

SECTION VI REFINISHING

GENERAL

6-1. The painting and finishing information provided in this manual reflects the paint systems and procedures used by the manufacturer during production. Since some of the materials used are of a proprietary nature, it may not always be possible to obtain exactly the same materials through supply channels

when refinishing becomes necessary. In such cases, follow the instructions contained in NAVAIR 01-1A-509, NAVAIR 07-1-503, and in current local directives and specifications.

STRIPPING

NOTE

The stripping and refinishing procedures are major undertakings. They should not be attempted unless facilities are adequate. Clean up and touch up procedures should be used by those organizations whose facilities are inadequate for the major procedures.

6-2. AIRCRAFT PREPARATION.

- a. Defuel aircraft.
 - b. Park aircraft in shaded area, outside if possible. If aircraft is parked in an enclosed area, the area must be well ventilated.
 - c. Ground the aircraft.
 - d. With kraft paper (UU-P-268 or UU-P-271) and masking tape (UU-T-106, Type I or MIL-T-21595), mask all non-metallic materials and components, and plug all openings that allow stripping solution access to aircraft interior. Mask all adhesive and sealed joints.
 - e. Cover or mask all areas called out in Figure 6-1.
 - f. Install the following covers and guards. Refer to NAVAIR 01-245FDB-2-1.1 for installation procedures.
- (1) Cockpit Canopy Cover.
 (2) Wheel Well Honeycomb Cover.
 (3) Engine Air Duct Cover.
 (4) Engine Afterburner Cover.

CAUTION

To avoid damage to angle of attack probe, apply masking tape to junction between aircraft skin and angle of attack probe guard.

- (5) Angle of Attack Probe Guard (F-4).
 - (6) Ram Air Outlet Cover (F-4).
 - (7) Total Temperature Sensor Cover (F-4).
 - (8) Tri-Camera Oblique Window Cover (RF-4).
 - (9) Forward Vertical Window Cover (RF-4).
 - (10) Aft Panoramic Window Cover (RF-4)
 - (11) Tri-Camera Vertical Window Cover (RF-4).
 - (12) Forward Oblique Window Cover (RF-4).
 - (13) Pitot Tube and Stabilator Pressure Inlet Tube Cover Assembly.
- g. Jack aircraft. Refer to NAVAIR 01-245FDB-2-1.1.
- h. Retract landing gear.
 - i. Arrange staging around aircraft as needed. See Figure 6-2.

Aft Fuselage Area.

- Door No. 62 Glass and Hinge (Right Side)
 Drain Holes
 Epon Patches on Honeycomb Skins of Rudder and Stabilator (Left and Right Sides, Top and Bottom)
 Fuel System Vent Mast
 Louvered Vents in Aft End of Engine Area (Left and Right Sides)
 Drag Chute Door Hole
 Ram Air Port at Lower Forward End of Vertical Fin

- Rudder and Rudder Enclosure (Left and Right Sides of Enclosure Area)
 Rudder Hinge Openings (Four Openings, Left and Right Sides)
 Rudder Seams (Left and Right Sides)
 Shingles (Left and Right Sides)
 Stabilator Seams (Left and Right Sides)
 Stainless Steel Fairings (Left and Right Sides)
 Tail Cone Upper Surface
 Vertical Fin Leading Edge Tubes (Three Tubes)
 Vertical Fin Tip
 Vertical Fin Forward of Rudder Enclosure (Left and Right Sides)
 All Jo-bolts on Stabilator

Figure 6-1. Aircraft Masking (Sheet 1)

Center Fuselage Area.

Aft Missile Rack Compartments (Left and Right Sides)
 Catapult Holdback Door Hinge and Hole
 Centerline Fuel Tank Openings for Attachment (Four Openings)
 Door No. 74 Hinge (Left and Right Sides)
 Door No. 78 Hinge (Left Side)
 Door No. 80 Hinge (Right Side)
 Door No. 81 Hinge (Left and Right Sides)
 Dore No. 82 Hinge (Left and Right Sides)
 Door No. 83 Hinge (Left and Right Sides)
 Door No. 84 Hinge (Left and Right Sides)
 Door No. 92 Attach Bolts and Hinge (Left and Right Sides)
 Door No. 96 Attach Bolts and Hinge (Left and Right Sides)
 Door No. 120 Hinge (Left Side)
 Drain Holes
 Engine Tailpipes (Left and Right Sides)
 Keel Steel Plate
 Number 2 Fuel Cell Door Light
 Perimeter of Ram Air Turbine (Left Side)
 Ram Air Turbine Door Hinges (Two Hinges, Left Side)
 Signal Horn Covers (Seven Covers)

Forward Fuselage Area

Forward and Aft Canopies
 Aft Canopy Open and Close Buttons (Two Buttons, Left Side)
 Aft Cockpit Flooding Door (Left Side)
 Aft Nose Gear Door Antenna
 Air Duct Bottom Louvers (Left and Right Sides)
 Air Duct Top Louvers (Left and Right Sides)
 APN-22 REC/SMTR (PN 32-87385-7)
 Camera Windows (RF-4B only)
 Cockpit Drain Holes (Three Holes)
 Cockpit Steps (Three Steps)
 Doghouse Glass Panels (Left and Right Sides)
 Door No. 2 Antenna
 Door No. 3 Angle of Attack Probe Hole (Left Side)
 Door No. 7 Hinge (Left Side)
 Door No. 16 Louvers
 Door No. 19 Antenna and Hinges (Three Hinges)
 Door No. 27 (Left and Right Sides)
 Door No. 30 Louvers (Left and Right Sides)
 Door No. 116 Hinge and Latch (Left Side)
 Door No. 122 Louvers (Left and Right Sides)
 Door No. 126 Hinge (Right Side)
 Drain Holes
 Forward Canopy Open and Close Buttons (Two Buttons, Left Side)
 Forward Cockpit Flooding Door (Right Side)
 Forward Missile Rack Compartments (Left and Right Sides)
 Forward Variable Ramp Hinges (Six Hinges, Left and Right Sides)
 Inflight Refueling Probe Door (Right Side)
 Inflight Probe Light (Right Side)
 Nose Gear Door Louvers
 Nose Gear Strut Door Antenna

Forward Fuselage Area (Cont)

Nose Gear Strut Door Lights
 Nose Landing Gear Door Opening (Doors in Closed Position)
 Nose Gear Steering Torque Cotter Seal
 Pitot Exhaust Tube Opening in Door No. 33 (Left and Right Sides)
 Radome
 Rain Removal Nozzle Ports (Forward End of Windshield)
 Refrigeration Package Exhaust Vents (Left and Right Sides)
 Refrigeration Package Ram Air Scoops (Left and Right Sides)
 Variable Ramp Lower Opening (Left and Right Sides)
 Variable Ramp Upper Opening (Left and Right Sides)
 Windshield (Left and Right Sides)

Inner Wing Area.

Aft End of Inner Wing (Left and Right Sides)
 Aft End of Spoilers (Left and Right Sides)
 Aileron Hinges (Left and Right Sides, Top and Bottom)
 Aileron Honeycomb Seams (Left and Right Sides, Top and Bottom)
 Door No. 75 Hinge (Left and Right Sides)
 Door No. 100 (Left and Right Sides)
 Door No. 129 (Left and Right Sides)
 Drain Holes
 Epon Patches on Honeycomb Skins of Ailerons and Flaps (Left and Right Sides, Top and Bottom)
 Flap Seams (Left and Right Sides)
 Forward End of Aileron Closure (Left and Right Sides)
 Forward End of Trailing Edge Flap Closure (Left and Right Sides)
 Inboard and Outboard Leading Edge Flap Hinges (Left and Right Sides and Bottom)
 Inboard and Outboard Leading Edge Flap Interlock (Left and Right Sides)
 Inboard and Outboard Leading Edge Flaps Joint (Left and Right Sides, Top and Bottom)
 Inboard Leading Edge Flaps and Center fuselage Joint (Left and Right Sides, Top and Bottom)
 Main Landing Gear Inboard Flipper Door Hinge (Left and Right Sides)
 Main Landing Gear Outboard Flipper Door Hinge (Left and Right Sides)
 Spoiler Hinges (Left and Right Sides)
 Trailing Edge Flap (Left and Right Sides, Top and Bottom)
 Trailing Edge Flap Hinge (Left and Right Sides and Bottom)
 Wing Pylon Attachment Mechanism Plate (Left and Right Sides and Bottom)
 Wingfold Hinges (Left and Right Sides, Top and Bottom)
 Wing Tank Openings (Four Openings, Left and Right Sides)

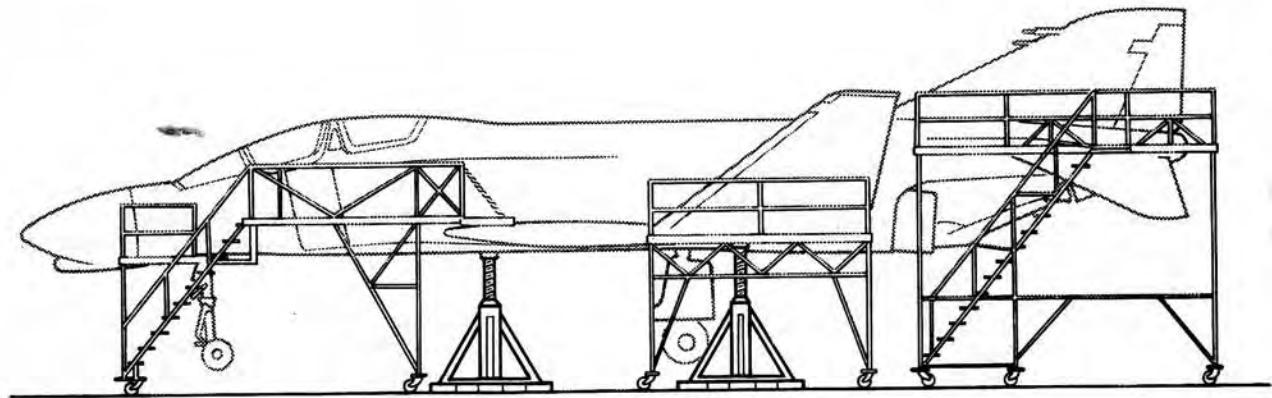
Figure 6-1. Aircraft Masking (Sheet 2)

Outer Wing Area.

Aft Wing Tip Lights (Left and Right Sides)
Drain Holes
Epon Patches on Honeycomb Skins (Left and
Right Sides, Top and Bottom)
Forward Wing Tip Lights (Left and Right Sides)
Honeycomb Seams (Left and Right Sides, Top
and Bottom)

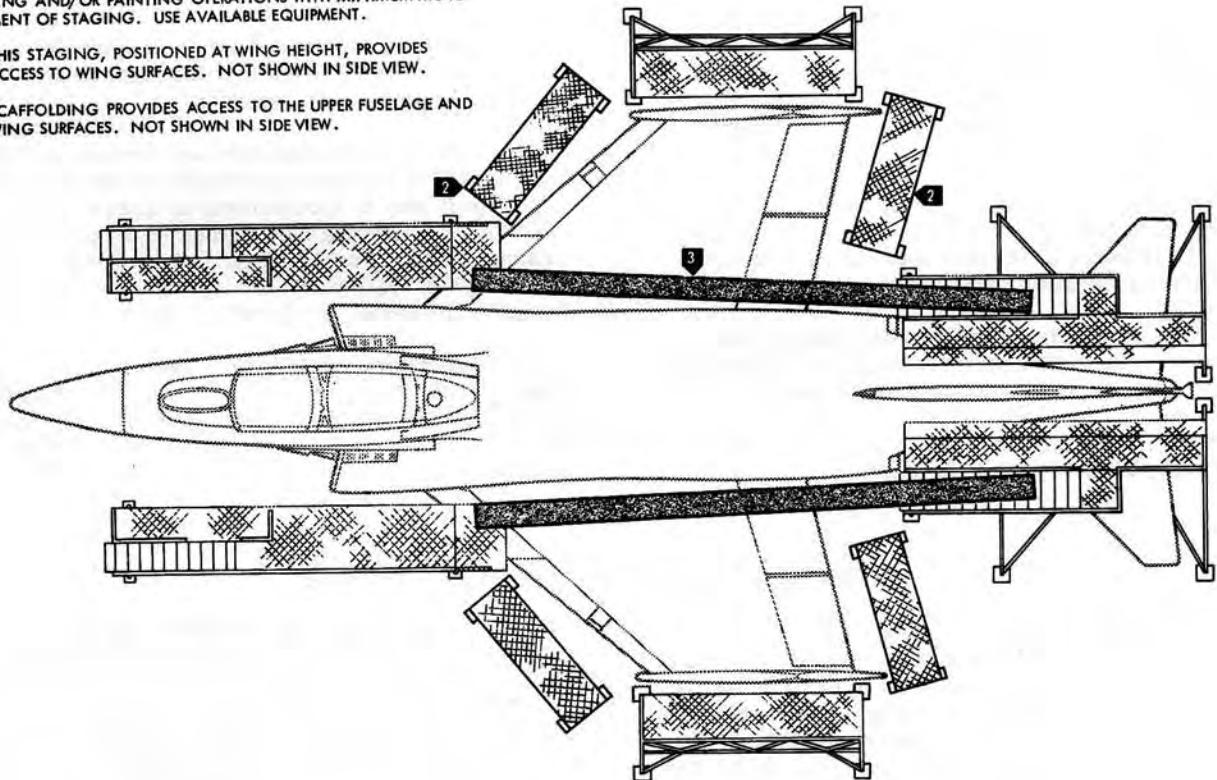
Leading Edge Flaps (Left and Right Sides, Top
and Aft End)
Leading Edge Flap Hinge (Left and Right Sides
and Bottom)
Outer Wing and Center Wing Leading Edge Flaps
Joint (Left and Right Sides, Top and Bottom)
Wing Tip Seams (Left and Right Sides, Top and
Bottom)

Figure 6-1. Aircraft Masking (Sheet 3)



NOTES

1. THIS ARRANGEMENT IS TYPICAL AND PERMITS MAXIMUM STRIPPING AND/OR PAINTING OPERATIONS WITH MINIMUM MOVEMENT OF STAGING. USE AVAILABLE EQUIPMENT.
2. THIS STAGING, POSITIONED AT WING HEIGHT, PROVIDES ACCESS TO WING SURFACES. NOT SHOWN IN SIDE VIEW.
3. SCAFFOLDING PROVIDES ACCESS TO THE UPPER FUSELAGE AND WING SURFACES. NOT SHOWN IN SIDE VIEW.



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Figure 6-2. Aircraft Staging

6-2A. AIRCRAFT PAINT STRIPPING.

6-3. Procedure for stripping MIL-C-22750 Epoxy Paint. Strip the aircraft in accordance with the general procedures established in NAVAIR 01-1A-509, and the following:

WARNING

Paint removers are toxic and contain ingredients harmful to eyes and skin. Rubber gloves, aprons of suitable chemical resistance material, goggle type eye glasses, and rubber boots should be worn when handling these compounds. If removers come in contact with skin, immediately flush the area with fresh water or diluted alcohol. Follow this action with an application of glycerin, vaseline, or petrolatum. Report to Medical Section immediately.

- a. Use paint remover (MIL-R-81294) as it is received. Stir remover to mix it thoroughly, and pour about two gallons into a five gallon pail to avoid spillage.
- b. Begin application on the upper surface, and spray or daub on a generous amount of paint remover with a bristle brush. Cover surface completely to a depth of 1/32 to 1/16 inch.

CAUTION

To avoid damage to aircraft and components, paint remover shall not be allowed to contact bearings, dry film lubricated parts, or fluid lubricated parts. Paint remover shall not be allowed to enter areas from which it cannot be removed.

- c. Allow the stripper to remain on the surface until the paint has lifted and wrinkled. This may be from 10 minutes to several hours depending upon condition of the paint and upon the ambient temperature.
- d. Scrub the wetted surface with a stiff bristle brush saturated with remover to further loosen the finish in areas where the paint is still adhering to the metal.
- e. Remove the loosened finish with non-metallic scrapers, fiber brushes, or rags.

- f. Reapply stripper as necessary in areas where the finish has not been sufficiently loosened.
- g. Remove loosened paint and residual stripper with cleaning compound (MIL-C-22543), warm water, and a fiber bristle brush.
- h. After paint and stripping compound have been flushed away, clean the metal surface with lacquer thinner (MIL-T-19544 or TT-T-266) or dry cleaning solvent (P-D-680).

NOTE

Any paint which remains on the surface of the aircraft following the stripping procedure should be carefully removed by mechanical means.

- i. Following the final rinse of the aircraft, completely drain all water and solutions from natural voids and recesses where water and/or solutions may be entrapped.

CAUTION

Failure to detect and remove stripping solutions could result in deterioration of aircraft components.

- j. Inspect all airframe cavities, component compartments, vents, ports, seams, hinges, etc., for evidence of stripping solutions.

NOTE

Do not use compressed air to remove solution deposits as there is a tendency to redistribute the contamination.

- k. Remove all stripping solution deposits by draining, swabbing, or vacuuming contaminated area.
- l. Repeat step h in contaminated areas.
- m. Remove masking materials and carefully strip residual paint. Use dry cleaning solvent (P-D-680) or Methyl-Ethyl-Ketone (TT-M-261) and non-metallic scrapers to assist in removing persistent finish.

6-3A. Procedure for Stripping DeSoto Super Koropon Epoxy Paint. Strip the aircraft in accordance with Local Process Specification LPS No. 63-06-458025, Naval Air Rework Facility, U.S. Marine Corps Air Station, Cherry Point, North Carolina.

CHEMICAL TREATMENT OF METAL SURFACES**6-4. GENERAL.**

6-5. The exposed surfaces of all of the metal parts and components, except those made of titanium, receive a chemical treatment of some kind during construction and assembly of the aircraft. These surface treatments are intended to increase the corrosion resistance of the aircraft and to provide better adhesion of subsequently applied organic protective and finish coatings. If the protection provided by these chemical coatings has been destroyed by abrasion, scratching, chemical action, or some other means, the probability of corrosion beginning on the part is

greatly increased. Some chemically produced coatings can be partially or completely restored in the field. Some types of coatings require procedures and equipment which are impractical for field use. In such cases, suitable substitutes can usually be applied until the aircraft is inducted for PAR at a depot where the original protective coating can be renewed. The procedures contained in Paragraph 6-6 through 6-22 are intended for use on relatively small isolated areas and on individual components; the procedures in Paragraphs 6-23 through 6-26 are for large areas up to and including the entire aircraft.

6-6. MAGNESIUM.

6-7. Magnesium alloys are treated during production with one or more of the processes meeting requirements of the following specifications:

- a. MIL-M-3171, Process for Pretreatment and Prevention of Corrosion on Magnesium Alloy.
- b. HAE which is a process meeting the requirements of MIL-C-13335, Coatings for Magnesium and Magnesium Alloys.
- c. MIL-M-45202, Anodic Treatment of Magnesium Alloys. Of these processes, three which meet the requirements of MIL-M-3171 may be considered as adaptable for field use. Procedures for using these three processes are given in Paragraphs 6-8 through 6-10.

6-8. Using Chrome-Pickle Solution (DOW 1) for Touchup of Magnesium. This procedure may be used for touchup of small scratches, abrasions, or reworked areas.

- a. Mask or otherwise protect all adjacent components or areas which might ingest or trap the touchup solution.
- b. Prepare the solution by mixing materials in the following proportions in an acid resistant container:

Sodium Dichromate, O-S-595	1.4 to 1.6 pounds
Nitric Acid, O-N-350	1.0 to 1.5 pints
Water	To make 1 gallon

CAUTION

Avoid all skin contact with this acid solution.

- c. Carefully apply a liberal quantity of solution to the part with an acid resistant brush.
- d. Continue to brush solution onto part for one minute. Immediately rinse part with large quantity of water. Make sure all solution is removed.
- e. Allow part to air dry.

NOTE

The specified organic coatings shall be applied to the part as soon as possible after treatment. Avoid unnecessary handling of the treated part.

6-9. Using Phosphate Treatment (DOW 18) on Magnesium. This procedure may be used on all magnesium components without affecting dimensions of the part.

- a. Carefully mask or otherwise protect all adjacent components and parts which might ingest or trap the solution.
- b. Using Turcoat 4091, manufactured by Turco Products, Incorporated, carefully brush a liberal quantity of solution onto the part for one minute.
- c. Immediately rinse with large quantity of water. Make sure all traces of solution are removed.
- d. Allow part to air dry.

NOTE

Apply the specified organic coatings to the part as soon as possible after treatment. Avoid unnecessary handling of the treated part.

6-10. Using Chromic Acid Solution (DOW 19) on Magnesium. This solution may be used on any magnesium part as a touchup treatment.

- a. Mask or otherwise protect adjacent parts and areas which might ingest or trap the solution.
- b. Using an acid resistant container, prepare the solution by mixing Chromium Trioxide, O-C-303, in water in the ratio of 25 ounces to 1 gallon.

CAUTION

Avoid all skin contact with this acid solution.

c. Clean the areas to be treated with a cleaning solution consisting of 6 to 8 ounces of Prosolv "B" manufactured by Turco Products, Inc. mixed in 1 gallon of water and heated to 180° to 210°F. Immerse the part if possible or apply liberal quantities of cleaning solution with a swab or brush.

d. Allow the cleaning solution to remain on the part for 5 to 15 minutes.

e. Rinse with hot water and then with cold running water for one minute.

f. Check for water break. If necessary, repeat the cleaning process.

g. While the area is still wet, brush on liberal quantities of the solution prepared in step b with a fiber bristle brush. Keep surface wet with solution for 1 to 3 minutes.

h. Rinse part with cold running water for one minute. Do not use hot water.

i. Permit part to air dry.

NOTE

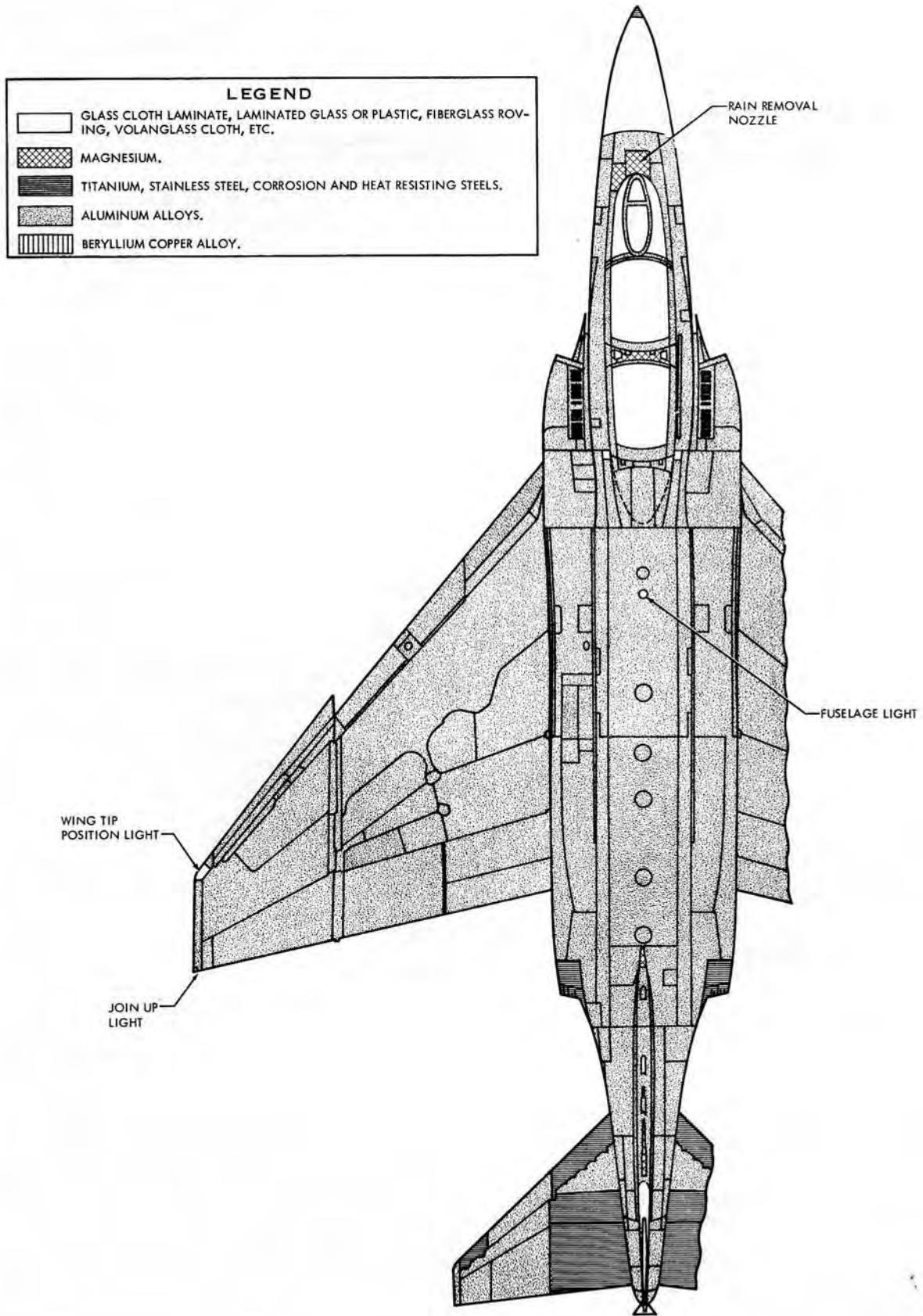
Apply the specified organic coatings to the part as soon as possible after treatment. Avoid unnecessary handling of the treated part.

6-11. ALUMINUM.

6-12. During production of the aircraft, aluminum and aluminum alloy components receive one or more of the following chemical surface treatments:

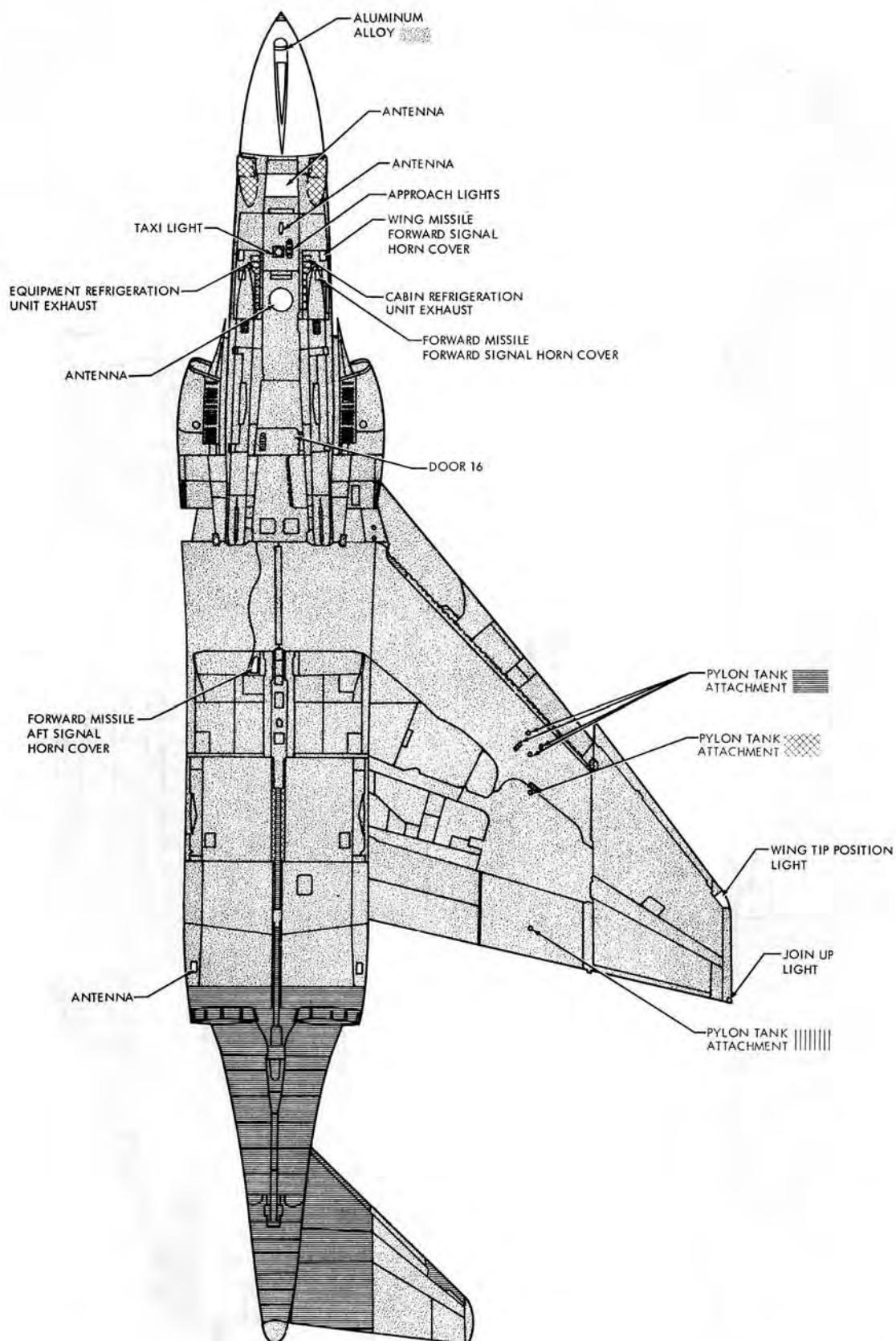
a. Hard Coating: This is a commercial process for providing a hard oxide coating on aluminum alloys. Alumilite 226, Alumilite 726, Martin Hard Coat, Sanford Process, Hardas Process, and other proprietary processes are used to provide hard coating. These processes are not considered practical for field application.

b. MIL-S-5002, Surface Treatments and Metallic Coatings for Metal Surfaces of Weapons Systems: Alodine 1000 or Chromic Acid, O-C-303 are used to provide a colorless film to the more corrosion resistant aluminum alloys with treatment fulfilling the requirements of this specification. These processes are not considered practical for field application.



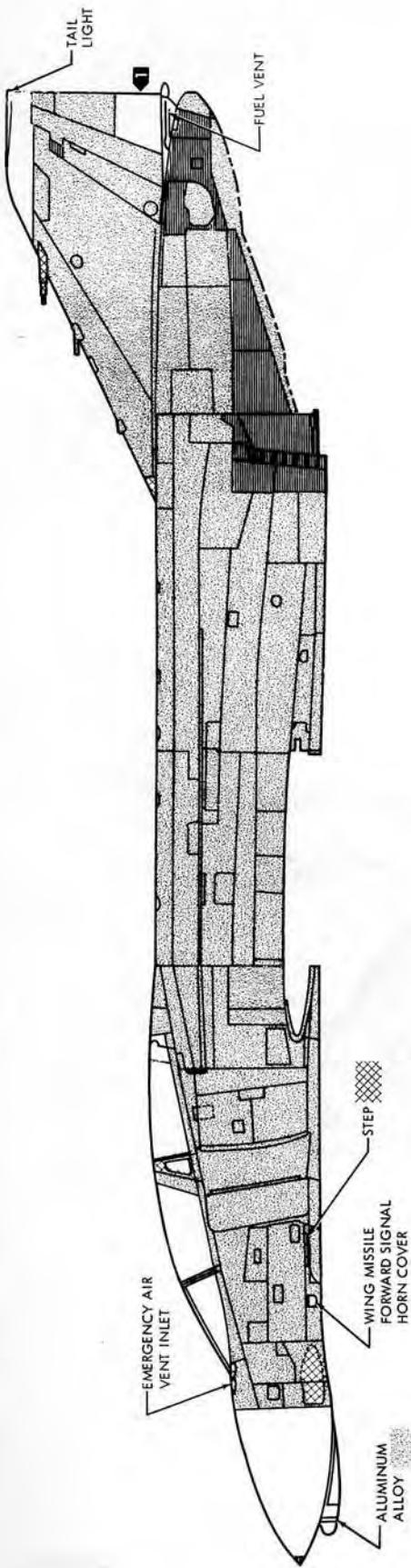
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Figure 6-3. External Surface Index (Sheet 1)

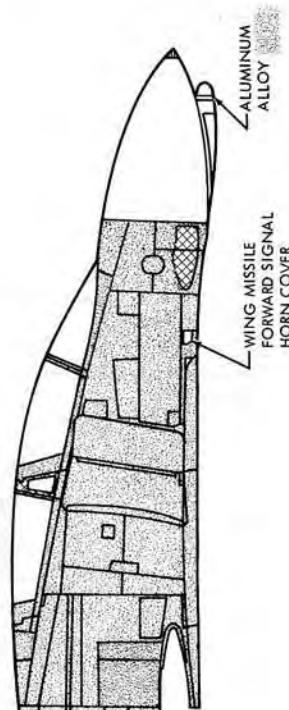
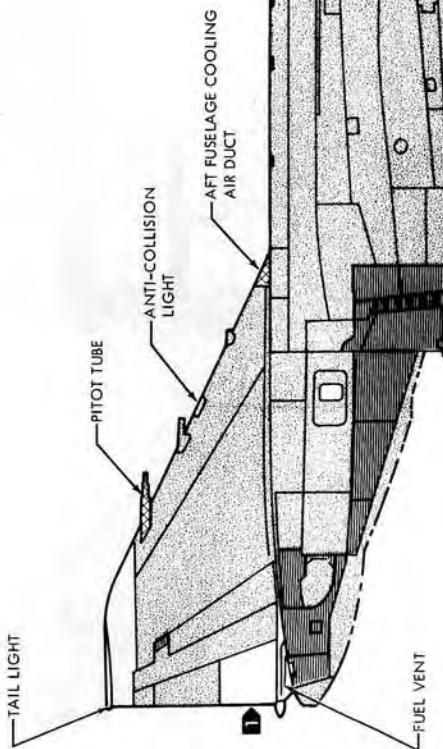


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Figure 6-3. External Surface Index (Sheet 2)

**NOTE**

► FIBERGLASS REMOVED FROM RUDDER, AIRCRAFT 150480H AND UP.



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Figure 6-3. External Surface Index (Sheet 3)

c. MIL-A-8625, Anodic Coatings for Aluminum and Aluminum Alloys: Chromic Acid Anodize and Sulfuric Acid Anodize meeting requirements of this specification are applied to increase corrosion resistance of aluminum alloy parts. These processes are not considered practical for field application.

d. MIL-C-5541, Chemical Films and Chemical Film Materials for Aluminum and Aluminum Alloys: Several processes meeting requirements of this specification are used to improve corrosion protection and to provide a base for subsequent organic coatings. Alodine 1200, manufactured by Amchem Products, Inc., is used on large components which cannot be immersed and for touchup in areas where the surface coating has been disturbed by manufacturing operations. This process is adaptable for field application. Refer to Paragraph 6-13 for the applicable procedure. Components which can be immersed are treated with Turcoat 4178 or other solutions meeting the requirements of MIL-C-5541.

6-13. Using Alodine 1200. Alodine 1200 should be used for touchup and for applying a chemical conversion coating on all aluminum components in accordance with the following procedures:

NOTE

Proprietary materials, other than Alodine 1200, which are qualified under specification MIL-C-5541 may be used for brush application. These should be mixed and applied in accordance with the manufacturer's instructions.

a. Prepare the solution by adding 2 to 3 ounces of Alodine 1200 powder to 1/2 gallon of water. Mix thoroughly, then add an additional 1/2 gallon of water. Allow the solution to sit for one hour before applying. Use an acid resistant container.

CAUTION

Avoid all skin contact when using Alodine 1200. Wash any areas of contact immediately with large quantities of cold water.

b. Mask or otherwise protect all adjacent areas and components which might ingest or retain the solution.

c. Clean the area or component with P-D-680, Dry Cleaning Solvent or with MIL-C-5410, Aluminum Surface Cleaning Compound per Paragraph 5-25.

d. Scrub surface with water using a nylon abrasive pad such as Scotch-Brite, Type A, aluminum oxide, manufactured by Minnesota Mining and Manufacturing Company. Abrasive should be very fine or ultra fine grade.

e. Before surface dries, rinse with cold, running water.

f. Perform a water break check, and repeat the cleaning procedure as necessary to obtain a water break free surface.

g. Before surface dries, apply Alodine 1200 solution with a cheesecloth pad or a brush. Keep surface wet with solution until a light golden to light brown finish develops (approximately 1 to 5 minutes).

h. Rinse surface thoroughly with cold running water.

i. Permit component to air dry. Do not disturb the surface during the drying time.

NOTE

Subsequent organic coatings should be applied as soon as possible after the surface has completely dried. Do not touch treated surface with bare hands before painting.

6-14. Using Chromic Acid Solution on Aluminum. If MIL-C-5541 treatment contained in Paragraph 6-13 is not available, Chromic Acid solution may be used to provide a chemical treatment for aluminum prior to painting. Use the procedure contained in Paragraph 5-22. Subsequent organic coatings should be applied as soon as possible and not later than 24 hours after treatment.

6-15. FERROUS METALS.

6-16. Mild Carbon Steel. The surfaces of mild carbon steel parts are cadmium plated in accordance with QQ-P-416, Electrode Deposited Cadmium Plating; chromium plated per QQ-C-320, Electrode Deposited Chromium Plating; or phosphatized per MIL-P-16232, Type M, Class 3, Heavy Phosphate Coatings for Ferrous Metals. All of these procedures are impractical for field application and should not be attempted. Any corrosion found on mild steel should be removed per Paragraph 5-9, and the applicable organic coating applied directly to the metal.

6-17. Corrosion Resistant and Stainless Steel. The corrosion resistant and stainless steels may receive no chemical treatment of any kind, they may be cadmium plated per QQ-P-416 or chromium plated per QQ-C-320, or they may receive a nitric acid - sodium dichromate passivation treatment per MIL-S-5002, Surface Treatment and Metallic Coatings for Metal Surfaces of Weapons Systems. These procedures are impractical for field application. Any organic coating required on corrosion resistant or stainless steel components not on the exterior of the aircraft should be applied directly to the clean metal.

6-18. High Strength Steel. No chemical treatment of any kind should be applied to high strength steel parts.

6-19. CADMIUM PLATED AND CHROMIUM PLATED METALS.

6-20. No chemical surface treatments are normally required on plated components.

6-21. TITANIUM.

6-22. Titanium components are normally highly corrosion resistant and unpainted. No chemical surface treatment should be attempted.

6-23. EXTERIOR SURFACES.

6-24. Extensive areas on the exterior of the aircraft shall be processed in accordance with the procedures contained in Paragraphs 6-25 and 6-26. These procedures are intended to prepare the surface for the application of paint. For proper adhesion of the organic coatings, painting should follow the chemical treatment as soon as possible and in any event not later than 24 hours after the aircraft has dried.

6-25. Surface Preparation. The following cleaning procedure shall be applied after the metal has been stripped of all paint and primer, and the stripping materials have been removed.

- a. Remove all masking from those areas which are to receive chemical treatment.

CAUTION

Do not use steam to clean the aircraft.

- b. Clean the area using a MIL-C-22543 Cleaning Compound.

c. Rinse the area with clear water before the cleaning compound has dried on the surface.

d. When the area has been rinsed, avoid contacting the clean surface. Any area of accidental contact shall immediately be cleaned with TT-T-548, Technical Toluene.

e. Scrub all aluminum areas with water and nylon abrasive pads such as Scotch-Brite aluminum oxide abrasive pad manufactured by Minnesota Mining and Manufacturing Company. Very Fine or Ultra Fine Grade abrasive should be used.

f. Without allowing the surface to dry, rinse with cold, running water while scrubbing the surface thoroughly with clean cheesecloth. Continue scrubbing until a gray color is no longer picked up with one wipe with the wet cheesecloth.

g. Rinse all areas except honeycomb or foamed plastic with cold water under pressure. On honeycomb or foamed plastic areas, wipe with clean cloth saturated with water.

h. Perform a water break check. Repeat the cleaning procedure as necessary to obtain a water break free surface.

i. Apply the chemical surface treatment immediately. Refer to Paragraph 6-26.

6-26. Using MIL-C-5541 Materials on Exterior Surfaces. Any product qualified under the requirements of MIL-C-5541, Chemical Films and Chemical Film Materials for Aluminum Alloys may be used as a chemical treatment on the exterior surface of the aircraft. Such proprietary products as Alodine 1200, Iridite, Alcorite, Allond, Konverkote, Rodip, and others, meet the requirements of this specification. After cleaning as outlined in Paragraph 6-25, immediately apply the material in accordance with the following procedure.

- a. Mix the solution for brush application in accordance with the manufacturer's instructions.
- b. Apply the solution to a wet surface using light pressure and continuous motion with a cheesecloth pad. Limit each application to an area which can be covered in one minute.
- c. Keep the area wet with solution until the aluminum surfaces show a light golden to light brown color (3 to 4 minutes).
- d. Rinse the area with cold, running water until the run-off is colorless.
- e. Repeat steps b through d until the entire stripped area has been treated.
- f. Allow the treated area to air dry. Do not disturb the treated surface until drying is complete (8 to 12 hours for large areas).
- g. After the area is dry, test with moistened neutral litmus paper, MS36253. The paper shall not change color. If the paper turns red, rinse the surface with cold water and repeat the test. If the paper turns blue, repeat steps b thru d and retest. The areas touched by the litmus paper shall be thoroughly cleaned with Lacquer Thinner, TT-T-266, and wiped dry with clean cheesecloth.

NOTE

After the chemical treatment has dried, do not touch the treated area with bare hands prior to painting.

h. One hour before painting, wipe the treated area with clean cheesecloth dampened with water.

i. Immediately before painting on the lower surfaces of the aircraft, clean up any area contaminated by hydraulic fluid with clean cheesecloth moistened with Toluene, TT-T-548.

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paint system different from the original is to be applied. Current local directives and procedures should be followed when painting the aircraft. In addition, refer to the publications listed in Paragraph 2-25.

6-29. PAINT SYSTEMS.

6-30. Figures 6-4 and 6-5 list the various primers and finish coatings which have been applied to the

F/RF-4 during production. The paint systems are defined in Figure 6-4, and applicability of each system by area and by aircraft serial number is shown in Figures 6-4 and 6-5. These charts should be consulted in particular when touchup painting is necessary.

6-31. TOUCHUP PAINTING.

6-32. Small scratches, abrasions, and isolated damage may be touched up as follows:

- a. Refer to Paragraph 6-29 and to the paint decal on the exterior of the aircraft to determine the paint system which is on the area to be touched up.
- b. Feather edge the finish adjacent to the touchup area using an abrasive cloth meeting the requirements of P-C-451, Type I, 500 grit or finer.
- c. Wipe the area with clean cheesecloth dampeden with TT-T-266 Lacquer Thinner.
- d. Dry the area with clean cheesecloth.
- e. Treat the area with the applicable chemical treatment for the metal involved. Refer to Paragraph 6-6 through 6-25.
- f. Apply the applicable paint system. Refer to Paragraph 6-29.

NOTE

Primer coats may be omitted for touchup of narrow scratches or areas covering less than four square inches.

- g. Allow exterior areas to dry for a minimum of four hours before the aircraft is flown.

6-33. REPAINTING LARGE AREAS.

6-34. Large areas, up to and including the entire aircraft, should be painted in accordance with the following procedure.

- a. Completely strip the area to be painted in accordance with Paragraph 6-3.
- b. Mask all areas which are to remain unpainted.
- c. Apply chemical treatment to the surfaces in accordance with Paragraphs 6-6 through 6-25.
- d. Apply the applicable paint system in accordance with the manufacturers instructions and current local directives.

NOTE

Paint should be applied as soon as possible after the chemical coating has dried.

6-35. Paint Film Thickness. The thickness of each coat of paint should be controlled, insofar as practicable, to provide better paint adhesion, to prevent cracking, and on very large areas to keep weight to a minimum. The following thicknesses are considered normal for a single, dried coat of each of the listed paints:

<u>PAINT</u>	<u>THICKNESS</u>
Wash Primer	0.2 to 0.3 mil
Zinc Chromate Primer	0.3 to 0.4 mil
Aircraft Lacquer	0.4 to 0.5 mil
Enamel (other than Epoxy)	0.8 to 1.0 mil
Varnish	0.8 to 1.0 mil
Epoxy Primer	0.3 to 0.5 mil
Epoxy Enamel	0.7 to 0.8 mil

6-36. Particular care should be used to avoid excessively thick primer coats. Thick primer coats tend to cause brittleness and cracking in overlying topcoats. The thickness of coatings can be measured by including small test panels in the spray pattern as the aircraft surface is covered.

6-37. SPECIAL COATINGS AND PROCEDURES.

6-38. Certain areas and components on the aircraft require special treatment because of the material of which they are made, because of functional design considerations, or because of location on the aircraft. Finishing procedures for such areas and components are given in Paragraphs 6-39 through 6-46.

6-39. Laminated Plastics. Laminated plastic parts such as radomes and antenna covers do not normally require paint or other finishing except as indicated in Figures 6-4 and 6-5. Some plastic parts receive paint in order to maintain the exterior color scheme, other plastics are coated with Neoprene as protective measure against rain erosion. Refer to Paragraphs 6-40 and 6-41 for procedures applicable to plastic parts which require finishing.

6-40. Apply Exterior Paint System to Plastics. Laminated plastic parts on the exterior of the aircraft shall be finished as follows when finishing is required to maintain the color scheme:

- a. Lightly sand the surface of the plastic using 400 grit or finer Aluminum Oxide Abrasive Cloth, P-C-451.
- b. Clean the surface with cheesecloth moistened with Xylene, TT-X-916.
- c. Allow the surface to dry for one hour.
- d. Using the manufacturers instructions, mix and apply a sanding surfacer which will be compatible with the finishing paint. Thickness of the sanding surfacer should be held to the minimum required to hide all imperfections and cloth weave in the plastic.
- e. Lightly sand the surface. Sanding motion should be parallel to normal air flow.
- f. Wipe the surface with clean cheesecloth dampeden with water.
- g. Allow the surface to air dry for one hour.
- h. Apply the specified topcoats.

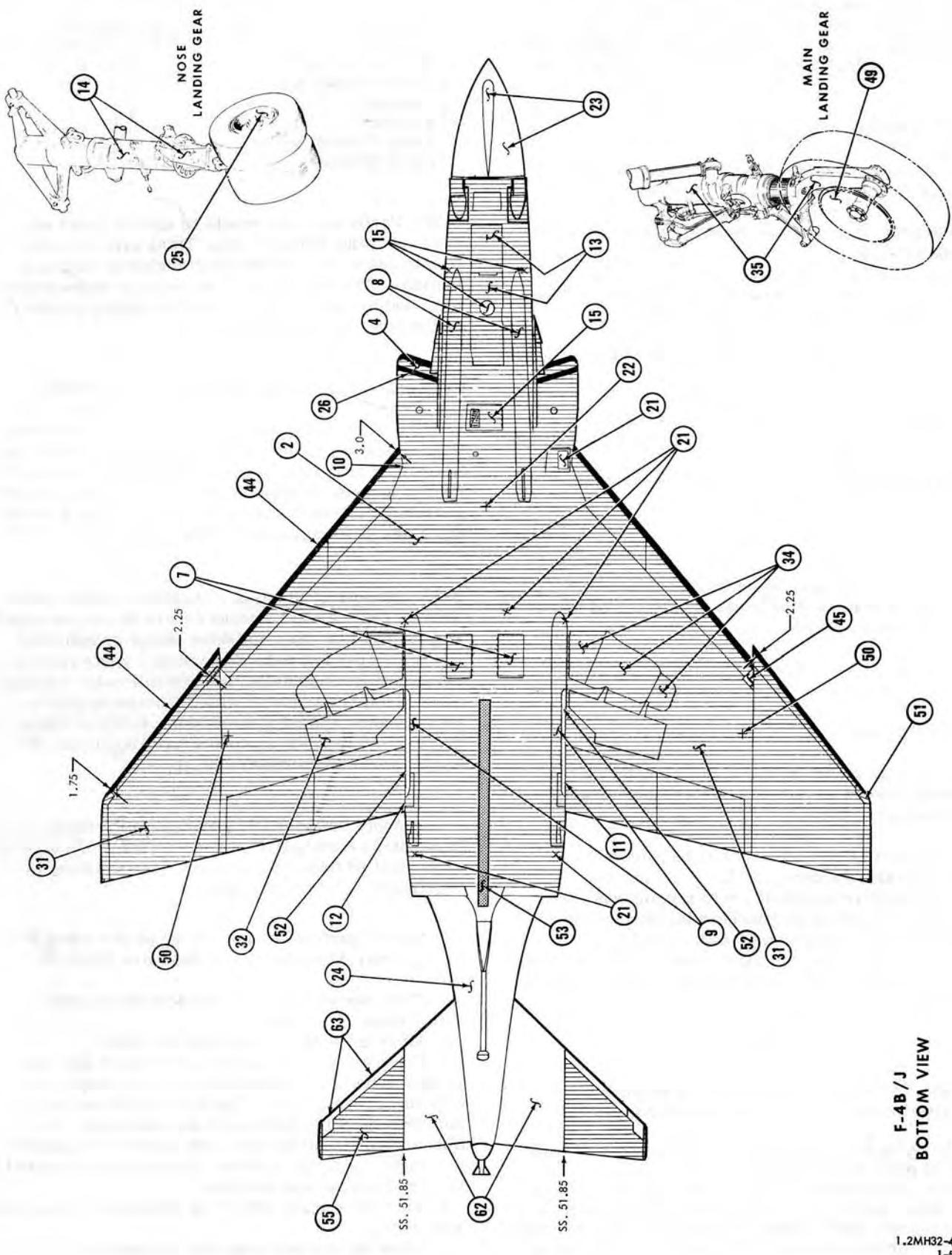


Figure 6-4. F-4 Paint Systems Index (Sheet 1)

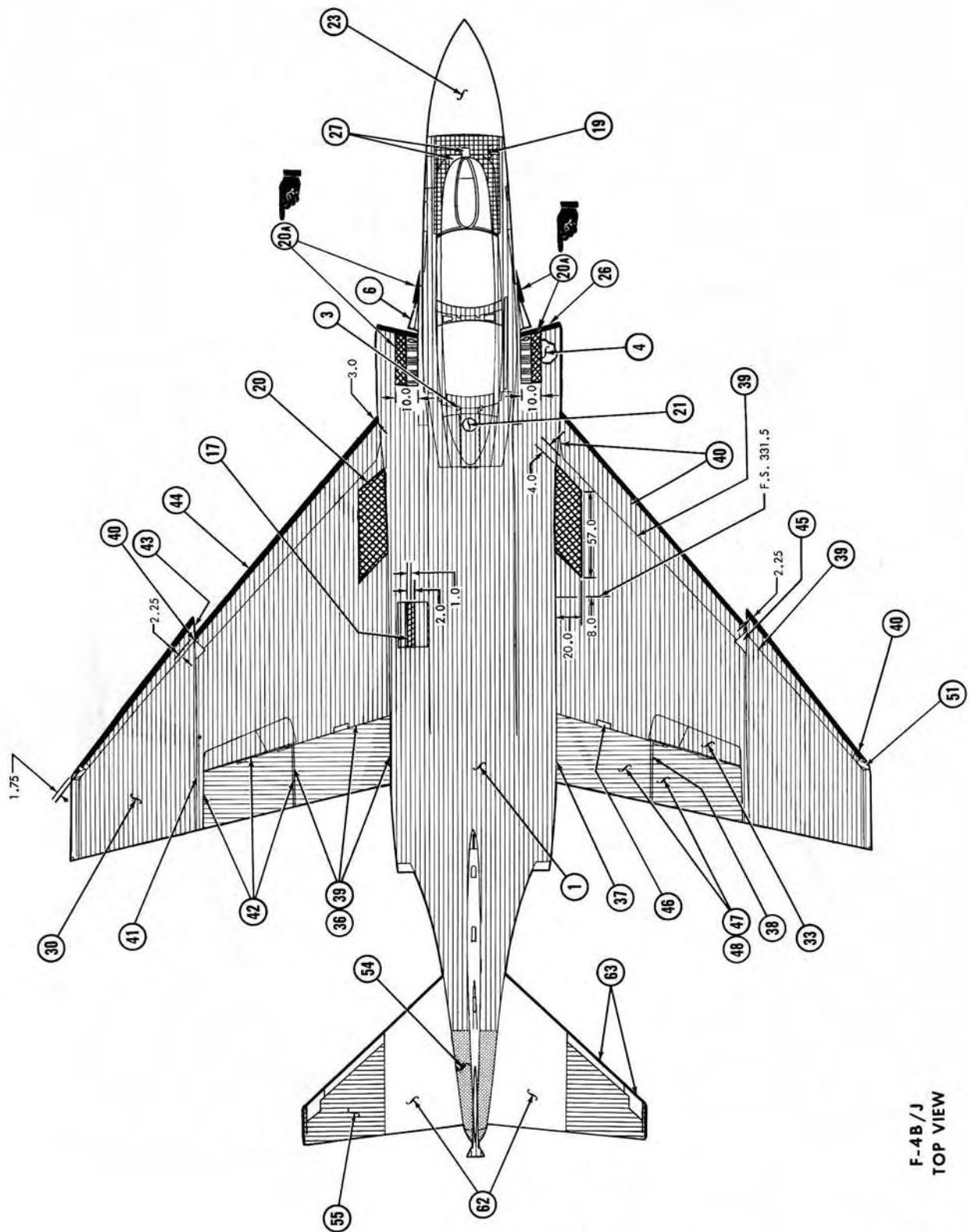
F-4B/J
TOP VIEW1.2MH32-4961F
2-5

Figure 6-4. F-4 Paint Systems Index (Sheet 2)

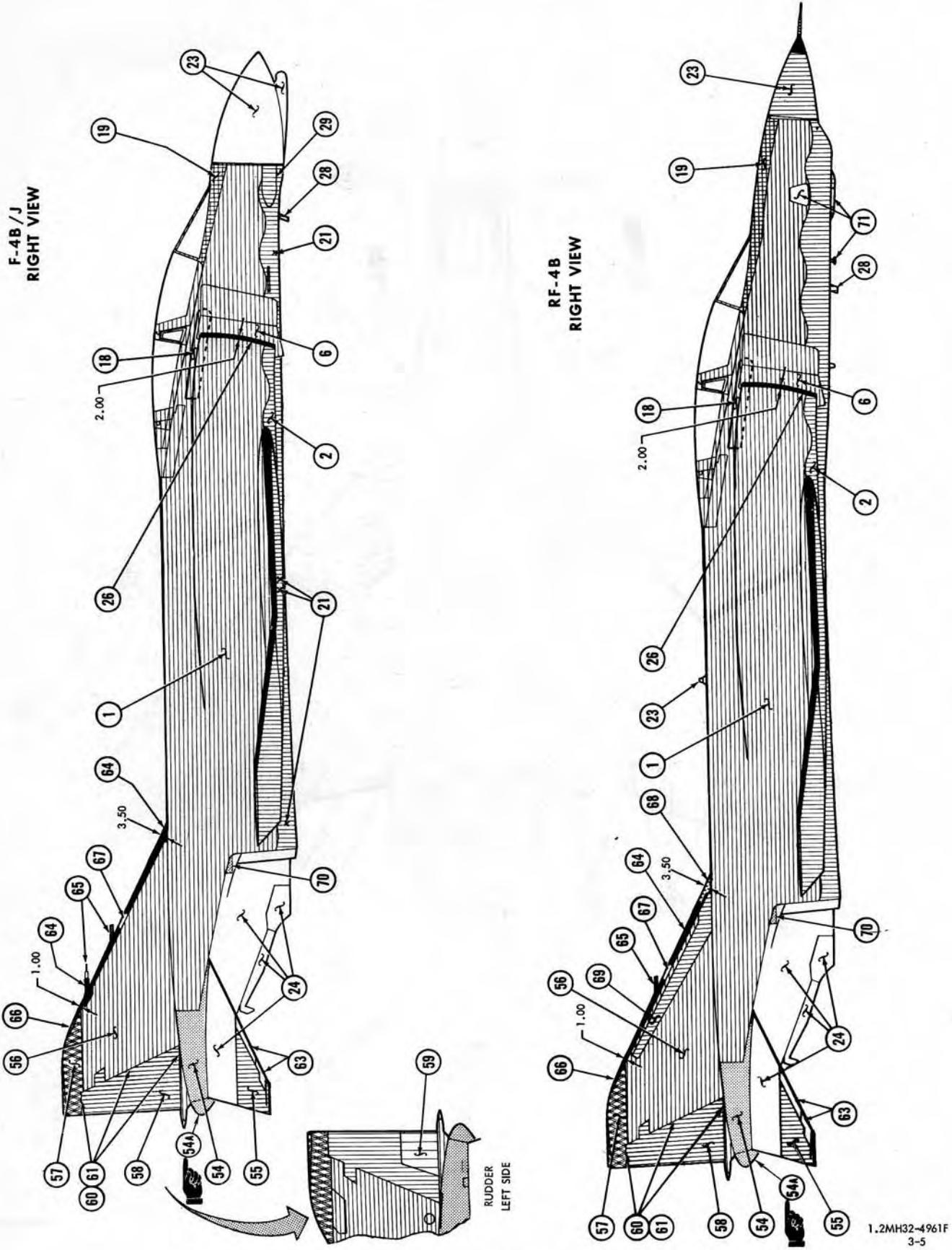


Figure 6-4. F-4 Paint Systems Index (Sheet 3)

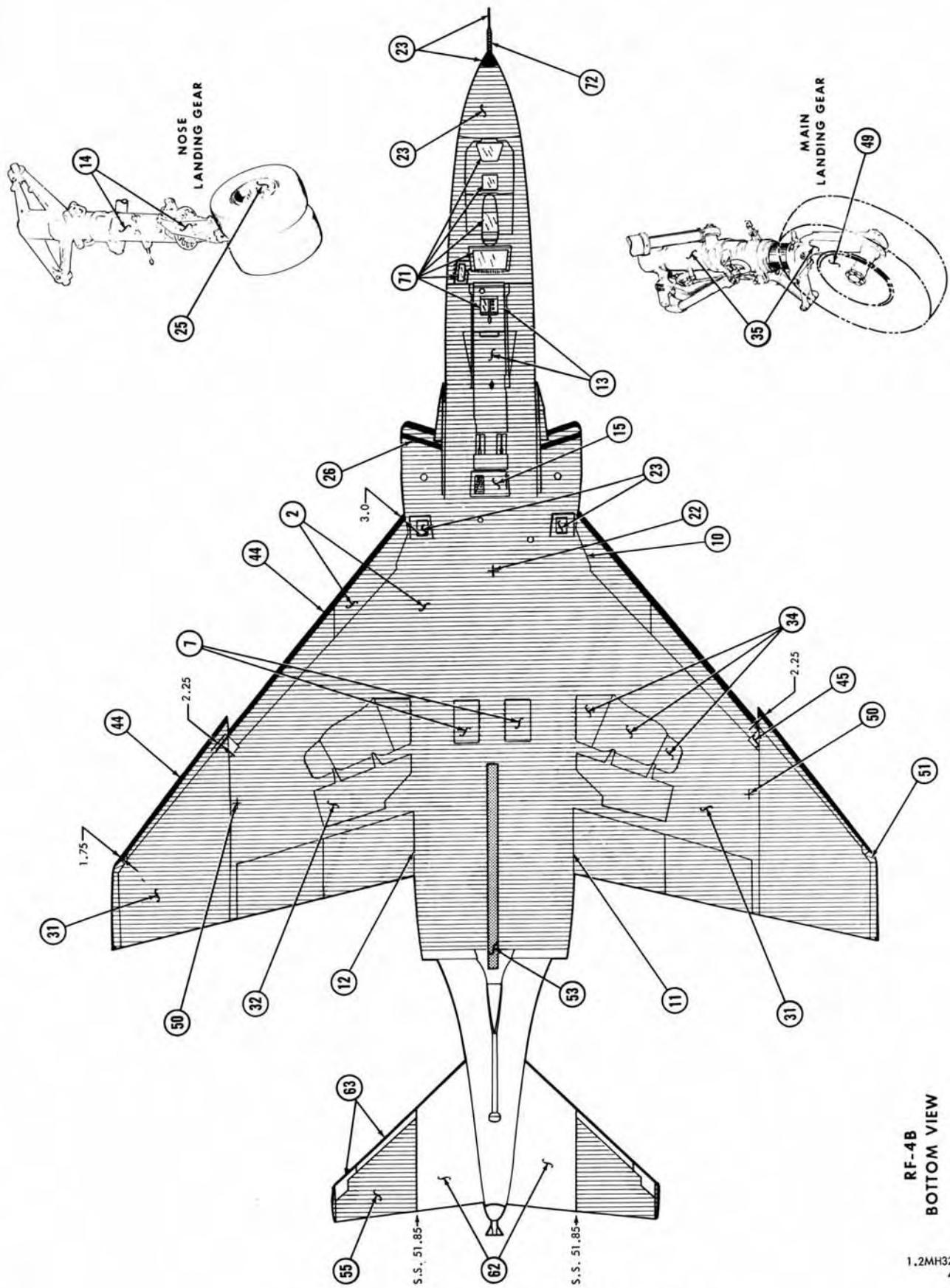


Figure 6-4. F-4 Paint Systems Index (Sheet 4)

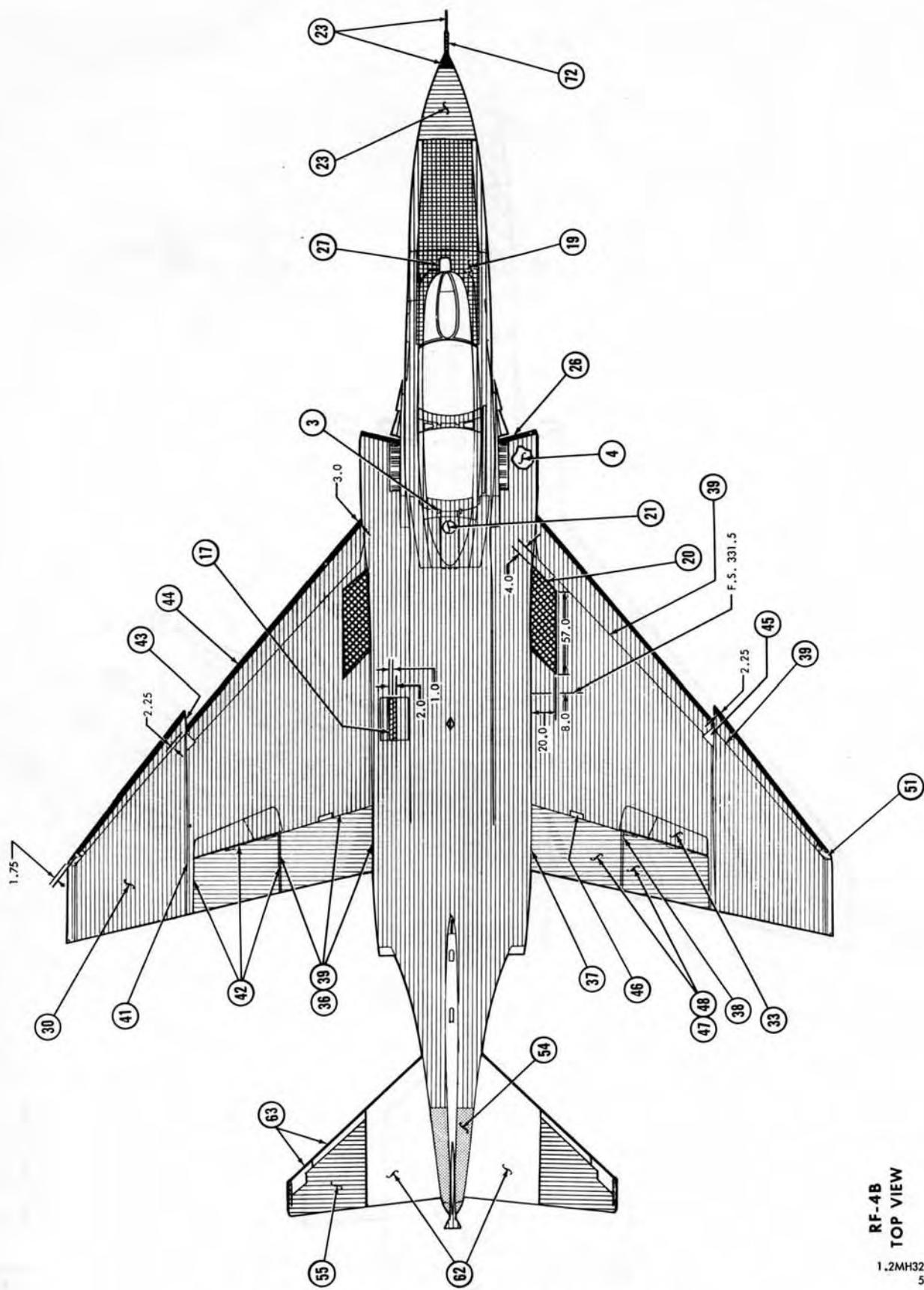


Figure 6-4. F-4 Paint Systems Index (Sheet 5)

RF-4B
TOP VIEW1.2MH32-4961E
5-5

PAINT SYSTEM IDENT. NUMBER	UNDERCOAT	PRIMER	TOPCOAT
0	None	None	None
1	MIL-C-8514 Rosin-Acid Metal Pretreatment Coating Compound (Wash Primer)	MIL-P-7962 Cellulose Nitrate Modified Alkyd Type Corrosion Inhibiting Fast Drying Primer Coating.	MIL-L-19538, Acrylic-Nitrocellulose Camouflage Lacquer for Aircraft Use.
2	MIL-C-8514 (See 1)	MIL-P-7962 (See 1)	MIL-L-19537 Acrylic-Nitrocellulose Gloss Lacquer for Aircraft Use
3	None	Epoxy Primer (Sherwin-Williams)	Epoxy Enamel (Sherwin-Williams)
4	Precoat Primer (Sherwin-Williams)	Epoxy Primer (Sherwin-Williams)	Epoxy Enamel (Sherwin-Williams)
5	Precoat Primer (Sherwin-Williams)	None	Epoxy Enamel (Sherwin-Williams)
6	None	MIL-P-23377 Epoxy-Polyamide Chemical and Solvent Resistant Primer Coating	MIL-C-22750 Epoxy Polyamide Chemical and Solvent Resistant Coating for Weapons Systems
7	MIL-C-5541 Chemical Films for Aluminum and Aluminum Alloys	MMS 405 Epoxy Primer (DeSoto Chemical Coatings, Inc.)	MMS 405 Epoxy Enamel (DeSoto Chemical Coatings, Inc.)
8	MIL-C-5541 (See 7)	MIL-P-8585 Zinc Chromatic Low Moisture Sensitivity Primer Coating	None
9	MIL-C-8514 (See 1)	MIL-P-8585 (See 8)	MIL-L-7178 Cellulose Nitrate Gloss Lacquer for Aircraft Use (Superseded by TT-L-32)
10	MIL-C-8514 (See 1)	MIL-P-8585 (See 8)	MIL-E-7729 Gloss Enamel
11	None	MIL-P-8585 (See 8)	MIL-L-6805 Camouflage Lacquer (Superseded by TT-L-20)
12	MIL-C-5541 (See 7)	None	72526 Heat Resistant Aluminized Enamel (Pittsburgh Plate Glass)
13	None	MIL-S-974 Sanding Surfacer	MIL-L-19538 (See 1)

Figure 6-5. Paint Systems Chart (Sheet 1)

PAINT SYSTEM IDENT. NUMBER	UNDERCOAT	PRIMER	TOPCOAT
14	None	MIL-C-7439 Rain Erosion Resistant and Rain Erosion Resistant with Antistatic Treatment Elastomeric Coating System for Aircraft and Missile Exterior Plastic Parts	MIL-C-7439
15	None	MIL-S-974 Sanding Surfacer	MIL-L-19537 (See 2)
16	None	MMS 405 Epoxy Surfacer (DeSoto Chemical Coatings, Inc.)	MMS 405 Epoxy Enamel (DeSoto Chemical Coatings, Inc.)
17	MIL-C-8514 (See 1)	MIL-P-8585 (See 8)	MIL-E-5556 Quick Drying Camouflage Enamel
18	MIL-C-8514 (See 1)	MIL-P-8585 (See 8)	EC 843S Aluminized Corogard (Minnesota Mining & Manufacturing Company)
19	EC 776 Priming Cement (Minnesota Mining & Manufacturing Company)	Corogard No. 22 Non- Slip Walkway Coating (Minnesota Mining & Manufacturing Company)	Corogard No. 21 or No. 121 Non-Slip Walkway Coating (Minnesota Mining & Manufacturing Company)
20	MIL-C-5541 (See 7)	None	M49AC19 or M49WC6 Heat Resistant Enamel (Sherwin-Williams)
21	MIL-C-8514 (See 1)	None	MIL-E-7729 Gloss Enamel
22	MMS 405 Epoxy Primer (DeSoto Chemical Coatings, Inc.)	MMS 405 Epoxy Enamel (DeSoto Chemical Coatings, Inc.)	EC 843S Aluminized Corogard (Minnesota Mining & Manufacturing Company)
23	MMS 405 Epoxy Primer	MMS 405 Epoxy Enamel	MIL-E-5556 Quick Drying Camouflage Enamel
24	MMS 405 Epoxy Primer	MMS 405 Epoxy Enamel	MIL-L-6805 (TT-L-20) Camouflage Lacquer
25	MIL-P-23377 Epoxy Polyamide Primer	MIL-C-22750 Epoxy Polyamide Coating	MIL-L-6805 (TT-L-20) Camouflage Lacquer
26	None	823-721 High Leaching Epoxy Polyurethane (DeSoto Chemical Coatings, Inc.)	822-010 Polyurethane Enamel (DeSoto Chemical Coatings, Inc.)
27	None	823-721 (See 26)	821-010 Polyurethane Enamel (DeSoto Chemical Coatings, Inc.)

Figure 6-5. Paint Systems Chart (Sheet 2)

REA

PAINT SYSTEM EFFECTIVITY

INDEX NUMBER FIGURE 6-4	NOMENCLATURE	F-4																								F-4J												
		148363f THRU 148396g	148397g THRU 148410g	148411h THRU 148413h	148414h THRU 148429h	148430h THRU 148434h	149403i THRU 149416i	149417i THRU 149430j	149418i THRU 149441j	149431j THRU 149443j	149442j THRU 149452k	149444j THRU 149454k	149453k THRU 149452k	149455k THRU 149457k	149458k THRU 149460k	149459k THRU 149474k	149461k THRU 151426p	150406L THRU 151984t	151497s THRU 152995z	152985y THRU 153005z	152996z THRU 153005aa	152997z THRU 153050aa	153006z THRU 153915ab	153051aa THRU 155569ag	153071z THRU 155876al	155570ah THRU 155889al	155877al THRU 155896am	155890am AND UP	151975t THRU 153108aa	153109aa & UP								
FUSELAGE																																						
1	Upper Moldline	1	3	3	3	3	4	4	5	4	4	7	4	6	4	7	4	7	7	7	6	7	6	7	7	7	7	7	7	7	26	26	7	7	7			
2	Lower Moldline	2	3	3	3	3	4	4	5	4	4	7	4	6	4	7	4	7	7	6	7	6	7	7	7	7	7	7	7	7	27	27	7	7	7			
3	Aft Canopy Well	8	8	8	9	9	9	8	8	9	9	9	9	9	9	9	9	9	7	6	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
4	Engine Intake Ducts	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
5	Structure (Interior)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	6	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
6	Variable Ramps (Inboard Side)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	6	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
7	Auxiliary Air Doors (Interior)	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	7	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
8	Fwd Missile Wells (Interior)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	7	6	7	7	7	7	7	7	7	7	7	7	7	7	7				
9	Aft Missile Wells (Interior)	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21				
10	L.E. Flap End Closure	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		
11	Left T.E. Flap End Closure	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		
12	Right T.E. Flap End Closure	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10				
13	NLG Well and Doors (Interior)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10				
14	Nose Landing Gear	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
15	Oxygen Compartment	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
16	Access Steps (Interior)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
17	Ram Air Turbine Well	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
18	Refueling Probe Well	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
19	Anti-glare Area	1	3	3	3	4	4	5	4	4	7	4	6	4	7	4	24	24	25	24	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
20	Walkways	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19		
20A	Walkways	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Antennas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Jackpoints	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Radome	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14		
24	Engine Exhaust Area	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Nose Wheel	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
26	Engine Intake Duct Leading Edge	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18		
27	Ram Removal Nozzles	17	17																																			

Figure 6-5. Paint Systems Chart (Sheet 3)

AREA

PAINT SYSTEM EFFECTIVITY

INDEX NUMBER FIGURE 6-4	NOMENCLATURE	F-4 B																								F-4J						RF-4B	
		148363f THRU 148396g	148397g THRU 148410g	148411h THRU 148413h	148414h THRU 148429h	148430h THRU 148434h	149403i THRU 149416i	149417i	149418i THRU 149430j	149431j THRU 149441j	149442j THRU 149443j	149444j THRU 149452k	149453k THRU 149454k	149455k THRU 149457k	149458k THRU 149460k	149459k THRU 149474k	149461k THRU 150426p	150406L THRU 151426p	151497s THRU 151984t	152985y THRU 152995z	152996z THRU 153005z	152997z THRU 153050aa	153006z THRU 155569ag	153071z THRU 155876al	155570ah THRU 155889al	155877al THRU 155896am	155890am THRU 155896am	155897am AND UP 153108aa	151975t THRU 153108aa	153109aa & UP			
WING (Cont)																																	
48 T.E. Flap Honeycomb Area		20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9	20 9				
49 MLG Wheel		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0			
50 Jackpoint		20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0	20 0			
51 Position Lights		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
52 Seal		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
53 Keel Lower Longeron		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
EMPENNAGE																																	
54 Tail Cone		12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12	12 12			
54A Drag Chute Door		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
55 Stabilator (Outboard Panels)		2 3	3 3	3 3	3 3	4 4	4 4	5 5	4 4	4 4	7 7	4 4	6 6	4 4	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7		
56 Vertical Fin (Except Tip)		1 1	3 3	3 3	3 3	4 4	4 4	5 5	4 4	4 4	7 7	4 4	6 6	4 4	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7		
57 Vertical Fin Tip		13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13	13 13			
58 Rudder (Except Fiberglass)		1 1	3 3	3 3	3 3	4 4	4 4	5 5	4 4	4 4	7 7	4 4	6 6	4 4	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7	7 7		
59 Fiberglass on Rudder		15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15	15 15			
60 Rudder Ends		9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9	9 9		
61 Rudder Closure		11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11	11 11			
62 Stabilator (Inboard Panels)		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
63 Stabilator Leading Edge		18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18	18 18			
64 Vertical Fin Leading Edge		18 18	18 18	18 18	18 18																												

6-41. Using Elastomeric Coatings (MIL-C-7439). Elastomeric coatings are used to protect some plastic surfaces against rain erosion. These coatings meet the requirements of MIL-C-7439, Rain Erosion Resistant and Rain Erosion Resistant with Static Discharge Elastomeric Coating System for Aircraft and Missile Exterior Plastic Parts. Application and repair of these coatings should be accomplished in accordance with the instructions provided by the manufacturer of the particular product being used.

6-42. Corogard. The proprietary product, Corogard, is used on leading edges, on walkways, and on cockpit interiors. The procedures in Paragraphs 6-43 through 6-45 may be used in renewing these finishes.

6-43. Leading Edge Material. Aluminized Corogard (EC843S, manufactured by Minnesota Mining & Mfg. Company, St. Paul, Minnesota) should be applied over Zinc Chromate Primer MIL-P-8585 or MMS 405 Epoxy Enamel whichever is applicable. This paint coating will be applied to all metal leading edges on aircraft 148363f THRU 155889al. Mixing and application instructions are as follows:

- a. Prepare the Corogard for application by mixing the aluminum powder with the base material.

NOTE

Mix the aluminum powder with a small amount of Methyl-Isobutyl-Ketone (TT-M-268) to form a smooth paste. Add the aluminum paste to the base material and blend until they are thoroughly mixed. No thinning should be necessary since the materials should be received in a spraying consistency. If this is not true, however, use sufficient Methyl-Isobutyl-Ketone (TT-M-268) to obtain the proper viscosity.

- b. Apply two crosscoats of Aluminized Corogard to the impinging area of the leading edge, allowing twenty minutes drying time between coats.
- c. Apply two crosscoats over the entire area, allowing 20 minutes drying time between coats.
- d. After the last coat has dried 20 minutes, remove masking tape and allow film to air cure 24 hours.
- e. Carefully sand the edges to feather into the adjacent finish using #400 sandpaper.
- f. Allow an additional 24 hours drying before flying aircraft.

NOTE

If the corogard coating is damaged in small areas, touch-up by feather edging the damage into the surrounding area. Use #400 sandpaper. Clean surface with lacquer thinner (TT-T-266). Apply Aluminized Corogard so that damaged area blends into the surrounding surfaces.

6-44. Walkway Material. Black Corogard (No. 22, manufactured by Minnesota Mining & Mfg. Co.,

St. Paul, Minnesota) and Light Gull Gray Corogard (No. 121, manufactured by Minnesota Mining & Mfg. Co., St. Paul, Minnesota) are used to produce the walkway coating outlined below. Mixing and application instructions are as follows:

- a. Remove masking from walkway areas, and strip any primer or paint in this area.
- b. Clean area thoroughly with a clean cloth saturated with dry cleaning solvent. Allow area to dry. Mask area adjacent to walkway.
- c. Apply a light coat of priming adhesive (EC-776, manufactured by Minnesota Mining & Mfg. Co., St. Paul, Minnesota).

NOTE

Apply cement in the direction of airflow with respect to the aircraft. Allow cement to dry completely.

- d. Corogard No. 22 and No. 121 will be thinned with a mixture of Methyl-Ethyl-Ketone (TT-M-261), Methyl-Isobutyl-Ketone (TT-M-268), and Toloul (TT-T-548). The proportion of this thinning mixture will be equal volumes of the three solvents.
- e. The thinning ratio will be nine volumes of package material to one volume of the thinner described in step d.
- f. Apply two heavy crosscoats of Corogard 22 over the cement primer. Allow at least one-half hour drying time between coats. Use a spray gun air pressure between 50 and 60 pounds.
- g. When Corogard 22 has dried sufficiently to resist marking of masking tape, mask off a one-half inch wide border of the wing walkway area.
- h. Apply six heavy crosscoats of Corogard 121 in the same manner as outlined in step f above.

NOTE

The walkway material should blend in smoothly with the adjacent painted surfaces. This can be accomplished by light sanding of the edges of the walkway material after each coat.

- i. When the final coat is dry, remove masking tape. The one-half inch border of exposed Corogard 22 will clearly outline the wing walkway area.
- j. Do not walk on finished areas for at least 24 hours. Maximum hardness is not obtained until seven days after application.

6-45. Cockpit Components. Components located in the cockpit are finished with Black Corogard (No. 22, manufactured by Minnesota Mining & Mfg. Co., St. Paul, Minnesota) or Dark Gull Gray Corogard (No. EC1335, manufactured by Minnesota Mining & Mfg. Co., St. Paul, Minnesota). Allow the last coat of primer to air dry one and one-half hours before applying the Corogard finish.

6-46. Forward Movable Ramp Assembly. The holes in the forward movable ramp will not be painted. When this assembly is painted, all holes must be filled with Rubbing Compound (TT-R-771, Type III). After chemical surface treatment and prior to painting, fill holes with compound which has been thinned with water to a brushing consistency. When compound has dried, use cheesecloth to wipe off the excess. After painting operations are completed and all coats are dry, remove compound with air pressure.

6-46A. Thermal Insulating (Intumescent) Coating. On F-4B 148363f THRU 153915ab AFTER AFC 378, structural areas which are subject to heat damage due

to bleed air duct failures are protected with a coating of thermal insulating paint (MIL-C-46081MR). These areas are as follows and are shown in figure 6-5A:

- a. Left and right forward fuselage hydraulic and pneumatic area.
- b. Interior surfaces of access doors 29 L/R and 30 L/R.
- c. Left and right center wing trailing edge and flap areas.
- d. Left and right engine bay areas adjacent to trailing edge BLC valve.
- e. Center keel web area.

6-46B. For thermal insulating coating application procedures refer to NA 01-245FDA-3-1.6.

EXTERIOR MARKINGS

6-47. EXTERIOR MARKINGS.

6-48. External markings shown in Figures 6-6 through 6-19 are applied to the aircraft by the manufacturer. Markings should be reapplied as necessary in accordance with the provisions of MIL-I-18464, Insignia and Markings for Naval Weapons Systems.

6-49. Access Door Markings F-4B/G. See Figure 6-6.

6-50. Access Door Markings RF-4B. See Figure 6-7.

6-51. Access Door Markings F-4J. See Figure 6-8.

6-52. Instructional Markings F-4B. See Figure 6-9.

6-53. Instructional Markings RF-4B. See Figure 6-10.

6-54. Instructional Markings F-4J. See Figure 6-10A.

6-55. Servicing and Precaution Markings F-4B/G. See Figure 6-11.

6-56. Servicing and Precaution Markings RF-4B. See Figure 6-12.

6-57. Servicing and Precaution Markings F-4J. See Figure 6-12A.

6-58. Wing Missile Pylon Markings. See Figure 6-13.

6-59. Wing Missile Pylon Adapter Markings. See Figure 6-14.

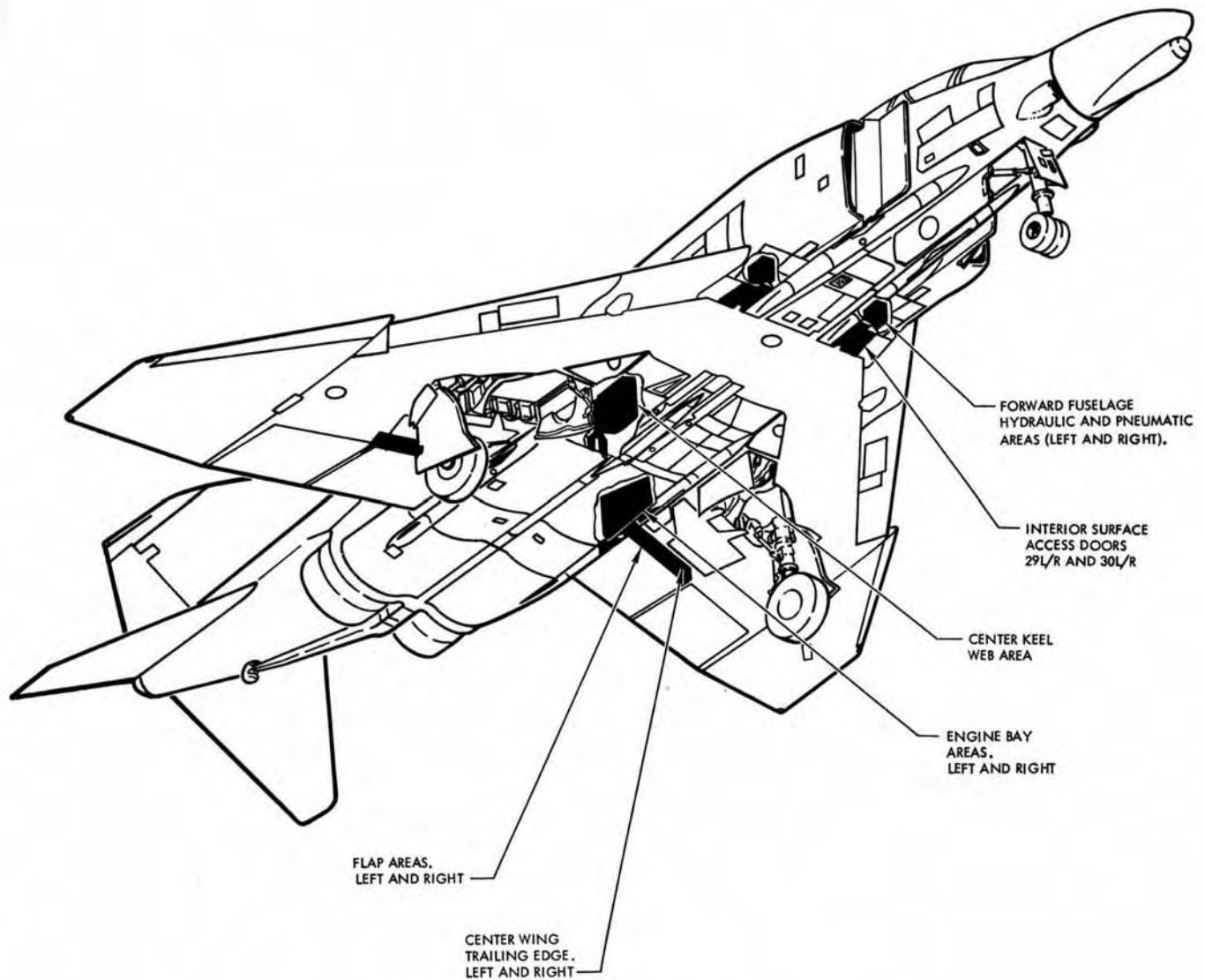
6-60. Wing External Fuel Tank Markings. See Figure 6-15.

6-61. Centerline External Fuel Tank Markings. See Figure 6-16.

6-62. Centerline Multiple Weapons Adapter Fairing Markings. See Figure 6-17.

6-63. Wing Outboard Fuel Tank Pylon Weapons Adapter Markings. See Figure 6-18.

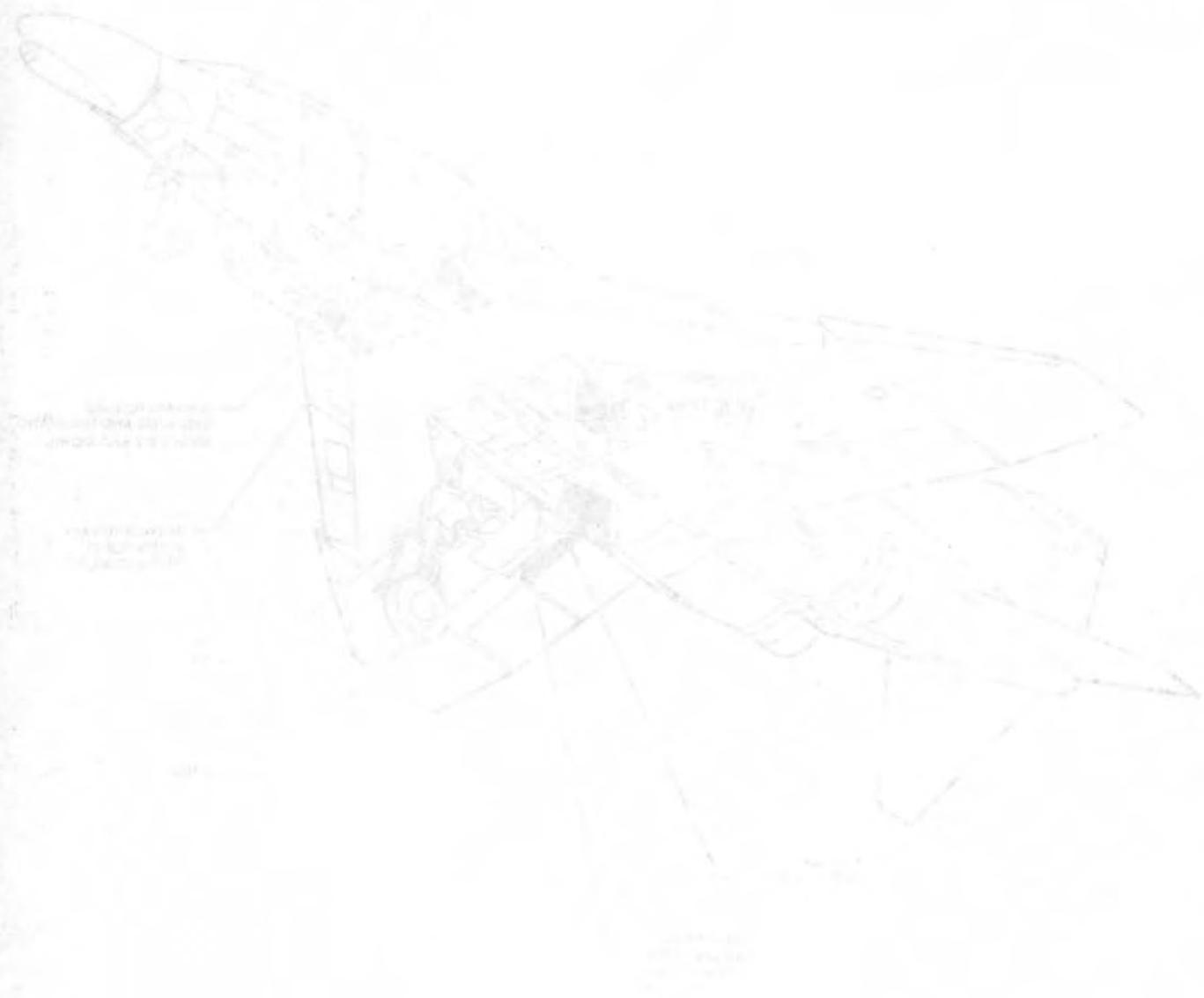
6-64. Drain Markings. See Figure 6-19.



1.2MH32-(1)

Figure 6-5A. Thermal Insulating (Intumescent) Coated Areas

F-4B AFTER AFC 378



and by the manufacturer's name "Baldwin" and may
be registered.

1. LETTERING TO CONFORM TO MIL-I-18464.
2. MARKINGS ARE BLACK NON-SPECULAR ENAMEL, COLOR NO. 37038, ON GRAY SURFACES, AND MEDIUM GRAY GLOSSY ENAMEL, COLOR NC. 16307, ON WHITE SURFACES.
- THE HEIGHT OF DOOR NUMBERS IS 1.0 INCH. THE HEIGHT OF GENERAL MARKINGS IS 0.5 INCH.
4. THE WIDTH OF LETTERS AND NUMBERS IS 3/4 THE HEIGHT, AND THE STROKE IS 1/6 THE HEIGHT.
5. THE INFORMATION WITHIN THE PARENTHESES IS FOR LOCATION AND REFERENCE PURPOSES ONLY AND IS NOT PART OF THE MARKING.

NOTES

- 6 F-4B 148363f THRU 149474k
- 7 F-4B 148363f THRU 148411h AND 148413h THRU 149474k.
- 8 F-4B 148412h, 150406i AND UP.
- 9 F-4B 148387g AND UP.
- 10 F-4B 149403i AND UP.
- 11 F-4B 148363f THRU 151426p.
- 12 F-4B 151427q AND UP.
- 13 F-4B AFTER AFC375 PART I.
- 14 F-4B AFTER AFC375 PART II.
- 15 F-4B AFTER AFC 333.
- 16 F-4B 152995z AND UP AND F-4B 148363f THRU 152994y AFTER AFC-218.
- 17 F-4B AFTER AFC387
- 18 149403i THRU 152994y AFTER AFC 218.
- 19 148363f THRU 152994y AFTER AFC 218.
- 20 BEFORE AFC 331, PART I
- 21 AFTER AFC 331, PART I

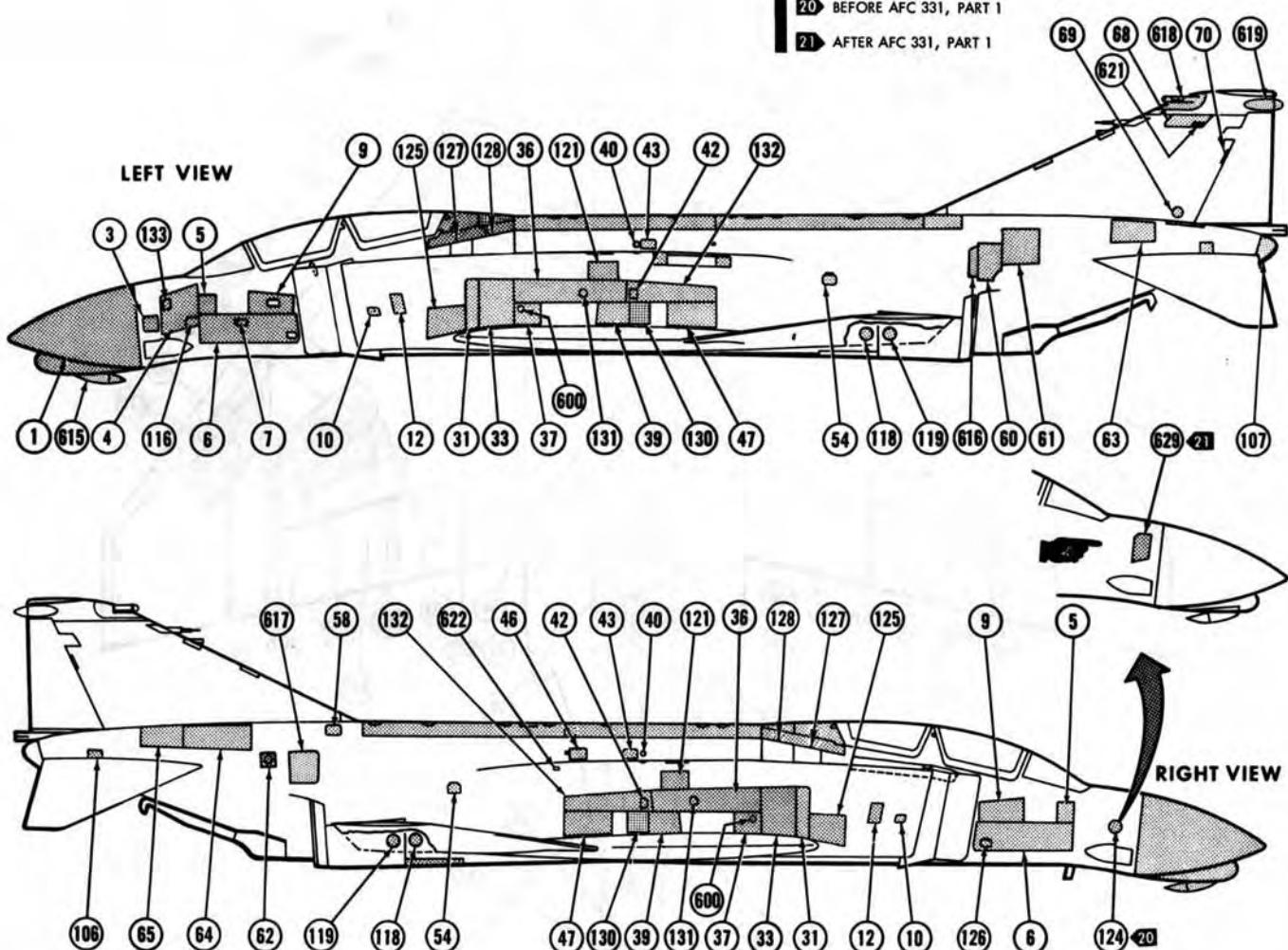


Figure 6-6. Access Door Markings (Sheet 1)

TOP VIEW

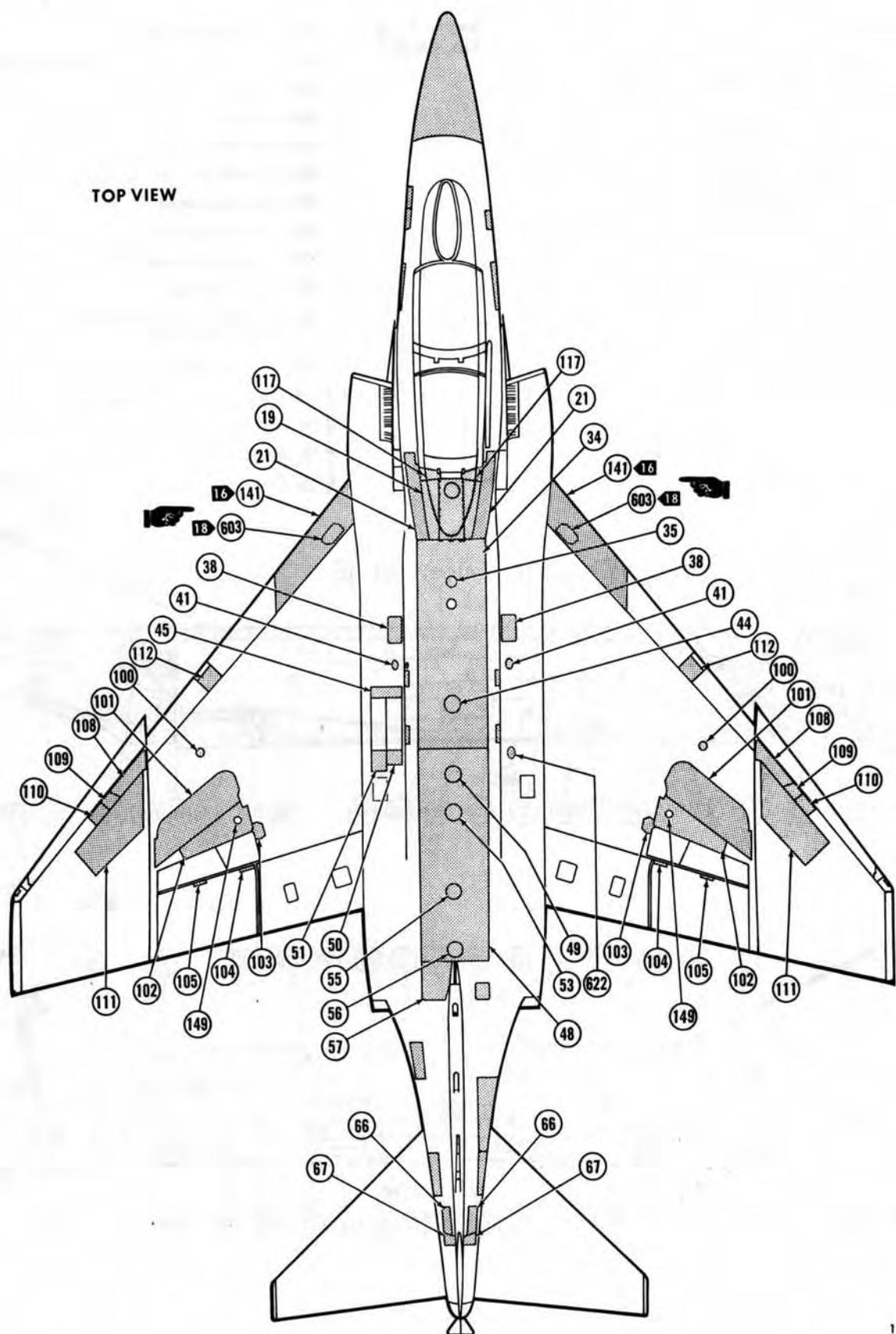
1.2MH32-5677J
2-13

Figure 6-6. Access Door Markings (Sheet 2)
F-4B

Changed 15 March 1969

BOTTOM VIEW

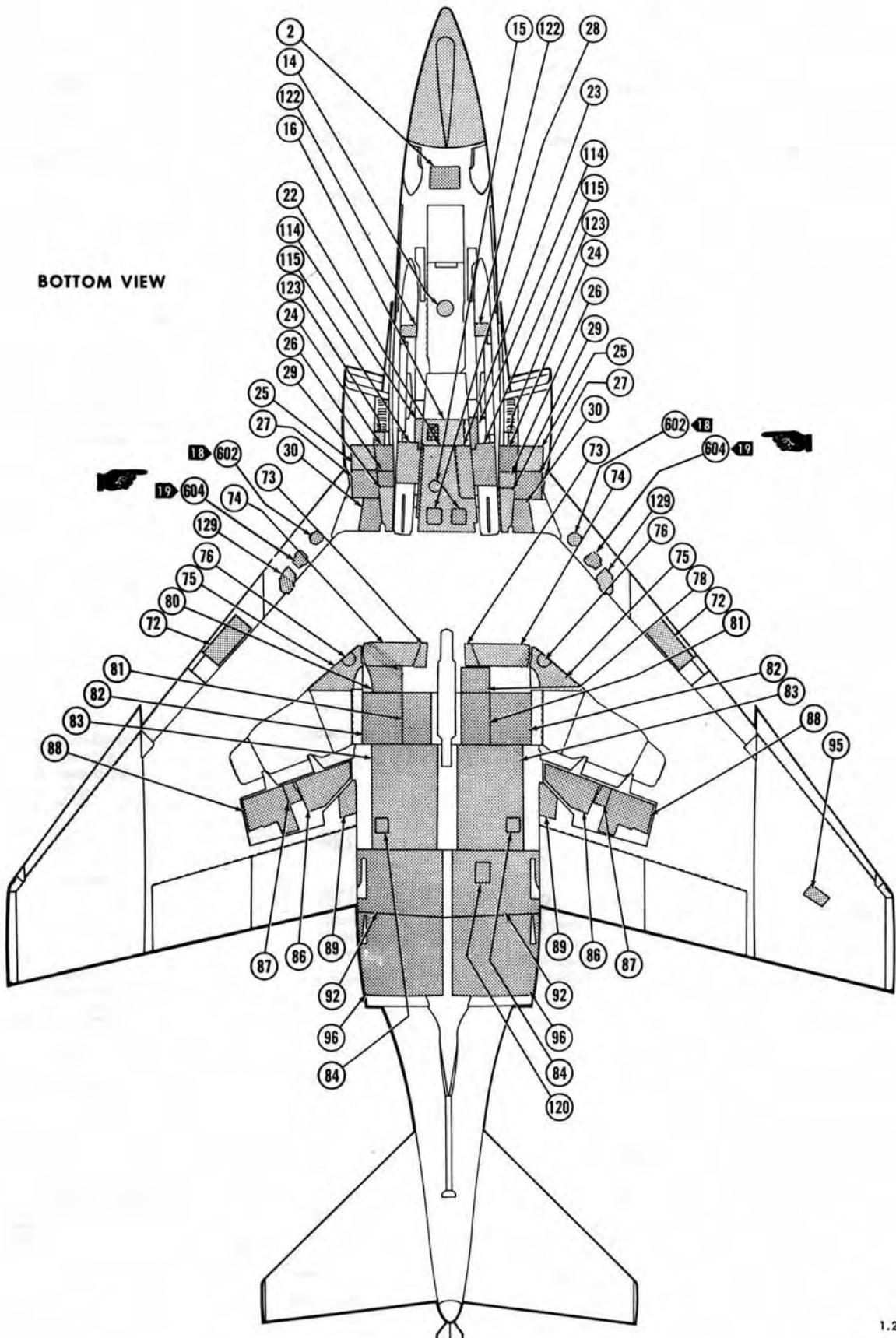
1.2MH32-5677J
3-13

Figure 6-6. Access Door Markings (Sheet 3)

F-4B

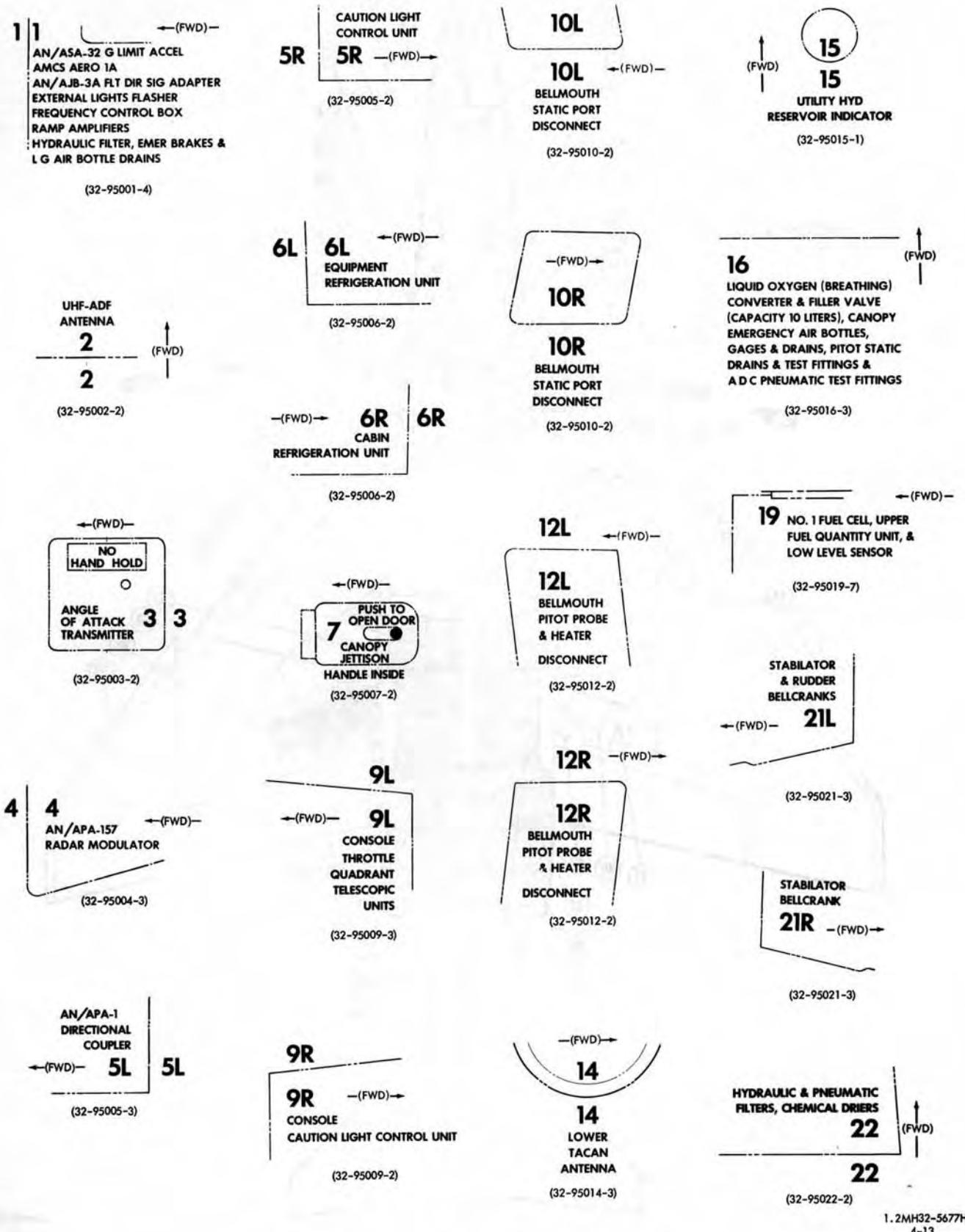


Figure 6-6. Access Door Markings (Sheet 4)

F-4B

Changed 15 May 1968

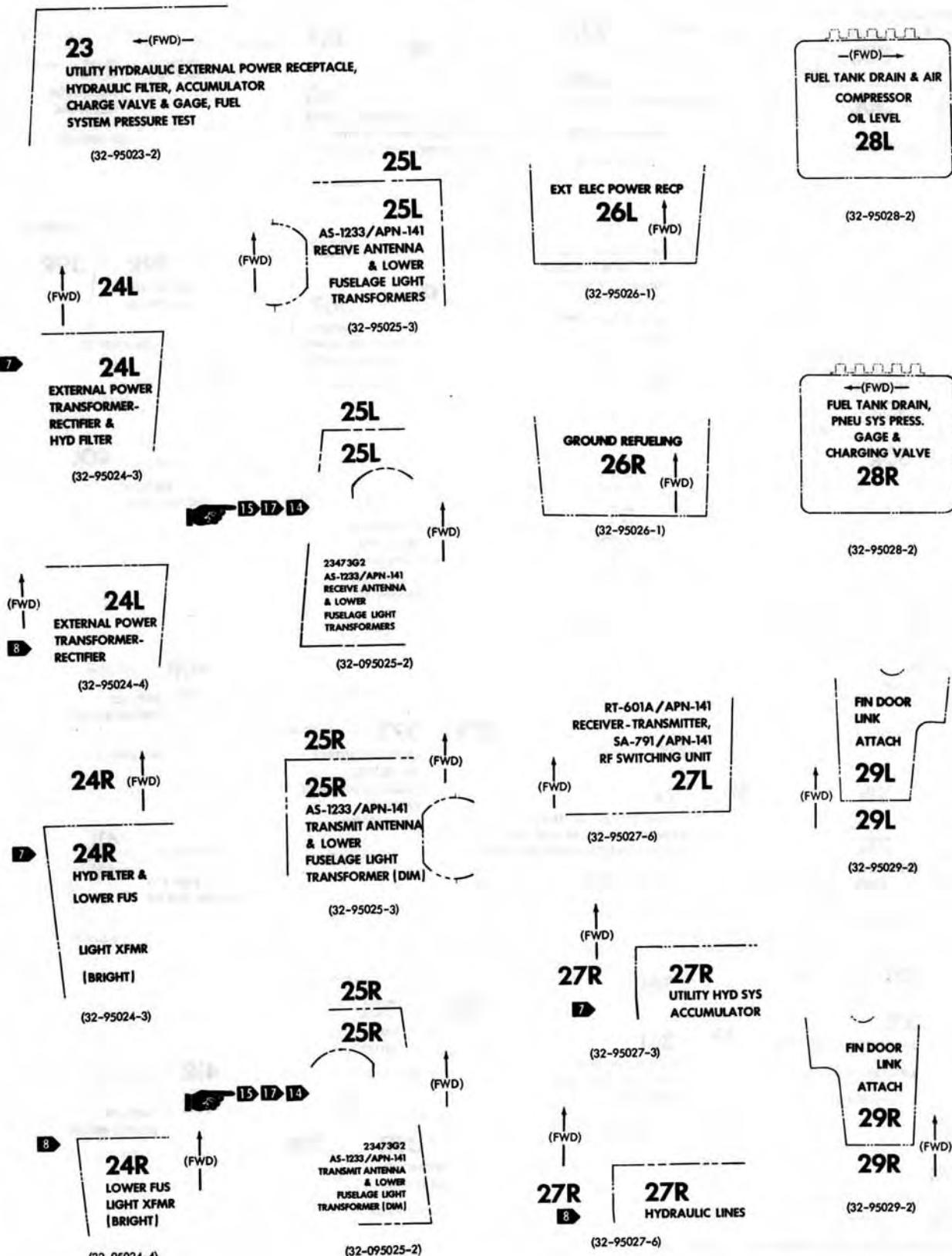


Figure 6-6. Access Door Markings (Sheet 5)

NAVAIR 01-245FDB-2-1.2

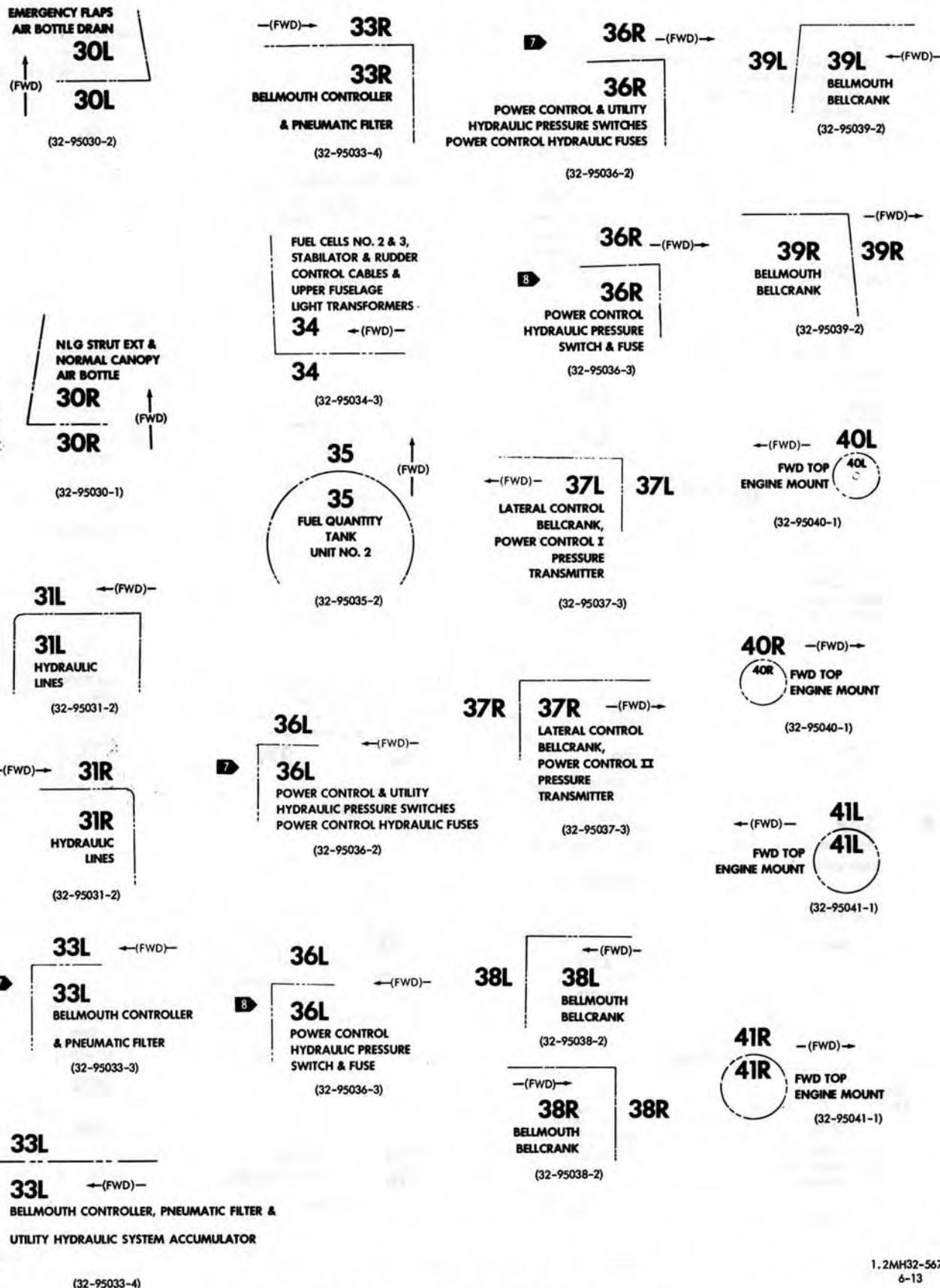


Figure 6-6. Access Door Markings (Sheet 6)

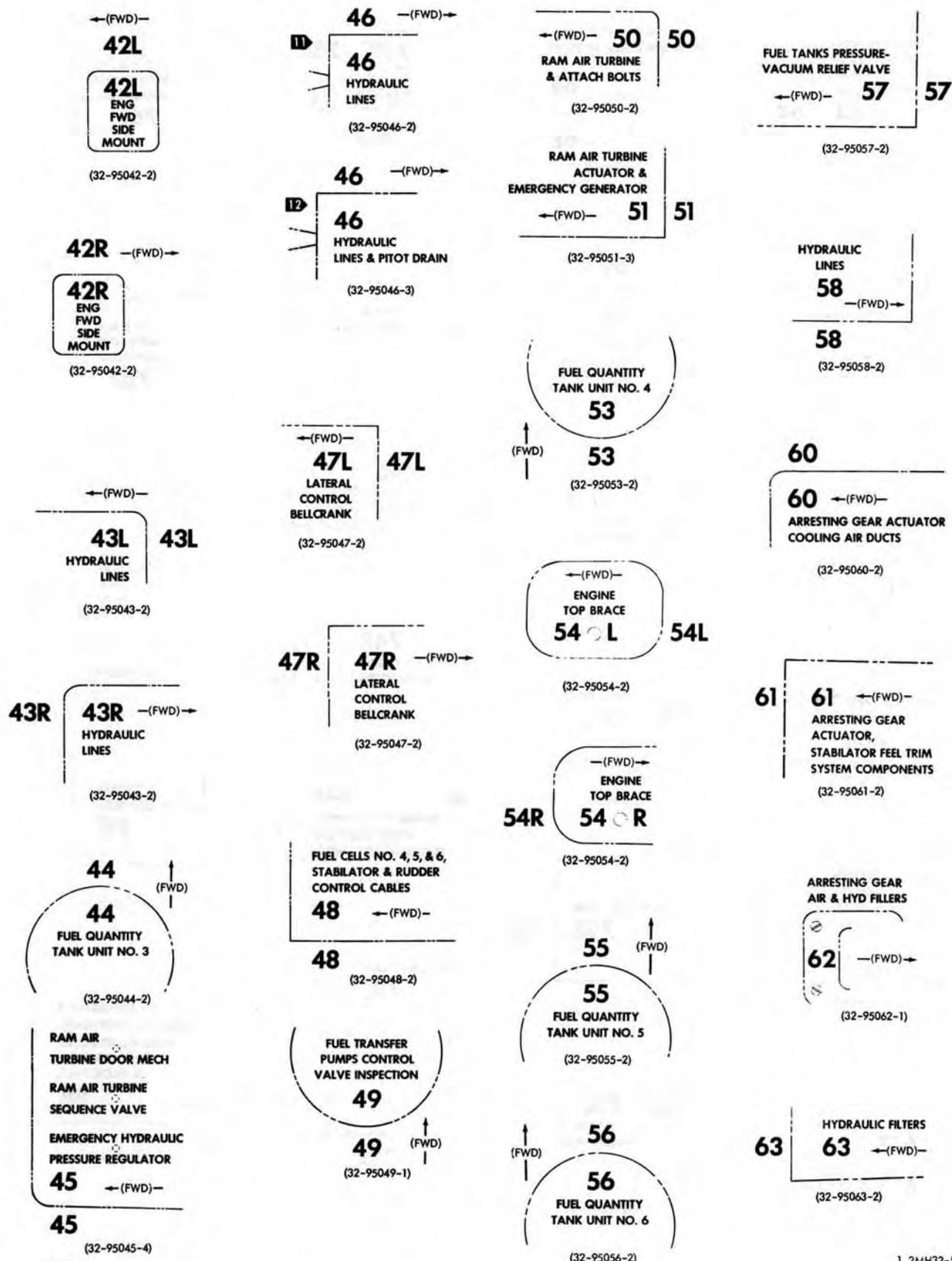


Figure 6-6. Access Door Markings (Sheet 7)

F-4B

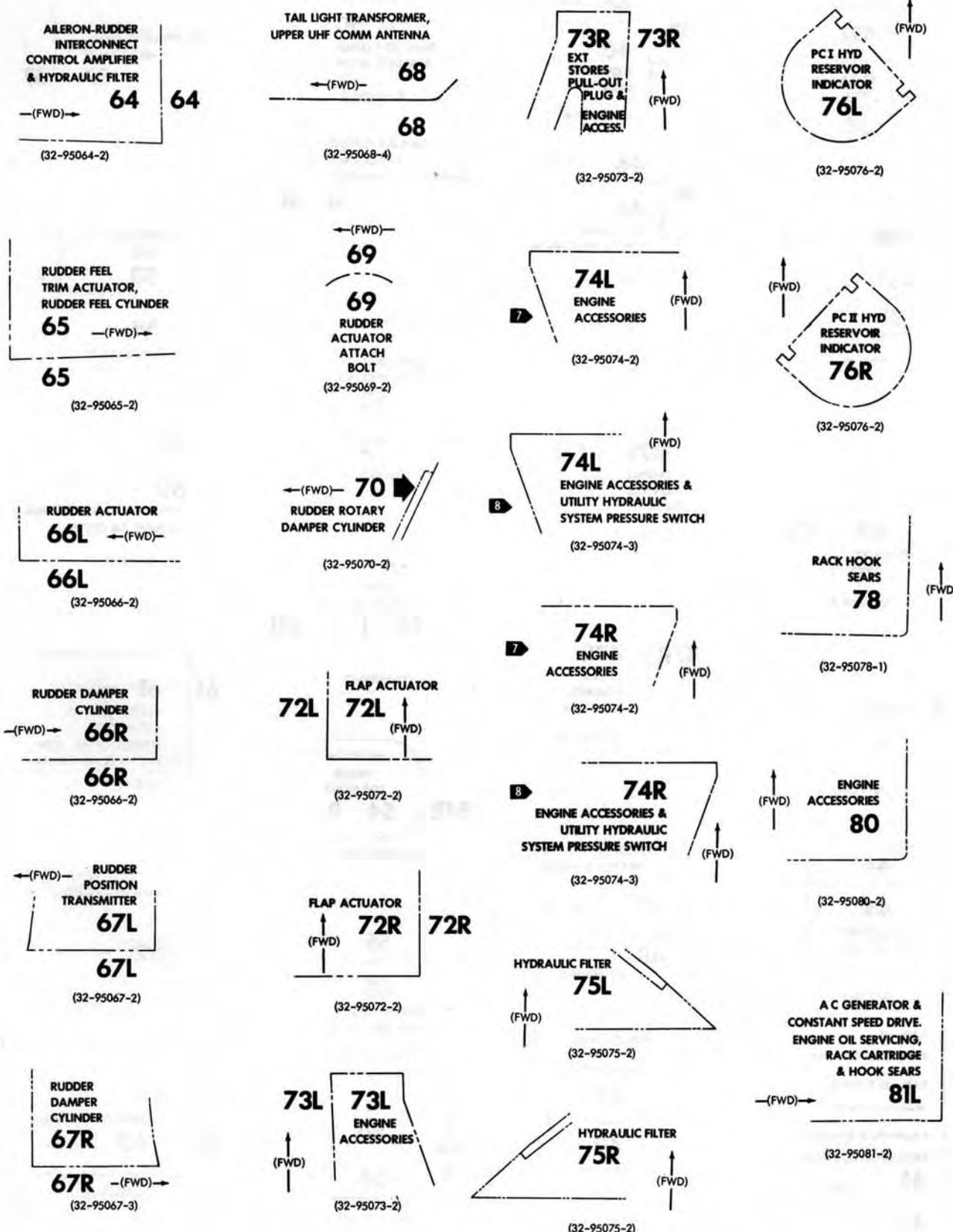
1.2MH32-5677H
8-13

Figure 6-6. Access Door Markings (Sheet 8)

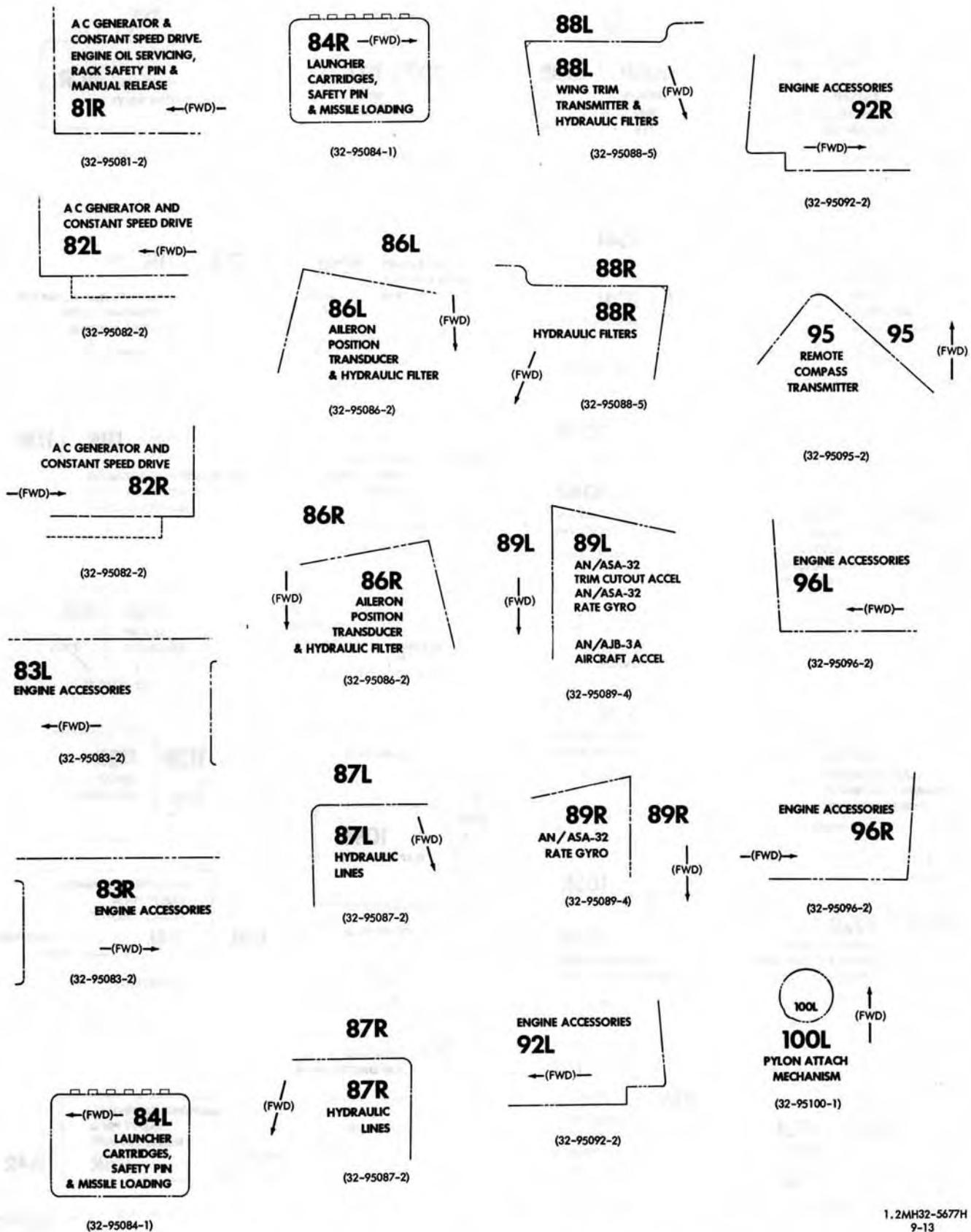


Figure 6-6. Access Door Markings (Sheet 9)

F-4B

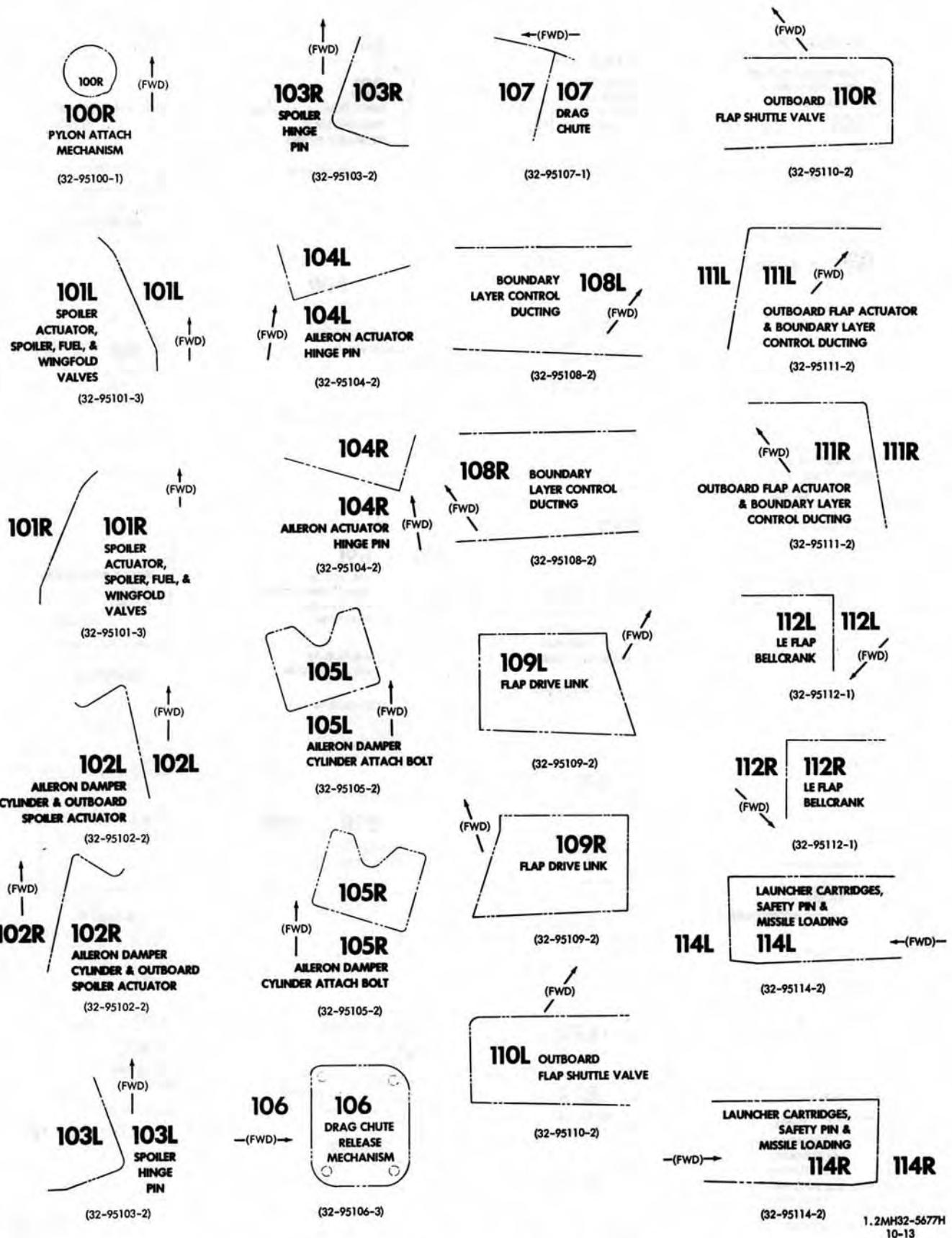


Figure 6-6. Access Door Markings (Sheet 10)

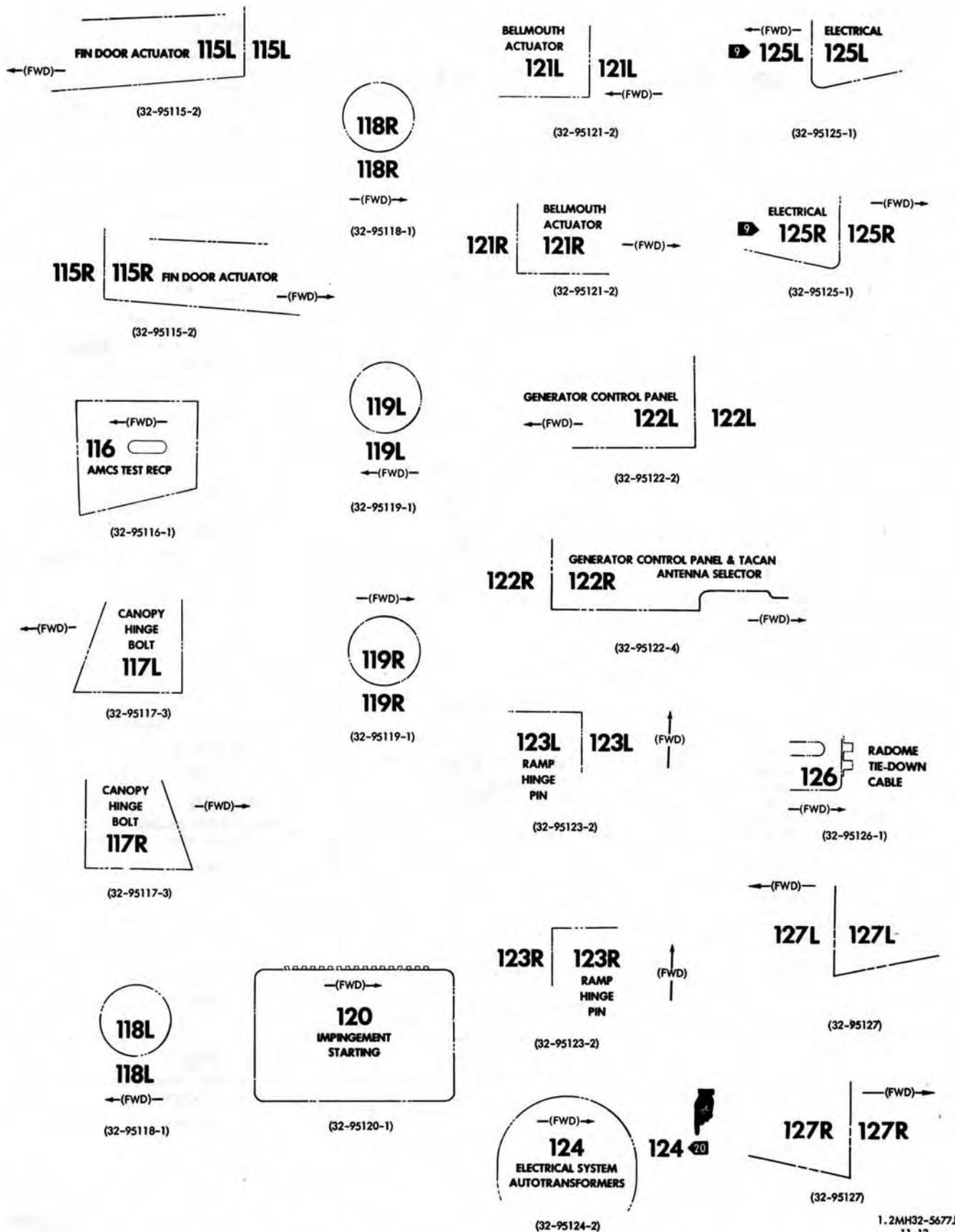


Figure 6-6. Access Door Markings (Sheet 11)

F-4B

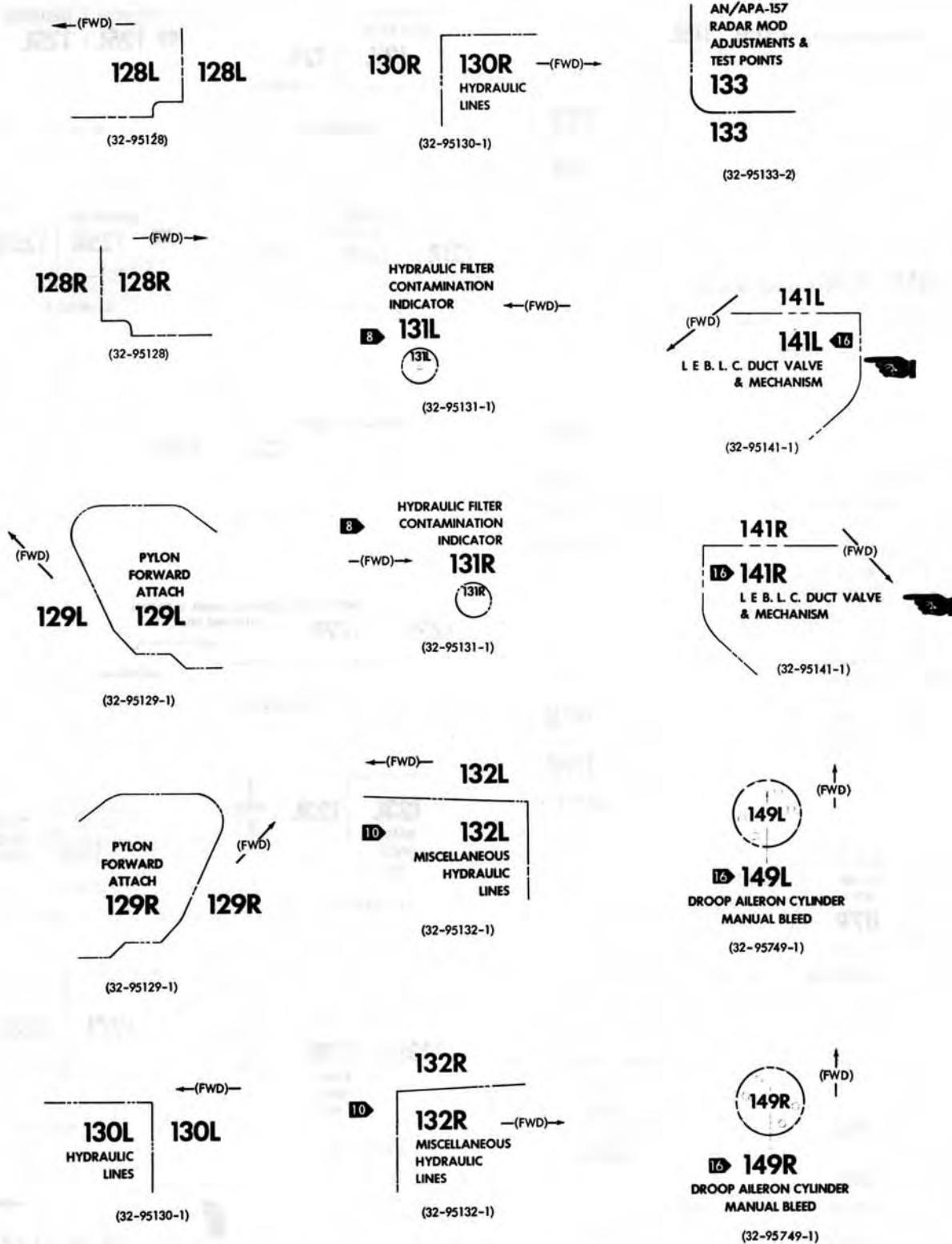
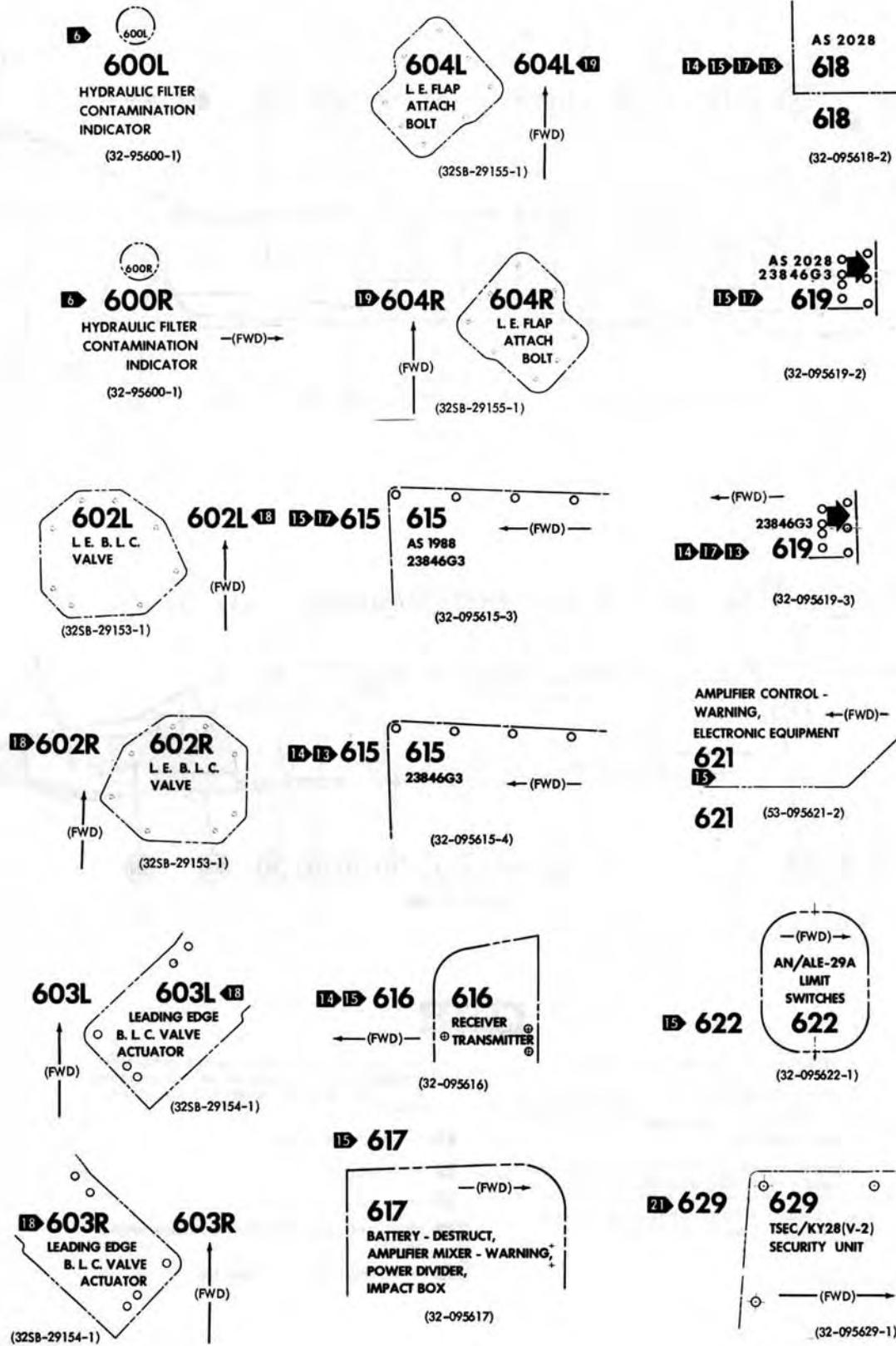


Figure 6-6. Access Door Markings (Sheet 12).

F-4B

1.2MH32-5677J
12-13

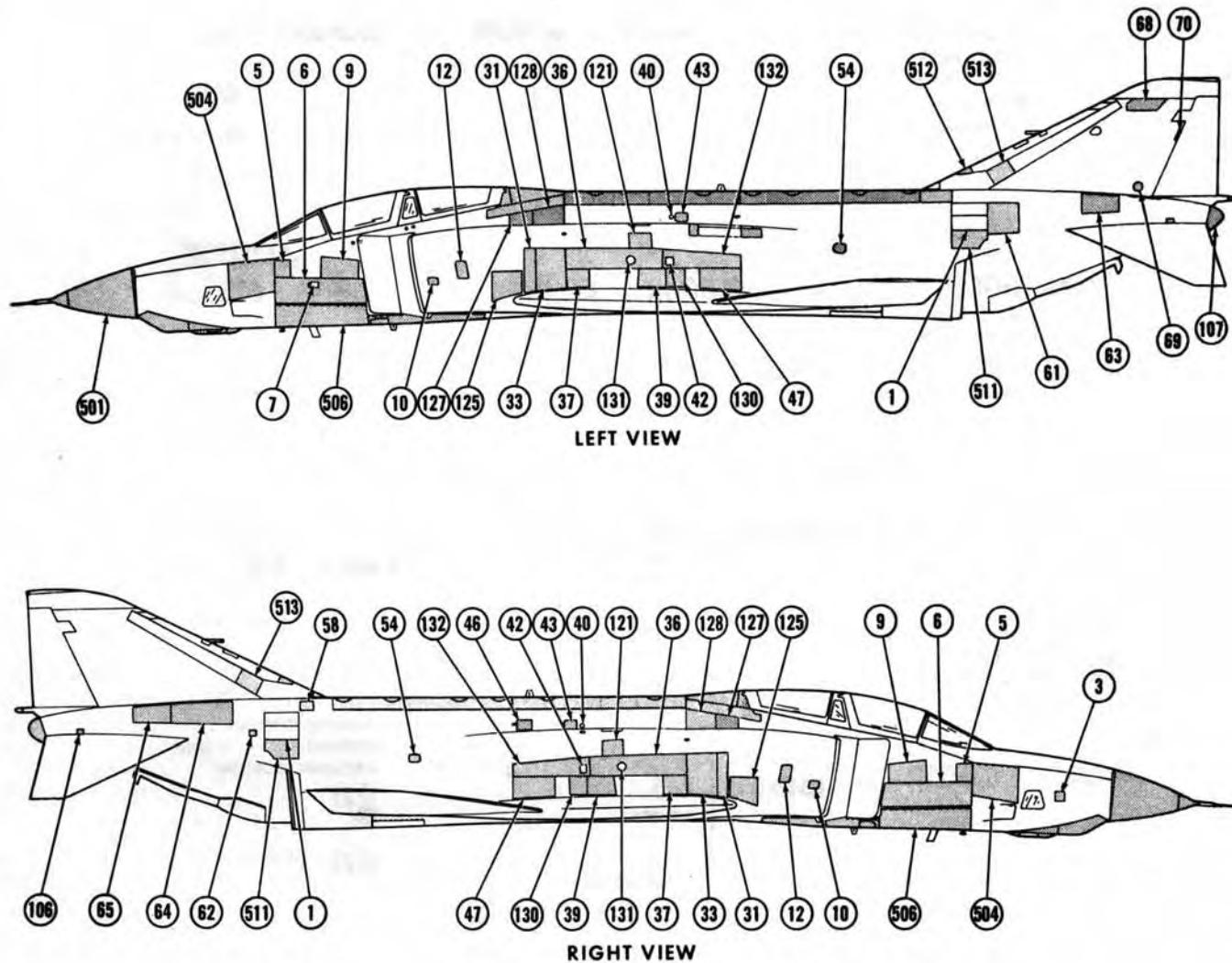
Changed 15 March 1969



MAJOR CHANGE

1.2MH32-5677 J
13-13

Figure 6-6. Access Door Markings (Sheet 13)

**NOTES**

1. LETTERING TO CONFROM TO MIL-I-18464.
 2. MARKINGS ARE BLACK NON-SPECULAR SILK SCREEN ENAMEL (COLOR NO. 37038) ON GRAY SURFACES, AND MEDIUM GRAY GLOSSY ENAMEL (COLOR NO. 16307) ON WHITE SURFACES.
 3. THE HEIGHT OF DOOR NUMBERS IS 1.0 INCH. THE HEIGHT OF GENERAL MARKING IS 0.5 INCH.
 4. THE WIDTH OF LETTER AND NUMBERS IS 3/4 THE HEIGHT, AND THE STROKE IS 1/6 THE HEIGHT.
 5. THE SMALL ARROWS IN PARENTHESIS AND THE PART NUMBERS BELOW THE MARKINGS ARE FOR LOCATION AND REFERENCE ONLY AND ARE NOT PART OF THE MARKING.
- 6 ➤ BEFORE AFC 316 OR 332.
 7 ➤ AFTER AFC 316.
 8 ➤ AFTER AFC 332.
 9 ➤ 153101z AND UP, ALSO 151975t THRU 153100y AFTER AFC 218.
 10 ➤ 151975t THRU 153100y AFTER AFC 218.

1.2MH32-(R)-20473C
(1-14)

Figure 6-7. Access Door Markings (Sheet 1)
RF-4B

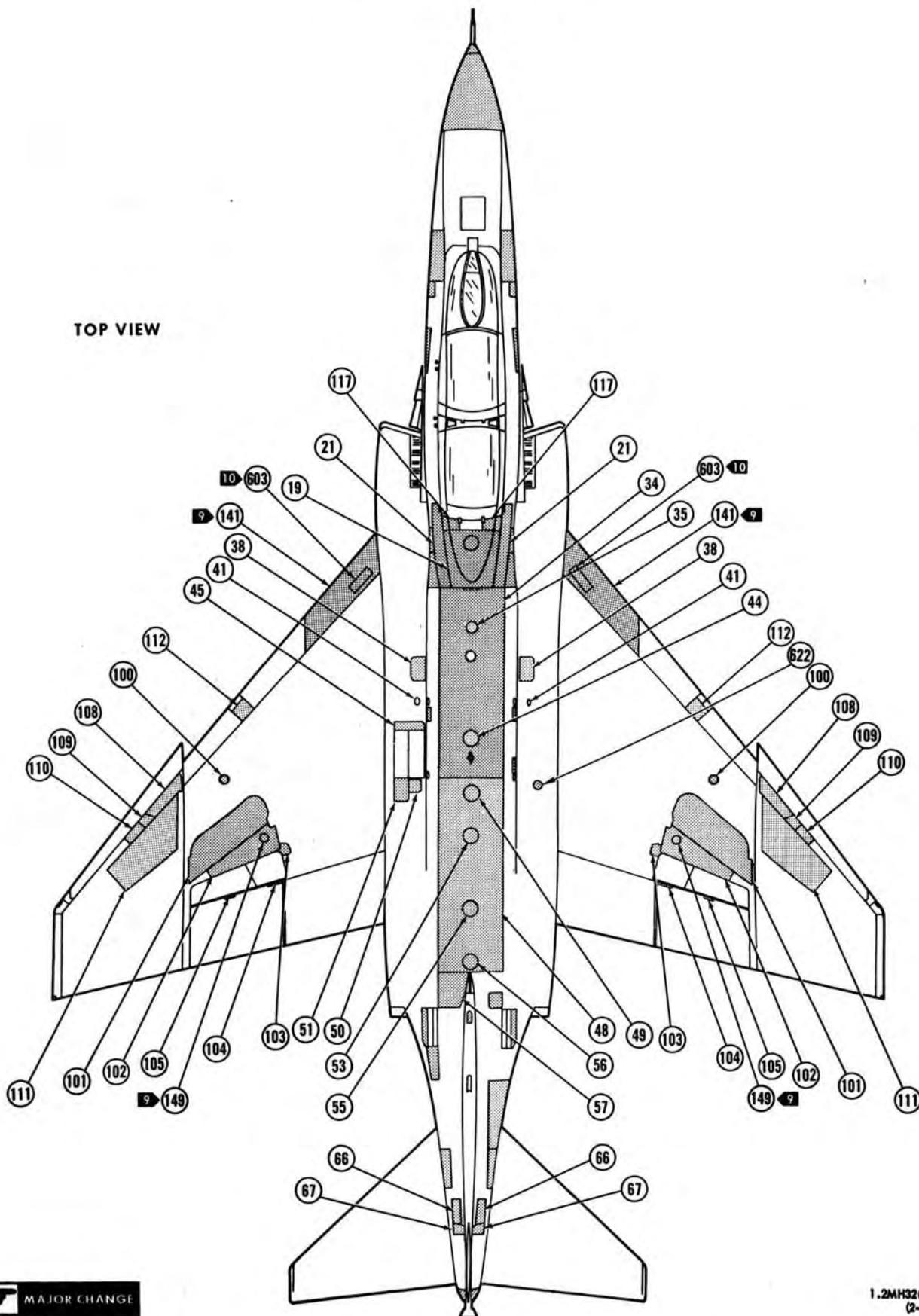
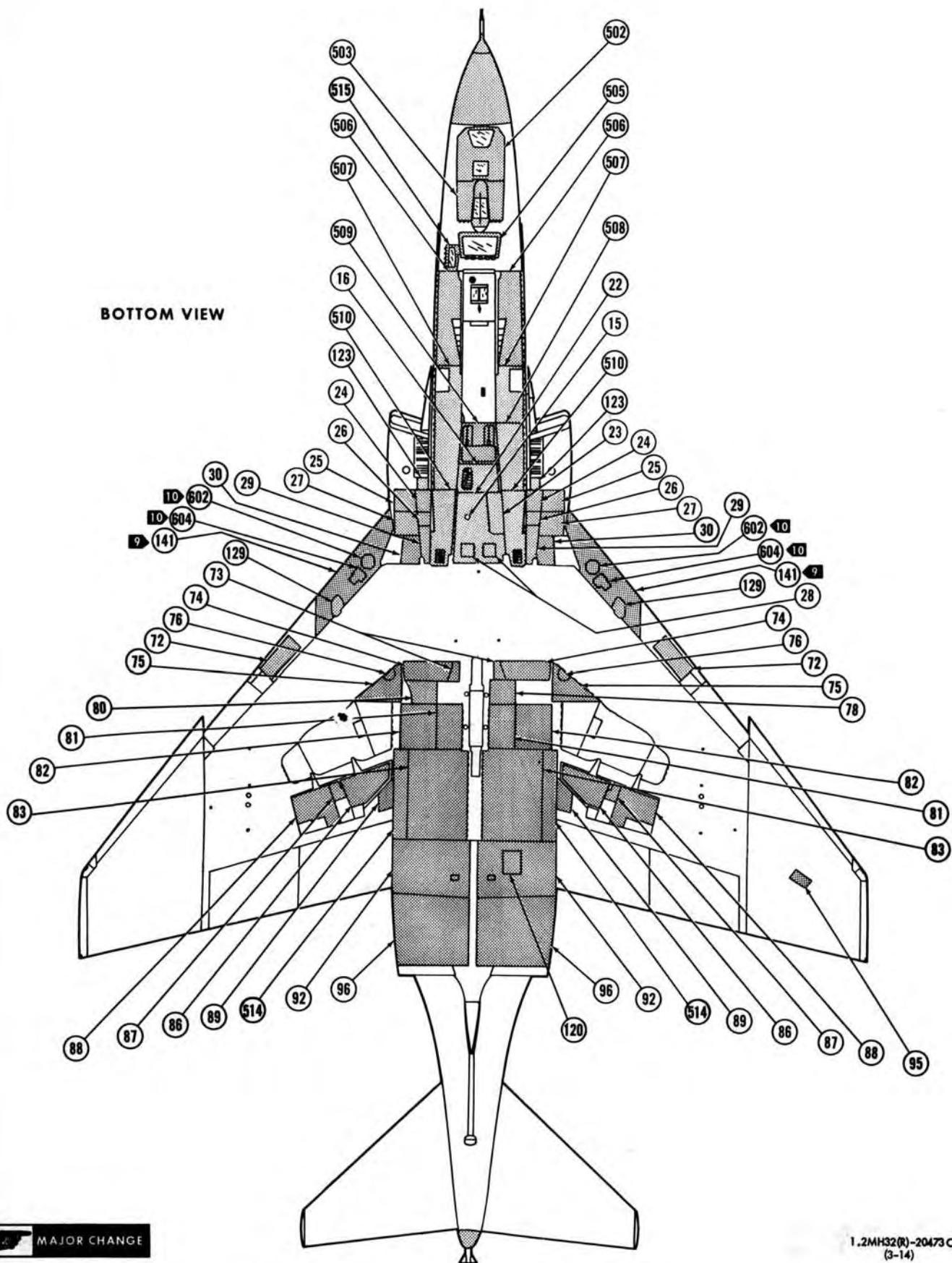


Figure 6-7. Access Door Markings (Sheet 2)

RF-4B



MAJOR CHANGE

1.2MH32(R)-20473 C
(3-14)

Figure 6-7. Access Door Markings (Sheet 3)

RF-4B

①

**PHOTOFASCH CARTRIDGE EJECTORS,
AN/ARC-105 COUPLER,
PHOTOFASCH DOOR ACTUATOR**

(53-95714-1)

—(FWD)→ **6R**
CABIN
REFRIGERATION UNIT

(32-95006-2)

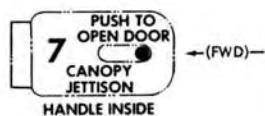
10R—(FWD)→ **10R**BELLMOUTH
STATIC PORT
DISCONNECT

(32-95010-2)



(32-95003-4)

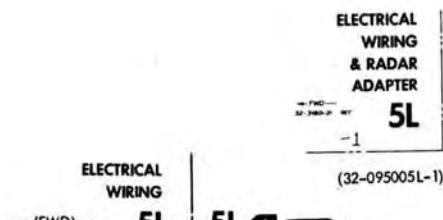
—(FWD)→
3



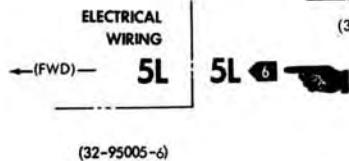
(32-95007-2)

6R**12L**—(FWD)→
12L
BELLMOUTH
PITOT PROBE
& HEATER
DISCONNECT

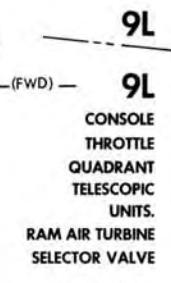
(32-95012-2)



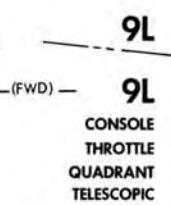
(32-095005L-1)



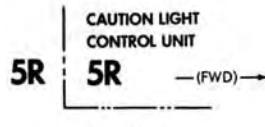
(32-95005-6)



(32-95009-5)

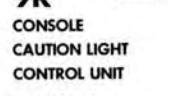
**12R**—(FWD)→
12R
BELLMOUTH
PITOT PROBE
& HEATER
DISCONNECT

(32-95012-2)

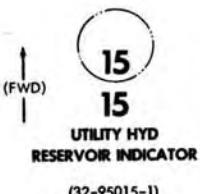


—(FWD)→

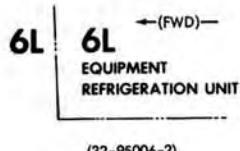
(32-95005-4)

5R**9R**

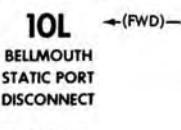
(32-95009-5)



(32-95015-1)



(32-95006-2)

10L

(32-95010-2)

16—(FWD)→
LIQUID OXYGEN (BREATHING)
CONVERTER & FILLER VALVE
(CAPACITY 10 LITERS), CANOPY
EMERGENCY AIR BOTTLES,
GAGES & DRAINS, PITOT STATIC
DRAINS & TEST FITTINGS &
A D C PNEUMATIC TEST FITTINGS

(32-95016-3)

1.2MH32(R)-20473B-4

Figure 6-7. Access Door Markings (Sheet 4)

RF-4B

19

NO. 1 FUEL CELL, UPPER FUSELAGE LIGHT TRANSFORMERS,
AN/APQ-102 COMPUTER REFERENCE SIGNAL GENERATOR
& RECORDER CONTROL, AN/ASQ-88 RADIO RECEIVER
-TRANSMITTER, PULSE DECODER, CODER-RECEIVER
-TRANSMITTER, AMPLIFIER-POWER SUPPLY-RECEIVER

(32-95019-6)

-(FWD)-

24RLOWER FUS
LIGHT XFMR
[BRIGHT]

(FWD)

(32-95024-4)

-(FWD)→ **27R**

AN/APN-159 TRANSMITTING ANT.

(32-95027-5)

STABILATOR
& RUDDER
BELLCRANKS**21L**

-(FWD)-

(32-95021-4)

25L

25L
LOWER FUSELAGE
LIGHT TRANSFORMERS

(32-95025-1)

(FWD)

FUEL TANK DRAIN & AIR
COMPRESSOR
OIL LEVEL
28L

(32-95028-2)

STABILATOR
BELLCRANK
& AIRSPEED
SWITCHES**21R**

-(FWD)→

(32-95021-4)

25R25R
LOWER FUSELAGE
LIGHT TRANSFORMER [DIM]

(32-95025-2)

(FWD)

FUEL TANK DRAIN,
PNEU SYS PRESS.
GAGE &
CHARGING VALVE
28R

(32-95028-2)

UTILITY HYDRAULIC RESERVOIR, HYDRAULIC & PNEUMATIC FILTERS, SELECTOR VALVE MANIFOLD, AIR REFUELING SELECTOR VALVE, FUEL BOOST PUMPS, & SHUTOFF VALVES, AIR COMPRESSOR, MOISTURE SEPARATOR, CHEMICAL DRIERS

○

(32-95022-4)

(FWD)

22EXT ELEC
POWER
REC'D
26L

(FWD)

(32-95026-2)

(32-95028-2)

23

UTILITY HYDRAULIC EXTERNAL POWER RECEPTACLE,
HYDRAULIC FILTER, ACCUMULATOR
CHARGE VALVE & GAGE, FUEL
SYSTEM PRESSURE TEST

(32-95023-2)

-(FWD)-

GROUND REFUELING
26R

(FWD)

(32-95026-1)

(32-95029-3)

(FWD)

24LEXTERNAL POWER
TRANSFORMER-
RECTIFIER

(32-95024-4)

27L

AN/APN-159 RECEIVING ANT.

(32-95027-5)

-(FWD)-

HYDRAULIC &
PNEUMATIC
LINES
29R

(32-95029-3)

(FWD)

29R

1.2MH32(R)-204738 - 5

Figure 6-7. Access Door Markings (Sheet 5)

RF-4B

Changed 15 May 1968

EMERGENCY FLAPS
AIR BOTTLE DRAIN
30L
(FWD) ——————
30L
(32-95030-3)

—(FWD)—
33R
33R
BELLMOUTH CONTROLLER
& PNEUMATIC FILTER
(32-95033-4)

—(FWD)— **37L** **37L**
LATERAL CONTROL
BELLCRANK
(32-95037-2)

NORMAL CANOPY
AIR BOTTLE
30R
(FWD) ——————
30R
(32-95030-3)

FUEL CELLS NO. 2 & 3,
STABILATOR & RUDDER
CONTROL CABLES
34 —(FWD)—
34
(32-95034-5)

37R —(FWD)—
LATERAL CONTROL
BELLCRANK
(32-95037-2)

—(FWD)—
31L
31L
HYDRAULIC
LINES
(32-95031-2)

—(FWD)—
35
35
FUEL QUANTITY
TANK
UNIT NO. 2
(32-95035-2)

—(FWD)—
38L **38L**
BELLMOUTH
BELLCRANK
(32-95038-2)

—(FWD)—
31R
31R
HYDRAULIC
LINES
(32-95031-2)

—(FWD)—
36L **36L**
POWER CONTROL I
HYDRAULIC PRESSURE
TRANSDUCER, SWITCH, & FUSE.
UTILITY HYDRAULIC FILTER
(32-95036-4)

—(FWD)—
38R **38R**
BELLMOUTH
BELLCRANK
(32-95038-2)

33L

33L —(FWD)—
BELLMOUTH CONTROLLER, PNEUMATIC FILTER &
UTILITY HYDRAULIC SYSTEM ACCUMULATOR
(32-95033-4)

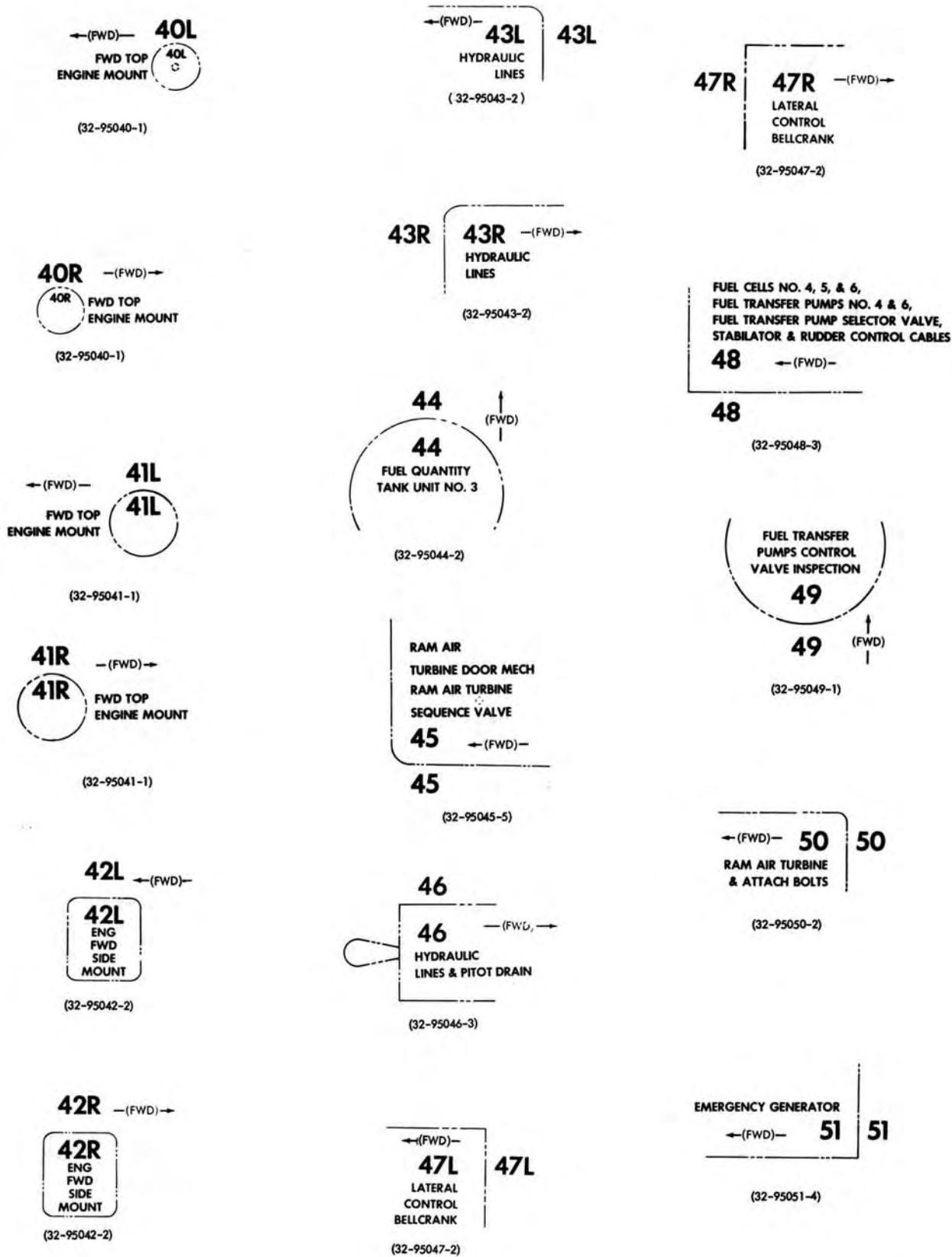
36R —(FWD)—

36R —(FWD)—
POWER CONTROL II HYDRAULIC
PRESSURE TRANSDUCER,
SWITCH, & FUSE. UTILITY
PUMPS SCAVENGE FILTERS
(32-95036-4)

—(FWD)—
39L **39L**
BELLMOUTH
BELLCRANK
(32-95039-2)

—(FWD)—
39R **39R**
BELLMOUTH
BELLCRANK
(32-95039-2)

Figure 6-7. Access Door Markings (Sheet 6)



1.2MH32-(R)-204738-7

Figure 6-7. Access Door Markings (Sheet 7)

RF-4B

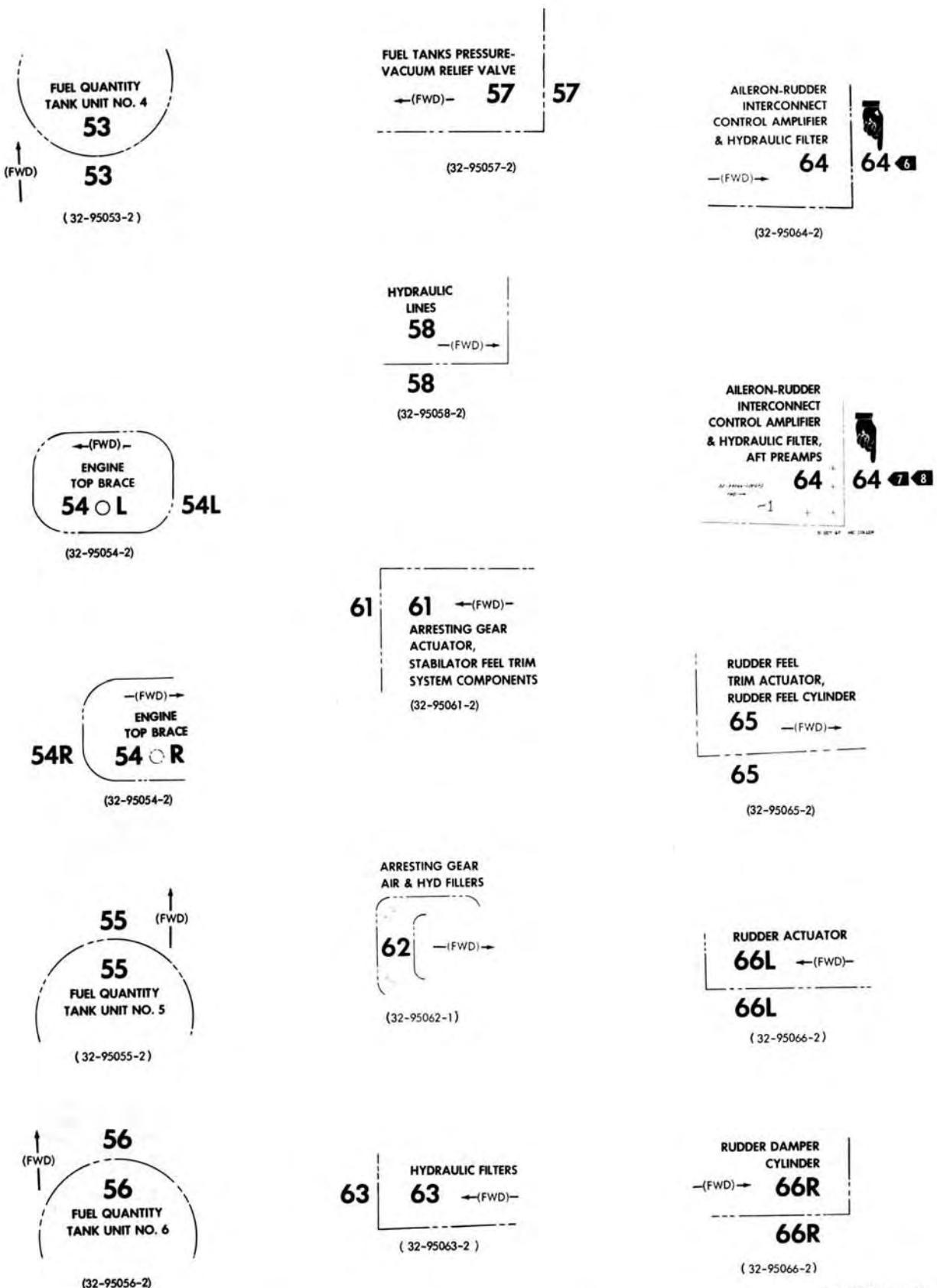


Figure 6-7. Access Door Markings (Sheet 8)

RF-4B

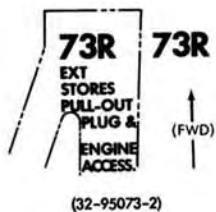
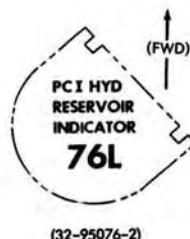
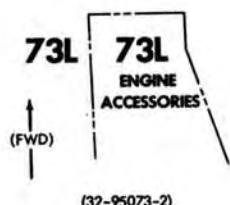
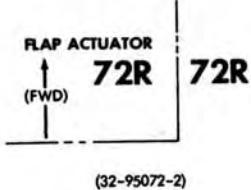
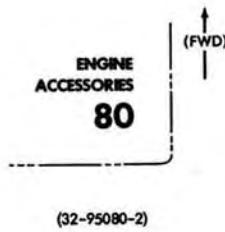
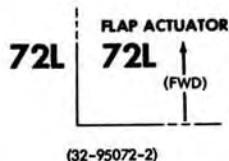
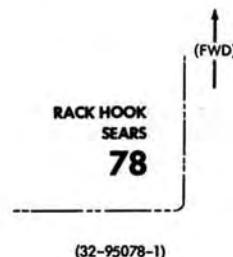
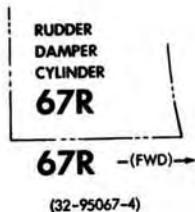
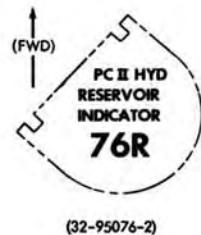
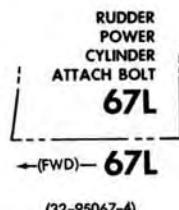


Figure 6-7. Access Door Markings (Sheet 9)

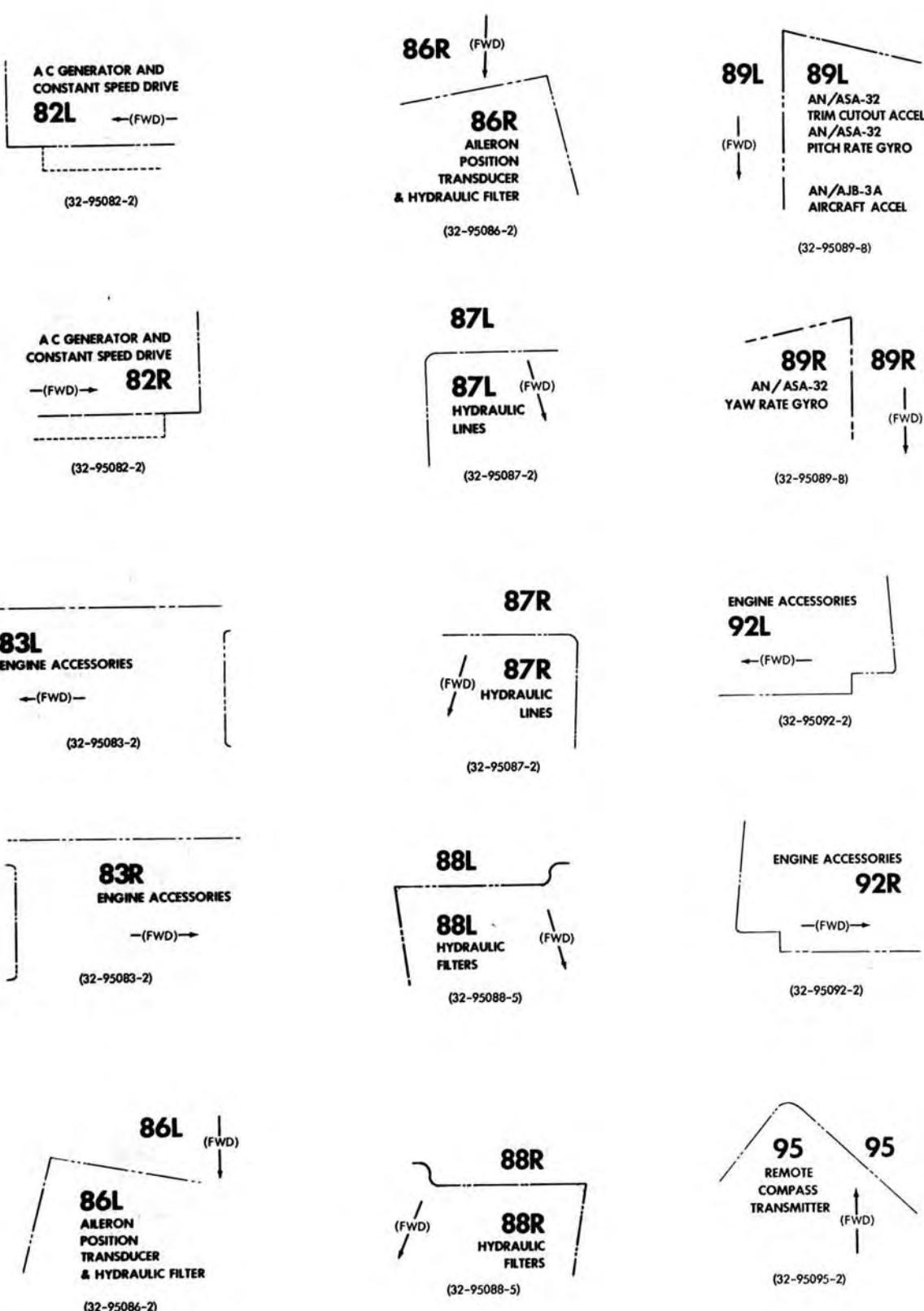
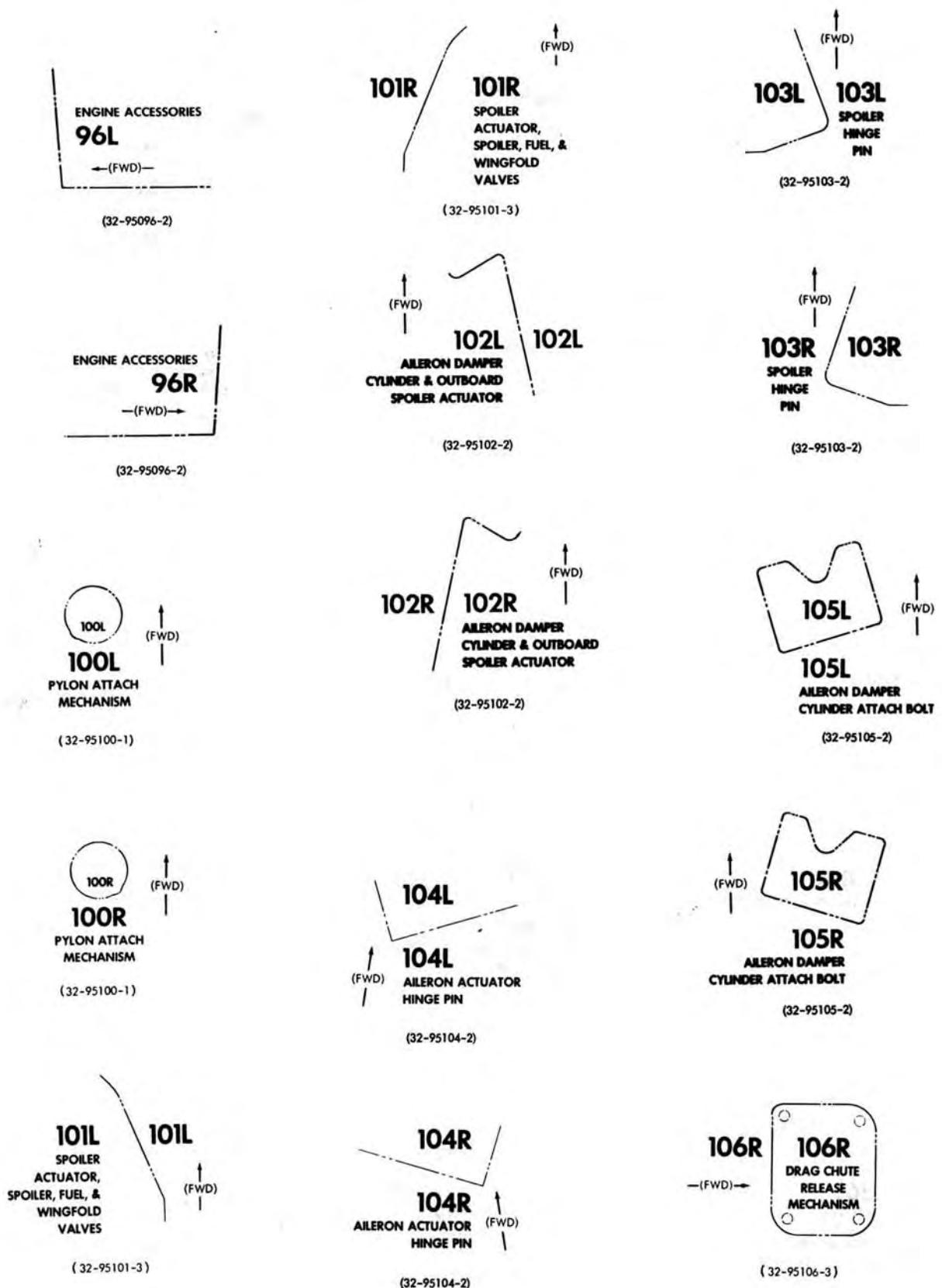


Figure 6-7. Access Door Markings (Sheet 10)

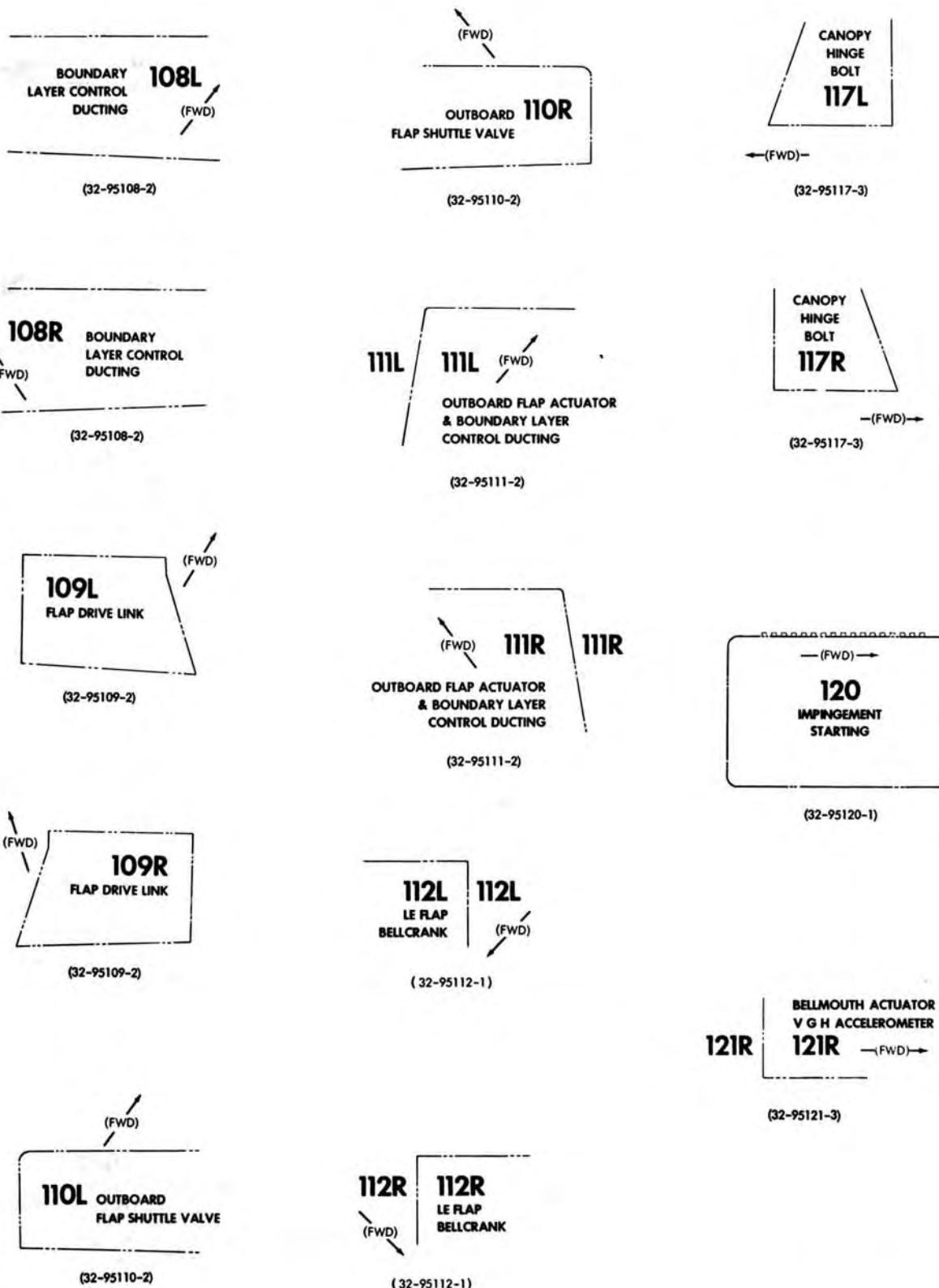
RF-4B



1.2MH32(R)-20473B-11

Figure 6-7. Access Door Markings (Sheet 11)

RF-4B



1.2MH32(R)-20473B-12

Figure 6-7. Access Door Markings (Sheet 12)

RF-4B

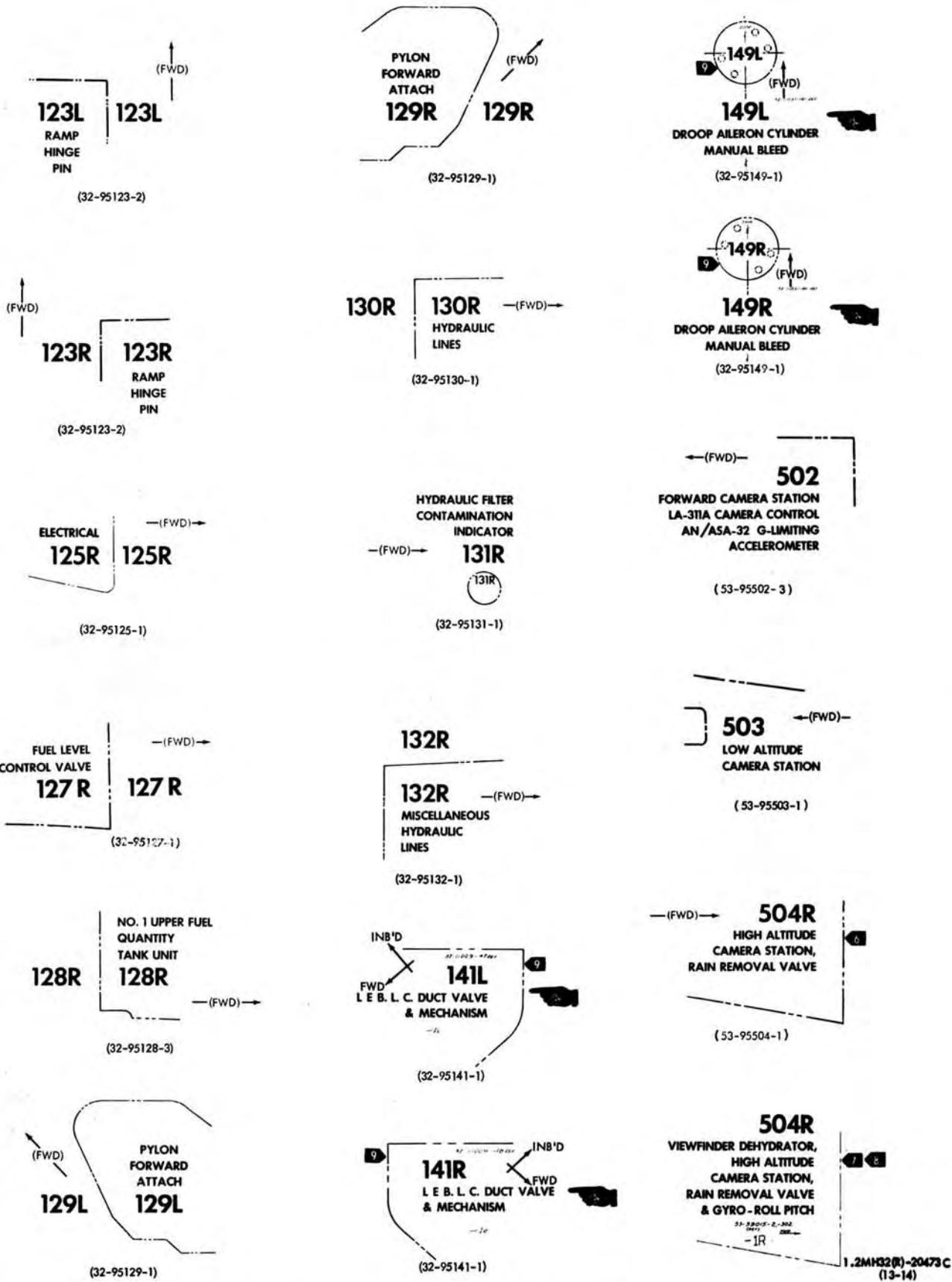


Figure 6-7. Access Door Markings (Sheet 13)

RF-4B

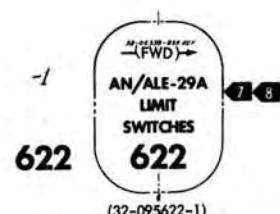
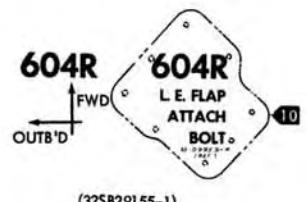
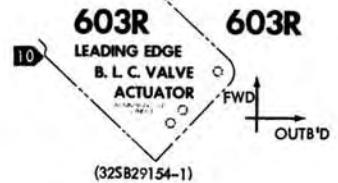
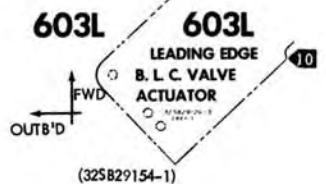
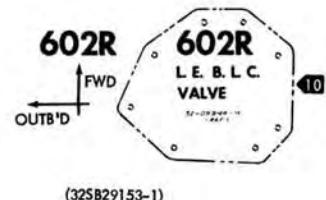
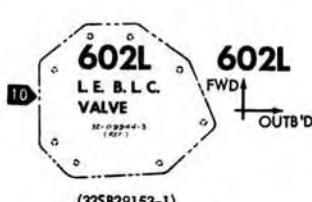
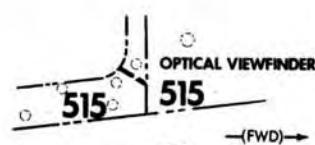
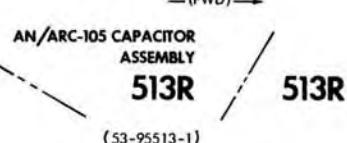
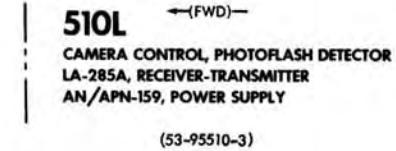
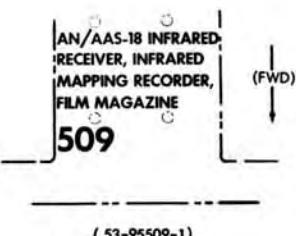
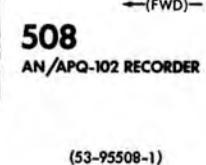
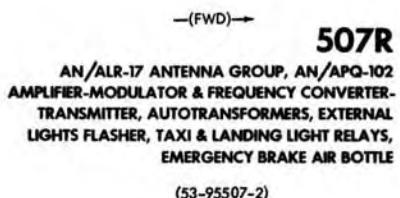
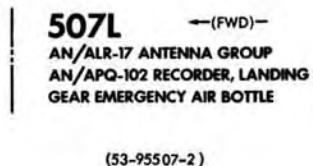
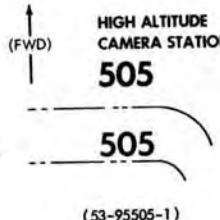
1.2MH32(R)-20473C
(14-14)

Figure 6-7. Access Door Markings (Sheet 14)

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