

Making the industry safer - Reducing accidents in FVL

2023 incidents & analysis

APRIL 2024



ECG

The Association
of European
Vehicle Logistics

About ECG

ECG, the Association of European Vehicle Logistics, has been the voice of the Finished Vehicle Logistics industry in Europe since 1997. ECG represents the interests of more than 160 member companies and partners, from family owned SMEs to multi-nationals, and is the major champion of the European vehicle logistics sector. ECG represents all transport modes at EU level – road, rail, maritime and fluvial. ECG members provide transport, distribution, storage, preparation and post-production services to manufacturers, importers, car rental companies and vehicle leasing operators in the 27 Member States of the European Union as well as Norway, Switzerland, Turkey, the United Kingdom and beyond. They own or operate more than 360 car-carrying ships, 15,100 purpose-built railway wagons, 22 river barges and around 23,000 road transporters.

As a major employer, the finished vehicle logistics sector plays an important role in contributing to the economic success of the European Union. Today, ECG members have an aggregate turnover of €21.3bn and their economic impact on companies associated with the sector is estimated at €56bn. More than 93,000 Europeans are employed directly by our members and an additional 224,000 are indirectly employed in the sector.

About the Health & Safety Working Group

The [ECG Health & Safety Working Group](#) (H&S WG) was established in 2018 with the objective to enhance drivers' safety in Finished Vehicle Logistics (FVL) and road transportation. The initial focus of the group was to address falls from height and provide key recommendations on how to prevent them. It is divided into 5 sub-groups from which there is one active sub-group (SG1).

Sub-Group 1 within the H&S WG gathers details of **severe accidents**¹ and **near misses**² during loading and unloading operations on trucks. The main objective of SG1 is to identify key trends and steer the work carried out by other Sub-Groups.

SG2 is responsible for developing and improving standards for loading and unloading on car transporters and produced the [ECG Guidelines - Safe Loading Process](#) (referred to as 'ECG Guidelines' in this report). The guidelines, translated into 14 European languages, utilize a combination of pictures and concise descriptions to illustrate step-by-step loading and unloading procedures, ensuring that drivers carry out these operations in the safest possible manner. SG3 developed standards for a safe environment in hubs & compounds and produced the [ECG Guidelines - Safe Yard Design](#). SG5 is set up to risk assess and identify safety features of car transporters to improve equipment used in Finished Vehicle Logistics (FVL).

As a next step, SG 4 will be looking at the delivery at retailers to identify safety risks and develop a process for improving drivers' safety in this area.

Health & Safety Working Group Organisation

SG1

Key Accident Learning & Sharing

SG 2

Safe loading

Training drivers
for safe loading
and unloading

Not active

SG 3

Safe yards

Safe
environment
across all hubs

Not active

SG 4

Safe retailers

Process for
safe delivery at
retailers

Next step

SG 5

Safe trucks

Safe equipment

Not active

¹ Accidents are defined as "an occurrence arising out of, or in the course of, work that *does* result in an injury". Severe accidents are categorized as:

- Fatal (Death of a person).
- Unrecoverable (Amputation, Head trauma with unrecoverable consequences, Permanent damage/loss of eyesight (1 or 2), Serious burns causing permanent scarring).
- Recoverable but Serious (Fractures, Any crush injury to the torso causing damage to internal organs, Non-permanent serious burns including scalding, Any admittance to hospital for more than 24 hours, Cuts if an internal organ or tendon is hurt or in case of hemorrhage, Any loss of consciousness caused by head injury or asphyxia, Electric shock resulting in an injury).

² Near misses are defined as "an occurrence arising out of, or in the course of, work that *could* result in an injury".

Executive summary

'Making the industry safer: Reducing accidents in FVL' is the 4th annual report published on severe incidents and near misses logged on the [incident reporting website](#). The website was developed by the H&S WG in 2018 for all operators to gather information on incidents during loading/unloading operations on trucks. The aim of the website is to create a database of incidents that can be analysed and used to share insightful information and contribute to drivers' safety. Since 2019 [annual reports](#) are published with the analysis of the most common incidents in the industry and with the key recommendations on how to prevent them.

A total of 132 incidents were uploaded to the database of which 117 are analysed in this report. It is important to note that incidents that were uploaded but not included in this report are not related to the loading and unloading operations (i.e. traffic collisions).

The 2023 analysis shows similar trends to the previous reports for the period 2019-2022 regarding the type of incidents. Slips & Trips (S&Ts) continue to constitute the majority of the incidents reported. In the 2023 report additional categories of incidents were reported under the category of loading/unloading incidents (e.g. incidents concerning Material/Machine failure, Strains & Sprains due to the material/machine handling). When it comes to the severity of the incidents analysis shows a similar trend compared to 2022, however more severe incidents are reported compared to the 2019-2021 period (25% of incidents in 2023 are Serious but Recoverable compared to 15%). One Unrecoverable incident (amputation of a fingertip) was reported.

The report shows that most of the incidents analysed (i.e. Slips&Trips, Roll-offs, Falls from Height) could be prevented by following detailed steps laid out in the [ECG Guidelines – Safe Loading Process](#). It is important that the Guideline is adopted by all Logistic Service Providers (LSPs) in their drivers' training programme to mitigate the risks of further incidents.

Every input is important to allow accurate and informative analysis and recommendations. Only by sharing, we can learn together as an industry, enhance knowledge and improve drivers' safety. Therefore, it is of the greatest importance to submit incidents on our database so the analysis can be as accurate and informative as possible.

Please encourage your colleagues to support this project via the website:



reports.ecgassociation.eu

Contents

About ECG	1
About the Health & Safety Working Group.....	2
Executive summary	3
1 Overview	6
1.1 Comparison to 2019-2022 Incidents.....	7
2 Breakdown of high-risk incidents.....	10
2.1 Slips & Trips (S&Ts)	10
2.1.1 What causes S&Ts?.....	11
2.1.2 Why are S&Ts caused?	12
2.2 Roll-offs	12
2.2.1 Factors leading to Roll-offs	13
2.3 Falls from height.....	15
2.3.1 What causes falls from height?.....	16
2.4 Drive-offs.....	17
2.5 Collisions	17
2.6 Transport incidents.....	18
2.7 Incidents during delivery at retailer.....	18
3 Summary points for the industry	19
3.1 Key recommendations.....	19
3.1.1 Method/man.....	19
3.1.2 Machine	19
3.1.3 Environment.....	20
3.2 Concluding remarks	20

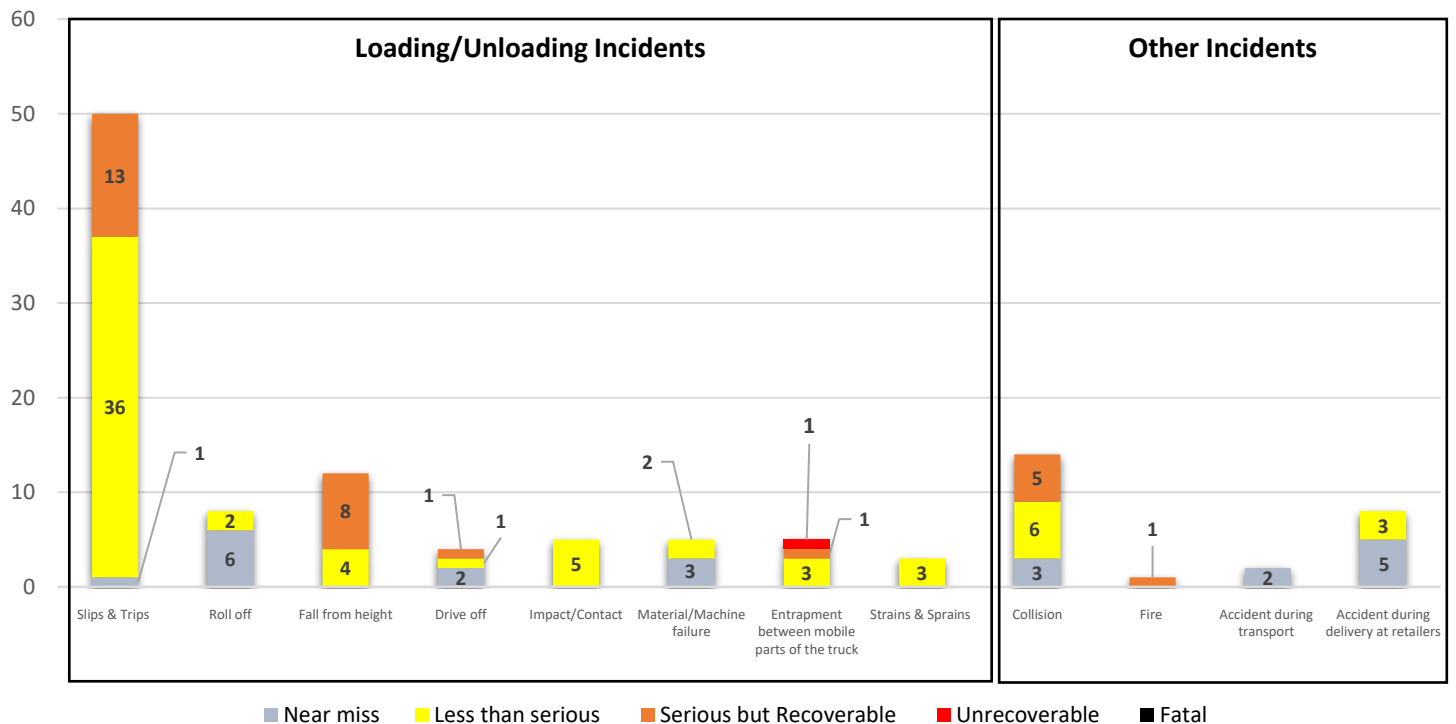
List of Abbreviations	
3PC	3 Points of Contact
EPB	Electronic Parking Brake
EV	Electric vehicle
FVL	Finished Vehicle Logistics
H&S WG	Health & Safety Working Group
ICE	Internal combustion engine
LSP	Logistic Service Provider
OEM	Original Equipment Manufacturer
S&Ts	Slips and Trips
SG	Sub-Group

1 Overview

This chapter provides an overview of the incidents reported and analysed for 2023 and a comparison with incidents reported from 2019 – 2022.

117 loading/unloading incidents have been analysed for 2023 as shown, in Fig.1 below.

Fig. 1 - Breakdown of incidents for 2023



Slips & Trips constitute the majority of the incidents reported

As in the reports for the period 2019 – 2022, Slips & Trips (S&Ts) are the most common type of incident reported for 2023 occurring during loading/unloading operations. Out of 50 incidents reported, 2% were Near misses, 26% of accidents resulted in Serious but Recoverable injuries whilst 72% were Less than Serious.

Other loading/unloading incidents

In addition to S&Ts, the following categories are included under loading/unloading incidents:

- **8 Roll-offs** were reported where most incidents (75%) resulted in Near Misses.
- **Fall from height** proportionally led to more severe incidents in 2023. 12 incidents were reported, from which 67% led to a Serious but Recoverable injuries.
- **4 Drive-offs** were reported for 2023: 2 Near Misses, 1 resulted in Less than Serious injuries and 1 Serious but Recoverable.

- The category of **Impact/Contact** refers to incidents where drivers hit a body part against a fixed structure of the truck/trailer. In 2023 5 incidents were reported which resulted in Less than Serious injuries.
- 5 incidents were reported under the category **Material/Machine failure**. 40% of incidents resulted in Less than Serious injuries and 60% were Near misses. 2 incidents are related to failure of safety rails and 3 incidents happened due to technical failures of the trailer (e.g. burst of an air spring, failure of the hydraulic box). In one of the cases reported, the chain of the superstructure upper deck broke and caused the upper deck to drop on the side.
- 4 incidents were reported under the category '**Entrapment between mobile parts of the truck**'. 1 incident was reported as Unrecoverable: while the truck driver was manually adjusting the decks, the deck dropped entrapping the driver's left hand and causing the loss of a fingertip. A similar incident was also reported in 2021.
- **Strains & Sprains** are ergonomic injuries that occurred from material (e.g. chocks/lashes) /machine (e.g. pulling out the ramp) handling. Typically, when drivers are performing certain operations, especially pulling out ramps, they often experience back pain. In 2023, 3 incidents reported resulted in Less than Serious injuries.

Other incidents

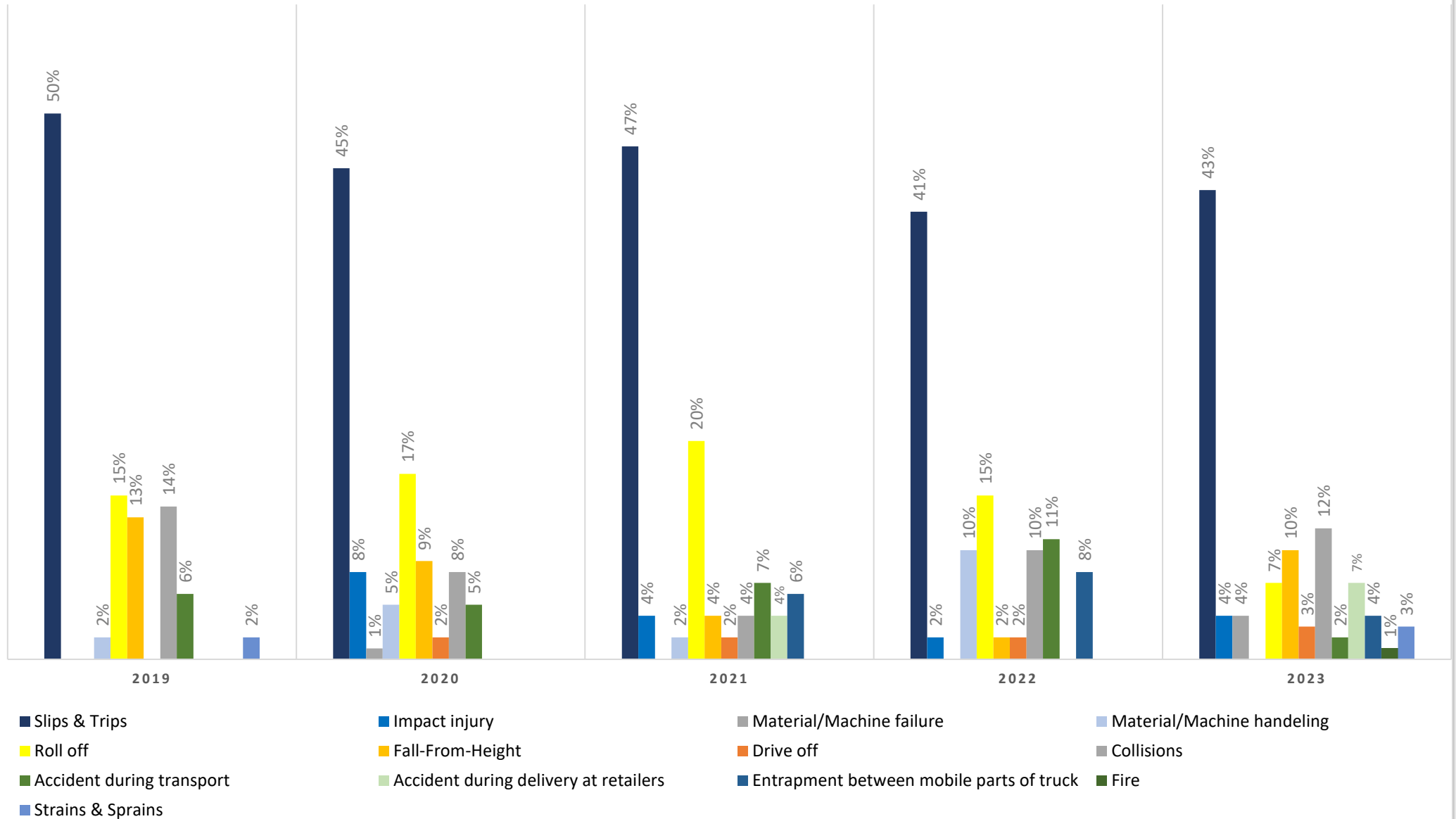
Besides the loading/unloading category, in this report the following incidents are analysed:

- 14 incidents were reported under the category '**Collision**'. 8 were car-man, 4 car-car and 2 car-truck collisions. Notably 21% of collisions reported were Near misses, 43% resulted in Less than Serious injuries and 36% in Serious but Recoverable.
- In 2023, 1 **Fire** accident was reported: the yard operator was charging an ICE vehicle battery which burst into flames. The fire was extinguished and caused in Recoverable but Serious injuries to the operator.
- For 2023 2 **Transport incidents** were reported and 8 incidents occurred during **Delivery at retailers**. These will be analysed at a later stage in the report.

1.1 Comparison to 2019-2022 Incidents

Fig. 2a shows the comparison between ratios and key trends of incidents reported for the period 2019-2023. It is important to note that even though some categories of the most common incidents are comparable to the previous reports, additional categories of incidents are added in the 2023 analysis and therefore not included in the comparison.

Fig. 2a - Breakdown of loading and unloading incidents (2019 - 2023)



- Slips & Trips still constitute the majority of the reported incidents (~40-50%).
- Compared to previous reports, a slight decrease in roll offs is noted in 2023 (7% in 2023 compared to 15-20% for the 2019-2022 period).
- The percentage of Fall from height incidents increased in 2023 compared to 2021 and 2022 (10% compared to 2-3%). However, a similar trend to 2023 can be noted in 2019 and 2020.
- There were no significant changes for collisions compared to 2019 and 2022 (10-15%). A slight increase is noted compared to 2020 and 2021 incidents (4-8% versus 12%)
- There were no significant changes for Drive offs (2-3%).
- A slight increase of incidents reported at retailers is observed compared to 2021 (7% compared to 4%)

It's also noteworthy to compare severity of accidents reported for the period 2019-2023 as shown in Fig. 2b below.

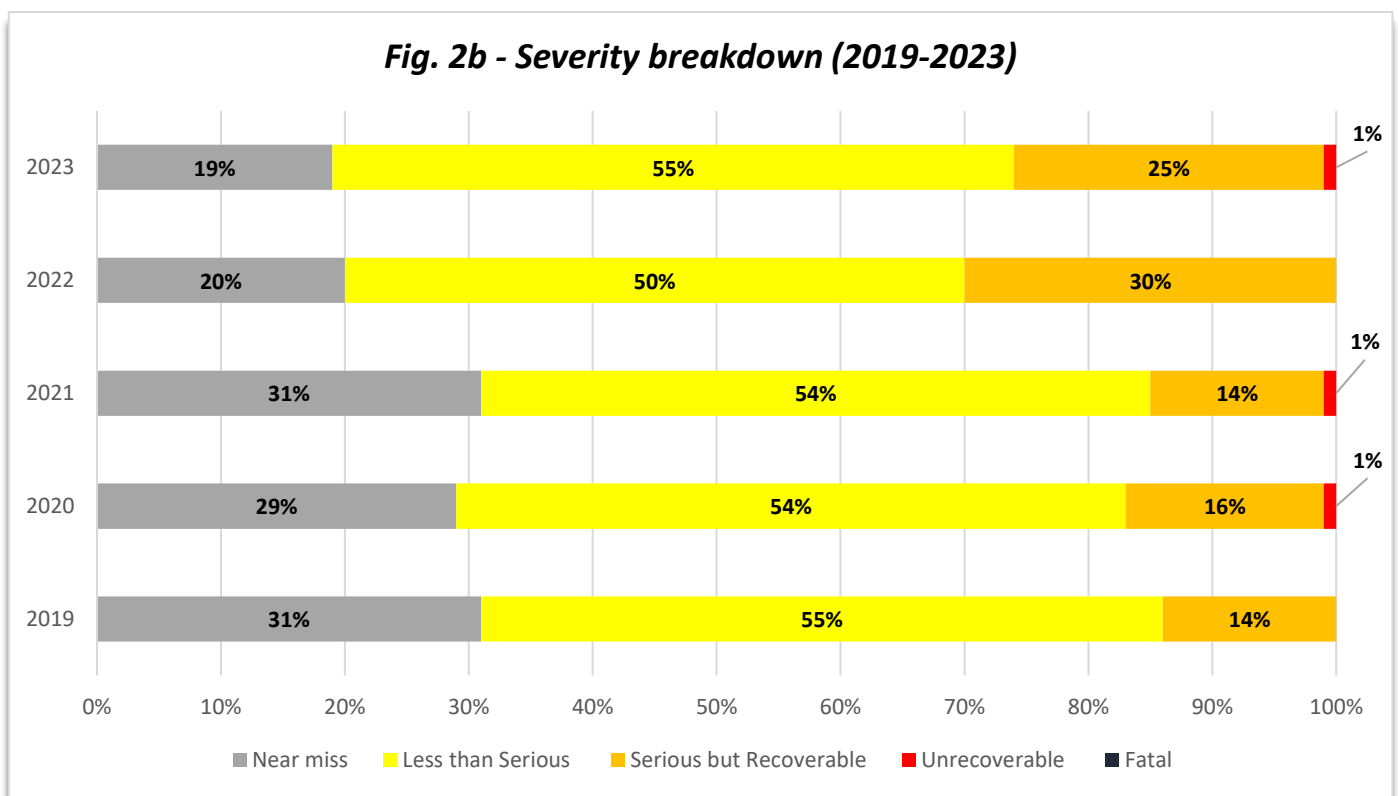


Fig 2b shows that the proportion of Recoverable but Serious incidents is similar to 2022. This is ~10% higher compared to 2019, 2020 and 2021. In 2023 the amputation of a fingertip was reported as an Unrecoverable incident.

2 Breakdown of high-risk incidents

The following section provides an in-depth breakdown of the different types of high-risk incidents reported in 2023. For the purposes of the report, **high-risk incidents** are defined as *those which occur very frequently and/or can cause potentially serious injuries when they do occur.*

2.1 Slips & Trips (S&Ts)

Slips & Trips cover a broad range of incidents linked to walking on the truck/trailer or yard, standing-on and accessing decks.

Key highlights

- 50 Slips & Trips reported in 2023: 13 incidents led to Serious but Recoverable injuries, 36 incidents resulted in Less than Serious injuries and 1 Near miss
- 13 incidents are linked to poor deck preparation and walking on decks (i.e. stepping on open drop-holes)
- 11 incidents reported are caused by poor environmental conditions (i.e. rain, snow)
- 6 incidents are caused by uneven surfaces in yards (i.e. driver stepped on potholes)
- 2 incidents due to drivers jumping off decks/ladders – non-compliant with the ECG Guidelines - Safe Loading Process
- 1 incident happened due to a structural failure: the driver was preparing the lower deck and leant on the taillight which broke. The driver lost balance and fell which led to a Recoverable but Serious injury (fractures).

S&Ts constitute the majority of the incidents reported for 2023. This type of incident can happen both during loading/unloading when drivers are walking on the truck/trailer or when walking in the yard or at retailers. Environmental conditions (i.e. slippery surfaces due to snow/ice) are also a contributing factor to some incidents. 98% of S&Ts reported for 2023 resulted in some form of injury.

As noted in the previous reports, most of the incidents that occurred can be linked to the lack of compliance with [ECG Guidelines - Safe Loading Process](#). The Guideline provides key indications on how to minimize the risk of such incidents especially during deck preparation, walking, standing and accessing decks.

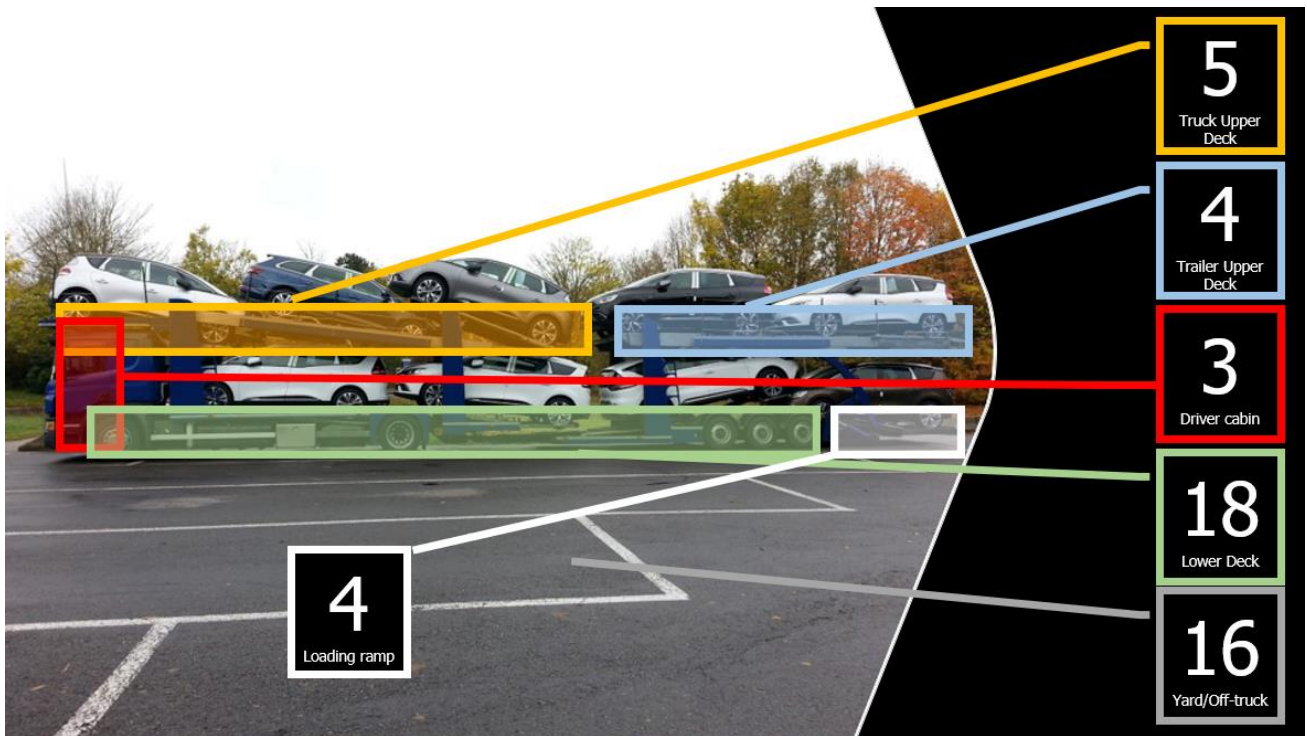
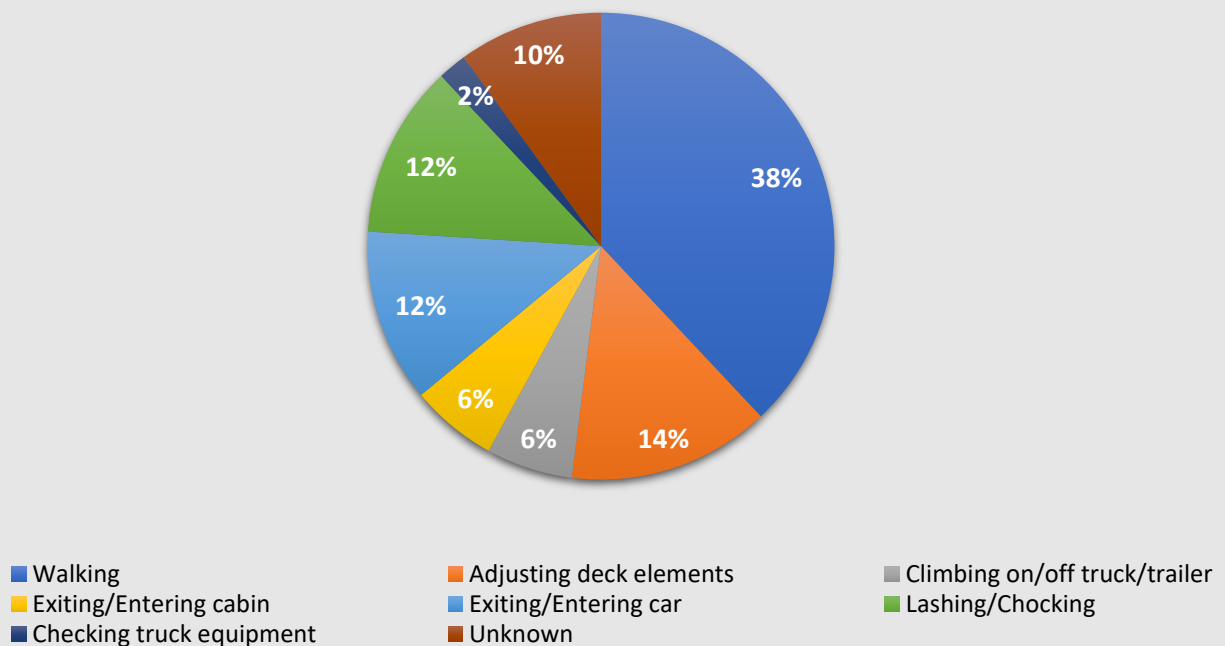


Fig. 3 – Areas where S&Ts occurred in 2023

2.1.1 What causes S&Ts?

Fig. 4 provides an overview on the actions performed by the drivers when S&Ts occurred:

Fig. 4 - The causal factors leading to S&Ts in 2023



38% of S&Ts occurred when drivers were walking. Drivers tripping in holes and/or walking over gaps on trailer decks are common, however most incidents in this category occur due to uneven and/or slippery surfaces in the yard.

Other factors leading to S&Ts are:

- Exiting/Entering car without 3PC led to 12% of S&Ts in 2023.
- Adjusting deck elements led to 14% of S&Ts in 2023.
- Unsafe lashing/chocking caused 12% of S&Ts in 2023.
- Climbing on/off trailer/truck unsafely (including jumping) led to 6% of S&Ts in 2023.

2.1.2 Why are S&Ts caused?

As discussed in previous reports, the following reasons lead to S&Ts:

- Some incidents reported in 2023 can be attributed to the drivers' **lack of awareness** about the truck/trailer design. This type of incident typically includes situations where a driver walks and trips over holes or gaps on a truck/trailer.
- **Environmental factors** led to a number of S&Ts in 2023. This refers to incidents that happened due to inadequate environmental conditions (i.e. slippery surfaces due to snow/ice/rain).
- **Lack of drivers concentration/distraction** is the third contributory factor. This can be applied to both loading/unloading operations and when walking in the yards. It is important that companies at all times raise awareness about risks leading to S&Ts.

2.2 Roll-offs

A roll-off incident is one where a car without a driver rolls off an inclined plane e.g. from an angled truck deck, or from parking on a slope, due to improper parking or securing (chocking/lashing).

Key highlights

- 8 Roll-offs reported in 2023: 2 incidents led to Less than Serious injuries and 6 were Near misses
- 75% of roll-offs involved Electronic Parking Brake
- All incidents reported showed non-compliance with loading safety fundamentals recommended in the **ECG Guidelines – Safe Loading Process**

75% of Roll-offs reported in 2023 resulted in no injuries. However, these types of incidents have a high potential to result in some form of injury as when a vehicle rolls off it moves through an area where other drivers/yard operators may be working and where other vehicles are parked causing either a car-man or car-car collision. In the 2023 report, 1 incident resulted in no collision, 3 in car-object collisions, 2 in car-man collisions and 2 in car-truck collisions.

In one of the incidents reported, the driver was loading a vehicle on the truck's lower deck. As the car would not start, the driver pushed it by hand. At the same time the car started to

roll off. It is important that LSPs train the drivers on what to do in situations when the vehicle's engine does not start and discourage any initiatives by drivers which may lead to dangerous incidents.

2.2.1 Factors leading to Roll-offs

As recognised in the previous reports, it is important to secure vehicles during loading/unloading operations and during deck manipulation to prevent roll-offs.

Following the ECG Guidelines - Safe Loading Process, Loading Safety Fundamentals include:

- Always **follow 4-step parking process** & confirm that vehicle is securely parked (as shown in the Fig.5)
- **Chock vehicle** as soon as possible after exiting the vehicle
- **Lash** before releasing brake/gear

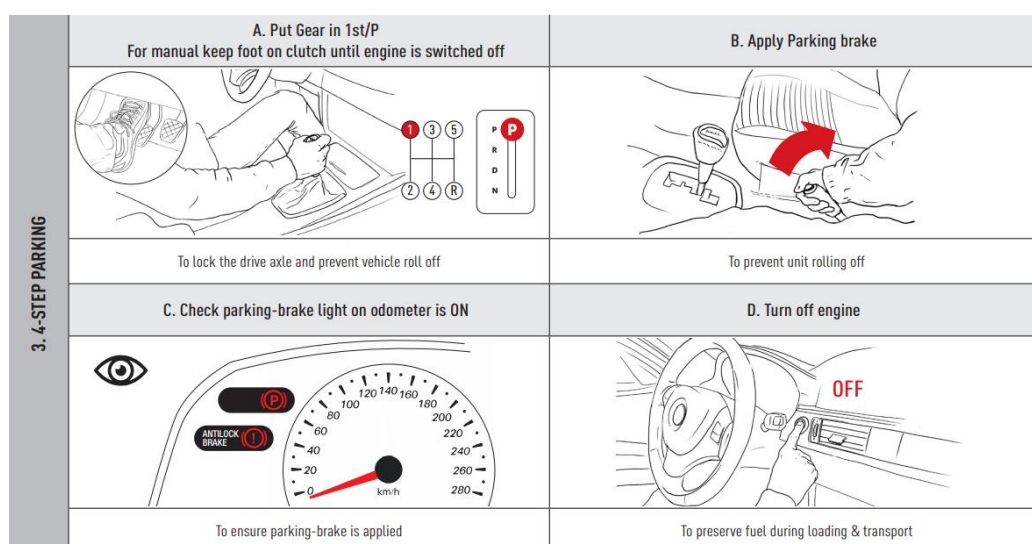


Fig.5 – 4-Step Parking Process

In the 2023 report, roll-offs occurred due to various errors at different stages:

- 2 incidents happened because the driver did not apply the parking brake and/or engaged the gear in “Park” mode: this error could lead to roll offs with a high risk of car-man collision on angled decks.

Example 1

The driver failed to apply the parking brake when loading the vehicle. After removing lashes and chocks, the vehicle rolled off.

- In 1 case, the drivers forgot to both chock and lash before manipulating the decks and securing the vehicle.

Example 2

Two drivers were loading vehicles on the upper deck. When one of the vehicles was on the last position two steps were missed which consequently led to a roll off. One of the drivers climbed up on the trailer and was moving towards the vehicle while the second driver started manipulating the decks. As the vehicle was not properly secured by chocks and the parking brake was not applied the vehicle rolled off.

- 3 incidents reported happened due to the improper lashing/chocking. In 2 cases the vehicles rolled-off during **transportation**.

Example 3:

The last car on the upper platform was not properly lashed/choked. When the truck braked abruptly, the cars on the upper platform moved and the last one fell to the ground hitting another car on the lower platform.

Example 4:

While the driver was leaving a site, one of the vehicles was not properly chocked/lashed: it rotated, hitting another vehicle in the truck and causing significant damage.

In the 2023 report, 3 incidents were noted during unloading, 2 during loading, 1 during the preparation of trailer upper decks and 2 when leaving the site.

As stipulated in the previous reports, there are several explanations to why roll-offs occur:

1. **Type of parking brake:** 6 out of 8 incidents (75%) involved Electronic Parking Brake. Even though it is hard to draw a conclusion on whether the complexity of EPB is a significant factor that leads to roll-offs, it is important that drivers are acquainted with the brand/model of vehicles and their parking systems.
2. **Position of the vehicle on the truck/trailer:** In 2023 4 incidents occurred from the truck/trailer upper deck, 2 from the loading ramp and 2 cases from the truck lower deck.

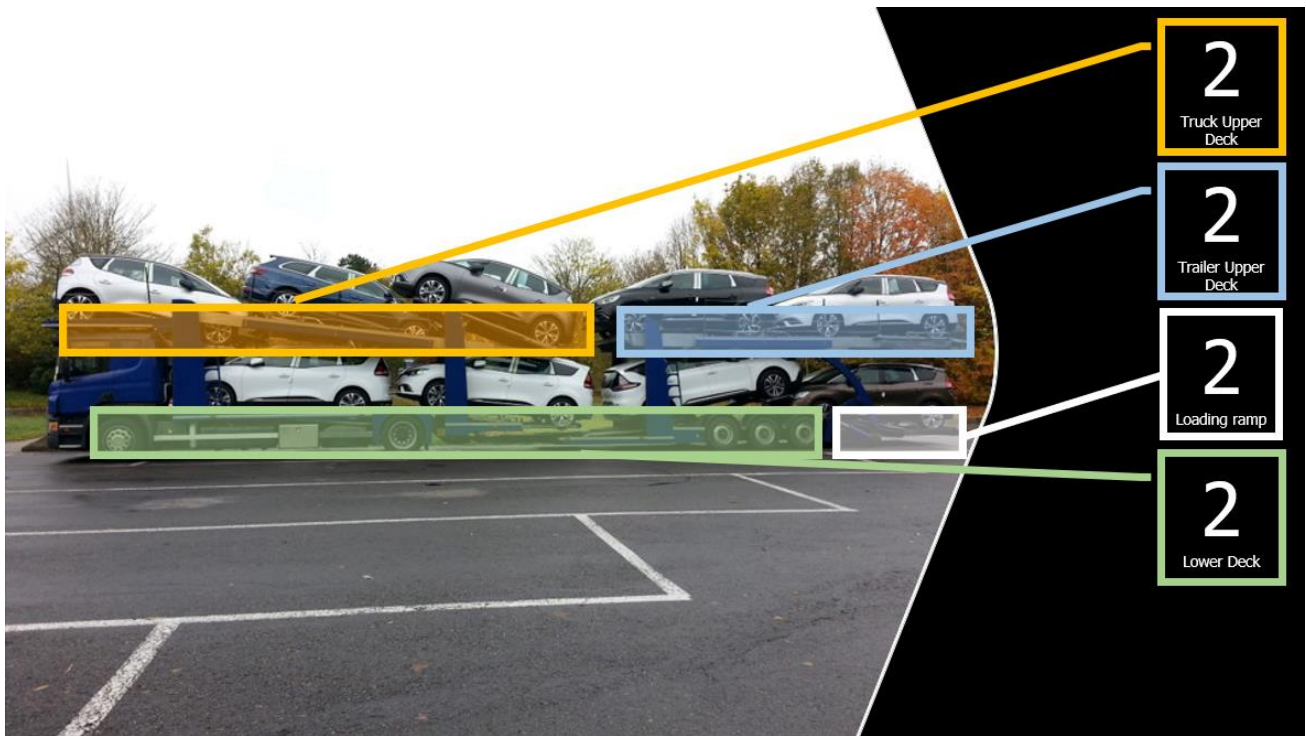


Fig. 6 – Areas where roll-offs occurred in 2023

2.3 Falls from height

Falls from height typically occur when drivers are performing loading/unloading operations on truck/trailer upper deck. Because drivers are working and moving without any external protection the risk for this type of incident is high. Often they result in serious injuries leading to Fatal, Unrecoverable or Recoverable but Serious injuries. Fortunately, none of the incidents reported in 2023 led to Fatal or Unrecoverable injuries. Several factors identified in the previous reports (2019-2022) can be recognised as a contributing factor leading to falls from height in 2023 as well: not maintaining 3PC, jumping, leaning on safety rails.

Key highlights

- 12 Falls from height reported: 8 Serious but Recoverable and 4 Less than Serious
- 9 cases occurred when drivers were exiting/entering cars, walking on deck or descending from the ladders
- 1 case occurred during lashing/chocking
- 2 cases occurred due to structural failure (i.e. safety rails)
- 2 cases happened from the ladder, 5 on the truck upper deck and 5 on the trailer upper deck.



Fig. 7 – Areas where falls from height occurred in 2023

2.3.1 What causes falls from height?

In the 2023 report the following factors led to Fall from height:

- Drivers moving unsafely caused 9 incidents in 2023:
 - These types of incidents include lack of 3PC while exiting/entering the car.
- Unsafe lashing/chocking was noted in 1 incident.
- Structural failure was reported in 2 cases where a safety rail failed as drivers leant on it. As noted in the 2021/22 report, in order to prevent these types of incidents it is important to:
 - Regularly check and maintain safety rails as they get rusty over time and therefore less durable.
 - Raise awareness during drivers training that safety rails are not designed to support the weight of the driver. Typically, when lashing/chocking the vehicle drivers tend to stand up by pulling on safety rails.
 - As stipulated in the [ECG Guidelines - Safe Loading Process](#), during loading/unloading operations drivers need to visually confirm that safety rails are present and damage free.

2.4 Drive-offs

Drive-off incidents are those where a driver loading a car drives-off from the truck. This can be caused by either improper control of the acceleration/braking of the car, or by mis-steering the car off the deck.

Key highlights

- 4 Drive-offs reported in 2023: 1 incident led to Serious but Recoverable injuries with 'Admittance to hospital for more than 24 hours', 1 Less than Serious and 2 Near misses
- All drive-offs occurred from the upper deck
- All drive-offs included automatic transmission systems and electronic parking brake

4 drive-off incidents were reported in 2023. In 1 of the cases reported, the driver drove-off the upper deck and the cause of the incident seems to indicate a combination of factors: the vehicle was electric with faster acceleration than a traditional ICE and the slippery deck because of rain. It is crucial that LSPs and, in particular, driver trainers train drivers not only on specific vehicles brands/models but also by type of vehicle (EV, ICE etc.)

1 case occurred due to the improper chocking/lashing of the vehicle: during the **transportation** the driver had to brake to avoid collision with another vehicle. The vehicle that was placed in the first position drove off and fell to the ground.

2.5 Collisions

Collision incidents involve one or more moving vehicles colliding with other vehicles, individuals or fixed objects. Depending on the vehicle and speed involved, the consequences of collisions can vary from near misses to much more serious incidents.

Key highlights

- 14 incidents reported for 2023 from which 4 resulted in Recoverable but Serious injuries, 7 in Less than Serious injuries and 3 were Near misses.
- 5 incidents happened during manoeuvring the car in the yard, 2 during loading/unloading operations, 2 during checking/preparing vehicles and 1 during arrival on site.

Compared to the 2021/22 report where collision incidents resulted either in Near Misses or Less than Serious injuries, in the 2023 report there are 4 incidents resulting in Recoverable but Serious injuries causing car-man collisions.

In 2023, 8 reported incidents were car-man, 4 car-car, 1 truck-truck, 1 car-truck collisions. From the incidents observed, in most cases '**not paying attention**' was listed as a factor leading to collisions. Typically, these incidents involve movement in the yard (when driving or walking) without checking if there is any vehicle moving around.

Example 1:

The driver was walking and was run over by another vehicle that was moving. The vehicle was hybrid and did not produce any noise that would warn of its presence. The pedestrian zone was occupied by vehicles because of lack of space and the unloading area was not properly marked.

As stipulated in the [ECG Guidelines – Safe Yard Design](#), it is important that all loading areas are adequately spaced and correctly marked in order to minimize risk of collisions.

2.6 Transport incidents

Under the section '**Other incidents**' next to the collisions and fire incident, incidents that occur during transportation are included. For the purpose of this report not all transport incidents are analysed (i.e. traffic collisions). The focus of this report are incidents related to or occurring during loading/unloading operations in yards. It is important to make sure that vehicles are safely loaded at all times to prevent any type of transport accidents.

Key highlights

- 2 incidents during transport reported resulted in Near miss

1 transport incident occurred due to incorrect deck adjustment: the driver forgot to adjust the upper platform after loading. During transport, when passing under a tunnel, one of the vehicles on the upper platform hit the roof. In the [ECG Guidelines – Safe Loading Process](#) it is highlighted that the final step before leaving the site is to adjust decks properly to prevent incidents.

2.7 Incidents during delivery at retailer

Key highlights

- 8 incidents reported during loading/unloading at retailers: 3 incidents resulted in Serious but Recoverable injuries and 5 Near misses

8 incidents noted during delivery at retailers happened due to **inadequate unloading conditions, mainly lack of dedicated space**. Some of the incidents resulted in car-

truck/car-man collision as drivers had to unload on a public road in the traffic outside of the delivery point.

The H&S WG will look further into these type of incidents and work towards raising awareness and improving conditions for drivers delivering vehicles at retailers.

3 Summary points for the industry

In this section we provide a set of recommendations for different stakeholders in FVL industry, as well some brief concluding remarks.

3.1 Key recommendations

3.1.1 Method/man

Following the reports for the 2019-2022 period, this analysis again shows that some incidents occurred, such as S&Ts, Roll-offs and Falls from Height, because the **ECG Guidelines – Safe Loading Process** were not followed. It is essential that all LSPs adopt the guidelines to train and audit their drivers if we are to reduce the number of the incidents. Additionally, it is important that LSPs raise awareness with drivers on the causes of incidents and share these main causes with drivers during training.

The following fundamentals are highlighted in the Guidelines which help in preventing incidents:

Slips & Trips
➤ Use 3PC when moving on upper deck
➤ Preparing decks correctly to avoid walking near holes, chocks or lashes
➤ Identify designated safe areas on the truck when walking
➤ No running/jumping or walking backwards

Roll-off
➤ Always follow 4-step parking process (see Fig. 5)
➤ Always lash a fixed axle before deck manipulation
➤ Train drivers on specific vehicles brands/models

Fall from Height
➤ Visually confirm that safety rails are present and damage-free
➤ Lower deck as much as possible when loading top decks; Work from the ground up
➤ Be aware of the environment in order to avoid missteps and stumbling

3.1.2 Machine

In order to minimize incidents such as S&Ts, Roll-offs and Fall from Height, LSPs and OEMs should work together with trailer manufacturers towards finding breakthrough solutions for

safer design of car transporters. Several incidents reported (S&Ts, Fall from Height) are directly linked to the failure of safety poles. Therefore, it is important that LSPs perform regular checks and maintenance of the safety poles (i.e. perform visual inspection and stress tests) in order to avoid any incident.

During the training process, each driver should be acquainted with the trailer structures and its specificities. The same should be done with experienced drivers during refresher training sessions.

3.1.3 Environment

A significant number of incidents reported were collisions that happened during loading/unloading operations in a yard.

[ECG Guidelines – Safe Yard Design](#) gives key recommendations on how to ensure loading areas can be laid out in order to minimize the risk of yard incidents:

- Loading areas should be adequately spaced and correctly marked.
- Loading areas should be regularly cleaned to avoid S&Ts in the yard.

Additionally, it was noted that certain incidents during delivery at retailers happened due to the inadequate conditions for unloading. It is important that the industry works towards common minimum standards for safe delivery in order to minimize/limit the risk of incidents for drivers.

3.2 Concluding remarks

The analysis of 2023 incidents shows similar trends to those found in the 2019-2022 period. Therefore, it is important to highlight the complexity of loading and unloading operations and potential safety risks to truck drivers. By combining knowledge from different LSPs, OEMs and trailer manufacturers we can make the sector safer by identifying common factors which lead to accidents.

In order to gain an in-depth picture and minimize incidents happening in the FVL industry, it is of the utmost importance that companies continue to report on incidents – both **severe accidents** and **near misses**. Only by sharing we can improve current standards and provide breakthrough solutions for safer and more efficient operations.

Some incidents in this analysis highlighted non-compliance with the **ECG Guidelines – Safe Loading Process**. We therefore urge all operators to **fully adopt** the Guidelines and use them as a key point during training, auditing and supervision of drivers.