

Although not a sports car—neither the VW nor its owners admit it—it behaves like one on the corners

## **VOLKSWAGEN MAY NOT BE A BIG CAR, BUT IT'S A FINE ONE, SAY OWNERS**

## **By Volkswagen Owners**

WHAT'S VOLKSWAGEN'S secret? What is there about this small, ugly, low-powered import that excites people all over the world and makes every owner talk like a salesman?

To find out, we asked hundreds of VW owners. Their replies are unbelievable. These owners actually have fallen in love with a car. Not a single owner in the survey rates the VW as "poor." An amazing 95.8 percent say it's "excellent"—many adding a plus sign! And all this on a car that sells for about \$1600.

One owner, an engineer in Texas (an amazingly high percentage of VW owners are engineers and technicians; see table on page 157) sums it up just about as well as it can be done:

"The VW is an engineering masterpiece. It was designed to fit a purpose and a price. The purpose is to provide reliable transportation for a few (4) persons at a reasonable price. It was not designed to outdrag D-type Jags or haul seven persons at the same time. On several occasions I have spent 10 or 12 hours behind the wheel and arrived in better shape than when I drove a Detroit car—and I had a much better time driving. When the occasion presents itself you can take to the side roads, buzz around corners, shift gears like crazy in short, have a barrel of fun and still not leave a widow and three orphans. I can afford a bigger car, but I think I shall buy another VW. I would rather have two VWs than one big car. In general, I love it because of what it is—a VW."

That high praise sums up what hundreds of owners report. Obviously, there is more (Continued to page 157)

OCTOBER 1956

# An Engineer Analyzes The Volkswagen

## By Dale Kelly, SAE

Model tested: Two-door sedan. Rear-axle ratio: 4.4 to 1. (Highest gear in transmission is an overdrive with a ratio of .82, making over-all ratio 3.61 to 1.) Wheelbase: (measured) 95 inches. Tires: 5.60 x 15. Curb weight: 1580 pounds with gas tank

half full (41 percent of weight on front wheels, 59 percent on rear wheels). Barometer: 28.8 inches. Temperature: 92 degrees. Payload: 400 pounds for acceleration tests and 200 pounds for the economy tests.

0 to 60 1/4 m	10 0 to 60 1/4 mi
$\begin{array}{ccc} 42.5 & 27 \\ 42.5 & 26 \end{array}$	42.5 27.4 42.5 26.8
0.0 7.7 5.3 5.6	7.7

## FUEL ECONOMY IN MILES PER GALLON

	Steady 30 m.p.h.	Steady 50 m.p.h.	Steady 60 m.p.h.	Traffic Route	
In third gear	35 m.p.g.	34 m.p.g.	28 m.p.g.	28 m.p.g.	
In fourth gear	44 m.p.g.	34 m.p.g.	28 m.p.g.	28 m.p.g.	
In the traffic test, the car average 15 miles per hour. Fir was timed for regular gasoline	st, second and th	stops per mile aird gears only	and is driven fas were used. In all i	t enough to tests ignition	

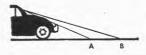
ESTIMATED ANNUAL GASOLINE BILL: \$83 for 10,000 miles.

## SPEEDOMETER ERROR (MILES PER HOUR)

		And and the second second				
Indicated speed	20	30	40	50	60	70
True speed			10.0			
Car No. 1	25.0	32.5	40.0	47.0	56.0	65.0
Car No. 2	21.0	29.5	38.0	47.0	57.0	67.0
(Test was conducted with two	different	Volkswagens.)				

#### ODOMETER ERROR

The odometer indicated two percent more than the actual distance traveled (102 miles for a true 100 miles).



## DRIVER'S VISION

Some portion of the road could be seen 8 feet in front of the car (A in sketch) by an average driver (5 feet 9 inches tall); full width of the road could be seen 12 feet in front of the car (B in sketch).



OCTANE REQUIREMENT

## GROUND CLEARANCE

The bottom corner of the rear overhang would touch the ground if the car were driven through a dip whose profile had a radius of curvature of less than 21 feet (solid line in sketch). The center of the car would drag if the car were driven over a hump with a radius of less than 10 feet (dotted line in sketch). The engine would drag if the car were driven in ruts deeper than 8 inches. The doors would open over a 13-inch curb.

## MISCELLANEOUS

#### LUGGAGE CAPACITY:

The best acceleration from 35 to 55 miles per hour in fourth gear was obtained with timing set at 7 degrees before top center. At this setting the engine did not knock on typical regular gasoline. Therefore, it would be impossible to improve performance by using premium gasoline.

## STEERING:

From straight ahead, the steering wheel had to be turned only .43 revolution to complete a circle with an outside radius of 50 feet. The steering wheel turned 2.5 turns from lock to lock. Diameter of the turn circle: 37 feet. Diameter of the walled circle in which the car could turn was 38 feet. Steering-wheel diameter: 16 inches. In addition to the spare tire and the tirechanging tools, the luggage compartment at the front of the car could accommodate one cardboard carton of the size used for 48 tall cans of evaporated milk; two more could be stored behind the back seat.

## WATER RESISTANCE:

The body was well sealed against water leaks. In ten trips through the splash pan at 20 miles per hour a few drops of water entered the front luggage compartment, but none got into the body. Ignition and brakes were not affected.

## CENTER OF GRAVITY:

The center of gravity of the unloaded car was 21.5 inches above the ground.

## POPULAR MECHANICS

Percentages, below, summarize what VW owners from 41 states (in color on map) think about their cars

## The Owners Analyze the Volkswagen

# Over-All Rating of the VolkswagenEXCELLENTAVERAGE95.8%4.2%0.0%

Had trouble with engine? No trouble
Some trouble
What was engine trouble?
Oil leak
Would like faster acceleration?
Yes, would
Would like more top speed?
Yes, would
Would like more room inside?
Yes, would
Would like four doors?
Yes, would
Even if car had to be bigger?
Yes, even if bigger11.2% No, not if bigger11.1%
Rides better than U.S. cars?
Yes, rides better43.6% Rides about same36.1% No, does not ride better20.3%
Have taken long trip (over 500 miles)?
Yes
How was the long trip?
Comfortable, pleasant72.2% Somewhat tiring13.4% Undecided, no answer14.4%

## How was car delivered? Average condition......12.3% Poor condition..... 1.9% How is dealer service? Poor ..... 7.5% Have owned VW before? Would buy VW again? What was traded on VW? Traded Chrysler make.....10.3% Who are the VW owners? Technicians, craftsmen.....17.5% Salesmen ..... 6.6% Teachers ..... 5.7% 2.6% Scientists ..... Others ..... **Best-Liked Features**

Cheap to operate.		÷					÷	.68.9%
Easy to handle								.47.6%
Easy to park								.32.1%
Comfortable ride	2	9	ŝ				1	.20.8%
Excellent workman	15	sł	ni	p			Ļ	.16.0%

to this car than is apparent as it scoots past you in traffic. There is more to it than dollar-saving economy of operation, although this is the most frequently mentioned best-liked feature with 68.9 percent of the owners listing it.

"We fill the car with gas every Friday. It used to cost me \$3.50 to \$4.00 to fill my V8 each week. It costs me from 90 cents to \$1.10 to fill the VW each week despite the fact that the price of gas is up three cents a gallon."—New Jersey retired owner.

"I drive 56 miles a day on a rural news route in the Santa Cruz Mountains. I average 28 miles per gallon in this stop-and-go



Small																			13.7%
Roada																			
Advan	ced	er	19	yi	n	e	e	r	ir	19	ġ	•	,	•	•	÷	•	•	9.0%

## **Most-Frequent Complaints**

No complaints at all
Limited rear vision
Engine, transmission noise, 10.4%
Cross wind bothers at speed 9.0%
Hard to shift into reverse, low. 7.5%
Wipers too slow 7.1%
Needs more power 6.6%
Heater inadequate 5.2%
Bumpers too soft 4.7%

## What Should Be Changed?

Nothing at all		.25.9%
Increase power slightly		. 12.3%
Make engine quieter		.11.3%
Improve rear vision		. 9.4%
Increase heater output		. 9.0%

IS	IT THE SECOND CAR?
Y	<b>VW second car in family?</b> Yes, it is
WH	nat is the other car?
N	ow-price make42.4% Aedium-price make46.7% High-price make10.9%
1	hich car is used most? /W is used most73.1% Dther car is used most10.8% Both used about same16.1%
1	no drives the VW in family? Husband drives VW70.2% Wife drives the VW17.0% Both drive about same12.8%

driving (60 stops in 56 miles)."—Californi**a** news carrier.

"On a 3300-mile trip to Florida, the VW used ½ cup of oil, averaged 36.5 miles per gallon."—Michigan teacher.

"We traveled from California to Illinois and back, going 4996 miles including side trips. Our entire cost was \$51 for gas, two grease jobs, two oil changes and a wash job."—California cashier.

"We went 612 miles on \$4.79 worth of gas in 11½ hours. Whenever a car passes me (which is seldom), I chuckle because it's costing him at least four times as much to drive his car as it's costing me."—Missouri teacher.



Above, the VW has no gas gauge. If you must know how much gas you have, use a yardstick! Below, some owners dislike the roller accelerator pedal (arrow)



## But It's Noisy!

Volkswagen owners may be fanatical in their praise, but they aren't blind to its faults. Only 25.9 percent say they have no complaints at all—a relatively small percentage when compared with previous reports on American cars.

Two complaints are tied for top mention: (1) engine and gear noises; and (2) limited rear and front-quarter vision. Each was mentioned by 10.4 percent of the owners.

"Better noise insulation would help. My 1956 seems noisier than the 1954 model, but a little glass-fiber matting does wonders." —Louisiana Air Force instructor.

"It's noisy, but becoming quieter or am I getting used to it?"—California steno.

"Excessively noisy, especially with the windows open on a windy day. Unable to hear radio then."—California aircraft worker.

"Needs a larger rear window. There are some blind spots at the sides in back."— Massachusetts student.

"Get rid of the blind spot beside the windshield."—California truck driver.

## Handling Praised

Second to economy on the best-liked list is ease of handling with 47.6 percent of the owners mentioning it.

"I like the way it handles in traffic. And after a one-day drive of 500 miles with three adults and two children in the car we were actually less fatigued than in our

Below and opposite, some owners say the VW floats across deep puddles! We tried it. Despite a 185pound driver and a full gas tank, it did float, but water leaked in through the bottom of the doors



previous United States car."—California business man.

"I could write pages about the VW. I'm scared to death to drive our full-size car, but I'll try anything in the 'bug'! It lets me feel I'm the boss when I'm behind the wheel and not as though I'm driving by remote control. When I turn the wheels I know exactly what angle I'm getting. As long as VW is made I'll never drive anything else." —Ohio housewife.

Today's congestion makes parking a headache, but VW owners don't mind. Ease of parking is the third best-liked feature with 32.1 percent mentioning it.

"Parking in a very small space, I nosed her in and my friend and I picked up the rear end and moved it into the curb, to the amusement of passers-by."—New York carpenter.

"The answer to the second-car problem. Small, easily parked, it is ideal for shopping."—California salesman.

## **More Complaints**

Here are more owners' complaints, listed in order of frequency of mention:

"Car tends to sway at speeds above 55 miles per hour in strong winds when only one or two passengers are in it. Otherwise very well satisfied with the car."— California Air Force sergeant.

"I have no complaints, but my wife doesn't like pushing down on the gearshift lever to get into reverse. It is difficult for her to do."—Arizona contractor.

"Windshield wipers are too slow."— Florida aircraft mechanic.

(Continued to page 304)



Above, air-cooled rear engine has only one fault, say owners: It's a bit noisy. Below, the four cases fit inside car without infringing on seating space. One goes under hood, others pack behind rear seat





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## 

## Volkswagen May Not Be Big, But It's Fine

(Continued from page 159)

"Maybe it's just my car, but it takes two hands to shift into reverse."—Connecticut schoolteacher.

"The car is dangerously in need of more torque at moderate speeds for passing."— Pennsylvania anthropologist.

"Underpowered when passing, especially with four passengers."—Ohio body-shop owner.

"Heater could give more heat at city speeds."—Wisconsin TV technician.

"Should have provision for defrost without heat or at least without heat to the lower duct outlets."—Ohio engineer.

"Back bumper is too easily pushed in by American cars. I often find I cannot open the back end of the car to get at the engine after someone has dented the bumper."— California secretary.

## **Fabulous VW Stories**

Every VW owner seems to have an anecdote about his automobile that is worth repeating.

"I climbed a bunch-grass hillside lined with deep cow trails that has even stumped four-wheel-drive vehicles. I had two men in the rear seat. I also ran into a deep puddle of water (about 14 inches deep and 150 feet long) at 40 miles per hour. The car weathered the water and actually floated across the deepest part." — Washington wheat farmer.

"During unusually heavy rains the little Volks negotiated flooded fords and pools that made less hardy breeds hesitate. In one instance, it ran for quite a distance with both exhaust pipes underwater. The interior remained high, dry and comfortable." —California electronic technician.

"The spirit of friendship between VW owners is something not found when driving a domestic car. Recently while on a week-end outing, we stopped to take some pictures. A passing VW from out of state stopped to inquire if we were having any trouble and if he could help."—Illinois machine designer.

"Can go almost any place. Once we could not make it between some trees so we lifted the car around inch by inch to continue on a footpath. We emerged among some hikers who were shocked to see a car come out of the woods at that point."— North Dakota student.

"I use my VW for exploring river-valley country where there are no roads. I get through mud holes and willow thickets fully loaded. I've climbed earth dams

(Continued to page 306)

POPULAR MECHANICS

where only 'Cats' and bulldozers have been before."—Missouri writer.

"I had my car washed in a three-minute car wash. I jokingly suggested that I should get it washed at half price. So it was!"— Washington insurance inspector.

"Some of my friends, during my absence, put the 'bug' on top of a low stone wall. They later lifted it down with me in it." —Kentucky treasurer.

"When we got the new VW home and in the garage for the first time our dog barked furiously at the car and would not go near it. She ran in circles around the car, barking all the while."—New Jersey owner.

"About once every two weeks people come up to my house, ring the doorbell and ask what is that thing parked in front. They say it's real cute. They ask the price, how I like it, and walk away saying 'You know, we should have a car like that'."— Pennsylvania technician.

"I hit a 10-inch pool of water at 40 miles per hour and scooted across as if on water skis."—California switchman.

"I want to beam every time I look at the VW and have noticed the same expression on most VW owners when they wave or toot their horn as we pass each other."— California homemaker.

"My husband would trade me in before he would his VW."—Louisiana housewife.

"My only real complaint is that I have to fight with my wife to get to drive."— California flight inspector.

## **And More Complaints**

Perhaps after reading the preceding you understand better the VW owner's infatuation with his car.

He still permits himself to complain a bit, however, and here are some more things he would like changed:

"Gas gauge should be standard equipment."—California information director.

"Should use a dash light to warn of low fuel supply instead of floor lever. At 60 miles per hour on a crowded highway or at low speeds in heavy traffic, the VW will cough, sputter and cease to perform for a frightening 5 to 10 seconds while driver thrashes at the floor lever switching to auxiliary tank. My system now is to buy gas every 300 miles."—Ohio designer.

"My only real complaint is the fact that when windows are open (I have tried every possible combination) a drumming noise is created that seems likely to burst an eardrum."—California conductor.

"Back windows should open. Door should close easier when windows are shut."— New York lawyer.

(Continued to page 308)





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"Turn circle too large for such a small automobile."—Florida doctor.

"Car must be shifted frequently in city driving."—New Jersey engineer.

"Accelerator pedal is too high from the floor. Makes it hard driving in high heels, besides it wears out the back of my shoe." —Texas secretary.

"Wife doesn't like the roller accelerator pedal."—California underwriter.

"Gas fumes noticeable just after taking on gas."—New Jersey nurse.

"Space behind rear seat difficult to load." —Virginia travel manager.

"Too little legroom in back. In fact, I must sell it for that reason and hate to." —Virginia real-estate saleswoman.

"Battery in inconvenient place."—Oklahoma student.

"Brake and clutch pedal too close together."—New York mechanic.

"No place for left foot while driving, except on top of dimmer." — Maryland engineer.

"Not enough luggage space for such items as golf clubs and carts."—California writer.

## **Good on Long Trips**

Prospective owners may consider the VW fine for around town, but not so good for long vacation trips. Most of the owners disagree with this opinion.

"The thing that amazed our friends is that on our trip to Florida we drove 650 miles on Saturday and the remaining 550 miles the next day. We cleaned up and were sightseeing by 4:30 p.m. that same day. Coming back we drove 1000 miles straight through from Georgia in 24 hours." —Ohio stockbroker.

"Two adults and two children went over 3000 miles on our vacation trip. We drove over 70 miles per hour. Better than 500 miles a day, averaging 35½ miles per gallon."—Florida painting contractor.

"Drove 2000 miles in 37 hours. Had no trouble. 35 miles per gallon. Total trip of 4000 miles cost about \$33. Comfortable."— California switchman.

"Just returned from a 1525-mile trip. Used \$15.27 worth of gas. Highway speed was 72 miles per hour. On the trip were my wife and I who rode in the roomy, adjustable, reclining front seats. In the nose or trunk I had two cots, my camp stove and two pillows. In the back-seat area we had our tent, icebox, food and utensil box, six quilts, two small suitcases, minnow bucket, three fishing rods and some odds and ends."—Oklahoma Air Force inspector.

"Well impressed after a 1400-mile trip in two days. No discomfort, stiffness or soreness."—Oklahoma insurance salesman.

(Continued to page 313)

POPULAR MECHANICS

Here, in order of frequency of mention, are more of the features liked best by the Volkswagen owners:

"Everything about this car is top notch. Those Germans are real craftsmen."— Pennsylvania realtor.

"I like the way it holds the road at 70 miles per hour."—Michigan diemaker.

"I like the peace of mind I have knowing I am driving the finest engineered automobile in the world."—California engineering supervisor.

"I now own two VWs. I discovered the trade-in value of the 1955 VW was \$1700 so I decided to keep it for my son and daughter. Now we have two and I plan to trade one each year. The trade-in value of the two-year-old will be about \$1500."— Delaware underwriter.

"A delightful car. Fun to drive. A car with its own personality."—Florida student.

"Needs no repairs. I drive a motor route for a newspaper seven days a week, making 600 stops in three hours and about 40 miles. The car has held up for 9000 miles and still haven't taken the brakes up. This is the first car on the route that uses no oil. It averages between 21 and 25 miles per gallon on the route."—Nebraska route man.

"Excellent winter car. Did not use chains or snow tires once and passed many cars stuck on hills or in snowbanks."—Massachusetts bank clerk.

"Storage space behind rear seat ideal for pups, cats, birds or small active boys."— California aircraft inspector.

"Less trouble to wash and wax as it has about half the surface of conventional car. My wife likes the absence of engine heat on her feet."—Florida minister.

"Sold on its tight body construction. Bought it for city driving only, but since then the other car just sits and we do all or most all of our driving in the VW."— Nebraska packing-house worker.

"My wife threatened divorce if I bought a VW. But I bought it anyway. Now she wants one."—Washington, D. C., broker.

"The jack is wonderfully simple and efficient. I have changed a flat in my dress suit, it's so simple."—California teacher.

"Toughest little car I've ever been in. You get every ounce of power, gas and speed it has got and never feel sorry for it. If I need more than one car, I'll have two VWs."—Ohio modelmaker.

There it is—the story of the most enthusiastic collection of owners ever to have taken part in a *Popular Mechanics* Owners Report. For the dispassionate view of an analytical engineer turn to Dale Kelly's report on page 156. For the veteran's view of the VW, read what Floyd Clymer writes beginning on page 154. \* \* \*



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