DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A29EU
REVISION 5
B-N GROUP LTD.
BN2A MK. III
BN2A MK. III-2
BN2A MK. III-3

March 2,2007

TYPE CERTIFICATE DATA SHEET NO. A29EU

This data sheet, which is a part of type certificate No. A29EU, 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	B-N Group Ltd. Bembridge Airport Isle of Wight, United Kingdom
Type Certificate Holder Record	Pilatus Britten-Norman Limited transferred TC A29EU to B-N Group Ltd. on December 9, 2002. Britten-Norman (Bembridge) Limited transferred TC A29EU to Pilatus Britten-Norman Limited on Septermber 24, 1979.

I. - Model BN-2A MK. III Trislander, 18 PCLM (Normal Category), Approved 4, August 1971

Engines	3 Lycoming O-540-E4C5 (See NOTE 6)
Fuel	91/96 Minimum grade aviation gasoline
Engine limits	For all operations, 2,700 r.p.m. (260 hp.)
Propeller and propeller limits	Hartzell HC-C2YK-2B/C8477-4, HC-C2YK-2B/C8477A-4, Hartzell HC-C2YK-2C/C8477-4, Hartzell HC-C2YK-2C/C8477A-4 and Hartzell HC-C2YK-2CF/FC8477A-4 (See Note 5). Diameter range 80" maximum, 78" minimum. No further reduction permitted. Pitch setting at 30 in. station: Low 12.5° High 78.6° Spinners: Hartzell 836-29 Governors: Woodward 210275, D210659, 210715, F210444, G210659, or B210715 (See NOTE 7)

Airspeed limits (IAS)

With Modification NB/M/510 airspeed indicator installed

Vne (Never exceed)	195 knots (225 m.p.h.)
Vno (Max. structural cruising)	152 knots (175 m.p.h.)
Va (Maneuvering)	130 knots (150 m.p.h.)
Vfe (Flaps take-off)	113 knots (130 m.p.h.)
Vfe (flaps landing)	106 knots (122 m.p.h.)
Vmc (minimum control)	50 knots (58 m.p.h.)

With Modification NB/M/501 airspeed indicator installed

Vmo (Max. operating limits)	152 knots (175 m.p.h.)
Va (Maneuvering)	130 knots (150 m.p.h.)
Vfe (Flaps take-off)	113 knots (130 m.p.h.)
Vfe (Flaps landing)	106 knots (122 m.p.h.)
Vmc (Minimum control)	50 knots (58 m.p.h.)

C.G. range

(+20 in.) to (+25.6 in.) at 8,750 lb.
(+21.0 in.) to (+25.6 in.) at 9,350 lb.
Straight line variation between points.

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Empty weight C.G. range	None
Maximum weight	9,350 lb. Maximum takeoff weight. 9,350 lb. Maximum landing weight. 9,050 lb. Maximum zero fuel weight.
Minimum crew	One Pilot.
Number of seats	18 (2 at -133.5 in) (2 at -103.4 in) (2 at - 74.1 in) (2 at - 45.7 in) (2 at - 15.9 in) (2 at + 14.2 in) (2 at + 43.5 in) (2 at + 71.5 in) (2 at +101.3 in)
Maximum baggage	400 lb. (+144.0 in).
Fuel capacity	196 U.S. gal. total (two 69 U.S. gal. main wing tanks at +27.0 in. plus two 29 U.S. gal. wing tip tanks at +34.0 in.) (See NOTE 1 for data on unusable fuel)
Oil capacity	24 U.S. qt. total (two wing engines) (-2.6 in.) 12 U.S. qt. total (rear engine) (+164.5 in.) (See NOTE 1 for data on undrainable oil)
Maximum Operating Altitude	12,000 ft.

Control surface movements

Wing flaps retracted	Full Up	6° (down)	Full Down	56° (down)
Aileron	Up	25°	Down	15°
Elevator	Up	25 1/2°	Down	19 1/2°
Elevator trim tab*	Up	23°	Down	26°
Rudder	Right	20°	Left	20°
Rudder tab	Right	20°	Left	20°

*(measured with elevator neutral)

2. Model BN.2A MK. III-2 Trislander, 18 PCLM (Normal Category), Approved December 9, 1976
(Same as BN.2A MK III except for elongated nose incorporating baggage compartment, increase in maximum weight and change in C.G. limits).

Engines	Three Lycoming O-540-E4C5 (See NOTE 6)
Fuel	91/96 Minimum grade aviation gasoline
Engine limits	For all operations, 2700 r.p.m. (260 hp)
Propeller and propeller limits	Hartzell HC-C2YK-2B/C8477-4, HC-C2YK-2B/C8477A-4, Hartzell HC-C2YK-2C/C8477-4, Hartzell HC-C2YK-2C/C8477A-4 and Hartzell HC-C2YK-2CF/FC8477A-4 (See Note 5). Diameter range 80" maximum, 78" minimum. No further reduction permitted. Pitch setting at 30 in. station: Low 12.5° High 78.6° Spinners: Hartzell 836-29 Governors: Woodward 210275, D210659, 210715, F210444, G210659, or B210715 (See NOTE 7)

Airspeed limits (IAS) — For operation in FAR Part 135 Category.
(See NOTE 9 for FAR 91 operations)

Vmo (Max. operating limit)	142 knots (164 m.p.h.)
Va (Maneuvering)	133 knots (153 m.p.h.)
Vfe (Flaps take-off)	133 knots (153 m.p.h.)
Vfe (flaps landing)	110 knots (127 m.p.h.)
Vmc (minimum control)	50 knots (58 m.p.h.)

C.G. range	(+19 in.) to (+25.6 in.) at 8,750 lb. (See NOTE 9 for FAR 91 operations) (+19.6 in.) to (+24.95 in.) at 9,500 lb. Straight line variation between points.
Empty weight C.G. range	None
Maximum weight	9,500 lb. Maximum takeoff weight, maximum landing weight, and maximum zero fuel weight. (See NOTE 9 for FAR 91 operations.)
Minimum crew	One Pilot.
Number of seats	18 (2 at -133.5 in) (2 at -103.4 in) (2 at - 74.1 in) (2 at - 45.7 in) (2 at - 15.9 in) (2 at + 14.2 in) (2 at + 43.5 in) (2 at + 71.5 in) (2 at +101.3 in)
Maximum baggage	300 lb. (-209.5 in) 400 lb. (+144.0 in).
Fuel capacity	196 U.S. gal. total (two 69 U.S. gal. main tanks at +27.0 in. plus two 29 U.S. gal. wing tip tanks at +34.0 in.) (See NOTE 1 for data on unusable fuel)
Oil capacity	24 U.S. qt. total (two wing engines) (-2.6 in.) 12 U.S. qt. total (rear engine) (+164.5 in.) (See NOTE 1 for data on undrainable oil)
Maximum Operating Altitude	12,000 ft.

Control surface movements

Wing flaps retracted	Full Up	6° (down)	Full Down	56° (down)
Aileron	Up	25°	Down	15°
Elevator	Up	25 1/2°	Down	22 1/2°
Elevator trim tab*	Up	23°	Down	26°
Rudder	Right	20°	Left	20°
Rudder tab	Right	20°	Left	20°

*(measured with elevator neutral)

3. Model BN2A MK. III-3 Trislander, 18 PCLM (Normal Category), Approved February 9, 1977.
(Same as BN2A MK. III-2 except for Autofeather system installation and increased weights).

Engines	Three Lycoming O-540-E4C5 (See NOTE 6)
Fuel	91/96 Minimum grade aviation gasoline
Engine limits	For all operations, 2700 r.p.m. (260 hp)
Propeller and propeller limits	Hartzell HC-C2YK-2B/C8477-4, HC-C2YK-2B/C8477A-4, Hartzell HC-C2YK-2C/C8477-4, Hartzell HC-C2YK-2C/C8477A-4 and Hartzell HC-C2YK-2CF/FC8477-4 (See Note 5). Diameter range 80" maximum, 78" minimum. No further reduction permitted. Pitch setting at 30 in. station: Low 12.5° High 78.6° Spinner: Hartzell 836-29 Governor: Woodward 210521 or A210521 (See NOTE 8)

Airspeed limits (IAS)

For operation to FAR Part 135 Category.
(See NOTE 9 for FAR 91 operations)

Vmo (Max. operating limit)	142 knots (164 m.p.h.)
Va (Maneuvering)	133 knots (153 m.p.h.)
Vfe (Flaps take-off)	133 knots (153 m.p.h.)
Vfe (Flaps landing)	110 knots (127 m.p.h.)
Vmc (Minimum control)	50 knots (58 m.p.h.)

C.G. range

(+19.0 in.) to (+25.6 in.) at 8,750 lb.
(+20.0 in.) to (+24.5 in.) at 10,000 lb.
Straight line variation between points.

Empty weight C.G. range

None

Maximum weight

10,000 lb. Maximum takeoff weight.
10,000 lb. Maximum landing weight.
9,700 lb. Maximum zero fuel weight.

Minimum crew

One pilot.

Number of seats

18 (2 at -133.5 in) (2 at -103.4 in)
(2 at - 74.1 in) (2 at - 45.7 in)
(2 at - 15.9 in) (2 at + 14.2 in)
(2 at + 43.5 in) (2 at + 71.5 in)
(2 at +101.3 in)

Maximum baggage

300 lb. (-209.5 in)
400 lb. (+144.0 in).

Fuel capacity

196 U.S. gal. total (two 69 U.S. gal. main tanks at +27.0 in.
plus two 29 U.S. gal. wing tip tanks at +34.0 in.)
(See NOTE 1 for data on unusable fuel)

Oil capacity

24 U.S. qt. total (two wing engines) (-2.6 in.)
12 U.S. qt. total (rear engine) (+164.5 in.)
(See NOTE 1 for data on undrainable oil)

Maximum Operating Altitude

12,000 ft.

Control surface movements

Wing flaps retracted	Full Up	6° (down)	Full Down	56° (down)
Aileron	Up	25°	Down	15°
Elevator	Up	25 1/2°	Down	22 1/2°
Elevator trim tab*	Up	23°	Down	26°
Rudder	Right	20°	Left	20°
Rudder tab	Right	20°	Left	20°

*(measured with elevator neutral)

DATA PERTINENT TO ALL MODELS

Datum

Wing leading edge (Stn. 234.5 in)

Leveling means

Fore and Aft leveling: Holes for datum pins on which straight edge is placed are located on the left side of the center fuselage.

Lateral leveling: By a lateral leveling plate located on the cabin floor immediately forward of the aft baggage area (fuselage station 345).

Serial Numbers eligible	The United Kingdom Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for certification is made.
Import requirements	A United States Airworthiness Certificate may be issued on the basis of a United Kingdom Certificate of Airworthiness for export signed by a member of the United Kingdom Department of Trade and Industry containing the following statement "The airplane covered by this certificate has been examined, tested and found to conform to the 14 CFR Part 23 approved under US Type Certificate A29 EU and is to be in condition for safe operation".
Service Information	Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the United Kingdom CAA. • Service bulletins, • Structural repair manuals, • Vender manuals, • Aircraft flight manuals, and • Overhaul and maintenance manuals. The FAA accepts such documents and considers the FAA-approved unless on of the following conditions exits: • The documents change the limitations, performance, or procedures of the FAA approved manuals: or • The documents make an acoustical or emissions change to this product's U. S. type certificate as defined in 14 CFR 21.93. The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASEA to approve on Behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.
Certification basis	FAR 21.29 and FAR 23 effective February 1, 1965 as amended by amendments 23-1 through 23-9 inclusive, plus FAR 135 Appendix A, effective July 19, 1970 plus special conditions number 23-35-EU-7 issued August 4, 1971. Type Certificate No. A29 EU issued August 4, 1971 (re-issued to Britten-Norman, Bembridge, Limited on February 23, 1972). Date of application for Type Certificate, October 1, 1970. The United Kingdom CAA originally type certificated this aircraft under is type certificate Number BA8. The FAA validated this product under U.S. Type Certificate number A29EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the United Kingdom CAA.
Validation basis	Pursuant to FAR 21.29 (a)(1)(ii) Type Certificate No. A29 EU was issued in validation of the British Air Registration Board's certification of compliance with the following airworthiness standards which were found to provide a level of safety equivalent to that provided by the aforementioned type certification basis. 1. The British Certification Basis as stated in Air Registration Board Type Certificate Data Sheet No. BA.6 dated May 14, 1971. 2. The "FAA additional requirements for UK airplanes 12,500 lbs. or less maximum weight" dated January 1, 1970. 3. FAR 23 Section 23.1529 effective February 5, 1970 (Amendment 23-8) and Section 23.1441, 23.1443, 23.1447 and 23.1449 effective June 17, 1970

(amendment 23-9).

4. FAR 135 Appendix "A" effective July 19, 1970.

5. FAA Special Conditions No. 23-35-EU-7 issued August 4, 1971.

Equipment

Basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:

(a) Stall warning indicator (Safe Flight Type No. 165).
(b) A pilot's rear view mirror installed on the forward L.H. fuselage.
(c) Model BN.2A MK.III Trislander : CAA approved airplane Flight Manual, Document No. FM/BN.2A III/1, plus deviations 1 and 2 and subsequent CAA approved revisions.

Model BN.2A MK.III-2 Trislander : CAA approved airplane Flight Manual, Document No. FM/BN.2A III/1, plus deviations 1, 2, and 16, and subsequent CAA approved revisions. For operations under FAR Part 91, Flight Manual supplement No. 17 applies.

Model BN.2A MK III-3 Trislander : CAA approved airplane Flight Manual, document No. FM/BN.2A III/1, plus deviations 1, 2 and 16 and subsequent CAA approved revisions. For operations under FAR Part 91, Flight Manual supplement No. 18 applies.

For compliance with FAR 135 Appendix A and associated Special Conditions, the following modifications must be incorporated.

(a) Airspeed indicator marked to show a maximum operating limit speed (Vmo) Modification no. NB/M/610.

(b) Rear engine fire detection system, Modification no. NB/M/508.

(c) Rear engine power loss warning system, Modification NB/M/502 (Models BN-2A MK. III and BN-2A MK. III-2 only).

(d) Auto-feather system to Modification NB/M/872 (BN2A MK. III-3 only).

NOTE 1 : Current Weight and Balance report including list of equipment included in certificated empty weight and loading instructions where 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 the following: -

(a) 66 lb. of unusable fuel (42 lb. at +27.0 in and 24 lb. at +34.0 in).

(b) 0 lb. undrainable oil.

NOTE 2 : The following placards must be displayed on the instrument panel in full view of the pilot.

"THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS."

In addition, all placards required in the applicable approved Airplane Flight Manual must be installed in the appropriate location.

Also, each individual airplane must be fitted with a placard which specifies approved types of operations (such as V.F.R., I.F.R., day or night) to which the airplane is limited by the equipment installed.

NOTE 3 : RESERVED.

NOTE 4 : Information essential for proper maintenance of the airplane is contained in the following Britten-Norman Limited documents:

(a) Maintenance Manual, reference MM/2, dated 14th June 1971 or later revision.

(b) Maintenance Schedule, reference MS/2 dated 18th June 1971 or later revision.

NOTE 5 : Propellers of the type shown are eligible for the incorporation of Hartzell Service Bulletin 114 and Service Instructions No. 102. Propellers so modified have the letter U added to their type designation, e.g. HC-C2YK-2CUF/FC 8477A-1.

NOTE 6 : Britten-Norman Modification NB/M/746 introduces the wide deck variant of the Lycoming O-540-E4C5 engine. There is no change in the engine type designation.
Serial numbers of wide deck engines contain the identification letter "A" e.g. standard deck L-13268-48 becomes wide deck L-13268-48A. Britten-Norman Service Bulletin BN.2/SB.87 also refers.

NOTE 7 : For aircraft fitted with wide deck engines (See NOTE 6), the only propeller governors to be fitted are: G210659 where no unfeathering accumulator is installed and B210715 where an unfeathering accumulator is installed. For the standard deck engines, propeller governor P/N D210659 and F210444 are interchangeable for aircraft without unfeathering accumulators and P/N 210715 and 210275 are interchangeable for aircraft with unfeathering accumulators.

NOTE 8 : Propeller governor part numbers listed for BN.2A MK III-3 model Trislander are not interchangeable. P/N 210521 is applicable to standard deck Lycoming engines and P/N A210521 is applicable to wide deck engines.

NOTE 9 BN.2A MK III-2 and -3 airplanes with modification NB/M/579 airspeed indictor installed are eligible for operation under FAR Part 91. Operations under FAR Part 91 must be conducted in accordance with the CAA approved airplane Flight Manual including the appropriate supplement as noted under equipment, paragraph (c), and the following data sheet information applies in lieu of that appearing under the corresponding heading for the particular model:

Model BN.2A MK III-2

Airspeed limits (IAS)

Vne (Never exceed)	182 Knots (210 MPH)
Vno (Max structural cruising)	142 Knots (164 MPH)

C.G. Range

(+19.0 IN) to (25.6 IN) at 8750 LB.
(+20.0 IN) to (24.5 IN) at 10,000 LB.
Straight line variation between points.

Maximum weight

10,000 LB. - maximum take-off weight
10,000 LB. - maximum landing weight
9,700 LB. - maximum zero fuel weight

Model BN.2A MK III-3

Airspeed Limits (IAS)

Vne (Never exceed)	182 Knots (210 MPH)
Vno (Max. structural cruising)	142 Knots (164 MPH)

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