

DAILY/INITIAL FLIGHT TEST REPORT		1. AIRCRAFT TYPE S-3A	2. SERIAL NUMBER 160136
3. CONDITIONS RELATIVE TO TEST			
A. PROJECT/MISSION NO	B. FLIGHT NO/DATA POINTS	C. DATE 1 SEP 88	
D. FRONT COCKPIT (Left Seat) LDR UCHU USA	E. FUEL LOAD 7900 #	F. JON	
G. REAR COCKPIT (Right Seat) CAPT BASS / CAPT DANNER	H. START UP GR WT/CG 38,000 #	I. WEATHER CLD 7 29.91, PA = 2318	
J. TO TIME/SORTIE TIME 1120 / 1.7	K. CONFIGURATION/LOADING CLEAN	L. SURFACE CONDITIONS 90° GUNDS CTRM	
M. CHASE ACFT/SERIAL NO	N. CHASE CREW	O. CHASE TO TIME/SORTIE TIME	
4. PURPOSE OF FLIGHT/TEST POINTS GOAL EVAL FOR ASW, SEA SURFACE SURVEILLANCE MISSIONS SECONDARY MISSION: SURFACE ATTACK			
5. RESULTS OF TESTS (Continue on reverse if needed)			
<p><u>COCKPIT</u>: ESCAPAC SEAT IS UNCOMFORTABLE IN LOWER BACK AND IS NOT OPTIMUM FOR LONG FLIGHTS THAT THIS AIRCRAFT IS CAPABLE. FOV FROM RIGHT SEAT GOES FROM 9 O'CLOCK TO ABOUT 4:00 AT WING TIP, 5 O'CLOCK LOW TO ENGINE. OVERHEAD CONSOLE BLOCKS A LITTLE ACROSS COCKPIT HIGH BUT CAN COVER AREA ADEQUATELY BY MOVING HEAD IF NECESSARY. TAPE ENGINE INSTRUMENTS ARE WELL PLACED EASY TO GET USED TO AND READ. LARGE ATTITUDE GYRO VERY GOOD FOR INSTRUMENT FLYING AND POSSIBLE TO FLY OVERHEAD ACRO FROM. FORWARD HIGH FOV GOOD, OVER THE NOSE EXCELLENT. REAR COCKPIT COULD USE BETTER AND CLEAR (PRESENT ONES VERY SMALL AND ALMOST OPAQUE) WINDOWS FOR LIGHT AND BETTER BACK SEAT S.A.</p> <p><u>CANDOPS</u>: APU ALLOWS SELF START. POST START PROCEDURES TOOK 2-4 MINS, GOOD FOR QUICK DECK ALERT OR SPARE. MWS IS VERY TIGHT RODDER FREEPLAY WAS LESS THAN 1/4" DID NOT NOTICEABLY AFFECT ABILITY TO MAINTAIN TIGHT CONTROL OF CENTERLINE. 10' OFFSET TO RAPID DECELERATION COULD BE MADE WITHOUT OVERTHROTTLE. SIGNIFICANT AMOUNT OF RESIDUAL THRUST AT IDLE REQUIRES INTERMITTENT USE OF BRAKES TO CONTROL SPEED. THIS WOULD BE ADVANTAGEOUS FOR SHIPBOARD OPS. <i>why!</i></p> <p><u>T.O.</u>: 3500 FT ROLL,</p> <p><u>CLMB</u>: 220 KIAS CLIMB 3K FPM 8-15K' 5:48 FLOW 8K' - 20K' MSL</p> <p><u>TRIM</u>: MAX RANGE 210 KIAS 4500# OF FUEL = 1000 PPH/SIDE AT 20K' MSL 210 KIAS 5500# OF FUEL = 1100 PPH/SIDE AT 5K' MSL</p> <p>POT MUCH DIFFERENCE AT ALL WITH ALTITUDE, VERY EFFICIENT AND CAPABLE OF LONG ENDURANCE/RANGE. FULL FUEL LOAD ALLOWS ~3000 NM AND > 5 HOURS.</p>			
6. RECOMMENDATIONS Well suitable for ASW and sea surveillance unsuitable for surface attack <i>Good for S</i>			
COMPLETED BY CAPT G. BASS / Capt J. Danner		SIGNATURE <i>(Signature)</i>	DATE 6 Sep 88

LEVEL ACCEL:MAN FLT:

F_s	G
8lbs	1.5
10lbs	2.0
15lbs	3.0

SH.SS.

FULL RUDDER AT 210 KIAS 15K'
RESULTED IN $\approx 25^\circ$ AOBANK
AND $\sim 10^\circ$ P.

KIAS	TIME
250	0
270	:25
290	:51
300	1:21
308	Vmil

STALL CHARACTERISTICS: PLENTY OF WARNING OF IMPENDING STALL, GOOD CONTROL IN ALL THREE AXES. WITH 5500# AT 12K' MSL GET SLOWLY INCREASING BUFFET BELOW 140 KIAS. HEAVY BUFFET AT 125 KIAS AND MODERATE G BREAK AT 120 KIAS. RECOVERY WITH FULL POWER AND RELEASE OF BACK PRESSURE AT G BREAK TOOK ~ 300 FT. **How was power response! Tendency for secondary stall**

DYNAMICS: 220 KIAS 15K' % SPIRAL \approx NEUTRAL, W.S.P. ≈ 1 Hz 2 OVERSHOOTS, 2 SECS TO DAMP D.R. = 2 OVERSHOOTS \approx SNAKE! DAMPER ON, > 8 AND ROLLY WITH DAMPER OFF.

WRAS DELIVERY + LOW LEVEL:

AIRCRAFT IS VERY COMFORTABLE TO FLY LOW LEVEL AND ALTITUDE IS VERY EASY TO CONTROL. TIGHT TURNS ACROSS COCKPIT REQUIRE PILOT TO DUCK HEAD IN ORDER TO SEE HORIZON INTO TURN. RADAR ALTIMETER WITH BUG VERY VALUABLE FOR LOW LEVEL OVER WATER (EACH PILOT HAS ONE). LACK OF BOMBING SIGHT (THEY HAVE HOME-MADE ONES IN SOME SQUADRONS) MAKES PRECISION BOMBING DIFFICULT AND SLOW DELIVERY SPEED 300-350 KTS MAKE A/C UNSUITABLE FOR DEFENDED TARGET. AIRCRAFT VERY CONTROLLABLE IN POP UP WITH TARGET ACQUISITION CROSS COCKPIT DIFFICULT. EXCELLENT FWD AND SIDE AND DOWN FIELD OF VIEWS WOULD MAKE PHOTOGRAPHY OF SURFACE CONTACTS POSSIBLE QUITE EASILY. MANEUVERING FLAPS ALLOW VERY TIGHT TURNS AND AID IN LOCATING SUBSURFACE CONTACTS BY QUICKLY RETURNING TO A POSITION WHEN MARKED FROM THE BACK SEATS.

LANDINGS: FLEW CARRIER PATTERN AT CHINA LAKE. ALTITUDE CONTROL IN BREAK VERY EASY $\pm 100'$ C.H. 3. AIRCRAFT VERY CLEAN AND NOT A LOT OF INDUCED DRAG, HARD TO SLOW DOWN FROM A FAST BREAK. HARD TO GET THERE, BUT ONCE ESTABLISHED EASY TO MAINTAIN ON SPEED IN TURN AND ON FINAL ± 1 UNIT CH=3. AIRCRAFT TENDS TO FLOAT QUITE A BIT AND REQUIRES MODERATE USE OF THE STICK TO GET CORRECTIONS TO TAKE AND KEEP BALL CENTERED. THIS FORMER CARRIER BE LESS AT SHIP WITH MORE WIND THAN AT FIELD. DLC CONTROL ON STICK ALSO HELPS TO CORRECT FOR HIGH WITHOUT AFFECTING PITCH OR AOA. PITCH CORRECTION WITH THROST CHANGES ^{ON FINAL} ELIMINATES PITCH CHANGES WITH POWER CHANGES, BUT AIRCRAFT STILL EASY TO FLY WITH SYSTEM OFF. CONTROL OF LINE UP REQUIRED MODERATE COMPENSATION TO LAND ON CENTERLINE. THIS WOULD BE IMPORTANT AT SHIP AND MAY REQUIRE MORE ATTENTION IN LINE UP THAN MOST AIRCRAFT.

GEN: GOOD LOW LEVEL, RANGE, ENDURANCE, AND FWD VISIBILITY ^{PLUS WRAS + PAYLOAD CAPABILITY} MAKE AIRCRAFT VERY SUITABLE FOR THE MISSIONS OF ASW AND SEA SURFACE SURVEILLANCE. LACK OF HIGH SPEED AND BOMBING SYSTEMS MAKE A/C UNSUITABLE FOR SURFACE ATTACK EXCEPT FOR LIGHTLY DEFENDED TARGETS.