

Mechanical System Inspection/Clean & Tune

Agency: BVCAP CAPLSC CAPMN CNCAP HFHO NENCAP NWCAP SENCA

Inspector Name: _____ Date: _____ Job Number: _____

Client Name & Address: _____ City: _____ Phone Number: _____

Ownership: <input type="checkbox"/> Renter <input type="checkbox"/> Owner	Building Type: <input type="checkbox"/> Frame <input type="checkbox"/> Mobile <input type="checkbox"/> Multifamily	Fuel Type: Heating: _____ Water Heating: _____	Heating System Type: <input type="checkbox"/> Forced Air <input type="checkbox"/> Gravity <input type="checkbox"/> Boiler <input type="checkbox"/> Vented <input type="checkbox"/> Un-vented <input type="checkbox"/> Wall <input type="checkbox"/> Floor <input type="checkbox"/> Heat Pump
Cooling System Type: <input type="checkbox"/> Central Air <input type="checkbox"/> Window <input type="checkbox"/> Heat Pump <input type="checkbox"/> None <input type="checkbox"/> A Coil <input type="checkbox"/> Sloped Coil		Water Heating Type: <input type="checkbox"/> Tank <input type="checkbox"/> Instantaneous <input type="checkbox"/> Heat Pump	

INSPECTION/EVALUATION REQUIREMENTS

- Combustion Units Only**
- Leakage testing of piping and controls
 - Test heat exchanger for cracks and openings
 - Inspect venting for pitch, size, blockage, corrosion
 - Inspect heat exchanger for excessive corrosion
 - Inspect burners and crossovers for blockage
 - Determine pilot is burning properly
 - Determine main burner ignition is satisfactory
 - Test pilot safety devices
 - Visually determine gas is burning properly
 - If equipped, check main burner at low modulator
 - Test for spillage at draft hood

- Boilers Only (To be completed by a qualified technician)**
- Smoke spot tests
 - Net stack temps (5.3003.2e)
 - Carbon dioxide and oxygen (5.3003.2f)
 - Excess air (5.3003.2g)
 - CO (5.3003.2h)
 - Technician will provide printout for 5.3003.2c, 5.3003.2e, 5.3003.2f, 5.3003.2g and 5.3003.2h
 - Inspect for water or combustion product leaks (if applicable)
 - Determine water pumps are operational
 - Test low water cutoff, feed control, etc.
 - Determine the controls are operational

- All Heating Units (including Electric)**
- Check fan and belt condition
 - Inspect for exposed wiring and disconnect switch
 - Check thermostat operation
 - Check filter, filter rack and cover
 - Check limit and fan control
 - Install sticker (all repairs and Contractor Inspections)

- Boilers Only (To be completed by a qualified technician)**
- Recorded data plate information
 - Correct nozzle sizes
 - Fuel pressure readings
 - Steady state efficiency (5.3003.2c)

- Furnaces and Console Heaters**
- Determine the fan control is operational

- Water Heaters**
- Inspect for water or combustion product leaks (if applicable)
 - Determine unit has pilot access door & draft hood (if applicable)
- Air Conditioners**
- Inspect central air conditioner coils inside and out
 - Not accessible
 - Inspect wiring
 - Inspect pipe insulation

FORCED AIR SYSTEM AIR FLOW EVALUATION – SWS 5.3003.3

Yes	No	N/A	Specification	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	External static pressure	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure drop across coiling coils	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure drop across filter	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air flow measured at each register	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Supply wet bulb temperature	_____ °
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Supply dry bulb temperature	_____ °
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Return wet bulb temperature	_____ °
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Return dry bulb temperature	_____ °
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature rise between supply & return	Tested _____ ° Mfg. Req'd. _____ °

FORCED AIR SYSTEM ELECTRICAL SERVICE EVALUATION – SWS 5.3003.4

Yes	No	N/A	Specification	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Polarity of equipment tested/corrected	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage/amperage in accordance with mfg. specs	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage drop in accordance with mfg. specs/range	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grounding conforms with NFPA 70 National Electrical Code	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blower amperage will not exceed mfg. full load amperage	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Compressor amperage will not exceed mfg. full load amperage	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blower compartment safety switch operation verified	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heat pump emergency heat circuit function verified	_____

REFRIGERANT LINE EVALUATION – SWS 5.3003.5

Yes	No	N/A	Specification	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulated to a minimum R-4	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If exposed to sunlight, protected from UV degradation	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sized to meet manufacturer specifications	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Installed without kinks, crimps, or excessive bends	_____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Appropriately routed, supported and secured to prevent damage	_____

CLEAN AND TUNE REQUIREMENTS

- | | | |
|--|---|--|
| <p>All Units</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lubricate all moving parts <input type="checkbox"/> Clean and vacuum the return air and cabinet and filter rack <input type="checkbox"/> Calibrate and adjust the thermostat, inspect wiring <input type="checkbox"/> Clean or replace filter <input type="checkbox"/> Adjust the conditioned airflow, high limit, fan control, fan on/fan off and temperature rise <input type="checkbox"/> Adjust the belt tension or replace belt (if needed) | <ul style="list-style-type: none"> <input type="checkbox"/> Remove and clean the blower <input type="checkbox"/> Check blower capacitor, fan relay and or contactts <input type="checkbox"/> Clean air conditioner coil <input type="checkbox"/> Not Accessible <p>All Units</p> <ul style="list-style-type: none"> <input type="checkbox"/> Seal thermostat wire penetration in frame homes <input type="checkbox"/> Install sticker (all repairs and Contractor Inspections) | <p>Combustion Units</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clean flame sensor <input type="checkbox"/> Clean and test heat exchanger – except boilers <input type="checkbox"/> Check and adjust burners <input type="checkbox"/> Clean the exhaust port and draft hood <p>Electric Units</p> <ul style="list-style-type: none"> <input type="checkbox"/> Repair or replace damaged wiring <input type="checkbox"/> Test heating elements and sequencers |
|--|---|--|

CARBON MONOXIDE TESTING AND ADJUSTMENT

Test and adjust each chamber for carbon monoxide		
	Pre-cleaning	Post-cleaning
Chamber 1	PPM	PPM
Chamber 2	PPM	PPM
Chamber 3	PPM	PPM
Chamber 4	PPM	PPM

HVAC CLIENT EDUCATION

Yes	No	N/A	Specification
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Basic operation of the equipment has been explained to the client (i.e. efficiency measures, design considerations differences from previous systems)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proper operation and programming of the system controls for proper operation has been explained
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indoor and outdoor shut-offs have been demonstrated
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of combustion air inlets have been identified for the client as per NFPA 31, 54 & 58
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of not blocking combustion air inlets
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of cleaning dust and debris from return air grilles
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of proper placement of interior furnishings with respect to registers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the negative consequences of closing registers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of leaving interior doors open as much as possible
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of proper filter selection and how to change the filter
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of keeping the outside units clear of debris, vegetation, decks and other blockages
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of the importance of routine professional equipment maintenance
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed that there will be no air bypass around the new filter and that the new forced air system will have a minimum MERV 6 filtration
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed of situations when a HVAC contractor should be contacted <ul style="list-style-type: none"> • Fuel Odors • Water draining from secondary drain line • Emergency heat indicator always on for a heat pump • System blowing cold air during heating season and vice versa • Icing of evaporator coils during heat pump cooling mode • Heat pump outside unit never defrosts • Unusual noises • Unusual odors
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been informed that carbon monoxide(s) alarm has been installed and the importance of maintenance
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Client has been provided with relevant manuals and warranties
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The labor warranty has been explained to the client

SIGNATURES

I certify that the work performed meets the requirements of the Nebraska Weatherization Assistance Program Installation Measures and Work Standards.

Agency or Company Name _____

Sign Here _____ Signature Heating/Plumbing Technician _____ Date

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