

# EVO™

## Pump Control

For  
John Deere R Series Sprayers



# Installation Instructions

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# Chapter 1: Installation Instructions

## Parts List—EVO Pump Control—JD R Series

**Important:** To install the EVO™ system on a John Deere R Series Sprayer, you must have a 3-trunk power harness and the 3-trunk power to CAN harness. For more information, see the EVO™ Spray Operator Manual.

Part Number	Description	Qty
150270-010	EVO™ Pump Control Module Type B	1
150005-011	EVO™ JD Pump Control Harness	1
150285-100	EVO PSI NAV Commander Module	1
150005-016	EVO PSI NAV Commander Harness	1

## Install the EVO™ Pump Control Kit

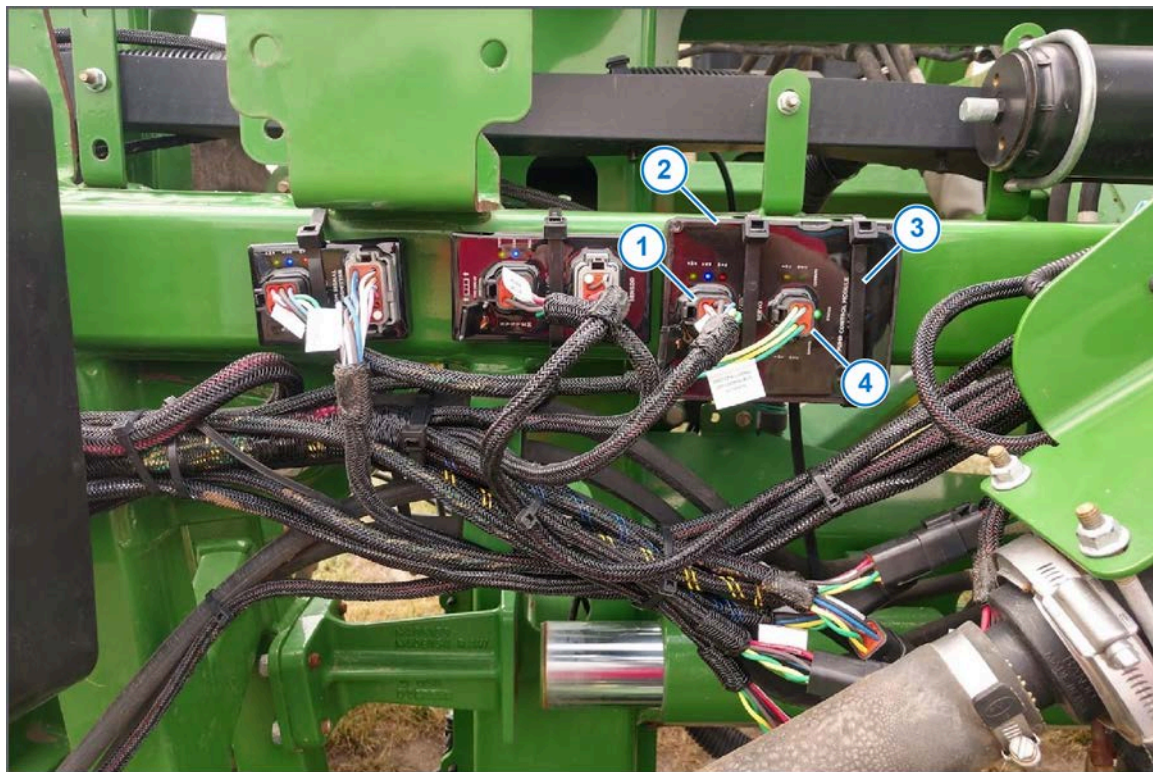


Figure 1:

1. Connect the connector labeled **Pump Mod** (1) on the power to CAN harness to the Pump Control Module B (P/N 150270-010) (2).
2. Attach the module to a metal surface with cable ties (3), as it may intentionally get warm and the metal it is attached to will help dissipate heat.
3. Connect the 4-pin JD Pump Control Harness (P/N 150005-011) (4).



**Figure 2:**

4. Install the JD Pump Control Harness (1) as shown.  
At the machine PWM control valve (2) the 2-pin pump control harness connectors are installed between the existing OEM harness and the control valve.





**Figure 3:**

5. Connect the connector labeled **PSI Mod** (2) on the power to CAN harness to the PSI NAV Commander Module (P/N 150285-100) (1).

**Note:** When a PSI NAV Commander Module is used, the system will not use the PSI Transmitter Module.

6. Connect the 8-pin DT connector on the PSI NAV Commander Harness (P/N 150005-016) (3) to the PSI NAV Commander module.



**Figure 4:**

7. Route the harness (1) to the existing pressure sensor (2) at the back mast of the machine.
8. Install the harness between the existing harness (3) and the existing pressure sensor.

**Note:** The EVO PSI NAV Commander Harness 150005-016 must be utilized. Do not use any alternate versions of the EVO™ PSI harness.

## Settings

### EVO™ Display Settings

Recommended EVO™ Display Settings (Important settings are highlighted)	
<b>Main Menu</b>	
Backlight:	5
Alarm Volume:	3
Turn Compensation:	On
Rate Sync:	On
Pressure Increment:	5 psi
<b>Advanced Menu</b>	
System Gain:	2.0 (Recommended Starting Point)
P-Gain:	3.5 (Recommended Starting Point)
I-Gain:	0.25 (Recommended Starting Point)
Nozzle Hold Delay:	0 sec
Low Pressure Shutoff:	Off
PWM Frequency:	10 Hz
Valve Open Time:	15 ms with 7-watt valves 20 ms with 12-watt valves
Units:	US (psi)
Nozzle Valve Spacing:	Enter the Correct Spacing
Module Location Menu:	See Module Location in the Operator Manual for more information
Section Size Menu:	Enter the Correct Number of Nozzles per Section
<b>GPS Menu:</b>	
GPS Source:	CAN (with EVO GPS Transmitter Module) SERIAL (with 3rd party GPS receiver)
Boom Type:	FIXED
GPS to Axle:	Enter the distance the GPS is from the rear axle
Trailer Hitch to Axle:	0
Trailer2 Hitch to Axle:	0

Recommended EVO™ Display Settings (Important settings are highlighted)	
<b>Pump/Servo Menu:</b>	
Servo Type:	PWM
Servo Min:	26% (calibrate this per machine)
Servo Max:	61% (calibrate this per machine)
Nozzle Cycle Time:	0.1 sec
Servo Hold Delay:	0 sec
Input Current Load:	On
<b>Low Flow Menu:</b>	
Low Flow Threshold:	10 gpm (Recommended Starting Point) <b>NOTE:</b> 9 to 11 gpm will be common
Valve Size:	Select per sprayer: 15.5 for 7-watt valves 24 for 12-watt valves
Spray Tip Size:	Select tip size being used
<b>PSI Module Menu:</b>	
Sensor Module:	CMD (with PSI NAV Commander Module)
Sensor Offset:	0 psi
Sensor Volt Min:	0.5 volts
Sensor Volt Max:	4.5 volts
Sensor Pressure Min:	0 psi
Sensor Pressure Max:	200 psi
Pressure Command:	On
Navigation IMU:	Off

## Rate Controller Settings

Recommended Rate Controller Settings	
<b>Spray Setup (G)</b>	
Minimum Spray Pressure	0 psi (This setting must stay at 0)
Spray Off Pressure	50 psi (this setting must stay at 50)
Spray System Min/Max	1
Boom Charge	Off
Orifice Valve Mode	Set appropriate for your application