



# TECHNICAL NOTE

## Tightening of the screws holding the rear wheels callipers on the J-RO

### 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.

#### **ATTENTION**

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.

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.

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

## 1 - Information

- **Date:** January 9th 2015
- **Impacted aircrafts:** J-RO 912/914 nb001 to nb032
- **Application:** Immediately
- **Motivation:** A bad tightening and the loss of two out of the three screws holding one of the brake callipers was not seen by the owner during the prescribed maintenances at 25 hours and at 100 hours, nor was it found during the standard pre-flight checks. That situation led to the loss of the calliper at 120 hours.
- **Object:** Checking the tightening of the 3 screws holding each of the two brake callipers.
- **Risks:** loss of one or both of the brake callipers, meaning the inability to slow down the gyroplane during taxiing on the ground, damages to the brake calliper, to the rim and to the brake hose.

### **DANGER**

Not respecting this instruction can cause damages to the gyroplane or physical injuries, serious or even deadly.

- **Labour :** estimated time 45 min
  - ⇒ 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.
- **Reference documents :**
  - ⇒ Illustrated parts catalogue Section AG Page 13/14 and 17/18 (CF pages 4, 5, 6 & 7 of this document)
  - ⇒ Maintenance manual

## 2 - Supplies

- **Cost, availability, information :**
  - ⇒ Part prices, availability, eventual advice, are to be asked to DTA or their resellers.
  - ⇒ Cost for small supplies, safety wire, thread lock paste, grease,... nonspecific nuts and washers, costs linked to the immobilisation of the machine and eventual loss of time and income, costs linked to the 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 ALLEN tip 5 for CHC screw Ø6
- ⇨ Universal hexagonal socket Torque wrench Ø 10 for H6 nuts
- ⇨ Safety wire twister

➤ **Lubricant/Thread lock paste/diverse :**

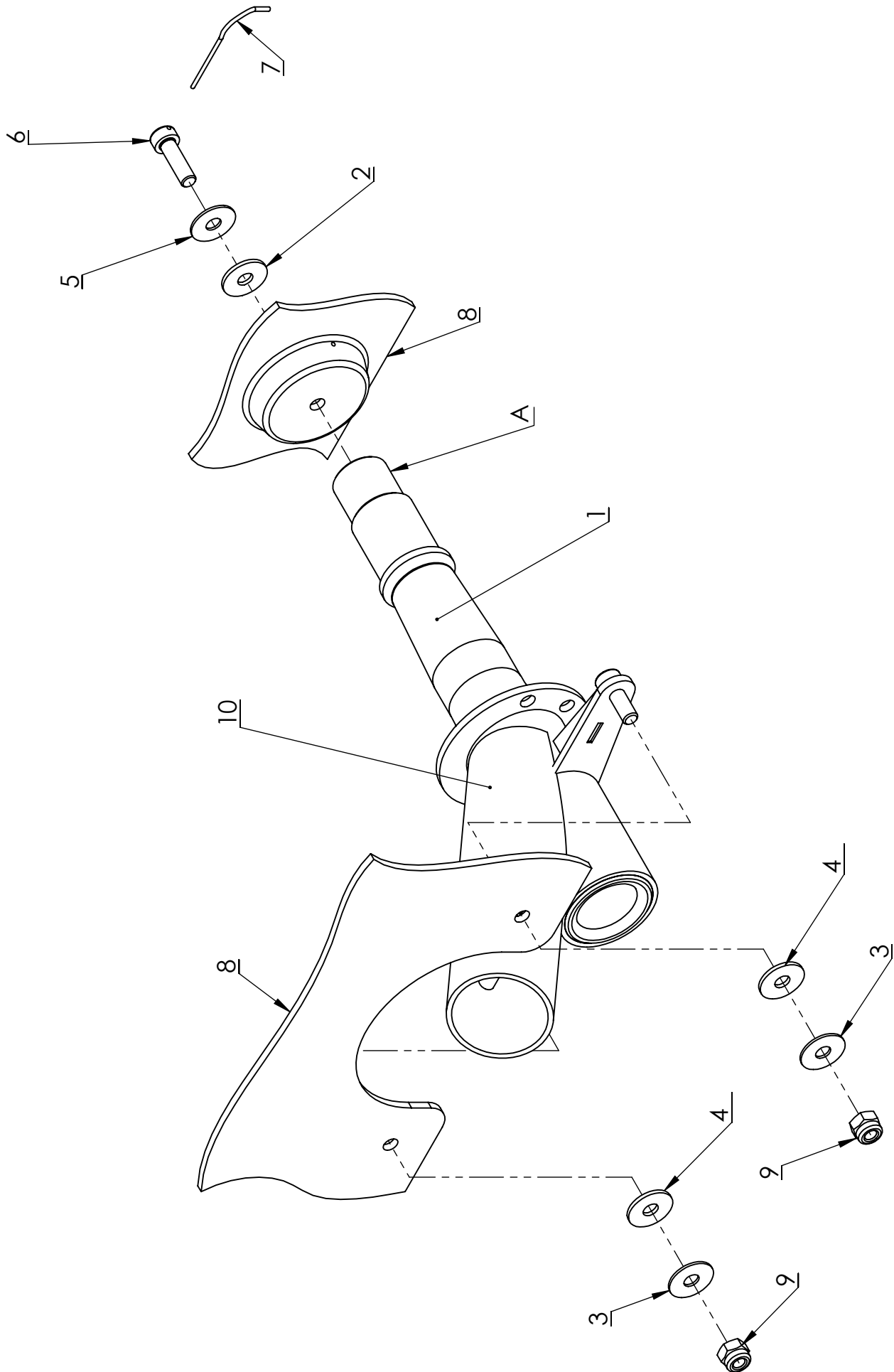
- ⇨ Blue thread lock LOCTITE 242 (only)
- ⇨ Safety wire Ø 0.8 (L 0.60 ML)
- ⇨ Nylstop nut M6 (Qty. 4)

### 3 – Realisation procedure

- **Safety procedures:** The gyroplane will be immobilized, engine off, general contact OFF.
- **Preparation:** Take out the wheels fairings
- **Operations:** to make on each one of the two wheel shafts (left and right).
  - ⇨ Unscrew each one of the 3 M6x16 CHC screws (section AG p13 marked 6)
  - ⇨ Take out the first screw completely, and screw it back with blue thread lock LOCTITE 242
  - ⇨ Tightening torque : 8 Nm
  - ⇨ Repeat the same operation on the 3 screws.
- **Reassembly:**
  - ⇨ Put back in place the wheel fairings
  - ⇨ Replace the nylstop M6 nuts
  - ⇨ Tightening torque H6 nut and external screw CHC 6 : 6 Nm only because the composite part is sandwiched in between.
  - ⇨ Secure the external CHC 6 screw with safety wire ( → )  
 Note: The safety wire goes round the wheel shaft (Section AG, page 17, marked "A")



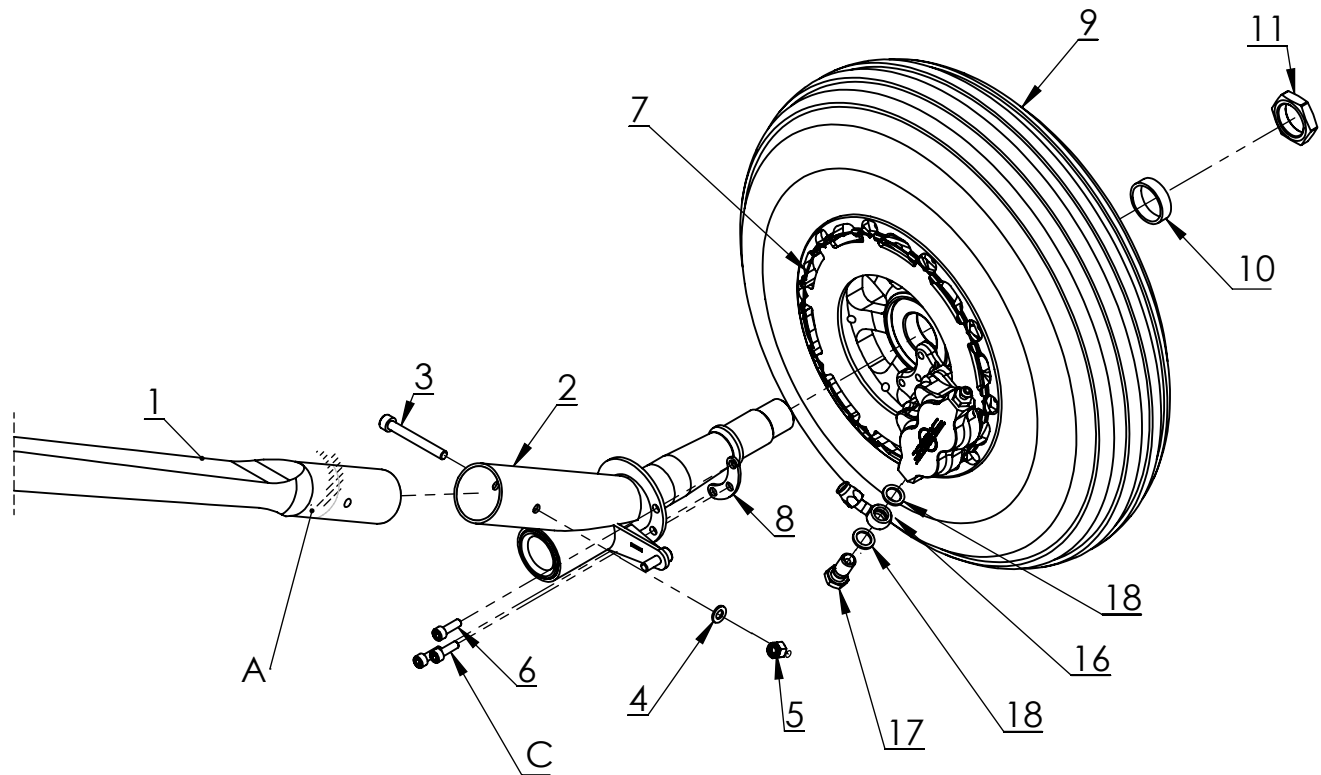
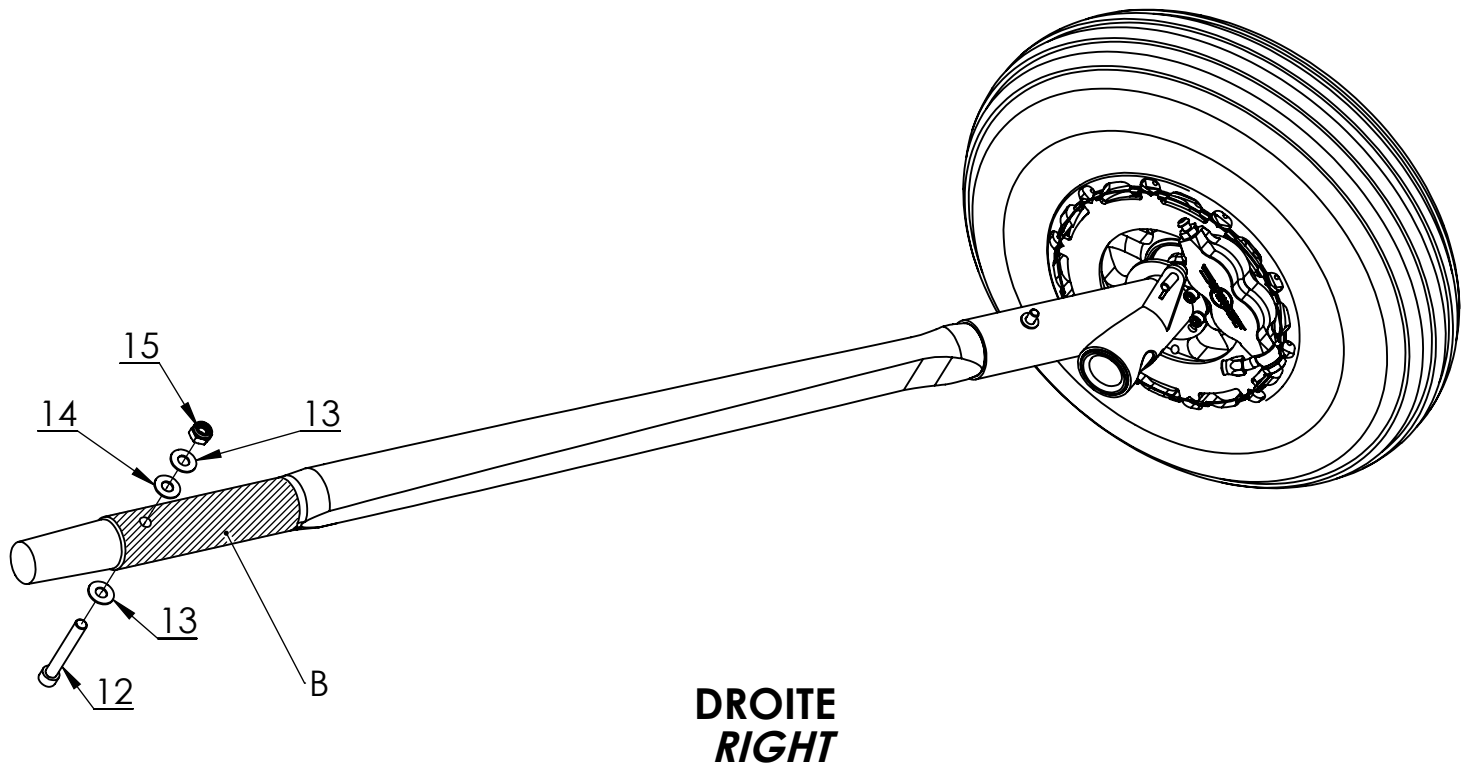
# Carénage de roue arrière / Back wheel fairing



**Carénage de Roue Arrière / Back wheel fairing**

Fig N°	Code	Rev.	Description	Qté/PL
1	AG030-1		AXE DE ROUE BERINGER <i>BERINGER WHEEL SHAFT</i>	1
2	B0559		RONDELLE NYLON 28x8/1,5 <i>NYLON WASHER 28x8/1,5</i>	1
3	B0529		RONDELLE L6 INOX <i>WASHER L6 STAINLESS</i>	1
4	B0552		RONDELLE NYLON 18x6/1,5 <i>NYLON WASHER 18x6/1,5</i>	3
5	BE539		RONDELLE LL8 INOX <i>WASHER LL8 STAINLESS</i>	3
6	AG034		CHC 6X20P carénage de roue <i>HSHC 6X20P wheel fairing</i>	1
7	RA001139-1		Fil à freiner ø0,8 <i>Safety wire ø0,8</i>	
8	NG024 / NG023		CARENAGE DE ROUE GAUCHE / DROIT <i>BACK WHEEL FARING LEFT / RIGHT</i>	1
9	B0422		ECROU NYLSTOP M6 <i>NYLSTOP NUT M6</i>	2
10	AG031		FUSEE <i>Wheel axle</i>	1
A			LE FIL A FREINER FAIT LE TOUR DE LA ROUE <i>Safety wire (7) goes round the wheel axle</i>	

**Fusée, roue arrière / Spindle, back wheel**  
**Jambe de train Landing gear leg**



**Fusée, Roue Arriere, jambe de train / Spindle, Back Wheel, landing gear leg**

Fig N°	Code	Rev.	Description	Qté/PL
1	AG045 (AG050)		JAMBE DE TRAIN (JAMBE DE TRAIN EXPORT) LANDING GEAR LEG (EXPORT LANDING GEAR LEG)	1
2	AG030		FUSEE SPINDLE	1
3	B0132		CHC 6X50 HSHC 6X50	1
4	BE510		RONDELLE INOX Z6 WASHER STAINLESS Z6	1
5	B0422		ECROU NYLSTOP H M6 NYLSTOP NUT H M6	1
6	B0115		CHC 6X16 HSHC 6X16	3
7			fil à freiner ø1 safety wire ø1	3
8	AG033		CALE ETRIER BERINGER CALIPER SHIM BERINGER	1
9	AG039		ROUE BERINGER avec pneu BERINGER WHEEL with tyre	1
10	AG038		ENTRETOISE 26x30/8 SPACER 26x30/8	1
11	B0430		ECROU NYLSTOP SIX PANS 25X150 NYLSTOP NUT HEX 25X150	1
12	AG323 (AG324)		CHC 8X56/10 (CHC 8X70/12 pour export) HSHC 8x56/10 (HSHC 8x70/12 for export)	1
13	BE512		RONDELLE INOX Z8 WASHER STAINLESS Z8	2
14	BE521		RONDELLE INOX M8 WASHER STAINLESS M8	1
15	B0424		ECROU NYLSTOP M8 NYLSTOP NUT M8	1
16	AG322D		DURITE FREIN DROITE avec raccord banjo 90° (à gauche AG322G) BRAKE HOSE RIGHT with banjo fitting 90° (left side AG322G)	1
17	FMG802		VIS BANJO SIMPLE M10x100 BANJO SCREW SIMPLE M10x100	1
18	FMG801		JOINT CUIVRE BANJO COPPER JOINT BANJO	2
A			Etanchéité: cordon de colle epoxy largeur 5 mm / Sealing: epoxy adhesive bead thickness 5 mm	
B			Graissage synthétique haute performance emmanchement sup (hors cône) / Synthetic lubrication high performance upper fixing (out of cone)	
C			Frein filet bleu LOCTITE 242 Threadblocker blue LOCTITE 242	
			<b>Note:</b> pression 1,6 bar / 1,6 bar pressure	
			Roue BERINGER: kit circlips, roulements, etc. CF: catalogue BERINGER roulements petits: B_BE_001 roulements grands: B_BE_002 BERINGER wheel: kit circlips, bearing, etc. SEE: BERINGER catalog small bearings: B_BE_001 big bearings: B_BE_002	