February 2003
Newsletter No.105

AIRTOURER ASSOCIATION

Dedicated to the preservation and continued airworthiness of VICTA and AESL Airtourer Series Aircraft

NEWSLETTER

http://www.Airtourer.asn.au

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Articles for inclusion in the Newsletter should be submitted direct to John O'Halloran at the contacts listed above. Please enclose payment for any advertisement. The next Newsletter will be published in May 2003. Contributions and or advertisements are to be with JOH by 15 April 2003.

Small advertisement (Maximum of 4 lines)	$20.00
Large advertisement	$40.00

Cheque to be made payable to the Airtourer Association. Post with copy direct to the publisher.

Editorial

Now that the hectic pace of the Christmas & New Year period is over we can continue with the equally hectic pace of normal life! The Association and the Co-Op are still heavily distracted by the Type Certificate and Flight Manual issues. We hope to have the Flight Manual in a satisfactory state soon with Supplements developed by the Association and later in the year will address the safety concerns of having superseded data in the manual. The Co-Op are pursuing legal action to recover the Type Certificate as well as restructure. More on these issues in this Newsletter.

Dealing with CASA on Flight Manuals has been particularly frustrating. On an individual basis CASA staff do their best to be helpful however glaring inconsistencies within the organisation and poorly thought out policies make it difficult for the end user, i.e. the owners and pilots. However, we are making progress and once the Flight Manuals are sorted out the Association can re-focus on other matters.

Safe Airtouring,

John O'Halloran

Cover Photo: The unmistakable Airtourer shape from the 'line astern' position.

Disclaimer

The views expressed are those of the contributors and not necessarily those of the Publishers, the Airtourer Association or the Airtourer Co-Operative Ltd.

Letter to the Editor

Dear John and Jan,

Many thanks to you, the Airtourer Association and the Newsletter as we now have a newly reconditioned prop. and are back in the air. The response of members was very good and after several phone calls we were able to arrange everything with a minimum of fuss. Mel was home for Christmas [the first time for a few years] and seemed to enjoy his flights and Peter couldn't have wished for a better Christmas present. Hope to catch up with you at Wangaratta.

Cheers,

Bernardine and Peter Hupfeld

NOTICE UNDER SECTION 145 OF THE CO-OPERATIVES ACT 1992

The directors of the Airtourer Co-operative Limited have convened a general meeting of members to be held on Sunday 23rd March 2003 at Wangaratta, to consider, and if thought fit, amend the Rules of the Co-operatives Act 1992 so that the Airtourer Co-operative Limited will convert from a co-operative with share capital to a co-operative without capital registered under the Co-operative Act 1992 and that the Co-operative, having obtained consent from each member, will repay that member's share.

The Rules proposed for adoption are available for inspection at 230 Hudson Parade, Clareville, 2107 during usual business hours. Any person, including creditors, who wish to object to the adoption of the proposed Rules, should write to:

The Registrar
Registry of Co-operatives
154 Russell Street
BATHURST NSW 2795

Flight Manual Update

John O'Halloran

In the last Newsletter I advised that all Airtourers except New Zealand built 150s, Super 150s or T6s needed the new MAI Flight Manuals. In January the New Zealand Civil Aviation Authority approved the new MAI Flight Manuals for the remaining NZ built aircraft, therefore ALL Airtourers must now use the new MAI Flight Manuals.

The last Newsletter also explained that aircraft modified with different engines would need a Flight Manual Supplement. These Supplements have been drafted by the Association and are presently with CASA for approval. Unfortunately the Supplements could not be approved and distributed by the end of January 2003. This meant that many owners could be liable for prosecution for not having the correct Flight Manuals. The Association therefore made a case to CASA to extend the moratorium on enforcement action for modified aircraft. Capt. Mick Toller as Director of Aviation Safety has advised that the moratorium could not be extended however CASA did understand the situation and were working on an exemption. A copy of his email is attached. When the exemption is received the Association will pass the information to members.

From: TOLLER, MICK
Sent: Friday, 31 January 2003 9:41 AM
To: 'John O'Halloran'
Cc: Gemmell, Bruce; MCINTYRE, BILL; PROBERT, NEVILLE; WILLIAMS, MIKE; GIBSON, PETER (Manager Corporate Communications); ELDER, ROB
Subject: RE: Request for extension to Flight Manual Moratorium for VICTA & AESL Airtourer Aircraft

John,

A heads up on what we will be passing on formally next week.

I am not willing to continue the general moratorium on non-carriage of compliant Flight Manuals, but do recognise the problems faced by Victa Airtourer owners with modified aircraft as outlined in your letter.

We will therefore be drawing up an exemption document. The exact form has not yet been decided but the effect is intended to allow continued operation of Victa Airtourer aircraft, but not in RPT or charter operation(!), provided the basic flight manual and the existing Australian Flight Manual or equivalent source of operational information relevant to the particular aircraft are carried. This will be for a non-extendable period of one year covering the introduction of Flight Manual Supplements as per the current Regulations.

I am copying this letter to our head of Compliance to ensure that inspectors are aware of this situation, and hereby authorise the continued use of the Victa aircraft pending the issue of the exemption in line with the current moratorium.

I believe this is a safe practical way of achieving long term regulatory compliance while recognising the problems which your Association has been professionally addressing.

Feel free to pass this email to your members as you see fit.

Best wishes,

Mick

25th Annual Convention and Fly-In Wangaratta 21-22-23 March, 2003

Please come and help celebrate this special event.

11 people from the U.K. are coming - are you?

Some, we know, have booked Motels but haven't sent deposits and registrations to the Marshall's - please help by sending the deposit and registration form a.s.a.p.

The Proposed Exciting Program is:

Friday	Arrivals. Welcome drinks at Aero Club. Dinner.
Saturday	Arrivals. Morning nature walk. Shopping (opt.) Airport Day - Flying Activities. Learn more about BNV. Birthday cake. Murray Griffith's workshop tour. Celebration Dinner with surprise entertainment and Guest speaker.
Sunday	AGM & Co-op meetings. Tour to historic gold town Beechworth where Ned Kelly was gaoled, plus the Lunatics Walk!! Farewell Dinner.
Monday	Departures.

The following recommended Motels are in walking distance to all town activities: Parkview Motor Inn Ph. 1800 032 475; Gateway Ph. 1800 033 439; Warby Lodge Ph. 1800 806 720; Ryley Ph. 03 5721 6388.

Registrations close mid February - POST IT NOW - Please!
Enquiries: Phone Lindsay & Beryl Marshall 03-5486 2353 - who are in charge of registrations.

Lost your invitation/registration form? Go to:- *http://www.airtourer.asn.au/silverjub.htm*, **or use the form with this newsletter.**

Low Compression Engine - Grade 100 Aviation Fuel.

Reprinted from the Lycoming Flyer

Many Lycoming engines designated as low compression engines were originally certified to use Grade 80 aviation gasoline. The fuel was rated at 80 octane when the engine was leaned for cruise, and at 87 octane when it was set at rich for takeoff and climb. This aviation gasoline contained one half milliliter of lead per gallon. Owners of aircraft that use engines certified to use Grade 80 fuel occasionally have questions about the use of higher leaded fuels. During the mid-1970s, announcement of a single grade aviation fuel for all reciprocating aircraft engines created a furor which gradually faded away as pilots and mechanics became more knowledgeable of the actual effects of using the new fuel, Grade 100LL. Grade 100LL has two milliliters of lead per gallon and is rated at 100 octane when the engine is leaned for cruise, and at 130 octane when the mixture is set at rich. The fuel is designated as "low lead" because the previous fuel with a 100/130 octane rating contained twice as much lead, four milliliters per gallon. For all practical purposes, Grade 80 fuel with one half milliliter of lead has been phased out and is no longer available. Use of Grade 100LL fuel in engines certified for 80 octane fuel can result in increased engine deposits both in the combustion chamber and in the engine oil. It may require increased spark plug maintenance and more frequent oil changes. The frequency of spark plug maintenance and oil drain periods will be governed by the type of operation. Operation at full rich mixture requires more frequent maintenance periods; therefore it is important to use approved mixture leaning procedures. To reduce or keep engine deposits at a minimum when using the leaded fuel available today, it is essential that the following four conditions of operation and maintenance are applied. These procedures are taken directly from Service Letter No. L185.

A. GENERAL RULES

1. Never lean the mixture from full rich during take-off, climb, or high performance cruise operation unless the airplane owners manual advises otherwise. However, during takeoff from high elevation airports or during climb at higher altitudes, roughness or reduction of power may occur at full rich mixture. In such a case the mixture may be adjusted only enough to obtain smooth engine operation. Careful observation of temperature instruments should be practiced.
2. Operate the engine at maximum power mixture for performance cruise powers and at best economy mixture for economy cruise power; unless otherwise specified in the airplane owners manual.
3. Always return the mixture to full rich before increasing power settings.
4. During let-down and reduced power flight operations, it may be necessary to manually lean or leave mixture setting at cruise position prior to landing. During the landing sequence the mixture control should then be placed in the full rich position, unless landing at high elevation fields where operation at a lean set-

ting may be necessary.

5. Methods for manually setting maximum power or best economy mixture.

a. **Engine Tachometer - Airspeed Indicator Method:** The tachometer and/or the airspeed indicator may be used to locate, approximately, maximum power and best economy mixture ranges. When a fixed-pitch propeller is used, either or both instruments are useful indicators. When the airplane uses a constant speed propeller, the airspeed indicator is useful. Regardless of the propeller type, set the controls for the desired cruise power as shown in the owners manual. Gradually lean the mixture from full rich until either the tachometer or the airspeed indicator are reading peaks. At peak indication the engine is operating in the maximum power range.

b. **For Cruise Power:** Where best economy operation is allowed by the manufacturer, the mixture is first leaned from full rich to maximum power, then leaning is slowly continued until engine operation becomes rough or until engine power is rapidly diminishing as noted by an undesirable decrease in airspeed. When either condition occurs, enrich the mixture sufficiently to obtain an evenly firing engine or to regain most of the lost airspeed or engine RPM. Some slight engine power and airspeed must be sacrificed to gain a best economy mixture setting.

c. **Exhaust Gas Temperature Method** (EGT): Refer to the article on this subject in the Operations section of this book. Recommended fuel management—manual leaning will not only result in less engine deposits and reduced maintenance cost, but will provide more economical operation and fuel saving.

B. ENGINE GROUND OPERATION

The engine ground operation greatly influences formation of lead salt deposits on spark plugs and exhaust valve stems. Proper operation of the engine on the ground (warm-up, landing, taxi and engine shut-down) can greatly reduce the deposition rate and deposit formation which cause spark plug fouling and exhaust valve sticking. 1. Proper adjustment of the idle speed (600 to 650 RPM) fuel mixture, and maintenance of the induction air system will ensure smooth engine operation and eliminate excessively rich fuel/air mixtures at idle speeds. This will minimize the separation of the nonvolatile components of the high leaded aviation fuels greatly retarding the deposition rate. 2. The engine should be operated at engine speeds between 1000 and 1200 RPM after starting and during the initial warm-up period. Avoid prolonged closed throttle idle engine speed operation (when possible). At engine speeds from 1000 to 1200 RPM, the spark plug core temperatures are hot enough to activate the lead scavenging agents contained in the fuel which retards the formation of the lead salt deposits on the spark plugs and exhaust valve stems. Avoid rapid engine speed changes after start-up and use only the power settings required to taxi. 3. Rapid engine cool down from low power altitude changes, low power landing approach and/or engine shut-down too soon after landing or ground runs should be avoided. 4. Prior to the engine shut-down, the engine speed should be maintained between 1000 and 1200 RPM until the operating temperatures have stabilized. At this time the en-

gine speed should be increased to approximately 1800 RPM for 15 to 20 seconds, then reduced to 1000 to 1200 RPM and shut-down immediately using the mixture control.

C. LUBRICATION RECOMMENDATIONS

Many of the engine deposits formed by combustion, regardless of the lead content of fuel used, are in suspension within the engine oil and are not removed by a full flow filter. When sufficient amounts of these contaminants in the oil reach high temperature areas of the engine they can be baked out, resulting in possible malfunctions such as in exhaust valve guides, causing sticking valves. The recommended periods of 50-hour interval oil change and filter replacement for all engines using full-flow filtration system and 25-hour intervals for oil change and screen cleaning for pressure screen systems must be followed. If valve sticking is noted, all guides should be reamed using the procedures as stated in latest editions of Service Instruction No. 1116 and/or Service Instruction No. 1425, and the time between oil and filter changes should be reduced.

D. SPARK PLUGS

The fuel management techniques outlined previously will aid in minimizing spark plug fouling. Engine operation, spark plug selection, and spark plug maintenance are all factors that help to keep engines operating smoothly with leaded fuels. If the magneto check before or after flight reveals any roughness caused by a fouled spark plug, open the throttle slowly and smoothly to cruise RPM, and lean the mixture as far as possible (yet with a smooth engine). After several seconds leaned, return to the proper mixture position for takeoff and recheck the magneto. If two such attempts do not clear the fouled plug, then return to the line and report the problem to maintenance. Spark plugs should be rotated from top to bottom on a 50-hour basis, and serviced on a 100-hour basis. If excessive spark plug lead fouling occurs, the selection of a hotter plug from the approved list in Service Instruction No. 1042 may be necessary. However, depending on the type of lead deposit formed, a colder plug from the approved list may better resolve the problem. Depending on the lead content of the fuel and the type of operation, more frequent cleaning of the spark plugs may be necessary. Where the majority of operation is at low power, such as patrol, a hotter plug would be advantageous. If the majority of operation is at high cruise power, a colder plug is recommended. Spark plug fouling is not limited to engines that were certified for 80-octane aviation fuel, but which are using the higher leaded 100-octane gasoline. Therefore, the techniques recommended herein for operation and maintenance apply to all Lycoming piston engines, but with emphasis on the 80- octane engine using 100-octane fuel.

E. SUMMARY

When Grade 80 aviation gasoline was first phased out, the highly leaded Grade 100 green fuel was the only alternative for some operators. During that period of time, in the middle 1970s, exhaust valve erosion was a concern for the operators of low compression engines. There are two reasons why this should not cause concern today. First, Grade 100LL does not cause this problem, and second, the newer materials used in Textron Lycoming exhaust valves for more than 15 years are highly resistant to erosion. In addition, Grade 100LL has proved to be a satisfactory fuel for all Textron Lycoming reciprocating aircraft engines. The higher octane level does not change engine operating temperatures, and engine deposits on the spark plugs and in the oil can be managed by using the techniques outlined in previous paragraphs.

THE SHERIFF OF LOCKINGTON INTERROGATES.....

Richard and Veronica Davies
of "Tandara" (means "camp here" - so we did), Billeroo Road, Coorow, W.A.
"Tandara" is a One hour 13 minute flight NW from Northam in a 100 h.p. Airtourer. (They have another farm "Yalanga" (means "over there" - it's just got to be hasn't it?).

Interrogated at "Tandara" prison, on 13th August, 2002.
Supervised by the children Jaci 12, Ben 10, and Sheriff's deputy Lochy 6.

1. When did you join the Airtourer Association? 1989.

2. Your occupation Richard? A wheat and sheep farmer, after once running a Hardware shop at Ravensthorpe, (southern W.A.)
Veronica? Farmer, I.T. Consultant, Accountant.

3. Where were you born? Richard was born in Perth in 1964, and Veronica in Albany in 1966. "We are showing our date of birth to show we're younger than most members".

4. Where have you, and do you live? Richard? Grew up on the farm, went to boarding school in Perth. and went to Ravensthorpe before returning to Coorow.
Veronica? Grew up in Ravensthorpe, then Richard "ripped me out of there as soon as he was allowed!"
Well how did you meet Richard? We met on a square dance floor at Ravensthorpe, Richard's first and last stop of his working trip around Australia. After two years of courting we were married on 2nd February, 1985).

5. Aircraft Type & Registration? VH-RIC 160, prior registration was PHP.

6. When did you buy this Airtourer Richard? September 1989, the day they found out they were pregnant with Jaci (eldest child), and weren't game to tell anyone in case we were talked out of buying the aircraft - "wouldn't be able to afford it". We got on to it through AOPA. We were going to buy a Tri Pacer - takes four - like a tail dragger, then RVs started, and we got "this close", then this Victa came up. I'd flown in it as a kid but knew nothing about it. Brian Davies said "You can't go wrong. I'll help you get it in the air". We thought it was flyable, (and bought it on the proviso that it was, then found out there was a detention order on it). Picked it up in a state of disrepair when Jaci was 6 months old. Completely dismantled the air frame, every rivet removed, acid etched - alodined, etched- primed and reassembled, including new wing and tail skins, floor skins and under pan, 160 h.p. conversion reassembled with flush solid rivets wherever possible. The work was carried out on the farm in the garage, 3185 of my hours, plus help from others, over a period of 8 years.

7. Veronica how did you tolerate Richard building the aircraft over such a long time? Pretty good, we always knew where he was, and we <u>all</u> got involved. When he had to go to Jandakot I could go shopping. He couldn't get cross with us or we wouldn't help him

especially with the rivets!

8. Any interesting stories about the Aircraft? Refer Airtourer Association Newsletter of August 1999 "The Nullarbor at 2000 feet AGL". *(Sheriff - It's worth hunting out.)*

9. How did you get interested in aircraft? Always liked them, and it stemmed from Dad's interest - he has had his Tiger Moth VH-SSH since 1974, and this also lives on the farm. It seemed as a kid I was the "strapper", I strapped visitors in for a flight, then had to wait another day for my turn!

10. What year did you gain your pilot's licence? 1987 restricted then bought aircraft and went on from there, getting my PPL January 2001.

11. How many hours in your log book? 328. Veronica has 1.1!

12. Richard longest trip flown? Mildura AGM 1999, 1488 n.m.

Veronica? Home to Albany, but Richard is working on me flying to the AGM in Wangaratta.

13. What was one of the most memorable flights you have done? First flight, then post restoration flight as RIC. In Mildura I won "Longest distance flown", and "Best presented Airtourer", and I was pretty happy about that, and was rewarded with a kiss from the Sheriff. *(Sheriff - Worth winning a trophy for!)*

14. Most humorous moment in flight? Took Lochy (youngest son) and we got into cloud. Lochy looked around and said, "I thought Jesus lived here."

15. Most embarrassing moment in flight? When taxiing at KAL, gave call to depart on a certain runway. Took off from the wrong end, and had a Commercial Aircraft on turning base asked me which way I was really heading. Bit disturbing for a restricted pilot.

16. Other interests? Veronica, the kids, Country Music, Model aircraft, anything old, and farms.

17. Richard do you, or did you, have a nickname, and what is it? "Ric", "Ditch" when at school, Mum didn't like "Dick".

Veronica? "Ron", as in the last half of "RicnRon" *(read on).*

18. If you were Prime Minister of Australia for ONE day, what would you change for the betterment of Australia? Both Richard and Veronica replied "Make everyone responsible for themselves."

19. What is/was your greatest extravagance Richard? The Airtourer, Time and Money. *Veronica?* A Mustang P51 flight for Richard on 26 January, 2002.

20. If you had a spare million dollars what would you do with it? Invest in an aircraft like a Beech Stagger Wing (good family aircraft with character), Boomerang (good Aussie digger).

21. Any further comments you wish to add? Have enjoyed the association with the Association. An Airtourer <u>can</u> be flown to W.A, just ask Alan & Merle Wood, and Lindsay & Beryl Marshall, and if you go to Coorow you'll take home a souvenir sticker "I've flown to RicnRon's".

Thank you RicnRon for the pleasure of interrogating you and staying with you, the hospitality was great, and we had a great time. When Richard was showing Lindsay the photo album and records of the aircraft rebuild, a regular comment was heard, "That was a big day". Congratulations Ric & Co. on a job well done.

The Sheriff.

Welcome

Alan Dalrymple from Lilydale in Victoria who purchased CND from Mike Fisher.
William Fuller of Corrimal in NSW who is the new owner of MUZ.

NOTICE OF ANNUAL GENERAL MEETING Airtourer Association Inc.

The Annual General Meeting of the Airtourer Association will be held at the Parkview Motel, Wangaratta on Sunday 23rd March 2003 at 0900.

Agenda:

- Presentation of Minutes of the previous Annual General Meeting.
- (Published in the May 2002 Newsletter.)
- Business Arising from the Minutes.
- Presentation of Reports
- Election of Office Bearer

Other Business

NOTICE OF ANNUAL GENERAL MEETING Airtourer Co-Operative Ltd

The Annual General Meeting of the Airtourer Co-Operative will be held Parkview Motel, Wangaratta on Sunday 23rd March 2003 at 1000.

Agenda:

- Presentation of Minutes of the previous Annual General Meeting.
- Business Arising from the Minutes.
- Proposal to change to a Co-Operative without share capital. (See Notice on Page 3 of this Newsletter.)
- Election for retiring Board Members
- Other Business

Committee Elections

The Rules governing an Incorporated Association lay down the following requirements for election of the Committee:

- The Committee shall consist of a President, Vice President, Secretary, Treasurer and 3 Ordinary Members.
- Nominations must be submitted in writing to the Secretary.
- There must be 2 Proposers and the Nominee must state acceptance of the nomination.
- A member can be only nominated for one position.

Nominations are called for all positions on the Committee to be elected at the AGM as notified in this Newsletter. Nominations are to be sent to the Secretary at the following address on the attached or similar form.

Secretary: John O'Halloran
P.O. Box 778
Tewantin QLD 4565
FAX: 07 54425180

Airtourer Association Nomination for Election to the Committee

I nominate _____

for the position of: *(mark appropriate position)*

President
Vice President
Secretary
Treasurer
Ordinary Members (three positions)

Nominated by (Signature) _____

(Name) _____

Seconded by (Signature) _____

(Name) _____

I agree to being nominated for the above mentioned position.

Signature of candidate: