

s 9(2)(a)

From: s 9(2)(a)
Sent: Tuesday, 1 September 2020 9:23 pm
To: s 9(2)(a)
Subject: Fwd: Letter - Sanwa-Seiki park-brake valves

s 9(2)(a) - FYI

Sent from my iPhone

Begin forwarded message:

From: Out of Scope @nzta.govt.nz>
Date: 1 September 2020 at 14:33:10 NZST
To: Out of Scope @nzta.govt.nz> s 9(2)(a)
s 9(2)(a) @fultonhogan.com>
Subject: RE: Letter - Sanwa-Seiki park-brake valves

Thanks also s 9(2)(a). As we discussed, this will be coming through our Board next month.

Regards

Out of Scope
Chief Executive

M s 9(2)(a)
E Out of Scope @nzta.govt.nz / w nzta.govt.nz

Waka Kotahi NZ Transport Agency
Victoria Arcade, 50 Victoria Street,
Private Bag 6995, Wellington 6141, New Zealand



From: Out of Scope @nzta.govt.nz>
Sent: Tuesday, 1 September 2020 2:31 PM
To: s 9(2)(a) @fultonhogan.com>; Out of Scope
Out of Scope @nzta.govt.nz>
Subject: RE: Letter - Sanwa-Seiki park-brake valves

Thanks s 9(2)(a)

As discussed last week, I really appreciate you getting this to us and offering assistance in our process. I hope you don't mind but I have also forwarded your note to our regulatory team that I know would be interested in the views you have put forward.

Stay well.
Out of Scope

Out of Scope / General Manager

Safety, Health and Environment
DDI s 9(2)(a) / M s 9(2)(a)
E Out of Scope @nzta.govt.nz / w nzta.govt.nz

From: s 9(2)(a)
To: Out of Scope
Subject: Letter - Sanwa-Seiki park-brake valves
Date: Monday, 31 August 2020 9:41:48 AM
Attachments: [310820 Collated Letter to Nicole Rosie_EGJ Park-Brake Valves.pdf](#)

Hi Out of Scope –

Thanks for your time over the last few days to catch up by phone,
As mentioned, I've attached a letter capturing some of my thoughts and observations on Sanwa-Seiki park-brake valves in NZ, pursuant to our meeting a couple of months back.
I appreciate that you have this as a 'live' piece of work on the agenda for Waka Kotahi, among a myriad of other challenges no doubt. Thank you for your efforts in this regard in seeking to drive a positive outcome, I'm happy to assist if you see an opportunity for me to help.

Best regards,

s 9(2)(a) | Chief Executive Officer – New Zealand | **Fulton Hogan Ltd** | 15 Sir William Pickering Drive | PO Box 39185, Harewood, Christchurch, 8545, New Zealand | Mobile s 9(2)(a)
| Web www.fultonhogan.com

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31st August 2020

Out of Scope

Chief Executive
Waka Kotahi NZ Transport Agency

By email to: Out of Scope @nzta.govt.nz cc: Out of Scope @nzta.govt.nz

Dear Out of Scope

Update – Nissan diesel trucks containing Sanwa Seiki park-brake valves

Thank you again for your time on 30th June 2020 where you, Out of Scope and I discussed via video-conference the latest observations that Fulton Hogan has made regarding issues with Sanwa Seiki park-brake valves, fitted to a number of Nissan Diesel (and potentially other commercial trucks) operating in New Zealand. I apologise for the delay in coming back to you with this summary letter following our meeting, but recent events in August related to the NZ Government reinstatement of Covid Alert Level 2 and 3 restrictions around the country has occupied a significant amount of my time of late, as I am sure it has occupied yours.

The purpose of my letter is to summarise our observations and thoughts on the matter of Sanwa Seiki park-brake valves, as may assist with discussions that Waka Kotahi are having internally on considering and developing 'next steps' around the risk posed and how best to respond.

Background and continuing risk

Fulton Hogan continues to have significant concerns that Nissan Diesel and other trucks are still operating on New Zealand roads while fitted with Sanwa Seiki park-brake valves, that have been implicated in a number of 'roll-away incidents'. Evidence indicates that these particular mechanisms may suddenly and accidentally release after the park-brake is applied, as identified in at least two fatal accidents in New Zealand: one in Dunedin in 2010 which was subject to a Coronial Inquest (ref: 2012-NZ CorC82-15/06/202) and one in Wellington in March 2019 which tragically led to the death of a young man working for Fulton Hogan.

As disclosed when we met on 30th June, I must note that the Ngauranga Gorge accident is currently subject to charges laid under the Health & Safety at Work Act 2015 and Fulton Hogan Limited is one of the four defendants (Wellington District Court-2020 085 871).

I have enclosed the relevant recommendations of the Coronial inquest in 2012 regarding the Dunedin incident. This included a recommendation that the Sanwa Seiki park-brake valves should be inspected at every service to ensure there is no build-up of foreign materials between the lever shaft and the valve body, which is an identified source (but not the only source) of failure. I note to date that, pursuant to these findings, at least nine

further advisory notices have been issued along these lines, including three from Waka Kotahi, one from WorkSafe and at least one from the Nissan Truck distributor in New Zealand.

Each of these notices recommend inspection, servicing and maintenance to mitigate this identified source of failure, however the notices are voluntary, non-binding and reliant on the actions of individuals possessing and operating these trucks. There is currently no fail-safe, independent regime that mandates their periodic inspection, maintenance or replacement.

Observations have been made of other sources of failure in the park-brake valve, including wearing and material loss in a number of components leading to 'hair trigger' engagement. All of these situations are extremely susceptible to unexpected and uncontrolled releases of the valve through small vibrations (such as may result from simply shutting the door of the truck). It is understood that the park brake valve from the truck involved in the 2019 Ngauranga Gorge fatal accident failed 100% of the time when tested by NZ Police after the incident.

Recent observations

The vehicle involved in that 2019 Ngauranga Gorge accident had received a COF just eight days earlier but there is no evidence of inspection, servicing or maintenance of the park-brake valve having ever been carried out by its owner (Shuttle Express Ltd). The current advice and recommendations available are clearly genuine in their intent to help mitigate a known risk that these mechanisms pose, but this insight alone highlights that the recommendations are not effective as an administrative control, without also including mandatory verification that these tasks are being carried out by owners.

Recently, I met with senior Fletcher Building, Fletcher Construction and Winstone Aggregates staff to share our learnings, based on the observation that an at-risk Nissan Diesel truck was involved in a recent roll-away incident on one of their sites, thankfully not leading to injury. I also note eight other situations over the last seventeen months in Fulton Hogan, where we have turned away at-risk trucks from our worksites, as a result of their owners not being able to prove to us that they had carried out inspection, maintenance or replaced the valve mechanism with an appropriate alternative.

Personally, I believe a further more robust engineering control could be implemented which would be to mandate the removal and replacement of these at-risk valves with a suitable after-market system. This approach was carried out by Fulton Hogan on its own vehicles after 2012, with relatively minimal cost per unit, and our advice to a number of other parties in our sector has led to them taking a similar voluntary course of action.

Unfortunately, Fulton Hogan's 'communication influence' is relatively limited within the sector in which we operate and the issue appears far broader. The latest indication we have is that there could be around 1600 Nissan Diesel trucks potentially fitted with these park-brake valves operating on New Zealand's roads and I remain concerned that trucks fitted with these brake valves are still able to obtain a COF and be legally driven on New Zealand's roads.

Summary of potential improvements

To address the ongoing risk that is currently posed by these park-brake valves in the national truck fleet, I believe there are two courses of action that should be explored and implemented:

- a. Immediately initiate mandatory processes, including audit and verification, that ensure vehicle owners must 'at the very least' inspect and maintain the park-brake valve before they obtain a COF or the vehicle can be legally operated on New Zealand roads or worksites.
- b. Preferably, initiate a mandatory recall of impacted Nissan Diesel trucks (and any other trucks) which are currently fitted with the Sanwa Seiki park-brake valves, for the purposes of carrying out a suitable retrofit.

You shared with me at our 30th June meeting that responses to this matter of Sanwa Seiki park-brake valves are currently being considered and developed by staff and the Board of Waka Kotahi NZ Transport Agency and I would like to acknowledge and thank you all for maintaining a focus on resolving this important safety issue. Please don't hesitate to reach out if there is anything that I, or others in industry, can be doing to help with these matters. We are certainly ready, willing and able to assist where possible.

Yours sincerely,

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CEO New Zealand
Fulton Hogan Ltd

Enclosures:

- *Coroner's Summary of Recommendations 2012 (regarding fatal accident in Dunedin 2010)*
- *Table of NZ industry alerts issued since 2004.*
- *Fulton Hogan 'Red-Alert' Issued after 2019 Ngauranga Gorge fatality*

Table of Park Brake Advisory Notices – Nissan Trucks

Ref	Year	Description
1	2004	Nissan Diesel Service Bulletin
2	2011	WorkSafe Safety Bulletin
3	2012	UD Trucks Industry Alert
4	2013	UD Trucks Safety Bulletin
5	2013	NZTA Alert
6	2015	VTNZ Technical Advice Note
7	2017	NZTA Alert
8	2019	NZTA Alert
9	2020	MINEX Alert (Post Winstones Incident)

Released under the Official Information Act 1982

Critical Risk: Potential for Unattended Trucks to Roll Away

Date: March 2019 - Updated 12 April 2019

1.0 Introduction

The potential for an unattended truck to roll away in an out of control manner is a critical risk.

This Red Alert supersedes the email issued on the 15 March 2019 which suspended the use of Nissan Truck models; CG380, CG400, CK330, CM180, CW330, CW380, CW400, manufactured between 1993 & 2005.

Further, this Red Alert has now been updated to include a number of practical improvements suggested by the wider Fulton Hogan business. Thank you for your feedback.

NB: This Red Alert may be updated further to include other makes and models of trucks if it becomes clear that other manufacturers are using the same hand brake mechanism that is used in the models above.

2.0 Mandatory Requirements

2.1 Nissan Trucks

Nissan Truck models; CG380, CG400, CK330, CM180, CW330, CW380, CW400, manufactured between 1993 & 2005 are not permitted on any Fulton Hogan sites. And, in addition, these trucks are not to be operated by Fulton Hogan employees on any other sites. These mandatory requirements apply unless these trucks have been fitted with a replacement, approved, aftermarket hand brake that complies with the Heavy Vehicle Brake Rule 32015. (Graham Eaton can provide more detail on this if required).

It is strongly recommended that customers who use these trucks to pick up materials from our quarries also make these modifications. In light of this they should each be given a copy of this alert and the May 2017 NZTA safety alert attached. **Unless the improvements described above have been made, quarry customers operating these trucks must not be permitted to leave the cab of their vehicle while at the quarry.**

These modifications to the factory fitted handbrake are necessary because once wear occurs the lock pin is able to hold the brakes on but may not actually be fully engaged. Consequently, the hand brake can be unintentionally released via a knock or vibration.

2.2 Minimum Requirements for Subcontractor Plant and Hired in Plant

From 1 July 2019 all subcontracted and hired in plant must comply with the minimum requirements listed in the table below.

Plant that meets these minimum requirements can be approved for use by a qualified mechanic or a competent FH; manager, supervisor or site foreman. Approvals will be valid for 12 months.


Approved plant is to be 'stickered' accordingly. Stickers (similar to the one shown here) are available through FH Signs & Graphics

Inspection records (checklist attached) must be kept by the approving Region or Project

The procurement team will work with our preferred plant hire providers to implement this with them.

If other tier 1 contractors chose to adopt this same approach, then the stickers can be jointly branded.

It's acknowledged that this manual system may be able to be improved further through the use of technology. Options will be investigated as time and resources permit.

PLANT INDUCTION 2019	J	F	M
	A	M	J
	J	A	S
	O	N	D
EXPIRY DATE: _____			
ASSET NUMBER: _____			
ISSUED BY: _____			
 Fulton Hogan			

Critical Risk: Potential for Unattended Trucks to Roll Away

Date: March 2019 - Updated 12 April 2019

Table of: Subcontracted and Hired in Plant Minimum Requirements

Minimum Requirements	Trucks	Excavators	Cranes	Other Mobile Plant
Legal Requirements (Where legally required)				
Registration	✓	✓	✓	✓
RUCs	✓		✓	
COF	✓		✓	✓
Current Crane Certification			✓	
FH Requirements				
Reversing alarm	✓	✓	✓	✓
Flashing Light	✓	✓	✓	✓
Seatbelts fitted	✓	✓	✓	✓
Park brake alarms	✓			
Swinging tail door locked out	✓			
Antiburst valves fitted (All lifting equipment > 7tn)		✓	✓	
ROPs / FOPs / TOPs fitted		✓		✓
Two stage quick hitch (or pinned)		✓		
Certified lifting point		✓		Loaders
Vehicle Prestart Check (Daily)	✓	✓	✓	✓
Air Compressors: Must be fitted with securing straps or double-eye, stocking-style, whip-socks to prevent the hose / pipe from flailing if it uncouples				
Nissan Truck models: CG380, CG400, CK330, CM180, CW330, CW380, CW400, manufactured between 1993 & 2005 are not permitted on FH sites unless these trucks have been fitted with a replacement, approved, aftermarket hand brake that complies with the Heavy Vehicle Brake Rule 32015.				

2.3 Safe Parking

Resources

There are two parking related videos on the KnowHow Moving Plant channel. (1) Light Trucks – Parking Safely, and (2) Parking or Leaving Heavy Wheeled Plant on Site. Please consider playing and discussing these with all operational staff during your April tailgate meetings.

3.0 Additional Notes

- a) It's acknowledged that the implementation of these controls will require conscientious management, time and resources.
- b) Relevant, historical, Red Alert requirements will be included and kept up to date in the new Living Safety Health & Safety Manual due for publication in July.

Thank you for your help with the implementation of these requirements.

Critical Risk: Potential for Unattended Trucks to Roll Away

Date: March 2019 - Updated 12 April 2019

4.0 Revision History

Date	Author	Brief Description of change
16 March 2019	s 9(2)(a)	Initial Draft
18 March 2019		1st version for publication
15 April 2019		2 nd version for publication

5.0 Closeout Requirements

Please discuss this Red Alert with your teams, complete the items below and return to your Safety Manager. They will collate all responses for the business unit and send a single confirmation to the HSQES Analyst at nzincident@fultonhogan.com before 30 July 2019.

5.1 What date was this Red Alert communicated to the workplace: ____/____/20____

5.2 Have all relevant people been informed in your Region or Project been informed? **Yes / No**

5.3 Have all the actions and recommendations been implemented? **Yes / No**

2.1: Nissan truck models CG380, CG400, CK330, CM180, CW330, CW380, and CW400 manufactured between 1993 & 2005 have either been removed from site OR have been appropriately modified Yes / No

2.1: Quarry customers using the Nissan truck models above have been advised to remain in the cabs at all times and have been provided with the May 2017 NZTA alert OR their trucks have been appropriately modified. Yes/No

2.2 The Region / Project has communicated the subcontractor plant requirements to all subcontractors and has a plan in place to ensure all plant on site is signed off to the minimum requirements by 1 July 2019. Yes / No

2.3 The two KnowHow videos have been shown to, and discussed with, all operational staff. Yes / No

5.4 If 'no' (5.3 above) please explain why

In signing this document, I confirm that the actions above have been completed in this region/project.

Region / Project: _____

Region / Project Manager Name: _____

Signature: _____

Date: _____

Critical Risk: Potential for Unattended Trucks to Roll Away

Date: March 2019 - Updated 12 April 2019

Subcontracted and Hired in Plant Minimum Requirements - Checklist

Plant Description:	Inspected By:
Make & Model:	Organisation:
Registration / Fleet #	Date:
Owned By:	

Minimum Requirements	Trucks		Excavators		Cranes		Other Mobile Plant	
	Required	Comply	Required	Comply	Required	Comply	Required	Comply
Legal Requirements (Where legally required)								
Registration	✓		✓		✓		✓	
RUCs	✓				✓			
COF	✓				✓		✓	
Current Crane Certification					✓			
FH Requirements								
Reversing alarm	✓		✓		✓		✓	
Flashing Light	✓		✓		✓		✓	
Seatbelts fitted	✓		✓		✓		✓	
Park brake alarms	✓							
Swinging tail door locked out	✓							
Antiburst valves fitted (All lifting equipment > 7tn)			✓		✓			
ROPs / FOPs / TOPs fitted			✓				✓	
Two stage quick hitch (or pinned)			✓					
Certified lifting point			✓				Loaders	
Vehicle Prestart Check (Daily)	✓		✓		✓		✓	
Project Specific Requirements								

Air Compressors: Must be fitted with securing straps or double-eye, stocking-style, whip-socks to prevent the hose / pipe from flailing if it uncouples

Nissan Truck models: CG380, CG400, CK330, CM180, CW330, CW380, CW400, manufactured between 1993 & 2005 are not permitted on FH sites unless these trucks have been fitted with a replacement, approved, aftermarket hand brake that complies with the Heavy Vehicle Brake Rule 32015.

Critical Risk: Potential for Unattended Trucks to Roll Away

Date: March 2019 - Updated 12 April 2019



HEAVY VEHICLE SERVICING

INFORMATION

May 2017

SAFETY ALERT

AVOID PARK BRAKE FAILURES

Park brake control valve maintenance and operational requirements for Nissan CK330, CW330, CW380, CW400, CG380, CW400 and CG400 vehicles manufactured between 1993-2005.

The *Nissan Diesel Owner's Manual* recommends that the **park brake hand control valve is overhauled at 12-month intervals**.

It also recommends that the valve's operation is thoroughly checked by a qualified diesel technician when the vehicle is being serviced or if there is concern about its operation.

As some of these vehicles have been in service for some time (up to 24 years old as of 2017), it is important to test the operation of these valves more frequently. Because of the exposure to everyday working conditions and numerous applications this valve can make during a normal working day it **should also be part of the drivers daily pre-start checks**.

Points of note when testing the hand control operation

- When rotating the hand control handle it should move freely and should be spring loaded to the OFF position (Figure 1, item 3: rotational spring)
- The release handle lock must move freely up and be spring loaded down to the lock position
- With the hand brake applied and in locked position it should not be able to be released (rotated) without lifting the release handle.

If there are faults found with the above checks the valve must be inspected/replaced before the vehicle is put into service.

The areas that require a close inspection if you are looking to repair this valve are in the illustrations below (new valve shown).

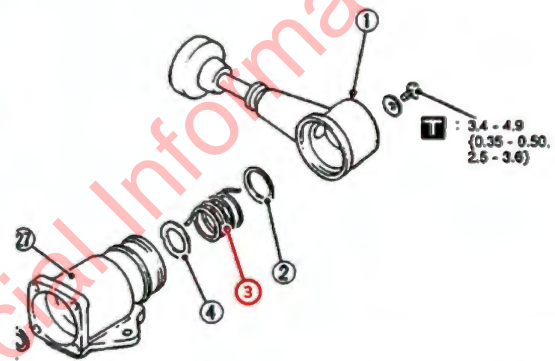
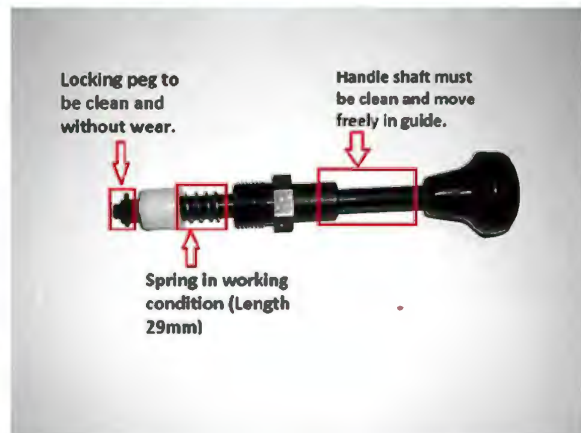


Figure 1. Handle lift to release (spring loaded to lock down)



Locking peg hole



Locking handle removed