



AFLOAT
Main Propulsion
Diesel
Checklist

UPDATED April 2026

SAFETY REVIEW ITEMS - Main Propulsion (Diesel)

Main Diesel and Drive

ARE ENGINE THROTTLES/CONTROLS LOCKED/SECURED AND A WARNING SIGN IN PLACE INDICATING THE JACKING GEAR IS ENGAGED?

REF: NSTM 241-3.4

ARE WARNING SIGNS ON THE SIDE OF ENGINE "CAUTION DO NOT OPEN OR REMOVE ENGINE CRANKCASE COVERS OR ACCESS COVERS UNTIL AT LEAST 30 MINUTES HAVE ELAPSED AFTER SHUTDOWN OF AN ENGINE WHEN IT IS KNOWN OR SUSPECTED THAT THERE HAS BEEN AN EXPLOSION, FIRE OR AN OVERHEATED PART IN THE CRANKCASE"?

REF: NSTM 233-13.2

IS DIESEL ENGINE FREE OF EXCESSIVE OIL, FUEL AND WATER LEAKS (IE. FUEL DILUTION)?

REF: NSTM 233-13.13

ARE THE DIESEL INSPECTIONS WITHIN PERIODICITY?

REF: JFMM VOL 5 CH 4

ARE ROPE CABLES SECURED WITH THE PROPER ATTACHMENTS (U-BOLTS) AND ARE CABLES IN GOOD CONDITION (PULL HANDLE ATTACH, ROTATION TRIP DEVICE LOCKING PINNED, BARRING DEVICE CABLING CONNECTION INTEGRATED)?

REF: NSTM 233-1.10
PMS MIP 3121 Series
PMS MIP 3112 Series

Main Shafting/Spring Bearings

ARE THERMOMETERS INSTALLED?

REF: NSTM 244-2.4
GSO 244 B

IS PHYSICAL SECURITY IN PLACE FOR EQUIPMENT REQUIRING LOCKS OR LOCKING DEVICE?

REF: EDORM 3540.3 Series 4407

ARE BULKHEAD SEALS IN GOOD MECHANICAL CONDITION, SELF ALIGNING AND CAPABLE OF BEING ACTIVATED FROM EITHER SIDE OF THE BULKHEAD AND NOT IN CONTACT WITH THE SHAFT WHEN NOT IN USE?

REF: NSTM 244-6.6
GSO 244 B

Main Shaft Seal/Packing

ARE GAUGES INSTALLED AND CALIBRATED?

REF: PMS MIP 9802 Series
GSO 504 E, F, G
NSTM 504-3.7

General Safety

ARE UPTAKE SPACES IN SATISFACTORY CONDITION (NO FOD, RUST, RAGS, TOOLS MISSING BOLTS / SCREWS ON FOD SCREEN)?

REF: NSTM 555-1.2
NSTM 221-2.13

ARE ACCESS LADDERS SECURELY FIXED IN PLACE?
REF: NAVSEA DWG 803-1340709 note (1)
GSO 622 D

ARE WATER TESTING CHEMICALS STORED PROPERLY?
REF: NSTM 670

Hearing Conservation

ARE NOISE HAZARD SIGNS POSTED IAW THE INDUSTRIAL HYGIENE SURVEY?
REF: OPNAVINST 5100.19 Series B-4

ARE HEARING PROTECTION DEVICES AVAILABLE FOR PERSONNEL WORKING IN OR ENTERING DESIGNATED HAZARDOUS NOISE AREA OR UTILIZING HAZARDOUS TOOLS OR EQUIPMENT?
REF: OPNAVINST 5100.19 Series B-4

ARE PERSONNEL WEARING CORRECT HEARING PROTECTIVE DEVICES FOR THE DURATION OF THE EXPOSURE?
REF: OPNAVINST 5100.19 Series B-4

Instructions and Safety Precautions

ARE IDENTIFICATION PLATES INDICATING MAXIMUM ALLOWABLE LOADS OR TEST DATA INSTALLED BY LIFTING PADS OVER HEAVY EQUIPMENT?
REF: NAVSHIPS DRWG S2803-980208
GSO 602 H

ARE CHAIN FALLS OR MONORAIL HOISTS WEIGHT TESTED AND TEST DATA TAGS ATTACHED TO EQUIPMENT?
REF: PMS MIP 6645 Series

IS THE ENGINEERING OPERATIONAL SEQUENCE SYSTEM (EOSS) IN USE?
REF: EDORM 3540.3 Series

ARE CURRENT "TAG OUT" PROCEDURES IN USE?
REF: NAVSEA S0400-AD-URM-010/TUM REV 8
OPNAVINST 3120.32 Series 630.17

Hazardous Materials

ARE TOXIC OR HIGHLY FLAMMABLE MATERIALS (FLASH POINT 200 DEGREES AND BELOW) STOWED IN MACHINERY SPACES?
REF: NSTM 670-17.3

ARE ALL HAZARDOUS MATERIAL CONTAINERS CLEARLY LABELED WITH MATERIAL NAME, MANUFACTURERS NAME AND ADDRESS, STOCK NUMBER, HCC AND THE NATURE OF THE HAZARD PRESENTED BY THE HM INCLUDING THE TARGET ORGAN?
REF: NSTM 670-3.2

ARE HAZARDOUS MATERIALS PROPERLY STOWED?

REF: NSTM 670-3

Flexible Hoses

ARE FLEXIBLE HOSE ASSEMBLIES PROPERLY INSTALLED?

REF: PMS MIP 5000/009 Series
NAVSEA S6430-AE-TED-010 VOL.1 (SECTION 9)

ARE FLEXIBLE HOSE ASSEMBLIES FREE OF TWIST BETWEEN FITTINGS, PROPERLY SUPPORTED AGAINST RESILIENTLY MOUNTED EQUIPMENT TO PREVENT CHAFING?

REF: PMS MIP 5000/009 Series
NAVSEA S6430-AE-TED-010 VOL.1 (SECTION 9)

ARE FLEXIBLE HOSE ASSEMBLIES FREE OF EXCESSIVE SAG OR STRESS?

REF: NAVSEA S6430-AE-TED-010 VOL.1 (SECTION 9)
PMS MIP 5000/009 Series

ARE FLEXIBLE HOSES PROPERLY IDENTIFIED WITH A NONCORROSIVE METAL TAG?

REF: PMS MIP 5000/009 Series
NAVSEA S6430-AE-TED-010 VOL.1 (SECTIONS 8.5 AND 9)

ARE FLEXIBLE HOSES PAINTED (A FEW SPOTS INADVERTENTLY SPLASHED ON THE HOSE IS ACCEPTABLE AS LONG AS PAINTED AREA IS 10% OR LESS THAN THE HOSE SURFACE AREA)?

REF: NAVSEA S6430-AE-TED-010 VOL.1 (SECTION 9.J, 10.J)

ARE FLEXIBLE HOSES EXCESSIVELY SOFT?

REF: NAVSEA S6430-AE-TED-010 VOL.1 (SECTION 10)
PMS MIP 5000/009 Series

Escape Trunks

ARE THERE OBSTRUCTIONS AT THE ESCAPE TRUNKS?

REF: OPNAVINST 5100.19 Series C-1

ARE ESCAPE TRUNKS WELL LIT AND HAVE EMERGENCY LIGHTING?

REF: NSTM 330-1.6
GSO 332 E, G

ARE LABEL PLATES INSTALLED ON TOP OF ESCAPE SCUTTLES INSCRIBED WITH 1-INCH RED LETTERS THAT STATE "ESCAPE SCUTTLE DO NOT OBSTRUCT OR BLOCK"?

REF: NAVSHIPS DRWG 805-1640412
GSO 602 J

Lagging/insulation

IS LAGGING/INSULATION ADEQUATE?

REF: GSO 508B
NSTM 635 (SECTIONS 2 AND 3)

IS LAGGING/INSULATION TORN OR MISSING (SEAM INTACT AND TAPED / PIN / STUDS SECURE)?

REF: NSTM 635-2.9

ARE LAGGING/INSULATION OIL / WATER SOAKED?

REF: NSTM 635-2.9

Reduction Gear Security

ARE MEDIUM OR HIGH SECURITY PADLOCKS INSTALLED (ISEA ADVISORY NUMBER 006-01 VERIFY S&G MODEL 833 HIGH SECURITY LOCKS HAVE BEEN CHANGED OUT WITH ABLOY MODEL PL655 OR PL656)?

REF: NSTM 241-4

ISEA ADVISORY NR 006-01

ARE ALL OTHER ACCESSES PROTECTED FROM UNAUTHORIZED ENTRY?

REF: EDORM 3540.3 Series

NSTM 241-4.2

DO VENT FOG PRECIPITATORS / MIST ELIMINATORS APPEAR TO BE IN SATISFACTORY CONDITION AND HAVE A WARNING PLATE INSCRIBED WITH "WARNING HIGH VOLTAGE"?

REF: NSTM 262-3.1

GSO 262C

NSTM 241-2.3

NAVSEA STD DWG 803-2145504

Lube Oil System

ARE THERE LOCKING DEVICES FOR ALL MAIN LUBE OIL PUMPS SUCTION AND DISCHARGE VALVES TO PREVENT SHUTTING?

REF: EDORM 3540.3 Series 4407

ARE PURIFIER DRAINS PIPED TO CONTAMINATED OIL TANK?

REF: NSTM 541-4.7

GSO 262 C

GSO 534 C

DOES THE LUBE OIL STORAGE AND SETTLING TANKS HAVE OVERFLOW AND DRAIN CONNECTIONS LEADING TO THE OILY WATER DRAIN OR WASTE COLLECTING SYSTEM?

REF: NSTM 541-4.7

GSO 262 C

ARE STRAINERS PROVIDED WITH PROTECTIVE COVERS?

REF: NSTM 505-10.3

NSTM 079-46.5

GSO 505 E

ARE STRAINERS PROVIDED WITH VENT/DRAIN VALVES?

REF: NSTM 505-10.3

ARE STRAINERS PROVIDED WITH DRIP PANS?

REF: GSO 262 C

NSTM 505-10.3

Oil Piping Flange Shields

ARE LUBE OIL AND FUEL OIL PIPING FLANGE SHIELDS OF CORRECT MATERIAL?

REF: NAVSEA DRAWING 803-2145518

NSTM 505-7.9 and FIG 505-7-15

GSO 505 E

NSTM 233-7.9
GSO 502 B

ARE FLANGE SHIELDS PROPERLY INSTALLED?
REF: NSTM 505-7.9
GSO 505 E

ARE ANY FLANGE SHIELDS MISSING?
REF: NSTM 505-7.9
GSO 505 E

Valves and Valve Operators

ARE VALVE HANDWHEELS PROPERLY SECURED AND LABELED?
REF: NSTM 505-7.8
NAVSEA S0400-AD-URM-010/TUM (TAG OUT USERS MANUAL)
GSO 507 F

ARE VALVE HANDWHEELS PROPERLY COLOR CODED?
REF: NSTM 505-7.8

Piping Systems

ARE PIPING SYSTEMS ADEQUATELY LABELED?
REF: NSTM 505-7.8 and table 505-7-1

ARE PIPING SYSTEMS PROPERLY COLOR CODED?
REF: NSTM 505-7.8 and table 505-7

ARE PIPING SUPPORT DEVICES PROPERLY MAINTAINED?
REF: NSTM 505-7.5
NAVSHIPS DWG 804-1385781
GSO 505 C

ARE FLAMMABLE SYSTEMS LEAK TIGHT (NO VISIBLE EVIDENCE OF LEAK)?
REF: NSTM 505-8.3

ARE NON-FLAMMABLE SYSTEMS LEAK TIGHT?
REF: NSTM 505-8.3

Relief Valves

DO RELIEF VALVES APPEAR TO BE IN GOOD WORKING ORDER? (FREE OF BROKEN SPRINGS, LEAKING, BENT STEMS OR CORRODED)
REF: NSTM 505-9.18

ARE RELIEF VALVES PROPERLY LABELED?
REF: PMS 5000 Series
GSO 505 E

ARE RELIEF VALVES EQUIPPED WITH A TAIL PIPE THAT DOES NOT STRESS THE VALVE BODY AND DISCHARGES WHERE IT DOES NOT CREATE A HAZARD TO PERSONNEL OR EQUIPMENT?
REF: GSO 505 E
NSTM 505-9.17

ARE METAL TAGS PROVIDED TO INDICATE SHIP NAME AND HULL NUMBER, DATE OF LIFT TEST, LIFTING PRESSURE, VALVE NUMBER OR IDENTIFICATION?

REF: GSO 505 E
NSTM 505-9.17

Eductors and Bilge Drainage

ARE EDUCTORS AND BILGE DRAINAGE SYSTEM OPERATING INSTRUCTIONS POSTED?

REF: GSO 529 H
NSTM 505-10.7

IS THE OIL POLLUTION ACT POSTED AT THE OVERBOARD DISCHARGE VALVES, DECK RISERS AND PUMPS CAPABLE OF DISCHARGING OILY WASTE?

REF: NSTM 593-3.7
GSO 593 D

ARE ACTUATING PRESSURE AND SUCTION PRESSURE GAGES INSTALLED AND PRESSURIZED?

REF: GSO 529 H
NSTM 505 figure 505-10.2
MIP 5291 Series

ARE BILGES CONTAMINATED WITH OIL, FUEL OR TRASH?

REF: EDORM 3540.3 Series

OIL LAB

DOES THE SHIP HAVE AN OIL SPILL CONTINGENCY PLAN THAT HAS BEEN TAILORED TO THE SHIP?

REF: OPNAVINST M 5090.1 SERIES CHAPTER 35, PARA 35-3.15

ARE OIL SPILL KITS INSPECTED QUARTERLY AND REPLENISHED AS REQUIRED?

REF: OPNAVINST 5100.19 Series B-3

ARE PORTABLE ELECTRICAL LABORATORY EQUIPMENT TESTED FOR ELECTRICAL SAFETY IN ACCORDANCE WITH PMS?

REF: PMS MIP 3000/001 Series

IS NAVI FLASH / APPROVED FLASHPOINT TESTER IN WORKING ORDER AND CALIBRATED?

REF: NSTM 262-51.4

HAVE CHEMICALS EXCEEDED THEIR SHELF LIFE?

REF: NSTM 220-26

ARE ALL CHEMICALS STORED IN APPROVED FLAMMABLE OR CORROSIVE LOCKERS, <30 GAL?

REF: NSTM 220-26
NSTM 670-12.3

ARE MERCURIC NITRATE REAGENTS DISPOSED OF PROPERLY?

REF: OPNAVINST 5100.19 Series APPENDIX B-3-B

ORM/TCRM

IS ORM APPLIED NOT ONLY TO OPERATIONAL MISSIONS, BUT AT THE DECK PLATE
LEVEL FOR DAY TO DAY WORK UNIT OPERATIONS AS WELL?

REF: OPNAVINST 5100.19 Series

OPNAVINST 3500.39 Series