STANDARD AIRCRAFT CHARACTERISTICS

P5M-2S

MARTIN

15 OCTOBER 1962
**POWER PLANT**

No. & Model ... (2) R-3350-32WA
Mfr. ................. Wright
Supercharger ....... 1 stage, 2 speed
Red. Gear Ratio ... 0.4375
No. Bl/Dia ........... 4/15'-9"

**RATINGS**

<table>
<thead>
<tr>
<th>RPM</th>
<th>RPM</th>
<th>ALT</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.O.</td>
<td>3700</td>
<td>2900</td>
</tr>
<tr>
<td>MIL.</td>
<td>3400</td>
<td>2900</td>
</tr>
<tr>
<td></td>
<td>3420</td>
<td>2900</td>
</tr>
<tr>
<td></td>
<td>2550</td>
<td>2600</td>
</tr>
<tr>
<td>NORM.</td>
<td>2600</td>
<td>2600</td>
</tr>
<tr>
<td></td>
<td>2840</td>
<td>2600</td>
</tr>
<tr>
<td></td>
<td>2450</td>
<td>2600</td>
</tr>
</tbody>
</table>

**MISSION AND DESCRIPTION**

The PSM-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 PSM-1 incorporating a tee tail, low chin 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 units are on the aft fuselage.

**DEVELOPMENT**

First Flight ........ April 1954
Service Use ........ October 1954

**WEIGHTS**

<table>
<thead>
<tr>
<th>LOADINGS</th>
<th>LBS</th>
<th>L.F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty</td>
<td>49218</td>
<td></td>
</tr>
<tr>
<td>Basic (ASW)</td>
<td>52998</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>70000</td>
<td>3.0</td>
</tr>
<tr>
<td>Combat (ASW)</td>
<td>65986</td>
<td></td>
</tr>
<tr>
<td>Max. Take-off</td>
<td>78000</td>
<td>2.7</td>
</tr>
<tr>
<td>Max. Landing</td>
<td>75000</td>
<td>2.8</td>
</tr>
</tbody>
</table>

All weights are actual.

**FUEL AND OIL**

<table>
<thead>
<tr>
<th>NO. TANKS</th>
<th>TOTAL GALLONS</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1545</td>
<td>WING</td>
</tr>
<tr>
<td>3</td>
<td>1298</td>
<td>HULL</td>
</tr>
<tr>
<td>2</td>
<td>1150</td>
<td>BOMB BAY</td>
</tr>
</tbody>
</table>

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

**OIL**

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

**DIMENSIONS**

<table>
<thead>
<tr>
<th>WING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area .......... 1406 sq. ft.</td>
</tr>
<tr>
<td>Span .......... 118'-2&quot;</td>
</tr>
<tr>
<td>M.A.C. .......... 12'-8&quot;</td>
</tr>
<tr>
<td>Length .......... 100'-4&quot;</td>
</tr>
<tr>
<td>Tread .......... 10'-1&quot;</td>
</tr>
<tr>
<td>Prop. Water Clearance .... 41'-6&quot;</td>
</tr>
</tbody>
</table>

**ELECTRONICS**

See Notes Page

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15 October 1962
### PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF LOADING CONDITION</th>
<th>(1) PATROL ASW 2-MK-84X8 RD</th>
<th>(4) PATROL MINING 4-MK-39</th>
<th>(7) FERRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td>76595</td>
<td>78000</td>
<td>78231</td>
</tr>
<tr>
<td>Fuel, internal/external</td>
<td>2670</td>
<td>16688</td>
<td>23754</td>
</tr>
<tr>
<td>Payload</td>
<td>2497</td>
<td>8168</td>
<td>9</td>
</tr>
<tr>
<td>Wing loading</td>
<td>54.4</td>
<td>55.5</td>
<td>54.2</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
<td>FLAPS = 300</td>
<td>98.0</td>
<td>97.1</td>
</tr>
<tr>
<td>Take-off run at S.L.</td>
<td>4800/3800</td>
<td>4650/3450</td>
<td>4200/3150</td>
</tr>
<tr>
<td>Take-off to clear 50 ft.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max. speed/altitude (A)</td>
<td>220/18200</td>
<td>220/18200</td>
<td>220/18200</td>
</tr>
<tr>
<td>Rate of climb at S.L. (A)</td>
<td>770</td>
<td>1760</td>
<td>816</td>
</tr>
<tr>
<td>Time: S.L. to 10000 ft.</td>
<td>(A) min.</td>
<td>15.5</td>
<td>15.0</td>
</tr>
<tr>
<td>Service ceiling</td>
<td>20600</td>
<td>20700</td>
<td>21100</td>
</tr>
<tr>
<td>Combat radius</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>138</td>
<td>132</td>
<td>136</td>
</tr>
<tr>
<td>Cruising altitude(s)</td>
<td>1350</td>
<td>1300</td>
<td>1500</td>
</tr>
<tr>
<td>Combat radius</td>
<td>600</td>
<td>620</td>
<td>1063</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>138</td>
<td>140</td>
<td>136</td>
</tr>
</tbody>
</table>

### MISSION TIME (RANGE)(C)

- Clean: 15.55 km
- Clean: 11.73 km

### COMBAT LOADING CONDITION

<table>
<thead>
<tr>
<th>COMBAT WEIGHT</th>
<th>(2) CLEAN</th>
<th>(3) CLEAN</th>
<th>(5) CLEAN</th>
<th>(6) CLEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine power</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
</tr>
<tr>
<td>Fuel</td>
<td>12182</td>
<td>12182</td>
<td>12182</td>
<td>12182</td>
</tr>
<tr>
<td>Combat speed/comb altitude</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rate of climb/comb altitude</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Combat ceiling (500 fpm)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max. speed at S.L.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>231/1750</td>
<td>229/12200</td>
<td>235/17300</td>
<td>233/18200</td>
</tr>
</tbody>
</table>

### LANDING WEIGHT

<table>
<thead>
<tr>
<th>LANDING WEIGHT</th>
<th>(1) CLEAN</th>
<th>(2) CLEAN</th>
<th>(3) CLEAN</th>
<th>(5) CLEAN</th>
<th>(6) CLEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stall speed - power-off/appr. power</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Distance - (over 50 ft. obs. ft.)</td>
<td>1940/2500</td>
<td>1940/2500</td>
<td>1910/2470</td>
<td>1910/2470</td>
<td>1890/2450</td>
</tr>
</tbody>
</table>

### 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

15 OCTOBER 1962
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
462
322
113
40

ELECTRONICS

COMM

UHF TRANSCEIVER
AN/ARC-27A

HF TRANSCEIVER
AN/ARC-38A

TELEVYEWER
TT-234/AG

HF RECEIVER
AN/ARR-41

VHF TRANSCEIVER
AN/ARC-1

INTERPHONE
AN/AIC-58

Radar and IFF

SEARCH RADAR
AN/APS-80

TRANSPONDER
AN/APX-68

INTERROGATOR
AN/APX-7

CODER
AN/APA-89

DECODER
KY-364/AXP

ECM

ECM DIRECTION FINDER
AN/APA-69C

VIDEO SIGNAL AMPLIFIER
AN/APA-74

COUNTERMEASURES RECEIVER
AN/ALR-3

COUNTERMEASURES RECEIVER
AN/ALR-6

ASW

MAD EQUIPMENT
AN/ASQ-5

MANEUVER MONITOR
AN/AQO-2A

SEARCH LIGHT
AN/AQO-6

TAPE RECORDER
AN/UNH-6

SONOBUEY RECEIVERS
AN/ARR-26

SONOBUEY RECEIVERS
AN/ARR-58

REORDER GROUP
AN/ASA-20

UNIVERSAL SONOBUEY INDICATOR
AN/ARA-1

INDICATOR GROUP
AN/ARA-4(V)

INTEGRATED DISPLAY SYSTEM
AN/ASA-25

INDICATOR GROUP
AN/APA-125A

DETECTING SET
AN/ASQ-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-1768/ASA-13

NAVIGATORS PLOTTER
PT-396/ASA

TRUE AIRSPEED COMPUTER
T-692/ASA-13

ROLL STABILIZER COMPASS
MF-1

○ LOADING CONDITION COLUMN NUMBER

15 OCTOBER 1962