

FlowSense Service and Repair Manual

If a FlowSense module is detected by the 20|20 monitor, but not measuring flow, then there may be debris in the module preventing the turbine from spinning. The turbines of the FlowSense can be removed and cleaned or replaced.

It is recommended that all CAN and AUX FlowSense have a row strainer installed before the device to prevent debris from entering the FlowSense. This can prevent the issue of plugged turbines in many cases. Part number 724432 is ¼” PTC row strainer - quantity 10 and part number 724433 is ⅜” PTC row strainer - quantity 10. It is also recommended that a check valve be installed **after** the FlowSense to prevent hose draining and fertilizer drying out inside of the FlowSense device.

Cleaning procedure

Step 1:

Optional) Do not disassemble. Back flush the module, meaning put flow through it in the opposite direction of normal. Many times this will be enough to push any debris out of the module without disassembly. Test the FlowSense and if operational, resume planting.

Step 2:

Remove the turbine from the module using the appropriate procedure below. There are different procedures for each type of FlowSense.

Step 3:

Clean the turbine with warm, soapy water. **DO NOT USE COMPRESSED AIR** - this will damage the turbine bearings.

Step 4:

Reassemble the FlowSense.

Step 5:

Test if the FlowSense is working properly. If not, disassemble the FlowSense and install a new turbine. A list of service parts can be found on the next page. The PTC half cartridge is included in the “Turbine Rebuild Kit” but may be needed if cleaning the turbine and a collet is damaged when removed.

FlowSense Service Parts	
Part Number	Description
724158	Turbine Rebuild Kit - Low Flow
724297	Turbine Rebuild Kit - High Flow
724508	1/4" PTC half cartridge - Kit of 5
724509	3/8" PTC half cartridge - Kit of 5
724518	1/2" PTC half cartridge - Kit of 5

Disassembly Procedures

High Flow AUX FlowSense or High Flow CAN FlowSense

Step 1:

Remove the collet from the **inlet** side of the FlowSense. The PTC tool included in the FlowSense essentials kit will make this easy.



Step 2:

Remove the o-ring from the inside of the FlowSense. The Deutsch removal tool included in the essentials kit is a good tool to use.



Step 3:

Hook the frame of the turbine with a tool and gently pull the turbine out. Again the deutsch removal tool is good for this.

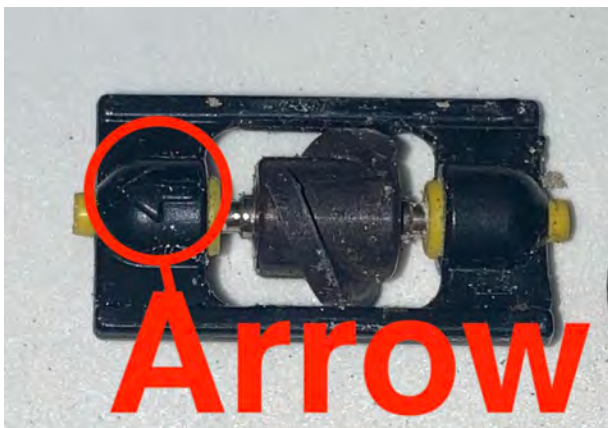


Step 4:

Clean the turbine with warm, soapy water. **DO NOT** use compressed air. Do not disassemble the turbine from the turbine frame.

Step 5:

Re-install the turbine into the FlowSense housing. The turbine will need to align in the slots of the FlowSense housing. The turbine has an arrow indicating the direction of flow, this needs to match the directional arrows on the outside of the housing.



Step 6:

Reinstall the o-ring and then the collet. It is recommended to push the o-ring in against the seat inside the FlowSense evenly so that the o-ring does not roll once the adapter or hose is installed.

Step 7:

Test for proper operation of the FlowSense. If proper operation is not restored, then replacement of the turbine is recommended following the above instructions.

Low Flow AUX FlowSense or LowFlow CAN FlowSense

Step 1:

Remove the 1/4" adapter from the outlet side of the FlowSense.



Step 2:

Remove the collet.



Step 3:

Remove the o-ring from inside of the FlowSense. The Deutsch removal tool included in the essentials kit is a good tool to use.



Step 4:

Use the deutsch removal tool, screwdriver, or piece of 1/4" tubing to push the turbine out of the FlowSense housing from the inlet side.

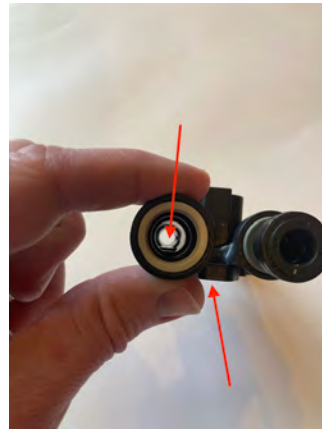


Step 5:

The low flow turbine cannot be disassembled any further, aka it cannot be removed from the clear turbine housing. Clean the turbine with warm, soapy water. **DO NOT** use compressed air.

Step 6:

Re-install the turbine into the FlowSense housing. The turbine housing has a flat side that must align with the flat side inside of the housing (which is the same as the flat side on the outside of the housing). Make sure the small o-ring is present on the outside of the clear housing before installation.

**Step 7:**

Reinstall the o-ring and then the collet. It is recommended to push the o-ring in against the seat inside the FlowSense evenly so that the o-ring does not roll once the adapter or hose is installed.

Step 8:

Test for proper operation of the FlowSense. If proper operation is not restored, then replacement of the turbine is recommended following the above instructions.