

HOLDEN in economy run win



WINNERS in class G, Marc McInnes (left) and Chas Knight, who wrote this article. They are also shown below receiving their winning presentation from the Mayor of Mildura. Marc is with Engineering, Fishermen's Bend, and Chas is an Investigation Engineer with Quality Control, Dandenong. Both have been prominent in motoring club activities and each has held position of President.

The Mobil Economy Run, first run in America in 1950, has spread to many other countries throughout the world. Results are used both by vehicle manufacturers and the Oil Company to promote their products. In Australia the Mobil Economy Run has been conducted for nine years, over different routes of approximately 1200 miles. This year the route extended from Wollongong, at sea-level on the N.S.W. coast, over the top of Mt. Kosciusko in the Australian Alps and down the valleys of the Murrumbidgee and Murray rivers to Mildura—a distance of 1,382 miles.

Although Holdens were entered by dealers in previous Runs, 1964 saw the first official entry by General Motors—Holden's into this field of motoring. Two Holdens, a 149 manual sedan and a 179 automatic sedan, were prepared at Fishermen's Bend by Engineering Department. While the vehicles were being prepared, drivers with competitive experience were selected from the GMH Motoring Club for training in Economy Run driving conditions.

The end result of this preparation was that GMH, entering an Economy Run for the first time, won class G (automatics, 2,500 c.c.—3,500 c.c.) with the 179 automatic giving 32.03 miles per gallon. This car was driven by Charles Knight and Marc McInnes.

The 149 manual, driven by Gordon Elliot and Bob Watson, finished a close fourth against strong opposition in class E (manuals, over 1950 c.c.) with a 35.27 miles per gallon figure.

The natural reaction of any car owner is, "How on earth do they do it?"

It must be realised that these results are more of a useful indication than an accurate guide to the mileage they can expect from their own cars. Three features of an Economy Run which can differ from everyday driving and result in the high M.P.G. figures achieved are, (I) the condition of the vehicle, (II) the speed at which it is driven, and (III) driving technique. Let us take these in order.



WOLLONGONG, N.S.W., scrutineering point and our 149 manual Holden team of Bob Watson and Gordon Elliot. These two Technical Centre Engineers finished a close fourth in class E. Both are prominent motor sport exponents who work with Experimental Engineering.



It is important to realise that the only cars eligible for the Mobil Economy Run are those currently on sale to the general public—and close checking is carried out by scrutineers to ensure this is fulfilled. They are the same types of car as you drive to and from work. However, where certain options are available these may be fitted. The majority of English cars, for example, have optional carburettor jets, and any of these may be fitted. But, there is nothing stopping you from buying and fitting them to your car.

However, manufacturers and people who handle cars know what affects a vehicle's consumption. Certain tyres have less rolling resistance than others. An old tyre has softer rubber than a new one; it will inflate to a larger diameter for less engine revs per mile. Relatively low speed driving means ignition timing can be set to a more economical point than is possible for all-purpose driving and different spark plugs used. When identical carburettors are put on a test bench one is sure to be fractionally more economical than the rest. There may be fifteen or twenty of these and similar items, and although the car bought off the showroom floor will undoubtedly incorporate some of them, the entrant placing a car in the Mobil Economy Run tries to ensure that **all** are present in that vehicle. The total improvement gained by these items may only be 2 or 3 m.p.g. better than the average vehicle. One very helpful deviation is that tyres may be run at 28 lbs. per square inch. It goes without saying that the car will be in a first class, finely tuned and well run-in condition, having received adequate and careful maintenance throughout its preparation.

To make conditions realistic during the Run, the vehicle is loaded with two drivers, an independent observer, and weights to a total load of 700 lbs., for the large cars. Similarly lesser weights apply for smaller cars.

Secondly, and this perhaps is where the greatest saving in fuel can be made, is the speed at which the vehicle is driven. The average speed for the entire 9th Mobil Economy Run was 39 m.p.h., which, allowing for time lost in towns and on hills, required a level open road speed of 45-50 m.p.h. This may seem rather slow to the average motorist, yet it is surprising how many miles can be covered if one keeps at this speed without making unnecessary stops. The competing cars covered 300-400 miles each day with corresponding driving times of 8-9½ hours, without ever exceeding 50 m.p.h., on the level. The average motorist takes about the same time to cover the same distance, yet his level road speed will rarely be less than 60 m.p.h.

Consider two motorists who pass through a town at the same time, one travelling at 45 m.p.h., the other at 60 m.p.h. If the faster car stops for 10 minutes in the town it will be 30 miles before he catches up to the slower one again. The slower car may be getting 30 m.p.g., the faster one certainly won't be getting 25 m.p.g. It doesn't take very many stops or interruptions to progress to see why the fuel consumptions of the two cars will be so different—although their travelling times will be the same.

Thirdly, driver technique plays an important part in utilizing the advantages of a well-prepared car and a reasonable road speed. We all know fast "take-offs" and hill climbing use great amounts of fuel.

So the economy driver will use two miles of road in gradually accelerating from 20 to 45 m.p.h. He will crawl away from stop lights and change into top gear at 10 m.p.h. His speed up hills will be as low as the car will go in third gear—or about 20 m.p.h. in second gear. His level road speed will be as low as possible having regard for his time schedule. All the while he will be maintaining minimum throttle opening for the speed required, and meticulously avoiding all sudden changes of velocity.

On the other hand he may do 60 or 70 m.p.h. down hills with either very little throttle or none at all. If he has to drive fast to make up schedule, downhill is the best place to do it—with gravity helping. If you think economy driving is a pussyfoot occupation, consider yourself in a car "coasting" into a series of blind corners on a narrow mountain road at 60 m.p.h., with no accelerator or brakes to help control the car and a long drop over the edge if you misjudge the situation. No accelerator, because that uses fuel; no brakes, because they destroy momentum. Just skill, and a nice "feel" of the car.

There are many other things which go to make up the technique of a polished economy driver. He analyses wind conditions, air temperatures, the type of road surface, the known direction of the route and the country it traverses, likely traffic holdups—and many other small things which will indicate if conditions are favourable for driving a little faster at the moment or to wait before making up schedule.

In an Economy Run, one penny worth of petrol is worth every effort required to save it. By these margins Runs have been won and lost. By these margins vehicles are hailed as the most economical of their type in Australia, until the combination of another Mobil Economy Run, a well-prepared car and two skilful drivers produces another vehicle to take its place. However, 1964 sees Australia's Own Car, the Holden, honoured as the leading economy car in its class.

—CHARLES KNIGHT

