

Human Performance in Maintenance

A CASE STUDY

"To Kill a Whopping Bird"

This Department of National Defense case study is not based on an actual event but the chain of events are all too possible to occur.

There are a lot of links which could have been broken along the line and prevented the accident from occurring. You will see some Safety nets, designed to prevent the accident, shot full of holes in the name of expediency. Watch for the broken Safety nets as they are links.

Finally determine what new Safety nets are needed and how to repair some of the existing ones

*We must learn from the mistakes of others,
as we'll never live long enough to make them all ourselves*

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Copies of this video are available from System Safety Services

This Case Study may be reprinted for use with the training video.

To Kill a Whopping Bird

The Scene

It was an early Friday morning at Canadian Forces Base, Comox, located on Vancouver Island. Over at 442 Squadron, Private Billy Frisk was feeling a little under the weather due to a party the night before and Sergeant Gord Keyhole, his Crew Chief, was very worried about the injuries his daughter had sustained from a car accident.

The Tracker

At VU 33, a Coastal Patrol Squadron, Master Corporal Harry Rossetti, the Instrument/Electrical Technical Supervisor, was fixing a snag with a short in a Tracker Electrical Inverter. Captain Dave Bercoli, one of the Squadron's pilots, was getting impatient for his aircraft to become serviceable and interrupted him, "*How much longer Harry? It's required for a mission.*" Harry was very rushed as he was short of personnel, having dispatched a Mobile Repair Party to repair a Tracker unserviceable at an away unit earlier. A lack of step stands and his shortness in stature meant he had to complete the job by feel, not being able to see his work. He then asked Corporal Jenny Sawyer to sign the "Rectified By" column and he would sign the "Inspected and Passed" column. He knew this was wrong but it enabled the paperwork to be completed earlier with less fuss.

Shortly afterward Captain Bercoli took off. Not long into the mission, vibration began to undo Harry's faulty work and the aircraft had to make an emergency landing at Port Hardy.

The Labrador

Not having any spare aircraft to transport a Mobile Repair Party, Major Owen the Commanding Officer of VU 33 asked the Commanding Officer of 442 Squadron, Lieutenant Colonel Stewart, for some help. He replied that the only spare aircraft he had was a Labrador helicopter, which was due for a test flight just prior to lunch. If this aircraft tested serviceable, the Mobile Repair Party could be flown to Port Hardy in it.

To Kill a Whopping Bird (Continued)

When Major Owen discovered the Labrador was not ready as promised, he decided to check on it himself. Lieutenant Zimmerman, the 442 Squadron Repair Officer, became the target for Major Owen who made it quite clear he needed the aircraft right away. Zimmerman promised that the Labrador would be available very shortly and immediately decided that only Sergeant Gord Keyhole could pull this one off. Sergeant Keyhole had only one thing on his mind, the condition of his daughter and decided not to get involved in the Major's squeeze tactics. So Sergeant Keyhole simply called in Master Corporal Jim Harrigan and told him to get on with it.

Master Corporal Harrigan didn't want to explain to Keyhole the problems rushing was going to cause the men changing the shock mounts. He simply carried out Keyhole's orders and pushed his men into completing the job earlier. By now Billy Frisk and his supervisor Corporal Koka just had to connect the sink shaft to the flex coupling. Corporal Koka figured that with Frisk being so quick to catch on, he could trust him to complete the job on his own and left to start the "B" Check or the "Before Flight Inspection", leaving Frisk the torque values required to finish the job.

Prior to the nuts being torqued, Billy had other problems, leaving his job in a hurry to visit "*Ralph, the little white telephone*" (toilet). Billy got back just before Koka and was sure he had completed the job in hand. Koka was just starting to inspect Billy's work when Master Corporal Harrigan showed up with the paperwork for sign off and the Tow Crew was ready to go.

With the pressure on, Corporal Koka signed the "Rectified By", Master Corporal Harrigan signed the "Inspected and Passed" and Sergeant Keyhole, still on the phone, signed off the "Certified BY" columns. None of them having seen the work.

The Test Flight

The aircraft checked out OK during the test flight, maybe a little unusual vibration, but the Labrador was certified as "test flown serviceable". The pilot kept the aircraft running and the Mobile Repair Party quickly loaded their gear. Shortly after leaving the zone, it began, suddenly, with out warning, "*Mayday, Mayday.*" The Base response was superb, but they never had a chance.

To Kill a Whopping Bird (continued)

What really caused the Labrador. to crash?

Was it Private Billy Frisk partying too much the night before?

Was it Master Corporal Harry Rossetti not compensating for his height?

Was it Corporal Jenny Sawyer trying too hard to fit into the crew?

Was it Corporal Koka doing too many things at once?

Was it the Major Owen putting on too much pressure?

Was it Master Corporal Harrigan putting pressure on his men?

Was it Sergeant Gord Keyhole not able to concentrate on his work?

Was it the system which did not enforce the Safety nets designed to prevent accidents like this one?

Each one of them allowed a human factor to effect their work and not one of them recognized it. Would You?

Military jargon used in this video

TQ3 - Level 3 corporal

VU33 - Fixed wing coastal patrol squadron

442 Squadron - search and rescue squadron

MRP - Mobile Repair Party

IE Tech - Instrument Electric Technician

CF 349 - Major sign-off sheet requiring dual signatures for all items

WORKSHEET

Complete as a team *FIRST*

CHAIN OF EVENTS

A link in the Chain of Events is any event, which is a contributing factor, and which if broken or removed, might prevent the occurrence



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

SAFETY NETS

A Safety Net is a regulation, policy, procedure or practice which, if in place might break a link or prevent a link from forming

