

“SAFETY THROUGH EDUCATION”

PROJECT SUPPORTED BY HVSI

ONLINE TRAINING COURSES

LOAD RESTRAINT FUNDAMENTALS

BEST PRACTICE TYRE MANAGEMENT

1 DECEMBER 2023



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PROJECT OVERVIEW

“Load Restraint Fundamentals” and “Best Practice Tyre Management” are new courses on the HVIA Training online education platform.

Heavy Vehicle Industry Australia’s (HVIA) “Safety Through Education” project received key funding through the National Heavy Vehicle Regulator’s (NHVR) Heavy Vehicle Safety Initiative (HVSII), supported by the Federal Government.

The HVSII program supports key initiatives that deliver tangible safety improvements for the heavy vehicle industry and all road users.

The grants enable the NHVR, local governments, industry and other stakeholders to develop innovative solutions to achieve a shared goal of safer drivers, safer vehicles and safer road use for all Australians.

HVIA’s Safety Through Education project was one of 28 successful heavy vehicle safety initiatives to receive funding from \$5.5 million in Round 6 of the HVSII.

The HVSII funding enabled HVIA to contribute a valuable training resource towards improved heavy vehicle safety outcomes across the supply chain.

“Best Practice Tyre Management” online course by HVIA Training

Correctly specified and maintained tyres and wheels improve the safety outcomes of the most critical and most consumable heavy vehicle component.

The Best Practice Tyre Management course guides operators to develop their own procedures including maintenance, rotation and replacement policies.

“Load Restraint Fundamentals” online course by HVIA Training

Packing, loading and load restraint requirements are relevant to the entire transport supply chain.

Load Restraint Fundamentals will ensure heavy vehicle operators and other members in the chain understand their responsibilities and refresh their knowledge as required.

HVIA Training portal

The immersive online courses are undertaken via the HVIA Training learning management system.

Companies and organisations seeking to enrol multiple participants are able to appoint group leaders to manage their teams with full back-of-house access and visibility.

Project Objective

The project aimed to transform the volumes of written guidance information into simple and practical online courses, providing a relevant, accurate and immersive educational experience.

The two interactive online training tools cover best practice procedures for load restraint and tyre management - two issues that have been consistently over-represented in accident statistics and compliance breaches.

It is hoped that every fleet owner or manager will see the value in making the courses a part of their on-boarding process and build them into a program of refresher training that even the best and safest drivers should be receiving.

The courses are delivered on a proven learning platform, to enable successful participation by drivers and workers across the supply chain, with the ambition of affecting improved safety outcomes.



Project Background

The Heavy Vehicle National Law has specific chain of responsibility provisions that places an obligation for parties in the chain, to ensure they conduct safe transport activities.

That includes packing, loading, load restraint and vehicle roadworthiness. (equivalent provisions apply in WA and NT).

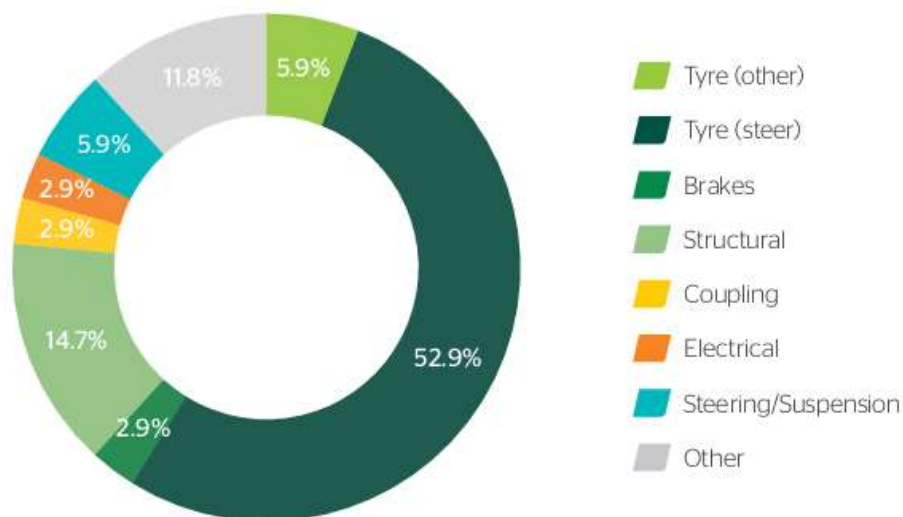
National Transport Insurance's (NTI) NTARC Major Accident Investigation Report series has consistently highlighted the safety-critical nature of load restraint and tyre management practices, which are also often raised by roadside enforcement officers as areas of concern.

In fact, the 2020 NTARC Major Accident Investigation Report identified that of the major losses attributed to mechanical failure, tyres accounts for 60% of the accidents. This is primarily made up of steer tyre failures but also captures other tyre issues.

To put this into perspective, the other seven possible reasons for a mechanical failure combined – which includes items such as: brakes, couplings, structural issues, electrical issues or steering/suspension failures – attributes the remaining 40%.

The data confirms that operational policies, maintenance systems and management for tyres, as the biggest consumable for a heavy vehicle and the only component which has contact with the road, is critical to safety.

Mechanical failure losses by sub-cause



NTARC Major Accident Report 2020

The evidence indicates that relative industry experience and knowledge around tyre management and performance, the frequency of pre-start checks and the lack of education resources pertaining to tyres, are all factors in the high correlation between tyres and major accidents involving a heavy vehicle.

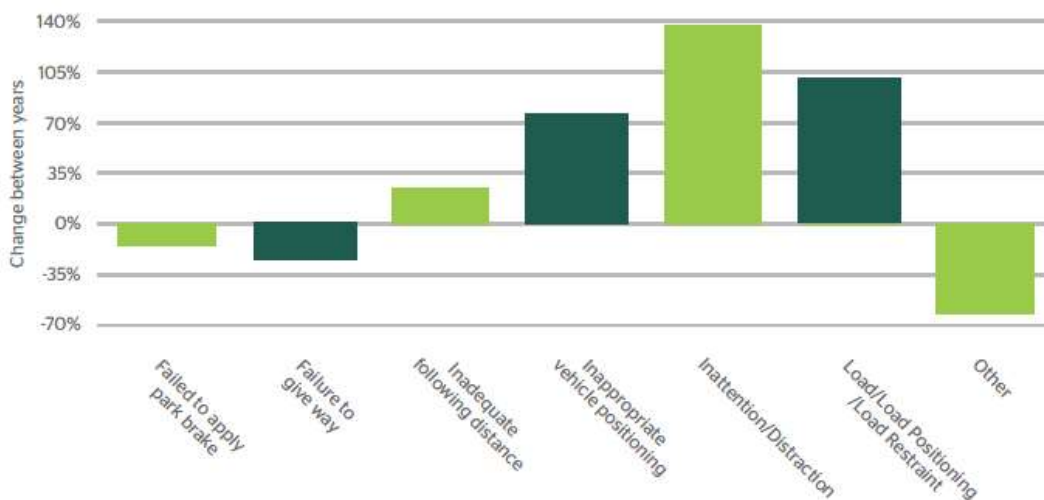
This is quite distinct from Load Restraint, where there is a wealth of information and educational resources, but unfortunately presented in a cumbersome, lengthy, legalistic way which misses the mark on the intended audience.

HVIA's determination to make a difference in this area was only confirmed by two news articles appearing in one week. The first came from the NSW Police, who released details of a compliance blitz on 4 February 2021. Of the 60 vehicles stopped, 49 traffic infringement notices were issued – primarily in relation to fatigue and load restraint.

The other article detailed the primary duty charges by the NHVR following an incident that resulted in metal beams on the trailing vehicle smashing the rear window on the prime mover cabin. That story goes on to say, "The charges stem from the incorrect restraint of a load of a trailer by someone who had not been adequately trained in load restraint nor had any relevant experience restraining loads on heavy vehicles."

HVIA remains unconvinced that all parties in the chain are adequately trained and understand their legal responsibilities, not to mention the safety risks; so, on the back of the development and launch of HV101 online induction course, HVIA determined that online courses would provide a valuable, assessable tool to ensure all participants could demonstrate their comprehension of key concepts and the steps required to develop safe systems for their own operations.

Proportional change in number of driver error incidents by subcause between 2017 and 2019



HVIA'S CAPACITY TO DELIVER

Even prior to COVID, HVIA had identified the benefits of investing in online education tools to reach a wider audience.

Traditional learning is resource intensive, time consuming, inflexible and costly for members – not to mention logistically impractical, particularly with HVIA's members spread to all corners of the country in both metropolitan and rural locations.

HVIA launched the HVIA Training learning management system (LMS) – its online educational resource – in October 2020, with a comprehensive multifaceted course called HV101.

As an induction-style course, HV101 has become a staple for introducing concepts and terminology to people entering or working with the heavy vehicle industry.

HGVIA is committed to ongoing investment in the LMS including its ongoing administration and maintenance. As an increased range of content is being gradually moved and developed for the platform, HVIA seeks to make training resources more affordable, accessible and convenient.

As an example, HVIA was able to reduce the price of a former half-day course, centred around the HV101 content, from \$450 for in-person training, to \$29 for the online HV101 version, (based on a subscription of 50 enrolments or more).

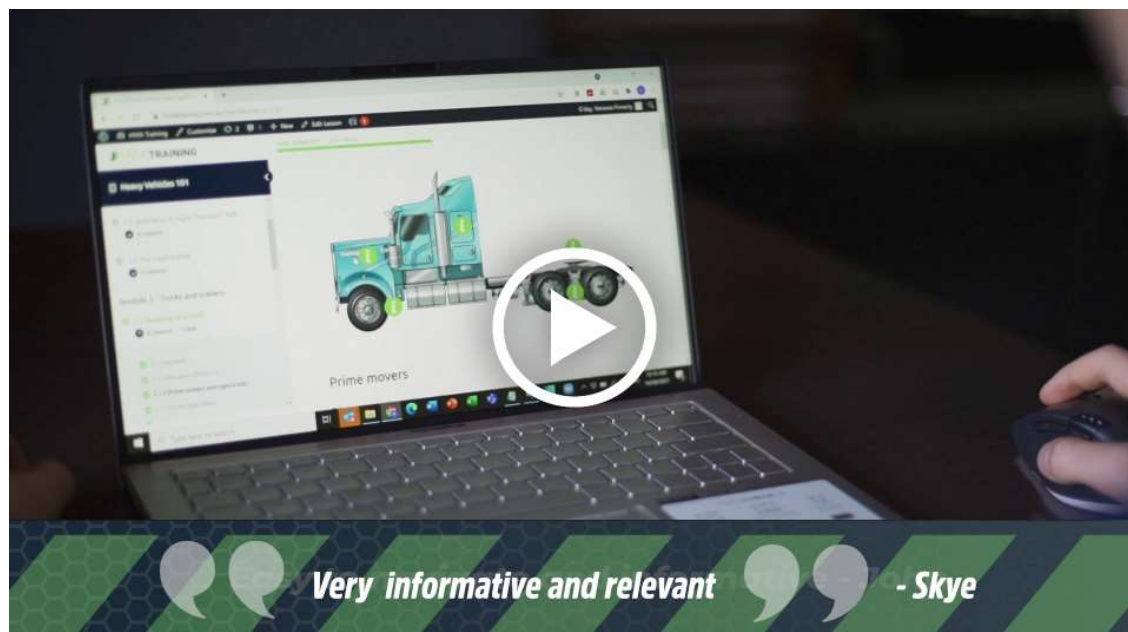


Figure 1: HV101 has become an integral part of many businesses' induction programs

HVIA's LMS has also been used as the mechanism for the National Apprentice Challenge examination, with apprentices from the length and breadth of Australia undertake in hope of selection for their state team to compete at the Brisbane Truck Show.

The data, research and resources that underpin each of HVIA's online courses is drawn from a combination of proprietary information, members, the government and its regulatory agencies, and an extensive array of bespoke content developed specifically for the courses.

For instance, video demonstrations have been filmed with the assistance and cooperation of HVIA members and their customers; animations have been produced built on illustrations developed by the NHVR and National Transport Commission and key learnings have been ratified by subject matter experts, including NHVR managers, engineers and roadside enforcement specialists.

While HVIA is proud of the original and creative content produced specifically for the courses, priority is always given to accuracy and consistency with industry standards, manuals and best-practice resources.

Beyond that, it is about crucial that the courses have visibility to ensure that they are adopted as widely as possible. As owners and producers of the Brisbane Truck Show, HVIA has a large and reliable database of Australian heavy vehicle industry operators, suppliers and other stakeholders.

Between its various communication channels and that world-class showcase, HVIA is well placed to ensure that the courses receive effective exposure to their target audiences.

HVIA intends that every fleet owner or manager will see the value in making these new courses part of their on-boarding process and build them into a program of refresher training that even the best and safest drivers should be receiving.



PROJECT PLAN

The project was built around a nine-stage model, each with its own timeline and key performance indicators. As with any significant project, there were many intersections between the stages, with dependencies for the progress reliant on successful achievement of milestones in other parts of the project.

1. Convene project and consultative working groups

- a. Load Restraint Project – a process to engage expert stakeholders has been undertaken, taking into account work that has already been done in this space.
- b. comprising various HVIA members as a subset of HVIA's State Committees (Qld, Vic, NSW, WA), NHVR, QTA, MaxiTrans, NTI, Toll, Parkes Shire Council, National Road Safety Partnership Program.
- c. HVIA convened a tyre working group including external stakeholders and HVIA members representing different product specialisations including:
 - Tyres: Bridgestone, Michelin, Goodyear
 - Wheel rims: Alcoa/Howmet
 - Tyre inflation management systems: AIR CTI, TyreSafe Australia
 - Braking: Levanta
 - External consultation includes: Australian Tyre Industry Council, ATA Industry Technical Council, NHVR, NTI, NSW Centre For Road Safety



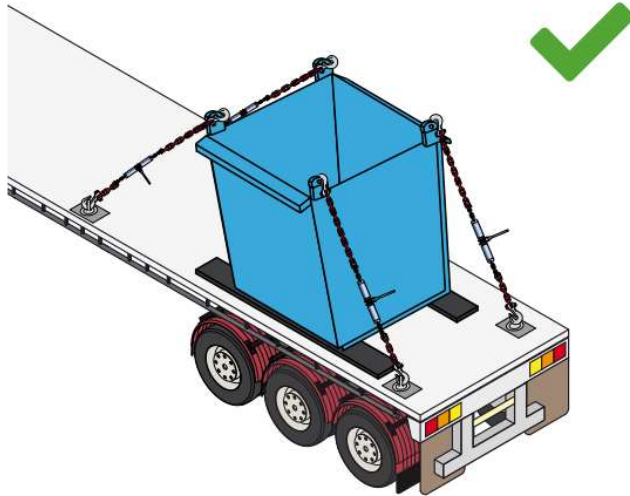
Figure 2: HVIA facilitated a Load Restraint Masterclass at the ATA's Trucking Australia '22 conference; the well-attended session prompted strong engagement from a passionate audience of industry leaders.

2. Ratify project plan, timeline and deliverables

- a. The Load Restraint project:
 - deliver an online course designed to test the user's comprehension of load restraint principles and ability to apply them.
 - for launch at the Brisbane Truck Show in May 2023.
 - housed on the HVIA LMS (and ideally transferrable to all compatible LMS.)
- b. The Best Management Tyre Management Project
 - deliver an online course aimed at fleet managers, workshops, equipment purchasers, fleet operators and drivers.
 - The course addresses three overarching issues:
 - 1. Poor selection when purchasing new tyres
 - 2. Recognising the symptoms of unusual tyre wear or damage
 - 3. Poor tyre in service management
 - for launch at the Brisbane Truck Show in May 2023.

3. Commence Content and Literature Review

- a. The Load Restraint project does not seek to reinvent the wheel. Its point of difference is creating an assessable tool, to ensure that course participants demonstrate their comprehension of load restraint principles and are equipped to put them into practice.
- b. The “source of truth” for the project is the NTC Load Restraint Guide 2018.
 - Alongside that the ATA-ALC MasterCode (2018).
- c. Many other resources and reference materials are being collated and reviewed including industry specific documents, guides, training materials and safety campaigns.
 - Those materials will be available in an online reference portal.
- d. The Best Practice Tyre Management project is utilizing materials sourced from HVIA members, industry stakeholders and peer organisations both within Australia and internationally.
- e. Regulation and existing codes of practice are very light on in terms of identifying and providing guidance on tyre management.
- f. The process of collating and condensing those materials is expected to create an Australia-specific guide to be made available as a supplementary resource.



4. Content Gap Analysis

- a. Ensure any necessary technical updates and software upgrades to ensure correct hosting (LMS, websites etc)
- b. HVIA to scope experienced course builders and delivery options, to ensure the course will be compatible with existing LMS systems as far as possible and practicable, for the widest potential uptake.
- c. Subject to further investigation, HVIA may partner with safety/CoR management systems providers to house and maintain the course, provided it is not restricted by any subscription models.

5. Source marketing provider from grantees approved suppliers

- a. HVIA has a shortlist of agencies who will be asked to tender for the opportunity to develop marketing materials
- b. Primary initial marketing will occur directly to existing HVIA databases, through HVIA members to their customers, through Brisbane Truck Show collateral, PR and live events, and through targeted social media marketing.



6. Develop Communication and Engagement strategy

- a. Identify and confirm:
 - target audiences:
 - value proposition:
 - transaction process
 - marketing split

7. Engage BETA testers

- a. BETA testing was performed by the working group, committee; the grantees' broad group of stakeholders also provided access to a broad array of transport operators undertaking a wide range of transport tasks to conduct testing
- b. HVIA facilitated a conference session on Load Restraint at the ATA's national conference Trucking Australia. Attendees were invited to sign-up to engage with the project and will be invited to test the BETA product in due course.
- c. The testing will be done progressively. The launch will be a final product ready to go.

8. Launch

- a. Promotion and targeted media campaign (Aug 2022 – March 2023)
- b. Promotion using the Brisbane Truck Show May 2023.

9. Evaluation

- a. Program reach
- b. Completion survey
- c. Reviews/testimonials.



PROGRAM DESIGN AND STAKEHOLDER CONSULTATION

The *Load Restraint Fundamentals* and *Best Practice Tyre Management* courses were developed in tandem as part of the *Safety Through Education* project.

HVIA's member organisations, the NHVR and other industry stakeholders provided their time, resources and experience to the development of the courses.

CONTENT DEVELOPMENT

The flow of the “story” through a logical and intuitive process is important for the participant to be able to comprehend the growing body of knowledge, with that comprehension assessed at appropriate points.

The structure of the two online courses is a hierarchy of modules, topics and lessons.

- The project outlines went through an extensive process of consultation, with further development occurring based on feedback and scenario testing.
- Once course outlines were ratified each topic and lesson were developed individually.

This process preceded the development of the actual training modules, including production of media to accompany it.

- Where possible “wish lists” were developed so that photographic shoots, and film production could be progressed.
- That included determining priorities for live action footage and animations where determined to be most appropriate.

Course working group members reviewed lesson outlines, scripts and storyboards and then tested the course online as modules became available in BETA mode.



Further consultation activities

- Conducted a session at Trucking Australia 2022
 - featuring an in-person workshop with key NHVR on road enforcement managers to engage attendees on their own experiences with load restraint practice and enforcement issues.
- Workshopped with subject matter experts
 - HVIA staff presented the entirety of the load restraint course material to designated NHVR managers, and responded to valuable detailed feedback that helped shape real-world applicability, particularly from an regulatory enforcement perspective.
 - Tyre course material was tested with HVIA's stakeholder group, which comprises industry representatives from tyre and rim suppliers, equipment suppliers, and tyre technology manufacturers.
- Learning Management System (LMS)
 - HVIA's existing LMS 'Learndash' was selected to host both new courses.
 - The platform is fully integrated with the dedicated HVIA Training website, and also hosts HVIA's existing 'HV101' introductory course.
- Imagery
 - Original artwork files from the 2018 NTC Load Restraint Guide were made available for use, enabling consistency between the Load Restraint Guide (2018) and course materials.
- Fleet operators
 - Fleets with operations in metropolitan Melbourne and Brisbane were approached and offered the chance to provide vehicles, drivers, and equipment to be filmed for a series of short clips that would support both courses.
- Tyre manufacturers
 - Filming activities were undertaken at a Brisbane truck tyre workshop.
- Load restraint specialist
 - A load restraint equipment supplier (Rud systems) participated in some filming and photography activities.
- Animation
 - An animation studio was engaged to design and generate still images and short animations to support the written content.



HIGH-LEVEL COURSE OUTLINES

BEST PRACTICE TYRE & RIM MANAGEMENT

- **Module 1 – Best Practice Tyre Management – Introduction**
 - 10 Lessons | 1 Quiz
- **Module 2 – Best Practice Tyre Management**
 - 4 Lessons | 2 Quizzes
- **Module 3 – Tyre and Wheel Selection**
 - 8 Lessons | 2 Quizzes
- **Module 4 – Tyre Pressures**
 - 8 Lessons | 2 Quizzes
- **Module 5 – Tyre and Wheel Condition**
 - 8 Lessons | 2 Quizzes
- **Module 6 – Wheel Alignment and Balance**
 - 5 Lessons | 2 Quizzes
- **Module 7 – Inspections and Maintenance**
 - 6 Lessons | 2 Quizzes
- **Module 8 – Repairs and Storage**
 - 7 Lessons | 2 Quizzes
- **Module 9 – Procedures, Responsibilities, Training and Equipment**
 - 5 Lessons | 2 Quizzes
- **Conclusion**
 - 1 Lesson

LOAD RESTRAINT FUNDAMENTALS

- **Module 1: Load restraint – What is it all about?**
 - 9 Lessons | 1 Quiz
- **Module 2: Understanding the load**
 - 8 Lessons | 1 Quiz
- **Module 3: Vehicles and load restraint equipment**
 - 9 Lessons | 1 Quiz
- **Module 4: Calculating the right restraints**
 - 7 Lessons | 1 Quiz
- **Module 5: Ten step load restraint plan and checklists**
 - 11 Lessons | 1 Quiz

MARKETING PLAN

PRODUCT: BEST PRACTICE TYRE MANAGEMENT

TARGET AUDIENCES:

- staff directly involved in transport, maintenance, support, operations, and driving
- managers, executives, and other parties wishing to understand their Chain of Responsibility obligations in these areas
- new entrants to the transport industry, and persons with experience wishing to refresh or extend their knowledge
- persons working in roles that face the heavy vehicle industry, such as government agencies or departments.

VALUE PROPOSITION:

- a comprehensive overview of the best practice tyre and wheel management principles for the heavy vehicle industry
- correctly specified and maintained tyres and wheels is critical to safety.
- Single or Group
- Group Dashboard
- Spread investment across courses

CALL TO ACTION:

- Save money and save lives – two good reasons to do this course

TRANSACTION PROCESS

- Register at hviatraining.com.au

MARKETING SPLIT

- Magazine
 - ad placement (funded by HVSI grant)
 - RoadBoss editorial and ad placement
- Media release
- EDM's
- Talk the Torque
- Social
 - HVIA LinkedIn
 - BTS Facebook (paid placements funded by HVSI grant)
- Video production (x3) (production funded by HVSI grant)
 - Shortform teaser (HVIA website, BTS website, social media etc),
 - Longform (HVIA Training website)
 - HVIA Training – multi course Group Dashboard

PRODUCT: LOAD RESTRAINT FUNDAMENTALS

TARGET AUDIENCES

- This course is intended for anyone who has any role in arranging the transport, of goods in or out of an organisation and anyone who manages staff that undertake these tasks
- staff involved in the process of handling goods that enter or leave the organisation including drivers
- managers, executives, and other parties wishing to understand their Chain of Responsibility obligations in these areas
- new entrants to the transport industry, and persons with experience wishing to refresh or extend their knowledge
- persons working in roles that face the heavy vehicle industry, such as government agencies or departments

VALUE PROPOSITION

- Upon completion, you will understand why load restraint is important and be able to explain:
- the load restraint performance standards
- the key strategies used for restraining loads (tie down and direct restraint)
- which strategies and vehicles are appropriate for different types of load
- different types of load restraint equipment and their strengths and weaknesses
- how to decide whether you have enough equipment to adequately secure your load
- how to use the checklist outlined in the load restraint guide to ensure the load arrives safely at its destination.

CALL TO ACTION

- If your role involves goods getting from A to B - you need to understand load restraint fundamentals.

TRANSACTION PROCESS:

- Register at hviatraining.com.au

MARKETING SPLIT

- Magazine ad placement (funded by HVSI grant)
- Media release
- Talk the Torque
- HVIA LinkedIn
- BTS Facebook (paid placements funded by HVSI grant)
- Video production (x3) (production funded by HVSI grant)
 - shortform teaser (HVIA website, BTS website, social media etc),
 - longform (HVIA Training website)
 - HVIA Training – multi course Group Dashboard

SUMMARY

HVIA is grateful to the National Heavy Vehicle Regulator and the Federal Government for their continued investment and support of industry-led safety initiatives through the Heavy Vehicle Safety Initiative (HVSII) grant scheme.

In this instance that support enabled the creation of two best-practice courses which are now available for use by industry participants and stakeholders.

Their purpose is to improve the safety systems and practices, and thereby the outcomes of their operations.

The HVSII funding initiative has been instrumental in improving resources and training available for road transport operators.

The HVIA team worked hard to ensure the courses address these important safety concepts in a way that engages their audience; the generous assistance and guidance invested by so many parties during the project has really paid off.

PROGRAM REACH

HVIA is utilising its full array of communication channels, support from members and its partnerships and broader industry relationships, to position the courses as the best available devices to inform and test the concepts and principles that form the basis of each course.

The courses are now a major part of HVIA's suite of education tools and will receive full ongoing support and investment, to maximise their reach and the longevity of their relevance and workplace applicability.

The courses were undertaken by over one hundred participants during development and BETA testing, and over 400 participants were registered in the promotional period following the launch.

KEY FINDINGS

There is no doubt that delivery of projects like these are a major undertaking, so should not be taken lightly.

HVIA hopes that the NHVR and Federal Government will continue to support the Heavy Vehicle Safety Initiative which has been responsible for numerous worthy projects since its inception in 2017.

These two courses have emerged from opposite ends of the spectrum in terms of where they fit amongst existing resources.

In the case of load restraint, there are numerous public and private resources and campaigns, most of which are consistent in referencing the 2018 Load Restraint Guide as the source of truth.

The gap that HVIA sought to fill was to ensure that the knowledge and comprehension was practical and tangible and able to be tested.

Tyre management is quite the opposite, with very little in the way of published guidance, which is surprising given how prevalent tyres are as a consumable operating expense.

The savings to be made from an economic and productivity perspective should be enough to motivate more attention, however the demonstrable safety outcomes are much more than a convenient side-effect of that effort.

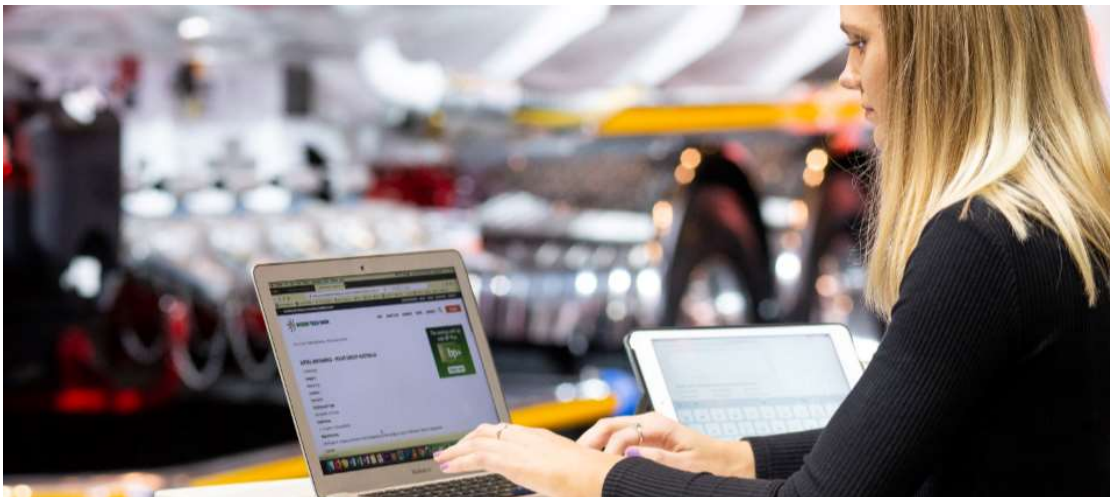
When presented with these topics for discussion, an experienced driver or fleet manager might be inclined to say they already know these fundamentals, but the reminder and reinforcement of first principles is invaluable towards ensuring that these learnings are put into practice, especially in a systemised way.

ONGOING OPERATION

HVIA Training is run as a business unit managed by HVIA staff. HVIA is suitably resourced to ensure that customer service is responsive, technology and service is maintained and course content is reviewed and revised frequently.

All participants are invited to complete a brief survey at the completion of each of the courses, and the feedback has already proven invaluable towards refining the course and the user experience.

The Safety Through Education project courses are available at: hviatraining.com.au



APPENDIX 1: ABOUT HVIA

Heavy Vehicle Industry Australia (HVIA) represents and advances the interests of manufacturers and suppliers of heavy vehicles and their components, equipment and technology.

HVIA's membership includes almost every major truck manufacturer/importer, most of Australia's major trailer manufacturers and an ever-growing list of their suppliers and distributors.

The association's 300+ corporate members, plus their offices and branches across Australia, reap the rewards of membership through a range of benefits such as:

- low-cost membership,
- opportunities to engage and contribute to industry policy development,
- regular networking events and information forums across the country
- advocacy to government and its regulatory agencies on national, regional & local issues
- technical & regulatory support service
- EmployerASSIST – HR & IR Hotline
- world-class national events including the Brisbane Truck Show – the southern hemisphere's largest road transport event

HVIA is committed to providing leading advice and assistance to its members and directing and influencing policy at all levels of government with a commitment to delivering the best possible outcomes for its members, the wider industry and the community.

HVIA is well-resourced to deliver our key work programs:

Advocacy, Member Services, Workforce Development and National Events

PURPOSE

To represent and advance the interests of the entire heavy vehicle industry.

MISSION

To advocate for a successful and sustainable heavy vehicle industry with a strong unified voice.

VISION

An innovative and prosperous heavy vehicle industry, supporting the safest and most productive fleet.

WHAT IS THE HEAVY VEHICLE INDUSTRY?



The entire industry involved in the design, manufacture, importation, distribution, modification, sale, service and repair of on-road vehicles with a gross vehicle mass or aggregate trailer mass over 3.5 tonnes as well as their components, equipment and technology.

Australia is a world leader in many aspects of heavy vehicle transport. We have a thriving and robust local industry that comprises hundreds of innovative trailer, specialised vehicle, component, equipment and technology manufacturers and suppliers in addition to the product assembly of global heavy vehicle brands such as Volvo, Mack, Kenworth, DAF, Iveco, SEA Electric and now Hyzon.

Australia's Heavy Vehicle Industry directly employs over 80,000 people and manufactures, services and repairs some of the world's most efficient, safe, innovative and technologically advanced vehicles.

The increasing pace of technological change presents substantial challenges to industry and to regulators. There is also a significant focus on innovation and regulatory reform to support the performance of the Australian economy into the future.

APPENDIX 2. STEERING COMMITTEE & WORKING GROUP MEMBERS

The Project team oversaw the “Safety Through Education” project including producing all content.

- Adam Ritzinger HVIA Tyre Management project lead
- Greg Forbes HVIA Load Restraint Fundamentals
- Steve Power HVIA Project administration
- Vanessa Finnerty HVIA LMS Management, Voiceover
- Harrison Hunkin HVIA Voiceover
- Tom Chapman Contractor LMS and web
- Aeran Thomas Contractor LMS and web
- Jenny Power Webtree Web platform and hosting management
- Luke Blair Video Production & Photography
- Daniel Neucom Photography
- Amber Gustin Graphic Design
- Sandra Walters KAPOW Animation studio

The Project working and consultation groups ensured the project was aligned with the project objectives and best-practice.

HVIA expresses its gratitude to the many individuals and organisations who provided advice, resources and time towards the development of the Best Practice Tyre Management and Load Restraint Fundamentals courses, especially:

- Team Global Express & Toll Group – trucks, driver/loader and depot
 - Adam Holland
 - Marion Mayo, Stuart Baker
- Michelin – Brisbane tyre workshop
 - Darren Wong and Ben Linford
- HVIA Tyre Working Group:

<ul style="list-style-type: none"> ◦ LSM Technologies Pty Ltd (Peter Woodford, Kelvin Nicholson) ◦ Car-o-liner (Rickard Eriksson, Joe Bourke) ◦ Goodyear (Bruce Ansell, Tom Ruessman) ◦ National Tyre & Wheel (Tracy Griffin) ◦ Tyres4U (Dean Ward) ◦ Tyre Traders (Daniel Sapstead) 	<ul style="list-style-type: none"> ◦ Howmet (Michael Nichols) ◦ Meikawheel (Stephan Rausch) ◦ Australian Tyre Industry Council (Silvio De Denaro) ◦ Tyre Evolution (Mick Small) ◦ Bridgestone (Garth Middleton) ◦ AirCTI (Wendy Cline)
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- National Heavy Vehicle Regulator subject matter expert advisors including:

<ul style="list-style-type: none"> ◦ Peter Rouse ◦ Paul Daly 	<ul style="list-style-type: none"> ◦ Callum Frazer ◦ Timothy Brown
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APPENDIX 3. RESOURCES

Load Restraint

NHVR Mass Dimension & Loading .../road-access/mass-dimension-and-loading/loading

NHVR Load Restraint Guide 2018 [NTC] .../files/202112-1285-load-restraint-guide-2018.pdf

Plus various independent studies, articles, campaigns, manuals and training materials

Tyre Guide\Library\

N#01 - 2016 09 16 Wide Base Tires Report - 091616 supersingles.docx

N#02 - 2019_ALCOA service_manual_english.pdf

N#03 - 202101-1208-nhvr-directional-stability-under-braking-discussion-paper.pdf

N#04 - ADAMG-Asian Trucker issue 45 Tyre Business article.pdf

N#06 - BTMA-Driver-Check-List-A4-v4.pdf

N#07 - BTMA-Tyre-Management-on-Heavy-Vehicles-Booklet.pdf

N#08 - ETRMA-Type-approval requirements for motor vehicles as regards general safety.pdf

N#09 - ETRTO recommendations - edition 25 March 2015 with translations of the c....pdf

N#10 - FW Snow Chains on Heavy Vehicles.msg

N#11 - Influence of tyre inflation pressure on whole-body vibrations.pdf

N#12 - MichelinService Manual 2009 lowres.pdf

N#13 - MichelinTB Technical Databook 2019.pdf

N#14 - NHVR PBS ISSUES Pres 2018 may 25 PBS tyre.pdf

N#15 - NSW crashstats2020.pdf

N#16 - NTARC-2020-Msjor Accident Report.pdf

N#17 - pp18 07 NZ design rules tyres-and-wheels-2001.pdf

N#18 - QLDgov Tyre,wheel,rim management.pdf

N#19 - questions answers from Dept ITC&RD ref 19. SQ19-000411.pdf

N#20 - Recognised standard 13 Tyre wheel and Rim management.pdf

N#21 - RiskManagementTyreFitting.pdf

N#22 - TAPs - Tyre inflation and operation Draft January 2019 v6.pdf

N#23 - TAPs - Wheel End Security Third Edition April 2016.pdf

N#24 - TPMS European General Road Safety Regulation.pdf

N#25 - Tyre safety for earth-moving machinery on WA mining operations - guideline.pdf

N#26 - TyreBlowOutSafety.pdf

N#27 - TyreInflationInjuryStats _ Elsevier Enhanced Reader.pdf

N#28 - TyreInflationSafety.pdf

N#29 - TyreTrends 2106 eml.pdf

N#30 - Underover inflation affecting stoppnig distance.pdf

N#31 - Understanding the whole-body vibration produced by mining equipment as a role-player in workers' well-being – a systematic review _ .pdf

N#32 - UNECE brake testing PVGTR2004-18_test-wipe_.doc - PVGTR-2004-18e.pdf

N#33 - 5 Nitrogen Inflation of Tires Study Final (NHTSA)[784].pdf

N#34 - NHTSA Tire Pressure Maintenance - A Statistical Investigation[788].pdf

N#35 - pp12_DOT_fuel efficiency rolling resistance email[789].pdf

N#36 - pp12_tyre-pressure-report-final[790].pdf

N#37 - TPMS_as_a_means_to_reduce_light-commercial_and_heavy_duty_fuel_use.pdf

N#38 - NHTSA PneumaticTire tyre HS-810-561 detailed discussion[786].pdf

N#39 - Tire related factors in the pre crash phase 2012 811617[783].pdf

N#40 - PP18 09 TNO EU report 2014 tyre safety discussion[792].pdf



Marketing Report

HVIA HVSI Courses

Load Restraint Fundamentals

Best Practice Tyre Management

PRACTICAL ONLINE LEARNING

Tailored courses for the heavy vehicle industry

COURSES

A career in the heavy vehicle industry is about far more than just your singular skillset – it is how your contribution fits into the big picture. Your role is a vital cog in the machinery that allows the trucking industry to keep Australia moving.

Our training programs will help you achieve your full potential in your career, your workplace, and in the heavy vehicle industry. Through a practical focus and flexible online study, you will elevate your knowledge and take your unique role to the next level.

Join thousands of people in sharpening your skills and widening your knowledge on the heavy vehicle industry today and gain the unique opportunity to positively engage, support and contribute to the future of Australia.

COURSES ON OFFER

Start with the basics, or dive right into technical topics. Heavy Vehicles 101 is a thorough introduction to the trucking industry, while Load Restraint Fundamentals and Best Practice Tyre Management offer comprehensive coverage of specific topics.



Heavy Vehicles 101

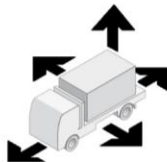
COURSE DETAILS

"Explore the Heavy Vehicle Industry"

Explore the world of heavy vehicles with our immersive HV101 online course.

Obtain a thorough overview of Australia's heavy vehicle industry, regulations, and diverse range of vehicles.

Master essential terminology and concepts tailored for both technical and non-technical roles.



Load Restraint

COURSE DETAILS

"Master Load Restraint Techniques"

Five practical and instructional modules to guide industry professionals on the best way to approach load restraint.

Find out how the major considerations in understanding the load, the vehicle, and the equipment.

Learn how to choose the right restraint method, and calculate the required restraints.



Tyre Management

COURSE DETAILS

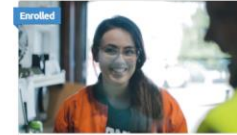
"Unlock Tyre Management Secrets for Heavy Vehicles"

Get in-depth instruction on the seven key principles of best practice tyre management.

Learn about the importance of pressure, tyre and wheel condition, and balance and alignment.

Discover how to set inspection intervals, and how to set procedures, responsibilities, training and equipment.

Courses



Heavy Vehicles 101

COURSE DETAILS



Best Practice Tyre Management

COURSE DETAILS



Load Restraint Fundamentals

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- 1 BEST PRACTICE TYRE MANAGEMENT
- 2 LOAD RESTRAINT FUNDAMENTALS

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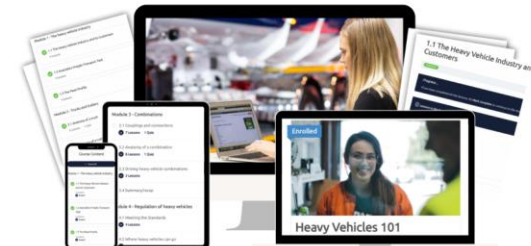
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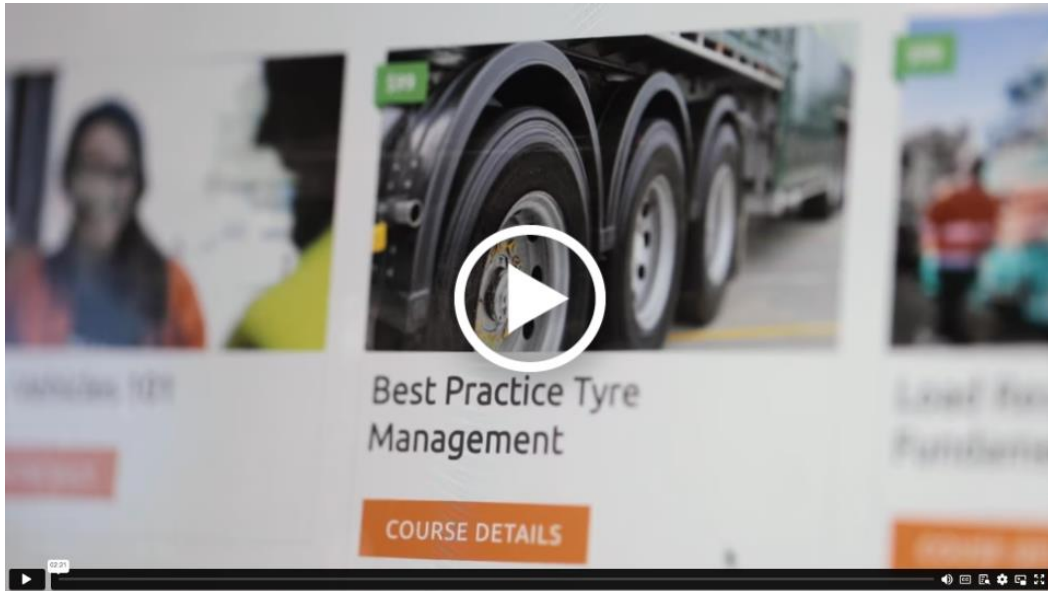
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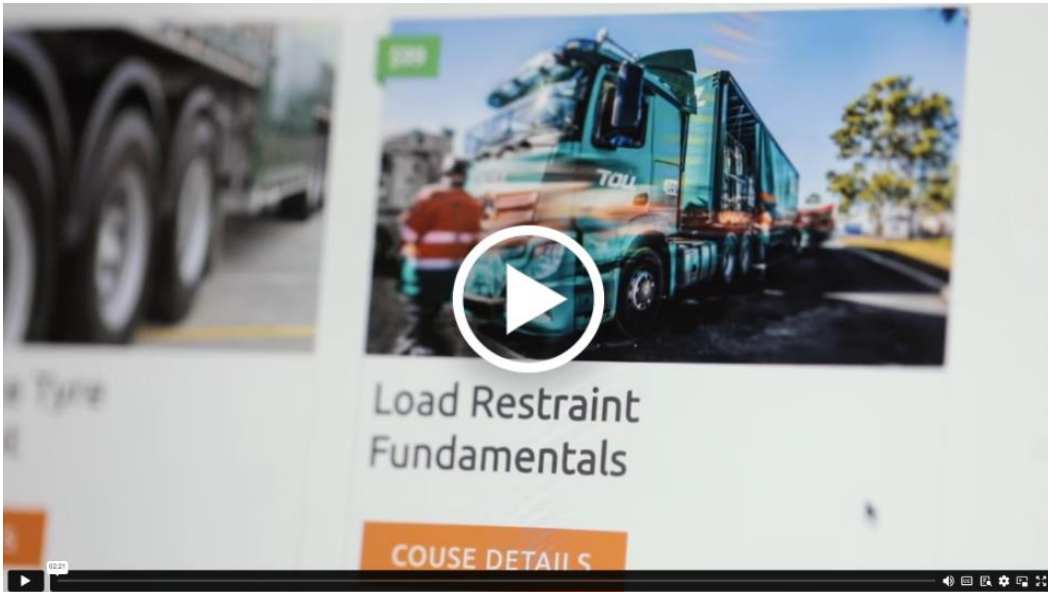


HVIA Training - Best Practice Tyre Management
<https://vimeo.com/854209931>



HVIA Training - Best Practice Tyre Management - Launch Special
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Promo videos: Load Restraint Fundamentals



Why your team should do Load Restraint Fundamentals
by HVIA Training
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HVIA Training - Load Restraint Fundamentals - Launch Special 2023
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*Use code "HVS1"

Essential Training

*practical, dynamic,
interactive
online learning!*

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HVIA has unveiled two new online courses, funded by the National Heavy Vehicle Regulator's (NHVR) Heavy Vehicle Safety Initiative (HVS1), and supported by the Australian Government.

The "Load Restraint Fundamentals" and "Best Practice Tyre Management" courses are the outcome of HVIA's Safety Through Education project with both now available on the HVIA Training online platform.

National Transport Insurance's (NTI) NTARC Major Accident Investigation Report series has consistently highlighted the safety-critical nature of load restraint and tyre management practices, which are also often raised by roadside enforcement officers as areas of concern.

HVIA's National Manager of Strategic Projects and Business Improvement, Steve Power, says the interactive online learning education courses will be transformative.

"The Load Restraint Fundamentals and Best Practice Tyre Management courses have been built on the same platform as HVIA's popular HV101," he says.

"As an induction-style course, HV101 has become a staple for introducing concepts and terminology to people entering or working with the heavy vehicle industry.

"We hope every fleet owner or manager will see the value in making these new courses part of their onboarding process and build them into a program of refresher training that even the best and safest drivers should be receiving.

"The proven platform enables successful participation by drivers and workers across the supply chain and will lead to improved safety outcomes."



Best Practice Tyre Management online course by HVIA Training

HVIA Chief Technical Officer Adam Ritzinger says correctly specified and maintained tyres and wheels improve the safety outcomes of the most critical and most consumable heavy vehicle component.

"The Best Practice Tyre Management course will guide operators to develop their own procedures including maintenance, rotation and replacement policies," he says.

Ritzinger says the Load Restraint Fundamentals course transforms complex written guidance information into a simple, immersive, practical online education course.

"Packing, loading and load restraint requirements are relevant to the entire transport supply chain," he says.

"Load Restraint Fundamentals will ensure heavy vehicle operators and other members in the chain understand

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HVIA Releases State Committee Meetings Agenda



FEATURED EVENTS



HVIA State Committee Meeting: WA – 31.10.23

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HVIA Training – Heavy Vehicles 101



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Thursday 14 September 2023

Tackling Heavy Vehicle Safety Through Online Education

Heavy Vehicle Industry Australia (HVIA) has unveiled two new online courses this week, funded by the National Heavy Vehicle Regulator's (NHVR) Heavy Vehicle Safety Initiative (HVSII), and supported by the Australian Government.

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"Packing, loading and load restraint requirements are relevant to the entire transport supply chain," he says.



TALK the TORQUE

by Heavy Vehicle Industry Australia

News, issues and events for the heavy vehicle industry

Wednesday 13 September 2023



Tackling Heavy Vehicle Safety Through Online Education

New online courses on load restraint fundamentals and best practice tyre management aim to improve safety outcomes for heavy vehicle industry

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[Read more](#)

Best Practice Tyre Management



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Load Restraint Fundamentals



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LOAD RESTRAINT

Fundamentals

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Tackling heavy vehicle safety through education



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September 13, 2023, 2:58 pm

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The Load Restraint Fundamentals course ensures that everyone in the chain understands their responsibilities.

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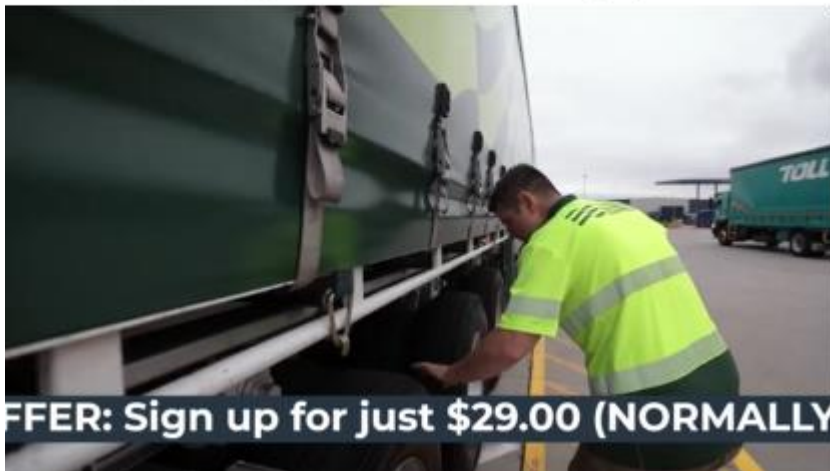


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HVIA's new Load Restraint Fundamentals course delivers practical, dynamic, interactive online learning. Transforming complex written guidance information into a simple, immersive, practical online education course. Sign up before the New Year for just \$29 per person - a saving of \$70! More info here: bit.ly/3PleLfk



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HVIA's new Best Practice Tyre Management course delivers practical, dynamic, interactive online learning. Learn how to develop your own procedures based on best practice tyre management principles including maintenance, rotation and replacement policies. Sign up before the New Year for just \$29 per person - a saving of \$70! More info here: bit.ly/3PleLfk





Issue 168 - 15 September 2023



HVSI funded project launches two educational courses for industry

Heavy Vehicle Industry Australia (HVIA) has launched two new online courses this week for industry, funded by the NHVR's Heavy Vehicle Safety Initiative (HVSİ) and supported by the

Australian Government.

A successful grantee from round 6 of the HVSİ, HVIA's 'Load Restraint Fundamentals' and 'Best Practice Tyre Management' courses are the result of the organisation's Safety Through Education project.

The HVSİ program supports industry-led projects, that address key issues in the transport and logistics sector and provide innovative solutions, to reduce road trauma and save lives.

Grantees have the ability to deliver crucial safety improvements, to contribute to a shared goal, of safer drivers, safer vehicles and safer road use.

HVIA's two interactive courses allow heavy vehicle operators and other members in the supply chain, understand their responsibilities when it comes to the safety-critical nature of load restraint and tyre management practices.

Find further information about HVSİ at: www.nhvr.gov.au/about-us/heavy-vehicle-safety-initiative

Use the code 'HVSİ' to access the courses at a heavily discounted rate on the [HVIA Training platform](#).

Toolbox Talks

TOOLBOX TALK



LOAD RESTRAINT Fundamentals

No matter your profession or role in the heavy vehicle industry, keeping everyone safe is paramount.

Adequately restraining your load is an essential part of keeping both your staff and the public safe.

- Even if your role does not see you behind the wheel of a truck, you may have an important part to play in ensuring loads are correctly restrained.
- The National Heavy Vehicle Regulator publishes the Load Restraint Guide, which explains best practice load restraint in Australia.
- Knowing how load restraint works will allow you to understand what part you can play in safe practices.

The 10 fundamentals of Load Restraint

1. Understand your load
2. Choose a suitable vehicle
3. Use a suitable restraint system
4. Position your load for vehicle stability, steering and braking
5. Check vehicle and restraint condition and strength
6. Make sure your load is secure
7. Use safe work practices
8. Make sure you use high restraint equipment
9. Allow for changes in driving conditions
10. Check the load and restraint regularly during your journey

These principles are explained in thorough detail in HVIA Training's **Load Restraint Fundamentals** online course. Upon completion, you will be able to explain:

- loading requirements including the load restraint performance standards
- key strategies used for restraining loads (tie down and direct restraint)
- which strategies and vehicles are appropriate for different types of load
- different types of load restraint equipment and their strengths and weaknesses
- how to decide whether you have enough equipment to adequately secure your load

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HVIA's Safety Through Education project is funded by the NHVR's Heavy Vehicle Safety Initiative, supported by the Australian Government.

TOOLBOX TALK



Best Practice TYRE MANAGEMENT

The tyre is the only piece of equipment on a vehicle that is in contact with the road, so it is the only real means by which a vehicle can safely accelerate, stop and most importantly, steer.

Tyres or wheels on a vehicle are not functioning correctly, affecting vehicle's handling, stability, and stopping distance. A negative impact, possibly to the extent that the vehicle becomes unsafe to drive.

In our 2020 Major Accident Investigation report, National Transport Insurance (NTI) analysed the causes of truck crashes resulting from mechanical failure, and found that steer tyre failure (blowout) contributed to over half (52.9%) of all mechanical failure crashes.

The 7 key principles of Best Practice Tyre Management

1. Choose tyres and wheels that are fit for the task
2. Regularly check tyre pressures
3. Regularly examine tyre and wheel condition
4. Wheel balance and alignment
5. Setting appropriate inspection intervals
6. Repairs, and storing tyres and wheels and other parts
7. Procedures, responsibilities, training, and equipment.

- These principles are explained in thorough detail in the Best Management Tyre Management online course by HVIA Training. The course is supported by diagrams, graphics, animations, and videos.
- No matter what your role is in the heavy vehicle industry, these courses are invaluable for on-boarding and refresher training for staff.
- Remember, if you have any concern about a safety issue please come talk to your team leader or supervisor. Together helps make our workplace and tasks safer.

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HVIA's Safety Through Education project is funded by the NHVR's Heavy Vehicle Safety Initiative, supported by the Australian Government.

Fact Sheets

FACT SHEET

 **HVIA TRAINING**
by Heavy Vehicle Industry Australia

LOAD RESTRAINT Fundamentals

Understand your load		Choose a suitable vehicle	
Use a suitable restraint system		Position your load for vehicle stability, steering and braking	
Check vehicle an restraint condition and strength		Make sure your load is stabilised	
Use safe work practices		Make sure you use enough restraint	
Allow for changes when driving		Check the load and restraints regularly during your journey	

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HVIA's Safety Through Education project is funded by the NHVR's Heavy Vehicle Safety Initiative, supported by the Australian Government.

FACT SHEET

 **HVIA TRAINING**
by Heavy Vehicle Industry Australia

Best Practice TYRE MANAGEMENT

Choose tyres and wheels that are fit for the task		Regularly check tyre pressures	
Regularly check for wear and condition		Monitor wheel balance and alignment	
Set appropriate inspection intervals		Plan for repairs, and storing tyres and wheels and other parts	
Establish procedures, responsibilities, training, and equipment.		Online course Develop your own procedures based on best practice tyre management principles	

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