

DAILY/INITIAL FLIGHT TEST REPORT

1. AIRCRAFT TYPE

T-43

2. SERIAL NUMBER

31149

3. CONDITIONS RELATIVE TO TEST

A. PROJECT/MISSION NO QUAL	B. FLIGHT NO/DATA POINTS 1	C. DATE 21-11-88
D. FRONT COCKPIT (Left Seat) JORGENSEN/BASS	E. FUEL LOAD 26000	F. JON 996 TPS
G. REAR COCKPIT (Right Seat) WAYNE BROWN	H. START UP GR WT/CG 89,000 / 20%	I. WEATHER CLEAR
J. TO TIME/SORTIE TIME 1055 / 119	K. CONFIGURATION/LOADING	L. SURFACE CONDITIONS Calm
M. CHASE ACFT/SERIAL NO	N. CHASE CREW	O. CHASE TO TIME/SORTIE TIME

4. PURPOSE OF FLIGHT/TEST POINTS

QUAL FAM OF THE T-43

Overall - Very nice flying A/C - excellent FQ, good performance.

5. RESULTS OF TESTS (Continue on reverse if needed)

Cockpit Eval - Nice cockpit layout, logical and easy to read. Good outside visibility, very nice shading. Eng start required throwing only 2 switches, real simple. Seat comfort is excellent, with plenty of adjustments.

Taxi/T.O: Good turning radius, idle thrust required a tapping of the brakes every once in a while. Brakes firm and good.

$V_r$  was 145 KIAS with app 15 lbs pull required to rotate to 15°. Slight hesitation noticed at about 8° nose up.

1.9 EPR climb at 280 KIAS gave app 3000/min Wk at 6K, dropping to about 2400 at 15K.

Speed brake extension at 15K/250 KIAS caused a mild pitchup.

FQ at 15K/250 were good with DR and Sp having one small overshoot. With yaw damper off, DR gave more than 10 overshoots with a period of 3.5 sec,  $\phi/B \approx 0.5$

COCKPIT NOISE LEVEL VERY LOW, EVEN AT 325 KIAS CAN COMMUNICATE IN COCKPIT WITH NORMAL SPEAKING VOLUME.

6. RECOMMENDATIONS

OK  
TSS

COMPLETED BY

D. JORGENSEN

SIGNATURE

CAPT GREG BASS

*[Handwritten Signature]*

DATE

21/11-88

MANUAL REVERSION - 250 KTS 10K' MSL: RUDDER VERY EFFECTIVE, (CAN USE TO CONTROL ROLL. VERY LARGE DEADBAND IN OTHER AXES (1 1/2" PITCH, 2" AT END OF YOKE Laterally) WITH VERY LIGHT FRICTION. ONCE OUT OF THE DEADBAND AILERON AND PITCH FORCES WERE ABOUT 3 TIMES NORMAL. PITCH TRIM STILL EFFECTIVE BUT AILERON TRIM HAS LITTLE OR NO EFFECT.

LITTLE OR NO ADVERSE OR PROVERSE YAW WITH FULL ROLL CONTROL (NORMAL SPOILERS + AILERONS)

CLEAN STALL - TRIMMED TO 200 KTS  
175 - SLIGHT BUFFET  
162 - STICK SHAKER  
150 - VERY HEAVY BUFFET - COULDN'T EVEN WRITE  
150 - ROLL OFF TO THE RIGHT

PA-STALL - TRIMMED TO 150 KTS :  
120 - SLIGHT BUFFET  
109 - STICK SHAKER - SLIGHT ROLL TENDENCY (TO RIGHT) CONTROLLABLE  
99 - G BREAK + roll off right

GOOD WARNING BUT SMALL SPEED RANGE REQUIRES STICK SHAKER

LVL ACCEL DIRTY - CLEAN NORMAL SCHEDULE 13K' 150 KIAS EPR 2.1 TRIM ZERO AT 170 KIAS.  
250 KIAS 20 lbs (00sec) . . . 290 KIAS 35 lbs (1:30)  
AIRCRAFT IS MUCH LESS SPEED STABLE THAN MOST HEAVIES (MUCH LESS THAN KC-135) AIRCRAFT WOULD BE FLYABLE IN AN EMERGENCY WITHOUT TRIM.

DECEL/DESCENTS - AIRCRAFT IS VERY CLEAN AND HARD TO SLOW DOWN BELOW 270 KIAS, EVEN WITH SPOILER.  
FOR 'RAPID' DESCENTS, USE OF GEAR WORKED BEST.

LANDINGS: SPEED STABILITY ON FINAL WAS ADEQUATE AND APPROACH AIRSPEED COULD BE MAINTAINED  $\pm$  3 KIAS WITHOUT EXCESSIVE TIME SPENT ON AIRSPEED. NO DUTCH ROLL EXCITATION NOTICED WITH LINE UP CORRECTIONS AND DID NOT HAVE TO WORK AT KEEPING THE WINGS LEVEL. EASY TO JUDGE HEIGHT FOR FLARE AND NO NOTICEABLE AMTITUDE OR PITCH TRIM CHANGES WHEN THROTTLES REDUCED FOR FLARE (TWO ENGINE). ABOUT 10-15 lbs AND 2-3" LONG STICK TRAVEL FOR FLARE AT FLAPS 30; FLAPS 40 - SIGNIFICANT DRAG INCREASE BUT ONLY ABOUT 30 KT DECREASE IN APPROACH SPEED. USUALLY NOT USED.  
SINGLE ENGINE - ABOUT 20 lbs REQUIRED TO OFFSET APPROACH POWER. RUDDER TRIM NEEDS TO BE CENTERED FOR TOUCHDOWN. MISSED APPROACH REQUIRED FULL RUDDER ~ 80 lbs AND STILL WOULDNT CENTER BALL. 5° AOB WORKED WELL. NO PROBLEMS WITH CONTROLLABILITY AT APPROACH AIRSPEEDS  
PARTIAL FLAP FULL STOP (A/C TENDS TO GET FAST) MINIMAL FLARE TECHNIQUE WORKED WELL FOR SMOOTH TOUCH DOWN. IMMEDIATE USE OF FULL REVERSE HAD AIRCRAFT AT TAXI SPEED BY 5000 FT OF ROLL.

OVERALL - LACK OF NOTICEABLE STRUCTURAL MODE, MEDIUM TO LIGHT STICK FORCES, GOOD DYNAMIC MODES, AND GOOD EXCESS POWER MAKE AIRCRAFT EASY AND SAFE TO FLY AND LAND PRECISELY. EXCEPTIONALLY SUITED TO NAVIGATION ON/OFF AIRWAYS AND LANDING ON SMALLER FIELDS.