

CHAPTER 6.2

Conventional Weapons Handling Procedures Ashore

6.2.1 General. This chapter provides general and specific information for the safe and efficient handling, transportation, and stowage of ammunition and explosives ashore. The regulations and safety precautions set forth herein do not change or modify existing directives, nor do they relieve cognizant personnel of their responsibility for the use of good judgment and observance of safety precautions. The rules and regulations contained in this chapter are based in whole or in part on the bibliography listed in figure 6-2-1. For expanded or detailed procedures, reference should be made to those directives.

6.2.2 Responsibilities. Duties and responsibilities of authoritative personnel concerned with the handling of explosives at shore activities are delineated in chapter 1 of NAVAIR 00-80T-103 (Naval Air Training and Operating Procedures Standardization (NATOPS) Conventional Weapons Handling Procedures Manual (Ashore)) and in volume II, chapter 6.1.

6.2.3 Ammunition Allowances

6.2.3.1 The Load Plan/Load Planning is authorized and maintained by authority of OPNAVINST S8010.12E of 20 April 1987 (NOTAL). It contains the latest revision of the applicable station's mission statement. Each Navy and Marine Corps station which stocks and stores ammunition to support its stated mission has an Load Plan/Load Planning prepared by the Naval Sea Systems Command. Only the weapons officer is authorized to requisition and turn in ammunition in support of Load Plan/Load Planning and other training allowances. The weapons officer is responsible for maintaining Load Plan/Load Planning allowances or letters of waiver from the applicable authority.

6.2.3.2 Special purpose ammunition other than that authorized by Load Plan/Load Planning may be stocked with the approval of type commanders.

6.2.3.3 The weapons officer shall request modifications to Load Plan/Load Planning consistent with stowage capabilities, usage rates, and annual training ammunition allowances.

6.2.4 Ammunition Accountability and Management

6.2.4.1 The policy, procedures, and responsibilities for management of conventional ammunition as promulgated in NAVORDCENINST 8010.2A (NOTAL) shall be adhered to.

6.2.4.2 The weapons officer shall maintain a stock record for all conventional ammunition in the station's custody, utilizing an established uniform ammunition stock recording procedure for mechanized and non-mechanized activities. Mechanized activities are all TIR stock points with the Ordnance Management System (OMS) and ATR activities with the Fleet Optical Scanning Ammunition Marking System (FOSAMS) which have approved automated inventory records.

6.2.4.3 Non-mechanized activities shall maintain ammunition stock record cards. There are three forms available for ammunition stock recording. An Ammunition Master stock Record Card (NAVSUP 1296) and either a Lot/Location Card (NAVSUP 1297) or a Serial/Location supplemental card (NAVSUP 1356) will be maintained for every Naval Ammunition Logistics Code (NALC) carried on board. Lot/location or serial/location supplemental cards should be placed with the appropriate master stock record card. Another supplemental master stock record card by National Item Identification Number (NIIN) will be used if a second NIIN is received. All entries should be posted promptly and in ball point pen. When transferring to a new stock record card, the existing stock record card will be retained for audit purposes.

6.2.4.4 The weapons officer shall maintain a Notice of Ammunition Reclassification (NAR) file in accordance with NAVSEA TW 024-AA-ORD-010 (NOTAL) and ensure that all ammunition carried on the master stock records is properly coded and identified.

6.2.4.5 All departments and tenant commands shall return unserviceable ammunition, and any other ammunition not required or authorized, to the weapons officer for further disposition. The weapons officer shall manage the ammunition disposition program in accordance with NAVORDCENINST 8010.2A (NOTAL).

NAVAIR PUBLICATIONS

NAVAIR 00-80R-14	USN Firefighting and Rescue Manual
NAVAIR 01-700	Publication Index on Airborne Weapons Stores
NAVAIR 01-AIM9-2	MIM AIM-9 Series SIDEWINDER
NAVAIR 01-AIM54-2-3	MIM AIM-54A PHOENIX
NAVAIR 01-1A-75	ALM Consumable Material Application for Cleaning and Corrosion Control
NAVAIR 01-265GMAD-9-3.12	MIM AIM-7 Series SPARROW
NAVAIR 01-AGM84A-2-1	MIM AGM-84 HARPOON/SLAM
NAVAIR 01-15MGD-1	Laser Guided Bomb (LGB-2)
NAVAIR 01-90TBA-1	AQM-37A Target (0)
NAVAIR 01-90TBA-3	AQM-37A Target (1)
NAVAIR 11-1-113	Safety Precautions for Liquid Fuel
NAVAIR 11-1-116B	Navy Ammunition Logistic Codes (also issued as TW 010-AA-ORD-030)
NAVAIR 11-1F-2	Airborne Bomb and Rocket Fuze Manual
NAVAIR 11-5A-17	Bombs and Associated Components
NAVAIR 11-5A-37	JDAM
NAVAIR 11-15-7	Pyrotechnic Screening and Marking Devices
NAVAIR 11-155UU-44/A1	SUU-44 Flare Dispenser
NAVAIR 11-75-63	Launchers, Single Bay LMU-23/E and Power Bay LMU-24E for Smokey Sam
NAVAIR 11-75A-44	SUU-44 Flare Dispenser
NAVAIR 11-75A-61	2.75-inch Airborne Rocket Launchers (LAU-61/68 Series)
NAVAIR 11-75A-63	5.00-inch Rocket Launchers (LAU-10 Series)
NAVAIR 11-75ADU475-1	ADU-475/E GM Adapter
NAVAIR 11-85-1	Propellant Actuated Devices (PADs)
NAVAIR 11-85-5	Airborne Rockets
NAVAIR 11-85M-2	Rocket Motors (JATO)
NAVAIR 11-95-1	M61A1 Gun System
NAVAIR 11-100-1	Cartridges and Cartridge Actuated Devices
NAVAIR 11-120A-1.1	Weapons Packaging, Handling, Stowage
NAVAIR 11-120A-1.2	Weapons Packaging, Handling, Stowage
NAVAIR 11-140-5	Airborne Weapons Assembly Manual, Bombs, Firebombs and Practice Bombs
NAVAIR 11-140-6.1	Airborne Weapons Assembly Manual, Air-to-Air Tactical Missiles
NAVAIR 11-140-1	Rapid Rearm Manual
NAVAIR 11-140-6.2	Airborne Weapons Assembly Manual, Air-to-Ground Tactical Missiles
NAVAIR 11-140-6.3	Airborne Weapons Assembly Manual, Training Missiles
NAVAIR 11-140-10	Airborne Weapons Assembly Manual, LGBs / GBUs
NAVAIR 11-140-9	Airborne Weapons Assembly Manual, CBUs
NAVAIR 11-140-24	Ordnance Handling Equipment
NAVAIR 16-1-529	RADHAZ HERO Manual (also issued as OP 3565)
NAVAIR 19-15BC-10	Aero 39 Bomb Skid Adapter
NAVAIR 19-15BC-12	Aero 12C Weapons Skid
NAVAIR 19-15BC-13	Aero 21A Weapons Skid
NAVAIR 19-15BC-18	A/M32K5 Munitions Set w/Adapters
NAVAIR 19-15BC-505	Aero 21 Weapons Skid

Figure 6-2-1. Bibliography of Applicable References

NAVAIR PUBLICATIONS

NAVAIR 19-15BD-2	Aero 67A Munitions Transporter
NAVAIR 19-25E-51	Aero 51 Weapons Trailer
NAVAIR 19-25E-61	MHU-126 Weapons Trailer
NAVAIR 19-25E-63	MHU-151/M Munitions Trailer
NAVAIR 19-95-1	Weapons Handling Equipment Configuration Guide
NAVAIR 19-100-1.1	Approved Ordnance Handling Equipment

NAVAIR Directives

NAVAIR 19-600-63.6-1/-4	PMS/Preop Aero 51 Bomb Trailer
NAVAIR 19-600-66-6-2	PMS/Aero 47A Loader w/Adapters
NAVAIR 19-600-75-6-1/-4	PMS/Preop Aero 21 Skid w/Adapters
NAVAIR 19-600-86-6-2	PMS A/S 32K-1A/B Loader w/Adapters
NAVAIR 19-600-101-6-1/-4	PMS/Preop MK 7 Bomb Trailer
NAVAIR 19-600-145-6-1/-2	PMS/Preop Munitions Set A/M32K-5
NAVAIR 19-600-148-6-1/-2	PMS/Preop LALS
NAVAIR 19-600-162-6-1/-2	PMS/Preop MHU-126 Bomb Trailer
NAVAIR 19-600-169-6-1/-2	PMS/Preop Aero 61 Sting
NAVAIR 19-600-185-6-1/-2	PMS/Preop MHU-151/M Bomb Trailer
NAVAIR 19-600-186-6-1	Preop A/S32A-30 Tow Tractor
NAVAIR 19-600-189-6-1	PMS MHU-171/E Trailer
NAVAIR 19-600-198-6-1	Preop MHU-171/E Trailer
NAVAIR AW-820HN-MIB-000	MIM AGM-84 HARPOON
NAVAIRINST 4460.1D	Policy and Procedures for Air Launched Missile Repairable Material Movement

NAVSEA PUBLICATIONS

NAVSEA OP 5 Volume 1	Ammunition and Explosives Ashore
NAVSEA OP 1014	Ordnance Safety Precautions
NAVSEA OP 2173 Volumes 1 & 2	Catalog of Ordnance Handling Equipment
NAVSEA OP 2165 Volume 1	Navy Transportation Safety Handbook
NAVSEA OP 2217	Miscellaneous Chemical Munitions
NAVSEA OP 2238	Identification of Ammunition
NAVSEA OP 2239	Explosive Driver's Handbook
NAVSEA OP 2793	Toxic Hazards of Pyrotechnics
NAVSEA OP 3199 Volumes 1 & 2	Safety Precautions for Liquid Propellant
NAVSEA OP 3347	USN Ordnance Safety Precautions
NAVSEA OP 3565 Volumes 1 & 2	HERO Manual (also issued as NAVAIR 16-1-529)
SW023-AH-WHM-010	Handling Ammunition with MHE
SW023-AG-WHM-010	On-Station Transportation of Ammunition
NAVSEA SG420-AP-MMA-010	Testing of Ordnance Handling Equipment
NAVSEA SW020 AC SAF-010/020/030	Transportation and Storage Data for Ammunition, Explosives and Related Hazardous Materials
TW 010-AA-ORD-030	Navy Ammunition Logistics Codes
TW 024-AA-ORD-010	Ammunition Unserviceable, Suspended
NAVSEAINST 4570.1A	Demolition and Disposal of Ammunition

Figure 6-2-1. Bibliography of Applicable References (Cont'd)

OPNAV Instructions	
OPNAVINST 3100.6G	Special Incident Reporting (OPREP-3, Navy Blue and Unit SITREP) Procedures
OPNAVINST 4790.2G	Naval Aviation Maintenance Program
OPNAVINST 5102.1C	Mishap Investigation and Reporting
OPNAVINST 5530.13B	DON Physical Security Instruction for Sensitive Conventional Arms, Ammunition and Explosives (AA&E)
OPNAVINST S8010.12E	Nonnuclear Ordnance Requirements (NNOR)
OPNAVINST 8023.2C	U.S. Navy Explosive Safety Policies, Requirements and Procedures
OPNAVINST 8027.6E	Naval Responsibilities for Explosive Ordnance Disposal (EOD)
SECNAV Instruction	
SECNAVINST 5000.2B	Small Arms and Weapons Management
SECNAVINST 5500.4G	Missing, Lost, Stolen, or Recovered Government Property; Reporting of
SECNAVINST 5510.30A	DON Personnel Security Program
COMNAVAIRLANT/PAC Directives	
COMNAVAIRPACINST C8011.6	Training Ordnance Requirements
COMNAVAIRLANTINST 8023.5G/ COMNAVAIRPACINST 8023.2F COMNAVAIRESFORINST 8025.1F	Conventional Aviation Ordnance Qualification and Certification Program
NAVSUP Directives	
NAVSUPINST 4440.115	Physical Security
NAVSUPINST 4440.132A	Inventory Accuracy Office Program
NAVSUP Pub 505	Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft
COMNAVORDCEN Instruction	
NAVORDCENINST 8010.2A	Policy, Procedures, Responsibilities for Supply Management of Ammunition
CINCLANT/CINCPACFLT Instructions	
CINCPACFLTINST 8010.12	Fleet Ammunition Requisition and Reporting Guide
CINCLANTFLTINST 8027.3C/ CINCPACFLTINST 8027.1 M	Explosive Ordnance Disposal

Figure 6-2-1. Bibliography of Applicable References (Cont'd)

6.2.5 Ammunition Requisition, Issue, and Return Procedures

6.2.5.1 Ammunition requests shall be delivered to the weapons department ammunition accounting section within the time frame specified in the station's ordnance handling instruction. All department heads and squadron commanding officers shall provide the weapons officer with a continually updated list, with signature specimens affixed, of all personnel authorized to sign DD 1348 requisitions for ammunition. All requests for assembled ammunition must be accompanied by a DD 1348 requisition for all major and ancillary components of the all-up-round.

6.2.5.2 Propellant Actuated Devices (PADs) requisitioning policy is described in NAVAIR 11-85-1 (NOTAL). These items are manufactured in limited quantities and are not carried as stock items. PADs requisitioning shall be handled in the following manner:

a. PADs requiring replacement during aircraft calendar inspection should be requisitioned 90 days in advance of the requirement.

b. While based ashore, and when directed by their type commander, fleet squadrons may be authorized early replacement of PADs that will expire during deployment. When PAD are requisitioned for this purpose, the remarks section of the DD 1348 shall be so annotated.

c. Requisitions for replacement of damaged PADs shall cite the applicable naval aviation maintenance discrepancy report serial number and the date time group of the message report.

6.2.5.3 Ammunition requiring assembly shall be assembled by the weapons department at the naval air station and marine aviation logistics squadron at a Marine Corps air station and issued as an all-up-round in the configuration specified on the DD 1348 requisition.

6.2.5.4 All ammunition other than all-up-rounds shall be issued in their original shipping containers or in an approved metal ammunition shipping container.

6.2.5.5 Due to the Hazards of Electromagnetic Radiation to Ordnance (HERO) considerations, chaff, decoy flares, associated impulse cartridges, and 2.75-inch and 5.00-inch rockets shall be issued only after being properly and safely loaded inside the dispenser unit.

6.2.5.6 All ammunition returned to the weapons department shall be accompanied by a properly completed DD 1348-1 (DOD single line item release/ receipt document) in its prescribed shipping container. The weapons department shall provide shipping containers when the original is not available. Containers and documents shall reflect the national stock number, naval ammunition logistics code, MK and MOD, nomenclature, lot number(s), serial numbers, and condition code.

6.2.5.7 For CADs and PADs, a DD 1577-2 (unserviceable (repairable) tag-material) shall accompany the DD 1348-1 turn in document and material. All repairable CADs and PADs shall be turned in packaged in the shipping container received with the replacement item.

6.2.5.8 The weapons department shall return to not ready-for-issue stock all ammunition returned from squadrons in condition code K (serviceable condition unknown) pending verification of actual condition code. The item(s) shall be accompanied by a properly completed DD 1348-1 indicating the known item data, the material condition code, and annotated "Gain by Fleet Return." Disposition will be requested through normal channels.

6.2.6 Armament Weapons Support Equipment. All equipment authorized for the handling of conventional weapons shall be maintained and serviced in strict accordance with existing directives. Detailed information pertaining to the handling of such equipment can be found in volume II section 8.

6.2.7 Transportation of Explosives

6.2.7.1 All vehicles used to transport ammunition and explosives on or off military installations shall have fully operable electrical and mechanical systems and be equipped with all safety equipment required by NAVSEA OP 2165 volume 1 and NAVSEA OP 2239.

6.2.7.2 The driver of on-base, explosive-laden vehicles shall be thoroughly familiar with the applicable portions of NAVSEA OP 2239 and SW023-AG-WHM-010.

6.2.7.3 All rules and regulations pertaining to on-station transportation of explosives shall apply for off-station movement including the following:

6.2.7.3.1 The supply officer will schedule all off-station explosive movements utilizing commercial carriers or public works department vehicles and drivers. All off-station explosive movements shall be in accordance with the following government directives:

a. DOD Regulation 5200.1-R of 1 January 1997 (NOTAL).

- b. OPNAVINST 5530.13B (NOTAL).
- c. CINCPACFLTINST 8010.12 (Pacific Fleet activities only) (NOTAL).
- d. NAVSEA OP 2239.
- e. NAVSEA OP 2165 Volume 1
- f. NAVORDCENINST 8010.2A (NOTAL).
- g. NAVSEA SW020-AC-SAF-010/020/030.

6.2.7.3.2 The public works transportation officer shall ensure all vehicles provided to the supply officer and public works officer for off-station explosive movements are in fully operable condition and capable of passing inspection in accordance with DD 626 (motor vehicle inspection form).

6.2.7.3.3 Required off-station explosives movement forms shall be completed as follows:

- a. Supply Officer.
 - DD 1907, Signature and Tally Record
 - DD 1387-2, Special Handling Data/Certification
 - DD 1348-1 DOD Single Line Item Release/Receipt Document
 - Standard 1183, Government Bill of Lading
- b. Public Works Officer.
 - NAVFAC 9-11240/1, Vehicle/Equipment Request and Record
 - NAVMC 10627, Vehicle/Equipment Operational Record
- c. Weapons Officer.
 - DD 836, Special Instructions for Motor Vehicle Drivers
 - DD 626, Motor Vehicle Inspection
 - DD 1387-1C, Waterproof Shipping Tag
 - NAVSEA 8023/3, Railroad Car Inspection Report

6.2.7.3.4 For off-station shipments, the supply officer shall ensure the following directives are complied with for shipment security and documentation:

- DOD Regulation 5200.1-R of 1 January 1997 (NOTAL)
- DOT Exemption E-868 (NOTAL)
- OPNAVINST 5530.13A (NOTAL)
- Chapter 7 and table 7-3 of NAVSEA OP 2165 Volume I (NOTAL)
- NAVSEA TW 010-AA-ORD-010 (NOTAL)
- NAVSUP Manual Volume V (article 52150) (NOTAL)

6.2.7.3.5 United States Navy numbered seals (NSN 9Z5340-00-084-1570) provided by the supply officer shall be used on the following Arms, Ammunition, and Explosives (AA&E):

- a. All rail and truck shipments of classified AA&E categorized as I, II, III, or IV security risk.
- b. All metal containers designed for strap-seal (missile containers).
- c. All closed compartments of vehicles when used to transport AA&E category I, II, III, or IV material.
- d. Carload and less than carload shipments of AA&E under DOT Exemption E-868.
- e. AA&E shipments to which the carrier is to be denied access.

6.2.7.3.6 When seals are applied to commercial carrier shipments, the seal numbers, seal ownership, and applying activity shall be annotated on the Government Bill of Lading and DD Form 1348-1.

6.2.7.3.7 When a shipment contains classified material, a seal tag and a seal notice shall be affixed on and near the seal.

6.2.7.3.8 When AA&E is classified CONFIDENTIAL, unit weight is over 200 pounds, and material is packaged in a container with strap seals applied, the material shall be shipped as unclassified. In addition, CONFIDENTIAL material packaged in a domestic or fleet issue unit load in accordance with MIL-STD/ WR50 series requirements shall be shipped as UNCLASSIFIED. In either case, the material may be shipped by any authorized mode.

6.2.7.3.9 Incoming sealed shipments shall be thoroughly inspected by the receiving department (weapons or supply). Seal numbers shall be compared with the DD 1348-1 and the Government Bill of Lading. If seal is intact and the numbers match, the word "INTACT" shall be annotated on the Government Bill of Lading. Refer to NAVSEA OP 2165, Volume 1, for procedures to follow for discrepant shipments.

6.2.8 Magazines and Magazine Areas

6.2.8.1 All magazines and magazine areas are under the cognizance of the station weapons officer and shall be administered and maintained in accordance with NAVSEA OP 5, Volume 1 and NAVSEA SW020-AC-SAF-010/020/030.

6.2.8.2 The physical security of ammunition and explosives stored in the station's magazines shall be provided for in accordance with OPNAVINST 5530.13B (NOTAL).

6.2.8.3 Ammunition storage requirements, magazine condition, and magazine area encroachment due to off-base construction shall be continually monitored to ensure that explosive safe quantity distances and storage criteria is maintained in accordance with NAVSEA OP 5 (NOTAL). Should a violation of regulations be detected, and resolution at the local level is impossible, a waiver or exemption shall be requested in accordance with OPNAVINST 8023.20E (NOTAL).

6.2.9 Assembly and Disassembly

6.2.9.1 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 accomplished in accordance with NAVSEA OP 5, NAVSEA OP 3565/NAVAIR 16-1-529, the appropriate checklist, and the Naval Air Systems Command (NAVAIRSYSCOM) technical manuals.

6.2.9.2 Assembly or disassembly of components shall be conducted only in the station's approved ordnance assembly area and shall be accomplished by properly qualified and certified weapons department personnel at naval air stations and marine aviation logistics squadron personnel at Marine Corps air stations.

6.2.9.3 The assembly and disassembly areas shall be maintained HERO safe whenever the ordnance being handled is HERO susceptible. In the event HERO-susceptible ordnance must be handled, the officer in charge of the

evolution shall request the operations officer to set the appropriate HERO emission control condition prior to exposing the HERO-susceptible ordnance to radio frequency environments.

6.2.10 Ordnance Handling and Loading Pads and Combat Aircraft Loading Areas

6.2.10.1 Ordnance handling pads and/or Combat Aircraft Loading Areas (CALA) are areas that are designed and constructed to meet the explosive safety requirements of NAVSEA OP 5 and DOD explosive safe quantity distances during the loading or downloading of high explosives on combat and cargo aircraft. A map depicting the exact location of the ordnance handling pad and/or CALA should be included in the station's air operations manual and ordnance handling instruction.

6.2.10.2 Use of the pad and/or CALA is mandatory during the loading, downloading, and rearming of aircraft carrying hazard class 1.1 and 1.2 explosives, also certain hazard class 1.3 and 1.4 explosives are required to use the pad and/or CALA.

6.2.10.3 The pad and/or CALA shall be used for all emergency safing and downloading of HERO-unsafe or HERO-susceptible ordnance and hung ordnance that cannot be adequately safed in the arming and dearming areas.

6.2.10.4 Rules and regulations pertaining to the operation and scheduling of the ordnance handling pad and/or CALA shall be included in the station's ordnance handling instruction and the air operations manual.

6.2.11 Aircraft Loading and Downloading

6.2.11.1 All aircraft loading and downloading will be conducted by qualified, certified personnel in accordance with OPNAVINST 8023.2C (NOTAL) or MCO 8023.3 (NOTAL) and applicable type commander instructions utilizing the appropriate NAVAIRSYSCOM conventional weapons and stores loading manual and checklist. Loading information contained in these manuals and checklists shall not be construed as authority to load any weapon or store for flight. The appropriate aircraft tactical manual shall be consulted for the authorized loading configuration of any weapon, store, or combination. More detailed information and safety regulations regarding the handling of explosives and loading of aircraft with ordnance at shore activities can be found in NAVAIR 00-80T-103 (NATOPS Conventional Weapons Handling Procedures Manual Ashore).

6.2.11.2 The primary area for loading and downloading explosives and other hazardous material is the ordnance handling pad.

6.2.11.3 All explosive and ammunition loading or downloading from aircraft shall be accomplished in strict accordance with the appropriate loading manual. Aircraft loaded with ammunition must meet the quantity and distance separation requirements specified in the appropriate NATOPS manual.

6.2.12 Aircraft Arming and Darming

6.2.12.1 All aviation ordnance capable air stations shall have designated arming or dearming areas, normally near the ends of runways. Maps showing the location of such areas should be included in the station's air operations manual and ordnance handling instruction.

6.2.12.2 All aircraft, ordnance, and weapons will be armed, safed, and dearmed in compliance with the NAV-AIRSYSCOM weapons loading checklist. Tasks to be performed in the checklist "rearm" area may be accomplished in the designated loading areas or in the rearming areas. All tasks to be performed in the "arming" area shall be conducted only in the designated arming areas. If a conflict exists between this instruction and the applicable NATOPS, then the NATOPS manual shall govern and the discrepancy reported to CNO (N881) using the procedures established in volume I chapter 1.1.

6.2.12.3 Arming and dearming shall be conducted only while the aircraft is at a complete stop and control of that aircraft has been turned over to the arming and dearming supervisor. Arming and dearming hand signals shall be in accordance with the NATOPS Conventional Weapons Handling Procedures Manual Ashore and figure 6-1-1.

6.2.13 Maintenance On Loaded Aircraft

6.2.13.1 Loaded aircraft shall be construed to mean aircraft with any explosive, propellant, or pyrotechnic device on board regardless of purpose or intended use.

6.2.13.2 Per NAVSEA OP 3347, Second Revision, any equipment normally containing explosives or explosive devices shall have the explosives or explosive devices removed prior to commencing maintenance on that system, and certified in writing. Certification for aircraft may be accomplished by use of the Visual Information Display System/Maintenance Action Form. Although maintenance on loaded aircraft is prohibited, minor main-

tenance and routine servicing necessary to ready the aircraft for the next launch may be conducted after all weapons have been safed to the maximum degree as specified in the NAVAIRSYSCOM weapon and stores loading checklists with the following restrictions:

- a. Maintenance requiring application of electrical power to the armament or weapons release and control circuitry shall not be performed.
- b. Aircraft requiring extensive troubleshooting, engine removal, or complete jacking are not considered readily available for flight and shall be downloaded.
- c. Freshwater washdown of aircraft carrying any type weapon (including captive carry) is prohibited until download is complete.

6.2.13.3 After a "WARNING" placard or control stick cover is prominently displayed in the cockpit, the maintenance or servicing of loaded aircraft which requires application of electrical power is limited to:

- a. Refueling by fuel truck only.
- b. Replacement and checkout of communications or navigation equipment.
- c. Replacement or checkout of engine performance and flight instruments.
- d. Engine low power turn up.
- e. Flight control and hydraulic system checks.

6.2.14 Nose Dock and Hangared Aircraft

6.2.14.1 No explosive devices shall be allowed to remain on board aircraft which are hangared in nose docks or other maintenance or shelter facilities ashore except as follows:

- a. Emergency egress systems and classified equipment destructors.
- b. Pylon explosive bolts in F-4 type aircraft.
- c. Ejection rack separation cartridges when fuel tanks are installed (BRU-9/10/11).
- d. MK 64 signals, underwater sound loaded in patrol or antisubmarine warfare aircraft in designated storage racks.

e. Fire extinguisher cartridges installed in aircraft (exempt from safing requirements).

f. All other cartridges shall be removed prior to parking aircraft in these facilities.

6.2.14.2 In all cases, safety precautions for installed items shall be strictly adhered to; safety pins installed and cartridges electrically disconnected or mechanically locked to prevent the possibility of inadvertent firing. When maintenance is to be performed on an aircraft and the possibility of firing these items exists, in no case shall they be left in or on the aircraft.

6.2.14.3 Under conditions of war or extreme emergency, these requirements may be modified as necessary with the concurrence of the commanding officer. This may include ready alert aircraft during times of adverse weather. Safety precautions commensurate with the objective to be accomplished must be observed at all times.

6.2.15 Aircraft Fueling and Defueling

6.2.15.1 Simultaneous fueling and loading or downloading of weapons is strictly prohibited.

6.2.15.2 Fueling of explosive-loaded aircraft with fuel trucks is authorized on the flight line or ordnance handling pad, provided the stores are properly safed in accordance with the applicable aircraft weapon and stores loading manual and checklist.

6.2.15.3 Hot refueling of explosive-loaded combat aircraft is prohibited. Explosive-loaded combat aircraft are prohibited from entering the fueling pits. Hot refueling of aircraft with hung ordnance of any type is prohibited.

6.2.15.4 Hot refueling of aircraft with the following unexpended aircraft stores is authorized, providing they have been safed and dearmed in accordance with the aircraft weapons and stores loading manual or checklist.

a. M61A1 gun systems loaded only with target practice ammunition, providing the gun is not jammed.

b. Unexpended MK 80 series, MK 76 and MK 106, or other practice bombs with flash or impact signals.

c. Captive carry missiles without live warheads and motors.

d. Unexpended dummy ordnance.

e. Internally carried unexpended pyrotechnics and signals, underwater sound.

f. Unexpended chaff and impulse cartridges in ALE series dispensers.

6.2.16 Hung and Unexpended Ordnance

6.2.16.1 Hung ordnance is any airborne weapon which could not be dropped or fired due to a weapon, rack, or circuit malfunction. Unexpended ordnance is any airborne weapon that has not been subjected to attempts to fire or drop and is presumed to be in normal operating condition and can be fired or jettisoned if necessary.

6.2.16.2 All aircraft returning to base with hung or unexpended ordnance shall be dearmed in accordance with the applicable NAVAIRSYSCOM weapons and stores loading manual and checklist. After safing, hung free-fall and forward-firing ordnance may be downloaded in the designated area. Refer to the air operations manual and the ordnance handling instruction.

6.2.16.3 Aircraft returning with forward-firing hung ordnance that cannot be safed or dearmed in accordance with the NAVAIRSYSCOM loading checklist shall be shut down in the arming and dearming area. The weapons officer shall be notified and the aircraft downloaded in place. Hung free-fall weapons that cannot be safed or dearmed shall be downloaded at the ordnance handling pad after engine shutdown.

6.2.16.4 Aircraft with hung ordnance shall not conduct touch-and-go or field carrier landing practice. All landings shall be full stop only.

6.2.16.5 Aircraft with externally carried unexpended ordnance shall not perform touch-and-go or field carrier landing practice training when the flight path of the aircraft in the landing pattern is over any inhabited area. When the flight path is over uninhabited areas, touch and go or field carrier landing practice may be conducted with unexpended practice ordnance or captive carry missiles only.

6.2.17 Divert and Transit Aircraft

6.2.17.1 The station's commanding officer shall establish and maintain a crew of personnel qualified and certified to arm and dearm diverted aircraft.

6.2.17.2 Transit aircraft or aircraft diverting from another base or ship due to weather or aircraft emergency shall be challenged by the tower controller or operator

who first makes radio contact as to the specific type of ordnance on board. Once the type ordnance has been determined, the station's assigned divert aircraft arming and dearming personnel shall be notified.

6.2.17.3 After dearming, divert or transit aircraft may be parked in the designated loading area as specified in local instructions. If downloading is required, it shall be conducted in the designated loading and downloading area.

6.2.17.4 If downloading cannot be accomplished, a security watch shall be posted until aircraft departure.

6.2.17.5 In the event an aircraft loaded with unfamiliar ordnance diverts into a facility and qualified personnel are not available for dearming, the aircraft shall be shut down and retained in the dearming area until it has been dearmed or until its departure.

6.2.17.6 Maintenance and servicing of loaded divert or transit aircraft shall be in accordance with paragraphs 6.2.13, 6.2.14, and 6.2.15.

6.2.18 Cargo Aircraft

6.2.18.1 Prior to loading or unloading ammunition, explosives, and other hazardous materials, the aircraft shall be grounded.

6.2.18.2 Loading and unloading shall be done in accordance with explosive safe quantity distance requirements specified by NAVSEA OP 5, volume 1.

6.2.18.3 If the aircraft carrying explosives and hazardous material requires only minor repairs, the cargo need not be unloaded but repairs shall be accomplished at a location which complies with appropriate explosive safe quantity distance requirements for the cargo aircraft. For major repairs, the plane shall be unloaded and the cargo stored in accordance with NAVSEA OP 5. If a landing is made for refueling purposes only, the cargo need not be unloaded. Refueling shall be accomplished at a location

suitable for the performance of minor repairs as described above. A fire truck shall stand by during handling evolutions.

6.2.18.4 Prior to aircraft taxi or landing, the pilot shall contact the tower and make known the contents of the cargo and shall request any specific instructions and priority for the aircraft.

6.2.18.5 The crash crews and firefighting personnel shall be notified as to the type of explosives or hazardous materials aboard prior to taxi or landing.

6.2.18.6 Cargo aircraft loaded with explosives shall proceed to and from the duty runway by a route that affords the greatest practical separation from inhabited buildings, combat aircraft parking areas, and explosive storage areas. No stops shall be made in proceeding to and from the duty runway except as necessary for safe ground operation of the aircraft.

6.2.19 Aircraft Grounding

6.2.19.1 During aircraft (combat, cargo, rotary, and fixed wing) explosive loading or downloading, fueling or defueling operations, the aircraft shall be grounded. An aircraft ground is any ground in which the resistance between the aircraft structure and ground is 10,000 ohms or less. The resistance value of an aircraft ground strap must not exceed 10 ohms. Ground straps must have an impedance check annually, be serialized, and a record maintained on ground strap resistance.

6.2.19.2 Aircraft grounding points shall be identified and marked as shown in figure 6-2-2. The ground system shall be visually checked frequently and at least semi-annually to ensure that the connections are secure and free from paint, corrosion, or foreign materials which might impair the efficiency of the system.

6.2.19.3 Aircraft grounding systems shall be tested for electrical resistance and continuity in accordance with NAVSEA OP 5, volume 1, and MIL-HDBK-274(AS) (Electrical Grounding for Aircraft Safety) (NOTAL).

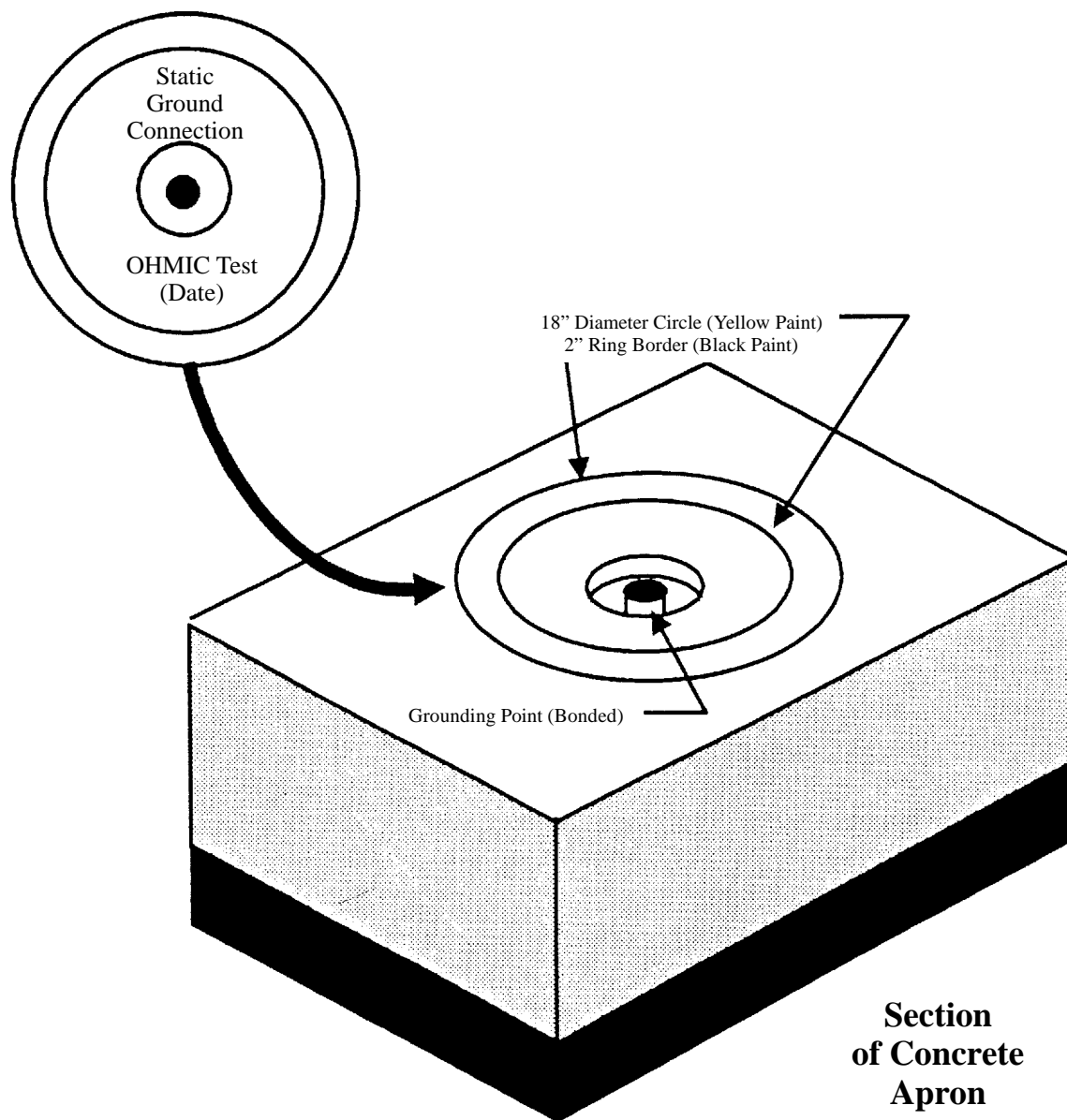


Figure 6-2-2. Aircraft Grounding Points