TYPE-CERTIFICATE

DATA SHEET

NO. EASA.IM.A.503

for
Beechcraft 65, 70, 90

Type Certificate Holder
Textron Aviation Inc.

Once Cessna Boulevard
Wichita, KS 67215
USA

For models: C90A
C90GT
C90GTi

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CHANGE RECORD

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SECTION I: GENERAL Model C90A, C90GT, and C90GTi (King Air) Type Design

Data Sheet No.: EASA.IM.A.503		Issue 6
a) Model:		C90A, C90GT, and C90GTi
b) Variant:		N/A
1.	Airworthiness Category:	FAR-23 and CAR 3 Normal Category
2.	Type Certificate Holder:	Textron Aviation Inc. One Cessna Blvd Wichita, Kansas 67215 USA
3.	Manufacturer	Textron Aviation Inc. One Cessna Blvd Wichita, Kansas 67215
4.	EASA Certificate Application Date:	09 February 2006 (C90GT) 28 September 2007 (C90GTi)
5.	FAA Type Certificate Date:	01 December 1983 (C90A) 16 December 2005 (C90GT) 13 December 2007 (C90GTi)
6.	EASA Type Certificate Issue Date:	28 September 2003 (C90A) 22 December 2006 (C90GT EASA.IM.A.C.01303) 15 February 2008 (C90GTi) EASA.IM.A.C.01701)

II. Certification Basis

1.	Reference Date for determining Applicable requirements	Model C90A Accepted under EU Regulation 1702/2003 Model C90GT Application to EASA: 09 February 2006 Model C90GTi Application to EASA: 28 September 2007
2.	(Reserved)	
3.	(Reserved)	
4.	Certification Basis	The EASA Aircraft Type Certification standard includes that of FAA TC 3A20, based on individual EU member state acceptance or certification of this standard prior to 28 September 2003. Other standards conforming to TC/TCDS standards certificated by individual EU

member States prior to 28 September 2003 are also acceptable.

Effective May 15, 1956, CAR 3 with (Am. 3-1, 3-2, 3-8); CAR 3 (Amdt. 3-6); CAR 3.705 (Amdt. 3-7); 23.1111 of (Amdt. 23-7), 23.1385(c), 23.1387(a), 23.1387(e) of am. 23-12 to FAR 23, Special Conditions outlined by FAA letters to Beech dated January 21, February 15, and February 27, 1963 and May 5, 1965

For C90A – Additional applicable paragraphs to certification basis for Model C90A: 23.959 and 23.1583(a) of Am. 23-7 to FAR 23; 23.143(a), 23.145(d), 23.153, 23.173(a), and 23.161(c)(3) of Am.23-14 to FAR 23; 23.175 of Am. 23-17 to FAR 23; 23.967(a)(5) of Am. 23-18 to FAR 23; 23.1545(a) of Am. 23-23 to FAR 23; 23.729 of Am. 23-26 to FAR 23; 25.831(d) of Am. 25-41 to FAR 25; Part 36 dated December 1, 1969, through Am. 36-10; and SFAR 27 dated February 1, 1974, as amended through 27-4. Effective April 17, 1992, Electronic Flight Instrument Systems shall meet the requirements of FAR 23.1301, 23.1309, 23.1311, 23.1321, 23.1322, and 23.1335 as amended through Amendment 23-41. Effective January 20, 1994, FAR 23.1457 as amended by Amendment 23-35.

For C90GT - 23.201, 23.203, 23.207 of Am. 23-50 to FAR 23; 23.959 and 23.1583(a) of Am. 23-7 to FAR 23; 23.143(a), 23.145(d), 23.153, 23.173(a), and 23.161(c)(3) of Am. 23-14 to FAR 23; 23.175 of Am. 23-17 to FAR 23; 23.967(a)(5) of Am. 23-18 to FAR 23; 23.1545(a) of Am. 23-23 to FAR 23; 23.729 and 23.1529 of Am. 23-26 to FAR 23; 25.831(d) of Am. 25-41 to FAR 25; 34.11(a)(b)(c), 34.21(e), 34.71, 34.89 of Am. 34-3 to FAR 34; Part 36 dated December 1, 1969, through Am. 36-
25; and SFAR 27 dated February 1, 1974, as amended through 27-4. Effective April 17, 1992, Electronic Flight Instrument Systems shall meet the requirements of FAR 23.1301, 23.1309, 23.1311, 23.1321, 23.1322, and 23.1335 as amended through Amendment 23-41. Effective January 20, 1994, FAR 23.1457 as amended by Amendment 23-35.

Additional Requirements for RDR2100/KDM850 Installation on Model C90A/C90GT:

14 CFR Part 23 §23.301(a), 23.303, 23.305(a)(b),23.307(a), 23.321, 23.331, 23.333, 23.335, 23.337, 23.341, 23.347, 23.349, 23.351, 23.365(a)(b)(c), 23.421, 23.423, 23.425, 23.441, 23.471, 23.473, 23.571, 23.573, 23.601, 23.603(a)(b), 23.605(a), 23.607, 23.609(a)(b), 23.613(a)(b), 23.615, 23.619, 23.621, 23.623, 23.625, 23.627, 23.629, 23.1331(a)(b), 23.1365(a)(d)(e), 23.1367(a)(b)(c)(d) (Amdt.Original); §23.611, 23.617, 23.777(a)(b), 23.867(a)(b), 23.561(a)(b), 23.959, 23.1111, 23.1351(a) (Amdt. 23-7); §23.1581 (Amdt. 23-13); §23.1322(a)(b)(c)(d) (Amdt. 23-17); §23.1301(a)(b)(d), 23.1321(a)(b)(c)(d)(e), 23.1357(a)(b)(c)(d) (Amdt. 23-20); §23.1307(b), (Amdt. 23-23); §23.1529 (Amdt. 23.26); §23.1583(m), 23.1585(j), 23.1587 (Amdt. 23-34); §23.1311(a)(b), 23.1331(c), 23.1359(c) (Amdt. 23-35); §23.1309(a)(b) (Amdt. 23-41).

Additional Requirements for GPS 400 Installation on Model C90A/C90GT:

14 CFR Part 23 §23.301(a), 23.303, 23.305(a)(b),23.307(a), 23.321, 23.331, 23.333, 23.335, 23.337, 23.341, 23.347, 23.349, 23.351, 23.365(a)(b)(c), 23.421, 23.423, 23.425, 23.441, 23.471, 23.473, 23.571, 23.573, 23.601, 23.603(a)(b), 23.605(a), 23.607, 23.609(a)(b), 23.613(a)(b), 23.615, 23.619, 23.621, 23.623, 23.625, 23.627, 23.1331(a)(b), 23.1365(a)(d)(e), 23.1367(a)(b)(c)(d), 23.1431(a)(b)(c) (Amdt.Original); §23.611, 23.617, 23.777(a)(b), 23.867(a)(b). 23.561(a)(b), 23.1351(b) (Amdt. 23-7); §23.1581 (Amdt. 23-13); §23.1322(a)(b)(c)(d) (Amdt. 23-17); §23.1301(a)(b)(c)(d), 23.1321(a)(b)(c)(d)(e), 23.1357(a)(b)(c)(d) (Amdt. 23-20); §23.1307(b) (Amdt. 23-23); §23.1529 (Amdt. 23.26); §23.1583(m), 23-1585(j), 23.1587 (Amdt. 23-34); §23.1329(h), 23.1331(c), 23.1359(c) (Amdt. 23-35); §23.1309(a)(b) (Amdt. 23-41).

Additional Requirements for IHAS 800 Installation on Model C90A/C90GT:

14 CFR Part 23 §23.301(a), 23.303, 23.305(a)(b),23.307(a), 23.321, 23.331, 23.333, 23.335, 23.337, 23.341, 23.347, 23.349, 23.351, 23.365(a)(b)(c), 23.425, 23.441, 23.471, 23.473, 23.571, 23.573, 23.609(b), 23.613(a)(b), 23.615, 23.619, 23.621, 23.623, 23.625, 23.627, 23.629,

23.1331(a)(b), 23.1365(a)(d)(e), 23.1367(a)(b)(c)(d) (Amdt.Original); §23.611, 23.617, 23.777(a)(b), 23.867(a)(b), 23.561(a)(b), 23.1351(b) (Amdt. 23-7); §23.1581 (Amdt. 23-13); §23.1322(a)(b)(c)(d) (Amdt. 23-17); §23.1301(a)(b)(d), 23.1321(a)(b)(c)(d)(e), 23.1357(a)(b)(c)(d) (Amdt. 23-20); 23.1541 (Amdt. 23-21); §23.1307(b) (Amdt. 23-23); §23.1529 (Amdt. 23.26); §23.1583(m), 23.1585(j), 23.1587 (Amdt. 23-34); §23.1311(a)(b), 23.1331(c), 23.1359(c) (Amdt. 23-35); §23.1309(a)(b), (Amdt. 23-41).

For C90GTi - CAR 3, Effective May 15, 1956, (Am. 3-1, 3-2, 3-8); CAR 3 (Amdt. 3-6); CAR 3 §3.705 (Amdt. 3-7); 14 CFR Part
§23.1385(c) (Amdt. Original). §23.959, 23.1111 and 23.1583(a) (Amdt. 23-7). §23 §23.1387(a)(e) (Amdt. 23-12). Special Conditions outlined by FAA letters to Beech dated January 21, 1963, February 15, 1963 and February 27, 1963. Special
Conditions outlined by FAA letters to Beech dated May 5, 1965. 14 CFR Part 23.143(a), 23.145(d), 23.153, 23.161(c)(3) and 23.173(a) (Amdt. 23-14). §23.175 (Amdt. 23-17). §23.967(a)(5) (Amdt. 23-18). §23.1545(a) (Amdt. 23-23). §23.729 and
23.1529 (Amdt. 23-26). §23.201; 23.203; 23.207; (Amdt. 23-50). 14 CFR Part 25 §25.831(d) (Amdt. 25-41). SFAR 27, February 1, 1974 through Amendment 27-4. 14 CFR Part 34, §34.11(a)(b)(c), 34.21(e), 34.71, 34.89 (Amdt. 34-3).
Additional requirements for Rockwell Collins Pro Line 21 Avionics Installation on Model C90GTi: 14CFR 23.601; 23.1367(a)(b)(c)(d); 23.1381(a)(b)(c) (Amdt. Original). §23.1301(a)(b)(c)(d); 23.1335 (Amdt. 23-20); 23.1501(a) (Amdt. 23-21). §23.1457(a)(c) (Amdt. 23-35). §23.1322(a)(b)(c)(d); 23.1357; (Amdt. 23-43). §23.1549 (Amdt. 23-45). §23.1309(a)(b)(c)(d)(e); 23.1311(a)(b)(c); 23.1321(a)(b)(c)(d)(e); 23.1329(a)(b)(d)(e)(f); 23.1359(c); 23.1365(a)(b)(c)(d)(e); 23.1431(a)(b)(c) (Amdt. 23-49). 23.1521(b)(c); 23.1543(c); 23.1545(a)(b)(c); 23.1555(a) (Amdt. 23-50). §23.1305(a)(2)(3),(c)(1)(2)(5), (e)(1) (Amdt. 23-52). §23.901(e)(1) (Amdt. 23-53).
14 CFR Part 36, through Amendment 36-28.
Special Condition 23-108-SC “Protection of Systems for High Intensity Radiated Fields (HIRF)”
Equivalent Level of Safety ACE-07-06 “Installing Electronic Engine Indicating Systems (EIS)”

		Additional requirements for Rockwell Collins Fusion Installation on Model C90GTi: 14 CFR 23.601, 23.1367, 23.1381(a)(b) (Amdt. Original). 23.867(a)(b)(1), 23.937(a); (Amdt. 23-7). 23.903(b)(2) (Amdt. 23-14). 23.1301(a)(b)(c)(d), 23.1327(a)(1)(2)(b), 23.1335, 23.1547(a)(b)(c)(d)(e); (Amdt. 23-20). 23.1501(b) (Amdt. 23-21). 23.853(a) (Amdt. 23-34). 23.1322(a)(b)(c)(d)(e), 23.1331(b)(c), 23.1357(a)(b)(c)(d); (Amdt. 23-43). 23.613, 23.773(a)(1)(2), 23.1525, (Amdt. 23-45). 23.1303(a)(b)(c)(e), 23.1309(a)(1)(3)(b)(c)(1)(2)(i)(iii)(3)(d)(e), 23.1311(a)(b)(c), 23.1321, 23.1323(a)(c), 23.1329(c)(h), 23.1351(a)(1)(2)(i), 23.1353(h), 23.1359(c), 23.1365(a)(b)(d)(e), 23.1431(a)(b)(e); (Amdt. 23-49). 23.1521(a)(b)(1)(3)(4)(c)(1)(3), 23.1543(b)(c), 23.1545(d), 23.1355(a), 23.1581(a)(2)(b)(1)(3)(c)(d)(f), 23.1583(h)(m), 23.1585(a)(j); (Amdt 23-50). 23.777(a)(b), 23.1141(g)(2); (Amdt. 23-51). 23.1305(c)(1)(3)(6)(7)(e)(1); (Amdt. 23-52). 23.901(a)(1)(2)(e)(1) (Amdt. 23-53). 23.1308(a)(b)(c)(d) (Amdt. 23-57). 23.1306(a)(b) (Amdt. 23-61). 23.251(b) (Amdt. 23-62). Equivalent Level of Safety ACE-15-18 for 23.1305(a)(2)(3)(c)(2)(5) (Amdt 23-52), 23.1311(a)(6)(7) (Amdt 23-49), and 23.1549(a)(b)(c) (Amdt 23-45). Effective at Serial Numbers LJ-2129 and after.
5.	Special Conditions:	As shown above.
6.	Exemptions:	None
7.	Equivalent Level of Safety Findings:	As shown above
8.	EASA Environmental Standards:	ICAO Annex 16, Volume 1 see EASA Type Certificate Data Sheet Noise re TCDSN IM.A.503.

III. <u>Technical Characteristics and Operational Limitations</u>

<u>MODEL C90A</u>

1.	Type Design Definition:	Aircraft General Assembly, Model C90A, King Air, Drawing No. 90-00007, latest FAA revision.
2.	Description:	Aircraft with two wing-mounted turboprop engines, retractable tricycle landing gear and conventional tail.

3. Equipment: Equipment list according AFM (see section IV. Operation and Service Instructions of TCDS IM.A.503 for appropriate AFM/POH part number).

4. Dimensions:

Span	15.32 m (50 ft. 3 in)
Length	10.82 m (35 ft. 6 in)
Height	4.34 m (14 ft. 3 in)
Wing Area	27.308 sq. meters (293.94 sq. ft.)

5. Engines: 2 Pratt & Whitney Aircraft of Canada, Ltd. PT6A-21 (Turboprop).

Engine Limits:

	Shaft Horsepower S.H.P.	N_1 Gas Generator Speed %	Prop Shaft Speed R.P.M	Max. Permissible Turbine Interstage Temp. (Deg. C)
Takeoff (5 minutes)	550	101.5	2200*	695
Max Continuous	550	101.5	2200*	695
Starting Transient (2 seconds)		102.6		1090
Max Reverse (1 minute)	300	88.0	2100	695

See Note 4.

At low altitude and low ambient temperature the engines may produce more power at takeoff than that for which the airplane has been certificated. Under these conditions, the placarded torque meter limits shall not be exceeded.

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual for engine operating limits under Section II, Limitations.

6. Propellers:

Reversing Propeller **(See Note 30)**
2 Hartzell HC-B3TN-3M or HC-B3TN-3B hubs with T10173K-8 or T10173NK-8 blades.
Diameter: 93-3/8 in. (Nominal) Minimum allowable for repair 90-3/8 in. (no further reduction permitted)
Pitch settings at 30 in. Sta.:

Flight idle stop	**(See Note 10)**
Secondary flight idle stop	**(See Note 10)**
Reverse	-11˚
Feather	87˚

Non Reversing Propeller
2 Hartzell HC-B3TN-2(B)/T10173B-8
Diameter: 93-3/8 in. (Nominal) Minimum allowable for repair 90-3/8 in. (no further reduction permitted)

Pitch settings at 30 in. Sta.: Low 19˚, Feather 87˚

Serial effectivity: LJ-1063 through LJ-1287, LJ-1288 through LJ-1294, and LJ-1296 through LJ-1299.

Reversing Propeller
2 McCauley 4HFR34C768 hubs with 94LMA-4 blades.
Diameter: 90 in. (Nominal) Minimum allowable for repair 89 in. (no further reduction permitted)
Pitch settings at 30 in. Sta.:

Flight idle stop		**(See Note 27)**
Reverse	-10˚ ± .2˚	
Feather	85.8˚ ± .2˚	
minimum idle speed		1100 rpm **(See Note 33)**

Serial effectivity: LJ-1288, LJ-1295, LJ-1302, LJ-1303, LJ-1305 thru LJ-1308, LJ-1311, LJ-1312, LJ-1314 thru LJ-1316, LJ-1318, LJ-1320 thru LJ-1366, LJ-1368 thru LJ-1372, LJ-1374 thru LJ-1376, LJ-1378 thru LJ-1383, LJ-1385, LJ-1387, LJ-1388, LJ-1390 thru LJ-1393, LJ-1395, LJ-1396, LJ-1398 thru LJ-1402, LJ-1404 thru LJ-1410, LJ-1412 thru LJ-1424, LJ-1426 thru LJ-1430, LJ-1432 thru LJ-1434, LJ-1436 thru LJ-1726, LJ-1728 thru LJ-1753, LJ-1755.

7. (Reserved)

8. Fluids

8.1. Fuel: JP-4, JP-5 (MIL-T-5624); JP-8 (MIL-T-83133); Jet A, Jet A-1, and Jet B conforming to P &WC S.B. 1244 or ASTM Spec D1655.
See Note 5 for emergency fuels.

8.2. Oil: P&WC Engine Service Bulletin No. 1001 lists approved brand oils.

Approved Engine Oils:
7.5 Centistoke Turbine Engine Oils
5 Centistoke Turbine Engine Oils

8.3. Coolant: N/A

9. Fuel Capacities:

9.1. Fuel

	U.S CAP. GAL.	U.S. USABLE GAL.	ARM

L & R Nacelle	61 each (230.9 litres)	61 each (230.9 litres)	+131
L & R Wing	131 each (495.9 litres)	131 each (495.9 litres)	+167

See Note 1 for data on unusable fuel.

9.2. Oil: 21.2 litres (22.4 qt.) total (fuselage station 101)
See Note 1 for data on unusable oil.

10. Airplane Limit Speeds (KCAS)

S/N LJ-1063 thru LJ-1137 and LJ-1146	Maximum operating speed	226 knots
	Maneuvering	153 knots
	Flaps extended speed	140 knots
	Maximum landing gear operating speed Extension Retraction	 182 knots 164 knots
	Maximum landing gear extended speed	182 knots
S/N LJ-1138 thru LJ-1145	Maximum operating speed	226 knots
	Maneuvering	169 knots
LJ-1147 thru LJ-1726, LJ-1728 thru LJ-1753, LJ-1755	Flaps extended speed	140 knots
	Maximum landing gear operating speed Extension Retraction	 182 knots 164 knots
	Maximum landing gear extended speed	182 knots

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual for airplane limit speeds under Section II, Limitations.

11. Maximum Operating Altitude: 9144 m (30,000 ft.) pressure altitude

12. Operational Capacity: VFR Day and Night
IFR Day and Night
Icing Conditions, **See Note 26.**

13. Maximum Certified Weights

	Ramp	Takeoff	Landing
S/N LJ-1063 thru LJ-1137 and LJ-1146	4,404 kg 9,710 lb	4,377 kg 9,650 lb	4,159 kg 9,168 lb
S/N LJ-1138 thru LJ-1145, LJ-1147 thru LJ-1726, LJ-1728 thru LJ-1753, LJ-1755	4,609 kg 10,160 lb	4,581 kg 10,100 lb	4,355 kg 9,600 lb

See Pilots Operating Handbook, and FAA Approved Airplane Flight Manual for weight limits under Section II, Limitations.

14. Centre of Gravity Range — See Pilots Operating Handbook and FAA Approved Airplane Flight Manual for airplane centre of gravity under Section II, Limitations.

15. Datum: — The reference datum is located 212 centimetres (83.5 inches) forward of the center of the nose jack point.

16. (Reserved)

17. Leveling means: — 2 external screws on left side of fuselage forward of entrance door.

18. Minimum Flight Crew: — 1 Pilot

19. Max. Passenger Seating Capacity: — 13 (including pilot and co-pilot).

20. Baggage/Cargo Compartment (Structural Limit): — 159 kg (350 lb.) (fuselage station 275)
159 kg (350 lb.) (fuselage station 70) Baggage and Avionics

21. Wheels and Tyres: — Main Landing Gear (MLG) 8.50 x 10, 8 ply rated
Nose Landing Gear (NLG) 6.50 x 10, 6 ply rated

22. Serial Numbers eligible: — LJ-1063 thru LJ-1726, LJ-1728 thru LJ-1753 and LJ-1755**. See Note 29.**

MODEL C90GT

1. Type Design Definition: Aircraft General Assembly, Model C90GT, King Air, Drawing No. 90-00008, latest FAA revision.

2. Description: Aircraft with two wing-mounted turboprop engines, retractable tricycle landing gear and conventional tail.

3. Equipment: Equipment list according AFM, P/N 90-590024-111, or later approved revision.

4. Dimensions:

Span	15.32 m (50 ft. 3 in.)
Length	10.82 m (35 ft. 6 in.)
Height	4.34 m (14 ft. 3 in.)
Wing Area	27.308 sq. meters (293.94 sq. ft.)

5. Engines: 2 Pratt & Whitney Aircraft of Canada, Ltd. PT6A-135A (Turboprop) Per Hawker Beechcraft Corporation Specification BS184061.

Engine Limits:

	Shaft Horsepower S.H.P	N_1 Gas Generator Speed %	Prop Shaft Speed R.P.M.	Max. Permissible Turbine Interstage Temp. (Deg. C)
Takeoff (5 minutes)	550	101.5	1900*	805
Max Continuous	550	101.5	1900*	805
Starting Transient (2 seconds)		102.6		1090
Max Reverse (1 minute)	300	88.0	1825	805

***See Note 31**.

At low altitude and low ambient temperature the engines may produce more power at takeoff than that for which the airplane has been certificated. Under these conditions, the placarded torque meter limits shall not be exceeded.

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual, P/N 90-590024-111 for engine operating limits under Section II, Limitations.

6. Propellers

Reversing Four Bladed Propeller **(See Note 30)**
2 Hartzell HC-E4N-3N hubs with D8990SK blades per Hawker Beechcraft Specification BS186497.
Diameter: 90.00 in. (Nominal) Minimum allowable for repair 89.00 in. (no further reduction permitted)
Pitch settings at 30 in. Sta.:

Flight idle stop	**(See Note 32)**
Reverse	-10˚ ± .5˚

Feather 85.8˚ ± .5˚
minimum idle speed 1100 rpm
(See Note 33)

7. (Reserved)

8. Fluids

8.1. Fuel: JP-4, JP-5 (MIL-T-5624); JP-8 (MIL-T-83133); Jet A, Jet A-1, and Jet B conforming to P & WC S.B. 1244 or ASTM Spec D1655 and Chinese Jet Fuel No. 3. **See Note 5** for emergency fuels.

8.2. Oil: P&WC PT6 Engine Service Bulletin No. 1001 lists approved brand oils.

Approved Engine Oils:
7.5 Centistoke Turbine Engine Oils
5 Centistoke Turbine Engine Oils

8.3. Coolant: N/A

9. Fuel Capacities:

9.1. Fuel

	U.S CAP. GAL.	U.S. USABLE GAL.	ARM
L & R Nacelle	61 each (230.9 litres)	61 each (230.9 litres)	+131
L & R Wing	131 each (495.9 litres)	131 each (495.9 litres)	+167

See Note 1 for data on unusable fuel.

9.2. Oil: 17.413 litres (18.4 qt.) total (fuselage station 101)
See Note 1 for data on unusable oil.

10. Airplane Limit Speeds (KCAS)

Maximum operating speed	226 knots
Maneuvering	169 knots
Flaps extended speed (full down)	140 knots
Maximum landing gear operating speed Extension Retraction	 182 knots 164 knots
Maximum landing gear extended speed	182 knots

See Pilots Operating Handbook and FAA Approved

Airplane Flight Manual, P/N 90-590024-111 for airplane limit speeds under Section II, Limitations.

11. Maximum Operating Altitude: 9144 m (30,000 ft.) pressure altitude

12. Operational Capacity: VFR Day and Night
IFR Day and Night
Icing Conditions, **See Note 26.**

13. Maximum Certified Weights

Ramp	Takeoff	Landing
4,609 kg 10,160 lb	4,581 kg 10,100 lb	4,355 kg 9,600 lb

See Pilots Operating Handbook, and FAA Approved Airplane Flight Manual, P/N 90-590024-111 for weight limits under Section II, Limitations. Centre of Gravity Range See Pilots Operating Handbook and FAA Approved Airplane Flight Manual, P/N 90-590024-111 for airplane centre of gravity under Section II, Limitations.

Datum: The reference datum is located 212 centimetres (83.5 inches) forward of the center of the nose jack point.

(Reserved)

Leveling means: 2 external screws on left side of fuselage forward of entrance door.

Minimum Flight Crew: 1 Pilot

Max. Passenger Seating Capacity: 13 (including pilot and co-pilot).

Baggage/Cargo Compartment (Structural Limit):
159 kg (350 lb.) (fuselage station 275)
159 kg (350 lb.) (fuselage station 70) Baggage and Avionics

Wheels and Tyres: Main Landing Gear (MLG) 8.50 x 10, 8 ply rated
Nose Landing Gear (NLG) 6.50 x 10, 6 ply rated

SERIAL NOS. ELIGIBLE: LJ-1727, LJ-1754 and LJ-1756 and after.
See Note 29.

MODEL C90GTi

1. Type Design Definition: Aircraft General Assembly, Model C90GTi King Air, Drawing No. 90-00009, latest FAA revision.

2. Description: Aircraft with two wing-mounted turboprop engines, retractable tricycle landing gear and conventional tail.

3. Equipment: Equipment list according AFM, P/N 90-590024-163, or later approved revision.

4. Dimensions:

Span	15.32 m (50 ft. 3 in.)
Length	10.82 m (35 ft. 6 in.)
Height	4.34 m (14 ft. 3 in.)
Wing Area	27.308 sq. meters (293.94 sq. ft.)

5. Engines: 2 Pratt & Whitney Aircraft of Canada, Ltd. PT6A-135A (Turboprop) Per Hawker Beechcraft Corporation Specification BS184061.

Engine Limits:

	Shaft Horsepower S.H.P	N_1 Gas Generator Speed %	Prop Shaft Speed R.P.M.	Max. Permissible Turbine Interstage Temp. (Deg. C)
Takeoff (5 minutes)	550	101.5	1900*	805
Max Continuous	550	101.5	1900*	805
Starting Transient (2 seconds)		102.6		1090
Max Reverse (1 minute)	300	88.0	1825	805

*See Note 11.

At low altitude and low ambient temperature the engines may produce more power at takeoff than that for which the airplane has been certificated. Under these conditions, the placarded torque meter limits shall not be exceeded.

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual, P/N 90-590024-163 for engine operating limits under Section II, Limitations.

6. Propellers

<u>Reversing Four Bladed Propeller</u> **<u>(See Note 30)</u>**
2 Hartzell HC-E4N-3N hubs with D8990SK blades per Hawker Beechcraft Specification BS186497.
Diameter: 90.00 in. (Nominal) Minimum allowable for repair 89.00 in. (no further reduction permitted)
Pitch settings at 30 in. Sta.:

Flight idle stop	**(See Note 32)**
Reverse	-10˚ ± .5˚
Feather	85.8˚ ± .5˚
minimum idle speed	1100 rpm **(See Note 33)**

7. (Reserved)

8. Fluids

8.1. Fuel: JP-4, JP-5 (MIL-T-5624); JP-8 (MIL-T-83133); Jet A, Jet A-1, and Jet B conforming to P & WC S.B. 1244 or ASTM Spec D1655; and Chinese Jet Fuel No. 3.
See Note 5 for emergency fuels.

8.2. Oil: P&WC PT6 Engine Service Bulletin No. 1001 lists approved brand oils.

Approved Engine Oils:
7.5 Centistoke Turbine Engine Oils
5 Centistoke Turbine Engine Oils

8.3. Coolant: N/A

9. Fuel Capacities:

9.1. Fuel

	U.S CAP. GAL.	U.S. USABLE GAL.	ARM
L & R Nacelle	61 each (230.9 litres)	61 each (230.9 litres)	+131
L & R Wing	131 each (495.9 litres)	131 each (495.9 litres)	+167

See Note 1 for data on unusable fuel.

9.2. Oil: 17.413 litres (18.4 qt.) total
See Note 1 for data on unusable oil.

10. Airplane Limit Speeds (KCAS)

Maximum operating speed	226 knots
Manoeuvring	169 knots
Flaps extended speed (full down)	140 knots
Maximum landing gear operating speed Extension Retraction	 182 knots 164 knots
Maximum landing gear extended speed	182 knots

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual, P/N 90-590024-163 for airplane limit speeds under Section II, Limitations.

11. Maximum Operating Altitude: 9144 m (30,000 ft.) pressure altitude

12. Operational Capacity: VFR Day and Night
IFR Day and Night
Icing Conditions, **See Note 26.**

14. Maximum Certified Weights

Ramp	Takeoff	Landing
4,609 kg 10,160 lb	4,581 kg 10,100 lb	4,355 kg 9,600 lb

See Pilots Operating Handbook, and FAA Approved Airplane Flight Manual,

P/N 90-590024-163 for weight limits under Section II, Limitations. Centre of Gravity Range

See Pilots Operating Handbook and FAA Approved Airplane Flight Manual, P/N 90-590024-163 for airplane centre of gravity under Section II, Limitations.

Datum:The reference datum is located 212 centimetres (83.5 inches) forward of the center of the nose jack point.

(Reserved)

Leveling means: 2 external screws on left side of fuselage forward of entrance door.

Minimum Flight Crew: 1 Pilot

Max. Passenger Seating Capacity: 13 (including pilot and co-pilot).

Baggage/Cargo Compartment (Structural Limit):
159 kg (350 lb.) (fuselage station 275)
159 kg (350 lb.) (fuselage station 70) Baggage and Avionics

Wheels and Tyres: Main Landing Gear (MLG) 8.50 x 10, 8 ply rated
Nose Landing Gear (NLG) 6.50 x 10, 6 ply rated

SERIAL NOS. ELIGIBLE: LJ-1847, LJ-1853 and after.

IV. Operation and Service Instructions

Airplane Flight Manual (AFM) **King Air C90A POH/AFM:**

P/N 90-590024-5 S/N LJ-1063 through LJ-1137 and LJ-1146

	P/N 90-590024-23 S/N LJ-1138 through LJ-1145, LJ-1147 through LJ-1287, LJ-1289 through LJ-1294, LJ-1296 through LJ-1299. S/N LJ-1288, LJ-1295, LJ-1302, S/N LJ-1303, LJ-1305 thru LJ-1308, LJ-1311, LJ-1312, LJ-1314 thru LJ-1316, LJ-1318, LJ-1320 thru LJ-1352 P/N 90-590024-43 S/N LJ-1300, LJ-1301, LJ-1304, LJ-1309, LJ-1310, LJ-1313, LJ-1317 and LJ-1319 P/N 90-590024-61 S/N LJ-1367, LJ-1373, LJ-1377, LJ-1384, LJ-1386, LJ-1389, LJ-1394 and LJ-1397, LJ-1403, LJ-1411, LJ-1425, LJ-1431 and LJ-1435 P/N 90-590024-69 S/N LJ-1353 through LJ-1726, LJ-1728 through LJ-1753 and LJ-1755, except -61 manual serial. **King Air C90GT POH/AFM:** P/N 90-590024-111, or later approved version. **King Air C90GTi POH/AFM:** P/N 90-5900024-163 S/N LJ-1847, LJ-1853, through LJ-1963, LJ-1965, LJ-1967, LJ-1969 through LJ-1971, LJ-1973 through LJ-1976.. **King Air C90GTx (Model C90GTi) POH/AFM**: P/N 90-5900024-217 S/N LJ-1964, LJ-1966, LJ-1968, LJ-1972, LJ-1977 thru LJ-2128. **King Air C90GTx (Model C90GTi) POH/AFM**: P/N 434-590171-0003 S/N LJ-2129 and after. (Note: The marketing designation C90GTx has two (2) STCs installed during production. STC SA02054SE / 10029451 – Installation of Winglets and STC SA10747SC / 10016501 Increase Operating Gross Weight Approval.
Airplane Maintenance Manual	King Air 90 Series Interactive Maintenance Library, P/N IML-90 (Includes Wiring Diagram Manual, Illustrated Parts Catalogue, Maintenance Manual, Component Maintenance Manual, Structural Repair Manual, Printed Circuit Board Manual

V. Operational Suitability Data (OSD)

The Operational Suitability Data elements listed below are approved by the European Aviation Safety Agency under the EASA Type Certificate as per Commission Regulation (EU) 748/2012 as amended by Commission Regulation (EU) No 69/2014.

1. Master Minimum Equipment List

a) C90MMELEU EASA Master Minimum Equipment List, revision original or later approved revision.
b) Required for entry into service by EU operator.

2. Flight Crew Data

a) BE90-200ALLOSDFC-01 EASA Operational Suitability Data, Flight Crew, revision original or later approved revision.
b) Required for entry into service by EU operator.
c) Pilot Type Rating: BE90/99/100/200

VI. Notes

NOTE 1

At the time of original certification, the following must be provided for each aircraft: current weight and balance data; loading information; list of equipment included in the empty weight.

The Basic Empty Weight must include unusable fuel and engine oil (includes capacity oil and undrainable, where applicable) as shown below:

Fuel 24 lbs. (+140) and oil 56 lbs. (+101) for Model C90A, C90GT, and C90GTi.

NOTE 2

The following placard must be displayed in full view of the pilot:
"This airplane must be operated as a normal category airplane in compliance with the operation limitations stated in the form of placards, markings, and manuals."

NOTE 3

For the Model C90A and C90GT, the retirement limit is 13,500 hours time in service. However, the Fuselage Life may be unlimited if the airplane is maintained and inspected at the required

intervals in Chapter 5 (or Chapter 4 or Airworthiness Limitations Section, as appropriate) of the Airplane's Maintenance Manual.

A. Mandatory replacement time for the model C90A, LJ-1085, for all wing attach bolts and nuts, is 15 yrs or 15,000 hours, whichever occurs first; subsequent replacement times are the same as initial intervals as noted.

B. Mandatory replacement time for Model C90A and C90GT; serials LJ-1086, LJ-1088 and after for upper forward and upper and lower aft wing attach bolt and nut is 15 years or 15,000 hours whichever occurs first; for lower forward wing attach bolts and nuts is 5 years or anytime the bolt is removed regardless of time in service; subsequent replacement times are the same as initial intervals as noted.

C. Mandatory replacement time for Model C90GTi, serials LJ-1847 and LJ-1853 and after for upper forward and upper and lower aft wing attach bolt and nut is 15 years or 15,000 hours whichever occurs first; for lower forward wing attach bolts and nuts is 5 years or anytime the bolt is removed regardless of time in service; subsequent replacement times are the same as initial intervals as noted.

NOTE 4

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NOTE 5

Emergency use of MIL-G-5572: Grades 80/87, 91/98, 100/130, and 115/145 are permitted on Models C90A, C90GT, and C90GTi for a total time period not to exceed 150 hours during any overhaul period. It is not necessary to purge the unused fuel from the system when switching fuel types.

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NOTE 10

Flight idle at 2000 propeller rpm shall be an indicated 600 ± 60 ft. -lb. torque corrected for sea level standard day. Secondary flight idle stop when installed shall be 210 ± 40 propeller rpm higher than flight idle stop with a gas generator speed of 70%.

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NOTE 26

Models C90A, C90GT,and C90GTi are eligible for flight into known icing conditions when the required equipment is installed and operational.

NOTE 27

Flight idle propeller low pitch stop is set so that at 2000 rpm the engine torque is 608 ± 40 ft. lb. torque corrected to sea level standard day conditions. Ground idle low pitch stop is set so that at 58% to 60% N1, prop rpm is not less than 1100 rpm.

NOTE 28

Model C90A Airplanes which incorporate MOD Drawing MOD005147-1 are limited to a maximum ramp weight of 10,059 lbs., a maximum takeoff weight of 9,999 lbs., and a maximum landing weight of 9,600 lbs. MOD Drawing MOD005147-1 requires an AFM and POH supplement PN 90-590024-81 and an operating weight limitation placard, MOD005147-3. Eligible Serial Numbers are LJ-1469 through LJ-1726, LJ-1728 through LJ-1753,and LJ-1755.

NOTE 29

Company name change effective April 15, 1996. The following serial numbers are manufactured under the name of Raytheon Aircraft Company: C90A and G90GT: LJ-1437 through LJ-1826.

NOTE 30

By model, any combination of reversing hub and blade part numbers listed is acceptable. It is permissible to mix blade part numbers on the same hub.

NOTE 31

The maximum propeller shaft overspeed limit for the Model C90GT and C90GTi is 110 percent (2090rpm). 100 percent propeller shaft speed is defined as 1900 rpm and is the normal steady state operating limit. Gas generator speeds up to 102.6 percent are permissible for 2 seconds and to 101.5 percent for unlimited periods subject to applicable temperature and other limits. 100 percent gas generator speed is defined as 37,500 rpm.

NOTE 32

Flight idle propeller low pitch stop is set so that at 1800 rpm the engine torque is 545 -0/+40 ft. lb. torque corrected to sea level standard day conditions.

NOTE 33

The following warning concerning propeller operation is in both the AFM and Maintenance Manual: “Stabilized ground operation within the propeller restricted RPM range can generate high propeller stresses and result in fatigue damage to the propeller. This damage can lead to a reduced propeller fatigue life, propeller, propeller failure and loss of control of the aircraft”.

NOTE 34

Company name change effective 3-26-07. The following serial numbers are manufactured under the name of Hawker Beechcraft Corporation: LJ-1827 through LJ-2069 (HBC).

Contact Beechcraft Corporation as necessary to obtain availability information concerning the drawings and kits which are referenced by this publication.

NOTE 35

The C90B is a marketing designation that was created to distinguish those C90A airplanes that were upgraded with McCauley or Hartzell propellers. Hartzell propellers were added by STC and then became the standard propeller after serial number LJ-1540.

NOTE 36

Company name change effective 4-12-13. The following serial numbers are manufactured under the name of Beechcraft Corporation: C90GTi: LJ-2070 and after.

NOTE 37

Company name change effective 10/12/16. The following serials are manufactured under the name Textron Aviation Inc.: C90GTi: LJ-2134 and after.

