

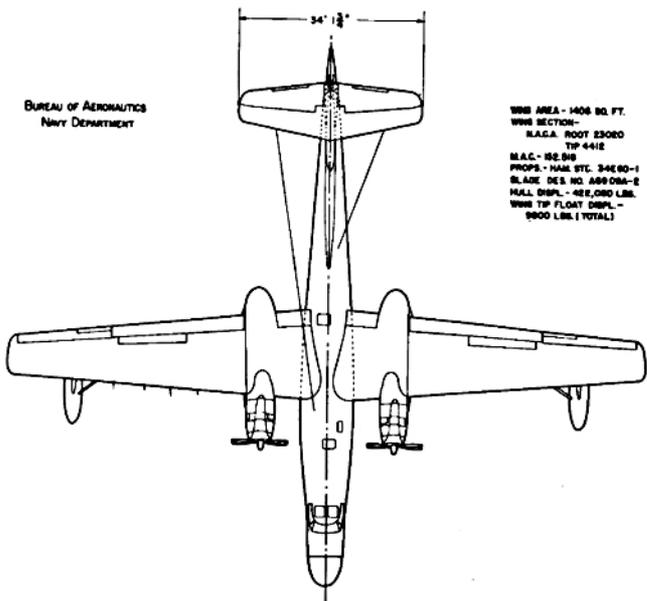


STANDARD AIRCRAFT CHARACTERISTICS

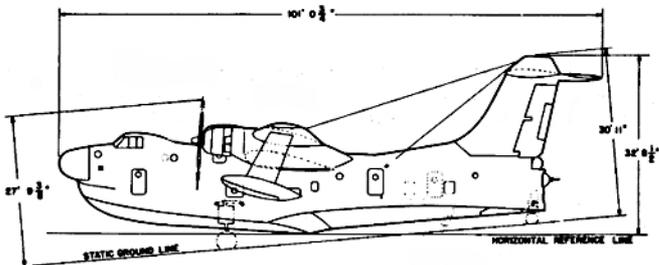
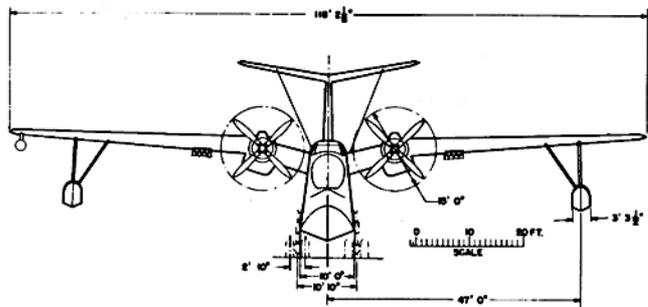
P5M-2 "MARLIN"

MARTIN

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA - 1408 SQ. FT.
WING SECTION -
NACA ROOT E3080
TIP 4412
M.A.C. - 192.919
PROP. - 1444 ETC. 34E60-1
BLADE DES. NO. A69 09A-2
HULL DISPL. - 422,080 LBS.
WING TIP FLOAT DISPL. -
9000 LBS. (TOTAL)



MODEL P5M-2

CONFIDENTIAL

DESCRIPTIVE ARRANGEMENT

NAME

CONFIDENTIAL

ARMAMENT & TANKS

NAVAER

MODEL P5M-2

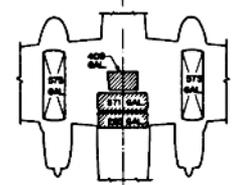
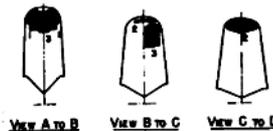
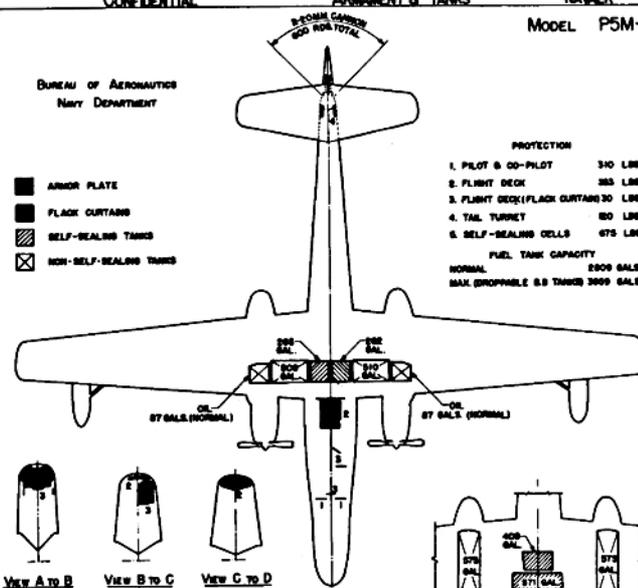
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- ARMOR PLATE
- FLACK CURTAIN
- ▨ SELF-SEALING TANKS
- ⊗ NON-SELF-SEALING TANKS

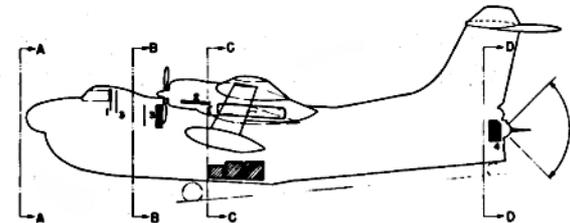
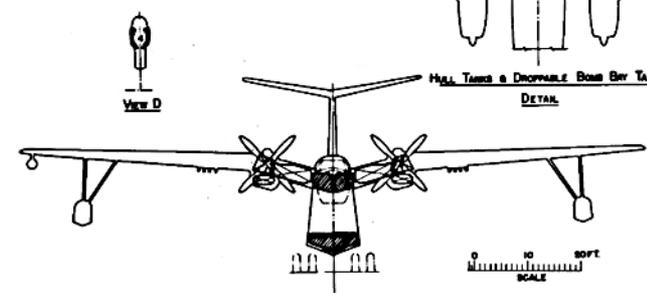
PROTECTION

1. PILOT & CO-PILOT 310 LBS.
2. FLIGHT DECK 383 LBS.
3. FLIGHT DECK (FLACK CURTAIN) 30 LBS.
4. TAIL TURRET 80 LBS.
5. SELF-SEALING CELLS 475 LBS.

FUEL TANK CAPACITY
NORMAL 2908 GALS.
MAX. (DROPPABLE 2.8 THICK) 3099 GALS.



FUEL TANKS & DROPPABLE BOMB BAY TANKS
DETAIL



Standard Aircraft Characteristics NAVAER 13358 (REV. 1-49)

POWER PLANT

NO. & MODEL....(2) B-3350-32W
 MRF.....Wright
 SUPERCHARGER...1 stage, 2 speed
 RED. GEAR RATIO.....0.4375
 PROP. MFR.....Ham. Standard
 PROP. BLADE DES. NO....A6925B-2
 NO. BL./DIA.....4/15'-0"

RATINGS

	<u>BHP</u>	<u>RPM</u>	<u>ALT.</u>
T.O.	3,400	2,900	S.L.
MIL.	3,400	2,900	S.L.
	3,420	2,900	2,400
	2,550	2,600	17,000
NORM.	2,800	2,600	S.L.
	2,850	2,600	4,100
	2,450	2,600	18,000

SPEC. WAD NO. N878-A

ORDNANCEGUNS

<u>NO.</u>	<u>SIZE</u>	<u>LOCATION</u>	<u>RDS.</u>
2	20mm	Tail	600

FIRE CONTROL

Radar AN/APA-16

BOMBS AND ROCKETS

<u>RACKS</u>	<u>NO.</u>	<u>LOCATION</u>	<u>CAP.</u>
Aero 14A	3	Wing	500 lb

Bombs, mines and torpedoes
 also carried in bomb bay.

Max. Bomb Capacity 10,000 lbs.

MISSION AND DESCRIPTION

The P5M-2 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 and open sea rescue.

It is a modified P5M-1 incorporating a tee tail, low chine bow and more powerful engine.

The seaplane is of semi-monocoque construction, has gull wings, single slotted flaps, and is equipped with hydro-flaps for water maneuvering and handling. It carries a crew of seven.

Provisions for four JATO units is provided on the aft fuselage.

DEVELOPMENT

First flight.....April 1954
 Service use.....October 1954

DIMENSIONSWING

AREA.....1406 sq. ft.
 SPAN.....118' - 2"
 M.A.C.....12' - 8"
 LENGTH.....101' - 1"
 HEIGHT.....30' - 11"
 TREAD.....10' - 1"
 PROP. WATER CLEAR....4' - 8"

WEIGHTS

<u>LOADINGS</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY.....	48,383
BASIC(ASW)....	51,413
DESIGN.....	70,000	3.0..
COMBAT.....	62,987
MAX. TAKE-OFF..	78,000	2.7..
MAX. LANDING...75,000	2.8..

All weights are calculated.

FUEL AND OIL

<u>NO. TANKS</u>	<u>TOT. GAL.</u>	<u>LOCATION</u>
4	1545	Wing
3	1264	Hull
2	1150	Bombay

Fuel Grade.....115/145
 Fuel Spec.....MIL-F-5572

OIL

Capacity (Gals).....174
 Grade.....1100
 Spec.....MIL-O-6082A

ELECTRONICS

UHF.....AN/ARC-27A
 Transmitter.....AN/ART-13
 Receiver.....AN/ARR-15A
 Radio Compass.....AN/ARN-6
 Radio Altimeter....AN/APN-22
 Marker Beacon Rec...AN/ARN-12
 Loran.....AN/APN-4
 Interphone System...AN/AIC-5B
 ECM Receiver.....AN/APR-9B
 ECM Hom. Adapter...AN/APA-70C
 Range Rec.....R-23A/ARC-5

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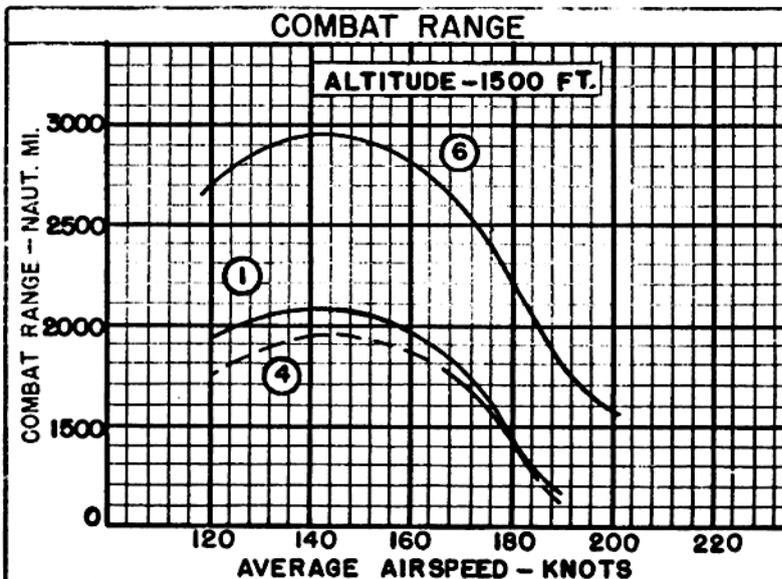
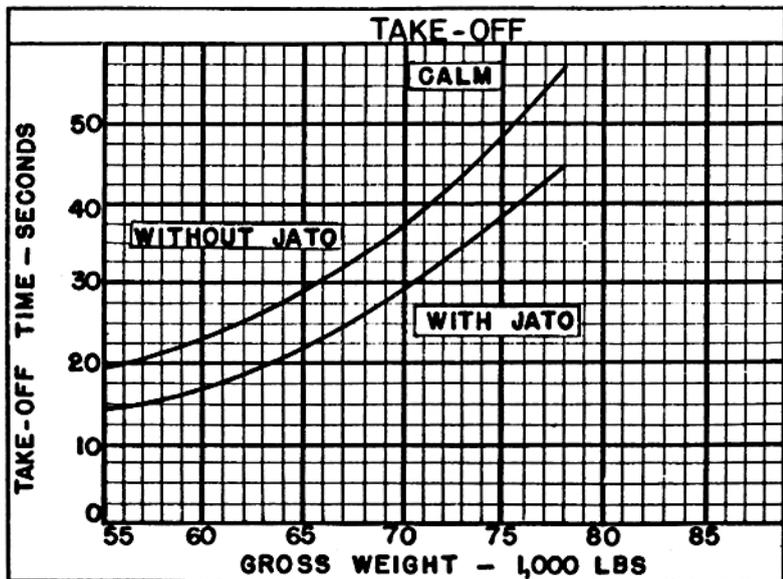
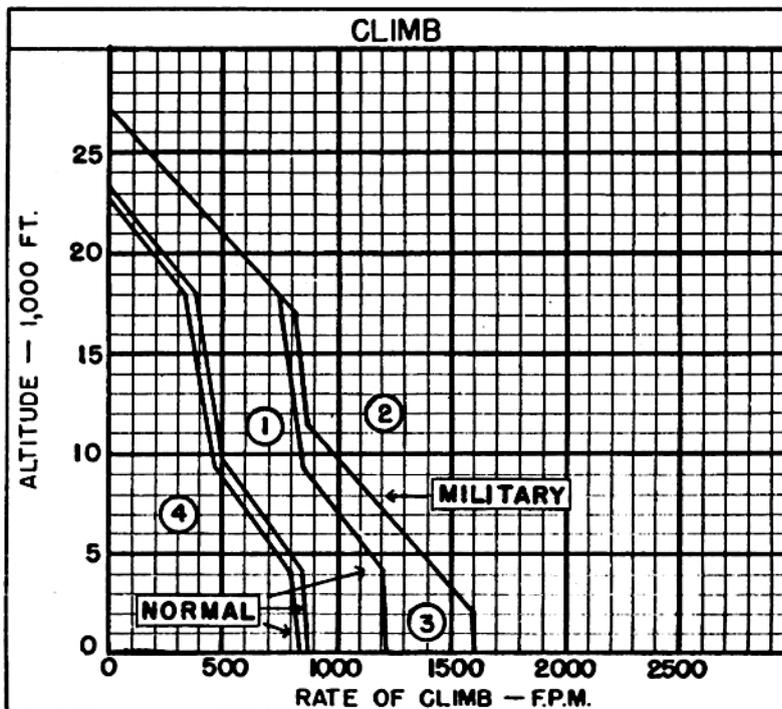
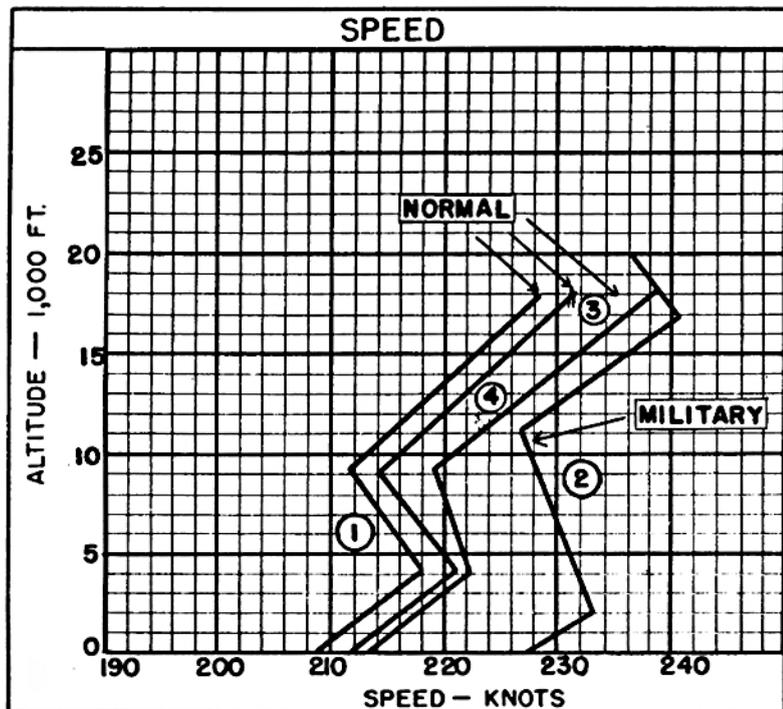
PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) PATROL ASW 2-MK 41-1 Torps. 8-HPAG Rockets	(4) PATROL MINING 4-MK 39	(5) PATROL MINING 4-MK 39 Full Internal Fuel	(6) FERRY
TAKE-OFF WEIGHT lb.	74,302	76,860	77,680	76,748
Fuel lb.	16,854	16,034	16,854	22,649
Payload lb.	4,575	8,200	8,200	0
Wing loading lb./sq.ft.	52.9	54.6	55.2	54.6
Stall speed - power-off kn.	86	87.5	87.8	87.5
Take-off run at S.L. - calm (B) secs.	47	54	56	53.0
Take-off run at S.L. kn. wind ft.	--	--	--	--
Take-off to clear 50 ft. - calm ft.	--	--	--	--
Max. speed/altitude (A) kn./ft.	228/18,000	231/18,000	230/18,000	231/18,000
Rate of climb at S.L. (A) fpm	860	817	800	819
Time: S.L. to 10,000 ft. (A) min.	14.0	15.0	--	14.7
Time: S.L. to 20,000 ft. (A) min.	38.7	42.5	--	41.6
Service ceiling (100 fpm) (A) ft.	21,900	21,300	21,100	21,300
Combat range n.mi.	2,070	1,925	2,015	2,940
Average cruising speed kn.	149	153	153.5	151
Cruising altitude(s) ft.	1,500	1,500	1,500	1,500
Combat radius n.mi.	830	770	805	1,175
Average cruising speed kn.	149	153	153	151
Mission time (range) (C) hrs.	13.93			
COMBAT LOADING CONDITION	(2) Clean	(3) Clean		
COMBAT WEIGHT lb.	62,987	62,987		
Engine power	Military	Normal		
Fuel lb.	10,112	10,112		
Combat speed/altitude kn./ft.	231/1,500	216/1,500		
Rate of climb/altitude fpm/ft.	1,580/1,500	1,220/1,500		
Combat ceiling (500 fpm) ft.	20,900	20,900		
Rate of climb at S.L. fpm	1,590	1,230		
Max. speed at S.L. kn.	227	212		
Max. speed/altitude kn./ft.	240/17,000	239/18,000		
LANDING WEIGHT lb.	53,982	53,982		
Fuel lb.	1,106	1,106		
Stall speed - power-off kn.	73.3	73.3		
Stall speed - with approach power kn.	67.0	67.0		

(A) Normal Rated Power
 (B) Military Rated Power
 (C) Mission time = total time for climb and cruise.
 Performance Basis: Calculations
 Combat range and radius are based on engine specification fuel consumption data increased by 5%.

NOTES

119917 NAVAER-1335D (Rev. 10-51)



STANDARD AIRCRAFT PERFORMANCE DATA - NAVALP 1335E (REV. 2-50)

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NOTES

ASW RADIUS PROBLEM

Combat Radius = 40% of combat range at 1,500 ft. altitude.

 Rate-of-climb at Sea Level, military power, one engine inoperative, propeller feathered on unused engine,
 flaps and gear up.

Gross Weight - Lbs.

50,000
 60,000
 70,000
 74,300

Rate-of-Climb - Ft./min.

640
 375
 175
 100

ELECTRONICS (Continued)

MAD Equipment.....AN/ASQ-8
 Search Radar.....AN/APS-44A
 Searchlight.....AN/AVQ-2A
 IFF Equipment.....AN/APX-6B
 Wire Recorder.....IC/VRW-7
 Sonobuoy Rec.....AN/ARR-26
 VOR.....AN/ARN-14E
 Pulse Analyzer.....AN/APA-74
 UHF Direction Find.....AN/ARA-25
 IFF Equipment.....AN/APX-7