

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

| COLUMN NUMBER | | 1 | 2 | 3 | 4 |
|-----------------------------------|---------------------------------|---------------------------|----------------------|---|----------------|
| LOADING CONDITION | | COMBAT * | COMBAT * | COMBAT * | BOMBER 1-1000# |
| GROSS WEIGHT | LBS. | 13500 | 13500 | 13500 | 14650 |
| EMPTY WEIGHT | -Actual- LBS. | 10093 | | | |
| FUEL/OIL | GALS. | 365/20 | 365/20 | 365/20 | 365/20 |
| FIXED GUNS/AMMUNITION | | 2-20mm/400rds | | | |
| FLEXIBLE GUNS/AMMUNITION | | none | | | |
| ENGINE POWER USED FOR PERFORMANCE | | COMBAT | MILITARY | NORMAL | NORMAL |
| WING LOADING | LBS./SQ.FT. | 33.8 | 33.8 | 33.8 | 36.6 |
| POWER LOADING ① | LBS./BHP. | 6.1 | 7.1 | 7.5 | 8.1 |
| V-MAX. SEA LEVEL. | KN | 310 | 299 | 280 | 253 |
| V-MAX./CRITICAL ALT. | KN/FT. | 326/13600 | 320/17300 | 313/17400 | 285/17000 |
| V-STALL GROSS WEIGHT ② | KN | 71.7 | 71.7 | 71.7 | 74.8 |
| V-STALL WITHOUT FUEL ② | KN | 65.8 | 65.8 | 65.8 | 69.0 |
| TIME-TO-CLIMB -10000FT- | MIN. | 3.2 | 3.8 | 4.0 | 4.5 |
| TIME-TO-CLIMB -20000FT- | MIN. | 7.8 | 8.2 | 9.3 | 10.6 |
| SERVICE CEILING | FT. | 33200 | 33200 | 32800 | 31100 |
| TAKE-OFF DISTANCE -CALM- | FT. | 416 | 416 | 416 | 515 |
| TAKE-OFF DISTANCE -15 KN- | FT. | 256 | 256 | 256 | 324 |
| TAKE-OFF DISTANCE -25 KN- | FT. | 171 | 171 | 171 | 221 |
| TAKE-OFF DISTANCE -50 FT. OBST. | FT. | | | | |
| TAKE-OFF TIME | SECONDS | | | | |
| RATE OF CLIMB -SL- | FT./MIN. | 3680 | 3250 | 2640 | 2360 |
| MAX. RANGE / V-AV. ③ | NMI./KN | | | 1345/142 | 1120/141 |
| RANGE / V-AV. -60%NSP-③- | NMI./KN | | | | |
| SEARCH RADIUS / V-AV. -20%R- | NMI./KN | | | | |
| A.S.W. RADIUS / V-AV. -20%R- | NMI./KN | | | | |
| SCOUT RADIUS | N MI. | | | | |
| COMBAT RADIUS | N MI. | | | 315 (B-1) | 275 (B-1) |
| ENGINE / PROP. GEAR RATIO | | W.A.C. R-3350-24W (.4375) | | | |
| ENGINE RATING BHP/RPM/ALT. | COMBAT | MILITARY | NORMAL | TAKE-OFF | |
| | 2800/2800/S.L.-1000' | 2500/2800/S.L.-3500 | 2100/2400/S.L.-5500 | 2500/2900/S.L. | |
| | 2200/2600/8000-11000' | 1900/2600/11000-14800 | 1800/2400/9750-15000 | | |
| TANKAGE IN GALLONS | | OIL | FUEL | OFFENSIVE ARMAMENT | |
| AUX. FIXED | PROTECTED | | 365 | Fuselage (Explosive Displacing Gear) | |
| | UNPROTECTED | 31 | | Bombs: 1-2000#, 1-1600#, 1-1000# or 1-500# | |
| | TOTAL - FIXED INTERNAL | 31 | 365 | Depthbombs: 1-650# or 1-325# | |
| | DROPPABLE -Wings- 2 @ 150 | | 300 | Mines: 1-2000# or 1-1000# | |
| | DROPPABLE -Alternate with bombs | | | Torpedo: 1 MK 13-3 | |
| TOTAL | 31 | 665 | | Wings: (Paired MK 51-9 bomb racks) | |
| NOTE | | | | Bombs: 2-1000#, 2-500#, 2-250#, or 6-100# | |
| | | | | Depth Bombs: 2-650#, or 2-325# | |
| | | | | Mines: 2-1000# | |
| | | | | Mookata: 2-11.75 "A.R. (Tiny Tim)" | |
| | | | | Note: AN/APN-4 Radar carried on right wing bomb-rack. | |

Reissued 1 January 1947

DATE 1 MAY 1945

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MODEL XBT2D-1

6852

NAVAER-15108 (Rev. 9-48)

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BUREAU OF AERONAUTICS, NAVY DEPT.

| COLUMN NUMBER | | 5 | 6 | 7 | 8 |
|-----------------------------------|------------|------------------------------|---|--|---|
| LOADING CONDITION | | BOMBER 1-2000# 2-1000# | BOMBER 1-2000# One Tank External | TORPEDO 1 MK 13-3 One Tank External | ROCKET 8-5 "HVAR 1-1000# 1-Tank Ext. |
| GROSS WEIGHT | LBS. | 17500 | 16729 | 16924 | 16873 |
| EMPTY WEIGHT - Actual - | LBS. | | 10093 | | |
| FUEL/OIL | GALS. | 365/20 | 515/28 | 515/28 | 515/28 |
| FIXED GUNS/AMMUNITION | | 2-20 mm/400 rds | | | |
| FLEXIBLE GUNS/AMMUNITION | | NONE | | | |
| ENGINE POWER USED FOR PERFORMANCE | | NORMAL | NORMAL | NORMAL | NORMAL |
| WINGLOADING | LBS/SQ.FT. | 43.8 | 41.8 | 42.3 | 42.2 |
| POWER LOADING ① | LBS/BHP | 9.7 | 9.3 | 9.4 | 9.4 |
| V-MAX. SEA LEVEL | KN | 237 | 237 | 235 | 230 |
| V-MAX./ CRITICAL ALT. | KN/ FT. | 265/16800 | 266/16800 | 263/16800 | 257/16700 |
| V-STALL. GROSS WEIGHT ② | KN | 81.7 | 79.9 | 80.3 | 82.3 |
| V-STALL. WITHOUT FUEL ② | KN | 76.5 | 72.2 | 72.6 | 74.4 |
| TIME-TO-CLIMB -10000FT.- | MIN. | 6.0 | 5.5 | 5.7 | 5.7 |
| TIME-TO-CLIMB -20000FT.- | MIN. | 14.8 | 13.6 | 14.0 | 14.0 |
| SERVICE CEILING | FT. | 27800 | 28400 | 28200 | 28100 |
| TAKE-OFF DISTANCE -CALM- | FT. | 810 | 724 | 748 | 790 |
| TAKE-OFF DISTANCE -15 KN- | FT. | 535 | 473 | 490 | 522 |
| TAKE-OFF DISTANCE -25KN- | FT. | 380 | 332 | 346 | 371 |
| TAKE-OFF DISTANCE -50 FT. OBST. | FT. | | | | |
| TAKE-OFF DISTANCE | SECONDS | | | | |
| RATE OF CLIMB -SL- | FT./MIN. | 1810 | 1940 | 1900 | 1900 |
| MAX. RANGE / V-AV. ③ | NMI./KN | 921/147 | 1370/141 | 1335/141 | 1290/139 |
| RANGE / V-AV. -80%NSP-④ | NMI./KN | | | | |
| SEARCH RADIUS/V-AV. -20%R- | NMI./KN | | | | |
| A. S. W. RADIUS/V-AV. -20%R- | NMI./KN | | | | |
| SCOUT RADIUS | NMI. | | | | |
| COMBAT RADIUS | NMI. | 250 (R-1) | 455 (R-1) | 450 (R-1) | 440 (R-1) |

PERFORMANCE IS BASED ON - PRELIMINARY FLIGHT TEST (except Rate of Climb is based on calculations).

RANGE & RADIUS ARE BASED ON ENGINE REQUIREMENT FUEL CONSUMPTION DATA INCREASED BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

* COMBAT CONDITION: Fuselage displacing gear, bomb-rack and sway bracing aboard; Wing bomb-racks (faired) and swry bracing aboard; AN/APS 4 radar and rocket launchers not aboard; addition of 8 MK 9-1 rocket launchers reduces Vmax/S.L. by 4 kn. at COMBAT POWER.

CLEAN CONDITION: Combat condition with all bomb-racks, sway bracing, and displacing gear removed. At COMBAT POWER Vmax/S.L. 313 kn; Vmax/13600 ft. = 329 kn.

ROCKET CONDITION: 8-5" head/5" motor rockets suspended from MK 9-1 launchers.

FERRY CONDITION: Armor, Armament, and Radar removed, Gross Weight = 14950 lbs. with 665 gals fuel. Max. range at 1500 ft. = 2000 n.mi./136 kn.

NOTE: Fuselage bomb-rack sway bracing and displacing gear, and wing bomb-racks and sway bracing in all conditions except CLEAN.
AN/APS 4 radar on right wing bomb-racks for conditions 4, 6, 7, and 8.
Rocket launchers carried in rocket condition only.
Condition 5: 2000# bomb carried on fuselage, 1000# bombs carried on wings.

C-57288

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BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS. - 4--8

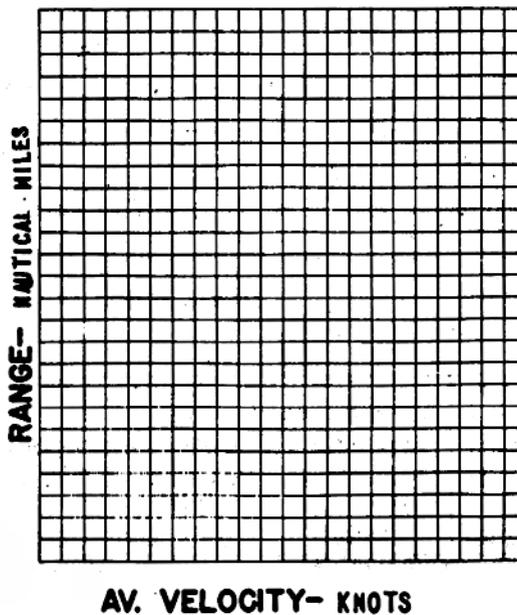
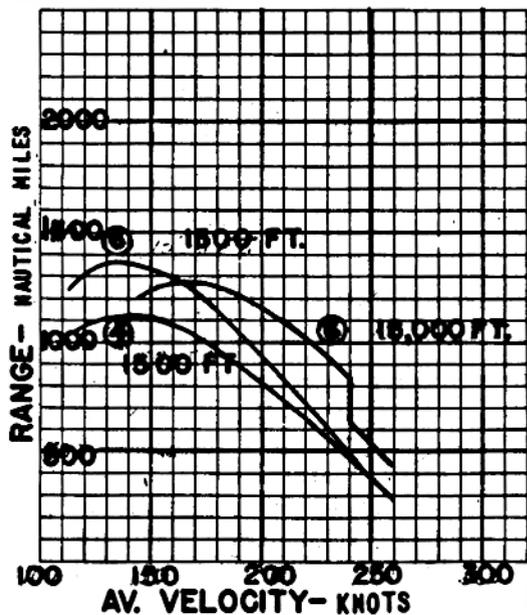
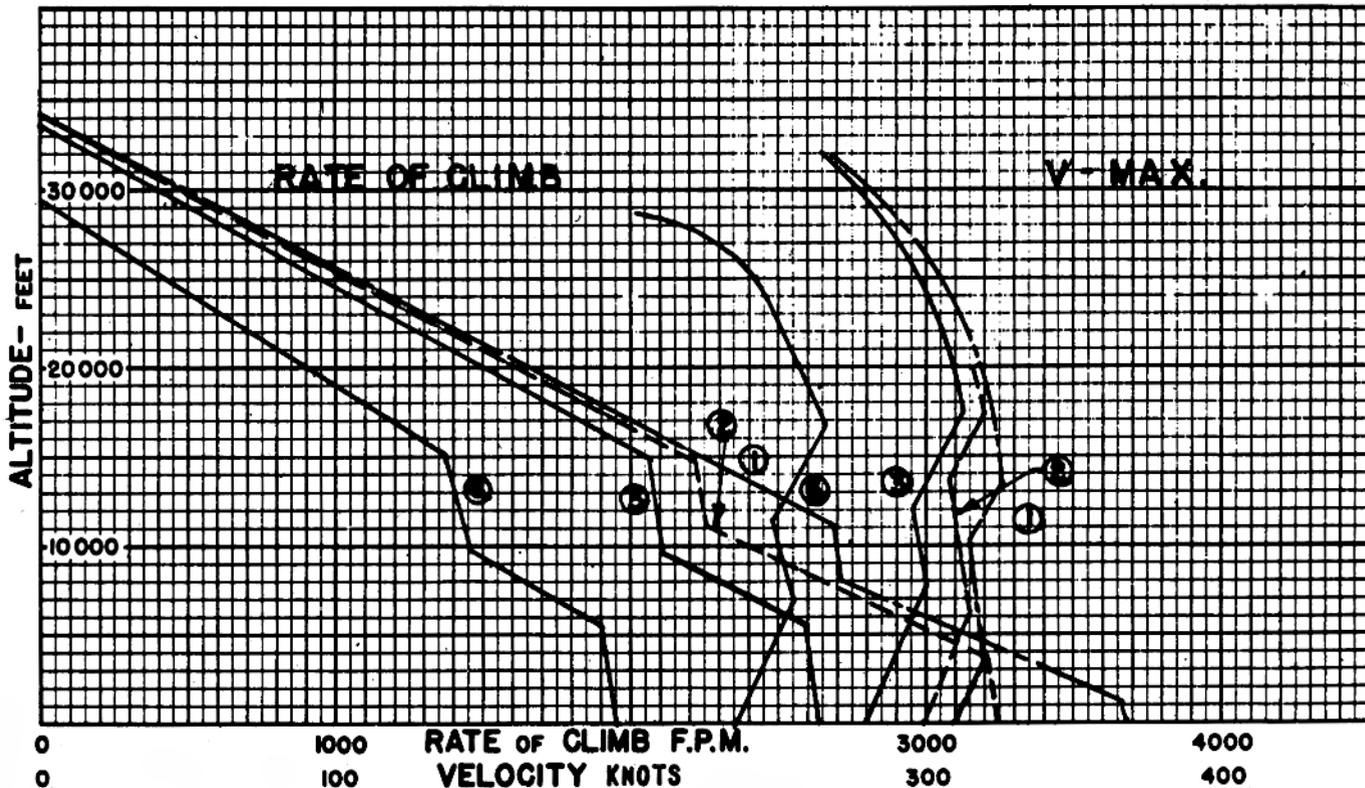
RADIUS = CLIMB + CRUISE-OUT = CRUISE BACK

| <u>WARM-UP</u> | <u>RENDEZVOUS</u> | <u>CLIMB</u> | <u>CRUISE OUT</u> | <u>DROP TANKS</u> | <u>COMBAT</u> | <u>CRUISE BACK</u> | <u>RESERVE</u> |
|-----------------|-------------------|--------------|-------------------|-------------------|-----------------|--------------------|----------------|
| 20 min. | 20 min. at | to | | <u>DESCEND</u> | 15 min. | | 60 min. |
| | sea level | 15000 ft. | at 15000 ft. | to 1500 ft. | at 1500 ft. | at 1500 ft. | at |
| <u>TAKE-OFF</u> | at | at | 180 kts.TAS | <u>DROP BOMBS</u> | 5 min. WEP. | 170 kts.TAS | Vel. for |
| 1 min. | 60% N.S.P. | 60% N.S.P. | Auto Lean. | <u>FIRE</u> | 10 min. Nor.Pr. | Auto Lean. | Max. Range |
| | Auto Lean. | Auto Rich. | Auto Lean. | <u>ROCKETS</u> | | Auto Lean. | Auto Lean. |

Water available for approximately 12 minutes at COMBAT POWER.

188 ft. length is required to spot 20 airplanes on the 96 ft. wide deck immediately aft of forward ramp on CV-9 class carriers.

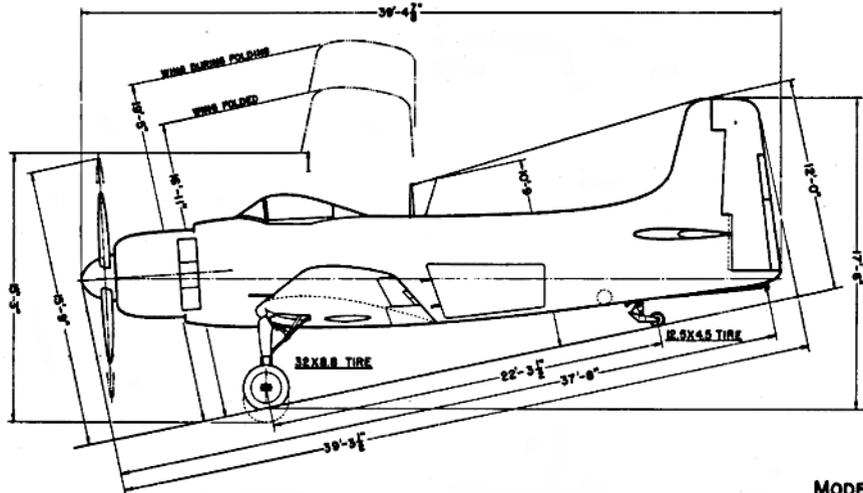
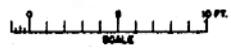
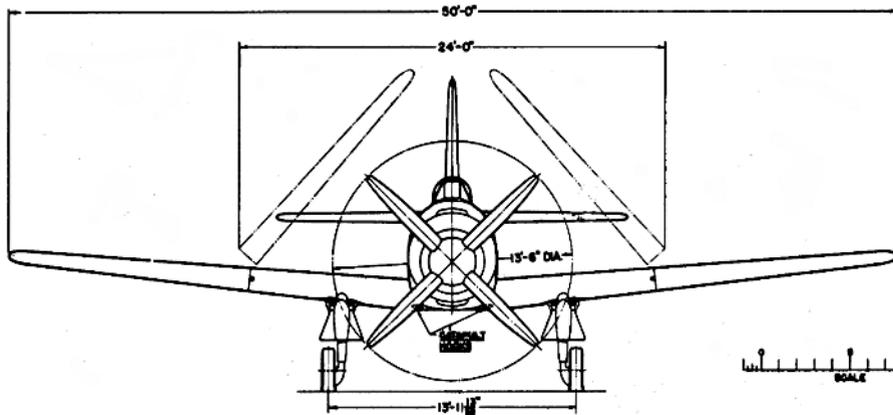
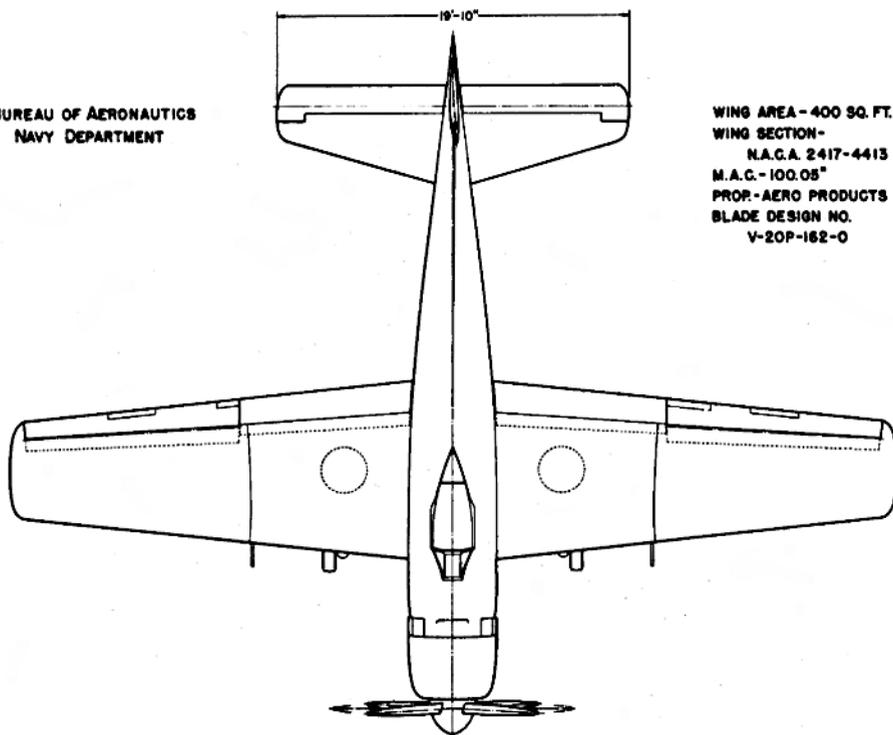
8-100# bombs or 8-250# bombs can be carried on MK-9 Rocket Launches.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 400 SQ. FT.
WING SECTION -
N.A.C.A. 2417-4413
M.A.C. - 100.08"
PROP - AERO PRODUCTS
BLADE DESIGN NO.
V-20P-162-0



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

-  BULLET RESISTANT GLASS ARMOR PLATE
-  DEFLECTION PLATE
-  SELF-SEALING TANKS
- 

PROTECTION

- | | |
|-----------------------|----------|
| 1. PILOT FORWARD | 85 LBS. |
| 2. PILOT AFT | 108 LBS. |
| 3. OIL COOLER | 15 LBS. |
| 4. SELF-SEALING CELLS | 266 LBS. |

