



Poles apart

Arek Kwiecie introduces the Polish Tomcat, a formidable racer pioneered by Land Serwis Photos: Arek Kwiecie

Several years ago, Polish off-roading fans dreamed of nothing better than Russian UAZ and GAZs, ancient all-terrain vehicles that constantly struggle with rust and demand permanent care, technical skills and the patience of a saint. A few were lucky enough to own more superior vehicles, most of which were imported from abroad. Several-year-old Land Rovers that

were outdated in Western Europe were considered luxurious in Poland. But times have changed. Communism has long been forgotten and new vehicles produced by well-known manufacturers and bought in showrooms are now seen on Polish roads (and off-road tracks). Poland still doesn't have proper highways and its existing roads are dotted with holes, so it's

no wonder Poles excel off-road. To prove their skills they needed professional racing cars that wouldn't shame them when competing abroad, hence the appearance of English Tomcats in Poland in 2003.

King of the 'cats

Known for his loyalty to Land Rovers, Piotr Kowal was the first to import

Tomcats to Poland. One of the country's best off-roaders, he regularly competes in prestigious events like the Rainforest Challenge and the Berlin-Breslau Rally. He is also the managing director of Land Serwis, a company that deals with Land Rover conversions and repairs.

'I built my first professional off-roader, ES, in 1998 using parts from my first

Tough off-roading in Poland requires tough vehicles, and the tricked-up Tomcat has proved its worth



Owner profile

Owner: Piotr Kowal
Occupation
 4x4 expert, owner of Land Serwis, equipment and spare parts importer, Polish Britpart dealer
Vehicle history
 Expedition racer prepared for the world's toughest off-road competitions
How much?
 Over 40,000 zloty for building and conversion

Piotr Kowal has great success with this much-modified and widely-travelled Tomcat built with Solihull parts

What the owner says...

'My Tomcat's biggest advantage is its light weight and appropriate weight distribution. We have recently discovered that moving its power transmission system 30cm backwards achieves the ultimate weight distribution on both axles. We used that solution with the Tomcat's racing model.'

'I am planning to build a new Tomcat next year, with portal axles and a 400bhp, 4.2-litre supercharged engine. Its power, combined with the vehicle's light weight, will allow us to drop the mechanical winch and replace it with a modified electrical model with two engines and a strong power source'

Challenge events get seriously dirty



Tomcats offer great power to weight ratio



Mud, water and 4x4s? Must be a winch challenge event!



Polish 4x4 enthusiast scene has progressed recently

vehicle, a 1982 Range Rover Classic that I had driven so often it had "lost" its body,' Piotr says. 'I still use it today when participating in rallies or planning race routes. It may look clumsy, but it's a really efficient vehicle.'

'Land Serwis customers often used to inquire about professional off-road vehicles they could race. Some needed light, fast

cars for cross-country racing and others were interested in strong, damage-proof off-roaders adapted for extreme rallies aficionados. I started looking for something to satisfy their needs,' Piotr recalls. 'I went to Great Britain to visit Tomcat Motorsport. What I liked about Tomcats was the simplicity and versatility of such an idea - you can use an old Range Rover

FEATURE LAND ROVER Polish Tomcat

subframe, for instance, and add a light cage, which makes for a rather inexpensive solution. According to the buyer's needs, other modifications can be made. I was quickly convinced it was the answer to our problems and soon obtained a license to manufacture and sell Tomcat's safety cages and light bodywork.'

Unlike its English relatives, which are mostly used in cross-country races, Land Serwis's prototypical Tomcat was an extreme off-road racer. 'We already had light, solid bodywork. We needed the rest to be strong and durable.'

Standing tall

The Polish Tomcat's secret weapon is its portal axle: an additional gear in the driving axle normally used in tractors. It helps increase torque to the wheels and minimise the risk of axle shaft damage. It also boasts a 16cm larger axle base and 13cm higher ground clearance, which enables vehicles to drive over obstacles most standard cars would find too difficult. The vehicle is taller but also wider, so its centre of gravity remains in the ultimate position and the Tomcat isn't prone to falling over. The portal axle Piotr chose was manufactured by Australian company Maxi-Drive.

This Polish Tomcat has a mechanical winch (towed weight: 12 tonnes) powered by a shaft connected to the transmission. Piotr designed it using the gear from the driving axle. A vertical drum with a wire rope allows the winch to fit between the rear suspension elements. Appropriate axle ratio helps the cable pull with the same speed as the vehicle on transmission. The winch can use full engine power when pulling and its cable winds and unwinds much faster than that on an electric winch.

Piotr says: 'I knew a mechanical winch would be much heavier than an electric

one. I had used a similar model before in my ES and have been a fan ever since. They know no competition when it comes to speed and make driving on muddy territory a piece of cake.'

Portal axles are also key to the Polish Tomcat's off-road success. 'The simplicity, durability and infallibility of its structure is also important. Apart from the tuning elements, we used only Land Rover sub-assemblies,' Piotr states proudly.

He built his first Tomcat using a refined Range Rover Classic's 100in frame and revitalised it with a stonking 4.6-litre V8. Its high torque plays a vital role in difficult driving conditions, reaching a massive 309lb ft at a mere 2600rpm. The radiator is situated in the back of the vehicle so preventing it from getting damaged or clogged up with mud, and the Tomcat is now better balanced as a result.

Driving Piotr's Tomcat is fairly easy thanks to its Range Rover automatic transmission (ZF 4HP22) with Raybestos Sport clutch plates. It has an early Defender transfer box (gear ratio 1:1.6) and manually-lockable central differential. The final Range Rover parts that were donated were the driving axles with Maxi-Drive



Vehicles built for challenge events need to be tough and reliable to cope with these conditions regularly



Tomcat bodywork lends itself to the application of sponsors' stickers and logos



Thanks to huge 35in Simex tyres Tomcat owners can drive fearlessly in the toughest possible conditions

locking mechanism, axle shafts and heavy duty U-joints.

The Tomcat's suspension kit features King Springs and Öhlins shock absorbers. Brakes, built with Turbo Groove discs and EBC Brakes blocks, have to control huge wheels with Simex 35in tyres.

The Tomcat's cab is designed for two people, with bucket seats and multi-point seat-belts for safety. Although the interior isn't spacious, two well-built men can easily fit in. Getting in the high cab is quite a challenge, so doors are usually removed before a race, and the Tomcat has no mirrors (they'd get damaged on the road



'Daktari' paintjob and Range Rover alloys indicate an early incarnation of the Kowal Tomcat

anyway). Instead, a minicam in the back transmits images to a monitor in the cab.

Biggest cost?

Produced by world-famous manufacturers Equipe, Maxi Drive, Öhlins or Simex, tuning elements are quite pricey, but quality always is.

Hub reduction gear, a good power transmission system and the experience, skills and solutions of Land Serwis staff also cost. For instance, you cannot buy the mechanical winches Land Serwis invented in shops – only together with a Tomcat...

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Money no object

Piotr Kowal's Tomcat has been competing in extreme rallies in Poland and abroad for a few years. Meanwhile, Land Serwis has built a few new Tomcats similar to the prototypical. Their interiors vary depending on customers' budgets and individual preferences. For instance, suspension kit subassemblies, produced by Italian company Equipe, have replaced King Springs and Öhlins shock absorbers, proving to be very good substitutes. Britpart Super Gas or Bilstein shock absorbers are also available. Some well-off clients ask for additional electrical winches – usually Warn M8274 – in case of a breakdown.

Land Serwis assembles Tomcats modified for cross-country rallies as well as expedition-adapted ones. One model won the Berlin-Breslau rally in 2005 before completing the Dakar Rally in 2007.

Some of the cross-country models, which are lighter and faster than their expedition-prepared brothers, are also based on Range Rover 100in frames with

consumption, however, is a different story. It needs 90litres/100km during some races.

Despite speed-reducing conversions, even the extreme version of Tomcat can go pretty fast. Its top speed is 150km/h and it reaches 100km/h in 11.4 seconds. Its performance is weaker due to its greater weight – the cross-country version weighs 1460kg, the extreme one 200kg more. Not much compared to its competitors, thanks to its ultra-light lamina body.

About 10 Tomcats produced by Land Serwis are now off-roading in Poland. Each has been adjusted to its owner's individual needs at costs from 30,000 (cross-country) to over 40,000 (extreme). This could buy several UAZs, but customers still queue up for their own Tomcats. **LRW**



Instead of mirrors, a minicam in the back of the Tomcat transmits images to a monitor in the cab

Modifications

- Maxi-Drive portal axles
- Self-made mechanic winch & Warn M8274
- Raybestos sport clutch plates
- Maxi-Drive locking mechanism & axle shafts
- Heavy duty U-joints
- Suspension: Öhlins shock absorbers and King Springs
- Brakes: Turbo Groove discs and EBC brakes blocks
- Simex Extreme Trekker 35x16in tyres

Specification

Engine: 4.6-litre V8
Power: 295bhp @4800rpm
Torque: 309lb ft 2600 rpm
Capacity: 4554cc
Tyres: Simex Extreme Trekker 35x16in



Suspension includes Öhlins shock absorbers and King Springs

Piotr built his own mechanical drum winch



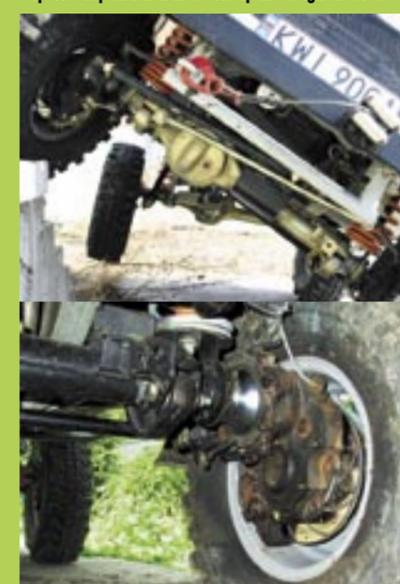
Tomcat's axle articulation is impressive

The Tomcat boasts a strong cage and light body



Although not spacious, two men can easily fit in here

Superb suspension travel eats up the tough obstacles



Driving axles with Maxi-Drive locking mechanism