

Summary Report for Individual Task
551-88L-2060
Maintain a Heating System
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD5 - This product/publication has been reviewed by the product developers in coordination with the [installation/activity name] foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

Condition: Given an operational heating system aboard a vessel, at sea, at anchor or moored alongside a pier, day or night, under all sea and weather conditions, while wearing appropriate PPE, (i.e. hearing protection, Nitrile gloves, eye protection, etc.), with a lock out tag out kit and a marine rail tool box.

Standard: The Soldier correctly maintains a heating system aboard an Army vessel, IAW the appropriate Technical Manual and local SOPs, without injury to self or others and without damage to equipment. The heating system was fully mission capable at task completion.

Special Condition: None

Safety Risk: Low

MOPP 4:

Task Statements

Cue: None

DANGER
None

WARNING
None

CAUTION
None

Remarks: None

Notes: None

Performance Steps

1. Conduct maintenance on duct heaters, (refer to Figure 551-88L-2060_01).
 - a. Lock out and tag out power to the heater.
 - b. Remove electrical access panel.
 - (1) Check wires for looseness.
 - (2) Check porcelain insulators for signs of cracking.
 - c. Remove heater from duct.
 - d. Clean heating element with a wet/dry vacuum and/or low pressure air.
 - e. Replace heater into the duct.
 - f. Replace electrical access panel.
 - g. Test heater for proper operation.
 - (1) Raise thermostat to a point above ambient air temperature.
 - (2) Check for heat being emitted from the duct heater.
 - (3) If heater is not operating, troubleshoot in accordance with TASK 551-88L-3067.
 - h. Place heater into normal operation.

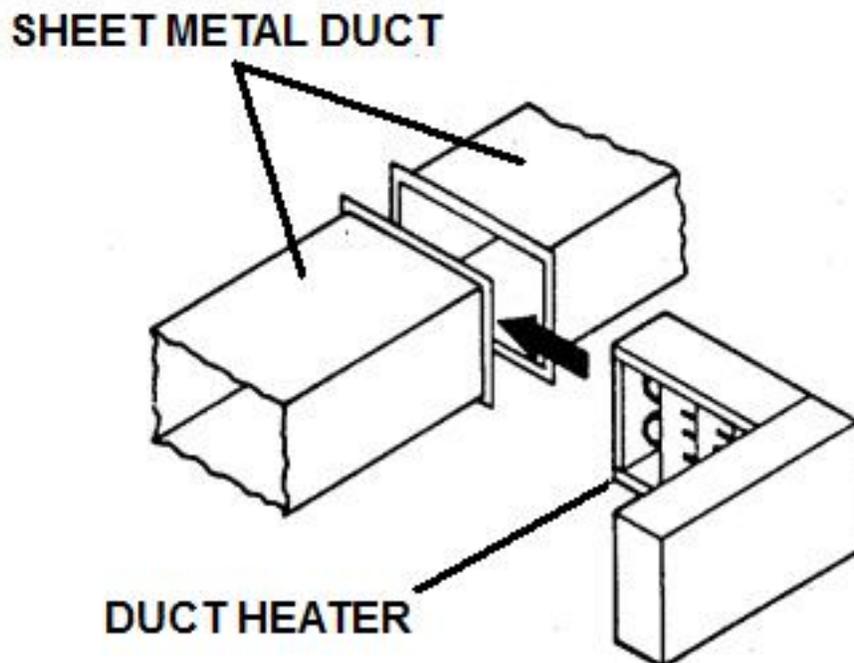


Figure 551-88L-2060_01
Duct Heater

2. Conduct maintenance on unit heaters, (refer to Figure 551-88L-2060_02).
 - a. Lock out and tag out power to the heater.
 - b. Remove electrical access panel.
 - (1) Check wires for looseness.
 - (2) Check porcelain insulators for signs of cracking.
 - c. Remove louver assembly.
 - d. Clean heating element with a wet/dry vacuum and/or low pressure air.
 - e. Clean fan blades.
 - f. Clean and replace louver assembly.
 - g. Replace electrical access panel.
 - h. Check fan motor for cleanliness in accordance with TASK 551-88L-2056.
 - i. Test heater for proper operation.
 - (1) Raise thermostat to a point above ambient air temperature.
 - (2) Check for heat being emitted from the heater.
 - (3) Ensure fan motor is running.
 - (4) If heater is not operating, troubleshoot in accordance with TASK 551-88L-3067.
 - j. Place heater into normal operation.

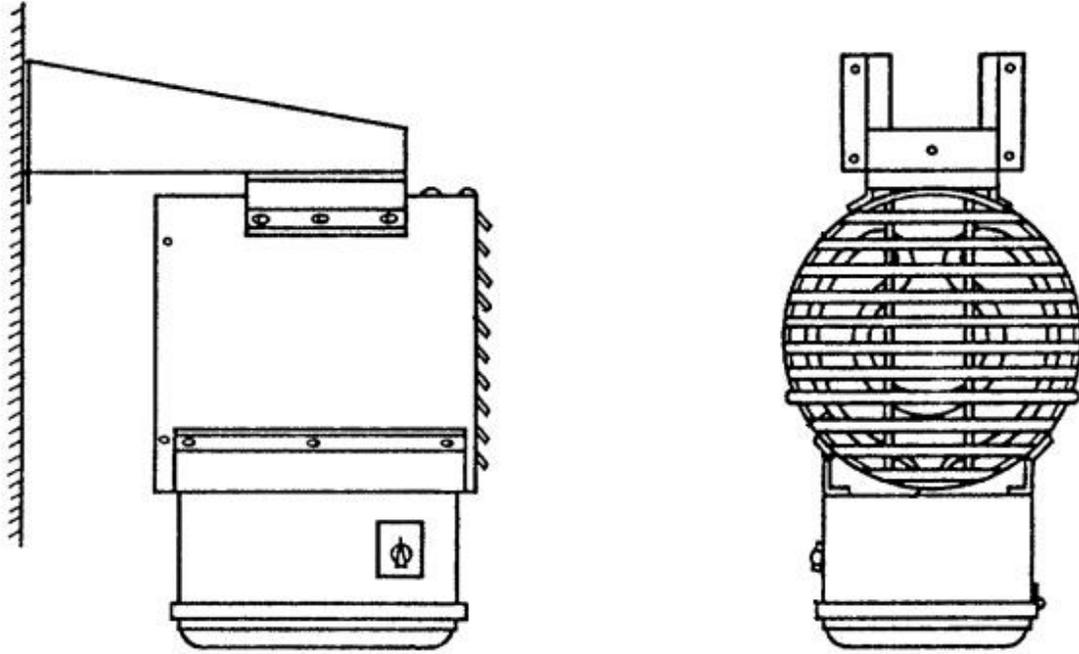


Figure 551-88L-2060_02
Unit Heater

3. Conduct maintenance on convection space heaters, (refer to Figure 551-88L-2060_03).
 - a. Lock out and tag out power to the heater.
 - b. Remove electrical access panel.
 - (1) Check wires for looseness.
 - (2) Check porcelain for signs of cracking.
 - c. Remove louver assembly.
 - d. Clean heating element with a wet/dry vacuum and/or low pressure air.
 - e. Clean fan blades.
 - f. Clean and replace louver assembly.
 - g. Replace electrical access panel.
 - h. Check fan motor for cleanliness in accordance with TASK 551-88L-2056.
 - i. Test heater for proper operation.
 - (1) Raise thermostat to a point above ambient air temperature.
 - (2) Check for heat being emitted from the heater.
 - (3) Ensure fan motor is running.

(4) If heater is not operating, troubleshoot in accordance with TASK 551-88L-3067.

j. Place heater into normal operation.

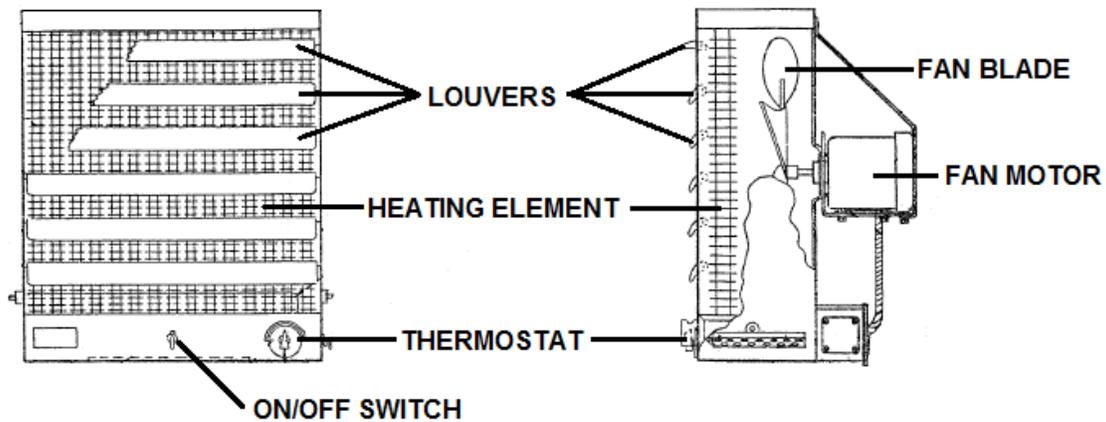


Figure 551-88L-2060_03
Convection Space Heater

4. Conduct maintenance on air handler heating elements, (refer to Figure 551-88L-2060_04).

a. Maintenance should be conducted in conjunction with TASK 551-88L-2059.

b. Lock out and tag out power to the air handler heating element.

c. Remove access panel.

(1) Check wires for looseness.

(2) Check porcelain for signs of cracking.

d. Remove heater from the air handler.

e. Clean heating element with a wet/dry vacuum and/or low pressure air.

f. Replace heater into the air handler.

g. Replace access panel.

h. Test heater for proper operation.

(1) Raise thermostat to a point above ambient air temperature.

(2) Check for heat being emitted from the heater.

(3) If heater is not operating, troubleshoot in accordance with TASK 551-88L-3067.

i. Place heater into normal operation.

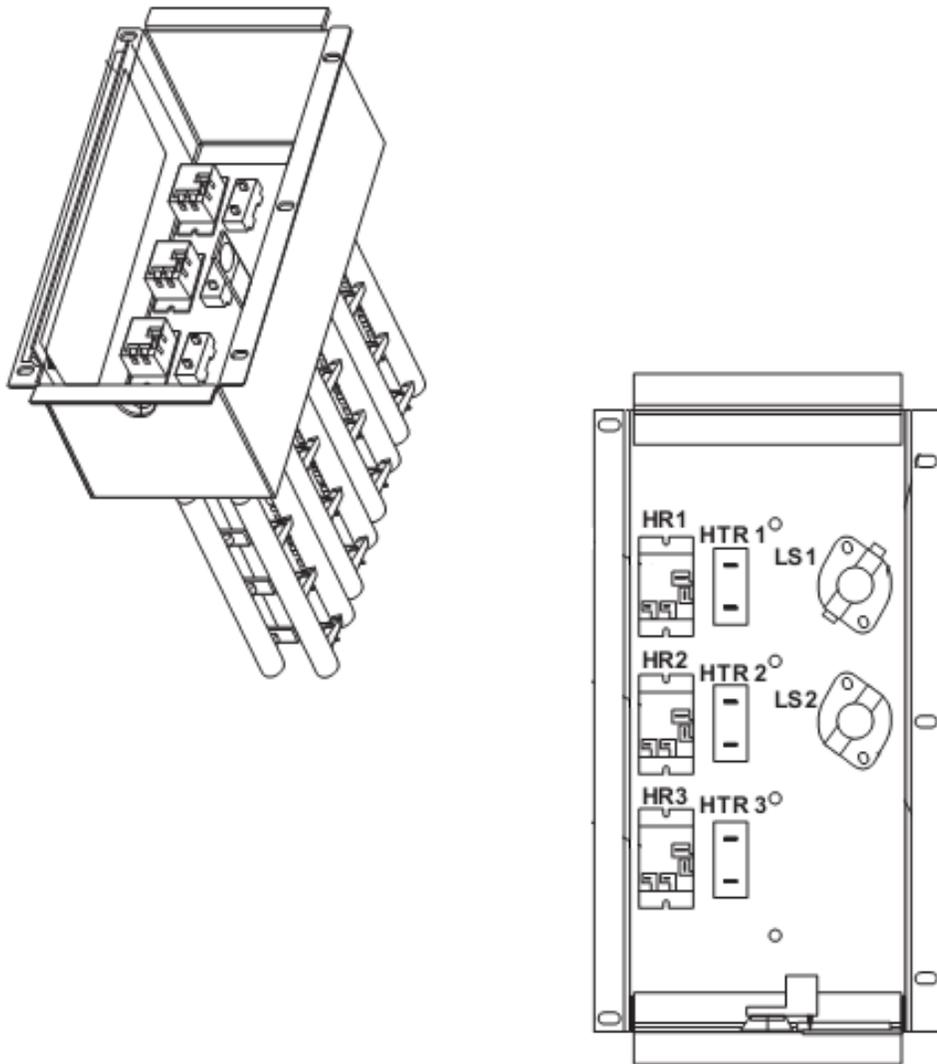


Figure 551-88L-2060_04
Air Handler Heater

(Asterisks indicates a leader performance step.)

Evaluation Guidance: None

Evaluation Preparation: None

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Conducted maintenance on duct heaters.			
a. Locked and tagged out electrical system.			
b. Checked wires for looseness.			
c. Checked porcelain insulators for cracks.			
d. Cleaned heating element.			
e. Tested heater after cleaning.			
2. Conducted maintenance on unit heaters.			
a. Locked and tagged out electrical system.			
b. Checked wires for looseness.			
c. Checked porcelain insulators for cracks.			
d. Cleaned heating element.			
e. Cleaned louver assembly.			
f. Checked fan for cleanliness in accordance with TASK 551-88L-2056.			
g. Tested heater after cleaning.			
3. Conducted maintenance on convection space heaters.			
a. Locked and tagged out electrical system.			
b. Checked wires for looseness.			
c. Checked porcelain insulators for cracks.			
d. Cleaned heating element.			
e. Cleaned louver assembly.			
f. Checked fan for cleanliness in accordance with TASK 551-88L-2056.			
g. Tested heater after cleaning.			
4. Conducted maintenance on air handler heating elements.			
a. Locked and tagged out electrical system.			
b. Checked wires for looseness.			
c. Checked porcelain insulators for cracks.			
d. Cleaned heating element.			
e. Tested heater after cleaning.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TM 55-1905-223-24-17	UNIT, INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE INSTRUCTIONS FOR ENVIRONMENTAL CONTROL SUBSYSTEM FOR LANDING CRAFT UTILITY (LCU) (NSN 1905-01-154-1191) (REPRINTED W/BASIC IN	No	No
	TM 55-1915-208-24&P	UNIT INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR ENVIRONMENTAL CONTROL SYSTEM P/N LM2-WC30-65, 39BA-050, 42CG, 42VF,	No	No
	TM 55-1915-254-10-1	OPERATOR'S MANUAL FOR LOGISTICS SUPPORT VESSEL (LSV-7 & -8)	No	No
	TM 55-1915-254-10-2	OPERATOR'S MANUAL FOR LOGISTICS SUPPORT VESSEL (LSV-7 & -8)	No	No
	TM 55-1925-224-24&P	UNIT, INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR ENVIRONMENTAL CONTROL SUBSYSTEM FOR LARGE TUG (LT) (NSN 1925-01-24	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
551-88L-2064	Maintain a Ventilation System	551 - Transportation (Individual)	Approved
551-88L-1043	Identify Basic Components of a Heating Ventilation and Air Conditioning (HVAC) System	551 - Transportation (Individual)	Analysis
551-88L-3070	Troubleshoot a Ventilation System	551 - Transportation (Individual)	Approved
551-88L-2059	Maintain an Air Conditioning System	551 - Transportation (Individual)	Approved
551-88L-3066	Troubleshoot an Air Conditioning System	551 - Transportation (Individual)	Approved
551-88L-3067	Troubleshoot a Heating System	551 - Transportation (Individual)	Approved
551-88L-2056	Maintain an Electric Motor	551 - Transportation (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
551-88L-3067	Troubleshoot a Heating System	551 - Transportation (Individual)	Approved
551-88L-3066	Troubleshoot an Air Conditioning System	551 - Transportation (Individual)	Approved
551-881-9049	Direct the Maintenance of an Air Conditioning System	551 - Transportation (Individual)	Approved
551-88L-1043	Identify Basic Components of a Heating Ventilation and Air Conditioning (HVAC) System	551 - Transportation (Individual)	Proposed
551-88L-2059	Maintain an Air Conditioning System	551 - Transportation (Individual)	Approved
551-88L-2056	Maintain an Electric Motor	551 - Transportation (Individual)	Approved
551-881-8082	Conduct Field Maintenance on an Air Conditioning System	551 - Transportation (Individual)	Approved
551-88L-2064	Maintain a Ventilation System	551 - Transportation (Individual)	Approved
551-88L-3070	Troubleshoot a Ventilation System	551 - Transportation (Individual)	Approved
551-88L-2039	Conduct The Engine Room Watch	551 - Transportation (Individual)	Approved
551-88L-1043	Identify Basic Components of a Heating Ventilation and Air Conditioning (HVAC) System	551 - Transportation (Individual)	Analysis
551-88L-4033	Review HVAC Theory	551 - Transportation (Individual)	Approved
551-88L-1043	Identify Basic Components of a HVAC System	551 - Transportation (Individual)	Approved

Supported Collective Tasks : None

ICTL Data :

ICTL Title	Personnel Type	MOS Data
88L30 Watercraft Engineer	Enlisted	MOS: 88L, Skill Level: SL3, Duty Pos: TFR, LIC: EN
88L40 Watercraft Engineer	Enlisted	MOS: 88L, Skill Level: SL4, Duty Pos: TGB, LIC: EN, SQI: O
88L20 Watercraft Engineer	Enlisted	MOS: 88L, Skill Level: SL2, Duty Pos: TFS, LIC: EN