

TECHNICAL NOTE

Controlling the propeller hub for the DUC Flash II, Flash II LBT and Flash-Back PV, and mounting of a spacer.

COMPULSARY

Employed symbolic:

This note uses three levels of warnings: DANGER, CAUTION and NOTE, associating three colours red, yellow and grey. The meanings are as follows:

DANGER

Identifies an important instruction that, if not followed, can cause damages and accidents whose consequences can lead to serious physical injuries or even death.

CAUTION

Identifies an important instruction that, if not followed, can cause serious accidents or even physical injuries.

IMPORTANT NOTE

Underlines an instruction that, if not followed, can cause damages to the engine or the gyroplane, and can also lead to the suspension of warranty.

REMARK Identifies practical information for a better use of the product.

During a revision of the document (for example Rev1), a vertical line in the left margin of the document shows a change in the text or in the illustration.

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SB-JRO-912-914-003

TECHNICAL NOTE

To ensure satisfactory results, the operator has to scrupulously respect the procedures written in this document, applying widely used methods and good common mechanical sense, all the time in the respect of its national regulations. All nylstop nuts unscrewed during the operations must be replaced with new ones.

DTA sas shall not be liable for the quality of the work done during the operations required by the present document.

1 - Information

- **Date :** May 16th 2016
- Impacted aircrafts : J-RO 912S & 914 equipped with DUC FLAH II, FLASH II LBT and FLASH BACK PV propellers, from n°1 to n°42 included..
- > Application : immediately
- > **Motivation :** Prevent any risk of deformation of the carbon propeller hub.

We noticed, on a few recent propellers of this kind, a deformation of the surface of the carbon forged face of the hub in contact with the driving pulley (SEE example on photo paragraph 3), and an exaggerate free play between the aluminum centering pins and the carbon. The depth of this deformation is variable : from a simple scratch to a 1.5mm recess

- > Object :
 - 1° Removal of the propeller
 - 2° Control of the surface of the half hub in contact with the pulley
 - 3° Mounting of extra spacer plate
 - 4° mounting of the propeller back, and tightening of the bolts and nuts to the torque.

Note : If the recess of the half hub is thicker than a simple scratch or a light marking, or in ase of doubt, please send us a picture, specifying the serial number of the J-RO, the serial number of the half hub, as well as the operating hours for the aircraft and the propeller

> Risks :

Even a light recess of the carbon half hub can lead to the progressive loosening of the fixing bolts, as well as abnormal vibrations.

Labour : (time needed : 1 H)

- ⇒ France : Maintenance can be done by the owner/pilot himself, if he has the technical capacities and knowledge, as well as the tooling and supplies required.
- ⇒ Other countries : Please approach the local aviation authorities to conform to your specific regulations. Generally, maintenance is done by a certified mechanic.

> DTA SAS reference documents:

- ⇒ Illustrated Parts Catalog J-RO Edition n°2 Décembre 2015
- ⇒ Instruction Manual DUC, FLASH range of propellers

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2 - Supplies

- > Cost, availability, Information :
 - A flange will be sent on demand by DTA SAS (Code HG751 cost : 22.20 € incl VAT + port)
 - A half propeller hub will be sent if necessary, after expertize (Cost : 156 € incl VAT + port)
 - ➡ Costs linked to the immobilization of the machine and eventual loss of time and income, costs linked to telephone calls and delivery of parts, are not covered by this note and will neither be taken into account nor reimbursed by DTA.
- > Tooling :
 - ⇒ Torque wrench with appropriate end bit for CHC M8 screw

> Lubricants/Threadlocker/diverse :

⇒ Non relevant

3 – Realization procedure

> Safety procedures : The gyroplane will be immobilized, engine OFF, general switch OFF.

> Preparation :

⇒ Ask for the flange at DTA sas

> Operations :

- 1° Upon reception of the flange, remove the propeller
 - \Rightarrow Control the state of the surface of the half hub in contact with the driving pulley.



 \Rightarrow If the surface state is satisfactory, : Put the flange on, and mount the propeller back.

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⇒ When in doubt, please send us a good quality photo : After expertize, we can eventually send you a replacement half hub

Note : Example of a very importante recess, meaning the replacement of the half hub.



<u>Flash-Back PV :</u> It will be necessary to adjust the length of the carbon control rod, in order to take into account the thickness of the flange (4 mm).

> Finition and controls :

1° The thightening will be done in 2 or 3 successive operations to reach the final 25 N.m (2.5 Kg/m) value (Flash-Back PV : 20 N.m)