



GORDON CHITTENDEN PHOTOS

# BMW 2800 CS

*Beautiful, fast, stable, comfortable, quiet but—maybe too expensive?*



THE BMW 2800 CS is a remarkable mating of an older chassis and body with a brand new engine. The 4-cyl, 135-bhp 2000 CS we tested three years ago was sophisticated and luxurious but underpowered and frankly a disappointing car for its over-\$5000 price. Putting the 2788-cc, 192-bhp six into this car has resulted in all the expected performance improvements plus a new standard of sophistication and understated luxury for 6-cyl cars.

Performance aside, we always thought the 2000 CS had one of the most attractive basic bodies of any car in the world—unfortunately capped off with singularly awkward front-end styling. For the 2800 CS, BMW engineers and stylists kept the original unit body, added 3 in. to the wheelbase ahead of the windshield to accommodate the longer engine and designed an entirely new, absolutely satisfactory front end. Just how well this was done can be appreciated from the detail sketches in the accompanying R&T Styling Analysis on pages 106-107. These drawings tell the story

better than words but we'd like to say here that the changes—not the least of them being the adoption of wider, larger-diameter tires and the resulting larger wheel arches—has given the car a crisp, aggressive appearance. It looks *right*.

The interior looks right, too. There is not a trace of ostentation, but everything is there, tastefully and simply done. The front seats are superbly designed—fully supporting, upholstered in leather and adjustable through 75 degrees. The rear seats are equally good (though lacking a bit of the headroom and more than a little legroom), with a fold-down center armrest. The instrument panel, with large, properly round and easily readable gauges in front of the driver, is devoid of any decoration except for the handsome, full-width wood veneer. Also running full width is a most practical shelf for incidental items, with a padded edge and wood dividers every few inches to keep things from rolling about. In addition to this shelf there are snap-flush map pockets in each door; a useful shelf in front of the gearshift lever, under



COLOR PHOTOGRAPHY BY JONATHAN THOMPSON



## BMW 2800 CS

the heating/ventilation unit; and *two* underdash storage compartments, a large one in front of the passenger and a smaller one to the left of the steering column. The latter compartment contains the hood release lever and the trip odometer reset knob, but—surprisingly for an expensive car—neither compartment is lockable. Nor is the fuel filler cap.

The steering wheel is large and well positioned, with a wood rim. The rim is elegant but not quite as pleasing in the hands as the leather-covered rim of a 2800 CS we tried in Germany last summer (shown in the color photos). That wheel also had its horn button in the center, replaced on our test car by three buttons, one in each spoke. The column has two control stalks, the left one for high beam and the much appreciated headlight flasher, the right one for the directional signals, windshield wiper switch and washers. The three functions of this lever took some getting used to but seemed right thereafter. The gearshift lever has a wood knob and a nice, zippered, leather boot. On the console around the gearshift are the electric window switches, the windshield wiper speed control and the cigarette lighter. The test car had electric lifts for the rear quarter windows only; the optional electric front lifts, tried in Germany, are slow but relieve the laborious cranking required with the manual system. All the controls are carefully placed where they are functionally correct, in contrast to the flight-deck array of

switches on some GT cars. There is no BMW identification anywhere in the interior—you don't need to be reminded what car you are driving. But the BMW badge appears eight times on the exterior—others are being informed! Vision in every direction is excellent, unobscured by the headrests in their down positions.

Driven moderately, the 2800 CS is smooth and very, very quiet. At cruising speeds the only sound is the steady hum of the steel-belted Michelin XAS tires. The big BMW engine, fully described in the New Model Analysis and Road Test of the sedans in the May 1969 issue, is without a doubt the most efficient and sophisticated inline six in the world. It is powerful and responsive, yet remarkably easy on gasoline and meeting government emission regulations on carburetors with no added-on devices. Almost soundlessly willing at part-throttle, with amazingly low tappet noise, it has the most beautifully subdued snarl imaginable when opened up. Getting off in a hurry is accompanied by traditional BMW wheel patter—not objectionable but one of the few things about the car that is not ultra-refined. Accelerating suddenly from low engine speeds in the intermediate gears gave a momentary hesitation on our test car; the blame for this is laid to leather seals around the accelerator pump pistons which need more miles to seat correctly.

Gearing seems just right (the CS has a 3.45:1 final drive ratio, compared to the 2500's 3.64), permitting corrected speeds of 32, 61 and 91 mph in the first three gears and an observed corrected maximum of 126 mph. The speedometer was 8 percent optimistic—unacceptable, we think, in a car that makes such a strong appeal to alert, knowledgeable



### COMPARISON DATA

	BMW 2800 CS	Mercedes 280 SL	Jaguar E-Type	Porsche 911E
List price.....	\$8107	\$7654	\$6250	\$7995
Curb weight, lb.....	2990	3120	3018	2361
0-60 mph, sec.....	9.3	9.9	8.0	8.4
Standing ¼-mi.....	17.4	17.1	15.7	16.0
Speed at end, mph.....	82	80	86	83
Panic stop from 80 mph, % g.....	80	90	84	84
Fade in 6 stops from 60 mph, %.....	48.0	nil	nil	nil
R&T wear index.....	50	60	55	39
R&T steering index.....	1.38	1.07	1.04	1.01
Fuel economy, mpg.....	19.0	17.5	15.9	18.4

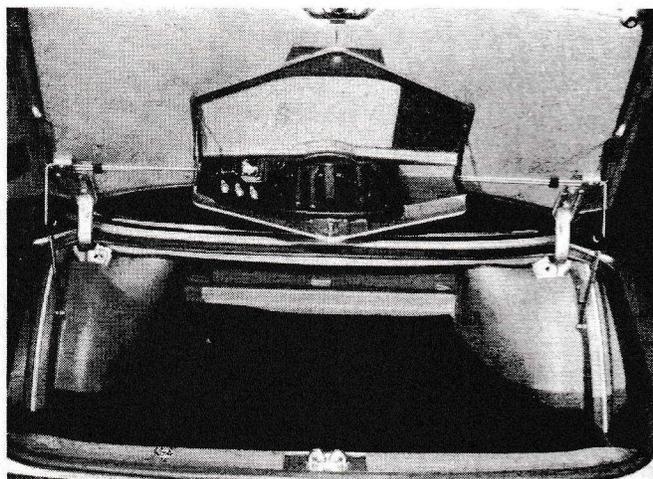
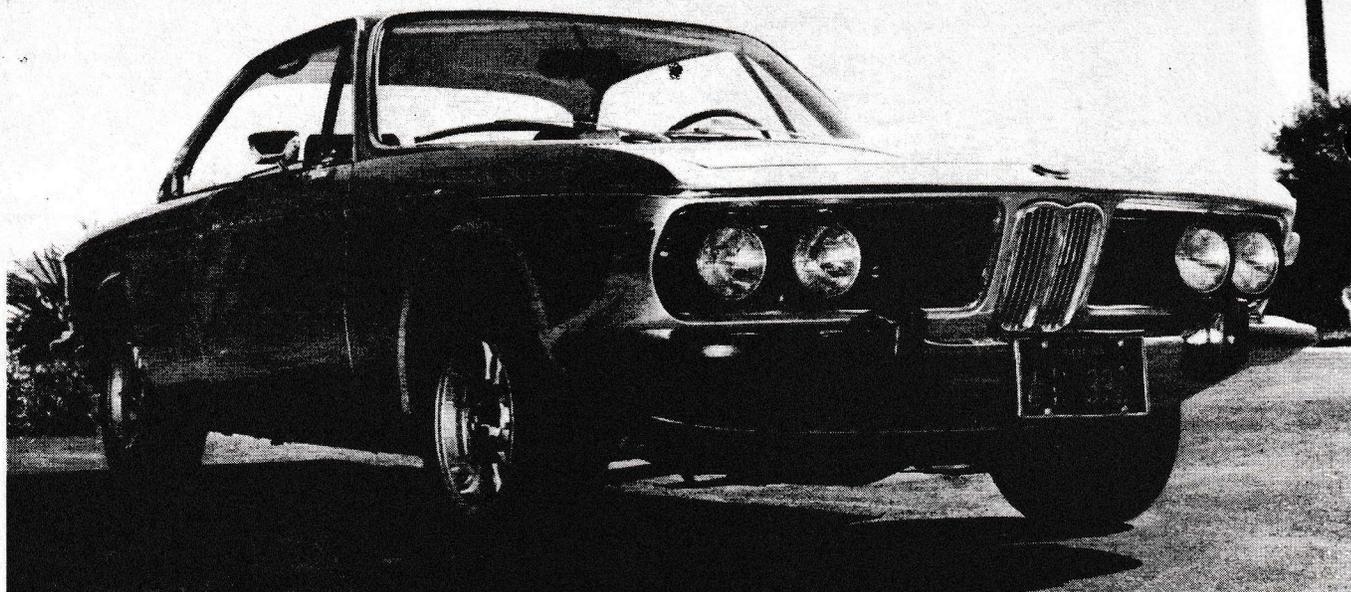
drivers. The shifting action is very smooth, especially into 1st and reverse, often awkward on other transmissions. Making really quick changes we experienced an occasional snick as we beat the synchros. Handling is very good in all conditions, not as phenomenal as a Porsche 911 but exceptional for a luxurious 4-passenger car. Typically BMW, the inside rear wheel lifts in hard cornering. The Michelin radials squealed at the slightest provocation, but since the Semperits on the car driven in Germany did the same, it may well be a suspension characteristic. The optional D70-14 radials might help.

The power steering is very nearly as good as that of Mercedes, which is to say, tops. It feels just a bit light initially at high speeds but continued use of the car builds complete confidence; there is just enough feel to ensure accuracy. At lower speeds, the CS is really maneuverable. The brakes, unsatisfactory in our fade test, are discs in front and drums in back—a carryover from the older 2000 CS, as is the narrow rear track, which despite the wider wheels is still 2.4 in. less than that of the 2500/2800 sedans. According to specifications, the 2800 CS also has the small, 14.5-gal tank of the 2000 CS, but our test car and subsequent examples have a bigger, 18.5-gal tank—fortunately for the cruising range. Averaging 19 mpg over a variety of conditions which included some very hard driving, the 2800 CS is exceptionally efficient for a 2.8-liter, 3000-lb car.

Assembly quality and detailing are first rate and largely responsible for the car's tight, insulated character. The ride is very soft; under the hard driving conditions that the power and adhesion encourage, this results in a distinct but not

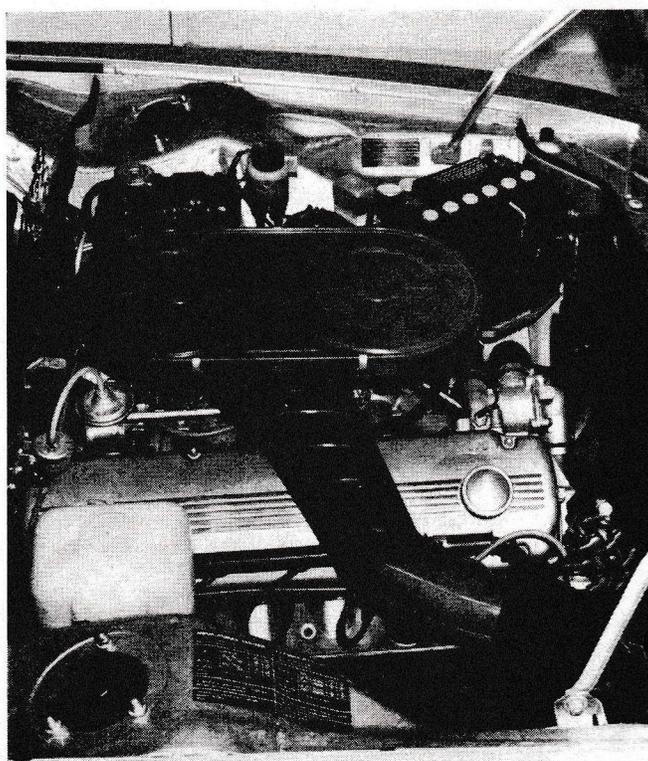
disturbing bobbing motion over irregular surfaces—a minimal effect from fully independent suspension that combines ride and roadholding so well. Passengers are rarely aware of the level at which the driver is pressing on. At high speeds a poorly fitting vent window produced quite a bit of wind noise but since the other one was silent it was a matter of individual fit rather than design. There is surprisingly little noise from the unframed but rubber-edged mating of the main side windows just behind the driver's and front passenger's ears. Ventilation from the console system is excellent, with a satisfactory range of air supplied by the blower.

The BMW engine compartment is as well finished as the exterior of some cars, with a beautifully cast cam cover and rather tidy plumbing, including a radiator top tank on the left of the engine ahead of the firewall. Other than for inspection and photographic purposes, we had only one occasion to open the nicely counterbalanced hood—when the bellcrank on the accelerator linkage came adrift one night; fortunately it snapped back into place easily. The trunk is long, wide and well carpeted but not particularly deep, not quite accommodating full grocery sacks upright. The *pièce de résistance*, characteristic of the whole car, is the super-complete tool kit in a fold-down tray which fits neatly, out of the way but easy to get at, in the underside of the trunk lid. Contained therein: 3 double open-end wrenches, 4 double box-end wrenches, 3 Allen wrenches, pliers, channel-locks, regular screwdriver, Phillips screwdriver, plug socket wrench, a set of feeler gauges, 3 spark plugs, 3 bulbs and 6 fuses. Also, two special tools we couldn't identify, apparently for BMW-class adjustments!



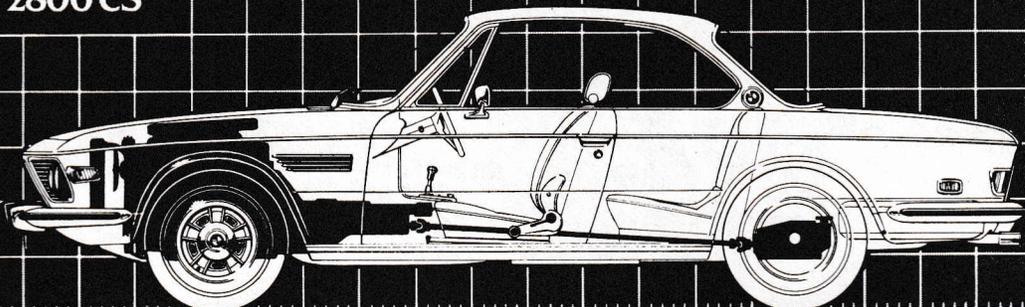
## BMW 2800 CS

So far, so good: a car that in every facet of its appearance and performance (with the exception of lacking brute, unusable acceleration) awed and made covetous every member of the staff and everyone else who saw or rode in it. A car that simply conquered all road conditions with polished authority, a car as much for enthusiastic hard driving as for sedate, comfortable cruising. *But*—it costs over \$8000 basic, over \$8500 as equipped and close to \$9000 with tax and license. It was already unattainable by mere mortals, before the re-evaluation of the German Deutschmark, at \$7600. And the price can be boosted above \$10,000 through a combination of options not fitted to our test car: automatic transmission, air conditioning, manual or electric sunroof, tinted glass, radio and electric front window lifts. Perhaps when one gets beyond, say, \$7500 a few additional hundreds are not particularly crucial, but an American customer begins to balk at prices approaching \$10,000 for an under-200-bhp, 6-cyl car. The answer to this, of course, is that the BMW is a far more stable, balanced, totally usable car than any other we can think of, and there is nothing remotely approaching the 2800 CS for significantly less. One has to look to the top-of-the-line Mercedes-Benz models, or to the Ferrari/Lamborghini class, to find more car. So anyone with \$9000 to spend must find the 2800 CS close to irresistible. 





## ROAD TEST BMW 2800 CS



SCALE: 10" DIVISIONS

### PRICE

List price, east coast ..... \$8022  
List price, west coast ..... \$8107  
Price as tested ..... \$8517  
Price as tested includes leather upholstery (\$310), metallic paint (\$100)

### IMPORTER

Hoffman Motors Corp.  
375 Park Ave., New York, N.Y.

### ENGINE

Type ..... 6 cyl inline, sohc  
Bore x stroke, mm ..... 86.0 x 80.0  
Equivalent in ..... 3.39 x 3.15  
Displacement, cc/cu in. .... 2788/170  
Compression ratio ..... 9.0:1  
Bhp @ rpm ..... 192 @ 6000  
Equivalent mph ..... 126  
Torque @ rpm ..... 174 lb-ft @ 3700  
Equivalent mph ..... 74  
Carburetion two Solex 35/40 INAT  
Type fuel required ..... premium  
Emission control ..... engine mods

### DRIVE TRAIN

Transmission ..... 4-speed manual,  
Gear ratios: 4th (1.00) ..... 3.45:1  
3rd (1.38) ..... 4.75:1  
2nd (2.12) ..... 7.31:1  
1st (3.85) ..... 13.28:1  
Final drive ratio ..... 3.45:1

### CHASSIS & BODY

Body/frame ..... unit steel  
Brake type: 10.7-in. disc front, 9.8-in. drum rear, power assisted; handbrake on rear drums  
Swept area, sq in ..... 394  
Wheels ..... alloy disc, 14 x 6J  
Tires ..... Michelin 175 HR 14 XAS  
Steering type: ZF-Gemmer worm & roller, power assisted  
Overall ratio ..... 18.9:1  
Turns, lock-to-lock ..... 4.0  
Turning circle, ft ..... 34.5  
Front suspension: MacPherson struts, lower A-arms, coil springs, tube shocks, anti-roll bar  
Rear suspension: semi-trailing arms, coil springs, tube shocks, anti-roll bar

### ACCOMMODATION

Seating capacity, persons ..... 4  
Seat width, front/rear ..... 2 x 22.5/2 x 20.5  
Head room, front/rear ..... 36.5/36.0  
Seat back adjustment, degrees ..... 75  
Driver comfort rating (scale of 100):  
Driver 69 in. tall ..... 90  
Driver 72 in. tall ..... 75  
Driver 75 in. tall ..... 70

### INSTRUMENTATION

Instruments: 150-mph speedo, main & trip odo, 8000-rpm tach, water temp, fuel level, clock  
Warning lights: oil pressure, alternator, fuel reserve, directionals, high beam, handbrake, rear window heater, emergency flashers

### MAINTENANCE

Service intervals, mi:  
Oil change ..... 4000  
Filter change ..... 4000  
Chassis lube ..... none  
Minor tuneup ..... 4000  
Major tuneup ..... 8,000  
Warranty, mo/mi ..... 12/12,000

### GENERAL

Curb weight, lb ..... 2990  
Test weight ..... 3325  
Weight distribution (with driver), front/rear, % ..... 56/44  
Wheelbase, in ..... 103.3  
Track, front/rear ..... 56.9/55.2  
Overall length ..... 183.5  
Width ..... 64.9  
Height ..... 53.9  
Ground clearance ..... 5.9  
Overhang, front/rear ..... 38.2/42.0  
Usable trunk space, cu ft ..... 14.5  
Fuel tank capacity, U.S. gal. .... 18.5

### CALCULATED DATA

Lb/bhp (test weight) ..... 17.3  
Mph/1000 rpm (4th gear) ..... 19.5  
Engine revs/mi (60 mph) ..... 3080  
Engine speed @ 70 mph ..... 3550  
Piston travel, ft/mi ..... 1620  
Cu ft/ton mi ..... 90.8  
R&T wear index ..... 50  
R&T steering index ..... 1.88  
Brake swept area sq in/ton ..... 227

## ROAD TEST RESULTS

### ACCELERATION

Time to distance, sec:  
0-100 ft ..... 3.7  
0-250 ft ..... 6.6  
0-500 ft ..... 9.8  
0-750 ft ..... 12.4  
0-1000 ft ..... 14.8  
0-1320 ft (1/4 mi) ..... 17.4  
Speed at end of 1/4 mi, mph ..... 82  
Time to speed, sec:  
0-30 mph ..... 3.6  
0-40 mph ..... 5.7  
0-50 mph ..... 7.4  
0-60 mph ..... 9.3  
0-70 mph ..... 12.7  
0-80 mph ..... 16.4  
0-100 mph ..... 28.8  
Passing exposure time, sec:  
To pass car going 50 mph ..... 5.9

### FUEL CONSUMPTION

Normal driving, mpg ..... 19  
Cruising range, mi ..... 350

### SPEEDS IN GEARS

4th gear (6000 rpm) ..... 126  
3rd (6200) ..... 91  
2nd (6200) ..... 61  
1st (6200) ..... 32

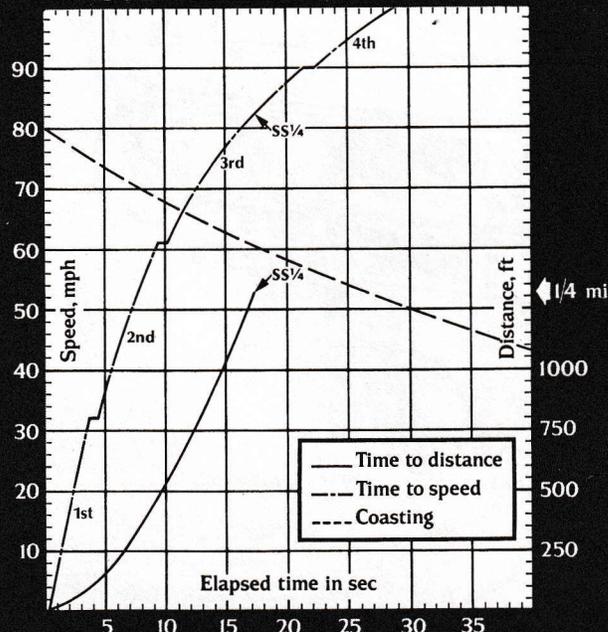
### BRAKES

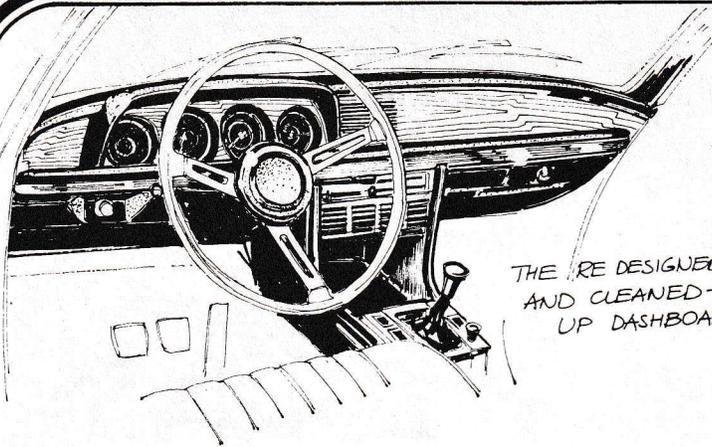
Panic stop from 80 mph:  
Deceleration rate, % g ..... 80  
Stopping distance, ft ..... 352  
Control ..... very good  
Fade test: percent increase in pedal effort to maintain 50%-g deceleration rate in 6 stops from 60 mph ..... 48  
Parking: Hold 30% grade? ..... yes  
Overall brake rating ..... good

### SPEEDOMETER ERROR

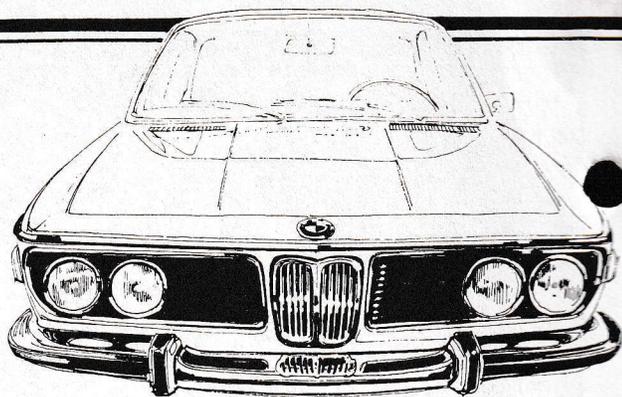
30 mph indicated is actually ..... 26.0  
40 mph ..... 36.0  
60 mph ..... 55.0  
70 mph ..... 64.0  
80 mph ..... 74.0  
100 mph ..... 93.0  
Odometer, 10.0 mi ..... 9.10

## ACCELERATION & COASTING

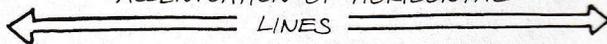




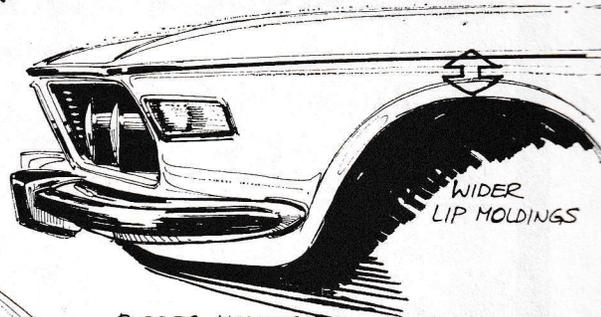
THE RE DESIGNED AND CLEANED-UP DASHBOARD.



ACCENTUATION OF HORIZONTAL LINES

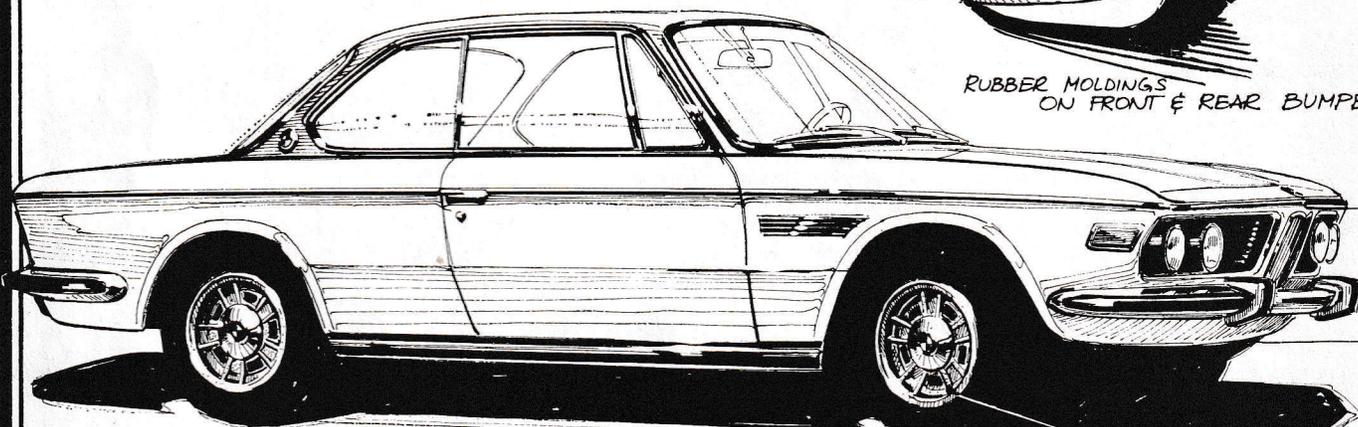


## R & T STYLING ANALYSIS BMW 2800 CS



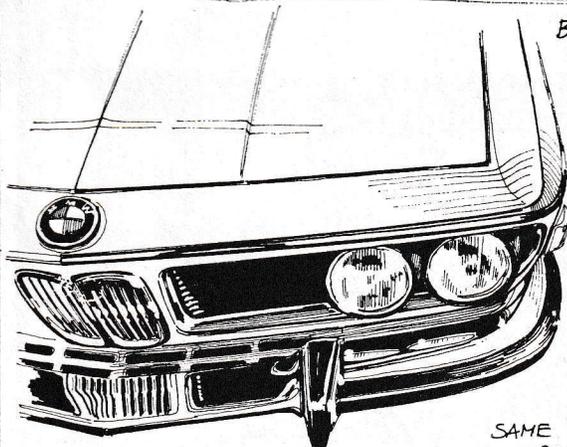
WIDER LIP MOLDINGS

RUBBER MOLDINGS ON FRONT & REAR BUMPER.



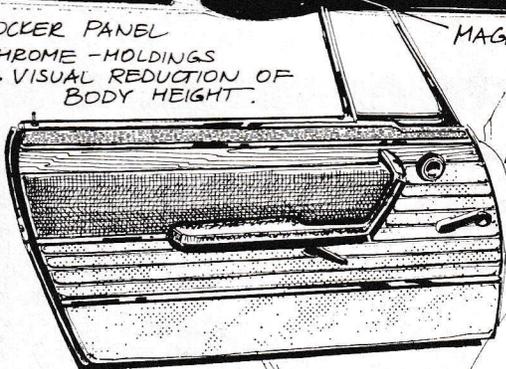
BLACK ROCKER PANEL WITH CHROME-MOLDINGS → VISUAL REDUCTION OF BODY HEIGHT.

MAG WHEELS

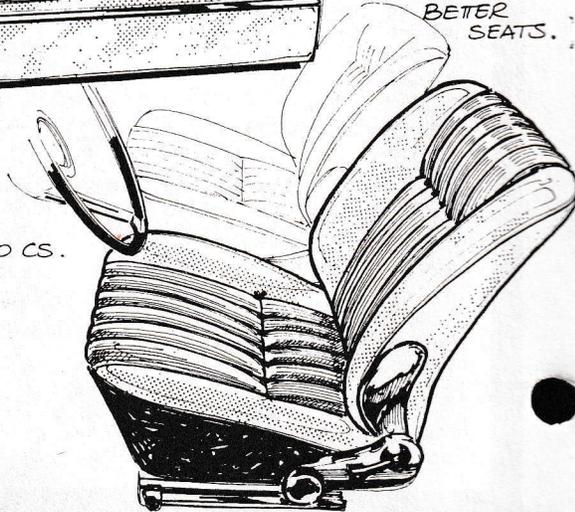
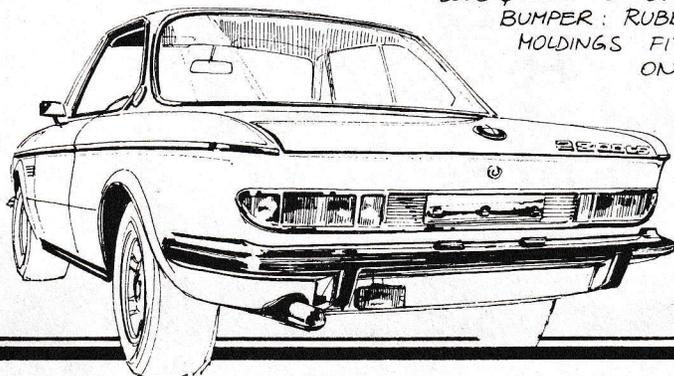


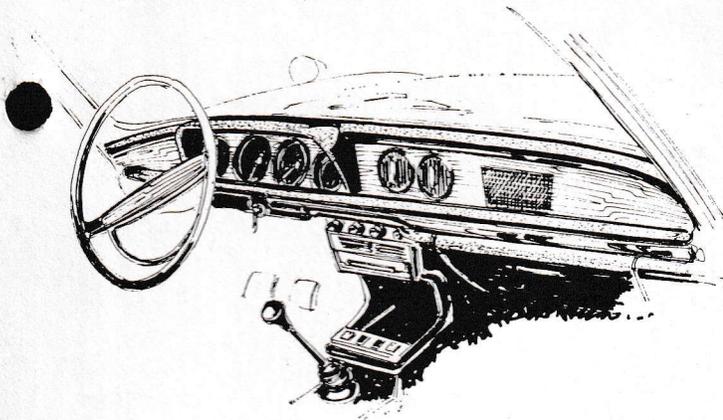
NO POCKET ON THE 2800 DOOR —

BUT MUCH NICER AND BETTER SEATS.

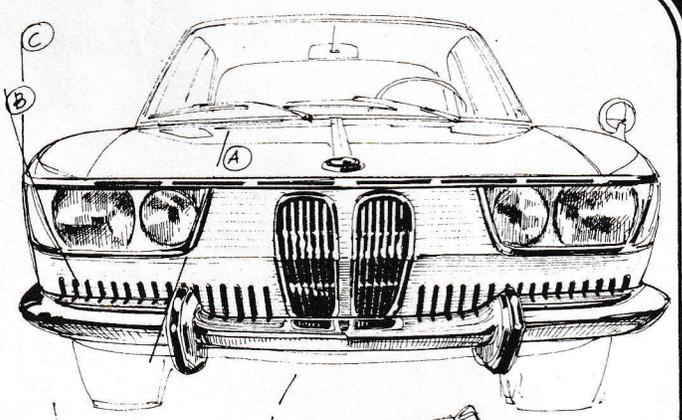


SAME REAR END ON 2000 & 2800 EXCEPT BUMPER: RUBBER-MOLDINGS FITTED ON 2800 CS.

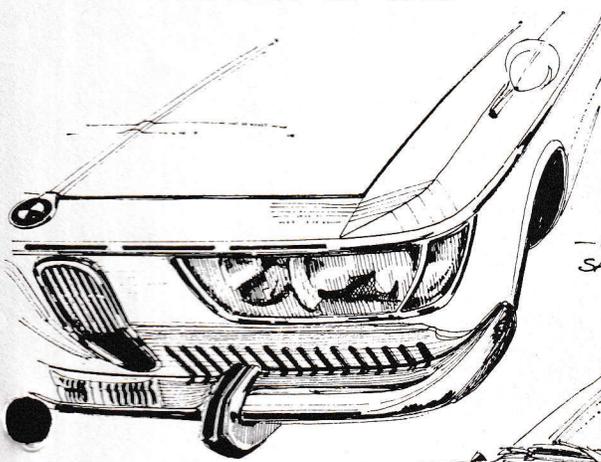




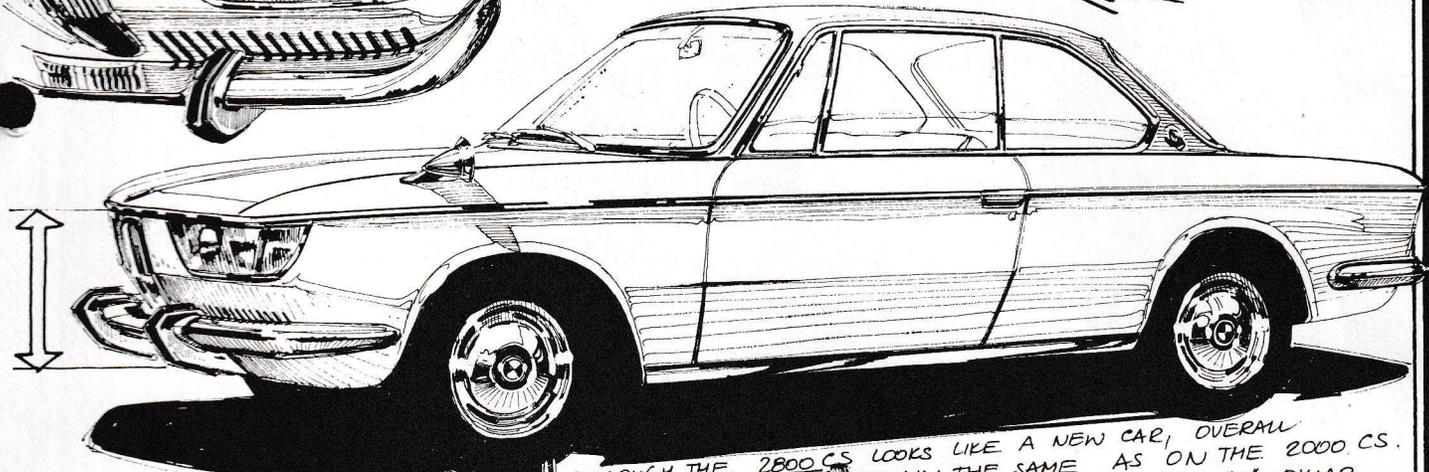
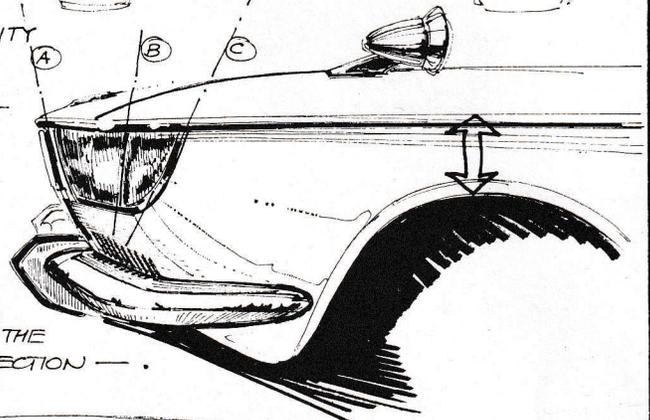
# 2000 CS



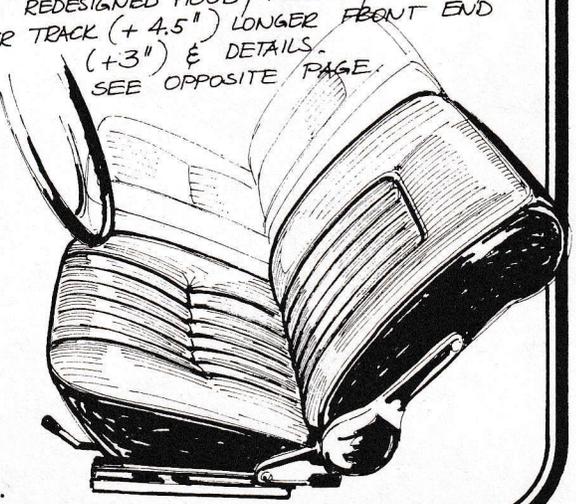
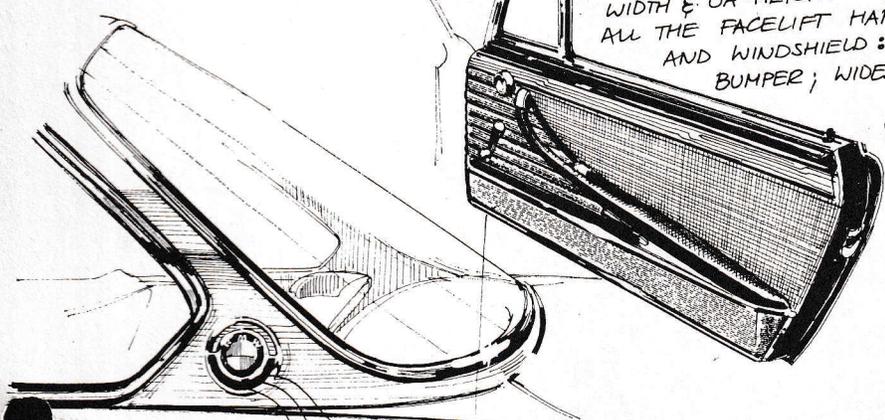
NO CONTINUITY  
BETWEEN  
THE LINES  
A B & C -  
DESTROYS  
BASICALLY  
CLEAR  
DESIGN.



VERY WELL  
SOLVED ON  
THE 2800 CS  
- WITH ALMOST THE  
SAME ZERO SECTION - .



ALTHOUGH THE 2800 CS LOOKS LIKE A NEW CAR, OVERALL  
WIDTH & OA-HEIGHT REMAIN THE SAME AS ON THE 2000 CS.  
ALL THE FACELIFT HAPPENS IN FRONT OF THE 'A'-PILLAR  
AND WINDSHIELD: REDESIGNED HOOD; FENDER; GRILLE;  
BUMPER; WIDER TRACK (+ 4.5") LONGER FRONT END  
(+3") & DETAILS.  
SEE OPPOSITE PAGE.



"C"-PILLAR VENTILATION -  
COMBINED WITH EMBLEM  
(ON 2000 & 2800 CS).