



JOHN BOLSTER tests the ideal car for defeating British weather ...

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THE SNOW-TRAC

AMONG sportsmen there is a considerable demand for a cross-country vehicle for use in deer forests and on grouse moors. In industry, a similar machine is badly needed for hydro-electric schemes, to quote only one example, and in agriculture the hill farmers are crying out for a car on tracks that will climb mountains or cross boggy land.

In all these cases, the conditions are far too severe for any wheeled vehicle and the very light pressure exerted by endless tracks is required to "float" over the ground. A crawler-type tractor is too slow, too expensive to maintain, and has insufficient seating space. Some excellent vehicles do exist, but up to now they have been priced too highly for the sportsman and the farmer.

When travelling all over the world, Innes Ireland had been searching for just such a machine for his own use. Having acquired a Snow-Trac in Sweden, he realized that his quest was at an end, and he became so enthusiastic that he took over the agency for the British Isles. Innes invited me to come to Scotland and test it in the glens where he stalks the deer, but at the time of my visit some parts of the country were isolated by snow. So, the Snow-Trac was pressed into service, taking fodder to the hill sheep and carrying much-needed provisions to the shepherds and their families. Thus, a superb opportunity was presented to try the machine under the toughest possible conditions and I set off for Kelso.

Having borrowed a Volkswagen from Ninian Sanderson, I was eventually able to find a route that was not completely blocked and joined Innes Ireland and the Snow-Trac.

The power plant of the vehicle is the Volkswagen air-cooled engine and four-speed, all-synchromesh gearbox. From the output shafts which normally drive the swing axles of the car, two chains enclosed within the body take the power forward to the main driving sprockets of the tracks. The steering of tracked vehicles is usually achieved by braking one track and accelerating the other, or by a system of clutches. In either case, much power is wasted.

The steering of the Snow-Trac is highly ingenious and consumes virtually no power. The ordinary VW differential is employed in the transmission and each output shaft from it, in addition to operating one of the two transmission chains, also drives a vertical shaft with a large pulley on the top of it. So, each side of the differential has its own pulley, and these are coupled together by a heavy vee-belt. The two pulleys expand and contract, exactly as do those in the transmission of the DAF car. This expansion and contraction is con-

trolled by the steering wheel, and it will be seen that by increasing one pulley and diminishing the other one must slow down one side of the differential and cause the opposite output shaft to speed up. Turning the steering wheel to the left enlarges the pulley on that side and consequently reduces the speed of the left track. This is balanced exactly by an acceleration of the right track and so the Snow-Trac turns to the left. (For a more detailed description of variable pulleys, see my DAF road test.)

The tracks themselves are of reinforced rubber with steel cross-pieces bolted on. A damaged track need not be scrapped as it can be cut and have a new section bolted in. The front driving sprockets have teeth, but the idler wheels all have pneumatic tyres. The weight-carrying bogeys are also sprung to give a soft ride and the hydraulic dampers are telescopic.

Various equipment is available, but Innes Ireland is selling the machine with a hard-top body containing seating for the driver and six passengers. Rails allow the carriage of parcels, sacks, or hay bales along the top of the track guards. Heavy loads may also be carried on the roof and can overlap