SERVICE BULLETIN - AUCKLAND	0002
Date of Issue	08.09.2017
Issue Number	A-01
Customer	ORIX New Zealand Ltd
Component Affected	Skid Plate

To whom it may concern,

T605Z Trailer Incident

Please find below response related to the issue raised respectively:

A. As per your assessment original structure does not have sufficient sectional properties. From our calculations which I myself have double checked, we meet the sectional properties for the anticipated loading and if we haven't, we won't be able to provide LT400 for that trailer. I would also like to know how MECH-TECH have calculated 62% (vertical) and 88% (Longitudinal) without having the trailer drawings. Attached report from MECH-TECH didn't give their complete calculations (basic sketch/drawing of their basis of calculation for our verification).

Adding to conclusion, the trailer main cause of failure was the welding procedure plus the workmanship. MaxiTrans have analysed this problem back in 2012 and fixed the welding procedures (changed stitch welding to fully weld inside and out) for its trailers from 2013 onwards. Unfortunately, this trailer was originally on the road in 2012. Our trailers from 2013 onward have no such issue anymore. According to our ID Skid plate report from 2011-2013(file attached), There is only one trailer that was owned by ORIX, Which now has been repaired. The rest of the fleet that ORIX own from MaxiTrans are updated models. Even for the models from 2013 onwards, MaxiTrans will ensure that all costumers follow the service bulletin (file attached) for a timely inspection of the skid plates.

B. As per Mech-Tech, there were no drain holes. Drain holes are for rain water drainage. In Reefer trailers, the skid plate/kingpin area are supposed to be sealed. Mech-Tech didn't realise that adding drain holes will allow condensation to occur and add more water droplets inside result in corrosion. In this particular case, the condensation occurred because of the top floor drills allowed condensation to sit in the sealed area causing rust. From 2013 onwards, MaxiTrans have changed its procedure to avoid the area of kingpin/skid plate for the drill holes, so that no moisture can occur near that critical area.

C. Skid plate itself is not the cause of the failure. MaxiTrans agree with Mech-Tech report in this regard.

D. In this case, brakes and brake setup is not the cause of the failure. MaxiTrans agrees with Mech-Tech report in this regard.

E. MaxiTrans trailers are made for New Zealand roads including Maungamuka Hill. But in some cases like this one, there are so many factors (Driver's ability, Dynamic forces, speed, brake etc.) that can add up some increased unforeseen forces to act on particular spots of the trailer causing its efficiency/ability to manoeuvre on the road and increasing the stress level on kingpin area. As per Mech-Tech observation around that hill site, Maxitrans will respond to take extra precautions on such turns for a smooth manoeuvre.

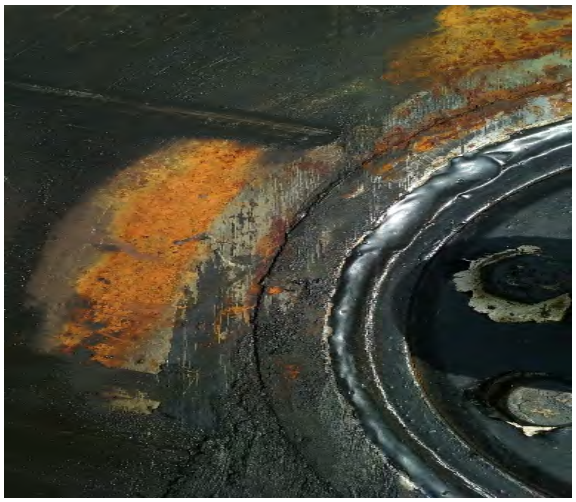
F. Galvanise skid plate corrosion is totally another issue, and maxitrans will look into it. It looks like it was not galvanized properly.

G. We cannot give an exact life span of our trailers as no one can but just a rough figure, our trailers can last upto 10Years +, depending on the usage and service history.

If further information is required please contact
Engineering Department
MaxiTRANS Auckland
PH: (00649)2690712
Email: section 9(2)(a) [redacted]

Skid Plate section 9(2)(a) Fleet 747



Skid Plate P202E Fleet 6015








Skid Plate GY20L Fleet 7500

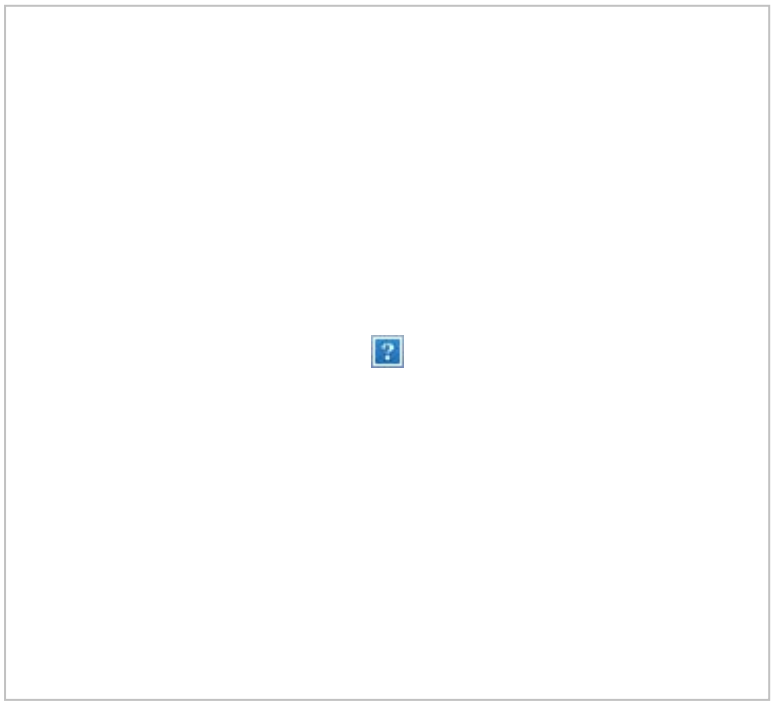
From: section
To: section 9(2)
Cc: section
Subject: FW: Skid plate W425T Fleet No 747
Attachments: section 9(2)(a)
Importance: High

Hello sectio 9(2)

I am just following up on this "E" mail as it would appear I have not received any response.

Regards,

secti



From: section 9(2)
Sent: Wednesday, 19 April 2017 3:31 p.m.
To: section 9(2)(a)
Cc: section 9(2)
Subject: RE: Skid plate W425T Fleet No 747
Importance: High

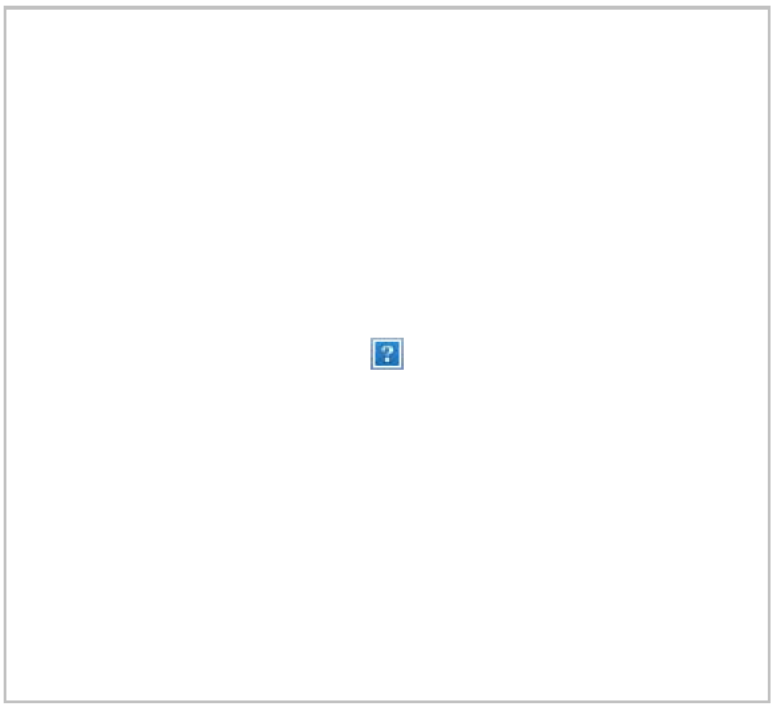
Hello secti

This begs the question about the other plates assembled and welded by this individual.

Should there be a control sample inspected for possible cracking?

Regards,

secti



From: section 9(2)(a)
Sent: Tuesday, 18 April 2017 11:49 a.m.
To: section 9(2)
Cc: section 9(2)
Subject: Skid plate W425T Fleet No 747

Hi sectio
9(2)

This trailer was manufactured and released to you in September 2013. In December, last year the trailer was reported to MaxiTRANS with some issues regarding skid plate. We investigated the issue and we found that the skid plate problem was due to the welding procedure. Some of the welding were stitch welding instead of fully welding. We replaced the skid plate under warranty and issued LT 400 for the new skid plate.
The replaced skid plate is a new generation MaxiTRANS skid plate with improved design and welding procedure.
Please let me know if there is any concern about any skid plate.
Please contact me, if further clarification is needed.

Regards

section 9(2)(a) | Engineering Manager
MaxiTRANS Industries
61 Spartan Road
PO Box 217, Takanini, Auckland 2245, New Zealand
P: section 9(2)(a) | **M:** section 9(2)(a)
E: section 9(2)(a)
W: www.maxitrans.co.nz

|

From: Brian Sara
To: Don Hutchinson
Cc: Mark Rounthwaite
Subject: FW: Skid Plate
Date: Tuesday, 9 May 2017 8:25:01 a.m.
Attachments: section 9(2)(a) [redacted]

Hello Don

Once you have had a look at this can we please discuss our next steps.

Regards,
Brian Sara
Manager Vehicles – NZ Transport Agency
DDI section 9(2) ( ) M section 9(2)(a)

From: Dave Mabey
Sent: Monday, 8 May 2017 7:38 p.m.
To: Brian Sara; Eileen Kerry
Subject: FW: Skid Plate

Hi Brian & Eileen

Please see below & attached FYI regards skid plate failures

Regards

Dave

From: section 9(2)(a) [redacted]
Sent: Thursday, 4 May 2017 3:04 p.m.
To: Dave Mabey
Subject: Skid Plate

Hello Dave,

See attached sheets.

I have the photos but the file was too large without converting.

If you need them I will organise something for you.

The list of additional skid plates is in the "E" mail from Fruehauf and I have most of these sitting in the back shed if they need to be viewed.

See "E" mail trail re the latest failure. Maxi Trans have scrapped the unit so all I have are the photos.

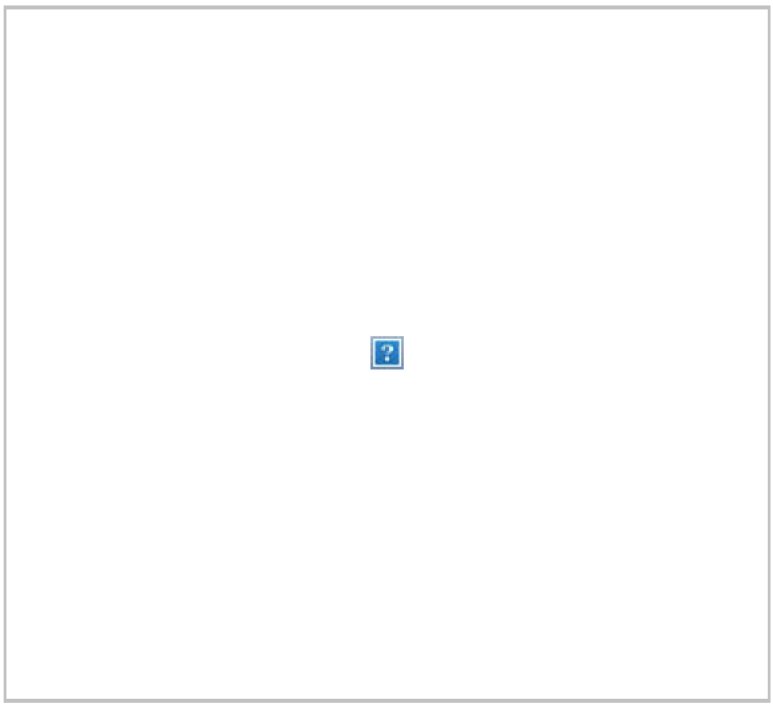
Regards,

secti [redacted]

PS still chasing some chassis rego's from our owner drivers.

Regards,

secti



PO Box 4085
Kamo
WHANGAREI
Ph 09 4307988
mechtech.co.nz

Mech Tech

Mechanical and Technical (2009) Ltd.

Thursday, 24 August 2017

To whom it may concern,

Report into kingpin supporting structure failure:

Trailer:
2012 Maxicube Reefer 3 Axle Semi Trailer
Registration: T650Z
VIN: 7AT0PR00X12012739
Chassis Number NZ00012739
GVM; 38,000 kg
Tare weight; 10,840 kg (as recorded)
Distance travelled by Hubometer records from Landata: 732,738km

Typical kingpin and supporting structure.

The kingpin is the short shaft that extends down from the front of a semi-trailer to which all the towing loads are provided by the 5th wheel and tractor unit.
The kingpin also supports the vertical load that prevents the trailer from going up and coming out of the 5th wheel. The kingpin is mounted to a skid plate above, that provides the reaction against the vertical down load.
The kingpin can take on many different styles. This vehicle uses the most common style, which consists of a welded on housing, and a bolted in kingpin. This allows the kingpin to be readily replaced.
The removable kingpin is a standard item, and the housing is a specific size to suit the thickness of the skid plate. This ensures the kingpin is always fitted in the correct relative position to the skid plate. The kingpin is replaced as it reaches its wear limit, or is damaged.

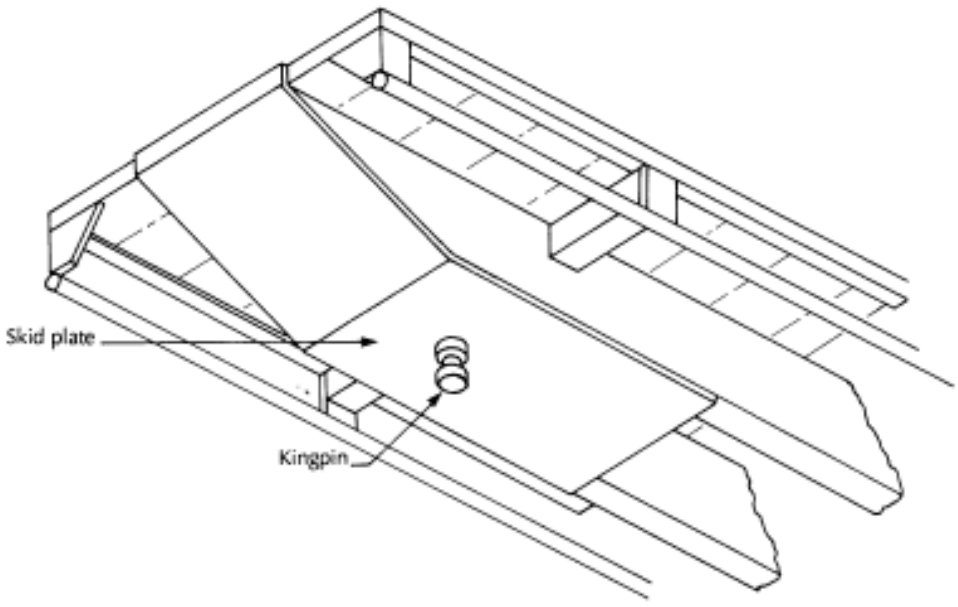


Figure 1
Skidplate and Kingpin Assembly (AS5451:1989)

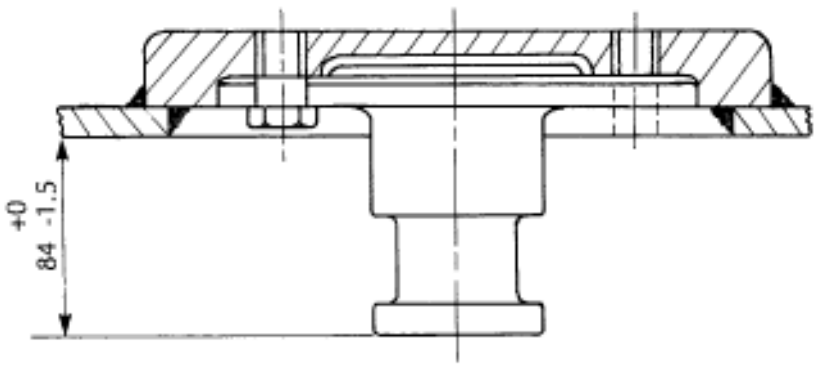


Figure 2
Drop-out king pin assembly

Inspection history

I first inspected the trailer on the 7th August 2017 at Ten4 Ltd workshop.
The trailer had been transported from the site of the incident to the workshop by means I did not view.
The kingpin and housing accompanied the trailer.
section 9(2) from Cable Price (NZ) Ltd was present and described the incident as the driver heard a unusual noise, and a short time later noted the trailer had moved over relative to the truck. The driver was able to stop the combination safely, lower the landing legs and uncouple the trailer.
The truck continued on to Auckland. I have not inspected the truck, or talked with the driver regarding this incident.
The kingpin, and housing had separated from the skidplate adjacent to the weld.

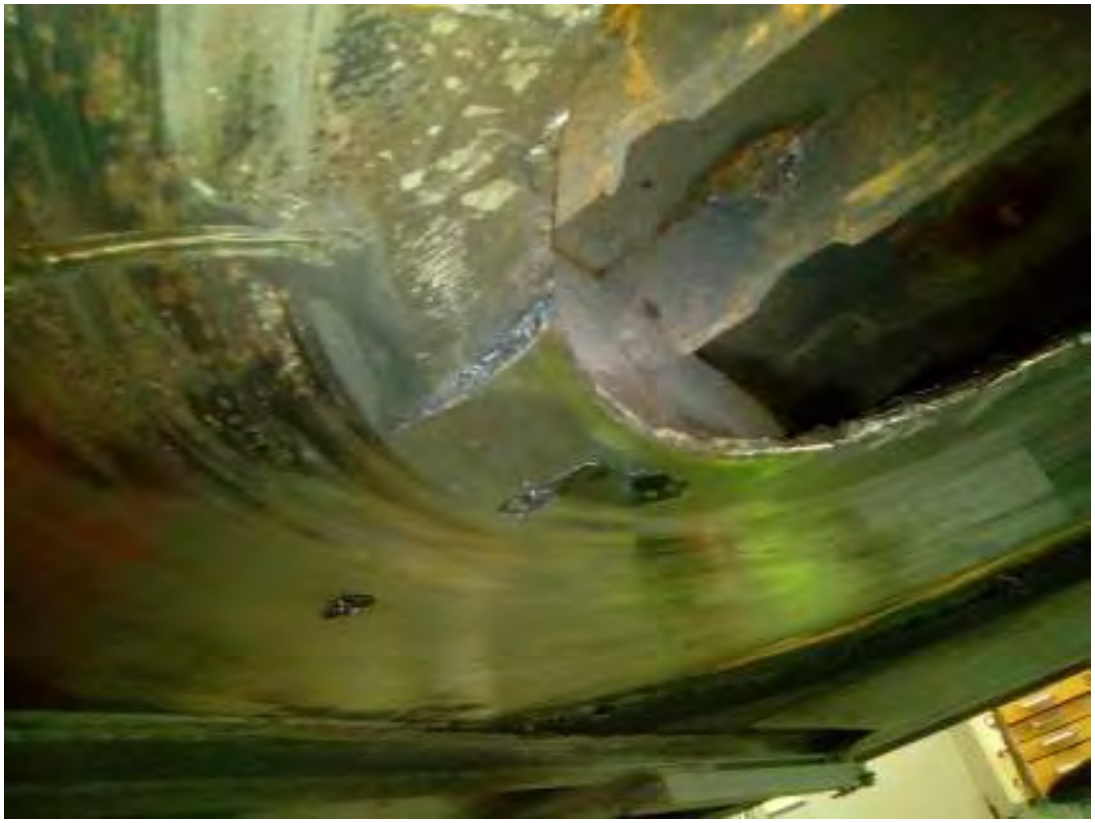


Photo1
Skidplate at initial viewing, following cleaning. View is to the rear of the trailer

Photo 2
Skidplate at initial viewing (view to right hand cavity)

Photo 3
King pin and housing at initial inspection

Photo 4
King pin and housing at initial inspection

The kingpin and housing have since been separated, the items were difficult to identify, however I believe Fuwa K Hitch manufactured both the housing and kingpin. I was unable to identify if the housing was suitable for the skid plate thickness. The fractured edge was severely damaged, and so any failure analysis was impossible.
section 9(2) stated that the kingpin was recently changed. I have not verified this.
Ultrasound measurements of the skid plate show a minimum thickness of 7.88mm, and a maximum of 8.03mm. These are within the tolerance range allowed by NZS5451. The skid plate appeared well greased.

I contacted Maxitrans on the 8th of August and communicated with s 9(2)(a) regarding this issue, specifically to understand the construction so that the deck could be removed.
s 9(2) responded with an indication that these failures often occur by incorrect trailer braking, and that I should check the brake set up. I have not done this as it is outside my certification authorities, and I have not inspected the towing vehicle.
s 9(2) also sent me a sketch of the construction so that the deck above the skid plate could be removed. Later that day he e-mailed me that he, and the repair manager, would travel to Whangarei to inspect the vehicle. I did not take this as an invitation, and I did not attend.
I also provided a brief report on the situation to date to section 9(2) at Orix (the owners of the vehicle).

The second inspection occurred on 15th August 2017. The upper aluminium deck, and fibreglass cover was removed to reveal the supporting structure.
The structure consisted of two 8mm thick channels separated by approx 300mm, with a 8mm plate welded between, at the top, above the kingpin. All welding appears to be stitch welded (welded for approx 100mm, and then a space of approx 100mm).
The bridging plate was removed, revealing some stiffeners. Evidence of substantial cracking of the crossmembers, and the skid plate was found. Many of the skid plate cracks initiated at the ends of the stitch welds.
No water drain holes have been incorporated in the design, and corrosion has started. Expanded foam insulation, and cut polystyrene insulation removed was wet.

Photo 5
Skid plate structure with bridging plate removed

Photo 6
Crack in crossmember with skid plate removed

Photo 7
Cracks in crossmember with skid plate removed

Repair

I was given the go ahead at this point to design a repair by section 9(2) at Ten4 Ltd.
Land Transport Rule 31002-Heavy Vehicles requires the use of NZS5451 Coupling Devices for Articulated Vehicles – Fifth Wheel Kingpins, however this standard does not provide suggested construction, or design loads.
AS/NZS4968.1:2003, Heavy Road Vehicles – Mechanical Coupling Between Articulated Vehicle Combinations, provides design loads for kingpins, and 5th wheels. Specific combination values are placed into a formula to provide a "D-Value" which can be used for sizing propriety components such as the replaceable kingpin. The D-Value can also be used to provide design loads.
The towing truck has a gross combined mass (GCM) of 60,000kg. Using this value is unreasonable for New Zealand conditions, and provides a D value of 96kN. Using the maximum allowable axle masses on New Zealand roads, 39,000kg, the D Value is 124kN.
This standard does not provide a fatigue criterion.
Converting the D-Value to design loads results in a longitudinal force of 270kN.
I considered a vertical load of 15,000kg. The design loads from this result in a vertical up force on the skid plate of 263kN, and a vertical down force of 135kN.
As a comparison, at maximum legal trailer axle mass of 18,000kg, and 15,000kg on the kingpin, the trailer could weigh 33,000kg. The longitudinal load is 0.83g, and the maximum vertical load is 1.78g.
My calculations suggest that the original structure has only 62% of the required sectional properties in the vertical direction for these loads, and 88% in the longitudinal direction.
I considered that the structure was manufactured from a C300 grade steel, and used AS3990: Mechanical Equipment – Steelwork, for allowable stresses. It is possible that higher strength steel was used, however without providing fatigue calculation, I believe considering a lower strength steel is a

better assumption.
Note that there is no requirement to use AS/NZS4968 for 50mm kingpins in New Zealand, and NZS5451 only requires skid plates to "be suitably stiffened to prevent bowing or bending."
For the sake of expediency, I designed repairs and modifications to the existing structure to provide for these design loads.
Ten4 Ltd in Whangarei made the repairs, and a Statement of Design Compliance has been provided by myself to Ten4 Ltd so that they may issue an LT400.

Photo 8
New 12mm skidplate, new stiffeners, and repaired crossmembers complete with strapping

Photo 9
New kingpin housing and stiffeners

Other relevant comments

This trailer travels over the Maungamuka hill, a stretch of road known to be difficult to long trailers, particularly semi trailers. We have seen several trailers with issues, usually around the suspension, that travel over this road. One local operator will now not allow travel of their semi trailer over this stretch of road.
The construction of this trailer is that the body forms the chassis of the vehicle. This is not unusual, and offers some advantages compared with a conventionally constructed trailer. As such the body forms a (square) tubular structure, which can make for a very torsionally rigid trailer. That is, a trailer that does not twist easily. Tanker bodies form a similar structure.
As they are torsionally rigid, it is usually recommended to tow the trailer with a compensating 5th wheel. This allows some compliance between vehicles, but comes at the disadvantage of a higher 5th wheel height.

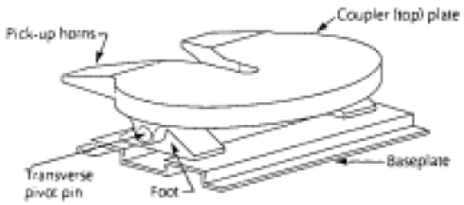
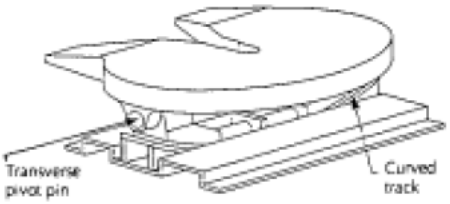
Fifth wheel type	*Recommended application (semi-trailer type)*	*Road characteristics*
 **Fig.1 SINGLE OSCILLATING**	Generally used where the chassis is designed with a degree of torsional flexibility that will compensate for terrain irregularities. For general over the road use e.g. flat tops, dry vans, livestock, curtainsiders, tippers, etc.	The driver will be able to feel the trailer and its load swaying or rolling, during normal road travel, as the prime mover and trailer will tend to move as a single unit.
 **Fig 3 COMPENSATING** See note	Generally for applications where minimizing torque and twist of semi-trailer is desirable and where the centre-of-gravity of the loaded semi-trailer does not exceed approximately one metre above the fifth wheel height e.g. tankers and trailers with bodies that have some measure of torsional rigidity.	The driver will be able to feel the trailer and load tending to sway, but he will not receive any direct initial feel of a change of a tractor unit/trailer roll attitude. (See 2.7.3)

Figure 3
Extract from NZS 5450:1989

Conclusions

I believe that it is clear that the skid plate structure is not suitable for the duty it has been performing. Using calculations based on loads from AS/NZS4968, the skid plate supporting structure is significantly undersized.
Welding details appear to have contributed to initial cracks at the stress raisers on the weld ends. Stitch welded locations should be carefully selected.
An 8mm skid plate is not a common size used in New Zealand.
No drain holes have been incorporated into the design. This is a significant under sight for New Zealand conditions where rain, and wet roads are a constant issue.
Further investigation into the type and suitability of the 5th wheel used needs to be completed.

Regards

s 9(2)(a)
s 9(2)(a)

Mechanical and Technical (2009) Ltd.
Heavy Vehicle Engineer (I.D. WRD)

From: Don Hutchinson
To: Brian Sara; Dave Schumacher
Subject: RE: MaxiTrans Skid Plate; BJL-Brian&Jim 25 Jul-17
Date: Tuesday, 25 July 2017 4:10:56 p.m.
Attachments: section 9(2)(a) [redacted]

Hi Dave

Attached are the rego details and I've also attached all other correspondence possibly some duplication though.

Thanks

Don

Don Hutchinson
Principal Engineer – Heavy Vehicles
Operational Standards & Guidelines
DDI section 9(2)(a)
M section 9(2)
E Don.Hutchinson@nzta.govt.nz

From: Brian Sara
Sent: Tuesday, 25 July 2017 3:54 p.m.
To: Dave Schumacher
Cc: Don Hutchinson
Subject: FW: MaxiTrans Skid Plate; BJL-Brian&Jim 25 Jul-17

Hello Dave

This will provide some background to the Maxi-Trans concern that was discussed today.

Don – can you please provide Dave with the list of vehicle Reg No's that were supplied by Dave Mabey?

Regards,
Brian Sara
Manager Vehicles – NZ Transport Agency
DDI section 9(2) ( ) M section 9(2)(a)

From: John Long
Sent: Tuesday, 25 July 2017 7:54 a.m.
To: Brian Sara
Cc: Jim McDonald

Subject: MaxiTrans Skid Plate; BJL-Brian&Jim 25 Jul-17

Hello Brian & Jim

There is a long history of MaxiTrans skid plates failing prematurely, both by design & in-service, and documented from information most recently by section 9(2)(a) of Gary Douglas Engineering - although in this instance it appears that the original fabrication may have shortcomings. It is beyond the scope of the review process because it is my opinion, and that of other certifiers, that the MaxiTrans semi-trailer design defies sound engineering practice.

Thank you

John

B J (John) Long
Engineer – Heavy Vehicles
Access & Use Vehicles (National)
M section 9(2)
E john.long@nzta.govt.nz / w nzta.govt.nz

From: Brian Sara
Sent: Monday, 24 July 2017 2:13 p.m.
To: Jim McDonald
Cc: John Long
Subject: Skid Plate; Brian Sara 24 Jul-17

Sure can ☺

Brian Sara
Manager Vehicles – NZ Transport Agency
DDI section 9(2) M section 9(2)(a)
( )

From: Jim McDonald
Sent: Monday, 24 July 2017 1:55 p.m.
To: Brian Sara
Cc: John Long
Subject: FW: Skid Plate

Hi Brian

It concerns me that once again the "review Process" is being used wrongly to correct issues such as this.

If we have evidence/statements then the Agency should take action – if this is as serious as it is being made out to be then these vehicles need recalling urgently and Maxitrans certifiers need to be held accountable via the complaints process.

Can we talk about this one tomorrow please when we meet.

Thanks

Jim

Jim McDonald Chief Advisor
Project Implementation and HVSC QA
Operational Standards and Guidelines
Customer Design and Delivery
DDI section 9(2)( ) Mobile section 9(2)( )
E jim.mcdonald@nzta.govt.nz

RegoBanner

From: Don Hutchinson
Sent: Monday, 17 July 2017 9:23 a.m.
To: Jim McDonald
Cc: Brian Sara
Subject: FW: Skid Plate

Hi Jim

Brian and I discussed last week a potential emerging risk with the Maxitrans HVSC's.

Some kingpins that where certified managed to leave the factory with only tack welds and some front ends of semi-trailers are breaking up quite early in life – see attached details from Dave Mabey.

Could you please check when the Maxitran's HVSC's (whoever they are) are being next reviewed and whether you think they should have their review prioritised earlier within John's busy schedule.

Thanks

Don

Don Hutchinson
Principal Engineer – Heavy Vehicles
Operational Standards & Guidelines
DDI section 9(2)(a)
M section 9(2)
E Don.Hutchinson@nzta.govt.nz

From: Dave Mabey
Sent: Friday, 19 May 2017 9:16 a.m.
To: Don Hutchinson
Subject: RE: Skid Plate

Morning Don

Please find attached brief sequence of events as discussed.

From my understanding is that the operator is more concerned around the safety aspect & whether the Agency is able to look into this without causing major concerns or disruptions to the industry.

Cheers

Dave

Dave Mabey Certification & Licensing Manager
Auckland, Northland
Access & Use
Mob section 9(2)(a)
DDI section 9(2)(a)
E dave.mabey@nzta.govt.nz / w nzta.govt.nz
Auckland Office / Level 11, HBSC House
1 Queen Street, Auckland 1143, New Zealand

From: Don Hutchinson
Sent: Wednesday, 17 May 2017 10:36 a.m.
To: Dave Mabey; Brian Sara; Eileen Kerry
Cc: Mark Rounthwaite
Subject: RE: Skid Plate

Hi all

Dave and I discussed the skid plate issue this morning. They are owned by Hall's and being repaired by Fruehauf's despite being manufactured by Maxitrans.

We have been aware of previous more widespread problems with corrosion in skid plates, particularly with refrigerated fibreglass bodied trailers. This was first raised via Paul Chapman's ICG 18 months back and resulted in us developing a skid plate corrosion information sheet that was widely circulated and on our website:

http://www.nzta.govt.nz/vehicles/choosing-the-right-vehicle/choosing-and-operating-a-heavy-vehicle/servicing/

Next steps are that Dave has agreed to briefly write up the issue and recommendations for me (thanks Dave), I've placed it as an agenda item on our monthly HV meeting for tomorrow. We

may have John Long prioritise a PRS on the Maxitrans certifying engineers to check their design process it fit for purpose.

I'll update again with any further planned actions.

Thanks

Don

Don Hutchinson
Principal Engineer – Heavy Vehicles
Technical Services
DDI section 9(2)(a)
M section 9(2)
E Don.Hutchinson@nzta.govt.nz

From: Dave Mabey
Sent: Tuesday, 9 May 2017 11:00 a.m.
To: Brian Sara; Eileen Kerry; Don Hutchinson
Cc: Mark Rounthwaite
Subject: RE: Skid Plate

Morning Brian

I can confirm that I have not made any contact with these companies re these concerns.There has been no updates on the prime mover vehicles to date, as previously mentioned I made an error with the prime mover as the cracking was around the rear of the right front spring hanger.

Regards

Dave

From: Brian Sara
Sent: Tuesday, 9 May 2017 8:22 a.m.
To: Eileen Kerry; Dave Mabey; Don Hutchinson
Cc: Mark Rounthwaite
Subject: RE: Skid Plate

Hello Eileen & Dave.

We have done nothing with this so far as this is the first time we have had details of the volume and specific vehicles involved. I will discuss this with my Principle Engineer Heavy Vehicles today to determine the next steps.

From the brief look I have had so far it seems there may be 2 issues here. In the case of Maxi trans, it seems the welding was not completed correctly at the time of manufacture. The Fruehauf issue looks like a possible design concern.

Dave – can you please advise if you have made any contact with either company and if so what was the result? Also – you mentioned some chassis issues around some 5th wheel mountings.

Do you have an update on that?

Eileen – thanks for your offer of assistance. I suspect we will want some further information so we will be in touch.

Regards,
Brian Sara
Manager Vehicles – NZ Transport Agency
DDI section 9(2) ( ) M section 9(2)(a)

From: Eileen Kerry
Sent: Tuesday, 9 May 2017 8:06 a.m.
To: Dave Mabey; Brian Sara
Subject: RE: Skid Plate

Good morning Brian

Rick raised this issue at our regional team meeting yesterday. Are you able to let me know please what the Agency's response to this issue is, i.e. have we contacted the owners of the vehicles concerned?

Also, I do have two Vehicle Specialists in my team, if you require someone to go and look at the plates, please let me know together with what iformation you'd like from them.

Cheers, Eileen

From: Dave Mabey
Sent: Monday, 8 May 2017 7:37 p.m.
To: Brian Sara; Eileen Kerry
Subject: FW: Skid Plate

Hi Brian & Eileen

Please see below & attached FYI regards skid plate failures

Regards

Dave

From: section 9(2)(a)
Sent: Thursday, 4 May 2017 3:04 p.m.
To: Dave Mabey
Subject: Skid Plate

Hello Dave,

See attached sheets.

I have the photos but the file was too large without converting.

If you need them I will organise something for you.

The list of additional skid plates is in the "E" mail from Fruehauf and I have most of these sitting

in the back shed if they need to be viewed.

See “E” mail trail re the latest failure. Maxi Trans have scrapped the unit so all I have are the photos.

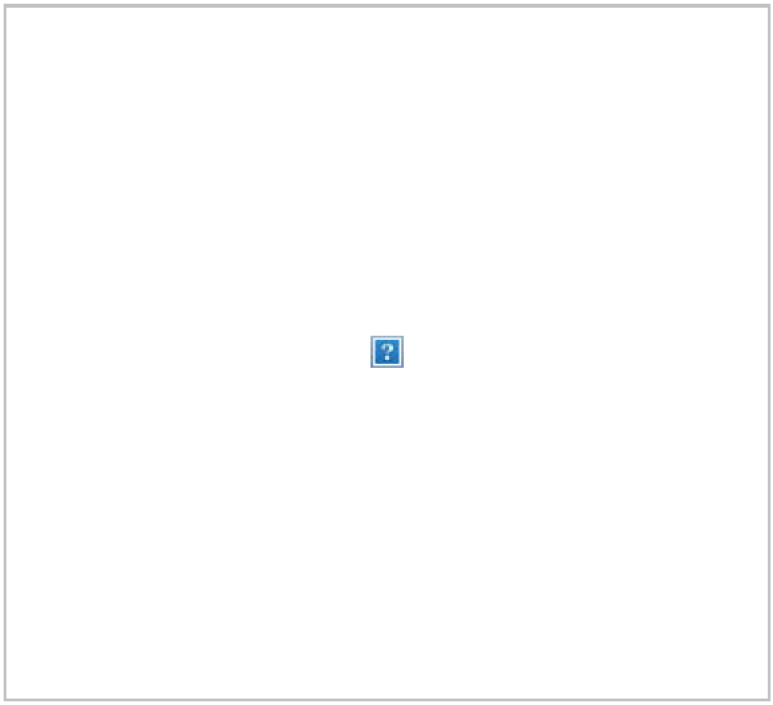
Regards,

secti

PS still chasing some chassis rego’s from our owner drivers.

Regards,

secti



SAFETY CONCERNS AROUND SKID PLATE FAILURES ON MAXITRANS SEMI TRAILERS

Initial email correspondence was received from section 9(2)(a) workshop service manager for Halls Transport in Auckland on the 3rd March 2017 raising concerns around the design & safety of the above mentioned, Semi-Trailer units. Halls Transport have a maintenance programme in place for all of their fleet vehicles.
The reply received was covered as below & referenced information from the Agency web site which was relayed back to Halls Transport.
Paul Chapman, John Long and I worked on this concern a year or two back which resulted in advice provided at ICG's and the following information distributed and now residing on our website.

On the 28th April I received a phone call from Halls Transport once again raising concerns around the safety & design of the above mentioned, units. The question was asked as to whether the Agency was able to follow-up on the design or manufacture of these units to see if they meet the correct standards. Several operators operate these units & may not be aware of the skid plate failures which they have had in their fleet.
To date ten units have had failures in the skid plate area either from cracking or corrosion to a lesser degree as per the list of registration numbers below.
G471C, G720L, P424F, section 9(2)( ), R336R, R434T, R662Q, R746Y, S188B, S819D

The most recent trailer was manufactured and released in September 2013. In December, last year the trailer was reported to MaxiTRANS with some issues regarding skid plate. We, (MAXITRANS) investigated the issue and we found that the skid plate problem was due to the welding procedure. Some of the welding were stitch welding instead of fully welding. We replaced the skid plate under warranty and issued LT 400 for the new skid plate.
The replaced skid plate is a new generation MaxiTRANS skid plate with improved design and welding procedure.
With the high number of failures on these units which are also operating under the HPMV permit process we have concerns around the safety of these units as several companies throughout NZ operate the same units as mentioned above.

NZ TRANSPORT AGENCY
WAKA KOTAHI

Minutes

Purpose	Service Engineers Industry User Group
Date & Time	04 November 2014
Location	Airport Conference Centre, Hamilton Airport, Hamilton
Attendance	s 9(2)(a) [redacted] Rhys Bright section 9(2)(a) [redacted] Yvette Lusby s 9(2)(a) [redacted]
Apologies	section 9(2)(a) [redacted] John Holderness section 9(2)(a) [redacted] section 9(2)(a) [redacted] Paul Knight section 9(2)(a) [redacted] section 9(2)(a) [redacted] s 9(2)(a) [redacted] Melvin Powell section 9(2)(a) [redacted]

The opinions/statements given by the speakers are those of the speakers only. NZTA do not in any way endorse/influence these opinions

Out of Scope [redacted]

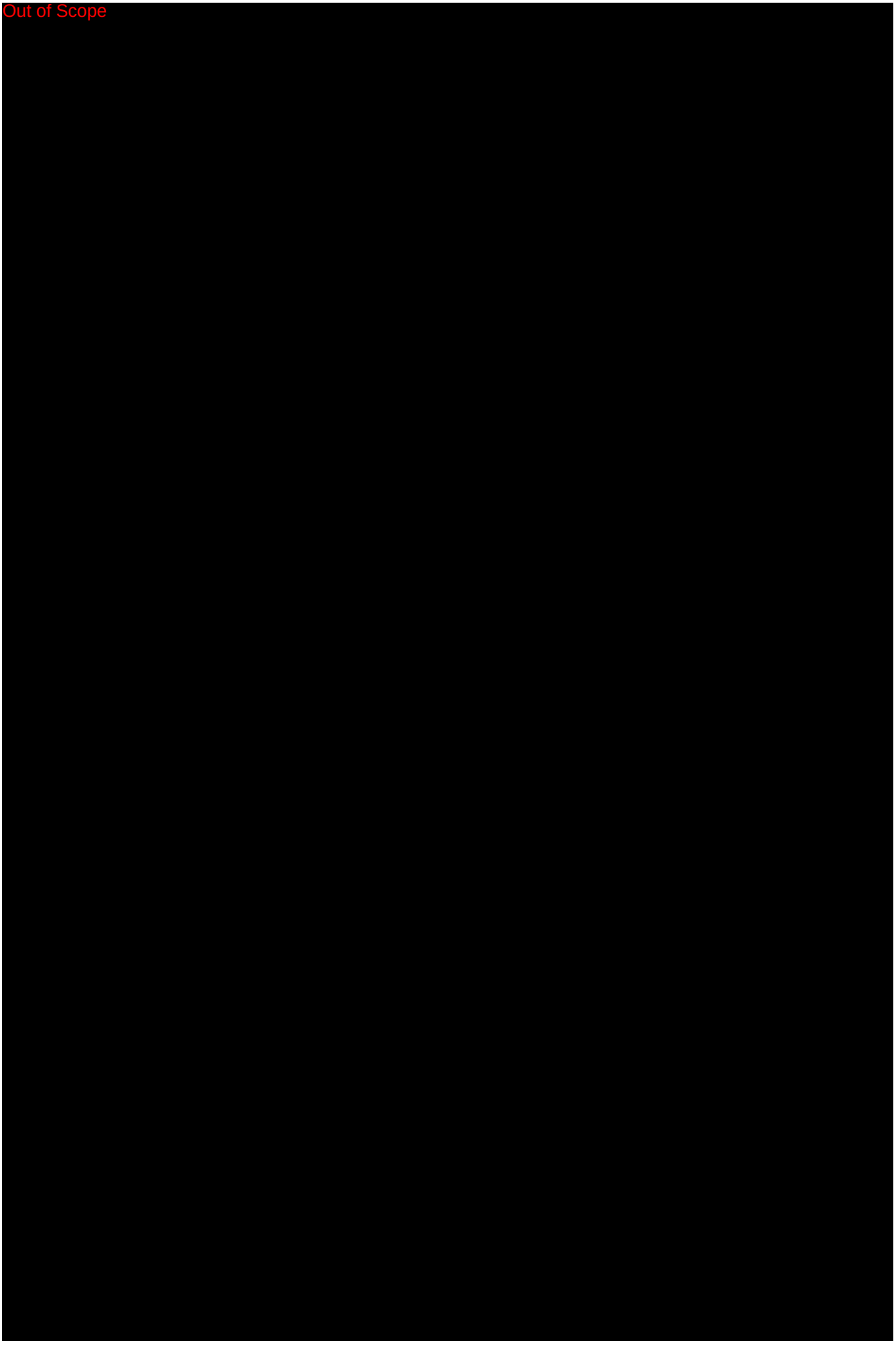
2	**Changing GVM, King Pin & Skid Plate Maintenance, Scania Component recall** s [redacted] presented on 5th Wheel Skid Plate Corrosion (update from issues raised at previous meetings), Changing GVM on a Vehicle, Scania Component recall. Presentation included resources available with regards to the changing of GVM on a vehicle, proposed Skid Plate corrosion check sheet, details of the Scania component recall with regards to UJ bolts. Main Topics of discussion arising: Changing GVM -	s 9(2)(a) [redacted]

Item	Subject	
	• Refer to Engineers memos, memo 55, memo 57 series (a,b,c,d,e) and memo 80 • Policy statement available on the website - http://www.nzta.govt.nz/resources/gross-vehicle-mass-policy-position-statement/index.html • GVM is the technical minimum • In service – alterations to GVM consistent with modification King Pin & Skid Plate Maintenance • Suggestion made of check sheet similar to that for 5th Wheel, this would be supported by Standard (NZS 5451:1989), Check sheet to require confirmation of relevant measurements; • Kingpin – confirm standard, damage and wear (state dimensions) • Skid Plate – confirm Skid Plate is undamaged, without ripples, corrosion or sharp projections and does not exceed the "out of flatness" limits in the Standard (state dimensions) • King Pin mounting – confirm all mounting details including lube plate are compatible with the fitting (state dimensions) Include a statement of liability to ensure this inspection has been carried out Suggest operators require manufactures/engineers to design inspection facility (Section 5.2) It was put to the group would there be support for this, this was supported by the group with the agreement that a working party be set up to progress further, working group members will be s[redacted], section 9(2) section 9(2)(a) s 9(2)(a) [redacted], section 9(2)& representatives from the Truck & Trailer Manufacturers Federation. It was agreed that this group would develop the check sheet which will then be distributed amongst members for feedback Scania Component recall • As per attached Scania service bulletin, Scania have had failure reports of the mounting bolts which secure the Universal Joint to both the gearbox and axle flange coming loose. This leads to the bolts breaking and can cause catastrophic failure of the UJ with large consequential damage. • Cable Price Scania have identified all vehicles where these bolts have been used within their own dealer network and are working through a recall process, along with all over the counter sales and are working to identify/recall affected vehicles, this is fully supported by The Agency	

Out of Scope

[redacted]

Out of Scope



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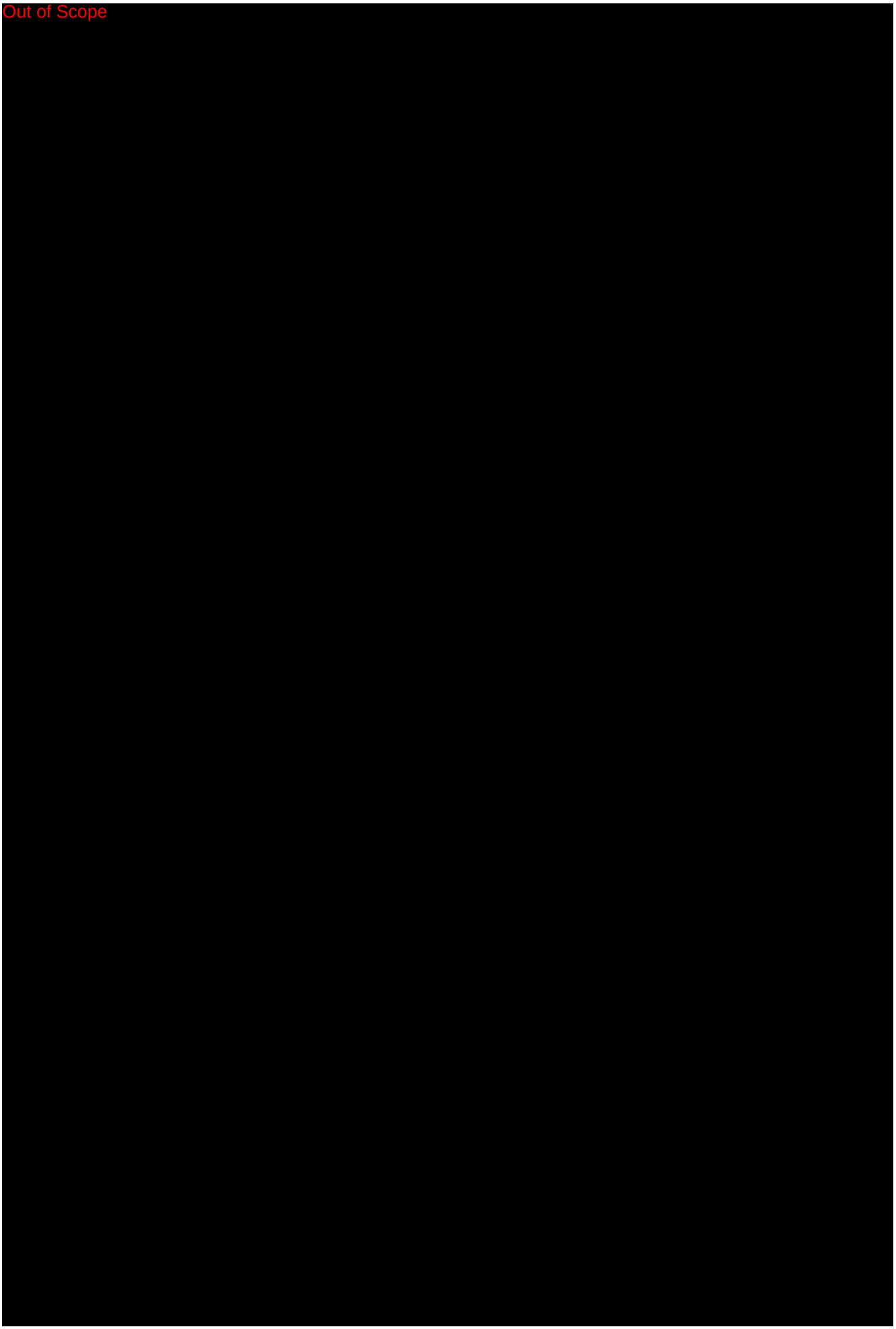

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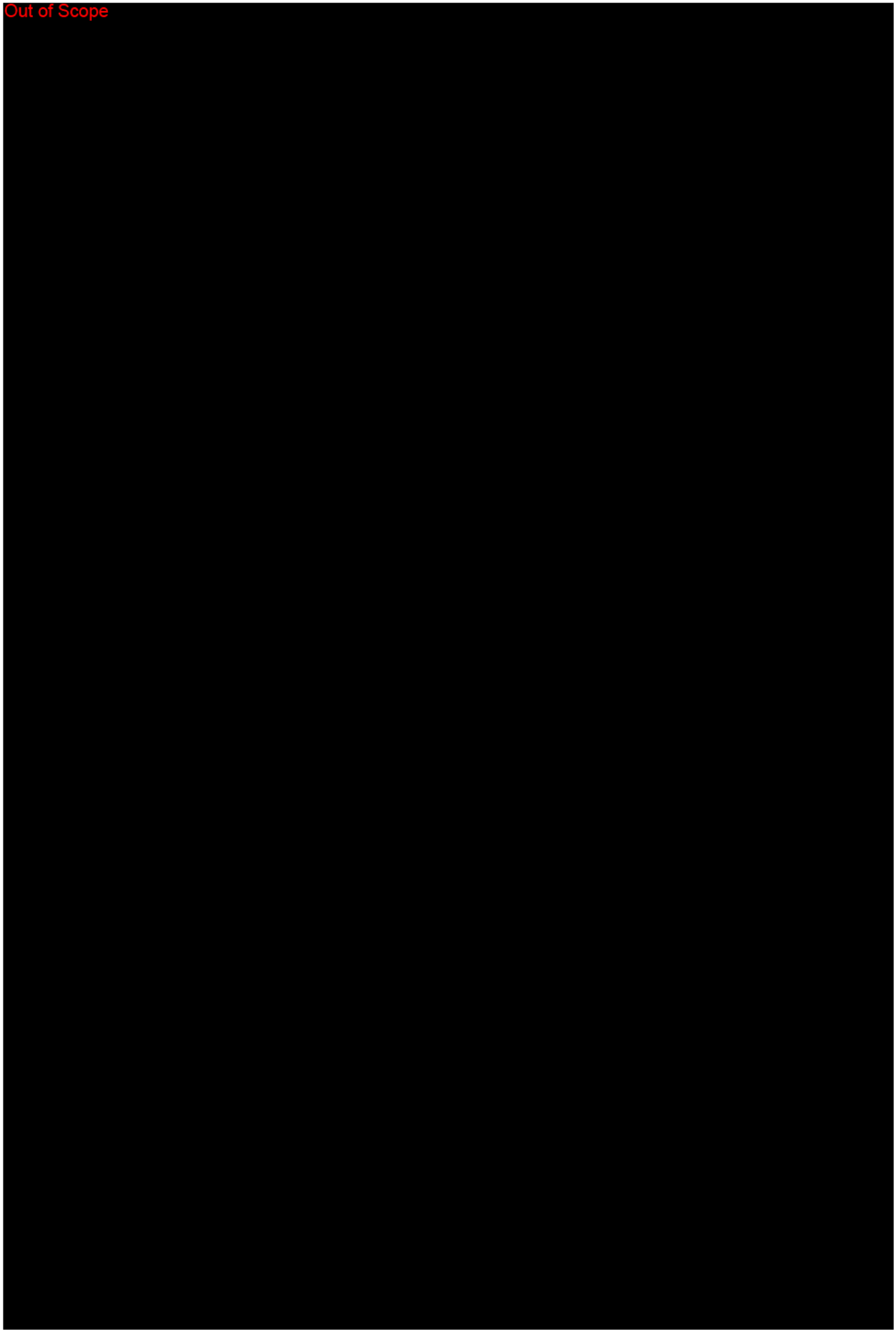

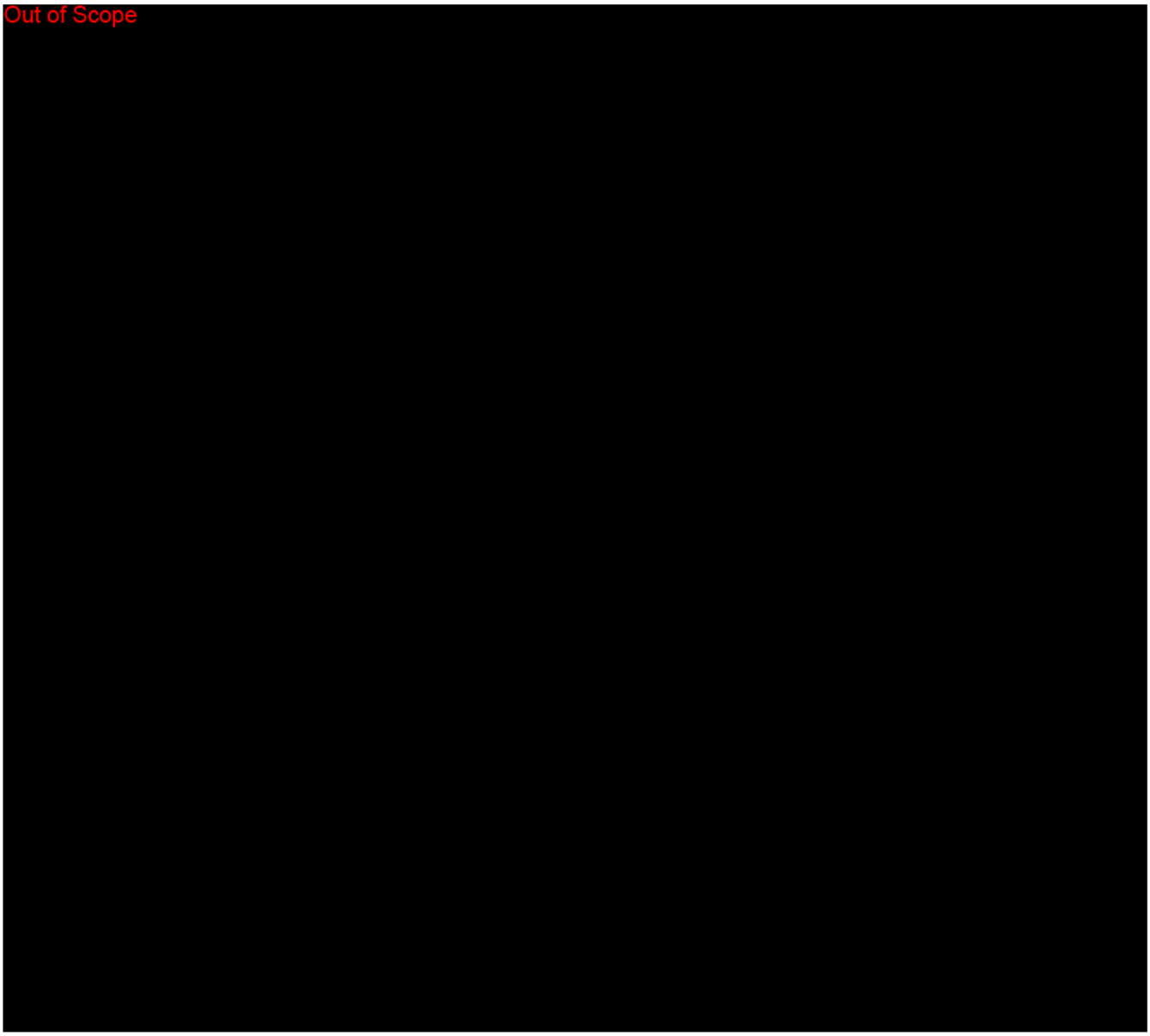

Next Meeting: Tentative - Wednesday 22 April 2015

WORKING GROUP FOR SKID PLATE INSPECTIONS, MAINTENANCE & DESIGN

16 December 2015
WIRI

PRESENT:

Name	Company	Area of Expertise
section	Fruehauf Trailers	General Road Freight
section 9(2)	Maxitrans Industries	Skels, Fibreglass
section	Tanker Engineering	Fuel tankers
section 9(2)(a)	Transfleet Equipment	Tipping Bodies/trailers
section 9(2)(a)	Halls Transport	Transport Operator
section 9(2)(a)	Fairfax Industries	Fibreglass, monocoque
John Long	NZTA	In-field auditing
section 9(2)	Transport Equipment Solutions	Equipment Supplier
section 9(2)	Transport Technology	Design, certification

BACKGROUND

An industry meeting held on 18th November 2014 raised concerns about the condition of older skid plates and the hidden rust and deterioration. A further meeting held on the 28th July 2015 drafted a Statement of Compliance Sheet and Heavy Vehicle Servicing Information sheet. Although not mandated, a final version became live on the NZTA website in July 2015. It was deemed "Recommended Best Practice". The document proposed operational, maintenance and design practices.

Although it was the intention of the industry group to involve engineers in developing the next step (which was to facilitate inspection procedures and design criteria for new trailers), this did not happen. The outcome has seen some interpretation on the part of vehicle Inspectors and subsequent demands from operators on trailer builders, without due consideration for design and manufacturing difficulties across the different types of equipment. There is also the potential for unauthorised modifications to skid plates to facilitate inspections which would normally require an LT400.

DISCUSSION

Since the requirement for king pin crack testing at 100,000kms was removed, there is no regular inspection or measurement of kingpins by testing stations. This has gone from the sublime to the ridiculous.

Skid plates have (or meant to have) a design life of 10 years/1million kilometres. They should bare a certification plate attached.

It was agreed that cracks and flatness distortions are a visible sign of degradation inside the skid plate. All skid plates should be steamed cleaned and checked for cracks at 5 years then 12 monthly after that.

With regard to new trailers, manufacturers could facilitate an inspection portal.

From: section
To: section
Subject: Skid plate replacement rego"s
Date: Thursday, 4 May 2017 12:45:06 p.m.
Attachments: section

Hi secti the following rego's have had skid plates swapped out so far:

G471C
G720L
P424F
R232W
R336R
R434T
R662Q
R746Y
S188B
S819D

Cheers,

secti

section 9(2)(a)

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