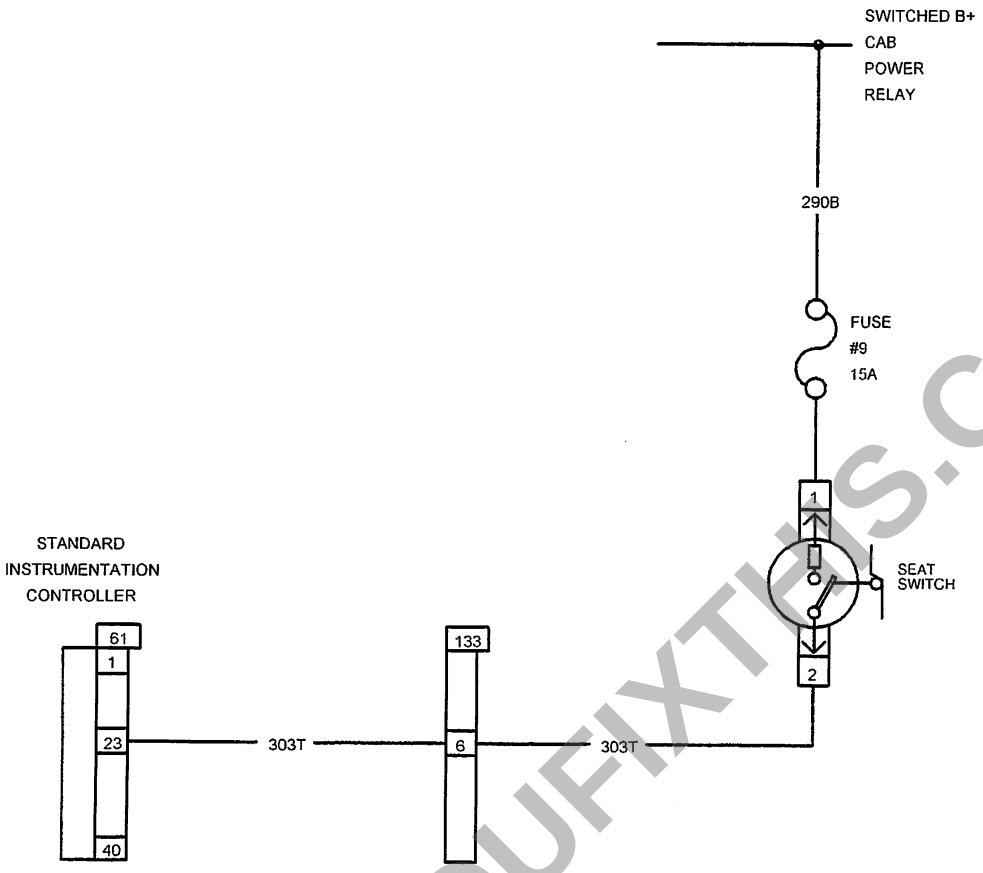
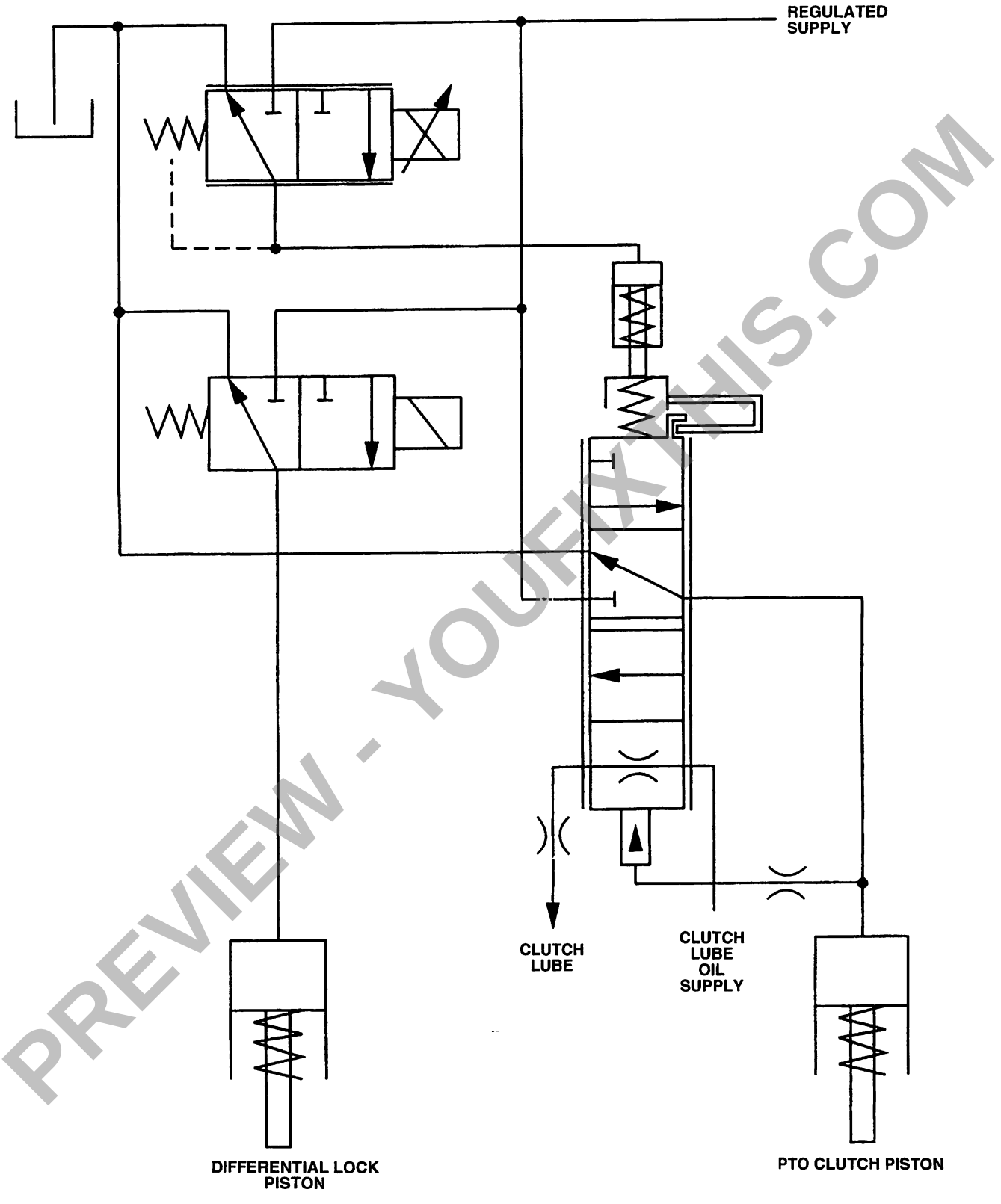


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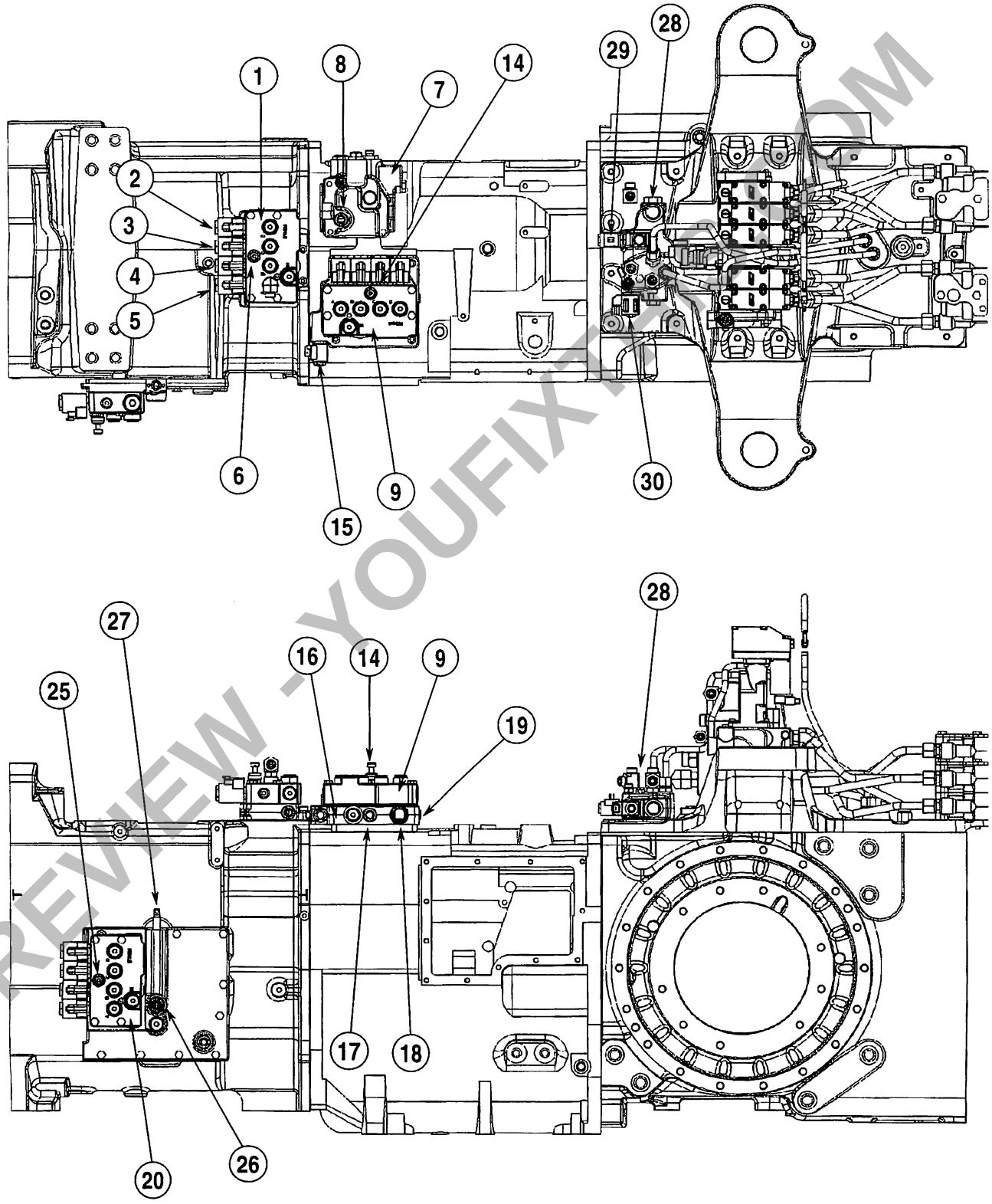
PTO/DIFFERENTIAL LOCK VALVE CIRCUIT



NOTE: *Refer to page 13 for Differential Lock electrical schematic diagram.*

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TRANSMISSION SYSTEM COMPONENTS



RI98F010 and 01

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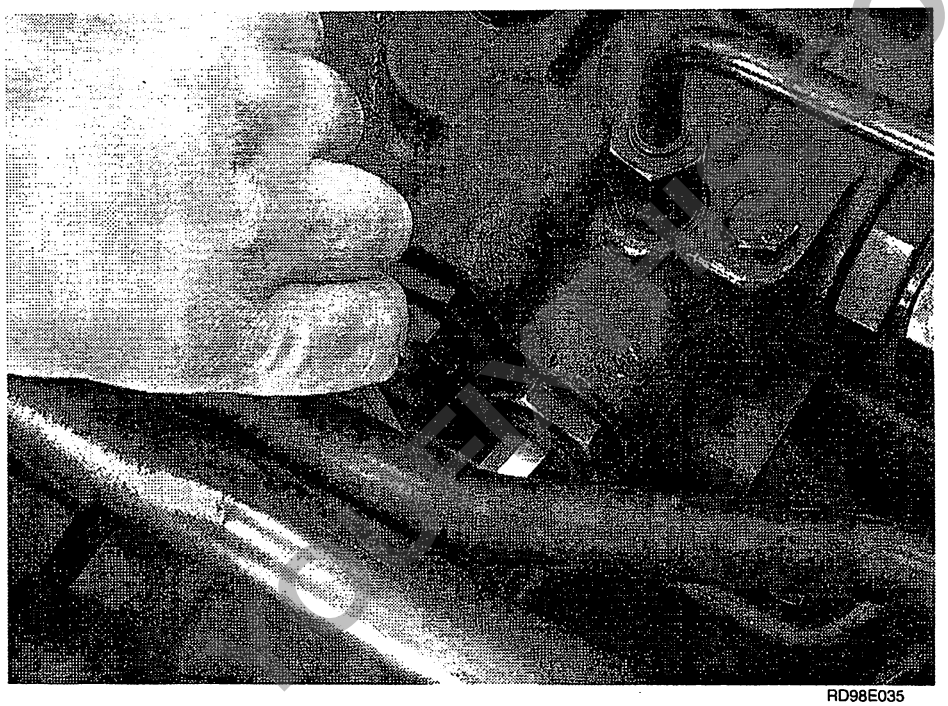
STEP 4 - Regulated Pressure Adjustment

Test Fitting and Tool Requirements:

- 400 PSI (28 bar) pressure gauge with extension hose long enough to reach into cab.
- 1-1/4 Inch Crowfoot wrench and 7/16 Allen wrench.

If the regulated pressure measurement recorded for Step 2 was out of specification adjust the pressure as follows:

Regulated Pressure Specification: 290 PSI (20 bar) at 1500 RPM engine speed



RD98E035

- Start and run the engine at 1500 RPM.

- Loosen the lock nut and turn the adjustment screw in or out until the correct pressure is read.

- Tighten the lock nut to a torque of 30 to 40 lb ft (41 to 54 Nm). After tightening the lock nut check the regulated pressure again.

A. If the correct pressure cannot be obtained, check the following:

1. Transmission oil level
2. Priority/Regulator valve springs broke, or spool is sticking.
3. Low front section pump flow perform “Front/Regulated System Pump Flow Test”.

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Section

10003

10003

TRANSMISSION CONTROLLER

Calibration and Fault Codes

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CASE CANADA CORPORATION
450 Sherman Avenue
Hamilton, ON L8N 4C4 CANADA

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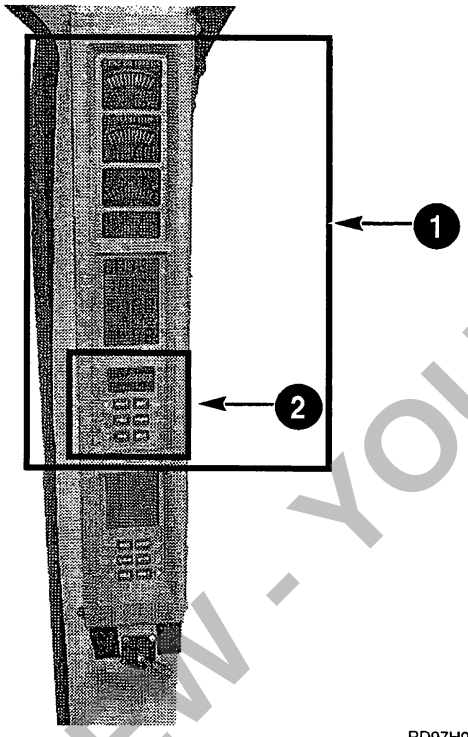
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INSTRUMENTATION PROGRAMMING

General Information

Tractor instrumentation programming is performed through two levels. The first level, operation setup permits adjustment of display units and tire radius. The second level, controller configuration permits configuration of the electronic controllers that are expected on the CDB (Case Data Bus) and tractor model data.

Both programming levels are entered and performed through the programmable display on the instrumentation.



RD97H050

1. STANDARD INSTRUMENTATION
2. PROGRAMMABLE DISPLAY

The tractor instrumentation must be programmed anytime new instrumentation is installed, when a value for level one programming has changed (tire radius, etc.), or when there is a change made that affects configuration (addition or removal of a controller).

IMPORTANT: *The controller must be calibrated when moved from one tractor to another.*

Configure the instrumentation with the key in the ON position and the engine not running. Be sure the battery is fully charged. Turn off all accessories during configuration.

Operation Setup

NOTE: *Configuration can only be entered within the first 10 seconds of turning the key switch to the ON position.*

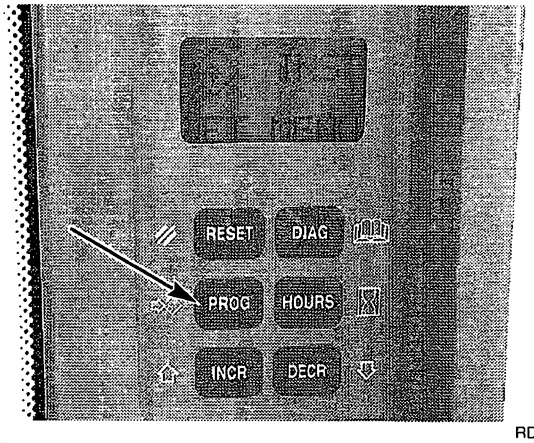
STEP 1

Enter operation setup by pressing and holding the PROG key for 3 seconds within the first 10 seconds of turning the key switch to the ON position.

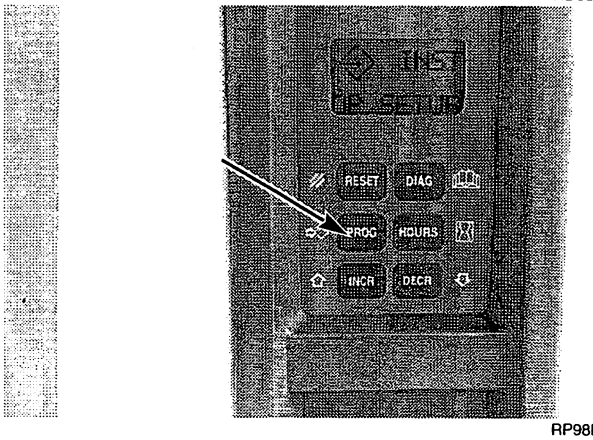
NOTE: *If any fault codes are recorded, they must be corrected before configuration is possible. See Fault Code Retrieval in this section.*

STEP 2

The display will read INST SET MENU. Press the PROG key. The display will read INST OP SETUP (instrumentation operation setup). Press the PROG key again and the last stored setting will be displayed. Display units can now be selected, either English or Metric. The default setting is English.



RD98F039



RP98H010

1. Press the INCR or DECR key to toggle between the two selections.

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Corrective action:

STEP 1 - Find out if fault code is still active

Clear all fault codes.
Start the engine and enable hitch.
Attempt to lower or raise the hitch.
-- If fault code is recorded when hitch is enabled go to Step 2.
-- If fault code is not recorded again, there may be a loose or damaged pin in one of the connections. Perform Steps 2 through 4.
-- If fault code is recorder as hitch is cycling, replace rockshaft potentiometer.

STEP 2 - Check C155 connection and rockshaft potentiometer

Check the position sensor linkage for problems.
Disconnect connectors C155 from the rockshaft position sensor.
Inspect pins A, B, and C in connector C155. Clean the connection.
Clean the female pin by connecting and disconnecting C155 several times.
Measure the resistance from pin A to C. Total resistance must be 4000 Ohms +15%.
Measure the resistance from pin A to B. The resistance should change as the potentiometer is turned clockwise from approximately 4000 Ohms down to approximately 150 Ohms (+15%).
Measure the resistance from pin C to B. The resistance should change smoothly as the potentiometer is turned clockwise from approximately 150 Ohms up to approximately 4000 Ohms (+15%).
-- NOT OK - Replace the potentiometer and calibrate the hitch controller.
-- OK - go to Step 3

STEP 3 - Measure controller output voltage to rockshaft potentiometer

Turn ignition key to the ON position.
Measure the controller output voltage at C155-A. It must be approximately 8 volts.
Measure the controller output voltage at C155-A to C155-B. It must be approximately 8 volts.
Measure the controller output voltage at C155-A to C155-C. It must be approximately 8 volts.
-- NOT OK - go to Step 5.
-- OK - go to Step 4.

STEP 4 - Install connector and rockshaft potentiometer, test the hitch again

Connect C155 to the Rockshaft position sensor and test the hitch.
-- NOT OK - fault code is recorded again (Hitch stops), replace and test again.
-- OK - problem was corrected. Assemble the tractor.

STEP 5 - Inspect and clean hitch controller connector C059

Turn the key to the OFF position.
Remove the controller cover from the rear of the tractor.
Disconnect connectors C059 (Brown) from the hitch controller.
Inspect pins 1, 6, 7, 8, and 11 in connector C059. Clean the connection.
Clean the female pin by installing and removing connector C059 several times in the controller.
With the connector installed, start the engine and check for hitch fault codes.
-- NOT OK - fault code is recorded again (Hitch stops), go to Step 6.
-- OK - problem was corrected. Assemble the tractor.

STEP 6 - Wire harness open circuit check

Disconnect the rockshaft position sensor C154 and controller harness connector C059.
Measure the resistance between C059-06 and C155-C. It must be less than 10 ohms.
Measure the resistance between C059-07 and C155-B. It must be less than 10 ohms.
Measure the resistance between C059-08 and C155-A. It must be less than 10 ohms.
-- OK - go to Step 7.
-- NOT OK - Install a new wire.

STEP 7 - Wire harness short to chassis ground check

Measure the resistance between C059-06 and chassis ground. It must be more than 150k ohms.
Measure the resistance between C059-07 and chassis ground. It must be more than 150k ohms.
-- OK - go to Step 8.
-- NOT OK - Install a new wire.

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STEP 12 - Check remote hitch raise switch at connector C058

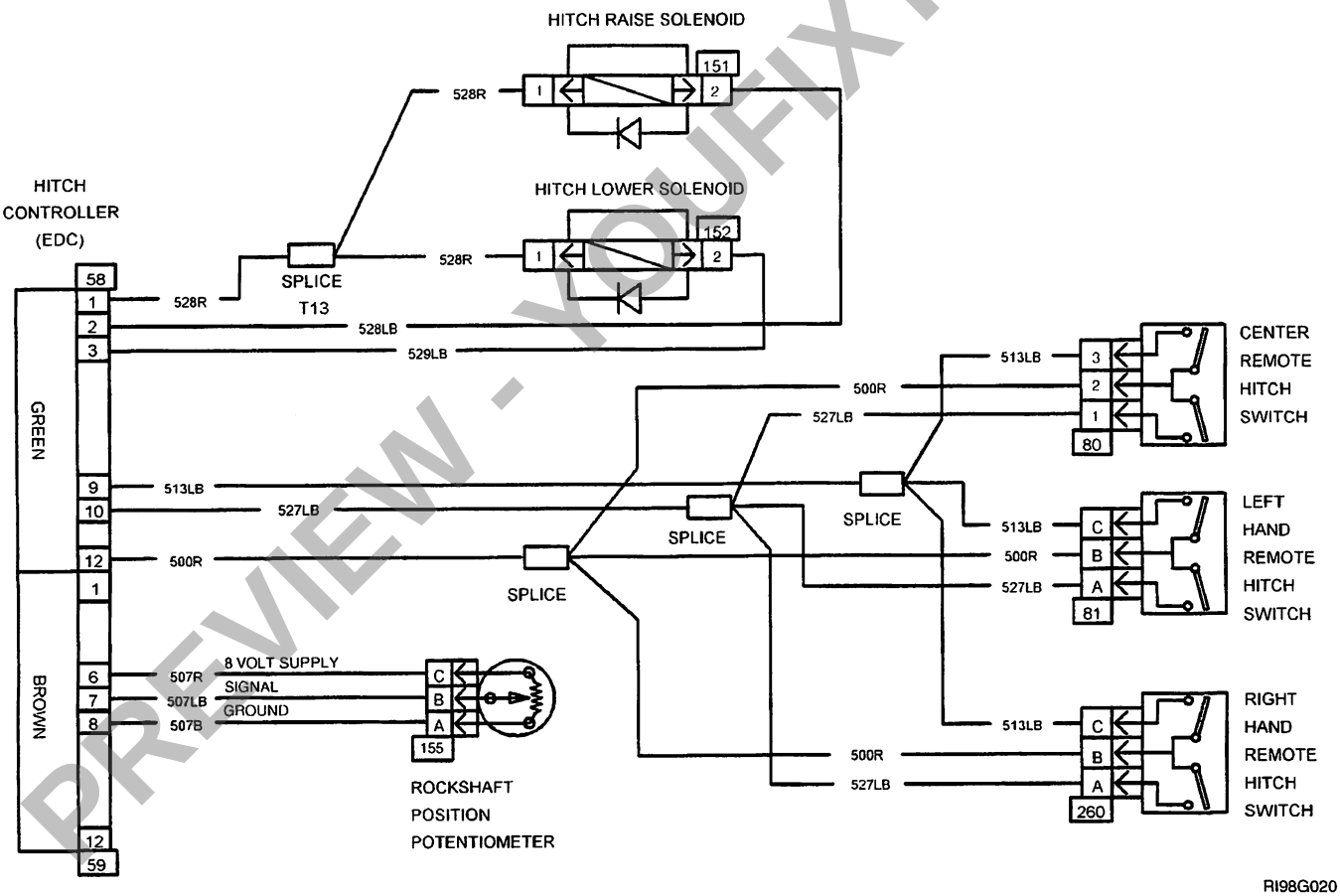
Turn the key on.
Pin C058-10 should only be powered when the hitch raise switch is depressed.
Check pin C058-10 for power.
-- OK - Pin C058-10 is only powered when the hitch raise switch is depressed. Hitch should work.
-- NOT OK - Pin C058-10 is powered when the hitch raise switch is not depressed, go to Step 13.

STEP 13 - Disconnect remote hitch remote switches

Disconnect the hitch remote hitch switch at the back of the tractor connector C80 or (C91 and C260 fender).
Turn the key on.
Pin C058-10 should not be powered.
Check pin C058-10 for power.
-- OK - Pin C058-10 is not powered, replace hitch switch.
-- NOT OK - Pin C058-10 is powered when key is turned on. Replace wire C058-10 from connector to hitch switch(s) connector C80 or (C81 and C260 fender).

STEP 14 - Replace hitch controller

Make sure the wire harness routing of the controller is installed against the cab (Make sure the wires are not loose or draped in front of the controllers).
Write the fault code on the failed controller.
Install and calibrate a new controller.



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SYMPTOM BASED FAULTS - NO FAULT CODES
Instrumentation Display Will Not Illuminate When Key Is Turned On
No Fault Code

Meaning:
The INST controller (display) is not to be powered or has failed.

Possible failure mode:
1. Failed cab power relay - engine will run after starting.
2. Failed controller power relay - engine will stop after starting.
3. Failed key switch - engine will stop after starting.
4. Fuse #30 failed or circuit from fuse to controller pin 40 of connector 61 failed open.
5. Poor ground supply to Display pin 39 of connector 61.

Background:
The key switch activates the cab power relay and the controller relay when the key is placed in the start and run position. The cab power relay supplies battery power (switched power) to the cab power relay. Both relays must be powered for the controllers to be powered.

NOTE: *Both the cab power relay and the controller relay must make a clicking sound when the key is turned on.*

Wiring information:
Instrumentation controller C61-40<--->Fuse 30<--->243 (Controller relay) 241<--->138 (cab power relay)
240<--->unswitched power

Corrective action:

STEP 1 - Cycle Key switch - (20 times)
Turn the front wiper on.
Turn the key switch on and off while monitoring the display and the front wiper, the display and front wiper must turn on and off everytime when the key is cycled.
-- OK - The display and front wiper turned on every time when key switch was turned on.
-- NOT OK - The wiper turned on but the display did not turn on when the key was turned on, go to Step 4.
-- NOT OK - The display and the wiper did not turn on, go to Step 2.

STEP 2 - Check power to cab power relay
The cab power relay is located in the right hand fuse panel.
Turn the key on, the relay should make a clicking sound.
-- OK - Relay clicks, but wiper did not turn on - Replace relay (failed contacts).
-- NOT OK - Relay did not click - Check power supply to relay, go to Step 3.

STEP 3 - Check power and ground to the cab relay
Check relay ground - correct if needed.
Turn key on.
Check for relay coil power at pin 138 for switched power from the key switch.
-- OK - Replace relay
-- NOT OK - Failed key switch
No power to key switch
Failed wire from the key switch to relay

STEP 4 - Check fuse 30
With the key switch on the display will not illuminate.
Check fuse 30.
-- OK - go to Step 5.
-- NOT OK - Replace fuse, If fuse fails when key is turned on, go to Step 9.

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HITCH CONTROLLER CALIBRATION

Setup Process

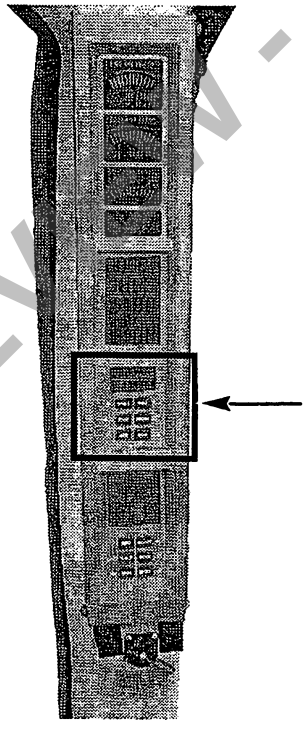
Requirements For Calibration

NOTE: *The standard instrumentation and armrest controllers must be calibrated before the hitch controller can be calibrated.*

- Before starting the hitch calibration procedure, check the wiring harness and components for damage or loose connections. Replace or repair any damaged part as necessary.
- Be sure that the hitch is free to move all the way between the lift cylinders minimum and maximum limits. Make sure that no interference exists during hitch movement (such as a quick coupler contacting a draw bar). **Be sure there are no persons in the back of the tractor during hitch calibration.**
- Do not calibrate the hitch with the tractor moving.
- The transmission oil must be warmed to more than 38°C (100°F).
- The engine speed must be 1600 RPM or higher during calibration.

Hitch Setup Main Menu

Hitch setup / calibration is performed from the programmable display on the standard monitor.



RD97H050

Once the requirements for calibration have been met, hitch calibration can begin.

NOTE: *Programming can only be entered within the first 10 seconds of turning the key switch to the ON position.*

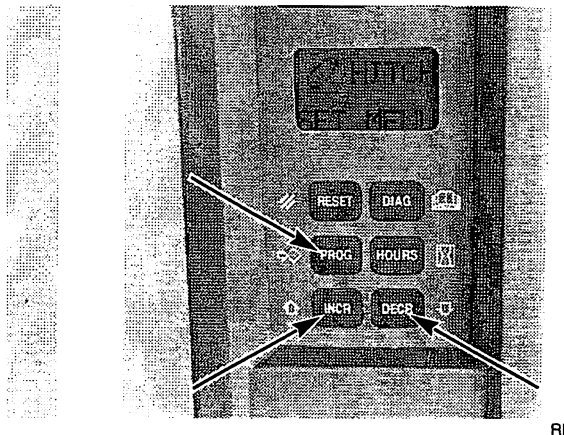
To get to the hitch setup main menu, do the following:

1. Start the tractor.
2. Push the program button and hold for two seconds within the first ten seconds after turning on the key switch. A short beep will indicate that the program mode has been accessed and the display will read INST SET MENU.
3. Push the DECR key three times. The display will read HITCH SET MENU.
4. Push the program key to enter the main menu.

When the Hitch Set main menu is entered, the setup options include the following:

1. HITCH CAL-Capability to calibrate the hitch system.
   A. Calibration of systems configuration.
   B. Calibration of systems parameters
2. HITCH SETTINGS-Capability to set user settings of certain parameters.
3. HITCH VIEW-Capability to view information about the controller.

The HITCH CAL will be the first option upon entry into the setup main menu. Press the INC or DECR key to move through the main menu which includes HITCH CAL, HITCH SETTINGS and HITCH VIEW. To enter the submenu of your choice, press PROG.



RD98H019

NOTE: *If any fault codes are recorded, they must be corrected before programming is possible.*

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TIRE RADIUS CODES

Tire Size	Goodyear	Firestone	Kleber
	mm (inch)		
320/90R54	NA	942 (37.0)	NA
20.8R38R1W	872 (34.3)	869 (34.2)	866 (34.0)
14.9R46	875 (34.4)	889 (35.0)	NA
18.4R42R1W	876 (34.5)	NA	NA
20.8R38R1	876 (34.5)	865 (34.0)	NA
420/80R46	883 (34.8)	889 (35.0)	NA
18.4R42R1	891 (35.0)	881 (34.7)	NA
20.8R42R1W	920 (36.2)	918 (36.1)	920 (36.2)
710/70R38	920 (36.2)	918 (36.1)	923 (36.3)
20.8R42R1	926 (36.5)	922 (36.3)	NA
620/70R42	931 (36.7)	NA	924 (36.4)
18.4R46R1	939 (37.0)	934 (36.8)	NA
20.8R42R2	944 (37.2)	938 (37.0)	NA
18.4R46R2	945 (37.2)	NA	NA
520/85R46	979 (38.5)	NA	NA
710/70R42	NA	NA	

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MAINTENANCE SCHEDULE

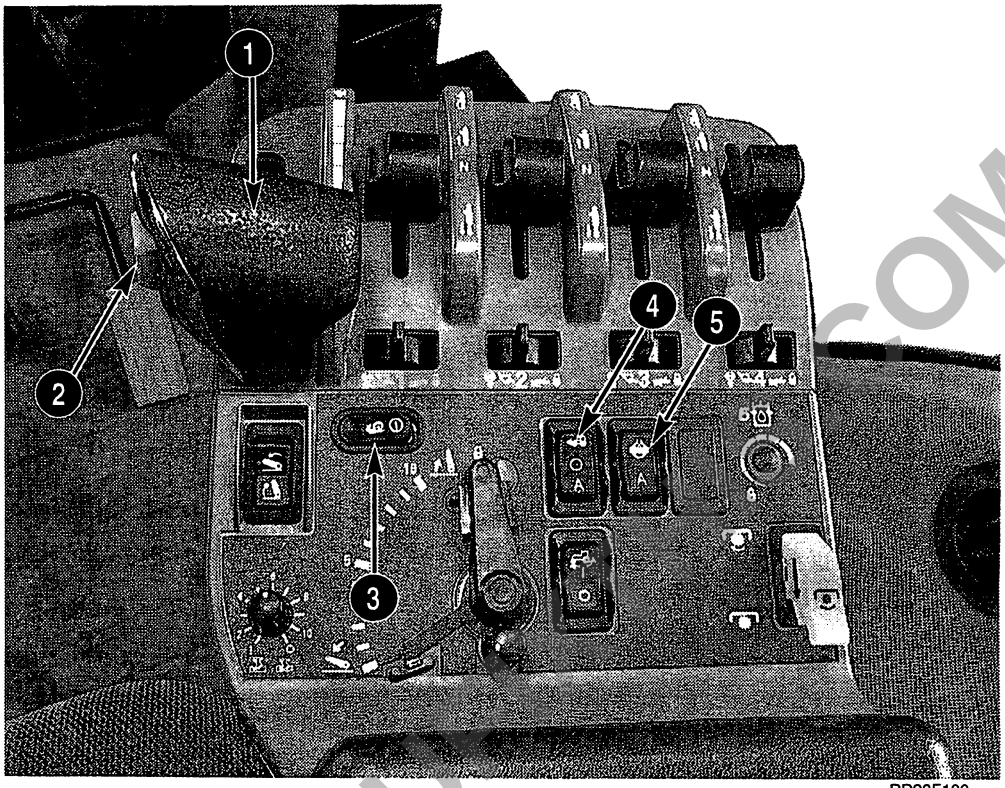
SERVICE POINTS	OPERATION	FREQUENCY IN HOURS
Engine Oil Level	Check	10
Engine Coolant Level	Check	10
Transmission Oil Level	Check	10
Engine Primary Fuel Filter	Drain Water	50
A/C Belt Tension	Check	300
Battery Water Level	Check	300
Engine Air Intake Hoses	Check	300
Engine Coolant Level Deaeration Tank	Check	300
Engine Oil and Filter	Change	300
Front and Rear Wheel Bolt Torques	Check	300
Front Axle and Rear Hitch (see note A)	Grease	300
Fuel Tank	Drain Water	300
MFD Differential and Planetary Oil Level	Check	300
Engine Coolant Antifreeze Protection	Check	600
Engine Coolant Filter	Change	600
Engine Coolant Hoses and Clamps	Check	600
Engine Fuel Filters	Change	600
Engine Air Precleaner	Clean	1200
Engine Coolant and Coolant Conditioner	Change	2100
Engine Primary and Secondary Air Filter	Change	1200
MFD Differential and Planetary Oil	Change	1200
Transmission Oil, Filter and Breather	Change	1500
Engine Fuel Injection Nozzles and Pump (see note B)	Check	2100
Engine Crankshaft Dampener (see note B)	Check	4800
Engine Valve Adjustment (Models MX 180, 200 and 220) (see note B)	Check	4800
Cab Air Filter	Clean/Change	As Required
Engine Primary Air Filter	Clean	As Required
Grill Screens, Radiator, Condenser, Oil Cooler, Fuel Cooler and Air-Air Cooler	Clean	As Required
Tire Pressure	Check	As Required

Note A - In severe dust or wet conditions, the interval is every 10 hours or daily.
Note B - See your dealer to have this service performed.

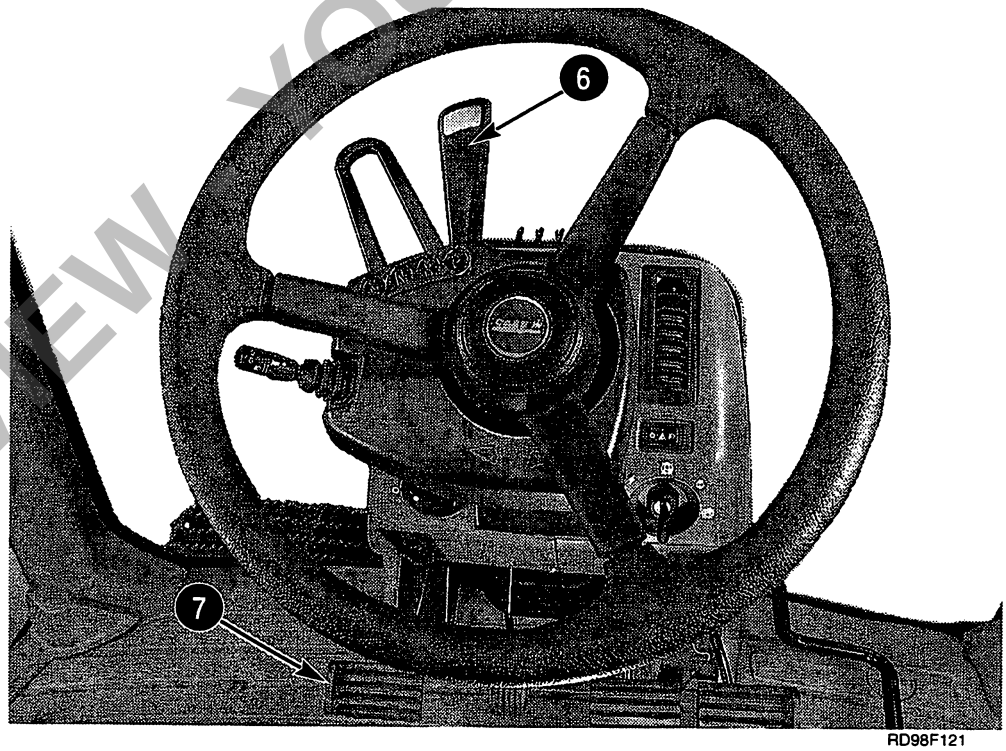
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TRANSMISSION SYSTEM CONTROLS



RD98F100



RD98F121

1. THROTTLE HAND LEVER
2. GEAR SELECTION SWITCH
3. CREEPER CONTROL SWITCH
4. MFD CONTROL SWITCH
5. DIFF LOCK SWITCH
6. TRANSMISSION CONTROL LEVER
7. INCHING PEDAL

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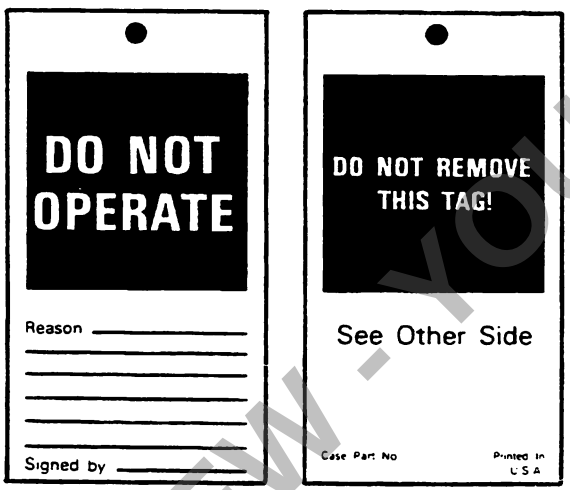
SAFETY

THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH. M171B

To prevent injury always follow the Warning, Caution and Danger notes in this section and throughout the manual.

Put the warning tag shown below on the key for the key switch when servicing or repairing the machine. One warning tag is supplied with each machine. Additional tags are available from your service parts supplier.

Before servicing a machine, park the machine on hard level ground. Turn off the engine, apply the parking brake and remove the key from the key switch. Put blocks in front of and behind either the front or rear wheels.



201L95

WARNING: *Read the operators manual to familiarize yourself with the correct control functions.* M489

WARNING: *Operate the machine and equipment controls from the seat position only. Any other method could result in serious injury.* M490

WARNING: *This is one man machine, no riders allowed.* M491

WARNING: *Before starting engine study Operators Manual safety messages. Read all safety signs on machine. Clear the area of other persons. Learn and practice safe use of controls before operating. It is your responsibility to understand and follow manufacturers instructions on machine operation, service, and to observe pertinent laws and regulations. Operator and Service Manuals may be obtained from your equipment dealer.* M103A

WARNING: *If you wear clothing that is too loose or do not use the correct safety equipment for your job, you can be injured. Always wear clothing that will not catch on objects. Extra safety equipment that can be required includes hard hat, safety shoes, ear protection, eye or face protection, heavy gloves and reflector clothing.* M492

WARNING: *When working in the area of the fan belt with the engine running, avoid loose clothing if possible, and use extreme caution.* M493

WARNING: *When doing checks and tests on the equipment hydraulics, follow the procedures as they are written. DO NOT change the procedure.* M494

WARNING: *When putting the hydraulic cylinders on this machine through the necessary cycles to check operation or to remove air from a circuit, make sure all people are out of the way.* M495

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Configuration/Calibration Mode 5

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STANDARD INSTRUMENTATION CONTROLLER FAULT CODES 15

TIRE RADIUS CODES 49

NOTE: Case Corporation reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

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Section 10001

STANDARD INSTRUMENTATION

Programming and Fault Codes

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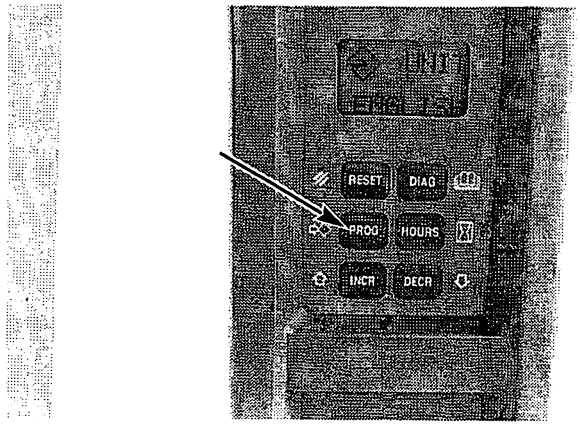
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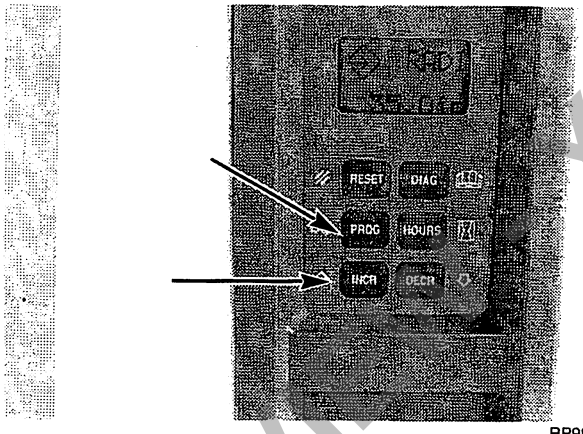


RP98H011

2. Press the PROG key to save and your choice. The system will then go to the next step.

STEP 3

The upper line of the display will read RADI (radius). This will allow you to program rear tire radius. Tire radius can be set from 400 to 1100 mm in the Metric setting and (15.7 to 43.3 inches) in the English setting. See the tire radius code chart on the last page of this section for the code for your tire size. The default number is 745.



RP98H012

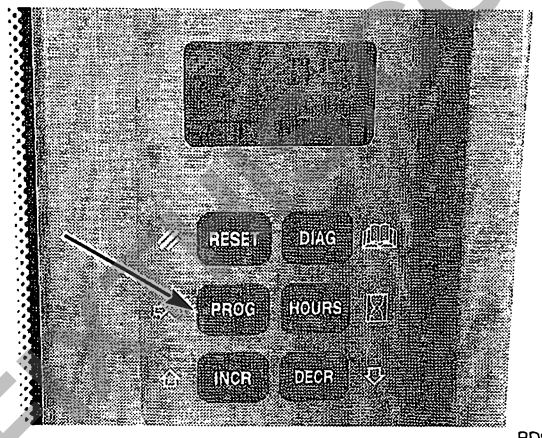
1. Press the INCR or DECR key to change the radius number by one mm (0.1 inch). Pressing and holding the INCR or DECR key will rapidly change the radius number.
2. When the correct radius number is reached, press the PROG key to save the programmed number. The system will return to the INST OP SETUP menu.
3. Press the DECR key once to go to the INST CNT CONF MENU, or twice to go to the EXIT menu.

Controller Configuration

NOTE: *Configuration can only be entered within the first 10 seconds of turning the key switch to the ON position.*

NOTE: *If any fault codes are recorded, they must be corrected before configuration is possible. See Fault Code Retrieval in this section.*

STEP 4



RD98F039

1. If starting with controller configuration, turn the key switch to the ON position and press the PROG key for two seconds within the first ten seconds after turning on the key switch. The controller selection will be accessed.
2. Pressing the DECR key will toggle through the list of controllers. The controllers will appear in this order: Standard Instrumentation, (INST), Transmission, (TRANS), Armrest (ARM), Hitch, Remote Hydraulics (AUX), PTO, Steering (STEER), Engine (ENG), Performance Monitor (PERF) and Exit.
3. Press the PROG key with INST SET MENU on the display.
4. The display will read INST OP SETUP (Instrumentation operation setup). Press the DECR key and the display will read INST CNT CONF (Instrumentation controller configuration). Press the PROG key. The instrumentation can then be configured. If another controller is chosen, refer to the section in this service manual for that controller.

NOTE: *If the selected controller does not exist or respond to communication, the display will read COMM ERR (communication error). The display can be cleared by pressing the PROG key.*

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FAULT CODE HITCH 9302

Meaning:
(H) During calibration, the current needed to start raising the hitch is below the lower limit.

Possible failure modes:
1. Hitch raise solenoid mechanical stuck in the on position or electrically failed.
2. Hitch valve spool is sticking.
3. Rockshaft sensor not attached to rockshaft.
4. PFC pump supply/pressure problem.

Background:
The hitch controller measures the current it sends to the hitch raise solenoid during calibration. If the current sent to the solenoid by the hitch controller is below a set limit and hitch movement is detected fault code 9302 is recorded.

Solenoid information:
Approximately 5.1 ohms at - 40˚C (-40˚F).
Approximately 6.9 ohms at 25˚C (77˚F).
Approximately 9.5 ohm at 100˚C (212˚F).

Wiring information:

NOTE: *Always inspect connector ends for damaged, bent or dislocated pins when troubleshooting.*

C058-02 ----> C151-2 (Hitch raise solenoid) C151-1 ---> C058-01

IMPORTANT: *To avoid pin and harness damage, use CAS - 2593-31 male test lead when taking measurements.*

IMPORTANT: *The hitch must be calibrated whenever a hitch component is replaced.*

Corrective Action:

STEP 1 - Check rockshaft sensor
Check that the rockshaft sensor is connected to the rockshaft.
-- NOT OK - Connect sensor to rockshaft.
-- OK - Go to Step 2.

STEP 2 - Check hitch raise solenoid, coil and circuit resistance
Turn key off.
Disconnect connect C058 (Green) from the hitch controller.
Measure resistance between pin C058-02 and pin C058-01.
-- OK - The resistance measure is between 6.0 to 7.8 ohms, go to Step 3.
-- NOT OK - The resistance measure was not between 6.0 to 7.8 ohms, replace failed solenoid or damaged wire.

STEP 3 - Hitch valve and solenoid leakage test
Turn key off.
Disconnect connector C058 (Green) from the hitch controller.
Remove the raise solenoid power supply pin 2 from connect C058-02.
Attach connector C058 to the hitch controller.
Start engine.
Stand clear of hitch (Hitch should not raise).
-- OK - Hitch did not raise, go to Step 5.
-- NOT OK - Hitch raised, go to Step 4.

STEP 4 - Raise solenoid spool movement check
Disconnect connectors C151 from the raise solenoid.
Remove and inspect hitch raise solenoid. Check for cut o-rings and that inner spool moves when power and ground is applied to coil.
Start tractor and check for hitch movement.
-- OK - No hitch movement. Connect harness and calibrate hitch.
-- NOT OK - Hitch moved. Correct hitch valve problem.

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STEP 10 - S, R and O sensor wiring short circuit check

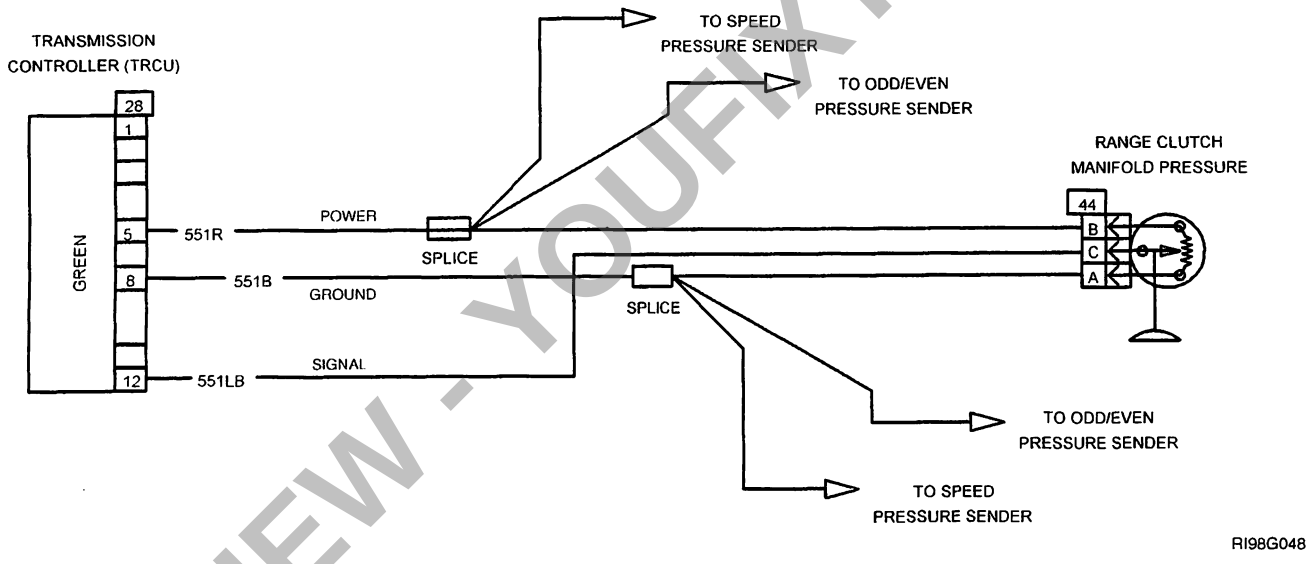
Install pin 5 in connector C028 and install connector on to controller.
Use CAS - 2577 Cab Lift Tool and lift the tractor cab.
Disconnect the S, R and O sensors.
With the tractor in park, **start the engine but do not drive the tractor.**
Use the TRANS VIEW menu and check the S, R, and O sensor pressure reading.
-- OK - Pressure is at or near 0 kPa. Replace all three sensors.
-- NOT OK - The S, R and O sensor readings are locked up at a high pressure. Go to Step 11.

STEP 11 - Install new wires from controller C028-5 to S, R, and O sensors

With new wire installed from C028-5 to connectors C044-B, C045-B and C046-B.
Connect the S, R and O sensors.
With the tractor in park, **start the engine but do not drive the tractor.**
Use the TRANS VIEW menu and check the S, R, and O sensor pressure reading.
-- OK - All pressures no longer read high and change with engine RPM.
-- NOT OK - Go back to Step 1.

STEP 12

Install and calibrate a new controller.
Write fault code on failed controller.
Make sure the controller wire harness is routed against the cab and not hanging in front of the controllers.



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STEP 3 - Neutral switch check

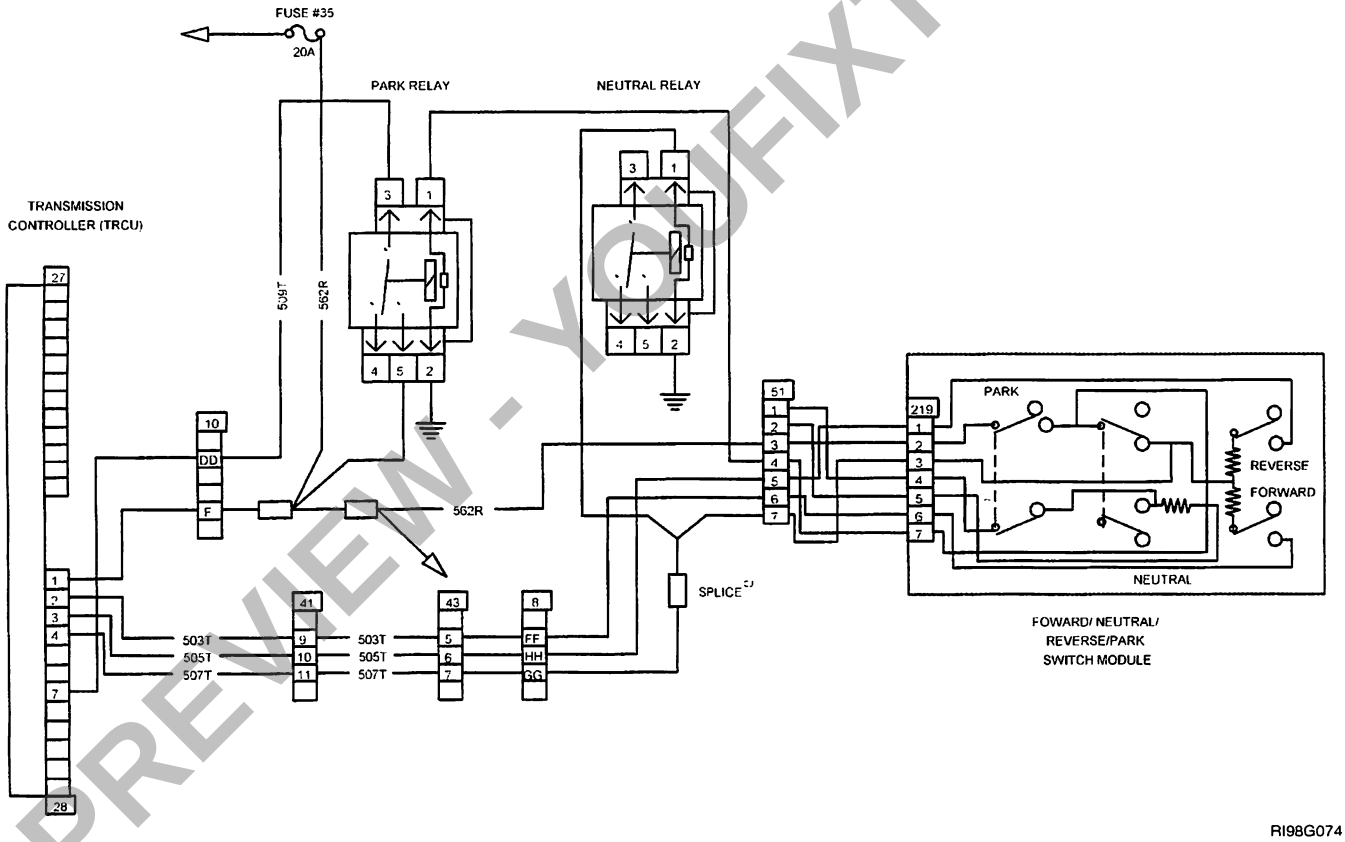
Install test s wires into connector C051 pins 4 and 7.
The switch contacts must be open when in Neutral.
The switch contacts must close when the lever is lifted out of Neutral.
-- OK - Go to Step 4.
-- NOT OK - Replace FNRP switch.

STEP 4 - Forward switch check

Install test s wires into connector C051 pins 6 and 7.
The switch contacts must be closed when in Forward.
The switch contacts must open when the lever is lifted out of forward.
-- OK - Go to Step 5.
-- NOT OK - Replace FNRP switch.

STEP 5 - Reverse switch check

Install test s wires into connector C051 pins 5 and 7.
The switch contacts must be closed when in Reverse.
The switch contacts must open when the lever is lifted out of reverse.
-- OK - FNRP switch is OK.
-- NOT OK - Replace FNRP switch.



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FAULT CODE ARM 1069

Meaning:
MFD switch failure.

Possible failure modes:
1. Switch Failed (shorted or open).
2. External wiring damage (shorted or open).
3. Bad connection (loose connector or bent pin).
4. Armrest controller has failed.

MFD switch information:
Position A = Auto MFD active
Position B = Center position = OFF
Position C = ON
SW201-4 = Auto MFD signal
SW201-5 = Switch power 12 volt
SW201-6 = MFD ON signal

Corrective action:

STEP 1 - Check wiring
Check for wiring damage, loose connector or bent pin.

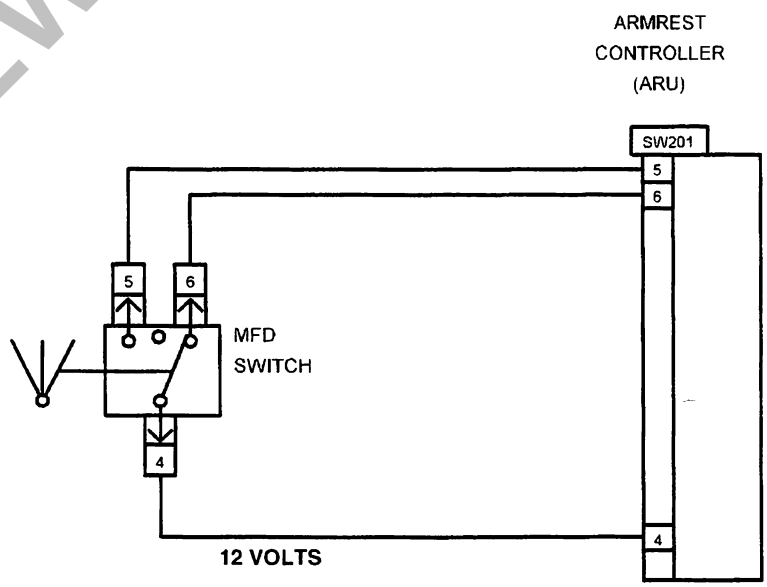
STEP 2 - Check switch function
A. When the switch is in Auto MFD position, there should be continuity between SW201-4 and SW201-5. No continuity between SW201-5 and SW201-6.

B. When the switch is in ON position, there should be continuity between SW201-4 and SW201-6 and no continuity between SW201-4 and SW201-5.

C. When the switch is in OFF position, there should be no continuity between SW201-4, SW201-5 and SW201-6.

STEP 3 - Check controller function
A. Measure the voltage output from the controller at pin SW201-5. It should be +12v.

B. Short wire SW201-4 to SW201-5 and then SW201-5 to SW201-6 to simulate the Auto MFD and ON function. If the controller does not function properly, replace and calibrate the armrest controller.



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FAULT CODE AUX 51147

Meaning:
AUX 5 Type 7th instance. Invalid software instruction executed.

Possible failure modes:
1. Software problem.
2. Hardware problem.

Corrective action:
1. Reprogram with a newer software if available. If not regress one or more compatible levels.
2. If error goes away, stay with latest software that does not exhibit this problem.
3. If error stays, internal failure is possible. Write fault code on failed controller. Replace the controller.

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ATC FAULT CODE 02

Meaning:
Low pressure switch lockout. The A/C system low pressure switch has cycled four times within a 60 second interval. Shut the A/C toggle switch or ignition off and then back on to reset.

Possible failure modes:
1. Ground to the A/C low pressure switch has been interrupted.
2. The system is undercharged with refrigerant.
3. The wrong low pressure switch is installed.
4. The pressure switch has failed.
5. The expansion valve is defective or blocked by debris.

Background:
The compressor clutch will no longer engage due to the low pressure switch setting being exceeded therefore shutting down the system. The system will automatically reset if the switch is tripped occasionally no more than four times a minute. Once the ATC controller detects that the switch setting has been reached four times within one minute it will lockout the compressor indicating that a system abnormality has occurred.

Pressure switch information:
This is a normally closed switch when refrigerant pressure is present. The switch will trip open if the refrigerant pressure on the low side drops below 28 kPa ± 14 kPa (4 psig ± 2 psig). The switch will then reset once the refrigerant low side pressure rises above 138 kPa ± 21 kPa (20 psig ± 3 psig).

Wiring information:
Ground circuit must be uninterrupted from ATC controller through the pressure switch and to chassis ground. Examine ground connections fro loose ground wires or corroded connections.

NOTE: *Always inspect connector ends for damaged, bent or dislocated pins when troubleshooting.*

(1C) LP-OR --->LP-BR ---> HVAC Unit GRD Stud --->

Corrective action:

STEP 1 -
Verify fault codes.

STEP 2 -
Shut off tractor.

STEP 3 -
Remove bolts from HVAC unit lid and hinge seat forward. Inspect pressure switch and connections.

STEP 4 -
Verify switch is closed.

STEP 5 -
Confirm continuity across pressure switch to ATC module pin 1C.
-- OK - Go to Step 6.
-- NOT OK - Refer to cab electrical harness troubleshooting.

STEP 6 -
Install A/C high and low side pressure gauges.

STEP 7 -
Refer to A/C system troubleshooting and diagnostics.
-- OK -
-- NOT OK - Replace ATC controller.

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POWER FLOW (FORWARD CREEPER DRIVE SPEEDS)

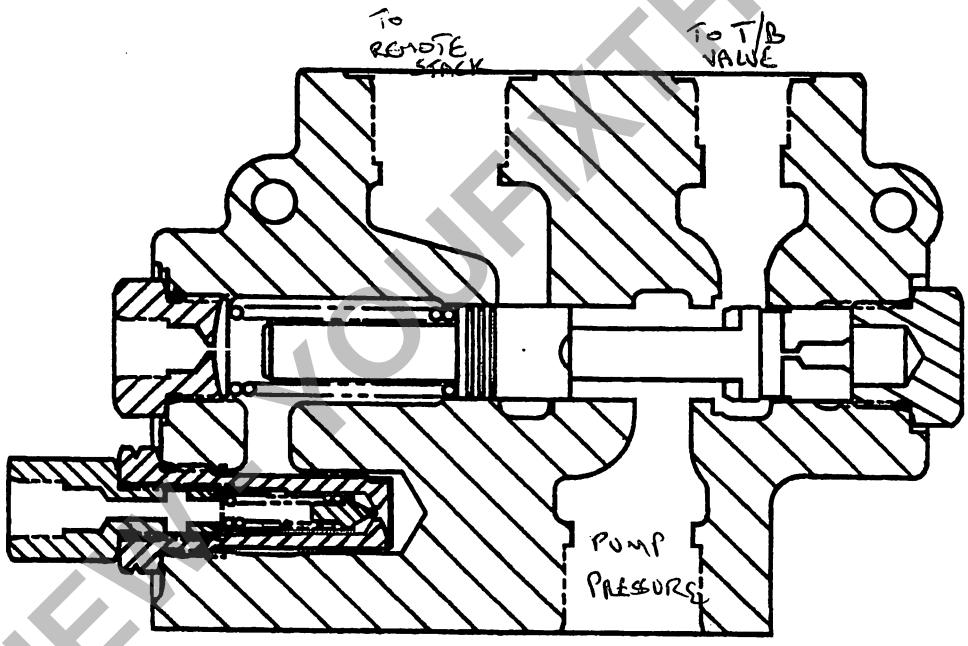
FIRST CREEP GEAR - As the operator selects first creep speed, he simultaneously disengages and locks out the odd-speed clutch pack and the even-speed clutch pack. He also engages the creep speed clutch pack, the first speed clutch pack and the low range clutch pack. This is accomplished through the transmission controller. Power then flows from the speed transmission input shaft creep speed drive gear through the creep-speed clutch, and across the countershaft to the first-speed clutch drive gear. Power is then directed through the first speed constant mesh gear set and the clutch pack, across the output shaft to the master clutch.

With the master clutch engaged, power is transmitted across the range transmission input shaft to the low-range drive gear. Power then flows to the low-range clutch pack gear and across the range countershaft to the constant mesh gear set. Power flow is delivered to the pinion shaft by this constant mesh gear set in all speeds.

SECOND CREEP GEAR - As the operator selects second creep speed, he simultaneously disengages the first speed clutch and engages the third speed clutch. Power then flows from the speed transmission input shaft through the creep-speed clutch on the countershaft, to the third-speed clutch on the output shaft then the master clutch. Power flow through the range transmission is the same for speeds first creep through third creep.

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TRAILER BRAKE PRIORITY VALVE.

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