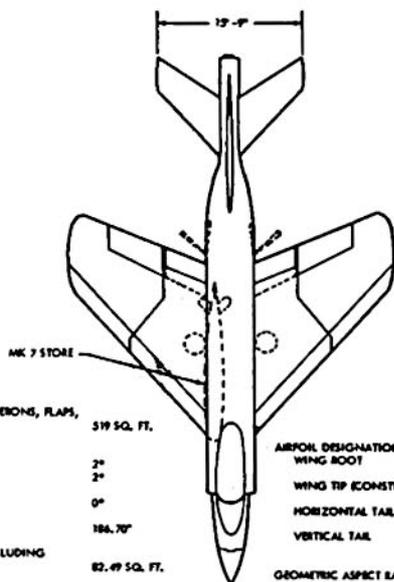


STANDARD AIRCRAFT CHARACTERISTICS

F-3C DEMON

McDONNELL



TOTAL WING AREA INCLUDING ALERONS, FLAPS, AND 103.0 SQ. FT. OF FUSELAGE

519 SQ. FT.

INCIDENCE AT ROOT AT CONSTRUCTION TIPS

2°

2°

DIHEDRAL

0°

MEAN AEROBYNAMIC CHORD

186.70"

TOTAL HORIZONTAL TAIL AREA INCLUDING 13.52 SQ. FT. OF FUSELAGE

82.49 SQ. FT.

TOTAL VERTICAL TAIL AREA FIN TO BUDDER HINGE BUDDER, AFT OF HINGE

45.40 SQ. FT.

34.10 SQ. FT.

11.30 SQ. FT.

AIRFOIL DESIGNATION PARALLEL TO CENTERLINE

WING ROOT NACA 0026.77-1.13

32/0.77 (MOD.)

WING TIP (CONSTRUCTION TIP) NACA 0026.36-1.16

38/1.14 (MOD.)

HORIZONTAL TAIL NACA 0027-1.16

38/1.14 (MOD.)

VERTICAL TAIL NACA 0027-1.16

38/1.14 (MOD.)

GEOMETRIC ASPECT RATIO

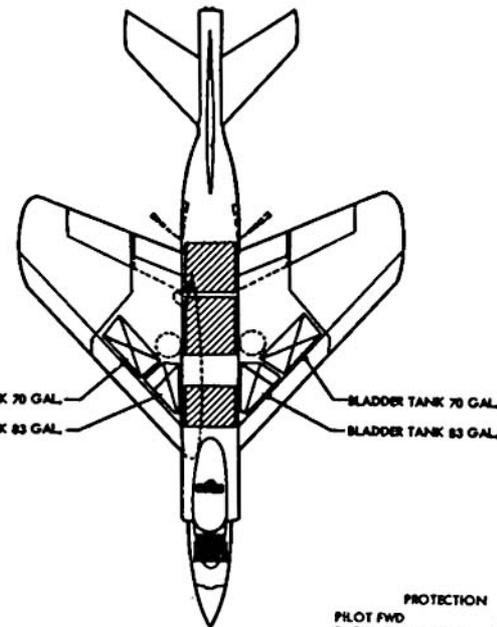
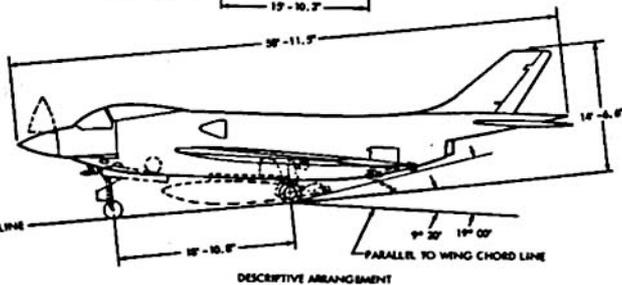
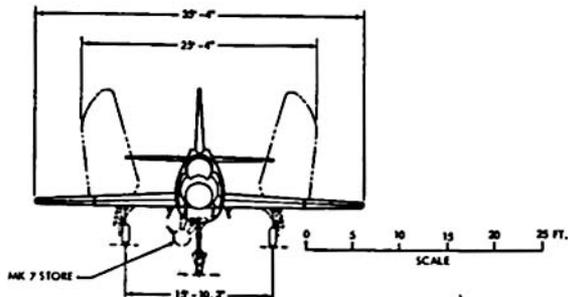
2.41

WING HORIZONTAL TAIL

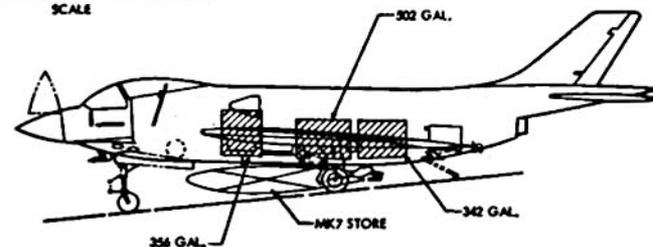
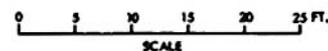
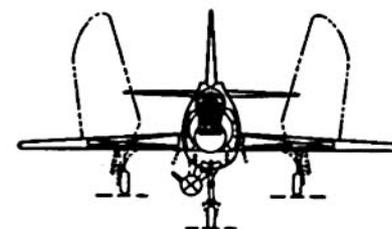
3.00

VERTICAL TAIL

1.12



PROTECTION
 PILOT FWD -79 LBS.
 BACK ARMOR PLATE -30 LBS.
 FLOOR PLAC PLATE -22 LBS.
 SELF-SEALING FUEL CELLS 495 LBS.



ARMAMENT AND TANKAGE

POWER PLANT

NO. & MODEL.....(1) J71-A-2
 MFR.....Allison
 TYPE.....Axial flow
 LENGTH INCLUDING A.B.....287"
 HEIGHT.....42"
 DIAMETER.....43"
 AUGMENTATION.....Afterburner

RATINGS

	LES.	RPM.	ALT.
MAXIMUM	14,500...	6,100...	S.S.L.
MILITARY	10,200...	6,100...	S.S.L.
NORMAL	8,800...	6,100...	S.S.L.

SPEC NO. 361-B

ORDNANCE

NO.	SIZE	LOCATION	RDS.
4	20mm	Nose	720

FIRE CONTROL

1-AFCS Mk-16 Mod 9 with
 Gyro and MK-32 Converter
 1-AN-N-6A Gun Camera

STORES

1-Mk-7 Special Store
 1-Mk-91 Special Store
 1-Mk-12 Special Store
 2-Aero 7A Douglas Ejector Rack on
 fuselage

 6-Aero 15A rocket launchers on wing -
 500 capacity each
 Aero 18 Control (LAB System)
 T-208 Store Control System

MISSION AND DESCRIPTION

The McDonnell F3H-2N airplane is a single place, swept wing, all weather fighter, designed for either land or carrier based operations.

The F3H-2N is fitted with tricycle landing gear, catapult and arresting gear, and folding wing panels. Equipment includes an automatic pilot, ejection seat, and pressurized cockpit. It is fitted with power actuated leading edge slats, trailing edge plain flaps, and fuselage mounted speed brakes. The primary control system incorporates power actuation with artificial feel forces. Provisions are included for obtaining moderate control forces during emergency operation.

An auxiliary power unit may be carried externally to provide for engine starting when operating from advance bases.

DEVELOPMENT

First Flight.....January 1955
 Service Use.....December 1955

DIMENSIONS

WING
 AREA.....519 Sq. Ft.
 SPAN.....35'-4"
 MAC.....15'-6"
 SWEEPBACK (1/4 Chord).....43°-12'
 LENGTH.....59'-0"
 HEIGHT.....14'-7"
 TREAD.....15'-10"

WEIGHTS

LOADINGS	POUNDS	L.F.
EMPTY.....	20,645.....	
BASIC.....	21,542.....	
DESIGN.....	26,000.....	7.5
COMBAT.....	28,050.....	7.0
MAX. T.O. (Field).....	35,378.....	5.5
MAX. LDG. (Field).....	29,000.....	

ALL WEIGHTS ARE ESTIMATED

FUEL AND OIL

NO. TANKS	GALS.	LOCATION
3	1200	Fuselage
4	306	Wings

FUEL GRADE.....JP-4
 FUEL SPEC.....Applicable MIL-F-5624

OIL

GRADE.....1010
 SPEC.....Applicable MIL-C-6081

ELECTRONICS

UHF.....AN/ARC-27A
 UHF DP.....AN/ARA-25
 LP ADF.....AN/ARN-6
 RADAR ALTIMETER.....AN/APN-22
 IFF.....AN/APX-6/6B
 RADAR.....AN/APG-51A
 SPECIAL EQUIP. Provisions
 for ADF, AN/ARN-21 (Alternate for
 AN/ARN-6)
 CODER.....AN/APA-89

SERVICE

PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION	(1)	(2)	(3)	(4)	(5)
	CLEAN Full Internal Fuel			COMBAT AIR PATROL	MK-7 MOD 3 Store
TAKE-OFF WEIGHT	lb.	31,963		31,963	33,611
Fuel	lb.	9,789		9,789	9,789
Fayload (Guns/Store)	lb.	432		432	432/1,650
Wing loading	lb./sq.ft.	61.6		61.6	64.8
Stall speed - power-off	kn.	109.5		109.5	112.5
Take-off run at S.L. - calm	ft.	3,550		3,550	4,000
Take-off run at S.L. 25 kn. wind	ft.	2,400		2,400	2,800
Take-off to clear 50 ft. - calm	ft.	--		--	--
Max. speed/altitude (A)	kn./ft.	580/Sea Level		580/Sea Level	560/Sea Level
Rate of climb at S.L. (A)	fpm.	5,550		5,550	4,830
Time: S.L. to 20,000 ft. (A)	min.	5.2		5.2	6.2
Time: S.L. to 30,000 ft. (A)	min.	9.8		9.8	12.4
Service ceiling (100 fpm) (A)	ft.	39,000		39,000	35,500
Combat range	n.mi.	1,040		--	880
Average cruising speed	kn.	481		--	473
Cruising altitude(s)	ft.	35,000/39,200		--	31,600/38,200
Combat radius	n.mi.	265		150	275
Average cruising speed	kn.	481		465	472
Mission time	hrs.	1.88		1.98	1.2
Loiter time	hrs.			.98	
COMBAT LOADING CONDITION	(2)	(3)	(4)	(6)	(7)
				1 PYLON	1 PYLON
COMBAT WEIGHT	lb.	28,050	28,050	28,050	28,050
Engine power		Maximum	Military	Maximum	Military
Fuel	lb.	5,876	5,876	5,876	5,876
Combat speed/combat altitude	kn./ft.	561/35,000	526/35,000	625/Sea Level	572/Sea Level
Rate of climb/combat altitude	fpm/ft.	5,500/35,000	1,200/35,000	13,390/Sea Level	6,200/Sea Level
Combat ceiling (500 fpm)	ft.	49,000	40,000	48,600	39,500
Rate of climb at S.L.	fpm.	15,200	6,850	13,390	6,200
Max. speed at S.L.	kn.	628	581	625	572
Max. speed/altitude	kn./ft.	628/Sea Level	581/Sea Level	625/Sea Level	572/Sea Level
LANDING WEIGHT	lb.	23,812		23,812	
Fuel	lb.	1,640		1,640	
Stall speed - power-off	kn.	94.3		94.3	
Stall speed - with approach power	kn.	90.4		90.4	

NOTES

(A) Military rated thrust.

PERFORMANCE BASIS: Calculations.

RANGE AND RADIUS are based on engine specification fuel consumption increased by 5%.

REASON FOR REISSUE: To incorporate more accurate performance data on basic airplanes plus incorporation of special store configurations.

SPOTTING: A total of 64 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(8) MK-91 STORE	(9) MK-12 STORE			
TAKE-OFF WEIGHT	lb.	35,378	33,233			
Fuel	lb.	9,789	9,789			
Payload (Guns/Store)	lb.	432/3,415	432/1,270			
Wing loading	lb./sq.ft.	68.2	64.0			
Stall speed - power-off	kn.	115.4	111.9			
Take-off run at S.L. - calm	ft.	4,550	3,960			
Take-off run at S.L. 25 kn. wind	ft.	3,100	2,650			
Take-off to clear 50 ft. - calm	ft.	--	--			
Max. speed/altitude (A)	kn./ft.	564/Sea Level	558/Sea Level			
Rate of climb at S.L. (A)	fpm.	4,510	4,900			
Time: S.L. to 20,000 ft. (A)	min.	6.7	6.2			
Time: S.L. to 30,000 ft. (A)	min.	13.3	12.0			
Service ceiling (100 fpm) (A)	ft.	34,800	35,950			
Combat range	n.mi.	836	886			
Average cruising speed	kn.	477	472			
Cruising altitude(s)	ft.	30,800/34,750	31,900/38,400			
Combat radius	n.mi.	270	275			
Average cruising speed	kn.	477	474			
Mission time	hrs	1.2	1.2			
COMBAT LOADING CONDITION						
COMBAT WEIGHT	lb.					
Engine power						
Fuel	lb.					
Combat speed/combat altitude	kn./ft.					
Rate of climb/combat altitude	fpm/ft.					
Combat ceiling (500 fpm)	ft.					
Rate of climb at S.L.	fpm.					
Max. speed at S.L.	kn.					
Max. speed/altitude	kn./ft.					
LANDING WEIGHT						
Fuel	lb.					
Stall speed - power-off	kn.					
Stall speed - with approach power	kn.					

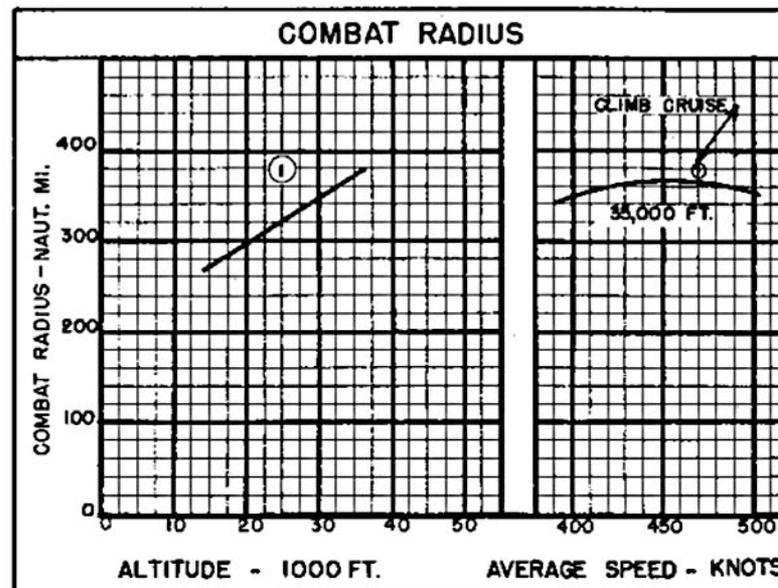
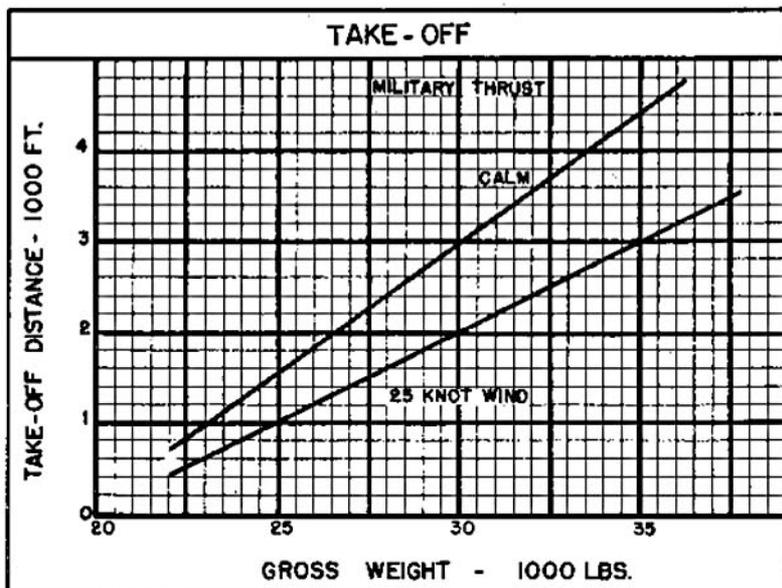
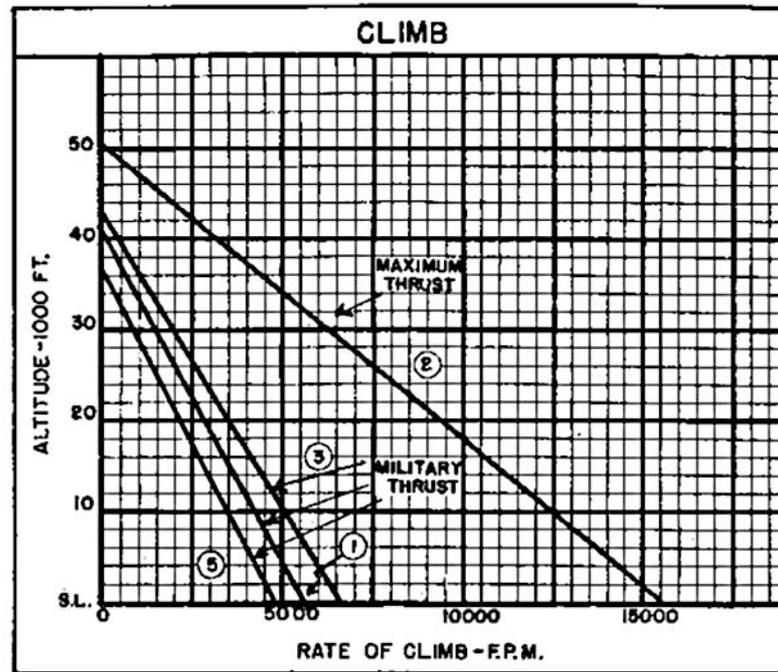
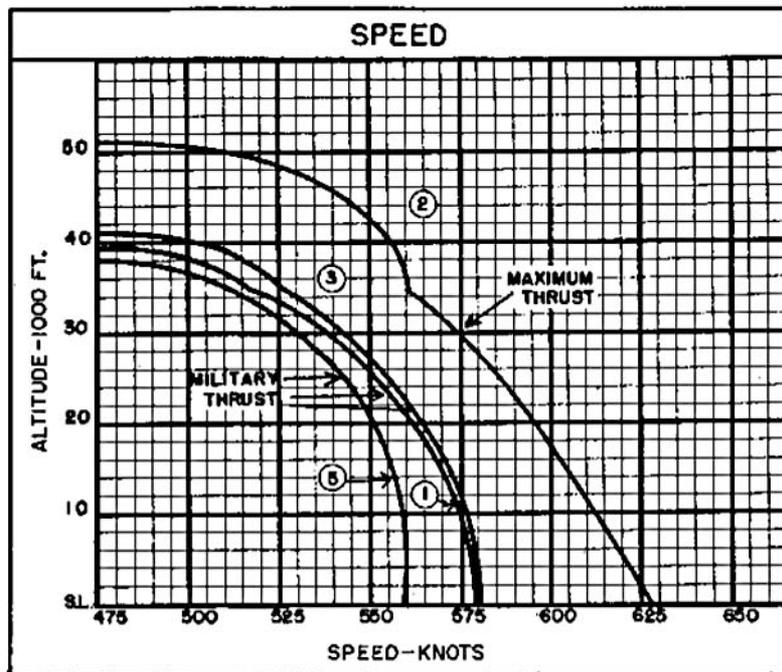
NOTES

(A) Military rated thrust.

PERFORMANCE BASIS: Calculations.

RANGE AND RADIUS are based on engine specification fuel consumption increased by 5%.

SERVICE



○ LOADING CONDITION COLUMN NUMBER

NOTES

GENERAL PURPOSE FIGHTER

WARM-UP, TAKE-OFF, ACCELERATION: 5 minutes at normal rated thrust at sea level.
 CLIMB: At military rated thrust to optimum cruise altitude.
 CRUISE-OUT: At speed for long range at optimum cruise altitudes.
 COMBAT: Fuel allowance at 35,000 feet for 20 minutes operation, 15 minutes at military rated thrust and 5 minutes at maximum rated thrust (assume combat concluded at initial cruise-back altitude).
 CRUISE-BACK: At speed for long range at optimum cruise altitudes.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

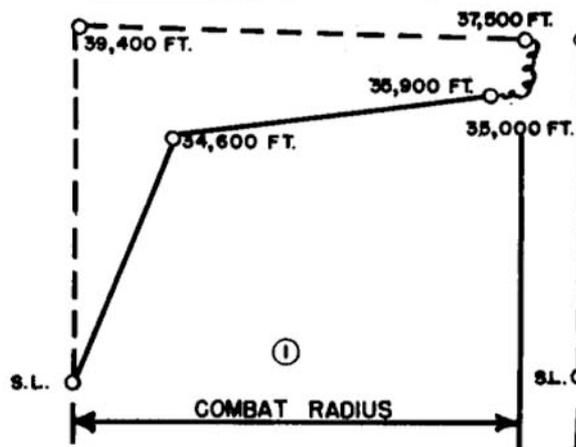
COMBAT AIR PATROL

WARM-UP, TAKE-OFF, ACCELERATION: 5 minutes at normal rated thrust at sea level.
 CLIMB: At military rated thrust to optimum cruise altitude.
 CRUISE: To a point 150 nautical miles from base at optimum cruise altitudes and airspeed for maximum range.
 LOITER: At speed for maximum endurance at an altitude coinciding with final cruise-out altitude.
 COMBAT: Fuel allowance at 35,000 feet for 20 minutes operation, 15 minutes at maximum speed with military thrust, 5 minutes at a speed midway between Vmax at military power and Vmax at maximum power (assume combat concluded at initial cruise-back altitude).
 CRUISE: Back to base 150 nautical miles at optimum cruise altitudes and at airspeed for maximum range.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

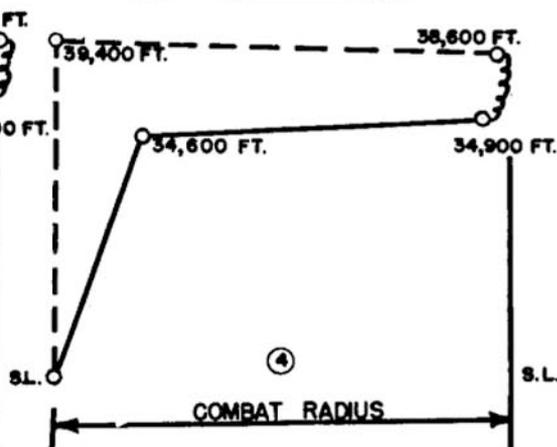
LOW ALTITUDE SPECIAL STORE DELIVERY MISSION

WARM-UP, TAKE-OFF, ACCELERATION: 5 minutes at normal rated thrust at sea level.
 CLIMB: At military rated thrust to optimum cruise altitude.
 CRUISE-OUT: At speed for long range at optimum cruise altitudes.
 DESCEND: To sea level. (no fuel used - no distance gained)
 APPROACH: 50 nautical miles at maximum speed at military rated thrust at sea level.
 DROP STORE:
 COMBAT: Fuel allowance at sea level for one minute at maximum rated thrust.
 ESCAPE: 50 nautical miles at maximum speed at military rated thrust at sea level.
 CLIMB: At military rated thrust to optimum cruise altitude.
 CRUISE-BACK: At speed for long range at optimum cruise altitudes.
 RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

GENERAL PURPOSE FIGHTER



COMBAT AIR PATROL



LOW ALTITUDE SPECIAL STORE DELIVERY

