



DAVE EPPERSON

TOYOTA CORONA

An Asiatic Automatic Built to Battle Beetles

CHANCES ARE that when the first astronauts reach the moon, they'll be greeted by a smiling Japanese automobile salesman intently touting the virtues of the Toyota Corona. Absurd? Not if Toyota Motor Company's policies and those of the Japanese government are examined. Toyota aims to conquer the world—cover the planet with well made, durable cars and commercial vehicles. So, why not the moon? The Japanese government has issued an edict to manufacturers which, paraphrased, says: "Thou shalt produce products which are well made, reliable and intensely competitive in the world market." Survival by export is mandatory for more than 95 million Japanese people.

In shooting for the moon in world auto sales, Toyota already is third (behind General Motors Corp. and Ford

Motor Co.) in production of commercial vehicles. Toyota management has set No. 1 as its goal in production of passenger cars as well as commercial vehicles.

Immediate target in Toyota's plans, however, is Volkswagen of Germany. Toyota hopes its small Corona, with 90 bhp and seating for almost six passengers, will present an appeal to American and European buyers who also are looking at VW's 50 bhp and a passenger compartment which accommodates at best a cramped five.

Can Toyota administer a sales karate blow to VW? Possibly. The VW Beetle, like a bulldog pup, is charmingly ugly and thereby wins friends of long standing. The Toyota Corona also has that appearance, but in boxy lines, rather than 1939 curves. A cult of Toyota Corona faddists, like Beetle-

maniacs, could arise and exhibit all the delight in this small Japanese car that has been displayed by a generation of VW owners.

On first acquaintance, the Toyota Corona 1900 Automatic traps the driver into thinking of Japan—*Kabuki* dancers, fluttering fans, kimono, *geta* and steaming bowls of rice. "This would be a great car to take mama-san to the *Noh* plays," the driver muses in evening midtown traffic. It seems gentle, cultured, a ladies' car when driven that way.

But, given a tougher assignment, the Corona performs like a Judo champion. When a 4-wheel-drive vehicle for a weekend exploration of California's vast Mojave Desert failed to arrive as scheduled, the Toyota Corona was elected a committee of one to carry out the desert trek assignment. More than a small amount of apprehension developed at the idea of taking such an unknown quantity into the waterless wasteland of eastern California. Nevertheless, the Toyota demonstrated an effortless 75 mph cruise on eight-lane freeway, distinct ability to corner well on curving, paved mountain roadway, capability to remain upright at good speed in sand, and a pen-

chant for leaping nimbly from boulder to boulder in less smooth territory.

The Toyota was taken through a sticky dry lake bed, over broken lava spewed from volcanic cinder cones, amid sage and cactus, around dunes where flowed a river of good size a million years ago, and up canyons recently ripped from mountains by flash floods. The impression of Japanese delicacy was replaced by the picture of a bandy-legged, stringy athlete ready to pin his opponent to the mat.

As the Toyota negotiated the lunar-like craters and dead seas of the Mojave, it became apparent that if Toyota Motor Co. wishes, it may capture the moon market—hands down.

On the homeward leg of the desert junket, the Toyota was driven along a 30-mile section of U.S. Route 66 which extends westward in a straight line and climbs some 2000 feet. It was on this long, long grade the test driver discovered the delightful sport of deavouring VWs. Even 1966 VW 1300s and 1500 fastbacks tend to flag on the lengthy climb. Shouting an exuberant "Banzai!" the Toyota passed one after another laboring Volkswagen. The little Corona also showed the tail of its kimono to a Ford Falcon Six or two and an occasional Rambler American.

THOUGH THE Toyota Corona is fun to drive in a variety of situations, two hours in the driver's position provides a lesson in what automotive discomfort can be. Accelerator position offers no rest for the right leg. The steering wheel seems much too proximate. On the whole, the control system appears scaled for the average Japanese, rather than a horse-sized American.

Because the door pillar is well ahead of the back of the front bench seat, and because the steering wheel projects well into driving seat space, exit from the Toyota is a decided pinch for those of ample posterior dimensions. It is safe to speculate that *sumo* wrestlers do not purchase Toyota Coronas.

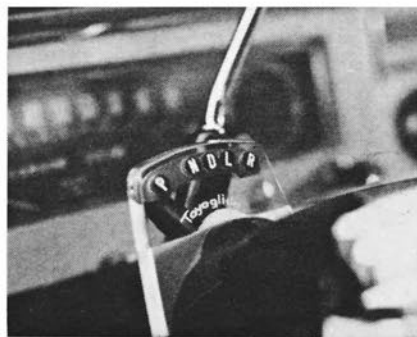
Front seat passenger room is adequate for an additional adult or two medium-sized children. The rear seat will accommodate three adults, provided they are on the best of terms and aren't overly long in the shank.

The Toyota's luggage capacity is astounding when wheelbase of 95.3 in. and overall length of 161.8 in. are considered. More than 13 cu. ft. of space is available in the rear luggage compartment—which carried into the desert a large aluminum cooler chest, a carton of food, a propane stove, cookware and dishes, three gallons of water and a change of clothing for three. All of the latter was fitted in with ease beside spare wheel, sturdy

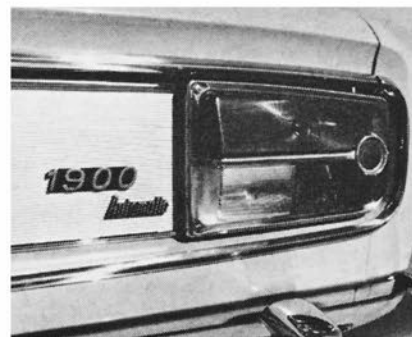


SCOTT MALCOLM

SIMPLICITY IN design is the Toyota interior keynote. Seating seems scaled more for the average Japanese, rather than for 6-ft. Americans.



THIS odd quadrant may become illegal with U.S. standardization.



REVERSE, stop and tail lamps display trim integration.

cantilever jack and a kit of chromium plated tools, which included a folding steel wheel chock.

The *CAR LIFE* test Toyota was fitted with "Toyoglide"—described by one Toyota engineer as a carbon copy of Chevrolet's 2-speed Powerglide au-

tomatic transmission, "dehydrated a little bit." Toyoglide offers no wheel-spin or other dragstrip gymnastics which could be obtained with Toyota's 4-speed manual gearbox. What Toyoglide produces for the driver is smooth, brisk acceleration through low range

BOXY LINES, four doors, seating for six and 90 bhp could lure some U.S. buyers away from Beetlemania into seizures of Coronaddiction.



DAVE EPPERSON



(1.82:1) to nearly 48 mph, then a change (somewhat abrupt) to high range (1.00:1) for continued acceleration to 90 mph or so. The automatic feature is what will appeal to the American housewife—the operator of that second car—in her rounds to doctor, dentist, supermarket, school, department store and beauty shop.

Though quadrant positions (P-N-D-L-R) may be acceptable on the Mojave moonscape, such an arrangement is quite likely to be illegal in the U.S. before too many months.

The Corona's steering was much too imprecise. Moreover, it didn't seem "quick" enough to match the agility of the remainder of the car. At

speeds above 60 mph, steering displayed a disconcerting lack of road feel. Approximately 5° of play in the steering system resulted in the driver being constantly in doubt in regard to his true track and road position.

The Toyota's 11-in. drum brakes provided adequate stopping power in normal situations. In panic stops, rear wheels locked up for slides that were difficult to control. However, repeated panic stops brought on no tendency toward complete brake fade. Front drums are of quick-cooling Buick bi-metal variety, with finned aluminum outer drums over cast-iron inner liners. In all, the Toyota's brakes may be regarded as slightly better, certainly no worse, than drum brakes on current Detroit products. In favor of Toyota brakes is that they were mistaken for discs by one test driver. VW offers discs; Toyota probably will do likewise within a short span of time.

The Corona's independent front suspension is of conventional unequal length A-arms, coil springs and telescoping shock absorbers. Rear suspension is by twin leaf springs and live axle. Altogether, the Corona's suspension delivers a firm, but not stiff ride.

In engine design, Toyota Motor Co. has not strayed from time tested

1966 TOYOTA CORONA 1900 AUTOMATIC



DIMENSIONS

Wheelbase, in.	95.3
Track, f/r, in.	50.0
Overall length, in.	161.8
width	61.0
height	55.9
Front seat hip room, in.	51.8
shoulder room	45.5
head room	36.2
pedal-seatback, max.	42.5
Rear seat hip room, in.	51.7
shoulder room	45.8
leg room	n.a.
head room	34.3
Door opening width, in.	28.9/28.0
Floor to ground height, in.	10.5
Ground clearance, in.	7.1

PRICES

List, fob p.o.	\$1714
Equipped as tested	2029
Options included: Automatic trans., seat belts, heater-defroster, white sidewall tires, carpet, 2-speed windshield wipers, radio.	

CAPACITIES

No. of passengers	6
Luggage space, cu. ft.	13.4
Fuel tank, gal.	12.0
Crankcase, qt.	4.25
Transmission/diff., pt.	15/2.2
Coolant radiator, qt.	7.4

CHASSIS/SUSPENSION

Frame type	unit
Front suspension type: Independent by unequal length A-arms, coil springs; tubular shock absorbers.	
ride rate at wheel, lb./in.	n.a.
anti-roll bar dia., in.	0.8
Rear suspension type: Parallel, longitudinal semi-elliptic leaf springs, live axle, tubular shock absorbers.	
ride rate at wheel, lb./in.	n.a.
Steering system: Recirculating ball, long and short tie rods with single idler.	
gear ratio	18.2
overall ratio	n.a.
turns, lock to lock	3.6
turning circle, ft. curb-curb	32.4
Curb weight, lb.	2170
Test weight	2530
Weight distribution, % f/r	56.8/43.2

BRAKES

Type: Single-line hydraulic, with self-adjusting duo-servo shoes in finned aluminum front drums, cast-iron rear drums.	
Front drum, dia. x width, in.	9.1 x 1.25
Rear drum, dia. x width	9.1 x 1.25
total swept area, sq. in.	142.8
Power assist	none
line psi @ 100 lb. pedal	115.4

WHEELS/TIRES

Wheel size	13x4.5
optional size available	none
bolt no./circle dia., in.	4/4.5
Tire make, brand	Dunlop Dunsafe
size	5.60-13
recommended inflation, psi	23/21
capacity rating, total lb.	n.a.

ENGINE

Type, no. cyl.	ohv 1L4
Bore x stroke, in.	3.46 x 3.07
Displacement, cu. in.	115.7
Compression ratio	8:1
Rated bhp @ rpm	90 @ 4600
equivalent mph	81
Rated torque @ rpm	110 @ 2600
equivalent mph	45
Carburetion	1x2
barrel dia., pri./sec.	0.906/1.142
Valve operation: Mech. tappets, tubular pushrods and rocker arms.	
valve dia., int./exh.	1.65/1.38
lift, int./exh.	0.2562/0.2622
timing, deg.	23-53, 53-23
duration, int./exh.	256/256
opening overlap	106
Exhaust system: Resonator, reverse flow muffler.	
pipe dia., exh./tail	1.75/1.55
Lubrication pump type	rotor
normal press. @ rpm	.50 @ 2000
Electrical supply	alternator
ampere rating	30
Battery, plates/amp. rating	n.a./40

DRIVE-TRAIN

Clutch type	
dia., in.	
Transmission type: Torque converter, 2-speed planetary gearbox.	
Gear ratio 4th () overall	
3rd ()	
2nd (1.00)	3.70
1st (1.82)	6.73
1st x t.c. stall (2.10)	14.1
synchronous meshing	planetary
Shift lever location	steering column
Differential type: Hypoid.	
axle ratio	3.70:1

patterns—a 4-cyl. ohv engine employing an internal gear-driven camshaft, pushrods and rocker arms to actuate its valves. With its bore and stroke at 3.46 in. and 3.07 in., respectively, the engine's 115.7 cu. in. produce 90 bhp at 4600 rpm.

One trick played on the *CAR LIFE* test crew by the Corona was in its taste for fuel. To test crewmen, an 8:1 compression ratio appeared to mean regular grade fuel. A pronounced knocking once the tank had been filled with regular indicated otherwise. The need for premium gasoline apparently is dictated by the shape of Toyota combustion chambers—almost identical to those of some British Motor Corp. engines which require higher octane gasoline though the compression ratio also is a "low" 8:1.

Though the Corona's desires run to premium fuel, its engine produces better than 26 mpg for an estimated operating cost of \$1.70 per 100 miles. That is not equal to VW's 28-31 mpg on regular grade fuel, but it appears outstanding when Toyota's 90 bhp vs. VW's 50 bhp are compared.

Not boasting a great deal of experience with tires of Japanese manufacture, CL feared the worst when faced with tortuous sections of moon-crater

lava rock in the Mojave, something akin to acres of broken Coca-Cola bottles. The Japanese Dunlop Dun-safes 5.60-13s with which the Corona was fitted maintained their pressure, did not puncture, split or chunk. On pavement the tires provided a great deal of bite without interference with steering ease.

THE TEST Corona was painted a Japanese silk blue with, for some unknown reason, a daffodil yellow, three-barred competition stripe running from nose to tail. Paint application appeared well done from the low-cost mass production standpoint. Upholstery, in matching shades of blue, was of synthetic textiles.

Panel fit, hardware and general tightness of the Toyota did not match those of VW. Nevertheless, the Toyota's doors, lids, latches and catches fit tightly and present an overall view of snugness and the exercise of some care in manufacture.

One glaring failure in Toyota design is in the vent pane latch mechanism. The latch striker plate is painted, not plated with a hard metal to withstand wear. Hence the latch-dog face scrapes its way down the paint, leaving an ugly scar, which could only detract

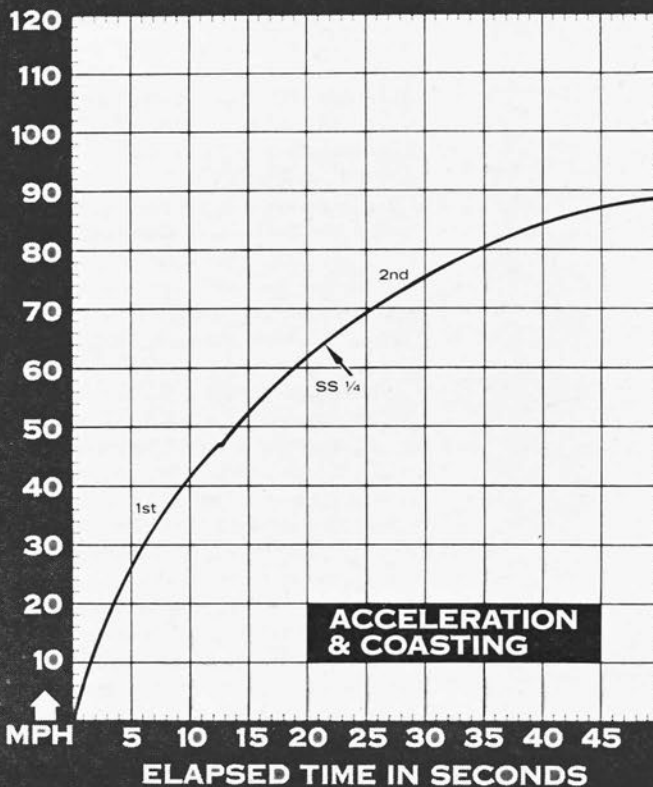
from enjoyment in ownership. *CAR LIFE's* guess is that Toyota will rectify this in short order.

One novel feature of the Corona is that the turn signal actuation lever has been integrated into the horn ring on the steering wheel. This is jim dandy for those who appreciate a hoot every time they round a bend.

Such foibles are minor. Taken as a whole, the Toyota Corona 1900 Automatic is a very roadable small car that will find its way, as the second car, into a number of American two-car garages. It also will be owned by those to whom economy is a factor, to whom initial purchase price and maintenance costs are more than passing considerations.

The Corona provides one lesson outside the realm of the entirely automotive. Behind those silks, pagodas, quaint rice paddies and snow-capped Mt. Fuji is an industrial complex that has only begun to flex its production muscles, a capacity for manufacture that is eager for market. The success of this youthful giant will be based on acceptance of Japanese products world wide. If the Toyota Corona is any indication, Japan's products will continue to win favor everywhere—perhaps on the moon. ■

CAR LIFE ROAD TEST



CALCULATED DATA

Lb./bhp (test weight).....	28.2
Cu.ft./ton mile	94.8
Mph/1000rpm (high gear).....	17.5
Engine revs./mile (60 mph).....	3430
Piston travel, ft./mile.....	1755
Car Life wear index.....	60.2
Frontal area, sq. ft.....	18.9
Box volume, cu. ft.	318.4

SPEEDOMETER ERROR

30 mph, actual.....	29.4
40 mph.....	38.6
50 mph.....	49.1
60 mph.....	58.1
70 mph.....	68.7
80 mph.....	79.0
90 mph.....	

MAINTENANCE INTERVALS

Oil change, engine, miles.....	2000
transmission/dif.....	10,000
Oil filter change.....	6000
Air cleaner service, miles.....	3000
Chassis lubrication.....	2000
Wheelbearing re-packing.....	10,000
Universal joint service.....	10,000
Coolant change, mo.	seasonal

TUNE-UP DATA

Spark plugs.....	Denso W17ES
gap, in.....	0.032
Spark setting, deg./idle rpm.../7/500	
cent. max. advance,	
deg./rpm.....	14/2500
vac. max. adv., deg./in. Hg 12/n.a.	
Breaker gap, in.....	0.018
cam dwell angle.....	52
arm tension, oz.....	14-19
Tappet clr., int./exh.....	0.008/0.014
Fuel pump pressure, psi.....	3.5
Radiator cap relief press., psi.....	15

PERFORMANCE

Top speed (5150), mph.....	90
Shifts (rpm) @ mph	
3rd to 4th ().....	
2nd to 3rd ().....	
1st to 2nd (4900).....	47

ACCELERATION

0-30 mph, sec.....	6.2
0-40 mph.....	9.2
0-50 mph.....	14.3
0-60 mph.....	18.8
0-70 mph.....	25.8
0-80 mph.....	34.3
0-90 mph.....	
0-100 mph.....	
Standing 1/4-mile, sec.	21.8
speed at end, mph.....	64
Passing, 30-70 mph, sec.....	19.6

BRAKING

(Maximum deceleration rate achieved from 80 mph)	
1st stop, ft./sec./sec.....	17
fade evident?.....	no
2nd stop, ft./sec./sec.....	17
fade evident?.....	slight

FUEL CONSUMPTION

Test conditions, mpg.....	26.3
Normal cond., mpg.....	25-30
Cruising range, miles.....	300-360

GRADABILITY

4th, % grade @ mph.....	
3rd.....	
2nd.....	9 @ 62
1st.....	15 @ 44

DRAG FACTOR

Total drag @ 60 mph, lb.....	n.a.
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