

F.ACT.O.R.

FOLLOW-UP ACTION ON OCCURRENCE REPORT



FACTOR n.:	01/2017	issue date <small>(data di emissione)</small>	02/02/2017	Rev. <small>(stato di revisione)</small>	0
Operation type <small>(tipo di volo)</small>	<input type="checkbox"/> commercial air transport <small>(trasporto aereo commerciale)</small>	<input checked="" type="checkbox"/> general aviation <small>(aviazione generale)</small>	<input type="checkbox"/> aerial work <small>(lavoro aereo)</small>	<input type="checkbox"/> other _____ <small>(altro)</small>	
a/c category <small>(categoria aeromobile)</small>	<input checked="" type="checkbox"/> Fixed wing <small>(ala fissa)</small>	<input type="checkbox"/> Balloon <small>(mongolfiera)</small>	<input type="checkbox"/> Glider <small>(alante)</small>	<input type="checkbox"/> RPAS <small>(SAPR)</small>	
1st a/c involved <small>(1° a/m coinvolto)</small>	<small>manufacturer (costruttore)</small>	<small>type (modello)</small>	<small>Registration Mark (marche)</small>		
	Tecnam	P2002	F-GXEC		
2nd a/c involved <small>(2° a/m coinvolto)</small>	<small>manufacturer (costruttore)</small>	<small>type (modello)</small>	<small>Registration Mark (marche)</small>		
	-	-	-		
Occurrence Location: <small>(luogo incidente)</small>	Andernos-les-Bains (France)		Occurrence date: <small>(data dell'evento)</small>	26/10/2013	

Technical Investigation Report * issued by: <small>(Rapporto di Investigazione emesso da)</small>	<input type="checkbox"/> ANSV <input checked="" type="checkbox"/> BEA (Bureau d'Enquetes e d'Analyses)	n. <small>(if applicable – se applicabile)</small>
Title: <small>(titolo del Rapporto)</small>	Failure of a rudder control component, runway excursion during landing, coming to a standstill in a ditch	
Ref. no.: <small>(n. di protocollo)</small>	002132/BEA/D	Incoming Date: <small>(data del protocollo)</small> 14 September 2016

Event description (copied from *):
(descrizione dell'evento – tratto da *)

The aeroplane landed shortly beyond the displaced threshold on unpaved runway 13, rolled about 100 metres and exited the runway to the right. After crossing the taxiway, it came to rest in the adjacent ditch.



FOLLOW-UP ACTION

Safety Recommendation no.:
FRAN-2016-037
(Raccomandazione di Sicurezza n.)

The Italian production Supervisory Authority ensure that the manufacturer of the Tecnam P 2002 improves the welding and weld inspection processes, to reduce the risk of crack initiation.

ENAC Recommendation Assessment *(posizione dell'ENAC):*

- | | |
|---|--|
| <input type="checkbox"/> agreement <i>(in accordo)</i> | <input type="checkbox"/> no longer applicable <i>(non più applicabile)</i> |
| <input type="checkbox"/> partial agreement <i>(parzialmente in accordo)</i> | <input type="checkbox"/> more information required <i>(richieste ulteriori informazioni)</i> |
| <input checked="" type="checkbox"/> disagreement <i>(in disaccordo)</i> | <input type="checkbox"/> not responsible <i>(non responsabilità di ENAC)</i> |
| | <input type="checkbox"/> unknown <i>(non definita)</i> |

ENAC response *(valutazione dell'ENAC):*

From the information received, Tecnam does not consider the pedal as the root cause of occurrence but it could be more probably the result of the incident. The root cause of issue is more probably the landing procedure performed by Pilot, who in this specific case with critical cross wind (around 90°, with gust 10Kts) didn't manage correctly the landing operation, increasing overly the loads on the pedals. Probably he aligned the NLG before to touch ground creating an excessive load which damaged the pedal linkage.

Another possible conclusion could be that the pilot landed out of paved runway and was not able to break and keep the control of the aircraft avoiding to come into ditch.

The conclusions above are confirmed from bent rod which indicate the high load transmitted on pedal (Before landing and after).

Considering that the airplane P2002 JF s/n 038, delivered in May 2006, had 3195 flight hours without problem Tecnam is confident that the issue is not related to production issue. In addition, the problem occurs on a part which is made in special steel (4130 welded), material known for its great fatigue strength and low propagation speed of cracks.

Moreover Tecnam informs that damaged pedal is installed on around 2500 aircraft (countering CS-VLA and UL/LSA) and considering that only 2 occurrences were received on it, the failure rate is very low, around ≈0,0008.

Finally Tecnam didn't receive occurrences on the pedal, without counting this latter, since 2011.

In addition the two occurrence analyzed with EASA PCM, have been detected during the application of SB-018, so also the limits, reported in the SB, are appropriate to detect the damage.

Therefore also if the crack was present, as third remote possibility, it underlines a probably poor maintenance by customer, which didn't detect the crack, if present, in the previous maintenances.

EASA PCM agrees with Tecnam investigation and conclusion.

Although during the POA audit a revision of SB-018 has been proposed, at the end Tecnam didn't consider necessary, from all performed investigation, further corrective actions because no similar occurrences were received since 2013, and therefore the SB results to be adequate to identify the cracks.

Completion Status *(cross the applicable %)*
(stato di completamento del follow-up – segnare con una X la % applicabile)

0 %	25 %	50 %	75 %	X
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