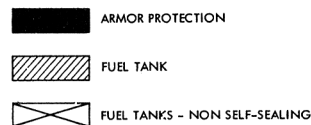
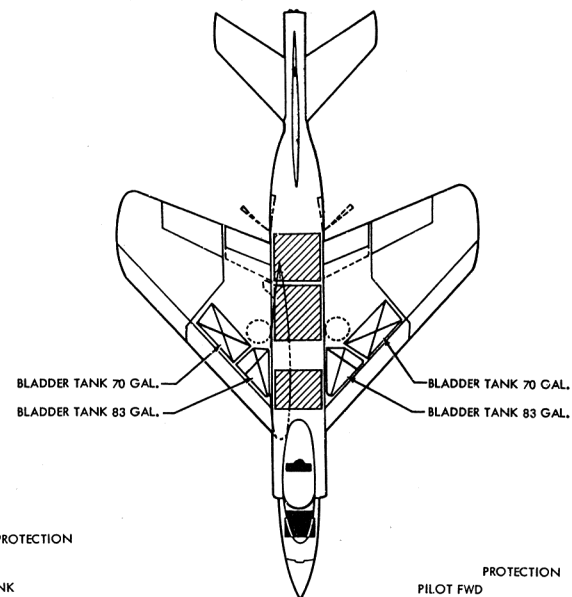
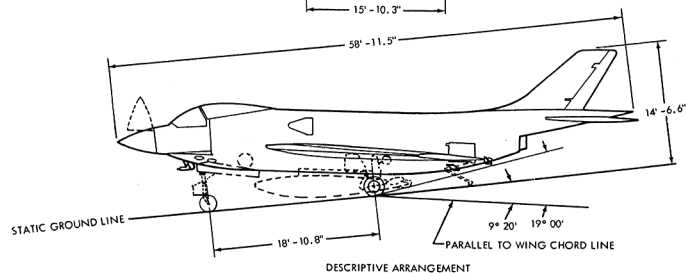
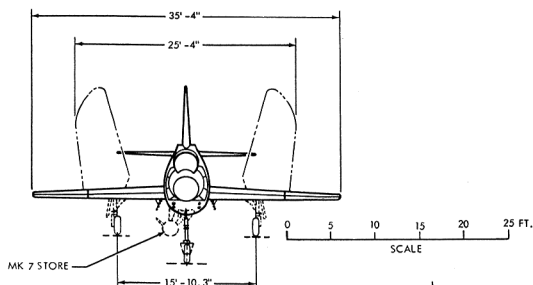
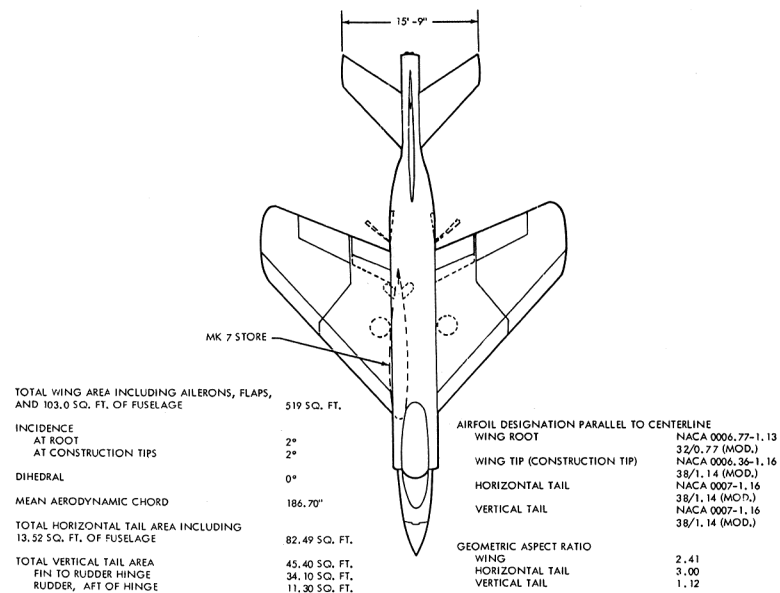


STANDARD AIRCRAFT CHARACTERISTICS

F3H-2N "DEMON"

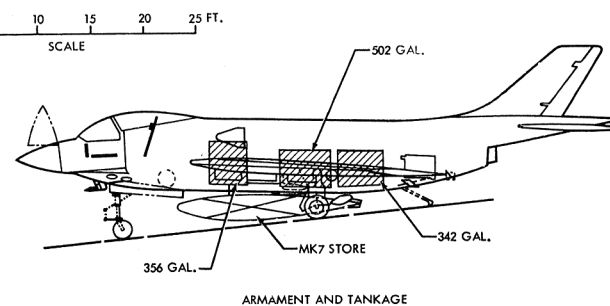
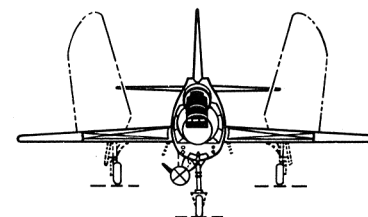
Mc DONNELL

Standard Aircraft Characteristics NAVAER 135A (REV. 1-55)



PROTECTION

PILOT FWD -79 LBS.
BACK ARMOR PLATE -50 LBS.
FLOOR FLAK PLATE -22 LBS.
SELF-SEALING FUEL CELLS 495 LBS.



Standard Aircraft Characteristics NAVAER 1332B (Rev. 1-55)

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

	<u>LBS.</u>	<u>RPM.</u>	<u>ALT.</u>
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

<u>NO.</u>	<u>SIZE</u>	<u>GUNS</u>	<u>RDS.</u>
		<u>LOCATION</u>	
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 ($\frac{1}{4}$ Chord).....43°-12'
 LENGTH.....59'-0"
 HEIGHT.....14'-7"
 TREAD.....15'-10"

WEIGHTS

<u>LOADINGS</u>	<u>POUNDS</u>	<u>L.F.</u>
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

<u>NO. TANKS</u>	<u>GALS.</u>	<u>LOCATION</u>
3	1200	Fuselage
4	306	Wings

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

OIL

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

ELECTRONICS

UHF.....AN/ARC-27A
 UHF DF.....AN/ARA-25
 LF 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

PERFORMANCE SUMMARY						
TAKE-OFF LOADING CONDITION		(1) CLEAN Full Internal Fuel		(4) COMBAT AIR PATROL	(5) MK-7 MOD 3 Store	
TAKE-OFF WEIGHT	lb.	31,963		31,963	33,611	
Fuel	lb.	9,789		9,789	9,789	
Payload (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.	365		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)		(6) 1 PYLON	(7) 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 airplane 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.

NAVAER-1395D (Rev. 1-55)

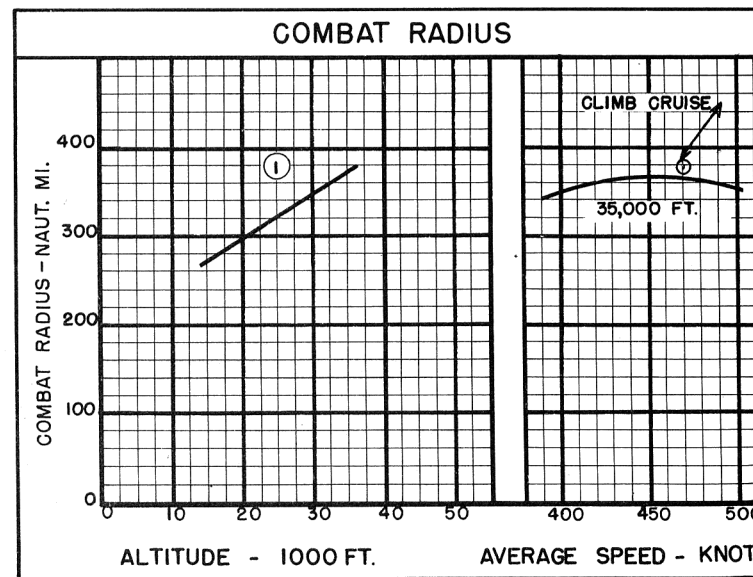
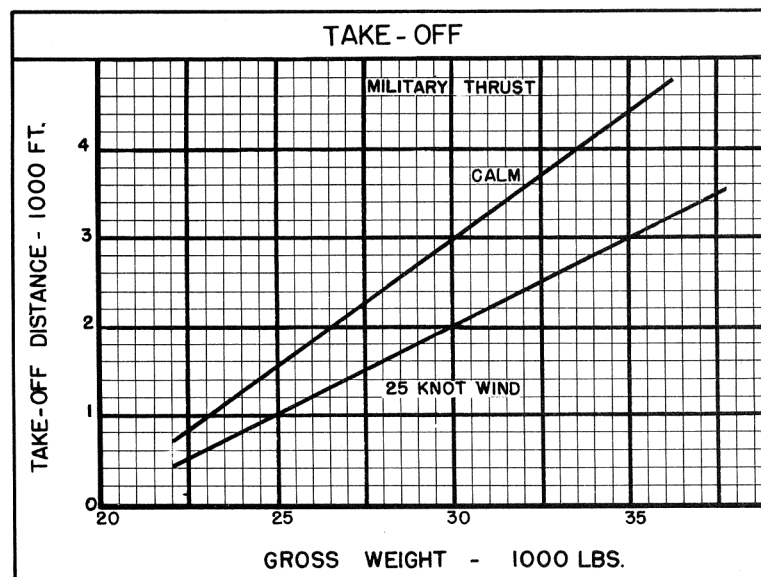
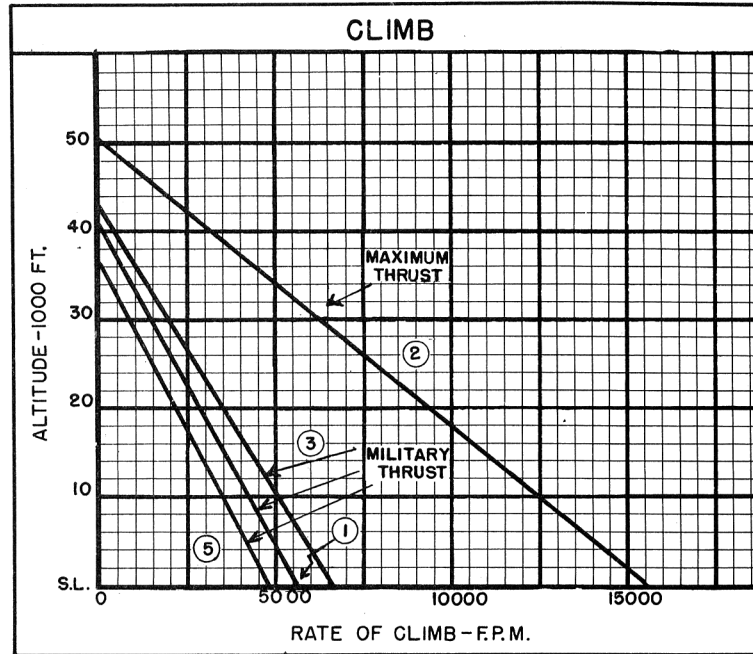
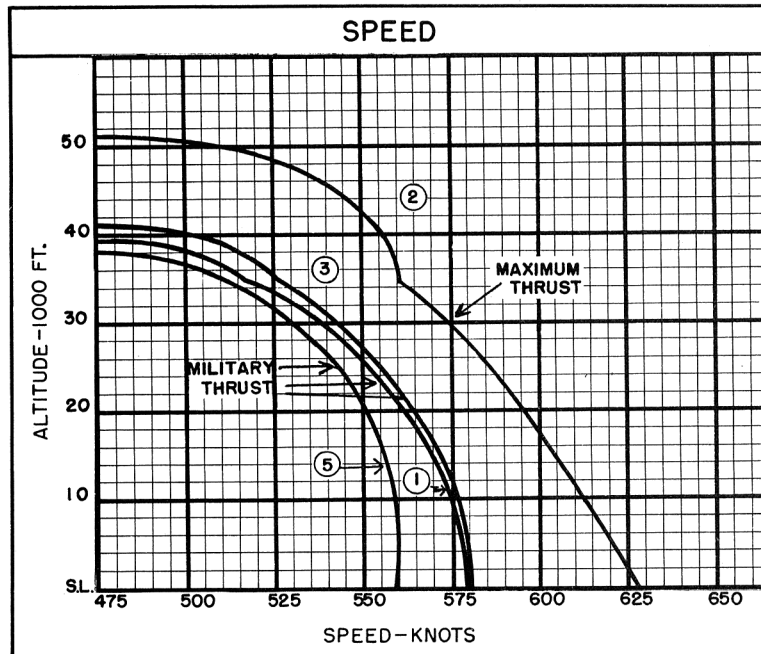
PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION	(8)	MK-91 STORE	(9)	MK-12 STORE	
TAKE-OFF WEIGHT	lb.	35,378		33,233	
Fuel	lb.	9,789		9,789	
Payload (Guns/Store)	lb.	432/3,415		432/1,270	
Wing loading	lb./sq.ft.	68.2		64.0	
Stall speed - power-off	kn.	115.4		111.9	
Take-off run at S.L. - calm	ft.	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%.



Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

○ 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.

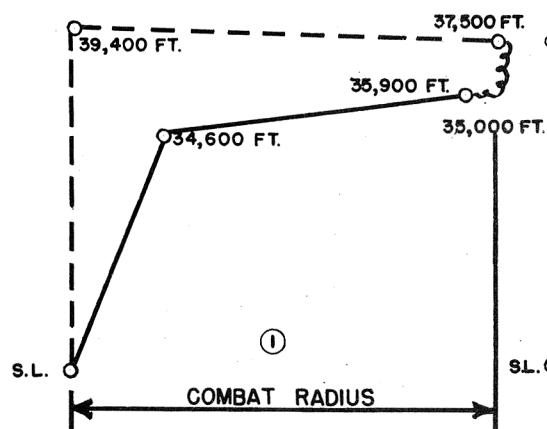
COMBAT AIR PATROL

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.

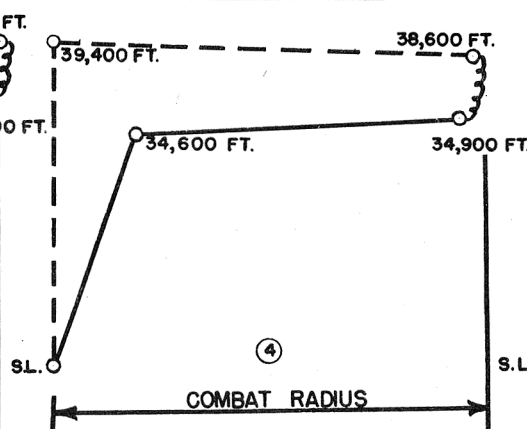
LOW ALTITUDE SPECIAL STORE DELIVERY MISSION

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.

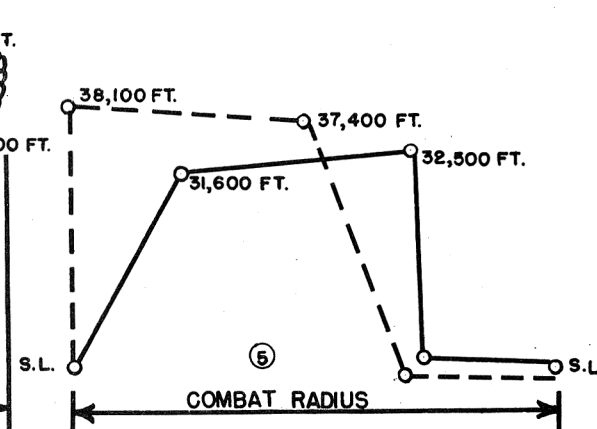
GENERAL PURPOSE FIGHTER



COMBAT AIR PATROL



LOW ALTITUDE SPECIAL STORE DELIVERY



SERVICE

CONFIDENTIAL

Standard Aircraft Characteristics NATAR 1335F (Rev. 1-55)

F3H-2N

CONFIDENTIAL

15 JUNE 1956