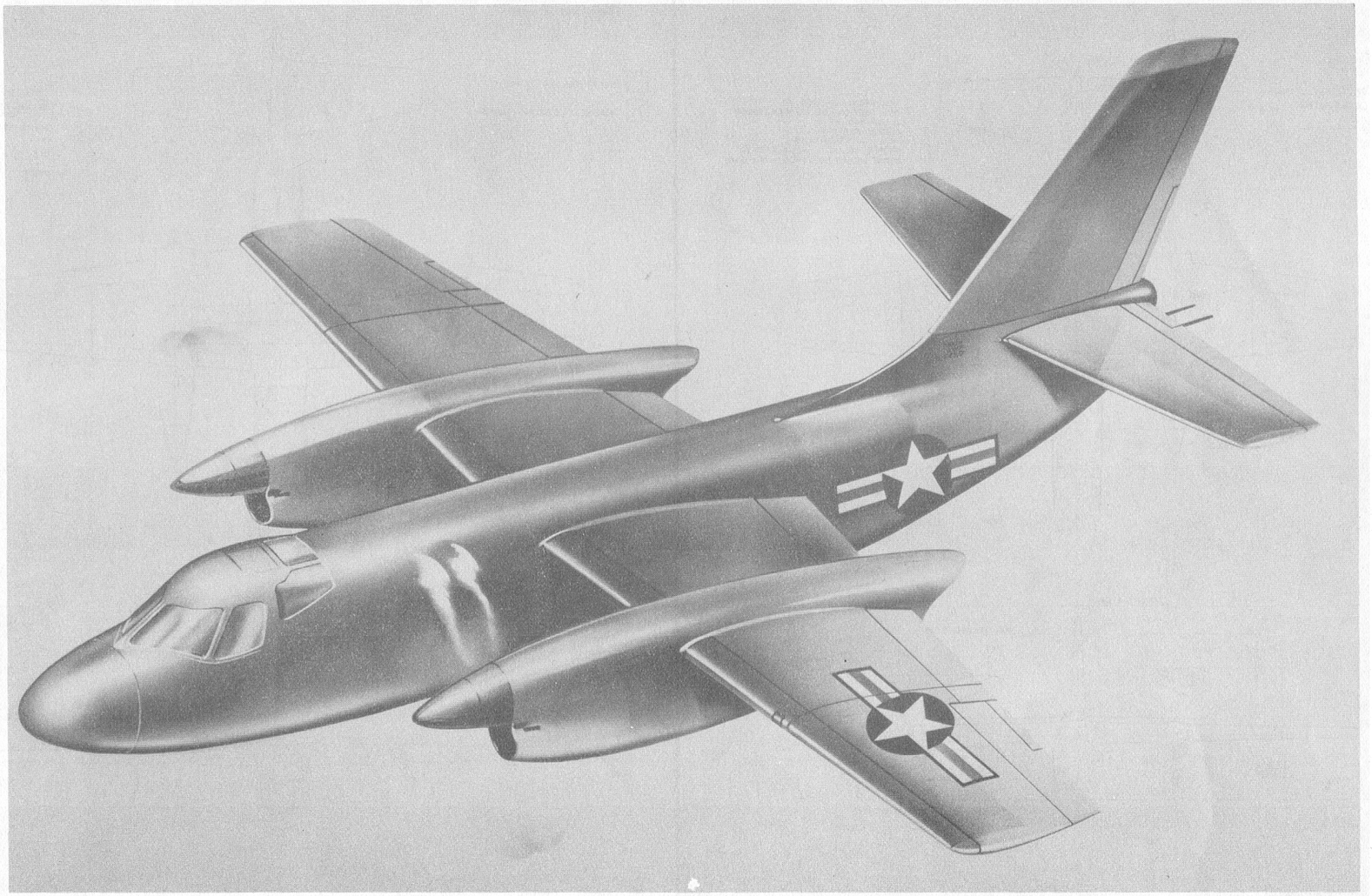


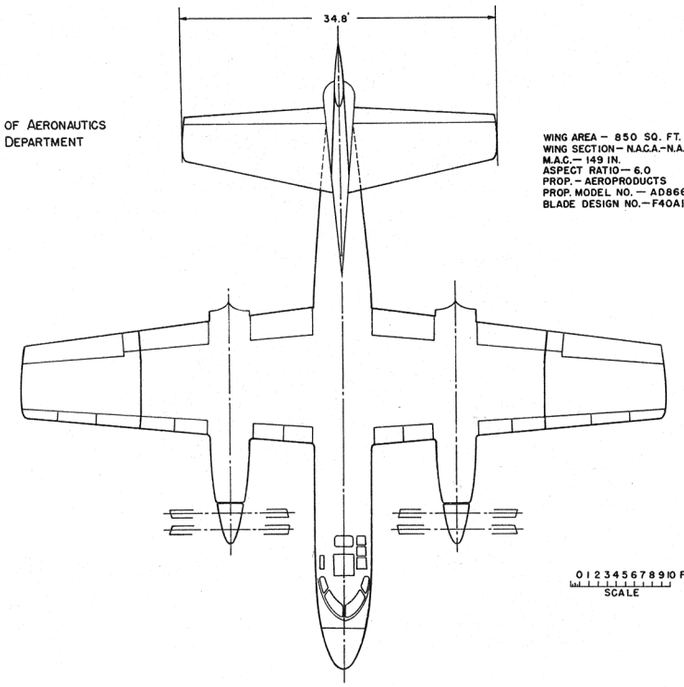
STANDARD AIRCRAFT CHARACTERISTICS

XA2J-1

NORTH AMERICAN

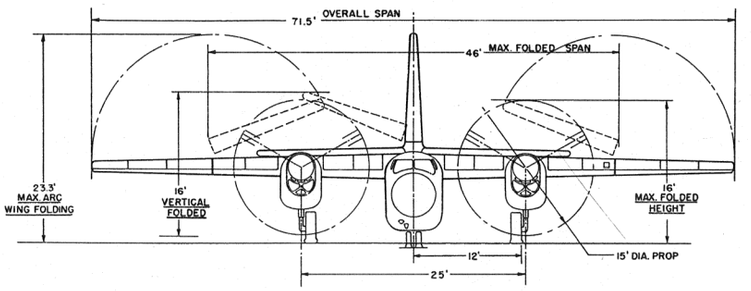
Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

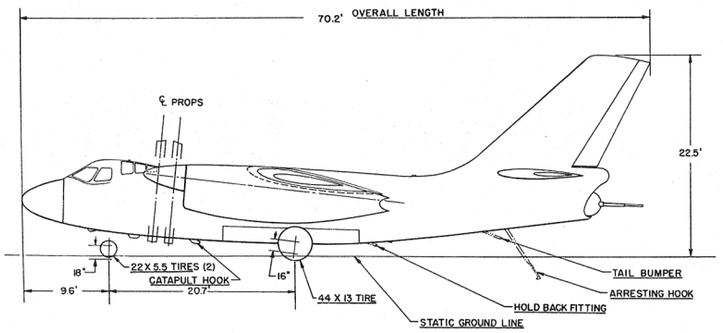
BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA – 850 SQ. FT.
WING SECTION – N.A.C.A.–N.A.A.646B012
M.A.C. – 149 IN.
ASPECT RATIO – 6.0
PROP. – AEROPRODUCTS
PROP. MODEL NO. – AD8664FN-67
BLADE DESIGN NO. – F40A1-198-18M2

0 1 2 3 4 5 6 7 8 9 10 FT
SCALE





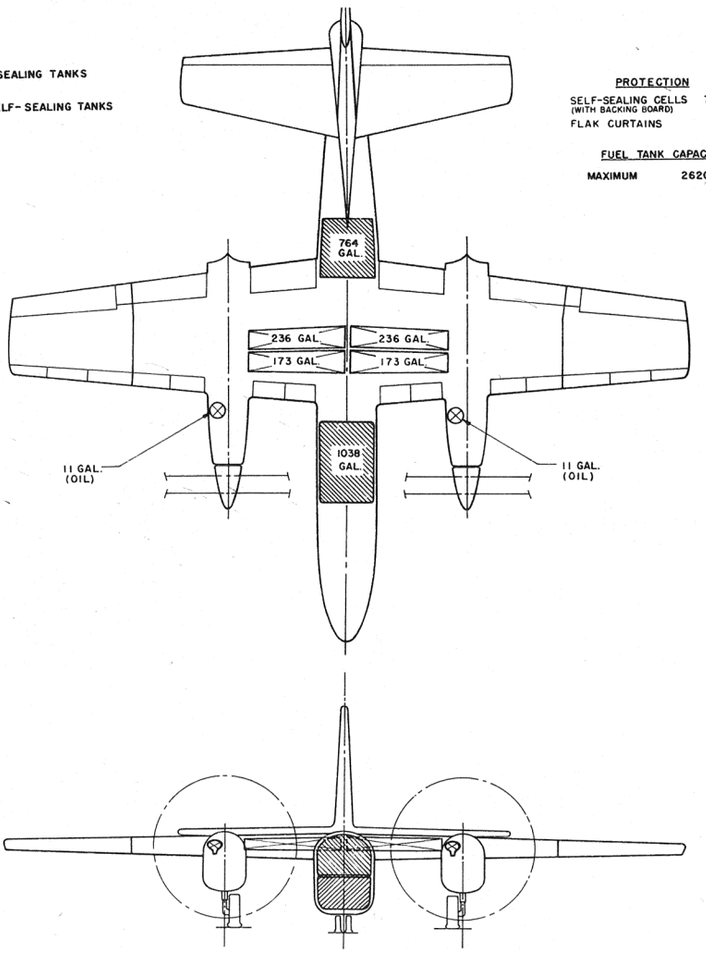
DESCRIPTIVE ARRANGEMENT

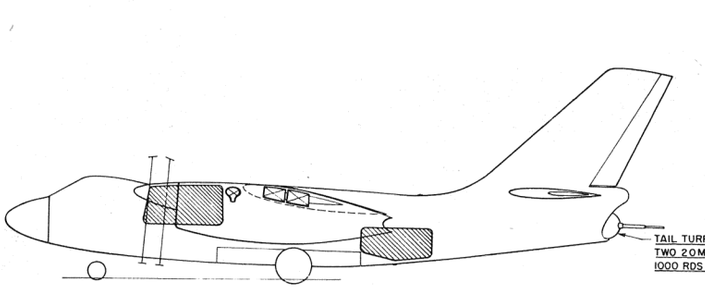
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

SELF-SEALING TANKS
NON-SELF-SEALING TANKS

PROTECTION
SELF-SEALING CELLS (WITH BACKING BOARD) 785 LB
FLAK CURTAINS 60 LB

FUEL TANK CAPACITY
MAXIMUM 2620 GAL.





0 1 2 3 4 5 6 7 8 9 10 FT.
SCALE

ARMAMENT & TANKS

18

Standard Aircraft Characteristics NAVAER 1335B (REV. 1-49)

MISSION AND DESCRIPTION

The primary mission of this airplane is attack.

It is a three-place airplane capable of take-off with or without catapult aid from the deck of a CVB or CV-34 (modified) aircraft carrier or landing field, and landing in an arresting gear or on a landing field.

Provisions are made for hydraulic folding of wings and tail. Single slotted trailing edge flaps and nose flaps, are fitted.

The horizontal stabilizer is all movable and is the primary longitudinal control.

The controls are operable by the pilot only. Power boost is provided for ailerons, elevators, and rudder.

Equipment for pressurizing, heating, and cooling cabin air is provided.

The fuselage provides for an escape chute in the cabin deck.

Mock-up completed -- September 1949
Two experimental aircraft in early fabrication stage
First flight estimated -- June 1951

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY	32,169	
BASIS	33,495	
DESIGN	50,926	2.67
COMBAT	43,712	2.67
MAX.T.O	58,000	2.25
MAX.LAND	50,926	
MAX.LAND ARRESTED	40,568	

All weights are estimated.

POWER PLANT

NO. & MODEL.....(2) XT40-A-6
MFR.....Allison
PROP. GEAR RATIO.....0.0638
PROP. MFR.....Aeroproducts
PROP. DES.....F40A1-198-18M2
NO. BL./DIA.....6/15 ft.

RATINGS

All ratings	Shp Static Sea Level	Lbs. Rpm
T. O.	5,035	1,225 14,300
MIL.	5,035	1,225 14,300
NORM.	4,470	1,115 14,000

SPEC. NO. 264-A

FUEL AND OIL

Gals.	No. Tanks	Location
1,802	2	Fuse.,S.S.
818	4	Wing

FUEL GRADE.....100/130
FUEL SPEC....MIL-F-5572

OIL

CAPACITY (Gals.).....22
GRADE.....M
SPEC.....MIL-O-6086

ORDNANCE

GUNS

No.	Size	Location	Rds.
2	20mm	Tail Tur.	1,000

BOMBS

Type	Size	Location	No.
Bomb	100#	Fuselage	16
Bomb	250#	Fuselage	12
Bomb	500#	Fuselage	12
Bomb	1,000#	Fuselage	8
Bomb	1,600#	Fuselage	4
Bomb	2,000#	Fuselage	4
Torp.	1,100#	Fuselage	4
Mine	500#	Fuselage	12
Mine	1,000#	Fuselage	8
Mine	2,000#	Fuselage	4

FIRE CONTROL

Bomb Director Set...AN/ASB-1
Radar (Modified)...AN/APS-31

MAX. BOMB CAP....10,500 lbs.

DIMENSIONS

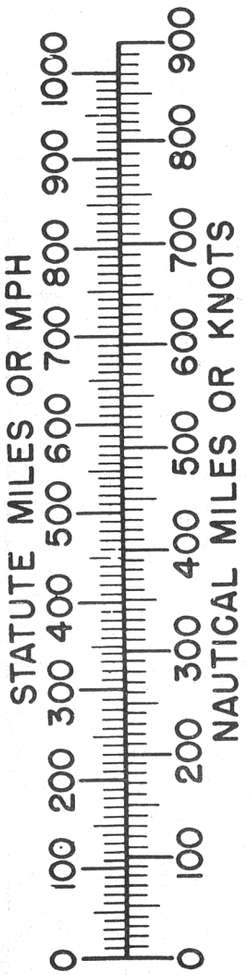
WING AREA.....850 sq. ft.
SPAN.....71' - 6"
LENGTH.....70' - 2"
HEIGHT.....22' - 6"
TREAD.....25' - 0"
M.A.C.....12' - 5"
PROP. GRD. CLEAR.....17"

ELECTRONICS

VHF RADIO.....AN/ARC-1A
HOMING.....AN/ARR-2A
IFF.....AN/APX-6
RADAR ALTIMETER.....AN/APN-1
MHF RECEIVER.....AN/ARR-15
MHF TRANSMITTER....AN/ART-13
LF RANGE RECEIVER.R-23/ARC-5
MF AUTO COMPASS.....AN/ARN-6

To be Service Installed:

LF & MF RANGE REC..AN/ARN-19
VHF RADIO.....AN/ARC-27



PERFORMANCE SUMMARY

LOADING CONDITION		(1) ATTACK 8,000 # Bombs		(4) ATTACK 10,500 # Bombs	
TAKE-OFF WEIGHT	lbs.	58,000		58,000	
Fuel	lbs.	15,606		13,106	
Bombs	lbs.	8,000		10,500	
Wing/Power Loading (A)lbs/sq.ft;lbs/bhp.		68.3/-		68.3/-	
Stall Speed--Power off	km.	97.3/-		97.3	
Stall Speed--Power off - No Fuel	km.	83.2		85.6	
Stall Speed--Power on	km.	89.0		89.0	
Maximum Speed/Alt (B)	km/ft.	392/24,000		392/24,000	
Take-off Distance, deck -- calm	ft.	1,190		1,190	
Take-off Distance, deck 25 kn.	ft.	645		645	
Take-off Distance, 50 Ft. Height	ft.				
Rate of climb -- sea level (B)	ft/min.	3,260		3,260	
Service Ceiling (B)	ft.	37,600		37,600	
Time-to-climb 20,000 ft. (B)	min.	8.4		8.4	
Time-to-climb 30,000 ft. (B)	min.	16.8		16.8	
Combat Range/V av (Climb)	ft. n.mi/kn.	1,895/348		1,530/348	
Combat Radius/V av (A-3)	ft. n.mi/kn.	1,025/348		850/348	
Combat Radius/V av (A-2)	n.mi/kn.	930/348			
LOADING CONDITION		(2) COMBAT	(3) COMBAT	(5) COMBAT	(6) COMBAT
GROSS WEIGHT	lbs.	43,712	43,712	42,258	42,258
Engine power		Military	Normal	Military	Normal
Fuel	lbs.	9,364	9,364	7,864	7,864
Bombs/Tanks		None	None	None	None
Combat Speed/Alt. (A-2)	km/ft.	391/1,500	365/1,500	391/1,500	365/1,500
Max. speed at sea level	km.	388	362	388	362
Max. speed/Alt	km/ft.	425/30,000	408/30,000	425/30,000	408/30,000
Combat speed/Alt (A-3)	km/ft.	410/39,300	389/39,300	410/39,300	389/39,300
Rate of climb SL	ft/min.	5,600	4,735	5,815	4,980
Ceiling for 500 fpm R/C	ft.	42,300	40,600	43,300	41,300
Time-to-climb/Alt.	min/ft.	8.1/30,000	9.9/30,000	7.7/30,000	9.4/30,000

NOTES

(A) BHP at Maximum Critical Altitude
(B) Normal BHP

Performance is based on calculations.

Range and radius are based on engine specification fuel consumption data increased by 5%.

Spotting: 200 ft. length is required to spot 9 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on the CV-9 class carriers.

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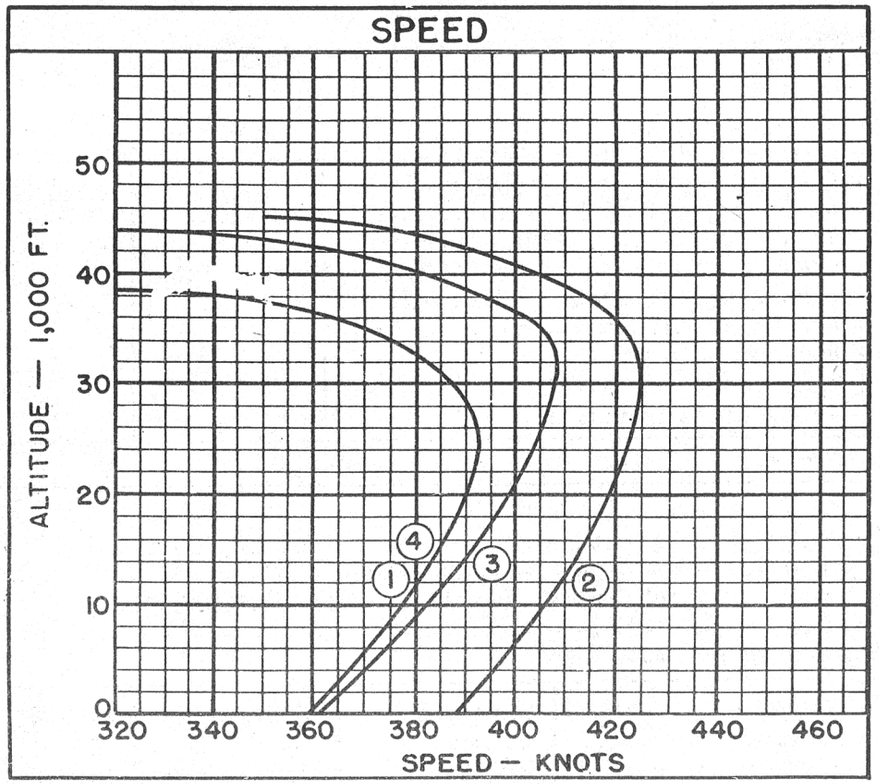
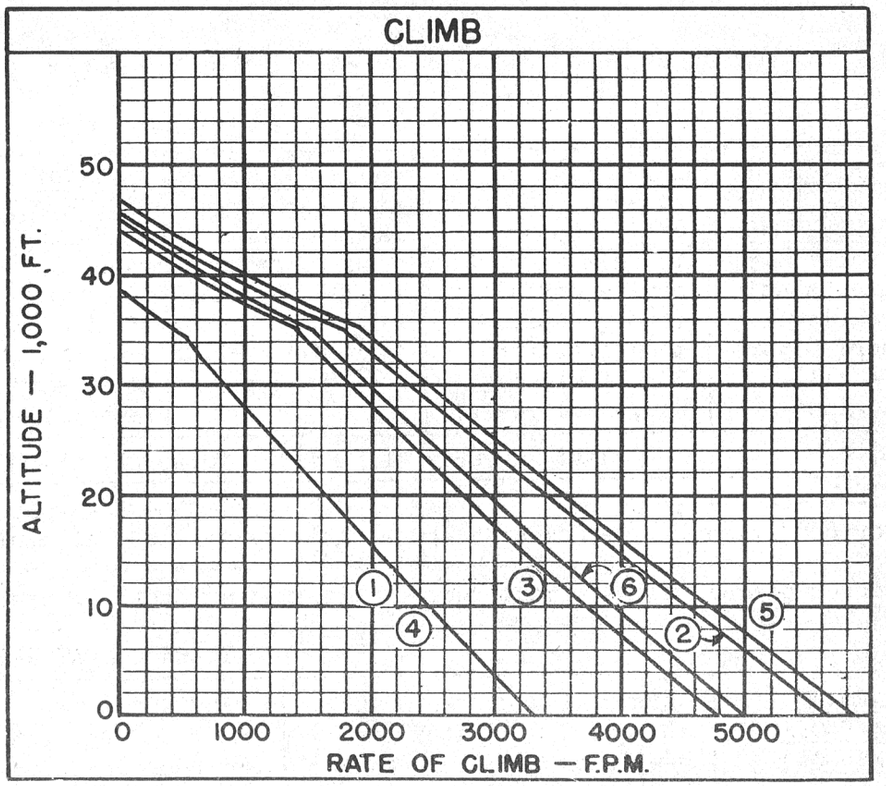
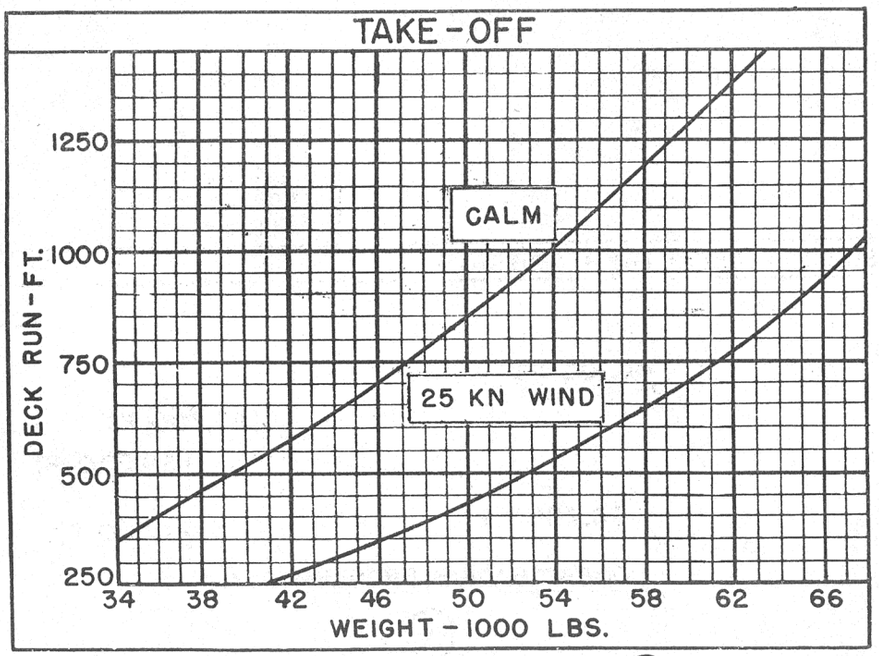
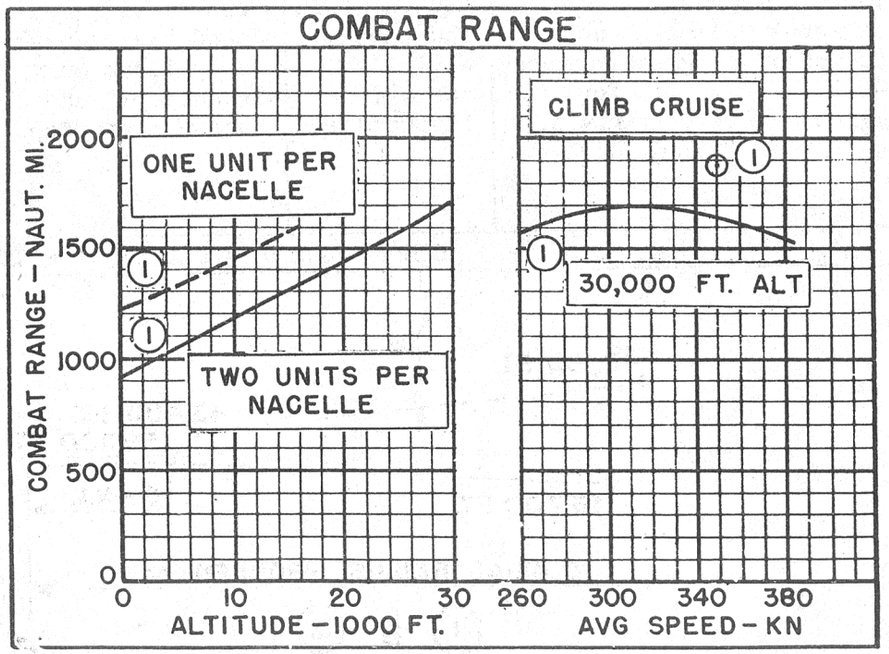








◯ LOADING CONDITION COLUMN NUMBER

21

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)

NOTES

ATTACK COMBAT RADIUS PROBLEM NO. A-3

WARM-UP TAKE-OFF RENDEZVOUS Fuel for 5 min. static sea level nor. power -- all engines	CLIMB (A) at max. R/C w/mil. power, to initial cruise-out alt. (not greater than alt. for 300 ft/min.max. R/C, nor. power)	CRUISE-OUT at V for long-range operation to reach 35,000 ft. min. alt., not less than 100 n.mi. from target.	CONTINUE CRUISE-OUT at V-long-range operation at 35,000 ft. min. alt., to 50 n.mi. from target	COMBAT at 35,000 ft. min. alt. Run-in 50 n.mi. Drop expendable ordnance. Retain ammunition. Run-out 50 n.mi. Max. power available, all engines.	CLIMB (B) At max. R/C w/mil. power to initial cruise-in alt.	CRUISE-IN at V for long-range operation.	RESERVE 10% of initial fuel load.

COMBAT RADIUS = CLIMB (A) + TOTAL CRUISE-OUT + 50 N.MI. = 50 N.MI. + CLIMB (B) + CRUISE-IN

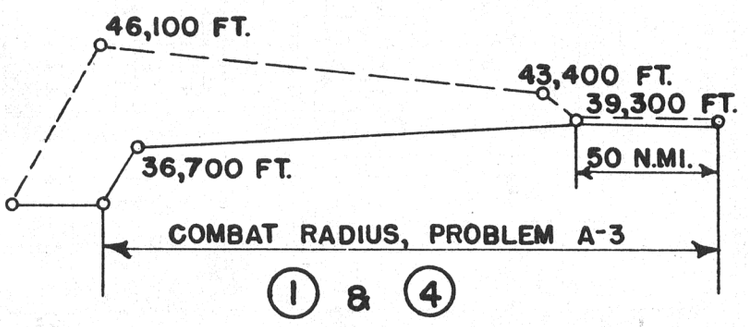
For Condition (1) -- Combat Range - Altitude at start of cruise, 36,700 ft.; altitude at end of cruise, 41,900 ft.

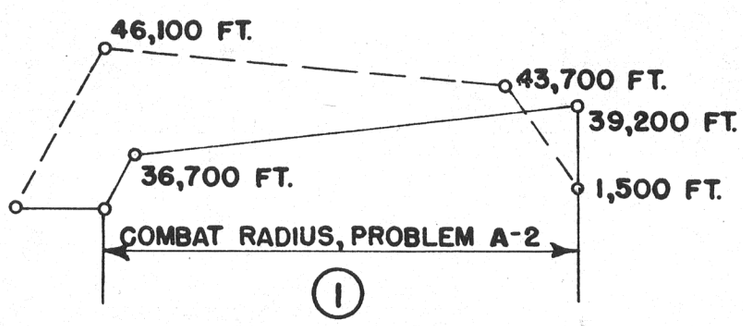
For Condition (4) -- Combat Range - Altitude at start of cruise, 36,700 ft.; altitude at end of cruise, 40,800 ft.

ATTACK COMBAT RADIUS PROBLEM NO. A-2

WARM-UP TAKE-OFF RENDEZVOUS Fuel for 5 min. static sea level nor. power -- all engines	CLIMB (A) at max. R/C w/mil. pr., to initial cruise-out alt. (not greater than alt. for 300 ft/min.max. R/C, nor. power)	CRUISE-OUT at V for long-range operation. (State alt. and special engine operations involved.)	DESCEND to 1,500 ft. alt. No fuel used, no distance gained. Drop or fire expendable ordnance. Drop tanks only when empty and state when dropped.	COMBAT at 1,500 ft. alt, at V max. for 5 min. with mil.pr. plus augmentation if available. (No distance made good)	CLIMB (B) At max. R/C w/mil. pr. to initial cruise-in alt.	CRUISE-IN at V for long-range operation. State alt. and any special eng.operation (alt. not to exceed cruise ceiling.	RESERVE 10% of initial fuel load.

COMBAT RADIUS = CLIMB (A) + CRUISE-OUT = CLIMB (B) + CRUISE-IN





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Standard Aircraft Characteristics NAVAER 1335F (REV. 1-49)