LANUDCIH2000K **Installation Instructions**

CASE IH® 6088 & 7088 Series Combine Unloading Auger Electric Clutch Disengage System

The initial burnish process of the clutches contained in this kit has been performed by Lankota prior to shipment.

DO NOT USE WITH AN AUTOMATIC LUBRICATION SYSTEM!

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

Numerical Parts List

Part Numbers	Description	Qty
LANUDCIH1100	Clutch Mount Bracket Assembly	1
LANCIH60A45	Sprocket - #60, 45 Teeth	1
LANCIH60A43	Sprocket - #60, 43 Teeth	1
LANUDCIH1004	Sprocket Hub	2
LANUDCIH1005	Sprocket Spacer	4
LANUDCIH2006	Clutch Spacer	2
LANUDCIH1007	Keyed Washer	10
LANGT5C-LK01	Electro Magnetic Clutch - REAR	1
LANGT5C-LK02	Electro Magnetic Clutch - FRONT	1
LAN47577188	Bearing Lock Collar	2
LAN44302	Zip Ties	10
LANUDJD1004	Sprocket Shim	6

Numerical Parts List

Part Numbers	Description	Qty
LANUDCIH1000KBH	Bag Of Hardware	1
	5/16" SAE Flat Washer	4
	M12-1.75 X 60mm, Grade 8.8 Bolt	2
	M12 Lock Washer	2
	M8-1.25 X 25mm, Grade 8.8 Bolt	16
	M8-1.25 X 35mm, Grade 8.8 Bolt	12
	M8-1.25 X 45mm, Grade 8.8 Bolt	12
	M8 Lock Washer	24
	5/8" SAE Flat Washer	10
	M8 Nyloc Nut	4
	Key - 8 x 10 x 40mm	2
LANHT9261	Wiring Harness Bundle	1
	Cab Extension Harness	2
	Clutch Harness	1
	Cab Foot Switch	1
	Power Harness	1

Pictorial Parts List



Pictorial Parts List



For further technical assistance,

Call Lankota Inc. at: 1-866-526-5682

Refer to Figures 1 & 2

- 1. Unload/Empty the grain tank.
- 2. Open L/H main access door on combine, exposing the unloading auger drive chain system.
- 3. Loosen drive chain tensioner completely.
- 4. Remove drive chain, letting it hang in place for later reinstallation.
- 5. Measure the gap between the grain tank and the sprockets. This will help line up the new sprockets with the drive chain.
- 6. Remove both grain tank cross auger drive sprockets from auger shafts. Leave square shaft key installed on shafts just as they are.
- 7. Use emery cloth to clean any scuffs, burs or paint from the shafts. This will make installation of new components much easier.

Figure 1

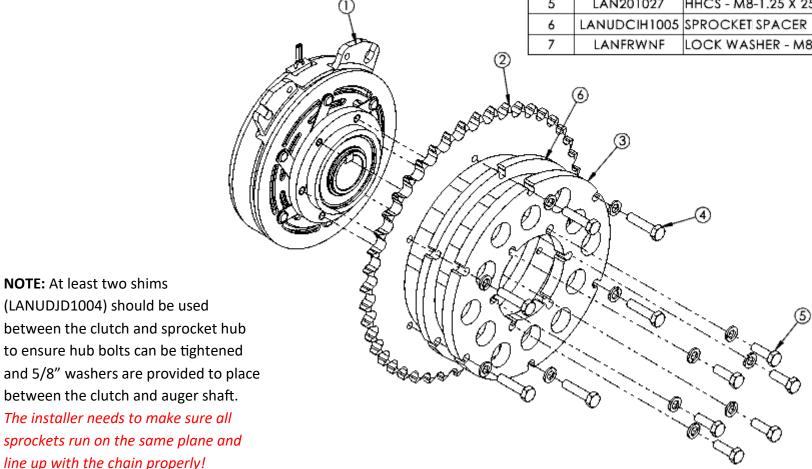




Bolt the 45 tooth sprocket to the clutch as shown in the drawing below.

This kit requires the LANGT5C-LK01 clutch to be attached to the 45 tooth sprocket and placed on the REAR unloading auger shaft!!

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LANGT5C-LK01	REAR CLUTCH	1
2	LANCIH60A45	SPROCKET - CIH - NO. 60, 45 TOOTH	1
3	LANUDCIH1004	SPROCKET HUB	1
4	METRIC BOLT	HHCS - M8-1.25 X 35, GR. 8.8	6
5	LAN201027	HHCS - M8-1.25 X 25, GR. 8.8	6
6	LANUDCIH1005	SPROCKET SPACER	1
7	LANFRWNF	LOCK WASHER - M8	12



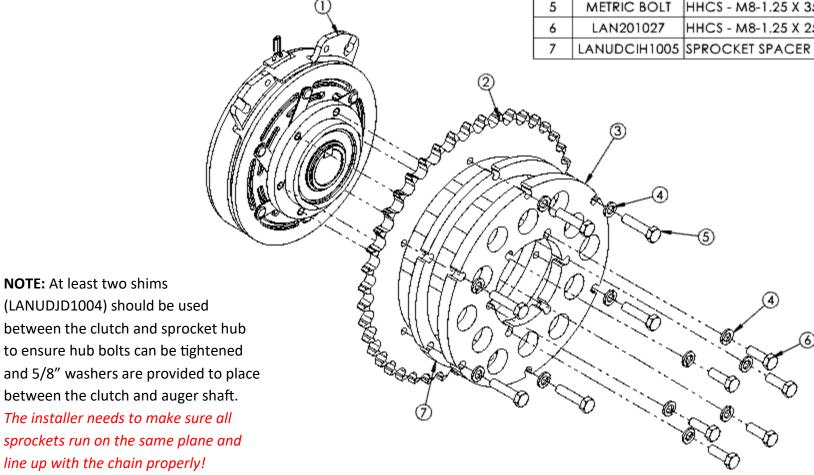
The installer needs to make sure all sprockets run on the same plane and line up with the chain properly!

NOTE: At least two shims

Bolt the 43 tooth sprocket to the clutch as shown in the drawing below.

This kit requires the LANGT5C-LK02 clutch to be attached to the 43 tooth sprocket and placed on the FRONT unloading auger shaft!!

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LANGT5C-LK02	FRONT CLUTCH	1
2	LANCIH60A43	SPROCKET - CIH - NO. 60, 43 TOOTH	1
3	LANUDCIH1004	SPROCKET HUB	1
4	LANFRWNF	LOCK WASHER - M8	12
5	METRIC BOLT	HHCS - M8-1.25 X 35, GR. 8.8	6
6	LAN201027	HHCS - M8-1.25 X 25, GR. 8.8	6
7	LANUDCIH1005	SPROCKET SPACER	1

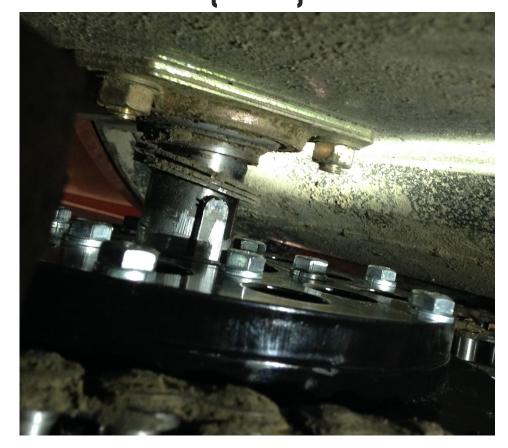


NOTE: At least two shims

Refer to Figure 3

NOTE: Use either the factory or provided key(s) for proper clutch/shaft engagement. You may need some light sanding to properly fit the key.

- 10. Mount one of the clutches. Measure between the grain tank and sprocket; compare this with the previous measurement.
- 11. Use the 5/8" flat washers (LANFWS57) or the clutch spacer (LANUDCIH1006) inside the clutch to move the sprocket out, OR the sprocket shims (LANUDJD1004) between the sprocket and clutch to move it in.
- 12. When the sprocket is set, examine the shaft behind the clutch and then remove the clutches:
 - a) If the locking collar (LAN47577188) will fit, remove the shaft keys and install the (2) eccentric lock collars on the shafts. Then replace the keys.
 - b) If the lock collars will not work, leave the keys in place and fill the space with the keyed washers (LANUDCIH1007).



2. Kit Installation

Refer to Figure 4

NOTES:

- It is STRONGLY recommended that anti-seize be applied to the auger shaft before installing the clutch & sprocket assembly.
- Use a small amount of thread locking compound on each bolt to secure clutch/ sprocket assembly to drilled shafts.
- 1. Using the 5/8" flat washers (LANFWS57) or the clutch spacer (LANUDCIH1006) inside the clutch, OR the sprocket shims (LANUDJD1004), make sure the sprocket lines up with the chain properly when the sprocket assemblies are placed on the auger shaft. Fasten using one M12-1.75 x 60mm Grade 8.8 Bolt with thread locking compound and one M12 Lock Washer per shaft. Make sure the 45 tooth sprocket is on the rear shaft and the 43 tooth sprocket is on the front shaft. The grain tank unload augers will need to be kept from rotating to tighten these bolts.
- 2. Install the chain onto the sprockets in the same manner it was taken off.



Figure 4

2. Kit Installation

Refer to Figure 5

- 1. Locate four M8-1.25 x 25mm Grade 8.8 Bolts, four M8 Nyloc Nuts and four 5/16" SAE Flat Washers from the supplied bag of hardware and use to attach the Clutch Mount assembled earlier to both front and rear clutch assemblies. Tighten the hardware at this time.
- 2. Tighten the unload drive chain as outlined in the COMBINE OPERATOR'S MANUAL.



Refer to Figure 6

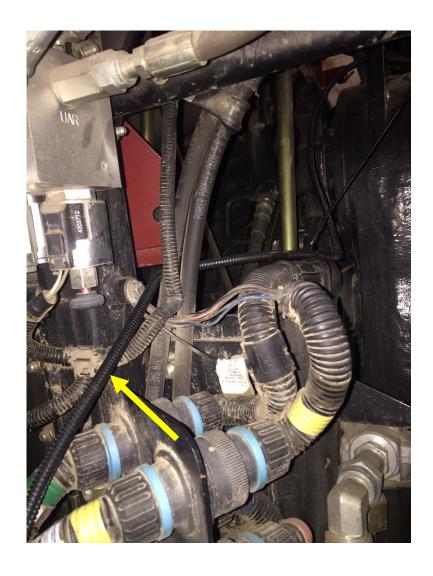
The supplied wiring harness has two different style connector ends to fit many different model combines. Choose the connectors that match your combines connectors.

- 1. Access the left side of the combine.
- 2. Locate the unloading auger solenoid wiring connectors on the left side of machine.
- 3. From the supplied wiring harness kit, locate the Main Rear Harness which is the longest wiring harness wrapped with a braded cover which has several connector ends.
- 4. Connect the wiring harness to the connectors on the combine.
- 5. Whichever connectors do not get used, connect those to each other.
- 6. Secure wires with a zip tie.



Figure 6

Route wiring harness similar to the next figures. Secure harness as needed using supplied bag of hardware that came in the wiring bundle and/or the supplied zip ties (LAN44302). The harness is indicated with a yellow arrow. Route may differ depending on combine model.







Refer to Figure 7

- 7. Route the clutch harness to the clutches and plug into the clutch wire leads.
- 8. Attach the ground wire to a nearby bolt on the frame (ensure a good connections)
- 9. Secure all wires with zip ties to avoid any damage.



Refer to Figure 8

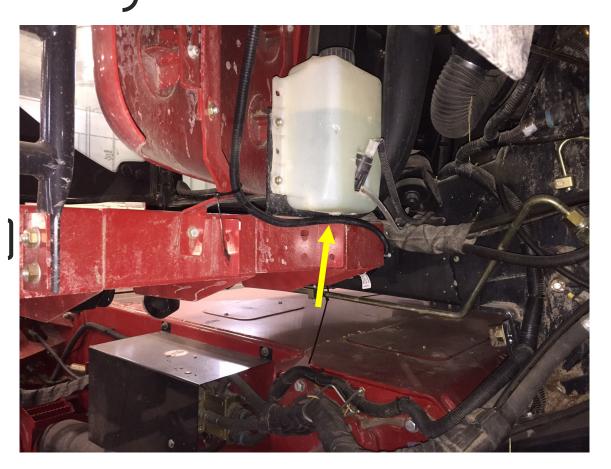
- 10. Continue harness forward along the hinge point of the large L/H main access door.
- 11. Attach harness where you can to avoid any damage during operation of combine and/or opening and closing of the side shield.



Refer to Figure 9

- 12. Run harness below the walking platform as close to the cab access door as you can.
- 13. Secure where you can to avoid damage to harness.

This harness WILL NOT continue into combine cab.



Refer to Figures 10 & 11

NOTE: BEFORE PROCEEDING, DISCONNECT ANY BATTERY POWER SOURCE TO THE CAB.

- 1. Locate Power Harness from wiring bundle. This harness has eyelets on a black and red wire and a plug on the other end.
- 2. Locate and remove the fuse panel cover (red arrow). Connect the power eyelet to the bolt indicated with the gold arrow and the ground wire to the bolt indicated with the blue arrow.

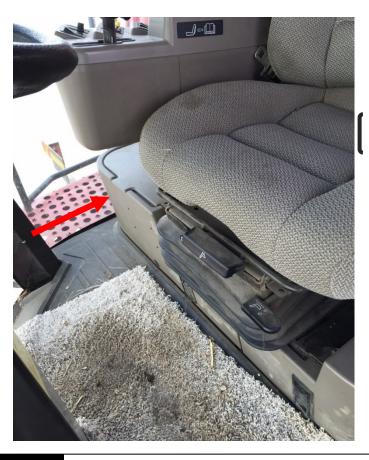
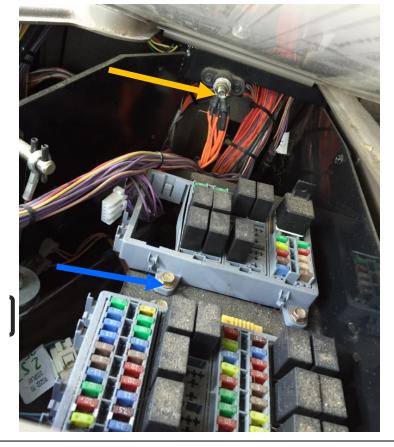


Figure 10



Refer to Figure 12

- 3. Locate Cab Extension Harness. It has a single plug on one end and two plugs on the other.
- 4. Plug the corresponding connector into the Power Harness.
- 5. Locate Foot Switch Controller that is supplied in wiring kit. Place in cab where desired. Route cord as best able to avoid congestion with feet and brake pedals.
- 6. Plug connector from Foot Switch Controller into connector on Cab Extension Harness.
- 7. Route Cab Extension Harness under the front lip of the floor mat as shown in the image.



Refer to Figure 13

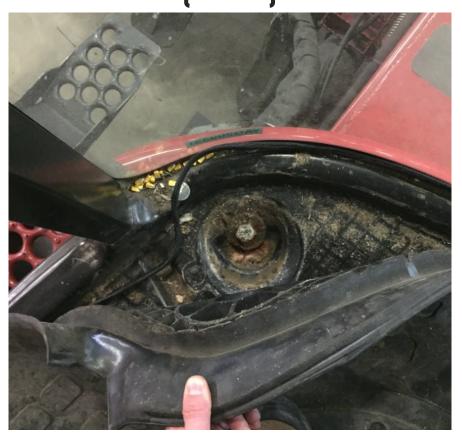
8. Run the harness under the front lip of the floor mat and to the front bottom corner of the combine cab access door.

Refer to Figure 14

9. Run the excess length of the Cab Extension Harness in the corner of the doorway and under the walking platform.

Figure 14

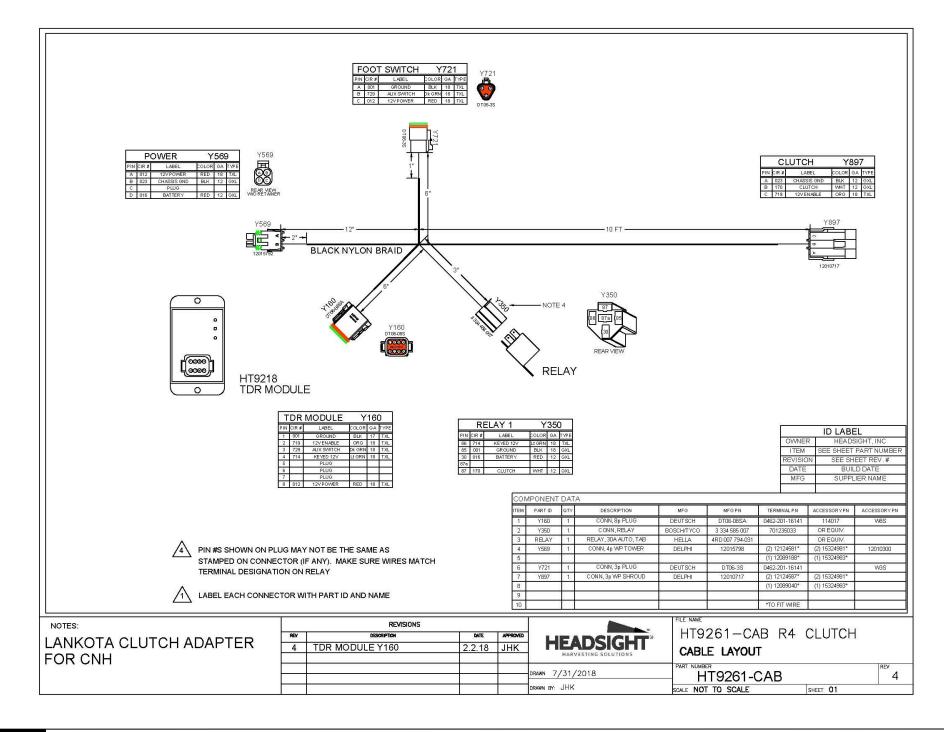




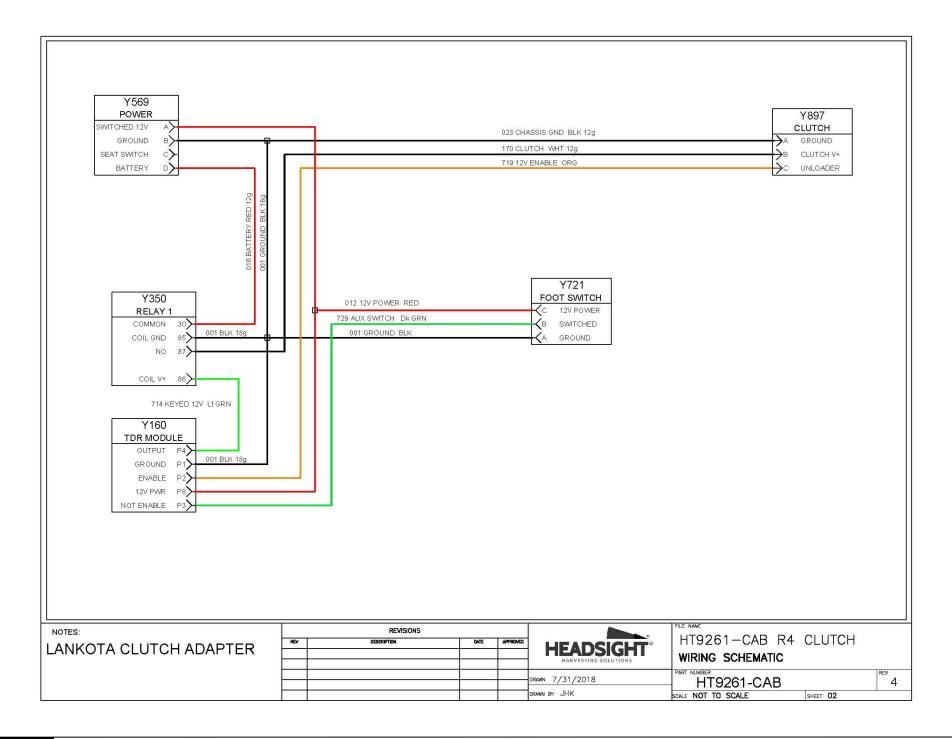
Refer to Figure 15

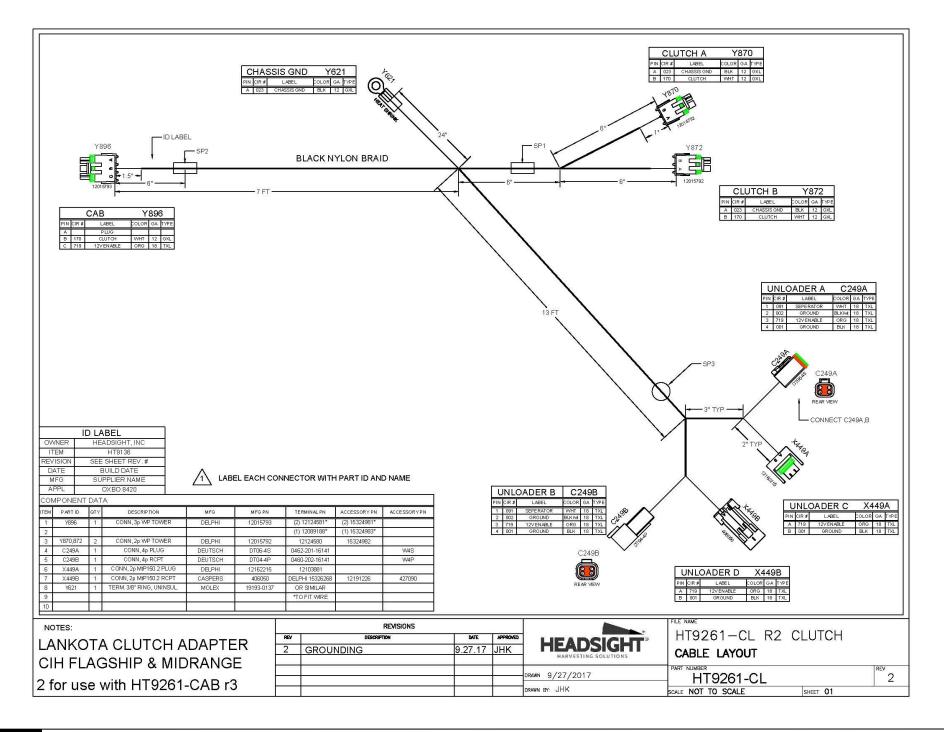
- 10. Connect end of Cab Extension Harness to harness previously installed in access door area on the bottom side of the ladder landing.
- 11. Secure harness where you can to avoid damage during operation.
- 12. Tidy up harness in cab as best as possible to avoid damage.

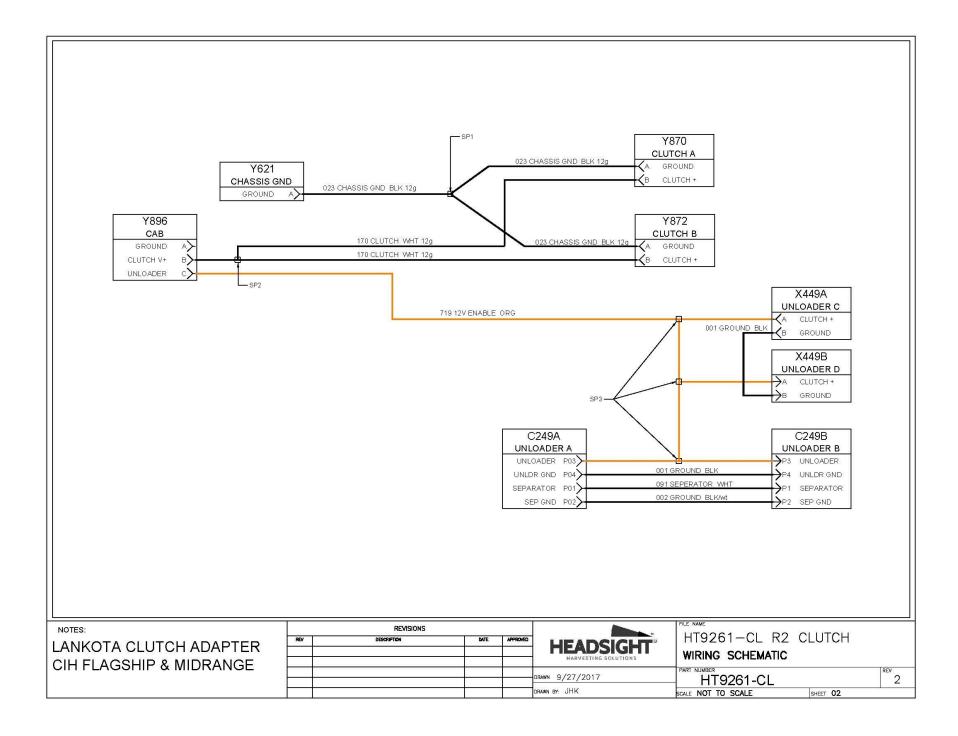


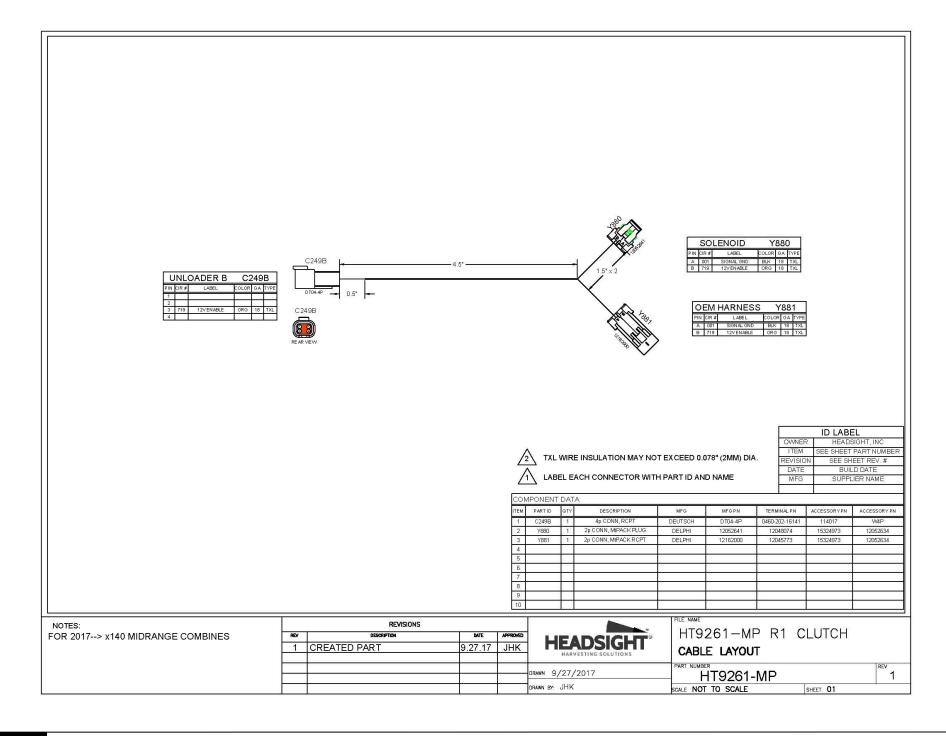


Page | 21 10/18/2021 www.lankota.com | Lankota Inc.

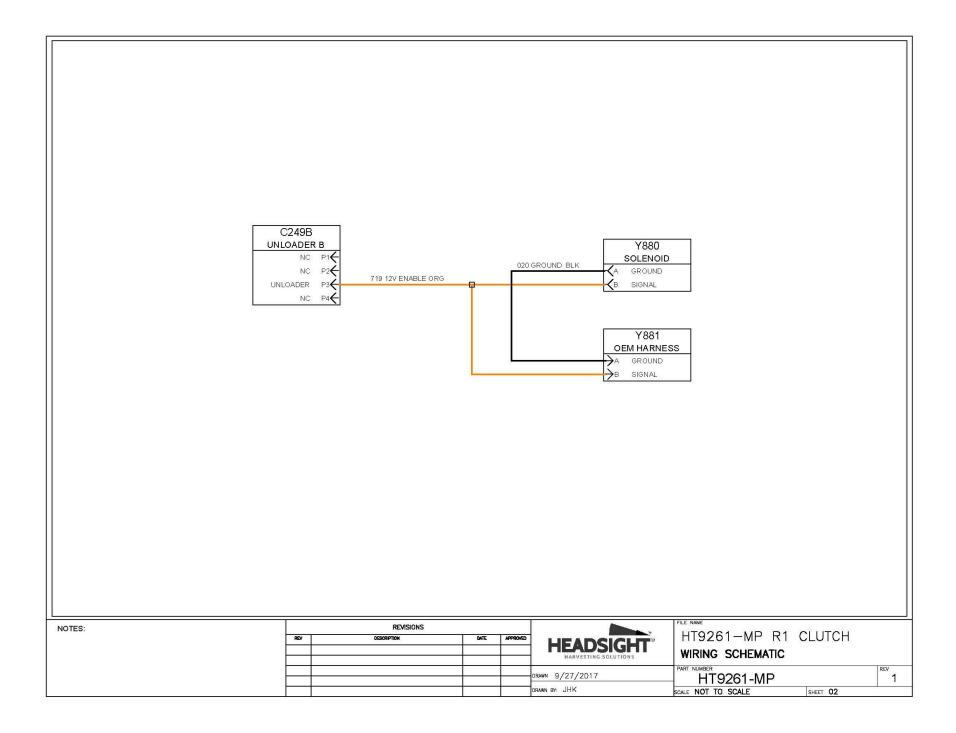








Page | 25 10/18/2021 www.lankota.com | Lankota Inc.





HT9218 MODULE DIAGNOSTICS ASSIST

09062027a

Description

It operates as both a logic module and a Delay Timer to allow the main auger to start first, then engage the cross augers. The HT9218 TDR Molule is used with the Lankota "Cross Auger Clutch Kit".

Functionality

The module operates on 12V DC, has 2 inputs, and a single output.

- Pin 1 = Ground
- Pln 6 = +12V power supply
- CNH Keyed 12V
- JD Unloader clutch 12V (same as pin 3)
- Pin 3 is the Enable input from the OEM unloader clutch
- V > 9V or 25% PWM, Enable output (with time delay)
- Pin 2 is the Disable input from the foot switch
- V > 9V or 25% PWM. Turn OFF output
- Pin 4 is the Output pin, used to turn on the cross-auger clutch relay

Indicators

The unit has 3 LED indicators to assist Troubleshooting:

- GREEN Power: nominal +12V supply to unit YELLOW Enable is Active (OEM Unloader Clutch > 9V or 25% PWM)
 - RED Output is ON

Correct Operation

- When the OEM unloading auger is NOT running:
- JD No LED's are on
- CNH Only Green LED is ON (whenever the combine key is on)
- Green & Yellow LEDs both ON whenever the OEM unloading auger clutch is engaged 7
- Red LED turns ON after Time delay (4-6 seconds), relay closes, cross auger clutches engage
- 4. Pressing the foot switch immediately stops augers, releasing foot switch immediately starts augers

LED Diagnostics

he following requirements must be met before testing:

Key on, combine engine running. Unloader running

Step thru the chart by Light Function

STEP 1 - Is the Green Light working properly?

STEP 2 - Is the Yellow Light working properly? STEP 3 - Is the Red Light working properly?

Measure voltages, etc in 6 pin plug	Measure voltages, etc in 6 pin plug that connects to module, not on actual module pins.	al module pins.
Error Code	Problem	Solution
No Green Light OE Unloader running	No Ground - Test Continuity, Pin 1 in plug to Frame Ground	Repair wire or find better ground bolt
	No 12V. CNH - Measure Pin 6 in plug to Frame Ground	Check 12V supply in cab, or wiring
	No 12V, JD - Measure Pin 6 in plug to Frame Ground	See No Yellow Light, OEM Unloader running
	12V. Pin 6 to Pin 1 in plug	Replace Module
No Yellow Light OEM Unloader Running	No Voltage - Not connected to Unloader Clutch plug.	Find correct plug (see Install Manual)
Test Pin 3 in plug to frame ground JD - 11-13V CNH - 6-13V	No Voltage - Orange wire broken. Test continuity from Pin 3 in plug to orange wire in any of the Unloader Clutch Tee plugs JD - Y540/Y541, Y874,Y875 CNH - C249, X449	Repair wire Check 3 Pin WP connection Y896/ Y897
	No Ground - Test Continuity, Pin 1 in plug to Frame Ground	Repair wire or find better ground bolt
	Voltage as shown, Pin 3 to Pin 1 in plug	Replace Module
No RED Light OEM Unloader running.	No Ground - Test Continuity, Pin 1 in plug to Frame Ground	Repair wire or find better ground bolt
Time Delay > 6 seconds after starting Unloader	Foot Switch ON Disconnect foot switch plug Y721	Test foot switch or wiring
	Defective module	Replace Module
All Lights ON. Cross Augers not energized	No Battery Power Measure large Red Wire at relay	Connect Red wire, Check Fuse, repair wire
(No 12V A-B in clutch plugs)	Defective Power Relay	Replace Relay
	Clurches not Grounded	Check Ground bolt connection in clutch harness

Finishing

- 1. Make one final check to complete wiring harness to ensure there are no points in the harness that will come in contact with anything that may damage harness during combine operation and/or L/H main access door opening and closing.
- 2. Do a final check of all nuts, bolts etc. installed to make sure they are all tight and secure.

DO NOT USE WITH AN AUTOMATIC LUBRICATION SYSTEM!

Test Run & Burnish

Test run the system. The unloading auger system should work exactly the same as it did before you installed this kit except when the foot switch is engaged the two grain tank cross augers will stop turning allowing the unloading auger to empty out roughly 85 - 90%. As soon as pressure is released from the foot switch the augers will reengage. This means that anytime you want the cross augers not to turn, you must have your foot on the foot switch.

The initial burnish process of the clutches contained in this kit has been performed by Lankota prior to shipment. Seasonal reburnishing of the clutches at the beginning of every harvest season will greatly increase the life of your clutch system.

To burnish the clutches:

- 1. Swing out the auger.
- 2. Start the unloading auger.
- 3. Run the combine on high idle.
- 4. Press and release the foot switch 5-10 times.

THESE TIPS NEED TO REMAIN IN THE COMBINE WITH THE OPERATOR AT ALL TIMES

TIPS TO ENSURE LONG LIFE OF YOUR LANKOTA GRAIN TANK CROSS AUGER CLUTCH SHUT OFF SYSTEM

WIRING SYSTEM NEEDS GROUNDED TO THE BATTERY:

(John Deere® Kits Only) Most kits have been installed with the grounding wire attached to a bolt usually above the battery box. Even though there might be factory wiring grounded to this bolt, it is **NOT** a sufficient ground for the clutch kit. **For Pre "S" Series Combines**, remove the battery box lid and attach the ground wire to the **SWITCHED** side of the battery cut off switch. Do not connect to the side of the switch that is directly connected to the **BATTERY** ground, that will drain your battery. **On "S" Series Combines**, attach ground wire directly to the battery.

BURNISH CLUTCHES REGULARLY:

If you have not used the unloading auger clutch system for several days, such as at the beginning of every season, or after a weather delay, make sure to run the engine at high RPM, engage the unloading auger system with an empty grain tank and slowly cycle the foot pedal on and off 15 – 20 times to clean the surfaces of the clutch. This will rid the mating surfaces of rust and dirt which can cause the clutch to slip.

GRAIN TANK CROSS AUGER COVERS:

For high moisture crops (corn especially), put the grain tank cross auger covers in the **DOWN** position on the far **RIGHT** side of the grain tank. Put them in the UP position on the auger side or left side of the grain tank. This will minimize compacting the wet corn under the auger covers.

MAKE SURE GRAIN TANK SUMP IS CLEAN:

Even if you put your combine in a shed **EVERY NIGHT**, there still will be dirt and build up in your grain tank sump. As a rule of thumb, with a clutch kit installed or not, you should drain and clean out the sump **WEEKLY**, even if there is not wet material present. Cleaning out the sump will guarantee you do not have any clumps of rotten gain, hard dirt or ice hindering the flow of grain.

NEVER LEAVE WET GRAIN IN THE GRAIN TANK:

Never leave high moisture grain in the grain tank for long periods of time. This will settle and act like cement causing many problems.

For any questions, comments or concerns, please contact Lankota @ 866 – 526 – 5682. We are happy to help you have the best harvesting experience possible. After hours and weekend emergency tech support available by calling the above phone number.