

LANUDJD3000K

Installation Instructions

Unloading Auger Electric Clutch Disengage System

John Deere® 60-S670 NON HUR & 50 Series STS Combines

LANKOTA®

270 West Park Avenue

Huron, SD 57350

866-526-5682

Numerical Parts List

Part Number	Description	Qty.
LANUDJD1001	Shaft Drill Jig	1
LANUDJD3002	Clutch Alignment Bracket	1
LANUDJD3004	Door Latch Bracket	1
LANUDJD3005	Front Door Bracket	1
LANUDJD3006	Rear Door Bracket	1
LANI-5228-48	Electro Magnetic Clutch - REAR	1
LANI-5228-56	Electro Magnetic Clutch - FRONT	1
LAN60A49	#60, 49 Tooth Sprocket	2
LANUDJD1004	Sprocket Shim	6
LANFHKG5	Key—8 x 10 x 40mm	2
LAN5218-251-016	Clutch Wire Lead	2
LANUDJDBH	Bag Of Hardware	1
-----	25/64" Drill Bit	1
-----	7/16" Lock Washer	2
-----	7/16" x 2" Grade 5 Bolt	2
-----	7/16"-14 Drill Tap	1
-----	M8-1.25 x 25mm, Grade 8.8 Bolt	16
-----	M8 Lock Washer	12
-----	M8 Nyloc Nut	4
-----	5/16" SAE Flat Washer	8
-----	11" Zip Tie	10
-----	3/8"-16 x 3/4" Carriage Bolt	2
-----	3/8"-16 x 1" Bolt	3
-----	3/8" Serrated Flange Nut	5
-----	5/8" Washer	10

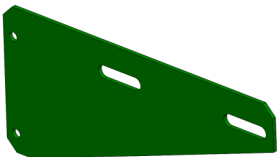
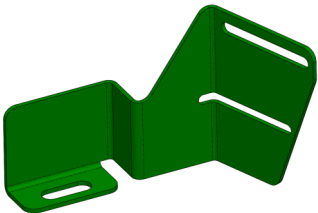
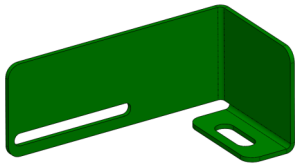

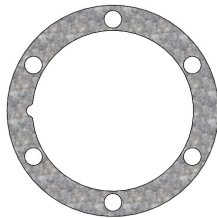

Numerical Parts List

Part Number	Description	Qty.
LANHT9260	Wiring Harness Bundle	1
-----	Cab Extension Harness	2
-----	Power Harness	1
-----	Cab Foot Switch	1
-----	Clutch Harness	1
-----	Wiring Harness Bundle Hardware Bag	1

Pictorial Parts List

				
LANUDJD1001	LAN60A49 (2)	LANI-5228-48 (1)	LANI-5228-56 (1)	LAN5218-251-016 (2)
				
Cab Extension Harness	Power Harness	Clutch Harness	Cab Foot Switch	Wiring Kit Bag of Hardware
				
LANUDJD3002	M8 Lock Washer (12)	7/16" Lock Washer (2)	7/16"-14 Tap	25/64" Drill Bit
				
M8-1.25 X 25mm, Gr 8.8 Bolt (16)	M8 Nyloc Nut (4)	5/16" SAE Flat Washer (8)	7/16" x 2" Grade 5 Bolt (2)	11" Zip Tie (10)

Pictorial Parts List

 <p>LANUDJD3004</p>	 <p>LANUDJD3005</p>	 <p>LANUDJD3006</p>	 <p>8x10 x 40mm Key (2)</p>	 <p>LANUDJD1004 (6)</p>
 <p>5/8" SAE Flat Washer (10)</p>				

Preparation

Refer To Figure 1.1

1. Open L/H main access door on combine, exposing the unloading auger drive chain system.
2. Loosen drive chain tensioner completely.
3. Remove drive chain; let it hang from rear main drive sprocket or set it aside for later reinstallation.
4. Remove both grain tank cross auger drive sprockets from auger shafts. Leave bearing locking collar and square shaft key installed on shafts just as they are. **DO NOT TRY TO REMOVE BEARING LOCKING COLLAR OR SQUARE KEY FROM SHAFT!**
5. Use emery cloth to clean any scuffs, burs or paint from end of shaft. This will make installation of new components much easier.

Figure 1.1



1. Clutch & Sprocket Installation

Refer To Figure 1.2

1. Locate the 25/64" Drill Bit that is supplied in the bag of hardware. Measure from the cutting end of the drill bit back towards the shank 2 1/2" inches and make a visible mark.
2. Slide Shaft Drill Jig (LANUDJD1001) over the end of front exposed auger shaft. Make sure jig is on all the way.

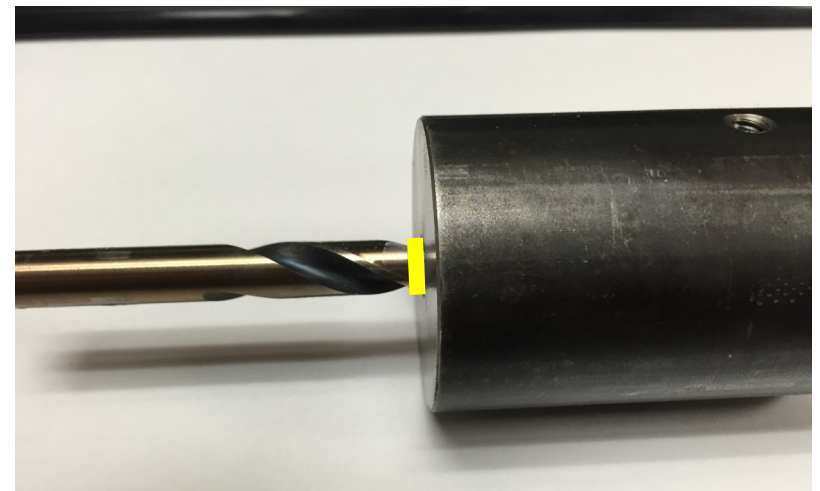
Refer To Figure 1.3

3. Using the jig as a guide, drill into the end of the shaft deep enough so that your 2 1/2" mark is flush with the end of the Shaft Drill Jig. **MAKE SURE YOU DRILL AT LEAST THIS DEEP. IF YOU DRILL DEEPER THAT IS OK.**
4. Repeat these steps for the second, rear auger shaft.
5. Remove Shaft Drill Jig from shaft. You will no longer use this jig.

Figure 1.2



Figure 1.3



1. Clutch & Sprocket Installation

Refer To Figure 1.4

6. Use a pipe wrench or equivalent to hold auger shaft from turning while tapping the drilled hole. Locate the 7/16" Tap supplied in the hardware bag and tap the holes drilled in both auger shafts.
7. Use a cutting oil or spray lubricant if possible to get the best thread results.

Figure 1.4



1. Clutch & Sprocket Installation

Refer To Figure 1.5

8. Locate twelve of the M8-1.25 x 25mm, Grade 8.8 Bolts and twelve of the M8 Lock Washers from the supplied bag of hardware. Attach a #60, 60 Tooth Sprocket (LAN60A60) to the Electro Magnetic Clutch (LANI-5228-48) using six bolts and lock washers - This will go on the **REAR CROSS AUGER**.
9. Attach another sprocket to the Electro Magnetic Clutch (LANI-5228-56) using the remaining fasteners - This will go on the **FRONT CROSS AUGER**.

NOTE: Bolts may be tightened at this time.

Figure 1.5



1. Clutch & Sprocket Installation

Refer to Figure 1.6 & 1.7

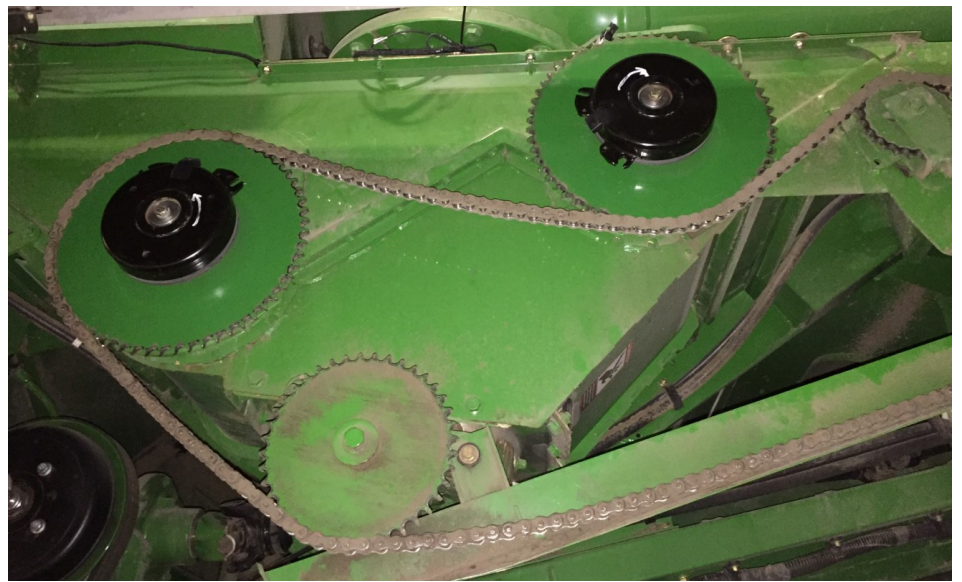
NOTES:

- Shims (LANUDJD1004) are provided to bolt between the clutch and sprocket and 5/8" washers are provided to place between the clutch and auger shaft. *NOTE: You may not need to use any of these. The installer needs to make sure all sprockets run on the same plane and line up with the chain properly.*
 - 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.
10. Install both front and rear clutch/sprocket assemblies onto drilled auger shafts using one 7/16" x 2" Grade 5 Bolt with thread locking compound and one 7/16" Lock Washer per shaft.
 11. Re-install the unloading system chain on the new sprocket/clutch assemblies.

Figure 1.6



Figure 1.7



1. Clutch & Sprocket Installation

Refer to Figure 1.8 & 1.9

12. Locate four M8-1.25 x 25mm, Grade 8.8 Bolts, four M8 Nyloc Nuts and eight 5/16" SAE Flat Washers from the supplied bag of hardware and use to attach Clutch Alignment Bracket (LANUDJD3002) to both front and rear clutch assemblies. Tighten at this time.
13. Plug a clutch wire lead (LAN5218-251-016) into each of the clutches
14. Tighten the unload drive chain as outlined in the COMBINE OPERATOR'S MANUAL.

Figure 1.8



Figure 1.9

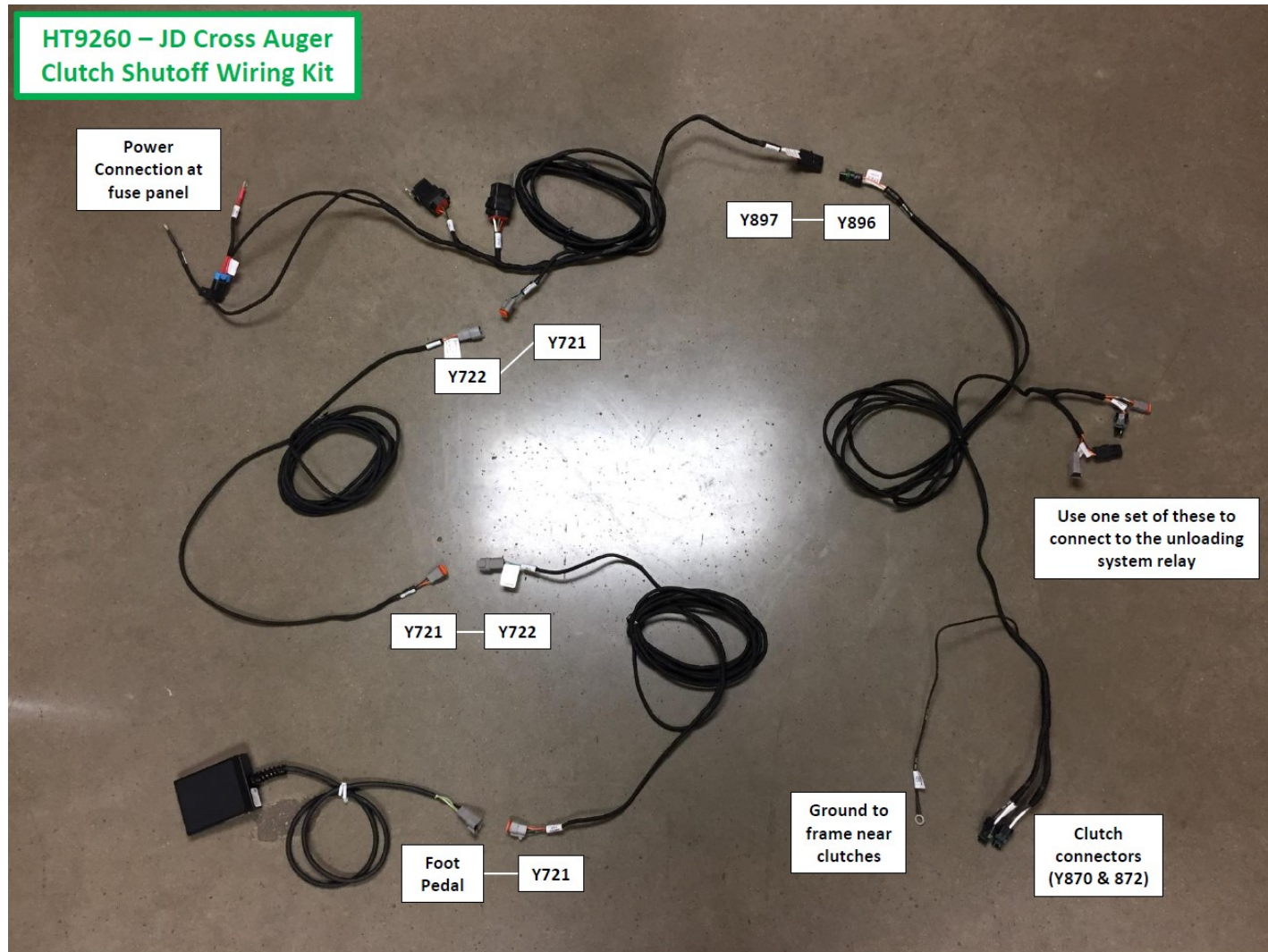


2. Rear Wiring Harness Installation

Refer to Figure 2.1

1. Open the wiring harness box and unpack.

Figure 2.1



2. Rear Wiring Harness Installation

Refer to Figures 2.2 - 2.4

2. Identify the power cable and connect the red wire to the battery cable terminal.
3. Attach the relays to the back of the fuse panel.
4. Connect the ground wire to a suitable bolt on the frame.



Figure 2.2



Figure 2.3



Figure 2.4

2. Rear Wiring Harness Installation

Refer to Figures 2.5 & 2.6

5. Connect (1) of the cab extension cords to the power cable.
6. Run the ends of the two cords together across the combine, under the rotor drive belt and on top of the sieve.

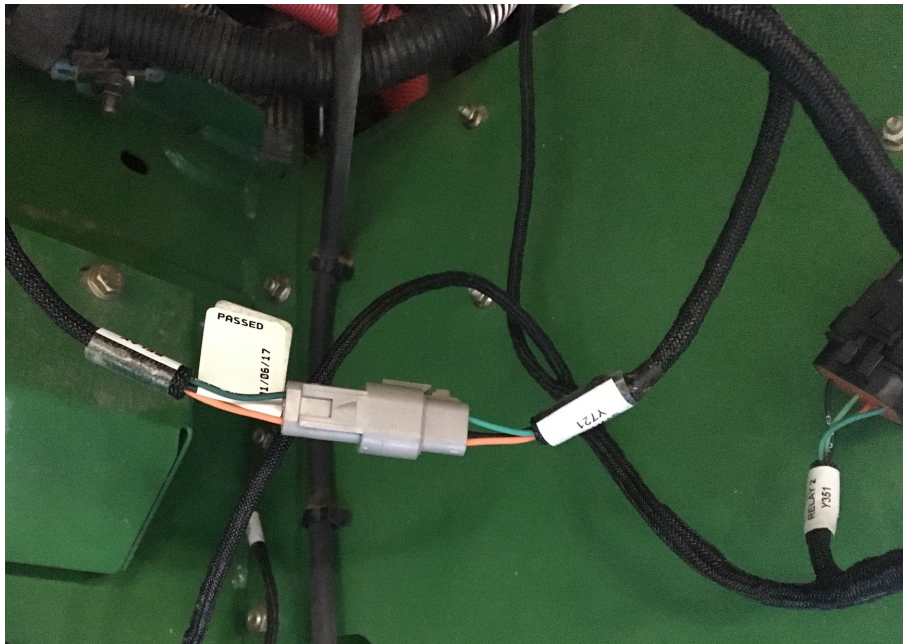


Figure 2.5



Figure 2.6

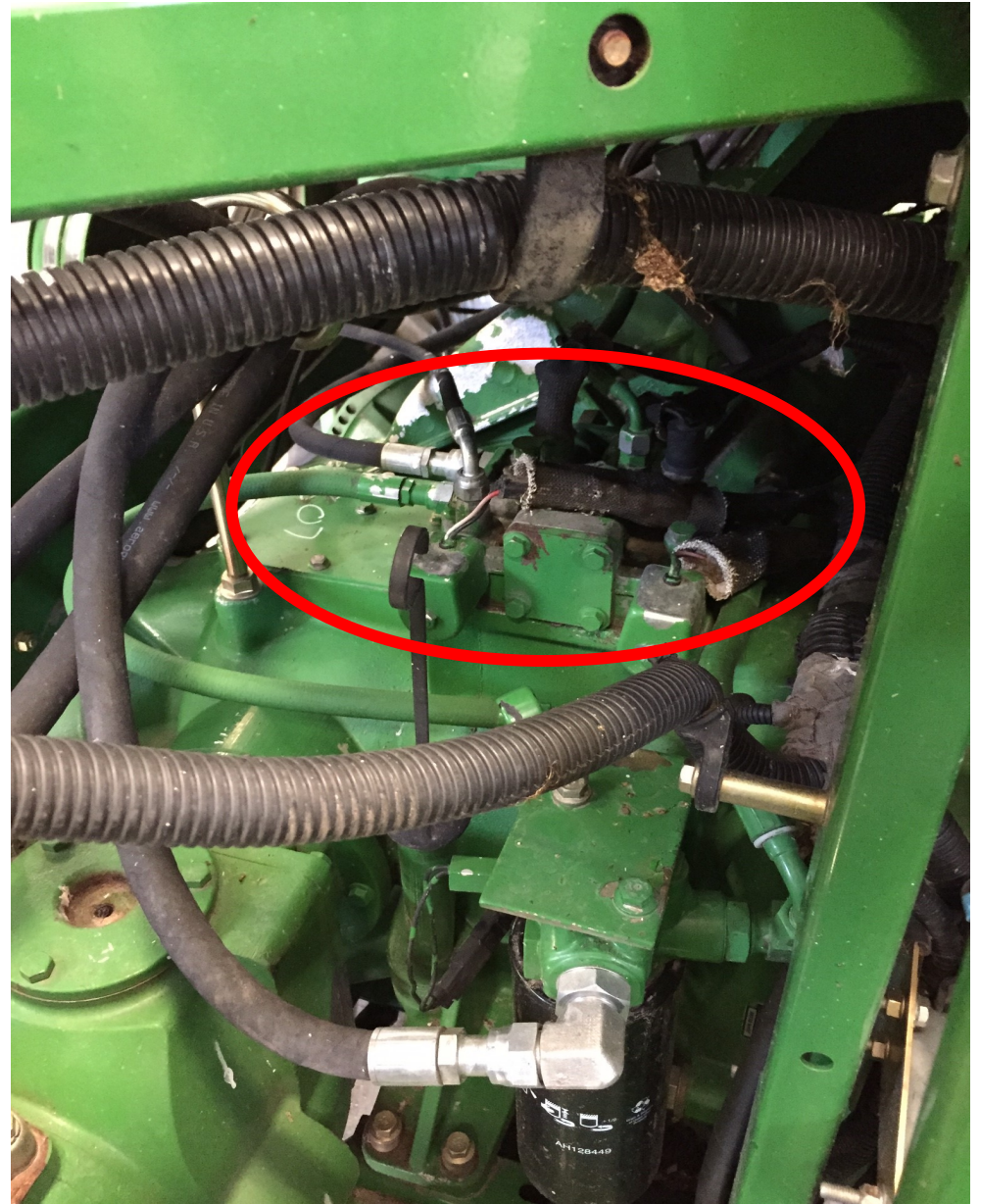
2. Rear Wiring Harness Installation

Refer to Figure 2.7

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

7. Retrieve the clutch connecting wiring harness.
8. Access the engine compartment.
9. Locate the unloading auger solenoid wiring connectors on the left side of the engine.

Figure 2.7



2. Rear Wiring Harness Installation

Refer to Figure 2.8 & 2.9

The supplied wiring harness has two different style connector ends to fit many different model combines. Choose either the black connectors or the gray connectors that match your combine's.

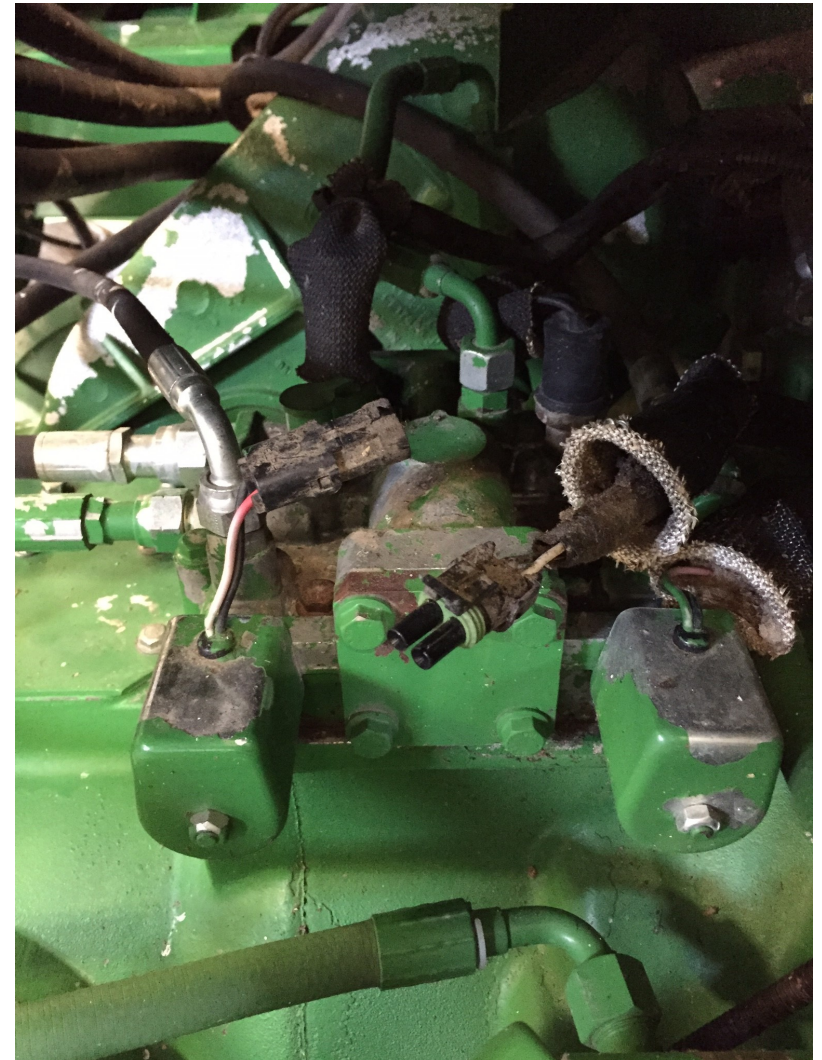
10. Loosen protective covering on L/H solenoid.

11. Disconnect **L/H ONLY** wiring connectors as shown in Figure 2.3.

Figure 2.8



Figure 2.9



2. Rear Wiring Harness Installation

Refer to Figure 2.10

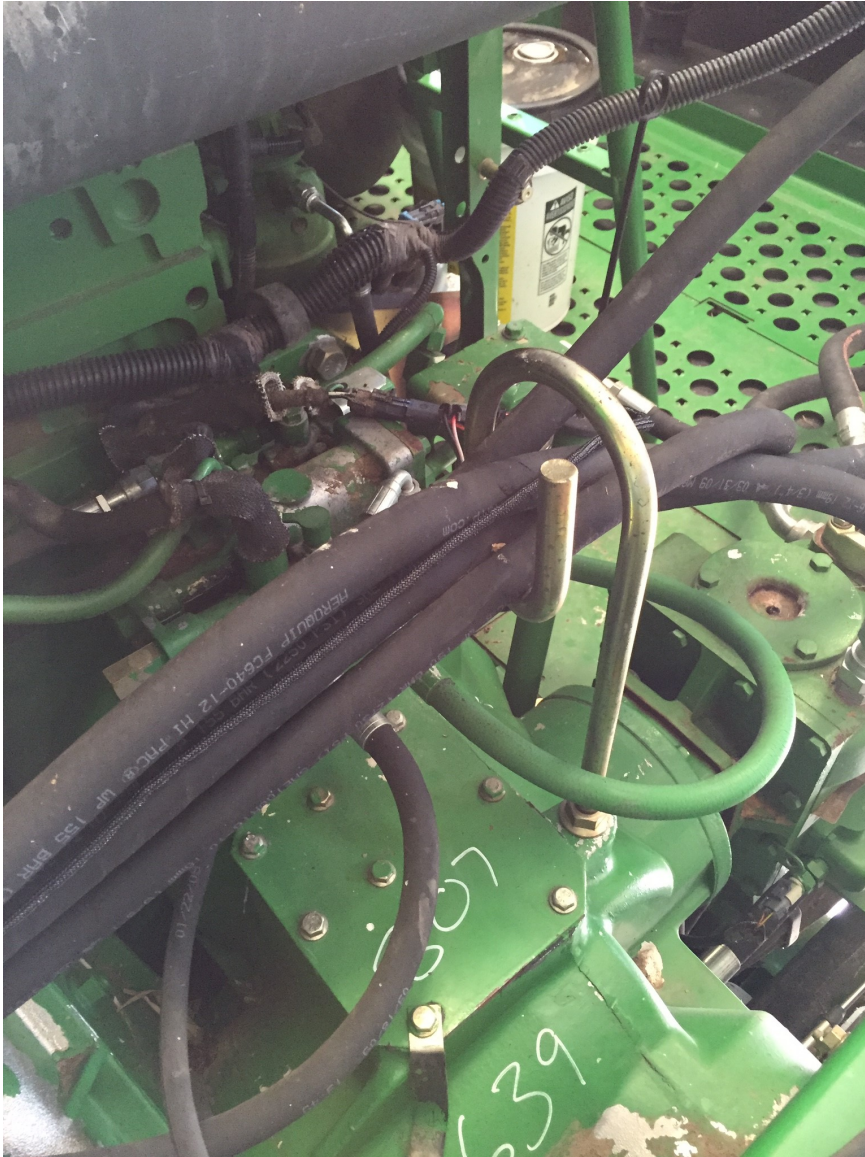
12. Connect either the black connectors or the gray connectors of the wiring harness to the connectors on the combine. Whichever connectors do not get used, connect those together as shown in the picture shown by the yellow arrow.
13. Replace wiring harness protective cover previously removed. Secure with a zip tie.

Route wiring harness as shown in the next figures. Secure harness as needed using supplied bag of hardware that came in the wiring bundle and/or the supplied zip ties.

Figure 2.10



2. Rear Wiring Harness Installation



2. Rear Wiring Harness Installation



Clutch Connector
Wiring Harness

Cab Extension
Cable

Power Cable
Wiring Harness

2. Rear Wiring Harness Installation



2. Rear Wiring Harness Installation

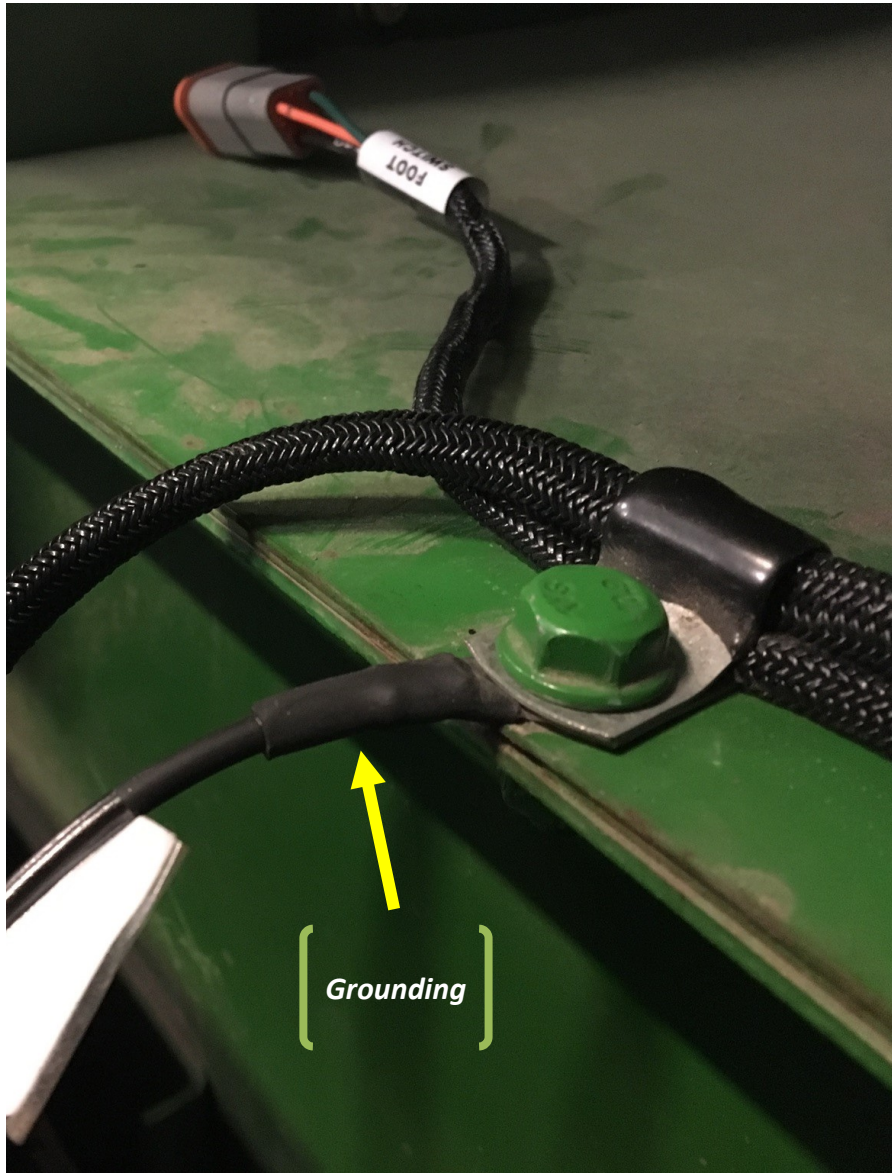


Figure 2.11

Refer to Figures 2.11 & 2.12

- 14. Attach grounding cable to frame (ensure a good connection).
- 15. Route the clutch harness to the clutches and plug into the clutch wire leads (LAN5218-251-016).
- 16. Secure harness with zip ties as to avoid any damage.



Figure 2.12

3. Cab Wiring Harness Installation

Refer to Figures 3.1 & 3.2

1. Retrieve second cab extension wiring harness and connect it to the first as shown.
2. Attach harness where you can to avoid any damage during operation of combine and/or opening and closing of the side shield.



Figure 3.1

Figure 3.2



3. Cab Wiring Harness Installation

Refer to Figure 3.3 & 3.4

3. Open lower access door just outside of the combine cab door at the top of the ladder landing.
4. Route harness as shown in Figure 3.3. Secure where you can with zip ties.
5. Loop any extra wire here.

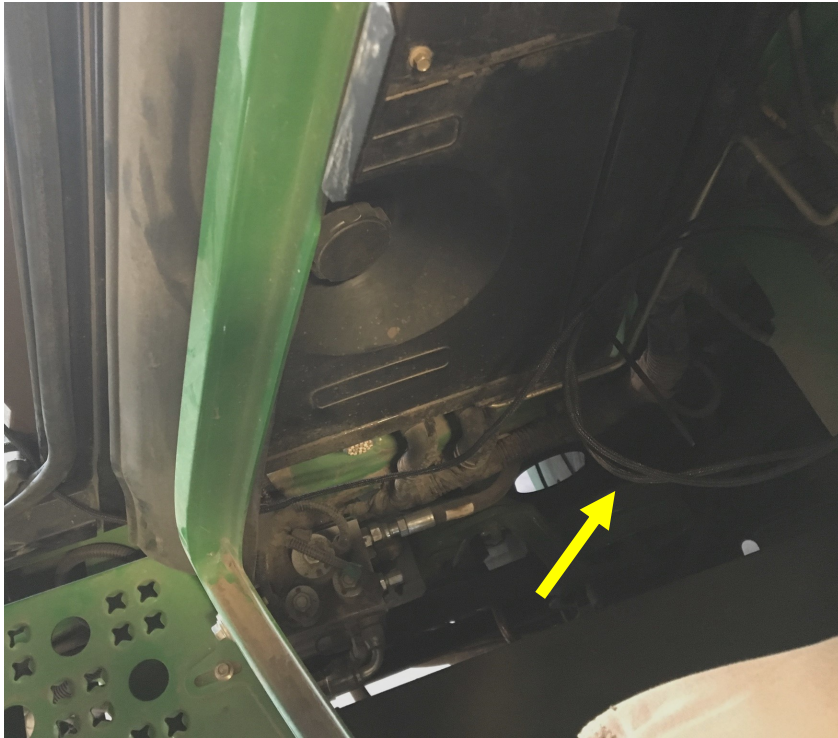


Figure 3.4

Figure 3.3



3. Cab Wiring Harness Installation

Refer to Figure 3.5A

6. Run harness through bottom of door frame as shown. Notice harness under door seal.

Refer to Figure 3.5B

7. It is recommended to grind out a small amount of material from the door frame so the harness does not experience a tight bend and rub on the metal over time causing the harness to fail.

Figure 3.5B



Figure 3.5A



3. Cab Wiring Harness Installation

Refer to Figure 3.6

8. Remove cab door bottom threshold cover by removing the three recessed bolts.
9. Pull up floor mat of combine cab just in front of passenger and operator seat. Run harness under floor mat to the far R/H side of the cab.
10. Connect Floor Pedal Harness to the cab extension cord. Place in cab where desired. Route cord as best as possible to avoid congestion with feet and brake pedals.



Figure 3.7

Figure 3.6



4. Door Bracket Installation

In some instances the side of the combine may come in contact with the clutches when closed. Aftermarket door brackets are provided to space the door out an appropriate amount in the front, back, and at the latch area of the door.

Refer To Figures 4.1 & 4.2

1. Open the door and remove the middle door latch and bracket plate.
2. Replace plate with LANUDJD3004 as shown and reattach to combine.

Figure 4.1



Figure 4.2



4. Door Bracket Installation



Figure 4.3a



Figure 4.3b

Refer To Figures 4.3 - 4.4

3. Remove the rear door catch plate from the combine.
4. Remove the magnetic cup from the door.



Figure 4.4a



Figure 4.4b

4. Door Bracket Installation

Refer To Figures 4.5

5. Replace rear plate with LANUDJD3006 as shown and reattach to combine.

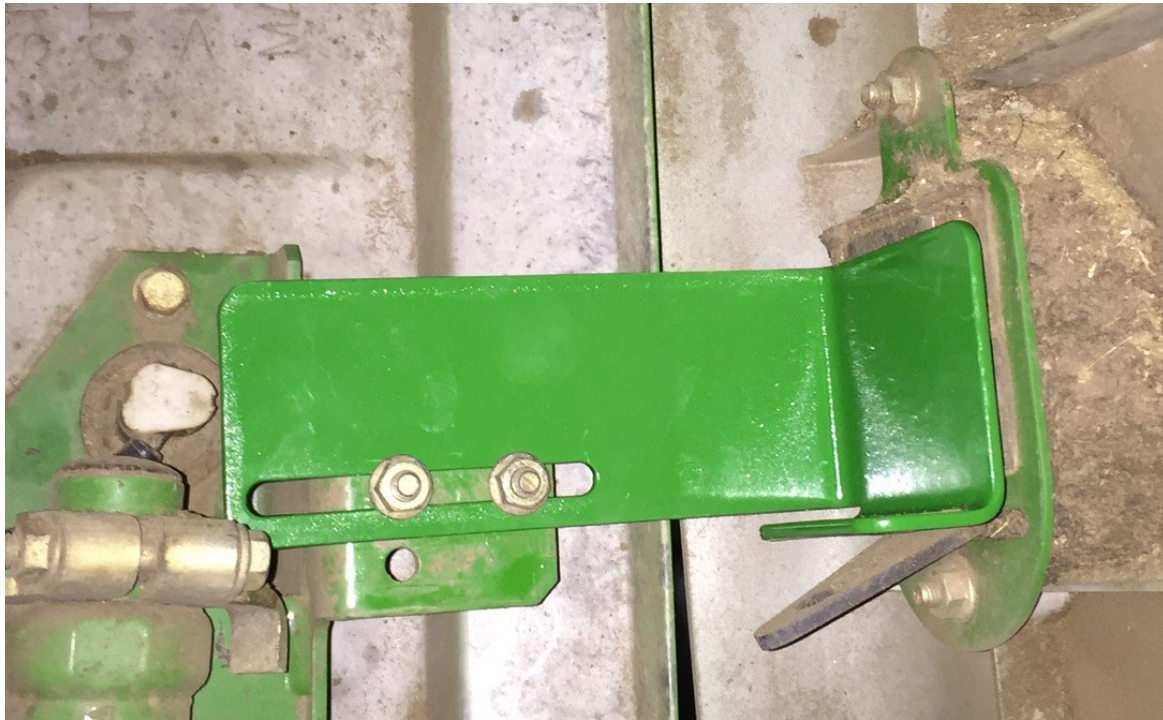


Figure 4.5

4. Door Bracket Installation

Refer To Figures 4.6 - 4.8

6. Remove the front door bracket.

7. Replace with LANUDJD3005.

Figure 4.6



Figure 4.7



Figure 4.8

Finishing Up

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.

Test Run

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.

Note: Burnishing the clutches is VERY IMPORTANT!

Burnishing the clutches ensures that when the system is engaged under load, the clutches mesh appropriately instead of slipping and burning up. To burnish the clutches:

1. Swing out the auger.
2. Start the unloading auger.
3. Press and release the foot switch 25-30 times.