



RÉSUMÉ

Thomas J. Gibson BE MSc PhD CPEng

Tom Gibson has over 20 years experience in the area of the biomechanics of impact injury causation and mitigation.

From a background in automotive design and development, in 1984 and 1985 he helped establish a multi-disciplinary crash investigation team investigating head injury mechanisms in vehicle accidents at the NH&MRC Road Accident Research Unit in Adelaide. This project used a combination of detailed crash investigation, the collection of injury and anthropometric data and mathematical modelling to investigate injury mechanisms. He developed a special interest in mechanical and mathematical modelling of injury causation and the simulation and design of safety systems.

While working for Biokinetics & Associates Ltd. Tom was involved in a number projects aimed at the application of human tolerance to the design, evaluation and development of specialised protective systems for different applications. These included the design and fabrication of helmets for specialised purposes, a police riot suit, seat belt system evaluation and the development of a biofidelic motor cycle crash test dummy. He was also involved in the development of tests and test methodologies to assist in the design and evaluation of protective equipment.

In 1996, Tom returned to Australia and established a company in Sydney, Human Impact Engineering. He has continued to work in the area of injury prevention and protective system design and testing, with projects including establishment of injury criteria for use with dummies, helmet effectiveness, investigation of heavy vehicle crashes (with special reference to underrun and seatbelt effectiveness) and the simulation and evaluation of whiplash and its countermeasures. He has become increasingly involved in efforts to advance the state of knowledge on the biomechanics of injury through studies of real impacts. He is actively involved in several technical committees at a national level.

Tom has recently been awarded his PhD in Biomedical Engineering at the University of New South Wales for his thesis titled *Development and Validation of a C5/C6 Motion Segment Model*.

CURRICULUM VITAE

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EDUCATIONAL BACKGROUND

- 2006 Doctor of Philosophy (Biomedical Engineering)
Thesis: Development and Validation of a C5/C6 Motion Segment Model
Graduate School of Biomedical Engineering, UNSW, Australia
- 1990 Graduate Management Qualification
Australian Graduate School of Management, UNSW, Australia
- 1978 Master of Science (Automotive)(Best Student Award)
School of Automotive Studies, Cranfield Institute of Technology, UK.
- 1974 Teaching Certificate
Kuringai CAE, Australia
- 1972 Bachelor of Engineering (Mechanical)(Cadetship with the PWD, NSW)
School of Mechanical and Industrial Engineering, UNSW, Australia

EMPLOYMENT HISTORY

- Since 1996 Principal Engineer and Director
Human Impact Engineering
Biomechanical Engineering Consultants, Sydney, Australia.
- 1993 - 1995 Vice-President
- 1990 - 1992 Senior Engineer
Biokinetics & Associates Ltd.
Bioengineering Consultants, Ottawa, Ontario, Canada
- 1989 - 2000 Director of Biomechanical Research
Roads and Traffic Authority of NSW, Sydney
- 1987 - 1988 Lecturer, in charge of engineering design,
School of Mechanical Engineering, University of Technology, Sydney
- 1986 - 1987 Research Engineer
Biokinetics & Associates Ltd.
Bioengineering Consultants, Ottawa, Ontario, Canada
- 1984 - 1985 Senior Research Officer
Road Accident Research Unit, University of Adelaide

1980 - 1983 Senior Research Officer
Fuel Consumption and Emissions Test Laboratory, University of Sydney

1979 - 1980 Project Engineer
General Motors Holden P/L, Melbourne

1974 - 1975 Teacher, Engineering Science
Chatswood High School, Sydney

1972 Engineer
Department of Public Works, NSW

PROFESSIONAL ACTIVITIES

American Society for Testing and Materials (ASTM)

Former member - Technical Committee F-08 on Sports Equipment and Facilities (including protective headgear and protective clothing)

Association for the Advancement of Automotive Medicine (AAAM)

Australian College of Road Safety

Former Board member of the Sydney Chapter

Canadian Standards Association Committees

Former member:

- Fire-fighters Helmets
- Bicycle Helmets
- Wheelchair Restraint Systems

Institution of Engineers, Australia (IEAust)

Chartered Professional Engineer, Biomedical College

Member of the National Panel on the Biomechanics of Impact Injury (former chair)

Society of Automotive Engineers, Inc. (SAE, SAE-A)

Former member of Task Force on Mechanical Human Body Simulation and selection committee for best paper

Standards Australia (SA) Committees

Current member representing IEAust on:

- Helmet Test Methodology Committee
- Bicycle Helmet Committee
- Helmets for Motorised Vehicle Users Committee

PAST & PRESENT CLIENTS

AccessUTS, University of Technology Sydney
Accident Research Centre, Monash University (MUARC)
Australian College of Road Safety (ACRS)
Australian Consumer and Competition Commission (ACCC)
Australian Defence Apparel (ADA) Pty Ltd
Australian Harness Racing Council (AHRC)
Australian Racing Board (ARB)
Australian Transportation Safety Bureau (ATSB)
Autoliv, Sweden and Australia
Biokinetics and Associates Ltd, Ottawa
Centre for Automotive Safety Research (CASR), University of Adelaide
Civil Aviation Safety Authority (CASA)
COMCAR
Crashlab
Department of Defence, Canada
Department of Public Prosecutions, NSW
Department of Transport and Regional Services (DoTaRS), Canberra
GM Holden Ltd
Gripple Pty Ltd, UK
Imtest Laboratory Ltd, NZ
Jamieson Foley and Associates Pty Ltd
Motorcycle Council of NSW (MCCofNSW)
National Expert Witness Services (NEWS) Pty Ltd
NewSouth Global Pty Ltd (formerly Unisearch Pty Ltd), University of New South Wales
NSW Police
NSW Roads and Traffic Authority (RTA)
Price Waterhouse Coopers
Road User Research Pty Ltd, Melbourne
RONA Kinetics and Associates Ltd, Vancouver
Transport Canada, Ottawa
University of Sydney

RESEARCH PROJECTS

Child Restraints in Aircraft

In association with Britax Pty. Ltd., the Australian Transport Safety Bureau and the Civil Aviation Safety Authority

Goals: To test commercially available child restraint systems for fit and function on Australian aircraft.

Responsibilities: Review the usage of CRS internationally and in Australia, test current Australian CRS and advise on best practice for child aircraft passengers.

Protective Vests for Harness Racing Drivers

In association with the Australian Harness Racing Council

Goals: To evaluate protective vests for impact protection, safety and heat strain.

Curriculum Vitae of Thomas J. Gibson, April 2006

Responsibilities: Test vests available in the Australian market for compliance with BETA Level 2 requirements and advise on approval by AHRC.

Far-Side Impact Protection

In association with ARC, Monash University Accident Research Centre, Holden, GWU, WMC, Autoliv,

Goals: To develop an improved design methodology for safety systems of new passenger vehicles to minimise occupant harm in far side impacts.

Responsibilities: Development of injury assessment functions for use with the available side impact dummies in the design of safety systems for protection against far side impacts.

Improved Side Impact Protection

In association with ARC, Monash University Accident Research Centre, Holden, and the FORS

Goals: To develop an improved methodology for the optimisation of the safety systems of new passenger vehicles to minimise occupant harm in side impacts.

Responsibilities: Development of injury assessment functions for use with the BioSID and SIDII in side impacts.

The Child Head Injury Study

In association with NSW RTA, Institution of Forensic Medicine, Road Accident Research Unit, The University of Adelaide and School of Anatomy, UNSW.

Goals: To use a multidisciplinary approach to correlate information obtained from detailed neuropathological analysis of head injury with the magnitude and direction of the head impact to children in vehicle crashes.

Responsibilities: Advise on crash investigation and develop and implement the MADYMO simulation of the crash to obtain head impact data.

Soft Tissue Neck Injury Mechanisms and Chronic Pain

In association with Autoliv, FORS, Holdens, CSRU Newcastle University and School of Biomedical Engineering, UNSW

Goals: The development of a simple cervical spine motion segment model, able to demonstrate known soft tissue neck injury mechanisms.

Responsibilities: Investigated of motor vehicle crashes with known chronic neck pain outcomes, the development and validation of a MADYMO motion segment model of C5/C6 intervertebral joint and the application of the model to a set of crash reconstructions.

Evaluation of Fall Arrest Harness Design

In association with Crashlab and the ISO Committee

Goals: To evaluate current fall arrest system designs using an advance anthropomorphic dummy.

Responsibilities: Design experimental procedure, analyse test results and prepare report.

Evaluation of Occupant Protection in Buses

In association with Transport Canada and RONA Kinetics, Vancouver

Goals: To evaluate current occupant protection system designs for motor coaches.

Responsibilities: Review the Australian situation and regulations, as well as the test and simulation methodologies and advise the Canadian Government.

PUBLICATIONS AND PRESENTATIONS

HUMAN BODY MODELLING

Anthropometric Test Devices

Gibson, T, Newman, J, Zellner, J, Wiley, K: An Improved Anthropomorphic Test Device. Proceedings of the AGARD Aerospace Medical Panel Symposium on Aircraft Accidents: Trends in Aerospace Medical Investigation Techniques, Turkey, 1992.

Gibson, T, Shewchenko, N and Withnall, C: Biofidelity Improvements to the Hybrid III Neck. Proceedings of the Fourteenth Experimental Safety Vehicle Conference, Munich, 1994.

Newman, J, Withnall, C, Zellner, J and Gibson, T: The Performance Specifications for the Neck of a Motorcyclist Crash Test Dummy. Proceedings of the Fifteenth Enhanced Safety of Vehicles Conference, Melbourne, 1996.

Anthropometry

Gallup, B., Gibson, T, Pedder, J, Newman, J, Hidson, D: Anthropometry: A Look at Six Techniques for Monitoring 3-D Human Shape. SOMA - Engineering for the Human Body, Vol. 3, No. 2, pp 35-42, 1989.

Mathematical Modelling

Gibson, T, Hinrichs, R and McLean, A: Pedestrian Head Impacts: Development and Validation of a Mathematical Model. Proceedings of IRCOBI Conference, Zurich, 1986.

Gibson, T, and Hinrichs, R: Simulation of Pedestrian Head Impacts. Proceedings of the Seminar on Head Injury in Road Accidents, University of Adelaide, Australia, 1986.

Currie, A and Gibson, T: Vehicle Occupant Safety Modelling. Proceedings of the First Australasian Congress on Applied Mechanics, Melbourne, 1996.

Gibson, T and Benetatos, E: Model Validation - An Engineer's Perspective. Proceedings of the 1999 Australian MADYMO Users Meeting, Melbourne, 1999.

Gibson, T, Bostrom, O and Milthorpe, B: Development of a Simple Model of a Cervical Spine Motion Segment. Proceedings of the Australian MADYMO Users Meeting, Melbourne, 2001.

INJURY BIOMECHANICS

Crash Injury Biomechanics

Gibson, T, McLean, A and McCaul, K.A: Investigation of Head Injury Mechanisms. Journal of Australian Physical and Engineering Sciences in Medicine, December 1982.

Gibson, T, Surowiak, J and Pierce, C: Chestband Measurement of Human Upper Torso Dynamic Response. Proceedings of the 20th Annual Workshop on Human Subjects for Biomechanical Research, Seattle, November 1992.

Gibson, T: Biomechanics of Impact Injury Short Course - 4/8 Sessions. Unisearch, UNSW, Sydney, 1997.

Gibson, T, Blumbergs, P, McCaul, K and McLean, A: Investigation of Head Injury Mechanisms in Vehicle Accidents - A Multidisciplinary Approach. SAE Paper No. 850093. Society of Automotive Engineers, Warrendale, P.A., 1985.

McLean, A, Paix, B. and Gibson, T: Occupant Injury Severity: Forward Control Passenger Vehicles. Proceedings of the 10th IAATM Congress, Tokyo, May 1985.

Paix, B, Gibson, T and McLean, A and Woodward, A: Severity of Injuries in Road Crashes: A Comparison of Injured Occupants of Forward Control and Conventional Passenger Vehicles. Medical Journal of Australia, July 1986.

Gibson, T: Biomechanical Aspects of Crash Investigation. Proceedings of the Second Australian Head Injury Symposium, Sydney, December 1989.

Pedder, J., Dalmotas, D, Gibson, T., and Gilbert D. The Development of a Protocol for Documenting Vehicular Sitting Posture of Car Occupants Involved in Rear-End Collisions. Proceedings of the 22nd Annual Workshop on Human Subjects for Biomechanical Research. Fort Lauderdale, Florida, October 1994.

Gibson, T: Pelvic and Lower Limb Injury Biomechanics. Course in Crash Injury Biomechanics, Institution of Engineers, Australia, Sydney, June 1995.

Gorrie, C, Dufflou, J, Brown, J, Gibson, T and Waite, P: Extent and distribution of vascular brain injury in paediatric road fatalities. Journal of Neurotrauma 18(9): 849-860, 2001.

Gibson, T: Biomechanics of Injury and Vehicle Crashworthiness Short Course - 6/12 Sessions. ARC, Monash University, 2002 and 2003.

Neck Injury

Gibson, T and McIntosh. A: Rear End Impact Associated Neck Injuries. Proceedings of the 1997 Australian MADYMO Users Meeting, Melbourne, April 1997.

Gibson, T and Bogduk N: Automotive Design and Whiplash Injury. Published in The Spine: State of the Art Review, on Whiplash Injury. Editor D. Malanga, Hanley & Belfus, Inc. 1998.

Gibson, T, Bogduk, N, Ryan, GA and Sparke, L: Neck Injury Research Needs: an Australian Perspective. in "Frontiers of Head and Neck Trauma: Clinical and Biomechanical". Editors Yogananda, N and Pintar, F, IOS Press, Harvard, MA, 1998.

Ryan, G.A and Gibson, T., "Field Studies of Whiplash in Australia." Published in Frontiers in Whiplash Trauma: Clinical and Biomechanical. Editors Yoganandan, N. and Pintar, F., IOS Press, Harvard, MA, 2000.

Gibson, T, Bostrom, O and Milthorpe, B: Development of a Simple Model of a Cervical Spine Motion Segment. Proceedings of the Australian MADYMO Users Meeting, Melbourne, 2001.

PROTECTIVE EQUIPMENT

Child Restraint Systems

Brown, J, Kelly, P, Griffiths, M, Tong, S, Pak, R and Gibson, T: The Performance of Tethered and Untethered Forward Facing Child Restraints. Proceedings of the IRCOB Conference, Bron, 1995.

Helmets

Bolduc, M, Tylko, S, Gibson, T, Fournier, E, Worswick, M and van Hoof, J: Exploration of the Helmeted Head Response to Ballistic Impact. Presented at the Specialist Team on Body Armour, San Diego, 1996.

Tylko, S, Gibson, T, Fournier, E and Bolduc, M: Development of Design Criteria for Use in Ballistic Head Protection. Personal Armour Systems Symposium 96, Cholchester, 1996.

Gibson, T and Benetatos, E: How to choose a bicycle helmet? Choice March 2000

Gibson, T, Benetatos, E and Knudsen, C: On Helmet Effectiveness. Proceedings of the IEAust Conference on the Biomechanics of Impact Injury, Sydney, 2000.

Gibson, T: Helmet Design and Head Injury Protection. Proceedings of the IEAust Conference on the Biomechanics of Impact Injury, Sydney, 2001.

Gibson, T and Cheung, A: Assessing the Level of Safety Provided by the Snell B-95 Standard for Bicycle Helmets. Australian Transport Safety Bureau Report Number CR 220, Canberra, July 2004. Mobility Aids

Gibson, T, Fournier, E, Garland, L, and McManmon, S: The Development of a Surrogate Mobility Aid (SMA). In Seat System Comfort and Safety - SP-963. Society of Automotive Engineers, Inc., Warrendale, PA, 1993.

VEHICLE DESIGN

Noise and Vibration Control

Wood, L, Joachim, C, Gibson, T and Sparke, L: Noise and Vibration Control in Passenger Cars and Trucks. SAE-Australasia, Vol. 39, May-June, 1979.

(Award for Best Paper of 1979)

(Has been reprinted several times since)

Fuel Economy and Emission Control

Kent, J, Post, K, Maunder, A, Gibson, T and Bilger, R: Motor Vehicle Fuel Economy. Proceedings of the NERDDC Workshop on Motor Vehicle Fuel Economy, February 24-25, Melbourne, Australia, 1981.

Post, K, Maunder, A, Gibson, T, Kent, J and Bilger, R: Vehicle Emission Maps - the influence of some parameters. Proceedings of the International Clean Air Conference, Adelaide, Clean Air Society of Australia and New Zealand, Australia.

Bilger, R, Post, K., Gibson, T: Motor Vehicle Fuel Economy Models and the Impact of Catalysts. Short Course on Car Exhaust Catalysts, University of NSW, 1982.

Gibson, T and Bilger, R: Standardized Transient Engine Maps for Australian Vehicles and Their Use in Fuel Economy Modelling. Proceedings of the Joint SAE-A/ARRB 2nd Conference on Traffic Energy and Emissions, Melbourne, Australia, 1982.

Gibson, T and Bilger, R: Fleet-averaged Engine Matrices for Australian Vehicles and their use in Fuel Economy Modelling. Int. J. of Vehicle Design, Vol.8, No. 1, pp115-144, January 1987.

Vehicle Safety

Gibson, T, and McLean, A: Developments in Road Safety: Vehicle Factors. Transactions of the Institution of Engineers (Queensland Division), Vol. 25, No. 6, June 1984.

Paix, B, Gibson, T and McLean, A: Crashworthiness of Forward Control Passenger Vehicles. SAE Paper No 852183, Society of Automotive Engineers, Warrendale, PA, 1985.

Gibson, T: When the Crunch comes - Vehicle Design to Reduce Pedestrian Injuries. Presented at the Pedestrian Injury Seminar, Royal Australian College of Surgeons, Adelaide, 1985.

Gibson, T: Vehicle Factors in Road Safety. A component of the course, Road Safety Studies - NT03 offered by Vehicle and Equipment Safety, RTA of NSW and the University of New England, Armidale, 1996.

Gibson, T and Bogduk N: Automotive Design and Whiplash Injury. Published in The Spine: State of the Art Review, on Whiplash Injury. Editor D. Malanga, Hanley & Belfus, Inc. 1998.

Airbags

Gibson, T: Airbags - International Effectiveness. Workshop on Airbags, Institution of Engineers, Australia, Melbourne, April, 1997.

Side Impact Protection

Dalmotus, D, Newman, J and Gibson, T: Prospects for the Further Improvement of Side Impact Protection Based on Crash Testing. Proceedings of the Fourteenth Experimental Safety Vehicle Conference, Munich, 1994.

Dalmotus, D, Gibson, T and Withnall, C: Side impact Opportunities. Proceedings of the Fifteenth Experimental Safety Vehicle Conference, Melbourne, 1996.

Gibson, T, Fildes, B, Deery, H, Nightingale, J, McLean, J and Vulcan, P: Improved Side Impact Protection: A Review of Injury Patterns, Injury Tolerance and Dummy Measurement Capabilities. Accident Research Centre, Monash University, Report No. 147, 1999.

Gibson, T, Benetatos, E, Newstead, S and Fildes, B: Improved Side Impact Protection: The Development Of Injury Assessment Functions. Proceedings of the Sixteenth Experimental Safety Vehicle Conference, Amsterdam, 2001.

REPORTS

ANTHROPOMETRIC TEST DEVICES

Biokinetics and Associates: Injury Assessment Considerations in the Design and Use of a Motorcycle Test Device - Volume II: MATD2: An Interim Motorcyclist Test Dummy. Biokinetics and Associates Ltd. Report R90-14a, January 1991.

Biokinetics and Associates: Investigation of Strains in the Frangible Face System. Biokinetics and Associates Ltd. Report R91-02a, May 1991.

Biokinetics and Associates: ATD-Based Injury Assessment Functions and Criteria in Lateral Impact - A Review. Biokinetics and Associates Ltd. Report R91-06a, July 1991.

Biokinetics and Associates: Modified Torsional Response of the MATD Neck. Biokinetics and Associates Ltd. Report R92-15, December, 1992.

Biokinetics and Associates: Lateral Impact Performance of the AATD Shoulder Mechanism. Biokinetics and Associates Ltd. Report R93-08, February, 1993.

Biokinetics and Associates: Test Method for a Biofidelic ATD Neck. Biokinetics and Associates Ltd. Report R93-02a, April 1993.

Biokinetics and Associates: Motorcycle Crash Test Dummy Neck. Biokinetics and Associates Ltd. Report R95-03, April, 1995.

Gibson, T, Benetatos, E, Newstead, S and Fildes, B: Injury Assessment Functions for Use with the BIOSID. Accident Research Centre, Monash University, 2000.

MATHEMATICAL MODELLING

Gibson, T and Marx, W: Reconstruction of Pedestrian Head Impacts. Road Safety Bureau of the RTA of NSW, Special Report 90-191, October 1990.

Gibson, T: A 6 Year Old Child Dummy Model for Investigating Head Injuries to Children in Crashes. HIE Report No. R97-02, 1997.

Anderson R, Gibson, T and Benetatos, E: Computer and Physical Reconstruction of Pedestrian Accidents Involving Children. Road Accident Research Unit, the University of Adelaide, Adelaide, 2000.

INJURY BIOMECHANICS

Accident Studies

Biokinetics and Associates: Frequency and Characteristics of Conventional Urban Transit Bus Accidents in the US and Canada. Biokinetics and Associates Ltd. Report R95-09, April, 1995.

Dynamic Testing

Biokinetics and Associates: Response of the Human Thorax to Dynamic Upper Torso Belt Loading. Biokinetics and Associates Ltd Report R92-08, July 1992.

PROTECTIVE EQUIPMENT

Crash Testing

Biokinetics and Associates: Analysis of 10 Frontal Barrier Crash Tests. Biokinetics and Associates Ltd. Report R86-12, July, 1986.

Fall Arrest Harnesses

Gibson, T, Britos.C and Wainohu, D: Analysis of Fall Arrest Gear Loading. Crashlab Report, 2002.

Helmets

Biokinetics and Associates: Development of a Specification for Head Protection Systems for Canadian Forces Aircrew - Background Review. Biokinetics and Associates Ltd. Report R86-02, March 1986.

Biokinetics and Associates: Draft Specification for Head Protection Systems for Canadian Forces Aircrew - Test Documentation. Biokinetics and Associates Ltd. Report R86-07, June 1986.

Biokinetics and Associates: Draft Specification for Head Protection Systems for Canadian Forces Aircrew - Preliminary Draft Specification. Biokinetics and Associates Ltd. Report R86-10, August, 1986.

Biokinetics and Associates: Draft Specification for Head Protection Systems for Canadian Forces Aircrew - Testing to Draft Specification. Biokinetics and Associates Ltd Report R86-18, December 1986.

Biokinetics and Associates: Draft Specification for Head Protection Systems for Canadian Forces Aircrew - Test Procedure Refinement. Biokinetics and Associates Ltd. Report R87-01, March 1987.

Gibson, T: A Comparison of Two Helmet Standards - AS20633 and BS4472. Report to the Australian Jockey Club, March 1989.

Biokinetics and Associates: Head Protection System for Airport Firefighters. Biokinetics and Associates Ltd. Report R92-02, March, 1992.

Biokinetics and Associates: Draft Performance Specification for a Protective Helmet for Fast Rescue Craft (FRC) Operation. Biokinetics and Associates Ltd. Report R94-5, March 1994.

Biokinetics and Associates: Evaluation of the PASGT Military Helmet. Biokinetics and Associates Ltd. Report R95-05, March, 1995.

Biokinetics and Associates: Exploration of the Helmeted Head Response to Ballistic Impact. Biokinetics and Associates Ltd. Report R96-8, March, 1996.

Biokinetics and Associates: A Lumped Mass Model to Simulate a Ballistic Helmet Impact. Biokinetics and Associates Ltd. Report R96-9, July, 1996.

Gibson, T and Benetatos, E: Helmets for Drivers. HIE Report for the AHRC, 2001.

Gibson, T and Cheung, A: Assessing the Level of Safety Provided by the Snell B95 Standard for Bicycle Helmets. Report for the Australian Transportation Safety Bureau, DOTARS, Canberra (2004).
Mobility Aids

Biokinetics and Associates: Development of a Dynamic Test Procedure for Transportable Mobility Aids and Securement Devices - Volume 1: Summary and Recommendations. Biokinetics and Associates Ltd. Report R91-12a, December 1991.

Biokinetics and Associates: Development of a Dynamic Test Procedure for Transportable Mobility Aids and Securement Devices - Volume 4: Test Procedure and Results. Biokinetics and Associates Ltd. Report R91-15a, December 1991.

Protective Clothing

Biokinetics and Associates: Development of an Integrated Protective Suit for Riot Police. Biokinetics and Associates Ltd. Report R92-04, March, 1992.

Gibson, T: Protective Vests for Jockeys - Part One: A Review Of Injury Data and Current Standards. HIE Report No. R96-04, 1996.

Gibson, T: Protective Vests for Jockeys - Part Two: Development of Guidelines. HIE Report No. R97-01, 1997.

Gibson, T: Protective Vests for Drivers. HIE Report for the AHRC, 1999.

VEHICLE DESIGN

Fuel Economy and Emission Control

Post, K, Nguyen, H, Gibson, T, Kent, J and Bilger, R: Fuel Economy and Emissions Research - Annual Report by the University of Sydney for 1978-1979. Charles Kolling Research Laboratory, Technical Note ER-32, Department of Mechanical Engineering, University of Sydney, 1979.

Post, K, Gibson, T, Maunder, A, Kent, J and Bilger, R: Fuel Economy and Emissions Research - Annual Report by the University of Sydney for 1979-1980. Charles Kolling Research Laboratory, Technical Note ER-34, Department of Mechanical Engineering, University of Sydney, 1979.

Post, K, Gibson, T, Tomlin, J, Pitt, D, Carruthers, N, Maunder, A, Kent, J and Bilger, R: Fuel Economy and Emissions Research Annual - Report by the University of Sydney for 1980-81. Charles Kolling Research Laboratory Technical Note ER-36, Department of Mechanical Engineering, University of Sydney, 1981.

Post, K, Gibson, T, Maunder, A., Tomlin, J., Carruthers, N., Pitt, D., Kent, J and Bilger, R: Motor Vehicle Fuel Economy Report to NERDDC by the University of Sydney 1980-1981. Charles Kolling Research Laboratory Technical Note ER-37, Department of Mechanical Engineering, University of Sydney, 1981.

Vehicle Safety

Paix, B, Gibson, T and McLean, A: Safety of Forward Control Passenger Vehicles. Report of the NH & MRC Road Accident Research Unit, The University of Adelaide, Australia, 1985.

Gibson, T: The Biomechanical Significance of the New Load Distribution Test. Road Safety Bureau of the RTA of NSW, Special Report 90-248, September 1990.

Dovile, P, Dunabin, M, Sweatman, P and Gibson, T: Safety Effects of Increasing Size and Mass of Heavy Vehicles. Road User Research Report No. 96-284-01, 1996.

Gibson, T: The Contribution of Vehicle Factors to Crashes. HIE Report No. R96-03, 1996.

Gibson, T and Benetatos, E: Mobile Display Terminals Risk Assessment. HIE Report for ComCar, Canberra, 1999.

Gibson, T and Benetatos, E: Motorcycles and Crash Barriers. HIE Report for the NSW Motorcycle Federation Inc. Sydney, 2000.

Gibson, T, Corbett, B and Brown, J: Crashed Vehicle Study - Heavy Under Run Analysis. HIE report for the Roads and Traffic Authority of NSW, 2001.

Restraint Systems

Biokinetics and Associates: Test Parameters for the Performance of the Occupant Restraint System for the NCV. Biokinetics and Associates Ltd. Report R86-17c, January 1987.

Biokinetics and Associates: Design of a Restraint System for the NCV - Test Report - Phase 1. Biokinetics and Associates Ltd. Report R86-25b, January 1987.

Biokinetics and Associates: Development of a Prototype Retractable Seatbelt System for the Medium Logistic Vehicle Wheeled (MLVW). Biokinetics and Associates Ltd Report R87-5B, February 1987.

Biokinetics and Associates: Design of a Restraint System for the NCV - Preliminary Simulation Report. Biokinetics and Associates Ltd. Report R87-15, June 1987.

Gibson, T, Dal Nevo, R and Marx, W: Occupant Restraint Project - Report on Phase 1. Road Safety Bureau of the RTA of NSW, Special Report 90-183, September 1990.

Biokinetics and Associates: Response of the Human Thorax to Dynamic Upper Torso Belt Loading. Biokinetics and Associates Ltd Report R92-08, July 1992.

Biokinetics and Associates: Towards the Development of a Seat Belt Fit Compliance Procedure Based on the Belt Fit Test Device (BTD). Biokinetics and Associates Ltd. Report R92-11B, January 1993.

Biokinetics and Associates: Belt Fit Test Device Fleet Measurement. Biokinetics and Associates Ltd. Report R94-06, May 1994.

Biokinetics and Associates: The Belt Fit Test Device - A Description of Its Development and Function as an Evaluative Tool. Biokinetics and Associates Ltd. Report R93-05, June 1994.

Biokinetics and Associates: A Demonstration of the Capabilities of the Belt Fit Test Device. Biokinetics and Associates Ltd. Report R93-06, June 1994.

Gibson, T, Benetatos, E and Corbett: Seatbelt Effectiveness in Heavy Vehicles HIE report for the Roads and Traffic Authority of NSW, 2001.

Pedder, J and Gibson, T: Evaluation of Occupant Protection in Buses. RONA Kinetics and Associates Report, 2002.