



John King

In December 1998 a Ryan STM returned to New Zealand skies after an absence of over 40 years. This 72-year-old sporting aeroplane has had another hiatus, somewhat shorter but no less insignificant, ending with ZK-BEM making a recent return to flight, complete with new engine, to begin the fifth chapter of its flying career. Nicholas McIndoe enters the arena of the

# Sport Military Trainer

In 1934 T Claude Ryan evolved his Ryan School of Aeronautics into the Ryan Aeronautical Company with the ST, a small sporting monoplane trainer of clean lines, its first product. The ST had seating for two in open tandem cockpits, an all-metal fuselage and fabric-covered wings with spruce spars braced by external wires. The non-retractable wheels were faired in, while a 95 hp Menasco B-4 inverted inline engine gave a top speed of 140 mph. The handling characteristics were reported to have been delightful.

Only five were built, but less than a year later the Ryan STA appeared, causing quite a stir, winning races and setting a number of light aircraft point-to-point and height records. Powered by a 125 hp Menasco C-4 engine, the STA won the 1937 International Aerobatic Championship in the hands of factory pilot Tex Rankin.

Next came the Ryan STA Special with a supercharged C-4S delivering 150 hp. This led directly to the STM, incorporating the same engine but with a slightly developed airframe and wider cockpit openings. Designed as a trainer for the Latin American market, it was described by the factory as a "light fighter".

A standard STA was entered into USAAC trials in early 1939 at Wright Airfield, and so impressed the authorities that 15 were ordered as evaluation Y1PT-16s. Others followed — the STK powered by a Kinner engine of similar power, and STW

with 160 hp Warner Scarab, evolving into the PT-20 series.

Longer, with a wider fuselage to accommodate the radial engine, Kinner-powered versions included the ST-3 and 100 each of the PT-21 and NR-1, followed by over 1000 examples of the definitive PT-22 series with the 160 hp Kinner R-55. Many of these are still popular as warbirds.

The largest export market for Ryan trainers was the Netherlands East Indies, now Indonesia. When war broke out in 1939, the Dutch colony had to find a new way to train pilots, all previous training having been done in the Netherlands. In the interim, three de Havilland Tiger Moths were leased from the Surabaya Flying Club before 84 STM-2 landplanes and 24 STM-S2 floatplane trainers arrived, along with 36 sets of spare floats.

The first batch of eight Ryans left Los Angeles in December 1940, 10 days before the Japanese attack on Pearl Harbour, the remainder following aboard Dutch ships over the next few months.

The aeroplanes were busy in the Indonesian heat. Based at Perak airfield, they filled the role of both primary and advanced trainer as well as aerobatics and instrument flying. The only exercises not covered were bombing and gunnery training, with students progressing straight from Ryans to multi-engine types.



Nicholas McIndoe

The newly installed electrical system — including electric start! — has required some additional instruments.



Nicholas McIndoe

The LOM Prague occupies the same space as the unreliable Menasco Pirate but needs a new engine mount and some cowls.

By the close of 1941, eight Ryans had been lost— two destroyed by the Japanese and the rest in operational accidents, two them fatal.

The Ryan series were often described as a “hot ships” which could bite a careless pilot, especially on takeoff and landing.

In fact, the handling characteristics of Ryans have been praised now for over 70 years and they gave a good account of themselves in Indonesia. US Navy pilot Earl ‘Chink’ Lee, whose brother Rollin worked for Ryan at San Diego, wrote of one encounter in which two Japanese fighters attacked one floatplane, which returned to base full of holes and its control tabs shot away.

“Those Ryan seaplanes could really manoeuvre and turn inside the Jap pursuits,” said Lee. “Of course they had no guns and less than half the speed of the Japs, but they were so positive on control and so beautiful in the air that this pilot, and others too, was able to return from one-sided dogfights, even though somewhat shot-up.

“Actually some of the pilots felt so confident of the Ryans that they wanted to put 0.30 calibre machine guns on them and engage the Japanese fighters.”

Thirty-four Ryan STMs managed to be extracted ahead of the Japanese from Indonesia to Australia, where they were used by the RAAF.

One of the Netherlands East Indies Ryans (S-53, c/n 489) which made its way to Australia spent the rest of the war as A50-13. It then flew as VH-AGS on the Australian Civil Register before being imported into New Zealand as ZK-BEM in the 1950s by Flt Lt J L D C Whiteman, ex-RAAF. The aircraft flew with a number of private owners, including Alex Blechynden. Its last owner was Clem O’Neal, and after he was killed in an aircraft accident his parents gave the Ryan to Kerry Newman, who presented it to MOTAT in 1967.

Around 1980, the New Zealand Warbirds Association learned that BEM was stored at MOTAT awaiting restoration. The Ryan had been presented to MOTAT on the condition that it would be restored to flying condition, but MOTAT did not have the resources to undertake such a task and in a historic agreement the aeroplane was released on long-term loan to Warbirds and the restoration process began.

Initially the restoration was a voluntary project, mainly due to lack of funding, with Ace Edwards and Bruce Coulter the main participants. Eddie Doherty then stepped in, formed a syndicate to provide funding and the project flourished. Greg Ryan, Jim Lawson and the team at Aerotech also helped finish off the restoration, and the original 150 hp Menasco Pirate engine was overhauled by Flightline.

Finally, just before Christmas 1998, BEM, painted in its genuine Netherlands East Indies Air Force (NEIAF) scheme, was flown off Ardmore’s runway by the founding New Zealand Warbirds Association president, Trevor ‘TT’ Bland, and began a new chapter in its flying career.

Alas, while flying over the Clevedon area on 29 August 2004 with Shane Papps at the controls, the Ryan suffered a failure of its magneto drive gear. A piece came loose and sheared the oil pump drive, resulting in a complete loss of oil pressure, followed by engine seizure. Shane’s skill saw the aircraft successfully force landed in the Clevedon polo field, with both pilot and aircraft surviving unscathed, albeit with one very sick engine.

Since then the Ryan syndicate of 12 has been busy and, with the support of the Whitehouse Tavern Trust which has sponsored the project from the beginning, has managed to source and install a replacement \$50,000 engine.

Ironically, this engine is a LOM Prague M337AK inline from the Czech Republic, turning BEM into the “Eastern Bloc Ryan!” laughs Ace Edwards, who along with Shane Papps has done most of the engine work required to get it flying again.



Ralph Starck

“The LOM Prague has more horsepower but is smaller and lighter than the Menasco. It’s a good engine,” says Ace. “The aircraft now has an electric start and required a complete new engine mount, as well as a new frontal and right-hand side cowl. The spinner is new and the constant speed propeller unit is also from the Czech Republic.”

Ace says the Ryan has flown around 28 hours with the LOM Prague engine, not a zero-timed unit but sourced via the United States.

“The aircraft is mostly original,” he says. “While the engine is not and some of the cowling, spinner and prop are not, it has the same oil tank and cooler, the same airframe and is still in its NEIAF scheme apart from the Whitehouse Tavern Trust sponsorship on both sides of the forward fuselage.

“And the wire bracings are now stainless steel,” he adds, giving BEM with a look of obvious affection.

And that is no surprise. The little Sport Military Trainer is a beautiful aeroplane, with a real nostalgic character to it, as these photographs show, helped by some excellent flying from Phil Welcome in the Ryan and Beaver camera ship pilot Garry Butler.

Well done to MOTAT, New Zealand Warbirds, Eddie Doherty, Ace Edwards, Shane Papps, the Whitehouse Tavern Trust and many others on this wonderful achievement. Long may the Ryan fly!

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