



Kammavari Sangham ® 1952

# K. S. INSTITUTE OF TECHNOLOGY

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## Industry - Institute Interaction Cell

### A REPORT ON ONE DAY INDUSTRIAL VISIT TO TOYOTA KIRLOSKAR MOTORS PVT. LTD.

**Place of Visit:** Toyota Kirloskar Motors Pvt. Ltd., Bidadi, Bengaluru

**Date of Visit:** 18<sup>th</sup> September, 2025

#### **Introduction:**

The Department of Mechanical Engineering organized an industrial visit for the 3<sup>rd</sup> semester students to **Toyota Kirloskar Motors Pvt. Ltd. (TKM), Bidadi, Bengaluru** on 18<sup>th</sup> September 2025. The objective of this visit was to provide the students with practical exposure to modern automobile manufacturing practices, production processes, and industrial culture. Such visits bridge the gap between theoretical knowledge and real-world applications, enabling students to better understand engineering concepts.

#### **Schedule and Proceedings:**

- **8:00 AM – Assembly at Campus**

All students, along with faculty coordinators, assembled in the college campus by 8:00 AM. After a short briefing on the schedule and discipline to be maintained, the team departed for the industrial visit.

- **9:35 AM – Arrival at Toyota Kirloskar Motors, Bidadi**

The team reached the Toyota Kirloskar Motors plant located at Bidadi Industrial Area. The students were warmly received by the company's representatives and guided towards the orientation hall.

- **10:00 AM – Orientation Session by Toyota Personnel**

A detailed presentation was delivered by a Toyota personnel about the history, vision, and operations of Toyota Kirloskar Motors in India. Key highlights of the session included:

- Overview of Toyota Kirloskar Motors Pvt. Ltd.
- Manufacturing capacity and plant layout
- Sales performance and statistics of different models
- Popular Toyota models manufactured at the Bidadi plant
- Global quality standards and Toyota Production System (TPS) principles

This session gave students an insight into Toyota’s philosophy of “**Kaizen**” (**continuous improvement**) and “**Lean Manufacturing.**”

- **10:45 AM – Visit to Manufacturing Plant**

The students were then taken on a guided tour of the manufacturing facilities. The visit covered:

- **Sheet Metal Processing:** Cutting and pressing of sheet metal into desired automotive body shapes.
- **Welding Shop:** Robotic and manual welding processes used in assembling vehicle structures.
- **Paint Shop:** Advanced automated painting processes ensuring corrosion resistance and long-lasting finish.
- **Assembly Line:** Step-by-step vehicle assembly, from engine installation to interiors, quality checks, and final testing.
- **Shipping Yard:** The logistics section where completed vehicles are dispatched to dealers.

Students witnessed first-hand how large-scale automobile production is carried out with precision, automation, and strict adherence to quality standards.

- **12:00 PM – Visit to Toyota Technical Training Institute (TTTI)**

Following the plant tour, the students visited the **Toyota Technical Training Institute**, an educational and social initiative by TKM. The institute provides free training in automobile technology and industrial skills to underprivileged students, particularly from rural and economically weaker sections. Students observed:

- State-of-the-art laboratories and training workshops
- Demonstration models for practical learning
- The institute’s focus on holistic development including technical, cultural, and moral education

This session highlighted Toyota's contribution towards social responsibility and skill development in India.

- **1:00 PM – Departure**

After completing the scheduled activities, the students departed from the Toyota Kirloskar campus and reached back safely to the college.

**Participant details:**

No. of participants in total: 32

Students: 29

Faculty – Prof. Harish U, Prof. Saviraj A S & Mr. Palaksha S (Foreman)

**Objectives of the Visit:**

1. To provide students with practical exposure to the **automobile manufacturing processes** at Toyota Kirloskar Motors.
2. To understand the implementation of the **Toyota Production System (TPS)**, lean manufacturing, and quality control techniques.
3. To observe the integration of **automation, robotics, and modern technologies** in vehicle production.
4. To learn about Toyota's **corporate social responsibility initiatives**, especially the Toyota Technical Training Institute (TTTI).
5. To bridge the gap between **theoretical knowledge** acquired in classrooms and its **industrial applications** in real-world engineering.

**Outcomes of the visit:**

1. Students gained first-hand knowledge of **end-to-end automobile manufacturing**, from sheet metal processing to final vehicle dispatch.
2. Observed the role of **automation and robotics** in enhancing efficiency, safety, and precision in production.
3. Learned about Toyota's initiatives in **skill development and social responsibility** through the Toyota Technical Training Institute.
4. The visit enhanced students' awareness of **industrial discipline, teamwork, and safety practices**, crucial for their future careers.

Photos:



The Department of Mechanical Engineering expresses its sincere gratitude to the **Management, Principal, and Head of the Department** for their constant encouragement and support in organizing

this industrial visit. We also thank the **Transport Department** for arranging the bus facility, which ensured the smooth and safe travel of students.

**PO/PSO Mapping Table – Industrial Visit to Toyota Kirloskar Motors**

<b>Outcomes of IV</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PSO1</b>	<b>PSO2</b>
Exposure to automobile manufacturing processes and engineering concepts	3	2	3	1	2	1	1	1	1	1	2	3	1
Observing automation, robotics, and IT tools in production	3	2	3	1	3	1	1	1	1	2	3	3	2
Understanding social responsibility through TTTI initiative	1	1	1	1	1	3	3	2	2	1	1	1	3
Improving communication, teamwork, and discipline	1	1	1	1	1	1	2	3	3	2	2	1	3
Motivation for life-long learning and adaptability	2	2	2	2	2	1	1	1	2	2	3	2	2

### **PROGRAM OUTCOMES (POs)**

**PO1: Engineering Knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

**PO2: Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

**PO3: Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

**PO4: Conduct Investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

**PO5: Engineering Tool Usage:** Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

**PO6: The Engineer and The World:** Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

**PO7: Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

**PO8: Individual and Collaborative Team work:** Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

**PO9: Communication:** Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

**PO10: Project Management and Finance:** Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

**PO11: Life-Long Learning:** Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

### **PROGRAM SPECIFIC OUTCOMES (PSOs):**

**PSO1:** Ability to apply concept of mechanical engineering to design a system, a component or a process/system to address real-world challenges.

**PSO2:** Ability to develop effective communication, team work, entrepreneurial and computational skills.

### **Justification for PO/PSO mapping:**

**PO1 – Engineering Knowledge:** Students directly observed the application of mechanical engineering fundamentals in sheet metal processing, welding, painting, and assembly lines, reinforcing classroom knowledge with real-world practices.

**PO2 – Problem Analysis:** The introduction to Toyota Production System (TPS), Kaizen, and Just-in-Time manufacturing demonstrated how industries analyze and address production-related problems systematically.

**PO3 – Design/Development of Solutions:** The plant visit exposed students to the design of processes and assembly lines aimed at producing safe, cost-effective, and sustainable vehicles, showing how design principles are applied in industrial environments.

**PO4 – Conduct Investigations of Complex Problems:** Students observed how Toyota uses data-driven approaches, testing, and inspections to maintain product quality, highlighting the role of research, experimentation, and analysis in decision-making.

**PO5 – Engineering Tool Usage:** The exposure to robotics, automation, and IT-enabled manufacturing tools provided insights into modern engineering tools and computational technologies used in solving complex problems.

**PO6 – The Engineer and The World:** The visit to Toyota Technical Training Institute (TTTI) showcased how engineering can uplift society by providing free technical education to rural and underprivileged youth, linking engineering with social responsibility and sustainability.

**PO7 – Ethics:** The disciplined and safety-conscious culture of Toyota emphasized professional ethics, values, inclusion, and adherence to both national and international standards.

**PO8 – Individual and Collaborative Team Work:** Observations of production line operations highlighted the importance of teamwork and collaboration among engineers, technicians, and managers in achieving large-scale manufacturing goals.

**PO9 – Communication:** Interaction with Toyota personnel and presentations improved students' technical communication skills, particularly their ability to listen, comprehend, and present technical ideas clearly.

**PO10 – Project Management and Finance:** Students learned about the management of large-scale automobile projects, emphasizing cost-efficiency, productivity, and effective resource utilization in multidisciplinary environments.

**PO11 – Life-Long Learning:** Exposure to advanced technologies and evolving industrial practices motivated students to keep updating their knowledge base and adapt to new technologies in the future.

**PSO1 – Application of Mechanical Engineering Concepts:** The visit helped students directly relate theoretical knowledge from their curriculum (materials, design, thermodynamics, manufacturing) to practical systems such as sheet metal processes, assembly, and testing.

**PSO2 – Communication, Teamwork, and Computational Skills:** The plant environment emphasized discipline, collaboration, communication, and computational tools – essential skills for becoming effective engineers, leaders, and entrepreneurs.



22/09/25

**Industrial Visit coordinator**



**HOD - ME**

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Principal