Step 6	Is fault code ERR 208 showing on the ICC?	**YES:** Check unswitched power circuit. See System: Power Circuit Diagnosis in Section 40, Group 25. **NO:** Test complete.

AA95137,00028EF -19-14SEP10-8/8

Rear PTO Circuit Operation

Function:

To engage the rear PTO and illuminate a light on the ICC to alert the operator that the rear PTO is on.

Operating Conditions:

- Key switch in run or start position.
- Operator on seat, or off seat if the off seat PTO logic is activated. See Fuel Supply/Engine Shutoff Circuit Operation—Operating Conditions in Section 40, Group 25.
- Rear PTO switch on.

Theory of Operation:

The rear PTO switch is used as an interlock to the fuel supply circuit as well as engaging the rear PTO.

In the off (normally closed) position the rear PTO switch supplies current to the fuel supply circuit through the A1 ICC. If the rear PTO is on and the operator leaves the seat, current is removed from the fuel supply circuit unless the off seat PTO logic is activated.

With the key in start or run position, battery voltage is provided to the S3 rear PTO switch through the S1 key switch, 072A Red wire, F5 fuse and 562AA and 562AC Red wires.

With the PTO on, the rear PTO switch is in the on (open) position, and voltage is supplied across the rear PTO switch (terminals 1 and 4) from the 562AA and 562AC Red wires to the 574A Yel wire. The 574A Yel wire supplies current to the Y3 rear PTO solenoid to energize the solenoid and engage the rear PTO.

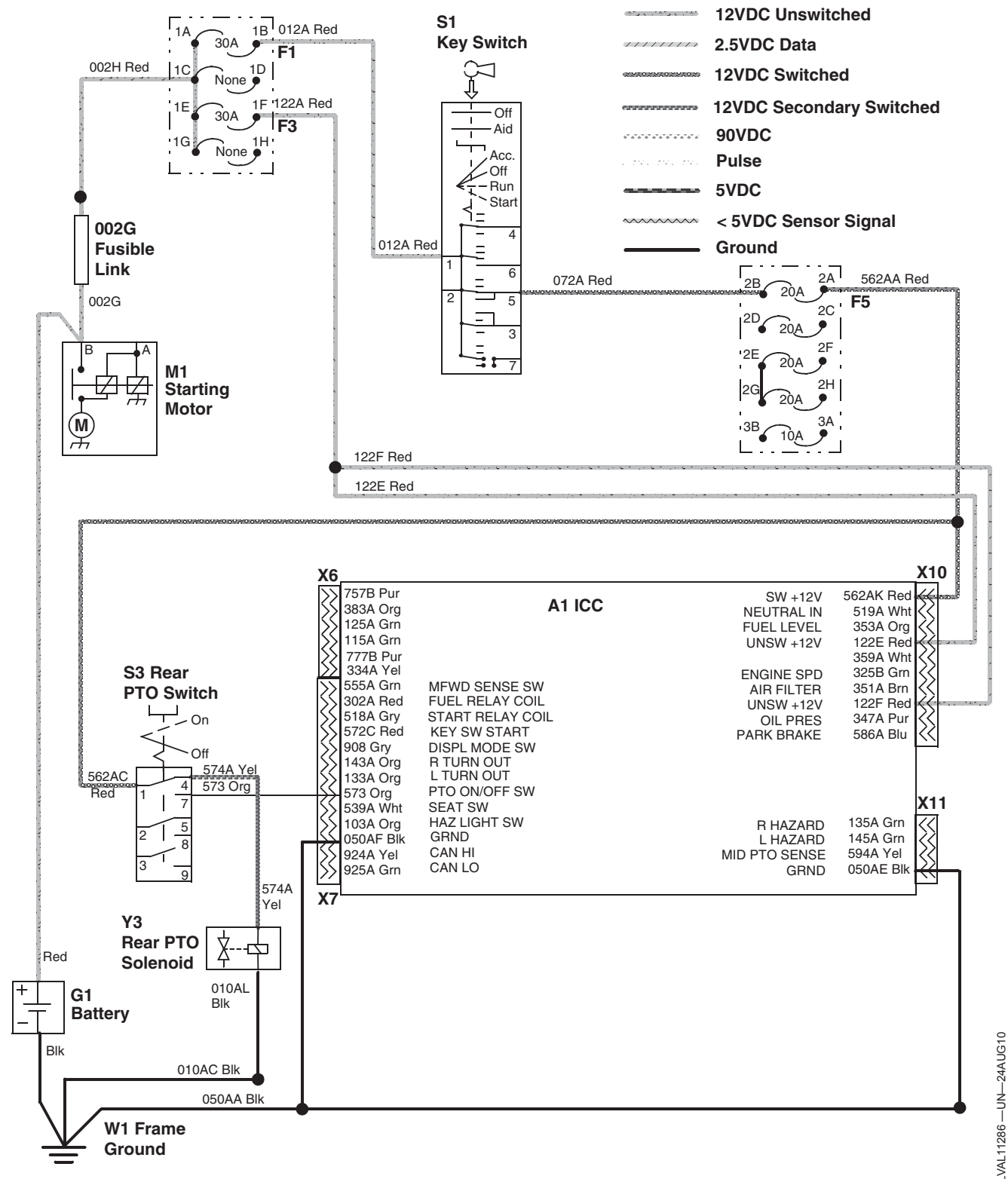
The ground circuit for the rear PTO solenoid is provided though the 010AL and 010AC Blk wires.

At the same time power is removed from the 573 Org wire which supplies current to the A1 ICC through the X7 connector (terminal K). The ICC logic reads the power being removed from this input and turns on the rear PTO indicator light. Additionally, the ICC checks for the proper inputs from the other switches. If the seat switch is closed (operator on seat) then the ICC will continue to provide an output to the fuel relay. If the operator is off the seat, then the off seat PTO logic must be active before the rear PTO switch is placed in the on position or the ICC will remove power to the fuel relay.

A ground circuit path for the ICC is provided though the X7 connector (terminal P) 050AF Blk, and X11 connector (terminal H) 050AE Blk, and 050AA Blk wires.

AA95137,00028F0 -19-13SEP10-1/1

Rear PTO Circuit Electrical Schematic



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AA95137,00028F1 -19-13SEP10-1/2

002G— Fusible Link
A1—ICC (Instrument Cluster Controller)
F1— 30A Fuse
F3— 30A Fuse
F5— 20A Fuse
G1—Battery
M1—Starting Motor
S1— Key Switch
S3— Rear PTO Switch
W1—Battery/Frame Ground
X6— W1 Main Wiring Harness-to-ICC Connector
X7— W1 Main Wiring Harness-to-ICC Connector
X10— W1 Main Wiring Harness-to-ICC Connector
X11— W1 Main Wiring Harness-to-ICC Connector
Y3— Rear PTO Solenoid

AA95137,00028F1 -19-13SEP10-2/2

System: Rear PTO Circuit Diagnosis

Test Conditions:

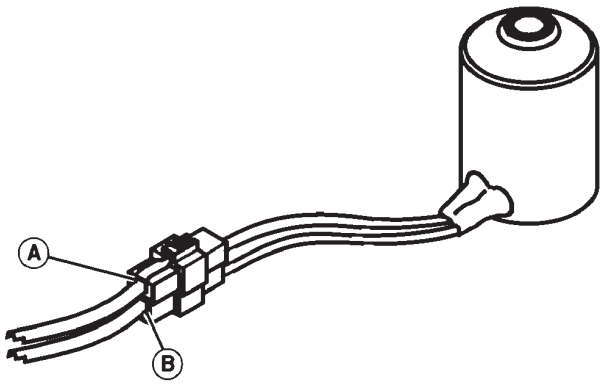
- Right rear wheel removed for easier access to rear PTO solenoid.
- Park brake locked.
- Transmission in neutral.
- Key switch in run position, engine running.
- Operator off seat, off seat PTO logic activated. See Fuel Supply/Engine Shutoff Circuit Operation—Operating Conditions in Section 40, Group 25.
- Rear PTO on.

AA95137,00028F2 -19-14SEP10-1/7

Rear PTO Solenoid Test

AA95137,00028F2 -19-14SEP10-2/7

Step 1



LVAL10141 —UN—23JUL10

A—574A Yel Wire
B—010AL Blk Wire

Is battery voltage present at the Y3 rear PTO solenoid, 574A Yel wire (A)?

YES: Go to next step.

NO: Test rear PTO switch. Check 574A Yel wire and connections.

AA95137,00028F2 -19-14SEP10-3/7

Step 2

Is continuity to ground present at the Y3 rear PTO solenoid, 010AL Blk wire (B)?

YES: Test rear PTO solenoid. See Rear PTO Solenoid Test in Section 40, Group 30. If ok, and rear PTO does not function. See Symptom: PTO Diagnostics Table in Section 80, Group 20.

NO: Check 010AL and 010AC Blk wires / connections.

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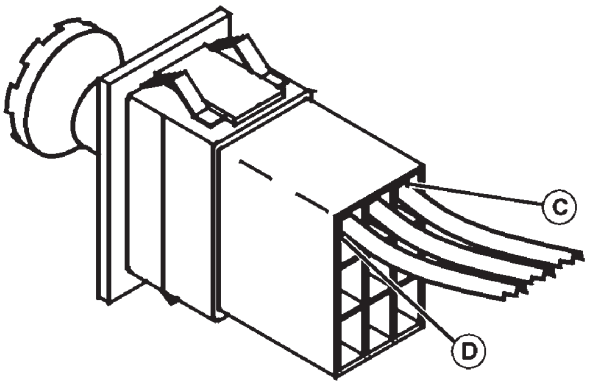
AA95137,00028F2 -19-14SEP10-4/7

Step 3	 LVAL10142 —UN—23JUL10 **C—562AC Red Wire** **D—573 Org Wire** Is battery voltage present at the S3 rear PTO switch, 562AC Red wire (C)?	**YES:** Go to next step. **NO:** Test switched power circuit. See System: Power Circuit Diagnosis in Section 40, Group 25.

AA95137,00028F2 -19-14SEP10-5/7

Step 4	Is battery voltage present at the S3 rear PTO switch, 573 Org wire (D)?	**YES:** Replace rear PTO switch. **NO:** Go to next step.

AA95137,00028F2 -19-14SEP10-6/7

Step 5	Is rear PTO light illuminated on ICC?	**YES:** Test complete. If rear PTO does not function, see Symptom: PTO Diagnostics Table in Section 80, Group 20. **NO:** Replace ICC.

AA95137,00028F2 -19-14SEP10-7/7

MFWD Circuit Operation

Function:

To illuminate a light on the ICC to alert the operator that the MFWD is engaged.

Operating Conditions:

- Key switch in RUN position, and
- MFWD lever in the engaged position, MFWD engagement sensing switch on.

Theory of Operation:

The MFWD function is a mechanical system that uses a ball switch to turn a light on or off on the ICC to alert the operator that the MFWD is engaged.

With the key in START or RUN position, battery voltage is provided to the MFWD engagement sensing switch through the S1 key switch, 072A Red wire, F5 fuse and 562AA, 562BB, and 562AU Red wires to the MFWD engagement sensing switch.

When the MFWD lever is pulled up to the engaged position, the ball of the switch is pushed in to close the contacts inside the switch. With the switch contacts closed, current flows across the MFWD engagement sensing switch to the 555A Grn wire and X7 connector (terminal A) to the A1 ICC to illuminate the MFWD indicator light.

A ground circuit path for the ICC is provided though the X7 connector (terminal P) 050AF Blk, and X11 connector (terminal H) 050AE Blk, and 050AA Blk wires.

AA95137,00028F3 -19-13SEP10-1/1