

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		TORPEDO 2MK13-2	TORPEDO 2MK13-2	SCOUT	SCOUT
GROSS WEIGHT	LBS.	28545	28545	24080	24080
EMPTY WEIGHT - ESTIMATED -	LBS.	18405			
FUEL/OIL	GALS.	501/28	501/28	501/28	501/28
FIXED GUNS/AMMUNITION		4-.50cal./1600rds.			
FLEXIBLE GUNS/AMMUNITION		3-.50cal./1200rds			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	MILITARY	NORMAL
WING LOADING	LBS./SQ.FT.	47.1	47.1	39.8	39.9
POWER LOADING ①	LBS./BHP.	11.9	12.9	10.1	10.9
V-MAX. SEA LEVEL	KN	254	237	273	256
V-MAX./CRITICAL ALT.	KN/FT.	271/15300	264/16200	295/13600	289/16600
V-STALL GROSS WEIGHT ②	KN	74.8	74.8	68.4	68.4
V-STALL WITHOUT FUEL ②	KN	70.6	70.6	63.9	63.9
TIME-TO-CLIMB -10000FT-	MIN.	8.2	10.2	6.1	7.3
TIME-TO-CLIMB -20000FT-	MIN.	22.3	26.5	15.5	17.5
SERVICE CEILING	FT.	24500	24100	27900	27600
TAKE-OFF DISTANCE -CALM-	FT.	1019	1019	664	664
TAKE-OFF DISTANCE -15 KN-	FT.	673	673	423	423
TAKE-OFF DISTANCE -25 KN-	FT.	485	485	292	292
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1390	1020	1815	1410
MAX. RANGE / V-AV. ③	NMI./KN		1085/141		1365/142
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.				395
COMBAT RADIUS	N MI.		215		
ENGINE / PROP GEAR RATIO		P.&W, XR-4360-8 (.425)			
ENGINE RATING BHP/RPM/ALT.	NORMAL	MILITARY		TAKE-OFF	
	2500/2550/S.L.-5000	3000/2700/S.L.-1500		3000/2700	
	2200/2550/14500	2400/2700/13500			

	TANKAGE IN GALLONS	OIL	FUEL	OFFENSIVE ARMAMENT
FIXED	PROTECTED	60	774	WINGS: (External)
	UNPROTECTED			Torpedoes: 4 MK13-2
	TOTAL - FIXED INTERNAL	60	774	Bombs : 2-4000#, 4-2000#,
AUX.	DROPPABLE			4-1000#, or 4-500#
	DROPPABLE -Wings- 2 @ 300*		600	Depth Bombs: 4-650#, or 4-325#
	TOTAL	60	1374	Mines: 2-MK 12-1, or MK 13

NOTE	REMARKS:*
① BHP AT MAX. CRIT. ALT.	Wing droppable tanks carried on outboard bomb-racks. With droppable tanks installed.
② STALL-WITHOUT POWER	4000# bomb cannot be carried and inboard racks, only, are available for bombs and
③ AT 1500' ALTITUDE	torpedoes.

Reissued 1 January 1947

DATE 1 FEBRUARY 1944

PAGE 1

MODEL XTB2D-1

NAVAER-15198 (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8
LOADING CONDITION		TORPEDO 1MK13-2	SCOUT	TORPEDO 4MK13-2	TORPEDO 2MK13-2 One Tank External
GROSS WEIGHT	LBS.	28060	25830	34760	32450
EMPTY WEIGHT -Estimated-	LBS.	18405			
FUEL/OIL	GALS.	774/43	774/43	774/43	1074/60
FIXED GUNS/AMMUNITION		4-.50 Cal./1600 rds.			
FLEXIBLE GUNS/AMMUNITION		3-.50Cal./1200 rds.			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	46.3	42.7	57.3	53.6
POWER LOADING (1)	LBS./BHP	12.7	11.7	15.7	14.8
V-MAX. SEA LEVEL	KN	245	254	214	220
V-MAX./ CRITICAL ALT.	KN/FT.	274/16400	287/16600	234/15900	242/16000
V-STALL. GROSS WEIGHT (2)	KN	74.0	70.8	82.4	80.2
V-STALL. WITHOUT FUEL (2)	KN	67.5	64.2	76.6	71.9
TIME-TO-CLIMB -10000FT.-	MIN.	9.8	8.3	17.7	14.1
TIME-TO-CLIMB -20000FT.-	MIN.	25.1	20.7	----	42.3
SERVICE CEILING	FT.	24600	26300	19000	21000
TAKE-OFF DISTANCE -CALM-	FT.	966	784	1755	1452
TAKE-OFF DISTANCE -15 KN-	FT.	638	508	1212	987
TAKE-OFF DISTANCE -25KN-	FT.	457	355	904	729
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1060	1250	610	750
MAX. RANGE / V-AV. (3)	NMI./KN	1830/143	2050/143	1260/146	1960/139
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	NMI.		620		
COMBAT RADIUS	NMI.	460		355	650

PERFORMANCE IS BASED ON - CALCULATIONS

RANGE & RADIUS ARE BASED ON ENGINE REQUIREMENT

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

Practical Combat Radius is based on 20 min. warm-up and idle: 1 min. take-off; 10 min. rendezvous at 60% normal sea-level power (n.s.p.) and auto-rich; cruise-out at 15000' at 60% n.s.p. and required mixture; drop unprotected droppable tanks; dive, drop bombs and torpedoes; combat at 1500' for 5 min. with full military power plus 10 min. with full normal power; cruise-back at 1500' at 60% n.s.p. and auto-lean; 60 min. at V for max. range allowance for rendezvous, landing and reserve. Radius includes distance covered in climb but not in dive.

Practical Scouting Radius is 1/3 of range at V for max. range at 1500' with fuel taken from initial fuel load for 20 min. warm-up and idle and 1 min. take-off and with allowance at end of flight for 60 min. at V for max. range for rendezvous, landing, and reserve.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		9	10	11
LOADING CONDITION		BOMBER 4-1000#	SCOUT One Tank External	FERRY Two Tanks External
GROSS WEIGHT.	LBS.	30275	27985	28490
EMPTY WEIGHT - ESTIMATED-	LBS.	18405		17915
FUEL/OIL	GALS.	774/43	1074/60	1374/60
FIXED GUNS/AMMUNITION		4-.50/1600		None
FLEXIBLE GUNS/AMMUNITION		3-.50/1200		None
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	50.0	46.1	47.0
POWER LOADING ①	LBS./BHP.	13.8	12.7	13.0
V-MAX. SEA LEVEL	KN	230	238	227
V-MAX./ CRITICAL ALT.	KN/ FT.	255/16100	267/16300	252/16100
V-STALL. GROSS WEIGHT ②	KN	77.7	74.0	75.2
V-STALL. WITHOUT FUEL ②	KN	71.4	64.8	63.4
TIME-TO-CLIMB -10000FT.-	MIN.	11.7	9.7	10.2
TIME-TO-CLIMB -20000FT.-	MIN.	32.0	25.0	26.5
SERVICE CEILING	FT.	22700	24600	23700
TAKE-OFF DISTANCE -CALM-	FT.	1192	973	1037
TAKE-OFF DISTANCE -15 KN-	FT.	800	642	687
TAKE-OFF DISTANCE -25KN-	FT.	583	460	494
TAKE-OFF DISTANCE -50 FT. OBST.	FT.			
TAKE-OFF DISTANCE	SECONDS			
RATE OF CLIMB -SL-	FT./ MIN.	900	1060	1025
MAX. RANGE / V-AV. ③	NMI./ KN	1565/141	2500/141	2980/134
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	NMI.		775	
COMBAT RADIUS	NMI.	435		

PERFORMANCE IS BASED ON-

RANGE & RADIUS ARE BASED ON

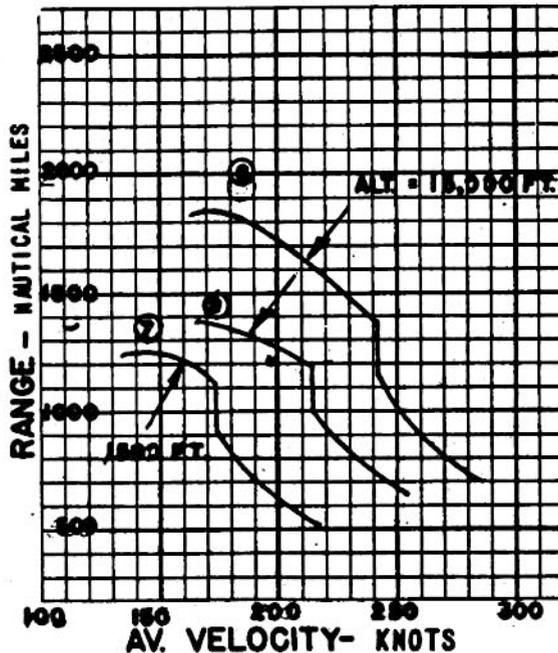
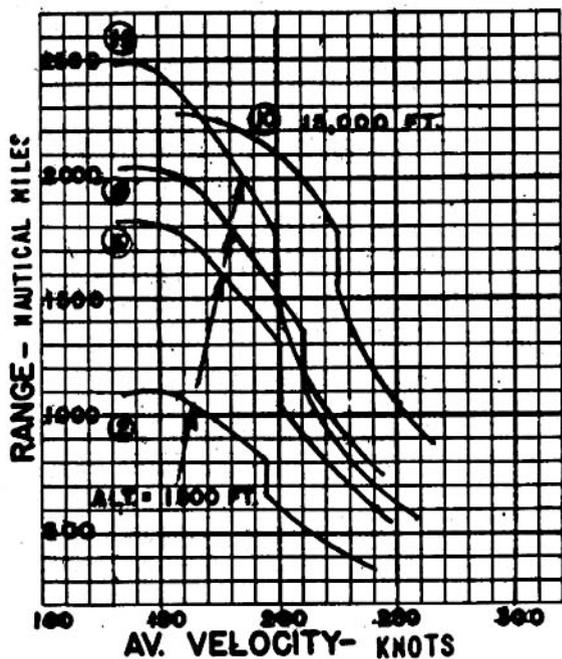
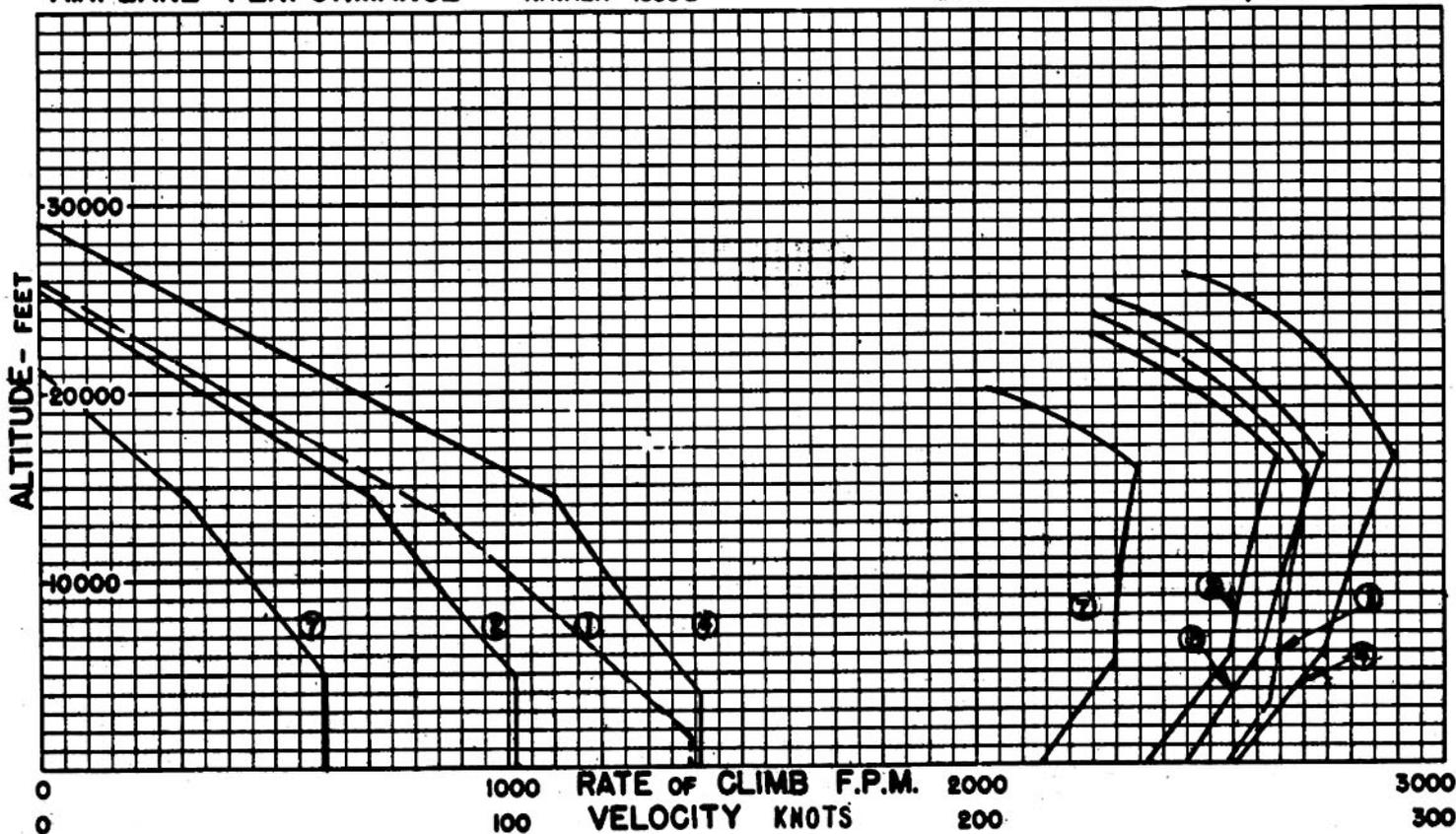
FUEL CONSUMPTION DATA INCREASED

BY PERCENT TO CONFORM WITH PAST EXPERIENCE.

AIRPLANE PERFORMANCE

NAVAER - 1335 B

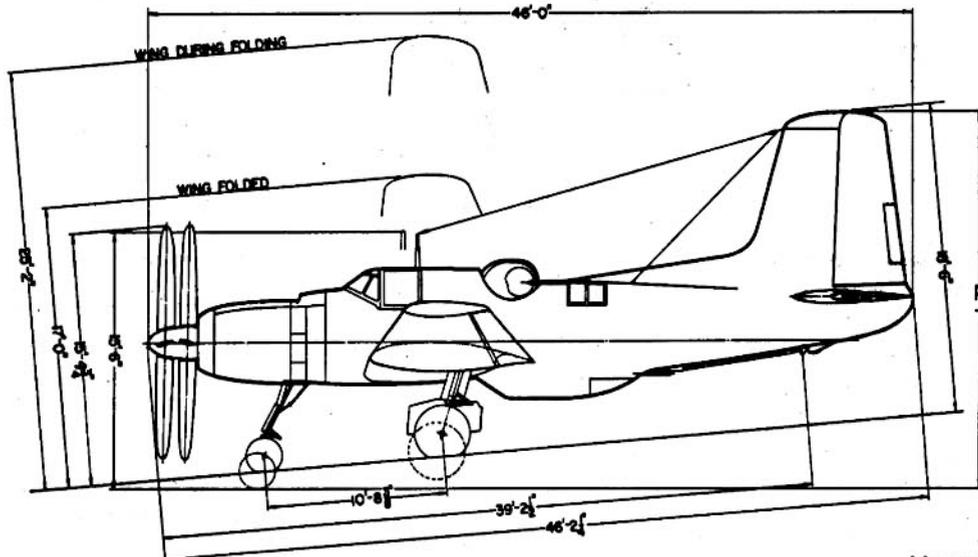
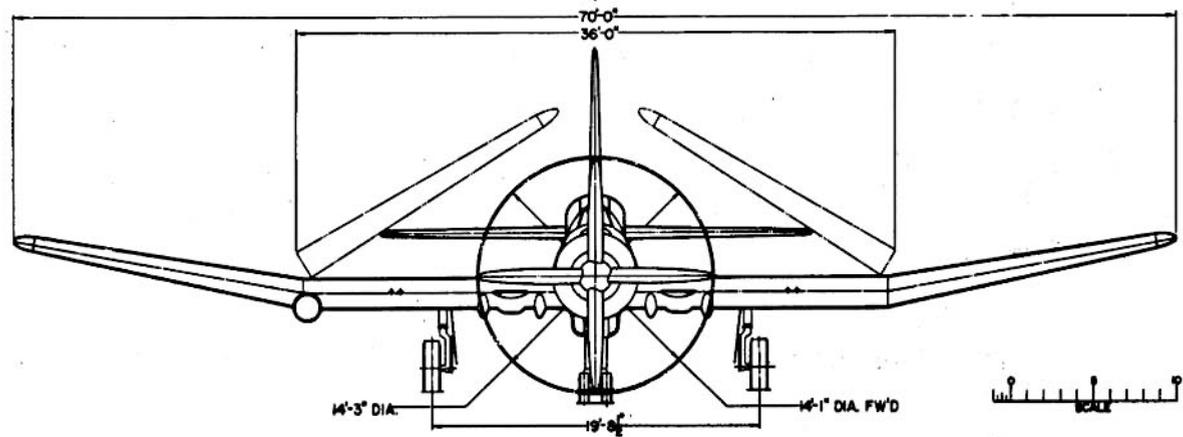
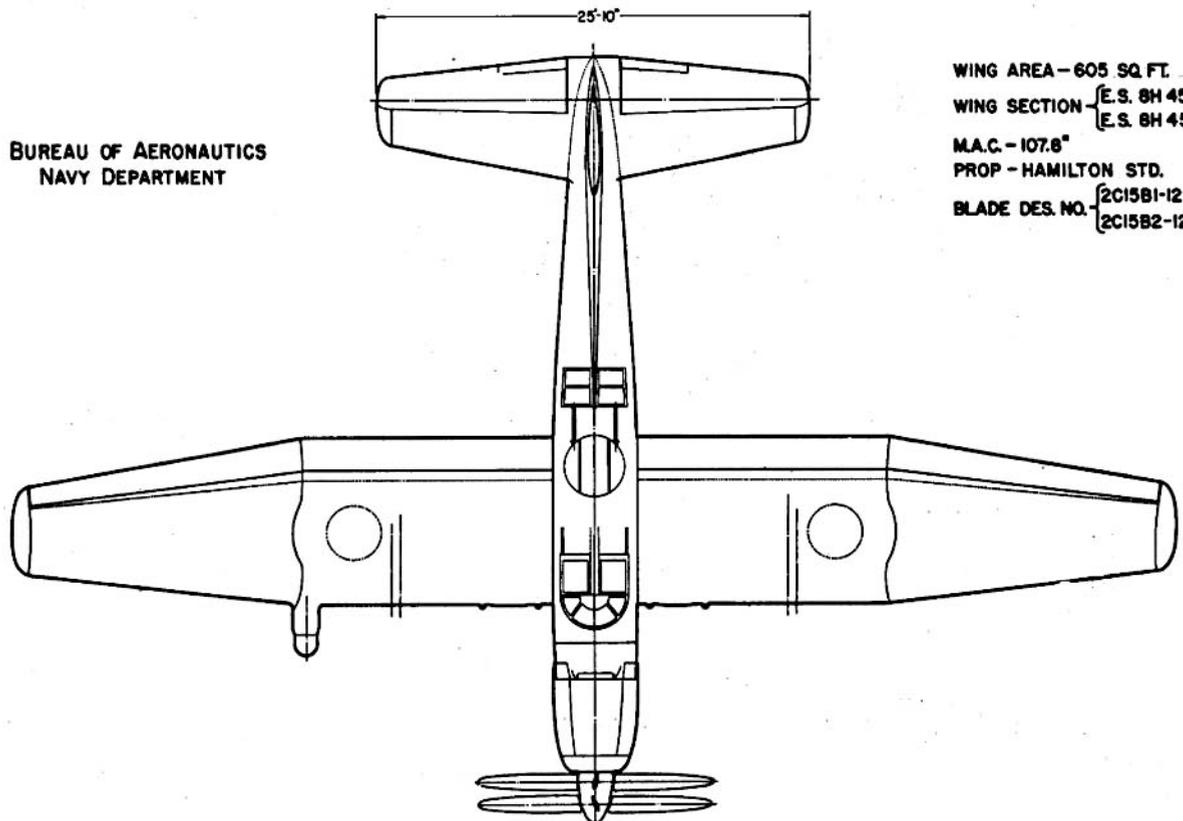
BUREAU OF AERONAUTICS, NAVY DEPT.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 605 SQ. FT.
 WING SECTION { E.S. 8H 4518
 { E.S. 8H 4516
 M.A.C. - 107.8"
 PROP - HAMILTON STD.
 BLADE DES. NO. { 2C15B1-12 FW'D
 { 2C15B2-12 AFT



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

- | | |
|-----------------------|----------|
| 1. PILOT FORWARD | 104 LBS. |
| 2. PILOT AFT | 122 LBS. |
| 3. OIL COOLERS | 81 LBS. |
| 4. TURRET | 120 LBS. |
| 5. TUNNEL GUNNER | 200 LBS. |
| 6. SELF-SEALING CELLS | 963 LBS. |

