



Maritime Helicopters

April/May 2017 Quality & Safety Notes



In the Starting Blocks for Summer!

As I write this month, I feel like there is just enough time to send everyone out for the summer with last minute advice. Like the mom who yells, “Wear your raincoat!” as the kids run out the door. As the Maritime dance card fills up for the summer months, we’ll be hard pressed to write the perfect logistics support plans, emergency response plans, and crew schedules for what looks to be a busy year.

Emergency Response Plans

On a recent trip to Homer, I spent some time with Dave B. and Bob, discussing our Emergency Response Plans. WE came up with one simple fact. When you are flying helicopters over 200,000 or so square miles, there is no “one size fits all ERP. With that in mind, let’s talk a little “Maritime South” with respect to Emergency Response Plans. Remember that as far as flight plans go, it’s Company, Customer, or FAA flight plan every single time we fly.

Akutan: No Internet equals no SkyTracker for the mechanic on duty. However, the aircraft can be watched from Homer and Fairbanks. But, possible the best tracking is if the mechanic at Akutan can be on the radio for the first couple miles across the strait, and then the aircraft loader can be on the radio with the aircraft the second half of the passage. Both pilots & Mechanics need to continue to cultivate the local relationships with the village (including the boat/barge owners) as well as the East Aleutians Borough emergency service people. This is one of our biggest challenges, but I think that basically everyone in the village should be aware (to some extent) when the aircraft is flying back and forth between Akutan and Akun.

Kodiak: The apartment does have internet while the hangar does not. So the mechanic can help out with flight following/Skytracker watch (assuming the guest account is current: see Dave B.) I’m aware that at Homer, the FAA flight plan is most often used, and there are some repeaters around the island to keep in comms. But if the mechanic can watch the Sky Tracker, especially in after-hours/weekends situations, that would be much appreciated. If you are down in Homer, and you are flying to new, or little flown areas, please do feel free to call Homer or Fairbanks and we can keep an eye on you!

Nikiski: We’re working on a plan to include the drilling rig expeditors to assist in flight following for the short flights within the Cook Inlet. Stay tuned for possible “aircraft feet wet” “aircraft feet dry” calls from and to shore if that works. In the meantime, if you are flying out of Nikiski AND have a mechanic available, they can help with flight following. Otherwise, Homer has you on their flight tracker screen.

All the flight following in the world doesn’t help in an emergency if you aren’t familiar with our ERP Manual and our Emergency Response Checklist (version 16 is current right now). Ensure that you have the checklist available and that you occasionally go on the Safety portion of the maintenance portal to be familiar with Emergency Response!



Maritime Helicopters

“End of June” 2017 Quality & Safety Notes



Mid-Summer Update

Mid-Summer! Barbeques! Great weather! No snowshoes in the aircraft! A Bose Headset, Shorts and Flip Flops to go flying! Okay, I exaggerated a bit at the end there. But let's not get complacent with all this nice weather. We still want to make sure that we are getting good weather reports, filing company, customer, or FAA Flight Plans, and doing our paperwork at the end of the flight. A few QUALITY checks of aircraft logbooks have shown that not a lot of power checks are being completed and that the proper care for the logging of maintenance times is not being taken.

Emergency Response Plans

Correction from last month: The hangar at Kodiak *has* internet and the ability to watch the aircraft on SkyConnect. Thus, the mechanic on duty should be able to track the aircraft while out working. That doesn't mean that the rest of us with SkyTracker accounts shouldn't be helping out and watching all the aircraft.

Changes to ERP Manual, specifically the Emergency Response Checklist. We're adding a page three to the ERP Checklist. Essentially, it will be a temporary or remote area checklist to allow pilots and crew to have a worksheet to give a look at your surroundings in the field, and fill in the blanks for *your* individual ERP contacts for an area outside of normal contact channels. An example for this would be the summer work for Exxon up at Pt Thompson this summer. We'll have the crews look at how the Exxon-Maritime Response Plans fit together and then have a document to share between Maritime and Exxon managers. Definitely a work in progress, but please take a look and see if there are items that you would change or add to.

One note, if you are still stationed at one of our regular bases, you can just continue printing the first two pages of the ERP Checklist and tacking them next to your phone.

MH Emergency Pocket Checklist v.17

•**Start Log**

•**Initial Report-Contact Manager on Duty**

Director of Operations: Bob Fell, 907-227-7602
Chief Pilot: Dave Jones, 907-388-8390

•**Alert-Senior Management**

Director of Operations: Bob Fell, 907-227-7602
Chief Pilot: Dave Jones, 907-388-8390

•**Subsequent Alerts if Event is Significant**

Director of Maintenance: Steve Slade, 720-413-9835
Assistant Chief Pilot: Dave Buzga, 208-596-9076
Safety Manager: Dennis Busch 907-750-9548

•**Notification of Client-Director of Operations shall notify**

Identify and notify client representative

•**Notification of Authorities-Director of Operations shall notify**

FAA Comm. Center Duty Officer: 907-271-2000
FAA POI Mathew Dahl: 907-209-0833
FAA PMI David Fredrick: 907-790-7305
NTSB: 907-271-5001

•**Post Alert Duties and Responsibilities-Manager on Duty**

Keep flight operations running.
Establish permanent communications with accident site

•**Emergency Response Center Procedures**

Members will assemble at MH principal base

•**GO TEAM Established**

•**First Person Procedures at Accident Scene**

Action Priorities: care of injured, preserve wreckage & cargo

Secure flight and maintenance records
Establish contact with Manager on Duty-Bob Fell/Dave Jones

•**Communications**

All communication will be through Bob Fell/Dave Jones

Note: All statements to the press will only be through the President or Senior Representative of the GO Team

•**Required Reports filed by Director of Operations**
DOD - Immediate if on DOD contract, next business day otherwise

U.S. Department of State - Passenger Report (within 3 hours)

FAA - Mechanical Reliability Report (within 3 days)

NTSB Form 6120.1 or 7120.2 (within 10 days)

NTSB - submit to Director, Family Support Services (upon request)

Obtain Pilot and Witness Statements

DOD Contract Reporting: HQ AMC Command Center @ Scott AFB Illinois 618-229-0360

DOD Next Business Day Reporting: Duty Officer, USTRANSCOM, Scott AFB Illinois (616-402-2369) **and to** HQ AMC/A3B (618-229-4801 or 4343)

NTSB National Transportation Safety Board Office (7-5) 907-271-5001

FAA Regional Operations Center (24 hrs.) 907-271-5936

USCG Rescue Coordination Center: 907-463-2000

ANG Air National Guard Alaska Rescue Coordination Center: 907-428-7230

Natl' Parks in AK Dispatch 907-683-9555

KNP - King Salmon Natl' Park Office (8-5) 907-246-3305

LCNP ANC Lake Clark Natl' Park Office (8-5) 907-644-3626, Chief Ranger Carin Farley 907-644-3647

Alaska Fish & Wildlife Protection Division (Kodiak) 907-486-4761

State Troopers: Anchor Pt/Homer 235-8239; Kodiak 486-4121; King Salmon 246-3464; Anchorage 269-5511; Fairbanks 451-5100; Valdez 835-4307; Glennallen 822-3263; Coldfoot 678-5211

Homer Police Dept.: 235-3150

Fairbanks Police Dept.: 450-6500

Homer Airport

Airport Mgr. (Kevin Jones) 235-5217of, 399-4069c

ARFF/Maint. Crew 235-4394, 399-7886

Homer Flight Service 235-8550

MHI HELICOPTER SAT PHONE NUMBERS

N193AL	011-8816-2347-5252
N304MH	011-8816-5147-4518
N305MH	011-8816-5147-3084
N306MH	011-8816-5147-6601
N307MH	011-8816-2347-5428
N308MH	011-8816-5147-3007
N309MH	011-8816-5147-2999
N312MH	011-8816-2249-4799
N314MH	011-8816-2347-5344
N316MH	011-8816-2346-6521
N326MH	011-8816-2244-6282
N327MH	011-8816-2244-6323
N328MH	001-8816-5148-4760
N405LP	011-8816-5146-7719
N407PA	011-8816-2249-4876
N407RH	011-8816-2249-9809
N618AC	011-8816-2346-6275

MH Emergency Pocket Checklist v.17

- (Remote Area Supplement)
- Many worksites in Alaska may not have conventional access to Telephone/Cellphone. (Radio? Sat Phone?)
- Contacts on the ERP Pocket Checklist may not be available
- Fill out this checklist when establishing new base of operations to document ERP contacts.
- These contacts should be for local use and for immediate notification. In the case of incident/accident, once Maritime Operations has been notified, onsite personnel will take direction from Maritime Operations.

Customer Contacts & Contact Method

Flight Following _____

(PH#/Frequency)

Safety Official _____

(PH#/Frequency)

Contracting Official _____

(PH#/Frequency)

Local Law Enforcement/Rescue (VPSO/Contract Security/Fire)

VPSO/Law Enforcement _____

(PH#/Frequency)

Local Fire/Rescue _____

(PH#/Frequency)

ERP Info to be shared with Customer:

Satellite Phone number of Aircraft: _____

Maritime Director of Operations: Bob Fell 907-227-7602

Maritime Chief Pilot: Dave Jones 907-388-8390

Maritime Assistant Chief Pilot: Dave Buzga 907-596-9076

Maritime Quality & Safety Manager: Dennis Busch-907-750-9548

Maritime Offices: Homer 907-235-7771/Fairbanks 907-452-1197

Gap Analysis should be performed with each new working relationship. Bridging the gaps between customer procedures and Maritime Procedures should be of primary concern between Pilot, Mechanic, and Customer's procedures.

Aircraft will generally be considered overdue at 30 minutes after scheduled arrival. The use of the Honeywell SkyTracker , customer flight following center, or prearranged arrival time with the on duty mechanic are all methods that can be used to establish arrival times.

✓ Gap Analysis Notes

Just in case the intent was lost here, I had the Chief Pilot go ahead and fill out the remote area supplement page for the work for Exxon in the B412 this summer. I hope this helps. There isn't an exact right answer for filling it in, other than to bring to mind, the information you need, should you ever need it!

MH Emergency Pocket Checklist v.17

- (Remote Area Supplement)
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- These contacts should be for local use and for immediate notification. In the case of incident/accident, once Maritime Operations has been notified, onsite personnel will take direction from Maritime Operations.

Customer Contacts & Contact Method

Flight Following Exxon Mobile Auv Logistics Coord
(907) 685-3551/3588
122.9 if close to PAAD (PH#/Frequency)

Safety Official Dennis Busch (None @
work location) (PH#/Frequency)

Contracting Official N/A
 _____ (PH#/Frequency)

Local Law Enforcement/Rescue (VPSO/Contract Security/Fire)

VPSO/Law Enforcement North Slope Borough Police
(907) 659-2515 (PH#/Frequency)

Local Fire/Rescue PASC ARFF (Only Available when
FSS is open)
(907) 659-2553 (PH#/Frequency)

ERP Info to be shared with Customer:

Satellite Phone number of Aircraft: (N328MH) 011-8816-5148-4760

Maritime Director of Operations: Bob Fell 907-227-7602

Maritime Chief Pilot: Dave Jones 907-388-8390

Maritime Assistant Chief Pilot: Dave Buzga 907-596-9076

Maritime Quality & Safety Manager: Dennis Busch-907-750-9548

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✓ Gap Analysis Notes

- Considered overdue After 5 minutes
- Pax Manifest emailed to Mark.Ouellette@exxonmobile.com
- Neil.Ex@exxonmobile.com
- FTT FOLLOWING CALLS
 - Prior to Departure
 - Every 30 minutes enroute.
 - AFTER Ldg
- FTT FOLLOWING CALL
 - Aftt Call Sign
 - Persons on Board
 - Fuel on board
 - Position
 - ETA Next Point
 - Any Diversions

Bell Messages (Tail Rotor Blade Preflight Check)

These are not new inspections, but simply emphasis areas which Bell is putting out due to a recent event. Please follow the hyperlinks and make this part of your detailed preflight items. There is a link for both the 206 and the 407 Tail Rotors

https://www.bellcustomer.com/files/Storage/OSN_206L-17-52.pdf

http://www.bellcustomer.com/files/Storage/OSN_407-17-21.pdf

Cold Gas Venting

For those of you flying off the Coast on any of the oil platforms, the BSEE (Bureau of Safety and Environmental Enforcement) has put out a message regarding the dangers of Cold Gas Venting from drilling or "off gassing" operations which can cause additional risk for helicopters flying in the vicinity. The origins of this message came from the two incidents listed below.

Two helicopter incidents (2011 and 2013) which resulted when methane gas was vented from a facility and ingested into the turboshaft engines of the helicopters during takeoff; resulting in the ditching of the two aircraft.

- The 2011 incident (NTSB-CEN11LA252⁵) involved a Bell 206L-3, N32041 at Main Pass 61A on March 24th, resulting in the helicopter engine losing power after the pilot heard a loud bang. The pilot performed a successful autorotation to the water. The occupants escaped with minor injuries. The NTSB attributed this incident to engine compressor stalling resulting from ingesting methane gas during takeoff.
- The 2013 incident (NTSB CEN13FA491⁶) involved a Bell 407, N53LP, at Ship Shoal 208H on August 13th, where shortly after takeoff the pilot reported hearing a loud bang and then losing engine power. The pilot executed a successful water entry. All occupants exited with only minor injuries. The exact cause of this accident remains undetermined, but records indicate that the facility involved vented significant amounts of methane throughout the day of the accident.

Although this is a pretty huge area of study, it might help for all of us in the Oil & Gas Support business to know a little about. I'll include the link to the National Transportation Safety Board version of this message which at least has some useful picture of a typical off-gassing flare boom. At any rate, suffice it to say, that if you know or suspect that if scheduled or unscheduled off-gassing is going on (yes, I know that methane is invisible) that I would question the Landing Deck Safety Officer about the safety of helicopter operations in the area.

<https://www.nts.gov/safety/safety-recs/reclatters/A-14-069-070.pdf>

And if you **REALLY** have time on your hands?

<https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//study-of-effects-of-combustible-gas-on-helicopter-operations.pdf>

OLD BUSINESS

Vehicle Walk Arouns

Have you done your vehicle walk-around??? I just checked out the 2011 Chevy truck in Fairbanks and noticed a shimmy in the front left tire. If you find something, say something!



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 June

FIR: ALL MONTH LONG! Bell 407, N407RH (FADEC Faults)

Okay, let's get something straight right out of the blocks! We need to track ALL the Fight Irregularities even if they are seemingly redundant. Even if it is a fault that seems innocuous but you know is a maintenance issue and you think you can “live with it”, please write it up. Many of the FIRs this year have come from the FADEC issues of N407RH. It has had intermittent problems which have now been fixed, causing a series of FADEC degrades and start issues. Had maintenance known all the details, we would have sent the Olympic Maintenance Team or called the President of Bell Helicopters, or summoned Zeus for goodness sakes!

At any rate, 407RH has had several FIRs this month, all having to do with the Engine FADEC. The indications were general, but not every time, a single FADEC Degrade light right after engine start. On some occasions, the Start Fault was illuminated during the start. The aircraft was moved from the field, back to Fairbanks and eventually, the troubleshooting led to the NG Pickup, which was replaced.

There are two points here. The FIRs that are submitted pretty much have to be for every event if maintenance is going to make good decisions on fixes. And then, the information has to be accurate! If you are having a maintenance issue, a correct reflection of the actual cockpit indications is crucial!

GOR: Bell 206L3 N307MH (Tail Rotor Driveshaft Hardware)

The torque check on the Tail Rotor Driveshaft hardware was being performed 13.2 hours after the A0054 Inspection. The mechanic doing the torque check noted that one of the three bolts on the driveshaft flex pack was actually loose. There was no damage found and the hardware “held torque” after being torqued properly. Maintenance lead was informed and a records check was performed. Indications are that the torque after reassembly was not performed properly, possibly due to “rushing” on a day when several aircraft were in the hangar for scheduled maintenance.

There is never a reason to rush maintenance past the time it takes to do it right the first time! If you do something wrong the first time because you are rushed, when are you ever going to find the time to redo the job???



LAST SAFETY ALERT!
Mid-Summer! Don't be eaten by a bear!

Dennis S. Busch
Quality and Safety Manager
safety@maritimehelicopters.com



1915 Donald Ave
Fairbanks, AK 99701
Tel 907.452-1197
Cell 907.750-9548

Fax 907.452-4539

OLD BUSINESS

Vehicle Walk Arounds

Have you done your vehicle walk-around???



New Station Audit Checklists (yes, I'm keeping this in here every month)

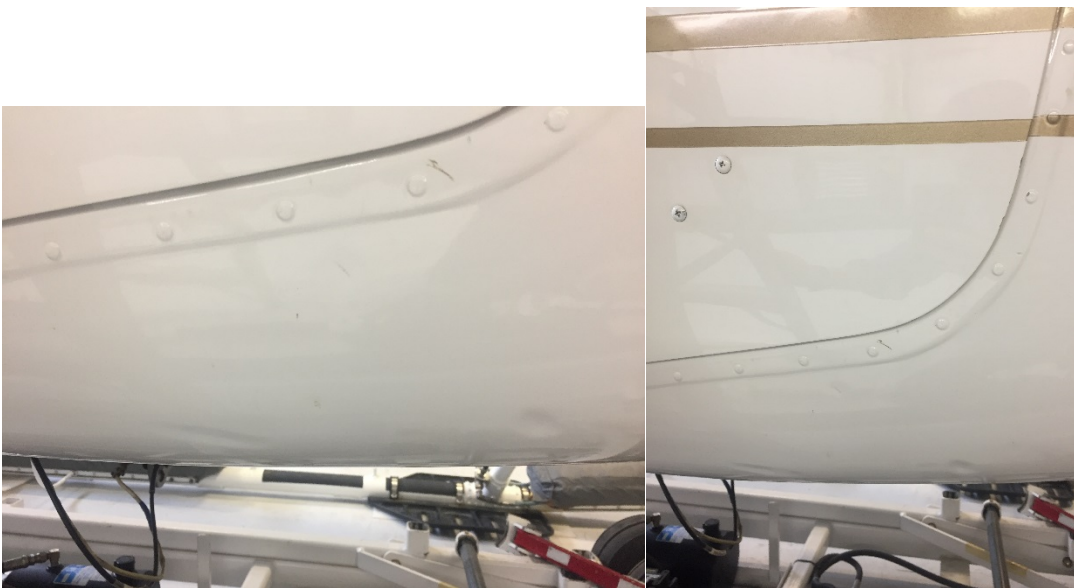
The new station audit checklists are still working great for most stations. Please remember that each time you come on shift to take the time to go through the station checklist, see if you need any assistance and then send the checklist to me.

Continue sending them to me at...

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

Aircraft Walk-Arounds

Recent reviews of the Flight Irregularity Reports are showing up a bit of a disturbing trend of our aircraft being damaged while either unloading or loading. Some pictures from the Nikiski aircraft show what appears to be fairly specific loading damage. Namely, that while hot loading, people are placing boxes or other loads on the Bell 206 step and "shoving" the load towards the helicopter.



NOTE: Depressions are about eight inches below the Left Passenger Cabin Door

Two points on this: 1. We have to keep our customers briefed on how to load and unload our aircraft. In addition to this type of sheet metal repair, we've had aircraft come back from the field with windows popped out or cracked, and upholstery torn. The sheet metal repairs are especially costly. 2. We *must* continue to perform our through-flight walk-arounds to identify this kind of damage for both pilot and customer safety as well as for our ability to identify and train individuals who are being "kinda rough" on our equipment.

NEW FEATURE!!! TADAH! TADAH! TADAH!!!

The Safety Data Sheet of the Month

As I have looked at the usage statistics from our Safety Data Sheet program through 3E Company, it's hard to notice that most of Maritime doesn't access our SDSs...ever. There's no scolding meant here. If you don't want to take a look at any of the information which we pay for, so we have knowledge of the kinds of chemicals we use, that's just a choice. But while taking the Red Cross, First Aid class last week, we had an instructor give us a rapid fire interrogation of our knowledge of first aid for various chemicals. It's sad to say that nobody knew what to do for first aid in situations when chemicals as common as Windex were ingested, sprayed in the eyes, or in contact with bare skin.

I suppose I believe in chipping away at glaciers sized problems with an ice pick, so here goes. I picked Jet B/JP4 Jet Fuel as a first, experimental look at some of the data in our SDS database.

AVIATION TURBINE FUEL, JP-4 WITH ANTI-STATIC ADDITIVES: (abbreviated version compiled at great effort, but very little expense by your Safety Manager)

What is JP4? It's really nothing more than some refined hydrocarbons, also called Jet B. Sort of a mixture between Kerosene and Gasoline and having more dangerous additives like Benzene, it isn't really that good for humans. But it's how our aircraft "go". Some of the components, like benzene, can be absorbed through the skin...not good. So if you wonder why we keep the rubber gloves around the fuel systems, there's your answer. For the pilots or mechanics out pumping the stuff, some eyeglasses with side shields are recommended, as well as long sleeves and gloves.

First Aid: If you get any JP4 in your eyes, you need to flush your eyes with running water for at least FIFTEEN MINUTES! If it's on your skin, wash with soap and water for at least 15 minutes. If you ingest any, DO NOT INDUCE VOMITING but seek medical attention! If you inhale enough to cause respiratory distress, you may need artificial respiration or oxygen.

Firefighting: Nasty stuff when burning. Believe it or not, it is hard to get Jet Fuel to burn. You can put out matches in it at most temperatures. (Don't try that at home!). A Dry Chemical, Foam or CO2 Fire Extinguisher will work.

If you want to know more, remember the website

<https://www.3eonline.com/EeeOnlinePortal/DesktopDefault.aspx>

You can use the general user name, [Mechanics](#) and the password, [maritime2015](#)

Incident Reporting April/May

Flight Irregularity Reports

FIR: 02/27/17 Bell 407 (Un-forecast weather)

After landing at Prospect Creek, the weather deteriorated to approximately ¼ mile with heavy snow and mist. The Chief Pilot was called and plans were started for a possible Remain-Over-Night (RON). A vehicle was scheduled to bring aircraft covers and overnight equipment for aircraft. After a several hour mission delay, the weather improved and the vehicle was never sent.

What can I say? Preparing for a contingency on the ground is much better than being in the clouds and hoping to get to the ground!

FIR x2 (one Bell 206, one Bell 407 (see above))

There have been two Flight Irregularities in April and May with aircraft having to stop operations and land because of unforecast weather. Without going into both sets of details, I wanted to mention that while Alaska a bit lacking in some remote area observation and forecasting, things are getting better for us here at Maritime. AT&T, through the Alyeska Pipeline extranet system, is allowing us access to their cameras at their repeater sites.

That is great for anyone on the Pipeline (PS#4, PS#5, GRB) but if you need an observation and don't have extranet access, you can call me, (Dennis Busch at the Fairbanks office or my cellphone, or Dave Jones at Fairbanks) we can look up the cameras and either send you a screen shot or just let you know how it looks where you are going.

The Valdez crew can *maybe* work something out with GRB for camera shots if you are going north??? Here is the list of available cameras as of 5/26/2017. (The "not available" sites may or may not be available in the future.)

Prudhoe Bay Franklin Bluff Costa Hill Slope Galbraith (*not available*) Atigun Margaret Hill (*not available*)
Kaaruk Cold Foot Eagle (*not available*) Fish Bench Livengood (*not available*) Aggie Pedro Dome (*not available*)
Fairbanks Buck Donnley Dome Nicole Knob (*not available*) Yost (*not available*) Round Top Gakona (*not available*)
Stuck Kimball Pass (*not available*) Tiekel Tsina (*not available*) Ptarmagin (NorthEast South)
Valdez Keystone MW

FIR: 04/11/2017 Bell 407 (FADEC FAULT/Failed ECU)

While performing confined area landings for an annual Part 135 Checkride, the FADEC Failed to Reversionary Governor Mode. Pilot and Check Airman returned aircraft to home field. During shutdown, the aircraft wouldn't wind down to idle when the throttle was placed in IDLE position. The Aircraft was shut down after two minutes at 100% rotor RPM. Then, when engine was shutdown, the FADEC horn and light came on after engine stop.

Maintenance performed the FADEC troubleshooting and discovered the Engine Control Unit (ECU) to be faulty. Maintenance replaced ECU with a serviceable unit. After operational checks, aircraft was returned to service.

If you haven't looked over the FADEC Reversionary Mode procedures recently, this might be a good reminder.

FIR: 04/12/2017 Bell 407 (FADEC Degrade)

After engine start, FADEC Degrade) light illuminated. Engine was shut down and maintenance began troubleshooting. (away from base station). The pilot and Fairbanks Maintenance used the FADEC diagnostic "button" on aircraft. The aircraft was started again and no FADEC lights were noted. A successive start was also successful that day. The aircraft was moved to Homer and a subsequent start showed the same FADEC Degrade. Through troubleshooting, the 1K3, 2K4, & Starter Relays were replaced. Aircraft was returned to service.

Ground Occurrence Reports

GOR: 04/12/2017 Bell 407 (Fuel Leak)

During preflight, when the fuel valve and fuel boost pumps were turned on to sample the airframe fuel filter, the pilot noticed fuel leaking onto the engine deck, coming from the fuel line between the Fuel filter and the Hydro-Mechanical-Unit. Fuel switches were turned off and maintenance notified.

Maintenance confirmed fuel leak and replaced worn line with a new serviceable line (that's an eleven hundred dollar fuel line, folks). Fairbanks maintenance lead issued CAN-17-03 to have the remainder of the Bell 407 fleet checked for lines that may be contacting the cowling support and possibly causing fuel line damage.

There are a couple of lines in these B407s which are awfully close to the cowling supports when you close the cowling (or as they move past the lines during closure) Please add these areas to your preflights and daily inspections if you weren't already.

GOR: Bell 407 5/16/17(Emergency Floats)

A mechanic at one of the base stations noticed that the float system was leaking and that the pressure in both float bottles was low. Further inspection showed that the float bottle valves appeared to have only been hand tightened.

The mechanic properly tightened the float bottle valves (replacing the O-Rings as a preventative measure during reassembly) and then serviced the float system. Aircraft was returned to service.

This incident has begun an investigation as to the float bottle tasks and if there are differences in how the two bases are putting them back together. There will be several tool box talks on this subject and then, on the next install on a float system, possibly N307MH? There will be some classes, standardizing the proper procedures. This GOR will be kept open for the time being until corrective actions and training are completed.

Alyeska Safety Meeting Topic (Operation Discipline)

I don't always include items from Alyeska Pipeline Service Company in these safety notes, but as they have been fielding the newest version of their Operational Discipline Procedures, I thought it might be interesting for pipeline and non-pipeline crews alike to review one of their short documents regarding OPDeep as they call it. This document really just demonstrates how they do their Corporate and Self Assessments as they take on each new task. Please take a look and keep in mind the "Five Objectives" which must be met in all of their processes as you work at your sites this summer.

This is just FYI and is in no way an endorsement of anything other than the idea of Operational Discipline.

[Operational Discipline](#)

HAVE YOU PACKED YOUR MOSQUITO SPRAY IN YOUR SURVIVAL EQUIPMENT?



That's it for April/May See you in a few weeks!

Dennis S. Busch

Quality and Safety Manager

safety@maritimehelicopters.com



1915 Donald Ave

Fairbanks, AK 99701

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Cell 907.750-9548

Fax 907.452-4539



Oil Movements/Pipeline/Valdez Division Operating Procedure

Title: Operational Discipline

Number: OMPV-0002

Page: 1 of 4

Revision: 4

Effective Date: 2/22/16

Approved by: John Baldridge, Sr. Director, Pipeline Operations	Approved by: Melanie Myles, Director, Oil Movements	Approved by: Scott A. Hicks Sr. Director, Valdez Operations
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Purpose

Over time Alyeska has developed processes and procedures to ensure safety, integrity and compliance objectives are met. These are based on common sense, lessons learned, laws and regulations; and they address PPE, fire prevention, and building safety; environmental protection and spill prevention; control of stored energy and work; process safety; and shift and job turnover. Taken together, these requirements comprise a system which impacts every task or activity undertaken in the Division.

To heighten focus on these requirements and increase emphasis on the critical importance of following the rules, we have adopted the term "Operational Discipline" to refer to our behavior and performance in carrying out the requirements of Alyeska's processes and procedures.

This procedure defines Operational Discipline (OpD) and identifies related accountabilities.

Five objectives must be met in every activity to meet the expectations of Operational Discipline. They are:

1. A safe work area is provided.
2. The environment is protected.
3. Equipment and systems are controlled.
4. Work is planned, scheduled, implemented, and controlled.
5. Communications are sufficient and effective.

Accountable Resources

- Sr. Director, Pipeline Operations
- Sr. Director, Valdez Operations
- Director, Oil Movements
- SERVS Director
- Managers and supervisors are accountable to ensure individuals and teams under their supervision are trained, qualified, and accountable for understanding and carrying out the principles of Operational Discipline.
- All Operations Division Personnel



Oil Movements/Pipeline/Valdez Division Operating Procedure

Title: Operational Discipline

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Effective Date: 2/22/16

Definition

Operational Discipline (OpD)	<p>The embodiment of Alyeska's values and principles in management systems that are developed, implemented, and maintained to:</p> <ol style="list-style-type: none">1. Structure operations and maintenance tasks in a manner consistent with APSC's expectations.2. Ensure that every task is performed deliberately and correctly.3. Minimize variations in performance. <p>The desired result is that every Operation & Maintenance work task is performed in a disciplined manner - adhering to all approved procedures and work practices - every time. The expectation is that a strong, ongoing focus on flawless Operational Discipline assures excellence in work quality and safety.</p>
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PROCEDURE

A. General Information

Operational Discipline is all about due diligence as we go about our work each and every day. The challenge for every person working in the Operations Division is ensuring the requirements of APSC policies and procedures are followed by everyone. The goal is flawless operations and maintenance.

B. Objectives and Associated Requirements

1. A Safe Work Area is Provided

Associated requirements include, but are not limited to:

- a. The authority to stop work is fully understood and practiced by all TAPS workers.
- b. Proper personal protective equipment (PPE) is used.
- c. Housekeeping is maintained and hazards are identified.
- d. Individual and team behavior is in accordance with all safety rules, policies, and practices.
- e. Site specific safety plans are prepared and implemented.
- f. Safe Performance Self-Assessments (SPSA) are properly completed as appropriate.
- g. Loss Prevention Observations (LPOs) and safety attests are conducted.
- h. Area and facility access is controlled; all rules, conditions, and permissions for entry are followed.
- i. All traffic rules are adhered to.

2. The Environment is Protected

Associated requirements include, but are not limited to:

- a. Environmental plans are written and environmental briefings are held as appropriate.
- b. Air emission sources are managed in accordance with air quality permits and regulations.



Oil Movements/Pipeline/Valdez Division Operating Procedure

Title: Operational Discipline

Number: OMPV-0002

Page: 3 of 4

Revision: 4

Effective Date: 2/22/16

- c. Water systems and wastewater discharges are managed in accordance with water quality permits and regulations.
 - d. Pollution practices are employed to minimize the generation of waste. All waste is properly managed.
 - e. Oil and chemical spill prevention and mitigation measures are taken and maintained.
 - f. All spills are properly reported, responded to, and cleaned up.
 - g. Fish and wildlife protection measures are taken and maintained.
 - h. Vegetation and water bodies are properly maintained to protect wildlife habitat according to permits and regulations.
- 3. Equipment and Systems are Controlled**
- Associated requirements include, but are not limited to:
- a. Energy isolation is properly done, maintained, and documented.
 - b. Car seals are properly used, maintained, and documented.
 - c. Equipment out of service requirements are properly used, maintained, and documented.
 - d. Physical jumpers and electronic bypasses are properly used, maintained, and documented.
- 4. Work is Planned, Scheduled, Implemented, and Controlled**
- Associated requirements include, but are not limited to:
- a. Work scope is reviewed and understood.
 - b. Engineering review is completed (as applicable).
 - c. Job requirements (time and resources) are verified.
 - d. Operations and Maintenance work procedures are correct and ready on time.
 - e. Safe Operating Committee (SOC) is performed and reviewed (as applicable).
 - f. Job Loss Analysis (JLA) is performed and reviewed (as applicable).
 - g. Work is correctly planned and scheduled.
 - h. Materials (parts and supplies), tools, and personnel are available.
 - i. Operating area, systems, and equipment are ready when needed (as applicable).
 - j. Notification is made to OCC 24 hours prior to requesting remotely operated equipment turnover for maintenance.
 - k. Permits are properly prepared and followed.
 - l. SPSAs are completed.
 - m. Work completion is assured and documented.



Oil Movements/Pipeline/Valdez
Division Operating Procedure

Title: Operational Discipline

Number: OMPV-0002

Page: 4 of 4

Revision: 4

Effective Date: 2/22/16

5. Communications are Sufficient and Effective

Associated requirements include, but are not limited to:

- a. Active, two-way communication is practiced ensuring information, requirements, and expectations are understood by all parties.
- b. Turnover is proper and thorough.
- c. Coordination of activity between areas, crafts, teams, and individuals is effective and sufficient.

C. Continuous Improvement

All managers and supervisors will continuously advocate, promote, and monitor Operational Discipline in all aspects of work performance. Effective use of LPS tools is a primary vehicle for maintaining focus on and continuously improving OpD performance.

References

- [EC-71-XXX](#), *Emergency Contingency Action Plans* (all pipeline, OCC, and VMT volumes)
- [N-8.00.01](#), *Pipeline Pump Station Access and Orientation*
- [SA-38](#), *Corporate Safety Manual*

Records

None	All records generated as a result of this document will be retained in accordance with CW-200 , <i>Records Retention Schedule</i> .
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Revision History

Revision	Date	Revision Summary
4	2/22/16	Full scheduled review performed. Updated document owners to add John Baldrige and Scott Hicks. Changed TAPS employees to TAPS workers per MAC Action 15254. Rewrite to align with APSC policies and procedures. Removed situational awareness and all performance indicators. Section C updated. Section D deleted.
3	1/21/14	No SOC. Rewritten definition for Operational Discipline in Section 3.0. Improved language for the performance indicators in Section 4.0. Other minor edits. No SOC required.
2	8/29/12	Added SERVS Director to Section 2.0 Accountable Resources. Measurements section rewritten. Other minor edits. No SOC required.
1	10/10/11	Revised to add language requiring notification of OCC for requesting equipment to be taken out of service. No SOC required.
0	6/16/10	Original issue of OMPV-0002. Supersedes the following departmental documents: <i>N-6.00.18, Pipeline Operational discipline, O-6.00.01, Valdez Marine Terminal Operational Discipline, D6.1.02, SERVS Operational Discipline, and OMD-0102, Oil Movements Department Operational Discipline.</i>



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 discoloration (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 Arouns

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 single 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

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**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 faadmin@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

A handwritten signature in black ink, appearing to be 'D. L. ...', written over a horizontal line.

DATE

08/09/2017





Maritime Helicopters

August/September 2017 Quality & Safety Notes



No Freezing Weather in August/September

Not really...Of course Pump Station 4 and Pump Station 5 had their freezes. But in Fairbanks and south we've been living large with our Global Climate Change! Yeah! But now I'll be the downer and say that it is time once again to get ready for winter. The fireweed has almost run its course and the bears will be headed off to sleep very soon.

There were still quite a few Flight Irregularity Reports in August which we will get to later in the letter, but I do want to mention that the vehicle walkaround program definitely needs some renewed diligence. One of the pilots helped us out here in Fairbanks the other day and was checking the condition of the vehicles and found out that 3 for 3 needed to have engine oil added, and they were mostly down towards the EMPTY line on the gas gauge. Folks, that is ridiculous. We need to keep our vehicles ready to go at all times. The aircraft part being delivered might be for YOU! Please, let's keep the vehicle walkaround program going or the control measures could get ugly. For now I think we'll just settle for some "friendly" reminders from Becky and Jessica when you get the keys to a vehicle, to do a walkaround before you get it!

FLIGHT IN ICING

We've had a couple of reports from August, where one Maritime Pilot (with customers) has seen another Maritime aircraft depart into known icing conditions. Let's just agree right here; that makes no sense. None of our missions are life and death except for and occasional impromptu medical transport on the pipeline or off a ship. We don't need to be flying in icing. On the 29th of August, I was flying Pipeline Security out of Fairbanks when I got a call, relayed through the Alyeska Radio Telephone System (ARTS) at Pump Station 5, that the Pump Station 4 aircraft had experienced unforecast icing around Atigun Pass. Mission curtailed...Period.

We have, in our Health, Safety, And Environmental Manual, a concept know to the industry as "Stop Work". In simplest terms, that means, if you are afraid that you are doing something unsafe (or outright prohibited by the Bell Operator's Manuals in this case, you can stop what you are doing, ask questions of management about other ways of accomplishing your tasks, or discussing the complete cessation of flying, working, driving, etc. until the situation can be made safe.

There is no expectation from Maritime Management that our pilots' are expected to conduct any operation that is in violation of the FAR's or the Rotorcraft Flight Manual. We must be successful in everything that we do. If there is any doubt about whether to continue or not, please give Management a call or don't continue.

(206 L4 Manual)

Basic configured helicopter is approved for seven-place seating and is certified for land operation under day or night VFR **nonicing conditions.**

Aircraft Fuel Samples

Several reports lately of pilot not taking daily fuel samples. Obviously, not good from the whole "I really like working here and would like to continue" standpoint. But more importantly, from the "stay alive and not damage the engine" standpoint.

Straight from the Fuel Quality Manual

12.2 Aircraft Fuel Samples

The Pilot-in-Command will ensure the daily fuel system sumping procedure as outlined by the Aircraft/ Rotorcraft Flight Manual has been performed. A "Clear & Bright" fuel sample taken from the main fuel tank sump will be placed in a sample jar, marked with the aircraft tail number, and be retained until the aircraft has completed all daily flights. If the fuel does not pass the "Clear and Bright" test, it must be tested with the Velcon Water Detection kit or the Shell Water Detection capsule. If it does not pass these tests, the fuel must be rejected.

I hope that was short and to the point.



SDS of the Month: Mastinox 6865K

The State Troopers stopped by to borrow a few ounces of Mastinox Sealant the other day. (yes, that's the yellow goop that you have to keep in the fridge to be used for bearings and such (dissimilar metals). I went on the 3E Company site to print out a secondary label for them and got reading the Safety Data Sheet. Yeeesh! Kinda nasty stuff! So even if this isn't the biggest *volume* product we use on the aircraft from day to day, I thought I'd include it as our SDS of the month. Here's the straight dope on this...

Mastinox 6856K Jaune BMS 3-27 / Cart. 160 ML

Classification of the substance or mixture

FLAMMABLE LIQUIDS - Category 2

ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category

4 SKIN IRRITATION - Category 2 CARCINOGENICITY - Category 1A

TOXIC TO REPRODUCTION (Unborn child) - Category 2

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), hearing organs, kidneys, liver) - Category 2

Signal word: Danger

Hazard statements: Highly flammable liquid and vapor.

Harmful if swallowed or if inhaled.

Causes skin irritation.

May cause cancer.

Suspected of damaging the unborn child.

May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs, kidneys, liver)

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion: If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Eye contact: Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
pain or irritation watering, redness

Potential acute health effects

Harmful if inhaled.

Harmful if swallowed.

Causes skin irritation. Defatting to the skin.

Section 8. Exposure controls/personal protection

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves For prolonged or repeated handling, use the following type of gloves:

Recommended: polyvinyl alcohol (PVA), Viton®

Not recommended: nitrile rubber

Eye/face protection: Chemical splash goggles.

Respiratory protection: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Body protection Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing.

Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Target organs : Contains material which causes damage to the following organs: brain.

Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, the reproductive system, liver, heart, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), ears, eye, lens or cornea.



OLD BUSINESS

Vehicle Walk Arouns

Have you done your vehicle walk-around??? It might be time to get your 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 Late July/August

FIR: 7/20/2017: Bell 206L3, N307MH (Battery)

Aircraft was on a Ferry Flight and stopped for fuel (first start at home base was with a battery cart). The pilot turned the battery on and prepared to start aircraft. Prestart checks were normal, but the instant the start switch was engaged, the battery power to the aircraft was lost. No warnings were illuminated at all. Having assistance from the Pump Station Mechanic, a low battery condition was diagnosed. The spare battery from the Pump Station aircraft was installed. The aircraft was started normally with the “new” battery and the flight was continued.

CAS MEMORANDUM M-17-03 was issued regarding battery maintenance and records. Please read that memo on the Company Portal if you haven't already.

FIR: 7/21/2017: Bell 407, N309MH (Engine Chip)

The Aircraft was performing flights from the Maritime Maid. The engine Chip light illuminated shortly after lift-off. The pilot immediately turned back to the ship and landed. Mechanic noted a single flake less than 1/32". The 30 minute ground run (penalty run) was performed without additional faults. Aircraft was returned to service. One note on this incident. Make sure ALL the paperwork is completed from the Engine Chip light & Maintenance procedures before departing on the next mission flight!

FIR: 7/29/2017: Bell 407, N407RH (Stuck Mike)

After a 7.9 hour flight day, coming back into home station, the cyclic transmit switch stuck in the transmit position. There was no previous indication of switch failure. The switch was changed out with a new/operational cyclic switch.

We always have to remember that things as innocuous as a stuck mike switch can add stressor to our single pilot crew resource management. If radios/comms/Interphone Communication Systems fail, we can get our heads inside the cockpit too much which can lead to mishaps. It was good that in this instance, the switch failed at the end of the day, and the pilot

was curtailing operations anyway. But put yourself in the same situation at the start of a busy mission! Your **Stop-Work** decision might be more complex than you think. At what point do you stop living with “annoying situations” in the cockpit? Well obviously, when they become dangerous situations. Something to think about.

FIR: 8/05/17 Bell 206L3 N307MH (TOT Gauge)

During first start of the day, with the aircraft battery having been on a trickle charger the previous evening, After introducing fuel, the Turbine Outlet Temperature maxed at 830C. After dropping to 760C, the second spike rose to 810C and then down to 790C. The TOT dropped below 768 at the pilot’s count of 7 but the TOT light illuminated.

(Maintenance Comments) The TOT indicated over 768C for greater than 10 seconds. Overtemp was verified by the Bell Manual table. The TOT had not exceeded 826C but exceeded 768 for 10 seconds. Mechanic found that the incorrect TOT gauge was installed per the aircraft serial number. The correct gauge was installed and the aircraft returned to service.

(Chief Pilot Comments) Please ensure that anytime that the TOT goes over 768C that the throttle is reduced and begin counting.

FIR: 8/10/2017 Bell407 N309MH (Overspeed Event)

After performing engine Inspection AA0056 (300 hour), the pilot was performing the FADEC Overspeed check, and activated the Overspeed switch while at 100% rotor. Power Turbine Over sped to 118.2%. Aircraft was grounded and company investigation was opened.

(Maintenance Comments) Engine was removed and disassembled. Turbine and gearbox sent to repair facility. Serviceable engine was installed along with gearbox. Original compressor was reinstalled as no compressor overspeed was noted. Aircraft was returned to service.

Plain and simple, if you aren’t sure on a maintenance operational check. Don’t do it.

FIR: 8/26/2017: Bell 407, N407RH (Lost Window)

While flying with regular customers on a surveillance job, the front left passenger opened the sliding window of the 407 and the window fell out and exited the aircraft. A quick visual while backtracking of the flight path did not find the window. The pilot proceeded to the next regular stop and had maintenance bring him a new window which was installed. An inspection was performed to see if any damage to the aircraft was done by the free-flying window! No damage was found.

We all know that new customers don’t want to touch anything in the aircraft and experienced customers don’t mind touching everything. I have added to my passenger briefing, to have customers let me know when they are changing the configuration of the aircraft. Also, you might want to have customers use two hands on the sliding windows. It’s really not a “robust” piece of equipment.



Last Words

Please do take a moment and look at your Alaska survival equipment with respect to your job in your environment. Even when I have an office day planned, I make sure that I have a good coat in the car with some basic survival items. I don't smoke, but I generally ALWAYS carry a few cigarette lighters with me just in case. We'll get to the real winter survival items in the next few months.

We are in the middle of the fall audit season! If you haven't been a part of any auditing thus far, you certainly will be. If you receive a copy of audit results or specific audit items from me, then you are probably integral in the corrective action to those audit items. Let's fix what we can fix, so we can fix it soon! Or else we'll have those items on next fall's audits also!



Have a Great Autumn!

Dennis

Dennis S. Busch
Quality and Safety Manager
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Tel 907.452-1197
Cell 907.750-9548
Fax 907.452-4539

MARITIME HELICOPTERS
PUBLICATIONS
ROUTING MEMORANDUM

DATE: 09/18/17

TO: Ak All

FROM: Quality/Safety Department

SUBJECT: August/September 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



Maritime Helicopters

October 2017 Quality & Safety Notes



Is It Winter Where You Are?

When winter starts slowly, it's nice to think that it eventually won't whack us with an ice-caked 4x4. But least, north of Fairbanks and above 3,000 feet, winter is here. There are some whom haven't even looked at their survival gear yet. I took some folks out to work on their remote site, and I was the only one around to have brought a lighter to thaw their door lock. I like carrying a pocket torch as well as a few cheap cigarette lighters. Whichever way you go, I think a source of fire/heat is THEE basic item for Alaska winter survival.



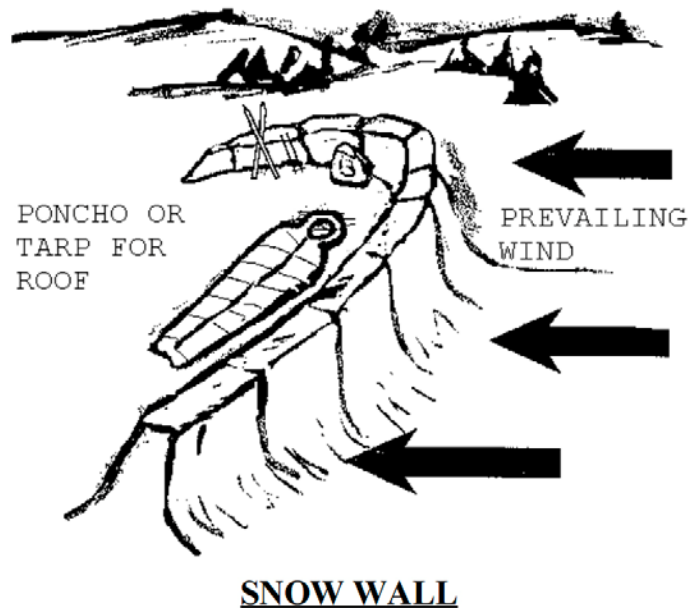
So while we aren't going to play, "what's in your survival kit?" this month. It might be time to take a look at a few survival tools and tricks to help us cope with emergencies in our big, cold state...

Survival Shelters

The U.S. Marine Corps has provided two useful documents that show us how to construct improvised shelters: the Survival, Evasion, and Recovery Handbook and the Winter Survival Course Handbook. We looked through these two handbooks, and found **5 different winter shelters** that have been tested and proven by the USMC to protect you from the cold. See below for the methods, but first, here are some general tips:

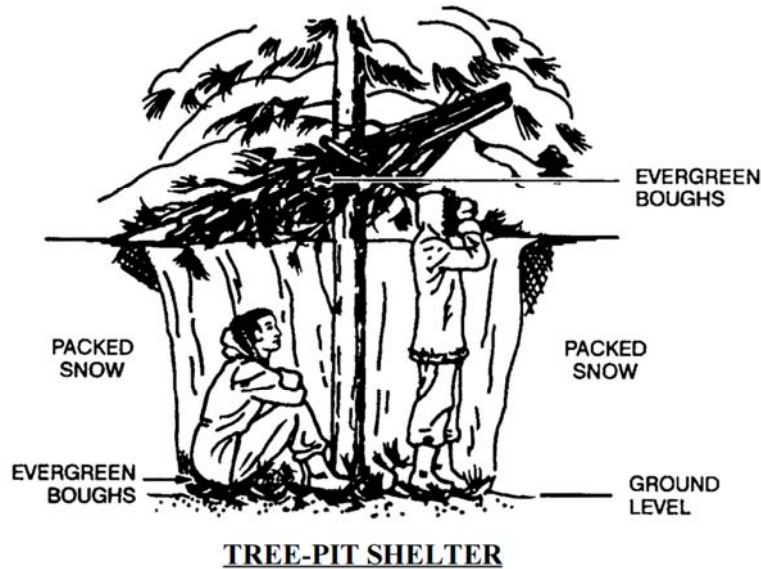
- Cold climates require **enclosed, insulated shelter**.
- Snow is the most abundant insulating material in these climates. Although it is cold to the touch, it's also very effective at containing heat in an enclosed space. So, incorporate it into your shelter.
- Insulate your body from the snow and the cold ground by putting down a layer of pine boughs or other foliage. This slows the loss of body heat.
- An air vent is required to prevent carbon monoxide (CO) poisoning from using an open flame inside an enclosed space. CO poisoning can kill you before you even realize there's a problem, so don't forget this step. (Read the Mayo Clinic's guide on symptoms of CO poisoning for more information.)
- As a general rule, unless you can see your breath, your snow shelter is **too warm**, and should be cooled down to prevent the snow from melting and dripping.

This is what the USMC calls an "immediate shelter". It's about as basic as it gets, but piling up a snow wall to act as a wind break for your camp is a lot better than sitting totally exposed. Wind chill can drop the perceived ambient temperature by 20 to 30 degrees (or more), so by simply blocking this wind, you'll feel much warmer.



If you're located in a flat plain or valley like the photo above, there are no trees to work with, and the snow is too shallow to dig into, a **snow wall** may be your best option. File this under last-ditch plan, but don't rule it out completely.

The **tree pit shelter** is another form of immediate shelter. If you can find a sizeable tree buried in a few feet of snow, dig down to the base of the trunk, and cover the ground with boughs from the tree itself.



Then, stack more boughs against the trunk above you to serve as a roof. Aside from an ingress/egress hole, try to keep the space as enclosed as possible to retain heat. Simple but effective.

It's just too bad that in Alaska, we don't always have any trees at all, let alone trees with 5 feet of snow, stacked around the base.

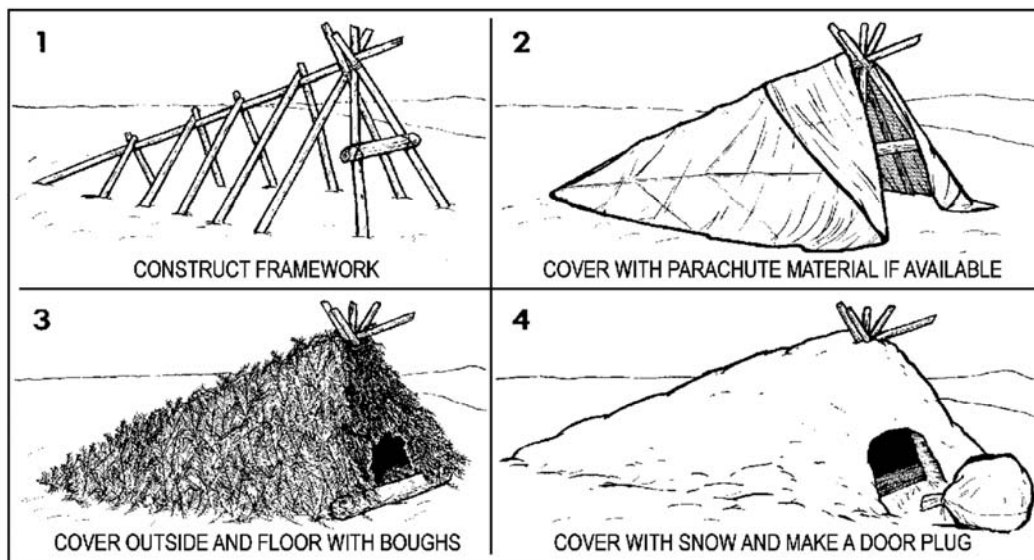


Figure VI-5. Thermal A Frame

You've probably heard of an A-frame shelter before, and this is a winter variant. Build a framework as shown from tree branches or sticks, then cover with a parachute, tarp, or thermal blanket (if you have one). Cover the floor with tree boughs or other soft plant material, which will insulate your body from the cold ground.

Top off the structure with more tree boughs, preferably stacked in layers from the bottom up (with the branch up and leaves down), in a similar manner to roofing shingles. This layered pattern will help strengthen the structure, and prevent pinhole leaks from forming in the next layer.

Speaking of the next layer, the previous step is where you would have stopped if you were building an ordinary A-frame shelter—now for the “winter” part. Cover the tree boughs with packed snow, watching for holes and gaps. Finish it off with a door plug to seal out the wind, and don't forget to add an air vent if you plan to build a fire inside.

The **A-Frame** is the shelter we had to build in Uncle Sam's Army. The helicopter soundproofing gets offered up pretty quickly in a real emergency. Even in the Army, they would always give you a chunk of parachute to cover your airframe. But we don't have many ejection parachutes on our aircraft!

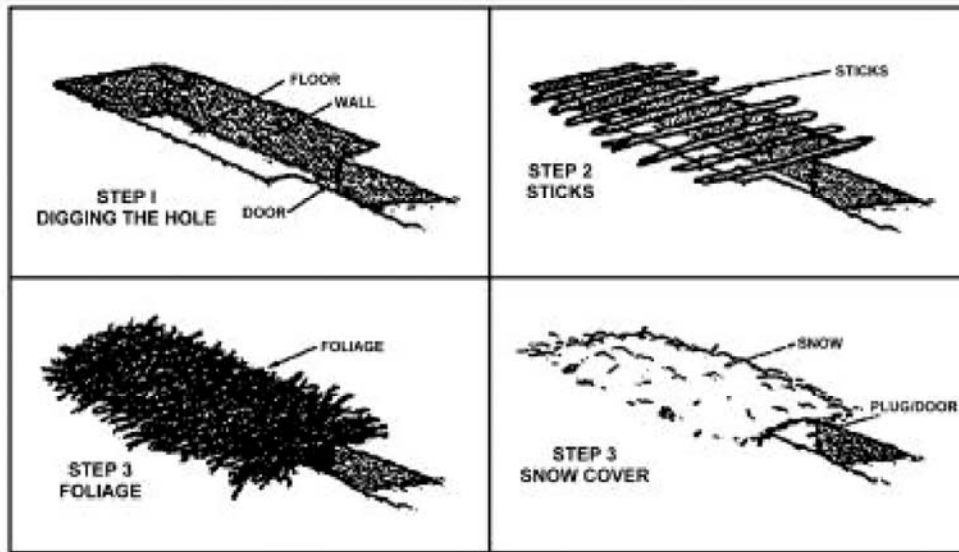


Figure VI-6. Snow Trench

The **snow trench** was also called the "coffin". This shelter is exactly what it sounds like. First, you'll dig a ditch or trench into the snow, making it deep enough to lie down in comfortably. Then create a support structure of sticks across the top, and cover with foliage (such as tree boughs or moss) and snow. Plug the doorway, and voila—it's not roomy, but it'll keep you warm.

The Snow Trench method can also be combined with the Tree Pit design, by digging your trench under the snow-covered branches of a nearby tree. The branches act as a pre-made roof, saving you time and effort.



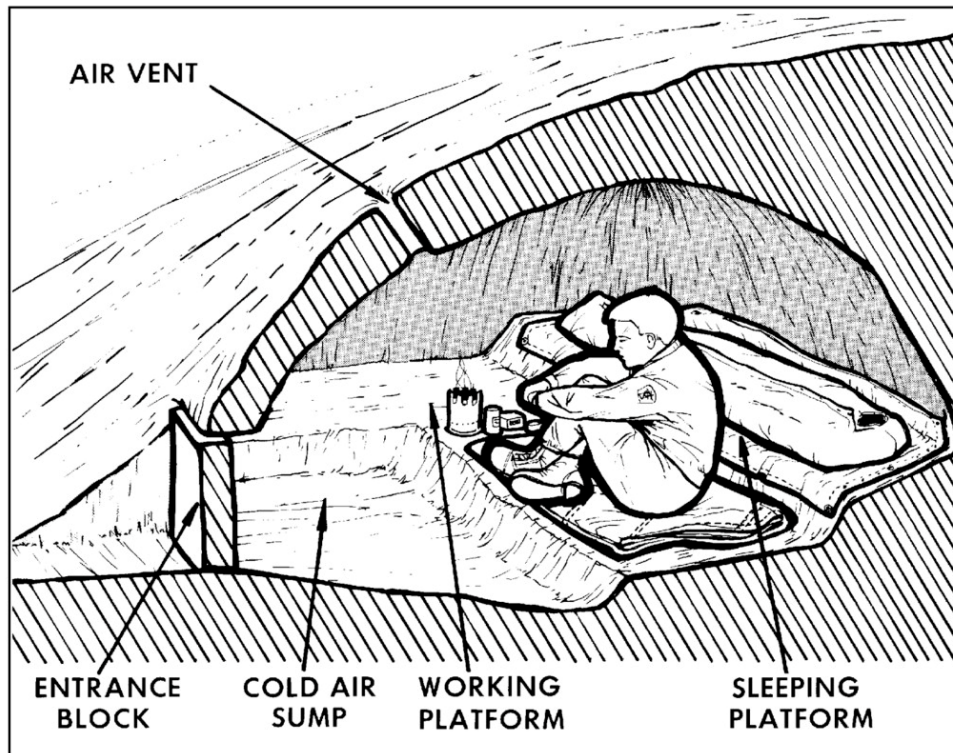


Figure VI-7. Snow Cave

This is the most complex and time-consuming shelter to build, but it also provides lots of space, excellent insulation, and even a way to conceal your location. Dig your shelter into a snowy hillside, ensuring there's plenty of snow above your head to prevent a collapse.

You'll also want to create three stepped floor levels. The purpose behind these levels has to do with the fact that cold air naturally sinks, while hot air rises. By building the floor of the chamber below where you're sleeping and working, you'll avoid sitting in a "pool" of cold air that has fallen to the lowest point in the chamber. This makes efficient use of the heat you generate inside the shelter.

The lowest level is the cold air sump, which is even with the entrance to the shelter. This is where the cold air will collect. Next, you have a working platform, where you can cook and build your fire. Finally, on the top level, you have your sleeping platform, elevated for maximum heat retention while you're asleep.

As with the other shelters, remember to block off the entrance with a solid object (like a backpack or some snow), so the wind doesn't get in. Also, don't forget to poke a small air vent hole at the top, to prevent carbon monoxide from collecting in the shelter and silently poisoning you. It would be a real shame to go to the effort of making this shelter, only to have it become your tomb because you forgot the air vent.

If you have time to build a real-live snow cave such as this, you have a lot of time on your hands! And once again, I'm not sure how much snow we have, shy of the mountains, to make such a cave. For the Homer folks, I would just call the Discovery Channel and have the Kilchers drive out and collect you with their horses.

This Presentation has been brought to you by the United States Marine Corps



SDS of the Month: Scotch Weld Epoxy (A & B Parts)



One more fine product from 3M Company that we use a lot but can cause us serious grief if used improperly. I think the bottom line on all epoxies is to not get them in your eyes!

PRODUCT NAME: 3M (TM) Scotch-Weld (TM) Epoxy Adhesive 2216 Gray PMF (PART A)

EMERGENCY OVERVIEW

Specific Physical Form: Viscous

Odor, Color, Grade: Gray, pungent odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Hazardous polymerization may occur. May cause severe eye irritation. May cause allergic skin reaction.

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Epoxy Adhesive 2216 Gray Part B

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

7.1. Precautions for safe handling

For industrial or professional use only. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.).

8.2.1. Engineering controls

Provide ventilated enclosure for heat curing. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates
For questions about suitability for a specific application, consult with your respirator manufacturer.

10.4. Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.



4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

Safety Note: I did check several industry pages on the use of Polymer Laminate gloves and most sources agree that for the amounts you use for small repairs and the limited time of usage, that the Nitrile gloves we keep on hand are sufficient protection.

OLD BUSINESS

Change to Station Audit Checklists???

I've had a few requests to try tailoring the audit checklists a little better for relevance and applicability. I've received Station Checklists for Homer on the current form, (which wouldn't be detailed enough) and also for Alyeska (redundant to Pipeline Company Audits or lack relevance). I'm very aware that there is no "one size fits all" in Maritime's facilities. I'll be taking suggestions for the best way to modify or outright rewrite these station checklists. In the meantime...

Continue sending them to me at...

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



We're doing pretty well at getting the workforce trained on Adult First Aid/CPR/AED. There were 21 employees trained in Fairbanks in October with another class being taught on November 28th. Per OSHA, the intent is that all the remote site pilots and mechanics certified for this class this fall and winter (currency is every two years). I'll probably travel down to Homer for a class at least once in December, so please be flexible on class dates. The class takes approximately 4 ½ hours and we'll have an add-on for Blood borne Pathogens class which takes about a half hour. The Blood borne Pathogens class is for all employees.

We are making a list for the Red Cross Certification class, so even if you do not work remotely, and want to get certified/recertified, let Heidi or me know.

Incident Reporting: October

FIR: 10/20/2017: Bell N308H, (XMSN Chip Light)

During approach to final at refuel site, the transmission Chip Light flickered, and then came on steady. On short final, the light extinguished. Then, at a hover, the chip light flickered again and became steady. Pilot hovered to transient parking. While setting the aircraft down, the chip light extinguished again. The pilot shut down and notified the Chief Pilot and the station mechanic.

Mechanic pulled both chip detectors to the Main Gearbox and found a small chip on the lower plug. Information was recorded, both plugs reinstalled and a 20 minute ground run was performed. No faults noted.

(Sometimes the most annoying chips are the intermittent ones. Is there are problem or not. But we treat them all the same. Good job by everyone. 308 has not had subsequent chips)

FIR: 10/30/2017: Bell 407H, N312MH (Engine Oil Pressure)

Aircraft was approximately one mile from station at the beginning of flight, and in cruise. At 73% Torque, and 94.6% NG Speed, the engine oil pressure was steady at 105 PSI. The EOP should have been at least 11h PSI at this NG setting. Aircraft was returned to station and mechanic was called. Fairbanks maintenance was notified and an engine oil pressure transducer and oil gauge were flown out of Fairbanks.

Mechanic completed function check of Engine Oil Pressure Transducer during ground run with in-line pressure gauge. Function check showed no faults IAW the Bell Manual. Aircraft was MOC's and parts kept at remote station in-reserve.

Intermittent or "one time" problems are still problems that need to be addressed. But for an aircraft that is and was making good pressure in the oil system, we are left with no more than a one-time *indication* issue. We'll continue to monitor this aircraft for proper engine oil indications.

Last Words

Here is a list of bullet statements from the Pipeline Station Audits, which might bring to mind items at your work site that need some attention...

- The checklist holders are there for a reason. Let's make sure that everyone is using the aircraft checklists
- Wish lists are important! Whether it is plain "want" items like a certain type of equipment, or maintenance items like paint at various locations, we need to know
- The Emergency Response Guide, current version is ver.17. Please make sure it is available/visible.
- If you have items like headsets that need repair, please just go through the actual process and green tag them and turn them in for repair. Wishing for things doesn't get you apple pie OR repaired equipment!
- Please, please, please! Remember that then you are reviewing aircraft logbooks for preflight that the calendar inspections need to be looked at as well as the hourly inspections. We've had several examples of overflying the most innocuous inspections (e.g. fire extinguishers)
- One more note: sometimes, the best solution is to find a solution yourself! Big Thanks! To Tim Kirkendall for adding some protection bollards to the propane tank at Valdez by some serious sweat, digging holes and mixing up some concrete!



Dennis S. Busch

Quality and Safety Manager

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Fairbanks, AK 99701

Tel 907.452-1197

Cell 907.750-9548

Fax 907.452-4539

**MARITIME HELICOPTERS
PUBLICATIONS
ROUTING MEMORANDUM**

DATE: 11/3/17

TO: AK ALL

FROM: Records Department

SUBJECT: October Quality and Safety notes

Please complete the verification of receipt below and return this form to the Records Department in Fairbanks via email to faiaadmin@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



Maritime Helicopters

November 2017 Quality & Safety Notes



That Time of Year

By now, it has probably set in that this won't be the first year in history where we skip winter. So we have to get used to the idea again, that Alaska isn't a tropical paradise. And as we deal with all the snow and ice, it's time to mention that the last recordable injury we had as a company, was from slipping on ice! So please pay special attention to the Tips for those injuries!

Please also note the quick review of the Globally Harmonized System (GHS) standard for Hazardous Materials Communication. This month's Safety Data Sheet will cover a pretty common chemical which we all have used.



Tips for Preventing Slip & Fall Injuries

Fresh snow fall, packed snow, freezing rain, ice, snow-covered ice, rough frozen slush, snow stuck to your footwear and other winter conditions; we sometimes take these conditions for granted or our mind is somewhere else and that's when we are most vulnerable to slip & fall. These are some pretty serious conditions to navigate through and not being fully alert and cautious can result in some pretty serious consequences.

Here are some tips to help you get through the season standing upright and injury free.

Be aware of surface conditions and slow down; take small steps.

Focus on what you are doing. Walk attentively on hazardous surfaces, you may want to take smaller steps or shuffle on ice. In icy weather, it's safer to keep feet on the ground by shuffling. This is one time to leave the spring out of your step

Choose your path carefully and avoid icy conditions whenever possible.

Avoid sudden movements when stepping onto a hard surface. Although most stores and offices take precautions to prevent slippery areas, it's easy for a tile or concrete floor to have slippery puddles during wet weather.

Keep your eyes on your feet. Forget what's taught in dance class--it's safest to watch your feet on uneven surfaces, especially if you're carrying articles.

Get the snow off from the bottom of your footwear when entering buildings.

ON campus containers of sand have been placed at some building entrances and sidewalks by Facilities Management. When you see icy or hard packed snow conditions, consider spreading some sand. You might help to prevent an accident or injury.

Report trouble spots to building maintenance personnel on or off campus.

Select appropriate footwear. Some materials are very slippery on snow and ice (plastic, leather, foam). You'll get superior traction with rubber soles having deep traction grips. Strap-on non-slip shoe treads are available in stores.

Get an earlier start to your destination. It takes more time to navigate winter walkways safely so it's a good idea to leave a little earlier to get to your destination in time and injury free.

Be extremely careful getting out of your vehicle. If possible, swing your legs around and place both feet on the pavement before you attempt to stand. Steady yourself on the door frame until you have gained your balance. Avoid reaching beyond your center of balance to take hold of the door, because this might cause a fall.

Don't take shortcuts. Always use sidewalks and the cleared paths in parking lots. Never walk between parked cars. Be especially careful when stepping to different levels — down or up steps or from curbs (don't step on curbs). And remember, grassy slopes can be as dangerous as snowy steps.

SDS of the Month: Klean Strip Odorless Mineral Spirits

I wanted to take a little time this month to bring up something about the Safety Data Sheets which we use as part of our (and OSHA's) Hazardous Communication (HAZCOM) Standard. Hopefully, by now, everyone has had some kind of training in the Globally Harmonized System for HAZCOM and so realize, that as of 2015, all chemical manufacturers should be using the newer Safety Data Sheets instead of the old Material Safety Data Sheets.

Shockingly enough, the Safety Data Sheet is not yet standard. If you access our 3E Database and retrieve the "most current" SDS, you'll find that you are very often looking at an old format MSDS. Lesson? The real world moves slower than the regulators. Acquiring new & accurate SDSs is time consuming and costly. It may be a few years still.

In the meantime, I've picked a chemical this month, which will show what one of the new Safety Data Sheets ***should*** look like. Also, it's a chemical that most of us should be familiar with. If you've ever washed your paint brushes in Mineral Spirits after painting the garage, you've probably had the familiar one-gallon jug of this common "petroleum distillate" in your home.

Please take this few minutes to look at this Safety Data Sheet (presented in its entirety as opposed to most months) and look at the format as well as the hard data:



SAFETY DATA SHEET

Klean Strip Odorless Mineral Spirits

Page: 1

Printed: 04/16/2015

Revision: 04/16/2015

Supersedes Revision: 03/26/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Klean Strip Odorless Mineral Spirits	
Reference #:	1631.1	
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113	Phone Number: (901)775-0100
Web site address:	www.wmbarr.com	
Emergency Contact:	3E 24 Hour Emergency Contact	(800)451-8346
Information:	W.M. Barr Customer Service	(800)398-3892
Intended Use:	Paint, stain, and varnish thinning.	
Synonyms:	GKSP94006P, QKSP94005, QKSP94205, GKSP94006, GKSP94214	
Additional Information	This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.	

2. HAZARDS IDENTIFICATION

Aspiration Toxicity, Category 1

Flammable Liquids, Category 3



GHS Signal Word:	Danger
GHS Hazard Phrases:	H304: May be fatal if swallowed and enters airways. H226: Flammable liquid and vapor.
GHS Precaution Phrases:	P233: Keep container tightly closed. P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P280: Wear protective gloves/protective clothing/eye protection/face protection. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P243: Take precautionary measures against static discharge. P242: Use only non-sparking tools.
GHS Response Phrases:	P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting. P370+378: In case of fire, use dry chemical to extinguish. P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
GHS Storage and Disposal Phrases:	P405: Store locked up. P501: Dispose of contents/container according to local, state and federal regulations. P403+235: Store in cool/well-ventilated place.

SAFETY DATA SHEET

Klean Strip Odorless Mineral Spirits

Page: 2

Printed: 04/16/2015

Revision: 04/16/2015

Supersedes Revision: 03/26/2015

Hazard Rating System:

HEALTH	*	1
FLAMMABILITY	2	2
PHYSICAL	0	0
PPE		X



HMIS:

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects
(Acute and Chronic):

Inhalation Acute Exposure Effects:

Vapor concentration may cause headache, dizziness, irritation of the respiratory tract, eye irritation, stupor, depression of the central nervous system, watering of the eyes, weakness, nausea, muscle twitches, and kidney effects. Aspiration into lungs may cause pneumonia or death. Severe overexposure may cause convulsions, unconsciousness, and death.

Skin Contact Acute Exposure Effects:

May cause irritation.

Eye Contact Acute Exposure Effects:

Liquid contact may cause irritation.

Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea, weakness, muscle twitches, gastrointestinal irritation, diarrhea, unconsciousness, and death.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Repeated or prolonged skin contact may cause redness, irritation, and scaling of the skin. May cause skin irritation, anemia, bone marrow damage, liver damage, and jaundice.

Medical Conditions Generally None known.

Aggravated By Exposure:

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
64742-47-8	Hydrotreated light distillate (petroleum)	100.0 %	OA5504000

4. FIRST AID MEASURES

Emergency and First Aid
Procedures:

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin contact:

Wash with soap and large quantities of water for at least 15 minutes. Seek medical attention if irritation from contact persists.

Eye contact:

Immediately flush eyes with water, remove any contact lens, continue flushing with water for at least 15 minutes. Get medical attention.

Ingestion:

Do not induce vomiting. Call your poison control center, hospital emergency room, or physician immediately.

SAFETY DATA SHEET
Klean Strip Odorless Mineral Spirits

Page: 3
 Printed: 04/16/2015
 Revision: 04/16/2015
 Supersedes Revision: 03/26/2015

Signs and Symptoms Of Exposure:	Primary routes of exposure: Inhalation, ingestion, and dermal.
Note to Physician:	Call your local poison control center for further instructions.

5. FIRE FIGHTING MEASURES

Flash Pt:	NFPA Class II > 105.00 F
Explosive Limits:	LEL: 0.8 UEL: 6
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use carbon dioxide, dry chemical powder, or foam.
Fire Fighting Instructions:	Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.
Flammable Properties and Hazards:	No data available.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:	<p>Clean-up: Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources, keep flares, smoking or flames out of hazard area.</p> <p>Small spills: Take up the spilled liquid with sand, earth, or other noncombustible absorbent material and place in a plastic container where applicable.</p> <p>Large spills: Dike far ahead of spill for later disposal.</p>
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7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.
Precautions To Be Taken in Storing:	Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64742-47-8	Hydrotreated light distillate (petroleum)	No data.	TLV: 200 mg/m3	No data.
Respiratory Equipment (Specify Type):	For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.			
Eye Protection:	Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.			
Protective Gloves:	Wear impermeable gloves. Gloves contaminated with product should be discarded.			

SAFETY DATA SHEET
Klean Strip Odorless Mineral Spirits

Page: 4
Printed: 04/16/2015
Revision: 04/16/2015
Supersedes Revision: 03/26/2015

Other Protective Clothing:	Promptly remove clothing that becomes soiled with product. Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.
Engineering Controls (Ventilation etc.):	Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.
Work/Hygienic/Maintenance Practices:	A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	Colorless to light yellow Solvent odor
Melting Point:	No data.
Boiling Point:	318.00 F - 354.00 F
Autoignition Pt:	No data.
Flash Pt:	> 105.00 F
Explosive Limits:	LEL: 0.8 UEL: 6
Specific Gravity (Water = 1):	0.78
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	5 Air = 1
Evaporation Rate:	No data.
Solubility in Water:	No data.
Solubility Notes:	Very slightly soluble in cold water (<0.1% w/w)
Percent Volatile:	100.0 % by weight.
VOC / Volume:	780.0000 G/L
Additional Physical Information	Conductivity = <5 picosiemens/meter

10. STABILITY AND REACTIVITY

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Conditions To Avoid - Instability:	No data available.
Incompatibility - Materials To Avoid:	Incompatible with strong oxidizing agents.
Hazardous Decomposition Or Byproducts:	Thermal decomposition may produce carbon monoxide and carbon dioxide.
Possibility of Hazardous Reactions:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Conditions To Avoid - Hazardous Reactions:	No data available.

SAFETY DATA SHEET
Klean Strip Odorless Mineral Spirits

Page: 5
 Printed: 04/16/2015
 Revision: 04/16/2015
 Supersedes Revision: 03/26/2015

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Refer to section 2 for acute and chronic effects.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
64742-47-8	Hydrotreated light distillate (petroleum)	n.a.	n.a.	A4	n.a.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with applicable local, state, and federal regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Paint Related Material, Not Regulated
 DOT Hazard Class:
 UN/NA Number:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Paint Related Material

UN Number:	EMS: F-E, S-E UN1	Packing Group:	III
Hazard Class:		IMDG MFAG Number:	
IMDG EMS Page:			

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Paint Related Material

	Packaging Instructions: See IATA Dangerous Goods Regulations		
UN Number:	1263	Packing Group:	III
Hazard Class:			

Additional Transport Information:

The shipper may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64742-47-8	Hydrotreated light distillate (petroleum)	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Acute (immediate) Health Hazard
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Chronic (delayed) Health Hazard
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Fire Hazard
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Sudden Release of Pressure Hazard
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Reactive Hazard

SAFETY DATA SHEET
Klean Strip Odorless Mineral Spirits

Page: 6
Printed: 04/16/2015
Revision: 04/16/2015
Supersedes Revision: 03/26/2015

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64742-47-8	Hydrotreated light distillate (petroleum)	CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
Regulatory Information Statement:	All components of this material are listed on the TSCA Inventory or are exempt.	
16. OTHER INFORMATION		
Revision Date:	04/16/2015	
Preparer Name:	W.M. Barr EHS Department (901)775-0100	
Additional Information About This Product:	No data available.	
Company Policy or Disclaimer:	The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.	

See, even relatively commonly used chemicals aren't particularly safe in all situations. Isaac, make sure you are wearing your splash goggles!

OLD BUSINESS

Splash Goggles

I am trying to make sure that everyone that works with paints or solvents (and any other eye hazards) has **SPLASH GOGGLES** available! These are **NOT** the same as safety goggles with eye shields! You know the ones I'm talking about. No, it's not about making you look like you're in High School Shop Class. Some of our chemicals like the Zep Formula 50 require splash goggles instead of safety glasses. Please let me know my email or through your audit sheets if you don't have any of these...



We're doing pretty well at getting the workforce trained on Adult First Aid/CPR/AED. There were 24 employees trained in Fairbanks in October with another class being taught on November 28th. Per OSHA, the intent is that all the remote site pilots and mechanics certified for this class this fall and winter (currency is every two years). The class in Homer will be 0800 on December 18th. The class takes approximately 4 ½ hours and we'll have an add-on for Blood borne Pathogens class which takes about a half hour. The Blood borne Pathogens class is for all employees. Dave B. has the list for the Red Cross Certification class, so even if you do not work remotely, and want to get certified/recertified, let Dave know.

Incident Reporting: November

FIR: 11/21/2017: Bell 407, N308H, Oil Cooler Fan Shaft

During preflight, the pilot rotated the m/r blades and heard a metallic knocking sound. Closer investigation found the aft oil cooler shaft bearing had a large amount of radial play. Fairbanks lead mechanic was notified

Removed and replaced oil cooler, fan shaft, assembly. Complete balancing of fan shaft with bearing in limits. The removed oil cooler assembly had been installed 118.9 hours prior and at the time of install the after bearing had not been properly seated on the shaft. Causing movement. The shaft and bearings were new at the time of install. The shaft was \$7,900.00 and the bearing was \$1400.00

The comprehensive fix will be a *revision in the Bell 407 AAIP* form A1720 to include a feeler gauge check between the bearing and dust shield after the bearing is torqued to ensure proper seating of the bearing. Stay tuned for the change!

FIR: 10/30/2017: Bell 407, N308MH Fuel Transfer Lights

At last shutdown during oil-cooler balance, during aircraft shutdown, the FUEL Boost/XFR-Off step, the transfer lights failed to illuminate.

Write-up transferred to logbook as MEL and added to corrective action block on front of logbook. Mechanic checked all connectors and ground contacts. No defects then noted. MEL was cleared.

FIR: 11/30/2017: Bell 407, N407RH Engine Start Issues

Attempting to start engine at 5,000' and 4 deg. Celsius, aircraft experienced a high temperature start abort (880 degree C). Second Start was attempted with an Alternate Start Procedure with the same result, after start "latched" the temperature went high and FADEC shut down the engine. Both of these starts had all electrical components turned off except for the fuel switch and the fuel pumps. One more alternate start was attempted with the same result. The Chief Pilot was called from the remote site. After discussion, a normal start was attempted with the fuel pumps OFF. Temperatures were not quite as high (860C) but start was still aborted by FADEC. One last attempt was made with the fuel pumps off using an Alternate Start Procedure and the aircraft started. Temps were in the 800-820 range. Flight back to home station was uneventful. Aircraft was inducted for its annual inspection upon return. Troubleshooting will continue before release after annual.

GOR: 11/07/2017: Bell 407H, N309MH Engine Starter

During the Turbine replacement on a rental, engine turbine, the starter was removed. Crew found the shroud was dented which pushed the shroud and screen into the fan blades. The blades cut the screen enough to disconnect the screen from the shroud. The starter was installed 20 hours prior to this removal, and was serviceable at that time (and was 324.8 hours from overhaul).

Starter sent to overhaul and awaiting results. Probable cause is that the starter was damaged either during handling of it during installation or damaged during shipment prior to installation. Either way the installing Mechanic failed to notice this damage. Might be a good idea to build more wooden shipping crates for our starters. These starters are so heavy that a cardboard box without having the expanding foam type of packing is hard to keep from getting damaged.

Last Words

December's Safety Notes will attempt to wrap up 2017. I think we've made great strides this year with customer compliance, OSHA Safety, and lowering our human factors incidents. Please have a safe Holiday Season and work/fly safe!

Dennis S. Busch

Quality and Safety Manager

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MARITIME HELICOPTERS
PUBLICATIONS
ROUTING MEMORANDUM

DATE: 5/26/17

TO: Ak All

FROM: Quality/Safety Department

SUBJECT: November 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