

STANDARD AIRCRAFT CHARACTERISTICS
P-2F NEPTUNE

LOCKHEED

POWER PLANT

NO. & MODEL... (2) R-3350-30WA
 MFR.....Wright
 SUPERCH.....1 Stage, 2 Speed
 RED. GEAR RATIO.....0.4775
 PROP MFR.....Ham. Std.
 PROP. HL. DES. NO:2J1703-368
 NO. HL./DIA.....4/14" - 2"

RATINGS

	<u>RPM</u>	<u>RPM</u>	<u>ALT.</u>
T.O.	3500	2900	S.L.
MIL.	3250	2900	S.L. to 3400'
	2550	2600	11400' to 15400'
NOHM.	2600	2600	S.L. to 6500'
	2450	2600	9600' to 16600'

SPEC. NO. - N856-A

ELECTRONICS

RCM Pulse Analyser...AN/APA-64B
 VHF Comm. Equip.....AN/ARC-1
 Trans. Rec.....RT-62/APX-6
 Pulse Analyser.....AN/APA-11
 Interphone.....AN/AIO-5B
 Radio Trans.....AN/ART-13
 Comm. Rec.....R23A/ARC-5
 Liaison Rec.....AN/ARB-15A
 UHF.....AN/ARO-27
 Direct Finder.....AN/ARF-6
 Radio Altimeter.....AN/APR-1
 Marker Beacon.....AN/ARN-12
 Loran.....AN/APR-4
 RCM.....AN/APR-9B
 ROM - Dir. Find....AN/APA-69A
 Search Radar.....AN/APS-33B
 Sonobuoy Rec.....AN/ARR-26
 M.A.D.....AN/ASQ-8
 Ground Pos. Ind....AN/APA-57B
 Omni-Range Rec.....AN/ARN-14A
 Indicator.....AN/APA-91

MISSION AND DESCRIPTION

The P2V-6 is designed for use as a day and night land based, long range mine laying airplane. Its secondary tactical missions are anti-submarine, rocket attack, night torpedo attack, and photo reconnaissance.

The P2V-6 was developed from the P2V-5 (R-3350-30W) and differs from the P2V-5 by installation of the APS-33B which permits a longer bomb bay thereby allowing a more versatile selection of ordnance.

It has an all metal semi-monocoque fuselage with wings of conventional two span construction. It is an nine place, twin engine airplane with tricycle landing gear, modified Fowler flaps, varicam stabilizer, jettisonable wing tip nacelles, and thermal anti-icing. Design features permit underwing refueling.

DEVELOPMENT

First Flight November 1952
 Service Use January 1953

DIMENSIONS

WING
 AREA.....1,000 Sq. Ft.
 SPAN.....104' - 0"
 M.A.C.....10' - 6"
 LENGTH.....84' - 10"
 HEIGHT.....28' - 1"
 TREAD.....25' - 11"
 PROP. CRD. CLEARANCE 0' - 9"

WEIGHTS

<u>LOADINGS</u>	<u>LBS.</u>	<u>L.F.</u>
EMPTY.....	44383.....	
BASIC.....	47263.....	
DESIGN.....	67500.....	2.67
COMBAT.....	64477.....	2.79
MAX.T.O.....	80000.....	2.25
MAX. LANDING..	62000.....	

All weights are actual.

FUEL AND OIL

<u>GALS.</u>	<u>NO. TANKS</u>	<u>LOCATION</u>
2800	4	Wing
700	2	Wing Tip
700	2	Bomb Bay
FUEL GRADE...115/145		
FUEL SPEC:MIL-F-5572		

OIL

CAPACITY (GALS.).....154
 GRADE.....1100
 SPEC.....MIL-L-6082A

ORDNANCE

<u>NO.</u>	<u>SIZE</u>	<u>GUNS</u>		<u>RDS.</u>
		<u>LOCATION</u>		
2	20mm	Nose		800
2	20mm	Tail		800
2	50cal.	Deck		800
Mine Layer Only				
FIRE CONTROL				
Mk. 18 Mod. 6				
BOMBS AND ROCKETS				
<u>BACKS</u>	<u>NO.</u>	<u>LOCATION</u>	<u>MAX. CAP.</u>	
Aero 14A	16	Wing	500 lbs.	
Torpedoes, Mines and Bombs also carried inside the fuselage.				
MAX. LOAD CAPACITY 12,000 lbs.				

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) MINE LAYER 8 Mines	(4) ASW PATROL 4 Torpedoes	(6) FERRY Maximum Fuel
TAKE-OFF WEIGHT	lb. 80,000	78,588	77,500
Fuel	lb. 18,788	21,000	25,200
Payload	lb. 8,000	6,200	None
Wing loading	lb./sq.ft. 80.0	78.6	77.5
Stall speed - power-off	kn. 99.0	98.1	97.4
Take-off run at S.L. - calm (B)	ft. 3,520	3,350	3,250
Take-off run at S.L. - km. wind	ft. --	--	--
Take-off to clear 50 ft. - calm	ft. 4,800	4,600	4,350
Max. speed/altitude (A)	kn./ft. 259/17,500	268/17,500	262/17,500
Rate of climb at S.L. (A)	fpm 730	820	810
Time: S.L. to 10,000 ft. (A)	min. 15.6	13.7	14.0
Time: S.L. to 20,000 ft. (A)	min. 52.6	41.7	38.5
Service ceiling (100 fpm) (A)	ft. 19,400	20,400	20,400
Combat range	n.mi. 2,310	2,790	3,585
Average cruising speed	kn. 175	175	172
Cruising altitude(s)	ft. 1,500	1,500	1,500
Combat radius (See NOTE)	n.mi. 1,100	1,110	--
Average cruising speed	kn. 170	175	--
Mission time	hrs. 12.8		
COMBAT LOADING CONDITION	(2)	(3)	(5)
COMBAT WEIGHT	lb. 64,477	64,477	63,998
Engine power	Military	Normal	Military
Fuel	lb. 11,270	11,270	12,600
Combat speed/altitude	kn./ft. 263/1,500	246/1,500	269/1,500
Rate of climb/altitude	fpm/ft. 1,630/1,500	1,150/1,500	1,700/1,500
Combat ceiling (500 fpm)	ft. 20,200	20,200	20,700
Rate of climb at S.L.	fpm 1,650	1,170	1,730
Max. speed at S.L.	kn. 260	243	265
Max. speed/altitude	kn./ft. 276/16,500	272/17,700	283/16,500
LANDING WEIGHT	lb. 62,490		58,984
Fuel	lb. 1,283		1,396
Stall speed - power-off	kn. 87.5		85.0
Stall speed - with approach power	kn. 79		77

NOTES

Reason for reissue: Flight Test data on the P2V-6 airplanes available.

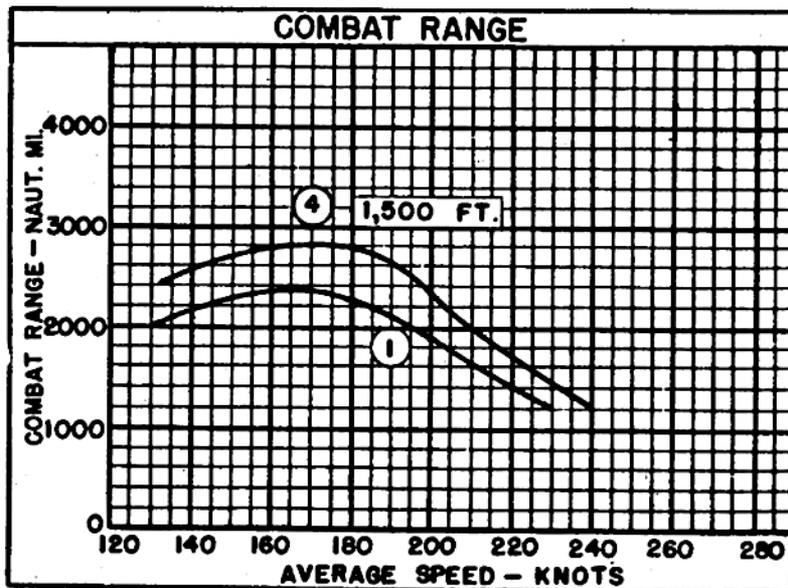
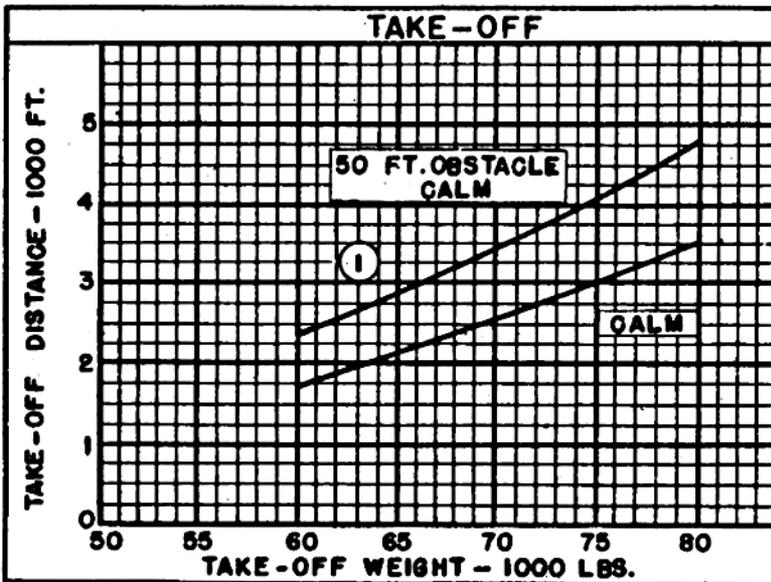
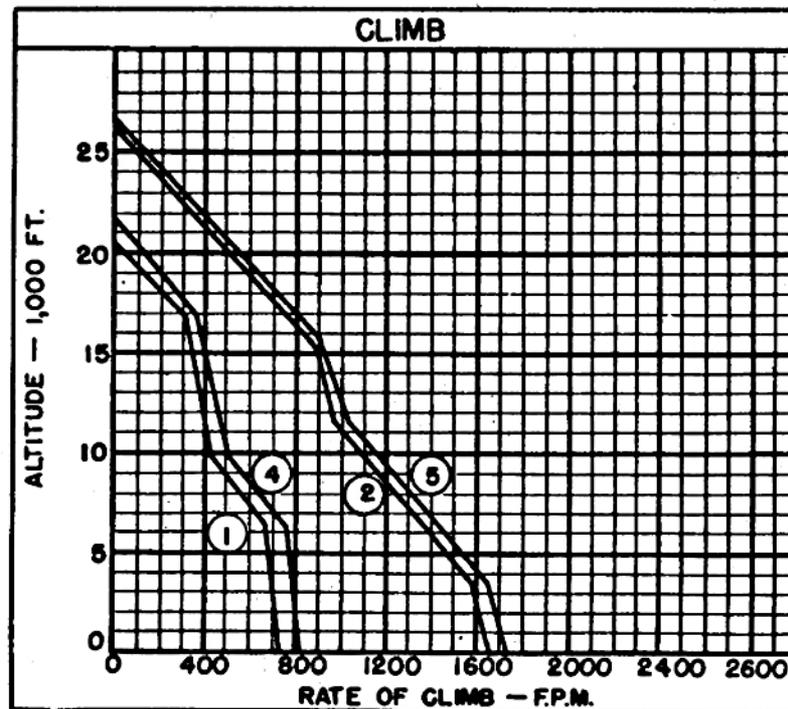
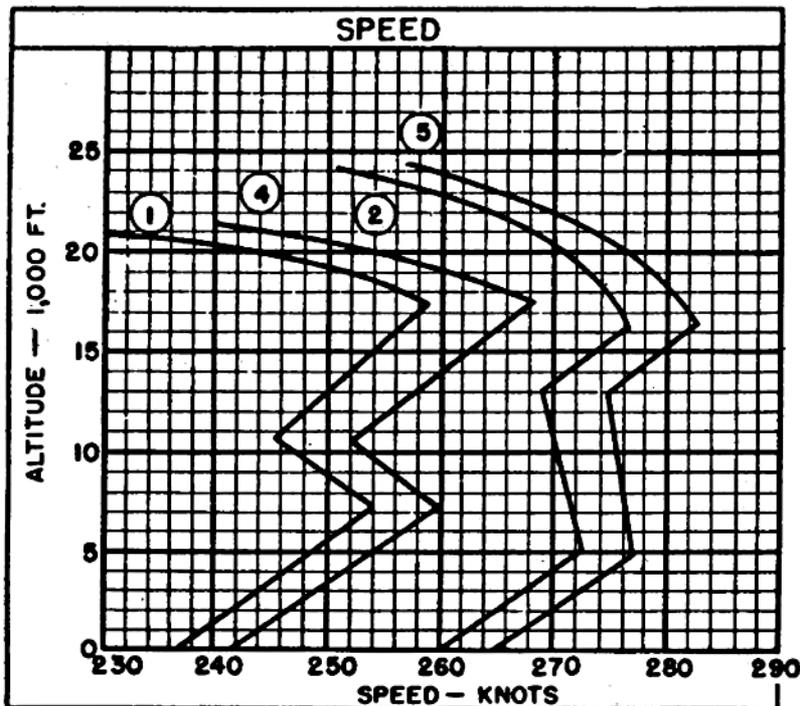
(A) Normal rated thrust.

(B) Take-off rated thrust.

Performance basis: Calculations, Navy and contractor flight test data on the P2V-6 airplane.

Combat range and radius are based on contractor P2V-5 flight test data increased by 5%.

All of the configurations listed above include 16-14A rocket/bomb racks carried on the underside of the wing.



○ LOADING CONDITION COLUMN NUMBER

NOTES

MINE LAYER RADIUS PROBLEM

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal rated power at sea level.

CLIMB: To cruise altitude of 1,500 ft. at normal rated power.

CRUISE-OUT: At speed for long range at cruise altitude.

DESCEND: To sea level.

RUN-IN: 50 nautical miles at military rated power.

DROP MINES:

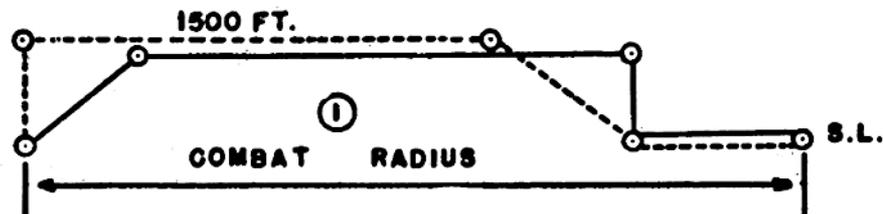
RUN-OUT: 50 nautical miles at military rated power.

CLIMB: To cruise altitude of 1,500 ft. at normal rated power.

CRUISE-BACK: At speed for long range at cruise altitude.

RESERVE: 20 minutes at speed for long range at sea level plus 5% of initial fuel load.

$$\text{MISSION TIME} = \text{CLIMB} + \text{CRUISE-OUT} + \text{RUN-IN} + \text{RUN-OUT} + \text{CLIMB} + \text{CRUISE-BACK}$$



Combat Radius (mine layer problem) is reduced approximately 6 nautical miles for each additional minute of military power operation.

ASW RADIUS PROBLEM

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

Rate of climb at sea level, military rated power, one engine inoperative (propeller feathered), flaps and gear up.

Gross Weight - lbs.

Rate-of-Climb - ft./min.

56,000
67,500
70,000
76,000
80,000

550
275
220
100
30

○ LOADING CONDITION COLUMN NUMBER