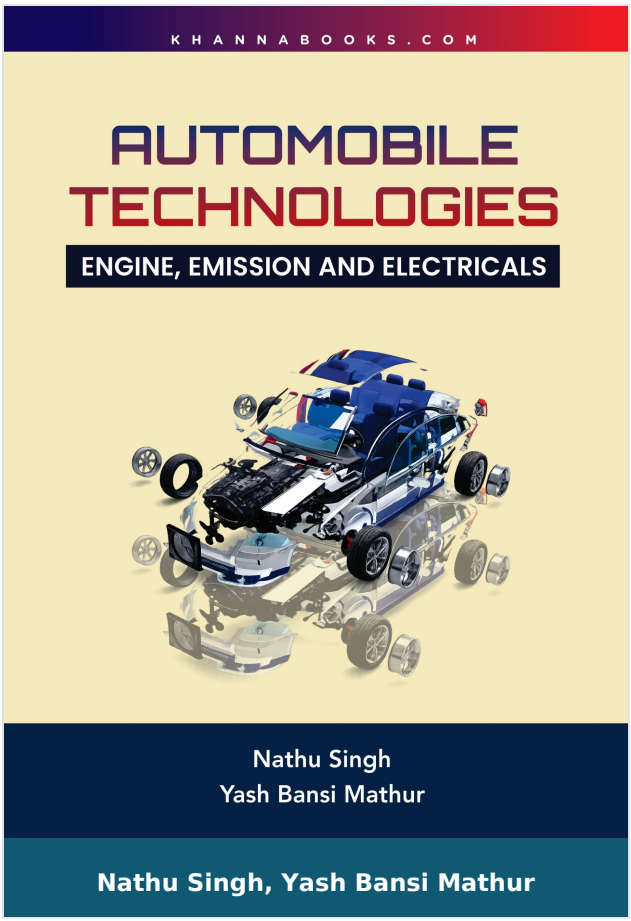



# Automobile Technologies (Engine, Emission And Electricals)

| | |
|---|---|
| **Author :** | Nathu Singh, Yash Bansi Mathur |
| **ISBN 13 :** | 978-93-55389-63-3 |
| **ISBN 10 :** | 9355389639 |
| **E-ISBN 13 :** | 978-93-55389-63-3 |
| **Edition :** | First |
| **Pages :** | 280 |
| **Type of book :** | Physical |
| **Year :** | 2026 |
| **Language :** | English |
| **Publisher :** | Khanna Publishing House |
| **M.R.P :** | Rs 495.00 |
| **Categories :** | New Arrivals, Automobile Engineering, Book Store |
| **Condition Type :** | New |
| **Country Origin :** | India |

**Khanna Publishing House**
4C/4344, Ansari Road, Daryaganj, New Delhi-110002
Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

## Product Description

**Automobile Technologies (Engine, Emission And Electricals)**

Automobile Technology-II is a comprehensive and academically rigorous guide designed to provide a deep dive into the advanced mechanical and electrical systems of modern vehicles. Developed in alignment with the latest National Education Policy, this textbook bridges the gap between foundational automotive principles and the rapidly evolving technological trends of the current market. The authors, Nathu Singh and Yash Bansi Mathur, meticulously cover critical areas including advanced engine designs, sophisticated vehicle control mechanisms, and the intricate electrical systems that define contemporary automotive engineering.

The book's primary purpose is to equip readers with both the theoretical knowledge and the practical technical skills necessary for professional competency in the automotive field. By exploring the relationship between heat, work, and gas properties through thermodynamics, and providing detailed breakdowns of components like reciprocating engines and ignition systems, it offers a holistic view of vehicle performance and efficiency. This makes it an essential resource for students of automobile engineering, professional technicians seeking to upgrade their skills, and researchers interested in the latest advancements in fuel economy, emission reduction, and vehicle safety. Whether you are preparing for gainful employment or looking to master complex engine supercharging techniques, this book serves as a definitive roadmap for excellence in automobile technology.

**Salient Features:**

- **Advanced Thermodynamic Insights**: Detailed exploration of gas laws, standard cycles like Otto and Diesel, and the principles of thermodynamics as they apply to internal combustion engines.

**Khanna Publishing House**
4C/4344, Ansari Road, Daryaganj, New Delhi-110002
Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

- **Comprehensive Suspension Mechanics**: In-depth analysis of various suspension types, including leaf springs and shock absorption, focusing on maintaining vehicle stability and load-bearing capacity.
- **Precision Steering Systems**: Extensive coverage of steering gear mechanisms, from manual rack and pinion setups to modern hydraulic and electric power steering (EPS) systems.
- **Specialized Engine Components**: A thorough breakdown of reciprocating and rotating engine parts, including pistons, crankshafts, and the unique working principles of Wankel engines and gas turbines.
- **Cutting-Edge Electrical Systems**: Comprehensive guides to engine starting circuits, digital ignition systems, and modern lighting technologies such as halogen-quartz and sealed beam headlamps.
- **Advanced Induction Techniques**: Dedicated sections on engine supercharging, turbocharging, and scavenging processes aimed at improving engine power and volumetric efficiency.
- **Practical Vehicle Maintenance:** Technical focus on wheel alignment parameters like caster, camber, and toe, alongside common failure diagnostics for automotive air-conditioning systems.
- **Future-Ready Fuel Technologies**: Insightful discussion on the production and application of alternative fuels, such as methanol produced from biomass or solid waste, for sparking ignition engines.

**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

## Table Of Contents


- : Motor Vehicle Technology -II
- : Automobile Engine System -II
- : Automobile Electrical Systems -II
- : Automobile Electrical Equipment -II
- : Alternative Fuel and Emission Control -II


## Author


**Nathu Singh**

Nathu Singh,

**Yash Bansi Mathur**

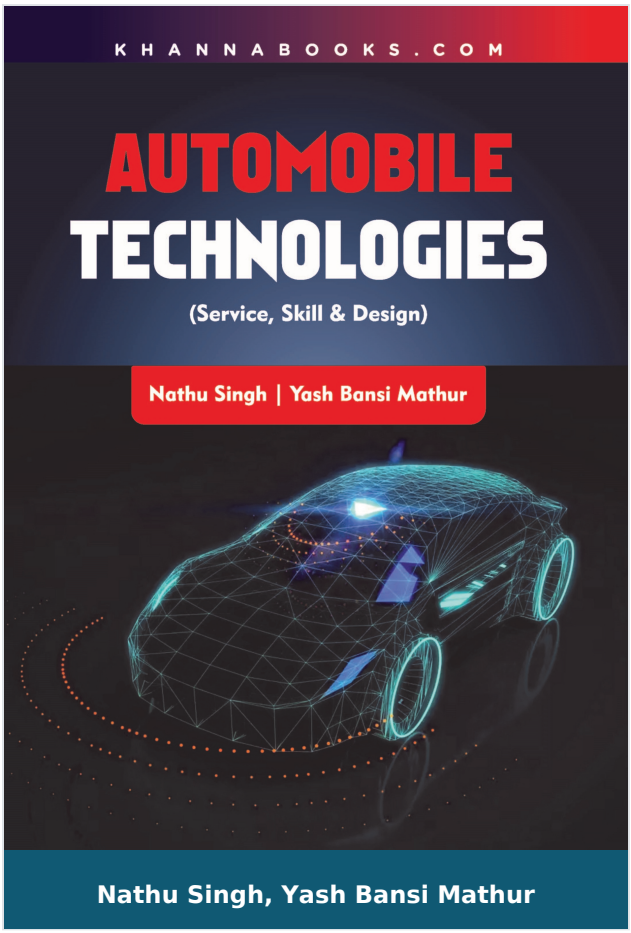
Yash Bansi Mathur



**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320




# Automobile Technologies (Service, Skill & Design)

| | |
|---|---|
| **Author :** | Nathu Singh, Yash Bansi Mathur |
| **ISBN 13 :** | 978-93-55380-48-7 |
| **ISBN 10 :** | 9355380488 |
| **E-ISBN 13 :** | 978-93-55380-48-7 |
| **Edition :** | First |
| **Pages :** | 332 |
| **Type of book :** | Physical |
| **Year :** | 2023 |
| **Language :** | English |
| **Publisher :** | Khanna Publishing House |
| **M.R.P :** | Rs 299.00 |
| **Categories :** | New Arrivals, Automobile Engineering, Book Store |
| **Condition Type :** | New |
| **Country Origin :** | India |

**Khanna Publishing House**
4C/4344, Ansari Road, Daryaganj, New Delhi-110002
Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

## Product Description

To award Certificate/Diploma/Advanced Diploma/ Degree level Professional courses to the technicians and engineers and to provide vertical mobility vertical mobility in the Service, Skills and Design stream of automotive sector, some model curriculum has been designed by the Technical Boards and Technical Universities has included in the book. The book consists of Motor Vehicle Technology, Automotive Systems, Drawing and Design. These systems are very useful for all level of technicians covering some practical and theoretical knowledge and technics of Automotive field. After studying the book, the person would acquire relevant and appropriate technical skill together with the professional competencies in the automotive fields, so that he may properly prepare to take gainful employment in the field.

**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

## Table Of Contents


- Unit-1: Motor Vehicle Technology -I
- Introduction of Automobiles
- Clutches
- Gear Box
- Final Drive and Driving System
- Wheels and Tyrese
- Unit- 2: Automobile Engine System
- Starting, Ignition and Lubrication System
- Automobile Engine Cooling and Fuels
- Fuel Systems of Diesel Engines
- Fuel Systems of Petrol Engines and Carburetors
- Petrol Engine Injection, Performance and Testing Systems
- Unit-3: Automotive System Design
- Design of Clutches and Gear-Box
- Design of Propeller Shats and Axles
- Design of Brake Systems
- Design of Suspension and Steering System
- Statistical Consideration in Design and Optimization
- Unit-4 Automotive System Design
- Drafting of Sectional Views of the Main Assembles of I.C. Engine
- Free hand Diagram of the Main Systems of the Vehicle
- Drafting of Sectional Views of the Main Assemblies
- Vehicle Depot Organization


**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320

- Design of the Main Components of an Automobile Engine

## Author

**Nathu Singh**

Nathu Singh,

**Yash Bansi Mathur**

Yash Bansi Mathur

**Khanna Publishing House**

4C/4344, Ansari Road, Daryaganj, New Delhi-110002

Email: contact@khannabooks.com | Tel: 011-2324 44 47 - 48 | Mobile: +91-99109 09320