

TITLE: HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)
 VERSION: VI.3
 DATE PUBLISHED: 7/31/20

DEFINITION: Heating: A system consisting of a heat source and method of distribution designed to heat the surrounding air and area
Ventilation: A method of air distribution by air ducts to transfer air from one location to another. Air can be distributed passively or forced
Air Conditioning: A system consisting of a cooling source and method of distribution designed to cool the surrounding air and area

PURPOSE: Provide thermal comfort and acceptable indoor air quality

NAME VARIANTS: Air conditioner; A/C; Central air and heat; Chiller; Furnace; Window unit

COMMON MATERIALS: Metal; Plastic

COMMON COMPONENTS: Thermostat; Condenser; Furnace; Supply registers or vents; Ducts; Air handler; Radiant or convection heating covers; Boiler; Evaporative cooler; Thermocouple; Gas shutoff valve

LOCATION:

<input checked="" type="checkbox"/>	Unit	Living room, bedroom, kitchen, bathroom, closet
<input checked="" type="checkbox"/>	Inside	Any indoor common area (e.g., hall, bath, kitchen, office, exercise room, etc.)
<input type="checkbox"/>	Outside	None

MORE INFORMATION: None

DEFICIENCY 1: Heat source is missing
LOCATION: Unit

DEFICIENCY 2: Heating or air conditioning system or device is not operational
LOCATION: Unit Inside

DEFICIENCY 3: Heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent
LOCATION: Unit Inside

DEFICIENCY I — UNIT: HEAT SOURCE IS MISSING

DEFICIENCY CRITERIA: No permanent (excluding portable) heating source is found within unit.

HEALTH AND SAFETY DETERMINATION: Life-Threatening This is a life-threatening issue requiring a 24-hour repair, correction, or act of abatement.

CORRECTION TIMEFRAME: 24 hours - 24 hours correction timeframe: If outside temperature is below 50 degrees Fahrenheit and temperature inside unit is below 60 degrees Fahrenheit
 - 30 day correction timeframe: If not the above scenario

HCV — CORRECTION TIMEFRAME: 24 hours - 24 hours correction timeframe: If outside temperature is below 50 degrees Fahrenheit and temperature inside unit is below 60 degrees Fahrenheit
 - 30 day correction timeframe: If not the above scenario

RATIONALE:

CODE	CATEGORY	TYPE	DESCRIPTION	EXPLANATION
R1	Health	Direct	Condition could affect resident's mental, or physical, or psychological state.	If heat source is missing, then resident may be exposed to dangerously cold temperatures.
R2	Safety	Direct	Resident could be injured because of this condition.	If heat source is missing, then there is an increased likelihood that tenant may try to provide heat via other unsafe means (e.g., space heaters, ovens, and open fires).
R6	Usability and Operability of Fixtures	Direct	Because of this condition, the resident is unable to use certain fixtures, features, or appliances, which are reasonably assumed to be part of their rent.	If heat source is missing, then resident is unable to utilize an appliance of their home that is expected to be provide and maintained as part of their rent.
M1	Corrective Maintenance	Direct	It is reasonable to expect a tenant to report this deficiency, and for facilities management to prioritize a work order response to fix that deficiency.	If heat source is missing, then it is likely the resident will report this, and the defect's presence may indicate that complaint-based work orders are not being addressed.
M4	Capital Cost	Direct	This defect, on its own, is significant enough to be a capital cost to repair.	If heat source is missing, then the cost to install a heating source will likely be significant enough to incur capital cost.

INSPECTION PROCESS:

OBSERVATION: - Verify a permanent heating source (e.g., a radiator, radiant baseboard, or access panel to a central air system) is provided and installed by the property.

REQUEST FOR HELP: - None

ACTION: - None

More Information: - None



NATIONAL STANDARDS FOR THE PHYSICAL INSPECTION OF REAL ESTATE

TOOLS OR EQUIPMENT:

REQUIRED: - None

USEFUL: - None

DEFICIENCY 2 — UNIT: HEATING OR AIR CONDITIONING SYSTEM OR DEVICE IS NOT OPERATIONAL

DEFICIENCY CRITERIA: System or device does not turn on.

OR

Heating system or device produces only cold or room temperature air.

OR

Cooling system or device produces only hot or room temperature air.

HEALTH AND SAFETY DETERMINATION: Life-Threatening This is a life-threatening issue requiring a 24-hour repair, correction, or act of abatement.

CORRECTION TIMEFRAME: 24 hours

HCV — CORRECTION TIMEFRAME: 24 hours

RATIONALE:

CODE	CATEGORY	TYPE	DESCRIPTION	EXPLANATION
R1	Health	Direct	Condition could affect resident's mental, or physical, or psychological state.	If heating or air conditioning system or device is not operational, then resident may be exposed to dangerous temperatures.
R2	Safety	Direct	Resident could be injured because of this condition.	If heating or air conditioning system or device is not operational, then there is an increased likelihood that tenant may try to provide heat via other unsafe means (e.g., space heaters, ovens, and open fires).
R6	Usability and Operability of Fixtures	Direct	Because of this condition, the resident is unable to use certain fixtures, features, or appliances, which are reasonably assumed to be part of their rent.	If heating or air conditioning system or device is not operational, then resident is unable to utilize an appliance of their home that is expected to be provide and maintained as part of their rent.
M1	Corrective Maintenance	Direct	It is reasonable to expect a tenant to report this deficiency, and for facilities management to prioritize a work order response to fix that deficiency.	If heating or air conditioning system or device is not operational, then it is likely the resident will report this, and the defect's presence may indicate that complaint-based work orders are not being addressed.
M4	Capital Cost	Direct	This defect, on its own, is significant enough to be a capital cost to repair.	If heating or air conditioning system or device is not operational, then the repair costs will likely be significant enough to incur capital cost.

INSPECTION PROCESS:

- OBSERVATION:**
- Look for heating or cooling system or device (e.g., a radiator, radiant baseboard, window unit, or access panel to a central air system) and determine if it is on.
 - Listen to hear if the system or device powers on following request to POA.
- REQUEST FOR HELP:**
- If present and not on, ask POA to turn the system or device on.
- ACTION:**
- Place hand near system or device's heating or cooling element (or air vent if window unit or accesses a central air system) to feel for heated or cooled air.
- More Information:**
- None

TOOLS OR EQUIPMENT:

- REQUIRED:**
- None
- USEFUL:**
- None
-

DEFICIENCY 2 — INSIDE: HEATING OR AIR CONDITIONING SYSTEM OR DEVICE IS NOT OPERATIONAL

DEFICIENCY CRITERIA: System or device does not turn on.

OR

Heating system or device produces only cold or room temperature air.

OR

Cooling system or device produces only hot or room temperature air.

HEALTH AND SAFETY DETERMINATION: Life-Threatening This is a life-threatening issue requiring a 24-hour repair, correction, or act of abatement.

CORRECTION TIMEFRAME: 24 hours

HCV — CORRECTION TIMEFRAME: 24 hours

RATIONALE:

CODE	CATEGORY	TYPE	DESCRIPTION	EXPLANATION
R1	Health	Direct	Condition could affect resident’s mental, or physical, or psychological state.	If heating or air conditioning system or device is not operational, then resident may be exposed to dangerous temperatures.
R2	Safety	Direct	Resident could be injured because of this condition.	If heating or air conditioning system or device is not operational, then there is an increased likelihood that tenant may try to provide heat via other unsafe means (e.g., space heaters, ovens, and open fires).
R6	Usability and Operability of Fixtures	Direct	Because of this condition, the resident is unable to use certain fixtures, features, or appliances, which are reasonably assumed to be part of their rent.	If heating or air conditioning system or device is not operational, then resident is unable to utilize an appliance of their home that is expected to be provide and maintained as part of their rent.
M1	Corrective Maintenance	Direct	It is reasonable to expect a tenant to report this deficiency, and for facilities management to prioritize a work order response to fix that deficiency.	If heating or air conditioning system or device is not operational, then it is likely the resident will report this, and the defect’s presence may indicate that complaint-based work orders are not being addressed.
M4	Capital Cost	Direct	This defect, on its own, is significant enough to be a capital cost to repair.	If heating or air conditioning system or device is not operational, then the repair costs will likely be significant enough to incur capital cost.

INSPECTION PROCESS:

- OBSERVATION:**
- Look for heating or cooling system or device (e.g., a radiator, radiant baseboard, window unit, or access panel to a central air system) and determine if it is on.
 - Listen to hear if the system or device powers on following request to POA.
- REQUEST FOR HELP:**
- If present and not on, ask POA to turn the system or device on.
- ACTION:**
- Place hand near system or device's heating or cooling element (or air vent if window unit or accesses a central air system) to feel for heated or cooled air.
- More Information:**
- None

TOOLS OR EQUIPMENT:

- REQUIRED:**
- None
- USEFUL:**
- None
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DEFICIENCY 3 — UNIT: HEATING SYSTEM OR DEVICE FUELED BY COMBUSTION HAS MISALIGNED, DISCONNECTED, DAMAGED, BLOCKED, OR MISSING EXHAUST VENT

DEFICIENCY CRITERIA: Exhaust vent is misaligned, blocked, disconnected, or improperly connected through to the ceiling or wall.

OR

Exhaust vent is damaged (i.e., visibly defective; impacts functionality).

OR

Exhaust vent is missing (i.e., evidence of prior installation, but now not present or is incomplete).

HEALTH AND SAFETY DETERMINATION: Life-Threatening This is a life-threatening issue requiring a 24-hour repair, correction, or act of abatement.

CORRECTION TIMEFRAME: 24 hours

HCV — CORRECTION TIMEFRAME: 24 hours

RATIONALE:

CODE	CATEGORY	TYPE	DESCRIPTION	EXPLANATION
R1	Health	Direct	Condition could affect resident's mental, or physical, or psychological state.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then resident may be exposed carbon monoxide leaks.
R2	Safety	Direct	Resident could be injured because of this condition.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then resident could be exposed to carbon monoxide.
R7	Increased Monetary Impact to Resident	Indirect	Resident would incur additional costs because of this condition.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, and resident is responsible for utilities, then they may incur additional costs due to inefficient heating system.
M3	Preventative Maintenance	Direct	This defect indicates that a property is not following preventative maintenance practices for the item or equipment.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then it should be identified during preventative maintenance activities and the defect's presence may indicate that self-generated work orders are not being addressed.
M5	Increased Monetary Impact to HUD	Direct	HUD would incur additional costs due to this condition.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing

exhaust vent, and the property is responsible for utilities, then they may incur additional costs due to inefficient heating systems.

INSPECTION PROCESS:

- OBSERVATION:**
- Look at system or device to confirm exhaust vent is:
 - Present;
 - Properly connected through to the ceiling or wall; and
 - Free of any holes or blockage due to bending, warping, collapse, or foreign material.
 - Check for exhaust vent cap.
 - Verify exhaust vent has no downward slope.
- REQUEST FOR HELP:**
- Ask the POA representative if the unit is heated by a fuel-fired device; if not, disregard this deficiency.
 - If so, continue these steps.
- ACTION:**
- None
- More Information:**
- None

TOOLS OR EQUIPMENT:

- REQUIRED:**
- None
- USEFUL:**
- None
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DEFICIENCY 3 — INSIDE: HEATING SYSTEM OR DEVICE FUELED BY COMBUSTION HAS MISALIGNED, DISCONNECTED, DAMAGED, BLOCKED, OR MISSING EXHAUST VENT

DEFICIENCY CRITERIA: Exhaust vent is misaligned, blocked, disconnected, or improperly connected through to the ceiling or wall.

OR

Exhaust vent is damaged (i.e., visibly defective; impacts functionality).

OR

Exhaust vent is missing (i.e., evidence of prior installation, but now not present or is incomplete).

HEALTH AND SAFETY DETERMINATION: Life-Threatening This is a life-threatening issue requiring a 24-hour repair, correction, or act of abatement.

CORRECTION TIMEFRAME: 24 hours

HCV — CORRECTION TIMEFRAME: 24 hours

RATIONALE:

CODE	CATEGORY	TYPE	DESCRIPTION	EXPLANATION
R1	Health	Direct	Condition could affect resident's mental, or physical, or psychological state.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then resident may be exposed carbon monoxide leaks.
R2	Safety	Direct	Resident could be injured because of this condition.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then resident could be exposed to carbon monoxide.
M3	Preventative Maintenance	Direct	This defect indicates that a property is not following preventative maintenance practices for the item or equipment.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, then it should be identified during preventative maintenance activities and the defect's presence may indicate that self-generated work orders are not being addressed.
M5	Increased Monetary Impact to HUD	Direct	HUD would incur additional costs due to this condition.	If heating system or device fueled by combustion has misaligned, disconnected, damaged, blocked, or missing exhaust vent, and the property is responsible for utilities, then they may incur additional costs due to inefficient heating systems.

INSPECTION PROCESS:

- OBSERVATION:**
- Look at system or device to confirm exhaust vent is:
 - Present;
 - Properly connected through to the ceiling or wall; and
 - Free of any holes or blockage due to bending, warping, collapse, or foreign material.
 - Check for exhaust vent cap.
 - Verify exhaust vent has no downward slope.
- REQUEST FOR HELP:**
- Ask the POA representative if the unit is heated by a fuel-fired device; if not, disregard this deficiency.
 - If so, continue these steps.
- ACTION:**
- None
- More Information:**
- None

TOOLS OR EQUIPMENT:

- REQUIRED:**
- None
- USEFUL:**
- None
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SUMMARY OF CHANGES

TITLE: HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)
VERSION: VI.3
DATE PUBLISHED: 7/31/20

FIELD	CHANGE	VERSION	DATE
Overall Formatting	Complete rework of document format and layout	VI.3	2020-07-31
Definition	Revised definition	VI.3	2020-07-31
Purpose	Field added	VI.3	2020-07-31
Name Variants	Revised name variants	VI.3	2020-07-31
Common Components	Revised common components	VI.3	2020-07-31
More Information	Field added	VI.3	2020-07-31
Deficiency 1	Separated by inspectable location – Unit	VI.3	2020-07-31
Title	Added inspectable location		
Deficiency Criteria	Revised deficiency criteria		
Health and Safety Determination	Revised to “Life-Threatening” determination; added standardized description		
Correction Timeframe	Field added; response input as “24 hours” Noted 24-hour correction timeframe if outside temperature is below 50 degrees Fahrenheit and temperature inside unit is below 60 degrees Fahrenheit. Noted 30-day correction timeframe if not the above scenario If this scenario is not met.		
HCV – Correction Timeframe	Field added; response input as “24 hours” Noted 24-hour correction timeframe if outside temperature is below 50 degrees Fahrenheit and temperature inside unit is below 60 degrees Fahrenheit. Noted 30-day correction timeframe if not the above scenario If this scenario is not met.		
Rationale	Revised rationale categories, types, and explanations; added standardized codes and descriptions		
Inspection Process	Revised observation, request for help, action, and more information		
Tools or Equipment	Field added to deficiency; response revised		
Deficiency 2	Separated by inspectable locations – Unit and Inside	VI.3	2020-07-31
Title	Added inspectable locations		

Deficiency Criteria	Revised deficiency criteria		
Health and Safety Determination	Revised to “Life-Threatening” determination; added standardized description		
Correction Timeframe	Field added; response input as “24 hours”		
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HCV – Correction Timeframe	Field added; response input as “24 hours”		
Rationale	Revised rationale categories, types, and explanations; added standardized codes and descriptions		
Inspection Process	Revised observation, request for help, action, and more information		
Tools or Equipment	Field added to deficiency; response revised		
Deficiency 4	Removed deficiency	VI.3	2020-07-31
Deficiency 5	Removed deficiency	VI.3	2020-07-31