

POWER FARMING ROAD TEST
HAFLINGER 700 APT
FEATHERWEIGHT WITH A MIGHTY PUNCH



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FEATHERWEIGHT WITH A MIGHTY PUNCH

By Rex Matthews

A really light weight all-wheel-drive vehicle that's tough enough to be in regular use by eighteen different armies for cross-country transport of men and materials, yet costs less than the average motor car, is now available for farm and general use in Australia.

I HAD been waiting with keen anticipation since I saw the Haflinger in action at the Orange Field Days last November for a go at the wheel of one for myself. I had been fascinated to see this obviously work-horse little machine amble up to a log nearly a foot in diameter, and after pausing with one wheel against the log, flip that wheel up and over the log.

The second front wheel similarly climbed up and over, so the log was straddled. The first of the rear wheels went over, and the Haflinger was left with one wheel held, rather like a terrier worrying its way out of a trap. After a few vigorous shakes, over went the last wheel, and off scampered the Haflinger into the scrub.

Now I know a little of how its done. In half a day, wishing only that it could have been longer, I was able to put the micro-mini-motored wagon through field and swamp, hill and creek, and even a little trial on the open road.

Made by Steyr-Daimler-Puch A.G. of Austria, the Haflinger 700 APT is called by them a 30 hp car. "Car" is an odd term for such a vehicle, but not unreasonable, once you've ridden in it. It has five forward speeds ranging down to an extraordinary 63.7:1 overall reduction in first gear.

In this gear it can perform amazing feats of climbing, despite an engine capacity of only 643 cc. I drove it up the 45 deg slope of a dam wall, but, unfortunately, lacking a load, I wasn't able to confirm the claim that it could do the same with half a ton on the back.

Ground clearance is 12 in. despite the wheels being only 12 in. diameter, through the use of tractor-type spur gears for final reduction at each wheel. With a wheelbase of only 59 in., virtually no overhang, and a modest overall width of 53 in., the Haflinger is built to go into confined and awkward places without difficulty.

The degree of comfort enjoyed by

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driver and passenger even while negotiating tortuous, steep and rocky tracks is a surprise. Soft spring action and independent wheel suspension ensure at the same time, that safe and sure adhesion to the ground is maintained.

In spite of very high ground clearance, the weight of the machine is carried very low, so that you can drive sideways across slopes of 1 in 1 without turning over. The Haflinger is not amphibious, but it can ford creeks or drive through water up to 20 in. deep. Skid plates under the engine enable it to slide over many obstacles.

Weighing a mere 12 cwt, the Haflinger is light on petrol. About 33 mph is claimed for road economy. Translated into field terms this means a petrol consumption of about $\frac{1}{4}$ gallon per hour. A very practical hour-meter is fitted, in addition to the speedometer, so that account can be kept of hours worked as well as miles covered.

Two diff. locks

All-wheel drive and separate back and front differential locks can be engaged and disengaged at any speed under any conditions. This gives great flexibility, but, of course, a fair amount of use has to be made of the gear stick to get best value from the tiny motor.

On opening one of the two large engine access panels, I got the immediate impression that Volkswagen had a lot to do with the power plant. The motor looks like the one in the familiar beetle, only it has one cylinder each side instead of two. Cowling and oil radiator like that of the VW provide uniform cooling for all climates.

A remarkably thorough air-screening system begins with the centrifugal thrower, visible on the front of the cab, which ejects large particles. Air passes through an oil bath and a paper filter before reaching the motor, which runs with remarkable quietness and smoothness up to its governed maximum of 4,800 rpm.

The motor starts with a quiet whistle under the prompting of the integral starter-generator. The 12v battery is housed in a sturdy cradle,



Diminutive proportions of the Haflinger are accentuated in this close up, as it climbs a dam wall after a bout with the mud.



The high clearance of the Haflinger enables it to cross rock strewn river beds with up to 20 in. (508 mm) depth of water with minimum fuss.

During the test, we deliberately got the Haflinger bogged in this muddy channel. With 4-wheel drive and both diff. locks engaged, all wheels were spinning. But light weight and a tight steering lock enabled the Haflinger to climb up the side of the rut as it was driven back and forth. It took about 15 minutes to get free, but it was accomplished without external aid.

which when the door of its box is opened, slides out clear of obstacles. Wing nuts hold the flexible leads, so the battery may be easily removed, yet is locked in tight when the door is closed.

The Haflinger can be set at dead-slow speed, for feeding stock, for

instance, so that you can walk beside it while it drives itself. The governed maximum speed is a theoretical 47 mph, but it did a steady 50 for me over a few miles of undulating hills.

The body of the Haflinger is basically an open platform of pressed

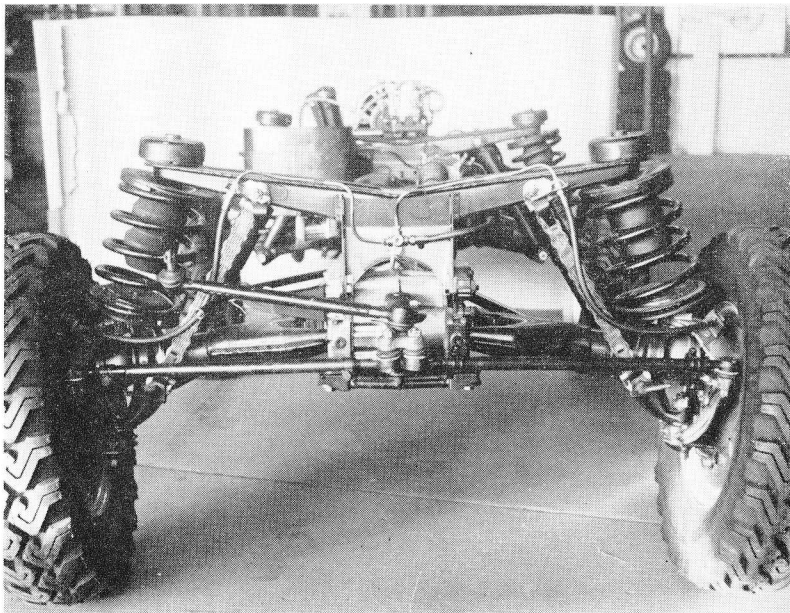
steel construction. A front vertical panel carries the headlights, horn and instrument panel, while the tray has a level uncluttered area of 21 sq ft. Two panels in the tray lift up, exposing wells where two additional seats may be installed.

The seats are an optional extra, as also are the sideboards for the tray. The standard small cab and two doors may be optionally replaced with a large canvas cab and four doors. A fibreglass cab of local manufacture can be obtained, together with towbar, rifle-holding attachments, and 700 x 12 diamond tread tyres in place of the standard 165 x 12 cross-country tread on 3.50 x 12 rims.

Extended wheelbase of 71 in. is an available option, and provision for pto, and pto shaft and universals are separate extras. Pumps, welders or any powered machinery can be mounted on a baseplate in place of one of the rear seats, where they can be pto operated.

Municipal authorities overseas use the Haflinger for street sweeping, snow clearing and an endless variety of tasks, with attachments that are specially manufactured for the vehicle. Fire fighting units, forestry officers, and power linesmen find application for it. It even makes an ambulance which gives a remarkably comfortable ride over broken terrain, according to a report from Taiwan.

The Haflinger is being assembled in Melbourne, where the basic unit sells ex works for \$2,980 plus sales tax if applicable. PTO price is \$112. Shafts and universals, another \$140.



Front-axle drive is via spiral bevel gears, bevel differential and homokinetic joints to the spur gear in the wheel hub. All four wheels are independently suspended by means of forked floating half-axes. A combination of coil springs with progressively acting hollow rubber springs and double-acting hydraulic shock absorbers evens out the ride. A cross member over each differential and a very substantial torque tube together comprise the Haflinger's equivalent of a chassis.