

IBA HEC Daily Safety Test Out / Worst Case Draft Testing for HVAC & Plumbing (2011)

Client Name: _____ Client/Job Application ID: _____
 Client Address: _____ County: _____

Contractor Tech: _____ Contractor Tech: _____ Contractor Tech: _____
 Day 1 Service Date: _____ Day 2 Service Date: _____ Day 3 Service Date: _____

Worst Case Draft Testing

	Day 1	Day 2	Day 3
Turn all combustion appliances off or to pilot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remove forced air furnace filter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close all exterior doors and windows	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open all supply registers (except supplies in CAZ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interior door positions. Fan off-close doors except with exhaust fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fan on-Smoke doors to rooms with exhaust fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close all fireplace and wood stove dampers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turn on dryer, clean or remove lint trap. Use no heat setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turn on all exhaust fans except whole house exhaust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set-up blower door if there is a working fireplace, (exhaust 300 cfm for each)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set-up pressure to read CAZ pressure with reference to outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a door between the CAZ and the rest of the house?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is there a forced air blower on the heating equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Determine Worst Case Configuration

	Day 1		Day 2		Day 3	
	CAZ Door Open	CAZ Door Closed	CAZ Door Open	CAZ Door Closed	CAZ Door Open	CAZ Door Closed
Fan off _____	_____	_____	_____	_____	_____	_____
Fan on _____	_____	_____	_____	_____	_____	_____
Outdoor temp. _____			_____	_____	_____	_____

Draft Test Water Heater (5-2-5 Test)

	Day 1	Day 2	Day 3
Fire the water heater	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Establishes flow in the vent within 5 seconds?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Spillage disappears within 2 minutes?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Record WH draft pressure after 5 minutes _____ Pa _____ "w.c.	_____ Pa _____ "wc	_____ Pa _____ "wc	_____ Pa _____ "wc
<small>(See page 2 for allowable minimum draft pressures)</small>			
Record CO in flue gas after 5 minutes _____ / _____ ppm	_____ / _____ ppm	_____ / _____ ppm	_____ / _____ ppm
<small>(Must be lower than 100 ppm)</small>			
<small>If appliance does not establish flow in the vent almost immediately, abort test and follow the "Response to Failure" Indiana Wx Field 3-39</small>			

Draft Test Furnace (5-2-5 Test)

	Day 1	Day 2	Day 3
Fire the furnace	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Establishes flow in the vent within 5 seconds?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Is there flame interference when the blower starts?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Spillage disappears within 2 minutes?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Record furnace draft pressure after 5 minutes _____ Pa _____ "w.c.	_____ Pa _____ "wc	_____ Pa _____ "wc	_____ Pa _____ "wc
Record CO in furnace flue gas after 5 minutes _____ / _____ ppm	_____ / _____ ppm	_____ / _____ ppm	_____ / _____ ppm
CO in each cell on draft hood furnace	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Re-test draft on water heater _____ Pa _____ "w.c.	_____ Pa _____ "wc	_____ Pa _____ "wc	_____ Pa _____ "wc
Did the heating appliance operation cause spillage or a reduction in draft on water heater?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

Daily Safety Test Out / Worst Case Draft Testing Form (continued)

Specifications:

- A) Flow of flue products must be established to the exterior of the structure in the vent almost immediately
- B) There should be no spillage after 2 minutes of operation
- C) Operation of the furnace should not cause spillage or a reduction in draft pressure in any other appliance it shares combustion air with.
- D) Adequate draft pressure after 5 minutes is:

Minimum Draft Pressure Requirements

<u>Outdoor Temperature</u>	<u>Inches of water column</u>	<u>Pascals</u>
Greater than 80 degrees F.	Negative 0.005" w.c.	Negative 1 Pa
Between 60 and 80 degrees F.	Negative 0.008" w.c.	Negative 2 Pa
Between 40 and 60 degrees F.	Negative 0.012" w.c.	Negative 3 Pa
Between 20 and 40 degrees F.	Negative 0.016" w.c.	Negative 4 Pa
Less than 20 degrees F.	Negative 0.02" w.c.	Negative 5 Pa

(If draft fails follow "Response to Failure" Indiana Wx Field Guide 3-39)