

Building Performance Institute, Inc.



Building Analyst – Guide to Performance Test

This form includes those items that will/may be evaluated on the Field Examination for Building Analyst based on the building stock. Candidates should familiarize themselves with each item detailed on this form in preparation for the Field Examination.

Combustion appliance inspection process

Correctly identified heating/DHW/Cooling system types, components
Inspected gas system for leaks, bad connectors and valves
Correctly used gas leak detector
Inspected vent system for problems
Inspected other heating systems components for safety problems

Combustion safety tests

Set up for natural conditions and measured baseline pressure differential
Created worst case conditions
Correctly measured worst-case CAZ depressurization
Checked for worst case spillage of each relevant appliance
Performed worst case draft test – tested DHW, furnace/boiler and then both
Measured worst-case CO
Checked for spillage, draft, CO under natural conditions
(only necessary to perform this test if spillage detected under worst case)
Made appropriate recommendations according to BPI standards

CO Testing

Equipment use proper
Tested ambient both indoors and outdoors and properly interpreted
Tested for CO in all combustion appliances and properly interpreted

Duct system inspection

Properly identified supplies and returns
Checked condition of filter(s)
Identified problematic duct design/installation including significant leakage
Determined duct insulation needs

Hydronic – Steam distribution inspection

Determined locations of supply and return piping
Determined piping insulation levels
Checked distribution system for leaks

Infiltration Evaluation

Blower door test

Calculated ventilation needs correctly – Onsite
Proper equipment set-up
Accurate cfm50 measurement

Understands pressure differential diagnostics – tested or recommended

Air leakage inspection

Identified potential bypasses low and high in the building
Identified air barrier/thermal boundary alignment issues
Conducted room by room inspection with blower door running

Recommended air sealing appropriately - Onsite
Recommended mechanical ventilation appropriately - Onsite

General home investigation

Inspected / determined insulation levels and effectiveness

Inspected doors and windows for fit and performance
Discussed heat loss / savings estimates and understands implications
Discussed consumption based on initial findings

Identified moisture/IAQ problems accurately and made appropriate recommendations - Onsite

Identified fire hazards and/or VOC pollutants
Identified major electric appliance upgrade opportunities
Identified significant lighting upgrade opportunities
Identified important fuel-switching opportunities

DHW Inspection

Checked safety controls
Discussed appliance condition and made appropriate recommendations
Inspected for additional DHW energy-saving measures