



ENGINEERING CHECKS

FFG 7 CLASS (Rev 8)

AUXILIARIES (AX)
PRE-UNDERWAY PHASE
 [FFG 7 CLASS MASTER CHECKLIST REV 3]

Inspect Chain Compressor operation	n/a
Inspect reduction gear lubrication (gauges/sight flows/dipsticks)	n/a
Test crossover valve operation	n/a

5811	ANCHOR WINDLASS
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual Support	NAVSEA/OEM TECH MANUAL
Inspect PMS Support	5811/002
Inspect posted operating/safety instructions and lubrication data	NAVSEA/OEM TECH MANUAL
Test Operate Anchor Windlass with No-Load	5811/002 U-1
Inspect Fluid Samples	5811/002 18M-3 NSTM 262
Inspect for proper HPU fluid levels	n/a
Inspect anchor windlass lubrication IAW PMS requirements	5811/002 S-1R 5811/002 Q-1R
Inspect handbrake is adjusted IAW PMS requirements (recommend within 30 days of MI)	5811/002 A-1
Inspect magnetic brake is adjusted IAW PMS requirements (recommend within 30 days of MI)	5811/002 A-1
Inspect brake linkage assembly	5811/002 U-1
Test wildcat/windlass solenoid switch	n/a
Inspect Gauge Calibration	CRL
Inspect relief valve data is properly posted (if data is not posted, then ship must conduct relief valve test)	n/a
Inspect all flex hoses are properly tested and labeled	NAVSHIPYD PUGET SOUND 261925Z APR99
Inspect flange shields	n/a
Inspect for adequate nitrogen charge for windlass	n/a
Inspect speed limiter	n/a
Inspect for adequate LP air pressure for chain compressor	n/a
Inspect filter differential indications	n/a
Inspect HPU mechanical seal leakage	n/a
Inspect Servo/Replenishment pressures during wildcat operation	n/a

5600 / 5611	STEERING (Inport System Verification)
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	NAVSEA/OEM TECH MANUAL and EOSS
Inspect PMS Support	5600/005 5611/813
Inspect operating/safety instructions and hydraulic system/electrical wiring diagrams are posted	NAVSEA/OEM TECH MANUAL
Inspect fluid samples	5600/005 S-4R NSTM 262
Inspect static mechanical checks	NAVSHIPYD PUGET SOUND 261925Z APR99
Inspect relief valve test tags are within periodicity (if not, test compensator relief valve settings)	5611/813 R-1
Inspect relief valve test tags are within periodicity (if not, test main relief valve settings)	5611/813 R-1 NSTM 562
Inspect flange shields are properly installed	NSTM 505
Inspect steering gear lubrication	5600/005 2W-2
Inspect trick wheel assembly	5611/813 R-2
Test N2 accumulator charge	5611/813 R-2
Inspect proper fluid levels	5611/813 R-2 NAVSEA/OEM TECH MANUAL
Inspect filter indicators	5611/813 R-2
Inspect rudder ram finish	NAVSEA/OEM TECH MANUAL
Inspect rudder ram cylinders for leaks	NAVSEA/OEM TECH MANUAL
Inspect gauge calibration	CRL
Inspect rudder stock grounding straps and post lubrication	5600/005 R-5 NAVSEA/OEM TECH MANUAL
Inspect servo/replenishment pressures are correct	5611/813 R-2
Test the rudder follow up error (1 deg increments at 0 to 5 deg; 5 deg increments at 5 to 25 deg)	5611/813 R-2 NSTM 562
Test the trick wheel stops	5600/005 R-2
Inspect the crush block clearances	5600/005 R-2
Test (inport) rudder swing checks	5611/813 R-2
Test (inport) blocking valve	NSTM 562
Test auxiliary emergency steering pump	n/a
Test manual emergency steering system	5611/813 R-2
Test steering casualty alarm	EOSS

Test pump remote operation and transfer of controls to pilot house	5611/813 R-2
Test for static rudder split (pilot house in control)	n/a
Test for indicator error (pilot house in control)	5611/813 R-2 NSTM 562

5210	FIRE PUMPS (ELECTRIC and STEAM)
Component/Sub-Component	Proposed Procedure
ALL FIRE PUMPS	
Inspect Tech Manual / EOSS support	EOSS NAVSEA/OEM TECH MANUAL
Inspect PMS support	5210/806 5210/008
Inspect gauge calibration	CRL
Inspect transducer calibration	CRL
Inspect pump, motor (casing, packing/mechanical seal, coupling, etc.)	5210/806 R-3/10/30/33 NSTM 503
Inspect coupling guard	5210/806 R-3/33 OPNAVINST 5100.19
Inspect foundation	5210/806 R-3/33 NSTM 503
Inspect ferrous fasteners	5210/806 R-3/33 NSTM 075, 505
Inspect resilient mounts	5210/806 R-3/10/33 NSTM 503 NAVSEA S9073-A2-HBK-010
Inspect grounding straps	5210/806 R-3/33 NSTM 300
Inspect piping & supports	5210/806 R-10/30 NSTM 505
Inspect all flex hoses are properly tested/labeled	5000/009 A-1/A-2 5000/014 A-1/A-2
Inspect piping lagging	5210/806 R-10/30 NSTM 505, 635
Inspect the suction strainer	EOSS NAVSEA/OEM TECH MANUAL
Test remote motor/hydraulic operated suction/discharge valves, interlocks	EOSS 5210/806 R-10/30
Inspect local valves and remote control station (labeling, position indicators, etc)	5210/008 60M-1, S-2
Inspect MHVC station oil level and relief valve test periodicity	5000/005 S-4, A-3 5000/006 2M-1, 36M-4
Test remote start/stop functions	EOSS
Test local start/stop functions	EOSS

Inspect pump operation (design discharge pressure, gages, unusual noise, bearing temps, etc).	EOSS NAVSEA/OEM TECH MANUAL
Inspect for proper seating of check valve and no reverse rotation upon securing pump	EOSS NAVSEA/OEM TECH MANUAL
STEAM DRIVEN FIRE PUMPS	
Inspect lube oil filter indications and oil level	N/A
Test the over speed trip	N/A
Test the speed limiting governor	N/A
Test the turbine auxiliary lube oil pump low-pressure automatic start switch operation	N/A
Test combination exhaust and relief valve	N/A

5512 / 5513 / 5515	LOW and MEDIUM PRESSURE AIR SYSTEM
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	
Inspect PMS Support	
Inspect Gauge Calibration	
Inspect operating/safety instructions are posted	
Inspect compressor oil level and oil samples	
Test compressor pressures and temperatures	
Test compressor capacity control system	
Inspect compressor belt condition	
Test compressor auto control and safety switches	
a. Operational control switches (115/120/125)	
b. Low oil pressure	
c. High discharge pressure	
d. High air and water temp	
Inspect all relief valve testing is within periodicity	
Inspect location of intake/vent supply	
Inspect receiver flask certification	
Test priority valve operation	
Inspect sea water cooling system	
Inspect 50/50 mixture of ethylene glycol	
Test type I and type II dehydrator operation	
a. Gauge calibration	
b. Tower operation	
c. Purge air pressure	
d. Automatic drain operation	
e. Dew point	
f. Inspect PMS and Tech Manual support	

5511 / 5515	HIGH PRESSURE AIR SYSTEM
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	
Inspect PMS Support	
Inspect Gauge Calibration	
Inspect operating/safety instructions are posted	
Inspect compressor oil level and oil samples	
Test compressor auto control and safety switches	
a. Start / Stop switch	
b. Low oil pressure switch	
c. Jacket water temp switch	
d. Compressor temp/pressure monitor operation	
Inspect compressor pressures and temperatures	
Inspect compressor drive belt condition	
Inspect condensate monitoring/drain system	
Inspect all flex hoses are properly tested/labeled	
Inspect all relief valve testing is within periodicity	
Inspect HP air flask certification	
Inspect sea water cooling system	
Inspect air intake/ventilation supply location	
Inspect all HP/LP air reducing stations	
Inspect fresh water pump belts	
Inspect capacity	
Inspect oil wipers	
Inspect pressure regulator valve	
Inspect 50/50 mixture of ethylene glycol	
Inspect seals for oil leaks	

Test high water/generator bearing temp alarm	
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A-002/105-11	EMERGENCY/SHIP'S SERVICE DIESEL GENERATORS
Component/Sub-Component	Proposed Procedure
Note: Overspeed trip is not required if DEI has conducted within the last ninety days and documentation of satisfactory performance is available.	Note: Dead Bus Pick-up & Reverse Power Relay checks are covered under EL.
Inspect Engine Sump Level	EOSS
Inspect Turbocharger Sump Level	EOSS
Inspect Start Air Lubricator Oil Level	EOSS
Inspect Governor Oil Level	EOSS
Inspect Lube Oil Sample	3112/002 R-22D
Inspect J/W Expansion Tank Level	EOSS
Inspect "Do not open access..." and Expansion Tank warning "Poison..." are posted	NAVSEA/OEM TECH MANUAL
Inspect/test fuel valve trip	EOSS
Inspect Relief Valves	3112/002 24M-3
Inspect Flange Shielding	NSTM 505
Inspect For Exhaust Leaks	EOSS
Inspect Filters, Strainers	3112/002 R-3,4,9W
Inspect Governor and Fuel Linkage for Binding	EOSS
Inspect J/W Standby Pump	EOSS
Test Blow In Damper	3421/800 A-3
Test pre-lube system operation	EOSS
Test Jacket Water High Temp Alarm	3112/002 24M-7
Test Lube Oil Filter High DP Alarm	3112/002 24M-7
Test low lube oil pressure alarm	3112/002 S-15
Test Remote Shut Down	3112/002 S-15
Test Local Shut Down	EOSS
Test Barring Device Interlock	EOSS
Test Engine Blow Down	EOSS
Test Local Pneumatic start	EOSS
Test Overspeed Trip	3112/002 24M-16R
Test 80% load for 15 minutes	3112/002 A-10R
Inspect for fuel/lube oil leaks	EOSS
Inspect pyrometer operation	3112/002 A-10R
Inspect manometer	3112/002 A-10R
Inspect sea water cooling pump	EOSS

5140	AIR CONDITIONING PLANTS
Component/Sub-Component	Proposed Procedure
CENTRIFUGAL UNITS (R-114, R-236fa) RECIPROCATING UNITS (R-12, R-134a) (check items below as applicable)	
Note: Some units are not equipped with isolation valves for pressure testing. Transferring a large amount of refrigerant would be required to test and is not advisable. For these installations, switch operation will be accomplished by operational means (e.g., securing/aligning s/w, turning the aux lube oil pump on/off, turning the c/w pump on/off).	Note: Applicable MRCs are used as guides to demonstrate a particular component's performance. Some MRCs may not be accomplished in their entirety.
Inspect Tech Manual / EOSS support	NSTM 516 NAVSEA/OEM Tech Manual
Inspect PMS support	5140/010 (R-12) 5140/012 (R-134a) 5140/805 (R-12 & R-134a)
Inspect operating/safety instructions are posted	GSO 516, 602 OPNAVINST 5100.19 NAVSEA/OEM Tech Manual
Inspect refrigerant logs	5140/010 M-4R 5140/012 M-4R
Inspect material condition	5140/805 R-2
Inspect compressor oil level, oil sample	5140/010 R-9D 5140/012 R-9D EOSS
Inspect moisture indicators	5140/010 W-1R 5140/012 W-1R
Inspect hermetic motor sight glass	N/A
Inspect gauge calibration	CRL
Verify calibration & operation of high pressure switch (236fa)	N/A
Verify calibration & operation of pressure transducers (236fa)	N/A
Inspect oil accumulator pressure (236fa)	N/A

Test safety/control pressure switch device settings and operation High pressure safety/control switch Low pressure safety/control switch Water pressure failure safety switch Oil failure/low oil pressure/differential oil pressure switch Oil temperature safety switch Compressor low pressure control switch Chill water pressure/differential flow switch Low refrigerant temp switch Chill water operating/low temp switch Thermostatic Expansion Valve (TXV)	5140/805 R-5 5140/010 R-4 5140/012 R-4
Inspect/test for system leaks (refrigerant/oil/water)	5140/805 R-2/8 5140/010 S-1R, R-7 5140/012 S-1R, R-7 NSTM 516 Sec. 3
Inspect for compressor shaft seal leaks	NSTM 516 Sec. 3
Inspect coupling guard	OPNAVINST 5100.19 NAVSEA/OEM Tech Manual
Operate/test unit, verify operating parameters, Test capacity control system operation (pressure, temperature) Test current limiter, electronic control module (as applicable) Verify operation of Pre-Rotational Vanes (PRV) & Hot Gas By-Pass Valve (HGBP) (centrifugal units) Inspect capacity control external pneumatic vent connection for proper venting (applies only to Carrier compressors equipped with hydraulic cap control) Test Water Regulating Valve (WRV)	5140/805 R-6/7/9/10 5140/010 A-1/5/7/8 5140/012 A-1/5/7/8 EOSS NAVSEA/OEM Tech Manual
Test compressor suction and discharge valves (reciprocating units)	5140/805 R-5 5140/010 R-5 5140/012 R-5
Inspect/test chill water pump Bearing lubrication Operating parameters Mechanical seal leakage Pump discharge check valve seat tightness Coupling guard	NSTM 503, GSO 503 EOSS NAVSEA/OEM Tech Manual OPNAVINST 5100.19

Inspect Chill Water Expansion Tank Operating level Filling air gap Hose connection warning sign Relief valves and vacuum breakers	5140/010 24M-1 5140/012 24M-1 NSTM 516, 533 GSO 602 EOSS
Inspect sea water system & controls Operate emergency cooling water reducing station Reducing valve and station pilot valve sensing line strainer Seawater regulating valve Condenser (O&I as required) Zinc anodes (O&I as required) Headers, tube sheet, divider plate (O&I as required) Strainers (Hellan, Y, Duplex) (O&I as required)	5140/805 R-2/4/8 5140/010 Q-1R, Q-2R, S-2R, A-3R, R-1/2/8D/12 5140/012 Q-1R, Q-2R, S-2R, A-3R, R-1/2/8D/12 5000/015 (A or R checks as applicable to installation) NSTM 516 EOSS NAVSEA/OEM Tech Manual
Inspect/test sea water pump (as applicable) Operating parameters Bearing lubrication Mechanical seal leakage Pump discharge check valve seat tightness Coupling guard	NSTM 503, GSO 503 EOSS NAVSEA/OEM Tech Manual OPNAVINST 5100.19
Inspect resilient mounts	5140/010 A-4R 5140/012 A-4R NAVSEA S9073-A2-HBK-010
Inspect grounding straps	NSTM 300
Inspect flexible hoses	5140/010 A-6 5140/012 A-6 5000/009 A-1/2 5000/014 A-1/2
Inspect vent exhaust ducting terminal (flow, location, indicators and alarms)	NSTM 516 Sec 4
Inspect cylinder stowage racks	NSTM 516 GSO 516, 671
Inspect replacement refrigerant charge	GSO 516
Inspect lube oil filter/strainer (O&I as required)	5140/010 R-6 5140/012 R-6
Inspect dehydrator (O&I as required)	5140/010 A-2R, R-3 5140/012 A-2R, R-3

Inspect/test refrigerant Purge and Pump Out (PPO) unit/Refrigerant Recovery Unit (RRO) Moisture indicator Oil level Belt drive & belt guard (tension & condition) Compressor cycling (high pressure) switch Material condition (O&I as required) Dehydrator cartridge (O&I as required)	A/C& R Advisory #32 5140/010 A-2R, R-4 5140/012 A-2, R-4 NAVSEA/OEM Tech Manual
Verify halocarbon monitor installation is compatible with refrigerant type. Test halocarbon monitor	NSTM 516 OPNAVINST 5100.19 GSO 516
Inspect for non-condensable gases (as required by when compressor discharge pressure cannot be maintained with WRV)	NSTM 516

5161	REFRIGERATION PLANTS	
Components/Sub-Components	Proposed Procedure	
Inspect Tech Manual / EOSS support	NSTM 516 NAVSEA/OEM Tech Manual	
Inspect PMS support	5161/001 (R-12) 5161/005 (R-134a) 5161/800 (R-12 & R-134a)	
Inspect operating/safety instructions are posted	GSO 516, 602 OPNAVINST 5100.19 NAVSEA/OEM Tech Manual	
Inspect refrigerant logs	5161/001 M-2R 5161/005 M-2R	
Inspect compressor oil level, oil sample	5161/001 R-12D 5161/005 R-12D EOP NAVSEA/OEM Tech Manual	
Inspect moisture indicators	5161/001 W-1R 5161/005 W-1R	
Inspect capacity control external pneumatic vent connection for proper venting (applies only to Carrier compressors equipped with hydraulic cap control)	NSTM 516 NAVSEA/OEM Tech Manual	
Inspect prerotational vane operation and controls	NSTM 516 NAVSEA/OEM Tech Manual	
Inspect gauge calibration	CRL	

Test safety/control pressure switch device settings and operation High pressure safety/control switch Low pressure safety/control switch Water pressure failure safety switch Oil failure/low oil pressure/differential oil pressure switch Compressor low pressure control switch Chill water pressure/differential flow switch Low refrigerant temp switch Chill water operating/low temp switch Thermostatic Expansion Valve (TXV)	5161/800 R-4 5161/001 18M-2, 18M-4, U-3/4 5161/005 18M-2, 18M-4, U-3/4 NSTM 516 NAVSEA/OEM Tech Manual
Inspect/test for system leaks (refrigerant/oil/water)	5161/800 R-5 5161/001 S-1R 5161/005 S-1R NSTM 516 Sec. 3
Inspect for compressor shaft seal leaks	NSTM 516 Sec. 3
Inspect coupling guard	OPNAVINST 5100.19 NAVSEA/OEM Tech Manual
Inspect drive belts and belt guards	5161/800 R-5 5161/001 18M-1 5161/005 18M-1
Operate/test unit, verify operating parameters, and verify capacity control system operation	5161/800 R-6 5161/001 18M-2 5161/005 18M-2 EOP NAVSEA/OEM Tech Manual
Test compressor suction and discharge valves	5161/800 R-4 5161/001 U-1 5161/005 U-1
Test/verify evaporator pressure regulator (EPR) and water regulating valve (WRV) setting and operation	5161/800 R-6
Inspect for non-condensable gases (as required by when compressor discharge pressure cannot be maintained with WRV)	5161/001 Q-5R 5161/005 Q-5R
Test/verify refrigeration room door safety device, inspect door seals	5161/001 S-4R 5161/005 S-4R
Inspect gravity type cooling coils for excessive frost build-up	NSTM 516 Sec 4
Inspect drip trough heating coils/cables and indicator lights	NSTM 516 Sec 4
Inspect refrigerator room recirculating fans and indicator light, verify damper operation	GSO 516 NSTM 516 Sec 4

Inspect sea water system Condenser Zinc anodes (O&I as required) Headers, tube sheet, divider plate (O&I as required) Operate emergency cooling water reducing station Stainers (Hellan, Y, Duplex) (O&I as required) Reducing valve and station pilot valve sensing line strainer	5161/800 R-3 5161/001 S-3R, Q-4R, R-13D 5161/005 S-3R, Q-4R, R-13D 5000/015 (A or R checks as applicable to installation) NSTM 516 EOSS NAVSEA/OEM Tech Manual
Inspect resilient mounts	NAVSEA S9073-A2-HBK-010
Inspect grounding straps	NSTM 300
Inspect flexible hoses	5161/001 A-7/8/10/11 5161/005 A-7/8/10/11 5000/009 A-1/2 5000/014 A-1/2
Inspect vent exhaust ducting terminal (flow, location, indicators and alarms)	NSTM 516 Sec 4
Inspect cylinder stowage racks	NSTM 516 GSO 516, 671
Inspect replacement refrigerant charge	GSO 516
Inspect liquid line strainers and filters (O&I as required)	5161/001 R-8 5161/005 R-2, R-8
Inspect dehydrator (O&I as required)	5161/001 A-2R 5161/005 A-2R
Inspect refrigerant recovery unit and vacuum pump	NAVSEA/OEM Tech Manual
Verify halocarbon monitor installation is compatible with refrigerant type Test halocarbon monitor	NSTM 516 OPNAVINST 5100.19 GSO 516

8543	DUMBWAITER
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	
Inspect PMS Support	
Inspect posted operating/safety instructions at each station	
Inspect posted lubrication chart at top station	
Inspect trunk bi-parting doors	
Inspect machinery access cover bolts & nuts	
Inspect machinery oil level	
Inspect hoist machinery mounting hardware	
Inspect hoist drum	
Inspect hoist wire rope and end fittings	
Test slack rope device and limit switch	
Test the hoist brake	
Test the up over travel limit switch	
Test the up deck level limit switch	
Test trunk bi-parting door limit switch	
Inspect car broken rope device	
Inspect car bi-parting door assembly	
Inspect car for missing components	
Test lower level trunk bi-parting doors and limit switch	
Test down over travel limit switch	
Test down level limit switch	
Inspect trunk buffer springs	
Test E-call and sound powered phone system when installed	
Inspect clean out cover mounting hardware	
Inspect motor controller for loose leads, posted placards, grounds and correct fuses	
Inspect dumbwaiter trunk for preservation and cleanliness	
Inspect guide rails	
Test each control station E-stop button	

5651	FIN STABILIZERS
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	NAVSEA/OEM TECH MANUAL EOSS
Inspect PMS Support	5651/002
Inspect Gauge Calibration	CRL
Inspect operating/safety instructions are posted	NAVSEA/OEM TECH MANUAL
Test operational controls	EOSS
Test pressure/temperature switches	5651/002 24M-1
Test limit stop switches	NAVSEA/OEM TECH MANUAL
Inspect HPU relief valves for test data	NSTM 565 NAVSEA/OEM TECH MANUAL
Inspect fin locking devices	NAVSEA/OEM TECH MANUAL
Inspect HPU coupling guard	OPNAVINST 5100.19
Inspect hydraulic system for leaks	NSTM 565
Test: Conduct underway operational roll test	EOSS NAVSEA/OEM TECH MANUAL
Test: Test fin travel equal in both directions	5651/002 A-3

5331	POTABLE WATER PUMPS
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual / EOSS Support	EOSS NAVSEA/OEM Tech Manual
Inspect PMS Support	5331/800
Inspect Gauge Calibration	CRL
Inspect Transducer Calibration	CRL
Inspect Coupling Guard	OPNAVINST 5100.19 NAVSEA/OEM Tech Manual
Test local & remote start/stop functions of potable water pump and priming pump	EOSS 5331/800 R-2/3
Inspect potable water pump and priming pump operation/design discharge pressure, unusual noise, bearing temps, etc.	EOSS 5331/800 R-2/3 NSTM 503 NAVSEA/OEM Tech Manual
Inspect reduced pressure, vacuum breaker and double check valve backflow preventer	5331/800 R-4/5/6
Inspect packing/mechanical seal leakage	NSTM 503
Inspect for dissimilar metals (fasteners & piping)	NSTM 075
Inspect foundation and resilient mounts	5331/800 R-2 NAVSEA S9073-A2-HBK-010 NSTM 300, 506
Inspect all flex hoses are properly tested/labeled	5000/009 A-1/2 5000/014 A-1/2 NAVSHIPYD PUGET SOUND 261925Z APR99
Inspect grounding straps	NSTM 300
Test potable water pump pressure switch	N/A

5331	WATER HEATERS
Component/Sub-Component	Proposed Procedure
Inspect Tech Manual and EOSS Support	NAVSEA/OEM TECH MANUAL
Inspect PMS Support	n/a
Inspect list of heaters onboard and spaces hot water services (berthing/laundry/galley)	CRL
Inspect gauge calibration	NAVSEA/OEM TECH MANUAL
Inspect outlet temp at heater (verify operation)	NAVSEA/OEM TECH MANUAL
Inspect relief valve test data	NAVSEA/OEM TECH MANUAL
Inspect relief valve drain piping	n/a
Inspect cold water inlet pipe for check valve	n/a
Test high temp switch setting	NSTM 505
Test high temp switch warning light	NSTM 505
Inspect lagging condition	n/a
Inspect for steam / water leaks	NAVSEA/OEM TECH MANUAL
Inspect Temp Reg Valve for locking device	NSTM 533
Inspect heater foundation	NAVSEA/OEM TECH MANUAL
Test water temp at basin/spigot	n/a

6641	FAN ROOMS
Component/Sub-Component	Proposed Procedure
Inspect deck condition	GSO 509, 512, 528, 670
- No standing water	GSO 509, 512, 528, 670
- Deck rusted / exfoliated	GSO 509, 512, 528, 670
- Deck drain not installed	GSO 509, 512, 528, 670
- Deck drain missing, not secured within deck socket or inoperative	GSO 509, 512, 528, 670
Inspect deck/bulkheads have no painted over rust	GSO 509, 512, 528, 670
Inspect lighting is operative and covers installed	GSO 509, 512, 528, 670
Inspect adequate lighting present in space	GSO 509, 512, 528, 670
Inspect vent duct condition	GSO 509, 512, 528, 670
- Access covers present	GSO 509, 512, 528, 670
- Access cover fasteners not rusted/missing	GSO 509, 512, 528, 670
- Duct interior is clean	GSO 509, 512, 528, 670
Inspect correct vent/piping system labeling	GSO 509, 512, 528, 670
Inspect fan motor installed correctly (flow)	GSO 509, 512, 528, 670
Inspect filters are clean and can be easily removed	GSO 509, 512, 528, 670
Inspect filter DP gauge is operative	GSO 509, 512, 528, 670
Inspect vent heating element is operative and not deteriorated	GSO 509, 512, 528, 670
Inspect cooling coils are clean	GSO 509, 512, 528, 670
Inspect thermostatic controls are calibrated, connected and operational	GSO 509, 512, 528, 670
Inspect the cooling coil drain is piped to the deck drain and is not clogged	GSO 509, 512, 528, 670
Inspect the proper color coding of piping	GSO 509, 512, 528, 670
Inspect that all hand wheels are present	GSO 509, 512, 528, 670
Inspect for damaged / missing lagging	GSO 509, 512, 528, 670
Test the C/W or steam solenoids are operational	GSO 509, 512, 528, 670
Inspect for chilled water / steam leaks	GSO 509, 512, 528, 670
Inspect for bull's eye and CCOL in space	GSO 509, 512, 528, 670
Inspect for any unauthorized stowed material	GSO 509, 512, 528, 670
Inspect for any unauthorized flammables	GSO 509, 512, 528, 670
Inspect the filter cleaning shop	GSO 509, 512, 528, 670

AUXILIARIES (AX)
PRE-UNDERWAY PHASE
 [FFG 7 CLASS MASTER CHECKLIST REV 3]

5811	ANCHOR WINDLASS DROP AND RETRIEVAL DEMONSTRATION	
Component/Sub-Component	Proposed Procedure	
Test Operate Anchor Windlass with Load	5811/002 U-1	
Test Mechanical Handbrake	5811/002 U-1	
Inspect Servo/Replenishment and Main Relief Pressures during wildcat operation	n/a	
Inspect Anchor drops from the hawsepipe	5811/002 U-1	
Test Magnetic brake	5811/002 U-1	
Inspect motor amperage readings	NAVSEA/OEM TECH MANUAL	

5600 / 5611	STEERING DEMONSTRATION	
Component/Sub-Component	Proposed Procedure	
Inspect proper fluid levels	5611/813 R-2 NAVSEA/OEM TECH MANUAL	
Inspect correct Servo/Replenishment pressures	5611/813 R-2	
Test - Demonstrate timed rudder swing checks/ blocking valve test Ahead (as per provided procedure)	5600/005 R-7 NSTM 562 INSURV NOTE	
Test - Demonstrate timed rudder swing checks/ blocking valve test Astern (as per provided procedure)	5600/005 R-7 NSTM 562 INSURV NOTE	
Inspect for dynamic rudder split from helm indicator	n/a	

5311	WATER PRODUCTION DEMONSTRATION – HEAT RECOVERY EVAPS	
Component/Sub-Component	Proposed Procedure	
Note: Pre-U/W - AX to verify distillers are operational, calibration & safety relief valves are within periodicity. Detailed material inspections are normally conducted during u/w water production.	Note: Pre-U/W - EL will inspect salinity panel & dump valves.	
Inspect PMS and Tech Manual support	5313/002 5313/800	
Inspect gauge calibration	CRL 5313/800 R-1	
Test flow meter	NAVSEA/OEM TECHMAN	
Inspect evaporator shell (sight glasses, diffuser cap and scale buildup) & feed heater relief valve	5313/800 R-1	
Test interlock device between potable water and feed water valves	NAVSEA/OEM TECHMAN	
Inspect feed pump (labeled, packing gland, foundation, seal / gland cavity)	5313/800 R-1	
Inspect brine pump (labeled, packing gland, foundation, seal / gland cavity)	5313/800 R-1	
Inspect distillate pump (labeled, packing gland, foundation, seal / gland cavity)	5313/800 R-1	
Inspect brine pump (labeled, packing gland, foundation, seal / gland cavity)	5313/800 R-1	
Inspect heater drain pump (labeled, packing gland, foundation, seal / gland cavity)	5313/800 R-1	
Inspect flexible hose condition and test tag	5000/009 A-1/A-2 5000/014 A-1/A-2	
Inspect feedwater strainer (foundation and basket)	5313/002 Q-1R 5313/800 R-1	
Inspect pipe labeling and lagging condition	NSTM 505/635	
Test - Demonstrate water production capability during the 4 Hour Water Production Demonstration	NAVSEA/OEM TECHMAN	

5315	WATER PRODUCTION DEMONSTRATION – REVERSE OSMOSIS	
Component/Sub-Component	Proposed Procedure	
Note: Pre-U/W - AX to verify distillers are operational, calibration & safety relief valves are within periodicity. Detailed material inspections are normally conducted during u/w water production.	Note: Pre-U/W - EL will inspect salinity panel & dump valves.	
Inspect Tech Manual Support	NAVSEA/OEM TECHMAN	
Inspect PMS Support	5315/007	
Inspect relief valves are within periodicity	NAVSEA/OEM TECHMAN	
Inspect HP pump oil level	5315/007 R-1D	
Inspect flexible hose condition and test tag	NSTM 505	
Inspect Accumulator Pressure	NAVSEA/OEM TECHMAN	
Test the operation of the product and brine flowmeters	NAVSEA/OEM TECHMAN	
Test - Demonstrate water production capability during the 4 Hour Water Production Demonstration	NAVSEA/OEM TECHMAN	
- Inspect RO to ensure the unit has not been set to produce above maximum recommended capacity (discharge pressure setting, production and sea water injection temperature diagram curve and tables)	NAVSEA/OEM TECHMAN	
- Inspect the operating panel for alarm / unusual conditions.	NAVSEA/OEM TECHMAN	
- Inspect 3 and 20 micron filter differential pressure	5315/007 R-2	
- Inspect all fittings and connections for leaks	NSTM 505	
- Inspect demineralizer operation	5315/007 R-3	
Inspect freshwater flush	5315/007 M-2R	

5681	AUXILIARY PROPULSION UNITS	
Component/Sub-Component	Proposed Procedure	
Inspect Tech Manual and EOSS Support	NAVSEA/OEM TECH MANUAL EOSS	
Inspect PMS Support	2371/002	
Inspect Gauge Calibration	CRL	
Inspect operating/safety instructions are posted	NAVSEA/OEM TECH MANUAL	
Inspect APU raise/lower gear oil levels	2371/002 30M-1	
Test actual vs. ordered position angles	NAVSEA/OEM TECH MANUAL EOSS	
Test all indicator lights illuminate on LOP	NAVSEA/OEM TECH MANUAL EOSS	
Test raise / lower of the APUs	EOSS	
Test: Conduct underway operational test	EOSS NAVSEA/OEM TECH MANUAL	

**ELECTRICAL (EL)
PRE-UNDERWAY PHASE
FFG 7**

3240 / 3112	SHIPS SERVICE DIESEL GENERATORS	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test dead bus pick-up.		A-6R
Test reverse power relays. 3112/002		A-13R
Test auto parallel operation.		IAW EOP
Test manual parallel operation.		IAW EOP
Test manual load shedding.		SHIP'S PROCEDURE
3140	400 HERTZ DISTRIBUTION SYSTEM (CONVERTERS)	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test Frequency Changer 60 Hz Input Circuit Breakers Shunt trips.		A-6
Test split and parallel operation.		IAW EOP / CSOSS
4221	TELL-TALE PANEL/NAVIGATION SIGNAL LIGHT PANEL	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test Navigational Lighting Panel.		R-3
Measure insulation resistance Signal Light Panel.		S-1
Measure insulation resistance of Navigational Lighting Panel.		S-1
4331	ANNOUNCING SYSTEMS	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test general, chemical, and collision alarms from all stations.		Q-1R/R-1
Test IMC from all stations.		Q-1R/R-1

Test general announcing system oscillator / amplifier (BOTH))		Q-1R/R-1
Test 5 MC operation		Q-2R
Measure speaker group insulation resistance.		A-1
Test 6MC operation.		Q-1R/R-1
Test 21MC operation.		Conduct Operational Test
4751	DEGAUSSING SYSTEM	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Conduct linearity test.		M-2R
Conduct ground test.		M-1
Inspect degaussing folder.		NAVSEA TECH MANUAL
3240	AUTOMATIC BUS TRANSFER EQUIPMENT	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test all engineering ABT's.		S-1R
Test all remaining ABTs. (Day two)		S-1R
Test SABT's		18M-4
4371	EVAPORATORS	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test dump valve operation.		S-5, S-6, S-8, S-10, S-15, S-17 Review scheduling aids
Test alarm settings.		S-6 S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-15, S-17 Review scheduling aids
2521	ELECTRIC PLANT CONTROL CONSOLE (EPCC)	

COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test lamps and alarms.		W-1
2521	AUXILIARY CONTROL CONSOLE (ACC)	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test lamps and alarms.		D-1
4373	WIND INDICATING SYSTEM	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test System For Proper Operation.		R-1M
5081	THERMAL IMAGING SURVEY	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Commence Thermal Imaging Throughout The Ship NOTE: Any equipment surveyed that has a temperature rise of 40 degrees centigrade or above (3 or 4 star) must be repaired or tagged out prior to getting underway. The items will not be available until repairs are completed and re-shot for verification		R-1 / R-2
3140	UNINTERRUPTED POWER SUPPLIES (UPS)	
COMPONENT/SYSTEM		PROPOSED PROCEDURE
Test EPCC UPS for proper operation.		R-16Q
Test PLC UPS for proper operation.		R-16Q
Test LOP UPS for proper operation.		R-16Q

ELECTRICAL (EL) UNDERWAY PHASE

NOTE: Electrical Underway Checks Consist Mainly Of Space Walk-Through Throughout The Ship.

In each space inspect the following if applicable:	
(INSPECT) FUSE BOXES	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Are fuses pulled from designated circuits without danger tags affixed?	NSTM 300 - 2.4.1
Are there loose or missing locking nuts or gear adrift?	NSTM 300 – 4.8.1
Are circuits properly labeled for easy identification?	GSO 305E
Are there any bent, twisted, misaligned, or broken fuse clips?	NSTM 300 4.8.1
Is the interior rusty or dirty?	NSTM 300 – 4.8.1/5.2.4
Are fuses of the correct amperage and voltage installed?	GSO 303F NSTM 320 – 1.7.4
Are circuits fed from one set of fuses (except battle lantern circuits) multiple?	GSO 331C
Are fuse clips phosphor-bronze instead of silver plated?	NSTM 300 – 4.8.1.2
Were door hinges broken?	5100.19 SERIES NSTM 300
Are non-silver ferruled fuses installed?	NSTM 300 - 2.5.4
Are circuits over fused?	NSTM 300 – 2.5.4
Is clearance provided to permit complete accessibility for maintenance, repair, renewal of fuses, and testing?	GSO 300D

(INSPECT) BATTLE LANTERNS	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were relay-operated lanterns installed in sufficient number?	NSTM 330 – 1.6.4.3.3.1
Are lanterns installed with suitable bracket assemblies to prevent removal of lantern?	NAVSEA 0964-000-2000 NSTM 300
Were lanterns inoperative?	NSTM 330 – 3.6.2
Were test switches and relay frames grounded?	NSTM 330 – 2.1.8

(INSPECT) BATTLE LANTERNS (CON'T)	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were lanterns located in explosion proof enclosures (prohibit)?	NSTM 330 – 1.6.4.3.2.2
Were NEALS lanterns installed and were they charged (red indicator)?	NSTM 330 – 1.6.4.3.2

Were relay operated lanterns fused?	NSTM 330 – 1.6.4.3.3.3
(INSPECT / TEST) SHORE POWER SYSTEM	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Is shore power being properly rigged?	NSTM 320-2.2.7
Did shore power shunt trip interlocks trip its associated breakers when tested?	IAW PMS IAW EOSS GSO 320D
Was shore power system cabling between the receptacles and the ship's switchboard insulation resistance within EOSS or PMS Limits	SPRU NSTM 300/320
Were shore power indicating lights operative, white in color, and all screws installed?	NSTM 320 – 2.2.9
Were warning signs posted?	GSO 070H
Was there pigtail stowage installed?	GSO 320D
Does the shore power system meet the current standards:	GSO 320D
<ul style="list-style-type: none"> - Have a Viking Connector System - Have AQB-LF400 Amp Circuit Breaker with shunt trip - Have a phase sequencing and phase orientation devices. - Have installed ammeter and selector switch to monitor total shore power current. 	

(INSPECT) CATHODIC PROTECTION SYSTEM	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was the installed Cathodic Protection System operative and adjusted	GSO 633C
Were the rudder grounding straps made of 1-1/2 inch wide braided copper and brazed to the rudder stock and the hull?	NSTM 633 – 3.3.2.7 GSO 633C
Has the system been turned off greater than 15 days?	GSO 633G

Was brush rigging correctly installed?	NSTM 633- 3.3.2.6
Were shaft grounding brushes correctly installed?	NSTM 633 ICCP Tech Manual
Did shaft grounding brushes exhibit full contact with the slip ring?	NSTM 633 – 3.3.2.6 ICCP TECH MANUAL

(INSPECT / TEST) ALARM SYSTEMS

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Test alarm switchboards and panels.	4351/Q-2
Were any alarm and warning systems inoperative or missing parts?	GSO 433J

(INSPECT) ORDER/INDICATING/METERING SYSTEMS

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were Tank Level Indicators (TLI's) out of calibration or inoperative?	GSO 437 E
Were valve position indicator circuits misadjusted or inoperative?	GSO 430H
Were there missing or inoperative salinity cells?	GSO 531B IAW PMS

MOTOR CONTROLLERS

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were interiors dirty, rusty, deteriorated, or contained gear adrift?	NSTM 302-3.3.2 GSO 320F
Were wiring diagrams, schematics or overload heater tables missing?	NSTM 302-3.3.1

MOTOR CONTROLLERS (CON'T)

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was controller electrical wiring properly banded?	ELECT PLT. INST. STD METHODS/GSO 302F
Were Start, Stop, "Emergency Run" or Reset buttons seized, missing or inoperative?	3001/S-1/18M-1
Were rubber boots cracked, torn or missing?	NSTM 300-3.2.2 3001/S-1/18M-1
Were overload relay heaters properly sized and adjusted to provide adequate protection for the	NSTM 302-3.3.2 GSO 302G

motor?	
Were switches protected against inadvertent activation?	GSO 070H
Were controllers with multiple power sources properly labeled?	GSO 305C
Were motor foundations properly preserved?	GSO 631J
Were controllers and remote operating stations properly labeled?	GSO 305C
Is clearance provided to permit complete accessibility for operation, maintenance, repair, renewal of fuses, and testing?	GSO 300D

WORKBENCHES

COMPONENT/SYSTEM	PROPOSED PROCEDURE
- Does the workbench conform to standards set forth in NSTM 300 APP H? (Insulation, ground straps, disconnect switches, labeling, ground connections, etc)	NSTM 300 GSO 320E GSO 665 GSO 650

(INSPECT) ELECTRICAL SAFETY

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were flat irons a high-grade commercial type with a three pronged cord?	NSTM 300-2.7.3.6 GSO 640G
Were Ironing Board Stations in berthing space modified to remove spotlight and fill the access hole? Ensure irons are not hardwired.	GSO 640G

(INSPECT) ELECTRICAL SAFETY (CON'T)

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Have shorting probes been modified by installing a nylon screw in the end of the probe and soldering the clip to the conductor?	NAVELEX 0101, 110A FIG 1-3 IAW PMS
Are portable tools/devices not stamped "Double Insulated" or equipped with a three pronged cord?	NSTM 300-2.7.3.3 IAW PMS

Were Hospital grade plugs used on portable equipment?	NSTM 300-2.7.3.2.8
Were light fixtures, guards, and covers securely mounted?	NSTM 300-4.3.3
Were over-sized lamps installed in lighting fixtures?	NSTM 330-2.2.4 NSTM 330-2.2.9
Were light fixtures missing lenses, protective guards, or faceplates?	NSTM 330-2.1.4 NSTM 330-2.2.6
Did diesel module room have adequate lighting?	GSO 331B GSO 332E
Were spray-tight fixtures adequately protected against water intrusion?	NAVSEA 0964-000-2000
Was bunk lighting cable hanging, or not routed through the inside of bunk stanchions?	NAVSEA 0964-000-2000
(INSPECT) CABLING	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was PVC cabling installed (new construction only)?	GSO 304D
Were dead-ended cables properly identified/terminated?	NSTM 300-4.6.7 GSO 304E NSTM 300-4.6.9 DOD-STD-2003-1
Were useless or improperly installed cables removed?	NSTM 300-4.6.7.1 GSO 304E
Was cabling properly supported, routed or were nylon wire ties being utilized?	GSO 304E

(INSPECT) CABLING (CON'T)	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were cables pulling out of equipment?	GSO 331E
Were cables improperly spliced?	GSO 304E NSTM 300-4.6.8 DOD-STD-2003-1
Were cables protected against being handholds or being stepped on?	GSO 304E

Was cabling run through beams without the use of chaffing rings?	NSTM 300 TABLE 300-4-4 GSO 304E
Was cabling running through metal partitions equipped with grommets?	GSO 304E NSTM 320-1.6.11
Were cable stuffing tubes properly assembled ?	NSTM 300-4.6.10.1 NSTM 300 TABLE 300-4-4 NSTM 320-1.6.11 GSO 304E
Were multiple cables running through one stuffing tube?	GSO 304E NSTM 300 TAB. 300-4-4
Were multi-cable penetrators installed in Flammable Liquid Storerooms?	GSO 304E MIL-STD-1310
(INSPECT) BUS TRANSFER EQUIPMENT	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were ABT's installed for the following: <ul style="list-style-type: none"> - Emergency Lighting. - IC Switchboard and panels. - Steering power panel. - Pumps associated with the main and auxiliary machinery plant having Low Voltage Release (LVR) control. - Fire pumps. - Fire extinguishing auxiliaries and controls. 	NSTM 320-1.3.2 GSO 320D
Did ASCO ABT transfer switches have an electrical charge on the metal screw on the manual operator?	NAVSEA FSC SER 03E2/03E2-234
Was the sliding interlock on manual bus transfer switches effective at preventing both breakers from being closed at the same time?	NSTM 300-4.8.4.2
Are feeder circuit breaker megger holes blanked off?	NAVSEA 230319ZNOV 98
Were Normal/Alternate source indicating lights operative?	NSTM 320-2.2.6.4
(INSPECT) SHIP TELEPHONE SYSTEM	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was the system unreliable due to unresolved software or hardware deficiencies?	NSTM 430-3 GSO 432
Test battery back-up for telephone system	NSTM 313-2.5 GSO 313J
(INSPECT) MOTORS	

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were motor foundations properly preserved?	NSTM 300- 5.4.3.10 GSO 631J
Was resilient mounted electrical equipment grounded to the ships hull through ground straps?	NSTM 300- 2.2.1
Did electrical rotating machinery have ball check grease fittings (zerk fittings) installed?	NSTM 244
Were coupling, belt, or chain guards effective?	GSO 320E
POWER PANELS	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Do labels specify the proper information?	GSO 305E
Do Breaker ratings match the circuit label current rating?	GSO 305E
Are multi-phase circuits missing breaker connecting handles?	GSO 324C
Were power panels located inside galley spaces?	GSO 320E
Is clearance provided to permit complete accessibility?	GSO 300D
CASUALTY POWER CABLES	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were cable ends properly terminated?	GSO 304E NSTM 320-3.4.1 DOD-STD-2003
Were cables deteriorated from age, heat, and humidity?	NSTM 079-47.4.2.2.10
Were normally energized power terminals labeled?	NSTM 320-1-2-8-2 GSO 320G
Were racks properly identified as to number/length of cables assigned to the rack?	GSO 305F
CASUALTY POWER CABLES (CON'T)	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Is there a label attached at the end of the cable to indicate the length and stowage rack number?	GSO 305F DOD-STD-2003
Are cable leads properly identified for phase identification?	NSTM 320-1.2.8.2
Were cable ferrules missing or heavily oxidized?	NSTM 079-47.4.2.2.6

Was an improper number/length of cable installed on a cable rack?	NSTM 079-47.5.6.1 GSO 320G
Were wrenches missing from terminals?	NSTM 079-47.4.2.3.3
Were covers installed on power terminals?	NSTM 079-47.4.2.3.4 NSTM 079-47.4.2.3.6 GSO 320G
ELECTRICAL DISTRIBUTION EQUIPMENT	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was electrical distribution equipment securely mounted?	NSTM 300-4.3.3 GSO 300D
Electrical distribution equipment have loose or missing covers?	NSTM 300-4.3.3
Were control knobs or fasteners missing from electrical equipment?	NSTM 300-4.3.3
Was electrical equipment protected from water intrusion?	NSTM 300-4.4.1 NSTM 300-4.4.5
Is electrical properly mounted or was it suspended solely by electrical cables?	NSTM 300-4.3.3
Were 440 multipurpose outlets properly phased?	NSTM 320-1.4.1
Did Standard Navy Receptacles (SNR) and Multi-Purpose Outlets (MPO) have an interlock switch or was the switch function such that the plug could not be removed from an energized receptacle?	NSTM 320-1.4.1
Were electrical receptacles broken or damaged?	NSTM 300-2.7.6
Were 400HZ AC, 60HZ AC, and DC convenience outlets labeled to prevent equipment being used with the wrong frequency?	GSO 320
SOUND POWERED TELEPHONE SYSTEMS	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were any Sound Powered Circuits below 50,000 ohms resistance to ground?	GSO 432I
Were Sound Powered Call Signal Stations (growlers) inoperative, corroded, damaged or missing parts?	NSTM 430
Were Sound Powered Jackboxes improperly labeled, corroded, damaged, or missing parts?	NSTM 430-3.2
(INSPECT) LIGHTING	

COMPONENT/SYSTEM	PROPOSED PROCEDURE
Were darken ship switches operative and adjusted properly? Ship provide list of darken ship switches for survey.	DOD-HDBK-289 NSTM 330-3.6.5
Were light fixtures, guards, and covers securely mounted?	NSTM 300-4
Were over-sized lamps installed in lighting fixtures?	NSTM 330-2
Were light fixtures missing lenses, protective guards, or faceplates?	NSTM 330-2
Were spray-tight fixtures adequately protected against water intrusion?	NSTM 300-4
Did diesel module room have adequate lighting?	GSO 331B/332E
(INSPECT) BATTERY LOCKERS	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Was a Battery Log maintained?	NSTM 313-2 GSO 313F
Is there an electrical interlock between exhaust ventilation and battery charger?	5100.19C C0904 NSTM 313
Test ventilation interlocks	3131/S-2
Are Alkaline and Lead Acid Batteries being serviced in the same facility?	5100.19 C0904 GSO F
Is each locker provided with: - Rubber Gloves and Aprons. - Goggles. - Two battery fillers. - Two battery test sets. - One soda water container.	5100.19 GSO 313F NSTM 313
Does the locker contain an eye wash station and a deluge shower?	NSTM 313-2

(INSPECT) BATTERY LOCKERS (CON'T)	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Are battery storage racks greater than 12 inches between tiers?	GSO 313F
Were battery hold-down clamps provided?	GSO 313F
Are Acids stored in appropriate protective containers?	GSO 313F
Are battery charger plugs and jacks marked NEG. and POS.?	GSO 313F

(INSPECT) MISCELLANEOUS EQUIPMENT	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Is permanently mounted electrical equipment hardwired to the ships electrical system?	NSTM 330-1
Is hardwired electrical equipment permanently mounted?	NSTM 330-1
Was more than 1 multi-purpose power strip connected to one isolated receptacle circuit?	NSTM 300-2.7
Is electrical equipment mounted on non-conducted surfaces properly grounded?	3000 / A-5
Were Surge Protectors of the approved type?	3000 / A-4R
Are portable electric device power cords properly tinned?	3000 / Q-1R
Are permanent-type safety precautions, operating instructions, high voltage warning signs, and resuscitation instructions installed where required?	NSTM -H.5, I-2
Did electrical connection boxes have knockouts pushed in leaving access holes In the side?	NSTM 300-2.
Are non-watertight connection boxes being used in engineering spaces?	GSO 300D
Was rubber matting oil soaked, cracked, punctured, perforated or had imbedded metal or conductive particles?	GSO 634B

(INSPECT) MISCELLANEOUS EQUIPMENT (CON'T)	
COMPONENT/SYSTEM	PROPOSED PROCEDURE
Did dress ship lights have broken, missing, or incorrect guards?	NSTM 330-1 3000/ R2
Were dress ship light receptacles labeled "Dress Ship Light Streamers. Not to be used for any other purpose"?	NSTM 330-1-
Were panel switches controlling circuits that are de-	NSTM 330-1

energized during darkened ship operation marked DARKENED SHIP?	
Had the float charge on the UPS batteries been reduced from 135vdc to 129vdc?	IAW PMS
Was UPS electronic cabinet bottom sealed to prevent water of oil entry from lower level engine room?	GSO 300D/324D NSTM 300-4

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ELECTRICAL (EL) POST-UNDERWAY FFG 7	
OPEN AND INSPECT AS REQUIRED BY THE INSPECTION	
COMPONENT/SYSTEM	PROPOSED PROCEDURE

MAIN PROPULSION (MP) PRE-UNDERWAY PHASE FFG 7	
MAIN ENGINES	
Component/Sub-Component	Proposed Procedure
Inspect Gas Turbine/Enclosure Assembly	EOP GTMI; 2340/001 R-18; R-20
- Gas Generator Assembly	EOP GTMI
- Power Turbine Assembly	EOP GTMI
- Transfer Gear box and components	EOP GTMI
- Bleed Air Manifold/ Regulating Valve	EOP GTMI/2340/001 R-16
- Base Enclosure Interior	2340/001 R-20; R-27
- Base Enclosure Exterior	2340/001 R-20; R-27
- Verify all technical directives have been installed	GTB/MGTESR GGTB 0
- Inspect LOSCA	EOP SLOA

- Inspect Gages/Instrumentation	CRL
Inspect Intake Dirty Side	2513/001 S-5
Inspect Demister Pads/Gaskets/Frames	2513/001 S-5
Test Blow in Doors	2513/011 S-4; S-6
Inspect Intake (Silencer level)	2513/001 S-5
Inspect Intake Plenum	2513/001 S-5
Inspect Bell Mouth Screen	2340/001 R-12
Test GTM Fire Extinguishing System	2521/001 S-4 (S-2 FFG 61)
- Halon/CO2 Bottles	5553/026 M-1
- Bypass valve	5553/026 M-1
- Conduit/actuation cables	2521/001 S-4 (S-2 FFG 61)
- Test pressure switches	2521/001 S-4 (S-2 FFG 61)
- Test time delay	2521/001 S-4 (S-2 FFG 61)
- Hoses/fittings/check valves	5553/026 M-1, A-2R,60M-3R, R-1
Conduct SAC Air Start and GTM Idle Checks	EOP CSAC/CAMS
Conduct HP Air Start and GTM Idle Checks	EOP CAMS
Conduct Methanol Test	NSTM 262

Inspect Input Shaft Seals	FTSC
Inspect Security Devices	FTSC/2411/005 PM-1
Inspect Flange Shielding	NSTM 505
Inspect Piping Systems	NSTM 505
Test Main Sea Water Pumps/Valve operation	EOP CSWP

LINE SHAFT BEARING	
Component/Sub-Component	Proposed Procedure
Inspect Sump Level	2000/001 R-1
Inspect Sump Drain Valve	2000/001 R-1
Inspect Seals	2400/002 A-2 NSTM 244 2.6.30
Inspect Thermometer	CRL
Inspect Lubricator	EDORM
Inspect Dip Stick	EDORM
Inspect Lock Wires	EDORM
Inspect Bearing Depth Mic Surface	EDORM
Inspect Foundation	EDORM

REDUCTION GEARS	
Component/Sub-Component	Proposed Procedure
Inspect Sump Level	2000/001 R-1
Inspect Lube Oil Condition	2000/001 R-1
Inspect Gear Teeth	2411/005 PM-3 0901-LP-420-002 Ch 49240.11 pg 64,65
Inspect Lube Oil Spray Pattern	0901-LP-420-002 PG 66, 66B
Inspect Casing Interior	0901-LP-420-002 PG 114
Inspect Oil Flow in SFI's	EOP/EOCC MHBRG
Inspect Temperature Gauges	JFMM V4
Inspect Casing Exterior	0901-LP-420-002 PG 114
Inspect Vent Fog Precipitator	EOP RGVS
Inspect Dehumidifier	EOP RGVS
Test Shaft Brake	EOP
Test Shaft Turning Gear	EOP MRTG
Test GTM PT Brake Assemblies	EOP

STERN TUBE SEAL	
Component/Sub-Component	Proposed Procedure
Inspect Gauges	CRL
Inspect Cooling Water Piping	NSTM 505
Inspect Cooling Water Strainer/Filter	2400/002 Q-1, Q-3
Test Cooling Water Low Flow Alarm	2400/002 S-6R, S-7R
Inspect LP Air Supply	2431/802 R-2
Inspect LP Piping/Hoses/Fittings	2431/802 R-2
Inspect CO2/N2 Bottles/Piping/Fitting	NSTM 244
Test Inflatable Seal	2400/002 S-1, S-3
Inspect Emergency Flax Packing Kit	NSTM 244
Inspect Backing Ring	NSTM 244

CPP SYSTEMS	
Component/Sub-Component	Proposed Procedure
HOPM	EOP CPPC
- Inspect Flex Hoses	2451/001 24M-1R
- Inspect Piping	NSTM 505
- Inspect Gages	CRL
- Inspect Flange Shields	NSTM 505
Test Electric CPP Pump	EOP CPPC
- Inspect Pump	NSTM 556
Inspect Oil Condition	2451/001 R1-W/NSTM 262
Verify Calibration between Consoles and OD box	0941-LP-05307010
Test Slew Rate	EOP CPPT
Test Command Pitch Mismatch Alarm	EOP EOT
Test Emergency Pitch Pump	2451/001 18M-4R/R-8
Attached CRP Pump	2411/005 A-7
- Inspect Mechanical Seal	EOP CPPC

FUEL OIL SYSTEMS	
Component/Sub-Component	Proposed Procedure
Test Auxiliary transfer pump.	EOP CFOP
- Inspect Mechanical seal	NSTM 503
- Inspect Valves and piping	EOP CFOP
- Inspect pump relief valves	NSTM 505
Conduct Fuel Oil Pump Sequence/Logics	2610/052 R 40
Inspect Coalescers/Pre-filters	2610/052 R 21
Inspect fuel oil service heater	2610/052 R-1, R-21
Inspect fuel oil service heater	2619/803 R-25
Test Service Tank Suction/Recirc Valves	EOP CFOP
Test Quick Closing Valves	EOP CFOP
Inspect instruments	CRL
Inspect flexible hoses	5000/005 A-1 A-2
Inspect flange shields	NSTM 505
Inspect gages and instruments	CRL

LUBE OIL SYSTEMS	
Component/Sub-Component	Proposed Procedure
Test MRG Lube Oil Sequencing	2620/003 Q-2
Test Electric MRG Lube Oil Pump	2620/003 Q-2
- Inspect Flexible coupling .	2620/003 18M-1
- Inspect Mechanical seal	NSTM 503 5.3.8.1.2
- Inspect Valves and piping	NSTM 505
- Inspect pump relief valves	2620/003 48M-1
Inspect MRG Coast down Lube Oil Pump	2620/003 Q-2, Q-4
- Inspect Valves and piping	NSTM 505
Test/Inspect Lube Oil Strainer	2620/003 18M-2R
Inspect Temperature Regulating Valve	LOSRG
Inspect Unloading Valve	LOSRG
Inspect Lube Oil Purifier and Heater	EOP LOPO

FUEL OIL XFER SYSTEMS	
Component/Sub-Component	Proposed Procedure
Inspect Fuel Oil Purifier	5410/003 R-5
Inspect/Test Transfer Pumps	EOP/5410/802 R-7
- Inspect Flexible coupling	5410/003 A-2
- Inspect Mechanical seal	EOP/5410/802 R-7
- Inspect Valves and piping	NSTM 505
- Inspect pump relief valves	5410/003 18M-14
- Inspect Transfer Pump Controller	NSTM 300/5410/802 R-10
Inspect fuel oil transfer heater	DELETE
Inspect F/O xfer and ballast console	EOP
Test F/O purifier operation	EOP
Test F/O purifier emergency stop	EOP
Inspect flexible hoses	5410/802 R-5
Inspect gages and instruments	CRL
Inspect flange shields	NSTM 505

CONTROLS	
Component/Sub-Component	Proposed Procedure
Test EOT Indicator	EOP EOT
Test PCC Alarms and Indicators	EOP CPSA 2521/001 M-2R
Test LOP Alarms and Indicators	EOP CPSA
Test EOT Wrong Direction Alarm	EOP EOT
ABO Panels on PCC and EPCC	LOCAL PROCEDURE
Inspect EMCU	2521/001 R-4
Inspect and Test Bell/Data Logger Test Print	EOP CPSI 2521/001 R-1
TEST Torque computer	EOP CAMS
Test UPS System	Local Procedure

Prairie/Masker/Fin Stabilizer (GA – 1)	75 (+ -) 3 psig
Inlet FWD masker venturi (GA – 3A)	28 (+ -) 2 psig
Inlet AFT masker venturi (GA – 3B)	28 (+ -) 2 psig
FWD masker DP (GA – 2A)	25 (+ -) 2 IH2O
AFT masker DP (GA – 2B)	25 (+ -) 2 IH2O
Prairie Venturi DP (GA – 4)	15 (+ -) 1 IH2O
Fin Stabilizer Venturi DP (GA – 6)	9 (+ -) 1 IH2O

HULL STRUCTURE	
Bilges	NSTM 100
Bilge Suction Screens	NSTM 100
Deck Plates	NSTM 100
Equipment Foundations	NSTM 100
Paint and Preservation	NSTM 631
Pipe Brackets/Hangers	NSTM 505

BLEED AIR SYSTEMS	
Component/Sub-Component	Proposed Procedure
Measure masker air flow rate to forward emitters	5516/002 R-3Q
Inspect Prairie Cooler	EOP BMPA
Operate Prairie/fin stabilizer air system	5516/002 R-2W
Inspect Flex hoses	5516/002 A-2
Inspect Gauges/Instrumentation	CRL
Inspect Piping/Fittings	NSTM 505
Inspect drain orifices	5516/002 A-1, R-2W

Prairie/Masker flow rate Data	5516/002 R-3Q
Bleed air temp (GBA-THIB)	925 deg max
Bleed air temp (GBA-THIA)	925 deg max
Prairie/Masker/Fin Stabilizer Supply Temp (TH1)	400 deg max
Prairie/Fin Stabilizer Sys Cooler Outlet Temp (TH3)	125 deg max
Bleed air Press Port (GBA-GA1B)	250 deg max
Bleed air Press Stbd (GBA-GA1A)	250 deg max

MAIN PROPULSION (MP) UNDERWAY PHASE FFG 7	
FULL POWER AND QUICK REVERSAL DEMONSTRATION	
Demonstrate Full Power ahead (1 hour)	PMS/EOSS/POG/9094.1B/2340 /001 R-9
Demonstrate Quick Reversal Astern	POG/Full Power Memo/EOSS
Demonstrate Quick Reversal Ahead	POG/Full Power Memo/EOSS
LUBE OIL PURIFIER DEMONSTRATION	
Demonstrate purifier operation	EOSS/PMS
FUEL OIL TRANSFER DEMONSTRATION	
Demonstrate fuel oil purifier (s) operation	EOSS/PMS
Demonstrate purifier (s) emergency stop capability	EOSS/PMS/Tech manual
PRAIRIE MASKER DEMONSTRATION	
Demonstrate Masker/Prairie air High temp sensors/alarms	

Demonstrate remote operation of all bleed air system solenoid valves	
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