



Debrief on January 19, 2023:

MAINTENANCE WORKGROUP

meeting held on January 18, 2023
in Houston (In Person and via Zoom)

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Agenda & Participants

- **27** participants (10 up) from **15** (6 up) organizations
 - Occidental, Leonardo (2), Kinetica (2), Swire, Chevron (7), Bristow, Westwind, PHI (4), BP, Imenco AS, Bayards Up, HeliOffshore, Oxy, NOAA, Shell
- (20 min) Safety, Anti-Trust, Introductions, Recap Oct meeting, Action Items
- (5 min) Learning From Incidents (Maintenance LFI)
- (5 min) Mission Statement
 - Charter next meeting
- (60 min) Aircraft type update by OEM tech rep
 - Leonardo (Prod Support Eng & Sr Mgr Supply Chain): AW139/169/189 update
 - Bell: next meeting
- (40 min) M-LOSA
 - Dr James Klinect, CEO “LOSA Collaborative”, shared his experiences
 - What do you consider an M-LOSA program?
- (10 min) Next meeting

WHAT WE CURRENTLY DO FOR THE ENERGY MARKET



- **Crew Change**



- **Windfarm Maintenance**



- **SAR / MEDEVAC**



450+ H/C



2,2 mln FH

Every ~2 minutes

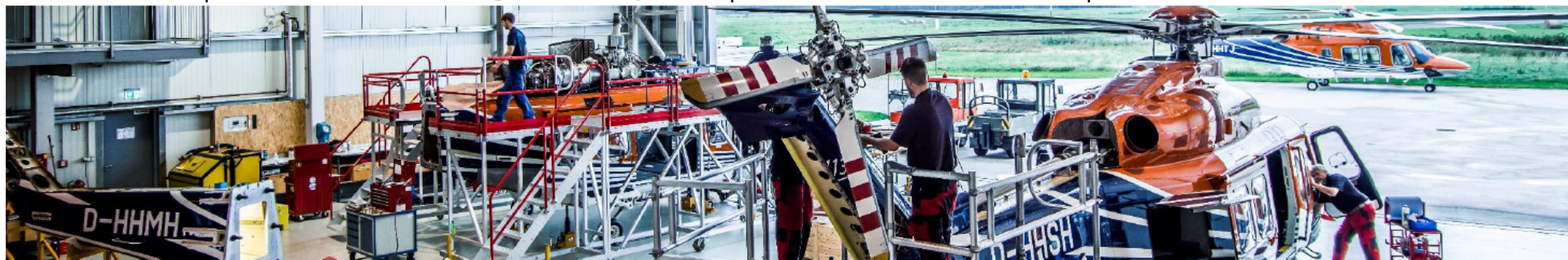
An AWFamily product in the World takes off for an Energy Mission



Aircraft Maintenance Planning – Main Achieved Extensions

Chapter 05 – Maintenance Tasks Overview

Interval Ref.	Item	Old Interval	New Interval
18-02 18-03	Mast vibration absorber installation components Mast vibration absorber assembly	300 FH	600 FH
24-12	Main battery (44 Ah)	900/1 year	1200/1 year
25-16	Cargo Hook	300/1 year	1 year
91-01 91-02	Avionic connectors in rear left avionic bay Avionic connectors in rear right avionic bay	300/1 year	1 year



Constantly improving Maintenance burden leading to Costs reduction and increased Availability



SPARE PARTS & REPAIR SERVICES

Recent geopolitical events have heavily influenced the current supply chain situation. The last two years have shown that companies are part of an ecosystem where all the value chain participants are woven together. In particular, the aviation sector has been experiencing the challenges below:

- Increase in manufacturing lead times and repair turn around times
- Lack/Reduced accessibility of raw materials
- Increase in shipping times
- Growing manpower challenges across the critical sector of the aviation industry

Recovery plan

- Increase planning horizon from 3m+LT to 12m+LT
- Leverage on repairs – core returns
- Company integrated crash team
- Leverage on service centers network proximity
- Open comms

IOGP RP690 – MOP requirement



- Ensuring SMS are effective at gathering and analyzing safety information, managing risks, providing assurance and ensuring continuous improvement
- The operator 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's in the name?

- **MOP**

(Maintenance Observation Program)

- **M-LOSA**

(Maintenance Line Operations Safety Audits)

LOSA Operating Characteristics

- | | |
|--|---|
| 1. Peer-to-peer observations during real-time operations | 6. Systematic observation instrument based on TEM |
| 2. Anonymous, confidential, and non-punitive data collection | 7. Secure data collection repository |
| 3. Voluntary participation | 8. Data verification roundtables |
| 4. Trusted and trained observers | 9. Data-derived safety targets for enhancement |
| 5. Joint management / union sponsorship | 10. Results feedback to front line operators |

If your LOSA has less than 10 characteristics, it's something else



Other take aways

- M-LOSA to drive decisions
 - Evidence based / Use of data
 - More efficient
 - More confident
- Our proposed RP to make possible: benchmarking or bring all data together
- Understand the “why”
- Organization to commit using the data + strategy how
- “Angel performance”
- Story above checklist
- Program, not a project

You can observe a lot by just watching.

- Yogi Berra

Next steps



- 2,5 hours means rushing
- Time to deliver on M-LOSA
 - Start drafting RP
 - Try to do an observation + report out
 - Further connect with HeliOffshore
- Supply chain shortages for aircraft parts
- Scheduled at Heli Expo in March: HSAC – HeliOffshore - HAI connect