

Southwest Windpower Whisper H40/Whisper 100

S/N: 04343682

Hub height 81' (24.7m)

Lower anem 49'-8" (15.1m)

Upper anem & vane 72'-8" (22.2m)



The Whisper H40 was installed during a Southwest Windpower installation workshop on October 18-21, 2004. Josh Levinson and Jay Yeager of Southwest Windpower traveled from Arizona to lead the 4-day, hands-on workshop.

The 80-foot tower and the 900W, 48VDC battery-charging turbine were installed per the manufacturer's recommendations. Arrowhead anchors were used. The tower pipe was purchased and cut locally.

Availability

From the 10/20/04 installation until 11/28/05, the Whisper H40/Whisper100 has been available 81% of the time. Three periods of downtime were experienced due to controller failure, damaged turbine wiring, and board failure. Replacement parts and turbines were covered under warranty. All repairs were performed onsite by SWI personnel. The damaged wiring was repaired by installing a complete new turbine head (less tail and blades), now called the Whisper 100. This was considered a replacement part, so this log will continue. A new log will not be started for the Whisper 100.

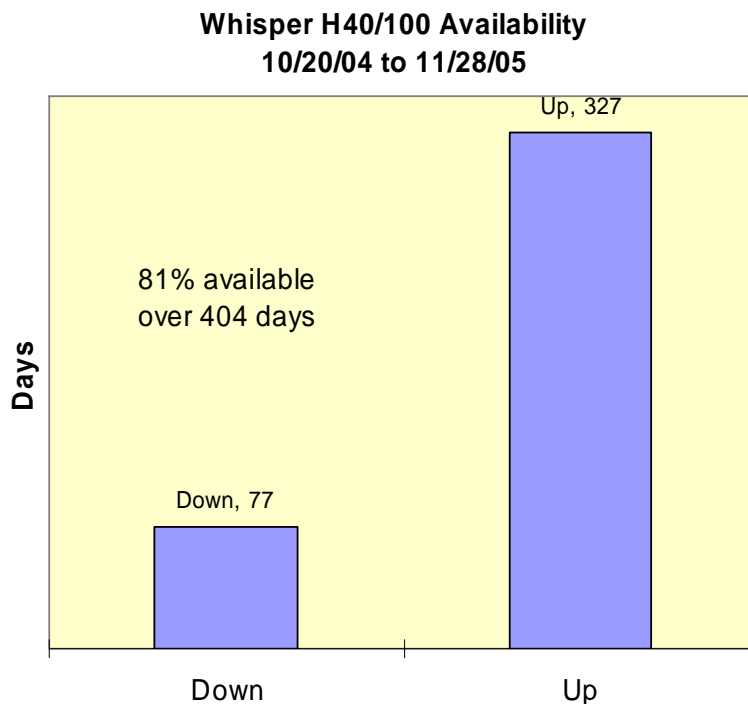


Table 1 Failures and repairs for the Whisper H40/100

Failure		Repair	
12/3/04	Controller failure	12/15/04	New controller
3/3/05	Wiring damage in turbine head	4/28/05	New Whisper 100 head
7/4/05	Controller board failure	7/23/05	Replacement board

Activity Log

Browse the activity log for details and photos.



10/19/04 Turbine installation workshop



10/20/04 Workshop attendees



10/20/04 Installed at workshop

12/3/04

New digital readout for controller was setup for 12V, called SWWP, Jay instructed me how to reset it to 48V.

- Disconnect turbine and short out
- Disconnect DC power to controller with display board attached
- Wait 15s
- Reconnect DC
- Check volt setting on panel
- Reconnect turbine

It worked, but turbine no starting. Need to troubleshoot.

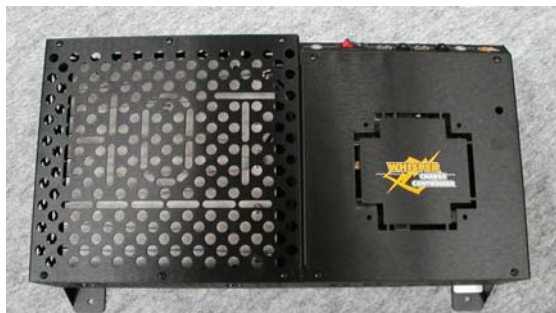
12/5/04

Disconnected turbine wired one at a time. Took off middle wire and it started up..shorted diode. Called Jay, he will send new controller.

12/15/04

Installed new H40 controller

LDC display plugged in, grounds connected, battery + and -, after confirming polarity with multimeter, connected turbine wires. Turned ON with green light on. Wind speed 15mph, 2.6A, 150W, 50.8V –BS



12/15/04 New controller installed

12/21/04

Ran sensor cables for anemometers and vane

12/29/04

H40 stuck in furl

1/14/05

H40 is furled, moving slowly but not producing. Batts at 51V. Wind strong (25mph). Ice on turbine.

1/17/05

Furled but producing

3/3/05

Noticed H40 making loud noise and producing about 50% power.

3/4/05

Lowered to find broken wire (3 phase), other two are damaged.



3/4/05 Turbine wires cut by casting

4/8/05

New Whisper 100 is in, s/n 10501107

Installed (almost) bolts not screwing into threaded holes in head.

The new machine has a redesigned casting to prevent sticking in furl and wire damage as well as other improvement.



4/8/05 New Whisper 100

4/15/05

Worked on bolts/holes



4/15/05 Chasing threads in new Whisper 100 head

4/27/05

Repaired/installed whisper 100.

5/26/05

Straightened tower.

6/4/05

Took down for a workshop demo

7/10/05

Noticed Whisper 100 was turning slowly

7/12/05

Came up to troubleshoot Whisper 100

Controller is bad

 Disconnected (2) wires, turbine starts up

 Reconnect one, slows

 Shorted

Screen is blank; disconnected/reconnected battery wires...still blank

To email Jay, need new controller

Looked back at data, controller failed at 12:26am on 7/4/05

7/23/05

Installed replacement board in Whisper 100 controller



7/23/05 New Whisper 100 board installed

11/24/05

Upper W100 anemometer is broken.