



NATIONAL ROAD TRANSPORT COMMISSION

HIGHER MASS LIMITS

Legislative Package

May 2000

**Prepared by
National Road Transport Commission**

National Road Transport Commission

Higher Mass Limits - Legislative Package - May 2000

Report Prepared by: **National Road Transport Commission**

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REPORT OUTLINE

Date:	May 2000
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Title:	Higher Mass Limits - Legislative Package
Address:	National Road Transport Commission PO Box 13105 LAW COURTS VIC 8010
	E-mail: nrtc@nrtc.gov.au Website: www.nrtc.gov.au
Type of report:	National Policy
Objectives:	Improve Transport Efficiency And Productivity.
NRTC Programs:	Mass Limits Review
Key Milestones:	<ul style="list-style-type: none">• Mass Limits Review reports (1996),• Investigation and testing of State and Territory bridges, funded by Commonwealth Government (1997),• In-principle approval (subject to funding) by Australian Transport Council (April 1998),• Commitment of several Governments to implement in 1999 (December 1998).
Abstract:	<p>This report contains a Policy Paper , Model Legislation</p> <p>There is also the supporting Regulatory Impact Statement entitled “Proposed ‘<i>Second Hurdle</i>’ for Higher Mass Limits” which is a separate document.</p> <p>Based on the Mass Limits Review report (NRTC 1996), the NRTC estimated that there were significant economic benefits nationally in allowing heavy freight vehicles to carry higher mass.</p> <p>Associated reports dealing with the progress of this Review are <i>Increased Mass Limits Compliance & Enforcement Issues, Discussion paper</i>, (December 1997) and <i>Draft Regulatory Impact Statement, Increased Mass Limits for Road Friendly Heavy Vehicles</i> (April 1998).</p> <p>The Policy Paper addresses certain operational aspects of the increase in mass limits for certain heavy vehicles including buses with road-friendly suspensions (tandem and triaxle).</p>

To protect road and bridge infrastructure, the policy proposal includes a requirement to restrict eligibility for higher mass limits on triaxle vehicles to operators accredited under the national Heavy Vehicle Accreditation Scheme Mass Management Module. The Regulatory Impact Statement evaluates this 'second hurdle' restriction.

Other issues covered include mass breaches, route compliance, vehicle identification and suspension certification.

Purpose:

For Information

Key words:

Mass limits, Higher Mass Limits (HML), road-friendly suspension (RFS), certification.

FOREWORD

In March 2000, the Australian Transport Council by majority vote approved the Higher Mass Limits Policy Paper, Model Legislation and the accompanying Regulatory Impact Statement *Proposed 'Second Hurdle' for Higher Mass Limits* to enable the mass limits of certain vehicles with road friendly suspensions to be increased on specific routes.

The Policy Paper clarifies aspects relevant to the administration of the policy to ensure Higher Mass Limits (HML) is administered consistently throughout Australia providing seamless operation for HML vehicles.

The major issues addressed were:

- Dealing with mass breaches
- Exchange of information – Indemnity
- Services provided by third parties
- Road friendly suspensions – certification and identification
- Route compliance
- HML vehicle identification.

The Regulatory Impact Statement (RIS) examined the impact of an additional requirement for triaxle vehicles requiring the operators of triaxle vehicles that nominate for higher mass limits operation to be accredited operators in the National Heavy Vehicle Accreditation Scheme Mass Management Module.

This work followed on from the *Report and Recommendations of the Mass Limits Review Steering Committee* (July 1996), which was established by the NRTC to study the feasibility and net benefits of increasing mass limits for vehicles fitted with road friendly suspension systems.

The RIS states that with the implementation of HML there is likely to be some proportion of overloads occurring with an operator managed mass management program, however, the situation will be better controlled.

The RIS has concluded that while the second hurdle (accreditation in the NHVAS Mass Management Module) was not demonstrated to have quantifiable benefits greater than its estimated costs, those costs are nonetheless low. As a result the additional requirement is being imposed and operators are required to install management systems that can demonstrate that they are able to control the maximum mass limits on their vehicles.

The HML submission was approved by Ministers in March 2000 and concludes the NRTC work required for the national implementation of HML. However, further investigations, designed to improve HML operation, are also proposed or under way.

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HIGHER MASS LIMITS POLICY PAPER

1. PURPOSE

To obtain endorsement of the Australian Transport Council (ATC) to the remaining Higher Mass Limits (HML) policy proposals, including issues relating to National Heavy Vehicle Accreditation Scheme (HVAS) Mass Management generally.

2. INTRODUCTION

Based on the Mass Limits Review report (NRTC 1996), the NRTC estimated that there were significant economic benefits nationally in allowing heavy freight vehicles to carry higher mass. The desirability and impacts of higher mass limits have been reported in earlier NRTC documentation, i.e. Increased Mass Limits Compliance & Enforcement Issues, Discussion Paper, (December 1997) and Draft Regulatory Impact Statement, Increased Mass Limits for Road Friendly Heavy Vehicles (April 1998).

3. BACKGROUND

At the April 1998 ATC meeting, Ministers acknowledged inter alia the productivity benefits obtainable from increasing allowable axle mass limits for vehicles with road friendly suspensions (the 1st Hurdle), the need to upgrade Australia's bridges to realise these benefits and the importance of reducing gross overloading.

Ministers also agreed to restrict increases in allowable mass for triaxles to vehicles operated by members of approved mass management compliance assurance schemes (the 2nd Hurdle).

Ministers noted also at the December 1998 meeting that:

- Victoria, South Australia, Western Australia, Northern Territory and the Commonwealth would proceed with HML by 1 July 1999 or earlier;
- the NRTC would convene a working group to develop consistency in application;
- those jurisdictions adopting HML would proceed in accordance with the procedures and guidelines developed by the working group.

Ministers received preliminary advice that the Mass Management module of the National Heavy Vehicle Accreditation Scheme (NHVAS) was a suitable model for the 2nd Hurdle. Subsequently, it has been confirmed at officer level that the NHVAS Mass Management module will be adopted as the relevant scheme.

Finalisation of the detail of the 'Alternative Compliance' NHVAS (including model legislation), which was endorsed recently by ATC (Submission No ATC 99/23(N)), has been achieved in parallel to the development of this Higher Mass Limits package.

Most jurisdictions except ACT and NSW have implemented HML either on or before 1 July 1999 (Western Australia implemented in August 1999). Tasmania is not proposing to

introduce the 2nd Hurdle until 1 July 2000 and several other jurisdictions are likely to defer offering mass management accreditation directly.

The submission provides model legislative provisions for vehicles operating in Higher Mass Limits mode, in addition to those already approved by Ministers for NHVAS. It is noted that most jurisdictions have implemented HML on restricted networks, mainly through the use of gazettal and exemption processes.

4. DEALING WITH MASS BREACHES

In November 1997, Council endorsed the National Heavy Vehicle Accreditation Scheme policy that included a higher mass entitlement for mass accredited operators, based on the legal mass limit plus the NAASRA tolerances.

Under HML policy, it is proposed that no such higher mass entitlement applies for NHVAS accredited operators when operating vehicles at higher mass limits. For example a 6-axle articulated vehicle with road friendly suspension on each axle would have a legal mass limit of 45.5 tonnes, with its breach level also at 45.5 tonnes and prosecution would occur where this limit was exceeded, allowing for any applicable deductions to reflect the accuracy of the method of weighing. This assumes the vehicle has road friendly suspension and the operator has Mass Management accreditation, the required HML identification and is travelling on the approved route network.

It can be argued that the Higher Mass Limited “benefit” granted by government is conditional on no non-compliances, particularly when a Mass Management Scheme is required. However, some allowance must be made for uncertainties in weighing to assure authorised officers that a legal limit has been exceeded. Authorised officers should refer to the NAASRA Guidelines for Weighing of Vehicles in these situations. Operators should be informed that they are expected to load to the legal limit and even a minor level of excess mass will be treated as a non-compliance in accordance with the Mass Management Compliance Audit Sanctions Model.

4.1 NAASRA Tolerances

The NAASRA guidelines provide an administrative allowance that an authorised officer applies to ensure that a breach can be identified with confidence. The tolerances are dependent on the method used to weigh the vehicle and are applied generally as a matter of policy, not as a result of legislation.

Representations have been made regarding the need for adjustment to the NAASRA tolerances as a result of the greater accuracy of contemporary weighing equipment. A review of the guidelines has been put forward as a candidate project for the 3rd Reform Package, currently under development.

The weighing allowances have been set at a level that caters for variations in the weighing process occur when weighing the vehicle. The factors that may cause variations of weighing are:

- variations in weighing area levels; and
- height of the scales.

The factors that affect the magnitude of these variations are:

- the spacing between the axle groups;
- the degree of level variation on weighing areas;
- the height of the scales;
- the spring stiffness of the tyres and the springs; and
- the type of suspension on each axle group.

The full NAASRA tolerance would normally be applied when a vehicle is weighed using portable scales or Electronic Mass Units (EMU). However, a minimal allowance only would be applied (for calibrated machine accuracy) when weighed on a fixed weighbridge installation.

The NRTC is undertaking a major review of current approaches to the compliance and enforcement of mass, dimensions and load restraint. A draft structure arising from the review categorises mass-related offences as minor, substantial and severe risk. This work is expected to be completed this financial year and may require amendments to the HML proposal at a later time.

4.2 Policy Outline

- HML vehicles are to operate at or below the legal limit (e.g. 45.5 tonnes for a 6-axle articulated vehicle).
- When a driver is intercepted on an approved HML route with a vehicle loaded over its legal mass limit (after any tolerance is subtracted) the offence/penalty should be calculated from the higher mass limit (eg. 45.5 tonnes).
- The alternative approach of basing these prosecutions on the non-HML limit (viz.42.5 tonnes) is not recommended based on equity considerations and a presumption that prosecution would be difficult to sustain in these circumstances.
- Should a vehicle claiming the ability to operate in HML mode be detected at any mass over standard mass limits and be:
 - off the approved HML routes; or
 - not carrying in the cabin of the truck the required HML documentation; or
 - a triaxle vehicle which is not identified as being under the control of an accredited operator in the approved Mass Management Module, then the driver/operator would be treated, for the purposes of enforcement, as if the operator were not entitled to operate at HML and the penalty would be based on the non-HML limit (eg. the standard mass limit of 42.5 tonnes for a 6-axle articulated vehicle).

4.3 Interception Reports

- When a tandem or triaxle vehicle operating in HML mode is intercepted by an authorised officer and is found to be over the legal mass limit:
 - the authorised officer would issue the appropriate infringement notice or submit an offence report.

- Also, for all interceptions where the vehicle is a triaxle vehicle the authorised officer would:
 - complete an NHVAS Interception Report; and
 - forward the Interception Report to the accrediting agency for investigation and appropriate action, which may include a triggered audit.

5. EXCHANGE OF INFORMATION – INDEMNITY

The NHVAS Business Rules (NRTC 1997) under the heading of ‘Information Exchange’, state that each accrediting agency¹ will transmit the following information to every other accrediting agency:

- the details of entry (names of accredited scheme members);
- the details of separations (voluntary, allowed to lapse, suspension, cancellation) from a module, after all appeals, if any, have been exhausted.

Each accrediting agency will transmit the following information to other agencies as appropriate:

- the results of a triggered audit carried out on behalf of another jurisdiction;
- the results of a vehicle inspection carried out on behalf of another jurisdiction;
- an enquiry regarding an audit or vehicle inspection;
- details of a complaint/Interception Report received about a scheme member accredited by another agency;
- a response to a complaint transmitted from another agency;
- a response to an enquiry regarding accreditation status.

South Australia has obtained legal advice regarding the exchange of information and believes it may have a problem proceeding against an operator in advance of the case against an operator being proved as a result of an Interception Report². South Australia has asked that a suitable indemnity be included in the model legislation.

Most jurisdictions have been advised similarly they may need additional legislative protection, but have indicated a preference to use local law.

The type of indemnity clause that is adopted should be carefully considered, as such clauses usually provide for no liability only for any action taken or done “in good faith and without negligence”. This is of limited use as the most common claims made against

¹ Accrediting agency means the road management authority with responsibility for administration of the NHVAS within the jurisdiction. (Source: Alternative Compliance Independent Audit Framework).

² The purpose of the Interception Report is to report performance as well as individual incidents. The reports can indicate that something may be wrong and this could generate a triggered audit performed by the accrediting agency. An Interception Report is not the sole cause of losing operator accreditation, and the driver of the truck may not necessarily have received an infringement notice.

government agencies in administering such matters are for an intentional or reckless action.

The view of most jurisdictions suggests that it would be very difficult to draft an indemnity clause suitable for each of them, given the variety of approaches adopted currently to handle similar issues and the difficulty in properly “meshing” with such existing approaches. The scope of such an indemnity might also vary in particular jurisdictions, for example, some might seek to indemnify also for “intentional or reckless behaviour”. It is also possible that the clause, if required, would have wider application than the exchange of information in the operation of Mass or Maintenance Management Schemes.

In summary, most jurisdictions have received legal opinion that the increased indemnity protection is required. Because of the strong concern expressed by South Australia a brief indemnity clause has been included in the Higher Mass Limits model legislation. Adoption of this clause is subject to the discretion of jurisdictions and might require appropriate modifications in accordance with each jurisdiction’s particular policy requirements.

6. THIRD PARTY SERVICE PROVIDERS

Agreement has been obtained at officer level that under the NHVAS Mass Management module (operators will be accredited by road authorities), rather than accrediting schemes eg the Australia Trucking Association’s TruckSafe scheme.

The Australian Trucking Association (ATA) and other organisations have expressed interest in administering approved mass management schemes providing eligibility for HML. The draft report for NRTC by Kinhill Economics³ sets out options for parties (other than the jurisdictions) to administer Mass Management or the Maintenance Management Modules. There are attractions for the jurisdiction to delegate some aspects of the administration of the schemes to 3rd parties (in terms of additional time and resources otherwise required). The options have been evaluated in the *Regulatory Impact Statement, Proposed ‘Second Hurdle’ for Higher Mass Limits* (December 1999) by Economic Associates Pty. Ltd.

The jurisdictions represented in the Alternative Compliance Implementation Working Group (ACIWG) agreed that the actual operator accreditation process for Mass Management should remain with the jurisdiction within a formal legal framework, and the same should apply to suspension and cancellation of operator accreditation.

The ATA made representations to the NRTC and VicRoads, as the lead agency in the Mass Management pilot, regarding interaction of a proposed Mass Management module under TruckSafe with the NHVAS Mass Management Module. The ATA subsequently agreed that the Business Rules, Mass Management Standards and Audit Matrix of the NHVAS would apply in granting triaxle vehicles access to HML. In addition, it has agreed that ATA (through TruckSafe) could act as a service provider in the delivery of this Module. In this role, TruckSafe would assist operators to develop an appropriate mass management system that meets the national performance standards. Other competent service providers could do likewise in assisting the industry to develop its mass management systems.

³ Kinhill Economics for NRTC (1998) *Proposed Mass Limits Second Hurdle – Evaluation of Mass Management Compliance Assurance Schemes* (December).

Auditing to the national framework of the NHVAS will be undertaken by auditors certified by the Quality Society of Australasia in both Quality Management Systems and NHVAS Auditor Training. The road agency will be responsible for accrediting an operator's mass management system following receipt of advice of a successful entry audit. This clearly retains the functional responsibilities for accreditation with the jurisdiction.

Thus, the basis of the scheme is the accreditation of operators. The national policy proposal includes an option for a certified third party to become a service provider to operators, with the jurisdictions remaining as the only accrediting agencies. However, this and other policies mentioned for endorsement as a consequence of HML may require some amendments to the NHVAS policy and Business Rules. Consultation with jurisdictions will occur over the next few months on these matters.

7. ROAD FRIENDLY SUSPENSIONS (RFS)

7.1 Certification

Vehicles with a compliance plate showing a date of manufacture on or after 1 January 2000 (or older vehicles that have suspension systems replaced on or after 1 January 2000) will be considered road friendly if they have a 'certified' road friendly suspension.

Vehicle Standards Bulletin No.11⁴ – Certification of Road-friendly Suspension Systems, April 1999 (VSB11) sets out the requirements for certification.

7.2 Axle Spacing Mass Schedule

A Road Friendly Allowance (RFA)⁵ should be applied to the present Axle Spacing Mass Schedules so that any affected existing vehicles do not require greater axle spacings to carry extra mass under HML.

For vehicles with an air suspension (up until 1 January 2000) or with suspension systems approved in accordance with VSB11 certification system, the mass limit derived by using the Axle Spacing Mass Schedule (ASMS) formula may be increased for the following axle or axle group mass limits (based on the current limits in Table 1 of the 'Schedule to the Road Transport Reform (Mass and Loading) Regulations') by:

- 0.5 tonnes for each tandem axle group with road friendly suspension, to 17.0 tonnes
- 2.5 tonnes for each triaxle with road friendly suspension, to 22.5 tonnes
- 1.0 tonnes on single drive axles on buses with road friendly suspension, to 10.0 tonnes
- 1.0 tonnes for six-tyre tandem axles with road friendly suspension, to 14.0 tonnes
- 0.7 tonnes where the steer axle of a long combination prime mover is fitted with single tyres with a section width of at least 375mm, to 6.7 tonnes.

or:

For most heavy vehicles (other than buses), this can be expressed as:

⁴ Published by the Land Transport Division of the Department of Transport and Regional Services (formerly the Federal Office of Road Safety (FORS)).

⁵ RFA means the allowance (used as part of the axle mass spacing mass formula) given for each road friendly tandem axle and triaxle on a vehicle/vehicle combination.

The mass limits in the regulations are increased by 0.5 tonnes for each tandem axle group with a certified road friendly suspension and by 2.5 tonnes for each triaxle group with a certified road friendly suspension.

7.3 In-Service RFS Performance

The NRTC is also working on the RFS In-Service Performance project. The project is being carried out in two stages: (1) the development of feasible methodologies, and (2) the demonstration and validation of the preferred methodology. The project is funded jointly with Austroads and will be submitted separately to Council for consideration, following the completion of the project.

8. ROUTE COMPLIANCE

The road network available for HML vehicles is expected to be progressively expanded as bridge upgrades are completed. All jurisdictions have a strong desire to ensure operators and drivers carry higher mass limits only on routes considered satisfactory for HML vehicle operation.

Two jurisdictions expressed a preference for inclusion of a route compliance management system into the Mass Management Module approved by ATC in November 1997. This was thought to be unwarranted by the majority of jurisdictions and an agreed position was negotiated whereby any jurisdiction may require a Route Compliance Certification form to be completed by those HML operators who operate within the jurisdiction, regardless of where the vehicle is registered.

The process is set down in Appendix 1, *Higher Mass Limits Route Compliance Certification*, and Appendix 2 the Form of the *Higher Mass Limits Route Compliance Certification*.

All jurisdictions agree it is important to have tough controls on route compliance. However, most jurisdictions do not support a paper-based Route Compliance Certification system, such as South Australia has in place, because of doubts about its effectiveness in ensuring route compliance. The South Australian approach has the ability to confirm by audit that a legal and continuous HML route is available from origin to destination but it may be difficult to prove that the driver is not complying with network requirements unless the vehicle is detected and weighed at the time of the alleged offence. The Commonwealth cites constitutional reason for its inability to comply with an optional system for FIRS vehicles.

However, it should be noted that the transport industry is embracing technological approaches for fleet and driver management. These technologies may in the future offer a simple low-cost and credible method for operators to confirm compliance with HML special route requirements, which all jurisdictions could support. Therefore, provision is made in the model legislation for a jurisdiction to include provision for the option of additional means of route compliance assurance.

9. VEHICLE IDENTIFICATION

All vehicle operators and drivers must be able to present evidence to authorised officers that the vehicle is eligible to carry higher mass limits, ie.

- it is fitted with a suspension system that is approved or presumed to be road friendly;
- a label affixed to each axle group that is certified road-friendly;
- the vehicle registration label carried the correct registration code⁶; and
- the official, serially numbered ‘Accredited Operator’ label is affixed to the right hand side of the driver’s cabin in triaxle vehicles.

In order to be able to properly register an eligible vehicle and/or to amend the vehicle registration database (as required for HML operations), satisfactory evidence that a suspension is road friendly must be presented to the registration and licensing Authority to pass the 1st Hurdle. In addition, the Authority will revise the vehicle’s registration code and incorporate this on the registration label.

When an operator’s mass management system, including evidence of a satisfactory entry audit, is approved by the accrediting agency, the operator will be given sufficient serially numbers ‘Accredited Operator’ labels which must be fixed to the right hand side of each of the nominated towing vehicles.

These processes are proposed as sufficient to identify a vehicle as being eligible for HML.

10. MODEL LEGISLATION

All Ministers (except Victoria which was in caretaker mode at the time of the submission) have voted not to disapprove the Alternative Compliance model legislative provisions and Compliance Audit Sanctions Models for Mass Management and Maintenance Management (Submission No. ATC 99/23(N)).

Model legislative provisions, *in addition to* those prepared for the NHVAS, are also required for HML⁷. Attached is a copy of the draft Model Legislative Provisions for Higher Mass Limits, which have been amended to include most of the comments made by jurisdiction officers and TACE.

11. CONSULTATION

During the implementation policy development, consultation has been carried out through the Mass Limits Implementation Working Group and the Alternative Compliance Implementation Working Group and other interested parties. The organisations represented or consulted are listed below:

⁶ Tasmania has advised that due to undertaking a major redevelopment of its Motor Registry System there will be no possibility of developing separate vehicle categories for HML vehicle for at least 12 months.

⁷ The policy issues covering limits infringements, indemnity protection and 3rd party service providers apply to all persons and vehicles accredited in the NHVAS.

Transport Agency Chief Executives
Tasmania, Dept of Environment, Infrastructure & Resources
ACT Dept of Urban Services
VicRoads
Main Roads Queensland
Queensland Police Service
Aust Local Govt. Association
Northern Territory, Dept of Transport & Works
Transport SA
Commonwealth Dept of Transport & Regional Services
Queensland Transport
Main Roads Western Australia
Roads and Traffic Authority of NSW
New South Wales Dept of Transport
Western Australia Dept of Transport
Australian Trucking Association
Victoria Police
South Australia Police

12. REFERENCES

- NAASRA (1987) Guideline for Weighing of Vehicles using Portable Wheel Scales and EMU for the enforcement of Axle Group and Gross Mass Load Limits (September).
- NRTC (1997) Increased Mass Limits Compliance and & Enforcement Issues, Discussion Paper (December).
- NRTC (1998) Draft Regulatory Impact Statement, Increased Mass Limits for Road Friendly Heavy Vehicles (April).
- NRTC (1998) Proposed Mass Limits Second Hurdle Evaluation of Mass Management Compliance Schemes Draft Report (December).
- DoTRS (1999) Regulatory Impact Statement: Higher Mass Limits for Federal Interstate Registration Scheme (FIRS) Vehicles (June).
- DoTRS jointly with NRTC, (1999), Alternative Compliance Independent Audit Framework, (July).

APPENDIX 1 HIGHER MASS LIMITS - ROUTE COMPLIANCE CERTIFICATION

The Process	Notes
<p>The employer should examine the available network for higher mass limits vehicles. There must be a continuous approved route between the origin and the required destination if operating in higher mass limits mode.</p> <p>If there is a seamless route to the required destination and it is in a State or Territory where route compliance is required, the employer must undertake Route Compliance Certification.</p>	<p>The approved network will be declared by each jurisdiction and updated as required. This can be in the form of printed table of routes or map format.</p> <p>Approved route maps are available from the various States and the Northern Territory.</p> <p>If there cannot be a continuous route to the required destination the vehicle must not travel at higher mass limits.</p>
<p>Employer (or responsible employee of the employer) will complete the company details and fully describe the approved route on the form. See Appendix 2.</p> <p>The form is to be given to the driver.</p>	<p>The driver must acknowledge receipt of this on the certificate, hand a copy back to the employer and take a copy of it with him or her.</p>
<p>The employer must retain a copy of the completed certifications for at least 12 months or until the next re-entry audit is completed.</p>	<p>These must be accessible by the compliance auditors for inspection.</p>
<p>If a driver wishes to travel to a destination in higher mass limits mode in a jurisdiction where route compliance is required, the driver will be required to carry a completed Route Compliance Certification Form.</p>	<p>A driver operating intrastate only in a jurisdiction that does not require the certificate will not be required to carry one while in that jurisdiction or travelling interstate where that other jurisdiction does not require it.</p>
<p>If the vehicle is intercepted operating in Higher Mass Limits off the approved network, the driver will be liable.</p> <p>A vehicle may be weighed and, if an offence is proven, the driver may be fined for being over mass.</p> <p>The authorised officer will complete an Interception Report Form that should be returned to the operator's accrediting agency as shown on the vehicle registration 'Accredited Operator' label.</p>	<p>A vehicle bearing an 'Approved Operator' mass management label may not always be operating in higher mass limits mode and might be operating off the approved higher mass limits network legitimately.</p>
<p>Accrediting agency (road/transport authority) will investigate the incident and decide appropriate action.</p> <p>Action will be taken in accordance with the Mass Management Compliance Audit Sanctions Model. Investigator/Auditor may have access to the operators copies of the Route Compliance Certifications to assist in deciding whether to recommend a sanction.</p>	<p>Because the Mass Management Scheme is based on accrediting operators to manage their businesses in accordance with the standards, action may be taken against the operator even if the employee driver disobeyed the instruction. Sanctions are based on the frequency and degree of overloading or operating in higher mass limits mode off the approved route operation.</p>

APPENDIX 2 HIGHER MASS LIMITS ROUTE COMPLIANCE CERTIFICATE

This certificate is to be completed and carried by the driver of a vehicle if the vehicle is being driven in higher mass limits mode in a jurisdiction where a Route Compliance Certification is required.

The route to be travelled must be determined from the maps attached to the gazette notice/information bulletin issued in that jurisdiction and be used to assess whether there is a continuous higher mass limits route available from origin to the destination. This completed certificate must be produced to an Authorised Officer.

Company Name & Address: _____

Prime Mover Registration Number: _____

Loaded Axle Weights (in kg):

Front Axle (Steer)	Rear Axle/s (Drive)	Trailer Axles (Tandem or Tri)	Gross Vehicle Mass (GVM)

Employer (or Employer’s representative) signature: _____

Route to: _____
(full address)

Route to: _____
(full address)

Nominated Route:

Via: <i>(Highway/Road Name)</i>

Declaration

The nominated route to be travelled is an approved route as detailed in the Gazette Notice or other relevant network information and I have been instructed to stay on that route.

Drivers’ Signature _____ **Date** _____

Drivers’ Name: _____

Copies of Route Compliance Certification forms are to be retained by the employer for a period of at least 12 months for auditing purposes. These certifications are to be made available to an NHVAS auditor if required.

HIGHER MASS LIMITS MODEL LEGISLATION

PART 1 - PRELIMINARY

1 Purpose

The purpose of this legislation is to implement, as part of a system of nationally consistent road transport laws, a policy agreed by the Commonwealth government and some governments of the States and Territories, to allow certain vehicles fitted with road-friendly suspensions to operate with Higher Mass Limits.

2 Application

(1) This legislation applies to-

- (a) a motor vehicle with a GVM over 4.5 tonnes that is specified in the following Table; and is not a Class 1 Restricted Access Vehicle as defined in the *Draft Road Transport Reform (Restricted Access Vehicles) Regulations*; and
- (b) a combination specified in the following Table that includes a vehicle referred to in paragraph (a), and
- (c) any vehicle included in a combination referred to in paragraph (b), and
- (d) any other vehicle or combination specified from time to time by a law of this jurisdiction,

and in this legislation “**eligible vehicle**” is to be construed accordingly.

Table

Vehicle Configuration	
1	Rigid Truck fitted with a tandem or tri drive axle group
2	Rigid Truck fitted with a tandem drive axle group towing a trailer that is fitted with a single tandem or tri-axle group towards the rear of the trailer
3	A combination where the prime mover is fitted with a tandem drive axle group and the semi trailer is fitted with either a single tandem or tri-axle group
4	Bus fitted with a single drive axle or tandem
5	Truck, trailer or bus with six tyred tandem axle group at the rear
6	B-Double where the prime mover is fitted with a tandem drive axle group and the trailer(s) is fitted with either a tandem or tri-axle group
7	Road Trains where the prime mover is fitted with a tandem or tri drive axle group, the semi trailer is fitted with either a tandem or tri-axle group and the convertor dolly is fitted with a tandem axle group

Note

- Rigid truck and trailer combinations; and
- medium combination articulated vehicles towing a dog trailer; are not ‘eligible vehicles’.

1 Interpretation

(1) In this legislation-

“**accredited operator**” means an operator accredited under the Mass Management Module of a NHVAS;

*“**air suspension**” means vehicle suspension in which air in compression is the main or only spring medium;

“**Authority**”, means the *(name of appropriate Authority and short title of Act under which it was established)*;

“**B-double**” means a combination consisting of a prime mover towing 2 semi-trailers;

“**bus**” means a motor vehicle-

- (a) built mainly to carry people; and
- (b) that seats more than 9 adults (including the driver);

“**certified road-friendly suspension**” means a road-friendly suspension certified by the Federal Office of Road Safety (now the Department of Transport and Regional Services) in accordance with the requirements and procedures contained in Vehicle Standards Bulletin Number 11 published by that Office in April 1999;

“**combination**” means a group of vehicles consisting of a motor vehicle connected to one or more vehicles;

“**converter dolly**” means a trailer with one axle group or single axle and a fifth wheel coupling designed to convert a semi-trailer into a dog trailer;

“**corresponding legislation**” means legislation of the Commonwealth or of a State or Territory that contains provisions corresponding to the provisions of this legislation;

“**dog trailer**” means a trailer (including a trailer consisting of a semi-trailer and converter dolly) with-

- (a) one axle group or single axle at the front that is steered by connection to the towing vehicle by a drawbar; and
- (b) one axle group or single axle at the rear;

“**higher mass mode**” has the meaning given to that expression by Clause 5;

“**mass limit Act**” in respect of an eligible vehicle, means *(the name of the legislation that imposes mass limits on heavy vehicles using the roads of the State or Territory)*;

“**NHVAS**” means the National Heavy Vehicle Accreditation Scheme established by the *(name of Act establishing the Scheme)* or by legislation of the Commonwealth or of a State or Territory that contains provisions corresponding to the provisions of that Act;

“**operator**”, in respect of a vehicle, means a person who controls or directs the operations of the vehicle or who is otherwise responsible for the use of the vehicle;

“**prime mover**” means a motor vehicle built to tow a semi-trailer;

“**relevant axle group**” means the relevant axle group referred to in Column 1 of the table set out in clause 5;

“**rigid**” means not articulated;

“**road**” means an area that is open to or used by the public and is developed for, or has as one of its main uses, the driving or riding of motor vehicles;

*“**road-friendly suspension**” means-a suspension system that conforms to the performance and component requirements specified in the Schedule;

“**road train**” means a combination, other than a B-double, consisting of a motor vehicle towing at least 2 trailers (counting as one trailer a converter dolly supporting a semi-trailer);

“**semi-trailer**” means a trailer (including a pole-type trailer) that has-

- (a) one axle group or single axle towards the rear; and
- (b) a means of attachment to a prime mover that would result in some of the load being imposed on the prime mover;

“**tandem axle group**” means a group of at least 2 axles, in which the horizontal distance between the centre lines of the outermost axles is at least 1 metre, but not more than 2 metres;

“**tri-axle group**” means a group of at least 3 axles, in which the horizontal distance between the centre lines of the outermost axles is more than 2 metres, but not more than 3.2 metres;

*“**wide single tyre**” means a tyre with a section width of not less than 375mm.

**Proposed definition.*

PART 2 - HIGHER MASS LIMITS

2 Higher mass mode operations permitted

(1) Despite the provisions of the (*name of any Acts specifying mass limits*) an eligible vehicle may operate on a road in increased mass mode if-

- (a) the relevant axle group of the vehicle is fitted with a certified road-friendly suspension; and
- (b) where the relevant axle group is a tri-axle group, the operator of the vehicle is an accredited operator.

(2) Despite subclause (1) an eligible vehicle is not authorised to operate with an increased mass on a relevant axle group if it would not be authorised to operate with the maximum mass shown in column 2 in respect of that axle as specified in the Table set out in clause 5 by virtue of any other provision of the (*name of any Acts specifying mass limits*).

Note:

Vehicle Components/GCM ratings must be appropriate for Higher Mass Limits.

(3) An eligible vehicle may operate in higher mass mode although the effect of doing so means that the mass of the vehicle exceeds a mass limit imposed by the (*name of any Acts specifying mass limits*) in respect of the vehicle or, where the vehicle is part of a combination, the combination.

3 Increased mass mode

An eligible vehicle is operating in higher mass mode if the mass on an axle group of the vehicle is more than the mass specified in column 2 of the following Table opposite that axle group but not more than the mass specified in column 3.

Table

Column 1	Column 2	Column 3
Type of axle group	Maximum mass permitted by mass limit Act	Maximum mass permitted by this Act
Tandem axle	16.5 tonnes	17.0 tonnes;
tri-axle groups	20.0 tonnes	22.5 tonnes;
Single drive axles on bus	9.0 tonnes	10.0 tonnes
six tyred tandem axle	13.0 tonnes	14.0 tonnes
Steering axles of long combination vehicle prime movers (ie, road trains and similar) fitted with wide single tyres	6.0 tonnes	6.7 tonnes

Penalty applies

1 Route limitations

(1) The Authority may (*by Notice in the Gazette/by Order*) specify-

(a) routes and/or zones that eligible vehicles when operating in higher mass mode must use; or

(b) roads that must not be used by eligible vehicles when operating in higher mass mode.

(2) A person must not drive an eligible vehicle when operating in higher mass mode contrary to a restriction imposed in accordance with subclause (1).

Penalty applies

(3) A person must not drive an eligible vehicle when operating in higher mass mode unless there is carried in the cabin of the vehicle a copy of any (*Notice given /Order made*) under subclause (1).

Penalty applies

2 Vehicle identification

(1) A person must not drive an eligible vehicle when operating in increased mass mode unless the vehicle has on it any registration and other identifying marks specified by the (*name of any Acts specifying the registration marks*)

(2) An eligible vehicle operating in higher mass mode must display and, in the case of tri-axle vehicles, the identifying label the vehicle must display to show that its operator is an accredited operator in the National Heavy Vehicle Accreditation Scheme Mass Management Module as approved by the Australian Transport Council.

Penalty applies

3 Mutual recognition

(1) Vehicles permitted to operate in the increased mass mode in another jurisdiction will also be permitted to operate in the higher mass mode in this jurisdiction without further application or inspection.

(2) Despite subclause (1) the operator is required to comply with published guidelines for operation in this jurisdiction.

Penalty applies

4 Indemnity

(1) No civil liability is incurred by the accrediting agency or any person engaged in the administration of this legislation for an honest act or omission in the exercise or discharge, or purported exercise or discharge, of a power, function or duty under this legislation.

(2) A liability that would, but for subsection (1), lie against the person lies instead against the Crown.

SCHEDULE

Performance Standard for Road-Friendly Suspension

A suspension system is road-friendly for the purpose of this legislation if it has the performance and component requirements specified in this Schedule.

Performance requirements

During free transient low frequency vertical oscillation of the sprung mass above an axle or axle group, the measured frequency and damping with the suspension carrying its maximum legal load must fall within the following limits-

- (a) the frequency of the sprung mass above the axle or axle group in a free transient vertical oscillation must not be higher than 2.0 Hz;
- (b) the mean damping ratio must be more than 20% of critical damping (C_0) for the suspension in its normal operating condition;
- (c) the damping ratio of the suspension with all dampers (if fitted) removed or incapacitated must be not more than 50% of the mean damping ration
- (d) in the case of multiple axle groups the static load share between axles in the group must be within 5%.

Components

Dual tyres must be fitted on the axles except in the case of a six tyred tandem axle group where one axle in the group may have single tyres fitted.

Definitions for the purpose of this Schedule

“**load-share**”, in respect of a suspension system on a multi axle group, means a suspension system that-

- (a) is built to divide the load between the tyres on the group so that no tyre carries a mass more than 5% greater than the mass it would carry if the load were divided equally; and
- (b) has effective damping characteristics on all axles of the group.

“frequency and damping”

In this definition a sprung mass “ M (kg)” above a driving axle or bogie is considered.

The axle or bogie has a total vertical stiffness between the road surface and the sprung mass of K Newtons/metre (N/m) and a total damping coefficient of C Newtons per metre per second (N.s/m).

The vertical displacement of the sprung mass is Z .

The equation of motion for free oscillation of the sprung mass is-

$$M \frac{d^2Z}{dt^2} + C \frac{dZ}{dt} + kZ = 0$$

The frequency of oscillation of the sprung mass F (rad/sec) is-

$$F = \sqrt{\frac{K}{M} - \frac{C^2}{4M^2}}$$

The damping is critical when $C = C_0$
where-

$$C_0 = 2\sqrt{KM}$$

The damping ratio as a fraction of critical damping is C/C_0 .

During free transient oscillation of the sprung mass the vertical motion of the mass will follow a damped sinusoidal path. The frequency can be estimated by measuring the time for as many cycles of oscillation as can be observed. The damping can be estimated by measuring the heights of successive peaks of the oscillation in the same direction. If the peak amplitudes of the first and second cycles of the oscillation are A_1 and A_2 , then the damping ratio D is,

$$D = \frac{C}{C_0} = \frac{1}{2\pi} \ln \frac{A_1}{A_2}$$

where 'ln' is the natural logarithm of the amplitude ratio.

“**critical damping**” means the minimum amount of viscous damping required in a linear system to prevent the displacement of the system from passing the equilibrium position upon returning from an initial displacement.

“**damping ratio**” means the ratio of the amount of viscous damping present in a system to that required for critical damping.

“**viscous damping**” means damping in which the force opposing the motion is proportional and opposite in direction to the velocity.

“**DM**” means the mean damping ratio.

“**DR**” means the damping ratio with all dampers removed or incapacitated.

“**C**” means viscous damping.

“**Co**” means critical damping constant.

“**F**” means the frequency of oscillation of the sprung mass.

“**M**” means the sprung mass of suspension.

“**K**” means the total vertical stiffness between the road surface and the sprung mass.

“**Z**” means the vertical displacement of the sprung mass.

“**A1**” means the peak amplitude of the first cycle of oscillation.

“**A2**” means the peak amplitude of the second cycle of oscillation.