Correct as at 17th May 2026. It may be superseded at any time.

Extract taken from: Heavy vehicle specialist certification > Technical bulletins > SRT requirements for ‘O’ Permit Export/Import containers

8 SRT requirements for ‘O’ Permit Export/Import containers

Memo 70c

Background

After recent vehicle rollovers, the Commercial vehicle Investigation Unit of NZ Police (CVIU) alerted the Transport Agency that the regulatory requirements for Static Roll Threshold (SRT), as defined in the **Land Transport Rule: Vehicle Dimensions and Mass 2016** (the VDAM Rule), were not being met by some operators of trucks using overweight permits and moving ISO shipping containers. The lack of SRT compliance presents a significant road safety issue for both the drivers of these trucks and other road users due to the higher probability of these vehicles rolling over.

The SRT of a vehicle is a static measure of the potential for that vehicle to become unstable and roll-over when moving. Vehicles with a low SRT (below 0.35g) are more likely to rollover than those with a higher SRT (those 0.35g and above). The lower the SRT, the less stable the vehicle, especially when turning sharp corners and during emergency manoeuvres such as sudden lane changes.

Previously the Agency has issued overweight permits to operators of ISO Container trucks on the assurance that these vehicles were being operated within the legal SRT requirements for mass and height. This reflected the fact that it is the permit holder’s responsibility to operate within the regulatory requirements relating to SRT, as well as other conditions detailed in the permit or legislation. This includes ensuring the SRT of the vehicle is calculated appropriately depending on what the vehicle is carrying and how it is loaded.

As well as the SRT issues raised with the Agency there have also been concerns raised about the braking capability of brake coded vehicles obtaining overweight permits.

As a result of the concerns raised with us by the NZ Police and in the interests of improving road safety for all road users, Permit Issuing Officers (both internal Agency staff and external contractors) have now been directed to check for both SRT compliance and that there is sufficient brake capacity when issuing overweight permits for combinations carrying ISO containers.

Additionally, holders of existing overweight permits for ISO Container trucks have been requested by the NZTA State Highway Managers to provide confirmation that their currently permitted vehicles are SRT and brake compliant.

The way forward

The Agency has worked with the Road Transport Forum, TERNZ and the CVIU to find solutions that will ensure the greatest amount of compliance with the least possible disruption for the industry, and four options have been developed. All four options require an SRT Compliance Certificate to be completed by a Heavy Vehicle Specialist (HVS2) Certifier and a Vehicle Attributes Sheet for each prime mover and trailer to be completed by a Heavy Vehicle Specialist Certifier (HVEC or HVEK) and supplied with the Permit Application Form..

These four options are as follows:

1. A uniform density SRT overweight permit at height from road surface to highest point on the tallest container [maximum load (container) height = 4.3m]

2. A uniform density SRT overweight permit with a load height of at least 3.90m [within the container].

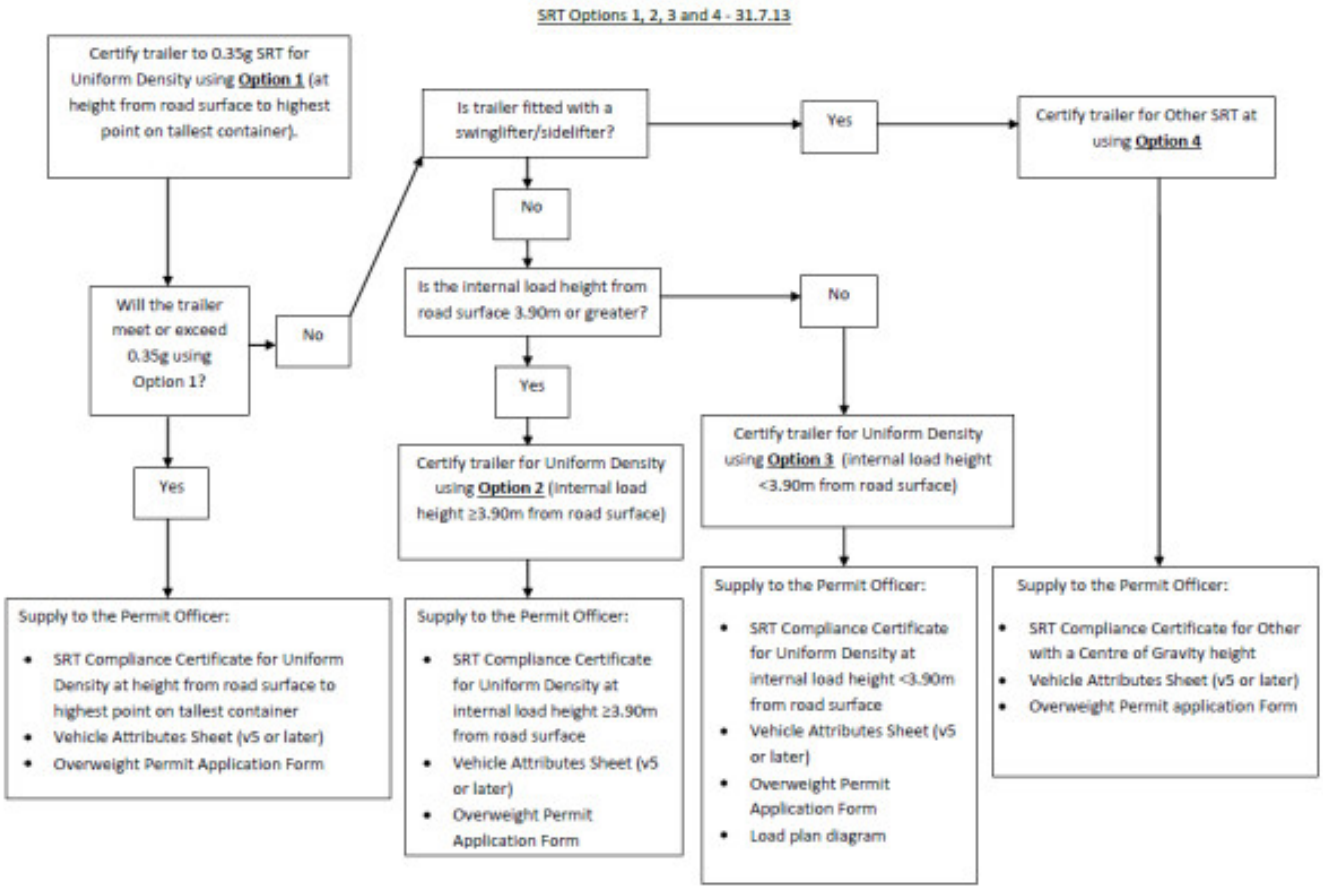
3. A uniform density SRT overweight permit at an internal load height of less than 3.90m [within the container].

4. An 'Other' SRT permit for swing lifter/sidelifter trailers.

The SRT compliance certificates should be at calculated using the weights on the trailer axle set, either listed on the overweight permit, the *Permit application* form, or at a realistic in-service weight.

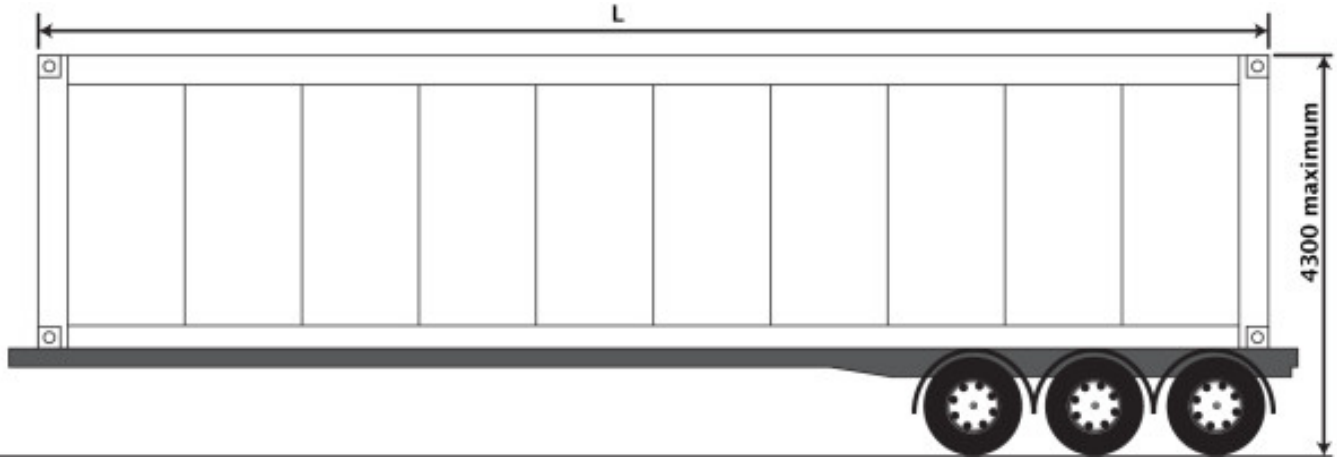
Please refer to the flowchart on the following page for advice on which option to select.

The Transport Agency will consider on a case-by-case basis extensions of up to one month from the 1 August 2013 deadline for those operators who have been unable to get a certifier to complete SRT compliance certificates. Operators will need to apply to their Permit Issuing Officer in writing.



- Download **SRT options flowchart** (PDF)

1. A Uniform Density SRT overweight permit at the maximum height from the road surface to the highest point on the tallest container (maximum load height of 4.3m).



This option is Uniform Density SRT calculated using the weights on the trailer axle set either listed on the Overweight Permit, the Permit Application Form, or at a realistic in-service weight, at the height from the road surface to the highest point on the tallest container, to a maximum height of 4.3m.

As this is the 'worst case' scenario it will cover the vehicle for every loading situation within the permit weights and specifically where the composition of the container load is not known.

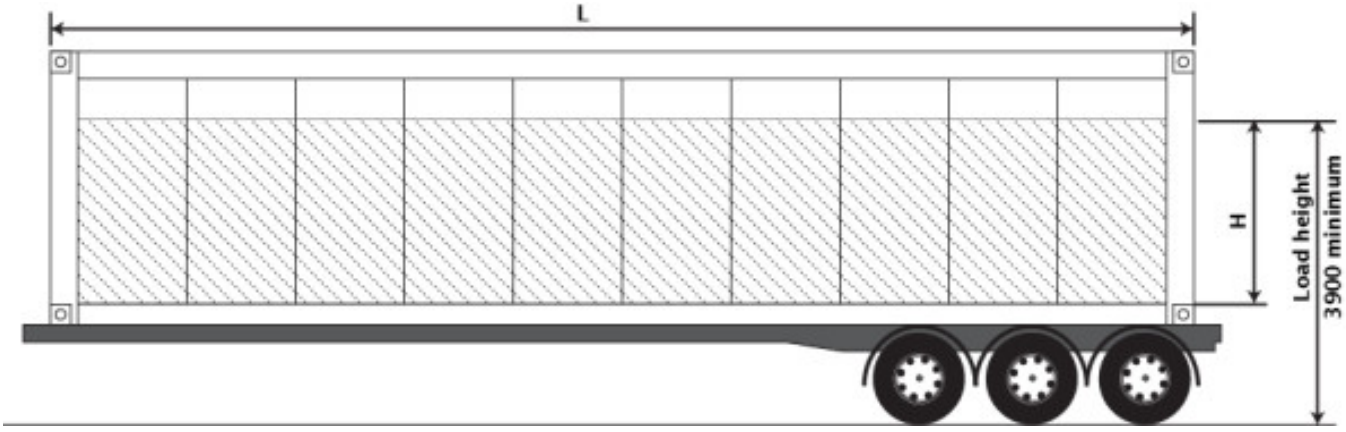
A valid SRT Compliance Certificate for Uniform Density and using the height from the road surface to the highest point on the tallest container (to a maximum height of 4.3m) completed by an HV Certifier with the HVS2 category, must be supplied with any overweight permit application form. The SRT compliance certificate must be carried on the vehicle and presented to the CVIU on request, together with the standard *evidence bona fide* listed in Section B3 of the Transport Agency's *Vehicle dimension and mass permitting manual*.

SRT Compliance Certificates do not have to be done at 22,000kg, as the maximum allowed for a tri-axle set is 21,780kg, depending on axle spacing, and calculating SRT at a higher weight than the permit will allow could lead to the trailer failing to meet the 0.35g compliance target.

Any permit operated outside of its conditions will be revoked under section 5.7 of the VDAM Rule.

Option 1 is recommended for all non-swinglifter/non-sidelifter trailers carrying import containers.

2. A Uniform Density SRT overweight permit with an internal load height of 3.90m or greater (Maximum load/container height 4.3m).



This option is for Uniform Density SRT calculated using the weights on the trailer axle set either listed on the Overweight Permit, the Permit Application Form, or at a realistic in-service weight.

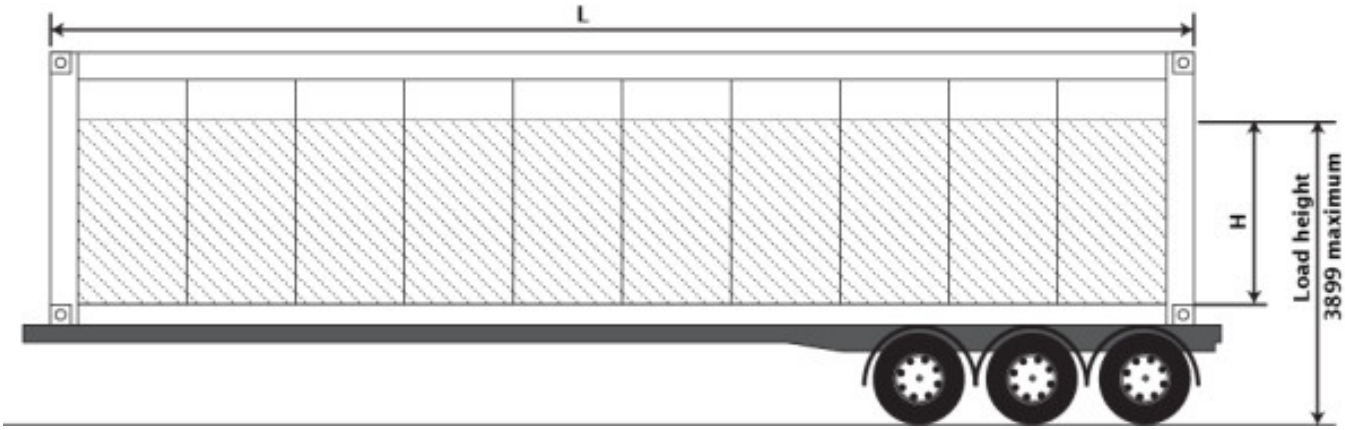
This option can be used where the distance from the road surface to the top of the load in the container is not less than 3.90m (must be 3.90m or more to use this option). This option reflects the fact that most containers have an air gap and are not filled to the roof of the container.

A valid SRT Compliance Certificate for Uniform Density at the permit weights on the trailer and at a minimum load height of 3.90m from the road surface to the top of the load must be completed by an HV Certifier with the HVS2 category and supplied with any permit application form. The SRT Compliance Certificate must be carried on the vehicle and presented to the CVIU on request, together with the standard *evidence bona fide* listed in Section 8.4.4 of the *Transport Agency Overweight Permit Manual*.

SRT Compliance Certificates do not have to be done at 22,000kg, as the maximum allowed for a tri-axle set is 21,780kg, depending on axle spacing, and calculating SRT at a higher weight than the permit will allow could lead to the trailer failing to meet the 0.35g compliance target.

The load height will be a condition of the permit. The CVIU have the legal authority to open any sealed container. Any permit operated outside of its conditions will be revoked under section 4.4 of the VDAM Rule.

3. A Uniform Density SRT overweight permit at an internal load height of less than 3.90m.



This option is for Uniform Density SRT calculated using the weights on the trailer axle set either listed on the Overweight Permit, the Permit Application Form, or at a realistic in-service weight.

This option can be used where the distance from the road surface to the top of the load in the container is less than 3.90m. This option reflects the fact that most containers have an air gap at the top of the load, and are not filled to the roof of the container.

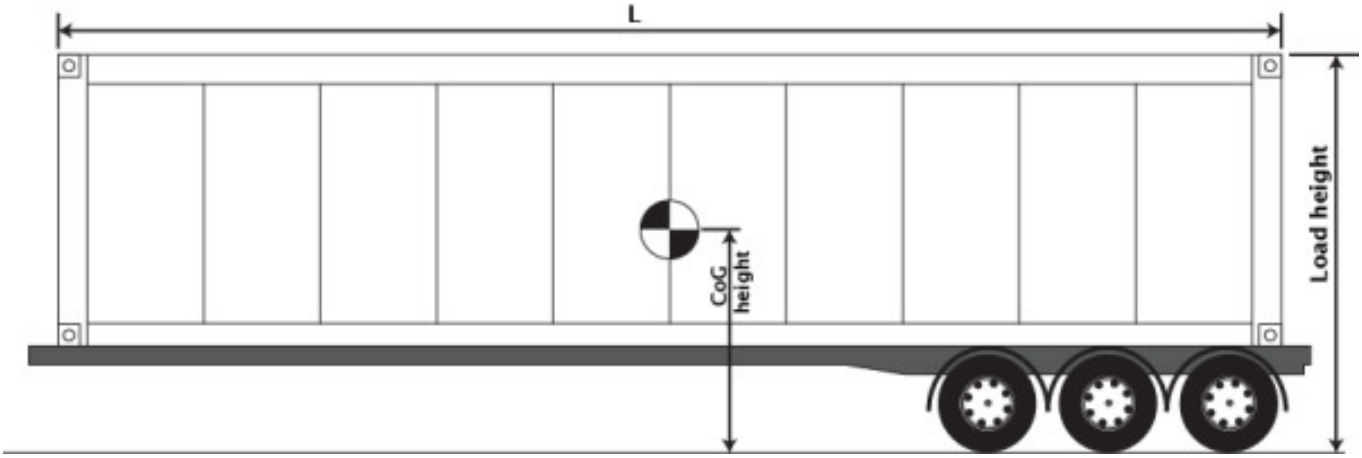
A valid SRT Compliance Certificate for Uniform Density at a load height less than 3.90m from the road surface to the top of the load must be completed by an HV Certifier with the HVS2 category and supplied with any permit application form. The SRT Compliance Certificate must be carried on the vehicle and presented to the CVIU on request, together with the standard *evidence bona fide* listed in Section B3 of the Transport Agency's *Vehicle dimension and mass permitting manual*.

SRT Compliance Certificates do not have to be done at 22,000kg, as the maximum allowed for a tri-axle set is 21,780g depending on axle spacing, and calculating SRT at a higher weight than the permit will allow could lead to the trailer failing to meet 0.35g.

This option also requires permit applicants to supply an accurate drawing (a “load plan”) which shows the height the container is loaded to (H), the mass of the contents, and the load height of the vehicle. This load plan will need to be carried on the vehicle for inspection by the CVIU.

The load height will be a condition of the permit. The CVIU have the legal authority to open any sealed container. Any permit operated outside of its conditions will be revoked under section 4.4 of the VDAM Rule.

4. An ‘Other’ SRT permit for swing lifter/sidelifter trailers (lifting arms not shown).



This option is calculated using the weights on the trailer axle set either listed on the Overweight Permit, the Permit Application Form, or at a realistic in-service weight. The load must be calculated on the basis that the contents are uniformly dense, and the CoG of the load itself can be nominated using the “Other” method.

A valid SRT Compliance Certificate for ‘Other’ SRT and at a maximum payload CoG height will be required to be completed by an HV Certifier with the HVS2 category and supplied with any permit application form. The SRT Compliance Certificate must be carried on the vehicle and presented to the CVIU on request, along with the standard *evidence bona fide* listed in Section B3 of the Transport Agency's *Vehicle dimension and mass permitting manual*.

SRT Compliance Certificates do not have to be done at 22,000kg, as the maximum allowed for a tri-axle set is 21,780g depending on axle spacing, and calculating SRT at a higher weight than the permit will allow could lead to the trailer failing to meet 0.35g.

The load height and CoG will be a condition of the permit. Any permit operated outside of its conditions will be revoked under section 4.4 of the VDAM Rule.

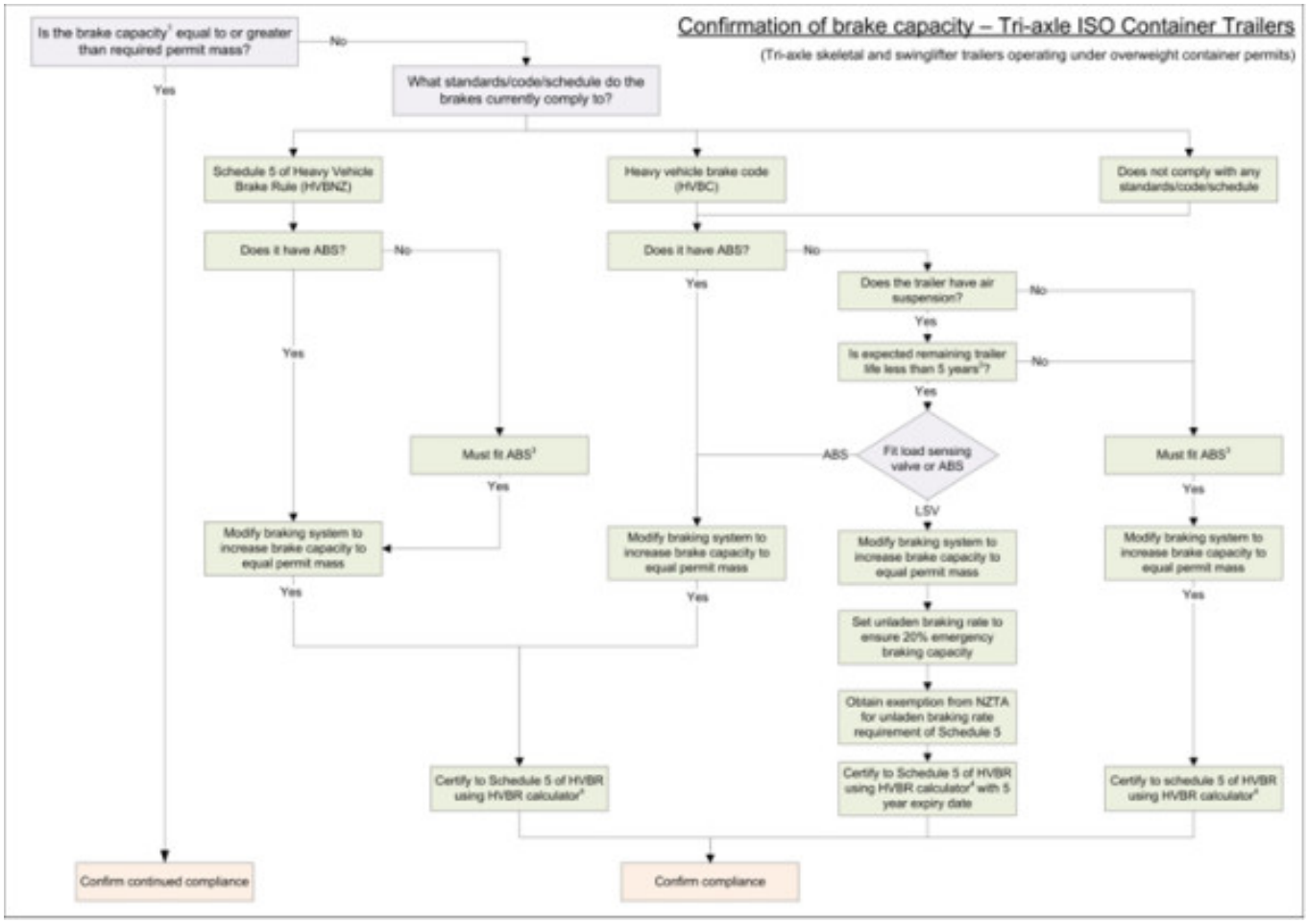
All of Vehicle option

An “all-of vehicle” option is under consideration. The details of this have not been approved or finalised at this time.

Brake Coded Vehicles

To ensure that all vehicles receiving overweight container permits have sufficient brake capacity to match the weight approved on the permit, even if they are Brake Coded, the Agency has agreed to allow operators to prove compliance by having a HVEK Certifier, using the flowchart below, to confirm the braking capacity of a tri-axle semi trailer. This should mean that the majority of tri-axle semi trailers with a VAI of no more than 1.1 will not require major brake upgrades. Quad-axle semi trailers are to be treated on a case by case basis.

The results of this compliance check are to be included in the PDS for the job and reflected on the Attribute Sheet.



- Download **Confirmation of brake capacity flowchart** (PDF)

Notes

1. Brake capacity – either the Brake Code Mass for Brake Coded trailers or the brake calculation mass for a trailer complying to the Heavy-vehicle Brakes Rule, (this should be the axle group mass at the GVM for brake rule compliance).

2. If the expected remaining life of the trailer is less than five years and it is fitted with air suspension a load sensing valve can be fitted – the certification of the braking system in this case will have a non repeatable five year expiry date and an exemption from the unladen braking rate in Schedule 5 of the Heavy-vehicle Brakes Rule will be required. This exemption number is to be recorded on the LT400 and the exemption to be carried with the vehicle

3. Load sensing is also an option however it has been demonstrated that this is only suitable for trailers with a tare weight per axle greater than 2500 kg, otherwise compliance in ALL 3 of the required states, unladen, laden, and the emergency braking requirement (20% brake efficiency) typically cannot be achieved.

4. Using a currently approved NZTA calculator, approved ‘proprietary’ software or manual calculations, where approved proprietary software is used compliance to schedule 5 must be demonstrated. The HVBC calculator is no longer approved and can NOT be used.

Vehicle attributes sheet (version 5 or later) required for each truck and trailer from 1 August 2013

From 1 August 2013 all new applications for ISO Container Overweight Permits must be accompanied by a completed Vehicle Attributes Sheet (Version 5 or later) for each truck and trailer signed by an appointed heavy vehicle certifier with

the HVS2 category, along with the SRT Compliance Certificates (and a load plan for Option 3) as required in this Memo. All container permit applications received from 1 August 2013 that can prove SRT Compliance using one of the four options and accompanied by a Vehicle Attributes Form (Version 5 or later) signed by an appointed HVS2 certifier for each truck and trailer, that demonstrates the vehicle is being operated within safety limits, will be issued with the full twenty-four month (two year) permit.

Requirements on engineers

When preparing an attributes sheet for an import/export container 'O' permit a HVS2 certifier must be engaged to certify the trailer as described in one of the alternatives above and write an LT400. The LT400 is to be added to Landata (IVCERT) but the original SRT values are to be left on the Certificate of Loading. The operator is to be supplied with a copy of the SRT Certificate which must be kept in the cab and produced on request by the NZ Police or NZTA Transport Officers. Such certification is an update and does not replace the original certification.

Where the certifier can verify that the vehicle is unmodified (same dimensions, same axles, same suspension) from its condition when last certified, then the SRT can be updated without physically inspecting the vehicle. Verification can be receipt of a signed declaration from the owner stating that the vehicle is unchanged from its most recent SRT certification. The onus is on the certifier to be satisfied that such a declaration is credible. If it cannot be verified that the vehicle remains unmodified since its last SRT certification then a full inspection and assessment will be required.

When calculating SRT it is important that you use the manufacturer's values as the generic values are more conservative and may result in a failed SRT. However, when calculating SRT for vehicles using Hendrickson axles (models HT230, Intraax and Intraax AANT) the correct roll stiffness figure is 23,162 Nm/degree (1,327,085Nm/rad). Permit officers have been advised to reject permit applications that use other figures for Hendrickson axles

As an additional assistance it has been agreed that the HVS2 certifier, when calculating the SRT using either option 2 or option 3, may include the tare weight of the container as part of the tare weight of the trailer.

Note that where the SRT has been derived from design data it must be verified from 'as built' data prior to the issuing of a SRT certificate.

Summary

- From 1 August 2013 all ISO container permit applications must be supplied with a Vehicle Attributes Form (Version 5 or later) signed by an HV Certifier with the HVS2 category for each truck and trailer, along with the SRT compliance certificates (and a load plan for Option 3).
- Permit applications received after 1 August 2013 with a Vehicle Attributes Form (Version 5 or later) signed by an HV Certifier with the HVS2 category for each truck and trailer along with the SRT compliance certificates (and a load plan for Option 3) will receive 24 month permits.
- All temporary ISO container permits successfully renewed with a Vehicle Attributes Form (Version 5 or later) signed by an HV Certifier with the HVS2 category for each truck and trailer, along with the SRT compliance certificates (and a load plan for Option 3) after 1 August 2013, will be extended from the initial date of issue for the full 24 months at no extra cost.
- SRT compliance certificates do not have to be done at 22,000kg, as the maximum allowed for a tri-axle set is 21,780g depending on axle spacing, and calculating SRT at a higher weight than the permit will allow could lead to the trailer failing to meet 0.35g.
- The Transport Agency will consider on a case-by-case basis extensions of up to one month on the 1 August 2013 deadline for those operators who have been unable to get a certifier to complete SRT compliance certificates. Operators will need to apply to their Permit Issuing Officer in writing.

The Transport Agency is taking this action in response to an increased road safety risk and has been working with industry representatives, the NZ Police and affected vehicle operators as a matter of urgency to inform affected parties what is expected of them. We appreciate your patience and time in addressing these important matters.

Page amended **1 February 2017** (see **amendment details**).