June 1990

The HUMBERETTE

CAR CLUB
HUMBER
VICTORIA

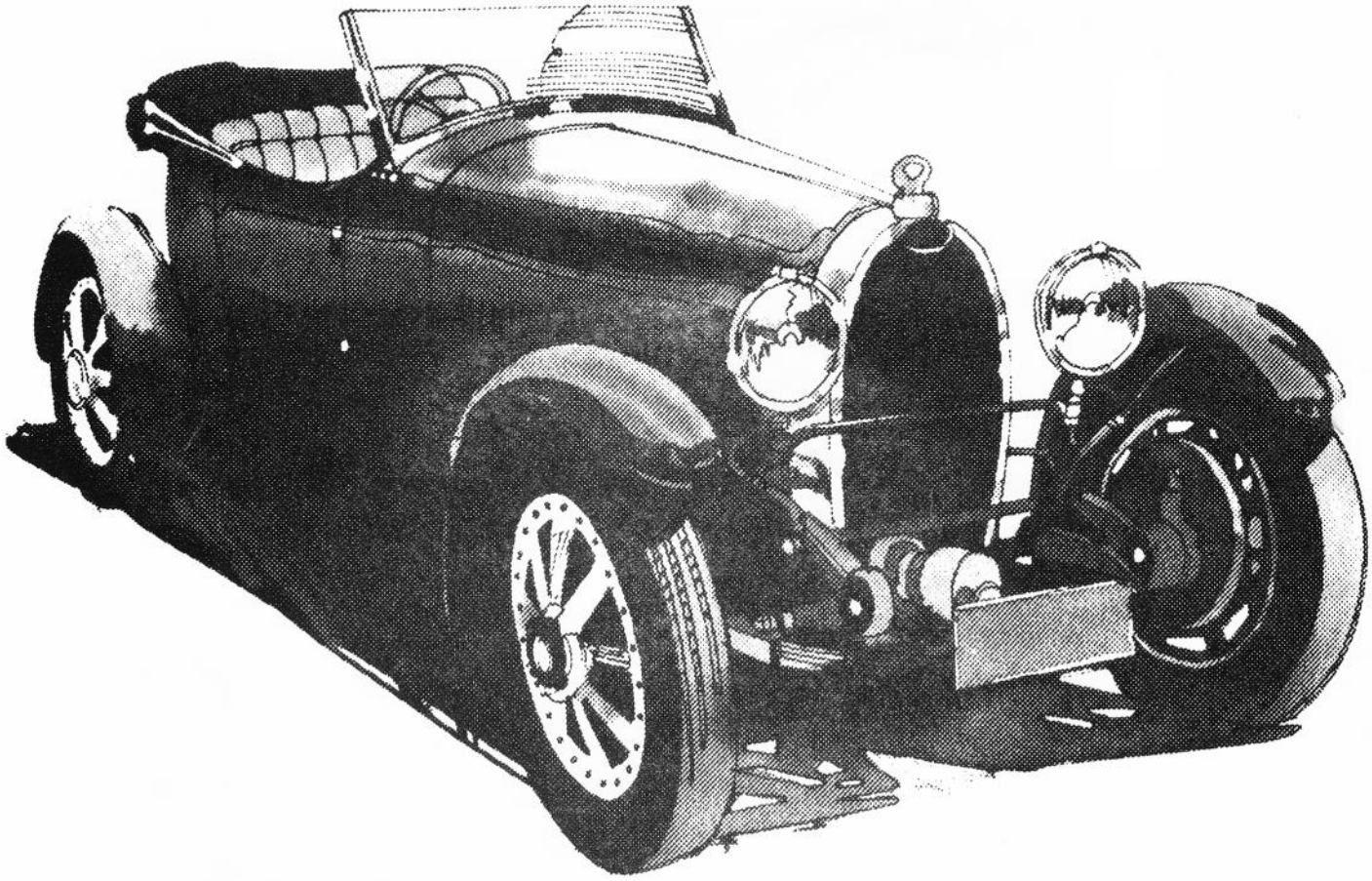
By Appointment to
The Royal Family

Official Newsletter of the
Humber Car Club of
Victoria Inc.

**Affiliated with the
Association of Motoring Clubs**

THE HUMBERETTE IS REGISTERED BY AUSTRALIA POST AS A PUBLICATION No. VBQ 0274

Vintage Insurance with Modern Benefits



VGL specialises in vintage, veteran, classic and collector insurance, along with hot rod and modified vehicle insurance. And because we recognise the needs of today's enthusiast we offer such benefits as:

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CALENDAR

JUNE 22ND.	GENERAL MEETING. DEEPDENE PARK HALL. 8.00PM. NATIONAL RALLY VIDEO.
JULY 22ND.	MONTHLY CLUB RUN . . GELLIBRAND HILL PARK.
JULY 27TH.	GENERAL MEETING. DEEPDENE PARK HALL. 8.00PM.
AUGUST 26TH (SUNDAY)	GENERAL MEETING / FAMILY DAY. DEEPDENE PARK HALL BYO PICNIC OR BBQ LUNCH. 12 MIDDAY. MEETING 2.00PM.
AUGUST 27TH. (MONDAY)	A.O.M.C. DELEGATE'S MEETING. PROGRESS HALL, CARNEGIE. 8.00PM SHARP.
AUGUST TBA.	COMBINED CLUBS RUN TO WESTERNPORT PUB. HASTINGS.
SEPTEMBER 28TH.	GENERAL MEETING. DEEPDENE PARK HALL. 8.00PM.
*** OCTOBER ***	*** 15TH BIRTHDAY OF HCCV. ***
OCTOBER 26TH.	GENERAL MEETING. DEEPDENE PARK HALL. 8.00PM.
NOVEMBER 11TH.	ANNUAL CONCOURS D'ELEGANCE, PRIDE OF OWNERSHIP , AND DISPLAY DAY. DEEPDENE PARK OVAL. N.B. ALTERNATIVE VENUE MAY BE NECESSARY IF OVAL DRAINAGE WORKS ARE NOT COMPLETED.
NOVEMBER 17TH - 18TH.	BENDIGO SWAP MEET, PRINCE OF WALES SHOWGROUNDS, HOLMES ROAD, BENDIGO. CLUB HAS INFORMATION STAND IN THE CLUB CORNER AREA, CONFERENCE HALL.
NOVEMBER 23RD.	FINAL GENERAL MEETING FOR YEAR. DEEPDENE HALL, 8.00PM.
NOVEMBER 26TH. (MONDAY)	A.O.M.C. ANNUAL MEETING AND DELEGATE'S MEETING. CARNEGIE PROGRESS HALL. 8.00PM.
DECEMBER 9TH.	CHRISTMAS BREAK-UP PARTY AND PRESENTATION DAY.

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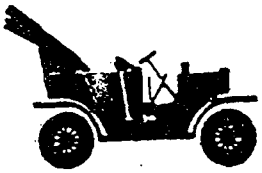

NEXT OUTING

** GELLIBRAND HILL PARK. **

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WHERE:	GELLIBRAND HILL PARK AND WOODLANDS HISTORIC HOMESTEAD. SOMERTON ROAD, OAKLANDS JUNCTION. MELWAY MAP 178 C6.
WHEN:	SUNDAY, JULY 22ND.
MEET:	AT THE PARK PICNIC AREA - ENTRANCE OFF SOMERTON ROAD.
TIME:	11.30 - 12 midday.
ACTIVITIES:	PICNIC OR BBQ LUNCH (BYO FOOD AND GAS BBQ), AFTERNOON SHORT HIKE TO GELLIBRAND HILL AND/OR WOODLANDS HOMESTEAD.
COST:	NO ENTRY FEE TO PARK : MAY BE SMALL ADMISSION CHARGE TO THE HOMESTEAD. DEVONSHIRE TEA AT HOMESTEAD (OPTIONAL).

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THE HUMBER CAR CLUB OF VICTORIA MEETS ON THE FOURTH FRIDAY OF EACH MONTH EXCEPT DECEMBER AND WHERE OTHERWISE STATED. MEETINGS ARE HELD IN THE DEEPDENE PARK HALL, ENTRANCE FROM WHITEHORSE ROAD, DEEPDENE. MELWAY REFERENCE MAP 46 A7. MEETINGS COMMENCE AT 8.00PM AND ARE FOLLOWED BY SUPPER.

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Waiting for discovery

GOING BUSH

ANDREW MEVISSEN

THE first thing most overseas and interstate visitors to Melbourne see is a national park few Melburnians know exists.

Overlooking Tullamarine Airport, Gellibrand Hill Park was created 13 years ago as "breathing space" for residents in the crowded western suburbs.

But locals have been slow to realise 645ha of beautiful wooded meadows lie on their back doorstep.

Just 25km from the city, Gellibrand Hill Park offers an authentic bush experience with majestic river red gums, rolling grassy woodlands, massive granite tors, native fauna and one of Victoria's oldest homesteads to explore.

And from the top of Gellibrand Hill (204m), walkers and aeroplane buffs alike are rewarded with a fascinating view over Melbourne and air traffic on the airport runways only metres from the park boundary.

To reach the main picnic area, take the Tullamarine Freeway past the airport turnoff and continue towards Sunbury, passing a popular spot for standing under jumbo jets as they come into land nearby.

Turn right along Oaklands Road behind the airport. This road passes a monument to explorers Hume and Hovell who travelled through here on their journey from Sydney to Western Port in 1824.

Turn right at Somerton Road and then right again into the park's attractive picnic area on the banks of the winding Moonee Ponds Creek (Melways 178 C6).

Long before aeroplanes arrived, the Wurundjeri-willam clan of the Woiworung Aboriginal tribe roamed the countryside here. Evidence of their habitation in the park can be seen in the form of eight "canoe trees" which were partially stripped of bark for the construction of boats, shelters and shields.

Irish settler William Pomeroy Greene bought land in the area in 1843 and erected the Woodlands Homestead.

The gracious country house has been restored and is listed on the Victorian Register of Historic Buildings.

From the picnic area, you can follow the nature trail along the tranquil Moonee Ponds Creek and a slashed track to the homestead 1.5km away.

Roaming between the magnificent old river red gums and the granite tors scattered across the sprawling meadows is a delight as you head south-east and then east past the Greenvale Geriatric Centre and across a gully to the rocky summit of Gellibrand Hill, topped by airport radar towers.

This excellent vantage point offers surprisingly breathtaking 360-degree views over Melbourne, the bay and surrounding mountain ranges.

The cockpit-like view of busy Tullamarine Airport sprawled at your feet is intriguing. Watch out for low-flying jets!

Granite outcrops on the summit were reportedly used to build the original Princes Bridge over the Yarra River in 1854.

For the return journey, meander across the trackless slopes south-west of the hill and then west through the strands of grey box, which are a haven for a variety of birds, including galahs and thornbills. Possums and a handful of kangaroos also live in the park.

Head north-west to a knoll topped by smooth granite slabs. Nearby, lies Woodlands Homestead, where Devonshire teas are available on Sundays.

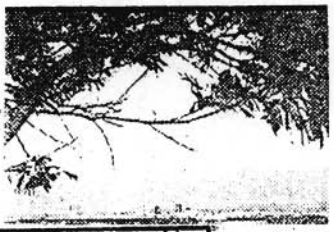
After exploring the house, which is not furnished, take the foot track north back to the picnic area.

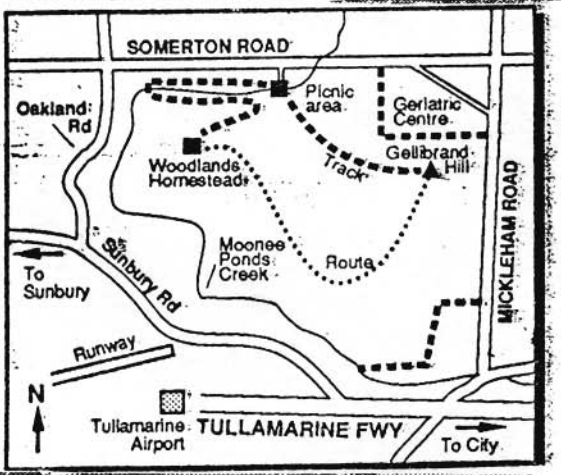
Maps of the park should be available at the picnic area.

You will need to bring your gas barbecue.

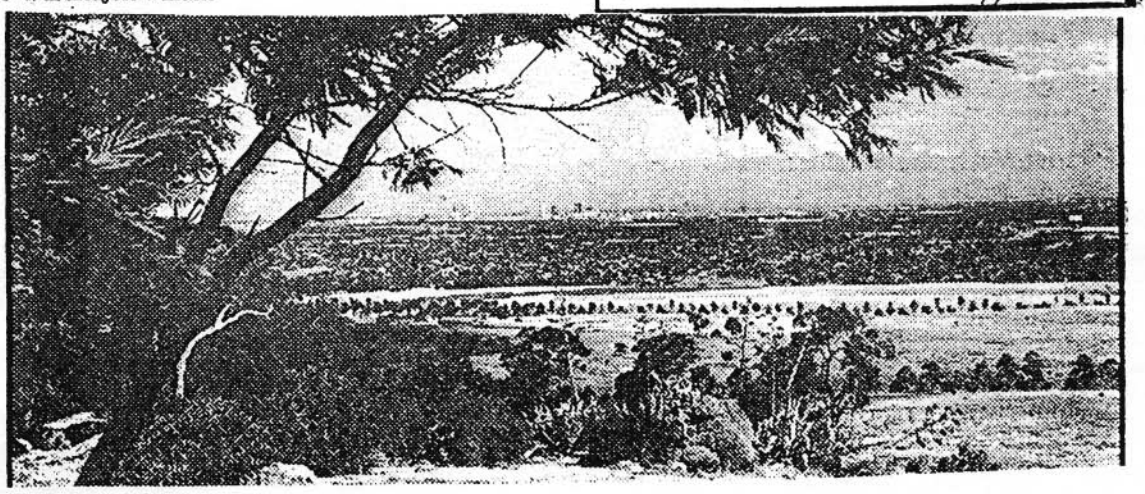
The park is open every day while the homestead is open 1-4pm on Mondays, Wednesdays, Fridays and Saturdays and 10am-4pm on Sundays and public holidays.

For more information, contact the park on 307-1164.





● Majestic Gellibrand Hill Park, an oasis of natural beauty nestled just 25km from the city.



THE HUMBER CAR CLUB OF VICTORIA INC.

CLUB ADDRESS — 23 HIGH STREET, WATSONIA. 3087

COMMITTEE 1990-91

PRESIDENT	: Geoff Webb		803 6592
VICE PRESIDENT	: Margaret Willimott		435 6354
SECRETARY	: Ian Foreman		
TREASURER	: Brian Parkinson		
MEMBERSHIP SECRETARY	: Graeme Finn		497 4231
EDITOR	: Barry Bosnich	(057)	83 1899
EVENTS DIRECTOR	: Mike Dupla		390 2211
LIBRARIAN	: Dave Denner		874 7016
REGALIA	: Vic Wilson		478 9352
TECHNICAL ADVISORS	:		
- Vogues	: D. Dunlop		439 7059
- Series V, VA S/Snipes	: A. Goldman	(059)	75 6807
- Hawks	: K. Willimott		435 6354
- Mk Cars	: B. Kennedy		789 5119
- General Information	: B. Kennedy		789 5119
- Auto Electrical	: M. Fitchett		366 8987

FOR SALE: MK 4 S/SNIPE, SPENT $2,000 ON VARIOUS REPLACEMENTS; BRAKES, CLUTCH, ETC. $5,500 NEG. CONTACT: R. JAMES, 7 MANGARRA ROAD, CANTERBURY, PH: 836 2051.

"REGALIA CORNER"

PRESIDENT'S REPORT

JUNE, 1990

Having just returned from the Churchill Island trip I was delighted with the number of members who attended the relatively long trip on a cold and wet rainy, winter Sunday. Over forty (40) members and visitors attended on what was a excellent run.

I have been thrilled by the attendances for all meetings lately, with the last Sunday afternoon meeting attracting fifty-eight (58) members. From the record of the meeting book which I would admit to being often conservatively inaccurate, the last Sunday meeting was by far our best attended event, except for the 1989 Concours which the record book showed sixty (60) attendees. The average attendances for the Friday night meetings has increased in excess of 13% over the prior year.

It is extremely encouraging to see the support increasing and on behalf of the Committee, thank you all. It is also pleasing to note the attendances of new members at both meetings and club runs.

As always, if you have any suggestions for a run please talk to me or any other Committee member, there are still many parts of Victoria that would be great for a run.

Geoff Webb

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MINUTES OF GENERAL MEETING

HELD 27TH MAY, 1990

Meeting commenced at 2:10pm. Fifty-four (54) members as per book.

Apologies: Karl Wilde, Rob Dunlop.

Welcomed: David Hart, Tom O'Keefe, Jack O'Keefe, Frank Weare, Vivian & Jim O'Brien and Trevor Pindale.

Treasurer's Report: Credit Balance $2646.70
Accounts for Payment $ 359.91

Correspondence: Australia Post, Exit Guard Ind., Vintage Drivers Club, Classic and Historic Auto Club, Veteran/Vintage & Classic Vehicle Club Wangaratta, Daimler Lanchester Club of Victoria, Rover Car Club of Australia, Australian Taxation Office, EJB Technology, Bay to Birdwood Run, Mr. R. Humphrey (Wodonga), AOMC Newsletter, Standard/Vanguard Club, The Flying "A", Chevrolet Car Club and Wolseley Hornet.

Events Director's Report: Cook book donated by A. Goldman, Margaret reported on President's Dinner, Churchill Island reminder.

Librarian's Report: Nil.

Technical Officer's Report: Bob Kennedy mentioned the subjects of cleaning heating units in cars plus topping up transmission units with Auto Conditioner.

Editor's Report: 216 newsletters circulated.

Hall Committee: Nil.

Meeting closed at 3.05pm. Afternoon tea served - 2,4,6,8 BOG IN, DON'T WAIT!

Ian Foreman.

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SOCIAL NEWS & NOTES

Hello all! If you didn't make the run to Churchill Island last Sunday you missed what must purely have been our best outing for some time. Ten Humbers plus two Hillmans and several "honorary Rootes vehicles" travelled to the Island and were joined temporarily at the Anderson pick-up point by an interested onlooker who had followed the convoy along Bass Highway. Turned out he was a Bendigo traveller who was himself restoring a commer van (Rootes) - he certainly knew how to pick a good car!!

Joining us at Churchill Island were N.S.W. Club Secretary Ronnie de Britt with her sister Allie, en route to Tasmania (no, their car didn't sport wings - or a sail!!). They were in fact advance guard/support vehicle for "Jenny" the brilliant yellow Mk IV of "Bourke to Broome" fame who is this year hoping to better her last performance in the Variety Club Annual Charity Bash. This year its a "Bourke to Burnie (Tasmania)" route to test endurance of cars and crew. Good luck Jenny!

The Island run provided an opportunity to greet David Hart and Stephen Yates, both ex-N.S.W. Club members who have migrated "south of the border". Welcome to HCCV David and Stephen.

Also amongst those enjoying the Churchill Island scenery that day were new member Fred O'Shea and son, the Duplars, the Kennedys, Fitchetts and Webb, Tom & Lyn McAlpine, the Judds, Jon White, Bob Bruce, Fred & Sylvia Pietersen, Arnold Goldman and the Wild Family - all in Series Super Snipes. The Rootes four-cylinder flag was kept aloft by the father/son Hillmans of Colin and Cameron Gunn plus Keith, Pam Batten and myself in the rally Mk I Sceptre. But where were the Vogues and Hawks??

Our thanks to the Wild family - all three generations and lateral shoots of them who collaborated to make the day such a success!!

Now to things a little more technical - books and Borg-Warner Boxes! In fact I really need only to draw your attention to the literature appearing in this journal. Thanks to Max Heazlewood for sending in the PVHCC letter which I had also seen featured in the latest NZ Humber/Hillman Torque. Cost of the Road Test Book on Series Humbers is in pounds sterling so you would need to convert. By the time you add postal charges you're probably looking at around $20.00 (Aust). Let's know at the next meeting if you're interested.

Jack Waring sent in the information from National Automatics on Borg Warner 35 changeover transmissions. It sounds like a good deal - has anybody had any dealings with the firm?

At the last AOMC meeting there was considerable discussion on recent or impending changes to RTA regulations and how they will affect us and our vehicles. Regulations governing 'P Plate' drivers come into effect on July 1st although there may be some amendment to the originally proposed requirement.

The new trailer and towing regulations could affect you if you have been in the habit of using your trailer to carry heavy weights (a 'parts car', boat, etc). A copy of these regulations is available for tabling at the June meeting.

If you have number plates in storage with the RTA, the annual fee has been raised to $22.50. Make sure you maintain your payment each year (even if you don't get a renewal notice) and have your receipt endorsed with the RTA Branch where the plates are located - under some circumstances it may be possible to hand in and back pay the fee for plates expired some time previously.

It is the aim of both the AOMC and HCCV to help and further the interests of the motoring movement. If you have any doubts on regulations affecting your club permit or hobby vehicle, it is in your own and the movements best interests to clarify the matter. Please ask questions!

Our next Club outing is a suburban run to Gellibrand Hill Park and Woodlands Historic Homestead. Details of this are on the calendar page.

I'll look forward to seeing you there and at the June meeting when we hope to show video scenes of the Easter National Rally.

Meanwhile, keep Humbering on.

Margaret.

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FOR SALES

Series 2 S/Snipe, off road since 1981, no reg or r.w.c., $1000 o.n.o.
Contact: L. Glennie, Ph: 569 6106 (A/H), 235 7372 (BUS) - RK.

1954 Hawk, on blocks twelve (12) years, good condition, no prangs, offers, car at Donvale.
Contact: H. Ambrose, Ph: 842 1450 (A/H), 877 4033 (Bus) - RK.

1964 Vogue, 12 months reg, reco auto, new brakes, tyres and paint, engine v/g/c, plus spares, $1900 o.n.o.
Contact: Cheryl, Ph: 720 1932 (A/H), 896 6763 (BUS) - RK.

1964 Vogue, manual, suit spares, car free but wants money for three (3) new tyres fitted.
Contact: J. Lewis, Glen Waverley, Ph: 233 4723 - RK.

1964 S/Snipe, Reg Nov 1990, reco engine, deceased estate, car at Northcote.
Contact: A. Michell, Ph: 481 8791 - RK.

1965 Vogue, auto, reg Sept 1990, slight body damage, fair interior, good tyres, offers.
Contact: L. Langdon, Ph: 266 4611 (BUS), 466 1983 (A/H) - RK.

Series 2 & 3 S/Snipe, one auto, one manual, "goer's", $200 for both.
Contact: R. Kennedy, Ph: 789 5119.

Mk 6 Hawk, stored at Castlemain many years, 'goer', best offer.
Contact: R. Tumney, Ph: (054) 72 2162 or in Brisbane from July onwards (07) 353 4003.

Mk 4A S/Snipe, black, no reg, engine runs well, uph fair, body needs some rust repairs, $800.
Contact: Ian Most, Ph: 877 1062 after 5:00pm, Blackburn South.

GIVE-AWAYS "FREE"

Mk 4 S/Snipe, car at Cohuna.
Contact: B. Kennedy, Ph: 789 5119 or Jim Yates on (089) 85 3571, Darwin.

Vogue sunvisor, underside rusty.
Contact: G. Hardy, Ph: 836 9162 (A/H).

WANTED

Mr. Ron Humphrey of Wodonga in Victoria wants Mk 2 or 3 S/Snipe, good body, no rust (1948-1951).
Ph: (060) 24 2033.

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FOR SALE

1965 SERIES 3 H/VOGUE, MOONSTONE, AUTO, ONE OWNER, 67,800 ORIGINAL MILES, REG. JAN '91, ALWAYS GARAGED, SELLING DUE TO ILL HEALTH, $3,000 NEG.

CONTACT: HCCV MEMBER JOAN WARD, PH: 497 1131, IVANHOE.

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PLEASE NOTE: THE LEOPARD TANK ROAD TEST ON NEXT PAGE HAS THE

FOLLOWING SECTION MISSING FROM THE BOTTOM OF COLUMN (2).

shock absorbers controlling the movement of five of the seven wheels either side. It's just as well the suspension is so effective as there are no seat belts aboard a Leopard!

AFV or ATV, the Australian Defence Forces' Leopard tank is lots of fun to drive. Paul Harrington reports.

Never mind the horsepower, feel the torque! That's what it comes to when you're in control of 42 tonnes of vehicle, powered by a twin supercharged, V-10 cylinder engine with a capacity of 37.4 litres. Power output is a mere 610 kW at 2200 rpm — about the same as produced by one of those superseded, 1.5 litre, turbocharged Formula One racing cars. Torque, on the other hand, is a mind boggling 2,860 Nm at 1500 rpm!

Those are the numbers behind the Australian Army's Leopard 1 tanks.

When it comes to offroading, literally across country, tracked vehicles really come into their own. This was the fact that the 1st Armoured Regiment, many of whose members are readers of 4X4 Australia, wanted to demonstrate when they invited us to Puckapunyal for a couple of days. Better still, they wanted us to drive their Leopards on the tank range to prove their point. Other than one whose picnic is short of a sanger, nobody would turn down an opportunity like that!

The Leopard has a dry weight of 42,400 kilograms. It is operated by a four-man crew comprising the driver, and in the turret the gunner, loader and commander. The turret is surprisingly roomy, other than for the gunner. He lives in a claustrophobic 'office' at the front, to the right of the big 105 mm gun's large breech. Behind him, on a raised seat, sits the commander. To the left of the gun, with all the room in the world when there's no 105 mm ammunition to handle, the loader almost has standing room. He also has a padded seat and his own hatch in the roof, side by side with the commander's.

The driver's position is a lonely one, sited low down in the front of the armored hull and to the right. He has his own hatch giving access to a rather cramped work station where he sits with his feet up quite high. The left foot rests on a huge brake pedal, the right caressing an equally large throttle pedal — big enough to accommodate the largest sizes of army boot!

Steering is by means of narrow handlebars. It's like driving anything else — turn to the left and the left hand track is slowed while the right hand speeds up, thus turning the vehicle. There are two pressures for steering. The first initiates gentle manoeuvres, while the second pressure has the tracks really churning, turning the vehicle in its own length.

Because there is a ZF automatic transmission, there's no need for changing gears. The gearshift is to the right and there are four speeds which can be selected to go forward, with two in reverse. For the rest, there's a comprehensive instrument panel which sits over the left shoulder, and a heater, fire extinguisher system, and other goodies to the right.

The driver's seat can be raised so that his head protrudes through the hatch, or lowered for when the hatch is closed and vision is facilitated by panoramic periscopes.

Apart from the rather uncomfortable seating position, with little support above the small of the back, driving the Leopard is very simple. Foot on the brake, select a forward gear, release the heavy handbrake and accelerate. It will start in any gear, with first giving a maximum of 13 km/h, second 24 km/h, third 37 km/h and top 62 km/h according to the book. In fact, we registered 70 on a downhill run over reasonably smooth going!

It was the ride which impressed us most. When you watch a tank going through its paces, it looks as though it must be hell inside. With the Leopard it's like riding in a Rolls Royce, even on quite rough patches of ground. This is the result of the chassis' transverse torsion bar springing, together with hydraulic

While it could be argued that a good 4WD vehicle, driven by an expert, might be capable of negotiating the same terrain as a Leopard tank, it certainly couldn't do it as fast, or as comfortably. Try it in a Series 111 Land Rover the way we did! Furthermore, no 4WD would cross the two metre wide washaways we encountered at 50 km/h. That was when the commander came over the intercom and just said, "OK. Hit it!" A hard dab on the throttle saw the Leopard cross the deep trench without a problem.

Gross though it may appear, the Leopard is a sophisticated machine. As already noted, its dry sump lubricated engine is a water cooled V10, with a 165 mm bore and a 175 mm stroke. It features four valves per cylinder, actuated by pushrod operated rockers from a single camshaft in the centre of the V. There's indirect injection into the cylinders which feature compression ignition combustion. Air is taken in through a series of filters and compressed to 23.5 psi by crankshaft driven, centrifugal superchargers, one to each bank of cylinders.

Technically, the engine is designed to run on almost anything that will burn — kerosene, light lube oil, or any grade of diesel fuel. In fact diesel fuel is used exclusively, there being 985 litres on board, with 475 litres in a right hand rear mounted tank, 480 litres in the left hand tank and 30 litres in a feeder tank. Fuel consumption on the highway is 165 litres/100 kms, giving an unrefuelled range of around 600 kms.

Drive passes directly to the ZF automatic four speed transmission, and thence to a 1:3.809 final drive. The complete engine, transmission, final drive and huge ventilated disc brakes, are designed in a complete package. This measures 2.5 metres in length, 2.1 metres in width and 1.22 metres high, weighing 4,540 kilograms. Despite its size however, the power pack can be changed completely in 20 minutes!

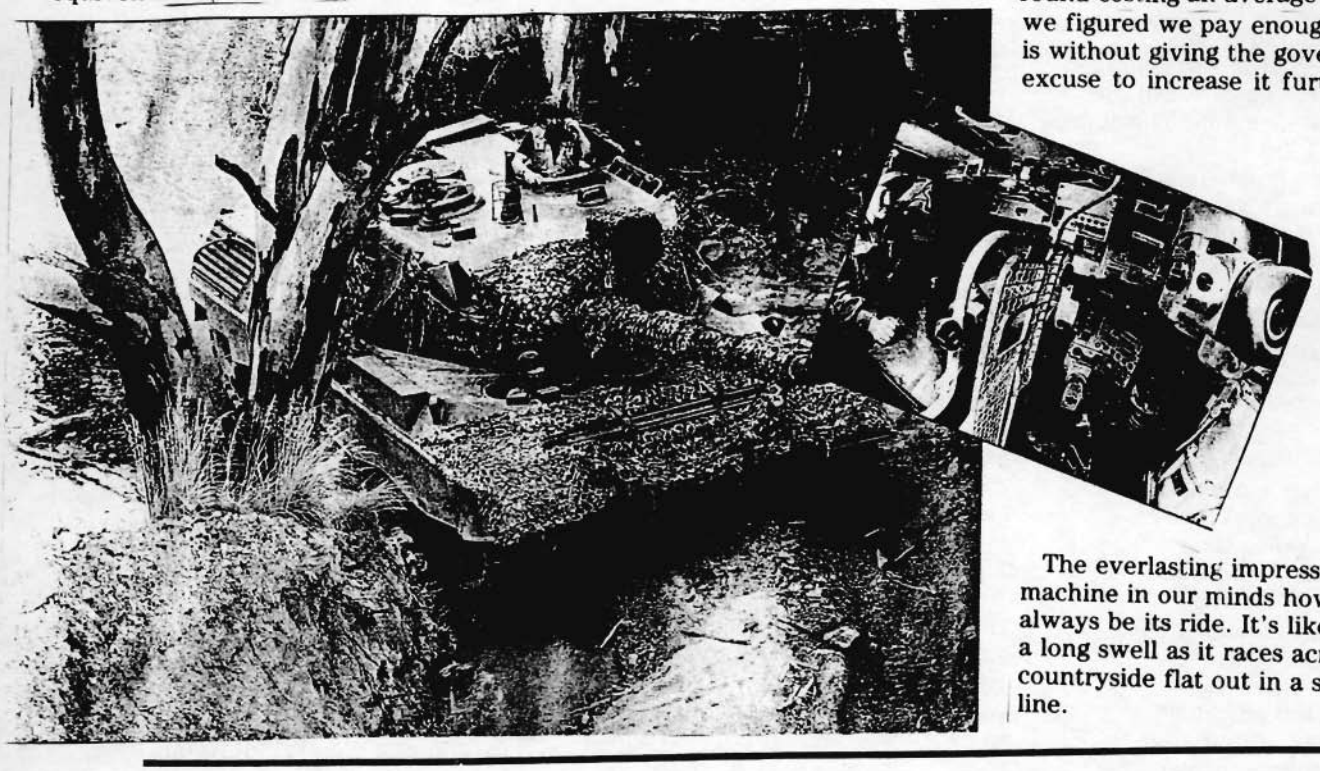
To facilitate this there are four mounting points which can be released from under the outside of the hull. All water and fuel lines are snap connected, while the transmission shafts simply wind in and out of the final drive splines. In the field a number of armored recovery vehicles (ARVs) look after maintenance and engine changing. Based on the Leopard chassis, these are mobile workshops, with dozer blades and powerful winches at the front and a 20 tonne crane on top.

Each carries a spare power pack which the crane can lift in and out with ease.

There's no doubt about the efficiency of these modern tanks, even if the design does date back to 1965. When you consider that early fighting vehicles travelled at no more than six km/h, had a range of less than 40 kilometres, and were manned by a crew of eight, today's equivelant is remarkable.

For example, the Leopard can walk its way over a step which is 1.15 metres high. It can climb a 54 degree slope and cross a 27 degree side slope. It can straddle a three metre wide trench and ford 1.2 metres depth of water without previous preparation. Fitted with underwater gear, it can negotiate depths of up to four metres!

As far as its fighting capabilities are concerned, we experienced only the turret mounted Rheinmetall MG 3 machine gun. Squeezing off a few 7.62 rounds gave a feel for the thing, making us glad we were on the trigger and not near the target! (Standing in front of the target we'd probably have been quite safe — Ed.) We were unable to use the main 105 mm gun however. With each round costing an average of $1000, we figured we pay enough tax as it is without giving the government an excuse to increase it further.



The everlasting impression of the machine in our minds however, will always be its ride. It's like a boat in a long swell as it races across the countryside flat out in a straight line.

Who can tow a trailer?

Anyone holding a current motor car driving licence can tow a trailer or another car. A person holding a "Learner's Permit" is not allowed to tow a trailer or another car.

Note: The Government is currently reviewing the conditions applicable to a Probationary Licence. It is possible that in future there may be restrictions on Probationary licence holders towing.

Towing another car

A person holding a Probationary or Full licence can flat tow another car. Flat towing is when all of the wheels on the towed vehicle are on the ground. When towing another car, the following conditions must, however, be observed:

(1) The towed vehicle must be controlled by a person who holds a current driving licence for that class of vehicle.

(2) The space between the vehicles must not exceed 3.5 metres.

(3) A flag or piece of material, not less than a 30 centimetre square, must be attached to the middle of the towing rope. At night, this material must be illuminated by a white light/s on the towed vehicle so that the flag or material is clearly visible as a warning.

(4) If the brakes of a towed motor vehicle are defective, it must not be towed with all its wheels on the ground unless it is connected to the towing vehicle by means of a coupling and draw bar that complies with the regulations.

Note: A licensed driver is still required to control a vehicle that is towed with a solid connection of any type, including an "A" frame.

(5) If a vehicle is being towed at night, the towed vehicle must have tail and stop lights and turning indicators which work.

An unregistered vehicle can be flat towed, however the registration number of the towing vehicle must be displayed on the rear of the towed vehicle.

Mechanic's lament

Tinkle, tinkle little part,
how I wonder where thou art,
I watched you roll across the floor,
I looked for you; you are no more . . .

RACV

REVERSING OUT OF DRIVEWAYS

RACV Member Legal Services receives many enquiries from members who are confused about the law when it comes to reversing out of a private driveway. Contrary to popular belief, the Road Safety legislation does not prohibit a driver reversing out of a driveway.

In fact, whether or not a driver reverses out of a driveway, or drives out forwards, the obligation to give way is the same. A driver entering a highway is obliged to give way to all traffic and pedestrians on the highway. A driver who is reversing has an additional obligation to reverse only if it is safe to do so.

Complications can, however, arise when a collision occurs between a car coming out of a driveway, and a cyclist who is riding on the footpath. In this situation the car driver is still compelled to give way to the cyclist. Unless the footpath is specifically intended for cyclists, however, the cyclist should not be riding on the footpath.

It is not easy to give a general ruling as to how legal liability would be determined in this type of accident as each case would be determined on its merits.

Rootes 'Restoration'

Last month Graham Robson began this in-depth history of the Rootes group by looking at the origins of this remarkable empire and tracing the mergers and takeovers that brought it into being. Now he covers the final pre-war years and takes the saga into the post-war age of 'product planning' and prosperity but also the start of the problems for the company . . .

In the autumn of 1938, Rootes issued the final slap in the face for Sunbeam and Talbot traditionalists, when they revealed a new marque, the Sunbeam-Talbot, whose models were not to be built in Wolverhampton, or West London, but in Coventry. Apart from the launching of a Humber Super Snipe for 1939, which combined the 9ft 6in wheelbase of the 16hp/Snipe models with an aluminium-headed 4086cc engine (for £385, a considerable bargain by any standards), the Sunbeam-Talbots were their most important new cars of the season.

There were three new Sunbeam-Talbots, the 10, the 3-litre and the 4-litre, all of which were closely related to existing Hillman and Humber chassis. The 10 grew out of the old Talbot 10, with a more forward-positioned 1815cc Minx engine and transmission (no synchromesh on Minx bottom gears for 1939, by the way), the 3-litre was little more than the 1938 model Talbot 3-litre on the 9ft 10in wheelbase, while the 4-litre was basically the same car, but with the 4086cc engine.

All the Sunbeam-Talbots were sold with a variety of body styles, the most notable of which were the pillarless-side styles which were to carry on in the Sunbeam-Talbots of the Forties and Fifties. Like the big Humbers for 1939, all had cruciform stiffening to their chassis, and all were given hydraulic brakes (a great improvement on the old Bendix variety).

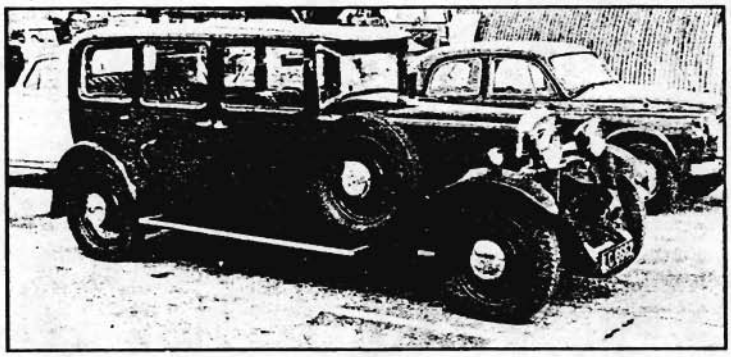
The pattern of the early Forties was now almost set, though there were two more important changes to be revealed just as the Second World War was declared, and which ensured that all supplies were channelled into the Armed Forces. The obvious model to appear was the Sunbeam-Talbot 2-litre, which was effectively a Sunbeam-Talbot 10, re-engined with the 1944cc Hillman 14 unit on a slightly longer (8ft 0.5in) wheelbase.

The truly major launch was of the third generation of Hillman Minx, which looked almost the same as the Minx Magnificent which it replaced, but which now had a unit construction body/chassis by Pressed Steel, the first ever to be used by the Rootes Group. That apart, it all looked very familiar to Minx lovers, for the 1185cc sidevalve engine and the four-speed transmission were not changed.

The styling included something of a 'bustle' over the luggage accommodation, which was a touch also applied to the large Humbers, but not to the Hillman 14, or the related Sunbeam Talbots. As with Nuffield, or General Motors, nothing, it seemed, could ever be taken for granted with Rootes.

There has been no space in this feature to look at all the special coachwork offerd on these cars, notably the tourers, sports saloons, and limousines, though companies like Whittingham & Mitchell, Carbodies, and Thrupp & Maberley all relied on such business from Rootes to keep themselves busy. Thrupp & Maberley, in fact, had been taken over by Rootes Ltd as early as 1925, while a larger, more "mass-production" maker of bodies, British Light Steel Pressings (of West London, like T & M), had joined the net in 1937 to produce Sunbeam-Talbot and other body styles.

By 1940, with up to 50,000 cars a year being built (perhaps 15 per cent of the UK total), Rootes was a full, paid-up member of Britain's 'Big Six' motor manufacturers, and the Dynasty was well-established. But after an incredibly active war effort, in which not only complete aero-engines were built, but in which a famous series of 4 x 4s would also evolve, there was even more to come in the future. If nothing else, they would have styling links with the famous American, Raymond Loewy, and a big modern factory, Ryton-on-Dunsmore, to assemble their cars.



Sunbeam, left, were taken into the Rootes group in January 1935

Important dates

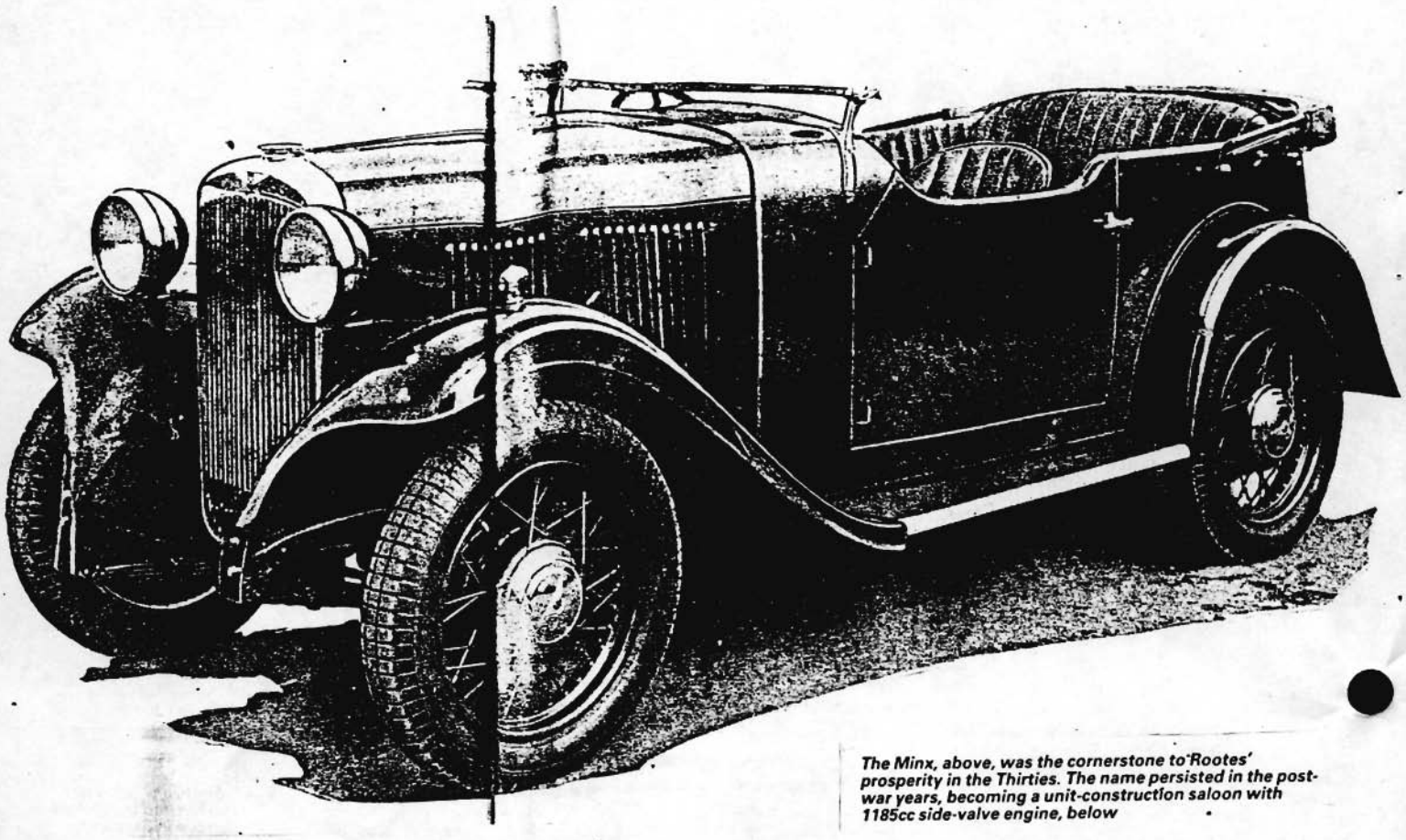
November 1928: Humber and Commer combined. Humber and Hillman had adjoining factories in Coventry, Rootes Ltd took a stake, but not financial control, in the new business.
December 1930: First public reference to new 'small' Hillman, to be launched in 1931.
October 1930; All-new Minx, the foundation stone to Rootes fortunes in Thirties, unveiled. (Sales began in March 1932).
June 1932: Rootes Group (of car companies) officially founded.
October 1932: Launch of all-new Humber 12, with engine destined to be used to Fifties.
January 1935; Rootes took control of Sunbeam company of Wolverhampton.
March 1935: Rootes took control of Clement Talbot company, of West London.
October 1935: Many new models, Hillman and Humber, launched with 'Evenkeel' independent front suspension. Mechanical rationalisation was setting in with a vengeance. On the other hand, Sunbeams disappeared and Talbots were progressively 'Humberised'.
October 1936: Exciting eight-cylinder Sunbeam prototype shown at Olympia, with Roesch-Talbot engine. Never produced.
September 1937: New six-window fastback body style (by Pressed Steel Co) announced for Hillman 14, and all the Humbers including the Snipe.
Autumn 1938: Rootes launced a new 'marque' — Sunbeam-Talbot — really higher-performance versions of Hillmans and Humbers. At first there was a '10', a 3.0-litre and a 4.0-litre First appearance of a Humber Super Snipe, still with standard corporate 'large' body.
September 1939: Even as the Second World War broke out, Rootes announced a new Hillman Minx, with monocoque body/chassis construction (a 'first' for the Rootes group), and a Sunbeam-Talbot 2.0-litre.
End 1939: Production closed down, as all factories turned over to the war effort.

Note: In July 1936, the government gave the first news of an aero-engine production plan, eventually to be known as the 'shadow factory' scheme, in which Rootes was joined by Austin, Daimler, Standard and Rover. This lead to the building of the Stoke Aldermoor plant, behind the main Rootes factories at Stoke, Coventry, and to the building of the vast Ryton-on-Dunsmore factory. All private-car assembly was to be centred on Ryton after the end of the war.

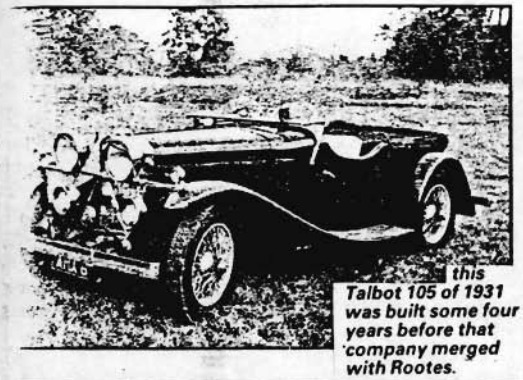
Family business to post-war colossus

After the end of the Second World War, the character of Rootes cars changed considerably in little more than ten years. In 1946, Hillmans, Humbers and Sunbeam-Talbots still had separate identities and a definite 'British' character. By 1957, for sure, there was Transatlantic influence on all sides, not only in the looks of the new models, but in the product planning methods (model cocktailing, really) which were being applied.

Several factors were involved. By government edict, the motor industry had to export many of its products, and Sir William Rootes latched on to this, with global expansion in mind. Then there was the styling trend recommended by Raymond Leowy's USA studios, and there was also the *Pizzazz* helped along by a successful competitions programme.

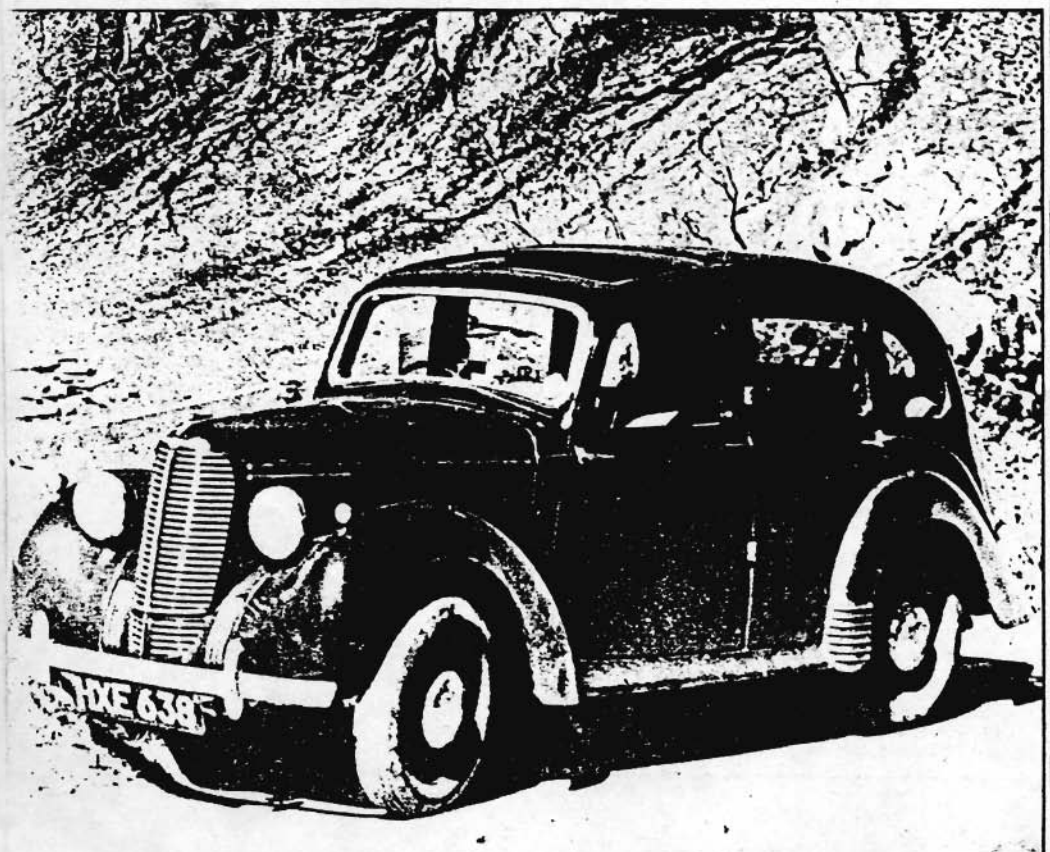


The Minx, above, was the cornerstone to Rootes' prosperity in the Thirties. The name persisted in the post-war years, becoming a unit-construction saloon with 1185cc side-valve engine, below



this Talbot 105 of 1931 was built some four years before that company merged with Rootes.

Humber Imperial from the Rootes post-war range



In that period there were sporty cars like the Sunbeam-Talbot 90s and Alpines, great-value limousines like the Humber Imperials, and perky little indulgences like the Hillman Californian. The cars which made the money, however, were the Minxes, the Hawks and the Huskies — plus the Singer Gazelles 'invented' by Rootes after the takeover in 1955.

It was a proud and prosperous period for The Family. But that pride was to come before a fall. . . .

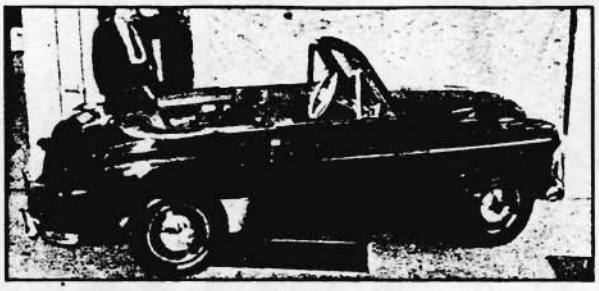
When you consider the size, and scope, of the Rootes war effort, it was a near-miracle that the company was ready to start selling cars again after such a short time. Victory in Europe was gained in May 1945, and the post-war Hillmans, Humbers and Sunbeam-Talbots were revealed in August 1945 — even before the end of the Japanese campaign.

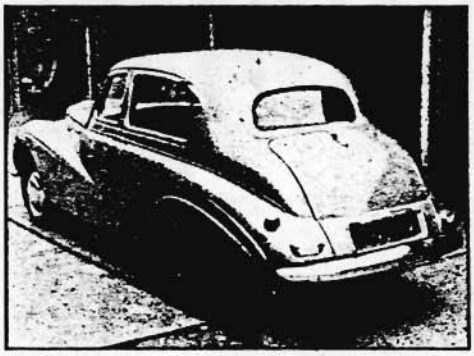
Rootes, while large (and growing) before the war started, was even larger when the fighting was over. Miraculously, the vast new 'shadow' factories at Stoke Aldermoor and Ryton-on-Dunsmore escaped the worst of the bombing of Coventry, as did satellite factories on Merseyside, and in London. In six years, Rootes factories had produced one in seven of all British bomber aircraft, 60 per cent of all the armoured cars, 30 per cent of the scout cars, nearly 80,000 aero-engines built or repaired, and more than 30,000 vehicles built from new, or reconstructed. Humber Super Snipe-based staff cars had become famous, especially when used by heroes like Field-Marshal Montgomery, while the scout cars and armoured vehicles seemed to be found in every sphere of the war.

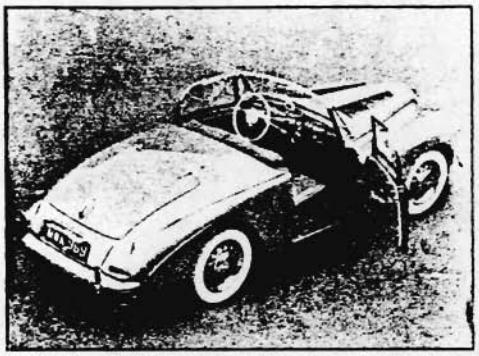
Compared with 1939, however, the Rootes private car operation looked very different in 1945. Ryton-on-Dunsmore, a few miles east of the city of Coventry, was an ideal place for car assembly once aero-engine building facilities had been swept away, and this meant that the old Humber-Hillman plants at Stoke, and the Stoke Aldermoor factory behind it, could all concentrate on making engines and transmissions to feed Ryton.

The old Sunbeam company in Wolverhampton had been disposed of years earlier, while the historic Talbot building in Barlby Road, West Kensington, became nothing more than a service centre. Many standard bodyshells would

Rootes 'Restoration'







Above, the new-shape Humber Hawk of 1948. Left, the Californian drophead Minx. Below left, along with the Sunbeam Talbot 90, the 80, shown here was Rootes' first true post-war design. Below, sporty Sunbeam Alpine of 1953

continue to come from Pressed Steel, at Cowley (where separate facilities concentrated purely on Rootes production), while two London-based Rootes subsidiaries, British Light Steel Pressings of Acton, and Thrupp & Maberley of the Edgware Road, looked after the more esoteric body types like Sunbeam convertibles and Humber limousines.

By this time there was more family influence at Rootes than ever before, for Sir William's sons Geoffrey and Brian, and Sir Reginald's son Timothy were all becoming involved. In due course, Geoffrey would not only inherit his father's title, but would also become chairman of the Rootes Group. As before Bernard ('BB') Winter was the chief design engineer, while Ted White became chief stylist, but in the meantime Sir William had hired the advice of French-born, USA-based designer Raymond Loewy. It was the successful Loewy, whose early post-war designs were also picked up by Studebaker, who did so much to ensure that post-war Rootes products eventually became attractive to North American buyers.

Rootes announced all their immediate post-war cars in August 1945, even though production had only just become possible, and quote systems were still in operation. Really, it was a case of dusting down the 1940 press tools and machinery, updating the designs slightly to take account of wartime experience, and getting the show on the road once again. It didn't matter that there was little new, for there was an incredible shortage of cars, not only in Britain, but all around the world. With the UK's economy in a war-shattered state, and the country needing lots of hard currency to start paying off its debts, it was a matter of 'Export or Die', for sheet steel supplies were rationed, with priority to the exporters. The Rootes business attacked this problem with relish.

Compared with the 1939/1940 model range, there was no Hillman 14, no 3-litre or 4-litre Sunbeam-Talbots, and no limited-production bodystyles at first, with the large coachbuilt Sunbeam-Talbots disappearing completely. The point was made that in the process of rationalisation, after 1932, 22 different basic models had been reduced to four, 10 gearboxes had been reduced to just two (large and small), and 13 different engines to a mere three. Vandalism? Some said so, but they were more interested in the romantic past than the hard economic present. In the process, thousands of jobs had been secured, or created, and the combined Hillman-Humber-Sunbeam-Talbot market share had soared. Even though there were times when the lights still went out, the coal stocks dwindled to nothing, Sir William kept his factories going somehow, and sales leapt ahead once again.

Down at the roots of his philosophy, the goal, quite simply, was one of expansion — into any market, with any model, but always at a profit. Like his contemporaries, Leonard Lord, Sir Miles Thomas and Sir John Black, Sir William Rootes was fascinated by the possibility of mass sales to the USA; it was always to his advantage, he thought, that he could call on the advice of ace-American stylist Raymond Leowy!

'Product Planning' pioneer

More than any other British tycoon of the period, Sir William had come to terms completely with product planning — which, in crude terms, meant the wringing as much variety as possible out of limited resources and components. He was not at all interested in submitting meekly to government entreaties to follow a one-model policy (nor, incidentally, was any other company in the UK's Big Six, though Standard and Vauxhall both made half-hearted attempts to produce a one-model-*range* line-up).

For the next few years at least, therefore, Rootes would build a minimum of three different marques and ranges, each considerably different from the other. The mass-production model, if not the big money spinner, would be the Hillman Minx, complete with its unit-construction body/chassis and sidevalve 1185cc engine. The 'sporty' marque would be Sunbeam-Talbot, still with a separate chassis, and special pillarless window side-styling, but with engines and transmissions, middle-class range would be the Humbers — Hawk, Snipe, Super Snipe and Pullman — chassis being the same except for a long-wheelbase on the Pullman — and two engine types, both sidevalve, but four-cylinders for the Hawk, six-cylinders for the others.

The interesting reshuffle was that the Humber Hawk was really the Hillman 14 reborn — even the "Hawk" was a Hillman model title as well!

It was going to be a long time before the exigencies of body-tooling made Rootes reduce that three-range line-up yet again (1956/1957, actually, when a new generation of Sunbeams were born as much-decorated Hillmans). For the foreseeable future, at least, they thought they could keep going, with several visually different cars.

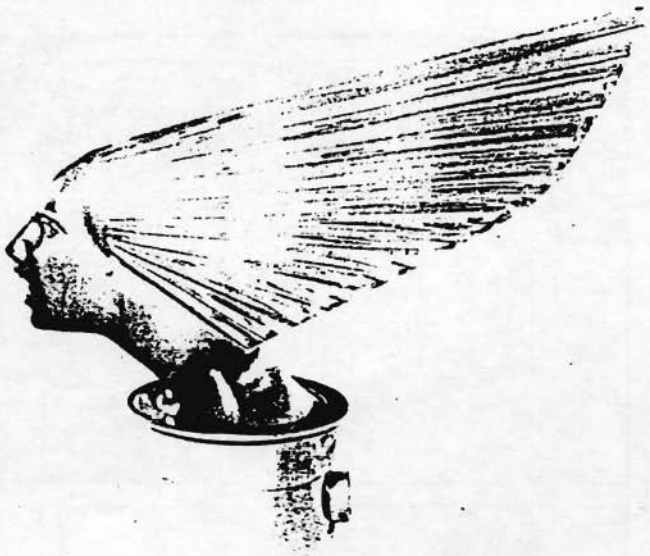
To any historian, the immediate post-war period is fascinating, for it shows how car makers struggled to get proper post-war designs into production as quickly as possible, but had to fight against shortages, rationing, a lack of cash, and the fact that every other maker seemed to be fighting for attention from component manufacturers at the same time! In 1945, let's not forget, the Minx style dated from 1935 (though the unit construction shell had arrived in 1939), the Sunbeam-Talbot shape from 1938, and the rounded six-window Humber saloons from 1937.

In the event, the Minx was to be replaced in 1948, along with the Hawk, and the Sunbeam-Talbots, but the old Super Snipe style soldiered on until the end of 1952, and the last of the post-war Imperials was not sold until 1954. The 1931-type Hillman Minx engine was built until the Mid-Fifties (last used in the Husky estate), and the last six-cylinder side-valve unit in 1952. Really, it took Rootes until the mid-Fifties to get their total post-war act into gear, and into the showrooms.

First, though, there was the interim period, when the pre-war cars were built in slightly re-touched form, and because of the imposition of purchase tax, and the attack of war-encouraged inflation, they cost a whole lot more than in 1939. Original post-war total prices included £397 for a Minx de Luxe (£175 in 1939), £620 for a Sunbeam-Talbot 10 (£265), and £889 for a Humber Super Snipe (£385).

Because it would be very easy to cause confusion, I think I had better survey Rootes's next ten years by marque, starting with the most successful, the Hillman . . .

Next month: Graham Robson moves on to look in detail at the cars bearing the badges of Hillman, Humber and Sunbeam Talbot and leads up to the decline and fall of the Rootes empire



PHOTOGRAPH RICHARD CAMBRIDGE COLLECTION COURTESY GALERIE MODERNE

Main picture A poster by Pollard commemorating the launch of the Humberette in 1913. Left "Victoire", made by René Lalique in 1928, was attached to the car bonnet, and thence to the engine with wires, and lit up when the car was in motion. Below right The characteristic grill badge of the Austin Seven

AUTOMOBILIA

YOU MAY NOT OWN A VINTAGE ROLLS-ROYCE, BUT A SPIRIT OF ECSTASY MASCOT COULD BE THE NEXT BEST THING. FRANK PAGE COLLECTS SOME MOTORING EPHEMERA

Collecting old cars may be getting a touch too costly for many people with the acquisitive urge, but collecting bits of old cars, and things to do with old cars, is still quite inexpensive. That's why there's a large and growing market for anything which can be loosely labelled "automobilia". It includes components of cars, mascots, badges, posters, sales brochures, pictures, books and even such distantly related objects as a desk blotter with the Rolls-Royce flying lady as the handle, and a cigarette lighter in the shape of the Rolls radiator.

It's a fascinating field to explore, because the pieces are not only beautiful things in themselves but they also provide a social history of the 20th century. An advertisement from a motoring magazine of 85 years ago might show that the all-enveloping ladies' hats worn for motoring then were supplied by the high-class emporium of Alfred Dunhill in Conduit Street, at the far from inconsiderable price of 23/6d. Clearly, it was only the rich who went motoring in those days.

By contrast, the sales material for the Austin Seven, when it first appeared in 1922, shows that this pace-setting new car was aimed at all those working-class men who had learned to drive (probably a lorry or gun tractor) during the 1914–1918 war and now could be wooed away from the spartan pleasures of a motorcycle and into a small family car. Here was motoring for the masses for the first time.

If you want to get the feeling of what makes automobilia, I would recommend a visit to the National Motor Museum at Beaulieu in Hampshire. There you will find display cases filled with elegant car mascots, protective clothing for the pioneer motorists, beautiful mascots and brightly enamelled badges for makes long since consigned to the history books. You will also find intriguing collections at other, smaller motor museums up and down the country.

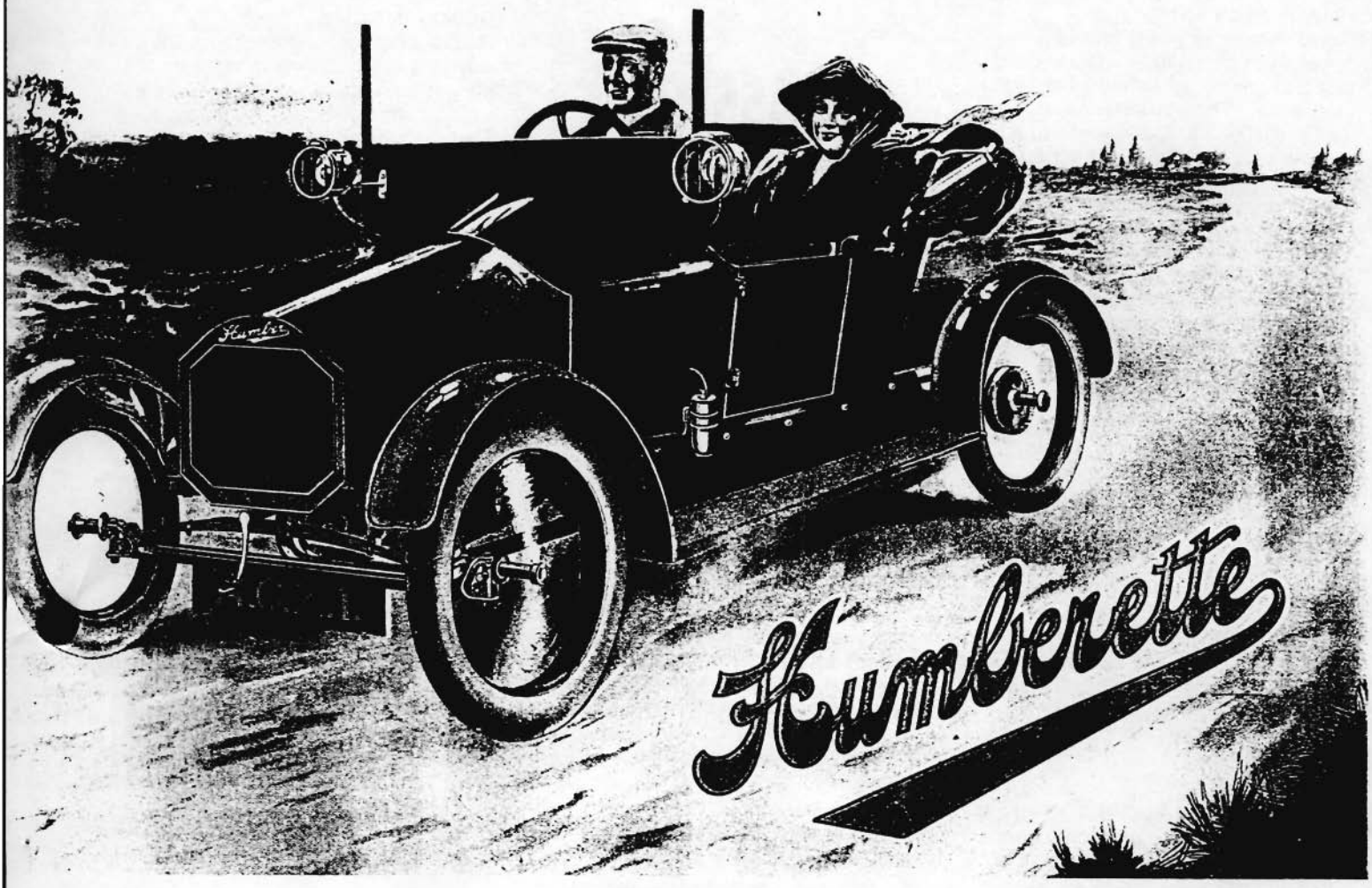
Clearly, there's a wealth of material which a new collector can find. The major auction houses, Sotheby's, Christie's and Bonhams, all hold auctions for classic and vintage cars at increasingly frequent intervals, and often there's a selection of automobilia in the catalogue too. What those houses put under the hammer tends to be the top end of the market, but you can also find some worthwhile pieces at country auctions and the odd gem can even be picked up at jumble and car-boot sales, too.

Car mascots and badges probably make the most obvious collection of automobilia. Many of the pre-war classic cars had superb mascots, beautifully sculpted and made of solid brass with heavy chromium-plating. The Rolls Spirit of Ecstasy mascot seems to have outlived many of the cars it originally decorated; the flying "B" of pre-war Bentleys; the leaping Jaguar of the SS built in the thirties, and the stylised stork of the Hispano-Suiza – all of these can be found. At the top sales they fetch about £300 each, but you could well find one for much less in a general auction.

In pre-war days, many motorists preferred to mount their own mascots on the prows of their stately transport, so you can often find wonderful "one-off" mascots; an Egyptian dancer standing on a giant beetle; a winged cherub; a stylish hare with ears erect; a comic policeman; a swift in flight – all of these were in a recent sale by Christie's and could be bought for as little as £100.

But the dedicated collectors of car mascots will get round to the word "Lalique" sooner or later. René Lalique produced many car mascots in glass, some of them exquisitely beautiful. And they still come up in sales – but they are expensive. Recently a Lalique mascot sold for £1,700 despite a chip in the glass. A perfect example would probably go for over £2,000.

Badges can be cheaper. Car club and manufacturers' badges often come up in local sales and even in the big auctions you get fine examples for less than £100. Many automobilia collectors make prints and paintings of cars the focus of their hobby. Britain has produced some superb car artists and there are magnificent



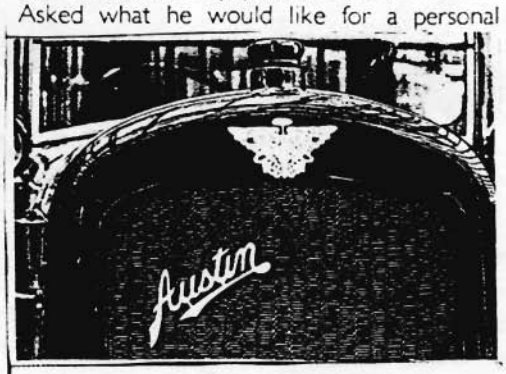
paintings and drawings by Frederick Gordon Crosby, Bryan de Grineau, Dexter Brown, Michael Turner, Terence Cuneo and Roy Nockolds which would grace any home. A typical Gordon Crosby charcoal and pencil drawing of an Edwardian Rolls-Royce Silver Ghost sold in a Christie's sale this spring for just under £1,000. A Michael Turner Grand Prix scene (he's a master at blending the movement of racing with total technical accuracy) could be yours for about £1,500. Pictures by Michael's son Graham are cheaper but just as collectable.

If original work is beyond your budget, there are very attractive lithographs, colour reproductions and event posters which make a brave display. A few years ago the Geneva Motor Show celebrated 50 years of existence with a book of all the posters that have promoted the show over the years; they make a fine collection.

But to some enthusiasts the obvious areas of mascots, badges and pictures have been harvested too thoroughly to be of much interest. What they go for are the oddities of early motoring – the picnic hampers, the beautiful brass lamps, the bulb horns and the elegant dashboard clocks. Clothing, too. A pair of leather gauntlets with red reflectors on the back to catch the light when the driver made hand signals, or a pair of goggles to shield the early motorist's eyes from the flying dust – these are the things which really revive the spirit of Edwardian motoring and they can be found in local antique shops, parish hall auctions and car boot sales. Mind you, the dealers are snapping up picnic hampers which have become very collectable in recent years. Indeed, the whole automobilia market is expanding in both quantity and price. Michael Chapman, consultant to Bonhams for classic vehicle and automobilia sales, says: "Quality is the key factor. The top end of the market is roaring ahead. Ten years ago you could get a mascot from a Rolls-Royce Silver Ghost for less than £100. Today that would be up to £600. A brass bull horn for an Edwardian vehicle could be picked up for £25 then; today you would have to pay at least £150."

Asked what he would like for a personal collection, Michael Chapman goes for the very best. "A Michael Turner painting; Lalique mascots, and some good badges. A mint BARC Brooklands badge (the one that shows cars racing on the famous Brooklands banking in pre-war days) which you could buy for £70 a few years back and is now worth £500."

I have to admit that when I look through the fascinating catalogues of automobilia being sold by the top auction houses, I always seem to covet those pieces which eventually fetch the highest prices. In a sale staged in Geneva by Sotheby's in the spring, there were two superb pen and watercolour pictures by Georges Gaudy of the amorous adventures of an early motorist. Very 90s, very naughty, they sold for nearly £5,000 for the pair. Ah well. Perhaps I'll go down to the jumble sale at the scout hut on Saturday. You never know. Ω



CONTRIBUTED BY FRED PIETERSON

GASSERS

HOW IT ALL WORKS

Liquid petroleum gas is stored under pressure in the cylinder. The liquid is piped to the converter mounted in the engine bay. The converter allows the high-pressure liquid to change to a low-pressure gas, which is introduced into the induction tract of the engine. The carby now acts only as a throttle body to control engine speed. In the supply line between the cylinder and the convertor is a lock-off solenoid (gas tap), combined with a filter that turns the liquid gas flow to the converter on and off. Fitted to the petrol line is another electrically controlled tap which prevents petrol from reaching the carby while it's operating on gas. A safety device monitors power (12V) and ignition, and controls the operation of the gas solenoid. If the engine stalls it will shut off the gas and, if the engine does not start for some reason, it will allow some gas through for starting, but will then stop supply until the engine fires.

A mode switch (LPG or petrol), a cold start prime button and fuel gauge are fitted inside the car. Some systems require the use of a push/pull cable arrangement to operate the gas carby.

POWER LOSS

Contrary to popular belief, LPG's heat value is lower than that of petrol and consequently, a slight power loss is inevitable. How much loss varies with some vehicles more than others, and some systems more than others. Various add-ons, which alter the engine's state of tune, can be incorporated to peg back the difference. It all depends on how much you want to spend, or how long it takes to recoup the outlay. Dual advance curve distributors, electronic water injection and specially recurved distributors and timing settings, are all available if you wish. Just remember that you converted in the first place to save money, not to fork out on bits and pieces that will erode your bank balance.

ADVANTAGES

It has long been said that the guy on LPG has the best of both worlds. He has the power (almost) of a petrol machine, with the running costs of a diesel - better in fact. More than that, he has the flexibility of a petrol engine and the advantages of a diesel engine.

1. Instant start — any climate, any grade; the fuel is already a vapour before entering the combustion chamber.

2. Unaffected by inclines or side angles because there is no liquid to be held level in a chamber.

In short, the LPG engine will handle the same grades as a diesel without flooding or fuelling up, while still retaining the responsiveness and acceleration of the petrol engine.

To some, the petrol engine's cold start and cold running is a bain which is compounded in the cold alpine climates of Victoria and Tasmania. Coughing and farting until warmed up, the problem is sometimes difficult to fix. It only gets worse with age (the auto choke, not the owner). Not so the LPG engine. From first start you can drive at full noise if you wish, because the gas has already vapourised, being at vapour point prior to entering the intake tract. There's no hesitation or backfiring; just plain driveability.

The price of the fuel is its big drawcard. With periodic price wars, the price can be as low as one-third that of petrol. At the very worst, when LPG is at its maximum retail price, it is still less than half the price of petrol.

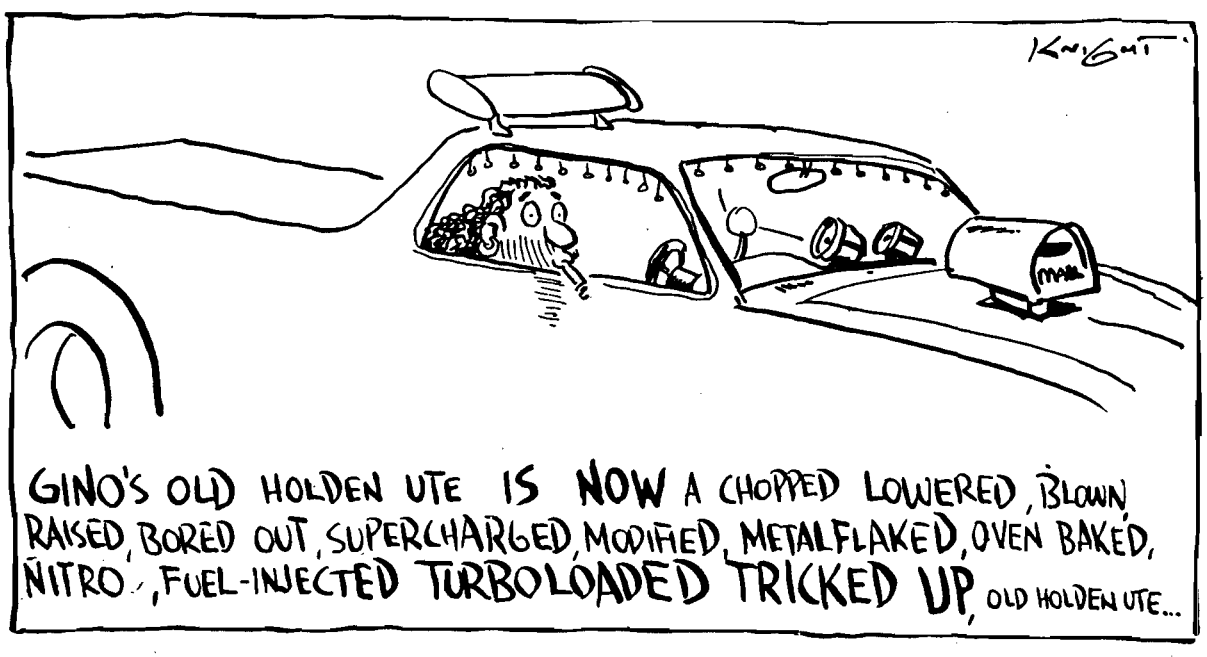
DISADVANTAGES

Gas is a dry fuel and consequently valves, valve guides and seats do not benefit from the slight lubrication they would normally receive from petrol. Therefore engines without special guides and seats will suffer accelerated wear of these items. Rebuilds are common using LPG-tolerant materials. This dry effect can be negated by fitting controlled electronic water injection, utilising an upper cylinder lubricant (a good investment for petrol engines too), or a once-a-fortnight change back to petrol for the day.

Prolonged operation on LPG means the carby/s are devoid of liquid petrol. Some types will suffer dry-out of seals and gaskets, especially accelerator pumps and power valves. When you change to petrol the car fuels-up or leaks petrol, or both. Switching to petrol once every fortnight should prevent this.

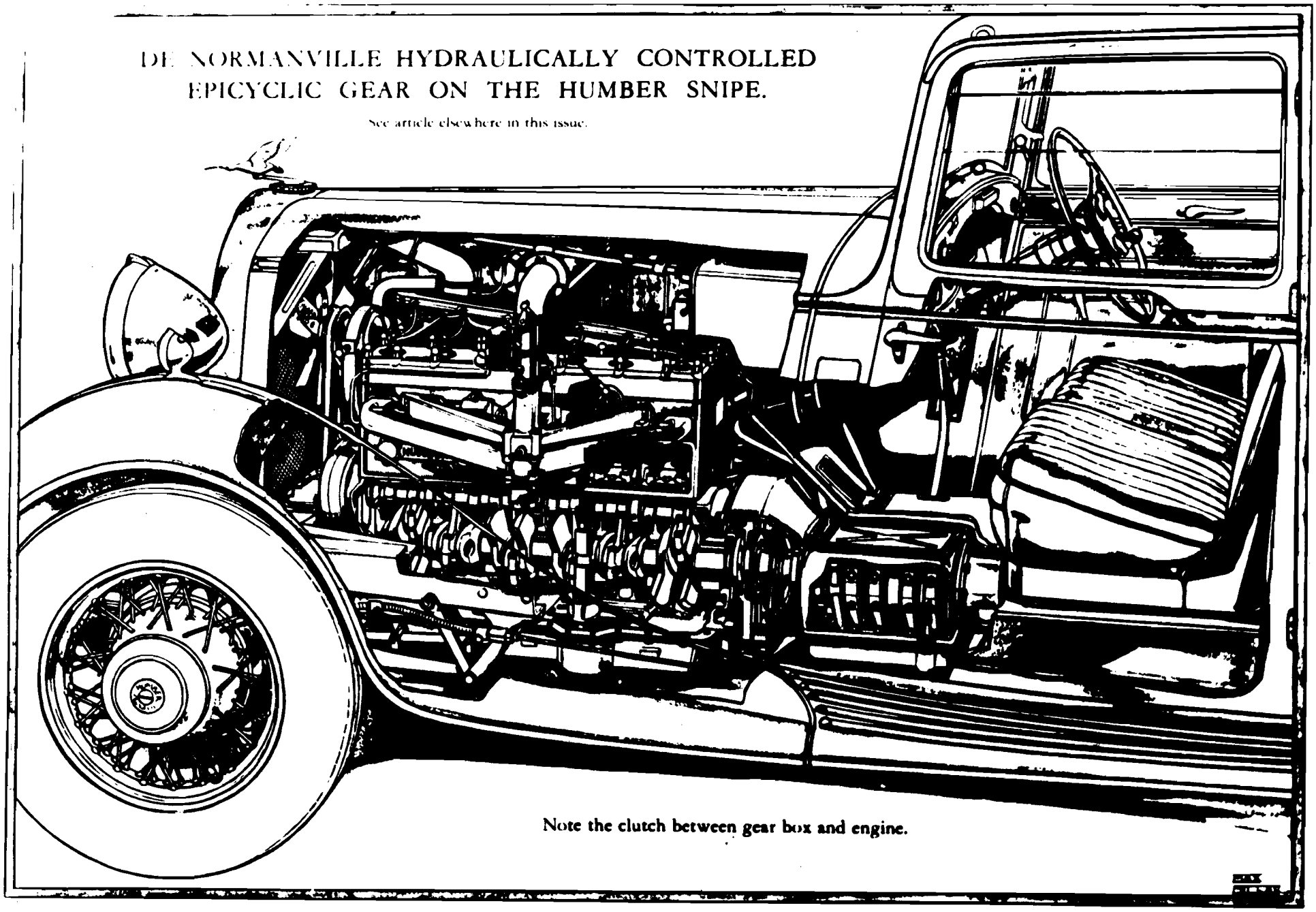
The latent heat of vaporisation means that the converter is subjected to freezing temperatures as the LPG converts. This is countered by the circulation of hot water through the body. Water is plumbed via the heater circuit and is usually sourced from the hottest part of the engine's cooling system. However, any loss of coolant as a result of a system fault could cause an air lock in the heater hoses. This will lead to the converter icing over, eventually stopping the engine from running. If this happens you have to switch to petrol to warm up the water and get going again.

LPG tends to run hotter (a legacy of the dry fuel), so the cooling system must be in tip-top nick, otherwise overheating can occur. LPG is also harder to ignite and requires that all ignition items are of top quality with spark plugs kept in good condition. Small electrical leaks and losses that were previously unnoticed whilst on petrol will become magnified when on LPG. Electricity takes the easiest path and will find a way out rather than ignite the LPG in the chamber.



DE NORMANVILLE HYDRAULICALLY CONTROLLED EPICYCLIC GEAR ON THE HUMBER SNIPE.

See article elsewhere in this issue.



Note the clutch between gear box and engine.

HUMBER ADOPT SAFETY GEAR

The de Normanville Hydraulically Controlled Epicyclic Gear for Pullman, Snipe, and 16-60 h.p. Models as an Extra

PRODUCTION is now in full swing at the big Humber factory of a new, ingenious, and exceedingly interesting safety gear, which will be offered at an extra cost of £30 on the Pullman, Snipe, and 16-60 h.p. models. This de Normanville gear gives the simplest possible kind of control of the car, and asks for no skill in driving; nevertheless, it offers some new attractions to the experienced motorist.

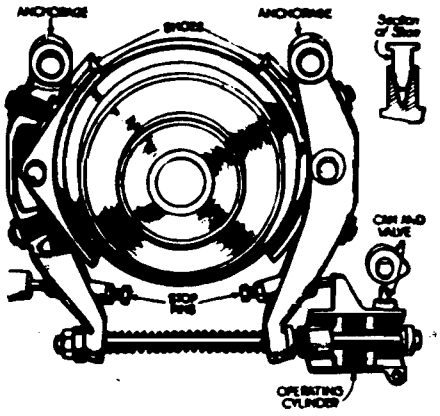
It is no mushroom growth; it is the result of years of experimental work and a wide experience of epicyclic gears. It is self-adjusting, and is comprised of components already well tried out in engineering practice; moreover, it does not depend upon special super-accuracy in manufacture, and its components can be erected or dismantled by any normally intelligent mechanic.

The gear has been aimed especially at reliability and efficiency, and is able to show an efficiency of 99 per cent. on third and 98 per cent. on second on the Highfield electrical test bed. Ball or roller bearings are used throughout, and there is not a plain bearing in the running gear. When in neutral all the gears are idle, and the brake shoes do not have to make slipping engagement, because a normal plate clutch does all that work.

Misleading Appearances

It is desirable to preface detailed description of the new gear with the remark that the mechanism is not so complicated as might appear at first glance in an illustration, for it is only the repetition of similar and fairly simple parts that causes such an appearance. Because there are so many keys the interior of a piano looks complicated, whereas a piano action is really a perfectly simple system of levers.

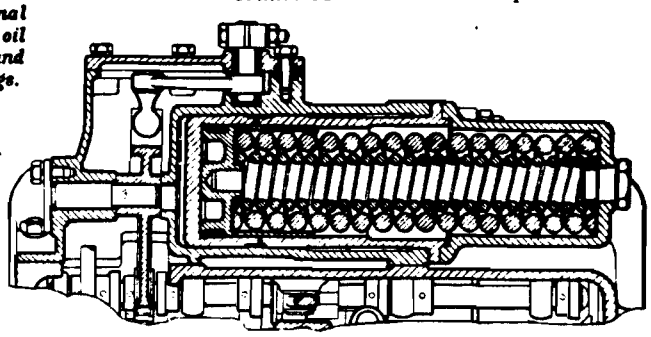
Commencing with the basic principle of the new gear, between the engine of the car and the propeller-shaft drive to the rear axle there are two components, the first a normal kind of plate clutch controlled by a pedal, the second a four-speed and reverse gear box of the epicyclic train type. "Epicyclic" is a word calculated to inspire awe in a non-technical mind, but really it only denotes a gear arranged rather on the principle of the sun and planets of the solar system.

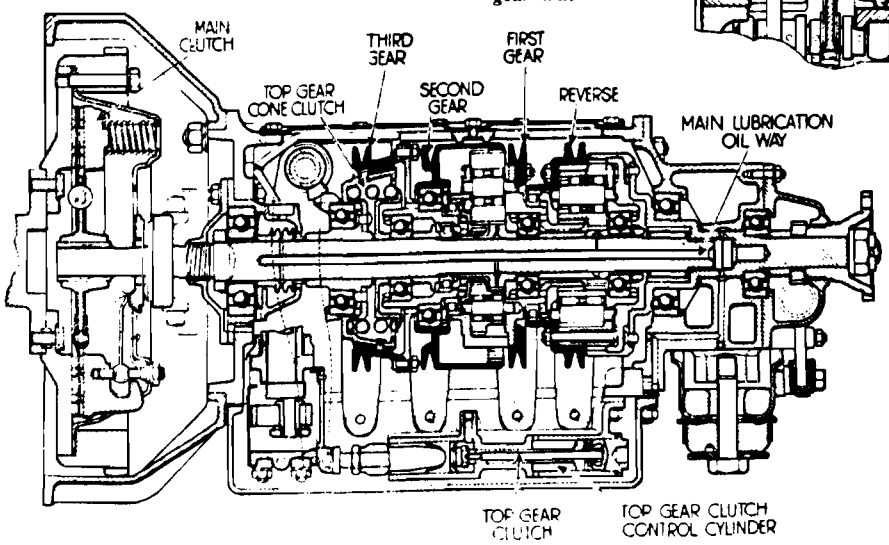


Brake drum, shoes, levers and self-adjusting hydraulic operating cylinder.

(Right) Part-sectional plan view, showing the oil pressure accumulator and oil pressure springs.

(Below) Sectional side elevation, showing the main clutch, the top gear clutch and the epicyclic gear trains.





In an epicyclic gear there is a central or sun gear which is surrounded by a set of three or more planetary gear wheels meshing with it. Around the outside of the set is a ring called an annulus with gear teeth cut on its inner periphery; these teeth mesh with the outer peripheries of the planet gears.

Supposing the system to be free, if the sun wheel is rotated all the gears rotate with it. But if the annulus is held stationary, then the planet wheels will be caused to run bodily around inside the ring at a lower speed than the sun wheel. Conversely, if the planet wheels are held from running bodily around, then the annulus, if free, will rotate at a lower speed than, and in the opposite direction to, the sun wheel. That, in a few words, is the epicyclic principle, which is capable, however, of infinite varieties and combinations. The gear in question is not so simple as the above explanation, but is of the most modern kind, with twin planet wheels, arranged to secure a high efficiency of action.

The Selector Lever

With this epicyclic box the gears are always in mesh even when idle, and a change in ratio is effected by locking one or another of a series of brake drums attached to the gear elements. The essential feature of the de Normanville gear is the manner in which this is accomplished. In the centre of the steering wheel is a small selector lever working in a quadrant marked with the following positions, reverse, neutral, first, second, third, top, and coasting.

This lever controls a cam mechanism inside the gear box, but it is also interconnected with the clutch pedal in such a way that the gear lever is locked from moving unless the clutch pedal is depressed. The only positions to which this does not apply is that the lever can be moved from top into coasting and from coasting back into top. There are two very important points, the first that, besides the absolute simplicity of this control, it functions in a manner natural to the experienced driver, besides being easy to the novice. The second point is that violent shocks cannot accidentally be given to the transmission by wrongful handling.

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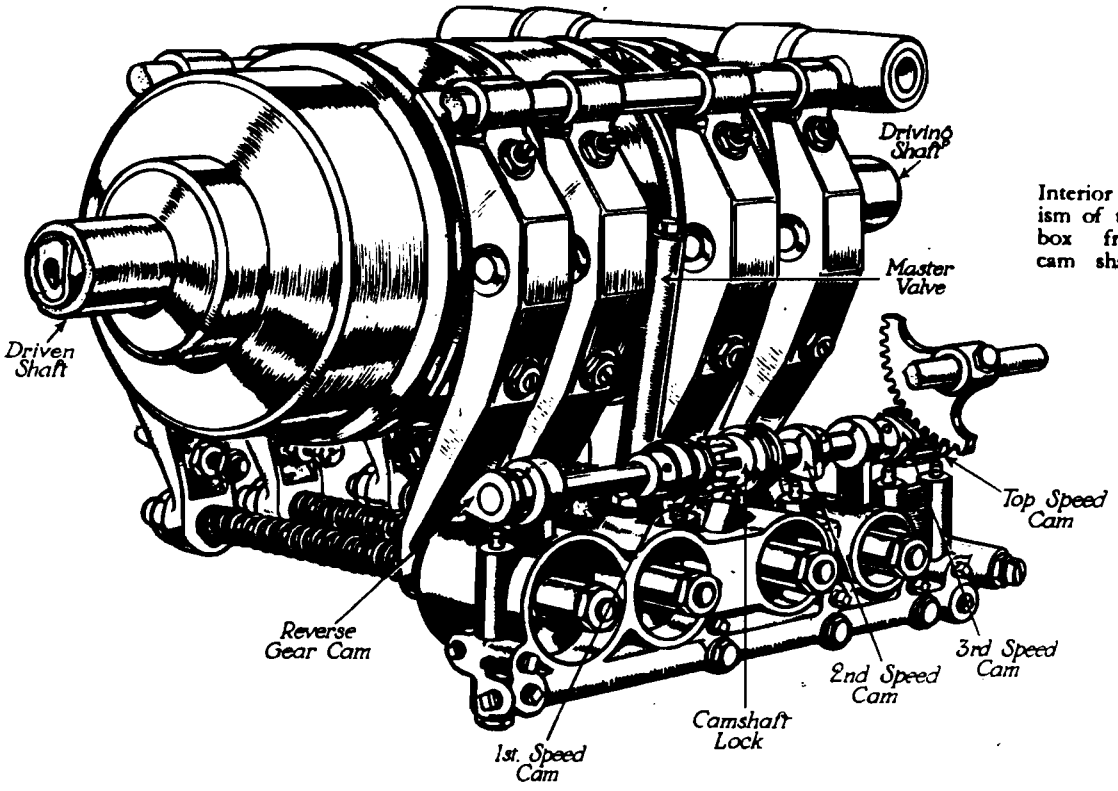
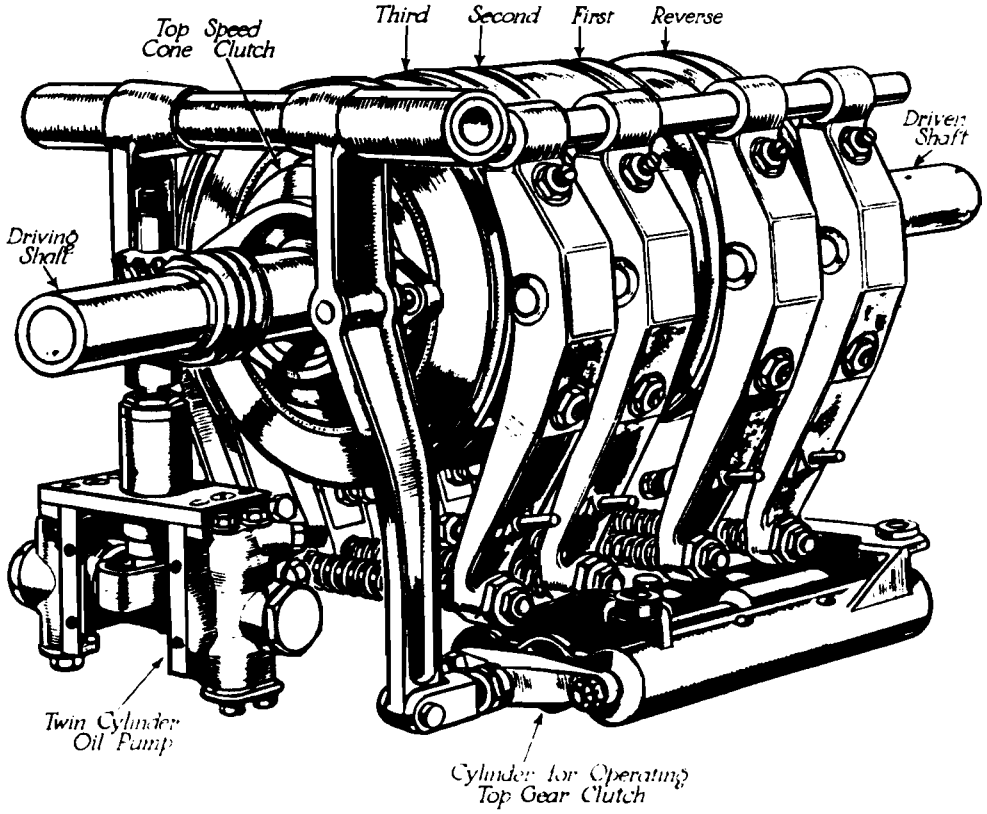
THE LATEST IN GEAR BOX DESIGN.

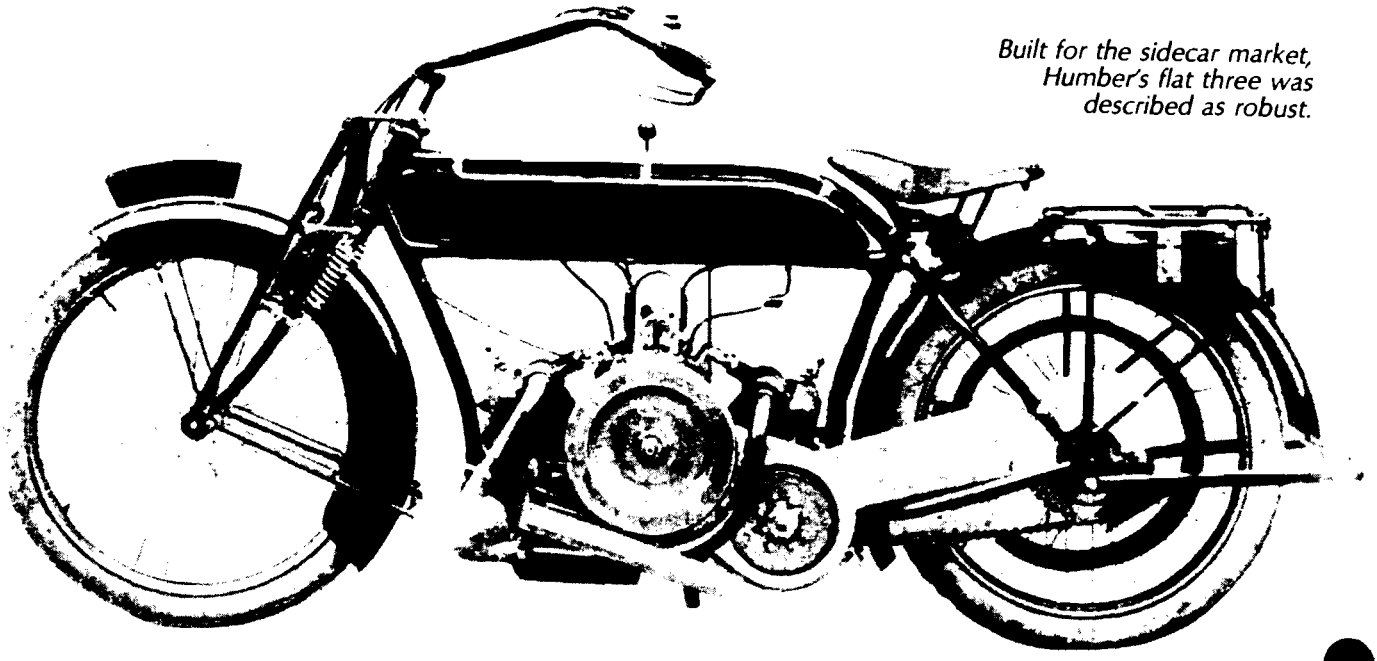
De Normanville Hydraulically controlled Epicyclic Gear on new Humber Snipe.



Interior mechanism of the Gear box from the cam shaft side.



Interior of the gear box from the top gear control side.



Built for the sidecar market, Humber's flat three was described as robust.

Humber's Flat Three

Heavyweight sidecar machine" was the advertised expectation of Humber's new model for the 1913 Olympia Show. But it was a model with a difference.

Though long forgotten by most (motor cycle production ceased in 1930 with car manufacture continuing until the mid-sixties), Humber in 1913 was a name to be reckoned with, with a proud heritage of wheeled, and motorised, devices that can be traced to the pre-dawn of motoring. In fact, Humber was one of the internal combustion pioneers with one of the first tricycles (in 1898) and licenced usage of the then production De Dion and P&M engine units, before building its own power plants.

A water-cooled single had given Humber a victory in the 1911 Junior TT and along with a wide range of singles, the factory had also proven a range of "along-the-frame" or "Fore'n'aft" twins as being sporty, people at the time did and such was the popularity of this format that most manufacturers had one or more on their books. Even Harley Davidson, perenially known for V-twins and singles, was to build a flat twin in the late teens and twenties.

Humber's flat twins were equally 'sporty' and looking at the increasing sidecar market, the factory sought a 'heavyweight' model both suitable and advertisable to the 'chair' man. Usually 'heavyweight' in this time, and for a time after, meant larger capacity (solos usually in the up to 500cc and single-cylindered) and more cylinders and Humber was no exception as they thought larger.

For smoothness the balance factor of the flat twins seemed the sensible way to go, and why not add a third pot to the twin for that extra torque and capacity?

The biggest road single already built was rated at four horse-power, and Humber, thinking of the heaviest sidecar then available, gave the new 'heavyweight' model a 50 percent increase in power to rate at six horses.

Built on traditionally robust Humber lines, the new model was essentially conventional in concept, but featured some, for then, quite advanced thinking. In a period of thinking 'belt', the drive system was chain and recognising the lower load work area of the sidecar, incorporated a three speed box in place of the more common two speed units.

The surprise package, though, was the engine. Seeking the greater capacity and more grunt, it had been decided to add the third cylinder, but still retain the flat format. The problem, then, was how to retain the smoothness, given that two cylinders must produce more power and vibration than one. Humber had the answer.

Despite the unequal number of cylinders, why not build the engine so that the power output was equivalent? The single front cylinder, therefore should be larger, and so it was with a bore and stroke of 78 x 78mm. The rear two pots were smaller in bore size, 55mm, sharing the same stroke size. A heavier external flywheel was fitted, the external flywheel being a common design with all flat twins of this era.

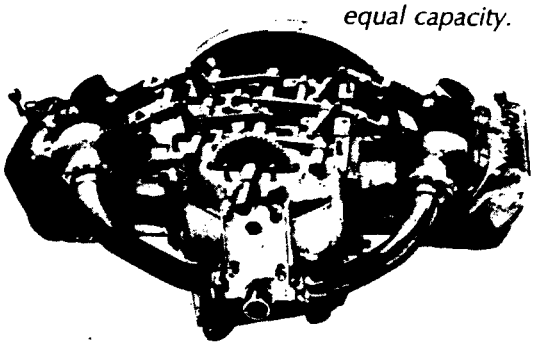
Another design uniqueness was the fact that the rear 'parallel' pots, were cast in a single casting with a common combustion head. Sidevalves were used and unusually, the valve chambers, including the valve seat seatings, were detachable for easier repair. Lubrication was by drip-feed.

Research indicates that the show did produce some orders for the Three, but no real records exist as to how many were actually made. Predictably, there were many orders for the other models, and for the record, Humber continued to produce the singles and twins for many years after that. The later stages of their manufacturing life saw the range mostly in the 350cc class with an ohc model coming in the late twenties with 1928 producing an overhead cam model, stories for other times.

The Humber Flat Three is yet another example of the design variation that was around in this pre-1920 period and had not the war intervened, the model might have had a chance in the more sidecar-orientated post-WWI world. Or was that, the buying public were more attracted to the vertical-tyre power plants?

Trevor Thomas

Two pots to the rear (left) and one to the front, both ends of equal capacity.



Post Vintage Humber Car Club

27th March 1990

Dear Max,

We have the opportunity through 'Rover P4 Spares' of London and their publishing arm to produce a 'road test' style soft backed A4 sized book on the Series Humbers.

Obviously to get production underway requires a commitment to financial outlay through the advance purchase of copies of the book. In our case it would amount to 250-300 copies which at a discounted price of £6 (UK sterling) each to the clubs means finding £1500 - £1800. This is beyond our resources but with several clubs involved, the cost could be spread making it a reality plus the opportunity of recouping some of the outlay by book sales at the recommended price of £9 (UK) each.

I am therefore writing to you to ask whether your club could consider the advance purchase of a number of copies for your members?

Daniel Young operates 'Rover P4 Spares' which is a well known and respected supplier of new spares for these cars who has now branched out into publishing producing a considerable number of books to date (see attached list) primarily on Rovers. However, they now wish to broaden the scope of this series by including other makes 'in the same market place' as Rover.

I don't know if you have seen either these or the 'Brooklands' series books but they are, as mentioned in my first para graph, soft backed and A4 sized, consist of approx. 96 pages of black & white reprints of Motor, Autocar and other journals (inc. Austrailian and American) road tests. We would be involved with the production and content.

I would be most grateful if you would discuss this within your club's commitee and advise in due course of your decision. Don't be concerned if your club is not ableto get involved at this stage as, if it does go ahead, copies can still be made available to you.

Thank you for your time and consideration,

With best wishes from the Post Vintage Humber Car Club,

Yours sincerely,

Steve

Stephen Lewis, Historian for PVHCC

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Dear Mr. Wearing

I refer to our telephone discussion pertaining to the proposed special pricing on Borgwarner 35 transmissions, and take pleasure in confirming that National Automatics will pass on the following pricing to all Humber Car Club members.

Supply and fit Borgwarner 35 changeover transmissions	$480.00
Supply and fit changeover Torque Convertors	$ 75.00
TOTAL	$555.00

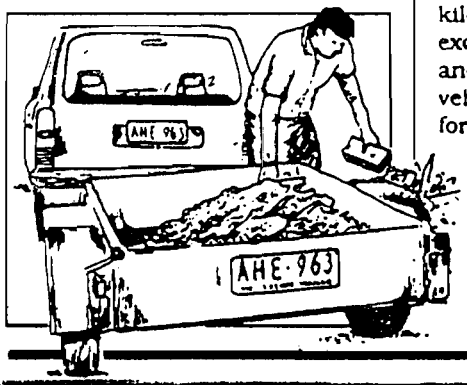
Transmission and convertor is covered with the National Automatics 24000k or 24 month warranty.

I trust the above confirms our discussions and if there are any queries please contact the writer.

Yours faithfully, D.L. PEDERSEN

Trailer Plates now available from VIC ROADS

For $11.20, owners of small trailers can say "goodbye" to the familiar weekend chore of fabricating home made number plates showing the registration number of the family car.



Special trailer plates, produced by VIC ROADS, are now available which can be affixed to the rear of small box trailers.

Box trailers weighing less than 200 kilograms unladen, which do not exceed three metres in overall length and are not wider than the towing vehicle, do not need to be registered for private use.

The registration number of the towing vehicle, however, must still be displayed. The specially manufactured trailer plates duplicate the registration number of the towing vehicle and are endorsed with the slogan VIC - EXEMPT TRAILER.

WHAT ARE THE DIMENSION LIMITS FOR TRAILERS?

(1) The maximum height for any trailer is 4.0 metres, however, on highways which have been named in a notice appearing in the Government Gazette, the height is increased to 4.30 metres.
(2) The width limit for any trailer is 2.5 metres. Rear vision mirrors fitted to the towing vehicle may, however, exceed this limit.
(3) The length limit for a motor vehicle and trailer combination is 17.5 metres.

TRAILERS MUST BE ROADWORTHY

All trailers, whether they are required to be registered or not, must be roadworthy. Trailers must comply with the standards for registration and the regulations relating to lights, coupling, safety chains, draw bar, wheels and tyres. Trailers must have at least two stop and tail lamps, turn signal lamps and a light illuminating the number plate as well as reflectors on the front and rear. Trailers more than 2.2 metres wide must have side marker and clearance lamps fitted.

Further information regarding these requirements can be found in a VicRoads publication "Vehicle Standards Information No. 9 — Summary of the Registration Requirements for Trailers" which is available from any VicRoads registration office.

TOWING ANOTHER CAR

A person holding a Probationary or Full licence can flat tow another car. Flat towing is when all of the wheels on the towed vehicle are on the ground. When towing another car, the following conditions must, however, be observed:

(1) The towed vehicle must be controlled by a person who holds a current driving licence for that class of vehicle.

(2) The space between the vehicles must not exceed 3.5 metres.

(3) A flag or piece of material, not less than a 30 centimetre square, must be attached to the middle of the towing rope. At night, this material must be illuminated by a white light/s on the towed vehicle so that the flag or material is clearly visible as a warning.

(4) If the brakes of a towed motor vehicle are defective, it must not be towed with all its wheels on the ground unless it is connected to the towing vehicle by means of a coupling and draw bar that complies with the regulations.

Note: A licensed driver is still required to control a vehicle that is towed with a solid connection of any type, including an "A" frame.

(5) If a vehicle is being towed at night, the towed vehicle must have tail and stop lights and turning indicators which work.

An unregistered vehicle can be flat towed, however the registration number of the towing vehicle must be displayed on the rear of the towed vehicle.

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