



Some 200 drivers will test 50 turbine cars under everyday conditions.

Today's trend is toward "personalized" autos: that's why we have literally several hundred separate models to choose from this year. But we'll have an almost infinite number if plastic ever licks production problems. For example, one manufacturer could offer the customer a choice of four or five different styles of plastic hoods or trunks, and once techniques are perfected in what is called "vacuum coating" of metal on large surfaces of plastic, it would be quite feasible to offer several varieties of grills.

All automakers are already well advanced in their struggle to provide the new-car buyer with a "service free" product. Within a few years, "lifetime" chassis lubrication will be standard, and chemists probably will create antifreezes in conjunction with sealed cooling systems that also will last the car's lifetime.

Tires with a leakproof chemical foam filler are around the corner; there will be disc-type brakes with metallicized linings that should last indefinitely; and cheaper, transistorized ignition systems will more than double spark-plug and point life.

Obviously, the modern piston engine is a highly refined product that continually gets better, but the reciprocating motion of many of its moving parts, coupled with off-set forces on these parts, inevitably causes wear. It also requires a relatively complicated and trouble-prone ignition system, and everything must be constantly oiled. Yet the only feasible threat to the piston engine is the gas turbine, particularly as developed by Chrysler.

CHRYSLER's turbine car, which will be loaned to some 200 persons for testing in the coming 12 months, produces 200 horsepower, but the turbine itself fits into a space about the size of an orange crate and weighs half as much as a piston engine of the same output. It has only 20 moving parts, and these rotate with little if any load on them once the engine is started. Since the oil is not subject to combustion, the five quarts put in at the factory will last a lifetime.

The ignition system consists of one spark plug that is used only when starting. The engine uses any liquid fuel other than leaded gasoline and will give 15 to 18 miles per gallon at highway speeds. It is an engine that can be guaranteed for 100,000 miles.

The turbine's designers, executive engineer George J. Huebner and his staff,

have not attempted to build in more performance or economy than an equivalent piston engine, which would be the V-8 commonly offered in the company's regular line. With their Italian-made sport-coupe bodies, the 50 turbine specials being built weigh about 4,000 pounds each, but this weight could be reduced drastically with U. S. production techniques.

Acceleration (zero to 60 miles per hour in 11 seconds) and a top speed of 115 mph would seem adequate for all normal driving needs. These figures, of course, would improve measurably if the body were built to the same lightweight standards as the turbine engine.

ALTHOUGH the turbine car was purposely engineered to drive like any other, a session behind the wheel is still a thrilling experience. You flip the ignition key, and there is momentarily complete silence. Then gradually the engine winds up to its "idle" of 22,000 revolutions per minute, a figure roughly four times the top speed of regular engines. The whine is noticeable and intentional: Chrysler figures that anyone who buys one of the first turbines would want to advertise that fact. And equally startling to the neophyte driver is the temperature gauge that climbs almost immediately to the "green" or operating range of 5,000 degrees. The turbine never needs "warming up."

At cruising speed, the most noticeable effect is one of extreme smoothness. The engine feels so detached from the car that there is an impression of coasting, yet actually engine "braking" or deceleration is about the same as on any other car, thanks to an automatic device that rotates the blades on the turbine when you lift your foot off the accelerator. A silent, rotating heat exchanger or regenerator (12 years in development) is the secret of the competitive fuel economy and is also why you can put your hand over the exhaust without being burned. The regenerator re-routes normally wasted engine heat back into the combustion cycle.

But before you will have the chance to "risk" buying one of these radical new cars, Chrysler must decide to take a vastly bigger risk. It must, in effect, make a \$100-million gamble, for it can profit from turbines only if they are mass-produced.

That's just one of the many risks being pondered by each of the automakers these days. The ultimate result will be better future cars for you—at no risk to you.

A Letter To Our NON-CATHOLIC Neighbors

Catholics and non-Catholics, as a rule, get along right well together.

Our families live amicably next door to each other and often become lifetime friends. Our sons fight side by side on every battlefield. We work together in the same shops and factories...root for the same baseball teams...do business with one another in a spirit of mutual trust every day.

In these and other phases of everyday life, there is a close association which promotes understanding and respect. But in religion...where this close association does not exist...there is often a regrettable lack of understanding and a corresponding absence of good-will.

Many people, for instance, have all sorts of false ideas about Catholics and the Catholic Church. They actually believe that Catholics worship statues...that many sordid things happen behind convent walls...that Catholics do not believe in the Bible...that Catholic teaching is pure superstition and the Mass nothing but mumbo-jumbo.

All non-Catholics, of course, do not believe such things. But enough of these false rumors are in circulation to cause some sincere and intelligent non-Catholics to look upon the Catholic Church with suspicion, and to reject Catholic truth without even troubling to investigate it.

It is for this reason that the Knights of Columbus, a society of Catholic laymen, publishes advertisements like this explaining what Catholics really believe. We want our non-Catholic friends and neighbors to understand us and our Faith, even if they do not wish to join us. We want them to know the Catholic Church as it really

is...not as it is so often misrepresented to be.

It is also important to you personally, however, to inquire into the teaching of the Catholic Church. For unless you do, you cannot know whether the Catholic Church is or is not the Church established by Jesus Christ for your salvation. You cannot intelligently accept or reject Catholic teaching until you investigate it and know what it really is.

A distinguished Catholic author has written "A Letter To a Friend Not of My Faith." This letter has been published in the form of a pamphlet which can be read in a few minutes...and which gives a remarkably clear and beautiful explanation of Catholic beliefs, worship and history. More importantly, it gives a blueprint of Christian living which will deeply move you whether you accept or reject the Catholic viewpoint.

This highly interesting pamphlet is well worth the few minutes it will take you to read it. We will be glad to send you a copy free on request, and nobody will call on you. Write today...ask for Pamphlet No. FM-23.

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