



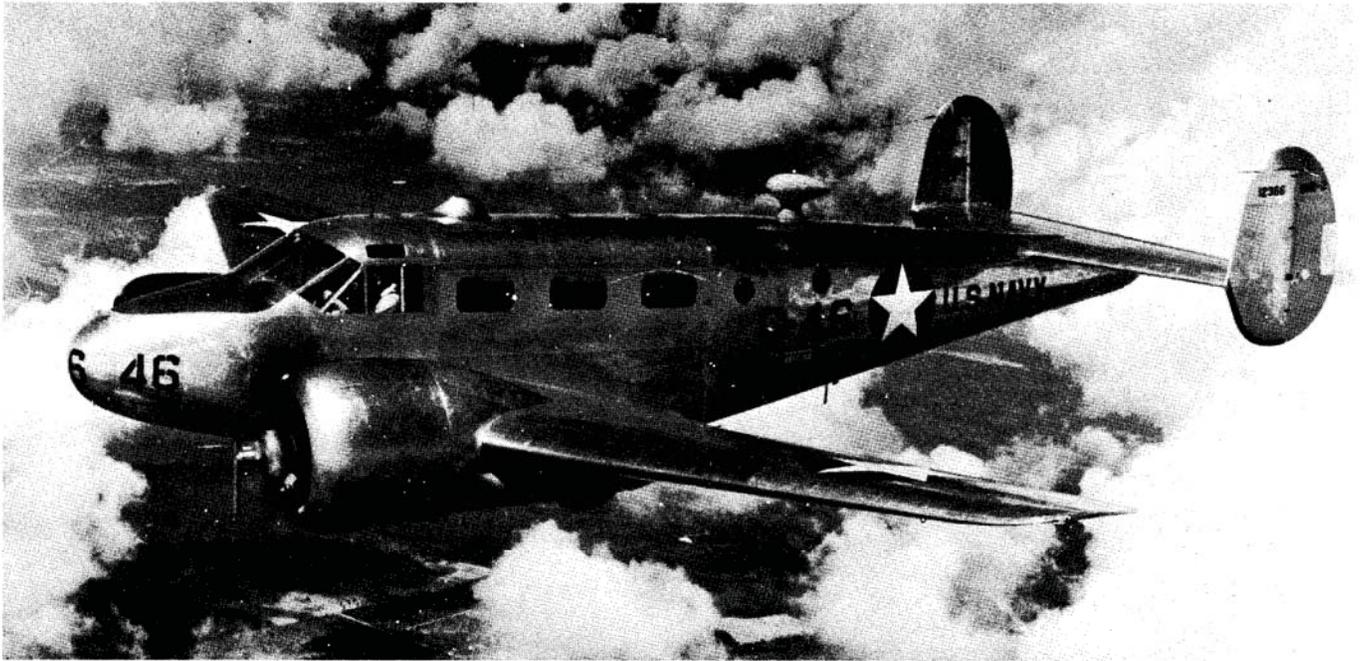
**BEECHCRAFT C18S/C-45F//SNB-1, 2, 3, 4**

## **STANDARD AIRCRAFT CHARACTERISTICS**

The following pages provide the Standard Aircraft Characteristics for the aircraft pictured above and below as published by the US Air Force and the US Navy.



**BEECHCRAFT C-45H/D18S/SNB-5**



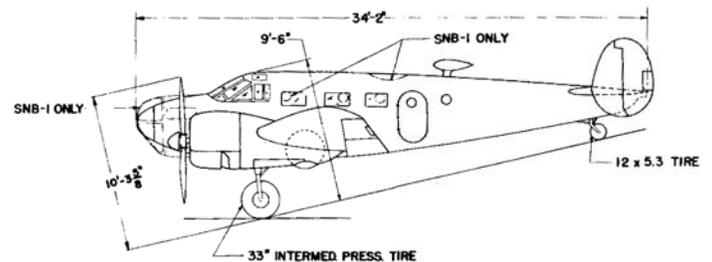
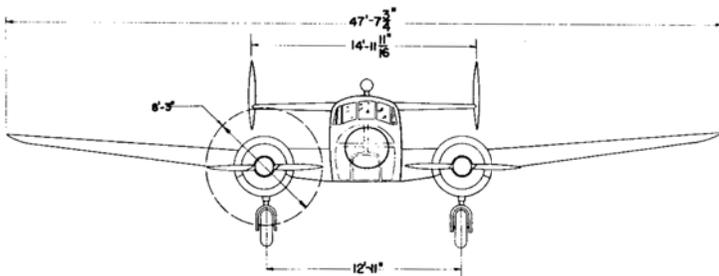
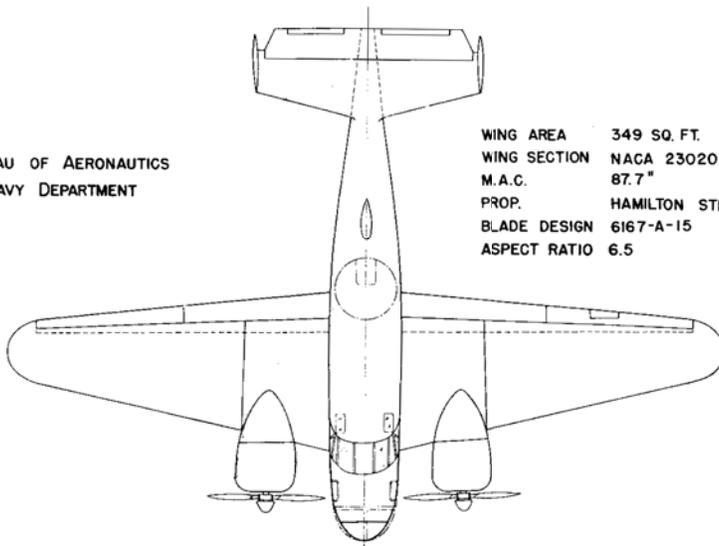
# STANDARD AIRCRAFT CHARACTERISTICS

## SNB-1 "KANSAN"

### SNB-2,-3,-4 "NAVIGATOR"

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA 349 SQ. FT.  
WING SECTION NACA 23020-23C<sup>1</sup>/<sub>2</sub>  
M.A.C. 87.7"  
PROP. HAMILTON STD.  
BLADE DESIGN 6167-A-15  
ASPECT RATIO 6.5



DESCRIPTIVE ARRANGEMENT

### MISSION AND DESCRIPTION

Originally designed for bombing training (SNB-1), its present primary mission is in multi-engine and instrument training. Also used for maintaining flight proficiency in multi-engine type and for flying classroom training of radar operators and night fighters.

Procured from Army Air Forces for Navy use; manufactured by Beech Aircraft Co. A low-wing, twin-engine, five- to seven-place conventional airplane of all-metal construction (Navy version of AF AT-11)

### WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	5800.....	
BASIC.....	6109.....	
DESIGN.....	8727.....	3.44
MAX. T.O.....	8730.....	3.44
MAX. LAND.....	8300.....	

All weights are actual.

### POWER PLANT

NO. & MODEL (2) R-985-AN-1  
 MFR.....P. & W.  
 SUPERCH.....1 Stage, 1 Speed  
 PROP.GEAR RATIO.....D.D.  
 PROP. MFR.....Ham. Std.  
 PROP.DES.NO.....6167A-15  
 NO.BL./DIA.....2/8'-3"

### RATINGS

	Bhp.	@ Rpm.	@ Alt.
T. O.	450	2300	SL
NORMAL	400	2200	SL

SPEC. AN-2035

### FUEL AND OIL

Gals. - No. Tanks - Location  
 206.....4.....Wing

FUEL GRADE.....91/98  
 FUEL SPEC.....AN-F-48

### OIL

CAPACITY (Gals.).....16  
 SPEC.....AN-O-8  
 GRADE.....1100-1120

### ACCOMMODATIONS

- 1 Bombardier Trainer
- 2 Instrument Trainer
- 3 Navigator Trainer
- 4 Pilot proficiency airplane

### DIMENSIONS

SPAN.....47'-8"  
 LENGTH.....34'-2"  
 HEIGHT.....10'-4"  
 WING AREA.....349 sq. ft.  
 M.A.C.....87.7"  
 TREAD.....12'-11"

### ELECTRONICS

SNB-1  
 COMMAND.....SCR-283

SNB-2, -3  
 COMMAND.....SCR-283  
 COMPASS.....SCR-269G  
 MARKER BEACON.....RC-43B

### PERFORMANCE SUMMARY

LOADING CONDITION		TRANSPORT
TAKE-OFF WEIGHT		8730
Fuel	lbs	1236
Bombs	lbs	
CARGO	lbs	925
Wing/Power Loading (A)	lbs/sq.ft.lbs/bhp	25.0/10.9
Stall Speed--Power off	kn	68.2
Stall Speed--Power off - No Fuel	kn	63.2
Stall Speed--Power on	kn	55.9
Maximum Speed/Alt (B)	kn/ft	192/6700
Take-off Distance, deck -- calm	ft	965
Take-off Distance, deck 25 kn.	ft	
Take-off Distance, Airport	ft	1740
Rate of climb -- sea level (B)	ft/min	1040
Service Ceiling (B)	ft	20800
Time-to-climb 10000 ft. (B)	min	16.6
Time-to-climb 20000 ft. (B)	min	43.4
Combat Range/V av 1500 ft.	ft. n.mi/kn	780/122
Combat Radius/V av	ft. n.mi/kn	
LOADING CONDITION		
GROSS WEIGHT	lbs	
Engine power		
Fuel	lbs	
Bombs/Tanks		
Max. speed at sea level	kn	
Max. speed	ft.	kn
Combat speed/Alt.	kn/ft	
Rate of climb SL	ft/min	
Ceiling for 500 fpm R/C	ft	
Time-tc-climb/Alt.	min/ft	

### NOTES

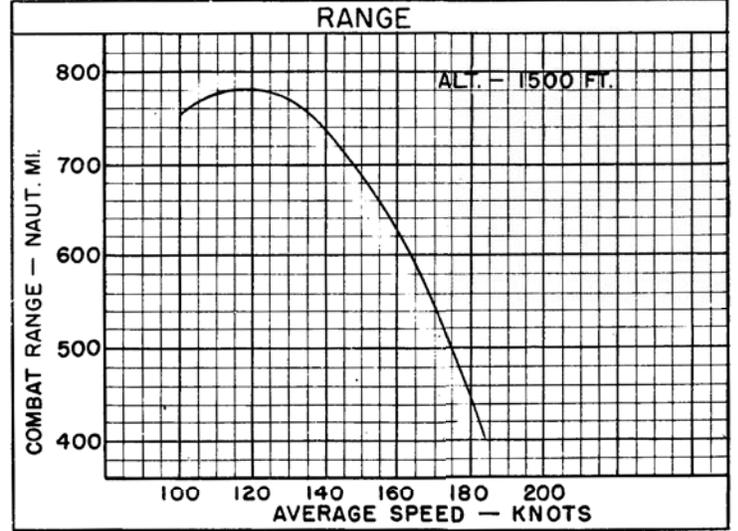
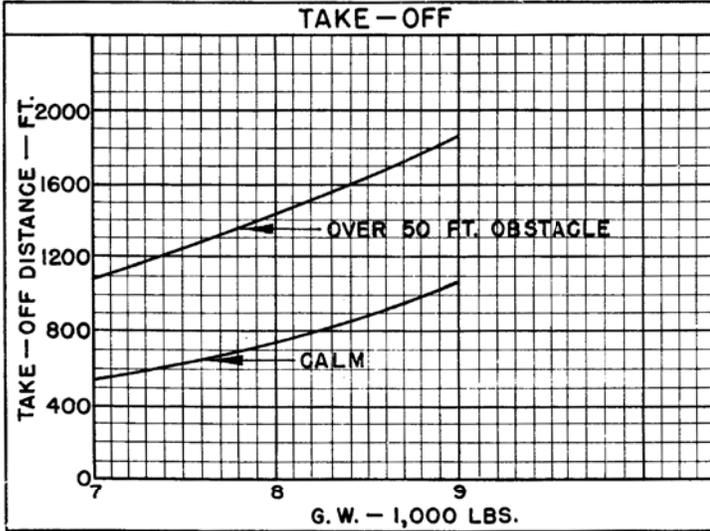
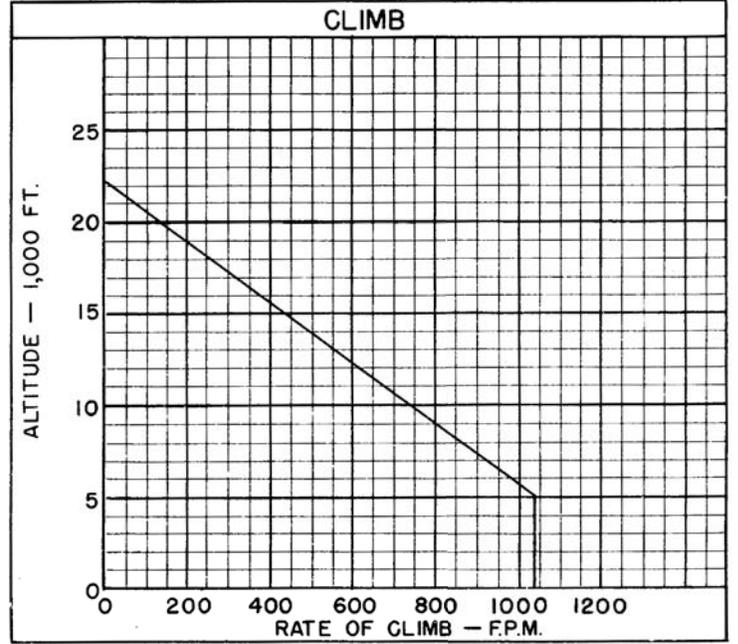
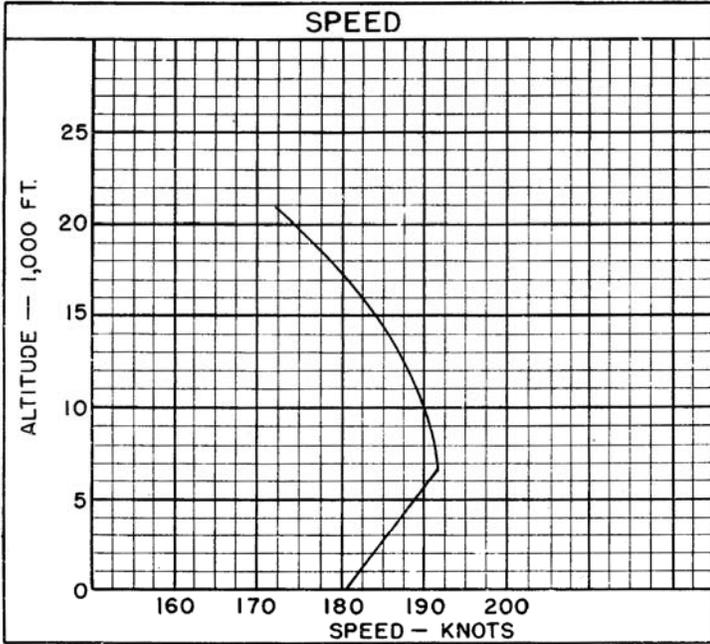
- (A) BHF at Maximum Critical Altitude
- (B) Normal BHF

Performance is based on flight tests of the JRB-1 airplane.

Range is based on engine specification fuel consumption data increased by 5%.

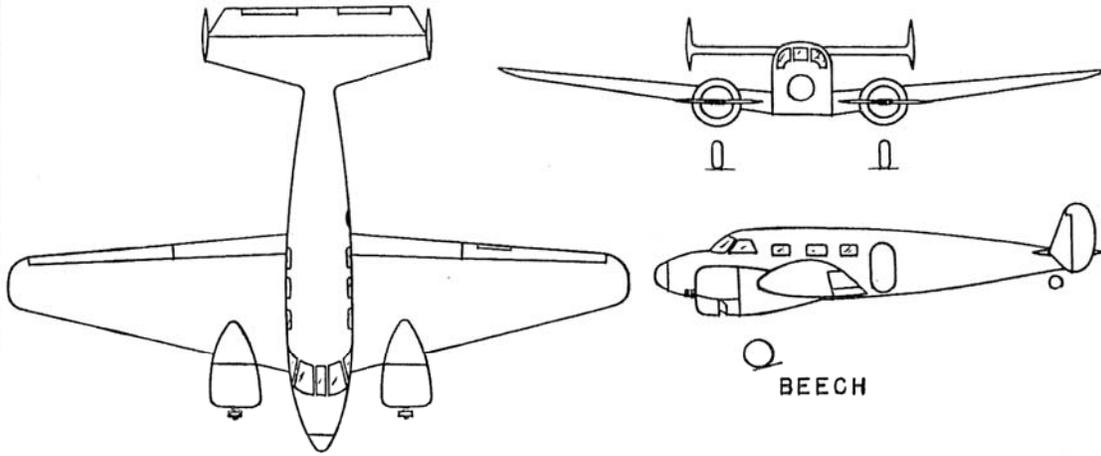
All data calculated with de-icer boots installed. Removal of de-icer boots increases Vmax by 5 knots.





# Characteristics Summary

CARGO..... C-45F



Wing area ..... 349 sq ft                      Length ..... 34.2 ft  
 Span ..... 47.6 ft                                  Height ..... 9.3 ft

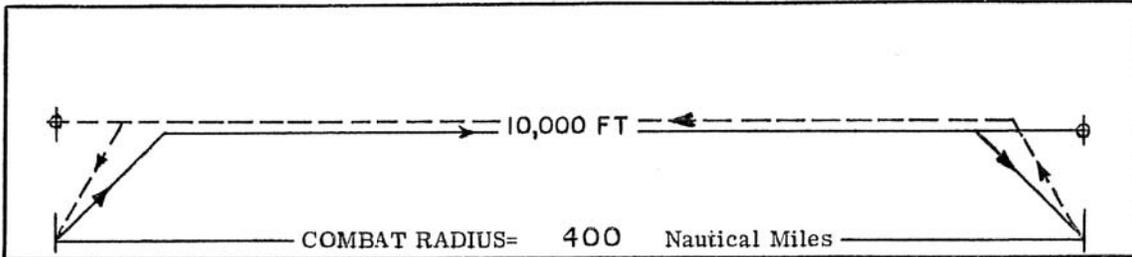
AVAILABILITY			PROCUREMENT			
Number available			Number to be delivered in fiscal years			
ACTIVE	RESERVE	TOTAL				

## STATUS

1. First acceptance: March 1940
2. Production completed: August 1945
3. Navy designation: JRB-4

POWER PLANT	FEATURES	ARMAMENT
(2) R-985-AN-1 or AN-3 Pratt-Whitney  ENGINE RATINGS  BHP - RPM - ALT T.O: 450 - 2300 - S.L. Nor: 400 - 2200 - 5100	Crew: 2 Passengers: 5 Prop Anti-icing Boot De-icer Life Rafts (2) (prov) Auto-Pilot Max Fuel Cap: 247 gal	NONE

*Characteristics Summary Basic Mission* ..... C-45F



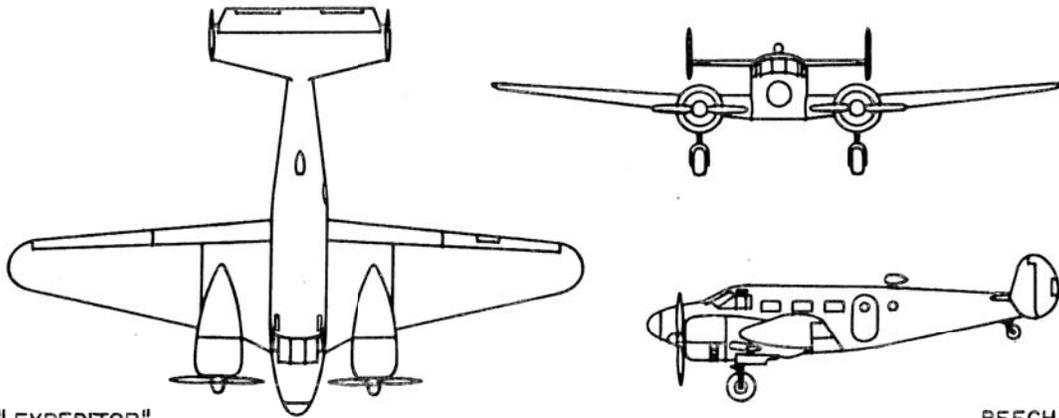
<b>PERFORMANCE</b>		
<b>COMBAT RADIUS</b>	<b>COMBAT RANGE</b>	<b>COMBAT SPEED</b>
400 naut. mi with 1000 lb payload at 111 knots avg. in 7.5 hours.	635 <sup>(2)</sup> naut. mi with 1000 lb payload at 113 knots avg. in 5.8 hours.	192 knots at 10,000 ft alt, max power
		<b>MAXIMUM SPEED</b>
		195 knots at 3000 ft alt, max power
<b>C L I M B</b>	<b>C E I L I N G</b>	<b>T A K E - O F F</b>
1110 fpm sea level, take-off weight normal power	21,000 ft 100 fpm, take-off weight normal power	ground run 1030 ft no assist   — ft assisted
1870 fpm sea level, combat weight maximum power	20,700 ft 500 fpm, combat weight maximum power	over 50 ft height 1530 ft no assist   — ft assisted
<b>L O A D</b>	<b>W E I G H T S</b>	<b>S T A L L I N G S P E E D</b>
Passengers: 5	Empty..... 5850 lb Combat... 7040 lb Take - off 8800 lb limited by space	59 knots flaps down, take-off weight
Fuel: *238 gal protected 0 % droppable 0 % external 0 %		<b>TIME TO CLIMB</b> —

**N O T E S**

- PERFORMANCE BASIS:
    - Flight test
    - Fuel density: 6.0 lb/gal
    - In computing Radius and Range, specific fuel consumptions have been increased 5% to allow for variation of fuel flow in service aircraft.
    - Performance shown above for max power is based on 450 BHP @ 2300 RPM @ 3000 ft.
  - Nose auxiliary fuel tank must remain full if two aft passenger seats are occupied
  - REVISION BASIS: To show engine ratings and changes in "Status", "Features" and "Notes" blocks.
- \* Note: Majority of aircraft now have 47 gal nose tank. (Total fuel 247 gal). A few aircraft will retain 38.5 gal nose tank. (Total fuel 238.5 gal). Above performance is based on 238 gal fuel.

# Characteristics Summary

CARGO . . . . . C-45H



"EXPEDITOR"

BEECH

Wing Area . . . . . 349 sq ft    Length . . . . . 34.2 ft  
 Span . . . . . 47.6 ft    Height . . . . . 10.7 ft

AVAILABILITY			PROCUREMENT			
Number available			Number to be delivered in fiscal years			
ACTIVE	RESERVE	TOTAL				

## STATUS

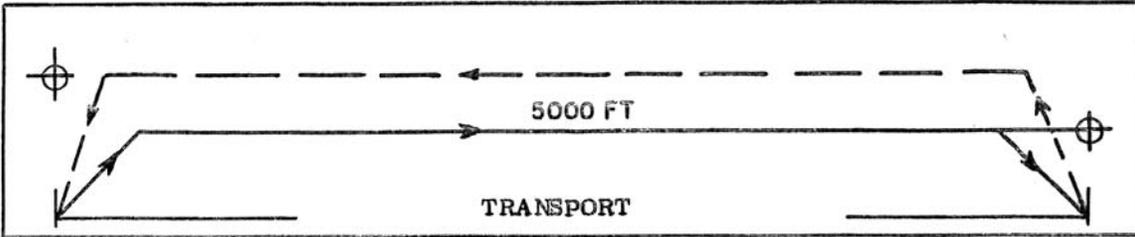
- Same as the C-45G except: R-985-AN-14B engines in lieu of R-985-AN-1 or 3 and Hamilton Standard Props in lieu of Aero-products.
- First Acceptance: Aug 53

Navy Equivalent: JRB/SNB Series

Mfr's Model: D18S(MOD)

POWER PLANT	FEATURES	GENERAL
(2) R-985-AN-14B Pratt & Whitney  ENGINE RATINGS  BHP - RPM - ALT - MIN T.O: 450 - 2300 - SL - 5 Nor: 450 - 2300 - SL - Cont	Prop. Anti-Icing  Boot De-icer  Dual Flight Instrumentation     Max Fuel Cap: . . . 253 gal	Crew . . . . . 2 Passengers . . . . . 4 Cargo: Nose Compt . . *600 lb Aft Compt . . . **300 lb  * Limited to 300 lb when nose compartment fuel tank is installed.  ** Placarded against stowage because of equipment installed

*Characteristics Summary Basic Mission . . . . . C-45H*



<b>PERFORMANCE</b>		
<b>COMBAT RADIUS</b>	<b>COMBAT RANGE</b>	<b>S P E E D</b>
458 naut. mi with 1084 lb payload at 128 knots avg. in 7.2 hours.	993 naut. mi with 1084 lb payload at 128 knots avg. in 7.8 hours	COMBAT 191 knots at 5000 ft alt, nor power MAX 193 knots at 1400 ft alt, nor power BASIC 191 knots at 5000 ft alt, nor power
<b>C L I M B</b>	<b>C E I L I N G</b>	<b>T A K E - O F F</b>
1260 fpm sea level, take-off weight normal power	18,200 ft 100 fpm, take-off weight normal power	ground run 2200 ft   — ft no assist   assisted
1700 fpm sea level, combat weight normal power	18,000 ft 500 fpm, combat weight normal power	over 50 ft height 2570 ft   — ft no assist   assisted
<b>L O A D</b>	<b>W E I G H T S</b>	<b>S T A L L I N G S P E E D</b>
Passengers . . . . . 800 lb Baggage . . . . . 284 lb Fuel: 253 gal protected 0 % droppable 0 % external 0 %	Empty..... 6120 lb Combat... 7501 lb Take - off 9300 lb limited by ground handling	66 knots power-off, landing config- uration, take-off weight
		<b>T I M E T O C L I M B</b>
		_____

**N O T E S**

1. Performance Basis:  
(a) Flight test

2. Revision Basis: Initial Issue