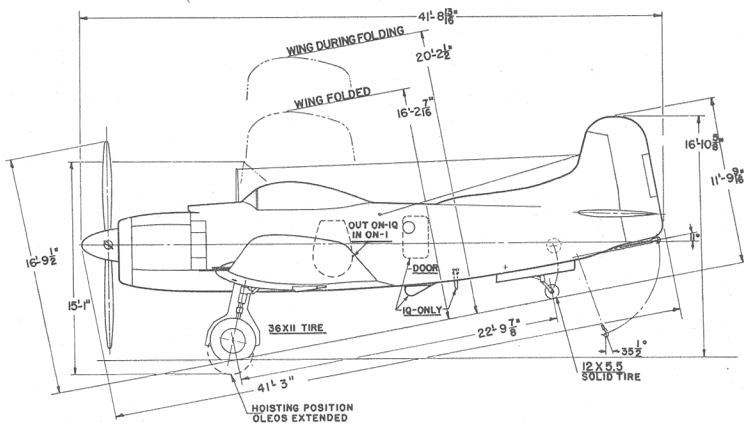
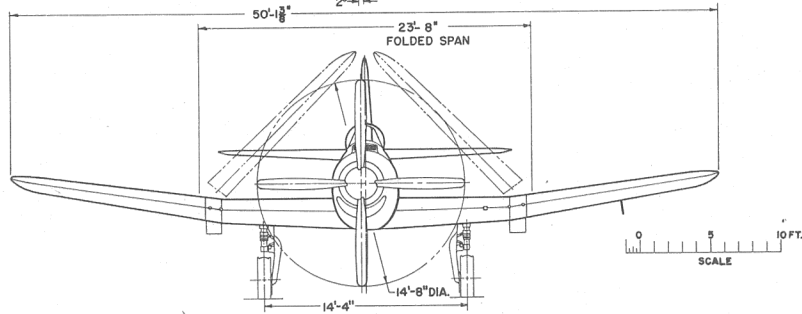
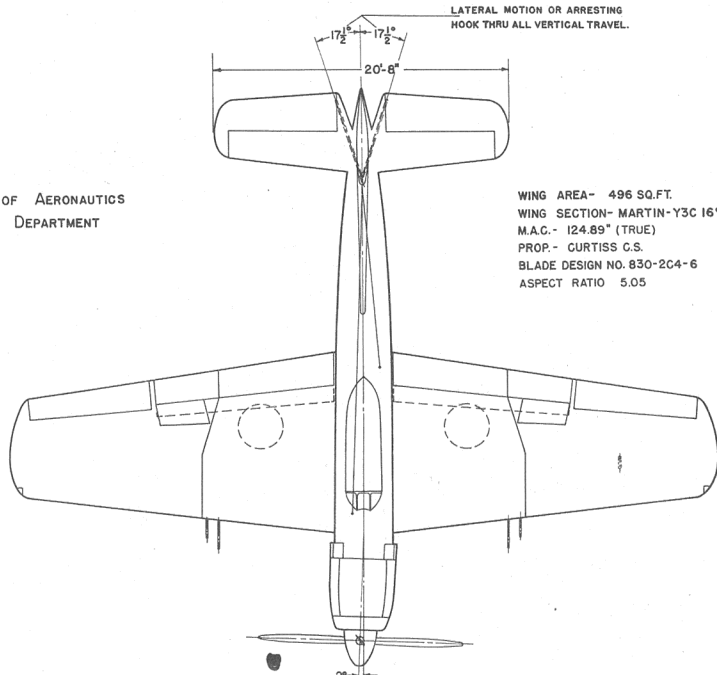


STANDARD AIRCRAFT CHARACTERISTICS
AM-1 "MAULER"

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NAVY DEPARTMENT



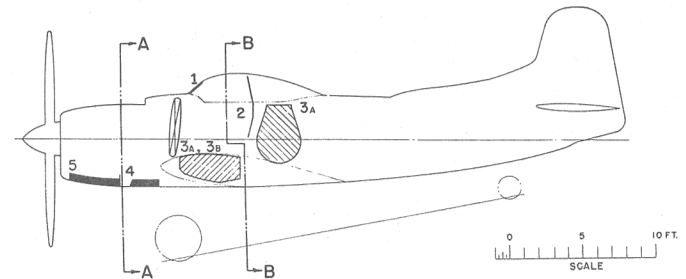
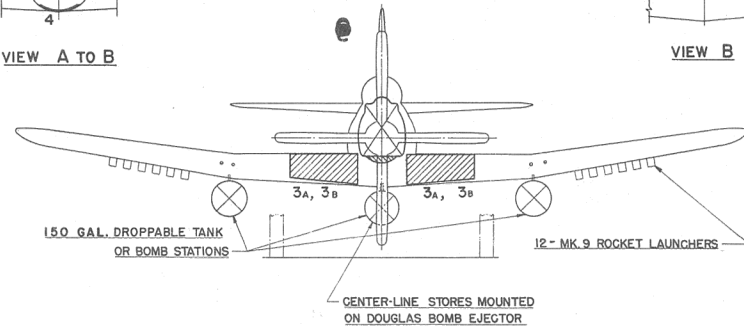
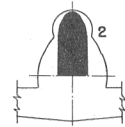
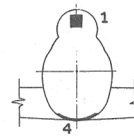
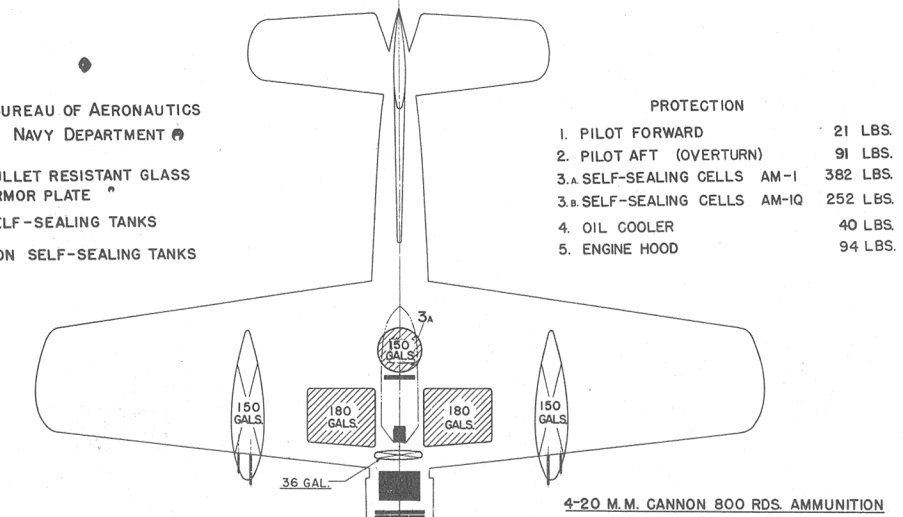
DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- BULLET RESISTANT GLASS
ARMOR PLATE "
- ▨ SELF-SEALING TANKS
- ⊠ NON SELF-SEALING TANKS

PROTECTION

- | | |
|------------------------------|----------|
| 1. PILOT FORWARD | 21 LBS. |
| 2. PILOT AFT (OVERTURN) | 91 LBS. |
| 3.A SELF-SEALING CELLS AM-1 | 382 LBS. |
| 3.B SELF-SEALING CELLS AM-1Q | 252 LBS. |
| 4. OIL COOLER | 40 LBS. |
| 5. ENGINE HOOD | 94 LBS. |



ARMAMENT & TANKS

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MISSION AND DESCRIPTION

The AM-1 is intended for torpedo and dive-bombing, and scouting. It is presently in production.

All bombs, mines, torpedoes, rockets, etc. are carried externally on three pylons on wings and fuselage. Provision for radar on right wing pylon. One-man crew.

Structure is conventional all-metal; hydraulically operated canopy. Folding wings. Slotted flaps. Split type dive brakes interlocked with landing flaps. Can carry incendiary and fragmentation clusters smoke tanks.

DIMENSIONS

WING AREA.....496 sq.ft.
SPAN.....50'-1"
LENGTH.....41'-3"
HEIGHT.....11'-10"
TREAD.....14'-4"
PROP: CLEAR.....7"
M.A.C.....9'-11"

WEIGHTS

| Loadings | Lbs. | L.F. |
|--------------|------------|------|
| EMPTY..... | 15100..... | |
| BASIC..... | 15830..... | |
| DESIGN..... | 19450..... | 7.50 |
| COMBAT..... | 20083..... | 7.25 |
| MAX.T.O..... | 25000..... | *5.8 |
| MAX.LD | | |

Carrier..17950.....
Shore..20600.....

Weights are actual with calculated changes.

*See Notes.

FUEL AND OIL

| GAL. | NO. TANKS | LOCATION |
|------|----------------|------------|
| 360 | 2 | WING, SEAL |
| 150 | 1 | FUSE, SEAL |
| 450 | 3 | DROP |
| | FUEL GRADE.... | 115/145 |
| | FUEL SPEC.... | AN-F-48 |

OIL

CAPACITY (GALS).....36
SPEC.....AN-0-8
GRADE.....1100-1120

ELECTRONICS

Range Rec.....R-23A/ARC-5
HF Comm.....AN/ARC-2
VHF Homing.....AN/ARR-2A
VHF Comm.....AN/ARC-1A
Altimeter.....AN/APN-1
Search Radar.....AN/APS-4
IFF.....AN/APX-2

POWER PLANT

NO. & MODEL.....(1)R-4360-4W
MFR.....P&W
SUPERCH.....1 stg, var.spd.
PROP.GEAR RATIO.....0.425
PROP.MFG.....Curtiss
PROP.DES.NO.....830-2C4-6
NO.BL./DIA.....4/14'-8"

RATINGS

| | Bhp | @ Rpm | @ Alt. |
|-------|------|-------|--------|
| T.O. | 3000 | 2700 | S.I. |
| MIL. | 3000 | 2700 | 1500' |
| | 2400 | 2700 | 13500' |
| NORM. | 2500 | 2550 | 5000' |
| | 2200 | 2550 | 14500' |

SPEC. N-7039-C

ORDNANCE

| <u>GUNS</u> | | | |
|-------------|------|----------|------|
| No. | Size | Location | Rds. |
| 4 | 20mm | Wing | 800 |

| <u>BOMBS & ROCKETS</u> | | | |
|----------------------------|--------|----------|-----|
| Type | Size | Location | No. |
| Bomb | 2000# | External | 3 |
| Bomb | 500# | External | 3 |
| Mine | 2000# | External | 3 |
| Mine | 1000# | External | 3 |
| D.E. | 350# | External | 3 |
| Torp. | Mk-13 | External | 3 |
| A.R. | 11.75" | Wing | 2 |
| HVAR | 5" | Wing | 12 |

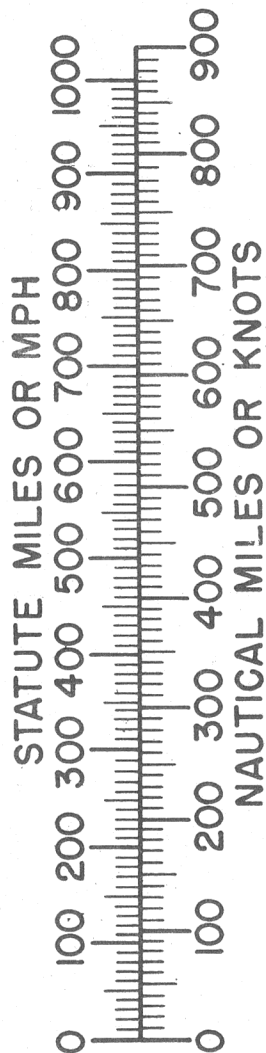
| <u>FIRE CONTROLS</u> | |
|----------------------|------------|
| Sighting Sys..... | Mk.1 Mod.2 |
| Bomb Director..... | AN/ASG-10A |

Max. Bomb Load.....6000 Lbs.

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PERFORMANCE SUMMARY



| LOADING CONDITION | (1) ATTACK 1-2000# Bomb AN/APS-4 | (3) ATTACK 1-2000# Bomb 2X150 Gal. Tanks | | |
|---|--|--|------------|--|
| TAKE-OFF WEIGHT | lbs 22166 | 24145 | | |
| Fuel Fixed/Drop | lbs 3060 | 3060/1800 | | |
| Bombs | lbs 2000 | 2000 | | |
| Wing/Power Loading (A) lbs/sq. ft. lbs/ bhp | 44.7/10.1 | 48.7/11.0 | | |
| Stall Speed--Power off | kn 85 | 89 | | |
| Stall Speed--Power off - No Fuel | kn 78 | 79 | | |
| Stall Speed--Power on | kn 81.5 | 85 | | |
| Maximum Speed/Alt (B) kn/ft | 271/16000 | 268/16000 | | |
| Take-off Distance, deck -- calm | ft 844 | 1045 | | |
| Take-off Distance, deck 25 kn. | ft 405 | 520 | | |
| Take-off Distance, Airport | ft | | | |
| Rate of climb -- sea level (B) ft/min | 1840 | 1550 | | |
| Service Ceiling (B) ft | 26800 | 24400 | | |
| Time-to-climb 10000 ft. (B) min | 5.9 | 7.0 | | |
| Time-to-climb 20000 ft. (B) min | 14.6 | 18.6 | | |
| Combat Range/V av 15000 ft. n.mi/kn | 845/175 | 1324/186 | | |
| Combat Radius/V av ft. n mi/kn | 360/175 | 670/175 | | |
| LOADING CONDITION | (2) COMBAT | (4) COMBAT | (5) COMBAT | |
| GROSS WEIGHT | lbs 20166 | 20083 | 20083 | |
| Engine power | Max. | Max. | Norm. | |
| Fuel | lbs 3060 | 3060 | 3060 | |
| Bombs/Tanks | | | | |
| Max. speed at sea level | kn 274 | 283 | 260 | |
| Max. speed ft. | kn 289/10500 | 301/10500 | 290/16000 | |
| Combat speed/Alt. | kn/ft 284/15000 | 293/15000 | 287/15000 | |
| Rate of climb SL | ft/min 3110 | 3130 | 2200 | |
| Ceiling for 500 fpm R/C | ft 25300 | 25630 | 25670 | |
| Time-to-climb/Alt. | min/ft | | | |

NOTES

- (A) BHP at Maximum Critical Altitude
(B) Normal BHP

Performance is based on calculations and partial AM-1 flight test.

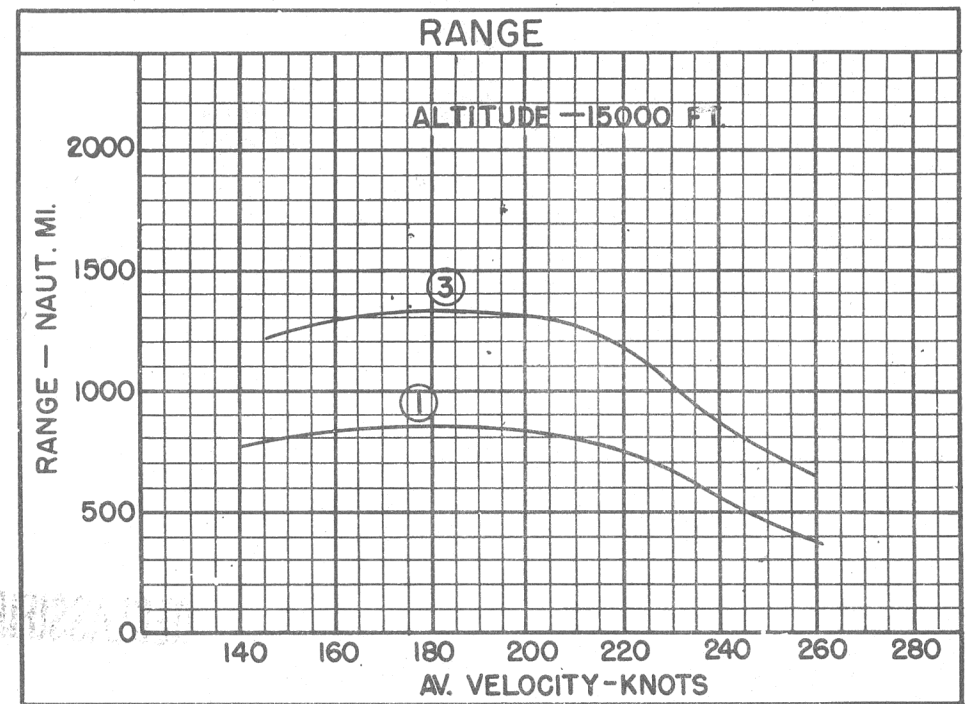
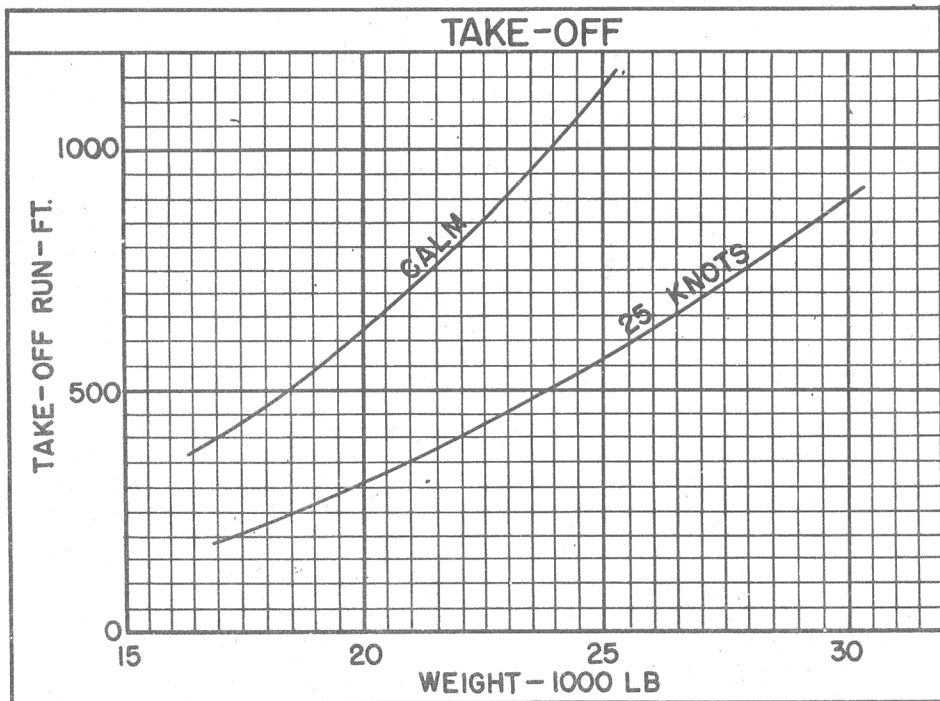
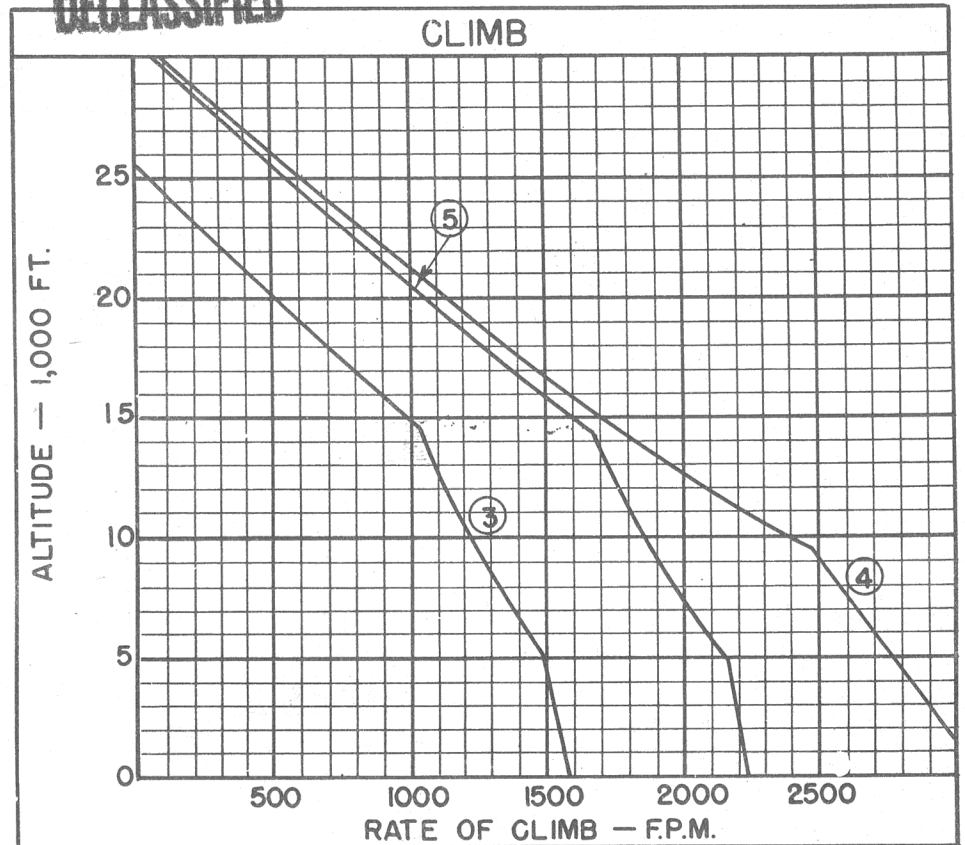
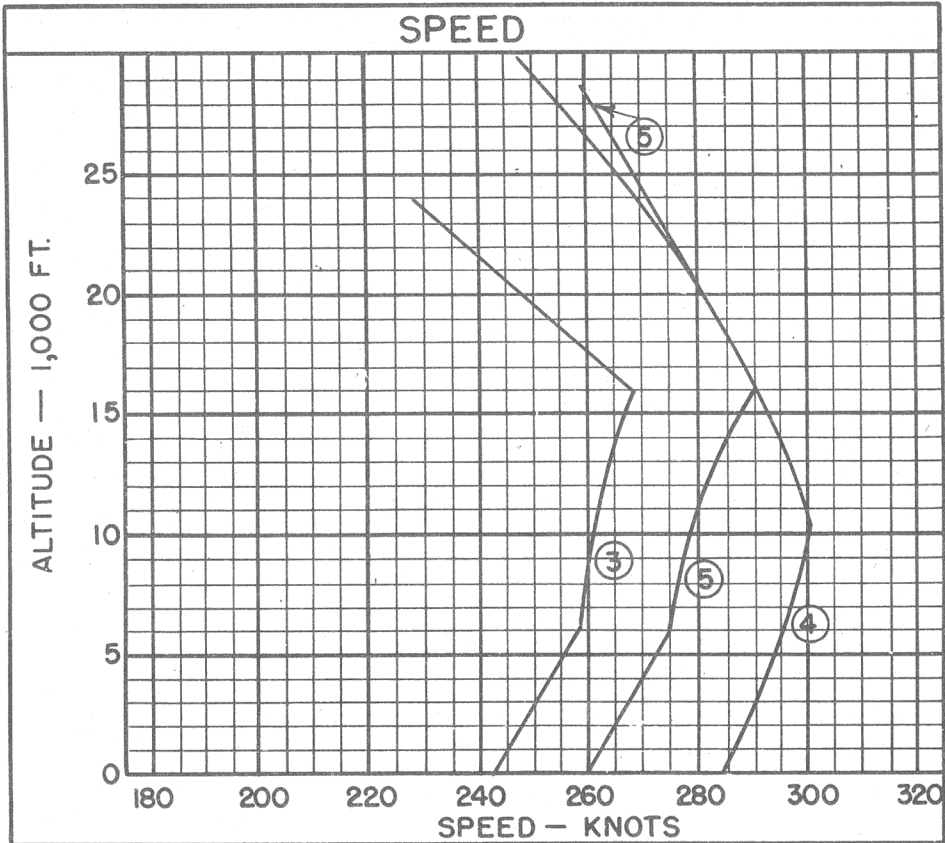
Combat range and radius are based on engine specification fuel consumption data increased 5%.

Addition of 12-5" HVAR to Col.(1) increases weight to 23900 lbs. reduces Vmax at S.L. by 6 knots, combat range by 105 naut. miles, and increases take-off (25 knot wind) by 100 ft.

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○ LOADING CONDITION COLUMN NUMBER

NOTES

Maximum take-off weight of 25000 lbs. is based on 11X36X12 ply tire rated at 12,500 lbs. Future tires 11X36X14 ply rated at 14000#, with increased braking capacity, will permit maximum take-off weights of 28000 lbs.

Attack Combat Radius Formula No. B-1

| <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 | at | <u>DESCEND</u> | 15 min. at | | 60 min. at |
| 20% N.Pr. | Sea Level | 15000 ft. | 15000 ft. | to 1500 ft. | 1500 ft. | at 1500 ft. | V for |
| <u>TAKE-OFF</u> | at 60% | at Normal | 180 kts.TAS | <u>DROP BOMBS</u> | 5 min. combat | 170 kts.TAS | Max. Range |
| 1 min. | N. Pr. | S.L. Pr. | Auto Lean | <u>FIRE</u> | and 10 min. | | |
| at T.O.Pr. | Auto Lean | Auto Rich | | <u>ROCKETS</u> | N. Pr. | Auto Lean | Auto Lean |

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