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4.8 Time-Domain Ride Analysis4.9 Frequency-Domain Ride Analysis; 4.10 Workspace; 5 Vehicle Steering; 5.1 Introduction; 5.2 Turning Geometry - Single Track; 5.3 Ackermann Factor; 5.4 Turning Geometry - Large Vehicles; 5.5 Steering Ratio; 5.6 Steering Systems; 5.7 Wheel Spin Axis; 5.8 Wheel Bottom Point; 5.9 Wheel Steering Axis; 5.10 Caster Angle; 5.11 Camber Angle; 5.12 Kingpin Angle Analysis; 5.13 Kingpin Axis Steered; 5.14 Steer Jacking; References; 6 Bump and Roll Steer; 6.1 Introduction; 6.2 Wheel Bump Steer; 6.3 Axle Steer Angles; 6.4 Roll Steer and Understeer
6.5 Axle Linear Bump Steer and Roll Steer6.6 Axle Non-Linear Bump Steer and Roll Steer; 6.7 Axle Double-Bump Steer; 6.8 Vehicle Roll Steer; 6.9 Vehicle Heave Steer; 6.10 Vehicle Pitch Steer; 6.11 Static Toe-In and Toe-Out; 6.12 Rigid Axles with Link Location; 6.13 Rigid Axles with Leaf Springs; 6.14 Rigid Axles with Steering; References; 7 Camber and Scrub; 7.1 Introduction; 7.2 Wheel Inclination and Camber; 7.3 Axle Inclination and Camber; 7.4 Linear Bump and Roll; 7.5 Non-Linear Bump and Roll; 7.6 The Swing Arm; 7.7 Bump Camber Coefficients; 7.8 Roll Camber Coefficients; 7.9 Bump Scrub
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9.4 Independent Suspension Compliance

Sommario/riassunto

Revealing suspension geometry design methods in unique detail, John Dixon shows how suspension properties such as bump steer, roll steer, bump camber, compliance steer and roll centres are analysed and controlled by the professional engineer. He emphasizes the physical understanding of suspension parameters in three dimensions and methods of their calculation, using examples, programs and discussion of computational problems. The analytical and design approach taken is a combination of qualitative explanation, for physical understanding, with algebraic analysis of linear and non-linear coeffic