Since its introduction some years ago, the Humber Hawk has changed little externally, but gradual improvements have made a world of difference.

By PETER HALL

HAWK WITH NEW

Gradual improvements have refined the Humber Hawk in many ways. The newest version looks the same, but has lighter steering and, most important, disc brakes.

In America the motor industry is the centre of the most outspoken and critical soul-searching about capitalist principles for many decades. Americans have always been noted for their unconcerned willingness to hang their dirty washing in the full view of all who care to look, including their worst enemies, and this is no exception.

The subject of the latest bout of soul-searching is something which classic car lovers and conservative-minded car buyers have long complained about when the subject of American cars came up.

It is called "planned obsolescence". Those critics who use this impressive phrase claim among other things that delibera

deliberately to over-design and over-engineer and to make the car appear more modern and therefore more desirable than it really is in order to make customers want to buy new cars as often as possible.

This, they say, is a deliberate and cynical strategy to keep the public buying ever more car.

The idea is that cars are supposed to have "superb finish", but this is merely a sales ploy to make consumers think they are getting more for their money. Few consumers can afford to buy a luxury car, so they are often taken in by the promise of a perfect finish. However, in reality, American cars do not last as long as European cars, and their finish is not nearly as good.

This is why the Humber Hawk has become such a popular choice in recent years. It is a car that is built to last, and it is also very cost-effective, which makes it a great value for money.
that many American manufacturers deliberately re-style their products at ever-shortening periods to entice the public to buy the new model even though the previous one is still thoroughly functional.

They say of the motor industry that the major changes to American cars in recent years have been superficial work alterations that have not improved the cars, but merely added unnecessarily to their cost.

This particular dirty washing display has its darker patches which do not concern us so much as the general proposition of whether annual model changes, superficial or not, are as important as some car makers seem to think.

Don't misunderstand me — no one in his right mind will ever criticise the car maker who does his best to improve the design, engineering, finish and performance of his products — genuinely and frequently.

The question is whether we really want to have cars that look different every year or so just for the sake of having them look different. I certainly don't and I suspect that a vast number of Australian motorists don't either. I believe I can point to the astounding sales success of rarely-changing cars like the Holden and Volkswagen to support my view.

It is a view which the very independent British firm, Rootes Ltd, seems to take.

There are few companies in the world which have changed the appearance of their range of cars so little in the past five years as Rootes and its Australian associate company have done.

To me, the final proof of Rootes policy came with the release of the Series Two, 1961 Humber Hawk saloon.

During my test of the car I examined every square inch of its exterior and found not a single detail which differed from the Series IA 1960 model. Those impressed only by superficialities would have denied it was a new model at all.

Is this a wise policy for Rootes or is it just colossal cheek on their part to foist a "new" model on the public that is completely and utterly not new?

The wisdom of the policy, from Rootes point of view, will be proved or disproved only by the year's sales figures. But after testing the car concerned I, for one, thoroughly applaud the policy.

For a start, the price of the Series Two model is exactly the same as the Series IA, with which, as I've said, it is identical in exterior appearance.

But, much more important, the car has several quite important modifications which, had not Rootes saved cash by not altering the superficial styling of the car, would undoubtedly cause its price to rise.

The most important of these, by far, is the fitting of disc brakes to the front wheels.

On the grand prix circuits and in sports car races throughout the world, disc brakes have been proved, beyond question, to be the best system the motor industry has yet devised to slow and stop motor cars.

They are free from fade, are little troubled by water and mud, adjust themselves automatically and the friction material fitted to them (in pads) is quickly and cheaply replaced when it wears out.

British braking firms developed disc brakes and it is pleasing to see British car firms fitting them to standard production models despite the fact that they cost more than conventional shoe-and-drum type brakes.

Rootes fitted them to the Hawk's big brother, the Humber Super Snipe, last year with outstanding success.

WHEELS, October, 1961
TECHNICAL DETAILS OF THE HUMBER HAWK

PERFORMANCE

TOP SPEED:
Fastest run .......................... 79.6 mph
Average of all runs .................... 78.6 mph

MAXIMUM SPEED:
First ................................ 42.0 mph
Second ................................ 53.0 mph
Top ...................................... 79.6 mph

ACCELERATION:
Standing Quarter Mile:
Fastest run .......................... 22.7 sec
Average of all runs .................... 23.3 sec
0 to 30 mph ................................ 6.3 sec
0 to 40 mph ................................ 10.8 sec
0 to 50 mph ................................ 15.4 sec
0 to 60 mph ................................ 21.2 sec
0 to 70 mph ................................ 23.9 sec
0 to 80 mph ................................ NA
20 to 40 mph ................................ 5.9 sec
40 to 60 mph ................................ 11.8 sec

GO-TO-WHOA:
0-60-0 mph ............................. 25.9 sec

SPEEDO. ERROR:
Indicated Actual
30 mph ................. 28 mph
40 mph ................. 30 mph
50 mph ................. 47 mph
60 mph ................. 57 mph
70 mph ................. 67 mph
80 mph ................. NA
90 mph ................. NA

FUEL CONSUMPTION:
Cruising speeds ................. 21.0
Overall for test ...................... 18.2

SPECIFICATIONS

ENGINE:
Cylinders .................. four, in line
Bore and stroke ............... 81 by 110 mm
Cubic capacity ............... 2207 cc
Compression ratio ............ 7.5 to 1
Valves ....................... pushrod, overhead
Carburettor ..................... Zenith
Power at rpm .................... 78 at 4400
Maximum torque ............... 120.3 lb/ft at 2800

TRANSMISSION:
Type ..................... Borgwarner automatic
Ratio:
First ...................... 9.769-20.474
Second ..................... 6.034-12.670
Top ......................... 4.22
Rear axle ..................... hypoid

SUSPENSION:
Front ..................... independent coil
Rear ..................... semi-elliptic
Shockers ..................... telescopic

STEERING:
Type ..................... Burman re-circulating ball
Turns, 1 to 1 ................. 4 1/2
Circle ......................... 38 ft

BRAKES:
Type ..................... disc front, drum rear

DIMENSIONS:
Wheelbase ..................... 9 ft 2 in
Track, front ..................... 4 ft 8 in
Track, rear ..................... 4 ft 7 in
Length ......................... 18 ft 4 in
Width ......................... 5 ft 9 in
Height ......................... 5 ft 1 in

TYRES:
Size ......................... 6:40 by 15

WEIGHT:
dry ......................... 27 cwt
After testing it, I’m inclined to think the discs are a greater success on the Hawk than they were on the Super Snipe. On this reflection, that seems logical enough. The Hawk is a lighter car, and the brake system used on the two models is identical.

The one drawback disc brakes have as far as ordinary, personal cars are concerned is that they require heavier pedal pressures.

So the second modification made to the Humber Hawk to justify it being called a new model was the fitting of a vacuum power-brake unit. The result was all the advantages of disc braking combined with pedal pressure so light that a baby could stop the car swiftly and effortlessly from any speed of which it was capable.

The third modification would go unnoticed by anyone who had not driven the earlier model Hawks. The steering, unchanged in principle or design, was very much lighter to operate than formerly.

The secret of the lighter steering, apparently, was in small but important changes to the position and free movement of steering joints and king pins.

The Hawk is as light as a midget to manoeuvre, whether the driver is edging it into an undersized city parking spot or racing down the highway at 70 mph.

Suspension is another part of the Hawk that has been modified slightly to give a quite noticeable improvement over earlier models.

New silico manganese coil springs are fitted to the front suspension, which is, of course, independent. An anti-roll bar is fitted between the bottom links of the front suspension. The semi-elliptic leaf springs at the back are slightly wider.

New shock absorbers are fitted all round the Hawk and the overall effect is to give the car a clearly softer ride over not-so-perfect surfaces. It is a tribute to the ingenuity of the Hawk’s suspension designers that the generally softer ride does not impair its handling qualities.

Indeed, I felt the handling of the 1961 Hawk was better than any of its predecessor. Its cornering characteristic was one of slight understeer but even under the most extreme centrifugal pressure the Hawk never got out of hand.

It rolled a bit more than its predecessors, but the wheels seemed to dig into the ground more vigorously. I’m sure this was due to the softer suspension — exactly the same thing happened to the Volkswagen when the Australian factory gave it softer shock absorber settings late in 1960.

On first roads the Humber Hawk sailed along with the serenity of the Canberra moving into Circular Quay on a calm day.

The other changes to the Hawk were of a more minor nature and were concerned mainly with the comfort of driver and passengers.

As on the Series Three Super Snipe, the intermediate gear hold for the Borg-Warner automatic transmission is now operated by pushing the selector lever towards the dash panel. In operation, this arrangement proved immeasurably easier than pulling out the knob that was formerly placed on the Hawk’s dashboard to the right of the instrument cluster.

On the test car, which had done only 2000 miles, the lever was a bit stiff to pull back, but this would undoubtedly correct itself with use.

Interestingly, automatic transmission is now standard equipment on Australian-assembled Humber Hawks. If you want the four-speed gearbox model, with or without overdrive, you have to order a fully-imported Hawk at considerably extra cost.

This is very much in contrast with the position in the Hawk’s home country, Britain, where the four-speed gearbox (synchro on the upper three gears) is the only transmission listed by Rootes. The only option as far as the Hawk transmission is concerned in Britain is the overdrive unit.

It seems that if an Englishman wants an automatic Hawk he has to import one from Australia!

This is indeed an illustration of the growing trend to automatic cars in Australia, a trend which Rootes were one of the first companies operating here to recognise and act on to their advantage.

The Borg-Warner transmission itself was predictably simple to operate and had only one annoying feature.
Unless the driver was very careful with his revs the jump from intermediate to drive gears was of the slap-in-the-back variety.

Rootes and several other owners of cars with Borg-Warner automatic transmission assure me this is a common characteristic of the transmission that disappears when the car has done 5000 to 7000 miles.

Performance of the Hawk was not hair-raising, but the car was no slowcoach. The car tested was the first of several Hawks I’ve driven over the years that would not deliver at least a genuine 83 mph. My best run registered a speed of a fraction under 80 for the flying quarter mile. I feel I should point out in this respect that the engine of the test car seemed unusually tight and the top speed runs were made with a very strong, gusty wind blowing from the side. It is conceivable that these factors could have reduced top speed by two or three miles.

However, I doubt if top speed would be of anything but academic interest to the average Hawk buyer. Much more important was its ability to cruise in silence and without strain to drivers, passengers or car at a genuine 70 mph, all day.

The engine was something of an anomaly in short-stroke 1961. A big 214-cid four cylinder engine with a stroke of no less than 110 mm is like something out of the history books.

But the Hawk power unit develops its handy 125 bhp at relatively low revs and does it so smoothly that it is almost impossible to pick the engine as a four at all. It is an engine with many years of careful development and modification behind it and its ability to lead a long and useful life is unquenchable.

The tightness of the Hawk were well up to Rumber standard and included a first-class heater and demister, windscreen washers, two-speed electric wipers, centre arm rests back and front, and a complete range of instruments, including an ammeter and voltmeter added for the first time on this model. I think the Hawk fully justifies Rootes’ contempt for annual “styling” changes.

Although the screen wipers park at the other end of their arc, this shot shows how they leave a blind spot on the right of the windshield.

CHRYSLER’S GAS TURBINE
(Continued from page 22)

After the war Heubner went to work on his project. He gathered about him a tiny group of engineers who believed in the gas turbine and he labored in a sea of sceptics. It was not until 1954 that they came up with their first gas-turbine automobile.

Nobody gave Heubner and his plans a second glance, however, until 1956, when they produced a turbine-powered car that averaged 14 mpg on a trip from New York to Los Angeles.

Persisting, he had so cleaned up his design by 1958 that he got 19.4 mpg on a Detroit-New York trip. That was better than a standard Plymouth V8.

Then Heubner Engine Number Three was announced early this year, it produced about the same fuel mileage as in 1958, but Heubner had added spine-tingling acceleration and fine engine braking under no-throttle conditions.

Between 1958 and 1961, Heubner wrestled with these heavy problems. A gas turbine is, essentially, a constant-speed engine adapted to automobiles, it obviously could not run at one speed. Heubner was suffering from a lack of acceleration, an absence of engine braking, and a lag between depression of the accelerator and engine response.

With innumerable engine refinements and the addition of an automatic transmission, he got more acceleration. Then he put swivelling blades in his power turbine. That gave him even more acceleration plus engine braking plus instant response to the go pedal.

Heubner calls the blades “variable nozzles”. He uses the unique addition to his engine. They swivel automatically through a control (a “brain”) that reacts to gas temperature and pressure. These two depend on accelerator pressure and car speed.

The blades are tiny airfoils. They twist, root to tip, not only to gain efficiency but to minimize gas-compressibility effects from the turbine’s high speed. At no-throttle the blades actually can reverse their “thrust.” Then the kinetic energy of the car, through the drive wheels and drive train, makes a fan of the power turbine.

The fan, a sort of spigot turning off the flow of gasses, stores their heat in the engine for use when the accelerator comes down again. Momentarily the engine interior becomes a heat reservoir. It’s this reverse-blade position, using up the car’s kinetic energy, that supplies the equivalent of the piston engine’s compression braking.

One of the odd characteristics of the engine is that above 18,200 rpm on the power turbine at no-throttle condition, it “flames out.” It’s dead.

No fuel flows. At exactly that speed the “brain” signals, “Hey, fuel, please!” Fuel flow resumes, the spark plug sparks, and instantly the engine is in business again.

Better fuel economy certainly is possible. “To use an engineer’s phrase, the Chrysler engine has finished its research phase and entered development. It has proved itself.

Fuel? On its latest publicised long-distance trip, from Detroit to Washington, the engine burned kerosene on the road and, in Washington, straight gasoline. On part of the return trip, it burned a mixture of diesel fuel dumped on top of gasoline. It will burn leaded, premium fuel, but only at the eventual expense of fouling the turbine blades.

Heubner is letting out just so much design information and no more. His regenerator, for instance, is off limits to reporters. Knowledgable engineers with competitive companies say, however, that he uses a whirling plate in it to boost the heat transfer.

One of Heubner’s problems in researching turbines has been the unwillingness of his staff engineers to wring out an engine to the point of failure. They fear when one of their precious engines is abused. Their attitude is, let George Heubner do it. So George has to do it.