

Pilot Profile: Joe Milanowski

by Russell Knetzger

The essence of Joe Milanowski, 64, is his willingness to take a lone, individual approach to tackling a challenge. That essence is well portrayed in the newly released movie titled "*The World's Fastest Indian*," starring Anthony Hopkins. Hopkins plays New Zealander Burt Munro, who used his self-modified 1920 Indian Twin Scout motorcycle to set a land speed record at Bonneville Salt Flats in the late 1960s, when he was almost age 70. Munro worked alone in his "home" workshop. Like Munro, Joe is a home restorer of motor bicycles such as the post WWII "Whizzer," pictured above and other motorcycles. To watch Hopkins is to watch Joe.

Currently Joe is building a home made motorcycle based on the Harley Davidson 45 (cubic inches) where he will scratch build the frame, drive, and other components. Ironically, he recently purchased a 45 cu. in. Harley Davidson 45 "basket case" from a young widow.

Joe's favorite route for riding his restored bikes includes Oakwood Road past our field. In about 1980, the year after the field opened, he came upon the field and renewed his boyhood spark for aero modeling back in Ashland, Wisconsin, where he grew up on Chequamegon Bay. From age 6 or 7 his favorite gifts to get were Top Flite or Monogram kits to build and fly. His love of air-planes and visits to the local airport was enhanced by his first "Safety Cycle" motor bike at age 14, which he could ride to the airport instead of pedaling his heavy Schwinn. With 6 years of college at Marquette University, getting degrees in both civil and mechanical engineering, Joe credits performing maintenance on his motor bike as providing the interest to study mechanical engineering.

That mix of education made Joe a natural to join Rexnord's environmental R & D department, which evolved in-to a division of Envirex which was sold to other companies and is now part of URS Corp. It designs and builds waste-water treatment plants, ranging from small "package plants" on airports to treat airliner waste, to discharges from huge paper mills. But Joe's job can involve travel, which sometimes interrupts his cycle restoring and aero-modeling. An EAA member since 1967, Joe has never missed an EAA convention and is interested in engine development for homebuilt airplanes. He restored a 1967 Corvair engine for aircraft use, but later sold it to clear the shop to scratch build a homebuilt hang glider of his own design. He followed ultralight development from the start and knew John Moody, the "father of ultralights."

In about 1991 his wife made a joint gift to Joe and his son of an R/C "ARF" *Navistar* trainer. The son bowed out, but Joe took flight lessons from Art Schmidt, Floyd Katz, Russell Knetzger, Bill Stilley, Steve Piteros and a



Joe Milanowski, P.E., with his scratch built "Iron Annie" and restored "Whizzer" motorized bicycle, March, 2006

"Phil" (probably Bartelme). Joe recounts many of those lessons left him "dry mouthed" and tensed.

After burying the Navistar in the rough, Joe designed and built what he calls his "Iron Annie," a model that allowed him to be relaxed as he improved his pilot skills. It is all 1/8th inch solid balsa, an oak firewall, 6 ft. wingspan, a tail dragger, and has a thick airfoil to keep it docile. It survived many crashes, enabling Joe to gain flying time instead of repair time.

In 1999 and 2000 Joe served two terms as RAMS vice president. During his vice presidency Joe gave periodic up-dates on his attempt to do in-home casting of an aluminum case for a model airplane engine. He learned to melt aluminum (1100 degrees F) using his own charcoal furnace made of a 5 gallon bucket. (Joe favors melting Chevrolet manifolds.) It is that project, plus the aluminum skis he showed the club last winter, that remind members who he is, and further establishes Joe's connection with Munro the way Hopkins plays him in the "*Fastest Indian*" movie. Munro casts his own aluminum pistons (of odd shapes), with rejects stored on a room-wide shelf.

For Joe the model airplane casting was not the final goal. He was really pursuing his intention of designing and building a prototype opposed twin cylinder engine for Ultralight use, applying some 2-cycle principles to 4-cycle use. At an EAA convention Joe saw a patented prototype engine that he envisioned, so interest switched to a model version of the design. Mechanical engineers can receive coursework in engine design principles and metallurgy, which Joe took.

Joe's time at the field has been limited by his restoration work and his job travels. He hopes to brush up on his pilot skills using "Iron Annie." Then he wants to finish building and fly a .60 sized (1/5 scale) "scratch built" scale model of an Aeronca Champ.

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