LOCK ON N°15

AIRCRAFT PHOTO FILE

692

F/A-18 A/C & CF-18C HORNET

Willy PEETERS
& John BROOKS

VP
the world in scale
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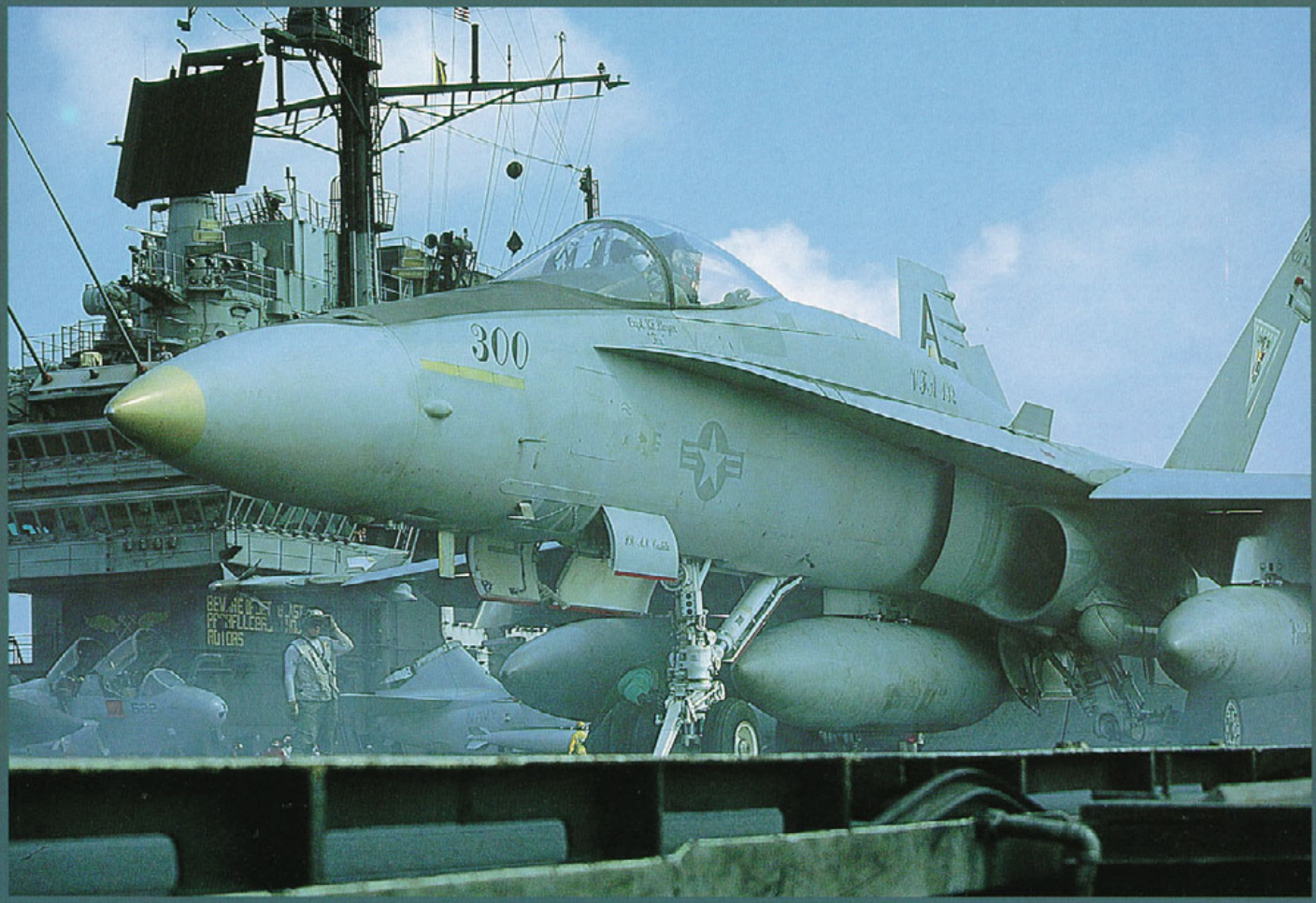

F/A-18C HORNET
VFA-132 "PRIVATEERS"
USS FORRESTAL

VP
VERLINDEN PUBLICATIONS

Front page : Two "haulers" moving CAG aircraft 400 of VFA-137 "KESTRELS" across the flight deck of the USS FORRESTAL in August 1991, under a clear blue Mediterranean sky. Extra wheel chocks and tow bars are carried on top of the yellow mule.

Title page : The same vessel, another CAG aircraft. Number 300 of VFA-132 "PRIVATEERS" being hooked-up for launch on the number two catapult. The white safety officer in the back is watching every move of the "green shirter" crouched aside the nosewheel strut.

Page 3 : The distinctive Hornet features include a fairly large nose section, outward positioned main gear legs (enlarging the wheel base) and canted twin tail surfaces, all very apparent in this into-the-sun view.

Rear cover : Canadian CF-18 Hornet of 490 Squadron based at Baden-Sölingen, Germany rolling out after a short stop-over in Kleine Brogel airbase as part of a familiarization flight. Part of NATO policy is to train pilots and ground crew of every NATO country to be able to service different types of aircraft should the need arise.

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Therefore, I greatly appreciated the visit aboard the USS FORRESTAL (CV-59), made possible by Cdr QUIGLY, US NAVY Sixth Fleet PA officer in Italy and Cpt P.C.BISHOP, US NAVY Chief of PA in London.
Special thanks are due to Rear Admiral Walter J. DAVIS, Jr Commander Carrier Group Six and Cpt Robert S. COLE, "skipper" of the USS FORRESTAL during my visit.
Very special thanks to Lt John KIRBY, PA officer CV-59, for his patience while taking the exterior detail shots of the F/A-18 on board the carrier.

A large part of the book is taken by photographs kindly provided by John S. BROOKS of Ferguson, Mo. , a former MC DONNELL DOUGLAS employee who went through a lot of trouble to obtain the razor sharp photos and the permission to print them.
He greatly appreciated the commitment of Daryl STEPHENSON, Tom DOWNEY and Jeff KING of McDONNELL DOUGLAS; and E.S. "Mule" HOLMBERG of HUGHES AIRCRAFT (for the pictures of the radar).
To all of them, my sincere gratitude.

Those regretfully not mentioned but of equal importance to the creation of this book, my apologies.

Willy PEETERS

Readers are invited to send in slides and/or clear color photographs on military subjects which may be used in future LOCK ON publications. Additional information on military aircraft of any kind is also welcomed. Material used will be paid for upon publication and unused material will be returned upon request. Original slides and photographs will be handled with extreme care.
Clearly state name and address when sending in your material.

INTRODUCTION

Jet aircraft have been known to carry the prefix "F" for fighter and "A" for attack aircraft ever since the early days of aerial warfare. The F/A-18 HORNET which has both prefixes attached to its unofficial name is the U.S. Navy's newest strike fighter. A multirole, high performance aircraft which can handle fighter, strike and intercept missions alike.

Designed to replace the ageing F-4 Phantom and A-7E Corsair its speed, maneuverability and acceleration greatly outclasses the performance of its predecessors and the introduction of completely new weapon systems make it a formidable opponent. Its beyond-visual-range, all-weather air combat and day/night strike capability is the standard for many new developments.

This state-of-the-art fighter, for which the design requirements were specified in 1974 by both the US Navy and Marine Corps, is the result of a development program which lasted over four years, requiring more than 6,000 hours of flight development. The first of the Navy's F-18 training squadron was established at Naval Air Station, Lemoore, CA. in November1980 with a second unit to follow in 1984 at Naval Air Station Cecil Field, FL. The Marine Corps started its first operational squadron, VFMA-314, at Marine Corps Air Station El Toro, CA. in January 1983.

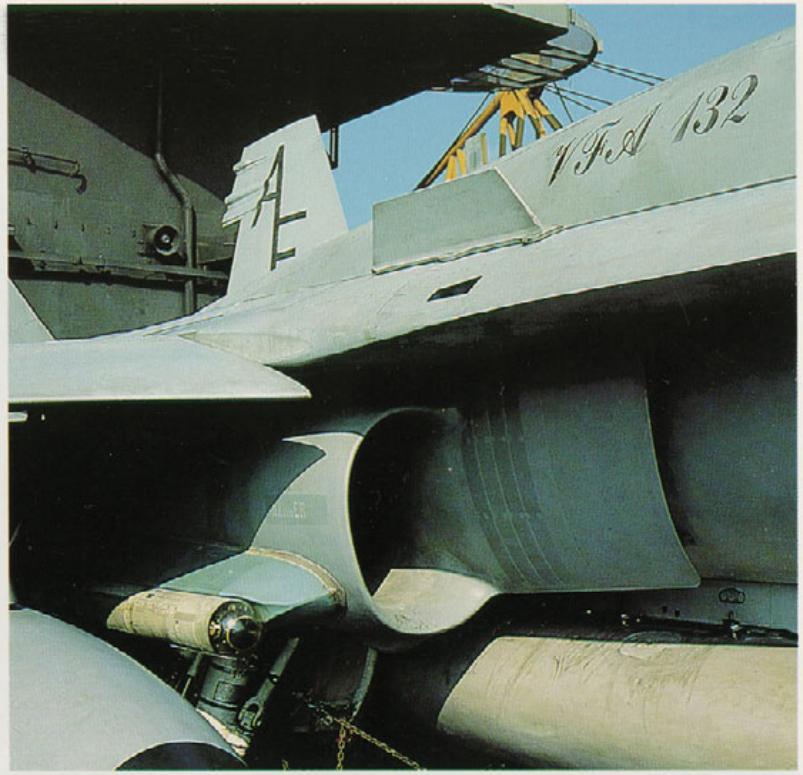
The honor to operate the F-18 on its first carrier deployment went to VFA-113 "Stingers" and VFA-25 "Fist of the Fleet" who joined the USS CONSTELLATION on a six month tour which commenced February 1985.

The Hornet's performance impressed the governments of Canada, Australia and Spain who ordered a significant number (138, 75 and 72 respectively) of aircraft to update their air arms with several Allied partners considering purchase and receiving details and proposals from McDONNELL DOUGLAS and the US Navy with the approval of the United States government.

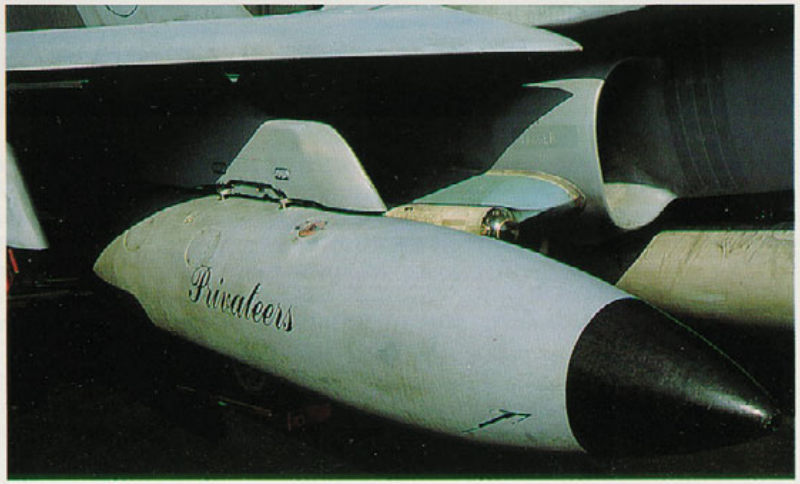
Check-ups being performed on this cranked-up F/A-18 Hornet of VFA-137 on board the USS FORRESTAL, its tail positioned over the catwalk to clear the hot exhaust air for inattentive passersby.
The Hornet maintenance design concept eliminates the use of ground support units and extensive Built-in-Test (BIT) allows for rapid automatic fault detection.
Of more than 300 access doors and panels, 90% can be reached from the deck without work stands, ladders or platforms. This malfunction detection system also excludes the use of sophisticated test equipment which would suffer from prolonged exposure to the salty air, oil and dirt on deck.
Note the installation of an FOD (Foreign Object Damage) screen over the air intakes and the mandatory yellow scissor tow bar on the nose wheel allowing a rapid evacuation in case of emergency. Also note the goldlike nose cone.
Compare this photo with the one on the next page showing a Canadian CF-18 for exterior detail similarity.

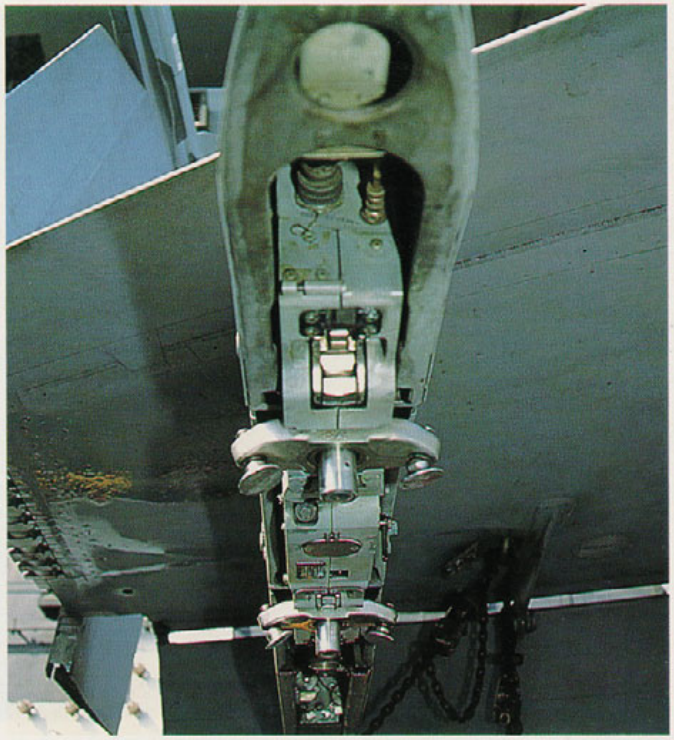
Another design requirement was the installation of an inflight refueling system which proved vital in the Vietnam war with aircraft having to strike targets well beyond their combat radius. Rather than a spine receptacle as seen on many air force fighters, the Navy opted for a hydraulically operated refueling probe in front of the windscreen, allowing the pilot to better control and monitor the replenishment in progress. This way, emergency shut-off is accomplished in a matter of seconds.This Canadian CF-18 on display at the Chievres air base open house in 1991 has its probe extended revealing inside detail.
At right is a close-up of the refueling probe connector and the hinge-like actuator. Note the AN/ALR -67(V) RHAW antenna fairing below the formation light strip, the static pitot sensor and angle of attack indicator in front of the emergency canopy release panel.

Two "checkers" or safety officers and a plane captain wrapped up in solving a problem on the main instrument panel.
Maintenance is done on deck amidst normal flight operations, even under severe weather conditions requiring the constant wearing of the segmented cranial.
Of interest in this view is the top of the main instrument panel cover with the windscreen defogging slots and Head Up Display (HUD) in the center.
Also note the shape of the canopy and how the Hornet's bulky spine tapers into the forward nose section.

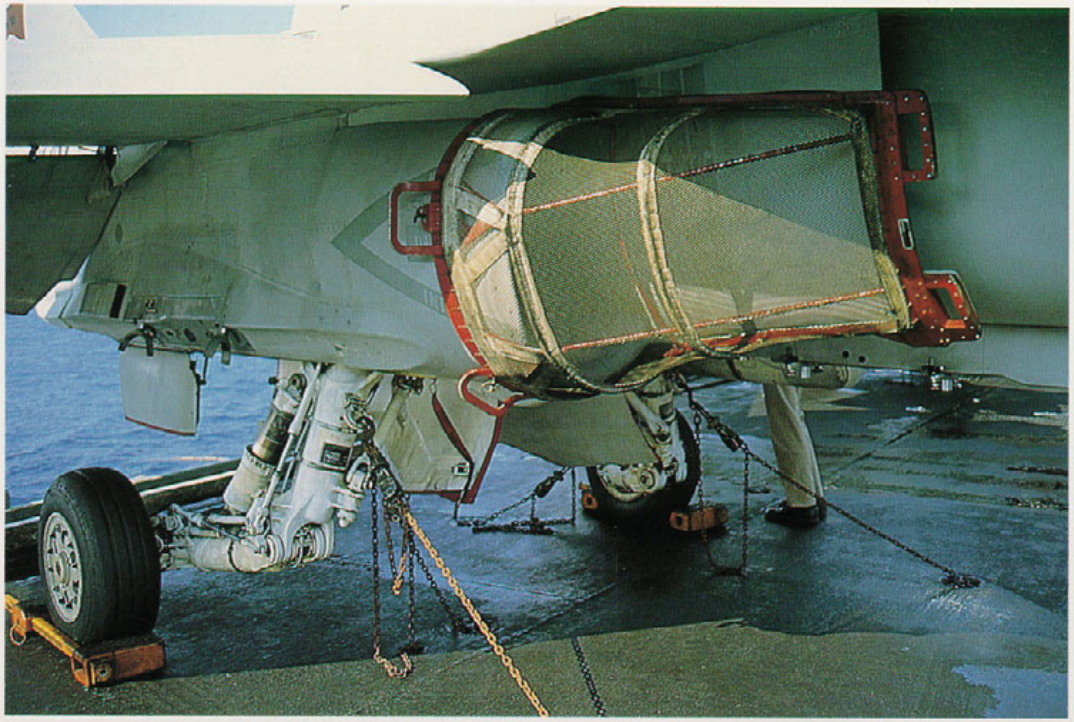


A late modification is the installation of a dorsal fin on top of the LEX or Leading Edge Extention, to alleviate vertical tail aerodynamic loads. No sophisticated air intake mechanism but a well designed an uncomplicated fixed ramp intake takes care of an optimal engine airflow. A 330 gallon external fuel tank attached to weapon station 9 or the right inboard pylon can be seen below.



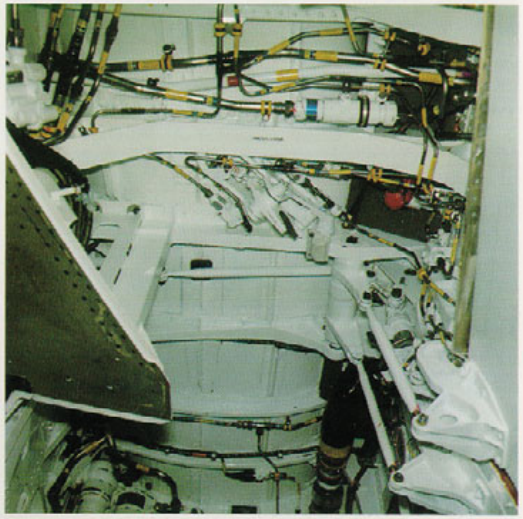


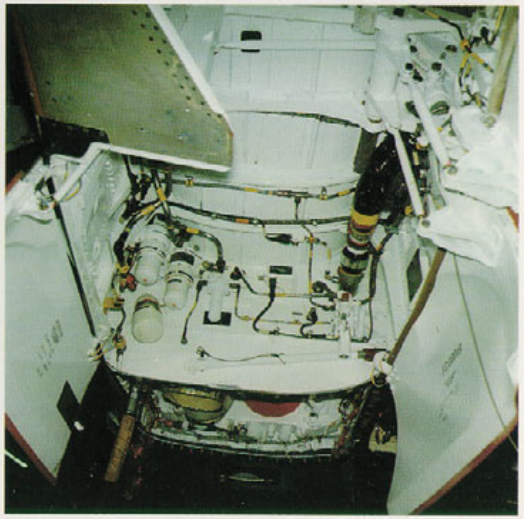
A simplified but effective wing fold mechanism allows the F/A-18 to reduce its wing span from approximately 40 feet to 27.5 feet. Folded wingtips feature a 10° angle past the vertical after completion of the fold sequence. Wingtip-mounted AIM-9L Sidewinders remain installed throughout these maneuvers. A Multiple Ejector Rack (MER) is seen attached to the characteristic pylon holding blue 25 lbs Mk76 practice bomblets.
Pylon attachment mechanism is faired inside the pylon housing, clearly shown in the photos at right. Note the tie-down and jack point outboard of the trailing edge flap hinge assembly.



FOD screens indicate an engine test-run is eminent or in progress. These red baskets snugly fit over the splitter plate and intake lip. Below is a view into the starboard side wheel bay. Forward is at the top of the picture.

(MCAIR via John S.BROOKS)



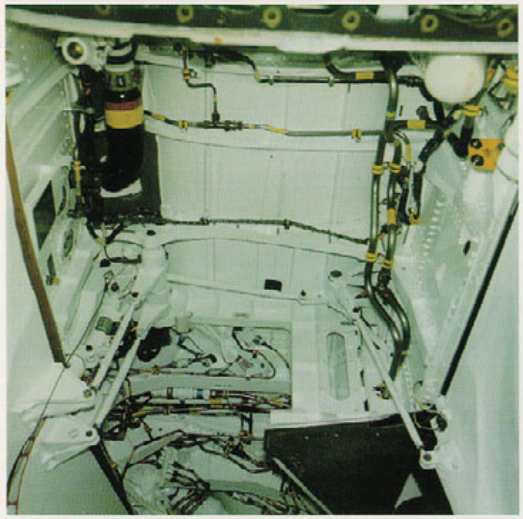


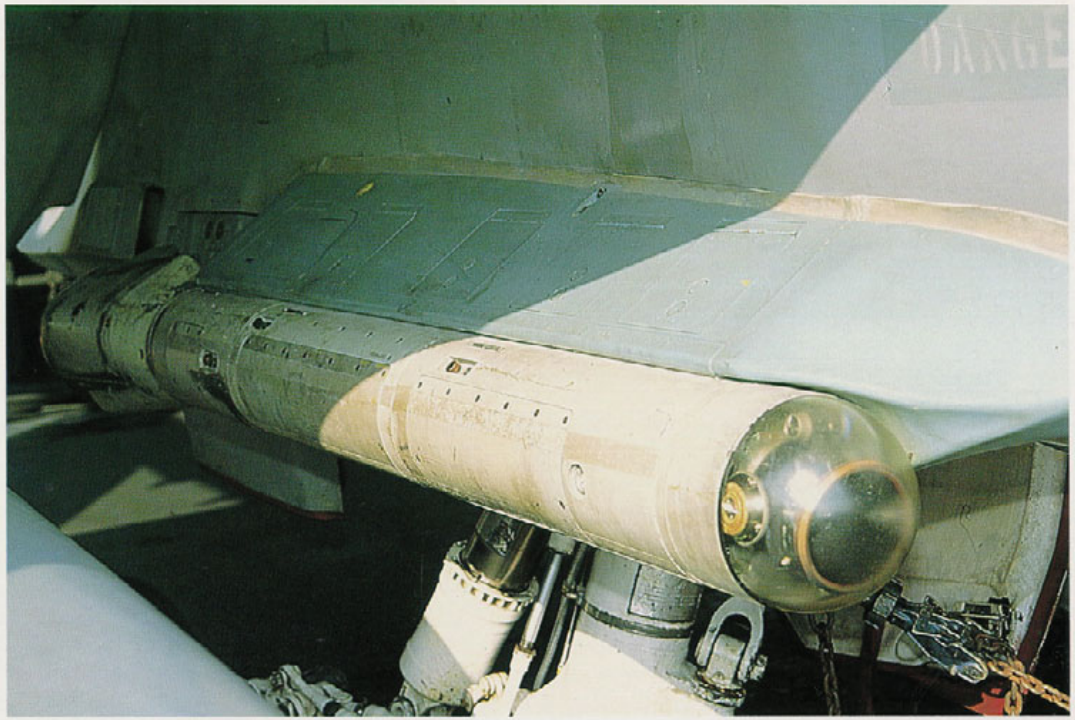
(MCAIR via John S.BROOKS)

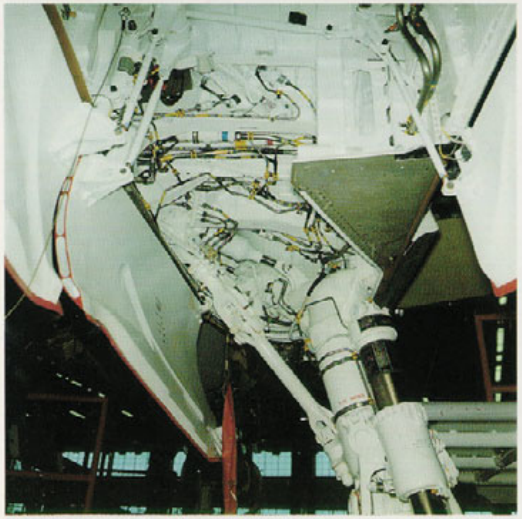
Close-up of the starboard trailing-arm type main gear strut. The hydraulic rams rotate the main gear 90° for retraction in the wheel well shown above and viewed toward the rear bulkhead. Note the tiedown connections.

The specially designed engine nacelle station on starboard can hold a Laser Detector Tracker (LDT) with strike camera used for ground attack missions. It enables precision bombing of laser designated targets.

(MCAIR via John S.BROOKS)



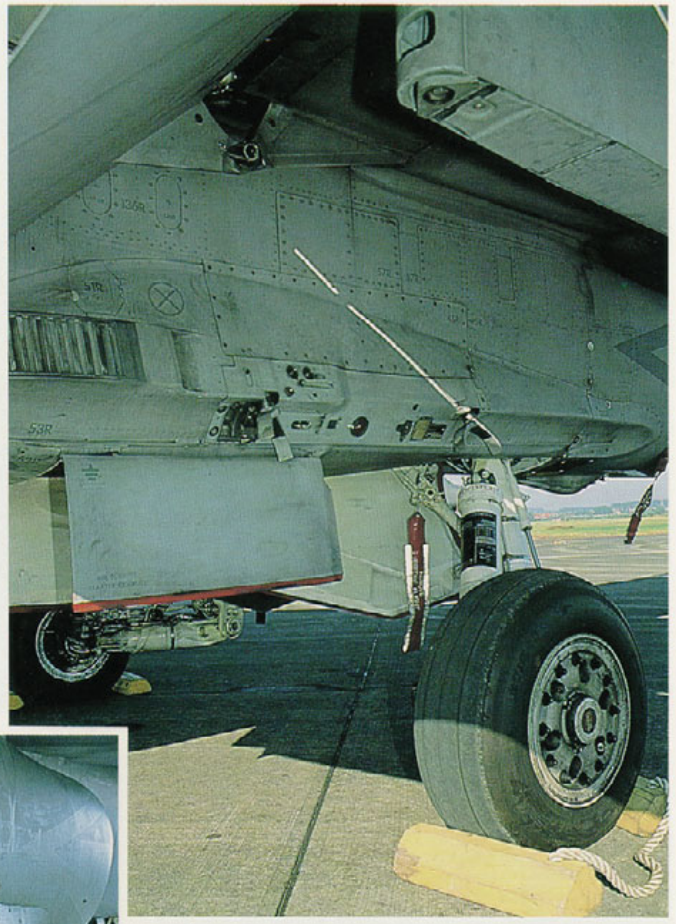




(MCAIR via John S.BROOKS)

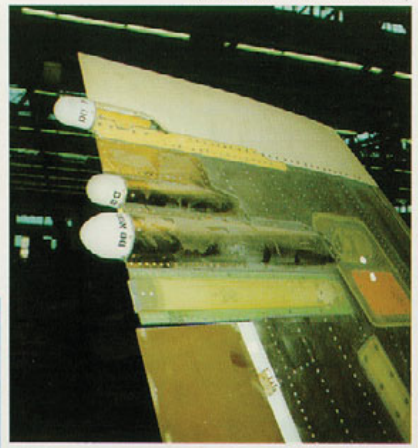
The main gear assembly and related area viewed from the rear clearly showing the main gear doors and actuators. Note the head assembly of the LDT (to the right) and the heavy discoloring of the lower skin surface.

When activated, the large trailing edge flap (some 30 square inch area each) moves aft a little and drops down, positioning the trailing chord level with the bottom of the fuselage. Note the modified bottom corner clearing the fuselage fairing and the flap actuator cover dropping accordingly.



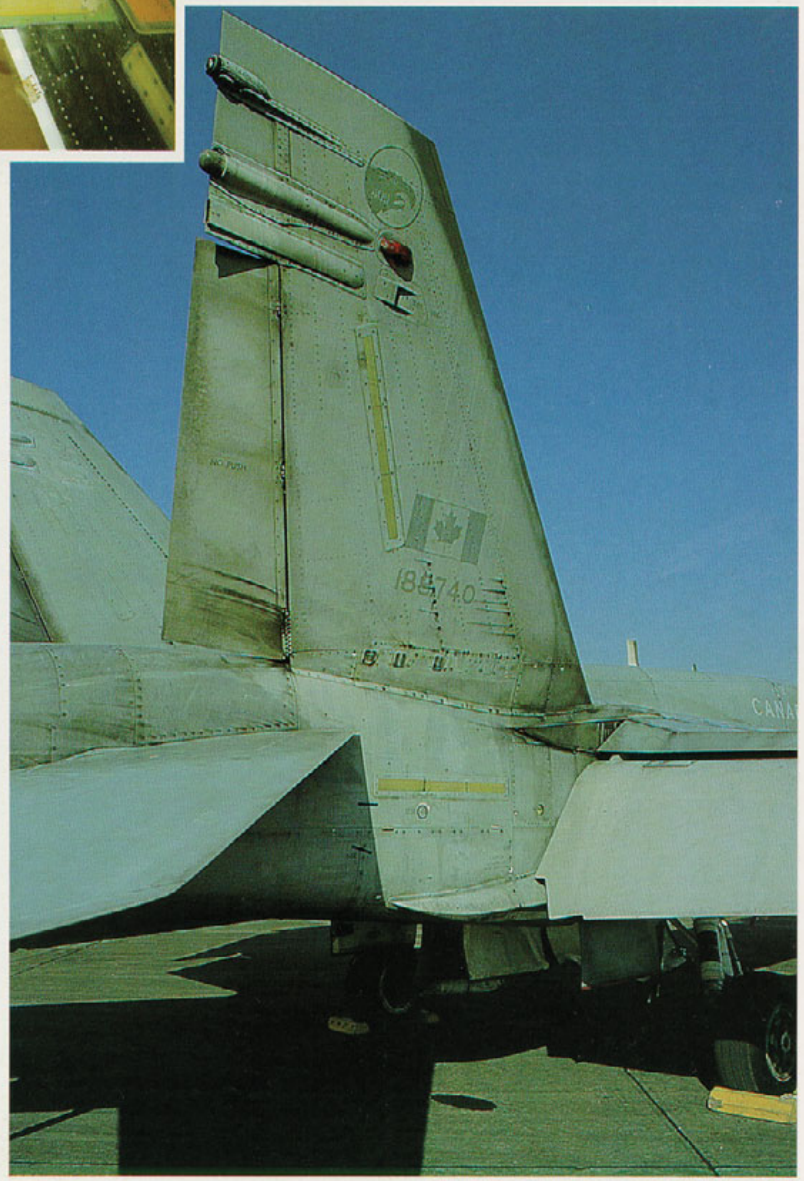
A missile attachment fairing is located next to the main gear well and engine nacelle on the lower fuselage edge. Both ejector arms can be seen halfway down the fairing. The exhaust louver incorporated in the aft part of the latter is the air turbine starter exhaust as indicated on the aft main gear door. To clear the lower forward fin of the missile the main gear goes down and underneath before being retracted into the main wheel well. The forward inboard fin matches the triangual bottom section seen on pages 8 and 9.

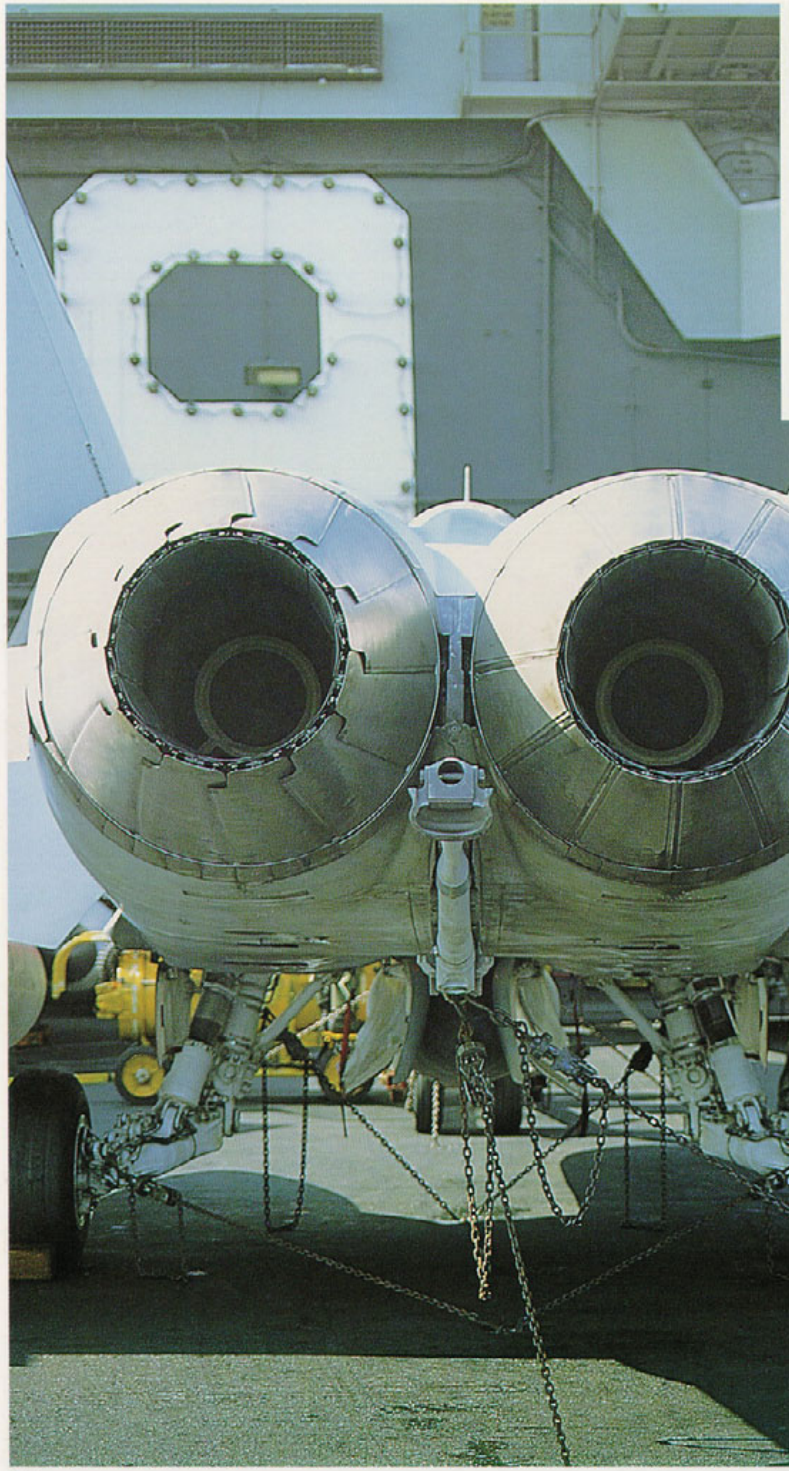
(MCAIR via John S.BROOKS)

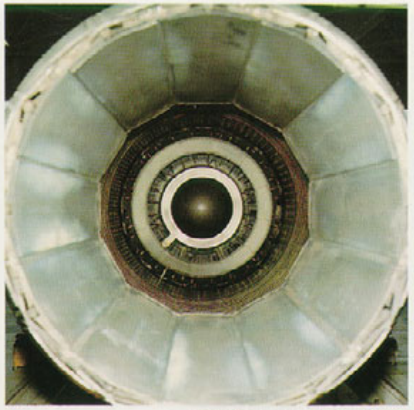


Comparison of the US Navy and CAF vertical tails reveals no physical difference but shows a considerable difference in weathering between a land-based and ship-boarded aircraft. Note the red strobe light and on both tails and the formation lights on tail and fuselage.

Antenna's featured are from top to bottom the AN-ALQ-165 high-band transmission antenna (tail posilion light on starboard), the AN/ALR-67 antenna (both tails) and receiver antenna (AN/ALQ-165 transmission antenna on starboard). Both tails have a fuel dump nozzle installed well above the engine exhausts.







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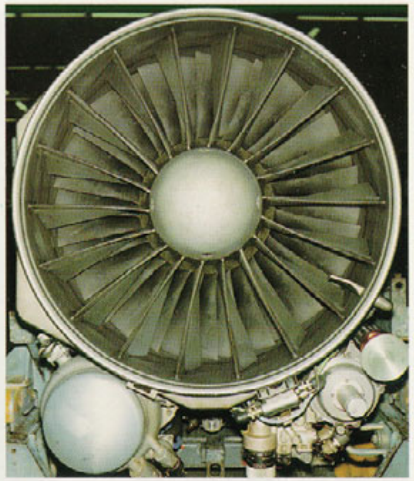

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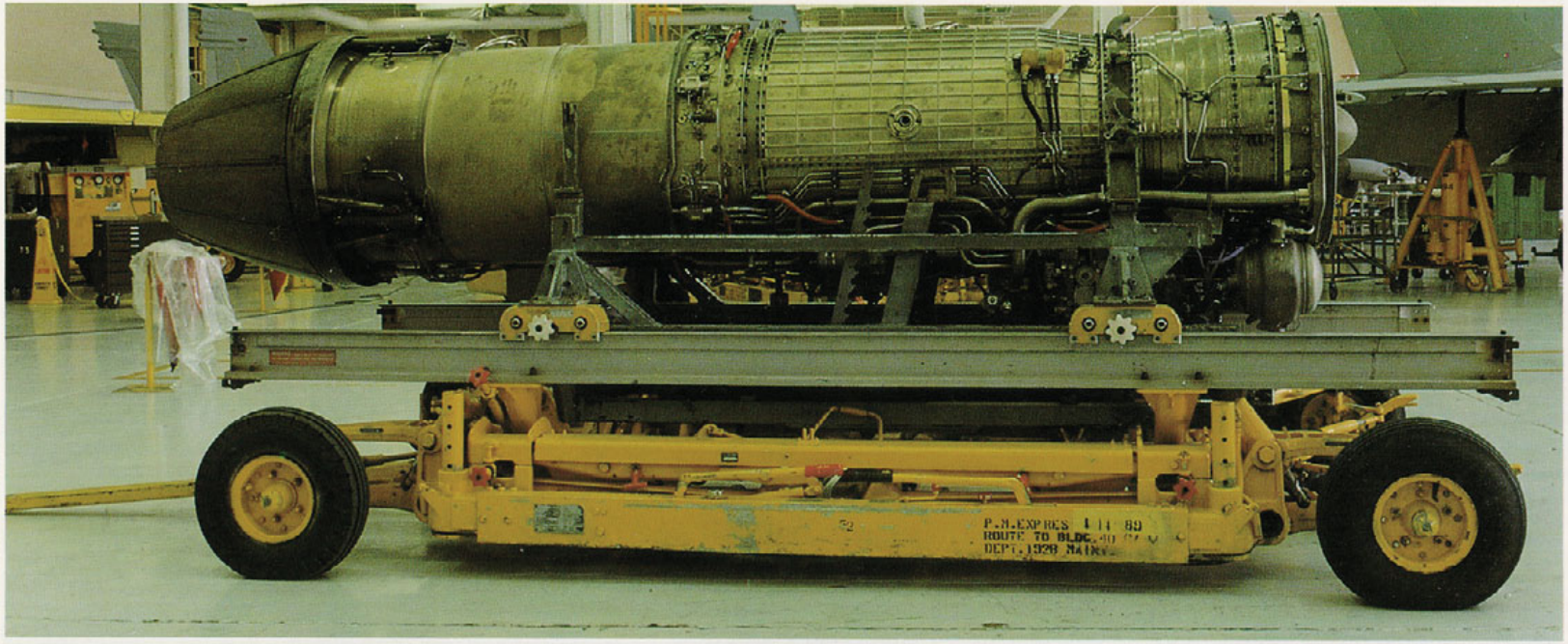
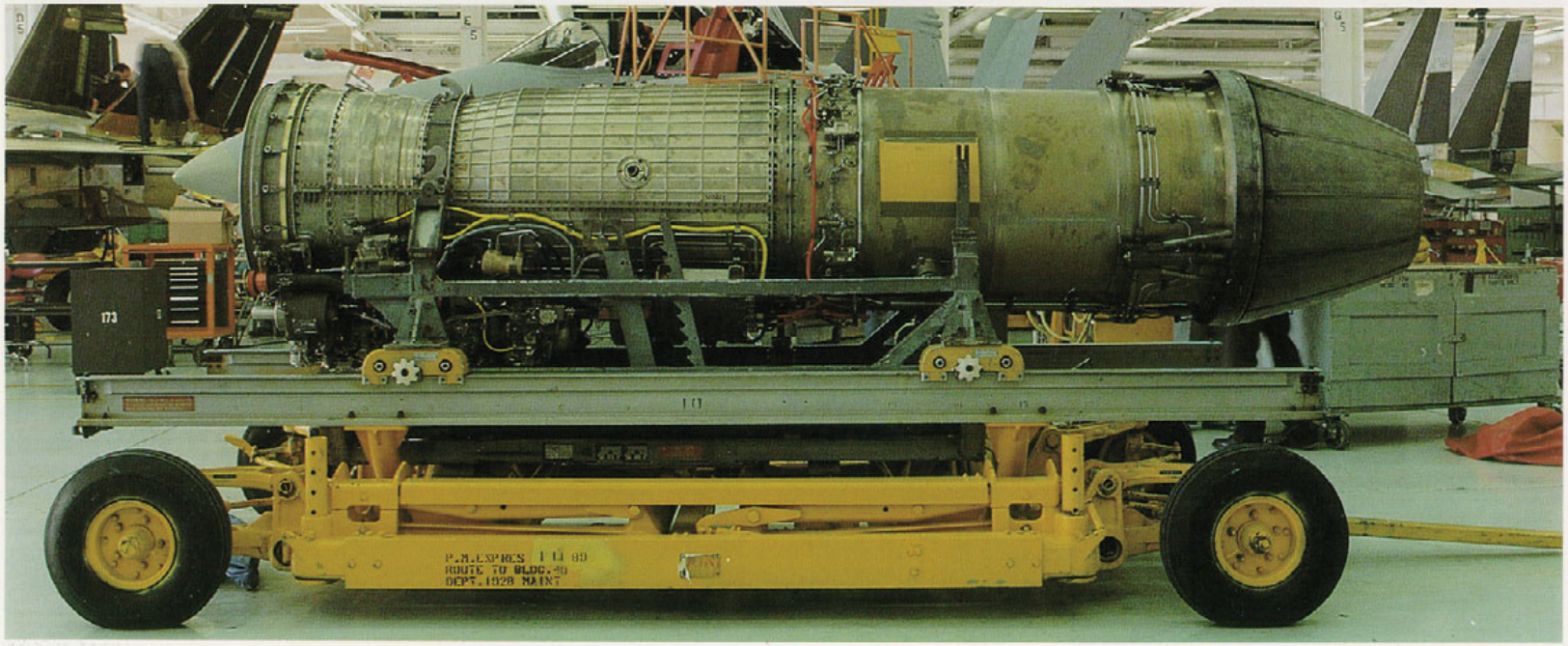


(MCAIR via John S.BROOKS)

Exclusively designed for the Hornet, the General Electric F404-GE-400 low-bypass turbofan not only has 7700 fewer parts than its GE predecessor but weighs 50% less. A high thrust-to-weight ratio and excellent thrust response describes this engine which only takes a four-man crew to remove it in less than thirty minutes. Noteworthy is the omission of auxiliary engine equipment which is airframe-mounted, eliminating the need of seperate left- and right handed components.



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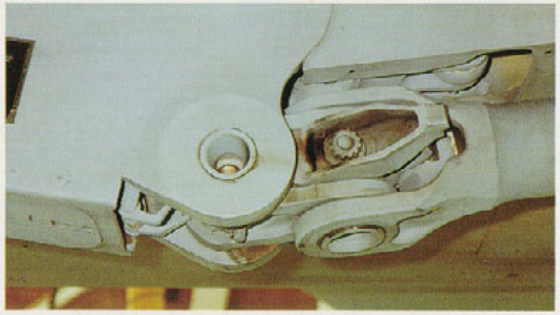
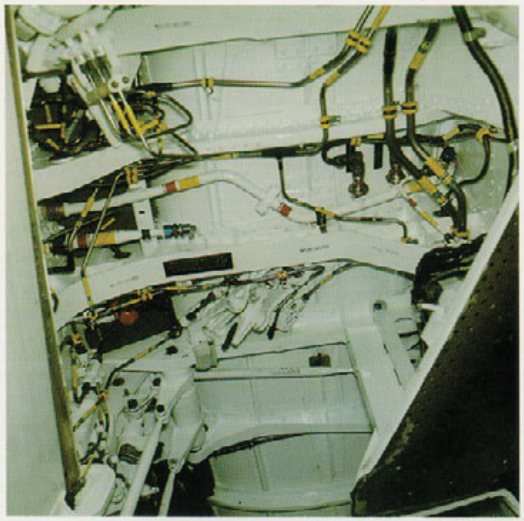


(John S.BROOKS)

(John S.BROOKS)

Carrier landings require a solid arrestor hook assembly. Attached to the main aircraft keel, the expendable (and periodically replaced) hook is forced down by an actuator providing the down force to ensure cable engagement.



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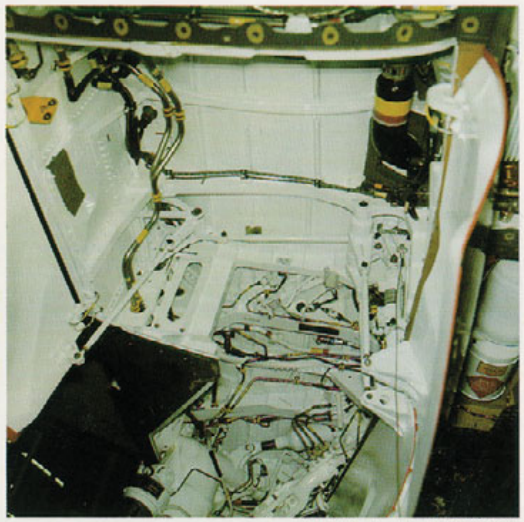

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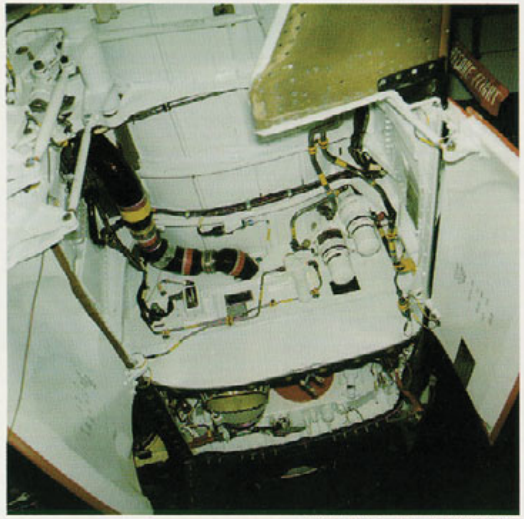

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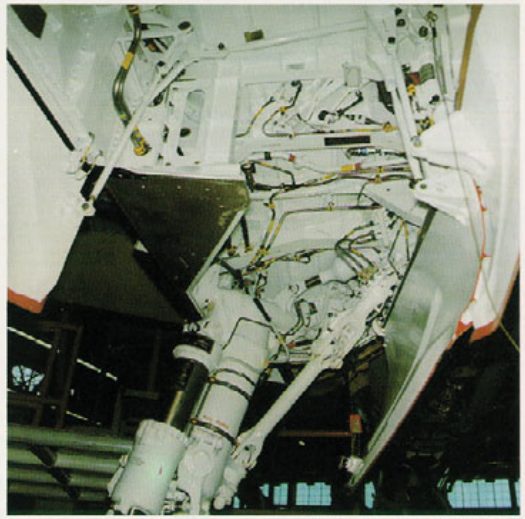

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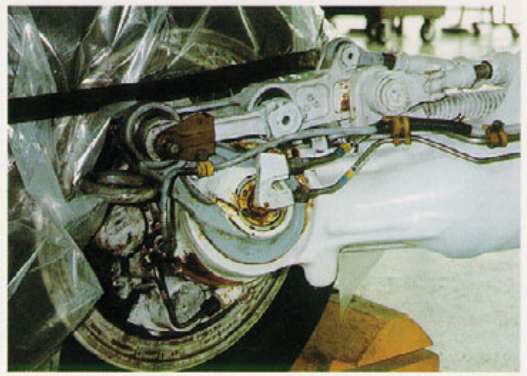


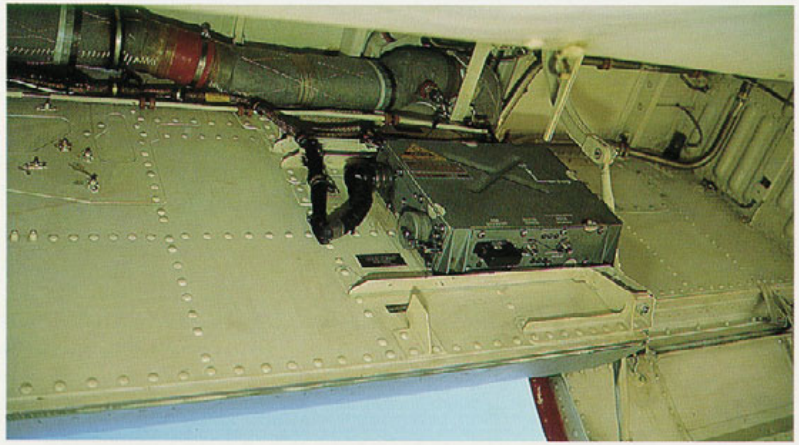
(John S.BROOKS)

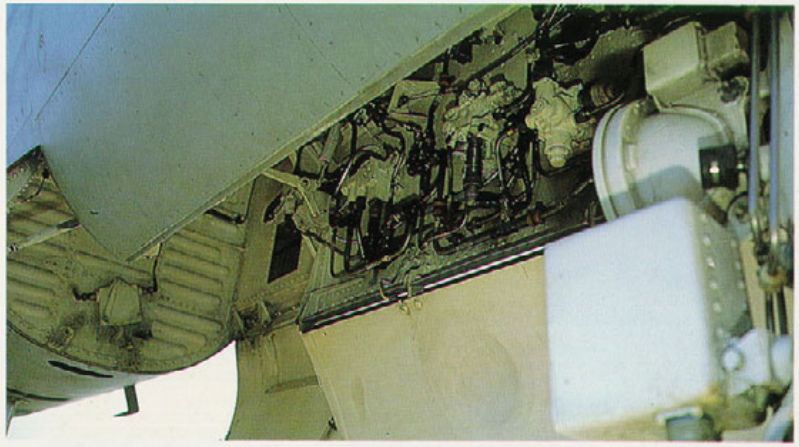
Top : *The wingtip flaperon actuator fairing extends all the way through the front spar while its outer end is hinged to the outer wingtip surface. Unlike other navy aircraft which feature one or more linkage arms, matching and locking pins the Hornet's folding mechanism consists of a central segmented rod mounted in the outer edge of the main wing, matching the scissor-like inner edge of the outer wing.*
No wiring or hydraulic feed lines are exposed when the wingtip is folded. Note how the trailing edge of the pylon runs parallel to the trailing flap.
Right : *Port side main wheel well detail characterized by the usual collection of hydraulic fluid containers, electrical harnesses, oil filters and feed lines. Bulkhead detail and structural strengtheners can be made out clearly because of the white colored inside surfaces which makes hydraulic leaks readily visible.*
To withstand the heavy impact of the main wheel assembly special attention was given to the main strut/wheel disc connection which incorporates a computerized anti-skid system and hydraulically actuated disc brakes.

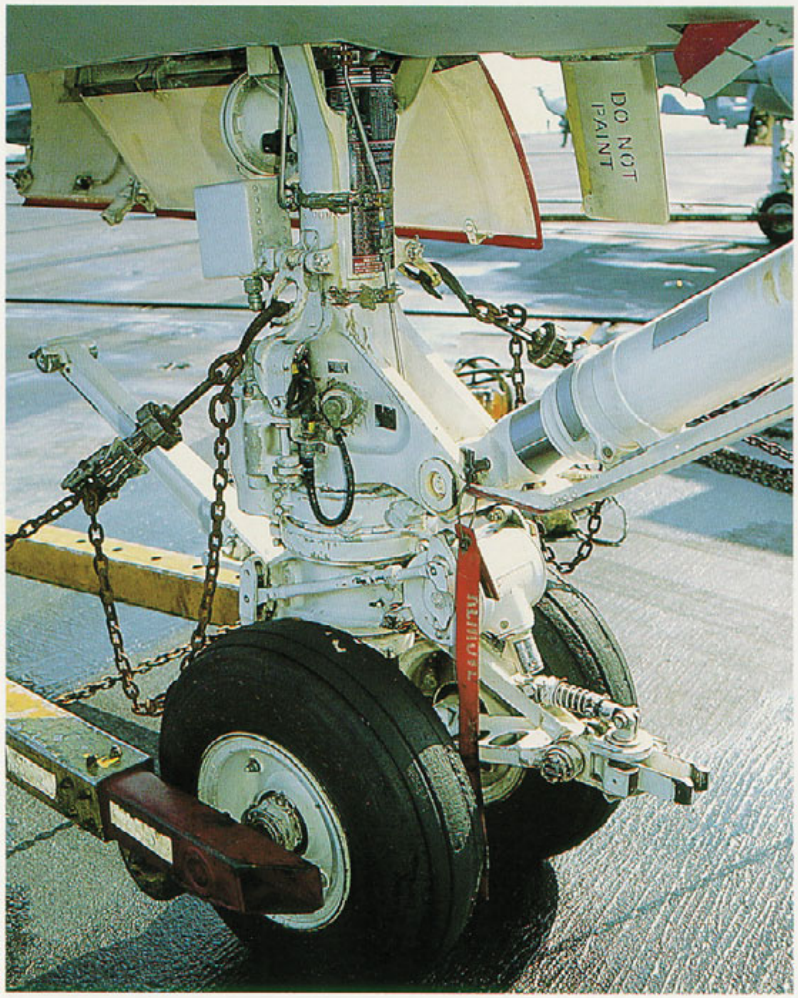
Next page, top
A maintenance control box is located at the left sidewall inside the nose gear well while hydraulic accumulators are side-mounted to the right.
In all, the F-18 has four nose gear doors, two asymmetric door halves in front, a single side-mounted door over the main strut and an integral fairing over the retraction strut which pushes the nose gear assembly forward into the well.

Initial leading edge extension (LEX) featured a slotted upper surface next to the canopy which was abandoned on production aircraft. The leading edge extension not only improves the Hornet's aerodynamic flying characteristics during high angles of attack but helps to establish a better flow of intake air.
The port leading edge extension houses an ingress/egress boarding ladder as seen used by the plane captain in the picture above. A forward and aft latch secure the ladder which mechanically retracts neatly into its housing. A drag brace and two side braces connect the ladder with the aircraft providing necessary rigidity.
Note the electrical power receptacle below the front LEX and the port angle of attack probe below the formation light strip. Also note the different contours of the anti-glare panel in front of the gun ports on top of the radome housing.

Next page, bottom
The shuttle link bar at the front (operated by the pilot) and the holdback-bar hook-up at the rear are part of the Hornet's launch assembly, both shown here in detail. Launch paths on todays carriers require dual wheel nose gears.



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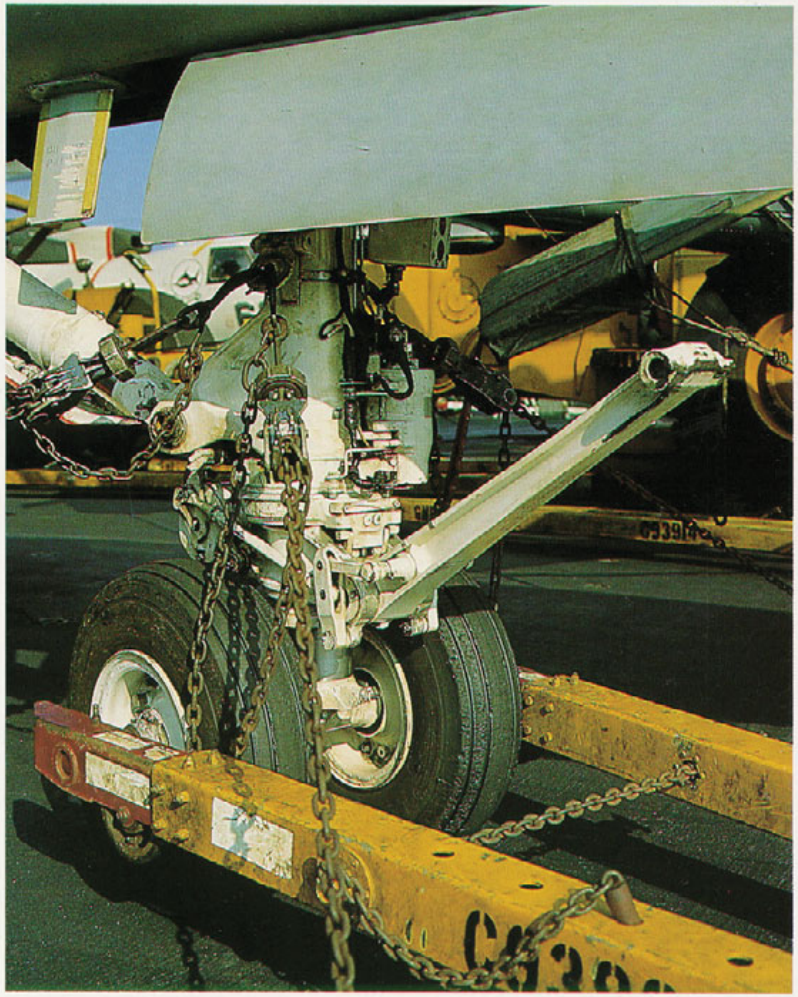

F/A-18C Hornet, VFA-137
"Kestrels"
USS Forrestal, US Navy
(Photo by Willy PEETERS)


400
CDR FAST FAHY
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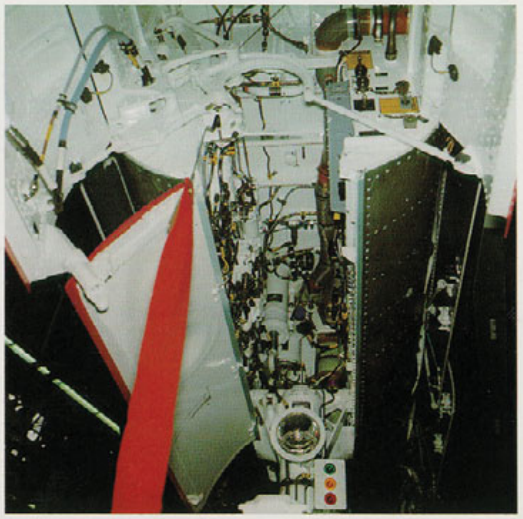
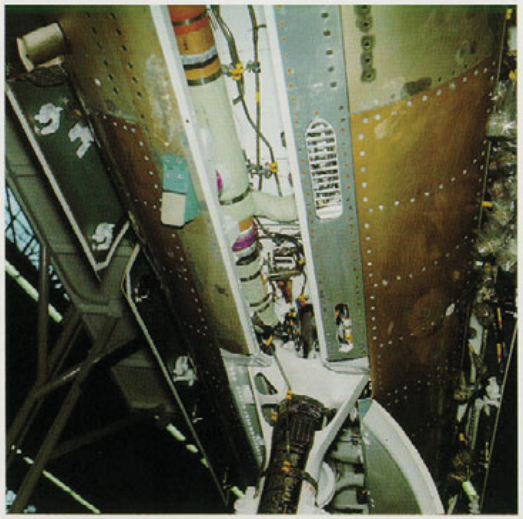
(MCAIR via John S.BROOKS)



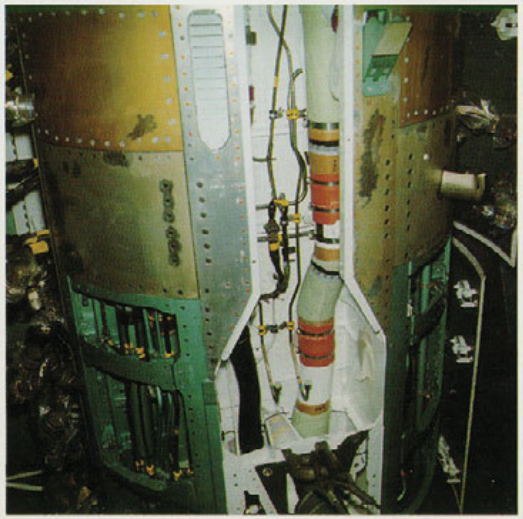
The landing light is mounted on top of the nose gear strut above the landing position indicator box. Note the door linkage assembly activated by the nose gear strut retracting.

(MCAIR via John S.BROOKS)



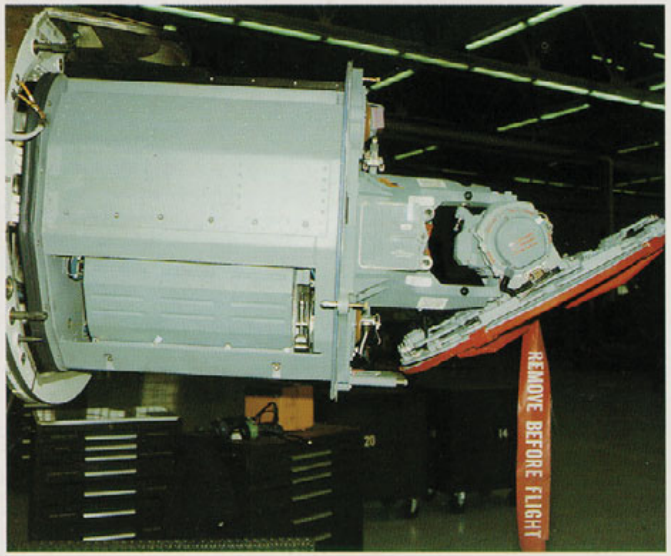
A number of data placards are attached to the rear of the strut. Like the major gear housing, the retraction strut housing is occupied by hoses and electrical harnesses. Note the different colors of the unpainted aircraft skin.

(MCAIR via John S.BROOKS)



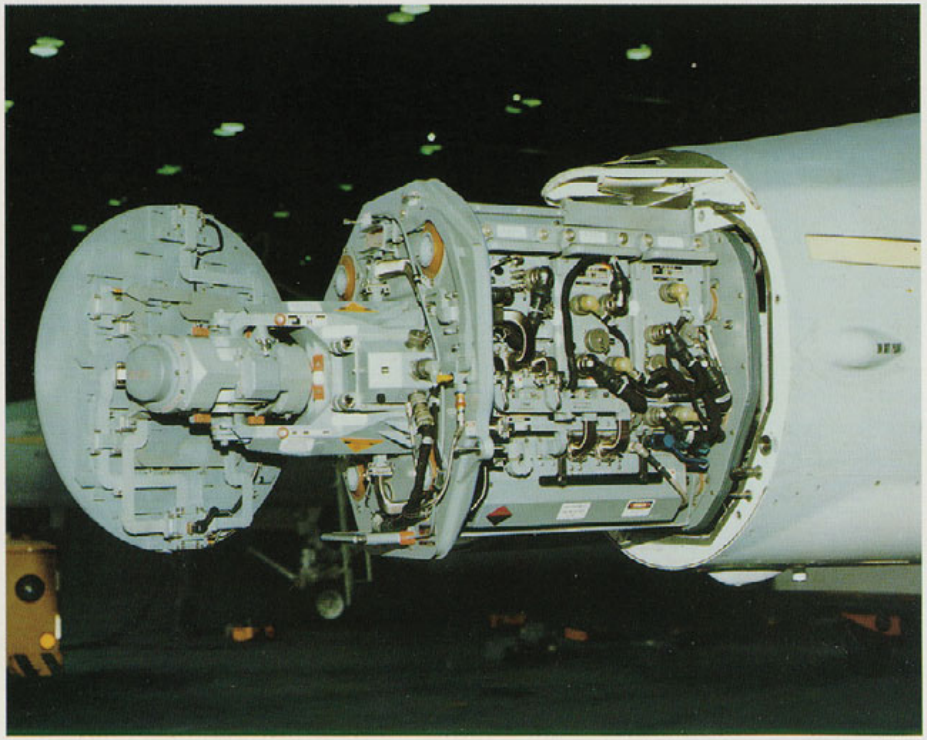
The same housing further aft where the strut is connected to the bottom fuselage frame. Note the colors of the protection hoses and rubber seals; and the immaculate white inside of the bay.

(Hughes)

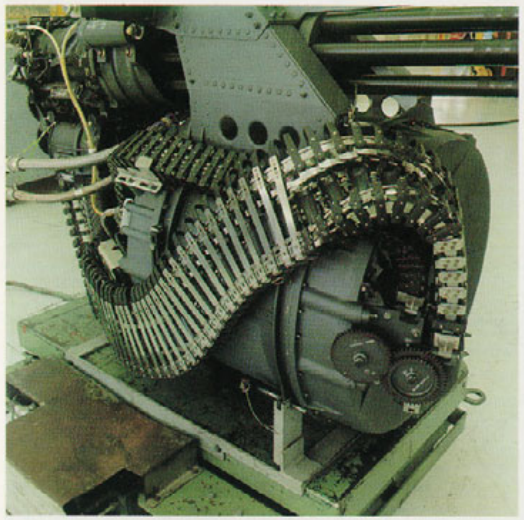


One of the Hornet's major assets, the Hughes APG-65 radar. Highly advanced, this multi-mode, pulse Doppler radar provides day/night/adverse weather, long-range, all-aspect detection and tracking of airborne targets. It also supplies pulse Doppler illumination for radar guided AIM-7 Sparrow missiles.

(Hughes)



(MCAIR via John S.BROOKS)

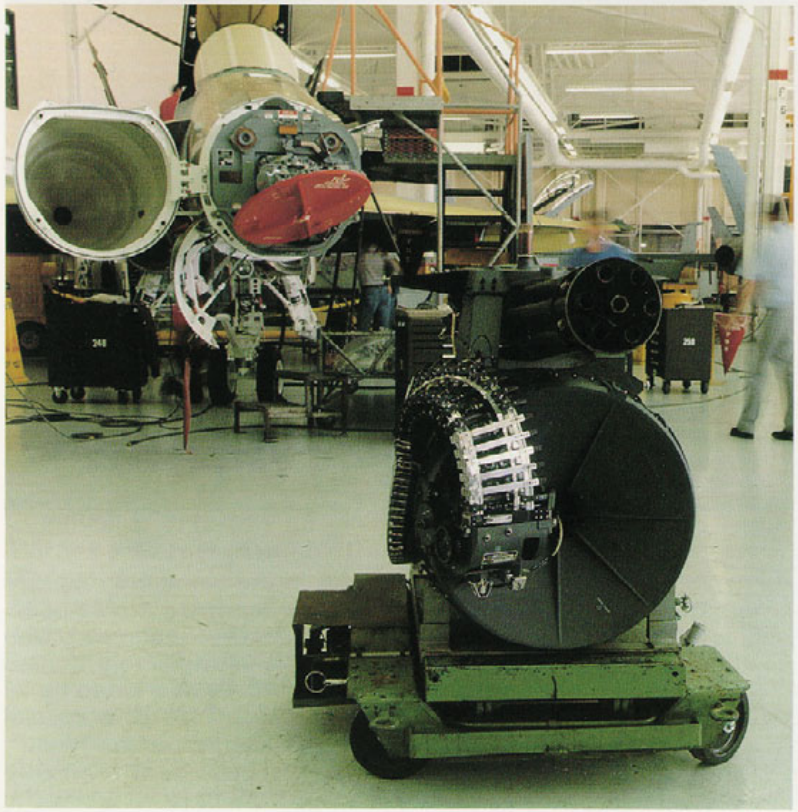


Clearly visible is the wide ammo feed line running from the front of the barrel over the left side to the rear. A smaller cartridge return chute is visible beneath the latter.

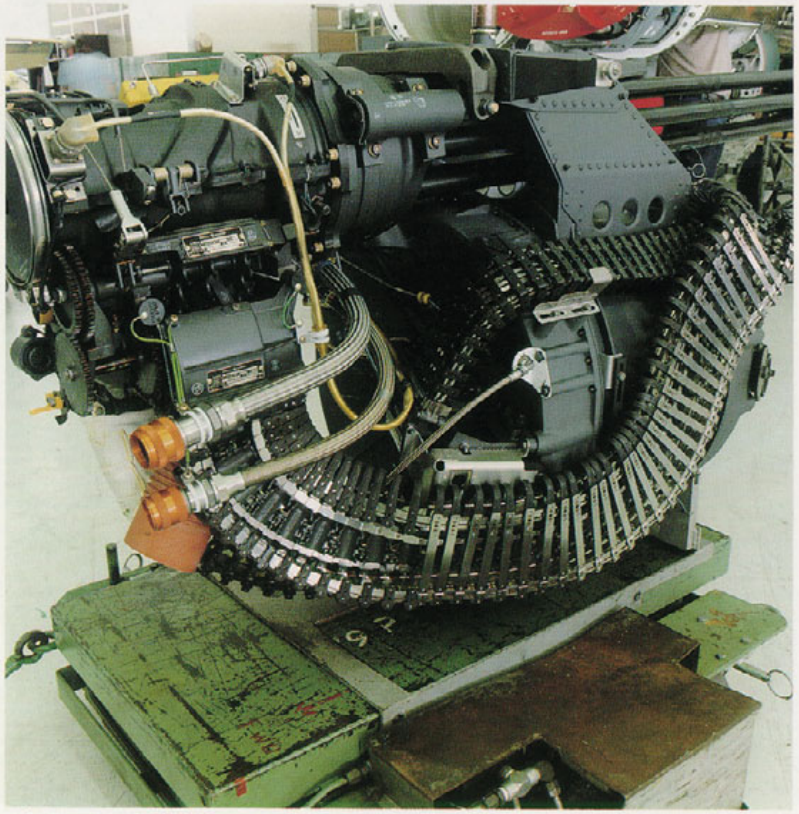
(MCAIR via John S.BROOKS)

The gun and ammo linkage unit, visible when the ammo loading panel at the starboard nose section is opened. Note the large red cooling hose below the gun.

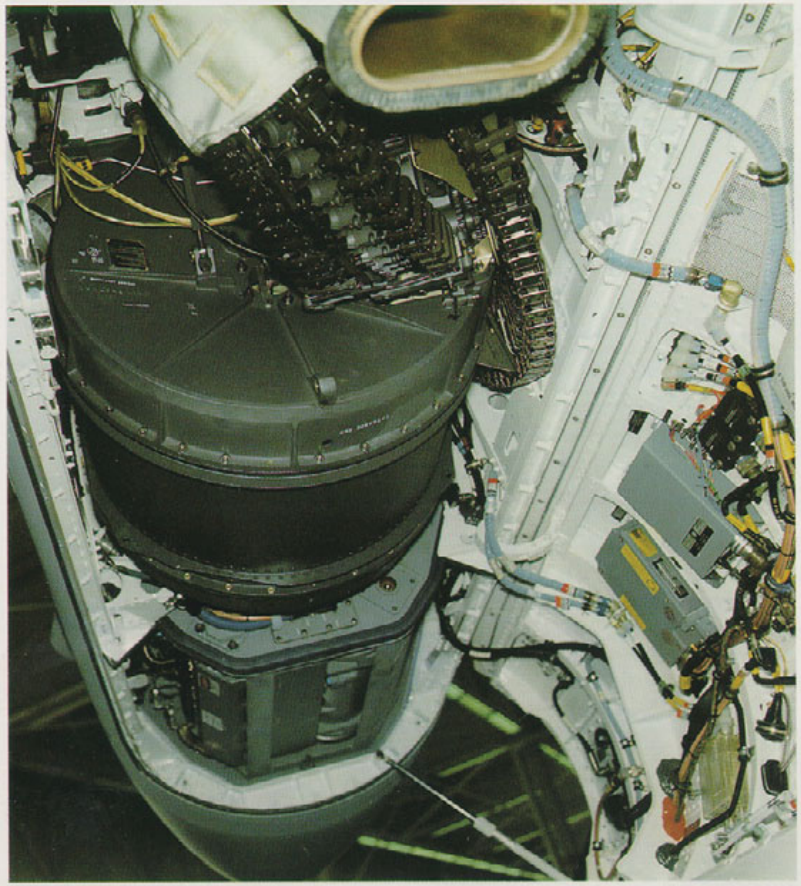
Almost the entire nose section forward of the cockpit and aft of the radar pack is filled by the massive gun pack shown here from different angles. The Hornet is equipped with a General Electric M61A1 20 mm rotary cannon (also referred to as the GAU-11) featuring six counter-clockwise (viewed from the rear) rotating barrels, the firing unit and a 570 round ammo drum. Rounds are being fed by an externally mounted, highly reliable feed unit. Spent cartridges are not discarded like on many older jets but transported back into the drum thus avoiding serious center-of-gravity disruptions.



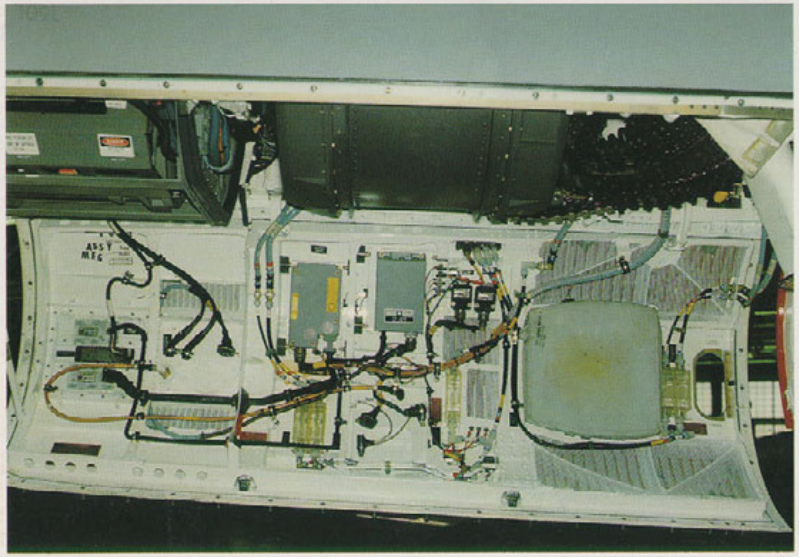
(MCAIR via John S.BROOKS)



(MCAIR via John S.BROOKS)



(MCAIR via John S.BROOKS)



(MCAIR via John S.BROOKS)

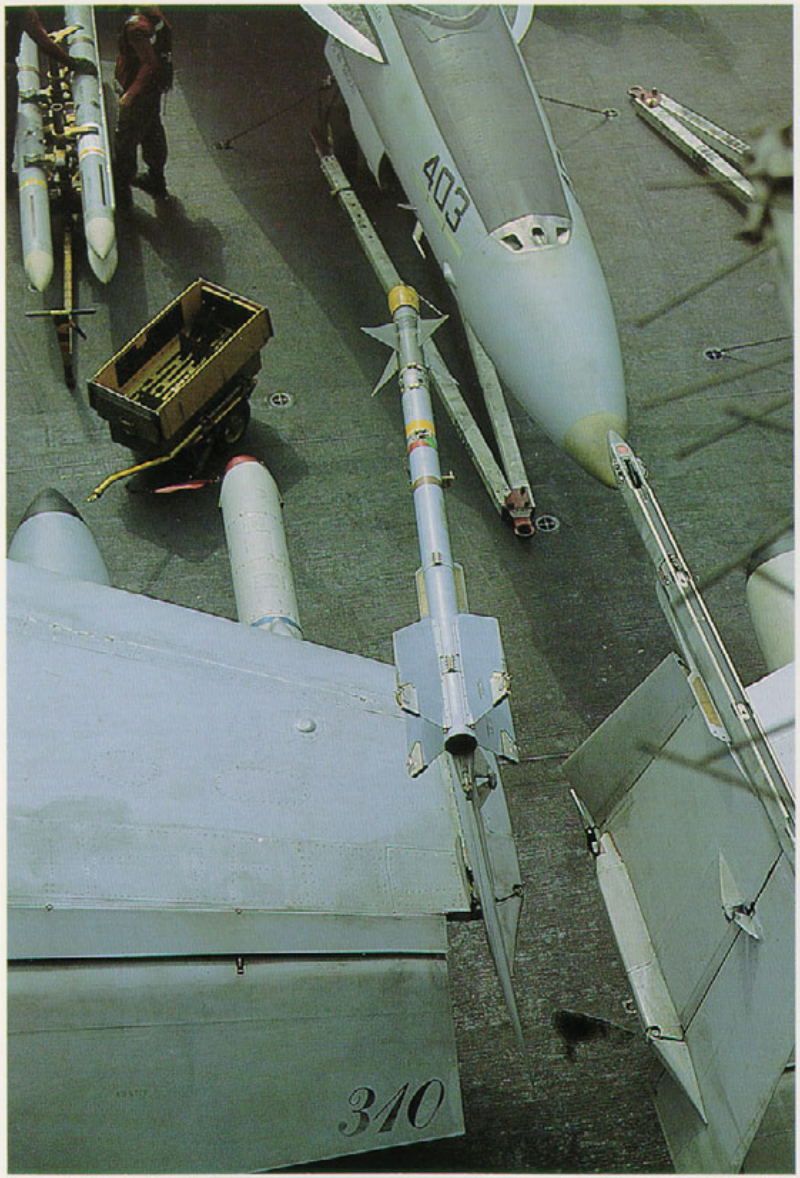
Earlier configurations of gun and radar in the same area caused severe malfunctions of the radar system when the gun was used. This is no longer a problem as proven by MCAIR engineers who positioned the gun/ammo drum assembly immediately behind the radar pack. Loading the gun is through the ammo load panel forward of the cockpit on port side and by means of a special linkage assembly hooked up to the aircraft's ammo drum.
Control boxes inside the weapons bay access door is mostly antenna related.

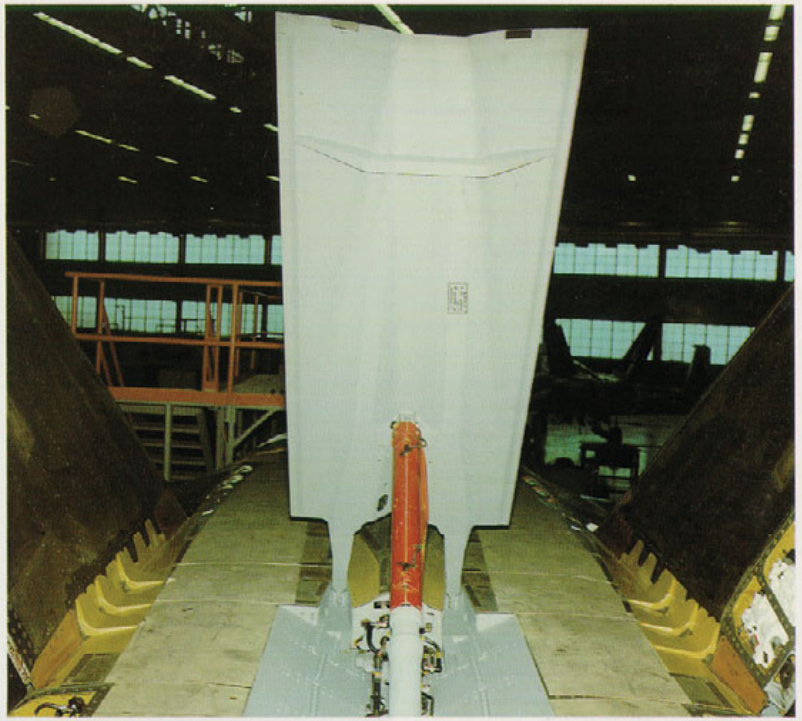
Canadian pilot dressed in pitchblack coverall but with green g-suit mounts his CF-18 fighter for a sortie back to his home base at Solingen, Germany after having spent some time at Kleine Brogel air base in Belgium. NATO pilots regularly make short hops to foreign bases to familiarize local ground crew with their aircraft.
Hornet specialists will be familiar with the different characteristics of Canadian F-18's of which the searchlight in the ammo loading door is the most significant. This was adopted by the Canadian Armed Forces / Forces Armées Canadienne for Search and Rescue duties over the vast Canadian countryside which can best be surveilled by fast flying jets with an increased combat range. The second adaptation is the fake cockpit painted on the bottom fuselage to trick opponents engaged in a dogfight. However smart the idea it is known to have tricked some wingmen flying close combat maneuvers, intensifying the rumors to discontinue the practice. Note the arabic signs on the LEX dorsal fin, revealing its engagement in the Gulf.

No black anti-glare panel on top of the nose section for these CF-18 Hornets which have dark gray upper surfaces and black walkway panels on top of the leading edge extension instead. Landing gear is overall white and landing gear door edges are red. Note markings and rescue panel in darker gray below the LEX while reverse on top of the fuselage. Also note the bilingual toned-down national insignia and the searchlight in the side panel.

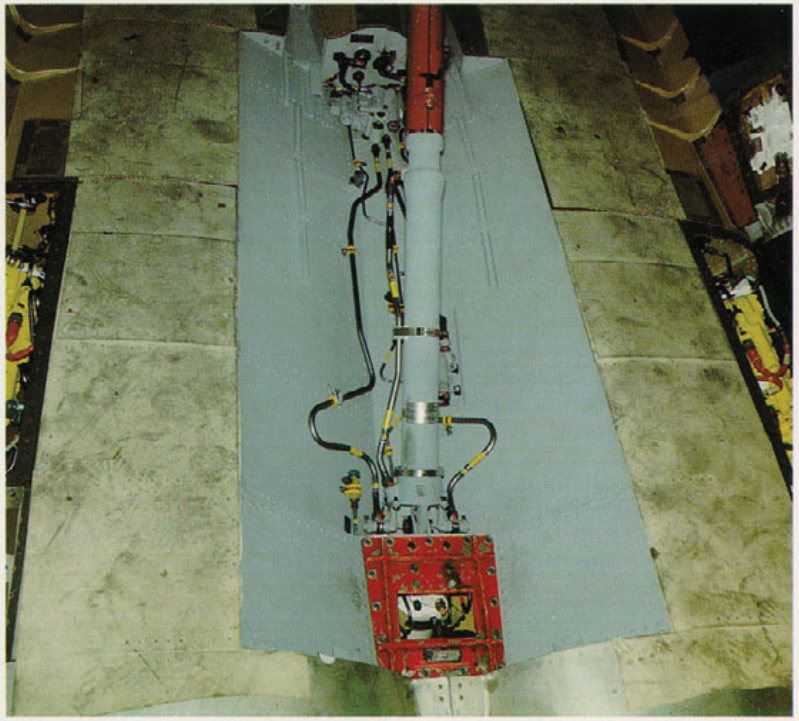
Overhead view of a Hornet revealing upper fuselage detail and paint application. To rectify fatigue problems with the vertical tail surfaces external bracing at the bottom of the tail proved necessary. This view also gives a good impression of the spine tapering to the rear and finally ending at the end of the airbrake between the engine nacelles. The black walkway panels on top of the LEX start just aft of the upper fuselage slots at wing cord level.

(MCAIR via John S.BROOKS)





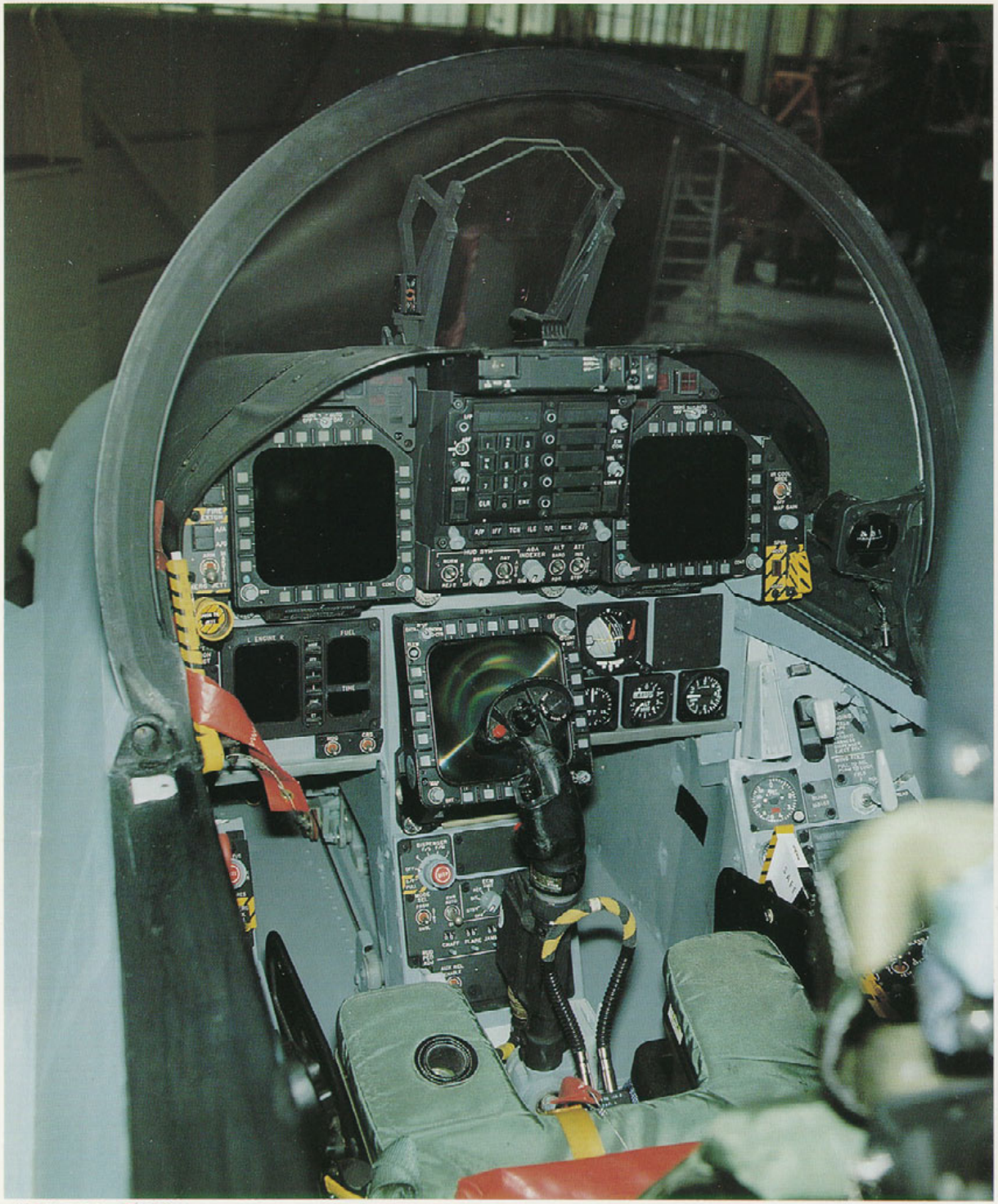
(MCAIR via John S.BROOKS)



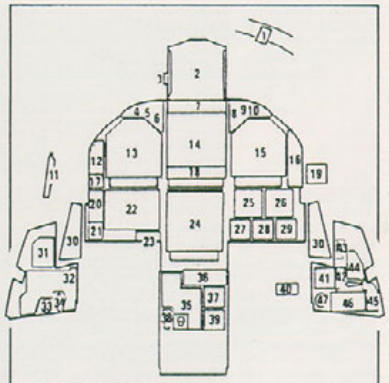
Wingtip mounted AIM-9L/M Sidewinder slightly canted outward when the wingtips are folded and pointing downward in level flight due to the Hornet's nose-up flying attitude. Launch rail detail can be seen on the wingtip of the adjacent Hornet while the shape of the cannon ports can determined on the F-18 parked opposite.
At right are two views of the single-piece dorsal airbrake.
A single hydraulic ram (operated by the pilot) pushes the airbrake to a maximum 60° deflection. Note red safety lock on actuator.

F/A-18A cockpit layout where three CRT-type primary displays replace much of the dials seen in earlier jets. Digital information is passed on to the pilot in a split second by pushing one or a combination of buttons on the CRT-screens.
Analog instruments are primarily emergency back-up related. The stand-by compass of early design at the bottom right windscreen frame is still carried in today's jets. As can be seen the stick holds more than just the mic button and gun trigger but allows the pilot to switch from one weapon system to another without having to let go of the stick.

(MCAIR via John S.BROOKS)

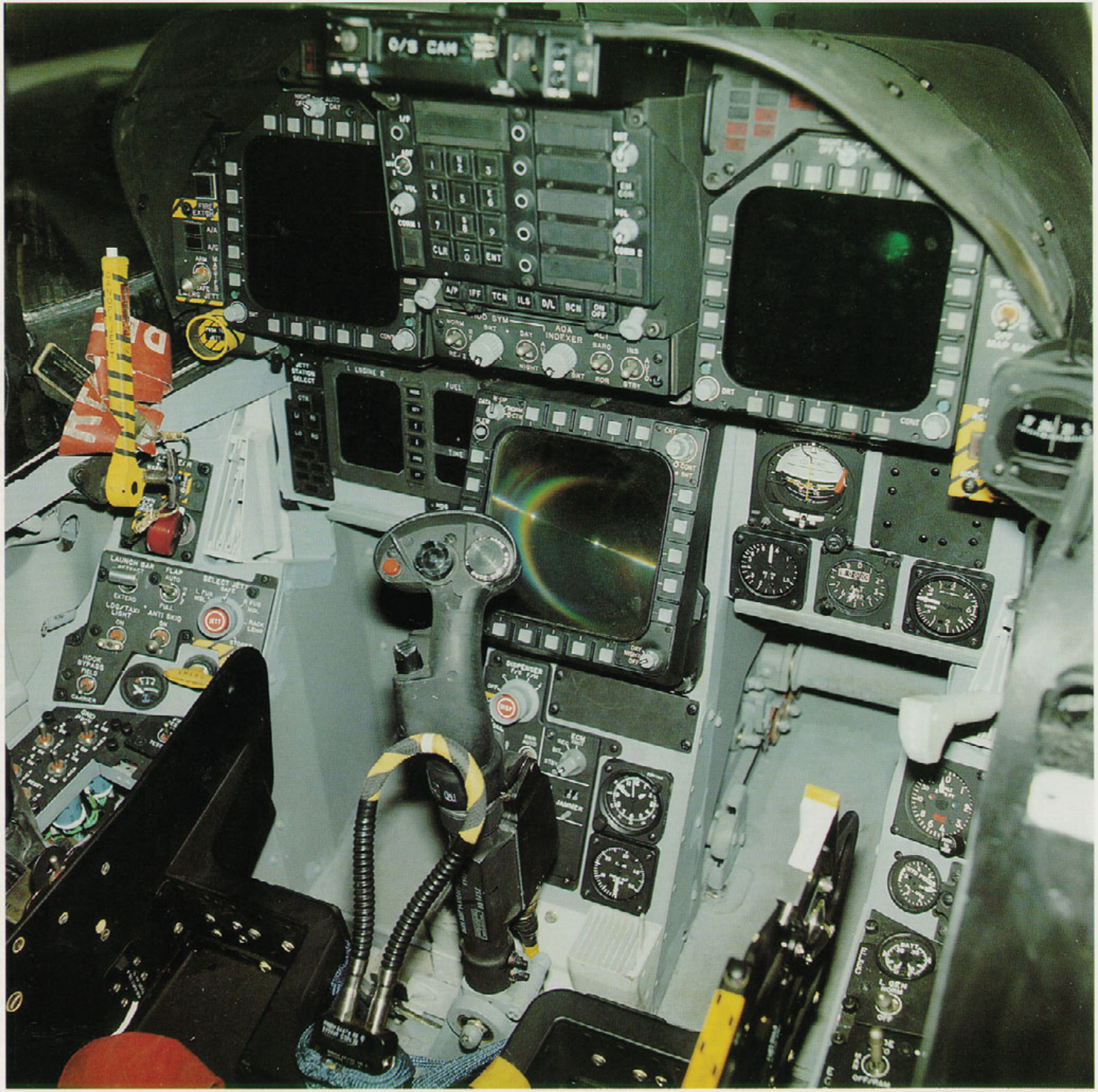


(MCAIR via John S.BROOKS)



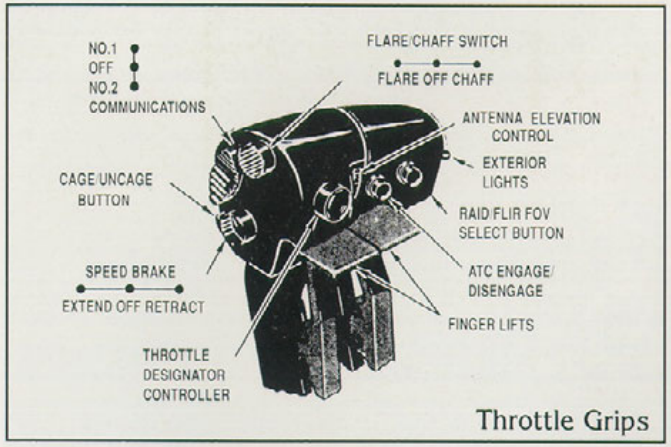
1. LOCK SHOOT LIGHTS
2. HEAD UP DISPLAY (HUD)
3. ANGLE OF ATTACK INDEXER LIGHTS
4. LEFT ENGINE FIRE WARNING/EXTINGUISHER LIGHT
5. MASTER CAUTION LIGHT
6. LEFT WARNING/CAUTION/ADVISORY LIGHTS
7. HUD VIDEO CAMERA CONTROL
8. RIGHT WARNING/CAUTION/ADVISORY LIGHTS
9. AUXILIARY POWER UNIT FIRE WARNING/EXTINGUISHER LIGHT
10. RIGHT ENGINE FIRE WARNING/EXTINGUISHER LIGHT
11. CANOPY INTERNAL JETTISON HANDLE
12. MASTER ARM PANEL
13. LEFT DIGITAL DISPLAY INDICATOR (DDI)
14. UPFRONT CONTROL PANEL
15. RIGHT DIGITAL DISPLAY INDICATOR (DDI)
16. MAP GAIN/SPIN RECOVERY PANEL
17. EMERGENCY JETTISON BUTTON
18. HUD CONTROL
19. STANDBY MAGNETIC COMPASS
20. STATION JETTISON SELECT
21. LANDING GEAR AND FLAP POSITION LIGHTS
22. INTEGRATED FUEL/ENGINE INDICATOR (IFEI)
23. HEADING AND COURSE SET SWITCHES
24. HORIZONTAL INDICATOR (HI)
25. STANDBY ATTITUDE REFERENCE INDICATOR
26. AZIMUTH INDICATOR; BLANK PANEL (SOME AIRPLANES)
27. STANDBY AIRSPEED INDICATOR
28. STANDBY ALTIMETER
29. STANDBY RATE OF CLIMB INDICATOR
30. ENVIRONMENT CONTROL LOUVERS
31. LANDING GEAR HANDLE AND WARNING TONE SILENCE BUTTON
32. SELECT JETTISON BUTTON
33. BRAKE ACCUMULATOR PRESSURE GAGE
34. EMERGENCY AND PARKING BRAKE HANDLE
35. DISPENSER/ECM PANEL
36. RWR CONTROL INDICATOR; BLANK PANEL (SOME AIRPLANES)
37. CLOCK
38. RUDDER PEDAL ADJUST LEVER
39. COCKPIT ALTIMETER
40. STATIC SOURCE SELECT
41. RADAR ALTIMETER
42. AIRCRAFT BUREAU NUMBER
43. ARRESTING HOOK HANDLE AND LIGHT
44. LANDING CHECKLIST AND WING FOLD SWITCH
45. FLIGHT COMPUTER COOL SWITCH
46. CAUTION LIGHTS PANEL (GEN TIE on airplanes 162394 and up)
47. HYD 1 AND HYD 2 PRESSURE INDICATOR

Compare this photo of an F/A-18C cockpit with the one on the previous page. All instruments, except for the engine and fuel quantity monitoring panel (visible below the left CRT) remain the same. The dual pane Head Up Display (HUD) is clearly visible from this angle.

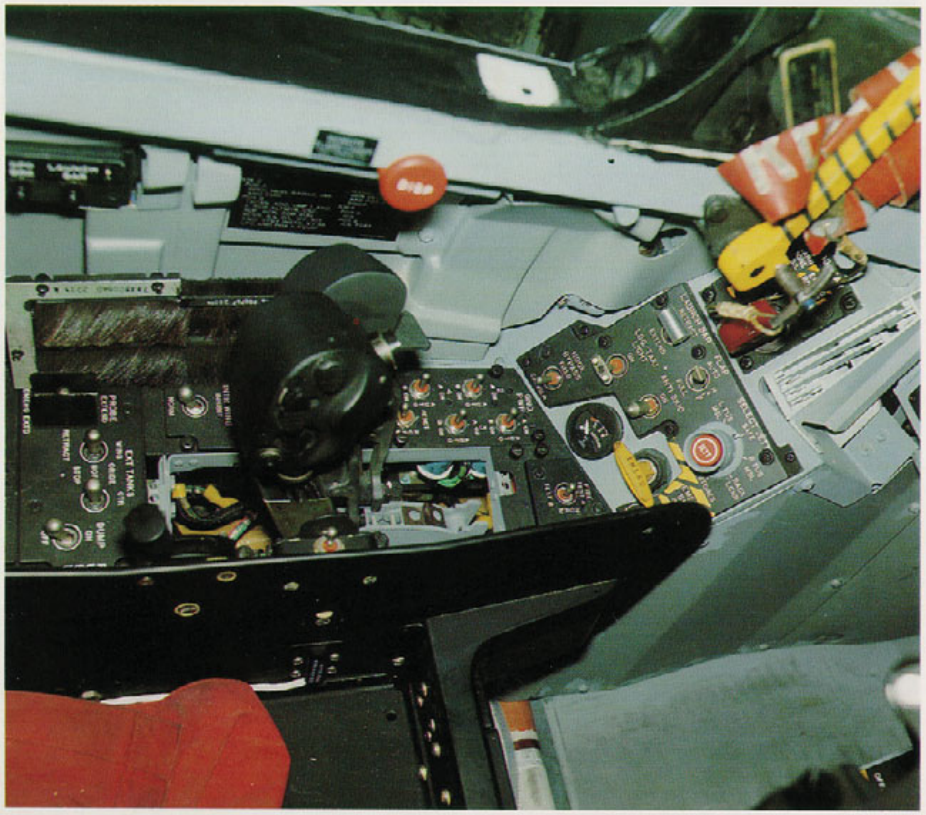


(MCAIR via John S.BROOKS)

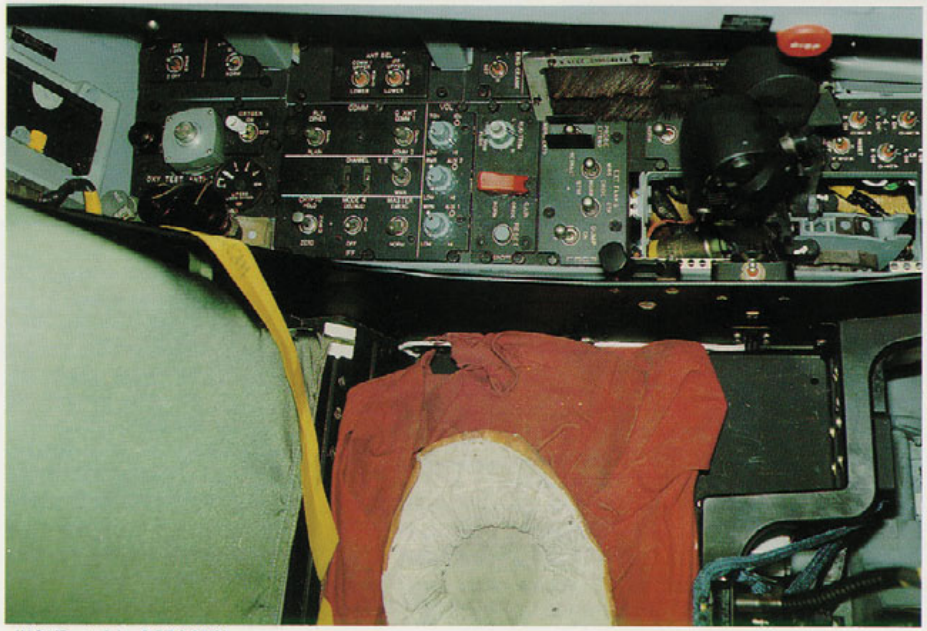
(MCAIR via John S.BROOKS)



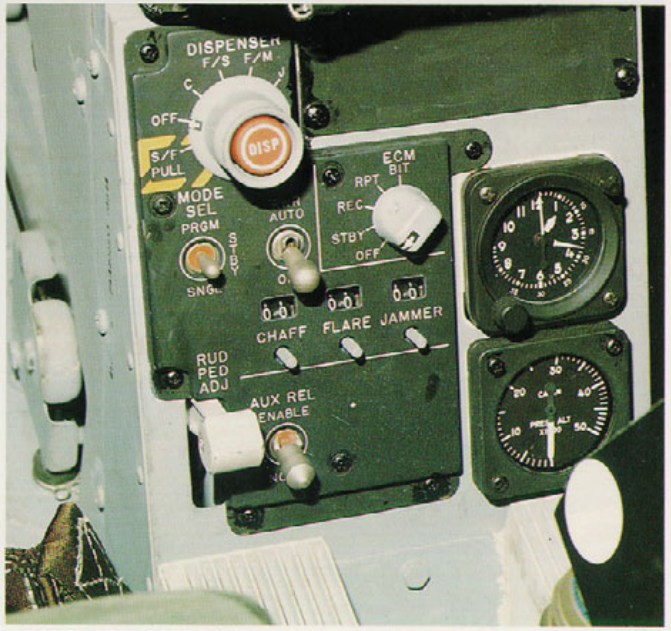
Throttle Grips



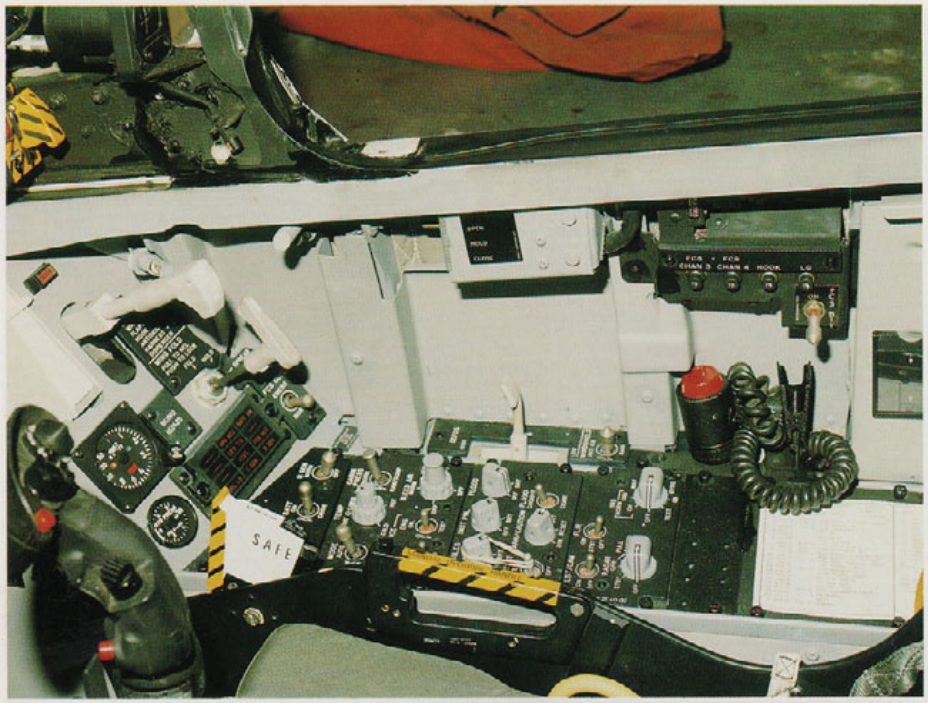
Left side console with throttle quadrant(top right and bottom left) and center console bottom panel. The latter is unmistakenly connected with Chaff/Flare operations and ECM activities.



(MCAIR via John S.BROOKS)



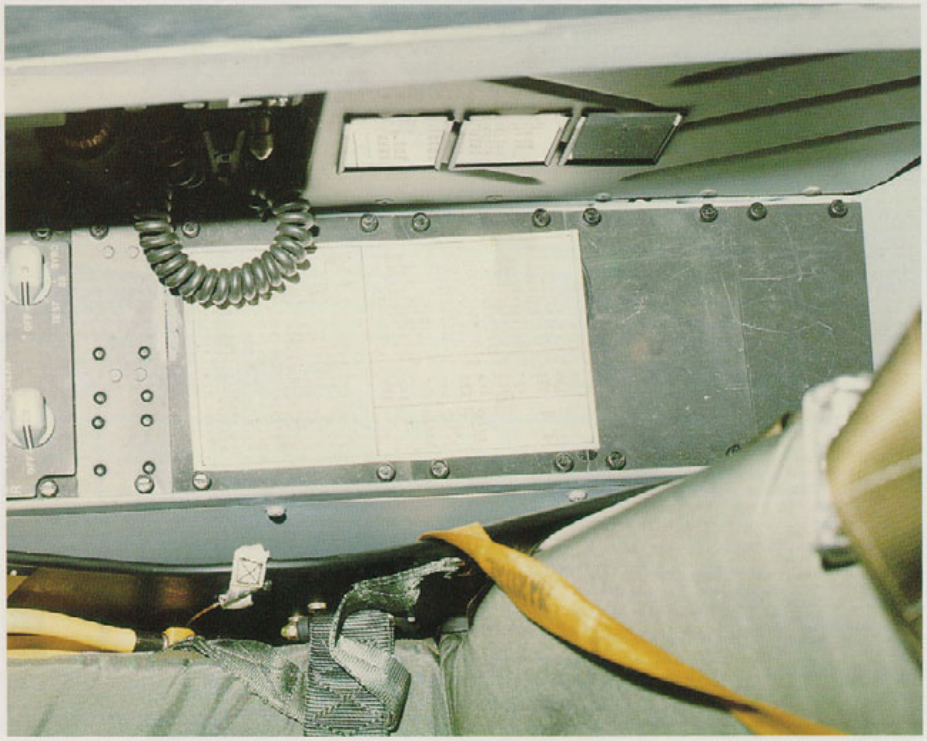
(MCAIR via John S.BROOKS)



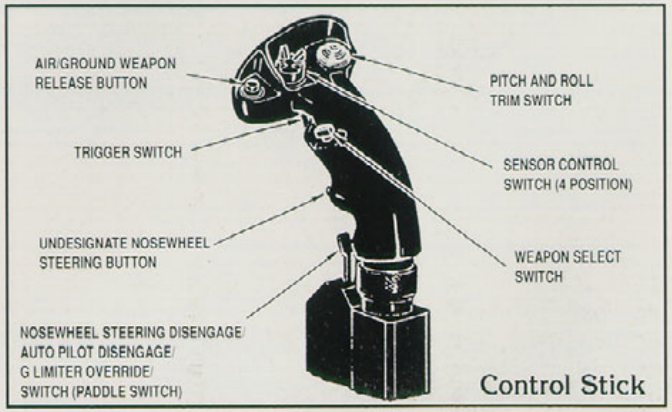
(MCAIR via John S.BROOKS)

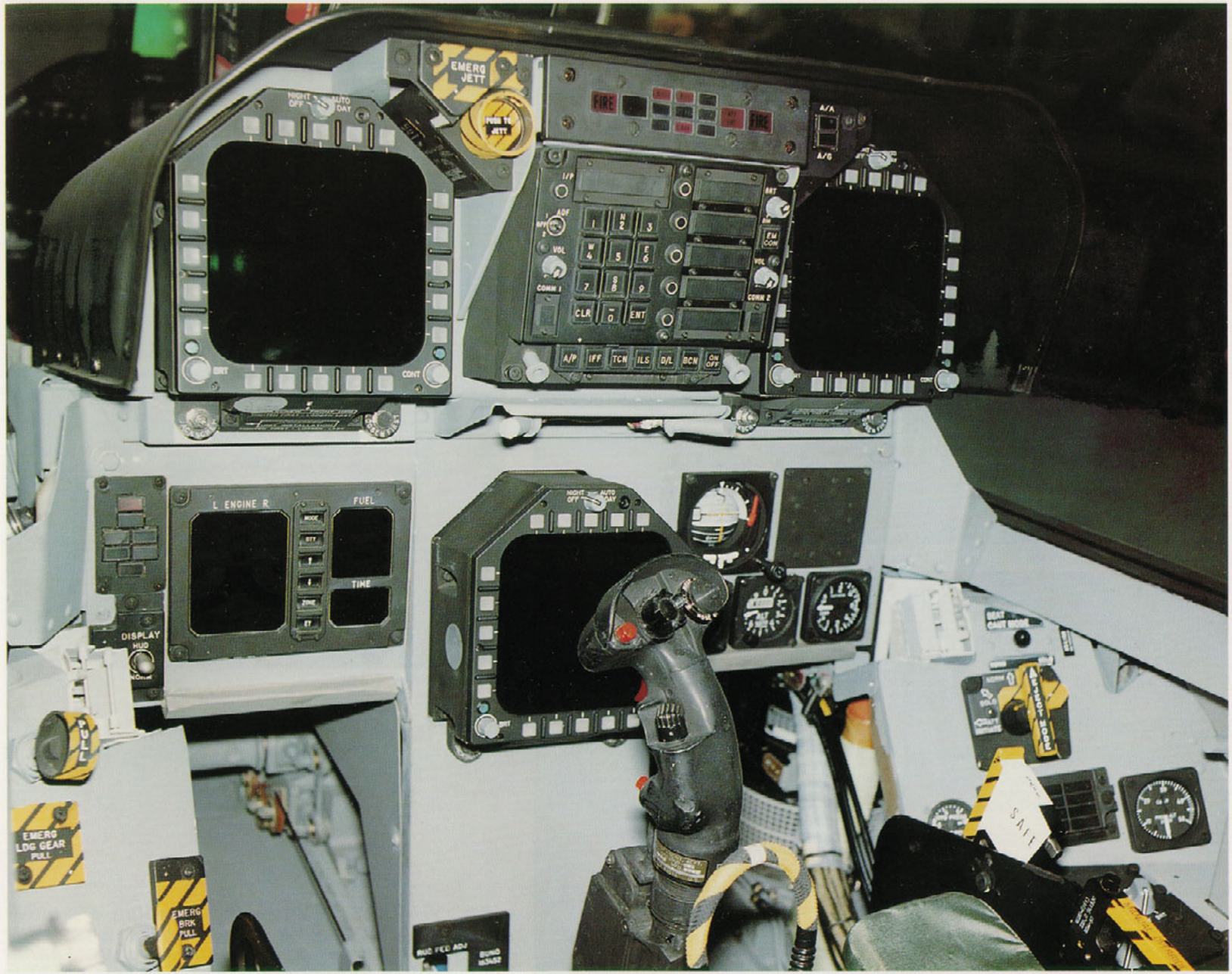
(MCAIR via John S.BROOKS)

Right hand console with cockpit environmental control panels, INS, LST/CAM, FLIR and radar control panel most aft. The top handle on the sub panel engages the tail hook while the smaller handle below and to the right operates the wingfold. Some data panels are located on the side console to the right rear of the pilot. Above is an interesting view of the canopy actuator rod and part of the canopy locking system on the lower frame. The compartment behind the seat is usualy covered with a light colored canvas protecting the computer related boxes from the environment.



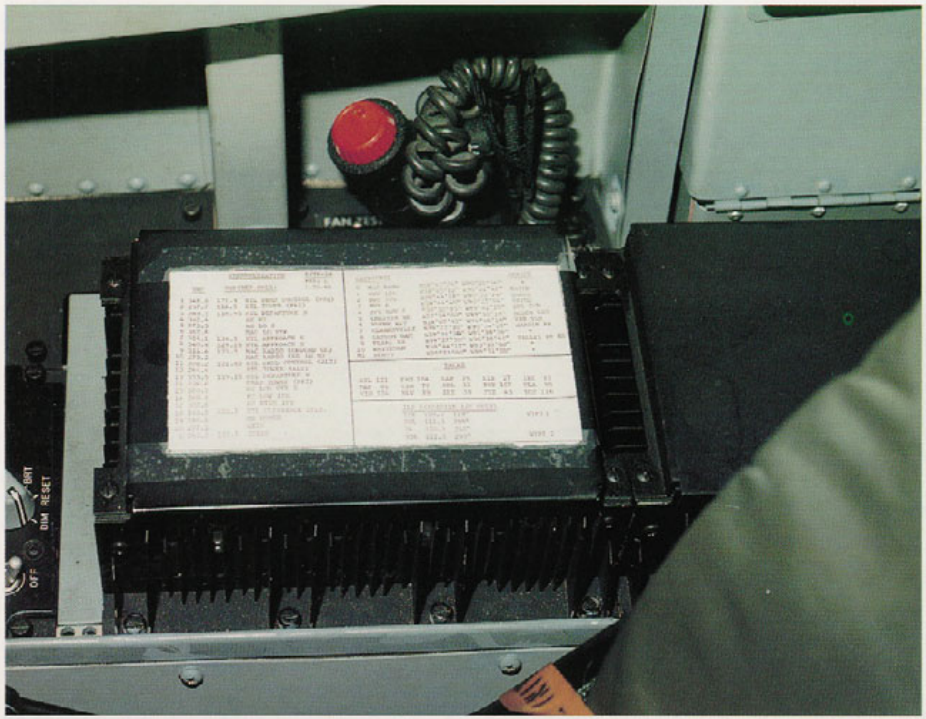
(MCAIR via John S.BROOKS)



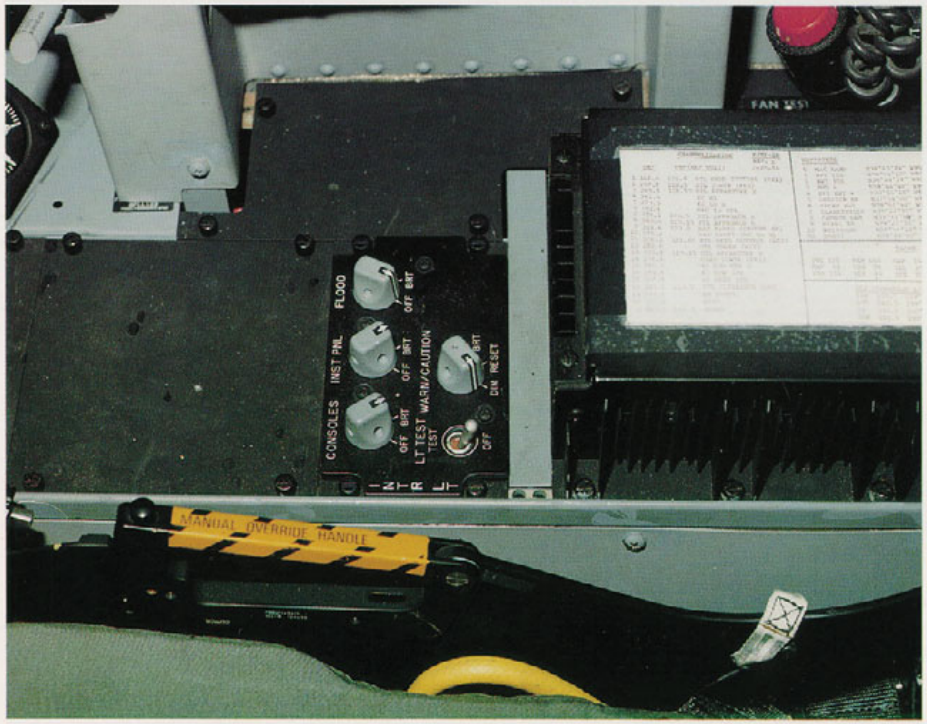


(MCAIR via John S.BROOKS)

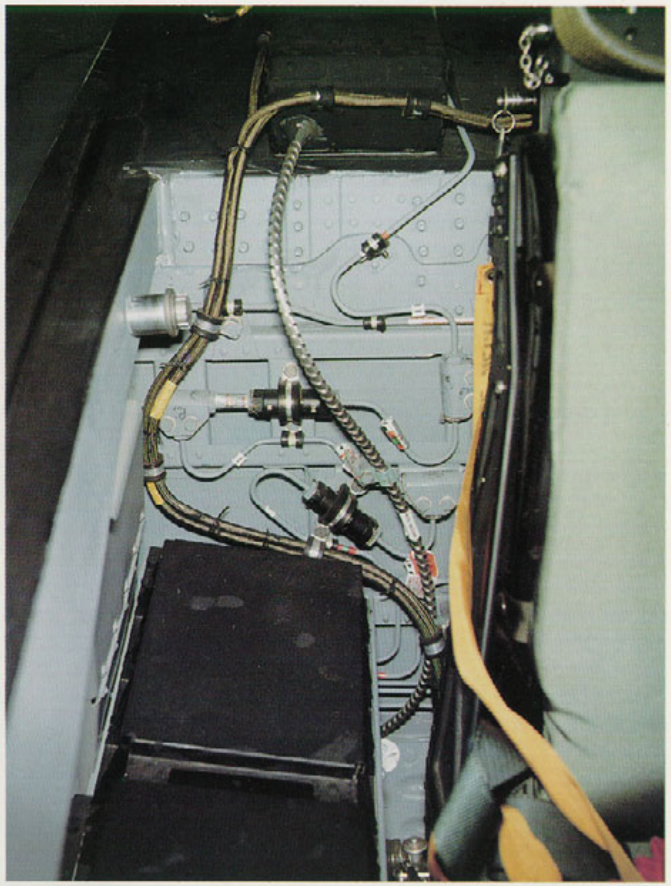
More spartan F/A-18B rear cockpit featuring similar CRT displays but lacking the ECM control panel on the center console, the hook down and wing fold handle. Instead, an ejection seat mode selector is located on the right hand sub panel. Note the various emergency pushbuttons marked yellow/black.



(MCAIR via John S.BROOKS)

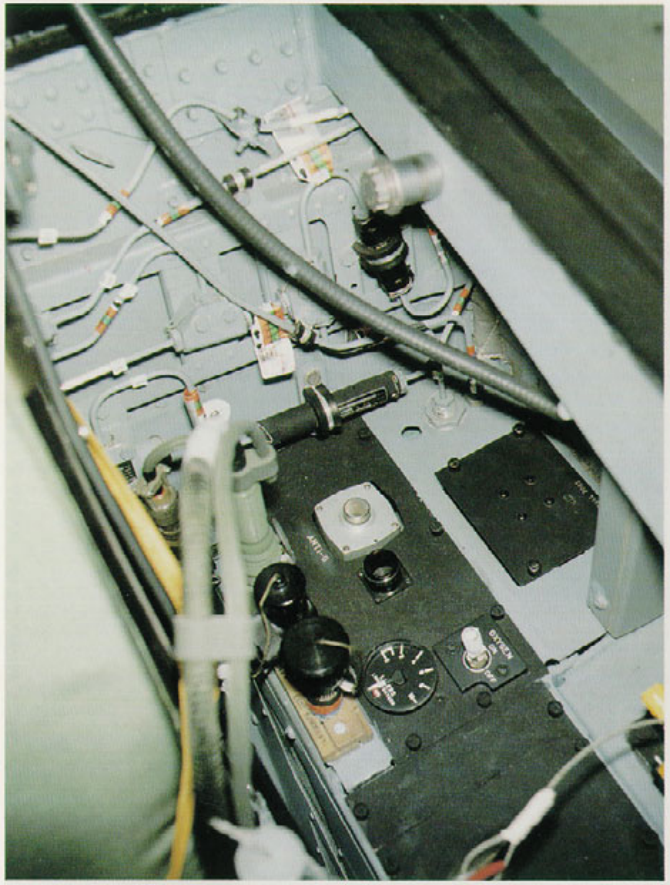


(MCAIR via John S.BROOKS)

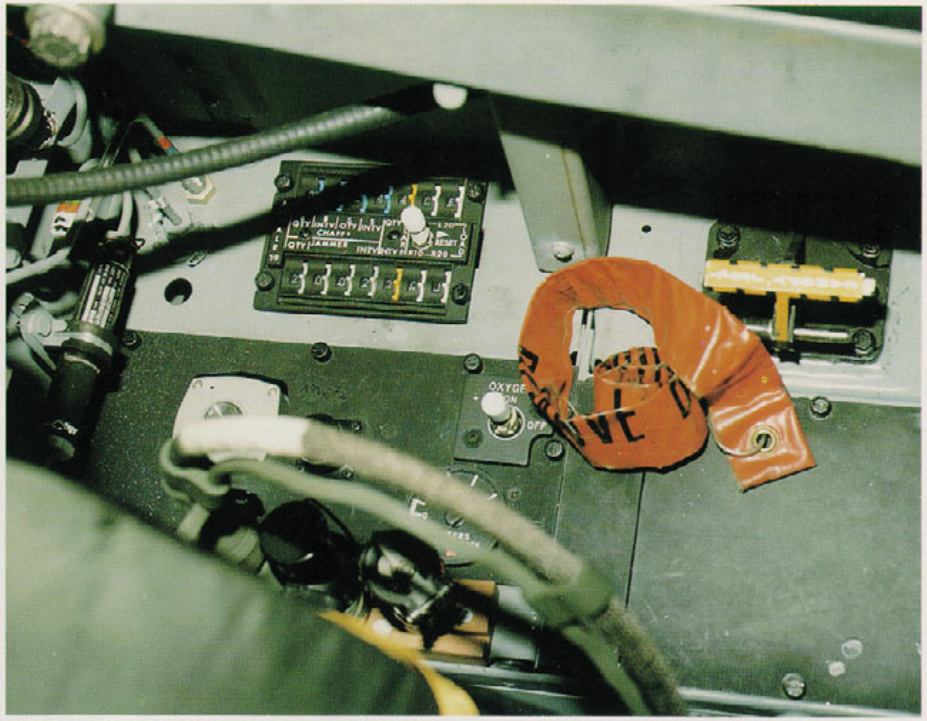


(MCAIR via John S.BROOKS)

UHF, VHF TACAN and ILS (Canadian a/c only) reference panel taped to the cockpit lights controller box with the interior lighting control panel immediately in front of it. Sidepanel dome light is stowed behind the box against the cockpit sidewall and can be clamped almost anywhere on this side of the cockpit when needed.
Mostly cables and connectors are mounted to the aft bulkhead which is painted the same gray color as the rest of the cockpit interior.



(MCAIR via John S.BROOKS)



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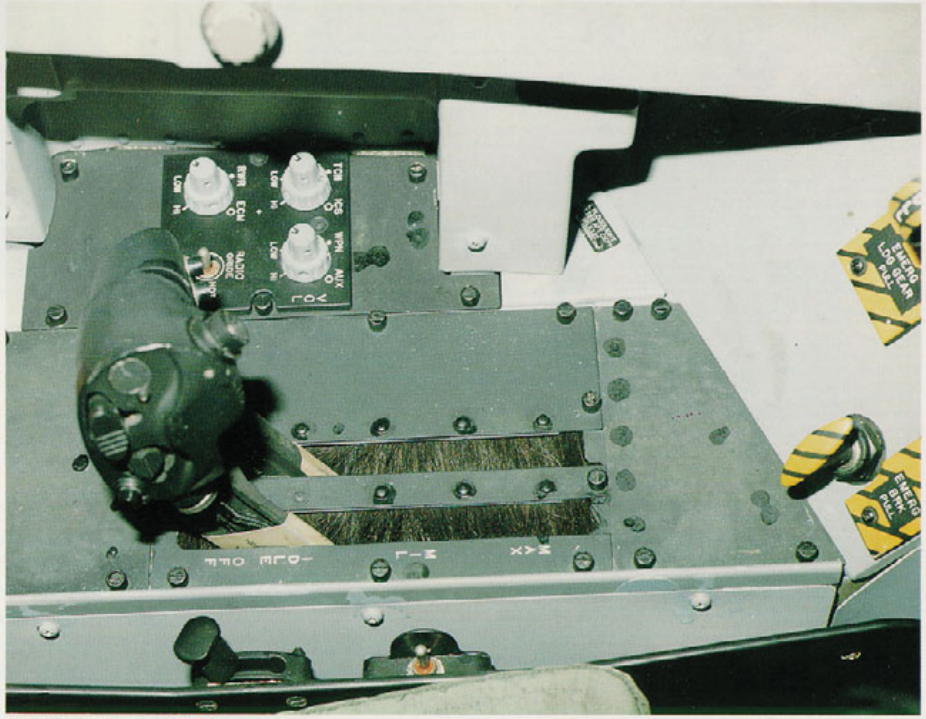


(MCAIR via John S.BROOKS)

The opposite side of the rear cockpit with G-suit and oxygen regulator panel aft of the seat. Some F/A-18 D have an ALE 39 (ECM related) control panel to the rear. Note the remove before flight tag securing the yellow/black canopy jettison handle to the sidewall. Dual throttle control levers for dual engine control can be pushed from OFF into IDLE, MIL (military power) or MAX (maximum power). Note the large screws holding the black subpanels in place.

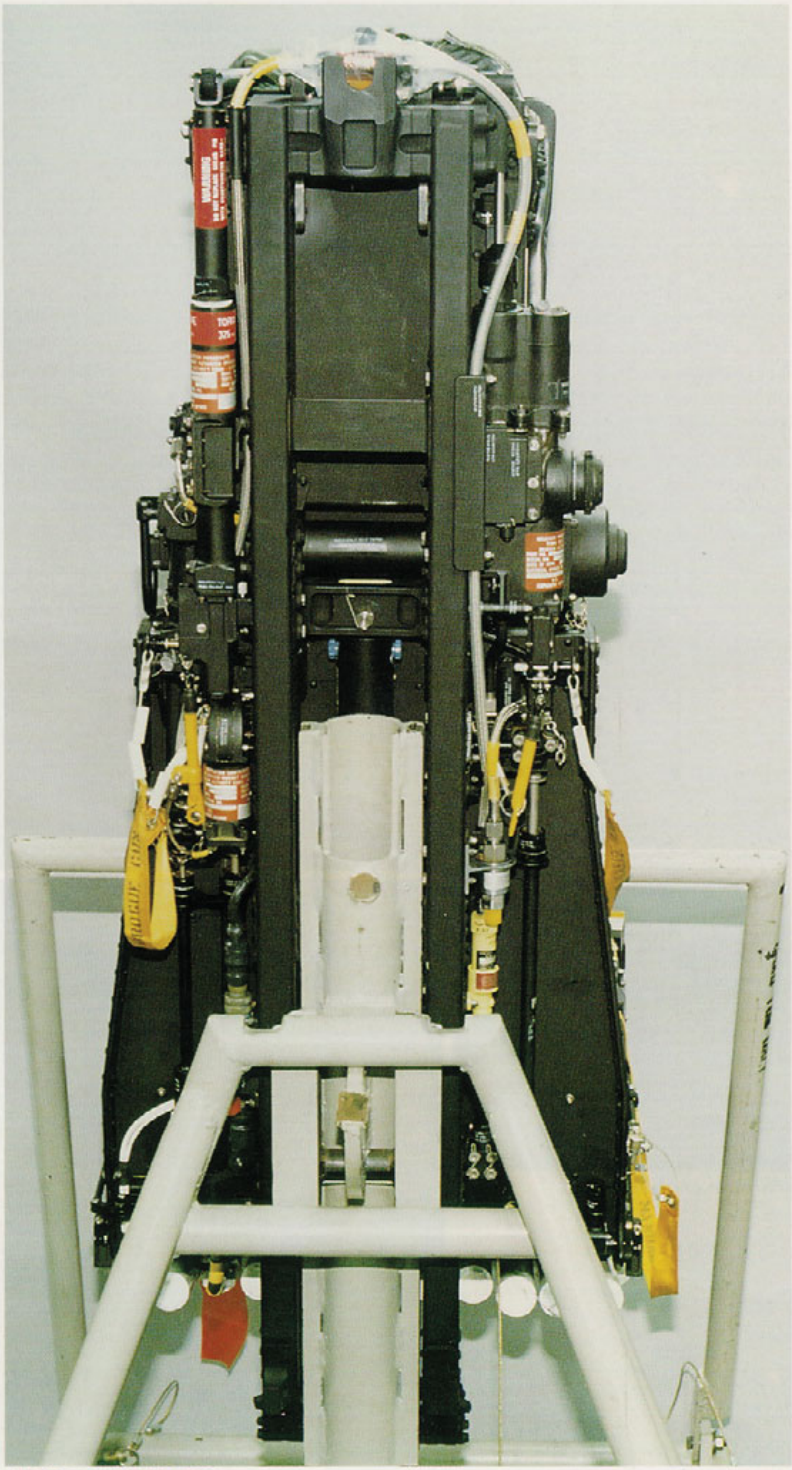
(MCAIR via John S.BROOKS)

(MCAIR via John S.BROOKS)

No F/A-18 leaves the MCAIR plant without the SJU-5/6A ejection seat. The SJU-5/A which differs only slightly from the SJU-6/A occupies the F/A-18C, CF-18A and F/A-18D aft cockpit while the latter is installed in the F/A-18D forward cockpit. This seat, which has zero-zero capability (which means it can be activated on ground level and still take the pilot to a safe height for a full parachute deployment even when the aircraft is flying upside down) has the usual components already familiar to modern jet pilots.

(MCAIR via John S.BROOKS)

Today's fighter jocks sit on the survival pack, attach their harness to the backrest harness assembly and strap the leg restraint garters around their lower legs (which are pulled against the seat (clear of the canopy frame) upon ejection and brace their head against the parachute pack in the headrest prior to launch. Various colors of seat cushion, back pack, ejection handles and harnesses can be made out. Note the yellow and red safety straps also installed when the aircraft is on the ground.



(MCAIR via John S.BROOKS)

(MCAIR via John S.BROOKS)

F/A-18 Night Attack Hornet.
Cockpit layout.
(MCAIR photo's)

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