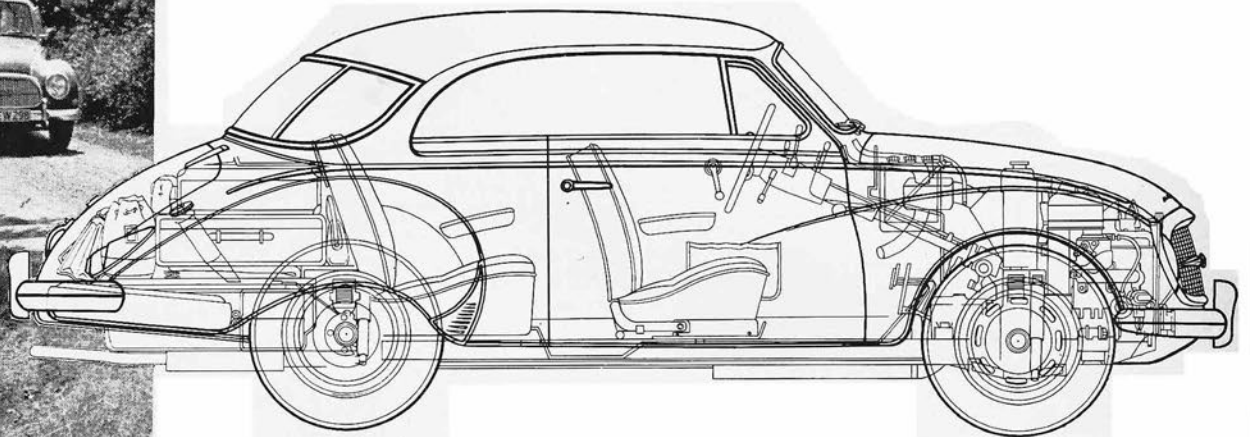


# AUTO UNION 1000



**I**N Zschopau, Germany, in 1916, a man by the name of Rasmussen was developing a steam-powered vehicle. Auf Deutsch, das heisst Dampf Kraft Wagen. But the war interrupted Rasmussen's steam experiments and he turned to the construction of a two stroke 1/4-hp toy car engine, called Des Knaben Wunsch (the boy's wish). This two stroke power plant was increased in size to 98 cc and it was giving 1-hp when adapted to bicycles. In 1920, it sold by the thousands in Germany, and Rasmussen's DKW firm was in the motor bike business in a big way.

In 1932, he bought out the Audi and Horch factories in Zwickau, as well as the automobile department of the Wanderer factory in Chemnitz. He combined them into one firm, Auto Union AG.

Today, the matter has gone one step further with their purchase by Daimler-Benz AG, of Stuttgart. This is without doubt one of the largest automotive combines in the world today, and they offer a tremendous variety of two and four-wheeled (and stroke) vehicles.

So much for historical background. Our test car was, specifically, the 50 bhp (SAE) Auto Union 1000, a two-door "hardtop" coupe. Typically DKW, it is a front-wheel-drive car powered by a two-stroke, water-cooled three cylinder in-line engine, i.e., valveless. It is a bored-out version (74 instead of 71 mm) of the 896 cc Grosser DKW (which in turn is "grosser" than the long-discontinued two-cylinder Deke.) At normal touring speeds the engine is quiet with excellent low-speed torque characteristics for bumbling along in traffic in third or even fourth gear. Recent modifications to the car's exhaust system and success in achieving a very lean oil-gas ratio have all but eliminated any sign of the expected cloud of blue smoke, as well as the famous two-stroke "burble". At idle speeds, you can still tell it's a Deke.

We were impressed with the acceleration of the DKW. It's no strain for a resourceful driver to show his heels at the stop light. (We found it very easy to spin the front wheels).

The car will cruise all day long at 75 mph, with its timed maximum at 80.

During our acceleration runs, we had difficulty choosing shift points, due to the absence of a rev counter and the impossibility of getting "valve-crash". When turned up until she won't wind any more, this two stroke takes on all the characteristics of an over-stressed Electrolux. But we'll say right now, that this Auto-Union puts out a surprising amount of steam when getting away from rest.

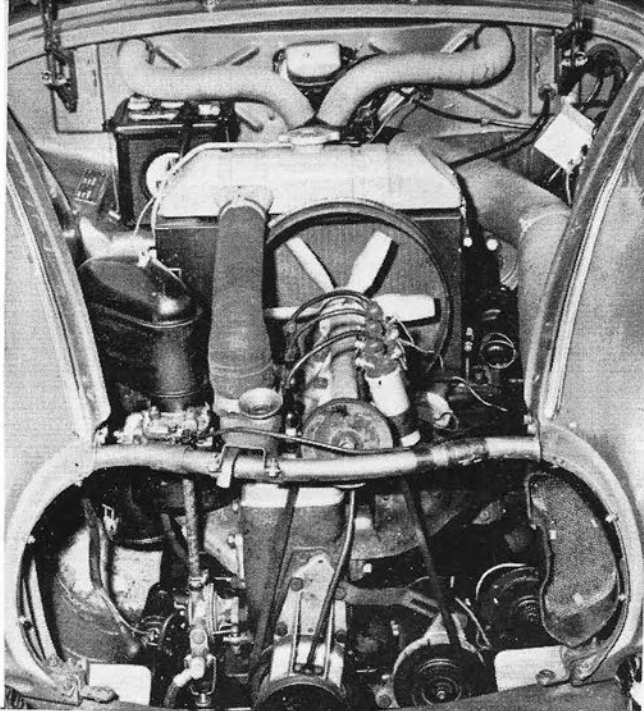
One is aware of the *fwd* only when the driver really lets the clutch in abruptly. Then there is a noticeable amount of wheel tramp. The rack and pinion steering is harder than conventional 1 1/2 liter sports cars, but not all that much. In fact, we expected it to be stiffer.

Probably the most striking impression of the AU 1000 is its extraordinarily high cornering power. It took us a while to learn to keep our foot flat on the floor when cornering at speeds so high that a more conventional car would swap ends. On a loose gravel surface the stability and "sticktion" of the DKW borders on the incredible and we began to understand the reasons why and how these cars have enjoyed such tremendous success in international rallies. One has the impression that a driver can pound the car without mercy, flog it for all it's worth and it will come back for more. The Auto Union 1000 is a rugged automobile, its beefy leaf springs and solid frame as well as the unburstable 980 cc engine, all substantiating this impression.

We had absolutely no fade during our ten-stop brake test and except for a notable increase in pedal travel, the brakes were just as good when we returned the car as they were at the beginning of the test, and we hadn't pussyfooted about.

The interior is exceptionally roomy with its flat floor stretching from door to door and toe board to trunk. The front seats are comfortable for touring though for competition they would benefit from more lateral support, since

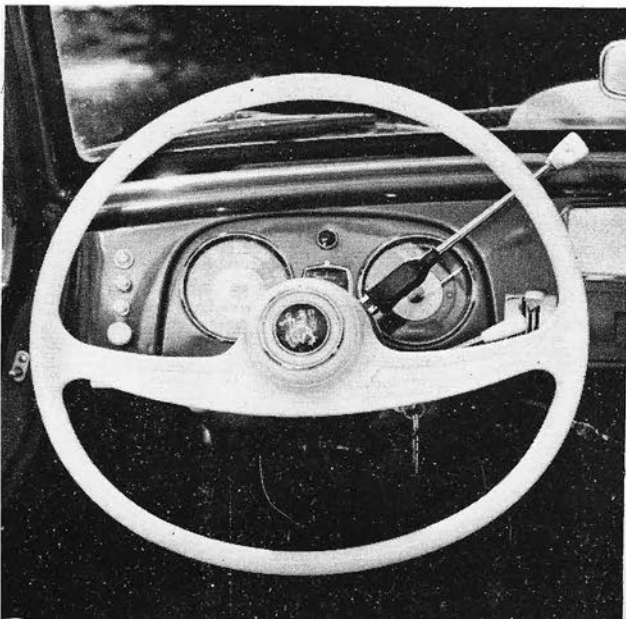
(Continued on page 54)



Two-stroke three-cylinder runs with smoothness of six cylinders. Separate coils for each spark plug. Grille removes for access.



Vigorous cornering with front-wheel drive demands foot flat on loud pedal plus firm grip on non-circular steering wheel. Steer well into turn. Oval shape adds to driver's knee-room.



## AUTO UNION 1000

Suggested Retail List Price . . . \$2395

U.S. Importers:

Robt. E. Lee Mtrs, Inc.  
520 W. 19th St.  
New York 11, N. Y.

Peter Satori, Ltd.  
325 W. Colorado St.  
Pasadena, Calif.

Imported Auto Dist. Inc.  
1405 Sixteenth St.  
Racine, Wisconsin

### PERFORMANCE

#### TOP SPEED:

Two-way average . . . . . 79.2 mph  
Fastest one-way run . . . . . 80.7 mph

#### ACCELERATION:

From zero to	seconds
30 mph . . . . .	5.6
40 mph . . . . .	10.0
50 mph . . . . .	15.7
60 mph . . . . .	23.0
70 mph . . . . .	38.8
Standing ¼ mile . . . . .	22.4
Speed at end of quarter . . . . .	59 mph

#### SPEED RANGES IN GEARS:

I . . . . .	0-22
II . . . . .	7-39
III . . . . .	12-64
IV . . . . .	17-top

#### SPEEDOMETER CORRECTION:

Indicated Speed	Timed Speed	Indicated Speed	Timed Speed
30	30	60	56
40	38	70	65
50	47	80	75

#### FUEL CONSUMPTION:

Very hard driving . . . . . 16 mpg  
Average driving  
(Under 60 mph) . . . . . 32 mpg

### SPECIFICATIONS

#### POWER UNIT:

Two stroke, water-cooled, in-line three-cylinder  
Bore & Stroke . . . . . 2.91 x 2.99 in. (74 x 76 mm)  
Stroke/Bore Ratio . . . . . 1.02/1  
Displacement . . . . . 59.8 cu. in. (980 cc)  
Compression Ratio . . . . . 7.25/1  
Carburetion by . . . . . one Solex 40 JCB downdraft  
Max. Power . . . . . 44 DIN (50 SAE) bhp  
@ 4500 rpm  
Max. Torque . . . . . 61½ lbs.-ft. @ 2250 rpm  
Idle Speed . . . . . 500 rpm

#### DRIVE TRAIN:

Transmission ratios  
I . . . . . 3.82  
II . . . . . 2.22  
III . . . . . 1.31  
IV . . . . . 0.915  
Final drive ratio . . . . . 4.72  
Axle torque taken by engine-gear box mounts.

#### CHASSIS:

Frame . . . . . Box-section with X-member  
Wheelbase . . . . . 92 in.  
Tread, front and rear . . . . . 50, 53 in.  
Front Suspension . . . . . Transverse leaf spring, lower wishbone  
Rear Suspension . . . . . Transverse leaf spring, tubular rigid axle  
Shock absorbers . . . . . Telescopic  
Steering type . . . . . Rack and pinion  
Steering wheel turns L to L . . . . . 2¾  
Turning diameter, curb to curb . . . . . 36 feet  
Brakes . . . . . 2 leading shoe front  
Brake lining area . . . . . 105 sq. in.  
Tire size . . . . . 5.60 x 15

#### GENERAL

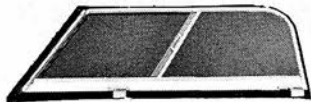
Length . . . . . 166 in.  
Width . . . . . 66 in.  
Height . . . . . 57 in.  
Weight, as tested . . . . . 2280 lbs.  
Weight distribution, F/R as tested . . . . . 54/46  
Fuel capacity . . . . . 11.8 U.S. gallons

#### RATING FACTORS:

Specific Power Output (SAE) . . . . . 0.83 bhp/cu. in.  
Power to Weight Ratio . . . . . 45.6 lbs./hp.  
Piston speed @ 60 mph . . . . . 1780 ft./min.  
Braking Area . . . . . 0.92 sq. in./ton  
Speed @ 1000 rpm in top gear . . . . . 16.8 mph



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  - (3) AUSTIN HEALEY..... Per Set @ 58.00
  - (4) MGA..... Per Set @ 58.00
  - (5) JAGUAR XK-140 & 120..... Per Set @ 72.50
  - (6) TRIUMPH 3 & 4..... Per Set @ 72.50
  - (7) MG-TD & TF..... Per Set @ 72.50
- For rear panels add 18.00  
(8) Ash trays available 1.50

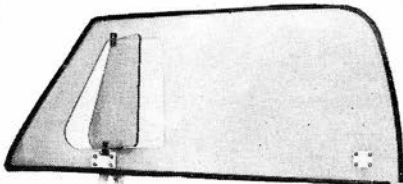
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## Auto Union — 1000

(Continued from page 41)

the car tends to lean considerably when cornering hard. Vision is excellent, except for the too thick windshield corner post. Sideways and rearwards it is outstanding. All the windows roll completely down and out of sight. The well-located instruments and switches are especially good, too. Our major beef with the car concerns the shift lever and its pattern. The lever itself is awkward to use and the pattern is completely backwards from a conventional "H" type of gate. As more miles are added, and one lives with the car for a longer period, it is something to which one becomes accustomed. Column gear changes are the bane of the sports car driver and the DKW is no exception, although the fully synchronized gear box seems rugged enough to stand any and all punishment.

We were unable to try an Auto Union 1000 fitted with the "Saxomat" automatic clutch but find it difficult to justify this available extra on such a small car. A controllable free-wheeling device is standard on all Auto Union passenger cars. We used it extensively for Autobahn driving, but once off these freeways, we preferred to leave the free-wheeling locked out, thus gaining the benefit of engine braking, slight though it is.

Two-stroke motoring is not as difficult or troublesome as it might seem. SAE 40 weight oil is mixed with the fuel at a ratio of 1 to 40 (one quart to ten gallons). The DKW's built-in mixer blends the fuel and oil provided the oil is put in first. It is difficult to say "fill it up" to the gasoline attendant, for one has to figure rather accurately how many gallons it will take, and then choose a lower round number so that the correct oil-fuel ratio will be maintained. We'd recommend that every DKW owner carry a few cans of oil in his trunk as well as a pint can with a screw-top.

In Europe, modified DKW's are the rule rather than the exception, with the factory as well as its continental distributors aiding and abetting DKW owners to get more out of their cars. Here is what the Swiss distributor does to his customer's cars to make them go better.

First the carburetion is altered with bigger jets, (main jet—165, air correction—230, venturi—31.) A sports air cleaner is installed as well. Then, the transmission oil is thinned out from 90 SAE down to 40 SAE, and less of it. The oil/gasoline ratio is changed, running on regular, 1:43, plus six or seven ounces per tankful of Redex. The wheel bearings are set to run in a mixture of oil with grease rather than the grease alone. Spark plugs stay the same, but on Swiss cars the distributor happily installs Michelin X tires, pressures raised to 28 psi. A performance increase of 10% can easily be expected. The greatest increase is in the higher speed ranges and an 85 mph maximum should certainly be possible. There's no doubt but the two-stroke engine is most happy in modified form.

One cannot help but be impressed with the car's performance in relation to its engine size. It is well appointed inside and roomy enough for the whole family. These attributes coupled with its excellent handling and ruggedness are the outstanding impressions left with us. It is a very different car, but prospective buyers should not shy away from the fact that it is a two-stroke and has front wheel drive. The former simplifies engine repairs and certainly eliminates oil changes! The *ford* will pay noticeable dividends if you live in a snow area during the winter or ever have traction problems since you can aim your thrust.

Besides, it's lot of fun.

Jesse Alexander

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travel equipment.



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