

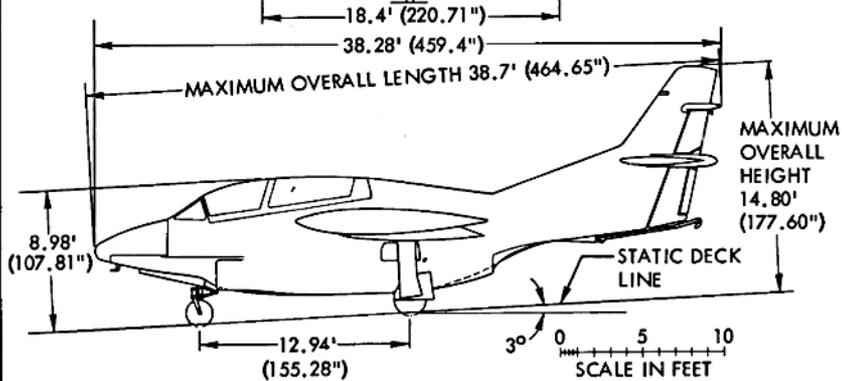
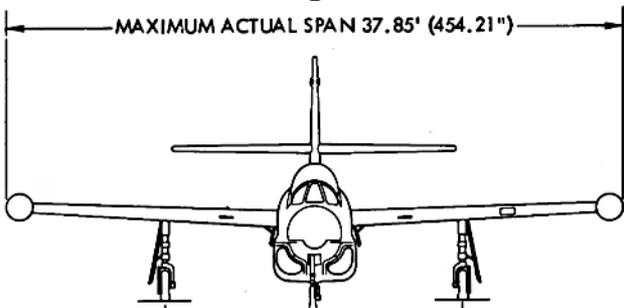
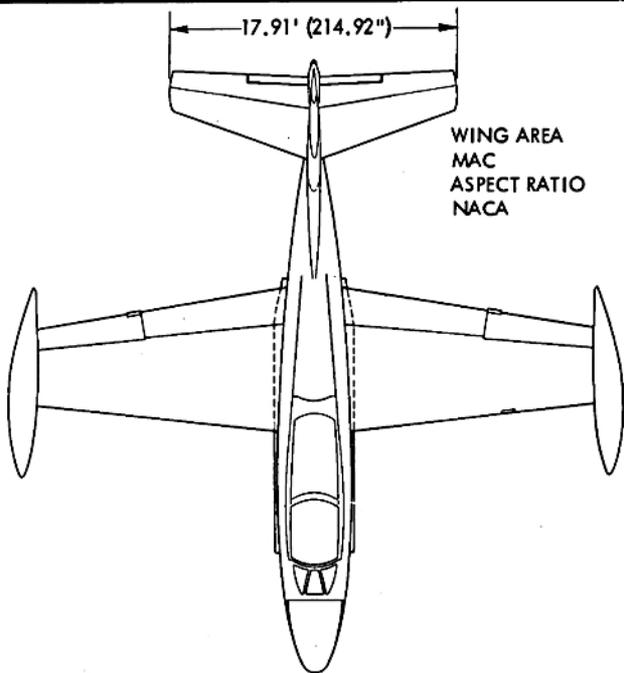
STANDARD AIRCRAFT CHARACTERISTICS

T2J-2

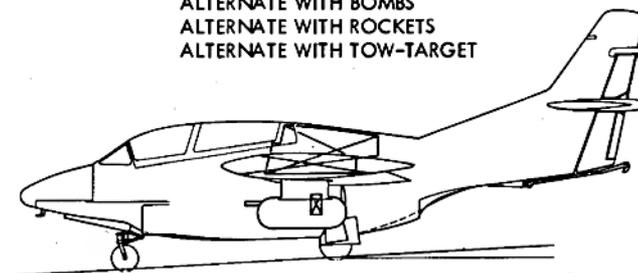
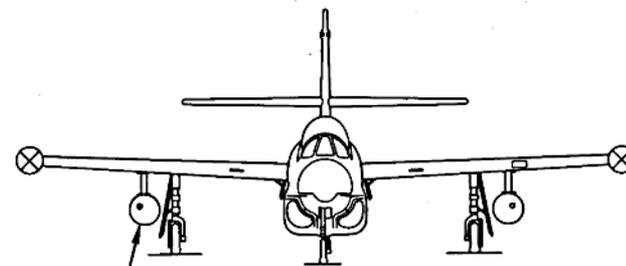
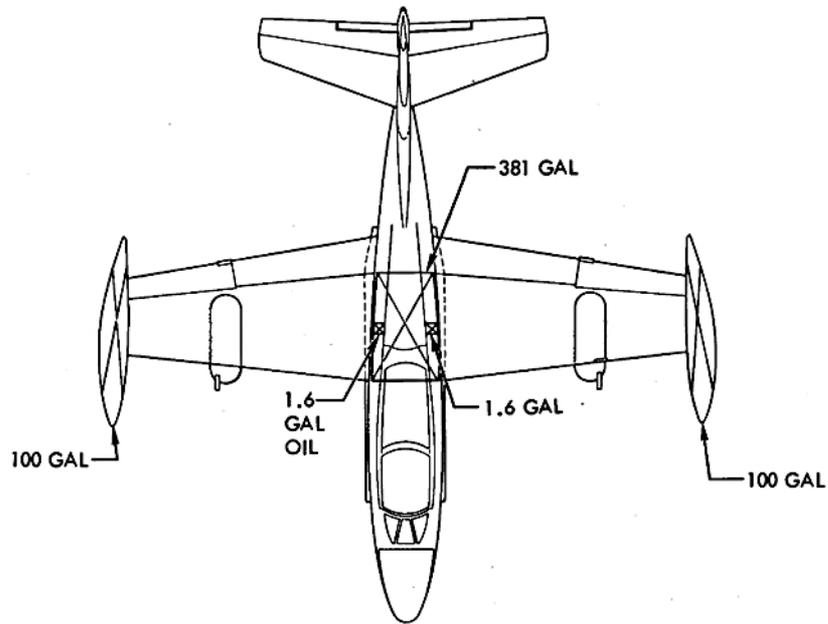
PROTOTYPE TRAINER

NORTH AMERICAN AVIATION, INC.

WING AREA 254.86
 MAC 88.88
 ASPECT RATIO 5.07
 NACA 64, A212
 (MODIFIED)



DESCRIPTIVE ARRANGEMENT



NON-SELF-SEALING TANKS

ARMAMENT & TANKAGE

POWER PLANT

No. & MODEL..... (2)J60-P-3A
 MFR... PRATT&WHITNEY AIRCRAFT
 TYPE..... AXIAL FLOW
 LENGTH(APPROX.)... 70.45 IN
 DIAMETER(APPROX.)... 22.00 IN
 AUGMENTATION NONE
 TAIL PIPE NOZZLE (TYPE) ...
 FIXED CONVERGENT

RATINGS

	<u>LBS. THRUST</u>	<u>RPM</u>	<u>ALT.</u>
MIL.	3000	16,700	SSL
NOR.	2570	15,750	SSL
MAX.	3000	16,700	SSL

ENGINE SPEC A-2412-G

ORDNANCE

SEE NOTES PAGE

MISSION AND DESCRIPTION

THIS AIRPLANE IS A PROTOTYPE DEVELOPMENT OF A DUAL ENGINE CONFIGURATION OF THE T2J-1 AIRPLANE. THE PRIMARY PURPOSE OF THIS PROTOTYPE AIRPLANE IS TO DEMONSTRATE INCREASED PERFORMANCE AND VERSATILITY OVER THE SINGLE ENGINE T2J-1 TRAINER.

THE T2J-2 PROTOTYPE INCORPORATES IN ITS DESIGN AN NACA LOW-DRAG, LAMINAR-FLOW AIRFOIL SECTION, A POWER-OPERATED, CLAM-SHELL TYPE CANOPY, SPEED BRAKES, A CATAPULT HOOK AND AN ARRESTING GEAR. THE WING INCORPORATES SINGLE-SLOTTED FLAPS. FLIGHT CONTROLS, EXCLUDING THE MECHANICAL RUDDER SYSTEM, ARE POWER OPERATED (ELEVATOR POWER-BOOSTED AND AILERON IRREVERSIBLE SYSTEM).

A LOW LEVEL ESCAPE SYSTEM IS ALSO FEATURED IN THE T2J AIRPLANE WHICH PROVIDES SAFE EJECTION THROUGHOUT THE FLIGHT ENVELOPE DOWN TO ZERO ALTITUDE AND A SPEED OF 75 KNOTS.

FLAPS AND LANDING GEAR MAY BE EXTENDED UP TO A SPEED OF 165 KNOTS. THE MAXIMUM PERMISSIBLE DIVE SPEED ABOVE 75000 FEET IS MACH NO 0.85. THE MAXIMUM STRUCTURAL DESIGN SPEED IS 485 KNOTS.

DEVELOPMENT

FIRST FLIGHT DATE ..(EST) SEPTEMBER 1962
 SERVICE USE INDEFINITE

DIMENSIONS

WING	
AREA	255 SQ. FT.
SPAN	35' - 11"
MAC	7' - 5"
LENGTH	38' - 4"
HEIGHT	14' - 10"
TREAD	18' - 5"

WEIGHTS

<u>LOADING</u>	<u>LBS</u>	<u>LF</u>
EMPTY	7447	
DESIGN	9916	6.5
BASIC	N.A.	
COMBAT	N.A.	
MAX. TAKE-OFF	11902	5.4
MAX. LANDING	11502	(FIELD)
MAX. LANDING	10600	(CARRIER)

ALL WEIGHTS ARE ESTIMATED

FUEL AND OIL

<u>No. TANKS</u>	<u>GALS.</u>	<u>LOCATION</u>
1	381	FUSELAGE
2	200	TIP TANKS

FUEL GRADE JP-4, JP-5
 FUEL SPEC(APPLICABLE)...
 MIL-J-5624

OIL

CAPACITY(GALS) 3.2
 GRADE 1010
 SPEC(APPLICABLE)

ELECTRONICS

UHF COMMAND	AN/ARC-52X
TACAN EQUIPMENT	AN/ARN-52(V)
RECEIVING SET	AN/ARR-40
DIRECTION FINDER	AN/ARA-25A
IFF TRANSPONDER	AN/APX-59
INTERPHONE	C-2379-AIC

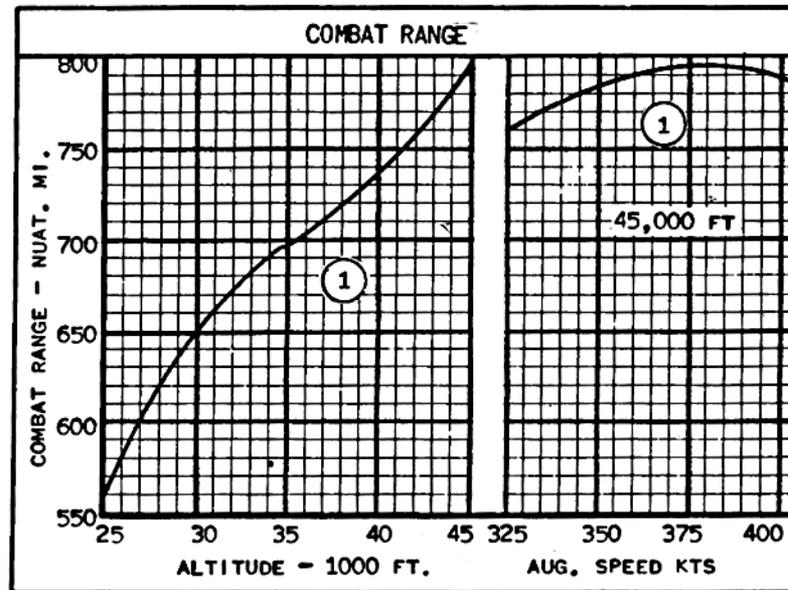
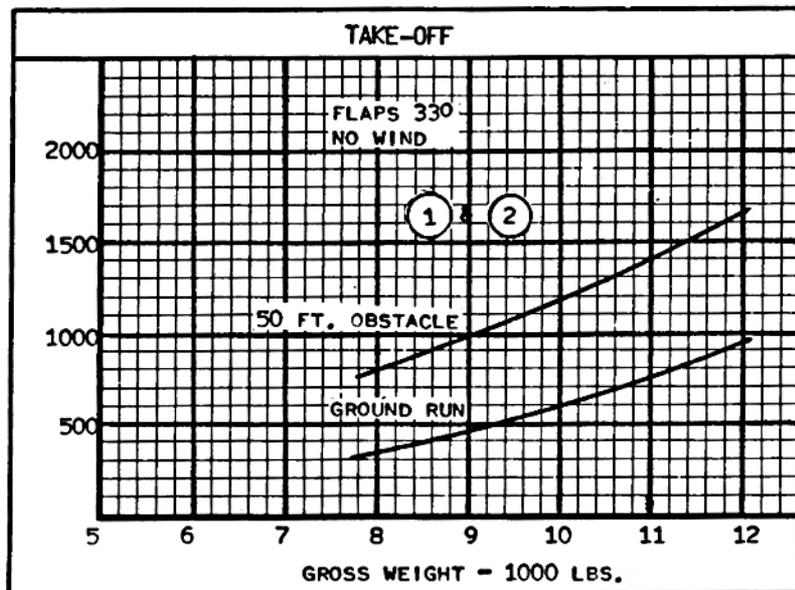
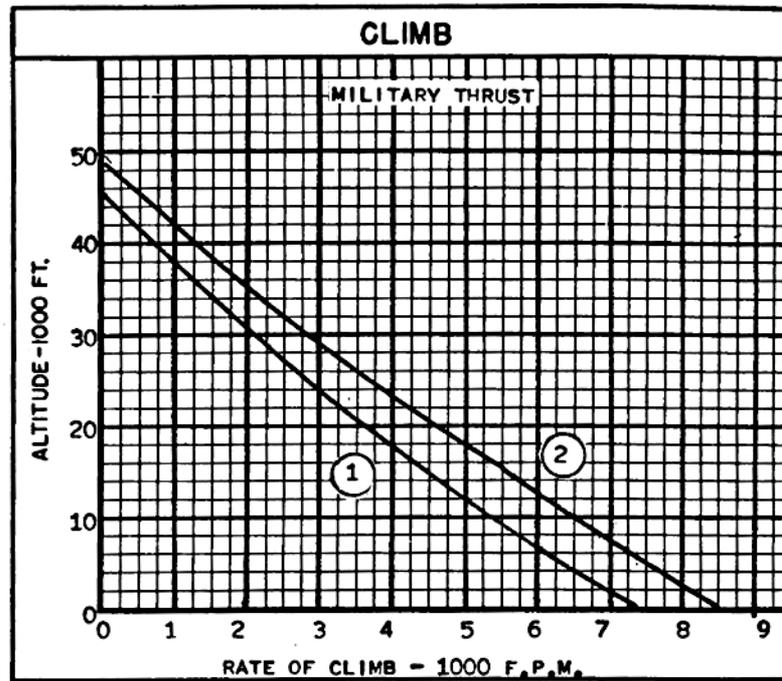
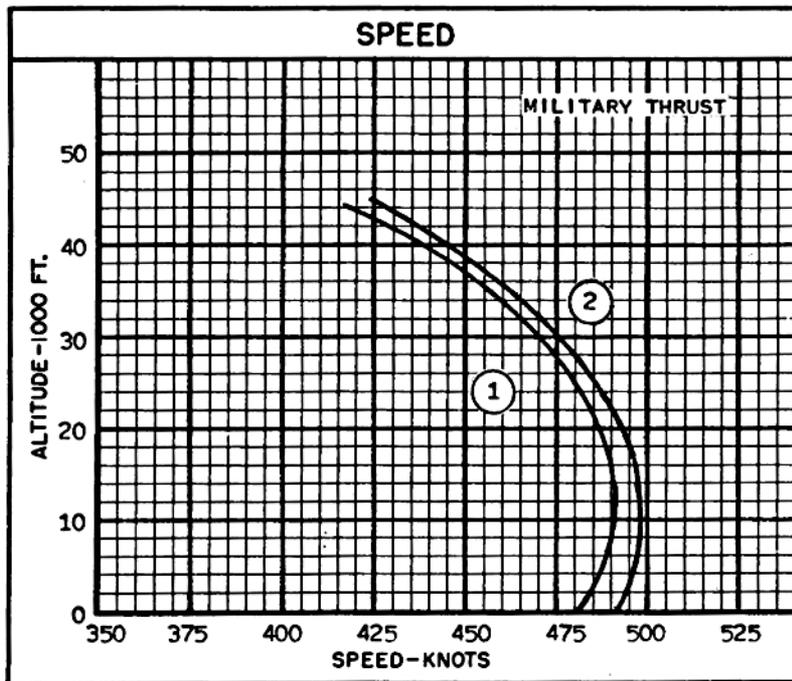
PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) CLEAN + 2 TIP TANKS	(2) CLEAN		
TAKE-OFF WEIGHT	1b. 11,902	10,463		
Fuel internal/external (P-4)	lb./lb. 2477/1300	2477		
Fayload	lb. —	—		
Wing loading	lb./sq.ft. 46.6	41.1		
Stall speed - power-off	kn. 92.5	87.2		
Take-off run at S.L. - calm	(A) ft. 910	680		
Take-off run at S.L. 25 kn. wind	(A) ft. 480	350		
Take-off to clear 50 ft. - calm	(A) ft. 1650	1300		
Max. speed/altitude	(A) kn./ft. 491/15,000	496/15,000		
Rate of climb at S.L.	(A) fpm. 7150	8430		
Time: S.L. to 20000 ft.	(A) min. 4.0	3.3		
Time: S.L. to 30000 ft.	(A) min. 7.0	6.3		
Service ceiling (100 fpm)	ft. 44,150	47,600		
Combat range/MISSION TIME	N.MI/HRS 795/2.1	385/1.1		
Average cruising speed	kn. 380	374		
Cruising altitude(s)	ft. 45,000	46,000		
Combat radius/Mission time	n.mi.			
Average cruising speed	kn.			
COMBAT LOADING CONDITION				
COMBAT WEIGHT	1b.			
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	1b. 8,845	8,647		
Fuel	lb. 720	661		
Stall speed - power-off/appr. power	kn./kn. 80/69	79/68		
Distance - ground roll/over 50 ft. obst.	ft./ft. 1270/2130	1240/2080		

NOTES

(A) MILITARY RATED THRUST
 PERFORMANCE BASIS: CALCULATIONS
 RANGE IS BASED ON ENGINE SPECIFICATION FUEL CONSUMPTION DATA INCREASED BY 5%.

NAVAR-13350 (Rev. 1-55)

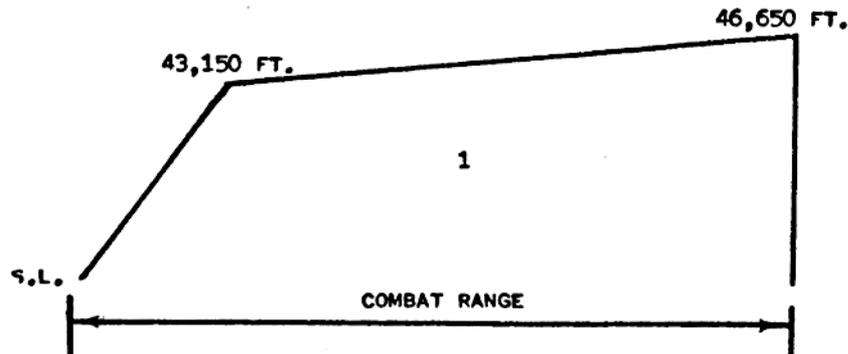


○ LOADING CONDITION COLUMN NUMBER

NOTES

RANGE PROBLEM - TRAINER

WARM-UP, TAXI, TAKE-OFF, ACCELERATION: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL.
 CLIMB: ON COURSE TO CRUISE CEILING WITH MILITARY THRUST
 CRUISE: AT LONG RANGE SPEEDS AT CRUISE CEILING.
 RESERVE: 5 PERCENT OF INITIAL FUEL PLUS FUEL REQUIRED FOR 20 MINUTES AT SPEED FOR MAXIMUM ENDURANCE AT SEA LEVEL.



ORDNANCE

ROCKETS

<u>No.</u>	<u>CAL.</u>	<u>GUNS</u> <u>ROUNDS</u>	<u>LOCATION</u>
2	.50	100 EA.	WINGS

REMOVABLE GUN PACKAGE, P/N 200-89045 ONE GUN PACKAGE LOCATION UNDER EACH WING (W.S.133).
 GUN CAMERA, (1) TYPE KB-9A LOCATION ON GUN SIGHT.

BOMBS

EXTERNAL, ONE LOCATION UNDER EACH WING (W.S.133).

<u>No.</u>	<u>TYPE</u>
2	100 LB. PRACTICE BOMBS TYP OF (MK 15 MOD 2,3, & 4)
OR 2	AERO 4B BOMB CONTAINERS
OR 2	PRACTICE BOMB CLUSTER AN-M1A2

EXTERNAL, ONE LOCATION UNDER EACH WING (W.S.133)

<u>No.</u>	<u>SIZE</u>	<u>TYPE</u>
2	2.25 IN. "SCAR"	AERO 1A SCAR ADAPTER
2	2.75 IN. "FFAR"	AERO 6A TYPE ROCKET LAUNCHER PACKAGE

FIRE CONTROL SYSTEM MK-6 MOD 4 INCLUDING MK-8 MOD 9 GUN SIGHT. GUNS CAN BE CARRIED IN LIEU OF, BUT NOT IN COMBINATION WITH, BOMBS OR ROCKETS.

PROVISIONS FOR AERIAL TOW TARGET.

○ LOADING CONDITION COLUMN NUMBER