

AIRWORTHINESS APPROVAL NOTE NO: 28419

APPLICANT: Michael Hamlett

AIRCRAFT TYPE: Piper PA28R-200

REGISTRATION NO: G-BLXP CONSTRUCTOR'S NO: 28R-7235200

OPERATOR: -

INSTALLER: Mr R Coates

DESIGN ORGANISATION: Horizon Instruments Inc

CERTIFICATE CATEGORY: Private Category

MODIFICATION NO: 002

MODIFICATION TITLE: **Installation of Engine Electronic Digital Tachometer in accordance FAA STC SA5842NM**

### 1. **Introduction**

The purpose of this AAN is to approve the installation of Horizon Instruments Inc P-1000 Electronic Digital Tachometer in the Piper PA-28R-200.

The subject aircraft holds a Certificate of Airworthiness in the Private Category. However, as other examples may be eligible for certification in the Transport Category, this AAN approves this modification in the Transport Category.

### 2. **Modification Definition**

A Horizon Instruments Inc P-1000 Electronic Digital Tachometer installed in accordance with FAA STC SA5842NM and Horizon Instruments inc Installation and instruction manual P103050 rev D replaces the standard mechanical tachometer. The electronic tachometer derives its input from directly from the primary circuits of the magnetos.

### 3. **Approval Procedures**

This modification approval has been carried out in accordance with BCAR B2-2.

#### **4. Basis Of Approval**

##### **4.1 CAA Approval Basis For The Modification**

This modification has been approved by the FAA, FAA Supplemental Type Certificate STC SA5842NM refers.

##### **4.2 CAA Design Requirements For Certificate Of Airworthiness**

Any installed equipment for which the Air Navigation Order requires approval must be approved by the CAA.

##### **4.3 Environmental Requirements**

These modifications are assessed as having no effect on the aircraft noise. The existing noise certificate, if any, remains valid.

##### **4.4 Design Requirements Associated With Operational Approvals**

Non applicable for this modification.

#### **5. Compliance With The Basis Of Approval**

##### **5.1 Compliance With The Certification/Validation/Approval Basis For The Modification**

Under the provisions of BCAR B2-2, 4.2.1 the certification of this modification by the State of design is accepted without investigation. The US Certification Basis is CAR 3. Details are given in FAA Supplemental Type Certificates STC SA5842NM.

##### **5.2 Compliance With Design Requirements For Certificate Of Airworthiness**

Non applicable for this modification

##### **5.3 Compliance with Environmental Requirements**

This modification is assessed as having no adverse effect on the aircraft noise, and the status of the aircraft relative to the noise legislation is unaffected. The existing noise certificate, if any, remains valid.

##### **5.4 Compliance with Design Requirements Associated With Operational Approvals**

Not required for this modification.

## **5.5 Required (Amendments To) Manuals And Other Documents Including Mandatory Placards**

### **Flight Manual Supplement**

The Flight Manual for this aircraft is VB-359. Horizon Instruments Inc have produced a Flight Manual Supplement No 1 that covers the PA-28R-200 aircraft. This was FAA approved on 14 September 1992. This approval is acceptable to the CAA.

This Flight Manual Supplement must be included in the back of the CAA-approved Flight Manual for the aircraft, and the contents/amendment sheet amended accordingly.

## **6. Conditions Affecting This Approval**

All placards specified by the manufacturer/modification must be installed. Limitations, and conditions defined in the modification/manufacture's documentation, and the Flight Manual Supplement must be observed.

Attention is drawn to the condition stated on the FAA STC that the compatibility of the modification with other previously approved modifications, (installed on the particular aircraft), must be verified by the installer. Where the potential for interactions between modifications exists, the advice of the CAA shall be sought.

## **7. Continued Airworthiness**

The influence of the modification on Airworthiness Directive, Service Bulletin eligibility and other data must be considered and the publications monitored accordingly. The maintenance schedule for the aircraft should include reference to this material additional to the original design

## **8. Survey**

This aircraft G-BLXP being the first to embody the modification to be approved under this AAN, has been surveyed by the CAA.

In the particular areas examined during the survey the modified aircraft was found to conform with the standard recorded by this AAN.

## **9. Authorisation of Release to Service**

In addition to the actions required by the procedures for release to service following maintenance or modification, the following actions must be completed prior to signing the Certificate of Release to Service:

- a. All actions and ground test procedures specified by Horizon Instruments Inc Installation Manual P103050, Rev D must be completed satisfactorily.
- b. It must be verified that the documents or amendments to documents, and the placards defined under Section 5.5 above are as specified, including any changes specified under Section 8 above.

- c. For G-BLXP and other aircraft embodying this modification, an airworthiness flight test must be carried out in accordance with CAA Flight Test Schedule No 2. This test flight may be performed by the installer's nominated pilot, who must be acceptable to the CAA. The results of this assessment must be sent to CAA Flight Department for fleet-monitoring purposes.

**10. Approval**

Subject to the conditions of Section 6 above, this modification, STC SA5842NM, is approved for embodiment on any PA-28R-200 aircraft certificated in Transport Category (Passenger), provided that they conform with the contents of this AAN, is within the applicability of the modification as approved by FAA, and is operated in accordance with the Flight Manual.

Alistair Maxwell

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For the Civil Aviation Authority

Date 1 August 2002