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TACTICAL PLANNING

Characteristics & Performance Chart

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

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BOMB

CARGO

FIGHTER

GLIDER

New Charts
Pages 39 and 40

1-OCTOBER-1944

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203-3
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FOREWORD

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

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

WARNING

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

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

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

Prepared by Technical Data Laboratory of the Engineering Division

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

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DEFINITIONS

CHARACTERISTICS		PERFORMANCE
SUPERCHARGER:	"TURBO" indicates exhaust driven turbine with single speed integral diffuser.	BOMBS: CARGO: Max. load:
BHP/ALT:	Brake horsepower per engine at critical altitude with ram.	Maximum rack capacity for standard sizes. Cargo, passenger or troop capacities. One size only on each bomb rack (in some cases a reduction in fuel load is required) Practical total cargo based on gross weight. Values are at least 125% of optimum.
T:	Maximum power for take off.	TAKE OFF & LANDING: (At 3000' runway alt.) Gross weight: (To clear 50')
M:	Maximum power for combat at altitude shown, (usually limited to 15 min. duration)	Arbitrary values for reference only. Distances representative of minimum airport requirements.
WE:	War emergency power for combat at altitude shown, (limited to 5 min. duration only)	Distances representative of minimum runway requirements. Practical minimum for average pilot.
C:	Maximum power for continuous operation.	HIGH SPEED & CLIMB: Military power: War emergency power:
Note:	Maximum cruise power is the maximum power for unlimited operation with lean mixture.	For limited periods of combat operation. (Performance with War Emergency ratings are shown when applicable). Minimum time to climb from sea level based on military power climb for allowable time and maximum continuous power climb from then on.
SIZE:	Approximate dimensions for storage planning.	RANGE & ENDURANCE: Take off weight: Bombs, etc:
Length:	Does not include protruding guns.	See discussion in "FOREWORD", page 2. Brief list of typical gross weights. Typical loadings combined with various tank capacities. No consideration is given to loadings requiring partially filled tanks.
Height:	Maximum in three point position.	Note: Take off weights with corresponding load and fuel quantity applies to all values to the right on the same line.
Wing area:	Standard aerodynamic surface area.	Max. cont. power: High speed cruising with rich mixture. (For emergency cruising only)
Tread:	Center to center main wheels: (outboard if dual).	Max. cruise power: Maximum continuous operation with lean mixture setting.
WEIGHTS:	Approximate averages for planning purposes.	Long range: Practical maximum range for planning purposes under all conditions set forth.
B:	Basic weight includes weight empty, trapped fuel and oil, equipment, armament, etc. but does not include disposable fuel, oil, droppable tanks, ammunition, bombs, cargo, nor crew.	
C:	Combat weight is based on latest confirmed information from theaters and usually includes full built-in fuel, full ammunition, and an arbitrary bomb or cargo load.	
R:	Recommended limit on gross weight which will allow a limit applied positive maneuver factor of at least 2.67g.	
W:	War maximum weight for special missions only.	
FUEL:	Standard fuel tankage and capacities.	
ARMAMENT:	Resume' of information in the "ARMAMENT & BOMB INSTALLATIONS" (Chart EE-306A)	
RADIO	Resume' of typical models installed.	

RED PRINT: Preliminary estimates or calculated data.

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BOEING (SEATTLE) "B0"

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-B0 (-1 thru -27)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500	NOSE....FLEX. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	NONE	9600	2550
B-17F-B0 (-30 thru -50)	NONE 1) 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-B0 -55 thru 1st.30(-85)	2) 1) 2) 2)	300 300 400 500 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	A S	A B O V E		2550 (-55 thru -75) 3630 -80 & SUB
B-17F-B0 1st 70(-85) thru -130	3) 1) 2) 2) 2)	300 300 400 500 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	AS ABOVE EXCEPT THAT EXTERNAL BOMB RACKS DELETED AFTER 15th.(-95)			3630
B-17G-B0 (-1 thru -110)	2) 1) 2) 2) 2)	300 365 300 600 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	PROVISION FOR RACKS	9600	AS ABOVE

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

DOUGLAS (LONG BEACH) "DL"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-DL -1 thru 1st.13(-10)	1-.30 2-.50 2-.50 2-.50	500 a 300 400 500 565	NOSE....FLEX. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	NONE	9600	2550
B-17F-DL 1st 12(-10) thru -20	2) 1) 2) 2) 2)	300 300 400 500 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	AS ABOVE	PROV. FOR EXTERNAL RACKS ON -20 & SUB.	AS ABOVE	AS ABOVE
B-17F-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 1st 19(-35) thru -65	3) 1) 2) 2) 2) 2)	300 300 400 500 565 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	A S	A B O V E	AS ABOVE	AS ABOVE
B-17G-DL (-1 thru -55)	2) 1) 2) 2) 2)	300 365 300 600 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	PROVISION FOR RACKS	9600	AS ABOVE

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

VEGA (BURBANK) "VE"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-17F-VE (-1 thru -10)	1-.30 CAL. (300 RDS.) IN 1st. 12 AIRPLANES, NOSE GUN DELETED ON NEXT 85 THRU (-10). NO RADIO COMPARTMENT GUN UNTIL LAST 14 (-15). OTHER ARMAMENT AS ABOVE.	300	NOSE GUN	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	NONE	9600	2550
B-17F-VE (-15 & -20)	2) 1) 2) 2) 2)	300 300 400 500 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	AS ABOVE	EXTERNAL RACKS ON 1st 31 (-20) & SUB.	AS ABOVE	AS ABOVE
B-17F-VE (-25 & -30)	A S	A B O V E	AS ABOVE	AS ABOVE	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) 2) 2)	300 300 400 500 565	NOSE....FLEX. RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	AS ABOVE	NONE	9600	3630
B-17G-VE (-1 thru -90)	2) 1) 2) 2) 2)	300 365 300 600 d 400 500 565	CHEEK...FLEX. CHIN TURRET RADIO COMPART. SIDE WAIST-FL. UPPER TURRET LOW-BALL TRR. TAIL...FLEX.MT.	2-2000 6-1600 6-1000 12- 500 16- 250 24- 100	AS ABOVE	PROVISION FOR RACKS	AS ABOVE

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

GENERAL NOTE:

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

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

PAGE 5
AS OF:
DATE: 28 SEP 1944

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE
	ENGINE MFR. MODEL	B.H.P./ALT.	S-SPAN	B-BASIC			TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY		
B-17F	WRIGHT R-1820-97 TURBO HAMILTON STD. 11"7" DIA. - 3BL. P.P. HYDROMATIC	T 1200/S L M 1200/27000 C 1000/30000	S 103'9" L 74'9" H 19'1" T 21'2" W 112'0" SQ. F.	B 36000 C 55000 R 56000 W 65000	9	MAIN - WINGS BOMB BAY	6-1730 2x 540 2550 TOT	2) 2) 1) .50 2) 2) 2)	300 300 300 400 500 565	NOSE - FLEX. SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	2-2000 6-1600 6-1000 12-500 2-1600 2-1000	2-1000 2-2000 2-1600 2-1000	C 6-1600 b 2-1000 17600	SEE NOTE (B)	TECHNICAL ORDER 01-208F-1. (20 JUNE 1944) EXTERNAL BOMBS ON SOME MODELS ONLY.
B-17F (WITH WING TIP TANKS)	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	9	MAIN - WINGS WING TIPS BOMB BAY	6-1730 2x 540 2x 410 3650 TOT	2) 2) 1) .50 2) 2) 2)	300 300 300 400 500 565	NOSE - FLEX. SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE
B-17G	AS ABOVE	AS ABOVE (SEE *)	AS ABOVE	AS ABOVE	9	AS ABOVE EXCEPT PROVISIONS ONLY FOR THE BOMB BAY TANKS	AS ABOVE	2) 2) 1) .50 2) 2) 2)	300 300 300 400 500 565	NOSE - FLEX. SIDE WAIST-FL. RADIO COMPART. UPPER TURRET LOW BALL TURRET TAIL - FLEX. MT.	AS ABOVE	PROV. FOR EXTERNAL RACKS	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-208F-1. (1 OCT. 1943) LATEST B-17's HAVE NEW TYPE SUPERCHARGER (B-22) GIVING INCREASED ALTITUDE PERFORMANCE. LATER MODELS HAVE 600 RDS. EARLIER MODELS 500 RDS./GUN & LENGTH DECREASED 5" ON LATER MODELS TO 74'4".

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT					RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE				
	GROSS WEIGHT LB.	TO CLEAR 50' DIST.		LANDING SPEED MPH	GROUND-RUN DIST.		STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER			TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 10000 FT.		LONG RANGE AT 10000 FT.						
		T.O. FT.	LAND. FT.		T.O. FT.	LAND. FT.		HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	TIME TO CLIMB MIN.				RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS		
B-17F	40000 50000 55000 56000	- - 3950 4100	3900 4750 5200 -	90 100 104 105	- - 3050 -	2000 2700 3050 -	55000	30000 25000 20000 15000 10000 5000	298 289 282 274 263	100 725 850 950 1050	220 274 266 255 245	52.0 36.2 25.7 17.3 10.2	56500 50500 56500	NONE NONE 6000	2550 1730 1730	1250 900 850	5.5 3.9 3.7	1100 950 900	5.6 4.0 3.8	1850 1300 1200	9.1 6.6 6.1	1950 1350 1250	8.9 6.3 5.9	2600 1500 1700	17.2 11.1 10.5	
B-17F (WITH WING TIP TANKS)	40000 50000 55000 56000 57000 64000	- - 3950 4100 -	3900 4750 5200 -	90 100 104 105	- - 3050 -	2000 2700 3050 -	55000	A S A B O V E	A B O V E	A B O V E	A B O V E	A B O V E	65500 59500 63500 59000 65500	NONE NONE 1000 6000 6000	3630 2810 2810 1730 2810	- 1100 1100 850 1100	- 6.1 6.1 3.7 6.0	- 1550 1550 900 1500	- 6.2 6.2 3.8 6.0	- 2050 2050 1200 2000	- 10.1 10.1 6.1 10.0	- 2150 2100 1150 -	- 9.0 9.9 5.9 -	2500 2700 1700 -	21.2 17.4 17.4 10.5 17.2	MAX. FERRY RANGE MAY BE RESTRICTED BY INSUFFICIENT OIL IF ENGINE IS NOT IN BETTER THAN AVERAGE CONDITION; OIL CONSUMPTION 3 QT. TO 3 GAL./HR. DEPENDING ON TIME SINCE OVERHAUL. LONG RANGE VALUES BASED ON CONSTANT W.P.H. PERFORMANCE DATA ABOVE 55000 LB. NOT YET AVAILABLE. SEE NOTE (A). PERFORMANCE DATA NOT AVAILABLE WITH TYPE B-22 SUPERCHARGER.

NOTES: (B)

24 VOLT RADIO SYSTEM
SCR-211 FREQUENCY METER
SCR-269G RADIO COMPASS
SCR-27LN COMMAND SET
SCR-287A LIAISON SET
SCR-695 SET (or SCR-995)
SCR-578 EMERGENCY TRANSMITTER
RC - 32 FILTER EQUIPMENT (or RC-198)
RC - 36 INTERPHONE AMPLIFIER
RC - 43B MARKER BEACON
RC - 103 BLEND LANDING (Provisions only)
SCR-522 COMMAND SET

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

(A) THRUSTER REPORTS INDICATE LOADINGS IN EXCESS OF 65000 LB. ARE BEING USED. IT IS ABSOLUTELY ESSENTIAL THAT WING FUEL & OIL TANKS ARE FULL AT THESE WEIGHTS & THAT MANEUVERS BE KEPT TO A MINIMUM.
(B) LATEST INVESTIGATION SHOWS THAT 2x1600 LB. ARMOR PIERCING BOMBS MAY BE CARRIED BUT BOMB RAIL LOAN FACTORS & CLEARANCES ARE REDUCED & MANEUVERING OF AIRPLANE MUST BE LIMITED ACCORDINGLY.

MANUFACTURED BY BOEING - DOUGLAS - YEAH



B-17

"FORTRESS"

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CONSOLIDATED (SAN DIEGO) "CO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-CO 0 thru 1st. 94(-15)	1) 2) 2)	200 400 400	NOSE.....FLEX. UPPER TURRET TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	2364
B-24D-CO Last 36(-15) thru -20	1) 2) 2)	200 400 400	NOSE.....FLEX. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	A S	A B O V E		2364 Last 36(-15) 3614 -20 & sub.
B-24D-CO -25 thru 1st. 26(-140)	3) 2) 2) 1) 2)	100 250 400 100 400	NOSE.....FLEX. SIDE WAIST..PL. UPPER TURRET TUNNEL...FLEX. TAIL TURRET	4-2000 8-1600 8-1000 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24D-CO Last 9(-140) thru -170	3) 2) 2) 2)	100 250 400 508 400	NOSE.....FLEX. SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CO (-1 thru -210)	2) 2) 2) 2)	400 250 ^b 400 508 400	NOSE TURRET SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-1 & -5-CO	2)	400	TAIL TURRET				

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

CONSOLIDATED (FT. WORTH) "CP"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-24D-CF (-1 & -5)	3) 2) 2) 1) 2)	100 250 400 100 400	NOSE.....FLEX. SIDE WAIST..PL. 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					
B-24J-CF (-1 thru -105)	2) 2) 2) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E (SEE a)		AS ABOVE
B-24J-CF (-1 thru -15)	2) 2) 2) 2)	400 500 ^b 400 508 400	NOSE TURRET S. WAIST-K6 MT. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-CF (-101 to -)	A	S	A	B	O	V	E

NOTES: ^a B-10 SHACKLES FOR 8-1600 LB. BOMBS START ON 2101st. FORD KNOCK-DOWN SET.
^b B-24J-20 HAS PROVISIONS FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

DOUGLAS (TULSA) "DT"

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 (-1 thru -15) (DOUGLAS)	2) 2) 2) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	4-2000 8-1600 8-1000 12- 500 12- 250 20- 100	NONE	12800	3614
B-24E-FO (-1 thru -15) (FORD)	A S	A B O V E		A S	A B O V E		AS ABOVE
B-24H-DT & FO (-20 thru -30)	2) 2) 2) 2)	400 500 ^b 400 508 400	NOSE TURRET S. WAIST-K6 MT. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-FO (-1 thru -20)	A	S	A	B	O	V	E
B-24J-DT (-1 thru -10)	B-24H-DT & FO AIRPLANES RECEIVE NEW B-24J DESIGNATIONS WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.						
B-24M-FO (-1 & SUBS.)	2) 2) 2) 2)	400 500 400 508 400	NOSE TURRET SIDE WAIST-K6 UPPER TURRET LOW BALL TR. TAIL POWER MT.	SAME AS LISTED AT TOP OF CHART			

NOTES: ^a B-10 SHACKLES FOR 8-1600 LB. BOMBS START ON 2101st. FORD KNOCK-DOWN SET.
^b B-24H-20 HAS PROVISION FOR ONLY 250 RDS. PER GUN AT SIDE WAIST POSITION.

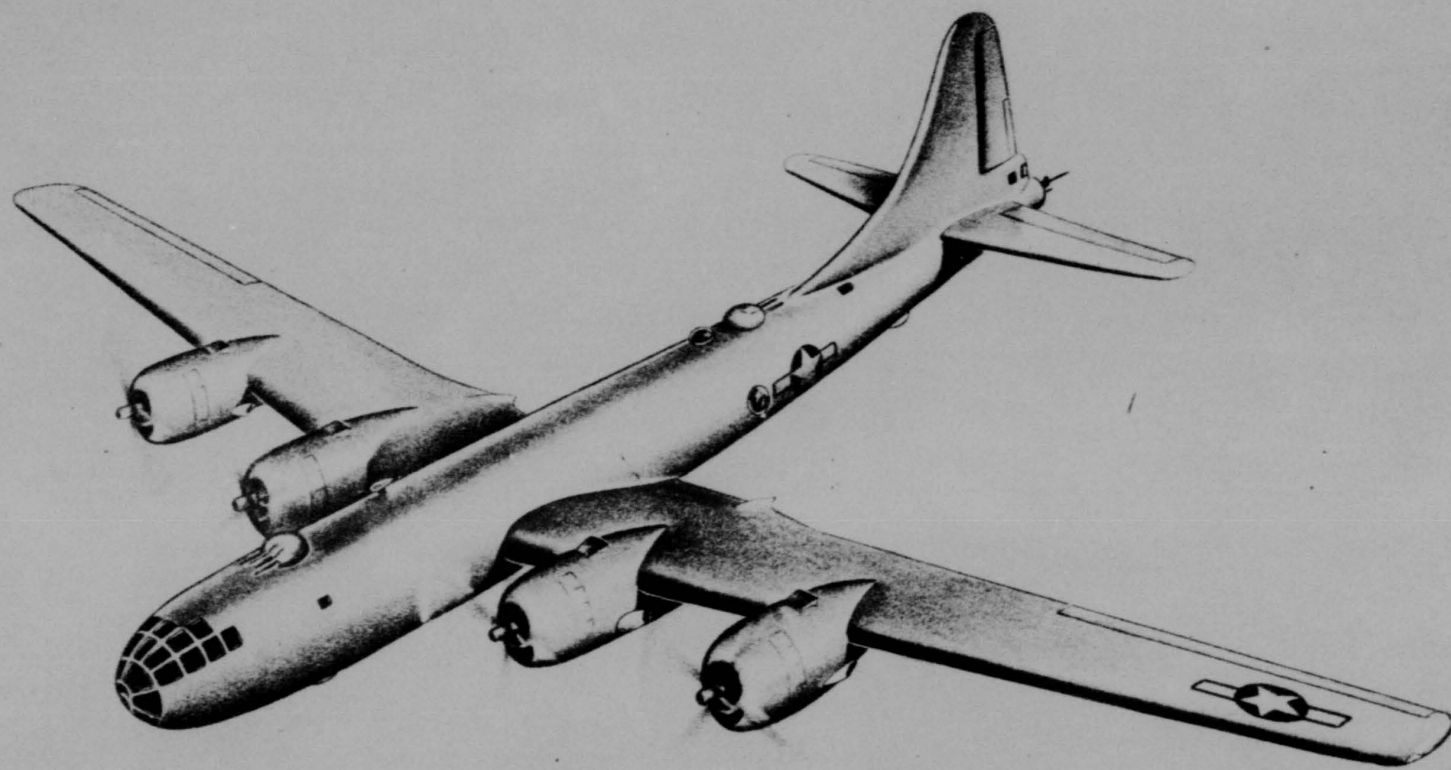
NORTH AMERICAN (DALLAS) "NT"

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-24E-NT (-1 thru -15)	3) 2) 2) 2) 2)	250 TOT. 250 400 508 ^a 400	NOSE.....FLEX. SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	4-2000 8-1000 12- 500 12- 250 20- 100	NONE	8000	3614
B-24J-NT (-1 thru -5)	2) 2) 2) 2)	400 250 400 508 400	NOSE TURRET SIDE WAIST..PL. UPPER TURRET LOW BALL TR. TAIL TURRET	A S	A B O V E		AS ABOVE
B-24J-NT (-10 thru -15)	A S	A B O V E					
B-24J-NT (-1 thru -10)	B-24J-20-NT AIRPLANES ARE DESIGNATED B-24J-1, ETC. WHEN C-1 AUTOMATIC PILOT & M-9 BOMB SIGHT REPLACE A-5 AUTOMATIC PILOT & S-1 BOMB SIGHT.						

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

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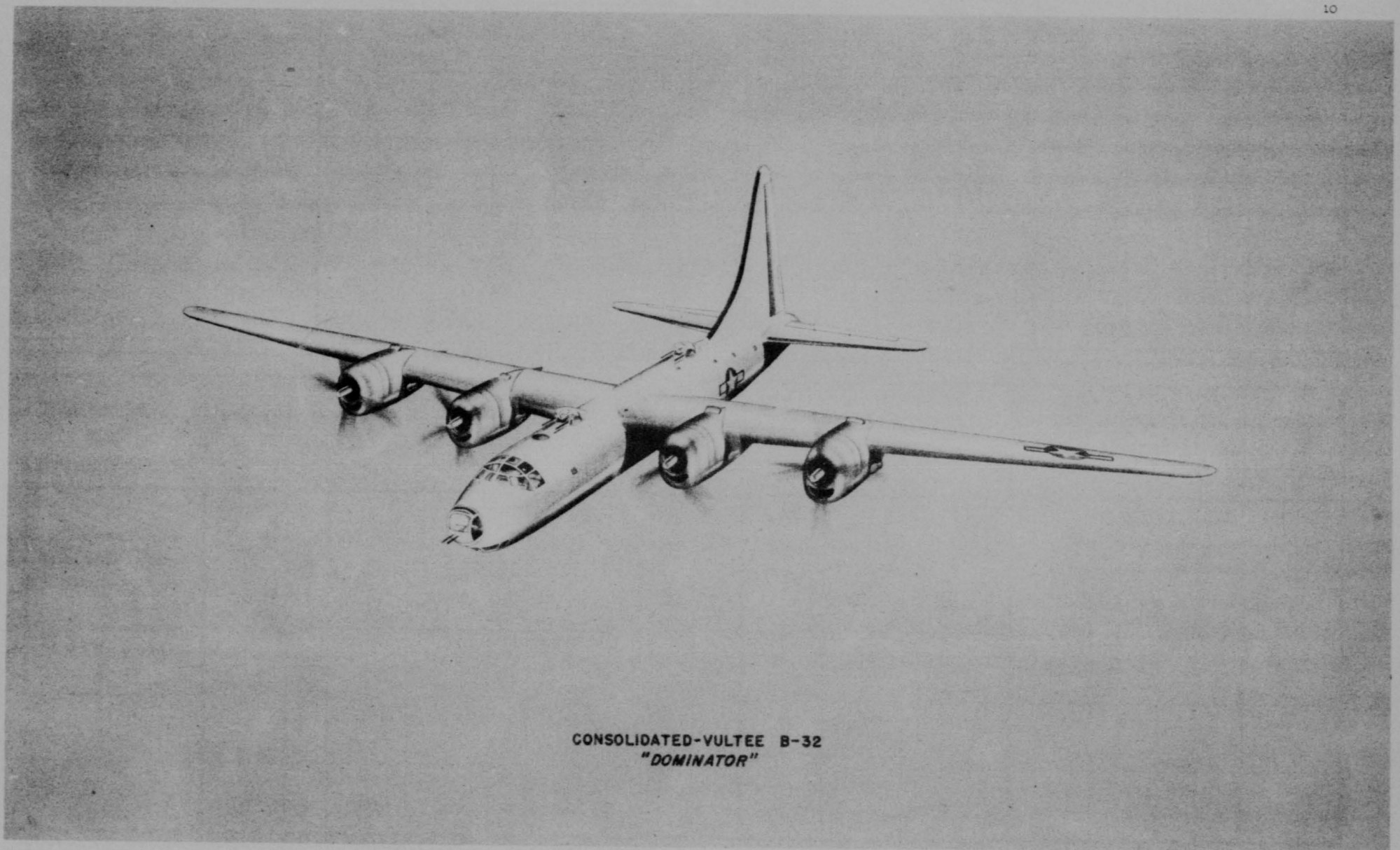
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BOEING B-29

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CONSOLIDATED-VULTEE B-32
"DOMINATOR"

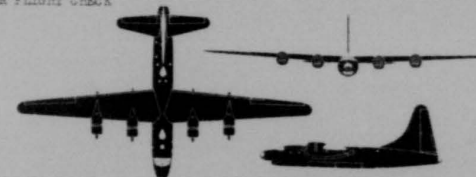
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
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MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.		TYPE
B-32-CF	4	WRIGHT R-3350-23 TURBO CURTISS 16" DIA. - LBL. CONST. SPD. - ELECT.	T 2200/3 L M 2200/30000 C 2000/32300	S 135' 0" L 42' 11" H 33' 0" T 28' 0" W 1122 34.1	B 60000 C 100000 R 102500 W 123250	8	INNER (CENTER) 2 x 668 OUTER 2 x 550 INNER 2 x 507 OUTER 2 x 309 INNER 2 x 360 OUTER 2 x 316 (See f.) 5400 FT	2) 365 2) 400 2) 50 2) 550 2) 1000	4	WING TURRET FRONT TOP TR. REAR TOP TR. LOW BALL TR. TAIL TURRET	4-1000 8-2000 8-1600 12-1000 40-500	608	20000	SCR-27LN, 211, 259, 287, 522, 695 & 718, 72-36, 103, 193 & 198	TECHNICAL ORDER OI-500-1 (20 JULY 1944) * SPACE PROVISIONS FOR 600 RDS./GUN; NORMAL RDS. LISTED. * RADIO LISTED FOR EXP. PLANS & FIRST FEW PROD. ARTICLES. * BOMB BAY TABLES IN DESIGN STAGE; NO DETAILS AVAILABLE.	
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE					
	GROSS WEIGHT LB.	TO CLEAR 50' DIST.		LANDING SPEED MPH	GROUND-RUN DIST.		WEIGHT LB.	STD. ALT. FT.	MIL. POWER			MAX. CONTIN. POWER			TAKE OFF WEIGHT LB.	BOMBS CARGO PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE				
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN	RATE OF CLIMB MPH	HIGH SPEED MPH	RATE OF CLIMB FT/MIN	RATE OF CLIMB MPH				AT 10000 FT	AT 25000 FT	AT 10000 FT		AT 25000 FT	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
B-32-CF	70000 60000 90000 100000 110000 120000	- 3650 1500 5500 6700 8850	- 4100 1550 5000 - -	88 96 106 118 - -	3000 3600 1300 - - -	2600 2900 3150 - - -	100000	30000 45000 20000 15000 10000 5000	582 566 350 331 318 302	650 625 950 1050 1150 1200	369 354 338 320 307 288	125 600 388 750 950 950	38.3 28.7 21.6 15.1 8.1 3.1	100000 106500 115000	2000 8000 20000	5460 5460 5460	1500 1150 1100	5.6 5.5 5.3	1700 1650 1550	5.7 5.6 5.6	2700 3650 2500	11.6 11.3 10.8	3550 2850 2500	11.1 11.1 10.8	3750 3500 2900	20.8 16.7 14.5

NOTES:

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



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"DOMINATOR"

MANUFACTURED BY CONSOLIDATED-VULTURE (Ft. Worth) "CF"

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

MODEL & BLOCK NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO & SIZE	NO & SIZE		
B-25C-NA (-1 thru -20)	1) 1) 2) 2)	300 300 200 200 a	NOSE....FLEX. NOSE....FIXED UPPER TURRET LOWER TURRET	1-2000 3-1000 6- 500 8- 250 12- 100	1-2000T 6- 325 8- 250 8- 100	3-1000 8- 250x 5000	1559 (B-25C) 1684 (B-25D)
B-25C-NA (-25) B-25D-NC (-20 thru -35)	AS ABOVE	EXCEPT NO LOWER TURRET ON 210(D-20), -25, -30 & -35.		1-2000 2-1600 3-1000 6- 500 8- 250 12- 100	1-2000 T 6- 325 8- 250 8- 100	2-1600 8- 250x 5200	1524 (B-25C) 1649 (B-25D)
B-25G-NA (-1 thru -10)	1-75MM 2-.50 2-.50 2-.50	21 400 200 200 c	NOSE CANNON M4 NOSE....FIXED UPPER TURRET LOWER TURRET	A S	A B O V E		1649
B-25H-NA (-1 thru -10)	1-75MM 4-.50 4-.50 2-.50 2-.50 2-.50	21 400 400 d 200 200 500	NOSE CAN. T13B1 NOSE....FIXED NOSE...PACKAGE UPPER TURRET SIDE WAIST-FL. TAIL...POWER MT.	** 1-2000 2-1600 3-1000 6- 500 8- 250 12- 100	1-2000 T	3200	1624
B-25J-NC (-1 thru -25)	4) 1) 2) 2) 2)	400 300 300 250 400 600	NOSE...PACKAGE NOSE....FLEX. NOSE....FIXED SIDE WAIST-FL. UPPER TURRET TAIL...POWER MT.	A S	A B O V E		AS ABOVE

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

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MARTIN

(BALTIMORE) "MA"
(OMAHA) "MO"

MODEL & BLOCK-NO.	ARMAMENT			BOMBS			FUEL U.S. GAL. (MAXIMUM)
	NO. GUNS & CALIBER	RDS. PER. GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX. LOAD LB.	
				NO. & SIZE	NO. & SIZE		
B-26B-MA (B thru -4)	1-.30 1-.30 2-.50 2-.50	600 600 1500 400	NOSE...FLEX. TUNNEL...FLEX. TAIL...FIX. MT. UPPER TURRET	2-2000 2-1600 4-1000 8- 500 16- 250 30- 100	1-2000 (TORPEDO)	2-1600 1-2000 T 5200	1162
B-26B-MA (-10 thru -20) B-26C-MO -5 thru 1st. 75(-30)	1) 1) 2) 2) 2) 2)	200 270 240 250 200 400	NOSE...FLEX. NOSE...FLEX. SIDE WAIST-FL. U.FUS.-PACKAGE L.FUS.-PACKAGE TAIL-POWER MT. UPPER TURRET	A S	A B O V E		1962
B-26B-MA -25 thru 1st. 150 (-50) B-26C-MO last 125(-30)		A S	A B O V E	2-2000 2-1600 4-1000 6- 500 10- 250 20- 100	AS ABOVE	AS ABOVE	1162
B-26B-MA Last 50(-50) & -55 B-26C-MO -15	1) 2) 2) 2) 2)	270 250 250 200 900	NOSE...FLEX. SIDE WAIST-FL. U.FUS.-PACKAGE L.FUS.-PACKAGE TAIL-POWER MT. UPPER TURRET	A S	A B O V E	AS ABOVE	AS ABOVE
111(B-40); AT-23A 1st. 109(B-45) " 3(C-25); AT-23B 71(C-30); AT-23B (C-35A-40) AT-23B 1st. 26(C-45) "			ALL GUNS & ARMAMENT ITEMS REMOVED FROM THESE MODELS; MODIFIED FOR TOW TARGET USE & DESIGNATED AT-23A & B.	N	O	N E	1962 3(C-25) 1162 (Balance)
B-26F-MA -1, -2 & -6 B-26G-MA -1 thru -25	1) 2) 2) 2) 2)	300 250 275 225 400 900	NOSE...FLEX. SIDE WAIST-FL. U.FUS...FLEX. L.FUS...PAGE. UPPER TURRET TAIL...POW.MT.	2-2000 2-1600 4-1000 6- 500 10- 250 20- 100	NONE	4000	1500

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

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 15
CONFIDENTIAL																	AS OF: 25-SEP-1944
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION		NO. TANKS & CAPACITY U.S. GAL.	NO GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE	EXTERNAL NO & SIZE	MAX. LOAD LB.	TYPE		
B-26 B-MA B-2,-3 & -4	2	PRATT-WHITNEY R-2800-5e 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. P.P. ELECTRIC	T 1850/ S L M 1850/ 2700 C 1500/ 7800	S 55'0" L 58'3" H 19'10" T 22'0" W 602 sq. ft.	B 23500 C 35000 R 36500 W 300	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE)	2 x 360 2 x 121 2 x 250	1-.30 1-.30 2-.50 2-.50	600 600 1500 400	NOSE - FLEX. TUNNEL - FLEX. TAIL-FLEX.MT. UPPER TURRET SIDE WAIST-FL.	2-2000 2-1600 4-1000 6-500 16-250 30-100	1-2000 (TORPEDO)	2-1600 1-2000T	SEE (A) SEE (B)	5200 (B)	SEE (A) TECHNICAL ORDER 01-358A-1. (5 MARCH 1943) * SIDE WAIST GUNS ADDED TO LAST 141 (-L) ONLY. * B-26B-MA HAS -5 ENGINE; B-26B-2-MA HAS -11 ENGINE & B-26B-3 & -4 HAS -43 ENGINE.
B-26 B-MA -10 TO -20 INCL B-26 C-MO -5 TO -25 INCL	2	PRATT-WHITNEY R-2800-43 2 SPD. SUPERCH. CURTISS 13'6" DIA. - 4 BL. P.P. ELECTRIC	T 1920/ S L M 1920/ 3200 C 1550/ 7100	S 71'0" L 58'3" H 21'6" T 22'0" W 659 sq. ft.	B 25300 W C 37000 R 37500 W 38200 (C)	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE & REAR)	2 x 360 2 x 121 4 x 250	1 1 2 2 2 2	270 240 250 200 400 600	NOSE - FLEX. NOSE - FLEX. SIDE WAIST-FL. U. PUS. - PACKAGE UPPER TURRET TAIL-FLEXER MT.	2-2000 2-1600 4-1000 6-500 10-250 30-100	A S A B O V E	A S O V E	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-358B-1. (25 DEC. 1943) * B-26B-10,-15 & C-5 HAVE FLEX.TAIL MOUNT INSTEAD OF POWER MOUNT. & RDS./GUN SAME AS B-26B-2-MA. * MAXIMUM WEIGHT OF B-26B-15 IS 21,500 LB.
B-26 B-MA -25 TO -55 INCL B-26 C-MO -30 & -45 INCL	2	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE ONLY)	2 x 360 2 x 121 2 x 250	A S	A B O V E	SEE (A) 2-2000 2-1600 4-1000 6-500 10-250 30-100	1-2000 (TORPEDO)	2-1600 1-2000T	NOTE (A) plus RC-103 & SCR-522	5200 (B)	NOTE (A) REFERENCE AS ABOVE * FLEXIBLE NOSE GUN DELETED ON LATEST B-26B's and B-26C-45. * ALL MODELS EXCEPT 1st. 75 (B-26C-30) CARRY LESS BOMBS DUE TO ORIENTATION OF 2 REAR BOMB BAYS. * RC-103 & SCR-522 ADDED TO LATER MODELS ONLY.	
B-26 F-MA -1,-2 & -6 B-26 G-MA -1 TO -10	2	AS ABOVE	AS ABOVE	S 71'0" L 56'11" H 30'11" T 22'0" W 658 sq. ft.	B 25300 C 37000 R 37500 W 38200 (C)	6	MAIN - WINGS AUX. - WINGS BOMB BAY - (PURE ONLY)	2 x 360 2 x 120 2 x 250	1 2 2 2	300 250 275 400 900	NOSE - FLEX. SIDE WAIST-FL. U. PUS. - PACKAGE L. PUS. - PACKAGE UPPER TURRET TAIL-FLEXER MT.	2-2000 2-1600 4-1000 6-500 10-250 30-100	NONE	4000	AS ABOVE	TECHNICAL ORDER 01-358C-1. (15 FEB. 1944) * B-26F DESIGNATION IS USED FOR AIRPLANES WITH AN FITTINGS; NO OTHER MAJOR CHANGES.	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE					
	GROSS WEIGHT LB.	TO CLEAR 50'		GROUND-RUN		STD. ALT. FT.	MIL. POWER			MAX. CONTIN. POWER			TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE								
		T.O. DIST. FT.	LAND. DIST. FT.	LANDING SPEED MPH	T.O. DIST. FT.		LAND. DIST. FT.	HIGH SPEED MPH	RATE OF CLIMB FT./MIN.	HIGH SPEED MPH	RATE OF CLIMB FT./MIN.	TIME TO CLIMB MIN.				RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES		ENDUR. HOURS				
B-26 B-MA B-2,-3 & -4	24000 28000 32000 35000 36000	- - 3250 4000 4300	2300 2900 3500 - -	110 120 130 - 3150	- - 2350 - -	1600 2600 -	35000	270 298 291 294 281	300 750 1000 1150 1500	265 600 288 300 255	200 11.0 7.7 3.4 0.0	26.5	34000 35500 36000 35000	NONE 1500 2000T 4000	1162 1162 1162 962	950 300 - 550	3.5 3.5 - 2.2	- - - -	- - - -	- - - -	- - - -	2000 1950 1900 1250	11.0 10.7 10.5 7.0					
B-26 B-MA -10 TO -20 INCL B-26 C-MO -5 TO -25 INCL	24000 28000 32000 35000 36000	- 2400 3050 3900 4400	1950 2200 2400 - -	134 135 136 - 3150	- 1600 2000 - -	900 1050 1200 -	37000	282 278 285	273 271 1000	320 350 650	28.6 11.2 4.1 0.0	- - - -	36200 37800 38200 35300	NONE 1500 2000T 4000	1362 1162 1162 962	1125 1000 1000 650	5.7 4.2 - 2.7	- - - -	- - - -	- - - -	- - - -	2375 1745 1700 1050	11.7 8.5 6.5 5.4	- - - -	2500 1825 1500 1075	14.7 10.2 10.2 6.0	* MUST BE STRIPPED TO 38200 LB.	
B-26 B-MA -25 TO -55 INCL B-26 C-MO -30 & -45 INCL	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	37000	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	37800 34200 35500 38100	NONE 1500 2000T 4000	1162 962 962 962	1000 650 - 650	4.2 2.6 - 2.7	- - - -	- - - -	- - - -	- - - -	- - - -	1725 1125 - 1050	8.5 5.4 - 5.4	- - - -	1825 1250 - 1075	10.2 7.0 - 6.0	
B-26 F-MA -1,-2 & -6 B-26 G-MA -1 TO -10	28000 32000 35000 36000 38200	2900 2450 2600 2650 3600	2200 2100 2600 2650 -	112 122 125 127 2100	1500 1750 1345 2000 -	1050 1300 1350 -	37900	255 274 277 285	258 - 390 259	350 390 950 950	31.0 17.2 4.1 0.0	- - - -	38000 36200 34200 38200	NONE 1500 2000 4000	1050 1850 1000 1000	4.3 3.6 2.7 2.8	- - - -	- - - -	- - - -	- - - -	- - - -	1775 1500 1175 1100	8.8 7.2 5.6 5.6	- - - -	1875 1600 1300 1125	10.6 9.0 7.3 6.3	* MUST BE STRIPPED TO 38200 LB.	

NOTES: (A)

24 VOLT RADIO SYSTEM
SCR-211 FREQUENCY METER
SCR-2590 RADIO COMPASS
SCR-2745 COMMAND SET
SCR-257A LIAISON SET
SCR-535 SET (or SCR-595 or SCR-695)
SCR-578 EMERGENCY TRANSMITTER
RC - 32 FILTER EQUIPMENT (or RC-195)
RC - 36 INTERPHONE AMPLIFIER
RC - 438 MARSHAL BEACON

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK
* MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.
(B) TORPEDOES BEING USED IN LIMITED QUANTITIES ONLY;
WITH MAXIMUM BOMB LOAD HEAVY TORPEDO MUST BE DROPPED FIRST.
(C) LIMITED TO 36200 LB. BY FLYING CHARACTERISTICS.

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



B-26
"MARAUDER"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
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MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM.		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.		TYPE
A-20B-DL	2	WRIGHT B-2500-11 2 SPD. SUPERCH. HAMILTON STD. 11"3" DIA. - 3 BL. P.P. HYDRA-MATIC	T 1600/3000 M 1600/11500 C 1350/5500 1275/12000	S 61'4" L 48'0" H 18'1" T 17' W 465 SQ. FT.	B 15600 C 22000 R 25000	4	MAIN - WINGS FUSELAGE BOMB BAY	4 - 390 1 x 100 2 - 590 1080 TOT.	1-.30 2-.30 1-.50 2-.50	500 1000 200 200	TUNNEL - FLEX. L.A.R. MAGELLES REAR COCKPIT NOSE - FIXED	1-1000 1-2000 T 1-500 1-250 10-100	(SEE C) 1-2000 T 2-500 1-250 1-100	1000	SCR-27LN SCR-535 FM-26C RE-51	TECHNICAL ORDER 01-4042-1. (1 DEC. 1942) * SOME MODELS ONLY.
A-20C-DO -I TO -10 INCL	2	AS ABOVE EXCEPT FOR CHANGE TO B-2500-23 ENGINE	T 1600/3000 M 1600/10000 C 1350/5000 1275/11500	S 61'4" L 47'4" H 18'1" T 17' W 465 SQ. FT.	B 16300 C 23000 R 25200	4	INBD. WINGS OUTBD. WINGS FUS. (BOMB BAY) BOMB BAY (SEE B)	2 x 136 2 x 64 3 - 325 4 - 680 1080 TOT.	1) 2) .30 4) a	500 ea.	TUNNEL - FLEX. REAR COCKPIT NOSE - FIXED	1-500 1-250 1-100	(SEE C) 1-2000 T b 1-2000 T	2000	AS ABOVE	TECHNICAL ORDER 01-4042-1. (10 FEB. 1942) b NO TORPEDO PROVISIONS ON A-20C-1. * FOR ALTERNATE INSTALLATIONS SEE EX-306-A.
A-20G-DO -I TO -15 INCL	2	AS ABOVE	AS ABOVE	S 61'4" L 48'0" H 17'7" T 17'0" W 465 SQ. FT.	B 17200 C 21000 R 25200	3	AS ABOVE	2 x 136 2 x 64 3 - 325 1 x 374 1099 TOT.	1(.30 or 1-.50 6-.50	500 500 350	TUNNEL - FLEX. REAR COCKPIT NOSE - FIXED	1-500 1-250 1-100	(SEE C) 1-2000 T 1-2000 T	2000	SCR-27LN SCR-535A SCR-595A MN-26Y RC-36 RC-198 SCR-522	TECHNICAL ORDER 01-40 (5 APRIL 1944) * ARMAMENT FOR A-20G-1 IS (2) .50 CAL. FIXED HOSE GUNS OF 350 RDS. EACH & (4) 20MM HOSE GUN, TYPE M2 OF 60 RDS. EACH; MAJORITY ALLOCATED TO FOREIGN POWER.
A-20G-DO -20 TO -45 INCL	2	AS ABOVE	AS ABOVE	S 61'4" L 48'0" H 17'7" T 17'0" W 465 SQ. FT.	B 17700 C 26000 R 26000	3	INBD. WINGS OUTBD. WINGS FUS. (BOMB BAY) DRP. - EXT. (SEE B)	2 x 136 2 x 64 3 - 325 1 x 374 1099 TOT.	1) 2) .50 6)	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	1-500 1-250 1-100	(SEE C) 1-2000 T 1-500 1-250 1-100	4000	SCR-27LN SCR-595A SCR-595A MN-26Y RC-36 RC-198 SCR-522	REFERENCE AS ABOVE * NO PROVISIONS FOR TORPEDO ON A-20G-40 & -45. * A-20G-15 HAS MN-26C INSTEAD OF MN-26Y. * SCR-522 INSTALLED ON THE -16'S ONLY.
A-20J-DO -I TO -20 INCL	2	AS ABOVE	AS ABOVE	S 61'4" L 48'0" H 17'7" T 17'0" W 465 SQ. FT.	B 17800 C 26000 R 26000	4	AS ABOVE	1) 2) .50 2)	400 400 350	TUNNEL - FLEX. UPPER TURRET NOSE - FIXED	AS	AS ABOVE	AS ABOVE	AS ABOVE	SCR-27LN SCR-595A MN-26C RC-36 RC-198 SCR-522	REFERENCE AS ABOVE * NO PROVISIONS FOR TORPEDO ON A-20J-15 & -20.

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE		
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE												
	TO CLEAR 50'		GROUND-RUN		LANDING		WEIGHT	STD. ALT.	MIL. POWER	HIGH SPEED	RATE OF CLIMB	MAX. CONTIN. POWER	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB	TAKE OFF WEIGHT	BOMBS CARGO PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE	
T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.	AT 10000 FT.													AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE	ENDUR.	RANGE	ENDUR.
A-20B-DL	17000	2800	2700	95	1500	1650	25000	280	370	277	290	22.0	23800	NONE	1080	850	3.3	1150	4.9	1500	7.0	-	-	2100	13.4
A-20C-DO -I TO -10 INCL	19000	2800	2700	95	1500	1650	25000	303	900	300	775	13.2	21000	NONE	1080	300	1.4	500	2.1	600	2.7	-	-	900	6.0
A-20G-DO -I TO -15 INCL	18000	2700	2700	95	1600	1650	25000	275	300	274	270	23.0	24500	NONE	1080	975	3.3	-	-	1500	6.6	-	-	2300	12.0
A-20G-DO -20 TO -45 INCL	20000	3200	2800	98	2350	1750	25000	302	800	298	720	12.0	23200	2000	540	350	1.5	-	-	675	3.1	-	-	1000	6.5
A-20J-DO -I TO -20 INCL	19000	2700	2700	95	1650	1650	25000	275	260	274	310	25.3	25300	NONE	1080	975	3.5	1650	6.8	1700	7.3	2000	9.1	2300	12.4
A-20J-DO -I TO -20 INCL	21000	3600	2900	102	1850	1850	25000	302	760	298	690	11.0	24000	2000	540	150	1.7	750	3.1	800	3.4	900	4.1	1100	6.0
A-20J-DO -I TO -20 INCL	23000	4400	3150	109	3250	2000	25000	317	1320	312	1200	8.7	24000	2000	540	125	1.7	650	3.0	700	3.3	-	-	950	5.7
A-20J-DO -I TO -20 INCL	26000	5900	-	-	4300	-	26000	319	1750	313	-	-	26200	NONE	1099	900	3.5	-	-	1625	7.3	-	-	2000	11.2
A-20J-DO -I TO -20 INCL	27000	6500	-	-	4700	-	26000	306	1860	301	-	-	26000	2000	725	625	2.3	950	4.3	1075	4.6	1250	5.7	1300	6.6
A-20J-DO -I TO -20 INCL	27000	6500	-	-	4700	-	26000	317	1500	308	1250	6.1	26000	2000 T	725	575	2.3	925	4.3	975	4.5	-	-	1175	6.7
A-20J-DO -I TO -20 INCL	27000	6500	-	-	4700	-	26000	306	1750	299	-	-	26000	4000	400	300	1.2	125	2.0	525	2.3	550	2.5	650	3.3

NOTES: (A) CRITICAL FLIGHT CHARACTERISTICS RESULT ABOVE 27000 LB.

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

(C) PROVISIONS ONLY, FOR TORPEDO: A-20 SERIES NOT BEING USED FOR TORPEDO MISSIONS AS PER MILITARY REQUIREMENTS POLICY NO. 37 DATED JULY 3, 1943.

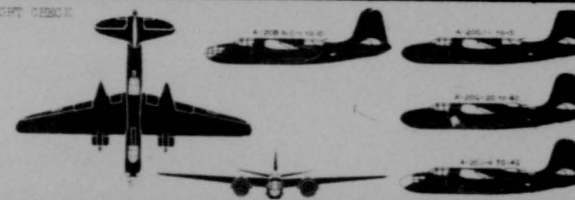
RANGE VALUES WITH TORPEDO ARE SHOWN FOR COMPARATIVE REFERENCE.

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

MILITARY POWER AVAILABLE FOR 5 MINUTES ONLY.

T TORPEDO (REPLACES INTERNAL BOMBS WHEN CARRIED)

X EXTERNAL

A-20
"HAVOC"

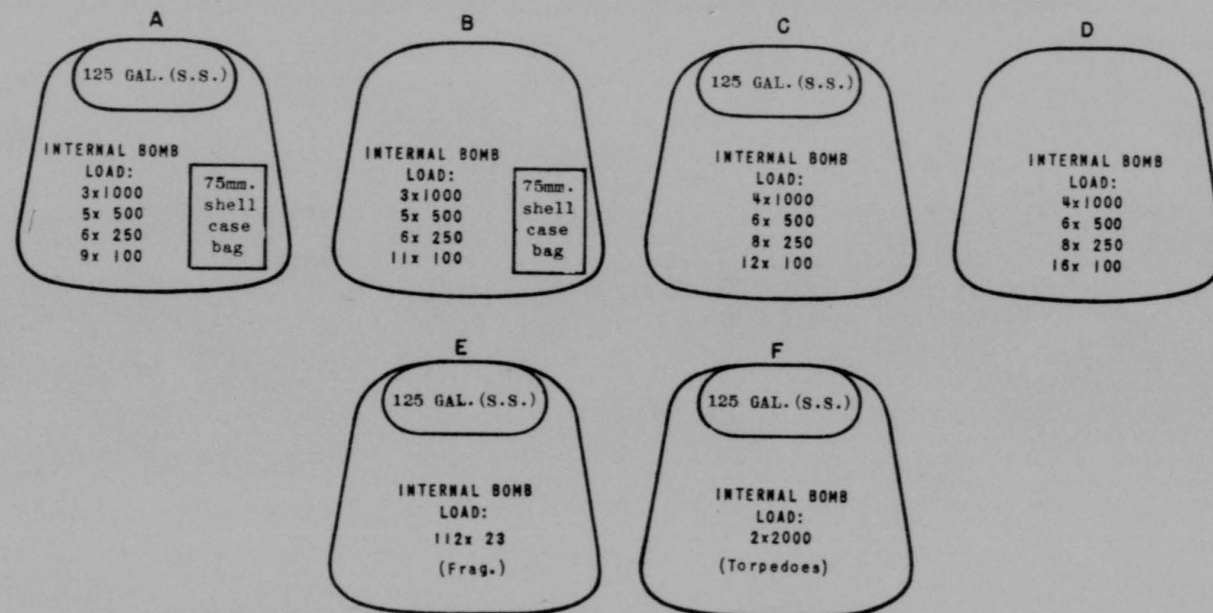
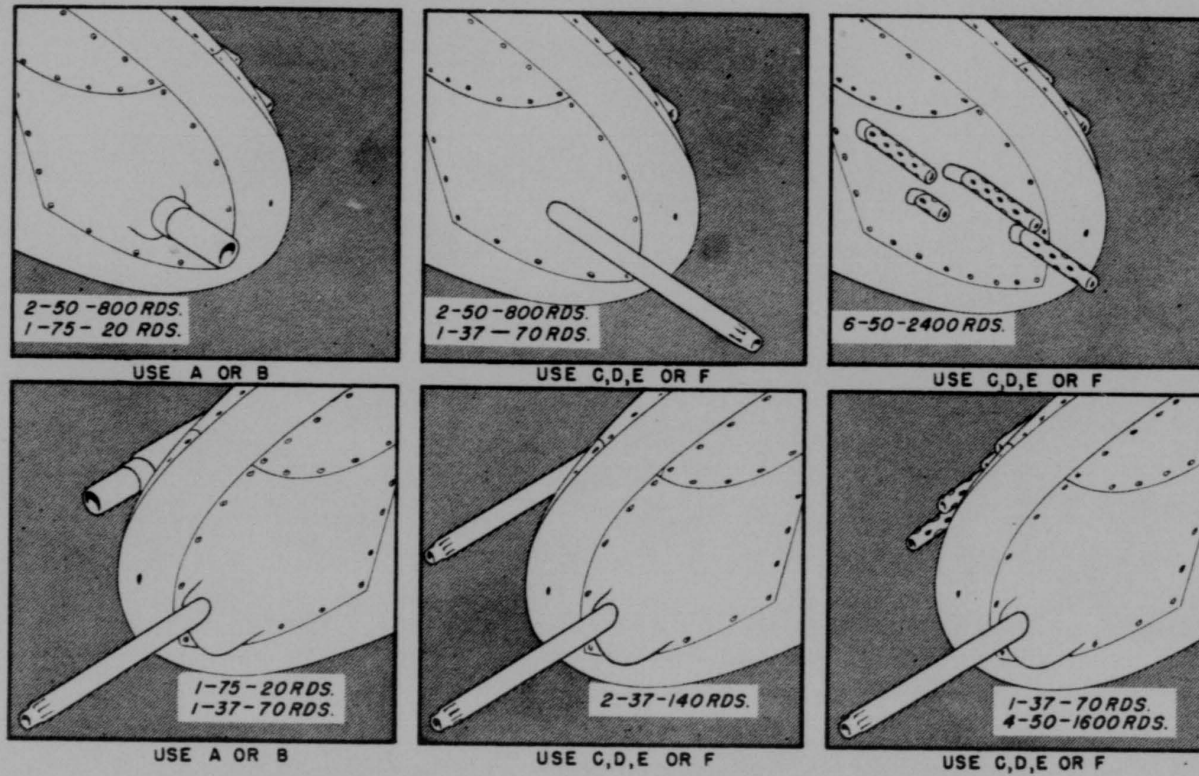
MANUFACTURED BY DOUGLAS (SANTA MONICA) "DO" (LONG BEACH) "DL"

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ALL PURPOSE NOSE & BOMB BAY

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S.S.-Self Sealing

A-26 B

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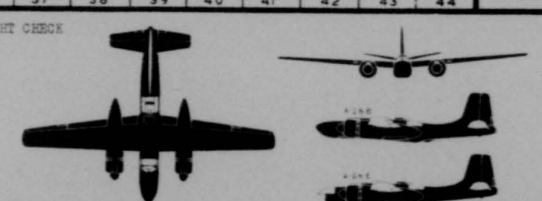
TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
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MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO & SIZE OR STATION	EXTERNAL NO & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE	
A-26B (DL/DT) -1 & -5	2	PRAATT-WHITNEY R-2800-27 SINGLE ST.-25PD. HAMILTON STD. 12'7"DIA.-3BL. F.F., HYDROMATIC	T 2000/5 L M 2000/1500 C 1600/13500	S 70' L 49'11" H 18'6" T 19'6" W 54 sq. ft.	B 23275 C 35000 R 35500 W 37000	2 3 c	MAIN - WINGS AUX. - WINGS BOMB BAY (SS) B. BAY (FERRY) 1500 TOT.	2 x 300 2 x 100 1 x 125 1 x 675	1-75MM 2-.50 2-.50 8-.50	20 500 500 500	*NOSE CAN, 115EL UPPER TURRET LOWER TURRET WINGS-PACKAGE (ALTERNATE INSTALLATION - SEE A)	b 1-1000 b 6-500 b 8-250 b 16-100	b 2-2000T 4-500 4-250 4-100	4-1000 4-500x 6000	SCR-274N SCR-995 MN-266 RC-36 SCR-522	TECHNICAL ORDER 01-104J-1. (15 AUG. 1944) a PARTS WILL BE PROCURED FOR SERVICE INSTALLATION OF ALL-PURPOSE NOSE AS SHOWN ON PAGE OPPOSITE. b SEE PAGE OPPOSITE FOR BOMB LOAD CARRIED WITH 75MM GUN. c NORMAL CREW (2); CREW (3) WITH 75MM CANNON. f NO SELF SEALING BOMB BAY TANK ON A-26B-1-DL ONLY. TECHNICAL ORDER 01-104J-1. (15 AUG. 1944) g SEE PAGE OPPOSITE FOR ALL-PURPOSE NOSE INSTALLATIONS.
A-26B (DL/DT) -10 TO -20 INCL	2	AS ABOVE	AS ABOVE	AS ABOVE EXCEPT FOR 50'7" LENGTH	B 22775 C 35000 R 35000 W 37000	2	AS ABOVE	AS ABOVE	6-.50 2-.50 2-.50 8-.50	400 500 500 500	*NOSE UPPER TURRET LOWER TURRET WINGS-PACKAGE (ALTERNATE INSTALLATION - SEE A)	AS ABOVE	AS ABOVE	AS ABOVE	SCR-274N SCR-995 MN-266 RC-36 SCR-522	TECHNICAL ORDER 01-104J-1. (15 AUG. 1944) g SEE PAGE OPPOSITE FOR ALL-PURPOSE NOSE INSTALLATIONS.
A-26C-DT -15 & -20	2	AS ABOVE	AS ABOVE	S 70' L 51'3" H 18'6" T 19'6" W 54 sq. ft.	B AS ABOVE C AS ABOVE R AS ABOVE W AS ABOVE	3	AS ABOVE	AS ABOVE	2-.50 2-.50 2-.50	400 500 500	NOSE UPPER TURRET LOWER TURRET	4-1000 6-500 8-250 16-100	2-2000T 4-500 4-250 4-100	4-1000 4-500x 6000	SCR-274N SCR-995 SCR-269 RC-36 SCR-522	TECHNICAL ORDER 01-104J-1. (-OCT. 1944)

MODEL & BLOCK NO.	TAKE OFF & LANDING				HIGH SPEED & CLIMB					RANGE & ENDURANCE										REMARKS ON PERFORMANCE					
	HARD SURFACE - NO WIND				AT NORMAL COMBAT WEIGHT					STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE															
	GROSS WEIGHT LB.	TO CLEAR 50 FT. DIST. FT.	LAND. DIST. FT.	LANDING SPEED M.P.H.	T.O. DIST. FT.	LAND. DIST. FT.	WEIGHT LB.	STD. ALT. FT.	MIL. POWER HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.	MAX. CONTIN. POWER HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.	TIME TO CLIMB MIN.	TAKE OFF WEIGHT LB.	BOMBS CARGO LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER AT 10000 FT.		MAX. CRUISE POWER AT 25000 FT.		LONG RANGE AT 10000 FT.				
A-26B (DL/DT) -1 & -5	25000 29000 32000 33000 34000 36000	- 2650 3700 4000 4300 4750	2650 3200 3250 -	96 104 109 111 -	1750 2100 2150 2250 -	35000	20000 15000 10000 5000 S L	337 355 346 350 328	260 720 1010 1540 2030	329 341 330 320 297	100 520 560 -	31.4 15.3 7.0 2.7 0.0	35000 31400 31400 31600 35000	NONE NONE 3000 4000 SES (B)	1600 925 925 800 800	- 770 750 610 620	- 2.5 2.5 2.2 2.5	- 1160 1030 850 -	- 4.2 4.0 3.4 -	- 1560 1500 1270 870	- 6.7 6.9 5.9 4.1	- - - -	3110 1830 1630 1360 1305	16.1 9.5 4.3 6.9 6.3	*STRIPPED TO 35000 LB. FOR FERRYING. NOTE: WHEN 8 EXTERNAL WING PACKAGE GUNS ARE CARRIED HIGH SPEED WILL BE DECREASED APPROX. 15 MPH. AND RATE OF CLIMB 150 FT./MIN.
A-26B (DL/DT) -10 TO -20 INCL A-26C-DT -15 & -20	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	35000	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) 8 REMOVABLE .50 CAL. PACKAGE GUNS MAY BE MOUNTED ON WING BOMB RACKS IN PLACE OF BOMBS. (B) 8 WING GUNS PLUS 112 FRAG. BOMBS. (4800 LB. TOTAL)

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

T-TORPEDO
X-EXTERNAL



A-26

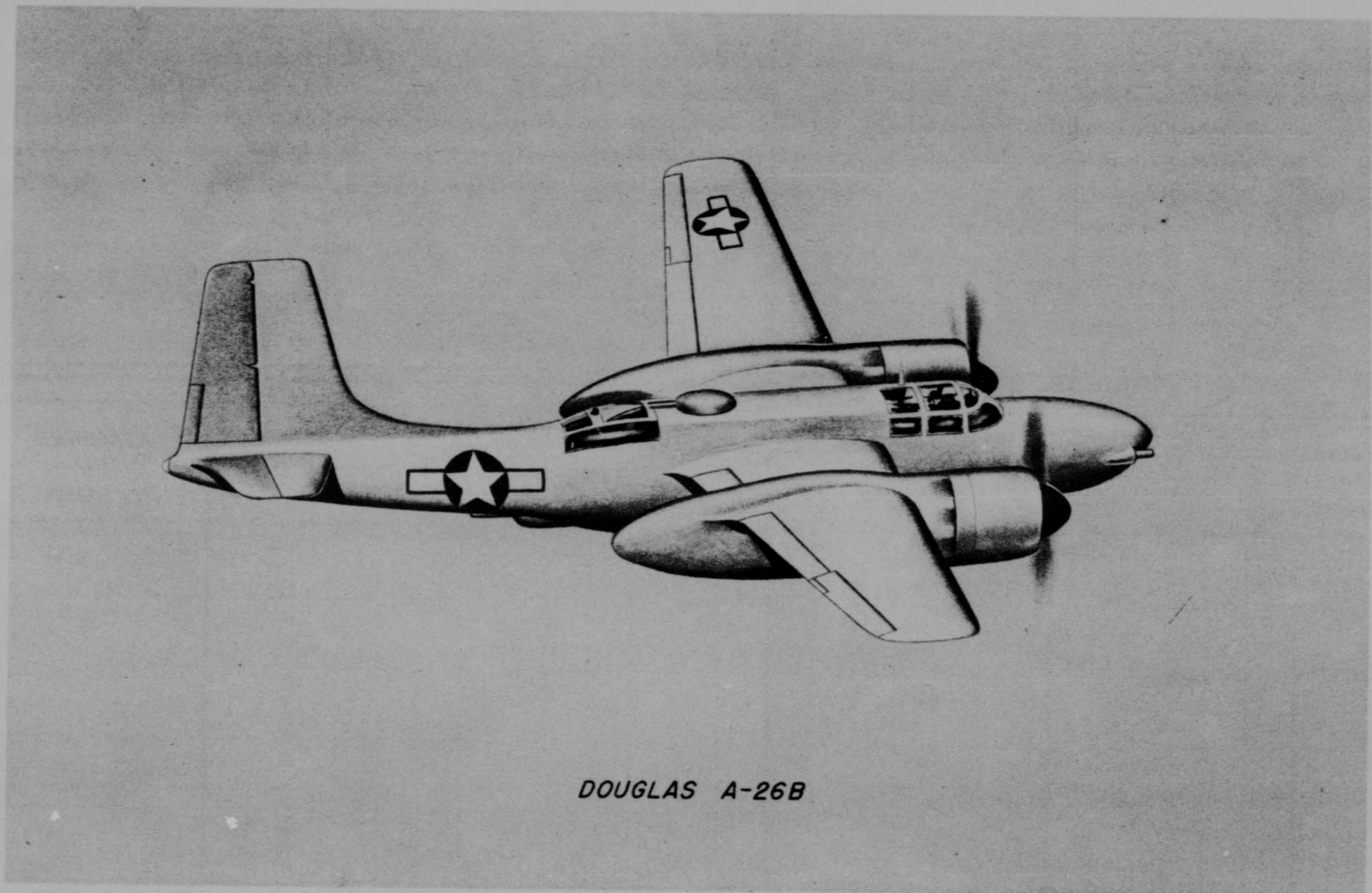
"INVADER"

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

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DOUGLAS A-26B

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																PAGE 42	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.		FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD.LIM W-WAR MAX.	COMBAT CREW	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. SIZE OR STATION	EXTERNAL NO. SIZE OR CAPACITY	MAX. LOAD LB.		TYPE	
																	WIND-PANELS FUSELAGE
C-46A-CU -1 TO -45 INCL. C-46A-CK -1 & 5.	2	PRATT-WHITNEY R-2800-51 2 SPEED CURTISS 13'6" DIA. - 48L. F.P. HYDROMATIC	T 2000/ S L M 2000/ 1500 C 1600/ 5700 1150/ 13000	S 108'0" L 76'4" H 22'0" T 26'0" W 1360 SQ. FT.	B 32100 C 16000 R 149600 W 56000A	3	WIND-PANELS FUSELAGE	6-1100 8x100 2200 TOT.		0	N	E	FORE-BELLY APT-BELLY MAIN-CABIN TROOPS	3700 1800 10000 or 50	15000	SCR-211, 269, 271M, 287, 578, 595, 695, 105 & 198. AN-ARR-1	TECHNICAL ORDER 01-251A-1. (25 JUN 1944) * EARLY MODELS HAVE HAMILTON STD., 3 BLADE, HYDROMATIC, 15'1" DIA. PROPELLER. * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. NOTE: EARLY MODELS LIMITED TO 40000 LB. GROSS WEIGHT & HAVE SMALL CARGO DOOR.
C-47A to -90 (DL) C-47A to -25 (DK) C-47B to -20 (DL) C-47B-1 (DL) C-53, C 4 D (DL)	2	PRATT-WHITNEY R-1850-92 (C-47A) R-1850-200 (C-47B) INTERNAL SUPER. HAMILTON STD. 11'7" DIA. - 3BL. F.P. HYDROMATIC	T 1200/ S L M 1050/ 7000 C 1050/ 7000	S 95'0" L 64'6" H 17'0" T 18'6" W 987 SQ. FT.	B 18000 C 26000 R 29300 W 36500A	3	MAIN-WINGS AUX.-WINGS FUSELAGE	2 x 202 2 x 200 8 x 100 1604 TOT.		0	N	E	CARGO or TROOPS or LITTERS	6000 27 18 10000 MAX 11000 MAX	SCR-211, 269, 271M, 287, 578, 595, 695, 105, 198. AN-ARR-1	TECHNICAL ORDER 01-140NC-1. (REV. 5 SEPT. 1944) * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. (AS/APN-2 ON SOME MODELS). C-47, C-53 & C-53C INSTALLED WITH 12 VOLT RADIO SYSTEM; OTHERS WITH 24 VOLT RADIO SYSTEM. NOTE: C-47 & C-53 SERIES SIMILAR EXCEPT FOR LARGE CARGO DOOR ON C-47. THE C-53 CARRIES 28 PERSONNEL.	
C-60A-LO ATO-5	2	WRIGHT R-1820-87 2 SPEED HAMILTON STD. 10'6" DIA. - 3BL. F.P. HYDROMATIC	T 1200/ S L M 1200/ 5700 C 1000/ 8400 900/ 16500	S 65' 8" L 49'10" H 12' 0" T 15' 4" W 551 SQ. FT.	B 13000 C 21000 R 21000 W 25000	3	FRONT-WINGS REAR - WINGS AUX. - CABIN	2 x 150 2 x 172 3 x 134 1016 TOT.		0	N	E	BELLY CABIN or PARATROOPS	3400 6600 or 15 8500	SCR-211, 269, 271M, 287, 578, 595.	TECHNICAL ORDER 01-75CE-1. (REV. 15 AUG. 1944) * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. EARLY MODELS CARRY SCR-535 IN PLACE OF SCR-695. * 1200 LB. BALLAST REQUIRED IN NOSE TO BALANCE PARATROOPS.	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE		
	GROSS WEIGHT LB.	TO CLEAR 50'		GROUND-RUN		STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE							
		T.O. DIST. FT.	LAND. DIST. FT.	LANDING SPEED M.P.H.	T.O. DIST. FT.		LAND. DIST. FT.	STD. ALT. FT.	HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.				HIGH SPEED M.P.H.	RATE OF CLIMB FT./MIN.	TIME TO CLIMB MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS
C-46A-CU -1 TO -45 INCL. C-46A-CK -1 & 5.	31000 39000 46000 50000	- 2050 2700 3500	2250 2150 2650 -	82 88 95 -	- 1150 2000 2700	1200 1100 1600 -	16000	20000 15000 10000 5000 S L	260 269 264 262 215	530 780 900 1100 1300	297 264 286 295 210	190 450 750 900 900	28.4 18.6 11.6 5.5 0.0	51000 47000 47000 51000	2000 4000 6000 10000	2200 1100 1050 1050	1600 850 750 700	6.8 4.2 3.1 3.0	- - - -	2500 1100 1200 1100	12.9 6.7 5.9 5.9	- - - -	2950 1900 1350 1200	15.8 10.9 7.1 6.7	
C-47A to -90 (DL) C-47A to -25 (DK) C-47B to -20 (DL) C-47B-1 (DL) C-53, C 4 D (DL)	21000 23000 26000 29900	- 1850 2100 3200	2100 2300 2600 -	56 69 73 -	- 1150 1550 2000	1400 1600 -	26000	20000 15000 10000 5000 S L	SAME AS FOR MAX. CONTIN. POWER	201 217 217* 202* 187*	180 450 720 920 -	37.0 20.0 11.0 5.0 0.0	29900 26000 29900	NONE 2000 6000*	1604 1000 804	1500 950 750	7.6 4.7 3.7	ABOVE PRAC-TICAL CRUIS-ING CEILING	2300 1150 1100	13.0 7.9 6.2	ABOVE PRAC-TICAL CRUIS-ING CEILING	3100 2050 1550	19.3 12.7 10.0	* MAX. PERMISSIBLE LEVEL FLIGHT SPEED FOR 29900 LB. **6000 LB. CARGO OR 27 TROOPS.	
C-60A-LO ATO-5	11000 17500 18500 21800 23000	- 1800 2050 2850 3300	2150 2600 2700 -	61 68 70 -	- 1000 1150 1600 1900	1700 2100 2200 -	21900	20000 15000 10000 5000 S L	259 269 260 255 236*	650 1300 1100 1600 1600	255 262 255 217 235	500 1000 1200 3.0 0.0	19.0 11.0 7.0 3.0 0.0	21000 23000	1150 5000*	1016 644	1000 600	4.5 2.7	AS ABOVE	1150 850	7.0 4.3	AS ABOVE	2300 1200	11.4 7.7	* SPEED RESTRICTED IN LEVEL FLIGHT. **5000 LB. CARGO OR 18 PARATROOPS & 1200 LB. BALLAST IN NOSE.

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



C-46A
"COMMANDO"



C-47A
"SKYTRAIN"



C-60A
"LODESTAR"

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


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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	PAGE 25
CONFIDENTIAL																	AS OF: 20 SEPT. 1944
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA			B-BASIC C-COMBAT R-RECD.LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL OR EXTERNAL		MAX. LOAD LB.	TYPE	
C-54A-DO -1&-5 C-54A-DC -1 TO -15 INCL.	4	PRATT-WHITENEY R-2000-3 or -7 2 SPEED HAMILTON STD. 13'1" DIA. - 3BL. P.F. HYDROMATIC	T 1290/3000 M 1290/3000 C 1015/9000 940/13200	S 117' 6" L 93' 10" H 27' 6" T 24' 8" W 1160 SQ. FT.	B 37000 C - R - W 85000A	6	INED. - WINGS OUTED. - WINGS FUSIAGE	2x 490 2x 490 4x 450		N 0	N E	FORE-BELLY APT - BELLY FORE-CARGO 24000 AFT - CARGO 11900 TROOPS 30 or 50	1800 2100 25000	SCR-271, 269, 271, 287, 278, 255 or 695, 25-36, 43, 103, 134, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	TECHNICAL ORDER 01-4084-1. (REV. 25 JUNE 1944) * MISC. RADIO CARRIED; MAX. COMBINATION SHOWN. NOTE: 30 TROOPS WITH FUSIAGE TANKS (3620 GAL.) 50 TROOPS WITHOUT FUSIAGE TANKS (1820 GAL.)		
C-54B (DC DO) -1 TO -15 INCL.	4	AS ABOVE	AS ABOVE	AS ABOVE	B 37600 C - R 75000 W 85000A	6	INED. - WINGS OUTED. - WINGS AUX. - WINGS FUSIAGE	2x 490 2x 510 2x 420 2x 450		N 0	N E	TROOPS 41 or 49* LITTERS 28 or 36*	32500	AS ABOVE EXCEPT FOR NO SCR-269	* 41 TROOPS or 28 LITTERS WITH FUSIAGE TANKS (3740 GAL.) 49 TROOPS or 36 LITTERS WITHOUT FUSIAGE TANKS (2812 GAL.) C-54B-1; (4) PLANES HAVE REDUCED LITTER CAPACITY.		
C-69-LO -1 TO -15 INCL.	4	WRIGHT R-3350-35 SINGLE or 2 SPEED HAMILTON STD. 15'2" DIA. - 3BL. P.F. HYDROMATIC	T 2150/3000 M 2135/6300* C 2025/6500*	S 123'0" L 95'2" H 23'8" T 28'0" W 1650 SQ. FT.	B 50500 C 82000 R 82000 W 101000A	9	WINGS (SEE F)	2x 1589 2x 819		N 0	N E	60 PASS-ENGINES	11600	SCR-271, (2) 269, 287, 211, & 695, SC-43/193, 36 & 104.	TECHNICAL ORDER 01-7504-1. (10 NOV. 1943) * FIRST FEW AIRPLANES EQUIPPED WITH SINGLE SPEED BLOWER. † TOTAL FUEL CAPACITY OF 1st. & 2nd. ARTICLES IS 4000 GAL.; 3rd. & SUBSEQUENT IS SHOWN. * HP. RATINGS ARE WITH SINGLE SPEED BLOWER.		
C-87-CF	4	PRATT-WHITENEY R-1830-L3 TURBO HAMILTON STD. 11'7" DIA. - 3BL. P.F. HYDROMATIC	T 1200/3000 M 1200/25500 C 1100/27000	S 110'0" L 66'1" H 18'0" T 25'8" W 1048 SQ. FT.	B 34250 C 56000 R 56000 W 62000	5	INED. - WINGS OUTED. - WINGS	12-2364 6-150	1-50	500	TAIL - FLEX. (ON SOME MODELS ONLY)	CHAIRS or LITTERS & BENCH	20 or 7 1400 NOR. 10000 MAX.	SCR-271, 269, 287, 278 & 695, SC-36, 43, SC-43	TECHNICAL ORDER 01-50A-1. (15 DEC. 1943)		

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE	
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE											
	TO CLEAR 50'		GROUND-RUN		WEIGHT	STD. ALT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS-CARGO-PASS.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
	T.O. DIST.	LAND. DIST.	T.O. DIST.	LAND. DIST.			HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB				TIME TO CLIMB	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		
C-54A-DO -1&-5 C-54A-DC -1 TO -15 INCL.	15000 55000 59000 62500 65000	- 2800 3300 3850 4350	2900 3100 - - -	80 90 - - -	1800 1600 1850 2150 2350	20000 15000 10000 5000 S L	- - - 272 260	- - - 1150 1150	269 278 276 1000 1100 245	425 800 1000 1100 1050	24.4 16.0 9.4 4.4 0.0	62000 65000 59000 65000	NONE *8500 *8500 *11,000	3620 2720 1820	EXCEEDS SPEED LIMITS	ABOVE PRACTICAL CRUISING CEILING	3300 2100 1550 1500	15.7 11.5 7.5 7.5	ABOVE PRACTICAL CRUISING CEILING	4000 2800 1850 1750	25.1 16.5 11.4 9.9	* 5000 LB. CARGO or 30 TROOPS & 2000 LB. EQUIPMENT. ** 11,000 LB. CARGO or 50 TROOPS & 4000 LB. EQUIPMENT.		
C-54B (DC DO) -1 TO -15 INCL.	55000 59000 62500 65000 73000	2800 3300 3850 4350 4750	3100 4000 4750 - -	90 95 98 - -	1400 1600 2150 - 3100	20000 15000 10000 5000 S L	- - - 270 255	- - - 685 700	260 265 277 265 235	43.0 25.0 15.1 7.1 6.0	63350 66000 60500 66500 73000*	NONE 8000 8000 11,000 21,000	3740 2905 2036 2036 2036	AS ABOVE	AS ABOVE	3550 2700 1825 1775 1700	17.1 13.0 8.7 8.6 8.3	AS ABOVE	4250 3200 2250 2125 2050	27.1 19.0 13.4 12.6 12.2	* LANDING WEIGHT LIMITED TO 62000 LB.			
C-69-LO -1 TO -15 INCL.	62000 68000 75000 82000 86000 90000*	1850 2250 2750 3255 3750 4500	2575 2810 3200 - - -	87 90 92 - -	1275 1600 1925 1675 - -	20000 15000 10000 5000 S L	- - 324 322 298	- - 1575 1770	305 312 318 315 291	440 840 1220 1460 1580	22.8 13.3 7.2 3.1 0.0	82000 90000 86700 84600	NONE 8000 11,600 21,000*	4816 4816 3178 1638	- - - -	- - - -	2950 2700 1900 950	10.4 10.3 6.7 3.3	- - - -	4300 4075 2600 1150	19.9 19.3 12.5 5.5	ALL PERFORMANCE WITH SINGLE SPEED SUPERCHARGER. * ALTERNATE CARGO IN LIEU OF PASSENGERS		
C-87-CF	40000 50000 56000 60000	- 3600 5050 6600	3300 3950 4300 -	90 100 105 -	2800 2550 3600 4750	30000 25000 20000 15000 10000 5000	306 293 280 266 255	500 1050 1100 1150 1200	300 287 275 262 249	31.0 26.8 20.9 15.3 9.0 4.2	52900 56000 56000 60000	NONE 3100 2364 9800	2814 2814 2364 2364	1215 1205 1000 975	4.6 4.6 3.8 3.7	1365 1375 1135 1100	4.6 4.6 3.8 3.8	2635 2550 2100 1975	11.7 11.4 9.4 8.9	2835 2750 2245 2165	11.0 10.8 8.9 8.8	3000 2850 2350 2340	16.2 15.5 12.5 11.7	

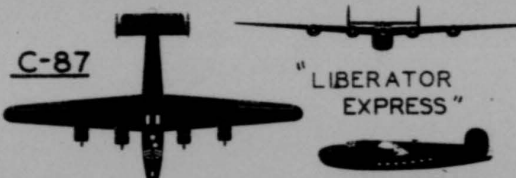
NOTES:
(A) PERMISSIBLE ONLY WITH ALL WING TANKS FULL.
RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.
* MILITARY POWER AVAILABLE FOR 5 MINUTES.



C-54 "SKYMASTER"



C-69 "CONSTELLATION"



C-87 "LIBERATOR EXPRESS"

MANUFACTURED BY DOUGLAS (SANTA MONICA) "DO" & (CHICAGO) "DC"; LOCKHEED (BURBANK) "LO"; CONSOLIDATED "CF" (FT. WORTH) CONFIDENTIAL

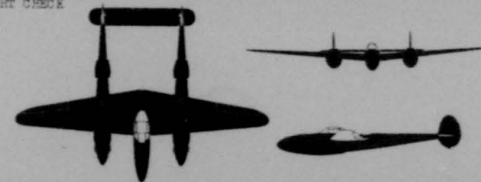
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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
CONFIDENTIAL																	
MODEL & BLOCK NO.	ENGINE & PROP.			SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD.LIM W-WAR MAX.	TANK TYPE OR LOCATION		NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE		
P-38F-LO	2	ALLISON V-1710-49 & -53 TURBO CURTISS 11'6" DIA. - 3BL. F.F. ELECTRIC	T 1225/8 L M * 1150/27000 C 1000/27000	S 52' 0" L 37' 10" H 12' 10" T 16' 6" W 328 SQ. FT.	B 13600 C 15300 R 20000 W -	15900	1	MAIN-WINGS RES.-WINGS	2 x 90 2 x 60 300 TOT.	1-20MM. 4-.50	150 500 (MAX.)	NOSE-TYPE M1 NOSE-FIXED	NO BOMBS CARRIED	SCR-163 or SCR-27LN	TECHNICAL ORDER 01-75FB-1. (REV. 15 JAN. 1943) * LIMITED TO 1150 HP. BECAUSE OF INADEQUATE COOLING.		
P-38F-LO -1 TO -15 INCL.	2	AS ABOVE	AS ABOVE	AS ABOVE	B 13600 C 15900 R 20000 W -	15900	1	MAIN-WINGS RES.-WINGS DROPP.-EXTER.	2 x 90 2 x 60 2 x 75 2 x 150 600 TOT.	AS ABOVE	AS ABOVE	NONE	2-1000 2-500 2-325 2-250 2-100	2000	SCR-27LN* SCR-515** SCR-522 SCR-535	REFERENCE AS ABOVE * PROVISIONS ONLY. ** SPACE ONLY.	
P-38G-LO -1 TO -15 INCL.	2	ALLISON V-1710-51 & -55 TURBO CURTISS 11'6" DIA. - 3BL. F.F. ELECTRIC	T 1225/8 L M * 1150/27000 C 1100/24000	AS ABOVE	B 13500 C 15800 R 20000 W -	15900	1	AS ABOVE EXCEPT THAT LAST P-38-10'S ARE SAME AS BELOW	2 x 90 2 x 60 2 x 75 2 x 150 600 TOT.	AS ABOVE	AS ABOVE	AS ABOVE EXCEPT LAST 200 P-38-10'S ONLY ARE SAME AS BELOW	SCR-27LN* SCR-515** SCR-522 SCR-535 SCR-695***	REFERENCE AS ABOVE * LIMITED TO 1150 HP. BECAUSE OF INADEQUATE COOLING. * PROVISIONS ONLY. ** SPACE ONLY. *** LAST 179 P-38-10'S ONLY.			
P-38H-LO -1 & -5	2	ALLISON V-1710-89 & -91 TURBO CURTISS 11'6" DIA. - 3BL. F.F. ELECTRIC	T 1425/8 L M * 1425/25000 C 1100/25000	AS ABOVE	B 13700 C 16300 R 21000 W -	16300	1	MAIN-WINGS RES.-WINGS DROPP.-EXTER.	2 x 90 2 x 60 2 x 75 2 x 150 2 x 300 900 TOT.	1-20MM. 4-.50	150 500 (MAX.)	NOSE-AM-M2"C" NOSE - FIXED	2-1500 2-1000 2-500 2-325 2-250 2-100	3200	SCR-27LN* SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-75FF-1. (25 SEPT. 1943) * LIMITED TO 1240 HP. BECAUSE OF INADEQUATE COOLING. * PROVISIONS ONLY. ** SPACE ONLY.	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT					RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE				
	GROSS WEIGHT LB.	TO CLEAR 50 FT.		LANDING SPEED MPH	GROUND-RUN		STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER	TAKE OFF WEIGHT LB.	BOMBS CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER			MAX. CRUISE POWER			LONG RANGE						
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.		HIGH SPEED MPH	RATE OF CLIMB FT/MIN.					HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	TIME TO CLIMB MIN.	AT 10000 FT.		AT 25000 FT.		AT 10000 FT.					
		RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS		RANGE MILES	ENDUR. HOURS					RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS							
P-38F-LO	13500 15000 15800	- 2150 2300	2750 2980 -	85 90 -	- 1280 1380	1450 1580 -	15900 20000 15000 10000 5000	390 380 365 355 340	2100 2300 2500 2700 2900	380 365 353 340 328	11.0 8.0 6.0 4.0 2.0	15800	NONE	300	400	1.3	425	1.3	700	2.7	675	2.4	900	4.5		
P-38F-LO -1 TO -15 INCL.	13500 15000 15500 17500 19900	- 2150 2270 3040 4000	2750 2980 3050 3350 -	85 90 91 97 -	- 1280 1360 1830 2400	1450 1580 1800 -	15900 20000 15000 10000 5000	395 390 376 351 347	2100 2300 2450 2600 2800	380 367 354 340 327	12.0 8.8 6.0 4.0 1.8	19900 18000 15900 17000 18000	NONE NONE NONE 1000 2000	900 600 300 300 300	1375 800 400 385 375	5.0 2.9 1.3 1.3 1.3	1450 850 400 396 375	5.0 2.9 1.3 1.3 1.3	2050 1400 700 675 625	9.3 6.1 2.7 2.8 2.8	2050 1425 685 650 600	8.6 5.4 2.1 2.4 2.3	2300 1750 900 850 800	9.9 9.1 4.5 4.3 4.1		
P-38G-LO -1 TO -15 INCL.		AS ABOVE	AS ABOVE			15800	25000 20000 15000 10000 5000	400 390 375 360 345	1700 2300 2500 2600 2800	390 377 362 347 333	11.5 8.5 5.9 3.7 1.8				SUBSTANTIALLY		AS	ABOVE								
P-38H-LO -1 & -5	13600 15500 17500 19500 20300	- 2000 2600 3500 4000	2750 3050 3500 -	86 93 100 -	- 1200 1600 2000 2300	1450 1650 2000 -	16300 20000 15000 10000 5000	402 387 372 360 345	1700 2300 2500 2600 2900	390 375 360 348 332	9.7 7.6 5.5 3.5 1.8	20500 18300 16300 18300 19500	NONE NONE NONE 2000 3200	900 600 300 300 300	1300 750 350 325 300	5.0 2.9 1.3 1.3 1.3	1350 800 375 325 300	5.0 2.9 1.3 1.3 1.3	1950 1350 650 575 525	9.3 6.1 2.7 2.8 2.7	1950 1350 650 550 525	8.6 5.4 2.1 2.3 2.2	2200 1700 850 750 700	10.0 9.5 4.7 4.0 3.8	NO WAR EMERGENCY POWER AVAILABLE BECAUSE OF INADEQUATE COOLING	

NOTES:

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



P-38
"LIGHTNING"

MANUFACTURED BY LOCKHEED (Burbank) "LO"

CONFIDENTIAL

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PAGE 25
AS OF
DATE 21 SEP 1944

TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE	
	ENGINE MFR. MODEL	B.H.P./ALT.	S-SPAN	L-LENGTH			T-TAKE-OFF	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE			
P-38J-LO -5&-10	ALLISON V-1710-89 & -91 TURBO CURTISS 11'6" DIA. - 3 BL. F.P., ELECTRIC	1125/SL	52'0"	37'10"	13700	1	MAIN - WINGS RES. - WINGS DROPP. - EXTER.	2x 90 2x 60 2x 75 or 2x 150 2x 165 or 2x 200	1-20MM 4-.50	150 500 (MAX.)	NOSE-AN M20" NOSE - FIXED	NONE	2-1500 2-1000 2- 500 2- 325 2- 250 2- 100	3200	SCR-27LN* SCR-515** SCR-522 SCR-695	TECHNICAL ORDER 01-75FF-1. (25 SEPT. 1943) * PROVISIONS ONLY. **SPACE PROVIDED.
P-38J-LO -5 TO -25 INCL. [L.E. TANKS]	AS ABOVE	1600/26500	AS ABOVE	AS ABOVE	11100 17500	1	MAIN - WINGS RES. - WINGS L.E. - WINGS DROPP. - EXTER. (SEE F)	2x 90 2x 60 2x 75 or 2x 150 or 150 or 165 or 300 1010 TWT	A S	A B O V E	A S	A B O V E	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE IF THE 2-55 GAL. LEADING EDGE WING TANKS ARE INSTALLED AT FACTORY, MOD. CENTER or FURNISHED TO SERVICE IN KITS. NO WAR EMERGENCY RATING.	
P-38L-LO -1&-5	ALLISON V-1710-111 & -113 TURBO CURTISS 11'6" DIA. - 3 BL. F.P., ELECTRIC	1125/S.L.	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	A S	A B O V E	A S	A B O V E	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE NO WAR EMERGENCY RATING. * INCREASED HP. RATING IS ANTICIPATED.	

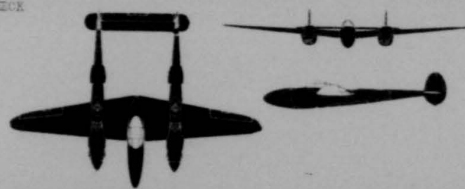
COLUMN — 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND					HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT								RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS					
	GROSS WEIGHT	TO CLEAR 50'		LANDING SPEED	GROUND-RUN		STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT	BOMBS-CARGO-PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER			MAX. CRUISE POWER			LONG RANGE						
		T.O. DIST.	LAND. DIST.		T.O. DIST.	LAND. DIST.		HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB				RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.	RANGE		ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.
P-38J-LO -5&-10	13700 15500 16500 18500 19600 20500	1650 1900 2100 2750 3400	2750 3050 3200 3550 3750	100 105 108 115 121	900 1050 1150 1500 1850	1450 1650 1750 2000 2000	16150	30000 25000 20000 15000 10000 5000	413 420 408 395 380 363	1830 2665 3190 3550 3820 3360	113 106 992 977 969 950	1550 2500 2875 3050 3250 3125	397 384 365 353 340 321	# # # # # #	10.3 8.0 6.2 4.5 2.9 1.5	20950 19050 16450 14450 19650	NONE NONE NONE 2000 3200	900 630 300 300 300	1000 750 385 300 290	3.8 2.6 1.1 1.1 1.1	1000 775 350 300 275	3.8 2.6 1.1 1.1 1.1	1700 1250 600 525 475	6.7 4.5 2.3 2.2 2.0	1750 1300 600 525 500	6.9 4.6 2.2 2.0 1.9	2100 1675 800 700 650	12.0 9.2 4.5 3.7 3.8	P-38J SERIES HAVE INCREASED DRAG DUE TO EXTERNAL GEAR TYPE COOLERS. PERFORMANCE VALUES ARE SHOWN WITHOUT EXTERNAL BACKS.
P-38J-LO -5 TO -25 INCL. [L.E. TANKS]	11000 16000 17500 19500 20700	1700 2000 2400 3400 4200	2800 3150 3400 3750 4500	102 109 111 121 121	950 1100 1300 1850 2000	1500 1700 1850 2000 2000	17500	30000 25000 20000 15000 10000 5000	405 411 403 390 377 360	1625 2115 2925 3265 3525 3670	105 992 985 973 961 947	1750 2200 2650 2850 3000 3200	390 378 359 348 336 312	# # # # # #	11.3 8.5 6.7 4.9 3.2 1.7	21600 20200 17500 19500 20700	NONE NONE NONE 2000 3200	1010 740 410 410 410	1050 835 660 475 425 400	4.2 3.1 1.6 1.6 1.6	1070 900 710 710 685	4.2 3.1 1.6 1.6 1.6	1820 1360 600 525 500	7.7 5.2 2.3 2.2 2.0	1860 1160 840 735 765	7.6 5.1 3.1 2.7 2.7	2260 1910 800 700 900	13.4 12.0 6.7 5.3 5.3	AS ABOVE
P-38L-LO -1&-5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE

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

NOTES:

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



P-38
"LIGHTNING"

MANUFACTURED BY LOCKHEED (Burbank) "LO"


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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
MODEL & BLOCK NO.	ENGINE & PROP.	SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS			RADIO	REMARKS & REFERENCE		
					TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.			TYPE	
					B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	WING TOTALS (PROP.-BELLY)	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.				
P-39D-BE	ALLISON V-1710-35 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. COMB. SPD. HYDR.	T 1150/8 L M 1150/12000 C 1000/10800	S 34' 0" L 30' 2" H 11' 10" T 11' 4" W 213 SQ. FT.	B 6900 C 7650 R 9200	1	WING TOTALS (PROP.-BELLY) 12-120 1x 75 or 1x156 or 1x175 295 TOT.	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	NONE	1-500 1-325 1-250 1-100	500	SCR-283	TECHNICAL ORDER 01-11079-1. (30 JUNE 1943)		
P-39D-BE -1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	4-.30 2-.50 1-37MM	*1000 200 60	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	A S	A B O V E		SCR-274H or SCR-522A & SCR-535A	TECHNICAL ORDER 01-11079-1. (30 JUNE 1943)		
P-39D-BE -2	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" DIA. - 3BL. COMB. SPD. HYDR.	T 1325/8 L M 1150/12000 C 1000/10800	AS ABOVE	AS ABOVE	1	AS ABOVE	A S	A B O V E	A S	A B O V E	A S	A B O V E	AS ABOVE	A S A B O V E		
P-39F-BE	ALLISON V-1710-35 SINGLE SPEED ARGO PRODUCTS 10'5" DIA. - 3BL. COMB. SPD. HYDR.	T 1150/8 L M 1150/12000 C 1000/10800	AS ABOVE	AS ABOVE	1	AS ABOVE	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M.L.	A S	A B O V E		SCR-283	TECHNICAL ORDER 01-11079-1. (30 JUNE 1943)		
P-39K-BE -1	ALLISON V-1710-63 SINGLE SPEED ARGO PRODUCTS 10'5" DIA. - 3BL. COMB. SPD. HYDR.	T 1325/8 L M 1150/12000 C 1000/10800	AS ABOVE	AS ABOVE	1	AS ABOVE	A S	A B O V E	A S	A B O V E	A S	A B O V E	SCR-274H or SCR-522A & SCR-535A	TECHNICAL ORDER 01-11079-1. (30 JUNE 1943)		

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB						RANGE & ENDURANCE										REMARKS ON PERFORMANCE			
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT						STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE													
	TO CLEAR 50'		GROUND-RUN		MIL. POWER		MAX. CONTIN. POWER		MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE													
	GROSS WEIGHT	T.O. DIST.	LAND. DIST.	LANDING SPEED	T.O. DIST.	LAND. DIST.	WEIGHT	STD. ALT.	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB	TAKE OFF WEIGHT	BOMBS CARGO PASS.	TOTAL FUEL	RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.		RANGE	ENDUR.	RANGE
P-39D-BE	6700	-	1850	82	-	1100	7650	25000	324	750	310	11.0	5850	NONE	295	550	2.2	-	-	-	-	-	-	-	1100	6.2
P-39D-BE -1	7500	2500	2050	86	1800	1300	20000	348	1350	332	9.1	8500	NONE	276	525	2.0	-	-	-	-	-	-	-	-	1050	5.9
P-39D-BE -2	7800	3000	2100	88	2000	1350	15000	360	2000	343	6.1	8150	NONE	195	400	1.6	-	-	525	2.4	-	-	-	-	800	4.7
P-39F-BE	8150	3400	2200	91	2250	1400	10000	355	2450	345	3.9	7650	NONE	120	275	0.9	450	1.7	350	1.5	-	-	-	-	600	2.9
P-39K-BE -1	8650	4500	2200	91	2800	-	5000	335	2550	323	1.9	8150	500	120	225	0.9	-	-	250	1.5	-	-	-	-	450	2.6
		AS	AS	AS	AS	AS		AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
		AS	AS	AS	AS	AS		AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS

NOTES:
 1. RANDOM P-39 MODELS MAY BE USED FOR AIR/GROUND SUPPORT BY INSTALLATION OF CAMERAS, BELLY ARMOR, ETC.
 2. RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK
 3. * MILITARY POWER AVAILABLE FOR 15 MINUTES
 4. * 1000 RDS./GUN MAX. FOR GROUND STRAPPING; 300 RDS./GUN NORMAL.



P-39
"AIRACOBRA"

MANUFACTURED BY BELL (Buffalo) "HE"

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PAGE 22
AS OF:
DATE: 01-09-1964

TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP. MFR. TYPE	B.H.P./ALT.		S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA		B-BASIC C-COMBAT R-RECD LIM W-WAR MAX	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL		MAX. LOAD LB.	TYPE
			T-TAKE-OFF M-MILITARY C-CONTINUOUS	M-MILITARY C-CONTINUOUS									NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY			
P-39L-BE -1	1	ALLISON V-1710-63 SINGLE SPEED CURTISS 10'5" H.A. - 3BL. CONST. SPD. HYDR.	1325/S L	1150/12000	1000/10800	34' 0" L 30' 2" H 11' 10" T 11' 4" W 213 SQ. W	B 6500 C 7900 R 9200	1	WING TOTALS DROPP.-BELLY 12-120 1x75 or 1x156or 1x175 295 TOT.	4-.30 2-.50 1-37MM	*1000 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M4	NONE	1-500 1-525 1-250 1-100	500	SCR-274N or SCR-522A & SCR-535A	TECHNICAL ORDER 01-110PM-1. (30 JUNE 1943)
P-39M-BE -1	1	ALLISON V-1710-83 SINGLE SPEED CURTISS * 10'5" H.A. - 3BL. CONST. SPD. HYDR.	1200/S L	1125/15500	1000/11000	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	TECHNICAL ORDER 01-110PM-1. (30 JULY 1943)
P-39N-BE -0 TO -5 INCL.	1	ALLISON V-1710-85 (A) SINGLE SPEED AERO PRODUCTS 11'7" H.A. - 3BL. CONST. SPD. HYDR.	AS ABOVE	AS ABOVE	AS ABOVE	34' 0" L 30' 2" H 12' 5" T 11' 4" W 213 SQ. W	B 6400 C 7600 R 9200	1	WING TOTALS DROPP.-BELLY S - 87 1 x 75 or 1 x 156or 1 x 175 262 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	SCR-274N or SCR-522A & SCR-535A SCR-695 *	TECHNICAL ORDER 01-110PM-1. (10 AUG. 1943) * SCR-695 REPLACES SCR-535A ON P-39N-5 ONLY. ** 1st. 166 P-39M-0 BUILT-IN FUEL 120 GAL. KITS AVAIL- ABLE IN SERVICE TO INCREASE FUEL OF ALL N's TO 120 GAL.
P-39Q-BE -1 TO -15 INCL.	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE EXCEPT: BUILT-IN FUEL** P-39Q-1.....87 GAL. P-39Q-5.....110 GAL. P-39Q-10 & -15..120 GAL.	2-.50 2-.50 1-37MM	300 200 30	WING - FIXED NOSE - FIXED PROP. - TYPE M4	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	SCR-274N or SCR-522A & SCR-695	TECHNICAL ORDER 01-110PM-1. (20 AUG. 1943) ** KITS AVAILABLE IN SERVICE TO INCREASE BUILT-IN FUEL OF P-39Q-1 & -5 TO 120 GAL.
P-39Q-BE -20 TO -30 INCL.	1	ALLISON V-1710-85 (A) SINGLE SPEED AERO PRODUCTS * CONST. SPD. HYDR.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	WING TOTALS DROPP.-BELLY 12-120 1x 75 or 1x156 or 1x175 295 TOT.	2-.50 2-.50 1-37MM	200 30	NOSE - FIXED PROP. - TYPE M4	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE * P-39Q-20 HAS 3 BLADED PROPELLER: 11'7" DIA. P-39Q-30 HAS 3 BLADED PROPELLER: 11'0" DIA. P-39Q-21 & -25 HAS 3 BLADED PROPELLER: 11'7" DIA.

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND					HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT					RANGE & ENDURANCE STATUTE AIR MILES-NO WIND-NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE								
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND-RUN		WEIGHT LB.	STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER			TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE							
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.			HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	TIME TO CLIMB MIN.				AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
P-39L-BE -1	7000 7400 7900 8400 9100	- 2600 3100 3750 5000	1950 2000 2100 - -	84 86 89 - -	1150 1200 1300 - -	7900	25000 20000 15000 10000 5000	323 347 360 354 335	650 1250 1900 2350 2900	309 330 362 341 322	11.9 9.7 6.6 4.2 2.1	9100 8400 7900 8400	NONE NONE NONE 500	295 195 120 120	400 250 250 200	1.6 0.9 0.9 0.9	550 425 425 275	2.5 1.5 1.5 1.2	350 350 300 250	1.5 1.5 1.1 1.5	- - - -	- - - -	1075 750 550 400	6.0 4.2 2.5 2.3					
P-39M-BE -1	7000 7400 7900 8400 9100	- 3100 3750 4400 5500	1950 2000 2100 - -	84 86 89 - -	1200 1300 1450 - -	7900	25000 20000 15000 10000 5000	357 365 370 350 330	1200 1775 2400 2250 2050	343 352 357 337 320	12.8 9.5 7.1 4.9 2.5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE		
P-39N-BE -0 TO -5 INCL.	6800 7500 8100 8700 8800	- 2550 3050 3500 3700	1850 2050 2150 - -	83 88 91 - -	1100 1300 1400 - -	7600	25000 20000 15000 10000 5000	368 375 376 357 330	1175 1825 2450 2600 2600	350 355 365 345 320	11.9 8.5 6.1 4.0 2.0	8750 8600 8050 7550 8050	NONE NONE 160 NONE 500	262 243 350 87 150	500 450 350 175 150	2.0 1.8 1.4 0.6 0.6	650 775 595 300 225	3.5 3.2 2.2 1.0 1.0	300 300 285 285	1.1 1.1 1.1 1.1	- - - -	- - - -	975 900 625 350 275	5.4 5.0 3.5 1.7 1.5	RANGE AND ENDURANCE OF 1st. 166 P-39M-0 ARTICLES SAME AS P-39Q-10 to -30 LISTED BELOW.				
P-39Q-BE -5	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	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	SEE NOTE (B) BELOW.
P-39Q-BE -10 TO -30 INCL.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	NOTE: PRELIMINARY TESTS OF P-39Q-21 & -25 SHOW THAT 4 BLADED PROPELLER MATERIALLY EFFECTS DIRECTIONAL STABILITY, BUT NOT PERFORMANCE. SEE NOTE (B) BELOW.

NOTES:

RANDOM P-39 MODELS MODIFIED FOR AIR/GROUND SUPPORT BY INSTALLATION OF CAMERAS, BELLY ARMOR, ETC.

* 1000 RISE./GUM MAX. FOR GROUND STRAPPING; 300 RISE./GUN NORMAL.

ATTENTION:

KITS AVAILABLE IN SERVICE TO INCREASE BUILT-IN FUEL CAPACITY OF ALL P-39 & P-39M MODELS TO 120 GAL. PERFORMANCE WILL BE SAME AS SHOWN FOR P-39Q-10 thru -30 MODELS.

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK

* MILITARY POWER AVAILABLE FOR 15 MINUTES

(A) ARRANGEMENTS ARE BEING MADE TO INSTALL CONVENTIONAL QUADRANT IN P-39Q-10 THRU P-39Q-30 ON AIRPLANES ALLOCATED TO AAF.

P-39Q-10 THRU P-39Q-30 HAVE AN AUTOMATIC SPEED-BOOST CONTROL.

(B) RANGES SHOWN WERE ESTIMATED FOR CONVENTIONAL TYPE AIRPLANES; AIRPLANES EQUIPPED WITH AUTOMATIC SPEED-BOOST CONTROL PROBABLY WILL NOT ATTAIN MAXIMUM RANGES AS SHOWN.



P-39
"AIRACOBRA"

MANUFACTURED BY BELL (Buffalo) "NE"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
CONFIDENTIAL																	
PAGE 29																	
AS OF:																	
DATE: 23 SEPT. 1944																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA	B-BASIC C-COMBAT R-RECD LIM W-WAR MAX		TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY	MAX. LOAD LB.	TYPE		
P-40N-CU -1	1	ALLISON V-1710-81 SINGLE SPEED CURTISS 11'0" DIA. - 3 BL. CONST. SPD. ELECT.	T 1200/S L M 1125/17300 C 1000/16400	S 37'4" L 33'4" H 12'4" T 8'2" W 236 SQ. FT.	B 6400 C 7725 R 11000 W -	1	REAR - WING FRONT - WING DROPPING - BELLY DROPPING - WING	1 x 54 1 x 66 1 x 52, 75, 150 or 170 252 TOT.	4-.50 [average]	201	WING - FIXED	NONE	1-500 & 2-100 or 6-20. 1-325 1-250 1-100	500	SCR-274 or SCR-522A & SCR-695	TECHNICAL ORDER 01-250N-1. (REV. 10 OCT. 43) * PROVISIONS FOR RACKS ONLY.	
P-40N-CU -5 TO -15 INCL.	1	AS ABOVE	AS ABOVE	AS ABOVE	B 6700 C 8400 R 11500 W -	1	REAR - WING FRONT - WING DROPPING - BELLY DROPPING - WING	1 x 54 1 x 37 1 x 70 1 x 75, 150 or 225 * 511 TOT.	6-.50 [average]	261	WING - FIXED	NONE	1-500 & 2-500 or 2-100 or 5-20. 1-325 1-250 1-100	1500	SCR-274 or SCR-522A & SCR-695	REFERENCE AS ABOVE * PROVISIONS FOR 2-225 GAL. PERRYING TANKS or 2-500 LB. or 2-100 LB. EXTERNAL WING BOMBS IN ADDITION TO 1-500 LB. BOMB IN PLACE OF BELLY TANK. SPACE ONLY FOR 6-20 LB. BOMBS	
P-40N-CU -20 THRU -30	1	ALLISON V-1710-99 * SINGLE SPEED CURTISS 11'0" DIA. - 3 BL. CONST. SPD. ELECT.	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	SCR-274 SCR-522A & SCR-695 MW-26 OR SCR-695	REFERENCE AND NOTE AS ABOVE. * FIRST 1272 AIRPLANES OF P-40N-20 SERIES DO NOT HAVE MODIFIER ON AUTOMATIC SPEED-BOOST CONTROL; REMAINDER -20 & ALL -30 INCORPORATE A MANIFOLD PRESS. MODIFIER.	
P-40N-CU -35		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	* STARTING WITH -35 AUTOMATIC SPEED BOOST CONTROL IS BEING DISCONTINUED.
P-40N-CU -40		ALLISON V-1710-115 SINGLE SPEED CURTISS 11'0" DIA. - 3 BL. CONST. SPD. ELECT.	AS ABOVE	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT				RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS ON PERFORMANCE								
	TO CLEAR 50'		L. SPEED MPH	GROUND RUN		STD. ALT. FT.	MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS CARGO PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE									
	T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.		HIGH SPEED MPH	RATE OF CLIMB FT./MIN.	HIGH SPEED MPH	RATE OF CLIMB FT./MIN.				TIME TO CLIMB MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.		RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.		
P-40N-CU -1	7000	-	1650	92	-	1000	25000	332	1225	313	#	12.4	8850	NONE	292	600	2.2	-	-	1050	4.9	-	-	1250	7.4		
	7725	2150	1750	96	1350	1100	20000	346	1850	330	#	9.1	8250	NONE	197	360	1.5	500	2.1	760	3.6	-	-	850	3.8		
	8250	2950	1750	105	1700	1100	15000	348	2100	333	#	6.7	7725	NONE	122	230	0.9	290	1.2	430	1.9	-	-	520	2.8		
	8425	3100	1850	-	1800	1150	10000	351	2525	315	#	4.1	8225	NONE	122	210	0.9	260	1.2	420	2.0	-	-	480	2.5		
	8850	3500	-	-	1950	-	5000	313	2425	297	#	2.1															
P-40N-CU -5 TO -15 INCL.	7000	-	1650	92	-	1000	25000	325	900	306	#	13.0	11100	NONE	611	1250	4.9	-	-	2250	10.9	-	-	2800	15.7		
	8400	2700	1850	100	1650	1200	20000	340	1550	325	#	8.8	9500	NONE	331	675	2.6	-	-	1250	6.0	-	-	1550	8.4		
	8900	3550	1850	109	2050	1200	15000	343	2130	328	#	6.0	8900	NONE	236	470	1.8	600	2.5	930	4.3	-	-	1080	5.7		
	9100	3800	1900	-	2200	1250	10000	325	2230	310	#	4.7	8400	NONE	161	320	1.2	400	1.6	600	2.6	-	-	750	3.9		
	9500	4200	-	-	2500	-	5000	308	2120	291	#	2.4	8900	500	161	300	1.2	370	1.6	590	2.8	-	-	-	-		
P-40N-CU -20 THRU -30		AS ABOVE	AS ABOVE	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	NO RANGE DATA AVAILABLE.
P-40N-CU -35, -40		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	

NOTES:

RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK

* MILITARY POWER AVAILABLE FOR 15 MINUTES



P-40
"WARHAWK"

MANUFACTURED BY CURTISS (Buffalo) "CU"

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

PAGE 30
AS OF:
DATE 28 APR 1964

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE
	ENGINE MFG. MODEL	B.H.P./ALT.	S-SPAN	B-BASIC			TANK TYPE	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION	EXTERNAL NO. & SIZE OR CAPACITY		
P-47C-RE -1 TO -3 P-47D RE & RA -1 TO -21 P-47G-CU -1 TO -16	SEE "A" R-2800-21, 59, -63 TURBO CURTISS 12'2" DIA. - 4 BL. CONST. SPD. ELECTR.	T 2000/31000 M 2000/27000 C 1625/29000	S 40'9" L 36'1" H 14'2" T 15'6" W 300 SQ. FT.	B 10700 C 13500 R 15000 W -	1	MAIN - FIS. AUX. - FIS. DROPP. BELLY or EXT. - WINGS & BELLY (SEE F)	1x205 1x100 1x 75 or 110 or 200 2x150 & 1x 75 650 TOT.	6) or 8)	267 NOR. 125 MAX.	WING - FIXED	NONE	b 2-1000 b 3- 500 b 3- 250 b 3- 100	2500	SCR-274N SCR-522A & SCR-535A SCR-695	TECHNICAL ORDER 01-2580-1 (REV. 20 NOV. 15) P-47D-15 & SUBSEQUENT P-47D-6 thru -11 & P-47G-10 AND -15 CARRY ONLY ONE SHACKLE IN BELLY POSITION. * 500 LB. BOMB MAX. ON BELLY SHACKLE DUE TO INTERFERENCE. * ONLY EARLY MODELS CARRY 200 GAL. DROPPABLE BELLY TANK. * THE R-2800-21 ENGINE WILL HAVE WAR EMERGENCY RATING WHEN WATER INJECTION IS INSTALLED & DESIGNATED (-63). * P-47G-CU (-15 & -16) - SAME AS -15. REFERENCE AS ABOVE
P-47D-RE -22	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0" DIA. - 4 BL. CONST. SPD. HYDRO.	T 2000/31000 M 2000/33000 C 1625/30000	AS ABOVE EXCEPT FOR 14'7" HEIGHT	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE
P-47D-RA -23	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0" DIA. - 4 BL. CONST. SPD. ELECTR.	AS ABOVE	AS ABOVE	B 10500 C 11000 R 17000 W -	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE * FIRST MODEL EQUIPPED WITH BUBBLE CANOPY.
P-47D-RE -25	PRATT-WHITNEY R-2800-59 TURBO HAMILTON STD. 13'0" DIA. - 4 BL. CONST. SPD. HYDRO.	AS ABOVE	AS ABOVE	B 10700 C 11600 R 17500 W -	1	MAIN - FIS. AUX. - FIS. DROPP. BELLY or EXT. - WINGS & BELLY	1x270 1x100 1x 75 or 1x110 2x150 & 1x110 760 TOT.	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE
P-47D-RA -26	PRATT-WHITNEY R-2800-59 TURBO CURTISS 13'0" DIA. - 4 BL. CONST. SPD. ELECTR.	AS ABOVE	AS ABOVE	B 10600 C 11500 R 17500 W -	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE

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

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS							
	GROSS WEIGHT LB.	TO CLEAR 50' DIST.		LANDING SPEED FT. MPH.	GROUND-RUN DIST.		STD. ALT. FT.	WAR EMERG. CLIMB		MIL. POWER CLIMB		MAX. CONTIN. POWER CLIMB		TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. U.S. GAL.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER			LONG RANGE						
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.		HIGH SPEED FT/MIN.	RATE OF CLIMB FT/MIN.	HIGH SPEED FT/MIN.	RATE OF CLIMB FT/MIN.	HIGH SPEED FT/MIN.	RATE OF CLIMB FT/MIN.				TIME TO CLIMB MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.		AT 25000 FT.	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS	RANGE MILES	ENDUR. HOURS
		P-47C-RE -1 TO -3 P-47D RE & RA -1 TO -21 P-47G-CU -1 TO -16	11000 12500 13500 14000 15000		- 3100 3300 3400 3800	2200 2500 2600 2800 -		92 100 104 106 -	1200 2000 2200 2300 2500	1500 1700 1800 -	13500 15000 16000 17000 18000	123 121 106 390 372 353	1375 1825 2140 2100 2630 2750				120 116 100 362 368 352	1750 2050 2200 2300 2350	375 365 350 335 320	20.0 15.0 11.0 7.2 4.3 2.2		16200 15600 11900 11300 11100 13500	NONE NONE NONE NONE NONE NONE	900 605 505 435 380 325	3.0 2.6 2.2 1.8 1.6 1.3	3.0 2.6 2.2 1.8 1.6 1.3	1100 1125 1100 1035 925 650	4.3 4.1 4.1 4.4 4.4 2.5
P-47D-RE -22	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	13500 15000 16000 17000 18000	123 121 106 390 372 353	1375 1825 2140 2100 2630 2750	120 116 100 362 368 352	1750 2050 2200 2300 2350	375 365 350 335 320	20.0 15.0 11.0 7.2 4.3 2.2	16200 15600 11900 11300 11100 13500	NONE NONE NONE NONE NONE NONE	900 605 505 435 380 325	3.0 2.6 2.2 1.8 1.6 1.3	3.0 2.6 2.2 1.8 1.6 1.3	1100 1125 1100 1035 925 650	4.3 4.1 4.1 4.4 4.4 2.5	1125 1100 1035 925 650	2.5 2.5 2.5 2.5 2.5 2.5	1725 1525 1100 1035 925 650	5.3 7.3 5.4 4.9 4.4 3.8	AS ABOVE			
P-47D-RA -23	12000 13000 14000 15000 16000 17000	- 3200 3400 3800 4400 5200	2300 2500 2700 -	98 102 106 -	1500 2100 2300 1800 -	11000 11500 12000 12500 13000	126 111 398 383 368 350	1500 2225 2525 2725 2860 2940	111 110 395 379 364 348	1360 1965 2265 2465 2570 2570	382 373 363 348 334 319	13.5 10.5 8.1 6.0 5.9 4.2	16900 16100 15100 11800 11600 11000	NONE NONE NONE NONE NONE NONE	715 605 455 435 380 305	3.0 2.6 2.2 1.8 1.6 1.3	3.0 2.6 2.2 1.8 1.6 1.3	1100 1125 1100 1035 925 650	4.3 4.1 4.1 4.4 4.4 2.5	1125 1100 1035 925 650	2.5 2.5 2.5 2.5 2.5 2.5	1850 1700 1500 1400 1300 800	6.8 7.3 5.4 4.9 4.4 4.2	NO RANGE WITH BOMBS AVAILABLE. PERFORMANCE VALUES SHOWN ARE WITHOUT EXTERNAL TANKS.				
P-47D-RE -25	12000 13500 14500 15500 16500 17500	- 3300 3600 4100 4700 6000	2300 2500 2700 -	100 104 105 -	1500 2200 2400 1800 -	11600 12100 12600 13100 13600	129 119 406 392 375 357	1575 2150 2375 2475 2725 2780	118 115 100 395 369 354	1225 1825 2125 2320 2415 2485	381 372 362 347 334 319	11.0 11.0 8.5 6.2 4.1 2.0	17500 16700 15400 15100 11600 11000	NONE NONE NONE NONE NONE NONE	780 670 480 445 370 370	3.0 2.6 2.2 1.8 1.6 1.3	3.0 2.6 2.2 1.8 1.6 1.3	1100 1125 1100 1035 925 650	4.3 4.1 4.1 4.4 4.4 2.5	1125 1100 1035 925 650	2.5 2.5 2.5 2.5 2.5 2.5	17100 15600 15300 15000 11600 11000	780 670 480 445 370 370	10.2 10.2 5.3 5.3 5.3 5.3	NO RANGE WITH BOMBS AVAILABLE. PERFORMANCE VALUES SHOWN ARE WITHOUT EXTERNAL TANKS.			
P-47D-RA -26	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	11600 12100 12600 13100 13600	129 119 406 392 375 357	1575 2150 2375 2475 2725 2780	118 115 100 395 369 354	1225 1825 2125 2320 2415 2485	381 372 362 347 334 319	11.0 11.0 8.5 6.2 4.1 2.0	17500 16700 15400 15100 11600 11000	NONE NONE NONE NONE NONE NONE	780 670 480 445 370 370	3.0 2.6 2.2 1.8 1.6 1.3	3.0 2.6 2.2 1.8 1.6 1.3	1100 1125 1100 1035 925 650	4.3 4.1 4.1 4.4 4.4 2.5	1125 1100 1035 925 650	2.5 2.5 2.5 2.5 2.5 2.5	17100 15600 15300 15000 11600 11000	780 670 480 445 370 370	10.2 10.2 5.3 5.3 5.3 5.3	AS ABOVE		

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

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

USED ON:
P-47C-RE (-1, -2 & -5)
P-47D-RE (-1, -2, -3, -4 & -5)
P-47D-RA (-6)
P-47G-CU (-1, -5 & -10)

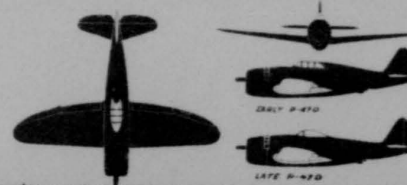
RED FIGURES ARE PRELIMINARY; SUBJECT TO REVISION AFTER FLIGHT CHECK.
* MILITARY POWER AVAILABLE FOR 15 MINUTES.

(A) R-2800-59
(WATER INJECTION & NEW
ELECTRICAL HARNESS)

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

(A) R-2800-63
(WATER INJECTION)

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



P-47
"THUNDERBOLT"

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

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PAGE 33
AS OF:
DATE 22 SEPT 1944

TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART

MODEL & BLOCK NO.	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE	
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT.	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA		B-BASIC C-COMBAT R-REC'D LIM W-WAR MAX.	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE	INTERNAL	EXTERNAL	MAX LOAD LB.		TYPE
			T-TAKE-OFF M-MILITARY C-CONTINUOUS									NO. & SIZE OR STATION	NO. & SIZE OR CAPACITY			
P-51B-NA -14-5 P-51C-NT -1	1	PACKARD V-1650-3 2 SPEED-2 STAGE HAMILTON STD. 11"2"DIA. - 4BL. CONST. SPD. HYDRO.	T 1100/8 L M 1150/19600 C 1190/21000 1120/20500 910/24000	S 37' 0" L 32' 3" H 13' 8" T 11' 10" W 233 SQ. FT.	B 7450 C 9200 R 12000 W -	1	MAIN-R. WING MAIN-L. WING DROP.-WINGS SEE (f)	1 x 92 1 x 92 2 x 75 or 2 x 150 569 TOT.	2) 2) 2) 2)	.50 280 350	OUTRD.-WINGS INRD.-WINGS	NONE	2-500 2-325 2-250 2-100	1000	SCR-274M SCR-522 or SCR-535A or SCR-695	TECHNICAL ORDER 01-60JD-1. (20 DEC. 1943) KIT AVAILABLE FOR 1285 GAL. FUSELAGE TANK. WHEN INSTALLED THESE MODELS WILL BE SAME AS ONES LISTED BELOW. WAR EMERGENCY RATINGS: 1595/17000' & 1295/28600' (RESTRICTED TO MODELS EQUIPPED WITH KLG-RC5/3 or LODGE RS5/5 SPARK PLOUG.)
P-51B-NA -7410 P-51C-NT -3	1	AS ABOVE	AS ABOVE	AS ABOVE	B 7450 C 9200 R 12000 W -	1	MAIN-R. WING MAIN-L. WING FUSELAGE DROP.-WINGS	1 x 92 1 x 92 1 x 85 2 x 75 or 2 x 150 569 TOT.	2) 2) 2) 2)	.50 280 380	OUTRD.-WINGS CENTER-WINGS INRD.-WINGS	AS ABOVE	AS ABOVE	AS ABOVE	SCR-522 or SCR-274M or SCR-274M & MS-26C COMBINATIO	REFERENCE AS ABOVE NOTE: LAST 550 P-51B-5 MODELS BECOME B-7 UPON ADDITION OF 1285 GAL. FUSELAGE TANK. P-51C-3 ARE MODIFIED P-51C-1's.
P-51B-NA -15 P-51C-NT -54-10	1	PACKARD V-1650-7 2 SPEED-2 STAGE HAMILTON STD. 11"2"DIA. - 4BL. CONST. SPD. HYDRO.	T 1190/8 L M 1630/13600 C 1390/27200 1230/27000 1190/29000	AS ABOVE	AS ABOVE	1	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE WAR EMERGENCY RATINGS: 1790/11500' & 1530/21500' (RESTRICTED TO MODELS EQUIPPED WITH KLG-RC5/3 or LODGE RS5/5 SPARK PLOUG.) SOME P-51C-5-NT MODELS FOR RECONNAISSANCE WILL NOT CARRY 1285 GAL. FUSELAGE TANK.
P-51D-NA -54-10 P-51D-NT -5	1	AS ABOVE	AS ABOVE	AS ABOVE	B 7635 C 10100 R 11500 W -	1	MAIN-R. WING MAIN-L. WING FUSELAGE DROP.-WINGS	1 x 92 1 x 92 1 x 85 2 x 75 419 TOT.	2) 2) 2) 2)	.50 270 380 1690	OUTRD.-WINGS CENTER-WINGS INRD.-WINGS ALTERNATE INSTALLATION	AS ABOVE	AS ABOVE	AS ABOVE	SCR-522 or PARTIAL SCR-274M INSTALL.	TECHNICAL ORDER 01-60JE-1.
P-51K-NT -1							P-51K SAME AS ABOVE EXCEPT FOR 11'0" DIA. AEROPRODUCTS PROPELLER. PERFORMANCE FIGURES WILL BE SLIGHTLY LESS THAN SHOWN FOR P-51D AIRPLANE.									

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND						HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT						RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS			
	GROSS WEIGHT LB.	TO CLEAR 50 DIST.		LANDING SPEED MPH.	GROUND-RUN DIST.		STD. ALT. FT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS-CARGO-PASS. LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE					
		FT.	FT.		FT.	FT.		FT.	FT.	HIGH SPEED FT/MIN.	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH.	RATE OF CLIMB FT/MIN.				HIGH SPEED MPH.	RATE OF CLIMB FT/MIN.	RANGE MILES.	ENDURANCE HOURS.	RANGE MILES.	ENDURANCE HOURS.		RANGE MILES.	ENDURANCE HOURS.	RANGE MILES.
P-51B & C (V-1650-3)	8000 9500 10000 11000	2100 2200 2300 3000	2000 2100 2200 -	100 105 106 -	1200 1300 1400 -	9200	30000 25000 20000 15000 10000 5000	140 130 127 124 106 388	1850 2650 2700 3475 3380 3280	133 118 127 144 392 371	2000 2325 2650 3025 2900 2780	597 390 405 373 353 335	11.0 8.9 7.0 5.3 3.6 1.8	11200 10200 9200 9700 10200	NONE NONE NONE 500 1000	424 334 184 184 184	1275 850 475 450 425	4.4 3.0 1.6 1.6 1.6	1700 1050 550 700 500	4.7 3.2 1.7 1.7 1.7	1925 1350 750 700 675	7.6 5.5 2.8 2.8 2.8	- - - - -	2200 1150 850 800 775	10.0 7.1 3.9 3.8 3.7	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT BOMB RACKS; RACKS DECREASE HIGH SPEED & M.P.H. & RATE OF CLIMB LESS THAN 100 / MIN.
P-51B & C (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	9800	30000 25000 20000 15000 10000 5000	135 126 124 117 117	1600 2500 3050 3125 3300 3200	135 128 144 144 146 381	1500 2300 2750 2700 3300 3500	415 406 390 388 362 340	11.2 8.4 6.5 4.7 3.0 1.5	11200 10200 9200 9700 10200	NONE NONE NONE 500 1000	424 334 184 184 184	1280 870 475 460 440	4.3 2.9 1.5 1.6 1.6	1350 890 1490 745 460	4.1 2.7 1.4 1.3 1.4	2000 1310 710 745 680	8.0 5.4 2.7 2.7 2.8	- - 7.0 - -	2290 1160 835 825 770	10.4 6.9 3.8 3.9 3.6	AS ABOVE
P-51B & C (V-1650-3)	8000 9000 10300 10800 11800	2100 2200 2350 2900 3400	2000 2100 2350 -	100 105 111 -	1200 1400 1550 -	9800	30000 25000 20000 15000 10000 5000	140 130 127 124 106 388	1850 2650 2700 3475 3380 3280	133 118 127 144 392 371	2000 2325 2650 3025 2900 2780	597 390 405 373 353 335	12.1 9.6 7.4 5.6 3.8 1.8	11800 10800 9800 10300 10800	NONE NONE NONE 500 1000	569 419 269 269 269	1500 1075 750 700 675	5.3 3.8 2.4 2.4 2.4	1875 1325 875 850 825	5.7 4.2 2.6 2.6 2.6	2275 1625 1125 1075 1025	9.0 6.5 4.3 4.2 4.1	- - - - -	2600 1800 1275 1225 1175	11.8 8.3 5.9 5.8 5.4	AS ABOVE
P-51B & C (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	9800	30000 25000 20000 15000 10000 5000	135 126 124 117 117	1600 2500 3050 3125 3300 3200	135 128 144 144 146 381	1500 2300 2750 2700 3300 3500	415 406 390 388 362 340	9.0 6.9 4.9 3.1 1.6	11800 10800 9800 10300 10800	NONE NONE NONE 500 1000	569 419 269 269 269	1150 1050 720 725 650	5.1 3.7 2.3 2.2 2.3	1550 1125 765 725 700	4.8 3.5 2.2 2.2 2.2	2275 1675 1110 1050 1000	9.1 6.8 4.3 4.1 4.0	- - 1065 - -	2600 1850 1250 1225 1175	12.0 8.7 5.7 5.7 5.6	AS ABOVE
P-51D (V-1650-7)		AS ABOVE	AS ABOVE	AS ABOVE	AS ABOVE	10100	30000 25000 20000 15000 10000 5000	133 126 124 113 116	1300 1950 2675 2775 2725	133 128 144 143 143	1300 1950 2300 2300 2925	415 404 388 387 360	12.6 9.5 7.3 5.2 3.3	11100 10100 10600 11100	NONE NONE 500 1000	419 269 269 269	1050 720 685 650	3.7 2.3 2.3 2.3	1125 765 725 700	3.5 2.2 2.2 2.2	1675 1140 1050 1000	6.8 4.3 4.1 4.0	- - - -	1850 1250 1225 1175	8.7 5.7 5.7 5.6	NOTE: HIGH SPEED AND CLIMB SHOWN WITHOUT RACKS. NEW TYPE BOMB RACKS DECREASE HIGH SPEED & M.P.H.

NOTES:

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



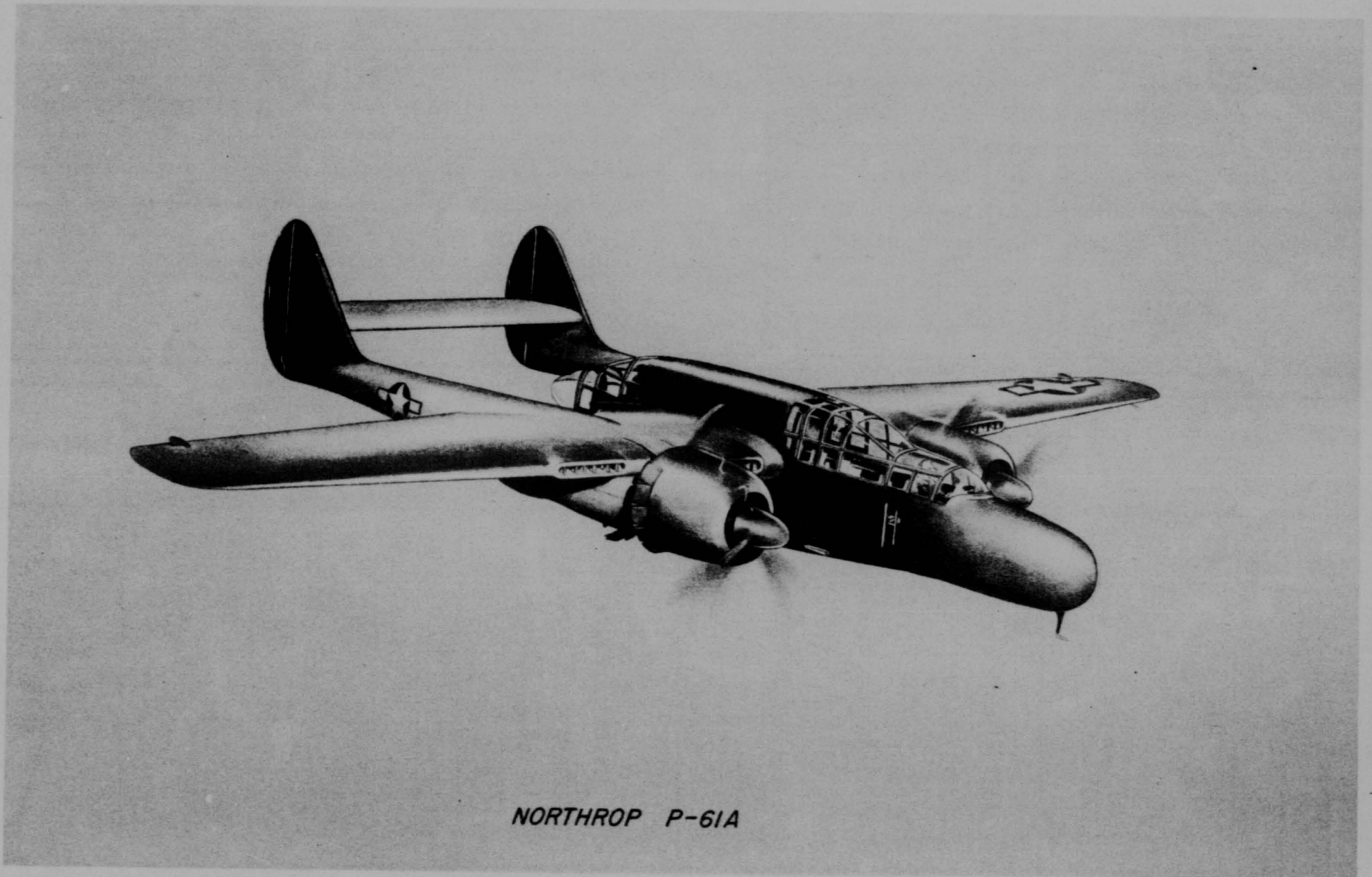
P-51
"MUSTANG"

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

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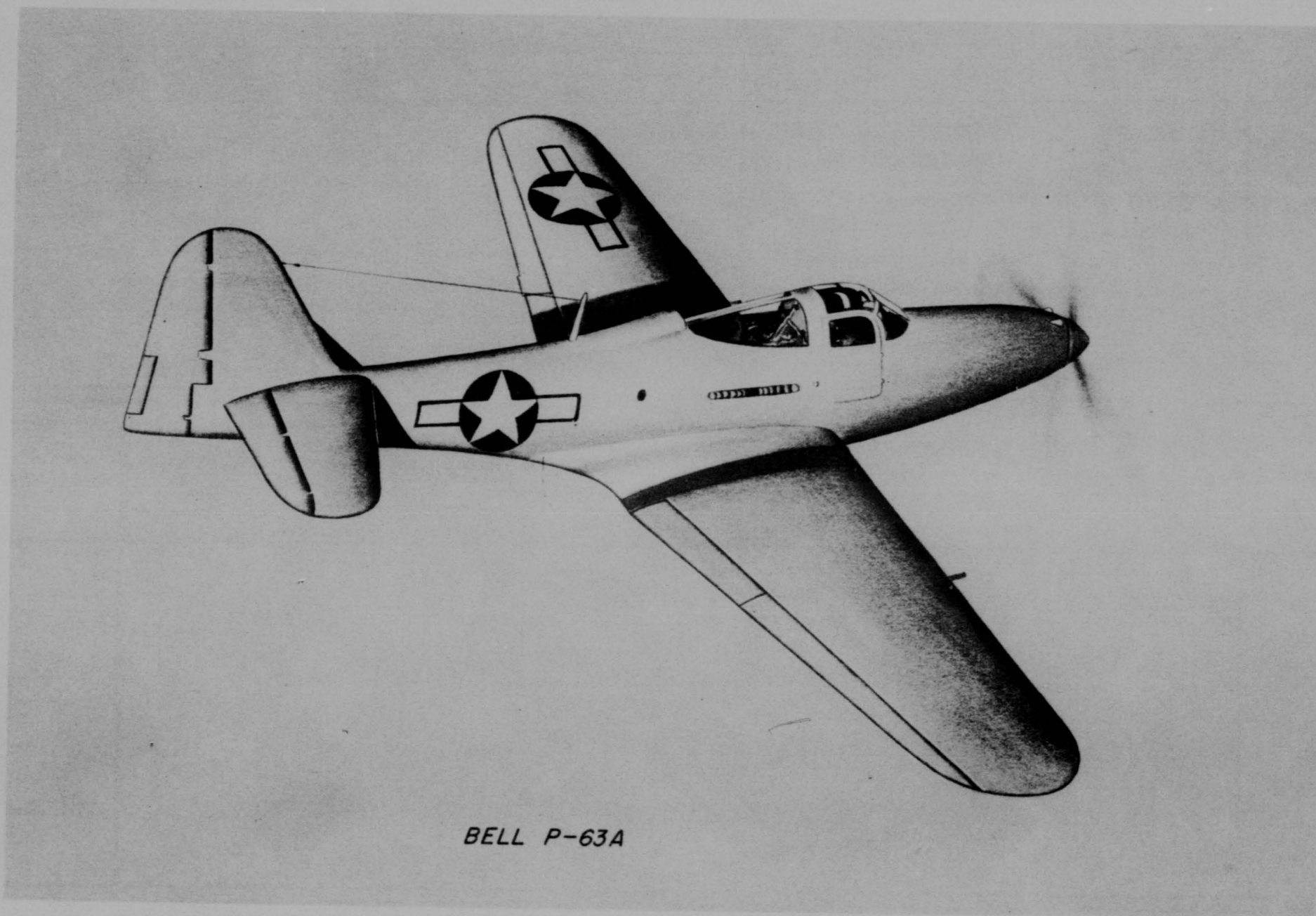


NORTHROP P-61A

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BELL P-63A

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																
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MODEL & BLOCK NO.	NUMBER	ENGINE & PROP.		SIZE	WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.			RADIO	REMARKS & REFERENCE
		ENGINE MFR. MODEL	B.H.P./ALT.				T-TAKE-OFF	S-SPAN	B-BASIC	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY	NO. GUNS & CALIBER	RDS PER GUN	LOCATION & TYPE		
P-63A-BE -1 TO -7 INCL.	1	ALLISON V-1710-93 2 STAGE SUPERCHARGER PROP MFR. TYPE	T 1325/ S L	S 38'1" L 32'8" H 12'3" T 14'7" W 24'8" SQ.	B 6925 C 8350 R 8900	1	MAIN - WINGS 2 x 68 DROPPABLE BELLY 1 x 75 & DROPPABLE WINGS 2 x 75 (See f) 161 TOT.	1-37mm 30 2-50 250 2-50 200	30	PROP.-TYPE M4 WING - FIXED NOSE - FIXED	NONE	1-500 1-325 1-250 1-100	500	SCR-274W & BE-198 or SCR-522a ORTHOLA 438 & SCR-695	TECHNICAL ORDER 01-110FP-1 (30 AUG. 1944) DROPPABLE WING TANKS ADDED TO P-63A-6 & SUBSEQUENT. WAR EMERGENCY RATING.	
P-63A-BE -8-9	1	ALLISON V-1710-93 2 STAGE SUPERCHARGER PROP MFR. TYPE	AS ABOVE	AS ABOVE	AS ABOVE	1	MAIN - WINGS 2 x 68 DROPPABLE BELLY 1 x 75 & DROPPABLE WINGS 2 x 75 (See f) 161 TOT.	1-37mm (58" 30) 2-50 250 2-50 200	30	PROP.-TYPE M4E3 WING - FIXED NOSE - FIXED	A S A B O V E	AS ABOVE	AS ABOVE	REFERENCE AS ABOVE & TYPE M4E3 CANNON ON P-63A-9. PROVISIONS FOR 1264 GAL. SELF SEALING BELLY TANK.		
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											
			T M C	S L H T W	B C R W											

MODEL & BLOCK NO.	TAKE OFF & LANDING						HIGH SPEED & CLIMB							RANGE & ENDURANCE										REMARKS		
	HARD SURFACE - NO WIND						AT NORMAL COMBAT WEIGHT							STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE												
	GROSS WEIGHT	TO CLEAR 50		LANDING SPEED	GROUND-RUN		STD. ALT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER			TAKE OFF WEIGHT	BOMBS-CARGO-PASS.	TOTAL FUEL	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE				
		T.O. DIST.	LAND. DIST.		T.O. DIST.	LAND. DIST.		HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	HIGH SPEED	RATE OF CLIMB	TIME TO CLIMB				RANGE	ENDUR.	RANGE	ENDUR.	RANGE	ENDUR.		RANGE	ENDUR.
P-63A-BE -1 TO -7 INCL.	7700	1700	1800	-	1070	1110	30000	392	1680	392	1680	350	10.1	10500	NONE	161	-	-	-	-	-	-	2250	13.3	PERFORMANCE SHOWN WITHOUT EXTERNAL TANKS.	
	8300	2140	-	-	1320	-	25000	401	2380	401	2380	365	7.6	9500	NONE	311	725	3.2	850	3.1	1100	4.9	-	1400		7.5
	8700	2520	-	-	1520	-	20000	398	3030	398	3030	370	7.6	8850	NONE	211	500	2.1	600	2.1	700	3.2	-	950		4.8
	9500	2900	-	-	2000	-	15000	387	3590	372	3540	352	4.2	8350	NONE	136	400	1.3	425	1.3	550	2.1	-	700		3.2
	10500	4500	-	-	3100	-	10000	373	3815	355	3690	335	2.8	8850	500	136	350	1.3	350	1.3	450	2.0	-	600		3.0
P-63A-BE -8-9							30000	402	1730	402	1730	359	10.1												AS ABOVE	
							25000	410	2350	410	2350	374	7.6													
							20000	407	2960	398	2960	375	5.7													
							15000	392	3500	380	3450	360	4.2													
							10000	379	3700	362	3575	340	2.8													

NOTES:

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



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 "KINGCOBRA"

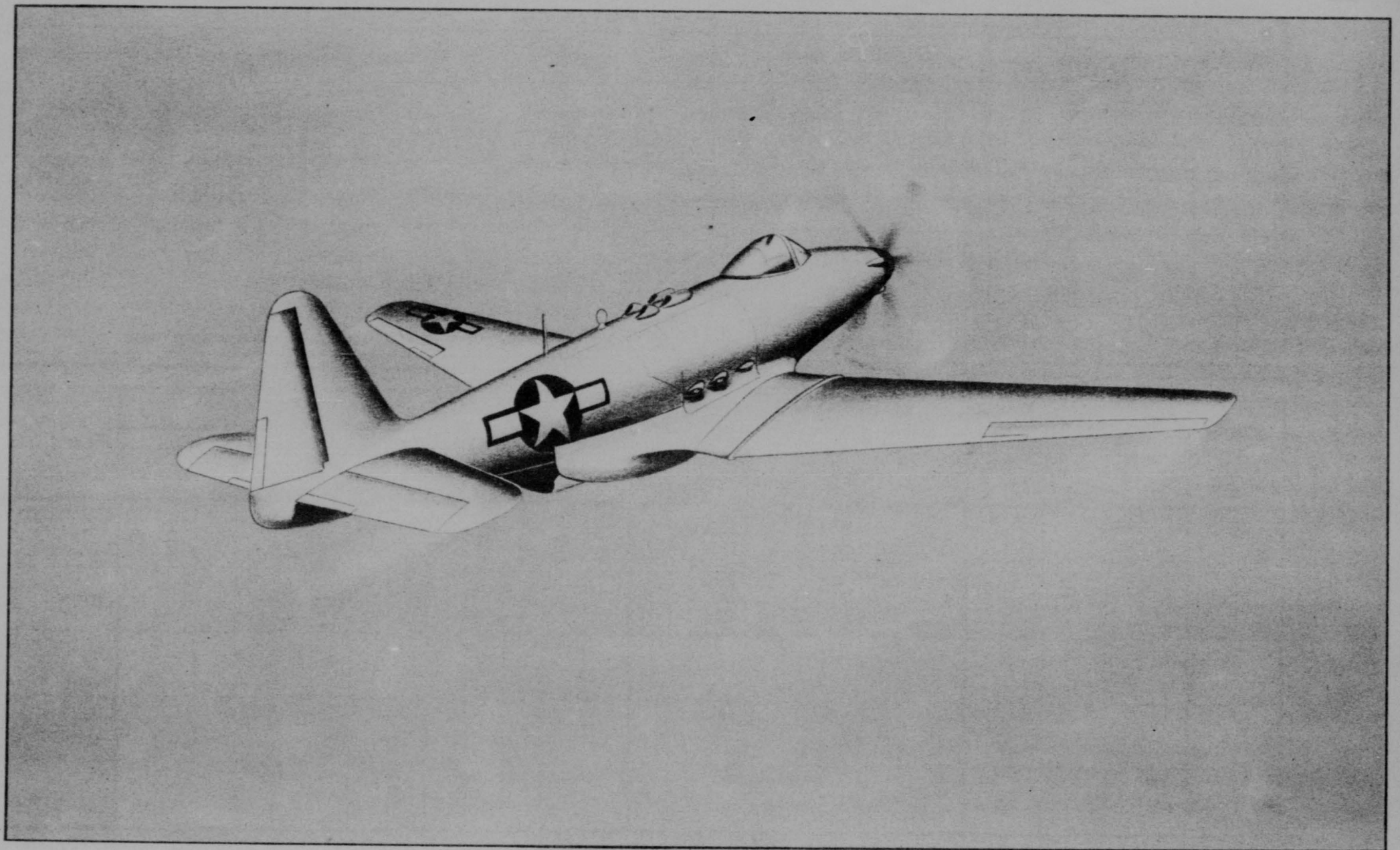
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GENERAL MOTORS P-75

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TACTICAL PLANNING CHARACTERISTICS & PERFORMANCE CHART																	
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PAGE 39 AS OF: DATE 20 SEPT. 1944																	
MODEL & BLOCK NO.	ENGINE & PROP.		SIZE		WT.	COMBAT CREW	FUEL		ARMAMENT			BOMBS-CARGO-PASS.		RADIO	REMARKS & REFERENCE		
	NUMBER	ENGINE MFR. MODEL SUPERCHARGER PROP MFR. TYPE	B.H.P./ALT. T-TAKE-OFF M-MILITARY C-CONTINUOUS	S-SPAN L-LENGTH H-HEIGHT T-TREAD W-WING AREA			B-BASIC C-COMBAT R-RECD.LIM W-WAR MAX.	TANK TYPE OR LOCATION	NO. TANKS & CAPACITY U.S. GAL.	NO. GUNS & CALIBER	RDS. PER GUN	LOCATION & TYPE	INTERNAL NO. & SIZE OR STATION				EXTERNAL NO. & SIZE OR CAPACITY
P-75A-GC -1	1	ALLISON V-3420-23 See note 2 AEROPRODUCTS 12"7" DIA. - 6 BL. COUNTER, SIG. S. HTD.	T 2500/31 M 2300/22000 W 3000/31 C 2100/19000	S 49' 4" L 41' 4" H 5' 6" T 20' W 347 sq. ft.	B 11300 C 17200 R 18700 W	1	MAIN - PUS. AUX. - WINGS DROP. WING	1 x 435 4 - 203 2 x 75 or 2 x 110 838 TOT.	4 - .50 6 - .50	300 235	NOSE - FIXED WING - FIXED	NONE	2-100 2-250 2-325 2-500	1000	SCR-522 DET. F136 or SCR-271 A SCR-695	TECHNICAL ORDER 01-257A-1 (1 SEPT. 1944) * 2-STAGE, VARIABLE SPEED HYDRAULICALLY COUPLED SUPERCH. ** WAR EMERGENCY RATING.	
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												
			T M C	S L H T W	B C R W												

MODEL & BLOCK NO.	TAKE OFF & LANDING HARD SURFACE - NO WIND				HIGH SPEED & CLIMB AT NORMAL COMBAT WEIGHT								RANGE & ENDURANCE STATUTE AIR MILES - NO WIND - NO ALLOWANCE FOR RESERVE										REMARKS				
	GROSS WEIGHT LB.	TO CLEAR 50'		LANDING SPEED MPH	GROUND-RUN		STD. ALT. FT.	WAR EMERG.		MIL. POWER		MAX. CONTIN. POWER		TAKE OFF WEIGHT LB.	BOMBS LB.	TOTAL FUEL U.S. GAL.	MAX. CONTINUOUS POWER		MAX. CRUISE POWER		LONG RANGE						
		T.O. DIST. FT.	LAND. DIST. FT.		T.O. DIST. FT.	LAND. DIST. FT.		HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.	HIGH SPEED MPH	RATE OF CLIMB FT/MIN.				TIME TO CLIMB MIN.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.	AT 25000 FT.	AT 10000 FT.		AT 25000 FT.	RANGE MILES	ENDUR. HOURS	RANGE MILES
P-75A-GC -1	11300 15000 16200 17200 18200 18700	- 1950 2300 2700 3000 3250	1950 2500 2700 3300 -	85 91 95 98 -	1200 1400 1500 1700 1950 2100	17200	30000 25000 20000 15000 10000 5000	400 419 430 426 415 403	800 1500 2200 2800 3200 3420	400 419 430 418 403 366	800 1500 2200 2600 2800 2050	357 380 396 395 376 360	14.5 10.0 7.2 5.2 3.3 1.6	18700 18200 17200 16200 18200	NONE NONE NONE NONE NONE	858 768 638 638 638	1200 1100 900 925 890	3.8 3.5 2.7 2.7 2.7	1250 1140 925 990 900	3.7 3.5 2.7 2.7 2.7	2350 2150 1875 1900 1850	9.0 8.3 6.7 6.7 6.7	2400 2100 1800 1900 1750	7.6 6.9 5.5 5.5 5.5	3300 3000 2675 2725 2400	15.1 14.8 14.7 14.7 13.0	* WEIGHT WITH 10 GUN CONFIGURATION.

NOTES:

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



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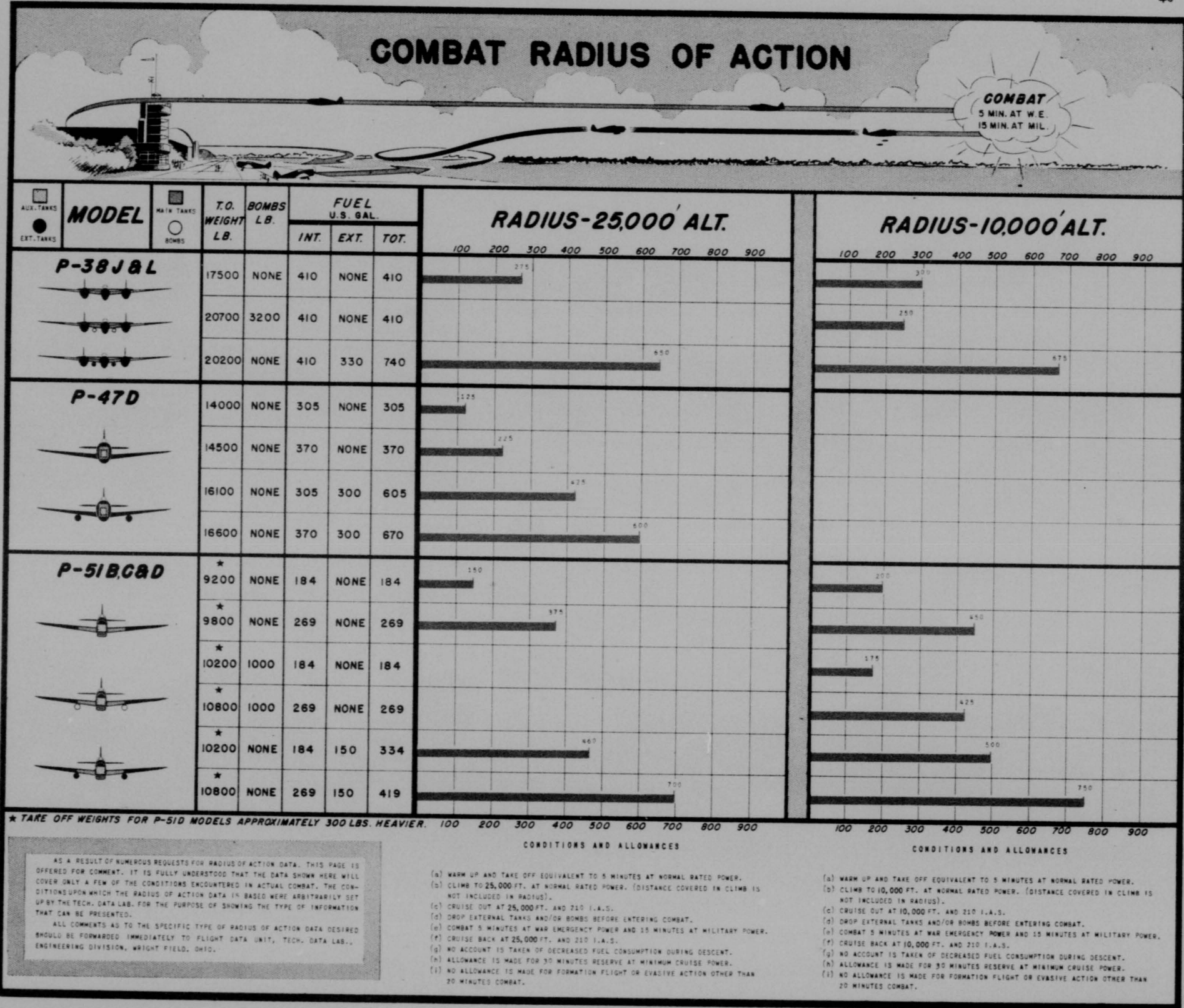
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FOREWORD

WARNING

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

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

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

RANGE and ENDURANCE are based on the following assumptions:

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

DEFINITIONS

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

RED PRINT: Preliminary estimates or calculated data.

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TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

AS OF: 25 SEP 1943

BOMBER TOWPLANE AND CG-4A GLIDER

TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) S.L.-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE (STATUTE AIR MILES-NO WIND-NO RESERVE) MAXIMUM						REMARKS	
	GLIDERS		TOWPLANE				MAX. TOW SPEED (M.P.H.)	TO CLEAR 50' OBJ. DISTANCE (FT.)	TAKE OFF SPEED I.A.S. (FT.)	GROUND RUN DISTANCE (FT.)	I.A.S. FOR CLIMB (M.P.H.)	INITIAL RATE OF CLIMB (FT./MIN.)	SERVICE CEILING (FT.)	TIME TO SERVICE CEIL. (MIN.)	RADIUS OF ACTION (GLIDER RELEASED AT RADIUS)			RECOMM. CRUISING ALTITUDE (FT.)	MAX. RANGE (WITH GLIDER)		
	TAKE-OFF WEIGHT (LB.)	CARGO OR PASS. (LB.)	TAKE-OFF WEIGHT (LB.)	BOMBS CARGO OR PASS. (LB.)	FUEL (US GAL.)	RADIUS (MI.)									TIME OUT (HRS.)	TIME BACK (HRS.)	RANGE (MI.)		ENDUR. (HRS.)		
	(LB.)	(LB.)	(LB.)	(LB.)	(US GAL.)	(M.P.H.)	(FT.)	I.A.S.	(FT.)	(M.P.H.)	(FT./MIN.)	(FT.)	(MIN.)	(MI.)	(HRS.)	(HRS.)	(FT.)	(MI.)	(HRS.)		
B-17F & (1) CG-4A	7500	3800	59100	NONE	2780	150	6150	110	4150	135	300	12000*	37	(990)	7.2	6.8	5000	1380	10.3	* LIMITED- NO OXYGEN IN GLIDER	
														(980)	6.8	6.3	10000	1370	9.6		
B-17F & (2) CG-4A	7500	3800	52500	NONE	1700	150	6000	110	4100	135	300	11000	57	510	3.8	3.5	5000	720	5.5		
	7500	3800	59100	NONE	2780	150	6950	110	4700	135	240	8000	44	860	6.6	6.2	5000	1140	8.8		
B-24D & (1) CG-4A	7500	3800	52500	NONE	2344	150	4225	115	3475	140	530	12000*	24	(870)	6.3	5.3	5000	1360	9.7	* LIMITED- NO OXYGEN IN GLIDER	
	7500	3800	59000	6000	2344	150	5075	115	4125	140	325	12000*	41	(830)	5.6	4.4	10000	1280	8.6		
B-25C & (1) CG-4A	7500	3800	30000	2000	972	150	5075	120	4175	140	390	12000*	38	540	3.8	3.4	5000	700	4.9	* LIMITED- NO OXYGEN IN GLIDER	

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

NOTES:

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

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

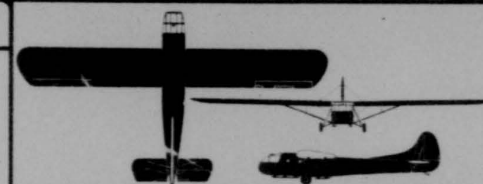
TEMPORARY TOW RELEASE MECHANISM ON B-17F CAN BE INSTALLED QUICKLY WITH NO STRUCTURAL MODIFICATIONS REQUIRED.

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

GLIDER CHARACTERISTICS

WEIGHT

B—BASIC
C—COMBAT
W—WAR MAX



SIZE

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

B— (3700 to 4500)
C— 7500
W— 9000

TYPICAL GLIDER CAPACITIES

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

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

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TOWPLANE & GLIDER TACTICAL PLANNING PERFORMANCE CHART

 Form 10,
 13 OCT
 28 SEP 1944

CARGO TOWPLANE AND CG-4A GLIDER

TOWPLANE & GLIDER COMBINATION	LOADING						TAKE OFF (WITH GLIDER ATTACHED) SL-HARD SURFACE-NO WIND			CLIMB (AT MINIMUM TOW SPEED)				RANGE & ENDURANCE STATUTE AIR MILES-NO WIND-NO RESERVE MAXIMUM						REMARKS
	GLIDERS		TOWPLANE				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.)	MAX. TOW SPEED (M.P.H.)								RADIUS (MI.)	TIME OUT (HRS.)	TIME BACK (HRS.)		RANGE (MI.)	ENDUR. (HRS.)	
	COLUMN— 1																			
C-46A & (1)CG-4A	7500	3800	45000	3000	1400	150	5150	95	3500	125	275	10000	47	650	5.3	3.8	5000	950	7.8	BETTER PERFORMANCE EXPECTED UPON FURTHER FLIGHT TESTING.
C-46A & (2)CG-4A	7500	3800	45000	3000	1400	150	8300	95	5650	120	100	3000	30	410	3.6	2.7	1000	530	4.7	AS ABOVE
C-47, 47A & 53 (STD. BLADE PROPS) & (1)CG-4A	7500	3800	26000	3000	804	150	4425	85	3000	120	275	11350	44	560	4.5	4.4	5000	830	6.8	
C-47, 47A & 53 (PADDLE BLADE PROPS) & (1)CG-4A	7500	3800	26000	3000	804	150	4625	80	3050	105	515	12000*	31	575	4.8	3.6	5000	955	8.0	*LIMITED- NO OXYGEN IN GLIDER.
	7500	3800	29000	6000	804	150	5400	85	3250	105	420	11300	37	515	4.6	3.4	5000	870	7.3	
	7500	3800	31000	8000	804	150	5950	85	3450	105	350	10400	39	520	4.4	3.2	5000	820	6.9	
C-47, 47A & 53 (PADDLE BLADE PROPS) & (1)CG-4A (TOWPLANE EQUIPPED WITH PARA-PACK RACKS)	7500	3800	26000	3000	804	150	4800	80	3200	105	465	11800	35	525	4.4	3.6	5000	870	7.3	
	7500	3800	29000	6000	804	150	6150	80	3400	105	370	10600	38	485	4.1	3.4	5000	830	6.9	
C-47, 47A & 53 (PADDLE BLADE PROPS) & (2)CG-4A	7500	3800	24200	1200	804	150	6200	80	3525	105	220	7800	46	450	4.0	3.0	2000	665	5.8	* TO 3000 FT. ALTITUDE.
	7500	3800	26000	3000	804	150	6900	80	3750	105	180	7300	50	435	3.8	2.9	2000	630	5.5	
	7500	3800	29000	6000	804	150	7250	80	4250	105	125	8000	57	395	3.7	3.3	2000	520	4.5	
	7500	3800	31000	8000	804	150	8850	85	5550	105	80	-	38*	370	3.4	3.1	1000	470	4.4	
C-60A & (1)CG-4A	7500	3800	18500	NONE	644	150	4000	85	2750	120	550	12000*	37	580	4.7	4.0	5000	940	7.9	*LIMITED - NO OXYGEN IN GLIDER.
	7500	3800	21500	3000	644	150	5425	85	3675	120	320	11500	48	410	3.4	2.8	5000	560	4.7	
C-60A & (2)CG-4A	4700	1000	18500	NONE	644	150	6200	85	4100	120	250	8000	40	360	2.8	2.5	5000	540	4.6	
	7500	3800	18500	NONE	644	150	7000	85	4500	120	200	7300	41	330	2.9	2.4	5000	475	4.0	

NOTES:

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

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

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

GLIDER CHARACTERISTICS

WEIGHT	GLIDER CHARACTERISTICS	SIZE
B-BASIC		S-SPAN
C-COMBAT		L-LENGTH
W-WAR MAX.		H-HEIGHT
		T-TREAD
		W-WING AREA
B- (3700 to 4500)	TYPICAL GLIDER CAPACITIES (a) TROOP CARRIER: CREW(2) & TROOPS(13). (b) CARGO CARRIER: CREW(2) & TROOPS(4) & JEEP CAR(1). (c) CARGO CARRIER: CREW(2) & TROOPS(3) & 75MM. HOWITZER(1) & 75MM. AMMUNITION(18 RES.)	S- 83'8"
C- 7500		L- 48'4"
W- 9000		H- 12'7"
		T- 9'4"
		W- (Tact. gear) 852 SQ. FT.

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