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**Our Ref. :** PSE/TQ/2021/31661 **Date:** 14 June 2021

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**From :** LH Service Engineering [engineering.support.lhd@leonardocompany.com](mailto:engineering.support.lhd@leonardocompany.com)

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**TO :** GALAXY AEROSPACE (M) SDN BHD **Page :** 1 / 4

**Attn:** Amirah Fatini Zainal  
[fatini@galaxyaerospace.my](mailto:fatini@galaxyaerospace.my)

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**SUBJECT :** **AW139 S/N 31913 (TT 36,58 FH): Hydraulic System N° 2 Leakage**

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Dear Sir,

with reference to your request in Annex A, Leonardo Helicopters (LH) technical advice is as follows.

It is possible to postpone for 2FH the operational test of hydraulic system N° 2 as per AMP 39-A-29-10-00-00A-320A-A Main hydraulic system - Operation test and leak check as per AMP 39-A-20-40-01-00A-362A-A Tubes - Pressure check, provided that the following activities are successfully performed before the next flight:

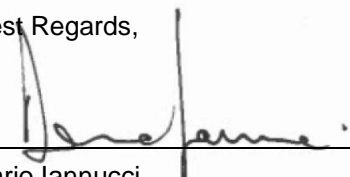
- Tube assy P/N 3G2920A04531 is replaced (refer to the applicable steps of AMP 39-A-20-40-00-00A-010A-A Standard practices - Hydraulic system - General data);
- The procedure detailed in Annex B is performed with no discrepancy;
- General visual inspection on upper deck area to detect possible presence of leakage is successfully performed. In case of findings, contact LH Service Engineering to receive proper corrective actions.

Please note that, during aforementioned period, the landing gears are kept locked in the extended position, refer to relevant AW139 RFM Section 1 for the applicable limitations.

Please be also informed that the above prescriptions must be considered valid only if the aircraft has been maintained in accordance with all Leonardo Helicopters mandatory recommendations, in addition to local authority requirements.


For any additional information do not hesitate to contact LH Service Engineering.

Best Regards,



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Dario Iannucci  
AW139 Chief Project Engineer



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Giuseppe Tellone  
Service Engineering Area Manager

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R.E.A. n. 7031



## Annex A

**From:** Amirah Fatini Zainal

**Sent:** lunedì 14 giugno 2021 12:09

**To:** FOC-Service Engineering (Team)

**Cc:** TECHNICAL SERVICES GAM; ismail sulaiman; Zaty Nadhira Binti Mohamed Zuhari; Omar Ahmad; Azillah Bin Matap; Syafrul Yamani Safruddin; Muhammad Nizam Jaafar; Parameswaran Shaavesh Kumaran; Amran Shah Masnon ; Eliyathamby Dhanaraj ; Gliori Henry; Tellone Giuseppe

**Subject:** Re: AW139 9M-PMF MSN 31913 - AIRCRAFT EMERGENCY LANDING DUE TO #2 HYDRAULIC SYSTEM LEAKING - CSR/2021/31660

Dear Sir,

LH: Please share all the information about the reported event and helicopter's condition once available. Confirm if any damage has been detected following the ongoing inspection and if the source of the leakage has been detected.

GAM: Pilot reported during aircraft flying at approximately 5-6 NM from coast line on normal cruise, CAS caution message Hydraulic Utility Pressure illuminates. After a few minutes, CAS message appeared such as:

1. 2 HYD oil PRESS ( NO 2 HYDRAULIC PRESSURE)
2. 2-4 HYD Pump ( No 2 and No 4 hydraulic pump fail)
3. 2 Servo ( No 2 system servo fail)
4. 2 HYD MIN ( No 2 Hydraulic quantity min Lev)

Pilot performed emergency landing.

### Findings:

Maintenance carried out post-flight inspection and found that the source of leakage on #2 PCM is due to tube assy PN 3G2920A04531 found chaffing with air-conditioning hose clamp.

### Immediate corrective action:

Replaced the tube assy PN 3G2920A04531 on #2 PCM.

### Post-replacement:

As the aircraft is currently stranded out of base with no facility to carry out the Operational Check as per 39-A-29-10-00-00A-320A-A, we can only carry out EGR for leak check to validate the aircraft serviceability in order to bring the aircraft back to base provided that the EGR is found satisfactory.

LH: Please provide a crew report related to the event and provide FDR download with EPIC SW phase installed.



GAM: We are currently in the process of downloading the FDR data and will share once download is completed. Aircraft is currently fitted with EPIC SW Phase 7.12.

LH: For FDR sharing, please provide an email address and a phone number where to send a link and a password for file sharing through Easy Transfer.

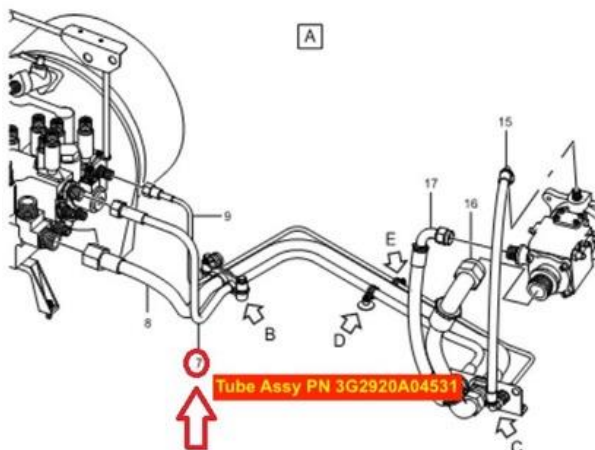
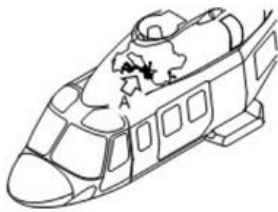
GAM: Kindly peruse the email [fatini@galaxyaerospace.my](mailto:fatini@galaxyaerospace.my) and phone number +6018-2816443.

**Question:**

In view of this, we would like to seek your clarification on the acceptable to carry out EGR to replace the Operational Check as per 39-A-29-10-00-00A-320A-A due to aircraft stranded at remote area.

Looking forward to your advice for our next course of action.

Regards,  
Amirah





## Annex B

1. Start to refill the PCM2 reservoir up to the FULL level (check the reservoir sightglass indicator), refer to AMP 39-A-29-12-01-00A-720A-A Number 2 power control module - Install procedure;
2. Unscrew some turns, the pipeline fitting at HPS 2 and 4, in order to allow trapped air to exit and let the hydraulic fluid to reach the pump. As soon as the fluid leaks, screw the fitting to the defined torque value;
3. Refill the PCM2 reservoir up to the FULL level, refer to AMP 39-A-29-12-01-00A-720A-A Number 2 power control module - Install procedure;
4. Manually rotate the Main Rotor blades in order to allow the HPS and relating lines to be filled;
5. Unscrew some turns the case and pressure pipeline fitting of the HPS2 and HPS4 lines at PCM2 in order to allow trapped air to exit. As soon as the fluid leaks, screw the fitting to the defined torque value;
6. Verify the PCM 2 reservoir level and in case fill up to FULL;

Note: At least 4 main rotor revolutions shall be carried out.

7. Following to the purge of the HPS2 and HPS4 lines proceed with the ground run (refer to AW139 RFM) and verify that pressure is stable at nominal value 207 bar approx. No CAUTION messages: HYD 2 PRESS, PUMP2 PRESS, PUMP 4 PRESS 2 SERVO, HYD UTIL PRESS, shall be in view during the ground run;
8. Activate SOV2 and verify the CAUTION MESSAGE: HYD 2 PRESS and 2 SERVO in view. Reselect OPEN on the Hydraulic Control Panel and the CAUTION MESSAGE: HYD 2 PRESS and 2 SERVO removal;
9. Continue the ground run for at least five minutes, then proceed for the shutdown (refer to AW139 RFM);
10. Discharge the PCM 2 reservoir and fill up again up to FULL, refer to AMP 39-A-29-12-01-00A-720A-A Number 2 power control module - Install procedure;