

SUNBEAM



RAPIER

SCI ROAD TEST

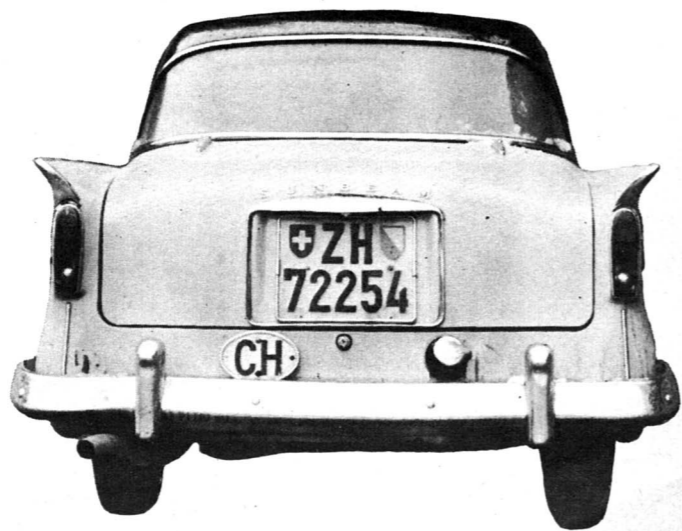
DURING THE 1958 Geneva Automobile Show, we found the Rootes stand more crowded than expected. As a rule, the English exhibits are passed up by the general public who swarm to other more exciting and less conservative automobiles to stare admiringly at the latest Italian custom coachwork. Elbowing our way into the mass of people, we found them to be intrigued by the new Sunbeam Rapier models, now full 1½ liter machines and available either as hardtops or convertibles. Almost knocking over Brian Rootes himself in the melee, we introduced ourselves to him. He agreed that in as much as Sunbeam was leading the 1958 European Touring Championship following Peter Harper's outright win in the RAC Rally, we should have one for a road test.

Mr. Rootes told us of their plans to put a team of cars into both the Tulip Rally and the famous Alpine this summer. If Harper enjoys continued success with his Series II Rapier, there's a good chance that Sunbeam will win this year's Rally championship. The latest Rapier is designed with rally participation in mind, being virtually identical to last year's team cars. Spacious, yet compact and maneuverable, powered by the virtually unburstable "Rallymaster" 1494 cc ohv four cylinder engine, we thought the car ideally suited to represent Britain in the production touring car class.

First of all, here are the changes in the new Rapier for 1958. Most important of all are the engine modifications that have produced a 9% increase in maximum output. The bore is out to 79.0 mm from 76.2 mm, raising the displacement 104 cc. Maximum brake horsepower is now listed at 73 bhp at 5200 rpm, while the torque curve has also been improved, producing 81 lbs-ft at 3000 rpm. Compression ratio, formerly 8.0 to 1, is now 8.5:1. Inlet and exhaust valves have been made slightly larger, while at the bottom end, lead-indium bearings are now used. With the hood up, one notices a thick silencer pad lining the hood. A second muffler is fitted directly behind the engine to further reduce the noise level. From the wheel, the Rapier appears almost the same as last year's car. But externally, rather extensive changes have been made. A vertical grill, reminiscent of earlier Sunbeams, graces the front, while at the rear, Rootes have gone American with a conservatively rakish pair of tail fins. Vision is good from the driver's seat, the fins serving as excellent guides for placing the car accurately while reversing. But the two best changes on the Series II Rapier are in the brakes and the shift linkage.



New grille revives traditional upright motif, while hooded headlights and angled fins are aimed straight at US market.



First the brakes. The car sports drums 10 inches in diameter at the front and 9 inches at the rear, giving a sizeable improvement in overall braking area. In our brake test we had hardly the slightest trace of brake fade during the ten 60 mph to zero panic stops. The pedal became hard and the brakes were beginning to smell at the conclusion of the test, but they were still just as potent at the end as they were at the beginning. Aside from these very fine anchors, Rootes has finally gotten around to fitting the Sunbeam with a floor shift. We found the new gear change to be simple, sturdy and very direct. It was too easy, however, to flick the lever into the reverse gate when coming down fast from third to second. A foolproof lock should be designed at once for this fine new system.

Eager to try the car on the road, we headed our Rapier out of Switzerland and into Germany where SCI has laid out a road test circuit that includes a stretch of Autobahn near Munich as well as some secondary roads that put any car on the defensive. German secondary roads are pretty bad, especially in the early Spring when faulty drainage has produced frantic ruptures from thawing. Whole sections of road are torn up and dodging man-sized chuck holes keeps a driver more than just a little busy if he's intent on making time.

The Rapier sailed over the rough stuff in fine shape, though on one or two bad washboard surfaces the whole car shook a bit violently, but we plowed on as fast as we could, beating the car unmercifully to find out just how it would stand up. A few minor rattles did show themselves after an hour of steady pounding, but we were able to get to Munich on time and well within our scheduled average. On the Autobahn, the overdrive-equipped Rapier is entirely at home. Controlled by a switch on the steering column, the Laycock-de-Normanville is operative in third and fourth gears only. Closely grouped, these four different ratios are all that are necessary either for effortless cruising on the open road or for zipping through fast moving city traffic.

Though the rear axle ratio has been dropped from 5.22 to 4.78, the gearbox is unchanged. So is our major criticism. First and second are too low and too close, and second and third are too far apart. Now that the Laycock-de-Normanville overdrive, an optional extra at \$159, is restricted to third and fourth, the last point becomes especially annoying. As Rootes has chosen to entitle the gears Emergency Low and One, Two and Three, it seems apparent that the Rapier

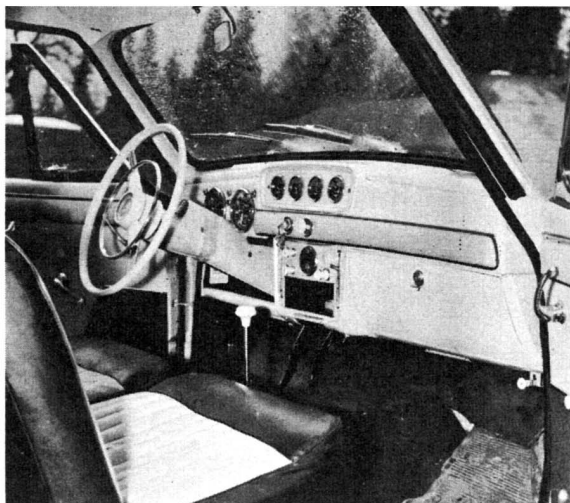
Burman steering box gives healthy improvement over last year's Rapier, especially in tight turns. European Ed. shows off its understeer in wet.



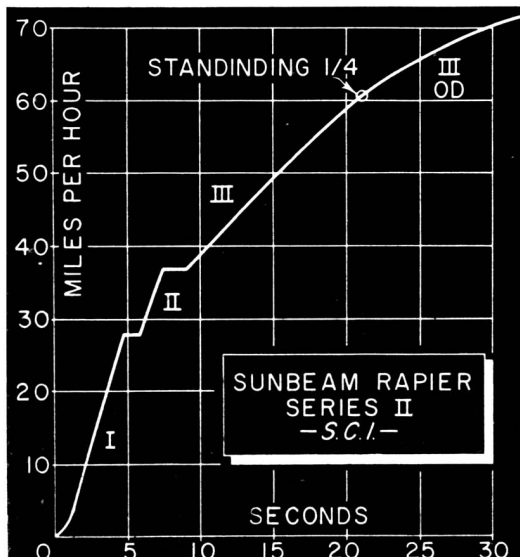
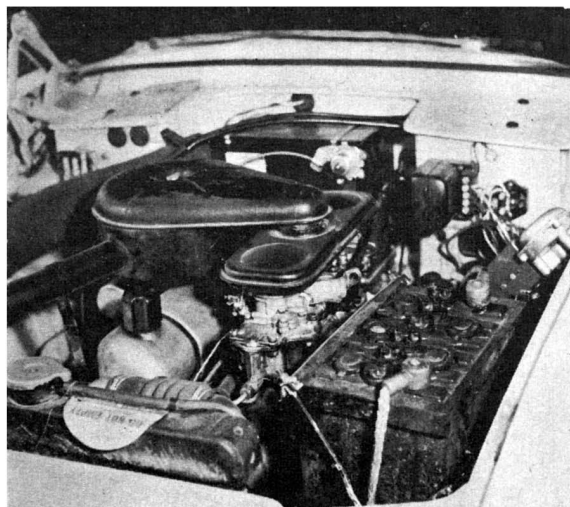
Speedometer and tachometer are right ahead of driver; minor instruments and heater controls are at center of "crash-padded" dashboard.



JULY '58



Above, all that remains of "backwards" column shift is a button above steering column showing new shift pattern. Engine, below, looks unchanged on the surface, but boring in out 0.11 inch raised power and torque output by 9 per cent.

**SUNBEAM RAPIERE SERIES II "COUPE DE SPORT"**

Price at East Coast and Gulf POEs—\$2499 basic, \$2705 as tested
Price at West Coast POEs—\$2580 basic, \$2786 as tested

PERFORMANCE**TOP SPEED:**

Two-way average 86 mph
Fastest one-way run 87 mph

ACCELERATION:

From zero to	seconds
30 mph.....	6.1
40 mph.....	10.6
50 mph.....	15.3
60 mph.....	20.6
70 mph.....	29.3
80 mph.....	47.9
Standing ¼ mile.....	22.0
Speed at end of quarter.....	62 mph

SPEED RANGES IN GEARS:

(6000 rpm max)

I	0-28 mph
II	0-37 mph
III	15-61 mph (20-80 in OD)
IV	23-top (27-top in OD)

SPEEDOMETER CORRECTION:

Indicated	Timed
30	29
40	37
50	46
60	56
70	65
80	75

FUEL CONSUMPTION:

Hard driving 20 mpg
Average driving (Under 60 mph) 26 to 30 mpg

BRAKING EFFICIENCY:

(10 successive emergency stops from 60 mph, just short of locking wheels)

1st stop	64	6th	64
2nd	64	7th	64
3rd	64	8th	64
4th	64	9th	64
5th	63	10th	64

SPECIFICATIONS**POWER UNIT:**

Type	In-line four, water cooled
Valve Arrangement	Pushrod overhead valves, in line
Bore & Stroke	3.11 x 3.00 in (79.0 x 76.2 mm)
Stroke/Bore Ratio	0.96/1
Displacement	91.2 cu in (149 cc)
Compression Ratio	8.5/1
Carburetion by	Two downdraft Zenith 36 WIP 2
Max. Power	73 bhp @ 5200 rpm
Max. Torque	81 lbs-ft @ 3000 rpm
Idle Speed	600 rpm

DRIVE TRAIN:

Transmission ratios test car

I	3.19
II	2.47
III	1.49 (1.13 in OD)
IV	1.00 (0.76 in OD)
Final drive ratio	4.78 (3.62 in OD, 4.55 without OD)
Axle torque taken by	Rear springs

CHASSIS:

Frame	Pressed steel
Wheelbase	96 in
Tread, front and rear	49, 48½ in
Front Suspension	Coil springs, unequal wishbones, anti-roll bar
Rear Suspension	Rigid rear axle, semi-elliptic springs
Shock absorbers	Telescopic
Steering type	Burman recirculating ball
Steering wheel turns L to L	3¾
Turning diam., curb to curb	34¼ ft
Brakes	Lockheed two leading shoe
Brake lining area	146 sq in
Tire size	5.60 x 15

GENERAL:

Length	162½ in
Width	60¾ in
Height	58 in
Weight, as tested	2440 lbs
Weight distribution, F/R as tested	55/45
Fuel capacity	11.8 U.S. Gallons

RATING FACTORS:

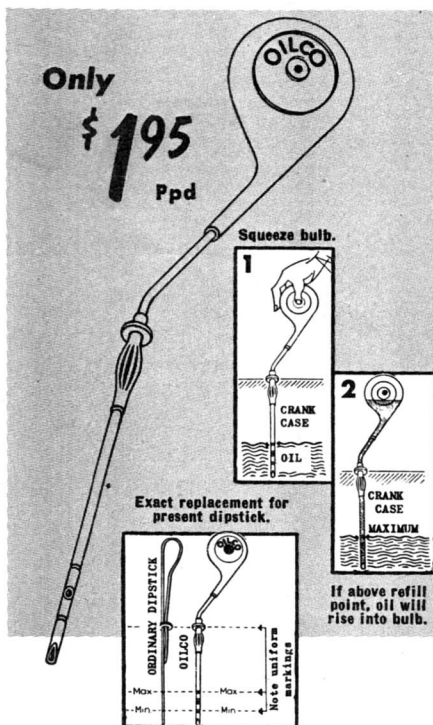
Specific Power Output	0.80 bhp/cu in
Power to Weight Ratio	33.4 lbs/hp
Piston speed @ 60 mph	1980 ft/min
Braking Area	120 sq in/ton
Speed @ 1000 rpm in top gear	15.2 mph

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RAPIER

(Continued from page 44)

is intended primarily as a docile family sedan. Its competitive successes stem from the fact that as such, it is indeed better than average in road-holding, breaking and in accelerative ability. Just the thing for families and rallies, in fact.

In order to get off the line smartly in our acceleration runs, we did use this Emergency Low, winding the engine to the far side of the 5500-6000 rpm red band and shifting at 28 miles per hour to second (One). Thirty-seven came up quickly and a snappy upshift put us in third. The speedo needle rapidly climbed to 65 (an actual 61) and with a flick of the switch, revs dropped one-fourth as the overdrive engaged smoothly and quickly under full throttle. The next shift came at 80 as we switched the OD off and simultaneously changed to fourth.

Top speed runs were made over SCI's measured quarter mile on the Munich-Ingolstadt autobahn in fourth OD. The speedo easily found the 90 peg and then began to falter, registering a hair over 90 on two runs. This worked out to be a true 87 mph. Considering the fact that this particular Rapier had been used harshly at Geneva as a demonstrator and then handed over to us, we were not disappointed in its inability to clock an honest 90 mph. Actually, considering the car's weight and streamlining handicap, we felt the Rapier's on-spot performance quite creditable. Engine speed in fourth overdrive was a modest 4200. It's worth noting that noise inside the passenger compartment was far from objectionable while flat out.

Steering we found to be still on the heavy side, despite the new Burman recirculating ball unit. The car under-

steered considerably when thrown into a corner hard, but it doesn't wallow at all, feeling very safe and secure. The Rapier did not like being slid on rough roads, but on smooth-surfaced pavement we could easily provoke rear end breakaway, though the tire screech seemed to be out of proportion.

Comfortable seating for four is fully possible in the Rapier. The two front seats fold forward well out of the way to allow easy access to the rear. Leg room in the front is more than adequate while knee room in back is enough even when both front seats are all the way back. Driving position is good and the pedals large and well spaced. A huge headlight dimmer switch could never be missed in the dark, nor could the well-placed two-speed windshield wiper control. Tach and speedo reside directly in front of the wheel, while the four other instruments are laid out in a row in the middle of the dash. The whole interior of the car is done in a washable bright colored imitation leather which gives off a warm, sort of light-hearted atmosphere well in keeping with the Rapier's personality.

We were particularly impressed with the size of the luggage compartment, though the trunk lid catch proved to be difficult. Overall quality of workmanship on the Rapier was not bad, though certain items on the dash did not seem to be up to previous Sunbeam standards. Storage compartments are multitudinous, but we still missed map pockets in either door. Optional at \$57 more, the heater and defroster worked well, and in a heavy rain storm encountered in Germany, the car was 100% water tight.

Featuring a bit of a dual character, it looks as if its successes in the rallying game will provide the necessary spark to stimulate sales success in the market place, where it will sell primarily as a family car.

Jesse Alexander

AUTO UNION

(Continued from page 27)

than today's Formula 1 cars, would turn everything but handsprings at his bidding. Zwickau being conveniently near to Nürburgring, Auto Union often used to hire the circuit for test purposes. During these sessions they had the exclusive entre to the place, and the *in camera* atmosphere seemed to dispel the last of Bernd's few inhibitions. The pit area at the Ring is perhaps 75 feet wide. One time just because he happened to feel like it, Rosemeyer demonstrated a novel form of take-off from the pits. When the operator with the portable electric starter had fired up the engine and stood his distance, Bernd dropped in the clutch and pitched into a series of overlapping circles, on full correcting lock and with rubber smoke spouting from the back tires. The pattern of arabesques carried the bolide clear across the road, finally to within inches of the wall fronting the tribunes; there, at the critical split second, and without otherwise punctuating his waltz, Rosemeyer un-wound the steering a degree or two and shot off along the course.

Not long ago, in an article in an American magazine, it was said of the Auto Union that "nobody ever learned how to take it into or out of a corner really fast". This was nonsense, and justifiably riled survivors of the *equipe* who read it. To get nearer the truth, let's say that out of the men who drove Auto Unions, Rosemeyer, Nuvolari and Stuck learned to corner them really fast. The relative misfits, some of whom, however, showed a sporadic insight, were Muller, Hasse, von Delius (killed in collision with Seaman's Merc during the 1937 German GP), Prinz zu Leiningen, Momberger, Meier, Bigalke, Fagioli, Kautz, Pietsch.

Almost consistently, anyway according to published and widely accepted figures, the Mercs were up on power compared with the Auto Unions of corresponding date. So how came it, if nobody knew how to take an Auto Union through turns really fast, that over the six relevant seasons, the Zwickau marque copped 41% of the top *grandes epreuves*? How too, it is pertinent to ask, did Auto Union ever succeed in licking the Stuttgart metal at Nürburgring, which is practically all corners? Rosemeyer lived to contest three German Grands Prix at the Ring, and won

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