Sentinel 1000 Rears Installation

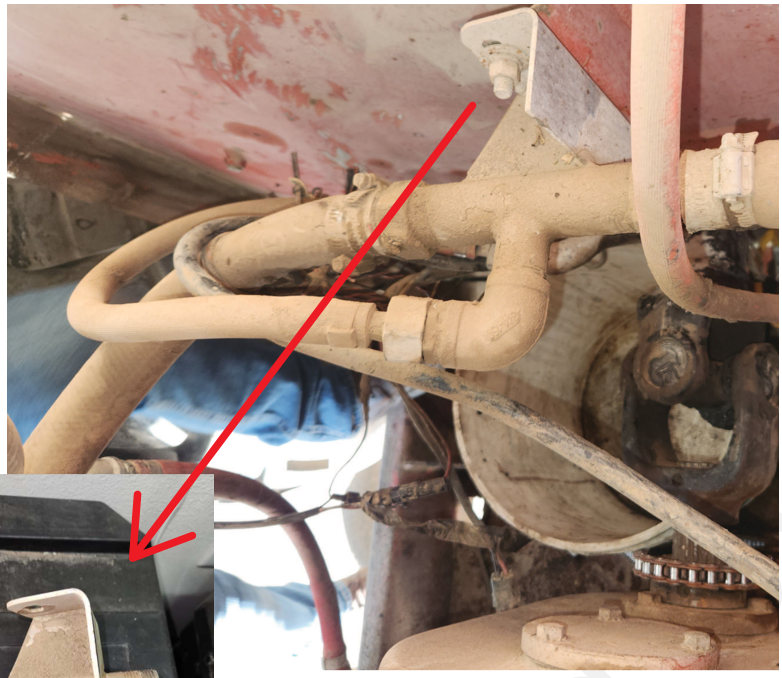
Prior to Installation Complete the Following Steps:

1. Flush system with clean water and drain tank.
2. Clean pump and valve area.
3. Disconnect light harness from lights.
4. Remove both side panels and top access panel.
5. This will allow entry to work area.

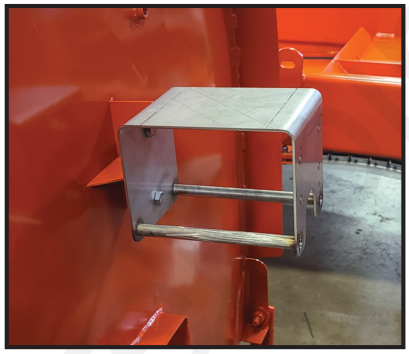
> **NOTE**
> Top panel may have spring tension on it.

6. Locate Discharge coupling “T”.
7. Remove hoses from “T”. Do not lose hose coupler gaskets.

8. Remove coupler “T” from tank.



9. Install new Flowmeter mounting plate as shown.

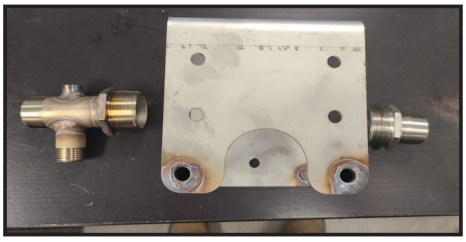


10. Install new SurePoint Orion flowmeter on mounting plate as shown.

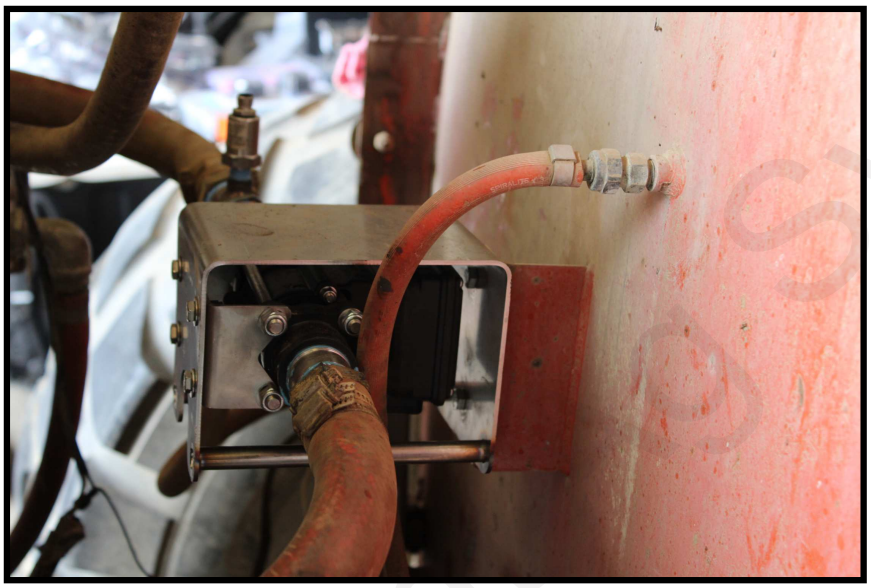
> **NOTE**
> Mount flowmeter with flow direction arrow facing the right section valve.

11. Install flowmeter fittings as shown.

12. Install hoses to fittings.


13. Install 400 PSI pressure transducer to the inlet fitting.
14. Use Blue Teflon tape or Blue Pipe joint compound on fittings.
15. Ensure hose gaskets are in good condition before installing hoses. Replace if needed.

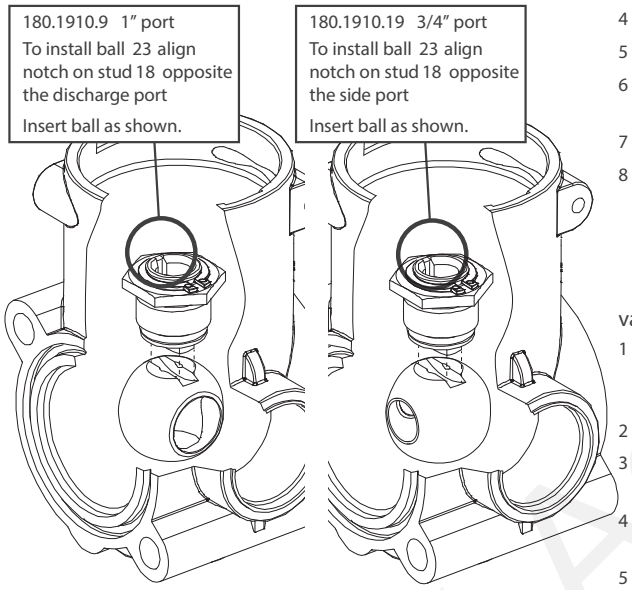


16. Locate the Braglia Valve stack.

> **NOTE**
> Valve colors are important. Green Top: Slow Servo (180-1910-10-30 second) Yellow Top: Fast Servo (180-1910-13-6 second) Red, Black or Orange = Dump Valve (on/off)

17. The Green Top Servo will need be changed to a Yellow Top Servo.

18. The entire valve can be changed or just the Top. (See following instructions for changing the Top Actuator).



Open Position
1" port ball

Closed Position
3/4" port ball

fig. i

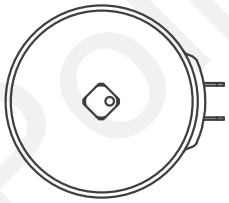
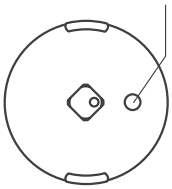


fig. ii the position indicator on the gearmotor cam should point at the control cable connector.

Note: Orange Cap gearmotor assemblies require a lock plate 13. The lock plate has an alignment indicator which should be oriented as illustrated, below.



valve disassembly

1 Disconnect power supply and remove all lines from valve ports.

2 Hold the valve firmly, gripping the side ports , and remove nipple 25 from valve using a CH32 wrench. Take care of plate 24. When gripping the valve body 15 protect the side port O-ring seats

3 Inspect seal 16B on nipple 25 and replace if necessary.

4 Remove ball 23 and replace seal 16A on the valve body.

5 Pull clamp 29 with Ø10 screwdriver.

6 Remove the gearmotor unit 1 from valve body. Inspect O-rings 14, 28 and replace if necessary.

7 Use CH24 socket wrench to remove the sub assembly 17.

8 Remove the lock ring 22 with pliers and pull the stud and washer 18. Check and replace O-rings 19, 21 and stud washer.

valve assembly

1 Before beginning assembly all parts should be clean and dry-no residual sealants. Lubricate all O-rings and sliding surfaces. Subassemblies should be ready before valve assembly: Nipple/seal 25/16B ; Drive subassembly 17.

2 Assemble and lubricate seal 16A in valve body. Do not damage seal surface.

3 Apply thread sealant on guide 20 of subassembly 17, screw the assembly onto the valve body. Using a CH24 wrench, tighten assembly flush with housing.

4 Use a Ø10 flat screwdriver to position the notch on stud 18 as illustrated in fig. i , at left.

5 Insert ball 23 on stud 18 as illustrated in fig. i .

180.1910.19 valve (3/4" port) skip to step 7.

6 180.1910.9 (1" port) To install seal 16B the ball orifice should not be visible in the discharge port. Use a Ø10 flat screwdriver to rotate the stud and ball 90° CCW . The ball orifice is rotated to the OFF position and is not visible in the discharge port.

7 Lubricate seal 16B on nipple with waterproof grease. Apply thread sealant on nipple 25 .

8 Position plate 24 and with a CH32 wrench thread nipple 25 with seal 16B into valve until flush with body. Important: maximum torque 35Nm.

180.1910.19 valve (3/4" port) skip to step 10.

9 180.1910.9 valve: Using th e screwdriver, return the stud and ball to the starting position (step 4)

10 Place O-ring 28 into valve body.

11 Before gearmotor operation, install 1.25A time delay fuse.

12 Look at the gearmotor cam (black cap and orange cap motors), fig. ii . The position indicator should point at the control cable connection plug as illustrated.

If the gearmotor cam is rotated 90° out of position: connect the spray control handset to a power supply and to the gearmotor; actuate the motor to turn the cam into position.

To insure that the gearmotor will align correctly with the flow selector ball, the notch on stud 18 should be positioned as illustrated in fig. i.

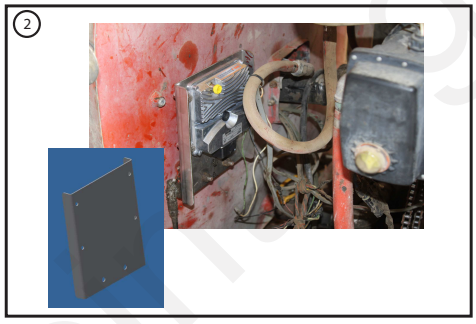
13 Lubricate O-ring 14. Insert unit 1 inside the valve body. the cap 9 must install flush against the valve body 15 .

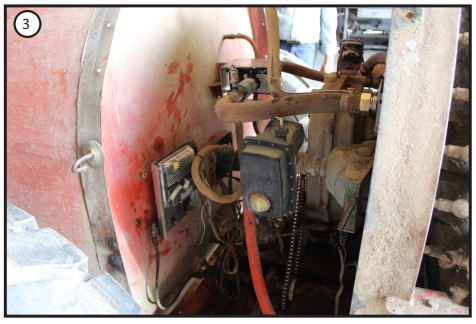
14 Install lock 29. Attach plumbing lines and electrical.

19. Valves may be re-positioned to accommodate hose length.

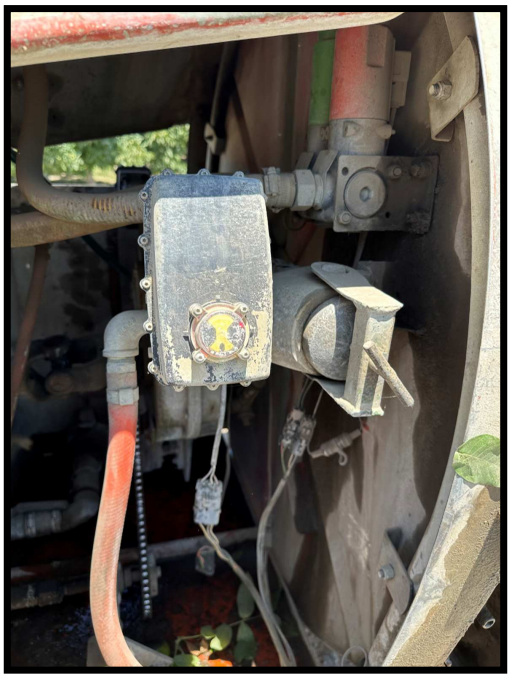
20. Clean “O” ring and/or replace if needed.

21. Locate this mounting bolt. It may have a grease zirt mount attached to it.
22. Attach Sentinel Rate Controller to the mounting plate.
23. Install Sentinel Rate Controller as shown.





24. Section Valves are KZ valves.



25. These valves can be direct wired to the Sentinel Rate Controller using supplied harnesses. The left valve will be considered section 1.
26. Install supplied harnesses to the Sentinel Rate Controller, both Section Valves, Braglia Servo Valve (Yellow Top), Flowmeter and Pressure Transducer.

> **NOTE**
> Don't forget about the Terminator to be installed in the Main Sentinel harness.

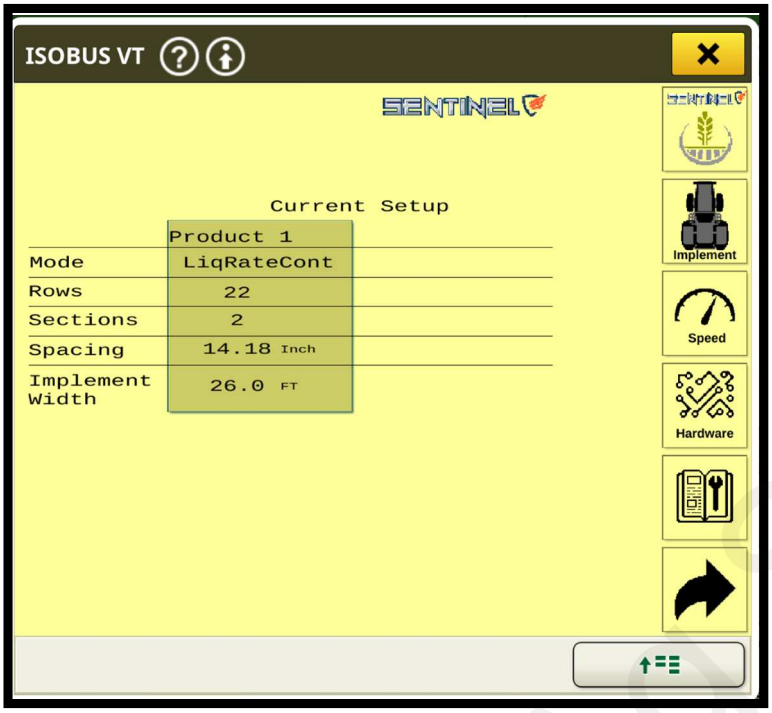
27. Run Main Harness underneath tank and route along the left frame.
28. The 9-pin IBBC connector can be attached to the tractor IBBC. Using Zip Ties, attach all harnesses so they cannot be compromised by moving parts or pinch points.

Sentinel In Cab Setup

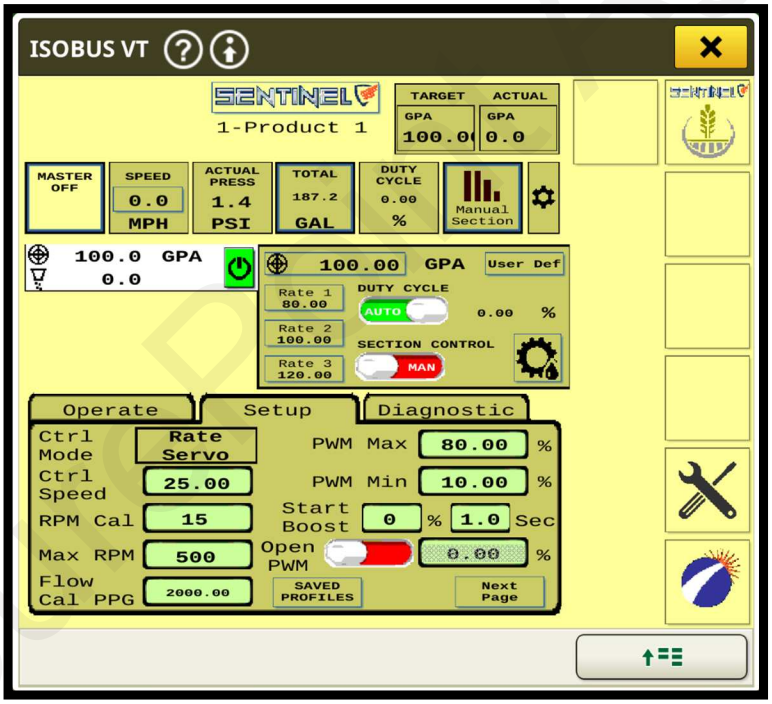
Refer to the SurePoint Ag System 396-4035 Manual for Complete Sentinel Setup Instructions.

1. Count the Number of Nozzles being used on the machine. Determine the spray width of the machine.

2. Spray Width / # of Nozzles determines row spacing. Enter these dimensions into the Sentinel Rate Controller.



3. Example of correct settings for this setup.



4. Fill the tank with water, enter a test speed and test for leaks. Repair as needed.