



STANDARD AIRCRAFT CHARACTERISTICS
TBM-3S "AVENGER"

MISSION AND DESCRIPTION

This is a carrier based anti-submarine modification of the TBM-3E which has had wide service use as a torpedo bomber. The TBM-3S is basically similar to the TBM-3E and has the addition of electronic gear to adapt it to anti-submarine warfare. The plane is presently being evaluated and is planned as an interim ASW aircraft for use until replaced by the AF-1S and -2S.

Structure is conventional, using single spar wing, hydraulically or manually folded, carrying a split flap of 62.5 sq. ft. area.

DIMENSIONS

SPAN.....54'-2"
 LENGTH.....41'-0"
 HEIGHT.....15'-7"
 WING AREA.....490 sq. ft.
 M.A.C.....117.2"
 TREAD.....10'-10"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	11055.....	
BASIC.....	11870.....	
DESIGN.....	14500.....	4.0
COMBAT.....	15097.....	3.7
MAX. T.O.....	17600.....	2.8
MAX. LAND.....	16000.....	

FUEL AND OIL

Gals. - No. Tanks - Location
 335.....3..Fuselage(protect.
 150.....1..Wing (drop)
 FUEL GRADE.....100/130
 FUEL SPEC.....AN-F-48

OIL

CAPACITY (Gals.).....32
 SPEC.....AN-O-8
 GRADE.....1120

ELECTRONICS

SEARCH RADAR.....AN/APR-1
 SONOBUOY REC.....AN/APR-16B
 RCM.....AN/APA-70
 RANGE RECEIVER.....AN/ARC-5
 VHF COMMAND.....AN/ARC-1
 HOMING.....AN/ARR-2
 IFF.....AN/APX-2
 RADAR.....AN/APS-4
 ALTIMETER.....AN/APN-1
 SEARCHLIGHT.....L-11
 HF LIAISON.....AN/ART-13

POWER PLANT

NO. & MODEL....(1) R-2600-20
 MFR.....WAC
 SUPERCH.....1 Stage, 2 Speed
 PROP.GEAR RATIO.....16:9
 PROP. MFR.....Ham. Std.
 PROP.DES.NO.....6359-A12
 NO.BL./DIA.....3/13'-0"

RATINGS

	Bhp. @	Rpm. @	Alt.
T.O.	1900	2800	S.L.
	or 1800	2600	S.L.
MIL.	1750	2600	3200'
	1450	2600	15000'
NORMAL	1600	2400	5000'
	1350	2400	14800'
	SEE NOTE		
	SPEC NO. N-776-B		

ORDNANCE

GUNS

No.	Size	Location	Rds.
2	.50 Cal.	Wing	400
MK. 8	Illum. - Sight		

BOMBS & ROCKETS

Type	Size	Location	No.
Torp.	Mk. 34	B.B.	1
HVAR	5"	Wing	8
MK. 23-6	Bombsight		
MK. 41-1	Aircraft Periscope		
Camera K-25			
2 Sonobuoys, D			
12 Sonobuoys, N.D.			
18 Float lights, MK.5			
2 Flares MK.6			



PERFORMANCE SUMMARY			
LOADING CONDITION		(1) Torpedo 1-MK. 34 Torp. 1-150 Gal. Ext. tank	(3) Rocket-Torp. 8-5" HVAR 1 MK34 Torp.
TAKE-OFF WEIGHT	lbs	17280	17377
Fuel Fixed/Drop	lbs	2010/900	2010
Bombs	lbs	1160	1160
	lbs		
Wing/Power Loading (A)	lbs/sq.ft. lbs/bhp	35.3/11.9	35.5/12.0
Stall Speed--Power off	kn	70.8	71.0
Stall Speed--Power off - No Fuel	kn	64.6	66.8
Stall Speed--Power on	kn	68.4	68.6
Maximum Speed/Alt (B)	kn/ft	208/17300	207/17300
Take-off Distance, deck -- calm	ft	964	978
Take-off Distance, deck 25 kn.	ft	423	430
Take-off Distance, Airport	ft		
Rate of climb -- sea level (B)	ft/min	1395	1295
Service Ceiling (B)	ft	25600	25500
Time-to-climb 10000 ft. (B)	min	9.0	9.1
Time-to-climb 20000 ft. (B)	min	23.9	24.0
Combat Range/V av 1500	ft. n.mi/kn	965/124	630/126
Combat Radius/V av 1500	ft. n.mi/kn	385/124	250/126
LOADING CONDITION		(2) Combat	(4) Combat
GROSS WEIGHT	lbs	15097	15097
Engine power		Military	Normal
Fuel	lbs	2010	2010
Bombs/Tanks			
Max. speed at sea level	kn	205	198
Max. speed/ACA ft.	kn	223/16400	218/17400
Combat speed/Alt.	kn/ft	208/1500	200/1500
Rate of climb SL	ft/min	1860	1645
Ceiling for 500 fpm R/C	ft	23700	23100
Time-tc-climb/Alt.	min/ft	15.4/20000	17.1/20000

NOTES

(A) BHP at Maximum Critical Altitude

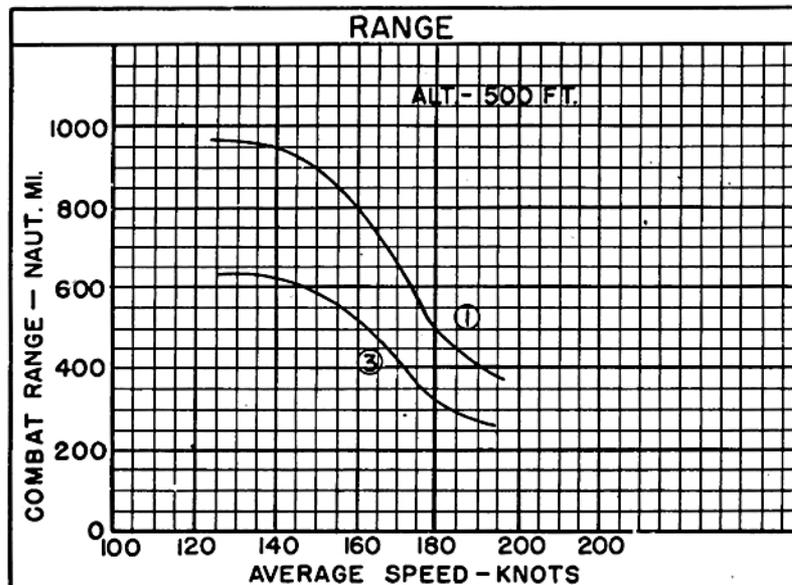
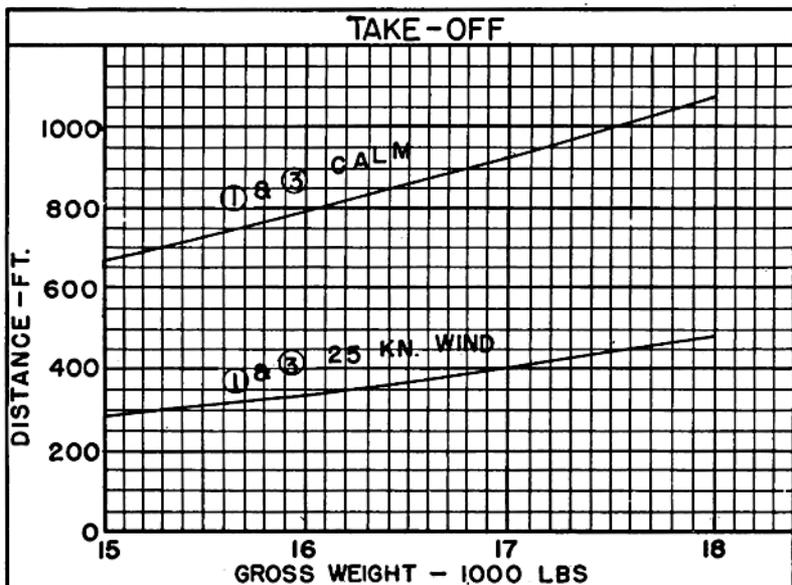
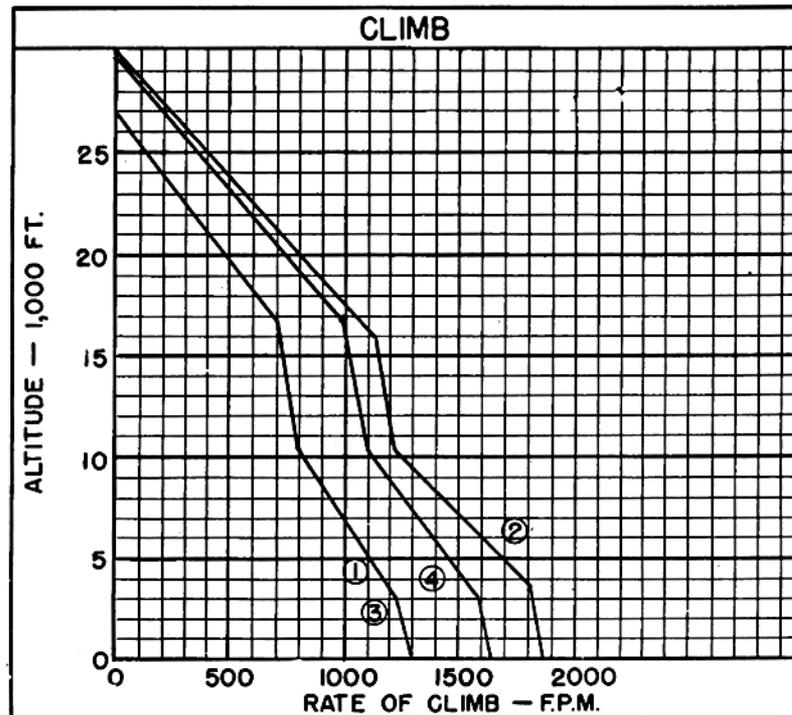
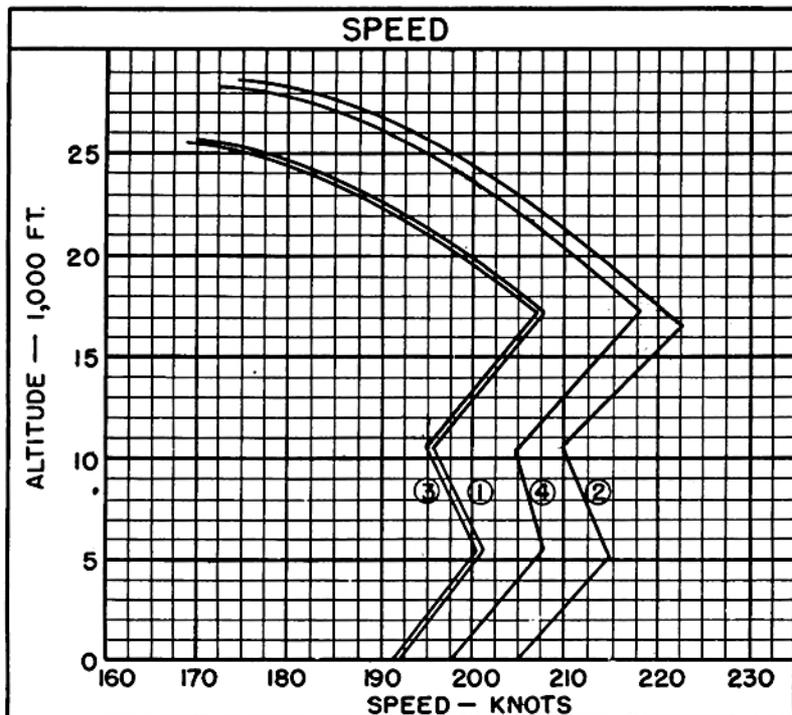
(B) Normal BHP

Performance is based on flight test of the TBM-3 airplane.

Range and radius are based on flight test fuel consumption of the TBM-3 airplane increased by 5%.

 Rocket launchers, AN/APS-4, searchlight, and camera aboard in all conditions, sway bracing and rack installed only when drop tank is carried.

NOTES CONTINUED ON LAST PAGE



○ LOADING CONDITION COLUMN NUMBER

NOTES

Spotting: 200ft. length is required to spot 25 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 Class carriers.

Combat Radius is .4 of maximum combat range at 1500 ft.

Engine ratings from Flight Test:

	<u>Hhp.</u>	<u>Rpm.</u>	<u>Alt.</u>
T.O.	1900	2800	S.L.
Mil.	1750	2600	3700
	1450	2600	15900
Norm.	1600	2400	4200
	1350	2400	16900