4 OCT 2021

Waterfront Maintenance Note 20

The MK41 Vertical Launching System (VLS) Cell Hatch Refurbishment and Replacement

The following references are provided to assist ships force in preparation for overhaul of VLS Cell Hatches.
References:

(a) IMS No. 4810-6692849-0019, Cell Hatch; Overhaul.
(b) NAVSEA Instruction 8394.2F, Mk41 VLS Safety and Design Precepts.
(c) Mk41 VLS Standing Instruction 86-2B.
(d) SW394-AF-MMO-050/VLS, Vertical Launching System Fault Isolation (Mk41 Mods 0 and 2).
(e) SW394-AF-MMO-060/VLS, Vertical Launching System Fault Isolation (Mk41 Mods 7 and 15).
(f) SW394-AF-COM/000, Vertical Launching System Computer Operators Manual.
(g) MIP 7211/015, MRCs 2M-IR, Cell and Uptake Hatch test and inspection.
(h) MIP 7211/079, MRCs 2M-IR Cell and Uptake Hatch test and inspection.
(i) MIP 7211/094, MRCs 2M-IR Cell and Uptake Hatch test and inspection.
(j) Joint Fleet Maintenance Manual (JFFM) COMFLTFORCOMINST 4790.3.
(k) SW304-AF-MDB-OI0, NAVSEA Certified Test Director/System Maintenance Technician manual.

1. Purpose: The purpose of this Waterfront Maintenance Note is to define the specific ship board / SERMC responsibilities that are required to support Mk41 VLS cell hatch overhaul and cell hatch replacement onboard ships. Adherence to this procedure will enable all Mk41 VLS systems home ported in the Mayport region to receive technical assistance with cell hatch replacement and overhauls when required due to failure during maintenance tests, inspections and concurrence with SERMC VLS Subject Matter Experts (SME's).

2. Due to the harsh environment and normal cell hatch aging, cell hatch failures on Mk41 VLS ships are increasing. Failures are attributed to corrosion of the Trunnion bearing area due to salt-water intrusion. The cause of the water intrusion is due to deteriorated O-ring or insufficient O-ring compression between the hatch brackets and the trunnion housing. There are

two replacement options for correcting a failed cell hatch on board a ship:

a. Requisition a cell hatch assembly from Navy Supply at a cost of approximately $50K each in OPTAR funding.

b. Utilize the cell hatch overhaul/replacement pool at SERMC at a cost of approximately $5K each to maintenance dollars. This is the preferred method due to cost savings but may have to be scheduled based on current waterfront demand on rotate pool.

SERMC (Ordnance Refurb Services Code 244) has been equipped and certified by the In-Service Engineering Agent (ISEA) to conduct maintenance and repairs on VLS cell hatches IAW Ref (a). Per Refs (b) and (c), both replacement options require a NAVSEA Certified Test Director (TD) or System Maintenance Technician (SMT) to replace the cell hatch assembly's onboard ships.

3. Procedures:

a. Ship's Force shall:

(1) Perform maintenance and fault isolation IAW Ref. (d) through (i) and report any discrepancies with any cell hatch assembly that does not pass timing requirements to the VLS SME at SERMC Code 295. This reporting should be done IAW Ref (j) by submitting a JSN for tech assist but also should be followed up by a phone call or e-mail to the VLS SME.

(2) When suspect cell hatch is identified as a replacement candidate by the VLS SME, submit two 2-kilos(See sample write-ups below), into the ships CSMP for accomplishment by SERMC at the earliest available opportunity. If VLS SME determines that SERMC cell hatch rotatable pool demand cannot support the ship's requirements, only the first 2-kilo needs to be submitted and then ships force must submit a requisition for a cell hatch assembly via NSN 2040-01-345-5961.

Sample 2-Kilos:

LAUNCHER/MODULE/CELL, CELL HATCH ASSEMBLY REQUIRES REPLACEMENT DUE TO LEAKING AT TRUNNION -XXX- REQUEST SERMC CODE 295 REMOVE/INSTALL/ADJUST CELL HATCH ASSEMBLY.

And/Or:

LAUNCHER/MODULE/CELL, CELL HATCH ASSEMBLY IS LEAKING AT INTERNAL TRUNNION BEARINGS DUE TO FAILED O-RINGS IN THE TRUNNION ARMS -XXX- REQUEST SERMC CODE 244 OVERHAUL CELL HATCH ASSEMBLY IAW IMS PROCEDURE # 4810-66928489-0019. SUSPECT CELL HATCH TO BE REMOVED/INSTALLED/ADJUSTED BY CODE 295 VIA ANOTHER JSN.

If suspect cell is loaded with ordnance, ships force shall INOP the cell at the LCU from further use IAW Ref (f) and schedule for ordnance off-load / relocation at the earliest opportunity so that suspect cell hatch assembly can be replaced.

b. SERMC Code 295 (VLS FTA) shall:

(1) Respond to ships force tech assist request to determine if suspect cell hatch is a replacement/overhaul candidate.

(2) Verify if the SERMC cell hatch rotate pool demand can accommodate replacement of suspect cell hatch onboard ship and within the ship's operational schedule. If not, then recommend ship procure replacement cell hatch assembly from Supply system via NSN 2040-01-345-5961.

(3) Once replacement hatch is received, notify ships force to schedule crane services. Crane services will be scheduled by ship's force supply and will be coordinated between ship's force and SEMC Code 295.

(4) Replace suspect cell hatch assembly onboard ship IAW Ref (k) and ship's force 2-kilo Maintenance Work Order (MWO).

c. SERMC Code 244 shall:

(1) Upon receipt of MWO for cell hatch assembly removed from the ship, ensure cell hatch overhaul kit and other Materials are ordered to overhaul cell hatch.

(2) Overhaul cell hatch assemblies IAW Ref (a).

(3) Ensure cell hatch overhaul RFI queue remains supplied to support current demand.

4. Points of Contact: For further guidance or information contact SERMC VLS SME: 904-270-5126 x3173.