UNITED STATES MARINE CORPS
Marine Corps Air Station
(Helicopters)
New River, Jacksonville
North Carolina 28545

204:MMMS:cbm
11000
15 May 1980

From: Commanding Officer
To: Commanding General, Marine Corps Base, Camp Lejeune, N. C. 28542
(Public Works Officer)

Subj: PWD 79-32, Aircraft Washracks

Ref: (a) Mtng of 13 Dec 1979 btwn Station S4, Group AMO's and W. HELLAMS from PWD, MCB, CLNC
(b) Ltr from PWO to BMO over PWD 79-32 dtd 4 Jan 1980

MAG-S Hold

Encl: (1) Aviation Washrack Requirements from MAG-26
(2) Aviation Washrack Requirements from MAG-29

1. In response to references (a) and (b), enclosures (1) and (2) are forwarded for continued work on subject engineering service request (ESR).

CARL H. YUNG
By direction

Copy to:
BMO, MCB, CLNC

MEMORANDUM FOR THE RECORD

SUBJECT: AVIATION WASHRACKS

DATE: 13 December 1979

1. Meeting held at MCAS(H), S-4 Office between MAG S-4's, AMO's, Station S-4 & MCB Public Works Office. Attending: Lt. Col. Yung, Station S-4
Capt. G. BUrnside, Station S-4
Mrs. M. Smith, Station S-4
Lt. Col. Whitner, MAG-29, S-4
CWO M. Gardner, MAG-29, AMO
Maj. Vern Clark, MAG-26 AMO
Mr. Wayne Hellams, Public Works

2. Meeting began with presentation by Mr. Hellams of Engineering Service Request, initiated by the Base Maintenance Officer, for the redesign of the washracks. Resulting discussing with the AMO personnel present concluded that the redesign concept presented was too simplistic to meet the current requirements. Mr. Hellams said that the design he presented complied with the requirements that he had been able to obtain from NAVFACENGCON (LANTDIV). The Group personnel said that they had other criteria from NAVAIR & Mr. Hellams said he would be happy to have their imput so that he could redo the design to meet their criteria.

MMMS

UNITED STATES MARINE CORPS
MARINE CORPS AIR STATION
(HELICOPTER)
NEW RIVER, JACKSONVILLE
NORTH CAROLINA 28545

204:FEA:jla
11000
4 Sep 1981

From: Commanding Officer
To: Commanding Officer, Marine Aircraft Group-29, Marine Corps Air Station (Helicopter), New River

Subj: Aircraft washing adjacent to AS-4108

Ref: (a) CO HML167 ltr 42/KGI/kgi 5100 of 17 Aug 1981 w/endorsement

1. The area referred to in the reference is not a washrack area and was not designed as a washrack area. Therefore, the NAVAIR Instruction quoted is not applicable.

2. The dumping of pollutants such as greases, oils and solvents into unprotected storm drains is a violation of the Environmental Protection Act and should not be permitted.

3. The washrack adjacent to AS-4106 is now undergoing a renovation to make it completely functional. It is scheduled for completion during the week of 7 - 11 September. When completed, it will accomodate two aircraft at a time and should alleviate the aircraft washing problem.

4. Additionally, plans are presently on-going to incorporate a paved area with a drain which will connect to an existing oil-water separator, in the location desired by the reference. We are attempting to accomplish this through an existing Pollution Abatement Contract.

D. W. Nelson

D. W. NELSON
By direction

UNITED STATES MARINE CORPS
Marine Aircraft Group 29
2d Marine Aircraft Wing, FMF, Atlantic
Marine Corps Air Station, (Helicopter)
New River, Jacksonville, N. C. 28545

4/CGR/11h
11000
31 August 81

FIRST ENDORSEMENT on CO HML-167's ltr 42/KGI/kgi 5100 of 17 August 1981

From: Commanding Officer
To: Commanding Officer, Marine Corps Air Station, (Helicopter), New River (S-4)

Subj: Building 4108 Safety Discrepancy on Aircraft Washrack

1. Forwarded, recommending that the area described in enclosure (1) of the basic letter be paved.

2. The subject area is one that is subjected to heavy traffic, vehicular and pedestrian and because it is adjacent to the flight line creates a FOD hazard. It is requested that the subject area be included in the list of R-1 funding.

3. It is acknowledged that the subject area is not an authorized "washrack" but is used for that purpose because the washrack adjacent to hangar 4106 is inoperable.

WILLIAM H. HUFFCUT

UNITED STATES MARINE CORPS
Marine Light Helicopter Squadron 167
Marine Aircraft Group 29
2d Marine Aircraft Wing, FMF, Atlantic
MCAS(H) New River, Jacksonville, North Carolina 28545

42/KGI/kgi
5100
17 Aug 1981

From: Commanding Officer HML 167
To: Commanding Officer MCAS(H) New River
Via: Commanding Officer MAG 29

Subj: Building 4108 Safety Discrepancy on Aircraft Washrack

Ref: (a) NAVAIR 01-1A-509 Chapter 8, Page 8-11, Paragraph 8-18, Figure 8-20, Type B Washrack
(b) OIC Quality Assurance HML 167 ltr of 4 Aug 1981

Encl: (1) Sketch of Proposed Aircraft Washrack

1. The washrack area north of Building 4108 is inadequate in accordance with the standards set in reference (a). In addition, this area is a safety hazard as described in reference (b).

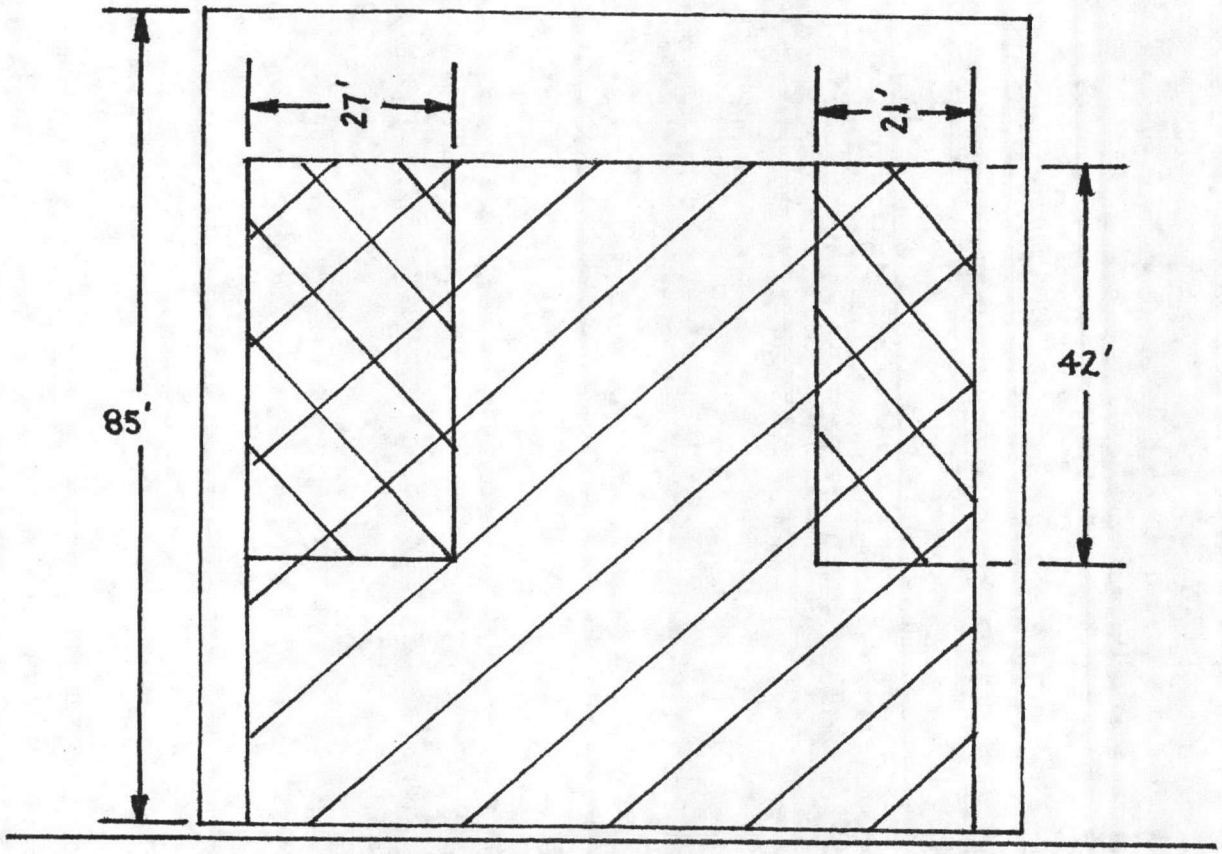
2. This problem has been previosly discussed and/or presented up through Station level. However, the continuous deterioration of the area warrants that corrective action be taken immediately.

3. It is requested that the problem be viewed as a safety hazard and not a building and grounds improvement. Command interest will ensure safer working conditions for our Marines. We have been fortunate that no incident has occurred, although the potential for a ground accident resulting in injury to one of our Marines or damage to an aircraft still exists.

4. Enclosure (1) is a scale drawing of a washrack area. Reference (a) shows the dimensions of a Type B washrack to be 85 feet by 85 feet, as represented by the outer square in enclosure (1). The shaded area is currently paved. The cross-shading denotes the area requiring paving. Due to lack of space, we cannot meet the criteria set forth in reference (a). However, once complete this washrack will meet our operational and safety needs.

R C Regan

R. C. REGAN
By direction



BUILDING 4108

UNITED STATES MARINE CORPS
Marine Aircraft Group 29
2d Marine Aircraft Wing, FMF, Atlantic
Marine Corps Air Station, (Helicopter)
New River, Jacksonville, N. C. 28545

4/TPN/mdh
11000
19 Feb 1980

FIRST ENDORSEMENT on CO, H&MS-29 ltr 5:DLS:dsh 11000 dtd 14 Feb 80

From: Commanding Officer
To: Commanding Officer, Marine Corps Air Station (Helicopter)
New River, Jacksonville, N. C. 28545

Subj: Aviation wash rack; requirements/construction of

1. Forwarded.

T. P. NUNAN
By direction

UNITED STATES MARINE CORPS
Headquarters and Maintenance Squadron 29
Marine Aircraft Group 29
2d Marine Aircraft Wing, FMF, Atlantic
Marine Corps Air Station, (Helicopter)
New River, Jacksonville, N. C. 28545

5:DLS:dsh
11000
14 Feb 1980

From: Commanding Officer
To: Commanding Officer, Marine Corps Air Station (Helicopter)
New River, Jacksonville, N. C. 28545 (Attn: S-4)
Via: (1) Commanding Officer, Marine Aircraft Group 29
(Attn: S-4)

Subj: Aviation Wash Rack; Requirements/Construction of

Encl: (1) AMO, H&MS-29 ltr 11/RHH/jca 11000 dtd 11 Feb 80

1. Enclosure (1) is forwarded for your planning of the subject.

D. L. SADDLER
By direction

UNITED STATES MARINE CORPS
Marine Aircraft Group 29
2d Marine Aircraft Wing, FMF, Atlantic
Marine Corps Air Station, (Helicopter)
New River, Jacksonville, N. C. 28545

11/RHH/jca
11000
11 February 1980

From: Aircraft Maintenance Officer
To: Commanding Officer, Headquarters and Maintenance Squadron 29

Subj: Aviation Wash Rack Requirements

Ref:
(a) MAG-29 msg 092241Z MAR 1979
(b) NAVAIR 01-1A-509
(c) NAVAIR 15-01-500
(d) NAVAIR 01-110HCB-2-1
(e) NAVAIR 01-110HCE-2-1
(f) NAVAIR 01-60GCB-2-2
(g) NAVAIR 01-110HCB-6-3
(h) NAVAIR 01-110HCE-6-4
(i) NAVAIR 01-H1AAA-6-3
(j) NAVAIR 01-60GCB-6-3
(k) CNALINST 4750.2J
(l) CNALINST 4750.6

Encl:
(1) MAG-29 msg 092241Z MAR 1979
(2) NAVAIR 01-1A-509, pg 8-11 and 8-15
(3) NAVAIR 15-01-500, pg 13-2
(4) NAVAIR 01-110HCB-2-1, pg 2-2
(5) NAVAIR 01-110HCE-2-1, pg 1A-13
(6) NAVAIR 01-60GCB-2-2, pg 2-83 and 2-84
(7) NAVAIR 01-110HCB-6-3, card 10
(8) NAVAIR 01-110HCE-6-4, card B-44
(9) NAVAIR 01-H1AAA-6-3, card 15
(10) NAVAIR 01-60GCB-6-3, card 15
(11) NAVAIR 15-01-500, pg 11-1
(12) CNALINST 4750.2J, pg 5
(13) CNALINST 4750.6, encl (1), pg 2

1. Reference (a), enclosure (1), identified existing problems with aviation wash racks available to this Air Group. A meeting with NAVFAC and MCAS(H) New River representatives indicated that renovation of the existing aviation wash facilities will not adequately meet existing requirements.

2. Reference (b) contains the specifications and requirements for a Type A wash facility for helicopters, enclosure (2). The

enclosure identifies water, steam, compressed air and electrical requirements. The following is a list of supporting documents in justification of each requirement.

a. Fresh Water, Cold - enclosures (2) - (13)

b. Fresh Water, Hot - enclosure (11)

c. Compressed Air - enclosures (2) - (10)

d. Electrical Power Source - enclosure (2)

e. High Pressure Steam - enclosure (13)

f. List solvents/drainage requirements - enclosure (13)

3. As requested, this information is forwarded for review to assist in construction of station aviation wash facilities. The information contained herein satisfies requirements for adequate aircraft and ground support equipment cleaning within MAG-29.

R. H. HOWELL

PAC file

PWO:403:AWH:sh
PWD 79-32

4 JAN 1980

From: Public Works Officer
To: Base Maintenance Officer

Subj: Aircraft Washracks, MCAS(H), New River

Ref: (a) BMO ltr MAIN/RMD/clm 4330 dtd 12 Mar 79

1. In response to reference (a), an engineering study of subject washracks has been conducted by this office.

2. Subject washracks are comprised of four (4) concrete wash aprons, Structures Nos. AS-505, 513, 4101, and 4104. Utilities are provided for aircraft washing at eight (8) equipment shelters, Structures Nos. AS-540, 541, 542, 543, 4133, 4134, 4135, and 4136, which are located on the aforementioned wash aprons.

3. The existing equipment shelters were designed to provide compressed air, 300 PSIG wash water, station pressure cold water, 150 PSIG steam, 155° F. (min.) water, 50 PSIG steam with detergent injection, 220 volt, 60 Hz, 3 Ph power receptacle, and 120 volt, 60 Hz, 1 Ph power receptacle. All of the aforementioned were provided with hoses, nozzles, quick-connects, automatic pneumatic drive hose reels, etc.

4. The majority of the equipment necessary for the wash system to function as designed is either missing or not repairable without replacement.

5. Field investigations confirm the accuracy of the conditions as stated in reference (a).

6. A meeting with MCAS(H) New River officials and Mr. Wayne Hellams (MCB PWD) was held on 13 December 1979.

a. Actual problems encountered during aircraft and support equipment washing/cleaning were presented.

b. Definitive criteria applicable to the washing/cleaning of equipment and aircraft were reviewed and it was determined that a genuine need exists for most of the utilities previously installed with the subject washracks.

c. The possibility of using portable steam/pressure cleaners was discussed, but determined to not be entirely feasible.

PWO:403:AWH:sh
PWD 79 32

d. It was decided that MCAS(H) New River will determine actual utility requirements -- pressures, temperatures, etc. needed for the proper cleaning/washing of air frames and supporting equipment, and will forward information with a request for redesign of washrack systems to the Public Works Officer for project preparation and cost estimate.

7. For further information contact Wayne Hellams at X-3238.

V. PODBIELSKI

Copy to:
AC/S, Fac
CO MCAS(H) (S-4)

UNITED STATES MARINE CORPS
Marine Aircraft Group 26
2d Marine Aircraft Wing, FMF, Atlantic
Marine Corps Air Station, (Helicopter)
New River, Jacksonville, N. C. 28545

11:ATM:dlt
11130
26 Dec 1979

From: Commanding Officer
To: Commanding Officer, Marine Corps Air Station (Helicopter) New River, Jacksonville, North Carolina 28545

Subj: Aviation Washrack Requirements

Ref: (a) CO MAG-26 ltr VLC:csb over 4790 dtd 30 May 1979
(b) NAVAIR 01-1A-509
(c) NAVAIR 15-01-500
(d) NAVAIR 01-250HDA-2-1
(e) CNALINST 4750.2J
(f) CNALINST 4750.6
(g) NAVAIR 01-230HMA-6-3 Card 20
(h) NAVAIR 01-250HDA-6-3 card 15

Encl: (1) NAVAIR 01-1A-509, pg 8-11
(2) NAVAIR 01-1A-509, pg 8-15
(3) NAVAIR 15-01-500, pg 13-2
(4) NAVAIR 01-250HDA-2-1, pg 4-68
(5) NAVAIR 01-250HDA-2-1, pg 4-71
(6) CNALINST 4750.2J, pg 15
(7) NAVAIR 15-01-500, pg 11-1
(8) CNALINST 4750.6, encl (1) pg 2

1. Reference (a) identified existing problems with aviation washracks available to this Air Group and requested assistance in making them functional. Subsequently, an on site survey was conducted by the Naval Facilities Engineering Command (NAVFAC). A recent meeting with NAVFAC and MCAS (H) New River representatives indicated that the planned renovation of the subject aviation washracks will not adequately meet existing requirements.

2. Reference (b), states that a Type A washrack is required for Helo aircraft, see enclosure (1). The specific capabilities are highlighted below:

a. Pressurized Air. In accordance with references (b), (c), (d), and (e) pressurized air is needed to conduct an effective corrosion control program by allowing the application of cleaning solutions through the operation of corrosion control equipment and having the capability to dry areas not accessible to the hand, see enclosures (1), (2), (3), (4), and (5).

b. Plumbing. At least 44 gallons per minute of cold water and 30 gallons per minute of hot water is required by reference (b) to meet prerequisites of a Type A washrack, see enclosure (2). Pressure spray is extremely important in preservation procedures when dealing with salt water or fire fighting chemical exposure as depicted in reference (c), see enclosure (7).

c. Hot Water. The requirements contained in reference (b), see enclosure (1), make hot water a necessity when establishing a Type A washrack. When initiating Type E preservation described in reference (c), the use of warm water is a preferred treatment, see enclosure (7).

d. Steam. High pressure steam cleaning used by organizational and intermediate maintenance levels to clean ground support equipment, is described in reference (f), see enclosure (8).

3. Currently, there are 44 CH-53's and 79 CH-46E/F's assigned to this Air Group. As required by references (g) and (h), 14-day inspections, it takes one man seven hours (7 MMH's) to wash a H53 and two men two hours (4 MMH's) to wash a H46. At a rate of twice a month, every 14 days, the total maintenance man hours invested in washing aircraft amounts to 616 MMH's for the H53's and 632 MMH's for the H46's. These totals do not take into account additional requirements such as aircraft returning from deployment and aircraft exposed to salt water. An excess of 1248 MMH's a month are being invested and this number increases when the necessary equipment/facilities are either not functioning or not available.

4. All assistance possible is requested to insure the minimum requirements are available. A quality corrosion control program is an absolute must and can only be achieved via adequate, functional facilities.

K. L. Bridgeman

K. L. BRIDGEMAN
By direction

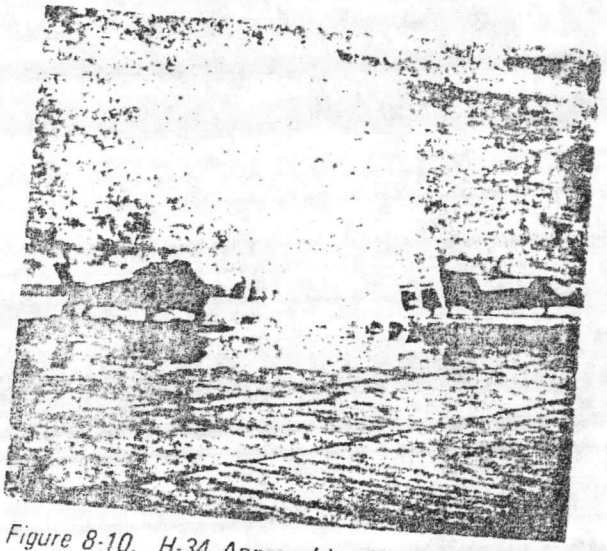


Figure 8-10. H-34 Approaching New River Rinse Facility Installation

Figure 8-11. H-34 During Rinsing Cycle

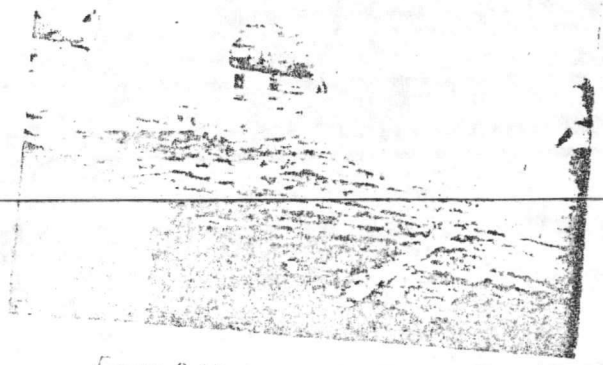


Figure 8-12. H-46 During Rinsing Cycle

8-16. FIXED WING AIRCRAFT. Two different installations are available for rinsing this type of aircraft. The basic designs are essentially the same, the major difference being the overall size and the type of nozzle configuration. Type 2 is the largest and is used for VP type aircraft. Type B nozzles are used in this facility. Figure 8-13 is a diagram of the VP rinse facility and figures 8-14 and 8-15 illustrate a P-3 entering and in the rinse facility. Type 3, used for VA and VF type aircraft, is shown in figure 8-16. Type C nozzles are used in this installation. Figure 8-17 shows an F-4 entering the rinse system.

8-17. Figure 8-18 illustrates the underground plumbing configuration for the nozzle manifold. Figure 8-19 shows an ideal location for a rinse facility.

8-18. AIRCRAFT WASHRACK. Aircraft washracks are installed at Naval and Marine Corps Air Stations for cleaning aircraft in conjunction with periodic maintenance. Some of the existing criteria for washracks are shown in figure 8-20 depicting a Type A washrack for VA, VF, and Helo aircraft and a Type B washrack for VP and VR aircraft. Normally, washracks are located adjacent to the hangar with access pavement provided as required. The utilities control center programmed with the washrack is a 35 by 18 foot building which houses detergent metering equipment, air compressor, detergent mixing tank, water heater, utility controls, sanitary facilities for personnel, if required, and storage space for cleaning equipment. A detergent storage tank and pollution abatement features are also to be included as part of the washrack.

8-19. CORROSION CONTROL HANGARS.

8-20. Corrosion control hangars have been designed for installation at intermediate maintenance activities. These facilities have a high initial cost, however, and will only be approved when they are used for scheduled corrosion control programs, or in support of deployed aircraft models as detachments, or when operating conditions are such that organizational corrosion control efforts are not satisfactory. Two sizes of hangars are avail-

compressed air supply of 90 P[illegible] minimum. It is recommended that the airless spr[illegible] gun be equipped with a Reverse-A-Clean tip with orifice size of 0.017 to 0.021 inch and a spray angle of 40 to 60 degrees. This equipment is preferred for applying sprayable strippable coatings.

b. Atomizing type spray equipment, (table 3-1, items 12, 13 and 15) as follows:

(1) Mechanically agitated paint pots with output capactiy of 30 to 40 fluid ounces per minute (table 3-1, item 12). These units are suitable for applying all types and classes of MIL-C-6799 compounds. Lower capacity units (table 3-1, item 13) are suitable only for applying Type II, class 1 and 4 compounds.

(2) Compressed air supply 60 to 70 PSI constant.

(3) Hose and fittings.

(4) Pressure regulators.

(5) Air line liquid traps.

(6) Spray guns (table 3-1, item 15).

c. Caulking guns (table 3-1, item 2).

13-9. FACILITIES REQUIRED.

13-10. The sprayable, strippable compounds described herein may normally be applied in any standard paint area. They may also be applied outdoors in an area protected from dust, wind, and rain provided temperatures are between 55° and 125° F. When spraying these materials in outdoor areas, careful control of spraying techniques is necessary to prevent dry, non-strippable, porous coatings and excessive loss of material through overspray.

NOTE

When ambient temperatures are above 100° F. and relative humidity is below 30 percent, strippable coatings will usually be of poor quality (dry, porous and non-strippable)when spraying is done in direct sunlight. If these problems exist, areas to be sprayed should be provided with temporary shade to reduce surface temperatures while coatings are being applied.

13-11. TRAINING REQUIREMENTS.

13-12. Careful control of spraying techniques is necessary to prevent waste of materials and to obtain good quality strippable coatings. Personnel assigned to the application of these materials shall be thoroughly indoctrinated in the purpose and function of strippable coatings and shall be carefully trained in spraying techniques until all the requirements of this section and Specification MIL-C-23760 can be consistently complied with.

13-13. SAFETY REQUIREMENTS.

13-14. All sprayable, strippable compounds specified by this manual are water-based and do not require any special storage, handling or use precautions to prevent fires or explosions. Brushable consistency topcoating compound described in paragraph 13-44 contains flammable solvents and requires standard fire protection precautions for viscous flammable materials with flash points of 20° to 80° F.

13-15. Personnel safety precautions including the wearing of personnel protective devices, shall be as directed by the local safety and industrial health authorities.

13-16. PREPARATION OF MATERIALS.

13-17. Prepare compounds for application under clean conditions using clean equipment. Do not open containers until ready for use. Clean container covers first and open carefully to prevent dirt from falling into compound. Before mixing compound, carefully remove surface skins, if present. Mix compounds thoroughly either by stirring with a paddle or by using a power mixer or agitator until any settled pigment is completely mixed. For proper use, compounds should be smooth, homogeneous, and of a consistency resembling heavy cream. Additional agitation may be required to restore compounds to usable condition if they have been stored under adverse conditions.

13-18. To improve sprayability, compounds may be diluted with lukewarm water to a maximum of 3 ounces of water per gallon of compound. Additional dilution will adversely effect the physical properties of the compound.

13-19. PREPARATION OF AIRCRAFT SURFACES.

13-20. Before applying the compound, prepare aircraft as detailed in paragraphs 13-21 through 13-37.

13-21. CLEANING. Clean all surfaces of aircraft to receive a strippable coating using the procedures of NAVAIR 01-1A-509. Remove any previously applied Type I (transparent) coatings. After cleaning, dry all surfaces using wiping cloths and compressed air as necessary. To insure ease of removal of the strippable plastic film, coat transparent acrylics with polish (table 3-3, item 16). To protect decals, stencils, neoprene, and rain erosion resistant material coated surfaces, coat with wax (table 3-3, item 65).

13-22. COVERING OF OPENINGS. Specification MIL-C-6799 strippable coatings will not bridge openings and will crack when uneven drying occurs. To prevent cracks, close and fair-in irregular surfaces in accordance with procedures of paragraphs 13-23 through 13-33.

13-23. Instructions for Applying Pressure Sensitive Tapes. Because pressure sensitive tapes tend to lift paint at time of depreservation, the use of tape shall be kept at a minimum. When pressure sensitive tapes

Table 4-III. Cleaning Solutions

Component or Area	Normal Soils	Heavy Soils	Exhaust Soils
Painted exterior surfaces and rotor blades	MIL-C-25769 or MIL-C-43616, Class 1 1 part compound to 16 parts fresh water	MIL-C-25769 or MIL-C-43616, Class 2 1 part compound to 9 parts fresh water	MIL-C-25769 or MIL-C-43616, Class 2 1 part compound to 4 parts fresh water
Rotor Mechanism	Cleaning Solvent P-D-680 Type II		

CAUTION

Most of the cleaners must be handled with special care due to their toxicity or flammability. (Refer to Toxicity, Flashpoint, Flammability of Chemicals, NAVAIR 07-1-505.)

o. Clean windows and windshields. (Refer to Corrosion Control, NAVAIR 01-250HDA-2-2.2.)

4-154. Clean the inside of the helicopter as follows:

a. Clean cockpit area with vacuum cleaner. Remove soils with cloth saturated with cleaning solvent.

b. Clean cabin area with vacuum cleaner. Remove heavier soils by scrubbing with low-titer soap and water. As an alternate, use cleaning compound MIL-C-25769 or MIL-C-43616, Type I, mixed one part cleaner to 16 parts fresh water. Wipe away soap or cleaning solution and follow with a clean water wipedown. Allow all areas to dry.

CAUTION

Do not wet any electrical wiring or components.

c. Open all fuselage drains at sta 157, 283, 347, 380, and 407. Let water run out. Close drains.

d. Clean relief tubes with a solution of 1 part ammonium hydroxide, to 9 parts of water. Rinse with fresh water and allow to dry.

e. Clean battery. (Refer to Electrical Systems, NAVAIR 01-250HDA-2-7 (H-46A/D), NAVAIR 01-250HDA-2-7.1 (H-46F), or NAVAIR 01-250HDA-2-7.2 (H-46E).

f. Remove app access door and open main engine access doors. Clean engines as follows:

1. [redacted] For removing light soils or for cleaning low-time engines, a wipe-down with a cloth saturated with cleaner is sufficient. Make sure cleaning materials do not enter engine interior.

2. Dry engine surfaces with air or wiping cloths.

3. Wipe dry any accumulations of solvent in app or engine compartments.

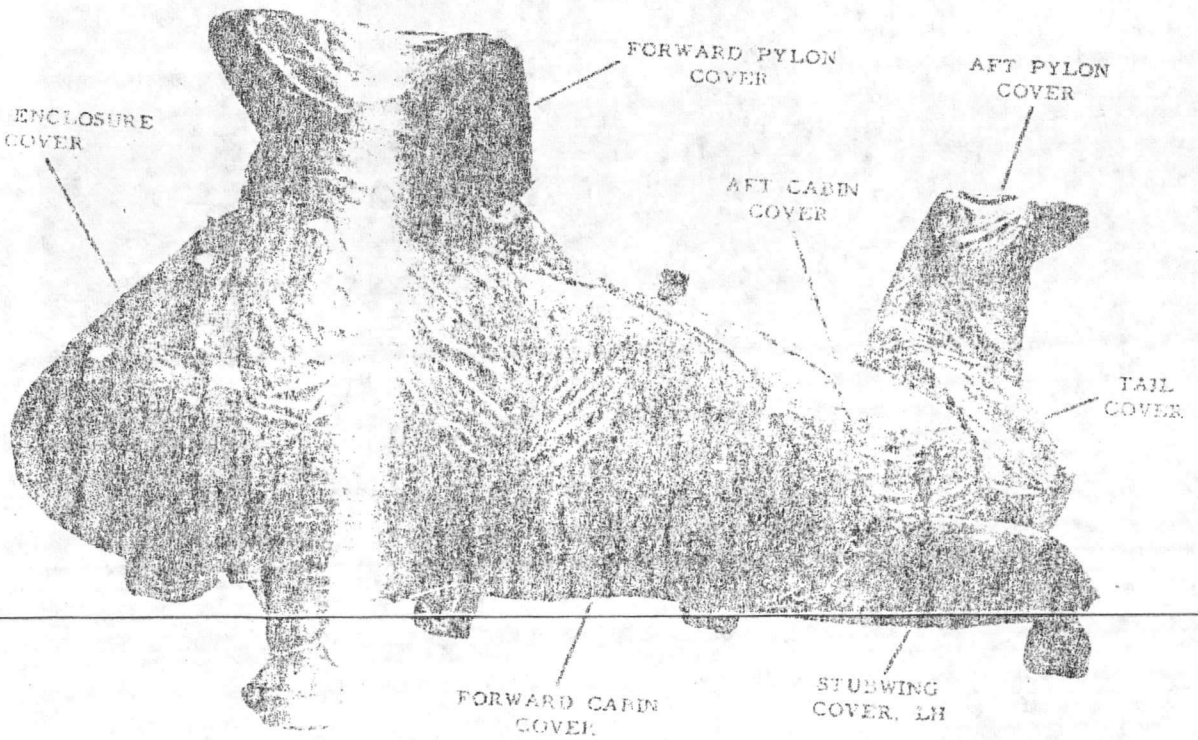


Figure 4-36. Helicopter Shipping and Storage Covers Installation (Sheet 8)

ENCLOSURE (5)

(4) Ensure compliance with established support equipment corrosion prevention/control maintenance intervals and develop local MRCs for equipment that has not been assigned corrosion maintenance criteria or induction interval(s).

d. NAVAIRLANT Stations and Marine Aircraft Group Commanding Officers

(1) Provide necessary support equipment and facilities for supported activities to conduct an effective corrosion prevention/control and emergency reclamation program; this includes low pressure air and adequate aircraft cleaning facilities.

(2) Ensure compliance with established support equipment corrosion prevention/control maintenance intervals and develop local MRCs for equipment that has not been assigned corrosion maintenance criteria or induction interval(s).

(3) Maintain sufficient stocks of authorized aircraft cleaning and corrosion prevention/control materials outlined in references (a) through (e), with adequate remaining shelf life. (R

e. CARAIRWING Commanders and Senior Embarked Squadron or Detachment Officers

(1) When embarked, shall be responsible for the coordination and effectiveness of subordinate activities' corrosion prevention/control programs. Special interest shall be placed on aircraft cleaning and judicious use of corrosion preventative materials.

(2) Conduct periodic corrosion prevention/control program spot checks on assigned activities.

(3) Periodically review assigned activities' corrosion prevention/control material stock status and materials remaining shelf life; supporting supply activity assistance as required.

(4) Ensure assigned activities' compliance with enclosures (2) through (6) of this instruction for applicable aircraft. (R

(5) Manage a corrosion prevention/control material retail issue outlet to ensure equitable distribution of available corrosion prevention/control materials.

(6) Coordinate corrosion material requisitioning/issue with supporting supply activity to ensure that aircraft, avionic equipment and support equipment corrosion materials are not issued to nonaviation divisions or departments. (R

SECTION XI
TYPE E PRESERVATION

11-1. GENERAL.

11-2. This section covers procedures for emergency treatment of aircraft that have crashed in water or have been subjected to the application of fire fighting foam or chemicals. While sea water is more corrosive than fresh water from lakes and streams, surface water bodies contain varying amounts of dissolved salts which become increasingly concentrated and more corrosive as drying occurs. The procedures of this section apply to both fresh and sea water crashes.

11-3. Type E preservation shall be applied as soon as possible after recovering aircraft from water or extinguishing the fire, subject to release of aircraft by accident investigation board. Prompt action is the most important factor in Type E preservation. Figures 11-1 through 11-2 illustrate the effects of prolonged exposure of aircraft parts to sea water and fire fighting chemicals. Since Type E preservation is emergency or temporary-type treatment, prompt overhaul is necessary to complete the salvage operation.

11-4. Except when aircraft recovery and delivery for preservation is delayed by such factors as distance from crash site or deep water salvage operations, the extent of overhaul and parts replacement is determined largely by the efficiency and promptness with which Type E preservation is applied.

11-5. Essentially, Type E preservation consists of removing all traces of corrosive water, salt deposits, or fire fighting chemicals and preserving the cleaned, dried components. NAVAIR 01-1A-509 contains additional instructions for treating salt water, smoke and fire fighting chemical damaged aircraft components.

NOTE

Clean, dry surfaces being treated during Type E preservation shall not remain uncoated due to the lack of specified preservatives. Any clean, unused light oil may be substituted for preservatives during such emergencies.

11-6. All parts and components removed from aircraft shall be tagged with Water-Crash, Fire Damage Tag (Figure 3-7). When parts or components are packaged [illegible] Water-Crash, Fire Damage Label [illegible] [illegible] both interior and exterior [illegible] [illegible] completely decontaminated [illegible] [illegible] water and fire fighting chemicals.

11-7. When aircraft are involved in water [illegible] [illegible] that all components, including hollow structural and mechanical members, are contaminated internally. All components shall be disassembled until it is established that contaminants have been removed and that all corroded surfaces can be effectively inhibited against further attack.

11-8. INITIAL FRESH WATER/DETERGENT WASH. As soon as possible after aircraft is recovered at water-crash or fire-damage site, thoroughly wash contaminated internal and external areas of aircraft using a water/detergent solution made up as follows:

a. Mix detergent (table 3-3, item 30) and isopropyl alcohol (table 11-2, item 1) in a ratio of 8 parts detergent to 20 parts alcohol.

b. Add the detergent/alcohol mixture to 72 parts of tap water and mix thoroughly.

c. For use, add one part of the foregoing concentrate to 9 parts tap water (warm water if available) and mix thoroughly.

11-9. If specified detergent/alcohol materials are not available, use water emulsion cleaning compound (table 3-3, item 17) mixed 1 part compound to 9 parts water or any available household detergent solution or fresh (tap) water.

NOTE

Even though a fresh water/detergent wash should not significantly affect accident investigations always obtain permission from the senior member of the appointed accident investigating board before performing this operation.

11-10. SAFETY PRECAUTIONS. Before starting Type E preservation and particularly in those instances where fuel cells have been ruptured and fuel or fuel vapors are present, it is imperative that the fire chief or his authorized representative supervise purging or inerting procedures and certify that aircraft is fire and explosion safe. A qualified ordnance man shall be assigned to handle all ordnance and allied items such as ammunition and pyrotechnics.

11-11. The following safety precautions shall be taken before aircraft is subjected to extensive inspection or preservation.

a. [illegible] aircraft. Attach the ground [illegible] at a point outside the area which could contain explosive vapors.

b. If the landing gear of land planes is used as a supporting mechanism, install a spreader bar [illegible]

ENCLOSURE (7)

ITEM NO.	NOMENCLATURE	SHELF LIFE	SPECIFICATION	NATIONAL STOCK NO.	CV	AFS	LAP	LOA	LANES	AFS FILL	MLSF	UNIT ISSUE	SIZE	INTENDED USE
6	Cleaning Compound Aircraft Surface Alkaline Waterbase	0	MIL-C-25769	* 9Q6850-00-935-0996	250	0	3	100	0	Yes	10	Cont	5 gal.	Aircraft washing material for removing light or non-oily, dry soils.
		0		9Q6850-00-935-0995	0	0	3	0	0	No	0	Drum	55 gal	
8	Cleaning Compound, Aircraft Surface	0	MIL-C-43616	* 9G6850-00-180-5943	50	2	15	20	12	Yes	5	Can	5 gal	Basic cleaning material for soil removal from aircraft surface for foam or general purpose application.
		0	Class 1	9G6850-00-180-5946	0	0	2	0	0	No	0	Drum	16 gal	
		0		9G6850-00-180-5945	0	0	3	0	0	No	0	Drum	55 gal	
		0	Class 1A (Aero can)	9G6850-00-005-5305	100	24	12	100	50	No	50	Aero Can	16 oz	
9	Engine Gas Path Cleaner	0	B & B 3100	* 9G6850-00-181-7594	25	10	15	20	5	Yes	5	Can	5 gal	For engine internal wash.
		0		9G6850-00-181-7597	0	0	3	0	0	No	0	Drum	55 gal	
10	Polish Metal, Aluminum, Aircraft	18	MIL-P-6888	* 9QL7930-00-267-1224	0	0	3	0	0	Yes	0	Can	1 gal	Cleaning and polishing bare aluminum surfaces.
		18	Type I (Liquid)	9QL7930-00-266-7131	0	0	3	0	0	No	0	Can	1 qt	
		0	Type II (Paste)	9QL7930-00-734-4010	0	0	3	0	0	No	0	Can	1 qt	
11	Polish Plastic	12	P-P-560	* 9Q7930-00-634-5340	200	10	20	150	12	Yes	25	Bot	1 pt	For polishing and cleaning transparent acrylic plastic surfaces.
12	Eraser, Magic Rub Plastic	0	3766	* 7510-00-949-5053	20	1	10	10	1	Yes	1	Doz	2 5/8" X 1/2"	Removal of light tarnish or corrosion from electrical connectors and avionics components.
13	[redacted]	0	MIL-C-22542	9G-6850-00-733-4998	0	0	3	0	0	Yes	0	Drum	55 gal	[redacted]
				* 9G-6850-00-733-5000	50	0	3	0	0	Yes	0	Can	5 gal	
14	Cleaning and Polishing Pad, Non-metallic (for aircraft)	0	MIL-C-83957	* 9G7920-00-151-6120	100	2	15	150	24	Yes	5	Pkg	5"X11" 3/8"	Aircraft washing pad for use with Kit No. 251

ENCLOSURE (8)

AUTHORIZED CORROSION CONTROL MATERIAL LIST