

QUICK ACTING WATERTIGHT DOOR CHECK SHEET

FOR: USS _____

DATE: _____

REF: (A) PMS 1671/008
(B) NSTM 600

NOTE: Use associated summary spreadsheet to record data on multiple doors.
This checksheet does not currently cover MAFO doors.

	IAW	YES/ NO
COMPARTMENT LOCATION		
CLOSURE NUMBER		
A. QAWTD INSPECTION [SUMMARY COMMENT]	PMS 1671/SERIES	
JAM NUTS/LOCK NUTS		
1. [JAM NUTS/SELF-LOCKING NUTS LOOSE/MISSING/WRONG] Are all jam nuts/self-locking nuts on dog spindles and operating handle present, tight, and properly installed?	S-1R/S-3R 1.a.(2) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
DOGS/DOG SPINDLE/DOG WEDGES		
2. [DOG SPINDLE SET SCREWS LOOSE/DAMAGED] [DOG SPINDLE BUSHING LOOSE] [DOG SPINDLE STRAIGHT BUSHING SEIZED] [DOG SPINDLE BUSHINGS OR SLEEVE WORN] [DOG THRUST WASHER WRONG MATERIAL] (See FIG 1.) Are the set screws for the flanged dog spindle bushing present, secure, and intact (i.e. not sheared)? (Note: Set screws should be flush or slightly recessed in dog sleeves.) <ul style="list-style-type: none"> Bushing should be held in place by the set screw with no relative motion of the bushing, axial or rotational, when dogging the door. If able to shake the dog spindle either up and down or side to side then either the bushings or sleeves are worn. For self-lubricated bushings, there should be a CRES thrust washer between the dog lever and the face of the flanged bushing. (See FIG 2.) Is the straight bushing free floating in the spindle sleeve (NSTM 2-1.6.i and 2-2.6.i)? 	S-1R/S-3R 1.a.(3,6), 1.c. NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
3. [DOG WEDGES WORN/LOOSE] Is there no indication of excessive wear on the dog wedges and are they securely fastened to the door? <ul style="list-style-type: none"> Wedges are considered worn when its thickness has been reduced to half of its original thickness of 5/16th of an inch at the center or if the leading edge of the taper is less than or equal to 1/16th of an inch. 	S-1R /S-3R 1.a.(12) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
4. [DOGS OUT OF ADJUSTMENT/WORN/MISSING] When the door is operated, do the dogs not make contact with the panel edge prior to engaging the dog wedges? <ul style="list-style-type: none"> Dogs should not chafe panel edges when opening/closing door. 	S-1R /S-3R 1.a.(18) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
HANDLE/CLIP/SPINDLE		
5. [HANDLE CLIP BROKEN/MISSING] Was the spring clip for the operating handle in place, unbroken missing, and without excessive wear? Spring clip positively engages handle in the undogged position.	S-1R/S-3R 1.a.(4) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
6. [EXCESSIVE PLAY IN OPERATING HANDLE] [HANDLE SPINDLE BUSHINGS OR SLEEVE WORN/MISSING] Is the degree of play in the operating handle within acceptable limits: <ul style="list-style-type: none"> With the linkage side handle held in the open position is the movement of the outside handle in the closed direction limited so that it does not obstruct the opening or interfere with the door swing. If able to shake the handle spindle either up and down or side to side then either the bushings or sleeves are worn. 	S-1R/S-3R 1.a.(7), 1.c NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
MATERIAL COMPOSITION		
7. [DOG, SPINDLE NUTS, AND HANDLES WERE NOT CRES ON WEATHER DECK DOOR] Are the dogs, dog spindle nuts, and door operating handles CRES (non-magnetic) on weather deck doors?	S-1R /S-3R 1.a.(16) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
LABELING		
8. [FITTING/ACCESS LABEL PLATE WRONG/MISSING] Is the access closure label plate installed and correct?	GSO SECT 602	
9. [DC CLASSIFICATION LABEL PLATE WRONG/MISSING] Is the DC classification label plate for the door installed and correct?	GSO SECT 602 NSTM 079 V2 DC BOOK	
GASKET		
10. [GASKET DETERIORATED] [PAINT/DEBRIS ON GASKET] [GASKET GAPPED] [EXCESSIVE GASKET PERMANENT SET] [GASKET BULGED] [GASKET NOT SEATED IN GASKET CHANNEL] Is the condition of the gasket satisfactory: <ul style="list-style-type: none"> Gasket is soft and pliable with no cracks. There is no paint, rust, or foreign matter on the gasket. The gasket joint is located at the top of the door. 	S-1R 1.a.(5), 1.h./S-3R 1.a.(5), 1.g. NSTM 600 Ch 14 Sects 2-1.4 and 2-2.4.	

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<ul style="list-style-type: none"> There are no gaps in the gasket joint. Any permanent set or groove in the rubber is less than 1/8 of an inch. The gasket is firmly seated in the gasket channel (note bottom of exterior door) There are no bulges in the gasket (note bottom of exterior door) 		
HINGE		
11. [HINGE COMPONENTS MISSING/WORN] [HINGE MATL WAS NOT BRASS FOR STANDARD DOOR] [HINGE ADJUSTING YOKE MISSING] Are the hinge pins, hinge pin collars/nuts, hinge washers, yoke pins, yoke washers, and cotter pins in place without evidence of excessive wear? (See Fig 3.) <ul style="list-style-type: none"> Indications of hinge pin/washer wear or enlarged hinge pin holes: <ul style="list-style-type: none"> Door gives more than 3/16" when the open door is pushed toward the hinge. Knife-edge rubs against gasket channel. Door panel rubs against dogs when opening or closing. Hinge washers are worn thin to ~1/32". Hinge pin bent or damaged. Raised land ("telltale") on one side of any dog wedge worn – hinge pins worn. Chalk test line parallel but not centered top and bottom – hinge washers are worn or out of adjustment. Chalk test line not parallel or centered – hinge pins may be worn. 	S-1R/S-3R 1.a.(8) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6	
12. [HINGE COMPONENTS MISSING/WORN] [HINGE PIN MATL WAS NOT STAINLESS STEEL FOR MACHALT 538] THIS STEP APPLICABLE TO DOORS WITH MACHALT 538 ONLY Are the hinge pins, yoke pins, thrust washers, hinge pad bushings (flanged), hinge yoke bushings (straight), hinge blade bushings, spacer bushings, spacer washer, and cotter pins in place without evidence of excessive wear? (See Fig 3.) <ul style="list-style-type: none"> See indications in 11. 	S-1R 1.a.(9) NSTM 600 Ch 14 Sect 2-1.6.	
CONROD LINKAGE/LEVERS		
13. [LINKAGE COTTER PINS MISSING] [LINKAGE ASSEMBLY NUTS MISSING] Are all brass conrod collars (round nuts) and cotter pins in place?	NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6	
14. [LINKAGE BUSHING WORN] Is the side to side motion of all conrods less than 1/8 th of an inch? <ul style="list-style-type: none"> If motion exceeds 1/8" then linkage bushings are worn. 	NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6	
15. [CONROD/LEVER STUD LOOSE/WORN] Are all conrod/lever studs stationary during door operation?	NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6	
BINDING		
16. [PAINT INTERFERING WITH FREE DOG/LINKAGE/HINGE MOTION] Is there no indication of paint related binding during door operation?	S-1R 1.f.	
DOOR PANEL		
17. [DOOR OUT OF CENTER] Is the door centered in the frame when closed? <ul style="list-style-type: none"> The clearance between the lip of the gasket channel at the outside panel edge and the knife edge around all sides of the door should be consistent and parallel all around. 	S-1R 1.a.(10)/S-3R 1.a.(9)	
18. [DOOR WARPED] [FRAME WARPED]* *See String test to verify frame warpage. Is there no indication of warpage between the door panel and the frame when closed as evidenced by a greater than 1/8 th of an inch gap between the knife edge and gasket. <ul style="list-style-type: none"> Based on string test, the maximum acceptable warpage of the door frame is 1/8th of an inch. 	S-1R 1.a.(10)/S-3R 1.a.(9) NSTM 600 Ch 14 Sects. 2-1.3 and 2-2.3	
19. [DOOR CORRODED] Are the door panel, bulkhead frame, dog sleeves, connecting rod linkages, and hinge assemblies free of rust and corrosion? <ul style="list-style-type: none"> Note blistered/flaking paint on weather deck doors with WSA coating. 	S-1R 1.a.(11)/S-3R 1.a.(10) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
20. [FIXED LIGHT BROKEN] If a fixed light is installed is the glass intact?	S-1R /S-3R 1.a.(13) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
21. [DEAD LIGHT COVER BROKEN] If a dead light cover is installed does it operate properly?	S-1R /S-3R 1.a.(14) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
22. [DOOR DAMAGED] [DOOR HOOK MISSING/INOP] [DOOR BUMPER MISSING/DEGRADED] Does the door hook securely hold the door and bumper assembly to prevent door/bulkhead damage? <ul style="list-style-type: none"> Note any missing parts or existing structural damage. 	S-1R /S-3R 1.a.(15) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
23. [DOOR ACCESS OBSTRUCTED] Is the operation and access to the door free of any obstruction. <ul style="list-style-type: none"> Door should be able to swing a minimum of 90 degrees. 	S-1R /S-3R 1.a.(17) NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
ALUMINUM DOOR CORROSION		
24. [DIELECTRIC BARRIERS MISSING] [BIMETALLIC CORROSION]	S-3R 1.a.(11)	

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THIS STEP APPLICABLE TO ALUMINUM DOORS ONLY Are the dielectric barriers in place between door panel and dog wedges, scuff plate, and label plate.		
MACHALTS		
25. [MACHALT 538 INSTALLED] Has MACHALT 538 been installed on door? MACHALT 167-31011 (ECP-538) replaces all existing replaceable components in the hinge assemblies of quick-acting watertight/quick-acting airtight (QAWT/QAAT) doors in high traffic locations with upgraded pins and thrust washers. Self-lubricated bushings are installed to correct recurring wear and maintain the integrity of the QAWT/QAAT doors.	NSTM 600 Ch 14 Sect 1-3.	
26. [MACHALT 526 INSTALLED] Has MACHALT 526 been installed on door? MACHALT 167-31010 (ECP-526) is installed on exterior doors, well deck doors, and doors in high moisture/humidity areas. This MACHALT removes the Oilite bronze flanged and straight bushings, jamnuts, packing plungers, string, string packing, and helical springs, and installs sintered bronze flanged and straight bushings, O-rings, T-seals, helical springs, self-locking hex nuts, setscrews, and CRES paint shields. The sintered bronze bushings are impregnated with Elisha Technologies EDC 1270 EPL, and the void space within the sleeve is filled with EDC 1270 EPL grease. MACHALT (ECP-526) also replaces the self-lubricated bushings previously installed by MACHALT 167-31004 (ECP-444) on quick-acting weather doors. MACHALT (ECP-526) is not applicable to the newer style doors equipped with grade 316 CRES spindle sleeves.	NSTM 600 Ch 14 Sect 1-3.	
27. [PAINT SHIELD DAMAGED/SEIZED/MISSING] [PAINT SHIELD/DOG SLEEVE JOINT NOT GREASED] [DOG SPINDLE STRAIGHT BUSHING SEIZED] THIS STEP APPLICABLE TO DOORS WITH MACHALT 526 Is the paint shield undamaged and does it rotate freely when dogging/undogging the door? <ul style="list-style-type: none"> • EDC 1270 grease should be evident at the paint shield/dog sleeve joint. • A loose paint shield indicates that the straight bushing is stuck in the sleeve. 	S-1R 1.e.	
28. [MACHALT 608 INSTALLED] Has MACHALT 608 been installed on door? MACHALT 608 incorporates a wear pad into the 316SST Dog. The existing dog design can be utilized in this design. The wear pads are made from composite material that has been tested (dogged/undogged) more than 1,300k cycles at the NSWCCD-SSES Philadelphia test site. When the wear pad is expended a new dog assembly (complete with wear pad) can be easily installed by Ships Force personnel.	MACHALT 608 Description.	
KNIFE EDGE/FRAME		
29. [PAINT ON KNIFE EDGE] [RUST ON KNIFE EDGE] Is the knife edge free of paint or rust?	NSTM 600 Ch 14 Sects 2-1.6 and 2-2.6.	
30. [FRAME WARPED] [FRAME DAMAGED] [KNIFE EDGE DAMAGED] STRING TEST Was there door frame straightness and knife edge condition within tolerance? <ul style="list-style-type: none"> • The maximum acceptable warpage of the door frame is 1/8th of an inch. • The maximum acceptable variation in knife edge straightness is 1/16th of an inch. 	NSTM 600 Ch 14 Sect.s. 2-1.3 and 2-2.3	
REPAIR		
31. [BEYOND S/F CAPABILITY TO REPAIR] Are the door condition discrepancies beyond Ships Force capability to repair? For example: <ul style="list-style-type: none"> • Aluminum knife edge build-up. • Spindle sleeves corroded to oversize dimensions. 		
B. QAWTD TEST:		
1. [DID NOT MAINTAIN WT INTEGRITY] [DID NOT PASS CHALK TEST] [DOOR OUT OF ADJUSTMENT] CHALK TEST a. Was the door proved to maintain watertight integrity? Watertight integrity is dependent on the following: <ul style="list-style-type: none"> • Satisfactory results from the PMS chalk test. • No gaps in the door gasket. • No holes in the door panel or frame. b. Contributing factors: <ul style="list-style-type: none"> ○ Chalk test line parallel but not centered top and bottom – hinge washers are worn or out of adjustment. ○ Chalk test line not parallel or centered – hinge pins may be worn. 	S-1R /S-3R 1.a.(5) and 2. NSTM 600 Ch 14 Sects 2-1.5 and 2-2.5.	

