

Balloon Maintenance

– Not for the Unqualified Operator

There's been disquiet for some years that private balloonists are illegally maintaining their own aircraft. But there seems to be a new appreciation of the potential danger in that.

David Norris, the chief pilot of Waikato Hot Air Balloon Club, has a mission.

He's concerned about the impact of private balloonists maintaining their own craft, without being authorized or approved, or without qualified supervision, and in breach of the Civil Aviation Rules.

"It goes back a long way," David says. "Everyone seems to have a different interpretation about what you can and cannot do to maintain a balloon."

So concerned was David, that he recently organised an information night for Waikato balloonists, with CAA Aviation Safety Adviser, John Keyzer, and LAME Paul Waterhouse, filling in the gaps in the balloonists' understanding.

"Because they've been doing their own maintenance, or at

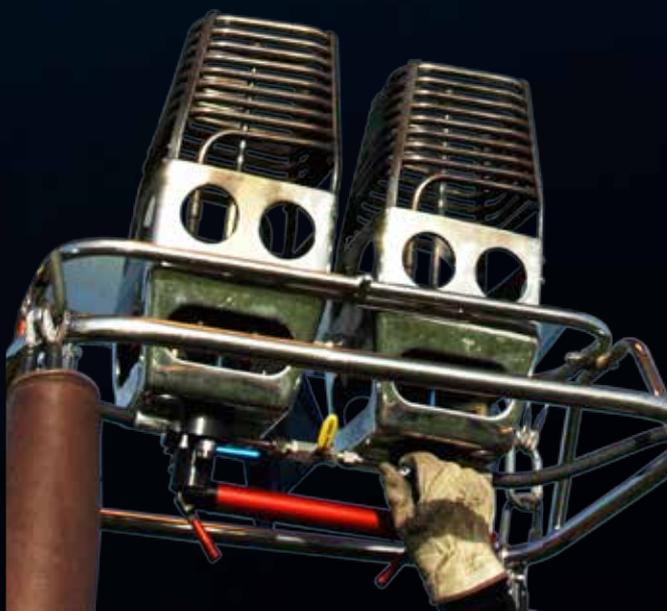
least some part of it, for the past 20 years, they think they can just keep on doing it," says John.

"They either don't understand how the rules work, or the restrictions the rules impose, or they don't care.

"But the rules are quite specific about what operator responsibilities are, what 'maintenance' is, who can carry it out, what they can do, and what conditions need to be met to hold an authorization."

CAA's Manager of Special Flight Operations and Recreational Aviation, Rex Kenny, says those concerns are legitimate.

"A few years ago, it emerged that operators were buying replacement regulator valves – from general engineering suppliers – that were actually designed for forklifts.



Multi-grip or poly grip pliers shouldn't be used anywhere on any aircraft. They can damage the fitting too easily.



“So if the fuel supply developed a leak, the forklift pressure regulator would shut off the fuel supply – potentially deadly in a balloon. They just didn’t realise that the same part numbers did not mean the same parts.

“That’s the essence of our concerns. Balloon owners need to know what they can and cannot do, according to the rules.

Wellington LAME and vice-president of the Ballooning Aviation Association, Scott Cursons, agrees, saying what might seem a simple task to the operator may in fact lead to further complications, and not just on the physical component.

“If maintenance is carried out on an aircraft by an unqualified person, then that maintenance can invalidate the operator’s insurance.”

Scott also says operators, coming into a paddock during a fast landing, do not need to be distracted by back-of-the-mind worries about, for instance, the reliability of a dodgy old fuel hose.

“Only equipment supplied by the manufacturer will give them complete confidence, and then they can get on with just flying.

“Really, if there’s any doubt, they should not have taken off in the first place.”

David Norris says there’s often confusion because a manufacturer’s maintenance manual may detail what an operator can do.

“A manufacturer allowing something doesn’t trump laws that prohibit an activity, or impose restrictions on it. In New Zealand, Civil Aviation Rules sit on top of the manual.”

In any case, says Scott Cursons, what pilots can do has been reduced, due to recent revisions to flight and maintenance manuals.

“I’ve just reviewed the flight and maintenance manuals of five balloon manufacturers, and really, the most pilots can do now is a pre-flight inspection, and basic servicing of the balloon – refuelling, basic cleaning – that sort of thing. Anything more has to involve a LAME with a ‘Lighter than Air’ rating.”

David says some Waikato club members were blown away by what they learned at the information night.

“One or two said it was a real eye-opener.”

Rex Kenny wants to remind GA (General Aviation) participants they, too, cannot maintain their aircraft outside the rules.

Relevant Rules for Balloon Maintenance

91.603 – What is required in general maintenance

43.51 – Who can perform maintenance, what they can do, and the conditions they need to meet

43.53 – Criteria that needs to be met

43.69 – Keeping maintenance records

43.105 – RTS after maintenance

“Like private owners with a C-172 on the farm – they won’t get an engineer in if they’ve got a failed spark plug. They’ll just go and pull it out. How do they know that the problem isn’t actually something in the magneto?

“We don’t mind them doing it, but only as long as they’ve met the qualification requirement for pilot maintenance.”

Scott Cursons, understandably flying the flag for his profession, says operators should use LAMEs to maintain their balloons.

“Engineers accept the responsibility, and its corresponding liability, of correctly maintaining an aircraft. They have a particular mindset based on compliance with the rules, mitigation of risk, and of doing things in a procedural way.

“Operators need to realise that when something is worked on, serviced, maintained, fixed, modified, and inspected, it’s been done in a way only really understood by a LAME.”

Balloon owners wanting to contact a Lighter than Air LAME can go to the Balloon Aviation Association web site, www.baan.co.nz.

Rex says the CAA would “absolutely” encourage balloonists to train as LAMEs.

“The AME licence requires just one exam, two law exams, and then the rating.

“And we generally say that if they do the Kavanagh Balloon course in Australia, we would accept that instead of the rating exam.

“So it’s not that difficult, and compared with the GA rating, it’s only a fraction of the cost.” ■