

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
SPECIAL AIRWORTHINESS CERTIFICATE

| | | | |
|----------|-------------------------------|------------------------------|------------------|
| A | CATEGORY/DESIGNATION | EXPERIMENTAL | |
| | PURPOSE | Research and Development | |
| B | MANUFACTURER | NAME | N/A |
| | | ADDRESS | N/A |
| C | FLIGHT | FROM | N/A |
| | | TO | N/A |
| D | N- 525TA | SERIAL NO. | 62001 |
| | BUILDER | MODEL | 525 |
| | Bell Helicopter Textron Inc | DATE OF ISSUANCE | 4/25/2016 |
| | | EXPIRY | 9/25/2016 |
| | OPERATING LIMITATIONS DATED | ARE PART OF THIS CERTIFICATE | |
| | 4/25/2016 | | |
| | [REDACTED] | DESIGNATION OR OFFICE NO. | |
| | Wilburn J. Battles III | SW MIDO-42 | |

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).



1. This aircraft does not meet the airworthiness requirements specified in Annex 8 to the Convention on International Civil Aviation. Operations in civil airspace outside of the United States will require the written permission of the applicable Civil Aviation Authorities (CAA). That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the CAA in the country of operation. Operations may be further restricted by the foreign CAA. This may include not allowing use of an airport, requiring specific routing, and restricting flight over specific areas. The operator must comply with any additional limitation prescribed by the CAA when operating in its airspace. (1)
2. No person may operate this aircraft for any other purpose specified on the face of the FAA Form 8130-7. These operating limitations do not provide any relief from any applicable law or regulation. This aircraft must be operated in accordance with applicable regulations and the additional limitations prescribed herein. Note that a clearance from air traffic control (ATC) is not authorization for a pilot to deviate from any rule, regulation, operating limitation, or minimum altitude, or to conduct unsafe operation of the aircraft. If ATC issues a clearance that would cause a pilot to deviate from a rule, regulation, or operating limitation, or in the pilot's opinion, would place the aircraft in jeopardy, it is the pilot's responsibility to request an amended clearance. These operating limitations are a part of FAA Form 8130-7 and are to be carried in the aircraft at all times and to be available to the pilot in command of the aircraft. (2)
3. This special airworthiness certificate and attached operating limitations are not in effect during public aircraft operations (PAO). Concurrent public/civil operations are not permitted; the aircraft cannot be operated as a civil aircraft and as a public aircraft at the same time. This airworthiness certificate is not in effect during flights related to providing military services (that is, air combat maneuvering, air-to-air gunnery, target towing, electronic countermeasures simulation, cruise missile simulation, and air refueling). These activities are inherent military training activities, not civil activities. The FAA makes the distinction between the authorized flights for experimental purposes, as described in the program letter, and PAO. Before operating this aircraft under this special airworthiness certificate following a PAO, the aircraft must be returned via an approved method to the condition and configuration at the time of airworthiness certification. This action must be documented in the aircraft records. The aircraft records and entries must clearly differentiate between a civil experimental flight per this certificate and any other flights. (3)
4. Application to amend these operating limitations must be made to the local Flight Standards District Office (FSDO) or Manufacturing Inspection District Office (MIDO). (6)
5. The pilot in command of this aircraft must hold Rotorcraft category and Helicopter class certificate or privilege. The pilot in command must hold all required ratings or authorizations, and endorsements required by 14 CFR part 61. (7)



6. The pilot in command must hold:
- (a) An appropriate type rating (if one has been established); or
 - (b) An experimental aircraft authorization, by make and model, on their pilot certificate;

or

- (c) A temporary LOA issued by an FAA Flight Standards Operations Inspector.

For single seat or single control aircraft, a qualified instructor may make a logbook endorsement, to allow the airman to be PIC, for the purpose of completing a practical test for the issuance of an experimental aircraft authorization. The endorsement may allow solo operation of the aircraft. The endorsement may be valid for a period up to 30 days. The endorsement must specify the flight conditions authorized (e.g. day, night, IMC) and flying area. The flying area may not exceed 3/8 the fuel range of the aircraft. (8)

7. When filing a flight plan, the experimental nature of this aircraft must be listed in the remarks section. (10)

8. This aircraft must not be used for towing, including, but not limited to glider towing, banner towing, target towing or towing electronic receivers or emitters. This aircraft must not be used for intentional parachute jumping. (12)

9. If aircraft, engine, or propeller operating limitations are exceeded outside of planned test conditions, an appropriate entry will be made in the aircraft records. (13)

10. No person may operate this aircraft unless it is maintained in accordance with an inspection program meeting the scope and content as described in 14 CFR 91.409(f). The operator must select and identify in the aircraft maintenance records, one of the following programs for the inspection of the aircraft:

- (1) For type certificated aircraft, a current inspection program recommended by the manufacturer; or

- (2) For former military aircraft, an inspection program recommended by the manufacturer or North Atlantic Treaty Organization (NATO) military service; or

- (3) An FAA-approved inspection program.

This aircraft will be maintained in accordance with BHT document 512-993-006 Rev. A titled "Model 525 Flight Readiness Inspection Plan" approved by AEG via letter dated March 4, 2015.

Note: To extend an inspection interval, the owner/operator must submit a request for that extension with supporting documentation and data to the local FSDO and obtain concurrence from that FSDO.

Inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per [identify applicable inspection program] and found to be in a condition for safe operation." (14)

11. Only FAA-certificated repair stations, FAA-certificated mechanics with appropriate ratings, or a manufacturer as authorized by § 43.3 may perform inspections required by these operating limitations. (18)



12. The aircraft may not be operated unless the replacement for life-limited articles specified in the applicable technical publications pertaining to the aircraft and its articles are complied with in one of the following manners:

(a) Type-Certificated Products: Replacement of life-limited parts required by § 91.409(e) applies to experimental aircraft when the required replacement times are specified in the U.S. aircraft specifications, or type certificate data sheets.

(b) Non-Type-Certificated Products: All articles installed in non-type-certificated products operated under an airworthiness certificate issued for an experimental purpose, in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. These limits must be evaluated for their current operating environment and addressed in the approved inspection program. All articles installed in non-type-certificated products in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. The article must be inspected to ensure that the equivalent level of safety still renders the product in a serviceable condition for safe operation. (19)

13. For aircraft originally incorporating fatigue life recording systems, the owner/operator must maintain and use the system as prescribed by the aircraft manufacturer and comply with the manufacturer's fatigue life limits. (20)

14. Day VFR flight operations are authorized.

Night flight operations are authorized if the instruments specified in § 91.205(c) are installed, operational, and maintained in accordance with the applicable requirements of part 91. (41)

15. All flights must be conducted within the geographic area described as follows (there may be areas within the geographical area that are not suitable for operation and may include ingress/egress routes). 1) Flight test at the Arlington, TX, Plant 6 airport (KGKY) Initial Experimental Flight Test Area as defined by the red outline area (Figure 5) to conduct development and envelope expansion testing. 2) Ferry the aircraft to/from/between BHT Plant 6 facility (KGKY) and BHT Amarillo (KAMA). The aircraft will follow a route as defined in Figure 7. 3) Flight test at the Bell Amarillo airport (KAMA) within the enclosed test area (Figure 6) to conduct development and envelope expansion testing. Testing will be conducted within 150nm of KAMA. 4) Ferry the aircraft to/from/between BHT Amarillo (KAMA) or Alamosa, CO Airport (KALS) or Leadville, CO airport (KLXV) or Gunnison, CO Airport (KGUC) or Buena Vista, CO Airport (KAEJ) for the purposes of high altitude testing. Aircraft will remain within a 20nm radius of KALS, KLXV, or KGUC during this testing. Upon completion of testing, the aircraft will ferry direct to BHT Amarillo or BHT Arlington, from any of the identified test sites in Colorado. 5) Actual ferry route(s) will be dependent on factors such as weather and fuel availability, but will be planned to be direct and remain away from populated areas. (44)



16. Flight over a densely populated area or in a congested airway is prohibited. (46)
17. No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight. (54)
18. Any changes to the approved inspection program under the 525 Program Aircraft Systems Interim Procedure (ASIP) process must be reported via email to the Ft. Worth Aircraft Evaluation Group Office prior to implementation. (a1)

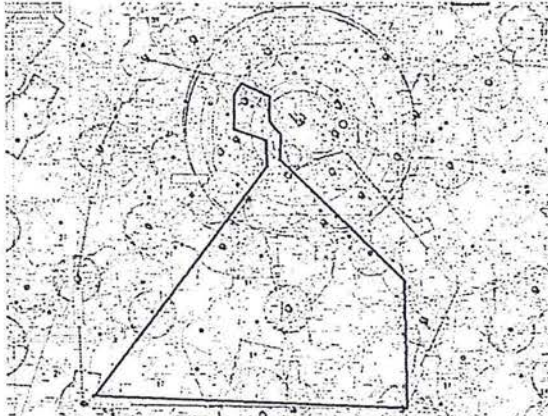


Figure 5 – Arlington Initial Experimental Test Area (Red Area Section)
(14CFR 21.193(d)(3))

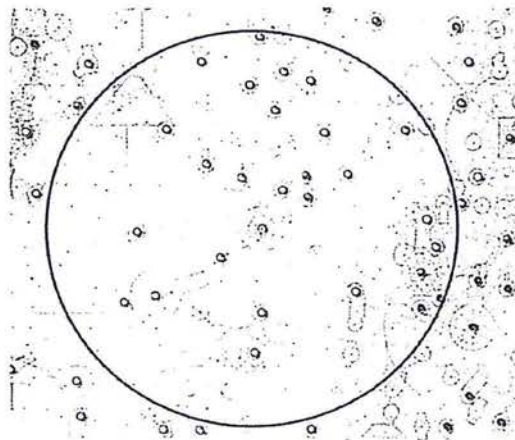


Figure 6 – Amarillo Expanded Experimental Test Area (14CFR 21.193(d)(3))

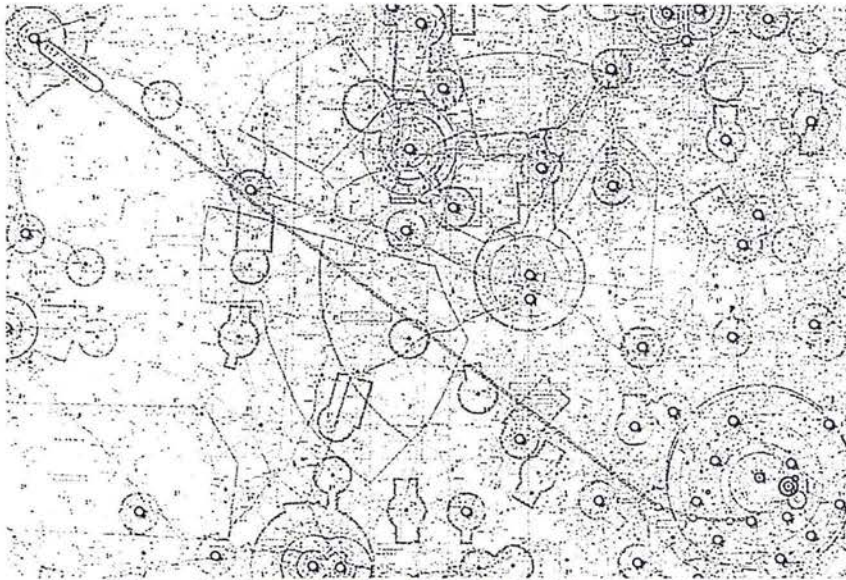


Figure 7 – Ferry Corridor to from KAMA to from KGGY

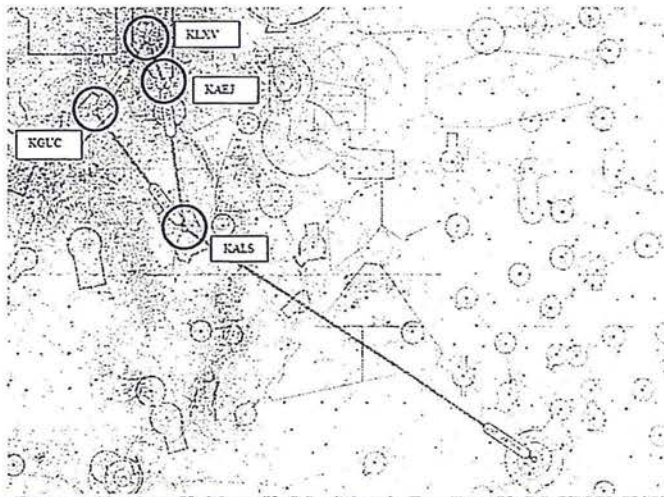


Figure 8 – Ferry corridor from KAMA to KALS. Colorado Test Sites (KALS, KLVX, KGUC, KAEJ)

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Wilburn J. Battles III
Aviation safety Inspector SW-MIDO-42

HELICOPTER LOG RECORD SHEET

951759

| | | |
|---------------------|---------------------|-------------------------------|
| MODEL 525 | S/N 62001 | REGISTRATION N525TA |
|---------------------|---------------------|-------------------------------|

| JOURNEY | | CREW | RECORD OF TIME | | CYCLES | | | | | SIGNATURE | |
|------------------------------------|--|-----------|----------------|--------------------------------------|--------------------|--------------------|-------------|------------------|-----------------|-----------|--------------------------|
| (1) DATE | (2) POINT OF DEPARTURE AND DESTINATION | (3) NAMES | (4) AIR TIME | (5) TOTAL AIR TIME SINCE MANUFACTURE | (6) START ENGINE 1 | (7) START ENGINE 2 | (8) LANDING | (9) TORQUE EVENT | (10) HOIST OPEN | (11) APU | (12) PILOT & LICENSE NO. |
| 25/APR/16 | TOTAL BROUGHT FORWARD → | | | 157.6 | | | | | | | |
| TOTAL AIR TIME SINCE MANUFACTURE → | | | | | | | | | | | ← TOTAL |

| ENGINE FLIGHT HOURS & CYCLES | ENGINE HOURS | | (15) ENGINE CYCLES | | (16) ENGINE O.E.I. | | EVENTS | | | |
|------------------------------|--------------|--------------|--------------------|-------------------------------|--------------------|---|--------------|------------------|------------------|--------------|
| | (13) 1 | (14) 2 | 1 | 2 | 1 | 2 | (17) LANDING | (18) TORQ. EVENT | (19) HOIST OPER. | (20) APU |
| TOTALS BROUGHT FORWARD | 226.9 | 230.5 | 202 | 205 <i>Zolencis</i> | | | 285 | | | 269.8 |
| TOTALS FOR THIS PAGE | | | | | | | | | | |
| ACCUMULATE TOTALS | | | | | | | | | | |

| | |
|---|--|
| NEXT SCHEDULED INSPECTION DUE (21) | |
| TYPE INSPECTION (50 HR., 100 HR., ETC.) | |
| ANNUAL INSPECTION DUE DATE | |

| POWER ASSURANCE | TORQ. | TOT/ITT | N1 | N2 | OAT | PA. |
|-----------------|-------|---------|----|----|-----|-----|
| (22) ENG. 1 | | | | | | |
| (23) ENG. 2 | | | | | | |

CORRECTED #2 ENGINE CYCLES TO 205

OPERATION AND MAINTENANCE RECORD

Bell Helicopter
A Textron Company

REG: N525TA, S/N 62001 ACFT. T.T:157.6, #1 ENGINE T.T:226.9 / CYCLES:202, #2 ENGINE T.T:230.5 / CYCLES:205, LANDINGS:285, APU T.T:269.8.

I certify that this aircraft has been Inspected and Maintained in accordance with Title 14, CFR 91 and the approved Inspection Program per Report/Document 512-993-006 Revision A, March 10, 2015. The aircraft will be maintained and operated under the Operating Limitations issued 25 Apr. 2016. The aircraft has been found to be in a condition for Safe Operation for issuance of a Special Airworthiness Certificate in the Experimental category for the purpose of Research and Development. Pertinent Details are on file at Bell Helicopter under E-Workbook and Work Order for aircraft s/n 62001, dated 25/Apr/2016.

Michael C. Morris, Sr. Flight Inspector for BHTI 600 Interstate 20 East Arlington, Texas 76018

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|---|--------------|--|--|
| 1 | ACTION TAKEN | I find this aircraft meets the requirements for a special airworthiness certificate for the purpose of Research and Development, and have issued a special airworthiness certificate and operating limitations dated | |
| 2 | ACTION TAKEN | April 25, 2016 Signed: Wilburn J. Battles III | |
| 3 | ACTION TAKEN | | |
| 4 | ACTION TAKEN | | |