

AVIONS ROBIN

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BULLETIN SERVICE N°145 rév. 2 / SERVICE BULLETIN N°145 rev. 2

IMPERATIF

OBJET ATTACHES VOILURES

AVIONS CONCERNES

HR200/100, HR200/120, HR200/120B, HR200/160,
HR200/100S,
R2160, R2100, R2100A, R2160D, R2112, R2160i

DELAI D'APPLICATION:
HR200/R2000: Voir texte

APPROBATION D.G.A.C.
28.01.99

Dans l'attente des résultats d'investigations en cours et à titre conservatoire, procéder aux vérifications suivantes (celles-ci sont associées à l'application de la dernière édition du programme d'entretien du constructeur et au respect des figures acrobatiques autorisées et des vitesses d'entrée figurant en section 4 approuvée du manuel de vol):

HR200/100, -/120, -/120B, -/160, -/100S:

- A la prochaine visite de 100 h puis, conformément au programme d'entretien, à chaque visite type 1000 h: Vérification du couple de serrage des boulons d'attaches voilure avant, principales et arrière. En cas d'anomalie, contacter le constructeur avant toute intervention.
- Annulation de la limitation en catégorie N à la suite de la visite de 100 h.

R2160, R2100, R2100A, R2160D, R2112, R2160i (cat. "A" et cat. "U"):

- Dès réception du BS, à titre conservatoire et sur demande des autorités:
Remplacement des boulons de fixations d'attaches voilure avant, principales et arrière (sauf pour avions N/S 299 et suivants), selon Note NAV 96-3 disponible sur demande.
- Conformément au programme d'entretien, à la première visite de 50 h après le remplacement des boulons, puis à chaque 100 h:
Vérification du couple de serrage des boulons d'attaches voilure avant, principales et arrière. En cas d'anomalies constatées, contacter le constructeur avant toute intervention.

Ces travaux ne peuvent être effectués qu'en atelier agréé.

Le Bulletin Service n°145 rév.1 du 02/05/96 est annulé et remplacé par la présente révision.

MANDATORY

SUBJECT WING ATTACHMENTS

AIRCRAFT AFFECTED

HR200/100, HR200/120, HR200/120B, HR200/160,
HR200/100S,
R2160, R2100, R2100A, R2160D, R2112, R2160i

TIME OF COMPLIANCE
HR200/R2000: See the text

D.G.A.C. APPROVAL
28.01.99

Awaiting the results of the investigations in process and as a conservative measure, proceed to the following checks (these checks are to be associated to the application of the manufacturer maintenance schedule and to the respect of the authorised aerobatic figures and entry speeds mentioned in the approved section 4 of the flight manual):

HR200/100, -/120, -/120B, -/160, -/100S:

- *At the next 100 h visit then at each 1000 h visit (in accordance with the maintenance schedule):
Check the torque value of the front, main and rear wing attachment bolts. In case of anomaly, contact the manufacturer before any further action.*
- *The limitation to N category is cancelled after the 100 h visit.*

R2160, R2100, R2100A, R2160D, R2112, R2160i (*"A" and "U" cat.:*)

- *On SB receipt: Replacement of the main spar bolts (except for aircraft S/N 299 and higher) as a conservative measure and upon the Authority request (refer to the Note NAV 96-3 available on request).*
- *Check the torque value of the main, front, rear wing attachments at the first 50 h visit after the replacement of the bolts, then at each 100 h visit, in accordance with the maintenance schedule. In case of anomaly, contact the manufacturer before any further action.*

These checks must be carried out in an authorised workshop.

The present revision supersedes the SB n°145 rev.1 dated 02/05/96.

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**NOTE NAV 96-3 revision 1
(linked to SB n°145 rev. 2)**

REPLACEMENT AND CHECKING OF THE R2000 WING ATTACHMENT BOLTS

1 - PREPARATION

- 1.1 -** Aircraft put on wheels: remove the seats, the wing root fairings.
- 1.2 -** Tear off the carpet under the seat from all the horizontal surface and cut it along the box front corner (take care not to scratch the structures).

2 - MAIN SPAR BOLTS (12 BOLTS)

2.1 - Removal

CAUTION: The bolts must be replaced one after the other that means from beginning to end of the process the 5 other bolts are set and correctly torqued.

- Unscrew using a ratched handle wrench with universal joint extension bar
- Push out the screw and clean

2.2 - Checking of the screw

Note: The screws may be either 10.0 dia. ones or 10.3 dia. ones. The nut are the same for these two types.

Carefully look at the screw to discover possible damages: distortion, fretting, corrosion, damaged threads...

2.3 - Checking of the nut

The nuts Nylstop 10PA106 P/N 95.24.25.000 (hexagonal head, nylon self locking) and the nuts Simloc 10PH135M P/N 95.24.39.000 (hexagonal, light, elliptical self locking) fitted with a separate washer P/N 95.61.13.000 (and which are torqued to 5 m.daN ; 435 in.lbs) **MUST BE REPLACED WITH** Simloc 10RH8035M nuts, P/N 95.24.39.010 (which must be torqued to $3,0 +^{0,5}_0$ m.daN ; 260 to 300 in.lbs).

2.4 - Checking of the bore

- Clean the bore (inside included) with a lightly fueled cloth or with a bottle brush.
- Using an inspection mirror, check bores for cleanliness.

2.5 - What to do if an anomaly is discovered

Inform the manufacturer.

2.6 - Setting of a new bolt

- 2.6.1 -** Ensure that the screw is of the same type as the removed one and authorised:
dia. 10 screw: P/N 95.13.54.000
dia. 10,3 screw: P/N 95.13.54.010

- 2.6.2 -** The bolts must be fitted head forward, nut backward (referring to the flight direction), no washer under the head.

- 2.6.3 -** Coat the screw shank with Mastinox P/N 95.40.10.000 and fit the screw. Eventually use a mallet.

- 2.6.4 -** Clean the threaded part of the surplus of Mastinox with a dry cloth and put the nut P/N 95.24.39.010: nut with captive washer that means no separate washer.

2.6.5 - Tightening procedure

The aim is to get a $3,0 +_{0}^{0,5}$ m.daN (260 to 300 in.lbs) torque value (with nut 95.24.39.010).

First tighten to 2 m.daN - 174 in.lbs (prestress). then regularly torque from 2 m.daN (174 in.lbs) to 3 m.daN (260 in.lbs) without stop. This manoeuvre results in a rotation of the wrench of about 30° (1/12 rotation).

Nota: These torque loading must be applied with a calibrated torque wrench and the threaded part of the bolt is clean from grease.

3 - FRONT AND REAR ATTACHMENT BOLTS

3.1 - Removal for checking

Each bolt must be checked (and/or replaced) without removal of the other and vice versa.

3.2 - Checking of the screw

The checking procedure is the same as for main attachment bolts.

Note: The screws may be either 10.0 dia. ones or 10.3 dia. ones. The nut are the same for these two types.

Carefully look at the screw to discover possible damages: distorsion, fretting, corrosion, damaged threads...

3.3 - Checking of the nut

The nuts Nylstop 10PA106 P/N 95.24.25.000 (hexagonal head, nylon self locking) and the nuts Simloc 10PH135M P/N 95.24.39.000 (hexagonal, light, elliptical self locking) fitted with a separate washer P/N 95.61.13.000 (and which are torqued to 5 m.daN ; 435 in.lbs) **MUST BE REPLACED WITH Simloc 10RH8035M nuts, P/N 95.24.39.010** (which must be torqued to $3,0 +_{0}^{0,5}$ m.daN ; 260 to 300 in.lbs).

3.4 - Checking of the bore

- Clean the bore (inside included) with a lightly fueled cloth or with a bottle brush.
- Using an inspection mirror, check bores for cleanliness.

3.5 - What to do if an anomaly is discovered

Inform the manufacturer.

3.6 - Setting of a new bolt

- 3.6.1 -** Insure that the screw is of the same type as the removed one and authorised:
rear attachment, dia. 10 screw: P/N 95.13.13.000
rear attachment, dia. 10,3 screw: P/N 95.13.13.030
front attachment, dia. 10 screw: P/N 95.13.13.010
front attachment, dia. 10,3 screw: P/N 95.13.13.020

3.6.2 - Front attachment:

The bolt must be fitted head forward, nut backward (referring to the flight direction).

Rear attachment:

The bolt must be fitted head forward, nut backward (referring to the flight direction)

Nota:

- Rear attachments for aircraft Serial Nr < 311:
1 washer P/N 95.61.13.000 under the head of the screw
- Rear attachments for aircraft Serial Nr ≥ 311:
No washer under the head of the screw

- 3.6.3 -** Coat the screw shank with Mastinox P/N 95.40.10.000 and fit the screw. Eventually use a mallet.

- 3.6.4 -** Clean the threaded part of the surplus of Mastinox with a dry cloth and put the nut P/N 95.24.39.010: nut with captive washer that means no separate washer.

3.6.5 - Tightening procedure

The aim is to get a $3,0 +_{0}^{0,5}$ m.daN (260 to 300 in.lbs) torque value (with nut 95.24.39.010)

First tighten to 2 m.daN - 174 in.lbs (prestress). then regularly torque from 2 m.daN (174 in.lbs) to 3 m.daN (260 in.lbs) without stop. This manoeuvre results in a rotation of the wrench of about 30° (1/12 rotation).

Nota: These torque loading must be applied with a calibrated torque wrench and the threaded part of the bolt is clean from grease.