

TIGER RAG



NEWSLETTER OF THE TIGER MOTH CLUB OF NEW ZEALAND INC

FEBRUARY 2021

What better way to launch a new year. John Pheasant showed us how its done. On a whim John decided to put the gloom of 2020 behind him. So, on the very first dawn of 2021, John was up early and prepared the Jackaroo for something special. Airborne at 0529, one minute after Tauranga official MCT, John and the Jackaroo were up in the pre-dawn sky with a full moon in view. The first Tiger Moth flight of the year and a sign of greater things to come. 2021 has a lot to offer including the Tiger Camp, AGM, and of course, later in the year, Taumarunui. So go have your own whim and see what comes of it. Thanks John for showing the way, for lighting the beacon that we leave behind on take-off and that guides us safely back again.





Taking delivery of a Tiger Moth is not something that happens every day and what better way than to fly it yourself across Marlborough and North Canterbury. The smile on Lionel's face says it all. Job done.



TIGER MOTHS BUILT IN AUSTRALIA WERE THEY BETTER THAN THE HATFIELD TIGERS?

Since Lionel's Tiger Moth is an Australian-built machine (originally), the question arises from time to time – who built the best Tiger Moths? Contenders are de Havilland's themselves, those built in Australia, Canada or New Zealand, or perhaps the mass produced ones built by Morris Motors? Opinions are divided for there were examples built in all these factories that just flew better than most of the others. ZK-BAD was one of those. It was the preferred machine in the Air Super Ltd fleet, a pre-war de Havilland-built example. Question is—how do the Aussie-built Tigers rate compared to the others?

De Havilland's worked hard to obtain an order from the Royal Australian Air Force and managed to secure an order when the slightly cheaper Avro Cadet missed out. This was remarkable considering de Havillands insisted that the first 36 Tiger Moths be built at Hatfield and there was to be a royalty payment to the parent company of 5% for all Australian-built machines. So what tipped the balance? Most likely the Commonwealth Aircraft Corporation (CAC) was involved. Back in November 1937 the CAC obtained a licence to build the Gipsy Major II engine for their new Wackett monoplane trainer and this offered so much that the RAAF cancelled an order for twenty Avro Cadets in November 1938 to make way for the Wackett. When the Gipsy Major powered Wackett proved to be underpowered, the RAAF ordered 20 British-built Tiger Moths to use up the Gipsy Major II engines they had already purchased. These twenty Tiger Moths were the only examples ever fitted with the Gipsy II but they still had standard fixed pitch wooden propellers fitted in place of the variable-pitch propellers the engines were designed for.

The first RAAF Tiger Moth, A17-1 was test flown at Bankstown, Sydney by the Managing Director of DH Australia, Major A. Murray Jones, on 6 May 1939. He had learned to fly in 1915 and was posted to Palestine where he quite possibly met Hereward de Havilland who commanded a Squadron in that sector. As Commanding Officer of RAAF Point Cook, Victoria, Jones was Race Marshall in the East to West Air Race in which Hereward de Havilland came third. In 1931, Jones took over from Hereward as manager of the Australian de Havilland Company and he held that position until his retirement on 31 December 1953.

Soon after the outbreak of the Second World War, de Havilland Australia received an order from the RAAF for 350 locally-built Tiger Moths, and the first of these, A17-24, was handed over to the RAAF on 20 June 1940. Production at the Bankstown factory steadily increased until it reached one a day, all powered by de Havilland made Gipsy Major engines. But when the RAAF ordered even more Tiger Moths, the Australian de Havilland Company turned to the Commonwealth Aircraft Corp. for help because they still held the manufacturing licence for the Gipsy Major, and with attacks on shipping was threatening the supply of engines from England. So the Australian de Havilland Company ordered 500 Gipsy Major engines from CAC in November 1939. However, CAC were no longer interested in building the Gipsy Major so they passed the order to one of their major shareholders, General Motors-Holden. The first set of blueprints was handed over in January 1940 causing immediate concern. All measurements on the drawings were metric while the entire General Motors plant operated in Imperial measurements with American tooling. There was not a single metric spanner in the works.

Eight years had passed since the first Gipsy Major was built at Stag Lane and in that time there had been considerable advancement in the metal used in aero engines. Among those in the forefront of such development was Allison Motors, another division of General Motors and there is no question that this knowledge was made available to Holdens. So while Holden's were faced with the enormous task of changing each of the 600 or so engine part drawings from metric to feet and inches, the management began sourcing metal from which to make the Gipsy Majors. All this took weeks but once done the Holden staff wasted no time in building Gipsy Majors. Since General Motors-Holden did not have the production capacity to build the engines as quickly as de Havillands were completing Tiger Moths, Holdens called on 57 smaller companies to build Gipsy Major components. Most of these businesses had never built any parts to such exacting standards and for a time they struggled to meet deadlines. In spite of this General Motors completed their first Gipsy Major in August 1940, It was forwarded for the all-important type test. Because Holdens had used metals of slightly different composition from that used by de Havillands, it was decided to make the acceptance test more stringent than usual. The test engine was run at 90% power for 50 hours in five sessions of 10 hours each with only minimal breaks for routine checks. The engine passed and General Motors-Holden went on to complete 1,500 Gipsy Major engines, the last one in March 1944.

The Tiger Moths built at Bankstown were all completed in the standard "de Havilland way" just like those at Hatfield, so there was no difference between them except for the engine. In that regard the Australian-built Tiger Moth was superior and to this day Gipsy Major engines made by Holden, especially the crankcases, are treasured items for those still flying or restoring Tiger Moths.

Janic Geelen

UP AND COMING EVENTS

2021

Reminder to all Tiger Moth owners to register with DH Support, Duxford, UK for the technical data to keep your aircraft compliant

1-5 March Tiger Camp

It's that time of year again when we start thinking about how to extend the fun of our annual pilgrimage to the AGM. The recent email calling for anyone keen on making a week long trip has seen good so it's all go. The Tiger Moth Club AGM is the weekend following the Wings Over Wairarapa air show so we are starting from Masterton. Naturally, people will join in or out and or do particular legs as they usually do and this is expected and adds to the fun.

To make things work, we need to know how much 91 petrol will need to be sourced and what degree of airfield transport we'll need to find. Pilots and passengers will make their own decisions regarding accommodation but if we have pretty definite numbers we can talk to the various locals who are likely to want to be hospitable to us and that's always a good thing. So, we are asking anyone interested in helping to give it some serious thought and let us know by registering at the link below. This will certainly help in the planning. Then after Christmas, we'll start to firm things up based on registrations.

The current proposed itinerary is as follows with overnight stops underlined:

Monday 1st March: meet at Otaki. Transport available to Paraparaumu for the night. Fuel cans have been arranged. Suggest purchasing lunch for Tuesday

Tuesday 2nd March: visit Foxpine, Koputaroa and anywhere else that takes our fancy. Stay in Hawera. A BBQ is being put on by the local aero club for \$20 per head. Transport and fuel cans have been arranged. Cut lunches will be available for purchase for Wednesday.

Wednesday 3rd March: fly around and up Mt Taranaki! Back to Stratford and/or Norfolk for lunch - no transport has been arranged to get into town. Stay in Te Kuiti. The local aero club is arranging a BBQ, fuel cans and transport (details to be announced)

Thursday 4th March: visit Waitomo Caves! After lunch head to Raglan for the night. This is a short flying day to allow for time at the caves and at Raglan. No transport or fuel has been arranged at Raglan.

Friday 5th March: visit Te Kowhai, Waihi Beach, Pauanui and anywhere else that takes our fancy. Lunch and fuel at Whitianga. Fly around the top of the Coromandel peninsula and back down into Thames for the annual fly in that starts Friday afternoon

We always have a great bunch of ground based members on our various Tiger trips and that's always a huge part of our success in enjoying Tiger Camp. The upcoming trip to the AGM will be a collective of fairly short flying legs so opens up the possibility of someone following along (or leading the way) in a vehicle, particularly as there may be members heading north on their way home from the Wairarapa airshow. This is just an idea that we're putting out there but if it was on, we could consider collectively renting a vehicle that met up with the aircraft at each stop, carrying a few bags, petrol cans and non flying fun seekers. If anyone out there is keen on being involved as a driver, please contact Amanda for a talk about the idea.

A reminder that all members and all aircraft types are welcome on Tiger Camp. If you have any suggestions for places to visit or things to do on Tiger Camp please email tigermothclub@gmail.com.

5-7 March ANNUAL FLY-IN AND AGM, THAMES

Planning for the event is near completion, and Registration is open. More detailed information will be published in the February Tiger Rag. The Hauraki Aero Club advise that a Food Festival is being held in Thames on the same weekend, and accommodation is expected to be at a premium. Early reservations are recommended.

Link to register for Thames: <https://forms.gle/xxBN97Xf8zKGQtN89>

27 March Ruatoria Aero Club Fly-In and Reunion.

8-9 May Tiger Moth Workshop run by Glenn Thompson at Warbirds, Ardmore.

Trophies for presentation at the AGM Fly-In, Thames

Brodie Trophy

Presented for air race/time trial winner

Dudley Payne Cup

Presented for most magnificent Moth

E. F. Harvie Memorial Mug

Presented to the most helpful member

E. J. Schaeffer

Presented for the best Non-instrument circuit

J. & A. C. Lawson Trophy

Presented for non-Tiger Moth aerobatics

John Crosbie Trophy

Presented for most interesting flight to the AGM Fly-in

John Mackie Memorial Trophy

Presented to the winner of the spot landing competition

Loretta McGarry Rose Bowl

Presented for best vintage aeroplane

Murray Neich Memorial Trophy

Presented to youngest competing member

Noya Smith Tankard

Presented to the bombing competition winner

Pine Park Trophy

Presented for longest flight in open cockpit aircraft attending the AGM

Ray Deerness Challenges

Presented for Photography and Writing

Ross Duncan Memorial Cup

Presented by the Tiger Moth Club committee

Scott Greaves Memorial Trophy

Presented for the best aircraft to return to service

Simon Spencer-Bower Cup

Presented for Tiger Moth aerobatics

Stan White Memorial Cup

Presented for the perfect loop

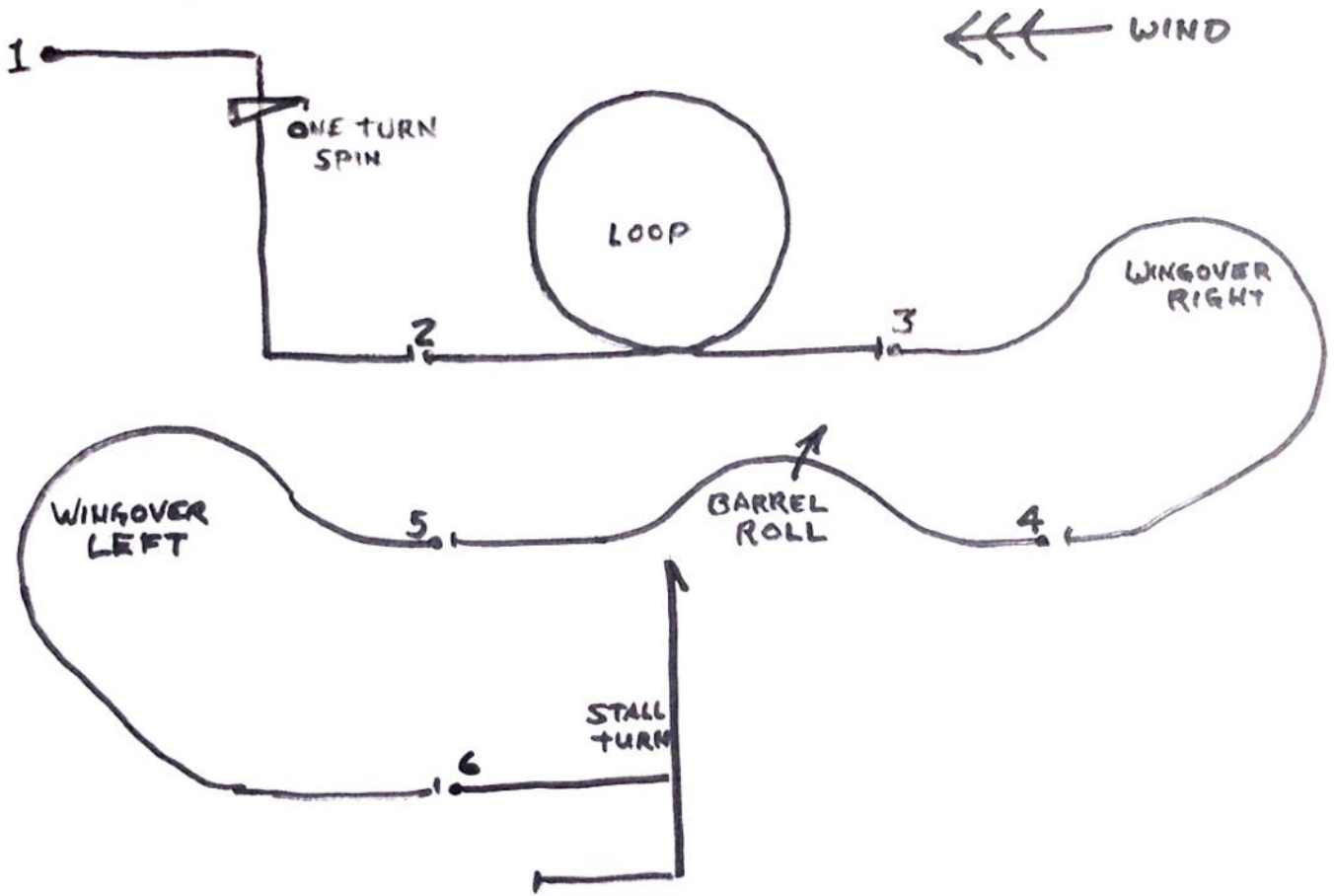
Temple Martin Memorial Cup

Presented to the owner of the most original Tiger Moth in attendance

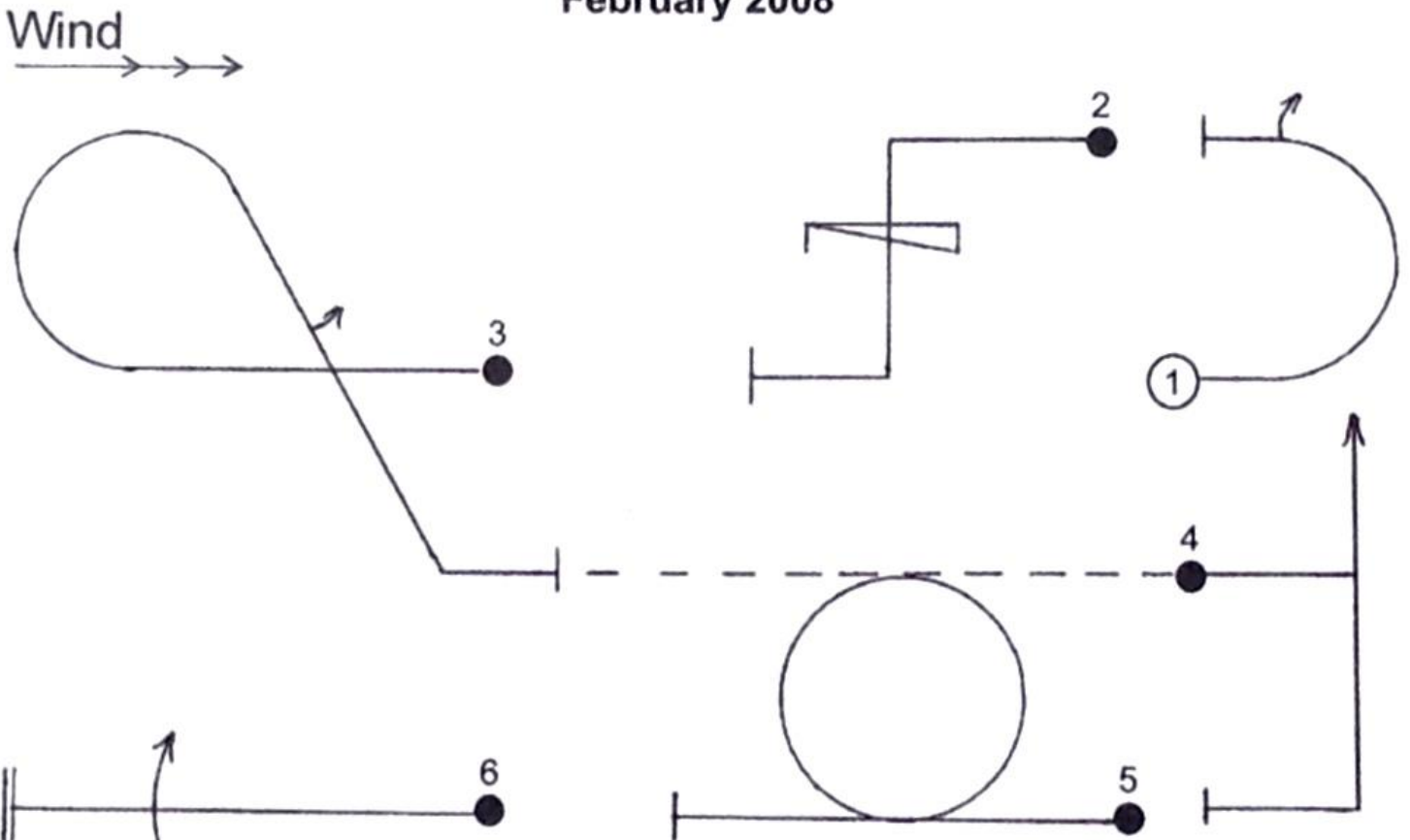
Tony McDonald Trophy

Presented for Novice Aerobatics

NOVICE AEROBATIC SEQUENCE 2019



Aerobatic routine for Taieri
February 2008



Starting downwind: 1 roll off the top
4 stall turn

2 one turn spin
5 loop

3 half cuban eight
6 slow roll

Ray Deerness Challenges

Photographic Competition

This is to be aviation related and not photo shopped - 2 prints per competitor. One of these prints may be used for display purposes so as to encourage further and future interest in the challenge.

Name and address to be marked clearly on the back of each entry.

Writing Competition

This can be an historical account of anything aviation, an event, learning to fly a Tiger Moth, a short story or something like a children's story, living and flying with a pilot of vintage aircraft - use your imagination up to 2500 words!

Each entry, if failing to win can be re-entered the following year for a second chance.

The winning photographs and script supplied may be used for the 'Tiger Rag' but remain the property of the creator.

Both of these Challenges are open to supporters of The Tiger Moth Club of New Zealand as well as members. One of the primary considerations for these challenges is to include those folk who faithfully attend Tiger Moth Club events but who have not participated in the flying. In this way it offers supporters and family of Club members an opportunity to achieve an award.

Just for a change here is an editor's challenge. Janic Geelen writes: "I have to admit I got a shock at seeing this image for the first time. My response was: Is that what it looked like!" So what are we looking at?



Tiger Moth Technical Forum (TMTF)

The Club has organised a TMTF at Ardmore over the weekend of May 8th and 9th, 2021.

The Forum will be held at the NZ Warbirds #2 Hangar upstairs briefing room, commencing at 9.30 am Saturday, and 9.00 am Sunday. Expected finish times are 4.30 Sat., and 3.30 Sun.

Lunch, morning and afternoon tea and coffee will be provided. It will be presented by Glenn Thompson, LAME, IA, CPL, 'D' Cat Instructor, and Moth restorer. It follows a previous successful forum held at Rangitata Island in 2018.

The forum is for engineers, owners, and pilots, and is designed to increase understanding of Tiger Moths and Gipsy Major engines. A 90 page Forum Manual of pertinent information is issued to each participant. It covers a little on rebuilds of the airframe, and focuses on maintenance and defects of the airframe and engine, including top overhauls, piloting skills, ground and flight ops, both routine and emergency.

To cover expenses, there is a registration fee of \$70. The fee includes lunch, tea and coffee for the two days, plus a take home copy of the TMTF Manual. The forum will be notified to other aviation organisations who have shown interest, in due course.

The course is limited to 30 participants, on a first in, first on basis. Early registration is advised.

REGISTRATION FOR TIGER MOTH TECHNICAL FORUM

**MAY 8TH, 9TH, 2021, AT NZ WARBIRBDS #2 HANGAR.
ARDMORE AIRFIELD.**

NAME.

EMAIL.

PHONE

ACCOMMODATION REQUIRED. **YES / NO**

**PLEASE DEPOSIT REGISTRATION FEE of \$70 INTO BANK ACCT,
12-3194-0023828-000 TIGER MOTH CLUB of NZ. Ref.; TMTF.**

Tiger Moth Club Official Merchandise



Lightweight Denim Blue Shirt 2017 Safari
was \$75 now \$ 50.00



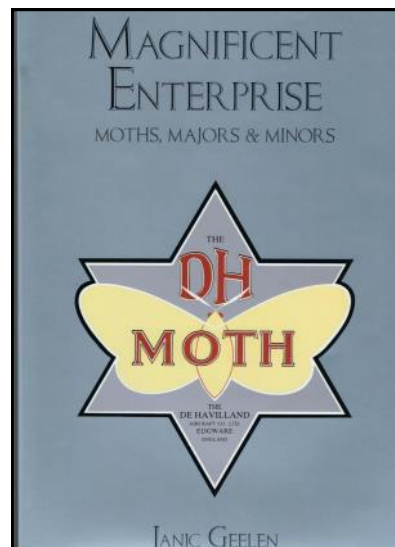
Round neck T-shirt
Men and Ladies Fleece Vests
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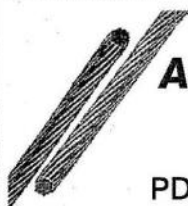
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TIGER RAG PUBLICATION DATES

March 30: post AGM Thames issue
September : pre Taumarunui issue
October: post Taumarunui issue

Identify your engine—Gipsy Major

Holden made Gipsy Major engines numbered from 1 to 1500
De Havilland made Gipsy Majors numbered from 5001 to 5999
and 80000 upwards

De Havilland also made Gipsy Major 10 engines as fitted to
Chipmunks.

This was an entirely new design having very few parts in com-
mon with the Gipsy Major 1.
Serial numbers start at 10001

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LIFE MEMBERS: Simon Spencer-Bower, Jim Lawson, John Pheasant, Loretta McGarry,
Bob McGarry, John King, Alan Land, Les Marshall, Eddie Doherty, Jeanette Lei



Above: Lionel starting off with his Tiger Moth Type rating—an essential for a new Tiger Moth owner.
Below: Over the Hauraki Gulf at sunrise on 8 Feb 2021. Picture taken from Stearman 77

