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EE-393

# TACTICAL PLANNING

## *Characteristics & Performance Chart*

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

**ATTENTION IS CALLED TO  
NEW CHART ON PAGE 37A**

1-SEPTEMBER-1944

**BOMBERS**

**CARGO**

**FIGHTERS**

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## FOREWORD

- This chart is a supplement to the Quarterly 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	PERFORMANCE
<b>SUPERCHARGER:</b> "TURBO" indicates exhaust driven turbine with single speed integral diffuser.	<b>BOMBS:</b> Maximum rack capacity for standard sizes.
<b>BHP/ALT:</b> Brake horsepower per engine at critical altitude with ram.	<b>CARGO:</b> Cargo, passenger or troop capacities.
<b>T:</b> Maximum power for take off.	<b>Max. load:</b> One size only on each bomb rack (in some cases a reduction in fuel load is required)
<b>M:</b> Maximum power for combat at altitude shown, (usually limited to 15 min. duration)	<b>Practical total cargo based on gross weight:</b> Practical total cargo based on gross weight.
<b>WE:</b> War emergency power for combat at altitude shown, (limited to 5 min. duration only)	<b>Values are at least 125% of optimum:</b> Values are at least 125% of optimum.
<b>C:</b> Maximum power for continuous operation.	<b>Arbitrary values for reference only:</b> Arbitrary values for reference only.
<b>Note:</b> Maximum cruise power is the maximum power for unlimited operation with lean mixture.	<b>Distances representative of minimum airport requirements:</b> Distances representative of minimum airport requirements.
<b>SIZE:</b> Approximate dimensions for storage planning.	<b>Distances representative of minimum runway requirements:</b> Distances representative of minimum runway requirements.
<b>Length:</b> Does not include protruding guns.	<b>Practical minimum for average pilot:</b> Practical minimum for average pilot.
<b>Height:</b> Maximum in three point position.	<b>HIGH SPEED &amp; CLIMB:</b> Values are for clean new airplanes.
<b>Wing area:</b> Standard aerodynamic surface area.	<b>Military power:</b> For limited periods of combat operation.
<b>Tread:</b> Center to center main wheels: (outboard if dual).	<b>War emergency power:</b> (Performance with War Emergency ratings are shown when applicable).
<b>WEIGHTS:</b> Approximate averages for planning purposes.	<b>Time of climb:</b> Minimum time to climb from sea level based on military power climb for allowable time and maximum continuous power climb from then on.
<b>B:</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.	<b>RANGE &amp; ENDURANCE:</b> See discussion in "FOREWORD", page 2
<b>C:</b> 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.	<b>Take off weight:</b> Brief list of typical gross weights.
<b>R:</b> Recommended limit on gross weight which will allow a limit applied positive maneuver factor of at least 2.67g.	<b>Bombs, etc:</b> Typical loadings combined with various tank capacities. No consideration is given to loadings requiring partially filled tanks.
<b>W:</b> War maximum weight for special missions only.	<b>Note:</b> Take off weights with corresponding load and fuel quantity applies to all values to the right on the same line.
<b>FUEL:</b> Standard fuel tankage and capacities.	<b>Max. cont. power:</b> High speed cruising with rich mixture. (For emergency cruising only)
<b>ARMAMENT:</b> Resume' of information in the "ARMAMENT & BOMB INSTALLATIONS" (Chart EE-306A)	<b>Max. cruise power:</b> Maximum continuous operation with lean mixture setting.
<b>RADIO</b> Resume' of typical models installed.	<b>Long range:</b> 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-BO (-1 thru -27)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500 565	NOSE...FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 2 1/2- 100	NONE	9600	2550
B-17F-BO (-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 2 1/2- 100	2-1000 2-2000 2-1600 2-1000	6-1600 2-1000x	AS ABOVE
B-17F-BO -55 thru 1st.30(-85)	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-BO Last 70(-85) thru -130	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-BO (-1 thru -110)	1) 2) 2) 2) 2)	300 300 400 500 565	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 2 1/2- 100	PROVISION FOR RACKS	9600	AS ABOVE

NOTES: a NOSE GUN DELETED ON LAST 25 (-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-DL -1 thru 1st.13(-10)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500 565	NOSE...FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 2 1/2- 100	NONE	9600	2550
B-17F-DL Last 12(-10) thru -20	2) 1) 2) 2) 2)	300 300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE			PROV. FOR EXTERNAL RACKS ON -20 & SUB.
B-17F-DL -25 thru 1st.21(-35)	A S A B O V E			AS ABOVE			PROV. FOR EXTERNAL RACKS AS ABOVE 3630
B-17F-DL Last 19(-35) thru -65	3) 1) 2) 2) 2)	300 300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	A S A B O V E			AS ABOVE
B-17G-DL (-1 thru -50)	1) 2) 2) 2) 2)	300 300 400 500 565	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

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

VEGA (SEATTLE) "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.)	NOSE GUN	2-2000 6-1600 6-1000 12- 500 16- 250 2 1/2- 100	NONE	9600	2550	
B-17F-VE (-15 & -20)	2) 1) 2) 2) 2)	300 300 300 400 500 565	NOSE...FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE			EXTERNAL RACKS ON Last 31 (-20) & SUB.
B-17F-VE (-25 & -30)	A S A B O V E			AS ABOVE			b 2-1000 6-1600 2-2000 2-1600 2-1000 17600 2550 (B-17F-25) 3630 (B-17F-30)
B-17F-VE (-35 thru -50)	3) 1) 2) 2) 2)	300 300 300 400 500 565	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)	1) 2) 2) 2) 2)	300 300 400 500 565	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 CARRIED 300 RDS./GUN.  
b EXTERNAL BOMB RACKS DELETED ON LAST 14(-30).  
c CHEEK GUNS ADDED AT MOD. CENTER. x EXTERNAL

## GENERAL NOTE:

LATEST INVESTIGATION SHOWS THAT 6-1600 LB.  
ARMOR PIERCING BOMBS MAY BE CARRIED, BUT  
BOMB RAIL LOAD FACTORS AND CLEARANCES ARE  
REDUCED AND MAINTENANCE OF AIRPLANE MUST  
BE LIMITED ACCORDINGLY.

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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 & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE		
																	FOR DETAILED ARMAMENT AND BOMB INSTALLATIONS SEE PAGE OPPOSITE
B-17F	4	WRIGHT R-1820-97 TURBO HAMILTON STD. 11'7" DIA. - 3 BL. P.F., HYDROMATIC	T 1200/S L M 1200/27000 C 1000/30000	S 103'9" L 74'9" H 19'1" T 21'2" W 1120 SQ. FT.	B 36000 C 55000 R 56000 W 65000	9	MAIN - WINGS BOMB BAY	6-1730 2x 410 2550 TOT	2) 300 2) 300 1) 300 2) 400 2) 500 2) 565	.50	NOSE - FLEX. SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	C 2-2000 6-1600 2-2000 12- 500 2-1600 2-1000	2-1000 2-1000	C 6-1600 b 2-1000 17600	SEE NOTE (B)	TECHNICAL ORDER OI-208P-1. (20 JUNE 1944) EXTERNAL BOMBS ON SOME MODELS ONLY.	
B-17F (WITH WING TIP TANKS)	4	AS ABOVE	AS ABOVE	AS ABOVE	B 38000 C 55000 R 56000 W 72000A	9	MAIN - WINGS WING TIPS BOMB BAY	6-1730 2x 540 3630 TOT	3) 300 2) 300 1) 300 2) 400 2) 500 2) 565	.50	NOSE - FLEX. SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	A S	A B O V E	AS ABOVE	AS ABOVE	AS ABOVE	
B-17G	4	AS ABOVE	AS ABOVE (SEE *)	AS ABOVE	B 38000 C 55000 R 56000 W 72000A	9	AS ABOVE EXCEPT PROVISIONS ONLY FOR THE BOMB BAY TANKS	6-1730 2x 540 3630 TOT	3) 300 2) 300 1) 300 2) 400 2) 500 2) 565	.50	NOSE - FLEX. CHIN TURRET SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	AS ABOVE	PROV. FOR EXTERNAL RACKS	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER OI-208P-1. (1 OCT. 1943) * LATEST B-17G'S HAVE NEW TYPE SUPERCHARGER (S-22) GIVING INCREASED ALTITUDE PERFORMANCE. * LATER MODELS HAVE 600 RDS./GUN; EARLY MODELS 300 RDS./GUN. * LENGTH DECREASED 5" ON LATER MODELS TO 74'4".

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' T.O. DIST. FT.		LANDING SPEED MPH	GROUND-RUN T.O. DIST. FT.		STD. ALT. FT.	MIL. POWER HIGH SPEED M.P.H.		MAX. CONTIN. POWER HIGH SPEED M.P.H.		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.	M.P.H.		FT/MIN.	M.P.H.	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		
B-17F	40000	-	3900	90	-	2000	50000	300	298	400	225	52.0	56500	NONE	2550	1250	5-5	1120	5-6	1850	9-1	1950	8-9	2500	17-2	
B-17F (WITH WING TIP TANKS)	40000	-	3900	90	-	2000	50000	A	S	A	B	O	V	E	65500	NONE	3630	-	-	-	-	-	-	-	2800	17-4
B-17G	40000	-	3900	90	-	2000	50000	300	298	400	225	52.0	56500	NONE	2550	1250	5-5	1120	5-6	1850	9-1	1950	8-9	2500	17-2	

NOTES: (B) 24 VOLT RADIO SYSTEM  
 SCR-211 FREQUENCY METER  
 SCR-2690 RADIO COMPASS  
 SCR-2715 COMMAND SET  
 SCR-287A LIAISON SET  
 SCR-695 SET (or SCR-995)  
 SCR-578 EMERGENCY TRANSMITTER  
 RC - 32 FILTER EQUIPMENT (or RC-198)  
 RC - 36 INTERPHONE AMPLIFIER  
 RC - 43B MARKER BEACON  
 RC - 103 SLIDING LANDING (Provisions only)  
 SCR-522 COMMAND SET

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK  
 \* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY  
 (A) TYPICAL REPORTS INDICATE LOADINGS IN EXCESS OF 65000 LB. ARE BEING USED. IT IS ABSOLUTELY ESSENTIAL THAT WING FUEL & OIL TANKS ARE FULL AT THESE WEIGHTS & THAT MANEUVERS BE KEPT TO A MINIMUM.  
 (B) LATEST INVESTIGATION SHOWS THAT 251000 LB. ARMED FIREBOMB BOMBS MAY BE CARRIED BUT BOMB RAIL LOAD FACTORS & CLEARANCES ARE REDUCED & MANEUVERING OF AIRPLANE MUST BE LIMITED ACCORDINGLY.

MANUFACTURED BY BOEING - DOUGLAS - VEGA

**B-17**  
"FORTRESS"

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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-00 0 thru 1st. 94(-15)	1) 2) 2)	200 .50 400	NOSE.....FLEX. UPPER TURRET TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	2364
B-24D-20 1st. 36(-15) thru -20	1) 2) 1) 2)	200 400 100 400	NOSE.....FLEX. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	A S	A B O V E		2364 Last 36(-15) 3614 -20 & sub.
B-24D-30 -25 thru 1st. 26(-140)	3) 2) 1) 2)	100 250 400 400	NOSE.....FLEX. SIDE WAIST...FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	1-2000 8-1500 8-1000 12- 500 12- 250 20- 100	NONE	12500	3614
B-24D-40 1st. 9(-110) thru -170	3) 2) 2) 2)	100 250 400 508 400	NOSE.....FLEX. SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24D-50 (-1 thru -210)	2) 2) 2) 2)	400 250b 400 508 400	NOSE TURRET SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24L-1 & -5-CO	2)	400	TAIL TURRET c				

NOTES: a NOT ON B-24D-25.  
b K-6 MOUNT & INCREASE TO 500 RDS./GUN STARTS ON -210 BLOCK.  
c B-24L-20 HAVE TAIL POWER MOUNT INSTEAD OF TAIL TURRET.

CONSOLIDATED (FT. WORTH) "CP"

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) 1) 2)	100 250 400 100 400	NOSE.....FLEX. SIDE WAIST...FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24D-CF (-10 thru -20)	A S	A B C V E		1-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12500	AS ABOVE
B-24J-CF (-1 thru -90)	2) 2) 2) 2)	400 250 400 400	NOSE TURRET SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E (SEE *)		AS ABOVE
B-24J-CF (-1 thru -15)	2) 2) 2) 2)	400 500b 400 508 400	NOSE TURRET S.WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CF (-20 thru -50)	2) 2) 2) 2)	400 500b 400 508 400	NOSE TURRET S.WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CF (-100 to -)	A	S	A	B	O	V	E

NOTES: a B-10 SHACKLES FOR 8-1500 LB. BOMBS START ON 2101st. FORD KNOCK-DOWN SET.  
b B-24E-20 HAS PROVISION FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

B-24D-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.

DOUGLAS (TULSA) "DT"

FORD (WILLOW RIDGE) "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) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	1-2000 8-1500 8-1000 12- 500 12- 250 20- 100	NONE	12500	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) 2)	400 500-b 400 508 400	NOSE TURRET S.WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-FO (-1 thru -20) B-24J-DT (-1 thru -10)	A	S	A	B	O	V	E

NOTES: a B-10 SHACKLES FOR 8-1500 LB. BOMBS STARTS ON 2101st. FORD KNOCK-DOWN SET.  
b B-24H-20 HAS PROVISION FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

B-24H-DT & FO AIRPLANES RECEIVE NEW B-24J DESIGNATIONS WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.

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-24B-NT (-1 thru -15)	3) 2) 2) 2)	250 TOT. 250 400 508 400	NOSE.....FLEX. SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24B-NT (-1 thru -5)	2) 2) 2) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST...FL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24B-NT (-10 thru -15)	A S	A B O V E		1-2000 8-1500 8-1000 12- 500 12- 250 20- 100	NONE	12500	AS ABOVE
B-24B-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-24B-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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CONSOLIDATED (SAN DIEGO) "CO"

CONSOLIDATED (FT. WORTH) "CP"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD LB.	
B-24D-00 D thru 1st. 94(-15)	1) 2) 2)	.50 400 400	NOSE.....FLEX. UPPER TURRET TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	2354
B-24D-00 Last 36(-15) thru -20	1) 2) 1)	200 400 100 400	NOSE.....FLEX. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	A S	A B O V E		2354 Last 36(-15) 3614 -20 & sub.
B-24D-00 -25 thru 1st. 26(-110)	3) 2) 2) 1) 2)	100 250 400 100 400	NOSE.....FLEX. SIDE WAIST..FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	1-2000 8-1000 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24D-00 Last 9(-110) thru -170	3) 2) 2) 2)	100 250 400 508 400	NOSE.....FLEX. SIDE WAIST..FL. UPPER TURRET LOW.BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24F-00 -1 thru -210	2) 2) 2)	400 250 <sup>b</sup> 400 508	NOSE TURRET SIDE WAIST..FL. UPPER TURRET LOW.BALL TR.	A S	A B O V E		AS ABOVE
B-24J-1 & -5-00	2)	400	TAIL TURRET <sup>c</sup>				

NOTES: a NOT ON B-24D-25.  
b 8-6 MOUNT & INCREASE TO 500 RDS./GUN STARTS ON -210 BLOCK.  
c B-24J-00 HAVE TAIL POWER MOUNT INSTEAD OF TAIL TURRET.

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD LB.	
B-24D-CF (-1 & -5)	3) 2) 2) 1) 2)	100 250 400 100 400	NOSE.....FLEX. SIDE WAIST..FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24D-CF (-10 thru -20)	A S	A B O V E				12800	AS ABOVE
B-24J-CF (-1 thru -90)	2) 2) 2) 2)	100 250 400 508 400	NOSE TURRET SIDE WAIST..FL. UPPER TURRET LOW.BALL TR. TAIL TURRET	A S	A B O V E (SEE a)		AS ABOVE
B-24J-CF (-1 thru -15)	2) 2) 2) 2)	400 508 <sup>b</sup> 400 508 400	NOSE TURRET S.WAIST-45 MT. UPPER TURRET LOW.BALL TR. 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-24D-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-24D-CF HAS PROVISIONS FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

DOUGLAS (TULSA) "DT"

FORD (WILLOW RIDGE) "FO"

NORTH AMERICAN (DALLAS) "NT"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD LB.	
B-24H-DT -1 thru -15 (DOUGLAS)	2) 2) 2) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST..FL. UPPER TURRET LOW.BALL TR. TAIL TURRET	1-2000 8-1500 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) 2)	400 500 <sup>b</sup> 400 508 400	NOSE TURRET S.WAIST-45 MT. UPPER TURRET LOW.BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-FO -1 thru -20	A S	A B O V E					
B-24J-DT -1 thru -10	B-24H-DT & FO AIRPLANES RECEIVE NEW B-24J DESIGNATIONS WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.						

NOTES: a B-10 SHACKLES FOR 8-1500 LB. BOMBS STARTS ON 2101st. FORD KNOCK-DOWN SET.  
b B-24H-20 HAS PROVISION FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD LB.	
B-24B-NT -1 thru -15	3) 2) 2) 2)	250 TOT. 250 400 508 400	NOSE.....FLEX. SIDE WAIST..FL. UPPER TURRET LOW.BALL TR. TAIL TURRET	1-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24J-NT (-1 thru -5)	2) 2) 2) 2)	100 250 400 508 400	NOSE TURRET SIDE WAIST..FL. UPPER TURRET LOW.BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24B-NT (-10 thru -15)	A S	A B O V E				12800	AS ABOVE
B-24J-NT (-1 thru -10)	B-24B-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.						

NOTES: a LOWER BALL TURRET ON 5th & SUBSEQUENT; NO TUNNEL GUN ON 1st & 4th ARTICLES.

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AS OF: 25 APR. 1944  
DATE

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 U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE OR STATION	EXTERNAL NO & SIZE OR STATION	MAX. LOAD LB.	TYPE	
B-24D	4	PRATT-WHITNEY R-1830-13 TURBO HAMILTON STD. 11"7" DIA. - 3BL. P.F. HYDRA-MATIC	T 1200/3 L M 1200/25000 C 1100/25000	S 110'0" L 66'4" H 18'0" T 25'8" W 104.8 SQ. F	B 34500 C 56000 R 56000 W 67800	8	MAIN - WINGS	12-2364	3) 2) 1) 2)	100 250 100 100	NOSE - FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL - FLEX. TAIL TURRET	L-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12600	SEE NOTE (B)	TECHNICAL ORDER 01-52C-1 (20 JUNE 1944) REVISED.
B-24D (WITH BOMB BAY TANKS)	4	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	8	MAIN - WINGS BOMB BAY	12-2364 2x 100 3164 TOT	3) 2) 2) 2)	100 250 400 508	NOSE - 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-24D (WITH WING TIP TANKS)	4	AS ABOVE EXCEPT R-1830-65 ENGINE IN LIEU OF -13 ON B-24D-20-CP & B-24D-135-00 thru -170-00.	T 1200/3 L 1200/26500 C 1100/27000	AS ABOVE	B 36500 C 56000 R 56000 W 71100A	8	MAIN - WINGS BOMB BAY WING TIPS	12-2364 2x 100 3614 TOT	A S	A B O V E	A S	A B O V E	AS ABOVE	AS ABOVE	A S A B O V E	A SEE FOOT NOTE "A"
B-24G,H&J	4	AS ABOVE EXCEPT R-1830-65 ENGINE IN LIEU OF -13 ON B-24D-5-WT & sub; B-24D-5-CP & sub; B-24L SERIES.	T 1200/3 L (SEE *) C	S 110'0" L 67'2" H 18'0" T 25'8" W 104.8 SQ. F	B 37500 C 56000 R 56000 W 71100A	8	AS A B O V E		2) 2) 2) 2)	400 250 400 508	NOSE TURRET *SIDE WAIST-FL. UPPER TURRET LOW BALL TURRET TAIL TURRET	A S	A B O V E	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-52C-1 (REV. 10 JUNE 1944) LATEST B-24L MODELS HAVE NEW TYPE SUPERCHARGER (B-22) GIVING INCREASED ALTITUDE PERFORMANCE. *BEING INCREASED TO 500 HRS.; SEE PAGE OPPOSITE. b FIVE EXTERNAL BOMB RACKS BEING INSTALLED AT MOD. CENTERS. (R-6) MOUNT AT SIDE WAIST FOR ON B-20SUBS. (CP, DT & FO)
B-24L-CO																

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.		LANDING SPEED MPH	GROUND-RUN		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					
		FT.	FT.		FT.	FT.		FT.	FT.	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.
B-24D	40000	-	3300	90	-	2800	30000	278	500	278	300	45.0	53000	NONE	2364	900	4.0	1000	3.9	1800	9.0	1900	8.5	2450	15.2	
B-24D (WITH BOMB BAY TANKS)	40000	1500	4200	103	3250	3450	25000	303	900	297	790	30.2	58000	5000	2364	850	4.0	950	3.9	1750	8.9	1800	8.3	2300	14.4	
B-24D (WITH WING TIP TANKS)	40000	1500	4200	103	3250	3450	20000	290	1000	284	800	22.0	53000	NONE	2364	900	4.0	1000	3.9	1800	9.0	1900	8.5	2450	15.2	
B-24G,H&J	40000	1500	4200	103	3250	3450	15000	277	1150	272	950	15.4	60500	NONE	3164	1200	5.3	1350	5.3	2200	11.9	2500	11.5	3200	20.0	*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.
B-24L-CO							10000	263	1200	259	1000	9.7	61000	3000	2814	1050	4.6	1200	4.6	2050	10.6	2200	10.2	2750	17.1	** PERFORMANCE DATA WITH TYPE B-22 SUPERCHARGER NOT AVAILABLE.
							5000	252	1200	246	7	4.2	60000	5000	2364	850	4.0	950	3.9	1750	8.9	1800	8.3	2300	14.4	** PERFORMANCE DATA ABOVE 65000 LB. NOT YET AVAILABLE; SEE NOTE (A).

NOTES: (B)

24 VOLT RADIO SYSTEM  
SCR-211 FREQUENCY METER SCR-522 COMMAND SET  
SCR-2690 RADIO COMPASS  
SCR-2714 COMMAND SET  
SCR-287A LIAISON SET  
SCR-295 SET (or SCR-995)  
SCR-778 EMERGENCY TRANSMITTER  
RC-32 FILTER EQUIPMENT (or RC-108)  
RC-36 INTERPHONE AMPLIFIER  
RC-135 MARKER BEACON  
RC-103 BLIND LANDING (Provisions only)  
AN (ARR-1) (Installed in some models)

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

(A) TETHER REPORTS INDICATE LOADINGS IN EXCESS OF 65000 LB. ARE BEING USED. IT IS ABSOLUTELY ESSENTIAL THAT WING FUEL & OIL TANKS ARE FULL AT THESE WEIGHTS & THAT MAINSTAYS BE KEPT TO A MINIMUM.



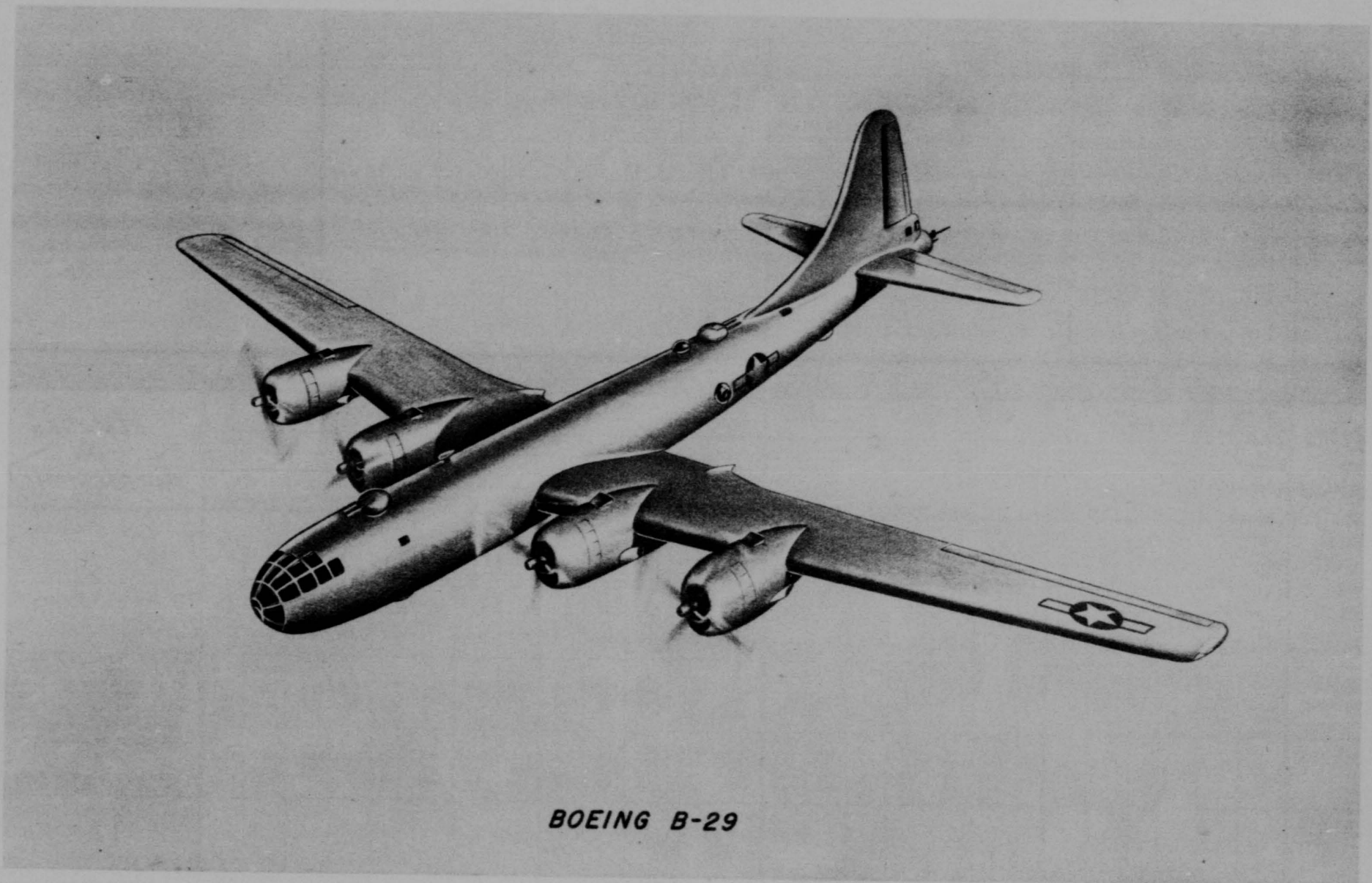
**B-24**  
"LIBERATOR"

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*BOEING B-29*

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																PAGE 9
CONFIDENTIAL																AS OF: 25 AUG. 1944
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	ENGINE MFR. MODEL	B.H.P./ALT.	S-SPAN	B-BASIC	T-TAKE-OFF		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-29-BW -1 to -20 INCL. B-29-BA -1 B-29A-BN -1	WRIGHT R-3350-23 TURBO HAMILTON STD. 16" DIA. - 4 BL. F.F., HYDROMATIC	T 2200/S L M 2200/25000* C 2000/25000*	S 111'3" L 99'10" H 27'9" T 31'6" W 1739 SQ. W	B 74500 C 120000 M 120000 W 135000A	10	OUTRD.-WINGS INRD.-WINGS BOMB BAY	11-2735 8-2873 6x 640 9448 TOT	1-20MM 2) 2) .50 2) 2) 1000	100 1000 1000 1000 1000	TAIL-M2, TYPE B UPPER FORE TRR. UPPER REAR TRR. LOWER FORE TRR. LOWER REAR TRR. TAIL-POWER MT.	4-4000 8-2000 12-1600 12-1000 40-500	NONE	20000	SEE NOTE (B)	TECHNICAL ORDER 01-20WJ-1 (10 AUG. 1944) * WITHOUT RAM * OUTBOARD TREAD-31'6"; INBOARD TREAD-25'8"	
B-29-BW -25 to -45 INCL. B-29-BA -5 to -15 INCL. B-29-MO -1 & -5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	10	OUTRD.-WINGS INRD.-WINGS CENTER-WINGS BOMB BAY	11-2735 8-2873 4-1315 6x 640 10762 TOT	1-20MM 4) 2) .50 2) 2) 1000	100 875 1000 1000 1000	TAIL-M2, TYPE B UPPER FORE TRR. UPPER REAR TRR. LOWER FORE TRR. LOWER REAR TRR. TAIL-POWER MT.	A S	A B O V E	AS ABOVE	REFERENCE AS ABOVE * WITHOUT RAM. * LAST (75) B-29-10-BW & SUBSEQUENT (BW) MODELS & ALL B-29-MO MODELS HAVE 4x.50 CAL. GUNS; OTHERS AS ABOVE. * OUTBOARD TREAD-31'6"; INBOARD TREAD-25'8".		
B-29A-BN -5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	10	OUTRD.-WINGS INRD.-WINGS CENTER-WINGS BOMB BAY	11-2735 8-2873 3-1120 6x 640 10568 TOT	1-20MM 2) 2) .50 2) 2) 1000	100 1000 1000 1000 1000	TAIL-M2, TYPE B UPPER FORE TRR. UPPER REAR TRR. LOWER FORE TRR. LOWER REAR TRR. TAIL-POWER MT.	A S	A B O V E	AS ABOVE	REFERENCE AS ABOVE * WITHOUT RAM. * OUTBOARD TREAD-31'6"; INBOARD TREAD-25'8".		
			S L H T W	B C R W												
			S L H T W	B C R W												
			S L H T W	B C R W												

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'		LANDING SPEED M.P.H.	GROUND-RUN		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 M.P.H.	RATE OF CLIMB FT./MIN.	HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.				TIME TO CLIMB MIN.	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	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS					
B-29-BW -1 to -45 INCL. B-29A-BN -1 & -5 B-29-BA -1 to -15 INCL. B-29-MO -1 & -5	84000 90000 105000 120000 135000	- 3150 4500 6100 8000	3200 3500 4400 5100 -	95 160 110 120 -	2300 2500 3000 3600 -	120000	30000 25000 20000 15000 10000 5000	361 351 340 326 313 299	300 150 600 750 900 1000	316 338 327 311 301 286	110 140 140 590 720 815	63.0 45.0 30.0 20.0 12.0 6.0	134000 125000 133000 120000 128000	NONE NONE 8000 4000 12000	8168 6888 6888 5608 5608	1850 1800 1800 1500 1450	7.1 7.1 7.1 5.7 5.7	2100 2000 2000 1700 1650	7.1 7.1 7.1 5.7 5.7	3650 3300 2850 2700	16.0 15.9 12.8 12.8	- - - - -	- - - - -	4400 4050 3500 3100 2850	21.9 19.4 17.7 15.8 14.3

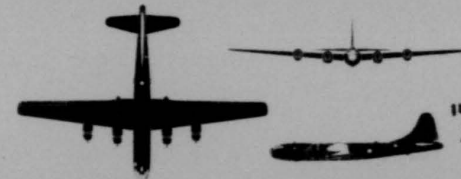
NOTES: (A) HIGHER LOADINGS ARE STRUCTURALLY POSSIBLE BUT ARE IMPRACTICAL BECAUSE POWER AVAILABLE WOULD BE INSUFFICIENT FOR TACTICAL OPERATION.

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK

(B)  
AN/ARC-6  
SCB-2695  
SC-43/193  
RC-109  
AN/TPN-5  
RC-16  
SCB-695  
SCB-576  
SCB-718  
AN/ADP-13  
RAVEN  
AN/ASB-1  
AN/ARR-1  
PROVISIONS FOR:  
AN/ARR-4  
SCB-477

LINKSON SET  
COMPASS (OF AN/ARR-1)  
MARKER BEACON  
SLIDE PATH RECEIVER  
LOCALIZER RECEIVER  
INTERPHONE (OF AN/ATC-2)  
IFF  
EMERGENCY TRANSMITTER  
HIGH ALTITUDE ALTIMETER  
HIGH ALTITUDE WADAR  
RDM  
STATIC DISCHARGER  
IN ADAPTER (SOME PLANES ONLY)  
LORAN  
WVF (SOME PLANES ONLY)

MANUFACTURED BY:  
(MARTIN (OMAHA) "MO"  
(BORING (WICHITA) "BW"  
(BORING (RENTON) "BN"  
(BRILL (ATLANTA) "BA")



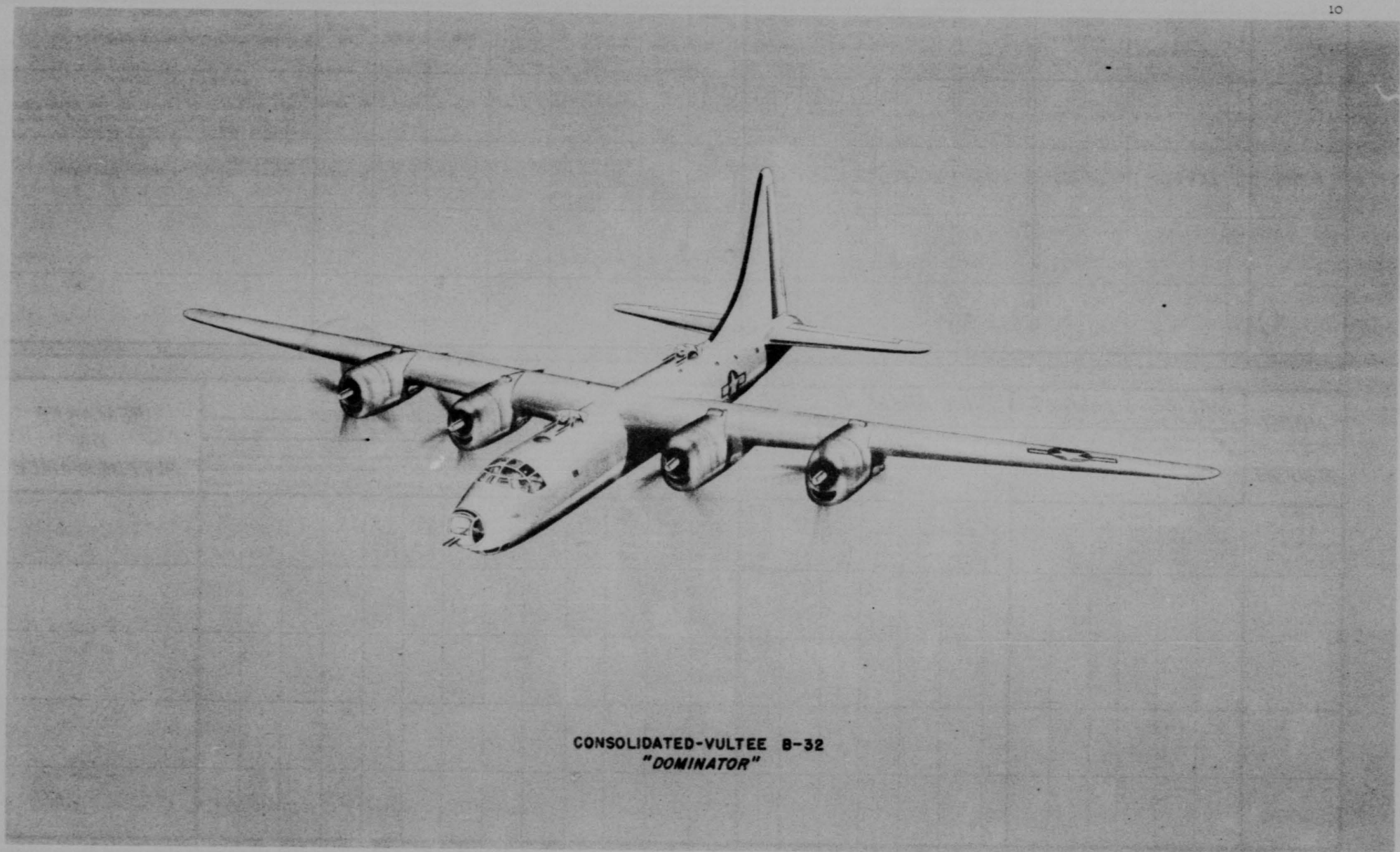
B-29

"SUPER FORTRESS"

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CONSOLIDATED-VULTEE B-32  
"DOMINATOR"

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AS OF  
DATE 25 AUG. 1944

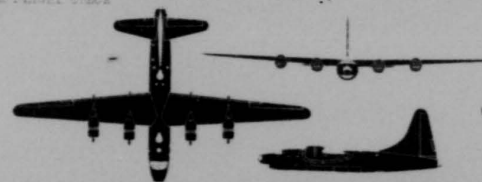
TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA W-WAR MAX.		B-BASIC C-COMBAT R-RECD LIM	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.
B-32-CF	4	WRIGHT R-3350-23 TURBO CURTISS 16" DIA. - LBL. CONST. SPD. - ELECT.	T 2200/8 L M 2200/10000 C 2000/12300	S 135' 0" L 82' 11" H 33' 0" T 28' 0" W 1122 sq. ft.	B 60000 C 100000 R 102800 W 123250	8	IMED. (INNER CENTER) 2 x 668 (OUTER) 2 x 597 (INNER CENTER) 2 x 399 (OUTER) 2 x 330 (See f) 5460 TOT	2) 365 2) 400 2) 400 2) 550 2) 1000	MOUSE TURRET FRONT TOP THR. REAR TOP THR. LOW B. L. THR. TAIL TURRET	L-1000 8-2000 8-1600 12-1000 10-500	NONE	20000	SCR-271A, 211, 252, 287, 522, 695 & 718. RC-36, 103 193 & 198	TECHNICAL ORDER 01-524-1 (20 JULY 1944) a SPACE PROVISIONS FOR 600 HDS./GUN; NORMAL HDS. LISTED. b RADIO LISTED FOR EXP. PLANE & FIRST FEW PROD. ARTICLES. c BOMB BAY TANKS IN DESIGN STAGE; NO DETAILS AVAILABLE.		
			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											
			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 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				RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE		ENDUR.			
B-32-CF	70000	-	3670	84	-	2200	30000	282	650	369	125	37.3	100000	2000	5460	1500	5.6	1700	5.7	2700	11.6	3950	11.1	3750	20.1		
	80000	3650	4100	96	3000	2900	25000	266	625	324	640	28.7	106500	3000	5460	1150	5.6	1650	5.6	2550	11.3	3850	11.1	3500	18.7		
	90000	4500	4550	106	3600	2900	20000	350	990	324	750	21.6	119000	3000	5460	1100	5.3	1550	5.6	2500	10.2	3600	10.8	2000	14.5		
	100000	5500	5000	118	4300	3150	15000	311	1050	320	850	15.4															
	110000	6700	-	-	5200	-	10000	318	1150	307	950	8.1															
	120000	8250	-	-	6400	-	5000	300	1000	288	1000	3.1															

NOTES:

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



**B-32**  
"DOMINATOR"

MANUFACTURED BY CONSOLIDATED-VULTEE (Ft. Worth) "CP"

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NORTH AMERICAN (INGLEWOOD) "NA"  
(KANSAS CITY) "NC"

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-25C-NA (-1 thru -20)	1) 1) 2) 2)	300 300 200 200 a	NOSE....FLEX. NOSE....FIXED UPPER TURRET LOWER TURRET	1-2000 3-1000 6- 500 8- 250 12- 100	1-2000T b 6- 325 8- 250 8- 100	3-1000 8- 250x 5000	1559 (B-25C) 1684 (B-25D)
B-25C-NA (-25) B-25D-NC (-20 thru -35)	AS ABOVE EXCEPT NO LOWER TURRET ON 210(D-20), -25, -30 & -35.			1-2000 2-1600 3-1000 6- 500 8- 250 12- 100	1-2000 T 6- 325 8- 250 8- 100	2-1600 8- 250x 5200	1524 (B-25C) 1649 (B-25D)
B-25G-NA (-1 thru -10)	1-75MM 2-.50 2-.50 2-.50	21 400 200 200 c	NOSE CANNON M4 NOSE....FIXED UPPER TURRET LOWER TURRET	A S	A B O V E		1649
B-25E-NA (-1 thru -10)	1-75MM 4-.50 4-.50 2-.50 2-.50 2-.50	21 400 400 d 200 200 500	NOSE CAN. TURRET NOSE....FIXED NOSE...PACKAGE UPPER TURRET SIDE WAIST-FL. TAIL...POWER MT.	** 1-2000 2-1600 3-1000 6- 500 8- 250 12- 100	1-2000 T	3200	1624
B-25J-NC (-1 thru -20)	4) 1) 2) 2) 2) 2)	400 300 300 200 200 600	NOSE...PACKAGE NOSE....FIXED NOSE....FIXED SIDE WAIST-FL. UPPER TURRET TAIL...POWER MT.	A S	A B O V E		AS ABOVE

NOTES: \*B-25C-1 & D-1 ARMAMENT SAME AS B-25C & D. c NO LOWER TURRET ON 78(G-5) & -10.  
T TORPEDO a NO LOWER TURRET ON 80(B-25D-15) ONLY. d SOME B-25H-1's HAVE ONLY  
x EXTERNAL b NOT CARRIED ON 1st.157(B-25C-1). 2 NOSE PACKAGE GUNS.  
\*\* 4000# BOMB STATION DELETED ON 131st AIRPLANE OF BLOCK H-5 AND SUBSEQUENT.  
\*\*\* 2000# BOMB STATION DELETED ON 151st AIRPLANE OF BLOCK J-1 AND SUBSEQUENT.

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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	INTERNAL NO & SIZE OR STATION	EXTERNAL NO & SIZE OR CAPACITY	MAX. LOAD LB.		
B-25C & D (NA & NC)	2	WRIGHT R-2600-13 2 SPD. SUPERCH. HAMILTON STD. 12" DIA. - 3BL. F.F. HYDROMATIC	T 1700/5 L M 1700/1500 C 1500/6700 1350/13500	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 184 MAIN - WINGS 2 x 151 BOMB BAY 1 x 585	2 x 184 2 x 151 1 x 585	1-.30 2-.50 2-.50	600 400 350	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 102 (B-25C's) SAME AS BELOW. g-LENGTH OF B-25C SERIES IS 53'
B-25C-NA -1 TO -25 INCL. B-25D-NC -1 TO -35 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 22000 C 33500 R 33500 W 35000 B	5	MAIN - WINGS 2 x 184 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 184 2 x 151 6 - 304 1 x 125 1 x 585	1) 1) 2) 2) 2)	300 300 400 350	NOSE - FLEX. NOSE - FIXED UPPER TURRET LOWER TURRET (On some models)	1-2000 b 2-1600 3-1000 6- 500 8- 250 8- 100	(SEE C) 1-2000 T	2-1600 x8- 250 5200	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-B-25C-25 & D-20 THROUGH -35 FUEL CAPACITY SAME AS BELOW. 1-125 GAL. SIDE WAIST TANK ON B-25D SERIES ONLY.
B-25G-NA -1 TO -10 INCL.	2	AS ABOVE	AS ABOVE	S 67'6" L 51' H 15'9" T 19'4" W 610 SQ. FT.	B 21700 C 33500 R 33500 W 35000 B	4	MAIN - WINGS 2 x 184 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 184 2 x 151 6 - 304 1 x 125 1 x 585	1-75MM 2) 2) 2)	21 400 400 350	NOSE CANNON-MT. NOSE - FIXED UPPER TURRET LOWER TURRET (On some models)	A S	A B O V E	AS ABOVE	TECHNICAL ORDER 01-600D-1. (REV. 10 DEC. 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 -1 TO -10 INCL.	2	WRIGHT R-2600-13 or -29 2 SPD. SUPERCH. HAMILTON STD. 12" DIA. - 3BL. F.F. HYDROMATIC	AS ABOVE	AS ABOVE	B 22000 C 33500 R 33500 W 35000 B	5	MAIN - WINGS 2 x 184 MAIN - WINGS 2 x 151 AUX. - WINGS 6 - 304 SIDE WAIST 1 x 125 BOMB BAY 1 x 585	2 x 184 2 x 151 6 - 304 1 x 125 1 x 585	1-75MM 4) 1) 2) 2)	400 400 200 200 600	NOSE CAN-T13E1 NOSE - FIXED PORE - PACKAGE SIDE WAIST-FL. UPPER TURRET TAIL-POWER MT.	AS ABOVE	1-2000 T	3200	SCR-271E SCR-269G SCR-287 SCR-522 SCR-578 SCR-695 RC - 103 RC - 36	TECHNICAL ORDER 01-600D-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. TECHNICAL ORDER 01-600E-1. (10 JULY 1944) **2000* BOMB STATION DELETED ON 151st AIRPLANE OF BLOCK J-1 AND SUBSEQUENT.
B-25J-NC -1 TO -15 INCL.	2	AS ABOVE	AS ABOVE	S 67'7" L 52'11" H 15'9" T 19'4" W 610 SQ. FT.	B 21100 C 33500 R 33500 W 35000 B	6	AS ABOVE	AS ABOVE	1) 2) 4) 2) 2)	300 300 400 200 600	NOSE - FLEX. NOSE - FIXED PORE - PACKAGE SIDE WAIST-FL. UPPER TURRET TAIL-POWER MT.	A S	A B O V E	AS ABOVE	SCR-271E SCR-269G SCR-287 SCR-522 SCR-578 RC - 103 RC - 36	TECHNICAL ORDER 01-600E-1. (10 JULY 1944) **2000* BOMB STATION DELETED ON 151st AIRPLANE OF BLOCK J-1 AND SUBSEQUENT.

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.		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	MIL. 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				RATE OF CLIMB MPH	TIME TO CLIMB MIN	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE MILES		ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES
B-25C & D (NA & NC)	25000 30000 32000 34000	- 3800 4700 5500	3300 3650 3900 -	99 108 112 -	1550 1800 2000 -	20000 15000 10000 5000 S L	267 286 284 283 265	- - - - -	262 285 279 276 260	100 600 820 8 -	32.1 14.5 8.0 3.5 0.0	30000 29500	NONE 3000	1255 670	950 500	3.9 2.0	- -	- -	1475 750	7.0 3.5	- -	- -	1850 925	10.3 5.2	
B-25C-NA -1 TO -25 INCL. B-25D-NC -1 TO -35 INCL.	32000 33200 34000 34900 35200	4700 5200 5500 5900 6000	3900 4000 4100 -	112 111 116 -	3700 2050 2100 -	20000 15000 10000 5000 S L	265 284 283 282 264	- - - 1150 1200	260 280 276 274 257	- 550 830 8 -	16.5 9.5 4.3 0.0	34900 34000 33200 32000 35200	NONE NONE 3200 2000 T 5200	1624 1599 974 974 974	- - 700 650 600	2.9 2.9 2.9	- -	- -	1050 950 875	5.9 4.6 4.5	- -	- -	1350 1350 1125	8.1 8.2 6.9	* FOR SPECIAL FERRYING USE 1x125 GAL. SIDE WAIST FUEL TANK.
B-25G-NA -1 TO -10 INCL.	32000 33700 34000 34900 35200	4700 5350 5450 5850 6000	3950 4050 4100 -	112 115 116 -	3700 2050 2100 -	20000 15000 10000 5000 S L	265 278 278 285 264	- - 274 1150 1200	260 277 274 276 257	- 550 830 8 -	16.5 9.5 4.7 0.0	34900 34000 33700 33900 35000	NONE NONE 2000 2000 T 5200	1624 1524 1189 1189 974	- - 950 925 700	3.9 4.0 3.2	- -	- -	- -	- -	- -	- -	2425 2250 1700 1475 1200	12.8 11.8 9.0 8.6 7.2	* INCLUDES 1x215 GAL. SELF SEALING REMOVABLE TANK AVAILABLE WITH 2000 LB. BOMBS ONLY OR 1x2000* TORP. ** FOR SPECIAL FERRYING USE 1x125 GAL. SIDE WAIST FUEL TANK.
B-25H-NA -1 TO -10 INCL.	32000 33200 33700 34000 34800	4700 5150 5350 5450 5800	3950 4000 4050 4100 -	112 111 116 -	3700 2050 2100 -	20000 15000 10000 5000 S L	262 277 275 285 266	- - 270 1150 1200	255 275 270 275 258	- 100 300 550 8	27.0 13.8 6.6 0.0	35000 35000 35000 34600	NONE NONE 2000 2000 T 3200	1624 1524 1189 1189 974	1250 1175 900 850 725	5.1 4.8 3.7 3.7 3.0	- -	- -	2200 2050 1550 1450 1250	10.3 9.6 7.3 7.2 5.8	- -	- -	2425 2300 1725 1550 1375	12.9 12.0 8.9 8.8 7.2	* INCLUDES 1x215 GAL. SELF SEALING REMOVABLE TANK AVAILABLE WITH 2000 LB. BOMBS ONLY OR 1x2000* TORP. ** STRIP TO 35000 LB. LIMITING WEIGHT: 1624 GAL. CONDITION INCLUDES 2x50 GAL. WAIST TANKS FOR SPECIAL FERRYING.
B-25J-NC -1 TO -15 INCL.	32000 33700 34000 34900 35200	4700 5350 5450 5800 6000	3950 4050 4100 -	112 115 116 -	3700 2050 2100 -	20000 15000 10000 5000 S L	262 277 275 285 266	- - 270 1150 1200	255 275 270 275 258	- 550 830 8 -	18.8 10.8 6.6 0.0	34900 34000 33900 34000 33100	NONE NONE 2000 2000 T 3200	1624 1524 1189 1189 974	- - 900 850 725	3.6 3.7 3.0	- -	- -	1575 1450 1150 1150	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. CONDITION INCLUDES 2x50 GAL. WAIST TANKS FOR SPECIAL FERRYING.

NOTES: (A)

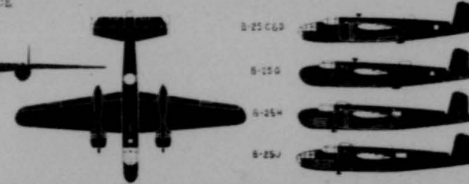
24 VOLT RADIO SYSTEM  
SCR-211 FREQUENCY METER  
SCR-269D RADIO COMPASS  
SCR-271E COMMAND SET (or SCR-522)  
SCR-287A LIAISON SET  
SCR-525 SET (or SCR-595 or SCR-695)  
SCR-578 EMERGENCY TRANSMITTER  
RC - 32 FILTER EQUIPMENT (of RC-198)  
RC - 43B MARKER BEACON  
RC - 103 BLIND LANDING (Provisions only)  
RC - 196 CONTACTOR UNIT  
RC - 36 INTERPHONE AMPLIFIER

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT TRIALS

\* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.

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

(C) TORPEDOES BEING USED IN LIMITED QUANTITIES ONLY.



B-25  
"MITCHELL"

MANUFACTURED BY NORTH AMERICAN (Inglewood) "NA" &amp; NORTH AMERICAN (Kansas City) "MC"

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MARTIN

(BALTIMORE) "MA"  
(CHINA) "MC"

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-26B-MA (B thru -4)	1-.30 1-.30 2-.50 2-.50	600 500 1500 400	NOSE...FLEX. TUNNEL...FLEX. TAIL...FLEX.MT. UPPER TURRET SIDE WAIST-FL.	2-2000 2-1600 4-1000 6-500 15-250 30-100	1-2000 (TORPEDO)	2-1500 1-2000T 5200	1162
B-26B-MA (-10 thru -20) B-26C-MO -5 thru 1st. 75(-30)	1) 1) 2) 2) 2)	200 270 240 250 200 400	NOSE...FLEX. NOSE...FLEX. SIDE WAIST-FL. U.FUS.-PACKAGE L.FUS.-PACKAGE TAIL-POWER MT. UPPER TURRET	A S	A B O V E		1962
B-26B-MA -25 thru 1st. 150 (-50) B-26C-ME Last 125(-30)	A S	A B O V E		2-2000 2-1600 4-1000 6-500 10-250 20-100	AS ABOVE	AS ABOVE	1162
B-26B-MA Last 50(-50) & -55 B-26C-MD -15	1) 2) 2) 2) 2)	270 250 250 200 900 400	NOSE...FLEX. SIDE WAIST-FL. U.FUS.-PACKAGE L.FUS.-PACKAGE TAIL-POWER MT. UPPER TURRET	A S	A B O V E	AS ABOVE	
B-26F-MA -1, -2 & -6 B-26G-MA -1 thru -25	1) 2) 2) 2) 2) 2)	300 250 275 225 400 900	NOSE...FLEX. SIDE WAIST-FL. U.FUS...PAGE. L.FUS...PAGE. UPPER TURRET TAIL...POW.MT.	2-2000 2-1600 4-1000 6-500 10-250 20-100	NONE	4000	1500

NOTES: a SIDE WAIST GUNS ADDED TO LAST 111(-4) ONLY.  
\* B-26B-10, -15 & C-5 HAVE SAME TAIL GUN INSTALLATION & RDS./GUN AS B-26B-MA.  
T TORPEDO

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 15	
CONFIDENTIAL																	AS OF:	
																	DATE 26 APR. 1944	
MODEL & BLOCK NO.	ENGINE & PROP.	SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE					
					TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE STATION	EXTERNAL NO. & SIZE CAPACITY		MAX. LOAD LB.	TYPE	FOR DETAILED ARMAMENT AND BOMB INSTALLATIONS SEE PAGE OPPOSITE.			
B-26B-MA B-2,3&4	PRATT-WHITENEY R-2500-5* 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. E.F. ELECTRIC	T 1850/ S L M 1850/ 2700 C 1500/ 11200 1500/ 7800 1450/ 13000	S 65'0" L 58'3" H 19'10" T 22'0" W 602 SQ. FT. W 5 300	B 23500 C 35000 R 36500	6	MAIN - WINGS AUX. - WINGS B. BAY - (PORE)	2 x 360 2 x 121 2 x 250 1162 TOT	1-30 1-30 2-50 2-50 2-50	600 600 1500 400 240	NOSE - FLEX. TUNNEL - FLEX. TAIL - FLEX. MT. UPPER TURJET SIDE WAIST-FL.	2-2000 2-1500 4-1000 8- 500 15- 250 30- 100	1-2000 (TORPEDO)	2-1600 1-2000T 5200 (B)	SEE (A)	TECHNICAL ORDER 01-352A-1. (5 MARCH 1943) * SIDE WAIST GUNS ADDED TO LAST 111 (-L) ONLY. * B-26B-MA HAS -5 ENGINE; B-26B-2-MA HAS -41 ENGINE & B-26B-3 & -4 HAS -43 ENGINE.			
B-26B-MA -10 TO -20 INCL B-26C-MO -5 TO -25 INCL	PRATT-WHITENEY R-2500-13 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. E.F. ELECTRIC	T 1920/ S L M 1920/ 3200 C 1490/ 11300 1550/ 7100 1360/ 11600	S 71'0" L 58'3" H 21'6" T 22'0" W 679 SQ. FT. W 38200(C)	B 25500 C 37000 R 37500	6	MAIN - WINGS AUX. - WINGS BOMB BAY (PORE & REAR)	2 x 360 2 x 121 4 x 250 1962 TOT	1) 1) 2) 2) 2) 2)	300 270 240 250 200 400 800	NOSE - FIXED NOSE - FLEX. SIDE WAIST-FL. U. FUS. - PACKAGE L. FUS. - PACKAGE UPPER TURJET TAIL-POWER MT.	2-2000 2-1500 4-1000 4- 500 10- 250 20- 100	A S	A B O V E	AS ABOVE	TECHNICAL ORDER 01-352B-1. (25 DEC. 1943) * B-26B-10; -15 & C-5 HAVE FLEX. TAIL MOUNT INSTEAD OF POWER MOUNT. & HGS./GUN SAME AS B-26B-2-MA. * BASIC WEIGHT OF B-26B-15 IS 21500 LB.			
B-26B-MA -25 TO -55 INCL B-26C-MO -30 & -45 INCL	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	6	MAIN - WINGS AUX. - WINGS BOMB BAY (PORE ONLY)	2 x 360 2 x 121 2 x 250 1162 TOT	A S	A B O V E	2-2000 2-1500 4-1000 4- 500 10- 250 20- 100	(TORPEDO)	2-1600 1-2000T 5200 (B)	NOTE (A) plus RC-103 & SCR-522 r	REFERENCE AS ABOVE * FIXED NOSE GUN DELETED ON LATEST B-26B's and B-26C-15. * ALL MODELS EXCEPT 1st. 75 (B-26C-30) CARRY LESS BOMBS DUE TO DELETION OF 2 REAR BOMB BAYS. * RC-103 & SCR-522 ADDED TO LATER MODELS ONLY.				
B-26F-MA -1, -2 & -6 B-26G-MA -1 TO -10	AS ABOVE	AS ABOVE	S 71'0" L 56'1" H 20'4" T 22'0" W 658 SQ. FT. W 38200(C)	B 25500 C 37000 R 37500	6	MAIN - WINGS AUX. - WINGS BOMB BAY (PORE ONLY)	2 x 360 2 x 120 2 x 250 1500 TOT	1) 2) 2) 2) 2)	300 250 275 225 400 900	NOSE - FLEX. SIDE WAIST-FL. U. FUS. - PACKAGE L. FUS. - PACKAGE UPPER TURJET TAIL-POWER MT.	2-2000 2-1500 4-1000 6- 500 10- 250 20- 100	NONE	4000	AS ABOVE	TECHNICAL ORDER 01-352C-1. (15 FEB. 1944) * B-26G DESIGNATION IS USED FOR AIRPLANES WITH AN FITTINGS; NO OTHER MAJOR CHANGES.			

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		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF		BOMBS CARGO		TOTAL FUEL		MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE				
B-26B-MA B-2,3&4	24000 28000 32000 35000 36000	- - 3250 4000 4300	2300 2900 3500 - -	110 120 130 - -	1600 2100 2350 - 3150	35000	20000 15000 10000 5000 S L	270 298 291 254 281	300 750 1000 1150 1500	265 294 288 283 265	200 600 900 # #	25.5 14.0 7.7 3.4 0.0	34000 35500 36000 35000	NONE 1500 2000T 4000	1162 1162 1162 962	950 900 - - 550	3.5 3.5 - - 2.2	- - - - -	- - - - -	2000 1950 1900 1250	11.0 10.7 10.5 7.0			
B-26B-MA -10 TO -20 INCL B-26C-MO -5 TO -25 INCL	24000 28000 32000 35000 36000 38200	- 3200 3050 4000 4300	1950 2200 2100 - -	134 135 136 - -	900 1050 1200 - -	37000	20000 15000 10000 5000 S L	282 273 271 255 270	300 750 1000 1150 1300	280 286 271 269 250	200 600 900 # #	28.6 11.2 7.1 3.4 0.0	38200 37800 38200 36500 38100	NONE 1500 2000T 4000	1162 1162 1162 962 962	1000 900 - - 650	4.2 4.2 - - 2.7	- - - - -	2375 1725 1700 - 1050	11.7 8.5 8.5 - 5.4	- - - - -	2600 1825 1800 - 1075	14.7 10.2 10.2 - 6.0	* MUST BE STRIPPED TO 38200 LB.
B-26B-MA -25 TO -55 INCL B-26C-MO -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	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE			
B-26F-MA -1, -2 & -6 B-26G-MA -1 TO -10	28000 32000 35000 36000 38200	2300 2150 2660 2900 3600	2200 2100 2500 2650 -	132 122 125 127 -	1500 1750 1845 1300 -	37000	25000 20000 15000 10000 5000 S L	255 258 274 277 283 281	300 750 1000 1150 1000	258 274 269 269 259 242	200 600 900 # #	31.6 17.2 8.1 0.0	38000 36200 31200 38200	NONE 1500 2000T 4000	1050 875 1000 675 1000	4.3 3.6 2.7 2.7 2.8	- - - - -	1775 1500 1175 1100	8.8 7.2 5.6 5.6	- - - -	1875 1600 1300 1125	10.6 9.0 7.3 6.3	* MUST BE STRIPPED TO 38200 LB.	

NOTES: (A)

24 VOLT RADIO SYSTEM

SCR-281 FREQUENCY METER  
SCR-2590 RADIO COMPASS  
SCR-271A COMMAND SET  
SCR-287A LIAISON SET  
SCR-535 SET (or SCR-595 or SCR-695)  
SCR-578 EMERGENCY TRANSMITTER  
RC - 32 FILTER EQUIPMENT (or RC-138)  
RC - 36 INTERPHONE AMPLIFIER  
RC - 138 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 FLYING CHARACTERISTICS.

GENERAL NOTES: SOME MODELS MODIFIED FOR TOW TARGET USE BY REMOVAL OF GUNS AND ARMAMENT ITEMS; FOR DETAILS SEE PAGE OPPOSITE. THESE MODELS HAVE BEEN REDESIGNATED AT-23A & B.



B-26

"MARAUDER"

MANUFACTURED BY MARTIN (Baltimore) "MA" &amp; MARTIN (Omaha) "M"

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

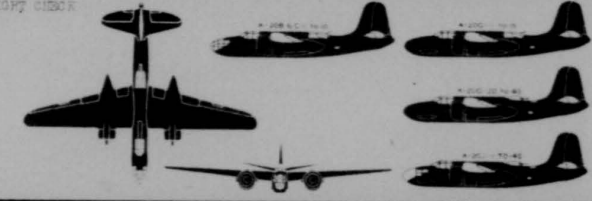
PAGE 16  
AS OF:  
DATE 21 AUG. 1944

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 STATION		MAX. LOAD LB.	TYPE
A-20B-DL	2	WRIGHT R-2600-11 2 SPD. SUPERCH. HAMILTON STD. 11'3" DIA. - 3 BL. P.F. HYDROMATIC	T 1600/3000 M 1600/11500 C 1350/5500 1275/12000	S 61'4" L 48'0" H 18'1" T 17' W 465 SQ. FT.	B 15600 C 22000 R 25000 W 27000A	4	MAIN - WINGS FUSELAGE BOMB BAY 1 x 100 2 - 590 1080 TOT.	1-30 2-30 1-50 2-50	500 1000 200 200	TUNNEL - FLEX. L.A.R. NACELLES REAR COCKPIT NOSE - FIXED	1-1000 1-2000T 1-500 4-250 10-100	(SEE C) 1-2000T 2-500 4-250 4-100	1000	SCR-271A SCR-535 MN-260 RC-51	TECHNICAL ORDER 01-40AC-1. (1 DEC. 1942) SOME MODELS ONLY.	
A-20C-DO -I TO -10 INCL	2	AS ABOVE EXCEPT FOR CHANGE TO R-2600-23 ENGINES	T 1600/3000 M 1600/10000 C 1350/5000 1275/11500	S 61'4" L 47'4" H 18'1" T 17' W 465 SQ. FT.	B 16300 C 23000 R 25200 W 27000A	4	INBD. WINGS OUTSD. WINGS PUS. (BOMB BAY) BOMB BAY (SEE B) 2 x 136 2 x 64 2 x 70 4 - 680 1080 TOT.	1) 2) .30 4) a	500	TUNNEL - FLEX. REAR COCKPIT NOSE - FIXED	4-500 4-250 4-100	(SEE C) 1-2000T	2000	AS ABOVE	TECHNICAL ORDER 01-40AD-1. (10 FEB. 1942) NO TORPEDO PROVISIONS ON A-20C-1. FOR ALTERNATE INSTALLATIONS SEE KR-306-A.	
A-20G-DO -I TO -15 INCL	2	AS ABOVE	AS ABOVE	S 61'4" L 48'0" H 17'7" T 17'0" W 465 SQ. FT.	B 17200 C 24000 R 25200 W 27000A	3	AS ABOVE	1) .30 1-50 6-50	500 500 350	TUNNEL - FLEX. REAR COCKPIT NOSE - FIXED	4-500 4-250 4-100	(SEE C) 1-2000T	2000	SCR-271A SCR-535A SCR-695A MN-260 RC-36 RC-198 SCR-522	TECHNICAL ORDER 01-40 (5 APRIL 1944) ARMAMENT FOR A-20G-1 IS (2) .50 CAL. FIXED NOSE GUNS OF 350 RDS. EACH & (4) 20MM NOSE CANNON, TYPE M2 OF 60 RDS. EACH; MAJORITY ALLOCATED TO FOREIGN POWER.	
A-20G-DO -20 TO -45 INCL	2	AS ABOVE	AS ABOVE	AS ABOVE	B 17700 C 25000 R 25000 W 27000A	3	INBD. WINGS OUTSD. WINGS PUS. (BOMB BAY) GRP. - EXT. (SEE B) 2 x 136 2 x 64 3 - 325 1 x 37 1/2 1099 TOT.	1) 2) .50 6)	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	4-500 4-250 4-100	(SEE C) 1-2000T 4-500 4-500 4-250 4-100 4000	4-500 4-500 4-500 4-500 4-500 4-500	2000	SCR-271A SCR-535A SCR-695A MN-260 RC-36 RC-198 SCR-522	REFERENCE AS ABOVE NO PROVISIONS FOR TORPEDO ON A-20G-10 & -15. A-20G-15 HAS MN-260 INSTEAD OF MN-260T. SCR-522 INSTALLED ON THE -15'S ONLY.
A-20J-DO -I TO -20 INCL	2	AS ABOVE	AS ABOVE	AS ABOVE	B 17800 C 25000 R 25000 W 27000A	4	AS ABOVE	1) 2) .50 2)	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	A S	A B O V E	2000	SCR-271A SCR-695A MN-260 RC-36 RC-198 SCR-522	REFERENCE AS ABOVE NO PROVISIONS FOR TORPEDO ON A-20J-15 & -20.	

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 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.	AT 10000 FT.	AT 25000 FT.	
A-20B-DL	17000 19000 22000 24000 27000	- 2800 4000 4650 6500	2150 2700 3000 3600 4700	88 95 105 113 120	1500 1650 1900 2100 2400	22000	25000 20000 15000 10000 5000	275 303 315 318 303	370 900 1125 1830 2125	277 300 312 310 297	290 775 1275 1830 2125	22.6 13.2 8.3 6.8 6.3	23800 21000	NONE 1000	1080 490	850 300	3-3 1-4	1150 500	4-9 2-1	1500 600	7-0 2-7	- -	- -	2100 900	13.4 6.0	
A-20C-DO -I TO -10 INCL	13000 20000 23000 25000 27000	- 3200 4100 5300 6500	2550 2700 3150 3950 4700	91 95 109 113 120	1600 1750 2000 2100 2400	23000	25000 20000 15000 10000 5000	275 302 317 319 306	300 900 1320 1750 1900	278 300 312 313 301	270 775 1200 1750 2077	23.9 13.9 8.7 6.8 6.1	24500 23200	NONE 2000	1080 540	875 350	3-3 1-5	- -	1500 875	6-6 3-1	- -	- -	2300 1000	12.0 6.5		
A-20G-DO -I TO -15 INCL	19000 21000 24000 26000 27000	- 3600 4550 5900 6500	2700 3900 3250 4300 4700	95 102 113 120 120	1650 1850 2100 2100 2400	24000	25000 20000 15000 10000 5000	275 302 317 319 306	300 900 1260 1680 1860	276 300 312 312 301	270 775 1150 1620 2077	23.9 13.9 8.7 6.8 6.1	25300 24000 24000	NONE 2000 2000T	1080 540 540	975 450 425	3-5 1-7 1-7	1650 750 650	6-5 3-1 3-0	1200 800 700	7-3 3-4 3-3	2000 900 -	9-1 4-1 -	2300 1190 950	12.5 6.0 5.7	
A-20G-DO -20 TO -45 INCL	19000 21000 24000 26000 27000	- 3600 4550 5900 6500	2700 3900 3250 4300 4700	95 102 113 120 120	1650 1850 2100 2100 2400	25000	25000 20000 15000 10000 5000	275 302 317 319 306	300 900 1260 1680 1860	276 300 312 312 301	270 775 1150 1620 2077	23.9 13.9 8.7 6.8 6.1	26200 25000 25000	NONE 2000 2000T	1099 725 725	900 425 575	3-5 2-3 2-3	- *950 *925	- 4-1 4-1	1625 1075 975	7-3 4-6 4-5	- *1250 *1250	- *5-7 *5-7	2000 1900 1175	11.2 6.6 6.7	FLIGHTS ABOVE 10000 FT. REQUIRE SPECIAL PROVISIONS FOR OXYGEN.
A-20J-DO -I TO -20 INCL	19000 21000 24000 26000 27000	- 3600 4550 5900 6500	2700 3900 3250 4300 4700	95 102 113 120 120	1650 1850 2100 2100 2400	25000	25000 20000 15000 10000 5000	275 302 317 319 306	300 900 1260 1680 1860	276 300 312 312 301	270 775 1150 1620 2077	23.9 13.9 8.7 6.8 6.1	26200 25000 25000	NONE 2000 2000T	1099 725 725	900 425 575	3-5 2-3 2-3	- *950 *925	- 4-1 4-1	1625 1075 975	7-3 4-6 4-5	- *1250 *1250	- *5-7 *5-7	2000 1900 1175	11.2 6.6 6.7	AS ABOVE

NOTES: (A) CRITICAL FLIGHT CHARACTERISTICS RESULT ABOVE 27000 LB. (B) FUSELAGE TANKS ARE CARRIED IN BOMB BAYS WITHOUT AFFECTING BOMB LOAD CAPACITY. (C) PROVISIONS ONLY, FOR TORPEDO: A-20 SERIES NOT BEING USED FOR TORPEDO MISSIONS AS PER MILITARY REQUIREMENTS POLICY NO. 37 DATED JULY 3, 1943. RANGE VALUES WITH TORPEDO ARE SHOWN FOR COMPARATIVE REFERENCE.

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.  
\* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.  
T TORPEDO (REPLACES INTERNAL BOMBS WHEN CARRIED)  
X EXTERNAL



**A-20**  
"HAVOC"

MANUFACTURED BY DOUGLAS (SANTA MONICA) "DO" (LONG BEACH) "DL"

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AS OF:  
DATE 24 APR 1964

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS			RADIO	REMARKS & REFERENCE
	ENGINE MFR. MODEL	B.H.P./ALT.	S-SPAN	L-LENGTH	B-BASIC		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	WEIGHT B-2600-29 2 SPD. SUPERCH. HAMILTON STD. 11"3" DIA. -3 BL. P.P. HYPERMATIC	T 1700/5. L. M 1700/5200 C 1500/13400 1350/15900	S 61'4" L 18'0" H 18'1" T 17'0" W 165 Sq. ft.	B 17800 C 26000 A 26000 W 27000	3	DED. WINGS OUTED. WINGS FIG. (FORM B) PROP. (EXTER.) (SEE B)	2x136 2x 64 3x305 1x37L 1099 TOT.	1) 2) .50 6)	400 400 350	TUNNEL-FLEX. UPPER TURRET NOSE-FIXED	L- 500 L- 250 L- 100	L- 500 L- 250 L- 100	L- 500 L- 500x 1200	SCR-27LN SCR-695A MB-26Y RC-36 RC-198	TECHNICAL ORDER 01-12AF-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	TUNNEL-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.	

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'		L LANDING SPEED MPH	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	TIME TO CLIMB	AT 10000 FT.				AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE		ENDUR.	RANGE
	FT.	FT.	FT.	FT.	MPH	MPH	FT/MIN	MPH	FT/MIN	MIN.	MPH	FT/MIN	MIN.	MPH	FT/MIN	MIN.	MILES	HOURS	MILES	HOURS	MILES	HOURS		MILES	HOURS
A-20H-DO -1 TO -15 INCL.	19000	2750	2750	94	1830	2375	25000	285	680	307	500	15.3	26380	NOX	1099	750	1.2	-	-	1115	6.3	-	-	2000	10.3
	21000	3500	3500	100	1875	2560	20000	335	680	317	500	15.3	26040	2000	725	595	0.1	-	-	1010	0.1	-	-	1700	0.3
	24000	4810	4810	108	2560	3250	15000	320	1200	317	1050	0.6	26090	4000	400	225	1.1	-	-	420	0.2	-	-	500	0.4
	26000	5690	5690	-	1500	-	10000	320	1500	302	1510	0.6													
	27000	6450	6450	-	1125	-	5000	305	1800	299	1470	0.7													
A-20K-DO -1 TO -15 INCL.		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

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.
- (B) FUSELAGE TANKS ARE CARRIED IN BOMB BAYS WITHOUT AFFECTING BOMB LOAD CAPACITY.

RED FIGURES ARE PRELIMINARY. SUBJECT TO REVISIONS AFTER FLIGHT CHECK.  
\* MILITARY POWER AVAILABLE FOR FIVE MINUTES ONLY.  
x EXTERNAL



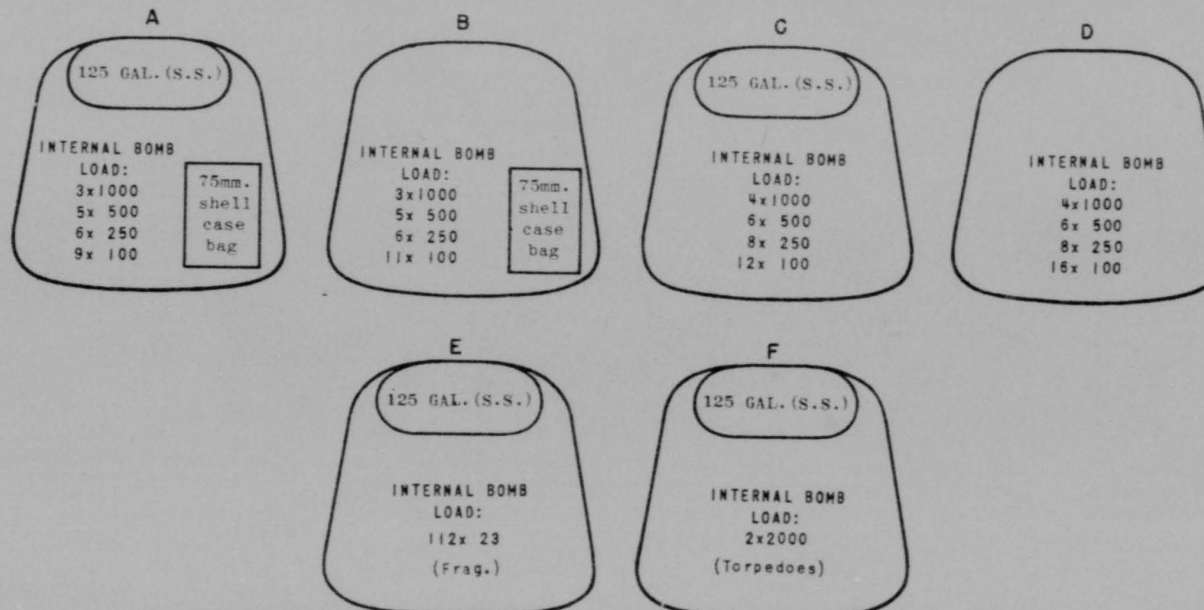
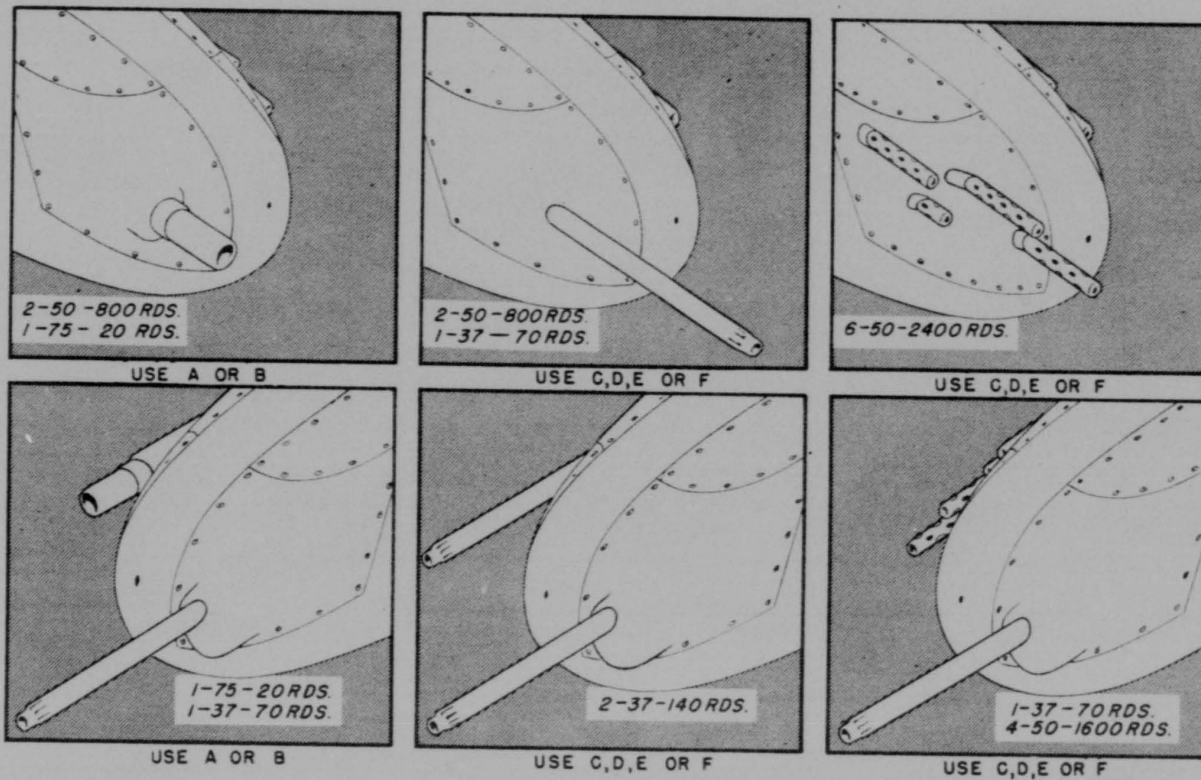
A-20  
"HAVOC"

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### ALL PURPOSE NOSE & BOMB BAY

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S. S. - Self Sealing

A-26

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AS OF  
DATE 25 AUG. 1946

### 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 US GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL			EXTERNAL	MAX LOAD LB.	TYPE
													NO & SIZE OR STATION			NO & SIZE OR CAPACITY		
A-26B {DL DT -1 & -5	2	PRATT-WHITNEY R-2800-27 SINGLE ST.-25PD. HAMILTON STD. 12"7"DIA.-3BL. F.F., HYDROMATIC	T 2000/8 L M 2000/1500 C 1600/13500	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 3 0	MAIN - WINGS AUX. - WINGS BOMB BAY (SS) B. BAY (FERRY) 1600 TOT.	2 x 300 2 x 100 1 x 125 1 x 675	1-750M 2-.50 2-.50 8-.50 (ALTERNATE INSTALLATION - SEE A)	20 500 500 300 (ALTERNATE INSTALLATION - SEE A)	*NOSE CANNON, 115L1 UPPER TURRET LOWER TURRET WINGS-PACKAGE	b 1-1000 b 6- 500 b 8- 250 b 16- 100	b 2-2000T 4- 500 4- 250 4- 100	4-1000 4- 500 4- 250 4- 100	SCR-27LN SCR-595 AN-250 RC-36	TECHNICAL ORDER 01-404J-1. (10 NOV. 1943) 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 75MM. GUN. c NORMAL CREW (2) ; CREW (3) WITH 75MM. CANNON. f NO SELF SEALING BOMB BAY TANK ON A-26B-1-DL ONLY. TECHNICAL ORDER 01-404J-1. (10 NOV. 1943) g SEE PAGE OPPOSITE FOR ALL-PURPOSE NOSE INSTALLATIONS.		
A-26B {DL DT -10 & -15	2	AS ABOVE	AS ABOVE	AS ABOVE EXCEPT FOR 50'7" LENGTH	B 22775 C 35000 R 35000 W 37000	2	AS ABOVE		6-.50 2-.50 2-.50 8-.50 (ALTERNATE INSTALLATION - SEE A)	400 500 500 300 (ALTERNATE INSTALLATION - SEE A)	*NOSE UPPER TURRET LOWER TURRET WINGS-PACKAGE	A S	A B O V E	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' DIST.		LANDING SPEED MPH	GROUND-RUN DIST. FT.	STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO PASSES	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 10000 FT.		LONG RANGE AT 10000 FT.						
		FT.	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	ENDUR. HOURS	
A-26B {DL DT -1 & -5	25000 29000 32000 33000 34000 36000	- 2950 3700 4000 4300 4850	2550 2950 3250 3250 3250 3250	104 109 111 111 111 111	1750 2100 2150 2250 2250 2250	35000 15000 10000 5000 S L	337 355 346 350 328	260 720 1010 1510 2030	329 341 330 380 297	100 520 560 7.0 2.7 0.0	31.4 15.3 7.0 2.7 0.0	35000 31100 31400 31600 35000	NONE NONE 3000 4000 SEE (B)	1600 925 925 800 800	770 750 640 620	2.5 2.5 2.2 2.5	1160 1030 850 -	4.2 4.0 3.4 -	1560 1530 1270 870	6.7 6.9 5.9 4.1	- - - -	3110 1830 1630 1360 1305	16.1 9.5 8.3 6.9 6.3	*STRIPPED TO 35000 LB. FOR FERRYING NOTE: WHEN 8 EXTERNAL WING PACKAGE GUNS ARE CARRIED HIGH SPEED WILL BE DECREASED APPROX. 13 MPH. AND RATE OF CLIMB 150 FT./MIN.
A-26B {DL DT -10 & -15	A S	A B O V E	A B O V E	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		

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) 8 REMOVABLE .50 CAL. PACKAGE GUNS MAY BE MOUNTED ON WING BOMB RACKS IN PLACE OF BOMBS.  
(B) 8 WING GUNS PLUS 112 FRAG. BOMBS. (4500 LB. TOTAL)

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



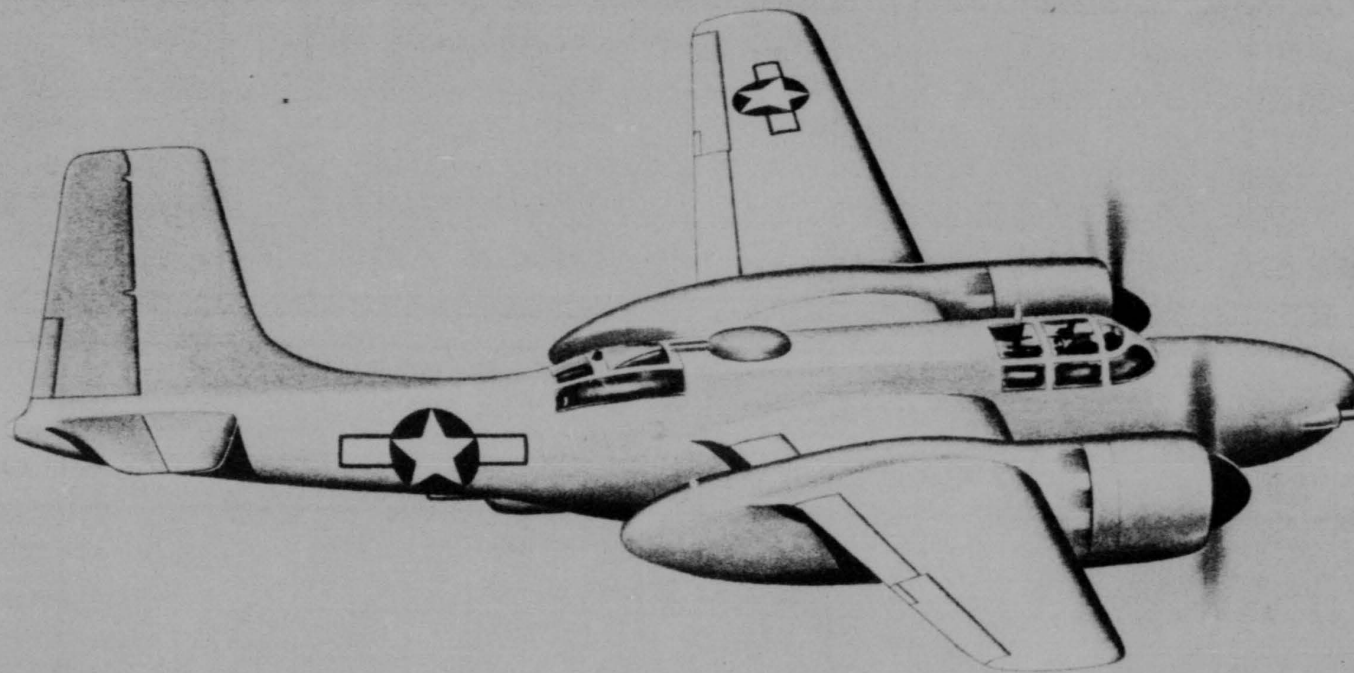
**A-26**  
"INVADER"

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

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DOUGLAS A-26B

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 21  
AS OF  
DATE 24 OCT. 1944

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	M-MILITARY	C-CONTINUOUS	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER			RDS PER GUN	LOCATION & TYPE
A-36 A-NA	1	ALLISON V-1710-27 SINGLE SPEED CURTISS 10'9" DIA. - 38L. CONST. SPD. ELECT		T 1325/S L M 1325/5100 C 1100/6600	S 37' 0" L 32' 3" H 12' 2" T 11' 10" W 233 SQ. FT.	B 7100 C 10000 R 10700	1	MAIN - WING EXT. - WING	2 x 90 2 x 75 2 x 150 450 TOT.	2-.50 4-.50	200 200	NOSE - FIXED WING - FIXED	NONE	2-500 2-250	1000	SCR-274 SCR-535 SCR-595**	TECHNICAL ORDER 01-508B-1. ( 10 JULY 1943) ** WAR EMERGENCY RATING. ** LAST 399 ONLY.

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'		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				
LB.	T.O. DIST.	LAND. DIST.	LANDING SPEED	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.
A-36 A-NA	9000 10000 11000	2800 3400 4100	3000 3500 -	- - -	2050 2600 3200	3100 3800 -	10000	288 295 305 310 315	500 1025 1525 2075 2200	277 285 293 295 275	300 - - - -	16.6 9.1 5.1 2.4 0.0	11000 10000 9000 10000	NONE NONE NONE 1000	450 330 180 180	1400 1000 550 500	5.6 3.8 2.0 2.0	- - - -	- - - -	- - - -	- - - -	2100 1500 850 800	10.4 7.7 3.9 3.7	* WITH 2-500 LB. EXTERNAL BOMBS.

NOTES:

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



**A-36**  
"MUSTANG"

MANUFACTURED BY NORTH AMERICAN (Inglewood) "NA"

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AS OF:  
DATE 25 AUG. 1944

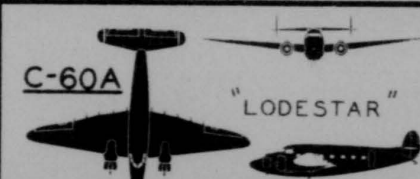
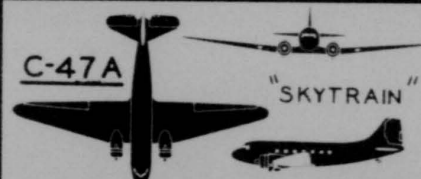
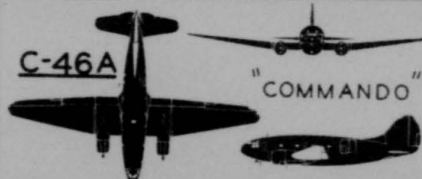
TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH 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
C-46A-CU -I TO -45 INCL C-46A-CK -I & S	PRATT-WHITNEY R-2800-51 2 SPEED CURTISS 13'6" DIA. - 3BL. P.F. HYDROMATIC	2000/1500 1600/13500 1600/5700 1150/13900	108'0" 76'4" 22'0" 26'0" 1360 sq. ft.	32200 16000 19600 56000A	3	WING-PANELS FUSELAGE	6-1100 8x100 2200 TOT.					FORE-BELLY AFT-BELLY MAIN-CABIN TROOPS	3700 1600 10000 or 50	15000	SCR-211 267,271A 267,518 578 & 695 RD-36,13 105 & 196 AN-ARR-1	TECHNICAL ORDER 01-251A-1. (15 APR. 1944) p EARLY MODELS HAVE HAMILTON STD., 3BLADE, HYDROMATIC, 15'1" DIA. PROPELLER. * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. NOTE: EARLY MODELS LIMITED TO 40000 LB. GROSS WEIGHT & HAVE SMALL CARGO DOOR.	
C-47-DL C-47A TO -90-DL C-47A TO -25-DK C-53, C&D-DL	PRATT-WHITNEY R-1830-92 INTEGRAL SUPER. HAMILTON STD. 11'7" DIA. - 3BL. P.F. HYDROMATIC	1200/5 L - 1050/7000	95'0" 64'6" 17'0" 18'6" 987 sq. ft.	15000 26000 29300 36500A	3	MAIN-WINGS AUX-WINGS FUSELAGE	2x292 2x200 8x100 1604 TOT.					CARGO or TROOPS or LITTERS	6000 27 16	6000 NOR 10000 MAX 11000 MAX	SCR-211, 267, 271A, 267, 518, 522, 578, 578/695, 55-36, 13, 105, 196, AN-ARR-1	TECHNICAL ORDER 01-LDMC-1. (REV. 15 DEC. 1943) * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. (AN/APN-2 ON SOME MODELS). C-47, C-53 & C-59: INSTALLED WITH 12 VOLT RADIO SYSTEM; OTHERS WITH 24 VOLT RADIO SYSTEM. NOTE: C-47 & C-53 SERIES SIMILAR EXCEPT FOR LARGE CARGO DOOR ON C-47. THE C-53 CARRIES 28 PERSONNEL.	
C-60A-LO A TO -5	WEIGHT R-1820-87 2 SPEED HAMILTON STD. 10'6" DIA. - 3BL. P.F. HYDROMATIC	1200/5 L 1200/5700 1000/15700 1000/8400 700/16500	65'8" 49'10" 12'0" 15'4" 551 sq. ft.	13000 21000 21900 25000	3	FRONT-WINGS REAR-WINGS AUX. - CABIN	2x150 2x172 3x131 1046 TOT.					BELLY CABIN or PARATROOPS	3400 6600 or 18	8500	SCR-211, 267, 271A, 267, 578, 695, RD-36, 13, 105, 196	TECHNICAL ORDER 01-750E-1. (10 MARCH 1943) * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. EARLY MODELS CARRY SCR-535 IN PLACE OF SCR-695. o 1200 LB. BALLAST REQUIRED IN NOSE TO BALANCE PARATROOPS.	

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. FT.	LAND. FT.		T.O. FT.	LAND. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN	HIGH SPEED MPH	RATE OF CLIMB FT/MIN				TIME TO CLIMB MIN	AT 10000 FT. RANGE MILES	AT 25000 FT. RANGE MILES	AT 10000 FT. RANGE MILES	AT 25000 FT. RANGE MILES		AT 10000 FT. RANGE MILES	AT 25000 FT. RANGE MILES		
		ENDUR. HOURS	ENDUR. HOURS		ENDUR. HOURS	ENDUR. HOURS			ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS				ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS		ENDUR. HOURS	ENDUR. HOURS		
C-46A-CU -I TO -45 INCL C-46A-CK -I & S	31000 39000 46000 50000	- 2050 2700 3500	2250 2150 2650 -	82 88 95 -	- 1150 2000 2700	1200 1400 1600 -	16000 15000 10000 5000 S L	20000 15000 10000 5000 S L	260 269 264 262 216	530 750 900 1100 1300	257 261 256 255 210	400 650 750 900 900	28.4 18.6 11.6 5.5 0.0	51000 47000 47000 51000	2000 4000 6000 10000	2200 1400 1050 1050	1500 850 750 700	6.8 4.2 3.1 3.0	- - - -	2600 1400 1200 1100	12.9 6.7 5.9 5.9	- - - -	2950 1900 1350 1200	15.8 10.0 7.1 6.7	
C-47-DL C-47A TO -90-DL C-47A TO -25-DK C-53, C&D-DL	21000 23000 26000 29300	- 1850 2100 3200	2100 2300 2600 -	66 69 73 -	- 1150 1550 2000	1300 1400 1600 -	26000 15000 10000 5000 S L	20000 15000 10000 5000 S L	NO MILITARY POWER RATINGS	231 217 217 202 187	180 150 720 920 0.0	37.0 20.0 11.0 5.0 0.0	29300 26000 29300	N.A.E 2000 6000	1604 1000 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 29300 LB. **6000 LB. CARGO OR 27 TROOPS.	
C-60A-LO A TO -5	14000 17500 18500 21000 23000	- 1800 2050 2850 3300	2150 2600 2700 -	61 68 70 -	- 1000 1150 1600 1900	1700 2100 2200 -	21000 15000 10000 5000 S L	20000 15000 10000 5000 S L	259 269 260 255 236	650 1300 1600 1600 1600	500 1000 1200 217 235	19.0 11.0 7.0 3.0 0.0	21000 23000	1450 5000	1046 644	1000 600	4.5 2.7	AS ABOVE	1450 850	7.0 4.3	AS ABOVE	2300 1200	11.4 7.7	* SPEED RESTRICTED IN LEVEL FLIGHT. **5000 LB. CARGO OR 18 PARATROOPS & 1200 LB. BALLAST IN NOSE.	

NOTES:

(A) PERMISSIBLE ONLY WITH ALL WING TANKS FULL.

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



MANUFACTURED BY CURTISS (Buffalo) "CU"; DOUGLAS (Long Beach) "DL" & DOUGLAS (Oklahoma) "DK"; LOCKHEED (Burbank) "LO"

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AS OF:  
DATE: 20 AUG. 1944


### 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-RECLIM 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	
																	1
C-54A-DO -1&-5 C-54A-DC -1 TO -15 INCL	4	PRATT-WHITNEY R-2000-3 or -7 HAMILTON STD. 13"1" DIA. - 3BL. F.F., HYDROMATIC	T 1290/3000 M 1290/3000 C 1015/9000	S 117' 6" L 93' 10" H 27' 6" T 24' 8" W 1160 SQ. FT.	B 37000 C 58000 R 65800 W 85000A	6	INBD. - WINGS OUTBD. - WINGS FUSELAGE	2 x 190 2 x 120 2 x 120 3620 TOT.	N	0	N	E	FORE-BELLY AFT - BELLY FORE-CARGO AFT - CARGO TROOPS	1800 2100 24000 11900 30 or 50	25000	SCR-271N (2) 269, 287, 211, & 695 RC-13/193, 36 & 103. AS/ASB-7.	TECHNICAL ORDER 01-40NM-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&-5	4	AS ABOVE	AS ABOVE	AS ABOVE	B 37600 C 58000 R 65800 W 85000A	6	INBD. - WINGS OUTBD. - WINGS AHL. - WINGS FUSELAGE	2 x 190 2 x 510 2 x 120 2 x 120 3740 TOT.	N	0	N	E	TROOPS LITTERS	41 or 49* 28 or 36*	32500	AS ABOVE EXCEPT FOR NO SCR-269	NO REFERENCE * 11 TROOPS or 28 LITTERS WITH FUSELAGE TANKS (3740 GAL.) 49 TROOPS or 36 LITTERS WITHOUT FUSELAGE TANKS (2812 GAL.) C-54B-1; (4) PLANES HAVE REDUCED LITTER CAPACITY.
C-69-LO -1 TO -15 INCL	4	WRIGHT R-3350-35 SINGLE or 2 SPEED HAMILTON STD. 15"2" DIA. - 3BL. F.F., HYDROMATIC	T 2200/3000 M 2200/7300 C 2000/7800	S 123' 0" L 95' 2" H 23' 8" T 28' 0" W 1650 SQ. FT.	B 50500 C - R 75600 W 101000A	9	WINGS WINGS (SEE F)	2 x 1589 2 x 819 4216 TOT.	N	0	N	E	60 PASSENGERS	NONE	14500	SCR-271N, (2) 269, 287, 211, & 695. RC-13/193, 36 & 103.	TECHNICAL ORDER 01-750J-1. (10 NOV. 1943) * FIRST FIVE AIRPLANES EQUIPPED WITH SINGLE SPEED BLOWER. * TOTAL FUEL CAPACITY OF 1st & 2nd ARTICLES IS 4000 GAL., 3rd & SUBSEQUENT IS SHOWN. * HP. RATINGS ARE WITH SINGLE SPEED BLOWER.
C-87-CF	4	PRATT-WHITNEY R-1530-13 TURBO HAMILTON STD. 11"7" DIA. - 3BL. F.F., HYDROMATIC	T 1200/3000 M 1200/2650 C 1100/27000	S 110' 0" L 66' 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 - 1450 2814 TOT.	1-.50	500	TAIL - FLEX. (ON SOME MODELS ONLY)	CHAIRS or LITTERS & BENCH	20 or 7 & 11	1400 NUR. or 10000 MAX.	SCR-271N, 269, 287, 578 & 695 RC-13, RC-13	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							
	GROSS WEIGHT LB.	TO CLEAR 50 FT. DIST.		LANDING SPEED M.P.H.	GROUND-RUN T.O. DIST. FT.	LAND. DIST. FT.	WEIGHT LB.	STD. ALT. FT.	MIL. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE								
		T.O. FT.	LAND. FT.						HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.				HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.		AT 25000 FT.	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
C-54A-DO -1&-5 C-54A-DC -1 TO -15 INCL	15000 55000 59000 62500 65000	- 2800 3300 3850 4350	2900 3400 - - -	80 90 - - -	1800 1600 1850 2150 2350	2200 2200 - - -	50000	20000 15000 10000 5000 S L	- - - 272 260	- - - 1150 1150	269 278 276 260 260	425 800 1000 1100 1050	24.4 16.0 9.4 4.4 0.0	62000 65000 59000 65000 65000	NONE *2500 *2500 *14,000	3620 2720 2036 2036 21000	EXCEEDS SPEED LIMITS	ABOVE PRACTICAL CRUISING CEILING	3300 2400 1950 1500 1500	15.7 11.5 7.5 7.5	ABOVE PRACTICAL CRUISING CEILING	4000 2900 1850 1750	25.1 16.5 11.4 9.9	* 8000 LB. CARGO or 30 TROOPS & 2000 LB. EQUIPMENT. ** 11,000 LB. CARGO or 50 TROOPS & 4000 LB. EQUIPMENT.		
C-54B -1&-5	55000 59000 62500 65000 73000	2800 3300 3850 4350 5500	3400 4000 4750 - -	90 95 98 - -	1600 1850 2150 2350 2700	2600	A	S	A	B	O	V	E	63350 66000 60500 66500 *73000	NONE 8000 8000 14,000 21,000	3740 2906 2036 2036	AS ABOVE	AS ABOVE	3550 2700 2236 1775 1700	17.1 13.0 8.7 8.6 8.3	AS ABOVE	4250 3200 2250 2125 2050	27.1 19.0 13.4 12.6 12.2	* LANDING WEIGHT LIMITED TO 62000 LB.		
C-69-LO -1 TO -15 INCL	58500 62000 67000 75000 82000	- 2050 2500 3100 3750	2650 3150 3400 - -	100 105 110 - -	1400 1450 1550 - -	2200	70000	20000 15000 10000 5000 S L	- - - 330 314	- - - 2260 2420	- - - 307 307	14.0 9.0 5.0 2.0 0.0	82000 82000 78200 82000	NONE 10000 11600 *12140	4216 3178 1638 1638	- - - -	3250 1960 925 900	11.3 7.3 3.4 3.4	- - - -	1850 2700 1250 1200	23.8 14.9 6.7 6.4	ALL PERFORMANCE WITH SINGLE SPEED SUPERCHARGER. * ALTERNATE CARGO IN LIEU OF PASSENGERS				
C-87-CF	40000 50000 56000 60000	- 3600 5050 6600	3300 3950 4300 - -	90 100 105 - -	2800 2650 3600 3550 -	2800	50000	30000 25000 20000 15000 10000 5000	- 306 293 280 266 255	500 1050 1100 1150 1200 1200	500 300 297 295 262	34.0 26.8 20.9 15.3 9.0 4.2	52900 56000 56000 60000	NONE 3100 5800 9800	2814 2814 2364 2364	1215 1205 1000 975	4.6 4.6 3.8 3.7	1385 1375 1135 1100	4.6 4.6 3.8 3.8	2635 2550 2100 1975	11.7 11.4 9.4 8.9	2835 2750 2235 2165	11.0 10.8 8.9 8.8	3000 2850 2350 2340	16.2 15.5 12.5 11.7	

NOTES:  
(A) PERMISSIBLE ONLY WITH ALL WING TANKS FULL.  
RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.



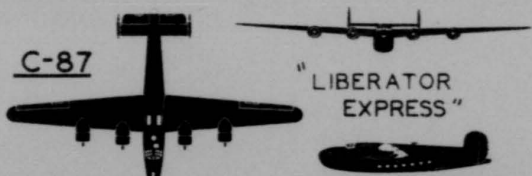
**C-54**  
"SKYMASTER"

MANUFACTURED BY DOUGLAS (SANTA MONICA) "DO" & (CHICAGO) "DC"



**C-69**  
"CONSTELLATION"

LOCKHEED (BURBANK) "LO"



**C-87**  
"LIBERATOR EXPRESS"

CONSOLIDATED "CF" (FT. WORTH)  
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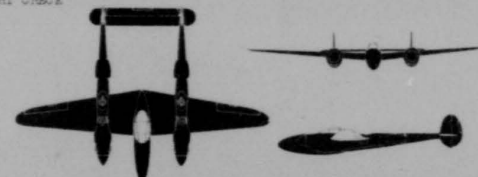
### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFG. MODEL SUPERCHARGER PROP MFG. 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-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 16' 6" W 328 SQ. FT.	B 13000 C 15300 R 20000 W -	1	MAIN-WINGS RES.-WINGS	2 x 90 2 x 60	1-20MM. 4-.50	150 500 (MAX.)	NOSE-TYPE #1 NOSE-FIXED	NO BOMBS CARRIED		SCR-183 or SCR-274M	TECHNICAL ORDER 01-75FB-1. (REV. 15 JAN. 1943) * 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 DRUP.-EXTER.	2 x 90 2 x 60 2 x 75 2 x 150 500 TOT.	A B	A B O V E	NONE	2-1000 2-500 2-325 2-250 2-100	2000	SCR-274M** 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 1100/24000	AS ABOVE	B 13500 C 15600 R 20000 W -	1	AS ABOVE EXCEPT THAT LAST 200 P-38G-10'S ARE SAME AS BELOW	2 x 90 2 x 60 2 x 75 2 x 150 500 TOT.	A B	A B O V E	AS ABOVE EXCEPT LAST 200 P-38G-10'S ONLY ARE SAME AS BELOW		SCR-274M** SCR-515** SCR-522 SCR-535 SCR-695**	REFERENCE AS ABOVE * LIMITED TO 1150 HP. BECAUSE OF INADEQUATE COOLING. ** PROVISIONS ONLY. ** SPACE ONLY. *** LAST 179 P-38G-10'S ONLY.		
P-38H-LO -1 & -5	2	ALLISON V-1710-89 & -91 TURBO CURTISS 11'6" DIA. - 3BL. P.F. ELECTRIC	T 1425/8 L M 1425/25000 C 1100/25000	AS ABOVE	B 13700 C 16300 R 21000 W -	1	MAIN-WINGS RES.-WINGS DRUP.-EXTER.	2 x 90 2 x 60 2 x 75 2 x 150 500 TOT.	1-20MM. 4-.50	150 500 (MAX.)	NOSE-AN-MP-C* NOSE-FIXED	NONE	2-1500 2-1000 2-500 2-325 2-250 2-100	3200	SCR-274M** SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-75FF-1. (25 SEPT. 1943) * LIMITED TO 1210 HP. BECAUSE OF INADEQUATE COOLING. ** PROVISIONS ONLY. ** SPACE ONLY.

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'		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	MIL. POWER			TAKE OFF WEIGHT LB.	BOMBS PASSES 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.	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	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS						
P-38F-LO	13500 15000 15800	- 2150 2300	2750 2980 -	85 90 -	- 1280 1380	1450 1580 -	15300 20000 15000 10000 5000	25000 20000 15000 10000 5000	390 380 365 355 340	2100 2300 2500 2700 2900	380 365 353 340 328	# # # # #	11.0 8.0 6.0 4.0 2.0	15800 18000 15900 17000 18000	NONE NONE NONE 1000 2000	300 800 700 385 375	400 800 400 385 375	1.3 2.9 1.3 1.3 1.3	425 850 400 395 375	1.3 2.9 1.3 1.3 1.3	700 1400 700 675 625	2.7 6.1 2.7 2.8 2.8	675 1225 700 650 600	2.4 5.4 2.4 2.4 2.3	900 1750 900 850 800	4.5 9.1 4.5 4.3 4.1				
P-38F-LO -1 TO -15 INCL.	13500 15000 15500 17500 19900	- 2150 2270 3640 4000	2750 2980 3050 3350 -	85 90 91 97 -	- 1280 1360 1830 2100	1450 1580 1620 1800 -	15300 20000 15000 10000 5000	25000 20000 15000 10000 5000	395 390 376 360 347	2100 2300 2450 2600 2800	380 367 354 340 327	# # # # #	12.0 8.8 6.0 4.0 1.8	19900 18000 15900 17000 18000	NONE NONE NONE 1000 2000	900 800 700 385 375	1375 800 400 385 375	5.0 2.9 1.3 1.3 1.3	1450 850 400 395 375	5.0 2.9 1.3 1.3 1.3	2050 1400 700 675 625	4.3 6.1 2.7 2.8 2.8	2050 1225 700 650 600	8.6 5.4 2.4 2.4 2.3	2300 1750 900 850 800	9.9 9.1 4.5 4.3 4.1				
P-38G-LO -1 TO -15 INCL.		AS ABOVE	AS ABOVE				15800 20000 15000 10000 5000	25000 20000 15000 10000 5000	400 390 375 360 345	1700 2300 2500 2600 2800	390 377 362 347 333	# # # # #	11.5 8.5 5.9 3.7 1.8				SUBSTANTIALLY		AS		ABOVE									
P-38H-LO -1 & -5	13600 15500 17500 19500 20300	- 2000 2600 3500 4000	2750 3050 3500 -	86 93 100 -	- 1200 1600 2300	1450 1650 2000 -	16300 20000 15000 10000 5000	25000 20000 15000 10000 5000	402 387 372 360 348	1700 2300 2500 2600 2800	390 375 360 348 332	# # # # #	9.7 7.6 5.5 3.5 1.8	20300 18300 16300 18300 19500	NONE NONE NONE 2000 3200	900 600 350 305 300	1300 750 350 325 300	5.0 2.9 1.3 1.3 1.3	1350 800 375 325 300	5.0 2.9 1.3 1.3 1.3	1980 1350 650 575 550	4.3 6.1 2.7 2.8 2.7	1950 1350 650 550 525	8.6 5.4 2.4 2.3 2.2	2200 1700 850 750 700	10.0 9.5 4.7 4.0 3.8	NO WAR EMERGENCY POWER AVAILABLE BECAUSE OF INADEQUATE COOLING			

NOTES:

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



**P-38**  
"LIGHTNING"

MANUFACTURED BY LOCKHEED (Burbank) "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	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		
		SUPERCHARGER PROP MFR. TYPE	T-TAKE-OFF M-MILITARY C-CONTINUOUS	L-LENGTH H-HEIGHT T-TREAD W-WING AREA	C-COMBAT R-RECD LIM W-WAR MAX							NO. & SIZE	NO. & SIZE				
P-38J-LO -5 & -10	2	ALLISON V-1710-89 & -91 TURBO CURTISS 11'6" DIA. - 3BL. F.P., ELECTRIC	T 1125/S.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 150 or 2x 165 or 2x 300 2x 300	1-20MM 4-.50	150 500 (MAX.)	NOSE-AN M2C NOSE - FIXED	NONE	2-1500 2-1000 2- 500 2- 325 2- 250 2- 100	3200	SCR-27LN* SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-75FF-1. (25 SEPT. 1943) * PROVISIONS ONLY. **SPACE PROVIDED.	
P-38J-LO -5 TO -25 INCL. [E TANKS]	2	AS ABOVE	T 1125/S.L. M 1600/26500 C 1100/32500	AS ABOVE	B 14100 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 300 1010 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	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	2	ALLISON V-1710-111 & -113 TURBO CURTISS 11'6" DIA. - 3 BL. F.P., ELECTRIC	T 1125/S.L. M 1125/26500* C 1100/32500	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 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 FT.		LANDING SPEED MPH	GROUND-RUN		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	
		P-38J-LO -5 & -10	13700		1650	2750		100	900	1450	30000	413	1890				405	1550	397	19.6	20950	NONE		900	1000	3.8	1000
P-38J-LO -5 TO -25 INCL. [E TANKS]	15500	1900	3050	105	1050	1650	25000	420	2665	426	2500	384	8.0	19050	NONE	630	750	2.6	775	2.6	1250	4.5	1300	4.6	1675	9.2	
P-38L-LO -1	16500	2100	3200	108	1150	1750	20000	408	3190	392	2875	365	6.2	16450	NONE	300	325	1.1	350	1.1	600	2.3	600	2.2	800	4.5	
	18500	2750	3550	116	1500	1900	15000	395	3550	378	3050	353	4.5	18450	2000	300	300	1.1	300	1.1	525	2.2	525	2.0	700	3.7	
	19600	3400	3750	121	1850	2000	10000	380	3820	365	3250	340	2.9	19650	3200	300	290	1.1	275	1.1	475	2.0	500	1.9	650	3.6	

NOTES:

RED FIGURES ARE PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK

\* MILITARY POWER AVAILABLE FOR 15 MINUTES



P-38  
"LIGHTNING"

MANUFACTURED BY LOCKHEED (Burbank) "LO"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
CONFIDENTIAL																	
PAGE 26																	
AS OF: - DATE 21 AUG. 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-39D-BE	1	ALLISON W-1710-35 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1150/8000 M 1150/12000 C 1000/10800	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 1x 75 or 1x 156 or 1x 175 295 TOT.	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M1	NONE	1-500 1-325 1-250 1-100	500	SCR-283	TECHNICAL ORDER 01-110PG-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 NOSE - FIXED PROP. - TYPE M1	A S	A B O V E		SCR-274L OR SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PG-1. (30 JUNE 1943)	
P-39D-BE -2	1	ALLISON W-1710-65 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1325/8000 M 1150/12000 C 1000/10800	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 W-1710-35 SINGLE SPEED AERO PRODUCTS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1150/8000 M 1150/12000 C 1000/10800	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M1	A S	A B O V E		SCR-283	TECHNICAL ORDER 01-110PG-1. (30 JUNE 1943)	
P-39K-BE -1	1	ALLISON W-1710-65 SINGLE SPEED AERO PRODUCTS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1325/8000 M 1150/12000 C 1000/10800	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	A S	A B O V E		A S	A B O V E		SCR-274L OR SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PG-1. (30 JUNE 1943)	
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		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								
GROSS WEIGHT	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	MPH	FT.			FT.	MPH	FT./MIN.	MPH				FT./MIN.	MIN.	LB	LB	U.S. GAL.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.
P-39D-BE	6700	-	1850	82	-	1100	7650	25000	324	750	310	#	11.0	8550	NONE	295	350	2.2	-	-	-	-	-	-	1100	5.2	ALL PERFORMANCE ESTIMATED	
	7600	2500	2050	86	1800	1300		20000	316	1350	332	#	9.1	8600	NONE	276	325	2.0	-	-	-	-	-	-	1950	5.0		
	7800	3000	2100	88	2000	1350		15000	360	2000	313	#	6.1	8150	NONE	195	120	1.6	-	-	-	-	-	-	800	4.7		
	8150	3000	2200	91	2250	1100		10000	355	2150	316	#	3.9	7650	NONE	120	275	0.9	150	1.7	390	1.5	-	-	500	2.9		
	8850	1500	-	-	2600	-		5000	335	2550	323	#	1.9	8150	500	120	325	0.9	-	-	290	1.5	-	-	150	2.6		
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		
P-39D-BE -2	6700	-	1850	82	-	1100																					A S A B O V E	
	7600	2500	2050	86	1800	1300			A S	A B O V E																	A S A B O V E	
	7800	2700	2100	88	1750	1350																					A S A B O V E	
	8150	3000	2200	91	2000	1100																					A S A B O V E	
	8850	1200	-	-	2600	-																					A S A B O V E	
P-39F-BE		SIM. L.A.V. TO P-39D								A S	A B O V E																	A S A B O V E
P-39K-BE -1		SIM. L.A.V. TO P-39D-2								A S	A B O V E																	A S A B O V E
	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:

RANKING P-39 MODELS MODIFIED FOR AIR/GROUND SUPPORT BY INSTALLATION OF CAMERAS, BELLY ARMOR, ETC.  
\* 1000 RDS./GUN MAX. FOR 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) "BE"

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PAGE 22  
AS OF:  
DATE 24 AUG. 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.	S-SPAN	B-BASIC	T-TAKE-OFF	L-LENGTH		C-COMBAT	NO. TANKS & CAPACITY	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY			MAX. LOAD LB.	TYPE
P-39L-BE -1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1325/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 A 9200	1	1	WING TOTALS DROPP.-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 M.	NONE	1-500 1-325 1-250 1-100	500	SCR-274N or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PM-1. (30 JUNE 1943)		
P-39M-BE -1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. CONST. SPD. HYDR.	T 1200/S L M 1125/15500 C 1000/11000	AS ABOVE	AS ABOVE	1	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.	ALLISON V-1710-85 (A) SINGLE SPEED AERO PRODUCTS 11'7" DIA. - 3BL. CONST. SPD. HYDR.	AS ABOVE	S 34' 0" L 30' 2" H 12' 5" T 11' 4" W 213 sq. ft.	B 6100 C 7600 A 9200	1	1	WING TOTALS DROPP.-BELLY SEE REMARKS**	8-87 1x75 or 1x156 or 1x175 262 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	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. & KITS AVAILABLE IN SERVICE TO INCREASE FUEL OF ALL N's TO 120 GAL.		
P-39Q-BE -1 TO -15 INCL.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	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 M.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-110PM-1. (20 AUG. 1943) ** KITS AVAILABLE IN SERVICE TO INCREASE BUILT-IN FUEL OF P-39Q-1 & -5 TO 120 GAL.		
P-39Q-BE -20 TO -30 INCL.	ALLISON V-1710-85 (A) SINGLE SPEED AERO PRODUCTS 11'7" DIA. - 3BL. CONST. SPD. HYDR.	AS ABOVE	AS ABOVE	AS ABOVE	1	1	WING TOTALS DROPP.-BELLY	12-120 1x75 or 1x156 or 1x175 295 TOT.	2-.50 2-.50 1-37MM	200 30	NOSE - FIXED PROP. - TYPE M.	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			
	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.		WEIGHT	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.
P-39L-BE -1	7000 7400 7900 8400 9100	- 2600 3100 3750 5000	1950 2000 2100 - -	64 66 69 - -	1150 1200 1300 - -	7900	25000 20000 15000 10000 5000	323 317 360 354 335	650 1250 1900 2350 2900	399 390 312 311 322	14.9 9.7 6.6 4.2 2.1	9100 8100 7900 8100	NONE NONE NONE NONE	295 195 120 120	500 150 250 300	2.0 1.6 0.9 0.9	850 2.5 1.5 1.5	3.5 - - - -	1075 750 550 400	6.0 4.2 2.5 2.3		
P-39M-BE -1	7000 7400 7900 8400 9100	- 3100 3750 4400 5500	1950 2000 2100 - -	64 66 69 - -	1200 1300 1150 - -	7900	25000 20000 15000 10000 5000	357 325 376 350 330	1200 1775 2400 2250 2050	413 390 367 337 320	12.8 9.5 7.1 4.9 2.5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		
P-39N-BE -0 TO -5 INCL.	6800 7600 8100 8700 8800	- 2550 3050 3600 3700	1850 2050 2150 - -	63 64 61 - -	1100 1300 1400 - -	7600	25000 20000 15000 10000 5000	368 375 376 357 330	1175 1825 2150 2600 2600	350 355 365 345 320	11.9 6.5 6.1 4.0 2.0	8750 8600 8050 7550 8050	NONE NONE NONE NONE	262 213 162 87 87	500 150 350 175 150	2.0 1.8 1.4 0.6 0.6	850 775 525 300 225	3.5 3.2 2.2 1.0 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 RANGE AS P-39Q-10 TO -30 LISTED BELOW.	
P-39Q-BE -5	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	SEE NOTE (B) BELOW.
P-39Q-BE -10 TO -30 INCL.	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	NOTE: PRELIMINARY TESTS OF P-39Q-21 & -25 SHOW THAT 4 BLADED PROPELLER MATERIALLY AFFECTS 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./GUN MAX. FOR GROUND STRAPPING; 300 RIB./GUN NORMAL.  
ATTENTION: KITS 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 FLIGHT CHECK.  
(A) MILITARY POWER AVAILABLE FOR 15 MINUTES.  
(B) ARRANGEMENTS ARE BEING MADE TO INSTALL CONVENTIONAL QUADRANT IN P-39Q-10 THRU P-39Q-30 ON AIRPLANES ALLOCATED TO AAF.  
(C) P-39Q-10 THRU P-39Q-30 HAVE AN AUTOMATIC SPEED-BOOST CONTROL.  
(D) RANGES SHOWN WERE ESTIMATED FOR CONVENTIONAL TYPE AIRPLANES; AIRPLANES EQUIPPED WITH AUTOMATIC SPEED-BOOST CONTROL PROBABLY WILL NOT ATTAIN MAXIMUM RANGES AS SHOWN.



**P-39**  
"AIRACOBRA"

MANUFACTURED BY BELL (Buffalo) "BE"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																PAGE 28
CONFIDENTIAL																AS OF: DATE 21 AUG. 1944
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. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA W-WAR MAX		B-BASIC C-COMBAT R-REC'D LIM W-WAR MAX	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-40E & E-1 -CU	1	ALLISON V-1710-39 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1150/11700	S 37'4" L 31'9" H 12'4" T 8'2" W 236 SQ.	B 6900 C 8400 R 10000	1	REAR - WING FRONT - WING FUSELAGE PROP. - BELLY	1 x 52 1 x 35 1 x 62 1 x 52	6-.50	281 (average)	WING - FIXED	NONE	1-500 & 2-100 or 6-20. 1-325 1-250 1-100	SCR-283 or SCR-27LN	TECHNICAL ORDER 01-250P-1. (REV. 20 OCT. '43) * NO EXTERNAL WING BOMBS ON EARLY MODELS. * WITHOUT RAM.	
P-40F-CU -I TO -20 INCL.	1	PACKARD V-1650-1 SINGLE STG. - 2 SPD CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1300/11500	S 37'4" L 33'4" H 12'4" T 8'2" W 236 SQ.	B 7000 C 8500 R 10000	1	REAR - WING FRONT - WING FUSELAGE PROP. - BELLY	1 x 54 1 x 37 1 x 66 1 x 52, 75 150 or 170	A 5	A B O V E	A S	A B O V E	SCR-27LN or SCR-522A * SCR-535A or SCR-695	TECHNICAL ORDER 01-250P-1 (20 JUNE 1943) REVISED * P-40F-1 LENGTH SAME AS P-40E. ALL SUBSEQUENT MODELS HAVE EXTENDED FUSELAGE.		
P-40K-CU -I TO -15 INCL.	1	ALLISON V-1710-73 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1325/11800	S AS ABOVE	B 6950 C 8400 R 10000	1	AS ABOVE	AS ABOVE	A 5	A B O V E	A S	A B O V E	AS ABOVE	TECHNICAL ORDER 01-250P-1. (25 MAY 1943) REV. * P-40K-1 & -5 LENGTH SAME AS P-40E. ALL SUBSEQUENT MODELS HAVE EXTENDED FUSELAGE. * WITHOUT RAM.		
P-40L-CU -I TO -20 INCL.	1	PACKARD V-1650-1 SINGLE STG. - 2 SPD CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1300/11500	S AS ABOVE	B 7000 C 8500 R 10000	1	REAR - WING FUSELAGE PROP. - BELLY	1 x 54 1 x 66 1 x 52, 75 150 or 170	4-.50	201 (average)	WING - FIXED	A S	A B O V E	AS ABOVE	TECHNICAL ORDER 01-250P-1 (REV. 20 JUNE '43) * P-40L-1 FUEL AND ARMAMENT SAME AS P-40F SERIES.	
P-40M-CU -I TO -10 INCL.	1	ALLISON V-1710-81 SINGLE SPEED CURTISS 11'0" DIA. - 3BL. CONST. SPD. ELECT.	T 1200/11700	S AS ABOVE	B 6950 C 8400 R 10000	1	REAR - WING FRONT - WING FUSELAGE PROP. - BELLY	1 x 54 1 x 37 1 x 66 1 x 52, 75 150 or 170	6-.50	281 (average)	WING - FIXED	A S	A B O V E	AS ABOVE	TECHNICAL ORDER 01-250P-1. (REV. 25 MAY '43)	

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' FT. DIST.		LANDING SPEED MPH	GROUND-RUN T.O. DIST. FT.	LAND. DIST. FT.	WEIGHT LB	STD. ALT. FT.	MIL. POWER HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.	MAX. CONTIN. POWER HIGH SPEED M.P.H.	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 AT 10000 FT.		MAX. CRUISE POWER AT 25000 FT.		LONG RANGE AT 10000 FT.		
P-40E & E-1 -CU	7500 8100 8400 8700 9100	- 2800 3125 3600 4300	1550 1700 1750 - -	84 87 90 - -	950 1050 1100 - -	8400	25000 20000 15000 10000 5000	- 330 362 345 335	980 980 2170 2100	520 300 312 313 296	18.2 11.5 7.6 4.8 2.4	10000 9300 8700 8650 9550	NONE NONE NONE NONE 700	201 169 149	327	425 325 300	1.7 1.2 1.2	- - -	675 525 450	3.0 2.2 2.1	- - -	850 650 575	4.5 3.5 3.1	
P-40F-CU -I TO -20 INCL.	7500 8850 9200 9350 9550 10000	- 3700 4450 4400 4700 5250	1700 1900 2450 2550 2700 3100	81 - - - - -	1050 1250 1300 1350 1400 -	8500	25000 20000 15000 10000 5000	350 364 352 340 320	1000 1100 1360 2210 2160	500 320 332 320 300	18.3 11.6 7.6 4.5 2.4	10000 9350 9200 8850 9550	NONE NONE NONE NONE 700	327 232 209 157 157	327	550 475 375 325	2.0 1.7 1.3 1.3	550 575 425 350	2.3 2.0 1.8 1.8	800 700 600 500	3.4 3.0 2.2 2.2	- - - -	1500 1000 875 700 600	8.0 5.0 4.4 3.1 3.2
P-40K-CU -I TO -15 INCL.	7500 8800 9150 9300 9500 10000	- 2950 3150 3200 3350 -	1700 1950 2000 2050 2100 -	81 - - - - -	1050 1300 1350 1400 -	8400	25000 20000 15000 10000 5000	- 330 362 342 335	980 1100 1650 2000 2100	520 300 312 313 296	18.5 11.2 7.5 4.9 2.4	10000 9300 9150 8600 9500	NONE NONE NONE NONE 700	327 232 209 157 157	327	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 1000 900 700 600	7.0 5.5 4.8 3.4 3.3	
P-40L-CU -I TO -20 INCL.	SUBSTANTIALLY SAME AS P-40F				SUBSTANTIALLY SAME AS P-40F					SUBSTANTIALLY SAME AS P-40F							P-40L-1 ONLY, SAME AS P-40F SERIES.							
P-40M-CU -I TO -10 INCL.	7500 8400 8800 9300 10000	- 2350 2650 3150 4000	1700 1850 1950 2000 -	81 85 - - -	1050 1200 1300 1350 -	8400	25000 20000 15000 10000 5000	353 360 361 346 328	850 1500 2025 2150 2070	330 335 334 320 308	14.7 10.2 7.2 4.5 2.4	10000 9300 8600 9300	NONE NONE NONE 700	327 232 157 157	327	650 450 325 300	2.5 1.8 1.1 1.1	- 750 475 375	1.8 2.9 1.8 1.8	1200 900 600 475	5.6 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 FOR 5 MINUTES ONLY.  
 # MILITARY POWER AVAILABLE FOR 15 MINUTES.



**P-40**  
"WARHAWK"

MANUFACTURED BY CURTISS (Buffalo) "CU"

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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	B.H.P./ALT.	S-SPAN	B-BASIC	T-TAKE-OFF	L-LENGTH		C-COMBAT	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	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-1710-81 SINGLE SPEED CURTISS 11'0" DIA. - 3 BL. CONST. SPD. ELECT.	T 1200/3 L M 1125/1730 C 1000/1640	S 37'4" L 35'4" H 12'4" T 8'2" W 256 SQ.	B 6400 C 7725 R 11000 W -	1	REAR - WING FUSelage BROP. - BELLY	1 x 54 1 x 68 1 x 75, 150 or 170 232 TOT.	4-.50	201 (average)	WING - FIXED	NONE	1-500 & 2-100 or 6-20. 1-325 1-250 1-100	500	SCR-271A or SCR-522A & SCR-695	TECHNICAL ORDER 01-2508-1. (REV. 10 OCT. 41) * PROVISIONS FOR RACKS 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 BROP. - BELLY BROP. - WING	1 x 54 1 x 37 1 x 70 1 x 75, 150 or 225 511 TOT.	6-.50	261 (average)	WING - FIXED	NONE	1-500 & 2-500 or 2-100 or 6-20. 1-325 1-250 1-100	1500	SCR-271A SCR-522A & SCR-695	REFERENCE AS ABOVE * PROVISIONS FOR 2-225 GAL. PERRYING 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	AS ABOVE	AS ABOVE	AS ABOVE	SCR-271A SCR-522A & SCR-695 MM-26 on some models	REFERENCE AND NOTE AS ABOVE. * FIRST 1272 AIRPLANES OF P-40N-20 SERIES DO NOT HAVE MODIFIER ON AUTOMATIC SPEED-BOOST CONTROL. REMAINDER -20 & ALL -30 INCORPORATE A MANIFOLD 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	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	AS ABOVE	AS ABOVE	AS ABOVE			

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 SPEED	T.O. DIST.	LAND. DIST.	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.					FT.	FT.	HIGH SPEED	RATE OF CLIMB				HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB	RANGE	ENDUR.	RANGE	ENDUR.		RANGE	ENDUR.
P-40N-CU -1	7000	-	1650	92	-	1000	25000	332	1225	313	#	12.4	8850	NONE	292	600	2.2	-	1050	4.9	-	-	1250	7.4	
	7725	2150	1750	96	1350	1100	20000	346	1450	330	#	9.1	8250	NONE	197	380	1.5	500	2.1	760	3.6	-	-	850	3.8
	8250	2950	1750	105	1700	1100	15000	346	2100	333	#	6.7	7725	NONE	122	230	0.9	290	1.2	430	1.9	-	-	420	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	-	-	480	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	4150	-	-	2250	-	5000	308	2120	291	#	2.4	8900	500	161	300	1.2	370	1.6	590	2.8	-	-	-	-
P-40N-CU -20 THRU -30	AS ABOVE						AS ABOVE						RANGE FOR MAX. CONTINUOUS AND MAX. CRUISE POWER APPROX. AS ABOVE. LONG RANGE CONDITIONS SHOWN ABOVE MAY NOT BE ATTAINED ON SOME AIRPLANES BECAUSE OF PRESENT SET UP OF AUTOMATIC SPEED-BOOST CONTROL.										NO RANGE DATA AVAILABLE.		
P-40N-CU -35, -40	AS ABOVE						AS ABOVE						11400 NONE 611 1250 4.9 - - 2250 10.9 - - 2800 15.7 9500 NONE 331 675 2.6 - - 1250 6.0 - - 1550 8.4 8900 NONE 236 470 1.8 600 2.5 930 4.3 - - 1080 5.7 8400 NONE 161 320 1.2 400 1.6 600 2.6 - - 750 3.9 8900 500 161 300 1.2 370 1.6 590 2.8 - - - -												

NOTES:

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



P-40  
"WARHAWK"

MANUFACTURED BY CURTISS (Buffalo) "CU"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 30
CONFIDENTIAL																	AS OF
																	DATE 21 APR. 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 PER GUN	RDS LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE			
P-47D RE & RA -1 TO -21 P-47G-CU -1 TO -16	1	PRATT-WHITNEY R-2800-21, 59, -63 TURBO CURTISS 12'2"DIA. - 4 BL. CONST. SPD. ELECTE.	T 2000/S L M 2000/27000 W 2300/27000 C 1625/29000	S 40'9" L 36'1" H 11'2" T 15'6" W 300 sq. ft.	B 10700 C 13500 R 15000 W -	1	MAIN - FUS. AUX. - FUS. DROPP. BELLY OR EXT. - WINGS & BELLY (SEE F)	1x206 1x100 1x 75 or 110 or 200 or 2x150 & 1x 75 680 TOT.	6) .50 8) 1425 MAX.	WING - FIXED	NONE	a 2-1000 b 3- 500 b 3- 250 b 3- 100	2500	SCR-271M SCR-522A SCR-535A SCR-695	TECHNICAL ORDER 01-758C-1 (REV. 20 NOV. 43) P-47D-15 & SUBSEQUENT. * P-47D-5 thru -11 & P-47D-10 AND -15 CARRY ONLY ONE SHACKLE IN BELLY POSITION. * 500 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 WHEN WATER INJECTION IS INSTALLED & SERVICED (-63). * D-19 & SUBSEQUENT. CRITICAL AIR. SAME AS BELOW.		
P-47D-RE -22	1	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0"DIA. - 4 BL. CONST. SPD. HYDRO.	T 2000/S L M 2000/33000 W 2300/31000 C 1625/30000	AS ABOVE	AS ABOVE	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	1	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0"DIA. - 4 BL. CONST. SPD. ELECTE.	AS ABOVE	AS ABOVE	B 10500 C 11000 R 17000 W -	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	1	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0"DIA. - 4 BL. CONST. SPD. HYDRO.	AS ABOVE	AS ABOVE	B 10700 C 11600 R 17500 W -	1	MAIN - FUS. AUX. - FUS. DROPP. BELLY OR EXT. - WINGS & BELLY (SEE F)	1x270 1x100 1x 75 or 1x110. 2x150 & 1x110 780 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	
P-47D-RA -26	1	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0"DIA. - 4 BL. CONST. SPD. ELECTE.	AS ABOVE	AS ABOVE	B 10600 C 11500 R 17500 W -	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	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' T.O. DIST. FT.		LAND. DIST. FT.	LANDING SPEED MPH	T.O. DIST. FT.	LAND. DIST. FT.	WEIGHT LB.	STD. ALT. FT.	WAR EMERG. HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	MIL. POWER HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	MAX. CONTIN. POWER HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	TIME TO CLIMB 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.			
P-47D RE & RA -1 TO -21 P-47G-CU -1 TO -16	11000	-	2800	98	-	1200	13500	30000	133	1375	120	-	341	800	20.0	16200	NONE	660	900	3.0	950	3.0	-	-	-	1725	8.3
P-47D-RE -22	12500	3100	2500	100	2000	1500	13500	25000	121	1825	116	1750	375	15.0	15600	NONE	605	800	2.6	850	2.6	-	-	-	1525	7.3	
P-47D-RA -23	13500	3300	2600	104	2200	1700	11000	20000	106	2110	100	2050	365	11.0	11900	NONE	505	625	2.2	650	2.2	1100	4.3	1125	4.1	1400	5.4
P-47D-RE -25	11000	3100	2800	106	2300	1600	11000	15000	390	2100	381	2200	350	7.2	11300	NONE	115	525	1.8	550	1.8	-	-	-	1035	4.9	
P-47D-RA -26	15000	3800	-	-	2600	-	11000	10000	372	2630	368	2300	335	4.3	11100	NONE	360	175	1.6	175	1.6	-	-	-	925	4.4	

NOTES: (A)

(A) R-2800-21  
(WATER INJECTION PROVISIONS;  
KITS AVAILABLE FOR INSTALLATION)

USED ON:

P-47D-RE (-1, -2 & -5)  
P-47D-RE (-1, -2, -3, -4 & -5)  
P-47D-RA (-6)  
P-47G-CU (-1, -5 & -10)RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.  
\* MILITARY POWER AVAILABLE FOR 15 MINUTES.

(A) R-2800-59

(WATER INJECTION & NEW  
ELECTRICAL HARNESS)

USED ON:

P-47D-RE (-20, -21, -22 & -25)  
P-47D-RA (-20, -21, -23 & -26)

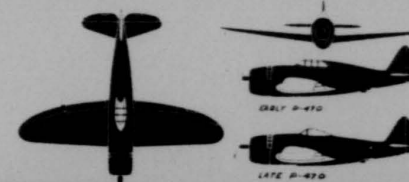
(A) R-2800-63

(WATER INJECTION)

USED ON:

P-47D-RE (-10, -11, -15 & -16)  
P-47D-RA (-11 & -15)  
P-47G-CU (-15 & -16)

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



**P-47**  
"THUNDERBOLT"

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**TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART**

PAGE 31  
AS OF:  
DATE 21 AUG. 1944

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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	MAX. LOAD LB.	TYPE		
P-47D-RE -27	PRATT-WHITELEY R-2800-59 TURBO HAMILTON STD. 13'0" DIA.-4 BL. CONST. SPD. HYDRO.	T 2000/3 L M 2000/33000 W 2535/27000 C 1625/30000	S 40'9" L 36'1" H 14'2" T 15'6" W 300 SQ.	B 10700 C 11600 R 17500 W -	1	M 1x270 AUX. - PUS. 1x100 DROG. BELLY 1x 75 or 1x110 EXT. - WINGS & BELLY 2x150 & 1x110	6) or 8)	267 HOR 425 MAX	WING-FIXED	NONE	2-1000 or 3- 500 or 3- 250 or 3- 100	2500	SCR-271 SCR-522A SCR-535A SCR-695	TECHNICAL ORDER 01-65BC-1		
P-47D-(RE RA) -28	PRATT-WHITELEY R-2800-59 TURBO CURTISS 13'0" DIA.-4 BL. CONST. SPD. ELECTR.	AS ABOVE	AS ABOVE	B 10600 C 11500 R 17500 W -	1	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		
	TO CLEAR 50'		LANDING SPEED	GROUND-RUN		STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS CARGO	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	HIGH SPEED	RATE OF CLIMB				TIME TO CLIMB	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE	ENDUR.			
	LB	FT.	FT.	MPH	FT.	FT.	FT.	MPH	FT/MIN	MPH	FT/MIN	MPH	FT/MIN	MIN.	LB	LB	U.S. GAL.	MILES	HOURS	MILES	HOURS	MILES	HOURS	MILES		HOURS	
P-47D-RE -27	12000	-	2300	100	1500	30000	433	1575	418	1825	381	8	11.0	17500	NONE	780								2100	10.2		
	13500	3300	2500	104	2200	25000	436	2270	415	1825	378	8	11.0	16700	NONE	670									-	-	
	11600	3600	2700	105	2400	20000	424	2650	400	2125	362	8	8.5	15200	NONE	480									-	-	
	15500	4300	-	-	2900	15000	407	2970	395	2320	347	8	6.2	15100	NONE	445	N O								-	-	
	16500	4700	-	-	3300	10000	389	3080	369	2415	333	8	4.1	15000	NONE	445									-	-	
	17500	5000	-	-	3800	5000	370	3120	356	2425	312	8	2.0	11600	NONE	370									1030	5.3	
P-47D-(RE RA) -28						30000	426	1175	411	1825	381	8	11.0	17100	NONE	780									2100	10.2	
						25000	428	2230	407	1825	372	8	11.0	16600	NONE	670										-	-
						20000	415	2650	393	2125	362	8	8.5	15300	NONE	480										-	-
						15000	398	2870	377	2320	347	8	6.2	15000	NONE	445	N O									-	-
						10000	382	3040	362	2415	334	8	4.1	15000	NONE	445										-	-
						5000	363	3120	347	2425	312	8	2.0	11600	NONE	370										1030	5.3

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"; (Evansville) "RA" & CURTISS (Buffalo) "CU"

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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 MFG. MODEL SUPERCHARGER PROP MFG. 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 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-51-NA -1 & -2	1	ALLISON V-1710-39 SINGLE SPEED CURTISS 10'9" DIA. - 3 BL. CONST. SPD. ELECTR.	T 1150/8 L 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 8800 R 10500 W -	1	MAIN-R. WING MAIN-L. WING RES.-L. WING	1 x 90 1 x 59 1 x 31	1-20MM	125	WING-TYPE M2	NO BOMBS CARRIED		SCR-27LN & SCR-535	TECHNICAL ORDER 01-607B-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 1200/8 L 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	2) .50 2) .50	280 350	OUTBD.-WINGS INBD.-WINGS	NONE 2-500 2-325 2-250 2-100	1000	SCR-27LN* SCR-535* SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-607C-1. (25 OCT. 1943) * 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 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' GROUND-RUN		LANDING SPEED MPH	WEIGHT LB.	STD. ALT. FT.	MIL. 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.				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.	RANGE MILES	ENDUR. HOURS		RANGE MILES
P-51-NA -1 & -2	7500 8000 8500 8800 9000	- 2600 3000 3200 3400	2600 2850 3100 3250 -	88 91 94 -	1700 1600 1900 2100 2200	25000 20000 15000 10000 5000	337 367 387 379 357	800 1300 1800 2000 2000	315 333 343 352 352	300 # # # #	16.0 10.9 7.6 5.0 2.5	8600 NONE 180	150 700	1.5 2.6	700 2.7	- -	- -	1000 4.5	- -			
P-51A-NA -1 TO -10 INCL.	8000 8600 9100 9600 10300	- 2050 3000 3250 -	2150 2750 3000 3250 -	100 103 106 -	1550 1400 1600 2350 2100	25000 20000 15000 10000 5000	375 390 380 360 340	1100 1650 2300 2300 2300	360 375 365 345 325	# # # # #	12.7 9.1 6.6 4.4 2.2	10600 9600 8600 9100 9600	NONE NONE NONE 500 1000	1135 725 425 415 410	4.1 2.7 1.4 1.4 1.4	- -	2000 1850 750 725 710	8.3 5.3 2.8 2.8 2.8	- -	2350 1525 1000 950 910	11.4 7.9 4.8 4.7 4.6	PERFORMANCE SHORT WITH WING RACES; REMOVAL OF WING RACES INCREASES HIGH SPEED APPROX. 12 MPH. & RATE OF CLIMB 50' TO 100'/MIN.

NOTES:

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



P-51  
"MUSTANG"

MANUFACTURED BY NORTH AMERICAN (Inglewood) "NA"

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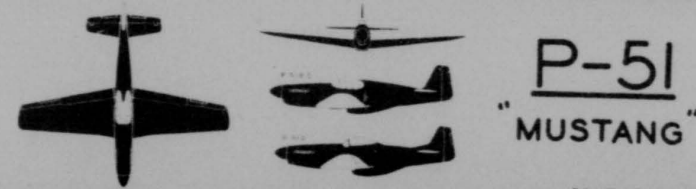
### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

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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	INTERNAL				MAX. LOAD LB.
													NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY			
P-51B-NA -14-5 P-51C-NT -1	1	PACKARD V-1650-3 2 SPEED- 2 STAGE HAMILTON STD. 11"2"DIA.- 4 BL. CONST. SPD. HYDRO.	T 11,90 / S L	33' 0" 32' 3" 13' 8" 11' 10" 253 sq. ft.	B 7450 C 9200 R 12000	1	MAIN-R. WING MAIN-L. WING DROG.-WINGS	1 x 92 1 x 92 2 x 75 or 2 x 75	2) 2)	.50 350	280 350	OUTRD.-WINGS INRD.-WINGS	NONE NONE	2-500 2-325 2-250 2-100	1000	SCR-27LN SCR-522 SCR-525A or SCR-595	TECHNICAL ORDER 01-60J-1. (20 DEC. 1943) KIT AVAILABLE FOR 1x85 GAL. FUELSAGE TANK; WHEN INSTALL- ED THESE MODELS WILL BE SAME AS ONES LISTED BELOW. WAR EMERGENCY RATINGS: 1550/17000 & 1245/28600 (RE- STRICTED TO MODELS EQUIPPED WITH K14-RC5/3 or LODGE RS5/5 SPARK PLUGS.)
P-51B-NA -7410 P-51C-NT -3	1	AS ABOVE	AS ABOVE	AS ABOVE	B 7450 C 9800 R 12000	1	MAIN-R. WING MAIN-L. WING DROG.-WINGS	1 x 92 1 x 92 1 x 85 2 x 75 or 2 x 75	2) 2)	.50 350	270 350	OUTRD.-WINGS CENTER-WINGS INRD.-WINGS	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27LN SCR-522 or SCR-27LN or MI-26C COMBINATION	REFERENCE AS ABOVE NOTE: LAST 550 P-51B-5 MODELS BECOME B-7 UPON ADDITION OF 1x85 GAL. FUELSAGE TANK. P-51C-3 ARE MODIFIED P-51C-1's.
P-51B-NA -15 P-51C-NT -54-10	1	PACKARD V-1650-7 2 SPEED- 2 STAGE HAMILTON STD. 11"2"DIA.- 4 BL. CONST. SPD. HYDRO.	T 11,90 / S L	AS ABOVE	B 7450 C 9800 R 12000	1	MAIN-R. WING MAIN-L. WING DROG.-WINGS	1 x 92 1 x 92 1 x 85 2 x 75	2) 2)	.50 350	270 350	OUTRD.-WINGS CENTER-WINGS INRD.-WINGS	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27LN SCR-522 or MI-26C COMBINATION	REFERENCE AS ABOVE WAR EMERGENCY RATINGS: 1770/11500 & 1530/21500 (RE- STRICTED TO MODELS EQUIPPED WITH K14-RC5/3 or LODGE RS5/5 SPARK PLUGS.) SOME P-51C-5-WT MODELS FOR RECONNAISSANCE WILL NOT CARRY 1x85 GAL. FUELSAGE TANK.
P-51D-W4 -34-10 P-51D-W7 -5	1	AS ABOVE	AS ABOVE	AS ABOVE	B 7635 C 10100 R 11800	1	MAIN-R. WING MAIN-L. WING DROG.-WINGS	1 x 92 1 x 92 1 x 85 2 x 75	2) 2)	.50 350	270 350	OUTRD.-WINGS CENTER-WINGS INRD.-WINGS	AS ABOVE	AS ABOVE	AS ABOVE	SCR-522 or PARTIAL SCR-27LN INSTALL.	TECHNICAL ORDER 01-60J-1.

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		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.				TO TIME MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.		AT 25000 FT.			
		ENDUR. HOURS	ENDUR. HOURS		ENDUR. HOURS	ENDUR. HOURS		ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS				ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS	ENDUR. HOURS		ENDUR. HOURS	ENDUR. HOURS		
P-51B & C (V-1650-3)	8000 9500 9000 9500 10300 10800 11200	- 2100 2200 2300 - - -	2000 2100 2200 2300 - - -	100 103 106 109 - - -	1200 1300 1400 1500 - - -	9000	50000 25000 20000 15000 10000 5000	140 127 124 106 92	2000 2700 3275 3360 392	133 118 111 102 88	2000 2325 2650 2900 3250	397 390 405 373 356	11.0 8.9 7.0 5.3 3.6	11200 10200 9200 9700 10200	NONE NONE NONE 500 1000	444 334 184 184 184	1275 850 475 460 425	4.4 3.0 1.6 1.6 1.6	1700 1050 550 525 500	4.7 3.2 1.7 1.7 1.7	1925 1350 750 700 675	7.6 5.5 2.8 2.8 2.8	- - - - -	- - - - -	2200 1150 850 800 775	10.0 7.1 3.9 3.8 3.7	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT BOMB RACKS; RACKS DE- CREASE HIGH SPEED 12 M.P.H. & RATE OF CLIMB LESS THAN 100' / MIN.
P-51B & C (V-1650-7)	8000 9000 9800 10300 10800 11800	- 2100 2200 2350 - -	2000 2100 2350 - -	100 106 111 - -	1200 1400 1550 - -	9200	50000 25000 20000 15000 10000 5000	140 127 124 106 92	2000 2700 3275 3360 392	133 118 111 102 88	2000 2325 2650 2900 3250	397 390 405 373 356	11.2 8.4 6.5 4.7 3.0	11200 10200 9200 9700 10200	NONE NONE NONE 500 1000	444 334 184 184 184	1275 850 475 460 425	4.3 2.9 1.5 1.3 1.6	1550 890 490 475 460	4.1 3.2 1.4 1.4 1.4	2000 1340 740 725 680	6.0 5.4 2.7 2.7 2.8	- - - - -	- - - - -	2290 1160 835 825 770	10.4 6.9 3.8 3.9 3.6	AS ABOVE
P-51B & C (V-1650-3)	8000 9000 9800 10300 10800 11800	- 2100 2200 2350 - -	2000 2100 2350 - -	100 106 111 - -	1200 1400 1550 - -	9800	50000 25000 20000 15000 10000 5000	140 127 124 106 92	2000 2700 3275 3360 392	133 118 111 102 88	2000 2325 2650 2900 3250	397 390 405 373 356	12.1 9.6 7.4 5.6 3.8	11800 10800 9800 10300 10800	NONE NONE NONE 500 1000	569 419 269 269 269	1500 1075 750 700 650	5.3 3.8 2.4 2.4 2.3	1875 1325 875 850 825	5.7 4.2 2.6 2.6 2.6	2275 1625 1125 1075 1025	9.0 6.5 4.3 4.2 4.1	- - - - -	- - - - -	2600 1800 1275 1225 1175	11.8 8.3 5.9 5.8 5.4	AS ABOVE
P-51B & C (V-1650-7)	8000 9000 9800 10300 10800 11800	- 2100 2200 2350 - -	2000 2100 2350 - -	100 106 111 - -	1200 1400 1550 - -	9400	50000 25000 20000 15000 10000 5000	140 127 124 106 92	2000 2700 3275 3360 392	133 118 111 102 88	2000 2325 2650 2900 3250	397 390 405 373 356	11.8 9.0 6.9 4.9 3.1	11800 10800 9800 10300 10800	NONE NONE NONE 500 1000	569 419 269 269 269	1150 1050 720 685 650	5.1 3.7 2.3 2.3 2.3	1550 1125 765 725 700	4.8 3.5 2.2 2.2 2.2	2275 1675 1140 1050 1000	9.1 6.8 4.3 4.1 4.0	- - - - -	- - - - -	2600 1850 1250 1225 1175	12.0 8.7 5.7 5.7 5.6	AS ABOVE
P-51D (V-1650-7)	8000 9000 9800 10300 10800 11800	- 2100 2200 2350 - -	2000 2100 2350 - -	100 106 111 - -	1200 1400 1550 - -	10100	50000 25000 20000 15000 10000 5000	140 127 124 106 92	2000 2700 3275 3360 392	133 118 111 102 88	2000 2325 2650 2900 3250	397 390 405 373 356	12.6 9.5 7.3 5.2 3.3	11100 10100 9600 10300 11100	NONE NONE 500 269 1000	419 269 269 269 269	1050 720 685 700 650	3.7 2.3 2.3 2.3 2.3	1140 745 725 725 700	3.5 2.2 2.2 2.2 2.2	1575 1140 1050 1000 1000	6.8 4.3 4.1 4.0 4.0	- - - - -	- - - - -	1250 1250 1225 1175 1175	6.7 5.7 5.7 5.6 5.6	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT RACKS. NEW TYPE BOMB RACKS DECREASE HIGH SPEED 14 M.P.H.

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



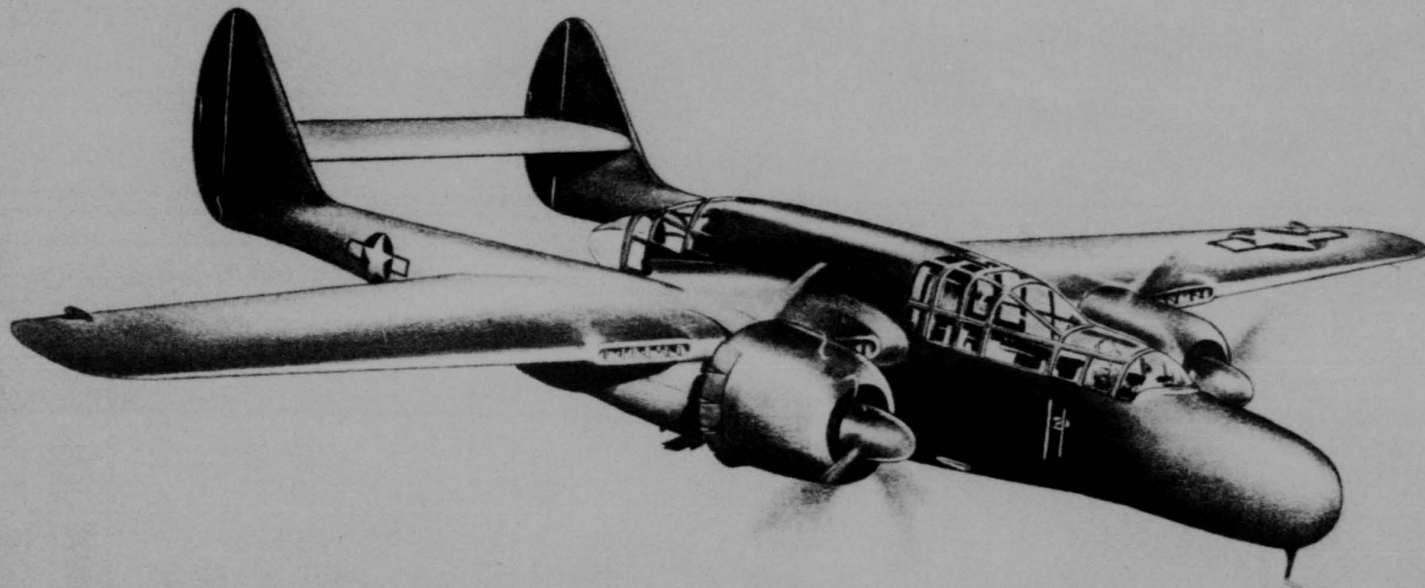
**P-51**  
"MUSTANG"

MANUFACTURED BY NORTH AMERICAN (ENGLWOOD) "NA" & NORTH AMERICAN (DALLAS) "NT"

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NORTHROP P-61A

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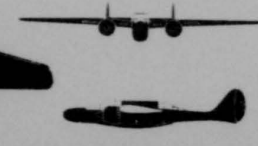
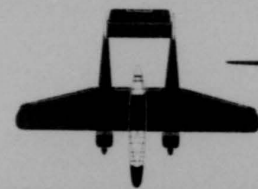
TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL	B.H.P./ALT.	S-SPAN	B-BASIC	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	TYPE			
		SUPERCHARGER PROP MFR. TYPE	T-TAKE-OFF M-MILITARY C-CONTINUOUS	L-LENGTH H-HEIGHT T-TREAD W-WING AREA	C-COMBAT R-RECD LIM. W-WAR MAX.						NO. & SIZE STATION	NO. & SIZE CAPACITY					
P-61A-NO -1 & -5	2	FRATT-WHITNEY R-2800-10 2 SPD.-2 STG. CURTISS 12"2"DIA-4 BL. F.P., ELECTRIC	T 2000/2000 M 1800/15600 C 1675/8100 1525/17800 1195/22700	S 66' L 48'11" H 14' 2" T 17' 2" W 661 sq. ft.	B 22500 C 28000 R - W -	0	2	2 x 115 2 x 200 650 Tot.	4-20mm 4- .50"	200 560	PURE-FUELSAGE UPPER TURRET	N	O	N	E	SCR-522 SCR-595 SCR-720 SCR-729 INT. #136 AFN - 1 EC - 36	* - ON 1st 37 P-61A-1's ONLY. * - CREW OF 3 FOR MODELS WITH TOP TURRET. * - WATER INJECTION AND WAR EMERGENCY ON P-61A-5 AND SUBSEQUENT. EXACT RATINGS UNDETERMINED.
P-61A-NO -10 & -11 P-61B-NO -1	2	FRATT-WHITNEY R-2800-55 2 SPD.-2 STG. CURTISS 12"2"DIA-4 BL. F.P., ELECTRIC	T AS ABOVE M AS ABOVE C	S L H AS ABOVE T AS ABOVE W	B AS ABOVE C AS ABOVE R W	2	2 x 115 2 x 200 2 x 165 560 Tot.	4-20mm	200	PURE-FUELSAGE	N	O	R	E	AS ABOVE	(f) EXTERNAL FUEL TANKS ON P-61A-11 AND ALL P-61B's.	

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'		LANDING SPEED MPH	GROUND-RUN		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.		WEIGHT LB.	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.	AT 10000 FT	AT 25000 FT	AT 10000 FT	AT 25000 FT		AT 10000 FT	AT 10000 FT			
P-61A-NO -1 & -5	25000 27000 28000 29000	2850 2100 2500 2700	1950 2100 2150 -	- - - -	1350 1500 1600 1750	1350 1450 1500 -	25000 20000 15000 10000 5000 211	353 342 353 351 350 310	NO DATA	353 354 353 352 351 350	900 1700 1900 2150 2250 2200	310 347 350 430 390 365	# # # # # #	10-1 9-7 6-7 5-1 5-1 0-0	28000 28000	NONE NONE	630 960 630	330 330	1.2 1.2	385 385	1.1 1.1	600 600	2.5 2.5	520 520	3.4 3.4	1000 1000	4.5 4.5	
P-61A-NO -10 & -11 P-61B-NO -1	A	S	A	B	C	V	E	A	S	A	B	O	V	E	A	S	A	B	O	V	E	A	S	A	B	O	V	E

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NOTES:



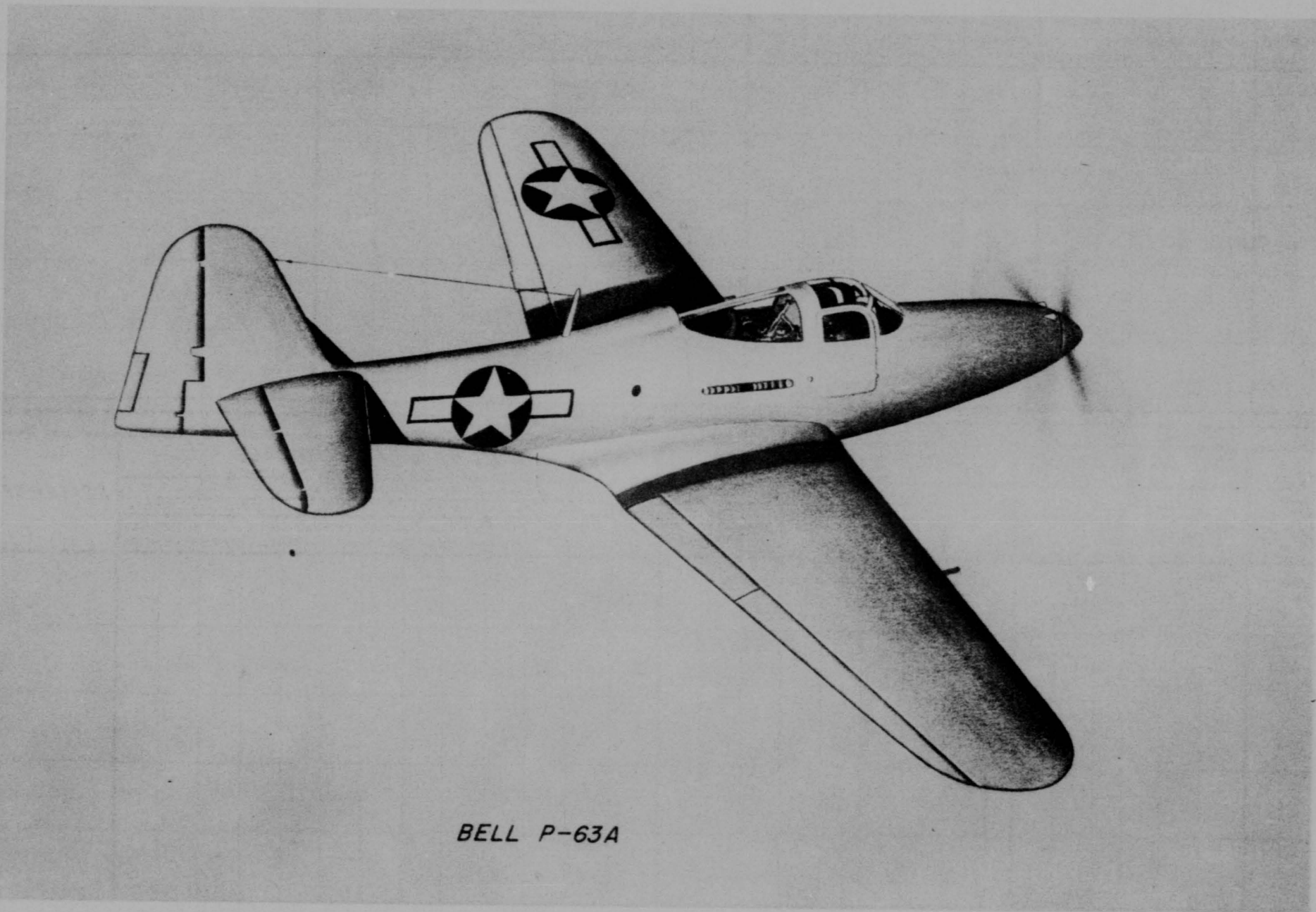
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"BLACK WIDOW"

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BELL P-63A

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DATE 21 AUG. 1944

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.		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT M-MILITARY W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.		TYPE
			T-TAKE-OFF	M-MILITARY									C-CONTINUOUS	NO. & SIZE OF STATION			
P-63A-BE -1 TO -7 INCL.	1	ALLISON V-1710-93 2 STAGE ARRO PRODUCTS 11'7" DIA. - 4 BL. CONST. SPD. HYDRO	T 1305/5 L M 1150/24200 W 1500/5 L C 1000/20000	S 38'4" L 32'8" H 12'3" T 14'7" W 24'6 3/4"	B 6905 C 8350 A 8900	1	MAIN - WINGS DROPP. - DRILLY OR DROPP. - WING (SEE F)	2 x 58 1x64 (S.W.) 1 x 75 1 x 75 2 x 75	1-37mm 2-50 2-50	30 250 200	PROP. - TYPE M1 WING - FIXED NOSE - FIXED	NONE	1-500 1-325 1-250 1-100	500	SCR-27(N) SC-196 or SCR-522 A DETROIT # 438 & SCR-695	TECHNICAL ORDER 01-110FP-1. (20 JULY 1943) 2-1x51 GAL. SELF SEALING DROPPABLE BULLY TANK AND 2x75 GAL. DROPPABLE WING TANKS ADDED TO P-63A-6. see WAR EMERGENCY RATING.	
P-63A-BE -8-9	1	ALLISON V-1710-93 2 STAGE ARRO PRODUCTS 11'0" DIA. - 4 BL. CONST. SPD. HYDRO	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	1-37mm 2-50 2-50	30 250 200	PROP. - TYPE M1 WING - FIXED NOSE - FIXED	A S	A B O V E	AS ABOVE	* TYPE M123 GUN ON -9.		

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		LANDING SPEED	GROUND-RUN		WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER	TAKE OFF WEIGHT	BOMBS CARGO	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.	ENDUR.
P-63A-BE -1 TO -7 INCL. [MILITARY POW.]	7700 8300 8700 9500 10500	1700 2110 2520 2900 1500	1800	1070 1320 1520 2000 3100	1140	8350	30000 25000 20000 15000 10000 5000	392 401 398 387 373 356	1680 2380 3030 3690 3415 3275	350 365 370 355 338 312	10.1 7.6 5.7 4.2 2.8 1.4	10550 9500 8850 8350 8850	NONE NONE NONE NONE 500	461 311 211 136 136	725 500 600 400 350	3.2 2.1 2.1 1.3 1.3	550 600 700 590 450	4.1 2.1 3.2 1.3 1.3	2100 700 590 450	1.9 3.2 2.1 2.0	2250 1100 950 700 600	13.3 7.5 4.8 3.2 3.0	PERFORMANCE VALUES WITHOUT EXTERNAL TANKS.
P-63A-BE -1 TO -7 INCL. [WAR EMERG.]	A S	A B O V E				8350	AS ABOVE						A S	A B O V E								AS ABOVE	
P-63A-BE -8-9 [MILITARY POW.]	A S	A B O V E				8350	AS ABOVE						A S	A B O V E								AS ABOVE	
P-63A-BE -8-9 [WAR EMERG.]	A S	A B O V E				8350	AS ABOVE						A S	A B O V E								AS ABOVE	

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

# P-63

"KINGCOBRA"

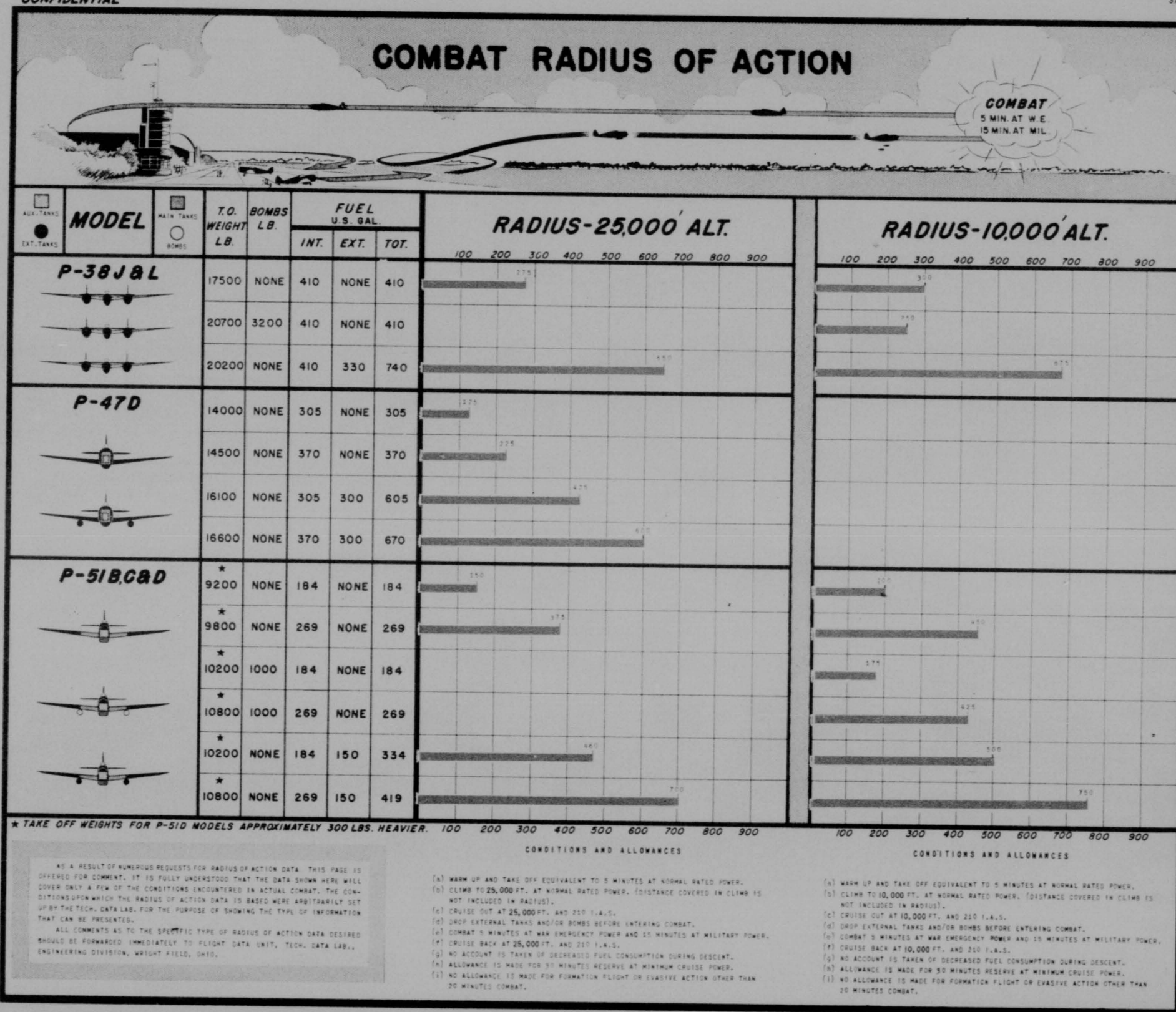
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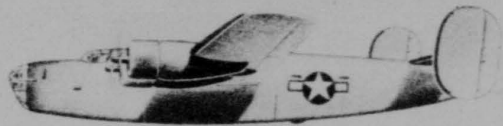
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**GLIDER AND  
TOWPLANE SECTION  
1-SEPTEMBER-1944**

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## 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 tow-
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: 21 AUG. 1944

## BOMBER 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 (MPH)	TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED I.A.S.	GROUND RUN DISTANCE (FT.)	I.A.S. FOR CLIMB (MPH)	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)									RADIUS (MI.)	TIME OUT (HRS)	TIME BACK (HRS)		RANGE (MI.)		ENDUR. (HRS.)
	(LB.)	(LB.)	(LB.)	(LB.)	(U.S. GAL)	(FT.)	I.A.S.	(FT.)	(MPH)	(FT/MIN)	(FT.)	(MIN)	(MI.)	(HRS)	(HRS)	(FT.)	(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	1360	10.3	* 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	3.8	3.5	5000	720	5.5	
	7500	3500	59100	NONE	2780	150	6950	110	4700	135	240	8000	44	860	6.6	6.2	5000	1140	8.8	
B-24D & (1) CG-4A	7500	3800	52500	NONE	2344	150	4225	115	3475	140	530	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*	41	(850)	5.6	4.4	10000	1280	8.6	
B-25C & (1) CG-4A	7500	3800	30000	2000	972	150	5075	120	4175	140	390	12000*	38	540	3.8	3.4	5000	700	4.9	* LIMITED- NO OXYGEN IN GLIDER

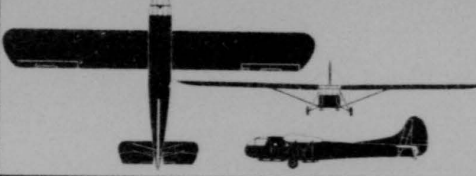
COLUMN— 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

**NOTES:**  
 (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-113 dated 1 DEC. 1943.  
 (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.  
 RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.

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.

### GLIDER CHARACTERISTICS

WEIGHT	GLIDER CHARACTERISTICS	SIZE
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> (a) TROOP CARRIER: CREW(2) & TROOPS(13). (b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1). (c) CARGO CARRIER: CREW(2) & TROOPS(3) & 75MM. HOWITZER(1) & 75MM. AMMUNITION(18 RDE.)	S- 83'8"
C- 7500		L- 128'4"
		H- 12'7"
W- 9000		T- 9'4"
		W- (Tact. gear) 852 SQ. FT.

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## TOWPLANE &amp; GLIDER TACTICAL PLANNING PERFORMANCE CHART

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AS OF:  
22 AUG. 1944

## CARGO 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 STATUTE AIR MILES-NO WIND-NO RESERVE MAXIMUM						REMARKS	
	GLIDERS		TOWPLANE				MAX TOW SPEED (MPH)	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.)	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.)		
C-46A & (1)CG-4A	7500	3800	45000	3000	1400	150	5150	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 B 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 7500 7500	3800 3800 3800	26000 29000 31000	3000 6000 8000	804 804 804	150 150 150	4685 5400 5950	80 85 85	3050 3250 3450	105 105 105	515 410 350	12000* 11300 10400	31 37 39	575 545 520	4.8 4.6 4.4	3.6 3.4 3.2	5000 5000 5000	955 870 820	8.0 7.3 6.9	*LIMITED- NO OXYGEN IN GLIDER.	
C-47, 47A & 53 (PADDLE BLADE PROPS) (1) CG-4A	7500	3800	26000	3000	804	150	4800	80	3200	105	465	11800	35	525	4.4	3.6	5000	870	7.3		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (2)CG-4A	7500 7500 7500	3800 3800 3800	24200 26000 29000 31000	1200 3000 6000 8000	804 804 804 804	150 150 150 150	6200 6900 7850 8650	80 80 80 85	3525 3750 4450 5550	105 105 105 105	220 180 125 80	7800 7300 8000 -	46 50 57 38*	450 435 395 370	4.0 3.8 3.7 3.4	3.0 2.9 3.3 3.1	2000 2000 2000 1000	665 630 520 470	5.8 5.5 4.5 4.4	* TO 3000 FT. ALTITUDE.	
C-60A & (1)CG-4A	7500 7500	3800 3800	18500 21500	NONE 3000	644 644	150 150	4000 5425	85 85	2750 3675	120 120	550 320	12000* 11500	37 48	580 410	4.7 3.4	4.0 2.8	5000 5000	940 560	7.9 4.7	*LIMITED - NO OXYGEN IN GLIDER.	
C-60A & (2)CG-4A	4700 7500	1000 3800	18500 18500	NONE NONE	644 644	150 150	6200 7000	85 85	4100 4500	120 120	250 200	8000 7300	40 41	360 330	2.8 2.9	2.5 2.4	5000 5000	540 475	4.6 4.0		
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 1 DEC. 1943.  
(2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

READ FIGURES AND PRELIMINARY. SUBJECT TO REVISION AFTER FLIGHT CHECK.

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

## GLIDER CHARACTERISTICS

WEIGHT		SIZE
B-BASIC C-COMBAT W-WAR MAX		
B- (3700 to 4500) C- 7500 W- 9000		<b>TYPICAL GLIDER CAPACITIES</b> S- 83'6" L- 48'4" H- 12'7" T- 9'4" W- (Incl. gear) 852 SQ.

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# TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

AS OF: 24 AUG. 1944

## FIGHTER 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			MAX. TOW SPEED (M.P.H.)	TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED I.A.S. (FT.)	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.)									RADIUS (MI.)	TIME OUT (HRS.)	TIME BACK (HRS.)			RANGE (MI.)	ENDUR. (HRS.)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)		(18)	(19)
P-38G & (1) CG-4A	7500	3800	15500	NONE	300	150	1000	100	3250	120	1000	12000*	15	270	2.2	1.6	5000	100	3.2	* LIMITED- NO OXYGEN IN GLIDER; SERVICE CEILING of 20000 ft. CAN BE REACHED IN 10 MINUTES IF OXYGEN IS INSTALLED IN GLIDER.

NOTES:

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

MINIMUM OF 200 LB. BALLAST IS REQUIRED IN NOSE OF P-38G WHEN NO AMMUNITION IS CARRIED.

TOW PLANE PERFORMANCE 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

- (a) TROOP CARRIER: CREW(2) & TROOPS(13).
- (b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1).
- (c) CARGO CARRIER: CREW(2) & TROOPS(3) & 75MM. HOWITZER(1) & 75MM. AMMUNITION(18 RIB.).

S - 83'8"  
L - 128'4"  
H - 12'7"  
T - 9'4"  
W - (Tact. gear) 852 Sq. Ft.

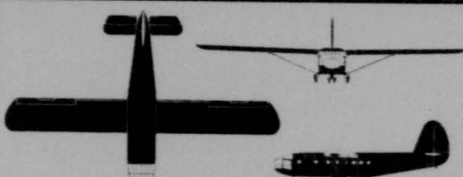
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TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART																					
PAGE 47 AS OP: 25 AUG., 1944																					
CARGO TOWPLANE AND CG-13A GLIDER																					
TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) SL-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE MAXIMUM STATUTE AIR MILES-NO WIND-NO RESERVE						REMARKS	
	GLIDERS			TOWPLANE			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.)	WEIGHT (LB.)	BOMBS CARGO OR PASS. (LB.)	FUEL (U.S. GAL.)	RADIUS (MI.)									TIME OUT (HRS.)	TIME BACK (HRS.)	RANGE (MI.)		ENDUR. (HRS.)		
	(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. (a) JEEPS (2) & TROOPS (8) & CREW (2) ATTENTION: WEIGHT OF GLIDER MAY BE LIMITED BY TOWPLANE PERFORMANCE; SEE (b) JEEP (1) & TROOPS (8) & CREW (2) & 75mm. HOWITZER (1) & AMMUNITION (156 RDS.) T.O. 01-1-113 JULY 1944 FOR ALLOWABLE GLIDER WEIGHT WITH (c) TROOPS (8) & CREW (2) & 75mm. HOWITZER (2) & AMMUNITION (165 RDS.) CORRESPONDING TOWPLANE. (d) TROOPS (8) & CREW (2) & STD. 105mm. HOWITZER (1) (M-2) & AMMUNITION (63 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.)																				
C-47, 47A & 53 PADDLE BLADE PROPS & (1) CG-13A	10000 15700 17700	1300 7000 9000	24200 24200 24200	1200 1200 1200	804 804 804	195 195 195	4600 5700 6350	85 90 90	3000 3500 3850	105 105 105	460 300 245	12000* 9500 8500	36 44 45	555 485 460	4.8 4.2 4.0	3.6 3.1 3.0	2000 2000 2000	855 725 675	7.5 6.3 6.0	* LIMITED - NO OXYGEN IN GLIDER.	
C-60A & (1) CG-13A	9500	800	18000	NO. E	644	-	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

GLIDER CHARACTERISTICS

WEIGHT		SIZE
B - BASIC		S - SPAN
C - COMBAT		L - LENGTH
W - WAR MAX	H - HEIGHT	T - TREAD
	W - WING AREA	
B - 8700	TYPICAL GLIDER CAPACITIES	
C - 18900	SEE NOTE "A" AT LEFT	
W - 18900	S - 85' 7"	L - 54' 3"
	H - 20' 3"	T - 9' 11"
	W - 873 SQ. FT.	

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