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Spangenberg

ISSUE OF PAGES
AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2
LOADING CONDITION		Bomber 60% Fuel	Bomber 2 - 300 gal. Tip Tanks
GROSS WEIGHT	LBS	53860	61800
EMPTY WEIGHT (ESTIMATED)	LBS	30861	
FUEL/OIL	GALS.	1897/13	3162/22
FIXED GUNS/AMMUNITION		NONE	
FLEXIBLE GUNS/AMMUNITION		NONE	
ENGINE POWER USED FOR PERFORMANCE		TURBO-PROP MIL. + JET	TURBO-PROP MILITARY
WING LOADING	LBS/SQ.FT.	64.5	74.0
POWER LOADING ①	LBS./BHP.		
V-MAX. SEA LEVEL	KN	425	369
V-MAX.	KN./FT.	450/25000	400/25000
V-STALL GROSS WEIGHT ②	KN.	93.4	100.1
V-STALL WITHOUT FUEL ②	KN.	82.9	83.4
TIME-TO-CLIMB -10000 FT-	MIN.	2.0	3.3
TIME-TO-CLIMB -20000 FT-	MIN.	4.6	8.1
SERVICE CEILING	FT.		39000
TAKE-OFF DISTANCE -CALM-	FT.		1098
TAKE-OFF DISTANCE -15 KN-	FT.		797
TAKE-OFF DISTANCE -25 KN-	FT.		619
TAKE-OFF DISTANCE -50 FT. OBST.	FT.		
TAKE-OFF TIME	SECONDS		
RATE OF CLIMB -SL-	FT./MIN.	5500	3440
MAX. RANGE /V-AV. ③	N MI./KN.		2900/330
RANGE /V-AV. -60% NSP -③-	N MI./KN.		
SEARCH RADIUS /V-AV. -20% R-	N MI./KN.		
A.S.W. RADIUS /V-AV. -20% R-	N MI./KN.		
SCOUT RADIUS	N MI.		
COMBAT RADIUS (SEE NOTE)	N MI.		1215
ENGINE / PROP GEAR RATIO 2 - Allison "500" Turbo-Prop/15.75:1 - J33-A-8 TURBO JET			
ENGINE RATING BHP/RPM/ALT.	MILITARY		TAKE-OFF
	5100 [REDACTED] 830#/JET/13620/SL	4500 + 800#/13620/SL	5100 + 830#/13620/SL
J-33-A-8			
Military Take-off		4600# STATIC/11750/SL	

AUX. FIXED	TANKAGE IN GALLONS	
	OIL	FUEL
PROTECTED	22	2562
UNPROTECTED		
TOTAL - FIXED INTERNAL	22	2562
DROPPABLE -		
DROPPABLE 2 - 300 GAL. TIP TANKS		600
TOTAL	22	3162

NOTE
 ① BHP AT MAX. CRIT. ALT.
 ② STALL - WITH POWER
 ③ AT 35000' ALTITUDE

PROPOSAL

DATE 26 FEB. 1948

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MODEL XA2J-1

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Cond. (1) represents the airplane when 40% of fuel of cond. (2) has been burned and tip tanks have been dropped.

Bomb capacity varies from 8000# to 12000#. This chart is based on an average bomb load.

RADIUS PROBLEM - COND. (2)

WARM-UP	RENDEZVOUS	CLIMB	CRUISE OUT	COMBAT
30 sec. at Max. Static Thr.	10 min. at SL at V for max. endur. on prop. engs.	to 35000' on prop. at rated power	at 35000' on props. at normal rated power <u>Drop external tanks</u>	50 miles in on all engs. Mil. power Drop bomb 50 miles out All engines Military power
<u>TAKE-OFF</u> 1 min. at T.O. Thrust				
	<u>CRUISE BACK</u> at 35000' on props at normal rated power	<u>RESERVE</u> 45 min. at S.L. with props at V for max. End.		

DESCRIPTION:

The XA2J-1 will be a modification of the XAJ-1 in which the R-2800 reciprocating engines will be replaced by Allison XT40 propeller turbine engines. Additional changes made necessary by these new power plants will result in some modifications of the tail, nacelles, and fuselage. The fuel load will be greatly increased with a resulting increase in combat radius. Like the XAJ-1, the XA2J-1 can be accommodated only on the CVB's or equivalent carriers. The XA2J-1 cannot be catapulted under average conditions at maximum gross weight.

Wing Area	835.45 sq. ft.
Span	78.38'
Length	68.56'
Height	23.50'

CONTRACTURAL:

- Phase I. Preliminary investigation, engineering development, wind tunnel model testing, and mock-up will be completed during Summer and Fall, 1948.
- Phase II. Complete engineering and construction will be completed about the end of 1949. This phase will be initiated early in Fiscal 1949.

Estimated first flight -- Jan. 1950.

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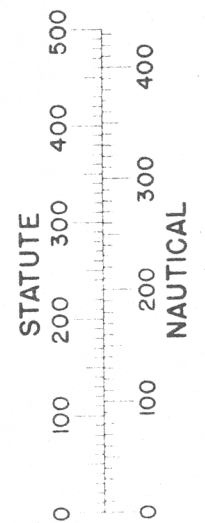
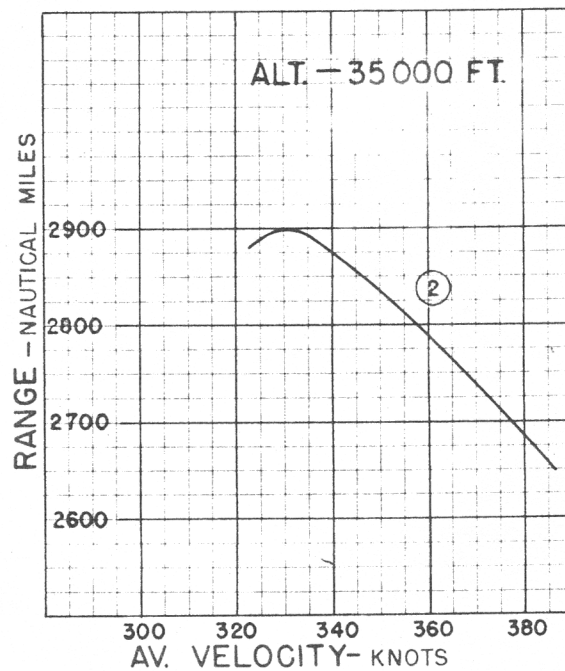
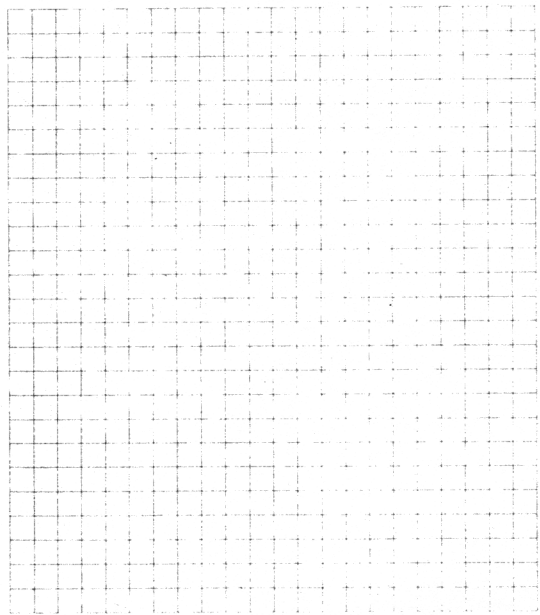
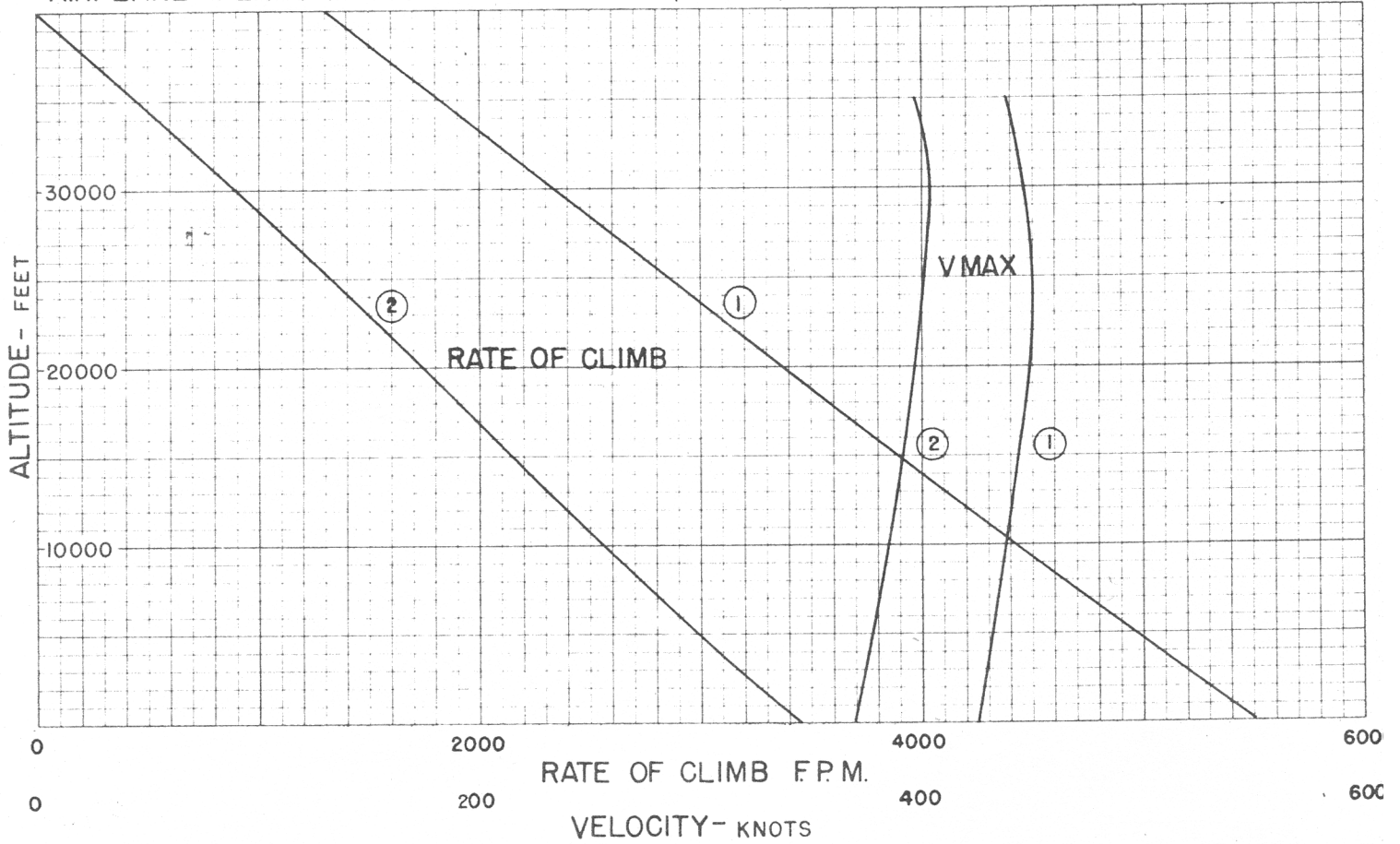
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MODEL-XA2J-1

AIRPLANE PERFORMANCE

NAVAER - 1335 B (REV 2-47)

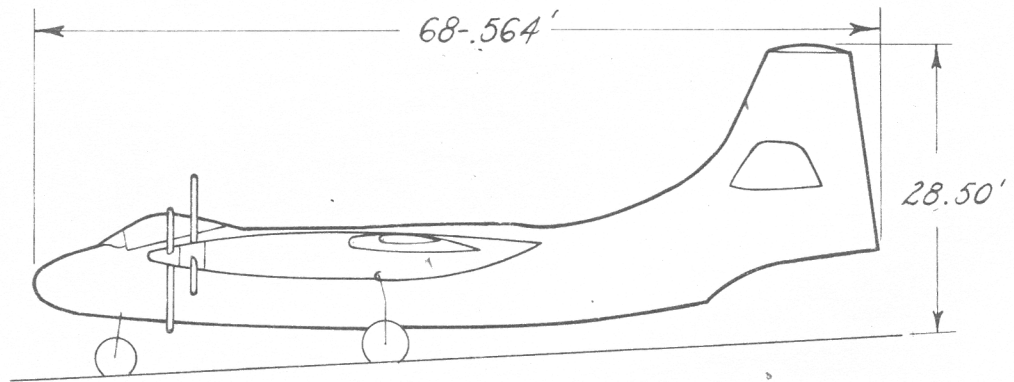
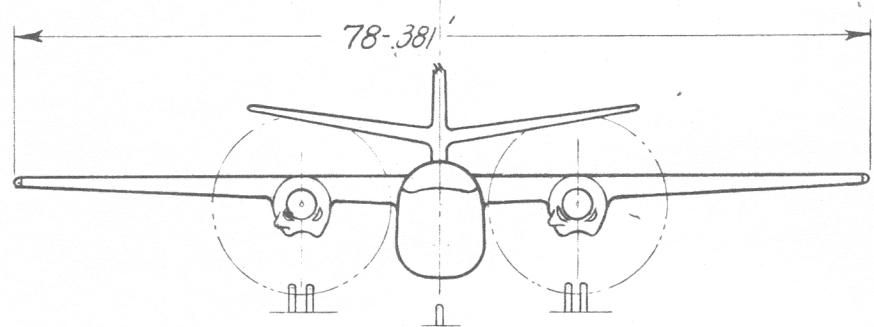
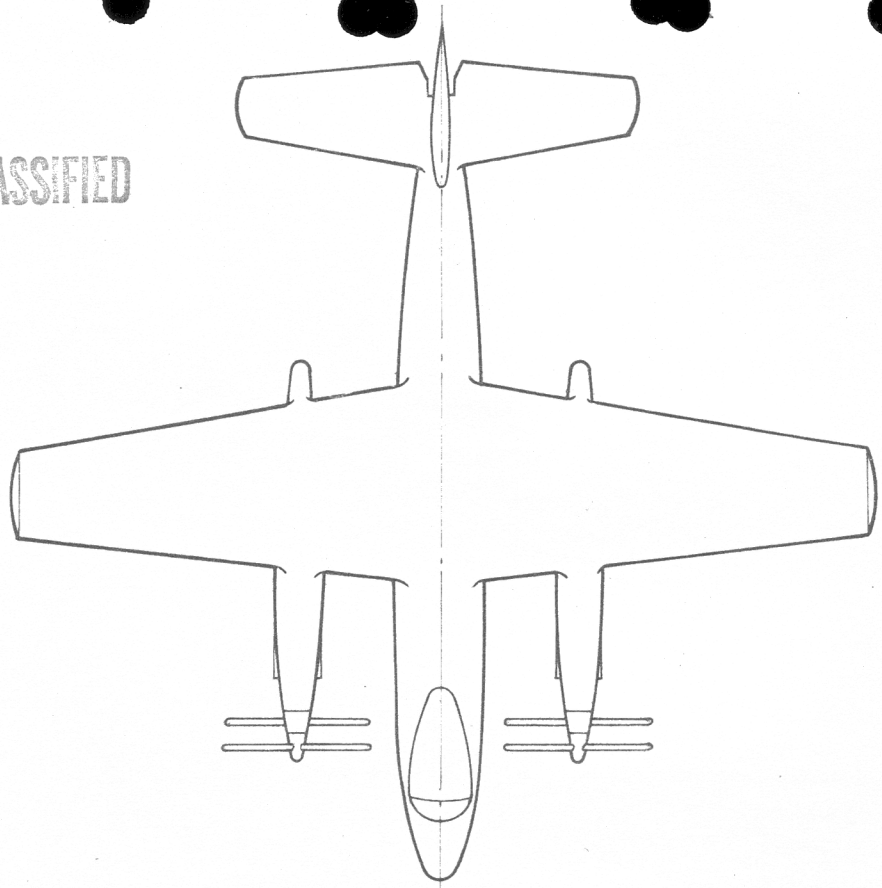
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○ LOADING CONDITION COLUMN NUMBER

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