	AIRWORTHINESS DIRECTIVE No F-2005-168 R1	Distribution: B	Issue date: December 21, 2005	Page : 1/2
Direction générale de l'aviation civile France GSAC publication	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.		*Translation of « Consigne de Navigabilité » of same number.* *In case of difficulty, reference should be made to the French issue.*	
	No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.			

Corresponding foreign Airworthiness Directive(s): **Not applicable**	Airworthiness Directive(s) replaced: **UF-2005-168**
Person in charge of airworthiness: **AIRBUS SAS**	Type(s): **A330 aircraft**
Type certificate(s) No. **EASA.A.004** TCDS No **EASA.A.004**	
ATA chapter: **73**	Subject: **Engine fuel and control - FADEC 2000-10BP1 replacement**

1. **EFFECTIVITY:**

AIRBUS aircraft A330, all certified models, all serial numbers, equipped with ROLLS-ROYCE TRENT 700 engines.

2. **REASONS:**

A brand new Trent 700 EEC PN 2000-10BP1 was rejected from AIRBUS production line due to an ENG MINOR FAULT generated by the EEC.

The unit was returned to Goodrich. EEC Trouble Shooting Data (TSD) confirmed that a high integrity computer (HIC) fault had occurred during Power Up Checks (PUC) performed before the engine start.

The fault has been replicated during testing at GOODRICH at test points not normally tested during production acceptance testing. The fault has been reproduced during transient temperature tests at Goodrich. The production acceptance test uses steady temperature test.

This HIC failure leads to get a channel control change annunciated by a "ENG X MINOR FAULT" ECAM warning associated with the maintenance message "EEC (EX-4000KS)".

The EEC PN 2000-10BP1 has been recently introduced in production. Therefore, the following list of aircraft delivered since end May 2005 is impacted: MSN 658, MSN 664, MSN 666, MSN 669, MSN 670, MSN 673, MSN 679, MSN 683, MSN 687. Any other aircraft adversely equipped with both engines fitted with this EEC is impacted by this AD.

The worst consequence of the HIC failure could be, if second channel is faulty too, a restartable engine shut down.

Original AD mandated the mitigation of the risk for an aircraft flying with two EEC impacted, therefore preventing the risk of dual engines in flight shut down.

Aim of the Revision 1 of this AD is to introduce ROLLS-ROYCE Non Modification Service Bulletin (NMSB) 73-E967 accomplishment on EEC 2000-10BP1 as an alternative means of compliance to the below mandatory actions.
The implementation of this Rolls-Royce Non Modification Service Bulletin allows recovering a nominal behavior of the Trent 700 EEC 2000-10BP1 without any restriction.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

From the effective date of this AD at original issue:

3.1. For A330 equipped with both ROLLS-ROYCE TRENT 700 engines fitted with EEC 2000-10BP1 installed through modification 54084 on which ROLLS-ROYCE NMSB 73-E967 has not been accomplished:

Within 60 flight hours or 10 flight cycles, whichever occurs first, remove and replace at least one EEC PN 2000-10BP1 by EEC pre-PN 2000-10BP1 or EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has been accomplished, in accordance with instructions given in Airbus All Operator Telex (AOT) A330-73A3039.

Note 1: As a result, the following configurations are now permitted on aircraft:

- Two EEC pre-PN 2000-10BP1
- One EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has not been accomplished and one EEC pre-PN 2000-10BP1
- One EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has not been accomplished and one EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has been accomplished
- One EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has been accomplished and one EEC pre-PN 2000-10BP1
- Two EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has been accomplished.

Note 2: All affected aircraft are fitted with EEC 12.4 software standard. Since EEC 12.4 software standard is not mixable with previous software standards, the replacement EEC must be fitted with 12.4 EEC software. Retrofit to software standard 11.4 is not allowed.

3.2. For all A330 equipped with ROLLS-ROYCE TRENT 700 engines:

After October 5th, 2005, it is forbidden to operate aircraft with both engines equipped with EEC PN 2000-10BP1 on which ROLLS-ROYCE NMSB 73-E967 has not been accomplished.

4. REFERENCE PUBLICATION:

AIRBUS All Operator Telex A330-73A3039 dated September 29, 2005
(Any further approved revision of this AOT is acceptable).

5. EFFECTIVE DATES:

Original issue : Upon receipt of the emergency AD issued on September 30, 2005
Revision 1 : December 31, 2005.

6. REMARKS:

This AD at original issue has been the subject only of an emergency diffusion on September 30, 2005.

For questions concerning the technical contents of this AD's requirements, contact:

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7. APPROVAL:

This AD Revision is approved under EASA reference No 2005-6441 dated December 13, 2005.