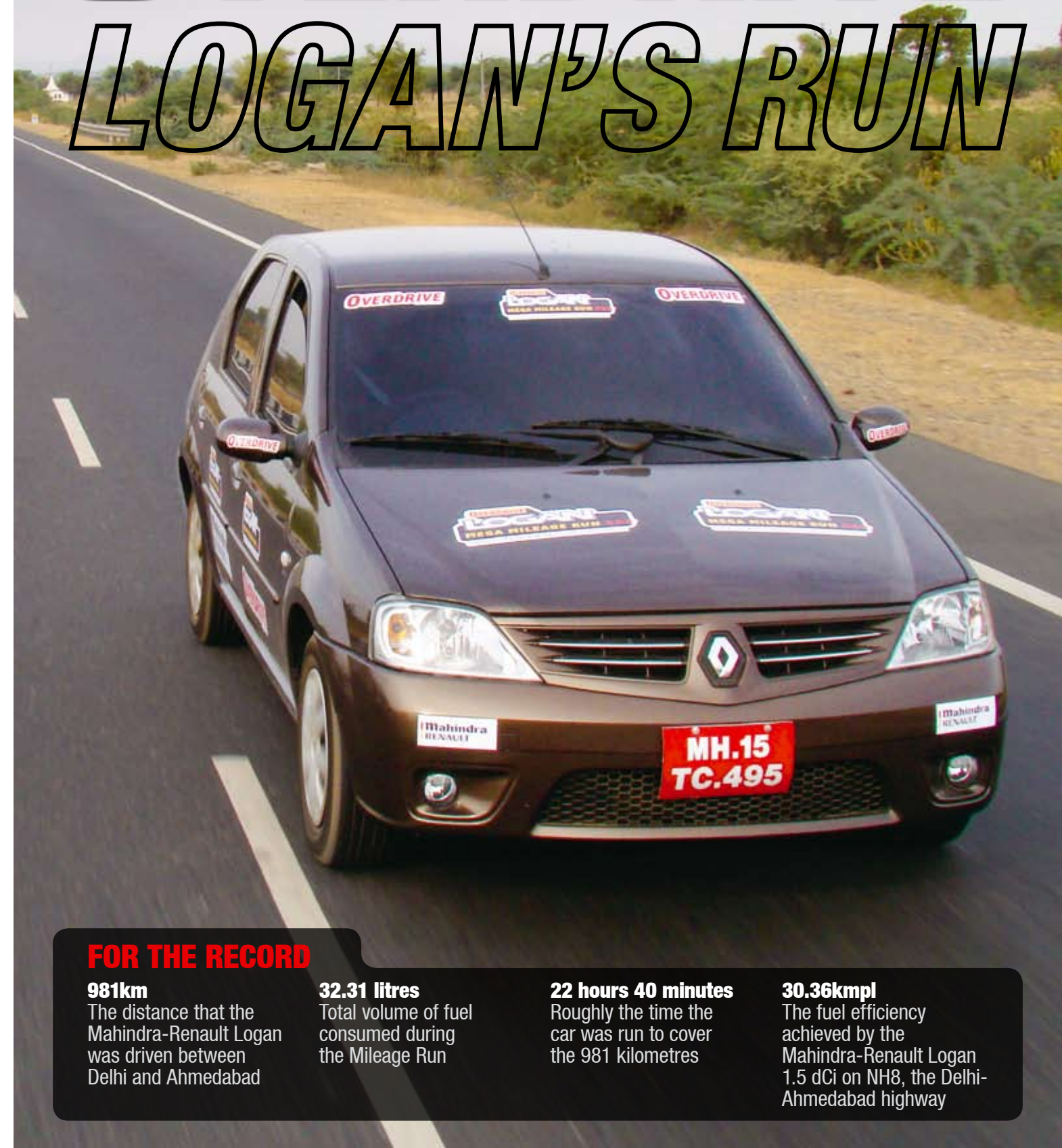


India's No. 1 Car & Bike Magazine

OVERDRIVE

LOGAN'S RUN



FOR THE RECORD

981km

The distance that the Mahindra-Renault Logan was driven between Delhi and Ahmedabad

32.31 litres

Total volume of fuel consumed during the Mileage Run

22 hours 40 minutes

Roughly the time the car was run to cover the 981 kilometres

30.36kmpl

The fuel efficiency achieved by the Mahindra-Renault Logan 1.5 dCi on NH8, the Delhi-Ahmedabad highway

Peak performance has various connotations. For us at OVERDRIVE it singularly means how fast or how quick a car goes. The 0-100kmph, standing kilometre and quarter mile runs dominate our senses. But how far a litre of fuel can be stretched sways all the mileage-obsessed common man's buying decisions...

Words & Photography: **Bertrand D'souza, Karanbir Singh Bedi, Martin Alva**

In the quest to pinpoint just what the mileage-mad *janata* hankers for, Team OVERDRIVE undertook the Mega Mileage Challenge in 2007, and drove a Mahindra Renault Logan as far as it could go on a single tankful of fuel, at the VRDE track in Ahmednagar. This endurance test of man and machine proved most enlightening. A retrospective of that endeavour is on the following pages. This time around we decided to emulate the exercise in real world conditions. So we drove from Delhi to Ahmedabad to gauge how the Logan fared in the mileage context on one of the busiest highways in India. **>>> Bert's stint** One should lead by example, so I promptly switched off the Logan, parked by the side of the road and shut my eyes. Having woken at 3am to start driving at 4am at a 50-60kmph average speed was setting off a chemical imbalance in my system. The sleep depriva-

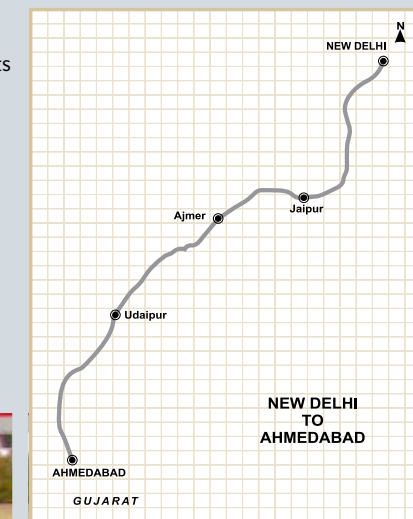
tion of the last few days... er nights, was compounding my lack of judgment. Truck drivers on the road this early in the morning can be unruly to say the least. Rather than test providence, I decided to pull over and let dawn turn to daylight. Achieving a mega mileage record in real world conditions is no joking matter. It can be dangerous too, as at such slow speeds it is easy to lose focus and be caught by a meandering truck side swipe. The spirit of adventure and zeal are never in short supply at OVERDRIVE. We are drawing a tangent to the mileage record we created in September 2007 where we attained a landmark mileage of 35.72kmpl in the Logan at the NCAT high speed test bowl in Ahmednagar. So we chalked out the plan to drive the Logan from Delhi to Ahmedabad the same way we conduct our mile-

>>> ...we decide to drive without air conditioning and keep use of electronics to a minimum



NH8

NH8 is one of the busiest highways in India. It connects the island city of Mumbai to Delhi, passing Vadodara, Ahmedabad, Udaipur, Ajmer and Jaipur. This highway is also part of the Golden Quadrilateral and also has India's first superfast and Vadodara-Ahmedabad expressway, which we did not cross, alas. The 4-lane highway ensures that traffic flows smoothly between Delhi and Ahmedabad, though the border crossings between Delhi and Rajasthan and Gujarat witness massive traffic snarls. Even the road passing through Kishangarh and Udaipur suffers massive traffic jams.



age tests. That meant we would be driving at a steady 80kmph over an extended distance. This would not only put the Logan in the same situation as any road-using car but also evaluate her efficiency over a much larger distance of roughly 920 kilometres and gauge her efficiency far more accurately. Karan and Martin are to share driving duties with me. But there are to be only two persons in the Logan. Since deriving the best mileage is our mission, we decide to drive without air conditioning and keep use of electronics to a minimum. Renault had removed the stereo anyway. Given the irregular traffic around Delhi, we decided to begin in the wee hours when transport vehicles are all that are up and about. It certainly is not the safest time though as groggy truck drivers are in a manic rush to reach or escape city limits. Sure, we had a couple of close calls with overtaking trucks and such. At our slow coach pace, evasive maneuvers are limited; you either brake and shave off speed or step on the gas and efficiency be damned. So discretion was the better part of valour. The northern areas are brisk and pleasantly chilly with temperatures of around 12 degrees Celsius. This also means that the Logan's 1.5-litre DCI engine takes a few minutes to reach optimum temperature. We, however, do not have time to idle. Thankfully, the Logan took no more than a minute to warm up. Within a few minutes the trip computer was



By 10:35am, the Logan's indicated mileage is showing a steady 29.9kmpl and efforts are on to get it up to 30kmpl and beyond.



With the high average mileage, the trip computer is also indicating a tall 1500km to go before refill. Little do we know that a few hours later that reading was going to be the same.



Exactly 12 hours later the trip computer is indicating a fraction over 30kmpl. However the figure is constantly fluctuating due to traffic build-ups hampering our efficiency run.



Only 2 bars have dropped from the fuel tank capacity indicator. However the distance to go is now around 1200km.

showing us an average efficiency of around 15kmpl and this figure was improving rapidly. Within the next half hour the Logan was averaging over 20kmpl and in the next half hour it stayed around 27/28kmpl. While I was regulating throttle inputs without too much pressure on or off the pedal, the incessant traffic in and out of the slow and fast lanes forced me to brake several times. The trip computer was showing an average distance of 1450 plus kilometres to go before a refill. Close to the Rajasthan border nearly two and a half hours later, the truck traffic was getting even more frantic to get past the check post. A minor traffic jam threatened to keep us on the crawl and shred our record attempt. So we decided to get some shut eye and wait it out. An hour and a half later the jam had evaporated and we got on the move. In Rajasthan, the roads are wider, smoother and importantly, empty. Within an hour the average fuel consumption gets close to 29kmpl and the decimal digits are still headed north ever so slowly.

I manage to maintain average speed of around 60kmph. This does not mean we were driving at 60kmph. To maintain that average speed, I often had to speed up to 80kmph and hold it there to ensure the 60kmph average. Every time we braked or slowed down the average speed kept dropping. We needed the car running at peak efficiency which is around 2000rpm and 60kmph or our record bid could be waved goodbye. I manage to get the average efficiency up to 30.5kmpl, with the Jaipur highway allowing us more consistent speeds. At around 1pm, I handed over the Logan wheel to Martin just outside Jaipur, with the mileage still reading around 30.5kmpl and 1400 odd kilometres to go before a refill.

» Martin

It's 9:32am in Jaipur when I take over the leading, driving role. I

must say that the Logan has an excellent ride and the highways in Rajasthan are great. The long nap I had while Bert drove from Delhi to Jaipur was my best car nap ever. I have no grouse about the no air con policy in the cool and pleasant winter hit north. I brace myself for what seems will be an involving drive. Unswerving attention is indispensable while attempting a mileage record. I have to alter my natural state of mind to one that abhors speed. My right foot must work with surgeon like precision on the throttle. An extra twitch and the revs rise above the ideal 2000-2200 range. I set out towards Udaipur with Karan for company and Bert catching 40 winks in the back-up vehicle.

Forced to drive across the excellent highways in Rajasthan at 60kmph is nerve-wracking. It's one of the longest, smoothest highway stretches in India and it's practically traffic free on a Sunday. What a drag to be stuck with an average 60kmph. The Logan trots along unruffled. Some six-wheeled behemoths pass us by and at times we come upon some cattle and traffic snarls on the outskirts of cities we pass.

The real time fuel indicator shows a mind-boggling 30.5kmpl when I took over. My objective was to add as many digits I could to it. The mostly flat gradient and some gradual slopes keep strain on the engine to a minimum.

Around 50 odd kilometres into the drive the mileage indicator has jumped up to 30.1kmpl and onwards to 30.4kmpl. This was my reward for driving ultra patiently.

I have always liked the ride and the handling of our long-term Logan, besides its roomy, airy and comfortable environs. Its European styling really helps. The lumbar support in the driver seat is a big boon on long drives.

It is time to wake Karan up. Despite my grouses, the drive was



Mission Logan begins in an eerie pre-dawn glow on the road out of Delhi.



fairly enjoyable. The trucks were slower as were the local taxis and such. The Logan seems to be the most fuel efficient car in India, showing 29.8kmpl when I hand over the wheel to Karan at 6:30pm, 350km before Ahmedabad.

» Karan

I have to make an effort to be patient, a virtue I'm not known for. The LCD on the instrument panel is indicating a fuel efficiency of 28.6kmpl. The stop in between the driver change and getting back up to cruising speed has reduced the mileage marginally. My aim is to get the reading as close to 30kmpl as I set off driving the car as gingerly as possible. No more than a slight tap on the accelerator pedal to get it going and keep it rolling with little resistance.

It doesn't take long before the slow speed gets on my nerves. Not exceeding 2200rpm at every gear change and maintain that on the inviting Rajasthan highway was harder than I imagined. You've got to hand it to the truck drivers, honestly. How do they trundle along for hours at no more than 50-60kmph or even drag race each other at speeds no higher than 50kmph?

This, I soon realise, is not my cup of tea but the open road has its charms and surprises. With a light foot on the throttle, no music to listen to, the Logan continued its mileage run on NH 8. Being a Sunday the lack of traffic was helping our cause and the Logan was in its zone. We were now getting 28.8kmpl but then we hit Udaipur where a traffic jam had blocked the bypass.

This was a catch 22 situation. The traffic was crawling no further than a few metres every couple of minutes which meant that I could neither let the engine idle nor could I afford to stop and start every time the traffic moved a few feet. I tried to hold the traffic behind me until I had sufficient distance to cover but that only annoyed those behind me as they bombarded me with a barrage of hoots and expletives. There wasn't much we could do but to wait for the traffic to clear. In the half hour we were stuck there the fuel efficiency dropped

to 28.5kmpl. It was now that the first bar of the fuel gauge dropped since we started that morning.

With the traffic jam at the bypass showing no signs of easing off, we made a quick decision to take the road through the city though we risked getting stuck again. Being a Sunday traffic was reasonably light but as we navigated our way around the princely city, meandering between animals and autos, it was inevitable that the fuel efficiency dropped further. We were now getting 28.3kmpl, our worst reading since we left New Delhi.

The roads remained relatively free of traffic and I quickly got back to the 2200rpm mark, trying not to exceed that. Under constant throttle, the mileage gradually started to rise. On exiting Udaipur we got a lucky break as the next few kilometres turned out to be a gradual descent. This eased the strain off the engine and slowly but surely the mileage reading kept increasing.

Nearly three hours of constant driving at a steady rpm had the fuel efficiency back to 28.9kmpl. Another hour later we halted for dinner at a roadside dhaba. Much to Martin and Bert's disappointment we stopped at what first seemed to be a strictly vegetarian joint but an overtly hospi-

table waiter offered to get us anything and everything, morality no issue, if you get my drift.

Entering Gujarat around 1am, our disciplined driving was paying dividends. The tall fifth gear meant that we could do away with gear changes despite some of the section of the highway closed on one side. Our mileage had risen over the last few hours but somehow despite the cooler air which let the engine operate more efficiently, the Logan's indicated efficiency was not rising. We were averaging around 29.1kmpl but it was now taking an eternity to increase every decimal point.

The Aravalli range was now replaced by factories and the smell of chemicals. Ahmedabad was fast approaching and in a last ditch effort to increase the mileage I drove even more cautiously into what was once referred to as the Manchester of the East.

The fuel efficiency of the car had now increased to 29.6kmpl but the wandering around in circles trying to locate our hotel within Ahmedabad saw our efficiency drop a couple of points to 29.4kmpl. Come morning we drove to the petrol pump to refuel the car and check on the mileage. To our surprise, we had managed to average a record 30.36kmpl. **C**



The Logan has been driven for 981 kilometres which has taken 23 hours.



The diesel pump indicates 32.31 litres of fuel consumed giving us a phenomenal average of 30.36kmpl. The Logan has notched up yet another record.



»» The tall fifth gear meant that we could do away with gear changes

Every drop counts

This is just how we do it... and you can too!

A few simple tips I learnt at the Renault Eco 2 program have greatly helped in maximising fuel efficiency. The Renault Eco 2 program is a unique division of Renault that makes more efficient cars by slight modifications to powertrain and body. In addition they also help drivers inculcate better driving habits that will further enhance their car's efficiency. This is what I learnt:

Pre-empt traffic movement ahead.

Are the cars ahead slowing down? If they are, you could too by simply lifting your foot off the throttle rather than accelerating till the last moment and then stepping on the brakes hard. Let the car coast for as long as possible before you have to use the brakes to come to a halt. Braking too often spends the energy generated by the fuel you just burnt which is a waste.

If traffic is speeding up or the traffic lights go green, there is no need for you to also step on the gas immediately; gradually accelerate and build speed. Steady acceleration will save you a lot of fuel. At speeds above 100kmph you can reduce fuel efficiency by nearly 33 per cent.

Another way of pre-empting traffic is by keeping at least two car lengths in between yourself and the car ahead. This is also called the 2-second rule which also ensures safer driving environments. Pick any marker on the road ahead and soon as the car that is in front crosses it start counting the seconds it takes you to cross the same marker. If you take less than two seconds to cross that marker you are too close to the car ahead and in case of any emergency braking you could run into the car ahead. The same technique will help you better understand what the car ahead is doing and you can accordingly adjust your car's momentum to ensure better efficiency.

If you have a tachometer, it is far more advisable to use rather than a speedometer to control your engine's efficiency. Try not to rev higher than 2500rpm. This will not

only prolong your engine's life but also ensure you get the best efficiency possible out of your engine.

The higher north the rev needle progresses the lesser the efficiency of your engine, so keep in mind to maintain low revs. Shift into the right gear at the right time. If you have a tachometer, upshift whenever the needle is between 2300 and 2500rpm. For downshifting, first apply the brakes until you see the rev needle drop below 2000rpm and then drop a gear.

When going up an incline, avoid crawling up in fourth or fifth gear. Surprisingly this reduces the efficiency of your car. What you are basically doing is starving the engine, thereby increasing the load and thus ruining the internal working parts of the combustion chamber. Shift down to third or second gear which will optimally utilise all the fuel fired into the combustion chamber.

Reduce excessive weight inside the car. Do not needlessly carry heavy loads in your boot. Every kilogram increases the load on the engine and reduces efficiency. Do not overload your car with more than the specified number of people.

Even when purchasing a new car, if fuel efficiency is your concern select the lightest car possible. In fact lose body weight if needed, else lose any seats you do not use.

Avoid idling for too long at traffic lights. Though this does not consume too much fuel, you lose efficiency because you are

using that fuel but getting nowhere.

Avoid changing lanes constantly if you are generally travelling in a straight line and do not have to turn left or right. From the slowest lane, don't drift needlessly into the fast and then wander back into the slow and so on. By doing this you travel a much longer distance than intended, as the shortest distance between any two points is a straight line.

Avoid using the air conditioning system especially during the winter season. Early mornings are cool enough to drive without the air con and so are late evenings. Also avoid using heavy duty audio equipment as this saps a lot of power from battery which is charged by the engine and inadvertently you are increasing the load on the engine and thus reducing efficiency. Also avoid using high wattage fog lamps or driving lamps (not headlights) unless absolutely necessary.

Ensure your tyres are inflated to the correct manufacturer recommended pressure. Improperly inflated tyres can increase the load on the engine thus reducing efficiency and also wear themselves out much faster.

Tank up your car regularly and ensure there is always around ¾ of a tankful in your car. While lesser fuel may mean lesser weight, lesser fuel can also lead to sloshing inside the fuel tank and improper feed to the fuel pump. This will wear out your engine and in due course reduce efficiency.

Another trick is to fill your car early in the mornings. Due to the cold ambient temperatures fuel is denser inside the petrol stations storage tanks, so you get more accurate measures than if you would fill later in the day when the fuel is less dense. **C**

»» ...when purchasing a new car, if fuel efficiency is your concern select the lightest car

Night and day

Looking back on the Mahindra-Renault Logan's record mileage run.

Words: *Sudheer Gaikwad*

'LOGAN'S RUN' (1976) directed by Michael Anderson is a sci-fi thriller about survivors of a nuclear holocaust. Actor Michael York plays Logan, the beautiful Brit actress Jenny Agutter his consort. 'Logan's Run' remains coherent till the finale, the star duo and the redoubtable Peter Ustinov keeping things credible.

It is quite my fave sci-fi movie and the one that came to mind when the Mahindra-Renault Logan was launched in August 2007. An astronomical 27.3kmpl highway fuel efficiency run set the then OVERDRIVE editor Yogendra Pratap thinking that the Logan 1.5 dCi could be coaxed to return an even loftier efficiency. No sooner said than done, and as Saturday, August 11 dawned, Team OVERDRIVE, along with reps of a multinational audit firm, drove the Logan to the National Centre for Vehicle Testing at the Vehicles Research and Development Establishment at Ahmednagar for what was labelled the 'Logan Mega Mileage Run'. The mission? To drive the Logan to the farthest record-setting kilometre count on a single tankful of diesel. Yogendra, Sirish Chandran, Bertrand D'souza and Vikrant Singh are to drive non-stop in 4-hour rotation, with Rahul Bose as standby driver. To keep count of kilometres, the Logan is fitted with the VBOX Mini test gear. At every driver change, memory cars are inserted/removed to ensure every millimetre was counted in.

Prior to

the delayed 2pm start, the Logan was put through thorough scrutiny by the audit firm folks, to verify that the car was in stock condition and conformed to standard specifications. That done, the Logan was tanked up and with the first driver Vikrant suited and strapped in, the mission was go...

Vikrant eased off the 60kmph speed initially decided on, on the first stint itself, bringing it down to around 52kmph. As Sirish, Bert and Yogen completed their driving stints, the stats settled into a 42kmph, 7-minute laps of the VRDE track. The Logan meanwhile was taking the sting out of the drivers' boredom by showing up a tall 33.1kmpl figure.

Quite fittingly, I was assigned time-keeping and lap-totalling duties along with designers Vikas, Nirmal and Vilas, even marketing manager Avijit lending a hand on this around-the-clock job. It all assumed quite surreal overtones, especially during the graveyard hours, the Logan orbiting around in clockwork 7-minute cycle. We had no inkling then that the ultra frugal Logan was going to stretch our mission to almost 60 hours...

The 4.226km high speed VRDE track is in quadrilateral form, with four straights of different lengths linked by banked bends. From an initial 125kmph limit when it was built in the 70s, the track was modified and shored up to cater

to 200kmph+ blasts. Due to track widening work, Team OD drivers had to drive an outside line clockwise, which accounted for the extra distance logged on.

A surprise star of the stint was the Logan's trip computer, which though not pinpoint accurate, kept every driver elaborately informed about average speed reading, kilometres to go, kilometres done, fuel consumed and most crucially fuel efficiency, via its orange glow screen.

The mileage run that began on Saturday afternoon reached standstill around dawn on Tuesday when the 50-litre Logan fuel tank was drained of the last drop of diesel. The final tally was tall enough to ring in a cork-popping champagne frenzy: the Mahindra-Logan clocked 2255.32km over 532 laps of the track on 62.949 litres of diesel, resulting in a quite extraordinary figure of 35.72kmpl. Much credit was also due to the Logan's torquey engine that enabled it to be driven at rock bottom revs and speed in fifth gear.

Theoretically the Logan could be driven to Delhi and a bit further on a tankful. In real life conditions the Logan then was returning over 15kmpl reaching 20kmpl even. **C**

FOR THE RECORD

2248.23km

The distance that the Mahindra-Renault Logan covered on a tankful of fuel.

62.949 litres

Total volume of fuel consumed during the Mega Mileage Run.

58 hours 44 minutes

Total time that the car ran on a tankful of diesel, in the process covering over 2248km.

35.72kmpl

The fuel efficiency achieved by the Mahindra-Renault Logan 1.5 dCi on the high speed track at the NCAT.