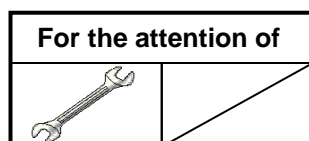# SAFETY INFORMATION NOTICE

<u>**SUBJECT**</u>: **POWER PLANT**

Change of responsibility for the Arriel 2B and 2B1 free wheel following MOD 07-9560
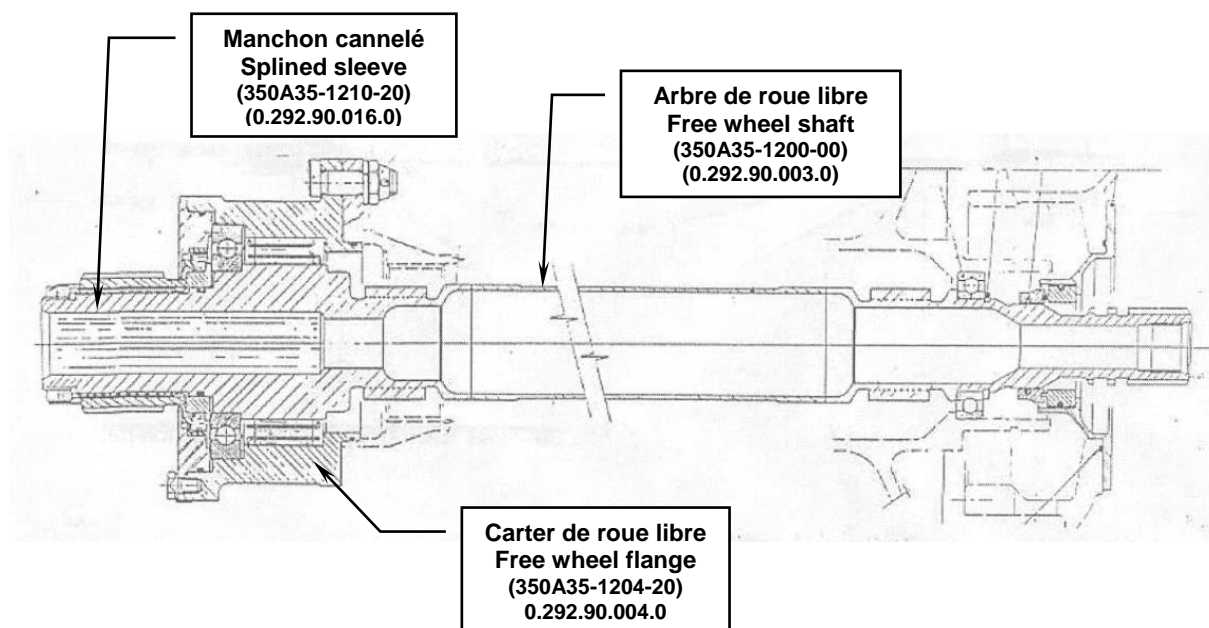
For the attention of	

AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
AS350	B3	
AS550		C3
EC130	B4	

The purpose of Revision 2 is to introduce additional information for cases where the numbers of operating hours and cycles logged by the MGB are unknown.

Airbus Helicopters informs you that, following the technical and commercial cooperation protocol agreed between Turbomeca and Airbus Helicopters, the definition of the free wheel assembly of Arriel 2B and 2B1 engines becomes the responsibility of Airbus Helicopters following embodiment of MOD 07-9560.

This change of responsibility does not lead to any modifications to the design or maintenance procedures in force.

The main parts which make up the free wheel assembly are the free wheel itself, the flange, the free wheel shaft and the bearing. These parts will have a dual Part Number comprising the Turbomeca Part Number and the Airbus Helicopters Part Number.

**Manchon cannelé
Splined sleeve
(350A35-1210-20)
(0.292.90.016.0)**

**Arbre de roue libre
Free wheel shaft
(350A35-1200-00)
(0.292.90.003.0)**

**Carter de roue libre
Free wheel flange
(350A35-1204-20)
0.292.90.004.0**

The service life limits of the splined sleeve and the free wheel shaft, which were so far expressed in flying hours, are now expressed in Torque Cycles (TC).

The splined sleeve is systematically scrapped by Turbomeca at each repair or complete overhaul of the free wheel assembly.

The parts with a service life limit, the free wheel shaft and the splined sleeve, are integrated in the Airbus Helicopters documentation (ALS/MSM).

As a first step, only free wheel shaft Part Numbers 350A35-1200-00 / 0.292.90.003.0 are concerned by the follow-up in torque cycles. Part Number 0.292.90.033.0 is still to be followed up in flying hours, pending the update of the ALS.

For Part Number 350A35-1200-00 / 0.292.90.003.0, the number of torque cycles logged by the free wheel must be manually recorded in its Log Card each time an engine or free-wheel assembly is replaced.

The number of torque cycles logged by the free wheel ($TC_{free\ wheel}$) corresponds to the number of torque cycles logged by the Main Gearbox.

Start of counting:
In order to start counting the number of torque cycles logged by the free wheel, the number of torque cycles to be considered must be determined using the following formula, for the helicopter on which the engine is (or was) installed:
1. Calculate R = (Number $_{torque\ cycles}$ of the MGB / Number $_{flying\ hours}$ of the MGB) for the helicopter on which the free wheel is installed.
2. Recover "FH", which is the number of flying hours logged by the free wheel assembly since its installation as a new part or since the latest Complete Overhaul (information available in the Log Card of the free wheel).
3. Calculate $TC_{free\ wheel}$
   a. If R is less than or equal to 6, the number of torque cycles to be recorded for the free wheel is:
      ▪ $TC_{free\ wheel} = FH \times 6$
   b. If R is greater than 6:
      ▪ $TC_{free\ wheel} = FH \times R$
4. If the numbers of operating hours and cycles logged by the MGB are unknown, the number of torque cycles to be assigned to the free wheel is: $TC_{free\ wheel} = FH \times 6$.

Basic counting method:
Increment the number of torque cycles logged by the free wheel ($TC_{free\ wheel}$) with the number of torque cycles logged by the MGB and record the total number in the Log Card of the free wheel.

Analysis of the counting: If the service life limit expressed in torque cycles of one of the free wheel components is exceeded, please contact the Airbus Helicopters Support via WebTek in order to define the measures to be taken.

In the event of a modification to the definition, the maintenance documentation will continue to be managed by Turbomeca; it will be integrated into the engine documentation and approved by Airbus Helicopters.