

NAVSEA
STANDARD ITEM

FY-23

ITEM NO: 009-107
DATE: 01 OCT 2021
CATEGORY: II

1. SCOPE:

1.1 Title: Piping System Cleanliness Restoration and Flushing (Non-Nuclear); accomplish

2. REFERENCES:

2.1 Standard Items

2.2 S9AA0-AB-GOS-010, General Specifications for Overhaul of Surface Ships (GSO)

2.3 0902-018-2010, General Specifications for Deep Diving SSBN/SSN Submarines

2.4 S9086-RK-STM-010/CH-505, *Piping Systems*

2.5 MIL-STD-1330, Precision Cleaning and Testing of Shipboard Oxygen, Helium, Helium-Oxygen, Nitrogen Systems, and Hydrogen Systems

2.6 MIL-STD-419, Cleaning, Protecting, and Testing Piping, Tubing, and Fittings for Hydraulic Power Transmission Equipment

2.7 MIL-STD-1622, Standard Practice for Cleaning of Shipboard Compressed Air Systems

3. REQUIREMENTS:

3.1 Accomplish the general cleaning requirements of 2.2 through 2.4 for new, modified, or repaired non-nuclear piping systems and components of nuclear and non-nuclear powered naval vessels. Accomplish the system cleaning requirements of 2.5 through 2.7.

3.1.1 *Where references 2.5 through 2.7 do not contain specific cleanliness exit criteria requirements, clean to the cleanliness levels assigned in section 505j2 of 2.2.*

3.2 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of compressed air systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 551 of 2.2 and 2.7.

(I)(G) “VERIFY CLEANLINESS”

3.2.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.2.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.3 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of oxygen, nitrogen, and helium systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 552 of 2.2 and 2.5.

(I)(G) “VERIFY CLEANLINESS”

3.3.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.3.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.4 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of hydraulic systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 556 of 2.2 and 2.6.

(I)(G) “VERIFY CLEANLINESS”

3.4.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.4.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.5 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of fuel oil systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 541 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.5.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.5.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.6 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of steam systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 253 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.6.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.6.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.7 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of condensate systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 255 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.7.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.7.2 *Verify proper equipment and setup following each configuration change prior to starting flush*

3.8 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of lube oil systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 262 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.8.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.8.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.9 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of each fresh water system must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 532 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.9.1 *Verify cleanliness in accordance with acceptance standards for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.9.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.10 Accomplishment of a Process Control Procedure (PCP) for each cleaning operation of refrigerant systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and *section 516 of 2.2.*

(I)(G) “VERIFY CLEANLINESS”

3.10.1 *Verify cleanliness in accordance with acceptance standards for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.10.2 *Verify proper equipment and setup following each configuration change prior to starting flush.*

3.11 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of HP/LP steam drains must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 534 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.11.1 *Verify cleanliness in accordance with acceptance standards for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “VERIFY PROPER EQUIPMENT AND SETUP”

3.11.2 Verify proper equipment and setup following each configuration change prior to starting flush.

3.12 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of divers air systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 592 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.12.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.12.2 Verify proper equipment and setup following each configuration change prior to starting flush.

3.13 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of gasoline and JP-5 systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 542 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.13.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.13.2 Verify proper equipment and setup following each configuration change prior to starting flush.

3.14 Accomplishment of a Process Control Procedure (PCP) for the cleaning, flushing, and acceptance criteria of distillate piping systems must be in accordance with NAVSEA Standard Items (See Note 4.2) and Section 531 of 2.2.

(I)(G) “VERIFY CLEANLINESS”

3.14.1 Verify cleanliness in accordance with acceptance standards *for each leg of the flush when multiple flushing legs are used or a single verification if one complete system flush is used.*

(V)(G) “**VERIFY PROPER EQUIPMENT AND SETUP**”

3.14.2 Verify proper equipment and setup following each configuration change prior to starting flush

4. NOTES:

4.1 This Standard Item does not apply to systems of nuclear-powered ships covered by NAVSEAINST 9210.36, Steam Plant Cleanliness Control, or nuclear piping systems on nuclear-powered ships.

4.2 If a Process Control Procedure (PCP) of 3.2 through 3.14 is required; the use of Category II Standard Item 009-09 “Process Control Procedure (PCP); provide and accomplish” of 2.1 will be specified in the Work Item.

4.3 For boats and craft 65 feet or less in length the requirement for a Process Control Procedure (PCP) for cleaning, flushing and acceptance criteria of the system is not applicable.