



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

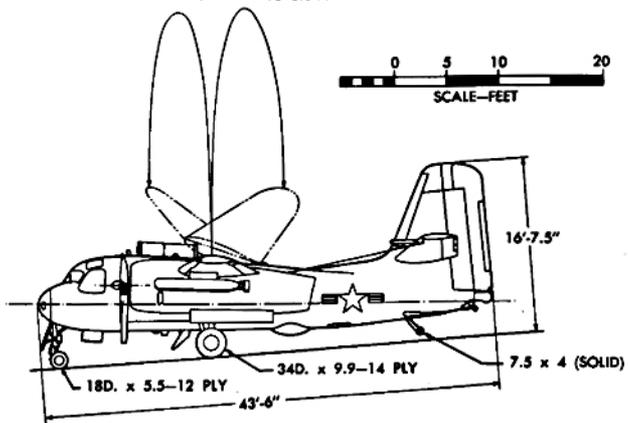
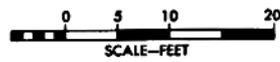
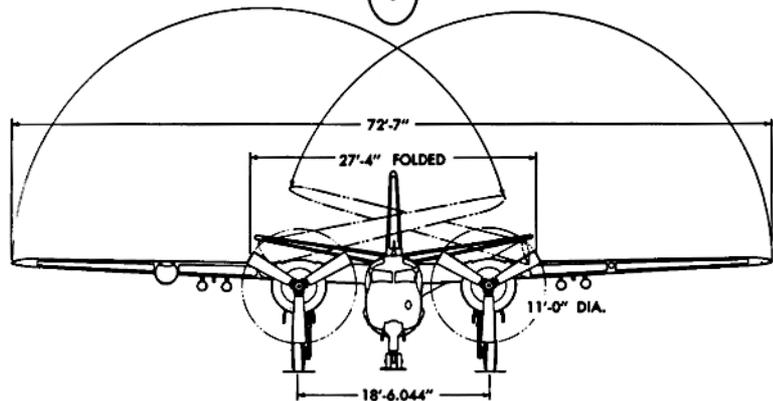
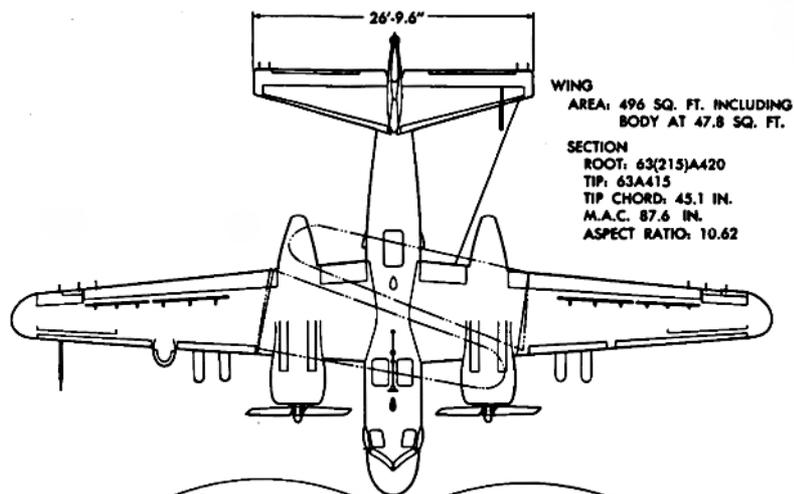
STANDARD AIRCRAFT CHARACTERISTICS

S2F-3 "TRACKER"

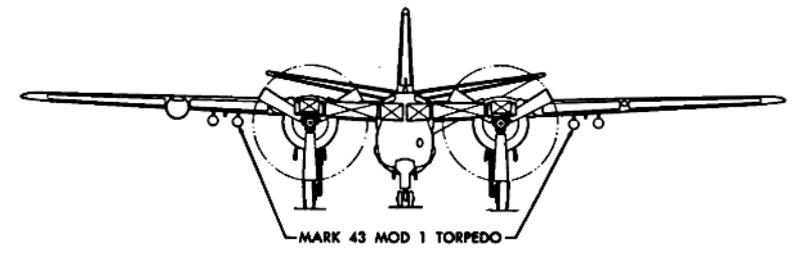
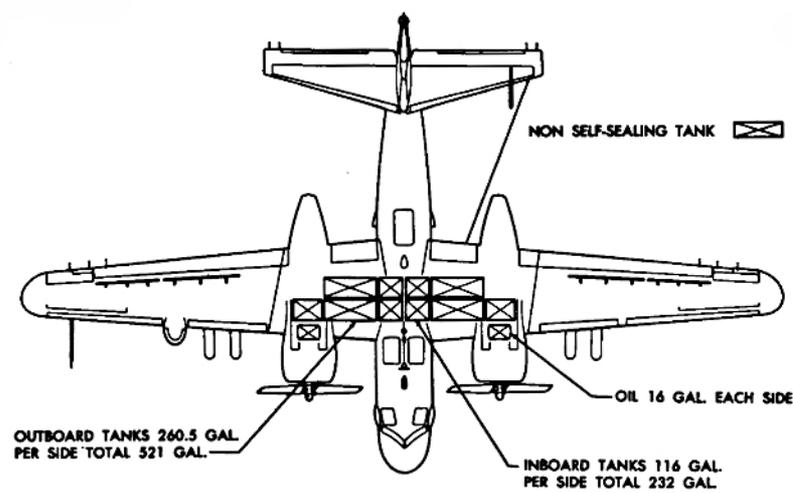
GRUMMAN

30 APRIL 1960

S2F-3

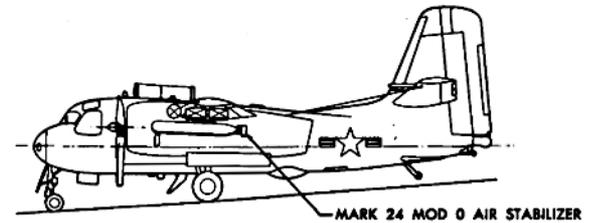


DESCRIPTIVE ARRANGEMENT
 S2F-3



EXTERNAL STORES
 ALTERNATE LOADING
 LAUNCHER POSITION

OUTBOARD	MIDDLE	INBOARD
5" HVAR ROCKET	5" HVAR ROCKET	5" HVAR ROCKET
MK 34 DEPTH BOMB	5" HVAR ROCKET	MK 34 DEPTH BOMB
MK 43-1 TORPEDO	MK 43-1 TORPEDO	MK 43-1 TORPEDO
MK 44-0 TORPEDO	5" HVAR ROCKET	MK 44-0 TORPEDO
MK 46-0 TORPEDO	5" HVAR ROCKET	MK 46-0 TORPEDO



ARMAMENT AND TANKAGE
 S2F-3

POWER PLANT

NO. & MODEL (2) R-1820-S2A
 MANUFACTURER CURTISS WRIGHT
 SUPERCHARGER 1 STAGE, 1 SPEED
 REDUCTION GEAR RATIO 0.5625:1
 PROP. MFR. HAM. STAND.
 BLADE DES. NO. 6985B-7
 NO. OF HL./DIS. 3/11' - 0"

RATINGS

	BHP	RPM	ALT
T.O.	1,525	2,800	700
MIL.	1,425	2,700	2,400
NORM.	1,275	2,500	3,500

SPEC. NO. N867-c

MISSION AND DESCRIPTION

The S2F-3 is a twin engine ASW airplane, whose mission is to search for, detect and destroy enemy submarines. It carries a crew of four: pilot, co-pilot, ECM/MAD operator and a sonobuoy operator. Crew members can interchange positions in flight and also service the electronic equipment.

The airplane is capable of operating from CV-34 and larger class carriers or land bases.

The S2F-3 is a development of the S2F-1 and incorporates the following changes:

- Wing span increased by 2.9 ft.
- Wing area increased by 14 sq. ft.
- Fuselage lengthened by 1.5 ft.
- APA-69A radome (over cockpit) removed
- Stabilizer span and area increased
- Afterbody of engine nacelles modified
- Internal fuel capacity increased by 233 gallons

WEIGHTS

LOADING	LBS.	L.F.
EMPTY.....	18,590	
BASIC.....	18,930	
DESIGN.....	26,214	3.0
MAX.T.O.(Field).....	28,750	
(Cat.).....		
MAX. LDG.(Field).....	23,820	
(Arrest).....		

All data based on actual weights

FUEL AND OIL

GALS.	NO. TANKS	LOCATION
753	5/side	Wing
Fuel Grade		115/145
Fuel Spec		MIL-G-5572B

OIL

Capacity (Gals)	32.0
Grade	1100
Oil Spec	MIL-L-6082B

ORDNANCE

DROPPABLE STORES

BOMB BAY	NO.
MK. 34-1 Torpedo	1
MK. 43-1 Torpedo	2
MK. 44-0 Torpedo	2
MK. 46-0 Torpedo	2
MK. 54-1 Depth Bomb	1
MK. 101-0 Depth Bomb	1

FUSELAGE

MK. 15-12 Practice Depth Charge:	
Normal.....	25
Overload	60

ENGINE NACELLE

AN/55Q-2B, -2D, -23, -26, -28..	28
XI-3A Floatlight.....	4

WING STORES

MK. 43-1 Torpedo.....	6
MK. 44-0 Torpedo.....	4
MK. 46-0 Torpedo.....	4
MK. 54-1 Depth Bomb	6
5" HVAR Rocket	6

WING

AN/AVQ-2C Searchlight.....	1
----------------------------	---

DEVELOPMENT

First Flight May 1959
 First Service Use September 1960

DIMENSIONS

WING	
AREA	496 sq. ft.
SPAN	72 ft. 7 in.
SPAN (WINGS FOLDED).....	27 ft. 4 in.
MAC	7 ft. 4 in.
LENGTH	43 ft. 6 in.
HEIGHT	16 ft. 7½ in.
TREAD	18 ft. 6.044 in.
PROP. GRND. CLEARANCE... 2 ft.	0 in.

ELECTRONICS

UHF Trans-Receiver	ARC-52
HF Trans-Receiver.....	ARC-39
ICS.....	AIG-14
Marker	ARN-32
LF ADF	ARN-59
IFF	APX-6B
ECM Dir. Finder	ALD-2
*Sono. Receiver.....	ARR-58
Radar	APS-88
Tape Recorder	UNH-6
UHF DF	ARA-25A
Tacan	ARN-21A
Altimeter	APN-117
Doppler Radar	APN-122
Navigation Computer	ASA-13A
Plotting Board	ASA-13
Coder	APA-89
Recorder Group	ASA-26
Indicator Group	AQA-3
MAD	ASQ-10
Nuclei Detector.....	ASR-3
Julie Target Computer.....	ASA-31

*Only First 35 Aircraft (BuNos:
 147531 to 147537 (incl) and 147868 to
 147895 (incl), the Rest will be
 equipped with ARR-52

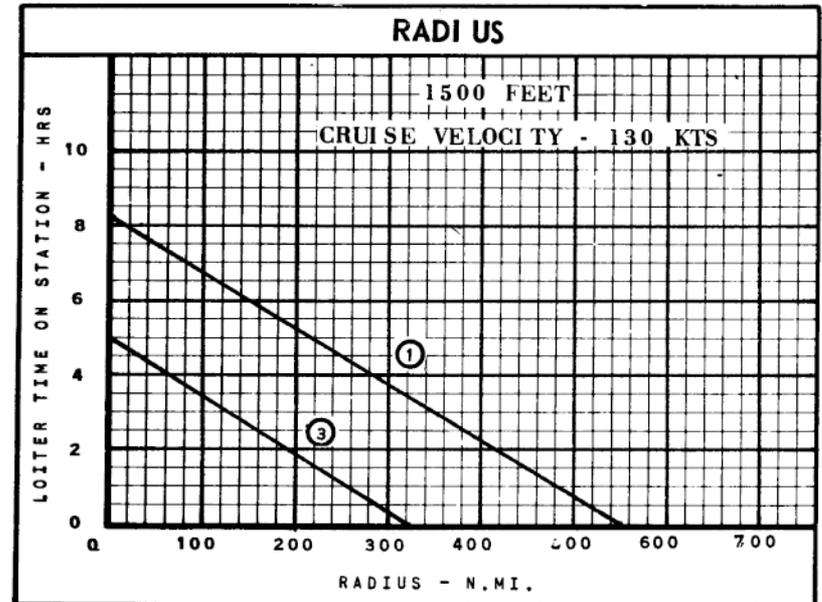
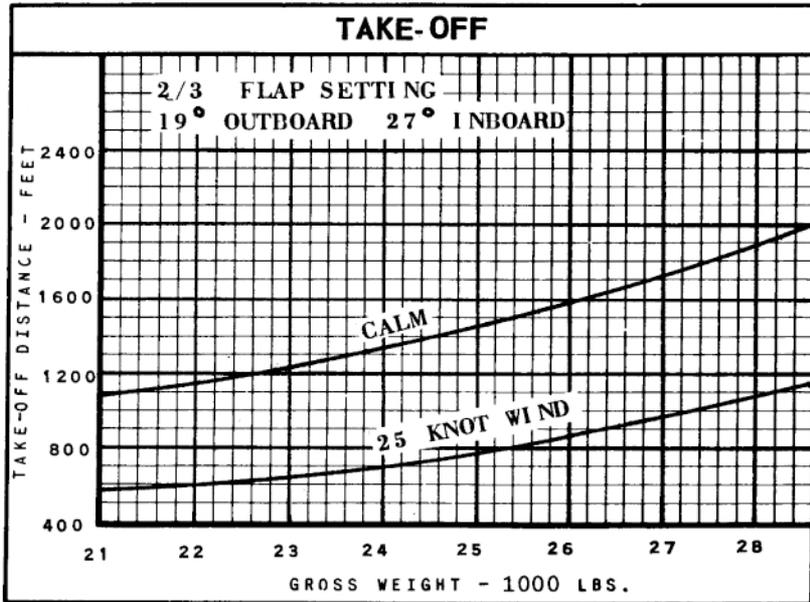
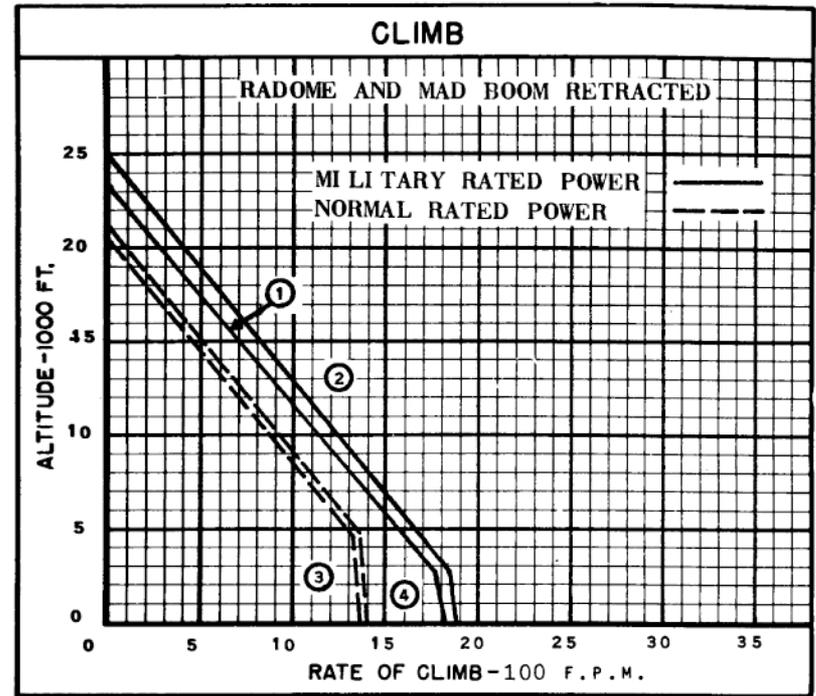
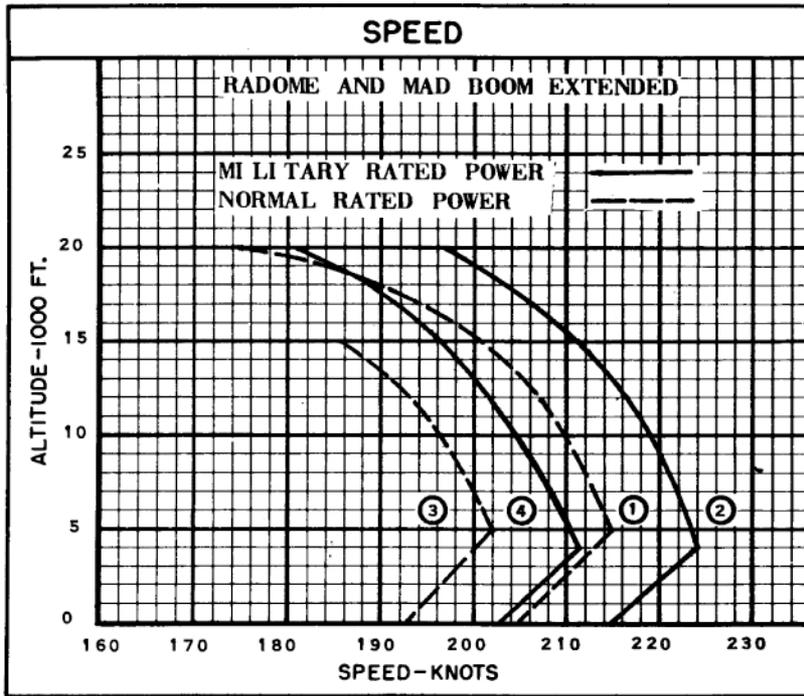
PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	① ASW LONG RANGE 1-MK 101 Depth Bomb (Bomb Bay)	③ ASW INTERMEDIATE (2) MK-44 Bomb Bay (4) MK 44-1 Wing			
TAKE-OFF WEIGHT	lb.	26475	25958		
Fuel	lb.	4518	3126		
Payload	lb.	1886	2591		
Wing loading	lb./sq.ft.	53.4	52.4		
Stall speed - power-off @ S.L.	kn.	83	84		
Take-off run at S.L. - calm (B)	ft.	1660	1600		
Take-off run at S.L. 25 kn. wind (B)	ft.	925	880		
Take-off to clear 50 ft. - calm	ft.	--	--		
Max. speed/altitude (A) (C)	kn./ft.	215/5000	202/5000		
Rate of climb at S.L. (C)	fpm.	1400	1380		
Time: S.L. to 10000 ft. (C)	min.	8.2	8.5		
Time: S.L. to Service Ceiling (C)	min.	31.0	34.0		
Service ceiling (100 fpm) (C)	ft.	20000	19200		
Combat range (A)	n.mi.	1075	650		
Average cruising speed (A)	kn.	130	130		
Cruising altitude(s) (A)	ft.	1500	1500		
Combat radius/Mission time (A)	n.mi./hr.	431/8.26	260/5.00		
Average cruising speed (A)	kn.	130	130		
Cruising Altitude (A)	ft.	1500	1500		
COMBAT LOADING CONDITION	② ASW LONG RANGE	④ ASW INTERMEDIATE			
COMBAT WEIGHT	lb.	24668	24708		
Engine power		Military	Military		
Fuel	lb.	2711	1876		
Combat speed/combat altitude (A)	kn./ft.	219/1500	206/1500		
Rate of climb/combat altitude	fpm/ft.	1870/1500	1780/1500		
Combat ceiling (500 fpm)	ft.	18500	17200		
Rate of climb at S.L.	fpm.	1880	1800		
Max. speed at S.L. (A)	kn.	215	203		
Max. speed/altitude (A)	kn./ft.	224/4000	211/4000		
LANDING WEIGHT	lb.	22409	23145		
Fuel	lb.	452	313		
Stall speed - power-off/approach power	kn./kn.	77.9/64.8	81.0/67.0		
Landing distance - ground roll	ft.	2280	2300		

NOTES

- (A) Radome and MAD Boom Extended. Retraction of MAD Boom and Radome increases speed by about 10 kts.
 (B) Take-off Power
 (C) Normal Rated Power

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



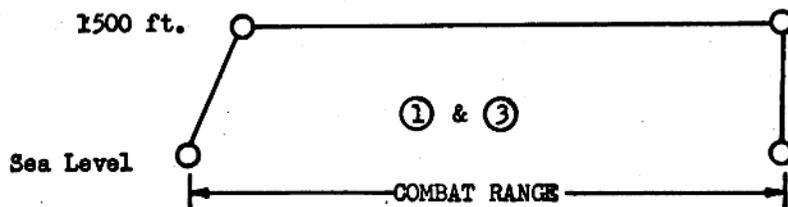
○ LOADING CONDITION COLUMN NUMBER

NOTES

ASW MISSIONS

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal rated power at sea level.
CLIMB: With normal rated power to 1500 feet (Radome and MAD boom retracted).
RANGE AND ENDURANCE: Cruise at 130 knots at 1500 feet (Radome and MAD boom extended).
RESERVE: 10% of initial fuel load.
ELECTRICAL ACCESSORY DRAW: 45 BHP per engine during cruise.

Combat radius is 40 per cent of combat range @ 1500 feet altitude



SEA LEVEL SINGLE ENGINE RATE OF CLIMB

SPEED - 110 Knots

CONFIGURATION - (4) MK 43 Torpedoes (wing mounted), Gear up, Flaps 1/3, Inoperative Propeller Feathered and Take-off Power

<u>Gross Weight</u> (lbs.)	<u>Rate of Climb</u> (Std Day-ft/min.)
24000	435
26000	300
28000	175

REMARKS - Torpedoes carry Cones and Parapacks (MK.24MOD.0)

SPOTTING

A total of 61 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-34 class angled deck carrier. (33 flight, 28 hangar)