Satloc Falcon Installation & Setup on SwathPRO

General Notes

- These instructions apply to the **Satloc Falcon Pro** or the **Satloc Falcon** with a paid upgrade.
- Two additional 18 AWG mil-spec wires will be needed to splice into the **Toggle Signal-GND Satloc wire**.
- **Important:** Do not connect Satloc wires to SwathPRO wires. Satloc wires **MUST NOT** be connected to voltage.

Wiring

1. **Switch Configuration:**
   - Use the Triple Pole (TP) switch as the **Narrow Swath switch**.
   - Use the Double Pole Single Throw (DPST) switch as the **Right Boom Shutoff switch**.

2. **Prepare Ring Terminals:**
   - Install ring terminals (P/N: M7928/1-30) on the ends of all four **Narrow Swath wires** for the SwathPRO (refer to Boom Shutoff Kit Schematic).

3. **Pilot Boom Input Wiring:**
   - Locate the **Pilot Boom Input** wires from the Satloc.
   - Securely attach two additional wires to the **Toggle Signal-GND** wire, ensuring they are long enough to reach both the **TP Narrow Swath switch** and the **DPST Right Boom Shutoff switch**.

4. **Right Boom Shutoff Switch:**
   - Attach a size #6 ring terminal to the **Valve 2 Toggle-Signal wire** and connect it to **Terminal 1** on the **Right Boom Shutoff** switch.
   - Install size #6 ring terminals on both **Valve Toggle-GND wires** and connect one of them to **Terminal 3** on the **Right Boom Shutoff** switch.

5. **Narrow Swath Switch:**
   - Install size #6 ring terminals on the **Valve 1 Toggle-Signal** and **Valve 3 Toggle-Signal wires.**
   - Connect both wires to **Terminal 1** on the Narrow Swath switch.
   - Connect the unused **Valve Toggle-GND wire** (from Step 4) to **Terminal 2** on the Narrow Swath switch.
   - Secure the unused **Valve 4 Toggle-Signal wire**, ensuring it makes no contact with other wires or components.

6. **Auto Dispersal (Only if using the Auto Dispersal Auto/Manual switch – skip this step if not using this function or this switch):**

- Use the relay installed as part of the **SwathPRO Shutoff Kit** (refer to the kit schematics in the SwathPRO Installation Manual).

- Keep the wire from **lug 86 on the relay** connected to the **Pump Brake Power** wire.

- Connect a new wire from **lug 85 on the relay** to the **Pump Brake Ground** wire.

   o This ground wire originates from **Terminal 4** of the Auto Dispersal Auto/Manual switch.

   o You may either splice into the existing wire near the power wire or connect directly to **Terminal 4** on the switch.

Setup

Navigate: **Menu**>**Diagnostics**>**IO Diagnostics** and check the circuit state of the Pilot Switch Inputs.
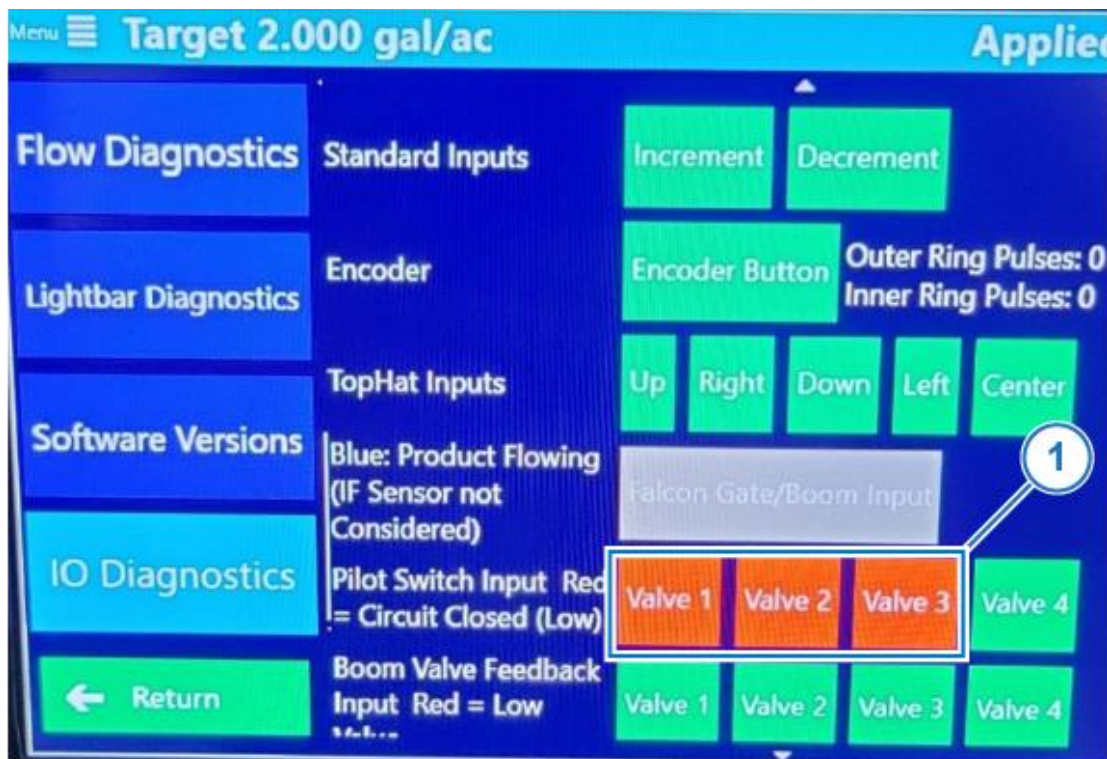
1. Flip the switches and verify that Valves 1–3 change states. The valve 1–3 icons (1) should each turn **red** when their corresponding switches are closed (valves are pulsing).

Navigate: **Menu**>**Devices**>**Booms** to create a new boom. Note that each menu will appear upon making a selection in the previous menu. In the following figure, we show all menus for the sake of conciseness.
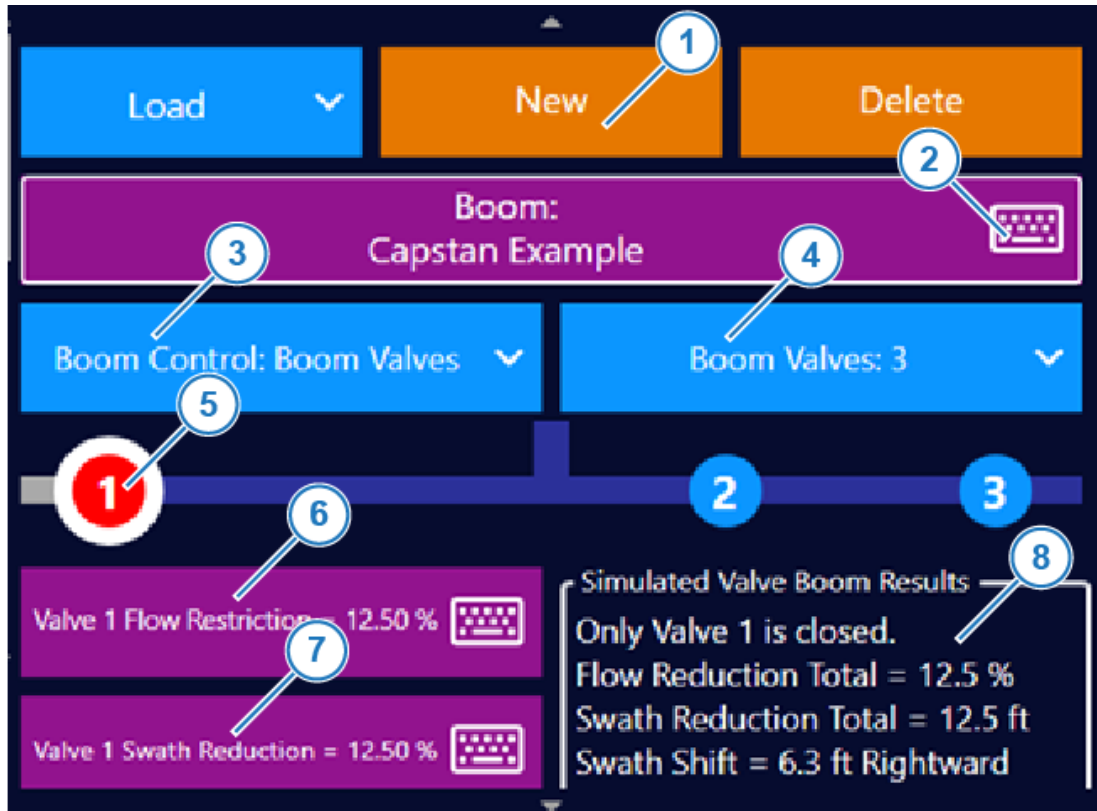
2. **Create a new Boom.**

   a) Select **New** (1) and select the **keyboard icon** (2) to name the new boom.

   b) Select **Boom Control** (3) and choose **Boom Valves**.

   c) Select **Boom Valves** (4) and select **3**.

3. **Set the Valve 1 parameters**.

   a) Select the **Valve 1** icon (5)

   b) Set both the **Flow Restriction** (6) and **Swath Reduction** (7) to **12.50%**.

   c) Tap the **Valve 1** icon again (it will now display as a red dot) to observe the simulated boom results (8) of closing Valve 1.

4. **Set the Valve 2 parameters**.

   a) Select the **Valve 2** icon and set both the **Flow Restriction** and **Swath Reduction** to **50%**.

   b) Tap the icon again to observe the simulated results as before.

5. **Set the Valve 3 parameters**.

   a) Select the **Valve 3** icon and set both the **Flow Restriction** and **Swath Reduction** to **12.50%**.

   b) Tap the icon again to observe the simulated results as before.

Valve Control Setup Wizard

6. Scroll down and select the **Valve Control Setup Wizard** icon.

7. Input the following answers to the five questions in the wizard:

   Note: If you do not have the Falcon PRO, or haven't paid for the upgrade for the Falcon, only questions b, c, and d will be asked.

   a) **NO** – Question: Is the Falcon set up to control the boom valves?

   b) **YES** – Question: Are there any other switches, a controller, or handles to actuate the boom valves?

   c) **YES** – Question: Are there any other switches, a controller, or handles on the Pilot Boom Inputs on the IO cable to indicate valve actuations?

   d) **YES** – Question: On the signals from the other switches, controller, or handles, do HIGH values indicate the valves are energized to CLOSE? (YES = HIGH to close; NO = LOW to close).

   e) **NO** – Question: Are there return signals from the boom to verify the Boom Valves are closed?

Navigate: **Menu**>**Application**>**Boom Dispersal**. This screen is a real-time image and data for valve state based on the switch inputs.

Boom Valve Status

Flow Reduction Total = 25%
Swath Reduction Total = 25ft
Swath Shift = 0.0 ft
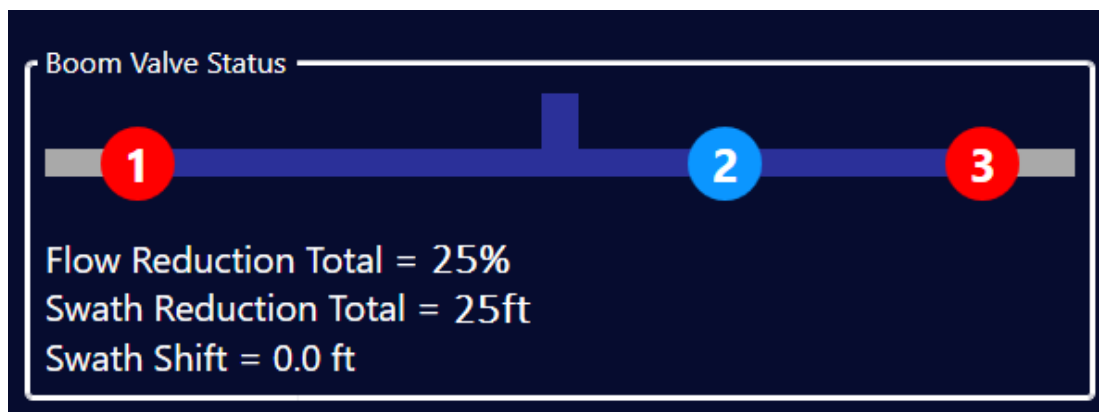
8. Cycle each of the switches and verify this screen updates appropriately.

Navigate: **Menu**>**Devices**>**Liquid Controller**.

9. Update the Primary Valve Calibration Factors:

Flowing

P Gain = 5000

G Gain = 150

Tolerance = 0.070

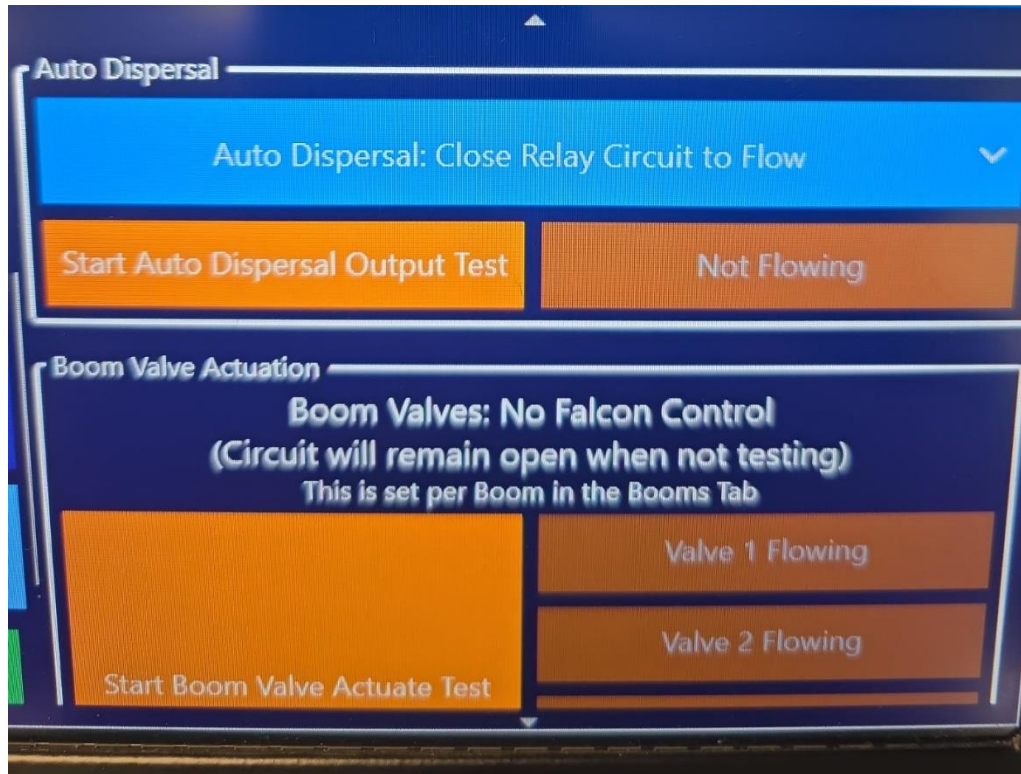**Non-Flowing**

P Gain = 10000

G Gain = 300

Valve Angular Tolerance = 2.49

Test the Auto Dispersal function: If not using the Auto Dispersal function, do not perform the following steps.

Navigate: **Menu**>**Devices**>**Output**.

10. Switch the Auto dispersal switch to **Auto**.
11. Unlock the fan brake using the fan brake switch.
12. Push the spray handle **down**.
13. Select **Start Auto Dispersal Output Test** on the screen.
14. Select **Not Flowing**, it should change to Flowing.
    a) You should hear the fan unlock, and the SwathPRO valves should start pulsing.
15. Select the **Flowing** button, it should change to Not Flowing and the fan should lock, and the valves should stop pulsing.
16. Select the **Stop Auto Dispersal Output Test**.
17. Switch the Auto Dispersal switch to **Manual**.
    a) The valves should start pulsing.
18. Pull the spray handle **up**.
    a) The valves should stop pulsing.

Satloc Falcon setup for SwathPRO is now complete!