

portal axles found on many European off-road vehicles, it will cruise at 65 mph (105 kph). The gasoline B30A inline 3-litre, 6-cylinder engine is a detuned version of that used in the Volvo 164 car, and puts out 125 hp. Four-wheel drive can be engaged on the fly as can the vacuum-powered front and rear differential locks. The solid axles have a 6:1 gear ratio, are sprung by leafs and the drive shaft is exposed. This is a configuration that puts these axles in high demand by the cannibals building rock buggies. More photos of Jim's Volvo can be viewed at:

<http://www.volvo4x4.com/pictures/wander/>

Jim's brother Sean, alias Uncle Buck, brought his 1975 TGB 1111 all the way from Houston Texas. Sean bought this truck in 2005 from a private sale. It only had 5,000 km on it. Being from Texas, Sean wanted an open air touring vehicle and this truck was perfect. It is simpler mechanically than the Unimog, competent off-road, quieter down the road but, alas, more rare. This model was previously a 'tank killer' for the Swedish army. It sported a TOW missile launcher, but even in Texas, they are not allowed to be owned by the public. A unique feature of this model is that it has a fully collapsible roll cage, which is handy for storing the vehicle in your garage, although its intended purpose was to be out of the way when the missile launcher was in use. Another handy feature is the huge multi storage available in the rear compartments, originally used to store ammunition.

George Vaughan from Lincoln City Oregon brought along his 1979 C306 quad cab 6X6. George bought this truck in 2004 from BAT Unimog at: <http://www.clatskanie.com/bat/> via their US representative. The truck's prior life was spent as a military airport fire truck. George

purchased it for recreational wheeling but it is fitted with some pretty unique fire fighting equipment such as hydraulic fittings at the rear, originally used for the 'jaws of life' and a hydraulic motor-driven water pump for the water cannon. Many military vehicles are fitted out with 24-volt electrical systems; George's C306 is 12-volt making it a bit easier to find compatible electrics in North America. George regularly shops for all sorts of parts at NAPA. The Warn 6000 winch has a Swedish designed quick disconnect so it can be easily moved front or rear. It is the best designed system I have seen. Certainly better than the more common wobbly hitch type. The axle ratio for the 6X6 is 7.14:1 including the portal gearing at the axle ends. The 6 drum brakes have an 'emergency fast brake' feature which automatically engages all wheel drive when brakes are applied in a panicky stopping manner. Perhaps the most unusual feature is the number of selectable drive options the

driver can chose from. There are two different 2WD modes, centre axle or front axle. The later allows front-wheel drive with its high speed directional control for snowy highway cruising, 4WD with the front and centre axles engaged and 6WD with all axles engaged. The front axles can be locked independently from the 2 rear axles.

#### *A rock buggy, German style*

Although the cannibals like the 'taste' of Unimog portal axles in their Jeeps, they are missing two other important ingredients that make a Unimog such an outstanding off-road vehicle. One is the so-called torque tube. This is essentially a very long control arm within which the drive shaft runs. It bolts to and swings from the output end of the transmission. The cannibals just lop it off because it does not easily attach to the end of any other transmission. It is said to be the key to successfully getting lots of power to the ground. The other ingredient is the

*In it's previous life this 979 C306 quad cab 6X6 owned by George Vaughan from Lincoln City Oregon spent it's time as a military airport fire truck*

