

Exhibit F

Jaguar Land Rover Ltd.
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Seize control of all terrains; Electronics have allowed engineers to do many things - among them tune a vehicle for improved off-road performance. Perhaps the pinnacle of this evolution, to date, is Land Rovers' Terrain Response System.

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ABSTRACT

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FULL TEXT

Electronics have allowed engineers to do many things - among them tune a vehicle for improved off-road performance. Perhaps the pinnacle of this evolution, to date, is Land Rovers' Terrain Response System.

A vehicle's off-road ability is governed by the same issues that apply to driving on the street, a race track or ice: grip. The four patches of rubber where the tires touch the surface determine how -- and how well -- the vehicle stops, turns or accelerates.

The combined total of those patches is little more than the surface area of a magazine page. Individually, each patch is about the size of the palm of your hand.

Keeping those contact patches at work is the key. Springs absorb the blow from surface changes. Shock absorbers control the springs. Sway bars or anti-roll bars transfer weight or forces from one side of the vehicle to another. The whole affair is designed to maximize the contact between tire treads and Mother Earth. That's how suspensions have worked for a century.

More recently, electronics have come into play. Extremely fast and powerful sensors and actuators have allowed engineers to come up with systems that read what's happening at an individual wheel, whether it's going up or down, speeding up or slowing down, losing grip or gaining more.

It started with anti-lock brakes, which release the brake pressure at an individual wheel should it lock up. A reverse algorithm brought traction control: the ability to brake a wheel when it spins more quickly than the other drive wheels.

Then along came stability control: the ability to sense a loss of direction and apply appropriate braking action at one of more wheels to bring things back in line.

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Off-road situations bring a whole new set of issues: Individual wheels often lose contact with the surface, causing ABS and traction control systems to react.

In some situations, off-road wheel spin is a good thing -- it clears the tread; but in other instances, you want the wheels to lock and build a barrier in front of the tires.

Land Rover has been building some of the most seriously capable off-road vehicles in the world for some time. LR engineers have extensive experience with literally all conditions on every continent.

With sufficient research and development funding from parent Ford, they set about to design and develop a system that would incorporate the various electronic aids, calling it Terrain Response.

An aluminum rotary switch and two small levers on the centre console creates a communication link between key vehicle subsystems, allowing the driver to select from six terrain settings:

Dynamic - for high-speed or winding paved roads.

Normal - for day-to-day driving.

Grass/gravel/snow - for slippery conditions.

Sand.

Mud -- deep ruts.

Rock crawl.

The slick part is the programming that went into this. Terrain Response sets operating parameters for the engine throttle mapping, transmission shift points, suspension (firmness and ride height), differential settings, traction control functions (including dynamic skid and hill descent control and the brakes (ABS) and brake force distribution.

The integrated system is pre-emptive in that it presets all these parameters depending on conditions. For example, should rain, snow or ice make normal roads slippery, switching to grass/gravel/snow alters the throttle mapping to provide less torque for a given amount of throttle travel due to the increased sensitivity to power in such conditions.

Place the transfer case in 4-low mode and the system automatically raises the suspension to increase ground clearance and alters throttle response, shift points and gear selection strategies to provide a wider range of control in anticipation of difficult conditions.

But that's just one layer of control. The slip control computer adjusts the dynamic stability control, the hill descent control and the traction control according to surface conditions, different for mud than snow for example. TR also controls the locking differentials in the transfer case and rear end for both traction and stability.

The system is so elaborate and effective experts and novices alike can enjoy the benefits.

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