



Debrief on May 18, 2023:

## **MAINTENANCE WORKGROUP**

meeting held on May 17, 2023

in Houston (In Person and via Zoom)

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# Agenda & Participants

- 23 participants from 13 organizations
  - Bayards Up, Bell, BSEE (2), Chevron (5), FAA, HAI, HeliOffshore, Imenco (2), Observator, PHI (2), PHI Trinidad and Tobago (2), Shell (2), Westwind (2)
- (20 min) Safety, Anti-Trust, Introductions, Recap Oct meeting, Action Items
  - Online document repository / website: “non-profit web package”
  - Supply Chain shortages for Aircraft parts: suggestion to send a letter on behalf of HSAC members to get traction
- (5 min) Learning From Incidents (Maintenance LFI): assign somebody
- (5 min) Mission Statement & Charter document
- (60 min) Aircraft type update by OEM tech rep: Bell (Airbus in October)
- (10 min) Break
- (40 min) MOP/MLOSA
  - Chevron presented their GOM Aircraft Operations MLOSA program – Many Thanks!!
  - Alignment with HeliOffshore
- (10 min) Next meeting



**HSAC 2023**

**Andre Boileau**

**Product Support Engineering**

# Customer Service Engineers (CSE)

40+ CSEs located around the world.

<https://www.bellflight.com/support/contact-support>



# Bell presentation included:



- Alert Service Bulletins (ASBs)
- Information Letters
- Operational Safety Notices
- Technical Bulletins
- Improvements
- Maintenance Tips

# Hangar Doors

Hangar doors and the door supporting systems need to be maintained and inspected.

- Stands, maintenance equipment should also be inspected frequently.



# Jacking Helicopters and Safety

Jacking of a helicopter carries significant safety risks both to the helicopter and to the mechanic.

## Incident Prevention:

- Use correct size jacks
- Check serviceability
- Oil Level
- Leaks
- Feet / Legs / Wheels
- Jack pads
- Lock collars
- Close valve, open vent



# Jacking Helicopters and Safety





# Sustainable Aviation Fuel (SAF)

## FAA released SAIB NE-11-56R4

- No other Civil Aviation Authority has “publicly” approved use of SAF.
- SAF used many countries with special authorization.

## Made of hydro processed esters and fatty acids (HEFA)

- Recycled waste cooking oils or animal fats

## Bell and all Bell engine suppliers approve up to 50% of SAF blended fuels.

- Meets: ASTM-7756 and reidentified as ASTM-1655 (Jet A and Jet A-1 specification).
- Bell Training Academy is using SAF in training aircraft.



# Potential 5G C-Band Wireless Broadband Interference With Radio (Radar) Altimeter Equipment

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If during operations owners/operators experience 5G C-Band interference.

- With the Radio altimeter.
  - Please report the following details to Product Support Engineering (PSE) at [productsupport@bellflight.com](mailto:productsupport@bellflight.com):
- The FAA has created a website where more information on the 5G and Aviation Safety is available.
  - Details can be found at <https://www.faa.gov/5g>.



## OPERATION SAFETY NOTICE

GEN-22-51  
20 January 2022

TO: All owners and operators of Bell helicopters

SUBJECT: POTENTIAL 5G C-BAND WIRELESS BROADBAND INTERFERENCE WITH RADIO (RADAR) ALTIMETER EQUIPMENT

The release of the Federal Aviation Administration (FAA) Airworthiness Directive (AD) [2021-23-13](#) and the Transport Canada Civil Aviation (TCCA) AD [CF-2021-53](#), identifying potential operational risks of certain 5G C-Band wireless frequencies (3.7 to 3.98 GHz) being deployed and the effect on installed radio altimeters have raised some concern from our Bell owners/operators.

Prior to the release of the ADs, the FAA had released the Special Airworthiness Information Bulletin (SAIB) [AIR-21-18](#) and TCCA released the Civil Aviation Safety Alert (CASA) [2021-08](#) with additional information and operational recommendations.

This Operation Safety Notice (OSN) is to provide additional information and the Bell position with regards to the operational restrictions discussed in both the FAA and the TCCA AD's. The *italic* text below, extracted from the AD's, is followed by the Bell position for the Bell models and type of operations that are potentially affected by the 5G C-Band frequencies.

The ADs are *applicable to all helicopters, certificated in any category, equipped with a radio altimeter. When operating in U.S. airspace, where the following operations requiring a radio altimeter are prohibited in the presence of 5G C-Band wireless broadband interference as identified by Notice To Air Missions (NOTAM):*

- *Performing approaches that require radio altimeter minimums for rotorcraft offshore operations. Barometric minimums must be used for these operations instead.*
  - This could potentially affect all Bell helicopter models performing Instrument Flight Rule (IFR) approaches during offshore operations.

## Maintenance Tips

### Working rivets can become very costly!

- Remove, clean and replace any loose rivets before next flight.
- Install rivets wet with adhesive C-317.



# Electrical Bonding

**Deterioration of Battery grounds**

**Deterioration of Generator grounds**

Causes

- Paint behind bus bars or terminals
- Loose connections
- Corrosion

**Maintenance**

Disconnect, remove paint, clean contact surfaces and treat with chemical film treatment (BHT-ELEC-SPM)



# Video

**When ever possible send a video of the issue.**

**Based on the issue we will share it with:**

- Quality Assurance.
- Engineering.
- Other customers during Maintenance Conference.



# IOGP RP690 – MOP requirement



- Ensuring SMS are effective at gathering and analyzing safety information, managing risks, providing assurance and ensuring continuous improvement
- The operator (and AMO) has a structured MOP in place
  - To monitor maintenance practices at regular intervals
  - Through observation of maintenance activity
  - At each operational location
- The MOP data is analyzed
- Appropriate action plans are implemented

# What we have reached on MOP so far



- Great discussions on:
  - The purpose of MOP
    - What is it? What is it not? What's in the name?
    - Spin offs & Challenges
  
- Re-energized the Maintenance Working Group: Teambuilding !
  
- Presentations
  - Operators presenting their Maintenance LOSA programs: PHI and Chevron
  - LOSA's Place in Maintenance Safety by LOSA Collaborative
  
- Shared documents
  - Considerations for Implementing M-LOSA by the FAA
  - White paper "Learning From All Operations" by the Flight Safety Foundation



# Next Steps

1. Writing the RP for MOP: Structure all information that we collected in the right HSAC format
2. Collaborative learning
  - Operators to conduct Maintenance observations and share learnings
  - Bring all Operators' results together for collaborative trending
- During the HAI Heli Expo in March 2023: alignment meeting with HeliOffshore and HAI
  - HeliOffshore had a first meeting on the same subject MOP
  - HeliOffshore is inviting non-HeliOffshore HSAC members to join (Westwind)
  - HSAC members voted for continuation of HSAC RP – ready for review in Oct
- Working sessions between May-Oct & in the morning of HSAC day 1