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**TACTICAL
 PLANNING**

AIR MATERIEL COMMAND

WRIGHT FIELD, DAYTON, OHIO

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WITH THE COOPERATION OF THE OTHER ACTIVITIES OF THE A.M.C.

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ing data in this report will be welcome. Address
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COMMANDING GENERAL,
AIR MATERIEL COMMAND,
WRIGHT FIELD, OHIO.
ATT: TSEST-9

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TSENG REPORT NO. 1



JUNE - 1947

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C O N F I D E N T I A L

-FOREWORD-**NOTE**

The performance data contained herein have been adjusted for planning purposes to include allowance factors derived from service experience as set forth under "Definitions" and is not suitable for aerodynamic analysis. For "official" characteristics and performance of each model refer to TSE Report No. 2 (formerly Report TSEST-A₂).

The charts in this report cover selected post war aircraft and set forth outstanding characteristics and a conservative interpretation of performance capabilities of typical models. The format reflects many of the suggestions received in connection with previous versions, Reports TSEAL-6-A1 and EE-393. This chart will be reissued biennially. Periodic revision sheets will be issued whenever required. It is the object of this chart to at all times present the most up-to-date record of the AAF Post War Program. Performance is based on the requirements of Army Navy Aeronautical Specification AN-N-8a; for "handbooks, Pilot's Flight Operating Instructions" which sets forth specific allowances for practical service operation.

All speeds shown are true air speeds (knots). Range (nautical miles) and endurance are based on the following assumptions and include allowances for:

- (a) Warm up, taxi, run up, take-off, and landing. This is equal to ten minutes operation at S.L. with max. continuous power.
- (b) Fuel consumed in climb. Distance and time to climb are included in range and endurance.
- (c) Carrying bombs and droppable tanks entire flight unless otherwise noted.
- (d) 10% net ideal range and endurance for miscellaneous differences in airplanes, equipment, pilot technique atmospheric conditions other than wind, unusable fuel, weight, and similar variables. For example range varies with the specific gravity of the fuel which varies with the outside air temperature.

U-13051

2

WF-O-21 JUL 47 1,500

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R E S T R I C T E D

—DEFINITIONS—

PROJECTED INVENTORY:

(a) ACTIVE (shown as solid line): The active or anticipated number of aircraft maintained in active status.

(b) TOTAL (shown as broken line): The sum of aircraft on active status, in storage, and/or projected deliveries on contract.

(c) Inventories are based on report SA-104. (12-31-46)

TURNING RADIUS: (Minimum)

Paved area required (figures are not physical minimum but are calculated on the inside wheel turning at its minimum economical radius).

POWER PLANT:

Listing of related items.

ENGINE RATINGS:

Latest AAF approved brake horsepower ratings or lb. of thrust per engine at critical altitude, without regard to the effect of installations (no ram), unless otherwise specified.

TAKE-OFF:

Maximum allowable for take-off

WAR EMERGENCY:

Maximum for emergency use (usually limited to 5 minutes)

MILITARY:

Maximum at critical altitude (15 minutes)

CONTINUOUS:

Maximum for continuous operation

FUEL & OIL:

Standard fuel tankage giving total capacity, number of tanks and location/type. Fuel weight 6 lb. per gallon for reciprocating engines, 7.1 lb. for jet fuel, 7.5 lb. for oil.

WEIGHTS:

EMPTY: Complete airplane minus crew, fuel, oil, armament, bombs and disposable equipment.

BASIC: Weight as defined in Technical Order AN-01-1R-40.

TARGET: Take-off gross weight minus 1/2 fuel (incl. warm-up, take-off and climb).

COMBAT: Weight includes full built-in fuel, full ammunition and a typical bomb load.

MAX. ALTERNATE: Maximum allowable gross weight for take-off, considering all aircraft and standard limitations, flight characteristics, take-off and landing restrictions, etc.

MAXIMUM LAND: Maximum allowable gross weight for landing, considering structural limitations and airport requirements.

MAXIMUM PAYLOAD: Practical maximum based on structural limitations with reduced to fuel load if necessary. Includes no fuel as part of payload.

MANEUVER FACTOR: The positive load factor of the gross weight noted by asterisk (s).

FOOT PRINT: Unit contact area at maximum weight of the aircraft.

RADIO:

Resume of typical models that may be installed.

TOWS:

Typical gun installations showing number, caliber, rounds each, and location/type.

ROCKETS:

Indicates maximum number, size and type carried.

ROWS:

Indicates alternate rack capacities for standard bombs.

MAXIMUM TOTAL:

Greatest practical load comprised of one size. (reduction in fuel may be necessary to stay within weight limitations)

CARGO:

Listing of alternate typical combat equipment.

PLACES:

Listing of personnel capacity (ies).

CABIN:

Maximum dimensions for clearance (cabin & doors).

CAMERA:

Listing of types and model.

MISC:

LANDING LOAD/WHEEL: Load per main wheel with the aircraft in static position at normal weight.

C H A R A C T E R I S T I C S

&

P E R F O R M A N C E

TAKE-OFF & LAND: Values are 125% of optimum at runway altitude of 3000 ft. on a standard day.

CLIMB: Rate and time from sea level using specified power ratings (within engine limits) and weight.

SPEED: Highest obtainable in level flight (within engine power limits) at specified power ratings, altitudes and weight.

RANGE & ENDURANCE: See conditions as set forth in "FOREWORD".

CONDITIONS: Typical flight conditions listed with corresponding range and endurance, bombs, or cargo, fuel load, altitude and take-off weights.

R E S T R I C T E D

3

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- CONTENTS -

BOMBARDMENT PART I

B-29 & B-29A.....BOEING	YB-36.....CONSOLIDATED
YB-35.....NORTHROP	B-45A.....NORTH AMERICAN
B-50.....BOEING	

FIGHTER PART II

P-51H.....NORTH AMERICAN	P-82E.....NORTH AMERICAN
P-61C.....NORTHROP	P-84B.....REPUBLIC
P-80B.....LOCKHEED	P-85.....M°DONNELL
P-86A.....NORTH AMERICAN	

CARGO PART III

C-54G.....DOUGLAS	C-82A.....FAIRCHILD
C-74.....DOUGLAS	YC-97.....BOEING

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TACTICAL

Bomber AIRCRAFT

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R E S T R I C T E D

WING AREA - 1736 SQ. FT.

TURNING RAD - 40.3'

PROP GRD. CLEAR - 1.3'

4" 29 23"

28.5'

17'

10' CLEARANCE

9.5' MAX DIA.

99' 0"

17' 0" ROOT

12.8' WAC

27' 8"

DESCRIPTION

GENERAL

The B-29 heavy bombardment aircraft is designed for long range and high altitude operation. Auxiliary fuel tanks can be carried in both bomb bays.

POWER PLANT

Four radial, 18 cylinder, R-3350's. Some engines have standard type carburetors, others equipped for fuel injection. Each engine has two exhaust-driven turbos, manifold fuel systems.

FUSELAGE

Semi-monocoque structure fabricated of aluminum alloy. Incorporates three pressure cabins capable of maintaining cabin pressure equivalent to 8000 ft. up to 30000 ft. altitude. Remotely controlled fire system installed to control turrets placed outside pressurized area. 28 volt. direct current electrical system. Three compartments can be pressurized while the tail gunners' pressurized enclosure is separate.

WING

Two spar stressed skin, full cantilever type; combined web and truss design. Construction of aluminum alloy with steel fittings. Electrically operated Fowler type flaps installed.

EMPERNAGE

Fixed surfaces; full cantilever design, fabricated from aluminum alloy. Movable surfaces; aluminum structure, fabric covered.

ALIGHTING GEAR

Fully retractable, tricycle gear fitted with twin wheels and oleo pneumatic struts on all gears. Landing gear retraction system is electrically operated. Hydraulic brakes.

DEVELOPMENT

DESIGN INITIATED..... 27 JUNE 1940
 CONTRACT DATE..... 6 SEPT. 1940
 CONTR. DEL. DATE..... 6 MAY 1942
 DATE 1ST PROD..... JULY 1943

CREW FOR'D

CREW AFT

PROJECTED INVENTORY

FUEL & OIL

NOSE COMP. PILOT'S COMP. NAV. & RADIO COMP. FWD BOMB BAY. WING BAY. REAR BOMB BAY. REAR UPPER TURRET. ENGINE. CAMERA. LOWER TURRET. TAIL ARMO. TAIL TURRET.

B-29 AND B-29A -BOEING-

PAGE DATE AS OF 15 JUNE 1947

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R E S T R I C T E D

POWER PLANT

NO. & MODEL... (4)R-3350-21,-23,
-23A,-41,-57,-59
MFR. WRIGHT
SUPCH. G.E. DUAL P-11,-31 TURBOS
RED. GEAR. G.35:1
PROP. MFR. *HAMILTON STD.
PROP. DIA. 16"-6"
PROP. TYPE. F.F., HYDROMATIC

*SOME AIRPLANES EQUIPPED WITH
CURTISS ELECTRIC PROPS.

ENGINE RATINGS

(Hhp. * Rpm. * Alt.)

TAKE-OFF.. 2320 * 2800 * 5 L.
WAR EMERG. 2500 * 2800 * 32000
MILITARY.. 2310 * 2600 * 33500
CONTINUOUS 2120 * 2400 * 36200

FUEL & OIL

(Tot. Gal. No. Tanks. Location)

2726 14 ... OUTBD. WINGS
2912 8 ... INBD. WINGS
1350 4 ... *CENTER WING
2560 4 ... BOMB BAY
9548 (MAX. TOTAL)

*R-29A CARRIES 1100 GAL. IN LIEU
OF 1350 GAL. EARLY R-29 MODELS
DID NOT CARRY CENTER WING TANKS.
(FUEL GRADE: AN-F-48: 100/130 OCT.)

- OIL -

CAPACITY..... 340 GAL.
GRADE... SUMMER 1100; WINTER 1120

WEIGHTS

(Loadings..... Lb.)

BASIC 75000
DESIGN..... 120000*
TARGET..... 110000
MAX. ALT. 138000**
MAX. LAND..... 120000*
MANEUVER FACTOR..... { *2.67
 **2.309

RADIO

(Radio & Type)

INTERPHONE..... AN/AIC-2
VHF COMMAND..... AN/ARC-3
LIAISON..... AN/ARC-8
RADIO COMPASS..... AN/ARN-7
HOMING ADAPTER..... AN/ARR-1
MARKER BEACON..... RC-193
LORAN..... AN/APN-9
BLIND LANDING..... SCR-570
RADIO ALTIMETER..... SCR-718
IFF..... SCR-695
INTERROGATOR..... SCR-729
RADAR..... AN/APQ-7
RAVEN..... RCM
TAIL GUN SIGHTING..... AN/APQ-15
DINOHY TRANSMITTER..... SCR-578

GUNS

(No. Cal.-Res. ea. Location/Type)

4-.50-500 UPPER FORE TURRET
2-.50-500 UPPER REAR TURRET
2-.50-500 LOWER FORE TURRET
2-.50-500 LOWER REAR TURRET
2-.50-500 *TAIL POWER MOUNT

(TURRETS MANUFACTURED BY GENERAL
ELECTRIC OR GENERAL RAILWAY SIG-
NAL AND TAIL POWER MOUNT BY
BOEING)

*EARLY MODELS ALSO CARRIED A 20mm.
CANNON (M2-TYPE B).

RANGE & ENDURANCE

CONDITION	RANGE (Naut. mi.)	ENDURANCE (Hours)	BOMBS (Lb.)	FUEL (Gal.)	ROMR. ALT. (Feet)	T.O. WEIGHT (Lb.)
FERRY/MAX. FUEL	4775	25.2	NONE	9548	10000	141000
BUILT-IN PLUS 2 BOMB BAYS	{ 3975 3820	20.8	7000	8268	*15000	138000
		19.4	7000	8268	*30000	138000
BUILT-IN ONLY	{ 3280 3100	17.0	16000	6928	*15000	138000
		15.9	16000	6928	*30000	138000
W/MAX. BOMBS	{ 2625 2410	13.4	20000	6304	*15000	138000
		12.0	20000	6304	*30000	138000

*CLIMB TO 5000 FT. FROM TAKE OFF, CRUISE AT 5000 FT. TO POINT WHERE CLIMB TO BOMBING ALTITUDE WILL END 87 NAUTICAL MILES FROM TARGET, 87 NAUTICAL MILES AT MAX. CONTINUOUS POWER BEFORE AND AFTER DROPPING BOMBS AT TARGET, DESCENT TO 15000 FT. FOR CRUISE RETURN. RANGE CONTAINS DISTANCE COVERED IN DESCENT.

BOMBS

(No. Size Lb.)

4 X 4000
8 X 2000
12 X 1500
12 X 1000
40 X 500

MAX. TOTAL..... 20000 LB.
LARGEST SIZE..... 4000 LB.

MISCELLANEOUS

A TOTAL OF 311 (R-29-RA) MODELS
WERE STRIPPED OF ALL ARMAMENT
EXCEPT 2 OR 3.50 CAL. TAIL GUNS
AND DESIGNATED R-29R-84.
AN/APQ-7 "EAGLE WING" AND
AN/APN-9 "LORAN" WERE INCORPOR-
ATED AND AN/APQ-15R RADAR GUN
SIGHTING SYSTEM WAS INSTALLED
IN TAIL POSITION FOR NIGHT
FIGHTER PROTECTION.

WARNING!

(a) This chart contains conserv-
ative averages for tactical plan-
ning and is not suitable for aer-
odynamic analysis.
(b) Review "DEFINITIONS & FORE-
WORD" in front of chart.

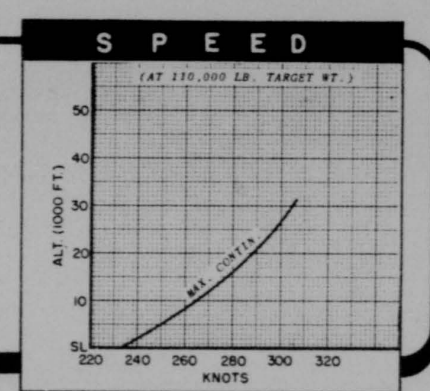
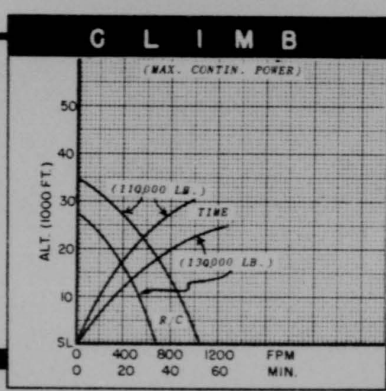
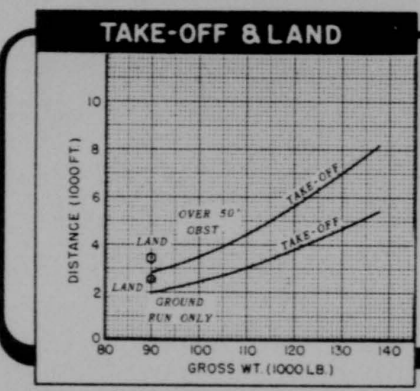
B-29 AND B-29A -BOEING-

REFERENCES

T.O. ... AN 01-20EJA-1 (5-27-46)
T.O. ... AN 01-20EJA-2 (10-14-46)
MFR. SPEC. D-2651-C

CREW

PILOT RADIO OPERATOR
CO-PILOT RADAR OPERATOR
ENGINEER TAIL GUNNER
NAVIGATOR TOP GUNNER
BOMBARDIER (2) SCANNERS



R E S T R I C T E D

PAGE DATE AS OF 15 JUNE 1947

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R E S T R I C T E D

30.8
13.1
172.0'
41.4
15.0' DIA
26.5' MAC
21' 51"
37.0
53.1'
20.5'

WING AREA - 4000 SQ. FT.
TURNING RAD. - 507'

DESCRIPTION

GENERAL

The Northrop XB-35 heavy bombardment airplane is a flying wing of the pusher type, powered by four 28-cylinder, Pratt & Whitney "ase Major" Engines. Each engine is coupled to a remote gear box assembly by an extension drive shaft. Engines not accessible in flight. Eight bomb bays are incorporated in the wings.

ELEVONS

Surfaces normally actuated by hydraulic pressure, but, in case of hydraulic failure they may be operated electrically. Elevons function as both elevators and ailerons.

RUDDERS

Hydraulically-actuated, double split-flap type rudder is attached to each trim flap. Rudders move with trim flaps when trim flaps are used to trim airplane but they operate independently of the flaps for directional control of the aircraft.

LANDING GEAR

Tricycle gear and gear fairing doors actuated by electric motors. Dual wheels, each equipped with disc brake, are used on each main gear and a single steerable wheel is used on nose gear. Normal retraction time for gear is approx. 57 seconds and normal extension time approx. 55 seconds. Nose gear retracts sideways.

ELECTRICAL SYSTEMS

Primary electric power used is 208v a-c, 3 phase, 400 cycles. 28v d-c current is used to operate relay controls, instruments, and some control motors. Airplane is equipped with two auxiliary power units which supply a-c power, and two motor-generators furnish d-c current. A.P.U. control panel is located at the engineer's station.

MAIN FUEL SYSTEM

Independent fuel system provided for each engine. Four main fuel tanks and engines are connected to a common manifold line which permits operation of any engine with fuel from any tank.

ENGINE AND TURBO OIL SYSTEM

Independent oil system provided for each engine and its two turbosuperchargers.

DEVELOPMENT

DESIGN INITIATED..... 27 MAY 1941
CONTRACT DATE..... 22 NOV. 1941
DATE 1ST FLIGHT..... 25 JUNE 1946
ACT. DEL. DATE..... NONE TO DATE
DATE 1ST PROD. FER. 1946
MOCK UP DATE..... 6 JULY 1942

CREW FOR'D

CREW AFT

PROJECTED INVENTORY

Year	Inventory
1947-1	0
1947-2	0
1947-3	0
1947-4	0
1947-5	0
1947-6	0
1947-7	0
1947-8	0
1947-9	0
1947-10	0
1947-11	0
1947-12	0
1948-1	1
1948-2	2
1948-3	3
1948-4	4
1948-5	5
1948-6	6
1948-7	7
1948-8	8
1948-9	9

FUEL & OIL

FOR'D GUNNER
UPPER TURRET
UPPER SIGHTING STATION
REAR TURRET
PILOT
BOMBARDIER
RADIO OPER.
FLIGHT ENG
NAVIGATOR
LOWER TURRET
LOWER SIGHTING STATION

YB-35
-NORTHROP-

PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

8

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R E S T R I C T E D

<p>POWER PLANT</p> <p>NO. & MODEL (2 ea.) R-4360-17S -21</p> <p>MFR. PRATT-WHITNEY</p> <p>SUPERCH. DUAL RH</p> <p>RED. GEAR. 381:1</p> <p>PROP. MFR. HAMILTON STD.</p> <p>PROP. DIA. 16-C</p> <p>PROP. TYPE... F.F.C.S; SINGLE ROT.</p>	<p>ENGINE RATINGS</p> <p>(Shp. & Rom. & Alt.)</p> <p>TAKE-OFF... 3000 * 2700 * S.L.</p> <p>MILITARY... 3000 * 2700 * 40000</p> <p>CONTINUOUS { 2500 * 2550 * 40000 2500 * 2550 * S.L.</p>	<p>FUEL & OIL</p> <p>(Tot. Gal. No. Tanks... Location)</p> <p>5000 4 WINGS</p> <p>- OIL -</p> <p>CAPACITY..... 600 GAL.</p> <p>SPECIFICATION.... AN-W-0-4464</p> <p>(AS ABOVE FOR 1ST (2) YB-35'S)</p> <p>REMAINING YB-35'S CARRY 5000 GAL.</p> <p>ADDITIONAL FUEL IN OUTBOARD WINGS.</p> <p>TANKS ARE WARE W/ NON-LEAK PROOF TYPE.</p>	<p>WEIGHTS</p> <p>(Loadings..... (Lb.))</p> <p>EMPTY.....</p> <p>RASIC..... 95000</p> <p>DESIGN..... 155000*</p> <p>TARGET..... NO DATA</p> <p>MAX. ALT. 162700**</p> <p>MAX. LAND..... NO DATA</p> <p>MANEUVER FACTOR..... { *3.00 **2.00</p>	<p>RADIO</p> <p>(SETS IN 1ST. (6) YB-35'S ONLY)</p> <p>VHF COMMAND..... AN/ARC-3</p> <p>LIAISON..... AN/ARC-8</p> <p>RADIO COMPASS..... AN/ARN-7</p> <p>MARKER BEACON..... RC-193</p> <p>INTERPHONE..... AN/AIC-2</p> <p>IFF..... SCR-695A</p> <p>EMERG. XMTR..... SCR-578</p> <p>LOCALIZER..... RC-103</p> <p>SLIDE PATH REC.V..... A/ARN-5</p> <p>RADAR (SPECIAL)..... *APQ-24</p> <p>* FOR YB-35A ONLY.</p>
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GUNS

(No.-Cal.-Res. ea. Location)

*4-.50-1000	*REAR, CREW NACELLE
4-.50-700	CENTER, UPPER WING
4-.50-700	CENTER, LOWER WING
2-.50-1000	LEFT, UPPER WING
2-.50-1000	RIGHT, UPPER WING
2-.50-1000	LEFT, LOWER WING
2-.50-1000	RIGHT, LOWER WING

(AS ABOVE FOR 1ST. YB-35)

*YB-35A ONLY, CARRIES

4-.50 CAL. NACELLE GUNS ONLY.

RANGE & ENDURANCE

CONDITION.....	RANGE	ENDURANCE	BOMBS	FUEL	BOMB ALT.	T.O. WEIGHT
(Naut. mi.)	(Hours)	(Lb.)	(Gal.)	(Feet)	(Lb.)	
FERRY	2200	13.0	NONE	4500	10000	130000

BOMBS

(No. Size (Lb.))

6 X 4000
14 X 2000
28 X 1600
28 X 1000
80 X 500

MAX. BOMB LOAD..... 44800 LB.

MAX. BOMB SIZE..... 4000 LB.

CREW

PILOT	CO-PILOT
NAVIGATOR	BOMBARDIER
RADIO OPERATOR	ENGINEER
(3) GUNNERS	
PROVISIONS FOR RELIEF CREW OF (6)	

BASED ON: EST.

WARNING!

(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.

(b) Review "DEFINITIONS" FOREWORD" in front of chart.

YB-35

-NORTHROP-

REFERENCES

T.O. AN-01-15EAA-1

T.O. AN-01-15EAA-2

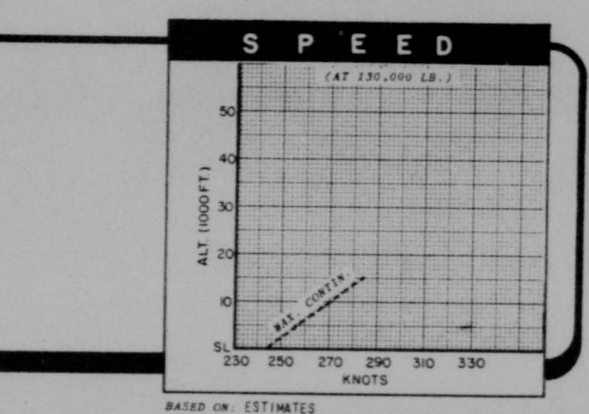
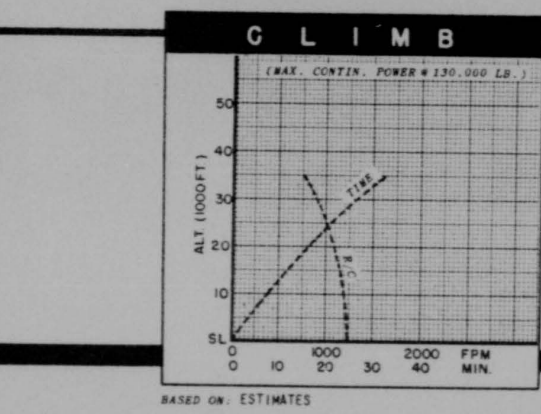
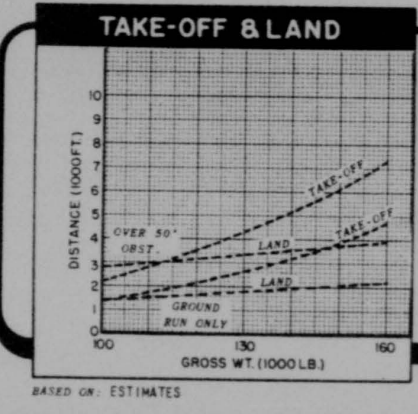
MFR. SPEC. NS-9A

CAMERAS

PROVISIONS FOR TYPE

K-22 CAMERA WITH

STANDARD MOUNT



9

R E S T R I C T E D

PAGE DATE AS OF 15 JUNE 1947

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R E S T R I C T E D

230'0"

46'0"

19' DIA

55' - 45' - 26'

15° 39'

46'0"

46'6"

TURNING RAD - 50.7'

PROP GRD CLEAR - 65'

WING AREA - 4772 SQ FT.

DESCRIPTION

GENERAL

The YB-36 is a heavy long range bomber powered with six pusher type Pratt & Whitney R-4360 engines. The fuselage is circular in cross section with two pressurized compartments, and four bomb bays. Cabins are connected by a pressurized tube with a scooter, and an unpressurized walkway on right side of bomb bays. The 230 foot laminar flow airfoil wing is located just forward of the center of fuselage and characterizes the airplane by its 15° sweepback. Outer wing panels have slots with upper and lower surface doors to counteract wing tip stall tendencies resulting from this sharp sweepback. There are three sets of flaps in each wing. The forward cabin in production airplane is divided into three decks with pilot, copilot and flight engineer located on upper deck under a raised canopy commanding a 360 degree sweep of horizon.

POWER PLANT

Pitch changing mechanism is unconventional in that it is effected mechanically with power obtained from propeller shaft. Normal rate of pitch change is approx. 2 1/2° per sec. while emergency operation (feathering and reversing) are accomplished at 45° per sec. Propellers are synchronized in both forward and reverse thrust. Engine cooling is accomplished by two-speed hydraulically driven fans, and is controlled by annular air plugs moving fore and aft to increase or decrease air flow.

ELECTRICAL SYSTEM

All current for the XP airplane will be supplied by two 40-kva alternators driven by 2 four-cylinder A.P. P.'s, each of which is rated at 110 hp. Eventually, A.C. power for the airplane will be furnished by four alternators mounted in the engine cooling tunnels of the four inboard engines, and driven thru constant speed hydraulic couplings. D.C. power is furnished by 3 A.C. -powered motor generator sets.

FUEL SYSTEM

Purging system used whereby a portion of the exhaust gases are directed through a flame arrester, into the fuel tanks, and out through the vents. This prevents existence of an explosive mixture in partially filled tanks.

DEVELOPMENT

DESIGN INITIATED.....OCT. 1941
 CONTRACT DATE.....15 NOV. 1941
 CONTRACT DEL. DATE..... 15 MAY 1944
 DATE OF 1ST FLIGHT..... 8 AUGUST 1946
 ACT. DEL. DATE..... NONE TO DATE
 DATE 1ST PROD. JUNE 1947

CREW FOR'D

CREW AFT

PROJECTED INVENTORY

Year	Month	Inventory
1947	1	0
1947	2	0
1947	3	0
1947	4	0
1947	5	0
1947	6	0
1947	7	0
1947	8	0
1947	9	0
1947	10	0
1947	11	0
1947	12	0
1948	1	5
1948	2	10
1948	3	15
1948	4	20
1948	5	25
1948	6	30
1948	7	35
1948	8	40
1948	9	45
1948	10	50
1948	11	55
1948	12	60
1949	1	65
1949	2	70
1949	3	75

FUEL & OIL

INSTALLATION OF PARASITE

CREW COMP TURRET BOMB BAY TURRETS GUNNERS TAIL COMP.

YB-36
CONSOLIDATED
VULTEE

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R E S T R I C T E D

POWER PLANT	ENGINE RATINGS	FUEL & OIL	WEIGHTS	RADIO
NO. & MODEL..... (6)R-4360-25 MFR. PRATT-WHITNEY SUPERCH. DUAL, R.H. RED.GEAR. 381:1 PROP.MFR. CURTISS PROP.DIA. 19'-0" TYPE.. C.S:F.F:REV.PITCH(2 INRD.)	(Hps. # Rpm. # Alt.) TAKE-OFF... 3000 * 2700 * S.L. MILITARY .. 3000 * 2700 * 35000 CONTINUOUS. 2500 * 2550 * 40000	(Tot.Gal. No.Tanks... Location) 21116* 6 WINGS (FUEL SPEC: AN-F-48: 100/130 OCT.) *NON-SELF SEALING TANKS. -OIL- CAPACITY..... 1176 GAL. SPECIFICATION..... 3606	(Loadings Lb.) BASIC..... 131370 DESIGN..... 265000* COMBAT..... 278000 MAX.ALT. 278000* MAX.LAND..... 255000 MANEUVER FACTOR..... **2.01 *1.95	VHF COMMAND..... AN/ARC-3 LIAISON SET..... AN/ARC-8 RADIO COMPASS..... AN/ARN-7 INTERPHONES..... AN/AIC-2 BLIND LANDING..... AN/ARN-5 MARKER REACON..... RC-198 *RADIO XMTR..... AN/ORT-3 STATIC DISCHARGER..... AN/ASA-3 IFF..... SCR-696 RADIO SET..... AN/ANP-9 RADAR..... AN/APQ-23A RCM EQUIPMENT..... AGL EQUIPMENT..... * SPACE PROVISIONS ONLY.

GUNS
(No.-Cal.-Rds.es. Location) 2-20mm-400 NOSE TURRET 4-20mm-70 FORE, UPPER TURRET 4-20mm-600 AFT, UPPER TURRET 4-20mm-600 AFT, LOWER TURRET 2-20mm-600 *TAIL TURRET *ALL TURRETS EXCEPT TAIL TURRET ARE REMOTE CONTROL.

RANGE & ENDURANCE							
CONDITION	RANGE	ENDURANCE	BOMBS	FUEL	BOMB.ALT.	T.O. WEIGHT	
	(Naut.Mi.)	(Hours)	(Lb.)	(Gal.)	(Feet)	(Lb.)	
FERRY	4550	41.4	NONE	21116	10000	271000	
MAX.BOMBS.	2200	12.5	72000	10250	250000	278000	

BOMBS	
No.	Size (Lb.)
2	X 43000
12	X 4000
28	X 2000
44	X 1600
72	X 1000
132	X 500
MAX.TOTAL	72000 LB.
LARGEST SIZE.	43000 LB.

CAMERAS
(Types)
K-17(6", 12" OR 24" LENS CONES)
K-22(6", 12" 24" OR 40" LENS CONES)
K-18: CAMERA
K-19R: NIGHT CAMERA
K-21 OR -24: ORIENTATION CAMERAS

BASED ON: EST.

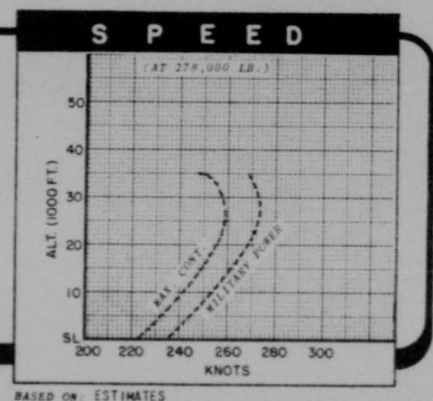
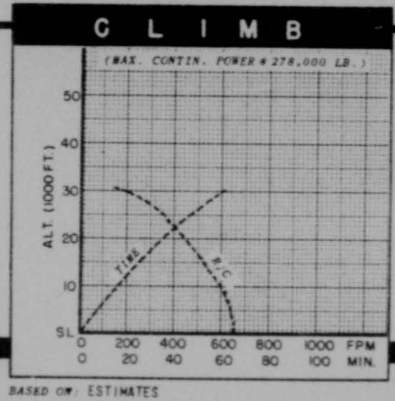
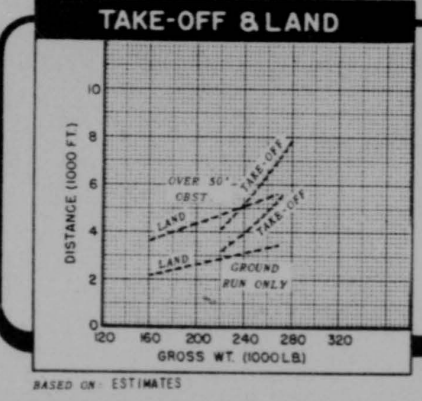
WARNING!

(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.
 (b) Review "DEFINITIONS & FOREWORD" in front of chart.

YB-36
 CONSOLIDATED
 VULTEE

REFERENCES	
T.O.	AN-OI-SEUA-1
T.O.	AN-OI-SEUA-2
MFR.SPEC.	FZD-36-002-A

CREW	
PILOT	CO-PILOT
ENGINEER	RADIO OPERATOR
NAVIGATOR	BOMBARDIER
(2) TURRET GUNNERS	
PROVISIONS FOR RELIEF CREW OF (4)	



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R E S T R I C T E D

DESCRIPTION

GENERAL

The XB-45 medium bomber is mid-wing land monoplane powered by four jet propulsion units. Designed to operate at high speeds and high altitudes, the airplane's chief tactical function is the bombing of land or naval material objectives. Two droppable jet assist units, one installed on the underside of each nacelle provide an additional thrust of 4,000 lbs. each for approximately one minute. For long range operation, the fuel capacity may be increased through use of the alternate fuel and bomb loading provisions. Defensive armament consists of two .50-caliber machine guns mounted in a radar controlled tail turret.

FUSELAGE

Divided into four compartments: a. Forward pressurized cabin for pilot, co-pilot, and bombardier-navigator; a bomb bay; an unpressurized compartment aft of the bomb bay; and a tail gunner's pressurized cabin. The design of the pilot's compartment is unconventional in that the pilot and co-pilot are seated in tandem. The co-pilot acts primarily as radio operator; but to enable him to serve as a relief or emergency pilot with this seating arrangement, basic power plant and flight controls, emergency brakes, and essential instruments are provided at his station. An electrically operated automatic pilot is installed and may be controlled from either pilot or co-pilot positions. The co-pilot cannot, how-

ever, control the fuel and hydraulic systems, nor can he operate landing gear, flaps, or trim tabs.

CANOPY

The pilot and co-pilot's canopy can be jettisoned from either position to provide an emergency exit.

LANDING GEAR

The gear and wheel fairing doors are operated hydraulically; the main gear retracts inboard into the wings, the nose gear retracts aft into the fuselage. The tail skid is also hydraulically actuated, extending and retracting automatically with the landing gear.

ELECTRICAL SYSTEM

Power is provided by a 28 volt direct-current system and several separate alternating-current systems.

DEVELOPMENT

DESIGN INITIATED..... FEB. 1944
 LTR. CONTR. DATE 9-8-44(FINAL 2-10-45)
 DATE 1ST FLIGHT..... 17 MARCH 1947
 ACT. DEL. DATE..... NONE TO DATE
 DATE 1ST PROD. JUNE 1947
 MOCK UP DATE..... 8 MARCH 1945

CREW FOR'D

CREW AFT

PROJECTED INVENTORY

FUEL & OIL

B-45A
NORTH AMERICAN

PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

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R E S T R I C T E D

POWER PLANT	
NO. & MODEL.....	(6)R-4360-25
MFR.....	PRATT-WHITNEY
SUPERCH.....	DUAL, P.H.
RED. GEAR.....	.381:1
PROP. MFR.....	CURTISS
PROP. DIA.....	19'-0"
TYPE.....	C.S.P. FIREY PITCH (2 INRD.)

ENGINE RATINGS	
(Hrs. • Pwr. • Alt.)	
TAKE-OFF... 3000 • 2700 • S.L.	
MILITARY .. 3000 • 2700 • 35000	
CONTINUOUS. 2500 • 2500 • 40000	

FUEL & OIL	
(Tot. Gal. No. Tanks.... Location)	
21116"	0
(FUEL SPEC: AN-F-48; 100/130 OCT.)	
*NON-SELF SEALING TANKS.	
-OIL-	
CAPACITY.....	1176 GAL.
SPECIFICATION.....	3606

WEIGHTS	
(Loadings Lb.)	
BASIC.....	131370
DESIGN.....	265000*
COMBAT.....	278000
MAX. ALT.....	279000
MAX. LAND.....	255000
MANEUVER FACTOR.....	**2.01 ***1.95

RADIO	
VHF COMMAND.....	AN/ARC-3
LIAISON SET.....	AN/ARC-8
RADIO COMPASS.....	AN/ARN-7
INTERPHONES.....	AN/AIC-2
BLIND LANDING.....	AN/ARN-5
MARKER REACON.....	RC-193
*RADIO XMTR.....	AN/DRT-3
STATIC DISCHARGER.....	AN/ASA-3
IFF.....	SCR-695
RADIO SET.....	AN/AAP-9
RADAR.....	AN/APQ-23A
RCM EQUIPMENT.....	
AOL EQUIPMENT.....	

* SPACE PROVISIONS ONLY.

GUNS	
(No. • Cal. • Rev. no. Location)	
2-20mm-400	NOSE TURRET
4-20mm-600	FORE, UPPER TURRET
4-20mm-600	AFT, UPPER TURRET
4-20mm-600	AFT, LOWER TURRET
2-20mm-600	*TAIL TURRET
*TAIL TURRETS EXCEPT TAIL TURRET ARE REMOTE CONTROL.	

RANGE & ENDURANCE						
CONDITION	RANGE	ENDURANCE	ROMBS	FUEL	BOMB ALT.	T.O. WEIGHT
	(Naut. Mi.)	(Hours)	(Lb.)	(Gal.)	(Feet)	(Lb.)
FERRY	6550	41.9	NONE	21116	10000	271000
MAX. ROMBS	2200	12.5	72000	10250	250000	278000

BOMBS	
(No. Size Lb.)	
2 X	43000
12 X	4000
28 X	2000
44 X	1800
72 X	1000
132 X	500
MAX. TOTAL.....	72000 LB.
LARGEST SIZE	43000 LB.

CAMERAS	
(Type)	
X-17(6")	12" OR 24" LENS CONES
X-22(6")	12" OR 24" OR 40" LENS CONES
X-18:	CAMERA
X-19F:	NIGHT CAMERA
X-21 OR -24:	ORIENTATION CAMERAS

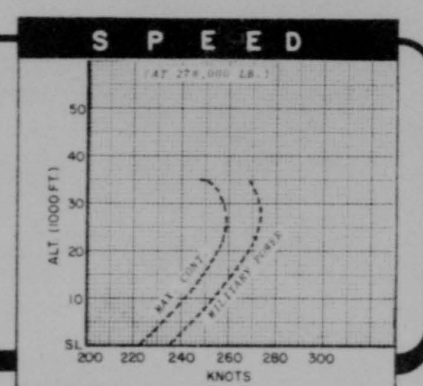
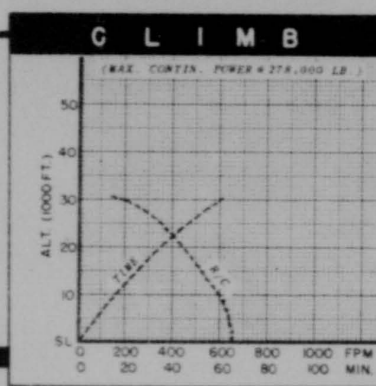
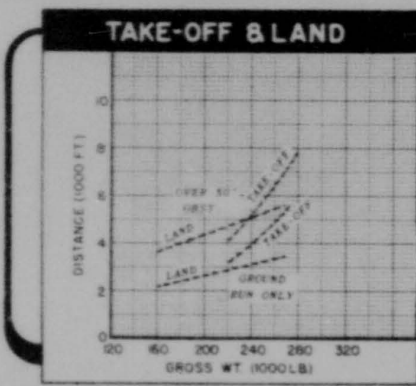
WARNING

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(b) Review "DEFINITIONS & FOREWORD" in front of chart.

YB-36
CONSOLIDATED
VULTEE

REFERENCES	
T.O.	AN-D1-SEDA-1
T.O.	AN-D1-SEDA-2
MFR. SPEC.	F2D-36-002-A

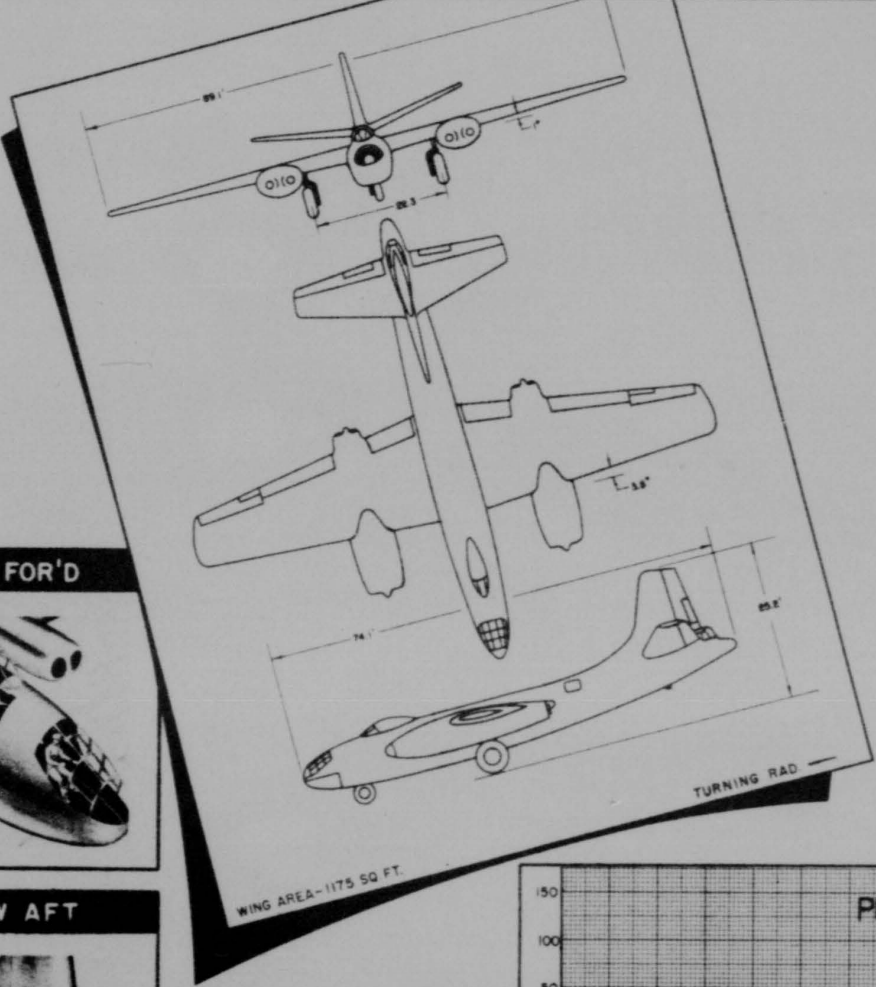
CREW	
PILOT	CO-PILOT
ENGINEER	RADIO OPERATOR
NAVIGATOR	BOMBARDIER
(2) TURRET GUNNERS	
PROVISIONS FOR RELIEF CREW OF (4)	



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R E S T R I C T E D



WING AREA - 1175 SQ. FT.

TURNING RAD

DESCRIPTION

GENERAL

The XB-45 medium bomber is mid-wing land monoplane powered by four jet propulsion units. Designed to operate at high speeds and high altitudes, the airplane's chief tactical function is the bombing of land or naval material objectives. Two droppable jet assist units, one installed on the underside of each nacelle provide an additional thrust of 4,000 lbs. each for approximately one minute. For long range operation, the fuel capacity may be increased through use of the alternate fuel and bomb loading provisions. Defensive armament consists of two .50-caliber machine guns mounted in a radar controlled tail turret.

FUSELAGE

Divided into four compartments:

- a. Forward pressurized cabin for pilot, co-pilot, and bombardier-navigator;
- b. Bomb bay; an unpressurized compartment aft of the bomb bay; and a tail gunner's pressurized cabin. The design of the pilot's compartment is unconventional in that the pilot and co-pilot are seated in tandem. The co-pilot acts primarily as radio operator; but to enable him to serve as a relief or emergency pilot with this seating arrangement, basic power plant and flight controls, emergency brakes, and essential instruments are provided at his station. An electrically operated automatic pilot is installed and may be controlled from either pilot or co-pilot positions. The co-pilot cannot, how-

ever, control the fuel and hydraulic systems, nor can he operate landing gear, flaps, or trim tabs.

CANOPY

The pilot and co-pilot's canopy can be jettisoned from either position to provide an emergency exit.

LANDING GEAR

The gear and wheel fairing doors are operated hydraulically; the main gear retracts inboard into the wings, the nose gear retracts aft into the fuselage. The tail skid is also hydraulically actuated, extending and retracting automatically with the landing gear.

ELECTRICAL SYSTEM

Power is provided by a 28 volt direct-current system and several separate alternating-current systems.

DEVELOPMENT

DESIGN INITIATED..... FEB. 1944

LTR. CONTR. DATE 9-8-44(FINAL 2-10-45)

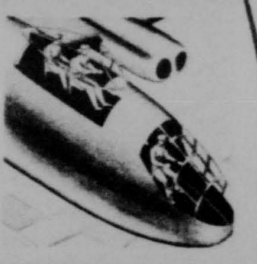
DATE 1ST FLIGHT..... 17 MARCH 1947

ACT. DEL. DATE..... NONE TO DATE

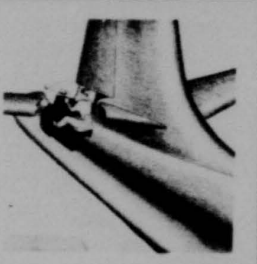
DATE 1ST PROD. JUNE 1947

MOCK UP DATE..... 8 MARCH 1945

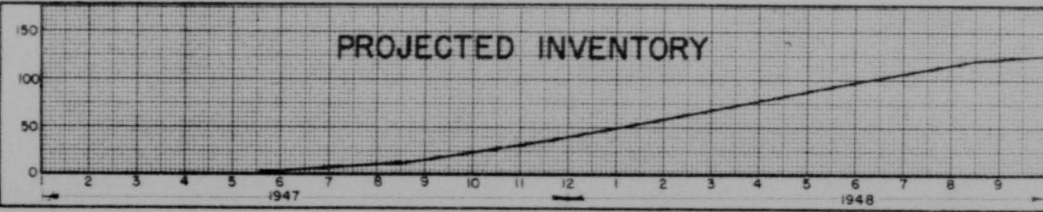
CREW FOR'D



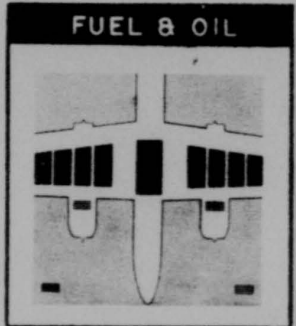
CREW AFT

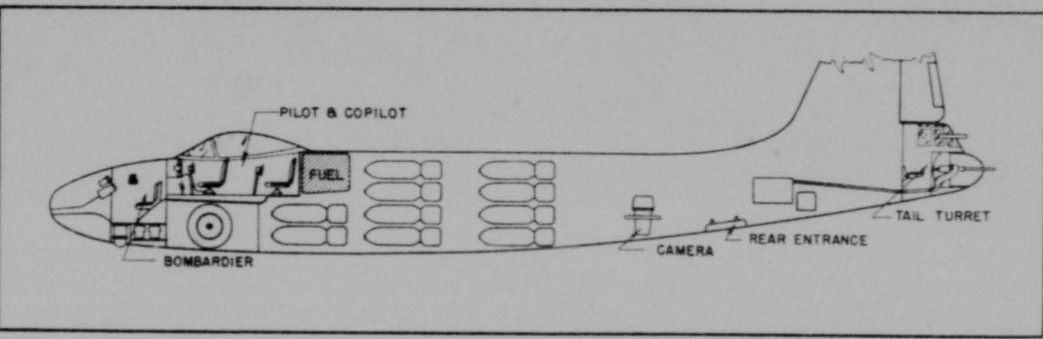


PROJECTED INVENTORY



FUEL & OIL





PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

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R E S T R I C T E D

POWER PLANT	
NO. & MODEL.....	(4)J-35-C-3
MFR.	GENERAL ELECTRIC
FLOW.....	AXIAL
TURBINE.....	SINGLE STAGE
COMPRESSOR.....	11 STAGE
LENGTH (OVERALL).....	178.0"
DIAMETER.....	39.0"
WEIGHT (DRY).....	2236#

ENGINE RATINGS	
(Thrust * Nom. * Sts. * Alt.)	
TAKE-OFF 4000 * 7700 * STAT. * SL.	
MILITARY 4000 * 7700 * STAT. * SL.	
CONTIN. 1500 * 7400 * 347 * 35000	

FUEL & OIL	
(Tot. Gal. No. Tanks.... Location)	
3100	8 ... WINGS
300	1 ... FUSELAGE
1200	*1 ... BOMB BAY
1200 (MAX. AUXILIARY, INTERNAL)	
5800 (TOT.)	
*TWO 310 GAL. B.B. TANKS WITH BOMBS CAN BE CARRIED IN LIEU OF 1200 GAL. B.B. TANK.	
(FUEL SPEC: AN/F-32 OR 34 OR 38 OR JP-1 OR 2)	
-OIL-	
CAPACITY.....	41 GAL
SPECIFICATION.....	AN-D-8
GRADE.....	1065

WEIGHTS	
(Loadings..... Lb.)	
BASIC.....	48800
EMPTY.....	43465
DESIGN.....	88555*
MAX. ALT.	108000
MAX. LANDING.....	64000**
MANEUVER FACTOR	{ *3.00 **4.00

RADIO	
VHF COMMAND.....	AN/ARC-3
LIAISON.....	AN/ARC-8
RADIO COMPASS.....	AN/ARN-6
MARKER BEACON.....	RC-193A
LOCALIZER.....	RC-103
GLIDE PATH.....	AN/ARN-5A
IFF.....	SCR-695B
INTERPHONES.....	
NAV. BOMBING.....	AN/APQ-24
RADAR.....	AN/APQ-31

CAMERAS	
(PROVISIONS FOR ANY ONE OF THE FOLLOWING)	
K-17 (6", 12" OR 24" LENS CONE)	
K-22 (6", 12", 24" OR 40" LENS CONE)	
K-18: HIGH ALT. RECONN. MAPPING	
K-19B: AUTO. NIGHT PHOTOGRAPHIC	
K-21 OR K-24: ORIENTATION	

RANGE & ENDURANCE						
CONDITION.....	RANGE	ENDURANCE	BOMBS	FUEL	BOMR. ALT.	T.O. WEIGHT
	(Naut. mi.)	(Hours)	(Lb.)	(Gal.)	(Feet)	(Lb.)
FERRY.....	1625	5.3	NONE	5800	10000	82600
FERRY.....	2225	5.9	NONE	5800	30000	82600

BOMBS	
(No. Size Lb.)	
1 X	PJ-SILVER PLATE
1 X	22000
1 X	12000
2 X	4000
4 X	2000
14 X	1000
27 X	500
27 X	250
MAX. BOMB SIZE	
22000	
MAX. LOAD.....	
22000	

CREW	
PILOT	
CO-PILOT*	
RADAR OPERATOR**	
TAIL GUN OPERATOR	
*ALSO RADIO OPERATOR.	
**OR BOMBARDIER OR NAVIG.	

WARNING!

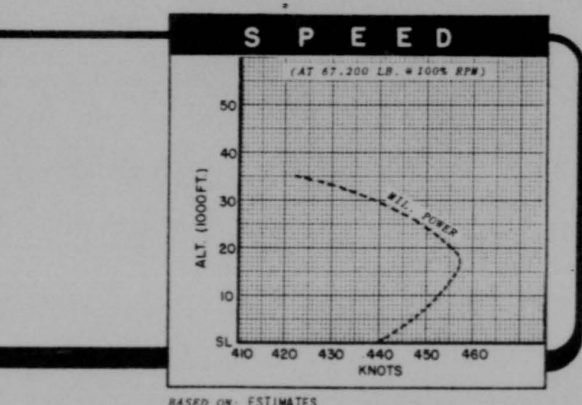
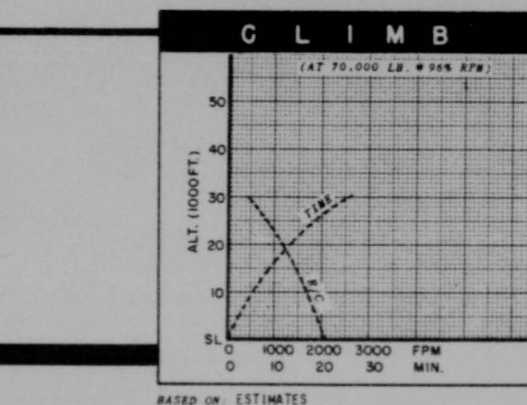
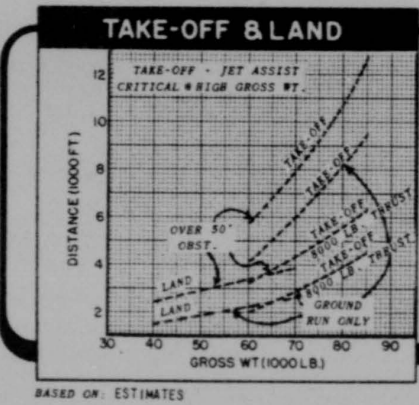
(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.

(b) Review "DEFINITIONS & FOREWORD" in front of chart.

B-45A
NORTH AMERICAN

REFERENCES	
T.O.	AN-DI-606FA-1
T.O.	AN-DI-606FA-2
MFR. SPEC.	NA-8240

GUNS	
(No.-Cal.-Rds. ea.... Location/Type)	
2-.50-600	TAIL TURRET



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R E S T R I C T E D

DESCRIPTION

GENERAL

The B-50A is similar in appearance to the B-29, but the numerous design changes makes it practically a new type airplane although many of the combat proven installations on the B-29 have been retained.

FUEL SYSTEM

Fuel system is of the manifold type with no provisions for fuel transfer. Fuel tanks are self-sealing.

HYDRAULIC SYSTEM

Because of reversible propellers, no emergency brake system is provided. Rudder operation is hydraulically boosted unless pressure falls below 900#. With hydraulic boost out, the rudder servo-boost tab prevents control forces from becoming excessive. Nose wheel is steerable hydraulically. With hydraulic system out, nose wheel will swivel with normal shimmy-dampening during taxing.

CRUISE CONTROL

Take-off performance at 140,000# with 14,000 HP will be considerably better than that of the B-29. Results indicate that the overall performance of the B-50 will be considerably better than the B-29. Results indicate that the overall performance of the B-50 will be considerably better than the B-29.

DEVELOPMENT

DESIGN INITIATED... STEMMED FROM B-29
 CONTRACT DATE.... (APPROVED 8-10-45)
 DATE OF 1ST FLIGHT 25 JUNE 1947
 ACT. DEL. DATE..... NONE TO DATE
 DATE 1ST PRODUCTION MARCH 1947

DIMENSIONS

The wing and fuselage length remain the same as the B-29, but the dorsal fin extends further forward and height of vertical fin and rudder has been increased 5'. The engine nacelles are longer and larger to accommodate Pratt & Whitney R-4360 engines. The air scoops are very pronounced and are below and to rear of ring cowl. All nacelles extend beyond wing trailing edge. Rudder folds over to permit housing in hangar.

POWER PACKAGE

The portion of the nacelle ahead of the firewall is built up as unit and called the Power Package. This unit, which contains the engine, accessories, turbosupercharger, oil tank, oil cooler, and intercooler is interchangeable in any one of the four engine positions. All hydraulic, electrical and engine controls are quickly disconnected at their respective panels on the firewall. After disconnecting all lines, the power package can be freed from the nacelle by the removal of four bolts. An experienced crew should be able to change a power package in less than one hour.

CREW FOR'D

CREW AFT

PROJECTED INVENTORY

FUEL & OIL

CREW FOR'D

CREW AFT

B-50
-BOEING-

FUEL & OIL

PROJECTED INVENTORY

PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

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R E S T R I C T E D

POWER PLANT	
NO. & MODEL.....	(4)R-4360-35
MFR.....	PRATT-WHITNEY
SUPERCH.....	TURBO
RED. GEAR.....	.381:1
PROP. MFR.....	CURTISS-WRIGHT
PROP. DIA.....	16'-2"
PROP. TYPE.....	ELECT., F.F., REVERSIBLE

ENGINE RATINGS	
(Dhp. * Pkw. * Alt.)	
TAKE-OFF..	3500 * 2700 * S.L.
MILITARY..	3500 * 2700 * 35000
WAR EMERG.....	NOT ESTABLISHED
CONTINUOUS	2650 * 2550 * 35000

FUEL & OIL	
(Tot. Gal. No. Tanks.... Location)	
*5460	INBD. WINGS
*1105	CENTER SECTION
2560	4 DPOP-ROHR BAY
9125 (MAX. TOT.)	
PLUS:	
(2) 30 GAL. TANKS; WATER/ALCOHOL INJECTION, TEN MINUTE SUPPLY.	
(M) SELF-SEALING & REMOVABLE.	
(FUEL GRADE:115/145 OCT: 1 GAL/76)	
- OIL -	
CAPACITY.....	300 GAL.

WEIGHTS	
(Loadings Lb.)	
BASIC.....	86000 LESS CREW AND OIL
DESIGN.....	120000*
TARGET.....	100000
MAX. ALT.	140000**
MAX. LAND.....	140000**
MANEUVER FACTOR.....	{ * 2.67 **2.50

RADIO	
INTERPHONE.....	AN/AIC-2A
SHORAN (SPACE).....	AN/APN-3
LORAN.....	AN/APN-9
RADAR EQUIP.....	AN/APQ-23A
VHF COMMAND.....	AN/ARC-3
LIAISON.....	AN/ARC-8
SLIDE PATH.....	AN/ARN-5A
RADIO COMPASS.....	AN/ARN-7
AUTO. POWRING.....	AN/ARN-9 & 10A
STATIC DISCHARGER.....	AN/ASA-3
SINGLY TRANS. (PROV.).....	AN/CST-3
RAZOR EQUIP. (PROV.).....	AN/ARN-3B
RADIO RANGE. (PROV.).....	RC-453A
RADIO LAND. EQUIP.....	RC-103A
MARKER REACOM.....	RC-193A
IFF.....	SCR-99SR
RADIO ALTIMETER.....	SCR-719C

GUNS	
(No. - Cal. - Nos. ea. Location/Type)	
4-.50-500	UPPER FORE, TURRET
2-.50-500	LOWER FORE, TURRET
2-.50-500	UPPER REAR, TURRET
2-.50-500	LOWER REAR, TURRET
3-.50-500*	TAIL, TURRET
* CENTER GUN LIMITED TO 380 RDS. PROVISIONS FOR 1000 RDS./GUN ON ALL EXCEPT CENTER TAIL GUN (380 RDS.)	

RANGE & ENDURANCE							
CONDITION	RANGE (Naut. mi.)	ENDURANCE (Hours)	POWRS (Lb.)	FUEL (Gal.)	POWS. ALT. (Feet)	T.O. WEIGHT (Lb.)	
FERRY	4400	14.6	NONE	9125	10000	140000	
FERRY	4200	14.3	NONE	9125	30000	140000	
MAX. POWRS	2000	6.8	19200	5460	30000	140000	

BOMBS	
(No. & Size Lb.)	
4 X	4000
8 X	2000
12 X	1600
12 X	1000
40 X	500
40 X	325
40 X	250
40 X	100
MAX. BOMB LOAD..... 20000 LB.	
MAX. BOMB SIZE..... 4000 LB.	

CAMERAS	
(Model)	
K-17	with 6, 12, or 24" LENS CONES
K-22	with 6, 12, 24, 40 or 48" LENS CONES
K-18	HIGH ALTITUDE RECCO. MAPPING
K-19	AUTO. NIGHT PHOTOGRAPHY
K-24	ORIENTATION CAMERA
(PROVISIONS FOR ABOVE CAMERAS)	

BASED ON EST.

WARNING!

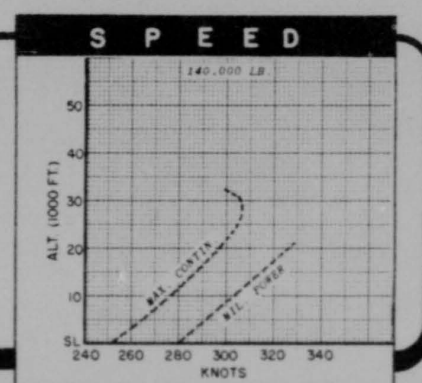
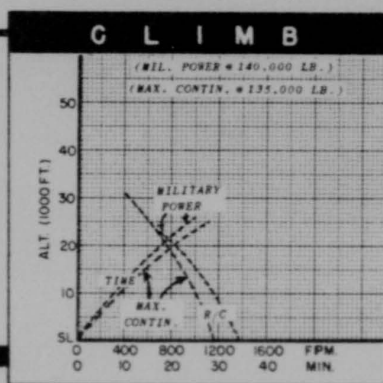
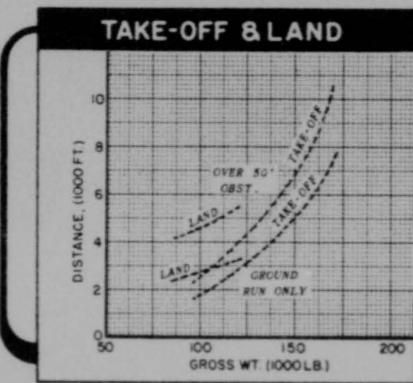
(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.

(b) Review "DEFINITIONS" FOREWORD in front of chart.

B-50
-BOEING-

REFERENCES	
T.O.	AN-01-20-ELA-1
T.O.	AN-01-20-ELA-2
MFR. SPEC.....	D-7156

MISCELLANEOUS	
PILOT	CO-PILOT
NAVIGATOR	ENGINEER
RADIO OPERATOR	RADAR OPERATOR
FORWARD GUN CONTROL OPERATOR	
LEFT SIDE GUN CONTROL OPERATOR	
RIGHT SIDE GUN CONTROL OPERATOR	
UPPER GUN CONTROL OPERATOR	
TAIL GUN CONTROL OPERATOR	



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TACTICAL

Fighter AIRCRAFT

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37'0"

14'

12'8"

8'7" MAIN WING CHORD

3'38" 1/2"

12'8"

10'

TURNING RAD - 21.6'

PROP GRD. CLEAR - 23'

WING AREA - 235 SQ. FT.

DESCRIPTION

GENERAL

The North American P-51H Fighter airplane is a single place, light weight monoplane, capable of operating as an interceptor, long range fighter or fighter bomber by varying the loading conditions. Although similar to other P-51 models in outward appearance, this airplane has many new design features. By designing into the P-51H all the combat equipment features that in the past were added to the original, engineers have been able to make this model approximately 700 lbs. lighter than its immediate predecessor, at the same time increasing the strength 10% throughout. This added strength gives the pilot the advantage that this fighter is designed for maneuvering load factors at its full gross weight rather than at an arbitrary lesser weight as is the usual practice.

FUEL SYSTEM

A speed density injection type carburetor replaces the conventional carburetor. All fuel cells are self-sealing and the droppable tanks are pressurized for positive operation at altitudes of 30,000 feet. The oil and coolant system is equipped with a heat exchanger for cooling the oil, using the after coolant fluid as a cooling medium. This eliminates the necessity of an oil radiator and permits the installation of the complete oil system forward of the firewall.

HYDRAULIC SYSTEM

A simple momentary Type 1500 P.S.I. hydraulic open center system is used. All units of the hydraulic system have been designed to eliminate as much weight as possible and interchangeability of the parts is an outstanding feature. Pressure relief is provided to allow automatic raising of the flaps in the event of excessive air loads and in sudden acceleration due to overshooting landings.

ELECTRICAL SYSTEM

The electrical controls are located beneath the instrument panel, mounted on hinged console type panels. These panels are hinged for easy access to electrical servicing and adjustments which may be accomplished with the engine running. Automatic selection of the correct engine blower gears is controlled by an aneroid switch. The landing light is electrically retractable within the wheel well.

DEVELOPMENT

DESIGN INITIATED..... 4 MAY 1940
 CONTRACT DATE..... 20 SEPT. 1940
 CO-T. DEL. DATE..... FEB. 1941
 ACT. DEL. DATE..... JULY 1941
 DATE 1ST PROD. JULY 1942

COCKPIT

EXTERNAL LOADING

PROJECTED INVENTORY

FUEL & OIL

P-51H
NORTH AMERICAN

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POWER PLANT

NO. & MODEL..... (1)V-1650-9
 MFR..... PACKARD
 SUPERCH..... 2 STG: 2 SPD.
 RED. GEAR..... .479:1
 PROP. MFR..... AERO PRODUCTS
 PROP. DIA..... 11"-1"
 PROP. TYPE...CONST.SPD:HYDROMATIC

ENGINE RATINGS

(No. & Rpm. & Alt.)

TAKE-OFF..... 1380 * 3000 * SL.
 MILITARY..... { 1495 * 3000 * 15300
 { 1230 * 3000 * 28700
 WAR EMERG..... { 2220 * 3000 * 10200
 { 1800 * 3000 * 25400
 CONTINUOUS.. { 1000 * 2700 * SL.
 { 1105 * 2700 * 17500
 { 950 * 2700 * 29500

FUEL & OIL

(Tot. Gal. No. Tanks ... Location)

105 1 ... RIGHT WING
 100 1 ... LEFT WING
 50 1 ... FUSELAGE
 (2)75, 110, 165 ea. DROP WING TANKS
 585 (MAX. TOT.)
 plus
 (1)10 GAL. TANK: WATER INJECTION
 FUEL GRADE: 100/130 (AN-F-48)
 1 GAL. = 6 LB.
 -OIL-
 CAPACITY..... 27 GAL.
 SPECIFICATION..... AN-VV-D-466
 GRADE..... 1100 OR 1120

WEIGHTS

(Loadings Lb.)

BASIC 7060
 DESIGN..... 9500*
 COMBAT..... 10000
 MAX. ALT. 11450
 MAX. LAND..... 8735
 MANEUVER FACTOR *7.33

RADIO

(Set..... Model)

VHF COMMAND..... AN/ARC-3
 TAIL WARNING RADAR..... AN/APS-13
 RANGE RECEIVER..... RC-1206A, B, C
 IFF..... SCR-695A
 *HOMING ADAPTER..... AN/ARA-8
 * USED ON LATER MODELS IN CON-
 JUNCTION WITH AN/ARC-3.

ROCKETS

(No. Size Type)

6 X 5" T-64, HYAR
 (WITH EXTERNAL TANKS/BOMBS)
 OR
 10 X 5" T-64, HYAR
 (WITHOUT EXTERNAL TANKS/BOMBS)

RANGE & ENDURANCE

CONDITION	RANGE (Naut. mi.)	ENDURANCE (Hours)	BOMBS (lb.)	FUEL (Gal.)	BOMB. ALT. (Feet)	T.O. WEIGHT (Lb.)
FERRY (MAX. FUEL).....	1900	8.4	NONE	587	10000	11800
BUILT-IN	1050	3.5	NONE	255	25000	9500
MAX. BOMBS.....	700	2.7	2000	255	25000	11800
BUILT-IN	775	3.1	10 ROCKETS	255	25000	11200

BASED ON: FLT. TEST

BOMBS

(No. Size Lb.)

2 X 1000
 2 X 500
 2 X 325
 2 X 250
 2 X 100
 MAX. BOMB LOAD 2000 LB.
 MAX. BOMB SIZE..... 1000 LB.

GUNS

(No.-Cal.-Rpm. Location/Type)

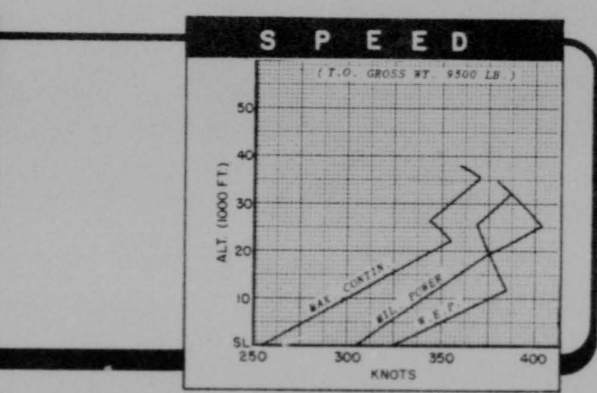
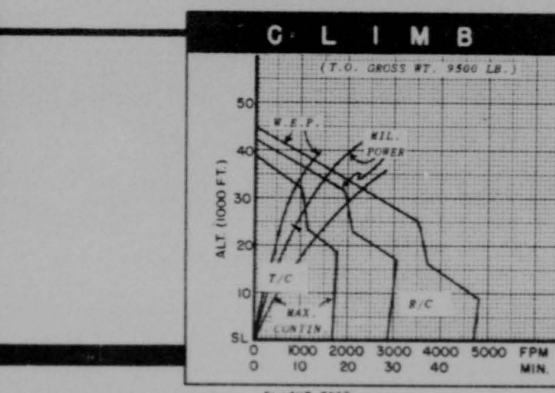
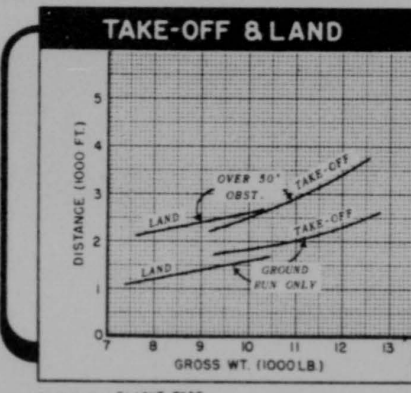
2-.50-390..... INRD. WINGS
 2-.50-260..... CENTER WINGS
 2-.50-260..... OUTRD. WINGS
 OR
 2-.50-390..... INRD. WINGS
 2-.50-490..... OUTRD. WINGS

WARNING!
 (a) This chart contains conserv-
 ative averages for tactical plan-
 ning and is not suitable for aero-
 dynamic analysis.
 (b) Review "DEFINITIONS & FORE-
 WORD" in front of chart.

P-51H
 NORTH
 AMERICAN

REFERENCES
 T.O. .. AN-01-60JF-1(9-30-46)
 T.O. .. AN-01-60JF-2 (2-7-47)
 MFR.SPEC. 5900

MISCELLANEOUS
 REFER TO PAGE OPPOSITE
 FOR GENERAL DESCRIPTION AND
 SPECIAL FEATURES.



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DESCRIPTION

<p>GENERAL</p> <p>The P-61C is a three-place, twin boom, midwing monoplane designed for the interception and destruction of enemy aircraft in flight during periods of darkness or under conditions of poor visibility. It is powered with two single stage, single speed turbo supercharged engines. Water injection is available. The engines and superchargers system coordinate automatically without separate control levers.</p> <p>FUEL SYSTEM</p> <p>Consists of four self-sealing fuel tanks with one installed in each inner wing and one in each engine nacelle. In addition, four pressurized drop tanks may be installed, one under each inner wing and one under each outer wing. The oil tanks are pressurized for high altitude operation and are located in the wheel wells.</p> <p>FUSELAGE</p> <p>The crew nacelle has separate compartments to accommodate each member of the three man crew. The radio operator's compartment in the aft section of the crew nacelle is separated from the pilot's and gunner's compartment by a turret and radio equipment. Crew nacelle construction is of stressed steel reinforced by stiffening members. A fiber-glass nose section, a plastic-glass tail cone, the cockpit and radio operation compartment enclosures complete the body group.</p>	<p>ALIGNING GEAR</p> <p>Hydraulically-actuated landing gear retracts aft into the engine and crew nacelle. A safety lock prevents inadvertent retraction before the airplane is airborne.</p> <p>HYDRAULIC SYSTEM</p> <p>Pressure system operates the gear, wing flaps, cowl flaps, fighter brakes, turret ejection doors, brakes and the automatic pilot. All units are operated by fluid under pressure from the engine driven pumps. Fluid from both pumps converges in a common line into a pressure regulator which maintains a pressure of 800 to 1000 P.S.I. An emergency system provides an auxiliary source of pressure. Provision is also made for extension of the nose gear and operation of the brakes by pneumatic pressure.</p> <p style="text-align: center;">DEVELOPMENT</p> <p>DESIGN INITIATED..... NOV. 1940</p> <p>CONTRACT DATE..... 20 JAN. 1941</p> <p>CONTRACT DEL. DATE..... 1 NOV. 1941</p> <p>DATE 1ST FLIGHT..... 26 MAY 1942</p> <p>ACT. DEL. DATE..... JULY 1943</p> <p>DATE 1ST PROD. AUGUST 1943</p>
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CREW FOR'D

CREW AFT

PROJECTED INVENTORY

FUEL & OIL

P-61C
-NORTHROP-

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POWER PLANT

NO. & MODEL..... (2)R-2800-73
 MFR. PRATT & WHITNEY
 SUPCH. .. SINGLE STG.-SINGLE SPD.
 RED. GEAR.450:1
 PROP. MFR. CURTISS-WRIGHT
 PROP. DIA. 12-8"
 PROP. TYPE..... C.S:F:F:ELECTRIC

ENGINE RATINGS

(Shp. * Rpm. * Alt.)

TAKE-OFF... 2100 * 2800 * S.L.
 MILITARY... 2100 * 2800 * 30000
 CONTINUOUS...
 { 1700 * 2600 * 7000
 { 1700 * 2600 * 30000
 { 1700 * 2600 * S.L.

FUEL & OIL

(Tot. Gal. No. Tanks.... Location)

410 2 ENG. WACELLE
 230 2 INNER WINGS
 860 4 DROP-WINGS
 0
 1240 4 DROP-WINGS
 1880 (TOT.)
 plus:
 WATER INJECTION (2X32 GAL. TANKS)
 (FUEL SPEC: AN-F-48; 100/130 OCT.)
-OIL-
 CAPACITY..... 84 GAL.
 SPECIFICATION..... AN/VV-O-446
 GRADE..... (S)1120; (W)1100

WEIGHTS

(Loadings..... Lb.)

BASIC..... 24265
 DESIGN..... 30630*
 COMBAT..... 31500
 MAX. ALT. 40500
 MAX. LAND..... 30000
 MANEUVER FACTOR..... *5.67q

RADIO

COMMAND..... AN/ARC-3
 IFF..... SCR-695
 INTERPHONE..... PC-36
 ALTIMETER AN/APN-1
 OR ACR-718
 RADAR..... SCR-720
 RADAR..... SCR-729
 RADAR..... AN/APS-13
 RADIO COMPASS..... AN/ARN-7

GUNS

(No.-Cal.-Rds. ea. Location)

4-.50-560 UPPER FUSE, TRR.
 4-20mm-200 BELLY(AN/W-2)

RANGE & ENDURANCE

CONDITION	RANGE (Naut. mi.)	ENDURANCE (Hours)	BOMBS (Lb.)	FUEL (Gal.)	ALT. (feet)	T.O. WEIGHT (Lb.)
FERRY*	1400	9.5	NONE	1330	10000	34500
BOMBS	630	3.4	4000	640	10000	32150

* FLIGHT MUST BE AT 5000' UNTIL WEIGHT OF PLANE IS 32000#.

BOMBS

(No. Size Lb.)

4 X 2000
 4 X 1600
 4 X 1000
 4 X 500
 4 X 325
 4 X 250

MAX. TOTAL..... 8000 LB.
 LARGEST SIZE 2000 LB.

CREW

PILOT
 GUNNER-PILOT
 RADIO OPERATOR

BASED ON: EST.

WARNING!

(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.
 (b) Review "DEFINITIONS & ACRONYMS" in front of chart.

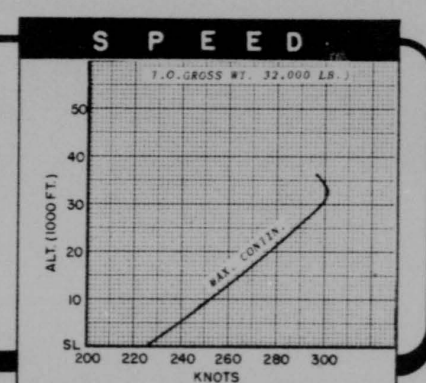
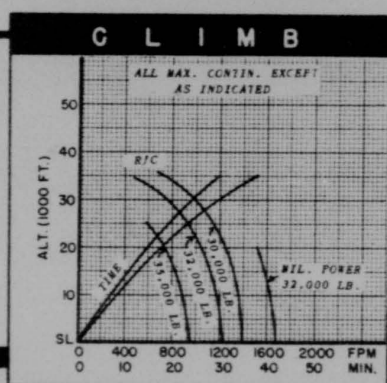
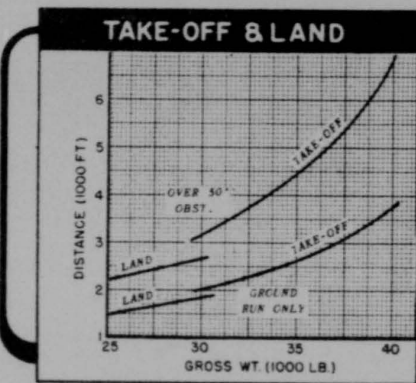
P-61C
-NORTHROP-

REFERENCES

T.O. ... AN-OI-15FC-1(10-25-46)
 T.O. ... AN-OI-15FC-2(10-16-46)
 MFR. SPEC. WS-8F

ROCKETS

NO PROVISIONS



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R E S T R I C T E D

WING AREA - 238 SQ. FT.

TURNING RAD - 14°

DESCRIPTION

GENERAL

The P-80B is a single place fighter airplane powered by a J-33 Jet Propulsion Unit hung on 3 ball and socket quick detachable mounts. Armament consists of six caliber 50-3 machine guns mounted in nose. Leading edge of wing tips are detachable. Has tricycle landing gear.

FLIGHT CONTROLS

Operation of aileron, elevator and rudder controls is conventional. Aileron forces are reduced by a hydraulic aileron booster. This system does not destroy the "feel" of the ailerons.

FLUID INJECTION

Fluid injection is employed in this aircraft. Use of this system increases thrust approximately 23%. When system is operating an actuating cylinder automatically shuts off pressurizing air to the cockpit to prevent noxious fumes from entering cockpit.

FUEL SYSTEM

Fuel is carried in four groups of tanks. Drop tanks are carried on bomb shackles at wing tips. All built in tanks are self sealing protected from "flowering" by laminated glass cloth sheets. Tricycle gear is employed on this aircraft.

ELECTRICAL SYSTEM

The single wire electrical system is power by a 300 ampere generator. In case of generator failure the high capacity battery can be used for limited operation of fuel transfer pumps.

PILOT EJECTION

The ejection provides a more positive method of abandoning the airplane. Power for ejection is supplied by a cartridge at the back of the seat. A safety pin prevents operation of the seat until the canopy has been jettisoned.

FIRE WARNING

Seven thermal switches located around tail pipe act as fire warning devices.

DIVE FLAPS

Dive recovery flaps under the fuselage forward of main wheel well, hydraulically actuated set "up" or "down" (78°).

DEVELOPMENT

DES. INITIATED...ORIGI...BRITISH JET UNIT

CONTRACT DATE..... OCT. 1943

DATE 1ST FLIGHT..... JAN. 8 1944

ACT. DEL. DATE..... OCT. 1944

DATE 1ST PROD. FER. 1945

COCKPIT

EXTERNAL LOADING

PROJECTED INVENTORY

FUEL & OIL

PAGE DATE AS OF 15 JUNE 1947

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R E S T R I C T E D

POWER PLANT

NO. & MODEL..... (1)J33-A-21
 MFR..... ALLISON
 TYPE..... SINGLE STG; CENTRIF.
 LENGTH..... 103 IN.
 DIAMETER..... 51 IN.
 WEIGHT (DRY)..... 1775 LB.

ENGINE RATINGS
 (#Thrust # Rpm # Stat.SL.)

TAKE-OFF.... 3825 @ 11500 @ SSL.
 MILITARY.... 3825 @ 11500 @ SSL.
 WAR EMERG. .. NOT ESTABLISHED
 CONTINUOUS.. 3650 @ 11200 @ SSL.

NOTE:
 ADDITIONAL THRUST OF 800# WHEN
 USING WATER INJECTION.

FUEL & OIL
 (Tot.Gal. No.Tanks..... Location)

218 13 WINGS
 207 1 FUSELAGE
 330 2 DROP-WING
 755 (MAX. TOT.)
 plus
 (2) 30 GAL. TANKS; WATER/ALCOHOL
 INJECTION.
 (FUEL SPEC: AN-F-32; JP-1)

-OIL-
 CAPACITY..... 12 GAL.
 SPECIFICATION..... 360c

WEIGHTS
 (Loadings Lb.)

BASIC 8000
 DESIGN 12200*
 COMBAT..... 12000
 MAX. ALT. 1417#
 MAX. LAND..... NO DATA
 MANEUVER FACTOR..... *7.35g

RADIO
 (Set..... Model)

VHF COMMAND..... AN/ARC-3
 HOMING ADAPTER..... AN/ARA-8A
 RADIO COMPASS..... AN/ARN-6
 IFF..... SCR-695A

GUNS
 (No.-Cal.-Rds. ea..... Location/Type)

6-.50-300..... NOSE, FIXED W2

RANGE & ENDURANCE

CONDITION.....	RANGE (Naut.mi.)	ENDURANCE (Hours)	BOMBS (Lb.)	FUEL (Gal.)	BOMB,ALT. (Feet)	T.O. WEIGHT (Lb.)
FERRY/MAX.FUEL.....	1100	2.9	NONE	755	35000	15375
MAX.ALT.IN.	500	1.6	NONE	425	35000	12904

BOMBS
 (No. Size Lb.)

2 X 1000
 2 X 500
 2 X 250
 2 X 100

MAX. BOMB LOAD..... 2000 LB.
 MAX. BOMB SIZE..... 1000 LB.

ROCKETS
 (No. Size Type)

8 5" HYAR

BASED ON: FLT. TEST

WARNING!

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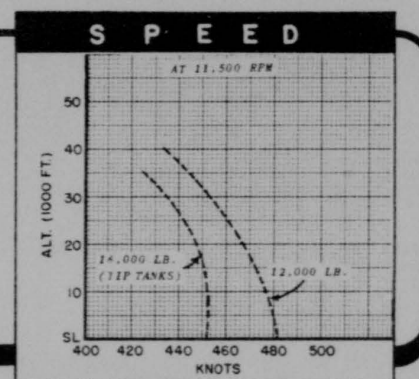
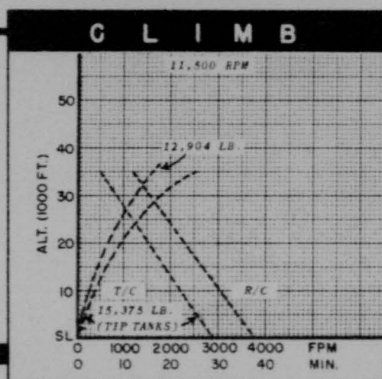
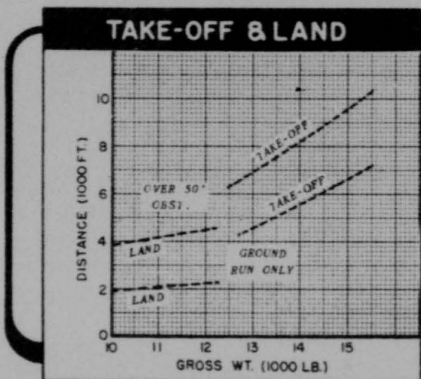
P-80B
 -LOCKHEED-

REFERENCES

T.O. AN-01-75FJB-1
 T.O. AN-01-75FJB-2
 MFR.SPEC. LAC-5743

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REFER TO PAGE OPPOSITE
 FOR GENERAL DESCRIPTION AND
 SPECIAL FEATURES.



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R E S T R I C T E D

DESCRIPTION

GENERAL

The P-82E is a two engine, twin-fuselage, low-wing, long range escort fighter. Functional versatility is attained by virtue of the design which provides an exceptional supporting platform between the two fuselages. Various load combinations and use of alternate equipment enable the airplane to operate as a long-range fighter, a long range escort fighter, a fighter bomber, or an attack fighter. Normally operating as a two place airplane it can be converted to a single place interceptor by removal of equipment from the copilot's cockpit. Intercockpit Control: Because the pilot's cockpit is inaccessible to the copilot during flight, sufficient controls are provided in the copilot's cockpit so that he can complete the flight in case of injury to the pilot. Normally, control of guns, fuel, heat (engine air intake and anti-icing) and command radio can be gained by either crew member by flipping the appropriate switch. Lights in each cockpit illuminate to indicate which crew member has control of the aforementioned system. In addition to these systems the copilot is provided with a full complement of flight controls including emergency operation of the flaps and landing gear. Engines: The Allison V-1710 engines are equipped with water injection and include several automatic features that simplify engine operation. Engine power control units relieve the pilot of some engine operation considerations; they prevent detonation limits from being exceeded regardless of throttle and propeller controls positioning, and they automatically control the output of the variable speed stage of the supercharger. Surface Control Boost: Hydraulic surface control boost is provided for ailerons, elevators and rudders. Propellers: Proper feathering procedure is insured by incorporating a micro-switch in the throttle quadrant that will prevent feathering when the appropriate throttle is not in the full closed position. Heating and Anti-icing: Heated air, obtained aft of the coolant radiator is used for heating, defrosting and anti-icing. Air for anti-icing is further heated by combustion heaters. Blowers are provided to permit heating and anti-icing operation while on the ground. Propeller anti-icing is electrical. Cold Weather Operation: During cold weather operation, engine starting can be facilitated by heat from the anti-icing system which can be directed to the engine blower section.

DEVELOPMENT

DESIGN INITIATED..... JAN. 1944
 CONTRACT DATE..... 9 DEC. 1944
 DATE 1ST FLIGHT..... 6 JULY 1945
 ACT. DEL. DATE..... APRIL 1945
 DATE 1ST PROD. OCT. 1945

COCKPIT

EXTERNAL LOADING

PROJECTED INVENTORY

FUEL & OIL

COCKPIT

EXTERNAL LOADING

FUEL & OIL

P-82E
NORTH
AMERICAN

PAGE DATE AS OF 15 JUNE 1947

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R E S T R I C T E D

POWER PLANT

NO. & MODEL. (1)V-1710-143 & 145
 MFR. ALLISON
 SUPERCH. { ENG.-STD. SINGLE SPD;
 AUX.-STG. VARIABLE SPD.
 RED. GEAR. 2:35:1
 PROP. MFR. AEROPRODUCTS
 PROP. DIA. 11'-0"
 PROP. TYPE UNAMATIC; C.S.F.F.

ENGINE RATINGS

(Shp. * Rem. * Alt.)

TAKE-OFF... 1600 * 3200 * S.L.
 MILITARY { 1600 * 3200 * S.L.
 1250 * 3200 * 32500
 COMBAT 2300 * 3200 * S.L.
 (WATER 14J) 2130 * 3200 * 16000
 CONTINUOUS { 1100 * 2700 * S.L.
 1000 * 2700 * 27700

FUEL & OIL

(Tot. Gal. No. Tanks... Location)

* 190 2 .. INRD. WINGS
 * 410 2 .. OUTRD. WINGS
 * 20 2 .. WING-DROP
 1220 (TOT.)
 plus:
 25 GAL. WATER/ALCOHOL INJECTION
 (FUEL SPEC: AN-F-44; 1 GAL. * 1 L.)
 * 710 EXTRA 310 GAL. EA. WING-DROP
 TANKS MAY BE CARRIED FOR SPECIAL
 FLIGHTS. (6) SELF-SEALING TANKS.
 -OIL-
 CAPACITY 48 GAL.
 SPECIFICATION AN-O-9
 GRADE MILITARY/SIMMER-1120

WEIGHTS

(Loadings..... Lb.)

BASIC..... 14560
 DESIGN..... 20300*
 COMBAT..... 21000
 MAX. ALT. 14500
 MAX. LA. D. NO DATA
 MAX. LIFT FACTOR..... * 1.33

RADIO

(Set..... Model)

INTERPHONE..... AN-26A/AIC
 COMMAND SET..... AN/ARC-3
 RADIO COMPASS..... AN/ARL-6
 IFF..... SCF-695R

GUNS

(No.-Cal.-Res. Location/Type)

6-.50-400 WING CENTER, FIXED M3
 DROPPABLE GUN WACELLE*
 8-.50-400 WING CENTER, M3
 * PROVISIONS MAY BE MADE FOR THIS
 INSTALLATION.

RANGE & ENDURANCE

CONDITION	RANGE (Naut. mi.)	ENDURANCE (Hours)	POWRS (Lb.)	FUEL (Gal.)	POW. ALT. (feet)	T.O. WEIGHT (Lb.)
PERFECT	2500	13.6	NONE	1220	5000	24500
ROCKETS	975	5.9	5 ROCKET TRAYS (25 ROCKETS)	600	5000	24200

BOMBS

(No. Size Lb.)

2 X 2000 (INRD. PANEL)
 2 X 1500 (INRD. PANEL)
 4 X 1000
 4 X 500
 2 X 500 (FRAG. CLUSTERS)
 4 X 350 (D.P.)
 4 X 250 (FRAG.)
 4 X 115 (CHEM.)
 4 X 110
 2 X 100 (FRAG. CLUSTERS)
 MAX. BOMB LOAD 4000 LB.
 MAX. BOMB SIZE..... 2000 LB.

ROCKETS

(No. Size Type)

25 X 5" HVAR
 CARRIED ON 5 RACKS IN GROUPS OF
 5; TWO RACKS ARE MOUNTED UNDER
 EACH OUTER WING PANEL AND ONE
 BENEATH CENTER WING SECTION.

WARNING!

(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.
 (b) Review "DEFINITIONS & FOREWORD" in front of chart.

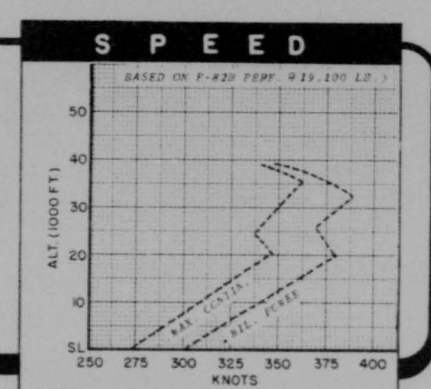
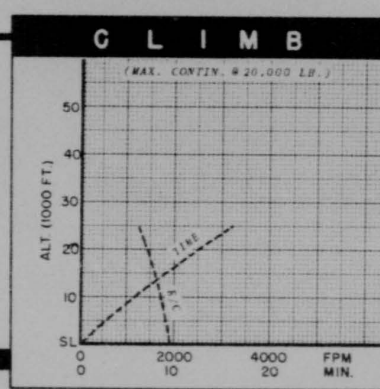
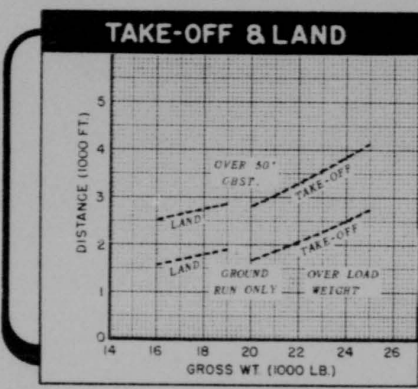
P-82E
NORTH AMERICAN

REFERENCES

T.O. ... AN-01-60JJA-1 (12-20-46)
 T.O. ... AN-01-60JJA-2 (1-10-47)
 MFR. SPEC. NA-8751

MISCELLANEOUS

REFER TO PAGE OPPOSITE
 FOR GENERAL DESCRIPTION AND
 SPECIAL FEATURES.



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R E S T R I C T E D

WING AREA - 260 SQ. FT.

TURNING RAD. - 19.7°

DESCRIPTION

GENERAL

The P-84B is a single plane, high speed, fighter airplane equipped with a J35-C-3 axial flow, jet engine. It is equipped for medium range escort and fighting duties being capable of carrying 405 gallons of fuel internally and 370 gallons in two droppable wing tip tanks. The airplane is equipped with six 50-calibre guns, armor plate, and is equipped to carry bombs, rockets, or chemical tanks. Operation of the airplane is considerably simplified by the automatic features of many of the systems, thus enabling the pilot to concentrate more fully on the important tasks of flying, navigating, and fighting.

Some of the more outstanding of the P-84 are as follows:

FUEL SYSTEM - This is one of the most important automatic features of this airplane. Fuel system management is entirely automatic - the pilot having only to switch on all fuel selectors on entering the airplane and switch each off as empty tanks are indicated by "tank empty" lights. Automatic selection is predetermined to maintain a satisfactory C.G. location. The main disadvantage to this type of system is that, in the event of electrical system failure, fuel can be used only from the fuel tanks.

EJECTION SEAT - Escape is facilitated by the ejection feature built into the pilot's seat. Accidental release is well guarded against by two separate safety latches. One safety latch, located near the trigger release, is manually released by the pilot - the second latch is released automatically by jettisoning the canopy. Thus the pilot is forced to jettison the canopy before he can eject himself from the cockpit. In an unusual emergency he could reach around behind his chair and remove the safety latch and eject the seat provided the canopy is rolled back behind the seat.

HEATING AND PRESSURIZATION - Operation of these systems is greatly simplified by the fact that they are combined and the pilot need only flip on the pressurization switch for automatically controlled pressurization guards against high pressure differentials that would result in explosive decompression. Temperature regulation is governed by manipulation of a single rheostat which controls the temperature of the pressurized air entering the cockpit.

DEVELOPMENT

DESIGN INITIATED..... OCT. 1944
 CONTRACT DATE..... 5 MARCH 1945
 DATE OF 1ST FLIGHT..... 28 FEB. 1946
 ACT. DEL. DATE..... DEC. 1946
 DATE 1ST PROD. JAN. 1947
 MOCK-UP DATE..... 5 FEB. 1945

COCKPIT

EXTERNAL LOADING

PROJECTED INVENTORY

FUEL & OIL

P-84B
-REPUBLIC-

PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

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C O N F I D E N T I A L

POWER PLANT	
NO. & MODEL.....	(1)J35-C-3
MFR.	GENERAL ELECTRIC
TYPE.....	AXIAL FLOW, 11 STAGE
LENGTH.....	178.0"
DIAMETER.....	39.0"
WEIGHT (DRY).....	2236#

ENGINE RATINGS	
(Thrust * Rev. * kts. * Alt.)	
T.O.	4150 * 7700 * 0 * SSL.
W.L.	4000 * 7700 * 0 * SSL.
WAR EMERG.	NOT ESTABLISHED
CONT.	1500 * 7400 * 347 * 35000

FUEL & OIL	
(Tot. Gal. No. Tanks..... Location)	
122	1 .. FUSEL. (MAIN)
125	1 .. FUSEL. (FORE)
168	2 .. WINGS
370	2 .. DROP-WINGS
785 (MAX. TOT.)	
SELF-SEALING TANKS.	
(FUEL SPEC: AN-F-32; JP-1)	
-OIL-	
CAPACITY.....	9.5 GAL.
SPECIFICATION.....	AN-VV-0-446
GRADE.....	1065

WEIGHTS	
(Loadings..... Lb.)	
EMPTY.....	9155
RASIC.....	9637
DESIGN (WOP.).....	13500
GROSS (FTR./BOMBER).....	15500
GROSS (LONG RANGE).....	16025
MAX. LAND.....	NO DATA
MANEUVER FACTOR.....	NO DATA

RADIO	
(Set..... Model)	
VHF COMMAND.....	AN/ARC-3
RANGE RECEIVER.....	RC-1206C
IFF.....	SCR-695A

ROCKETS	
(No. Size..... Type)	
* 8 X 5" HYAR	
* 1ST. (15) ARTICLES HAVE NO PROVISIONS FOR ROCKETS. 16TH AND SUBSEQUENT ARTICLES CARRY 2 CLUSTERS OF 2 EACH UNDER EACH OUTWARD WING (TOTAL OF 8), IN ADDITION TO TWO BOMB RACKS IN-BOARD OF WINGS.	
LAST 100 ARTICLES TO HAVE RETRACTABLE ROCKET POSTS.	

RANGE & ENDURANCE							
CONDITION.....	RANGE.....	ENDURANCE.....	BOMBS.....	FUEL.....	BOMB. ALT.....	T.O. WEIGHT.....	
	(Miles)	(Hours)	(Lb.)	(Gal.)	(Feet)	(Lb.)	
FERRY { MAX. RLT. IN.	775	2.4	NONE	420	35000	13500	
MAX. CONT. { MAX. RLT. IN.	870	-	NONE	420	35000	13500	

BOMBS	
(No. Size Lb.)	
2 X	1000
2 X	500
2 X	250
2 X	100
MAX. BOMR LOAD.....	2000 LB.
MAX. BOMR SIZE.....	1000 LB.

GUNS	
(No. - Cal. - Rev. no. Location/Type)	
4-.50 -300....	NOSE GUN BAY, M3
2-.50 -300....	WING ROOT, M3

WARNING!

(a) This chart contains conservative margins for tactical planning and is not suitable for aerodynamic analysis.

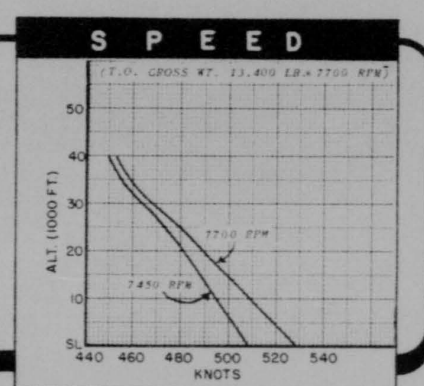
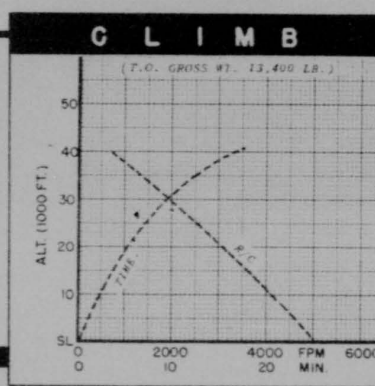
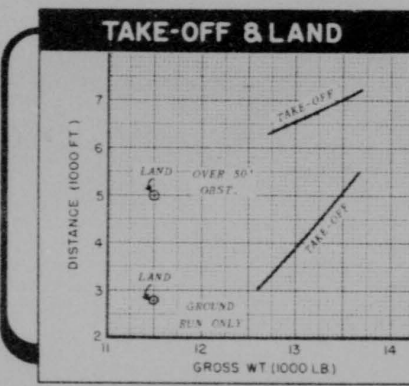
(b) Review "DEFINITIONS & FOREWORD" in front of chart.

P-84B

-REPUBLIC-

REFERENCES	
T.O.	AN-01-65RJB-1
T.O.	AN-01-65RJB-2
MFR. SPEC.	AP-23

REFER TO PAGE OPPOSITE FOR GENERAL DESCRIPTION AND SPECIAL FEATURES.



BASED ON ESTIMATES

BASED ON ESTIMATES

BASED ON ESTIMATES

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R E S T R I C T E D

DESCRIPTION

GENERAL

The P-85 is designed to be carried in the No. 1 bomb bay of the B-36. It takes off and lands on a retractable trapeze mechanism extending below the mother aircraft. The retracting hook on the fighter engages the trapeze on the B-36. There are no provisions for ground take-off or landing. Airplane will be powered with one Westinghouse J-34 jet engine. The P-85 is intended to furnish escort to B-36 beyond the range of conventional fighters. Weight of equipment and supplies in B-36, exclusive of the P-85, is 10000#. Fuel and ammunition for two additional missions is carried within the mother aircraft. Physical limitations on the pilot are 5'8" height and 200# weight with full equipment. The time required to launch and retrieve is 2.5 minutes.

FUEL SYSTEM

The fuel system is designed for use of gasoline normally carried in the B-36 airplane. The system consists of one self-sealing tank with a capacity of 130 gallons. Fuel tank is located in the fuselage. Oil capacity is 5 gallons.

FUSELAGE & CABIN

The fuselage is aluminum alloy semi-monocoque construction. The pilots cabin is pressurized maintaining a pressure differential of 2.75 P.S.I. above 18000 feet. A switch is provided to lower the differential to 1 P.S.I. prior to entering combat. The pilots seat assembly can be ejected by means of a powder type ejector tube. A safety circuit is incorporated to insure jettisoning of the canopy and windshield prior to ejection of pilots seat.

ALIGNING GEAR

No provisions are made for ground take-off or landing.

WING

The three-spar folding wings are of conventional structure without flaps. The wings fold to permit hoisting into the bomb bay of the B-36. The electric power for unfolding the wings prior to launching will be obtained from a source in the B-36.

ELECTRICAL SYSTEM

One 200 ampere generator and twelve 2 volt batteries are provided.

DEVELOPMENT

DESIGN INITIATED T.I. 2085 17 JULY 1945
 CONTRACT DATE..... 16 JULY 1946
 CONT. DEL. DATE.....
 EST. 1ST FLIGHT..... SEPT. 1947
 DATE 1ST PROD. ACCEP. - OCT. 1947
 MOCK UP DATE..... 10 JUNE 1946

COCKPIT

TRAPEZE

FUEL & OIL

TENTATIVE PROGRAM

P-85
MCDONNELL

PAGE DATE AS OF 15 JUNE 1947

R E S T R I C T E D

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C O N F I D E N T I A L

POWER PLANT
 NO. & MODEL..... (1)XJ34-WE-4
 MFR..... WESTINGHOUSE
 FLOW..... AXIAL
 COMPRESSOR..... 11 STAGE
 TURBINE..... 2 STAGE
 LENGTH (OVERALL)..... 119.2"
 DIAMETER..... 28.3"
 WEIGHT DRY..... 984#

ENGINE RATINGS
 (Thrust • Rev. • Kts. • Alt.)
 TAKE-OFF 3000 • 12000 • STAT.SL.
 WAR E-ENG. .. NOT ESTABLISHED
 MILITARY 3000 • 12000 • STAT.SL.
 CONTIN. 2430 • 11000 • STAT.SL.

FUEL & OIL
 (Tot. Gal., No. Tanks... Location)
 *130 1 ... FUSELAGE
 (FUEL GRADE: A-1-F-48:100/130 OCT.)
 *SELF-SEALING TANK.
 - OIL -
 CAPACITY 3 GAL.

WEIGHTS
 (Lb.)
 EMPTY..... 3150
 DESIGN GROSS..... 4835
 ALT. GROSS..... NO DATA
 WING Ldg. (w/Std.Ft.)..... 49.6
 POWER Ldg. (w/Thrust)..... 1.65

RADIO
 (Sht Model)
 VHF..... AN/ARC-5
 RADAR BEACON (HOMING ON MOTHER PLANE)

GUNS
 (No.-Cal.-Rds.ev. Location)
 4-.50-300 .. NOSE, UPPER PANEL
 K-148 GUNSIGHT

RANGE & ENDURANCE

CONDITION	SPEED (knots)	ENDURANCE (mins.)	ROMBS (Lb.)	FUEL (Gal.)	ROMB.ALT. (Feet)	T.O. WEIGHT (Lb.)
DESIGN WT.	336	90	NONE	130	40000	4835

BOMBS
 NO PROVISIONS

ROCKETS
 NO PROVISIONS

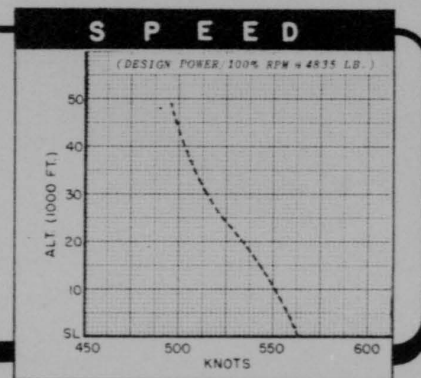
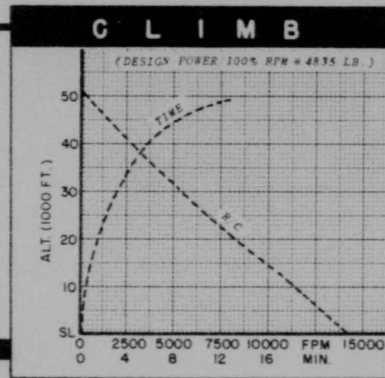
BASED ON: EST.
WARNING!
 (a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.
 (b) Review "DEFINITIONS & FOREWORD" in front of chart.

P-85
MCDONNELL

REFERENCES
 MFR.SPEC. S-145
 "GREEN BOOK" TSO/IG Report no. 3

MISCELLANEOUS
 PILOT'S PHYSICAL LIMITATIONS:
 HEIGHT..... 5'8"
 WEIGHT (w/FULL EQUIP.)..... 200#

TAKE-OFF & LAND
 NOT APPLICABLE



BASED ON: ESTIMATES

BASED ON: ESTIMATES

BASED ON: ESTIMATES

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R E S T R I C T E D

DESCRIPTION

GENERAL

The P-86 is a single place, high performance fighter airplane powered by a single jet reaction engine, its primary mission is the destruction of hostile aircraft in flight and secondarily to attack hostile ground or water-borne installations.

FUEL SYSTEM

The fuel system consists of two fuselage cells and three wing cells. Auxiliary fuel is provided by two streamlined dropable fuel tanks, one under each wing panel. The wing and fuselage cells are self sealing. An all metal oil tank of a capacity to provide 4.5 pounds per hour oil consumption, is installed above the engine in the fuselage. The oil cooling is integral with the engine.

FUSELAGE & CARIN

The fuselage is of dural monocoque to the trailing edge of dive flaps and from there the aft structure is stainless steel with dural skin to withstand the high tail pipe temperatures. The dive flaps in sides and bottom of fuselage, hydraulically operated, open to present 24 sq. ft. area. The horizontal stabilizer is electrically adjustable at front spar for control in place of trim tabs. The Pilot's compartment is pressurized, maintaining 2.75 P.S.I. differential pressure to an altitude of 37500 feet. An air conditioning system for cabin heating and pressurization is installed.

WING

Wing is of double spar double skin structure with no ribs in inboard half of span. Skin milled from 1/4" thickness at root. Slotted type landing flaps and conventional ailerons are fitted, with full span automatic leading edge slots. Hydraulic aileron and elevator boost is used.

HYDRAULIC SYSTEM

The hydraulic system is a 3000 P.S.I. combination open center and pressure type. A flow divider, divides the system into two separate systems, one for the operation of landing gear, dive brakes, wing flaps and power steering for nose wheel, the other operates aileron and elevator boost and landing gear wheel brake boost.

DEVELOPMENT

DESIGN INITIATED..... EARLY 1945
 LTR. CONT. DATE..... 20 JUNE 1946
 EST. 1ST FLIGHT..... JUNE 1947
 ACT. DEL. DATE..... NONE TO DATE
 DATE OF 1ST PROD. (P-DEC. 1947)
 MOCK UP DATE..... 6 JUNE 1945

COCKPIT

EXTERNAL LOADING

PROJECTED INVENTORY

FUEL & OIL

P-86A
NORTH
AMERICAN

PAGE DATE AS OF 15 JUNE 1947

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T A C T I C A L

argo AIRCRAFT

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WING AREA-1460 SQ. FT.
TURNING RAD-35°
PROP GRD. CLEAR.-13"

DESCRIPTION

GENERAL
Long range troop transport with provisions for carrying 49 troops or 36 litters with 4 attendants or 20,000 pounds of cargo or combat equipment. Fittings are provided for carrying one T-8 tank or 105MM howitzer externally and a glider tow is installed in the tail cone. There is no combat protection provided. Glider tow capacity is 16,700 lbs. Crew of five includes pilot, copilot, flight engineer, navigator and radio operator. Relief pilot and flight engineer carried on long flights. Three fuel combustion heating units provide 240,000 BTU/HR through spaced outlets in a ceiling duct.

STRUCTURE
Wing is full cantilever with spanwise shear webs and stringers in three main sections, i.e. center and two outer panels. Fuselage is all metal, semi-monocoque with transverse frames and longitudinal stiffeners. Main cabin entrance doorway is approx. 27 X 95 inches; 105 in. from ground. Standard tie-down fittings in 20 inch grid pattern on cabin floor.

ELECTRICAL SYSTEM
24-Volt DC with two 12 volt, .88 ampere-hour batteries and four 100 amp. engine driven generator. External battery cart receptacle.

FUEL SYSTEM
Comprised of six integral and two collapsible "stub" tanks in the wings. Capacities are: normal 7200 lb. (1200 gal.) and max. 21,240 lb. (3340 gal.) Tubing and wiring provisions only for installation of two extra 450 gallon fuselage tanks. Centrifugal booster pumps for wing tanks.

DEVELOPMENT
CONTRACT APPROVED (AAF)..... JAN. 1945
CONTRACT CANCELLED..... OCT. 1945
1ST. ACCEPTANCE..... JUNE 1945
LAST ACCEPTANCE..... JAN. 1946

COCKPIT

LITTERS

PROJECTED INVENTORY

FUEL & OIL

C-54G
-DOUGLAS-

PAGE DATE AS OF 15 JUNE 1947

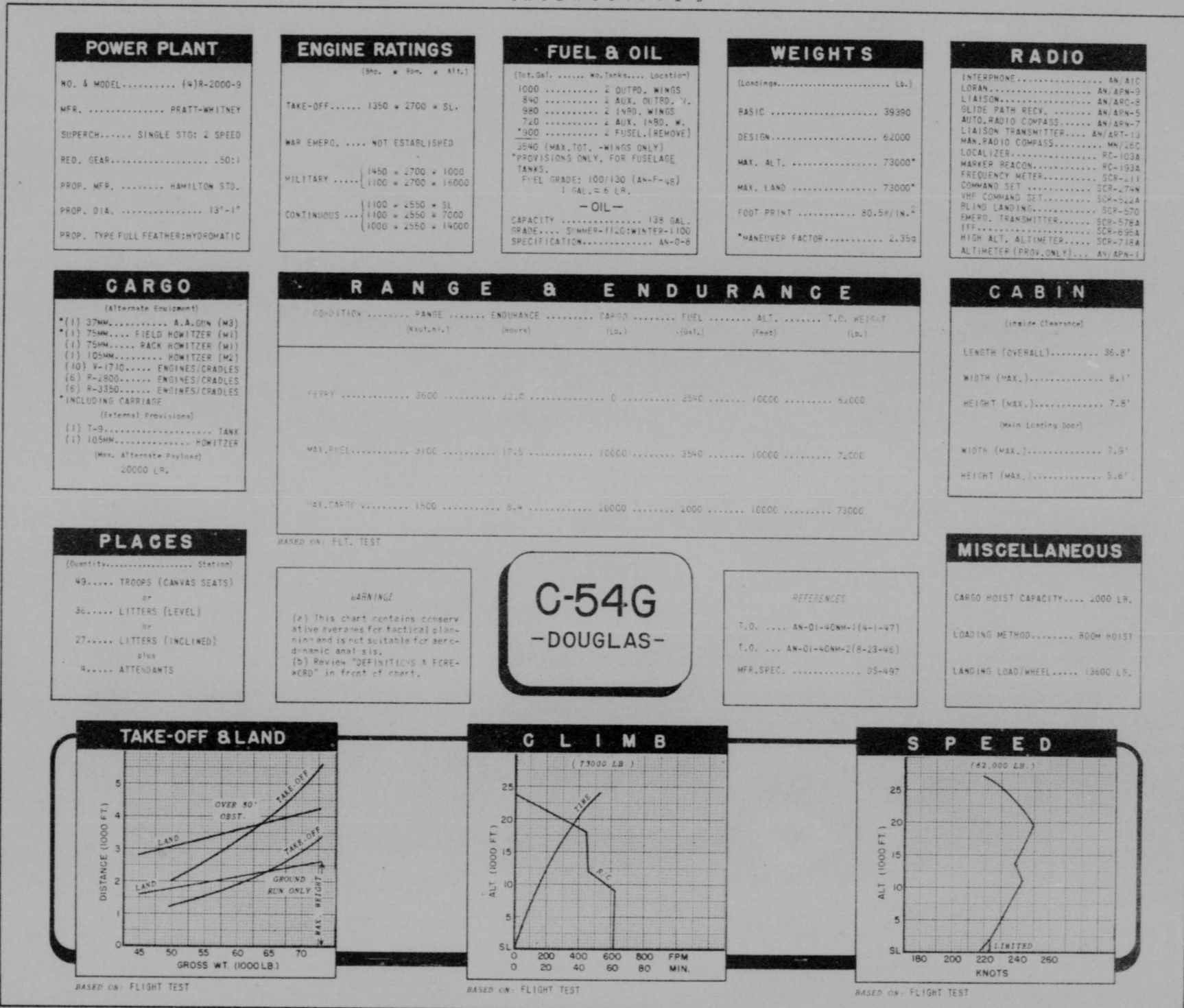
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COCKPIT

LITTERS

FUEL & OIL

DESCRIPTION

GENERAL

Because of its many large cargo loading doors and its ample power supplied by four Pratt & Whitney R-4360 engines, the C-74 long-range transport is capable of carrying heavy and bulky cargo to distant points. This airplane can be used as a fuel tanker inasmuch as it has a built-in fuel capacity of 11,000 gallons of fuel.

LOADSPEAKER

Located in nose wheel well speaker enables the pilot to address persons on the ground, either while the airplane is on the ground or during flight.

LOADING FACILITIES

(1) Loading Platform; A 155 by 89 inch loading platform, capable of lifting 9600 \times , can be used as elevator to lift or lower cargo from cargo compartment. (2) Traveling Crane Hoists; Two identical traveling crane hoists are installed on tails in main cabin. These hoists are used to lift loading platform or cargo alone and can carry the load to any part of cargo compartment. When used together the hoists will lift 16,000 \times . (3) Fixed hoist; A fixed hoist consisting of boom, mast, hoist strut, and electric motor is provided to lift loads of up to 4,500 \times through side cargo door.

LANDING GEAR

Normally, the landing gear is extended by force of gravity only. Hydraulic pressure can be diverted to the landing gear if necessary to lock the gear down.

BRAKING CONTROLS

Three methods of braking the airplane are provided, normal hydraulic power brakes, emergency air brakes, and reverse pitch propellers.

INSTRUMENTS

Loss of gyroscopic instruments through power failure is guarded against by having the pilot's instruments electrically operated and the copilot's vacuum operated.

HEATING AND ANTI-ICING

Twelve combustion heaters are provided for heating the crew and cargo compartments and for thermal anti-icing of the wings and tail surfaces.

DEVELOPMENT

DESIGN INITIATED..... JAN. 1942
 CONT. DATE..... JUNE 25, 1942
 DATE 1ST FLIGHT..... COMMERCIAL
 ACT. DEL. DATE..... SEPT. 1945
 DATE 1ST PROD. OCT. 1945

PROJECTED INVENTORY

Year	Inventory
1947 (Start)	5
1947 (Mid)	12
1948 (End)	12

C-74
-DOUGLAS-

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POWER PLANT

NO. & MODEL..... (4)R-4360-27

MFR. PRATT-WHITNEY

SUPCH..... SINGLE STG: VARIABLE

RED. GEAR381:1

PROP. MFR. CURTISS

PROP. DIA. 15'-8"

PROP. TYPE: C.S., F.F., REVERSIBLE

ENGINE RATINGS

(Shp. vs. # Rev. # Alt.)

TAKE-OFF.... 3000 * 2700 * SL.

WAR EMERG. ... NOT ESTABLISHED

MILITARY.. 3000 * 2700 * 40000

CONTINUOUS { 2550 * 2550 * SL.
2200 * 2550 * 14500

FUEL & OIL

(Tot. Gal. No. Tanks Location)

5000 2 . INTRD. WINGS

2700 2 . OUTRD. WINGS

3400 2 . AUX. WINGS

*11100 (MAX. TOTAL)

*PRACTICAL MAX. RESTRICTED TO 9250 GAL. NOT TO EXCEED 145000 LB. TAKE-OFF WEIGHT.

FUEL GRADE: 100/130 (AN-F-48)
1 GAL. = 6 LB.

- OIL -

CAPACITY 340 GAL.

GRADE.. SUMMER-1120; WINTER-1100

WEIGHTS

(Loadings Lb.)

BASIC 88000

DESIGN..... 125000

MAX. ALT. 145000*

MAX. LAND..... 145000*

FOOT PRINT 83 $\frac{1}{2}$ IN.²

*MANEUVER FACTOR..... 2.59

RADIO

(Set Model)

INTERPHONE AN/A1C

VHF COMMAND AN/ARC-3

LIAISON..... AN/ARC-8

HF COMMAND..... AN/ARC-9

RADIO ALTIMETER..... AN/APN-1

LORAN..... AN/APN-9

GLIDE PATH RECY. AN/ARN-5

AUTO. RADIO COMPASS..... AN/ARN-7

MAN. RADIO COMPASS..... AN/ARN-11

EMERG. TRANSMITTER..... AN/CRT-3

LOCALIZER

AUX. GLIDE PATH RC-103

MARKER BEACON RC-193

IFF..... SCR-695

HIGH ALT. ALTIMETER SCR-718

CARGO

(Alternate Equipment)

(5) CRADLES.. EXTRA HEAVY ENGINES

(12) CRADLES..... HEAVY ENGINES

(14) CRADLES..... LIGHT ENGINES

(2) 105MM..... HOWITZER & AMMO.

1 TON..... TRUCK & CREW

(3) P-51..... DISASSEMBLED

2 1/2 TON..... TRUCK (6x6)

37MM..... GUN

40MM..... A.A. GUN

75MM..... HOWITZERS

90MM..... A.A. GUN

(Max. Alternate Payload)

40000 LB.

RANGE & ENDURANCE

CONDITION	RANGE (Naut. Mi.)	ENDURANCE (Hours)	CARGO (Lb.)	FUEL (Gal.)	ALT. (Feet)	T.O. WEIGHT (Lb.)
FERRY	4200	23.7	NONE	9250	10000	145000
CARGO	3300	18.6	8000	7700	10000	145000
CARGO	1975	11.2	25000	5000	10000	145000
MAX. CARGO	750	4.0	44000	2000	10000	145000

* MAX. ALLOWABLE GROSS WEIGHT OF 145000 LB. RESTRICTS MAX. FUEL TO 9250 GAL.

CABIN

(Inside Clearance)

LENGTH (OVERALL) 71.4'

WIDTH (MAX.) 11.1'

HEIGHT (MAX.) 8.3'

(Side Cargo Door)

LENGTH (OVERALL) 11.7'

WIDTH (MAX.) 8.3'

(Belly Cargo Door)

LENGTH (OVERALL) 13.3'

WIDTH (MAX.) 10.0'

PLACES

(Quantity Station)

125 TROOPS (CANVAS SEATS)
or

115 LITTERS (STANDARD)
or

57 LITTERS (INCLINED)
and

33 LITTERS (LEVEL)
plus

4 PLACE TROOP BENCH

BASED ON: EST.

WARNING!

(a) This chart contains sensory active averages for tactical planning and is not suitable for aerodynamic analysis.

(b) Review "DEFINITIONS & FOREWORD" in front of chart.

C-74
-DOUGLAS-

REFERENCES

T.O. AN-01-40NT-1 (2-28-47)

T.O. AN-01-40NT-2 (1-13-47)

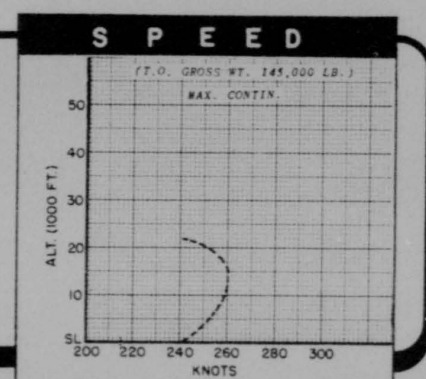
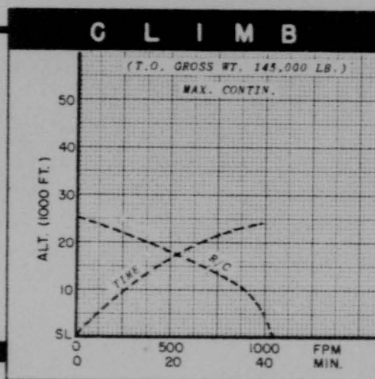
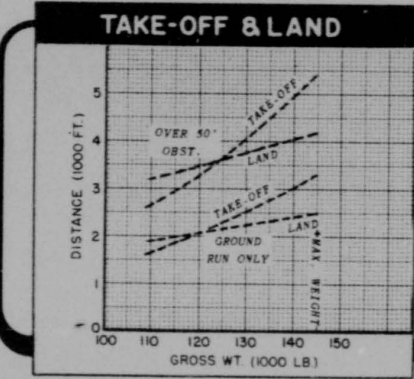
MFR. SPEC. DS-415A

MISCELLANEOUS

CARGO HOIST CAPACITY..... 8000+

LANDING LOAD PER WHEEL... 32500#

LOADING METHOD - LOADING PLATFORM



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DESCRIPTION

GENERAL

The C-82A airplane powered with two Pratt-Whitney "R-2800" engines is a high-wing, land monoplane of metal construction with twin booms and tricycle landing gear. It is designed for use as (1) a cargo carrier, (2) troop or paratroop transport with provisions for aerial delivery of supplies, (3) ambulance airplane, or (4) glider tow. Accommodations are provided for a five man crew, including a pilot, copilot, navigator, radio operator, and crew chief. All equipment, except for the hydraulic brake system, is operated electrically.

FUEL SYSTEM

An individual pressure-type fuel system feeds each engine, the two systems being connected by a cross-flow system connecting the two fuel tank selection valves. A fuel flow meter measures the rate of fuel flow to each engine.

ELECTRICAL SYSTEM

The electrical system is a 24 volt D.C. single wire type, the structure of the airplane serving as a ground return circuit. In addition to a battery and generators, an APP unit, and an external power receptacle are installed. A 1000 VA, 400 cycle inverter furnishes alternating current for certain instruments.

LANDING GEAR

The tricycle landing gear, electrically operated, is fully retractable and can be extended manually if the electrical system fails. The nose wheel swivels through an arc of 124 degrees.

AERIAL DELIVERY

A monorail system is installed to provide facilities for the delivery of standard army paracans. This system has a capacity of 15 paracans varying in weight up to 350 pounds each.

SLIDE TOW

One 15000 pound glider, or two totaling not more than 15000 pounds, can be towed. Late models are equipped with a 30000 pound glider tow.

DEVELOPMENT

DESIGN INITIATED..... JAN. 1944
 CONTRACT DATE..... 9 DEC. 1944
 DATE 1ST FLIGHT..... 6 JULY 1945
 ACT. DEL. DATE..... APRIL 1945
 DATE 1ST PROD. OCT. 1945

COCKPIT

CARGO LOADING

FUEL & OIL

PROJECTED INVENTORY

C-82A -FAIRCHILD-

PAGE DATE AS OF 15 JUNE 1947

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POWER PLANT	
NO. & MODEL	(2)R-2800-85 OR -24
MFR.	PRATT-WHITNEY
SUPCH.	SINGLE STG; 2 SPD.
RED. GEAR	45:1
PROP. MFR.	HAMILTON STD.
PROP. DIA.	151-2"
PROP. TYPE	CON. SPD; FULL FEATHER.

ENGINE RATINGS	
(H.P., H.R.P. & ALT.)	
TAKE-OFF	2100 * 2800 * SL.
WAR. EMERG.	NOT ESTABLISHED
MILITARY	2100 * 2800 * 3000 1700 * 2800 * 15000
CONTINUOUS	1700 * 2600 * 8500 1500 * 2600 * 18500

FUEL & OIL	
(Tot. Gal. No. Tanks. Location)	
1500	2 .. INBD. WINGS
1370	2 .. OUTRD. WINGS
2870 (MAX. TOT.)	EARLY MODELS
OR	
1290	2 .. INBD. WINGS
1210	2 .. OUTRD. WINGS
2500 (MAX. TOT.)	LATER MODELS
FUEL GRADE: 100/130 (AN-F-48)	
1 GAL. = 5 LB.	
- OIL -	
CAPACITY	180 GAL.
GRADE	SUMMER-1120; WINTER-1100
SPECIFICATION	AN/VV-D-440

WEIGHTS	
(Loadings Lb.)	
BASIC	33600
DESIGN	4,000
MAX. ALT.	54000*
MAX. LAND	50000**
FOOT PRINT	75/114.2
MANEUVER FACTOR	4.00* (2.78)**

RADIO	
(Set Model)	
INTERPHONE	AN/AIC-1A2
GLIDER INTERPHONE	AN/AIC-2
VHF COMMAND	AN/AVC-2
RADIO RECON. RECVR.	AN/ARN-2
LORAN	AN/ARN-3
GLIDE PATH RECVR.	AN/ARN-4A
AUTO. RADIO COMPASS	AN/ARN-7
HAN. RADIO COMPASS	AN/ARN-11
LIAISON TRANSMITTER	AN/ART-13A
LOCALIZER	RC-100
MARKER RECON.	RC-150
COMMAND SET	SCR-27AN
EMERG. RADIO SET	SCR-57B
IFF	SCR-608B

CARGO	
(Alternate)	
37MM	GUN(M4)
40MM	A.A. GUN(M2)
75MM	HOWITZER(M2A3)
105MM	GUN(M2A1)
155MM	HOWITZER
T-8	CAISSON
4.5TON	TRUCK (10 WHEEL)
4TON	TRUCK
(With Special Req.)	
T-9E1	LIGHT TANK
3"	A.A. GUN & CARRIAGE
75MM	GUN & HALF TRACK
90MM	A.A. GUN
M-14	TANK
* PARTIALLY MOUNTED (MAX. ALTERNATE PAYLOAD) 11000 LB.	

RANGE & ENDURANCE						
CONDITION	RANGE (Stat. mi.)	ENDURANCE (Hours)	CARGO (Lb.)	FUEL (Gal.)	ROMR. ALT. (Feet)	T.O. WEIGHT (Lb.)
FERRY	2150	18.6	0	2500	10000	50900
MAX. FUEL	2050	15.8	2500	2500	10000	54000
CARGO	1450	11.5	7000	1900	10000	54000
MAX. CARGO	800	8.0	11000	1250	10000	54000

PLACES	
(Quantity Station)	
42	TROOPS OR PARATROOPS
or	
45	AIR-DELIV. CONTAINERS
or	
42	PASSENGERS (SEATED)
or	
42	PASSENGERS (SEATED)
and	
15	LITTER PATIENTS
or	
34	LITTER PATIENTS
and	
4	ATTENDANTS

CABIN	
(Inside Clearance)	
LENGTH (OVERALL)	38.0'
WIDTH (MAX.)	8.0'
HEIGHT (MAX.)	8.0'
(Main Loading Door)	
WIDTH (MAX.)	8.0'
HEIGHT (MAX.)	8.0'

BASED ON: EST.

WARNING!

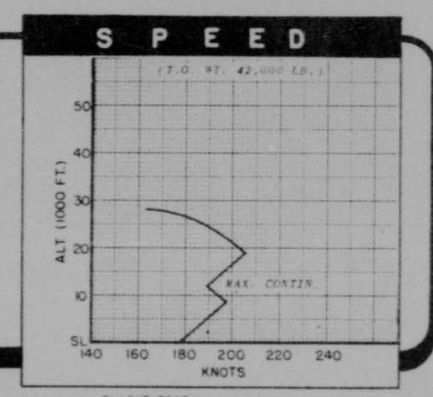
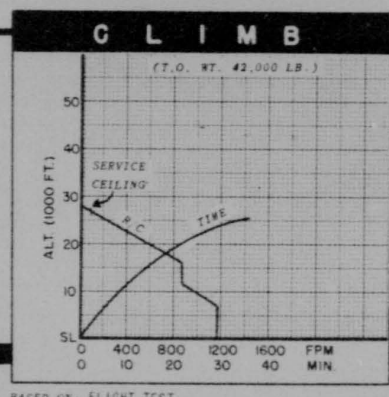
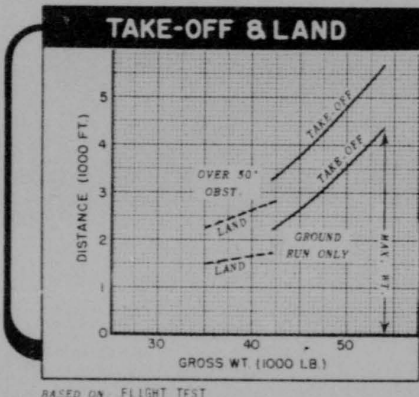
(a) This chart contains conservative averages for tactical planning and is not suitable for aerodynamic analysis.

(b) Review "DEFINITIONS & FOREWORD" in front of chart.

C-82A
-FAIRCHILD-

REFERENCES	
T.O.	AN-OI-115CRA-1(3-26-47)
T.O.	AN-OI-115CRA-2(4-30-47)
MFR. SPEC.	R-78042

MISCELLANEOUS	
LOADING METHOD	RAMP AND SLIDING STRIPS
LANDING LOAD/WHEEL	18490 LP.



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R E S T R I C T E D

DESCRIPTION

GENERAL

The YC-97 airplane powered with four R-3350 fuel injection engines, is a double-deck, cargo and troop carrying transport, capable of long range flights. General shape of the fuselage is one of a figure eight, formed by using (2) B-29 fuselages joined together. This airplane will carry approximately 32,000 pounds of cargo or 134 fully equipped troops or 83 stretcher casualties with medical attendants and supplies. The normal crew consists of pilot, copilot, engineer, navigator and radio operator. Flight engineer is seated between and slightly to rear of pilot and copilot. All three use same engine control stand. The airplane has a system for handling aerial-delivery cargo containers for supplying ground troops. The system will handle 17 bundles of five 300 pound containers or a total weight of 25,500 pounds. Will carry two propellers externally under the fuselage.

LANDING GEAR

Electrically operated tricycle gear. The main landing gears are equipped with dual duplex expander-type hydraulic brakes.

ELECTRICAL SYSTEM

Continuous 28 volt direct current power is produced by six engine driven generators, an auxiliary power plant generator, and a battery. Alternating current used by remote indicating instruments, turbosupercharger controls, automatic pilot, fluorescent light, and some radio equipment is provided by three inverters. One inverter is a spare which will automatically change over and supply all A.C. current except for fluorescent lights when the main inverter fails.

DEVELOPMENT

DESIGN INITIATED..... JULY 1942
 CONTRACT DATE..... 23 JAN. 1943
 EST. FLIGHT DATE..... 9 NOV. 1944
 ACT. DEL. DATE..... (X) JUNE 1945
 DATE 1ST PROD. 5 AUGUST 1946

COCKPIT

CARGO LOADING

FUEL & OIL

PROJECTED INVENTORY

YC-97 -BOEING-

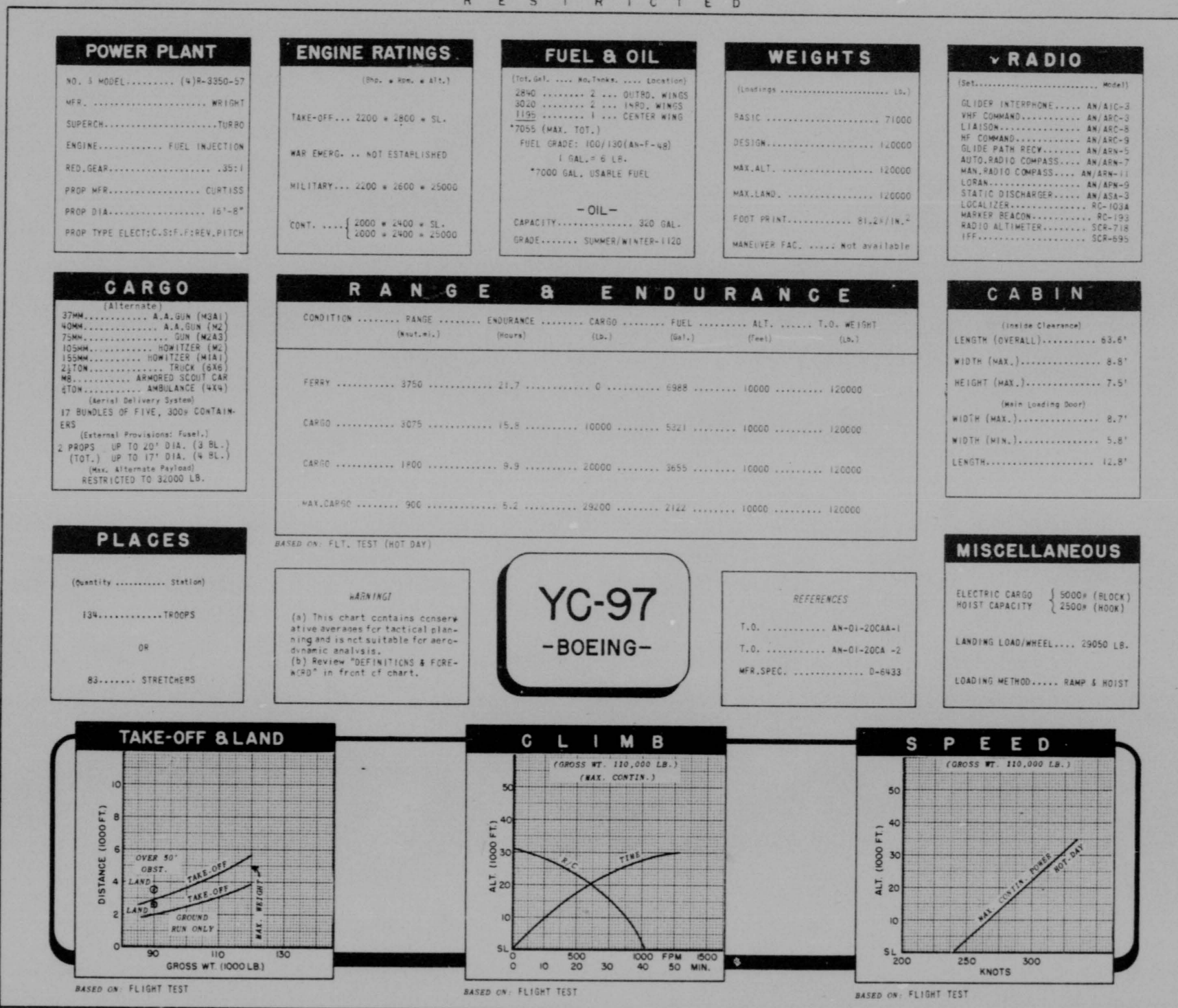
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