

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

| COLUMN NUMBER | | 1 | 2 | 3 | |
|--|---|------------------|----------------------------------|---|--|
| LOADING CONDITION | | COMBAT | COMBAT | FIGHTER | |
| | | FULL INT. | FULL INT. | 2 TIP TANKS | |
| GROSS WEIGHT | LBS. | 10741 | 10741 | 12571 | |
| EMPTY WEIGHT (ESTIMATED) | LBS. | | 7000 | | |
| FUEL / OIL | GALS. | 420 / | 420 / | 700 / | |
| FIXED GUNS/AMMUNITION | | 4-20 MM/600 Rds. | | | |
| FLEXIBLE GUNS/AMMUNITION | | NONE | | | |
| ENGINE POWER USED FOR PERFORMANCE | | COMBAT | MILITARY | NORMAL | |
| WING LOADING | LBS./SQ.FT. | 52.8 | 52.8 | 61.8 | |
| POWER LOADING ① | LBS./BHP. | | | | |
| V-MAX. SEA LEVEL | KN. | 521 | 474 | 395 | |
| V-MAX. | KN./FT. | 490/20000 | 475/7000 | 423/25000 | |
| V-STALL GROSS WEIGHT ② | KN. | 87.6 | 87.6 | 94.8 | |
| V-STALL. WITHOUT FUEL ② | KN. | 76.6 | 76.6 | 77.3 | |
| TIME-TO-CLIMB -10000FT- | MIN. | 1.3 | 2.8 | 5.6 | |
| TIME-TO-CLIMB -20000FT-* | MIN. | 2.9 | 6.6 | 14.1 | |
| SERVICE CEILING | FT. | 49000 | 40800 | 34400 | |
| TAKE-OFF DISTANCE (4) -CALM- | FT. | 1362 | 2172 | 3143 (1922) | |
| TAKE-OFF DISTANCE (4) -15 KN- | FT. | 981 | 1565 | 2342 (1432) | |
| TAKE-OFF DISTANCE (4) -25 KN- | FT. | 760 | 1213 | 1845 (1128) | |
| TAKE-OFF R/C* | FT./MIN. | | | 980 | |
| WAVE-OFF R/C* | FT./MIN. | 1295 | 348 | | |
| RATE OF CLIMB -SL- | FT./MIN. | 8480 | 4050 | 2140 | |
| MAX. RANGE /V-AV. ③ | N MI./KN. | | 635/214 | 1005/293 | |
| 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. | | | | |
| SCOUT RADIUS | N MI. | | | | |
| COMBAT RADIUS | F-3 (See Note) N MI. | | | 200 | |
| ENGINE J-34-WE-30 WESTINGHOUSE 24 C 4B | | | | | |
| ENGINE RATING BHP/RPM/ALT. | TAKE-OFF & MILITARY | | NORMAL | | |
| | 3250# Static Thrust/12500 RPM/SL | | 2700# Static Thrust/11800 RPM/SL | | |
| | COMBAT (with afterburning) | | | | |
| | 4225# Static Thrust/12500/SL | | | | |
| TANKAGE IN GALLONS OIL FUEL | | | | | |
| AUX. FIXED | PROTECTED | | 420 | NOTE: Performance is based on calculations. Range and radius are based on specification fuel consumption data increased 7.5% to conform with past experience. | |
| | UNPROTECTED | | | | |
| | TOTAL-FIXED INTERNAL | | 420 | | |
| | DROPPABLE | | | | |
| DROPPABLE | 2 Tip Tanks | | 280 | | |
| TOTAL | | | 700 | | |
| NOTE | ① BHP AT MAX. CRIT. ALT. | | | | |
| | ② STALL - WITHOUT POWER (Idling Jet) | | | | |
| | ③ AT 20000' ALTITUDE | | | | |
| | (4) Parenthesized figures include after-burner. | | | | |

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FIGHTER COMBAT RADIUS FORMULA NO. F-3-CONDITIONS NOS. -2 & 3. RADIUS=CLIMB/CRUISE-OUT=CRUISE BACK

| <u>WARM-UP</u> | <u>RENDEZVOUS</u> | <u>CLIMB</u> | <u>CRUISE OUT</u> | <u>DROP TANKS</u> and BOMBS | <u>COMBAT</u> | <u>CRUISE BACK</u> | <u>RESERVE</u> |
|---|--|-----------------|---------------------------|---|--|---------------------------|---|
| 30 sec. at Max Stat. Thrust | Climb to 5000 ft. | to 20000 ft. | at 20000 ft. | and and | 15 min. -V max. at 15000 ft. | at 20000 ft. | 15 min. at 10000 ft. |
| <u>TAKE-OFF</u> 1 min. at T.O. Thrust | Mil. Thrust 10 min. REND. Vel. for Max. Range | Mil. Thrust | at Vel. for Max. Range | <u>DESCEND</u> to 15000 ft. <u>FIRE</u> <u>ROCKETS</u> | <u>RETURN</u> to 20000 ft. Mil. Thrust | at Vel. for Max. Range | 15 min. at S.L. Vel. for Max. End. |

Note: Provisions are incorporated for fuel transfer from droppable to main tanks after take-off.

*Take-Off Rate of Climb - Rate of Climb at 100 kn TAS with flaps and landing gear down.

*Wave-Off Rate of Climb - Rate of Climb at V-stall plus 8.7 kn with flaps and landing gear down.

*Note: Both values are given at standard sea-level pressure at a temperature of 95°F.

Spotting - 200 ft. length is required to spot 38 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 class carriers.

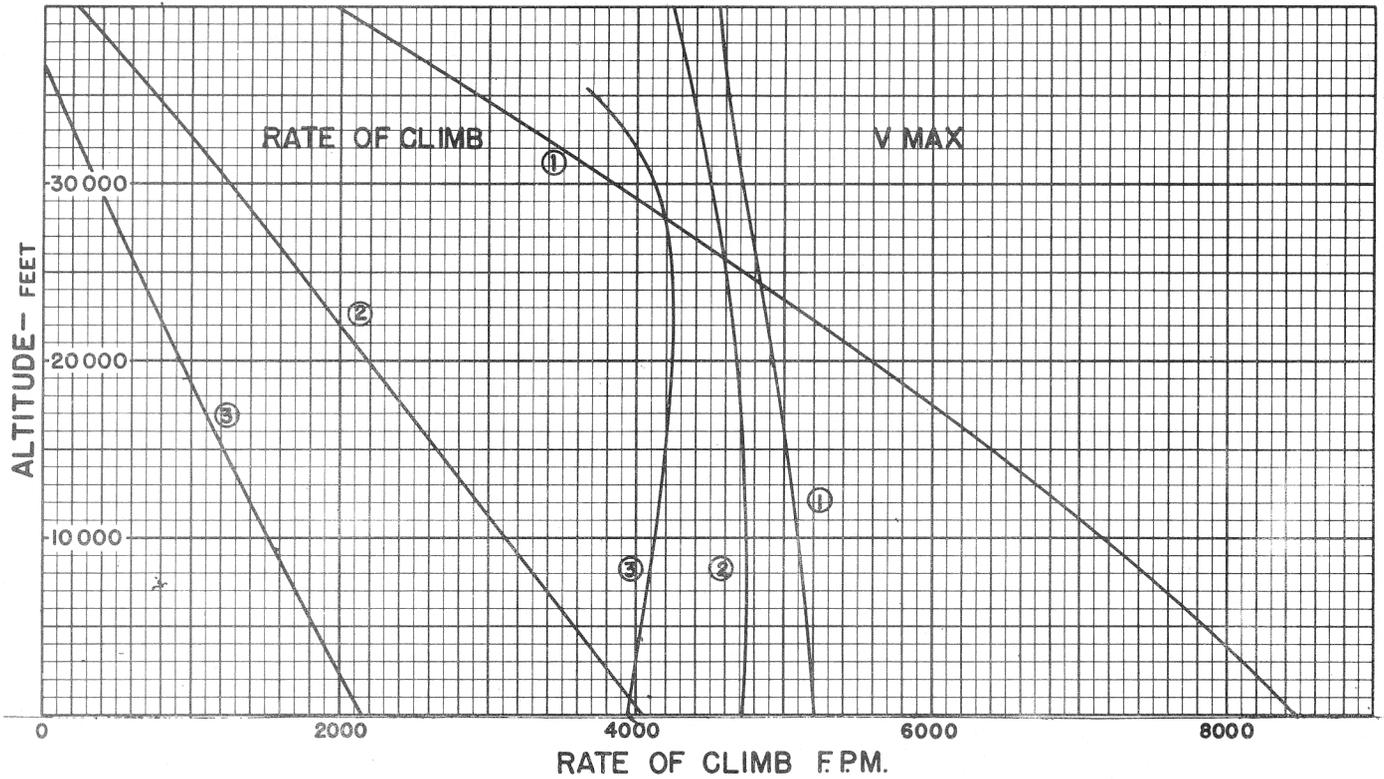
NOTE ON COMBAT RADIUS:

Combat Radius limited by amount of protected fuel for use in combat and return. 32.5 gals. fuel remain in unprotected tanks when entering combat and must be dropped, used for approximately .15 hrs. search at speed for maximum range, or used to increase speed in cruise out to normal thrust, or for 23 nautical miles additional radius if external tanks are carried in combat.

AIRPLANE PERFORMANCE

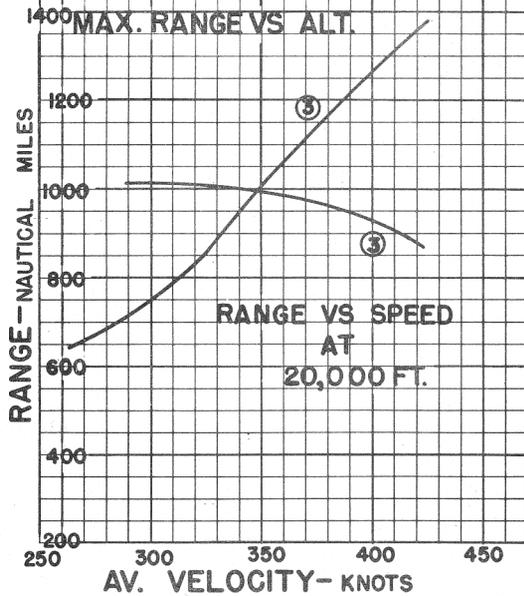
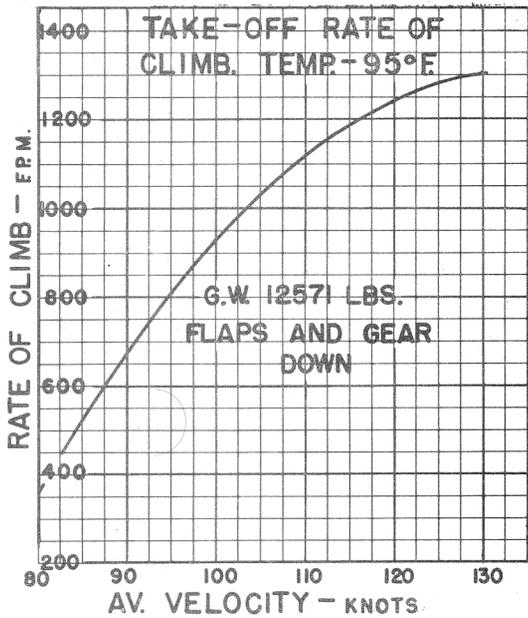
NAVAER - 1335 C (REV. 2-47)

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VELOCITY - KNOTS

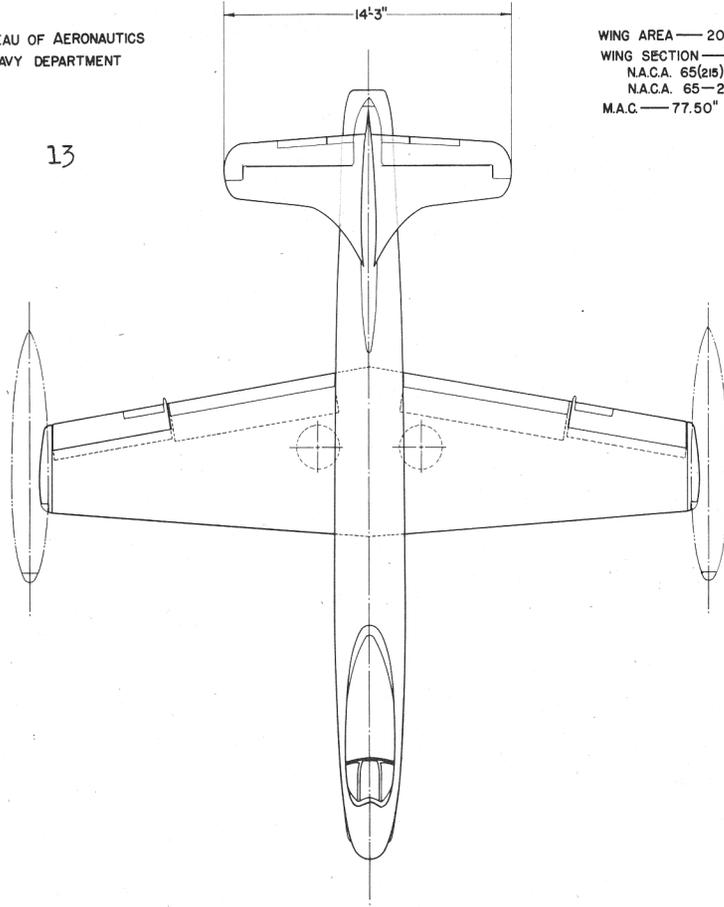
S.L. 10000 20000 30000 ALTITUDE



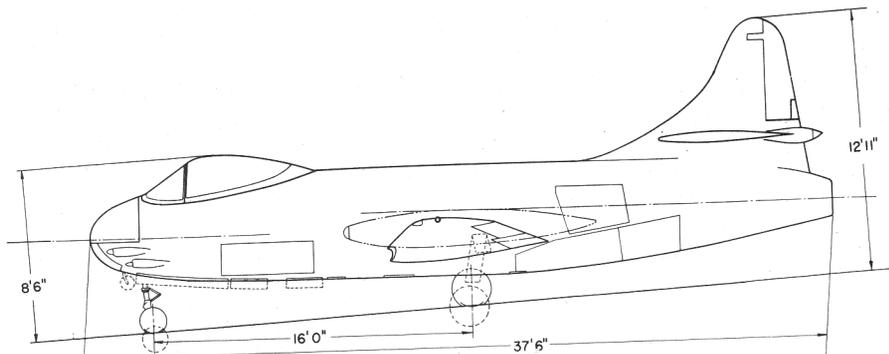
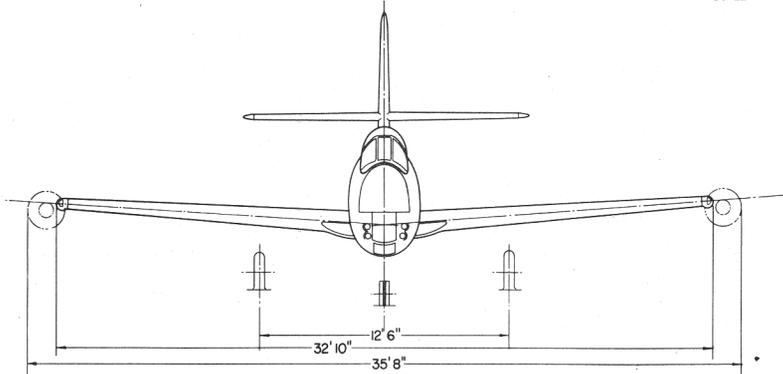
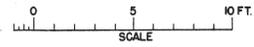
○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

13



WING AREA — 203.5 SQ. FT.
WING SECTION —
N.A.C.A. 65(215)-114 ($\alpha=1.0$)
N.A.C.A. 65-212 ($\alpha=0.6$)
M.A.C. — 77.50"



MODEL F6U-1
NAVAER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

- 1. PILOT FORWARD 52.1 LBS.
- 2. PILOT AFT 64.7 LBS.
- 3. FUSELAGE TANKS 276.6 LBS.
- 4. DEFLECTION PLATE 8.2 LBS.

