



Revised
Dec. 2015

Inspection Date: _____

Job/Client Information

Client name:	_____	Client/Job number:	_____
Address:	_____	Home:	_____
	_____	Phone:	_____
	_____	Work:	_____
		Cell:	_____

Client Interview notes:

Initial Health and Safety Inspection

Ambient CO Level:	_____ ppm								SWS Detail
	Y	N	Y	N	Y	N			2.0105.1
Mold or moisture:			Gas odor:		Fire hazards:				2.0105.1
									2.0111.2

Equipment Information

Fuel type:	<input type="checkbox"/> Natural	<input type="checkbox"/> Propane	Btuh Input:	_____	5.3003.1	
Furnace type:	<input type="checkbox"/> Draft hood	<input type="checkbox"/> 80%	<input type="checkbox"/> 90%	<input type="checkbox"/> Mobile home		<input type="checkbox"/> Space
Application:	<input type="checkbox"/> Up flow	<input type="checkbox"/> Down flow	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Lowboy		<input type="checkbox"/> Package
Make:	_____	Model:	_____	Serial:		_____
Temperature rise minimum:	_____ °F	Maximum:	_____ °F	Manifold pressure:		_____ In. W.C
Furnace Location (CAZ):	_____			Water heater:		<input type="checkbox"/> Gas <input type="checkbox"/> Electric
WH Location (CAZ):	_____			Btuh input:		_____

Form Instructions

This Form and associated tasks must be completed by qualified auditors, inspectors or heating technicians
Interim inspection is required when mechanical work is performed by non-state verified contractors
Interim inspection may be performed to verify work completed for mechanical invoice processing
Health and safety repairs shall be listed on page 8 of form
Is this the final inspection of a job with a new furnace installed?
If yes, only the CAZ Combustion Safety and Temperature Rise required to be completed on final.

Gas Piping Inspection

	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Free of gas leaks									2.0201.1
Proper materials and configuration									

Vent System Inspection

Describe vent system:	Masonry	B-Vent	Liner	Factory	PVC	2.0201.1
Water heater connector:	B-Vent	Diameter: <input style="width: 50px;" type="text"/> in.	Rise: <input style="width: 50px;" type="text"/> ft.	Lateral: <input style="width: 50px;" type="text"/> ft.		
Furnace connector:	B-Vent	Diameter: <input style="width: 50px;" type="text"/> in.	Rise: <input style="width: 50px;" type="text"/> ft.	Lateral: <input style="width: 50px;" type="text"/> ft.		
Common vent:	Diameter or area:	<input style="width: 50px;" type="text"/> in.	Vent height: <input style="width: 50px;" type="text"/> ft.			
Reductions for extra elbows or offsets:						

	Auditor		Tech		Interim		Final	
	Y	N	Y	N	Y	N	Y	N
Configuration proper(rise, lateral, etc.)								
Condition good(corrosion, blockage, etc..)								
Proper materials for system								

Combustion Air

Pre weatherization equipment inputs and available combustion air:

Total Btuh of natural draft equipment in CAZ:	<input style="width: 100px;" type="text"/> Btuh	Divided by 20	<input style="width: 50px;" type="text"/> cu.ft.	2.0201.2 2.0203.1
Total Btuh of draft induced equipment in CAZ:	<input style="width: 100px;" type="text"/> Btuh	Divided by 26	<input style="width: 50px;" type="text"/> cu.ft.	
Add the cu.ft. of these two lines together. This is the minimum volume needed:			<input style="width: 50px;" type="text"/> cu.ft.	
Calculate volume (L x W x H) that communicates with the CAZ.	Available volume		<input style="width: 50px;" type="text"/> cu.ft.	
<i>Projected combustion air requirements after modifications are made or equipment is replaced</i>				
Total Btuh of natural draft equipment in CAZ:	<input style="width: 100px;" type="text"/> Btuh	Divided by 20	<input style="width: 50px;" type="text"/> cu.ft.	
Total Btuh of draft induced equipment in CAZ:	<input style="width: 100px;" type="text"/> Btuh	Divided by 26	<input style="width: 50px;" type="text"/> cu.ft.	
Add the cu.ft. of these two lines together. This is the minimum volume needed:			<input style="width: 50px;" type="text"/> cu.ft.	
Calculate volume (L x W x H) that communicates with the CAZ.	Available volume		<input style="width: 50px;" type="text"/> cu.ft.	

Water Heater

	Auditor		Tech		Interim		Final	
	Y	N	Y	N	Y	N	Y	N
Water heater level								
T & P valve properly installed								
Water heater or T & P leaking								
Water heater leak requires replacement, T & P leaking requires expansion tank installed. Install expansion tank with water heater replacement if local code requires.								
Water temperature 120 degrees max.	<input style="width: 50px;" type="text"/> °F	<input style="width: 50px;" type="text"/> °F	<input style="width: 50px;" type="text"/> °F	<input style="width: 50px;" type="text"/> °F				

7.8103.1

Indiana Weatherization Gas Appliance Inspection Form

Thermostat

	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Thermostat location functional									5.3003.9
Level and hole sealed									5.3003.9
Heat anticipator or cycle rate set									
Heat anticipator setting: N/A			A		A		A		A
If replacing mercury based thermostat, remove safely and disposed of in accordance with EPA regulations									5.3003.9

Ducts and Filter System

Filter system	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Filter size: <input type="text"/> X <input type="text"/> X <input type="text"/>									
Filter clean and properly supported									5.3001.2
User friendly filter									
Client educated care and maintenance									5.3003.7
Ducts	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Open returns or disconnects									3.1602.1
Insulation of ducts required									4.1601.2

Electrical Safety

	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Polarity to furnace correct									5.3003.4
Furnace properly grounded									5.3003.4
Switch within reach of furnace									5.3003.7

Furnace cleaning and heat exchanger inspection

	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Heat exchanger cracks or holes	N/A								
Burners and heat exchanger clean									
Blower and coils clean									
Condensate drain system cleaned									5.3003.10

If a crack or hole is found, the heat exchanger or furnace must be replaced!

CAZ Depressurization Testing

Baseline test Set-up

	Auditor		Tech		Interim		Final		SWS Detail
Turn all combustion appliances off									2.0201.1
Remove forced air furnace filter									
Close all exterior openings									
Close all fireplace, wood stove dampers									
Set-up gauge: CAZ w/ reference to outside									
Record baseline CAZ pressure	<input type="text"/>	Pa	<input type="text"/>	Pa	<input type="text"/>	Pa	<input type="text"/>	Pa	

Blower off test set-up

Turn on dryer and all exhaust fans									2.0201.1
Blower door @ 300 CFM for fireplace									
CAZ supplies closed, all others open									
Close doors to rooms w/o exhaust fans									
<i>Room doors do not need to be tested at this time. Close doors to rooms without exhaust appliances. Smoke or pressure test any doors that separate stories or sections of the house to determine door position with CAZ at your back. Positive pressure(blows smoke toward you) close door. Negative pressure(sucks smoke under) open door.</i>									

	Auditor		Tech		Interim		Final		SWS Detail
Blower off with CAZ door open	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	2.0202.1
Blower off with CAZ door closed	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	

Blower on test set-up

Turn blower on, smoke or pressure test all doors to rooms with supplies and exhaust or returns to determine door position with CAZ at your back. Positive pressure(blows smoke toward you) close door. Negative pressure(sucks smoke under) open door. Retest doors that separate stories or sections of the house.

	Auditor		Tech		Interim		Final		SWS Detail
Blower on with CAZ door open	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	2.0201.1
Blower on with CAZ door closed	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	
Worst-case pressure adjusted for baseline	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	<input type="text"/>	Pa.	
Outdoor temp.	<input type="text"/>	°F	<input type="text"/>	°F	<input type="text"/>	°F	<input type="text"/>	°F	

Water Heater(or smallest Btuh input appliance) Combustion Safety Test

Set-up CAZ in "worst case" condition for testing, monitor ambient carbon monoxide while testing

	Auditor		Tech		Interim		Final		SWS Detail
Fire the water heater	Y	N	Y	N	Y	N	Y	N	2.0201.1
Establishes flow within 5 seconds									
Passes spillage test within 2 minutes									
Draft pressure after 5 minutes	<input type="text"/>	Pa	<input type="text"/>	Pa	<input type="text"/>	Pa	<input type="text"/>	Pa	
Carbon monoxide after 5 minutes	<input type="text"/>	"w.c."	<input type="text"/>	"w.c."	<input type="text"/>	"w.c."	<input type="text"/>	"w.c."	
	<input type="text"/>	ppm	<input type="text"/>	ppm	<input type="text"/>	ppm	<input type="text"/>	ppm	

(Note: Leave water heater fired for re-test purposes)

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Furnace(or larger Btuh input appliance) Combustion Safety Test

	Auditor		Tech		Interim		Final		SWS Detail
	Y	N	Y	N	Y	N	Y	N	
Fire the furnace									
Establishes flow within 5 seconds									
Passes spillage test within 2 minutes									
Re-test water heater after an 80% furnace burners fire or when there is no spillage from draft hood appliance. Also re-test water heater after firing any other vented appliance that shares combustion air.									
Spillage at the water heater draft hood									2.0201.1
Re-test draft pressure on water heater		Pa		Pa		Pa		Pa	
		"w.c.		"w.c.		"w.c.		"w.c.	
Was there reduction in draft when any combustion appliance that shares vent system or combustion air was fired	Y	N	Y	N	Y	N	Y	N	
Furnace draft pressure after 5 minutes		Pa		Pa		Pa		Pa	
		"w.c.		"w.c.		"w.c.		"w.c.	
Furnace CO in flue gas after 5 minutes		ppm		ppm		ppm		ppm	
CO in each cell on draft hood									

Furnace Operational Testing

Combustion Analysis

	Pre Tune-up		Post Tune-up		SWS Detail
Carbon monoxide		ppm		ppm	5.3003.14
Oxygen		%		%	
Carbon dioxide		%		%	
Excess air		%		%	
Steady State Efficiency		%		%	
Stack temperature		°F		°F	

Verify Input

* Clock meter for natural gas * Check manifold pressure for propane

Time seconds for 2 cu.ft. gas flow, e.g. 4 turns of 1/2 ft. dial or 8 turns of 1/4 ft. dial

	Auditor		Tech		Interim		Final		
Seconds timed for 2 cu.ft. gas flow		sec.		sec.		sec.		sec.	
Total seconds divided by 4		sec.		sec.		sec.		sec.	
Cubic feet/hr. from clocking table		cu.ft.		cu.ft.		cu.ft.		cu.ft.	
7200 ÷ Seconds for 2 cu.ft. flow		cu.ft.		cu.ft.		cu.ft.		cu.ft.	
Average Btu content of gas used			X						
Multiply cu.ft. per hour by Btu content of gas equals Btuh input		Btuh input		Btuh input		Btuh input		Btuh input	
Input must be within 5 % of rated input without going over									
Furnace gas manifold pressure		"w.c.		"w.c.		"w.c.		"w.c.	

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Air Flow

	Auditor		Tech		Interim		Final		SWS Detail
Supply air temperature	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	5.3003.3
Return air temperature	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	
Temperature rise	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	<input type="text"/>	° F.	
	Y	N	Y	N	Y	N	Y	N	
Temp rise within specifications									

If rise not within specifications, auditor or technician shall calculate airflow and test system static pressures to determine corrective measures

Verify Controls

	Y	N		
Limit switch functions	<input type="text"/>			5.3003.9
Record plenum temperature when tripped:	<input type="text"/>	° F.		
Record and adjust fan off temperature	<input type="text"/>	° F.	<input type="text"/> ° F. <input type="text"/> ° F.	

Air flow calculation by temperature rise method

Heat output: Use Btuh input multiplied by efficiency e.g.. 100,000 input X 90% = 90,000 output

Calculation: Heat output ÷ (temperature rise X 1.08) = CFM

Temperature rise: <input type="text"/> °F	Multiplied by 1.08 equals: <input type="text"/> °F	Adjusted temperature rise	
Btuh output: <input type="text"/>	Divided by adjusted temperature rise =	<input type="text"/> cfm	5.3003.3

Static Pressure Readings

A: Supply duct static pressure	<input type="text"/>	" w.c.		5.3003.3
B: Furnace total supply static pressure	<input type="text"/>	" w.c.		
C: Furnace total return static pressure	<input type="text"/>	" w.c.		
D: Return duct static pressure	<input type="text"/>	" w.c.		

Total or External static pressure:	<input type="text"/>	"w.c.	5.3003.3
(Add B: Furnace total supply static pressure to C: Furnace total return static pressure)			
Pressure drop across filter:	<input type="text"/>	"w.c.	5.3003.3
(Subtract D: Return duct static pressure from C: Furnace total return static pressure)			
Pressure drop across coil:	<input type="text"/>	"w.c.	5.3003.3
(Subtract A: Supply duct static from B: Furnace total supply static pressure)			

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Health & safety issues to be addressed

		Completed	
1	_____	Y	N
2	_____	Y	N
3	_____	Y	N
4	_____	Y	N
5	_____	Y	N
6	_____	Y	N
7	_____	Y	N
8	_____	Y	N
9	_____	Y	N
10	_____	Y	N

Client Education

		SWS Detail
Basic operation of equipment explained to the client	Done	
Operation of thermostat explained to the client	Done	2.0702.2
Disconnects and fuel shut offs shown to the client	Done	2.0702.2
Proper filter selection and how to change filter will be explained	Done	2.0702.2
Location of combustion air inlets identified for client and importance of not blocking inlets explained to the client	Done	2.0702.3

Initial inspection performed by: _____ Date: _____
 Signature: _____

Mechanical work performed by: _____ Date: _____
 Signature: _____

Interim inspection performed by: _____ Date: _____
 Signature: _____

Final inspection performed by: _____ Date: _____
 Signature: _____

Notes:

Indiana Weatherization Gas Appliance Inspection Form



Gas Meter Dial Used					
Secandr farane revolution	One Half cu.Ft.	One cu.Ft.	Tua cu.Ft.	Five cu.Ft.	Ten cu.ft.
Cubic Feet Per Hour					
10	180	360	720	1800	3600
11	164	327	655	1634	3272
12	150	300	600	1500	3000
13	138	277	555	1385	2770
14	129	257	514	1286	2572
15	120	240	480	1200	2400
16	112	225	450	1125	2250
17	106	212	424	1059	2118
18	100	200	400	1000	2000
19	95	189	379	947	1894
20	90	180	360	900	1800
21	86	171	343	857	1714
22	82	164	327	818	1636
23	78	157	313	783	1566
24	75	150	300	750	1500
25	72	144	288	720	1440
26	69	138	277	692	1384
27	67	133	267	667	1334
28	64	129	257	643	1286
29	62	124	248	621	1242



Gas Meter Dial Used					
Secandr farane revolution	One Half cu.Ft.	One cu.Ft.	Tua cu.Ft.	Five cu.Ft.	Ten cu.ft.
Cubic Feet Per Hour					
50	36	72	144	360	720
51	35	71	141	353	706
52	35	69	138	346	692
53	34	68	136	340	680
54	33	67	133	333	666
55	33	65	131	327	654
56	32	64	129	321	642
57	32	63	126	316	632
58	31	62	124	310	620
59	30	61	122	305	610
60	30	60	120	300	600
62	29	58	116	290	580
64	29	56	112	281	562
66	29	54	109	273	546
68	28	53	106	265	530
70	26	51	103	257	514
72	25	50	100	250	500
74	24	48	97	243	486
76	24	47	95	237	474
78	23	46	92	231	462



Gas Meter Dial Used					
Secandr farane revolution	One Half cu.Ft.	One cu.Ft.	Tua cu.Ft.	Five cu.Ft.	Ten cu.ft.
Cubic Feet Per Hour					
30	60	120	240	600	1200
31	58	116	232	581	1162
32	56	113	225	563	1126
33	55	109	218	545	1090
34	53	106	212	529	1058
35	51	103	206	514	1028
36	50	100	200	500	1000
37	49	97	195	486	972
38	47	95	189	474	948
39	46	92	185	462	924
40	45	90	180	450	900
41	44	88	176	440	880
42	43	86	172	430	860
43	42	84	167	420	840
44	41	82	164	410	820
45	40	80	160	400	800
46	39	78	157	391	782
47	38	77	153	383	766
48	37	75	150	375	750
49	37	73	147	367	734



Gas Meter Dial Used					
Secandr farane revolution	One Half cu.Ft.	One cu.Ft.	Tua cu.Ft.	Five cu.Ft.	Ten cu.ft.
Cubic Feet Per Hour					
80	22	45	90	225	450
82	22	44	88	220	440
84	21	43	86	214	428
86	21	42	84	209	418
88	20	41	82	205	410
90	20	40	80	200	400
94	19	38	76	192	384
98	18	37	74	184	368
100	18	36	72	180	360
104	17	35	69	173	346
108	17	33	67	167	334
112	16	32	64	161	322
116	15	31	62	155	310
120	15	30	60	150	300
130	14	28	55	138	276
140	13	26	51	129	258
150	12	24	48	120	240
160	11	22	45	113	226
170	11	21	42	106	212
180	10	20	40	100	200

Minimum Draft Pressure Requirements

Outdoor Temperature	Inches of water column	Pascals
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