

## Thanakom Panyothin

---

**From:** McConnell, DAVE P <dave.p.mcconnell@lmco.com>  
**Sent:** Monday, September 3, 2018 11:14 AM  
**To:** Grant Robinson; Nattawut Wongyai  
**Cc:** Thanakom Panyothin  
**Subject:** HVC MGB SOAP analysis evaluation

Grant

Per your request, following is the CSE response to elevated silver, iron and molybdenum levels found in the most recent MGB SOAP sample in HVC.

Case Number: C0103564  
Customer: Thai Aviation Services Limited  
Aircraft S/N: 761059  
Aircraft Model: S-76D  
Aircraft TT: 2,628  
ATA: 63  
Part Number: 76351-09600-046  
Case Subject: MGB SOAP Analysis-Request For Engineering Comment

### Problem Description:

Reference

- 1) Attached FocusLab Ltd. SOAP report
- 2) C0090545

Reference the attached FocusLab SOAP report for MGB P/N 76351-09600-046, S/N A231-00621 installed on TAS S-76D A/C S/N 761059.

FocusLab has again flagged Silver, Iron and, additionally Molybdenum levels in Mobil 1 AFT oil that was replaced at 900 hours as well as the replacement oil, sampled at 4.03 hours since servicing.

In March of this year the lab raised a similar concern regarding Silver and Iron levels noted for the previous load of oil on the same MGB S/N. Case C0090545 refers to that event.

The response from CSE at the time indicated that the silver and iron levels were not concerning. Molybdenum was not flagged or commented on during that sample.

TAS requests CSE review and comment regarding the current levels of Iron, Silver and Molybdenum in the oil of MGB S/N A231-00621 per the attached report.

In addition, please advise of any recommended maintenance action. EoM

This email notification is provided as the case has been reviewed and does not contain technical data in the issue description.

### Problem Resolution:

In reviewing the oil analysis the current sample levels have dropped considerably in Silver, and in Iron which is good based from the levels dated August 22nd 2018. Engineering feels that the levels would have dropped even lower if the oil analysis was taken at 50 flight hours rather than the 4.03 hours. The new oil has not had the opportunity to clean the inside of the Main Gearbox from the last oil change. The Molybdenum levels are caused by a disulfide grease lubricant which should decrease in time as the new oil cleans the inside of the Main Gearbox.

Engineering has stated there no Main Gearbox concerns based on this oil analysis, and engineering recommends another oil analysis in about 50 hours. There are no additional maintenance actions at this time.

**David P. McConnell**

Senior Field Service Representative  
Sikorsky, a Lockheed Martin company  
Email [dave.p.mcconnell@lmco.com](mailto:dave.p.mcconnell@lmco.com)  
Smartphone +1 (203) 873-8552 (US)  
Efax +1 (860) 998-8791 (US)  
Cell +66 (0)8 7750-7920 (Thailand)



**WARNING:** THE INFORMATION IN THIS TRANSMISSION IS CONFIDENTIAL AND IS MEANT TO BE READ AND USED ONLY BY THE INTENDED RECIPIENT. ENCLOSED COMMODITIES, TECHNICAL DATA OR SOFTWARE ARE SUBJECT TO THE EXPORT CONTROL OF EITHER THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) OR THE EXPORT ADMINISTRATION REGULATIONS (EAR) AND CANNOT BE EXPORTED WITHOUT THE AUTHORIZATION OF EITHER THE DEPARTMENT OF STATE OR THE DEPARTMENT OF COMMERCE PRIOR TO EXPORT. EXPORT INCLUDES DISCLOSURE AND OR ACCESS TO COMMODITIES, TECHNICAL DATA OR SOFTWARE BY FOREIGN NATIONALS WHETHER LOCATED IN THE UNITED STATES OR ABROAD. THIS REQUIREMENT APPLIES EQUALLY TO FOREIGN NATIONAL EMPLOYEES OF U.S. COMPANIES AND THEIR FOREIGN SUBSIDIARIES. THIS DOCUMENT, OR AN EMBODIMENT OF IT IN ANY MEDIA, DISCLOSES INFORMATION WHICH IS PROPRIETARY, IS THE PROPERTY OF SIKORSKY AIRCRAFT CORPORATION AND/OR ITS SUBSIDIARIES, IS AN UNPUBLISHED WORK PROTECTED UNDER APPLICABLE COPYRIGHT LAWS, AND IS DELIVERED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED, DISCLOSED, REPRODUCED, IN WHOLE OR IN PART (INCLUDING REPRODUCTION AS A DERIVATIVE WORK), OR USED FOR MANUFACTURE FOR ANYONE OTHER THAN SIKORSKY AIRCRAFT CORPORATION AND/OR ITS SUBSIDIARIES WITHOUT ITS WRITTEN CONSENT, AND THAT NO RIGHT IS GRANTED TO DISCLOSE OR SO USE ANY INFORMATION CONTAINED HEREIN. ALL RIGHTS RESERVED. ANY ACT IN VIOLATION OF APPLICABLE LAW MAY RESULT IN CIVIL AND CRIMINAL PENALTIES. ANY REVIEW, USE, DISSEMINATION, DISTRIBUTION OR COPYING OF THIS TRANSMITTAL BY AN UNINTENDED RECIPIENT IS STRICTLY PROHIBITED, AND MAY BE A VIOLATION OF LAW SUBJECT TO PENALTY.