

September 2012

Tru Count Electric Clutch and System Components Maintenance

This document provides guidance on the general maintenance of the Trimble® Tru Count Electric Clutch and other system components.

General maintenance of electric clutches

Maintenance as needed

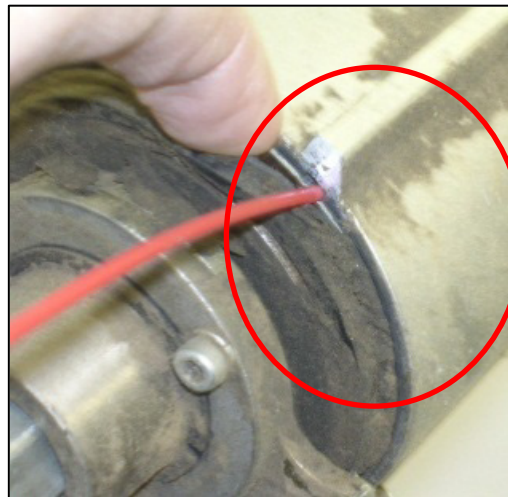
If the clutch performance declines, use one of the recommended lubricants as shown below.



Recommended lubricants for field maintenance

Approved lubricants	Non-approved lubricants
WD-40	Brake cleaner
Sprayon All Purpose Silicone Lube S00206 (Trimble P/N 68357)	Chain lube
Fast drying silicone spray	Hydraulic oil
	Engine oil
	Graphite

1. Lift the rubber seal away from the clutch, find the notch in the aluminum catch ring and then insert the straw. Spray for a few seconds.



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2. For best coverage, rotate the clutch and then spray at all three notch locations on both sides of clutch.
3. Repeat as needed.

End of season service

- Clean the clutch

Use a cloth, such as a shop towel, to clean dirt, dust, hydraulic fluid, and other debris from the exterior of the clutch.

If any chemicals spilled onto the clutch, rinse them off with water and then lubricate the clutch.

Turn the drive shaft and check for clutch functionality. Chemicals such as liquid fertilizer can seize the clutch causing irreversible damage.

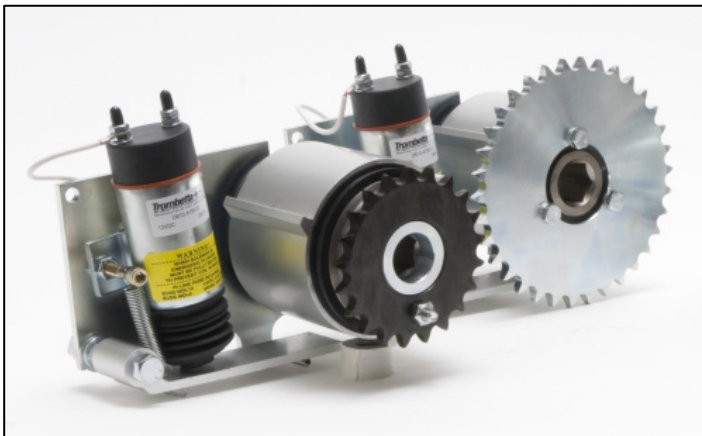
If fertilizer or chemicals penetrate the clutch, disassembly of the clutch may be required. Refer to service guide for further information.

- Test for function
 - Check that the clutch can drive when catch arm is not engaged.
 - Check that the output end clutches or stops once catch arm is engaged.

Example 1 with shaft/shaft.



Example 2 with shaft/chain.



- Inspect for wear

Clutch

Inspect the clutch for cleanliness and wear.

Make sure that seals are in place and are not weathered or cracked.

Check the sprocket (if equipped), for the condition of the teeth. If they are rounded and show signs of wear on the edges, the sprocket may need replaced.

Check the condition of the shaft or driver (if equipped) and replace if worn.

The hex should not be rounded or worn and the driver should fit-up well with the seed shaft. There should not be excessive play. Check also for broken or damaged cotter pins.

Replace the hex driver and hardware as necessary. See [Replacement parts](#).

Solenoid and solenoid plate

Check the connections at the solenoid.

If the solenoid cap is damaged or the terminals are bent or loose, replace the solenoid.

Inspect the spring and the spring clip on the catch arm. Check for rust and replace the extension spring or clip as needed.

Pull back the rubber solenoid boot to inspect the solenoid plunger.

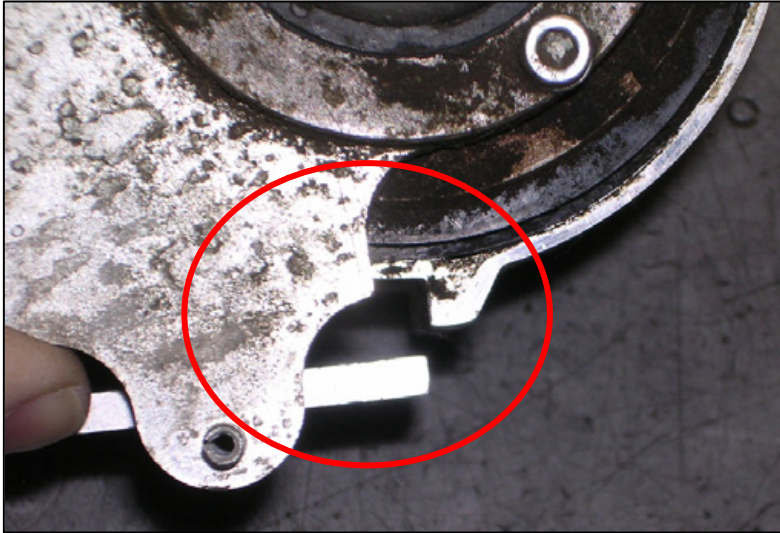
Check that the boot is free of dirt and debris.

If the shaft under the boot is rusty, has worn plating or is not operating smoothly, lubricate using only a silicone spray. If lubrication does not resolve the issue, you may need to replace the solenoid.



Check that the catch arm engages the clutch collar when the solenoid is energized. The solenoid plunger should retract completely and the catch arm should contact the aluminum stop collar squarely.

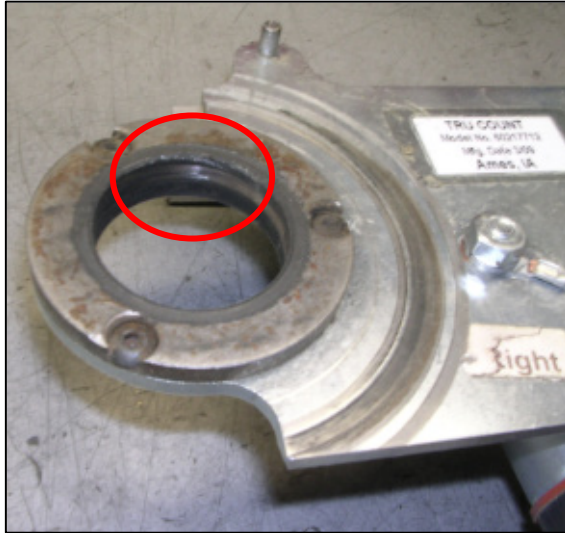
If it does not, check for solenoid plate straightness. If the catch arm “rides” over the stop on the collar, file the end of the catch arm squarely, or straighten the plate or the catch arm bolt.



Check that when clutch is not energized, there is at least a 1/8” gap between the catch arm and the clutch stop collar. If there is not, bend the roll pin away as needed.



Inspect the plate bushing for wear. Replace it if it is worn or uneven.



General maintenance of other system components

Harness and switch box

End of season service

- Harness

Inspect the harness for damaged or pinched wiring along the planter frame. Check for frayed wiring, damaged insulation, loose and poor connections. Check the connections at the solenoid and at the ground and positive battery terminals.

Check that the contacts are tight on clutches, connectors, and battery posts.

Check that the battery connection is clean and provides a minimum of 12 VDC.

As required, use di-electric grease to prevent corrosion at the terminals and connections.

- Manual control box

Inspect the power supply connection and the cable to the switch box.

Inspect the breaker on the switch box and make sure that switches light up when turned on.

Check the functionality of the switches and clutches:

- Test that switch 1 operates clutch 1, switch 2 operates clutch 2, and so on.
- Test that the breaker does not trip when clutches are energized

Note: For Trimble control or other third-party controllers, refer to the display or controller operating guide.

Always inspect the power supply to the display/controller and the connections to the clutches.

Check the functionality of the controller according to the equipment documentation.

Test that clutch 1 turns on when section one on the display is turned off, clutch 2 turns on when section 2 on the display turns off, and so on.

Check any other requirements for the controller to perform a section test. For example, any GPS signal, registered speed, implement switch is wired and enabled, master switch is on, etc.

Replacement parts

Part	Qty	P/N
Solenoid W/Voltage Suppressor	1	68607
Spring, LH Torsion, SL Electric Clutch (Tru Count P/N D9671)	1	68635
Spring, RH Torsion, SL Electric Clutch (Tru Count P/N D9672)	1	68653
Spring, LH Torsion, SS Electric Clutch (Tru Count P/N 60071)	1	68937
Spring, RH Torsion, SS Electric Clutch (Tru Count P/N 60072)	1	68938
Electric Clutch Hub, SL Slip (Tru Count P/N D10104)	1	71138-01
Assembly Drive Shaft, SL Clutch (A7137)	1	71141-00
Assembly Drive Shaft with X-hole, SL Clutch	1	71141-50
Assembly Drive Shaft, SS Clutch (Tru Count P/N 60139)	1	71165-00
Electric Clutch Hub, SS Slip (Tru Count P/N 60104)	1	71170-01
Bushing Plate, Electric Clutch (Tru Count P/N D9667) (SL Clutch)	1	71098-01
Bushing Plate, Counter-Bored Electric Clutch (Tru Count P/N D10586) (SS Clutch)	1	71098-00
Multi Driver, SS Electric Section Clutch (Tru Count P/N 60070)	1	68907
Assy, Weld Drive Coupler:		68744-00
68744 +Weld, Drive Coupler, REV. - (Tru Count P/N A9068)	1	
71174 +1/4-20 x 1-1/4 shcsz, zinc, KSC1410Z (.25-20x1.25shcsz)	3	
71175 +Washer Lock 1/4 hicollar (washer .25hclw)	3	
74693 +5/16-18 Hex Nut Full (.31-18nuthex5)	2	
74696 +5/16-18 x 3/4 Square Head Set Screw (.31-18x.75shss)	2	
Sprocket, 30T, Black Machine (Tru Count P/N 30TOOTH)	1	68896
Sprocket, 34T, Black Machine (Tru Count P/N 34TOOTH)	1	68897
Sprocket, 45T, Black Machine (Tru Count P/N 45TOOTH)	1	71209
Breakaway Driver 7/8 Hex (Tru Count P/N 60270)	1	71226
Breakaway Driver 3/4 Hex (Tru Count P/N 60170)	1	74276
Snap ring, 1-1/2" external inverted (10 Pack)	10	69030-10
Seal V-80A (10)	10	71147-10
Spring, Catch Arm Extension, 10 Pack (Tru Count P/N D10123)	10	68988-10
Washer, 2-1/2 X 1-1/2 X 1/8 FELT (Tru Count P/N D14513)	1	68652

Service kits

Kit	Qty	Kit P/N
Electric Clutch Service Kit - SS Clutch:		77079-11
68937 Spring, LH Torsion, SS Electric Clutch (Tru Count P/N 60071)	2	
68938 Spring, RH Torsion, SS Electric Clutch (Tru Count 60072)	2	
69030-10 Snap Ring 1-1/2" external inverted, 10 Pack	1	
68636 Clip, Rue 10 (Tru Count P/N D11120)	1	
68988-10 Spring, Catch Arm Extension, 10 Pack (d10123)	1	
71147 Seal V-80A (40415)	4	
71122 Pin Roll Split 3/16x2.25 (.19x2.25rpinz)	1	
Electric Clutch Service Kit - SL Clutch:		77079-12
68635 Spring, LH Torsion, SL Electric Clutch (Tru Count P/N D9671)	2	
68653 Spring, RH Torsion, SL Electric Clutch (Tru Count P/N D9672)	2	
69030-10 Snap Ring, 1.5" External Inverted, 10 Pack	1	
68636 Clip, Rue 10 (Tru Count P/N D11120)	1	
68988-10 Spring, Catch Arm Extension, 10 Pack (d10123)	1	
71147 Seal V-80A (40415)	4	
71122 Pin Roll Split 3/16x2.25 (.19x2.25rpinz)	1	