

<b>Health and Safety Executive</b>		<b>Sector Information Minute</b>	
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Target Audience:  
HSE Inspectors

### **PREVENTING "RUNAWAY" SKIPLORRY INCIDENTS**

This SIM alerts inspectors to the potential hazard of skip lorries "running" away when loading skips on slopes, measures adopted by manufacturers to reduce the risk and gives advice to inspectors.

#### **INTRODUCTION**

1 The purpose of this Sector Information Minute is to alert inspectors to the risks of "runaway" skip lorries when operated on slopes and vehicle movement when uplifting skips, the actions taken by equipment manufacturers to reduce that risk and gives advice to inspectors when inspecting skip operating activities.

#### **"RUNAWAY" SKIP LORRIES, THE HISTORY**

2 HSE has recently investigated two instances in which conventional bin type skip lorries have "runaway" when operating on slopes. One incident resulted in a fatality when the driver was crushed whilst attempting to re-enter the lorry cab as the lorry "ranaway" and the second resulted in the vehicle crashing into school grounds. There is also anecdotal evidence from the industry and the police of other instances of "runaways."

3 Further injuries have occurred on level ground during lifting of skips when operators have been trapped between the vehicle and another fixed object. As the skip is lifted the changing forces result in movement of the vehicle (if unbraked) and can create a trap between the vehicle and a fixed object.

#### **"RUNAWAY" SKIP LORRIES, THE CURRENT SITUATION**

4 Investigation of the circumstances found a potential common cause of "runaway" on a large number of skip lorries in the UK.

5 Skip lorries are built on various manufacturers chassis (as specified by the purchaser). The conventional bin lift type skip lorry consists of a frame with lifting arms and stabiliser legs at the rear of the vehicle. These legs are deployed when moving a skip to provide both longitudinal and latitudinal stability to the vehicle whilst lifting. The majority of these legs are fitted with free running roller wheels (used by some operators to drag skips out from enclosed areas). Some vehicles (particularly in the miniskip sector) are fitted with stabilisers with flat plates.

6 On many skip lorries, the handbrake operates only on the rear wheels. If roller wheeled stabilisers are over-extended the rear wheels of the vehicle can be raised off the ground thus negating the effect of the rear wheel hand brake. If vehicles are not braked in any other way, as the skip is lifted off the ground, the vehicle may "runaway" on the unbraked front wheels and the rollers of the stabiliser legs.

7 The majority of vehicles are provided with chocks to prevent such "runaways." However, there is the potential for (a) the surge of momentum when the skip is lifted to overcome the chocks and (b) chocks are not being deployed by operators.

#### RISK ASSESSMENT AND HIERARCHY OF CONTROL

8 Skip lorry owners and operators should carry out risk assessments that address the risks of "runaway" vehicles when operating on slopes and being trapped between the vehicle and another fixed object. The risk assessment should include / identify the following hierarchies of control.

##### **A. New skip loader vehicles**

When buying new skip loader vehicles:

- Specify the provision of all wheel braking on the sub frame of the vehicle before skiploader conversion.
- Where all wheel braking cannot practicably be fitted, flat plates should be provided on the stabiliser legs

N.B. On larger vehicle chassis (18 - 26 tonnes) all wheel braking is available on as standard on Scania trucks, otherwise it is an optional extra. All wheel braking typically costs £100 - 700 when fitted by the chassis manufacturer. On smaller trucks (7.5- 15 tonnes GVW) it is not always reasonably practicable to fit all wheel braking.

##### **B. Existing skip loader vehicles:**

When selecting and using existing skip loader vehicles:

- Retrofitting of all wheel braking on existing vehicles or
- Where the above is not reasonably practicable, the replacement of wheels on stabiliser legs with flat plates or
- Where the above are not reasonably practicable, the use of chocks. These should be provided and their use managed. The operator must be provided with information and training on how to use chocks safely (see Appendix 1)

#### ACTION BY MANUFACTURERS

9 The Container Handling Equipment Manufacturers Association (CHEM) have agreed that their members will undertake the following when manufacturing and supplying skip lorries:

- a) CHEM members will encourage purchasers to specify all wheel braking on new chassis.
- b) CHEM will encourage truck manufacturers to advise their agents that all wheel braking should be specified for skip loader applications.
- c) Where new skip lorries are not fitted with all wheel braking, CHEM members will ensure that only flat foot stabiliser legs are fitted.
- d) CHEM members will ensure that a handbrake interlock system is fitted to all new equipment irrespective of the type of stabiliser foot fitted. This device will ensure that the equipment cannot be operated until the handbrake is applied.

- e) CHEM members will ensure that labels warning of the danger of lifting the rear axle off the ground is fitted to all new vehicles (as an interim measure).
- f) CHEM members will update their operating instructions to warn of the risk of "runaway" when deploying stabiliser legs.
- g) HSE and CHEM have issued a joint bulletin to chassis manufacturers, CHEM members and the skip operating industry advising of the above.

10 CHEM have agreed that all vehicles supplied after 1<sup>st</sup> January 2004 will have either all wheel braking or flat foot stabiliser legs. Changes to operators manuals and provision of labels were made by 1<sup>st</sup> September 2003.

11 The Manufacturing sector will be advising key intermediaries of this action.

#### ADVICE TO INSPECTORS

12 If skip loader operations are encountered during inspection or investigation inspectors should consider:

- a) Raising awareness among skip loader owners and operators of the need to carry out risk assessments for new and existing machines.
- b) Ensuring that skip loaders supplied on/ after January 2004 meet the criteria in paragraph 8A.
- c) Ensuring that skip loader owners and operators of vehicles supplied before January 2004 meet the criteria set out in paragraphs 8B.
- d) Ensuring that clients and intermediaries such as landfill site operators, construction companies etc are aware of the above hierarchies of control for machines at work on their sites.

#### EMM GUIDANCE

13 Where all wheel braking or flat stabiliser plates have not been provided on the vehicle (regardless of age) inspectors should verify that the operator has carried out risk assessment and is able to support the choice of controls.

14 There is an Initial Enforcement Expectation (IEE) of a:-

- a) Prohibition Notice when a loaded skip is lifted on sloping ground, the vehicle is rear wheel braking only (with wheeled stabiliser legs) and chocks are not deployed.
- b) Improvement Notice where operator training has not been provided to ensure safe lifting of skips on slopes (see appendix 1).

#### FURTHER INFORMATION

15 Further information on the above standards can be obtained from Paul Harvey, Manufacturing Sector, Cardiff, vpn 511 3044.

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### Appendix 1

#### Suitability of chocks and their safe use.

**In the majority of cases the control measures detailed in para 8(a) & (b) are considered reasonably practicable, the use of chocks should be considered only in exceptional circumstances.**

Where the duty holder's risk assessment concludes that there are no reasonably practicable alternatives to wheeled stabiliser legs and chocks then the employer/ user should ensure that chocks can be used effectively in each situation. Factors to be considered include:-

- Ground conditions - wet ground or smooth surface (cobble stones) can reduce the friction effect on the vehicle.
- Slope - can the operator identify when the gradient is within the operating capabilities of the chock system?
- Vehicle surge - the shift in the centre of gravity of the vehicle, when a skip is being loaded/ unloaded.
- Rear wheel contact with the ground - When applying the stabilising legs, this can fully or partially lift the rear wheels off the ground. Visual examination may not necessarily highlight the extent/ effect of wheel contact.
- Training - operators must receive adequate instruction and training.
- Supervision and monitoring of drivers to ensure appropriate use of chocks.