

SHIP SYSTEM Ventilation	SUBSYSTEM Supply Systems Exhaust Systems Recirculation Systems	MRC CODE	
SYSTEM	EQUIPMENT Machinery Spaces, Galley/Pantry Exhaust, Laundry, Berthing, Sanitary Spaces, Office and Operating Spaces	RATES	M/H
MAINTENANCE REQUIREMENT DESCRIPTION 1. Conduct SEMAT assessment procedure for interior of ventilation ducting.		TOTAL M/H ELAPSED TIME	
SAFETY PRECAUTIONS 1. Forces afloat comply with NAVOSH Program Manual for Forces Afloat, OPNAVINST 5100.19 series. 2. Ensure compliance with ship's regulations for securing ventilation to critical areas. 3. Ensure all tag-out procedures are in accordance with current shipboard instructions. 4. Personnel involved in ventilation system maintenance should not eat, drink or smoke until hands and face have been thoroughly washed with soap and water.			
TOOLS, PARTS, MATERIALS, TEST EQUIPMENT			
<b>MATERIALS</b> 1. [1102] Rags, wiping 2. [1144] Tag, safety		<b>MISCELLANEOUS</b> 1. Inspection System, Chaser Black & White Mini-Camera 2. Data Sheet, SEMAT Ventilation System Assessment 3. [1365] NSTM Chapter 510 4. [9540] Screwdriver, cordless	
<b>TOOLS</b> 1. [0203] Screw driver, bit set 2. [1198] Screwdriver, flat tip, 6", general purpose 3. [1454] Wrench set, socket, 3/8" sq drive, 23-PC set 4. [1462] Wrench, adjustable, 6" heavy duty, 0.760" jaw open		PAGE 1 OF 5	
<b>NOTE:</b> Numbers in brackets can be referenced to Standard PMS Materials Identification Guide (SPMIG) for stock number identification.			
PROCEDURE <b>Preliminary</b> a. Obtain permission of cognizant officer(s) to perform assessment.			
DISTRIBUTION STATEMENT D Distribution authorized to DOD components and DOD contractors only; critical technology; January 1999. Other requests for this document shall be referred to Naval Sea Systems Command (SEA 04TD). Destroy by any method that will prevent disclosure of contents or reconstruction of the document.		19	AAAA
LOCATION	DATE January 1999	N	

PROCEDURE (Contd)

**WARNING:** Ensure compliance with ship's regulations for securing ventilation to critical areas.

**WARNING:** Ensure all tag-out procedures are in accordance with current shipboard instructions.

- b. De-energize associated vent exhaust/supply/recirc fan and tag "Do Not Operate".

**NOTE 1:** Accomplish either before availability, after availability or before deployment.

**NOTE 2:** Assessment of interior ventilation system ducting shall be accomplished on sections of ducting as follows:

- a. Galley/Pantry Exhaust - exhaust system including:
  - 1. From equipment exhaust hood or accessible inspection cover (assessment to include equipment hood) to weather deck.
  - 2. From exhaust inlets/terminal to weather deck.
- b. Laundry/Sanitary Spaces - exhaust system including:
  - 1. From discharge of clothes dryers to termination of laundry exhaust line.
  - 2. From washroom exhaust inlet to main exhaust duct.
- c. Machinery Spaces - exhaust and supply systems including:
  - 1. From exhaust inlets to weather deck.
  - 2. From weather deck inlet to supply terminals located within the space.
- d. Berthing, Office and Operating Spaces - recirc system including:
  - 1. From supply/return terminals to cooling coils/FCA's

**NOTE 3:** To facilitate access to ductwork, remove ventilation filters in the ducting to be assessed.

**NOTE 4:** While conducting the assessment, the camera lens shall be rotated within the duct, as practicable, to attain a 360° evaluation.

**NOTE 5:** Mini-camera lens should be wiped clean with rag after each insertion to ensure clear video feed to monitor.

**NOTE 6:** Conduct 'point of reference' imaging of measured sample items on view screen prior to conducting assessment to establish a SAT/UNSAT condition reference.

PAGE 2 OF 5

AAAA

N

**TABLE I**

Ventilation System Condition Assessment Criteria	
System Type	SAT Criteria
<u>Supply Systems</u>	No accumulation of dirt, lint, dust, rust or grease in excess of 1/32". No debris or foreign materials larger than 1/8". No corrosion/physical damage to vent structure, fan, or heating/cooling coils. No condensation build-up in way of coils, filters or fans.
<u>Fire Hazardous System</u> This designation applies to Exhaust systems in spaces where an inherent hazard exists due to a higher probability of fire or sparking. These systems are typically found in Laundry, Galley, Bakery, Pantry and Machinery Spaces	No accumulation of dirt, lint, dust, rust or grease in excess of 1/16". No debris or foreign materials larger than 1/8". No corrosion/physical damage to vent structure, fan, or heating/cooling coils. No condensation build-up in way of coils, filters or fans.
<u>Recirc and Exhaust Systems</u> This criteria applies to all Recirculation Systems and all Exhaust Systems not designated as Fire Hazardous Systems.	No accumulation of dirt, lint, dust, rust or grease in excess of 1/8". No debris or foreign materials larger than 1/4". No corrosion/physical damage to vent structure, fan, or heating/cooling coils. No condensation build-up in way of coils, filters or fans.

**NOTE 7:** Table I contains the Condition Assessment Criteria which shall be utilized for determining the SAT/UNSAT condition of all ventilation systems assessed.

**1. Conduct SEMAT Assessment Procedure for Supply, Exhaust and Recirc System Interior Ventilation Ducting**

A. Fan/Heating/Cooling Coil Assembly Access

1. Remove the access covers located on the intake side of the fan and the inlet and outlet sides of heating/cooling coils for the system to be assessed.

PROCEDURE (Contd)

A. Fan/Heating/Cooling Coil Assembly Access (continued)

2. Assess interior duct, fan and heating/cooling coils by inserting mini-camera and video push cable through access opening. Assessment shall include the condition of the fan, heating/cooling coils and the length of attached ducting accessible by the video push cable, up to 40 feet on both the intake and discharge sides of the heating/cooling coils and the intake side of the fan. Vane turns shall be assessed for dirt accumulation and air flow restrictions.
3. Determine the condition of the ventilation system being assessed in accordance with the criteria identified in Table I.
4. Capture "freeze-frame" pictures from the video feed, for the following conditions discovered, for inclusion with the condition report:
  - a. Two 'typical condition' pictures for each 40 feet of interior vent assessed to be in satisfactory condition.
  - b. Two 'typical condition' pictures for each 40 feet of interior vent assessed to be in unsatisfactory condition.
5. Results of assessment shall be recorded on SEMAT Ventilation System Data Sheets.
6. Remove video push cable and mini-camera from access opening.
7. Reinstall all previously removed access covers.

B. Discharge/Inlet/Terminal Access

1. Verify the accessibility of the mini-camera and video push cable at the discharge/inlet/terminal. Where required, remove the cover from the nearest inspection access opening for access.
2. Assess interior duct by inserting mini-camera and video push cable. Assessment shall include the condition of the length of attached ducting accessible by the video push cable, up to 40 feet. Vane turns shall be assessed for dirt accumulation and air flow restrictions.
3. Determine the condition of the ventilation system being assessed in accordance with the criteria identified in Table I.
4. Capture "freeze-frame" pictures from the video feed, for the following conditions discovered, for inclusion with the condition report:
  - a. Two 'typical condition' pictures for each 40 feet of interior vent assessed to be in satisfactory condition.
  - b. Two 'typical condition' pictures for each 40 feet of interior vent assessed to be in unsatisfactory condition.
5. Results of assessment shall be recorded on SEMAT Ventilation System Data Sheets.

PAGE 4 OF 5

AAAA

N

PROCEDURE (Contd)

B. Discharge/Inlet/Terminal Access (continued)

6. Remove video push cable and mini-camera.
7. Reinstall all previously removed access covers.
8. Reinstall all previously removed ventilation exhaust/recirc filters.
9. Remove safety tags.
10. Report completion of assessment to cognizant officer(s).

**2. Discrepancy/Unsatisfactory Condition Reporting**

- A. Report all discrepancies/unsatisfactory conditions identified on applicable SEMAT reporting forms (2-K or Material Assessment Form).
  1. Any ventilation system identified as having discrepancies or unsatisfactory conditions shall be recommended for cleaning in accordance with NSTM Chapter 510.

PAGE 5 OF 5

AAAA

N