Worst Case CAZ Depressurization & Draft Test

Client Name:	Job Number:

Technician Name: _____ Date of Test: _____

CAZ Test Setup

- ☐ Cool Venting System by turning gas valve of all combustion appliances to Pilot or Off position, and allow draft vent(s) to cool to room-temperature. VENTING SYSTEM MUST BE COLD BEFORE STARTING THIS TEST!
- ☐ Put dwelling in winter time condition, IE: all exterior doors & windows shut
- ☐ Ensure all interior doors are open
- ☐ Close any operable vents to the outdoors
- ☐ Check furnace/air handler filter--It must be clean
- ☐ Check and Clean dryer lint filter
- ☐ Set up DG 700 to measure CAZ with reference to outdoors on channel A
- ☐ Set up DG 700 to measure Vent with reference to CAZ on channel B

- ☐ Identify Venting Type

  Select the venting type that describes the combustion venting system at the time of this test

  - ○ Orphaned natural draft water heater
  - ○ Natural draft water heater common vented with natural draft furnace or boiler
  - ○ Natural draft water heater common vented with a Category 1 appliance
  - ○ Stand alone power vented appliances and Category 1 appliances
  - ○ Direct-vent sealed combustion appliances. *If all appliances are direct-vent select this venting type and stop the test here* STOP *and complete conclusion on last page.*

- ☐ Determine Minimum Acceptable Draft Pressure

  If Outdoor temp is Below 10°F = -2.5 PA
  If Outdoor temp is Between 10°F and 90°F Use the formula below
  If Outdoor temp is Above 90°F = -0.5 PA

(Outdoor Temperature _____ °F ÷ 40) -2.75 PA = Minimum Acceptable Draft -2.75 **PA**

Example: (33°F ÷ 40 = .825) - 2.75 = -1.93 PA, or -2 PA if you round up. Rounding final number up is acceptable. Rounding down (making the pressure less negative) is not acceptable.

CAZ Test

1. **Starting Pressure:** Record current CAZ pressure (channel **A**) ..... PA
2. **Exhaust Fans:** Turn on ALL exhaust fans 1 @ a time. Record CAZ pressure (channel **A**) .....
   If no exhaust fans exist mark n/a in box PA
3. **Dryers:** Turn on ALL dryers. Record CAZ pressure (channel **A**)..... PA
   If no dryers exist mark n/a in box
4. **Air Handler:** Turn on furnace/air handler fan. Record CAZ pressure (channel **A**)..... PA
   If no furnace/air handler exists mark n/a in box
5. **Fireplace:** If dwelling has a fireplace that uses inside air for combustion air, use blower door to simulate 300 CFM exhaust flow. Record CAZ pressure (channel **A**)..... PA
   If no fireplace exists mark n/a in box
6. **CAZ Doors:** Close CAZ doors. Record CAZ pressure (channel **A**)..... PA
   If no CAZ doors exists mark n/a in box
7. **Other Doors:** Close any other doors that influence CAZ pressure, record CAZ (channel **A**) .... PA
   If no other doors in the home influence the CAZ pressure mark n/a in box
8. **Worst Case:** Find the condition that creates the most negative or "Worst Case" CAZ depressurization. Turn off any exhaust fans, dryers or air handlers that cause the CAZ pressure to move less negative or towards a positive reading. Place All Doors in the position that causes the CAZ PA

Worst Case Draft Test

9. **Worst Case:** Place CAZ in the most negative or "Worst Case" Condition
10. **Starting Vent Pressure:** Measure vent pressure of cold vent (channel **B**). Record results below.
    Vent must be Cold (room-temperature) between testing of each appliance
11. **Fire Appliance(s):** Starting with the smallest BTUH appliance, fire the appliance and start a 60 second timer.
12. **Vent Pressure After 60 Seconds:** Measure vent pressure after 60 seconds (channel **B**). Record results below.
13. **Acceptable Draft:** Copy the Minimum Acceptable Draft Pressure calculated on page 1 to the field below. Compare the draft pressure after 60 seconds to the Minimum Acceptable Draft to determine if draft is acceptable. Record results below.
    Pass = Draft is equal to or more negative than the minimum acceptable draft
    Fail = Draft is less negative than the minimum acceptable draft
14. **Test ALL Appliances:** Repeat steps 9 thru 14 to test each natural draft appliance in the CAZ. Record results below.

Minumum Acceptable Draft: (copy from page 1) -2.75 PA

	Appliance Description	Starting Vent Pressure (Cold)		Pressure after 60 Seconds		Acceptable Draft
Appliance 1			PA		PA	Pass Fail
Appliance 2			PA		PA	Pass Fail
Appliance 3			PA		PA	Pass Fail
Appliance 4			PA		PA	Pass Fail

If every appliance passed with an acceptable draft, stop test here STOP and complete conclusion on last page. If any appliance fails a draft test under "Worst Case" conditions MUST also be tested under natural/normal conditions, to determine extent of problem. Continue

Natural/Normal Draft Test

1. **Natural/Normal Conditions:** Place CAZ into natural/normal conditions
2. **Starting Vent Pressure:** Measure vent pressure of cold vent (channel **B**). Record results below.
   Vent must be Cold (room-temperature) between testing of each appliance
3. **Fire Appliance(s):** Starting with the smallest BTUH appliance, fire the appliance and start a 60 second timer.
4. **Vent Pressure After 60 Seconds:** Measure vent pressure after 60 seconds (channel **B**). Record results below.
5. **Acceptable Draft:** Copy the Minimum Acceptable Draft Pressure calculated on page 1 to the field below. Compare the draft pressure after 60 seconds to the Minimum Acceptable Draft to determine if draft is acceptable. Record results below.
   Pass = Draft is equal to or more negative than the minimum acceptable draft
   Fail = Draft is less negative than the minimum acceptable draft
6. **Test ALL Appliances:** Repeat steps 1 thru 5 to test each natural draft appliance that failed the Worst Case Draft Test. Record results below.
   Any appliance that fails a draft test under natural/normal conditions MUST be taken out of service until the problem can be corrected. If an appliance is left in service after failing the Worst Case Draft, but passing the natural/draft test, technician MUST explain their reasoning and describe plan to remedy the problem in the conclusion section below.

Minumum Acceptable Draft: (copy from page 1) -2.75 **PA**

	Appliance Description	Starting Vent Pressure (Cold)		Pressure after 60 Seconds		Acceptable Draft
Appliance 1			**PA**		**PA**	○ Pass ○ Fail
Appliance 2			**PA**		**PA**	○ Pass ○ Fail
Appliance 3			**PA**		**PA**	○ Pass ○ Fail

Conclusion--Select appropriate results to the Worst Case Draft test:

- ☐ All combustion appliances are direct-vented, no further testing is required
- ☐ All combustion appliances passed the worst-case draft test, and are venting safely
- ☐ One or more combustion appliances failed the worst case draft test. See corrective action plan below:

Corrective Action Plan:

The _____ has been ○ Disabled ○ Left in Service, for the following reasons:

(name of appliance(s))

_____

Weatherization Agency will: _____

The Client will: _____

Client Signoff: I have been informed of the results of this test, and agree to follow any instructions listed in the corrective action plan. X

Note: Client Signoff is required when one or more appliances fail the worst case draft test

Technician Signature: _____ Date: _____