This and the following three are probably the sole official works photographs of the Hexonaut in existance today. Humber Ltd's Engineering Department captioned them: '15-cwt 6×6 GS Vehicle; designed to be carried in Dakota aircraft; prototype No. 1.'

Humber Hexonaut

A British 15-cwt 6×6 Airportable Floater

In 1942/43, when their militarized Super Snipe car and 8-cwt 4×2 and 4×4 chassis with various body styles were in full production for the War Office, the Engineering Department of Humber Ltd, the Rootes Group's well-known car division in Coventry, evidently had the opportunity to design something entirely different.

The Army was getting increasingly interested in special vehicles for the war effort in the Far East and Humber's contribution was the Hexonaut: an airportable floatable GS load carrier, thought to be useful for dropping by parachute in Burma where it could then be deployed in the jungle.

As the name suggests, and the pictures confirm, Hexonaut was six-wheeled and had nautical aspirations, although it was not an amphibian in the normally accepted sense. An official statement in 1946 said that 'though capable of limited operation in calm water it was primarily intended for use on jungle tracks.' It went on: 'When overall chains are fitted the performance is equal to that of a fully tracked vehicle.' However, as one contemporary Rootes Group engineer — Mr Sharratt of Luton — indicated, the Hexonaut was a designers' nightmare. Although engaged in the heavier range of Commer vehicles, he remembered the project and wrote us, some 25 years later: 'The vehicle had serious operational problems and really did not become fully developed.' Small wonder Rootes ignored the Hexonaut in its abundant war production publications and it would probably have been totally forgotten if it had not been for the survival of a set of photographs (rescued by your Editor in the late 1960s in a big clear-out at Devonshire House, Rootes' Piccadilly headquarters in London) and, as a result of this, one of the prototypes! More about this relic anon.

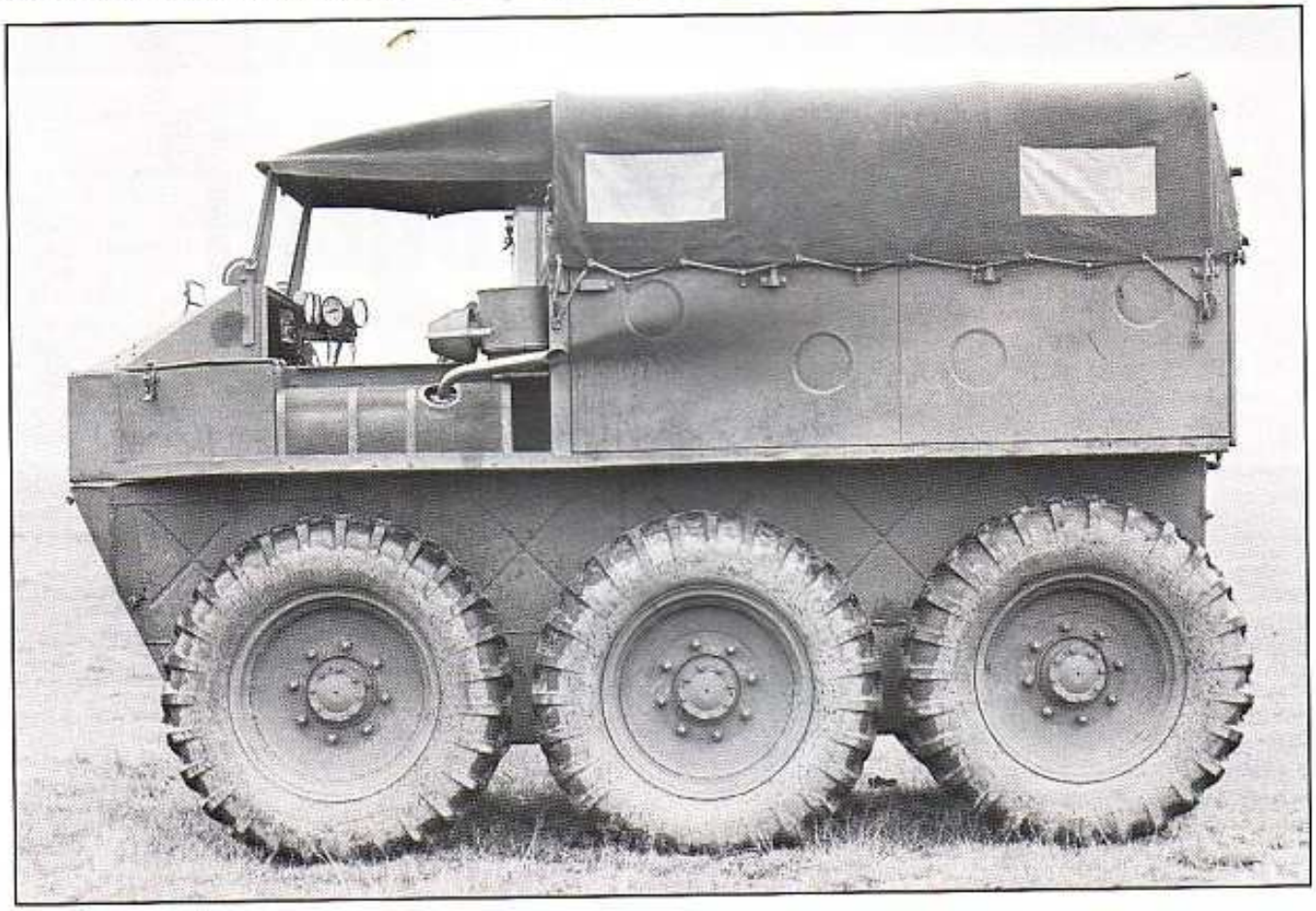
The Hexonaut's design comprised a narrow space-frame steel box or hull, some eleven feet long, with a forward-sloping bow and six tightly-mounted tractor-type wheels, with on top a single-seat soft-top cab with folding windscreen and a cargo box measuring about six feet long by four and a half feet wide. The cargo box had fixed sides, a hinged tail board and a set of hoops supporting a canvas cover with transparent inserts in the sides.

Propulsion was provided by a pair of Rootes (Humber, Hillman) 14 HP four-cylinder 1.9-litre side-valve engines,

mounted one behind the other in the hull. Each engine drove the wheels on one side, via a standard Hillman 4-speed gearbox and a transfer box: the forward engine — under the seat — the wheels on the right, the rear unit those on the left-hand side.

The wheels were unsprung, with their hubs mounted directly on the final drive cases or wheel stations which were bolted to the hull. It follows that skid steering was employed by varying the speed of the wheels on both sides in relation to each other, i.e. the revs of both engines, and braking for sharper turns. This was accomplished by levers which controlled — through involved linkages — the engine throttles and the inboard transmission brakes. The latter were of the drum type, on the propeller shafts and rod-operated.

Normal deviation from the straight was effected by actuating the throttle for the side one wished to come round: to turn right one opened the left-hand throttle (or closed the right-hand one). According to Mr Sharratt, by pushing one steering/control lever fully forward (which closed the appropriate engine's throttle and applied the brake) and opening the other throttle by pulling back the other lever, the machine would make a sharp turn. As can be imagined, on hard surfaces and especially with a load, such tight turns were problematical on account of the considerable tyre scrub and because one engine might stall. In order to combat the tyre scrub somewhat, the centre wheels were set



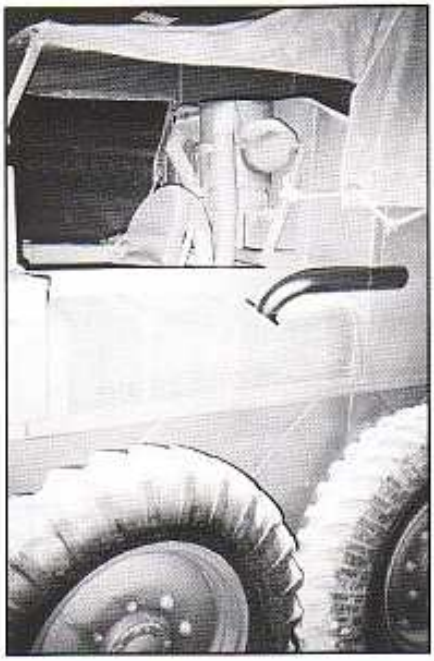
Above: Prototype No. 1 under test. Notice the neat finish of the body panels. Approximate dims. in metres: overall L×W×H 3.50× 1.35×2.30; wheelbase 1.10+1.10; track 1.15.

slightly lower than the front and rear ones. However, this also caused a hazardous seesaw effect when driving on hard ground.

The steering system was, in fact, the vehicle's major weak spot: any erratic running of either engine, due to a blocked carburettor jet or whatever, would impair its directional stability. This could have dangerous consequences, even if the solid suspension and the rocking motion limited the road speed to 20 mph at most.

Both power units were mounted with the gearboxes to the rear and they shared a common radiator, located in the nose of the hull. The exhaust system also shared one silencer, situated to the left of the driver; the fuel tank was opposite. There was also a drum-type recovery winch, mounted behind the rearmost transmission.

The steel-disc wheels were shod with 9.00-22 tyres with large cleats; these provided the vehicle's only springing and were of some — and only — assistance in water propulsion when afloat. For operation in water and bogged areas the front and rear of the hull were sealed by means of tightly-fitting steel covers. Nautical qualities



Among detail differences between No. 1 and survivor (shown) are air cleaner set-up and location of radiator filler cap. Access to cab and power train are extremely poor.

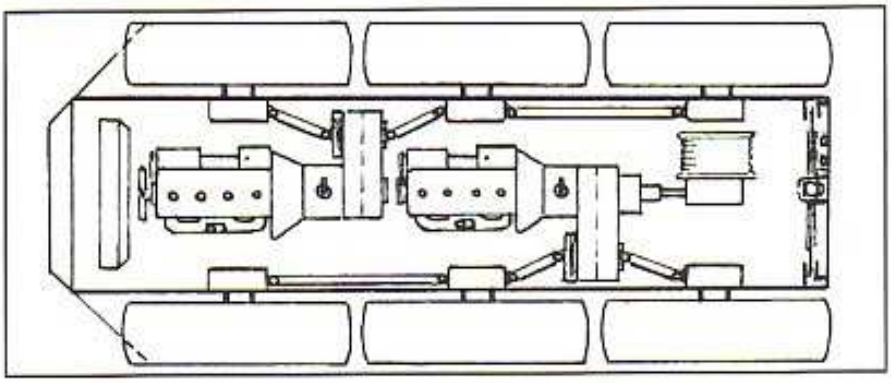
were not the Hexonaut's prime consideration, though.

As mentioned earlier, the vehicle was never further developed, probably due to its inherent design faults (unlike its larger contemporary, the eight-wheeled Terrapin, which had a similar propulsion system, with twin Ford V8 engines; that, however, was a true amphibian).

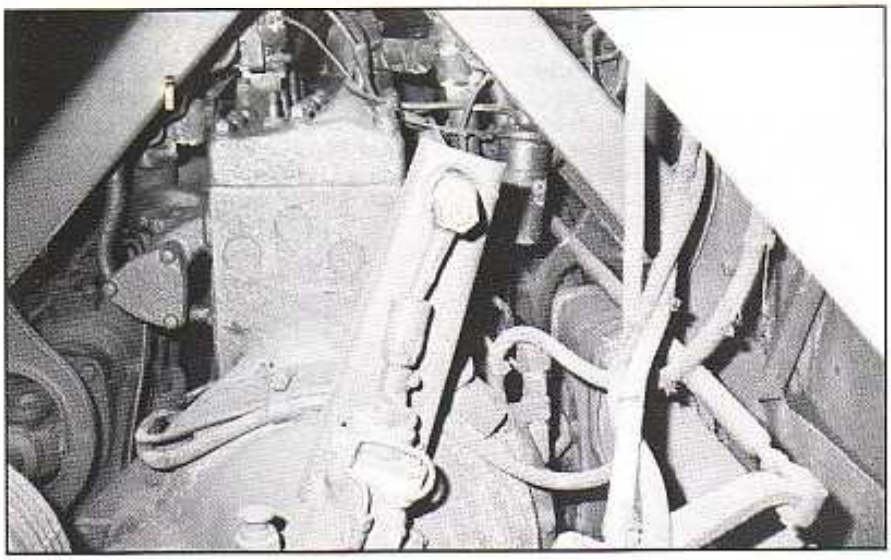
Only three experimental Hexonauts were produced, one of which was submitted for tests by the WVEE at Farnborough. It was kept at least until the summer of 1946, when — in June — it was shown in an exhibition of military vehicles and equipment at FVPE/ FVRDE Chertsey.

One of those three prototypes — possibly the one tested by the WVEE — was sold via Government Disposals and entered service with a civilian operator in Somerset. With most of the superstructure removed (but kept) plus a crane this peculiar contraption was used until the mid-1950s as a timber haulage tractor, pulling out trees in the West Country. It was then left rotting until 1971 when it was rescued by Geoff Theobald, an early MV collector in the Exeter area. Geoff (who had managed to identify the machine with the aid of

Some interesting snapshots supplied by Jeff Theobald, showing the vehicle hard at work during its civvy career. Jeff: 'the gent with the pipe is Mr Stanward from whom I bought the Hexonaut; the young boy is his nephew who in later life ran a garage near Crewkerne in Somerset. You can see the Ruddington Lot No. 153 still painted on the windscreen and also the Champ-type side lamp which is what put me off buying it to begin with.' Visible also are the guides and rollers allowing the winch cable to be paid out at the front. Towing A-frame, jib and extra winch — powered by a separate (third!) engine — were modifications by the owner.



Above: The surviving Hexonaut in Belgium, following restoration (without proper reference material). Fortunately, the removed parts had been kept and came with the vehicle. The winch cable rollers, however, do not seem to have survived and their absence on the new vehicle shown on pages 15–17 (Prototype No. 1) plus other detail deviations suggest that we are looking here at No. 2 or 3. For the pictures of the restored example we are indebted to the Victory Memorial Museum where it can now be seen. Our basic plan view, left, is diagrammatic and not to scale.



our *Observer's FV Directory*) later sold it to Guy F. Arend in Belgium. Mr Arend restored it and thus a unique WWII vehicle was preserved for posterity. It is now on permanent display in the Victory Memorial Museum near Arlon (see *W&T* 32), where it constitutes, in our opinion, one of the major attractions in the Allied MVs section. □

The twin tandem-mounted engines are 4-cyl. 1944-cc (75×110 mm) L-heads of 40 bhp at 3,200 rpm, as used also in late-1930s Hillman 14 HP cars and certain trucks (e.g. Commer Q15 and Q25). Visible alongside are propeller shafts and some of the final drive/wheel stations. The rear engine drove the left-hand wheels and the winch. U-joints were necessary because the worm drives were not in line. There was one common control lever for both gearboxes.