

Sports Trail

Plan Auto Assault on Sound Barrier

BY ROBERT MARKUS

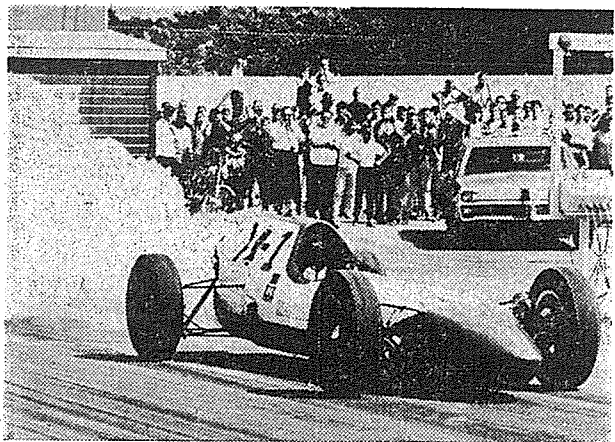
“WOULD YOU BE interested in a story about the world's fastest accelerating drag racer?” inquired the unfamiliar voice on the telephone.

“Who owns this car?” “I do.”

So that's how we became acquainted with Dick Keller, a Chicagoan who, with two pals, does indeed own the terror of the drag strips, the X-1 rocket-powered dragster. The X-1, avers Keller, has gone head-and-head against most of the jet-powered cars in the country and has spotted most of them time. Sometimes it spotted them too much time and was beaten, but claims Keller: “Without a handicap there's not a car in the country that can touch us.”

Even so, the X-1 is just small change. What Keller and his associates really want to do, insist they will do, is build a car that will break not only the world land speed record but the sound barrier as well.

The sound barrier, or the speed of sound, is approximately 750 miles an hour. The current land speed record is 600.6 miles an hour by Craig Breedlove. Keller says that his car will go



Chuck Suba blasting off starting line in X-1 dragster at Crown Point, Ind., where car set record elapsed time for quarter mile of 5.41 seconds.

past this record as matter-of-factly as Jim Ryun running a four-minute mile. This will be a mere warmup for the supersonic run, which is programmed for the late summer or early fall of 1969.

THE ULTIMATE SPEED—1,000 miles an hour. “We just picked that because it's a nice round figure,” says Keller. Once the sound barrier is broken, says Keller, there is really nothing to limit speed short of the thermal barrier, somewhere in the neighborhood of 3,000 miles an hour. That, Keller explained, is approximately the speed when wind resistance would create enough friction to burn the car to a cinder.

It is not a problem that Keller and his friends are going to worry about because they feel that 1,000 miles an hour is fast enough for them at present.

When Keller talks about racing cars he does not use the lexicon of the grease pits, but of the science lab. This is only natural because that is what he is, a scientist. Keller is chief technologist in combustion research at the Institute of Gas Technology. One of his partners, Ray Dausman, works in fuel cell research in Milwaukee. The mechanical know-how is supplied by the third member of the group, Pete Farnsworth, a truck mechanic in Milwaukee, who has built 16 racing cars, including five dragsters.

Driver of the X-1 and driver-designate of the as yet unnamed supersonic car is Chuck Suba, a veteran drag racer.

WHAT IS IT that will allow Keller's car to burst thru speed barriers that the giants of the field, Breedlove and the Arfons brothers, dare not even dream of? First of all, he says, the rocket engine, which has powered the X-1 to its drag strip records.

A rocket engine's superiority over a jet, says Keller, lies in the fact that it is much smaller. For instance, he illustrated, a rocket engine weighing 100 pounds will deliver as much thrust as a jet engine weighing 3,000 pounds. But there is one hitch. The rocket engine consumes fuel at about 100 times the rate of a hungry teen-ager rampaging thru the refrigerator.

That is why, for instance, the X-1, tho it holds all sorts of elapsed time records for the quarter mile drag run, has not even approached any speed records. If this seems like a contradiction, it is not, as any drag racing fan will tell you.

The winner of a drag race, Keller explained, is the car that gets from a standing start to the finish line, a quarter of a mile away, first. That is usually the X-1. But a car's speed is timed, he continued, in a zone 66 feet from the finish line to 66 feet past the finish line. Most dragsters are still accelerating at this point, but the X-1, which so far has never carried more than 100 pounds of fuel, has run out of fuel and is coasting—and slowing down—for the last 100 yards or so.

BESIDES CONSTRUCTING a rocket engine to propel the car at supersonic speeds, Keller must design a chassis that will withstand the shock waves that will be encountered at and beyond the sound barrier. And there must also be found a way to decelerate quickly back thru the barrier.

Keller says these problems have already been solved, in fact are “simple engineering problems.” Having, they believe, conquered the sound barrier, Keller and friends need only to conquer the money barrier to start construction. The total cost of the project is estimated at a quarter of a million dollars.

Most of the money is expected to be contributed by corporations such as tire manufacturers, fuel companies, and others who can make advertising capital of their connection with the world's fastest car.

Actually, it may be a car by definition only. Keller says it is possible the wheels may never touch the ground, tho they will be only minutely airborne. But, he added, international rules define a car as a vehicle with four wheels not in a straight line, which steers thru two wheels and can break a light beam 12 inches from the ground. The “supercar” [There, we've named it for you, Dick] will meet these specifications.