

ICA-030821

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR**

**HARTZELL 3A1-QP460A1/75A01-2**

**PROPELLER ON DIAMOND DA 40 NG AIRCRAFT**

**STC SA04549CH**

**LOG OF REVISIONS**

<b>Revision</b>	<b>Revised Pages</b>	<b>Description of Revision</b>	<b>Date</b>
IR	All	Initial Release	12/16/2021

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.

<b>Model</b>	<b>Aircraft Serial Number Range</b>	<b>Engine Model</b>	<b>Engine Power/RPM Takeoff Rating</b>
DA 40 NG	D4.111 D4.365	Austro Engine E4	123.5 kW @ 2300 RPM (165.6 HP @ 2300 RPM)
	40.N001 and subsequent <sup>1</sup>		
	40.NS001 and subsequent		
	40.NC001 and subsequent		

**Table 1. Eligible Aircraft**

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<sup>1</sup> Except 40.N183 thru 40.N187, 40.N189 thru 40.N211, 40.N213 thru 40.N223, 40.N228 thru 40.N234, and 40.N340 thru 40.N344

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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 A47CE with a 3A1-QP460A1/75A01-2 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](http://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 3A1-QP460A1/75A01-2 propeller are found in Hartzell Propeller Owner's Manual No. 411 (Manual 411). The 3A1-QP460A1/75A01-2 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 Diamond DA 40 NG 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 Maintenance Practices section of Manual 411.

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 411, Inspection and Check Section Chapter 5, Special Inspections - Lightning Strike, for detailed information on propeller lightning strike inspection and disposition.

**CHAPTER 6 THRU CHAPTER 57**

NO CHANGE.

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**CHAPTER 61 – PROPELLER**

**61-10 Propeller Assembly – General**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

Additional details of the Hartzell 3A1-QP460A1/75A01-2 can be found in Manual 411 available at [www.hartzellprop.com](http://www.hartzellprop.com).

**61-10 Propeller Assembly – Description**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

Additional descriptive details of the Hartzell 3A1-QP460A1/75A01-2 can be found in Manual 411 available at [www.hartzellprop.com](http://www.hartzellprop.com).

**61-10 Propeller Assembly – Operation**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

Additional operational details of the Hartzell 3A1-QP460A1/75A01-2 can be found in Manual 411 available at [www.hartzellprop.com](http://www.hartzellprop.com).

**61-10 Propeller Assembly – Troubleshooting**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

Refer to Manual 411 for all troubleshooting, inspections, and repair of the propeller. Manual 411 is available at [www.hartzellprop.com](http://www.hartzellprop.com).

**61-10 Propeller Assembly – Maintenance Practices**

**Propeller Removal & Installation**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

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Refer to the installation instructions (document number INST-030821) provided with this STC kit for complete details.

**Propeller Blade Tracking Test**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

Refer to Manual 411, Inspection and Check section, Chapter 4, Blade Track procedure to evaluate propeller blade track.

**Check/Adjust the V-Belt Tension of the Additional Alternator (if OÄM 40-314 is installed)**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

**Remove/Install the Additional Alternator V-Belt (if OÄM 40-314 is installed)**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

**Remove/Install the Additional Alternator (if OÄM 40-314 is installed)**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

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**61-20 Propeller Control**

**General**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

**Description and Operation**

This chapter and section of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

The specified propeller settings (set at the factory prior to shipment) are given as follows:

- Low pitch ..... 13.3° ±0.2° (@ 30.0" reference radius)
- High pitch ..... 31.0° ±1.0° (@ 30.0" reference radius)

**61-20 Propeller Control – Troubleshooting**

This chapter of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

**61-20 Propeller Control – Maintenance Practices**

This chapter of the Diamond DA 40 NG Airplane Maintenance Manual remain applicable to the noted airplane models and serial numbers with the Hartzell 3A1-QP460A1/75A01-2 propeller installed.

**CHAPTER 71 THRU CHAPTER 92**

NO CHANGE.

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