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## Subject: Engine Controls – Engine Control Box Product Improvement

### Effectivity

Dornier 328-100.  
EASA Type Cert. Datasheet: TCDS A.096  
Serial No's: All Aircraft

### References

- SI 328-76-048 Engine Controls – Power Lever Gate Design
- FOI 328-76-001 Pilot Information – Selection of Ground Idle/Reverse during RTOs and Landing
- LBA LTA D-2008-140
- SB 328-76-486 Engine Controls – Modification of Power Lever Assembly and introduction of Crew Aural Alerting Device
- EASA AD 2009-0196 Engine Controls – Power Lever Control Box – Modification

### General

It has been noticed that inappropriate use of power levers during landing resulted in aircraft handling difficulties and, in very few cases, in runway excursions. The correct technical function of the engine control system however was confirmed in all cases.

As a preventive measure Service Information SI-328-76-048 as well as Flight Ops Information FOI-328-76-001 were published.

### Product Improvement

To alert the pilots, an aural warning is introduced if the latches are pulled before the flight idle hard stop is reached or the latches are pulled beyond flight idle before the aircraft is on ground. To smoothen power levers mechanism and travel the coulisse shape will be slightly modified.

The improvement is introduced in two phases:

1. Modification of Engine Control Box (ECB) exclusively performed off-aircraft by 328SSG in Oberpfaffenhofen.
2. Modification of Aircraft in accordance with SB 328-76-486 (performed by operator)

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Model 328-100

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## Retrofit Management

### 1. Planning

Ideally retrofits are done during C-Checks or other longer down times to accommodate the retrofit (i.a.w. SB 328-76-486). Please note that in order to meet compliance deadline as per EASA AD, all aircraft modification planning is based on the slot principle (see matrix below). Major influencing factors are the limited availability of pool boxes and the impossibility to match timing expectations of all customers. In order to limit problems with normal aircraft operations it is important for operators to start slot planning as soon as possible to achieve the minimum disruption. Generally, priority will be given to aircraft in operation and customers with several aircraft in operation (fleets). Parked or inactive aircraft will be considered with third priority. In case an operator can provide 328 SSG with his own spare unit a special arrangement can be discussed. Actual status of slot reservation/booking can be observed online during the entire campaign at 328 SSG's homepage <http://www.328support.de>

		Slot					
		1	2	3	4	5	cont'd
Spare Boxes available at start to launch campaign	Spare Box 1	Customer 1 Aircraft 1	Customer 1 Aircraft 2	Customer 1 Aircraft 3	Customer 5 Aircraft 1	Customer 6 Aircraft 1	⇒
	Spare Box 2	Customer 2 Aircraft 1	Customer 2 Aircraft 2	Customer 2 Aircraft 3	Customer 2 Aircraft 4	Customer 7 Aircraft 1	⇒
	Spare Box 3	Customer 3 Aircraft 1	Customer 3 Aircraft 2	Customer 1 Aircraft 4	Customer 1 Aircraft 5	Customer 8 Aircraft 1	⇒
	Spare Box 4	Customer 4 Aircraft 1	Customer 4 Aircraft 2	Customer 4 Aircraft 3	Customer 4 Aircraft 4	Customer 4 Aircraft 5	⇒

Fig. 1: Matrix (example) of slot principle

### 2. Configuration

There are three different Engine Control Box (ECB) configurations:

- Aircraft SN up to 3079: pre-mod PN° 001A761A1010 004 ⇒ post-mod PN° 001A761A1010 010.  
The built-in friction brake will be eliminated, but effectivity is maintained.
- Aircraft SN 3080 and higher, except 3100 & 3109: pre-mod PN° 001A761A1010 006 ⇒ post-mod PN° 001A761A1010 012.
- Aircraft SN 3100 & 3109 (Dornier 328-130): pre-mod PN° 001A761A1010 008 ⇒ post-mod PN° 001A761A1010 014.



3. Post-Modification Engine Control Box (ECB) availability

The campaign has already started and all new Engine Control Boxes are sold. Post Mod ECB's can be obtained from the exchange pool.

4. Retrofit Steps

The typical retrofit comprises the following:

- 4.1 Placing an order at 328SSG including deposit<sup>1</sup>, if applicable.
- 4.2 Securing a slot for modification by down payment.
- 4.3 Delivery of SB Kit including modified Engine Control Box without CAM Switches by 328 SSG.
- 4.4 Removal of unmodified Engine Control Box from the aircraft by customer, removing originally installed CAM switches and installing them in the modified Engine Control Box.
- 4.5 Return of removed (unmodified) Engine Control Box to 328SSG without CAM Switches.
- 4.6 After return and inspection of pre-modified Engine Control Box and if showing no discrepancies, a credit note for the full deposit will be issued by 328 SSG. If discrepancies are found, the respective value of damages/replaced items and labour is deductible from deposit.
- 4.7 Installation of SB Kit incl. Engine Control Box on aircraft.

Action	Days												
	1	2	3	4	5	6	7	8	9	10	11	12	13
4.1 Placing Order	✓												
4.2 Receipt of Deposit	✓												
4.3 Preparation of SB-Kit													
Shipping													
4.4 Removal of ECB													
4.5 Return of ECB													
4.6 Inspection of ECB													
Refund													✓
4.7 Installation of SB Kit													

Fig. 2: Schematic (example) of typical Retrofit Cycle

<sup>1</sup> The performance of the Engine Control Box retrofit campaign with limited pool resources and a time constraint due to AD compliance date requires a strict control of modification processes and turnaround times. That means that an interruption of the modification chain must be avoided under any circumstance.

To ensure short turnaround times and a continuous process of modification/retrofit, a deposit is introduced to stimulate immediate shipment of originally installed pre-mod Engine Control Boxes by the operator. No deposit is required, if a customer wants to modify his own pre-mod Engine Control Box without exchange post-mod unit required.



## 5. Options

On request and to be charged separately, deployment of a 328SSG team to modify the Engine Control Box(es) on-site and assist in SB performance is offered. As this requires extensive preparation and planning, interested customers are requested to contact 328SSG at their earliest convenience.

## 6. Terms of Payment

- SB Material Kit including Modification of customer owned Engine Control Box at 328SSG

Sales Price: 26.087,-- € (incl. 3<sup>rd</sup> Amplifier),  
25.068,-- € (without 3<sup>rd</sup> Amplifier)  
35.493,-- € for Mod. 30

Payment Terms: 50% down payment with Purchase Order, 50% payment before Kit delivery to customer. Discrepancies will be charged as applicable.

- SB Material Kit including post-modified Exchange Engine Control Box

Sales Price: 26.087,-- € (incl. 3<sup>rd</sup> Amplifier) & deposit of 15.000,-- €,  
25.068,-- € (without 3<sup>rd</sup> Amplifier) & deposit of 15.000,-- €,  
35.493,-- € for Mod. 30 & deposit of 20.000,-- €

Payment Terms: 50% down payment with Purchase Order plus payment for deposit, 50% payment before Kit delivery. The deposit will be returned to the customer in full or with a discrepancy repair/replacement offset after inspection at 328SSG.

- On-site service team without material kit

Sales Price: will be individually quoted.

Payment Terms: 50% down payment with Purchase Order, 50% payment before team starts service.

## 7. Where to order

**328 Support Service GmbH**  
**Order Administration Team**  
**Telephone: +49 (0)8153 88111 3717**  
**Telefax: +49 (0)8153 88111 4628**



Dornier 328  
Customer Support  
Information



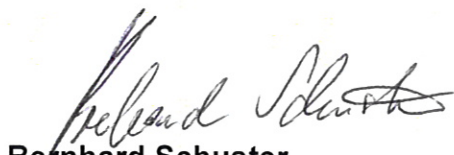
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P. O. Box 1252 - D-82231 Wessling/Germany


**IMPORTANT NOTE:**

1. After start of the retrofit campaign it became obvious, that the majority of returned (pre-mod) ECB's are in such condition that considerable replacement of parts – not only confined to the power lever kinematics – became necessary. As mentioned above such replacements are not covered in the modification price and to be borne by the sender.
2. It must be assured that all ECB's returned to 328SSG arrive in a configuration without CAM Switches and covers (see attached detailed information). Please note that this is imperative due to the fact that the condition of the switches as far as wear is concerned can not be determined and functionality can not be guaranteed. Therefore the sender has to reuse the switches removed from the pre-mod ECB and install them in his pos-mod ECB. An ECB shipped to 328SSG with switches installed will be rejected and returned to sender.
3. 328 Support Services GmbH (328SSG) reserves the right to decide which parts are defective and have to be replaced.

Please direct all inquiries and communication concerning this subject to:

328 Support Services GmbH  
Global Support Centre  
[GSC.OP@328support.de](mailto:GSC.OP@328support.de)  
Telephone: +49 (0)8153 88111 6666  
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