Australian Government

Department of Transport and Regional Services

Regulation Impact Statement

ADR 23/01
Passenger Car Tyres

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This Regulation Impact Statement deals with the requirements of strength, construction and for new passenger car tyres. 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 Regulation Impact Statement (RIS) examines a present Australian Government regulation ADR 23/01 – Passenger Car Tyres, as required by and to the principles and guidelines as set by the Council of Australian Governments (COAG).

ADR 23/01 applies to new pneumatic tyres fitted to new passenger vehicles (including three wheeled vehicles) and small trailers if these vehicles are fitted with passenger car tyres. The function and scope of this vehicle standard is to specify requirements for new pneumatic tyres for motor vehicles and trailers as required under the MVSA, where all new vehicles must be fitted with tyres that comply with this standard at the time of supply to the market place.

The ADR sets the performance and compatibility/interchangeability standards for new pneumatic tyres. It does not specify the type, size, speed rating or load rating of the tyres that are actually fitted to passenger vehicles.

ADR 23 accepts the test specified for the high speed test in the regulation adopted by the United Nations Economic Commission for Europe UNECE R 30 Annex 7 as an alternative test method. Therefore, the main differences between ADR 23 and UNECE 30 relate to the test requirements. UNECE R 30 only requires a high speed test, while ADR 23 requires tests for resistance to bead unseating, tyre strength, endurance and high speeds.

Tyres are perceived as a critical accident prevention safety feature of motor vehicles. Inadequate tyres, either by construction or suitability for the vehicle, can contribute to poor control and failure of tyres at highway speeds can be catastrophic. The existing mandatory standard provides a basic level requirement for traction performance and control in vehicles. Tyres are held in place by wheel rims and together the tyre-rim assembly fulfils an important function, appropriately designed and fitted tyre-rim combinations aid in vehicle traction. A vehicle's braking system performance may be severely compromised if tyres are ineffective or worn out.

Current road crash data shows that tyres are responsible for about 30 per cent of all vehicle defect related crashes, and are therefore estimated to comprise about 1.5 per cent of all road crashes. The causes of these tyre related crashes are almost entirely due to worn, poorly maintained (i.e. under or over-inflated) or damaged tyres. The existing mandatory standard provides a basic level requirement for new tyre performance and control in vehicles. Without this minimum standard the potential for new tyre failure could be an additional contributor to the cause of road crashes.

The issue of wear and tear is an in-service issue regulated and monitored by the states and territories. The state and territory transport authorities apply methods such as testing for roadworthiness of in-service vehicles that monitors the condition of various aspects of the

total vehicle including the condition of the vehicles tyres. The state and territory transport regulations require that all motor vehicles must continue to comply with the applicable ADRs that applied at the time of supply of the individual vehicle to the Australian market.

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 the present ADR;

Option 2: Adopt UNECE R 30, or

Option 3: Delete the ADR from national standards.

The parties affected by ADR 23 are:

- Vehicle importers (includes foreign manufacturers and their local representatives):
- Tyre manufacturers and importers;
- Vehicle owners;
- Vehicle occupants; and
- Governments.

There are approximately 12 million new passenger car tyres are sold in Australia each year, divided into about 25 per cent for the new car market and 75 per cent for replacement tyres. The two major tyre manufacturers in Australia are South Pacific Tyres (Goodyear and

Dunlop) and Bridgestone, while a range of other makes are imported. The new passenger car market in Australia comprises about 200 models that must be fitted with tyres certified to ADR 23. About 50 new models are introduced each year.

Tyres are a global product and it is estimated that about 50 per cent of the tyres manufactured in Australia meet ADR 23 and other additional standards either UNECE R 30 or FMVSS 103 as manufacturers with significant export volumes derive economies from scale and scope. Tyres which are exported are usually certified to one of the major standards, for example UNECE R30, FMVSS 109 (United States), Japanese Industrial Standards (JIS). Imported tyres are also usually tested to an overseas standard and, if fitted to new passenger vehicles in Australia, must also be tested to ADR 23.

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.

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.

Tyres are a global commodity and a unique ADR is both unnecessary and a cost imposition on industry and passenger car owners. There is little difference in technical standards between the present ADR 23 and the alternative UNECE R 30. It is estimated that between 25 per cent and 40 per cent of tyres tested to UNECE R 30 are also tested to ADR 23. This duplication of tests would be eliminated with Option 2.

The main differences between Options 1 and 2 are the additional tests required for ADR 23. The safety advantage of the additional tests is questionable as the tests were originally designed in the late 1960s for cross ply tyres and are of little relevance with the predominance of radial ply tyres now sold. The more flexible sidewalls on a radial tyre ameliorate the bead-unseating test, and the tyre retention test is easily met with the soft sides of radial tyres.

As noted earlier, all Australian manufactured tyres are covered by ADR 23 tests. These tests are mostly performed for product liability reasons for compliance with the consumer protection arrangements under the Trade Practices Act for after market transactions. Therefore Option 3 may have limited impact on testing costs, particularly for new tyres. It is

probable that UNECE R 30 would be the standard chosen to test against because of the advantages for the export market.

The estimated relative cost of compliance is: Option 1 at $1.5 million, Option 2 at $320,000 to 420,000 with Option 3 at $360,000 to 1.5 million. The adoption of Option 2 has the least impact on industry with lowest relative cost of compliance.

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 Commonwealth, state and territory governments, representatives of the manufacturing and operating industries, road user groups and experts in the field of road safety.

The Single Issue Working Group that considered this ADR recommended replacement of ADR 23 with UNECE R 30.

A member of the SIWG, the FCAI, requested that a lead-time of two years after the date of gazettal for application of the rule to be provided to assist industry in making the necessary arrangements and avoid burden generated through a rapid introduction.

The proposal was circulated for 90 days public comment from March 2000 to May 2000. All of the respondents agreed with the recommended option of harmonising with UNECE R 30 standard (Option 2).

In conclusion, as the cost of Option 2 is the least amongst the three options, the adoption of Option 2 is recommended. Option 2 is the most effective as it helps reduce road trauma by correcting for market failure, increasing the number of product offerings in the market through harmonisation of standards. Harmonisation of standards allows overseas manufacturers to access the market with lower compliance costs and promotes competition by increasing the number of players in the market.

The implementation of the proposed regulation will be endorsed as an ADR, it will be given force in law in Australia by making them National Standards (ADRs) 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.

The ADR will be harmonised with UNECE R30 with a two year application lead-time and is subject to a complete review in 10 years time.

1.0 STATEMENT OF THE PROBLEM

1.1 Introduction

Tyres are perceived as a critical accident prevention safety feature of motor vehicles. Inadequate tyres, either by construction or suitability for the vehicle, can contribute to poor control and failure of tyres at highway speeds can be catastrophic. Tyres are held in place by wheel rims and together the tyre-rim assembly fulfils an important function, appropriately designed and fitted tyre-rim combinations aid in vehicle traction. A vehicle's braking system performance may be severely compromised if tyres are ineffective or worn out.

The issue of wear and tear is an in-service issue regulated and monitored by the states and territories. The state and territory transport authorities apply methods such as testing for roadworthiness of in-service vehicles that monitors the condition of various aspects of the total vehicle including the condition of the vehicles tyres. The state and territory transport regulations require that all motor vehicles must continue to comply with the applicable ADRs that applied at the time of supply of the individual vehicle to the Australian market

Tyres are therefore critical for the safe performance of vehicles.

1.2 The Extent of the Problem

Vehicle defects are estimated to contribute to about 5 per cent of all road crashes. Current road accident data shows that tyres are responsible for about 30 per cent of all vehicle defect related crashes, and are therefore estimated to comprise about 1.5 per cent of all road crashes. The causes of these tyre related crashes are almost entirely due to worn, poorly maintained (i.e. under or over-inflated) or damaged tyres. The existing mandatory standard provides a basic level requirement for new tyre performance and control in vehicles. Without this minimum standard the potential for new tyre failure could be an additional contributor to the cause of road crashes.

The existing mandatory standard provides a basic level requirement for traction performance and control in vehicles. As pneumatic tyre 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, manufacturers may try to avoid offering consumers the benefits of advancing technology. However the minimum mandatory requirement ensures that all manufacturers comply with minimum level. Furthermore, without a mandatory standard it would be difficult to decide by casual inspection whether a tyre is adequate as consumers would not have the expertise or access to fully test a tyres performance.

Several factors govern the suitability of a tyre for a vehicle, notable among them are operating conditions and loading patterns. Vehicle and tyre manufacturers therefore engage in considerable research, development and testing to determine the most appropriate tyre for a vehicle. Considerable research costs could be incurred by consumers to decide on the most appropriate tyre for a vehicle and even after completing all required research tasks, there is no assurance that the consumer would pick a tyre, which would reflect the operating and loading conditions envisaged by a manufacturer. As consumers are rational self-seeking individuals, they are likely to increase their marginal utility at the risk of other road users through selecting tyres, which may be inappropriate and less safe.

Market failure therefore tends to occur in the absence of a mandatory standard particularly when consumers have to make judgement about a vehicle's tyres and this judgement would depend upon casual inspection or some form of inadequate research at considerable expense. In general, consumers would not possess the expertise or ability to access facilities to test the suitability of a tyre fitted to a vehicle.

Tyres are therefore perceived as an important safety item and it is desirable to consider appropriate standards for passenger car tyres.

1.3 Why Government Action Is Needed

The Government provides consumer protection for new vehicle consumers on two fronts, *firstly*, is through the Trade Practices Act (TPA) and *secondly*, through the *Motor Vehicle Standards Act 1989* (MVSA). The TPA provides consumer protection in a number of areas which include product safety, product information, conditions and warranties in consumer transactions, liability of and actions against manufacturers and importers for (defective goods). Section 65C of the Act requires goods to meet prescribed consumer product safety standards. 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.

ADR 23 specifies standards for tyres for passenger cars. As part of a vehicle's traction system, ADR 23 is intended to prevent the occurrence of crash and risk of injury to road users.

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 consumers of new and existing vehicles would be able to effectively exercise their safety preferences if they were in a position to accurately assess the safety level offered by different models. The typical consumer does not possess the engineering knowledge or information to make a comparative evaluation of principal safety devices in vehicles.

A related issue of manufacturer myopia where vehicle manufacturers may, in the absence of standards or regulations react to market pressures to the general detriment of safety. 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 and the consumer may be unable to differentiate between vehicles with and without basic safety features.

The reluctance of vehicle manufacturers and inability of consumer information programs to provide sufficient or adequate information to consumers, coupled with the consumer's inexperience to test and/or inability to access vehicles for such tests warrants government action. The lack of tyre safety information, consumer inexperience and the inability to access test facilities for carrying out tests would lead to consumers making poor decisions if tyres with inadequate levels of safety were available on the market. Such decisions could impose costs on the individual or on the community via externalities.

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

- Road trauma costs are borne by the community and not the manufacturer. Even in a highly regulated environment, road trauma costs the Australian community $6.0 billion in terms of health care,
- Costs include 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,
- The medical treatment of injuries and disability also draw scarce medical resources from other uses, and a significant part of the cost of these treatments falls on the public through increased taxes,
- Medical insurance programs can also introduce distortions and cause a potential problem on efficiency grounds to the extent that they 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 and well-being after accidents occur.

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

The negative externalities arising from manufacturers introducing less than optimally safe products and poor selection of vehicles by consumers would be 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:

- 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 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 measure for delivering safer vehicles to the Australian community. These include to:

General Objectives;

- 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.

Specific Objectives:

- 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.

This particular Regulation Impact Statement examines present Australian Government regulations for requirements for passenger car tyres. In essence, the RIS assesses the relative costs and benefits of the present regulation, proposed regulation and non-regulatory alternatives.

2.0 Present Government Regulation

ADR 23/01 applies to new passenger car tyres and is a national standard under the MVSA. The function of ADR 23 is to specify requirements for strength, construction and standard pressure/load relationships for new passenger car tyres of particular size designations. All new vehicles must be fitted with tyres that comply with this standard at the time of supply to the market place.

ADR 23/01 applies to vehicles (including three wheeled vehicles) designed to carry up to 12 passengers (including the driver) which have a gross vehicle mass (GVM) of up to 3.5 tonnes if these vehicles are fitted with passenger car tyres. It also applies to trailers up to 3.5 tonne gross trailer mass (GTM) if they are fitted with passenger car tyres. However, it does not apply to all passenger car tyres – it is not applicable to those tyres with speed ratings over 210 km/h or to temporary use spare tyres.

The ADR sets the performance and compatibility/interchangeability standards for the passenger car tyres themselves. It does not dictate the type, size, speed rating or load rating of the tyres that are actually fitted to the vehicle.

The standard requires the tyre manufacturer to nominate the standard to which the tyre complies with respect to dimensions, shape (for rim compatibility) and load rating. The acceptable nominated standards are those of the:

- Tyre and Rim Association of Australia;
- US Tyre and Rim Association Inc;
- European Tyre and Rim Technical Association (ETRTO);
- Japanese Automobile Tyre Manufacturers Association; and
- Japanese Industrial Standards (JIS) D4202 and D4218.

In addition to complying with the nominated standard, the tyre must meet specific marking and labelling requirements (essentially the same as those in the various nominated standards), incorporate at least 4 tread wear indicators and be subjected to the following performance tests detailed in the ADR:

- bead unseating;
- strength (penetration);
- endurance; and
- high speed.

In respect of the high speed test, ADR 23/01 accepts the test specified in the regulation adopted by the United Nations Economic Commission for Europe UNECE R 30 Annex 7 as an alternative test method. Therefore, the main differences between ADR 23/01 and UNECE 30 relate to the test requirements. UNECE R 30 only requires a high speed test, while ADR 23/01 as described above requires tests for resistance to bead unseating, tyre strength, endurance and high speeds. UNECE R 30 like the ADR has requirements for dimensions of tyres and methods for measuring tyres and tread wear indicators.

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 Australian Vehicle Standards (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. In the case of vehicle tyres, the AVSRs require that replacement tyres comply with ADR 23/01.

3.0 OPTIONS

3.1 Regulatory Options

The three most obvious options for future legislation are:

Option 1: Retain the present ADR;

Option 2: Adopt ECE R 30, or

Option 3: Delete the ADR from national standards. This option consists of two sub options, one that states and territories develop and implement their own standard and two, the market regulates the allocation of vehicles with safer tyres to consumers.

The options for future government legislation are logically either retaining the present ADR. Adopting the international standard UNECE R 30 or deleting the requirement. While allowing the standards applying in the United States of America (US) and Japan may seem like viable alternatives as tyres are sourced from these countries, closer examination proves otherwise. An increasing but small number of Japanese vehicles are being sourced from European plants and as Japan is a signatory to the UNECE Agreement, most Japanese current and future production of passenger cars are most likely to comply with UNECE R 30.

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 acceptance of alternative national standards from individual countries is only of real benefit where the alternative standard can be easily verified by examining authoritative certificates of compliance issued by approved certification agencies. Despite meeting speed and load ratings for specific vehicle applications tyres certified to standards which are materially different from the ADR high speed test requirements would need to be replaced to comply with the ADR requirements as applied to specific vehicle applications for speed and load.

The current ADR 23/01 is a mix of the US standard and the UNECE Regulation, including the physical properties tests from the US standard and the high-speed test from the UNECE Regulation. In discussions in the Single Issue Working Group it was agreed that the physical properties tests borrowed from the US standard, including bead unseating, bursting strength and endurance, became redundant with the introduction of radial belted tyres and furthermore, the tests bore little relevance to on-road performance. In comparison, the high-speed test from the UNECE Regulation was more relevant to on-road performance as it involved running the tyre close to its rated maximum speed at maximum load for a sustained period. Therefore adoption of the US standard was not a viable option; instead the UNECE Regulation was strongly supported by vehicle and tyre manufacturers.

There are other issues relevant in 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 tyre

standard.

- Japan is a contracting party to the UNECE (as is Australia) and if Japan decides to apply UNECE R 30, any approvals issued by Japan could be accepted in Australia without the need to also consider the Japanese domestic standard. The Japanese government does not issue certificates of approval for vehicles built for export markets and it would be up to the Australian vehicle regulator to confirm compliance with the Japanese standards.
- Maintenance of alternative standards is another issue that seriously erodes the regulator's efficiency to manage 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 and territory transport authorities 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 Parliamentary Secretary to the Minister for Transport and Regional Services under section 7 of the 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.

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 23 represents an important part of the crash avoidance system for a motor vehicle that is acceptable to the market and meets consumer expectations. The absence of ADR 23 could result in loss of assurance for consumers that performance specified tyres fitted in vehicles and supplied to the market provide an appropriate and adequate level of vehicle safety.

Vehicle owners replace tyres in vehicles and rely on the original tyre supplied by the vehicle manufacturer, the tyre performance for which is based on ADR 23. In the absence of an appropriately specified originally fitted tyre, road users could be exposed to a less safe road environment. The spill over costs of non-intervention by the government in the market could potentially be an increase in road trauma, property damage and community anxiety from a less safe 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 tyre defect related crashes 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 tyre performance requirements are not conducive to casual inspection, consumers are not in a position to assess the level of suitability afforded by tyres and are likely to make decisions that may disregard negative externalities imposing costs on third parties. The only way to assess tyre performance is by a full-scale test of a tyre 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 could be useful in informing consumers about safety issues and how various products rate in relation to some derived scale of measurement. Of course there would need to be widespread consumer interest in such campaigns in order for them to be

effective. One area where it is reasonable to assume a high degree of consumer interest is in relation to new or innovative technology, such as airbags and anti lock brakes.

Suppliers have always tended to introduce new safety features into the high priced luxury segment of the market, as consumers who can afford to purchase these vehicles are willing to pay for these features. As market information systems featuring these safety features were publicised not only by manufacturers but by non government organisations and the users themselves, manufacturers responded by gradually providing them in the lower price segments assisted partially and at times fully by government intervention. In most cases, government regulation has assisted the entry into the lower price segments, of features such as steering column protection and seat belts when consumers have not been fully willing to pay for these features. A recent example is engine immobilisers where some small car manufacturers were not providing immobilisers, as consumers were not willing to pay, despite wide spread publicity about the alarming rate of vehicle theft. Recent evidence for such a situation is provided with the case for immobilisers where some small car manufacturers were skimping on providing immobilisers, as consumers were not willing to pay, despite wide spread publicity about the alarming rate of vehicle theft.

Where public information campaigns are unable to progress the introduction of safety features into the lower end of the market, some form of government involvement is required such as setting a mandatory standard. The ability and role of governments to provide this service are discussed below.

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 tyre. 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 tyre performance. 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.

For consumer information programs to substitute the ADRs as a market based instrument to allocate safer vehicles to consumers, existing information suppliers need to be able to obtain information from manufacturers identical to that collected by the regulator to provide consumers with meaningful comparisons in easy to understand formats. Such a situation is hardly likely to emerge in the near future as most information collected by the regulator is treated as 'commercial-in-confidence' and it is not certain that manufacturers would provide such information without such protection.

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 countermeasures for different models. There is a distinct possibility that these information rich consumers may choose vehicles with too low a level of safety and such decisions may not always lead towards maximising community welfare.

Undesirable commercial relationships could develop between manufacturers and information providers, which could introduce distortions about the relative performance of different vehicles.

ADR 23 is designed to assist manufacturers in making design choices for tyres installed on vehicles. As such the ADR specifies requirements for strength, construction and standard pressure/load relationships for passenger car tyres of particular size designations and requires manufacturers to label tyres with the tyre size, speed category and maximum load rating. Tyres can therefore be replaced based on the information contained in the label. Most consumers are aware of the labels on tyres and the information contained therein and are therefore able to make informed choices.

The contribution of information programs provided by tyre manufacturers for replacement markets facilitates the process for vehicles to be fitted with designated tyres. However the onus for fitting designated tyres rests on the consumer and this can only be monitored through inspection arrangements operated by the states and territories. What is also important to realise here is the need for consumer protection as provided by the TPA in case manufacturers and distributors provide misleading information or supply tyres which they deem to be designated in accordance with the ADRs or AVSRs. Despite the positive efforts of all these non-regulatory options, what is of paramount importance is the need for preventing unsafe tyres from entering the market and this function is solely provided by the ADR.

3.2.3 Voluntary Codes 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. 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 the case of regulating design and construction of road vehicles, the responsible government agency has the expertise and the resources to administer a cost effective compliance regime and a mandatory code of practice is not the appropriate. The arrangements for administering the compliance regime have recently been reviewed and endorsed as part of the review 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:

- 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, 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)[1]. 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 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 Communications 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 ABA 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

[1] Grey Letter Law, Report to the Commonwealth Interdepartmental Committee on Quasi Regulation, 1997

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

Approximately 12 million new passenger car tyres are sold in Australia each year, divided into about 25 per cent for the new car market and 75 per cent for replacement tyres. The two major tyre manufacturers in Australia are South Pacific Tyres (Goodyear and Dunlop) and Bridgestone, while a range of other makes are imported.

Tyres are a global product. It is estimated that about 50 per cent of the tyres manufactured in Australia meet ADR 23 and another additional standard either UNECE R 30 or FMVSS 103 as manufacturers[2] with significant export volumes derive economies from scale and scope. Tyres which are exported are usually certified to one of the major standards, for example UNECE R30, FMVSS 109 (United States), Japanese Industrial Standards (JIS). Imported tyres are also usually tested to an overseas standard and, if fitted to new passenger vehicles in Australia, must also be tested to ADR 23.

The new passenger car market comprises about 200 models that must be fitted with tyres certified to ADR 23. About 50 new models are introduced each year.

ADR 23 specifies 4 tests as described in Section 2.2. Of these tests UNECE R 30 requires only the high speed test, and this test is an acceptable alternative to the ADR test. The average cost of ADR 23 certification tests is estimated at $8,000 each with about $500 for compliance administration. UNECE R 30 certification test cost is estimated at $2,500.

Only impacts in Australia are considered.

4.2 Identification of Affected Parties

The parties affected by ADR 23 are:

- Vehicle importers (includes foreign manufacturers and their local representatives):
- Tyre manufacturers and importers;
- Vehicle owners;
- Vehicle occupants; 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;

[2] Two local manufacturers have significant exports to the Gulf countries (JIS, FMVSS or UNECE).

- 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 23 forms part of a vehicle traction safety package, which contains other safety regulations. These ADRs need to be viewed in terms of a reduction in risk they offer vehicle drivers and occupants. The tyre standard along with other ADRs for occupant protection, structures, noise and lighting produce a risk diversification effect so as to reduce the overall risk of injury and fatality to vehicle occupants

In viewing the interaction of the various regulations comprising the traction safety package, it is important to decompose the process of safety. Specifically the distinction is made by distinguishing between safety generated by crash preventive features such as tyres and safety generated via protection features. Preventive and protective features provide safety in different ways. Preventive features prevent accidents from occurring while protective features protect occupants in accidents.

Tyres do not provide added protection against injury or death in the event of an accident they however increase a driver's ability to avoid an accident. The reduction of the probability of accidents is what makes tyres critical items in a safety package.

The study of the interaction of safety features is a complex exercise which depends upon the type (preventive or protection) of safety feature, risk profile of consumers (risk taker/risk averse) and size of the vehicle if we assume equivalence in handling, riding and braking abilities.

An analysis of the three options meriting further consideration reveals the following;

- Option 1 would retain existing legislation in the form of ADR 23,
- Option 2 would adopt the internationally accepted ECE 30 requirements, while;
- Option 3 would delete present requirements. This option can be sub divided into:
  - Possibility of states and territories introducing regulation
  - Leaving it to the market place (already discussed under 3.2.1)

Option 1 would retain existing legislation in the form of ADR 23. Option 2 would replace the existing requirements with the regulations that are presently considered technically equivalent to ADR 23 and would harmonise with international standards. Option 3 is likely to result in significant changes to state and territory legislation that presently calls up ADR 23. It is not

possible to speculate on the standards the states and territories would most likely re-introduce, however the following observations arise:

- The result could be non-uniform standards which could cause confusion, inconvenience and restricted entry to motorists as they cross-state borders.
- Some manufacturers may withdraw from the market as entry and transactions cost would vary across the states.

In order to permit ease of future discussion on Option 3 it will be viewed as deleting the requirement for a tyre standard and relying on market forces. Wherever possible, references will be drawn in the discussion about state and territory intervention in the market.

4.4 Categories of Expected Impacts

4.4.1 Introduction

The expected impacts will depend largely on:

- changes as a result of aligning with UNECE requirements; and
- whether removal of ADR 23 will significantly change present tyre practices.

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

4.4.2 General Issues

ADR 23 requires four tests but has no requirement to label as complying with the ADR. UNECE R 30 has only the high-speed test but includes a requirement for the tyres to be marked for compliance with the "E" mark. The "E" mark is an authorised symbol showing compliance with UNECE Regulations. However, this does not mean that in Australia the "E" mark is mandatory. A manufacturer needs only to confirm compliance with the technical requirements of the UNECE Regulation.

Tyres used in Australia would fall into 4 categories:

(1) those certified to both UNECE R30 and ADR 23 (and perhaps other standards);
(2) those certified only to ADR 23;
(3) those certified to UNECE R30 (and perhaps other standards); and
(4) those without any compliance testing.

It is not possible to accurately estimate the proportion of the market in these categories, but it is likely the latter category is substantial. Although in theory, replacement tyres should meet ADR 23, in practice it is not possible to enforce that requirement as no compliance marking is required. It is reported in the minutes of the Single Issue Working Group (SIWG) which examined alternatives to ADR 23 that some group members estimated that up to 70 per cent of Australian cars are fitted with non-complying tyres. In this context, however, it is assumed that non-complying means not having been tested to show compliance with ADR 23, not that they necessarily do not meet ADR 23. This non-compliance would also apply to tyres tested to UNECE R30 and carrying the "E" mark i.e. category (3).

It is understood that the major Australian manufacturers undertake compliance testing on all tyres, irrespective of whether they are fitted to new vehicles or not. Tyres fitted to new

vehicles must comply with ADR 23 and therefore even imported tyres for these vehicles must be tested to ADR 23.

An industry issue, raised during public comment, is the marking of tyres. The Australian Tyre Manufacturers Association (ATMA) is in favour of marking for after market tyres. They do not appear concerned over original equipment (OE) tyres. As stated earlier over 70 per cent of the national fleet is generally fitted with non-complying tyres which increase the risk of accidents caused by vehicles fitted with such tyres. Industry members during a meeting of the Single Issue Working Group for Traction pointed out that, tyres tested to UNECE R30 would be compliance marked while tyres tested to ADR 23 are not marked. Marking, industry members argued could assist in-service compliance as states and territory authorities could readily identify non-compliant tyre.

However, even if Option 2 (align with UNECE) was adopted, the tyres cannot be "E" marked until certified at an UNECE accredited test facility. Although existing test facilities would be able to carry out UNECE R 30 tests without any additional investment, they would need to have their facilities accredited and tests witnessed by a Contracting Party, such as Australia. Presently no UNECE accredited test facility exists in Australia. Although Australia has signed the so-called UNECE 1958 Agreement it would only be in a position to offer accreditation services or witness tests once it has adopted an UNECE Regulation. Until Australia adopts and applies UNECE R 30, it will not be entitled to issue UNECE approvals against UNECE R 30 or offer accreditation to test facilities interested in availing the service. Once, the UNECE arrangement is in place, it will benefit local manufactures wishing to enter the export market, as the cost of obtaining such approvals will drop significantly compared with the current situation, where they have to approach overseas approvals authorities.

However, this is only possible if the ADR is fully harmonised with UNECE R 30, because under the terms of the UNECE 1958 Agreement, when a country elects to apply a Regulation, complying products must be regarded as meeting all requirements of that country's national legislation. This means that ADR 23 cannot contain any additional mandatory requirements over and above the UNECE Regulation; optional additional requirements are permitted. Therefore once the ADR is fully harmonised with UNECE R 30, in time, the benefit to industry would increase substantially, as industry would not encounter any technical barriers to trade. Also there would be a substantial increase of compliant tyres in the national fleet as it would be easier for states and territories to identify non-compliant tyres from the E marks etched on tyres. The extent of the reduction in non-compliant tyres in the national fleet would depend upon the effectiveness of the states and territories monitoring arrangements.

It is also possible to modify the present ADR 23 (if it is retained) to incorporate compliance marking requirement but this issue is not addressed in this Regulation Impact Statement. Compliance marking is more of an in-service issue rather than a new vehicle issue. Compliance marking may assist consumers when they need to replace tyres and also assist the states and territories with the random checks they conduct on vehicles to assess vehicle road worthiness.

4.4.3 General Impacts

The most obvious of the general impacts are:

Option 1: No change to present practices.

Option 2:
- tyres approved to UNECE R30 would not require an additional ADR

23 compliance test; and
- tyres tested only to ADR 23 would require UNECE R 30 high-speed compliance tests instead.

Option 3: Some compliance testing to ADR 23 may cease or be replaced by testing to UNECE R 30.

As tyres are a global commodity, the impacts of Option 2 are the greatest. It is estimated that between 25 per cent and 40 per cent of tyres tested to UNECE R 30 are also tested to ADR 23. This duplication of tests would be eliminated with Option 2.

The main differences between Options 1 and 2 are the additional tests required for ADR 23. The safety advantage of the additional tests is questionable as the tests were originally designed in the late 1960s for cross ply tyres and are of little relevance with the predominance of radial ply tyres now sold. The more flexible sidewalls on a radial tyre ameliorate the bead-unseating test, and the tyre retention test is easily met with the soft sides of radial tyres.

As noted earlier, all Australian manufactured tyres are covered by ADR 23 tests. These tests are mostly performed for product liability reasons for compliance with the consumer protection arrangements under the Trade Practices Act for after market transactions. Therefore Option 3 may have limited impact on testing costs, particularly for new tyres. It is probable that UNECE R 30 would be the standard chosen to test against because of the advantages for the export market.

For purchasers of passenger tyres in the replacement tyre market, it is unlikely that any change will result in the short term. Only if the marking requirement changed would impacts arise. Crashes due to tyres arise almost exclusively due to worn, damaged or under-inflated tyres, not tyres originally unsuitable for the task. Product liability issues and consumer protection laws contribute to this position.

If no standard existed (Option 3) a greater risk is incurred because of the possible uncertainty as to what is an appropriate standard. Because of the perceived importance of tyres as a safety issue (despite crash statistics) it is likely that some states and territories would introduce their own legislative requirement. In these circumstances, compliance costs would rise without added benefits. Compliance administration and monitoring costs to state and territory governments may also rise but these are not quantified.

4.4.4 Quantification of Impacts

There are about 200 different vehicle models to which ADR 23 compliance is required. Many models have several different tyres and rim combinations while other models use the tyres common with companion models. Overall 300 variations for new models are assumed. The average design life is estimated at 3 years before changes requiring re-certification. Therefore, 100 certification tests for compliance are required each year for new vehicles.

As testing to ADR 23 is undertaken for tyres not fitted to new vehicles, it is reasonable to include costs for this group of replacement tyres. A further 100 certification tests per year are assumed.

Using these assumptions and the costs outlined in Section 4.1, the total annual industry compliance costs to ADR 23 would be:

100 x ($8,000 + $500) + 100 x $8,000 = $1.65 million

As ADR 23 recognises the UNECE R 30 high speed tests, the $8,000 is an overestimate of total costs for ADR testing if the tyre also has ECE compliance. It is likely that between 25 per cent and 40 per cent of tested tyres are UNECE compliant. In these circumstances, the testing cost for Option 1 would be reduced by between $100,000 and $200,000 to, say, $1.5 million annually.

If Option 2 (UNECE R 30) was adopted, the 60 per cent to 75 per cent of tyres not tested to UNECE R 30 would require UNECE testing. A high cost estimate would be:

0.75 x 100 x ($2,500 + $500) + 0.75 x 100 x $2,500 = $412,500 annually.

The low estimate would be 80 per cent of this figure i.e. $330,000 annually.

Therefore, industry compliance costs for Option 2 are likely to be between $320,000 and $420,000 plus the relatively minor costs of submitting the UNECE compliance approval number as certification for tyres certified elsewhere.

If option 3 was adopted and states and territories introduced legislation as expected, additional costs would be incurred for industry and government. At say 200 submissions per year at an average of $200 total cost for each, the cost additional to compliance test costs is $40,000 annually. It is probable that at least one state would re-introduce the technical requirements of ADR 23, leading to the same compliance costs as Option 1.

Information on costs were supplied by industry sources.

4.4.5 Summary of Impacts

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

Table 1a: Summary of Relative Benefits and Costs (per annum)

	Option 1 retain ADR23	**Option 2 adopt ECE R 30**	**Option 3 delete ADR 23**[(1)]
Benefits			
• level of benefits resulting from the availability of safer tyres	High and certain and similar to Option 2	High and certain and similar to Option 1	Uncertain and if occurring would be much lower than Options 1 and 2
• level of benefits accruing to road user and community welfare	High and certain and similar to Option 2	High and certain and similar to Option 1	Road users and community benefits uncertain
• Total benefits	Similar to Option 2	Similar to Option 1	Possible reduction in level as compared to Options 1 and 2
Total Costs			

• industry test and compliance costs	Excessively high	Low	Excessively high
• industry compliance costs	High	Low	Excessively high
• government compliance costs	High	Low	Greater burden on state and territory governments
Net benefits (Total benefits – Total costs) [(2)]	marginally lower than option 2	marginally greater than option 1	less than options 1 and 2

Notes: (1) Assumes that the states and territories introduce legislation.
(2) Figures are not provided owing to difficulty in quantifying benefits

Table 1b: Summary of Relative Benefits and Costs (per annum)

	Option 1 – retain ADR 23	**Option 2 – adopt ECE R 30**	**Option 3 – delete ADR 23**
Benefits			
• road trauma	minimal	minimal	minimal
Costs			
• total compliance costs	about $1.5 million	$320,000 to $420,000	at least $360,000 perhaps up to $1.5 million
Net benefits	(about $1.5 million)	($320,000 to $420,000)	(from $360,000 to $1.5 million)

Note: Figures in brackets are net costs not net benefits.

Table 2: Impacts on Affected Groups

Affected group	**Option 1 – retain ADR 23**	**Option 2 – adopt ECE R 30**	**Option 3 – delete ADR 23**
Passenger vehicle manufacturers	Retain present testing and compliance costs	Reduce testing and compliance costs	Reduce present testing costs but increase compliance costs
Passenger vehicle owners	Retain present costs passed on by manufacturers	Reduce present costs passed on by manufacturers	Reduce present costs passed on by manufacturers
Tyre manufacturers/ suppliers/ importers and distributors	Retain present costs	Probably increased opportunities for competition and export	Probably decreased opportunities for competition and export
Government	Retain present costs	Slightly reduced costs	Increased costs to state and territory governments
Other road users	minimal	minimal	minimal

In relation to competition between manufacturers, suppliers and distributors:

- Option 1 would not change the present position;
- Option 2 is likely to increase competition because costs of unique Australian tests could no longer be an inhibitor to importation of UNECE tyres; and
- Option 3 would probably reduce competition because of the possibility of differing standards between states and territories.

5.0 CONSULTATION

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 Commonwealth, state and territory governments, representatives of the manufacturing and operating industries, road user groups and experts in the field of road safety.

In carrying out the ADR Review, a number of Single Issues Working Groups were established to consider proposals for the revised system. The Group that considered this ADR recommended replacement of ADR 23 with UNECE R 30.

The Traction Single Issue Working Group was charged with reviewing the requirements of braking, tyres and other related safety countermeasures. A list of organisations that participated in the Traction Single Issue Working Group is presented in Annex 1.
The Group recommended adoption of UNECE R 30.

5.1 Public Comment

The proposal was circulated for 90 days public comment from March 2000 to May 2000. All of the respondents agreed with the recommended option of adopting UNECE R 30 (Option 2).

Australian Tyre Manufacturers Association (ATMA), Japan Tyre Manufacturers Association, Motor Traders Association of Australia, Australian Automobile Association, Federal Chamber of Automotive Manufacturers and states and territories all accepted the proposal to adopt Option 2. The FCAI requested a lead-time of two years after the date of gazettal for applying the rule. The ATMA's support for Option 2 was provided on the premise that harmonisation with UNECE R 30 would include the requirement that tyres be marked with an UNECE R 30 approval number and that Australia would become a signatory to the UNECE 1958 Agreement. ATMA submitted that becoming a signatory to the UNECE 1958 Agreement, would enable manufacturers to obtain a UNECE approvals in-country rather than having to apply to an overseas approval authority, resulting in considerable cost savings.

On the matter of insisting that all tyres be marked with the UNECE approval number, given that there is no such requirement for any other item, it is highly unlikely that such a scheme can be justified for tyres alone. However, on the matter of Australia becoming a signatory to the UNECE 1958 Agreement, this occurred on 25 April 2000, Australia will be in a position to apply and issue UNECE approvals to UNECE R 30 in Australia. This will benefit local manufacturers wishing to offer their tyres for export.

6.0 CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Identifying the most preferred option for setting standards to deliver safer vehicles to the community is beset with difficulties particularly when one is dealing with a situation, which is high impact and high risk in nature. The option selected must not only serve to maximise the total surplus to the community but must fully recognise the difficulties encountered by producers in supplying safer vehicles to the market and at the same time meet the objectives of this exercise.

This Regulation Impact Statement has considered both the regulatory and non-regulatory options available to reduce the likelihood unsafe tyres from entering the market. The non-regulatory options appear to meet some of the secondary objectives but fall short of the primary objectives particularly in averting market failure and progressing the market towards a social optimum. The discussion identifies the clear benefits that arise from harmonisation with UNECE R30. For identifying the best option, the social value of the option also needs to be considered. As the cost of Option 2 is the least amongst the three options, the adoption of Option 2 is recommended. Option 2 is the most effective as it helps reduce road trauma by correcting for market failure, increasing the number of product offerings in the market through harmonisation of standards. Harmonisation of standards allows overseas manufacturers to access the market with lower compliance costs and promotes competition by increasing the number of players in the market.

Tyres are a global commodity and a unique ADR is both unnecessary and a cost imposition on industry and passenger car owners. There is little difference in technical standards between the present ADR 23 and the alternative UNECE R 30. There appears to be strong support for the adoption of UNECE R 30 among affected parties.

6.2 Recommendation

While it is not possible to quantify the benefits, considerable savings will result from adoption of Option 2. It is therefore recommended that Option 2 be adopted and that ADR 23 be replaced by UNECE R30 with a two year application lead-time.

7.0 IMPLEMENTATION AND REVIEW

The proposed regulations would be endorsed as an ADR. They would be given force in law in Australia by making them National Standards (ADRs) under the MVSA. They 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.

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

A manufacturer will 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 Motor

Vehicle Standards Act are 120 penalty points for each offence.

Despite the recommended option being no more stringent than the current ADR 23 manufacturers have requested a lead-time of two years to adjust to the new ADR. Tyres manufactured to the current ADR will comply with the new ADR harmonised with UNECE R 30. A lead-time of two years[3] after the date of gazettal for application of the rule will be provided to assist industry in making the necessary arrangements and avoid burden generated through a rapid introduction.

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

[3] A lead time of two years is provided as the consultative process and ministerial action involved can take between six months to a year.

ANNEX 1

Traction Single Issue Working Membership

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
Department of Transport and Regional Services