



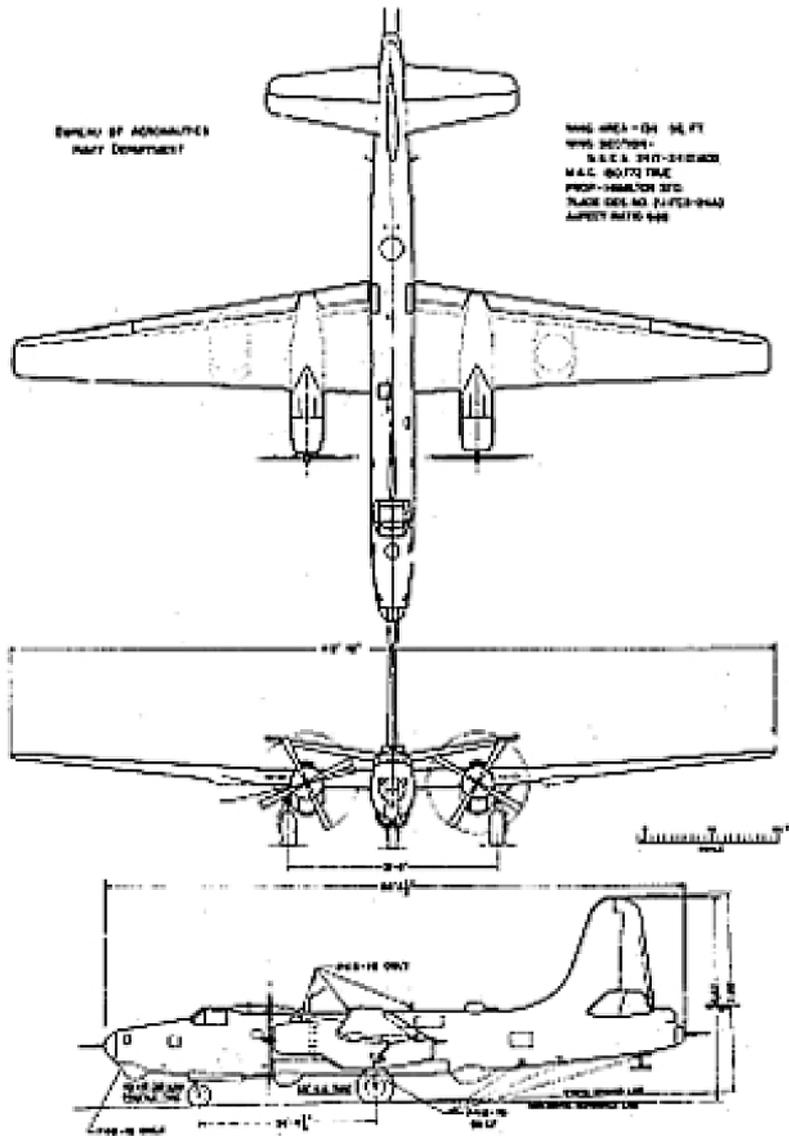
STANDARD AIRCRAFT CHARACTERISTICS

P4M-1Q "MERCATOR"

MARTIN

EMBLIC OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 234 SQ. FT.
WING SECTION -
S.W.C.S. 2017-21-22-23
M.A.C. 40.732 TRUE
PROP. - HAMILTON 3270
BLADE DIA. NO. 11175-11-43
ASPECT RATIO 9.48



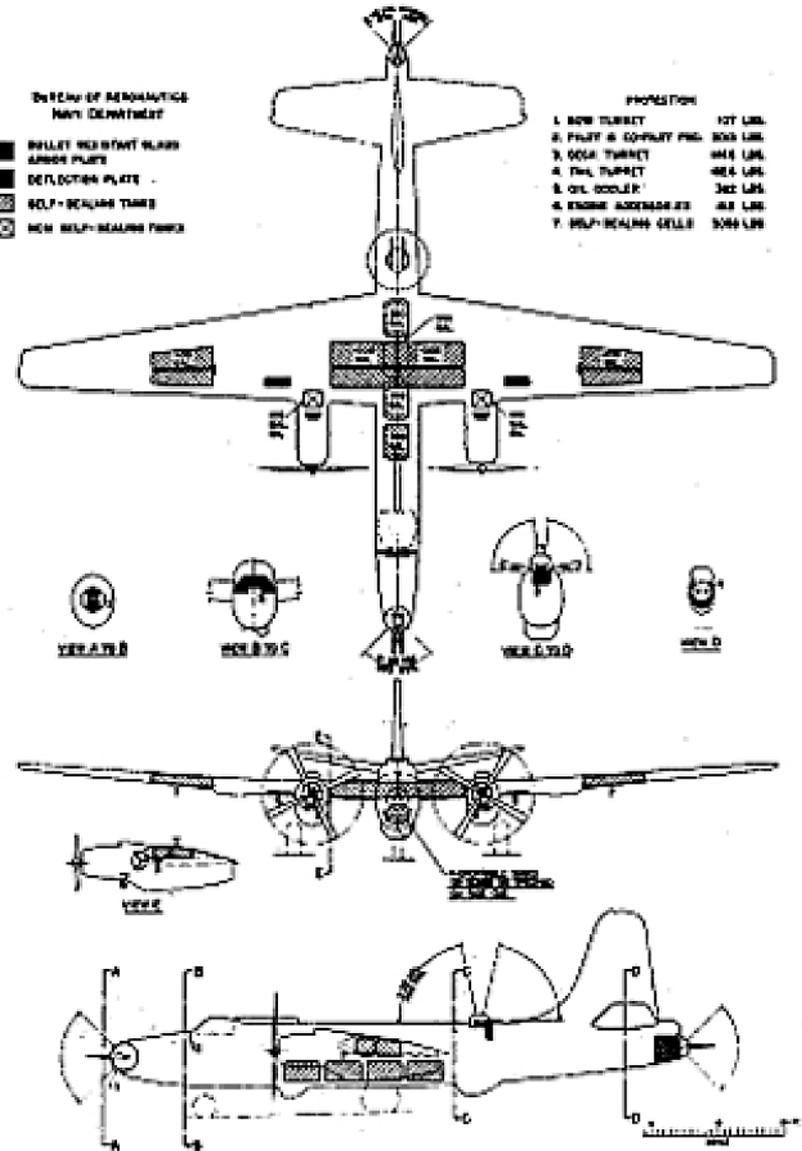
DESCRIPTIVE ARRANGEMENT

EMBLEM OF AERONAUTICS
NAVY DEPARTMENT

■ BULLET RESISTANT BLANK
ARROW PLATE
■ DEFLECTION PLATE
⊗ SELF-SEALING TANK
⊙ HIGH SELF-SEALING TANK

POSITION

- | | |
|------------------------|----------|
| 1. BOW TURBINE | 107 LBS. |
| 2. FUEL & COOLANT PMS. | 304 LBS. |
| 3. OIL TURBINE | 144 LBS. |
| 4. FUEL TURBINE | 144 LBS. |
| 5. OIL COOLER | 322 LBS. |
| 6. ENGINE ACCESSORIES | 44 LBS. |
| 7. SELF-SEALING CELLS | 504 LBS. |



ARMAMENT STAMPER

POWER PLANT

NO. & MODEL.....(2) R-4360-20
 (2) J-33-A-10
 MFR...Pratt & Whitney, Allison
 SUPERCH....1 Stage, Var. Speed
 PRCP. GEAR RATIO.....0.425
 PRCP. MFR.....Eam. Std.
 PRCP. DNS. NO.....2517C3-24AG
 NO. IN./DIA.....4/15'-2"

RATINGS

	Rpm	Alt.
T. O.	3,250	8,000'
MIL.	3,250	8,000'
WCRN.	2,650	6,000'
	2,300	18,000'

	Lbs.	Rpm	Alt.
T. O.	4,600	11,750	S.S.L.
MIL.	4,600	11,750	S.S.L.
WCRN.	3,900	11,250	S.S.L.

SPIC. FCS. N-7056, 252-B

ORDNANCE

GUNS			
No.	Size	Location	Rds.
2	20 mm	30w	800
2	.50 cal.	Deck	800
2	20 mm	Tail	800

BOMBS			
Type	Size	Location	No.
D.B.	325#	Bomb Bay	12
Bombs	100#	Bomb Bay	12
Bombs	1,000#	Bomb Bay	12
Bombs	1,600#	Bomb Bay	6
Bombs	2,000#	Bomb Bay	6
Mines	2,000#	Bomb Bay	6
Mines Mc. 26-1		Bomb Bay	12
Corp.	2,225#	Bomb Bay	2

FIRE CONTROL

3-Sight Assemblies, Mc. 18,
 Mod. 6 (Turret)
 1-Sight, Mc. 9, (Pilot)
 1-Bomb Radar.....AN/APA-5A
 MAX. BOMB LOAD.....12,000 lbs.

MISSION AND DESCRIPTION

The P4M-1Q is a thirteen place, land based airplane for use on Special Electronics Search Project (S.E.S.P.). This airplane is a development of the P4M-1.

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	52,723	
BASIC.....	54,836	
DESIGN.....	80,000	2.6
COMBAT.....	76,600	2.6
MAX.T.O.....	92,500*	2.25
MAX.LAND.....	88,000	

All weights are actual.

* Limited by strength

FUEL AND OIL

Gals.	No. Tanks	Location
800	2	Wing; Seal
2,000	2	Wing; Seal
1,200	4	Bomb Bay; Seal

FUEL GRADE.....115/145

FUEL SPEC.....MIL-P-5572

OIL

	R-4360	J-33
CAP.(Gals.).....	210	3.5
GRADE.....	1100-1120	1010
SPEC.....	MIL-O-6082	6081

DIMENSIONS

WING AREA.....1,311 sq. ft.
 SPAN.....113' - 10"
 LENGTH.....66' - 3"
 HEIGHT.....29' - 2"
 TREAD.....31' - 6"
 PRCP. CLEAR.....2' - 0"
 H.A.O.....12' - 7"

ELECTRONICS

VHF TRANSMITTER.....AV/ARC-1
 RANGE REC.....R-23/ARC-5
 UHF.....AV/ARC-27
 (Replacement for AV/ARC-1)
 TRANSMITTER.....AV/ART-13
 HF RECEIVER.....AV/ARF-15A
 COMPASS.....AV/ARF-6
 MARKER BEACON REC....AV/ARF-8
 SEARCH RADAR.....AV/APS-33A
 IFF.....AV/APX-2
 IFF.....AV/APX-6
 LORAN.....AV/APX-4
 (Continued on NEXT)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) SEARCH			
TAKE-OFF WEIGHT	lb.	35,700		
Fuel (Fixed/Drop)	lb.	16,800/3,400		
Payload	lb.	--		
Wing loading	lb./sq.ft.	66.1		
Stall speed - power-off	kn.	92.6		
Take-off run at S.L. - calm	ft.	2,010(3,670)		
Take-off run at S.L. kn. wind	ft.	--		
Take-off to clear 50 ft. - calm	ft.	2,710(5,020)		
Max. speed/altitude	(1) kn./ft.	223/5,000		
Rate of climb at S.L.	(2) fpm	2,040		
Time: S.L. to 5,000 ft.	(2) min.	2.6		
Time: S.L. to 10,000 ft.	(2) min.	5.5		
Service ceiling (100 fpm) (2)/(1)	ft.	30,000/17,500		
Combat range	n.mi.	2,460		
Average cruising speed	kn.	166		
Cruising altitude(s)	ft.	1,500		
Combat radius	n.mi.	985		
Average cruising speed	kn.	166		
COMBAT LOADING CONDITION	(2) 60% FUEL	(3) 60% FUEL		
COMBAT WEIGHT	lb.	76,600	76,600	
Engine power		Mil. + Jet	Military	
Fuel	lb.	15,100	15,100	
Combat speed/combat altitude	kn./ft.	315/S.L.	232/S.L.	
Rate of climb/combat altitude	fpm/ft.	3,080/S.L.	1,320/S.L.	
Combat ceiling (500 fpm)	ft.	11,000	17,500	
Rate of climb at S.L.	fpm	3,080	1,320	
Max. speed at S.L.	kn.	315	232	
Max. speed/altitude	kn./ft.	332/20,000	241/6,000	
LANDING WEIGHT	lb.	63,754		
Fuel	lb.	2,254		
Stall speed - power-off	kn.	85		
Stall speed - with approach power	kn.	78.4		

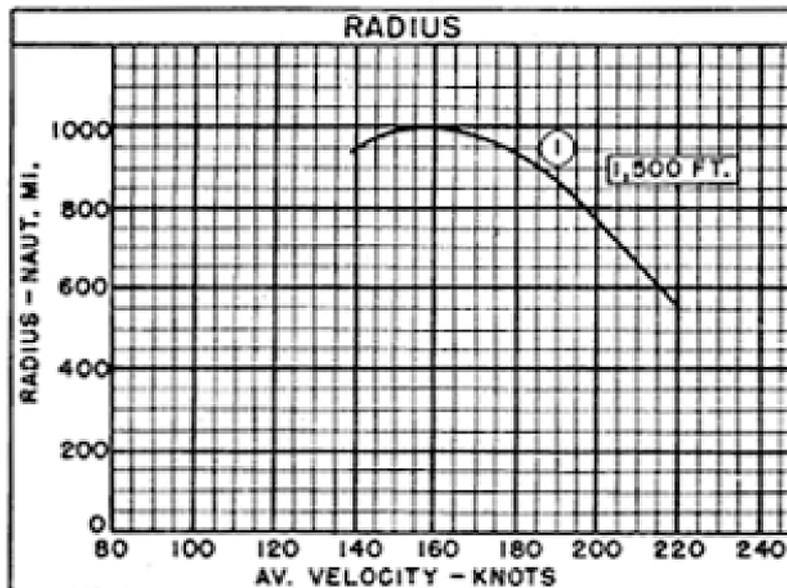
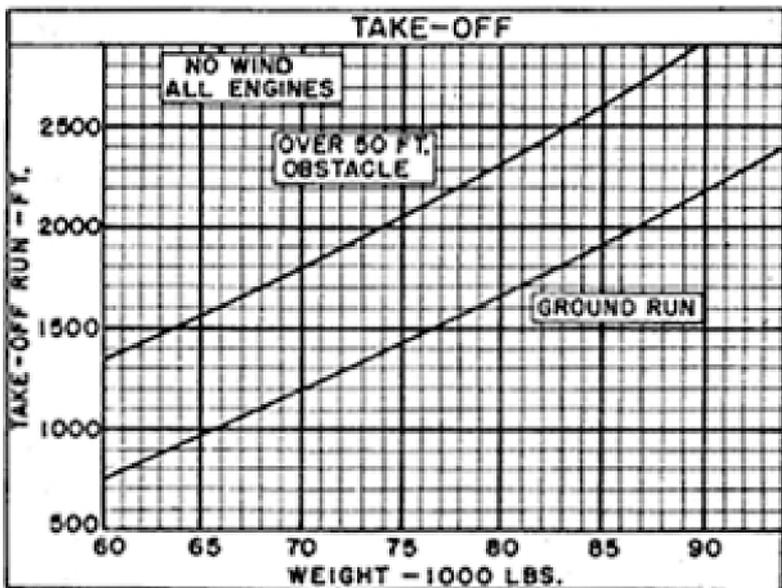
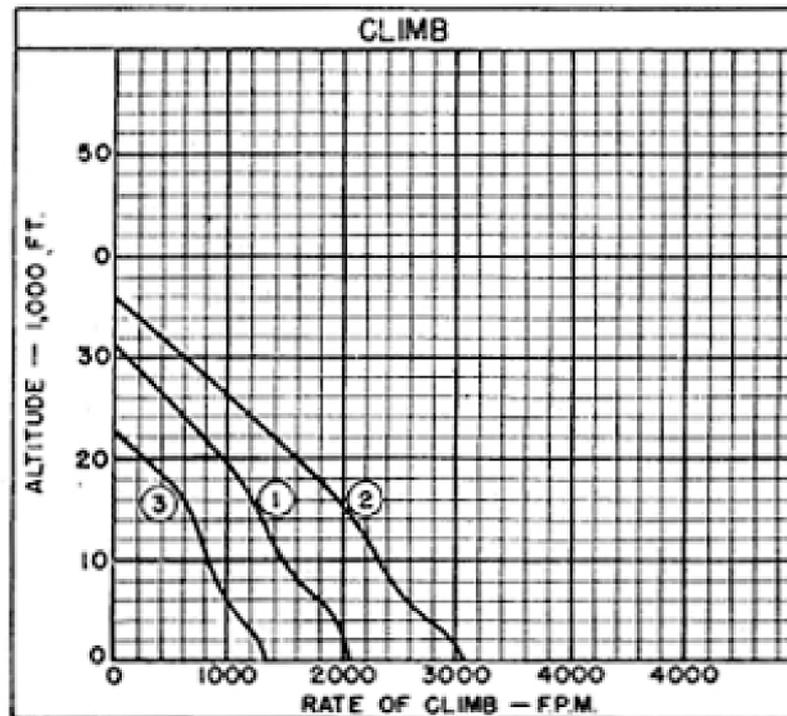
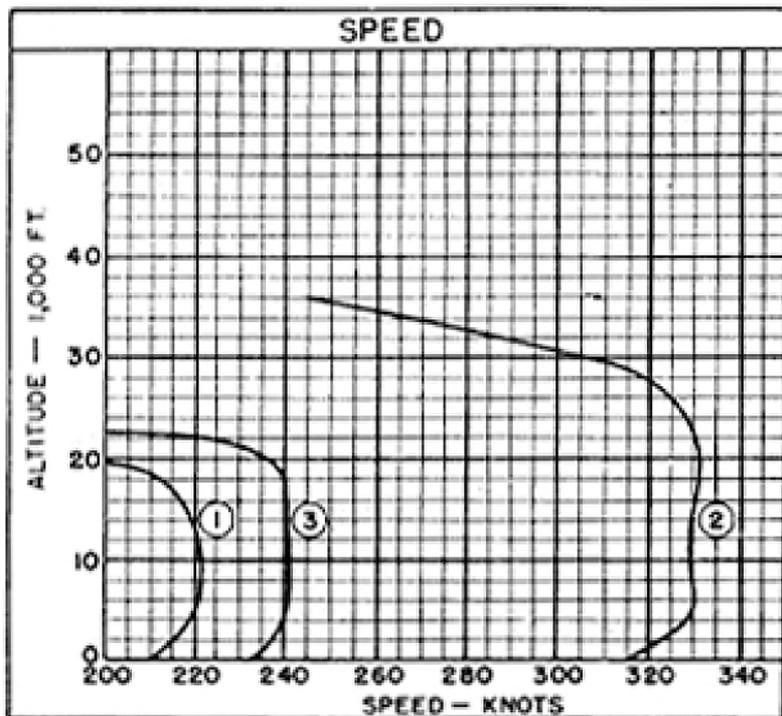
NOTES

- (1) Reciprocating engines: normal power -- Jet engines: inoperative
 (2) Reciprocating engines: normal power -- Jet engines: normal power

Performance is based on NATC flight test of P4M-1 airplane.

Range and radius are based on NATC flight test fuel consumption increased 5%.

Take-off is for all engines. Figure in parenthesis is for reciprocating engines only.



○ LOADING CONDITION COLUMN NUMBER

STANDARD AIRCRAFT CHARACTERISTICS MANUAL 1335E (REV. 2-50)

NOTES

SEARCH RANGE AND RADIUS PROBLEM

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

CLIMB: On course to 1,500 feet at normal power, all engines.

COMBAT RANGE: Cruise at V for long range at 1,500 feet.

RESERVE: 20 minutes at V for long range at sea level (jet engines idling) plus 5% of initial fuel load.

COMBAT RADIUS = 40% OF COMBAT RANGE

----- ELECTRONICS (Continued)

ALTIMETER.....	AN/APB-1	PULSE ANALYZER.....	SLA-1
COM REC.....	AN/APB-4	ANTENNA ASST.....	AN/APA-24
COM REC.....	AN/APB-9, -9A	INTERCOMMUNICATION.....	AS/AIC-5A
DIRECTION FINDERS.....	AN/APA-69	VISUAL CREST-RANGE.....	AN/ARN-14A
COM REC.....	AN/ARR-7	(Planned Service Installation)	
PULSE ANALYZER.....	AS/APA-10	IFF (I-R Unit).....	AS/APX-17
PULSE ANALYZER.....	AN/APA-38	(Planned Service Installation)	
PULSE ANALYZER.....	AN/APA-74	WIRE RECORDER.....	IC/TRU-7
