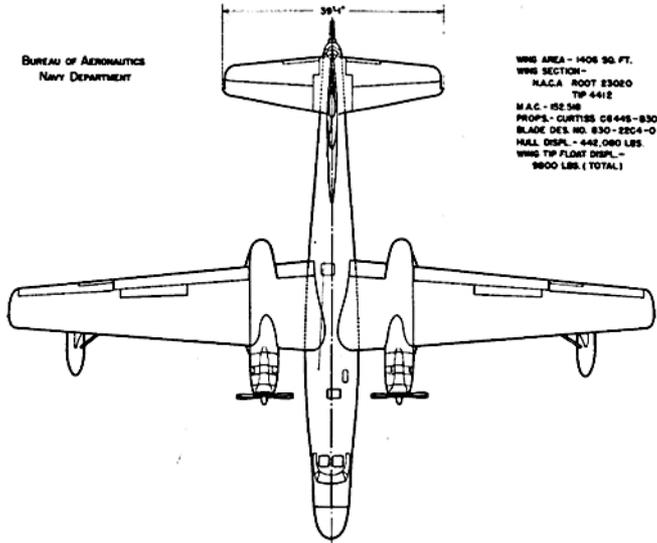
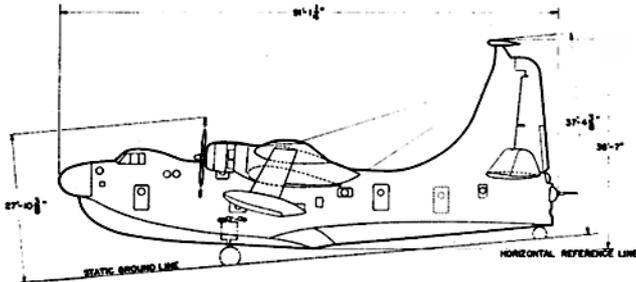
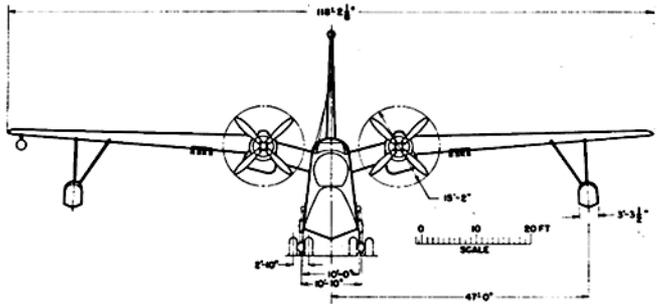


STANDARD AIRCRAFT CHARACTERISTICS
P5M-1 "MARLIN"
MARTIN

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

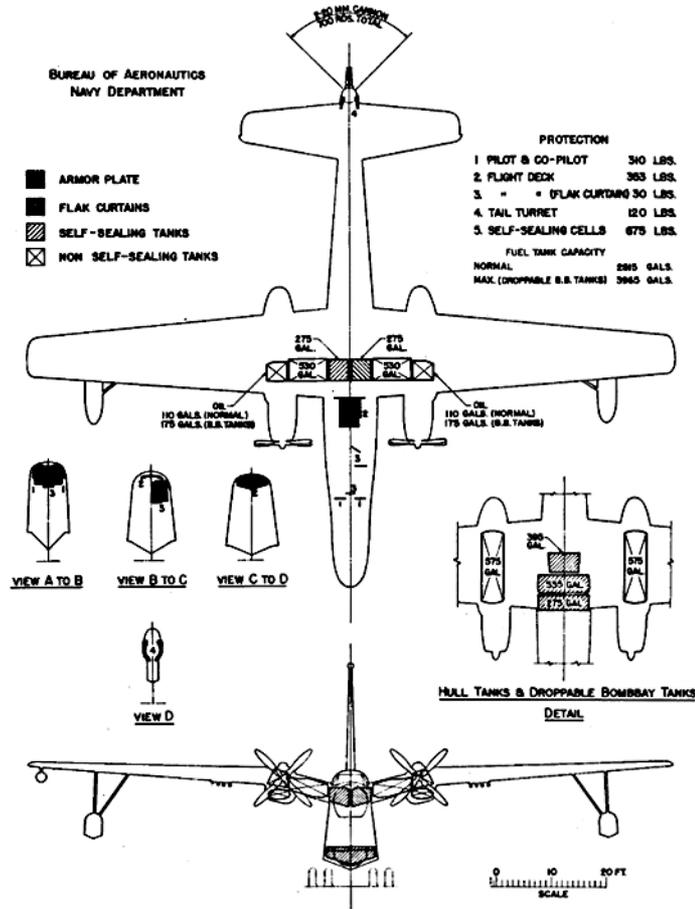


WING AREA - 1406 SQ. FT.
WING SECTION -
NACA ROOT 83020
TP 4412
M.A.C. - 152.546
PROPS. - CURTISS C8448-8300
BLADE DES. NO. 830-2204-10
HULL DISPL. - 442,090 LBS.
WING TP FLGHT DISPL. -
5800 LBS. (TOTAL)



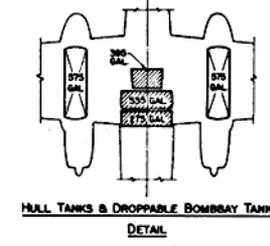
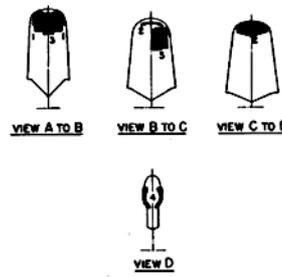
DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



- ARMOR PLATE
- FLAK CURTAINS
- ▨ SELF-SEALING TANKS
- ☒ NON SELF-SEALING TANKS

- PROTECTION
- 1 PILOT & CO-PILOT 310 LBS.
 2. FLIGHT DECK 363 LBS.
 3. " " FLAK CURTAIN 30 LBS.
 4. TAIL TURRET 120 LBS.
 5. SELF-SEALING CELLS 675 LBS.
- FUEL TANK CAPACITY
- NORMAL 285 GALS.
- MAX. (DROPPABLE B.B. TANKS) 386.5 GALS.



ARMAMENT & TANKS

MISSION AND DESCRIPTION

The P5M-1 is an all weather long-range patrol and Electronic Reconnaissance flying boat designed primarily for ASW. Secondary missions are long-range, low altitude radar mapping; mine laying; open sea rescue.

The P5M-1 is of semi-monocoque construction. The hull incorporates an 8.6 to 1 length beam ratio and a faired step for improved open sea water handling characteristics.

Provision is made for fitting four JATO units. Stabilizer is interchangeable with that of P4M-1. Single slotted flaps are fitted. Operational limitations are 218 knots at sea level, 3.0 G's at 70,000 pounds.

The aircraft is designed to carry a crew of seven men.

DIMENSIONS

WING AREA.....1,406 sq. ft.
 SPAN.....118' - 2"
 LENGTH.....91' - 1"
 HEIGHT.....37' - 4"
 TREAD.....10' - 10"
 M.A.C.....12' - 8"
 PROP. WATER CLEAR....4' - 4"

WEIGHTS

Loading	Lbs.	L.F.
EMPTY.....	46,524.....	
BEACHING (MAX.)..	78,500.....	
DESIGN (FLT.)....	70,000..	3.00
MINIMUM FLT.....	51,000.....	
COMBAT.....	62,281..	3.37
ASW SEARCH.....	72,757.....	
MINE LAYER.....	75,000.....	
FERRY.....	75,000.....	
MAXIMUM	85,000.....	

FUEL AND OIL

Gals.	No. Tanks	Location
1,610	4	Wing Tanks
1,205	3	Hull Tanks
1,150	2	Bomb Bay
FUEL GRADE.....115/145		
FUEL SPEC.....AN-F-48		

OIL

CAPACITY (Gals.).....220
 GRADE.....1120
 SPEC.....AN-O-8

ELECTRONICS

VHF.....AN/ARC-1 or -1A
 MHF.....AN/ARC-2
 TRANS.....AN/ART-13
 REC.....AN/ARR-15A
 RADIO COMPASS.....AN/ARN-6
 RADIO ALTIMETER.....AN/APN-1
 MARKER BEACON REC...AN/ARN-12
 LORAN.....AN/APN-4
 LF TRANS/REC.....R-23A/ARC-5
 RCM.....AN/APR-9B
 RCM HOM. AD.....AN/APA-70A
 GR. STAB.EQUIP.....AN/APA-57
 (Continued on NOTES sheet)

POWER PLANT

NO. & MODEL.....(2) R-3350-30
 MFR.....Wright
 PROP. GEAR RATIO.....0.4375
 PROP. MFR.....Curtiss
 PROP. DES. NO.....830-22C4-0
 NO. BL./DIA.....4/15'-2"

RATINGS

	Bhp	Rpm	@	Alt.
T. O.	3,250	2,900		S. L.
MIL.	3,250	2,900		S. L.
	3,250	2,900		3,400'
	2,550	2,600		15,400'
NORM.	2,500	2,600		S. L.
	2,650	2,600		6,500'
	2,450	2,600		16,600'
SPEC. NO. N-856				

ORDNANCE

GUNS

No.	Size	Location	Rds.
2	20 mm	Tail	600
Tur. Gunsight...Mk. 18 Mod. 6			

BOMBS AND ROCKETS

Type	Size	Location	No.
HVAR	5"	Wings	8
Bombs	1,600#	Wings	2
Bombs	1,000#	Wings	2
Bombs	500#	Wings	4
D.B.	350#	Wings	4
Bombs	1,600#	Bomb Bay	4
Bombs	1,000#	Bomb Bay	4
Bombs	500#	Bomb Bay	4
D.B.	350#	Bomb Bay	4
Torp.	1,700#	Bomb Bay	4
Mines	2,000#	Bomb Bay	4

FIRE CONTROL

Radar.....AN/APA-16
 Alt. Inj. Assy.....AN/APA-61
 MAX. BOMB CAP.....10,000 lbs.

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



PERFORMANCE SUMMARY				
LOADING CONDITION		(1) PATROL A.S.W. 2-Mk. 41 Torps.	(4) PATROL Mining 4-Mk. 25 Mines	(5) FERRY
TAKE-OFF WEIGHT	lbs.	72,757	75,000	75,000
Fuel	lbs.	16,890	16,034	22,649
Bombs	lbs.	2,660	7,720	—
Wing/Power Loading (A)	lbs/sq.ft; lbs/bhp.	51.8/14.3	53.3/14.7	53.3/14.7
Stall Speed--Power off	kn.	85.0	86.3	86.3
Stall Speed--Power off - No Fuel	kn.	74.5	76.6	72.1
Stall Speed--Power on	kn.	78.0	79.2	79.2
Maximum Speed/Alt (B)	kn/ft.	221/17,600	226/17,600	226/17,600
Take-off Time	secs.	28	30	30
Take-off Distance, deck	kn. ft.			
Take-off Distance, Airport	ft.			
Rate of climb -- sea level (B)	ft/min.	740	710	710
Service Ceiling (B)	ft.	20,900	20,500	20,500
Time-to-climb 10,000 ft. (B)	min.	15.2	16.0	16.0
Time-to-climb 20,000 ft. (B)	min.	41.0	45.8	45.8
Combat Range/V av 1,500 ft. n.mi./kn.		1,980/135	1,890/138	2,860/136
Combat Radius/V av 1,500 ft. n.mi./kn.		790/135	760/138	1,140/136
LOADING CONDITION		(2) COMBAT	(3) COMBAT	
GROSS WEIGHT	lbs.	62,281	62,281	
Engine power		Military	Normal	
Fuel	lbs.	10,224	10,224	
Bombs/Tanks		—	—	
Max. speed at sea level	kn.	219	203	
Max. speed/Alt	kn/ft.	234/16,400	233/17,600	
Combat speed/Alt	kn/ft.	222/1,500	207/1,500	
Rate of climb SL	ft/min.	1,480	1,070	
Ceiling for 500 fpm R/C	ft.	19,800	19,800	
Time-to-climb/Alt.	min/ft.			

NOTES

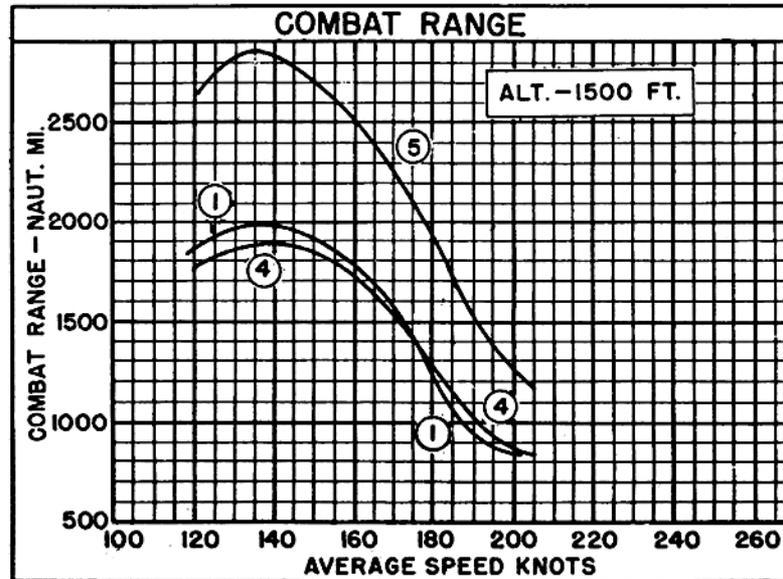
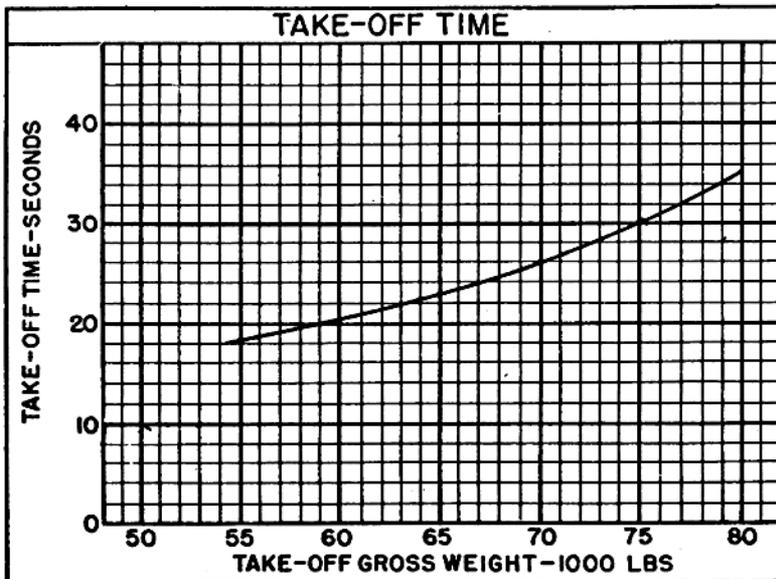
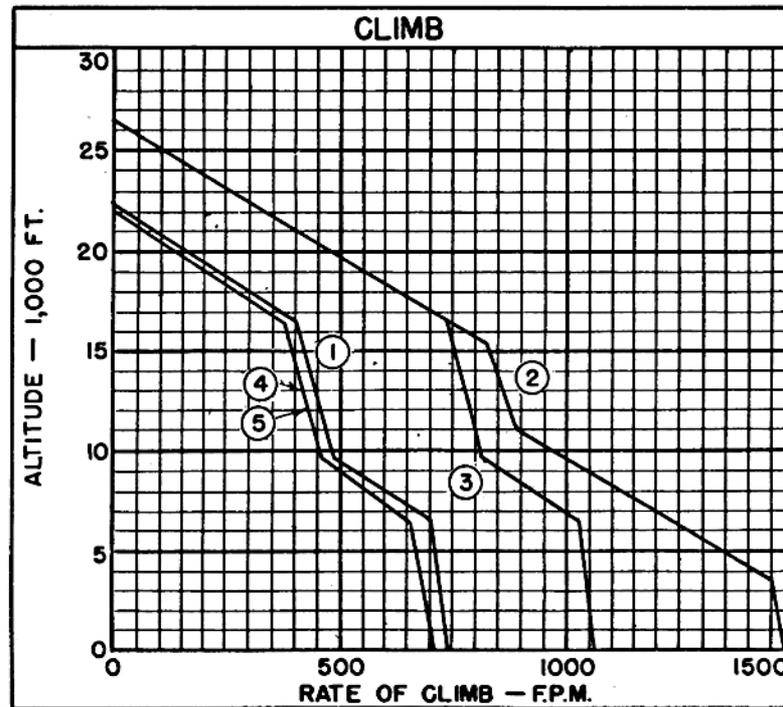
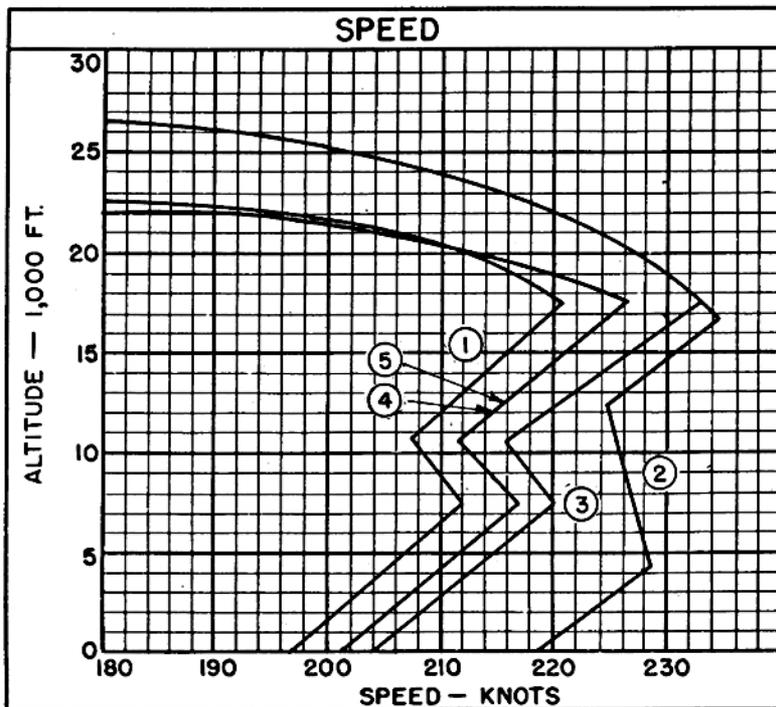
- (A) BHP at Maximum Critical Altitude
(B) Normal BHP

Performance is based on flight test of the XP5M-1 airplane.

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

GENERAL ASW PATROL PROBLEM NO. ASW-1

COMBAT RADIUS = 40% of combat range at 1,500 ft. altitude.



○ LOADING CONDITION COLUMN NUMBER

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

NOTES

Patrol Mining, Alternate, 6 Mk. 36 Mines (2 Mines Carried Externally):

Combat Range - 1,795 n.mi. at Take-Off Weight - 73,920 lbs.; Fuel Weight - 16,084 lbs.;
Mine Weight - 6,390 lbs.

ELECTRONICS EQUIPMENT (Continued):

MAD Equip.....AN/ASQ-8
SEARCH RADAR.....AN/APS-44
SEARCHLIGHT.....AN/AVQ-2A
IFF EQUIP.....AN/APX-6
WIRE RECORDER.....IC/VRW-7
RADIO SET.....AN/ARC-27 or -33
SONOBUOY REC.....AN/ARR-26
VOR.....AN/ARN-14

The following equipment to be Service Installed:

PULSE ANAL.....AN/APA-64B
UHF DIRECTION FINDER.....AN/ARA-25
BATHY THERMO REC.....RD-53/ARH
IFF EQUIP.....AN/APX-7
