

The Song of Success has a 3-Part Harmony

CAR LIFE
ROAD TEST

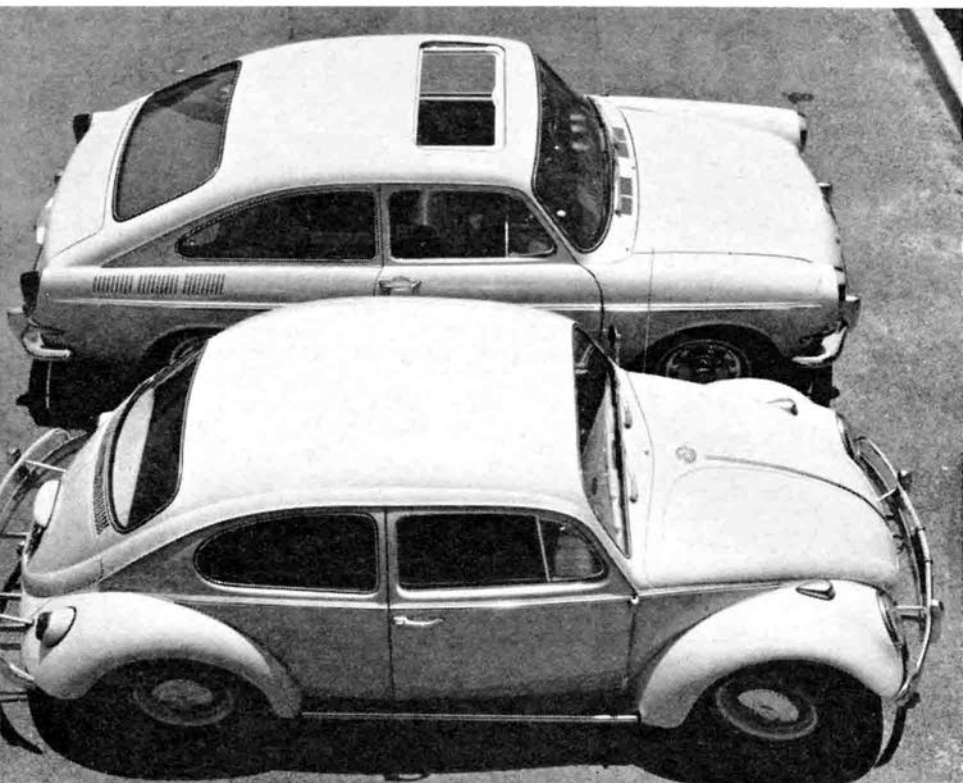


VOLKSWAGEN 1600 AND 1300

THEY LAUGHED when Volkswagen sat down to play; of course, the critics said that funny little knock-kneed bathtub couldn't carry a tune. Now, more than a million notes later, VW has become the most popular so-

loist in the import symphony. The secret to all this concert, of course, has been a fine 3-part harmony: Reliably good service, inexpensive operation of the vehicle, and extremely good transportation value.

Now there are two Volkswagen lines, the old familiar "beetle" VW and the more modern, more severely tailored 1600. Where the standard VW line is comprised of a sedan, a convertible and the Karmann-Ghia sports



SCOTT MALCOLM PHOTOS

WHICH BACK is the fastest? Latest 1300 version of the standard VW compares shapes with the newest model, the 1600 Fastback Sedan.

VW

coupe (all 2-doors), the 1600 boasts a Fastback and a Squareback sedan (again all 2-doors). The 1600 series is an offshoot of the VW Variant introduced to Europe in 1963, but withheld

from the U.S. market until the fall of '65 when it was unveiled as a 1966 model.

What the Volkswagen is, and isn't, can cause nearly as many debates as a presidential election. Car buffs either hail the VW as everyman's everycar, the panacea for all traffic ills, or the bane of the boulevard with an unpredictable disposition.

Treat or treachery? *CAR LIFE* wanted to find out, so armed itself with two new Volkswagens and a week of driver-sampling for each. Selected were the standard "1300" VW with its new 1285-cc (78.42 cu. in.) engine size and one of the new "1600" Fastback Sedan models with its 1584-cc (96.66 cu. in.) engine.

TO PUT THINGS into a proper frame of reference, it must be said that virtually everyone on the *CAR LIFE* staff has, at one time or another, owned a Volkswagen. The reasons for ownership were myriad, but two of the more common ones were simply that the car was economical and fun to drive. Its low-speed nimbleness, and its responsiveness, these ex-owners said, were what made it fun. Lack of space, lack of power and poor high-speed handling were common complaints.

The basic beetle has developed little in these latter areas. Though the parent company is fond of advertising its proclivity toward frequent refinement, but little outward change, the VW is still much the same car it was 10 years ago when many Americans first became acquainted with the waterless wonder of Wolfsburg. It still is relatively underpowered, it still does not utilize well the potential interior space it has available and it still is acutely subject to the whims of the wind; however, its fun factor has been increased.

The front and rear independent suspensions of the Volkswagen have remained unchanged in concept. However, ball-joints now are used at the ends of the parallel trailing arms in the front system, to make steering easier

FUEL GAUGE and radio speaker grille were among the refinements made to VW 1300's interior over years.

MORE STYLIZED interior comes with 1600; left pod has fuel gauge, warning lights, right one has clock.



and permit less frequent (6000 miles) service intervals. An anti-roll bar was added to the front end, to lessen cross-wind wandering and give added roll stiffness. Spring rates and shock absorber valving have been progressively lowered, to deliver a more U.S.-oriented ride. And a hydraulic steering damper (virtually a shock absorber in action and appearance) has been included in the steering linkage to reduce feedback of road shocks to steering wheel. The steering gears themselves have been changed from worm and nut to worm and roller for less effort and sharper steering quality.

Important changes in brakes have made them both more reliable and durable. The 1300 retains the conventional drum, single-leading shoe, non-self-adjusting design of former years, both front and rear, while the 1600 utilizes caliper discs at front and drums at rear. The 1300 has revised wheel cylinder sizes for better front/rear balance of braking effort and more even wear characteristics and less fade.

ENGINE PERFORMANCE has improved steadily. Fuel mileage has probably decreased slightly, but over-the-road utility has benefited. The changes through the years are legion, but the most easily noted are those in compression and displacement:

Year	displacement cu. in. (cc)	comp. ratio	bhp
1945	69.02 (1151)	5.8:1	30
1953	72.74 (1192)	6.1:1	36
1954	72.74 (1192)	6.6:1	36
1961	72.74 (1192)	7.0:1	40
1966	78.42 (1285)	7.3:1	50
1966*	96.66 (1584)	7.7:1	65

*New engines series.



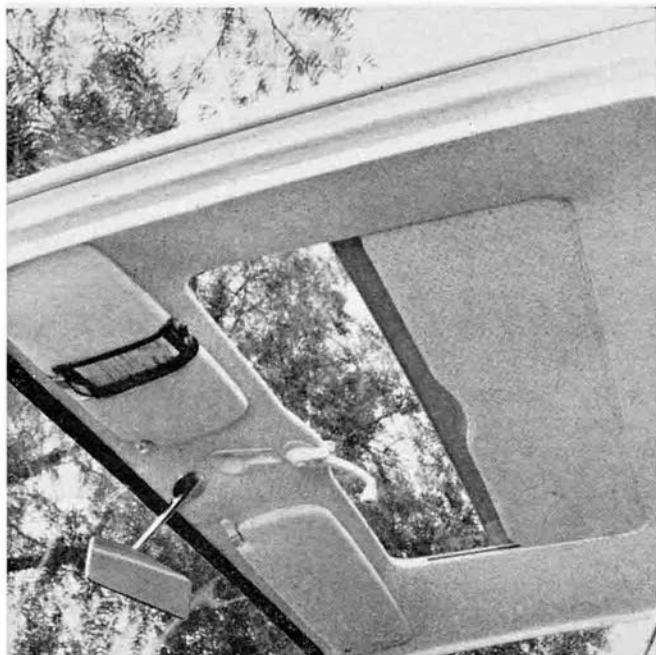
FASTBACK sedan is one of two 1600 models being offered by Volkswagen. Other body is a 2-door station wagon, or "Squareback," on same chassis.

Engine refinement is such that parts of the '66 models are not interchangeable with those of the pre-'61 versions, although layout, dimensions and installation are virtually the same. Even the latest 1600 series follows the same basic engine format—four horizontally opposed cylinders, overhead valves and air cooling—yet it cannot be installed in a 1300 chassis. The latest re-

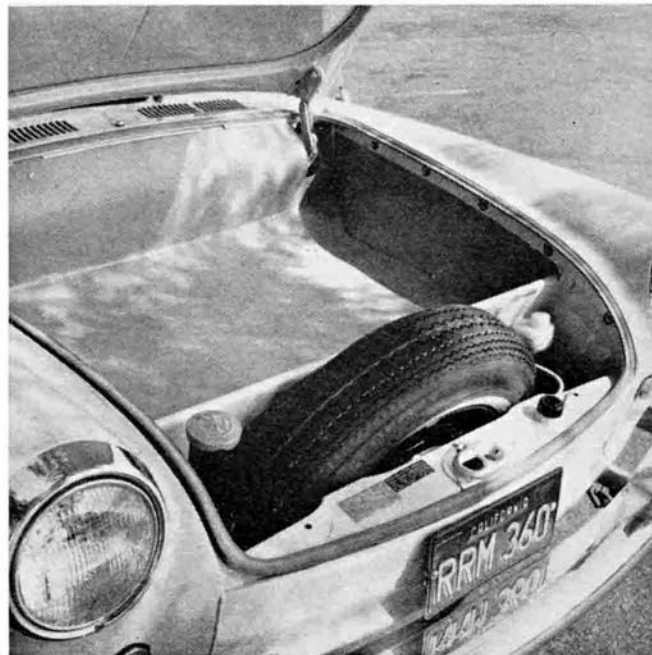
finement to the standard model, of course, is the 25% increase in power with only a 12.8% increase in piston displacement.

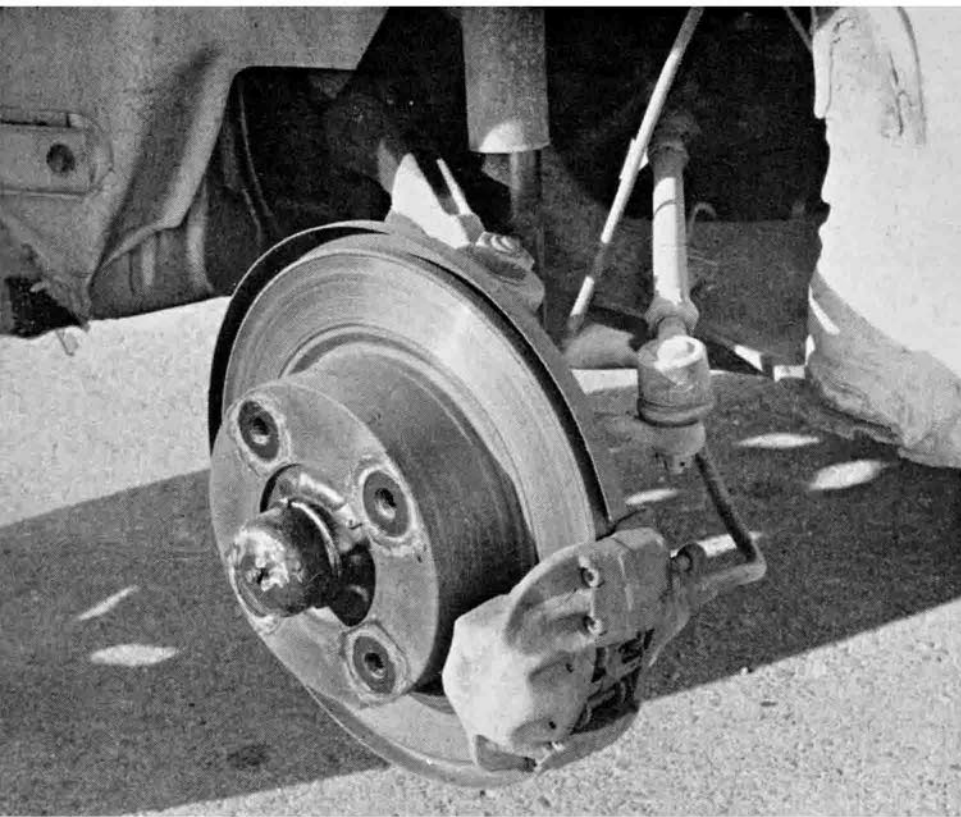
THIS LATTER figure was achieved with a 0.2 in. (5 mm) longer stroke, but no increase in bore size. The horsepower increase reflects a boost in compression, from 7.0 to 7.3:1, a larger

SUN-ROOF feature is optional in all Volkswagens, now a metal panel instead of cloth, cranks open.



FRONT LUGGAGE compartment in 1600 makes most of available space. Fuel filler is at left of spare tire.





CALIPER DISC brakes stop the front wheels of the 1600 model Volkswagens, operate in conjunction with drum brakes at rear. The 1300 has all drums.

carburetor venturi of 0.96-in. diameter, and slightly larger intake valves. The horsepower peaks at a somewhat higher engine speed than previously, 4600 vs. 3900 rpm, and thus the 50-bhp version shows a little more willingness to rev up through the gears.

Outward appearances also have been refined. Window area, for one, has been greatly increased, particularly the backlight and windshield. Another significant change was the substitution of a sliding metal panel in the roof for the old slide-back cloth optional sunroof.

The 1966 model changes most identifiable are new "low profile" hubcaps and the figure 1300 in chromium plating stuck on the engine cover.

Driving the 1300 for the first time, the owner, or ex-owner of an older Volkswagen will notice immediately the smoother, quieter operation, the greater airiness of the interior and a good deal more liveliness. Where the old models once trundled along, not unlike giant mechanical beetles, these newer ones seem to bounce about with a certain resiliency.

With increased power and ease of handling, the familiar agility of the VW has been sharpened to the point where it more easily holds its own in

1966 VOLKSWAGEN 1600 FASTBACK SEDAN



DIMENSIONS

Wheelbase, in.....	94.5
Track, f/r, in.....	51.6/53.0
Overall length, in.....	166.3
width.....	63.2
height.....	58.1
Front seat hip room, in.....	2 x 21.3
shoulder room.....	50.2
head room.....	36.0
pedal-seatback, max.....	49.6
Rear seat hip room, in.....	53.5
shoulder room.....	50.2
leg room.....	41.0
head room.....	35.0
Door opening width, in.....	37.2
Floor to ground height, in.....	9.8
Ground clearance, in.....	5.9

PRICES

List, pcc West Coast.....	\$2368
Equipped as tested.....	n.a.
Options included: Radio, wsw tires, windshield washer.....	

CAPACITIES

No. of passengers.....	5
Luggage space, cu. ft.....	16.7
Fuel tank, gal.....	10.6
Crankcase, qt.....	2.6
Trans./diff., pt.....	6.3
Radiator coolant, qt..... (air cooled)	

CHASSIS/SUSPENSION

Frame type.....	unitized
Front suspension type: Independent by trailing arms; torsion bar springs and telescopic shock absorbers; anti-roll bar.....	
Spring rate, lb./in.....	241.8
anti-roll bar dia., in.....	0.44
Rear suspension type: Independent by trailing arms, swing axles; telescopic shock absorbers.....	
Steering system: Worm and roller gear, divided tie rod, hydraulic damper.....	
gear ratio.....	19.4
overall ratio.....	14.9
turns, lock to lock.....	2.6
turning circle, ft. curb-curb.....	36.4
Curb weight, lb.....	2040
Test weight.....	2450
Weight distribution, % f/r.....	40.2/59.8

BRAKES

Type: Single-line hydraulic; caliper disc front, drum rears.....	
Front disc, dia. x width, in.....	11.75 x 1.50
Rear drum, dia. x width.....	9.77 x 1.77
total swept area, sq. in.....	203.8
Power assist.....	none
line psi @ 100 lb. pedal.....	n.a.

WHEELS/TIRES

Wheel size.....	15 x 4J
optional size available.....	none
bolt no./circle dia., in.....	4/n.a.
Tire make: Continental.....	
size.....	6.00-15
recommended inflation, psi.....	16-17/24-26
capacity rating, total lb.....	3600

ENGINE

Type, no. cyl.....	air-cooled, ohv, HO-4
Bore x stroke, in.....	3.37 x 2.716
Displacement, cu. in.....	96.7
Compression ratio.....	7.7
Rated bhp @ rpm.....	65 @ 4600
equivalent mph.....	93
Rated torque @ rpm.....	87 @ 2800
equivalent mph.....	56
Carburetion.....	Solex, 2x1 barrel dia., pri./sec..... n.a.
Valve operation: Pushrods, rocker arms on shafts, overhead valves.....	
valve dia., int./exh.....	1.42/1.24
lift, int./exh.....	0.346/0.326
timing, deg.....	7.5-37, 44.5-4
duration, int./exh.....	224.5/228.5
opening overlap.....	n.a.
Exhaust system: Single, reverse-flow muffler.....	
pipe dia., exh./tail.....	1.53
Lubrication pump type.....	gear
normal press. @ rpm.....	n.a.
Electrical supply.....	6-v. generator
ampere rating.....	30
Battery, plates/amp. rating.....	n.a./88

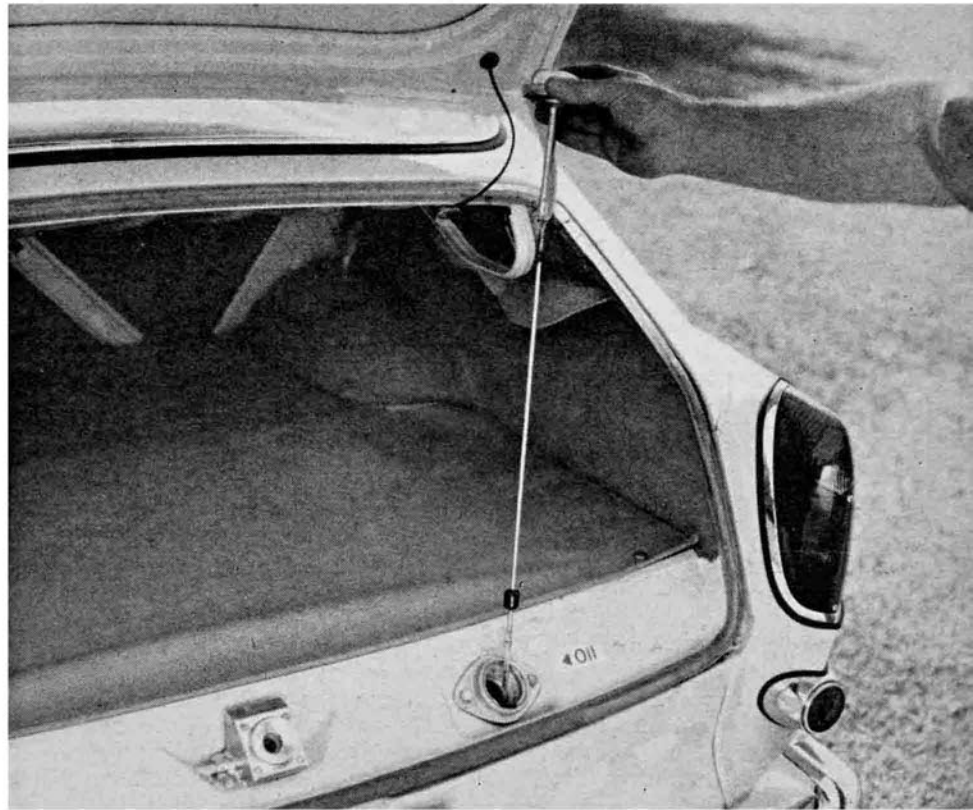
DRIVE-TRAIN

Clutch type: Single-plate, dry.....	
dia., in.....	7.874
Transmission type: 4-speed manual, in unit with differential.....	
Gear ratio 4th (0.89) overall.....	3.67
3rd (1.32).....	5.45
2nd (2.06).....	8.50
1st (3.80).....	15.7
synchronous meshing?.....	all four
Shift lever location.....	floor
Differential type: Spiral drive ring and pinion.....	
axle ratio.....	4.125

city traffic and maintains highway speeds (up to 75 mph) under all but the toughest of gradient and wind conditions. The 1300's 50 bhp and 78.42 cu. in. notwithstanding, if the top speed is 75 mph, and the headwind amounts to 25 mph, that leaves net forward progress of 50 mph. Because the VW still is lightly powered for its bulk (43.2 lb./bhp at test weight) it must struggle mightily with every hill of consequence.

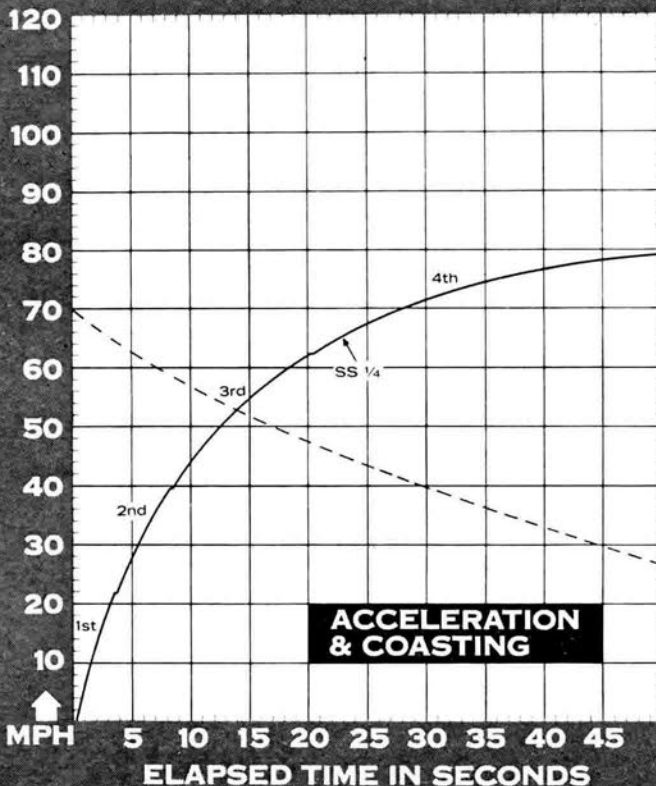
THE SIDE-WIND and gusty-wind stability of the standard VW has not improved measurably, as far as *CL*'s testers could determine. Freeway driving, at traffic-pacing speeds, gave the uneasy feeling that the car was up on tippy-toes, ready to leap sideways at the slightest gust of air. And, indeed, it would. On one particular test day a 20-mph crosswind gusted across a raised portion of freeway. Driving in these conditions required constant close attention and continual steering wheel correction to hold the car within the boundaries of a single lane.

This particular problem stems from the VW's basic design. With 57.6% of its weight on its rear wheels, the VW has a center of gravity rather far behind its center of wind pressure—



ACCESSIBILITY OF a sort: Long dipstick and filler pipe allow VW 1600 owner to check oil without opening the floor hatch in the luggage compartment.

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight).....	37.7
Cu.ft./ton mile.....	68.0
Mph/1000 rpm (high gear).....	20.1
Engine revs./mile (60 mph).....	2980
Piston travel, ft./mile.....	1350
Car Life wear index.....	40.2
Frontal area, sq. ft.....	20.4
Box volume, cu. ft.....	353

SPEEDOMETER ERROR

30 mph, actual.....	29.1
40 mph.....	40.5
50 mph.....	53.5
60 mph.....	64.7
70 mph.....	73.3
80 mph.....	82.7
90 mph.....	

MAINTENANCE INTERVALS

Oil change, engine, miles.....	3000
trans./dif.....	30,000
Oil filter change.....	none
Air cleaner service, miles.....	6000
Chassis lubrication.....	6000
Wheelbearing re-packing.....	30,000
Universal Joint service.....	none
Coolant change, mo.....	none

TUNE-UP DATA

Spark plugs.....	Champion L87Y
gap, in.....	0.024
Spark setting, deg./Idle rpm.....	7.5/550
cent. max. adv., deg./rpm.....	n.a.
vac. max. adv., deg./in. Hg. 12.5/1.8	
Breaker gap, in.....	0.016
cam dwell angle.....	50
arm tension, oz.....	n.a.
Tappet clearance, int./exh.....	0.004/0.004
Fuel pump pressure, psi.....	4.3
Radiator cap relief press., psi.....	n.a.

PERFORMANCE

Top speed (4200), mph.....	85
Shifts (rpm) @ mph	
3rd to 4th (4600).....	62
2nd to 3rd (4600).....	40
1st to 2nd (4600).....	22

ACCELERATION

0-30 mph, sec.....	5.3
0-40 mph.....	8.3
0-50 mph.....	12.4
0-60 mph.....	17.7
0-70 mph.....	27.7
0-80 mph.....	
0-90 mph.....	
0-100 mph.....	
Standing 1/4-mile, sec.....	22.7
speed at end, mph.....	66
Passing, 30-70 mph, sec.....	22.2

BRAKING

(Maximum deceleration rate achieved from 70 mph)	
1st stop, ft./sec./sec.....	26
fade evident?.....	none
2nd stop, ft./sec./sec.....	23
fade evident?.....	slight

FUEL CONSUMPTION

Test conditions, mpg.....	21.6
Est. normal range, mpg.....	22-26
Cruising range, miles.....	233-275

GRADABILITY

4th, % grade @ mph.....	6 @ 53
3rd.....	12 @ 40
2nd.....	18 @ 30
1st.....	25 @ 20

DRAG FACTOR

Total drag @ 60 mph, lb.....	135
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something similar to placing the arrowhead behind the feathers. Thus sidewinds try to spin the front of the car around the rear wheels. Front-end heavy cars (usually any car with its engine mounted forward) demonstrate the opposite condition: Because the center of gravity is ahead of the center of pressure (arrowhead in front of the feathers), wind gusts try to pivot the car on its front wheels. This latter condition is dynamically more stable and requires less driver attention.

SPEEDS BELOW 50 mph and suburban in-town traffic are the VW's forte. In these conditions the tail-heavy design is more help than hindrance and the VW darts thither and yon with amazing alacrity. It does so on 25-30 mpg fuel consumption, too, for economical errand running.

Straightaway performance is not a VW strongpoint, either, as a goodly number of other 1300-cc cars can easily out-run it. However, the VW's acceleration is acceptable, particularly in light of its other attributes and, with its good gearbox, the VW can be rowed with reasonable enthusiasm. The 1300-cc engine has improved the acceleration factor a little, particularly in letting the engine rev up a little higher in

gears. Compare the 1966 VWs with the 1961 version:

	1961 1200	1966 1300	1966 1600
0-30 mph, sec.	6.4	7.2	5.3
0-60	27.7	23.7	17.7
Standing 1/4-mile, sec.	22.8	22.2	22.7
Passing, 30-70 mph	43.6	34.3	22.2

Though wind and grade can play tricks with Volkswagen times, a qualitative comparison of these tables will show significant gain in the upper operating ranges for the 1300 over the old 1200 and for the 1600 over the 1300. Most noteworthy are the improvements in passing ability, an area in which the 1600 stands out.

The most outstanding improvement in Volkswagens for 1966, of course, is the 1600 line itself. For a somewhat higher price the VW buyer may obtain certain qualities which the standard model doesn't offer—namely that better performance and top speed, a greatly more spacious interior and luggage accommodation, and a station wagon model. The additional costs amounts to \$700 on the pricetag, 300 lb. curb weight, 6 in. additional length and 3 in. more width.

Unlike the ugly duckling which grew into a beautiful swan, the homely beetle only lost its utilitarian charm when it grew up into the 1600 series.

Doubtlessly the 1600 is better looking, and far more efficient in shape and space utilization. The 1600 is a Volkswagen with the bug taken out.

THOUGH IT SHARES the same 94.5-in. wheelbase with the standard VW, the 1600 series has a different understructure and thus its body components are not interchangeable. It retains the same sort of unit construction, the floorpan being used as the chassis upon which the main body structure and mechanical components are bolted. The pan is humped along its longitudinal centerline, to form an extra-stiff backbone that provides the chassis beam strength. The trailing arm front suspension bolts to the forward end of this spine, and the engine/transmission unit mounts in a forked arrangement at the rear. The independent rear suspension's trailing arms connect to their forward pivots just ahead of the wheels on a built-in crossmember.

The VW 1600 has exactly the same sort of suspension as does its parent model, utilizing trailing arms front and rear, as mentioned, to retain full independent suspension. The geometry provided by this system at front yields a firm understeer at low speeds, which generally counteracts the oversteering

1966 VOLKSWAGEN 1300 DELUXE SEDAN



DIMENSIONS

Wheelbase, in.	94.5
Track, f/r, in.	51.4/51.2
Overall length, in.	160.2
width	60.6
height	59.0
Front seat hip room, in.	2 x 20.5
shoulder room	47.2
head room	37.4
pedal-seatback, max.	47.8
Rear seat hip room, in.	52.3
shoulder room	47.2
leg room	n.a.
head room	32.8
Door opening width, in.	45.1
Floor to ground height, in.	9.7
Ground clearance, in.	6.0

PRICES

List, poe West Coast	\$1663
Equipped as tested	n.a.
Options included: Leatherette interior, wsw tires, radio, w.s. washer	

CAPACITIES

No. of passengers	5
Luggage space, cu. ft.	9.95
Fuel tank, gal.	10.6
Crankcase, qt.	2.6
Trans./diff., pt.	6.3
Radiator coolant, qt. (air cooled)	

CHASSIS/SUSPENSION

Frame type	unitized
Front suspension type	Independent by trailing arms; torsion bar springs and telescopic shock absorbers; anti-roll bar
Spring rate, lb./in.	213.34
anti-roll bar dia., in.	0.488
Rear suspension type	Independent by trailing arms, swing axles; telescopic shock absorbers
Steering system	Worm and roller gear, divided tie rod, hydraulic damper
gear ratio	19.4
overall ratio	15.0
turns, lock to lock	2.6
turning circle, ft. curb-curb	36.0
Curb weight, lb.	1750
Test weight	2160
Weight distribution, % f/r	42.4/57.6

BRAKES

Type	Single-line hydraulic; 1 trailing, 1 leading shoe each drum
Front drum, dia. x width, in.	9.09 x 1.57
Rear drum, dia. x width	9.09 x 1.18
total swept area, sq. in.	156
Power assist	none
line psi @ 100 lb. pedal	n.a.

WHEELS/TIRES

Wheel size	15 x 4J
optional size available	none
bolt no./circle dia., in.	5/n.a.
Tire make	Engelbert 33
size	5.60-15
recommended inflation, psi	16/24
capacity rating, total lb.	3300

ENGINE

Type, no. cyl.	air-cooled, ohv, HO-4
Bore x stroke, in.	3.031 x 2.716
Displacement, cu. in.	78.42
Compression ratio	7.3
Rated bhp @ rpm	50 @ 4600
equivalent mph	87
Rated torque @ rpm	68.7 @ 2600
equivalent mph	49
Carburetion	Solex, 1x1
barrel dia., pri./sec.	0.96
Valve operation	Pushrods, rocker arms on shafts, overhead valves
valve dia, int./exh.	1.24/1.16
lift, in./exh.	0.282/0.314
timing, deg.	7.5-37, 44.5-4
duration, int./exh.	224.5/228.5
opening overlap	n.a.
Exhaust system	Single, reverse-flow muffler
pipe dia., exh./tail	1.375
Lubrication pump type	gear
normal press. @ rpm	28 @ 2500
Electrical supply	6-v. generator
ampere rating	30
Battery, plates/amp. rating	n.a./77

DRIVE-TRAIN

Clutch type	Single-plate, dry
dia., in.	7.20
Transmission type	4-speed manual, in unit with differential
Gear ratio 4th (0.89) overall	3.89
3rd (1.32)	5.77
2nd (2.06)	9.02
1st (3.80)	16.6
synchronous meshing?	all four
Shift lever location	floor
Differential type	Spiral drive ring and pinion
axle ratio	4.375

effects of a hefty rearward weight bias and swing-axle rear suspension. Handling characteristics thus are virtually identical to that of the older VW. The Squareback model has an auxiliary compensator spring between the rear wheels to better control cornering deflections and overload conditions.

Brakes for the 1600 series use the standard 9.05-in. drums in the rear with caliper discs at the front. The drums doubtlessly were retained to facilitate handbrake operation, but it would appear that the 1600 should have had discs all the way 'round. With a 59.8% of the vehicle weight (test conditions) on the rear wheels in the Fastback model—and probably more in the Squareback—the rear drums tend to fade first, although it is virtually impossible to lock up the wheels during hard braking.

THE 1600 SYSTEM displays very good stopping power on the first all-on effort, 26 ft./sec./sec., but slight fading reduced maximum deceleration to 23 ft./sec./sec. on the second try; both stops were from 70 mph, rather than the usual 80, as neither test VW would quite gain that velocity within the limited space of the test area. Stopping the 1300 VW produced rates of 24 and

21 ft./sec./sec. with pronounced fade on the second stop. The older beetle needs either the 1600's combination disc/drum or all discs, too; adequate braking at freeway speeds has been one of the more frequent owner/driver requests.

The 1600 also shares the 1300's transaxle drive-train. Transmission ratios are identical, but the final drive is 4.125 rather than the 4.375:1 of the 1300. Thus the 1600, with its slightly fatter tires, 6.00-15 vs. 5.60-15, turns fewer engine revolutions per mile traveled, 2980 vs. 3190, and has a greater speed range both in the gears and at the top end. Where the 1300 will pull 75 mph on a flat roadway, the 1600 will go something around 85 if space permits a long enough run for it. Such velocities are not recommended, particularly in view of the vehicle's tendency toward skittishness in crosswinds. At normal highway speeds, however, the 1600 seems to cruise a great deal more effortlessly than does its little brother.

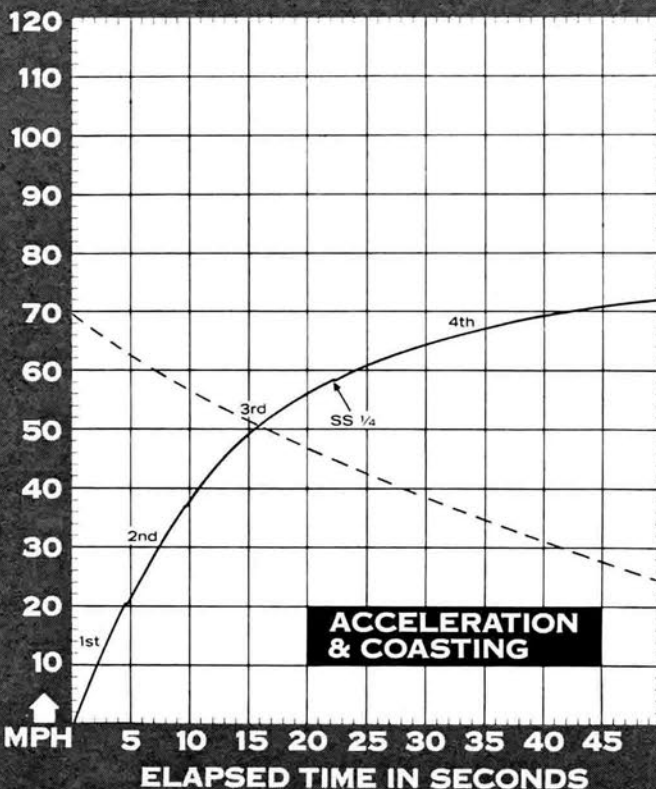
The 1600's engine uses the stroke of the 1300 with 6-mm larger bore to achieve its larger displacement. It also has slightly more compression, at 7.7:1, though the VW factory says that it still runs most satisfactorily on



FLATTER hubcaps identify 1300 models. Change was made to reduce curb damage.

most U.S. "regular" gasolines. Two Solex carburetors are mounted atop very short manifolds on the heads. Intake valve size is the same. The greatest difference, in addition to larger displacement and greater power, is in application; the 1600 has been re-

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight)	43.2
Cu. ft./ton mile	67.0
Mph/1000 rpm (high gear)	18.8
Engine revs/mile (60 mph)	3190
Piston travel, ft./mile	1450
Car Life wear index	46.2
Frontal area, sq. ft.	19.9
Box volume, cu. ft.	332

SPEEDOMETER ERROR

30 mph, actual	30.9
40 mph	40.0
50 mph	49.0
60 mph	57.2
70 mph	66.1
80 mph	
90 mph	

MAINTENANCE INTERVALS

Oil change, engine, miles	3000
transmission/differential	30,000
Oil filter change	none
Air cleaner service, miles	6000
Chassis lubrication	6000
Wheel/bearing re-packing	30,000
Universal joint service	none
Coolant change, mo.	none

TUNE-UP DATA

Spark plugs	Champion L87Y
gap, in.	0.028
Spark setting, deg./idle rpm	.75/500
cent. max. adv., deg./rpm	n.a.
vac. max. adv., deg./in. Hg.	12.5/1.8
Breaker gap, in.	0.016
cam dwell angle	.50
arm tension, oz.	n.a.
Tappet clearance, int./exh.	0.004/0.004
Fuel pump pressure, psi	.2.8 @ 3400
Radiator cap relief press., psi	none

PERFORMANCE

Top speed (4050), mph	76
Shifts (rpm) @ mph	
3rd to 4th (4600)	58
2nd to 3rd (4600)	37
1st to 2nd (4600)	20

ACCELERATION

0-30 mph, sec.	7.2
0-40 mph	10.7
0-50 mph	15.6
0-60 mph	23.7
0-70 mph	41.5
0-80 mph	
0-90 mph	
0-100 mph	
Standing 1/4-mile, sec.	22.2
speed at end, mph	58
Passing, 30-70 mph, sec.	34.3

BRAKING

(Maximum deceleration rate achieved from 70 mph)	
1st stop, ft./sec./sec.	24
fade evident?	slight
2nd stop, ft./sec./sec.	21
fade evident?	definite

FUEL CONSUMPTION

Test conditions, mpg	25.5
Est. normal range, mpg	26-30
Cruising range, miles	276-318

GRADABILITY

4th % grade @ mph	7 @ 49
3rd	11 @ 36
2nd	17 @ 27
1st	21 @ 17

DRAG FACTOR

Total drag @ 60 mph, lb.	140
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VW

designed to fit it into a smaller package space. Instead of having the cooling fan belt-driven via the generator as on the 1300, the 1600's fan is attached to the rear end of the crankshaft where it pulls in air from the rear fender louvers and sends it through ducts to the finned cylinder heads. This has lowered the profile impressively.

A small, useful trunk space is just over the engine compartment. The floor of this trunk actually is a heavily insulated trap door which swings up to reveal the engine. This extra barrier between engine and passenger compartments seems to reduce the noise which reaches the driver—at least in the Fastback; Squareback drivers report a higher level of noise, probably

because the normal barrier behind the seat is eliminated.

Normal operations do not necessitate the lifting of the engine hatch; engine oil dipstick and filler are extended to the rear edge of the trunk compartment, where they are exposed whenever the trunk lid is lifted.

The front trunk has considerably more capacity than the VW 1300's similar compartment. Between front and rear trunks, quite a large amount of luggage may be carried in the 1600. However, the Fastback's rear seatback does not fold forward in the manner of that in the 1300, so that particularly capacious area cannot be utilized. Conversely, the rear seat in the Squareback folds in station wagon style.

Passenger accommodation in the 1600 series consists of two individual seats in front and a 2-3 seat bench in the rear. The slab-sided envelope style of body design for the 1600 puts the

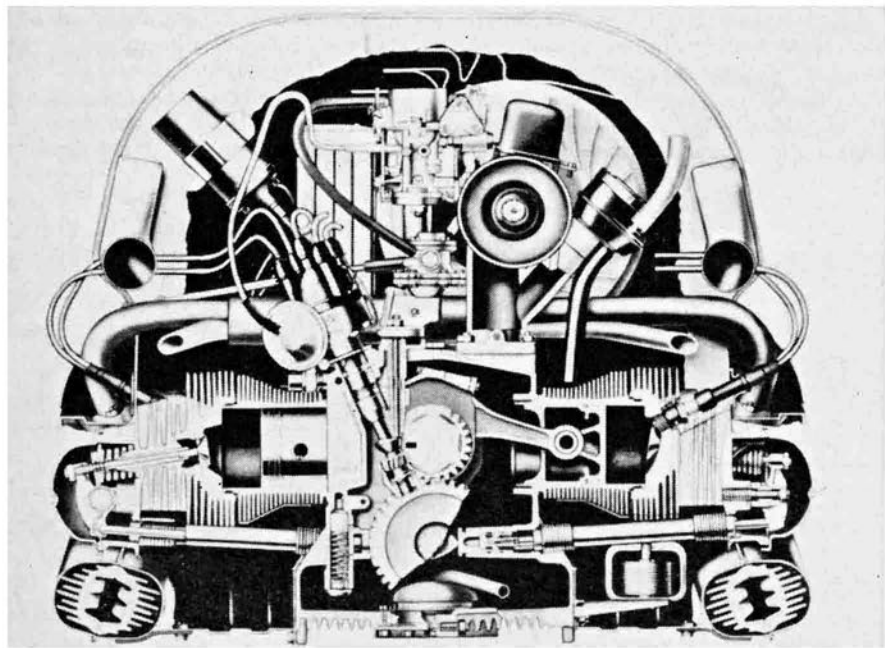
doors out to fender width, creating 3-4 in. more interior width for the passengers and a less claustrophobic atmosphere.

Instrument and control layout of the 1600 is functional and logical, and not as austere as on earlier VWs. However, many of the knobs are unmarked, making it difficult for the first-time driver to find his way around. In particular, the heater controls were mystifying as to their respective function. The instrument section itself is in three pods (*à la* 1959 Chevrolet) with the large speedometer dial occupying center stage. The right pod carries a clock, the left holds the fuel quantity gauge and the warning lights for generator and oil pressure. A vinyl-covered padding atop the panel provides some crash protection and reduces sun glare.

Both the 1300 and the 1600 showed that high quality of assembly and careful finish that have earned VW its enviable reputation as a well-built car. The simplicity of design, and demonstrated durability of its components have furthered this reputation. The 100,000-mile Volkswagen on a used car lot commands an outrageously high price because of this reputation.

ECONOMY OF OPERATION, from low purchase cost and high resale to 25-30 mpg fuel consumption, is the basic reason many people like to give for owning a standard VW. They count the fun factor, too, by relating how easily it is driven around town. In this context, the VW reaches its zenith of usefulness—it becomes a near-perfect "shopping car." Short hauls are practical, enjoyable and economical where long turnpike trips might become both boring and annoying. The 1600 falls readily into this category, except that its initial price is enough higher that it must compete with the domestic compacts. By far the most utilitarian is the Squareback version, with its upward-hinging rear door, but *CL* feels VW could have made an even more useful vehicle by building a 4-door sedan version. None exists in either VW line.

If not quite as endearing in its esthetic (or anti-esthetic?) appeal as its little brother, the Volkswagen 1600 series at least has a few more creature comforts to recommend it to the buyer. Going, stopping, handling and riding are all better, too, but are these qualities enough to justify a \$700 higher price? VW says it will sell approximately 35,000 of the 1600 models in the U.S. during 1966, and probably foresees a day when it will replace the older version. However, the standard "Beetle" shows no signs of diminishing in popularity. After all, it still is the best bargain in transportation short of a bicycle. ■



CUTAWAYS SHOW identical basic layouts of 1300 (top) and 1600 (bottom) Volkswagen engines. But 1600 has had its accessories compartmentalized to create lower overall height. Cooling fan is belt-driven in 1300 and crankshaft-driven in 1600, thus eliminating the tall air duct.

