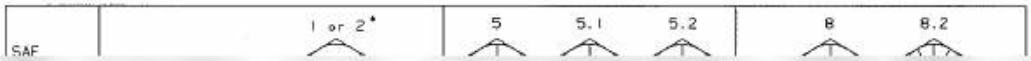
1.2 BOLT TORQUES

UNIFIED INCH AND ISO BOLT AND CAP SCREW TORQUE VALUES



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1.4 SCHEMATIC DRAWINGS

1.4.1 HYDRAULICS (Tow Between)

Serial Numbers Fr: GH2320.A0-M043701 To: GH2320.A0-N047940
Fr: G1720.A0-M045101 To: G1720.A0-N047846



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1.5 MAJOR OPERATING COMPONENTS

1.5.1 AUGER/AUGER SUPPORT

A. Description.

Physical

Length:	17 feet
Diameter:	7"
Flighting:	Double cup entry
Drive:	Hydraulic orbit
Auger Weight:	330 lbs.

DANFOSS DS-80 4.9 cu.in./rev.	DANFOSS OMPA80 4.75 cu.in./rev.	CHAR-LYNN 4.5 cu.in./rev.			
USGPM	USGPM	USGPM	RPM	△ P (PSI)	BU./HOUR *
10.6	10.3	9.7	500	450	1040
12.7	12.3	11.7	600	600	1150
15.9	15.4	14.6	750	650	1230

* Auger Bushels/Hour determined using standard flighting.

B. Service adjustments.

1. Front lock arm adjustment.

   Rapid wear occurs on the back side of the front support arm if the adjustment is not kept tight.

   Adjust the 7/16 bolts (1) such that the auger lock arm (2) will force the pivot arm (3) firmly against the bolts when the lock arm is in the locking position.

   Slots in the auger lock will allow movement forward or backwards. Loosen the 3/8" bolts and adjust lock. Tighten 3/8" bolts.

   See rear pivot adjustment (point #3) if pivot arm fails to contact front lock arm adjustment bolts.

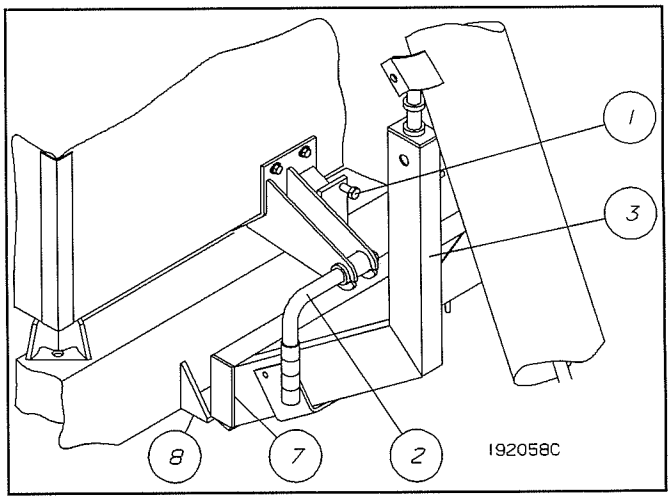


Figure 1.5.1a Front Lock arm

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3.4.4d TROUBLESHOOTING GUIDE

A good practise during troubleshooting is to replace suspected faulty parts with known good parts, whenever this is possible, to see if the problem clears up.

NOTE: The remote module (P/N 7542.x) and the granular remote module (P/N 7940.x) are not identical and cannot be interchanged.

IMPORTANT - HOW TO READ PRODUCT DATE CODES

Two date code methods are used - a four digit code and a five digit code.

FOUR DIGIT CODE: XXYY Where XX is the week of the year (1-52)
YY is the year code (eg. 94 for 1994)

FIVE DIGIT CODE (MORE COMMON):
XYYZZ Where X is the year code (eg 1994 would be '4')
YY is the month (1-12)
ZZ is the day (1-31)

PROBLEM	POSSIBLE CAUSE	SOLUTION
BIN LEVEL DISPLAY FLUCTUATING MORE THAN 1 BAR		
	Improper aiming	Properly aim the sensors onto the intended targets. Special aiming tool P/N GH588A can be used
	Mounting bracket out of position	Bracket should be mounted as high as possible
	Noise suppressor	Noise suppressor must be installed and have a label dated 36 92 or later
	Sensor is buried in product	Do not bury the sensors
	Dirty sensor	Carefully clean the bin sensor tube (inside) and the sensor element with a soft cloth or compressed air
	Fine material in tank (granular)	Tube type sensors do not work reliably with granular material. Set bin depth to 0 to stop nuisance bin alarms.
"CER 1" ALARM CODE DISPLAYED (REMOTE MODULE NOT COMMUNICATING)		
	Disconnected/Damaged cables	Check all cables between the console and the remote module for damage/disconnections
	Excessive current draw at remote	Disconnect the Frame Harness and power on the monitor again. If the problem goes away there is likely a short in a sensor, clutch or cable on the seed cart.
	Failed remote module	Try swapping in a good remote module
	Failed console	Try swapping in a good console

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3.4.4b ERROR CODES

The monitor design includes some self-diagnostic capabilities to assist with troubleshooting more common malfunctions.

Monitor system malfunctions included in the diagnostic operation are displayed as Error Codes in the digital section of the display. Error codes included in the monitor design are summarized below.

COMMUNICATIONS ERRORS

ERROR	DESCRIPTION	POSSIBLE SOLUTIONS
CEr 1	Console cannot communicate with the remote module	- Check cables between console and remote module - Check remote, console, noise suppressor, sensors etc.
CEr 2	Console cannot communicate with the granular remote module	- Check cables between console and granular remote module - Problem can be in the granular remote module or console unit
CEr 5 thru CEr 20	Console cannot communicate with a blockage module	- Refer to the supplied Blockage Operator's Manual

CONSOLE ERROR CODES

ERROR	DESCRIPTION	POSSIBLE SOLUTIONS
Err10	There is no more memory available for area. Console will accumulate area but loses area when shut off	- Temporary fix: Zero area for each product when console is turned on - Replace console
Err11	Memory problem detected. Operation is unpredictable.	- Replace console
Err13	Console is receiving corrupted message or messages from a remote module	- Replace console
Err14	Bad memory at console. Operation is unpredictable	- Replace console
Err18	Excess current draw detected on the 12 volt line to the remote module(s)	- Disconnect cables and sensors one at a time to find the faulty component
Err19	Switched 12 volt output has dropped below 10 volts	- Charge or replace tractor battery - Problem may also be in fuse holder or bad connections
Err20	Duplicate address codes received at console. Two or more modules are reporting as the same module.	- Check cables between console and remote modules - Attempt disconnecting granular remote module, followed by main remote module - Check address switches on blockage modules, if installed

NOTE: Error codes 10-20 relate primarily to console faults. If the above suggestions do not remedy the problem, try replacing the console with a known good one. Record the error code and return with the faulty console.

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3.4.2 SYSTEM WIRING DIAGRAMS

I) TRACTOR HARNESS - P/N 7536



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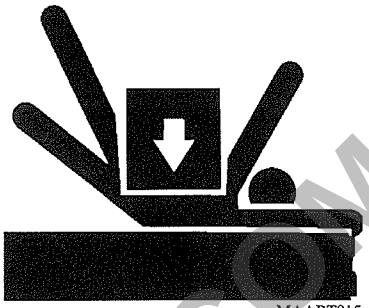
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1.1 SAFETY IN SERVICE

1.1.1 USE SAFE SERVICE PROCEDURES

A. Park on LEVEL ground and Block adequately.

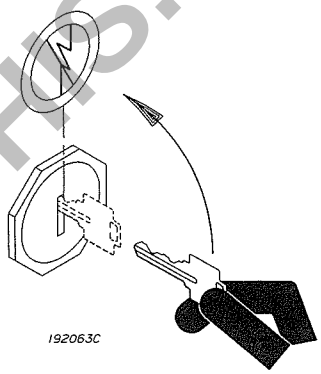


MAART015

Avoid Moving Machines

B. Remove the ignition key

Immobilize machine before repairing or adjusting.



192063C

Remove Ignition Key

Be certain all moving parts have stopped before servicing.



MAART021

Avoid Moving Parts

C. Know operators manual well.

D. Keep service area clean.



MAART040

Keep work area clean

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2.7.3 SERVICING THE WRAP SPRING CLUTCH (con't)

4. Disassembly of the clutch cluster.
   a. Remove two finger bolts (10) from the drive link to free the drive link from the clutch cluster.
   b. Remove 3/8" retaining bolt (1), lockwasher (2), and large flat washer (3) from the end of the meter box output shaft (9).
   c. Pull the output sprocket assembly (4) off of the output shaft.
      - The torsion spring (5) may resist sprocket removal. Work the output sprocket back and forth while pulling gently, and also holding the control sprocket (8) from rotating.
      - Clockwise rotation of the output sprocket will be most effective because it tends to open the torsion spring.
   d. Clean and grease liberally the torsion spring and all torsion spring contact surfaces.

   NOTE: Each sprocket assembly has pre-lubricated roller bearings with external seals. These bearings must not be contaminated and should not require cleaning or lubrication.

   e. The control sprocket assembly (8) cannot be removed without withdrawing the meter box output shaft from the meter box. This is <u>not recommended</u> for inspection and cleaning purposes. Removal is discussed separately under the heading. "Removal and Reinstallation of the Control Sprocket assembly."
   f. Clean around the control sprocket and be sure it rotates freely.
      i. <u>Do not</u> adjust clearance unless absolutely necessary.
      ii. Clearance adjustment is obtained by loosening the lock collars retaining the output shaft in the meter box, to allow repositioning of the output shaft.
   g. Clean and lubricate the sealing o-ring (6).

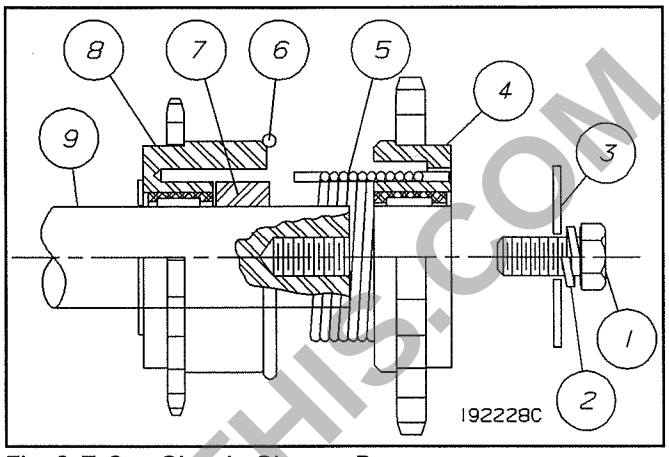


Fig 2.7.3c Clutch Cluster Parts

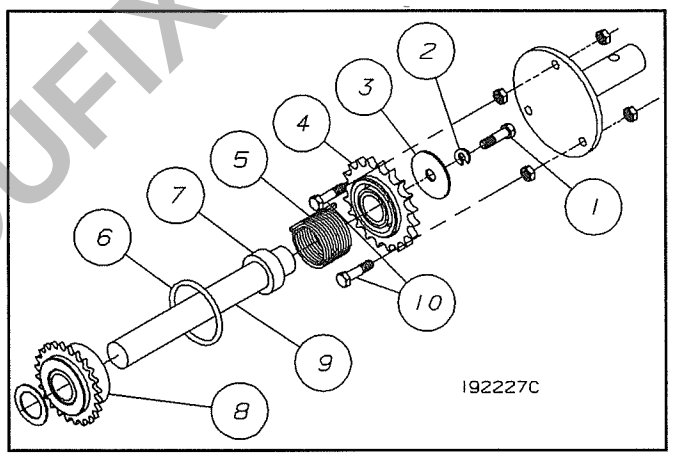
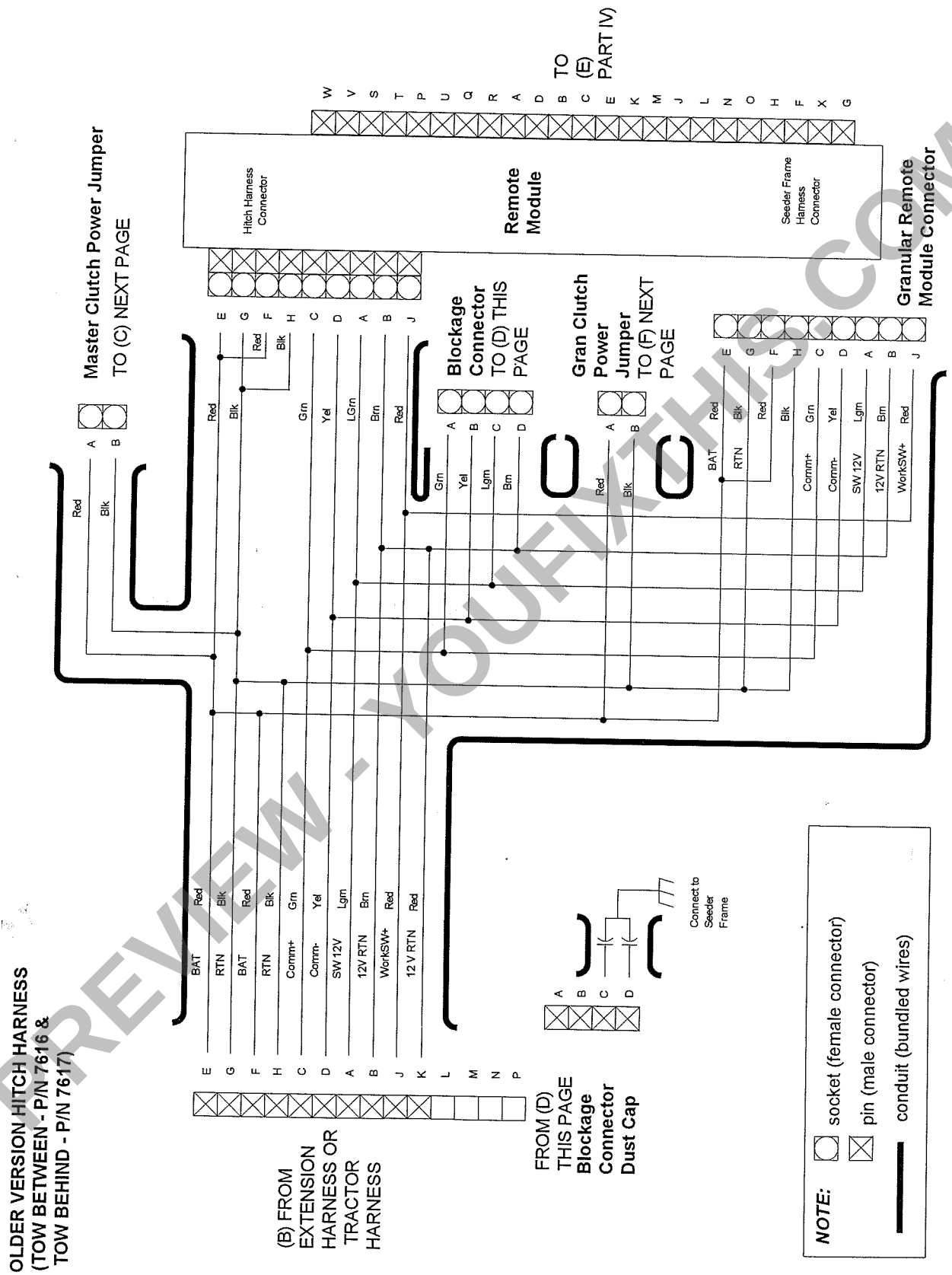


Fig 2.7.3d Clutch Cluster Disassembly

5. Reassembly of the clutch cluster.
   a. Slip the sealing o-ring (6) onto the hub of the control sprocket assembly (8).
   b. Pass the lubricated torsion spring (5) over the stator (7) into the drilled hole in the hub of the control sprocket assembly.
   c. Assemble the output sprocket assembly (4) onto the shaft and into position by rotating clockwise while pushing inward. The protruding tang on the torsion spring must locate into the small hole drilled into the output hub.
   d. Install the flat washer (3), lock washer (2), and 3/8" retaining bolt (1). Torque this bolt to 20 lbf-ft.
   e. Locate the sealing o-ring into the slight chamfer at the interface of the two hubs.
   f. Reassemble the fingers onto the drive link to secure it onto the output sprocket.

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