Maritime Helicopters

“End of July” 2017 Quality & Safety Notes

Strange Month Update

What happened in July? We went from a month with very few Flight Irregularities to at least ten in one month. (I’m only including seven of them in this letter some corrective actions are still being discussed on others. We’re flying a lot…it’s summer in Alaska. I get it. But some of these Irregularities need to be looked at with some fresh eyes and discussed. Even if we get the troubleshooting right, sometimes we are not getting the logistics answers done timely enough. A wise old Army General once told a group of us, “There are those who go, and those who push”. When we have people at remote sites, everyone back home is going to have to help expedite the correct solutions! More on this later.

We’ve had some visits from Exxon Quality &Safety in the last month. I’ll discuss a few of their observations a bit later.

My decision making skills closely resemble that of a squirrel when crossing the street.

SDS of the Month: Triple Nickel!

As it turns out, plain, old Triple Nickel isn't as innocuous as we'd all like to believe. Our favorite turbine engine oil has some nasty tricks up its sleeves.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: ROYCO 555 DOD-PRF-85734

Product Use Description: TURBINE ENGINE & HELICOPTER TRANSMISSION OIL Lubricant.

Lots of nastiness in Royco 555, I certainly wouldn't bath in it. If you are reading a Safety Data Sheet and see things that look like big, ugly organic, synthesized compounds (tris, methylphenyl phosphate), I'd probably wear some gloves unless I was going to wash the old paws immediately.

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
Fatty acids, C5-9, hexaesters with dipentaerythritol	67762-52-1	>= 5 - < 10 %
NJTS-46728100000-0001		>= 1 - < 5 %
tris(methylphenyl) phosphate	1330-78-5	>= 0.1 - < 1 %

Hazard pictograms 

Hazard statements
Other hazards Precautionary statements H361 Suspected of damaging fertility or the unborn child. H412 Harmful to aquatic life with long lasting effects.

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required. Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 4. FIRST AID MEASURES

- If inhaled
  Move to fresh air.
  If not breathing, give artificial respiration.
  If breathing is difficult, give oxygen.
  In case of bluish discolouration (lips, ear lobes, fingernails), give oxygen as quickly as possible.
  If symptoms persist, call a physician.

- In case of skin contact
  Wash off with soap and water.
  Remove contaminated clothing and shoes.
  Wash contaminated clothing before re-use.
  Get medical attention if irritation develops and persists.
- : In case of eye contact
  Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
- : If swallowed, DO NOT induce vomiting. Consult a physician if necessary.
- : None known.
- : For specialist advice physicians should contact the Poisons Information Service.

Engineering measures:

Respiratory protection: Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Breathing apparatus needed only when aerosol or mist is formed.
In the case of vapor formation use a respirator with an approved filter.

Personal protective equipment

Hand protection Remarks : Neoprene gloves

Eye protection: Safety glasses with side-shields Tightly fitting safety goggles

Skin and body protection: Impervious clothing

Audit Results (Exxon)

The Exxon Aviation Coordinator for Alaska visited both Fairbanks and Homer in July. He had a lot of great comments and some findings and some other good advice. I'll just let you know what's coming down the pike without going into too many specifics.

- Quite a lot of spare parts, hardware and consumables were found in individual toolboxes. We're going to have to do a little bit better job of policing our FOD and tool control programs. Expect changes.
- Our ground support equipment (GSE) is not being tracked in an easily accountable system. There will be some discussions on this before we decide on a system.
- There still needs to be some tweaking on the tool control program to meet with Exxon-Mobil specifications as listed in their aircraft operations guide. We've made some great strides here and the toolboxes are looking better.
- It was observed that the fuel samples in Homer were being kept in the flammables locker with other items. Exxon recommended that we get a separate locker for the fuel samples as is the case in Fairbanks. *I've been researching what reference he is using for this observation. More to follow.*
- Right now the Homer hangar doesn't have an "Industry Standard" type spill kit. We're going to do some research on this one also. Once we decide on a spill kit, expect some toolbox training on spill kits and their usage.
- Here is one for the "comedy of errors" book. Everyone was doing a great job of prepping for the Exxon visit. Somebody in Homer found some expired consumables in the flammables locker and placed them on one of the workbenches prior to disposal. Another person saw those items sitting out and put them back in the locker. *This happens more often than you think! The best intentions can go awry if actions aren't followed through. We had a similar event happen in Fairbanks during the very first Exxon visit. Remember that even these silly little hiccups cause your* ***quality department*** *to answer each and every finding.* In addition, customer quality compliance is how we get and keep business, folks!
- Although the mechanics get a human factors class annually per FAA guidance, the pilots have only been doing Human Factors on a biannual basis. Expect that to change for everyone to annual training.
- Not all the grease guns in service had open/in service dates for when the grease tube was replaced. We're going to have to add tags and expect to scribble down the new dates on the tag when you install a new grease tube.

That sounds like a lot of corrections, but if we just go ahead and embrace the changes, there should be little change to day-to-day operations. As they say in the Quality & Safety World, it's all part of something called "Continuous Improvement".

OLD BUSINESS

Vehicle Walk Arounds

Have you done your vehicle walk-around??? It might be time to get you wish lists in for winter improvements!


Not new, but still relevant! Station Audit Checklists

The "new" station audit checklists are still working great for most stations. Please remember that each time you come on shift to take the time to go through the station checklist, see if you need any assistance and then send the checklist to me.

Continue sending them to me at…

safety@maritimehelicopters.com or fax them to Fairbanks office at 907-452-4539

Incident Reporting July

FIR: 7/11/2017: Bell 407, N308MH (Start issues)

During startup, FADEC aborted the start on the first peak of 860 degrees. Engine spooled down to 150C. A second start was attempted using the alternate start procedure with the same result. Maintenance was called. After coordination to determine that a second aircraft was not available, the pilot attempted one more start while reducing the electrical load as much as he could. The aircraft started. A normal run-up was completed and normal operation was continued.

Mechanic replaced the starter/generator with new unit. Problem has not returned.

At some of our higher and more remote locations, this is a good FIR to remember. Good catch by the pilot to see this as an electrical load issue if the starter was not powerful enough. Good coordination with Fairbanks base before continuing with mission day.

FIR: 7/10/2017: Bell 407, N308MH (Start issues again. Different cause.

During Startup, FADEC aborted start at the first peak (approx. 854C). Engine spooled to 150C. A second normal start was attempted with the same result. Pilot attempted the alternate start procedure with the same result so called maintenance. Aircraft was started with a Ground Power Unit Assist.

The mechanic at the station replaced the battery when it returned. The fuel nozzle was inspected with no defects noted. The battery history was checked. It had been installed from another aircraft with no previous operational history. A capacity check had been performed and was installed on 2/2/2017 with a 6 month cycle. Mechanic mentioned needing a better battery life histories (hard cards) for all the batteries.

The battery history process is being changed now. There will be hard cards kept for all the batteries. We'll need to perform better battery conditioning also. Expect a CAS message from the DOM.

FIR: 7/12/2017: Bell412, N328MH

After loading passengers at a remote site, the number 2 engine did not light off. The number 1 engine was then started normally. The second start of the #2 was also unsuccessful. After a dry motoring run of the #2 engine, a third start was attempted without success.

Mechanic was informed that the #2 engine was not lighting off. Using the Pratt-Whitney fault isolation manual, the Mechanic removed and replaced the #2 engine exciter box and performed a ground run. The result was the same; no start. The troubleshooting led to check whether there was fuel coming from the flow divider on the #2 Engine. Even though there WAS fuel coming to the flow divider, the troubleshooting guide said to replace the flow divider. (Engine start attempted with no change). It was suggested that another attempt to start the engine be made from the Co-Pilot's side controls. The engine started normally and the aircraft was returned to the field base.

Further troubleshooting at the field base determined that the #2 Engine Driven Fuel pump was not operating correctly and it was replaced. The aircraft was returned to service.

This was the first AOG of the month where incomplete troubleshooting led to more down time due to not having ALL the parts sent at the same time. Communication with the rear is essential to making these decisions. Yes, it's a maintenance decision, but we have to make the correct logistics choices also. The availability of flights or the distances of driving in Alaska make these decisions much harder.

FIR: 7/15/2017: Bell206, N314MH (Hydraulic Failure)

While performing pipeline surveillance, the pilot began noticing a high frequency vibration coming from above at the transmission deck. Shortly afterwards (45 seconds?) the aircraft began to lose hydraulics. The pilot followed the Emergency Procedure and performed a hydraulics-off landing at a normal fuel stop pad. The aircraft was shut down and examined. There was no more hydraulic fluid left in the hydraulic reservoir.

(I'm going to insert a few comments here because I was on duty in the rear when this occurred. I received a voicemail from the mechanic with information about the hydraulic failure. I called the on-call mechanic in Fairbanks as well as Supply. They found the in-stock hydraulic pump and expendables and began driving up to where the aircraft was on the ground while the aircraft's mechanic was already driving down to the site)

The mechanic inspected the hydraulic lines for condition when he arrived at the aircraft with no faults noted. The filters were inspected with no defects noted. When the hydraulic pump arrived, it was replaced and the aircraft was operationally checked and returned to service.

All's well that ends well, eh? Okay, it just turned out that the hydraulic pump was just what was needed. But I kick myself that we sent the parts up before we actually had good communications with either the pilot or the mechanic on site. If the aircraft is on the ground and *safe,* then we have the time to make sure the logistics decisions are correct. Had this been one of the hydraulic lines, then a few hours of down time could have been a day. Or, we would have had to send another aircraft up with the parts. Once again, after every one is accounted for and safe in these incidents, lets make sure the right calls are made.

FIR: 7/18/2017: Bell206, N305MH (Jettisoned Sling Load)

Inter-Island flight in the Aleutians was being performed with ceilings of approximately 500' but no precipitation. On the return flight while hauling mail as a sling load with a 100 foot long line, the pilot noticed some substantial oscillations. The ceiling had deteriorated to about 300'. With the sling load oscillating, the pilot was following the shore, but still over the water. Flying point to point along the headlands on the "home" island, the pilot began to descend to keep from entering the clouds. Losing the sight of shore, the pilot pulled 110% engine torque to arrest the descent. A band of clouds obscured the clouds again and the pilot was descending rapidly. At the edge of the clouds and the edge of the shoreline, the pilot jettisoned the mail load. The aircraft was recovered to the base station. The pilot coordinated the recovery of the mail by boat, and the load was found 8-10 feet from the shore. The mail was recovered.

The mechanic performed the over-torque inspection with no faults noted. Due to the possible damage to the mail and the involvement of the borough, a company investigation was initiated.

In case you haven't gotten the word yet, the Chief Pilot has weighed in and we are going to start using 500' ceiling as the weather minimum for long lining. That's the process-oriented response to this event. On the gut reaction/decision making side, we just have to stress that while the mail is important, it certainly isn't worth risking your life for. This could have ended much worse than some wet mail. Please remember that being on the ground and cursing the weather is certainly better than inadvertently going into it.

FIR: 7/19/2017: Bell407, N309MH

Aircraft was performing boat work when the Engine Chip Light illuminated. The pilot turned around immediately and returned to the boat. The mechanic removed, inspected cleaned and function tested the chip detectors. One sungle flake less than 1/32" was found. Performed 30-minute ground run with no defects noted. Removed, inspected, cleaned and installed chip detectors. Aircraft was approved for return to service.

This appears like a pretty textbook chip detector incident with good maintenance follow up. However, remember to never get pressure by a customer to immediately start flying the aircraft again. If the logbook isn't complete, the work isn't complete.

FIR: 7/20/2017: Bell407, N407RH (Bird Strike)

Pilot was performing pipeline security operations when a small bird impacted the windscreen (cruise flight). Pilot contacted flight following and landed on the pipeline right-of-way. Aircraft was inspected and it was decided that the bird had been too small to do any damage. Pilot phoned the chief pilot and discussed decision to continue mission. The windscreen was cleaned and the mission was continued.

This was an excellent decision by pilot to land even if the bird was no bigger than a chickadee. In cruise flight, even tiny collisions can cause damage and they can really startle both crew and passengers.

There is a lot more to cover, but this letter is getting long and I'd rather you spend you valuable time discussin the irregularity reports for this month. Therefore, I'm going to sign off for the July wrap-up and leave you with this…

Have a Safe August!

Dennis

Dennis S. Busch
Quality and Safety Manager
safety@maritimehelicopters.com
Maritime Helicopters
1915 Donald Ave
Fairbanks, AK 99701
Tel 907.452-1197
Cell 907.750-9548
Fax 907.452-4539

MARITIME HELICOPTERS
PUBLICATIONS
ROUTING MEMORANDUM

DATE: 8/4/17

TO: Ak All

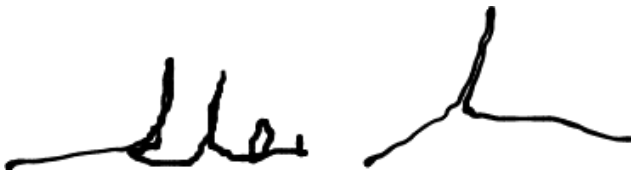
FROM: Quality/Safety Department

SUBJECT: July Safety Memo

Please complete the verification of receipt below and return this form to the Records Department in Fairbanks via email to faiadmin@maritimehelicopters.com or by fax to (907)452-4539

BY SIGNING THIS FORM I ACKNOWLEDGE I have reviewed and will comply with the memo listed above

EMPLOYEE SIGNATURE **DATE**



08/09/2017

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Aug 9, 2017, 3:23 PM AKDT (Aug 9, 2017, 11:23 PM UTC)
Jessica DelRosario (faiadmin@maritimehelicopters.com)
IP: 24.237.120.144

Signed:
Aug 9, 2017, 3:50 PM AKDT (Aug 9, 2017, 11:50 PM UTC)
Steve Slade (dom@maritimehelicopters.com)
IP: 104.254.227.146