


# FIELDPILOT<sup>®</sup>

## USER MANUAL

Assisted Steering Hydraulic Installation Manual for  
Vehicle Kit Number 91-02701 & 91-02702

Fits Only John Deere Tractor Models:  
8x00/8x10/8x20/8x30/8xxx-R Series  
with factory EHPS Steering Valve



A Subsidiary of  Spraying Systems Co.<sup>®</sup>

## FIELDPILOT®

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**WARNING: PINCH POINT HAZARD!** To prevent serious injury or death, avoid unsafe practice while manually operating hydraulic steering circuits. Keep others away and stay clear of mechanical steering linkages.

## KIT CONTENTS

Unpack the installation kit and identify the required parts.

Item	Part Number	Description	Quantity
A	32-04040	Switch, Engage/Disengage.....	1
B	45-05396	Power Cable, Cab Access .....	1
C	45-05626	Cable, Main Matrix Console.....	1
D	45-05801	Cable, John Deere - EHPS to TeeJet .....	1
E	45-07718	Harness, SCM, Short.....	1
F	45-08101	Terminator, CAN Male, WP.....	1
G	60-04141	Screw, Socket Head Cap, M5-0.8 x 25mm SST .....	2
H	60-05042	Spacer, 3/8" OD, 1/2" Long, #12 Screw, Aluminum .....	2
I	78-05080	Interface, EHPS to SCM .....	1
J	78-05083	Interface, John Deere - Steering Sensor to SCM (disengage) .....	1
K	78-05085	Interface, John Deere Wheel Sensor 1, John Deere 10/20/30/R-Series .....	1
L	78-05086	Interface, John Deere Wheel Sensor 2, John Deere 10/20/30/R-Series .....	1
M	78-05087	Interface, John Deere Angle Sensor, John Deere 10/20/30 Series .....	1
M	78-05084	Interface, John Deere Angle Sensor, John Deere R-Series 8 POS .....	1
N	78-08061	Steering Control , Module, FieldPilot IV .....	1
O	90-50013	Cable Tie Kit, 15 .....	1
P	91-07013	Kit, Dust Caps, John Deere EPHS 8xxx Series.....	1
Q	98-05227	Installation Manual John Deere w/Factory Valve .....	1

*NOTE: Which (M) is included depend upon which kit was ordered.*



## INSTALLATION



If there are questions concerning the installation of the FieldPilot system on this vehicle, or due to the changes in component specifications the parts supplied in the kit are not exactly as presented in this document, please contact your dealer or TeeJet Customer service representative for clarification before installation. TeeJet Technologies is not responsible for misuse or incorrect installation of the system.

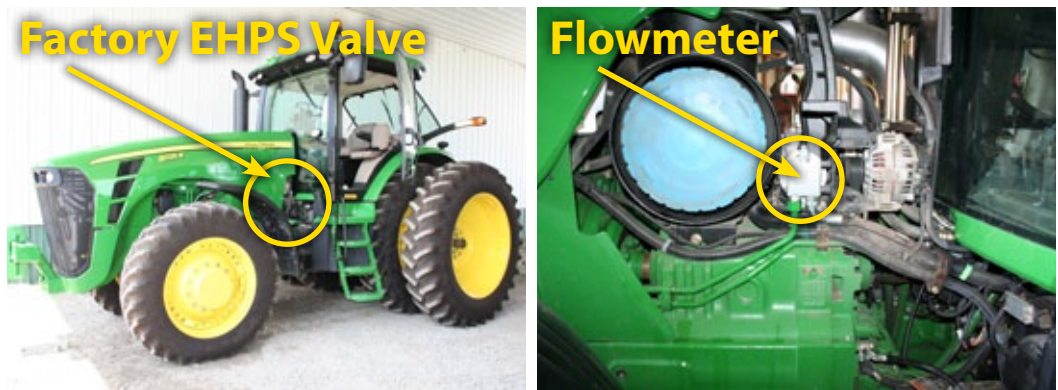
**NOTE: BE VERY CAREFUL TO ABSOLUTELY SECURE ALL CABLES AND HOSES SO THAT THEY DON'T INTERFERE WITH THE MANY MOVING PARTS OF THE MACHINE!**

## Overview of the Machine

- The factory EHPS valve is located under the front of the cab.
- The steering flowmeter (non-ILS machines) is located on the left side of engine.

*NOTE: All references to left and right are stated as if the user is seated in the driver's seat.*

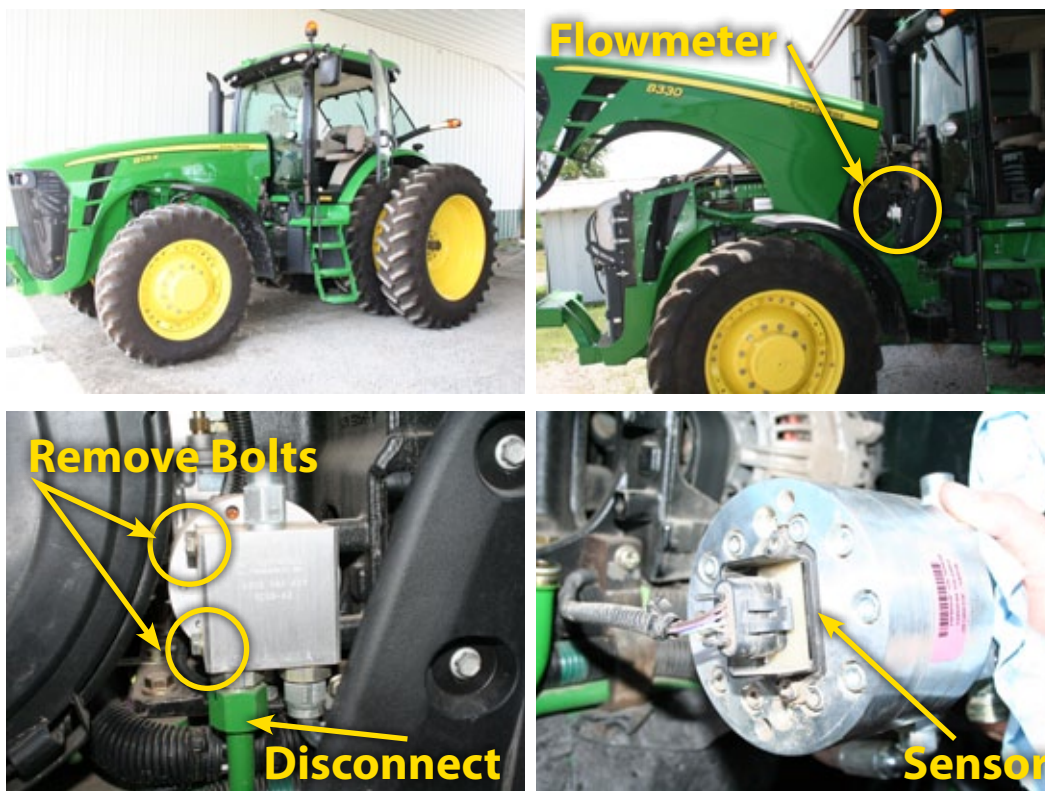
*Figure 1-2: Overview of the Machine*

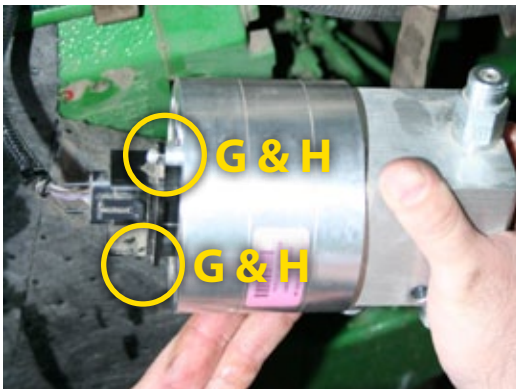
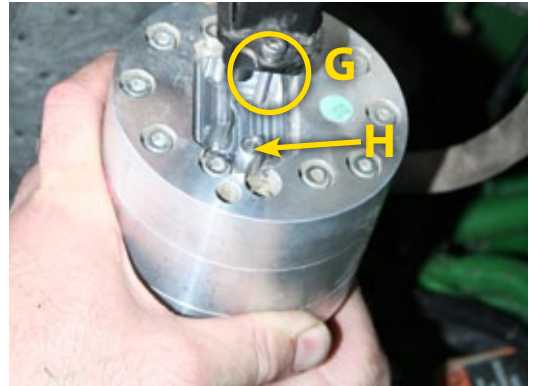
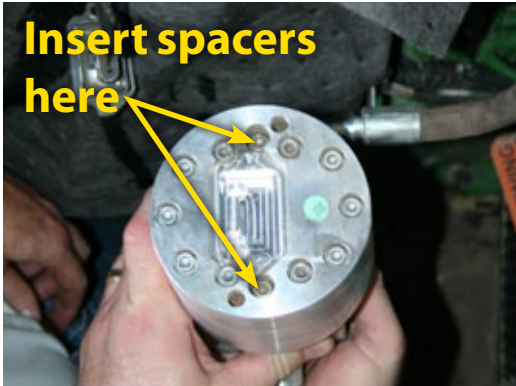


## 1. INSTALL SPACERS ON STEERING FLOWMETER SENSOR (Non-ILS only)

On non-ILS machines, there will be hydraulic flowmeter. The two spacers (G) will be installed on the flowmeter sensor. To gain access to the flowmeter sensor the flowmeter may need to be partially removed (depends upon tractor model). First remove the cover from the air cleaner. Disconnect the steel line from the flowmeter and remove the two bolts mounting the flowmeter. Then the flowmeter may be slid out and rotated to gain access to its sensor. Using a 4mm hex wrench remove the two screws holding the sensor. Then use screws (H) to install the spacers (G) under the sensor as shown. Slide the flowmeter back into its mounting location and reinstall the mounting bolts. Then reconnect the steel line to the flowmeter.

Figure 1-3: Install Spacers On Steering Flowmeter Sensor

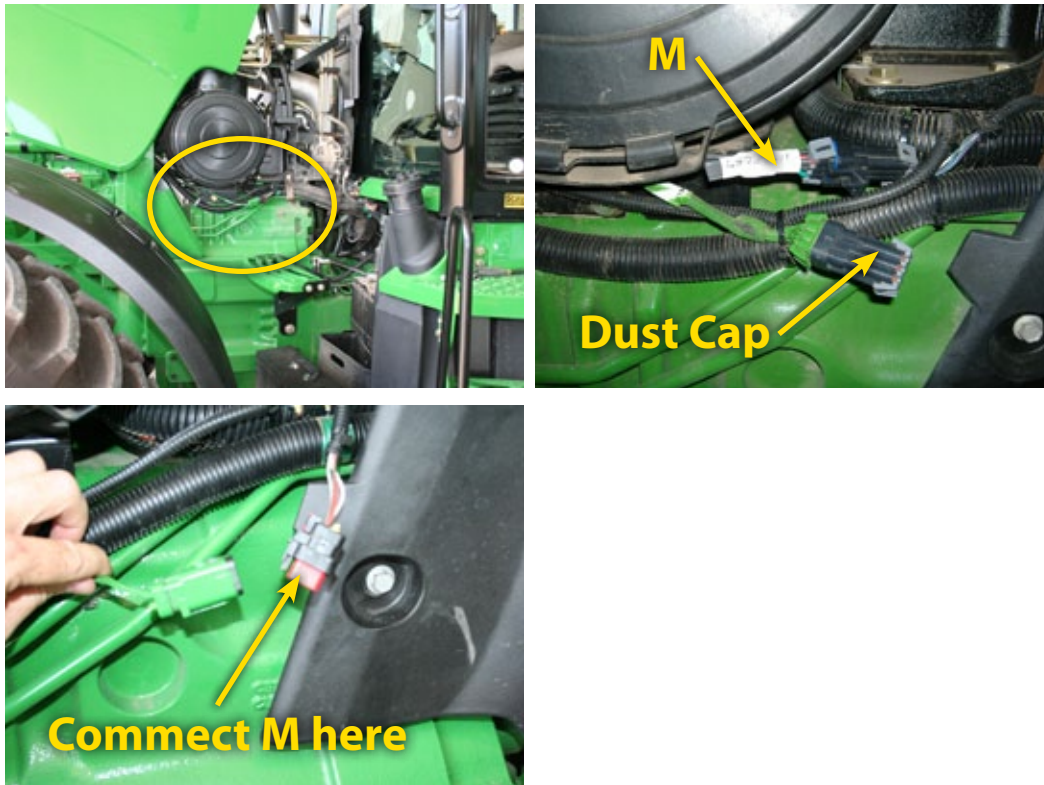




## 2. INSTALL ANGLE SENSOR INTERFACE (ILS ONLY)

Tractors with ILS will use a steering angle sensor instead of the steering flowmeter. There will be a connector for the sensor on the left side of the machine along the frame just in front of the cab. Disconnect at that location and install interface (M) in the connector going towards the cab. Then install the corresponding dust cap from kit (P) in the other connector. The R-Series connector differs from the 8x10/20/30 connector.

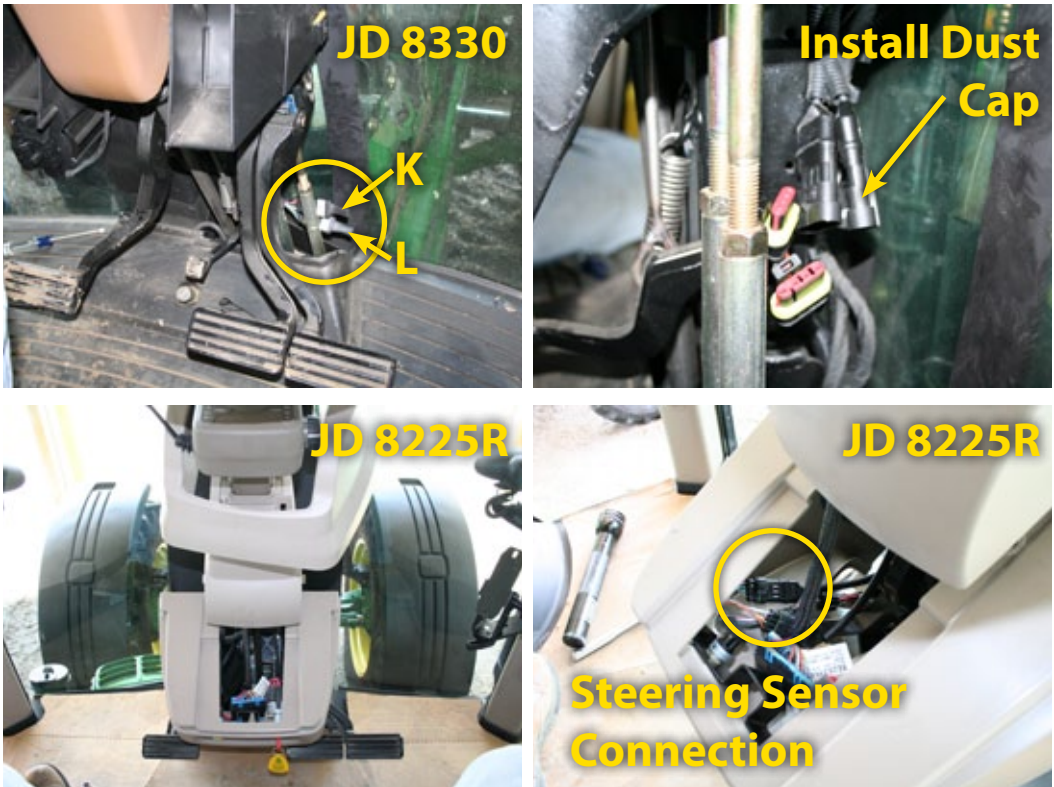
Figure 1-4: Install Angle Sensor Interface



### 3. INSTALL STEERING SENSOR INTERFACES

The JD tractors have two steering sensors on the steering shaft in the cab. The connectors for these sensors will need to be disconnected and Interfaces **(K & L)** will need to be installed. It does not matter which interface, **(K)** or **(L)**, is connected to which connector. On some models the connectors are located on the right side of the steering column. Other models have the connectors on the left side. Remove the necessary panels from the steering column and disconnect the sensors. Install the appropriate dust cap from kit **(P)** on one of the sensor connectors. The other steering sensor will be used in next step.

Figure 1-5: Install Steering Sensor Interfaces



## 4. INSTALL STEERING DISENGAGE INTERFACE

Using the remaining unused steering sensor connector, connect interface (J). It to the SCM cable labeled Steering Wheel Sense. Secure all cables so that they will not interfere with the steering shaft.

*Figure 1-6: Install Steering Disengage Interface*



## 5. INSTALL THE STEERING CONTROL MODULE (SCM) AND HARNESESSES

The SCM (**N**) should mount securely to the floor of the cab with the arrows pointed forward and as level as possible. Connect harness (**E & I**) to the SCM. Then connect together the single position connectors on (**E & I**). The are labeled FAULT.

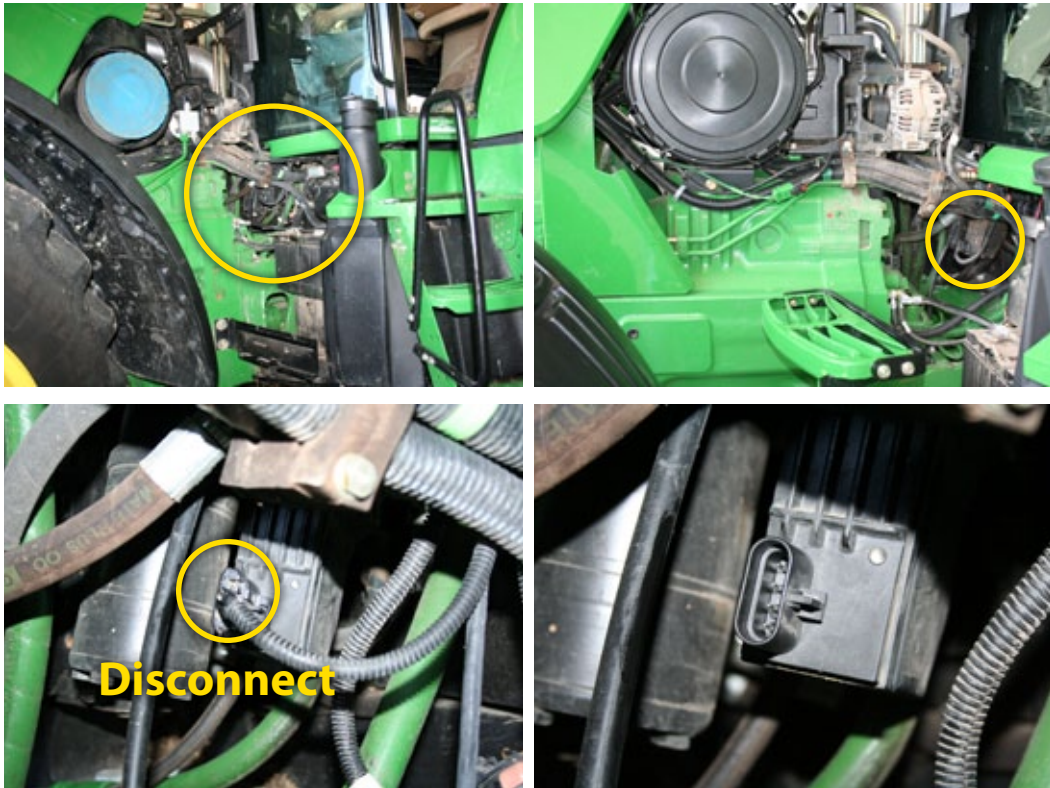
*Figure 1-7: Install The Steering Control Module (SCM) and Harnesses*

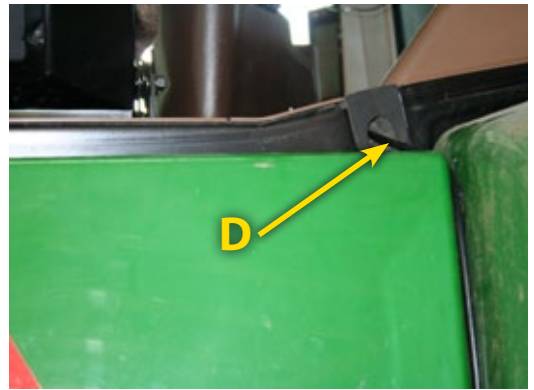
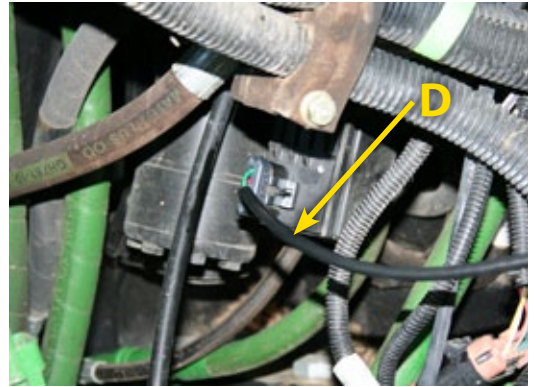
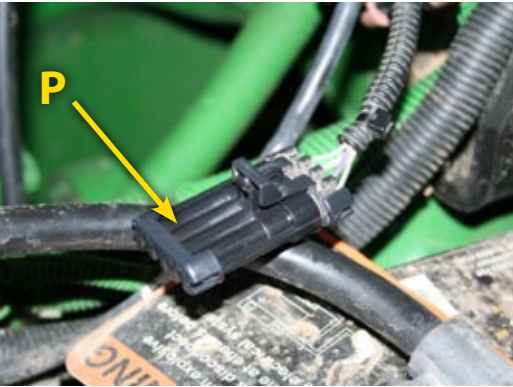


## 6. INSTALL STEERING CABLE TO EHPS VALVE

Locate the JD EHPS valve. Disconnect the cable from it and install dust cap from kit (P) on cable. Then route cable (D) from the JD EHPS valve under the cab and into the cab through the rear window. Connect to SCM harness (I).

Figure 1-8: Install Steering Cable To EHPS Valve





## 7. INSTALL GPS ANTENNA & CONTROL CONSOLE

The GPS antenna should be mounted on top of the cab as far forward as possible on a metal surface of at least 4" square. The control console can be mounted in the cab to preference of the operator.

Figure 1-9: Install GPS Antenna & Control Console



## 8. INSTALLATION OF ENGAGE/DISENGAGE SWITCH

Connect item **(A)** to the connector on the SCM harness labeled Remote Engage/Disengage. Install the push button in a location that is easily accessible during operation of the machine. This switch **(A)** is not required if the optional foot switch 32-04020 is used.

Figure 1-10: Engage/Disengage Switch



## 9. SPECIFIC CONSOLE SETTINGS

The **Valve Frequency** must be **set to 999**.

The target lock to lock time is **5 seconds** which is accomplished by adjusting the Maximum Duty Cycle setting in the Matrix console.

Adjust as needed the other FieldPilot settings in the Matrix console to obtain the best performance.



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A series of equipment-specific installation kits have been developed to work in conjunction with your assisted steering system. This kit contains the necessary components and instructions to install assisted steering on the John Deere Tractor Models: 8x00/8x10/8x20/8x30/8xxx-R Series with factory EHPS Steering Valve. Please review this manual thoroughly before beginning the installation process.



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