

Yoder Smokers Pellet Temperature Test

This test will allow you to verify that your pellet cooker is functioning normally. When running this test, it is strongly suggested that you use BBQr's Delight brand pellets, as this brand of pellets are what the factory uses exclusively for programming, testing and cooking. For proper results, remove old pellets from the hopper and use fresh pellets.

This test will take 2 hours, and require you to document timings, controller temperature readings, controller mode readings and optionally, external temperature probe readings, if you are using them.

External temperature probes **MUST** be located on the bottom grate, at the location(s) listed in FIG 1, using the probe location(s) specific to each model of pellet cooker, centered front to back, **positioned DIRECTLY ON THE GRATE SURFACE (not in probe holders), with the tip of the probe(s) at the specific location(s)**, and probe wire(s) MUST NOT be run through the door into the cooker.

Measurements for probe tip placement are from the pellet hopper wall inside the cooker (FIG 2 below shows probe placement(s) in a YS640).

Model	1st probe	2nd probe	Requirements
YS480	10"	20"	None
YS640	11"	22"	sliding damper MUST be fully open to the right
YS1500	14"	28"	Chimney damper MUST be fully open and HMS damper MUST be fully closed
Cimarron	18"	36"	Chimney damper MUST be fully open, HMS damper MUST be fully closed, firebox door air inlet MUST be fully open

FIG 1

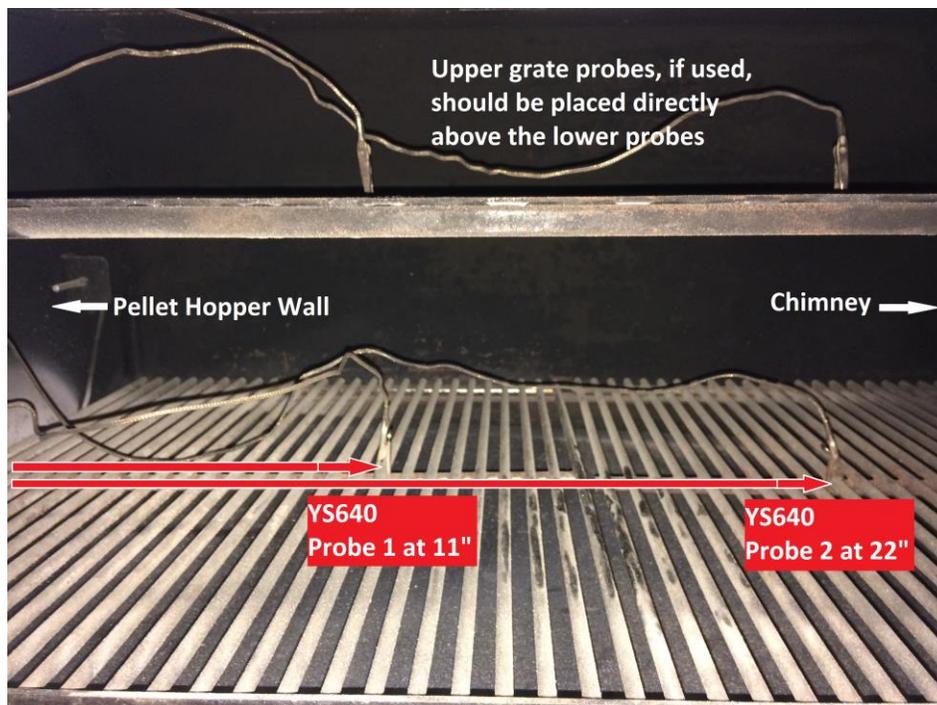


FIG 2

For the best troubleshooting and support, please take the following pictures **before** and **after** the test, and send them, along with the data gathered, to: customerservice@yodersmokers.com

- Inside the cooker with the grates removed and heat diffuser plate in place
- Inside the cooker with the grates and heat diffuser plate removed
- The firebox with the burn grate in place
- The firebox with the burn grate removed
- The chimney end of the cooker from inside the cooker

1. This test requires that you first completely clean your cooker by vacuuming all ash from the burn grate, firepot and the entire body of the cooker. You also need to clean all cooking debris and degrease all surfaces inside the cooker, including the heat diffuser, thermocouple, grease channel (including the drain hole), and inside the chimney.

2. Verify all of the silicone seals are not damaged or missing from around the firepot. Clean and repair all silicone seals per the manual if necessary BEFORE continuing with the test. (Current version(s) of all Yoder Smokers manuals: <http://community.yodersmokers.com/viewtopic.php?f=49&t=153>)

3. Insure that the burn grate fitment into the firepot is as specified in the manual. Correct the fitment prior to continuing the test, per the instructions in the manual, if required.

4. Plug the power cord into the cooker. You should **never** leave your cooker plugged in when not in use. If it is plugged in when starting this test (or before each cooking session), unplug the power cord, wait 30 seconds, and plug the power cord back in to the cooker.

5. Verify that you have the pellet hopper full, and if not, add pellets.

6. Open the cooker's main door.

7. Flip the power switch to the ON position, verify that the firmware version immediately flashes on the display (make note of the firmware version for reporting with the temperature data gathered), that the fans both start and you have a blue LED. (How to tell if both fans are working: <http://community.yodersmokers.com/viewtopic.php?f=36&t=354>)

8. Hit the START button and set your desired test temperature (DO NOT CHANGE THIS TEMPERATURE SETTING ONCE YOU SET IT). You should start to hear pellets dropping into the burn grate, and the ignition process should start.

9. After you visually verify that the cooker has started, by seeing the flames inside the burn grate (you will see the flames by looking down between the hopper wall and the heat diffuser/HMS within 5 minutes), close the cooker's door.

10. Start your timer and walk away from the cooker for 30 minutes. From this point forward, for the duration of the test, **DO NOT OPEN THE COOKER'S DOOR.**

11. At the 30 minute mark on your timer, and every 10 minutes thereafter, for the next 1 1/2 hours, you will document your test temperature setting, the time since you started your timer, the controller displayed temperature, the controller displayed mode (heat up, cool down or maintenance mode), and optionally, readings from your external temperature probe(s). The following is an example:

Model: YS640

Serial #: 12345

Build Date: 1/1/2017

Firmware: U29

Controller Test Temperature Setting – 250

Time	Controller	Mode	Probe #1	Probe #2
At 30 minutes	255	maintenance	256	250

At 40 minutes	250	maintenance	249	252
At 50 minutes	260	maintenance	259	257

At the 2 hour mark in the test, you should have 10 lines of data.

12. After taking the final readings at the 2 hour mark, flip the power switch to the OFF position and let the cooker run through the cool down cycle (it is a requirement that you always leave the cooker's door closed during the cool down cycle). After the cooker is completely cooled, unplug the power cord and take the "after" pictures as outlined above.

Because pellet cookers are burning wood, it is impossible to have a listing of data points that are all exactly the same as the temperature setting on the controller. There will be higher temperature readings as pellets are fed into the burn grate and ignite, thus adding additional heat into the cooker (bigger fire). There will also be lower temperature readings as the pellets are consumed and turned to ash, allowing for the cooker to cool down (smaller fire). Also, the temperature shown on the display, unlike any external temperature probes used, is not shown in "real time". The temperature shown on the display is a rolling 90 second average.

To analyze the data, calculate the average of all the readings from the display, and optionally, do the same for the external temperature probe(s). Compare the average readings from the display that you calculated, to the original temperature that you set on the controller at the beginning of the test. If the average is within 35 degrees, high or low, of the controller set temperature, your cooker is functioning as it should.

If you would like us to analyze the data for you, please send your gathered data and pictures, as outlined in the example above, to customerservice@yodersmokers.com

For more information on how we test cookers at the factory, please review this article:
<http://community.yodersmokers.com/download/Stuff/ys640%20temp%20profile%20U29.pdf>

For information on the difference between cooking with the physical grate temperature (controller displayed temperature) and suspended air temperature (temperature above the lower grate at an arbitrary distance), please review this article: <http://community.yodersmokers.com/viewtopic.php?f=49&t=1368>

For information on using pans, water pans and/or foil in the cooker, please review this article:
<http://community.yodersmokers.com/viewtopic.php?f=36&t=1392>

For information on why the ash must be removed from the cooker before each use, please review this article:
<http://community.yodersmokers.com/viewtopic.php?f=36&t=454>

For information on why opening the lid of the cooker causes erratic temperature swings, please review this article:
<http://community.yodersmokers.com/viewtopic.php?f=36&t=786>

For specifics on the YS640 sliding damper, please review this article:
<http://community.yodersmokers.com/download/Best%20Practice%20and%20how%20to/YS640%20Variable%20damper%20best%20practice.pdf>

If the cooker ever fails to light, please review this article:
<http://community.yodersmokers.com/download/Best%20Practice%20and%20how%20to/Cooker%20Failing%20to%20Light%20.pdf>

For a complete listing of what to check if experiencing temperature issues, please review this article:
<http://community.yodersmokers.com/download/Best%20Practice%20and%20how%20to/Temperature%20Issues%20Check%20List.pdf>

Please contact Customer Service at customerservice@yodersmokers.com or by calling 877-409-6337 option #2
Yoder Community Support Forum: <http://community.yodersmokers.com>