

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

| COLUMN NUMBER | | 1 | 2 | 3 | 4 |
|--|--------------------|---------------------|----------|-----------------------------------|-----------------------------------|
| LOADING CONDITION | | SEARCH | SEARCH | SEARCH 1-150 GAL. TANK EXT. | SEARCH 2-150 GAL. TANK EXT. |
| GROSS WEIGHT | LBS. | 19358 | 19358 | 20478 | 21560 |
| EMPTY WEIGHT | LBS. | | | | |
| FUEL / OIL | GALS. | 420/23 | 420/23 | 570/32 | 720/36 |
| FIXED GUNS/AMMUNITION | | NONE | | | |
| FLEXIBLE GUNS/AMMUNITION | | NONE | | | |
| ENGINE POWER USED FOR PERFORMANCE | | MILITARY | NORMAL | NORMAL | NORMAL |
| WING LOADING | LBS./SQ.FT. | 35.3 | 35.3 | 37.3 | 39.3 |
| POWER LOADING ① | LBS./BHP. | 8.4 | 8.4 | 8.9 | 9.4 |
| V-MAX. SEA LEVEL | KN. | 235 | 215 | 209 | 204 |
| V-MAX. | KN./FT. | 241/2100 | 232/7900 | 225/7800 | 219/7800 |
| V-STALL GROSS WEIGHT ② | KN. | 70.3 | 70.3 | 73.2 | 76.0 |
| V-STALL WITHOUT FUEL ② | KN. | 65.5 | 65.5 | 66.8 | 68.0 |
| TIME-TO-CLIMB -10000FT- | MIN. | 6.0 | 6.6 | 7.3 | 8.0 |
| TIME-TO-CLIMB -20000FT- | MIN. | 22.5 | 23.5 | 31.4 | --- |
| SERVICE CEILING | FT. | 21500 | 21500 | 20100 | 18900 |
| TAKE-OFF DISTANCE -CALM- | FT. | 726 | 726 | 870 | 1010 |
| TAKE-OFF DISTANCE -15 KN- | FT. | 457 | 457 | 560 | 660 |
| TAKE-OFF DISTANCE -25 KN- | FT. | 305 | 305 | 390 | 468 |
| TAKE-OFF DISTANCE -50 FT. OBST. | FT. | | | | |
| TAKE-OFF TIME | SECONDS | | | | |
| RATE OF CLIMB -SL- | FT./MIN. | 2150 | 1630 | 1490 | 1380 |
| MAX. RANGE / V-AV. ③ | N MI./KN. | | 1070/135 | 1370/135 | 1575/135 |
| RANGE / V-AV. -60% NSP-③- | N MI./KN. | | | | |
| SEARCH RADIUS / V-AV. -20% R- | N MI./KN. | | | | |
| A.S.W. RADIUS / V-AV. -20% R- | N MI./KN. | | 270/150 | 340/150 | 400/150 |
| SCOUT RADIUS | N MI. | | | | |
| COMBAT RADIUS | N MI. | | | | |
| ENGINE / PROP GEAR RATIO P & W R2800-46W/.45 | | | | | |
| ENGINE RATING BHP/RPM/ALT. | MILITARY | NORMAL | | TAKE OFF | |
| | 2300/2800/S.L.-600 | 1800/2600/S.L.-6500 | | 2300/2800/S.L. | |
| | | | | | |
| | | | | | |

| | | TANKAGE IN GALLONS | OIL | FUEL | |
|------------|--------------------------|--------------------|-----|------|---|
| AUX. FIXED | PROTECTED | | | 420 | Performance is based on calculations. Range and radius are based on engine specification fuel consumption data increased by 15 per cent to conform with past experience. |
| | UNPROTECTED | 36 | | | |
| | TOTAL - FIXED INTERNAL | 36 | | 420 | |
| | DROPPABLE -Wings 2 @ 150 | | | 300 | |
| NOTE | DROPPABLE | | | | |
| | TOTAL | 36 | | 720 | |
| | ① BHP AT MAX. CRIT. ALT. | | | | |
| | ② STALL - WITHOUT POWER | | | | |
| | ③ AT 1500' ALTITUDE | | | | |

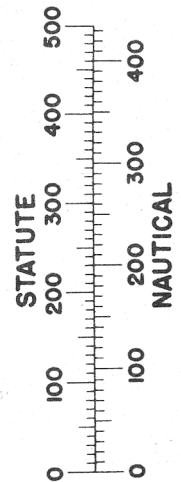
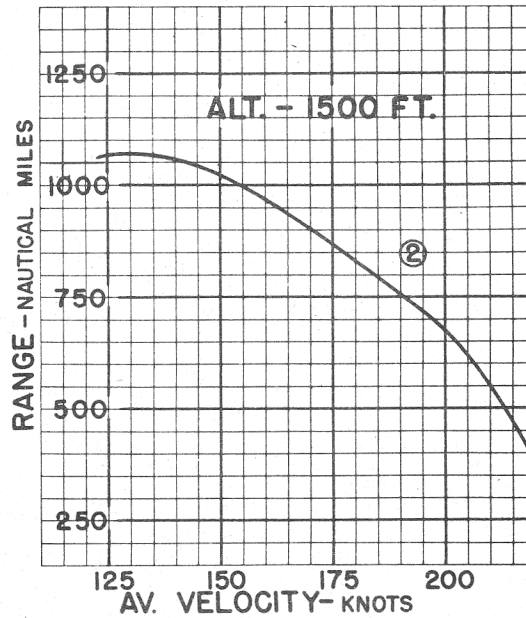
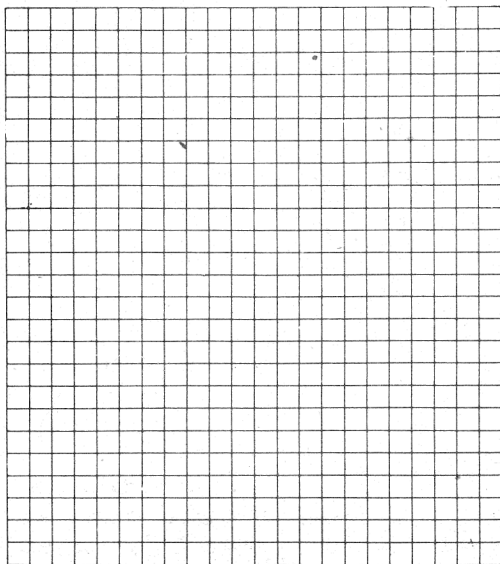
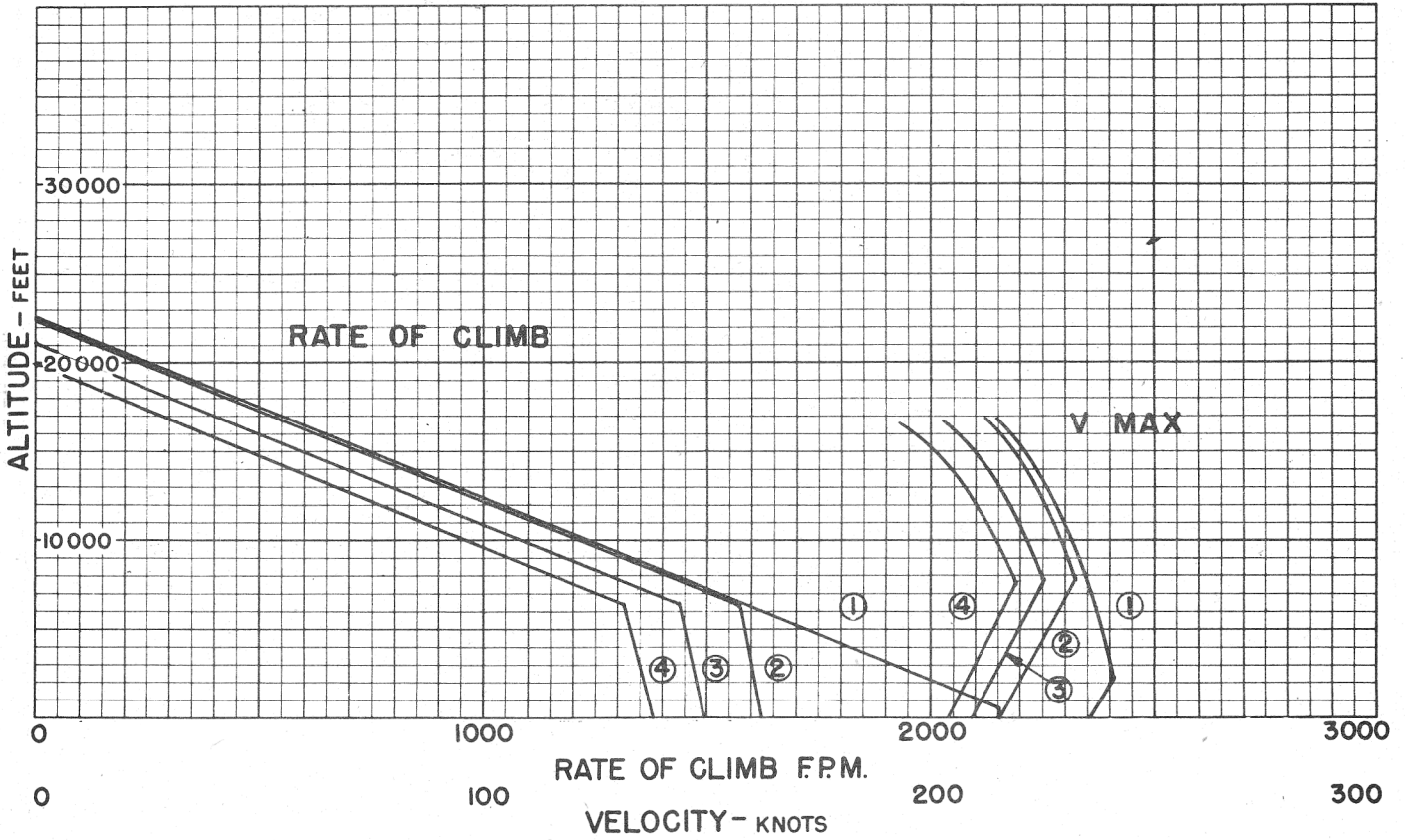
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Search Condition: AN/APS-20A Radar, 2-MK51 wing bomb racks, 18-AN/CRB-1B Sonobouys, 20-MK5 float lights, 2-MK6-2 aircraft float lights, K 25 camera and Edgerton D-1 Flasher are aboard.

A.S.W. Radius Formula No. PA-1 (Mod.) Cond. Nos. 1, 2, 3, 4.

Radius is 1/3 range at 150 kn. at 1500 ft. altitude. Allowance of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried entire distance. Sonobouys, float lights, and tanks are carried entire distance.



○ LOADING CONDITION COLUMN NUMBER

MODEL XTBF-1S

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 548.7
WING SECTION - N.A.C.A. 23018-23012
M.A.C. - 115.07

■ SELF-SEALING TANKS
⊗ NON SELF-SEALING TANKS

