



**ENDURANCE  
ENDURANCE TECHNOLOGIES LIMITED**

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Nagar Road, Pune-411 006 (M.S.), India  
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Fax: +91-20-26680894  
Website: www.endurancegroup.com  
CIN No. : L34102MH1999PLC123296

19<sup>th</sup> November, 2021

The Manager – Listing,  
BSE Limited,  
Phiroze Jeejeebhoy Towers,  
Dalal Street,  
Mumbai - 400 001

The Manager – Listing,  
National Stock Exchange of India Ltd.,  
Exchange Plaza, Bandra-Kurla Complex,  
Bandra (E),  
Mumbai - 400051

**Sub: Intimation of meeting with Analysts/ Institutional Investors**

**Ref: Regulation 30 read with Part A of Schedule III to the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015**

Dear Sir/ Madam,

Pursuant to the above-referred regulation, we inform you that a meeting has been scheduled with Marcellus Investment Managers, Mumbai (Marcellus) on 22<sup>nd</sup> November, 2021.

Senior management representatives from the Company, particularly from the R&D function, shall be present at the meeting. A copy of the presentation to be shared during the meeting is enclosed.

Kindly note that the meeting schedule may change due to exigencies on part Marcellus/Company.

We request you to take the same on record.

Thanking you,

Yours faithfully,  
For **Endurance Technologies Limited**

  
Sunil Lalai

Company Secretary and Executive Vice President – Legal

Encl.as above





**ENDURANCE**



# Endurance Technologies Limited

Research & Development

November -2021

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# Cautionary Statement

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The presentation may contain, without limitation, certain statements that could be considered forward-looking. Such forward-looking statements do not guarantee future performance; and may involve risks and uncertainties that could cause actual performance or results to be materially different from those anticipated in these forward-looking statements. The Company is under no obligation to update any forward-looking statements contained herein, should material facts change due to new information, future events or otherwise.

# Endurance R&D in numbers

**4** DSIR approved R&D Centers in India for 4 product lines

**2** Tech Centers in Italy

**29** Acre Proving Ground

**8** tracks in Proving Ground designed by international expert

**19** Patents (and 78 in application stage)

**15** Design Registrations (and 3 in application stage)

**200** dedicated personnel

# Endurance Values

C O R P O R A T E V A L U E S



**Customer Centricity**



**Integrity**



**Innovation**



**Teamwork**



**Transparency**

***INNOVATION*** is a core value at ***ENDURANCE***.

*We attempt to address the stated and latent needs of the customer. Through **INNOVATION** and **CUSTOMER CENTRICITY**, we have demonstrated the ability to win new customers, add new products with existing customers and increase our share of business.*

*Annual **PRASHANSHA** Awards, **IDEAFEST** and **ASPIRE** events fuel a culture of **INNOVATION**.*

# End-to-end Solution Provider to Customers

- Provide end-to-end services from conception to end-user delivery
- Aftermarket sale for a wide range of technology intensive auto components products

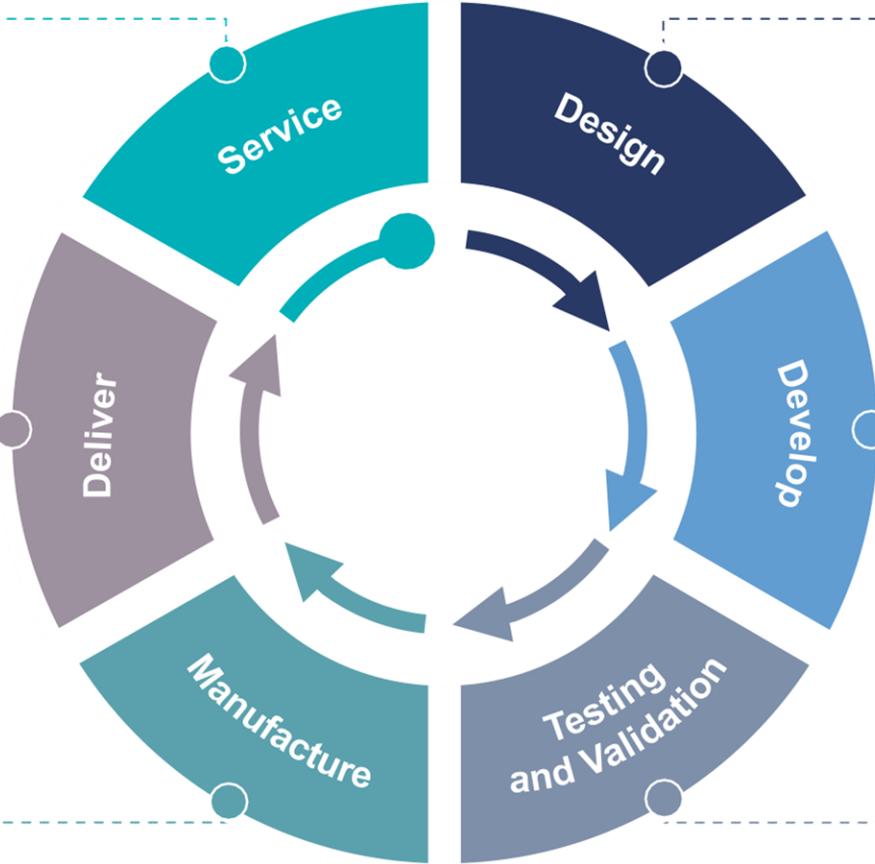
- Focus on developing innovative, lean and cost competitive designs to maintain a technological edge across product range

- Manufacturing facilities in proximity to customers, to ensure timely delivery

- Structured product development to get "first time right" products

- Manufacture wide range of products serving the diverse requirements of customers

- Facilities (including Proving ground) for material, component, product and vehicle level testing



*Our cognitive capabilities in technology help us in creating new products and increasing our customer base.*

# We use Technology in

-  New Product Development
-  Understanding Materials
-  Deploying the Right Machinery
-  Process Efficiency
-  Quality
-  Post Sales Service
-  Combining Information Technology with Production Systems

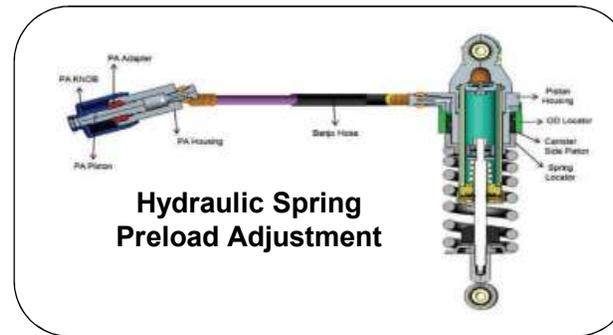
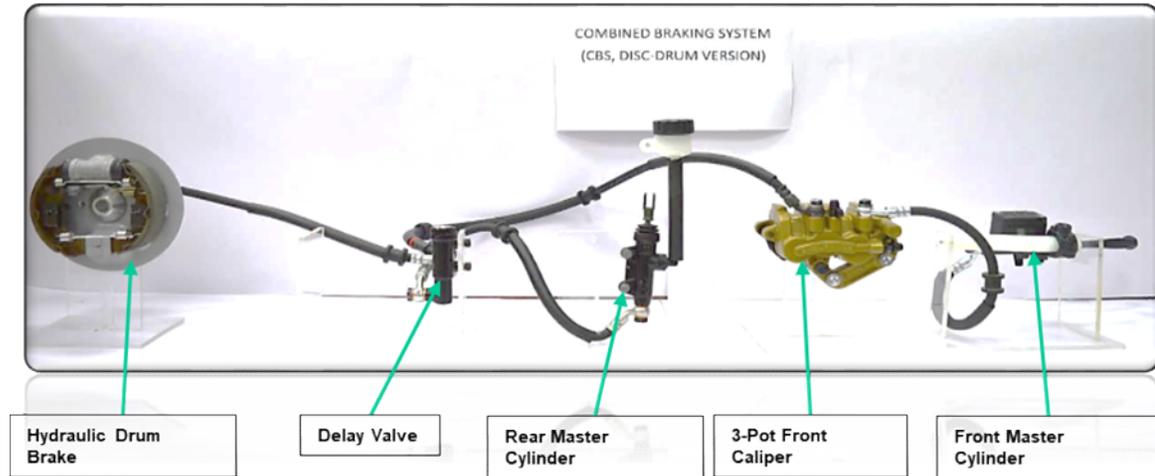
# Deep Expertise and Collaboration

- **Dedicated Cells with specialists to assist all 4 R&D Centers:**
  - Computer aided engineering and road-load data acquisition activities
  - Electronic control system team for advance electro-mechanical systems
  - Elastomers team
  - Oil and friction team
  - Metallurgy
  - IPR
- **Cross learning across R&D Centers in India and Europe, and among the specialist cells**
- **Close coordination with technical partners**
- **Structured product development to get "first time right" products**
- **Working with customers from concept design to rapid prototyping and accelerated testing**
- **Close engagement with customers to ensure satisfaction on QCDDM parameters**
- **Continuous benchmarking of products for performance, quality, reliability, durability and cost**

# At the forefront of new technology

- **Focus on new technologies for higher value added products:**

- Combined Brake Systems (CBS)
- Anti-lock Brake Systems (ABS) catering to tough Indian road conditions
- Advanced technology Slip & Assist clutches for motorcycles
- Paper-based friction plates for motorcycle clutches
- Adjustable inverted front forks and rear shock absorbers for high cc motorcycles
- CVTs and scooter front forks
- Comprehensive die-casting solutions for complex light-weight parts
- Aluminium Forgings



Electronically Controlled Suspension  
(Fully developed In-house)

# At the forefront of new technology (contd.)

- **Incorporate latest technologies from overseas technical partners**, value-engineering and re-engineering based on Indian conditions and deep know-how acquired over the years.

Long relationship with global leaders in technology for existing products. New relationships forged for products required for backward integration and expanding the addressable market.

*Acquired ~100% stake in technical partners in Europe to further enhance the level of cooperation, and to ring-fence their technology.*



APTIC PLUS

APTIC EVO



**Aluminium Forging  
Axle Clamp**

- **The only Auto Ancillary company with such Proving Ground facilities.** Riders trained by international expert. Close interaction between our riders and OEM riders. Greater ability to service customer needs, as evidenced in our ABS development.

# Technology Tie-ups

## Leading European Suspension company

- Technology tie-up since 2008 for development and manufacturing of suspension components.
- Current agreement was executed in 2015; it is valid for a period of 10 years and is renewable.
- It is for technology for a new series of motorcycle suspension components.

## Endurance Adler Spa

- Technology tie-up since 2002 for development and manufacturing of Transmission components.
- Agreement for sub-license of technology and IP was executed in 2021.
- Acquired 99% stake in Adler in April- 2020 and name is changed to Endurance Adler SpA. Gained access to range of clutch and CVT related IP, licenses, trademarks and customers. Shareholding increased to 99.86% in May-2021.

## Leading global brake and suspension company

- Entered into an agreement in 2017.
- For manufacture of Anti-lock Braking System (“ABS”) for application in 2W & 3W.
- Agreement is valid for a period of 20 years.

## Grimeca Srl (Since merged into Endurance Adler Spa)

- Technology tie-up since 2015. Agreement for sub-license of technology and IP was executed in 2021.
- Endurance Adler has acquired 100% stake in the technology provider in May 2020. Gained access to a range of brakes related IP, licenses and trademarks.

## European technology provider in Aluminium Forgings

- Entered into an agreement in 2019.
- Technical support related to Aluminium Forging Technology.

# Endurance Proving Ground (EPG) at Aurangabad

- EPG enables us to test our products on vehicle and further strengthens our position as a Complete Solution Provider.
- EPG is meant for Handling & Manoeuvrability, Ride Comfort, Driveability, Brake/ABS performance and Reliability evaluation.
- Consists test surfaces required for evaluation of Suspension, Transmission & Brake assemblies of 2W, 3W & Quadricycle.
- ABS test surfaces have provision of testing the brake system under wet and dry condition on different friction surfaces (Basalt tile, Ceramic tiles, High  $\mu$  (0.9) asphalt, Polished concrete and loose Gravel).
- Ride & Evaluation track comprises of Belgian pave, Pot holes, Cobble stone, Speed breakers, Long/Short wave pitching, Kerbs.....



# Ride Tuning Van



# 4 R&D Centers in India



Brakes



Castings



Suspensions



Transmission

# *ABS development – Case Study from R&D perspective*

## The product

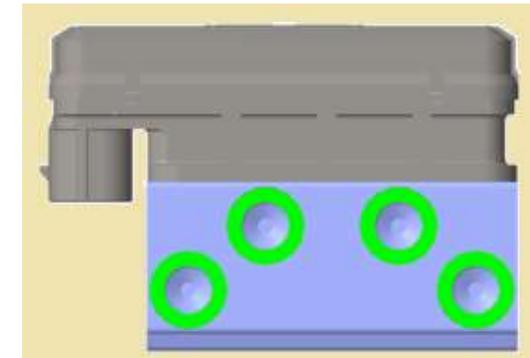
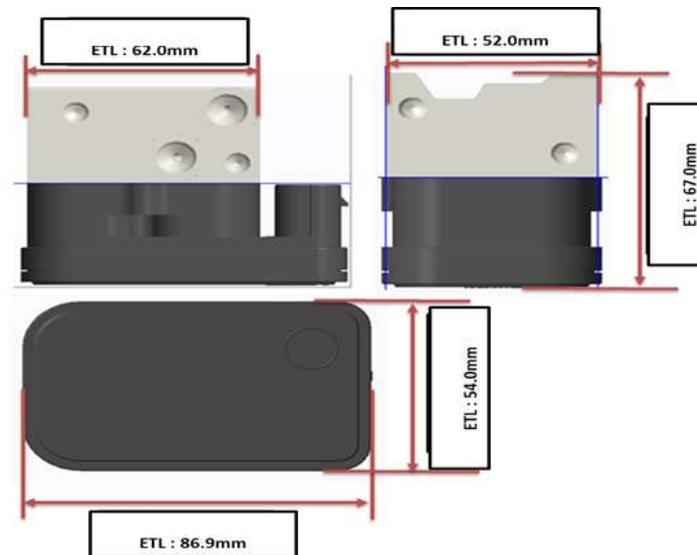
ETL *single-channel* ABS launched for one model. Evaluation ongoing for 3 more models. Shorter lead time expected for next models.

Our product is comparable with established modulator in terms of physical & electrical parameters, and also compatible with existing wheel sensors.

We have met our customer requirements on performance and durability, by testing on various surfaces and different conditions.



**ETL Single Channel ABS**



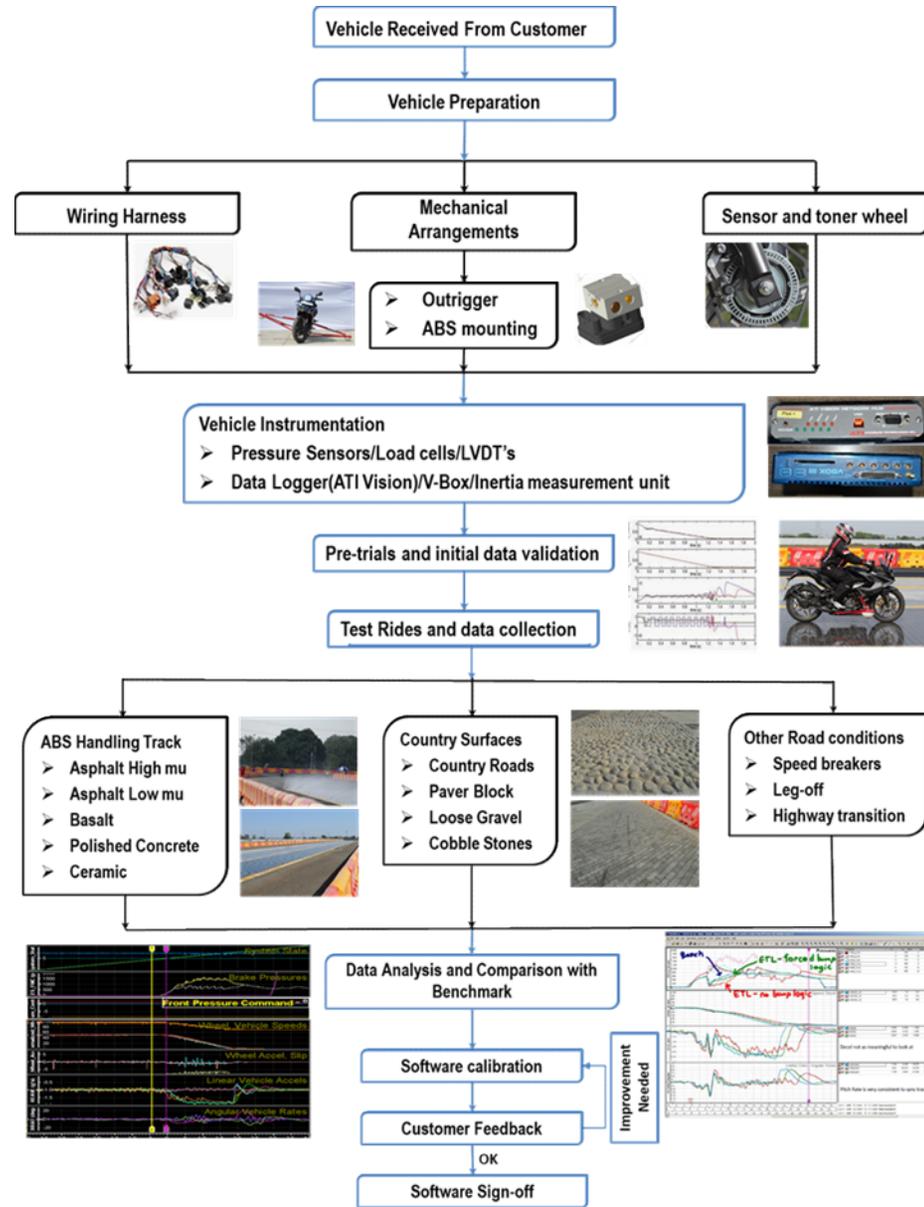
**ETL Dual Channel ABS**

Mechanical arrangements

Instrumentation arrangements

Data Collection in diverse environment

Analysis, Calibration, Benchmarking, Feedback, Sign-off



**Thank You**