



Hybrisson

Line of Business
Failure Analysis

Established
1992

Leading Executive
Mr. Shaul Yaacobi
Director

By combining several mechanical principles, the company has developed an integrated hybrid transmission which operates in a continuously variable manner. It may be used with or without a clutch mechanism. Unlike other designs, it further has the ability to include the differential and solves a number of difficulties associated with previous transmissions.

Lowest Fuel Consumption

The idea torque conversion via a transmission has always been to improve the motor's ability to work in a narrow range of speed where its output is most efficient, so fuel consumption is the lowest, and consequently, air pollution also is the lowest. Alternatively, it may be used continuously at max power to achieve high acceleration. The transition to stricter air pollution standards makes optimizing engine speed particularly acute.

Robotic Controls

Vehicles these days use mechanical six-speed boxes, robotic boxes or even automated gearboxes with seven or eight different integrations. These multiple gear ratios options are designed to keep the motor within the desired speed range (beyond the need to deal with changing road conditions). The resulting mechanisms are, with robotic controls and computer monitoring, while becoming quite efficient, are also becoming very complex and expensive.

Removing Complex Gearing

The Hybrisson removes the complex gearing in favor of a continuously varying torque conversion between conical surfaces. Full advantage is taken of the opportunities that this geometry affords which include:

- Technological simplicity: limited number of moving parts
- Expanded system capability can include differential gear reduction
- Light weight: small number of total components
- Matches many vehicle types: easily scaled design for broad range of applications
- Skills operating the vehicle : requires only selecting the direction forward / back. No intervention necessary throughout the acceleration, cruising or deceleration
- Cost significantly lower: due to fewer components and simplicity
- Savings in fuel consumption due to improved engine operational efficiency cost reduction in car usage due to above protecting the environment lowered emissions from improved engine efficiency

Fully Simulated

The system has been fully simulated and designed and awaits funding to begin the proof-of-concept proto-typing and experiments.

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