

CASE STUDY

Colas Ltd | Roller Brake Failure – June 2021

Introduction

All plant & equipment must be maintained and inspected to ensure they are safe to use and comply with the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER). Most of the requirements are met by way of regular servicing and thorough examinations by competent persons. In addition to these formal checks however, it is also **critical that all personnel operating the plant and equipment are familiar with the safety features on plant and equipment they operate**. They should also know how to visually and where necessary, physically check that safety features are in good working order before they use the item; these checks should be recorded.

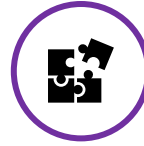
Any safety feature on an item of plant or equipment must only be used as defined by the manufacturer. Similar items of plant built by different manufacturers may have bespoke or slightly different safety features to one another, it is therefore important that all operators receive familiarisation training on any item of plant or equipment they have not used before. This type of training may only need to be brief but must include an overview of all safety features, how they operate, when they should be used and how to identify if they are faulty.





Overview

One of our surfacing teams were working on an incline and using a 10t Hamm HD90i Roller when the machines brakes failed causing it to freewheel backwards down the hill. As it rolled down the hill it clipped a Colas van causing minor damage but luckily no one was injured. The operator had carried out pre-use checks and had identified a problem with the forward and reverse control. When in the neutral position the roller was still creeping so the hire company were called out to investigate. After arriving on site later that morning, the service engineer inspected the roller and identified that the forward/reverse control lever was sticking and greased it before leaving site. Later that day the operator pulled into the side of the road to allow a vehicle to pass. The roller started to creep and the emergency stop button was pressed to try and stop it. As the emergency stop cuts all power, the operator had little control over the steering and the brakes failed to engage causing the roller to freewheel. During the investigation the following points were identified: The brake mechanism had completely failed and was in effect shattered; The emergency stop had previously been used in non-emergency situations. This may have caused critical damage to the mechanics of the braking system. The operator had not received familiarisation training for the roller, which should have included how to test the functionality of the braking system



Challenges

- During training, the operator may have only been taught on one manufacturers item of plant
- Different manufacturers of similar items of plant may not have the same safety features or methods of checking them
- Unless specified by us, any hired in plant and equipment could be from any manufacturer
- In the case of breakdown, replacement plant and equipment may not be like for like
- With numerous teams working nationally it is logistically challenging to arrange familiarisation training during busy operational periods

“It is vitally important that operators understand all the controls and safety features on the particular make and model of equipment they are using”



Action Taken

- Familiarisation training arranged with plant hire company
- Pre-use checks to include checking the functionality of the braking system
- Management Safety Observations arranged to identify how the roller should be safely loaded onto the low-loader without using the emergency stop.



Results

- Operators now aware how to carry out pre-use checks including brake function, on the Hamm roller
- Site management, supervisors and operatives understand the need for familiarisation training on all plant and equipment
- Improved Risk Assessment



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home
safe
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