

Introduction to Automotive Service


## *The Automotive Industry*

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Introduction to Automotive Service

## *Today's Vehicles*

- Multiple on-board networked computers
- Computer controlled powertrains
- Antilock brakes
- Electronically controlled steering and suspension
- Satellite navigation systems



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## *Today's Technicians*

- Highly trained professionals
- Computer diagnostic skills are essential
- \$50,000 to \$100,000 annual income
- Current Brookhaven associate degree graduates start at \$14 to \$18 per hour



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## *Automotive Employers*

- Dealerships
- Independent garages
- Service stations
- Large retail facilities
- Specialty centers
- Fleet garages



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## *Service Department*

- Service Manager
- Shop Foreman
- Service Writers
- Dispatcher
- Technicians



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## *Service Technicians*

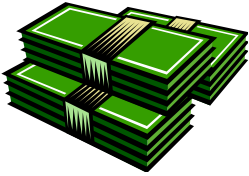
- Master Technician
- General Technician
- Specialists
  - front end/brakes
  - climate control, trim and electrical
  - driveability
  - engine repair
  - drive trains
  - automatic transmissions



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## Technician Pay

- Hourly
- Commission
- Teams
- Labor Time Guides
  - factory
  - Chilton or Mitchell
- Minimum check out time



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## ASE Certification


- A1 - engine repair
- A2 - automatic transmissions
- A3 - manual drive trains
- A4 - suspension and steering
- A5 - brakes
- A6 - electrical systems
- A7 - heating and air conditioning
- A8 - engine performance



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## Documenting Repair Orders

- The 3 C's of repair order documentation
  - Concern
  - Cause
  - Correction



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## Asking the Right Questions

- What is wrong or needs to be done?
- When does it happen and how often?
- When did it start?
- Can the driver duplicate it?
- Can the concern be corrected?
- Is the concern likely to be covered by factory warranty or an extended warranty?

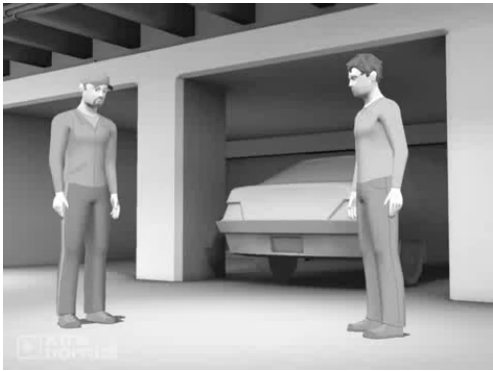
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## Vehicle Diagnosis

- Keep It Simple
- 4 step repair procedure
  - verify concern
  - isolate
  - repair
  - verify repair



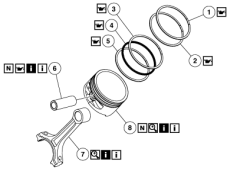
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## Service Information

- Service information is available in printed and electronic form
- Service information includes
  - Service manuals
  - Wiring diagrams
  - Technical service bulletins
- Service information is available from the manufacturer and aftermarket publication resources



The diagram shows an exploded view of a suspension component, likely a control arm assembly. It includes a control arm, a ball joint, a spring, and a shock absorber. The components are numbered with callouts: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. The callouts are arranged in a grid-like pattern around the components.