Issue # 01, August 2026

NEWSLETTER

Knowledge & Innovation (K & I)

Editorial

The KI Newsletter with its editorial team wishes the incoming CEO and MD of RSB Transmissions Ltd., Mr. G. Parthipan, a glorious tenure! Given his experience as a technology leader in auto sector and his commitment to excellence, the RSB family can confidently look forward to a greater leap in its journey ahead!

Friends, the climate engagement plan and the mission to limit the global temperature-rise to 1.5° C continues to be the immediate critical target for mitigating the miseries being suffered from extreme climate changes of heat, and natural disasters. Sadly, the world is still far from this goal, and the consequences are seen within the country & around the world already this year.

The Indian economy has shown a robust 7.8 % growth in Q1 of 2026, year-on-year, supported by a buoyancy in manufacturing and service sectors, along with healthy consumption and investment demand. However, this resilience must be taken together with the uncertain geopolitical developments and accordingly plan out a strategy for growth. For example, India experienced a significant increase in its crude oil import expenditure in Q1, by 26%, compared to the same period last year.

Knowlegde is Power

Strategic relationship between India and the European Union crossed a major milestone with the formal conclusion of negotiations for the India-EU Free Trade Agreement (FTA), on January 27, this year. As is known, it represents around a quarter of the world's population, with two billion people, and about 25% of the world's gross domestic product (GDP). Further, this Agreement is one of India's most significant trade agreements because it covers not only goods but also services, mobility, intellectual property, sustainable development and regulatory cooperation.

As per the Agreement, India would provide substantial tariff concessions on EU automobiles, but with phased implementation and safeguards, making this particularly important for India's automotive industry. Two very important items to watch will be: the European investment in India's automotive manufacturing industry, and the evolution of Indian exports of auto components to the EU (that will depend greatly on its ability to innovate). It is also expected that Indian suppliers of forgings, castings, gears, shafts, stampings, software, and precision engineering could gain from lower EU tariffs and easier market access. Similarly, cheaper imports from Europe would increase competition for Indian OEMs, especially in premium and technology-intensive segments.

Likely gains could accrue to electric vehicles & batteries. On a broader scale, access to European technology, battery materials, charging standards, and joint ventures could accelerate capability building in India. For commercial vehicles, import pressure may be less; benefits can happen mainly through components, exports, and technology transfer.

Omkar Nath Mohanty

Indian Auto Scenario

Passenger Vehicles posted its highest ever sales of Q1 in FY 2026-27, with 1.27 million units, with 25.9% growth over Q1 of FY 2025-26. The share of Utility Vehicles (UVs) in the Passenger Vehicle segment has now grown to about 68%. Passenger Vehicles saw their highest ever exports in Q1 of 2026-27 of 2.22 Lakh units registering a growth of 8.8% over Q1 of 2025-26. Export growth in this segment was driven by good demand from Latin America; Middle East. Europe & Japan also contributed to the overall uptick.

The Two-Wheeler segment posted sales of 5.63 million units in Q1 of 2026-27, posting a growth of 20.3%, compared to the same period of last year. Highest Q1 exports of Two-Wheelers was recorded in this quarter with 1.55 million units, with a considerable growth of 36.6%, compared to Q1 of 2025-26.

In Q1 of 2026-27, Three-Wheelers posted its highest ever Q1 sales with 2.14 Lakh units, along with a significant growth of 29.7%, compared to Q1 of 2025-26.k

In Q1 of 2026-27, Commercial Vehicles also posted its highest ever sales with 2.65 Lakh units posting a decent growth of 18.3% compared to Q1 of last year. Exports of Commercial Vehicles posted a growth of 43.3% in Q1 of 2026-27, compared to Q1 of previous year, with exports of around 0.28 Lakh units, which is also the highest ever exports in any Q1, due to recent demand of Pick-ups in Southeast Asia.

The Indian auto-component industry entered FY2026-27 on a strong growth trajectory. According to ACMA, the industry recorded a turnover of INR 7.60 lakh crore (USD 85.9 billion), registering a growth of 12.7% in rupee terms over the previous fiscal, supported by record vehicle sales, increasing localisation, higher OEM sourcing, exports and investment in advanced technologies. despite an increasingly uncertain global environment. While the OEM section accounted for USD 73.4 billion (+ 16.3 %), the aftermarket achieved ~ USD 12.3 billion (+ 9%).

However, the trade entered deficit as the import was ~ USD 25.4 billion, versus USD 24 billion of exports. China accounted for approximately 36% of India's component imports in FY26, up from 29% in FY25. Overall, India's localisation is advancing rapidly in conventional components, but high-technology components remain a weakness. In FY26, components supplied to EVs represented approximately 4.6% of domestic OEM component supplies, excluding lithium-ion batteries.

Innovation through Knowledge Management (KM)

The whole idea of the KM-framework is to create an ecosystem of thinking & innovative manpower. The KM approach is complementary to the Training system of RSB. While KM is at the output side, the training is at the input end for the manpower!

To begin with, the KM-system at RSB was based on manually filling up the documents by individuals. The operation today has been converted into a digitized system, named, **'MANTHAN'** (the system was developed along with a software firm, in collaboration with the IT Group). It is today fully accessible to the Management of RSB. The Knowledge Pyramid (Fig.1) reveals the benefits that accrue to the Group at various levels of absorption. The KM-structure (Fig.2) shows the operational modalities of KM across all plants of the RSB Group. MANTHAN has now been submitted to the Govt. of India for a possible Copyright.

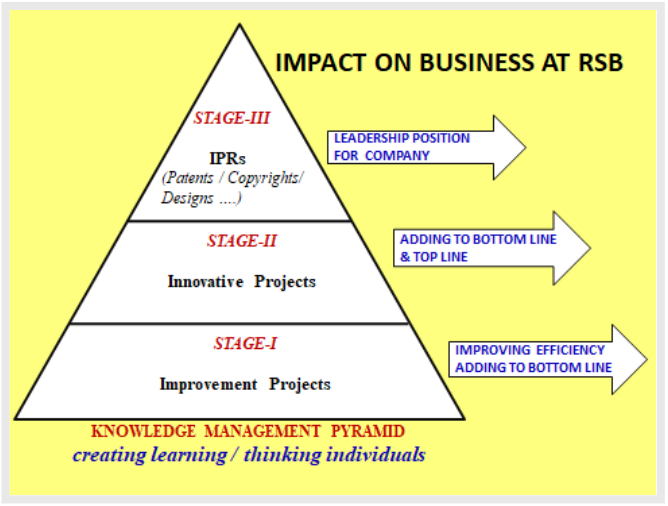

Fig.1: Knowledge Pyramid at RSB

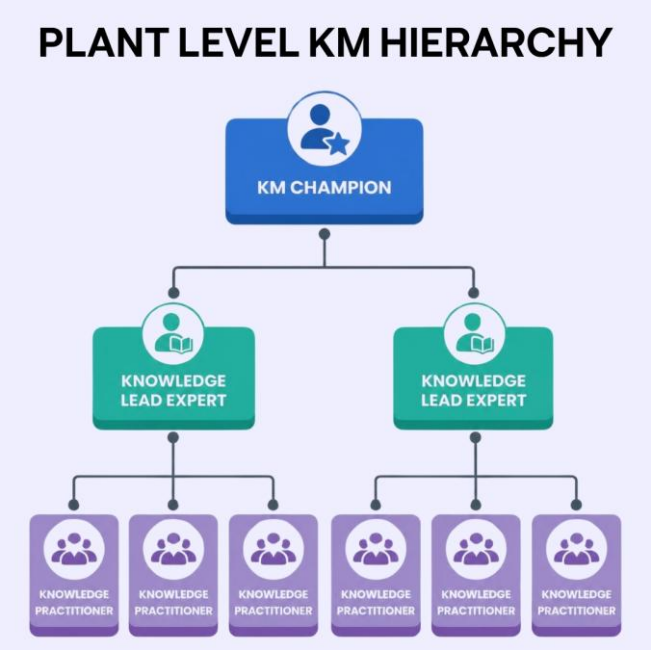

Fig.2: Knowledge Mgmt. (KM) Structure at RSB

Patent News: from RSB and Outside

RSB scene

Recently, two more patents have been granted to RSB. (bringing the total number to six). These are:

1. *Rear Drive Shaft Str. ..(#No.593531; dt.25.06.2026).*
2. *Center Support Assembly (#No.593055; dt. 22.06.2026).*

Another 6 patent applications filed &are under process

Patents around Hydrogen Powered Trucks

Fig.3: Hydrogen Powered Truck

There has been a noticeable increase in patenting around hydrogen-powered heavy trucks (Fig.3). The recent activity covers: fuel-cell electric trucks, hydrogen ICE trucks, hydrogen storage/injection, thermal management, braking, and retrofit of existing mining trucks. The two main categories are: (i) Hydrogen Fuel Cell Electric Vehicles (FCEV) and (ii) Hydrogen Internal-Combustion Engines (H_2-ICE), including direct injection and hybrid systems. During the past two years (2024-25), Volvo has been granted 4 patents, where as Daimler and a Chinese maker, one each. One of the strongest recent patent families is from First Mode / Cummins, aimed at converting large diesel-electric mining haul trucks to hydrogen fuel-cell/battery propulsion.

Patents at India's Leading Auto Companies

Mahindra & Mahindra (M&M) inform that the number of patents granted to them has grown more than 20-fold over a decade (56 in 2016 to 1,334 in March '26). The portfolio includes electric vehicle subsidiary Mahindra Electric Automobile Ltd. as well. Tata Motors Ltd. has achieved a significant milestone in FY26 by filling 144 patent applications. The company is investing in battery-electric technology and connected fleet management to reduce operating costs and emissions.

Patent Litigation in Automotive India

Tata Motors has challenged Ashok Leyland's patent titled, "Multi-Axle Vehicle Configuration Having Heavy Duty Lift Axle" (patent # IN387429), under Section 25(2) of the Patents Act. The matter has reached the Madras High Court

A Recent Patent of Relevance ….

Transmission gearbox for Truck Electric Drive axle

(US Patent # EP 4058313 B1; Grant Dt.: 28.05.2025)

[Patentee: Volvo Truck Corp.; Inventor(s): Barillot,Thomas & et al.]

This invention relates to a gearbox for use in a vehicle and to a power train assembly for use in a vehicle. More particularly, the invention relates to a gearbox and powertrain assembly driven by an electric motor for use in an electric vehicle, a hybrid vehicle or a trailer to be towed by a vehicle.

Typically, an axle includes two drive wheel shafts, one for each driving wheel. Most of the electric motors are, however, designed to run at high-speed/low-torque conditions as compared with known internal combustion engines, running at high-torque/low-speed condition.

Fulfilling the torque demand at the wheel(s) of a vehicle is important for stability of a vehicle in different conditions, particularly in slopes. There is thus a need for having a wide-gear reduction ratio through a gearbox/powertrain assembly (which can be typically between e.g. 1:20-1:50). Such a wide-gear reduction ratio is commonly fulfilled via a gearbox with several reduction stages which consequently need more space and leaves a limited volume of space for other parts (e.g. for batteries, body/aerodynamic devices, suspension assemblies) of a vehicle. Moreover, the commonly known heavy gearboxes further reduce the vehicle's moving capabilities and limit the autonomy of the vehicle. The innovative design (Fig.4) has achieved optimizing these requirements.

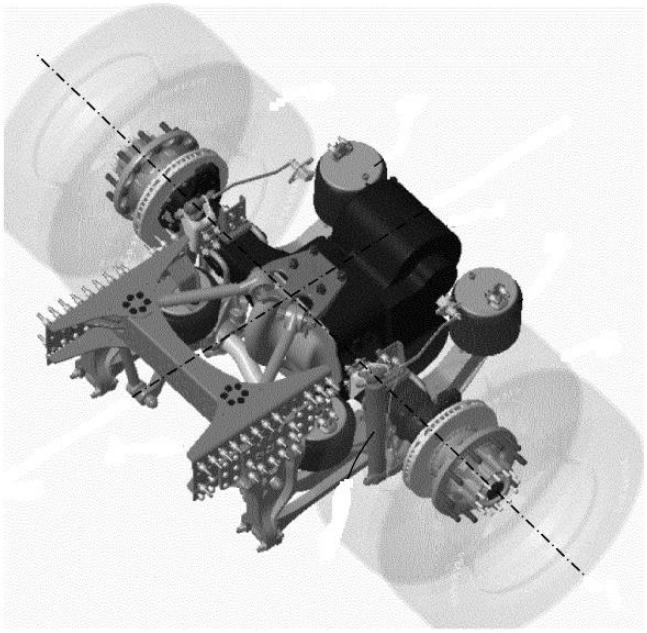

Fig. 4: A Perspective View of the Powertrain Assembly