



A Mahindra Aerospace Company

SB-GA8-2017-175

Issue 1

OPTIONAL

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Service Bulletin

Subject:

Installation of oil pressure transducer and USB download port.

Applicability:

This Service Bulletin is applicable to the aircraft identified in Table 1.

Table 1 – Applicability

AIRCRAFT	SERIAL NUMBER(s)
GA8	GA8-04-045,GA8-04-051,GA8-04-053,GA8-04-057,GA8-04-065,GA8-05-073,GA8-06-100,GA8-06-104 & GA8-08-129
GA8-TC 320	GA8-TC 320-08-130

Additional model numbers may be added at future revisions.

Amendments:

Issue 1: Initial Issue. Ref GAE11#2120.

Background:

This Service Bulletin provides instructions for the installation of an oil pressure transducer and USB data port to be added to an existing installation of a J.P. Instruments EDM 800 engine management system. The transducer and USB port interface are J.P. Instruments parts.

The EDM 800 is fitted to the aircraft as a reference/recording unit and may not be used in lieu of any of the other installed indicators (ie tachometer) as it is not a primary engine indicating instrument.

Compliance:

The accomplishment instructions contained within this Service Bulletin are optional and may be incorporated at the Operator's, Owner's or Maintenance Provider's discretion.

Weight and Balance:

The effect of this Service Bulletin's incorporation on the aircraft's weight and balance is negligible. The transducer weighs 0.32lb at an arm of 1.5" aft of the firewall.

Electrical Load Analysis:

No change is required of the aircraft Electrical Load Analysis.

Approval:

The modifications described in this Service Bulletin have been approved pursuant to Australian Civil Aviation Safety Regulation 21.095 (1998). GippsAero Reference GAE11#2120.

Parts:

The following parts as listed in Table 2 are required to accomplish this Service Bulletin.

Table 2 - Parts

ITEM	PART No.	DESCRIPTION	QTY	REMARKS
1	KIT 1170	Oil Pressure sensor PN 306018 w/harness (150PSI)	1	Nil

Parts Availability:

New parts can be obtained from distributors for J.P. Instruments Inc

Labour:

6 man hours should be allocated for completing the work detailed in this Service Bulletin. This time does not include set up etc.

Warranty:

Optional modification warranty is not applicable.

Accomplishment Instructions:

WARNING:

IT IS THE RESPONSIBILITY OF ALL PERSONNEL TO ENSURE WORK HEALTH AND SAFETY REQUIREMENTS ARE MET AT ALL TIMES. ALL PERSONNEL MUST COMPLY WITH ALL WORK HEALTH AND SAFETY REQUIREMENTS AS DEFINED OR RECOMMENDED BY:

- EQUIPMENT OEM INSTALLATION AND OPERATION MANUALS;
- AIRCRAFT MAINTENANCE AND OPERATION MANUALS;
- ASSOCIATED AIRCRAFT MODIFICATION INSTRUCTIONS;
- RELEVANT NAA REGULATIONS AND ADVISORY DOCUMENTATION;
- ORGANISATION MANUALS, INCLUDING NAA ENDORSED OPERATIONAL AND MAINTENANCE MANUALS; AND
- RELEVANT LOCAL, STATE AND FEDERAL GOVERNMENT REQUIREMENTS.

NOTE:

Unless otherwise specified, reference to the GA8/GA8-TC 320 Service Manual and FAA Advisory Circular (AC) 43.13-1B & -2B should be made when carrying out the procedures prescribed in this Service Bulletin. In case of a discrepancy between the Service Manual and the AC, the Service Manual takes precedence.

NOTE:

Unless otherwise specified, dimensions are in inches.

Part A – Preparation

1. Make the aircraft safe for maintenance by pulling all under floor electrical circuit breakers.
2. Check the back of the EDM 800 to see if there is a USB connector tail exiting the rear of the indicator case. Refer to Figure 1.
3. If there is no USB connector, this Service Bulletin cannot be completed until the EDM 800 display unit is returned to JP Instruments for the installation of this feature.

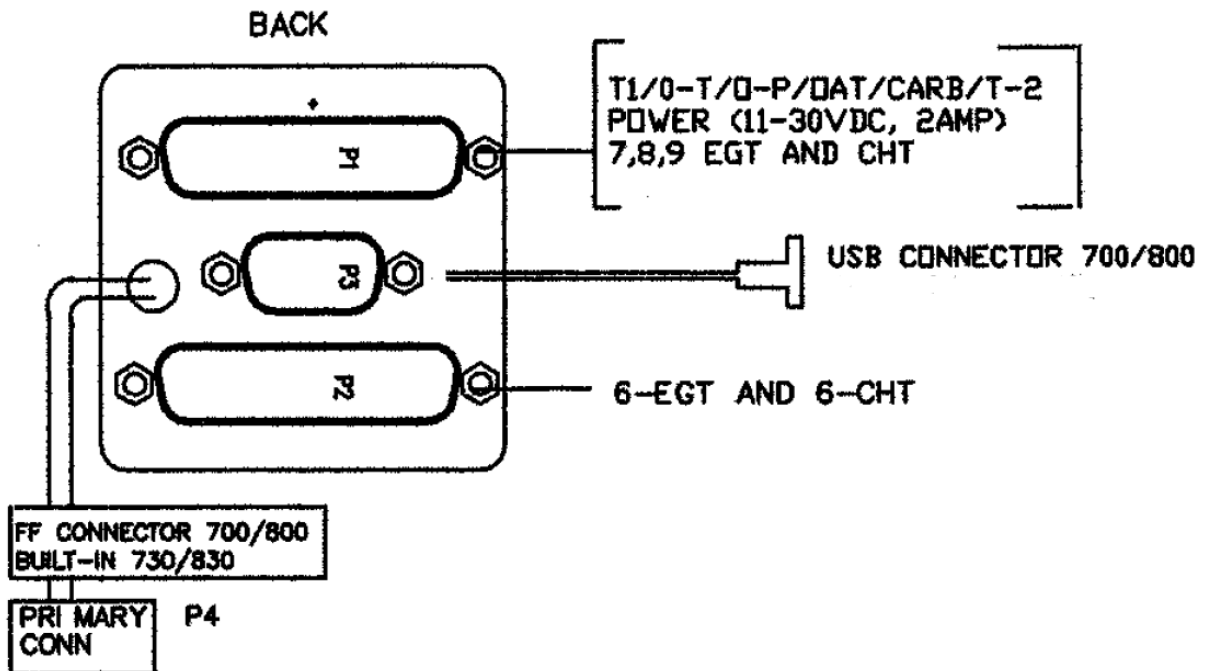


Figure 1 – Rear view of rear indicator

Part B – Accomplishment

1. Installation of the JP Instruments oil pressure transducer and harness:
 - 1.1. Refer to document EGT-701 Report 103, "INSTALLING THE EGT-701 SCANNER® 1/20/09" Rev-E to place the indicator into program setup mode.
 - 1.2. Disconnect the existing oil pressure switch from the aircraft's electrical system.
 - 1.3. Remove the oil pressure sensor fitting (P/No. GA8-793021-031), with the oil pressure switch intact, from the aircraft. Place rags under the fitting to catch oil leakage when the unit is removed.
 - 1.4. Apply blanking plugs to both oil lines.
 - 1.5. Remove the blanking grub screw from the oil pressure sensor fitting shown in Figure 2. Heating the fitting with a heat gun may be required.



Figure 2 - Oil pressure sensor fitting removed from aircraft.

- 1.6. Ensure the thread of the oil pressure sensor fitting is clean of all contaminants (oil, thread sealant etc.). If required, a 1/8 - 27 NPT tap may be used to clean the threads, without removing any metal from the part.
- 1.7. Fit the JPI transducer to the oil pressure sensor fitting using Loctite 567 thread sealant.
- 1.8. Remove the blanking plugs from the oil lines and reinstall the oil pressure sensor fitting to the aircraft.
- 1.9. Wipe up any remaining oil residue.
- 1.10. Route the 2 transducer wires from the indicator connector J3 to the installed transducer. Refer to Figure 3. Route the wires with existing wire routing running along the fire wall. The routing shall ensure that no chaffing can occur.

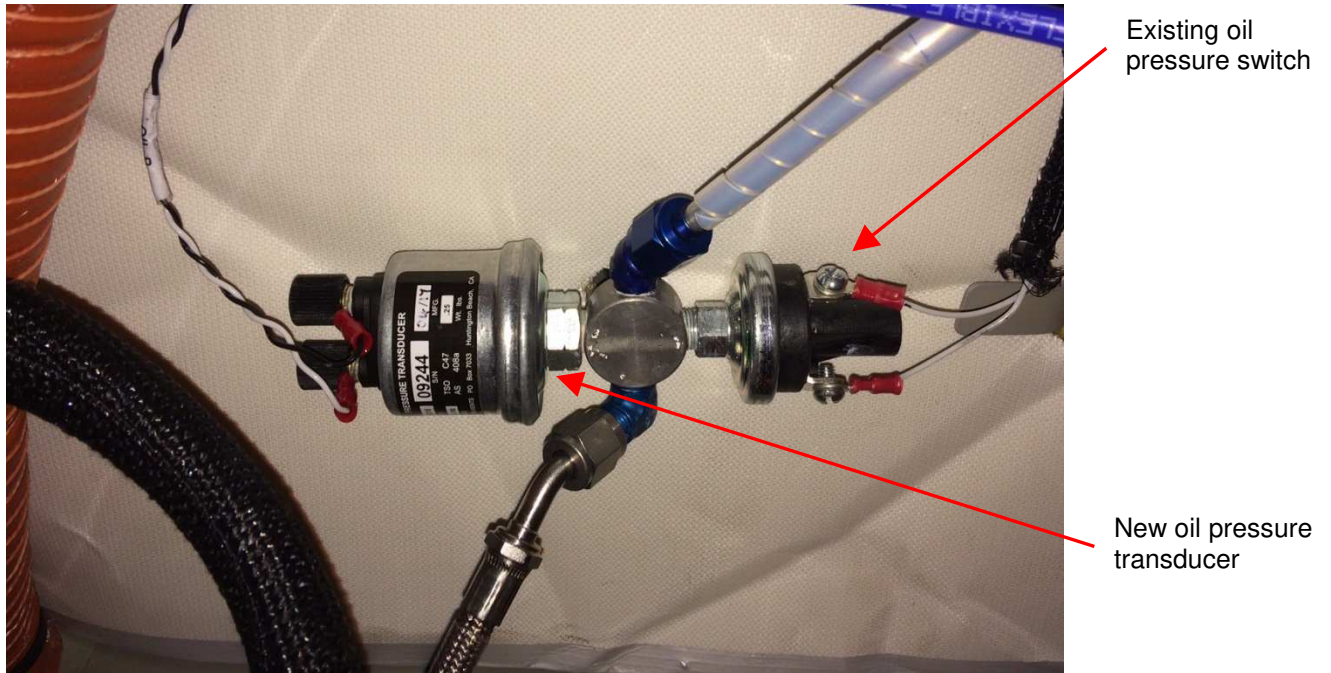


Figure 3 - Installed J.P. Instruments transducer

- 1.11. Terminate the wires with ring terminals supplied with the JPI kit.
- 1.12. Fit the terminated wires to the sensor and firmly tighten the locking nuts to the transducer. There is no polarity on the oil pressure transducer wires.
- 1.13. Place the EDM 800 into program mode in accordance with Installation Manual for EGT 701 Report 103.
- 1.14. Configure the programmable parameter "OIL P" in accordance with Service Manual Supplement C05-96-55 at latest issue.
- 1.15. Power cycle the indicator.
- 1.16. Place the EDM 800 into program mode in accordance with Installation Manual for EGT 701 Report 103.
- 1.17. Set the parameter "O-P" in accordance with Service Manual Supplement C05-96-55 at latest issue. Note the default value from JPI is 20 for this parameter & therefore should not require any change.
- 1.18. Power cycle the indicator.

2. Installation of USB data port.

2.1. Two locations for the USB port are allowed and are given in Figure 4 & Figure 5. Review the existing installation configuration of the aircraft cockpit before proceeding. The location shown in Figure 5 for the USB port may be deviated +/- 1.0" laterally from the location shown. The cut out details are provided in Figure 6. The location as described by Figure 5 will not interfere with the movement of the control column. Figure 4 is viewed looking straight at the instrument faces. Figure 5 is viewed looking at the instrument panel in a horizontal plane.

2.2. Secure the USB data port using the supplied fasteners.

2.3. Locally fabricate a placard stating "DATA PORT" and fit immediately adjacent to the USB connector as shown in Figure 4 & Figure 5, subject to data port location selected.

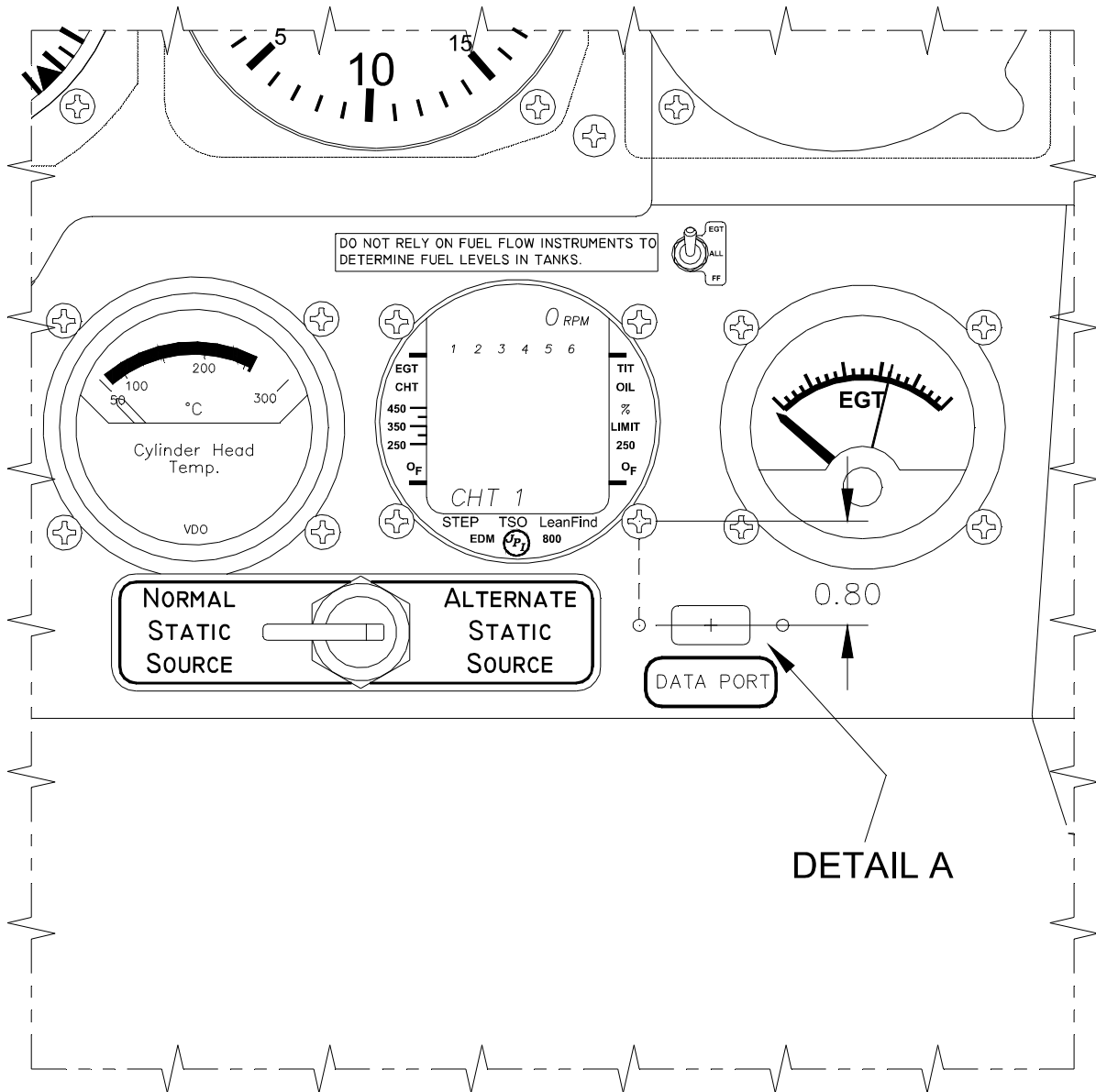


Figure 4 - Location of panel mounted USB port

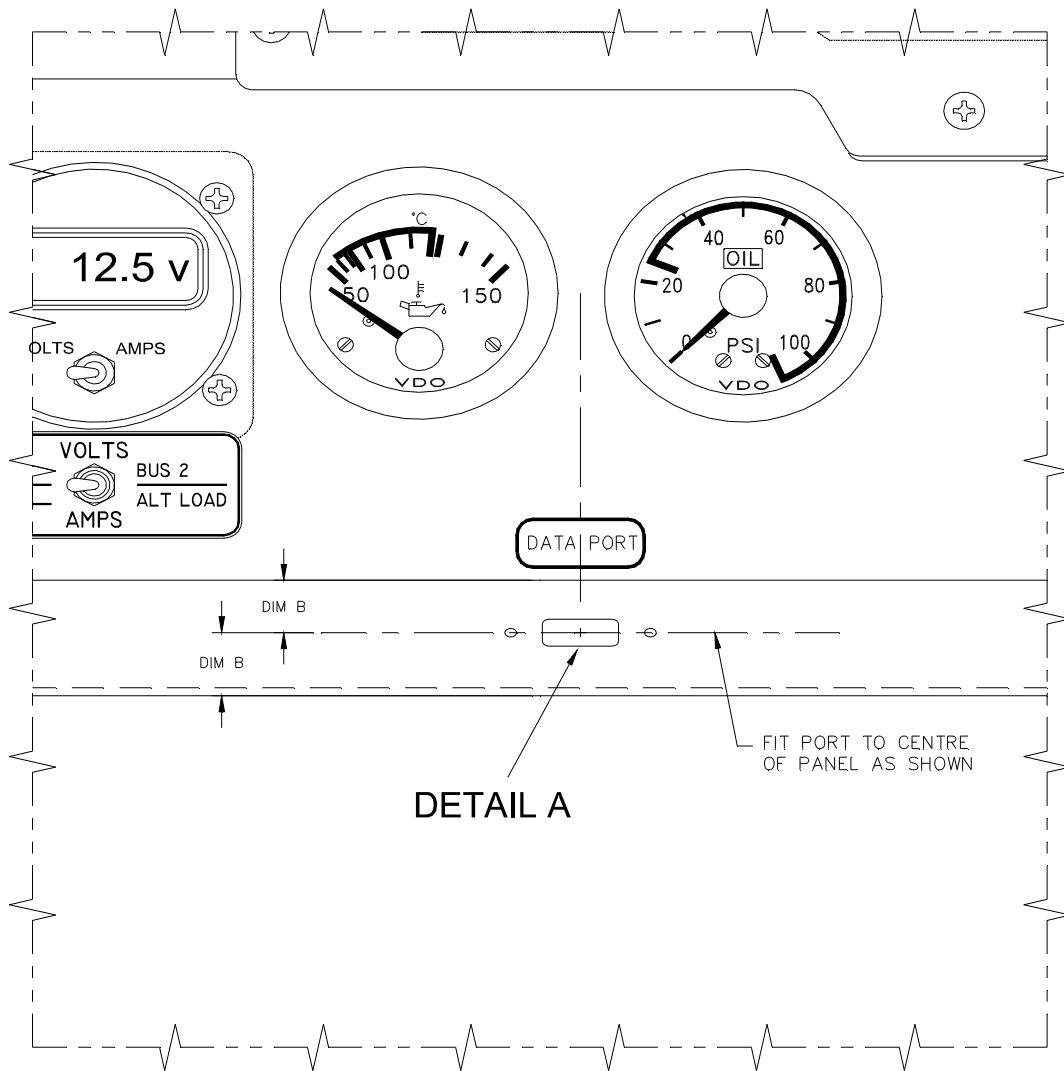
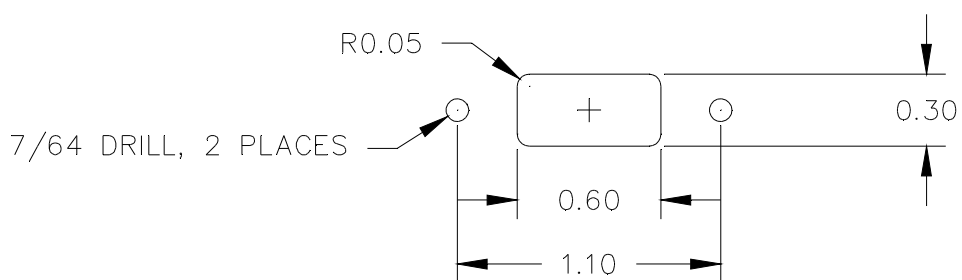


Figure 5 – Location of panel mounted USB port on underside of instrument panel.



DETAIL A

Figure 6 - Panel cut-out details for USB port, denoted "DETAIL A"

Part C – Restoration

1. Re install all panels removed.
2. Push in all under floor circuit breakers.

Part D – Testing

1. Perform a functional test.
 - 1.1. Carry out an engine test run in accordance with the GA8/GA8-TC 320 Service Manual. Verify oil pressure reading displayed on the EDM 800 matches that displayed on the primary oil pressure gauge (+/-10psi). Readings outside this limit will require troubleshooting in accordance with the manufacturer's installation manual "Installation Manual for EGT 701 Report 103", Rev-E or the GA8/GA8-TC 320 Service Manual.
 - 1.2. Verify that the EDM 800 will download log files to a suitably formatted USB thumb drive. It is recommended to use the supplied "J.P. Instruments" USB drive.
 - 1.3. Inspect the oil pressure sensor fitting after engine test run. Ensure that there are no oil leaks.

Documentation:

Update aircraft log book to reflect incorporation of this Service Bulletin.

Flight Manual Supplement C01-04-48 dated February 2016 is to be inserted into the aircraft Flight Manual if not already present.

Continuing Airworthiness:

Service Manual Supplement C05-96-55 Amendment 2 or later is to be inserted into the aircraft Service Manual.

Compliance Notice:

Complete the Document Compliance Notice and return to GippsAero by mail, fax or email.

DOCUMENT COMPLIANCE NOTICE



A Mahindra Aerospace Company

Document:

SB-GA8-2017-175

Issue 1

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2017-175, Issue 1 has been incorporated in the above aircraft.

Date of Incorporation: _____

Signed

Print Name: _____

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