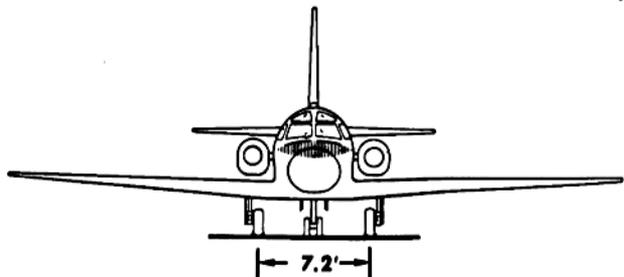
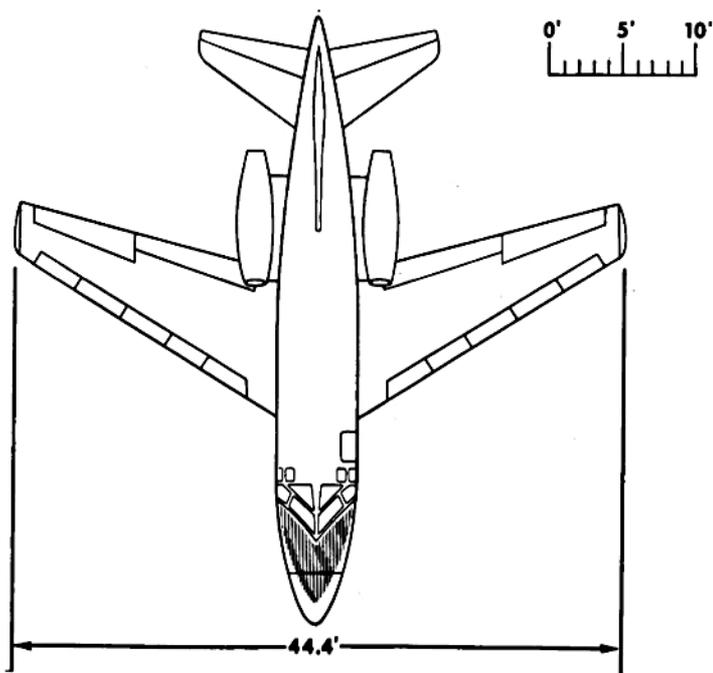
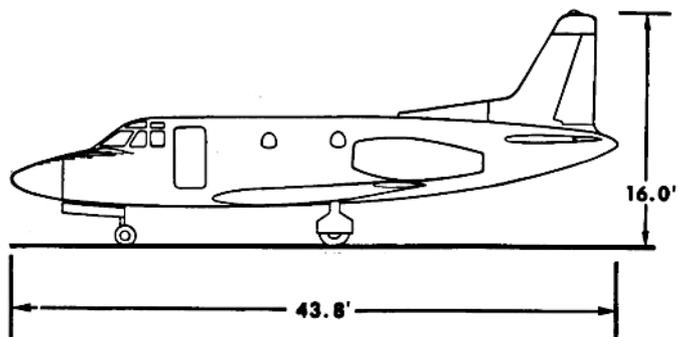


STANDARD AIRCRAFT CHARACTERISTICS

T3J-1

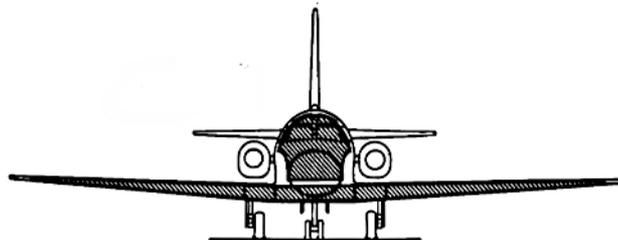
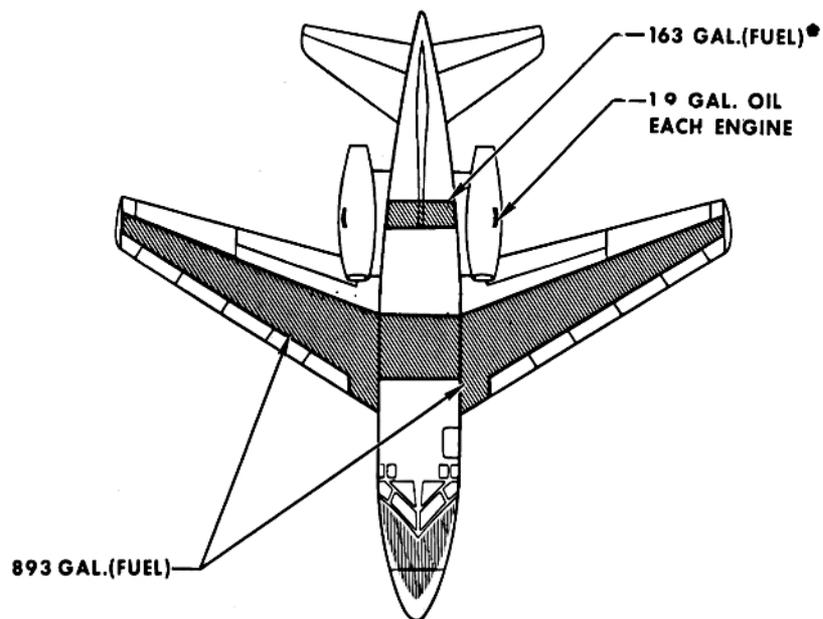
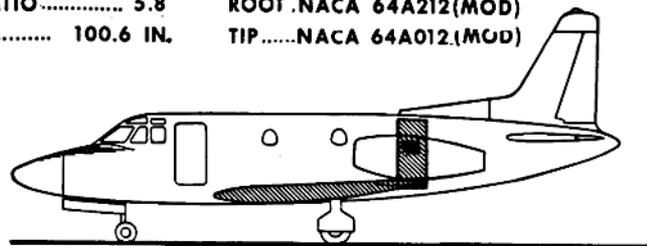
NORTH AMERICAN AVIATION, INC.

SERVICE



WING AREA...342.1 SQ FT
 ASPECT RATIO..... 5.8
 M.A.C. 100.6 IN.

WING SECTION
 ROOT .NACA 64A212(MOD)
 TIP.....NACA 64A012(MOD)



*EXTENDED RANGE ONLY

POWER PLANT

No. & Model (2)J60-P-3A
 Mfr Pratt & Whitney
 Engine Spec No. 2412D
 Type Axial Turbo Jet
 Length 76.0'
 Diameter 21.9"
 Weight (Dry) 448 lb
 Tail Pipe Fixed Area
 Augmentation None

RATINGS

S. L. S. LB - RPM - Min

Max: 3000 - 16,290 - 30

NORMAL: 2570 - 15,480 - Cont

ORDNANCE

AN/APQ-94 Fire Control Radar

(No Guns or Missiles)

MISSION AND DESCRIPTION

Air Force Equivalent: T-39B. Mfr's Model: NA-277

The primary mission of this airplane will be flight training in radarscope interpretation.

Special features of this airplane are aerodynamically balanced control surfaces, hydraulically operated speed brake, and automatic leading edge slats. The crew will consist of a pilot and a copilot (main student). Provisions are made in the aft cabin for an instructor, two standby students, and a navigators station. The airplane is designed in conformance with FAA certification procedures.

The cabin and cockpit are pressurized to 8000-foot cabin altitude for an airplane altitude from 8000 feet to 45,000 feet. Adequate heating and air conditioning is provided for cabin and cockpit.

Structural design maximum dive speed is 508 knots EAS.

DEVELOPMENT

First Flight (UTX) Sep 58
 First Flight (T-39A) Jun 60
 First Flight (T-39B) Nov 60
 First Flight (T3J-1) (EST) Dec 62

DIMENSIONS

Wing
 Area 342 ft²
 Span 44.4'
 Incidence (root) 0°
 (tip) -2.9°
 Dihedral 3.1°
 Geometric twist -2.9°
 Sweepback (25% Chord) 28.6°
 Length 43.8'
 Height 16.0'
 Tread 7.2'

WEIGHTS

Loading	LB	L. F.
Empty	10,250(E)	
Basic	10,341(E)	
Performance	*14,930	3.5
Max Design Flt.		
Basic Mission	16,870	3.5
Extended Range	17,375	2.5
Max T. O.	17,760	
Design Landing	13,000	

(E) Estimated

* For Basic Mission

FUEL AND OIL

Location	No. Tanks	Gal
Wing	2	893
Fuselage	1	163
	Total	1056
Grade	JP-4 or JP-5	
Specification	MIL-J-5624D	

OIL

Nacelle	2 (Total)	3.8
Specification	MIL-L-7808	

ELECTRONICS

Tacan	AN/ARN-52
IFF/SIF	AN/APX-46
UHF Command	AN/ARC-52
UHF Standby	AN/ARR-40
Receiver	
VOR/LOC	AN/ARN-14E
Receiver	
Marker Beacon	AN/ARN-32
Glide Path	AN/ARN-18
Interphone System	AN/AIC-14
UHF-ADF Type	AN/ARA-25A
Radar Altimeter	AN/APN-141
Radar Set	AN/APQ-94
Flight Director System	

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		BASIC MISSION	EXTENDED RANGE MISSION		
		①	②		
TAKE-OFF WEIGHT	lb.	17,255	17,760		
Fuel internal/external (JP-4)	6.5 lb./gal.	5804/893	6864/1056		
Payload	lb.	7005	7510		
Wing loading	lb./sq. ft.	50.4	51.8		
Stall speed - power-off	⑤ kn.	101.4	102.8		
Take-off run at S. L. - calm	① ⑥ ft.	2410	2580		
Take-off run at S. L. kn. wind	ft.	Not Applicable	Not Applicable		
Take-off to clear 50 ft. - calm	① ⑥ ft.	3610	3835		
Max. speed/altitude	② ⑦ kn./ft.	479/33,000	476/32,000		
Rate of climb at S. L.	① fpm.	5180	4990		
Time: S. L. to 20,000 ft.	① ③ min.	5.2	5.5		
Time: S. L. to 30,000 ft.	① ③ min.	10.0	10.5		
Service ceiling (100 fpm)	① ft.	41,000	40,000		
Combat range	n. mi.	1100	1405		
Average cruising speed	kn.	436	436		
Cruising altitude(s)	ft.	41,700 - 45,000	41,000 - 45,000		
Combat radius/Mission time	n. mi.	Not Applicable	Not Applicable		
Average cruising speed	kn.	Not Applicable	Not Applicable		
COMBAT LOADING CONDITION		Not Applicable	Not Applicable		
COMBAT WEIGHT	lb.				
Engine power					
Fuel	lb.				
Combat speed/combat altitude	kn./ft.				
Rate of climb/combat altitude	fpm/ft.				
Combat ceiling (500 fpm)	① ft.				
Rate of climb at S. L.	① fpm.				
Max. speed at S. L.	kn.				
Max. speed/altitude	① kn./ft.				
LANDING WEIGHT (5% Initial Fuel)	lb.	11,732	11,240		
Fuel	lb.	281	344		
Stall speed-power-off/appr. power	kn./kn.	77.6	75.8		
Dist-grd roll/over 50 ft. obst.	⑤ ft./ft.	3000	2830		

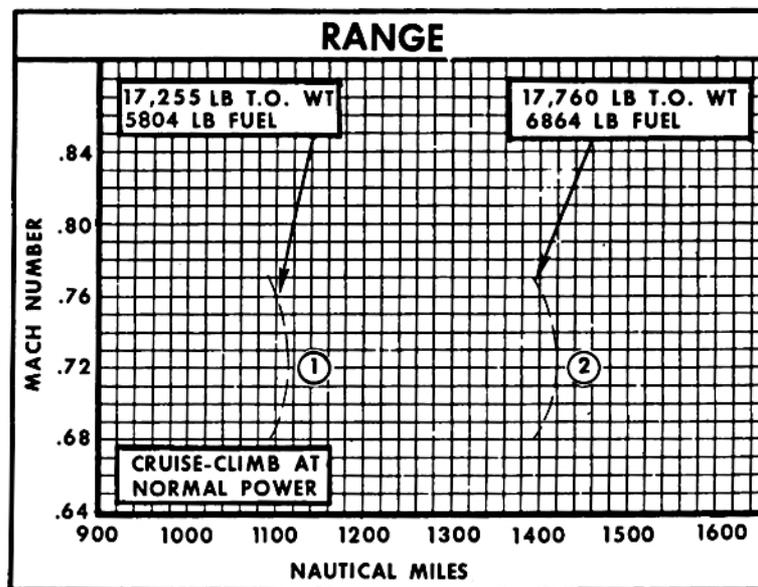
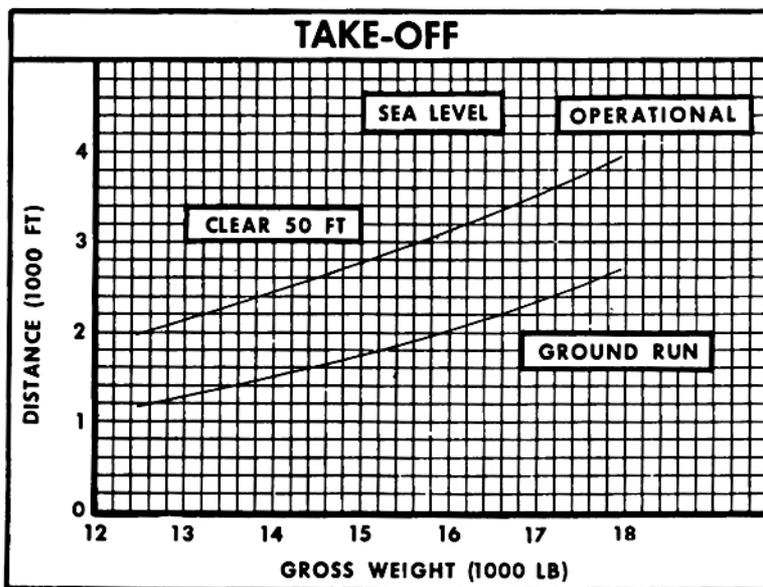
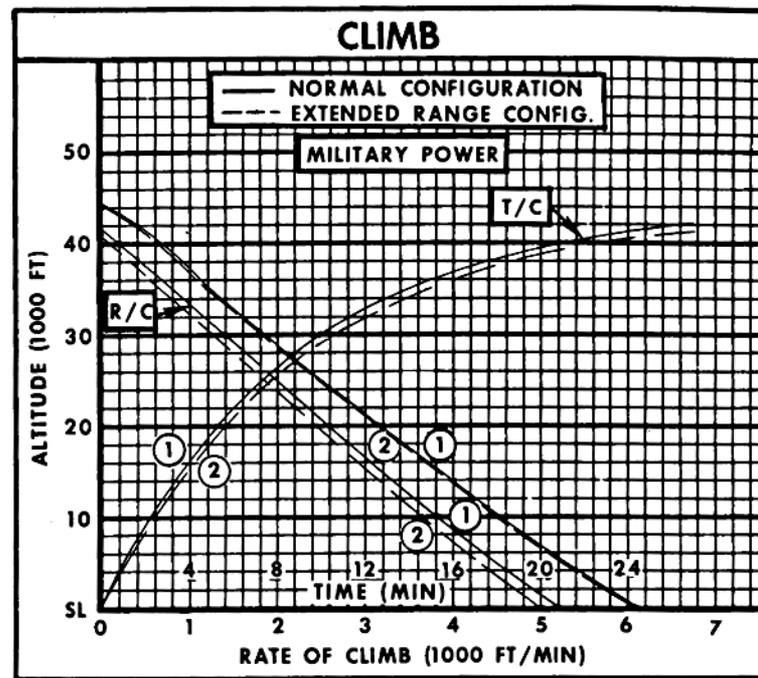
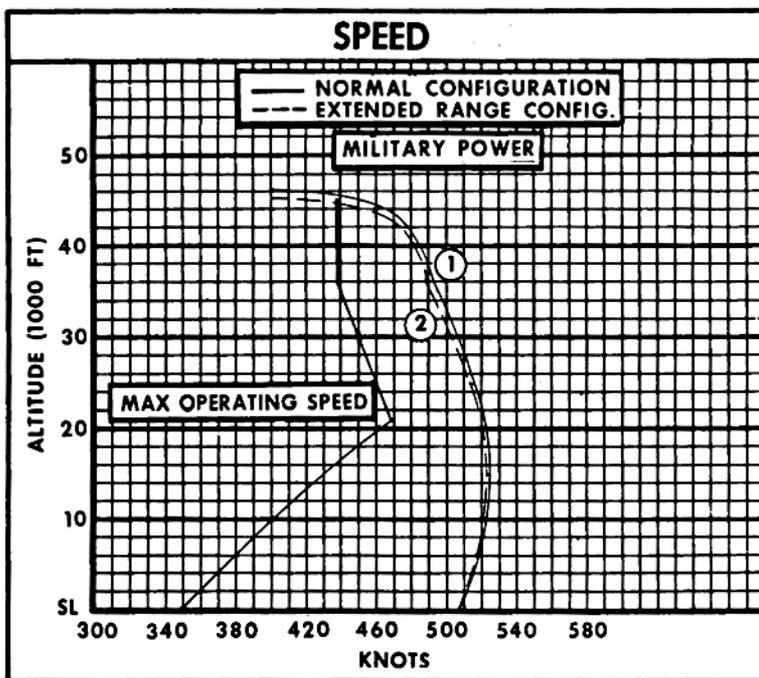
NOTES

- ① Military power
 ② Normal power
 ③ Allows for weight reduction during ground operation and climb

- ④ Detailed descriptions of RANGE missions given on page 6
 ⑤ Flaps 25°, slats open
 ⑥ Flaps 0°, slats operable
 ⑦ 60% Total fuel

PERFORMANCE BASIS:

- (a) Data source: Estimated
 (b) Performance is based on powers shown on page 6
 (c) Fuel flow data used in computing RANGE missions are increased 5%



○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics MAVER 13358 (Rev. 1-55)

NOTES

FORMULA: RANGE MISSION ① ②

Take-off with military power; climb on course to initial cruise altitude with military power; cruise-climb to 45,000 feet with normal power at .76 M; cruise at .76 M at 45,000 feet. Range free allowances include 5 minutes normal power at sea level for fuel used in starting engines and take-off, and a reserve equal to 30 minutes loiter at sea level at speeds for maximum endurance plus 5% of initial fuel.

GENERAL DATA:

(a) Engine values shown under Power Plant are guaranteed values. Installed values used in performance calculations are as follows:

(2) J60-P-3 A		
S. L. STATIC	LB	RPM
Mil:	2920	16,010
Nor:	2525	15,310

PERFORMANCE BASIS

North American Report No. NA-59-390 "Aerodynamic and Thermodynamic Data for a Twin Engine Turbojet Utility Trainer with a Pratt & Whitney J60 Engine (NAA Designation NA-265)."

North American Report No. NA-62-137 "FAA Type Inspection Report, Model NA-265."

○ LOADING CONDITION COLUMN NUMBER