

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

| COLUMN NUMBER | | 1 | 2 | 3 | 4 |
|-----------------------------------|---|-----------------------|-----------|--|------------------------------|
| LOADING CONDITION | | COMBAT * | COMBAT * | FIGHTER | FIGHTER |
| | | | | 1-150 Gal. Tank External | 2-150 Gal. Tanks External |
| GROSS WEIGHT | LBS. | 13346 | 13346 | 14399 | 15422 |
| EMPTY WEIGHT - Calculated - | LBS. | 10249 | | | |
| FUEL / OIL | GALS. | 309/17 | 309/17 | 459/21 | 609/21 |
| FIXED GUNS/AMMUNITION | | 4-.50 cal./1200 Rds. | | | |
| FLEXIBLE GUNS/AMMUNITION | | None | | | |
| ENGINE POWER USED FOR PERFORMANCE | | MILITARY | NORMAL | NORMAL | NORMAL |
| WING LOADING | LBS./SQ.FT. | 42.5 | 42.5 | 45.8 | 49.1 |
| POWER LOADING ① | LBS./BHP. | 5.6 | 6.1 | 6.5 | 7.0 |
| V-MAX. SEA LEVEL | MPH. | 399 | 373 | 354 | 337 |
| V-MAX./ CRITICAL ALT. | MPH./FT. | 431/16900 | 422/17700 | 401/17400 | 380/17200 |
| V-STALL GROSS WEIGHT ② | MPH. | 91.6 | 91.6 | 95.3 | 101.0 |
| V-STALL WITHOUT FUEL ② | MPH. | 85.0 | 85.0 | 85.8 | 88.2 |
| TIME-TO-CLIMB -10000 FT.- | MIN. | 2.5 | 2.8 | 3.1 | 3.4 |
| TIME-TO-CLIMB -20000 FT.- | MIN. | 5.7 | 6.3 | 7.0 | 7.8 |
| SERVICE CEILING | FT. | 38800 | 37900 | 36400 | 35000 |
| TAKE-OFF DISTANCE -CALM- | FT. | 577 | 577 | 716 | 887 |
| TAKE-OFF DISTANCE -15 KN- | FT. | 374 | 374 | 474 | 599 |
| TAKE-OFF DISTANCE -25 KN- | FT. | 259 | 259 | 338 | 438 |
| TAKE-OFF DISTANCE -50 FT. OBST. | FT. | | | | |
| TAKE-OFF TIME | SECONDS | | | | |
| RATE OF CLIMB -SL- | FT./MIN. | 4400 | 3650 | 3310 | 3020 |
| MAX. RANGE / V-AV. ③ | ST. MI. / MPH. | | 1190/190 | 1610/188 | 1955/185 |
| RANGE / V-AV. -60%NSP-③- | ST. MI. / MPH. | | | | |
| 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. | | 125 | 355 | 475** |
| ENGINE / PROP.GEAR RATIO | | P & W R-4360-4 (.425) | | | |
| ENGINE RATING BHP/RPM/ALT. | MILITARY | NORMAL | | TAKE-OFF | |
| | 3000/2700/SL-1500 | 2500/2550/SL-5000 | | 3000/2700 | |
| | 2400/2700/13500 | 2200/2550/14500 | | | |
| TANKAGE IN GALLONS | | OIL | FUEL | OFFENSIVE ARMAMENT | |
| AUX. FIXED | PROTECTED | | 309 | WINGS (Pylons):- | |
| | UNPROTECTED | 21 | | Bombs: 2-1600#, 2-1000#, or 2-500#, 2-250#, or 6-100# | |
| | TOTAL - FIXED INTERNAL | 21 | 309 | Note: 2 Pylons are available for either 2 Bombs or Drop- | |
| | DROPPABLE | | | pable Fuel Tanks. | |
| | DROPPABLE - S.S. or unprot. 2 @ 100 or 2 @ 150 | | | 300 | |
| TOTAL | 21 | | 609 | | |
| NOTE | STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS | | | | |
| | ① BHP AT MAX. CRIT. ALT. | | | | |
| | ② STALL - WITHOUT POWER | * See Note Page 2 | | | |
| ③ AT 1500' ALTITUDE | ** See Note Page 3 | | | | |

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| COLUMN NUMBER | | 5 | 6 | 7 | 8 |
|-----------------------------------|----------------|----------------------|--|--|---------------------------------------|
| LOADING CONDITION | | BOMBER 2-1000# | BOMBER 1-1000# 1-150 Gal. Tank External | ROCKET 8-5" A.R. 1-150 Gal. Tank External | FERRY 2-150 Gal. Tanks External |
| GROSS WEIGHT | LBS. | 15342 | 15397 | 15096 | 14633 |
| EMPTY WEIGHT - Calculated | LBS. | 10249 | | | 10093 |
| FUEL/OIL | GALS. | 309/17 | 459/21 | 459/21 | 609/21 |
| FIXED GUNS/AMMUNITION | | 4-.50 cal./1200 Rds. | | | None |
| FLEXIBLE GUNS/AMMUNITION | | None | | | |
| ENGINE POWER USED FOR PERFORMANCE | | NORMAL | NORMAL | NORMAL | NORMAL |
| WING LOADING | LBS./SQ.FT. | 48.9 | 49.0 | 48.0 | 46.6 |
| POWER LOADING ① | LBS./BHP | 7.0 | 7.0 | 6.9 | 6.7 |
| V-MAX. SEA LEVEL | MPH. | 337 | 337 | 333 | |
| V-MAX./ CRITICAL ALT. | MPH./ FT. | 380/17200 | 380/17200 | 376/17100 | |
| V-STALL GROSS WEIGHT ② | MPH. | 100.8 | 100.9 | 101.2 | |
| V-STALL WITHOUT FUEL ② | MPH. | 94.4 | 91.5 | 91.6 | |
| TIME-TO-CLIMB -10000FT.- | MIN. | 3.4 | 3.4 | 3.3 | |
| TIME-TO-CLIMB -20000FT.- | MIN. | 7.8 | 7.8 | 7.6 | |
| SERVICE CEILING | FT. | 35000 | 35000 | 35200 | |
| TAKE-OFF DISTANCE -CALM- | FT. | 882 | 885 | 867 | |
| TAKE-OFF DISTANCE -15 KN.- | FT. | 596 | 597 | 585 | |
| TAKE-OFF DISTANCE -25KN.- | FT. | 436 | 437 | 428 | |
| TAKE-OFF DISTANCE -50 FT. OBST. | FT. | | | | |
| TAKE-OFF DISTANCE | SECONDS | | | | |
| RATE OF CLIMB -SL- | FT./ MIN. | 3050 | 3040 | 3100 | |
| MAX. RANGE / V-AV. ③ | ST. MI. / MPH. | 955/191 | 1450/188 | 1445/184 | 2040/183 |
| RANGE / V-AV. -60%NSP-③- | ST. MI. / MPH. | | | | |
| SEARCH RADIUS/V-AV. -20%R- | NMI./ KN. | | | | |
| A. S. W. RADIUS/V-AV. -20%R- | NMI./ KN. | | | | |
| SCOUT RADIUS | NMI. | | | | |
| COMBAT RADIUS | NMI. | 105 | 325 | 325 | |

PERFORMANCE IS BASED ON - Prototype Flight Test

RANGE & RADIUS ARE BASED ON Engine Requirement

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

*COMBAT CONDITION: Two capped pylons aboard; rocket launchers not aboard; At Military Power -
 COMBAT CONDITION plus 8 MK5-1 launchers -V max/SL - 391 mph; V max - 422/16800'
 COMBAT CONDITION less pylons caps - V max/SL - 392 mph; V max - 424/16800'

CLEAN CONDITION: Same as COMBAT CONDITION except two pylons removed, GW-13286.
 V max-SL = 407 mph V max = 440/17000'.

ROCKET CONDITION: Rockets suspended from MK5-1 launchers.

NOTE: Provisions are incorporated for fuel pump back from droppable to main tanks after take-off.
 Two wing pylons carried in all conditions except "CLEAN" (Pylons are capped when not in use).
 Performance on these sheets are computed with the Aero Products V20-162-0, 13'-6"/4 blade propeller.
 Installation of the Ham.Std. 6491A-20, 13'-6"/4 blade propeller results in the following changes for condition (2): R/C SL - reduced 60 FPM; V max/SL - reduced 0.5 mph; V max/ACA - reduced 0.5 mph; Max. Range - 1500 ft. reduced 20 st. miles; Take-off Distance (25 kts. wind) increased 25 ft.

Installation of the Ham.Std. 2015B1-18, 13'-7"/4 blade propeller results in the following changes for condition (2): R/C SL - increases 40 FPM; V max/SL - no change; V max/ACA - reduced 1 mph; Max. Range-1500 ft. - increased 10 st. miles; Take-off Distance -25 knot wind - increased 12 feet.

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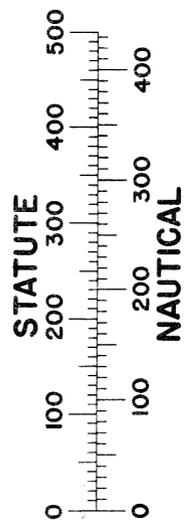
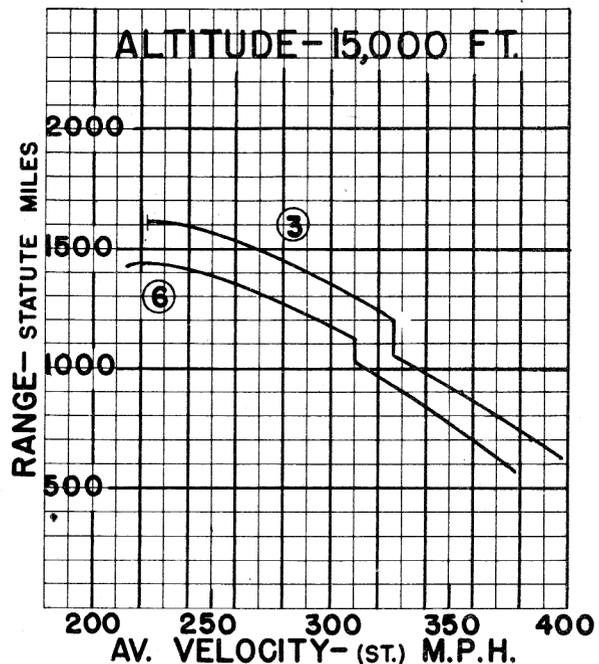
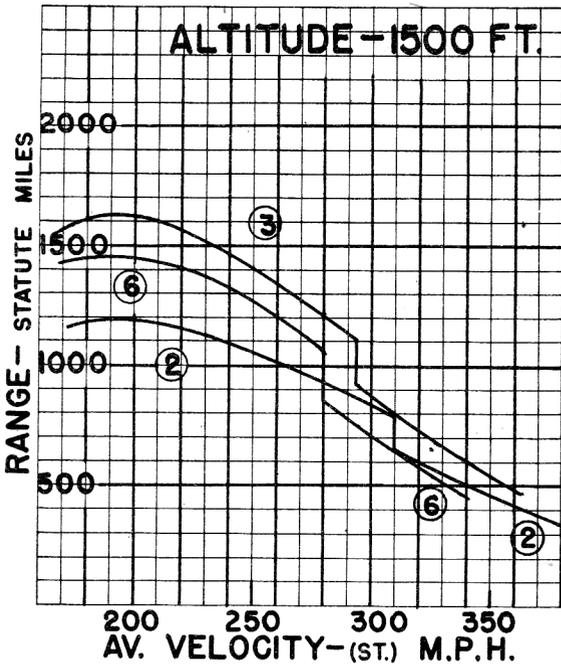
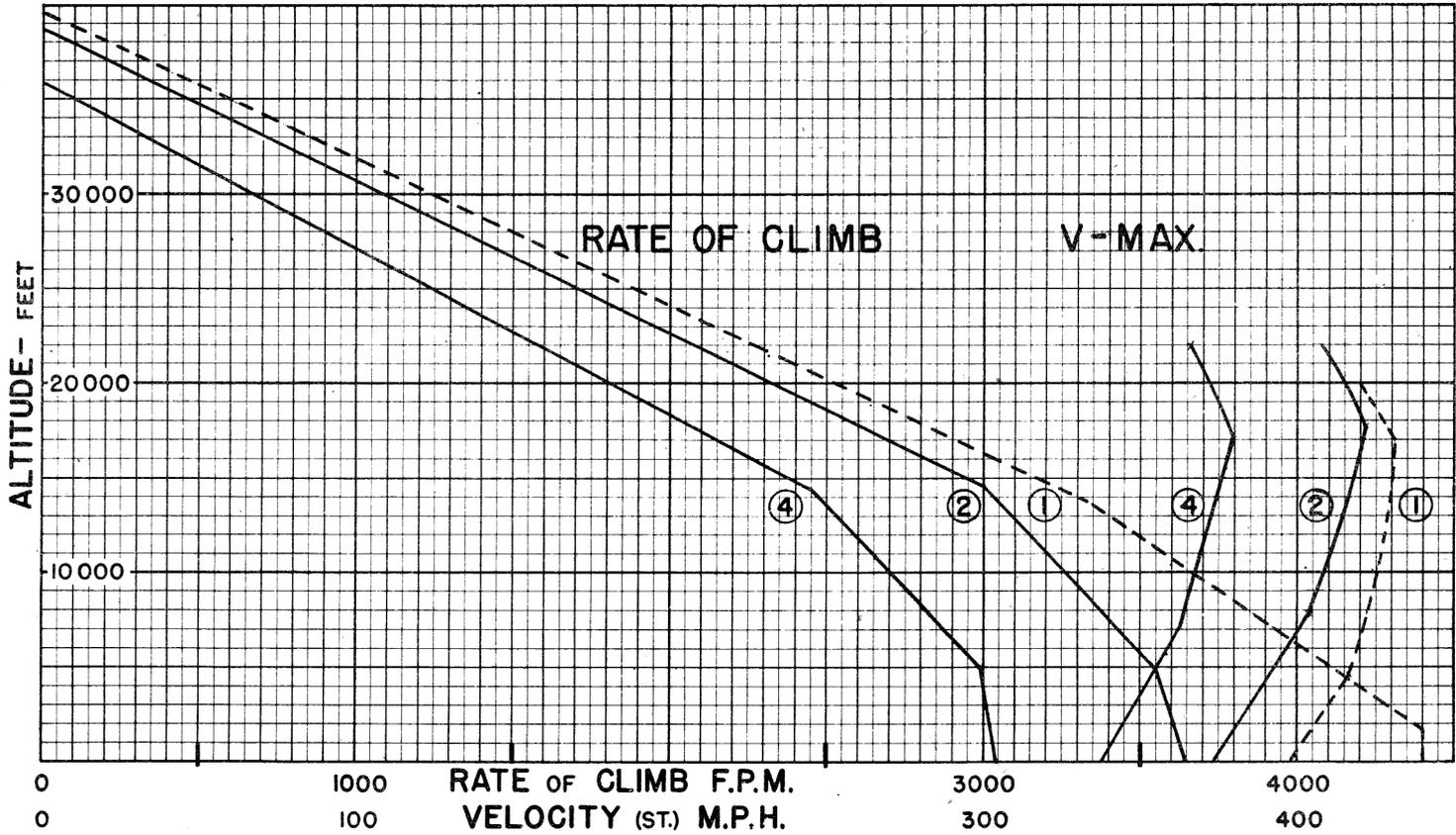
Combat Radius is based on 20 min. warm-up and idle; 1 min. take off; 20 min. rendezvous at 60% n.s.p. and auto-lean; climb to 15000 ft. at 60% n.s.p. and auto-rich; cruise out at 15000 ft. at V for max. range and auto-lean; drop bombs and unprotected droppable tanks; 20 min. combat at 15000 ft. at full military power; descend; cruise-back at 1500 ft. at 170 knots true air speed and auto-lean; 60 min. at V for max. range and auto-lean for rendezvous, landing and reserve. Radius includes distance covered in climb but not in descent. Rockets are fired during combat. Non Self-sealing droppable fuel tanks are included in the loading conditions with external tanks.

**50 gal. fuel remain in droppable fuel tank upon entering combat may be used for 44 min. search or used to increase cruise-out speed from 191-271 knots. When one of two 150 gal. droppable tanks is self-sealing, and is carried the entire distance, the combat radius is increased from 475 to 535 N. mi.

This airplane is modified FG-1 incorporating the R-4360-4 engine and outer panel wing tanks increasing the fuel capacity to 309 gal. Range and Radius limited by propeller governor limits of 1410 RPM engine speed.

COMBAT CONDITION (1) with 6-.50 cal./2400 rds., in lieu of 4-.50 cal./1200 rds., results in the following changes:

G.W. - Increased 502# V max./ACA - Reduced 3 MPH
V max./S.L. - Reduced 3 MPH R/C - S.L - Reduced 170 Ft./Min.

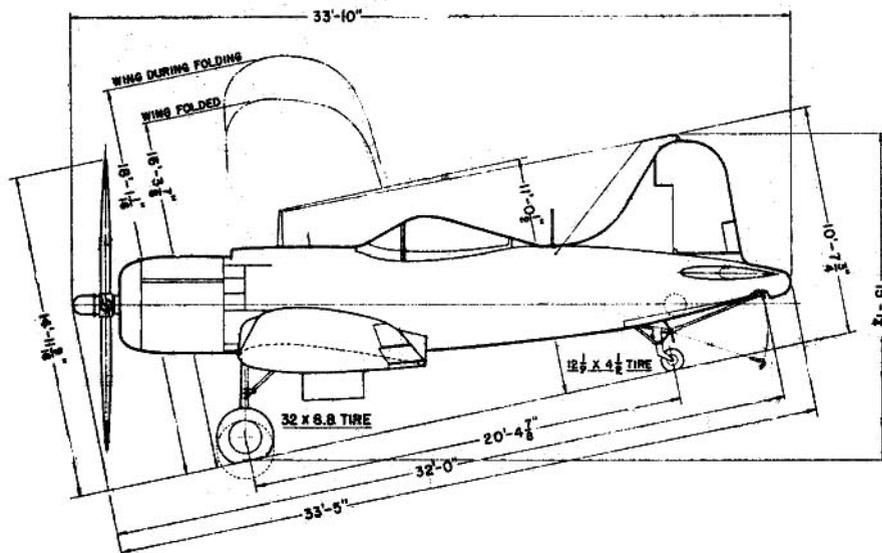
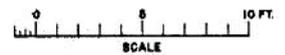
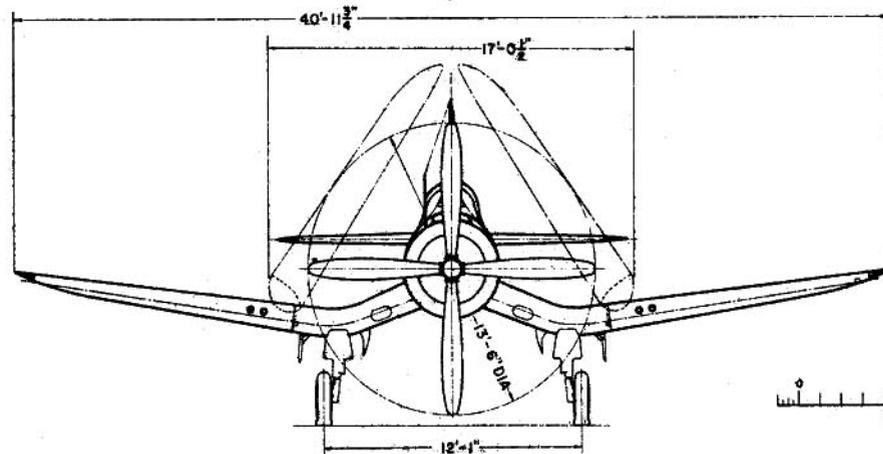
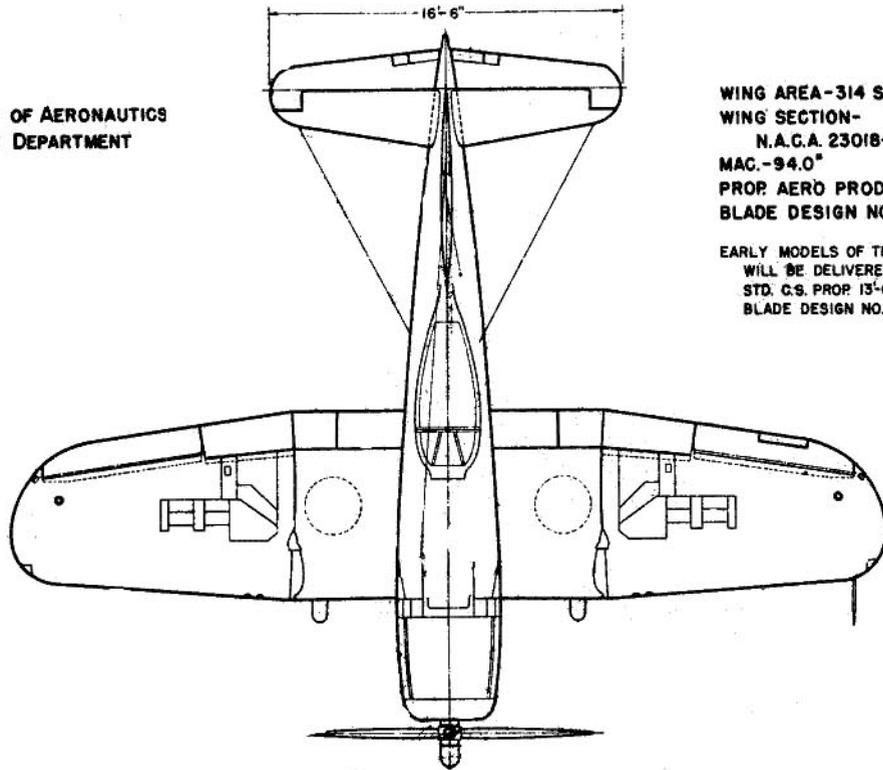


○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-314 SQ.FT
WING SECTION-
N.A.C.A. 23018-23009
MAC.-94.0"
PROP. AERØ PRODUCTS
BLADE DESIGN NO. V20-162-0

EARLY MODELS OF THIS AIRPLANE
WILL BE DELIVERED WITH HAMILTON
STD. G.S. PROP 13'-6" DIA. 4 BLADE,
BLADE DESIGN NO. 6491A-20



MODEL F2G-2

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

- 1. PILOT FORWARD 37 LBS.
- 2. PILOT AFT 152 LBS.
- 3. SELF-SEALING CELLS 297 LBS.
- 4. DEFLECTION PLATE 61 LBS.

