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# TACTICAL PLANNING

## *Characteristics & Performance Chart*

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PUBLISHED MONTHLY BY CHIEF, ENGINEERING DIVISION,  
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BOMB

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# TACTICAL PLANNING

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R E S T R I C T E D

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SECURITY CLASSIFICATION NOTICE

Due to a very poor printing job a number of security classification designations are incorrectly shown on page 3, the classification page. The following is submitted for your information and is the correct security classification for the material presented in the 1 August 1945 issue of Report No. TSEAL-6-A1:

1. B-24 Radio Restricted.
2. B-29 Fuel, Guns, Bombs (number and size internal) Restricted.  
B-29 Bombs (Maximum load), Radio Confidential.
3. B-32 Combat Crew, Fuel, Guns, Bombs (No. & size inter), Radio Restricted.  
B-32 Bombs (Maximum load) Confidential.
4. B-25 Rocket Inst., Radio Restricted.
5. A-20 Rocket Inst., Restricted.
6. A-26 Bombs Restricted.
7. All Cargo Cargo Information Restricted.
8. P-47 Rocket Inst. Restricted.
9. P-51 Rockets Restricted.
10. P-61 Engine (Supercharger), Bombs (Maximum load) Restricted.
11. P-80 Size, Restricted.

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## FOREWORD

This chart is a supplement to the Semi-Annual Chart of Engineering Characteristics and Performance, TSEAL-6-A2 "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 necessarily actual flight test results. For detailed planning see T.O. 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 at 3000 ft. 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, "War Maximum" weights are based on limiting applied positive maneuver factor of 2.00G unless otherwise specified. All speeds shown are true air speeds. 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 max. cont. at S.L.).
- (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 and endurance 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.)

THIS REPORT SUPERSEDES PREVIOUS TSEAL-6-A1 PUBLICATIONS; SUPERSEDED PUBLICATIONS, IF NO LONGER OFFICIALLY REQUIRED, WILL BE DESTROYED IN THE MANNER PRESCRIBED IN A.R.380-5.

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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> Military power for combat at altitude shown, (usually limited to 15 min. duration)	<b>Practical total cargo based on gross weight:</b> Values are at least 125% of optimum.
<b>WE:</b> War emergency power for combat at altitude shown, (limited to 5 min. duration only)	<b>TAKE OFF &amp; LANDING:</b> (At 3000' runway alt.)
<b>C:</b> Maximum power for continuous operation.	<b>Gross weight:</b> (To clear 50')
<b>Note:</b> Maximum cruise power is the maximum power for unlimited operation with lean mixture.	<b>Arbitrary values for reference only.</b>
<b>SIZE:</b> Approximate dimensions for storage planning.	<b>Distances representative of minimum airport requirements.</b>
<b>Length:</b> Does not include protruding guns.	<b>Distances representative of minimum runway requirements.</b>
<b>Height:</b> Maximum in three point position.	<b>Practical minimum for average pilot.</b>
<b>Wing area:</b> Standard aerodynamic surface area.	<b>HIGH SPEED &amp; CLIMB:</b> Values are for clean new airplanes.
<b>Tread:</b> Center to center main wheels: (outboard if dual).	<b>Military power:</b> For limited periods of combat operation.
<b>WEIGHTS:</b> Approximate averages for planning purposes.	<b>War emergency power:</b> (Performance with War Emergency ratings are shown when applicable).
<b>B:</b> Includes all equipment, that has a fixed location and is actually present in the airplane; air frame; power plant; and accessories; trapped fuel oil; full hydraulic; cooling and anti-icing fluid systems and reservoirs; armor plate, ordnance (less ammunition & bombs); chemical, navigation, oxygen, pyrotechnics, and radio equipment.	<b>Time to climb:</b> Time to climb from sea level based on maximum continuous power unless otherwise noted.
<b>BASIC WEIGHT:</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>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>W:</b> War maximum weight for special missions, limited by structural considerations, based on a positive maneuver factor of 2.0 unless otherwise noted. Wing tanks must be full.	<b>Bombs, etc:</b> Typical loadings combined with various tank capacities. No consideration is given to loadings requiring partially filled tanks.
<b>M:</b> Recommended max. landing as established in Tech. Order 01-1B-44. (10 March 1945).	<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 &amp; OIL:</b> Standard fuel tankage and capacities as well as max. oil.	<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" TSEAL-6-A5.	<b>Max. cruise power:</b> Maximum continuous operation with lean mixture setting.
<b>RADIO:</b> Resume' of typical models that may be installed.	<b>Long range:</b> Practical maximum range for planning purposes under all conditions set forth.
	<b>RED PRINT:</b> 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 24- 100	NONE	9600	2550
B-17F-BO (-30 thru -50)	NONE 1) 2) .50 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 24- 100	2-4000 2-2000 2-1600 2-1000	6-1600 2-4000x 17600	AS ABOVE
B-17F-BO -55 thru 1st.30(-85)	2) 1) 2) .50 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		2550 (-55 thru -75) 3630 -50 & SUB.
B-17F-BO Last 70(-85) thru -130	3) 1) 2) .50 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 EXCEPT THAT EXTERNAL BOMB RACKS DELETED AFTER 15th.(-95)			3630
B-17G-BO (-1 thru -110)	2) 1) 2) .50 2) 2) 2)	300 365 300 c 500 d 400 500 565 e	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 24- 100	MOUNT LUGS & CONTROLS RETAINED	9600	AS ABOVE

NOTES: a NOSE GUN DELETED LAST 35(-27). d EARLY MODELS CARRY 300 RDS./GUN.  
b RADIO COMPART. GUN ADDED AFTER 16th.(-30). e CHEYENNE TAIL MOUNT ON LAST 20(-90)  
c RADIO COMP. GUN DELETED LAST 66(-109 & -110). AND SUBSEQUENT. x EXTERNAL

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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 24- 100	NONE	9600	2550
B-17F-DL Last 12(-10) thru -20	2) 1) 2) .50 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.	AS ABOVE	AS ABOVE
B-17F-DL -25 thru 1st.21(-35)	A S	A B O V E	AS ABOVE	PROV. FOR EXTERNAL RACKS	AS ABOVE	AS ABOVE	3630
B-17F-DL Last 19(-35) thru -65	3) 1) 2) .50 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 -95)	2) 1) 2) .50 2) 2) 2)	300 365 300 c 500 d 400 500 565 e	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	AS ABOVE EXCEPT ONLY MOUNT- ING LUGS & CONTROLS RETAINED FOR EXTERNAL BOMBS ON (-80) & SUBSEQUENT MODELS.			AS ABOVE

NOTES: a NO NOSE GUN ON 1st.13(-10). d EARLY MODELS CARRY 300 RDS./GUN.  
b NOT CARRIED ON -1 & -5. e CHEYENNE TAIL MOUNT ON (-50) & SUBSQT.  
c RADIO COMPART. GUN DELETED (-75) & SUBSQT. x EXTERNAL

VEGA (BURBANK) "VE"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-VE (-1 thru -10)	1-.30 CAL.(300 RDS.) IN 1st. 12 AIRPLANES; NOSE GUN DELETED ON NEXT 28 THRU (-10). NO RADIO COMPARTMENT GUN UNTIL LAST 14(-15). OTHER ARMAMENT			2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	NONE	9600	2550
B-17F-VE (-15 & -20)	2) 1) 2) .50 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.	AS ABOVE	AS ABOVE
B-17F-VE (-25 & -30)	A S	A B O V E	AS ABOVE	b 2-4000 2-2000 2-1600 2-1000		6-1600 2-4000x 17600	2550 (B-17F-25) 3630 (B-17F-30)
B-17F-VE (-35 thru -50)	3) 1) 2) .50 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 EXCEPT ONLY MOUNT- ING LUGS & CONTROLS RETAINED FOR EXTERNAL BOMB RACKS ON (-35) & SUBSEQUENT MODELS.			3630
B-17G-VE (-1 thru -110)	2) 1) 2) .50 2) 2) 2)	300 365 300 e 500 d 400 500 565 c	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL...FLEX.MT.	A S	A B O V E		

NOTES: a NOT ON (-1) & (-5). d EARLY MODELS CARRIED 300 RDS./GUN.  
b EXTERNAL RACKS DELETED LAST 14(-30); e RADIO GUN STOWED (-35) thru 1st.16(-85);  
LUGS & CONTROLS RETAINED. f RADIO GUN DELETED LAST 24(-85) & SUBSQT.  
c CHEYENNE TAIL MOUNT ON LAST 14(-55) & SUBSQT. x EXTERNAL

GENERAL NOTE:

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

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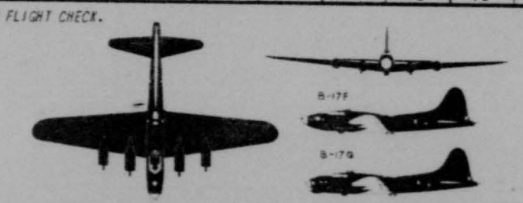
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT.		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX LAND		* NOTES	FUEL TANKAGE		TNG-ROCKETS-SIZE-INSTALLATION			NO. AND SIZE		TYPICAL MODELS CARRIED	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.	
			T-TAKE OFF W-WAR EMERG. M-MILITARY C-CONTINUOUS	T-TAKE OFF W-WAR EMERG. M-MILITARY C-CONTINUOUS					TYPE OR LOCATION ALSO (MAX OIL)	NO AND CAPACITY ALSO (MAX FUEL)	NO GUNS AND SIZE	RDS PER GUN	LOCATION AND TYPE	INTERNAL				EXTERNAL
B-17F (LATEST MODEL)	4	WRIGHT R-1820-97 TURBO HAMILTON STD. 11"7"9"1A-3 BL. F.I., HYDRA-MATIC	T 1200/3 L W 1380/25000 # M 1200/27000 C 1000/30000	S 103'9" L 74'8" H 19'1" T 21'2" W 1420 Sq. #	B 34000 C 55000 W 72000 # M 50000		10	MAIN - WINGS WING TIPS BOMB BAY (14#)	6-1720 2 x 540 2 x 410 (3800)	21 21 21 21 21	300 300 400 500 565	NOSE - FLEX. SIDE WAIST-FLEX. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL-FLEX.MOUNT	2-2000 6-1600 5-1000 12-500 18-250 28-100	2-4000 2-2000 2-1600 2-1000 (SOME MODELS)	6-1800 2-4000 17000	SEE NOTE (A)	B-17F TECH. ORDER 01-20EF-1 (REV. 10 FEBRUARY 1945) B-17G TECH. ORDER 01-20EG-1 (REV. 25 FEBRUARY 1945)	
B-17G (LATEST MODEL)	4	AS ABOVE	T 1200/3 L W 1380/26700 # M 1200/32700 # C 1000/35200 #	S 103'9" L 74'8" H 19'1" T 21'2" W 1420 Sq. #	AS ABOVE		10	AS ABOVE EXCEPT PROVISIONS ONLY. FOR THE BOMB BAY FULL TANKS.	AS ABOVE	21 21 21 21 21	300 365 500 400 500 565	CHEEK - FLEX. CHIN TURRET SIDE WAIST-FLEX. UPPER TURRET LOW BALL TURRET CHEYENNE TAIL MT.	AS ABOVE	MOUNTING LUGS & CONTROLS RETAINED FOR EXTERNAL RACKS.	9600	AS ABOVE	(A) WAR EMERGENCY POWER PERMITTED ONLY WHEN CARRIERS MODIFIED TO PARTS LIST NO. 395553-3. (B) EARLIER B-17G'S HAD CRITICAL ALTITUDE SHOWN FOR B-17F MODELS. (C) EARLY MODELS HAVE 74'9" LENGTH. (D) SEE PAGE OPPOSITE FOR DETAILED ARMAMENT BREAKDOWN.	
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT										RANGE AND ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS				
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			MAX. CONTINUOUS POWER				MAX. CRUISE POWER					LONG RANGE			
		LB	FT	FT	MPH			FT	FT	MPH	FT	MPH	FT	MPH	FT	MIN.	TAKE OFF WEIGHT	BOMBS CARGO RACKS	TOTAL FUEL	at 10,000 FT.		at 25,000 FT.		at 10,000 FT.		at 25,000 FT.		RANGE	ENDUR.
B-17F	40000	-	3900	90	-	1200	30000	218	890	295	400	280	225	52.0	55500	NONE	3630	-	-	-	-	-	-	-	-	-	3500 <sup>g</sup>	21.2 <sup>g</sup>	(e) FIRST 3 HOURS OF FLIGHT AT 20000 FT. ALTITUDE.
B-17G	50000	3200	4000	100	2300	1950	20000	308	1150	288	850	266	550	25.7	59500	NONE	2810	1400	6.1	1550	6.2	2050	10.1	2150	9.8	2800	17.4	(f) FIRST 4 HOURS OF FLIGHT AT 20000 FT. ALTITUDE.	
	55000	4000	4500	104	3100	2400	15000	288	1250	274	950	255	675	17.3	63500	4000	2810	1400	6.1	1550	6.2	2050	10.1	2100	9.8	2700	17.4	(g) MAX. FERRY RANGE MAY BE RESTRICTED BY INSUFFICIENT OIL IF ENGINE IS NOT IN BETTER THAN AVERAGE CONDITION: OIL CONSUMPTION VARIES FROM 3 QT. TO 3 GAL. PER HR. PER ENGINE DEPENDING ON TIME SINCE OVERHAUL.	
	50000	4800	-	-	3700	-	10000	278	1350	283	1050	245	750	10.2	65500	6000	2810	1400	6.0	1500	6.0	2000	10.0	-	-	2900	17.2		
	65000	6300	-	-	4900	-	5000	255	1825	252	1125	230	825	4.0															
							30000	310	800	295	350	-	-	-	55500	NONE	3630	-	-	-	-	-	-	-	-	3100 <sup>g</sup>	17.1 <sup>g</sup>		
							25000	302	900	287	800	253	210	54.0	59500	NONE	2810	1400	6.3	1500	6.2	2000	10.0	2350	9.6	2550	14.8		
							20000	291	1090	277	750	255	385	37.0	63500	4000	2810	1400	6.3	1440 <sup>g</sup>	6.2 <sup>g</sup>	1950	10.0	1850 <sup>g</sup>	8.7 <sup>g</sup>	2350	13.0		
							15000	280	1200	267	900	245	500	26.0	65500	5000	2810	1400	6.3	ABOVE PRAC. CEIL.	ABOVE PRAC. CEIL.	1800	9.8	ABOVE PRAC. CEIL.	ABOVE PRAC. CEIL.	2250	12.5		
							10000	269	1300	256	1000	234	580	16.0															
							5000	258	1400	246	1100	223	620	7.0															

NOTES: (A) TABLES FOR B-17F AND B-17G. RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.

TABLES FOR B-17F AND B-17G. RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.



**B-17**  
"FORTRESS"

MANUFACTURED BY BOEING - DOUGLAS - VEGA

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CONSOLIDATED (SAN DIEGO) "CO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-CO D thru 1st. 94(-15)	1) 2) .50 2)	200 400 600	NOSE.....FLEX. UPPER TURRET TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	2564
B-24D-CO Last 36(-15) thru -20	1) 2) .50 2)	200 400 600	NOSE.....FLEX. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	A S	A B O V E		2564 Last 36(-15) 3614 -20 & sub.
B-24D-CO -25 thru 1st. 26(-140)	3) 2) .50 1) 2)	100 250 400 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	4-2000 8-1500 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24D-CO Last 9(-140) thru -170	3) 2) .50 2) 2)	100 250 400 508 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24E-CO (-1 thru -210) B-24F-CO (-1 thru -20) B-24M-CO (-1 thru -90)	2) 2) .50 2) 2)	600 250 <sup>b</sup> 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. See "c"	A S	A B O V E		AS ABOVE

NOTES: a B-24J's HAVE TAIL TURRET; B-24L's HAVE HAND HELD GUNS IN TAIL &  
 b NOT ON B-24D-25 B-24M's HAVE LIGHT WEIGHT TAIL TURRET.  
 c B-6 MOUNT & INCREASE TO 500 RDS/GUN ON -210.

CONSOLIDATED (FT. WORTH) "CP"

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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) .50 2) 2)	100 250 400 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24D-CF (-10 thru -20)	A S	A B O V E		4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	AS ABOVE
B-24J-CF (-1 thru -105) B-24K-CF (-1 thru -15)	2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL TURRET	A S	A B O V E (SEE a)		AS ABOVE
B-24E-CF (-20 thru -30)	2) 2) .50 2) 2)	600 500 <sup>b</sup> 400 508 600	NOSE TURRET S. WAIST-46 MT. UPPER TURRET LOW BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CF (-101)	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 PROVISIONS FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

DOUGLAS (Tulsa) "DT" &amp; FORD (Willow Run) "FO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24E-DT & FO (-1 thru -15)	2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL TURRET	4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24E-DT & FO (-20 thru -30)	2) 2) .50 2) 2)	600 500 <sup>b</sup> 400 508 600	NOSE TURRET S. WAIST-46 MT. UPPER TURRET LOW BALL TRR. TAIL TURRET	A S	A B O V E		
B-24J-DT (-1 thru -10) B-24J-FO (-1 thru -20)	B-24E-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.						
B-24L-FO (-1 thru -20) B-24M-FO (-1 thru -30)	2) 2) .50 2) 2)	600 500 400 508 600	NOSE TURRET S. WAIST-46 MT. UPPER TURRET LOW BALL TRR. TAIL-HAND HELD	4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614

NOTES: a B-10 SHACKLES FOR 8-1500 A.P. BOMBS START ON 2101st. FORD KNOCK-DOWN SET.  
 b B-24E-20's HAVE PROVISIONS FOR ONLY 250 BOUNDS PER GUN.

NORTH AMERICAN (DALLAS) "NT"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24G-NT	3) 2) .50 2) 2)	230 TOT. 250 400 508 600	NOSE.....FLEX. SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24G-NT (-1 thru -5)	2) 2) .50 2) 2)	600 250 400 508 600	NOSE TURRET SIDE WAIST-FL. UPPER TURRET LOW BALL TRR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24G-NT (-10 thru -15)	A S	A B O V E		4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	AS ABOVE
B-24J-NT (-1 & -5)	A	S	A	B	O	V	E

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

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### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

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MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE	WEIGHT	COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE				
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE				B.H.P./ALT. T - TAKE OFF W - WAR EMERG. M - MILITARY C - CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX.LAND.	FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION				NO. AND SIZE		TYPICAL MODELS CARRIED	
									TYPE OR LOCATION ALSO (MAX. OIL)	NO. AND CAPACITY ALSO (MAX. FUEL)	NO. GUNS AND SIZE	RDS. PER GUN			LOCATION AND TYPE	INTERNAL		EXTERNAL
B-24D (LATEST MODEL)	4	PRATT-WHITNEY R-1820-43 or -55 TURBO HAMILTON STD. 11"7" DIAL - 3 BL. F.F., HYDROMATIC	T 1200/5 L W NONE M 1200/28500 C 1100/27000	S 110'0" L 95'4" H 18'0" T 25'6" W 1048 Sq.	B 37000 C 56000 W 71200 * M 56000	10	MAIN - WINGS 12-2354 WING TIPS 2 x 255 BOMB BAY 2 x 400 (132)	31 21 21-50 21	100 250 400 500 600	NOSE - FLEX. SIDE WAIST - FL. UPPER TURRET LOW-BALL TURRET TAIL TURRET	4-2000 8-1000 8-1000 12- 500 12- 250 20- 100	ONLY MOUNTING LOGS & CONTROLS INSTALLED	12800	SEE NOTE (A)	B-24D TECHNICAL ORDER 01-SEC-1 (REV. 25 DEC. 1944) B-24G, H, J, L & M TECH. ORDER 01-SEC-1 (REV. 30 JAN. 1945)  (a) EARLY B-24D, H & J* HAD CRITICAL ALTITUDE AS LISTED FOR B-24D. (b) ARMAMENT SHOWN FOR LATEST B-24D-FD. SEE PAGE OPPOSITE FOR DETAILED BREAKDOWN.			
B-24G, H & J (LATEST MODEL)	4	AS ABOVE	T 1200/5 L W NONE M 1200/31800 <sup>b</sup> C 1100/31500 <sup>b</sup>	S 110'0" L 97'2" H 18'0" T 25'6" W 1048 Sq.	B 38000 C 56000 W 71200 * M 56000	10	AS ABOVE	21 21 21-50 21	700 <sup>b</sup> 500 400 550 600	NOSE TURRET SIDE WAIST - FL. UPPER TURRET LOW-BALL TURRET TAIL TURRET	AS ABOVE	AS ABOVE	AS ABOVE					
B-24L & M (LATEST MODEL)	4	PRATT-WHITNEY R-1820-55 TURBO HAMILTON STD. 11"7" DIAL - 3 BL. F.F., HYDROMATIC	T AS ABOVE W AS ABOVE M AS ABOVE C AS ABOVE	S AS ABOVE L AS ABOVE H AS ABOVE T AS ABOVE W AS ABOVE	B 37500 C 56000 W 71200 * M 56000	10	AS ABOVE	21 21 21-50 21	AS ABOVE EXCEPT: B-24L HAS HAND WELD FLEX. TAIL GUNS. B-24M HAS LIGHT WEIGHT TAIL TURRET.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE					

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS						
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN	WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			MAX. CONTINUOUS POWER				MAX. CRUISE POWER		LONG RANGE					
		T.O. DIST.	LAND DIST.				LANDING SPEED	T.O. DIST.	LAND DIST.	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TAKE OFF WEIGHT	BOMBS CARGO - RASS	TOTAL FUEL	at 10,000 FT.			at 25,000 FT.		at 10,000 FT.		at 25,000 FT.	
		LB	FT				FT	MPH	FT	FT	MPH	FT/MIN	MPH	FT/MIN	MPH	FT/MIN	MIN	LB	LB	U.S. GAL		RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.
B-24D	40000	-	3200	90	-	2800	30000	-	350	350	41.5	59000	NONE	3514	-	-	-	-	-	-	-	-	3500 <sup>c</sup>	20.0 <sup>c</sup>	(c) MAX. FERRY RANGE MAY BE RESTRICTED BY INSUFFICIENT OIL IF ENGINE IS NOT IN BETTER THAN AVERAGE CONDITION. OIL CONSUMPTION VARIES FROM 3 QT. TO 3 GAL. PER HR. PER ENGINE DEPENDING ON TIME SINCE OVERHAUL.		
	45000	-	3600	95	-	3000	25000	-	303	300	22.0	81000	NONE	3164	1200	4.8	1350	4.8	2400	10.9	2500	-	3200	16.0			
	50000	3900	3900	100	2700	3300	20000	NONE	290	1000	15.4	61500	3900	2814	1050	4.1	1200	4.1	2050	9.5	2200	9.2	2750	15.4			
	55000	4800	4300	105	3400	3500	15000	NONE	277	1150	9.7	80500	5000	2354	850	3.5	950	3.5	1750	8.0	1800	7.5	2300	13.0			
B-24G, H & J	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	30000	-	300	375	29.0	200	46.0	65000	NONE	3514	-	-	-	-	-	-	3300 <sup>c</sup>	18.2 <sup>c</sup>			
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	25000	-	290	425	27.8	450	33.5	62000	NONE	3164	1150	4.8	1350	4.8	2200	10.7	2300	-		3200	16.4
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	20000	-	277	775	25.7	600	25.0	62500	3000	2814	1000	4.1	1200	4.1	1900	9.5	1950	8.8		2500	14.0
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	15000	-	254	900	17.4	850	11.4	61000	5000	2354	850	3.5	950	3.5	1600	7.9	1700	7.3		2100	11.7
B-24L & M	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	30000	-	300	375	29.0	200	46.0	64500	NONE	3514	-	-	-	-	-	-	-	-	-		
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	25000	-	290	425	27.8	450	33.5	62000	NONE	3164	-	-	-	-	-	-	-	-	-		
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	20000	-	277	775	25.7	600	25.0	62500	3000	2814	-	-	-	-	-	-	-	-	-		
	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	15000	-	254	900	17.4	850	11.4	61000	5000	2354	-	-	-	-	-	-	-	-	-		

NOTES:

(A) TABLES FOR WEIGHTS AND DIMENSIONS ARE SUBJECT TO REVISION AFTER FLIGHT CHECK

MODEL	WEIGHT	SPAN	LENGTH	HEIGHT	TREAD	WING AREA
B-24D	40000	110'0"	95'4"	18'0"	25'6"	1048 Sq.
B-24G, H & J	45000	110'0"	97'2"	18'0"	25'6"	1048 Sq.
B-24L & M	37500	110'0"	97'2"	18'0"	25'6"	1048 Sq.



**B-24**  
"LIBERATOR"

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## SAMPLE B-29 MISSION



TOTAL STAT. MILES	0	33	1653	1693	1893	2285	3436	3586
TOTAL NAUT. MILES	0	29	1435	1470	1640	1980	2990	3110
TOTAL TIME		0.2	7.6	7.8	8.5	10.2	16.1	16.9
TOTAL FUEL	170	351	3350	3552	4144	4657	6197	6397
CAL. AIR SPEED	190	202-198	190	240-250	184-180	180-176	178	0
COWL FLAP ANGLE	W.O.-7°	1°	2½°	1½°	0°	0°	0°	0°
WEIGHT	137400	136300	118300	117100	97500	94500	85200	84000

Note: — FUEL LISTED IN FIRST COLUMN IS ALLOWANCE FOR WARM UP TAKE-OFF AND CLIMB BASED ON 10 MINUTES OPERATION AT MAXIMUM CONTINUOUS POWER AT SEA LEVEL.  
 — NO ALLOWANCE HAS BEEN MADE IN RANGE FOR FORMATION FLIGHT, DIFFERENCES IN AIRPLANES, PILOT TECHNIQUE, WIND ETC.  
 — THE ABOVE DATA IS FOR COMBAT B-29 WITH TURRETS, BLISTERS, RADAR DOME, SHORT CHORD COWL FLAPS, LATEST ENGINE BAFFLES AND IS BASED ON MARIANAS DATA. THE B-29 IS GREATLY AFFECTED BY TEMPERATURE CHANGES. AS AN EXAMPLE AN INCREASE OF 10° C IN TEMPERATURE HAS THE SAME EFFECT ON RATE OF CLIMB AS ADDING 5000 LB. TO SHIP WEIGHT.

T.O. GROSS WT. - 138400 LB.  
 FUEL - 6988 GAL.  
 BOMBS - 16000 LB.  
 RANGE OF 3586 MILES  
 (WITH 591 GAL. RESERVE)

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BELL (ATLANTA) "BA"

MODEL & BLOCK NO.	ARMAMENT			FUEL		
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	MAX. CAPACITY (U. S. GALS)
B-29-BA -1	1-20MM. 2) .50 2) 1000* 2) 1000* 2) 1000*	100 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	OUTBD. WINGS INBD. WINGS BOMB BAY	11-2726 8-2912 1x 640	8198
B-29-BA -5 thru last 9 (-15)	A S	A B O V E	OUTBD. WINGS INBD. WINGS CENTER WING BOMB BAY	11-2726 8-2912 4-1350 1x 640	9548	
B-29-BA last 11 (-15) thru (-20)	1-20MM. 4) .50 2) 1000* 2) 1000* 2) 1000* 2) 1000*	100 875* 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	
B-29-BA -25 thru 23 (-48)	4) 2) .50 2) 1000* 2) 1000* 2) 1000*	875* 1000* 1000* 1000* 1000*	UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	
B-29-BA -30 thru -40 (SEE **)	2-.50	1000*	POWER TAIL MT.	A S	A B O V E	

NOTES: \* FILLER STRIPS ARE ADDED IN AMMUNITION CANS TO REDUCE ROUNDS TO 500 PER GUN.  
\*\* 2 CAL. 50 ON -30, -35, 1st. 47 (-40)  
3 CAL. 50 ON LAST 15 (-40) THRU -68

BOEING (WICHITA) "BW"

MODEL & BLOCK NO.	ARMAMENT			FUEL		
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	MAX. CAPACITY (U. S. GALS)
B-29-BW -1 thru -20	1-20MM. 2) .50 2) 1000* 2) 1000* 2) 1000*	100 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	OUTBD. WINGS INBD. WINGS BOMB BAY	11-2726 8-2912 1x 640	8198
B-29-BW -25 thru last 25 (-48)	A S	A B O V E	OUTBD. WINGS INBD. WINGS CENTER WING BOMB BAY	11-2726 8-2912 4-1350 1x 640	9548	
B-29-BW LAST 75 (-48) thru last 80 (-50)	1-20MM. 4) .50 2) 1000* 2) 1000* 2) 1000* 2) 1000*	100 875* 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	
B-29-BW last 20 (-50) thru (-80)	4) 2) .50 2) 1000* 2) 1000* 2) 1000*	875* 1000* 1000* 1000* 1000*	UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	

NOTES: \* FILLER STRIPS ARE ADDED IN AMMUNITION CANS TO REDUCE ROUNDS TO 500 PER GUN.

BOEING (MONTANA) "BM"

MODEL & BLOCK NO.	ARMAMENT			FUEL		
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	MAX. CAPACITY (U. S. GALS)
B-29A-BM -1	1-20MM. 2) .50 2) 1000* 2) 1000* 2) 1000*	100 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	OUTBD. WINGS INBD. WINGS BOMB BAY	11-2726 8-2912 1x 640	8198
B-29A-BM -5 thru last 11 (-10)	A S	A B O V E	OUTBD. WINGS INBD. WINGS CENTER WING BOMB BAY	11-2726 8-2912 3-1100 1x 640	9298	
B-29A-BM last 9 (-10) thru (-15)	2) 2) .50 2) 1000* 2) 1000* 2) 1000*	1000* 1000* 1000* 1000* 1000*	UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	
B-29A-BM -20 & -40	4) 2) .50 2) 1000* 2) 1000*	875* 1000* 1000* 1000* 1000*	UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. POWER TAIL MT.	A S	A B O V E	

NOTES: \* FILLER STRIPS ARE ADDED IN AMMUNITION CANS TO REDUCE ROUNDS TO 500 PER GUN.

MARTIN (OMAHA) "MO"

MODEL & BLOCK NO.	ARMAMENT			FUEL		
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	MAX. CAPACITY (U. S. GALS)
B-29-MO -1 thru last 9 (-20)	1-20MM. 4) .50 2) 1000* 2) 1000* 2) 1000*	100 875* 1000* 1000* 1000* 1000*	TAIL, M2, TYPE B UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	OUTBD. WINGS INBD. WINGS CENTER WING BOMB BAY	11-2726 8-2912 4-1350 1x 640	9548
B-29-MO last 19 (-20) thru (-48)	4) 2) .50 2) 1000* 2) 1000* 2) 1000*	875* 1000* 1000* 1000* 1000*	UPPER FORE TRL. UPPER REAR TRL. LOWER FORE TRL. LOWER REAR TRL. TAIL POWER MT.	A S	A B O V E	

NOTES: \* FILLER STRIPS ARE ADDED IN AMMUNITION CANS TO REDUCE ROUNDS TO 500 PER GUN.

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TRAPPED UNAVAILABLE FUEL.—When doing extreme maneuvers or making a steep landing approach with low fuel quantities, residual fuel is trapped in the tanks, and can cause one or more engines to cut out because of lack of fuel.

(1) With the airplane fuselage centerline in a 20° nose down position, 268 gallons of fuel are trapped and made unavailable to each inboard engine, and 105 gallons are unavailable to each outboard engine. At a 15° angle, 190 gallons are unavailable to each inboard engine, and 70 gallons are unavailable to each outboard engine.

(2) Several gallons of fuel are trapped in each tank, with the airplane at rest on the ground, and cannot be picked up by the booster pumps.

(3) The residual fuel quantities in the tanks for various flight attitudes is shown in the following tabulations.

## RESIDUAL FUEL IN WING TANKS WHEN FLYING WITH WINGS LEVEL

FLIGHT ATTITUDE	TANKS 1 AND 4	TANKS 2 AND 3
Body CL 4° up	21 gals. ea.	17 gals. ea.
Body CL 2° up	18 gals. ea.	17 gals. ea.
Body CL 0°	18 gals. ea.	23 gals. ea.
Body CL 2° down	18 gals. ea.	37 gals. ea.
Body CL 4° down	21 gals. ea.	55 gals. ea.
Body CL 6° down	27 gals. ea.	71 gals. ea.
Body CL 8° down	33 gals. ea.	86 gals. ea.

## RESIDUAL FUEL IN CENTER TANKS WHEN FLYING WITH WINGS LEVEL

FLIGHT ATTITUDE	B29A CENTER SECTION TANKS	B29 CENTER SECTION TANKS	BOMB BAY TANKS
Body CL 2° up	0 gals.	17 gals.	3 gals. ea.
Body CL 4° up	1 gal.	24 gals.	9 gals. ea.
Body CL 0°	0 gals.	11 gals.	0 gals. ea.
Body CL 2° down	4 gals.	13 gals.	3 gals. ea.
Body CL 4° down	14 gals.	28 gals.	9 gals. ea.
Body CL 6° down	25 gals.	57 gals.	16 gals. ea.

## RESIDUAL FUEL QUANTITIES FOR VARIOUS FLIGHT ATTITUDES WITH EITHER WING 2 1/4° DOWN

FLIGHT ATTITUDE	TANK 1 Gals.	TANK 2 Gals.	TANK 3 Gals.	TANK 4 Gals.
Body CL 4° up	21	17	17	21
Body CL 2° up	18	18	16	18
Body CL 0°	18	32	14	18
Body CL 2° down	18	50	24	18
Body CL 4° down	21	72	38	21
Body CL 6° down	28	99	43	26
Body CL 8° down	36	121	51	30

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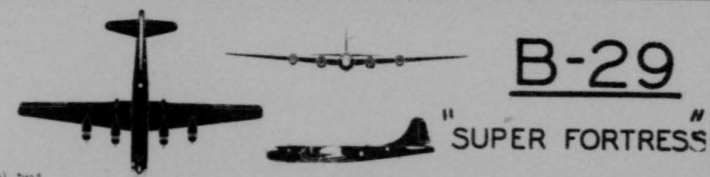
TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		PAGE
MODEL & BLOCK-NO.		ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE
NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT.		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX LAND.	COMBAT CREW	FUEL TANKAGE			NO. AND SIZE			INTERNAL	EXTERNAL	MAX. LOAD	TYPICAL MODELS CARRIED		
B-29 & A (LATEST MODEL)	WRIGHT R-3350-23, -23A, -41, -57 or -59 TURBO HAMILTON STD. 16" 7" DIA. x 9" SLL F.F., HYDROMATIC	T 2200/ 8 L W 2500/ - M 2200/25000 C 2000/25000	S 141' 3" L 99' H 29' 7" T 31' 6" W 1735 Sq. ft.	B 75000 C 120000 W 138000 M 120000	11 12	OUTRD. WINGS 14-2728 INRD. WINGS 9-2912 CENTER-WINGS 4-1350 BOMB BAY 4x 540 (240) *	40 21 21 21	500 500 500 500	UPPER FORE TRN. UPPER REAR TRN. LOWER FORE TRN. LOWER REAR TRN. TAIL POWER MT.	4-4000 8-2000 12-1500 12-1000 40- 500			20000	SEE NOTE (A)	REFER TO PAGE 4 FOR "FOREWORD." REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.			
B-29B (LATEST MODEL)	AS ABOVE	AS ABOVE	AS ABOVE	B 72700 C 120000 W 138000 M 120000	10	AS ABOVE	2-50	500	TAIL POWER MT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	(a) WAR EMERGENCY RATING WILL NOT BE USED UNLESS ALL FOUR ENGINES ARE R-3350-23A, -57 or -59. (b) RATINGS GIVEN WITHOUT RAM. (c) OUTBOARD TREAD 31" 6"; INBOARD TREAD 29" 5". (d) SEE PAGE OPPOSITE FOR ARMAMENT BREAKDOWN. AN/APG-15B USED WITH TAIL POWER MOUNT ON B-29B TO GIVE RADAR GUN SIGHTING FOR USE AGAINST NIGHT FIGHTERS.		

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT										RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS
	TO CLEAR 50'		GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			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	TAKE OFF WEIGHT	BOMBS CARGO	TOTAL FUEL	at 10,000 FT.	at 25,000 FT.	at 10,000 FT.	at 25,000 FT.	at 10,000 FT.	at 10,000 FT.			
B-29 & A	80000	-	-	-	30000	367	550	351	300	342	150	72.0	135000	NONE	8268	1800	5.0	1950	5.0	2550	9.5	2500	6.7	4550	20.5
B-29B *	80000	-	4400	-	25000	355	700	340	450	331	300	52.0	135000	NONE	5988	1800	5.0	2000	5.0	2550	9.4	2500	6.9	3800	17.7

NOTES:

B-29 & A	B-29B	NOTE
AN-100-1	AN-100-1	GLIDE PATH
AN-100-2	AN-100-2	CLIMB
AN-100-3	AN-100-3	SAFETY COMPASS
AN-100-4	AN-100-4	PROP
AN-100-5	AN-100-5	PROP
AN-100-6	AN-100-6	PROP
AN-100-7	AN-100-7	PROP
AN-100-8	AN-100-8	PROP
AN-100-9	AN-100-9	PROP
AN-100-10	AN-100-10	PROP
AN-100-11	AN-100-11	PROP
AN-100-12	AN-100-12	PROP
AN-100-13	AN-100-13	PROP
AN-100-14	AN-100-14	PROP
AN-100-15	AN-100-15	PROP
AN-100-16	AN-100-16	PROP
AN-100-17	AN-100-17	PROP
AN-100-18	AN-100-18	PROP
AN-100-19	AN-100-19	PROP
AN-100-20	AN-100-20	PROP

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



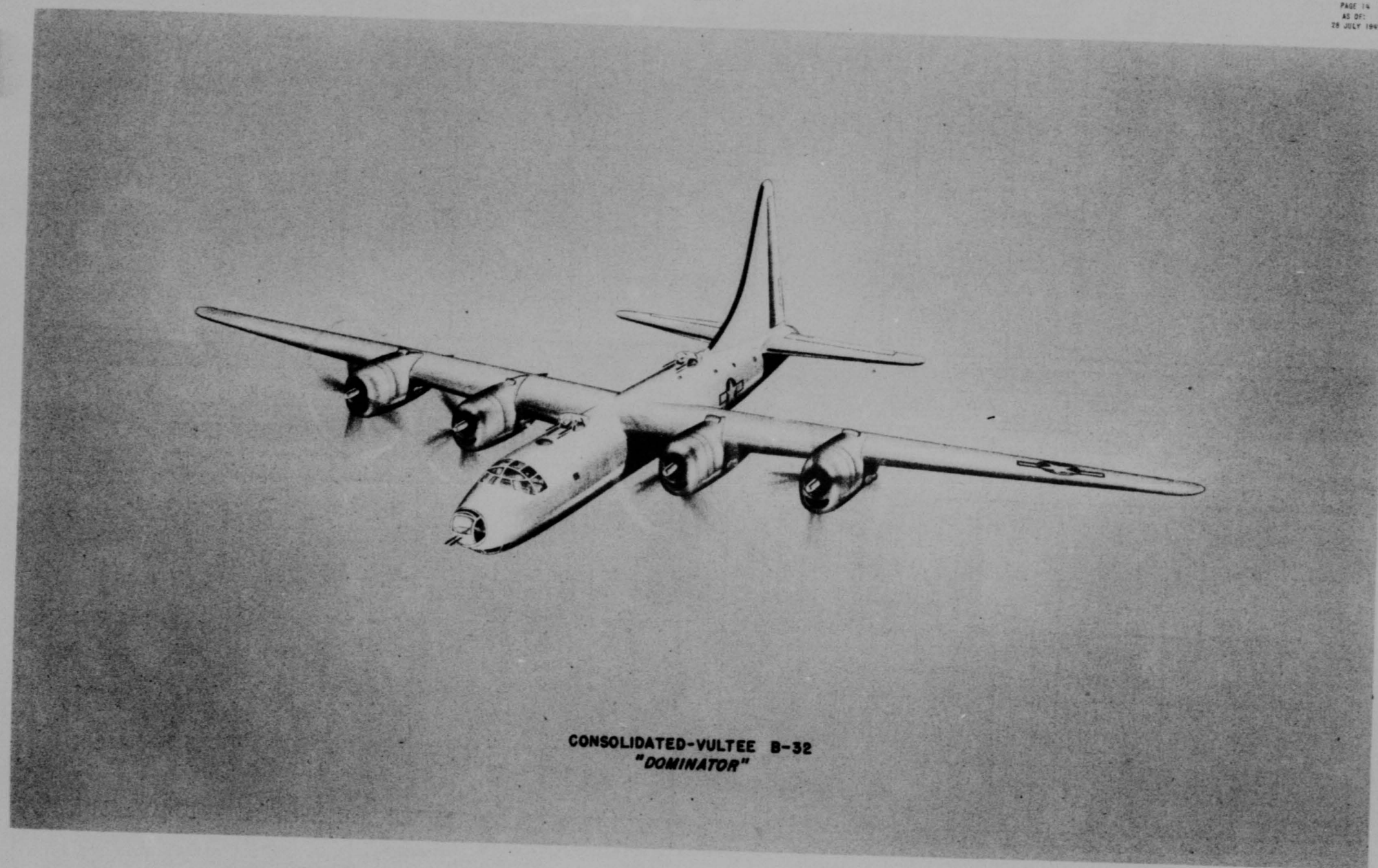
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28 JULY 1945



CONSOLIDATED-VULTEE B-32  
"DOMINATOR"

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### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

PAGE 15  
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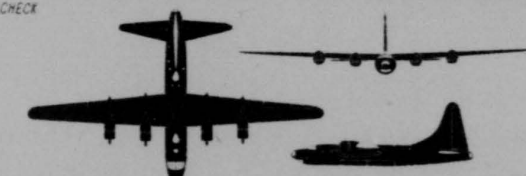
MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE	WEIGHT	COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE				B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. N-MAX.LAND	NOTES	FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION			NO. AND SIZE	
		T-TAKE OFF W-WAR EMERG. M-MILITARY C-CONTINUOUS					TYPE OR LOCATION ALSO (MAX. OIL)	NO AND CAPACITY ALSO (MAX. FUEL)	NO. GUNS AND SIZE	RDS PER GUN	LOCATION AND TYPE	INTERNAL	EXTERNAL	MAX. LOAD		
B-32-CF -1 thru -35		WRIGHT R-3350-23 TURBO CURTISS 16" H <sup>2</sup> OIAL-4 SL. CONST. SPD., ELECTRIC	T 2200/ 5 L W NONE M 2200/34000 C 2000/32500	S 135' 0" L 92' 1" H 33' 0" T 28' 0" W 1422 Sq.	B 62500 C 100000 W 114000 M 100000	INSTALLATION PENDING COMPLETION OF STATIC TESTS	10	INBOARD-WINGS OUTBOARD-WINGS BOMB BAY * (302)	5- 3450 5- 2010 2 x 750 (6950)	21 21 21 21	395 <sup>b</sup> 400 400 550 1000	NOSE TURRET FRONT TOP TURRET REAR TOP TURRET LOW. RAIL TURRET TAIL TURRET	4-4000 8-2000 8-1500 12-1000 40- 500	NONE 20000	SEE NOTE (A)	9-32 TECH. ORDER 01-SEQ-1 (5 MARCH 1945)  (a) BEGINNING WITH B-32-25 CF, PROVISIONS FOR INSTALLATION OF 2 BOMB BAY TANKS; 4 BOMB BAY TANKS CAN BE CARRIED IF SPECIAL INSTALLATION IS MADE. (b) NORMAL ROUNDS LISTED: SPACE PROVISIONS FOR 600 RDS. PER GUN.

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND- NO ALLOWANCE FOR RESERVE										REMARKS			
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		STD. ALT.	WAR EMERG.	MIL. POWER		MAX. CONTIN. POWER	LOADING			MAX. CONTINUOUS POWER				MAX. CRUISE POWER				LONG RANGE		
		LB	T.O. DIST. FT.	LAND DIST. FT.	LANDING SPEED MPH			T.O. DIST. FT.	LAND DIST. FT.		WEIGHT	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB	TAKE OFF WEIGHT	BOMBS	TOTAL FUEL	at 10000 FT.		at 25000 FT.		at 10000 FT.
B-32-CF -1 thru -35	70000 80000 90000 100000 110000 120000	- 3800 4500 5700 7300 9300	3700 4100 4600 5000 5500 7000	88 96 106 118 118 -	2200 2900 3400 4300 5500 7000	2800 2600 2900 3200 -	100000	NONE	157 247 324 312 296 281	350 550 700 850 950 1050	- 400 38.0	111500 119500 109000 121000	NONE 8000 8000 20000	8960 8000 5460 5460	1700 1350 1300	5.8 4.5 4.5	- 1400 4300 PRAC. CEIL.	4.8 2100 2050	10.5 9.2 8.2	2700 2200 2200	9.7 7.6 7.6	3600 3300 2900 2400	21.0 19.0 16.0 13.0	FLIGHT TEST IN PROGRESS

NOTES: (a) SCW-2744 COMMAND SET  
SCW-645 IFF  
SCW-978B EMERGENCY TRANSMITTER  
SCW-729 AIRBORNE INTERROGATOR  
SC-151  
AN/APN-5 BLIND LANDING  
MC-124 HELIX & BEACON  
RC-210 RADIO FILTERS  
AN/APN-7 RADIO COMPASS  
AN/APN-1 LOW ALT. RADIO ALTIMETER  
AN/APN-58 LAS  
AN/APN-13 870  
AN/APN-4 LOGAN  
AN/APN-3 STATIC DISCHARGER  
AN/APN-2 INTERPHONE  
PROVISIONS

RED FIGURES ARE PRELIMINARY: SUBJECT TO REVISION AFTER FLIGHT CHECK

\* MAX. WEIGHT HAS BEEN TENTATIVELY RESTRICTED TO 114000 LB. PENDING COMPLETION OF STATIC TESTS.



**B-32**  
"DOMINATOR"

MANUFACTURED BY CONSOLIDATED - VULTEE (SAN DIEGO) "CO" & CONSOLIDATED - VULTEE (FT. WORTH) "CF"

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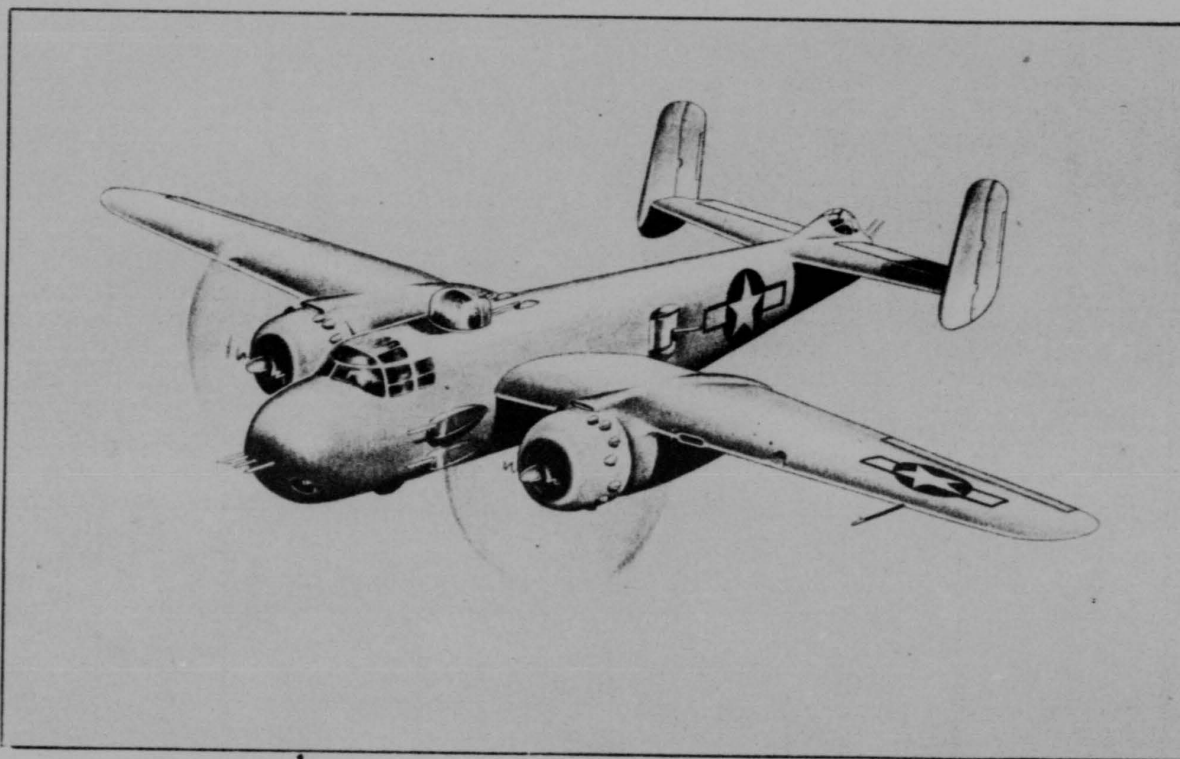


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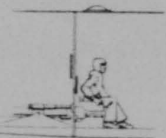
# B-25 MITCHELL BOMBER



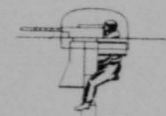
TAIL GUNNER  
B-25H&J



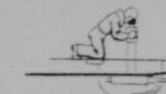
UPPER TURRET (REAR)  
B-25C, D, & G



CANNONEER  
B-25GAH



UPPER TURRET (FRONT)  
B-25H&J

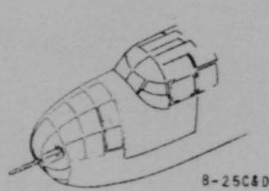


BOTTOM TURRET  
B-25C, D, & G

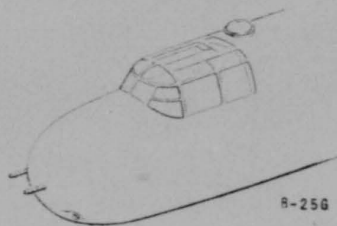


WAIST GUNNER  
B-25H&J

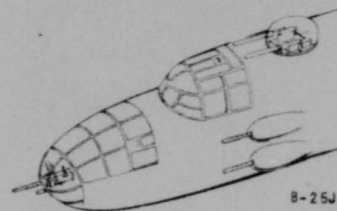
B-25H



B-25C&D



B-25G



B-25J

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		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 W-WAR MAX. M-MAX. LAND.	NOTES		FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION			NO. AND SIZE		TYPICAL MODELS CARRIED (SEE "A")	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.	
								TYPE OR LOCATION ALSO (MAX. OIL)	NO. AND CAPACITY ALSO (MAX. FUEL)	NO. GUNS AND SIZE	RDS. PER GUN	LOCATION AND TYPE	INTERNAL	EXTERNAL			
B-25C-NA -1 thru -25	2	WRIGHT R-2500-13 or -29 2 SPD. SUPERCH. HAMILTON STD. 17" DIA. -3 BL. T.F., HYDROMATIC	T 1700/ S L W 1840/ S L (-13) M 1700/ 4500 C 1400/ 13500	S 67' 6" L 52' 8" H 15' 3" T 19' 4" W 610 Sq. ft.	B 22000 C 33500 W 35000* M 32200	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 (75)	1) 300 1) 300 2) 400 2) 350	1) 300 1) 300 2) 400 2) 350	NOSE - FLEX. NOSE - FIXED UPPER TURRET LOWER TURRET (SOME MODELS)	1-2000 2-1500 3-1000 4-500 8-250 12-100	1-2000 2-1500 3-1000 4-500 8-250 12-100	2-1500 3-1000 4-500 8-250 12-100	SCR-211 SCR-249B SCR-274H SCR-287A SCR-522 SCR-535 SCR-578 SCR-595 SCR-695 AN/ARN-7 RC-32 RC-36 RC-43B RC-103 RC-196 RC-198	B-25C & D TECH. ORDER 01-60GB-1. (REV. 30 AUG. 1944) B-25G TECH. ORDER 01-60GC-1. (REV. 10 DEC. 1944) B-25H TECH. ORDER 01-60GD-1. (REV. 10 FEB. 1945) B-25J TECH. ORDER 01-60GE-1. (REV. 25 MARCH 1945)		
B-25G-NA -1 thru -10	2	AS ABOVE	AS ABOVE	S 67' 6" L 51' H 15' 9" T 19' 4" W 610 Sq. ft.	B 21700 C 33500 W 35000* M 32200	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 (75)	1-75mm 2) 21 2) 21 2) 21	21 21 2) 400 2) 350	NOSE - CANNON M4 NOSE - FIXED UPPER TURRET LOWER TURRET (SOME MODELS)	A S	A B O V E		(a) LENGTH B-25C is 53 FT. (b) B-25C-25 & D-20 THRU -35 HAVE SAME FUEL CAPACITY AS LISTED FOR B-25G. ONLY B-25G AIRPLANES CARRY 1 x 125 GAL. SIDE WAIST TANK. (c) B-25C-1 & D-1 CARRY ONLY 1-.30 CAL. FLEX. NOSE GUN OF 600 ROUNDS IN PLACE OF 2 NOSE GUNS. (d) ARMOR PIERCING BOMBS ON SOME MODELS ONLY. (e) BOMB BAY FUEL CONSISTS OF EITHER 1 x 215 GAL. SELF SEALING REMOVABLE TANK 1 x 335 GAL. METAL DROPPABLE TANK OR IN LIEU, 1 x 585 GAL. DROPPABLE METAL TANK. (f) SOME B-25H-1 MODELS CARRY ONLY 2 NOSE PACKAGE GUNS. (g) THE 2000 LB. STATION IS DELETED ON 131st. B-25H-5 AND SUBSEQUENT. ALSO 1st. 150 B-25J-1's.			
B-25H-NA -1 thru -10	2	AS ABOVE	AS ABOVE	S 67' 6" L 52' 11" H 15' 3" T 19' 4" W 610 Sq. ft.	B 22000 C 33500 W 35000* M 32200	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 (75)	1-75mm 2) 21 2) 21 2) 21	21 21 2) 400 2) 350	NOSE-CANNON T13E1 NOSE - FIXED FORE - PACKAGE SIDE WAIST - FL. UPPER TURRET TAIL POWER MT.	1-2000 2-1500 3-1000 4-500 8-250 12-100	1-2000 2-1500 3-1000 4-500 8-250 12-100	3200	(a) AS ABOVE EXCEPT MOUNTING LUGS & CONTROLS FOR EXTERNAL WING BOMBS INSTALLED ON LAST 250 B-25H-10 AND SUBSEQUENT.			
B-25J-NC -1 thru -35	2	AS ABOVE	AS ABOVE	S 67' 7" L 52' 11" H 15' 3" T 19' 4" W 610 Sq. ft.	B 21100 C 33500 W 35000* M 32200	5	A S A B O V E	1) 300 2) 300 2) 400 2) 250 2) 400 2) 600**	1) 300 2) 300 2) 400 2) 250 2) 400 2) 600**	NOSE - FLEX. NOSE - FIXED FORE - PACKAGE SIDE WAIST - FL. UPPER TURRET TAIL POWER MT.	1-2000 2-1500 3-1000 4-500 8-250 12-100	AS ABOVE EXCEPT MOUNTING LUGS & CONTROLS FOR EXTERNAL WING BOMBS INSTALLED ON LAST 250 B-25J-10 AND SUBSEQUENT.		T TORPEDO X EXTERNAL  ** 8(5") AR OR HYAR INSTALLED ON SOME SERVICE MODELS.			

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND, NO ALLOWANCE FOR RESERVE										REMARKS								
	TO CLEAR 50'		LANDING SPEED	GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			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	TAKE OFF WEIGHT	BOMBS CARRO.	TOTAL FUEL	at 10000 FT.	at 20000 FT.	at 10,000 FT.		at 20,000 FT.	at 10,000 FT.	at 10,000 FT.					
B-25C-NA -1 thru -25	24000	-	3300	105	-	1500	20000	-	-	265	-	250	-	-	34900	NONE	1684	1375	5.2	1450 <sup>2</sup>	5.7 <sup>2</sup>	2350	10.3	2175 <sup>2</sup>	10.0 <sup>2</sup>	2650	12.6	(N) SPEED LESS THAN FOR MAX. CONTINUOUS POWER DUE TO HIGH TIP SPEED LOSS.	
B-25D-NC -1 thru -35	27000	2900	3500	110	2300	1700	15000	NOT AVAILABLE	284	810	276	830	9.5	32200	3200	974	775	4.7	1300 <sup>2</sup>	5.2 <sup>2</sup>	2200	9.4	1950 <sup>2</sup>	9.0 <sup>2</sup>	2500	11.8			
B-25G-NA -1 thru -10	30000	4000	3800	112	3200	1900	10000	AS ABOVE	282	1225	274	1150	4.3	32200	2000 T	974	750	3.0	ABOVE PRAC- TICAL CEILING	1250	5.5	ABOVE PRAC- TICAL CEILING	1100	5.0	1525	7.3	1525	7.3	(S) FIRST PART OF FLIGHT AT 15000 FT.
B-25H-NA -1 thru -10	32000	4800	-	-	3900	-	5000	AS ABOVE	288	1375	257	1200	0.0	35000*	5200	974	725	2.9	ABOVE PRAC- TICAL CEILING	1100	5.0	ABOVE PRAC- TICAL CEILING	850	4.9	1350	8.1	850	4.9	* LIMIT DISPOSABLE ITEMS SO AS NOT TO EXCEED A LOADING OF 35000 LB. GROSS WEIGHT.
B-25J-NC -1 thru -35	35000	6000	-	-	4800	-	33500	AS ABOVE	266	1250	253	1110	0.0	34600	3200	974	725	2.8	575	2.7	1200	5.2	900 <sup>2</sup>	4.5 <sup>2</sup>	1300	6.2	1300	6.2	B-25J HIGH SPEED LOSSES AT MILITARY POWER WHEN CARRYING (8) 5" HYAR ON ZERO RAILES ARE AS FOLLOWS: 7 mph. at 4000 ft. 14 mph. at 10000 ft.

NOTES:

(A) SEVER OR MORE OF FOLLOWING:

SCR-211 FREQUENCY METER  
SCR-249B RADIO COMPASS  
SCR-274H COMMAND SET  
SCR-287A CLIMBING SET  
SCR-522 COMMAND SET  
SCR-535 SET  
SCR-578 EMERGENCY TRANSMITTER  
SCR-595 SET  
AN/ARN-7 SET  
RC-32 RADIO COMPASS  
RC-36 FILTER EQUIPMENT  
RC-43B INTERPHONE AMPLIFIER  
RC-438 MARKER BEACON  
RC-103 LOCALIZER  
RC-196 CONTACTOR UNIT  
RC-198 FILTER EQUIPMENT

RC-193 MARKER BEACON  
AN/AIC-2 INTERPHONE  
AN/APN-1 LOW ALT. ALTIMETER  
AN/ASW-1 GLIDE PATH  
AN/ASA-3 STATIC DISCHARGE

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



**B-25**  
"MITCHELL"

MANUFACTURED BY NORTH AMERICAN (INGLEWOOD) "NA" &amp; (KANSAS CITY) "NC"

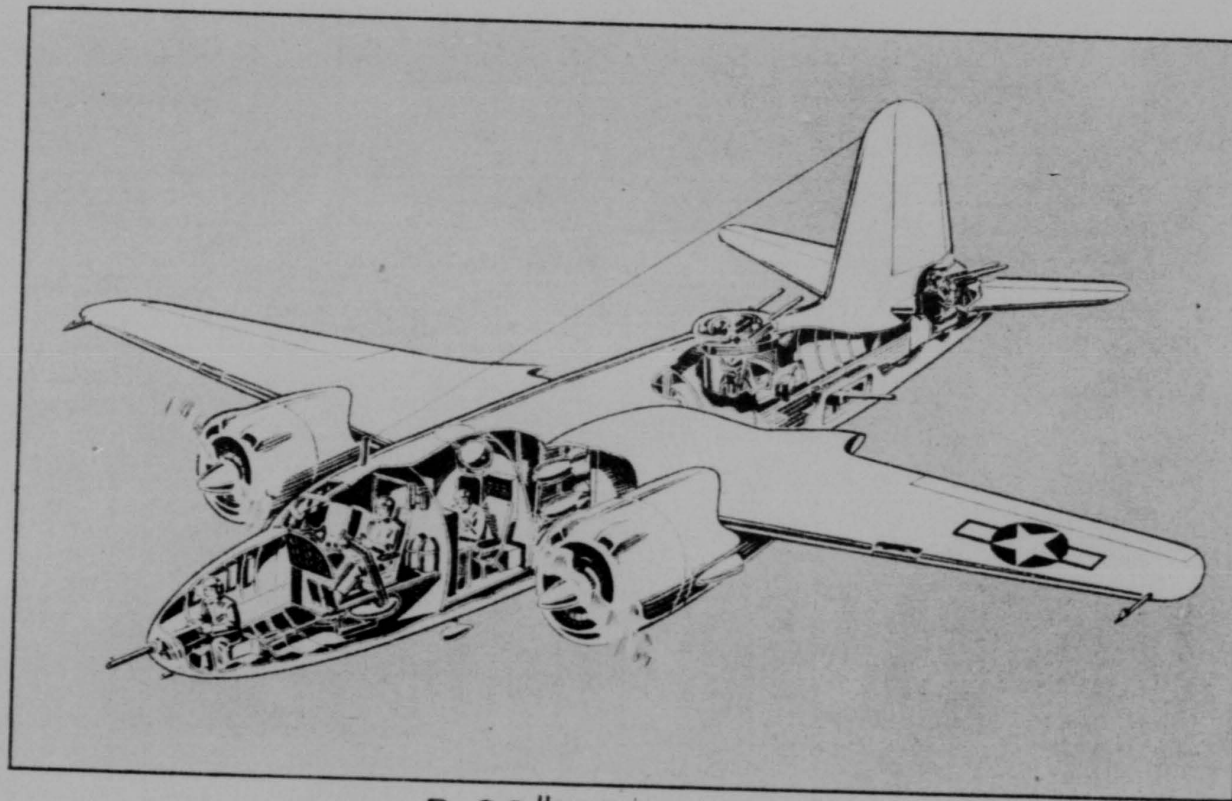
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PAGE 18  
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B-26 "MARAUDER"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT. T-TAKE OFF W-WAR EMERG M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX.LAND.	NOTES	FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION			NO. AND SIZE		TYPICAL MODELS CARRIED (SEE A)			
							TYPE OR LOCATION ALSO (MAX. OIL)		NO AND CAPACITY ALSO (MAX. FUEL)	NO. GUNS AND SIZE	RDS PER GUN	LOCATION AND TYPE	INTERNAL		EXTERNAL	MAX. LOAD	
B-26B-MA -10 thru -20	2	PRATT-WHITNEY 8-2800-43 2 SPD. SUPERCHARGER CURTIS	1920/ 3 L NONE 1920/ 3200 1490/ 14300 1550/ 7100 1360/ 14600	S 71' 0" L 58' 3" H 21' 5" T 22' 0" W 659 Sq. ft.	B 25300 C 37000 W 38200* M 34000	FLIGHT CHARACTERISTICS CRITICAL ABOVE 38200 LB.	MAIN - WINGS 2 x 380 AUX. - WINGS 2 x 121 BOMB BAY 4 x 250 (FORE & REAR) (83)	1) 200 2) 270 3) 240 4) 250 5) 200 6) 400 7) 800	NOSE - FIXED NOSE - FLEX. SIDE WAIST - FLEX. U. FUSEL. - PACKAGE L. FUSEL. - PACKAGE UPPER TURRET TAIL-POWER MOUNT	2-2000 2-1600 4-1000 8-500 15-250 30-100	1-2000T 5200	SCR-211 SCR-269B SCR-274 SCR-287A SCR-522 SCR-535 SCR-578 SCR-595 SCR-695 RC-35 RC-438 RC-103 RC-139 RC-32	B-26B & C TECH. ORDER 01-35EB-1. (REV. 30 APRIL 1945) B-26F & G TECH. ORDER 01-35EC-1. (REV. 15 OCT. 1944) (a) EARLY MODELS HAVE FLEXIBLE TAIL MOUNT WITH 1500 ROUNDS PER GUN INSTEAD OF POWER MOUNT. (b) EARLY MODELS HAVE SAME NUMBER OF BOMB STATIONS AS LISTED ABOVE; DECREASE IN BOMB STATIONS AS NOTED DUE TO DELETION OF 2 REAR BOMB BAYS. (c) FUEL CAPACITY 20 GAL. PER TANK GREATER DUE TO INCREASE OF 3 1/2° ANGLE INCIDENCE OF WING.				
B-26B-MA -25 thru -55	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		MAIN - WINGS 2 x 380 AUX. - WINGS 2 x 121 BOMB BAY 2 x 250 (FORE ONLY) (83)	1) 300 2) 250 3) 275 4) 225 5) 400 6) 900	NOSE - FLEX. SIDE WAIST - FLEX. U. FUSEL. - PACKAGE L. FUSEL. - PACKAGE UPPER TURRET TAIL-POWER MOUNT	2-2000 2-1600 4-1000 8-500 10-250 20-100	AS ABOVE						
B-26F-MA -1, -2 & -5	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		MAIN - WINGS 2 x 380 AUX. - WINGS 2 x 121 BOMB BAY 2 x 250 (FORE ONLY) (83)	1) 300 2) 250 3) 275 4) 225 5) 400 6) 900	NOSE - FLEX. SIDE WAIST - FLEX. U. FUSEL. - PACKAGE L. FUSEL. - PACKAGE UPPER TURRET TAIL-POWER MOUNT	2-2000 2-1600 4-1000 8-500 10-250 20-100	4000						

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND					HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT										RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND RUN		WEIGHT LB.	STD. ALT. FT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			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.	TAKE OFF WEIGHT LB.	BOMBS CARGO-BASS LB.	TOTAL FUEL U.S. GAL.	at 10000 FT. RANGE ENDUR.	at 20000 FT. RANGE ENDUR.	at 10000 FT. RANGE ENDUR.	at 20000 FT. RANGE ENDUR.	at 10000 FT. RANGE ENDUR.	at 10000 FT. RANGE ENDUR.		
		B-26B-MA -10 thru -20	28000		-	3400			135	-	1800	20000	-	-	-	-	-	-	38200*	NONE	1962	1425	5.2	1600	5.4	
B-26C-MA -5 thru -25	32000	3000	3900	136	1900	2000	15000	-	282	500	278	450	23.0	37800	NONE	1462	1000	3.8	1075	4.9	1725	7.8	1425	6.5	1825	9.2
B-26B-MA -25 thru -55	34000	3500	4200	138	2300	2200	10000	-	278	800	265	600	13.0	38200*	1500	1462	1000	3.8	1075	4.9	1700	7.8	1400	6.5	1800	9.2
B-26C-MA -30 & -45	36000	4000	-	-	2700	-	5000	-	285	1000	269	900	8.0	38300	2000	962	700	2.5	675	3.0	1100	4.9	800	4.0	1200	6.2
B-26F-MA -1, -2 & -5	28000	-	-	122	-	-	20000	-	255	-	258	-	-	38000	NONE	1502	1050	3.9	1175	5.1	1775	8.0	1525	6.2	1875	9.6
B-26G-MA -1 thru -25	32000	2500	-	124	1800	-	15000	-	274	-	274	350	31.6	35200	2000	1002	725	2.6	700	3.1	1150	5.1	900	4.2	1250	6.5
B-26G-MA -1 thru -25	34000	3000	-	125	2200	-	10000	-	277	-	269	390	17.2	35200	2000	1002	725	2.6	700	3.1	1150	5.1	900	4.3	1125	5.7

NOTES: (A) SCR-211 FREQUENCY METER  
SCR-269B RADIO COMPASS  
SCR-274 COMMAND SET  
SCR-287A LTA SET  
SCR-522 COMMAND SET  
SCR-535 SET  
SCR-578 FREQUENCY METER  
SCR-595 SET (107)  
SCR-695 SET (107)  
RC-32 FILTER EQUIPMENT  
RC-35 INTERPHONE AMPLIFIER  
RC-438 MARKER BEACON  
RC-103 LOCALIZER  
RC-139 FILTER EQUIPMENT

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

**B-26**  
"MARAUDER"

MANUFACTURED BY MARTIN (BALTIMORE) "MA" & (OMAHA) "MO"

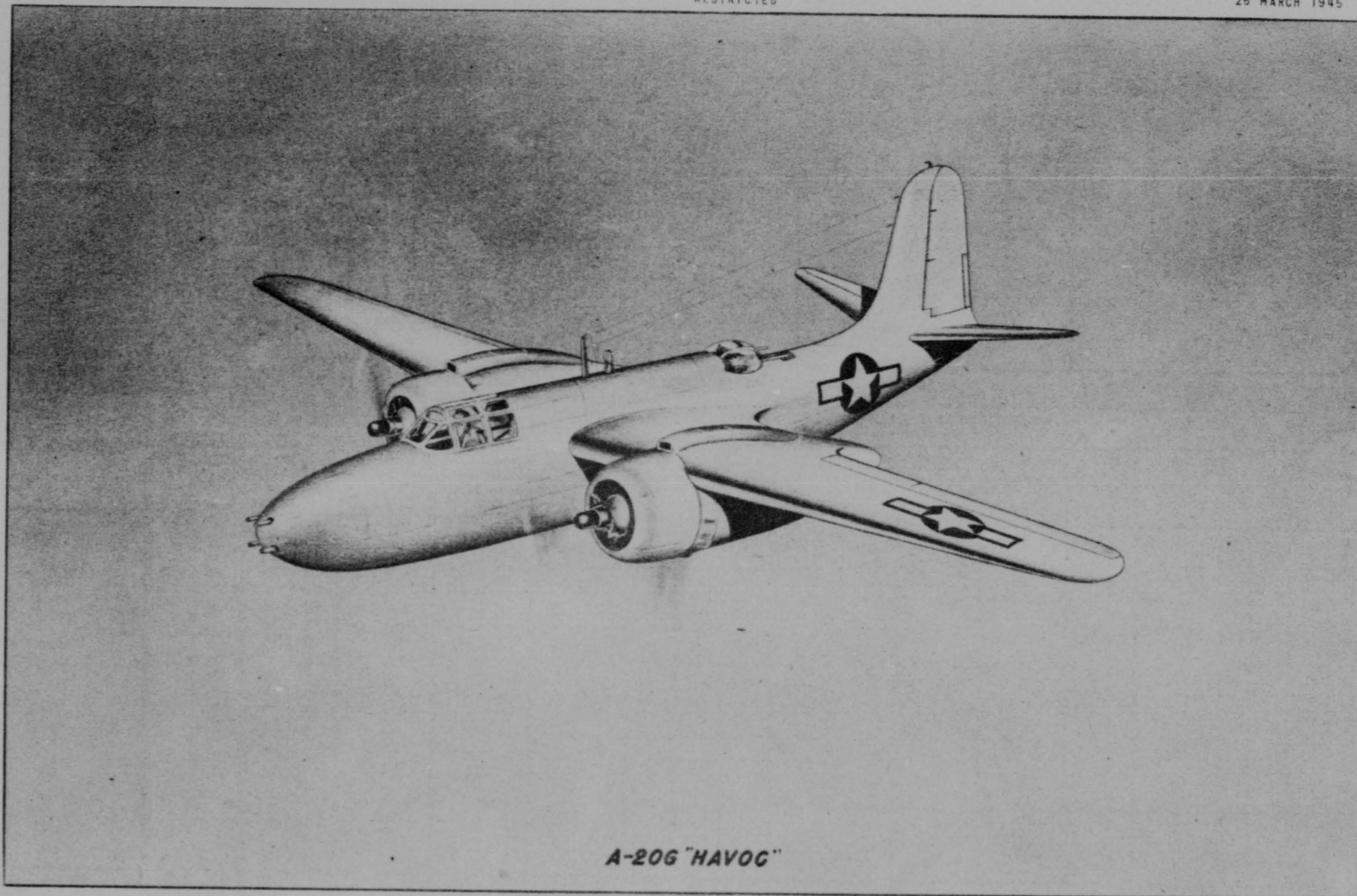
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX M-MAX LAND	NOTES	FUEL TANKAGE		NO GUNS AND SIZE	RDS PER GUN	LOCATION AND TYPE	NO. AND SIZE		MAX. LOAD	TYPICAL MODELS CARRIED (SEE 4)			
							TYPE OR LOCATION ALSO (MAX OIL)					NO AND CAPACITY ALSO (MAX FUEL)	INTERNAL			EXTERNAL		
A-20G-DO -5 thru -15	2	WRIGHT R-2600-13 2 SPD. SUPERCH. HAMILTON STD. 11"3"DIA.-3 BL. F.F. HYDROMATIC	T-1600/5 L W-1675/5 L M-1600/1000 C-1350/5000 (1275/11500)	S-61' 4" L-48' 0" H-17' 7" T-17' 0" W-465 Sq. Ft.	B-17200 C-24000 W-30000 M-24000		1	1940. - WINGS OUTRD. - WINGS FUS. (BOMB B.) DRDP. - WINGS (48)	2 x 135 2 x 54 2 x 70 4 x 580 (1080)	1 2 2 6	.30 .50 .50 .50	500 500 350	TUNNEL - FLEX. REAR COCKPIT NOSE - FIXED	4-500 4-250 4-100	1-2000T (PARTIALLY EXTERNAL)	2000	SCR-274 SCR-522 SCR-525 SCR-595 SCR-695 MW-26 RC-32 RC-36 RC-198	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING  A-20G & J TECH. ORDER 01-40-1 (REV. 5 MAR. 1945) A-20H & K TECH. ORDER 01-40A-1 (REV. 30 OCT. 1945)  (a) NO TORPEDO PROVISIONS ON -40 & -45 MODELS. T TORPEDO (REPLACES INTERNAL BOMBS WHEN CARRIED) X EXTERNAL  * 12(5") AR DR HYAR INSTALLED ON SOME MODELS IN SERVICE.
A-20G-DO -20 thru -45	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		3	1940. - WINGS OUTRD. - WINGS FUS. (BOMB B.) DRDP. - WINGS (48)	2 x 135 2 x 54 3 x 325 1 x 374 (1099)	1 2 2 6	.30 .50 .50 .50	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	4-500 4-250 4-100	4-500 4-250 4-100	4-500 4-500*		
A-20J-DO -1 thru -20	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		4	AS ABOVE		1 2 2	.50 .50 .50	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	AS ABOVE EXCEPT NO TORPEDO PROVISIONS ON -15 & -20 MODELS.				
A-20H-DO -1 thru -15	2	WRIGHT R-2600-29 2 SPD. SUPERCH. HAMILTON STD. 11"3"DIA.-3 BL. F.F. HYDROMATIC	T-1700/5 L W-1850/5 L M-1700/5200 C-1450/13400 (1500/5400 1350/5590)	S-61' 4" L-48' 0" H-18' 1" T-17' 0" W-465 Sq. Ft.	B-17800 C-25000 W-30000 M-24000		3	AS ABOVE		1 2 2	.50 .50 .50	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	4-500 4-250 4-100	4-500 4-250 4-100	4-500 4-500*		
A-20K-DO -1 thru -15	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		4	AS ABOVE		1 2 2	.50 .50 .50	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	AS ABOVE	AS ABOVE	4-500 4-500*		

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND						HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND- NO ALLOWANCE FOR RESERVE										REMARKS			
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		STD. ALT.	WAR EMERG.		MIL. POWER		MAX CONTIN. POWER		LOADING			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	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB	TAKE OFF WEIGHT	BOMBS CARGO	TOTAL FUEL	at 10000FT.	at 20000FT.	at 10000FT.	at 20000FT.		at 10000FT.	at 10000FT.	
A-20G-DO -5 thru -15	19000 21000 24000 28000 27000	- 3300 4900 6500 7000	- 3700 4000 - -	95 100 105 - -	2100 3100 3900 5000 6000	20000 15000 10000 5000 S L	NO DATA	305 317 315 305 300	420 875 1180 1500 1500	302 313 305 297 283	350 750 1000 1300 1300	18.5 12.8 7.1 3.2 0.0	25300 24000 24000	NOWE 2000 2000T	1080 540 540	925 425 350	3.1 1.5 1.4	1050 475 425	3.6 1.8 1.7	1450 825 575	5.7 2.5 2.3	1575 875 825	6.7 2.9 2.8	2025 875 776	10.5 4.2 4.0	(d) FLIGHTS ABOVE 10000 FT. REQUIRE SPECIAL OXYGEN PROVISIONS.
A-20G-DO -20 thru -45		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	20000 <sup>b</sup> 15000 <sup>b</sup> 10000 5000 S L	NO DATA	291 311 312 305 302	240 820 1000 1300 1300	280 299 295 290 275	500 500 850 1100 1100	18.5 8.8 3.5 2.5 0.0	25200 26000 25000 26000	NOWE 2000 2000T 4000	1099 725 725 400	725 600 475 375	2.5 2.0 1.8 1.1	1000 625 575 250	3.6 2.4 2.1 1.3	1525 1025 875 450	6.7 4.3 3.4 2.2	1450 900 775 325	5.1 4.0 3.8 1.8	1925 1175 1050 550	9.4 5.7 5.5 2.7	
A-20J-DO -1 thru -20		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	
A-20H-DO -1 thru -15	19000 21000 24000 28000 27000	- 3300 3500 4500 5000	- 3700 4000 - -	94 100 108 - -	2100 3100 3900 5000 6000	20000 <sup>b</sup> 15000 <sup>b</sup> 10000 5000 S L	NO DATA	315 322 320 305 300	575 1100 1250 1700 1700	307 317 301 299 285	500 1100 1100 1500 1500	18.0 11.6 6.6 2.5 0.0	25400 26000 26100	NOWE 2000 2000	1099 725 400	775 525 325	2.7 1.6 1.0	1025 575 250	3.8 2.1 1.0	1425 875 450	5.4 3.4 1.7	1550 925 375	5.3 3.6 1.6	1975 1225 525	8.7 5.2 2.3	
A-20K-DO -1 thru -15		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	

NOTES:  
(A) FIVE OF MORE OF FOLLOWING:  
SCR-274 COMMAND SET  
SCR-522 COMMAND SET  
SCR-525 IFF  
SCR-595 IFF  
SCR-695 IFF  
MW-26 RADIO COMPASS  
RC-32 FILTER EQUIPMENT  
RC-36 INTERPHONE AMP.  
RC-198 FILTER EQUIPMENT

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



A-20  
"HAVOC"

MANUFACTURED BY DOUGLAS (SOUTH WING) "DO"

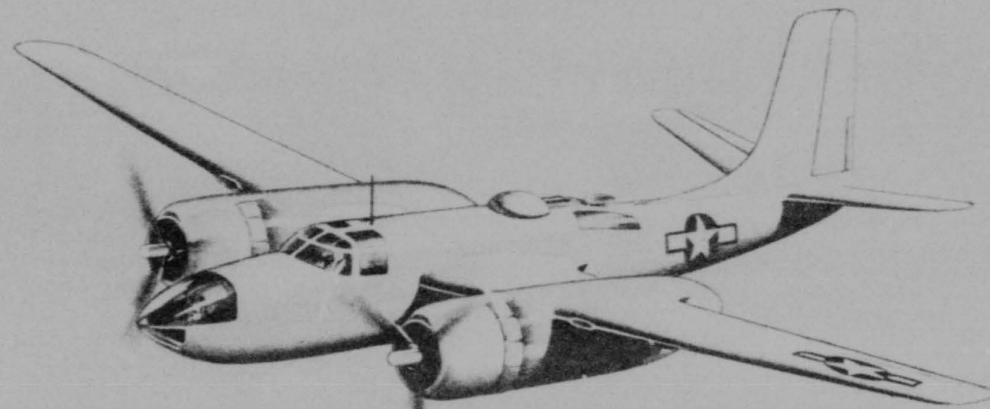
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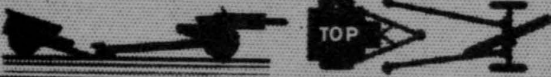
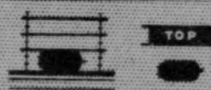






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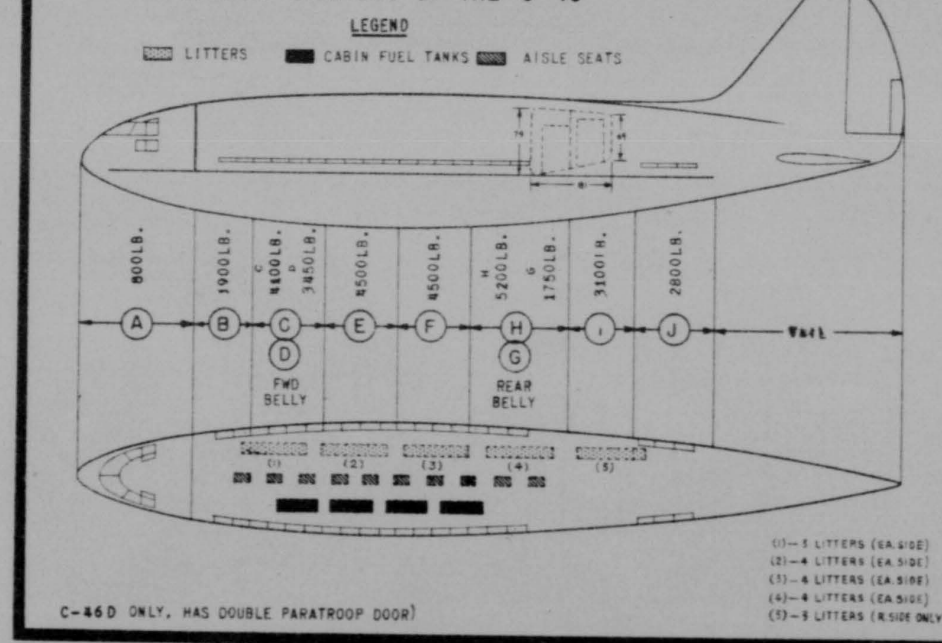
## LOADING THE CURTISS "COMMANDO"

ITEM	WEIGHT	STATION
JEEP 	3100 LB.	(C) THRU (H)
105 MM GUN & CAISSON 	GUN 4300LB. CAISSON 4700LB.	(E) THRU (H)
LITTERS 	3 TIER LITTER 50LB. OXYGEN BOTTLE 138LB.	REAR - (B) THRU FORE - (J)
75 MM HOWITZER & CAISSON 	HOWITZER 2100LB. CAISSON 5000LB.	(C) THRU (H)
37 MM GUN & MOTOR CHASSIS 	5500LB.	(C) THRU (H)
75 MM GUN & CAISSON 	GUN 3400LB. CAISSON 5000LB.	(C) THRU (H)
LARGE ENGINE & MOUNT 	4900LB.	(C) THRU (I)

## WEIGHT LEGEND

ATTENDANT OR PASSENGER — 200LB.  
TROOP AND EQUIPMENT — 240LB.  
LITTER (INCL. PATIENT) — 250LB.  
PARACAN — 250LB.  
PARATROOPER — 260LB.

## LOADING STATIONS OF THE C-46



ANY COMBINATION OF CARGO CAN BE CARRIED BUT MUST SATISFY FOUR REQUIREMENTS: (1) Total weight. (2) Space limitations. (3) Center of gravity. (4) Floor loading. (Typical items are illustrated).

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		CARGO OR PASSENGERS			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 W-WAR MAX. M-MAX LAND		X NOTES	FUEL TANKAGE		STATION	CAPACITY	MAX. LOAD LB.	STATION	PLACES	MAX. LOAD LB.	TYPICAL MODELS CARRIED (SEE 14)	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.
			T-TAKE OFF W-WAR EMERG M-MILITARY C-CONTINUOUS	W-NONE					M	C								
C-46A-5 thru -51 (C) C-46A-1, -5, -55, -60 (C) C-46A-1 (CS) C-46D-1 thru -20 (C)	2	PRATT-WHITNEY R-2000-11 or -75 2 SPEED-SINGLE STD. CURTIS 13' 6" DIA. - 4 BL. F.F., ELECTRIC	T 2000/ 5 L W NONE M 2000/ 1500 1800/ 1250 1900/ 1250 C 1450/ 1300	S 126' 0" L 76' 4" H 22' 0" T 25' 0" W 1360 Sq. Ft.	B 31500 C 49900 W 56000 M 49500		WING - FORE 2 x 244 WING - CENTER 2 x 265 WING - REAR 2 x 171 FUSEL - REMOVE 8 x 100 (2002)	CABIN (MAIN) BELLY (FORE) BELLY (AFT)	10000 2700 1800	15000	TROOPS* or LITTERS ATTENDANTS	50 or 33 4	12000 or 9000	SCR-211, 259-270K, 287, 516, 522, 576, 595, RC-36, 43, 103, 198, WA-26 AN/A1C-2,2 AN/ARA-10 AN/ARC-5,9, AN/ARN-5,7,11 AN/ARR-1 AN/ASA-1 AN/APN-1,2,4	C-46A & D TECH. ORDER 01-25LA-1 (25 MAY 1945) C-46E TECH. ORDER 01-25LB-1 (10 JUNE 1945)  (*) LATER C-46D'S HAVE EXTRA PARATROOP DOOR.			
C-46E-CS C-46F-CU -1	2	PRATT-WHITNEY R-2000-75 2 SPEED-SINGLE STD. HAMILTON STD. 15' 1" DIA. - 3 BL. F.F., HYDROMATIC	T AS ABOVE W AS ABOVE M AS ABOVE C AS ABOVE	S AS ABOVE L AS ABOVE H AS ABOVE T AS ABOVE W AS ABOVE	B 31700 C 49600 W 56000 M 49500		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 AND ENDURANCE										REMARKS						
	HARD SURFACE - NO WIND				CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE																
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING		MAX. CONTIN.		LONG RANGE		CRUISE							
LB	T.O. DIST.	LAND DIST.	LAND SPEED	T.O. DIST.	LAND DIST.			HIGH SPEED	RATE OF CLIMB	HIGH RATE OF CLIMB	RATE OF CLIMB	HIGH RATE OF CLIMB	RATE OF CLIMB	TAKE OFF WEIGHT	BOMBS CARGO	TOTAL FUEL	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.					
C-46A-5 thru -51 (C) C-46A-1, -5, -55, -60 (C) C-46A-1 (CS) C-46D-1 thru -20 (C)	34000 38000 40000 45000 50000	- 2100 2300 2900 3500	2300 2500 2600 2800 -	82 88 94 96 -	- 1900 1900 2100 -	1100 1400 1500 1600 -	15000 10000 5000 5 L		270 284 292 295	525 700 825 900	246 290 234 220	350 450 525 615	29.2 17.4 7.3 0.0	50000 48000 48000 50000	1400 4000 5000 19000	2302 1402 1050 1050	1500 900 850 625	5.2 3.8 2.7 2.7	2975 1800 1800 1225	17.7 10.3 7.3 7.0	2475 1750 1250 1150	15.4 9.2 5.7 5.2	2825 1700 1200 1000	14.8 10.2 7.3 5.3	2475 <sup>b</sup> 1900 1030 950 <sup>b</sup>	13.8 <sup>b</sup> 9.0 5.3 5.5 <sup>b</sup>	(b) FIRST 4 HRS. OF FLIGHT AT 15000 FT. ALTITUDE. (c) FIRST 3 HRS. OF FLIGHT AT 15000 FT. ALTITUDE.
C-46E-CS C-46F-CU -1		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	15000 5000 5 L		278 270 274 253	525 700 850 950	255 240 239 222	325 450 575 650	28.8 16.5 7.5 0.0	50000 41000 46000 50000	1200 3800 5800 9800	2302 1402 1050 1050	1425 850 850 625	5.3 3.1 2.7 2.7	3050 1850 1350 1250	18.7 11.8 8.4 7.7	3025 1850 1350 1200	17.8 11.0 7.9 7.0	2950 1825 1200 1150	16.8 10.3 7.3 6.5	2550 <sup>c</sup> 1450 1150 1000 <sup>c</sup>	14.3 <sup>c</sup> 9.0 5.3 5.8 <sup>c</sup>	

NOTES:	(A) EARLY TYPES	NAME	LATER TYPES	RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.
	20-21	22-23	24-25	
	26-27	28-29	30-31	
	32-33	34-35	36-37	
	38-39	40-41	42-43	
	44-45	46-47	48	



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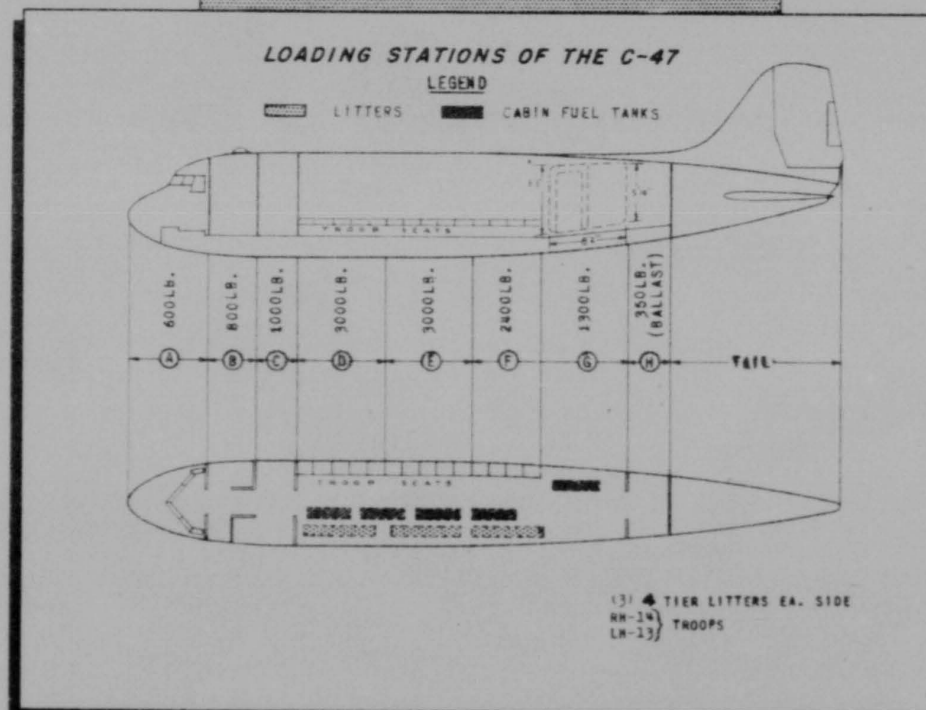
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# LOADING THE DOUGLAS "SKYTRAIN"

ITEM	WEIGHT	STATION
<b>JEEP</b> 	3100 LB.	(D) OR (E)
<b>LITTERS</b> 	4 TIER LITTER 50LB. OXYGEN BOTTLE 138LB.	(D) THRU (F)
<b>75 MM HOWITZER &amp; CAISSON</b> 	HOWITZER 2100LB. CAISSON 5000LB.	(D) THRU (F)
<b>37 MM GUN &amp; MOTOR CHASSIS</b> 	5500LB.	(D) AND (E)
<b>75 MM GUN &amp; CAISSON</b> 	GUN 3400LB. CAISSON 5000LB.	(D) THRU (F)
<b>LARGE ENGINE &amp; MOUNT</b> 	4900LB.	(D) AND (E)

### WEIGHT LEGEND

- ATTENDANT OR PASSENGER — 200LB.
- TROOP AND EQUIPMENT — 240LB.
- LITTER (INCL. PATIENT) — 250LB.
- PARACAN — 250LB.
- PARATROOPER — 250LB.



ANY COMBINATION OF CARGO CAN BE CARRIED BUT MUST SATISFY FOUR REQUIREMENTS: (1) Total weight. (2) Space limitations. (3) Center of gravity. (4) Floor loading. (Typical items are illustrated).

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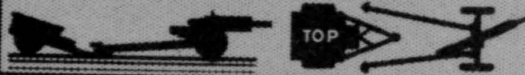
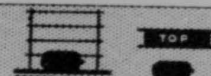






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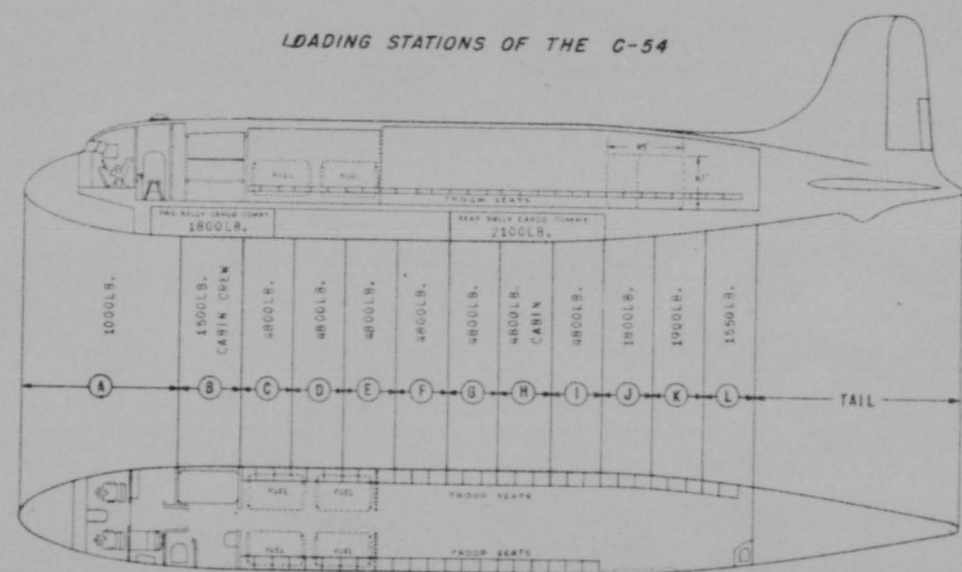
# LOADING THE DOUGLAS "SKYMASTER"

ITEM	WEIGHT	STATION
JEEP 	3100 LB.	(C) THRU (L)
105 MM GUN & CAISSON 	GUN 4300 LB. CAISSON 4700 LB.	INTERNAL (C) THRU (L) EXTERNAL (E)
LITTERS 	3 TIER LITTER 50 LB. OXYGEN BOTTLE 138 LB.	(C) THRU (L)
37 MM GUN & MOTOR CHASSIS 	5500 LB.	(C) THRU (L)
75 MM GUN & CAISSON 	GUN 3400 LB. CAISSON 5000 LB.	INTERNAL (C) THRU (L) EXTERNAL (E)
LARGE ENGINE & MOUNT 	4900 LB.	(C) THRU (L)
LIGHT TANK 	15,500 LB.	EXTERNAL ONLY (F)

### WEIGHT LEGEND

ATTENDANT OR PASSENGER — 200 LB.  
TROOP AND EQUIPMENT — 240 LB.  
LITTER (INCL. PATIENT) — 250 LB.  
PARACAN — 250 LB.  
PARATROOPER — 260 LB.

### LOADING STATIONS OF THE C-54



WITHOUT FUSELAGE TANKS—36 LITTERS  
WITH FUSELAGE TANKS—26 LITTERS

ANY COMBINATION OF CARGO CAN BE CARRIED BUT MUST SATISFY FOUR REQUIREMENTS: (1) Total weight. (2) Space limitations. (3) Center of gravity. (4) Floor loading. (Typical items are illustrated).

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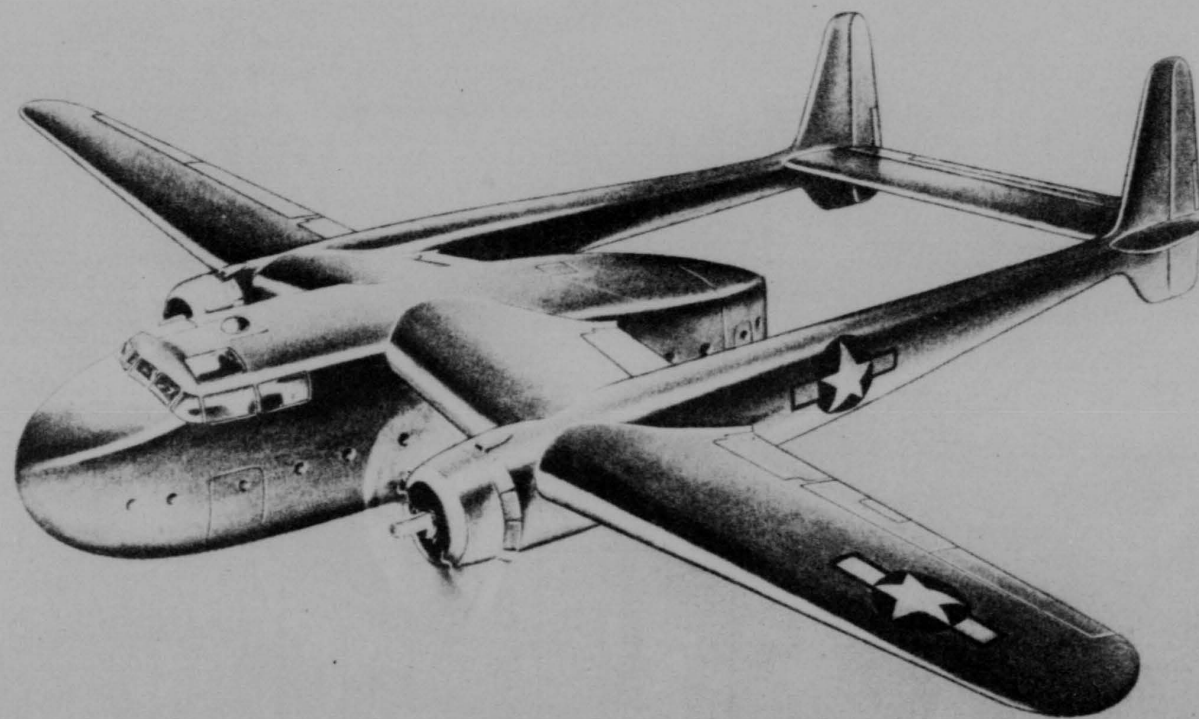




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PACKET  
FAIRCHILD C-82

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### TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

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MODEL & BLOCK-NO.	ENGINE & PROP.		SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		CARGO OR PASSENGERS			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 W-WAR MAX M-MAX LAND		NOTES	FUEL TANKAGE		STATION	CAPACITY	MAX LOAD		STATION	PLACES	MAX LOAD	TYPICAL MODELS CARRIED (SEE X)
			T-TAKE OFF W-WAR EMERG M-MILITARY C-CONTINUOUS	W					TYPE OR LOCATION ALSO (MAX OIL)	NO AND CAPACITY ALSO (MAX FUEL)								
C-69-LO -1 thru -10	4	WRIGHT R-3350-35 SINGLE SPEED HAMILTON STD. 15" 2" DIA.-3 BL. F.F., HYDROMATIC	T 2200/ 5 L W NONE M 2200/ 5000 C 2000/ 5000	S 123' 0" L 95' 2" H 23' 8" T 28' 0" W 1550 Sq. ft.	B 50500 C 82000 W 101000 M 82000	9	OUTRD.-WINGS 2 x 1590 INRD.-WINGS 2 x 820 (200)	2 x 1590 2 x 820 (4820)	CASIN-MAIN	21000	21000	PERSONNEL YAGGAGE	40 2500	14000	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING			
C-82 {FA NT	2	PRATT-WHITNEY R-2800-22C INTEGRAL SUPERCH. HAMILTON STD. 15" 2" DIA.-3 BL. F.F., HYDROMATIC	T 2100/ 5 L W NONE M 2100/ 1000 C 1700/ 7000 1450/ 18500	S 108' 5" L 75' 10" H 26' 4" T 28' 0" W 1400 Sq. ft.	B 28500 C 42000 W 82000 M 42000	5	OUTRD.-WINGS 2 x 785 INRD.-WINGS 2 x 344 (180)	2 x 785 2 x 344 (3454)	CASIN-MAIN	19400	19400	TROOPS PARACANS LETTERS ATTENDANTS	42 2500 32 6	12000	(1) C-69-10-LO HAS ONLY 43 PLACES; OTHERS HAVE 50. (2) SOME MODELS HAVE 14-50 CAL. FLEX. TAIL GUN WITH 500 HRS.			
C-87-CF	4	PRATT-WHITNEY R-1830-43 or -65 TURBO HAMILTON STD. 11" 7" DIA.-3 BL. F.F., HYDROMATIC	T 1200/ 5 L W NONE M 1200/ 26500 C 1100/ 27000	S 110' 0" L 68' 4" H 18' 0" T 25' 8" W 1048 Sq. ft.	B 33400 C 59000 W 71200 M 56000	5	INRD.-WINGS 12- 2344 OUTRD.-WINGS 6- 450 (156)	12- 2344 6- 450 (2814)	CASIN-MAIN NOSE COMPART.	11000 1000	12000	PERSONNEL HAGGAGE	20 400	4800	SCR-274, 269, 211, 287, 578, 695, RC-25, 43, 103.			

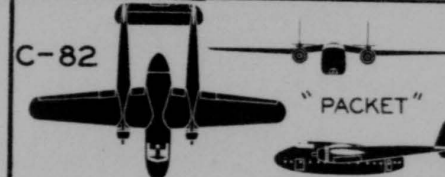
MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND				HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS						
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	WEIGHT LB.	STD. ALT. FT.	WAR EMERG.		MIL POWER		MAX CONTIN. POWER		LOADING			MAX. CONTIN.		LONG RANGE CRUISE									
		TO	LAND				HIGH	RATE	HIGH	RATE	HIGH	RATE	TAKE	BOMBS	TOTAL	at 10000 FT.		at 5000 FT.		at 10,000 FT.		at 15,000 FT.		at 20,000 FT.			
		DIST.	DIST.				SPEED	CLIMB	SPEED	CLIMB	SPEED	CLIMB	OFF	CARGO	FUEL	RANGE	ENDUR.	RANGE	ENDUR.	RANGE		ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE
C-69-LO -1 thru -10	55000 70000 75000 80000 93000	- 2400 2700 3100 4500	2400 2900 3000 - -	84 91 92 - -	20000 15000 10000 5000 5 L	20000 15000 10000 5000 5 L	NO DATA	NO DATA	310 322 329 327 311	- - - 1600 1800	308 317 323 320 304	225 520 1030 1400 1700	25.0 13.3 7.1 3.1 0.0	82000 93000	NONE 11000	4016 4616	2276 2200	7.4 7.4	4024 3800	19.4 17.5	4050 3775	17.9 15.6	3925 3675	15.1 15.2	3000 3225	10.4 12.1	(1) A.R. MIXTURE NECESSARY FOR ENTIRE FLIGHT. (2) FIRST 5.5 HRS. AT 15,000 FT. WITH A.L. MIXTURE; BALANCE AT 20000 FT. WITH A.R. MIXTURE.
C-82 {FA NT	30000 35000 42000	- 2500 3000	1800 2000 2300	83 85 91	20000 15000 10000 5000 5 L	20000 15000 10000 5000 5 L	NO DATA	NO DATA	222 223 219 221 212	425 620 815 1150 1410	24.7 14.2 7.5 4.5 0.0	42000 42000	NONE 1000 1070	1150 950	5.4 3.2	2800 1400	19.8 9.5	1500 1250	15.2 8.3	2375 1100	13.8 5.1	1775 575	9.0 3.3				
C-87-CF	34500 40000 45000 50000 56000 62000	- 2100 2500 2900 3800 5000	2300 2700 3000 3200 4300 -	87 90 95 100 105 -	20000 20000 15000 10000 5000	25000 20000 15000 10000 5000	NO DATA	NO DATA	296 292 280 266 255	1050 1100 1150 1200 1200	300 287 275 262 249	850 900 950 1000 1000	26.8 20.9 15.3 8.0 4.2	53500 56000 62000	NONE 2500 8500	2814 2814 2814	NO RELIABLE DATA	3175 3050 2800	19.5 18.4 17.0	3150 3025 2775	17.4 15.8 15.7	3050 2950 2700	15.5 14.9 13.7	3000 2875 2600	14.5 14.0 12.9	C-82 FLIGHT TEST REQUESTED	

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




C-69  
"CONSTELLATION"

LOCKHEED (MCKINNEY) "L-10"



C-82  
"PACKET"

FAIRCHILD (HAMILTON) "F-1" & NORTH AMERICAN (DALLAS) "N-1"



C-87  
"LIBERATOR EXPRESS"

WHEELER (EST. NORTH) "L-1"

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# TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

PAGE 32


AS OF 28 JUNE 1945

MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE	WEIGHT	COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE			
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT.				S-SPAN LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX M-MAX LAND	NOTES	FUEL TANKAGE		(NO. ROCKETS-SIZE-INSTALLATION)				NO. AND SIZE		
										TYPE OR LOCATION ALSO (MAX. OIL)	NO. AND CAPACITY ALSO (MAX. FUEL)	NO. GUNS AND SIZE	RDS PER GUN			LOCATION AND TYPE	INTERNAL	EXTERNAL
P-38G-LO -1 thru -15	2	ALLISON V-1710-51 & -55 TURBO CURTISS 11' 5" DIA. - 3 BL. E.F., ELECTRIC	T 1425/3 L W NONE M 1100/27000 C 1100/24000	S 52' 0" L 27' 10" H 12' 10" T 15' 8" W 326 sq. ft.	B 12500 C 15800 W - M -	1	MAIN - WINGS 2 x 50 RES. - WINGS 2 x 50 DROPP. - WINGS 2 x 750pt (25)	4-.50 1-20mm	500 150	NOSE - FIXED NOSE-AN CANNON	NOSE	2-1000 2-500 2-225 2-250 2-100	2000	SCR-274 SCR-522 SCR-695 MM-26 AN/APS-13 AN/ARC-3 BC-1206	<p>REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.</p> <p>P-38G TECH. ORDER 01-75F-1 (REV. 30 SEPT. 1944) P-38H, J, L TECH. ORDER 01-75-1 (REV. 15 FEB. 1945)</p> <p>(a) LIMITED TO 1150 H.P. BECAUSE OF INADEQUATE COOLING. (b) LAST (200) P-38G-10' HAVE MAX. FUEL AS LISTED FOR P-38H MODELS. (c) LAST (200) P-38G-10' HAVE BOMB LOAD AS LISTED FOR P-38H MODELS. (d) LIMITED TO 1240 H.P. BECAUSE OF INADEQUATE COOLING. P-38J'S HAVE CORE TYPE COOLER GIVING INCREASED ENGINE RATINGS AS LISTED. (e) ROCKETS INSTALLED ON P-38L-5 MODELS ONLY: CLUSTER OF 3 LOADED ROCKET TUBES (KITS ISSUED FOR EARLY MODELS) UNDER EACH WING, REDUCES TOP SPEED 20 MPH. AT 15000 FT.</p>			
P-38H-LO -1 & -5	2	ALLISON V-1710-89 & 91 TURBO CURTISS 11' 5" DIA. - 3 BL. E.F., ELECTRIC	T 1425/3 L W NONE M 1240/25000 C 1100/24000	S 52' 0" L 27' 10" H 12' 10" T 15' 8" W 326 sq. ft.	B 13700 C 16200 W - M -	1	MAIN - WINGS 2 x 90 RES. - WINGS 2 x 50 DROPP. - WINGS 2 x 750pt 2 x 1500pt 2 x 300 (20)	4-.50 1-20mm	500 150	NOSE - FIXED NOSE-AN - WDC	NOSE	2-1000 2-1000 2-500 2-325 2-250 2-100	3200					
P-38J-LO -5 thru -25	2	AS ABOVE	T 1425/3 L W 1600/26500 M 1425/26100 C 1100/22400	S 52' 0" L 27' 10" H 12' 10" T 15' 8" W 326 sq. ft.	B 14100 C 17500 W - M -	1	MAIN - WINGS 2 x 90 RES. - WINGS 2 x 50 L.E. - WINGS 2 x 55 DROPP. - WINGS 2 x 1500pt 2 x 150pt 2 x 150pt (20)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE					
P-38L-LO -1 & -5	2	ALLISON V-1710-111 & -113 TURBO CURTISS 11' 5" DIA. - 3 BL. E.F., ELECTRIC	T 1425/3 L W 1500/26700 M 1425/29000 C 1100/23800	S 52' 0" L 27' 10" H 12' 10" T 15' 8" W 326 sq. ft.	B 14100 C 17500 W - M -	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE					
P-38L-VN -5	2	AS ABOVE	T 1425/3 L W 1500/26700 M 1425/29000 C 1100/23800	S 52' 0" L 27' 10" H 12' 10" T 15' 8" W 326 sq. ft.	B 14100 C 17500 W - M -	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE					

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE-NO WIND						HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS					
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			MAX. CONTINUOUS POWER				MAX. CRUISE POWER				LONG RANGE			
		LB	T.O. DIST. FT.	LAND DIST. FT.	LANDING SPEED MPH			T.O. DIST. FT.	LAND DIST. FT.	HIGH SPEED MPH	RATE OF CLIMB FT. MIN.	HIGH RATE OF CLIMB FT. MIN.	HIGH RATE OF CLIMB FT. MIN.	HIGH RATE OF CLIMB FT. MIN.	TIME TO CLIMB MIN.	TAKE OFF WEIGHT LB	BOMBS CARRIED LB	TOTAL FUEL U.S. GAL.	at 10000 FT. RANGE MILES	at 10000 FT. ENDUR. HOURS	at 25000 FT. RANGE MILES	at 25000 FT. ENDUR. HOURS		at 10000 FT. RANGE MILES	at 10000 FT. ENDUR. HOURS	at 25000 FT. RANGE MILES	at 25000 FT. ENDUR. HOURS	at 10000 FT. RANGE MILES
P-38G-LO -1 thru -15	14000 15000 18000 20000	- 2400 3200 4100	- 3100 - -	85 90 - -	- 1500 2000 2500	- 1700 -	16800 20000 15000 10000 5000	- - - - -	400 390 375 360 345	1625 1700 2300 2500 2600	395 390 375 360 345	1700 1600 2200 2000 1950	338 332 326 320 314	11.0 11.0 11.0 11.0 11.0	19800 17800 15800 16800 17800	NOSE NOSE NOSE NOSE NOSE	900 800 300 300 300	1000 700 340 330 310	3.3 2.2 1.0 1.0 1.0	1100 750 350 320 310	3.4 2.2 1.0 1.0 1.0	1120 1120 500 530 520	1.9 1.9 1.9 1.9 1.9	1790 1200 570 510 480	6.2 4.0 1.6 1.7 1.6	2200 1670 850 760 740	10.8 7.9 3.9 3.5 3.5	<p>P-38J &amp; L MODELS HAVE INCREASED DRAG DUE TO EXTERNAL CORE TYPE COOLERS.</p> <p>WITH ONE PHOP. FEATHERED, LOSS IN LOW RANGE (CLEAN AIRPLANE) IS APPROX. 15% FOR P-38L APPROX. 25% FOR P-38L-LOS IN MAX. CONT. POWER RANGE IS APPROX. 25% FOR P-38L APPROX. 30% FOR P-38L.</p> <p>LOSS IN SPEED FOR P-38L AT MILITARY POWER, CAUSED BY INSTALLATION OF (10) ZERO LENGTH ROCKET RAILS, IS 17 MPH AT 10,000'. SPEED LOSS WITH (10) 5" AR OR HYAR IS 21 MPH AT 10,000' AND 24 MPH AT 25,000'.</p> <p>P-38L FLIGHT TEST IN PROGRESS</p>
P-38H-LO -1 & -5	14000 16000 18000 20000	- 1800 2100 2400	- 2200 - -	88 95 - -	- 1000 1200 1700	- 1600 -	16800 20000 15000 10000 5000	- - - - -	402 387 372 360 345	1650 2500 2850 3200 3520	396 370 353 336 318	11.0 8.0 6.5 5.0 3.0	11.0 8.0 6.5 5.0 3.0	20300 18300 16300 19300 19300	NOSE NOSE NOSE NOSE NOSE	900 800 300 300 300	1180 820 350 320 300	4.3 2.1 1.2 1.2 1.2	1150 890 370 500 530	3.5 2.0 1.7 2.0 1.9	1800 1300 500 530 500	1.9 1.9 1.9 1.9 1.9	1700 1160 570 665 450	5.7 2.8 1.6 1.6 1.6	2200 1560 850 750 700	10.2 7.2 4.2 3.6 3.4		
P-38J-LO -5 thru -25	14000 16000 18000 20000 21000	- 2000 2800 3500	102 2200 - -	102 109 - -	- 1200 1700 -	- 1700 -	17000 20000 15000 10000 5000	- - - - -	405 414 403 390 377	1625 2425 2925 3275 3525	395 398 385 373 361	1700 2400 2650 2900 3100	338 374 381 396 335	11.0 12.0 7.0 5.0 4.0	21600 20200 17500 19500 20700	NOSE NOSE NOSE NOSE NOSE	900 740 410 410 410	1050 830 400 430 400	2.8 2.8 1.4 1.4 1.4	1070 900 470 420 410	3.8 2.8 1.4 1.4 1.4	1820 1360 800 710 680	5.0 4.7 2.8 2.7 2.6	1880 1540 840 970 900	6.9 4.9 2.8 2.8 2.8	2200 1610 1170 970 900	12.1 10.8 6.0 4.8 4.8	
P-38L-LO -1 & -5	14500 16000 18000 20000	- 2000 2800	103 2200 -	103 109 -	- 1200 1700	- 1700 -	17000 20000 15000 10000	- - - -	405 414 403 390	1625 2425 2925 3275	395 398 385 373	1700 2400 2650 2900	338 374 381 396	11.0 12.0 7.0 5.0	21600 20200 17500 19500	NOSE NOSE NOSE NOSE	900 740 410 410	1050 830 400 430	2.8 2.8 1.4 1.4	1070 900 470 420	3.8 2.8 1.4 1.4	1820 1360 800 710	5.0 4.7 2.8 2.7	1880 1540 840 970	6.9 4.9 2.8 2.8	2200 1610 1170 970	12.1 10.8 6.0 4.8	
P-38L-VN -5	14500 16000 18000 20000 22000	- 2000 2800 3700	103 2200 -	103 109 -	- 1200 1700 2200	- 1700 -	17000 20000 15000 10000 5000	- - - -	405 414 403 390 377	1625 2425 2925 3275 3525	395 398 385 373 361	1700 2400 2650 2900 3100	338 374 381 396 335	11.0 12.0 7.0 5.0 4.0	21600 20200 17500 19500 20700	NOSE NOSE NOSE NOSE NOSE	900 740 410 410 410	1050 830 400 430 400	2.8 2.8 1.4 1.4 1.4	1070 900 470 420 410	3.8 2.8 1.4 1.4 1.4	1820 1360 800 710 680	5.0 4.7 2.8 2.7 2.6	1880 1540 840 970 900	6.9 4.9 2.8 2.8 2.8	2200 1610 1170 970 900	12.1 10.8 6.0 4.8 4.8	

NOTES: (A) SCR-274 COMMAND SET  
SCR-522 COMMAND SET  
SCR-695 IFF  
MM-26 RADIO COMPASS  
AN/APS-13 TAIL WARNING RADAR  
AN/ARC-3 COMMAND SET  
BC-1206 DEACON RECEIVER

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.  
\* FIRST 5 MINUTES WITH MILITARY POWER.  
# TIME TO CLIMB FROM S.L. BASED ON MILITARY POWER.



## P-38 "LIGHTNING"

MANUFACTURED BY LOCKHEED (BURBANK) \*LO\* & VULTEE (NASHVILLE) \*VN\*

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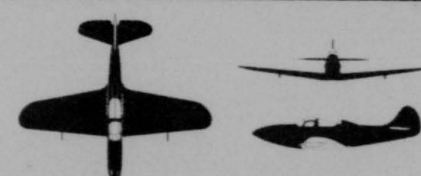
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX LAND.	NOTES	FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION			NO. AND SIZE			TYPICAL MODELS CARRIED (SEE A)			
							TYPE OR LOCATION ALSO (MAX OIL)		NO. AND CAPACITY ALSO (MAX FUEL)	NO. GUNS AND SIZE	RDS. PER GUN	LOCATION AND TYPE	INTERNAL	EXTERNAL		MAX. LOAD		
P-39N-BE -0, -1 & -5	1	ALLISON V-1710-B5 SINGLE SPEED AERO PRODUCTS * 11'7" DIA. - 3 BL. CONST. SPD. - HYDRO.	T 1200/ 5 L W 1430/ 9600 M 1125/ 16400 C 1000/ 14800	S 34' 0" L 30' 2" H 12' 5" T 11' 4" W 212 Sq. Ft.	B 6400 C 7700 W - M -		WING - CELLS RELLY - DRIP. 1 x 75 gal 1 x 156 gal 1 x 175	12 - 120 1 x 75 gal 1 x 156 gal 1 x 175	8 (4.5") M-10 ROCKETS IN CLUSTERS OF 3 PROCURED IN SERVICE KITS FOR SOME MODELS 4-.30 2-.50 1-37mm	300 200 30	WINGS - FIXED NOSE - FIXED PROP. - TYPE W4	NONE	1-500 1-325 1-250 1-100	500	SCR-274 SCR-522 SCR-535 SCR-595	REFER TO PAGE 4 FOR "FOREWORD." REFER TO PAGE 3 FOR SECURITY CLASSIFICATION. REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.  P-39N SERIES - TECH. ORDER 01-110FM-1 (REV. 25 OCT. 1944) P-39Q SERIES - TECH. ORDER 01-110FM-1 (20 MARCH 1944)  (a) P-39Q-30 HAS PROP. DIA. OF 11' 0". (b) P-39Q-20, -25 & -30 DO NOT HAVE WING GUNS.		
P-39Q-BE -1 thru -30	1	AS ABOVE	AS ABOVE	AS ABOVE	B 6400 C 7800 W - M -		AS ABOVE	AS ABOVE	8 (4.5") M-10 ROCKETS IN CLUSTERS OF 3 PROCURED IN SERVICE KITS FOR SOME MODELS 2-.50 2-.50 1-37mm	300 200 30	WINGS - FIXED NOSE - FIXED PROP. - TYPE W4	AS ABOVE	AS ABOVE					
					B C W M													
					B C W M													
					B C W M													

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND					HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT								RANGE AND ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS
	GROSS WEIGHT LB	TO CLEAR 50'		LANDING SPEED MPH	GROUND RUN T.O. DIST. FT. LAND DIST. FT.	WEIGHT LB	STD. ALT. FT	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING		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.	HIGH SPEED MPH	RATE OF CLIMB FT. MIN.	TIME TO CLIMB MIN.	TAKE OFF WEIGHT LB	BOMBS CARGO PASS LB	TOTAL FUEL U.S. GAL	at 10,000 FT. RANGE MILES ENDUR. HOURS	at 25,000 FT. RANGE MILES ENDUR. HOURS	at 10,000 FT. RANGE MILES ENDUR. HOURS	at 25,000 FT. RANGE MILES ENDUR. HOURS	at 10,000 FT. RANGE MILES ENDUR. HOURS		
P-39N-BE -0, -1 & -5	8600 7500 8000 8500 9000	- 2500 3000 3500 4200	2100 - - - -	83 - - - -	1200 - - - -	7700	25000 20000 15000 10000 5000		368 375 378 357 330	1175 1825 2450 2500 2500	310 355 365 345 320	# 11.4 # 8.1 # 5.8 # 3.8 # 1.9	8900 8800 8200 7700 8200	NONE NONE NONE 120 500	295 275 195 120 120	550 520 370 270 220	2.0 1.3 1.4 0.8 0.8	950 900 450 450 350	3.1 3.2 2.5 1.4 1.3	- - 570 350 270	1.5 1.5 1.5 1.5 1.5	ABOVE CEILING OF AIRPLANE IN MAX. CRUISE POWER	1100 1090 790 570 420	5.6 5.3 3.9 2.3 2.1
P-39Q-BE -1 thru -30						7800																		

NOTES: (A) SCR-274 COMMAND SET  
SCR-522 COMMAND SET  
SCR-535 IFF  
SCR-595 IFF

RED FIGURES ARE PRELIMINARY - SUBJECT TO REVISION AFTER FLIGHT CHECK.  
# TIME TO CLIMB FROM S.L. BASED ON MILITARY POWER.



**P-39**  
"AIRACOBRA"

MANUFACTURED BY BELL (BUFFALO) "BE"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE OFF W-WAR EMERG. M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX LAND	NOTES	FUEL TANKAGE		NO. ROCKETS-SIZE-INSTALLATION			NO. AND SIZE		TYPICAL MODELS CARRIED (SEE A.)				
							TYPE OR LOCATION		NO. AND CAPACITY	NO. GUNS AND SIZE	RDS. PER GUN	LOCATION AND TYPE	INTERNAL		EXTERNAL			MAX. LOAD
P-51B-NA -1, -5, -7, -10	1	PACKARD V-1650-3 2 SPEED-2 STAGE HAMILTON STD. 11" 2" DIA. - 4 BL. CONST. SPD., HYDRO.	1400/ 5 L 1295/ 29200 1450/ 19800 1190/ 31000 1120/ 20560	S 37' 0" L 32' 3" H 13' 8" T 11' 10" W 233 Sq. Ft.	B 7450 C 9800		MAIN - R. WING MAIN - L. WING FUSELAGE DROP - WINGS	1 x 92 1 x 92 1 x 85 2 x 75 of 2 x 110 of 2 x 150	5 (5") ROCKETS OR 4 (5") M-10 ROCKETS PROCURED IN SERVICE KITS FOR SOME MODELS.	270 270 350	OUTRD. - WINGS INBD. - WINGS	NONE	2-1000 2- 500 2- 325 2- 250 2- 100	2000	SCR-274 SCR-515 SCR-522 SCR-535 SCR-595 AN-680-P AN-680-3 AN/AP-13 SC-120K HM-25	P-51B & C TECH. ORDER 01-60JD-1 (REV. 25 MAY 1945) P-51D & K TECH. ORDER 01-60JE-1 (REV. 25 MAY 1945) P-51H TECH. ORDER 01-60JF-1 (REV. 25 APR. 1945)  (A) P-51B-NT HAS 11" DIA. AEROPRODUCTS PROPELLER INSTALLED. LISTING APPROX. SAME PERFORMANCE AS SHOWN WITH HAMILTON STD. PMDP. (B) ROCKETS INSTALLED ON LAST (1100) P-51D-25-NA; P-51D-20-NT; P-51H-10 & -15 AND SUBSEQUENT MODELS. KITS PROCURED FOR SERVICE INSTALLATION ON SOME OF OTHER MODELS.		
P-51B-NA -15	1	PACKARD V-1650-7 2 SPEED-2 STAGE HAMILTON STD. 11" 2" DIA. - 4 BL. CONST. SPD., HYDRO.	1450/ 5 L 1390/ 24000 1550/ 13000 1260/ 25500 1190/ 17000 980/ 29000	AS ABOVE	AS ABOVE		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE			
P-51D-NA -5 thru -30 P-51D-NT -5 thru -25 P-51E-NT -1 thru -15	1	AS ABOVE EXCEPT P-51D-2MT & P-51D-30-NA HAVE V-1650-P ENGINE INSTALLED	AS ABOVE	AS ABOVE	AS ABOVE		MAIN - R. WING MAIN - L. WING FUSELAGE DROP - WINGS	1 x 92 1 x 85 2 x 75 of 2 x 110	5 (5") ROCKETS WITH, OR 10 (5") ROCKETS WITHOUT EXTERNAL WING BOMBS OR TANKS.	270 270 400	OUTRD. - WINGS CENTER - WINGS INBD. - WINGS	NONE	2-1000 2- 500 2- 325 2- 250 2- 100	2000				
P-51H-NT	1	PACKARD V-1650-9 2 SPEED-2 STAGE AEROPRODUCTS 11" 2" DIA. - 4 BL. CONST. SPD., HYDRO.	1380/ 5 L 2220/ 10200 1800/ 25400 1470/ 21800 1190/ 24900 1080/ 22100 930/ 35000	S 37' 0" L 33' 4" H 13' 8" T 11' 1" W 235 Sq. Ft.	B 7050 C 9500		MAIN - R. WING MAIN - L. WING FUSELAGE DROP - WINGS	1 x 105 1 x 100 1 x 50 2 x 75 of 2 x 110	(2)	(2)	(475)							
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE						REMARKS			
	GROSS WEIGHT LB.	TO CLEAR 50'		GROUND RUN T.O. DIST. FT. L.D. DIST. FT. LANDING SPEED MPH	STD. ALT. FT.	WAR EMERG. HIGH SPEED MPH	MIL. POWER RATE OF CLIMB FT. MIN.	MAX. IORTIN. POWER HIGH SPEED MPH	TIME TO CLIMB MIN.	LOADING			MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE					
		T.O. FT.	LAND FT.							TAKE OFF WEIGHT LB.	BOMBS CARGO PKGS.	TOTAL FUEL U.S. GAL.	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							
P-51B & C SERIES WITH (V-1650-3)	8000 9000 10000 11000 12000	- 2200 3000 3500	2100 2300 2500	100 106 111 1800 1300	1100 1200	440 430 427 424 406 388	1925 2425 2525 3075 3150 3050	433 418 427 414 392 374	1925 2100 2475 2800 2700 2500	357 15.0 11.5 8.5 5.9 2.8	11800 11300 10800 9800 10800 11800	NONE NONE NONE NONE 2000 2000	559 485 419 259 269 229	1520 1270 1170 740 690 560	4.7 4.0 2.1 2.2 2.2 2.2	1880 1740 1170 1050 1000 1000	5.2 4.1 8.0 4.2 3.7 3.6	2100 1870 1720 1100 1190 1000	7.1 6.0 6.0 3.2 3.9 3.6	2540 2070 1840 1280 1180 1070	10.8 8.5 7.7 5.1 4.9 4.3	P-51B & C PERFORMANCE SHOWN WITH EXTERNAL WING RACKS; WITHOUT RACKS THE HIGH SPEED INCREASES APPROX. 12 MPH. & RATE OF CLIMB APPROX. 50 FT. TO 100 FT. PER MIN.
P-51B & C SERIES WITH (V-1650-7)		A S	A B D Y E																		P-51D, 6th PERFORMANCE SHOWN WITHOUT EXTERNAL WING RACKS; WITH RACKS THE HIGH SPEED LOSS IS 1% TO 5 MPH.	
P-51D & K SERIES		A S	A B D Y E																		HIGH SPEED LOSSES AT MILITARY POWER WHEN CARRYING 10 (5") AR OR HYAR 4 OR RAILS WILL BE APPROX. WITH ROCKETS ON RAILS	
P-51H-NT		A S	A B D Y E																		HIGH SPEED LOSSES AT MILITARY POWER WHEN CARRYING 10 (5") AR OR HYAR 4 OR RAILS WILL BE APPROX. WITH ROCKETS ON RAILS	

NOTES:	THREE OR MORE OF THE FOLLOWING:		WAR EMERG.		P-51H TEST RESULTS BASED ON 87" HL (DRY ENGINE)
	SCN-274	COMMAND SET	STD. ALT.	RATE OF CLIMB	
(A) SCR-515	IFF	30000	450	2250	<p>RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.</p> <p>WAR EMERGENCY HIGH SPEED AND RATE OF CLIMB BASED ON 90" HL (WATER INJECTION) USING AN-V-33 FUEL.</p> <p>LOSSES DUE TO ROCKET INSTALLATIONS:</p> <p>(1) COMBAT RADIUS OF ACTION DECREASED BY 12%.</p> <p>(2) 10 (5") HYAR ON POST TYPE LAUNCHERS INCREASE TAKE-OFF GROUND RUN BY 20%.</p> <p>(3) 4.5 (WB) ROCKET WITH ADAPTER HAS SAME DRAG AS 5" HYAR.</p>
SCR-522	COMMAND SET	25000	435	2750	
SCR-535	IFF	20000	470	4090	
SCR-595	IFF	15000	430	3220	
AN-680-3	NOMING ADAPTER	10000	405	3350	
AN/AP-13	COMMAND (W/F)	5000	380	3300	
SC-120K	TAIL WARNING RADAR				
HM-25	RADIO COMPASS				

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
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<p>MANUFACTURED BY NORTH AMERICAN (INGLEWOOD) "NA" &amp; (DALLAS) "NT"</p> <p>CONFIDENTIAL</p>		<p><b>P-51</b> "MUSTANG"</p>
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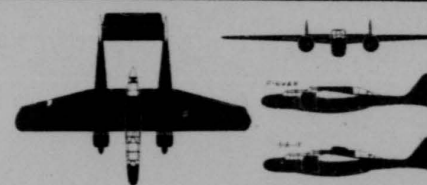
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																		
MODEL & BLOCK NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		ARMAMENT			BOMBS		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX. M-MAX LAND.	NOTES	FUEL TANKAGE		FNG-ROCKETS-SIZE-INSTALLATION			NO. AND SIZE		MAX. LOAD	TYPICAL MODELS CARRIED (SEE A)			
							T-TAKE OFF W-WAR EMERG M-MILITARY C-CONTINUOUS		TYPE OR LOCATION (MAX. OIL)	NO AND CAPACITY (MAX. FUEL)	NO GUNS AND SIZE	RDS PER GUN	LOCATION AND TYPE			INTERNAL		EXTERNAL
P-61A-NO -1	2	PRATT-WHITNEY R-2800-10 2 SP3-2 STG. CURTISS 12" DIA. -4 BL F.F., ELECTRIC	2000/ 4000 1800/ 1800 1625/ 17800 1550/ 22700	S 56' 0" L 48' 11" H 14' 8" T 57' 2" W 69 1/2 Sq. Ft.	B 22300 C 27600 W - M -	2 OF 3	OUTBD.-WINGS 2 x 205 INBD.-WINGS 2 x 115 (44)	4-.50 4-20mm	560 200	UPPER TURRET FORE-FUSELAGE	N O N E			SC-9-522 (2) SC-9-695 SC-9-718 SC-9-720 SC-9-729 RC-32 RC-36 RC-198 HW-25 AN/APG-1 AN/APN-1 AN/APN-13 AN/APN-3 AN/AIM-7 AN/ASA-3 BC-1206	P-61A & B TECH. ORDER 01-15FB-1 (REV. 10 MAY 1945) (a) INSTALLED ON FIRST 37 (P-61A-1) ONLY. (b) THE (2) 310 GAL. DROPPABLE WING TANKS OR 2-1600 LB. BOMBS INSTALLED ONLY ON P-61A-11; P-61B-2, -6 & -11 MODELS; OTHERS AS ABOVE.			
P-61A-NO -5, -10, -11 P-61B-NO -1, -2, -5, -6, -11	2	AS ABOVE EXCEPT CHANGE TO R-2800-65 ENGINE	T-2000/ 5 L W-2260/ 1000 M-2040/ 12800 C-1930/ 17000	S AS ABOVE L AS ABOVE H P-61B HAS 49' 7" T W LENGTH	B 22300 C 28000 W - M -	2	OUTBD.-WINGS 2 x 205 INBD.-WINGS 2 x 115 DROPP.-WINGS 2 x 165 or 2 x 310 b (84)	4-20mm	200	FORE-FUSELAGE	NONE		3200					
P-61B-NO -10	2	AS ABOVE	M 2000/ 4000 1800/ 1800 1550/ 20900	S AS ABOVE L AS ABOVE H AS ABOVE T AS ABOVE W AS ABOVE	B 22650 C 28000 W - M -	2	OUTBD.-WINGS 2 x 205 INBD.-WINGS 2 x 115 DROPP.-WINGS 4 x 165 or 4 x 310 (84)	A S A B O V E						6400				
P-61B-NO -15, -16, -20, -25	2	AS ABOVE	C 1675/ 8400 1625/ 17800 1550/ 22700	S AS ABOVE L AS ABOVE H AS ABOVE T AS ABOVE W AS ABOVE	B 28450 C 29700 W - M -	3	AS ABOVE EXCEPT P-61B-16 CARRIES ONLY (2) DROPPABLE WING TANKS.	4-.50 4-20mm	560 200	UPPER TURRET FORE-FUSELAGE	AS ABOVE EXCEPT P-61B-16 HAS ONLY (2) EXTERNAL BOMB STATIONS IN PLACE OF (4)							
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

MODEL & BLOCK NO.	TAKE OFF & LANDING				HIGH SPEED & CLIMB						RANGE AND ENDURANCE										REMARKS								
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		STD. ALT.	WAR EMERG.			MIL. POWER			MAX. CONTIN. POWER			LOADING		MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE							
		LB	T.O. DIST.	LAND DIST.	LANDING SPEED		T.O. DIST.	LAND DIST.	WEIGHT	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TAKE OFF WEIGHT	BOMBS GARR.	TOTAL FUEL	at 10000 FT.	at 25000 FT.		at 10000 FT.	at 25000 FT.	RANGE	ENDUR.	RANGE	ENDUR.		
P-61A-NO -1	24000 26000 28000	- 2600 2900	2100 2200 2300	- - -	1400 1500 1700	27600	30000 25000 20000 15000 10000 5000	350 356 350 333 324	1050 1575 1925 2025 2175	360 355 343 323 305	500 # 14.0 # 10.1 # 7.1 # 4.5 # 2.2	27600	NONE	640	370	1.2	420	1.3	810	2.7	790	2.9	1020	4.5					
P-61A-NO -5, -10, -11 P-61B-NO -1, -2, -5, -6, -11	24000 26000 28000 30000 32000	2600 2900 3300 3800	2100 2200 2300 -	- - -	1400 1500 1700 -	28000	30000 25000 20000 15000 10000 5000	356 369 364 355 326	1025 1625 2250 2550 2600	360 355 350 333 324	475 # 14.3 # 10.3 # 7.2 # 4.5 # 2.2	32400 30400 28000 30000	NONE NONE NONE 2000	1250 970 540 2000	750 560 370 -	2.4 1.8 1.2 -	620 420 -	1.8 1.3 -	1140 810 -	4.5 2.7 -	1030 790 -	4.1 2.9 -	1425 1020 -	6.3 4.5 -					
P-61B-NO -10	24000 28000 30000 32000 34000 36000	- 2900 3300 3800 -	2100 2200 2300 -	- - -	1400 1700 -	29700	30000 25000 20000 15000 10000 5000	356 356 352 352 333	825 1400 1950 2225 2250	356 354 348 331 322	800 357 # 12.0 # 8.5 # 5.6 # 2.7	36550 32750 30750 28350 30350 32350	NONE NONE NONE NONE 2000 4000	1680 1250 970 640 2000 640	750 560 370 -	2.4 1.8 1.2 -	620 420 -	1.8 1.3 -	1140 810 -	4.5 2.7 -	1030 790 -	4.1 2.9 -	1425 1020 -	6.3 4.5 -	P-61B FLIGHT TEST IN PROGRESS				
P-61B-NO -15, -16, -20, -25	26000 30000 32000 34000 36000 38000	- 3800 -	2200 -	- -	1500 -	29700	30000 25000 20000 15000 10000 5000	352 356 362 352 333	825 1400 1950 2225 2250	357 352 # 12.0 # 8.5 # 5.6 # 2.7	38000 34100 32100 29700 31700 33700	NONE NONE NONE NONE 2000 4000	1680 1250 970 640 2000 640	750 560 360 -	2.4 1.8 1.2 -	610 410 -	1.8 1.3 -	1130 785 -	4.5 2.7 -	1010 580 -	4.1 2.2 -	1350 940 -	5.9 4.2 -						
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48

NOTES: SEVER OR MORE OF FOLLOWING:  
(A) SC-9-774 COMMAND SET  
SC-9-722 COMMAND SET  
SC-9-695 IFF  
SC-9-719 RADAR ALTIMETER  
SC-9-720 RADAR SET 14 MCSE  
SC-9-729 INTERROGATOR  
RC-31 FILTER EQUIPMENT  
RC-32 INTERPHONE AMPLIFIER  
RC-36 FILTER EQUIPMENT  
RC-198 RADIO COMPASS  
HW-25 GUN LAYING RADAR  
AN/APG-1 LOW ALT. ALTIMETER  
AN/APN-13 TAIL WARNING RADAR  
AN/ARC-1 COMMAND VHF  
AN/ARC-3 RADIO COMPASS  
AN/ASA-3 STATIC DISCHARGE  
BC-1206 BEACON RECEIVER

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.  
# TIME TO CLIMB FROM S.L. BASED ON MILITARY POWER.



P-61  
"BLACK WIDOW"

MANUFACTURED BY NORTHROP (NORTHROP) "NO"

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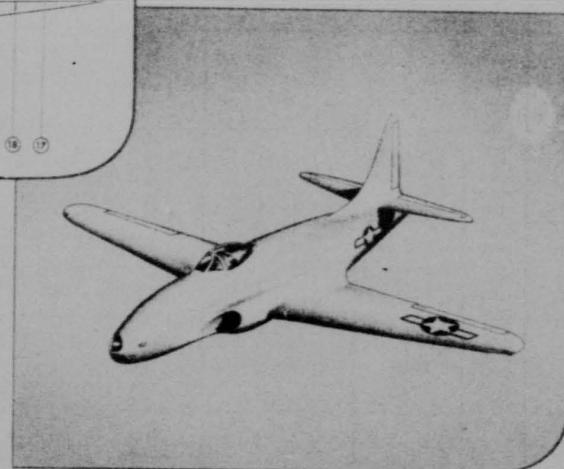
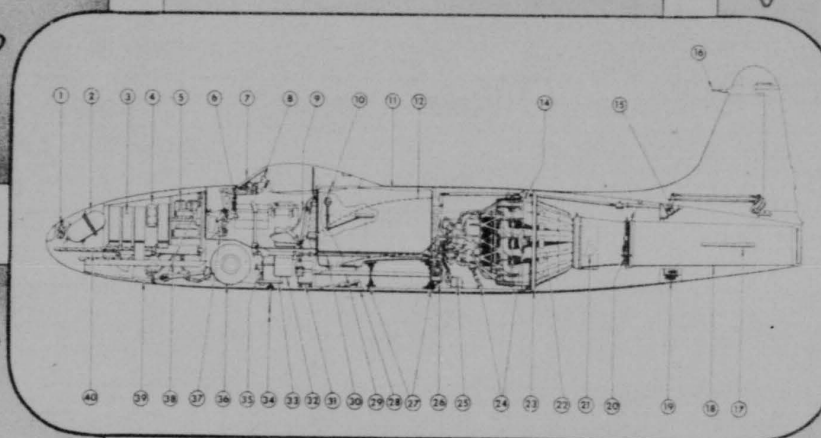
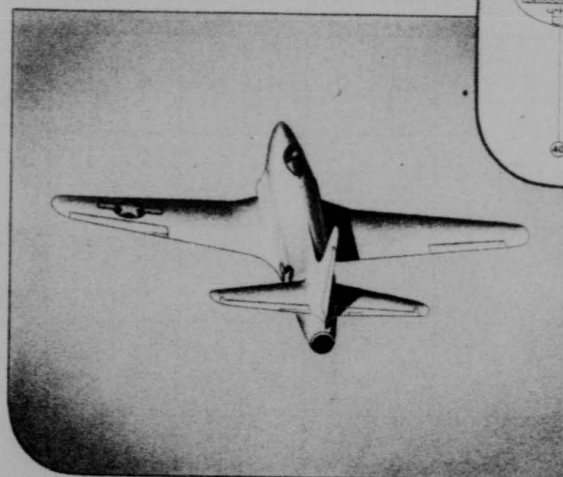
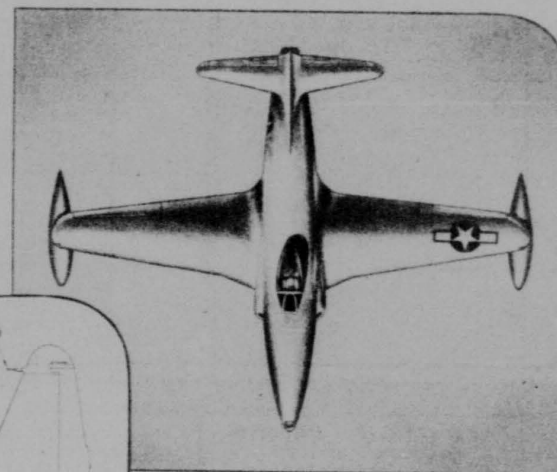
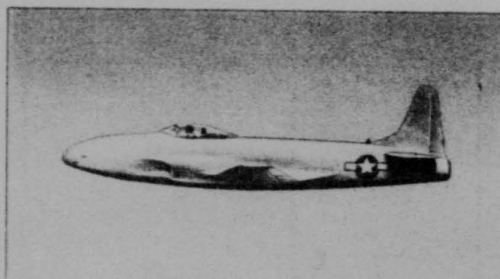
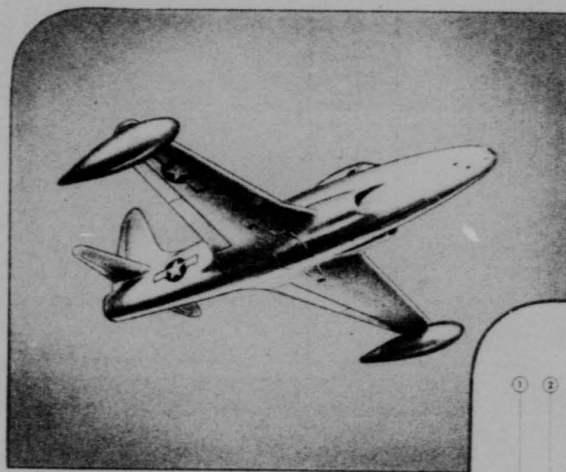
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PAGE 38  
AS OF:  
29 JUNE 1946

RESTRICTED

# LOCKHEED P-80A

*Shooting Star*



- |                             |                                  |
|-----------------------------|----------------------------------|
| 1. Landing light            | 21. Elevator tab motor           |
| 2. Oxygen cylinder          | 22. Engine                       |
| 3. Ammunition box           | 23. Air intake seal              |
| 4. Armament junction box    | 24. Engine mounts                |
| 5. Command radio            | 25. Fuel filter                  |
| 6. Instrument panel         | 26. Aileron booster              |
| 7. Bullet-proof windshield  | 27. Wing spars                   |
| 8. Gun sight                | 28. Dive flaps                   |
| 9. Pilot's seat             | 29. Aileron torque tube          |
| 10. Fuel gauge transmitter  | 30. Elevator push-pull tube      |
| 11. Main fuel tank          | 31. Identification radio         |
| 12. Air intake duct         | 32. Electrical junction box      |
| 14. Aft fuselage joint      | 33. Battery                      |
| 15. Elevator spring         | 34. Identification radio antenna |
| 16. Air speed pitot         | 35. Elevator-aileron control     |
| 17. Tail pipe support track | 36. Nose wheel                   |
| 18. Tail pipe               | 37. Rudder pedals                |
| 19. Remote compass          | 38. Nose section joint           |
| 20. Tail pipe clamp         | 39. Shell case ejection doors    |
|                             | 40. Machine guns-.50 cal.        |

RESTRICTED





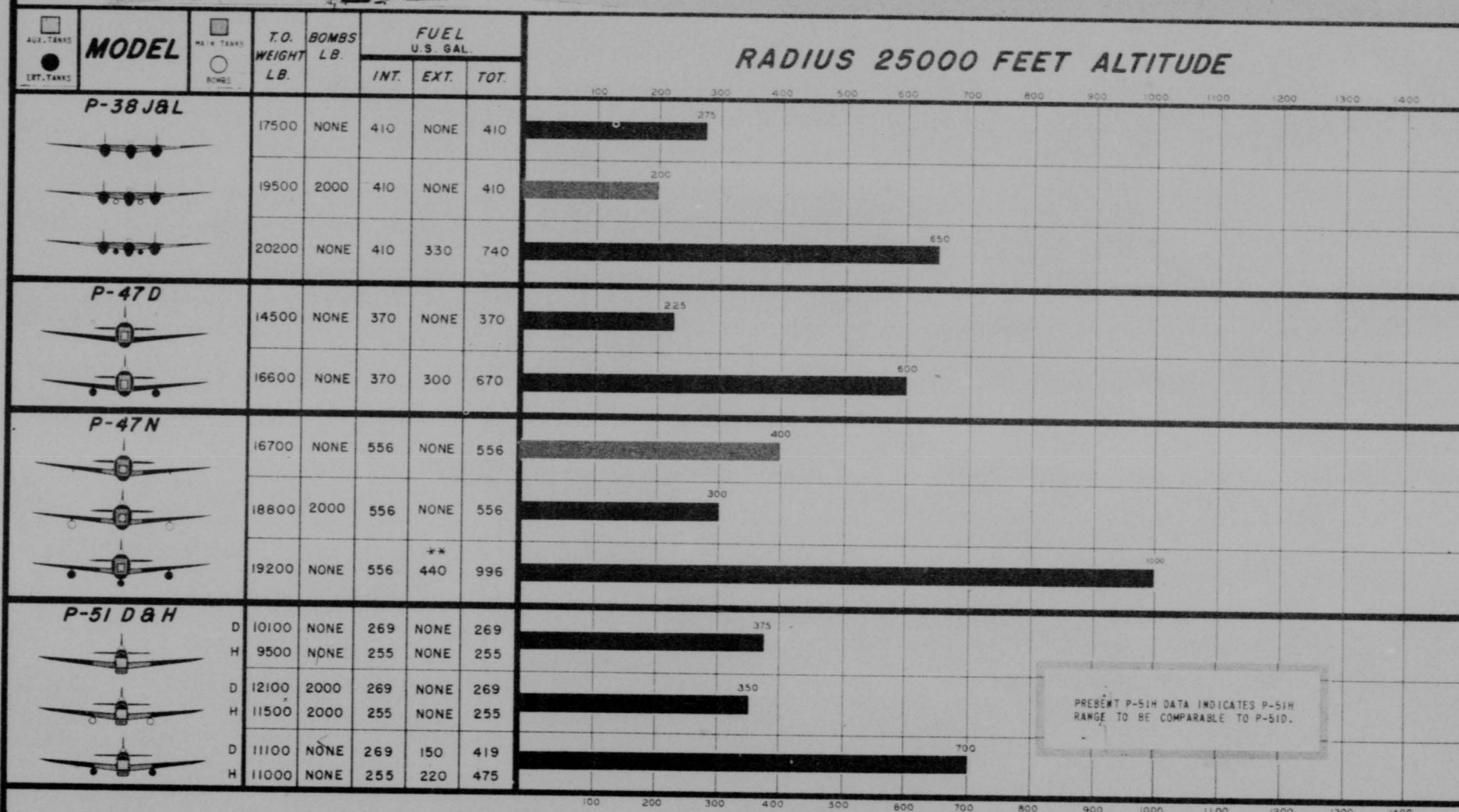
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40  
25 JUNE 1945

# COMBAT RADIUS OF ACTION

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



PRESENT P-51H DATA INDICATES P-51H RANGE TO BE COMPARABLE TO P-51D.

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

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

\*\* 400 GAL. EXTERNAL FUEL CONSISTS OF 2-160 GAL. WING TANKS AND 3-120 GAL. BELLY TANK. WHEN JUST 2-160 GAL. WING TANKS ARE USED THE RADIUS INCREASES ONLY 25 MILES DUE TO DRAG OF LARGER TANKS.

- CONDITIONS AND ALLOWANCES
- (a) WARM UP AND TAKE OFF EQUIVALENT TO 5 MINUTES AT NORMAL RATED POWER.
  - (b) CLIMB TO 25,000 FT. AT NORMAL RATED POWER. (DISTANCE COVERED IN CLIMB IS NOT INCLUDED IN RADIUS).
  - (c) CRUISE OUT AT 25,000 FT. AND 210 I.A.S.
  - (d) DROP EXTERNAL TANKS AND/OR BOMBS BEFORE ENTERING COMBAT.
  - (e) COMBAT 5 MINUTES AT WAR EMERGENCY POWER AND 35 MINUTES AT MILITARY POWER.
  - (f) CRUISE BACK AT 25,000 FT. AND 210 I.A.S.
  - (g) NO ACCOUNT IS TAKEN OF DECREASED FUEL CONSUMPTION DURING DESCENT.
  - (h) ALLOWANCE IS MADE FOR 30 MINUTES RESERVE AT MINIMUM CRUISE POWER.
  - (i) NO ALLOWANCE IS MADE FOR FORMATION FLIGHT OR EVASIVE ACTION OTHER THAN 20 MINUTES COMBAT.

RED INDICATES PRELIMINARY DATA.

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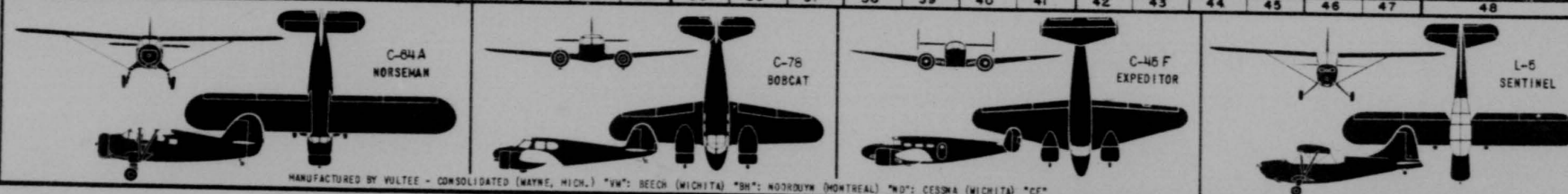
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																					
MODEL & BLOCK-NO.	ENGINE & PROP.			SIZE		WEIGHT		COMBAT CREW	FUEL & OIL		CARGO OR PASSENGERS			RADIO	REMARKS & REFERENCE						
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT. T - TAKE OFF W - WAR EMERG. M - MILITARY C - CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT W-WAR MAX M-MAX LAND	NOTES	FUEL TANKAGE		STATION	CAPACITY	MAX. LOAD	STATION	PLACES		MAX. LOAD	TYPICAL MODELS CARRIED	REFER TO PAGE 4 FOR "FOREWORD" REFER TO PAGE 3 FOR SECURITY CLASSIFICATION REFER TO PAGE 5 FOR DEFINITIONS. REFER TO T.O. LISTED FOR DETAILED PLANNING.				
							TYPE OR LOCATION ALSO (MAX OIL)													NO. AND CAPACITY ALSO (MAX FUEL)	
L-5 L-5B L-5C L-5E L-5E-1	VW	1	LYCOMING G-435-1 NONE SEKSENICH FIXED - WOOD	T 185/ S L W NONE M NONE C 185/ S L	S 34' 0" L 24' 1" H 7' 11" T 7' 5" W 155 Sq. Ft.	B 1650 C 2050 W 2200 M 2200		2	WINGS (3)	2 x 18 (36)		L-5 CAN CARRY PASSENGER OR 200 LB. BAGGAGE IN LIEU OF OBSERVER L-5B AND SUBSEQUENT CAN CARRY CASUALTY IN LITTER OR 200 LB. BAGGAGE IN LIEU OF OBSERVER.			SCR-274-W AVT-112 AVR-204 AW/ARR-13	L-5 SERIES TECH. ORDER 01-5008-1 (20 MARCH 1945) UC-45F TECH. ORDER 01-9000-1 (REV. 15 FEB. 1945) UC-64A TECH. ORDER 01-1550B-1 (REV. 25 FEB. 1945) UC-78 SERIES TECH. ORDER 01-125-1 (REV. 20 NOV. 1944)					
C-45F-BH		2	PRATT & WHITNEY R-980-AN-10P-3 INTEGRAL HAMILTON STD. CONST. SPEED	T 450/ S L W NONE M NONE C 450/ S L	S 47' 8" L 34' 3" H 9' 8" T 12' 11" W 348 Sq. Ft.	B 5800 C 7480 W 8725 M 7850		2	MAIN - WINGS AUX. - WINGS (16)	2 x 78 2 x 25 (206)		N O N E	CABIN	5	1000	SCR-274-W SCR-269D RC-528 RC-26 SCR-635	(a) L-5E-1 HAS LARGER WHEELS INCREASING HEIGHT APPROX. 1". (b) BEGINS ON LATE L-5E. (c) EARLY MODELS DID NOT HAVE PROVISIONS FOR LITTERS. (d) A FEW ARTICLES HAD FIXED-PITCH WOOD PROPELLERS.				
C-64A-ND		1	PRATT & WHITNEY R-1340-AN-1 INTEGRAL HAMILTON STD. CONST. SPEED	T 600/ S L W NONE M NONE C 550/5000	S 51' 6" L 32' 4" H 10' 1" T 9' 1" W 325 Sq. Ft.	B 4800 C 7400 W 8000 M 7400		2	WINGS FRONT BELLY REAR BELLY MEX. - CABIN (20)	2 x 60 1 x 45 1 x 77 1 x 28 (263)		CABIN	1500	1500	CABIN	4 LITTERS OR 6 PASS.	1200	SCR-274-W SCR-578 SCR-595 SCR-695 RC-198			
UC-78 UC-78B UC-78C	CE	1	JACOBS R-755-3 NONE HAMILTON STD. CONST. SPEED	T 245/ S L W NONE M NONE C 225/ S L	S 41' 11" L 32' 9" H 9' 11" T 12' 7" W 295 Sq. Ft.	B 4200 C 5700 W 5700 M 5700		2	WINGS AUX. - FUSEL. (10)	2 x 60 1 x 30 (150)		N O N E		CABIN	3	600	SCR-283				
COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			

MODEL & BLOCK-NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB CLEAN AIRPLANE AT NORMAL COMBAT WEIGHT						RANGE AND ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS						
	GROSS WEIGHT	TO CLEAR 50'		GROUND RUN		WEIGHT	STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		LOADING			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	TAKE OFF WEIGHT	CARGO PASS.	TOTAL FUEL	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.		RANGE	ENDUR.				
L-5 L-5B L-5C	VW	1800 1900 2000 2100 2200	- - 1050 1150 1300	875 925 950 1000 -	- - 550 525 550	475 500 525 550 -	15000 10000 5000 S L	NOT APPLICABLE	NOT APPLICABLE	115 118 122 130	150 400 550 900	35.5 16.0 6.4 0.0	2000 2150 2200	0 200 200	36 25 34	250 150 250	1.9 1.2 1.9	NOT APPLICABLE	380 250 360	3.4 2.2 3.2	NOT APPLICABLE	420* 270* 400*	3.9 2.5 3.7	(a) AT 5000 FT. ALT.					
L-5E L-5E-1	VW	1800 1900 2000 2100 2200	- - 1000 1100 1225	A5 ABOVE 41 -	600 650 725	ABOVE ABOVE	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							
C-45F-BH		5500 7000 8000 8725	- 1900 1600 2100	1700 1800 1950 -	56 58 62 -	1200 1250 1400 -	25000 20000 15000 10000 S L	NOT APPLICABLE	188 206 210 215 206	250 550 900 1250 1200	29.0 15.8 5.6 4.1 0.0	7850 8725	0 1000	206 206	500 500	2.4 2.4	470 <sup>f</sup> 470 <sup>f</sup>	2.3 2.3	670 650	3.5 3.4	650 <sup>f</sup> 490 <sup>f</sup>	3.4 3.5	850 750	4.8 4.4	(1) SPECIAL PROVISIONS MUST BE MADE FOR OXYGEN FOR ALTITUDE FLIGHTS.				
C-64A-ND		5500 6000 7000 8000	- 1250 1800 2900	1150 1200 1450 -	56 54 64 -	1200 625 1100 750 -	20000 15000 10000 5000 S L	NOT APPLICABLE	- - 145	200 400 500 600	45.0 19.0 9.0 0.0	7400 7400	400 1500	280 120	750 250	5.0 1.7	900 <sup>f</sup> 350 <sup>f</sup>	6.0 2.5	1000 450	7.7 3.5	NOT APPLICABLE	1280 500	10.7 4.2						
UC-78 UC-78B UC-78C	CE	4500 5000 5500 5700	- 1325 1700 2000	- - - -	- 625 650 725	- - - -	15000 10000 5000 S L	NOT APPLICABLE	144 171 175	220 520 850 950	30.0 15.0 6.0 8.0	5700 5700	400 500	150 120	600 470	3.6 2.8	670 500	2.9 2.3	NOT APPLICABLE	NO DATA									
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48

NOTES:

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



RESTRICTED



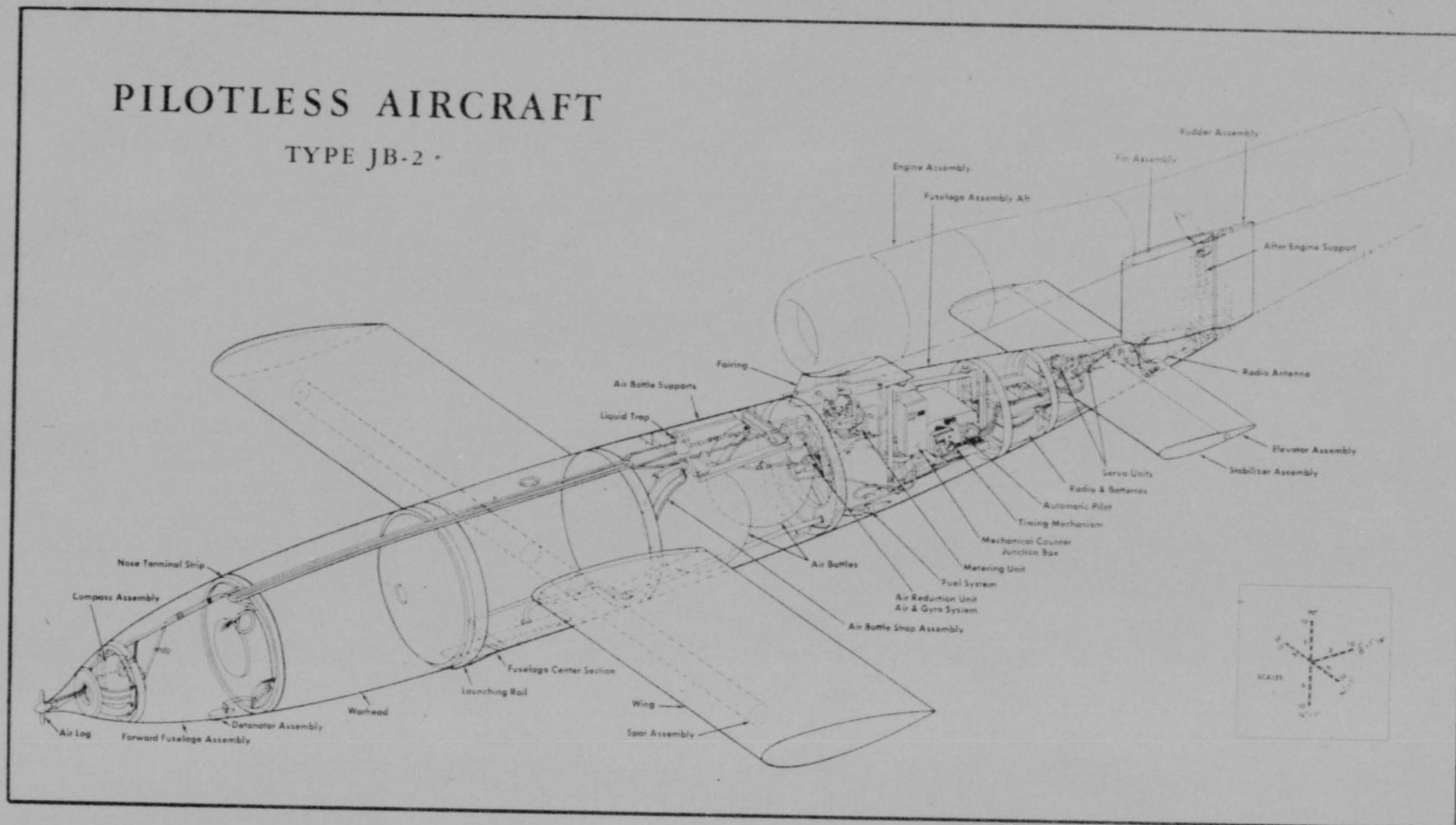


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### PILOTLESS AIRCRAFT TYPE JB-2

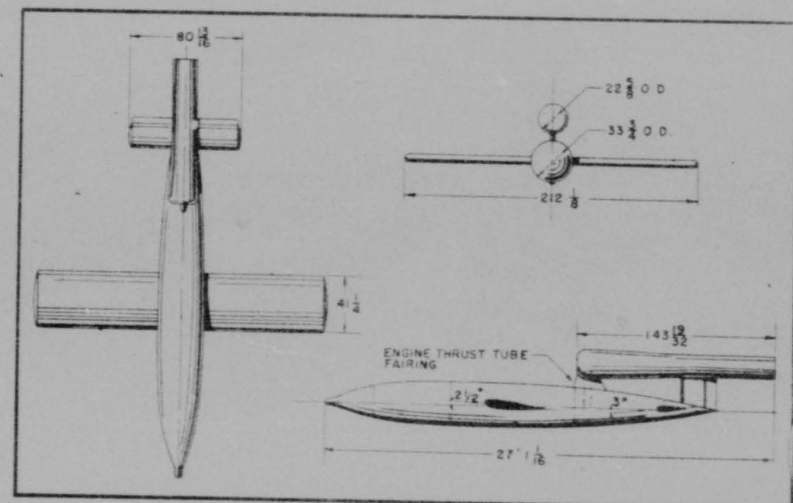


THE JB-2 ROBOT BOMB IS A PILOTLESS, JET PROPELLED, MID-WING MONOPLANE. CHARACTERISTICS ARE AS FOLLOWS:

GROSS WEIGHT . . . . .5025 LB.	HIGH SPEED . . . . .400 MPH AT 200' FEET.
WAR HEAD WEIGHT . . .2080 LB.	SERVICE CEILING . .6000 FEET
SPAN . . . . .17' 8"	RATE OF CLIMB . .1000 FEET PER MINUTE
LENGTH . . . . .27' 1"	MAXIMUM RANGE . .150 MILES

WING AREA . . . . .60.7 Sq. Ft.  
MAXIMUM FUEL . . . . .180 GALLONS (U.S.)

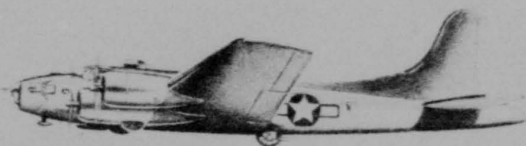
POWERED BY INTERMITTENT JET TYPE "EJ-15-1" ENGINE.  
LAUNCHED FROM A 50' PORTABLE LAUNCHING RAMP MOUNTED  
ON BED OF 40' TRAILER.



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**GLIDER AND  
TOWPLANE SECTION**

AUGUST-1945

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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 towplanes 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 max. contin. at S.L.)
- (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 and endurance 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.

TYPE OF RELEASE: A number of combinations shown are not eligible for clear releases, for complete information on release characteristics see T.O. 01-1-143, dated 5 Mar. 1945.

RED PRINT: Preliminary estimates or calculated data.

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## DEFINITIONS

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AS OF:  
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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: (AT S.L.) (To clear 50' object)	Distances representative of minimum airport requirements. (No allowance made for tow rope glider length).
Take off speed:	Normal for average pilot. (Towplane I.A.S.)
Ground run:	Distances representative of minimum runway requirements. (No allowance made for tow rope glider length).
CLIMB (I.A.S. for climb)	Minimum towplane indicated air speed for good control & satisfactory engine cooling.
Initial rate of climb:	Sea level rate of climb at minimum towplane indicated air speed.
Note:	For some combinations rate of climb tends to increase up to critical altitude of towplane.
Service ceiling:	Altitude at which rate of climb is 100'/min.
Time to service ceiling:	Time to climb in minutes from sea level to service ceiling based on I.A.S. for climb.
RANGE & ENDURANCE:	(See discussion under foreword)
Radius of action:	Distance glider can be towed and released with towplane having enough fuel to return to base alone.
Time out:	Time from take off to release of glider, (At recommended cruising altitude).
Time back:	Time required for towplane to return to base alone at recommended cruising speed and altitude.
Max. range & endurance:	Practical maximum range which glider can be towed under conditions set forth and corresponding time required.





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## TOWPLANE &amp; GLIDER TACTICAL PLANNING PERFORMANCE CHART

PAGE 48  
AS OF:  
28 JULY 1945

## 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 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 SERVCE 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		20
C-46A & (1)CG-4A	7500	3800	41000	NONE	1100	150	2900	85	2150	120	640	12000*	22	770	5.2	4.7	5000	1255	8.5	* LIMITED - NO OXYGEN IN GLIDER.	
	7500	3800	46000	5000	1100	150	3950	90	2900	120	490	12000*	30	715	5.3	4.3	5000	1115	8.2		
C-46A & (2)CG-4A	7500	3800	41000	NONE	1100	150	4100	85	2950	120	330	12000*	50	605	4.5	3.7	5000	850	6.3	* LIMITED- NO OXYGEN IN GLIDER. NOTE: THE 46000 LB. LOADING WITH (2) GLIDERS IS FOR EMERGENCY RELEASE ONLY.	
	7500	3800	46000	5000	1100	150	6200	90	4200	120	240	8700	43	555	4.1	3.4	5000	755	5.7		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (1)CG-4A	7500	3800	26000	3000	804	150	4150	80	2550	105	515	12000*	31	575	4.8	3.6	5000	955	7.9	* LIMITED- NO OXYGEN IN GLIDER.	
	7500	3800	29000	6000	804	150	4900	85	2750	105	410	11300	37	545	4.6	3.4	5000	870	7.3		
	7500	3800	31000	8000	804	150	5450	85	2950	105	350	10400	39	520	4.4	3.1	5000	820	6.9		
C-47, 47A & 53 (PADDLE BLADE PROPS) (1) CG-4A (TOWPLANE EQUIPPED WITH PARA-PACK RACKS)	7500	3800	26000	3000	804	150	4280	80	2650	105	465	11800	35	525	4.4	3.6	5000	870	7.3		
	7500	3800	29000	6000	804	150	5350	80	2900	105	370	10600	38	485	4.1	3.4	5000	830	6.9		
C-47, 47A & 53 (PADDLE BLADE PROPS) & (2) CG-4A	7500	3800	24200	1200	804	150	5700	80	3050	105	220	7800	46	450	4.0	2.8	2000	665	5.8	* LOADINGS SHOWN ARE FOR EMERGENCY RELEASE ONLY.	
	7500	3800	26000	3000	804	150	6380	80	3250	105	180	7300	50	435	3.8	2.7	2000	630	5.5		

## NOTES:

- (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-143 dated 5 MARCH 1945  
(2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

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

## GLIDER CHARACTERISTICS

WEIGHT		SIZE
B-BASIC C-COMBAT W-WAR MAX		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA
B- (3700 to 14500)	TYPICAL GLIDER CAPACITIES	
C- 7500	(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 RES.)	
W- 9000	S- 63'8" L- 12'11" H- 12'7" T- 9'1/2" W (Tact. gear) 852 SQ. FT.	



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TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART																					
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.	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.)		
P-38G & (1) CG-4A	7500	3800	15500	NONE	300	150	3500	100	2750	120	1000	12000*	15	270	1.9	1.4	5000	400	2.9	* LIMITED- NO OXYGEN IN GLIDER; SERVICE CEILING OF 20000 FT. CAN BE REACHED IN 40 MINUTES IF OXYGEN IS INSTALLED IN GLIDER. NOTE: LOADINGS SHOWN ARE FOR PRO- VISIONAL RELEASE ONLY.	
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 5 MARCH 1945  
(2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

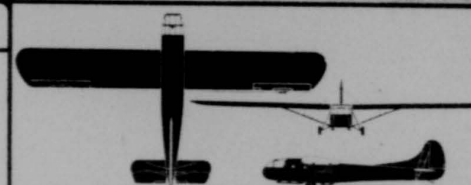
MINIMUM OF 200 LB. BALLAST IS REQUIRED IN NOSE OF  
P-38G WHEN NO AMMUNITION IS CARRIED.

TOW PLANE PERFORMANCE WITH CG-4A TO  
BE SAME AS WITH CG-1A.

## GLIDER CHARACTERISTICS

## WEIGHT

B—BASIC  
C—COMBAT  
W—WAR MAX



## SIZE

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

## TYPICAL GLIDER CAPACITIES

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

(a) TROOP CARRIER: CREW(2) & TROOPS(13).  
(b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1).  
(c) CARGO CARRIER: CREW(2) & TROOPS(3) & 7500L.  
HOWITZER(1) & 7500L. AMMUNITION(18 DIS.)

S— 83'8"  
L— 48'4"  
H— 12'7"  
T— 9'4"  
W (Tact. rear)  
852 sq.

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## TOWPLANE &amp; GLIDER TACTICAL PLANNING PERFORMANCE CHART

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AS OF:  
29 JULY 1945

## CARGO TOWPLANE AND CG-13A 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 (M.P.H.)	GROUND RUN DISTANCE (FT.)	I.A.S. FOR CLIMB (M.P.H.)	INITIAL RATE OF CLIMB (FT./MIN.)	SERVICE CEILING (FT.)	TIME TO SERVICE CEL. (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-47,47A & 53 PADDLE BLADE PROPS & (1) CG-13A	10000	1300	21200	1200	80L	195	1100	85	2600	105	460	12000*	36	555	4.8	3.6	2000	855	7.4		
	15700	7000	21200	1200	80L	195	5140	90	3100	105	300	9500	41	485	4.2	3.2	2000	785	6.3		
	17700 <sup>1/2</sup>	9000	21200	1200	80L	195	5850	90	3350	105	215	8500	45	460	4.0	3.0	2000	675	5.9		
C-46A & (1) CG-13A	10000	1300	41000	NONE	1400	195	3950	85	2750	120	465	12000*	29	700	5.2	4.2	5000	1095	8.1		
	18900	10200	41000	NONE	1400	195	4650	90	3250	120	320	12000*	45	610	4.6	3.7	5000	895	6.7		

## NOTES:

- (1) REFERENCE MATERIAL FROM TECHNICAL ORDER 01-1-113 dated 5 MARCH 1945 (A) TYPICAL GLIDER CONDITIONS
- (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.
- ATTENTION: WEIGHT OF GLIDER MAY BE LIMITED BY TOWPLANE PERFORMANCE; SEE T.O. 01-1-113 DEC. 1944 FOR ALLOWABLE GLIDER WEIGHT WITH CORRESPONDING TOWPLANE.
- (a) JEEPS (2) & TROOPS (8) & CREW (2)  
 (b) JEEP (1) & TROOPS (8) & CREW (2) & 75mm. HOWITZER (1) & AMMUNITION (156 RDS.)  
 (c) TROOPS (8) & CREW (2) & 75mm. HOWITZER (2) & AMMUNITION (165 RDS.)  
 (d) TROOPS (8) & CREW (2) & STD. 105mm. HOWITZER (1) (M-2) & AMMUNITION (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.)

## GLIDER CHARACTERISTICS

WEIGHT		SIZE
B-BASIC		S- SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA
C-COMBAT		
W-WAR MAX		
B- 8700	<b>TYPICAL GLIDER CAPACITIES</b>	
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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# TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

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AS OF:  
28 JULY 1945

## CARGO TOWPLANE AND CG-15A 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.)	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	TIME OUT (HRS.)	TIME BACK (HRS.)		RANGE		ENDUR.
	(LB.)	(LB.)	(LB.)	(LB.)	(U.S. GAL.)	(FT.)	(I.A.S.)	(FT.)	(M.P.H.)	(FT./MIN.)	(FT.)	(MIN.)	(MI.)	(HRS.)	(HRS.)	(FT.)	(MI.)	(HRS.)		
C-47 47A & 53 MIDDLE BLADE PROPS & (1) CG-15A	8000	3950	26000	3000	80L	180	1100	80	2700	105	125	12000	37	555	4.4	3.8	5000	850	6.8	* LIMITED - NO OXYGEN IN GLIDER.
	8000	3950	29000	5000	80L	180	5150	85	3200	105	365	10500	45	520	4.2	3.5	5000	775	6.2	
	8000	3950	31000	8000	80L	180	5700	85	3600	105	320	9500	45	490	3.9	3.3	5000	720	5.7	
C-46A & (1) CG-15A	8000	3950	41000	NONE	1100	180	3100	85	2100	120	620	12000*	23	755	5.3	4.6	5000	1215	8.4	* LIMITED - NO OXYGEN IN GLIDER.
	8000	3950	45000	5000	1100	180	3500	90	3200	120	480	12000*	30	715	5.3	4.3	5000	1115	8.3	

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 DAT. WILL FROM TECHNICAL ORDER 01-1-113, DATED 5 MARCH 1945
- (2) ALL PERFORMANCE SHOWN WITH GLIDER TRAINING GEAR ATTACHED.

**GLIDER CHARACTERISTICS**

<b>WEIGHT</b>		<b>SIZE</b>
B - BASIC		S - SPAN
C - COMBAT		L - LENGTH
W - WAR MAX	H - HEIGHT	T - TREAD
	W - WING AREA	
<b>TYPICAL GLIDER CAPACITIES</b>		
B - 1050	(a) TROOP CARRIER: CREW(2) & TROOPS(13).	S - 62'3"
C - 8000	(b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1).	L - 48'9"
W - 9000	(c) CARGO CARRIER: CREW(2) & TROOPS(3) & 75MM. HOWITZER(1) & 7500 LBS. AMMUNITION(18 RIG.)	H - 12'7"
		T - -
		W - 556 SQ. FT.

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