

NAVAIR 00-110AT34-1

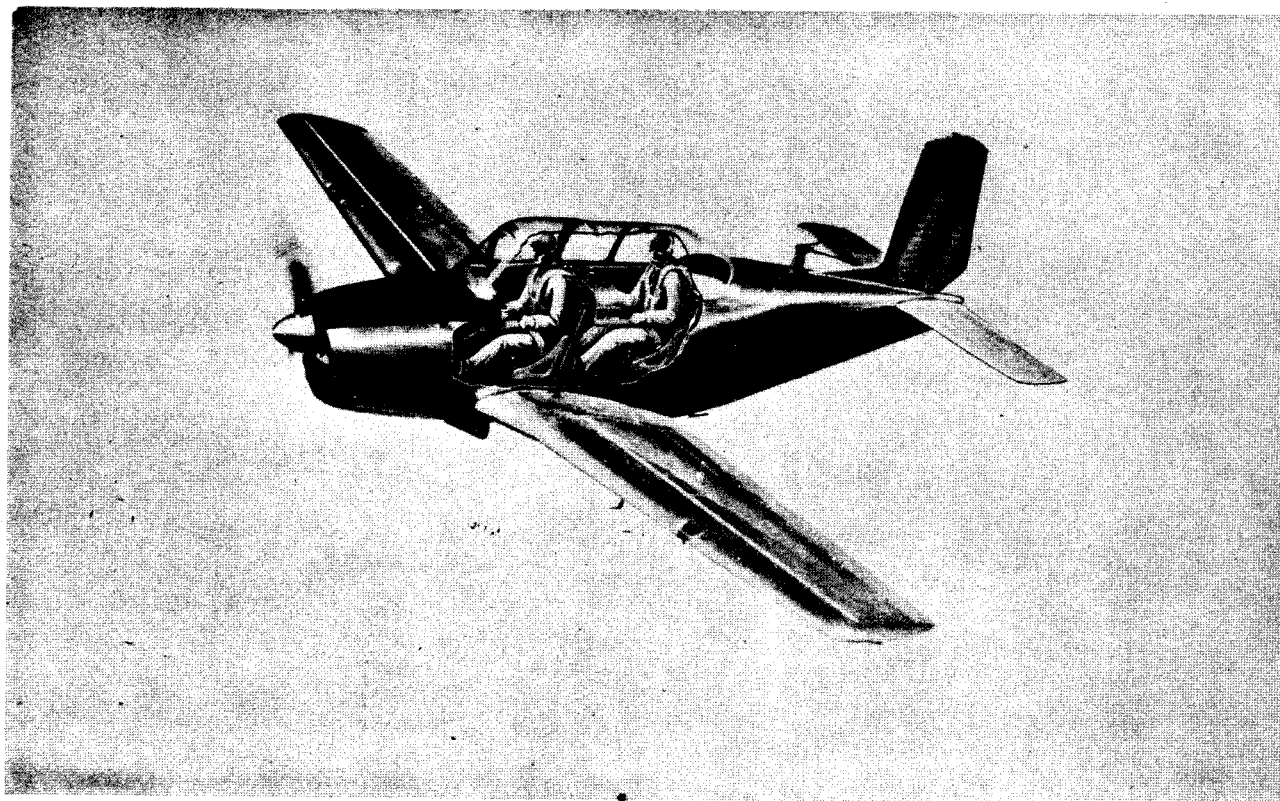
# Standard Aircraft Characteristics

NAVY MODEL  
T-34B  
AIRCRAFT

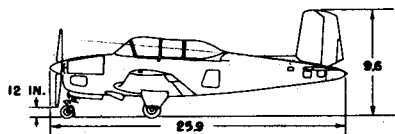
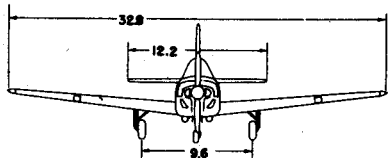
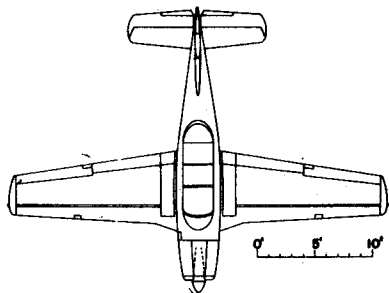
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1 MAY 1955 IN PART AND ALL ADDENDA THERETO

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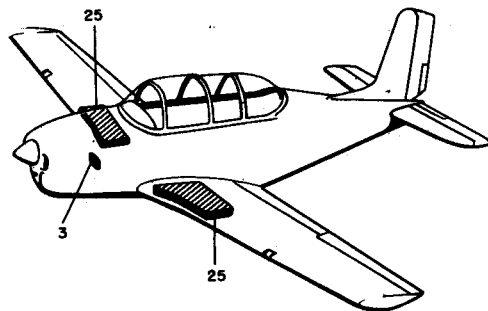
1 JULY 1967



STANDARD AIRCRAFT CHARACTERISTICS  
T-34B MENTOR



Wing Area . . . . . 177.6 sq ft      Wing Section:  
 Aspect Ratio . . . . . 6.1                      (root) . . NACA23016.5  
 M.A.C. . . . . . 64.58 in                      (tip) . . . NACA23012



No Pressurization

▨ Fuel (Gal)

■ Oil (Gal)

**POWER PLANT**

NO. & MODEL.....(1)O-470-13  
 MFR.....Continental  
 RED. GEAR RATIO.....1,000  
 PROF. MFR.....Beech  
 PROF. BL. DES. NO.....278-208-84  
 NO. BL./DIA.....2/7' -0"

**RATINGS**

	<u>BHF</u> @	<u>RFM</u> @	<u>ALT.</u>
T.O.	225	2,600	S.L.
NORMAL	225	2,600	S.L.

Eng. Spec. No....1219E

**ACCOMMODATIONS**

Crew.....2

**MISSION AND DESCRIPTION**

The principal mission of the T-34B is primary and basic pilot training.

It is a two-place, tandem, all-metal, low-wing, single-engine aircraft.

An overturn structure is incorporated in the windshield frame as a safety feature. Heating and ventilating are provided in both cockpits. Exhaust augmenters are provided to reduce internal drag, thereby eliminating the need for cowl flaps.

NACA slotted flaps and ailerons are incorporated, the ailerons having servo tabs, the left one being adjustable for trim. The rudder and elevators are equipped with adjustable tabs, the rudder tab being an anti-servo type.

The landing gear and wing flaps are electrically operated. The landing gear is fully retractable and is completely covered when retracted. Brakes are hydraulically operated.

**DEVELOPMENT**

First flight....October 1954  
 Service use.....May 1955

**DIMENSIONS**

WING  
 AREA.....178 sq.ft.  
 SPAN.....32' -10"  
 MAC.....5' -4"  
 SWEEFBACK( $\frac{1}{4}$  CHORD).....0°  
 LENGTH.....25' -10"  
 HEIGHT.....9' -7"  
 TREAD.....9' -7"  
 PROF. GRD. CLEARANCE.....1' -0"

**WEIGHTS**

<u>LOADINGS</u>	<u>LBS</u>	<u>L.F.</u>
EMPTY.....	2,239	
BASIC.....	2,246	
DESIGN.....	2,975	6.0
MAX. T.O.....	2,975(A)	
MAX. LAND.....	2,975(A)	

All weights are calculated.

(A) Limited by structure.

**FUEL AND OIL**

<u>No. tanks</u>	<u>Tot. Gal.</u>	<u>Location</u>
2	51	Wing
		FUEL GRADE.....80
		FUEL SPEC....MIL-F-5572

**OIL**

CAPACITY(Gals).....	3
GRADE.....	1065 Winter
	1100 Summer
SPEC.....	MIL-L-6082

**ELECTRONICS**

AIRCRAFT RADIO CORP:  
 VHF COMMAND RECEIVER...R-19  
 VHF TRANSMITTER  
 (116-132MC).....T-11B  
 VHF TRANSMITTER  
 (132-148MC).....T-13A  
 VHF NAVIGATION EQUIPMENT  
 (108-135 MCS).....ARN-30A

SERVICE

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) BASIC MISSION	(2) FERRY MISSION			
TAKE-OFF WEIGHT	lb.	2,975	2,775		
Fuel	lb.	306	306		
Payload	lb.	None	None		
Wing loading	lb./sq.ft.	16.8	15.6		
Stall speed - power-off	kn.	49.0	47.0		
Take-off run at S.L. - calm	ft.	1,185	980		
Take-off run at S.L. kn. wind	ft.	-	-		
Take-off to clear 50 ft. - calm	ft.	1,420	1,220		
Max. speed/altitude (A)	kn./ft.	162/S.L.	162/S.L.		
Rate of climb at S.L. (A)	fpm	1,100	1,230		
Time: S.L. to 10,000 ft. (A)	min.	12.5	10.9		
Time: S.L. to Service ceiling (A)	min.	38.6	38.5		
Service ceiling (100 fpm) (A)	ft.	17,300	18,600		
Combat range	n.mi.	705	755		
Average cruising speed	kn.	110	105		
Cruising altitude(s)	ft.	5,000	5,000		
Combat radius	n.mi.	-	-		
Average cruising speed	kn.	-	-		
COMBAT LOADING CONDITION					
COMBAT WEIGHT	lb.				
Engine power					
Fuel	lb.				
Combat speed/combat altitude	kn./ft.				
Rate of climb/combat altitude	fpm/ft.				
Combat ceiling (500 fpm)	ft.				
Rate of climb at S.L.	fpm				
Max. speed at S.L.	kn.				
Max. speed/altitude	kn./ft.				
LANDING WEIGHT	lb.	2,697	2,496		
Fuel	lb.	28	27		
Stall speed - power-off	kn.	46.2	44.2		
Stall speed - with approach power	kn.	43.2	41.2		

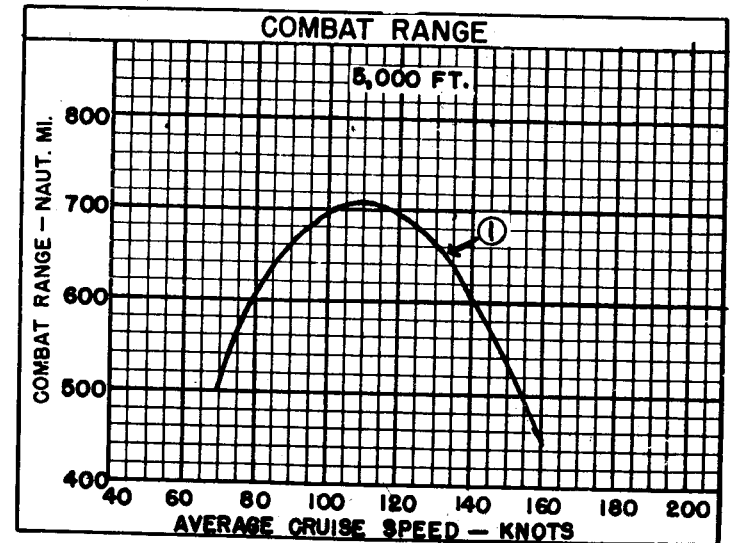
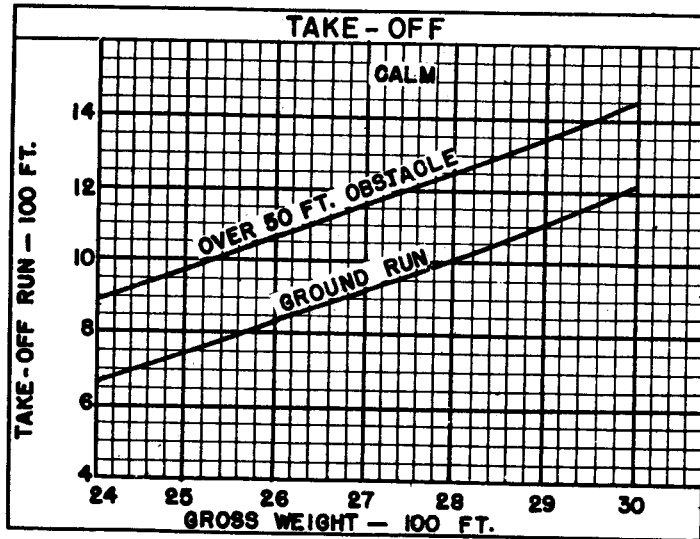
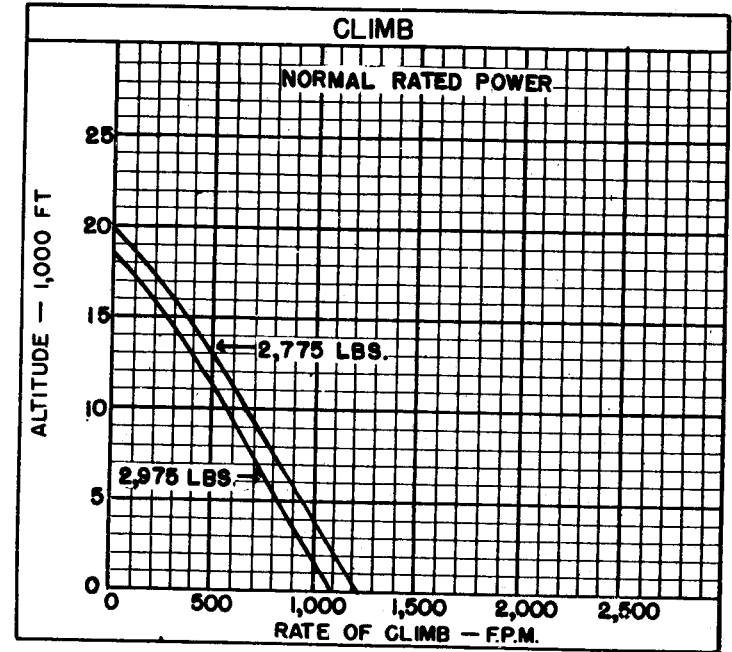
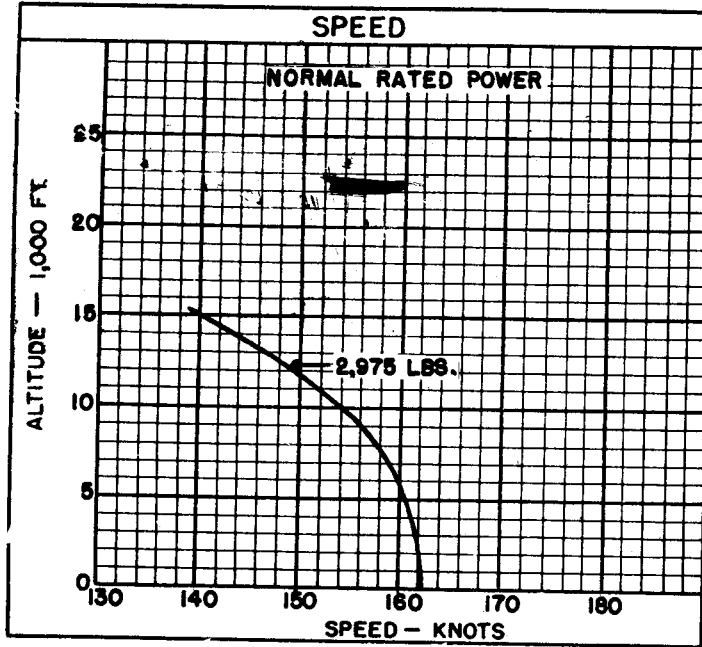
## NOTES

(A) Normal Rated Power

Performance basis: Flight test of the T-34A airplane.

Range based on flight test fuel consumption data increased by 5%.

4



○ LOADING CONDITION COLUMN NUMBER

# NOTES

## RANGE PROBLEM - TRAINER

WARM-UP, TAKE-OFF, ACCELERATION: 5 minutes at normal rated power at sea level  
CLIMB: To 5,000 feet with normal rated power.  
CRUISE: At speed for long range at 5,000 feet.  
RESERVE: 20 minutes at speed for long range at sea level plus 5% of initial fuel load.

