

STANDARD AIRCRAFT CHARACTERISTICS

P5M-2S

MARTIN

Standard Aircraft Characteristics MATABE 1375A (REV. 1-55)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) PATROL ASW 2-MK43 TORPEDOES 8-HVAR 5" ROCKETS	(4) PATROL MINING 4-MK-39	(7) FERRY	
TAKE-OFF WEIGHT	lb. 76595	78000	76231	
Fuel internal/external ()	lb./lb. 20304	16689	23754	
Payload	lb. 2487	8168	0	
Wing loading	lb./sq.ft. 54.4	55.5	54.2	
Stall speed - power-off	FLAPS = 30° kn. 97.2	98.0	97.1	
Take-off run at S.L. - calc (B) NO JATO	ft. 4300/3200	4650/3460	4200/3150	
Take-off run at S.L. - calc	kn. wind ft. -	-	-	
Take-off to clear 50 ft. - calc	ft. -	-	-	
Max. speed/altitude (A)	kn./ft. 220/18200	220/18200	220/18200	
Rate of climb at S.L. (A)	fpm. 770	760	810	
Time: S.L. to 10000 ft. (A)	min. 15.5	16.0	15.0	
Time: S.L. to 20000 ft. (A)	min. 45.5	46.0	41.5	
Service ceiling (100 fpm)	(A) ft. 20600	20700	21100	
Combat range	n.mi. 2147	1677	2658	
Average cruising speed	kn. 138	139	136	
Cruising altitude(s)	ft. 1500	1500	1500	
Combat radius	n.mi. 858	820	1063	
Average cruising speed	kn. 138	140	136	
MISSION TIME (RANGE)(C)	15.55	11.73		
COMBAT LOADING CONDITION	(2) CLEAN	(3) CLEAN	(5) CLEAN	(6) CLEAN
COMBAT WEIGHT	lb. 65986	65986	59819	59819
Engine power	MILITARY	NORMAL	MILITARY	NORMAL
Fuel	lb. 12182	12182	6676	6676
Combat speed/combat altitude	kn./ft. 224/1500	210/1500	225/1500	211/1500
Rate of climb/combat altitude	fpm/ft. 1420/1500	1070/1500	1730/1500	1320/1500
Combat ceiling (500 fpm)	ft. 18200	18200	21900	21900
Rate of climb at S.L.	fpm. 1470	1080	1790	1330
Max. speed at S.L.	kn. 218	205	219	207
Max. speed/altitude	kn./ft. 231/17400	229/18200	235/17300	233/18200
LANDING WEIGHT	lb. 55187	55187	54345	54345
Fuel	lb. 1383	1383	1202	1202
Stall speed - power-off/appr. power	kn./kn. 81/68	81/68	80/67	80/67
Distance - /over 50 ft. obst.	ft./ft. 1940/2500	1940/2500	1910/2470	1910/2470
				1890/2450

NOTES

- (A) NORMAL RATED POWER
 (B) MILITARY RATED POWER
 (C) MISSION TIME = TOTAL TIME FOR CLIMB AND CRUISE
 PATROL ASW AND MINING LOADING INCLUDES A CREW OF 12.
 FERRY LOADING INCLUDES A CREW OF 5.

PERFORMANCE BASIS: CONTRACTOR AND NATC FLIGHT TESTS

POWER PLANT

NO. & MODEL(2)R-3350-32WA
 MFR. WRIGHT
 SUPERCHARGER ..1 STAGE, 2 SPEED
 RED. GEAR RATIO0.4375
 PROP. MFR. HAM. STANDARD
 PROP BLADE DES. NO. A6925B-2
 NO. BL/DIA 4/15¹-0"

RATINGS

	BHP	RPM	ALT
T.O.	3700	2900	S.L.
MIL.	3400	2900	S.L.
	3420	2900	2400
	2550	2600	16700
NORM.	2800	2600	S.L.
	2840	2600	4000
	2450	2600	17700

ORDNANCE**BOMBS AND ROCKETS**

RACKS	NO.	LOCATION	CAP
AERO 14B	8	WING	500 LB.

BOMBS, MINES AND TORPEDOES
 ALSO CARRIED IN BOMB BAY.
 MAXIMUM BOMB CAPACITY
 12,000 LBS.

MISSION AND DESCRIPTION

THE P5M-2S 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 NORMALLY CARRIES A CREW OF 12 FOR PATROL AND 5 FOR FERRY.

PROVISIONS FOR FOUR JATO UNIT ARE ON THE AFT FUSELAGE

DEVELOPMENT

FIRST FLIGHT APRIL 1954
 SERVICE USE OCTOBER 1954

DIMENSIONS

WING
 AREA 1406 SQ. FT.
 SPAN 118¹-2"
 M.A.C. 12¹-8"
 LENGTH 100¹-2"
 HEIGHT 30¹-11"
 TREAD 10¹-1"
 PROP. WATER CLEAR..... 4¹-8"

WEIGHTS

LOADINGS	LBS	L.F.
EMPTY	49218
BASIC(ASW)	52998
DESIGN	70000	3.0
COMBAT(ASW)	65986
MAX. TAKE-OFF	78000	2.7
MAX. LANDING	75000	2.8

ALL WEIGHTS ARE ACTUAL

FUEL AND OIL

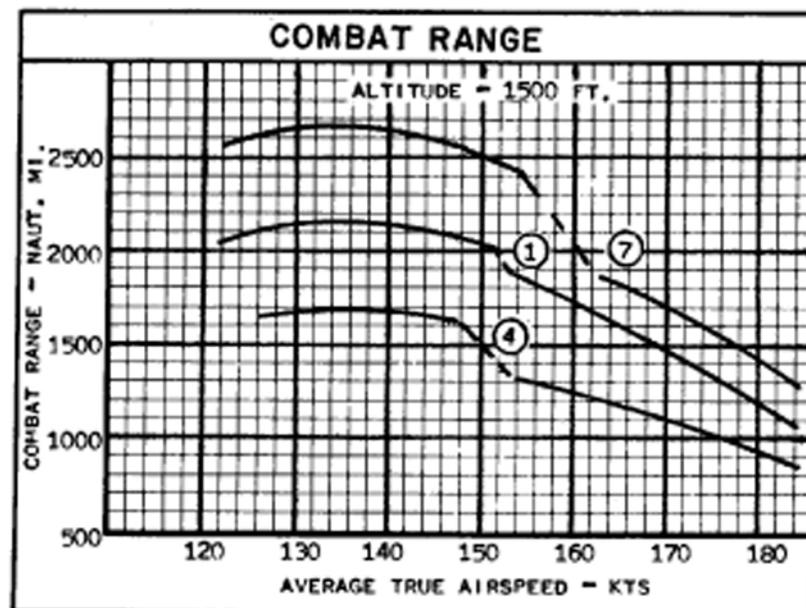
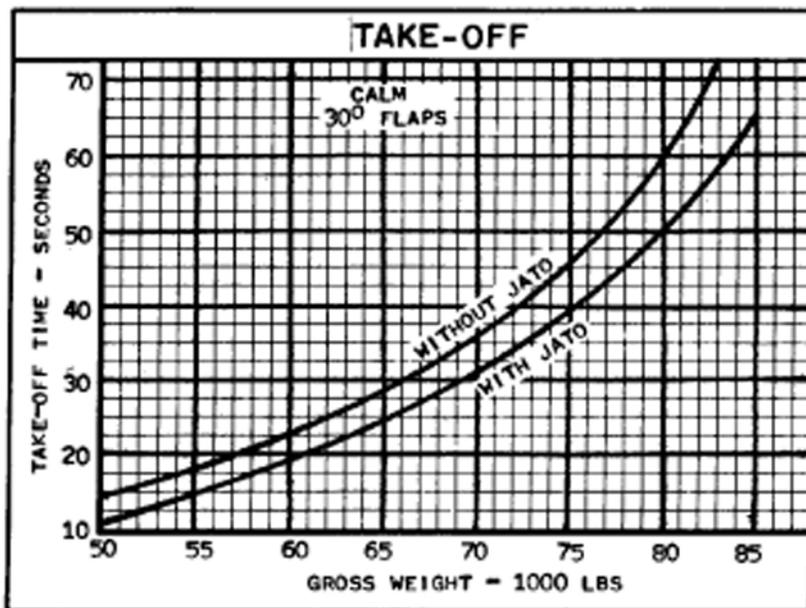
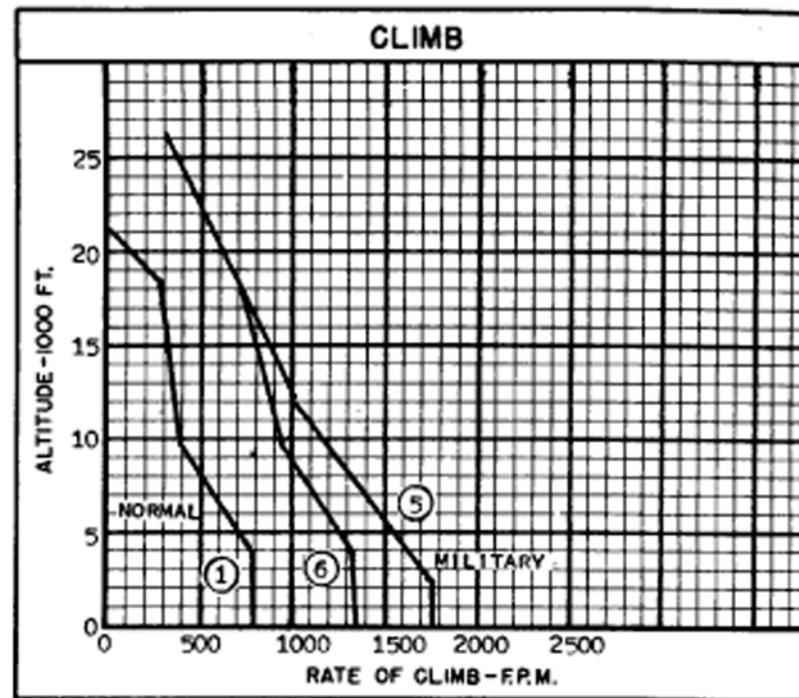
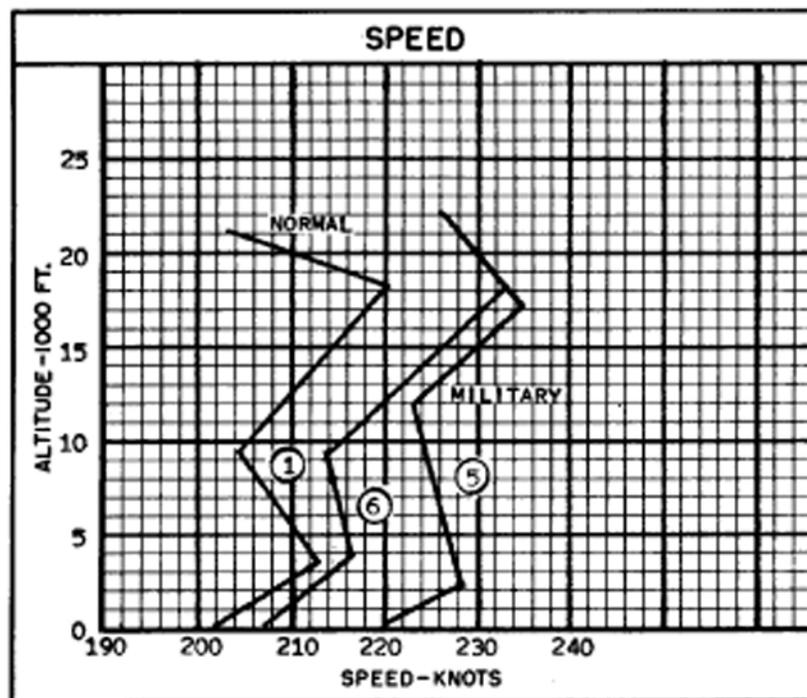
NO. TANKS	TOTAL GAL.	LOCATION
4	1545	WING
3	1298	HULL
2	1150	BOMB BAY
FUEL GRADE 115/145	
FUEL SPEC. MIL-F-5572	

OIL

CAPACITY (GALS).... 174
 GRADE..... 1100
 SPEC MIL-L-6082

ELECTRONICS

SEE NOTES PAGE



○ LOADING CONDITION COLUMN NUMBER

NOTES

COMBAT RADIUS = 40% OF COMBAT RANGE AT 1500 FT. ALTITUDE FOR PATROL ASW & FERRY MISSIONS
 COMBAT RADIUS IS ACTUAL FOR PATROL MINING MISSION SINCE MINES ARE DROPPED AT RADIUS DISTANCE
 BEFORE RETURN TO BASE.

 RATE-OF-CLIMB AT SEA LEVEL, MILITARY POWER, ONE ENGINE INOPERATIVE, PROPELLER FEATHERED
 ON UNUSED ENGINE, FLAPS UP, STANDARD DAY.

GROSS WT. - LBS

54,000
 60,000
 70,000
 74,000

RATE-OF-CLIMB - FT/MIN

482
 322
 113
 40

ELECTRONICSCOMM

UHF TRANSCEIVER	AN/ARC-27A
HF TRANSCEIVER	AN/ARC-38A
TELETYPEWRITER	TT-23A/AG
HF RECEIVER	AN/ARR-41
VHF TRANSCEIVER	AN/ARC-1
INTERPHONE	AN/AIC-5B

RADAR AND IFF

SEARCH RADAR	AN/APS-80
TRANSPONDER	AN/APX-6B
INTERROGATOR	AN/APX-7
CODER	AN/APA-89
DECODER	KY-364/APX

ECM

ECM DIRECTION FINDER	AN/APA-69C
VIDEO SIGNAL AMPLIFIER	AN/APA-74
COUNTERMEASURES RECEIVER	AN/ALR-3
COUNTERMEASURES RECEIVER	AN/ALR-8

ASW

MAD EQUIPMENT	AN/ASO-8
MANEUVER MONITOR	MX-2230/ASO
SEARCH LIGHT	AN/AVQ-2A
TAPE RECORDER	AN/UH-6
SONOBUOY RECEIVER	AN/APR-26
SONOBUOY RECEIVER	AN/ARR-5B
RECORDER GROUP	AN/ASA-20
UNIVERSAL SONOBUOY INDICATOR	AN/AQA-1
INDICATOR GROUP	AN/AQA-4(V)
INTEGRATED DISPLAY SYSTEM	AN/ASA-25
INDICATOR GROUP	AN/APA-125A
DETECTING SET	AN/ASR-3

NAV

RADIO COMPASS	AN/ARN-6
RADAR ALTIMETER	AN/APN-22
MARKER BEACON RECEIVER	AN/ARN-12
LORAN	AN/APN-4
VOR	AN/ARN-14E
DOPPLER -INERTIAL NAVIGATOR	AN/APN-122
DIRECTION FINDER	AN/ARA-25
RADIO NAVIGATION SET(TACAN)	AN/ARN-21
NAVIGATOR COMPUTER	AN/ASA-13A
PILOTS PLOTTER	OA-176B/ASA-13
NAVIGATORS PLOTTER	PT-396/AS
TRUE AIRSPEED COMPUTER	T-692/ASA-13
ROLL STABILIZER COMPASS	MF-1

○ LOADING CONDITION COLUMN NUMBER