

Given the Works:

# DATSUN 240Z

Driving Rauno Aaltonen's RAC Rally car; a first look at this exciting Japanese GT

By Ray Hutton

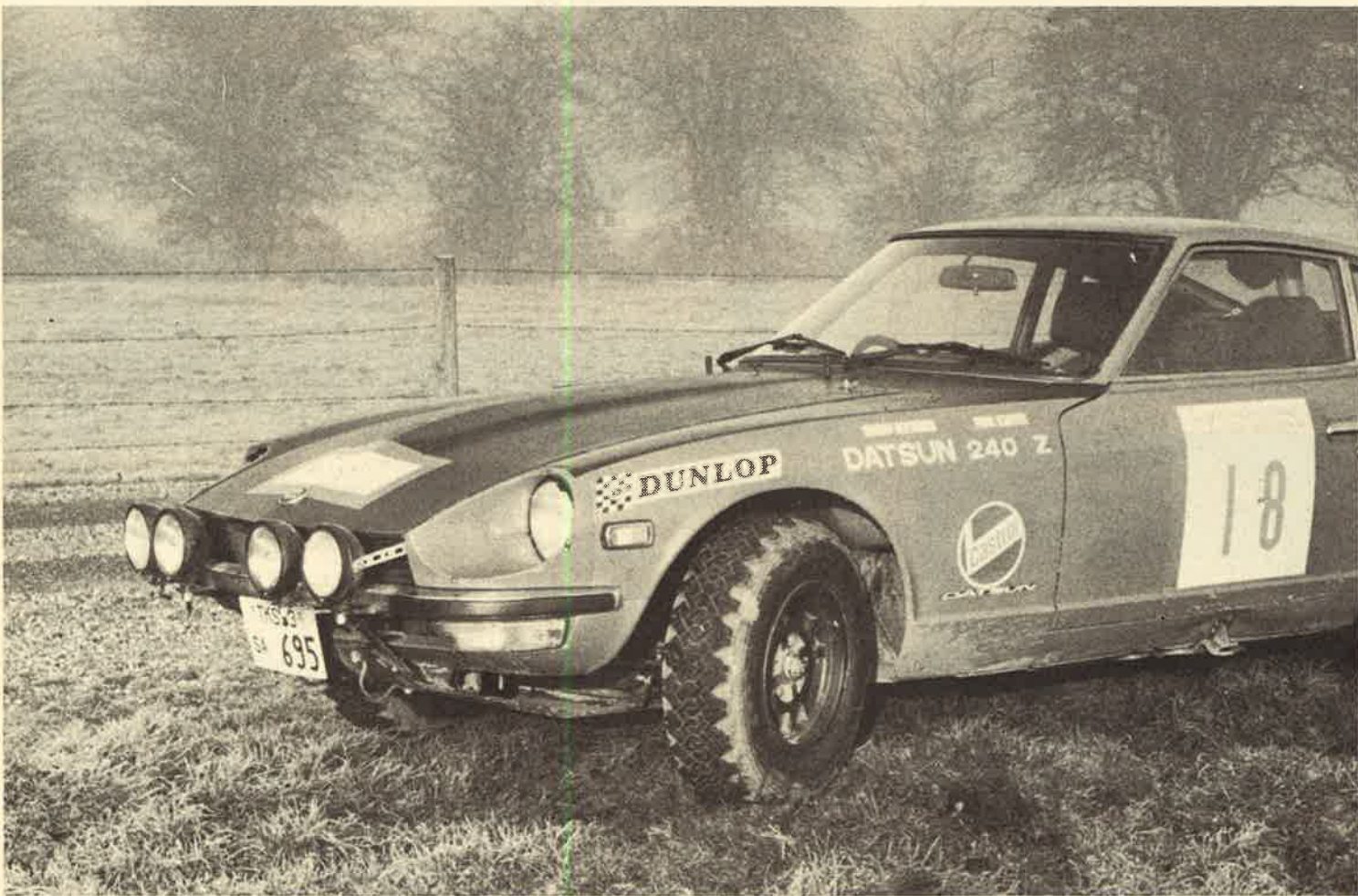
THE news, when published earlier this year, that Datsun were again to take part in the RAC Rally came as no surprise. In 1969 they had taken the team award with three 1600SSS saloons. Since then they had turned a 1969 team prize in the East African Safari into a win in the 1970 event and they clearly had hopes of a similar progression in the forests of Britain. What *did* surprise us was that the cars they entered were the new 240Z sports coupés, a model which, until this year's London Motor Show, had never been seen in England.

The Datsun 240Z was announced 12 months before at the Tokyo Motor Show and imports to the United States (at which market it is obviously primarily aimed) started early this year. Judging by the rave reviews it has received in the American enthusiast Press, it is a big success there and a few examples have already run in SCCA production car racing. The model has hardly been seen in Europe, and it has not yet been decided if it is to be marketed in Britain.

Datsun's RAC Rally effort should be an object lesson to some European manufacturers.

Early in October, five rally-prepared 240Zs arrived in England for what was to be their first international event. Prepared to Group 3 (the RAC does not allow prototypes), they were equipped with modified engines, suitable gearing, lightweight panels and a whole string of special items. Engineer Takashi Wakabayashi and his team in Nissan's engineering laboratories had done a very thorough job to develop and get all these bits and pieces through the complex procedure of homologation (despite virtually no competition experience with the model) before the company's rally plans were made public.

To ensure that thorough preparation was carried through with the same professional approach, they enlisted top drivers Rauno Aaltonen (who had driven a 1600SSS in the 1969 RAC), Tony Fall and their Safari winner Edgar Hermann. A fourth, spare car was an additional last-minute entry for 1969 RAC Rally Champion John Bloxham. The fifth 240Z was used as a service car (taking a leaf out of Porsche's book, who use 0911s as high speed tenders) and joined the service vehicles



## Performance Check

### Maximum speeds

Gear	Top	4th	3rd	2nd	1st
mph	126*	112	84	60	36

### Acceleration\*

mph	30	40	50	60	70	80	90	100	110
sec	4.1	5.4	7.1	9.0	10.6	12.6	16.2	18.8	25.6

Standing  $\frac{1}{4}$  mile: 16.0sec 89mph

Standing Kilometre: 27.5sec 117mph

\*see text



operated by two mechanics from Japan and staff from Old Woking Service Station, the British base for the operation.

Aaltonen had carried out some testing with the model just after this year's Monte Carlo Rally and did a couple of days' rough road testing at Bagshot in the weeks preceding the RAC, while Tony Fall used his car in a British club event to acclimatize himself. Initial impressions of these big (by rally standards), brutish cars seemed to suggest that they were going to be quite a handful—one driver said that it was like an Austin Healey 3000 "before sorting".

**Differentials spoil chances**

The four-strong team of red and black 240Zs were together with the French Alpines (also making their first British appearance) the centre of attraction at the start of the Rally. Tony Fall, enjoying himself hugely, was well-placed in the early stages but became involved with Ove Andersson's already-spun Alpine on the Dalby South stage in Yorkshire on the first night and

though he continued, retired on the next stage with a broken differential. Rauno Aaltonen had transmission trouble early on, when a drive-shaft broke on the first of the Clipstone stages. He thought at first that a tyre had punctured and drove to the end of the stage, where the broken drive-shaft and the brake pipes and cables it had damaged while flailing around were discovered. He and Easter removed the shaft and drove the next stage with one only (and no rear brakes) to reach their service crew, who fitted a shaft from their Datsun 1800. The brakes were progressively repaired by service crews throughout the night, but it was not until Bathgate control on the Sunday morning that the car's full braking was restored. On the return from the Scottish loop this car also suffered differential failure; fortunately they were able to get to the control and the unit was changed. Thereafter this car ran beautifully and steadily improved its position. In the latter stages it proved as fast as the quickest of the opposition, particularly on the faster stages; Aaltonen set fastest time on three stages and finished a strong seventh; he would

clearly have been much better placed had he not lost so much time early on. We had particular reason to be hopeful that this car would finish, for it was agreed that we could borrow it for the weekend after the rally had ended.

The two other team cars were victims of the same differential trouble; Datsun were by no means alone in this, for transmission failure was the universal cause of the mechanical retirements that affected the works teams.

**First close look**

Our weekend with number 18, the Aaltonen-Easter car, provided an opportunity not only to drive what is already a highly competitive rally car but also our first chance to examine the model in detail. Driving specially prepared competition cars is always an interesting exercise, and never more so than this, but it was curious to have no reference point by which to judge its performance and behaviour; none of us has driven a standard 240Z.

As it is so new to us, a run through the standard car's specification is perhaps appropriate. The 240Z is a front engine-rear drive coupé powered by a bulky in-line six-cylinder overhead camshaft engine of 2,393 c.c. which is, in effect, the familiar 1600 c.c. engine with two extra cylinders. It has bore and stroke measurements of 83mm x 73.3mm and produces 150 bhp (gross) at 5,600 rpm. It is available with either a four- or five-speed gearbox, has MacPherson strut and trailing link front suspension and an independent rear end, using struts again with lower wishbones. Rack and pinion steering and a mixed disc-drum brake set-up are employed. The two-seater steel coupé body has bits of several different cars in its styling (influences of the Jaguar E-type, Toyota 2000GT and several Ferraris are evident) but the overall effect is sporting, eye-catching and pleasing. A criticism might be its height off the ground—a feature which is of course of distinct advantage for rough-road rallying.

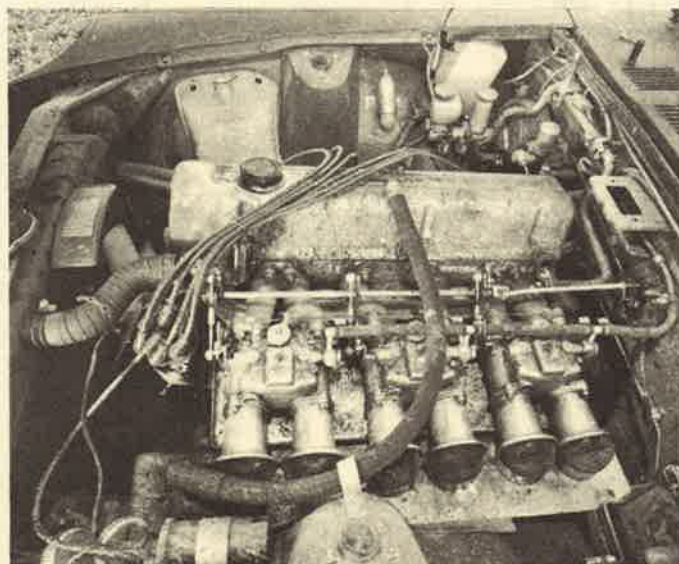
Exact details of all the internal modifications carried out in the preparation of the rally cars unfortunately are not available. The work was done in Japan and with characteristic inscrutability it was explained to us that the car was "fairly standard". The engine, which is normally equipped with two SU-type Hitachi carburettors, is fitted with three Mikuni-Solex twin-choke instruments and with a different camshaft; power has been increased to a quoted figure of 200 bhp (net). The gearbox, the five-speed version of course, has been re-ratioed and an ultra-low 4.87 final drive fitted (standard cars have a 3.9 axle; those sold in the US, 3.36). The limited-slip differentials, which proved the model's weakest link, had all suffered from loosening or breakage of the crown wheel bolts, not specifically from overheating (as was suspected at the time). Aaltonen had been worried as to whether the renewed diff on his car would last, and we were worried too, since it made dreadful sounds like broken glass when the car was reversed. Incidentally, though the Datsun's US options list includes a clutch-type limited-slip differential, this one had the characteristics of the cam-and-plunger type.

A glance underneath the car, to examine the cause of a slight but audible movement at one of the mounting points of the sub-frame that carries the differential, suggested that very little underbody strengthening had been necessary. There is the usual front undershield (rather more than a sump guard) but otherwise it really did seem "fairly standard" and it is a credit to the car's strength that it survived 2,300 miles of RAC Rally without any apparent damage. The wheels fitted are Datsun magnesium alloy designs; 14in. diameter with 6in. wide rims.



Above: The 240Z is the first serious attempt to rally a big-forty-front-engined sports car since the Austin Healey 3000. Aaltonen's car remained remarkably unblemished after 2,300 miles of RAC Rally

Far left: The doors and the bonnet are made of glass-fibre with plastic windows and the tailgate is so thin that it has a noticeable droop when supported open. Note the mud-flaps, mounted well back



The engine is a large lump for a 2.4 litre unit. The three carburettors are Japanese-made Solex. Access to the washer bottle and battery in the back corners of the bonnet is via small flaps on top of the wings.



A comfortable interior with well-planned controls but some lack of stowage space for odd essential items. The special seats are non-reclining; Willans full harnesses are fitted. Note the high windscreen washer post on the scuttle



## GIVEN THE WORKS: DATSUN 240Z . . .

Lightweight glass-fibre panels replace the doors, the bonnet and opening tailgate, and all side and rear windows are plastic. Outwardly the body changes are few—two strengthened jacking points at the sides, Safari-style mudflaps and a row of four modest-looking but highly effective Japanese supplementary lamps firmly outrigged in what seems a very damage-prone position. The standard bumpers remain. Oh, and there's two enormous megaphoned exhaust pipes.

### No 18 on the road

Those exhausts give advance warning of the sort of noise the beast makes when it is fired up. The noise is "very considerable", absolutely glorious and of questionable legality when the engine is on song—the noise guessing game of "who comes next" on the stages of the RAC provided a lot of Datsuns mistaken for Porsches. Actual starting up (on the key) is no problem at all and is preceded by a subdued clatter from the electric fuel pump behind you (colleague Michael Scarlett insists that it be likened to a covey of ladies from a Japanese Womens' Institute all knitting furiously). Surprisingly, the engine will idle quite happily at 800 rpm. Moving off, gently, is no problem either; the clutch is not unduly heavy (though of the competition variety) and the engine remarkably tractable. The transition when the road clears and the throttles are opened is an experience of a very special kind—the harsh, raucous exhaust note is directly proportional to the rate at which the revs rise, almost as if the accelerator was a volume control. There is a leap forward after 3,500 rpm but the engine is not "cammy" in the racing sense, just beautifully responsive throughout. And it will pull in 5th gear from 1,100 rpm. Noise level towards maximum revs of 6,800 is too high for normal conversation—hence the inevitable intercom.

The gearbox, all-synchromesh and with its five speeds arranged Alfa Romeo-style (1st to 4th in the standard positions, 5th to the right of 3rd, above reverse) is one of the best five-speeders we have tried.

With the gearing arranged for short bursts between corners in the forests, we expected the acceleration to be impressive. Our figures show that it was (the 0-100 mph and standing quarter mile are closely comparable with those for a standard 4.2 Jaguar E-type) and they could certainly have been improved upon had we not felt inhibited by the sub-standard differential and tempered by our desire to return the car in running order. A gentle 3,000 rpm was used for our careful take-offs from rest (which gave just a touch of wheelspin) and 6,500 rpm used in the gears. Serious vibration from the rear (the same diff trouble) prevented an accurate maximum speed run, but with such a low axle ratio the theoretical maximum of 126 mph is obviously realistic. For the record, the speedometer (in mph) was dead accurate, before its cable broke. A run of some 400 miles allowed a check on fuel consumption, which came out at 20.3 mpg, only slightly less than figures obtained for the standard car by our American contemporaries.

### How it handles

The car came to us exactly as it had finished the rally, numbers, mud and all. It was fitted with German-made Dunlop SP 215/70 SR14 radials which were used in the later stages, though the cars started the rally on some Japanese Dunlops not unlike the Dunlop "Hakka" snow tyre though with a harder compound, which were said to be excellent on dry, rough roads. Traction on tarmac on these big "chunkies" was excellent and directional stability good. Under smooth road conditions, understeer was moderate and power-induced rear-end breakaway easy to obtain and easy to catch, but on slippery corners the works drivers' reports of excessive understeer were confirmed, the front end "ploughing" out, even without a burst of power. But by "setting up" the car in the right gear with power to spare, cornering could be rapid indeed and the power was planted on the road to a surprisingly high degree. Under forestry conditions Aaltonen was using the handbrake to do this; hence his

slower stage times when the rear brakes were not fully operative following the drive-shaft failure.

The car's braking performance had remained good, if noisy and harsh at low speed and requiring a firm push. The steering is only moderately heavy, nicely geared (2.6 turns from lock to lock) and responsive. The dampers had also stood up well to the long pounding and the ride is very reasonable—if sharp over the bigger bumps. The works drivers expressed enthusiasm for the car's performance over "yumps" and the lack of drama on landing. Overall, we were most impressed by the 240Z's feeling of solidity but it seems a big and hairy lump of car to hurl through the forests (perhaps that is its only real similarity to the Healey) and we are once again filled with admiration for those who are able to do so at stage-winning speeds.

Both the driver and navigator are well catered for in the cockpit. Special cloth-covered seats are fitted; the passenger sits lower than the driver because Rauno is short and likes to sit high, but none the less the driving position proved comfortable even for our largest tester. The steering wheel is a comfortable, fat, leather-rimmed affair, while the pedals have been arranged for "proper" heel-and-toeing and a clutch footrest added. The handbrake, floor-mounted, is of the fly-off type. Visibility to the front is fine, though one is conscious of there being rather more of the long bonnet than is visible and of the heavy screen pillars. To the rear and at the rear three-quarters, the view is obstructed by the bodywork and also by the hefty four-strut roll-over bar and two spare wheels. This essential 'luggage' restricts interior storage space considerably.

### Well-planned controls

The standard dashboard layout has an American flavour, with deeply recessed dials. The dominant instruments are the paired speedometer and rev-counter, the three smaller dials at the centre showing water temperature and oil pressure (a source of some concern to us as it was never much over 30 psi), amps and fuel level, and the time, respectively. All normal lighting and wiper-washer operations are contained on a multiple stalk to the left of the steering column and the indicator stalk to the right, while the auxiliary lamps are looked after by an extra panel of six switches above (and obstructing) the heater-ventilator controls. Two separate Halda Tripmasters are fitted instead of the more usual Twinmaster; a fail-safe operation since they are driven independently from the two front wheels.

As always, it is the details that are so fascinating—the separate flexible-stalk blue lights that illuminate the Haldas, the map light on the door, the intercom amplifier mounted on the roll-over bar, the passenger's floor button for the air-horns, the pockets, the Velcro-attached pads to prevent chafing knees on window winders, the multiplicity of straps to hold down wheels, tools and all manner of things in the back, and the sticky tape everywhere to hold spare fuses, keys and padding in place—and even to show the driver where dead centre on the steering wheel is.

It is things like this that make rally cars so different from the standard article. This Datsun 240Z, which impressed us tremendously, could be a very different kettle of fish from the standard car. But if the "cooking" version shows only a percentage of the flair of this car, we await its introduction to Britain (which must surely come) with eager anticipation. In the meantime, Datsun intend to follow up their promising rally debut with a full programme of events next year, starting off with the Monte, when their drivers will once again be Rauno Aaltonen and Tony Fall.

*Not us—but the Little Finn himself, hurling the 240Z through the Grizedale stage on the RAC. Aaltonen finished seventh—one place better than he managed in 1969 with the Datsun 1600SSS saloon*

