

No. EC 016-2016

Support / Program

**Global Business Services** 

Marignane, 29/02/2016

Dear Customer,

The "Information Letter" is an additional means of communication intended to provide you with a regular summary of the main technical topics concerning each helicopter family. All the other forms of written communication remain valid, in particular the "Information Notices" whose content is more targeted but equally important.

The information given in this Letter is for information purposes only, it in no way replaces the official Maintenance publications issued by Airbus Helicopters or any other manual or recommendations in any form whatsoever.

This Letter is dedicated to the Ecureuil family (AS350/AS355/H125 and EC130/H130). It brings to your attention more information related to recent protective measures introduced by Emergency Alert Service Bulletins / Alert Service Bulletins, a status concerning some corrective solutions, some details about latest improvements carried out on the Product itself, and finally presents a synthesis of all actions carried out to reduce Costs of Operation and Maintenance for your fleet, even if some information were already provided in the previous Information Letter No. EC 014-2015 (February 2015) & No. EC015-2015 (July 2015), focused on H130 product.

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#### 1. GENERAL INFORMATION REGARDING THE FLEET: LIGHT HELICOPTERS FLEET BREAKDOWN

By the end of 2015, the worldwide in-service fleet of Light Helicopters products is distributed as follows:

- 182 x H130 aircraft (previously named EC130 T2)
- 427 x EC130 B4 aircraft
- 546 x H125 aircraft (previously named AS350 B3e)
- 599 x AS355 / AS555 aircraft
- 3,247 x AS350 / AS550 aircraft (including 1286 x B2 and 1035 x B3)

In total, **5,001** Light Helicopters were in service by End 2015, operated by more than 2,000 different Customers worldwide, which represents a little bit less than 50% of the whole Airbus Helicopters fleet flying worldwide.

The fleet leader in H130 / EC130 B4 fleet has accumulated more than 19,000 flight hours, for a total of 1,380,000 flight hours for this complete fleet.

The fleet leader in AS350 / H125 / AS355 fleet has accumulated more than 34,000 flight hours, for a total of 28,350,000 flight hours for this global fleet.

Over the last decade, the Ecureuil Family (AS350 / AS355 / H125 and EC130 / H130) has represented more than two third of the worldwide deliveries on the intermediate single segment.

#### Aerial work option on H130 product:

As already announced in the previous Information Letter, the H130 extended its versatility to Aerial Work missions, thanks to an increased external load capacity (1,500 kg // 3,307 lb). Its certification was obtained last May 2015, The main optional equipment are:

- a cargo-sling hook system which can be retrofitted according to Service Bulletin No. 130.25-50.09
- mirrors mounted externally underneath the cabin to enable the pilot to see the load and the hook while performing aerial work mission. The mirrors are positioned in front of the pilot to enable him monitoring the load and the instrument panel simultaneously : they can be procurable as a retrofit solution, by contacting Airbus Helicopters Canada under STC 130-201414 "B".

#### Weight & Balance application:

Airbus Helicopters proposes a new application for pilots on iPad, which consists in giving the possibility to calculate the helicopter's balance, taking into account the approved data provided and updated on a regular basis by the OEM.

This application will help the pilots to better prepare their missions and ensure that the operational limits of the aircraft will be always respected.

These calculations take into account the configuration of the aircraft according to its variables for mission, crew, passengers, fuel and freight. Configurations can be customized, depending on respective optionals and STC implemented on the aircraft.

This application can be downloaded via Apple Store, and will be available for H130 / EC130 B4 first (by Q2/2016), then for H125 / AS350 B3 / AS350 B2 (by Q3/2016).

# 2. PRODUCT UPDATES

# 2.1. FAN HOPPER MOUNT CRACKS - H130

Several cracks were reported over the past months on the fan hopper mount (cf Photo 1).

In october 2014, the Emergency ALERT SERVICE BULLETIN No. EC130-05A020 Rev0 was relased, requiring, as protective measure, a periodic visual check (during the P-inspection) of the hopper for crack detection at the attachments of the MGB oil fan to the hopper.

The Revision 1 of this EASB which was distributed in October 2015, provided a corrective solution to replace these checks: installation of 4 stainless steel rods to maintain the hopper mount. This corrective solution known as

Mod 07-4547, is defined in Service Bulletin No. EC130-79-001 which has been released simultaneously (Photo 2).

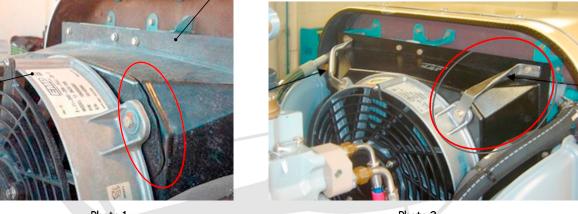


Photo 1

Photo 2

Implementation of these rods, which are provided Free Of Charge, is currently on going (Chart 1): the deadline fixed by respective Authorities (EASA as well as FAA) is November 22<sup>nd</sup>, 2016.

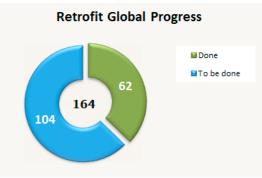


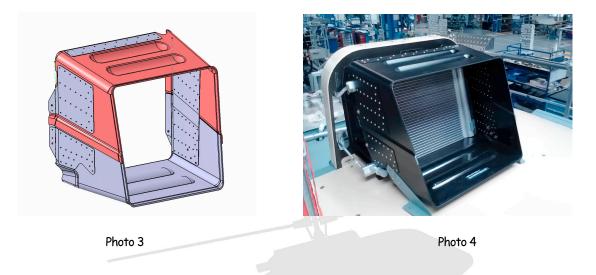
Chart 1 - Current retrofit status

Airbus Helicopters is currently working on an improved corrective solution to save weight by removing the rods. This new solution made of carbon composite will be available before end 2016, on newly produced helicopters as well as in retrofit through a dedicated Service Bulletin (retrofit will be under Customer request).

# PRODUCT INFORMATION lette R

# 2.2. AIR INTAKE CRACKS - H130

Several cases of cracks have been reported on the air intake oh the H130 (this part is made of polycarbonate). The rupture of the part has not been classified as Unsafe. A first solution has been provided to give the possibility to reinforce the current parts (preventive and/or curative solution): this reinforcement consists in adding doublers made of aluminium material (cf Photos 3 & 4). It corresponds to Mod 07-4557, and the retrofit is proposed, Free Of Charge, under Service Bulletin No. EC130-21-013 (released on February 1<sup>st</sup>, 2016). An improved solution made of carbon material will be proposed before End 2016, on newly produced helicopters and in retrofit (on Customer request).



# 2.3. ZODIAC AEROSPACE SEAT ISSUES: TYPE 198 & 284-SERIES

Here is a brief summary of respective on-going status on the -198 & -284 series seats.

#### Seat belt release knob broken:

As explained in the previous Information Letter, the root cause has been clearly identified by Zodiac Aerospace and its supplier Anjou Aeronautique, and the corrective solution has been defined. Retrofit of concerned buckles (737 in total) was required according to Service Bulletin No. 358SB-14-101 issued by Anjou Aeronautique in December 2014, and covered by Airworthiness Directives, with a deadline on July 2<sup>nd</sup>, 2015.

Despite several reminders (Safety Information Notices), only 44% of the concerned fleet have been retrofitted so far. We do encourage you, if concerned, to order as soon as possible the replacement parts, directly to Anjou Aeronautique at the following address : <u>seatbelts@anjouaero.com</u> (refer to Service Bulletin No. 358SB-14-101 for details). Parts are available in stock, and their supply is Free Of Charge.

#### Seat belt strap frayed:

Safety Information Notice No. 2882-S-25 was released in April 2015, covering the Service Bulletins' No. 284-25-004 & 198-25-006 issued by Zodiac Aerospace Services. Since this release, no new case of frayed straps has been reported. The subject is then considered as being closed.

#### Seat belt / strap loops clip breaking:

Zodiac is currently improving the product with a new clip design: belt clips are made of the same material as the belt itself. Their availability is expected by Q2 / 2016.

#### Seat bucket crack:

To fix this issue, Zodiac Aerospace reinforced its seat starting from September 2014 (retrofit being possible according to Service Bulletins No. 198-25-004 & 284-25-002 covered by the Information Notice No. 2845-I-25, released in February 2015). So far, no case of crack was reported on the reinforced seat bucket. We therefore consider that this reinforcement significantly reduces the occurrence of cracks in service.

However, in case you would still face an issue of seat bucket crack occurring on the previous design, the replacement by a reinforced one is still possible, free of charge until Sept 30<sup>th</sup>, 2017 (please refer to Zodiac's Service Bulletins).

#### Seat belt tags illegible:

Several cases of illegible tags have been reported in service.

A new design is currently in preparation by Zodiac Aerospace to improve the situation: this improvement will consist in protecting tags with a plastic cover. We will keep you posted as soon as this improvement will be available.

#### 2.4. FREE WHEEL RESPONSIBILITY ON ARRIEL 2B / 2B1

Airbus Helicopters is now responsible for the design and Continuous Airworthiness of the Free Wheel assembly included in Arriel 2B & 2B1 engines. This change of responsibility is covered by Mod 07-9560. This information has been released in Safety Information Notice No 2808-S-71 on December 16<sup>th</sup>, 2015.

Note : the responsibility of the Free Wheel on Arriel 2D belongs to Airbus Helicopters too.

No modification was carried out on the current design, neither on the maintenance in force, which will still be managed by Turbomeca (IPC, MSM chap 05, AMM...), and approved by Airbus Helicopters.

The main parts which constitute the Free Wheel (the free wheel itself, the flange, the free wheel shaft and the two bearings) will have now 2 Part Numbers : one from Turbomeca and one from Airbus Helicopters.

You certainly already noticed in the latest Master Servicing Manuals distributed by Airbus Helicopters, that some Service Life Limits (SLL) have evolved, being now expressed in Torque Cycles (TC) instead of Flight Hours (FH). A dedicated Communication is currently in preparation to explain the way to convert current FH into TC.

For further information, do not hesitate to contact your usual technical support point of contact.

#### 2.5. TAIL ROTOR DRIVE SHAFT BEARINGS

Until now, it was possible to fit four different bearing designs on the Tail Rotor Drive Shaft (TRDS) of Ecureuil family (cf. Chart 2).

Supplier	M/PN	P/N	Greasable
FAG	593404	704A33 651 181	YES
SKF	6007-2RSMT47CA	704A33 651 010	NO
FAFNIR	P9107NPP7	704A33 651 111	YES
коуо	83A851C3	704A33 651 143	YES

Chart 2 - TRDS bearing references

Airbus Helicopters has been receiving lots of questions regarding the maintenance to apply on each bearing.

Taking into account the following conditions:

- SKF bearing is not greasable, and has a limited life of operation (limited OTL)
- FAFNIR is not a bearing supplier anymore
- KOYO is not a Tail Rotor Drive Shaft bearing supplier anymore
- Reliabilities are guite low, and maintenance is time-consuming (ASB still in force see below)

Airbus Helicopters decided to remove the SKF, FAFNIR & KOYO bearings from the field, which is the aim of respective Alert Service Bulletins released on September 21<sup>st</sup>, 2015: ASB No. AS350-01.00.70, AS550-01.00.29, AS355-01.00.57 et AS555-01.00.56.

Consequently, these 3 references of bearings have been declared unfit for flight with effect from one year after ASB's release (which means to be removed from aircraft before September 20<sup>th</sup>, 2016) and their maintenance + reference will be removed from current Master Servicing Manuals accordingly.

Once these bearings will be removed from service, you won't be submitted to following Alert Service Bulletins which were dedicated to those bearings anymore : ASB No. AS350-05.00.08, AS550-05.00.04, AS355-05.00.02 and AS555-05.00.01, dating from February 2<sup>nd</sup>, 1998.

### 2.6. MAIN GEAR BOX INPUT SEAL LEAKAGE

In the Information Letter No. EC 014-2015, we described a first improvement carried out on the static tightness of the MGB input area: the O'ring material has been changed, and its position has been optimized, in order to significanly reduce seapage and/or leakage from this area. This corresponds to Mod. 07-7240, and proposed for retrofit, by Service Bulletins No. EC130-63-010, AS350-63.00.23 and AS550-63.00.18.

There remains a dynamic tightness issue (lip seal area).

To fix this issue, Airbus Helicopters is currently working on a design modification, as well as on an improvement of the tooling to install the lip seal.

Its availability is forecasted within 2017.

#### 2.7. SERVICE LIFE LIMIT ON GEAR BOX CASINGS

The Service Life Limit (SLL) of two specific parts which are the main casing and the MGB sump, had to be revised as these parts are mainly stressed in torque cycles (TC) and not flight hours (FH). To date, no crack has been reported on any MGB casing of the Ecureuil family, which so far logged more than 29,000,000 flight hours.

Dedicated Alert Service Bulletins have been released to explain how to convert current flown hours into torque cycles, and corresponding new Service Life Limits (cf Chart 3) with a specific monitoring of the two concerned parts:

- for all MGB sumps and main casings which were already in service when Alert Service Bulletins were released, a periodic visual check at each attachment lug of the casing is now required during each P-inspection (10 FH // 7 days) as soon as the "converted" SLL expressed in TC is beyond the new Service Life Limit, without exceeding 120,000 TC.
- this periodic check will no longer be necessary for new installed casings for which the new torque cycle limitation will have to be respected.

				Constant Constant	No. 1 to to star	
<u>Helicopter</u>	Version(s)	Casing	<u>Casing P/N</u>	<u>Current Service</u> <u>Life Limit</u>	New Limitation before inspection	<u>ASB N°</u>
	<u>B1, B2, L1</u>	MGB sump	350A32-3119-03 350A32-3119-05	20,000 FH	93,700 TC	<u>01.00.69</u>
			350A32-3156-21 Fitted on assembly 350A32-3156-01			
<u>AS350</u>	<u>B3</u>	<u>Main Casing</u>	350A32-3156-22 Fitted on assembly 350A32-3156-02	20,000 FH // 120,000 TC	89,800 TC	<u>01.00.68</u>
			350A32-3121-04 350A32-3121-06			
		MGB sump	<u>350A32-3119-05</u>	<u>20,000 FH</u>	78,100 TC	
<u>AS355</u>	<u>E, F, F1,</u> F2, N	MGB sump	350A32-3119-03 350A32-3119-05	20,000 FH	93,700 TC	<u>01.00.56</u>
	<u>NP</u>	Main Casing assembly	350A32-3121-07	10,900 FH	65,400 TC	<u>01.00.55</u>
		MGB sump	350A32-3119-03 350A32-3119-05	12,800 FH	76,800 TC	
	<u>A2, C2, U2</u>	MGB sump	350A32-3119-03 350A32-3119-05	20,000 FH	93,700 TC	<u>01.00.28</u>
			350A32-3156-21 Fitted on assembly 350A32-3156-01			
<u>AS550</u>	<u>C3</u>	Main Casing	350A32-3156-22 Fitted on assembly 350A32-3156-02	20,000 FH // 120,000 TC	89,800 TC	<u>01.00.27</u>
	7		350A32-3121-04 350A32-3121-06			
		MGB sump	350A32-3119-05	<u>20,000 FH</u>	78,100 TC	
			250 4 22 2110 02			
<u>AS555</u>	<u>AF, AN, SN,</u> <u>UF, UN</u>	MGB sump	350A32-3119-03 350A32-3119-05	20,000 FH	93,700 TC	<u>01.00.25</u>
			250 4 22 2156 21			
<u>EC130</u>	Main Casing	Main Casing	350A32-3156-21 Fitted on assembly 350A32-3156-01	20,000 FH // 120,000 TC	<u>89,800 TC</u>	
			350A32-3156-22 Fitted on assembly 350A32-3156-02	<u>1/ 120,000 TC</u>		04A005
		MGB sump	350A32-3119-05	20,000 FH // 120,000 TC	78,100 TC	

Chart 3 - Correspondence between previous and new limitations

## 2.8. STARTER GENERATORS : SHAFT BREAKAGE

Airbus Helicopters has been informed of several cases of shaft breakage, only during engine start up of the aircraft (therefore, on ground only).

The corrective solution to improve the situation consists in reinforcing the shaft, which was done by both suppliers (Auxilec-Thalès and Skurka-APC).

It is available through retrofit performed by respective suppliers, and described in following documents:

- Auxilec-Thalès starter-generator (P/N : 515-030):
  - Refer to Information Notice No. 2862-I-80 released in June 2015
- Skurka starter-generators:
  - Refer to Information Notice No. 2936-I-80 released January 2<sup>nd</sup>, 2016 (cf Chart 4).

Modifications	Part Numbers	Airbus Helicopters Service Bulletins	Skurka Aerospace Inc. Service Bulletins (SB)	Aircraf versions
07.4692	150SG122Q	AS350-24.00.26 AS550-24.00.07 EC130-24-005	SB No. 150SG164	AS350 B, B1, B2, B3, H125, BA, BB, L1 AS550 A2, C2, C3, U2 EC130 B4, H130
07.4693	200SGL130Q	AS350-24.00.27 AS550-24.00.08 EC130-24-006	SB No. 200SGL168	H125 H125 M H130
07.4696	200SGL130Q	AS350-24.00.28 AS550-24.00.09 EC130-24-007	SB No. 200SGL168	AS350 B3 AS550 C3 EC130 B4

Chart 4 - SB's reference for SKURKA starter generator retrofit

Note: besides a better reliability, and reduction of its DMC, the evolution of the starter-generators manufactured by Skurka enables the TBO to be extended from 900 FH up to 1200 FH (+ 10% margin).

## 2.9. CABIN WATER TIGHTNESS IMPROVEMENT ON ECUREUIL FAMILY

In 2015, different and independent improvements have been carried out to improve the water tightness of the AS350 / H125 family cabins. The following improvements are available on all aircraft produced since end 2015, and the retrofit solutions are described hereby:

• <u>VHF antenna tightness on the cabin roof</u> (Mod. 07-4715) which is now ensured thanks to the implementation of a seal in between the VHF antenna and its support (cf Photos 5 & 6).

Retrofit of this solution is described in Service Bulletins No AS350-23.00.06 & AS550-23.00.02 which have been released on September 10<sup>th</sup>, 2015.



Photo 5



 <u>Cabin air inlet scoop vs 7° bulkhead</u> (Mod. 07-4741): tightness has been improved thanks to addition of a water trap + optimized scoops in the air inlet circuit, as it is already done on H130 / EC130 B4 (cf Photos 7 & 8). The retrofit is described in Service Bulletin No AS350-21.00.19 which has just been released on Feb 22<sup>nd</sup>.



Photo 7 - pre Mod 07-4741



Photo 8 - post Mod 07-4741

• <u>Interface between the canopy and the 7° bulkhead</u> (Mod. 07-4741) : addition of a continuous PR sealant bead in between the two areas. This solution is currently only implemented on Production line (no retrofit proposal).

# 2.10. TAIL BOOM / FENESTRON JUNCTION FRAME ISSUE ON EC130 B4 / H130 - UPDATE

Following previous details given in the Information Letter No. EC015-2015, here is an update of the situation regarding the Tailboom / Fenestron junction frame analyses and conclusions.

Since the release of Emergency Alert Service Bulletin No. EC130-05A017 in June 2014 requiring a mandatory periodic visual check of the frame from the inside (with or without removing the horizontal stabilizer thanks to a borescope) for the whole EC130 B4 / H130 fleet, more than 11,500 visual checks have been done on about 450 aircraft, and no other case of crack has been detected so far.

However, investigation are still going on to identify all potential causes which could explain the only two cases reported in service beforehand. These investigation should be completed by end of March 2016. Then results and conclusions should be available by Q2 / 2016. We will keep you posted accordingly.

We have asked our Officials to extend the starting point for periodic checks, from 700 FH to 1,200 FH. We have just received a formal approval from EASA. Updated EASB No. EC130-05A017, as well as revised concerned EASA's AD should be released in the coming days. But it won't be possible to get any extension for the periodicity of the checks.

Besides this action, even if root causes are not completely identified, Airbus Helicopters is currently working on a corrective solution to be proposed and applicable on-site, at your premises.

Finally, current Service Bulletin No. EC130-53.024 is still applicable on some EC130 B4 aircraft, in order to supersede directives of Emergency Alert Service Bulletin No. EC130-53A019 Rev 1. Airbus Helicopters required Officials to postpone its deadline of the from End 2017 to End 2018, which should be officialized soon.

## 2.11. HOVER CAPABILITY INCREASE FOR AERIAL WORK MISSIONS ON H125

Airbus Helicopters has defined a new NR law to increase the maximum rotor speed from 394 rpm to 400 rpm (full pedal range), while detecting the presence of a load underneath the hook (otherwise, if no load is detected, the NR will remain 394 rpm).

The modification consists in a VEMD software update, and some electrical adaptations on the aircraft.

This improvement was certified in July 2015. Its implementation on Production Line started this year, and aircraft deliveries will include this improvement by Q2 / 2016.

Before end Q2 / 2016, the retrofit will be also possible, thanks to Service Bulletins currently in preparation. More details will be provided in a next Information Letter.

The benefits of this improvement in external load configuration will be:

- increased stability in heavy lift configuration at low altitude,
- increase of the tail rotor control margin in the whole flight envelope,
- additional operational torque margin at low altitude, equivalent to about + 30 kg (+ 67 lbs) in hover performance.

Please note that the approved hover performance charts which are provided in the Flight Manual and corresponding to the minimum specification engine, remain unchanged.

#### 3. DMC / DOC REDUCTION ACTION PLAN UPDATE

Taking into account all sources of customer feedback, the following priorities have been identified :

- Maintenance & Operation costs,
- Fleet availability,
- Improvement of the consistency of the Technical Publication,
- Simplification of the Maintenance Program,

Airbus Helicopters has committed on managing these topics. A priority list has been defined with several operators / maintenance centres.

Fixing these topics is essential to Airbus Helicopters.

Here is a status of the latest results Airbus Helicopters released in 2015, and what is planned for 2016 / 2017.

## 3.1.1. DMC reduction results, thanks to limitations increase

- Upper & lower main rotor sleeves (SLL) :
  - From 4,400 to 5,750 FH (H130),
    - From 4,400 to 6,600 FH (other versions).
- Swashplate bearing FAG (OTL) :
  - From 5,100 to 6,600 FH.
- Planet carrier bearing (OTL):
  - From 7.600 to 9,900 FH.
- Planet gear bearing (OTL):
  - From 7,600 to 9,900 FH.
- Tail rotor Drive shaft long section (SLL) :
  - From 2,300 to 8,400 FH (H130),
  - From 3,000 to 13,200 (EC130 B4).

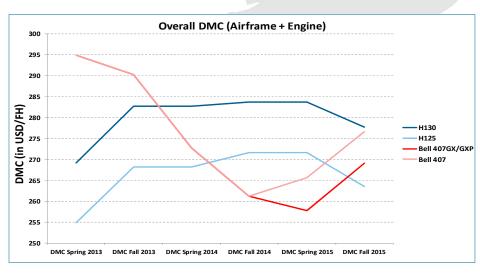
All those extensions generate a significant reduction of your airframe DMC, as follows:

- - 1,44 % on AS350 / H125 models (engine excluded),
- - 5 % on H130 / EC130 B4 (engine excluded).

These results have been officialized by Conklin & De Dekker in their latest publications dating from Fall 2015

(cf Chart 5).

Airbus Helicopters Maintenance Programs have been updated and released accordingly.





## 3.1.2. DOC reduction results

S-inspection periodicity (AMM 05-21) has been extended from 100 FH to 150 FH, leading to a 2% reduction on MMH/FH, and an availability increase of your fleet (saving 2 S-inspections over 5 during 600 FH interval.

As already explained in the latest Information Letter, you have the benefit of these extensions on the latest designs which are fitted at least, on H125 & H130 models. In case you want to take benefit from this extension, and your current configuration is not in line with the extended one, you have the possibility to bring your aircraft to the latest configurations, and replace parts accordingly. For all models, the periodicity of all electrical chip detectors remains the same as it is today. Its

For all models, the periodicity of all electrical chip detectors remains the same as it is today. Its extension up to 150 FH is one of our future actions, targeted in 2017.

 Completion of the T-inspection extension from 500 to 600 FH, leading again to a reduction of more than 2% on MMH/FH, and of course, increasing the availability of your fleet (saving of 1 T-inspection over 5 during 3000 FH).

#### 3.1.3. Product improvements

In addition to actions to reduce DMC / DOC / and MMH/FH, several other actions have been carried out in 2015 to improve the product:

- Doors sealing has been redesigned and is now available on all H125 production, starting Q1 / 2016 (No retrofit possible).
- Aircraft painting quality standard has been improved across Airbus Helicopters' network (in terms of surface preparation, compatibility of products, thickness, protection of painted surfaces).
- Airbus Helicopters went back to **hydraulic ground handling tools** instead of mechanic ones. Before their delivery, a maintenance action is now carried out to ensure lubrication, tyres pressure, global maintenance check...if necessary.

### 3.2. CURRENT OPTIMISATION BEING CARRIED OUT IN 2016

Airbus Helicopters remains committed to reducing the maintenance of the Light Helicopters fleet, not only in terms of DMC / DOC, but also in terms of MMH/FH. Here are the major actions being undertaken in 2016.

- Extension and/or cancellation of several inspections
  - Free wheel inspection on Arriel 2D (H130 & H125):
    - minimum extension from 30 FH to 50 FH
    - objective date of completion: Q4 / 2016
  - $\circ$  Hydraulic fluid drainage when operated in very cold conditions (-15°C) (all LH):
    - minimum extension of this mandatory task from 100 FH up to 150 FH...or cancellation (if possible).
    - tests and analyses are currently in process.
    - objective date of completion: Q2 / 2017
  - Bonding check on main rotor blades (H130):
    - Cancellation of the mandatory 30 FH check
    - objective of the completion date: Q1 / 2017
  - Check for cracks on main rotor blades (H130):
    - Extension of this mandatory check from 100 FH up to 150 FH
    - Objective of the completion date : Q4 / 2016

- Check of the tail rotor hub pitch horn on all LH (EC130 B4 & H130 excluded):
  - cancellation of this mandatory check which is currently each 30 FH
  - Alert Servide Bulletins No. AS350-05.00.74 & AS355-05.00.65 as well as EASA 's Airworthiness Directive No. 2013-0133-CN have both been revised and just released mid February 2016.
- 12 Year inspection cancellation on H130 & EC130 B4:
  - result: -10% saving on MMH/FH for these aircraft models
  - objective of completion date: before end 2016
  - implementation (thanks to a 'transition' maintenance program) mainly for all EC130 B4 which are already in-service, will be detailed later on, when available.

#### Hose identification if submitted to limitation (all LH models)

- Limitations can be OTL (operating time limit) or shelf life
- objective is to define their P/N in Log Book, Master Servicing Manual and IPC if missing
- advantage for operators: being able to simplify / lighten current maintenance & continuous airworthiness follow up (CAMO's responsibility).
- objective of completion date: Q4/2016
- Strategy for magnetic chip detectors (all LH models)
  - First step: Airbus Helicopters to develop a manual quick release magnetic plug for the conical housing (instead of a screwed one), with a periodicity of check not defined yet, but which should last 10 sec (and can be performed by a pilot). Service Bulletins will be released by Q4 / 2016 for H130 / EC130 B4 / AS350 B3 models.
  - Second step: Airbus Helicopters to extend the periodicity for all electrical chip detectors from current periodicity of inspection up to 150 FH. Objective of completion date: Q1 / 2017, at least for latest produced versions (H125 & H130).
  - Third step (exploration phase on-going): Airbus Helicopters to define a quick release electrical magnetic plug for conical housing: no commitment for its availability yet, as new design is needed.

We hope that this information will be of use to you.

Please revert to us for any suggestion, and feel free to contact us: we remain at your disposal to provide more detailed information if needed.

Yours sincerely,

Jean-Michel ARLHAC Global Business & Services Light Helicopters - Program Support Officer