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Early Riser® 1225
Rigid Trailing Planter

SERVICE MANUAL

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CASE IH AGRICULTURE

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Safety rules

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation that, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

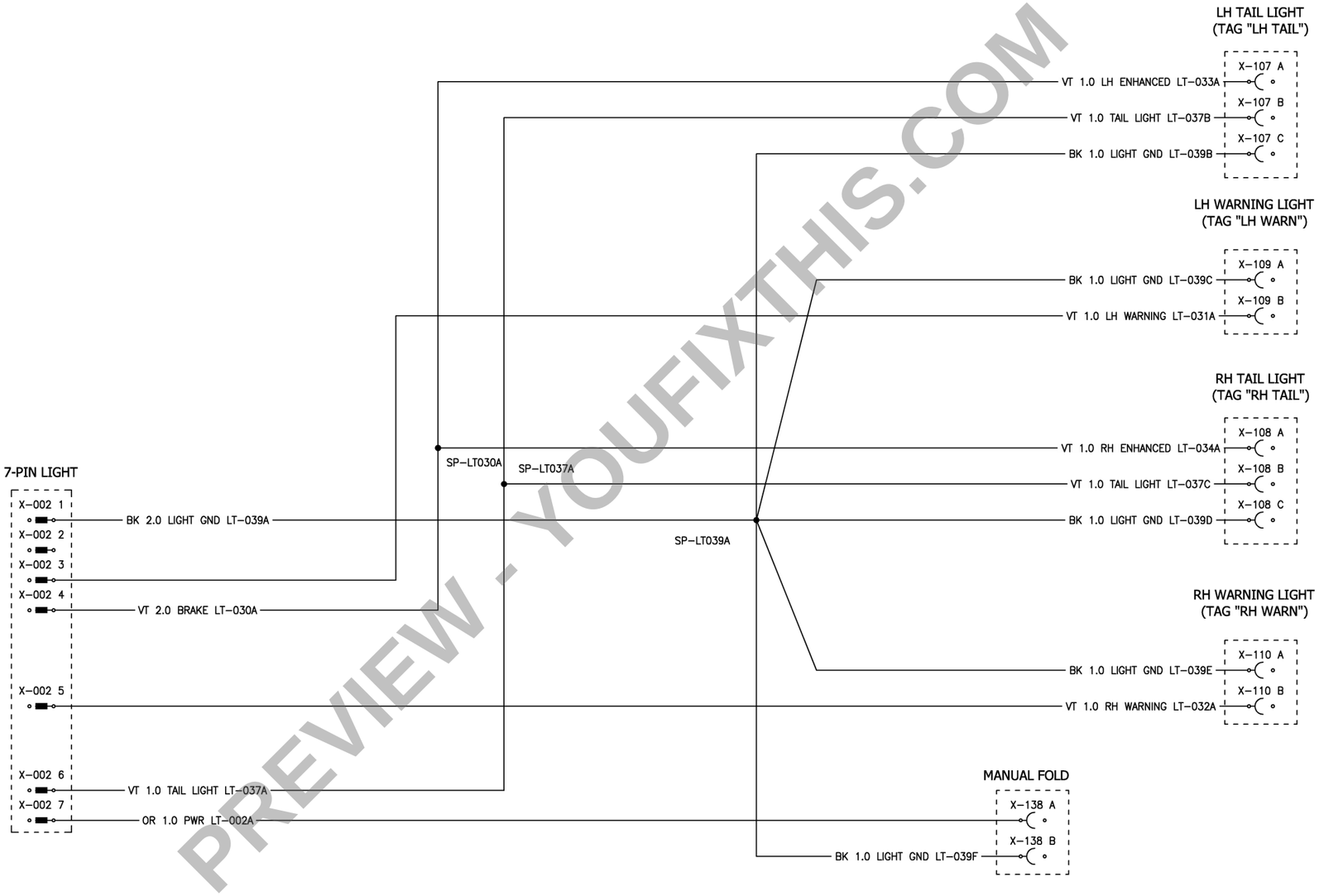
NOTE: *Note indicates additional information that clarifies steps, procedures, or other information in this manual.*

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

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LIGHTING

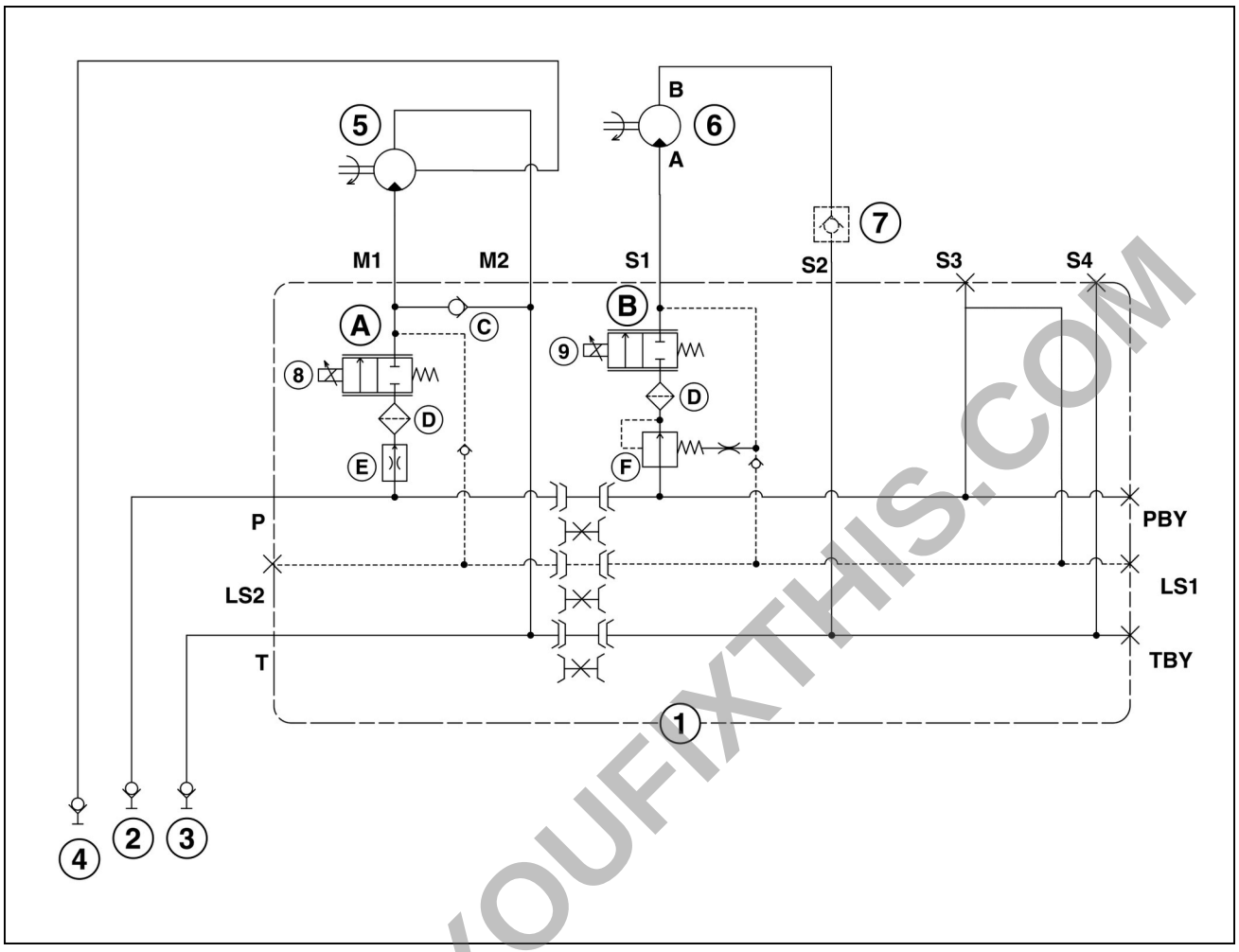


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FRAME 1

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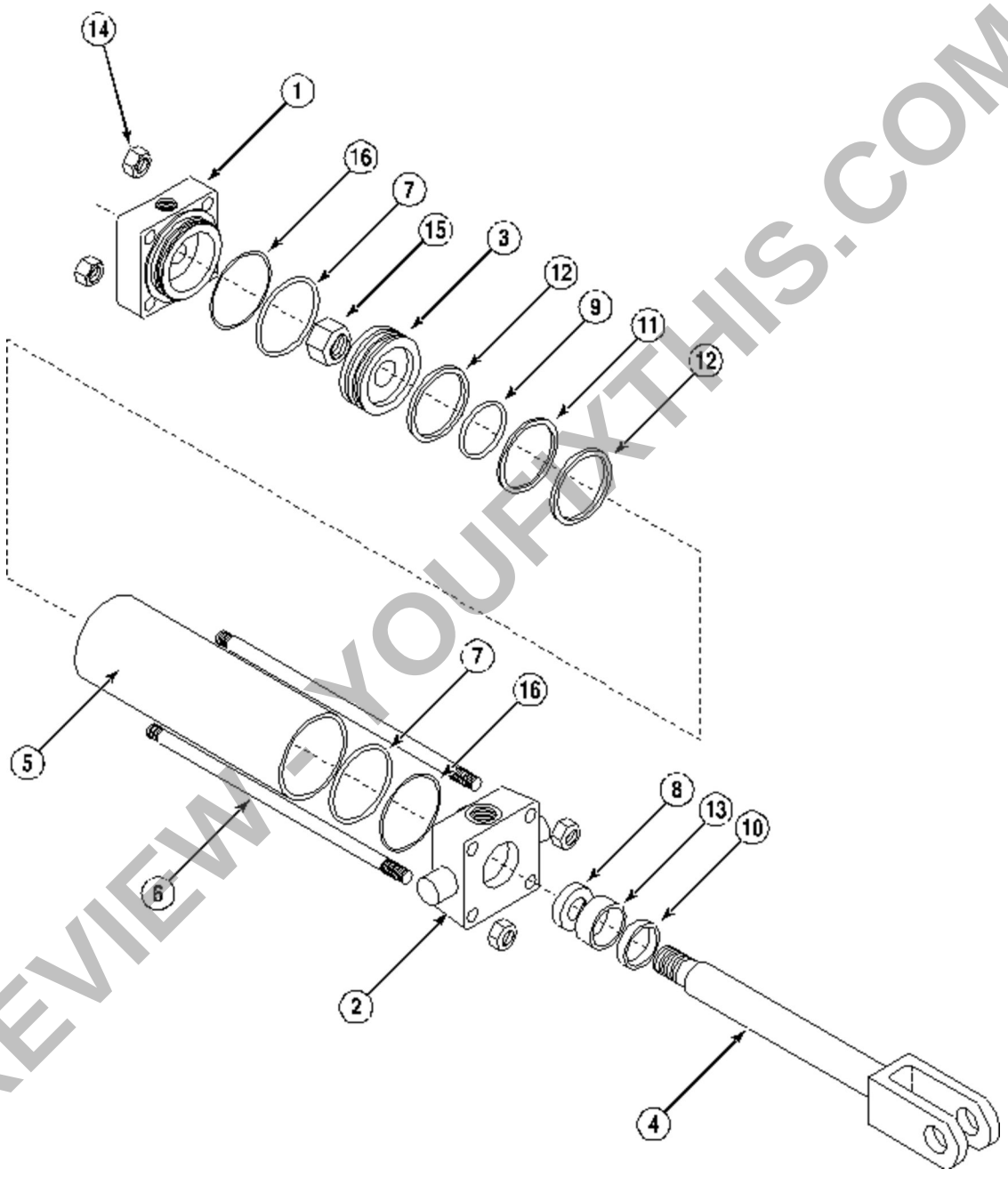
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Cylinder - Disassemble - Lift cylinder

Prior operation:
Cylinder - Remove (35.946)

NOTE: *Parts marked with an asterisk (*) are included in a seal kit. When performing cylinder disassembly, these parts should be discarded. They must be replaced with new parts during reassembly for proper cylinder sealing.*



RH04H081 1

Raise/Lower Cylinder

1. Cylinder Head	5. Cylinder Tube	9. Piston O-ring*	13. Wear Ring*
2. Cylinder Gland	6. Tie Bolt	10. Rod Wiper*	14. Hex Nut
3. Cylinder Piston	7. O-ring*	11. Piston Seal*	15. Lock Nut
4. Piston Rod	8. U-cup*	12. Piston Wear Ring*	16. Backup Ring*

1. Remove the four hex nuts **(14)** on the cylinder head **(1)** end of the cylinder and remove the four tie bolts **(6)**.

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Torque – Fasteners

SAE FASTENER TORQUE

Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated, as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, molydisulphide or other extreme pressure lubricant is used.

SAE Grade No.	2				5				8 (See Note below.)			
Bolt Head Identification (See Note below.)	 RH04H171 1				 RH04H175 2				 RH04H176 3			
Bolt Size	LB FT		Nm		LB FT		Nm		LB FT		Nm	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	5	6	7	8	9	11	12	15	12	15	16	20
5/16	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	20	23	27	31	35	42	48	57	45	54	61	73
7/16	30	35	41	47	54	64	73	87	70	84	95	114
1/2	45	52	61	70	80	96	109	130	110	132	149	179
9/16	65	75	88	102	110	132	149	179	160	192	217	260
5/8	95	105	129	142	150	180	203	244	220	264	298	358
3/4	150	185	203	251	270	324	366	439	380	456	515	618
7/8	160	200	217	271	400	480	542	651	600	720	814	976
1	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8					800	880	1085	1193	1280	1440	1736	1953
1-1/4					1120	1240	1519	1681	1820	2000	2468	2712
1-3/8					1460	1680	1980	2278	2380	2720	3227	3688
1-1/2					1940	2200	2631	2983	3160	3560	4285	4827

NOTE: *Bolt head identification marks as per grade. Manufacturing marks will vary.*

NOTE: *Thick nuts must be used with Grade 8 bolts.*

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FAULT CODES - DTC

DIAGNOSTIC

[Clutch Control ECU] - 21nn3-Clutch Control n ECU Solenoid Fault: Digital Output nn voltage above normal, open circuit or shorted to +battery. See operators manual. 7

[Clutch Control ECU] - 21nn4-Clutch Control n ECU Solenoid Fault: Digital Output nn voltage below normal or shorted to ground. See operators manual. 10

[Clutch Control ECU] - 27033-Clutch Control n ECU Power Fault: ECU_PWR voltage is above normal. See operators manual. 13

[Clutch Control ECU] - 27034-Clutch Control n ECU Power Fault: ECU_PWR voltage is below normal. See operators manual. 15

[Clutch Control ECU] - 27073-Clutch Control n ECU Power Fault: Internal 5V voltage is above normal. See operators manual. 18

[Clutch Control ECU] - 27074-Clutch Control n ECU Power Fault: Internal 5V voltage is below normal. See operators manual. 19

[Clutch Control ECU] - 27113-Clutch Control n ECU Power Fault: Internal 8V voltage is above normal. See operators manual. 20

[Clutch Control ECU] - 27114-Clutch Control n ECU Power Fault: Internal 8V voltage is below normal. See operators manual. 21

[Clutch Control ECU] - 27153-Clutch Control n ECU Power Fault: Internal 2.5V Ref voltage is above normal. See operators manual. 22

[Clutch Control ECU] - 27154-Clutch Control n ECU Power Fault: Internal 2.5V Ref voltage is below normal. See operators manual. 23

[Clutch Control ECU] - 27183-Clutch Control n ECU Power Fault: Sensor Pwr voltage is above normal. See operators manual. 24

[Clutch Control ECU] - 27184-Clutch Control n ECU Power Fault: Sensor Pwr voltage is below normal. See operators manual. 26

[Clutch Control ECU] - 27223-Clutch Control n ECU Power Fault: PWR voltage is above normal. See operators manual. 29

[Clutch Control ECU] - 27224-Clutch Control n ECU Power Fault: PWR voltage is below normal. See operators manual. 31

[Clutch Control ECU] - 27263-Clutch Control n ECU Power Fault: Internal 5V_PWR voltage is above normal. See operators manual. 34

[Clutch Control ECU] - 27264-Clutch Control n ECU Power Fault: Internal 5V_PWR voltage is below normal. See operators manual. 35

[Clutch Control ECU] - 27303-Clutch Control n ECU Power Fault: Ground Difference voltage is above normal. See operators manual. 36

[Clutch Control ECU] - 27304-Clutch Control n ECU Power Fault: Ground Difference voltage is below normal. See operators manual. 40

[Clutch Control ECU] - 27403-Clutch Control n ECU Power Fault: +5V voltage is above normal. See operators manual. 44

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21nn3-Clutch Control n ECU Solenoid Fault: Digital Output nn voltage above normal, open circuit or shorted to +battery. See operators manual.

Control Module : Clutch Control ECU

Cause:
The digital output channel, represented by ‘nn’, has a voltage value that is above normal. There is a possibility of an open circuit or a short to the battery.

Possible failure modes:

1. PWR shorted high.
2. Bad connection or open circuit in power or ground wire to the indicated device.
3. Device failure.
4. Faulty Clutch ECU.

Solution:

1. Find out if the fault code is still active.

   Turn system power ON.

   Clear all fault codes from the Clutch ECU.

   Cycle system power.

   A. Fault code 21nn3 is logged. Go to Step 2.

   B. Fault code is not logged. Return the planter to field operation and monitor for recurring fault.
2. Check for shorts to a voltage source higher than the battery voltage (e.g., to the starter system) in the tractor wiring.

   Disconnect connector **X-001** from the tractor.

   Turn system power ON.

   Measure the voltage at the tractor connector (typically J501 or P283) between contact 4 (LB+) and contact 2 (LGND). The voltage should be between **9 - 16 V**.

   A. Voltage outside of range. Go to Step 3.

   B. Voltage within range. Go to Step 4.
3. Check the Farming System harness and the tractor power system.

   Refer to the farming system harnesses in this manual and the tractor repair manual. Check the battery, fuses, and relays. Test primary power and ground circuits as required. Repair or replace components as needed.

   Reconnect all connectors and turn system power ON.

   A. Fault code 21nn3 is logged. Go to Step 4.

   B. Fault code is not logged. Return the planter to field operation.

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Multi-function block valves Multi-valve - Remove

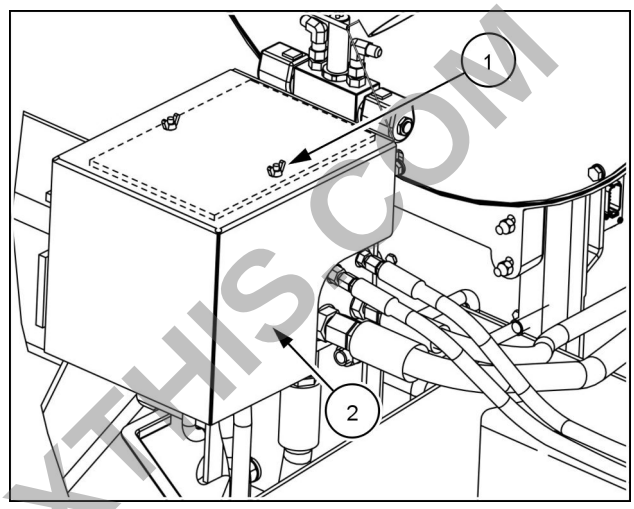
Move the planter to a hard and level surface.

Lower the planter to the ground.

Put the remote lever for the multivalve in the Neutral position to remove pressure from the hydraulic circuit.

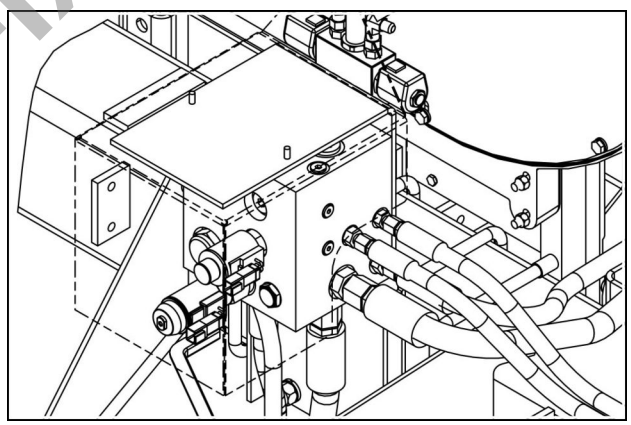
Turn the tractor keyswitch OFF.

1. Remove the two wing nuts **(1)** and remove the cover **(2)** to access the multivalve.



RCIL06PTR148AAA 1

2. Identify and tag all hydraulic hoses by their port identification shown on the valve block.



RCIL06PTR149AAA 2

3. Remove the hoses and adapters from the valve block. Plug or cap all ports and hoses to prevent entry of foreign material. Discard the adapter O-rings.
4. Noting the location for each connector, disconnect the harness connectors (not shown) to the two solenoid valves.
5. Remove the three bolts and washers securing the multivalve to the support, and remove the valve block.

Next operation:
Multi-function block valves Multi-valve - Decontaminating (35.359)

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NOTE: *Refer to the image on the previous pages for the connector number designation.*

Connector (1) pinout			
Pin number	**Wire color**	**Wire gauge**	**Function**
1	GN	22	ROW 1
2	BN	22	ROW 2
3	BL	22	ROW 3
4	OR	22	ROW 4
5	YL	22	ROW 5
6	VI	22	ROW 6
24	RD	18	+ **8 V**DC ROW 1–6
26	BK	18	GND ROW 1–6
37	WH	22	DIST.

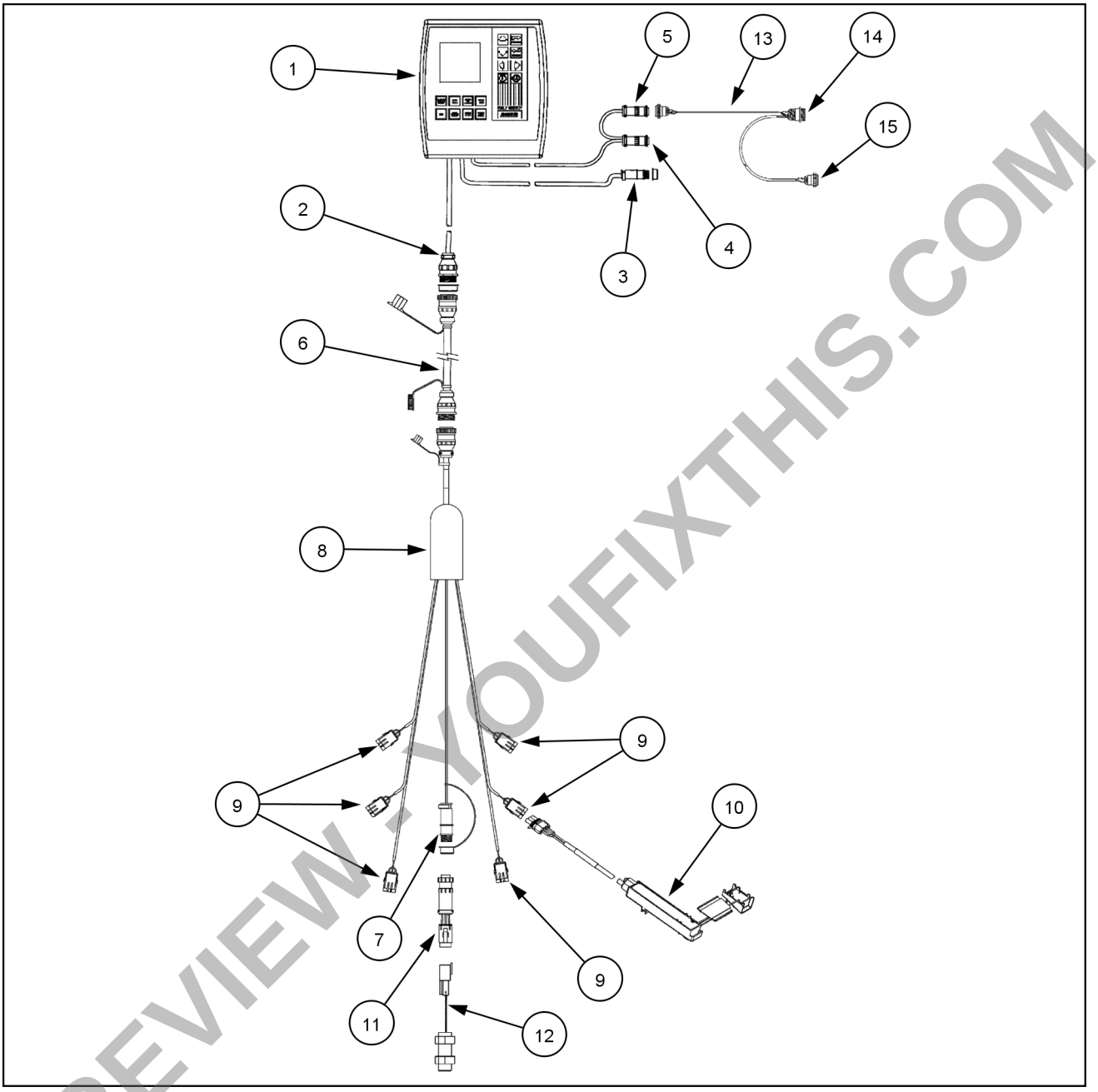
Connector (2) pinout			
Pin number	**Wire color**	**Wire gauge**	**Function**
1	N/A	N/A	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	GN	18	SIGNAL
5	BK	18	GROUND
6	RD	18	+ **8 V**DC

Connector (3) pinout			
Pin number	**Wire color**	**Wire gauge**	**Function**
1	RD	18	+ **8 V**DC
2	GN	18	SIGNAL
3	BK	18	GROUND

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Harnesses and connectors - Detailed view Early Riser IV system layouts



SAPH13PLA0531GA 1

Early Riser® IV system - 6 Row toolbar harness shown

Ref	Description	Ref	Description
1	Early Riser® IV monitor	8	Seed sensor toolbar harness
2	Standard sensor harness	9	To row unit seed sensor
3	To tractor radar	10	Seed sensor
4	To tractor cab auxiliary power connector	11	Wheel speed sensor adaptor
5	To frame fold/marker controller (if equipped)	12	Wheel speed sensor
6	**4 m** (**13 ft**) extension harness	13	Marker/fold controller power harness
7	To wheel speed sensor	14	3-pin auxiliary power outlet (not used)
		15	To marker/fold controller

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General specification

6 Row planter

Planter type: 1225 Rigid Trailing planter

- Number of rows: 6
- Row spacing: **762 mm** (**30 in**)

Lift system - Special double-acting hydraulic wheel cylinders with rephasing valve.

- Master cylinder - **83 mm** (**3-1/4 in**) x **1626 mm** (**8 in**) stroke
- Slave cylinder - **76 mm** (**3 in**) x **1626 mm** (**8 in**) stroke

Gauge/drive wheels

- Taper roller bearing hubs: 7.60 x 15 **Goodyear®** Sure Grip Traction, 10 Ply tire with approximate rolling circumference of **2337 mm** (**92 in**).
- Tire inflation pressure: **441 kPa** (**64 psi**).
- Wheel lug bolt torque: **90 - 102 N·m** (**66 - 75 lb ft**).

Row units: Parallel linkage, individually mounted for maximum flexibility to follow ground contour.

Seed openers: Staggered **356 mm** (**14 in**) diameter double disks with precision bearings with internal and external scrapers.

Covering disks: Adjustable **203 mm** (**8 in**) diameter inverted, spring loaded staggered double disks.

Press wheels: Adjustable, **165 x 305 mm** (**6.5 x 12 in**) center rib, chevron tread, semi-pneumatic rubber tires.

Planter depth: Controlled by equalizer gauge wheel system that equalizes soil pressure on both **102 x 406 mm** (**4 x 16 in**) grooved semi-pneumatic rubber gauge wheel tires.

Planting depth: Adjustable, **0 - 89 mm** (**0 - 3.5 in**).

On-row seed hopper and lid: Molded plastic with tethered strap.

- Hopper capacity: **0.067 m³** (**1.9 Bu**).

Granular chemical hopper:

- Hopper lid: Closed handling or non-closed handling (as equipped).

Planter drive: Ground wheel drive or hydraulic variable drive.

Transmission - Ground drive only: Chain drive, adjustable, 136 speed settings.

Markers: Disk type, precision bearing disk, manually or automatically selected, raises and lowers hydraulically, controlled by remote valves and AFS display OR by remote valves and marker controller.

Jack stand: Two positions: Field operation/road transport or storage crank adjustable - for adjusting planter hitch clevis to tractor drawbar.

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[79.105] Planting tool 79.4

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Multi-function block valves Marker - Dynamic description - Marker and lift operation

Electronic control

Advanced Farming System (AFS) marker control

Both of the marker solenoids, left-hand and right-hand, are connected to ground on pin 2 of each solenoid connection.

The Electronic Control Unit (ECU) supplies power to pin 1 to energize the solenoid valves for each marker individually.

Marker	ECU control pin
Left-hand	Pin R1 of ECU 1B to pin 1 of the marker solenoid
Right-hand	Pin A2 of ECU 1A to pin 1 of the marker solenoid

Early Riser® IV marker control

Both marker solenoid valves, left-hand and right-hand, receive power on pin1 from the marker/fold control module.

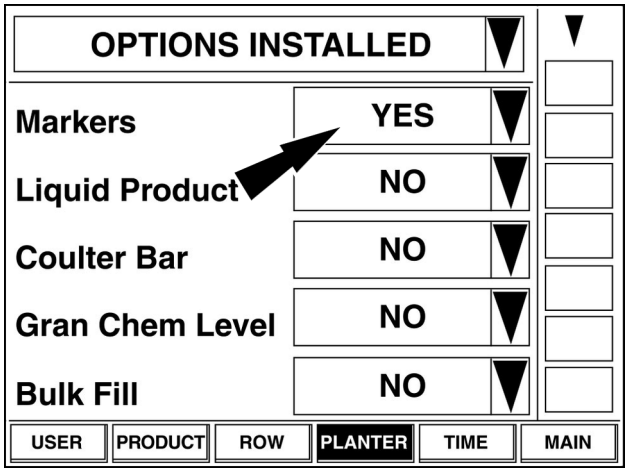
The marker/fold control module supplies ground to pin 2 to energize the solenoid valves for each marker individually.

Marker	Marker/Fold control pin
Left-hand	Pin 5 of marker/fold controller to pin 2 of the left-hand marker solenoid
Right-hand	Pin 4 of marker/fold controller to pin 2 of the right-hand marker solenoid

Software control

The marker solenoids are only energized when:

1. YES is selected in the Marker box on the planter Options Installed screen (SETUP > PLANTER).



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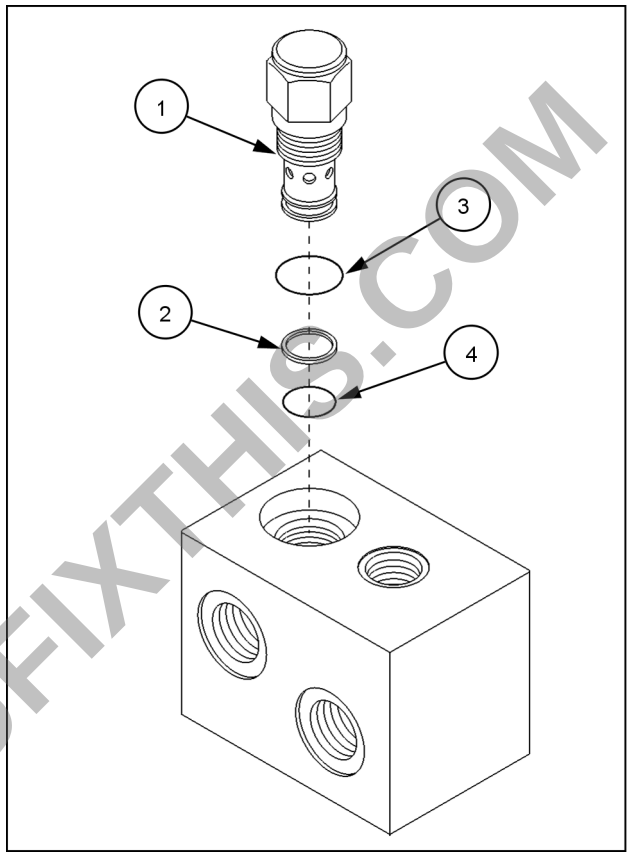
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Vacuum system control valve Flow limiter - Assemble

Prior operation:
Vacuum system control valve Flow limiter - Visual inspection (35.745)

1. Lubricate the valve **(1)** with clean **CASE IH AKCELA HY-TRAN® ULTRA™ HYDRAULIC TRANSMISSION OIL** hydraulic fluid.



SAIS13PLA0715BA 1

2. Install a new backup washer **(2)**, O-rings **(3)**, and **(4)** on the valve.
3. Install the valve assembly in the block. Torque the valve to **108 - 122 Nm** (**80 - 90 lb ft**).

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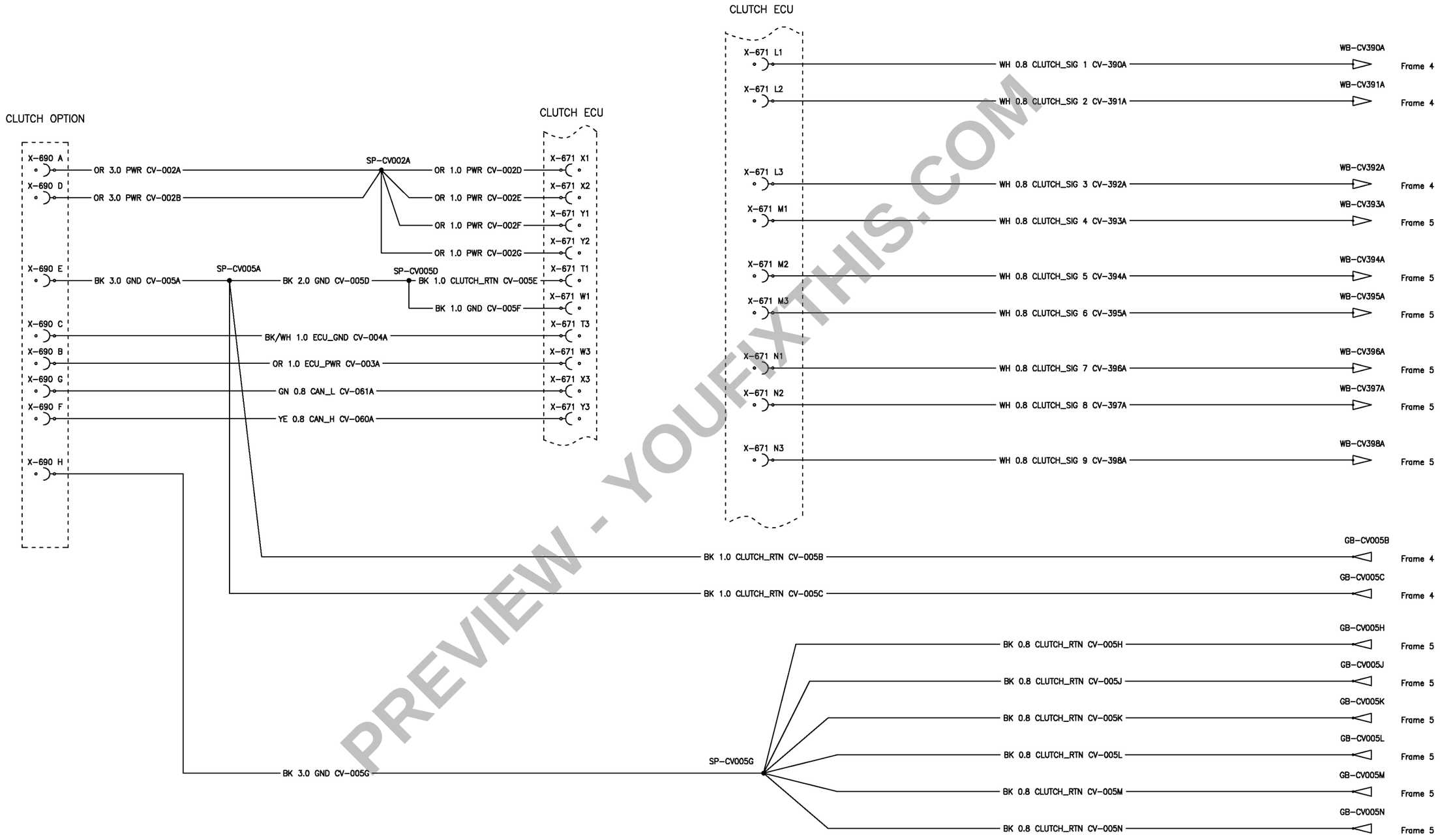
Electrical systems

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CLUTCH OVERLAY, 1 OF 4



FRAME 3

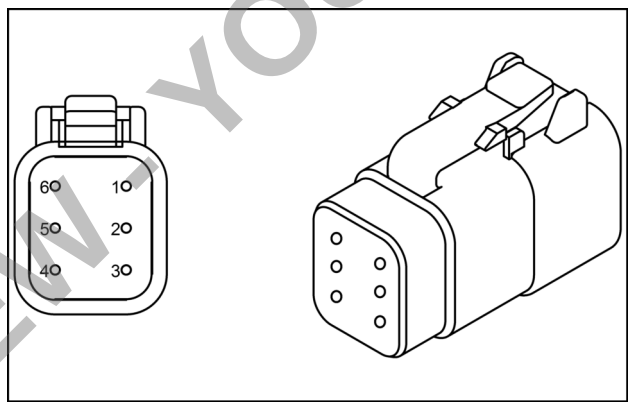
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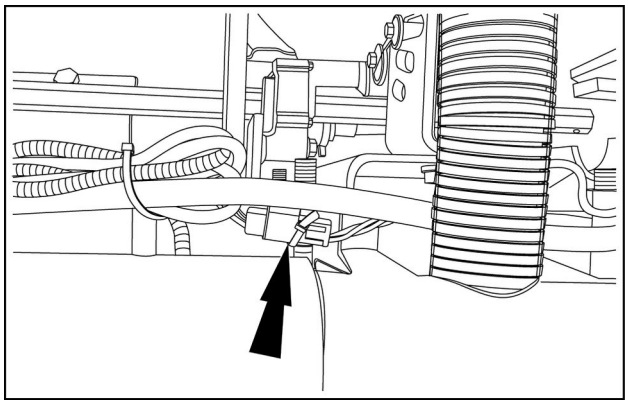
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CONNECTOR X-696-4 - CLUTCH & SEED 4

CONNECTOR X-696-4 - CLUTCH & SEED 4			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME - 6 Row**
1	13 (WH)	CLUTCH_SIG 4	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**
2	67 (BK)	CLUTCH_RTN	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**
3	-	-	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**
4	15 (YE)	SEED_SIG 4	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**
5	16 (BL)	SEED_GND	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**
6	17 (PK)	SEED_PWR	**Wiring harnesses - Electrical schematic sheet 05 Clutch harness - 6 Row Narrow - Clutch overlay, 3 of 4 (55.100)**



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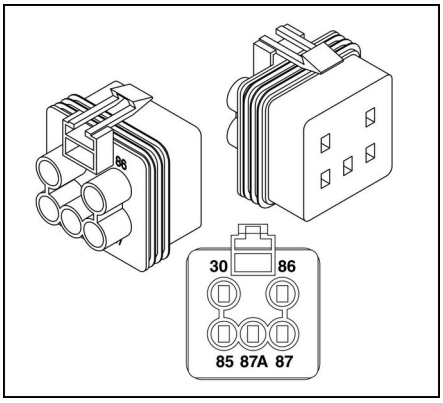
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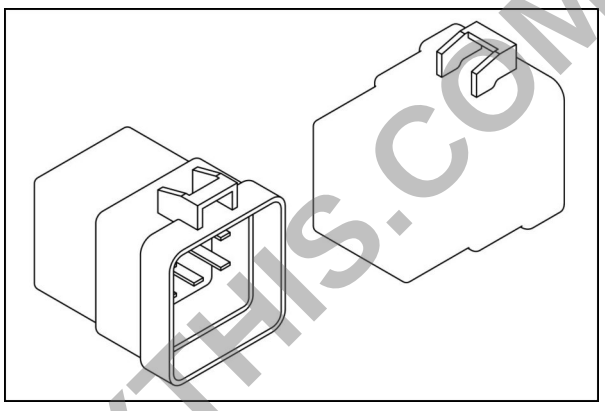
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Cavity/Pin	Circuit ID	Circuit Description	Next Connection
A	2B R-1.0	B+ SW	
B	3B LG-0.8	GPS RX	
C	5B BK-0.8	RS232 GND	
D	6B DU-0.8	GPS TX	
E	9B BK-1.0	CLEAN GND	

F. Low Power Relay - LB+



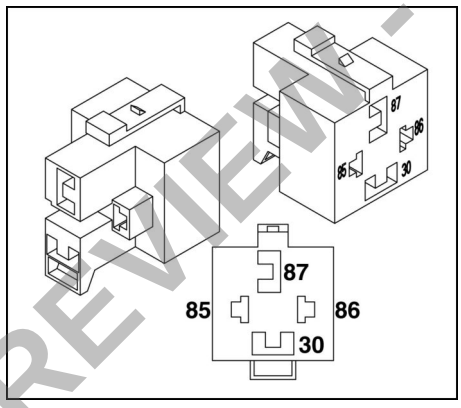
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297910A1



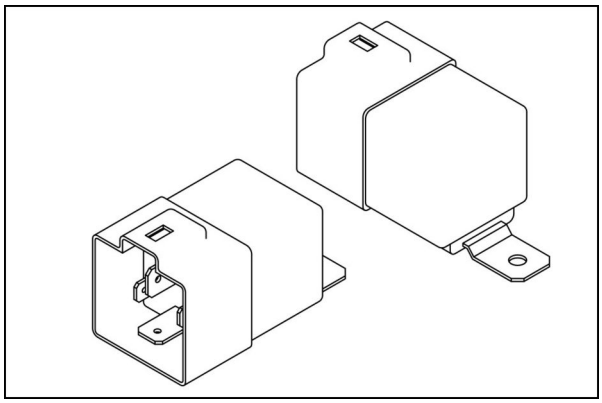
RCIL06_293256A1 4
293256A1

Cavity/Pin	Circuit ID	Circuit Description	Next Connection
87	20A R-3.0	LOW B+ SW	
85	15B DU-0.8	IMP PWR ACT	
86	25B R-3.0	COIL B+	
30	26B R-3.0	COM IMP B+ SW	
87A	PLUG	OPEN	

G. High Power Relay - HB+



RCIL06_310220A1 5
297910A1



RCIL06_296541A1 6
296541A1

Cavity/Pin	Circuit ID	Circuit Description	Next Connection
87	17A R-8.0	IMP B+ SW	
85	1A BK-1.0	GND	
86	22B R-3.0	B+ SW	
30	19B R8.0	UNSW B+	

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27264-Clutch Control n ECU Power Fault: Internal 5V_PWR voltage is below normal. See operators manual.

Control Module : Clutch Control ECU

Cause:
The internal **5 V** power voltage is below normal.

Possible failure modes:

1. Faulty Clutch ECU.

Solution:

1. Find out if the fault code is still active.

   Turn system power ON.

   Clear all fault codes from the Clutch ECU.

   Cycle system power.

   A. Fault code 27264 is logged. Go to Step 2.

   B. Fault code is not logged. Return the planter to field operation and monitor for recurring fault.
2. Replace the Clutch ECU.

   Turn system power OFF.

   Replace the Clutch ECU.

   Install, program, set implement identification and re-calibrate the system.

   A. Fault code 27264 is logged. Reinstall the original Clutch ECU. Submit a concern through ASIST.

   B. Fault code is not logged again. Write the fault code on the failed controller. Return the planter to field operation.

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Main Harness (6 & 8 Row)

Connector 1	Contact 1	Connector 2	Contact 2
X-001	1 (GND)	**X-203**	T1 W1 (GND)
X-001	2 (ECU_GND)	**X-203**	T3 (ECU_GND)
X-001	3 (PWR)	**X-203**	X1, X2, Y1, Y2 (PWR)
X-001	4 (ECU_PWR)	**X-203**	W3 (ECU_PWR)
X-001	8 (CAN_H)	**X-203**	Y3 (CAN_H)
X-001	9 (CAN_L)	**X-203**	X3 (CAN_L)
X-001	6 (TBC_PWR)	**X-251**	B (TBC_PWR)
X-001	7 (TBC_RTN)	**X-251**	D (CAN_RTN)
X-001	8 (CAN_H)	**X-251**	E (CAN_H)
X-001	9 (CAN_L)	**X-251**	F (CAN_L)
X-001	1 (GND)	**X-243**	E, H (GND)
X-001	2 (ECU_GND)	**X-243**	C (ECU_GND)
X-001	3 (PWR)	**X-243**	A, D (PWR)
X-001	4 (ECU_PWR)	**X-243**	B (ECU_PWR)
X-001	8 (CAN_H)	**X-243**	F (CAN_H)
X-001	9 (CAN_L)	**X-243**	G (CAN_L)

Center Clutch Overlay Harness (6 & 8 Row)

Connector 1	Contact 1	Connector 2	Contact 2
X-690	A (PWR)	**X-671**	X1, X2 (PWR)
X-690	D (PWR)	**X-671**	Y1, Y2 (PWR)
X-690	E (GND)	**X-671**	T1 (GND)
X-690	H (GND)	**X-671**	W1 (GND)
X-690	B (ECU_PWR)	**X-671**	W3 (ECU_PWR)
X-690	C (ECU_GND)	**X-671**	T3 (ECU_GND)
X-690	F (CAN_H)	**X-671**	Y3 (CAN_H)
X-690	G (CAN_L)	**X-671**	X3 (CAN_L)

Reinstall the planter CAN bus active terminator.

Cycle power.

A. Fault code 2002 is logged. Go to Step **3**.

B. Fault code is not logged. Return the planter to field operation.

3. Check power at the CAN bus active terminator connector in the tractor on the farming system harness.

Clear all Rate ECU fault codes.

Remove the CAN bus active terminator in the tractor from (typically) connector P293 or connector P512 on the farming system harness. Refer to the farming system harness schematics in this manual for additional information.

Turn system power ON.

Measure the voltage between contact 1 (DATABUS B+) and contact 3 (DATABUS GROUND) of the CAN bus active terminator connector on the farming system harness. The voltage should be between **10.5 - 14.5 V**.

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26042-Planter Options Setup Lost: Rate ECU NVM value lost. Default values used. Verify planter setups and calibrations. See operators manual.

Control Module : Rate ECU

Cause:
The planter options setup information in the NVM (Non-Volatile Memory) has been lost in the rate ECU (Electronic Control Unit).

Possible failure modes:

1. Low battery voltage (less than **9.8 volts**).
2. Poor power supply connections to the Rate ECU.
3. Faulty internal Rate ECU NVM (Non-Volatile Memory).

Solution:

1. Find out if the fault code is still active.

   Turn system power ON.

   Clear all fault codes from the Rate ECU.

   Cycle system power.

   A. Fault code 26042 is logged. Go to Step **2**.

   B. Fault code is not logged. Connect with EST and reconfigure parameter that was reported as being corrupted. Return the planter to field operation and monitor for recurring fault.
2. Check for low battery supply voltage.

   Turn system power ON.

   Disconnect **X-001** from the tractor.

   Measure the voltage at the tractor connector (typically J501 and P283) between contact 4 (LB+) and contact 2 (LGND). Voltage should be between **12 volts** and **16 volts**.

   A. Voltage outside of range. Go to Step **3**.

   B. Voltage within range. Go to Step **4**.
3. Check the Farming System harness and the tractor power system.

   Refer to Farming System harnesses in this manual and check the fuses and relays on the harness for the tractor. Test primary power and ground circuits as required. Check fuses, relays and the battery as needed. Repair or replace components as needed.

   Reconnect all connectors and turn system power ON.

   A. Fault code 26042 is logged. Go to Step **4**.

   B. Fault code is not logged. Return the planter to field operation.
4. Check for loose connections in the wiring to the Rate ECU.

   Inspect contacts 1 (GND), 2 (ECU_GND), 3 (PWR), and 4 (ECU_PWR) of connector **X-001**, contacts A, D (PWR), E, H (GND), B (ECU_PWR), and C (ECU_GND) of connector **X-243**, and contacts T1, W1 (GND), X1, X2, Y1, Y2 (PWR), W3 (ECU_PWR), and T3 (ECU_GND) of connector **X-203**.

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27403-Clutch Control n ECU Power Fault: +5V voltage is above normal. See operators manual. 44
27404-Clutch Control n ECU Power Fault: +5V voltage is below normal. See operators manual. 45
27503-Rate ECU Power Fault: ECU_PWR voltage is above normal. See operators manual. 243
27504-Rate ECU Power Fault: ECU_PWR voltage is below normal. See operators manual. 245
27583-Rate ECU Power Fault: Internal 8V voltage is above normal. See operators manual. 247
27584-Rate ECU Power Fault: Internal 8V voltage is below normal. See operators manual. 248
28012-CAN BUS Offline Fault: Rate ECU CAN communications chip is offline. See operators manual. 249
28022-Display Offline Fault: Rate ECU has not received the Display System Status message for 10 seconds. See operators manual. 253
28193-Clutch Control n ECU CAN Bus Fault: CAN_H voltage is above normal. See operators manual. 46
28194-Clutch Control n ECU CAN Bus Fault: CAN_H voltage is below normal. See operators manual. 49
28233-Clutch Control n ECU CAN Bus Fault: CAN_L voltage is above normal. See operators manual. 52
28234-Clutch Control n ECU CAN Bus Fault: CAN_L voltage is below normal. See operators manual. 55
30002-WSMB2 Not Detected Fault: Seed sensor bus was detected last power up, but this time was not detected. See Operator's Manual. 257
31002- WSMB2 Never Configured Fault: Seed Sensor Bus is not configured. Check at DIAGNOSTICS > SEEDBUS and reconfigure at TOOLBOX > SEEDBUS. See Operators' Manual. 260
32002-WSMB2 Serial Numbers Changed Fault: One or more Sensor Bus ECU serial numbers have changed. Check at DIAGNOSTICS > SEEDBUS and configure at TOOLBOX > SEEDBUS. See Operators' Manual. . . . 262
33002-WSMB2 Missing ECUs Fault: One or more Seed Sensor Bus ECUs are missing. Check at DIAGNOSTICS > SEEDBUS and reconfigure at TOOLBOX > SEEDBUS. See Operators' Manual 264
34002-WSMB2 Added ECUs Fault: One or more Seed Sensor Bus ECUs have been added. Check at DIAGNOSTICS>SEEDBUS and reconfigure at TOOLBOX>SEEDBUS 267
35002-WSMB2 Row Sensors Exp Det Mismatch Fault: Detected number of row sensors does not match expected. Check at DIAGNOSTICS>SEEDBUS and reconfigure at TOOLBOX>SEEDBUS 268
36002-WSMB2 Unassigned Rows Fault: Sensor Bus assigned row mismatch. Check at DIAGNOSTICS>SEEDBUS and reconfigure at TOOLBOX>SEEDBUS 271
40nn2-WSMB2 ECU n Communication Error: Seed Sensor Bus ECU # nn communication error. Check connections and ECU (nn=1 to 6). 272
41nn4-Vacuum Sensor Failure: Vacuum sensor nn not detected or shorted to ground 275
7nn0-Seed nn PWM Fault: Seed control has been disabled. See DIAGNOSTICS > FAULT screen for more details. 127
7nn2-Vacuum nn PWM Fault: Vacuum control has been disabled. See DIAGNOSTICS>FAULT screen for more details. 128
8nn0-Seed nn Rate Out Of Range: Check hydraulics. Verify product and distance calibrations. 129
8nn2-Vacuum nn Rate Out Of Range: Check hydraulics. Verify product and distance calibrations. 132
9002-Vacuum Turned Off While Planting: Planter unable to apply seed. Please turn Vacuum on. 135

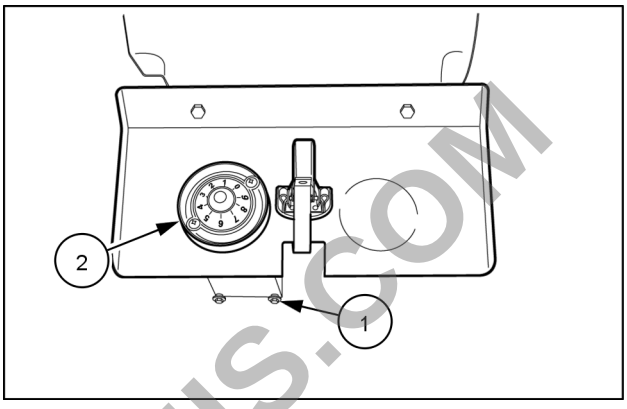
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Chemical meter - Adjust

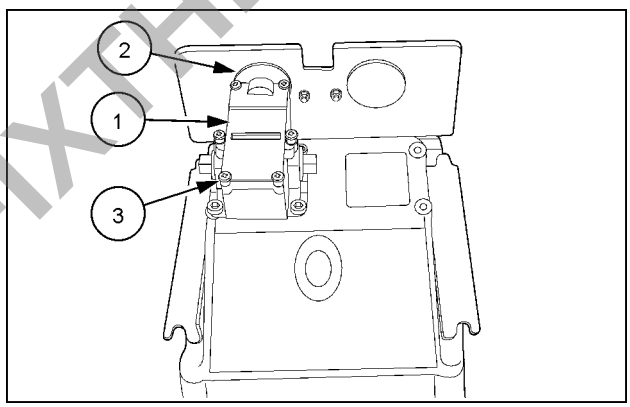
Prior operation:
Tank - Remove (63.110)

1. With the gauge control retainer screws **(1)** loose, turn the control knob **(2)** counterclockwise as far as possible. Do not over tighten the knob.



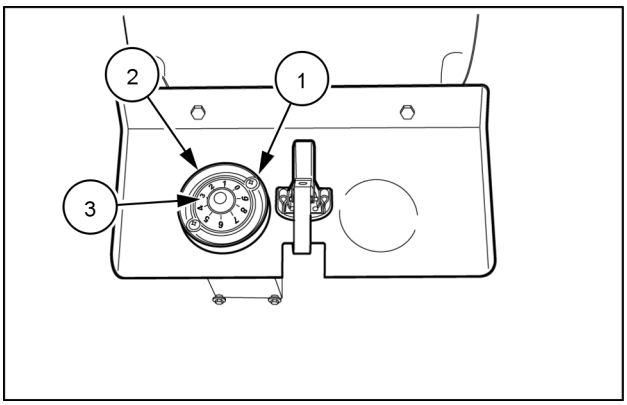
RH04H063 1

2. Push the gauge control retainer **(1)** tight against the knob **(2)** to remove all end play and tighten the six retaining screws **(3)**.



RD02N009 2

3. Loosen the dial retaining screws **(1)** without turning the control knob **(2)**. Rotate the dial **(3)** until "0" is in the 10 o'clock position. Make sure the dial is seated on the knob boss. Tighten the dial retaining screws.



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Next operation:
Tank - Install (63.110)

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