

An Ordeal by Flier



THE MAN

Flying Magazine



THE MACHINE

Flying Magazine

by Henry M. Galpin
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the anomaly of cars at Bonneville regu-



NEW HAVEN, CONNECTICUT, WEDNESDAY, MARCH 16, 1966

Striker Calls For Boycott

Sal Gonzales, a national officer of the striking Delano grape pickers union, claims nationwide boycotts to support the strike are improving the union's chances of success. He spoke last night at an SDS meeting and at a press conference sponsored by the NEWS.

Mr. Gonzales said the strike, which



by Henry M. Galpin

Norwood Russell Hanson has so many feathers in his cap already that he could take to the air by himself. Yet, with an insatiable passion for adventure and glamor, he has challenged the world speed record for single-engine, piston-powered aircraft.

Mr. Hanson, professor of the philosophy of science, has the basic equipment for the record-breaking attempt, his own Grumman F8F-2 Bearcat, and someone else's money is just around the corner. It is likely that an arrangement with an undisclosed major oil company will be concluded in the next few weeks.

"There is not one nickel in this for me," claims Mr. Hanson, whose major concern is getting the record back to America. Germany has held the record (470 mph) since 1939.

Yale's ebullient, self-styled "Flying Professor" bought his Bearcat in 1961, specifically for an assault on the record.

After sinking \$25,000 into "the fastest prop-driven fighter ever built," Mr. Hanson began giving flying air shows to make up his losses and operating expenses. He looked to the aviation industry for financial backing but received no response to hundreds of letters.

Then, in January of this year, Mr. Hanson published a letter in Aviation

Week and Space Technology lamenting the anomaly of cars at Bonneville regularly exceeding the land speed record while "entrepreneurs bent on securing tomorrow's jet and missile contracts" gave him the cold shoulder.

'Ask for Brand X'

This time the response was explosive. Two Yale graduates, employed as chemical and mechanical engineers by a major oil company, instantly recognized the advertising potential of sponsoring the professor and his Bearcat. ("Visualize 'Ask for Brand X' on the fuselage!" one of them wrote ecstatically to the company's advertising manager.)

Another party has promised to loan Mr. Hanson a new engine worth about \$85,000. The professor is "99 percent certain" that a working agreement will be concluded soon. Plans that would turn the professor's Bearcat into a 500 mph bomb have been drawn up and tentatively accepted.

Total costs for modifications to the plane have been pegged at approximately \$50,000.

But Mr. Hanson faces competition in his quest. As a result of his correspondence in Aviation Week and Space Technology "The competition has come out of the woodwork," he said. Three other pilots have declared themselves contenders.

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BEARCAT HONED FOR SPEED

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The Federation Aeronautique Internationale, a French group that certifies all world airplane records, lists the record at 469.22 mph, and the holder as a Messerschmitt Me 109R, flown by German test pilot Fritz Wendel in May, 1939.

The Me 109, an operational fighter in the German Luftwaffe, was listed as the record holder for propaganda purposes. The record was actually set by the prototype Me 209, a plane with very poor flight characteristics which burned nearly as much coolant as gasoline.

Mr. Wendel estimated that "the working life of the souped-up Me 209 engine would be but a half-hour at the very most." (Mr. Hanson's reaction: "I wish I could get my hands on that!") The German test pilot crashed one of the prototypes, but he survived and is still alive today.

Preparing an airplane for an assault on the speed record is prohibitively expensive for an individual. Modifications to Mr. Hanson's Bearcat may well cost \$1000 for every mile per hour gained above 450 mph. (The Goodyear Tire and Rubber Company gave Craig Breedlove an initial \$25,000 for his successful land speed record attempt and wound up shelling out \$600,000.)

However, the oil company looming as the principal backer for Mr. Hanson is not likely to find greater advertising potential, prestige, and status in the industry than the "Flying Professor." A sparkplug manufacturer, a tire company, and others are likely to jump on the bandwagon and reap the publicity.

In Order to Qualify

Merely preparing an application to the FAI is expensive. Mr. Hanson's signature on the dotted line costs \$2000. Fifteen French officials have to be brought in to measure the course and certify the record.

"bent-wing" Corsair F4U-3. (He also logged some time in the Corsair F4U-1, known as the "Ensign Eliminator" due to extremely poor pilot visibility.)

The young pilot earned the Distinguished Flying Cross for 54 carrier-based missions. A "hot" pilot then, as now, Hanson is remembered as the man who looped the Golden Gate Bridge. "My promotion was held up 22 months because of that," he said.

Several major modifications to the Bearcat are planned along with many minor ones before it attacks the record:

- **Engine:** Flying low in thick, turbulent air, brute power is perhaps the most important component for a record-breaker. A Yale alumnus and member of the Yale Corporation who is prominent in the aviation industry has agreed to loan the Hanson syndicate an R 2800, CB-16 engine. This powerplant, built for the DC-6 transport, will develop about 3,000 horsepower with additives of water methanol or hydrogen peroxide injection. (Nitro-glycerine injection, or "dynamite pills," is not conducive to long engine life, joked Professor Hanson.)

- **Propellor:** Top speed at high rpm's is critical. The shovel-bladed Skyraider prop is being considered for its bite, though it is thick and has a large amount of drag, the bugaboo of aerody-

namics. A high-speed propeller from the ill-fated Electra I is available for a cool \$25,000.

- **Spinner:** Hanson currently has a P-51 Mustang spinner but hopes to replace it with the spinner from a P2V Ventura which will make a cleaner break of the air envelope the plane must fly through.

- **Wings:** The present plan is to chop about three feet off each wing tip. This will reduce lateral stability and sacrifice aerobatic performance for speed.

- **Tail:** The blunt tail of the Bearcat will be molded to a knife edge, facilitating passage of the tear-drop shaped fuselage through the air without drag-producing turbulence.

- **Canopy:** Hanson's stock canopy, a mere bubble, costs about 30-40 mph due to drag. Professor Hanson's sketch for a new one reduces it almost to the function of a skylight. However, in the nose-down attitudes planes assume for speeds approaching Mach .9, the visibility should be sufficient. The landing attitude will be unusually nose-high because of the loss of lift from the chopped wings. Mr. Hanson has proposed a canopy that swings up in front of the pilot like a motorcycle windshield. An inflatable seat will enable him to sit up high enough to see down and around



PROFESSOR HANSON'S BEARCAT was painted coal black before air show trim was added. Tremendous torque makes right-hand rolls extremely difficult.

the cowl while landing.

Three Competitors

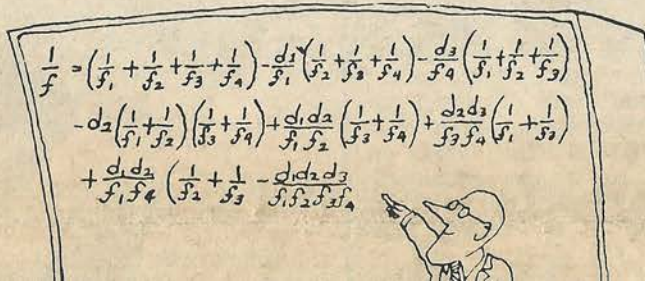
Mr. Hanson's verbal assault on the speed record by way of the letters page in Aviation Week and Space Technology has smoked out the competition. Three "hot rods" are already entered in the Los Angeles National Air Races, set for Memorial Day weekend.

The race promoter ambitiously

hopes to include European and Russian entrants in the eliminations for the speed record. (Edwards Air Force Base nearby is an FAI-approved course.)

Darryl Greenamaier, aeronautical engineer and Lockheed test pilot, leads the field with a Bearcat radically modified for closed course pylon events. Greenamaier

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measure the course and certify the record.



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FLYING PHILOSOPHER

The course is three kilometers in length. Without ever exceeding about 3000 feet in altitude during the entire run of two passes in each direction, the qualifying aircraft must hit the traps in a ribbon of air 50 to 300 meters high.

No landings are permitted until after the final pass. Hanson will have a fuel problem if his present 185 gallon tank is to remain. The 2250 horsepower engine now in the Bearcat burns 310 gallons per hour with the throttle fire-walled.

The F8F Bearcat was developed by the Grumman Aircraft Company at the end of World War II, and was never used operationally.

Mr. Hanson's F8F-2 was manufactured in 1948, and the Pratt and Whitney radial engine is capable of 2450 horsepower with water injection. Turning a 13-foot propeller, this powerplant hauled the 'Cat from standstill to 10,000 feet in 81 seconds, a world's record until it was broken by jets in 1954.

The 'Ensign Eliminator'

Mr. Hanson's credentials as a pilot are impressive. As a 19-year-old Marine fighter pilot during World War II Hanson flew 2,600 hours, including 2000 in the

Professor Faces Competition

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set a course record of 424 mph at the Las Vegas International Air Races last year. Greenamaier had to make six high-G turns around the closed course, achieving about 470 mph on the straights.

Grant Weaver has entered a Hawker-Siddeley Sea Fury Mk 2, a post-war fighter reputed to have topped 500 mph at high altitude. The machine has an interesting five-bladed prop. The Sea Fury was built in Great Britain and appears to be a dark horse.

Chuck Lyford is tuning up "Miss Bardahl," a P-51 Mustang with the hot Merlin Rolls-Royce engine. Although Lyford was beaten by Greenamaier last year at the Reno races, the Mustang is a serious contender for the speed record laurels.

President Brewster's Office has cleared Mr. Hanson to do anything he wants to in his spare time.

Although his principal backers are still in a "state of equipoise," Professor Hanson is ready to take on the challenge and the competition. But is the competition ready to take on him?