DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A19EA
Revision 2
TRIDENT
TR-1

May 20, 1987

TYPE CERTIFICATE DATA SHEET NO. A19EA

This data sheet which is part of Type Certificate No. A19EA 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: Viking Air, Ltd.
#9 - 9600 Canora Road
Sidney, British Columbia
Canada V8L 4R1

I - Model TR-1 4PCAmM (Normal Category) Approved December 16, 1976, by the FAA and October 27, 1976, by the Canadian Department of Transportation (DOT)

Engine	Single Teledyne Continental Tiara 6-285-C4 (Reduction gear ratio 0.5:1)		
Fuel	100/130 minimum grade aviation gasoline		
Engine Limits	For all operations 2000 r.p.m. (285 hp.)		
Propeller and Propeller Limits	Hartzell HC-H3YF-3LF/FL-C9684-12. Pitch setting at 30 in. station: Low 19°, High 36°, Reverse 11° Diameter: Maximum 84 in., Minimum 83 in. No further reduction permitted. Governor: Hartzell F-6-306 Spinner: Hartzell D-4247 Avoid continuous operation of the propeller in the following speed ranges: (a) Between 900 and 1300 propeller r.p.m. in flight (b) Between 900 and 1100 propeller r.p.m. on ground or water		
Airspeed Limits (CAS)	Vne *(never exceed)	180 m.p.h.	156 knots
	Va (maneuvering)	120 m.p.h.	104 knots
	Vfe (flaps extended-takeoff)	114 m.p.h.	99 knots
	Vfe (landing)	94 m.p.h.	82 knots
	Vle (gear extended)	114 m.p.h.	99 knots
	Vle (floats extended)	114 m.p.h.	99 knots
	*Up to 10,000 ft. reducing linearly to 134 m.p.h. (116 knots) at 18,000 ft.		
Center of Gravity (CG) Range	+114.17 to +123.87 at gross weights up to 3280 lb. +116.38 to +119.38 at gross weights of 3800 lb.		
Landing gear and floats extended	Straight line variation between points (Moment change due to landing gear retraction +83 in.-lb.)		
(Distance from Datum)	(Moment change due to float retraction +171 in.-lb.)		
Empty Weight (CG) Change	None		

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Datum	Forward face of bulkhead at Fuselage Station 6.4 (Located 99.35 in. forward of wing leading edge)
Mean Aerodynamic Chord (MAC)	72.45 in.
Leveling Means	Top surface of seat rails laterally and longitudinally.
Maximum Weight	3800 lb.
Minimum Crew	One (Pilot)
Number of Seats	Two at +57.25 Two at +88.05
Maximum Baggage	150 lb. at +129.6

Fuel Capacity

	U.S. Gal.	Imp. Gal.	Arm
	* 102	85	+129.6
Usable	93.7	78	

**See NOTE 1(b) for Weight and Balance*

Oil Capacity

	U.S. Qt.	Imp. Qt.	Arm
	**9.0	7.5	+147.4
Usable	5.0	4.2	

***See NOTE 1(c) for Weight and Balance*

Maximum Operating Altitude	18,000 ft.
Maximum Operating Air Temperature	90°F

Control Surface Movements

Ailerons	26° ± 2° UP	17° ± 2° DOWN
Elevator	30° ± 2° UP	20° ± 2° DOWN
Flaps		30° ± 2° DOWN
Rudder	26° ± 2°LEFT	26° ± 2° RIGHT

Manufacturer's Serial Numbers	Those aircraft shown to comply with Canadian DOT Aircraft Type Approval A119. The Canadian Department of Transport Certificate of Airworthiness for Export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.
Import Requirements	A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for DOT Approval No. A119, dated October 27, 1976, (FAA Type Certificate No. A19EA)".
Certification Basis	Federal Aviation Regulation Part 23, dated September 14, 1969, including amendments 1 through 13 and Federal Aviation Regulation Part 36 amendments 1 through 5, appendix F Type Certification No. A19EA issued December 16, 1976, date of application for Type Certificate - June 3, 1971.

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the aircraft for certification and is given in Trident Approved Equipment List TAR-070.
In addition, the following items of equipment are required:

(a) Canadian DOT approved Airplane Flight Manual TAR-068
(b) Stall Warning Vane, Safe Flight P/N 1750-1
(c) Stall Warning Horn, Safe Flight P/N 284

NOTE 1.

(a) Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.
(b) The following amount of unusable fuel is included in the empty weight: 8.3 U.S. gal. (7 Imp. gal.) Arm +129.6
(c) The following amount of unusable oil is included in the empty weight: 4.0 U.S. qt. (3.3 Imp. qt.) Arm +147.4

NOTE 2:

The following placards must be displayed:

(a) Forward on left door.

THE MARKINGS & PLACARDS INSTALLED IN THIS AIRCRAFT CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING IN THE NORMAL CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRCRAFT IN THIS CATEGORY ARE CONTAINED IN THE AIRCRAFT FLIGHT MANUAL.

THE AIRCRAFT IS APPROVED FOR FLIGHT IN DAY/NIGHT VFR/ IFR WHEN EQUIPPED IN ACCORDANCE TO AIR NAVIGATION ORDERS. FLIGHT INTO KNOWN ICING CONDITIONS PROHIBITED. AEROBATICS INCLUDING SPINS PROHIBITED.

(b) Forward on left door.

AIRSPEED LIMITATIONS (CAS)

MAX. LANDING GEAR/FLOAT OPERATING SPEED	99 KNOTS
MAX. FLAP SPEED (0 - T.O.)	99 KNOTS
MAX. FLAP SPEED (T.O. - LAND)	82 KNOTS
MANEUVERING SPEED	104 KNOTS
MAX. STRUCTURAL CRUISE SPEED	130 KNOTS
NEVER EXCEED SPEED SEA LEVEL TO 10,000 FT.	156 KNOTS
(ABOVE 10,000 FT. REDUCE BY 5 KNOTS PER 1000 FT)	

(c) On Instrument Panel by Strobe Switch.

TURN STROBE LIGHTS OFF WHEN TAXIING IN VICINITY OF OTHER AIRCRAFT AND WHEN IN CLOUD.

(d) Large Print on Red Background Beside Hand Pump.

EMERGENCY HYDRAULIC HANDPUMP
Extend Handle to Operate

(e) On Panel by Valve.

ALTERNATE STATIC SOURCE
ON ↑
OFF ↓

(f) On Ceiling Near Knob.

ALTERNATE ENGINE AIR
PULL - ON

(g) White Printing on Red Near Reverse Lever.

THRUST

← FORWARD LEVER REVERSE →

WARNING

FOR LOW SPEED WATER MANEUVERING ONLY
PITCH LEVER FULL FORWARD
MAX. RPM 1500
SEE FLIGHT MANUAL

(h) On Ceiling by Control.

HOT	←→	COLD	CABIN AIR OFF
CABIN AIR			IN CASE OF
ON	←→	OFF	ENGINE FIRE

(I) Near Fuel Quantity Indicator

78 IMPERIAL GALLONS USEABLE
7 IMPERIAL GALLONS UNUSABLE

(j) White Print on Red by Knob on Instrument Panel.

FUEL SHUT OFF
PULL OFF

(k) White Print on Red, On Pilot's Seat.

FIRE EXTINGUISHER UNDER PILOT'S SEAT

(l) Inside Baggage Door

BAGGAGE COMPARTMENT
LOAD IN ACCORDANCE WITH
WEIGHT AND BALANCE DATA
MAXIMUM CAPACITY - 150 LBS.
FLOOR LOADING NOT TO EXCEED 75 LB/FT 2

(m) On Instrument Panel

NO SMOKING

.....END.....