Australian Government

Department of Transport and Regional Services

Regulation Impact Statement

ADR 33/00
Brake Systems for Motorcycles and Mopeds

January 2007

This Regulation Impact Statement deals with the braking systems in motorcycles and mopeds belonging to L vehicle categories. The design rules have been reviewed proposing alignment with the requirements of the United Nations Economic Commission for Europe (UNECE) regulations.

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SUMMARY

In Australia, there are a number of legislated Australian Design Rules (ADRs) that have been introduced in order to reduce the cost to the community from road crashes. These ADRs set out requirements for road vehicle safety, anti-theft and emissions. They apply to new vehicles when supplied to the Australian market and are enforced through the Motor Vehicle Standards Act 1989 (MVSA). They are subject to review every ten years to ensure they remain relevant, cost effective, and do not become a barrier to importation of safer vehicles and vehicle components.

This particular Regulation Impact Statement examines present Australian Government regulations for cost-effective regulation of braking systems for motorcycles and mopeds. Motorcycles are two or three wheeled vehicles with engine cylinder capacity exceeding 50 ml and a maximum speed of 50 km/h. Mopeds are a group of two or three wheeled vehicles with an engine cylinder capacity not exceeding 50 ml and a maximum speed of 50 km/h.

ADR 33/00 - Brake systems for Motorcycles and Mopeds applies to all L Group vehicles – motorcycles (and motor cycles with sidecars), mopeds and most motor tricycles (see Attachment 1). LEP and LEG motor tricycles fitted with separate controls for the front and rear service brakes are required to comply with ADR 33/00, otherwise they must comply with ADR 31 – Brake Systems for Passenger Cars and ADR 35 – Commercial Vehicle Brake Systems respectively.

ADR 33 includes the following requirements:

- the ability to inspect brake lining thickness without removal of parts;
- the provision of adjustment to compensate for brake lining wear;
- for vehicles fitted with a split service brake system, a service brake failure warning lamp (and the conditions under which it must operate);
- for vehicles fitted with hydraulic brakes;
  - ⇒ the number and capacity of brake fluid reservoirs in relation to the wheel cylinder volume in the fully worn linings/fully applied brake state, and
  - ⇒ marking on or near each brake fluid filler showing the type of fluid required and a warning *clean filler cap before removing*,
- a protection device for power assist units.

The ADR also prescribes performance requirements for brake application, application force limits, fade and recovery under a range of situations and simulated wet weather braking.

ADR 33/00 accepts the United Nations Economic Commission for Europe regulations UNECE R 78/01 and UNECE R 78/02 as alternative standards. (The /02 indicates a later version of the regulation than /01) The Australian Vehicle Standards Rules 1999 (AVSRs) developed by the National Transport Council (NTC) are the model national regulations for in-service vehicles. The AVSRs require relevant in-service motorcycles and mopeds to continue to meet ADR 33/00. The state and territory governments have adopted this requirement.

The performance of motorcycle and moped brake system plays an important part in crash avoidance for riders. Motorcycles and mopeds are over-represented in road crashes, riders

and passengers are a vulnerable group of road users as they represent 10.38 fatalities per 100 million passenger kilometres travelled as compared with 0.49 fatalities per 100 million passenger kilometres travelled for passenger car occupants. Similar trends are observed with hospitalisation rates. (ATSB 2001) The public comment version of this regulatory impact statement suggested that possibly 5% of motorcycle crashes are brake related. No comment was provided that disputed this estimate and it has been adopted for the purposes of this assessment.

The objective of the ADR review is four-fold:

- to identify whether existing standards are relevant in the light of on going developments in automotive safety technology, given the fact that some of the standards are in a mature stage,
- if existing standards are relevant to, identify any refinements required to ensure their progression in the standards life cycle,
- to ensure standards do not impose excessive requirements on business, that they are cost effective and take account of community, social, economic, environmental, health and safety concerns, and
- to pursue where appropriate harmonisation with international standards, rather than with regional or national standards under the terms of the UNECE 1958 Agreement.

The general and specific objectives are to establish the most appropriate measure for delivering safer vehicles to the Australian community. These include to:

- reduce road trauma arising from any potential failure of the market to provide vehicles with adequate levels of safety;
- ensure that community, social, economic, environmental, health and safety requirements are not compromised; and
- determine what form of action maybe required , either government intervention or the use of market-based instruments.
- ensure the new measures proposed for tyres enable local manufacturers to access overseas markets; and
- ensure that any new measures proposed for tyres do not provide a barrier to importation of tyres for locally produced vehicles or imported vehicles fitted with tyres from the country of export.

The options reviewed were:

Option 1 Retain ADR 33/00,
Option 2 Adopt UNECE R 78, or
Option 3 Repeal ADR 33/00.
Option 4 Adopt American or Japanese standard as alternative, in each of the first two options.

The groups affected were identified as including consumers (vehicle users, other road users, accident victim families/carers), business (vehicle manufacturers/importers, component manufacturers/importers and test facilities, the private health and health insurance system, the private legal system, the employment market) and the Government (emergency services, public health and legal systems, Commonwealth transport agencies performing vehicle

compliance functions and state and territory transport agencies performing a review or oversight function).

Historically, government intervention would have originally been taken to control what was perceived as a problem that could not be addressed by the marketplace. There remains considerable doubt that the marketplace would be able to overcome the problems associated with imperfect information and negative externalities. It would be difficult to provide the required information in a manner that would be useful to the public and therefore is unlikely to influence consumers. This is particularly true as Australia has seen the number of manufacturers/imported of motorcycles/mopeds grow from 8 in 2001 to 56 in May 2006. In the same timeframe the number of models has increased from around 100 to more than 300. Consulting engineers who conduct braking tests in Australia have advised that currently they are being asked to certify a number of scooters and low cost motorcycles from developing economies. Some of these products have failed the braking tests indicating that regulation is still needed to ensure the market provides motorcycles and mopeds with adequate brakes.

Negative externalities can be expected because the consumer who makes the decision to purchase a product does not bear all of the costs. When a vehicle is involved in a road crash, the highest portion of the road trauma cost is borne by the community, rather than by the vehicle owner or the vehicle manufacturer. In the absence of regulation, some consumers may wish to maximise their private benefits by trading off vehicle price against safety features. The social costs would likely result in a net cost rather than a net benefit to the community.

It is assumed that the existing regulations contribute to reducing the cost to the community from road crashes, which has been estimated as $15 billion per year. Directly attributing the proportion of this cost to these regulations is not possible because pre-implementation economic data is generally not available. The only practical means of determining the contribution would be to remove the regulations and observe the result. This is considered an unacceptable risk.

The two regulatory options (Option 1 and 2) are similar in nature in respect of the magnitude and distribution of the expected costs and benefits. The costs would be borne by the consumer and the benefits by the community. The removal of regulation was considered unacceptable in the current climate of market pressure towards market failure – reports that some proposed imports have been found to have sub-standard brakes.

The adoption of American or Japanese standards as alternatives (Option 4) was considered unacceptable, the UNECE standard arose as a result of US manufacturers pulling out of the markets with motorcycle manufacturing becoming concentrated in Europe and Japan, with the Japanese manufacturers choosing to certify to the UNECE standard to meet the entry requirements for Europe.

The estimated relative cost of compliance for ADR 33 and UNECE R 78 is around $10,000 per test, Option 3 costs will range from minor to $300,000 per year (30 models at $10,000 per test).

Option 1 and Option 2 provide the same relative costs and benefits and the recommendation would come down to any industry preference. Given the information at para 4.4.2 (that

industry tests 50 per cent UNECE R78 and ADR 33/00) Option 1 becomes the recommended option.

The Department undertakes public consultation on behalf of the Minister for Transport and Regional Services. Under Part 2, section 8 of the Motor Vehicle Standards Act 1989 the Minister may consult with state and territory agencies responsible for road safety, organizations and persons involved in the road vehicle industry and organizations representing road vehicle users before determining the design rule.

A Motorcycle Single Issue Working Group was formed as a sub-group of the Technical Liaison Group (TLG). Meetings were then held to finalise the content of the reforms.

The proposal RIS was circulated for 90 day public comment in May 2000. However, the public consultation having occurred in mid to late 2000, consideration has been given to whether certification practices have changed in the market place since that time. Further consultation was undertaken in May 2006 with the most active certification consultants in testing and certifying motorcycle braking systems. The consensus was that the current ADR 33/00 should remain, Option 1, as approximately 50 per cent of certifications are now to the ADR 33 test program, with the remainder utilising the UNECE R 78 test program.

Industry choice is to adopt Option 1 – retain ADR 33/00 that accepts the international standards UNECE R78/01 and UNECE R78/02. Option 1 has the least affect on the current testing practices of industry and the option also accepts the UNECE standards that meet the COAG principles of the use of international standards.

It was not seen as necessary to conduct further broad consultation as the industry preference is for Option 1 which accepts both ADR and UNECE testing standards.

The implementation of the proposed regulation will be endorsed as an ADR, it will be given force in law in Australia by making it a National Standard (ADR) under the MVSA. It will be implemented under the type approval arrangements for new vehicles which are administered by the Vehicle Safety Standards Branch of the Department of Transport and Regional Services.

ADR33/00 will be retained and it is subject to another review in 10 years time.

1.0 STATEMENT OF THE PROBLEM

1.1 Introduction

The braking system of any vehicle is a critical safety item. In the case of motorcycles and mopeds, various design requirements of braking systems have been regulated for many years firstly by the states and territories and more recently by the Australian Government through the Australian Design Rules (ADRs).

Within this document, the term motorcycle should be taken to include moped and ADR 33 to mean ADR 33/00.

1.2 The Extent of the Problem

Motorcycles and mopeds are over-represented in road crashes, the riders and passengers are a vulnerable group of road users as they represent 10.38 fatalities per 100 million passenger kilometres travelled as compared with 0.49 fatalities per 100 million passenger kilometres travelled for passenger car occupants. Similar trends are observed with hospitalisation rates (ATSB 2001).

While the contribution of brake problems to the cause of road crashes is difficult to determine accurately, it is estimated that about 5 per cent of motorcycle crashes are brake related.

A braking system must provide deceleration not only for normal driving conditions but also in emergency avoidance situations. In the later case, retaining driver control is of great importance. Braking systems are an extremely important safety feature as they prevent accidents from occurring.

Neither Australian crash data nor overseas literature provides definitive evidence of the role of various types of braking in crashes, mainly because it is only defective brakes which would be noted. Defective brakes would not comply with any design standard.

The existing mandatory standard ADR 33/00 provides a base level requirement for braking in motorcycles and mopeds. Braking technology, like the rest of automotive technology, is dynamic and continuously evolving and manufacturers may exceed the minimum requirements. Owing to the competitive nature of the industry, some manufacturers may otherwise be reluctant to offer consumers the benefits of advancing technology. However, minimum mandatory requirements ensure that all manufacturers comply with the minimum level. Furthermore, without a mandatory standard it would be difficult to decide by casual inspection whether a vehicle has an effective braking system as consumers would not have the expertise or access to fully test a motorcycle’s braking system.

In the absence of a mandatory standard, state and territory governments would be likely to develop their own requirements, which may tend to lack uniformity, or they would feel compelled to provide braking information for every vehicle model available on the market.

1.3 Why Government Action Is Needed

The Government provides consumer protection for new vehicle consumers on two fronts, *firstly* through the Trade Practices Act 1974 (TPA) and *secondly* through the MVSA.
The TPA provides consumer protection and quality of supply of product. The areas addressed

by the TPA include product safety, product information, conditions and warranties in consumer transactions, liability of and actions against manufacturers and importers for defective goods and prescription of industry codes of practice. Section 65C of the Act requires goods to meet prescribed consumer product safety standard. Consumer protection laws are important for they create a device for increasing equity in market place dealings between consumers and producers of vehicles. Part IVB of the TPA can prescribe self regulated or quasi regulated industry codes into black letter law which applies the remedies contained in the TPA to those who contravene codes, mandatory or voluntary. It is important to note that the TPA applies across all sectors of the economy and is not industry specific.

The MVSA is an industry specific regulation which provides mandatory vehicle safety standards that suppliers of new vehicles are required to comply with. The MVSA, through the ADRs, specifies mandatory product safety standards which are given more force in law for overall consumer protection through the TPA. It is important to note that consumer's benefit from the functions of the two Acts, the MVSA providing a preventative effect, the TPA providing with both compensatory and preventative effects. The compensatory effect comes through its comprehensive coverage in most areas of consumer protection and the preventative effect through the prescriptions of codes by legislative means.

Besides the two Acts, market mechanisms as demonstrated by consumers' willingness to pay for safer vehicles and vehicle makers' responsiveness to consumers have been gradually moving market forces towards a social optimum. This is assisted by ADRs, information programs provided by government sponsored and non-government organisations and the provisions of the TPA. All these methods are desirable as they help improve the allocation efficiency of markets for automotive safety.

The conditions under which the market will produce a socially optimal level of product safety require individuals to have perfect information about the risk of personal injuries (i.e. with and without safety). In such a situation and assuming rational behaviour, a competitive market will lead to an optimal use of safety devices. This comes about from individuals balancing marginal benefits in terms of injury avoidance from safety devices against the marginal cost of purchasing and utilising safety devices. Ideally this behaviour leads to a global outcome in which total injury and injury avoidance costs are minimised for society as whole.

Determining the marginal benefits and costs of using safety devices is generally complex, where the relevant risk for any individual is likely to be driven by personal assumptions about the user environment and personal habits. Individuals will likely encounter serious difficulties in making a well-informed decision about the value of safety devices. This uncertainty about the benefits of protection could lead to greater or less than optimal use of safety devices.

Another source of market failure is the presence of externalities. Accidents that result in injuries or deaths because of the failure of individuals to use safety devices impose costs on other parties in society. Again, this can result in the sub optimal usage of safety devices for society as a whole. This is discussed in greater detail in the externalities section.

The need for government intervention in the market for delivery of safer vehicles to consumers therefore arises as a result of potential market failure from:

- Imperfect Information, and
- Externalities

Imperfect Information:

Individual riders of new and existing motorcycles are able to effectively exercise their safety preferences if they are in a position to accurately assess the safety level offered by different models. The typical rider does not possess the engineering knowledge or information to make a comparative evaluation of principal safety devices in motorcycles.

A related issue is manufacturer myopia where new or existing manufacturers, may in the absence of standards or regulations, react to market pressures to the general detriment of society. In a market based regulatory environment, it is likely that manufacturers may project an image that their vehicles are safe, without in fact even incorporating basic protective features. The consumer may be unable to differentiate between vehicles with and without basic safety features.

The reluctance of vehicle manufacturers and the inability of consumer information programs to provide information to consumers, coupled with the consumer's inexperience to test and/or inability to access vehicles for such tests may warrant government action. The lack of motorcycle braking information, consumer inexperience and the inability to access vehicles for carrying out tests would lead to consumers making poor (unsafe) decisions if vehicles with inadequate levels of braking were available on the market. Such decisions could impose costs on the individual or on the community via externalities.

Externalities:

When motorcycle manufacturers introduce vehicles into the Australian fleet, several negative externalities arise which would be enhanced in a market based non-regulatory environment. These include:

- Road trauma costs which are borne by the community and not by the manufacturer. Even in a highly regulated environment, road trauma costs the Australian community $6.0 billion annually in terms of health care.
- Costs in terms of losses in utility to family and friends. Losses in productivity to other workers in team oriented job tasks and also from the necessity of hiring and training temporary or permanent replacements.
- Other costs include property damage, and inconvenience to the community which have not been measured.
- The medical treatment of injuries and disability which draws scarce medical resources from other uses. A significant part of this cost falls on the public through increased taxes.
- Medical insurance programs which can lead to disincentives to the purchase and utilisation of safety devices because individuals do not have to bear the full costs of restoring their health after accidents occur.

Negative externalities are also likely to emerge when consumers make poor decisions in relation to an optimal level of vehicle safety. In the absence of government based regulation, vehicles with less than the optimal level of safety are likely to become available to consumers. Such a situation would create a demand by risk takers for very low cost vehicles with very few safety features. Although consumers may wish to maximise their private benefits through such a trade off, the social costs are likely to result in a net cost to the

community.

The negative externalities arising from manufacturers introducing less than optimally safe vehicles and poor selection of vehicles by consumers are therefore reflected by increasing expenditures on hospitalisation, a loss of quality of life, property damage, rehabilitation and other costs, most of which are borne by the community.

The Australian Government has undertaken to review the ADRs to ensure that they are relevant, cost effective and do not provide a barrier to importation of safe vehicles and components. These objectives are shared by the New Zealand Government, which has been reviewing its vehicle safety standards. The review is being carried out by the Vehicle Safety Standards Branch of the Department of Transport and Regional Services (DOTARS) together with the National Transport Commission (NTC) and the New Zealand Land Transport Safety Authority.

The aim of the ADR review is four-fold:

1. to identify whether existing standards are relevant in the light of on-going developments in automotive safety technology, given the fact that some of the standards are in a mature stage,
2. if existing standards are relevant to identify any refinements required to ensure their progression and positive contribution in the standards life cycle,
3. to ensure standards do not impose excessive requirements on business, that they are cost effective and take account of community, social, economic, environmental, health and safety concerns, and
4. to pursue where appropriate harmonisation with international standards, rather than with regional or national standards.

The review takes account of the provisions of the Trans-Tasman Mutual Recognition Arrangement (TTMRA) Annex 4 – Road Vehicles. This Annex concerns the harmonisation of Australian and New Zealand standards with the internationally recognised United Nations Economic Commission for Europe (UNECE) Regulations, or those national or regional standards that are agreed by the Parties. The UNECE is regarded as the international standards setting body, meeting the provisions of the World Trade Organisation (WTO) Agreement on Technical Barriers to Trade, as standards development in the UNECE is open to participation by the international community.

2.0 OBJECTIVES

The general and specific objectives are to establish the most appropriate measures for delivering safer vehicles to the Australian community. These include to:

General Objectives;

- reduce road trauma arising from the failure of the market to provide vehicles with adequate levels of safety,
- ensure that community, social, economic, environmental, health and safety are not compromised, and
- determine what form of action may be required, either government intervention or the use

of market based instruments.

Specific Objectives;

- eliminate any duplication and overlap arising from ongoing development of ADRs, and
- ensure that any new measures proposed for braking systems fitted to motorcycles provide safe and effective performance and do not provide a barrier to importation of safer vehicles.

This particular Regulation Impact Statement examines present Australian Government regulations for cost-effective regulation of braking systems for motorcycles and mopeds. Motorcycles are two or three wheeled vehicles with engine cylinder capacity exceeding 50 ml and a maximum speed of 50 km/h. Mopeds are a group of two or three wheeled vehicles with an engine cylinder capacity not exceeding 50 ml and a maximum speed of 50 km/h.

2.1 Present Government Regulation

ADR 33/00 - Brake systems for Motorcycles and Mopeds applies to all L Group vehicles – motorcycles (and motor cycles with sidecars), mopeds and most motor tricycles (see Attachment 1). LEP and LEG motor tricycles fitted with separate controls for the front and rear service brakes are required to comply with ADR 33/00, otherwise they must comply with ADR 31 – Brake Systems for Passenger Cars and ADR 35 – Commercial Vehicle Brake Systems respectively.

ADR 33 includes the following requirements:

- the ability to inspect brake lining thickness without removal of parts;
- the provision of adjustment to compensate for brake lining wear;
- for vehicles fitted with a split service brake system, a service brake failure warning lamp (and the conditions under which it must operate);
- for vehicles fitted with hydraulic brakes;
  - ⇒ the number and capacity of brake fluid reservoirs in relation to the wheel cylinder volume in the fully worn linings/fully applied brake state, and
  - ⇒ marking on or near each brake fluid filler showing the type of fluid required and a warning *clean filler cap before removing*,
- a protection device for power assist units.

The ADR also sets performance requirements for brake application, application force limits, fade and recovery under a range of situations and simulated wet weather braking.

The ADR deems that the requirements of UNECE R 78/01 or UNECE R 78/02 are equivalent to the technical requirements of the ADR (the /02 indicates a later version of the regulation than /01).

The Australian Vehicle Standards Rules 1999 (AVSRs) developed by the NTC are model national regulations for in-service vehicles. The AVSRs require in-service motorcycles and mopeds to continue to meet ADR 33. States and territories impose a similar requirement.

While the ADRs apply to new vehicles, which must comply before they can be supplied to the

market, once put into use the vehicles must comply with the in-service regulations administered by the states and territories. The general principle applied by the states and territories is that vehicles produced in compliance with ADRs applicable at the time of manufacture must continue to comply with those ADRs. In 1999, the NTC published the AVSRs with the aim of providing a set of national uniform in-service vehicle rules and all jurisdictions agreed to implement the AVSRs.

The AVSRs have preserved the general principle of continuing compliance with the ADRs but also make particular provisions in areas not covered by the ADRs. There are also particular provisions relating to some areas that are covered by ADRs, in recognition that as vehicles age, continued compliance with the ADRs is not practicable. Another area where departure from the general principle is allowed is to accommodate established practices such as window tinting and alternative tyre selection.

3.0 OPTIONS

The measures available to promote safer vehicles to consumers can be classified as firstly, those that use regulatory options and secondly, those that use non-regulatory options such as the use of market based instruments.

3.1 Regulatory Options

The four most obvious options for future legislation are:

Option 1 Retain the present ADR as is;

Option 2 Adopt UNECE R 78; or

Option 3 Delete the ADR from national standards in which case states and territories may introduce (1) uniform standards or (2) non-uniform standards; or

Option 4 Adopt American or Japanese standards as alternative standards, in each of the first two options.

UNECE R 78 is accepted as an alternative standard in the current version of ADR 33/00, while the American standard FMVSS 122 – Motorcycle brake systems is not accepted as an alternative standard. However, the present ADR is based on FMVSS 122. The UNECE standard was introduced as an alternative standard when manufacturers began certifying vehicles to the UNECE rule for other markets. The shift to UNECE arose as a result of US manufacturers pulling out of the market. Motorcycle manufacturing became concentrated in Europe and Japan, with the Japanese also choosing to certify vehicles to UNECE rules to meet entry requirements for Europe.

The option of allowing the national standards applying in the US and Japan may seem viable as motor cycles are sourced from these countries. However, closer examination proves otherwise. The requirements applicable in Japan are not well documented to an outside observer. The “Blue Book” published by the Japanese Automobile Standards Internationalisation Centre is the only document available which contains compliance requirements for vehicles imported into Japan. However, requirements for vehicles manufactured in Japan appear to be different to the “Blue Book” requirements and such complexity in the application of standards has lead to Australian importers of Japanese vehicles supporting moves to harmonise with UNECE regulations instead. In case of US manufacturers, a significant part of their production volume is directed to the European

market and they have also expressed support for compliance with UNECE regulations.

The allowance of alternative national standards from individual countries is only of real benefit where compliance with those standards can be easily verified by the issue of authoritative certificates of compliance or the standards are materially different and vehicles would need to be modified to comply with the chosen standard. In the case of motorcycle braking, neither of these conditions applies.

There are other issues relevant if Japanese and US standards are accepted. These are outlined below:

- As the US government does not get involved in pre-market approval of vehicles, there is no approval certification available for vehicles claiming compliance with the US braking standard.
- Japan is a contracting party to the UNECE (as is Australia) and if Japan decides to adopt UNECE R78, any UNECE R78 approvals issued by Japan could be accepted in Australia without the need to also consider the Japanese domestic standard. Presently, the Japanese domestic standard applies to vehicles destined for domestic and export markets. The Japanese government does not issue certificates of approval for vehicles built for export markets and it would be up to the Australian vehicle safety regulator to confirm compliance with the Japanese standards.
- Maintenance of alternative standards is another issue that seriously erodes the regulator's efficiency to mange the administrative functions. This is as a result of the need to continuously examine ADR amendment proposals to maintain the currency of the ADRs in relation to the alternative standards.
- The process for amending an ADR to allow compliance with an amended alternative standard typically involves assessment of the technical differences and preparation of a proposal for consideration by the advisory group responsible for ADR development. Following this stage and depending on the nature of the change, the proposal may need to be submitted to the Chief Executives of the State/Territory Departments of Transport for their consideration. If they agree with the proposal, the amendment needs to be approved by the Australian Transport Council and finally the amendment needs to be determined by the Minister for Transport and Regional Services under section 7 of the Motor Vehicle Standards Act 1989 (MVSA).

The above process could take up to 3 months if all goes well. However, priorities of the day may not allow immediate processing of requests so the actual time taken could be up to 6 months. In the meantime, manufacturers would not be able to progress compliance of components and vehicles certified to the amended alternative standard. The total cost of this activity is difficult to determine as it involves people from many different organisations.

Given the arguments above, Option 4 is not considered a viable option and will not be considered further.

3.2 Non Regulatory Options

Non-regulatory options form an important part of the compensatory arrangements for consumer protection in addition to the prevention part provided by a design rule. Non regulatory options can be classified into *three* categories: *firstly*, using market forces in

conjunction with the Trade Practices Act 1974 (TPA), *secondly*, public education campaigns (as per 3.2.2), and *thirdly*, voluntary codes of practice (as per 3.2.3).

3.2.1 Market Forces and the Trade Practices Act 1974

Manufacturers delivering unsafe vehicles into markets in the absence of mandatory standards would suffer a loss of sales and reputation if the market has well developed market information systems to advise consumers if a particular make or model of vehicle was unsafe. Such information systems may be operated by competing manufacturers, motoring associations and insurance companies who would have an incentive to draw this information to the attention of consumers. However, the information asymmetries arising from manufacturer and consumer organisations providing information are discussed in section 3.2.2.

ADR 33 represents a major part of the safety system installed in a motorcycle that is acceptable to the market and meets consumer expectations. The absence of ADR 33 could result in loss of assurance for consumers that braking systems fitted in vehicles and supplied to the market provide an appropriate and adequate level of vehicle safety. A small but significant number of owners of vehicles rebuild and refurbish braking systems in motorcycles and the absence of a mandatory standard could lead to vehicles being refurbished or rebuilt to inappropriate requirements, thus exposing the community to an unsafe road environment. The spill over costs of non-intervention by the government in the market would be an increase in road trauma, property damage and community anxiety from a generally unsafe road environment.

There are two compensatory mechanisms available for the consumer under the TPA.

1. Section 65F – Compulsory product recall and Part VA – Liability of manufacturers and importers for defective goods. These have a compensatory effect for consumer protection as opposed to the ADR or mandatory or voluntary code prescribed under the TPA which has a preventative effect as it prevents a supplier from placing unsafe vehicles on the market. Given the high-risk nature of motorcycle travel and the community costs when fatalities or injuries occur, it may not be appropriate to rely solely on a compensatory measure but rather to have a preventative measure such as an ADR or code prescribed under the TPA.
2. Part VA provides a well-defined right for consumers to sue for damages, which places pressure on vehicle manufacturers to avoid large compensation payouts by making their vehicles safer.

Full reliance on the consumer protection provisions of the TPA and non government information programs without the use of legally binding preventative provisions of the MVSA or TPA are likely to result in the following effects:

- As motorcycle braking effectiveness in terms of meeting minimum levels of braking performance is not conducive to casual inspection, consumers are not in a position to assess the level of protection offered by braking systems and are likely to make decisions that may disregard negative externalities imposing costs on third parties. The only way to assess system performance is by a full-scale test of a representative system installed on the vehicle to be marketed.

- Lack of a definitive regulation could still result in costs to manufacturers as responsible sections of the industry would still incur the overall cost of design, development, styling and testing whether or not there was a regulation. In the absence of regulation in such a technically complex area market pressures may cause a shift in focus away from safety,
- In the absence of regulation, states may introduce their own standards, potentially leading to lack of uniformity and undue jurisdictional requirements for consumer standards. This could result in additional testing and assurance procedures and hence additional costs to industry that flow on to the consumer.

While allocation of safer vehicles could be achieved by market forces acting together with market information systems, and the compensatory provisions of the TPA, of paramount importance is the need to prevent unsafe vehicles from entering the market and this can only be achieved by the use of regulatory options such as the use of an ADR or prescribed codes under the TPA.

3.2.2 Public Education Campaigns

Public education campaigns are effective when the information disseminated is simple to comprehend and unambiguous. If public information campaigns based purely on the ADR requirements were freely available, a typical consumer would be unable to comprehend the technical content, and make decisions about the safety aspects of a specific motorcycle's braking system. In such situations, consumers leave the decision either to the manufacturer if they trust the manufacturer or to a government nominated regulatory authority (if the requirement is regulated). The information asymmetry and relationship of the manufacturer-consumer arising from the situation just described would indicate that consumers would be better off by leaving the 'safety' decision to the regulatory authority. It is precisely for these reasons that public education campaigns on vehicle safety have enjoyed limited patronage among vehicle buyers. A summary of observations in relation to the issue of public education campaigns for automotive safety is:

- The issue is highly technical and not conducive to simple explanation in a way that will equip the public with the means to make informed choices,
- In the absence of a definitive regulation, in time there could be a number of different standards resulting in confusion,
- The secondary market for automotive consumer information exists in the form of vehicle magazines, vehicle road tests featured on television networks and publicity material prepared by motoring associations. The level and content of information provided does not facilitate consumer learning in critical areas such as motorcycle braking. The secondary market is likely to mature with the withdrawal of government intervention. However, the extent of development will depend upon how well the market resolves issues in relation to information asymmetry. Present trends indicate that the secondary market would not be able to resolve the above issues as well as fulfil the role currently performed by government regulation.

If regulation was abandoned in place of public education campaigns, the issue of spill over costs arises. Despite inequalities in information retrieval and application, there will be a significant number of consumers (institutional rather than individual) who would be aware of the relative safety performance of different braking systems. There is a distinct possibility that

these consumers may choose motorcycles with too low a level of safety and such decisions may not always lead towards maximising community welfare.

While public education campaigns help create awareness and increase consumer willingness to pay for safety features, they still need to be supplemented by consumer protection provisions of the TPA and the MVSA if community safety is not to be compromised. As stand alone options, they are unable to prevent the entry of unsafe vehicles into the market. Prevention provisions provided by the TPA and the MVSA are therefore essential.

3.2.3 Voluntary Code of Practice

Another alternative to direct government intervention for delivering safety outcomes is via a code of practice. These can be either mandatory or voluntary as provided for under the Trade Practices Act (TPA). Part IV B – Industry Codes of the TPA allows the development of mandatory and voluntary industry codes. Under section 51AE of the TPA, regulations may prescribe an industry code or specified provisions of the code and the industry code may be declared mandatory or voluntary. Prescriptions will apply the remedies to those who contravene such codes. These remedies include: injunctions, damages, orders for corrective advertising and refusing enforcement of contractual terms.

Of course a mandatory code of practice is hardly a non-regulatory option because participation and compliance are mandatory and the TPA provides for prescriptions and remedies including injunctions, damages and orders for corrective advertising for those who contravene such codes. Mandatory codes can be enforced under the TPA against all businesses in the automotive sector regardless of whether they are signatories to the code. A feature of such prescribed codes is that they retain a high degree of industry involvement while providing the enforceability and coverage that can be ensured only through legislative means. However, breaches can only be revealed by failures in the field or by third party reporting and any savings through avoiding government intervention need to be balanced against the consequences of failures.

The use of codes prescribed under the TPA is an effective means of regulation in areas where government agencies do not have the expertise or resources to monitor compliance. In case of regulating the design and construction of motor vehicles, the responsible government agency has the expertise and resources to administer a cost effective compliance regime and a mandatory code of practice is unnecessary. The report of the Commonwealth Interdepartmental Committee on Quasi Regulation titled “Grey-Letter Law” recommended the use of prescribed codes if there are significant deficiencies in any existing regulatory regime which cannot be remedied.

In addition, the arrangements for administering the compliance regime have recently been reviewed and endorsed as part of the review[1] of the MVSA. Among the options examined was that in place in the US which involves the regulator purchasing vehicles in the open market and conducting its own testing program. The task force noted that:

[1] Review of Motor Vehicle Standards Act 1989, Department of Transport and Regional Services, August 1999. The review analysed the use of self-regulation and self-certification as alternatives to the current system and concluded that the costs of the new proposals outweighed the benefits.

- This activity involves high costs. In the US for example a budget of approximately USD 25.0 million is provided, and
- In the event that vehicles are found not to comply with mandatory standards, action is taken by the regulatory authorities either in courts or through mandatory recall. Resolution in the courts can be a lengthy process during which potentially unsafe vehicles can remain in the market.

With voluntary codes of practice, given that there is no compulsion to participate or comply with the nominated standards, there needs to be some incentive to encourage operators to take part. A voluntary code would only apply to those agents who are willing to be bound by it. Industry associations could assume a supervisory role and persuade its members that participation and compliance is preferable to the more onerous alternative of direct government intervention, both in relation to setting mandatory standards and enforcing them.

Also, the associations would be in a position to negotiate special status for their members in recognition of their voluntary compliance with the code. This could include access to schemes to maximise productivity gains such as in the case of driving hours regulation, where bus operators complying with the code for sleeper berths can operate on longer routes and share the driving between two drivers. The same arguments that rule against adopting mandatory codes for regulating vehicle safety apply in the case of voluntary codes of practice.

Despite the inappropriateness of codes of practice as a form for enforcement of standards, the possibilities of using a code of practice are explored further in the discussions below.
The motor vehicle industry delivers new vehicles and used vehicles to automotive consumers. New vehicles are delivered from domestic production as well as from foreign production carried out in overseas plants. Imported used vehicles are mainly sourced from Japan. There are two industry associations, which represent a large collection of manufacturers in the new vehicle industry; these include the Federation of Automotive Product Manufacturers (FAPM) and the Federal Chamber of Automotive Industries (FCAI). Membership coverage by FAPM would approximate 40 per cent while that of the FCAI would be around 99 per cent[2], which also includes importers.

For a voluntary code of practice to succeed, the relationship between business, government and consumer representatives should be collaborative so that all parties have ownership of, and commitment to, the arrangements (Grey Letter Law, 1997)[3]. In considering a code of practice, it is useful to note the following conditions, which exist in the automotive industry. These include:

- Universal application of standards is relatively difficult as numerous sectors exist and which in turn are represented by their own industry associations,
- It is not clear whether the industry associations can apply effective sanctions,
- Effective operation of a voluntary code of practice would require an enforcement system identical or similar to the one currently operated by the government regulator. This requires the members of the associations to provide evidence to their associations as currently required for obtaining an approval. It is quite difficult to envisage an

[2] Membership base of the FCAI includes vehicle manufacturers and the FAPM. It does not include sectors such as tyre manufacturing, vehicle distribution, transport logistics and after market supplies.
[3] Grey Letter Law, Report to the Commonwealth Interdepartmental Committee on Quasi Regulation, 1997

environment where profit maximising economic agents would share information with their industry associations to enable the system to deliver certainty to consumers and governments.

An example of a code of practice applying in the automotive industry is the FCAI's code of practice for Electromagnetic Compatibility (EMC). This code of practice applies exclusively to FCAI members and while compliance with the nominated standards is mandatory, as prescribed by the Australian Broadcasting Authority (ABA) for electromagnetic emissions from electronic devices under the Radio Broadcasting Act, the Authority relies on the FCAI to ensure that its members comply. In this case it is understandable that the ABA has opted for a code, given the vast scope of its sphere of responsibility, as it covers all electronic equipment producers and the costs of direct Government supervision over all sectors would have been prohibitive.

Although it is called a voluntary code of practice, there is no option but to comply with the nominated mandatory standards and while the ACA is willing to rely on the FCAI to enforce compliance by its members, the full weight of the law would come down on those who fail to comply. Therefore it would appear that this code fits in with the concept of a mandatory code of practice.

Since the issue of providing safer vehicles is high-risk high-impact in nature, there does not appear to be any scope for adopting a voluntary code of practice. In relation to a mandatory code of practice, the standards setting component is no different to what is being examined in this RIS, while the enforcement component is beyond the scope of this RIS, having been previously determined under the review of the MVSA. The presence of mandatory standards is one of the main reasons why codes of practice do not operate and there would be great incentive for their development in the absence of standards.

4.0 IMPACT ANALYSIS

4.1 Introduction

The present ADR applies to most motorcycles and mopeds. Motorcycle and moped sales in Australia run at approximately 52,000 units per annum with 320 different models available from 56 major manufacturers and a small number of specialist motor tricycle manufacturers. The majority of motorcycles and mopeds offered in Australia are of Japanese origin with some European and some US manufacturers. Australia is a very small proportion of the world motorcycle market, accounting for less than one per cent of world sales.

Only impacts in Australia are considered.

4.2 Identification of Affected Parties

The parties affected by the regulatory options are:

- vehicle importers (includes foreign manufacturers and their local representatives),
- vehicle owners,
- vehicle users, and
- governments.

The affected parties are represented by several interest groups and these include:

- The FCAI which is an all encompassing group that represents the interests of the manufacturing sector. This includes vehicle manufacturers, vehicle importers and component manufacturers/importers;
- The Motor Traders Association of Australia that represent the interests of the national vehicle dealers;
- The Australian Automobile Association that represent the interests of the vehicle owners and vehicle occupants (passenger cars and derivatives);
- The Australian Trucking Association that represent the interests of the commercial vehicle owners/operators;
- The Insurance Council of Australia that represent the interests of the motor insurance sector;
- Australian Automobile Aftermarket Association and the Australian Road Transport Suppliers Association that represent the interests of the after market industry.

4.3 Effect on Existing Regulations

ADR 33/00 forms part of a suite of motorcycle ADRs, which contains other safety regulations. These ADRs need to be viewed in terms of a reduction in risk they offer motorcycle riders. The motorcycle braking ADR along with other safety rules for noise and lighting produce a risk diversification effect so as to reduce the overall risk of injury and fatality to a rider and passenger.

Brakes do not provide added protection against injury or death in the event of an accident. However, they increase a driver's ability to prevent an accident. The reduction of probability of accidents is what makes braking systems critical items in a safety package, particularly for motorcycles that by their nature can offer no crash protection features.

The study of the interaction of the ADRs is a complex exercise which depends upon the type (preventive or protection) of regulated feature, risk profile of consumers (risk taker/risk averse) and the size of the vehicle.

The following three options from para 3.1 remained for further consideration;

- Option 1 would retain existing Australian Government legislation;
- Option 2 would adopt the internationally accepted UNECE 78 requirements; while
- Option 3 would delete present Australian Government requirements. This option can be sub divided into:
  - The possibility of states and territories introducing regulation
  - Using market forces (already discussed under 3.2.1)

Option 1 would retain existing Australian Government legislation in the form of ADR 33/00. Option 2 would replace the existing requirements with the regulations that are presently considered technically equivalent to ADR 33 thus harmonising with international standards. Option 3 would repeal ADR 33, which may result in significant changes to state and territory legislation that presently calls up ADR 33. The following may result:

- They may adopt in-service rules such as the AVSRs (see para 2.2) for new vehicles. Maintaining relevancy of the rules would be difficult in the absence of a coordinating agency to preserve uniformity of standards.
- Some manufacturers may withdraw from the market as certification requirements would vary across states increasing the costs of compliance.
- Non-uniform standards would cause confusion, inconvenience and restricted entry to motorists when they attempt to use vehicles interstate.

4.4 Categories of Expected Impacts

4.4.1 Introduction

The expected level of costs and benefits will depend largely on:

- changes as a result of completely aligning with UNECE requirements; and
- whether deletion of ADR 33 (Option 3) will result in legislation being introduced in states and territories and if so, what would be legislated.

These general issues are discussed below in Sections 4.4.2 and 4.4.3. An attempt at quantification of impacts is given in Section 4.4.4.

4.4.2 General Issues

ADR 33 provides that UNECE R 78/01 and UNECE R 78/02 are deemed to be equivalent to the technical requirements of ADR 33. The difference between 78/01 and 78/02 is essentially that the latter version mandates use of asbestos-free brake linings.

All motor cycles and mopeds are imported. Recent consultation with three of the most active certification agents, their advice is that the majority are of Japanese origin with some European and US manufacturers and it is understood that 50 per cent of the models are certified to either of the two UNECE alternatives and 50 percent are certified to ADR 33/00.

Retaining the present ADR (Option 1) would retain UNECE R 78/01 and UNECE R78/02 as alternative standards. As UNECE 78/02 is mandated for all present vehicle models in Europe, the retention of ADR 33 would allow older models access to the Australian market with compliance to the technical provisions of ADR 33 or the alternative standard UNECE R78/01. These older vehicles may be fitted with asbestos brake friction material, although current advice is that all new motor cycles and mopeds presently sold in Australia are fitted with asbestos free linings in accordance with UNECE R 78/02.

Apart from the issue of asbestos-free linings, there is little difference in the technical requirements of ADR 33 and UNECE R 78. The differences are shown in the following table:

Requirement	**ADR 33**	**UNECE R 78**
Control forces for general test conditions	• between 20N and 250N for hand operated • between 40N and 450N for foot operated • force applied no less than 30 mm from the end	• no more than 200N for hand operated • no more than 350N for foot operated • force applied 50 mm from the end of the brake

	of the brake lever	lever
Distance driven prior to wet brake test	1 kilometre	500 metres
Initial vehicle speed	45 to 50 km/h	40 km/h for LA category 60 km/h for LC category
Deceleration (dry)	3.2 + 0.2 m/s2	ranges from 2.7 m/s2 to 4.3 m/s2 depending on test conditions and category

It is unlikely that compliance with one or the other standard would affect actual braking performance.

4.4.3 General Impacts

Both Options 1 and 2 would generally retain the present position whereby according to certification records and the advice of the 3 most active certification agents, 50 per cent of motorcycles and mopeds sold new in Australia are certified to UNECE R 78 or ADR 33/00. In addition, the level of braking performance would be similar. Therefore, the impacts on all affected parties would not change.

The possible impacts of Option 3, to delete the ADR, as stated earlier would be either:

- no legislative requirements would be placed on braking of motorcycles and mopeds (relying on market forces); or
- State and territory governments would introduce their own legislative requirements.

The former case could lead to importation of motor cycles with inferior braking systems. Given that motorcycles are already over-represented in road trauma, it is likely that states and territories would respond by legislating. In these circumstances, Option 3 would lead to significantly increased compliance costs without a corresponding road safety benefit.

After market issues

All replacement friction materials (i.e. brake pads and lining material) are required by state and territory legislation to retain compliance with the performance requirements in the ADR. This issue is a major source of contention as it is virtually impossible to prove compliance and anecdotal evidence suggests many poor quality materials are supplied in the after market.

Replacement linings for vehicles certified to UNECE R 78/02 must in theory also be asbestos-free. Linings supplied to pre UNECE R 78/02 or ADR 33 motorcycles may contain asbestos. Most after market suppliers have both types of friction material available as these are required on recent models by original equipment dealers.

Neither Option 1 nor Option 2 would alter that position but Option 3 could lead to an increased presence in the after market of untested and asbestos-based materials.

4.4.4 Quantification of Impacts

Although there are 320 different models (approximately) of motorcycles available in Australia, only about 30 new models are introduced each year requiring proof of compliance. For models complying with UNECE R 78, the approval number is submitted to prove compliance, which is a relatively minor administrative task.

If Option 3 was adopted, costs of proving compliance will depend on whether states and territories allowed UNECE R 78 motor cycles and mopeds insisted on ADR 33 compliance or introduced other requirements that may be different in each jurisdiction. With ADR 33 compliance testing costing around $10,000 per test, Option 3 costs will range from minor to $300,000 per year (30 models at $10,000 per test).

Information on models and costs were supplied by industry sources.

4.4.5 Summary of Impacts

The summary of relative quantified annual benefits and costs are shown in Table 1 and the consequences for the affected parties are shown in Table 2.

It is assumed that the existing regulations contribute to reducing the cost to the community from all road crashes, which has been estimated as $15 billion per year. Directly attributing the proportion of this cost to these regulations is not possible because pre-implementation economic data is generally not available. The only practical means of determining the contribution would be to remove the regulations and observe the result. This is considered an unacceptable risk.

Table 1: Summary of Relative Benefits and Costs

	Option 1 retain ADR	Option 2 adopt UNECE R 78	Option 3 delete ADR (1)
Benefits			
• road trauma	not quantified but likely to be substantial	not quantified but likely to be substantial	unknown, with a possible increase in road trauma cost
Costs			
• total compliance costs	$10,000	$10,000	Overall industry cost higher than ADR 33 and ECE R 78[4]
Net benefits	not quantified but likely to be substantial	not quantified but likely to be substantial	Lower than Options 1 and 2

Notes: (1) Assumes states and territories introduce legislation

Table 2: Impacts on Affected Groups

Affected group	Option 1 retain ADR	Option 2 adopt UNECE R 78	Option 3 delete ADR
Motorcycle and moped importers	nil	nil	more complicated compliance
Motorcycle and moped owners	nil	nil	nil
Component suppliers	nil	nil	probably nil
Government	no change	no change	greater burden on

[4] States and territories may enforce different standards in their jurisdictions, resulting in an increase in costs to manufacturers, as they would need to 'market ready' their vehicles for different jurisdictional requirements.

			state/territories and less burden on Australian Government
Other road users	no change	no change	no change

It is useful to consider the likely response of the market to rider protection in the absence of a motorcycle braking regulation. Several observations arise, some of which are summarised below:

- The absence of an ADR would permit motorcycles of varying standards to access the Australian market. While this arrangement may enhance consumer choice, it is likely that some importers may supply motorcycles which may not meet even the most basic safety requirements such as those from countries which do not mandate standards for motorcycles. Presently most manufacturers in Japan, Europe and the US certify 50 per cent of vehicles to UNECE R 78 and 50 per cent to ADR 33/00. The retention of ADR 33/00 will prevent unsafe vehicles from accessing the Australian market, offer more choice to consumers and promote a similar level of safety in the Australian fleet.
- The demand for independent assessments of braking systems in particular and motorcycle safety performance in general is not high. This is possible because of the strong presence of vehicle safety regulations, which have enjoyed a high level of acceptance by consumers, manufacturers and community organisations.
- Consumers are particularly confident of current arrangements in delivering vehicles with safe braking systems to the market. In the absence of current arrangements consumers would need to undertake extensive search for vehicles fitted with safe braking systems. This search effort would entail additional costs and be extremely inconvenient to consumers who would need to rely on information markets. Further, no well managed information program like the Australian New Car Assessment Program has been developed owing to the small volume of motorcycles sold.
- New institutions may emerge to supply automotive consumer safety information while existing institutions may increase their activities in relation to information delivery. Institutions disseminating information relating to safety of motorcycle braking systems may demand compensation for their services. If their services are available freely, the issue of information asymmetry arises as some of these institutions could be sponsored or owned by vehicle manufacturers or other special interest groups.

Under the current arrangement, which involves Australian Government intervention in the market for new vehicles, manufacturers supply the government regulator with information relating to safety aspects of vehicles to demonstrate compliance to a safety standard. The regulator assesses the information against criteria (an ADR) and issues an approval. The approval therefore permits the vehicle to enter the market for sale and eventually into the fleet through the vehicle registration process.

Several issues emerge in the current arrangement particularly those relating to the type of information supplied by the manufacturer. The information supplied is generally of a commercial-in-confidence nature, transmitted to a secure web site that is maintained by the regulator. Most of the information is technical and involves complex engineering calculations and tests which demonstrate compliance to the ADR. It is doubtful whether profit-seeking manufacturers would permit the current load of information supplied to the regulator to be

freely available and accessible by the general public. It is quite unlikely that the market without government intervention would be able to perform the regulator's role of coordination, scrutiny and trust and ensure the delivery of safe vehicles into the Australian fleet.

4.4.6 Discussion

Option 3 is the least favoured option as it would entail either lower standard braking in some motorcycles or increased regulation by states and territories on a national issue. Option 3 is likely to burden industry in terms of additional costs for complying with a plethora of standards required in the six states and two territories. This would lead to increased costs to consumers.

Option 1 and Option 2 provide the same costs and benefits and the recommendation would come down to any industry preference. Given the information at para 4.4.2 (that industry tests 50 per cent UNECE R78 and ADR 33/00) Option 1 becomes the recommended option.

5.0 CONSULTATION

The Department undertakes public consultation on behalf of the Minister for Transport and Regional Services. Under Part 2, section 8 of the Motor Vehicle Standards Act 1989 the Minister may consult with state and territory agencies responsible for road safety, organizations and persons involved in the road vehicle industry and organizations representing road vehicle users before determining the design rule.

A Motorcycle Single Issue Working Group was formed as a sub-group of the Technical Liaison Group (TLG). Meetings were then held to finalise the content of the reforms.

There remains future scope for consultation with the State and Territory transport officials and Ministers following public comment. However, such further consultation would only be undertaken if there were intractable issues raised during public comment. This approach was endorsed by the Australian Transport Council at its November 2005 meeting.

A list of organisations that participated in the Motorcycle Single Issue Working Group is presented in Annex 1.

5.1 Public Comment

The proposal was circulated for 90 days public comment in May 2000. All of the respondents agreed with the recommended option of adopting UNECE R 78 (Option 2). However, see clause 5.2 below for current situation.

5.2 Current Consultation and Developments

The above public consultation having occurred in mid to late 2000, consideration has been given to whether certification practices have changed in the market place since that time. Further consultation was undertaken in May 2006 with the most active certification consultants in testing and certifying motorcycle braking systems. The consultants perform approximately 100 tests per annum. The consensus was that the current ADR 33/00 should remain, Option 1, as approximately 50 per cent of certifications are now to the ADR 33 test

program with the remainder utilising the UNECE R 78 test program. (See Attachment 2 for comments)

6.0 CONCLUSION AND RECOMMENDATION

It was not seen as necessary to conduct further broad consultation as the recommendation prior to public comment was predicated on industry preference. The revised industry preference is now for Option 1. This option accepts UNECE R 78/01 and R78/02 as alternative standards, and so serves both the ADR and UNECE preferences by industry.

It is therefore recommended that Option 1 be adopted.

7.0 IMPLEMENTATION AND REVIEW

The proposed regulations would be endorsed as ADRs. They would be given force in law in Australia by making them National Standards under the MVSA. They would be implemented under the type approval arrangements for new vehicles which are administered by the Vehicle Safety Standards Branch of the Department of Transport and Regional Services.

The ADRs are national standards under the MVSA and are therefore subject to a complete review on a 10 year cycle.

There are arrangements for on-going development of the ADRs. Development of the ADRs is the responsibility of the Vehicle Safety Standards Branch of the Department of Transport and Regional Services and is carried out in consultation with representatives of the Australian, state and territory governments, representatives of the manufacturing and operating industries, road user groups and experts in the field of road safety.

Manufacturers would be required to ensure that vehicles supplied to the market comply with the requirements of any package of regulations. Penalties for non-compliance with the MVSA are 120 penalty points for each offence.

Annex 1

Motorcycle Single Issue Working Membership - 2000

Organisation
Federal Chamber of Automotive Industries
National Road Transport Commission
Australian Automobile Association
States and Territories (WA)
States and Territories (RTA, NSW)
States and Territories (QLD Transport)
Motorcycle Riders Association
Federation of Automotive Product Manufacturers
Motor Trades Association of Australia
Australian Automobile Aftermarket Association
Land Transport Safety Authority - New Zealand
Department of Transport and Regional Services

Attachment 1

Motorcycle and Moped Categories:

MOPED - 2 Wheels (LA)
A 2-wheeled motor vehicle, not being a power-assisted pedal cycle, with an engine cylinder capacity not exceeding 50 ml and a ‘Maximum Motor Cycle Speed‘ not exceeding 50 km/h; or a 2-wheeled motor vehicle with a power source other than a piston engine and a ‘Maximum Motor Cycle Speed‘ not exceeding 50 km/h.

MOPED - 3 wheels (LB)
A 3-wheeled motor vehicle, not being a power-assisted pedal cycle, with an engine cylinder capacity not exceeding 50 ml and a ‘Maximum Motor Cycle Speed‘ not exceeding 50 km/h; or a 3-wheeled motor vehicle with a power source other than a piston engine and a ‘Maximum Motor Cycle Speed‘ not exceeding 50 km/h.

MOTOR CYCLE (LC)
A 2-wheeled motor vehicle with an engine cylinder capacity exceeding 50 ml or a ‘Maximum Motor Cycle Speed‘ exceeding 50 km/h.

MOTOR CYCLE AND SIDE-CAR (LD)
A motor vehicle with 3 wheels asymmetrically arranged in relation to the longitudinal median axis, with an engine cylinder capacity exceeding 50 ml or a ‘Maximum Motor Cycle Speed‘ exceeding 50 km/h.

SIDE-CAR
A car, box or other receptacle attached to the side of a motor cycle and for the support of which a wheel is provided.

MOTOR TRICYCLE (LE)
A motor vehicle with 3 wheels symmetrically arranged in relation to the longitudinal median axis, with a ‘Gross Vehicle Mass‘ not exceeding 1.0 tonne and either an engine cylinder capacity exceeding 50 ml or a ‘Maximum Motor cycle Speed‘ exceeding 50 km/h.

Attachment 2

2006 Industry Consultation – ADR 33/00

Comments From	Agree with Option 1	Comments
Certification Agent	y	This agent tests 50 percent of test conducted are to either UNECE R78 and ADR 33/00
Certification Agent	y	All testing conducted by this agent is to ADR 33/00
Certification Agent	y	This agent tests 50 percent of tests conducted are to either UNECE R78 and ADR 33/00