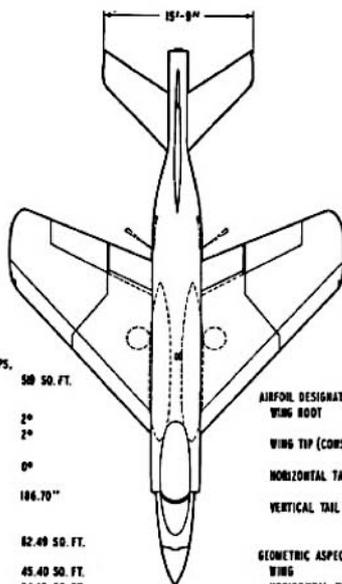




STANDARD AIRCRAFT CHARACTERISTICS

F3H-2N "DEMON"

McDONNELL



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

50 50. FT.

INCIDENCE
AT ROOT

2°

AT CONSTRUCTION TIPS

2°

DIHEDRAL

0°

MEAN AERODYNAMIC CHORD

106.70"

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

82.49 50. FT.

TOTAL VERTICAL TAIL AREA

45.40 50. FT.

FIN TO RUDDER HINGE

34.10 50. FT.

RUDDER, AFT OF HINGE

11.30 50. FT.

AIRFOIL DESIGNATION PARALLEL TO CENTERLINE

WING ROOT	NACA 0006.77-1.13
WING TIP (CONSTRUCTION TIP)	32/0.77 (MOD.)
HORIZONTAL TAIL	NACA 0006.36-1.16
VERTICAL TAIL	38/1.14 (MOD.)
	NACA 0007-1.36
	38/1.14 (MOD.)
	NACA 0007-1.16
	38/1.14 (MOD.)

GEOMETRIC ASPECT RATIO

2.41

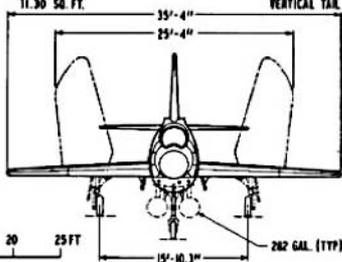
WING

3.00

HORIZONTAL TAIL

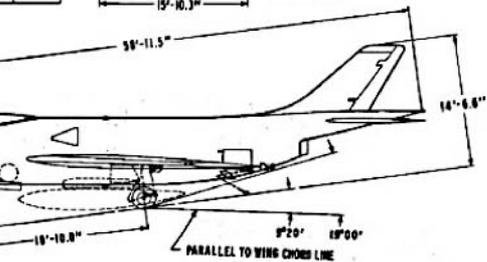
1.12

VERTICAL TAIL

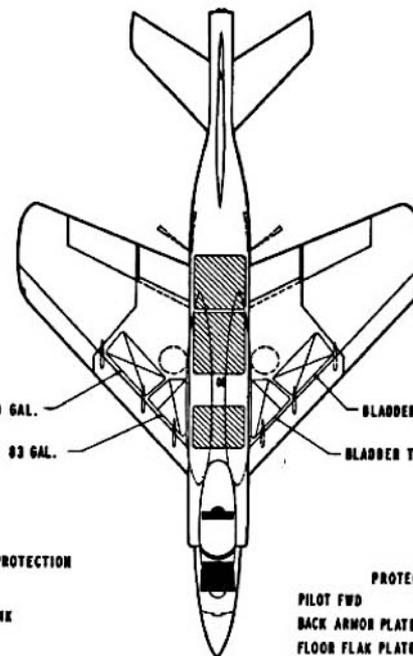


0 5 10 15 20 25 FT
SCALE

282 GAL. (TYP)



DESCRIPTIVE ARRANGEMENT



BLADDER TANK 70 GAL.

BLADDER TANK 70 GAL.

BLADDER TANK 83 GAL.

BLADDER TANK 83 GAL.

ARMOR PROTECTION

FUEL TANK

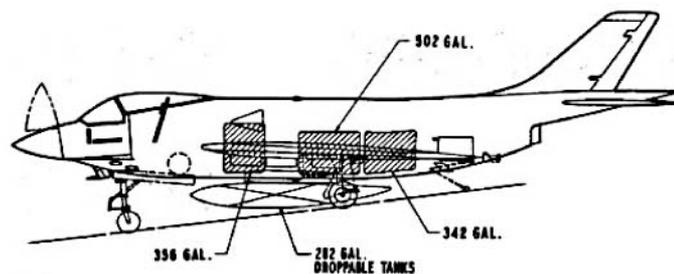
FUEL TANKS - NON SELF-SEALING

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



0 5 10 15 20 25 FT
SCALE

148-1
ROCKET LAUNCHERS



ARMAMENT AND TANKAGE

A 22474

F3H-2N

1 MARCH 1955

POWER PLANT

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

RATINGS

	<u>LBS.</u>	<u>RPM</u>	<u>ALT.</u>
MAX. *	14500	6100	S.S.L.
MIL.	10200	6100	S.S.L.
NORM.	8800	6000	S.S.L.

* With A.B. Augmentation.

SPEC. NO. 361-B

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 primary mission of the airplane is the destruction of enemy aircraft.

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

WEIGHTS

<u>LOADINGS</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY.....	20,288
BASIC.....	20,945
DESIGN.....	26,000	7.5..
COMBAT.....	27,491	7.1..
MAX.T.O. (FIELD)	35,000	6.2..
(CAT)	35,000
MAX.LAND (FIELD)	23,500	7.5..
(ARREST)	23,500

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.....MIL-F-5624

OIL

Grade.....1010
 Spec.....MIL-O-6081

ORDNANCEGUNS

<u>NO.</u>	<u>SIZE</u>	<u>LOCATION</u>	<u>RDS.</u>
4	20mm	Nose	720

FIRE CONTROL

E-10 Search & Fire Control
 Radar

EXTERNAL LOAD

<u>BACKS</u>	<u>NO.</u>	<u>LOCATION</u>	<u>MAX.CAP.</u>
Aero	8	Wing &	500 lb.
14A		Fuselage	
MK51*	2	Fuselage	2000 lb.

* Interchangeable with Aero
 14A rack on 2 fuselage
 stations.

Max.Load Capacity 4,000 lbs.

DIMENSIONSWING

AREA.....519 Sq.ft.
 SPAN.....35' - 4"
 M.A.C.....15' - 6"
 SWEEPBACK($\frac{1}{4}$ chord) 43° - 12'
 LENGTH.....59' - 0"
 HEIGHT.....14' - 7"
 TREAD.....15' - 10"

ELECTRONICS

UHF.....AN/ARC-27A
 UHF DF.....AN/ARA-25
 Short Range NAV.....AN/ARN-6
 Radio Altimeter.....AN/APN-22
 IFF.....AN/APX-6B
 Radar.....AN/APG-51A
 Special Equip...Provisions for
 ADF, AN/ARN-21 (Alternate for
 AN/APN-6)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) CLEAN Full Internal Fuel			
TAKE-OFF WEIGHT	lb.	31,404			
Fuel	lb.	9,789			
Payload	lb.	--			
Wing loading	lb./sq.ft.	60.5			
Stall speed - power-off	kn.	108.7			
Take-off run at S.L. - calm	ft.	3,400			
Take-off run at S.L. 25 kn. wind	ft.	2,300			
Take-off to clear 50 ft. - calm	ft.	--			
Max. speed/altitude	(A) kn./ft.	558/5,000			
Rate of climb at S.L.	(B) fpm	5,580			
Time: S.L. to 20,000 ft.	(B) min.	4.6			
Time: S.L. to 30,000 ft.	(B) min.	9.3			
Service ceiling (100 fpm)	(B) ft.	38,500			
Combat range	n.mi.	1,098			
Average cruising speed	kn.	471			
Cruising altitude(s)	ft.	35,332/39,600			
Combat radius	(C) n.mi.	375			
Average cruising speed	kn.	471			
Mission Time (Radius)		1.9			
COMBAT LOADING CONDITION		(2) Combat Clean	(3) Combat Clean		
COMBAT WEIGHT	lb.	27,491	27,491		
Engine power		Military	M11+A.B.		
Fuel	lb.	5,876	5,876		
Combat speed/altitude	kn./ft.	527/35,000	562/35,000		
Rate of climb/altitude	fpm/ft.	1,200/35,000	4,800/35,000		
Combat ceiling (500 fpm)	ft.	38,500	48,800		
Rate of climb at S.L.	fpm	6,550	15,500		
Max. speed at S.L.	kn.	581	628		
Max. speed/altitude	kn./ft.	581/S.L.	628/S.L.		
LANDING WEIGHT	lb.	23,115			
Fuel	lb.	1,500			
Stall speed - power-off	kn.	93.1			
Stall speed - with approach power	kn.	89.4			

NOTES

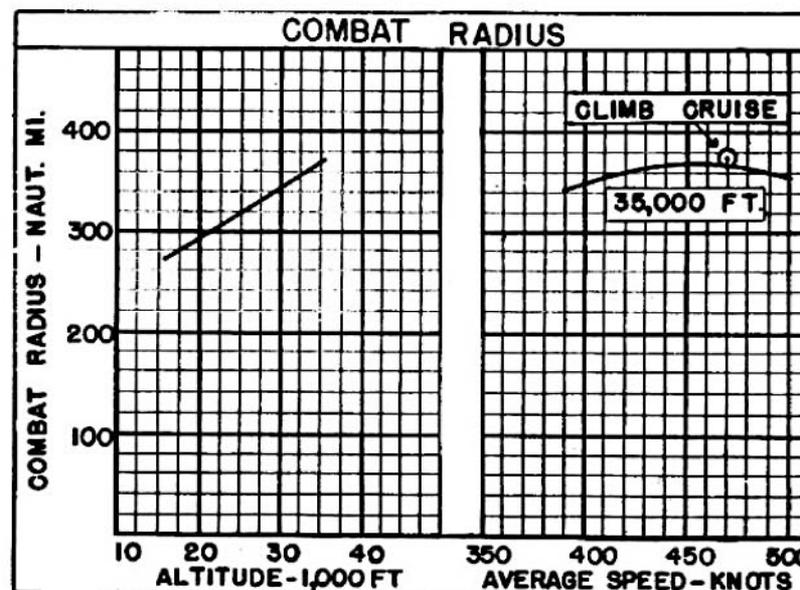
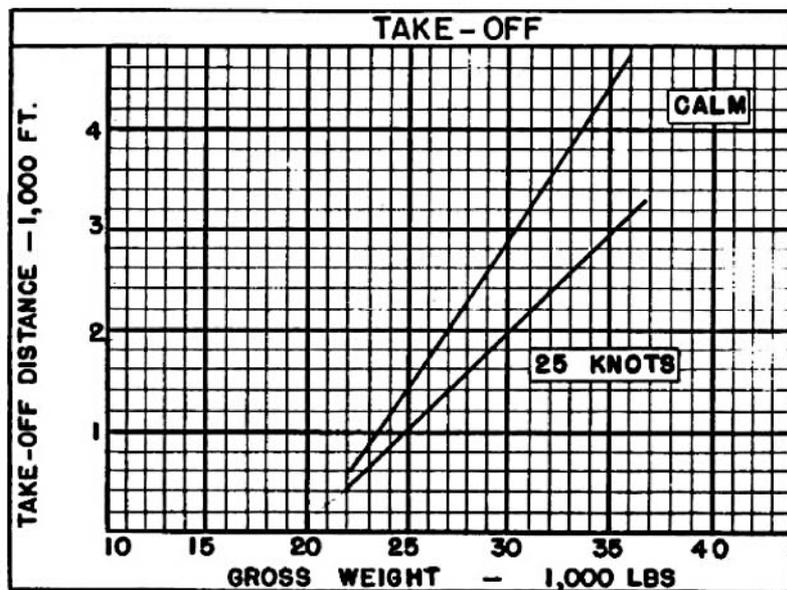
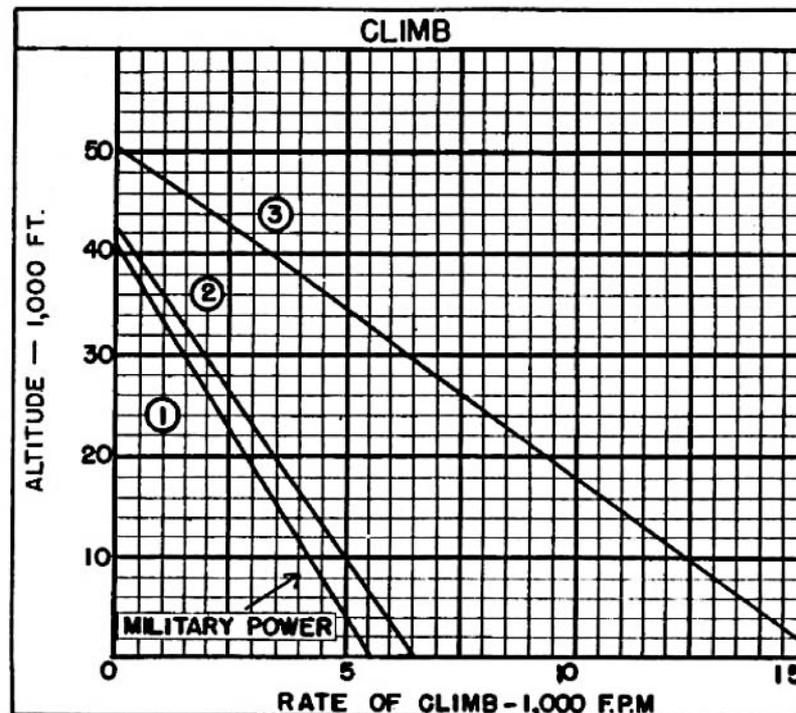
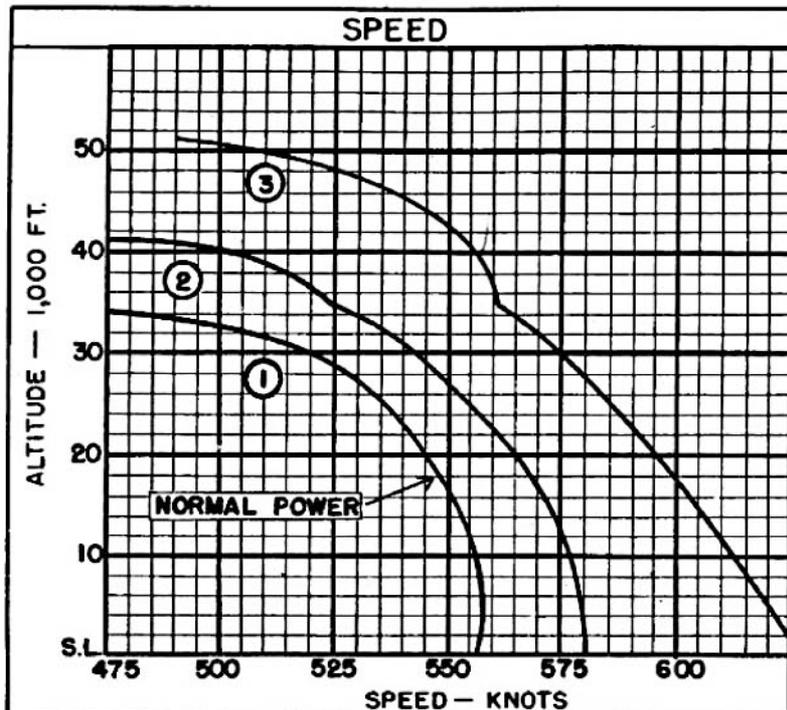
(A) Normal Rated Thrust

(B) Military Rated Thrust

(C) If afterburner is used in T.O. combat range and radius will be decreased to 330 Nautical miles.

Performance Basis: Calculations

Combat range and radius are based on engine specification fuel consumption data increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)

NOTES

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

GENERAL PURPOSE FIGHTER - (GAS TURBINE)

WARM-UP, TAKE-OFF, ACCELERATION: 5 minutes at normal rated thrust at sea level.

CLIMB: At military rated thrust to altitude for best cruise.

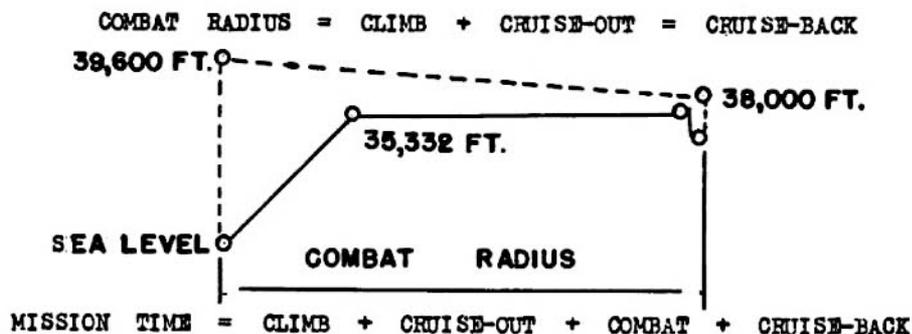
CRUISE-OUT: At speed for long range and altitude for best cruise.

DESCEND: To 35,000 ft. (No fuel used, no distance gained)

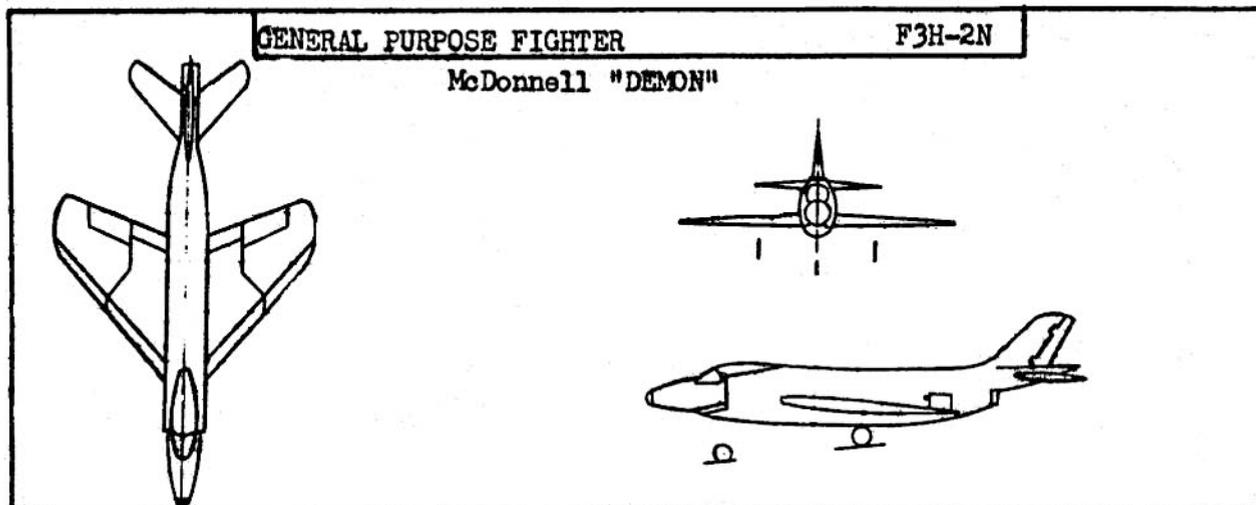
COMBAT: Fuel allowance at 35,000 ft. for 20 minutes operation: 15 minutes at military rated thrust and 5 minutes at maximum rated thrust. (Assume combat concluded at initial cruise back altitude)

CRUISE-BACK: At speed for long range at altitude for best cruise.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.



CHARACTERISTICS SUMMARY



WING AREA 519 sq. ft
WING SPAN 35' - 4"

LENGTH 59' - 0"
HEIGHT 14' - 7"

AVAILABILITY			PROCUREMENT			
NUMBER AVAILABLE			NUMBER DELIVERED			
			IN FISCAL YEARS			
ACTIVE	RESERVE	TOTAL				

STATUS
FIRST FLIGHT - - - - - January 1955 SERVICE USE - - - - - March 1955

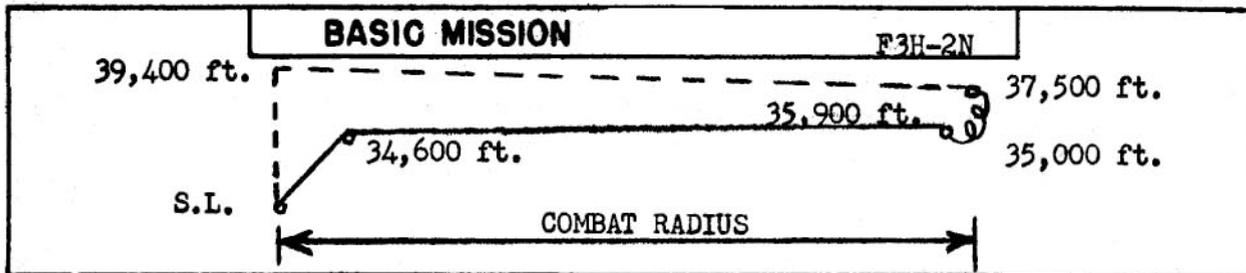
ENGINES			
1 Allison J71-A-2			
<u>LBS.</u>	<u>RPM.</u>	<u>ALT.</u>	
Max.	14,500/6,100/SSL		
Mil.	10,200/6,100/SSL		
Norm.	8,800/6,000/SSL		
SPEC. NO. 361-B			

FEATURES
Crew - 1
Pressurized
Folding Wings
Search & Fire Control Radar
Catapult & Arresting Gear
Powered leading edge Slats
MAX. FUEL CAP. 1506 gal.

ARMAMENT			
<u>GUNS</u>			
<u>NO.</u>	<u>SIZE</u>	<u>LOCATION</u>	<u>RDS</u>
4	20mm	Fuselage	720
- - - - -			
<u>FIRE CONTROL</u>			
1-AFSC MK.16 Mod. 9			
with MK.38 Gyro & MK.32 Converter			
Mk. 7,8,9,1,12, Special Store Capabilities			

NAVAER 1519 A (REV. 1-49)

CHARACTERISTICS SUMMARY



PERFORMANCE		
COMBAT RADIUS	COMBAT RANGE	SPEED
365 naut. mi. 481 knots avg. *1.88 hrs.	1,040 naut. mi. 481 knots avg. hours	628 knots at S.L. ft. 575 knots at 30,000 ft. 561 knots at 35,000 ft.
*Mission time General Purpose Fighter		Combat Weight Maximum Power
CLIMB	CEILING	TAKE OFF
6,850 ft./min. Sea Level, T. O. wt. MILITARY Power	39,000 ft. 100 ft./min., T. O. wt. Military Power	2,100 - Galm No assist
15,200 ft./min. Sea Level, Combat Wt. Maximum Power	49,800 ft. 500 ft. min. Combat Wt. Maximum Power	2,400-25 knot wind No assist
LOAD	WEIGHTS	STALLING SPEED
Fuel 1,506 gal. fixed 1,506 drop	Empty 20,645 lbs. Combat 28,050 lbs. Take-off 31,963 lbs.	109.5 knots Flaps down, T. O. wt.
		TIME TO CLIMB 30,000 ft. in 9.8 min. Take-Off Wt., MLI. Power

NOTES

Performance Basis: Calculations
 Range and Radius based on engine specification fuel consumption data increased by 5%.
 Reason for reissue: More accurate performance data plus incorporation of special store configurations.