



Ministerio de Fomento
AGENCIA ESTATAL DE SEGURIDAD AÉREA

**AIRWORTHINESS
DIRECTIVE**

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PAGE:
1/3

AFFECTED PRODUCTS: Gyroplanes Ultralight (ULM) ELA, models ELA-07 R-115 and ELA-07 R-100 (Type Certificate DGAC No. 284) and homebuilt aircraft aircrafts (Orden de 31 de mayo de 1982, BOE de 5 de junio) built from a "kit" ELA-07.

MANUFACTURER: ELA AVIACIÓN S.L.

ISSUE DATE: June 7th, 2013.

REFERENCE: ELA AVIACIÓN S.L. Service Bulletins No. 15 and 16.

EFFECTIVITY DATE: The day after of the issue date.

DESCRIPTION: As a result of breakage of the hub bar in the area of blade attachment in a microlight gyroplane manufactured by ELA AVIACIÓN S.L., model: ELA-07 R-100 during flight broke away a blade together with a part of the hub bar to which was attached. The "Comisión de Investigación de Accidentes e Incidentes de Aviación Civil" (CIAIAC), has established that the cause for which the blade was broke away in-flight, has been produced by a fatigue process, favoured by some holes counterbores on the underface of the piece. It also has joined the fact that the piece has not manufactured with the material detailed in the drawings of project, specified by the manufacturer.

COMPLIANCE: Before 10 flight hours after the entry into force of the Directive must perform the following actions:

1^o Accommodations of screw heads on the underface of the rotor hub bar must be inspected to know if they were machined (counterbox or countersunk) or not.

2^o If the accommodations of screw heads on the underface of the rotor are not mechanized, there is not necessary any action [hub bar P/N 14-145C (fig. 4)]

3^o If the accommodations of screw heads on the underface of the rotor are mechanized, [hub bar P/N. 14-145 (figure 1) and P/N 14-145B (figures 2 and 3)], the inspection must continue as follow:

3.1 Inspect the possible existence of cracks in the edge of the underface of the rotor hub bar. For this, lower the rotor, and remove screws from the screws housing following the instructions given by the service bulletins of the reference, depending on the hub bar: P/N 14-145 (SB No. 15) or hub bar P/N 14-145B (SB No. 16)

3.1.1 If cracks are found, then the gyroplane must not fly and the hub bar must be replaced by the hub bar P/N 14-145C (fig. 4) following the instructions for replacement given by the Service Bulletin No. 15, for hub bars P/N14-145, and by Service Bulletin No. 16 for hub bars P/N 14-145B.

3.1.2 If no cracks are found, then the gyroplane may be returned to service. Once inspected, the inspection must be repeated each 10 hours of flight, and then must be inspected again by following the guidelines given in 3.1.1.

Finally, before the 150 hours of flight from the first inspection, the hub bar, always, must be replaced by the hub bar P/N 14-145C (fig. 4).



Figure 1. Hub bar (without conicity) P/N: 14-145



Figure 2. Hub bar P/N: 14-145B



Figure 3. Detail of the Hub bar P/N: 14-145B



Figure 4. Detail of the Hub bar P/N: 14-145C

ADDITIONAL INFORMATION: For further information, contact:
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DIRECTOR, AIRCRAFT SAFETY

(SPANISH ORIGINAL SIGNED)

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