

# DEADLY CARGO

## Some things were never meant to fly

Ruth King

**T**HERE WAS A BOMB ON BOARD THE helicopter and the pilot didn't know it. Which was strange, because he put it there. It wasn't the sort of bomb you'd easily recognise – no ticking, no fuse and no sticks of dynamite – yet it resulted in the complete destruction of the aircraft within five minutes of departure.

The pilot was lucky. Shortly after take-off he noticed the acrid smell of something burning and a glow beneath the rear seat. He landed, escaped, and watched, with feelings of disbelief and growing embarrassment, as his aircraft was consumed by flames.

What was this cleverly disguised weapon? The pilot reported that he had been carrying signal flares, fuel, oil, grease and dirty rags on and beneath the rear seat...

**// [The pilot] came close to being overcome by the pungent fumes shortly after take-off and was forced to land at Perth. //**

he had also been smoking prior to becoming aware of the burning smell.

Given the damage that dangerous goods can do to aircraft, it is surprising how little awareness there is in the private pilot community about what can and cannot be carried on aircraft. According to law, no aircraft, commercial or private, is permitted to carry dangerous goods other than in accordance with the International Civil Aviation Organization's technical instructions. These cover the procedures for acceptance of consignments of dangerous goods and how they are to be packaged, labelled, handled, stored and carried aboard aircraft.

What are dangerous goods, and what can private pilots do to identify them? ICAO's definition is "Articles or substances which are capable of posing a significant risk to health, safety or property when transported by air". This is quite a broad definition. The International Air Transport Association (IATA) has published a manual of regulations which lists all goods classified as "dangerous" for the purposes of air transport, but I don't suppose too many private pilots have that in their nav bag. Some things are pretty obvious; others aren't.

What went through the mind of the

Cessna 180 pilot who loaded a can of paint thinners aboard his aircraft at Jandakot? He came close to being overcome by the pungent fumes shortly after take-off and was forced to land at Perth. The lid had come off the can, perhaps due to vibration in conjunction with expansion of air inside as the cabin pressure dropped during climb. Unfortunately, incidents like this are not isolated.

Perhaps some items listed as dangerous will surprise you: camping stoves with their butane or LPG fuel, scuba tanks, paints, household solvents and cleaning chemicals, adhesives, polishes, matches, Prist and other engine additives, fertiliser, farm chemicals, batteries, aerosols, cigarette lighters, seed cake, photographic chemicals, disinfectants, dyes, dry ice and engines. Even an "empty" gas cylinder can leak residual vapours if the valve is left open.

So back to the question of how to determine whether what you propose to carry is "dangerous". Although by no means exhaustive, the lists in Civil Aviation Regulation 262C and tables A and B, are a good starting point. Also, some hazardous goods will be marked with diamond shaped warning labels. The labels distinguish

among the various classes of dangerous goods, according to an internationally recognised system used for all forms of transport. Any substance which you have reason to believe might be dangerous is best left behind. Even if it is packaged appropriately for transport by air, you are not qualified to determine that without formal "acceptance" training. You should also be aware that a substance which is appropriately packaged for transport by sea or land is not necessarily legal for air transport!

There are quite a few items which would normally be considered dangerous which can be carried under certain conditions, including common personal items which are carried in such small quantities as to not present a significant hazard. Certain quantity and/or packaging restrictions may still apply.

Some items must be carried on the person and never in baggage, such as safety matches and some lighters. Presumably if a box of matches ignites in your pocket you will notice and act promptly; not so easy if it happens in your luggage. Medicine and toiletries containing alcohols or aerosols are quite acceptable in the typically small quantities required for personal use, but a carton of them would be a problem.

What about those spare bottles of engine oil shoved into the nose locker? Interestingly, engine oil is not officially classed as a dangerous good because of its high flash point, so the practice is acceptable. Just be aware of what a mess it would make if spilt, though. On that note, there are a number of other substances which are not defined as "dangerous" but you still wouldn't want them leaking in your aircraft. Acrylic paint and seafood are two common ones.

What should you do if you have an item or substance which you would like to carry on board your aircraft but you're not sure if it is allowable? If in doubt, leave it out. Arrange to purchase or borrow the product at your destination, or contact a shipping company and have a commercial operator transport it for you in accordance with the appropriate regulations. No can of paint or box of chemicals is so important that you should risk your life, the lives of your passengers or the safety of your aircraft to get it to your destination.

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## If in doubt, leave it out

Here are some common hazards to look out for. Some of these substances should not be carried under any circumstances, others may be carried in small quantities or if specific procedures are followed. Equally, some dangerous goods may be carried if there are no passengers on board. If you are not sure about a particular item contact one of CASA's dangerous goods experts on 131 757 or arrange to have the product shipped by an alternative form of transport.

**Explosives:** Fireworks, toy caps, ammunition, flares, commercial explosives, gunpowder.



**Compressed gases:** Compressed and liquified gases, oxygen tanks, scuba tanks, aerosols.



**Flammable substances:** Paint, thinners, fire lighters, aerosols, alcohols, adhesives, propane, butane, articles containing celluloid, oily rags, petrol, fibreglass repair kits.



**Oxidisers:** Bleaches, certain acids, pool chemicals.



**Poisons:** Weedkillers, pesticides, insecticides, toxic gases, many chemicals.



**Infectious substances:** Biological products and/or diagnostic specimens containing pathogens.



**Radioactive materials:** Instruments and medical or research materials with radioactive sources.



**Corrosives:** Acids, alkalis, wet-cell batteries, caustic soda, mercury.



**Miscellaneous:** Magnetised materials, dry ice, machines with a fuel tank, lithium batteries.

