

## CHAPTER 6.3

### Conventional Weapons Handling Procedures Afloat (LHA, LHD, and LPD)

#### 6.3.1 General

**6.3.1.1** Amphibious assault and transport dock ships are tasked to support a wide range of aviation-related ordnance functions attendant to Marine Corps strike warfare and amphibious assault operations. Tasks include the full range of ordnance support for attack helicopters, vertical and short takeoff and landing aircraft ordnance operations, service of utility and cargo helicopter defensive weapon systems, and support of aircraft electronic countermeasure systems.

**6.3.1.2** The prerequisites for safe and successful aviation ordnance evolutions aboard LHA, LHD, and LPD class ships requires careful planning and execution from stowage to launch and recovery. This chapter provides information that will aid in the standardization of procedures which provide guidance for personnel involved in the requisitioning, receipt, strikedown, stowage, breakout, assembly, strikeup, staging, and loading of air launched weapons on amphibious aviation and air-capable ships.

#### 6.3.2 Responsibilities

**6.3.2.1** Commanding officers shall ensure that all squadron and ships' ordnance personnel are properly indoctrinated in the safe and proper methods of handling and securing explosive ordnance carried by their ships. Commanding officers shall also ensure that:

a. All personnel handling ordnance are trained, qualified, and certified in accordance with OPNAVINST 8023.2C (NOTAL) or MCO 8023.3 (NOTAL) and applicable type commander instructions.

b. All ammunition is secured in accordance with guidance set forth in NAVSEA SG420-B5-WHS-101, NAVSEA OP 4550, and NAVSEA OP 4.

c. Daily inspections of all ammunition magazines are conducted in accordance with NAVSEA OP 4 and applicable preventive maintenance system maintenance requirement cards.

d. All weapons handling equipment is inspected and tested as per NAVSEA OP 4, NAVSEA SW023-AH-WHM-010, NAVSEA S9086-XG-STM-000/CH-700R2, NAVSEA SG420-AP-MMA-010, NAVAIR 17-1-127, and applicable surface and aviation preventive maintenance system maintenance requirement cards.

**6.3.2.2** Weapons Officer. The duties and responsibilities of the weapons officer are outlined in chapter 6.1.

**6.3.2.3** Aircraft Handling Officer. In the area of ordnance handling, the aircraft handling officer is responsible for setting environmental alert and coordinating with the weapons officer and electronics officer in setting Hazards of Electromagnetic Radiation to Ordnance (HERO) and emission control conditions. Additionally, the aircraft handling officer shall ensure that all conditions or restrictions pertaining to the movement or handling of explosive-loaded aircraft are strictly adhered to and are in accordance with NAVAIR 00-80T-106.

**6.3.2.4** Air Combat Element. Unit commanders are responsible for initiating, maintaining, and monitoring dynamic weapons handling, loading, downloading, arming, and dearming procedures within their units. Unit ordnance officers, working in conjunction with the weapons officer, shall determine the time of delivery and the types and quantities of aviation ordnance material to be delivered to the aircraft loading areas.

**6.3.3 Relevant Publications.** The rules and regulations contained in this chapter are based in whole or in part on the publications listed in volume IV, appendix L. For expanded or detailed guidance in all facets of ordnance handling aboard amphibious ships, refer to these publications.

#### 6.3.4 Training

**6.3.4.1** Numerous formal schools are available for training of shipboard and squadron aviation ordnance personnel. Although designed specifically for CV and CVN aviation ordnance personnel, the following course shall be used as indicated for aviation ordnancemen assigned to amphibious ships:

a. Aviation Flight Deck Safety Course (C-646-4101). This course is mandatory for all aviation ordnance personnel assigned duties on the flight deck during normal flight operations including Vertical Replenishment (VERTREP).

b. CV/CVN Air Launched Weapons Supervisor, course number C-646-4108, and CV/CVN Air Launched Ordnance (basic) course number C-646-3104, are 12-day courses that provide ordnance personnel with a thorough knowledge of the procedures and safety precautions relating to air launched weapons handling, storage, and assembly.

c. Ammunition Administration Course (J-041-0103). At least one enlisted aviation ordnanceman or gunners mate and one officer responsible for the requisitioning and accounting of the ship's mission load allowance, shipfill ammunition allowance, and LFORM class V (W) ammunition (landing force operational reserve material) shall attend this course.

d. Air Launched Guided Missile Intermediate Maintenance Course (C-122-3111). At least one aviation ordnanceman, E-5 or above, whose primary duties include the supervision of fleet intermediate maintenance on air launched missiles shall attend this course.

e. Strike Armament Equipment Intermediate Maintenance Repair (C-646-3118). Aviation ordnancemen assigned to the Aircraft Intermediate Maintenance Department shall attend this course. Course includes training on aircraft armament equipment, operational checkout procedures, corrosion control, troubleshooting procedures, periodic maintenance procedures, component removal, repair, replacement procedures, use of special tools and test equipment, use of publications, and use of safety and administrative procedures applicable to aircraft armament equipment items.

f. Magazine Sprinkler Systems Operations Maintenance and Repair (K-041-2048). Includes classroom and laboratory instruction on theory of operation, valves, thermo-pneumatic controls, and piping. During practical sessions students operate, test, isolate casualties, and repair operational classroom mock-up sprinkler systems (both wet and dry type), and repair all associated valves. Required for all personnel assigned magazine sprinkler systems maintenance duties.

g. Magazine Sprinkler Systems Inspector (K-041-2137). Is a follow-on course to qualify selected personnel attached to inspection and repair activities for

conducting shipboard magazine sprinkler system inspections. Course includes recognition of deviations between installed equipment and directives, detecting incorrect maintenance actions, determining installation criteria for wet and dry type magazine sprinkler systems, thermo-pneumatic automatic controls, and inspection techniques. Practical application is conducted on mock-up trainers. Required for all personnel assigned magazine sprinkler systems inspection duties.

h. Retail Ordnance Logistics Management Systems Intermediate (J-041-2104). Students learn how to perform logistics management duties utilizing the automated, computer-based procedures of the ROLMS. Subjects include generating and maintaining ROLMS-based ammunition records relating to requisitions, receipts, reporting NAR's allowances, and other technical information required to manage Navy, Marine Corps, and other service ammunition.

i. Retail Ordnance Logistics Management Systems Operator Advanced (J-041-2105). Students learn how to perform advanced logistics management duties utilizing the automated, computer-based procedures of ROLMS. Subjects include generating and maintaining ROLMS-based ammunition records relating to requisitions, receipts, issues, expenditures, inventory management and controls, reporting, NAR's allowances, and other technical information required to manage Navy, Marine Corps, and other service ammunition.

**6.3.4.2** Quotas for and information on the above listed courses can be obtained from Naval Air Maintenance Training Group Detachment quota control at NAS North Island, CA (DSN 735-8292 or Comm. (619) 545-8292) and NAS Norfolk, VA (DSN 836-2852 or Comm. (757) 444-2852).

**6.3.4.3** Training with aviation ordnance is sometimes difficult to achieve while in port. However, requisite training is available from the resident Naval Air Warfare Center Weapons Division, Point Mugu, Navy Civilian Technical Specialists at Commander, Naval Surface Force, Atlantic Fleet (COMNAVSURFLANT) and Commander, U.S. Naval Surface Force, Pacific Fleet (COMNAVSURFPAC). COMNAVSURFLANT and COMNAVSURFPAC maintain an inert class V(A) ammunition package for training and certification purposes. Information about the contents and availability can be obtained by contacting COMNAVSURFPAC, commercial (619) 437-3141, DSN 577-3141 or COMNAVSURFLANT, commercial (804) 444-5130, DSN 564-5130. The requesting ship shall provide transportation (round trip) for the training and certification phase (inert

ammunition) from either Naval Amphibious Base Coronado (west coast) or Naval Air Station Norfolk (east coast).

**6.3.4.4** As discussed above for amphibious ships, other air-capable amphibious ship personnel must be prepared for and trained to meet aviation ordnance contingencies. To ensure the proper degree of safety for the protection of the ship, material, and personnel, the procedures of this chapter, NAVAIR 00-80T-106 (NOTAL), and Naval Warfare Publication (NWP) 3-04.1 (NOTAL) shall be closely followed.

**6.3.4.5** Hands-on training must be used as the primary means to achieve and maintain proficiency, and ultimately to measure the readiness of the ship and embarked squadrons. Before embarkation of the squadron, ships weapons personnel must be thoroughly trained, qualified, and certified on the handling, stowage, assembly, and strikeup or strikedown procedures for the mission load allowance ammunition. This requirement can be achieved through the formal schools listed in paragraph 6.3.4.1, a formal lecture-type training syllabus and hands-on training utilizing the inert training package described in paragraph 6.3.4.3. Realistic training scenarios with actual breakout, assembly, strikeup and strikedown will provide the commanding officer with the means to achieve the desired degree of readiness. Squadron commanders must coordinate with ships personnel in scheduling frequent loading drills and captive carry training that will exercise the ship and squadron as a team and fine tune the readiness of the amphibious task force.

**6.3.5 Aviation Ordnance Safety Surveys.** These surveys are conducted to determine the ship's ability to handle and store aviation ordnance and provide an opportunity to demonstrate adherence to established safety procedures. All aspects (storage spaces, assembly areas, support equipment, routes of ordnance movement, training and certification programs) of aviation ordnance handling are reviewed during the survey and assist visit. The survey will normally be conducted in accordance with COMNAVSURFPACINST 8023.1J (NOTAL) and COMNAVSURFLANTINST 8600.1 (NOTAL) during the ship's air amphibious refresher training. COMNAVSURFPACINST 8023.1J (NOTAL) and COMNAVSURFLANTINST 8600.1 (NOTAL) are used by the survey team during their visit and can be utilized by ship's personnel to verify the ship's aviation ordnance handling program capability.

**6.3.6 Personnel Augmentation.** Since there are no aviation ordnance personnel assigned to LPD class ships,

augmentation will be required from the LHA, LPH, or LHD as directed by the amphibious squadron commander.

**6.3.7 Explosive Ordnance Disposal.** Explosive Ordnance Disposal (EOD) support shall be requested by the ship in accordance with COMNAVSURFPACINST or COMNAVSURFLANINST 8027 (NOTAL). EOD support shall be requested no later than 180 days prior to the scheduled deployment and no later than 60 days prior to refresher training. EOD requirements are defined in fleet commander in chief directives.

### **6.3.8 Ammunition Allowance and Requisitioning**

**6.3.8.1** For detailed information on the allowance list of landing force operational reserve material, mission load allowance, and other contingency material to be carried aboard amphibious warfare ships, refer to COMNAVSURFLANTINST 4080.1F (NOTAL), COMMARFORLANT Order 4000.10G (NOTAL), COMNAVSURFPACINST 4080.1B (NOTAL), or COMMARFORPAC Order 4080.2A (NOTAL).

**6.3.8.2** For detailed information on the requisitioning of ammunition, followup procedures, and ammunition transaction report guidelines, refer to NAVORDCENINST 8010.2A (NOTAL), or CINCPACFLTINST 8010.12 (NOTAL).

**6.3.9 Handling and Stowage.** The ordnance stowage capabilities and handling procedures aboard aviation amphibious ships vary greatly from one class to another and would require a complete and separate technical manual to adequately cover all aspects of the ordnance handling and stowage procedures for each class ship. For specific details, refer to NAVSEA SG420-B5-WHS-010 (NOTAL), NAVSEA OP 4, Fifth Revision (NOTAL), and NAVSEA OP 4550 (NOTAL).

### **6.3.10 Weapons Replenishment**

**6.3.10.1** Replenishment at sea is referred to as underway replenishment and is accomplished by two basic methods: connected replenishment and vertical replenishment (VERTREP).

**6.3.10.2** Connected replenishment is defined as the transfer of cargo between ships, while underway, by means of cables connected from one ship to another.

**6.3.10.3** VERTREP is defined as the transfer of cargo between ships using helicopters. VERTREP is often used to supplement connected replenishment. Weapons loads, generally limited to 4,000 pounds, are transferred from the supply ship to the flight deck of the amphibious ship. The decided advantage of a VERTREP is that it can effect replenishment without ship-to-ship connection.

**6.3.10.4** For a detailed account of underway replenishment operations aboard amphibious ships and the equipment involved, refer to NWP 14 (NOTAL), NWP 14-1 (NOTAL), NAVSEA S9571-AA-MMA-010 (NOTAL), and chapter 6-5 of NAVSEA OP 4550 (NOTAL).

### **6.3.11 Intermediate Level Maintenance**

**6.3.11.1** Intermediate level maintenance aboard amphibious aviation and air-capable ships represents a primary function of the ship. Generally, it includes intermediate level testing, maintenance, and repair of all aviation support equipment.

**6.3.11.2** The aircraft intermediate maintenance department provides support facilities, technical assistance, maintenance, and repair of aircraft gun systems, armament equipment, and armament systems components.

**6.3.11.3** Aircraft intermediate maintenance department functions on LPD ships are limited and specific capabilities are normally regulated by the type commander.

**6.3.12 Armament Weapons Support Equipment.** Armament weapons support equipment used in support of ordnance handling evolutions aboard amphibious ships will be maintained in accordance with section 5 of this instruction.

### **6.3.13 Assembly and Disassembly**

**6.3.13.1** Due to the inherent dangers involved, the assembly and disassembly of aviation ordnance shall be closely controlled. All weapons unpacking, assembly, and disassembly shall be done in accordance with NAVSEA OP 4, NAVSEA OP 3565/NAVAIR 16-1-529 (NOTAL), the appropriate checklist (NOTAL), and applicable Naval Air Systems Command (COMNAVAIRSYSCOM) technical manuals. All evolutions shall be conducted only in an approved assembly area. Refer to NAVSEA SG 420-B5-WHS-010 for designated assembly, disassembly, and staging areas on board the different class amphibious ships.

**6.3.13.2** The assembly and disassembly areas shall be maintained radiation hazard free whenever the ordnance is HERO susceptible. If HERO-susceptible ordnance must be handled in a radiation hazard area, the officer in charge of the evolution shall request that the operations officer set the appropriate emission control condition prior to exposing the HERO-susceptible ordnance to a radio frequency environment.

**6.3.13.3** The ship's weapons department shall maintain technical manuals for each type of ordnance material and weapons support equipment on board.

### **6.3.14 Aircraft Loading and Downloading**

**6.3.14.1** All aircraft loading and downloading evolutions shall be conducted in accordance with the applicable COMNAVAIRSYSCOM weapons loading manuals and checklists, the LHA/LHD NATOPS manual (NWP 3-04.1, Shipboard Helicopter Operating Procedures). Only those personnel who are qualified and certified in accordance with OPNAVINST 8023.2C (NOTAL), COMNAVSURFLANTINST 8023.4G (NOTAL), COMNAVSURFPACINST 8023.5C (NOTAL), and/or MCO 8023.3 (NOTAL) shall be allowed to participate in aircraft ordnance loading or downloading or other ordnance evolutions.

**6.3.14.2** Compliance with weapons requirements contained in the ordnance load plan demands close coordination between the aircraft handling officer, ship's weapons officer, squadron ordnance personnel, and the squadron maintenance liaison officer. The squadron ordnance officer is responsible for advising the squadron maintenance liaison officer as early as possible of any special requirements or considerations which apply to the loading of selected aircraft. The maintenance liaison officer shall ensure that the aircraft handling officer is apprised of any peculiarities in special requirements, configuration, or status which may render certain aircraft unassignable for particular types of weapons loads.

**6.3.14.3** The aircraft handling officer shall provide squadron ordnance personnel with the planned deck spot as early as possible to afford adequate time to properly configure the aircraft and to perform release and control systems checks in accordance with the applicable COMNAVAIRSYSCOM weapons release and control checklist.

**6.3.14.4** The loading and downloading of ordnance on aircraft in the high tempo environment on board air-capable ships dictates strict and absolute adherence to all prescribed safety precautions, warnings, and notices. Prior to loading and downloading ordnance on aircraft, all ordnance personnel shall be thoroughly familiar with those warnings, notes, and restrictions contained in chapter 6, paragraph 6.8.4 of NAVAIR 00-80T-106 and NAVSEA OP 3347.

**6.3.15 Aircraft Arming and Darming.** Weapons arming and darming shall be conducted only in designated areas. Arming and darming shall be

performed by qualified and certified personnel, under the direct control of an arming and dearming supervisor, utilizing the appropriate COMNAVAIRSYSCOM weapons loading checklist and the proper arming and dearming hand signals contained in the LHA, and LHD NATOPS manual and chapter 6.1.

**6.3.16 Recovery of Hung and Unexpended Ordnance**

**6.3.16.1** Vertical and short takeoff and landing aircraft landing with hung ordnance shall be safed as soon as practical after landing. Helicopters shall be dearmed prior to installing tiedown chains.

**6.3.16.1.1** Aircraft landing with unexpended ordnance shall be safed as per paragraph 6.3.15.