The "Velar" Secret: A Meticulous and Covert Genesis

By 1969, "Project Velar", the internal codename for the Range Rover, was in its final stages of exhaustive testing and pre-production refinement. The very name, derived from the Latin velare (meaning 'to veil' or 'to cover'), precisely encapsulated the high level of secrecy surrounding its creation. To further mask its true identity during road trials and to prevent industrial espionage, a legitimate front company, "Velar Company Limited," was established in London in 1969. This shell company acted as the registered owner of the initial 40 pre-production prototypes.

These test vehicles were deliberately disguised, fitted with incongruous body panels, false grilles from other British Leyland brands, or often shrouded in heavy tarpaulins or even wooden crates when transported, to completely conceal their revolutionary silhouette from public view. You can only imagine the baffled expressions of passers-by encountering these oddly-assembled vehicles, clearly not quite fitting into any known category; an early example of automotive industrial cloak-and-daggery that continues to this day.

As with any new vehicle development, Land Rover had a rigorous testing environment in place, well supplemented by their long-term, real-world feedback and continuous development of the Series. Under the dedicated leadership of engineers like Geoff Miller, who oversaw the Velar project, and with key input from test drivers like Roger Crathorne, these prototypes underwent a worldwide testing regimen that pushed every component to its absolute limit.

They were subjected to the scorching deserts of North Africa and the Middle East, enduring extreme temperatures and fine sand ingress, which led to refinements in cooling systems and engine reliability. The frozen landscapes of Scandinavia provided the snow-covered conditions for assessing cold-starting capabilities in sub-zero temperatures, and they could test the performance of the new permanent four-wheel-drive system on ice and snow.

The rugged terrains of the Scottish Highlands and Welsh Mountains challenged climbing ability on steep, rocky slopes and assessed chassis torsional rigidity over articulation courses. High-speed autobahns and motorways across Europe were used for refining on-road stability and minimising noise, vibration, and harshness in the cabin. The goal on the German roads was ensuring comfortable high-speed cruising - a non-negotiable differentiator from the 'non-high-speed' (at all) Series.

Fun Fact: At the time, nearly all serious 4x4s relied on leaf springs for their suspension, which provided a ride quality often described as 'agricultural' - a polite way of saying it could be a bit jittery. Introducing coil springs on all four corners of a vehicle intended for both off-road work and on-road comfort was a rather bold engineering step. This coil-sprung setup was a game-changer for the time, giving a smooth, comfortable, and controlled ride on tarmac with a level of refinement previously not found in a 4x4, while simultaneously giving increased axle articulation off-road, maximising traction and control.

Another distinguishing feature that set it apart from most contemporary vehicles was full-time permanent four-wheel drive. This was very different from the part-time 4x4 systems of many utilitarian vehicles, which could only be engaged on loose surfaces to prevent driveline wind-up. Power was now distributed continuously to all four wheels via a centre differential.

The heart of this system was the newly developed LT95 gearbox and transfer box assembly. This was a bespoke, integrated unit featuring a four-speed manual transmission combined with a two-speed (high/low range) transfer case. It incorporated a manually lockable centre differential,

allowing the front and rear axles to be linked for maximum traction. While they were dependable, they were heavy, and early versions of the LT95 were noted for an almost "truck-like" shift feel for some drivers.

So, now we've got coils and a new transmission, but why stop there? Land Rover picked the lightweight, compact 3.5-litre all-aluminium Rover V8 petrol engine for its heart - the 'rough and ready' 2.25s just weren't going to cut it for the intended customer. It was originally a Buick design from the late 1950s and acquired by Rover in 1965, well-suited to the Range Rover. For its new application, the engine was tuned for robust, low-speed torque (around 205 lb-ft at 2,500 rpm), essential for off-road work, while still offering smooth, ample power (around 135 bhp) for high-speed cruising. Its compact dimensions allowed for the relatively short front overhang, which, of course, helped approach angles off-road.

Still not enough? As an extra performance advantage for a vehicle of its size and capability, the Range Rover was fitted with disc brakes on all four wheels, a rare feature for a 4x4 at the time. There was also vacuum servo assistance, which brought a welcome reduction in pedal effort. The whole package was geared to increase braking performance for both high-speed road use and controlled descents in steep off-road terrain. The parking brake was the common 'transmission brake' on the central drum.

Maintaining the Land Rover tradition, the Range Rover utilised lightweight aluminium alloy for its non-stressed outer body panels for corrosion resistance and overall weight saving.

The external styling, largely credited to David Bache and his design team, resulted in a clean, minimalist, yet instantly recognisable two-door silhouette. Every line was intended to be functional, devoid of unnecessary adornment, and it remains quite iconic, even today. Elements like the clamshell bonnet and the iconic split tailgate, with its upper half lifting and lower half dropping horizontally, were not just aesthetic but practical.