Mahindra Navistar – Growing In Stature, Acceptance

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(Shopfloor)

The past few months haven't been kind to the Indian automotive industry, with retail sales slowing across all vehicle segments. Even as many struggle to keep stocks rolling, one company in particular isn't complaining. Mahindra Navistar Automotive Limited (MNAL), now a wholly-owned M&M group company, is banking big on its current crop of products, and those in its pipeline. Auto Tech Review recently visited the company's Chakan plant in Maharashtra for a first-hand experience of what is one of the country's most modern CV manufacturing plants.

INTRODUCTION

The Indian commercial vehicle industry is heavily skewed towards two large players – Tata Motors and Ashok Leyland – with both cornering close to 85 % of the overall CV market. For any new player in this segment, eating into their share is no easy task, yet every new entrant has a large market to tap and get a foothold in.

At MNAL, officials were early to spot on the opportunity. And they've gone about the task with marked precision. They've built a strong product, a robust product development team, and a modern plant with the best of equipments – tools they believe would help them leapfrog into being a credible and acceptable third big player.

Recent reports talk about M&M's accent to the second spot in the Indian CV market, but that may not project the entire picture correctly. However, there's little doubt that the company is ticking the right boxes as far as its growth drivers are concerned. The past year or so has seen a sharp drop in sales in the medium and heavy duty truck range, and increase in pick-ups, both in the goods and passenger carriers.

The current economic scenario in the country isn't exactly promising for the company. Yet, like Nalin Mehta, Managing Director, MNAL and everyone else in the company believe, MNAL is now set to take the next steps towards building a growth path on its own. It must be recalled that on December 18 last year, M&M and its American joint venture partner Navistar International Corporation announced that the Indian auto major would purchase Navistar Group's 49 % stake in MNAL and Mahindra Navistar Engines Pvt Ltd (MNEPL) for Rs 175 crore.

The deal has since been completed, giving Mahindra complete ownership of operations and the right to sell MNAL and MNEPL products. Navistar, meanwhile, would continue to provide technical support for developing engines. The agreement also provides the American company to continue sourcing components from India, while Mahindra would

continue to provide engineering services to Navistar. A change in the branding strategy is inevitable, but Mehta remained non-committal on the likely time frame for the change.

Addressing the media in January this year, Dr Pawan Goenka, President – Automotive and Farm Equipment Sectors, M&M had commented that the company's truck and engine businesses will continue to play a critical role in helping grow its presence in the CV market. The focus henceforth would be to further leverage synergies between the group and the vehicle and engine manufacturing units of Mahindra Navistar.

FOCUS ON ENGINEERING

The concept of frugal engineering has been in practice at M&M for quite some time now. And it's no different at MNAL. The company clearly distinguishes between value engineering and cost-cutting. Said Vijay Dhongde, Chief Executive Officer, Mahindra Vehicle Manufacturers Ltd, "Frugality starts from the mind. If the output is same with lesser input then there's no issue. But frugality should be all encompassing, through marketing, manufacturing and even the supply chain."

The company would look at creating differentiators, which play a critical role in the CV industry. For example, MNAL products come with storage space under the driver seat and berths, which earlier went unutilised. Kiran Vairagkar, Senior General Manager – Product Development, MNAL offered another example about innovations being undertaken at MNAL on telematics. “Unlike what our competitors are doing, we want to use telematics as a connect between the user and the owner to bridge the huge gap that exist today.”

A key aspect at MNAL is its constant focus on bringing down the cost of operations. While most of it involves attempts of improving fuel efficiency, the company also maps and understands the application as per the demand, rather than introducing it without any related study. The current generation engines offer the flexibility to map and optimise the usage pattern so as to get the best performance out of them. Efforts have also been made towards optimising the turnaround time, rolling capacity and robustness of the products and processes.

A lot of work is being done in the area of powertrain. While the aggregates for powertrains are being procured from external vendors, on its part, the company is trying to reduce parasitic losses in the engines, for instance. Wherever required, a different calibration strategy is being adopted, said Vairagkar. “It’s important that we communicate well with our customers. I need to tell them that our engines will suffice their needs. We are working on these areas. Some of our future models would have innovations like increase in drain interval, reduction in oil capacity, and use of smaller filters that will bring down the cost of operations,” he explained.

A big advantage that the group enjoys is its combined pool of suppliers. Most of the proprietary and Tier I suppliers are by and large common across Mahindra's AFS and MNAL. Even under geographical parameters, more than 75 % of the suppliers are common with AFS. "There is a good amount of synergy in our sourcing. Even in after treatment we source as a common pool," Mehta said.

SHOPFLOOR FLEXIBILITY

The MNAL manufacturing facility in Chakan, Pune is automated to the extent of 98 %, with manual activities limited to processes such as sample inspections and checks.

The MNAL press shop is flexible to the extent that it can accommodate panel work for all kinds of vehicles, including the XUV 500, Maxximo and trucks. At the press shop, steel blanks are first shaped as per the panel requirements, and then trimmed to remove all excess materials in the second press. Following this operation, the panels move to

the piercing station, where all the parts are pierced. Two cranes of 50 tonne each are used for this process. There are 49 studs to be drilled, which is done using an automated stud welding machine. The Pokayoke mechanism ensures that even if a single stud is missing, the process won't go ahead.

The fourth step is manual, where checks on scratches, cracks or other defects are undertaken. The manual checking process isn't done randomly, but each and every panel is checked to ensure zero faults. The performance of the press shop is measured on parameters like First Run Capability, which is measured at 99.5 %, essentially meaning almost negligible defects.

For heavy duty trucks, the shop has a capacity of undertaking 12 jobs (sets) every hour (JPH). The shopfloor technician we spoke to explained how different it is to calculate the capacity of a press shop, which is unlike any other shop. Capacity varies depending on the number of panels required by a vehicle. The MNAL press shop currently runs on a single shift, and capacities can be enhanced depending on the demand. The present capacity is measured at 15 strokes per minute (SPM).

IMPROVING EFFICIENCY

A detailed, extensive product audit helps the company keep a check on quality effectiveness. The Central Quality Assurance department undertakes audits from a consumer's perspective and all defects are categorised as V1, V2 and V3, etc, where V1 is the most severe defect. The Mahindra Quality System (MQS) is used in all plants of the automotive sector and frequent audits are undertaken. Extensive studies have been done to arrive at the directives and the 20 elements the MQS is divided into. It also looks at the sustainability aspect, because it is not just about product quality but quality in every aspect.

While improvements in manufacturing help bring in efficiency, a lot also depends on the materials used. Is MNAL focussing on alternative materials, we asked Vairagkar, who said the company is constantly on the lookout for alternative materials. "There are a few areas, where we are experimenting with different materials, like in the case of refrigerated vans," he said.

Conventionally, reefer van manufacturers use thick walls that add up to the weight of the vehicle. MNAL is looking for aluminium foam sort of a material to be used in the floor as well as side walls of the reefer vans, and are working with

companies with expertise on such areas. “Eventually, these would help in better thermal conductivity, insulation and weight reduction,” said Mehta.

Increasingly, MNAL is also looking at lightweighting as a tool to better efficiency. Lightweighting is achieved by using plastic and aluminium casting instead of iron casting, but at the same time the company is mindful of the bio-degradability aspect, because sustainability is important to MNAL.

CONCLUSION

From the products perspectives, the company believes it has an advantage in terms of aesthetics, robustness, and cabin design, among others. In a few years, MNAL is confident of building a strong differentiator in the area of telematics. The chassis too has been designed differently, where cross members have been redone to ensure better rigidity and robustness. But does MNAL have the wherewithal to take on the larger players through its products, and market penetration? Mehta believes differentiators (such as those mentioned above) would play a deciding role in the company’s growth in the future. “One more year, and the true worth of our trucks would be realised,” he concluded.

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