

# fact sheet

U.S. Department  
of Transportation  
Office of Public Affairs  
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*The information contained in this fact sheet has been checked for accuracy and corrected as of the date shown below. The Office of Public Affairs should be contacted if further information is required.*

**Subject:** Volkswagen Integrated Research Vehicle  
accepted for testing by Department of  
Transportation's National Highway Traffic  
Safety Administration

**Date:** June 28, 1977

**Phone:** 202-426-9550

**Design Features:** Two-door hatchback, lightweight (2072 pounds), 5-speed transmission; turbocharged, 4-cylinder diesel engine, seats 4 persons.

Compared to the standard diesel, this research engine has increased power, reduced emissions, and improved fuel economy, based upon the Environmental Protection Agency (EPA) driving cycle.

**Fuel Economy:** City driving 55 miles per gallon; highway 69 mpg; composite average 60 mpg.

**Emissions:** Lower than .41 grams per mile hydrocarbons, 3.4 gpm carbon monoxide, 1.5 gpm oxides of nitrogen. Volkswagen preliminary testing has produced even better emission levels of .23 gpm HC, .83 gpm CO, and .96 gpm NOx. (These emission levels were achieved without a catalytic converter). The research goal of the U.S. government is .41 gpm HC, 3.4 gpm CO, and .4 gpm NOx.

**Acceleration:** A 40-mile-per-hour frontal crash safety level. From 0 to 60 miles per hour in 13.5 seconds. Current subcompacts 10-20 seconds.

**Safety Features:** Passive restraint system (similar to that in the VW Rabbit) includes shoulder belts, which automatically come into place when doors are closed. Plus, two new features: belt pretensioning device which tightens the belt against the chest early in the accident event, and an energy absorbing device which reduces the high acceleration forces on the occupant.

These two new restraint features greatly improve the performance of belts in severe accidents above 30 mph.

General Specifications:

- VEHICLE -

- Body Type 2 Door Hatchback
- Overall Length 154.4 In.
- Overall Width 63.4 In.
- Overall Height 53.9 In.
- Wheelbase 94.5 In.
- Turn Diameter 374.4 In.
- Curb Weight 2072 Lb.
- Trunk Space 12.4 Cb. Ft.
- Seating Capacity 4 Persons

- ENGINE-POWER TRAIN -

- Type 4-Cylinder, Turbocharged
- Bore and Stroke 3.012; 3.149 In.
- Displacement 90 Cb. In.
- Compression Ratio 23
- Transmission 5-Speed Manual
- Gear Ratios 3.45/1.94/1.29/0.97/0.75
- Axle Ratio 3.7

Cost: The VW Integrated Test Vehicle was delivered to the Department of Transportation for evaluation as part of contracts with VW that totaled \$628,472. Of this amount DOT's cost was \$45,000. VW estimates it has spent over \$500,000 in producing the test vehicle.

Test Program: The National Highway Traffic Safety Administration will conduct tests on fuel economy, regulated emissions, unregulated emissions (including noise, smoke odor, and potential toxic or carcinogenic substances), active safety, acceleration performance, and consumer acceptance (including cold starting, vibration, and interior noise).

This VW is a forerunner to two other research vehicles to be tested later this year. One is being developed by Calspan Corp. of Buffalo, N.Y. with Chrysler Corp. of Detroit, the other by Minicars Inc. of Golita, Calif.

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