



INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

Beech Super King Air
200/A200/B200 Series Airplanes
with Pratt & Whitney PT6A-61 Engines
Installed Per STC SA10737SC

Revision C

Document Number 06010105

NOTICE

This document must be referenced on Block 8 of FAA form 337 and added to the aircraft permanent record as required by 14 CFR Part 91, §91.417 (a)(2)(vi) when the reference FAA-STC modification is accomplished on eligible aircraft. This document complies with the requirements of 14 CFR Part 23, §23.1529, in accordance with 14 CFR Part 23, Appendix G.

Aircraft Model Number _____

Aircraft Serial Number _____

Aircraft Registration Number _____



LIST OF EFFECTIVE REVISIONS

Always destroy superceded pages when you insert revised pages

REVISION	DATE	CHAPTERS AFFECTED
IR	March 15, 2007	
A	June 5, 2007	1,2,4,5,7,9,10
B	March 18, 2008	1,2,3,4,5,7,9,11,15
C	May 31, 2008	1, 2, 5



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1. INTRODUCTION:

This document provides instructions for the continued airworthiness (ICA) for Blackhawk Modifications, Inc. STC Number SA10737SC to install two Pratt & Whitney PT6A-61 engines on the following Beech Super King Air 200, A200, and B200 series aircraft.

Model	Serial Number
200	BB-2, BB-6 thru BB-733, BB-735 thru BB-792, BB-794 thru BB-828, BB-830 thru BB-853, BB-871 thru BB-873, BB-892, BB-893, BB-895, BB-912, BB-991.
200C	BL-1 thru BL-36
B200	BB-734, BB-793, BB-829, BB-854 thru BB-870, BB-874 thru BB-891, BB-894, BB-896 thru BB-911, BB-913 thru BB-990, BB-992 thru BB-1313, BB-1315 thru BB-1384, BB-1389 and after.
B200C	BL-37 and after
200T	BT-1 thru BT-22 and BT-28
200CT	BN-1
B200T	BB-1314, BT-23 thru BT-27, BT-29 thru BT-38, BT-44 and after
B200CT	BN-2 and after

FAA Model	Military Model	Beechcraft Serial Number
A200	C-12A C-12C C-12A or C	BC-1 thru BC-61 (1) BC-62 and after BD-1 and after (1)
A200C	UC-12B	BJ-1 and after
A200CT	C-12D C-12F FWC-12D RC-12D RC-12G RC-12H	BP-1, BP-19, BP-22, BP-24, BP-51 BP-52 thru BP-63 BP-7 thru BP-11 GR-1 thru GR-12 FC-1 thru FC-3 GR-14 thru GR-19
B200C	C-12F C-12R	BP-64 and after BW-1 and after

In addition to the new engine and propeller installation, the following STC's and Raytheon Aircraft Service Bulletin may also be installed:



STC Number	Nomenclature	ICA Document Number	Company
SA2698NM-S	Turbofan Propellers	85-120	Raisbeck Engineering
SA3366NM	Ram Air Recovery System	85-120	Raisbeck Engineering
SA3519NM	Dual Aft Body Strakes	85-120	Raisbeck Engineering
SA3831NM	Enhanced Performance Leading Edges	85-120	Raisbeck Engineering
SA8703NM	Exhaust Stacks	FA5726	Frakes Aviation
SA2905NM	Flow-Thru Engine Anti-ice	BI1003	Butterfield Industries
Drawing No.	Nomenclature	Document Number	Company
101-9048	Installation of Replacement Exhaust and Cowling Covers	Service Bulletin SB.2372	Raytheon Aircraft

This document supplements or supersedes the Beech Super King Air Model 200, A200 & B200 Series Maintenance Manual, only in those areas listed therein appropriate for the aircraft model and serial number.

2. DESCRIPTION:

The STC replaces the original engines with two Pratt & Whitney PT6A-61 engines. The PT6A-61 engines are installed in accordance with the latest revision of installation drawing 06010001 but, is similar to that of the existing PT6A-41/-42 engines. The engine-mounted components that were removed from the PT6A-41/-42 engines are re-installed on the new PT6A-61 engines.

A longer condition control cable bracket is installed in place of the existing bracket. Otherwise, the engine and propeller controls and operation remain unchanged from the original aircraft configuration.



The ITT, Ng, and Oil Pressure/Oil Temperature indicators are remarked to reflect the operation limits of the new PT6A-61 engines. See Blackhawk Document No. 06010105 Aircraft Flight Manual Supplement for engine operating limits.

The 'stovepipe' type exhaust stacks (if installed) are replaced with Raytheon Aircraft Service Bulletin SB.2372 which installs lighter replacement exhaust stacks which offer improved service life. This kit also provides a "flow-through" induction inlet heat system that eliminates the under nacelle exhaust outlet. An option to this service bulletin (if required) and to any existing exhaust stacks is the Frakes Aviation stacks STC SA8703NM which may also require the installation of Butterfield Industries STC SA2905NM Flow-thru Engine Inlet Anti-ice.

3. SPECIAL PROCEDURES:

For engine and propeller set-up/rigging procedures refer to document 06010109.

4. SERVICING INFORMATION:

The total oil capacity and useable oil capacity remain unchanged. For more information on aircraft and/or engine servicing, refer to the following manuals:

EnginesPratt & Whitney Maintenance Manual, P/N 3034342

Airframe/CowlingsBeech Super King Air Model 200 & B200 Series
Maintenance Manual, P/N 101-590010-19 or A200
Maintenance Manual P/N 92-37443-1B/2B

PropellersBeech Super King Air Model 200 & B200 Series
Maintenance Manual, P/N 101-590010-19 or Raisbeck
Engineering Maintenance Manual, P/N 85-120

De-IcingB.F. Goodrich Installation and Maintenance Manual for
Prop De-Icing Systems, P/N ATA 30-60-02

5. MAINTENANCE INSTRUCTIONS:

A. For maintenance and scheduled inspection instructions, refer to the following manuals:

EnginesPratt & Whitney Maintenance Manual, P/N 3034342



Airframe/Cowlings	Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or A200 Maintenance Manual P/N 92-37443-1B/2B
Propellers	Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or Raisbeck Engineering Maintenance Manual, P/N 85-120
De-icing	B.F. Goodrich Installation and Maintenance Manual for Prop De-Icing Systems, P/N ATA 30-60-02



B. For replacement parts, refer to Table 1:

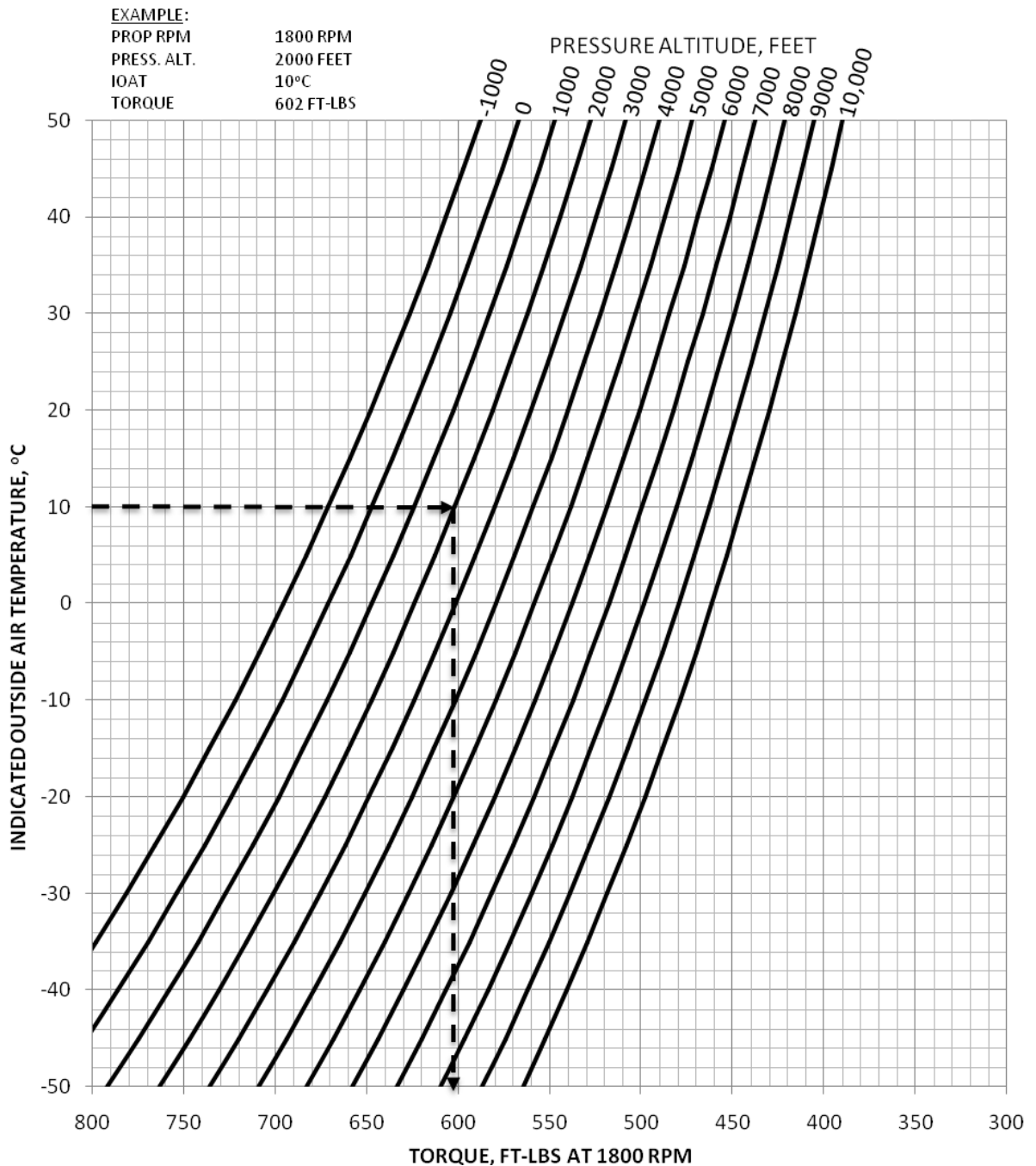
Table 1

Qty.	Part Number	Nomenclature	Manufacturer & Notes
2	PT6A-61	Engine	Pratt & Whitney
2	HC-E4N-3G/ D9390SK-1R	Propeller	Hartzell
2	HC-D4N-3A/ D9383K	Propeller	Hartzell (Raisbeck)
2	101-950022-1, -3 OR	Exhaust Stacks	See Beechcraft IPC for Eligible Serial Number aircraft or may be installed by Beechcraft SB.2372
2	101-950023-1, -3		
2	FA5726-17L, -18R OR	Alternate Exhaust Stacks (Frakes Aviation) STC SA8703SW	Alternate with Beechcraft SB.2372
2	FA5726-7L, -8R		Alternate without Beechcraft SB.2372
2	114-940024-1	Bracket	Hawker Beechcraft Call Blackhawk for Alternate
2	101-940001-15, -29	Arm	Hawker Beechcraft Call Blackhawk for Alternate
1	124F012B0360C270	Hose Assembly	Stratoflex
1	124F002-4CR-0310	Hose Assembly	Stratoflex
2	EXISTING	ITT Indicator	Modified per dwg 06010001-01
2	EXISTING	Ng Indicator	Modified per dwg 06010001-01
2	EXISTING	OP/OT Indicator	Modified per dwg 06010001-01



C. Low Pitch Torque Graph for Raisbeck Hartzell HC-D4N-3A/D9383K Propeller

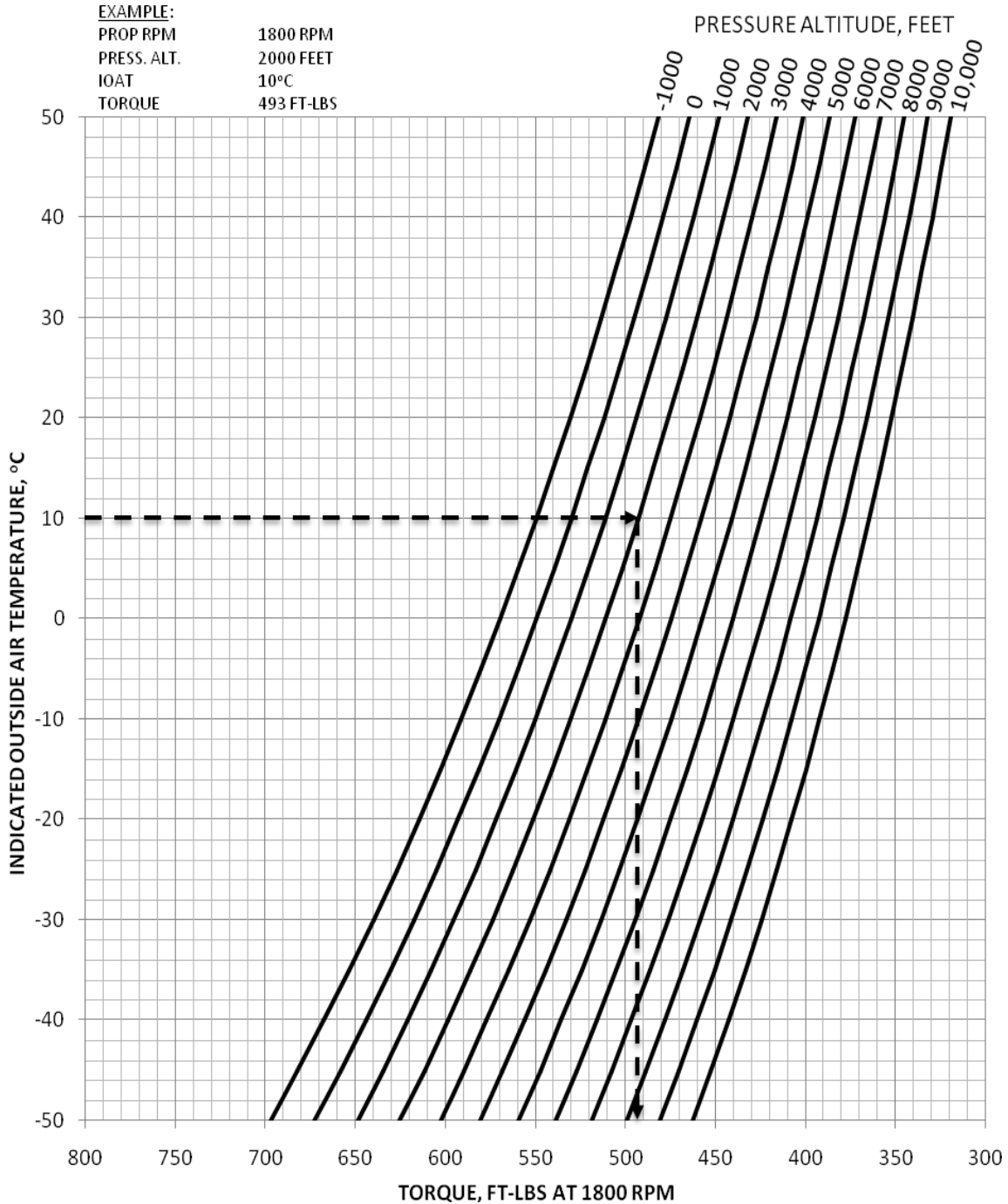
Replace the basic maintenance manual with this chart.





D. Low Pitch Torque Graph for Hartzell HC-E4N-3G/D9390SK-1R Propeller

Replace the basic maintenance manual with this chart.





E. Ground Performance Graph

This chart may be used as a performance history to compare with new engine installation results with future ground test runs or to evaluate the effects of component replacement, inaccuracies in the engine instruments or progressive hot section deterioration; but, such data should never be used as the sole criterion for determining the airworthiness of an engine. Refer to the MINIMUM TAKEOFF POWER chart and procedures in the appropriate Airplane Flight Manual Supplement to determine if the engines are producing sufficient power for airworthy operation.

Prior to performing the following checks, the engine cowling must be in place in order to ensure consistency of engine check parameters, F.O.D. screens must not be installed.

1. Record indicated outside air temperature (IOAT) in degrees Celsius in Table 1.
2. Record pressure altitude which is the value of pilot's altimeter with 29.92 set in Kollsman window in Table 1.
3. Using this IOAT and Pressure Altitude from Table 1, determine target torque and ITT, fuel flow, and N_1 limits from Chart 1 and record in Table 1 on the next page.
4. Start the engines as outlined by procedures in the appropriate Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.
5. Position the airplane crosswind (90° to the wind direction to eliminate variation in parameters due to changing wind velocity).
6. Turn on avionics and inverters (as required) to power engine instruments.
7. Ensure that the air-conditioning, bleed air and generator are all off on the engine being checked.
8. Position the ice vanes in the retracted position (Engine Anti-Ice is OFF).
9. Verify that the propeller levers are in the high rpm mode.
10. Bring the power levers forward to establish a torque indication equal to the target torque value determined in Step 3.

Note: Do not exceed torque redline limitations or any other engine limitations such as ITT or N_1 speed of the engine.

11. Verify that the engine propeller is governing at approximately 2,000 rpm. DO NOT exceed limitations.
12. Record actual fuel flow, N_1 and ITT indications in Table 1 for engine being checked.
13. Compare the actual values recorded with the limit values as determined from Step 3. If any of the actual values exceed the limit ITT, fuel flow, and N_1 values troubleshoot in accordance with the P&WC Maintenance Manual § 72-00-00.



IOAT (°C): _____		Target		Actual - Left		Actual - Right	
Pressure Altitude: _____							
Target Torque – Tq							
Limit ITT – TT5 °C							
Target Prop RPM – Np		2000					
Limit Gas Gen Speed – Ng %							
Limit Fuel Flow							
Oil Press	Oil Temp	--	--				

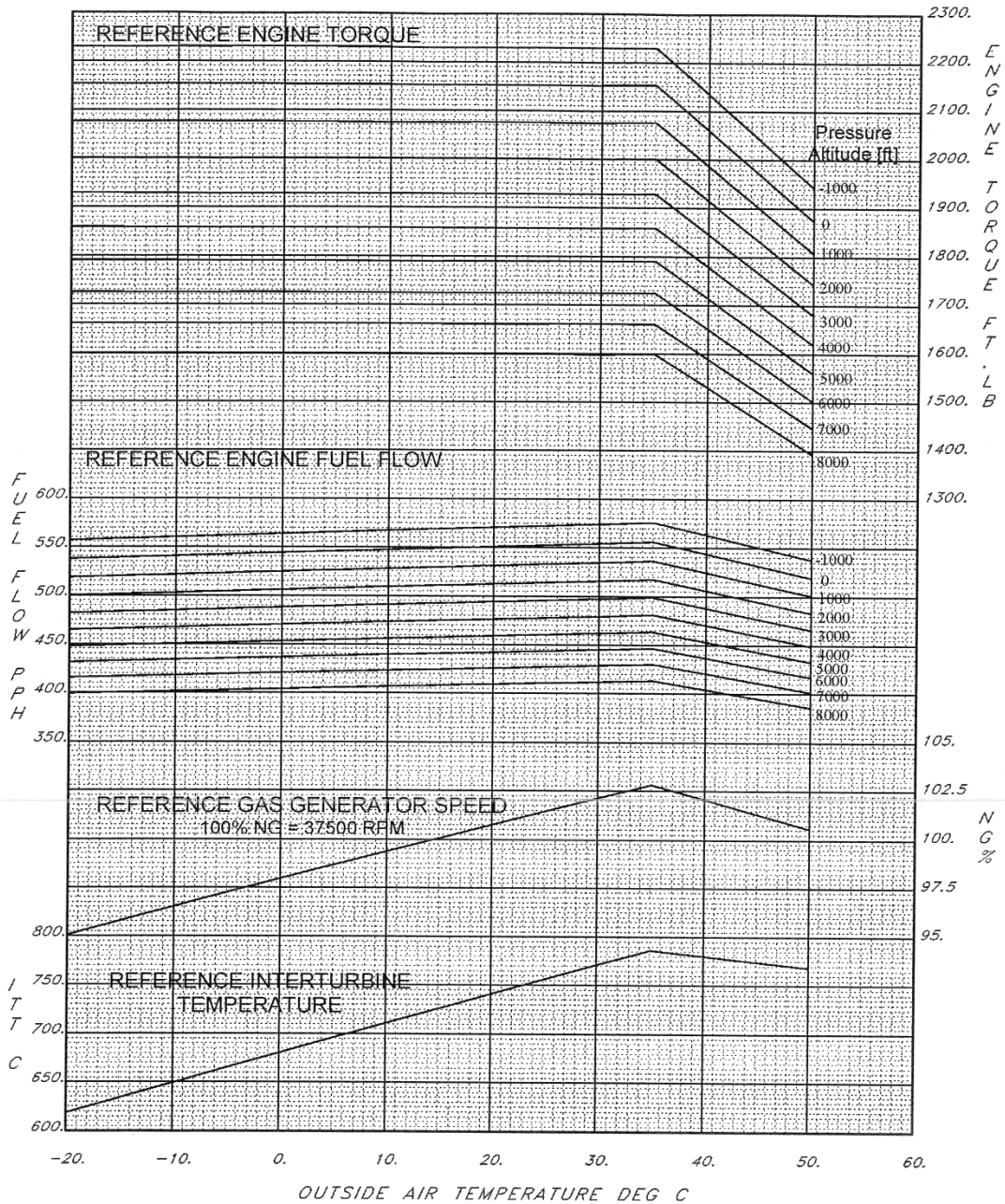
Table 1. Ground Performance Worksheet

Instructions for Continued Airworthiness

Beech Super King Air 200/A200/B200 Series
Airplane with Pratt & Whitney
PT6A-61 Engines



PRATT & WHITNEY CANADA PT6A-61 B/S 1236 BLACKHAWK KING-AIR 200 INSTALLATION
GROUND PERFORMANCE CHECK CHART
STATIC, INSTALLED, PROP SPEED = 2000 RPM
THIS GRAPH IS NOT TO BE USED TO ACCEPT OR REJECT AN ENGINE





6. TROUBLESHOOTING:

Troubleshooting guidance may be found in the documents listed in Section 5. Otherwise, contact Blackhawk for Assistance.

Blackhawk Modifications, Inc.

7601 Karl May Drive
Waco, Texas 76708

Phone: (254) 755-6711

7. REMOVAL AND REPLACEMENT:

Remove and replace the engines as specified in the latest revisions of Blackhawk Modifications, Inc. Installation drawings 06010000 & 06010001. For replacement parts contact Blackhawk at the following address:

Blackhawk Modifications, Inc.

7601 Karl May Drive
Waco, Texas 76708

Phone: (254) 755-6711

8. DIAGRAMS:

None

9. SPECIAL INSPECTION REQUIREMENTS:

Conduct routine inspections at the recommended intervals and in accordance with the instructions contained in the following manuals:

EnginesPratt & Whitney Maintenance Manual, P/N 3034342
Refer to Section 72-00-00

Airframe/CowlingsBeech Super King Air Model 200 & B200 Series
Maintenance Manual, P/N 101-590010-19 or A200
Maintenance Manual P/N 92-37443-1B/2B



Propellers	Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or Raisbeck Engineering Maintenance Manual, P/N 85-120
De-Icing	B.F. Goodrich Installation and Maintenance Manual for Prop De-Icing Systems, P/N ATA 30-60-02

10. APPLICATION OF SPECIAL TREATMENTS:

None

11. DATA:

For component installation sequence and torque values, refer to the following manuals:

Engines	Pratt & Whitney Maintenance Manual, P/N 3034342 Refer to Section 72-00-00
Airframe.....	Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or A200 Maintenance Manual P/N 92-37443-1B/2B
Propellers.....	Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or Raisbeck Engineering Maintenance Manual, P/N 85-120
Drawings	Blackhawk Modifications, Inc. Drawing Number 06010000 & 06010001

12. SPECIAL TOOLS:

None

13. ADDITIONAL INFORMATION FOR COMMUTER CATEGORY AIRCRAFT:

None



14. RECOMMENDED OVERHAUL PERIOD:

EnginesPratt & Whitney Service Bulletin SB 13303 R9 or later revision

PropellersHartzell Service Letter HC-SL-61-61Y or later revision

15. AIRWORTHINESS LIMITATIONS:

NOTICE:

This section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

There are no changes to the airworthiness limitations of those listed in the following manuals:

EnginesPratt & Whitney Maintenance Manual, P/N 3034342

Airframe.....Beech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or A200 Maintenance Manual P/N 92-37443-1B/2B

PropellersBeech Super King Air Model 200 & B200 Series Maintenance Manual, P/N 101-590010-19 or Raisbeck Engineering Maintenance Manual, P/N 85-120

De-Icing.....B.F. Goodrich Installation and Maintenance Manual for Prop De-Icing Systems, P/N ATA 30-60-02



16. REVISION:

Each time this ICA is revised or reissued, the revised ICA will be distributed to operators using a Service Letter/Bulletin by Blackhawk Modifications, Inc. This revision will include a new Log of Revisions page along with the revised pages. The upper left hand corner of each revised page will reflect the revision letter. That portion of text or an illustration, which has been revised by the addition of, or change in, information is denoted by a solid revision bar located adjacent to the area of change, and placed along the inside margin of a page. Revision bars show only the information changed within the latest revision.

17. ASSISTANCE:

For assistance with ICA issues not addressed herein, contact Blackhawk at the following address:

Blackhawk Modifications, Inc.

7601 Karl May Drive
Waco, Texas 76708

Phone: (254) 755-6711