

**SERVICE BULLETIN NO. 20140717**

July 17, 2014

**SUBJECT**                      **Missing GPS Information**

**PRODUCT FAMILY**        **WatchDog Sprayer Station and Console**

**AFFECTED UNITS**        WatchDog Sprayer Station with Replaceable Humidity Sensor and Console, item number 3349SSCH, consisting of items 3349SSC and 3349CN, sold between January 1, 2013 and Jul 16, 2014.

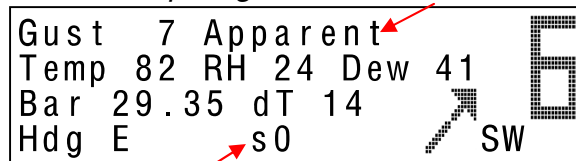
**DETAILS**

**Concern:** Due to a firmware change by the manufacturer of the GPS module component in the Sprayer Station, UTC may be reported with fractional seconds (hhmmss.ff) instead of integer seconds (hhmmss). The Sprayer Station Console, item 3349CN, was not designed to handle the fractional second format. As a result, true wind speed and direction is not reported when the vehicle is in motion.

**Identification:** Not all units will experience this issue. All consoles will display the word "Apparent" in the top line until GPS information is available, indicating the number on the far right (6 in the below example) is apparent wind, not true wind.

*Acquiring Satellites State*

```
Gust 7 Apparent
Temp 82 RH 24 Dew 41
Bar 29.35 dT 14
Hdg E s0 SW
```



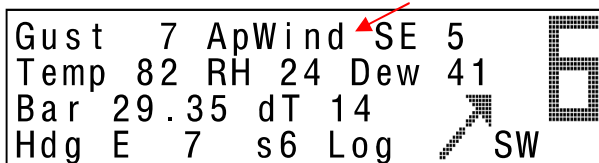
Once enough satellites are in view, the Sprayer Station establishes speed and location and can compute true wind speed and direction. The time to acquire the satellites will vary based on the available view of the sky among other factors.

On a correctly functioning console, the word "Apparent" will be replaced by "ApWind" followed by the apparent wind direction and speed (SE 5 in the below left example).

On a console which requires updating, the number of satellites in the bottom row will be greater than zero, however only the word "Apparent" will still be displayed.

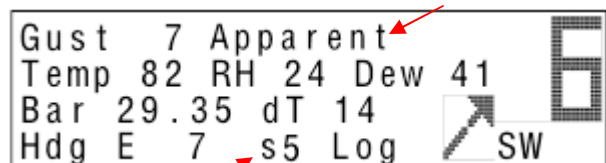
*Console Functioning Correctly*

```
Gust 7 ApWind SE 5
Temp 82 RH 24 Dew 41
Bar 29.35 dT 14
Hdg E 7 s6 Log SW
```



*Console Requires Updating*

```
Gust 7 Apparent
Temp 82 RH 24 Dew 41
Bar 29.35 dT 14
Hdg E 7 s5 Log SW
```



## RESOLUTION

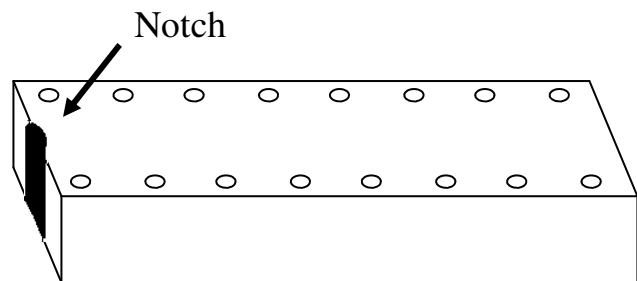
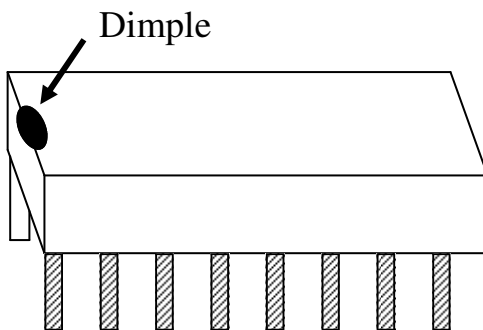
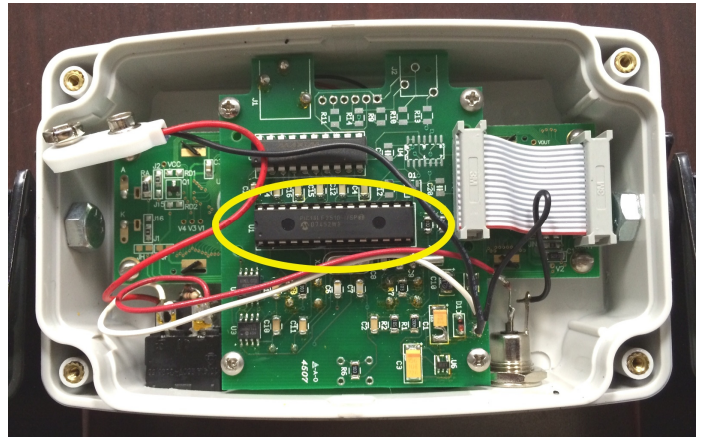
The firmware in the Sprayer Station Console has been updated to version 1.4 to handle both UTC formats.

Spectrum Technologies will provide a replacement microcontroller to repair any affected units. Please contact Spectrum to obtain the microcontroller.

## REPAIR PROCESS

Once you receive the replacement microcontroller chip, perform the following steps.

1. Remove the Phillips-head screws from the rear cover of the console display, and lift off the cover.
2. Remove the 9 volt battery from its connector.
3. The microcontroller is located in the center. With a small screwdriver, carefully lift the chip out of the socket.
4. Identify the side of the chip with the small dimple. This should align with the side of the socket that has the notch.



5. Carefully line up the pins and the socket and press the microcontroller until it snaps into the socket.
6. Re-insert the battery and re-attach the rear cover.