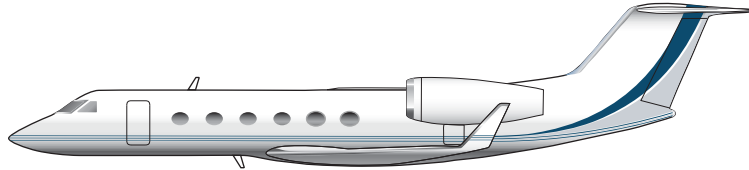


# Gulfstream G450

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## **AIRCRAFT SERVICE CHANGE**

NUMBER 076

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### **SUBJECT**

ENGINE FUEL AND CONTROL (ATA 73)

ENGINE ELECTRONIC CONTROLLER –  
T5.2 SOFTWARE UPGRADE

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JULY 12, 2013

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**PILOTS INFORMATION SHEET**

**ENGINE ELECTRONIC CONTROLLER – T5.2 SOFTWARE UPGRADE**

This service change upgrades the Engine Electronic Controller (EEC) software from T5.1 to T5.2 by incorporating Rolls-Royce Service Bulletin TAY-73-1779.

There will be no cockpit procedural changes required as a result of this installation.

**PLEASE DETACH AND GIVE TO FLIGHT DEPARTMENT PERSONNEL**

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## PILOTS INFORMATION SHEET

### ENGINE ELECTRONIC CONTROLLER – T5.2 SOFTWARE UPGRADE

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There will be no cockpit procedural changes required as a result of this installation.

PLEASE RETAIN THIS COPY WITH THE ASC BOOKLET

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The design change effected by this Aircraft Service Change (ASC) has been classified as Major by the United States Federal Aviation Administration (FAA) and Level 2 Major by the European Aviation Safety Agency (EASA). The design change data contained here-in and effected by this document is approved and accepted by the FAA and EASA under Gulfstream Organization Delegation Authorization Project No. TD-01-2011-0040.

The design of this ASC is approved by aircraft type design data for installation on aircraft registered for operation in accordance with applicable regulations of the FAA and EASA.

The design of an ASC is configured to a standard ("greenie") production aircraft. If spare wires, pin connections or locations called out have been used for another modification, the installing agency must ensure the development, documentation and approval of any required deviations.

The following instructions, in step-by-step form, are written as a guide to perform this ASC. Compliance with safe maintenance practices as defined in the Aircraft Maintenance Manual, (AMM) and by the FAA and EASA is required.

Gulfstream considers this ASC a means to enhance aircraft capabilities to meet individual operator requirements. The modification is not related to any safety or airworthiness condition.

Subject: Engine Fuel and Control (ATA 73), Engine Electronic Controller – T5.2 Software Upgrade

Purpose/Discussion: This service change upgrades the Engine Electronic Controller (EEC) software from T5.1 to T5.2 by incorporating Rolls-Royce Service Bulletin TAY-73-1779. The T5.2 software introduces several adjustments to improve the control of the thrust reverser, starter, Starter Air Valve (SAV), and several changes to the error message management. The changes are as follows:

- Changes to thrust reverser related nuisance indications and roll back
- Changes to nuisance messages related to starting including SAV, SAV lamp and Air Turbine Starter (ATS)
- Corrections to ATS fault handling
- Improvements to P160 fault accommodation
- Corrections to requirement errors for Independent Overspeed Protection (IOP) and improvements to IOP Built-in Test Equipment (BITE) power-up checks
- Investigation and solution for an isolated in service roll back event

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Purpose/Discussion Continued: Additionally, this modification introduces a two-part unit identification label to allow the unique, fixed information (e.g. serial number) to remain indefinitely with the unit and any variable information (e.g. part number) to be changed at a modification.

Description/Man-Hours Required Per Aircraft: This service change upgrades the EEC software from T5.1 to T5.2 by incorporating Rolls-Royce Service Bulletin TAY-73-1779 Rev "--" or later-approved version.

Up to 13.5 man-hours will be required for the modification of both EECs and engine ground runs.

This modification should be accomplished during regularly scheduled maintenance at a G450 Authorized Warranty Facility or Factory Authorized Service Center in cooperation with Rolls Royce or United Technologies Aerospace System (UTAS) representatives.

To schedule the aircraft into a Gulfstream facility for incorporation of ASC 076, please contact Gulfstream Scheduling at 800-810-GULF (4853) or 912-965-4178.

For planning purposes, Operators scheduling their aircraft for this modification are required to contact one of the Rolls-Royce or UTAS representatives listed below at least three weeks in advance.

Operators using a service center in the Americas should contact Rolls-Royce North America/Aero Engine Controls by electronic mail at [Tyler.Roth.JVAEC@rolls-royce.com](mailto:Tyler.Roth.JVAEC@rolls-royce.com) or by phone at 912-395-0387 or 317-946-7591.

Operators using a service outside of the Americas should contact UTAS UK by electronic mail at [neil.rouse@utas.utc.com](mailto:neil.rouse@utas.utc.com) or by phone at +44-121-788-5837.

**Please copy [operationsroom@utas.utc.com](mailto:operationsroom@utas.utc.com) on all requests.**

When contacting Rolls-Royce or UTAS the following information will be required:

- Part number and serial number of the EECs
- Type of release required (FAA, EASA)
- Aircraft and engine serial numbers
- A free-of-charge purchase order (for UTAS records purposes)

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Description/Man-Hours Required  
Per Aircraft Continued:

- The chosen service center
- The proposed date / window of opportunity for the upgrade.
- At the time of upgrade, UTAS will need the TSN and CSN of the EECs for release paperwork purposes.

Approved Engineering Data:

The source data for this aircraft service change is:  
1159ASC47076 Rev “A”, Top Drawing, T5.2 EEC  
Modification (ASC 076)

Prerequisites:

None

Concurrent Requirement:

Rolls-Royce Service Bulletin TAY-73-1779 Rev “–” or  
later-approved version.

Associated Documents:

Aircraft Maintenance Manual (AMM), Chapters 20, 71  
and 73

Flight Manual Revision/  
Supplement Required:

None

Publications Data:

Data concerning this service change will be published in  
a future revision of the affected manual(s). This booklet  
will provide technical data until the revision(s) is  
published.

Effectivity:

This service change is applicable to aircraft serial  
numbers 4001-4292.

This or a similar change will be installed during initial  
phase manufacturing on aircraft serial number 4293 and  
subsequent.

Effect on Spares:

Refer to Rolls-Royce Service Bulletin TAY-73-1779 Rev  
“–” or later-approved version.

Special Equipment/Tools  
Required:

Refer to Rolls-Royce Service Bulletin TAY-73-1779 Rev  
“–” or later-approved version.

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Skill Type Required: Knowledge of the Gulfstream G450 Engine Fuel and Control System will be required for this modification.

Price: Prices are subject to change without notice.

Installed Price: See Note\*

Kit Price only: A modification kit is not required for this ASC.

*NOTE:	This ASC will be provided at no charge for a period of 24 months from the release date noted on the cover of this Aircraft Service Change if performed during regularly scheduled maintenance at a Gulfstream G450 Authorized Warranty Facility or Factory Authorized Service Center, and subject to meeting all other requirements as stated in Rolls-Royce Service Bulletin TAY-73-1779 Rev “–” or later-approved version.
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**MODIFICATION INSTRUCTIONS:**

CAUTION:	DURING ANY MAINTENANCE PROCEDURE, PROTECT WIRE BUNDLES, CONNECTORS AND SURROUNDING STRUCTURE FROM SHAVINGS, DEBRIS AND CONTAMINATION. MAINTAIN A PROPERLY CLEANED WORK AREA THROUGHOUT THE PROCEDURE TO ENSURE THE INTEGRITY OF THE AFFECTED COMPONENT / SYSTEM. VISUALLY INSPECT WORK AREA USING ADDITIONAL LIGHT AS NECESSARY TO VERIFY ABSENCE OF ANY DEBRIS PRIOR TO COMPLETION OF PROCEDURE. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO COMPONENTS AND / OR SYSTEMS.
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- A.** Aircraft Preparation:
  - 1. Prepare the aircraft for safe maintenance. Refer to the AMM, Safe Ground Maintenance Procedure, Chapter 20.
- B.** Modify aircraft as follows:
  - 1. Perform Rolls-Royce Service Bulletin TAY-73-1779 Revision “–” or later-approved version.
- C.** Ensure work area is clean and clear of foreign objects and debris (FOD).
- D.** Record compliance with this aircraft service change in the aircraft’s permanent maintenance records and return aircraft to flight status.
- E.** Report compliance with this aircraft service change to Gulfstream Computerized Maintenance Program (CMP) by faxing the attached service reply card with the CMP task card(s) sign-off or uploading PDF forms to myGulfstream.com, CMP.Net document upload.

WEIGHT AND BALANCE DATA:	The aircraft’s basic weight and balance will not be affected by this change.
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ELECTRICAL LOAD ANALYSIS DATA:	The aircraft’s electrical loading will not be affected by this change.
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**SERVICE REPLY CARD**

PLEASE FAX THIS PAGE, WITH THE CMP TASK CARD(S) SIGN-OFF, TO GULFSTREAM CMP AT 800-944-1775 OR 912-963-0265, OR UPLOAD PDF FORMS TO MYGULFSTREAM.COM, CMP.NET DOCUMENT UPLOAD.

THE FOLLOWING AIRCRAFT SERVICE CHANGE HAS BEEN COMPLIED WITH:

ASC NUMBER	AIRCRAFT TYPE	A/C	COMPLIANCE DATE
970760	G450		

AIRCRAFT HOURS: \_\_\_\_\_ LANDINGS: \_\_\_\_\_

PREVIOUSLY COMPLIED WITH (PCW): \_\_\_\_\_ DATE: \_\_\_\_\_

NOT APPLICABLE: \_\_\_\_\_ DATE: \_\_\_\_\_

COMPONENT		PART NUMBER	SERIAL NUMBER	CMP CODE
ENGINE ELECTRONIC CONTROLLER (EEC#1)	OFF:			732001
	ON:			732001
ENGINE ELECTRONIC CONTROLLER (EEC#2)	OFF:			732002
	ON:			732002

SIGNATURE	TITLE / CERTIFICATE NUMBER	COMPANY

COMMENTS / SUGGESTIONS / ACTIONS TAKEN:


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