DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A49NM

Jetcruzer 450

June 14, 1994

TYPE CERTIFICATE DATA SHEET NO. A49NM

This data sheet which is a part of Type Certificate A49NM, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder	Advanced Aerodynamics & Structures, Inc 10703 Vanowen street North Hollywood, CA 91605

1 - Model Jetcruzer 450 (Normal Category), Approved June 14, 1994

Engine	Pratt & Whitney Canada PT6A-27	
Fuel	Jet A	
	Fuel used must contain anti-icing fuel additive in compliance with MIL-I-27686	
Engine Limits	For all operations, 2200 RPM (599 SHP)	
Propeller & Propeller limits	Hartzell Constant Speed, Model HC-B3TN-3UL	
	Blade, Model LT10173N-21R	
	Pitch Limits (at 30" station) Low Pitch 19.0° ± 0.1° Feather 82.1° ± 0.5° Reverse -13.0° ± 0.5°	
	Diameter: 80 3/8" maximum, 79 3/8" minimum, no further reduction permitted	
	Governor: Woodward 8210-003	
	Spinner: Hartzell C-3065-3	
	Limitations: None	
Airspeed Limits	Max. operating speed (V_{MO})	155 KTS CAS
	Maneuvering (Normal 4300 lbs) (V_a)	132 KTS CAS

C.G. Range	Normal Category		
	Forward:	254.0 inches aft of datum at 4300 lbs.	
		253.0 inches aft of datum at 4200 lbs.	
	Aft:	256.5 inches aft of datum at 4300 lbs.	
	(See Figure 1)		
Empty Weight C.G. Range	None		
Datum	92.0 inches forward of nose jack pad attachment on fuselage bottom fwd of nose wheel well.		
Leveling Means	Seat tracks, behind pilot station		
Maximum weight	4300 lbs.		
Minimum Crew	One pilot		
Maximum Occupants	Five (includes crew)		
Number of Seats	2 Occupants at 190.8" 1 Occupant at 221.3" 2 Occupants at 251.8"		
Maximum Baggage	None		

Fuel Capacity	Capacity Gal.	Usable Gal.	Arm
	68.5	60.5	+286.0
	See Note 1 for data on unusable fuel		

Oil Capacity	Capacity Qts.	Usable Qts.	Arm
	11	7.8	+295.6

Control Surface Movement			
	Airler	27.0°/23.0° Up	17.0°/14.0° Down
	Rudder (Each)	19.0°/16.0° Left	19.0°/16.0° Right
	Elevator	10.0°/8.0° Up	42.0°/40.5° Down
	Elevator Tab	33.0°/31.0° Up	17.0°/16.0° Down
	(All surfaces must be within 2° left to right)		
Nose Wheel Movement	Steering ± 15°		
	Castoring ± 30°		
Serial Numbers Eligible	2 & Up		

SPECIFICATIONS PERTINENT TO ALL MODELS

Certification Basis

The certification basis for the AASI Jetcruzer 450 is:
14 CFR part 23, effective February 1, 1965, as amended by Amendments 23-1 through 23-42; effective February 2, 1991; § 23.905(e) of Amendment 23-43 for protection of the pusher propeller from ice impingement; § 23.905(f) of Amendment 23-43 for pusher propeller disc conspicuity; § 23.905(g) of Amendment 23-43 for protection of the pusher propeller from exhaust gas impingement; § 23.925(b) of Amendment 23-43 for pusher propeller ground clearance; § 23.1203(a) of Amendment 23-43 for engine fire detection system; Part 34, effective September 10, 1990; Part 36, through Amendment 36-20, effective September 11, 1992; and the following special conditions and exemption (special conditions 1 and 6, as proposed in Notice No. 23-ACE-61, are issued as final special conditions 1 and 2):

Special Condition 1, Evaluation of Composite Structure, and

Special Condition 2, Protection of Electrical and Electronic Systems from High Intensity Radiated Fields

Exemption No. 5594, grants an exemption from a portion of § 23.903(e)(2) of the FAR which requires, in pertinent part, that a means be provided for stopping the rotation of any turbine engine.

For the metal structures, conducting of damage tolerance analysis provides an equivalent level of safety as envisioned in the regulations and thus meets the requirements of § 23.572(a)(1).

Compliance with § 23.1091(c)(2), Water Ingestion, was found by equivalent level of safety by prohibiting takeoff or landing with standing water on the runway. Appropriate testing must be conducted prior to the removal of the limitation.

NOTE: As a result of AASI decision to seek initial certification without advanced electronic system, Special Condition 2 is not considered necessary for initial type certification. For following certification with advanced electronic system installed, compliance with Special Condition 2 is required.

Production Basis

None. Prior to original certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, and conformity with the approved technical data, and a check of the flight characteristics.

Equipment

The basic equipment required as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. This equipment must include the following:

* A current Airplane Flight Manual.
* 120 lbs movable ballast.

NOTE 1

Current weight and balance report, including list of equipment included in certificated empty weight, and loading instruction when necessary must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity locations must include total oil capacity and unusable fuel as noted below:

* Unusable fuel (8.0 gal) 53.6 lbs at 286.0"

NOTE 2

The following placard must be displayed in front of and in clear view of the pilot.

"This airplane must be operated as a Normal Category airplane in compliance with operating limitations stated in Airplane Flight Manual". See Approved Airplane Flight Manual for additional placards. "All placards required in the Approved Airplane Flight Manual must be installed in the appropriate location".

NOTE 3

Aircraft Service Life is limited to 500 flight hours. When the damage tolerance analysis AASI Report Nos. ER-5141 and ER-5142 of the aircraft are submitted and approved, the service life will then be readjusted based upon the determined threshold of each Principal Structural Element together with their inspection intervals.

Fuel Quantity Measuring System Indicator P/N 81-240-1 and Transmitter P/N 75-169-3, which are not qualified to TSO C55, are service life limited to 100 hrs T.B.O.

The HC-B3TN-3UL/LT10173N-21R propeller is required to have repetitive blade inspection for erosion and/or corrosion at intervals not to exceed 24 months or 600 hours of operation, whichever occurs first. See Hartzell S/B 181, dated 3/12/93 or later revision for the inspection procedures.

These limitations may not be changed without FAA engineering approval.

NOTE 4

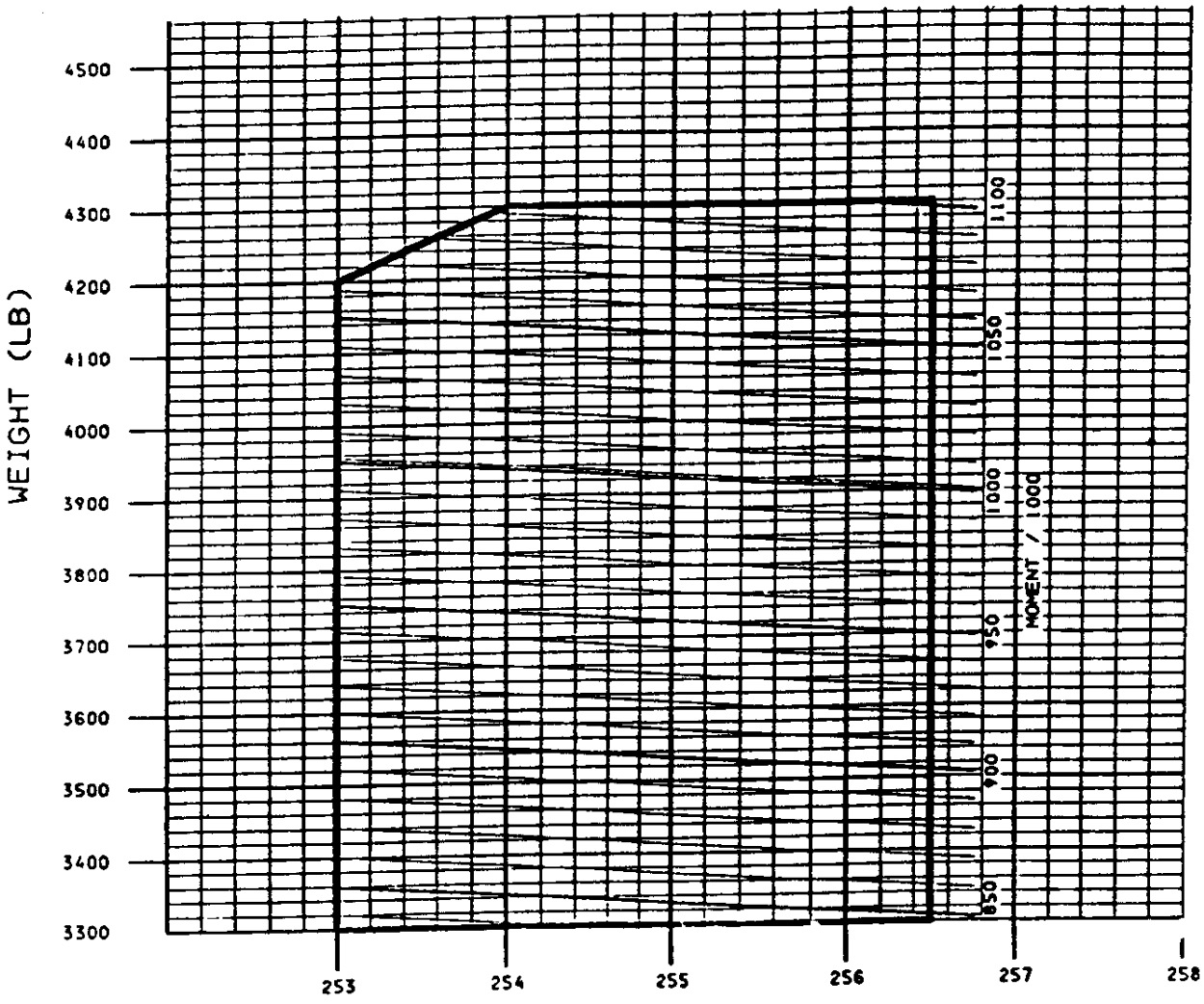
Aircraft is not eligible for installation of avionics equipment (HF, VHF, Nav/Com radios, transponder, etc) without complete Electromagnetic and Radio Frequency Interference (EMI/RFI) ground and flight test due to known interference with previously approved equipment (Fuel Quantity Gauging System).

NOTE 5

Each aircraft produced must be flight tested specifically to show compliance to § 23.207(c) of 14 CFR Part 23, using at least a swiveling pitot boom and sensitive airspeed indicator.

Figure 1

WEIGHT AND CENTER OF GRAVITY LIMITS



--END--