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ON THE JOB TRAINING (OJT)

Most of us, when we think back to our "On-the-job-training" (OJT) days, we conjure up memories of sleepless nights, anxiety filled training shifts and depending on the type of "On-the-job-training-instructor" (OJTI) one had; either a sour taste in ones mouth because of the excruciating time we spent under their dictatorship or a thankful smile on our face as we recollect memories of an OJTI that guided us with a calm but firm hand and a demeanour of competence and professionalism that not only gave us something to aspire to but that left even the birds in the air and on the ground, be it metal or flesh, with no doubt as to who was in control.

This article however, is not directed at the OJTIs and how they can aspire to be great instructors; that article will come out at a later installment of this bulletin, but instead, it is directed at the Fiji air traffic control trainees, a handful of which have passed the last 70meters of their 100meter race to their final check before issuance of the coveted "yellow book".

At this point, I would like to acknowledge and say 'Kudos' to the pilots out there who remain patient throughout, there have, at times been pilots who become snappy when they realize controller training is being conducted, forgetting that they themselves were once trainees who made many a mistake between their first solo flight and the day they attained their Air Transport Pilot License (ATPL).

This article highlights some common ATC OJT mistakes and provides tips on how to get the most benefit out of your OJT. With all its pranks and pitfalls, stalls and setbacks, awkward moments and accomplishments, OJT is still the only way to learn and fully grasp the concepts of air traffic control.

No matter how long we're on the job, we never stop learning. However, in the early years of ones' career there is so much to learn and such a limited time to do so; most get 6 months from commencement of OJT and for some lucky (or unlucky) ones, up to a year of OJT. Although OJTIs are there to help you make it; you as the trainee have to be ready for the process. You've already been through a lot of classroom training, taken tests galore and committed more things to memory than a portable 'hard drive', but now is the time to step up a notch and enter the '**learn at the speed of flight**' OJT environment; where 'just keeping up' isn't good enough.

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ON THE JOB TRAINING (OJT) CONT...

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On-the-job trainees should always be conscious of the way they conduct themselves. Trainees must envisage the end goal; a license and the salary that comes with it isn't all, but the satisfaction of having safely and efficiently managed traffic in your airspace is a feeling most seek at the end of a long busy shift. With this in mind, work hard to reach your goal, take direction well, develop a strong desire to learn and show complete confidence in your mentor.

A common utterance from trainees is; **"I was just about to do that!"** Maybe you were, but part of any instructor's skill set is to recognize when an inefficient or potentially dangerous situation is about to arise and intervene accordingly. The challenge for all instructors is determining how long to leave a trainee to resolve a situation on their own, so, if the OJTI has intervened then you have left it too long and should have acted sooner. Remember that it is your training officer's license you are operating under and any mistakes you make as a trainee is considered their mistake.

Doing things when they need to be done is one of the keys to success as a controller, whether it be carrying out coordination with another unit, assigning an altitude or route change, clearing one flight for takeoff or instructing another to "Line up and wait"; all have to be done at precisely the right moment. Teaching you how to recognize that moment is part of what your OJTI does, your challenge is to 'be there' when the time comes to issue that instruction or carry out that coordination. Even a small distraction or misplaced priority can result in you being too late.

Another common misperception by the trainee is thinking **"It would have worked."** There will be times when, in the course of a developing situation, you the trainee will attempt corrective action, taking the initiative is good but if the action could potentially exacerbate an already deteriorating situation then your OJTI may have to step in and issue different instructions. When that happens, it does little good for you to claim your plan "would have worked." Remember that OJTIs have undoubtedly seen the same or similar situations, dozens of times, give them credit for their experience, take the knowledge they're sharing and make it your own.

Sometimes, trainees feel that the OJTIs **"expect too much"** of them. There may occasionally be some truth in that statement when OJTIs expectations are unrealistic of a trainee's skill level, however, in most circumstances, the OJTI expects that the trainee continues to improve, taking into account the time spent so far in OJT. Your OJTI can tell when you aren't meeting the minimum criteria, therefore, raise your own standards and expectations, and push yourself harder. Make yourself part of the traffic picture, assert yourself with the pilots and maybe you'll avert that expectation gloom.

ATC requires that you give it everything you are capable of, there is no room for complacency, and never think you can relax or take it easy because you have been doing well, instead keep trying to do better. Whilst sitting at your controller's position, remember; the travelling public, pilots and passengers, rely on you to keep them on schedule, separated from other aircrafts and safe, therefore, you owe them the best effort you are capable of.

"I don't know"; either saying this out loud or demonstrating it through your actions (or inaction) says a lot about you, it implies that have come unprepared. Turning up for your training shift and still trying to grasp or remember the separation standards, approach plates etc. is a "no-no". Those things, along with the rest of the Standard Operating Procedures should be second nature by now. OJTIs want to use each training shift to show you how to put all the important knowledge together and safely manage the position, the last thing they want to do is waste both your time going over things you should already know. Most can attest to the fact that 'not knowing' during a busy shift has often resulted in the OJTI pulling out our headset jack and sending us to the back of the Tower cab to cower in silence. However, what was written in our Assessment report or Daily Training record, no way compared to the OJTI's interjections directed our way. In time, we came to understand it was simply tough love. So, make sure you are prepared and bring to each OJT session all the supporting knowledge you'll need.

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ON THE JOB TRAINING (OJT) CONT...

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Thinking, **"This traffic is too light for my ability; I might as well spend the time studying".** Remember, you could learn important lessons; even in the lightest of traffic conditions. You can also use those periods of light traffic to refine the skills you'll rely on when traffic is heavy. Don't allow the pace of a slow period to slow your working pace. If you always work the position as though it was busy; you'll keep your skills sharp and not have to change tempo when traffic picks up.

Becoming frustrated because an OJTI is **"Teaching their own technique!"** At times trainees become confused because different instructors have different techniques. Do you know how many recipes there are for a good lamb curry? Probably hundreds and I am sure, every chef will tell you theirs is the best.

The truth of the matter is; there can also be several workable ways to solve a control problem. During my controller years, I had my own set of techniques, but over the years I'd come across another controller handling the same situation in another more efficient way, and wow - I saw the light! So, I learnt to fine tune my technique to incorporate this more efficient way and in turn passed it on to those I instructed, but always remembering to tell my trainee (s) that this was not the "only" way to do it. As the saying goes, "learn from each OJTI, taking the best from each and making it your own."

No one can argue that OJT can be as frustrating as wanting that roti parcel at lunch time and not having enough money on you to buy it! But once you are given the opportunity, take it because it very seldom comes around twice, and while you're at it, take ownership of your failures as amiably as you would your successes.

Never ever argue with your OJTI whilst on the hot seat, you may disagree and you may even be right but the OJTI is the one responsible for the position, so save it for the debrief.

"**Focus**"; your OJTI will appreciate your hard work and notice your diligence and when they do you will be surprised at how far they will go to help you succeed.

Understand that, as you make your way through the OJT process, you are laying the groundwork for how you will be perceived throughout your career, whether good or bad; controllers can never outrun their reputations. Don't forget, the extended ATC family is a relatively small one, if you transfer to another facility, your reputation will get there first.

Last but not least, when you are licensed, enjoy working at the positions you're licensed on, and most important of all, keep trying to improve your game, you may be surprised at the level of skill you are capable of!

Till next time, I leave you with a famous ATC quote; **"Air traffic control is easy until it gets hard. Then it gets very hard. The problem is, it can get very hard very easily."**

"Stay Safe"

(Article by: Ground Safety Department)

GOOD AIRMANSHIP

ENVIRONMENTAL

A. Few people like aircraft noise and several aerodromes are under threat of closure due to this, so it is vital to be a good neighbour.

B. Adhere to noise abatement procedures and do NOT fly over published or briefed noise-sensitive areas near aerodromes.

C. Select sites for practice forced landings very carefully. HASELL includes 'LOCATION'.

D. When en-route, fly at a height/ power setting to minimise noise nuisance, in addition to complying with 5 'Low Flying'.

E. When flying a variable-pitch propeller aircraft, change pitch slowly to avoid excessive noise. When flying twins, synchronise the engines to avoid 'beats'.

F. Select engine run-up areas to minimise disturbance to people, animals etc.

G. NEVER be tempted to fly low or 'beat up' the countryside.

WIND & WAKE TURBULENCE

A. Know the maximum demonstrated cross-wind for the aircraft type you are flying and factor this for your experience and recency.

B. Remember, that was obtained by a test pilot! If the wind approaches what you have decided is your own limit, be ready to divert.

C. Use the 'Sixth Sense' rule to work out the cross-wind component.

10° off runway = 1/6 of the wind

20° off runway = 2/6 wind

30° off runway = 3/6 wind etc.

D. If there is a cross-wind, the reduced head-wind component will lengthen the take-off and landing runs. You may retain better control on landing by not using full flap, further increasing the landing distance.

E. If another runway which is more into wind is available, use it (after asking Air Traffic Control if there is one). You may have to wait a few minutes to fit in with other traffic.

F. When winds or gusts exceed 66% of the aircraft's stall speed (50% for tail draggers), in general, don't go flying! If you have to, use outside assistance for taxiing such as a wing walker. Taxi very slowly when winds exceed 30% of the stall speed (unless the POH specifies otherwise), and be VERY careful when the wind is from your rear.

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GOOD AIRMANSHIP CONT...

G. On the ground, stay 1,000 ft clear of the 'blast' end of powerful aircraft.

H. On Beware of wake turbulence behind heavier aircraft, especially helicopters, on take-off, during the approach or on landing. You should remain 8 NM, or 4 minutes or more, behind most large aircraft. Note that wake turbulence lingers when wind conditions are very light. These very powerful vortices are invisible. Heed Air Traffic warnings.

CIRCUIT PROCEDURES

A. When joining or re-joining, make your radio call early and keep radio transmissions to the point. Know the non-radio procedures in case of failure.

B. Check that the change from QNH to QFE reduces the altimeter reading by the aerodrome elevation. If landing using QNH, e.g. at a strip, don't forget to add aerodrome elevation to your planned circuit height.

C. Use the correct joining procedures for your destination aerodrome. Unless otherwise published, make a standard join from the overhead (see 'Standard Overhead Join' Safety Poster). Check circuit height and direction. Be aware of and look out for other aviation activity such as gliding and parachuting.

D. Check windsock/signals square or nearby smoke to ensure you land in the right direction. Be very sure of the wind direction and strength before committing yourself to an approach at a non-radio aerodrome.

E. Make radio calls in the circuit at the proper places. Listen and look for other circuit traffic. Don't forget pre-landing checks, easily forgotten if you make a straight-in approach.

F. Be aware of optical illusions at unfamiliar aerodromes with sloping runway or terrain, or with very long, or very wide, runways.

G. Take care where runways can be confused, e.g. 02 and 20. Make sure you know whether the circuit is left- or right-hand, as this will determine the dead side. If in doubt – ASK.

H. In most piston-engined aircraft, apply full carb heat early enough to warm it up BEFORE reducing power.

LANDING

A. A good landing is a result of a good approach. If your approach is bad, make an early decision and go-around. Don't try to scrape in.

B. Plan to touch down at the right speed, close to the runway threshold, unless the field length allows otherwise. Use any approach guidance (PAPI/VASI) to cross-check your descent.

C. Go-around if not solidly 'on' in the first third of the runway, or the first quarter if the runway is wet grass. However, if the runway is very long, plan your landing to minimise runway occupancy – think of the next user.

D. Wait until you are clear of the active runway, then stop to carry out the after-landing checks. Double check the lever you intend moving is the flaps and NOT the landing gear.

E. If the clearance between the propeller and the ground is small, or grass is long and hiding obstructions, be especially watchful to prevent taxiing accidents.

F. If you are changing passengers, shut down the engine. Do not do 'running changes'; propellers are very dangerous.

G. Remember, the flight isn't over until the engines are shutdown and all checks completed.

H. 'Book in' and close any Flight Plan, or contact your "responsible person".

SUMMARY

- Keep in current flying practice, have an annual check-out with particular emphasis on stall recognition and asymmetric practice in twins.
- Get an aviation weather forecast.
- Prepare a thorough Route Plan using the latest charts, check on NOTAMs etc.
- Know the aircraft thoroughly.
- Don't over-load the aircraft.
- Make sure the runway is long enough in the conditions.
- Over water in a single-engined aircraft, wear a lifejacket. Carry an accessible life-raft.
- Pre-flight properly with special emphasis on fuel/oil contents and flying controls.
- In a single-engined aircraft, bear in mind the consequences of engine failure.
- Maintain a good look-out, scan effectively, be aware of 'threat areas'.
- If the weather deteriorates, or night approaches, make the decision to divert or return early.
- Don't end up in weather outside your ability or licence privileges.
- NEVER descend below your Safety Altitude in IMC.
- Request help early if lost or you have other problems, e.g. fuel shortage.
- Keep out of controlled airspace unless you have clearance.
- Make regular cruise checks including fuel contents/selection.

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GOOD AIRMANSHIP CONT...

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- Maintain flying speed, avoid inadvertent stall/spin, don't fly low and slow.
- Always treat propellers as 'live'.
- Don't do anything stupid - become an old pilot, NOT a bold pilot.

Finally

Pilots exercising GOOD AIRMANSHIP never sit there 'doing nothing', they always think 15 to 20 miles ahead. ■

(Article by: Air Safety Department)

CABIN DECOMPRESSION AWARENESS

Decompressions are extremely rare but crewmembers must have knowledge of the consequences and a good awareness of hypoxia – arguably the greatest hazard.

Introduction

Aircraft have cabin air systems that control pressurisation, airflow, air filtration, and temperature. The purpose of these systems is to provide safe and comfortable cabin environment, and to protect all cabin occupants from the physiological risks of high altitudes.

In the case of decompression, there is a risk that not enough oxygen will be supplied to the body. The condition, hypoxia, is the greatest threat to both crewmembers and passengers.

Types of Decompression

The Risk of a pressurized cabin is the potential for cabin decompression. This can occur due to a pressurisation system malfunction, or damage to the aircraft that causes a breach in the aircraft structure, enabling cabin air to escape outside the aircraft, for example loss of a window, or a breach in the aircraft fuselage due to an explosion.

The loss of pressurisation can be slow – in case of a small air leak-while a rapid or explosive decompression occurs suddenly, usually within a few seconds.

The consequences of decompression, and its impact on cabin occupants, depend on a number of factors, including:

- The size of the cabin: the larger the cabin, the longer the decompression time.
- The damage to the aircraft structure: the larger the opening, the faster the decompression time.
- The pressure differential: the greater the pressure differential between the cabin pressure and the external environmental pressure, the more forceful the decompression.

When cabin pressure decreases, cabin occupants are no longer protected from the dangers of high altitudes, and there is an increased risk of hypoxia, decompression, illness, and hypothermia. It is, therefore, important that crewmembers recognize the different types of decompression, react effectively to overcome the difficulties associated with a loss in cabin pressure.

Rapid/Explosive Decompression

Rapid/Explosive decompression results in a sudden loss in cabin pressure, and can be recognized by the following signs:

- A loud bang, thump or clap that is the result of the sudden contact between the internal and external masses of air.
- Cloud of fog or mist in the cabin that is due to the drop in temperature, and the change of humidity.
- Rush of air, as the air exists the cabin.
- A decrease in temperature, as the cabin temperature equalizes with the outside air temperature.

If a breach in the aircraft structure is the cause of the decompression:

- Unsecured items in the immediate area are ejected from the aircraft
- Debris may fly around the cabin
- Loose items may become projectiles
- Dust particles may limit visibility.

In the case of rapid/explosive decompression, there may be a lot of confusion due to the high noise level and fog that makes it difficult to communicate in the cabin.

Slow/Insidious Decompression

Slow/insidious decompression involves a very gradual decrease in cabin pressure. Slow decompressions may be the result of a faulty door seal, a malfunction in the pressurisation system, or a cracked window.

Slow decompression may not be always obvious. The cabin crew may not notice the changes in the cabin and therefore must be aware of signs that could indicate a slow decompression. In some cases an unusual noise, such a whistling or hissing sound around the door areas, may be indication of a slow decompression and therefore the flight crew should be immediately notified.

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CABIN DECOMPRESSION AWARENESS CONT…

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One of the first physiological indications of a slow depression may be ear discomfort or "popping", joint pain, or stomach pain due to gas expansion.

Hypoxia

As mentioned, the greatest danger, during decompression is hypoxia. To prevent crewmembers from becoming significantly impaired or incapacitated, the cabin crew must continuously observe passengers and crew members for the signs and symptoms of hypoxia. The effects of hypoxia (lack of oxygen) cannot be over emphasized. It is Important for the crew to realize that even mild hypoxia, though not fatal, can have fatal result. This is because hypoxia can significantly reduce the crewmember's ability to perform, and consequently lead to errors that may be fatal.

The insidious nature of hypoxia causes subtle decrease in individual performance, followed by incapacitation; the symptoms may not be identified until it is too late.

The most common type of aviation hypoxia is 'hypoxic hypoxia' that occurs due to low partial pressure of oxygen in the arterial blood. If oxygen is not used immediately in hypoxia cases it is possible that occupants become incapacitated and lose consciousness in a very short term.

Physiological and Psychological Effects of Hypoxia

It is important that cabin crewmembers be aware of the symptoms of hypoxia in themselves and incidents. During a decompressions incident, some of the passengers may show signs of hypoxia: some may appear to be dizzy and laughing and some may not be bothered to put on their oxygen masks.

It is necessary to remember that each person may not react in the same way, and that symptoms of hypoxia may manifest themselves differently in each individual.

Initial signs of hypoxia include:

- Stomach pain due to gas expansion
- Increase rate of breathing
- Tingling sanction in the hands and feet
- Cyanosis (blue discolouration of the lips and fingernails)
- Headache
- Nausea
- Light-headedness
- Dizziness
- Sweating
- Irritability
- Euphoria
- Ear discomfort

These symptoms become more pronounced with the lack of oxygen, for example:

- Impaired vision
- Impaired judgment
- Impaired motor skills (not able to coordinate body movements)
- Drowsiness
- Slurred speech
- Memory loss
- Difficulty with concentration

Hypoxia can cause a false sense of well-being. It is possible for a person to be hypoxic and not be aware of their condition. Therefore it is important that the cabin crew recognizes the signs of hypoxia and provides oxygen as soon as possible in order to prevent a loss of consciousness.

Although the affected passengers of the crewmember usually recovers after a few minute after receiving oxygen, they may not be aware that the lost consciousness for a time.

Time of Useful Consciousness

The time of useful consciousness refers to the time available to individuals to perform their task after they have been deprived of oxygen but are still aware of their environment and capable of controlling their actions.

It is important for the cabin crew to realize that the time of useful consciousness is different for each individual, and depends on the:

- Altitude
- Individuals state of health
- Amount of activity

"It is necessary to remember that each person may not react in the same way, and that the symptoms of hypoxia may manifest themselves differently in each individual."

As an example the time of useful consciousness at 22,000 feet is approximately five minutes for moderate activity and ten minutes when sitting quietly.

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CABIN DECOMPRESSION AWARENESS CONT…

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The following are some other factors that can contribute to reducing the time of useful consciousness:

- Fatigue: a person who is physically or mentally fatigued will have an increased risk of hypoxia
- Physical effort: during physical activity, there is an increased need for oxygen an increase risk of hypoxia and, as a result a decrease in the amount of useful consciousness time
- Alcohol: alcohol can significantly affect behavior, and can increase the risk of hypoxia, in addition to aggravating some of the behavioural changes resulting from hypoxia.

Immediate Actions

In the case of decompression the immediate use of oxygen is critical. Therefore, the first actions to be performed by the cabin crew are:

- Sit down and hold on
- If near oxygen bottle, don mask
- Otherwise wait until levelled out.

The priority of the cabin crew is to consider their personal safety.

Post Decompressions

After a decompression, when the air craft reaches a safe altitude, the cabin crew can move around the cabin, and should use the portable oxygen until they are confident that they can breathe without support.

When the emergency descent is completed, and are safe altitude is reached, the cabin crew should consider their oxygen requirements. Due to physical activity at an increased altitude, the cabin crew may still be exposed to hypoxia. Oxygen deprivation can be insidious and the cabin crew may not be the best judges of their own oxygen intake after decompression.

After cabin decompressions, the cabin crew should:

- Assist passengers
- Report to Captain ■

(Source: Acknowledgement to Mount Cook Airlines, Aoraki Safety-Issue 2008/02)

Decompression Accident

Although extremely rare, there have been a number of high profile and tragic accidents in recent times, directly attributed to incapacitation of the crew due to hypoxia.

Helios Airways-2005
B737 crashed in Greece. All 121 people killed.

Australian B200 Kind Air -2000
Charter aircraft flew nearly 3,000 km across Australia before the fuel supply was exhausted. All eight people were killed.

Payment Stewart-1999
Chartered Learjet flew uncontrolled for 2,300 km across the United States until it ran out of fuel. All six people killed.

FCAIR

FIJI CONFIDENTIAL AVIATION INCIDENT REPORTING FORMS AVAILABLE ON WEBSITE

www.caaf.org.fj

OR FRONT DESK, CAAF HQ

AIR PACIFIC REBRANDED TO FIJI AIRWAYS

Fiji Airways was launched by the Hon Minister for Civil Aviation Mr Aiyaz Sayed Khaiyum on 27th June.

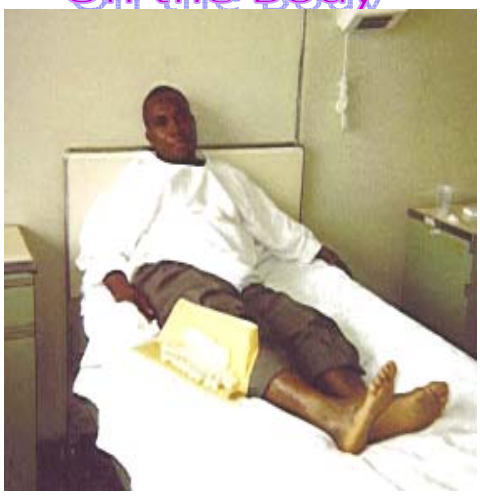
CAAF's Standards section is keen to hear from you regarding our levels of service. If you believe you have constructive ideas on how we can improve our services, or would like to report instances where we have failed to meet your expectations, please send your feedback to CAAF, preferably using the QA 108 form that can be accessed from our website. This can be sent to CAAF by faxing it to Quality Assurance Manager on 6727429, dropping it in the feedback box in the foyer of CAAF HQ, or emailing to standards@caaf.org.fj.

Your suggestions for improvements to this publication are also invited. CAAF also invites you to submit valuable information or articles that you would like to have published through this bulletin for the benefit of readers. Your name will be appropriately acknowledged. Please use the email address stated above.

DIFFERENT WAYS OF CONCEALMENT

Aviation security personnel are facing a mammoth task everyday in trying to identify prohibited items and improvised explosive devices. It is becoming more difficult as terrorists have become more innovative. Below are some methods of concealment.

On the Body



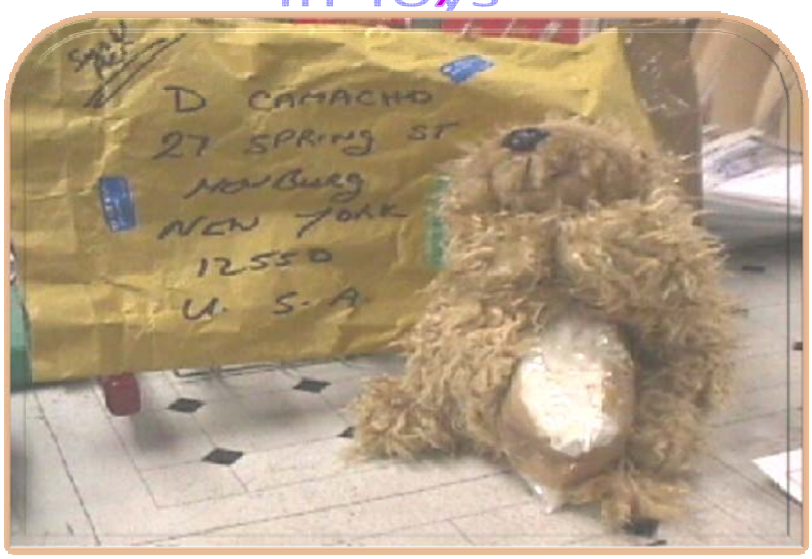
Inside the Body

In Food and Beverage Containers

Special Belts Body Packing

Double Bottom Suitcase

In Toys



DIFFERENT WAYS OF CONCEALMENT CONT....

In Laptops

In Animals

Shoe Bomb

Shoe bomb

The plastic explosive, likely to have been C4, was packed into the hollowed-out heel of a black, high-top basketball shoe. C4 is a malleable high explosive which is readily available on the black market. The exact arrangement of the device isn't known but the alleged bomber was seen trying to light a fuse at the tongue of his trainers. This alone may not have been enough to ignite C4 which is very stable. A chemical detonator was probably embedded in the explosive.

Undergarment Bomb

Radio Bomb

(Article By Aviation Security & Facilitation Department)

AVIATION SAFETY

THE KEY TO YOUR SUCCESS

Civil Aviation Authority of Fiji

Promoting effective aviation safety in Fiji and the region