SPORTS CAR ROAD TESTS

No.11 AN AUSTRALIAN SPORTS CAR WORLD SPECIAL 60c*

TESTS:

FERRARI BOXER • DATSUN 260Z • LOTUS ELITE
• LAMBO COUNTACH • MGB V8 • FIAT X1/9

COMPARISONS:

FALCON GT v TORANA V8 • RENAULT 15 v FIAT 124S
SUBARU GSR v FIAT 128SL • LAMBO v FAZZ

IT'S FUN ALL THE WAY WITH THE FIAT X1/9

Australian Design Rules bar it, but in England the Fiat X1/9 has made quite a name for itself . . . even if the conversion to right-hand drive makes it expensive . . . so says MEL NICHOLS.

I FELT SORRY of the Jensen-Healey driver, in a patronising sort of way. We'd been stopped side-by-side at the traffic lights, both our cars with their roofs removed. I heard his words clearly in the still night air; I think he meant me to. "They might look pretty good," he told his passenger knowingly, "but the engine's only 1300 ccs. No bloody go at all." Then the lights changed, and to prove his point he gave the Healey full power. The back tyres chirped on the tarmac and his car leapt away, leaving me 'way, way behind.

But just a few hundred yards further on there was a roundabout. A great big roundabout; the biggest one I know, and rather more like a miniature race track than a traffic junction. I was only half-way to the first curve when the Jensen-Healey was heading for the second. But by the third curve I'd caught him and he was drifting out just wide enough, on the limit, for me to nip deftly through on the inside. Still accelerating and feeling the car perfectly unfussed, I was able to rub it in further by cutting back across in front of him to slice into the exit from the roundabout that I wanted. In the mirror I saw him follow, 100 yards behind, the roll angle of the Jensen's nose showing how hard it was being pushed.

The next set of lights went red just as I approached, and I sat and waited for the Jensen-Healey. He pulled up gently beside me, very close to the side of my car, and asked: "Could you tell me, please, if you have the standard engine in there?" Without even smiling very much, I informed him that, yes, he was indeed looking at a standard Fiat X1/9 and that he had been correct a few minutes earlier: the capacity was only 1300 cc.

Well, I wasn't being totally truthful. The little car *was* running alloy wheels an inch wider than normal and top gear had been lowered ever so slightly to even up the gear ratios. But in performance it had undergone no changes since it left the factory in Italy and the case of the good little 'un against the ordinary big 'un had been proved only too perfectly for the Jensen-Healey driver.

In a way, the incident at the roundabout was as

much a lesson for me as it was for that poor beggar. I had only been driving the X1/9 a few miles until then and I, too, must admit to thinking as I battled through the traffic that the thing was rather underpowered. There was no chance at all of beating anything half decent in sheer acceleration. Maybe it really was a mistake for Fiat's first mid-engined production car to have such a meagre engine. But then came the roundabout and the Jensen-Healey and I began to discover that in a car like this Fiat, where the handling and roadholding is so damned phenomenal, lack of outright power doesn't matter so much. In the days to follow, that thinking was to be reinforced with every mile . . .

It was quite fair for the Press, SPORTS CAR WORLD among it, to say the X1/9, when first released, was the only truly modern sports car in the world today (excluding the expensive ones like GTs, Dino and things). It still is, and it is likely to be for some time, for we know now that Leyland's new Triumph range wear the engine in the nose and don't have open tops anyway. The question is: why did Leyland decide not to build the Triumphs with mid engines . . . when Fiat, with the X1/9, has demonstrated so superbly how all the traditional disadvantages of the configuration can be overcome.

Why Leyland should consider mid-engined cars too hard to design, build, service or whatever seems ridiculous, especially since Fiat is now going ahead with a bigger mid-engined car, and one that approximates the new TR7/Bullet coupes at that. It is the X1/20, a neat coupe looking rather like a simpler Ferrari BB and powered by the Lancia Beta 1800 twin cam engine. Just as it did with the fwd Fiat 128 powerplant to create the X1/9, Fiat is slipping the transverse engine/transmission from the Beta between the loins of the X1/20.

Very simple, very sound . . . precisely what Leyland could have done 15 years ago by putting the Mini Cooper powerplant into a mid-engined car; or, lately, various other of its fwd units like the Tasman/Kimberley/Austin 2200 six. But it's no good moaning about what Leyland might (or should!) have done. We can only be grateful to Fiat for showing us what a proper 1970s sports car should be.

The X1/9 was built as the replacement for the pretty little Fiat 850 Spider, an excellent car which earned lots of export money for Fiat, especially in America. Only a few reached Australia, but it is notable that among their owners was Peter Mitchell, the Lamborghini concessionaire. Thus, knowing what sort of gap in the market the X1/9 had to fill, and remembering that when the design was laid down Fiat's only fwd powerplant was the 128 unit, you soon appreciate why the car was given a capacity of 1300 cc. Especially when Fiat knew it would later have the Beta engine and transmission to power a big sister to the X1/9.

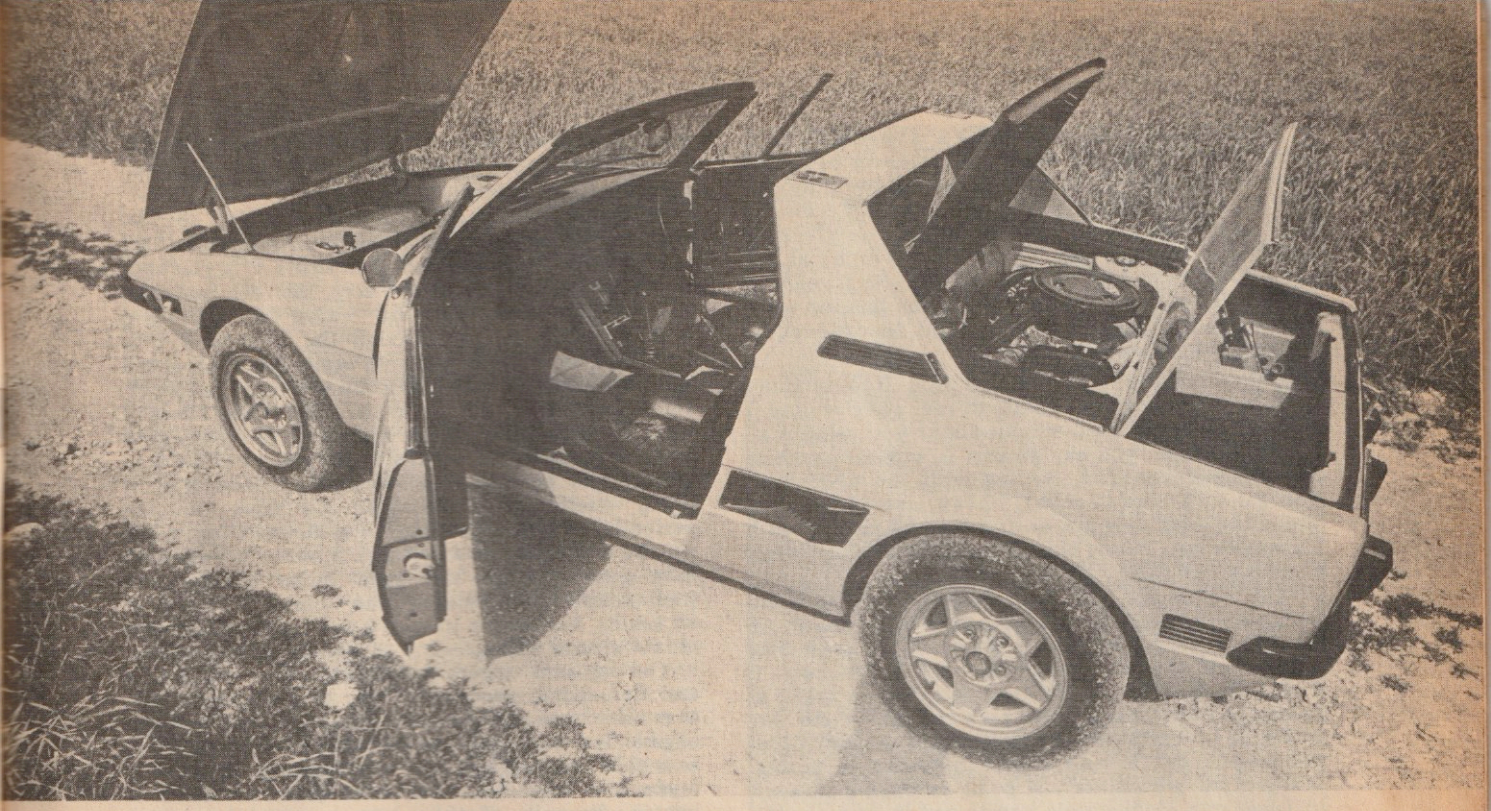
Apart from being fitted with lighter pistons (to ensure cooler running in the more restricted engine bay) and mild timing changes, the engine is essentially the way it is used in the 128 coupe — enormously oversquare at 86 mm by 55.5 mm for 1290 cc, 8.9 to one compression, single overhead cam, twin choke downdraught Weber. The distributor on the X1/9 engine is located differently from the 128 engine though, and the inlet and exhaust manifolds have been reworked to suit the new engine bay. Final result is 53.7 kW (74 bhp) at 6600 rpm but an increase in torque to 97.6 Nm (72 lb/ft) at 3400 rpm.

The only transmission difference is that the X1/9 gets a slightly overdrive top gear of 0.959 to one compared with the 128 coupe's 1.041 ratio. The purpose — to permit more relaxed cruising while retaining similar top gear performance (because of the sports car's better aerodynamics). In the car I tested, imported into England and converted to RHD, the old 128 top gear had been re-installed to close up the gap in the gearing.

Fiat used 128 parts in the suspension too, although it is not exactly the same in the X1/9. MacPherson struts are used front and rear to save space, with two wide-based control arms in wishbone-pattern forming the lower members at both front and rear ends. Steering is rack and pinion, and mounted on the cabin bulkhead so it is feet away from the nose in a crash.

Whether it was the body designer Bertone, or Fiat itself, who dictated the layout of the mechanical components, the result is brilliant. The radiator is tilted in the nose, wide and shallow with an electric

Front view shows Fiat's modern lines and "chin whisker" spoiler underneath. Car passed European crash barrier tests with flying colors.



Fiat sporty has two boots — one each end. The one in front is rather shallow, but the rear one, behind the engine, is surprisingly roomy. Wheels are optional cast alloy, 5½ inches wide.

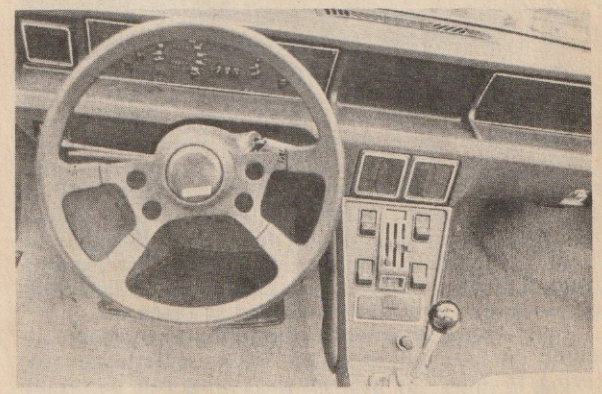
fan. Then there is nothing, save for the MacPherson struts on each side, until you reach the steering rack and bulkhead. The cabin is compact but roomy enough, and behind the left-hand seat hides the 11-gallon fuel tank. The spare wheel is behind the driver's seat. Then you have the engine, tilted fractionally backwards, and contained almost entirely within the area of the wheels. That leaves only the muffler, which runs transversely just behind the engine. Pure brilliance, the whole lot.

Of course, Bertone's styling job with the panels themselves is just amazing. No matter how well the car is photographed, it still looks better in the flesh. You marvel at its apparent compactness, its tough, stubby looks, its beautiful sculpturing and proportion. My favorite view is from the rear three-quarters, where you see how stubby the tail is.

Going past sheer looks, when you start living with the X1/9 you appreciate how thoughtful the Bertone/Fiat combination has been. The forward-hinging bonnet opens to reveal a deep luggage well (using the space between the radiator and cabin bulkhead), the cabin is easy to get into and the top fits tightly, yet it is a snack to remove. It stores under the front bonnet without taking up more than a few inches of the luggage space. The filler cap is hidden in behind the edge of the B-pillar/roll-over bar but is totally convenient, the engine is readily accessible through its lift-up, black vented cover, and then there is the rear boot, Countach or Dino-style, that brings the total luggage capacity to around six cubic ft — almost as much as an MGB GT has.

Driving the X1/9 in London after picking it up from the importer/converter (RHD production is still some time off), I found the little car was indeed rather gutless down low. At least 2000 rpm had to be wound on to make it move off the line. But I was impressed by its all-round vision — far and away the best yet in a mid-engined car — and with its minute dimensions that made darting between cars, taxis and buses so easy once underway. It was so light and easy to handle too, and the ride and comfort were excellent.

And how good it was to be once more in an open-top car that had the other drivers twisting their heads to look, pretty girls smiling as they crossed in front of it and male bystanders watching with envy. On that score alone, the Fiat does its job superbly.



Fiat X1/9 interior is comfortable, roomy, functional and attractive. What more is there to say . . .?

Going home, late, and in thinning traffic I began to discover how well it performed in other ways. In the roundabouts the British use so often instead of traffic lights (a good idea, too),it was demonstrating exceptionally high levels of roadholding as I started going quicker and quicker. It wasn't long before I was coming into them without slackening pace at all. Turn the wheel, aim the car and dart through. Then there was the incident with the Jensen-Healey, and later a brace of TR6s (though I do the Fiat an injustice by merely mentioning them in the same story) and an MGB V8 all satisfactorily put down through the bends as well. Maybe the 1300 cc engine didn't matter so much after all.

Next day, heading west to Wales with the roof off and the sun streaming in, the Fiat proved unexpectedly relaxing. Cruising at a sedate 112 km/h (70 mph) there was no wind buffeting to speak of, not much noise from the engine, and conversation in just about normal tones.

Since, at 112 km/h the engine was spinning at just under 5000 rpm it was well into its power band and there was plenty of oomph in hand for lively though obviously not shatteringly fast overtaking. Feeding in the throttle up a long hill, the car kept accelerating relentlessly, going from 112 km/h (70 mph) at the bottom to 153 km/h (95) at the top. So it really is only in those first few seconds off the line, or when you want strong power out of a bend, that the engine seems a little too small.

Once underway, the SOHC mill is beautifully smooth and incredibly willing to rev. They redline it at 6900, and are dead serious about you using it all too; if you like, you can go past it without anything nasty happening. But, staying with the 6900 limit you get 48 km/h (30 mph), 77 (48) and 120 (75) in the gears, providing a ratio for most situations, with the engine just strong enough to carry through when there is a rare gap.

Getting off the motorway onto the flowing Welsh backroads, it was soon obvious that once wound up the Fiat could sustain its speed. It has such fine balance and nimble handling that few curves cause it to lose pace. When there are slower bends, taken at relatively slow speeds, the rack-and-pinion steering transmits information saying there is a moment of understeer. But it isn't really understeer in normal terms — the wheels are just going through a moment of lesser grip, deliberately engineered in, to make the driver aware of his speed.

All he does is note it, keep turning the wheel and bring the power on more. The Fiat then follows his selected path around the corner, sending back unmistakable messages about the tenacity of its grip. No fuss, no body roll, and all without roll bars too.

Soon you realise that you can take corners even faster. And as you do so, further exploring the roadability of the car, it displays truly superb breeding and thorough engineering. The faster you go the more its responses tighten up, especially the steering, so that flying into one corner after another the wheel is barely turned. It is used only to make minute corrections as the car takes itself through the bend in answer to the movements of your throttle foot. The little machine has become as taut and precise and as deliciously balanced as a race car.

In the bend we selected for action photographs, I found out precisely how good it was. It was no use trying to kick the tail sideways with full power in second, suddenly tramped on. There just isn't enough power to overcome the limpet-like grip. So on the next run I flew into the tight corner at 65 mph in third. The car just stayed neutral all the way around. Next time it was 70 mph and almost flat in third, and the response as I locked over to swing onto line revealed the quality of the X1/9's handling. It was a perfect demonstration of how a good mid-engined car, with low polar moments of inertia, behaves. The instant the wheel was turned, at the fraction of a second in which I lifted off the throttle, the tail cocked itself out into *theoretical* oversteer, lying right over on its tyres and doing the job the steering usually does in lesser cars.

The attitude it assumed lined the car up so that it then needed merely to be driven straight ahead through the rest of the bend, the wheel moving mere fractions of an inch from the straight ahead to keep it all balanced. What's more, all the while the car was pumping up an endless stream of information through the wheel and the seat to let me know exactly what it was doing, and was likely to do. The communication was so acute I could actually feel the tyres distorting, and that sort of information is very rare indeed.

So you *know* what the Fiat is doing as it corners; you know it and you love the car for getting the real essence of motoring pleasure, that special something only the finest cars can offer.

But even at that level there is more left to play with, for this is no ordinary sports car where you find the limits of its ability and then that's it. If you have the skill, or even just the bravery, the Fiat has much more to give. Things like this — after testing the grip with three more runs through the bend at 110 to 120 km/h in third, I went up again and approached this time at better than 130 km/h (80 mph) in fourth, coming extremely deep into the bend. Then I braked hard, right up to the apex, feeling the tail really start to cock itself out now but still not going farther than what might be called an oversteer attitude. With it lining itself up beautifully, the nose pointing perfectly to the inside bank, I snatched third, came off the brakes and powered out. A better driver could have gone through the bend much quicker still (remember, I estimated the curve at around 80 km/h), but for me to take it any faster would have meant absurd transgression of normal driving sanity.

Getting such superb handling balance was a long and demanding process for the Fiat engineers, and that they have succeeded so thoroughly makes them eligible for the highest possible praise. The problem, as with all mid-engined road cars, centred around that mysterious ingredient called the polar moments of inertia. Because of their layout, with the engine weight biased inboard, mid-engined cars have very low polar moments, precisely the opposite of a car with a heavy front like a Torana six. What it means is the speed with which the car responds to driver inputs; for example, when he lifts off the throttle. In cars like Torana and Cortina sixes, the response is slow — their polar moments are high — and they continue understeering relentlessly.

In mid-engined cars, the natural polar moments can be so low that the responsiveness is too fast for the ability of most drivers. If he lifts off, or changes direction quickly, the tail will flick out so fast he'll spin. And so Fiat's task was in getting the polar moments on the X1/9 just right. At first it was much too low, and the car was believed uncontrollable by all but racing drivers when near its limits. Painstaking development won out, and now we know just how good the little car is. You feel you can do anything with it, all the while extracting supreme enjoyment.

Unless you do something absurd — like backing off totally when at high speed in a bend (in which case it will spin) — it will not do anything nasty to you. Such controllability is the difference between a modern mid-engined car built for driving pleasure, and the other "sports cars".

Having learned all this first hand in that country corner, I loaded photographer Kim Sayer back on board and we set off for another three hours of delectable motoring. We sang along the lanes in a way that I have not been able to do with any other car in Britain so far. Part of the reason was the Fiat's compact dimensions; the lanes are mostly so narrow two vehicles have trouble passing, they have high grass banks and you never know where they're going to curve next. Yet, flying along them in the Fiat, I felt (and I think Kim did too) completely secure.

Twice we rounded bends at quite high speed to find a tractor plodding towards us. In other cars it would have required A Phenomenal Avoidance; in the X1/9 it was just a deft change of line and steer past the obstacle, with inches to spare on each side. In such circumstances, and over crests or under hard brakes into blind downhill bends, I especially admired the car's stability. Its long suspension travel enabled it to rise over the crests and soak up the landing stresses

on the other side, and to cope with the bumps when under brakes without moving off line so much as an inch. The X1/9 has *precision*, always.

Our blind through the lanes, and then back on the motorway again, proved the car's comfort to be as good as the first miles in London had suggested it would. Kim Sayer is 6 ft 4 in. but he had plenty of legroom, his head missed the wind and we both found the seats good even though they don't recline. Hand-in-hand with the seating and cabin comfort goes the ride. Somewhat choppy at low speeds, it smooths right out with pace so that bumps on backroads are never a problem and motorway running is relaxing.

Even at the sustained 6500 rpm cruise — 157 km/h (98 mph) — we used to make up time on the way back to London, wind buffeting was no more intrusive than at 96 km/h (60 mph) and we could still talk without having to shout. The closeness of the roll-over bar/rear window to the windscreen doesn't let the air come down into the cabin enough to be a nuisance.

There are few things for the driver to grumble about in the Fiat. The wheel is slightly offset to the left in the rhd car, but it is at exactly the correct distance, and so are the pedals. The clutch throw is short and sweet, the brakes light but fractionally spongy for the first part of their travel. They are certainly powerful enough ... they're four-wheel discs. But I suspect the 5.5 inch alloy wheels the importers had fitted to the test car and their Dunlop Aquajets helped improve braking grip at the front wheels on loose gravel and in the wet (locking front brakes is a fault of mid-engined cars). No doubt they also aided the handling and roadholding a certain amount too.

Instrumentation is straightforward and neatly presented in a square panel covered with one piece of glass. Fuel, oil pressure and temperature back up the tacho and speedo. All five dials are clearly marked, but the trim of the steering wheel hides the upper range of the tachometer in the converted cars. The tacho itself has a yellow warning sector starting at 6500 rpm, but the redline proper doesn't take over until 6900 rpm. So willing is the little engine that it will even pull to the redline in top, giving a true 167 km/h (104 mph).

The overall design of the dashboard is neat and modern-looking. Set into it at the edges and in the top of the console are big vents, and they kick out strong streams of air. The important switchgear is on column mounted stalks and the rest are rocker switches mounted in the console, along with the sides for heat and air control. One switch there brings up the lights, while one of the column stalks is for selecting parkers, low beam or high beam. The lights are good, although if you bring them up from their seats at 145 km/h (90 mph) or beyond you can feel the car slow a fraction, proving how good its aerodynamics are.

What faults are there? Nothing worth worrying about except rather tinny rattles when you shut the doors, lack of provision for a radio and no glove box in the converted cars (the lhd cars have one; and no doubt so will the production rhd models). In general the finish is fair but not particularly good (the car is built at Bertone, not Fiat). And yet, while there are rattles when shutting the doors, you get none on rough roads and neither is there detectable scuttle movement. The body is rigid, thanks to the integral roll-over bar, and it is officially safe because it passes the crash tests. These points explain why it weighs, at 853 kg (1880 lb), 36 kg more than the 128 coupe.

But of course crash safety isn't the story of the X1/9. Its real safety comes from its remarkable roadholding, its stability and its utterly delicious handling. Once you learn not to worry about indulging in traffic light derbies, the 1300 cc engine proves satisfactory enough, matching the overall balance of the car. Moreover, it returns 9.04 km/l (27 mpg) even when thrashed almost beyond endurance and well over 10 km/l (30) with only less hectic driving. The problem, of course, is non-availability of rhd production and steep prices for specially imported and converted cars.

Radbourne, the dealer bring cars into Britain and converting them, claims it's not making much money even at 2500 pounds, the kind of money that gets you an Alfetta, Audi 100Gl and damned near a Rover 3500S. Radbourne will convert privately-owned cars for 250 pounds, a figure that seems reasonable to us (the job takes a week, and while not complicated did require a lot of research and thought: the result is an undetachable conversion).

So, if you just happened to be coming to Europe it would seem a very worthwhile idea to go down to Italy and buy an X1/9 duty free, bring it to England and have it converted for eventual shipment back to Australia (provided you've checked to see it meets all those niggling Australian design rules). In Italy, the car is a bargain at 1550 pounds — $2660. A good idea? I, for one, am seriously contemplating it, and I think I've told you why. *

SPECIFICATIONS

ENGINE:	
Cylinders	four
Cooling	water
Valves	SOHC
Compression	8.9
Bore/stroke	86 mm x 55.5 mm
Capacity	1290 cm³ 78.5 CID
Max power	53.7 Kw at 6600 rpm (74 bhp)
Max torque	97.6 Nm at 3400 rpm (72 lb/ft)
TRANSMISSION:	
First	3.583
Second	2.235
Third	1.454
Top	1.042 (0.959 standard)
Final drive	4.076
Mph/1000 rpm	15 (24 km/h)
SUSPENSION:	
Front	MacPherson struts, lower control arms
Rear	independent, MacPherson struts, lower control arms
Brakes	discs all round, unassisted
Steering	rack and pinion
Turns lock to lock	3.3
Turning circle	8.5 m (28 ft)
DIMENSIONS:	
Length	3830 mm (12 ft 6.75 in.)
Wheelbase	2202 mm (86.75 in.)
Track front/rear	1335 mm/1343 mm (52.5/52.75 in.)
Width	1570 mm (61.25 in.)
Height	1170 mm (46 in.)
Weight	852.8 kg (1880 lb)

PERFORMANCE

SPEEDS IN GEARS:	
First	48 km/h (30 mph)
Second	77 km/h (48 mph)
Third	120 km/h (75 mph)
Top	168 km/h (104 mph)
ACCELERATION:	
0-30 mph	3.8 sec
0-40 mph	5.8 sec
0-50 mph	8.3 sec
0-60 mph	11.7 sec
0-70 mph	15.5 sec
0-80 mph	21.6 sec
Standing quarter mile	18.4 sec