

USS OMAHA (LCS 12) TEMPORARY STANDING ORDER NUMBER 073

Date: 08 Jul 21

Cancellation Date: 08 Jan 22

1. References: (a) LCS-12-0001-2020
(b) Email from NAVSEA 05D to CSD 11 N4
(c) MSG DTG 121730Z MAR 20
2. Component: INDEPENDENCE CLASS Variant FR 35, 36, and 46 Structural cracks
3. Problem Discussion/Degree of Non-Compliance: NAVSEA assessed LCS 4-26 and 28 have under-designed structural defects at FR 35, 36, and 46. Metal fatigue is assessed to be caused from stresses in the lateral and vertical plane. To limit crack propagation, speed and sea state restrictions are imposed.
4. Affected Watch Stations: OOD, RCO
5. Required Actions: The following restrictions and instructions are implemented to track and reduce metal fatigue at FR 35, 36, and 46:
 - 1) Ship operations restricted to 15 knots in Sea State (SS) 4 (max significant wave height 2.5m/8.2ft), avoiding bow and beam seas as far as practicable. Ship should follow published Seaway Operator Guidance (SOG) for SS 0-3.
 - 2) No operation in SS 5 or greater. If SS 5 is unavoidable, ship should slow down to 10 knots if in head, bow, or beam seas.
 - 3) All cracks shall be marked and dated by maintenance team. Ships force shall conduct daily inspections while underway to check for crack growth, or after ship enters SS4 or above. If crack growth of 6 or more inches is discovered while underway, reduce speed and notify NAVSEA.
 - 4) If required, ship can increase speed up to 18 knots to conduct UNREP while in SS4. Upon completion, ship should immediately reduce speed to 15 knots or less and inspect cracking to ensure cracks have not grown by 6 inches or more.
 - 5) Cracks in side shell can be covered with clear RTV to keep water out, if required, assuming no impact to ability to check for possible crack growth.
 - 6) Detailed inspection by maintenance team conducted upon return to port. If cracks have grown, inspection results should be uploaded to DFS for extension request for NAVSEA review.

6. Cancellation Criteria: TSO 073 will remain in effect until Ship's Design Manager institutes a Class Advisory that includes how to address cracking in the 01 Level and all repairs are complete.

Reviewed:

(b) (6), (b) (7)(C)

Engineer Officer

Reviewed

(b) (6), (b) (7)(C)

Commanding Officer

Advisory**Tracking Record**

(ATR) #:

PMS505-CLAD-LCS-2-0001-2020

ATR State

ALERT**ATR Date Time Group (DTG)**

101500Z FEB 20

*** Subject**

INDEPENDENCE VARIANT STRUCTURAL CRACKING AT FRAME 36 AND FRAME 45 ON THE 01 LEVEL

Originator Name

(b) (6), (b) (7)(C)

Originator Activity

NAVSEA PMS 505F

Originator Email

(b) (6), (b) (7)(C)

Originator Phone

(b) (6), (b) (7)(C)

POC Name

(b) (6), (b) (7)(C)

POC Activity

NAVSEA PMS 501T

POC Email

(b) (6), (b) (7)(C)

POC Phone

(b) (6), (b) (7)(C)

TPOC Name**TPOC Activity****TPOC Email****TPOC Phone****ESWBS 1****ESWBS 2****ESWBS 3****SWLIN 1****SWLIN 2****SWLIN 3****ATR Attachments:**

Filename	Restriction	Uploader	Uploaded	Size
121730Z MAR 20 PEO USC WASHINGTON DC LCS CLASS ...	CUI	(b) (6), (b) (7)(C)	03/13/2020	23.07 KB
REF A DFS LCS-4-1040-2019_QA12.pdf	CUI	(b) (6), (b) (7)(C)	03/13/2020	288.52 KB
REF B NSWCCD - 0002 - 20.pdf	CUI	(b) (6), (b) (7)(C)	03/13/2020	5.79 KB
REF C LCS-DM-S-023674_(01-LVL DECK CRACK).pdf	CUI	(b) (6), (b) (7)(C)	03/13/2020	865.30 KB

Advisory Applicability:LCS-2LCS-10LCS-18LCS-26LCS-34LCS-4LCS-12LCS-20LCS-28LCS-6LCS-14LCS-22LCS-30LCS-8LCS-16LCS-24LCS-32**NAVSEA Release**

Released by	Date	Activity	Email	Phone	NAVSEA MSG
(b) (6), (b) (7)(C)	03/13/2020	NAVSEA PMS 505F	(b) (6), (b) (7)(C)		

COMNAVSURFPAC Release

Released by	Date	Activity	Email	Phone	CNSP Re-Add MSG
(b) (6), (b) (7)(C)	03/20/2020	COMNAVSURFPAC	(b) (6), (b) (7)(C)		R 192230Z MAR 20 PMS505-CLAD-LCS-2-0001-2020.pdf [CUI]

COMNAVSURFPAC Initial Completion Date (ICD): 03/20/2020

CONTROLLED UNCLASSIFIED INFORMATION

Task #1 SYSCOM**Action**

RECOMMENDED ACTION 5.1: REGIONAL MAINTENANCE CENTERS INSPECT 01 LEVEL, BOTH PORT AND STBD, WHERE THE SHELL PLATE VERTICAL FLAT BAR MEETS THE DECK BETWEEN FRAMES 35-36 AND 45-46. CLEARLY MARK AND DATE THE ENDS OF ANY CRACKS SO SHIPS' FORCE CAN MONITOR FOR CRACK GROWTH. A. REPORT INSPECTION COMPLETION STATUS AND FINDINGS IN EARRTS. B. UPLOAD INSPECTION RESULTS AND PHOTOS INTO EDFS FOR CRACKING DISCOVERED DURING INSPECTIONS.

Assignee

SWRMC

Required Completion Date

08/31/2020

Reviewers

SEA 05D5 SDM - In-Service LCS-2

Task Attachments**Task Applicability**

[LCS-2](#)
[LCS-10](#)
[LCS-18](#)
[LCS-26](#)
[LCS-34](#)

[LCS-4](#)
[LCS-12](#)
[LCS-20](#)
[LCS-28](#)

[LCS-6](#)
[LCS-14](#)
[LCS-22](#)
[LCS-30](#)

[LCS-8](#)
[LCS-16](#)
[LCS-24](#)
[LCS-32](#)

Task #2 ALERT**Action**

RECOMMENDED ACTION 5.1: C. UNTIL EACH STRUCTURAL CRACKING DFS IS APPROVED, NAVSEA RECOMMENDS RESTRICTING SHIPS TO OPERATE BELOW 15 KNOTS AT SEA STATE 4 AND NOT OPERATE ABOVE SEA STATE 4 TO LIMIT FURTHER CRACK GROWTH. OPERATIONS IN SEA STATES 0-3 SHALL FOLLOW THE PUBLISHED SOG. THE APPROVED DFS WILL PROVIDE SPECIFIC RECOMMENDATIONS MEETING OPERATIONAL RESTRICTIONS FOR SPEED AND SEA STATE ON A CASE-BY-CASE BASIS UNTIL CRACKS ARE REPAIRED IAW REF (B) OR (C). STRUCTURAL FIRE PROTECTION (SFP) MAY BE TEMPORARILY REMOVED TO FACILITATE INSPECTIONS. D. IF A SHIP ENCOUNTERS SEAS ABOVE SEA STATE 4, SHIPS FORCE SHALL VISUALLY INSPECT THE MARKINGS FOR INDICATIONS OF CRACK GROWTH BEYOND 6 INCHES, ALERT THE LOCAL TECHNICAL AUTHORITY OF ANY CHANGE AND PROVIDE THE CLAD POCS WITH UNDERWAY ENVIRONMENTAL AND SHIP SPEED DATA TO FACILITATE ANALYSIS OF CONDITIONS CAUSING CRACK PROPAGATION.

Assignee

SHIP'S FORCE

Compliant State Restricted: No**Reviewers**

TYCOM

Task Attachments**Task Applicability**

[LCS-2](#)
[LCS-10](#)
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Task #3 SYSCOM**Action**

RECOMMENDED ACTION 5.2 AND 5.3: C. NSWC CODE 65 WILL TEMPORARILY MODIFY THE SOG UPON APPROVAL OF THIS CLAD UNTIL ADDITIONAL STRUCTURAL MODIFICATIONS IAW PARAGRAPH 5.3 ARE EXECUTED. D. ONCE REFERENCES (B) OR (C) ARE EXECUTED, THE SHIP WILL BE SAFE TO OPERATE WITHIN THE ACCEPTABLE "GREEN" REGIONS OF THE MODIFIED SOG POLAR PLOTS FOR SPEED AND HEADING. THESE LOCATIONS WILL SUBSEQUENTLY BE INCORPORATED INTO LCS INDEPENDENCE VARIANT CRACK INSPECTION PLANS. LONG TERM: NSWCDD 65 WILL EVALUATE THE STRUCTURE BETWEEN FRAMES 33-48 FOR POTENTIAL DESIGN MODIFICATIONS WHICH MAY BE REQUIRED FOR EXECUTION IN A FUTURE SHIP CHANGE DOCUMENT (SCD). THE ADDITIONAL STRUCTURAL MODIFICATIONS MAY BE NECESSARY FOR A SHIP TO RETURN TO FULL COMPLIANCE WITH THE APPROVED SOG.

Assignee

NSWCCD

Required Completion Date

08/31/2020

Reviewers

SEA 05D5 SDM - In-Service LCS-2

PMS 505 PEO LCS

Task Attachments**Task Applicability**LCS-2 (P) **USS INDEPENDENCE**

Response:

Review(s): 2 Pending

LCS-4 (P) **USS CORONADO**

Response:

Review(s): 2 Pending

LCS-6 (P) **USS JACKSON**

Response:

Review(s): 2 Pending

LCS-8 (P) **USS MONTGOMERY**

Response:

Review(s): 2 Pending

LCS-10 (P) **USS GABRIELLE GIFFORDS**

Response:

Review(s): 2 Pending

LCS-12 (P) **USS OMAHA**

Response:

Review(s): 2 Pending

LCS-14 (P) **USS MANCHESTER**

Response:

Review(s): 2 Pending

LCS-16 (P) **USS TULSA**

Response:

Review(s): 2 Pending

LCS-18 (P) **USS CHARLESTON**

Response:

Review(s): 2 Pending

LCS-20 (P) **USS CINCINNATI**

Response:

Review(s): 2 Pending

LCS-22 (P) **USS KANSAS CITY**

Response:

Review(s): 2 Pending

LCS-24

(P) USS OAKLAND

Response:

Review(s): 2 Pending

LCS-26

(P) USS MOBILE

Response:

Review(s): 2 Pending

LCS-28

(P) USS SAVANNAH

Response:

Review(s): 2 Pending

LCS-30

(P) USS CANBERRA

Response:

Review(s): 2 Pending

LCS-32

(P) USS SANTA BARBARA

Response:

Review(s): 2 Pending

LCS-34

(P) LCS-34

Response:

Review(s): 2 Pending