Tires, Suspension and Handling

Second Edition

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To Anne
Contents

Preface to Second Edition .................................................................................................................. xi
Preface to First Edition ....................................................................................................................... xiii

1 Introduction ..................................................................................................................................... 1
  1.1 Introduction and History ............................................................................................................. 1
  1.2 Control, Stability and Handling ................................................................................................. 6
  1.3 Axis Systems and Notation ....................................................................................................... 7
  1.4 Vehicle Forces and Notation .................................................................................................... 12
  1.5 Body Stiffness ......................................................................................................................... 15
  1.6 Body Inertia ............................................................................................................................ 17
  1.7 Loads ...................................................................................................................................... 29
  1.8 Engine and Brakes .................................................................................................................... 32
  1.9 Differentials ............................................................................................................................ 36
  1.10 Wheels .................................................................................................................................... 41
  1.11 Roads ..................................................................................................................................... 46
  1.12 Drivers ..................................................................................................................................... 52
  1.13 Testing .................................................................................................................................... 54
  1.14 Problems ................................................................................................................................ 61
  1.15 Bibliography .......................................................................................................................... 64

v
# The Tire

- **2.1 Introduction** .................................................. 67
- **2.2 Construction** .................................................. 68
- **2.3 Rubber** .......................................................... 72
- **2.4 Axes and Notation** ............................................ 76
- **2.5 Tire Radius** ...................................................... 80
- **2.6 Speed Limitations** ............................................. 83
- **2.7 Rolling Resistance** ............................................ 85
- **2.8 Tire Models** ..................................................... 87
- **2.9 Slip Angle and Cornering Force** ........................... 90
- **2.10 Non-Dimensionalization** .................................... 101
- **2.11 Improved Friction Model** .................................. 104
- **2.12 Camber Angle and Camber Force** ......................... 106
- **2.13 Experimental Measurements** ............................... 109
- **2.14 Stiffness Measurements** ..................................... 111
- **2.15 Stiffness – Design Variables** .............................. 116
- **2.16 Friction Forces – Design Variables** ...................... 118
- **2.17 Longitudinal Forces** ........................................ 125
- **2.18 Combined Forces** ............................................ 129
- **2.19 Wet Surfaces** ................................................. 131
- **2.20 Tire Models** ................................................... 136
- **2.21 Tire Transients** ............................................... 137
- **2.22 Problems** ..................................................... 138
- **2.23 Bibliography** .................................................. 143

# Aerodynamics

- **3.1 Introduction** .................................................. 145
- **3.2 Atmospheric Properties** .................................... 146
- **3.3 Wind and Turbulence** ....................................... 150
- **3.4 Principles** .................................................... 154
- **3.5 Forces and Moments** ........................................ 159
- **3.6 Coefficient Values** .......................................... 165
- **3.7 Competition Vehicles** ...................................... 171
- **3.8 Problems** ..................................................... 178
- **3.9 Bibliography** .................................................. 180
# 4 Suspension Components

4.1 Introduction .................................................. 181
4.2 Mobility Analysis ........................................... 182
4.3 Straight-Line Mechanisms ................................. 185
4.4 Two-Dimensional Analysis ................................. 192
4.5 Independent Systems ........................................ 194
4.6 Dependent Systems ........................................... 199
4.7 Compliant Link Systems .................................... 202
4.8 Spring Types .................................................. 204
4.9 Spring Linkage Geometry ................................. 206
4.10 Roll and Pitch Springing ................................... 209
4.11 Damper Types ................................................ 211
4.12 Damper Characteristics .................................... 215
4.13 Parasitic Friction ............................................ 219
4.14 Inertia .......................................................... 221
4.15 Gyroscopic Effects ......................................... 223
4.16 Problems ....................................................... 223

# 5 Suspension Characteristics

5.1 Introduction .................................................. 225
5.2 Bump and Heave .............................................. 225
5.3 Roll .............................................................. 234
5.4 The Roll-Center ............................................... 238
5.5 Independent Suspension Roll-Centers – Part 1 ....... 242
5.6 Independent Suspension Roll-Centers – Part 2 ....... 246
5.7 Solid-Axle Roll-Centers ..................................... 252
5.8 Compliant-Link Roll-Centers ............................... 253
5.9 Experimental Roll-Centers ................................. 256
5.10 Suspension Load Transfer ................................ 257
5.11 Vehicle Load Transfer ....................................... 263
5.12 Pitch ............................................................ 271
5.13 Wheel Vertical Forces ....................................... 278
5.14 Steering ........................................................ 283
5.15 Turning Geometry ............................................ 292
5.16 Bump-Steer and Roll-Steer ............................... 296
5.17 Compliance Steer ............................................. 309
5.18 Ride Height ..................................................... 315
# 6 Steady-State Handling

6.1 Introduction ........................................................................... 331
6.2 Parameters ........................................................................... 332
6.3 Basic Handling Curve ............................................................. 335
6.4 Cornering Forces ................................................................. 342
6.5 Linear Theory ....................................................................... 345
6.6 Vehicle Cornering Stiffnesses .............................................. 351
6.7 Nonlinear Trim State ............................................................. 357
6.8 Nonlinear Theory ................................................................. 359
6.9 Understeer and Oversteer ..................................................... 361
6.10 Primary Handling ................................................................. 364
6.11 Secondary Handling ............................................................ 376
6.12 Final Handling ..................................................................... 379
6.13 Differentials ........................................................................ 387
6.14 Aerodynamics – Primary ..................................................... 391
6.15 Aerodynamics – Final ......................................................... 396
6.16 Path Radius ......................................................................... 404
6.17 Banking ................................................................................ 407
6.18 Hills .................................................................................... 410
6.19 Loading ............................................................................... 412
6.20 Wind ................................................................................... 415
6.21 Testing ................................................................................ 416
6.22 Moment Method ................................................................. 418
6.23 Desirable Results ................................................................. 420
6.24 Problems ............................................................................ 422
6.25 Bibliography ....................................................................... 429

# 7 Unsteady-State Handling

7.1 Introduction ........................................................................... 431
7.2 1-dof Vibration .................................................................... 432
7.3 1-dof Sideslip ...................................................................... 437
7.4 1-dof Yaw ........................................................................... 439
7.5 2-dof Model (Vehicle-fixed Axes) ....................................... 443
7.6 2-dof Model (Earth-fixed Axes) .......................................... 447
7.7 2-dof Free Response ............................................................ 450
<table>
<thead>
<tr>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.8</td>
</tr>
<tr>
<td>7.9</td>
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<tr>
<td>7.10</td>
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**Appendices**

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<thead>
<tr>
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<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
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<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
</tbody>
</table>

**References**

557

**Index**

565
Preface to Second Edition

The first edition, published by Cambridge University Press in 1991, was well received in Europe but received limited exposure in the U.S.

I am therefore delighted that this edition has been adopted by the SAE who are ideal publishers for this subject matter.

The original policy was to give a thorough presentation of the principles of road vehicle handling theory, concentrating on the timeless core of the theory rather than elaborating temporary fancies. This approach seems to have been justified, as all the material continues to be relevant and useful.

The general contents of the second edition are therefore unchanged. However, the opportunity has been taken to make numerous detail additions and improvements. The small number of known errors have, of course, all been corrected.

I would like to express my appreciation to those who have offered suggestions for improvements to the earlier edition, and would like to invite readers to continue this process.

Finally, thanks to Rebecca McCormack, Sheila McBrearty, Morine Gordon and Sharon Lumbers for so patiently performing the text revisions, to the Faculty of Technology of The Open University for allowing me the time to continue developing this text, and to the SAE staff for final text preparation.

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Preface to First Edition

Some years ago I wanted to read a book explaining the principles of vehicle handling, with supporting information on tires and suspensions. Although there were two books available, they did not entirely meet my needs. This is my attempt to fill the gap.

I have emphasized physical understanding rather than mathematics, although I have been surprised by the number of equations that have been required in the chapters on handling.

I have included a fairly large number of questions, with answers for most of the quantitative ones. These questions should help self-organised study or act as stimulants for those using the book as a teaching aid.

I have been fortunate to have received constructive criticism of early drafts from a number of friends and colleagues. Thank you all. Especially I must mention John Dominy, Keith Martin, Rod Mansfield and John Whitehead. I have not always taken their advice. Of course, in a work of this kind one owes a great deal to the enormous number of authors of the vast research literature. No doubt there are still some technical faults in the material, for which I must remain responsible, and I would be delighted to be advised of corrections or to receive suggestions for possible improvements.

Certainly much more remains to be said on the subject area of this book, and I hope only that it will be seen as a reasonably thorough introduction.

Finally, thanks to Carla Walton, Mavis Beard and Rebecca McCormack for help with word processing, to David Greenway for the diagrams, and to Garry Hammond who performed the final text preparation and editing on behalf of Cambridge University Press.