1/19/2016

HEATING Field Guide

Standards of Reference:
ANSI/BPI-1200-S-2017 Standard Practice for Basic Analysis of Buildings
Technical Standards for the Heating Professional

Health and Safety

Identified existing moisture-related problems
- Appropriate identification of foundation/basement moisture issues
- Appropriate identification of living space moisture issues

Identified existing any indoor air contaminant sources
Identified existing fire hazards
Comprehension of interaction of building envelope conditions with duct leakage
Comprehension of interaction of building envelope conditions with combustion appliance performance

Diagnostic Tests and Inspections

Properly conducted combustion gas leakage testing
- Appropriate speed for testing
- Complete 360 degrees for any unions
- Recommended soapy solution to verify positives

Infiltration Evaluation

Combustion appliances set to pilot or disabled
Proper set-up of the blower door frame/shroud/fan
Proper set-up of the manometer
Proper house set-up for testing
Correctly measured baseline pressure differential
Accurate CFM50 measurement
Measured existing ventilation fan flow
Discussed ventilation needs in relation to existing fans
Conducted sample room by room inspection with blower door running
Recommended air sealing appropriately
- Mentioned: Top plates and penetration through top and bottom floor

Recommended mechanical ventilation appropriately
Mentioned need for further pressure differential testing as appropriate

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Combustion Safety Tests

Correctly identified heating / cooling system types
Visual inspection of venting system for problems - NON-SCORABLE
- Determined condition accurately

Correctly set up for natural conditions
Correctly recorded pressure differential in the CAZ prior to turning on exhaust appliances
Correctly setup home in worst case condition - NON-SCORABLE
- All exhaust appliances running
- Correct door closures - measured quantitatively or qualitatively
- Air handler operation impact checked

Correctly checked for worst case spillage in heating system
Correctly determined if the appliance passes the spillage test
Correctly checked for worst case spillage in the domestic water heater
Correctly determined if the appliance passes the spillage test

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CO Testing

Correctly prepared CO monitor for use while outside of the building
Correctly tested ambient CO indoors
Correctly measured heating system flue gas CO during combustion safety testing

Correctly measured DHW flue gas CO during combustion safety testing
Appropriately applied BPI action levels based on test results for CO in the flue (choose DHW or heating system)
Correctly monitored ambient CO levels in the CAZ during entire combustion safety tests
Tested for CO in oven - NON-SCORABLE
Correctly checked for items, excessive debris inside oven
Oven test sampling location appropriate

Ducted Systems

Duct Blaster set up appropriately
- Manometer set-up appropriate
- Supply tap appropriate
- Return tap appropriate
- Accurate measurement

Made Appropriate Duct Sealing Recommendations - Onsite
- Demonstrated ability to prioritize repairs
- Appropriate materials selected for repairs
- Appropriate method selected for repair.

Accurately Measured Heat Rise Delta T
Made Appropriate Heat Rise Correction Recommendations
Performed Appropriate System Balancing Diagnostic Testing
Made Appropriate System Balancing Recommendations - Onsite
Properly conducted Heat Exchanger Inspection
Recommended Replacement of Heat Exchanger as appropriate
Inspected Fan on/off Settings
Made Appropriate Fan Setting Correction Recommendations
Conducted Steady State Efficiency test

Hydronic Systems

Evaluated basic system controls
Evaluated basic system safety devices
Properly Assessed Zone Configuration
Assessed Conservation Opportunities
Assessed performance enhancements
Identified pipe insulation needs
Accurately assessed distribution problems
Conducted Steady State Efficiency test

Heat Loss / Load Calculation

Discussed heat loss calculation / savings estimates and understands implications
Accurately identified conservation measures that could impact sizing
Identified distribution system issues relating to these calculations
Understands relationship between calculations, current usage and proposed savings

Domestic Hot Water

Properly evaluated safety devices
Properly evaluated system efficiency
- Proper probe placement if measured with analyzer

Made appropriate recommendation for system improvement or replacement - Onsite
Made appropriate recommendations for conservation measures - Onsite