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# TACTICAL PLANNING

## *Characteristics & Performance Chart*

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PUBLISHED BY AUTHORITY OF THE COMMANDING GENERAL  
ARMY AIR FORCES, BY THE CHIEF, ENGINEERING DIVISION, AIR  
TECHNICAL SERVICE COMMAND, WRIGHT FIELD, DAYTON, OHIO

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**BOMBERS**

**CARGO**

**FIGHTERS**

**GLIDERS**

1-DECEMBER-1944

Y-100211

WF. Area B-11-25-44-950

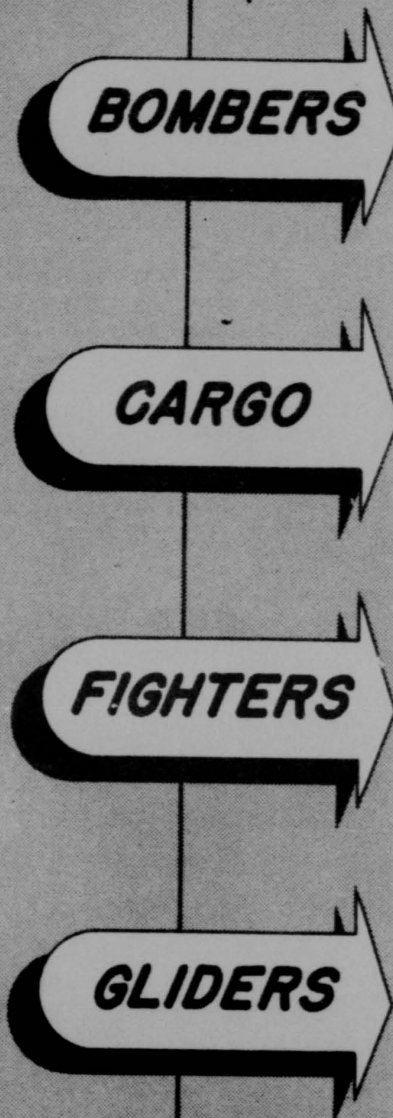
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203-13  
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# TACTICAL PLANNING

## Characteristics & Performance Chart



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## FOREWORD

This chart is a supplement to the Semi-Annual Chart of Engineering Characteristics and Performance, EE-306-1, "Production". This issue covers typical models now in theater operation and is kept up to date as new models are received by the A.A.F.

All data includes service allowances based on theater experience. Individual airplanes may vary appreciably due to age and service changes. Data printed in red are preliminary and subject to revision after flight check. Data printed in black have been derived from information obtained in flight but are not actual flight test results. For detailed planning see Technical Orders listed as references.

## WARNING

*THESE CHARTS CONTAIN CONSERVATIVE AVERAGES FOR TACTICAL PLANNING AND ARE NOT SUITABLE FOR AERODYNAMIC ANALYSIS.*

Performance is based on the requirements of Army-Navy Aeronautical Specification AN-H-8a; "Handbooks; Pilot's Flight Operating Instructions" which sets forth specific allowances for practical service operation. Take off and landing distances are 125% of optimum on hard surface, no wind, standard temperature. Weights are "Basic" weight plus crew, oil, full ammunition, fuel and bombs, cargo, passengers or troops as applicable. For bombers and cargo, "Recommended Limit" and "War Maximum" weights are based on limiting applied positive maneuver factors of 2.67G and 2.00G respectively unless otherwise specified. Time to climb is minimum within published engine limits. In future issues speed and climb with "Military Power" will be replaced with "War Emergency" when applicable. Range and endurance are based on the following assumptions:

- (a) Allowance for warm up, taxi, run up, take off, and landing, (equal to ten minutes at rated power).
- (b) Allowances for fuel consumed in climb. Distance and time to climb are included in range and endurance.
- (c) Allowance for carrying bombs and droppable tanks entire flight.
- (d) Allowance for 10% net ideal range for miscellaneous differences in airplanes, equipment, pilot technique, atmospheric conditions other than wind, unusable fuel, weight, and similar variables. (For example, range varies day and night due to fuel expansion prior to take off.)

Prepared by Technical Data Laboratory of the Engineering Division

THIS REPORT SUPERSEDES PREVIOUS EE-393 PUBLICATIONS; SUPERSEDED PUBLICATIONS, IF NO LONGER OFFICIALLY REQUIRED, WILL BE DESTROYED IN THE MANNER PRESCRIBED IN PARAGRAPH 23, A.R.380-5, DATED 28 SEPT. 1943.

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## DEFINITIONS

## CHARACTERISTICS

**SUPERCHARGER:** "TURBO" indicates exhaust driven turbine with single speed integral diffuser.

**BHP/ALT:** Brake horsepower per engine at critical altitude with ram.

**T:** Maximum power for take off.

**M:** Maximum power for combat at altitude shown, (usually limited to 15 min. duration)

**WE:** War emergency power for combat at altitude shown, (limited to 5 min. duration only)

**C:** Maximum power for continuous operation.

**Note:** Maximum cruise power is the maximum power for unlimited operation with lean mixture.

**SIZE:** Approximate dimensions for storage planning.

**Length:** Does not include protruding guns.

**Height:** Maximum in three point position.

**Wing area:** Standard aerodynamic surface area.

**Tread:** Center to center main wheels: (outboard if dual).

**WEIGHTS:** Approximate averages for planning purposes.

**B:** Basic weight includes weight empty, trapped fuel and oil, equipment, armament, etc. but does not include disposable fuel, oil, droppable tanks, ammunition, bombs, cargo, nor crew.

**C:** Combat weight is based on latest confirmed information from theaters and usually includes full built-in fuel, full ammunition, and an arbitrary bomb or cargo load.

**R:** Recommended limit on gross weight which will allow a limit applied positive maneuver factor of at least 2.67g.

**W:** War maximum weight for special missions only.

**FUEL:** Standard fuel tankage and capacities.

**ARMAMENT:** Resume' of information in the "ARMAMENT & BOMB INSTALLATIONS" (Chart EE-306A)

**RADIO** Resume' of typical models installed.

## PERFORMANCE

**BOMBS:** Maximum rack capacity for standard sizes.

**CARGO:** Cargo, passenger or troop capacities.

**Max. load:** One size only on each bomb rack (in some cases a reduction in fuel load is required) Practical total cargo based on gross weight. Values are at least 125% of optimum.

**TAKE OFF & LANDING:** (At 3000' runway alt.)

**Gross weight:** (To clear 50')

**Ground run:** Arbitrary values for reference only. Distances representative of minimum airport requirements.

**Landing speed:** Distances representative of minimum runway requirements. Practical minimum for average pilot.

**HIGH SPEED & CLIMB:** Values are for clean new airplanes.

**Military power:** For limited periods of combat operation.

**War emergency power:** (Performance with War Emergency ratings are shown when applicable).

**Time of climb:** Minimum time to climb from sea level based on military power climb for allowable time and maximum continuous power climb from then on.

**RANGE & ENDURANCE:** See discussion in "FOREWORD", page 2

**Take off weight:** Brief list of typical gross weights.

**Bombs, etc:** Typical loadings combined with various tank capacities. No consideration is given to loadings requiring partially filled tanks.

**Note:** Take off weights with corresponding load and fuel quantity applies to all values to the right on the same line.

**Max. cont. power:** High speed cruising with rich mixture. (For emergency cruising only)

**Max. cruise power:** Maximum continuous operation with lean mixture setting.

**Long range:** Practical maximum range for planning purposes under all conditions set forth.

RED PRINT: Preliminary estimates or calculated data.

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BOEING (SEATTLE) "BO"

MODEL & BLOCK NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-80 (-1 thru -27)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500	NOSE...FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 21- 100	NONE	9600	2550
B-17F-80 (-30 thru -50)	NONE 1) 2) 2) 2) 2)	NONE 300 b 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 21- 100	2-1000 2-2000 2-1600 2-1000	6-1600 2-1000x	AS ABOVE 17600
B-17F-80 -55 thru 1st.30 (-85)	2) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	A S	A B O V E		2550 (-55 thru -75) 3630 -80 & SUB
B-17F-80 Last 70 (-85) thru -130	3) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE EXCEPT THAT EXTERNAL BOMB RACKS DELETED AFTER 15th. (-95)			3630
B-17G-80 (-1 thru -110)	2) 2) 1) 2) 2) 2)	300 365 300 500 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 21- 100	PROVISION FOR RACKS	9600	AS ABOVE

NOTES: a NOSE GUN DELETED ON LAST 35 (-27). d EARLY B-17G MODELS CARRY 300 RDS./GUN.  
b RADIO COMPART. GUN ADDED AFTER 16th. (-30).  
c CHEEK GUNS ADDED AT MOD. CENTER. x EXTERNAL

DOUGLAS (LONG BEACH) "DL"

MODEL & BLOCK NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-1L -1 thru 1st.13(-10)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500	NOSE...FLEX. SIDE WAIST FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 21- 100	NONE	9600	2550
B-17F-1L Last 12(-10) thru -20	2) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE	PROV. FOR EXTERNAL RACKS ON -20 & SUB.	AS ABOVE	AS ABOVE
B-17F-1L -25 thru 1st.21(-35)	A S	A B O V E	AS ABOVE	PROV. FOR EXTERNAL RACKS	AS ABOVE	AS ABOVE	3630
B-17F-1L Last 19(-35) thru -65	3) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	A S	A B O V E	AS ABOVE	AS ABOVE
B-17G-1L (-1 thru -65)	2) 2) 1) 2) 2) 2)	300 365 300 500 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	A S	A B O V E	AS ABOVE	AS ABOVE

NOTES: a NO NOSE GUN ON 1st.13(-10) d EARLY B-17G MODELS CARRY 300 RDS./GUN.  
b NOT CARRIED ON -1 & -5.  
c CHEEK GUNS ADDED AT MOD. CENTER. x EXTERNAL

VEGA (BURBANK) "VE"

MODEL & BLOCK NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-VE (-1 thru -10)	1-.30 CAL.(300 RDS.) IN 1st. 12 AIRPLANES. NOSE GUN DELETED ON NEXT 28 THRU (-10). NO RADIO COMPARTMENT GUN UNTIL LAST 14(-15). OTHER ARMAMENT AS 80.	NOSE GUN	2-2000 6-1600 6-1000 12- 500 16- 250 21- 100	NONE	9600	2550	
B-17F-VE (-15 & -20)	2) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE	EXTERNAL RACKS ON Last 31 (-20) & SUB.	AS ABOVE	AS ABOVE
B-17F-VE (-25 & -30)	A S	A B O V E	AS ABOVE	2-1000 2-2000 2-1600 2-1000	6-1600 2-1000x	2550 (B-17F-25) 3630 (B-17F-30)	
B-17F-VE (-35 thru -50)	3) 1) 2) 2) 2)	300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE	NONE	9600	3630
B-17G-VE (-1 thru -90)	2) 2) 1) 2) 2) 2)	300 365 300 500 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE	PROVISION FOR RACKS	AS ABOVE	AS ABOVE

NOTES: a NOT ON B-17F-1 & -5. d EARLY B-17G MODELS CARRY 300 RDS./GUN.  
b EXTERNAL BOMB RACKS DELETED ON LAST 4(-30).  
c CHEEK GUNS ADDED AT MOD. CENTER. x EXTERNAL

GENERAL NOTE:

LATEST INVESTIGATION SHOWS THAT 6x1600 LB.  
ARMOR PIERCING BOMBS MAY BE CARRIED, BUT  
BOMB RAIL LOAD FACTORS AND CLEARANCES ARE  
REDUCED AND MANEUVERING OF AIRPLANE MUST  
BE LIMITED ACCORDINGLY.

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CONSOLIDATED (SAN DIEGO) "CO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-CO 0 thru 1st. 94(-15)	1) 2) .50 2)	200 400 600	NOSE.....FLEX. UPPER TURRET TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	2364
B-24D-CO Last 36(-15) thru -20	1) 2) .50 1) 2)	200 400 100 600	NOSE.....FLEX. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	A S	A B O V E		2364 Last 36(-15) 3614 -20 & sub.
B-24D-CO -25 thru 1st. 26(-110)	3) 2) 2) .50 1) 2)	100 250 400 100 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24D-CO Last 9(-110) thru -170	3) 2) 2) .50 2) 2)	100 250 400 508 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CO (-1 thru -210) B-24J-CO (-1 thru -20) B-24M-CO (-1 thru -10)	2) 2) 2) .50 2) 2)	600 250 <sup>b</sup> 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. See "a"	A S	A B O V E		AS ABOVE

NOTES: c B-24J's HAVE TAIL TURRET; B-24J's HAVE HAND HELD GUNS IN TAIL & B-24M's HAVE LIGHT WEIGHT TAIL TURRET.  
a NOT ON B-24D-25  
b B-24M-20 HAS PROVISIONS FOR ONLY 250 RDS/GUN ON -210.

CONSOLIDATED (FT. WORTH) "CF"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-CF (-1 & -5)	3) 2) 2) .50 1) 2)	100 250 400 100 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24D-CF (-10 thru -20)	A S	A B O V E		A S	A B O V E		AS ABOVE
B-24J-CF (-1 thru -105) B-24H-CF (-1 thru -15)	2) 2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL TURRET	A S	A B O V E (SEE a)		AS ABOVE
B-24H-CF (-20 thru -30)	2) 2) 2) .50 2) 2)	600 500 <sup>b</sup> 400 508 600	NOSE TURRET S.WAIST-45 MT. UPPER TURRET LOW-BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CF (-101 to -)	A	S	A	B	O	V	E

NOTES: a B-24H-CF AIRPLANES RECEIVE NEW B-24J DESIGNATIONS WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.  
b B-24H-20 HAS PROVISIONS FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

DOUGLAS (TULSA) "DT" and

FORD (WILLOW RUN) "FO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24H-DT (-1 thru -15) (DOUGLAS)	2) 2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL TURRET	4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24H-FO (-1 thru -15) (FORD)	A S	A B O V E		A S	A B O V E		AS ABOVE
B-24H-DT & FO (-20 thru -30)	2) 2) 2) .50 2) 2)	600 500 <sup>b</sup> 400 508 600	NOSE TURRET S.WAIST-45 MT. UPPER TURRET LOW-BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-FO (-1 thru -20) B-24J-DT (-1 thru -10) B-24J-FO (-1 thru -10)	2) 2) 2) .50 2) 2)	600 500 400 508 600	NOSE TURRET S.WAIST-45 MT. UPPER TURRET LOW-BALL TRR. TAIL-HAND HELD	A S	A B O V E		AS ABOVE

NOTES: a B-10 SHACKLES FOR 8-1600 LB. BOMBS STARTS ON 2101st. FORD KNOCK-DOWN SET.  
b B-24H-20 HAS PROVISIONS FOR ONLY 250 RDS/GUN.

NORTH AMERICAN (DALLAS) "NT"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-NT (-1 thru -15)	3) 2) 2) .50 2) 2)	250 TOT. 250 400 508 <sup>a</sup> 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24J-NT (-1 thru -5)	2) 2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-NT (-10 thru -15)	A S	A B O V E		A S	A B O V E		AS ABOVE
B-24J-NT (-1 thru -10)	A	S	A	B	O	V	E

NOTES: a LOWER BALL TURRET ON 5th. & SUBSEQUENT; NO TUNNEL GUN ON 1st. 4 ARTICLES.  
B-24D-20-NT AIRPLANES ARE DESIGNATED B-24J-1, ETC. WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 7  
AS OF  
DATE 25 NOV. 1944

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING-AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION		NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE OR STATION	EXTERNAL NO & SIZE OR CAPACITY	MAX LOAD LB.			TYPE
B-24D (WITH BOMB BAY TANKS)	4	PRATT-WHITELEY R-1830-45 TURBO HAMILTON STD. 11'7" DIA. - 3 BL. P.F.L. HYDROSTATIC	T 1200/3100 M 1200/26500 C 1100/27000	S 110'0" L 56'4" H 18'0" T 25'8" W 104'6"	B 35000 C 56000 R 56000 W 71400B	10	MAIN - WING BOMB BAY	12-2364 2x 400 3164 TOTAL	5) 2) 2) 1) 2)	100 250 400 100 500	ROSE - FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL - FLEX. TAIL TURRET	4-2000 8-1500 9-1000 12-500 12-250 20-100	NONE	12500	SEE NOTE "A"	TECHNICAL ORDER 01-52C-1 (REV. 20 JUNE 1944)	
B-24D (WITH WING TIP TANKS)	4	AS ABOVE EXCEPT R-1830-65 ENGINE ON B-24D-20-CF & B-24D-135-CC ITRU -170-00.	AS ABOVE	AS ABOVE	B 37000 C 56000 R 56000 W 71400B	10	MAIN - WING WING TIPS BOMB BAY	12-2364 4x 225 2x 400 3614 TOTAL	5) 2) 2) 2) 2)	100 250 400 508 500	ROSE - FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TURRET TAIL TURRET	A S	A B O V E	AS ABOVE	A S A B O V E		
B-24G,H&J	4	PRATT-WHITELEY R-1830-65* TURBO HAMILTON STD. 11'7" DIA. - 3 BL. P.F.L. HYDROSTATIC	AS ABOVE SEE "b"	S 110'0" L 57'2" H 18'0" T 25'8" W 104'6"	B 38000 C 56000 R 56000 W 71400B	10	AS ABOVE	AS ABOVE	2) 2) 2) 2) 2)	600 250 400 508 500	ROSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TURRET TAIL TURRET	A S	A B O V E	AS ABOVE	SEE "c"	TECHNICAL ORDER 01-52E-1 (NOW BEING PRINTED) * ENGINE IS R-1830-45 ON B-24G & G-1-W; B-24H-1 & (152)B-5-CF; B-24F-1 & -5-F0; ALL B-24, BY DT. * LATEST AIRCRAFT HAVE NEW TURBO SUPERCHARGER TYPE (B-24) GIVING CRIT. ALTITUDE SAME AS SHOWN FOR B-24G & M. FOR EXTERNAL BOMB BAY SEE INSTALLED AT MOD. CENTERS. REVISION TO REFERENCE ABOVE NOW AT MANUFACTURERS. * B-24L SERIES HAS HAND HELD FLEX. GUNS IN THE TAIL. B-24M SERIES HAS LIGHT WEIGHT TURRET IN TAIL.	
B-24L & M	4	PRATT-WHITELEY R-1830-65 TURBO HAMILTON STD. 11'7" DIA. - 3 BL. P.F.L. HYDROSTATIC	T 1200/3100 M 1200/31800 C 1100/31500	AS ABOVE	B 37500 C 56000 R 56000 W 71400B	10	AS ABOVE	AS ABOVE	2) 2) 2) 2) 2)	600 500 400 508 500	ROSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TURRET See note "a"	A S	A B O V E	AS ABOVE	AS ABOVE		

COLUMN — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE						
	GROSS WEIGHT LB.	TO CLEAR 50' T.O. DIST. FT.		LANDING SPEED MPH	GROUND-RUN T.O. DIST. FT.		WEIGHT LB.	STD. ALT. FT.	MIL. POWER HIGH SPEED MPH		MAX. CONTIN. POWER HIGH RATE OF CLIMB FT/MIN		TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 10000 FT.		LONG RANGE AT 10000 FT.							
		FT.	FT.		FT.	FT.			MPH	MPH	MPH	FT/MIN				MPH	FT/MIN	MIN	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
B-24D (WITH BOMB BAY TANKS)	40000 54000 59000 60000	- 1500 6200 -	3300 103	90	- 2800 3450 -	56000	30000 25000 20000 15000 10000 5000	300 290 277 254 254	375 625 775 900 975	290 297 324 272 259	200 700 800 950 1000	41.5 30.2 22.0 15.4 9.7	59000 53500 58500	NONE NONE 5000	3164 2364 2364	1200 900 850	5.3 4.0 4.0	1350 1200 950	5.3 3.9 3.9	2100 1800 1750	12.1 9.0 8.9	2500 1900 1800	11.5 8.5 8.3	3200 2450 2300	20.0 15.2 14.4		
B-24D (WITH WING TIP TANKS)	40000 56000 59000 60000 62000 64000	- 5050 6200 -	3300 105	90	- 3600 4450 -	56000	30000 25000 20000 15000 10000 5000	300 290 277 254 254	375 625 775 900 975	290 297 324 272 259	200 700 800 950 1000	41.5 30.2 22.0 15.4 9.7	61000 61000 61000 60500	NONE NONE 3000 5000	3164 3164 2814 2364	1200 1050 1000 850	5.3 4.0 4.6 3.9	1350 1200 950	5.3 4.6 3.9	2100 2050 1750	12.1 10.6 8.9	2500 1900 1800	11.5 8.5 8.3	3500* 3200 2750 2300	22.2* 20.0 17.1 14.4	*MAX. FERRY RANGE MAY BE RESTRICTED BY INSUFFICIENT OIL IF ENGINE IS NOT IN BETTER THAN AVERAGE CONDITION. OIL CONSUMPTION: 3 QT. TO 3 GAL./HR. DEPENDING ON TIME SINCE OVERHAUL. *PERFORMANCE DATA ABOVE 65000 LB. NOT YET AVAILABLE; SEE NOTE "b"	
B-24G,H&J		A S	A B O V E			56000	30000 25000 20000 15000 10000 5000	300 290 277 254 254	375 625 775 900 975	290 297 324 272 259	200 700 800 950 1000	41.5 30.2 22.0 15.4 9.7	65000** 62000 62500 61500	NONE NONE 3000 5000	3164 3164 2814 2364	- 1150 1000 850	- 5.3 4.6 3.9	- 1350 1200 950	- 5.3 4.6 3.9	- 2200 1900 1600	- 11.9 10.6 8.8	- 2300 1950 1700	- 11.3 9.8 8.1	3300* 2900 2500 2100	20.2* 18.2 15.6 13.0		
B-24L & M		A S	A B O V E										64500 61500 62000 61000	NONE NONE 3000 5000	3164 3164 2814 2364												

18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

NOTES: (A) 24 VOLT RADIO SYSTEM

SCR-211 FREQUENCY METER  
SCR-522 COMMAND SET  
SCR-2690 RADIO COMPASS  
SCR-271N COMMAND SET  
SCR-287A LIAISON SET  
SCR-595 IFF (or SCR-595)  
SCR-578 EMERGENCY TRANSMITTER  
RC - 32 FILTER EQUIPMENT (or RC-136)  
RC - 36 DISTANCE AMPLIFIER  
RC - 43B MASTER BEACON  
RC - 103 BLIND LANDING (Provisions only)  
AS/AHR-1 RECEIVER (installed in some models)

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.  
\* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.  
(B) HEATER REPORTS INDICATE LOADING IS IN EXCESS OF 65000 LB. ARE BEING USED. IT IS ABSOLUTELY ESSENTIAL THAT WING FUEL & OIL TANKS ARE FULL AT THESE WEIGHTS & THAT MAINTAINERS BE KEPT TO A MINIMUM.



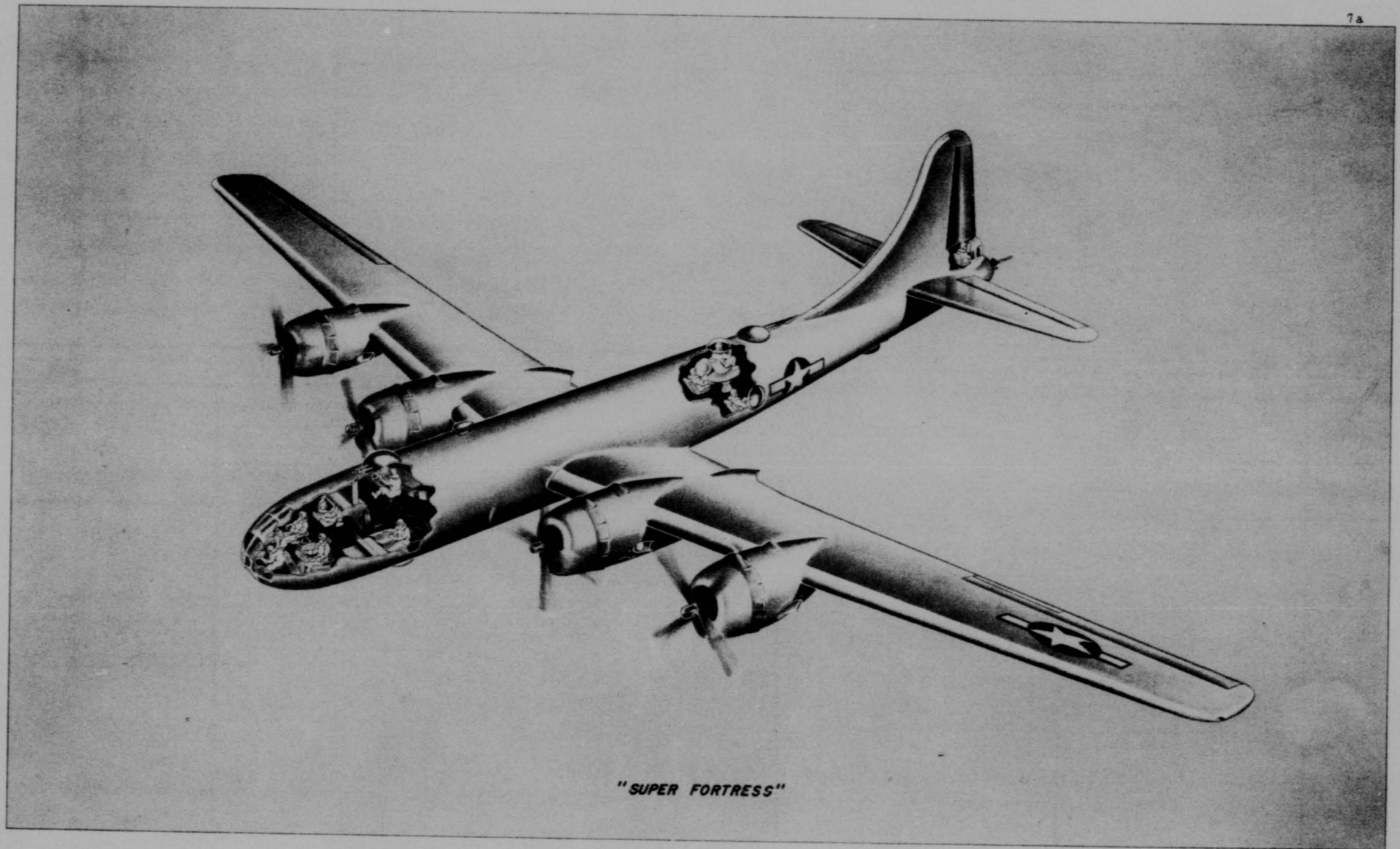
**B-24**  
"LIBERATOR"

MANUFACTURED BY CONSOLIDATED - DUGLAS - FORD - NORTH AMERICAN

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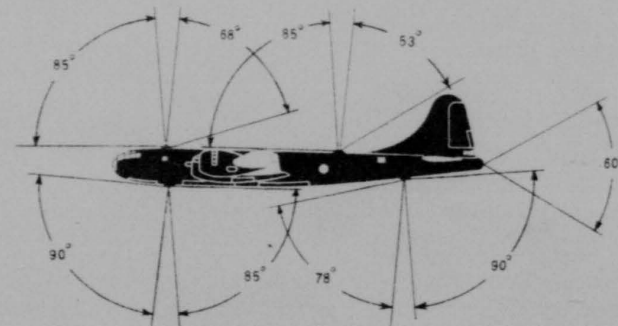
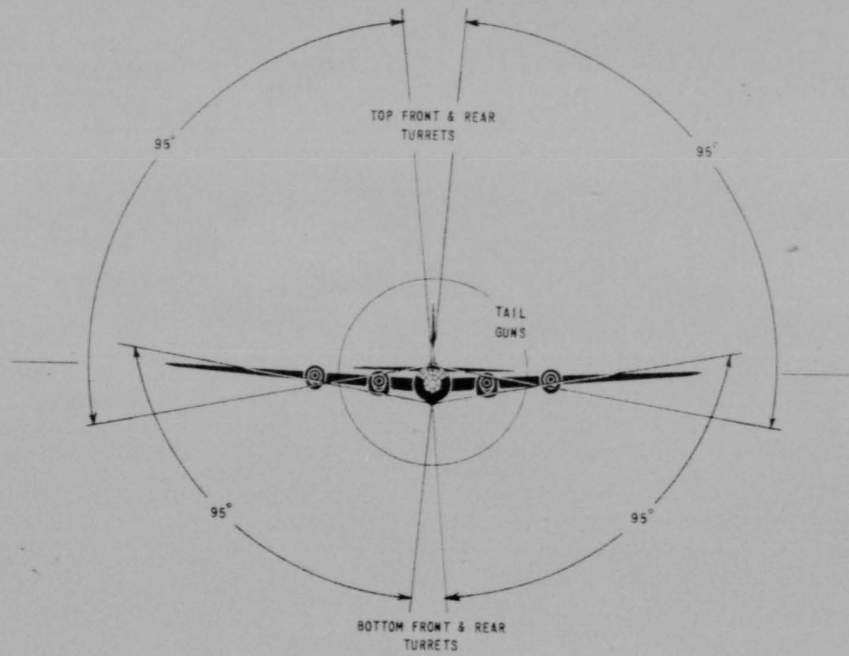
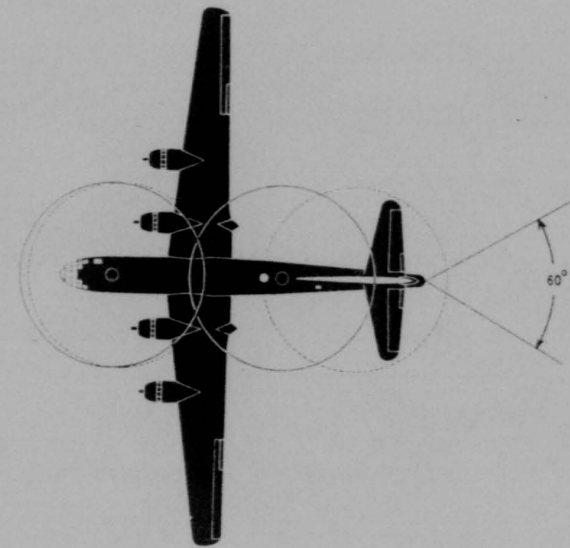
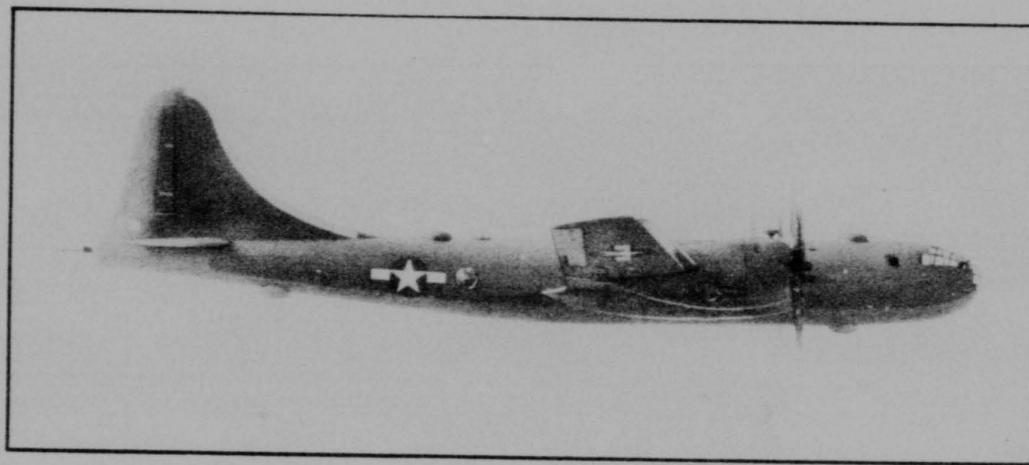


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7b



----- BOTTOM TURRETS

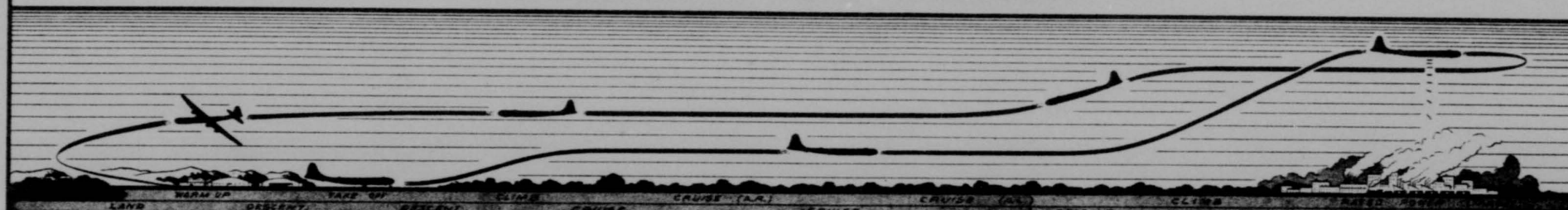
**B-29 "SUPER FORTRESS"**



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8

**SAMPLE B-29 MISSION**

	DENSITY ALTITUDE	COWL FLAP	INDICATED AIR SPEED	FUEL USED	TIME IN FLIGHT	AIR MILES
WARM UP AND TAKE OFF	0 TO 100	WIDE OPEN TO 7.5°	0-180	160	0	0
CLIMB	100 TO 5000	9°	195	330	0.2	38
CRUISE (A.R.)	5000	1.7°	202	1330	2.4	500
CRUISE (A.L.)	5000	1.7°	198	2500	5.5	1172
CLIMB	5000 TO 30000	9°	195	3530	6.5	1463
RATED POWER (TARGET AREA)	30000	7°	206	3810	6.8	1563
CRUISE	30000	7°	185	4290	7.5	1780
CRUISE DESCENT	30000 TO 15000	3.5°	186	4970	9.5	2305
CRUISE	15000	3.5°	186	5600	11.4	2755
DESCENT AND LAND	15000 TO 0	1.7° TO WIDE OPEN	184	6142	13.6	3132

## NOTE

2. THE ABOVE DATA IS BASED ON STANDARD TEMPERATURE. THE B-29 IS GREATLY AFFECTED BY TEMPERATURE CHANGES AND A VARIATION IN PERFORMANCE OF AS MUCH AS 20% MAY BE EXPECTED UNDER CERTAIN CONDITIONS OF WIND AND TEMPERATURE. FOR EXAMPLE, A 1° C. CHANGE IN TEMPERATURE HAS APPROXIMATELY THE SAME EFFECT ON SERVICE CEILING AS 1000 LB. IN WEIGHT.

T.O. GROSS WT.—135000 LB.  
 FUEL—6923 GAL.  
 BOMBS—10000 LB.  
 RADIUS OF ACTION 1550 MI  
 (WITH 781 GAL. RESERVE)

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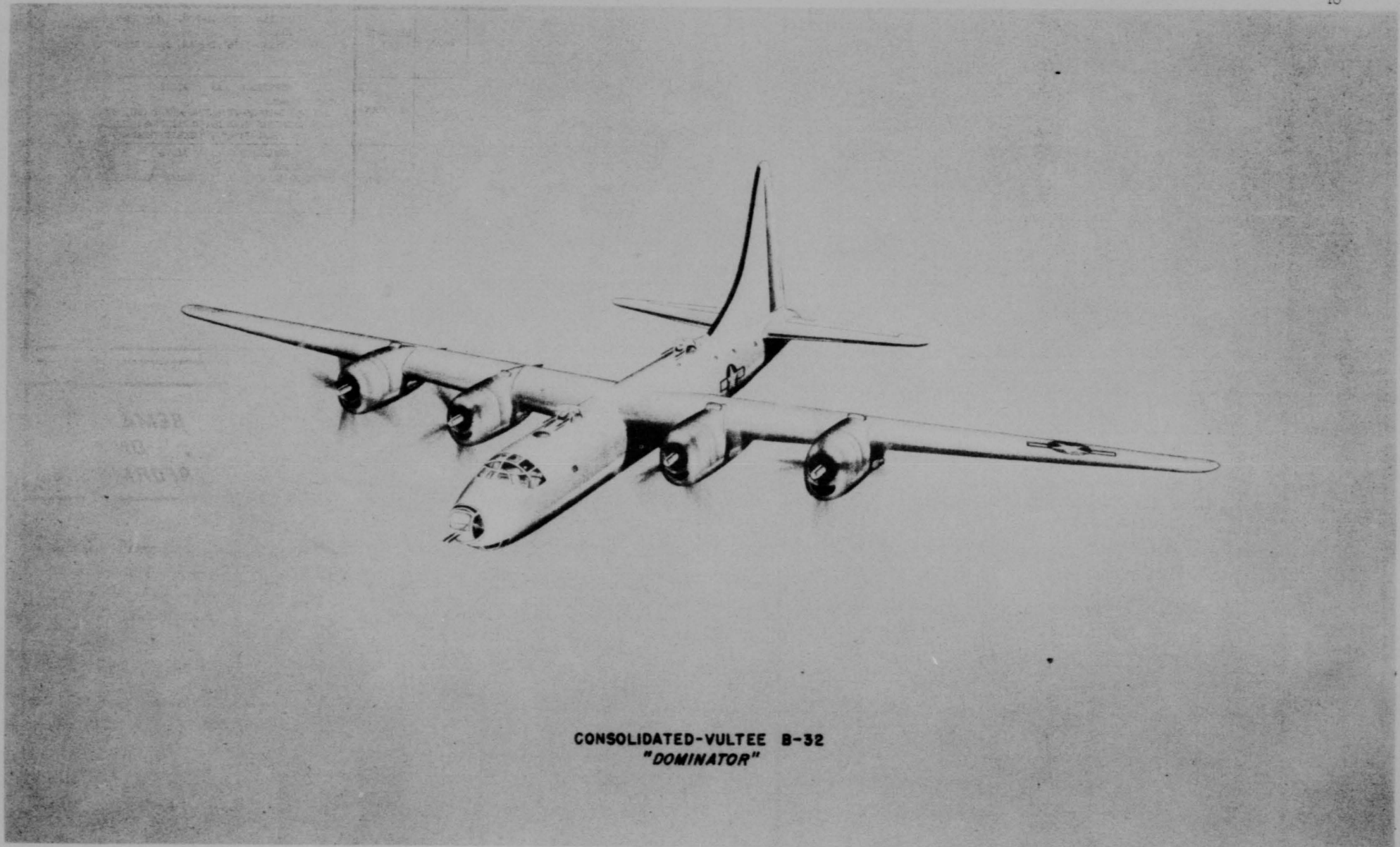




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TYPE B PERFORMANCE

10



CONSOLIDATED-VULTEE B-32  
"DOMINATOR"

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 11  
AS OF:  
DATE 25 NOV. 1944

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MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE			
	NUMBER	ENGINE MFR.	B.H.P./ALT.	S-SPAN			B-BASIC	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL			EXTERNAL	MAX. LOAD LB.	TYPE (See r)
		MODEL	T-TAKE-OFF	L-LENGTH			C-COMBAT						NO. & SIZE			NO. & SIZE		
B-32-CF	4	WRIGHT R-3350-83 TURBO SUPERCHARGER PROP. MFR. TYPE	T 2200/8 L M 2200/30000 C 2000/32500	S 135' 0" L 82' 11" H 33' 0" T 23' 0" W 1122 3/4"	B 60000 C 100000 R 102800 W 123250	8	INBO. (CENTER) 2 x 550 OUTBO. (CENTER) 2 x 507 OUTBO. (OUTER) 2 x 316	2) 2) 2)	365 <sup>a</sup> 400 550 1000	ROSE TURRET FRONT TOP TWR. REAR TOP TWR. LOW BALL TWR. TAIL TURRET	4-1000 6-2000 8-1600 12-1000 10- 500	NONE	20000	SCR-27LN, 211,269, 257,522, 695 & 716, 80-36,103, 103 & 136.	TECHNICAL ORDER 01-524-1. (20 JULY 1944) a SPACE PROVISIONS FOR 600 RDS/GUN; NORMAL RDS. LISTED. b BOMB BAY TANKS IN DESIGN STAGE; NO DETAILS AVAILABLE. c RADIO LISTED FOR EXP. PLANES & FIRST FEW PROD. ARTICLES.			
			T M C	S L H T W	B C R W													
			T M C	S L H T W	B C R W													
			T M C	S L H T W	B C R W													
			T M C	S L H T W	B C R W													

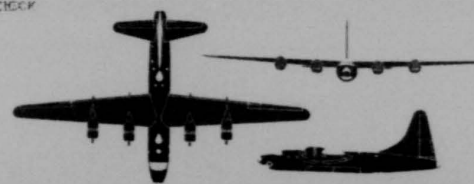
COLUMN — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

MODEL & BLOCK NO.	TAKE OFF & LANDING				HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE							
	HARD SURFACE - NO WIND				AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE																	
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 25000 FT.		LONG RANGE AT 10000 FT.								
FT.		FT.	FT.		FT.	FT.			FT.	MPH	FT/MIN	MPH				FT/MIN	MIN	MPH	FT/MIN	MIN	MPH	FT/MIN	MIN	MPH	FT/MIN	MIN	MPH	FT/MIN
B-32-CF	70000	-	3650	88	-	2200	100000	30000	382	650	360	125	38.3	100000	2000	5150	1500	5.6	1700	5.7	2700	11.6	2950	11.1	3750	20.8		
	80000	3650	1100	96	3000	2600	25000	366	825	354	600	28.7																
	90000	4500	4550	106	3600	2900	20000	350	950	332	750	21.6	106500	8000	5150	1150	5.5	1650	5.6	2650	11.3	2850	11.1	3500	18.7			
	100000	5500	5000	118	4300	3150	15000	331	1050	320	850	15.4	119000	20000	5150	1100	5.3	1550	5.6	2500	10.8	2500	10.8	2900	14.5			
	110000	6700	-	-	5200	-	10000	318	1150	307	950	8.1																
	120000	8850	-	-	6150	-	5000	302	1200	292	2	3.4																

18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

NOTES:

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK  
 \* MILITARY POWER AVAILABLE FOR 5 MINUTES.



**B-32**  
"DOMINATOR"

MANUFACTURED BY CHRISTIAN L. WILHELM (Ft. Worth) "CF"

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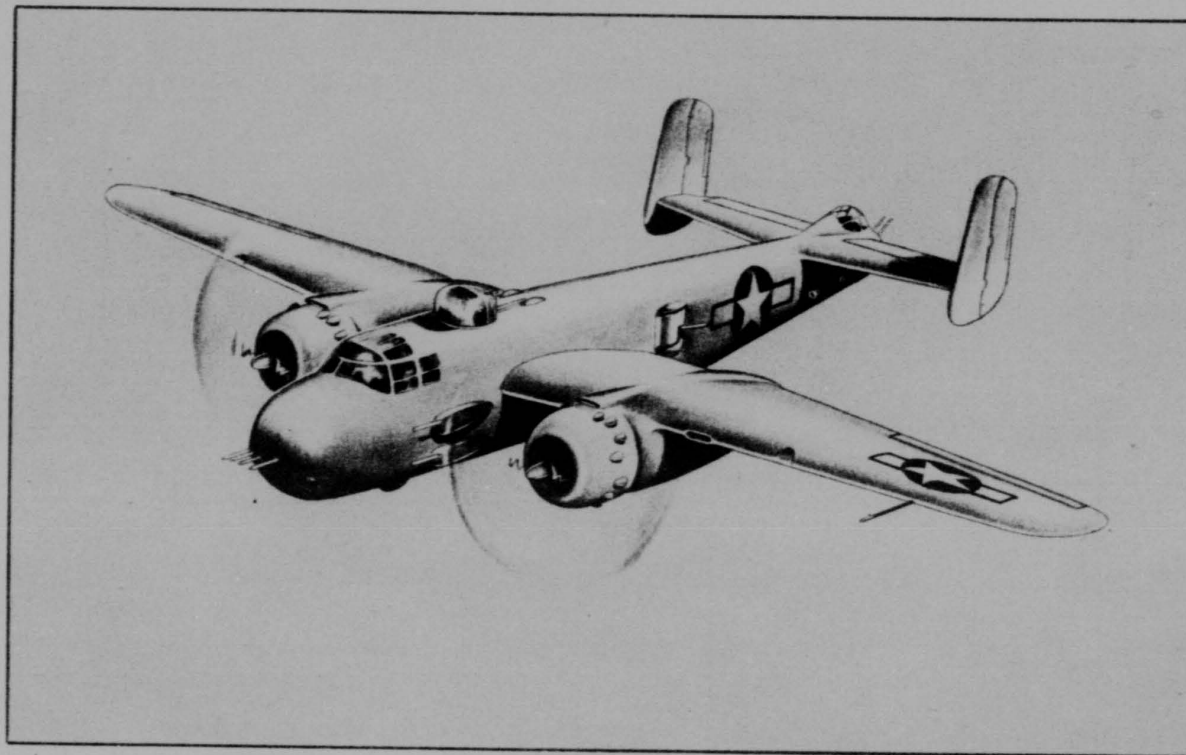


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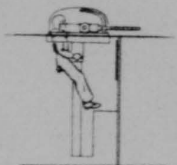
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12

# B-25 MITCHELL BOMBER



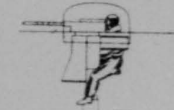
TAIL GUNNER  
B-25H&J



UPPER TURRET (REAR)  
B-25C, D&G



CANNONEER  
B-25G&H



UPPER TURRET (FRONT)  
B-25H&J

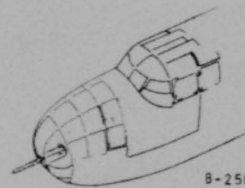


BOTTOM TURRET  
B-25C, D, & G

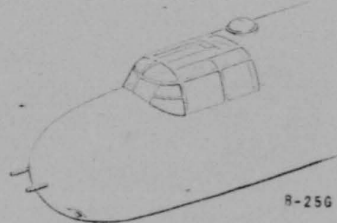


WAIST GUNNER  
B-25H&J

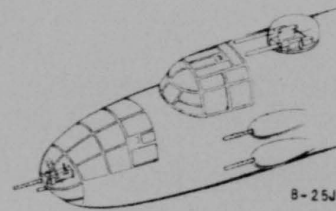
B-25H



B-25C&D



B-25G



B-25J

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR.	B.H.P./ALT.	S-SPAN			B-BASIC	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL			MAX. LOAD LB.
		MODEL	T-TAKE-OFF	L-LENGTH			C-COMBAT						NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY			
B-25C & D (NA & NC)	2	WRIGHT R-2600-13 2 SPD. SUPERCH. HAMILTON STD. 12" DIA. - 3BL. P.F., HYDRA-MATIC	T 1700/3 L M 1700/1500 C 1500/6700 1250/1250	S 67'6" L 52' H 15'9" T 19'4" W 610 SQ. FT.	B 20500 C 29500 R 33500 W 35000 B	5	MAIN - WINGS 2 x 151 MAIN - WINGS 2 x 151 BOMB BAY 1 x 585	2 x 151 2 x 151 1 x 585	1-.50 2-.50 2-.50	600 100 350	NOSE - FLEX. UPPER TURRET LOWER TURRET	1-2000 2-1000 6- 500 8- 250 12- 100	NONE	3000	SEE (A)	TECHNICAL ORDER 01-600B-1. (1 MAY 1943) f-FUEL CAPACITY OF LAST 100 (B-25C's) SAME AS BELOW. s-LENGTH OF B-25C SERIES IS 53'	
B-25C-NA -I TO -25 INCL. B-25D-NC -I TO -35 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 22000 C 33500 R 33500 W 35000 B	5	MAIN - WINGS 2 x 151 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 151 2 x 151 6 - 304 1 x 125 1 x 585	1) .50 2) .50 2) .50	300 300 400 350	NOSE - FLEX. NOSE - FIXED UPPER TURRET LOWER TURRET (On some models)	1-2000 2-1600 3-1000 6- 500 8- 250 8- 100	(SEE C) 1-2000 T 2-1600 x 8- 250 5200	AS ABOVE	AS ABOVE	TECHNICAL ORDER SAME AS ABOVE a-B-25C-1 & D-1 ARMAMENT SAME AS B-25C & D. b-CARRIED ON LATER MODELS ONLY. f-FUEL CAPACITY SAME AS B-25C & D. g-LENGTH OF B-25C SERIES IS 53'. i-125 GAL. SIDE WAIST TANK ON B-25D SERIES ONLY.	
B-25G-NA -I TO -10 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 21700 C 33500 R 33500 W 35000 B	4	MAIN - WINGS 2 x 151 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 151 2 x 151 6 - 304 1 x 125 1 x 585	1-75MM 2) .50 2) .50	21 400 400 350	NOSE CANNON-M/L NOSE - FIXED UPPER TURRET LOWER TURRET (On some models)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-600G-1. (REV. 10 FEB. 1943) f-BOMB BAY FUEL CAPACITY CONSISTS OF 1-215 GAL. SELF SEALING REMOVABLE TANK & 1-335 GAL. METAL DROPPABLE TANK. 1-585 GAL. METAL TANK IS INTERCHANGEABLE.	
B-25H-NA -I TO -10 INCL.	2	WRIGHT R-2600-13 or -29 2 SPD. SUPERCH. HAMILTON STD. 12" DIA. - 3BL. P.F., HYDRA-MATIC	AS ABOVE	AS ABOVE	B 22000 C 33500 R 33500 W 35000 B	5	MAIN - WINGS 2 x 151 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 151 2 x 151 6 - 304 1 x 125 1 x 585	1-75MM 4) .50 2) .50 2) .50	21 400 400 350	NOSE CANNON-M/L NOSE - FIXED NOSE - PACKAGE SIDE WAIST-FL. UPPER TURRET LOWER TURRET (On some models)	AS ABOVE	1-2000 T 3200	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-600H-1. (15 OCT. 1943) a-SOME B-25H-1's CARRY ONLY 2 NOSE PACKAGE GUNS. f-BOMB BAY FUEL NOTE SAME AS FOR B-25G SHOWN ABOVE. g-2000# BOMB STATION DELETED ON 131st AIRPLANE OF BLOCK B-5 AND SUBSEQUENT. h-2000# BOMB STATION DELETED ON 151st AIRPLANE OF BLOCK J-1 AND SUBSEQUENT.	
B-25J-NC -I TO -25 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 21100 C 33500 R 33500 W 35000 B	6	AS ABOVE	AS ABOVE	4) .50 2) .50 2) .50 2) .50	400 400 250 400 600	NOSE - FLEX. NOSE - FIXED NOSE - PACKAGE SIDE WAIST-FL. UPPER TURRET LOWER TURRET (On some models)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-600J-1. (10 JULY 1944) g-2000# BOMB STATION DELETED ON 151st AIRPLANE OF BLOCK J-1 AND SUBSEQUENT.	

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE				
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE														
	GROSS WEIGHT LB.	T.O. DIST. FT.	LAND. DIST. FT.	LAND. SPEED MPH	T.O. DIST. FT.	LAND. DIST. FT.	WEIGHT LB.	STD. ALT. FT.	MIL. POWER M.P.H.	RATE OF CLIMB FT./MIN.	MAX. CONTIN. POWER M.P.H.	RATE OF CLIMB FT./MIN.	TIME TO CLIMB MIN.	TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
																	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.					
B-25C & D (NA & NC)	25000	-	3300	99	-	1950	20000	267	-	262	175	30.0					950	3.9	-	-	1475	7.0	-	-	1850	10.3	
B-25C-NA -I TO -25 INCL. B-25D-NC -I TO -35 INCL.	30000 32000 34000	3800 4700 5500	3650 3900 -	106 112 -	2950 3700 4400	1800 2000 -	20000 15000 10000	267 286 283	- 900 1250	262 279 276	175 179 176	30.0 18.5 9.5		30000	NONE	1255	950	2.0	-	-	750	3.5	-	-	925	5.2	
B-25G-NA -I TO -10 INCL.	32000 33200 34000 34900 35200	4700 5200 5500 5900 6000	3900 4000 4100 -	112 111 116 -	3700 4100 4400 4750 4850	2000 2050 2100 -	20000 15000 10000 5000 S L	265 284 283 282 264	- 1150 1200	260 280 274 257	175 179 176 176	30.0 16.5 9.5 4.3 0.0		34900 34000 33200 32000 35200	NONE NONE 974 974 974	1624 1599 974 2000 T 974	700 700 650 600	2.9 2.9 2.9	-	-	1050 950 875	5.9 4.6 4.5	-	-	1350 1125	6.2 6.9	FOR SPECIAL FERRYING USE 1x125 GAL. SIDE WAIST FUEL TANK.
B-25H-NA -I TO -10 INCL.	32000 33700 34000 34900 35200	4700 5150 5450 5850 6000	3950 4000 4100 -	112 111 116 -	3700 4100 4400 4750 4850	1950 2000 2100 -	20000 15000 10000 5000 S L	265 281 278 285 268	- 1150 1200	260 277 274 276 257	175 179 176 176 176	30.0 16.5 9.5 4.3 0.0		34900 34000 33700 32900 35000	NONE NONE 974 974 974	1624 1521 1189 1189 1189	1200 1120 950 925 700	4.5 4.1 3.4 3.4 3.2	-	-	2270 2120 1600 1160 975	9.8 9.1 7.0 6.7 4.9	-	-	2515 2345 1790 1610 1415	13.2 11.2 8.8 8.0 7.0	INCLUDES 1x215 GAL. SELF SEALING REMOVABLE TANK AVAILABLE WITH 2000 LB. BOMBS ONLY or 1x2000# TORP. STRIP TO 35000 LB. LANDING WEIGHT. 1624 GAL. CAPACITY INCLUDES 2x50 GAL. WAIST TANKS FOR SPECIAL FERRY.
B-25J-NC -I TO -25 INCL.	32000 33700 34000 34800 35200	4700 5350 5450 5800 6000	3950 4050 4100 -	112 115 116 -	3700 4250 4350 4650 4850	1950 2050 2100 -	20000 15000 10000 5000 S L	265 270 266 272 266	- 1150 1200	260 275 262 264 253	175 179 176 176 176	30.0 16.5 9.5 4.3 0.0		34900 34000 33800 32000 33100	NONE NONE 974 974 974	1624 1521 1189 1189 1189	1200 1120 900 850 725	4.5 4.1 3.6 3.7 3.0	-	-	1575 1150 1275	7.3 7.2 6.0	-	-	2475 2325 1800 1575 1450	13.0 12.3 9.4 9.0 7.6	INCLUDES 1x215 GAL. SELF SEALING REMOVABLE TANK AVAILABLE WITH 2000 LB. BOMBS ONLY or 1x2000# TORP. 1624 GAL. CAPACITY INCLUDES 2x50 GAL. WAIST TANKS FOR SPECIAL FERRY.

NOTES: (A)

24 VOLT RADIO SYSTEM  
SCR-211 FREQUENCY METER  
SCR-259G RADIO COMPASS  
SCR-274F COMMAND SET (or SCR-522)  
SCR-287A LIAISON SET  
SCR-535 SET (or SCR-595 or SCR-695)  
SCR-578 EMERGENCY TRANSMITTER  
RC - 32 FILTER EQUIPMENT (or RC-198)  
RC - 43B MARKER BRACON  
RC - 103 BLIND LANDING (Provisions only)  
RC - 196 CONTACTOR UNIT  
RC - 36 INTERPHONE AMPLIFIER

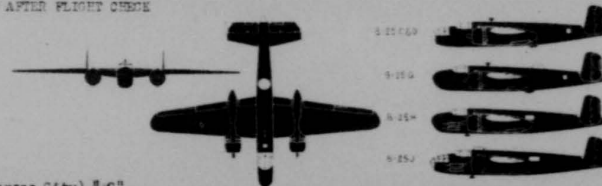
RED FIGURES ARE PRELIMINARY; SUBJECT TO DIVISION AFTER FLIGHT CHECK

MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.

(B) LIMITED TO 35000 LB. BY FLYING CHARACTERISTICS.

(C) TORPEDOES BEING USED IN LIMITED QUANTITIES ONLY.

(D) TIME TO CLIMB BASED ON MAX. CONTINUOUS POWER ONLY.



**B-25**  
"MITCHELL"

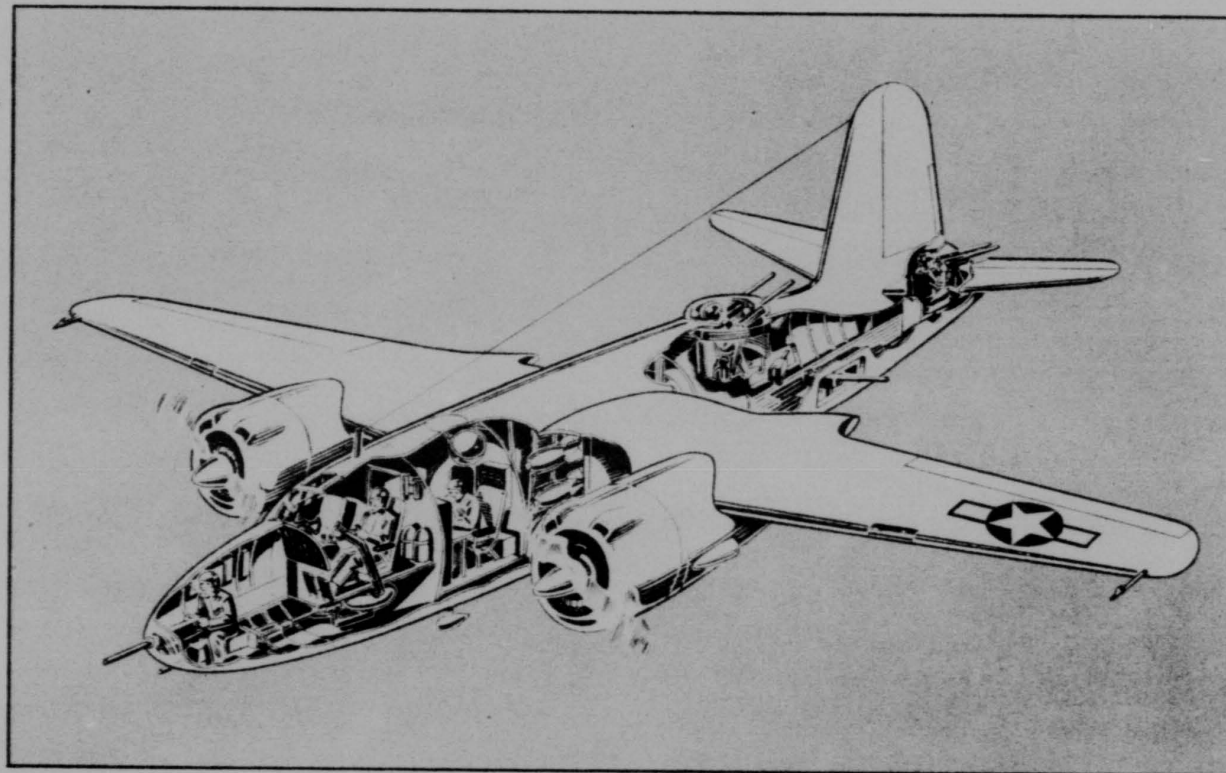
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14



B-26 "MARAUDER"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & PER CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE STATION	EXTERNAL NO & SIZE CAPACITY	MAX. LOAD LB.		TYPE
B-26 B-MA B,-2,-3 & -4	2	PRATT-WHITELEY R-2800-5 <sup>a</sup> 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. P.P. ELECTRIC	T 1850/3200 M 1850/2700 C 1500/1400 1150/1300	S 65'0" L 58'3" H 19'10" T 22'0" W 602 sq. ft.	B 23500 C 35000 R 36500 W 36500	6	MAIN - WINGS AUX. - WINGS B. BAY - (PURE)	2 x 360 2 x 121 2 x 250 1162 TOT	1-30 1-30 2-50 2-50	600 600 1500 400	NOSE - FLEX. TUNNEL - FLEX. TAIL-FLEX. MT. UPPER TURRET SIDE WAIST-FL.	2-2000 2-1600 1-1000 8-500 16-250 30-100	1-2000 (TORPEDO)	2-1600 1-2000T 5200 (B)	SEE (A)	TECHNICAL ORDER 01-352A-1. (5 MARCH 1943) a SIDE WAIST GUNS ADDED TO LAST 111 (-4) ONLY. b B-26B-MA HAS -5 ENGINE; B-26B-2-MA HAS -41 ENGINE & B-26B-3 & -4 HAS -43 ENGINE.
B-26 B-MA -10 TO -20 INCL B-26 C-MQ -5 TO -25 INCL	2	PRATT-WHITELEY R-2800-13 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. P.P. ELECTRIC	T 1920/3200 M 1920/3200 C 1550/1100 1360/1160	S 71'0" L 58'3" H 21'6" T 22'0" W 659 sq. ft.	B 25300 C 37000 R 37500 W 38200 (C)	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE & REAR)	2 x 360 2 x 121 4 x 250 1962 TOT	1) 1) 2) 2) 2)	270 240 250 200 400 800	NOSE - FLEX. NOSE - FLEX. SIDE WAIST-FL. U.PUS. - PACKAGE L.PUS. - PACKAGE UPPER TURRET TAIL-POWER MT.	A S A B O V E	A S A B O V E	AS ABOVE	TECHNICAL ORDER 01-352B-1. (25 DEC. 1943) a-B-26B-10,-15 & C-5 HAVE FLEX. TAIL MOUNT INSTEAD OF POWER MOUNT & RDS./GUN SAME AS B-26B-2-MA. b-BASIC WEIGHT OF B-26B-15 IS 21,500 LB.	
B-26 B-MA -25 TO 55 INCL B-26 C-MQ -30 & -45 INCL	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE ONLY)	2 x 360 2 x 121 2 x 250 1162 TOT	A S A B O V E	SEE (A)	2-2000 2-1600 1-1000 8-500 16-250 30-100	1-2000 (TORPEDO)	2-1600 1-2000T 5200 (B)	NOTE (A) plus RC-103 & SCR-522	REFERENCE AS ABOVE a-FLEXIBLE GUN DELETED ON LATEST B-26B's and B-26C-5. b-ALL MODELS EXCEPT 1st.75 (B-26C-30) CARRY LESS BOMBS DUE TO DELETION OF 2 REAR BOMB BAYS. c RC-103 & SCR-522 ADDED TO LATER MODELS ONLY.	
B-26 F-MA -1,-2 & -6 B-26 G-MA -1 TO -25	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE ONLY)	2 x 360 2 x 121 2 x 250 1500 TOT	1) 2) 2) 2) 2)	300 250 275 225 400 900	NOSE - FLEX. SIDE WAIST-FL. U.PUS. - PACKAGE L.PUS. - PACKAGE UPPER TURRET TAIL-POWER MT.	2-2000 2-1600 4-1000 6-500 10-250 20-100	NONE	4000	AS ABOVE TECHNICAL ORDER 01-352C-1. (15 FEB. 1944) a-B-26G DESIGNATION IS USED FOR AIRPLANES WITH AN FITTINGS; NO OTHER MAJOR CHANGES.	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE	
	GROSS WEIGHT LB.	TO CLEAR 50 FT. DIST.		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE				
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT./MIN.	HIGH SPEED MPH	RATE OF CLIMB FT./MIN.				TIME TO CLIMB MIN.	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS		RANGE MILES
B-26 B-MA B,-2,-3 & -4	24000 25000 32000 35000 36000	- - 3850 4000 4300	2300 2900 3500 -	110 120 130 -	1600 2100 2600 -	35000	20000 15000 10000 5000 S L	270 298 291 294 281	300 750 1000 1150 1500	265 294 288 285 265	200 600 900 -	26.5 14.0 7.7 3.4 0.0	34000 35500 36000 35000	NONE 1162 2000T 4000	1162 1162 962 962	950 900 962 950	3.5 3.5 -	- -	- -	- -	2000 1950 1900 1250	11.0 10.7 10.5 7.0		
B-26 B-MA -10 TO -20 INCL B-26 C-MQ -5 TO -25 INCL	28000 32000 35000 36000 38200	2400 3050 4000 4300 6100	2200 2100 -	135 136 -	1600 2000 -	37000	20000 15000 10000 5000 S L	282 278 285 270	- - 1000 1300	- 273 271 269 250	300 320 550 -	28.6 11.2 4.1 0.0	38200 38200 36300 38100	NOTE NOTE 2000T 4000	1162 1162 962 962	1000 950 962 950	4.2 2.6 -	- -	2375 1725 1700	11.7 8.5 8.5	- -	2500 1825 1800 1075	11.7 10.2 10.2 6.0	* MUST BE STRIPPED TO 38200 LB.
B-26 B-MA -25 TO 55 INCL B-26 C-MQ -30 & -45 INCL	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	37000	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	37800 34100 35300 38100	NOTE NOTE 2000T 4000	1162 962 962 962	1000 950 962 950	4.2 2.6 -	- -	1725 1125 -	3.5 5.4 -	- -	1825 1290 -	10.2 7.0 -	
B-26 F-MA -1,-2 & -6 B-26 G-MA -1 TO -25	28000 32000 35000 36000 38200	2300 2150 2660 2900 3600	2200 2100 -	122 122 125 127 -	1500 1750 1300 1350 -	37000	25000 20000 15000 10000 5000 S L	256 274 277 285 281	- - 350 390 650 1000	258 274 269 259 242	- - 31.8 17.2 6.1 0.0	36000 36200 34200 38200	NONE NOTE NOTE 4000	1500 1250 1000 1000	1050 875 675 675	4.3 3.6 2.7 2.8	- -	1775 1500 1175 1100	8.8 7.2 5.6 5.6	- -	1675 1600 1300 1125	10.6 9.0 7.3 6.3	* MUST BE STRIPPED TO 38200 LB.	

NOTES: (A)

24 VOLT RADIO SYSTEM

SCR-211 FREQUENCY METER  
SCR-2690 RADIO COMPASS  
SCR-271a COMMAND SET  
SCR-237A LIAISON SET  
SCR-535 SET (or SCR-595 or SCR-695)  
SCR-578 EMERGENCY TRANSMITTER  
RC - 32 FILTER EQUIPMENT (or RC-198)  
RC - 36 INTERPHONE AMPLIFIER  
RC - 43B MARKER BEACON

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK

\* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.

(B) TORPEDOES BEING USED IN LIMITED QUANTITIES ONLY;  
WITH MAXIMUM BOMB LOAD SHOWN TORPEDO MUST BE DROPPED FIRST.  
(C) LIMITED TO 38200 LB. BY FLIGHT CHARACTERISTICS.



**B-26**  
"MARAUDER"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
CONFIDENTIAL																
PAGE 17																
AS OF:																
DATE: 25 NOV. 1944.																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS - <del>CARGO</del> - <del>PASS</del>			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE	
A-20H-DO -1 TO -15 INCL.	2	WRIGHT R-2600-29 2 SPD. SUPERCH. HAMILTON STD. 11"3"DIA.-3 BL. E.F. HYDRA-MATIC	T 1700/5200 M 1700/13400 C 1500/6400 1350/15900	S 61'4" L 48'0" H 18'1" T 17'0" W 145 sq. ft.	B 17800 C 26000 R 26000 W 27000	3	DIED. WINGS OUTPD. WINGS FIN. (BOMB P. DRIP. (EXTERNAL (SEE B) 1099 TOT.	2x136 2x 64 3x325 1x274	1) 2) .50 6)	400 400 350	TURREL-FLEX. UPPER TURRET NOSE-FIXED	L- 500 L- 250 L- 100	L- 500 L- 250 L- 100	L- 500 L- 500 L- 500 L- 500	SCR-27LN SCR-695A M-26Y RC-36 RC-198	TECHNICAL ORDER 01-LOAD-1 (15 JUNE 1944)  NO TORPEDO PROVISIONS.
A-20K-DO -1 TO -15 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	4	AS ABOVE		1) 2) .50 2)	400 400 350	TURREL-FLEX. UPPER TURRET NOSE-FIXED	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE.  A-20K SAME AS A-20H, EXCEPT FOR BOMBARDIER NOSE.
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
COLUMN --- 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17																

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE			
	TO CLEAR 50'		GROUND-RUN				WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS CARGO - <del>PASS</del>	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	LANDING SPEED	LAND. DIST.			LAND. DIST.	HIGH SPEED	RATE OF CLIMB	HIGH SPEED				RATE OF CLIMB	TIME TO CLIMB	RANGE ENDUR.	RANGE ENDUR.	RANGE ENDUR.	RANGE ENDUR.	RANGE ENDUR.		RANGE ENDUR.	RANGE ENDUR.	
LB.	FT.	FT.	FT.	MPH	FT.	FT.	FT.	MPH	FT/MIN.	MPH	FT/MIN.	MIN.	LB.	LB.	U.S. GAL.	MILES	HOURS	MILES	HOURS	MILES	HOURS	MILES	HOURS	MILES	HOURS	
A-20H-DO -1 TO -15 INCL.	19000	2750	3750	94	1820	2375	25000	325	600	307	600	15.3	26380	3086	1099	750	1.2	-	1115	6.3	-	-	2000	10.3	* FLIGHTS ABOVE 10000 FT. REQUIRE SPECIAL PROVISIONS FOR OXYGEN.	
	21000	3600	4600	100	1875	2560	20000	315	600	307	600	15.3	26410	2000	725	575	2.1	-	1010	4.1	-	-	1555	6.3		
	24000	4810	6200	108	2560	3450	15000	320	1200	317	1050	5.6	26990	4000	400	210	1.1	-	120	2.2	-	-	595	2.8		
A-20K-DO -1 TO -15 INCL.	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS ABOVE
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45																										

NOTES: (A) CRITICAL FLIGHT CHARACTERISTICS RESULT ABOVE 27000 LB. RED FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.  
 (B) FUSELAGE TANKS ARE CARRIED IN BOMB BAYS WITHOUT EFFECTING MILITARY POWER AVAILABLE FOR FIVE SLATES ONLY.  
 \* EXTERNAL



A-20  
"HAVOC"

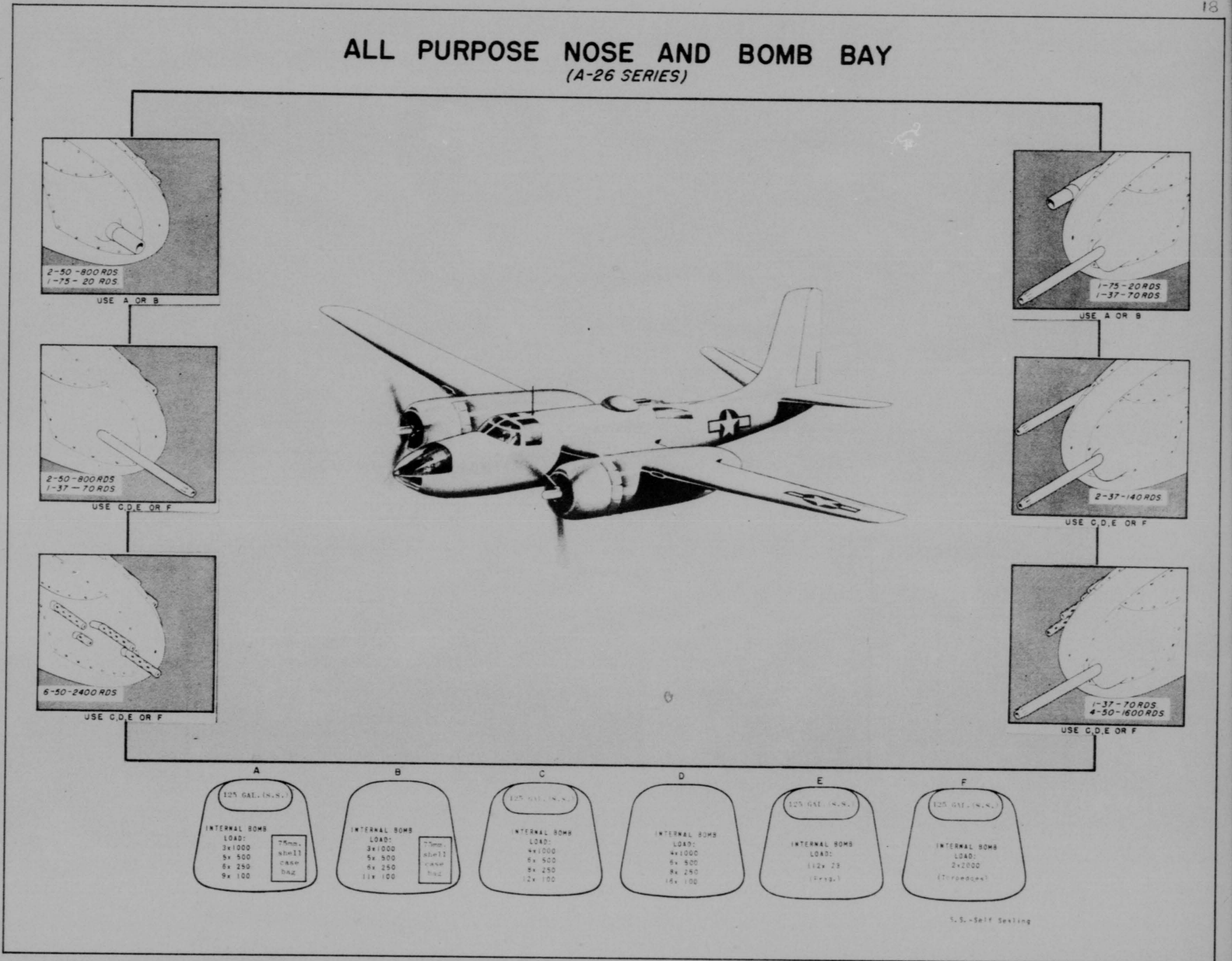
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### ALL PURPOSE NOSE AND BOMB BAY (A-26 SERIES)



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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 19  
AS 891  
DATE 24 NOV 1944

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE
	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX			TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY		
A-26B (DL) DT -1 & -5	PRATT-WHITNEY R-2800-27 SINGLE ST.-2 SPD. HAMILTON STD. 12"7" DIA. - 3BL. F.P. HYDROMATIC	T 2000/ S L M 2000/ 1500 C 1600/ 6500 1150/ 14000	S 70' L 49'11" H 18'6" T 19'6" W 54.0 sq. ft.	B 23275 C 35000 R 35500 W 37000	2	2	MAIN - WINGS 2 x 300 AUX. - WINGS 2 x 100 BOMB BAY (SS) 1 x 125 B. BAY (FERRY) 1 x 675 1600 TOT.	2-50 2-50 4 or 8-50	20 500 500 300	NOSE CAN, 113EL UPPER TURRET LOWER TURRET WINGS-PACKAGE (ALTERNATE INSTALLATION - SEE A)	b 4-1000 b 6- 500 b 8- 250 b 16- 100	b 2-2000T 4- 500 4- 250 4- 100	4-1000 4- 500x 6000	SCR-274A SCR-595 MN-260 RC-36 SCR-522	TECHNICAL ORDER OI-104J-1. (REV. NOV. 1944) a PARTS WILL BE PROCURED FOR SERVICE INSTALLATION OF ALL-PURPOSE NOSE AS SHOWN ON PAGE OPPOSITE. b SEE PAGE OPPOSITE FOR BOMB LOAD CARRIED WITH 7500 GWT. c NORMAL CREW (2) + CREW (3) WITH 7500 GWT. CANNON. f NO SELF SEALING BOMB BAY TANK ON A-26E-1-DL ONLY.
A-26B (DL) DT -10, -15, -20	PRATT-WHITNEY R-2800-27 or -71 SINGLE ST.-2 SPD. HAMILTON STD. 12"7" DIA. - 3BL. F.P. HYDROMATIC	AS ABOVE	S 70' L 50'7" H 18'6" T 19'6" W 54.0 sq. ft.	B 23225 C 35000 R 35500 W 37000	2	2	AS ABOVE	2-50 2-50 4 or 8-50	400 500 500 300	NOSE UPPER TURRET LOWER TURRET WINGS-PACKAGE (ALTERNATE INSTALLATION - SEE A)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER OI-104J-1. (REV. NOV. 1944) a SEE PAGE OPPOSITE FOR ALL-PURPOSE NOSE INSTALLATIONS.
A-26C-DT -15 & -20	AS ABOVE	AS ABOVE	S 70' L 51'3" H 18'6" T 19'6" W 54.0 sq. ft.	B 23225 C 35000 R 35500 W 37000	3	3	AS ABOVE	2-50 2-50 2-50	400 500 500	NOSE UPPER TURRET LOWER TURRET	4-1000 6- 500 8- 250 16- 100	2-2000T 4- 500 4- 250 4- 100	4-1000 4- 500x 6000	SCR-274A SCR-595 SCR-269 RC-36 SCR-522 AN/ARN-7	TECHNICAL ORDER OI-104J-1. (REV. NOV. 1944)

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT				RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE						
	GROSS WEIGHT LB.	TO CLEAR 50' T.O. DIST. FT.		LANDING SPEED MPH	GROUND-RUN T.O. DIST. FT.		WEIGHT LB.	STD. ALT. FT.	MIL. POWER HIGH SPEED		MAX. CONTIN. POWER HIGH SPEED		TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 10000 FT.		LONG RANGE AT 10000 FT.					
		FT.	FT.		FT.	FT.			MPH	MPH	FT/MIN.	MPH				FT/MIN.	MIN.	RANGE MILES		ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES
A-26B (DL) DT -1 & -5	25000 29000 32000 35000 34000 35000	- 2900 3700 4600 4300 4600	2650 2950 3200 3250 -	96 104 109 111 -	1750 2100 2550 2700 -	20000 15000 10000 5000 S L	337 355 346 350 328	260 720 1010 1540 2030	329 341 330 320 297	100 520 560 # #	31.4 15.3 7.0 2.7 0.0	35000 31400 34400 34600	NONE NONE 3000 4000	1600 925 925 800	1090 660 660 560	3.8 2.2 2.2 1.9	1115 585 585 485	6.4 4.8 4.8 4.1	2445 1355 1300 1150	6.7 4.7 4.7 4.2	2265 1175 1125 970	6.9 5.1 5.1 4.3	3090 1735 1640 1385	14.5 6.7 7.6 6.5	NOTE: (a) NO PROVISIONS FOR OXYGEN. (b) WHEN 8 EXTERNAL WING PACKAGE GUNS ARE CARRIED HIGH SPEED DECREASES APPROX. 13 MPH. & RATE OF CLIMB 150 FT./MIN.
A-26B-10 to-20 (DL) A-26B-10 to-20 (DT) A-26C-15, -20 (DT)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE

NOTES:

(A) 4 or 8, CAL. 50 REMOVABLE PACKAGE GUNS MAY BE MOUNTED ON WING BOMB RACKS IN PLACE OF BOMBS.  
SINGLE NOTE: SOME A-26 MODELS USE WATER INJECTION ENGINES, MODELS R-2800-67 & -79.

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK  
\* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.  
T-TURBIDO  
X-EXTERNAL



**A-26**  
"INVADER"

MANUFACTURED BY DOUGLAS (Long Beach) "DL" and DOUGLAS (Tulsa) "DT"




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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 22	
CONFIDENTIAL																	AS OF:	
																	DATE NOV. 20, 1944	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO		REMARKS & REFERENCE		
	NUMBER	ENGINE MFGR. MODEL SUPERCHARGER PROP MFGR. TYPE	B.H.P./ALT.		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	COMBAT CREW	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL		MAX LOAD LB.		TYPE	
			T-TAKE-OFF M-MILITARY C-CONTINUOUS	T-TAKE-OFF M-MILITARY C-CONTINUOUS									NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY				
C-46A-5 to -55 (CU) C-46A-1, -5, -55 (CX) C-46A-1 (CS) C-46D-1, -5, -10 (CU)	2	PRATT-WHITENEY R-2800-51 or -75 2 SPEED CURTISS 13'6" DIA. - 3BL. F.P., HYDROMATIC	T 2000/ 5 L M 2000/ 1500 C 1500/ 13500 1150/ 13000	S 108'0" L 76'4" H 22'0" T 26'0" W 1360 SQ. FT.	B 52400 C 15000 R 49000 W 56000A	3	WING-PANEL FUSELAGE	8-1100 2x 100 2200 TOT.					FORE-BELLY APT -BELLY MAIN-CARGO TROOPS	3700 1500 10000 or 50	15000	SCR-211, 259, 271A, 287, 512, 578 & 695 R-2800-75 ENGINES ON LATE C-46A-55-CU & C-46D-10-CU.	TECHNICAL ORDER 01-251A-1. (25 JUNE 1944) * MAX. RADIO COMBINATION LISTED.	
C-47A to -90 (DL) C-47A to -30 (DX) C-53C & D (DL)	2	PRATT-WHITENEY R-1850-92 INTERNAL SUPER. HAMILTON STD. 11'7" DIA. - 3BL. F.P., HYDROMATIC	T 1200/ 8 L M 1050/ 7000 C 1050/ 7000	S 95'0" L 64'6" H 17'0" T 18'6" W 987 SQ. FT.	B 18000 C 26000 R 29300 W 36500A	3	MAIN - WINGS AUX. - WINGS FUSELAGE	2x 202 2x 200 8x 100 1604 TOT.					CARGO or TROOPS or LITTERS	6000 27 18	6000 3000 10000 MAX 11000 MAX	SCR-211, 259, 271A, 287, 512, 578, 695, 595, 103, 198, 103, 198, 103, 198.	TECHNICAL ORDER 01-420C-1. (REV. 5 SEPT. 1944) * MAX. RADIO COMBINATION LISTED. (AN/APN-2 ON SOME MODELS) NOTE: C-47 & C-53 SERIES SIMILAR EXCEPT FOR LARGE CARGO DOOR ON C-47 & (28) PLACES IN C-53.	
C-47B-04 -1 to -20 C-47B-01 -1	2	PRATT-WHITENEY R-1850-90C 2 SPEED HAMILTON STD. 11'7" DIA. - 3BL. F.P., HYDROMATIC	T 1200/ 8 L M 1050/ 7500 C 1050/ 7500 950/ 13600	S 95'0" L 65'9" H 16'11" T 18'6" W 987 SQ. FT.	B 18150 C 26000 R 29300 W 36500A	3	A S A S O V E						A S A S O V E			AS ABOVE	TECHNICAL ORDER 01-420D-1. (NOV. 1944)	
C-60A-L0 A to -5	2	WEIGHT R-1820-87 2 SPEED HAMILTON STD. 10'6" DIA. - 3BL. F.P., HYDROMATIC	T 1200/ 8 L M 1200/ 5700 C 1000/ 6400 900/ 16500	S 65'8" L 49'10" H 12'0" T 15'4" W 551 SQ. FT.	B 13000 C 21000 R 21000 W 25000	3	FRONT-WINGS REAR-WINGS AUX. - CABIN	2x 150 2x 172 3x 134 1046 TOT.					BELLY CABIN or PARATROOPS	3400 6000 or 18	3500	SCR-211, 259, 271A, 287, 512, 578, 695, 595, 103, 198, 103, 198.	TECHNICAL ORDER 01-750B-1. (REV. 15 AUG. 1944) * MAX. RADIO COMBINATION LISTED. 1200 LB. BALLAST REQUIRED IN NOSE TO BALANCE PARATROOPS.	
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

MODEL & BLOCK NO.	TAKE OFF & LANDING				HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE																										
	HARD SURFACE - NO WIND				AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE																																				
	TO CLEAR 50'		GROUND-RUN		WEIGHT	STD ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS CARGO PASS.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER			MAX. CRUISE POWER			LONG RANGE																											
	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.			HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB				AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE		ENDUR.	RANGE	ENDUR.																							
C-46A-5 to -55 (CU) C-46A-1, -5, -55 (CX) C-46A-1 (CS) C-46D-1, -5, -10 (CU)	34000 39000 45000 50000	- 2050 2700 3500	2250 2150 2650 -	82 88 95 -	1200 1400 1600 -	14000 14000 14000 14000	20000 15000 10000 5000 S L	260 269 264 262 245	530 700 900 1100 1300	257 264 256 259 240	400 650 900 900 900	28.4 18.6 11.6 5.5 0.0	51000 47000 47000 51000	2000 4000 6000 10000	2200 1100 1050 1050	1600 850 750 700	6.8 4.2 3.1 3.0	- - - -	- 2600 1200 1100	12.9 6.7 5.9 5.9	- - - -	- - - -	2950 1900 1350 1200	15.6 10.0 7.1 6.7																							
C-47A to -90 (DL) C-47A to -30 (DX) C-53C & D (DL)	21000 23000 26000 29300	- 1850 2400 3200	2100 2300 2600 -	66 61 73 -	1300 1400 1600 -	20000 15000 10000 5000 S L	SAME AS FOR MAX. COMB. WEIGHT	217 221 219 203	360 650 1250 1020	25.7 15.6 10.0 5.0 0.0	29300 26000 29300 29300	NONE 2000 6000 6000 or (27) TROOPS	1604 1004 804 804	1500 950 750	7.6 4.7 3.7	ABOVE PRAC-TICAL CRUIS-ING CEILING	2300 1450 1100	13.0 7.9 6.2	ABOVE PRAC-TICAL CRUIS-ING CEILING	3100 2050 1550	19.3 12.7 10.0		* MAX. PERMISSIBLE LEVEL FLIGHT SPEED FOR 29000 LB. IS 187 MPH.																								
C-47B-04 -1 to -20 C-47B-01 -1	21000 23000 26000 29300	2100 2350 2850 3300	1530 1650 2750 -	71 73 76 -	1000 1325 1700 2150	20000 15000 10000 5000 S L	SAME AS FOR MAX. COMB. WEIGHT	223 229 224 219 203	500 730 900 1250 1020	24.0 15.0 10.0 5.0 0.0	29300 26000 26000 29300	NONE 1400 2000 6000 or (27) TROOPS	1604 1204 1004 804	- - -	DATA BEING EVALUATED	- -	- -	- -	- -	- -	- -	- -																									
C-60A-L0 A to -5	14000 17500 18500 21000 23000	- 1800 2050 2850 3300	2150 2600 2700 -	61 58 70 -	1700 2100 2200 -	20000 15000 10000 5000 S L	259 269 260 255 236**	650 1300 1400 1900 1600	235 262 255 247 235	500 1000 1200 7.0 3.0 0.0	21000 23000	1450 5000*	1046 644	1000 600	4.5 2.7	ABOVE PRAC-TICAL CRUIS-ING CEILING	1450 850	7.0 4.3	ABOVE PRAC-TICAL CRUIS-ING CEILING	2300 1200	14.4 7.7		* 5000 LB. CARGO or 18 PARATROOPS & 1200 LB. BALLAST IN NOSE. ** SPEED RESTRICTED IN LEVEL FLIGHT.																								
NOTES:	SEE FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.																																														
(A) PERMISSIBLE ONLY WITH ALL WING TANKS FULL.																																															
												 <p>C-46A "COMMANDO"</p>												 <p>C-47A "SKYTRAIN"</p>												 <p>C-60A "LODESTAR"</p>											
MANUFACTURED BY CURTISS (Buffalo) "CU"; CURTISS (Louisville) "VA"; CURTISS (St. Louis) "CS"; DOUGLAS (Long Beach) "DL" & DOUGLAS (Oklahoma) "DX"; LOCKHEED (Burbank) "LO"																																															
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PAGE 23  
AS OF:  
DATE: 21 NOV 1944

### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	ENGINE MFR. MODEL	B.H.P./ALT.				TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL OR STATION	EXTERNAL OR CAPACITY			MAX. LOAD LB.	TYPE
C-54A-00 -1 & -5 C-54A-DC -1 to -20	PRATT-WHITNEY R-2000-7 2 SPEED HAMILTON STD. 13'1" DIA. - 3BL. F.F. HYDRA-MATIC	T 1350/ S L M 1350/ 4000 C 1015/ 9000 346/13500	S 117' 6" L 93' 10" H 27' 6" T 24' 8" W 1160 SQ. FT.	B 37000 C 58000 F 65800 W 85000A	6	INBD. - WINGS OUTBD. - WINGS FUSELAGE	2 x 190 2 x 120 4 x 150 3620 TOT.	N	0	N	E	PURE-BELLY APT - BELLY PURE-CARGO APT - CARGO TROOPS	1800 2100 24000 14000 30 or 50	25000	SCR-211, 259, 271, 287, 295 or 295A, 305, 315, 105, 198, AB/ARM-7.	TECHNICAL ORDER 01-4088-1. (REV. 25 JUNE 1944) * MISC. RADIO CARRIED: MAX. COMBINATION SHOWN. NOTE: 30 TROOPS WITH FUSELAGE TANKS (3620 GAL.) 50 TROOPS WITHOUT FUSELAGE TANKS (1820 GAL.)
C-54B-1 to -10 (10) C-54B-1 (10) C-54B-1 (10) C-54B-1 (10)	PRATT-WHITNEY R-2000-11* 2 SPEED HAMILTON STD. 13'1" DIA. - 3BL. F.F. HYDRA-MATIC	T 1150/ S L M 1100/ 7000 C 1100/ 7000	AS ABOVE	B 38700 C - W 73000 85000A	6	INBD. - WINGS OUTBD. - WINGS AUX. - WINGS FUSELAGE	2 x 190 2 x 510 2 x 120 2 x 150 3740 TOT.	N	0	N	E	TROOPS LITTERS	41 or 49* 28 or 36*	32500	AS ABOVE EXCEPT FOR NO SCR-269	TECHNICAL ORDER 01-4088-1 (10 OCT. 1944) * C-54B MODELS HAVE R-2000-7 ENGINE AS SHOWN FOR C-54A. * 41 TROOPS or 28 LITTERS WITH FUSELAGE TANKS (3740 GAL.) 49 TROOPS or 36 LITTERS WITHOUT FUSELAGE TANKS (2812 GAL.) FOUR C-54B-1 PLANES HAVE REDUCED LITTER CAPACITY.
C-69-L0 -1, -5, -10	WRIGHT R-3350-35 SINGLE or 2 SPEED HAMILTON STD. 15'2" DIA. - 3BL. F.F. HYDRA-MATIC	T 2150/ S L M 2135/ 6300* C 2025/ 6500*	S 123' 0" L 95' 2" H 25' 6" T 28' 0" W 1650 SQ. FT.	B 50500 C 82000 R 86250B W 101000A	9	WINGS WINGS (SEE F)	2 x 1589 2 x 819 4816 TOT.	N	0	N	E	50 PASSENGERS	NONE	14000 PASSENGER CONFIGURATION	SCR-271N, (2) 259, 287, 211, & 695, RC-43/193, 36 & 101.	TECHNICAL ORDER 01-7508-1. (10 NOV. 1943) * HORSEPOWER RATINGS SHOWN ARE WITH SINGLE SPEED BLOWER. * TOTAL FUEL CAPACITY OF 1st. & 2nd. ARTICLES IS 14000 GAL. 3rd. & SUBSEQUENT IS SHOWN.
C-87 C-87A } CF C-87B }	PRATT-WHITNEY R-1830-43 or -65 TUREO HAMILTON STD. 11'7" DIA. - 3BL. F.F. HYDRA-MATIC	T 1200/ S L M 1200/ 26500 C 1100/ 27000	S 110' 0" L 66' 1/4" H 18' 0" T 25' 8" W 1048 SQ. FT.	B 34250 C 56000 R 56000 W 62000	5	INBD. - WINGS OUTBD. - WINGS	12 - 2364 6 - 450 2814 TOT.	1-50	500	TAIL - FLEX.	CHAIRS or LITTERS & BENCH	20 or 7 14000 MAX.	SCR-271N, 269, 287, 578 & 695, RC-36, RC-43	TECHNICAL ORDER 01-50A-1. (15 DEC. 1943)		

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE	
	TO CLEAR 50		GROUND-RUN		WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS-CARGO-PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.			HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB				TIME TO CLIMB	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE	ENDUR.		RANGE
C-54A-00 -1 & -5 C-54A-DC -1 to -20	45000	-	3900	60	-	1800	20000	-	-	269	425	24.4	62000	NONE	3620	EXCEEDS SPEED LIMITS	ABOVE PRAC-TICAL CRUISE-ING CEILING	3300	15.7	4000	25.1	* 8000 LB. CARGO or 30 TROOPS & 2000 LB. EQUIPMENT. ** 14000 LB. CARGO or 50 TROOPS & 4000 LB. EQUIPMENT.		
C-54B-1 to -10 (10) C-54B-1 (10) C-54B-1 (10) C-54B-1 (10)	55000	2800	3400	90	1500	2200	20000	-	-	260	265	43.0	63550	NONE	3740	AS	ABOVE	3550	17.1	4250	27.1	* LANDING WEIGHT LIMITED TO 62000 LB.		
C-69-L0 -1, -5, -10	62000	1850	2575	87	1275	1400	20000	308	-	303	440	22.8	82000	NONE	4816	AS	ABOVE	2950	10.4	4300	19.9	ALL PERFORMANCE WITH SINGLE SPEED SUPERCHARGER. * ALTERNATE CARGO IN LIEU OF PASSENGERS		
C-87 C-87A } CF C-87B }	40000	-	3300	90	-	2800	30000	600	-	600	34.0	52900	NONE	2814	1235	4.8	1375	4.8	2210	10.2	2030	8.8	3315	18.4

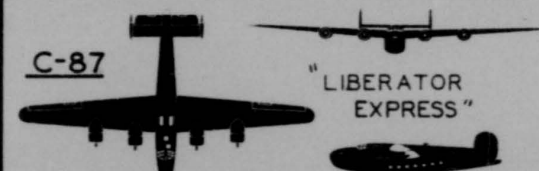
NOTES:

(A) PERMISSIBLE ONLY WITH ALL WING TANKS FULL.

RED FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.

MILITARY POWER AVAILABLE FOR 5 MINUTES.

(B) SUBJECT TO STRUCTURAL MODIFICATION OR LATER MODEL.



MANUFACTURED BY DOUGLAS (SMITH BARNEY) "DO" (CHICAGO) "DC"

LOCKHEED (BURBANK) "LO"

CONSOLIDATED "CP" (FT. WORTH)

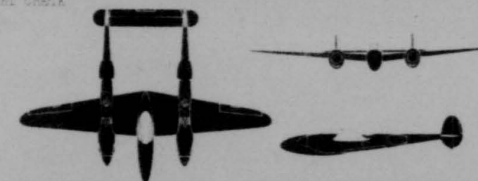
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR.	B.H.P./ALT.	S-SPAN	B-BASIC		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	TYPE		
		MODEL	T-TAKE-OFF	L-LENGTH	C-COMBAT							NO. & SIZE	NO. & SIZE				
P-38F-LO	2	ALLISON V-1710-19 & -53 TURBO CURTISS 11'6" DIA. - 3BL. P.F., ELECTRIC	T 1225/8 L M 1150/27000 C 1000/27000	S 52' 0" L 37'10" H 12'10" T 15' 6" W 328 92'	B 13000 C 15300 R 20000 W -	1	MAIN - WINGS RES. - WINGS 2 x 90 2 x 60 300 TOT.	1-303. 1-50 (MAX.)	150 500	NOSE-TYPE M1 NOSE-FIXED	NONE	NONE	2-1000 2-500 2-325 2-250 2-100	SCR-185 or SCR-27LN	TECHNICAL ORDER 01-75-1. (30 APRIL 1944) * LIMITED TO 1150 HP. BECAUSE OF INADEQUATE COOLING.		
P-38F-LO -1 TO -15 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 13600 C 15900 R 20000 W -	1	MAIN - WINGS RES. - WINGS DRIP - EXTER. 2 x 90 2 x 60 2 x 75 2 x 150 300 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	NONE	NONE	2-1000 2-500 2-325 2-250 2-100	SCR-27LN* SCR-515** SCR-522 SCR-535	REFERENCE AS ABOVE ** PROVISIONS ONLY. ** SPACE ONLY.		
P-38G-LO -1 TO -15 INCL.	2	ALLISON V-1710-51 & -55 TURBO CURTISS 11'6" DIA. - 3BL. P.F., ELECTRIC	T 1225/8 L M 1150/27000 C 1100/21,000	AS ABOVE	B 13500 C 15000 R 20000 W -	1	AS ABOVE EXCEPT THAT LAST P-38G-10'S ARE SAME AS BELOW	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE EXCEPT LAST 200 P-38G-10'S ONLY ARE SAME AS BELOW	NONE	2-1000 2-500 2-325 2-250 2-100	SCR-27LN* SCR-515** SCR-522 SCR-535	REFERENCE AS ABOVE * LIMITED TO 1150 HP. BECAUSE OF INADEQUATE COOLING. ** PROVISIONS ONLY. *** LAST 179 P-38G-10'S ONLY.		
P-38H-LO -1 & -5	2	ALLISON V-1710-59 & -91 TURBO CURTISS 11'6" DIA. - 3BL. P.F., ELECTRIC	T 1425/8 L M 1125/25000 C 1100/25000	AS ABOVE	B 13700 C 15300 R 21000 W -	1	MAIN - WINGS RES. - WINGS DRIP - EXTER. 2 x 90 2 x 60 2 x 75 2 x 150 300 TOT.	1-303. 1-50 (MAX.)	150 500	NOSE-AN-MTC" NOSE - FIXED	NONE	NONE	2-1000 2-500 2-325 2-250 2-100	SCR-27LN* SCR-515** SCR-522 SCR-535	TECHNICAL ORDER 01-75-1. (15 SEPT. 1944) * LIMITED TO 1210 HP. BECAUSE OF INADEQUATE COOLING. ** PROVISIONS ONLY. ** SPACE ONLY.		
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE			
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE													
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND RUN		WEIGHT LB.	STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER				LONG RANGE				
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.				TO CLIMB MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		RANGE MILES	ENDUR. HOURS	RANGE MILES
P-38F-LO	13500	-	2750	85	-	1150	25000	390	2100	360	#	11.0	15600	NONE	300	400	1.3	425	1.3	700	2.7	675	2.4	900	4.5	
P-38F-LO -1 TO -15 INCL.	13500	-	2750	85	-	1150	25000	375	2100	360	#	12.0	19900	NONE	900	1375	5.0	1150	5.0	2050	9.3	2050	3.6	3300	9.9	
P-38G-LO -1 TO -15 INCL.	15000	2150	2980	90	1280	1580	20000	370	2300	367	#	8.8	18000	NONE	600	800	2.9	850	2.9	1400	6.1	1425	5.4	1750	9.1	
P-38H-LO -1 & -5	15000	2270	3050	91	1360	1620	15000	376	2150	354	#	6.0	15000	NONE	500	400	1.3	400	1.3	700	2.7	635	2.4	900	4.5	
	17500	3040	3350	97	1830	1800	10000	351	2500	340	#	4.0	17000	1000	300	305	1.3	395	1.3	675	2.2	650	2.4	850	4.3	
	19900	4000	-	-	2100	-	5000	347	2000	327	#	1.2	18000	2000	300	275	1.3	375	1.3	625	2.2	600	2.3	800	4.1	
							25000	400	1700	390	#	11.5														
							20000	390	2300	377	#	8.5														
							15000	375	2500	354	#	5.9														
							10000	350	2600	347	#	3.7														
							5000	345	2600	333	#	1.2														
	13600	-	2750	86	-	1150	25000	402	1700	390	#	8.7	20300	NONE	900	1300	5.0	1350	5.0	1950	9.3	1950	3.6	2900	10.0	
	15900	2000	3050	93	1800	1650	20000	377	2300	375	#	7.4	18300	NONE	600	750	2.9	800	2.9	1350	6.1	1350	5.4	1700	9.6	
	17500	2600	3500	100	1600	2000	15000	372	2500	350	#	5.5	16300	NONE	300	350	1.3	375	1.3	650	2.7	650	2.4	850	4.7	
	19500	3500	-	-	2000	-	10000	360	2600	347	#	3.5	18300	2000	300	325	1.3	325	1.3	575	2.2	550	2.3	750	4.0	
	20300	4000	-	-	2300	-	5000	345	2700	332	#	1.7	19500	3200	300	300	1.3	300	1.3	550	2.2	525	2.2	700	3.2	

NOTES:

RED FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.  
# HEAVY POWER AVAILABLE FOR 15 MINUTES.

P-38  
"LIGHTNING"

REPRODUCED BY AUTHORITY OF (Part 4) "10"

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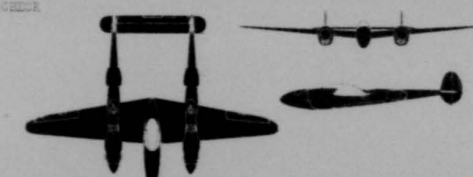
**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 25  
AS OF:  
DATE: 25 NOV. 1944.

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE			
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT.	T-TAKE-OFF M-MILITARY C-CONTINUOUS			S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION			EXTERNAL NO. & SIZE OR CAPACITY	MAX LOAD LB.	TYPE
P-38J-LO -5&-10	2	ALLISON V-1710-89 & -91 TURBO CURTISS 11'6" DIA. - 3BL. F.F. ELECTRIC	T 1125/3 L M 1125/26500 C 1100/32500	S 52' 0" L 37' 10" H 12' 10" T 16' 6" W 328 SQ. FT.	B 13700 C 16450 R 21000 W -	1	MAIN - WINGS RES. - WINGS DROPP. - EXTER.	2x 90 2x 60 2x 75 or 2x 165 or 2x 100	1-20MM 4-.50	150 (MAX.)	MISE-AN M2" C HOSE - FIXED	NONE	2-1600 2-1000 2- 500 2- 325 2- 250 2- 100	3200	SCR-27LA* SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-75-1. (15 SEPT. 1944) * PROVISIONS ONLY. **SPACE PROVIDED.			
P-38J-LO -5 TO -25 INCL. [L.E. TANKS]	2	AS ABOVE	T 1125/3 L M 1600/26500 C 1100/32500	AS ABOVE	B 11100 C 17500 R 22000 W -	1	MAIN - WINGS RES. - WINGS L.E. - WINGS DROPP. - EXTER. (SEE F)	2x 90 2x 60 2x 55 2x 75 or 150 or 165 or 100 1010 LBS.	A S	A B O V E	A S	A B O V E	A S	A B O V E	AS ABOVE	REFERENCE AS ABOVE IF THE 2-55 GAL. LEADING EDGE WING TANKS ARE INSTALLED AT FACTORY, MOD. CENTER OR FURNISHED TO SERVICE IN KITS. NO WAR EMERGENCY RATING.			
P-38L-LO -1&-5 P-38L-VN -1	2	ALLISON V-1710-111 & -113 TURBO CURTISS 11'6" DIA. - 3 BL. F.F. ELECTRIC	T 1125/3 L M 1125/26500 C 1100/32500	AS ABOVE	B 11100 C 17500 R 22000 W -	1	AS ABOVE	AS ABOVE	A S	A B O V E	A S	A B O V E	A S	A B O V E	AS ABOVE	REFERENCE AS ABOVE NO WAR EMERGENCY RATING. * INCREASED HP. RATING IS ANTICIPATED.			

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE												REMARKS						
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER				MAX. CRUISE POWER				LONG RANGE					
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.				TIME TO CLIMB MIN.	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
		FT.	FT.		FT.	FT.			FT.	FT.	FT.	FT.	FT.	FT.				FT.	FT.	FT.	FT.	FT.	FT.	FT.		FT.	FT.	FT.	FT.	FT.	FT.
P-38J-LO -5&-10	15500 16500 18500 19600 20500	1900 2100 2750 3100 3350	3050 3200 3550 3750 -	105 108 116 121 -	1050 1150 1500 1850 2000	1650 1750 1900 2000 -	16450	30000 25000 20000 15000 10000 5000	115 120 108 95 80 63	1870 2665 3190 3550 380 363	105 106 92 77 65 50	1350 2500 2875 3090 305 320	597 341 365 353 310 321	10.6 8.0 6.2 4.5 2.9 1.8	20950 14050 16450 18450 19650	NONE NONE 300 300 300	900 630 300 300 300	1000 750 325 300 290	3.8 2.6 1.1 1.1 1.1	1000 775 350 300 275	3.8 2.6 1.1 1.1 1.1	1700 1250 600 525 475	6.7 4.5 2.3 2.2 2.0	1750 1300 600 525 500	6.9 4.6 2.2 2.0 1.9	2100 1675 800 700 650	9.2 6.5 4.5 3.7 3.8	P-38J SERIES HAVE INCREASED DRAG DUE TO EXTERNAL CORE TYPE COOLERS. PERFORMANCE VALUES ARE SHOWN WITHOUT EXTERNAL RACKS.			
P-38J-LO -5 TO -25 INCL. [L.E. TANKS]	16000 17500 19500 20700 21600	2000 2100 3100 3750 6500	3150 3400 3750 -	109 111 121 -	1100 1300 1850 2000 -	1700 1850 2000 -	17500	30000 25000 20000 15000 10000 5000	105 111 105 95 80 72	1625 2115 2925 3265 3525 3470	95 98 85 73 61 51	1350 2500 2850 3090 305 320	597 341 365 353 310 321	11.6 8.8 6.7 4.9 3.2 1.6	21600 20200 17500 19500 20700	NONE NONE 300 300 300	1010 740 300 300 300	1050 835 325 300 290	4.2 3.1 1.6 1.6 1.6	1070 790 475 400 375	4.2 3.1 1.6 1.6 1.6	1520 1360 600 525 475	7.7 5.2 3.1 3.0 2.9	1880 1460 600 525 500	7.6 5.1 3.1 3.0 2.7	2250 1910 800 700 650	13.4 12.0 6.7 5.3 5.3	AS ABOVE			
P-38L-LO -1&-5 P-38L-VN -1	A S	A B O V E	A B O V E	A S	A B O V E	A S	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	A S	A B O V E	AS ABOVE		

NOTES:  
RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECKS.  
\* MILITARY POWER AVAILABLE FOR 15 MINUTES



**P-38**  
"LIGHTNING"

MANUFACTURED BY LOCKHEED (Spartan) "LO"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
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MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE				B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN				LOCATION & TYPE
P-39D-BE	1	ALLISON V-1710-35 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. ELECT.	T 1150/S L M 1150/12000 C 1000/10600	S 34' 0" L 30' 2" H 11' 10" T 11' 4" W 213 sq. ft.	B 6300 C 7650 R 9200 W -	1	WING TOTALS PROP. - BELLY	12-120 1x75 or 1x150 or 1x175 295 TOT.	4-.30 2-.50 1-37MM	*1000 200 50	WING - FIXED HOSE - FIXED PROP. - TYPE M1	NONE	1-500 1-305 1-250 1-100	500	SCR-283	TECHNICAL ORDER 01-110PB-1. (30 JUNE 1943)
P-39D-BE -1	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	4-.30 2-.50 1-37MM	*1000 200 50	WING - FIXED HOSE - FIXED PROP. - TYPE M1	A S	A B O V E		SCR-271M or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PE-1. (30 JUNE 1943)
P-39D-BE -2	1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. ELECT.	T 1325/S L M 1150/12000 C 1000/10600	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	A S	A B O V E		A S	A B O V E	AS ABOVE		A S A B O V E
P-39F-BE	1	ALLISON V-1710-35 SINGLE SPEED KRO PRODUCTS 10'5" DIA. - 3BL. CONST. SPD. ELECT.	T 1150/S L M 1150/12000 C 1000/10600	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	4-.30 2-.50 1-37MM	*1000 200 50	WING - FIXED HOSE - FIXED PROP. - TYPE M1	A S	A B O V E		SCR-283	TECHNICAL ORDER 01-110FE-1. (30 JUNE 1943)
P-39K-BE -1	1	ALLISON V-1710-63 SINGLE SPEED KRO PRODUCTS 10'5" DIA. - 3BL. CONST. SPD. ELECT.	T 1325/S L M 1150/12000 C 1000/10600	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	A S	A B O V E		A S	A B O V E		SCR-271M or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110KG-1. (30 JUNE 1943)

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT				RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE						
	GROSS WEIGHT	TO CLEAR 50'		LANDING SPEED	GROUND RUN		STD. ALT.	MIL. POWER	MAX. CONTIN. POWER	TAKE OFF WEIGHT	BOMBS CARGO PASS	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE								
		T.O. DIST.	LAND. DIST.		T.O. DIST.	LAND. DIST.							HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	AT 10000 FT.	AT 25000 FT.		AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE	ENDUR.
P-39D-BE	6700 7600 7800 8150 8850	- 2500 2700 3000 4500	1850 2050 2100 2200 -	82 86 88 91 -	1100 1300 1350 1400 -	7650	25000 20000 15000 10000 5000	324 312 360 395 335	750 1350 2000 2500 2550	310 332 313 315 303	# # # # #	11.0 9.1 6.1 3.9 1.7	8950 8500 8150 7650 8150	NONE NONE NONE NONE 500	295 276 175 120 225	590 585 400 275 225	2.2 2.0 1.6 0.9 0.9	- - - 1.7 -	- - - 350 250	1.5 1.5 1.5 1.5 1.5	- - - - -	1100 1050 800 600 450	6.2 5.9 4.7 2.9 2.6	ALL PERFORMANCE ESTIMATED	
P-39D-BE -1		A S	A B O V E				A S	A B O V E				A S	A B O V E				A S	A B O V E				A S	A B O V E		A S A B O V E
P-39D-BE -2	6700 7600 7800 8150 8850	- 2500 2700 3000 4500	1850 2050 2100 2200 -	82 86 88 91 -	1100 1300 1350 1400 -		25000 20000 15000 10000 5000	324 312 360 395 335	750 1350 2000 2500 2550	310 332 313 315 303	# # # # #	11.0 9.1 6.1 3.9 1.7	8950 8500 8150 7650 8150	NONE NONE NONE NONE 500	295 276 175 120 225	590 585 400 275 225	2.2 2.0 1.6 0.9 0.9	- - - 1.7 -	- - - 350 250	1.5 1.5 1.5 1.5 1.5	- - - - -	1100 1050 800 600 450	6.2 5.9 4.7 2.9 2.6	A S A B O V E	
P-39F-BE		S I M I L A R	T O	P - 3 9 D			A S	A B O V E				A S	A B O V E				A S	A B O V E				A S	A B O V E		A S A B O V E
P-39K-BE -1		S I M I L A R	T O	P - 3 9 D - 2			A S	A B O V E				A S	A B O V E				A S	A B O V E				A S	A B O V E		A S A B O V E

## NOTES:

RANGE P-39 MODELS MODIFIED FOR AIR/GROUND SUPPORT BY INSTALLATION OF CAMERAS, BELLY ARMOR, ETC.  
\* 1000 RDS./GUN MAX. P.R. GROUND STRAPPING: 300 RDS./GUN NORMAL.

RED FIGURES ARE PRELIMINARY: SUBJECT TO REVISION AFTER FLIGHT CHECK  
# MILITARY POWER AVAILABLE FOR 15 MINUTES



**P-39**  
"AIRACOBRA"

MANUFACTURED BY BELL (Buffalo) "EE"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 27a
CONFIDENTIAL																	AS OF:
																	DATE: 25 NOV. 1944
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA			B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION				EXTERNAL NO. & SIZE OR CAPACITY
P-39L-BE -1	1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. - 3BL.	T 1335/S L M 1150/12000 C 1000/10800	S 34' 0" L 30' 2" H 11' 10" T 11' 4" W 213 sq. ft.	B 6500 C 7900 R 9200 W -	1	WING TOTALS PROP. - BELLY	12-120 1x75 or 1x156 or 1x175 295 TOT.	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M1	NONE	1-500 1-325 1-350 1-100	500	SCR-27LN or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PM-1. (30 JUNE 1943)	
P-39M-BE -1	1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. - 3BL.	T 1200/S L M 1125/15500 C 1000/11000	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-110PM-1. (30 JULY 1943)	
P-39N-BE -0 TO -5 INCL.	1	ALLISON V-1710-65 (A) SINGLE SPEED AERO PRODUCTS 11'7" DIA. - 3BL. CONST. SPD. - 3BL.	AS ABOVE	S 34' 0" L 30' 2" H 12' 5" T 11' 4" W 213 sq. ft.	B 6400 C 7600 R 9200 W -	1	WING TOTALS PROP. - BELLY SEE REMARKS **	8-87 1x75 or 1x156 or 1x175 262 TOT.	AS ABOVE	AS ABOVE	WING - FIXED NOSE - FIXED PROP. - TYPE M1	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27LN or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PM-1. (10 AUG. 1943) ** SCR-695 REPLACES SCR-535A ON P-39N-5 ONLY. ** 1st. 166 P-39N-0 BUILT-IN FUEL 120 GAL. HITS AVAIL- ABLE IN SERVICE TO INCREASE FUEL OF ALL N's TO 120 GAL.	
P-39Q-BE -1 TO -15 INCL.	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE EXCEPT: BUILT-IN FUEL**	P-39Q-1.....87 GAL P-39Q-5.....110 GAL P-39Q-10 & -15-120 GAL	2-.50 2-.50 1-37MM	300 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M1	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27LN or SCR-522A & SCR-695	TECHNICAL ORDER 01-110PM-1. (20 AUG. 1943) ** HITS AVAILABLE IN SERVICE TO INCREASE BUILT-IN FUEL OF P-39Q-1 & -5 TO 120 GAL.	
P-39Q-BE -20 TO -30 INCL.	1	ALLISON V-1710-65 (A) SINGLE SPEED AERO PRODUCTS 11'7" DIA. - 3BL. CONST. SPD. - 3BL.	AS ABOVE	AS ABOVE	AS ABOVE	1	WING TOTALS PROP. - BELLY	12-120 1x75 or 1x156 or 1x175 295 TOT.	2-.50 1-37MM	200 30	WING - FIXED PROP. - TYPE M1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE * P-39Q-20 HAS 3 BLADED PROPELLER: 11'7" DIA. P-39Q-30 HAS 3 BLADED PROPELLER: 11'0" DIA. P-39Q-21 & -25 HAS 3 BLADED PROPELLER: 11'7" DIA.	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT				RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE					
	TO CLEAR 50'		O LANDING SPEED MPH	GROUND-RUN		WEIGHT LB	STD. ALT. FT	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB	BOMBS CARGO PASS. LB	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE				
	T.O. DIST. FT	LAND. DIST. FT		T.O. DIST. FT	LAND. DIST. FT			HIGH SPEED MPH	RATE OF CLIMB FT/MIN	HIGH SPEED MPH	RATE OF CLIMB FT/MIN				TIME TO CLIMB MIN	AT 10000 FT	AT 25000 FT	AT 10000 FT		AT 25000 FT	AT 10000 FT	AT 25000 FT	RANGE MILES	ENDUR. HOURS
P-39L-BE -1	7000 7500 7900 8400 9100	- 1950 2000 2100 2500	84 86 89 - -	- 1150 1200 1300 -	7000	25000 20000 15000 10000 5000	353 347 360 354 335	650 1250 1900 2350 2900	309 330 362 344 322	11.9 9.7 6.6 4.2 2.1	9100 8100 7900 8100	NONE NONE NONE NONE	295 195 120 120	- 1.6 0.7 1.2 0.9	- 2.5 1.5 2.5 1.5	- 525 390 250	- 2.1 1.5 1.5	- - - -	- - - -	1075 750 550 400	6.0 4.2 2.5 2.3			
P-39M-BE -1	7000 7500 7900 8400 9100	- 1950 2000 2100 2500	84 86 89 - -	- 1200 1300 1450 -	7000	25000 20000 15000 10000 5000	357 365 370 357 330	1200 1775 2400 2250 2050	313 352 357 337 320	12.8 9.5 7.1 4.9 2.5														
P-39N-BE -0 TO -5 INCL.	6600 7500 8100 8700 8800	- 1950 2050 2150 2500	83 88 91 -	- 1100 1300 1400 -	7600	25000 20000 15000 10000 5000	368 375 376 357 330	1175 1625 2150 2600 2600	350 355 365 345 320	11.9 8.5 6.1 4.0 2.0	8750 8600 8050 7550 8050	NONE NONE NONE NONE NONE	262 243 162 87 87	2.0 1.8 1.4 0.6 0.6	650 775 525 300 225	3.5 3.2 2.2 1.1 1.0	- - - - -	- - - - -	- - - -	- - - -	975 900 625 350 275	5.4 5.0 3.3 1.7 1.5	RANGE AND ENDURANCE OF 1st. 166 P-39N-0 ARTICLES SAME AS P-39Q-10 TO -30 LISTED BELOW.	
P-39Q-BE -5		AS ABOVE	AS ABOVE	AS ABOVE			AS ABOVE	AS ABOVE	AS ABOVE															SEE NOTE (B) BELOW.
P-39Q-BE -10 TO -30 INCL.		AS ABOVE	AS ABOVE	AS ABOVE			AS ABOVE	AS ABOVE	AS ABOVE															NOTE: PRELIMINARY TESTS OF P-39Q-21 & -25 SHOW THAT 4 BLADED PROPELLER MATERIALLY IMPROVES DIRECTIONAL STABILITY, BUT NOT PERFORMANCE. SEE NOTE (B) BELOW.

NOTES:

RANDOM P-39 MODELS MODIFIED FOR AIR/GROUND SUPPORT BY INSTALLATION OF CAMERAS, BELLY ARMOR, ETC.  
\* 1000 RIB./GPH MAX. W/BR GROUND STRAPPING; 500 RIB./GPH NORMAL.  
ATTENTION: HITS AVAILABLE IN SERVICE TO INCREASE BUILT-IN FUEL CAPACITY OF ALL P-39 & P-39M MODELS TO 120 GAL. PERFORMANCE WILL BE SAME AS SHOWN FOR P-39Q-10 THRU -30 MODELS.

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLEET CHECK  
\* MILITARY HITS AVAILABLE FOR 15 MINUTES  
(A) AIRCRAFT SHOULD BE KEPT ON GROUND UNTIL AFTER 15 MINUTES  
P-39-10 THRU P-39Q-30 HAVE AN AUTOMATIC SPEED-BRake CONTROL.  
(B) HITS SHOULD BE INSTALLED FOR ONLY 15 MINUTES PER HOUR. AIRCRAFT EQUIPPED WITH AUTOMATIC SPEED-BRake CONTROL SHOULD BE KEPT ON GROUND UNTIL AFTER 15 MINUTES PER HOUR.



**P-39**  
"AIRACOBRA"

MANUFACTURED BY BELL (CORP.) INC.

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WINGAREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOC. TION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX LOAD LB.		TYPE
P-40E & E-1 - CU	1	ALLISON V-1710-39 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1150/ S L. M 1150/11700 C 1000/10800	S 37 1/4" L 31 1/2" H 12 1/4" T 8 1/2" W 236 SQ. FT.	B 6900 C 8400 R 10000 W -	1	REAR - WING MOUNT - WING MUSLAGE PROP. - BELLY	1 x 50 1 x 37 1 x 66 1 x 50, 75 150 or 170 327 TOT.	6-.50 201 (average)	WING - FIXED	NONE	1-500 & 2-100 or 6-20. 1-225 1-250 1-100	700	SCR-283 or SCR-27LM	TECHNICAL ORDER 01-250F-1. (REV. 20 OCT. '43) * NO EXTERNAL WING BOMBS ON EARLY MODELS. * WITHOUT RAIL.	
P-40F-CU -1 TO -20 INCL.	1	PACKARD V-1650-1 SINGLE STG. - 2 SPD. CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1300/ S L. M 1240/11500 C 1080/9500 1010/16000	S 37 1/4" L 31 1/2" H 12 1/4" T 8 1/2" W 236 SQ. FT.	B 7000 C 8500 R 10000 W -	1	REAR - WING MOUNT - WING MUSLAGE PROP. - BELLY	1 x 50 1 x 37 1 x 66 1 x 50, 75 150 or 170 327 TOT.	A 6 A B O V E	A B O V E	A 6 A B O V E	A 6 A B O V E	AS ABOVE	SCR-27LM or SCR-282A & SCR-535A or SCR-699	TECHNICAL ORDER 01-250H-1. (20 JUNE 1943) REV 1950 * P-40F-1 LENGTH SAME AS P-40E. ALL SUBSEQUENT MODELS HAVE EXTENDED MUSLAGE.	
P-40K-CU -1 TO -15 INCL.	1	ALLISON V-1710-73 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1300/ S L. M 1150/11800 C 1000/11000	AS ABOVE	B 6950 C 8400 R 10000 W -	1	REAR - WING MOUNT - WING MUSLAGE PROP. - BELLY	1 x 50 1 x 37 1 x 66 1 x 50, 75 150 or 170 327 TOT.	A 6 A B O V E	A B O V E	A 6 A B O V E	A 6 A B O V E	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-250F-1. (25 MAY 1943) REV. * P-40K-1 & -5 LENGTH SAME AS P-40E. ALL SUBSEQUENT MODELS HAVE EXTENDED MUSLAGE. * WITHOUT RAIL.	
P-40L-CU -1 TO -20 INCL.	1	PACKARD V-1650-1 SINGLE STG. - 2 SPD. CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1300/ S L. M 1240/11500 C 1080/9500 1010/16000	AS ABOVE	B 7000 C 8500 R 10000 W -	1	REAR - WING MUSLAGE PROP. - BELLY	1 x 50 1 x 66 1 x 50, 75 150 or 170 327 TOT.	6-.50 201 (average)	WING - FIXED	A 6 A B O V E	A 6 A B O V E	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-250H-1. (REV. 20 JUNE '43) * P-40L-1 RAIL AND ARMAMENT SAME AS P-40F SERIES.	
P-40M-CU -1 TO -10 INCL.	1	ALLISON V-1710-61 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1200/ S L. M 1125/17300 C 1000/16400	AS ABOVE	B 6950 C 8400 R 10000 W -	1	REAR - WING MOUNT - WING MUSLAGE PROP. - BELLY	1 x 50 1 x 37 1 x 66 1 x 50, 75 150 or 170 327 TOT.	6-.50 201 (average)	WING - FIXED	A 6 A B O V E	A 6 A B O V E	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-250E-1. (REV. 25 MAY '43)	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE	
	GROSS WEIGHT LB.	TO CLEAR 50 DIST.		LANDING SPEED MPH	GROUND-RUN DIST.		WEIGHT LB.	STD ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO PASS LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE				
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN	HIGH SPEED MPH	RATE OF CLIMB FT/MIN				TIME TO CLIMB MIN	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		
		RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS			RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS				RANGE MILES	ENDUR. HOURS							
P-40E & E-1 - CU	7500 8100 8400 8700 9100	- 2800 3125 3600 4300	1550 1700 1750 - -	84 87 90 - -	1600 1800 1950 - -	1050 1100 - -	8400	25000 20000 15000 10000 5000	- 330 362 345 335	- 980 1150 2170 2100	265 300 312 313 296	520 - - - -	18.2 11.5 7.6 4.8 2.4	9100 8700 9200	NONE NONE 500	201 149 149	425 325 300	1.7 1.2 1.2	- - -	675 525 450	3.0 2.2 2.1	- - -	850 650 575	4.5 3.3 3.1
P-40F-CU -1 TO -20 INCL.	7500 8850 9200 9350 9550 10000	- 3700 4150 4400 4700 5250	1700 1900 2150 2550 2700 3250	81 85 88 90 91	1650 2150 2550 2700 3100	1050 1300 1350 1450 -	8500	25000 20000 15000 10000 5000	350 364 352 340 320	1000 1100 1360 2210 2160	500 1000 332 320 300	18.3 11.6 7.6 4.5 2.4	10000 9350 9200 8850 9550	NONE NONE NONE 157 700	327 242 209 157 157	- 550 475 375 325	- 2.0 1.7 1.3 1.3	- 550 575 425 350	2.3 3.0 1.8 1.8	800 700 600 500	3.4 3.0 2.2 2.2	- - - -	1500 1300 875 700 600	8.0 5.0 4.4 3.1 3.2
P-40K-CU -1 TO -15 INCL.	7500 8800 9150 9300 9500 10000	- 2950 3150 3200 3350 -	1700 1950 2000 2050 -	81 85 88 89 90	1650 1900 1950 2050 -	1050 1300 1350 1450 -	8400	25000 20000 15000 10000 5000	- 330 362 342 320	265 1100 1650 2000 2100	350 300 312 313 296	18.5 11.2 7.5 4.9 2.4	10000 9300 9150 8800 9500	NONE NONE NONE 157 700	327 232 209 157 157	- 500 400 350 300	- 1.9 1.6 1.2 1.2	- 900 750 600 550	3.9 3.4 2.4 2.4	- - - -	1100 1300 900 700 600	7.0 5.5 4.8 3.4 3.3		
P-40L-CU -1 TO -20 INCL.	-	SUBSTANTIALLY SAME AS P-40F				-	8500	SUBSTANTIALLY SAME AS P-40F				10000 9750 9100 8600 9100	NONE NONE NONE NONE 700	327 291 195 120 120	- - 450 275 225	- - 1.6 0.9 0.9	- - 425 300 250	1.8 2.3 1.3 1.3	650 500 425 350	2.3 2.8 1.6 1.6	- - - -	1500 1200 800 500 425	8.0 6.2 4.1 2.2 2.3	F-40L-1 ONLY, SAME AS P-40F SERIES.
P-40M-CU -1 TO -10 INCL.	7500 8400 8800 9300 10000	- 2350 2650 3150 4000	1700 1850 1950 2000 -	81 85 88 89	1650 1600 1900 2500	1050 1300 1350 -	8400	25000 20000 15000 10000 5000	253 360 361 342 328	850 1500 2025 2190 2070	330 355 338 320 308	14.7 10.2 7.2 4.5 2.4	10000 9300 8600 8500 9300	NONE NONE NONE 157 700	327 232 157 305 157	650 450 305 300	2.5 1.8 1.1 1.1	- 750 475 475	2.9 1.8 1.8 1.8	900 600 475	4.2 2.5 2.3	- - -	1150 1000 700 575	8.4 5.6 3.7 3.3

NOTES:

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.

\* MILITARY POWER AVAILABLE PER 5 MINUTES ONLY.

\* MILITARY POWER AVAILABLE PER 15 MINUTES.



**P-40**  
"WARHAWK"

MANUFACTURED BY CURTISS (Buffalo) "CO"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																PAGE 29	
CONFIDENTIAL																AS OF:	
																DATE: 25 NOV. 1944.	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE			
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA		B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY		MAX. LOAD LB.	TYPE	
P-40N-CU -1	1	ALLISON V-1710-21 SINGLE SPEED CURTISS 11"0" DIA. - 3 BL. CONST. SPD. ELECT.	T 1200/8 L M 1125/17300 C 1000/16400	S 37'4" L 33'4" H 12'4" T 8'2" W 236 SQ. FT.	B 6400 C 7725 R 11000 W -	1	REAR - WING FUSelage 1 x 54 1 x 62 150 or 170 DROG - BELLY 1x58, 75, 150 or 170 (SEE REMARKS) 211 TOT.	4-.50	201 (average)	WING - FIXED	NONE	1-500 or 2-100 or 6-20. 1-325 1-250 1-100	500	SCR-27L or SCR-522A & SCR-695	TECHNICAL ORDER 01-250N-1. (REV. 10 OCT. '43) * PROVISIONS FOR RACES ONLY.		
P-40N-CU -5 TO -15 INCL.	1	AS ABOVE	AS ABOVE	AS ABOVE	B 6700 C 8400 R 11500 W -	1	REAR - WING FRONT - WING FUSelage 1 x 54 1 x 37 1 x 70 1x75, 150 (SEE REMARKS) 211 TOT.	6-.50	281 (average)	WING - FIXED	NONE	1-500 or 2-500 or 2-100 or 6-20. 1-325 1-250 1-100	1500	SCR-27L or SCR-522A & SCR-695	REFERENCE AS ABOVE * PROVISIONS FOR 2-225 GAL. FERRYING TANKS or 2-500 LB. or 2-100 LB. EXTERNAL WING BOMBS IN ADDITION TO 1-500 LB. BOMB IN PLACE OF BELLY TANK. SPACE ONLY FOR 6-20 LB. BOMBS		
P-40N-CU -20 THRU -30	1	ALLISON V-1710-99 SINGLE SPEED CURTISS 11"0" DIA. - 3 BL. CONST. SPD. ELECT.	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27L or SCR-522A & SCR-695. MW-26 on some models	REFERENCE AND NOTE AS ABOVE. * FIRST 1272 AIRPLANS OF P-40N-20 SERIES DO NOT HAVE MODIFIER ON AUTOMATIC SPEED-BOOST CONTROL. REMAINDER -20 & ALL -30 INCORPORATE A HANDPUMP PRESS. MODIFIER.		
P-40N-CU -35		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	* STARTING WITH -35 AUTOMATIC SPEED BOOST CONTROL IS BEING DISCONTINUED.		
P-40N-CU -40		ALLISON V-1710-115 SINGLE SPEED CURTISS 11"0" DIA. - 3 BL. CONST. SPD. ELECT.	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE			
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE			
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE													
	GROSS WEIGHT	TO CLEAR 50'		LANDING SPEED	GROUND-RUN		WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS-CARGO-PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
		T.O. DIST.	LAND. DIST.		T.O. DIST.	LAND. DIST.			HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB				TIME TO CLIMB	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		RANGE	ENDUR.	RANGE
P-40N-CU -1	7000	-	1650	92	-	1000	25000	352	1225	313	#	12.4	8850	NONE	292	600	2.2	-	-	1050	4.9	-	-	1250	7.4	
	7725	2150	1750	96	1350	1100	20000	316	1850	330	#	9.1	8250	NONE	197	380	1.5	500	2.1	750	3.6	-	-	850	3.8	
	8250	2950	1750	105	1700	1100	15000	318	2400	333	#	6.7	7725	NONE	122	230	0.9	290	1.2	430	1.9	-	-	520	2.8	
	8425	3100	1850	-	1800	1150	10000	331	2525	315	#	4.1	8225	500	122	210	0.9	260	1.2	420	2.0	-	-	420	2.5	
	8850	3500	-	-	1950	-	5000	313	2425	297	#	2.1														
P-40N-CU -5 TO -15 INCL.	7000	-	1650	92	-	1000	25000	325	900	306	#	13.0	11400	NONE	611	1250	4.9	-	-	2250	10.9	-	-	2800	15.7	
	8400	2700	1850	100	1650	1200	20000	340	1550	325	#	8.8	9500	NONE	331	675	2.6	-	-	1250	6.0	-	-	1550	8.4	
	8900	3550	1850	109	2050	1200	15000	343	2130	328	#	6.0	8900	NONE	236	470	1.8	600	2.5	930	4.3	-	-	1080	5.7	
	9100	3800	1900	-	2200	1250	10000	325	2230	310	#	4.7	8400	NONE	161	320	1.2	400	1.6	600	2.6	-	-	750	3.9	
	9500	4450	-	-	2250	-	5000	308	2120	291	#	2.4	8900	500	161	300	1.2	370	1.6	590	2.8	-	-	-	-	
	11400	5720	-	-	2500	-																				
P-40N-CU -20 THRU -30		AS ABOVE	AS ABOVE																							
P-40N-CU -35, -40		AS ABOVE	AS ABOVE																							

NOTES:

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK  
# MILITARY POWER AVAILABLE FOR 15 MINUTESP-40  
"WARHAWK"

MANUFACTURED BY CURTISS (Buffalo) "CO"

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 30  
AS OF  
DATE 23 NOV. 1944

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE
	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	COMBAT CREW	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	TYPE	
											NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY			
P-47C-RE -1 TO -5 P-47D-RE & RA -1 TO -21 P-47G-CU -1 TO -16	SEE "A" PRATT-WHITNEY R-2800-21, 59, -63 TURBO CURTISS 12'2" DIA. - 4 BL. CONST. SPD. ELECTR.	T 2000/ S L M 2000/27000 C 2300/27000 1625/29000	S 40'9" L 36'1" H 11'2" T 15'6" W 300 sq. ft.	B 10700 C 13500 R 15000	1	MAIN - FUE. AUX. - FUE. DROPP. BELLY EXT. - WINGS & BELLY (SEE F)	1x270 1x100 1x 75 or 110 or 200 or 2150 & 1x 75	6) 5) 8)	257 MAX. 145 MAX.	WING - FIXED	NONE	a 2-1000 b 3- 500 c 3- 250 d 3- 100	2500	SCR-271M SCR-522A SCR-535A SCR-695	TECHNICAL ORDER 01-5580-1 (30 AUG. 1944) b P-47D-15 & SUBSEQUENT, P-47D-6 thru -11 & P-47G-10 AND -15 CARRY ONLY ONE SHACKLE IN BELLY POSITION. * 900 LB. BOMB MAX. ON BELLY SHACKLE DUE TO INTERFERENCE. † ONLY EARLY MODELS CARRY 200 GAL. DROPPABLE BELLY TANK. ‡ THE R-2800-21 ENGINE WILL HAVE WAR EMERGENCY RATING AND WATER INJECTION IS INSTALLED & REDESIGNATED (-63). § P-47G & SUBSEQUENT, REDESIGNATED AIR - DATA AS SHOWN.
P-47D-RE -22	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0" DIA. - 4 BL. CONST. SPD. HYDRO.	T 2000/ S L M 2000/33000 C 2300/31000 1525/30000	AS ABOVE EXCEPT FOR 14'7" HEIGHT	B 10500 C 11000 R 17000	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE
P-47D-RA -23	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0" DIA. - 4 BL. CONST. SPD. ELECTR.	AS ABOVE	AS ABOVE	B 10500 C 11000 R 17000	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE * FIRST MODEL EQUIPPED WITH BUBBLE CANOPY.
P-47D-RE -25	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0" DIA. - 4 BL. CONST. SPD. HYDRO.	AS ABOVE	AS ABOVE	B 10700 C 11500 R 17500	1	MAIN - FUE. AUX. - FUE. DROPP. BELLY EXT. - WINGS & BELLY (SEE F)	1x270 1x100 1x 75 or 110 or 200 or 2150 & 1x 75	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE
P-47D-RA -26	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0" DIA. - 4 BL. CONST. SPD. ELECTR.	AS ABOVE	AS ABOVE	B 10600 C 11500 R 17500	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE

COLUMN — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

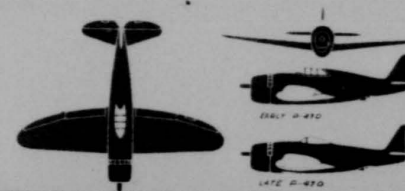
MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS				
	GROSS WEIGHT LB.	TO CLEAR 50' FT.		GROUND-RUN DIST. FT.	LANDING SPEED MPH	T.O. DIST. FT.	STD. ALT. FT.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	MIL. POWER OF CLIMB MPH	MAX. CONTIN. POWER RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	TIME TO CLIMB MIN.	TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE					
		FT.	DIST. FT.															FT.	FT.	FT.	FT.	FT.		FT.	FT.	FT.	FT.
P-47C-RE -1 TO -5 P-47D-RE & RA -1 TO -21 P-47G-CU -1 TO -16	11000 12500 13500 15000 16000 15000	- 3100 3300 3400 3600	2200 2500 2600 2800	92 100 104 106	1200 2000 2200 2300 2500	15000 20000 15000 10000 5000	30000 25000 20000 15000 10000	433 421 406 390 372 353	1375 1825 2110 2400 2630 2750	420 436 400 384 368 352	1500 1750 2050 2200 2300 2350	800 800 800 800 800 800	15.0 15.0 11.0 7.2 4.3 2.2	16000 13600 11900 11500 11100 13500	NONE NONE NONE NONE NONE NONE	660 605 505 415 300 395	900 800 685 585 475 385	3.0 2.6 2.2 1.8 1.6 1.2	950 850 650 550 475 400	3.0 2.6 2.2 1.8 1.6 1.3	- - - - - 620	- - - - - 2.5	- - - - - 650	- - - - - 2.5	1725 1525 1400 1035 825 825	6.3 7.3 5.4 4.9 4.4 3.8	NO RANGE WITH BOMBS AVAILABLE. PERFORMANCE VALUES SHOWN ARE WITHOUT EXTERNAL TANKS.
P-47D-RE -22	12000 13000 14000 15000 16000 17000	- 3200 3400 3600 3800	2300 2500 2600 2800	98 102 106 108	1500 2100 2300 2400 2500	15000 20000 15000 10000 5000	30000 25000 20000 15000 10000	435 424 409 395 377 358	1850 2450 2700 2900 3050 3100	420 436 400 387 368 352	1500 1750 2050 2200 2300 2350	800 800 800 800 800 800	15.0 15.0 11.0 7.2 4.3 2.2	16000 13600 11900 11500 11100 13500	NONE NONE NONE NONE NONE NONE	660 605 505 415 300 395	900 800 685 585 475 385	3.0 2.6 2.2 1.8 1.6 1.2	950 850 650 550 475 400	3.0 2.6 2.2 1.8 1.6 1.3	- - - - - 620	- - - - - 2.5	- - - - - 650	- - - - - 2.5	1725 1525 1400 1035 825 825	6.3 7.3 5.4 4.9 4.4 3.8	AS ABOVE
P-47D-RA -23	12000 13000 14000 15000 16000 17000	3200 3400 3600 3800 4000	2300 2500 2600 2800	98 102 106 108	1500 2100 2300 2400 2500	15000 20000 15000 10000 5000	30000 25000 20000 15000 10000	435 424 409 395 377 358	1850 2450 2700 2900 3050 3100	420 436 400 387 368 352	1500 1750 2050 2200 2300 2350	800 800 800 800 800 800	15.0 15.0 11.0 7.2 4.3 2.2	16000 13600 11900 11500 11100 13500	NONE NONE NONE NONE NONE NONE	660 605 505 415 300 395	900 800 685 585 475 385	3.0 2.6 2.2 1.8 1.6 1.2	950 850 650 550 475 400	3.0 2.6 2.2 1.8 1.6 1.3	- - - - - 620	- - - - - 2.5	- - - - - 650	- - - - - 2.5	1725 1525 1400 1035 825 825	6.3 7.3 5.4 4.9 4.4 3.8	AS ABOVE
P-47D-RE -25	12000 13500 14500 15500 16500 17500	- 3300 3500 3600 3800 4000	2300 2500 2600 2800	100 104 106 108	1500 2100 2300 2400 2500	15000 20000 15000 10000 5000	30000 25000 20000 15000 10000	435 424 409 395 377 358	1850 2450 2700 2900 3050 3100	420 436 400 387 368 352	1500 1750 2050 2200 2300 2350	800 800 800 800 800 800	15.0 15.0 11.0 7.2 4.3 2.2	16000 13600 11900 11500 11100 13500	NONE NONE NONE NONE NONE NONE	660 605 505 415 300 395	900 800 685 585 475 385	3.0 2.6 2.2 1.8 1.6 1.2	950 850 650 550 475 400	3.0 2.6 2.2 1.8 1.6 1.3	- - - - - 620	- - - - - 2.5	- - - - - 650	- - - - - 2.5	1725 1525 1400 1035 825 825	6.3 7.3 5.4 4.9 4.4 3.8	AS ABOVE
P-47D-RA -26	12000 13000 14000 15000 16000 17000	3200 3400 3600 3800 4000	2300 2500 2600 2800	98 102 106 108	1500 2100 2300 2400 2500	15000 20000 15000 10000 5000	30000 25000 20000 15000 10000	435 424 409 395 377 358	1850 2450 2700 2900 3050 3100	420 436 400 387 368 352	1500 1750 2050 2200 2300 2350	800 800 800 800 800 800	15.0 15.0 11.0 7.2 4.3 2.2	16000 13600 11900 11500 11100 13500	NONE NONE NONE NONE NONE NONE	660 605 505 415 300 395	900 800 685 585 475 385	3.0 2.6 2.2 1.8 1.6 1.2	950 850 650 550 475 400	3.0 2.6 2.2 1.8 1.6 1.3	- - - - - 620	- - - - - 2.5	- - - - - 650	- - - - - 2.5	1725 1525 1400 1035 825 825	6.3 7.3 5.4 4.9 4.4 3.8	AS ABOVE

18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

NOTES: (A) R-2800-21 (WATER INJECTION PROVISIONS; KITS AVAILABLE FOR INSTALLATION) (A) R-2800-59 (WATER INJECTION & NEW ELECTRICAL HARNESS) (A) R-2800-63 (WATER INJECTION)

USED ON: P-47C-RE (-1, -2 & -5) (A) P-47D-RE (-1, -2, -3, -4 & -5) (A) P-47D-RE (-6) (A) P-47G-CU (-1, -5 & -10) (A) P-47D-RE (-20, -21, -22 & -25) (A) P-47D-RA (-20, -21, -23 & -25) (A) P-47D-RE (-10, -11, -15 & -16) (A) P-47D-RA (-11 & -15) (A) P-47D-CU (-15 & -16)

MANUFACTURED BY REPUBLIC (Farmingdale) "RE"; (Evansville) "RA" & CURTISS (Buffalo) "CU"



**P-47**  
"THUNDERBOLT"

CONFIDENTIAL

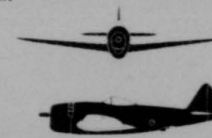
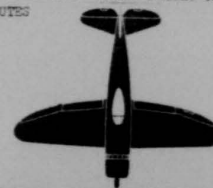


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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFG. MODEL SUPERCHARGER PROP MFG. TYPE	B.H.P./ALT.	S-SPAN		B-BASIC	TANK	NO. TANKS	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.		TYPE
			T-TAKE-OFF	L-LENGTH		C-COMBAT	TYPE	NO. & SIZE				NO. & SIZE				
P-47D-RE -27	1	PRATT-WHITELEY R-2800-59 TURBO HAMILTON STD. 13"0" DIA. - 4 BL. CONST. SPD. HYDRO.	2000/33000	36'1"	10700	1x270 1x100 1x75 or 1x110 2x150 & 1x110	6) .50	267	WING-FIXED	NONE	2-1000 or 3-500 or 3-250 or 3-100	2500	SCR-27A SCR-522A SCR-535A SCR-695	TECHNICAL ORDER 01-6580-1 (30 AUG. 1944) NO WAR EMERGENCY RATING.		
P-47D-RE -28 & -30	1	PRATT-WHITELEY R-2800-59 TURBO CURTISS 13"0" DIA. - 4 BL. CONST. SPD. HYDRO.	AS ABOVE	AS ABOVE	10600	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE.			
P-47M-RA	1	PRATT-WHITELEY R-2800-57 TURBO HAMILTON STD. 13"2" DIA. - 4 BL. CONST. SPD. HYDRO.	2100/32750	36'4"	11100	1x270 1x100 1x110	AS ABOVE	AS ABOVE	AS ABOVE	NONE	1-500 or 1-250 or 1-100	500	I.O. BEING PREPARED AT THIS TIME NO WAR EMERGENCY RATING.			
P-47N-RE -1	1	PRATT-WHITELEY R-2800-57 TURBO 13"2" DIA. - 4 BL. CURTISS CONST. SPD. HYDRO.	AS ABOVE	AS ABOVE	11600	1x270 1x100 1x110	6) .50	267	WING-FIXED	NONE	2-1000 or 3-500 or 3-325 or 3-250 or 3-100	2500	AS ABOVE			

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE						REMARKS				
	GROSS WEIGHT	TO CLEAR 50'		GROUND-RUN		STD. ALT.	WAR EMERG. HIGH SPEED	MIL. POWER RATE OF CLIMB	MIL. POWER RATE OF CLIMB	MAX. CONTIN. POWER HIGH SPEED	MAX. CONTIN. POWER RATE OF CLIMB	TAKE OFF WEIGHT	BOMBS CARGO PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE			
		T.O. DIST.	LAND. DIST.	LANDING SPEED	T.O. DIST.										LAND. DIST.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.		AT 25000 FT.	RANGE ENDUR.	RANGE ENDUR.	RANGE ENDUR.
P-47D-RE -27	12000	-	2500	100	-	1500	30000	133	1575	118	1225	381	#	11.0	17500	NONE	750					2100	10.2
	13500	3300	2600	104	2200	1700	25000	136	2270	115	1825	372	#	11.0	16700	NONE	670					-	-
	14500	3600	2700	105	2400	1800	20000	124	2650	100	2125	362	#	8.5	15400	NONE	450					-	-
	15500	4100	-	-	2800	-	15000	107	2870	855	2320	347	#	6.2	15100	NONE	445					-	-
	16500	4700	-	-	3300	-	10000	89	3060	569	2445	333	#	4.1	14600	NONE	370					1030	5.3
	17500	6000	-	-	4100	-	5000	63	3120	354	2425	310	#	2.0									
P-47D-RE -28 & -30		AS ABOVE					30000	128	1475	111	1225	381	#	11.0	17400	NONE	750					2100	10.2
		AS ABOVE					25000	128	2230	107	1825	372	#	11.0	16600	NONE	670					-	-
		AS ABOVE					20000	115	2650	93	2125	362	#	8.5	15700	NONE	450					-	-
		AS ABOVE					15000	98	2870	77	2320	347	#	6.2	15000	NONE	445					-	-
		AS ABOVE					10000	82	3040	56	2445	334	#	4.1	14500	NONE	370					-	-
		AS ABOVE					5000	63	3120	34	2425	310	#	2.0								1030	5.3
P-47M-RA		AS ABOVE					30000	140	2375	132	1525	403	#	13.8	15500	NONE	450					-	-
		AS ABOVE					25000	153	2500	115	1840	386	#	10.8	14700	NONE	370					-	-
		AS ABOVE					20000	135	2975	100	2100	370	#	8.5	14700	NONE	370					1030	5.3
		AS ABOVE					15000	118	3200	83	2325	355	#	6.0								-	-
		AS ABOVE					10000	100	3400	56	2440	340	#	3.9								1030	5.3
		AS ABOVE					5000	85	3500	40	2550	326	#	1.9									
P-47N-RE -1		AS ABOVE					30000	160	-	122	1500	400	#	11.8	20660	NONE	1150						
		AS ABOVE					25000	148	-	105	1550	385	#	11.7	19370	NONE	990						
		AS ABOVE					20000	131	2550	90	1700	370	#	8.7	16700	NONE	550						
		AS ABOVE					15000	115	2760	77	1720	355	#	6.7	17800	1000	550						
		AS ABOVE					10000	97	2770	58	1730	340	#	5.8	17800	1000	550						
		AS ABOVE					5000	81	2770	42	1730	325	#	2.9	18800	2000	550						

NOTES:

RED FIGURES ARE PRELIMINARY: SUBJECT TO REVISION AFTER FLIGHT CHECK.  
# MILITARY POWER AVAILABLE FOR 15 MINUTES

**P-47**  
THUNDERBOLT

MANUFACTURED BY REPUBLIC (Farmingdale) "RE"; (Swanville) "RA" &amp; CURTISS (Buffalo) "CU"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
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MODEL & BLOCK NO.	NUMBER	ENGINE & PROP.		SIZE		WT.		COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE
		ENGINE MODEL	PROP. TYPE	B.H.P./ALT.	T-TAKE-OFF	S-SPAN	B-BASIC		TANK TYPE	NO. TANKS	NO. GUNS	RDS PER GUN	LOCATION	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD	
P-51-NA -1 & -2	1	ALLISON V-1710-39 SINGLE SPEED CURTISS 10"9" DIA. - 3 BL. CONST. SPD. ELECTR.	T 1150/13750 M 1150/13750 C 1000/13750	S 37' 0" L 32' 3" H 12' 2" T 11' 10" W 233 SQ. FT.	B 7050 C 8600 R 10500 W -	1	MAIN-R. WING MAIN-L. WING EXT.-L. WING	1 x 90 1 x 59 1 x 31 180 TOT.	4-20MM	125	WING-TYPE M2	NONE	NONE	NO BOMBS CARRIED	SCR-27JN & SCR-535	TECHNICAL ORDER 01-60JB-1. (10 JAN. 1943)	
P-51A-NA -1 TO -10 INCL.	1	ALLISON V-1710-81 SINGLE SPEED CURTISS 10"9" DIA. - 3 BL. CONST. SPD. ELECTR.	T 1200/18000 M 1125/18000 C 1000/17500	AS ABOVE	B 6850 C 8600 R 10500 W -	1	MAIN-R. WING MAIN-L. WING EXT.- WINGS	1 x 90 1 x 90 2 x 75 2 x 150 480 TOT.	2) .50 2) 350	280 350	OUTBD.-WINGS INBD.-WINGS	NONE	2-500 2-325 2-250 2-100	1000	SCR-27JN SCR-535 SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-60JC-1. (30 APRIL 1944) * PROVISIONS ONLY ** SPACE PROVIDED	
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE		
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE												
	TO CLEAR 50'		GROUND-RUN		LANDING		WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS CARGO PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE					
T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	HIGH SPEED			RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB				RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.
LB.	FT.	FT.	MPH	FT.	FT.	LB.	FT.	MPH	FT/MIN	MPH	FT/MIN	MIN.	LB.	LB.	U.S. GAL.	MILES	HOURS	MILES	HOURS	MILES	HOURS	MILES	HOURS		
P-51-NA -1 & -2	7500	-	2600	88	-	1700	8600	25000	337	800	315	300	16.0												
	8000	2600	2850	91	1600	1900	20000	367	1300	333	300	10.9													
	8500	3000	3100	94	1900	2100	15000	387	1800	343	300	7.6	8600	NONE	180	350	1.5	700	2.6	700	2.7	-	-	1000	4.5
	8800	3000	3250	-	2100	2250	10000	379	2000	352	300	5.0													
	9000	3400	-	-	2200	-	5000	357	2000	352	300	2.9													
P-51A-NA -1 TO -10 INCL.	8000	-	2450	100	-	1550	8600	25000	375	1100	360	12.7	10600	NONE	180	1135	4.1	-	-	2000	6.3	-	-	2350	11.4
	8600	2050	2750	103	1400	1850	20000	390	1650	375	300	9.1	9600	NONE	330	725	2.7	-	-	1250	5.3	-	-	1555	7.9
	9100	2250	3000	106	1600	2100	15000	380	2300	365	300	6.6	8600	NONE	180	425	1.4	-	-	750	2.8	-	-	1000	4.8
	9500	2500	3250	-	1800	2350	10000	360	2300	345	300	4.4	9100	500	180	415	1.4	-	-	725	2.8	-	-	950	4.7
	10300	2900	-	-	2100	-	5000	340	2300	325	300	2.2	9600	1000	180	410	1.4	-	-	710	2.8	-	-	910	4.6

NOTES:

1. ALL FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.  
 2. MILITARY POWER AVAILABLE FOR 15 MINUTES.



**P-51**  
"MUSTANG"

MANUFACTURED BY NORTH AMERICAN (Inglewood) "NA"

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 33  
AS OF:  
DATE 25 NOV 1944

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS			RADIO	REMARKS & REFERENCE			
	NUMBER	ENGINE MFR. MODEL				B.H.P./ALT.	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE	EXTERNAL NO. & SIZE			MAX. LOAD LB.	TYPE	
		SUPERCHARGER PROP. MFR. TYPE	T-TAKE-OFF	M-MILITARY		C-CONTINUOUS								S-SPAN				L-LENGTH
P-51B-NA -14-5 P-51C-NT -1	1	PACKARD V-1650-3 2 SPEED- 2 STAGE HAMILTON STD. 11'2" DIA. - LBL. CONST. SPD. HYDRO.	T 1190 / S L M 1150 / 19500 C 1120 / 20500 R 1100 / 21000	S 37' 0" L 32' 3" H 13' 8" T 11' 10" W 253 sq. ft.	B 7450 C 9200 R 12000 W -	1	MAIN-R. WING MAIN-L. WING DROPP. WINGS SEE (F)	1 x 92 1 x 92 2 x 75 2 x 150 569 TOT.	2) 2) 2) 2)	.50 .50 .50 .50	280 350	OUTBD. - WINGS INBD. - WINGS	NONE NONE	2-1000 2- 500 2- 325 2- 250 2- 100	2000	SCR-27LN SCR-522 SCR-535A or SCR-595	TECHNICAL ORDER 01-600D-1. (15 MAY 1944) KITS AVAILABLE FOR 1255 GAL. FUSelage TANKS. INSTALL ED THESE MODELS WILL BE SAME AS ONES LISTED BELOW. WAR EMERGENCY RATINGS 1525/17000'S, 1275/22500' (RE- STRICTED TO MODELS EQUIPPED WITH EIG-RC5/3 or LODGE RS5/5 SPARK PLUGS.)	
P-51B-NA -7410 P-51C-NT -3	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE NEXT LAST 550 P-51B-5 MODELS BECOME B-7 UPON ADDITION OF 1255 GAL. FUSelage TANK. P-51C-3 ARE MODIFIED P-51C-1's.	
P-51B-NA -15 P-51C-NT -54-10	1	PACKARD V-1650-3 2 SPEED- 2 STAGE HAMILTON STD. 11'2" DIA. - LBL. CONST. SPD. HYDRO.	T 1190 / S L M 1630 / 13500 C 1230 / 17000 R 1100 / 22000	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE WAR EMERGENCY RATINGS; 1770/11500' + 1530/21500' (RE- STRICTED TO MODELS EQUIPPED WITH EIG-RC5/3 or LODGE RS5/5 SPARK PLUGS.) SOME P-51C-5-NT MODELS FOR RECONNAISSANCE WILL NOT CARRY 1255 GAL. FUSelage TANK.	
P-51D-NA -5 10 -20 P-51D-NT -5 10 -20	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	SCR-522 or SCR-27LN or MD-260 COMBINATION	TECHNICAL ORDER 01-600E-1. (30 JULY 1944)
P-51K-NT -1 10 -15							P-51K SAME AS ABOVE EXCEPT FOR 11'0" DIA. AEROPRODUCTS PROPELLER. PERFORMANCE FIGURES WILL BE SLIGHTLY LESS THAN SHOWN FOR P-51D AIRPLANES.											

COLUMN — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB										RANGE & ENDURANCE										REMARKS
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT										STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										
	GROSS WEIGHT	TO CLEAR 50'		GROUND-RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS-CARGO-PASS	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
		T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.			LANDING SPEED	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	HIGH SPEED				RATE OF CLIMB	TIME TO CLIMB	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 10000 FT.			
P-51B & C (V-1650-3)	8000 9000 9500 10000 11000	2100 2200 2300 -	2100 2200 2300 -	105 106 109 -	1200 1400 1500 -	9200	30000 25000 20000 15000 10000 5000	470 427 424 426 388	2000 2700 3275 3790 3280	415 477 434 411 371	2300 2650 3025 2780	397 390 375 342	11.0 8.9 7.0 5.3 3.6	11200 10200 9200 10200 11200	NONE NONE NONE 1000 2000	124 850 154 184 184	1275 850 475 1.6 1.5	4.4 3.0 1.7 1.6 1.5	1700 1050 550 500 510	4.7 3.2 1.7 1.7 1.6	1925 1350 750 675 620	7.0 5.5 2.8 2.8 2.4	- - - - -	- - - - -	2200 1150 850 775 690	10.0 7.1 5.9 3.7 3.7	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT BOMB RACKS; RACKS DEPR. E HIGH SPEED 12 M.P.H. & RATE OF CLIMB LESS THAN 100' / MIN.
P-51B & C (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	9200	30000 25000 20000 15000 10000 5000	435 439 426 411 395	1600 2300 3050 2700 2200	425 428 411 411 381	1500 2300 2700 3300 340	11.2 8.4 6.5 4.7 3.0 1.5	11200 10200 9200 10200 11200	NONE NONE NONE 1000 2000	124 850 154 184 184	1.5 1.6 1.7 1.7 1.7	510 1090 600 550 555	1.7 3.4 1.7 1.7 1.7	- - - - -	- - - - -	4700 1990 660 570 570	3.0 5.0 1.9 1.9 1.9	4040 1990 825 740 705	9.1 6.6 3.5 3.4 3.1	AS ABOVE		
P-51B & C (V-1650-3)	8000 9000 9800 10300 10800 11800	2200 2100 2350 -	2200 2100 2350 -	106 111 109 -	1500 1400 1500 -	9800	30000 25000 20000 15000 10000 5000	440 427 424 426 388	1850 2150 2590 3130 2700	455 477 434 411 371	1850 2175 2650 2780	397 390 375 342	12.1 9.6 7.4 5.6 3.8	11200 10200 9200 10200 11200	NONE NONE NONE 1000 2000	124 850 154 184 184	1500 1075 750 675 650	5.3 3.8 2.4 2.4 2.4	1875 1325 875 825 800	5.7 4.2 2.6 2.6 2.6	2275 1625 1125 1025 910	9.0 6.5 4.3 4.1 3.8	- - - - -	- - - - -	2600 1800 1275 1175 1065	11.8 8.3 5.9 5.4 4.8	AS ABOVE
P-51B & C (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	9800	30000 25000 20000 15000 10000 5000	435 439 426 411 395	1600 2100 3050 2700 2200	425 428 411 411 381	1500 2100 2700 3300 340	11.2 9.0 6.9 4.9 3.1 1.6	11200 10200 9200 10200 11200	NONE NONE NONE 1000 2000	124 850 154 184 184	1.5 1.6 1.7 1.7 1.7	510 1920 1100 940 855	1.7 4.3 2.6 2.6 2.6	1920 1400 940 855 840	3.8 4.3 2.6 2.6 2.6	- - - - -	- - - - -	2130 1600 1360 1135 1075	6.9 5.4 5.4 5.2 4.7	AS ABOVE		
P-51D (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	10100	30000 25000 20000 15000 10000 5000	435 437 424 413 395	1300 1950 2575 2775 2295	435 425 412 413 381	1300 1950 2425 2300 2100	443 434 387 360 340	12.6 9.5 7.3 5.2 3.3 1.7	11100 10100 11100 12100	NONE NONE 1000 2000	419 269 269 269	1050 720 650 620	3.7 2.3 2.4 2.3	1125 765 700 670	3.5 2.2 2.2 2.2	1675 1140 1000 -	6.8 4.3 4.0 -	- - - -	- - - -	1850 1250 1175 -	8.7 5.7 5.6 -	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT RACKS. NEW TYPE BOMB RACKS DEPR. HIGH SPEED 12 M.P.H.

NOTES:  
RED FIGURES AND SMALL ITALIC FIGURES INDICATE REVISIONS AFTER FLIGHT CHECK.  
\* MILITARY POWER AVAILABLE FOR 15 MINUTES.



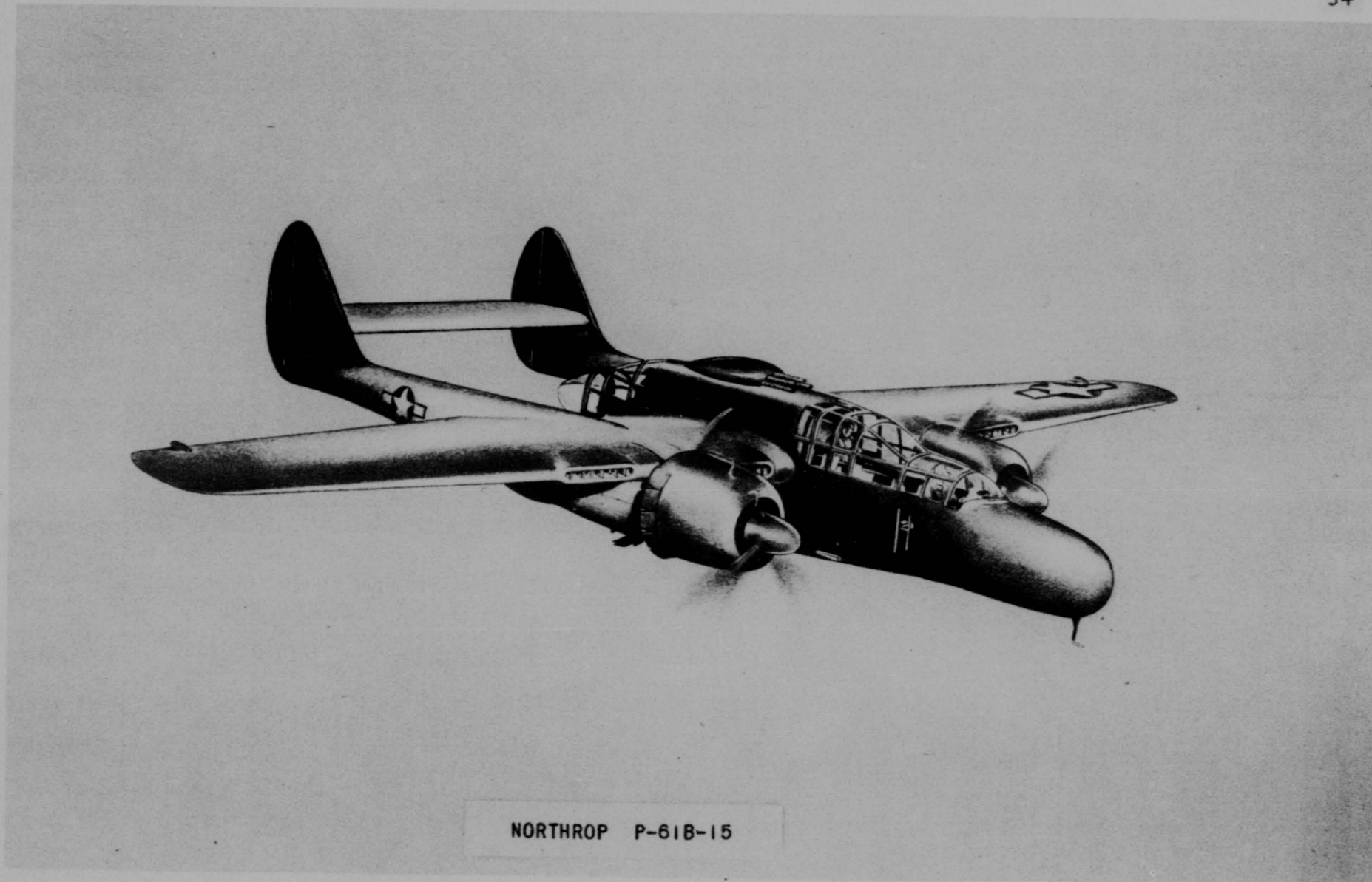
**P-51**  
"MUSTANG"

MANUFACTURED BY NORTH AMERICAN (LOCKHEED) "NA" & NORTH AVIATION (DASSAULT) "DA"

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34





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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	COMBAT CREW	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY US GAL	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.		TYPE
P-61A-NO -1	2	FRATT-WHEINER R-2800-10 2 SPD.- 2 STG. CURTIS 12" DIA.- 4 BL. F.P. ELECTRIC	T 1850/8 L 1860/4500 1760/16600 1600/21600 1600/8200 1650/17500 1550/22500	S 66' L 45'11" H 14' 2" T 17' 2" W 664 sq. FT.	B 22500 C 27600 R 40000	2	2 x 115 2 x 200 650 GAL.	4-20mm 4-50	200 560	FORE-FUSelage UPPER TURRET					SCR-522 SCR-605 SCR-720 SCR-724 DETR. 136 RC - 36 AN/ARC-3	TECHNICAL ORDER 01-15FB-1 (15 OCT. 1944) * UPPER TURRET ON lat. (37) P-61A-1's ONLY. * CREW OF (3) FOR MODEL WITH TOP TURRET.
P-61A-NO -5, -10 & -11 P-61B-NO -1, -2, -5 & -6	2	FRATT-WHEINER R-2800-65 2 SPD.- 2 STG. CURTIS 12" DIA.- 4 BL. F.P. ELECTRIC	T AS ABOVE PLUS THREE WAR EMERG. RATINGS M 2250/1500 C 2060/13000 R 1925/17500	AS ABOVE	B 22500 C 26000 R 40000	2	2 x 115 2 x 200 2x165 or 2x134 1850 GAL.	4-20mm	200	FORE-FUSelage	NONE			3200	AS ABOVE PLUS: APM-1 & APS-13 (See 2)	REFERENCE AS ABOVE EXTERNAL WING TANKS of 2-1600 LB. BOMBS CAN BE CARRIED ON P-61A-11; P-61B-2 & -6 ONLY. THE 310 GAL. EXTERNAL PRESSURIZED FUEL TANKS WILL BE AVAILABLE IN NEAR FUTURE. * APM-13 ON P-61B-5 & -6 ONLY.
P-61B-NO -10	2	AS ABOVE	AS ABOVE	AS ABOVE	B 22500 C 26000 R 40000	2	2 x 115 2 x 200 2x165 or 2x134 1850 GAL.	4-20mm	200	FORE-FUSelage	NONE			6400	SAME AS P-61A-1 PLUS: APM-1 & APS-13	REFERENCE AS ABOVE EXTERNAL WING TANKS of 2-1600 LB. BOMBS CAN BE CARRIED ON THE 310 GAL. EXTERNAL PRESSURIZED FUEL TANKS WILL BE AVAILABLE IN NEAR FUTURE.
P-61B-NO -15	2	AS ABOVE	AS ABOVE	AS ABOVE	B 25150 C 29700 R 40000	3	AS ABOVE	4-20mm 4-50	200 560	FORE-FUSelage UPPER TURRET	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		REFERENCE AS ABOVE

MODEL & BLOCK NO.	TAKE OFF & LANDING				HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS						
	HARD SURFACE - NO WIND				AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE																
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND-RUN		STD. ALT. FT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE					
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.		HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.				RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
P-61A-NO -1	24000	-	2050	-	1100	25000	350	1025	360	1025	360	11.0	27600	NONE	650	365	1.3	415	1.4	800	3.0	-	-	1010	5.0	ALL PERFORMANCE SHOWN WITHOUT DE-ICEERS.	
P-61A-NO -5, -10 & -11 P-61B-NO -1, -2, -5 & -6	26000 28000 29000 30500 32500	2550 2900 3050 3350 3500	2175 2300 2375 2500 2650	-	1600 1900 2050 1775 -	15000 10000 5000 S L	350 369 364 355 336 313	1025 1225 1240 1250 1250 1125	360 356 350 333 324 313	1025 1225 1240 1250 1250 1125	360 356 350 333 324 313	11.3 10.5 7.2 4.5 2.2 0.0	32000 30400 28000 30000 32000	NONE NONE NONE 2000 4000	1250 960 630 630 630	750 560 365 -	2.7 2.0 1.3 -	- 620 415 -	- 2.0 1.4 -	- 800 -	3.0 -	- -	- -	1900 1125 1010 -	9.6 7.0 5.0 -	AS ABOVE	
P-61B-NO -10	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE
P-61B-NO -15	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE

NOTES:

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK  
\* MILITARY POWER AVAILABLE FOR 15 MINUTES.



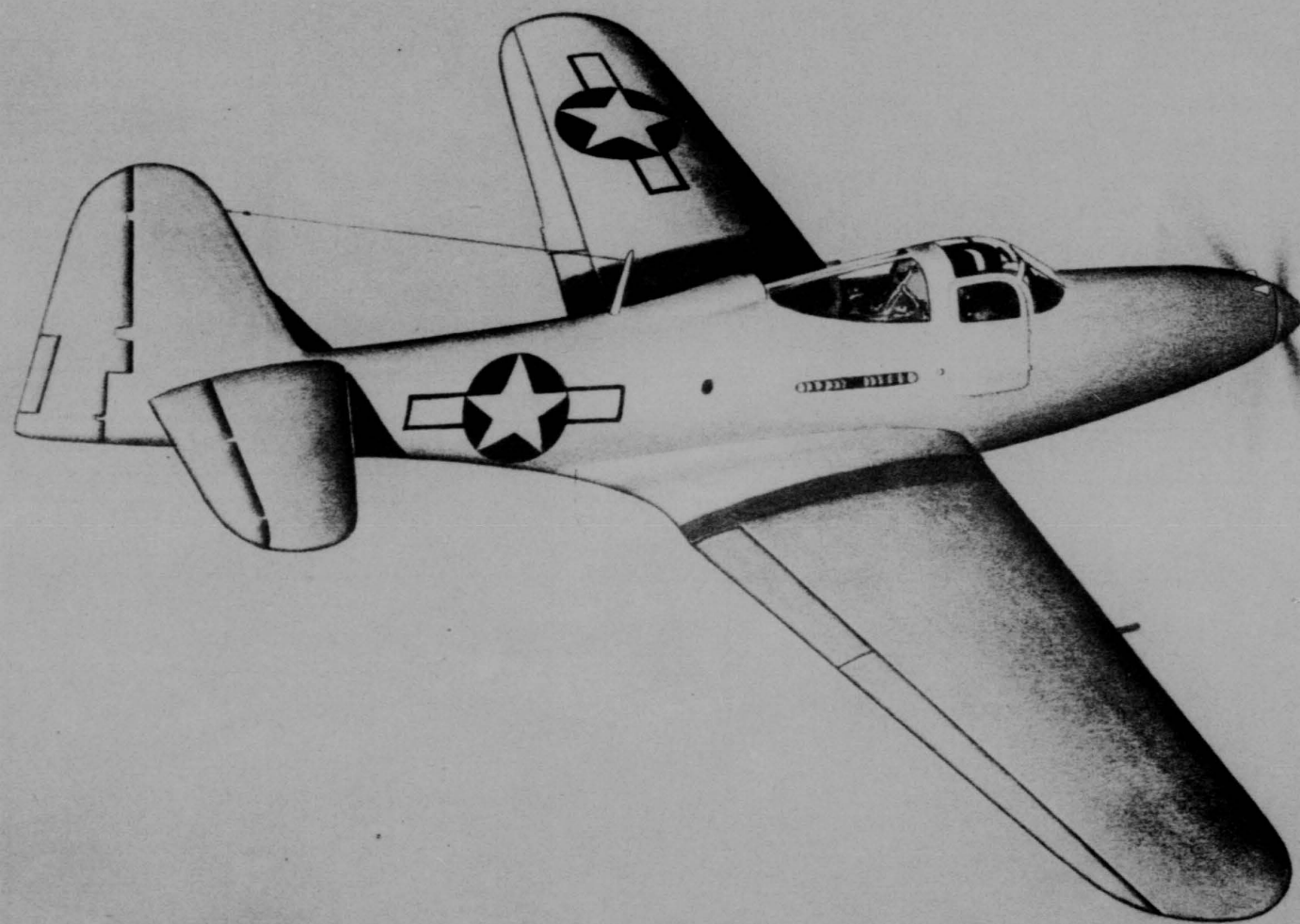
P-61

"BLACK WIDOW"

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BELL P-63A

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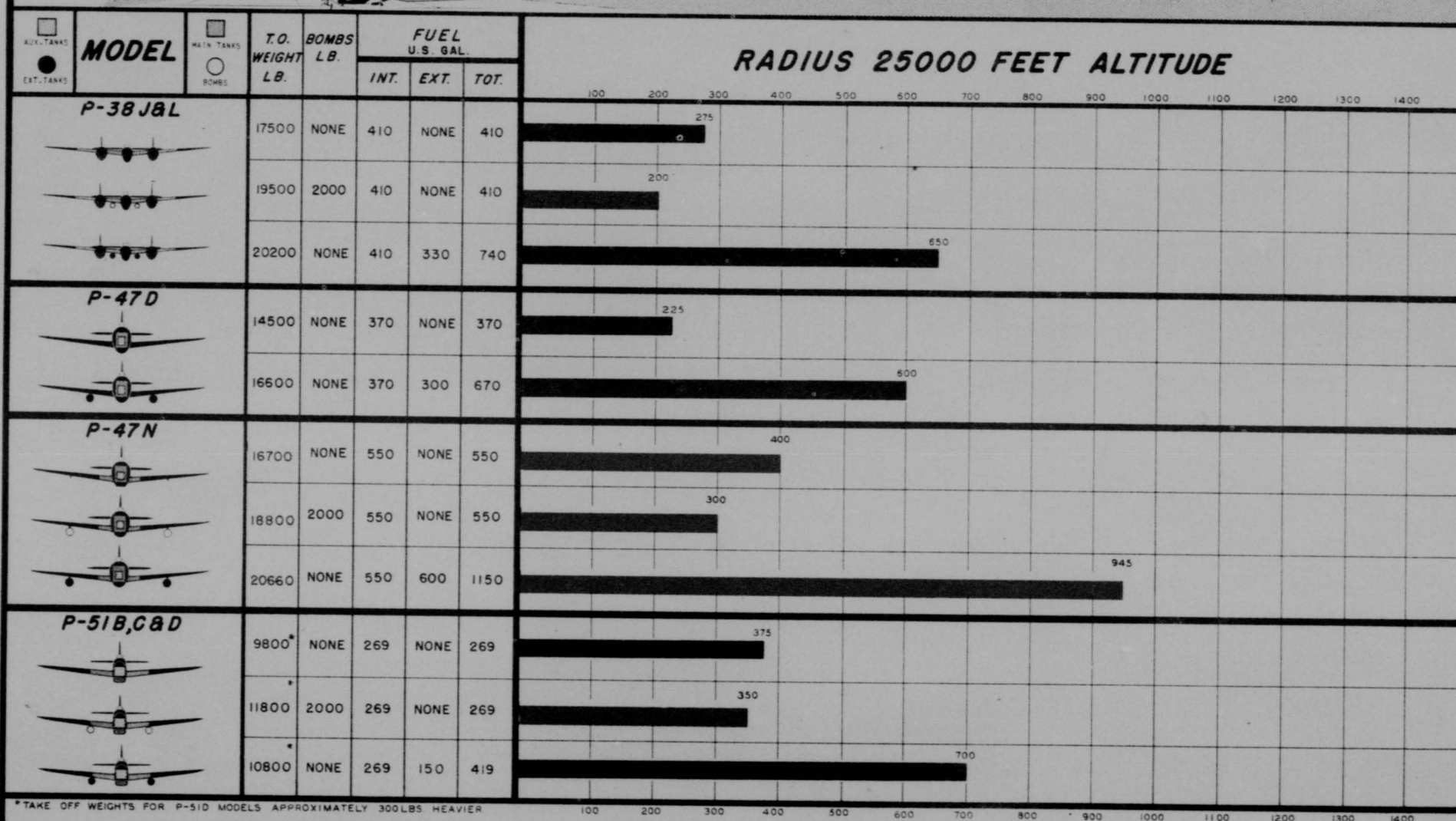
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59

# COMBAT RADIUS OF ACTION

COMBAT  
5 MIN. AT W.E.  
15 MIN. AT MIL.



\*TAKE OFF WEIGHTS FOR P-51D MODELS APPROXIMATELY 300LBS HEAVIER

CONDITIONS AND ALLOWANCES

AS A RESULT OF NUMEROUS REQUESTS FOR RADIUS OF ACTION DATA THIS PAGE IS OFFERED FOR COMMENT. IT IS FULLY UNDERSTOOD THAT THE DATA SHOWN HERE WILL COVER ONLY A FEW OF THE CONDITIONS ENCOUNTERED IN ACTUAL COMBAT. THE CONDITIONS UPON WHICH THE RADIUS OF ACTION DATA IS BASED WERE ARBITRARILY SET UP BY THE TECH. DATA LAB. FOR THE PURPOSE OF SHOWING THE TYPE OF INFORMATION THAT CAN BE PRESENTED.

ALL COMMENTS AS TO THE SPECIFIC TYPE OF RADIUS OF ACTION DATA DESIRED SHOULD BE FORWARDED IMMEDIATELY TO FLIGHT DATA UNIT, TECH. DATA LAB., ENGINEERING DIVISION, WRIGHT FIELD, OHIO.

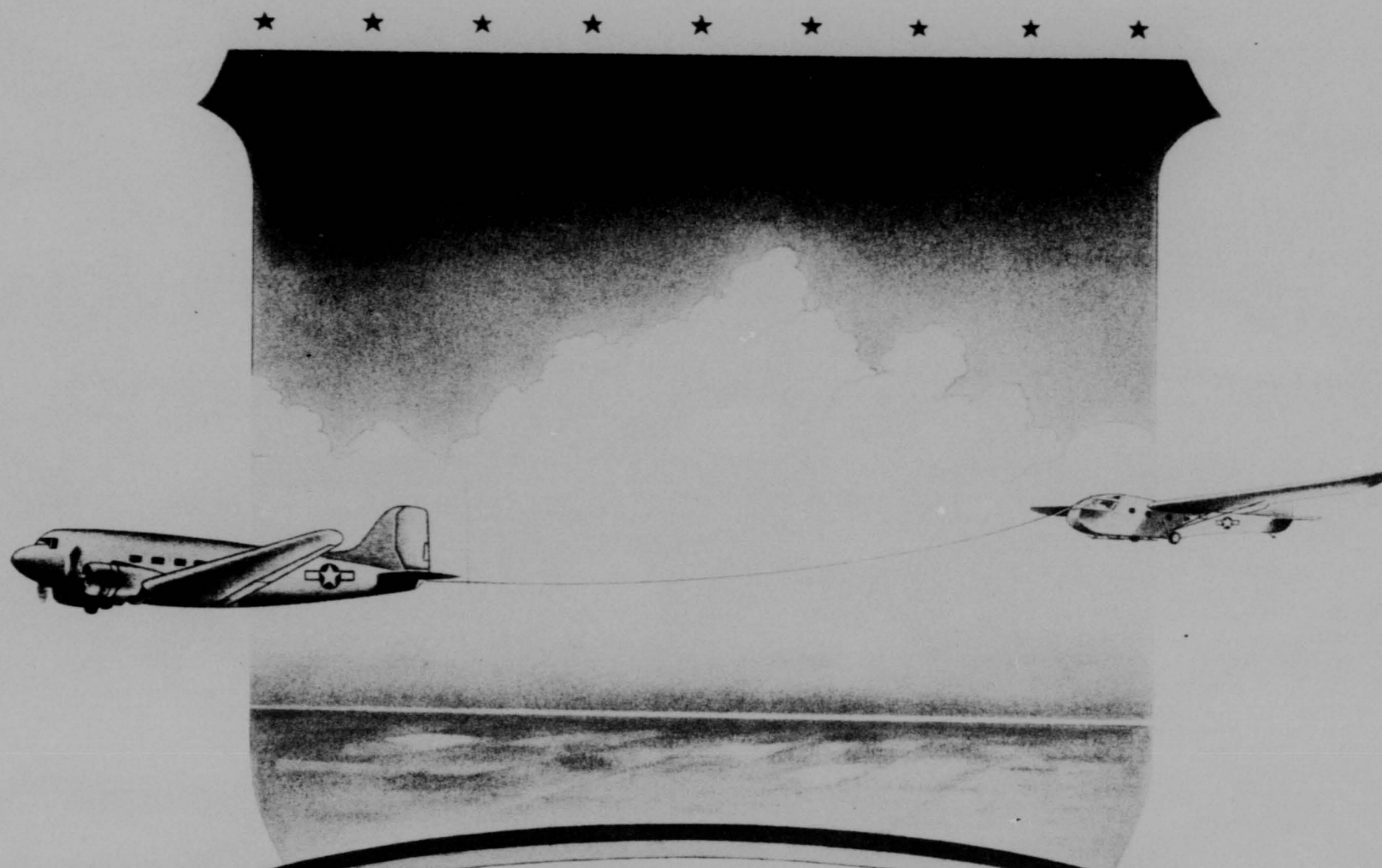
- (a) WARM UP AND TAKE OFF EQUIVALENT TO 5 MINUTES AT NORMAL RATED POWER.
- (b) CLIMB TO 25,000 FT. AT NORMAL RATED POWER. (DISTANCE COVERED IN CLIMB IS NOT INCLUDED IN RADIUS).
- (c) CRUISE OUT AT 25,000 FT. AND 210 I.A.S.
- (d) DROP EXTERNAL TANKS AND/OR BOMBS BEFORE ENTERING COMBAT.
- (e) COMBAT 5 MINUTES AT WAR EMERGENCY POWER AND 15 MINUTES AT MILITARY POWER.
- (f) CRUISE BACK AT 25,000 FT. AND 210 I.A.S.
- (g) NO ACCOUNT IS TAKEN OF DECREASED FUEL CONSUMPTION DURING DESCENT.
- (h) ALLOWANCE IS MADE FOR 10 MINUTES RESERVE AT MINIMUM CRUISE POWER.
- (i) NO ALLOWANCE IS MADE FOR FORMATION FLIGHT OR EVASIVE ACTION OTHER THAN 20 MINUTES COMBAT.

RED INDICATES PRELIMINARY DATA.

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**GLIDER AND  
TOWPLANE SECTION**

1-DECEMBER-1944

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42

## FOREWORD

## WARNING

*THESE CHARTS CONTAIN CONSERVATIVE AVERAGES FOR TACTICAL PLANNING AND ARE NOT SUITABLE FOR AERODYNAMIC ANALYSIS.*

Data contained herein are not to be considered guaranteed performance nor optimum performance as established by test flight but are to be considered official "Practical" characteristics and performance to be used for planning purposes for the average pilot.

All data includes service allowances based on theater experience. Individual airplanes may vary appreciably due to age and service changes. Data printed in red are preliminary and subject to revision after flight check. Data printed in black have been derived from information obtained in flight but are not actual flight test results. For detailed planning see Technical Orders listed as references.

RANGE and ENDURANCE are based on the following assumptions:

- (a) Allowance for warm up, taxi, run up, take off, and landing. (equal to ten minutes at rated power.)
- (b) Allowances for fuel consumed in climb. Distance and time to climb are included in range and endurance.
- (c) Allowance for carrying bombs and droppable tanks entire flight.
- (d) Allowance of 10% net ideal range for miscellaneous differences in airplanes, equipment, pilot technique, atmospheric conditions other than wind, unusable fuel, weight and similar variables. (For example, range varies day and night due to fuel expansion prior to take off.)
- (e) Other than the above, no allowances for wind, assured reserve, combat, nor formation flight.

## DEFINITIONS

LOADING:	Typical loadings of glider and towplane for tactical missions.
Note:	Weight and fuel quantities shown apply to all performances values to the right on the same line.
Max. tow speed:	Maximum permissible calibrated indicated air speed for towing glider at weight shown.
TAKE OFF: (To clear 50' object)	Distances representative of minimum airport requirements.
Take off speed:	Normal for average pilot. (Towplane I.A.S.)
Ground run:	Distances representative of minimum runway requirements.
CLIMB (I.A.S. for climb)	Minimum towplane indicated air speed for good control & satisfactory engine cooling.
Initial rate of climb:	Sea level rate of climb at minimum towplane indicated air speed.
Note:	For some combinations rate of climb tends to increase up to critical altitude of towplane.
Service ceiling:	Altitude at which rate of climb is 100'/min.
Time to service ceiling:	Time to climb in minutes from sea level to service ceiling based on I.A.S. for climb.
RANGE & ENDURANCE:	(See discussion under foreword)
Radius of action:	Distance glider can be towed and released with towplane having enough fuel to return to base alone.
Time out:	Time from take off to release of glider, (At recommended cruising altitude).
Time back:	Time required for towplane to return to base alone at recommended cruising speed and altitude.
Max. range & endurance:	Practical maximum range which glider can be towed under conditions set forth and corresponding time required.

RED PRINT: Preliminary estimates or calculated data.

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# TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

AS OF: 25 NOV. 1944

## BOMBER TOWPLANE AND CG-4A GLIDER

TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) S.L.-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE MAXIMUM STATUTE AIR MILES-NO WIND-NO RESERVE						REMARKS
	GLIDERS		TOWPLANE				TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED I.A.S. (M.P.H.)	GROUND RUN DISTANCE (FT.)	I.A.S. FOR CLIMB (M.P.H.)	INITIAL RATE OF CLIMB (FT./MIN.)	SERVICE CEILING (FT.)	TIME TO SERVICE CEIL. (MIN.)	RADIUS OF ACTION (GLIDER RELEASED AT RADIUS)			RECOMM. CRUISING ALTITUDE (FT.)	MAX. RANGE (WITH GLIDER)		
	TAKE-OFF WEIGHT (LB.)	CARGO OR PASS. (LB.)	TAKE-OFF WEIGHT (LB.)	BOMBS CARGO OR PASS. (LB.)	FUEL (U.S. GAL.)	MAX. TOW SPEED (M.P.H.)								RADIUS (MI.)	TIME OUT (HRS.)	TIME BACK (HRS.)		RANGE (MI.)	ENDUR. (HRS.)	
	(LB.)	(LB.)	(LB.)	(LB.)	(U.S. GAL.)	(M.P.H.)	(FT.)	I.A.S.	(FT.)	(M.P.H.)	(FT./MIN.)	(FT.)	(MIN.)	(MI.)	(HRS.)	(HRS.)	(MI.)	(HRS.)		
B-17F & (1) CG-4A	7500	3800	59100	NONE	2780	150	6150	110	4150	135	300	12000*	37	(990)	7.2	6.8	5000	1380	10.5	* LIMITED- NO OXYGEN IN GLIDER
														(980)	6.8	6.3	10000	1370	9.6	
B-17F & (2) CG-4A	7500	3800	52500	NONE	1700	150	6000	110	4100	135	300	11000*	57	510	3.2	3.5	5000	720	5.5	
	7500	3800	59100	NONE	2780	150	6950	110	4700	135	240	8000	14	860	6.6	6.2	5000	1110	8.8	
B-24D & (1) CG-4A	7500	3800	52500	NONE	2344	150	4200	115	3475	140	550	12000*	24	(870)	6.3	5.3	5000	1360	9.7	* LIMITED- NO OXYGEN IN GLIDER
	7500	3800	59000	6000	2344	150	5075	115	4125	140	325	12000*	11	(830)	5.6	4.4	10000	1250	8.6	
B-25C & (1) CG-4A	7500	3800	30000	2000	972	150	5075	120	4175	140	390	12000*	38	780	5.7	4.7	5000	1200	8.6	* LIMITED- NO OXYGEN IN GLIDER
														540	3.8	3.4	5000	700	4.9	

COLUMN— 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

**NOTES:**

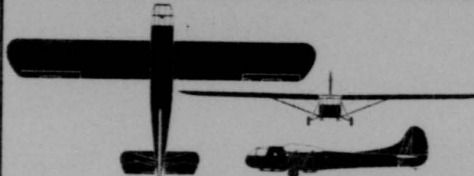
- (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-143 dated 1 DEC. 1943.
- (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

TEMPORARY TOW RELEASE MECHANISM ON B-17F CAN BE INSTALLED QUICKLY WITH NO STRUCTURAL MODIFICATIONS REQUIRED.

TOW PLANE PERFORMANCE WITH CG-4D TO BE SAME AS WITH CG-4A.

ALL FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.

**GLIDER CHARACTERISTICS**

<b>WEIGHT</b>		<b>SIZE</b>
B—BASIC		S—SPAN
C—COMBAT		L—LENGTH
W—WAR MAX		H—HEIGHT
		T—TREAD
		W—WING AREA
B— (3700 to 4500)	<b>TYPICAL GLIDER CAPACITIES</b>	
C— 7500	(a) TROOP CARRIER: CREW(2) & TROOPS(13).	
W— 9000	(b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1).	
	(c) CARGO CARRIER: CREW(2) & TROOPS(3) & 75MM. HOWITZER(1) & 75MM. AMMUNITION(18 RES.)	
	S— 83'8"	
	L— 18'4"	
	H— 12'7"	
	T— 9'4"	
	W— (Tact. gear) 852 SQ. FT.	

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TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART																					
CARGO TOWPLANE AND CG-4A GLIDER																					
TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) SL-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE STATUTE AIR MILES-NO WIND-NO RESERVE MAXIMUM						REMARKS	
	GLIDERS			TOWPLANE			MAX TOW SPEED (M.P.H.)	TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED I.A.S.	GROUND RUN DISTANCE (FT.)	I.A.S. FOR CLIMB (M.P.H.)	INITIAL RATE OF CLIMB (FT./MIN.)	SERVICE CEILING (FT.)	TIME TO SERVICE CEIL. (MIN.)	RADIUS OF ACTION (GLIDER RELEASED AT RADIUS)			RECOMM. CRUISING ALTITUDE (FT.)	MAX RANGE (WITH GLIDER)		
	TAKE-OFF WEIGHT (LB.)	CARGO OR PASS (LB.)	GLIDERS	TAKE-OFF WEIGHT (LB.)	BOMBS CARGO OR PASS (LB.)	FUEL (U.S. GAL.)									RADIUS (MI.)	TIME OUT (HRS.)	TIME BACK (HRS.)		RANGE (MI.)		ENDUR (HRS.)
	(LB.)	(LB.)	(LB.)	(LB.)	(LB.)	(U.S. GAL.)	(FT.)	(I.A.S.)	(FT.)	(M.P.H.)	(FT./MIN.)	(FT.)	(MIN.)	(MI.)	(HRS.)	(HRS.)	(MI.)	(HRS.)			
C-46A & (1)CG-4A	7500	3800	45000	3000	1400	150	3150	95	3500	125	275	10000	47	650	5.3	3.8	5000	950	7.8	BETTER PERFORMANCE EXPECTED UPON FURTHER FLIGHT TESTING.	
C-46A & (2)CG-4A	7500	3800	45000	3000	1400	150	8300	95	5650	120	100	3000	30	410	3.6	2.7	1000	530	4.7	A S A S O V E	
C-47, 47A & 53 (STD. BLADE PROPS) & (1)CG-4A	7500	3800	26000	3000	804	150	4425	85	3000	120	275	11350	44	560	4.6	4.4	5000	830	6.8		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (1)CG-4A	7500	3800	26000	3000	804	150	4625	80	3050	105	515	12000*	31	575	4.8	3.6	5000	955	8.0	*LIMITED - NO OXYGEN IN GLIDER.	
	7500	3800	29000	6000	804	150	5400	85	3250	105	410	11300	37	545	4.6	3.4	5000	870	7.3		
	7500	3800	31000	8000	804	150	5950	85	3450	105	350	10400	39	520	4.4	3.2	5000	820	6.9		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (1) CG-4A (TOWPLANE EQUIPPED WITH PARA-PACK RACKS)	7500	3800	26000	3000	804	150	4800	80	3200	105	465	11800	35	525	4.4	3.6	5000	870	7.3		
	7500	3800	29000	6000	804	150	6150	80	3400	105	370	10600	38	485	4.1	3.4	5000	830	6.9		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (2) CG-4A	7500	3800	24200	1200	804	150	6200	80	3525	105	220	7800	46	450	4.0	3.0	2000	665	5.8	* TO 3000 FT. ALTITUDE.	
	7500	3800	26000	3000	804	150	6900	80	3750	105	180	7300	50	435	3.8	2.9	2000	630	5.5		
	7500	3800	29000	6000	804	150	7550	80	4150	105	125	8000	57	395	3.7	3.3	2000	520	4.5		
	7500	3800	31000	8000	804	150	8350	85	5550	105	80	-	38*	370	3.4	3.1	1000	470	4.4		
C-60A & (1) CG-4A	7500	3800	18500	NONE	644	150	4000	85	2750	120	550	12000*	37	580	4.7	4.0	5000	940	7.9	*LIMITED - NO OXYGEN IN GLIDER.	
	7500	3800	21500	3000	644	150	5425	85	3675	120	320	11500	48	410	3.4	2.8	5000	560	4.7		
C-60A & (2)CG-4A	4700	1000	18500	NONE	644	150	6200	85	4100	120	250	8000	40	360	2.8	2.5	5000	540	4.6		
	7500	3800	18500	NONE	644	150	7000	85	4500	120	200	7300	41	330	2.9	2.4	5000	475	4.0		

NOTES:

- (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-113 dated 1 DEC. 1943.
- (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

NEW FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.

TOW PLANE EQUIPPED WITH CG-4A TO BE SAME AS WITH CG-4A

GLIDER CHARACTERISTICS

WEIGHT

- B - BASIC
- C - COMBAT
- W - WAR MAX.



SIZE

- S - SPAN
- L - LENGTH
- H - HEIGHT
- T - TREAD
- W - WING AREA

TYPICAL GLIDER CAPACITIES

- B - (3700 to 4500)
- C - 7500
- W - 9000

- (a) TROOP CARRIER: CREW(2) & TROOPS(13).
- (b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1).
- (c) CARGO CARRIER: CREW(2) & TROOPS(3) & 750LBS. HOWITZER(1) & 750LBS. AMMUNITION(18 RLB.)

- S - 83'18"
- L - 48'4"
- H - 12'7"
- T - 9'4"
- W (Tact. gear) - 852 SQ. FT.

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# TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

PAGE 49  
AS OF:  
25 NOV. 1944

## CARGO TOWPLANE AND CG-13A GLIDER

TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) SL-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE MAXIMUM STATUTE AIR MILES-NO WIND-NO RESERVE						REMARKS
	GLIDERS		TOWPLANE				TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED IAS	GROUND RUN DISTANCE (FT.)	L.A.S. FOR CLIMB (M.P.H.)	INITIAL RATE OF CLIMB (FT./MIN.)	SERVICE CEILING (FT.)	TIME TO SERVICE CEIL. (MIN.)	RADIUS OF ACTION (GLIDER RELEASED AT RADIUS)			RECOMM. CRUISING ALTITUDE (FT.)	MAX. RANGE (WITH GLIDER)		
	TAKE-OFF WEIGHT (LB.)	CARGO OR PASS (LB.)	TAKE-OFF WEIGHT (LB.)	BOMBS CARGO OR PASS (LB.)	FUEL (U.S. GAL.)	MAX TOW SPEED (M.P.H.)								RADIUS	TIME OUT (HRS.)	TIME BACK (HRS.)		RANGE	ENDUR.	
	(LB.)	(LB.)	(LB.)	(LB.)	(U.S. GAL.)	(M.P.H.)	(FT.)	IAS	(FT.)	(M.P.H.)	(FT./MIN.)	(FT.)	(MIN.)	(MI.)	(HRS.)	(HRS.)	(FT.)	(MI.)	(HRS.)	
C-47, 47A & 53 PADDLE BLADE PROPS & (1) CG-13A	10000	1300	24200	1200	80L	195	4500	85	3000	105	450	12000*	36	555	4.8	3.6	2000	855	7.5	* LIMITED - NO OXYGEN IN GLIDER.
	15700	7000	24200	1200	80L	195	5700	90	3600	105	300	9500	41	485	4.2	3.1	2000	725	6.3	
	17700	9000	24200	1200	80L	175	6350	90	3950	105	215	8500	45	460	4.0	3.0	2000	675	6.0	
C-60A & (1) CG-13A	9500	800	18000	400	61L	-	5000	85	3350	120	400	12000*	39	420	3.3	2.7	5000	590	4.4	* LIMITED - NO OXYGEN IN GLIDER.

COLUMN— 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

**NOTES:**

- (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-113 dated JULY 1944. (A) TYPICAL GLIDER CONDITIONS
- (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.
- ATTENTION: WEIGHT OF GLIDER MAY BE LIMITED BY TOWPLANE PERFORMANCE; SEE T.O. 01-1-113 JULY 1944, FOR ALLOWABLE GLIDER WEIGHT WITH CORRESPONDING TOWPLANE.
- (a) JEEPS (2) & TROOPS (8) & CREW (2)  
 (b) JEEP (1) & TROOPS (8) & CREW (2) & 75mm. HOWITZER (1) & AMMUNITION (156 RDS.)  
 (c) TROOPS (8) & CREW (2) & 75mm. HOWITZER (2) & AMMUNITION (165 RDS.)  
 (d) TROOPS (8) & CREW (2) & STD. 105mm. HOWITZER (1) (M-2) & AMMUNITION (23 RDS.)  
 (e) TROOPS (10) & CREW (2) & AERIAL DELIVERY CONTAINERS (4)  
 (f) WEAPONS CARRIER, 6x6, 1 1/2 TON (1) & CREW (2)  
 (g) JEEP (1) & TROOPS (6) & CREW (2) & 105mm. HOWITZER (1) & AMMUNITION (27 RDS.)

**GLIDER CHARACTERISTICS**

<b>WEIGHT</b>		<b>SIZE</b>
B-BASIC		S-SPAN
C-COMBAT		L-LENGTH
W-WAR MAX		H-HEIGHT
		T-TREAD
		W-WING AREA
B-1700	<b>TYPICAL GLIDER CAPACITIES</b>	
C-1900	SEE NOTE "A" AT LEFT	
W-1900		S-85' 7"
		L-54' 3"
		H-20' 3"
		T-9' 11"
		W-873 SQ.

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