Plymouth Turbo Fury

The remarkable new gas turbine passenger car

The engineers at Chrysler Corporation answer your questions about a new kind of car for the future

Imagine a car that . . .

1 . . . runs on almost any fuel that will flow through a pipe, from kerosene to diesel fuel, from Napoleon brandy to furnace oil—yet with fuel economy as good or better than you now get in a piston engine of equal performance.

2 . . . has an engine that weighs only about half as much as a conventional V-8—yet the 140 horsepower it delivers to the driveshaft is equal in performance to a 200-hp piston engine.

3 . . . is air cooled so you never have to worry about filling the radiator (there isn't one) or anti-freeze (none is needed).

4 . . . has only one spark plug and only about 1/5 as many moving parts as conventional engines—think what that can mean in reduced maintenance, tune-up and repair costs.

5 . . . starts instantly, even in the coldest weather, and needs no warm-up.

HERE ARE SOME QUESTIONS AND ANSWERS ABOUT CHRYSLER CORPORATION'S TURBOCAR.

What is a gas turbine anyway?

A gas turbine is something like a small-scale jet engine. Air is compressed and is then heated by the burning fuel in the combustion chamber. There, hot gases expand to drive the turbine wheels and deliver power to the wheels of the car. (See diagram.)

How does it differ from the piston engine?

For one thing, it's a much more simple engine. It has 80% fewer parts. The size is smaller, the weight lighter. Being air cooled, the gas turbine requires no radiator or liquid cooling system. The electrical system is extremely simplified with a storage battery, starter generator, coil and only one spark plug.

How does it compare for performance?

The low-speed high-torque characteristics of the gas turbine give it unusually quick acceleration. As one automotive editor wrote after driving one of these cars, "To go, you press on the gas pedal. If you press hard, hang onto your hat . . . I caught my breath at the acceleration." A gas turbine rated at 140 horsepower on the test stand provides performance comparable to that of a 200-hp piston engine.

How about fuel economy?

About the same miles-per-gallon as you'd expect in a piston engine of the same horsepower, but with one big difference. The gas turbine will burn just about any kind of fuel that will flow through a pipe: kerosene, diesel fuel, heating oil, even lighter fluid, hair oil or Napoleon brandy! On the road, Chrysler Corporation's gas turbine cars have averaged better than 19 miles per gallon on kerosene.

How does it feel to drive a gas turbine car?

Exciting. The first thing you'll notice probably will be the lack of engine vibration, then the smoothness of acceleration and the tremendous amount of torque at low speeds.

Will I have to learn any new driving habits?

Probably not. If you are used to driving an automatic-transmission car, you'll have no trouble at all. You just turn the key (the engine starts instantly even in below-0° weather) and step on the gas. No warm-up is necessary. To stop, you release the gas pedal and press the brake. That's all there is to it.

How about upkeep costs?

Judging by the experience the airlines have had with turbine engines, upkeep costs should be well below those on piston engines. The gas turbine engine is basically more simple, with 80% fewer moving parts.

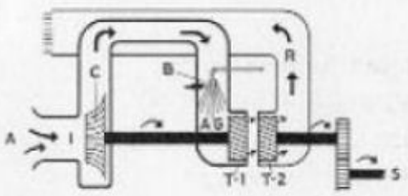
Where does Chrysler Corporation fit in the picture?

Chrysler Corporation has been the pioneer in the development of the gas turbine engine for passenger cars since World War II. In 1956, a turbine-powered Plymouth made a successful 3,020-mile trip from coast to coast. In 1958, a later model turbine averaged 19.4 miles per gallon from Detroit to Washington, D.C. on kerosene and diesel oil. Our latest model gas turbine engine, the CR2A, combines outstanding fuel economy with outstanding acceleration, and instant response to the gas pedal. It is another example of the advance engineering you expect from Chrysler Corporation.

How soon can I get one?

Good question. The Turbocar, as developed by Chrysler Corporation, is a practical car today—a family car engineered for family driving—but it is still probably a number of years away from mass production. In the meantime, the Turbocar is now undergoing its final evaluation tests to help us decide whether or not to go into limited production of these cars in the near future.

HOW THE GAS TURBINE ENGINE WORKS



Air (A) is sucked into the gas turbine intake (I), compressed (C) and then heated in a burner (B). The expanded air-gases (AG) jet from the burner and spin the two turbines. The first turbine (T-1) works the compressor, the second (T-2) delivers power to the drive shaft (S). Regenerator (R) salvages heat and transfers this energy to air coming from compressor (C).

Chrysler Corporation's record for advanced engineering has left its mark in other areas as well. Since 1952, Chrysler Corporation has been working closely with military and government scientists on America's first and most successful family of rockets and missiles. As prime contractor for the Redstone and Jupiter systems, we have participated from initial concept to the launching pad . . . and beyond.

We were honored last November 17, when the National Aeronautics and Space Administration selected Chrysler Corporation to build the 20 Saturn boosters that will play a major role in advanced space exploration.

The people at

Chrysler Corporation

Where Engineering puts something extra into every car

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