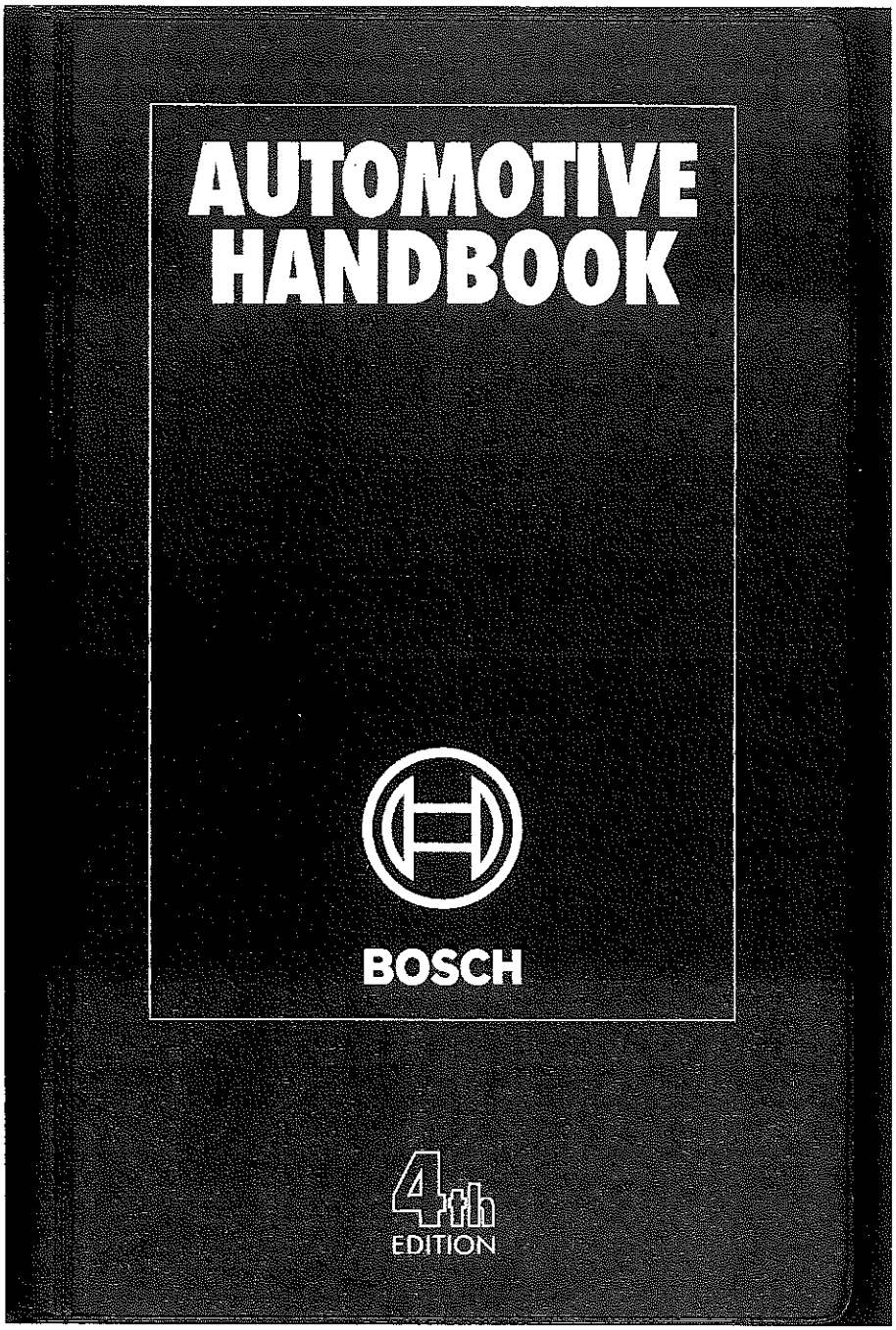

AUTOMOTIVE HANDBOOK

BOSCH

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Source of information for motor-vehicle specifications: Automobil Revue Katalog 1995.

Foreword to the 4th Edition

This "Automotive Handbook" is a handy, concise, pocket-sized technical reference manual. Its primary purpose is to provide the automotive engineer and mechanic, as well as all those interested in technical matters, with a wealth of reliable technical data and an insight into present-day state-of-the-art automotive technology in Germany. With this assignment in mind, the scope of the theoretical chapters dealing with **passenger cars and commercial vehicles**, as well as the remaining contents, have been kept to the practical and necessary level.

Within the framework of a pocketbook, it is impossible to present detailed coverage of individual technical subjects. On the other hand, bearing in mind the very wide range of readers, we did not want to dispense with generally applicable topics and data.

We recommend that you leaf through this "Automotive Handbook" before attempting to use it. This will prove to be a help when you subsequently want to refer to a particular subject.

The addition of new technical subjects and the expansion and up-dating of existing material are reflected in the fact that this 4th Edition is 40 pages longer than its predecessor.

Similar to the 2nd and 3rd Editions, this 4th Edition was to a great extent revised and up-dated by specialists from the Bosch Group, but also by experts from other companies. At this point we would like to express our appreciation to all concerned.

The editors

For your information:

Compared to the 3rd Edition, we have updated the following subjects:

Strength of materials, acoustics

Electronics:
- Microhybrids, circuits, pc-board techniques, sensors, actuators

Materials science:
- Basics, materials, lubricants, fuels, brake fluids, antifreeze

Joining and bonding techniques:
- Punch riveting

Tribology

Internal-combustion engines:
- Reciprocating-piston engines

Engine management (spark-ignition engines):
- Spark plugs, electric fuel pumps, fuel supply (L-Jetronic),
- Motronic, exhaust emissions, LPG systems

Engine management (diesel engines):
- Axial/radial plunger distributor pumps, unit pump system, unit-injector system, common-rail, nozzles and nozzle-holders, exhaust emissions, auxiliary starting devices

Electric drives

Drivetrain:
- ASR for pass. cars and commercial vehicles

Braking systems:
- Basics, brake-circuit configurations, ABS for passenger cars, ABS and ELB for commercial vehicles

Lighting
- Reflectors, PES-PLUS headlamps, Litronic, lights and lamps

Theft-deterrent systems

Communication/information systems:
- Car radio, parking systems, navigation systems, mobile radio,
- Board Information Terminal (BIT)

Safety systems:
- Front and side airbag systems

Comfort and convenience systems:
- Power sunroofs and power windows, seat and steering-column adjustment

Automotive electrical system:
- Circuit diagrams, energy supply, CAN

Electromagnetic compatibility (EMC)

Motor-vehicle specifications

Following subjects have been introduced:

Vehicle dynamics control (VDC)

and the following have been dropped:

Rear-wheel steering, vehicle-monitoring system (Check-Control), trip computer, tire-pressure monitoring system (RKS)

Contents

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