

AIRWORTHINESS APPROVAL NOTE NO: 28850

APPLICANT: CAA Internal Purposes.

AIRCRAFT TYPE: Various.

DESIGN ORGANISATION: J.P. Instruments, California.

CERTIFICATE CATEGORY: Transport Category (Passenger).

MODIFICATION No FAA STC SA2586NM and SA00432SE

MODIFICATION DESCRIPTION **Installation of J.P. Instruments Fuel Flow Transducer and Engine Indicator System in accordance with STC SA00432SE and SA2586NM**

1. **Introduction**

This AAN is issued to approve this Fuel Flow Transducer and Engine Indicating System. The FAA STC approval has wide applicability, and the opportunity is taken in this AAN to approve the system for all aircraft makes and models as defined in the FAA STC Eligibility Lists.

These STC's have previously been investigated under AAN 28351 for the Piper PA24-250.

2. **Modification Description**

The JP Instruments Engine Indicating System, STC SA2586NM, installed in accordance with JP Instruments Drawing List Report number 100, consists of an EGT-701 electronic cockpit display supported by various sensors, some of which are optional. These include:

Exhaust Gas Temperature, Cylinder Head Temperature (multiple), Oil Temperature, Outside Air Temperature, Fuel Flow Rate.

The JP Instruments Fuel Flow Transducer, STC SA00432SE, installed in accordance with JP Instruments Fuel Flow installation manual, report no 503, consists of a harness and a Fuel Flow Transducer. This provides the fuel flow rate information for the EGT-701.

3. **Approval Basis**

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

4. **Compliance with Requirements**

4.1 **CAA Validation Basis For The Modification**

This modification has been approved by the FAA. FAA Supplemental Type Certificates SA2586NM and SA00432SE refer.

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

This modification is 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

None applicable for this modification.

5. Compliance With The Basis Of Validation

5.1 Compliance With The Validation 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 detailed in FAA STCs SA2586NM and SA00432SE.

5.2 Compliance With Design Requirements For Certificate Of Airworthiness

None applicable for this modification.

5.3 Compliance with Environmental Requirements

None applicable for this modification.

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

J.P. Instruments have produced a Flight Manual Supplement No. 1 Rev B which covers all aircraft listed on FAA STC SA2586NM.

This J. P. Instruments Flight Manual Supplement reference has been approved by CAA for the Maule MXT-7-180 aircraft. For any installation it must be verified by the installer that the CAA have approved the Supplement for use with the Flight Manual appropriate to the aircraft being modified.

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

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.

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.

The installation Manual for the J.P. Instruments Fuel Flow indicator and transducer specifies the following Placard that must be mounted on the aircraft instrument panel:-

“Do not rely on Fuel Flow Instrument to determine Fuel Levels in Tanks”

For aircraft fitted with a primary fuel flow gauge, the following placard must be mounted on the aircraft instrument panel near the Fuel Flow indicator:-

“Refer to Original Fuel Flow Instrumentation for Primary Information.”

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.

J.P. Instruments Installation Manual details that there are no field adjustments and or calibration requirements for the Fuel Flow indicator and Transducer after initial installation. Maintenance of malfunctioning or non-functioning of components is limited to removal and replacement of JPI factory supplied new or repaired components. The aircraft maintenance programme should be amended to inspect every 50 hr/6 months the fuel lines and JP1 Fuel flow transmitter for leaks. Every annual remove clamp at one end of Flow transducer fire sleeve and inspect internally for leaks and the condition of fittings.

8. Survey

None Required

9. Continued Airworthiness

The influence of the modification on Airworthiness Directive, Service Bulletin etc eligibility 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.

10. Approval

This modification is approved for embodiment on any aircraft within the applicability of the FAA STC, in the Transport Category (Passenger), provided that it conforms to the contents of this AAN, is operated in accordance with the Flight Manual, and is maintained in accordance with manufacturer's requirements, and a maintenance programme approved by the CAA.

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JC Barratt
For the Civil Aviation Authority

Date 29 May 2003