

Phantom II De-Tails

By GEORGE J. LETZTER

Drawings by CLARENCE E. DOXSTATER, USN



Lineup of McDonnell F-4 Phantoms from VF-213, VF-92, U.S. Air Force Tactical Air Command, VF-96 and VF-114 at Lambert Field, Missouri in July 1966. (McDonnell Aircraft Corp)

This is an article on the markings and color schemes of a remarkable and rather unique aircraft, McDonnell's F-4 Phantom II. It will not attempt to chronicle its many records, versions, dimensions or capabilities, all of which have been fully covered in other publications.

The first United States All-Service fighter aircraft of the jet age, it is now serving all three air arms--Navy, Marine and Air Force. First flown as the F4H-1 on May 27, 1958, it later became F-4A under the new aircraft designation system. Over 1500 Phantom II's have been produced since 1958, and it probably is the only true Mach 2.5 aircraft in full operational service anywhere in the world.

Entering squadron service in February 1961, F-4A aircraft were assigned to VF-121 for transition training, and in July 1961, VF-101 received its first Phantom II's. Both squadrons were assigned the role of Fleet Indoctrination training of F-4 pilots. VMFA-314 became the first Marine squadron to operate the F-4B in August 1962, and since that time 35 operational Navy and Marine squadrons have flown the Phantom II.

Standard Navy and Marine color scheme for the F-4 is Light Gull Gray (Fed. Standard Color No 36440) on all upper surfaces and Insignia White (FSC No 17875) on under surfaces and both sides of the horizontal and vertical control surfaces. The leading edge of all flying surfaces are natural metal, and the large radome is Black (FSC No 37038). However, some aircraft have the radome painted Gloss White. The national insignia is located on the fuselage sides just forward of the wing leading edge and aft of the air intake, being 32 inches in diameter. Wing insignia, 48 inches in diameter, are located on the upper port and lower starboard surfaces and centered on the wing tip folding line. Radio Call Numbers, the last four digits of the BuAer number, are carried in two different locations, depending on the design applied to the tail surfaces. Black numerals,

12 inches in height, are applied either to the lower section of the fin area or to the upper fuselage section just below the forward fin area. NAVY or MARINES, in letters 24 inches high, is located on the aft section of the fuselage sides just above the trailing edge of the wings.

The individual aircraft number, consisting of three numerals, is carried on the forward section of the fuselage sides, and it is also repeated on the upper rudder area or fin area, using either the three numerals or just the last one or two. The squadrons within a Carrier Air Wing are identified by colors and numbers as follows:

1st Squadron	- Insignia Red	Nos 101-Up
2nd Squadron	- Orange-Yellow	Nos 201-Up
3rd Squadron	- Light Blue	Nos 301-Up
4th Squadron	- International Orange	Nos 401-Up
5th Squadron	- Light Green	Nos 501-Up
6th Squadron	- Black	Nos 601-Up
Other (VFP) Sqdns	- Maroon	Nos 901-Up

Note: Aircraft flown by Squadron or Group Commanders carry aircraft numbers 100, 200, 400, etc., depending on the squadron to which the aircraft is assigned.

Some aircraft also carry the squadron designation, i.e. VF-84, and the name of the carrier to which the squadron is assigned, i.e. USS INDEPENDENCE, on the aft section of the fuselage sides. Standard jet intake warning triangles are located just forward of the intakes on the fuselage sides and ejection seat warnings are located below the cockpit area with two triangles on each side of the fuselage. Numerous instructional stenciling is applied to all parts of the aircraft.

Carrier Air Wings (CVW) are assigned Unit Identifying Letters to be applied on the vertical tail surfaces of all aircraft assigned to the Wing. East coast CVW letters begin with an 'A' and west coast letters begin

with an "N". Following is a list of the Unit Identifying Letters:

AB CVW-1	NE CVW-2
AC CVW-3	NF CVW-5
AD RCVW-4	NG CVW-9
AE CVW-6	NH CVW-11
AF CVW-13 (No longer used)	NJ RCVW-12
AG CVW-7	NK CVW-14
AH CVW-16	NL CVW-15
AJ CVW-8	NM CVW-19
AA CVW-17	NP CVW-21 (No F-4 sqdns)

Marine Air Wings use a slightly different system in that the Unit Identifying Letters are assigned to the squadrons, thus giving each squadron a different set of identifying letters. Following is a list of MAW Unit Identifying Letters:

MAW-2	MAW-3
VE VMFA-115	DC VMFA-122
DW VMFA-251	DR VMFA-312
WS VMFA-323	VW VMFA-314
WF VMFA-513	WH VMFA-542
EC VMFA-531	TN VMCAJ-3
CY VMCAJ-2	RM VMCAJ-1 (MAW-1)

It should be noted that when Marine squadrons are assigned to carrier duty, they retain their Marine Unit Identifying Letters and do not adopt the letters of the CVW to which they are assigned.

The individual aircraft numbers for Marine F-4s also differ from the Navy system in that Marine aircraft are numbered from 1 thru 24, with numbers continuing on if there are more aircraft assigned to the particular squadron. Usually the Squadron Commander flies aircraft No 1.

Navy and Marine squadrons have added their Unit Identifying Letters and colors to the tail surfaces of their Phantom II's in a host of varying designs. These markings are shown on the foldout sheet following page number 118. Some squadrons have altered or completely changed their designs since original application, and an attempt has been made to show the various changes. Where there is more than one tail drawing for a particular squadron the earlier design is shown first and, where known, the date of first use is indicated under the drawing. As far as security regulations allow the tail drawings depict the current squadron markings. In addition to the tail surface markings some squadrons have added their squadron insignia or other color designs to the fuselage sides.

In 1961 the USAF began tests of the F-4, comparing it to the Air Defense Command's Convair F-106A Delta Dart. The tests showed such a marked superiority over the F-106 that in March 1962 the Phantom II was ordered into production for the Tactical Air Command as the F-4C. In July 1962 two U. S. Navy F-4B's, BuAer numbers 149405 and 149406, were loaned to TAC for test and evaluation. These aircraft retained their BuAer numbers on the fin but added, to the fuselage sides aft of the national insignia, U. S. AIR FORCE and buzz numbers FJ-405 or FJ-406 and the letters USAF to the upper starboard and lower port wing surfaces. An oversized TAC insignia was also added to the fin area.

An unusual feature of production USAF Phantom II's is that they retain the Navy color scheme of Light Gull Gray and Insignia White, making the type the only aircraft in the USAF inventory to fly with a standard U. S. Navy aircraft color scheme. This alone must be some sort of tribute to inter-service cooperation for the Tri-Service fighter.

Standard USAF markings were applied to the F-4C (or RF-4C) in either Enamel, Gloss Insignia Blue (FSC No 15044) or Gloss Black (FSC No 17038). U. S. AIR FORCE and a buzz number, prefix FJ with numerals that are the last three digits of the aircraft serial number, were added to both sides of the fuselage in 12 inch high, block-type letters. These markings were placed along



F-4B, 151487s, from VF-114 aboard USS Kitty Hawk at Andrews AFB in August 1965. (Richard Sullivan)



Landing at Naval Air Station Atsugi, Japan in August 1963 is F-4B, 150447, from VF-142. (Toshio Fujita)



In later VF-142 markings is F-4B, 152250e, at Andrews AFB during June of 1965. (Richard Sullivan)



F-4B, 149427, of VF-143 landing aboard USS Constellation off Viet Nam, November 1965. (Wm A. Pritchett)



Marine F-4B, 152226v, of VMFA-323 at Andrews AFB on August 28, 1965. (Richard Sullivan)



F-4B, 152245v, of VMFA-513 at rest at NAS Atsugi during February 1964. (Tadao Shibusawa)

the forward section of the fuselage just aft of the air intakes. This positioning resulted in changing the location of the fuselage national insignia to Station 407.58 on the rear fuselage sides, centered on the red turbine warning stripe. Fuselage insignia sizes are 32 inches in diameter, and wing insignia sizes are 48 inches in diameter, in the same location as on Navy aircraft. The letters USAF were also added to the upper starboard and lower port wing surfaces in letters 25 inches high. Radio call numbers were added to the fin area in numerals 12 inches high.

A reduced size TAC insignia was positioned on the vertical fin and has been recorded in two different locations. However, position near the rudder hinge line was standardized on later production aircraft. Squadron insignia were not authorized to appear on TAC planes.

With the reintroduction of camouflage requirements for tactical and strike aircraft, a new color scheme has been added to the USAF Phantom II's. It is a "Pattern" type camouflage and is based on optical principles that dictate certain non-reflective colors, color configurations and color proportions. With what might be called a jet-age version of the old British WW II sand and spinach camouflage, USAF F-4C's now sport a 3-tone upper surface camouflage pattern consisting of lusterless lacquer shades--Green, Dark (FSC No 34079), Green, O.D. (FSC No 34102) and Tan (FSC No 30219). Bottom surfaces are painted Gray (FSC No 36622).

The application of camouflage has resulted in a drastic change in standard USAF markings. The letters U. S. AIR FORCE and all buzz numbers have been removed from the fuselage and the letters USAF have been removed

from the wing surfaces. The national insignia is now applied in a miniaturized configuration, 17 inches in diameter, to the top of the port wing only and to the fuselage sides, again centered on the turbine warning stripe. Current marking directives do not authorize the national insignia on the lower starboard wing surface, but some F-4C's do carry the underwing miniature insignia. The red turbine warning stripe has also been eliminated from the upper portion of the fuselage so that it extends downward from the lower edge of the fuselage insignia to the wing root and also to the lower surfaces of the fuselage.

The letters USAF are now applied directly over the radio call numbers on both sides of the vertical fin in reduced size, 6 inch, black characters. Some aircraft carry only the letters AF above the call number. The aircraft radome remains Black. Squadron and organizational markings are not authorized for use on camouflaged aircraft.

Several non-standard markings have recently been noted on camouflaged aircraft. The last four digits of the serial number are repeated in White, 12 inch numerals, on the fin just above the smaller, black letters USAF and the radio call numbers. This is probably done as an aid to ground identification of the aircraft. Colors have also been added to the entire rudder area, probably as a flight identification.

Combat use of the Phantom II in Viet Nam has resulted in the reintroduction of mission and victory marks so common in World War II and Korea. Silhouettes of bombs, rockets and pistols are used to denote bombing, rocket and top cover missions. To date there has been



McDonnell F-4C-19-MC in standard Tactical Air Command markings, during early operations by TAC, (USAF via Lt. H. Kramer)

no record of pilots adding names or drawings to their aircraft, but surely this is the next logical step.

Already a combat veteran over Viet Nam, the Phantom II is being confirmed as the correct choice for a tri-service aircraft by Navy, Marine and Air Force pilots. The first MIG-21 downed by a U. S. aircraft fell to an Air Force F-4C piloted by Major Paul T. Gilmore of Alamogordo, New Mexico.

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Ramsey, USAF, Ensign J. E. Mehrman, P10 VX-5, Lt C. D. Pilcher, P10 VF-103, Erwin J. Bulban and R. W. Harrison.

As far as can be determined from unofficial sources, all Phantom II squadrons are included in this article. However, aircraft markings being what they are, there is always the possibility that a squadron was omitted. (VF-11 has recently converted to F-4B aircraft and carries the AA tail letters of CVW-17. Information on the exact design of these tail letters is not available at the time of this writing.) If any Member has information on squadrons not included, please write George J. Letzter, P.O. Box 271, McHenry, Illinois 60050.

EDITOR'S NOTE: This article is the result of over two years of work and research by George Letzter, well known for his past work on "Crusader De-Tails" in Vol 7, No 2 and Vol 9, No 2. Working right along with him on this project, doing the drawings, was artist Doc Doxstater.





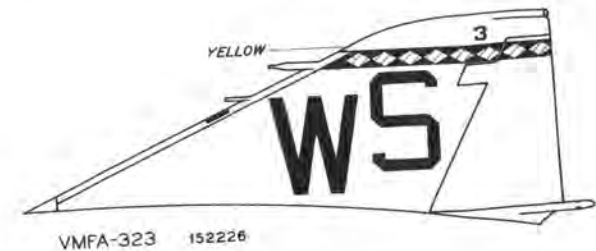
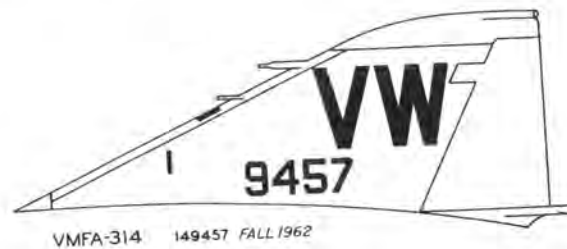
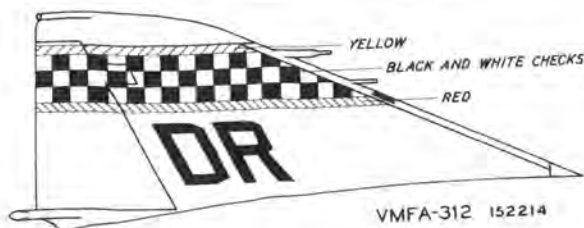
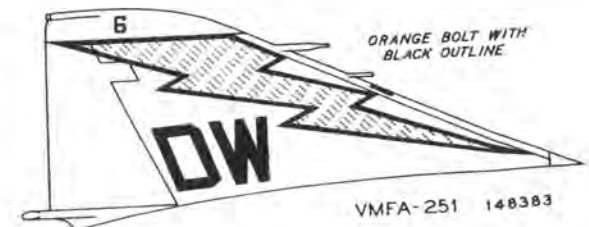
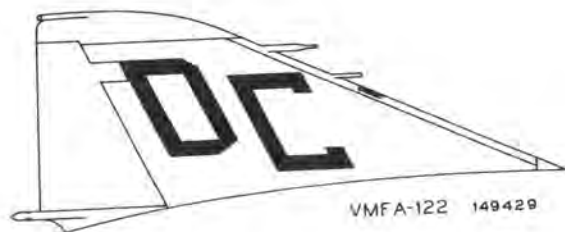
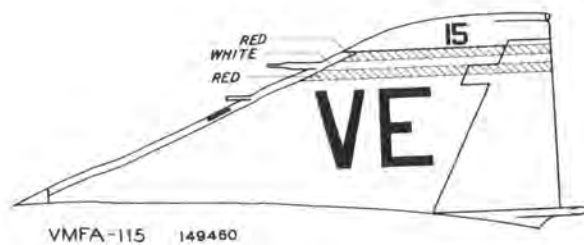
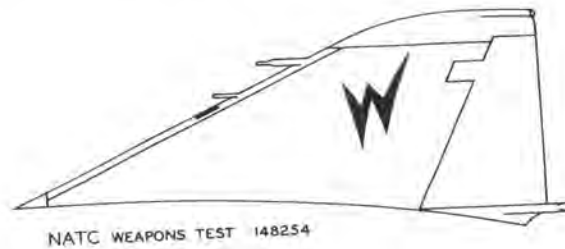
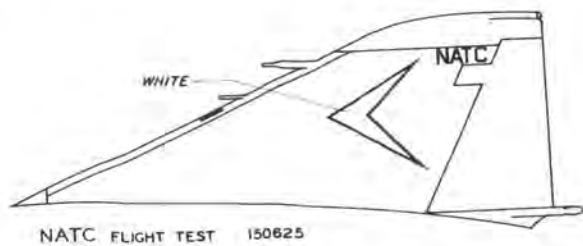
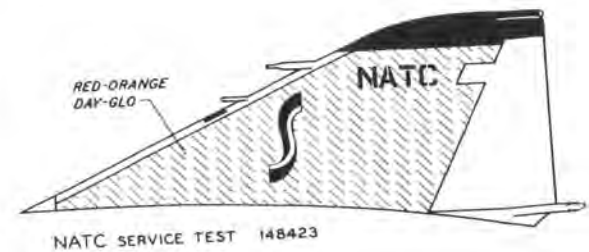
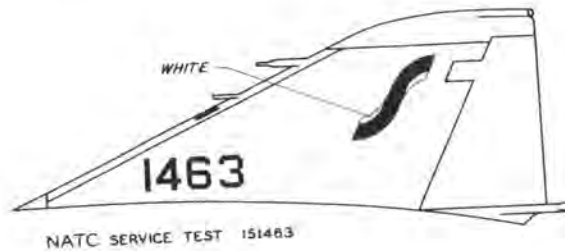
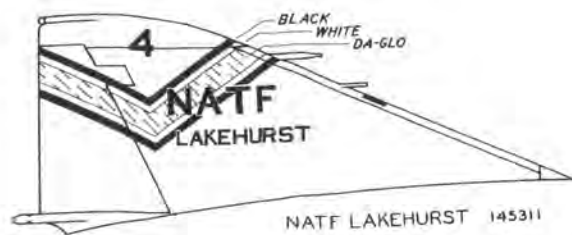
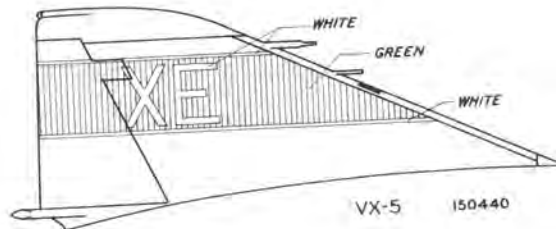
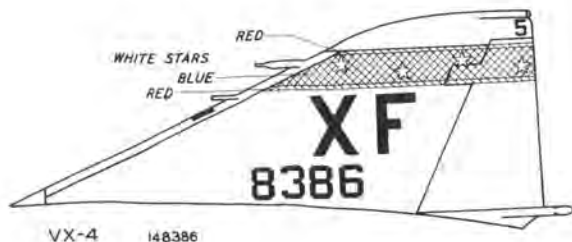
"Top Hatters," VF-14, Phantom F-4B, 149408, above the Atlantic on May 4, 1964. (Official U.S. Navy)

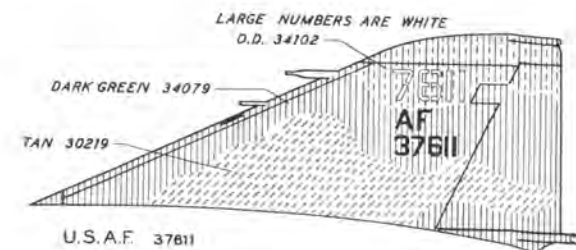
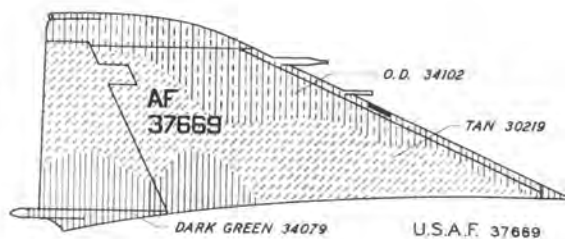
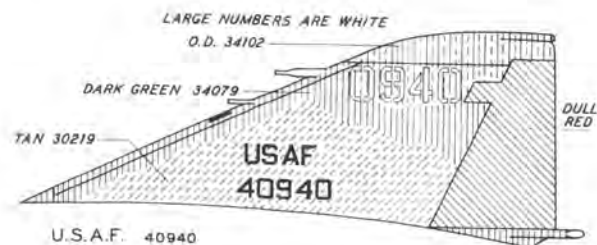
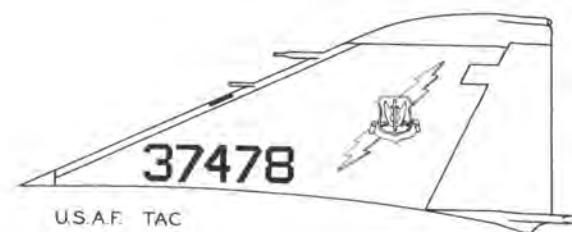
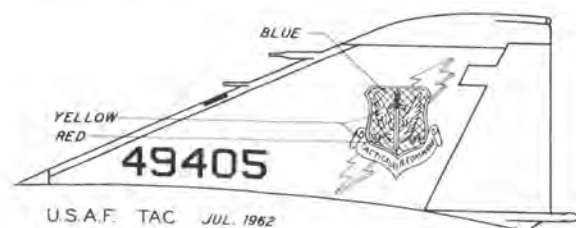
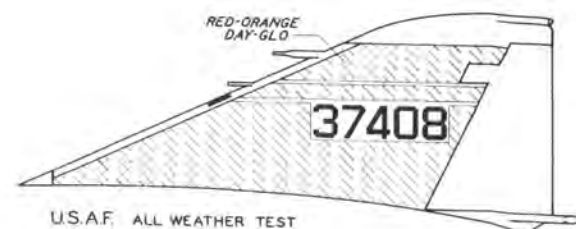
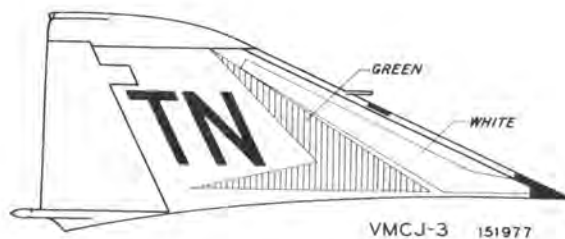
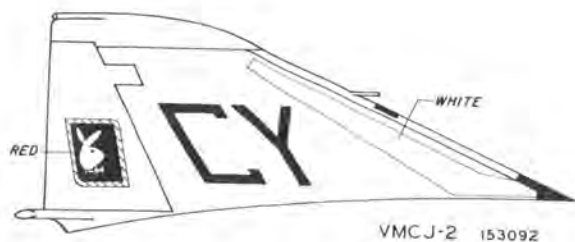
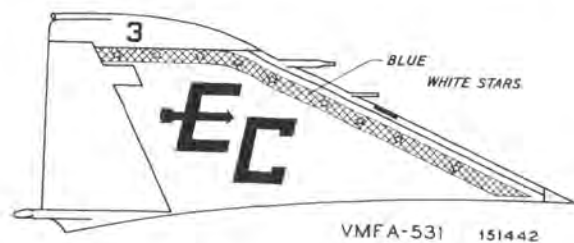
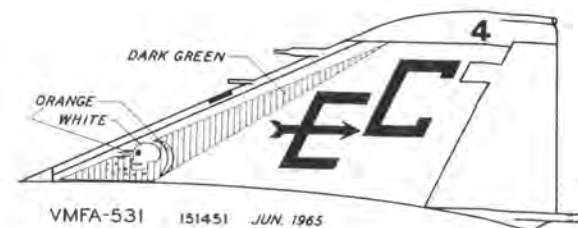
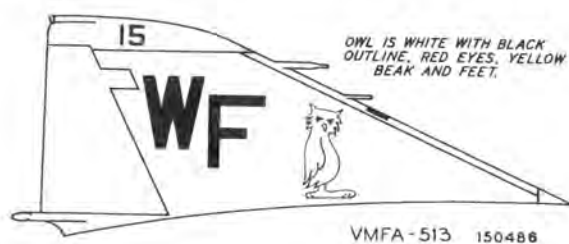


F-4B Phantom from VF-21 aboard the USS Midway at NAS Hensley Field, Dallas, Texas in June 1964. (Erwin J. Bulban)



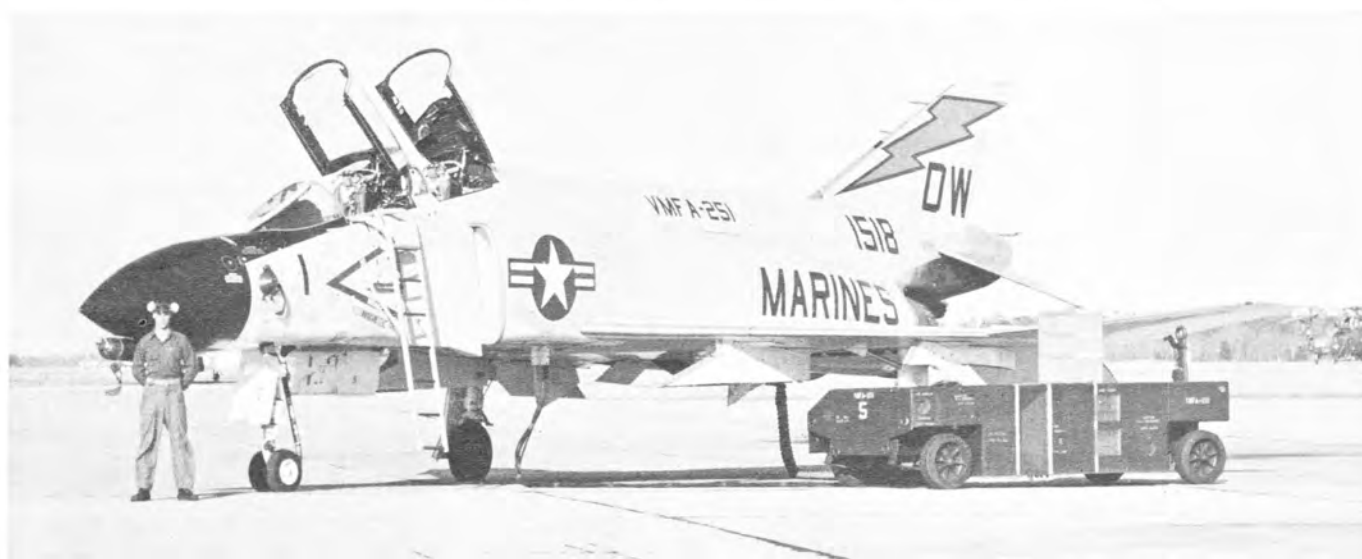
F4H-1 Phantom, 148373f, of the VF-74 "Be-Devilers" in April 1964. (McDonnell Aircraft Corp via A. O. Van Wyen)







Aboard USS Constellation is F-4B, 149404i, of VF-142. Off Viet Nam in November 1965. (Wm A. Pritchett)



At Beaufort Marine Air Station is F-4B, 151518, from VMFA-251 during March 1965. (James W. Friedhoff)



Reconnaissance version of Phantom, an RF-4B, 151977t, of VMCJ-3. (McDonnell via Wm A. Pritchett)