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BY T-G. Hill ON 12/19/96



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Standard Aircraft Characteristics NAVAER 1335A (REV. 1-55)

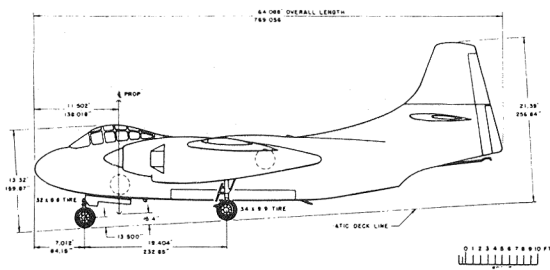
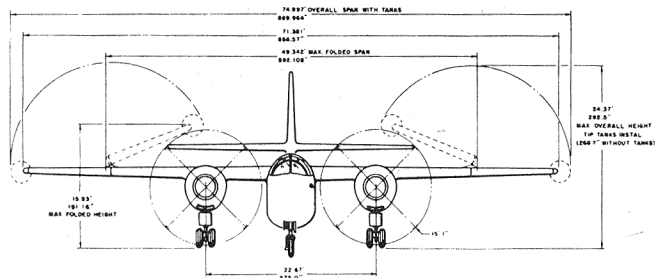
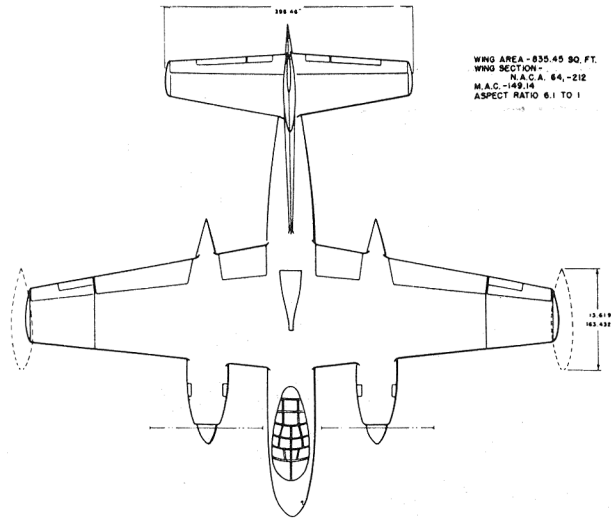
STANDARD AIRCRAFT CHARACTERISTICS

AJ-2 "SAVAGE"

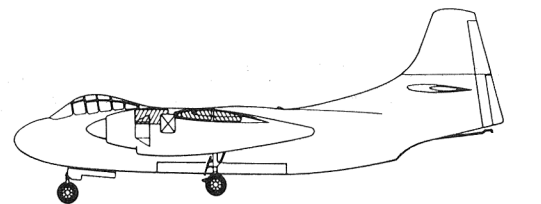
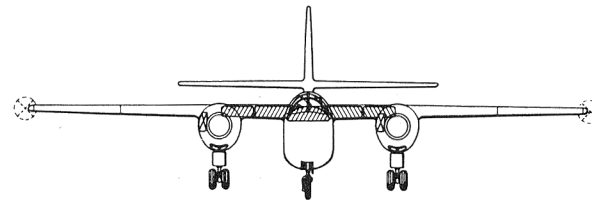
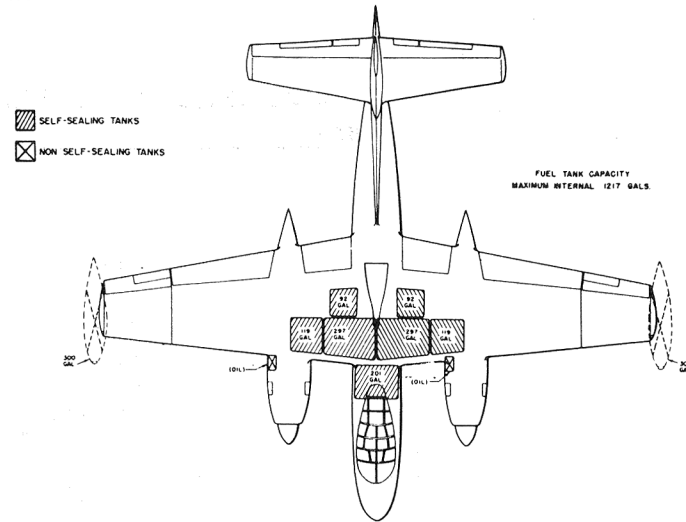
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DESCRIPTIVE ARRANGEMENT



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Standard Aircraft Characteristics NAVIER 1335B (Rev. 1-55)

POWER PLANT

NO. & MODEL.....(2) R-2800-44W
 (1) J-33-A-10
 MFR.....Pratt & Whitney, Allison
 SUPERCH.....1 Stg., 1 Spd. & Turbo
 TURBO.....GE-7S-CH-8-F1
 PROP. GEAR RATIO.....0.350
 PROP MFR.....Hamilton Standard
 PROP. DES. NO.....2F17M3-24AC
 NO. BL./DIA.....4/15' - 1"

RATINGS

	BHP	RPM	ALT.
T.O.	2,300	2,800	S.L.
MIL.	2,300	2,800	30,000'
NORM.	1,800	2,600	37,600'

	LBS	RPM	ALT.
T.O.	4,600	11,750	S.S.L.
MIL.	4,600	11,750	S.S.L.
NORM.	3,900	11,250	S.S.L.

SPEC. NOS. N-8127-B and 258-D

MISSION AND DESCRIPTION

The AJ-2 is a development of the AJ-1 carrier-based attack airplane. Principal differences from the AJ-1 are: larger vertical tail, no dihedral in horizontal tail, overall length one foot greater, and rearranged cockpit interior.

Slotted flaps are fitted into the wing. A power boost system is used to actuate the ailerons, elevators, and rudder.

WEIGHTS

LOADINGS	LBS	L.F.
EMPTY.....	30,776.....	
BASIC.....	31,177.....	
DESIGN.....	48,040.....	4.0
COMBAT*.....	47,841.....	4.0
MAX.T.O.(Field).....	54,000.....	
(Cat.).....	54,000.....	
MAX.LAND(Field).....	45,000.....	
(Arrest).....	37,500.....	

All weights are actual

* Includes MK-15 Special Store

FUEL AND OIL

GALS.	NO. TANKS	LOCATION
1,016	6	Wing, S.S.
201	1	Fuse., S.S.
500	1	Bomb Bay
840	1	Bomb Bay
1,300	1	Bomb Bay
300	1	Bomb Bay, Drop
600	2	Tip, Drop
FUEL GRADE.....		115/145
FUEL SPEC.....		MIL-F-5572

OIL

	RECIP.	JET	TURBO
CAP. (GAL)	90.9	3	3
OIL GRADE	1100	1010	1065
MIL-SPEC.	0-6082	0-6081A	0-6082

ORDNANCE

GUNS
None

BOMBS

Type	Size	Location	No.
Bombs	100#	Bomb Bay	16
Bombs	250#	Bomb Bay	12
Bombs	500#	Bomb Bay	12
Bombs	1,000#	Bomb Bay	8
Bombs	1,600#	Bomb Bay	6
Bombs	2,000#	Bomb Bay	4

Special Stores....MK 5, 7, 8, 12, 15, 91 and 39

(Only one of each type may be carried in Bomb Bay)

Mines(MK 39)2,000#	Bomb Bay	4
Mines(MK 25)2,000#	Bomb Bay	3
Mines 1,000#	Bomb Bay	8

BOMB DIRECTOR SET.....AN/ASB-1

MAXIMUM BOMB CAPACITY.....12,000 lbs.

DEVELOPMENT

Cockpit mockup..... August 1951
 First Flight..... December 1952
 Service Use..... January 1953

DIMENSIONS

WING AREA.....	836 sq. ft.
WING SPAN.....	71' - 5"
WING SPAN(with tiptanks).....	75' - 0"
WING SPAN(folded).....	49' - 4"
LENGTH.....	64' - 1"
HEIGHT.....	21' - 4"
HEIGHT(folded).....	16' - 2"
HEIGHT(folded with tiptanks)	17' - 4"
TREAD.....	22' - 8"
PROP. CLEARANCE.....	1' - 3"
M.A.C.....	12' - 5"

ELECTRONICS

VHF COMM.....	AN/ARC-1
(Installation Provision Only)	
UHF COMM.....	AN/ARC-27A
COMM.TRANS.....	AN/ART-13
HF REC. EQUIP.....	AN/ARR-15A
INTERPHONE.....	AN/AIC-4A
ALTIMETER.....	AN/APN-1 or -22
ADF.....	AN/ARN-6
MARKER BEACON.....	AN/ARN-12
RADIO HOMING.....	AN/ARN-21 (PSI)
HOMING.....	AN/ARR-2A
RANGE REC.....	R-23A/ARC-5
IFF.....	AN/APX-6

Standard Aircraft Characteristics NAVAER-1335C (Rev. 1-55)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) ATTACK 1-MK-15 Bomb 2-300 gal Tip Tanks	(3) ATTACK 1 MK-5 Bomb 2-300 gal Tip Tanks 1-500 gal B.Bay Tank	(5) ATTACK 2-300 gal Tip Tanks 1-840 gal Tank	(6) TANKER 2-300 gal Tip Tanks 1300 gal Bomb Bay Tank
TAKE-OFF WEIGHT	lb. 51,441	50,580	49,979	54,000
Fuel (Fixed/Drop)	lb. 7,302/3,600	10,302/3,600	12,342/3,600	7,302/3,600
Fayload	lb. 7,600	3,025	--	7,800 lbs. (JF-5)
Wing loading	lb./sq.ft. 61.5	60.5	59.8	64.6
Stall speed - power-off	kn. 104.8	103.2	103.0	107.0
Take-off run at S.L. - calm (A)	ft. 2,350(1,480)	2,050(1,380)	2,040(1,300)	2,850(1,790)
Take-off run at S.L. 25 kn. wind (A)	ft. 1,450 (829)	1,200 (760)	1,180 (720)	1,725(1,020)
Take-off to clear 50 ft. - calm	ft. --	--	--	--
Max. speed/altitude (B)	kn./ft. 294/26,000	300/26,000	300/26,000	285/26,000
Rate of climb at S.L. (B)	fpm. 930	1,000	1,020	850
Time: S.L. to 10,000 ft. (B)	min. 13.0	12.0	11.9	15.0
Time: S.L. to 20,000 ft. (B)	min. 30.0	26.0	25.8	35.0
Service ceiling (100 fpm) (B)	ft. 33,000	34,400	34,500	27,000
Combat range	n.mi. 1,490	2,150	2,655	1,360
Average cruising speed	kn. 234	226	233	233
Cruising altitude(s)	ft. 25,000	25,000	25,000	25,000
Combat radius	n.mi. 695	1,000	--	680
Average cruising speed	kn. 204	203	--	207
Mission time	hr. 7.04	10.17	12.1	7.4

COMBAT LOADING CONDITION	(2) 1 MK-15 Bomb retained	(4) 1 MK-5 Bomb retained
COMBAT WEIGHT	lb. 47,841	46,980
Engine power	Dry Mil. All Eng.	Dry Mil. All Eng.
Fuel	lb. 7,302	10,302
Combat speed/combat altitude	kn./ft. 382/30,000	385/30,000
Rate of climb/combat altitude	fpm/ft. 1,700/30,000	1,860/30,000
Combat ceiling (500 fpm)	ft. 40,000	41,500
Rate of climb at S.L.	fpm. 2,740	3,050
Max. speed at S.L.	kn. 309	310
Max. speed/altitude	kn./ft. 385/32,000	390/34,000

LANDING WEIGHT	lb. 33,840	34,704
Fuel	lb. 901	1,051
Stall speed - power-off	kn. 85.6	86.6
Stall speed - with approach power	kn. 72.6	73.7

NOTES

REASONS FOR REISSUE: Loading condition modified to include special stores. Performance data completely based on NATESTCEN Flight Test Data.

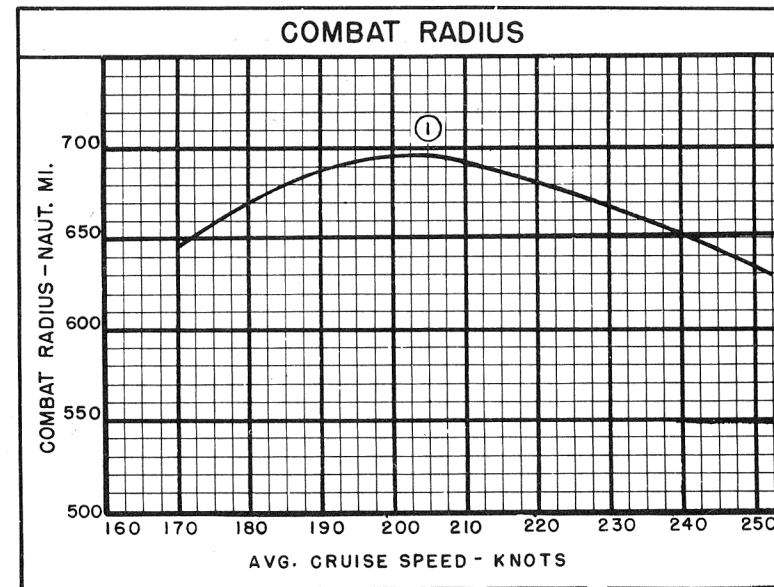
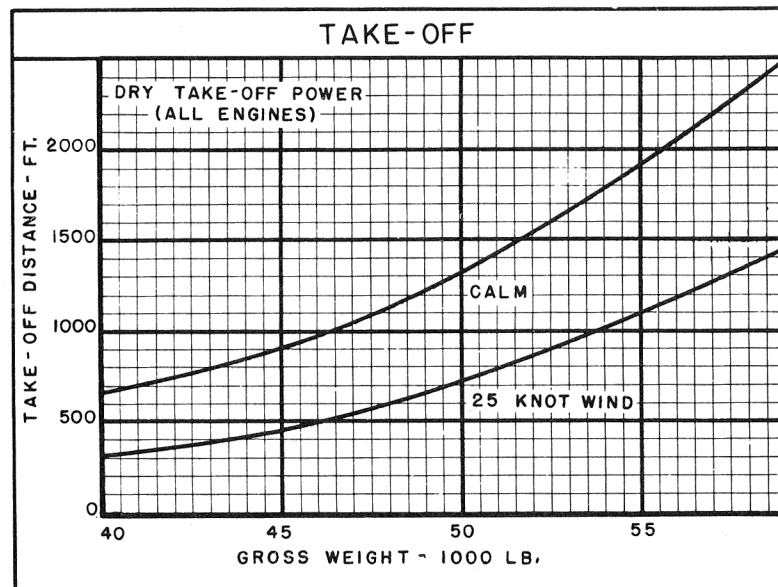
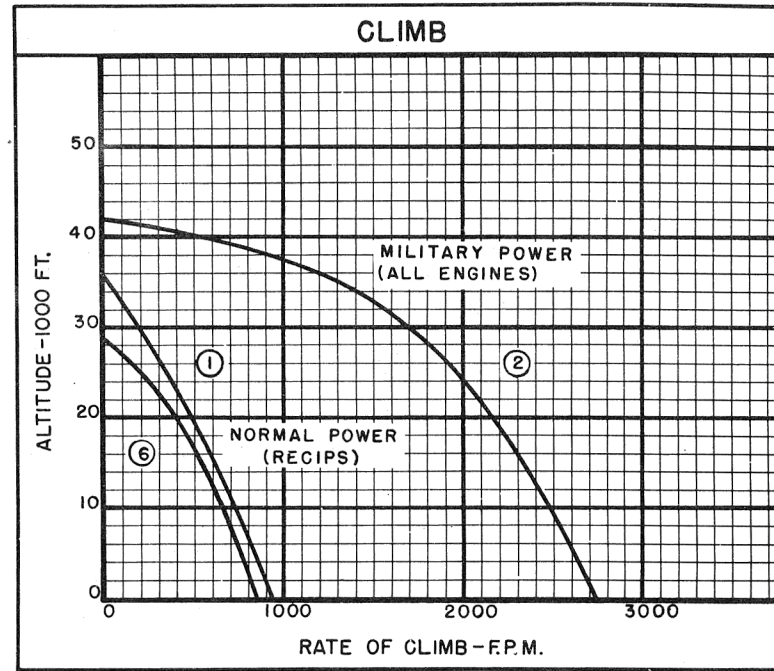
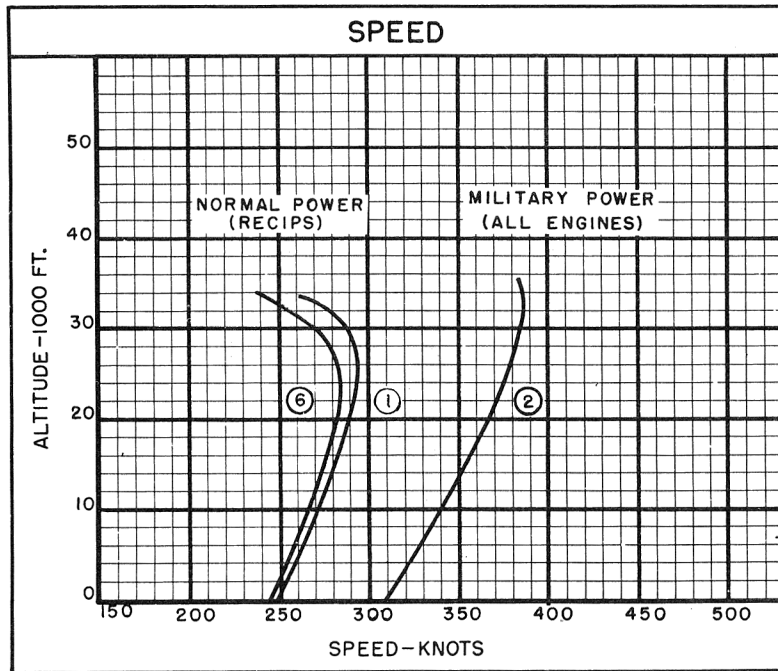
(A) Take-off distances are for take-off power on reciprocating engines. Figures in parenthesis are for take-off power on all engines.

(B) Normal Rated Power (2 reciprocating engines)

COMBAT RANGE and RADIUS are based on flight test fuel consumption increased by 5%.

Tip tanks are carried at all times. (Cruising fuel consumption is better with tip tanks on than with tip tanks off).

SPOTTING: A total of 22 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

V₀

NOTES

HIGH ALTITUDE ATTACK COMBAT RADIUS PROBLEM

WARM-UP, TAXI, TAKE-OFF: Reciprocating engines: 10 minutes at normal rated power.
 Jet engine: 5 minutes at normal rated power.

CLIMB: On course to 25,000 ft. at normal rated power. Jet off.

CRUISE-OUT: At 25,000 ft. at V for long range. Jet off. Tip tanks retained.

CLIMB: On course to 30,000 ft. at normal rated power. Jet off. Climb ends 87 nautical miles from target.

CRUISE-OUT: 43.5 nautical miles at 30,000 ft. at V for long range. Jet off.

RUN-IN: 43.5 nautical miles at 30,000 ft. at military rated power, all engines.

DROP BOMBS

RUN-OUT: 43.5 nautical miles at 30,000 ft. at military rated power, all engines.

DESCEND: To 10,000 ft. (No fuel used, no distance gained).

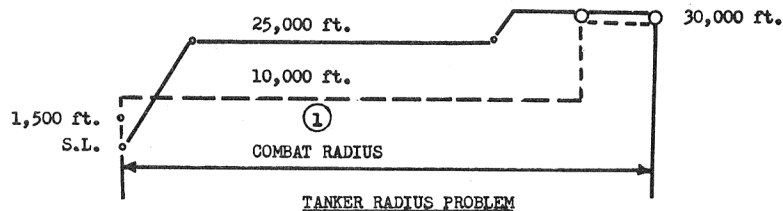
CRUISE-BACK: At 10,000 ft. at V for long range. Jet off.

DESCEND: To 1,500 ft. (No fuel used, no distance gained).

RESERVE: 30 minutes at V for long range at sea level (jet off) plus 5% of initial fuel load.

$$\text{COMBAT RADIUS} = \text{CLIMB} + \text{CRUISE-OUT} + \text{CLIMB} + \text{CRUISE-OUT} + \text{RUN-IN} = \text{RUN-OUT} + \text{CRUISE-BACK}$$

$$\text{MISSION TIME} = \text{CLIMB} + \text{CRUISE-OUT} + \text{CLIMB} + \text{CRUISE-OUT} + \text{RUN-IN} + \text{RUN-OUT} + \text{CRUISE-BACK}$$



WARM-UP, TAXI, TAKE-OFF: Reciprocating engines: 10 minutes at normal rated power.
 Jet engine: 5 minutes at normal rated power.

CLIMB: On course to 25,000 ft. at normal rated power. Jet off.

CRUISE-OUT: At 25,000 ft. at V for long range. Jet off. Tip tanks retained.

CLIMB: On course to 30,000 ft. at normal rated power. Jet off.

REFUEL RECEIVERS: 30 minutes at V for long range. No distance gained.

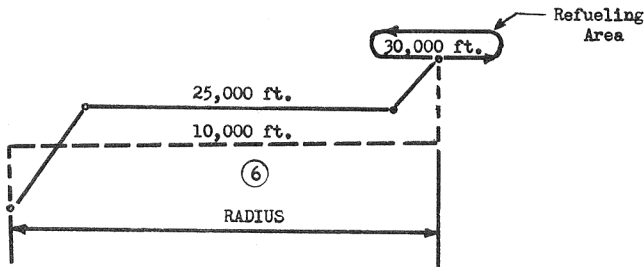
DESCEND: To 10,000 ft. (No fuel used, no distance gained).

CRUISE-BACK: At 10,000 ft. at V for long range. Jet off.

RESERVE: 30 minutes at V for long range at sea level (jet off) plus 5% of initial fuel load.

$$\text{RADIUS} = \text{CLIMB} + \text{CRUISE-OUT} + \text{CLIMB} = \text{CRUISE-BACK}$$

$$\text{MISSION TIME} = \text{CLIMB} + \text{CRUISE-OUT} + \text{CLIMB} + \text{REFUELING} + \text{CRUISE-BACK}$$



○ LOADING CONDITION COLUMN NUMBER

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Standard Aircraft Characteristics NAVAER 1335F (Rev. 1-55)