



TECHNICAL ADVISORY PROCEDURE

SAFETY ALERT COMPENDIUM

EDITION 1 / September 2024

ATA ITC Technical Advisory Procedure

Safety Alert Compendium

Edition 1

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About this Technical Advisory Procedure (TAP):

This Technical Advisory Procedure (TAP) is published by the Australian Trucking Association Ltd (ATA) to assist the road transport industry in improving the safety of heavy commercial trucks and trailers.

This TAP is not, nor is it intended to be, complete or without exception.

The TAP is a guide only and its use is entirely voluntary. Recommendations or procedures may not be suitable for, or applicable to all operators. Operators should consider their own circumstances, practices and procedures when using this TAP.

Operators must comply with the Australian Design Rules (ADRs), the Australian Vehicle Standards Regulations, the Roadworthiness Guidelines and any specific information and instructions provided by manufacturers in relation to the vehicle's systems and components.

No endorsement of products or services is made or intended. Brand names, where used in this TAP, are for illustrative purposes only.

Suggestions or comments about this TAP are welcome. Please write to the Industry Technical Council, Australian Trucking Association, 25 National Circuit, Forrest ACT 2603.

About the ATA Industry Technical Council (ITC):

The Industry Technical Council (ITC) is a standing committee of the Australian Trucking Association (ATA). The ITC's mission is to improve trucking equipment, its maintenance and maintenance management. The ITC was established in 1995.

As a group, the ITC provides the ATA with robust professional advice on technical matters to help underpin the ATA's evidence-based policymaking. It is concerned with lifting technical and maintenance standards, improving the operational safety of the heavy vehicle sector, and the development of guidelines and standards for technical matters.

ITC performs a unique service in the Australian trucking industry by bringing operators, suppliers, engineers and other specialists together in a long-term discussion forum. Its members provide expert and independent advice in the field to inform the work of the ITC. The outcomes from ITC benefit all ITC stakeholders and the heavy vehicle industry at large.

The ITC operates under the Australian Trucking Association's Council, which formulates industry policy for implementation by the organisation.

We welcome applications to join the ITC. For further information, please call the ATA on (02) 6253 6900 or email ata@truck.net.au or download information from the ATA website www.truck.net.au, follow the links under the members tab to join.

Acknowledgement

The cover page was generously provided by Volvo Trucks Australia.

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Introduction

This Technical Advisory Procedure (TAP) was published by the Australian Trucking Association Ltd (ATA) to assist the road transport industry. ATA's ITC Safety Alerts and ATA's Fact Sheets are designed to get critical information to key technical personnel in trucking industry, but are not intended to be a long-term source of information. This compendium has been created to capture and become the repository for the long term.

These documents will be reviewed annually after 12 months from their initial release onto the ATA's website and if appropriate, they will be added to this TAP. They won't be examined for validity of links etc but will for technical relevance.

It is not, nor is it intended to be, complete or without exceptions.

1. Definitions


The source for definitions is the [ADR Definitions and Vehicle Categories](#).

ADR [Australian Design Rules 3rd Edition](#).

For further terms refer to [ATA's ITC Dictionary \[LINK\]](#)

2. Telstra, 3G to 4G Compatibility

Fact Sheet November 2023



How to identify 3G devices not compatible with Telstra's 4G network

Telstra will be closing its 3G network in June 2024. The 3G closure will let us grow and improve our delivery of next generation 5G technology - helping us provide a better service to our customers.

We're committed to providing equivalent 4G coverage in 3G only areas prior to the network closure.

Ahead of the 3G network closure, we strongly advise you assess your connectivity needs to ensure that you have the appropriate devices. If you currently have 3G only devices, they will no longer work after 30 June 2024.

It is important to note 3G devices may not be limited to phones and can also include:


- 3G only Telstra Mobile Smart Antennas
- 4G devices that don't support VoLTE (voice on 4G)
- Internet-of-Things (IoT) or Machine-to-Machine (M2M) devices such as EFTPOS, telemetry and some medical devices that are 3G only.

If you have a 3G only device, you will be unable to connect to Telstra's network after we close the 3G network on 30 June 2024. Likewise, if you have a mobile device that does not have Voice over LTE (VoLTE) technology, even if the mobile device is 4G, it will not be able to make voice calls after 30 June 2024.


Common devices not compatible with Telstra 4G

Network extension devices

Telstra 3G Smart Antenna or Cel-Fi RS2. These devices are 3G only and will not work once the 3G network is switched off.



Telstra Smart antenna TMSA 3G only



Cel-Fi RS2

Common devices not compatible with Telstra 4G

Antennas

Antennas are designed for a certain band or frequency. Using an antenna that is not compatible with the frequency servicing your location will ultimately impact your service and performance. There are a couple of ways to check your antenna:

- 1 The elements on a 3G only antenna are typically all the same length, as opposed to a 4G capable antenna which have elements of varying length (see examples below).



3G Only - Nearly all the elements on the antenna are the same length.



4G capable - Note how all the elements are a different length ranging from small at the front to large at the back.

- 2 Check the labels on your antenna. If you see a code starting with an B, or one that shows frequencies starting with an B, they are 3G only (see examples below)

Freq:824Mhz to 890 Mhz 3G Only

Freq:898Mhz to 890 Mhz 3G/4G Yagi



How to identify if an item is compatible

There are many devices including EFTPOS Machines, Modems, Farm monitoring devices and other network connected devices that have the words 4G on them or say they are 4G compatible. This however does not ensure the devices are fully 4G compatible, as they may not have Band 28 / 700MHz capabilities, the standard technology utilised in regional and remote Australia. The easiest way to determine if an item is compatible is to search for details on the internet using the model number of the device.

Example: EFTPOS machine



Product Label on Back of Device

This EFTPOS machine has the words 4G on the back, but it also has EU, which means it is designed for Europe not Australia.



A quick search online reveals that this unit does not support 4G Band 28. This is the standard Australian band that uses 700MHz frequency for regional and remote areas. Therefore, it will not work in most rural and remote areas once 3G is switched off.

More information

If you have more questions about your device compatibility or 3G closure, go to telstra.com/3Gclosure

3. Differentials, Drivelines, Suspension and Wheel Ends

Safety Alert November 2022

The Problem

The recent impacts of wet weather flooded roads and road damage is having impacts on all vehicles including heavy vehicles. Reported impacts include wheel bearings suspension and wheels.

The Issues

Flooded roads - There have been multiple reports of bearing failures, because of water ingress.

A primary enemy of a bearing is foreign matter and/or water. Bearing seals are designed to keep lubricant contained, not other matter (including water) out. A warm to hot wheel end suddenly dunked in cool water will cool rapidly, resulting in a reduced pressure within the bearing/lubricant cavity.

A wheel bearing failure can lead to a wheel-off incident or wheel bearing fire, possibly catastrophic if it's a steer axle.

There are also reported issues relating to the water in differentials. The result from the differential breathers sucking in water through the above-mentioned mechanism – potentially contributing to further bearing issues.

It is also important to be aware of the increased risk of universal joint bearing failures after submersion in water.

Damaged roads - There have been multiple reports of damage and failure to suspension components and rims and tyres. With the current state of many roads, it is not always physically possible to avoid the worst of the potholes etc. The suspension components are subjected to direct impact and whilst the tyres absorb some of the force, much is transferred to other components. The results include broken shock absorber bolts, destroyed shock absorbers, and failed airbags.

Follow-Up Actions

Wheel End (Bearings) - If any vehicles have operated through water more than about 200 mm deep, then you need to be aware of the possibility of water ingress to the bearings and increase frequency of wheel bearing monitoring.

Road Failure Related Damage - All components relating to the tyres, rims, bearings, axles, and suspension face increased risk of failure to the declining road infrastructure. Increased frequency of general component monitoring will be required for equipment on the degraded network.

Equipment damages won't be limited however shock absorbers, shock absorber mounting bolts and air bags will be prime considerations.

Considerations

- Operators need to be aware and consider the implications of possible soft road edges (if there is room to stop off the road) as stability may be a safety issue.
- Drivers need informed to be more diligent with pre-trip and during trip checks and post trip reporting.
- Workshops will need to be more focussed on condition monitoring as opposed to routine scheduled maintenance.

4. Plan Now for the Coronavirus

Fact Sheet March 2020

Plan now for the coronavirus: how to keep your business going

6 March 2020

1. INTRODUCTION

Coronavirus (COVID-19) is a respiratory illness caused by a new virus.

The symptoms range from a mild cough to pneumonia. Some people recover easily. Others may get very sick very quickly.

For more information about the virus, visit the [health department website](#).

2. GET YOUR BUSINESS READY NOW

Do a risk assessment

As always, start with a risk assessment. Identify the hazards that the coronavirus poses to your business, think about their likelihood and potential consequences and think about how you could treat the risk.

The [master industry code of practice](#), developed by the ATA and the ALC, has advice on how to approach risk management and links to templates.

Cross train and certify your staff

Now is the time to cross train and certify your staff, to make sure you have more than one staff member who can carry out each business function.

Make sure more than one person can access your online services and alerts

Many businesses depend on online services, whether it's your accounting system, the NHVR Journey planner or your telematics.

Make sure that more than one person can log in to these systems. For security, get them their own passwords rather than asking them to share a single login.

If your systems send text alerts, make sure the alerts go to more than one person.

Develop a working from home policy

Truck drivers and forklift operators can't work from home, but could your administration staff?

Develop a working from home policy now and make sure that anyone who could work from home has access to a computer and your systems online.

A good working from home policy could allow your admin staff to keep going, even if they are isolated because of their close contact with someone who is sick.

Reach out to the people who could help keep your business going

You may have former staff or family who could help if you're short of staff. Contact them now, and make sure that any licences or certificates they need are up to date.

Talk to your customers and suppliers

Talk to your customers and your own suppliers about how they plan to keep going.

3. PROTECT YOURSELF AND YOUR TEAM

Check the health department advice and follow it. The health department has published excellent, clear advice about how you can protect yourself and your team. [Read the advice and follow it](#)

There is a 24/7 coronavirus information line. The number is 1800 020 080.

4. KEEP YOUR TEAM AND OTHER ROAD USERS SAFE

Stand firm against pressure to breach fatigue or other road safety requirements, even if you are short of staff.

In the eastern states and South Australia, phone the NHVR confidential reporting line – 1800 931 785 – if you have concerns.

DISCLAIMER

The Australian Trucking Association has prepared this fact sheet with due care, but it is general information only. It may not apply to your specific circumstances. Seek professional advice if necessary.

Note

Links are no longer valid.

5. Truckies Top Tips

Fact Sheet 2017



Visit: www.safetytruck.com.au

Avoid Blind Spots

I use my mirrors so I know what's around me. If you sit in my blind spots I might not know that you are there.

Don't sit too close right behind me.

There is also a big blind spot down to the side on my left. Please, don't sit in the spot near my passenger door.

Even out to the side on my right can be tricky... Just remember this simple rule...

If you can't see my mirrors, I can't see you.

Road Positioning

If stopped or broken down, try to park well clear of the roadway.

At night use hazard lights and to be safely seen, ensure your headlights are switched off and parking lights are on.

A truck uses 10 on the lane.

If you stay to the left when approaching an oncoming truck you will lessen buffeting from air turbulence.

Don't Cut In – braking distances

You'll often see that trucks leave a big space between us and the car in front. You probably don't realise how dangerous it is if you jump into that space with your car.

Because of my size and weight... *I need almost twice as much room to brake as a car.*

If you cut in front - I might not have room to stop! *For your safety and mine, please don't cut in.*

Maintain Your Speed

When being overtaken by a truck, please maintain your speed and do not accelerate.

In fact, it is good to *slow* for a moment to allow the truck to pass more easily.

Don't overtake turning vehicles

Trucks need more room to get around corners and roundabouts. Sit back until we've got around the corner.

Or worse thing unfortunately might happen!

Towing Caravans & Boats

If you are being overtaken by a truck, please maintain your speed and stay in your lane. Let the professional truck driver overtake you in a smooth way. *even if that is slow* this.

Lights At Night

Make sure you dip your high beam *before* reaching a crest or curve.

When coming up behind a truck, dip early because a truck's large mirrors don't have an anti-glare position.

100 KPH Speed Limiting

Speed limiting means no engine power is delivered above 100 km/hr, however gravity can push us faster downhill.

Truck drivers like to be at the legal speed approaching hills in order to lessen delays to all traffic, but if we slow going uphill or when overtaking, we are doing the best we can.

Road Courtesy

Better to give or receive a friendly wave of thanks than a shaken fist. Like you, truck drivers want to get home safely to their families.

For your safety and mine, please learn the Truckies Top Tips. *Let's Share the Road Safely.*

Seatbelts

Drivers and passengers travelling unrestrained in a car are at least 10 times more likely to be killed in a road crash than those wearing a seat belt. *Always use your seatbelt, no matter how short the trip or how well you may know the local roads.*

Overtake With Care

Stay well back behind the truck. Be certain you can see sufficient clear road ahead. *When you are sure it is safe, signal, move out, pass quickly but carefully.*

Don't move back in until you can see both the truck's headlights in your mirrors and do not slow down.

Distractions

Studies show that 80% of collisions are caused by motorists whose attention is taken away from the road by passengers, phones, GPS, radio, eating, drinking and smoking. *Distractions are the single biggest cause of motorist and passenger deaths - with road users who take their eyes off the road for two seconds or longer, doubling their crash risk.*



Carrying the goods you use every day!

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6. Trailer Brake Interlock Safety Systems

Safety Alert March 2017

The incident or issue

ATA Industry Technical Council (ITC) members involved in the transport of dangerous goods, have been advised that some brake interlock systems designed to prevent the vehicle moving during loading/unloading may have potential to apply the emergency brakes when the vehicle is moving at speed. The emergency brake circuit of a commercial vehicle does not include any ABS or other control system functionality, which could result in wheel locking, creating a dangerous situation. This problem may arise if an element in the interlock system comes loose or fails when the vehicle is in motion.

These systems are mandated in the dangerous goods tanker segment, but are now becoming more common across a range of industries.

Australian Standard (AS) 2809.1 Road tank vehicles for dangerous goods Part 1: General requirements for all road tank vehicles requires drive away protection ie “the trailer is immobilised whenever it is being loaded and unloaded”. In addition, this standard requires that the system cannot operate whilst the vehicle is being normally driven.

ADR35 truck and ADR38 trailer braking requires auxiliary equipment to have a separate air system to the brake system, with preferential supply to the braking system while the brake system air pressure is below 450 kPa.

As a result, if the trailer air system is fully depleted the interlock system may not prevent a drive-away as the brake system is preferentially charged. The parking brakes will likely fully release before the “protecting circuit” is charged and, the trailer air system cannot be charged unless the towing vehicle park brake is released to “charge” the trailers. If the trailer was voided of air when the “interlock” was engaged – the interlock would be ineffective whilst the trailer system was being charged.

Incident cause

Wheels can lock up uncontrollably if the vehicle’s interlock system accidentally becomes active when moving at speed and the system’s design allows the application of emergency brakes. This is neither approved nor allowed under Australian Standard 2809.1 - Road tank vehicles for dangerous goods - General requirements for all road tank vehicles and is widely accepted not to be best practice.

Potentially and more commonly, a break or interruption to the auxiliary circuit could be caused by road debris and/or animal strike. This may also bring on the uncontrolled emergency brakes, which is unavoidable no matter the system under this situation.

Solution

The use of a No Air In Motion (NAIM) interlock system will prevent vehicles moving while the interlock is active loading/unloading, but not result in interlock activation when already moving.

Follow-up actions

- Discuss with your trailer supplier to clarify the style of interlock system fitted or required.
- Check the system does not operate at any speed while in a safe and controlled situation.
- Review interlocked system when based on a TEBS system. This style of system interlock may not operate until the vehicle's speed is above 8 km/h. Therefore, if the system intervention was applied below this speed the system could apply the emergency brakes. It is similar to ABS functionality which do not typically operate or cycle below 15 km/h.

Common interlock system terminology and function - Pneumatic/mechanical systems

Drive away protection

The Dangerous Goods code and Australian Standard 2809 states that a brake interlock must be applied when transferring product and that just to apply the park brake is not adequate. The system is active and vents the trailer supply line, preventing the releasing of the park/emergency brakes when the interlocks are active.

Roll away protection

In addition to the above, if the drive away protection is active when the driver gets into the cab and releases the park brake, the vehicle cannot drive or roll away because the drive away interlock is still active, providing a signal to prevent the trailer air supply from being charged. If the driver then exits the cab without applying the park brake and closes the interlock, the brakes will stay applied as a result of the latching valve in the system. The driver must re-apply the park brake to reset the inter-lock and then release the park/emergency brake to drive away.

Note

Both drive away protection and roll away protection can be activated at any speed and will deactivate when the interlocked item is correctly located again.

No Air In Motion (NAIM)

In addition to both drive away and roll away protection systems above, NAIM typically removes the air off ALL of the interlocks fitted – such as gates, hose reels and hand rails. In the event that a gate opens while the vehicle does not have the park brake applied, there is no air available to pilot the inversion valve and apply the brakes. If the gate did bounce open, a brake interlock system would only activate the next time that the park brake was applied and apply the park/emergency brakes. A prominently positioned label should be include to identify that this system is different to both roll and drive away protection systems.

Note

The ADR does state that the required brake interlock must NOT be able to activate while the vehicle is being normally driven.

Confirming correct system operation of NAIM

1. Ask the driver to engage the trailer park brake – observe movement in slack adjusters and noise of air venting as the park brake is engaged.
2. Activate an interlock – lift or open an interlock-controlled item.
3. Ask the driver to (start truck if stopped) disengage park brakes – you should hear air release from the prime but not from the trailer.
4. Try to drive off – trailer brakes should be locked.
5. De-active the interlock. If the vehicle has a NAIM system, it will need to reset by re-activating the park brake before the truck can move off again.

Electrical interlock via Trailer Electronic Brake System (TEBS)

Alternatively, the TEBS system can be configured electronically to control the interlock function. However, a TEBS based interlock only functions when the vehicle's speed is above 8 km/h and power must be supplied. It is easy to circumvent this system and as a result not recommended.

7. Trailer Safety Chains, Are They Correctly Attached & Fitted?

Safety Alert December 2016

The incident or issue

Recent truck and trailer separation incidents caused by coupling failure have increased the retro-fitting of safety chains and some areas of the trucking industry now require the use of safety chains. ATA Industry Technical Council (ITC) members have expressed concerns about reports of poor retro fitment of these chains.

Safety chain attachment kits must be fitted by competent tradespeople along with technical oversight in order to ensure the chains are compliant and effective. Heavy vehicle safety chains are regulated by ADR62, the requirements of which are summarised in the checklist below.

Incident cause

A tanker trailer collision on 7 August 2014, near Wodonga Victoria, resulted in three deaths when the trailer separated from the truck. The high-profile fleet was typically well maintained. The coroner's report has not yet been published.

Solution

YES / NO - Check list for retro fitted safety chains to trailer drawbars :-

- 1) Are the safety chains a Grade T high tensile short link chain that meet AS 2321:2014 Short-link chain for lifting purposes?
- 2) Are the safety chain attachments located as near as practicable to each coupling point, and are the chains of sufficient length to allow full articulation, but not drag?
- 3) Are the chains crossed? This reduces trailer swing and movement after the coupling fails, and 'catches' a decoupled drawbar preventing it contacting the ground.
- 4) Does the safety chain attachment rating and safety chain rating exceed the Aggregated Trailer Mass (ATM) rating of the trailer being towed?
- 5) Are the rubber airlines (**not plastic or suzi coil airlines**) and electrical service lines of an appropriate length so that they won't drag or come under tension when the trailer is attached using only the safety chains?
- 6) Have the safety chain attachments been fitted to a substantial element of the trailer drawbar by a qualified welder? Strengthening the drawbar may be necessary if there is not a sufficiently strong nearby location. The ADR requires that all towbars are fitted with safety chain attachments irrespective of whether chains are being used. This should be rectified if towbar safety chain attachment points are not fitted.
- 7) Has the installation of retrofit safety chain attachments been approved and plated/signed off by an AVE (Authorised Vehicle Examiner)?



Example of safety chains fitted between the trailer drawbar and truck towbar.

Source: Bartlett Equipment

If the answer is **NO** to any of the above questions, the fitment should be rectified and advice sought from an appropriately qualified and experienced AVE.

Follow-up actions

- Review installation against the above check list. If any issue is found, investigate and seek appropriate assistance.
- Ensure coupling procedures are appropriate and that drivers and other personnel are trained in how to couple / decouple, check, and maintain their heavy vehicle couplings.
- Coupling systems including airlines and electric lines must be inspected and maintained as per their manufacturers' guidelines.



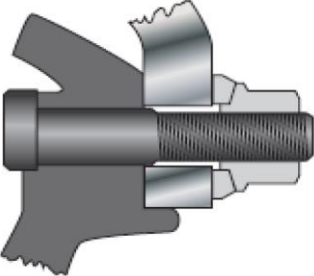
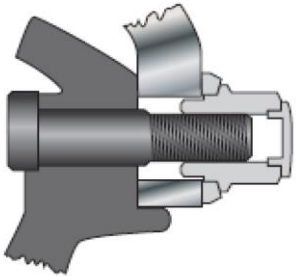
8. Use of Sleeved Wheel Nuts with Selected Axles and Wheels

Safety Alert November 2016

The incident or issue

An ATA Industry Technical Council member with extensive workshop experience failed to recognise that incorrect wheel nuts had been used to re-attach the factory supplied aluminium wheel assemblies to the steer axle of the truck he was driving. The standard ISO nut was fitted where a sleeved wheel nut should have been used. The standard ISO wheel nut fitted had a very limited amount of thread engagement and would not comply with the manufacturer's recommendation nor been able to maintain clamp loads to retain the wheel to the axle.

The thickness of the wheel's nave (centre disc) varies from a typical steel wheel at 12 mm up to 25 mm for an alloy wheel. As a result, sleeved nuts with appropriate wheel are commonly used when replacing steel with alloy wheels, negating the need to install longer wheel studs.

	Standard ISO wheel nut	ISO wheel nut with threaded sleeve.
Wheel nut.	 <p>Ensure several threads of the stud must protrude past the end of the nut</p>	 <p>Cap on the nut is used to protect the thread from debris.</p>
Single wheel assembly mounting. Note dual wheel assembly is similar with sleeved nut extending through both rims.		
Typical stud hole to clear M22 stud in the wheel.	26 mm	32 to 33 mm

Source of images: Alcoa wheel end products

Solution

Fit the correct wheel nuts to suit both the axle and wheel assembly, tension the wheel nuts appropriately and check them after about 100 kilometres of driving from its initial installation.

Follow-up actions for operators

- Inspect the wheel end for the correct nut. If it is unclear, remove a wheel nut to inspect. Then use the correct procedure to re-tension all nuts from loose.
- When upgrading from steel to aluminium rims, ensure the studs have adequate length to allow the stud to protrude past the end of the nut or use sleeve nuts.

Follow-up actions for operators

- This is being added to the next edition of the ATA ITC Wheel End Security TAP.

9. Availability of Truck Suspension Seats with Integrated Belts

Safety Alert October 2016

The incident or issue

It is widely accepted that the use of seat belts by commercial vehicle drivers, although growing, is lower than is acceptable. Anecdotal reports that cloths pegs are still being used to restrict a belt's travel have been received. Recent research has confirmed one third (33%) of heavy truck drivers killed in single vehicle heavy truck crashes were not wearing an available restraint.¹ Drivers have a range of excuses for not using a seat belt in a truck, but in a car, would automatically put on a seat belt. This issue is partly due to historical reasons where the seat belt was B pillar mounted on the cab's frame, often resulting in the driver being tightly locked down into the suspension seat. Another reason has been that not using a belt potentially allows the driver to jump from the truck in the event of a crash. However modern trucks have cab suspension, rear air bag suspension and long parabolic front springs providing a smooth ride for the driver and cargo. They simply do not buck and bounce as the trucks of old. The industry standard seat now has suspension. It is not working that hard while providing improved levels comfort and reduced fatigue.



Solution:

The following table lists the heavy truck brands (GVM greater than 16 tonne), that have available an integrated seat belt with the driver's suspension seat, which eliminates one of the excuses for not wearing a seat belt.

Brand / model	Integrated belt availability	Brand / model	Integrated belt availability
CAT^	Yes - Optional	Kenworth	Yes - Optional
DAF	Standard	Mack	Standard
Dennis Eagle	Standard	MAN	Standard
Freightliner^	Yes - Optional	Mercedes-Benz	Standard
Hino^	Standard	Scania	Standard
International^	Standard	Volvo	Standard
Isuzu^	Standard	UD^	No #
Iveco	Standard	Western Star^	Yes - optional

¹ Presentation, Heavy Truck Fatal Crash Trends – NSW Centre for Road Safety, January 2014

Note

“#” UD uses a 'Tension Reducing Seatbelt System' (TRSS) to reduce the possibility of a driver's B pillar mounted seat belt locking the driver down into the suspension seat, but it is still effective enough to save the driver in a crash.

“^” Japanese and US regulations for seat belt mounting strength are the same for all vehicle classes, whereas the UN Regulations and Australian ADR standards have a significantly lower strength requirement for heavy vehicles. As a result, it has not been possible for seats with integrated belts to comply with either Japanese or US standards, but they can comply in European and Australian markets.

Information was correct at the time of publication.

Follow-up actions

- Ensure the vehicle is maintained and the seat with belt is in good working order.
- Purchase new trucks with seat belts integrated into the suspension seat.
- Retro fit an AVE certified seat with integrated belts as seats require replacement.
- Selected seat belts, either seat or B-pillar mounted, may be able to be retro fitted with a seat belt reminder system. However, seat belt warnings will be ineffective if the driver's use 'belt extensions' or are connecting the seat belt and sitting on them.



10. Long Stroke Brake Chambers and Brake Balance

Safety Alert November 2015

The incident or issue

The ATA Industry Technical Council (ITC) has reviewed the National Heavy Vehicle Inspection Manual (NHVIM) and is creating a Technical Advisory Procedure for roller brake testing. This work has highlighted concerns about the frequent occasions where replacement brake parts on an axle may not be identical to the original and particularly, the components may vary from LHS to RHS across the axle. Any variation in componentry from left to right within the axle's brake groups, even the brand and age of component, will negatively impact brake balance.

Over recent years, long stroke brake chambers have become standard on a range of models. These are not easily identifiable and a mismatch will also lead to an imbalance issue. Suppliers always recommend fitting matching chambers and other componentry.

Incident cause

: Brake imbalance can create vehicle stability issues. The fewer the axles in a group, the more important brake balance becomes, with a short wheel base 4x2 prime mover being the most susceptible to poor balance induced stability issues. Operators frequently receive defects for brake imbalance, as confirmed by an ATA survey of trucking operators.

Solution:

Ensure components are identical across an axle and, optimally, within an axle group. Identify long stroke brake chambers by two of the following methods:

- Trapezoidal shaped tag with the stroke information detailed (figure 1)
- Square boss around the chamber's air supply port or ports (figure 2)
- Embossed or cast-in service instruction advising chamber details (figure 3)

Figure 1



Source Haldex

Figure 2



Haldex

Figure 3



BPW Transpec

Follow-up actions

- Safety related replacement parts should be either original or certified as being equivalent to original parts.
- Identical parts must be used across an axle and, optimally, within an axle group.
- Ensure parts and workshop staff can identify long stroke brake chambers.

11. Non-Approved Use of HCs as Refrigerants in Air/Con Systems

Safety Alert May 2015

The incident or issue

Through the work of its Industry Technical Council, the ATA has been alerted to a number of reports of incidents where aftermarket hydrocarbon-based refrigerants were used to recharge air conditioning systems. These gases are highly flammable and the incidents resulted in injuries that would not have occurred had the original refrigerant gas been installed.

Hydrocarbon gases have a lower purchase cost and have been promoted as being an environmentally friendly refrigerant within the aftermarket segment of the transport industry as a replacement for the approved R134a in vehicle systems and R404a in commercial units.

Incident cause

A truck cab air conditioning system was re-charged with a hydrocarbon based refrigerant similar to M30. The system leaked and the gas pooled in the HVAC system, which was ignited when the unit's fan was turned on resulting in the driver receiving burns.

Solution

There are no known heavy commercial vehicle or refrigerant equipment suppliers to the transport industry who have approved the use on hydrocarbon-based refrigerants.

Hydrocarbon refrigerants will potentially void equipment warranties and could lead to additional consequential damage.

On the advice of its Industry technical Council, the ATA recommends against the use of hydrocarbon refrigerants without the approval the Original Equipment Manufacturers (OEM) supplier.

Follow-up actions

- Maintain the original equipment manufacturers approved refrigerant.

12. Drawbar Units and Brake Airlines

Safety Alert May 2015

The incident or issue

ATA members have reported a number of instances where suzi coil airlines (shown at right) have been used to provide brake air with drawbar trailing units, such as dollies, pig trailers or dog trailers. This use of suzi coils could potentially prevent timely application of emergency brakes in a decoupling situation.



Incident cause

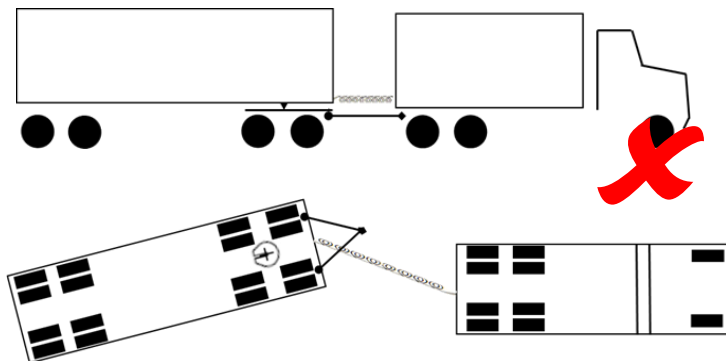
If a coupling disconnects unintentionally during travel, suzi coils can stretch elastically for several metres, and further again as the airline plastically deforms.

This stretching may prevent the quick venting of air from the supply line, extending the time before emergency brakes are activated on the separated trailer.

In addition, the snapped ends of a suzi coil broken in this manner deform plastically, further restricting the air loss from the system and delaying the application of emergency brakes.

Solution

The use of suzi coils with drawbar trailing units is not supported by the ATA. Instead, the ATA's Industry Technical Council recommends using shorter, non-elastic rubber brake line hoses with approved couplings for these applications.



Potential Suzi coil stretch after trailer decoupling. Preferred: Non-elastic rubber brake hoses

Follow-up actions

- Suzi coils used over drawbar trailing units should be replaced with a non-elastic option.

13. Mixing Metric / Imperial Brake Airlines and Fittings

Safety Alert May 2015

The incident or issue:

Through the work of its Industry Technical Council, the ATA has been alerted to a number of instances where newly purchased and installed fittings/airlines have failed to seal correctly.

These installations leaked excessively while the vehicle was under test in the workshop and were replaced without further incident. However, if undetected, these leaks could cause on-road complications such as the unintended activation of emergency braking systems.

Incident cause

Metric airlines and their fittings have become available through a range of parts networks to support European models. However, the Australian market typically uses imperial sizes of airlines and fittings.

Confusion can arise given the similar, but not equivalent, sizes of these airlines. The metric 12 mm line will appear to accept the imperial ½” olive, which has an equivalent to 12.7 mm outside diameter.

	Outside Diameter	Inside Diameter
6 mm	6.00	4.00
¼”	6.35	4.32
8 mm	8.00	6.00
5/16”	7.94	5.90
12 mm	12.00	9.00
½”	12.70	9.55
19 mm	18.00	14.00
¾”	19.05	14.38

The table above lists only a selected range of sizes and is not intended to be inclusive.

Solution

It is essential that airlines and fittings use the same applicable standard (metric or imperial) and airline size. Workshop staff should check the size printed on the airline before selecting matching fittings.

Follow-up actions

- Separate metric / imperial fittings/airlines and label stores correctly
- Educate staff about the differences

Drafting

Editors

– Chris Loose – ATA

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