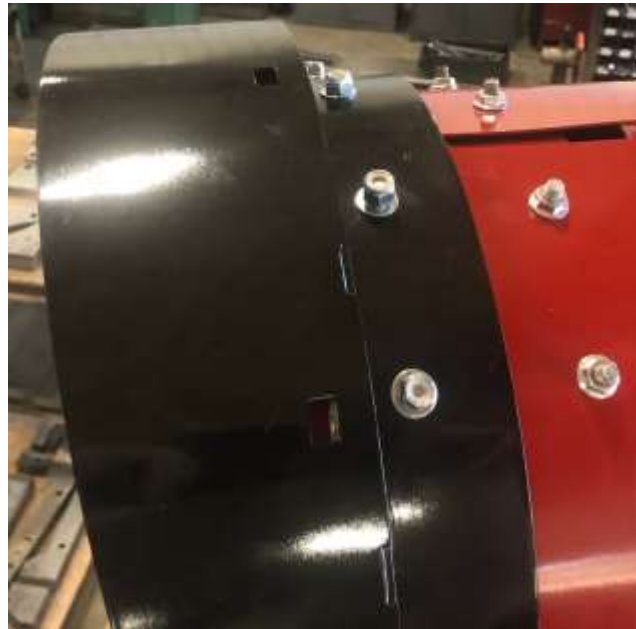


Figure 5





# Kit Installation - When Adapting to LANKOTA Auger Extension

## Refer to Figures 6

4. Take (2) 14" Tippy Spout Actuator Quarter Saddle Bands and install using (2) 5/16" x 1.25" Carriage bolts (LAN4A16A16), (2) 5/16" SAE Flat Washers (LANFWS52), and (2) 5/16" NYLOC nuts (LAN1616) on each side. Connect the (2) 14" Quarter Saddle Bands using (2) 5/16" x 1.5" Carriage bolts (LANF206K), (2) SAE Flat Washers (LANFWS52), and (2) 5/16" NYLOC nuts (LAN1616). Make sure to use proper bolt holes to have Quarter Bands between rib bolts on Auger Extension Tube.

Figure 6



# Kit Installation - When Adapting to LANKOTA Auger Extension

## Refer to Figure 7

5. Take the Inner Tippy Spout (LANHXE169395SC) and bolt to 14" Tippy Spout Actuator Saddle (LANTS216) and Tippy Spout Top Bracket (LANTS214). Use (9) 3/8" x 1.25" Carriage bolts (RED305K), (9) 3/8" Flat Washer (LAN18000), and (9) 3/8" NYLOC nuts (LAN1618000). Make sure Inner Tippy Spout (LANHXE169395SC) is flush with back lip on both 14" Tippy Spout Actuator Saddle and Tippy Spout Top Bracket.
6. Tighten Hardware.

Figure 7





# Kit Installation - When Adapting to Stuart Steel Auger Extension

## Refer to Figures 8, 9 & 10

- Loosely install (4) 5/16" x 1.25" carriage bolt (LAN4A16A16), (4) SAE Flat Washer (LANFWS52), and (4) 5/16" NYLOC nut (LAN1616) attaching 14" Tippy Spout Actuator Saddle (LANTS216) to 14" Tippy Spout Top Bracket (LANTS214). Take (2) 14" Tippy Spout Quarter Saddle Bands (LANTS217) and loosely attach top bolt pattern with (2) 5/16" x 1.5" carriage bolt (LANF206K), (2) SAE Flat Washer (LANFWS52), & (2) 5/16" NYLOC nut (LAN1616). Then take (4) 5/16" x 1.25" carriage bolt, (4) 5/16" SAE flat washer, & (4) 5/16" NYLOC nut connecting Quarter Saddle Bands to 14" Tippy Spout Actuator Saddle.
- Slide loosely installed parts over auger extension tube. Make sure 14" Tippy Spout Actuator Saddle and Top Bracket are flush with end of auger tube, and Quarter Saddle Bands are between rib bolt pattern.
- Tighten Hardware.

Figure 9



Figure 10



Figure 8



# Kit Installation - When Adapting to Stuart Steel Auger Extension

## Refer to Figures 11 & 12

10. After Hardware connecting 14" Tippy Spout Brackets are tight, flush with end of tube, & Quarter bands tight on extension rib, take 3/8" drill bit and drill one hole on each side of 14" Tippy Spout Actuator Saddle (LANTS216). (Indicated by arrow) Once holes are drilled take (2) Button Head Cap Screw (LANF11LC), (2) SAE Flat Washer (LANFWS53), & (2) 3/8" NYLOC nut (LAN1618000) and tighten hardware with cap head on inside of tube.

Figure 11



Figure 12



# Kit Installation

## Refer to Figures 13 & 14

11. Take Spout Pivot Bracket (LANTS106BLK) and Outer Tippy Spout Mold (LANHXE170706SC) and bolt together using (9) HHCS—.3125" x 1" bolt (REDB204), (18) 5/16" SAE Flat Washer (LANFWS52), & (9) 5/16" NYLOC nut (LAN1616).
12. Tighten Hardware.
13. Attach the assembled outer spout over the inner spout using the provided 3/8"-16 x 1-1/4" Gr. 5 Hex Head Bolts (LANFB305), 3/8" Flat Washers (LAN18000), and 3/8" NYLOC nuts (LAN1618000). Be sure to use a washer on both the bolt and nut side.

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

Figure 13



Figure 14



# Kit Installation

## Refer to Figure 15

14. 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 15





# Kit Installation

## Refer to Figures 16 - 19

15. Route the wires to top of auger tube securing with provided zip ties (LAN44302).
16. Locate the Auger Harness from the Tippy Spout Wiring Kit (LANTSWIRE01) and plug it into the linear actuator.
17. Secure the harness along the top side of the unloading auger.
18. With the auger swung 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.

Figure 16



Figure 17



Figure 18



Figure 19



# Kit Installation

## Refer to Figures 20 & 21

19. Locate the control harness from the Wiring Kit as well as the combines unloading system relay. Connect CIH Wiring Pig Tail (LANTSWIRE07) to control harness. Unused plugs can be plugged into each other to keep them free of dust and debris.
20. Take CIH Wiring Pig Tail (LANTSWIRE07) and connect to combines unloading system relay using a zip tie to ensure plugs stay connected.

Figure 20



Figure 21





# Kit Installation

## Refer to Figures 22 & 23

21. The eyelets of the Control Harness need to be attached directly to the battery posts.
22. 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 30 amp fuse inside the control module box.
23. Secure wires away from moving parts using the provided zip ties.

Figure 22



Figure 23



# Kit Installation

## Refer to Figures

24. 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.
25. The remaining plug on the Control Harness should be routed towards the cab of the combine and plugged into the Cap Extension Harness.
26. Secure wires away from moving parts using the provided zip ties.
27. Attach CIH Wiring Pig Tail - Foot Pedal (LANTSWIRE05) to seat power plug located on right side of seat. Connect Foot Pedal cable to end of Pig Tail and run cable under floor mat.
28. With cab extension Harness Connected to Pig Tail and routed under floor mat, run wiring out the right side door and secure with provided zip ties under cab and along left side of frame connecting to Control Harness.
29. Secure all wires away from any moving parts with provided zip ties.

Figure 24



Figure 25



# Manual

The LANTS24592 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**