

ICA-030822

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR

HARTZELL 5D3-NK366A1(Y)()/91D17(B)

PROPELLER ON QUEST KODIAK 100 AIRCRAFT

STC SA04589CH

LOG OF REVISIONS

Revision	Revised Pages	Description of Revision	Date
IR	All	Initial Release	03/15/2023

NOTE: All changes are indicated by a black vertical line along the left margin.

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APPLICABLE MODELS

This STC propeller applies to the approved combination of airplanes and engines listed in Table 1.

Model	Aircraft Serial Number Range	Engine Model	Engine Power/RPM Takeoff Rating
Kodiak 100	100-0001 and greater	P&WC PT6A-34	750 HP / 2200 RPM

Table 1. Eligible Aircraft

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INTRODUCTION

The subject STC approves replacement of the original approved propeller and spinner models listed in airplane Type Certificate Data Sheet A00007SE with a 5D3-NK366A1(Y)()/91D17(B) on the aircraft listed in Table 1.

The information contained in these Instructions for Continued Airworthiness (ICA) supplements or supersedes the information provided in the aircraft service manuals only in those areas listed for the propeller installation. This ICA is organized to match the format of GAMA Specification No. 2 for Airplane Maintenance Manuals (AMMs).

Current ICA and service letters are maintained and distributed via www.hartzellprop.com.

CHAPTER 4 – AIRWORTHINESS LIMITATIONS

NOTE: The Airworthiness Limitations section is FAA approved and specifies maintenance required under 14 CFR §43.16 and §91.403 unless an alternative program has been FAA approved.

There are no new (or additional) airworthiness limitations associated with this equipment and/or installation.

CHAPTER 5 – TIME LIMITS & MAINTENANCE CHECKS

All required maintenance, inspections, time intervals, and procedures for the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller are found in Hartzell Propeller Owner's Manual No. 486 (Manual 486). The 5D3-NK366A1(Y)()/91D17(B) propeller's recommended time between overhaul (TBO) is detailed in Hartzell Service Letter HC-SL-61-61Y. Propeller overhaul must be accomplished by a certified propeller repair station with the appropriate rating.

All propeller inspection requirements contained in the Kodiak 100 Airplane Maintenance Manuals remain unchanged and should be complied with as provided in Chapter 5. Procedures unique to the composite blade construction are provided in the Inspection and Check section of Manual 486.

Due to the composite construction of the propeller blades, in the event of a lightning strike, in addition to the lightning strike inspection criteria provided in the applicable Airplane Maintenance Manual, refer to Manual 486, Inspection and Check Section Chapter 5, Special Inspections - Lightning Strike, for detailed information on propeller lightning strike inspection and disposition.

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5-2 STANDARD INSPECTION PROGRAM

STANDARD INSPECTION PROCEDURES

5-2.B Inspection tables subordinate to the Standard Inspection Table:

10. Standard Inspection – Hartzell Propeller model 5D3-NK366A1(Y)()/91D17(B)

At each annual inspection, verify the airframe configuration file installed in the Garmin G1000 avionics system matches the current airframe configuration file listed on the Hartzell Propeller Inc. website for Instructions for Continued Airworthiness for Quest Kodiak 100 aircraft. This is typically at the link below.

<https://hartzellprop.com/products/top-prop/stc-maintenance-data/>

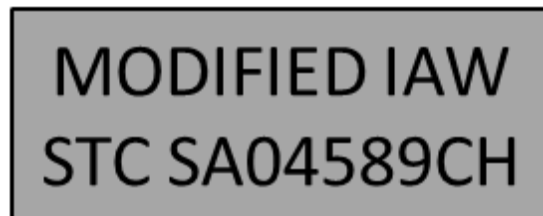
CHAPTER 6 THRU CHAPTER 10

NO CHANGE.

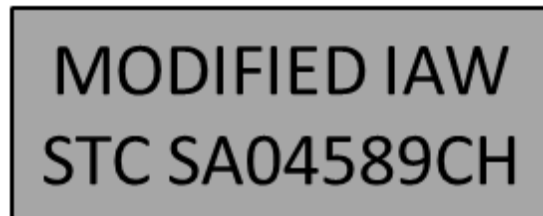
CHAPTER 11 – PLACARDS AND MARKINGS

1100.1.2 EXTERIOR PLACARDS AND MARKINGS

Located on the main propeller governor (Hartzell P/N 109331):



Located on the propeller overspeed governor (Hartzell P/N 109331):



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CHAPTER 12 THRU CHAPTER 28

NO CHANGE.

CHAPTER 30 – ICE AND RAIN PROTECTION

3000 Ice/Rain Protection Systems

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Maintenance practices related to the ice protection components of the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller are given in Hartzell Propeller Ice Protection System Manual No. 180.

3010 Airfoil Anti/De-Ice System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

3040 Windshield/Door Rain/Ice Removal

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

3060 Propeller Anti-Ice/De-Ice System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Maintenance practices related to the ice protection components of the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller are given in Hartzell Propeller Ice Protection System Manual No. 180.

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NO CHANGE.

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CHAPTER 61 – PROPELLERS/PROPULSORS

6100 Propeller System

The Hartzell propeller installation consists of a Hartzell model 5D3-NK366A1(Y)()/91D17(B) five bladed, constant speed, full feathering, reversible, governed propeller equipped with carbon composite blades. The propeller is flange mounted on the engine and is spring-loaded and counterweighted to the feather position.

The propeller system troubleshooting procedures of the Kodiak 100 Airplane Maintenance Manual are applicable to the 5D3-NK366A1(Y)()/91D17(B).

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

6110 Propeller Assembly

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Reference Manual 486 for maintenance practices and inspection procedures related to the propeller assembly and/or spinner.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

6120 Propeller Controlling System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

6122 Propeller Governor

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed with the following changes.

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6122.5.3 PROPELLER OVERSPEED GOVERNOR TEST/CHECK

- A. Propeller Overspeed Governor Test Procedures
1. Start the engine in accordance with the POH/AFM.
 2. Advance the propeller control lever to the MAX position.
 3. Press and hold down the propeller overspeed governor test switch, located on the upper left portion of the instrument panel.
 4. Advance the power lever; the propeller RPM should advance to and stabilize at 1880 RPM (Observe ITT and Torque limits).
 5. Verify that the propeller RPM stabilizes at 1880 +/- 50 RPM.
 6. Reduce the power setting to IDLE and release the propeller overspeed governor test switch.
 7. Shut down engine in accordance with the POH/AFM.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

6140 Propeller Indication Section

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

CHAPTER 71 – POWERPLANT

7100 Powerplant System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed with the following changes.

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7100.5.8 ENGINE PERFORMANCE CHECK

NOTE: The 5D3-NK366A1(Y)()/91D17(B) propeller is certified to 2,200 RPM & 750 HP per TCDS P00015CH. No unsafe conditions exist with respect to propeller operation at this condition.

1. Rig main governor and associated engine controls to allow propeller to operate at 2200 RPM in accordance with Kodiak 100 Airplane Maintenance Manual Chapter 76. The Main Governor Adjustment section in installation instructions document INST-030822 may be used as guidance for how initial STC installation rigging was completed.
2. Complete the Engine Performance Check according to the Kodiak 100 Airplane Maintenance Manual.
3. Rig main governor and associated engine controls for operation at 2000 RPM in accordance with installation instructions INST-030822, Main Governor Adjustment section. The placard does not need to be removed and reapplied.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

7110 Engine Cowling System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

7120 Engine Mount Section

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

7160 Engine Air Intake System

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

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Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

7170 Engine Drains

This chapter and section of the Kodiak 100 Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 5D3-NK366A1(Y)()/91D17(B) propeller installed.

Additional details of the Hartzell 5D3-NK366A1(Y)()/91D17(B) can be found in Manual 486 available at www.hartzellprop.com.

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NO CHANGE.

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