

SAFETY INFORMATION SHEET

GUIDANCE ON THE TRAINING OF NON LIFT PERSONNEL TO RELEASE TRAPPED PASSENGERS

This information sheet is one of a series produced by the LEIA Safety and Environment Committee on topics relevant to the lift and escalator industry. Whilst every effort has been taken in the production of these sheets, it must be acknowledged that they should be read in conjunction with the relevant legislation, codes of practice etc. They should not be taken as an authoritative interpretation of the law but guidance to it.

Increasingly, it is considered that the release of trapped passengers by the lowering or raising of the lift car should only be undertaken by a trained lift engineer or the Emergency Services. In some circumstances e.g. gearless lifts, lifts with bi-directional safety gears, machine-room-less installations etc., it is even more strongly recommended that only a lift engineer should undertake this activity.¹

The risks to those persons being rescued (and potentially the rescuers) increase when rescue of trapped persons is underway. There are obvious risks of falls into the lift well during rescue (a number of previous incidents supports this) as well as the potential for the machine to move in a way not anticipated by the occupants or poorly informed rescuers (with an obvious hazard of shearing or crushing injuries). The potential harm to occupiers or rescuers could be considered high and even fatal.

Any LEIA member intending to carry out this training should thoroughly risk assess the operation, document their findings and bring the results of the risk assessment to the client's attention before agreeing to undertake the training. As a result of this assessment the lift company may decide that the only appropriate training is to train to release passengers from a lift car within the door zone rather than training non-lift personnel to actually lower or raise the lift car.

Any person deployed to carry out this training must be competent to do so, and have sufficient skill, knowledge, experience and training to pass on their knowledge to the trainees. In this regard a thorough working knowledge of lifts is essential and a training qualification is desirable.

Conducting training of client's employees may not normally be deemed to be the normal business of a lift company therefore it is advisable that insurance cover is checked to ensure any liability resulting from the training is covered by the company's policy.

Inevitably, if something subsequently goes wrong during passenger release operations, it could be alleged that the lift company was at fault in the training given. It is therefore important to accurately record the nature of the training given together with details of when and where the training was carried out, by whom and to whom.

Release of Passengers from a Lift Car:

The use of unsafe release procedures will expose trapped passengers in a lift to far greater risk of injury than leaving them in the lift car until competent persons are in attendance. Attempts by persons other than those competent to effect a release is likely to result in serious injury to those persons and/or passengers being released from the lift car.

The procedure of releasing trapped passengers (commonly referred to as "shut in lift" by the emergency services) is often referred to as 'Emergency Release of Lift Passengers' however in most circumstances the passengers are not usually at risk as the lift car is stationary and the occupants protected by the lift car enclosure. Therefore although there may be a predictable urgency in effecting their release the

¹ Refer to Appendix 1 for extract of letter from HSE concerning Rescue of Persons from a Lift Car

situation does not merit the term ‘emergency’, but requires the controlled intervention of a competent person. It is advisable that lift companies bring this point to the attention of the client, so that client / lift owner can include this consideration in their own risk assessment of the situation.

Site Survey:

As stated previously, where training is to be provided, the person responsible for providing the training on behalf of the lift company to non-lift personnel must conduct a risk assessment to satisfy the legal requirements contained in Regulation 3 of the Management of Health and Safety at Work Regulations 1999. A full risk assessment of the lift installation and site conditions must be completed and recorded (it is recommended that the risk assessment is documented even if the company employs less than 5 persons) prior to the agreeing to undertake the training.

A Sample Risk Assessment is given in Appendix 2.

The risk assessment should also establish the suitability or otherwise of the site conditions including safe access and egress, sufficient space, falls at height hazards, any unguarded machinery, the correct function of those parts of the lift equipment necessary to carry out safe release, the ability to communicate with others involved in the release procedure etc

The trainer acting on behalf of the lift company should also be satisfied that the trainee(s) of the client / lift owner are suitable to undergo the training. They must be able to demonstrate their understanding of the safe release procedure before being issued with training certification.

The findings of the assessment should be conveyed to the client / lift owner including the identification of any corrective actions which need to be carried out on the lift installation before training can commence. The client /lift owner should also undertake a risk assessment to ensure the suitability of those persons to be given the instruction and the safety of all involved – both in the training and during any release.

Regulation 5(1)(d) of the Lifting Operations and Lifting Equipment Regulations 1998 requires employers to ensure that any person trapped in a carrier (e.g. lift car) is not exposed to danger and can be freed. By following the Approved Code of Practice a duty holder would be considered to be complying with the law by having a reliable means of rescue and that persons trapped within a carrier are not exposed to risk.

The Client Should Understand that:

Safe release should hardly ever be approached as an emergency because in nearly all circumstances it is a controlled situation. It can only be controlled when those carrying it out are fully trained and competent.

The client should never use a person who has not been trained and is unable to demonstrate the necessary level of competence. The use of untrained personnel will put both them and the trapped persons into a dangerous situation.

Trained personnel must be reminded that they should only be undertaking safe release on the lift/s on which they have been trained.

Trained personnel must be instructed that if they cannot remember or do not understand what to do they should not undertake the release procedure. They are to make that known to their employer and, if appropriate receive further training.

Similarly where the equipment [identified, for use in the training session] to effect the release does not function correctly they should cease any further action and contact their employer/ lift company.

The client will need to check their own liability insurance to ensure there is sufficient coverage for

passenger release by their own personnel.

Safe Release Training:

The initial survey and risk assessment should identify the training required to cover the types of lifts at the location(s) where release teams are required to operate.

Depending on the results of the risk assessment two trainers per instruction group may be required to ensure that trainees are supervised at all times and at all locations. Refresher training will be required at 12 monthly intervals in order to maintain the necessary skills. All trainees should demonstrate their competence to prove successful completion of the training.

It is essential that clear arrangements are in place should the Emergency Services attend the site whilst the release of passengers is being carried out. This liaison is vital to ensure that dangerous situations do not occur should the various parties work independently of each other.

Training and Release procedures should be given in accordance with BS 7255, and the manufacturer's instructions.

Consideration should be given to the following:

Equipment which may be required to facilitate safe release: -

- Landing barrier
- Lift out of service notices (See Appendix 3)
- Isolator lock and tag if applicable (See Appendix 4)
- Door Blocking Device (See Appendix 5)
- Visual and/or audible indication of the safe release zone.
- **Hydraulic** manual lowering valve;
- **Traction** brake Release;
- **Traction** hand winding wheel
- Safe release printed instructions (pictorial)
- Door release facilities at all levels and a release key available on site. *(Some vandal resistant lifts will only have releases at selected floors.)*

Release Team Requirements:

The following should be stressed: -

- The team must comprise at least the minimum number of personnel as detailed in the safe release instructions.
- A full team should be available at all times whilst the building is occupied. No attempt to release passengers should be made without a full team.
- All involved should be physically fit and technically competent to understand the procedures
- The need for the whole team to be trained and competent (Object of training)
- Practised in release procedure (Practice and reinforcement following initial training is essential)
- Aware of significant risks and the necessary controls.
- Know where further assistance is available
- Ensure liaison occurs between any lift engineer and Emergency Services who may attend site

Typical Passenger Release Procedures

Generic Procedure - as a basis of training

- Receive information that passengers are trapped in a lift car.
- Locate and offer reassurance to passengers that assistance is on its way.
- Notify the lift maintenance contractor (if appropriate).
- Assemble the team and equipment required for safe release, as defined in Safe Release Training.
- Obtain machine space access keys and door release key (they should be kept in a secure place) barriers and notices.
- Positively identify, from lift identification markings, the lift in which the trapping has occurred.
- Instruct trapped passengers that release is imminent and they should stand clear of doors and they must not move until instructed to do so.
- Display notices and barrier landing involved
- **Isolate the lift supply.**
- Lock-off and tag the power supply to ensure it cannot be reinstated without the knowledge of those who secured it.
- Allocate tasks to members of the release team.
- Visually check that all landing entrances are secure and without damage. If any of these conditions are not met then release must to be carried out by the trained lift engineer.

Specific Considerations

- Machine space personnel to locate:-
 Hydraulic manual lowering devices
 or
 Traction fit the Hand-winding equipment.
- **Hydraulic lifts:** Check that there is no obvious sign of failure e.g. burst hose or leaking connection. Where available refer to the oil pressure gauge of the hydraulic valve
- **Traction lifts:** Ensure that there are no obvious signs of mechanical failure.
- Landing duty person to confirm to the machine space duty person the location of the stopped lift car.

Activate the audible emergency lift car position indicator in the machine space [if fitted].

Particular attention must be paid to: -

Moving the lift car:

HYDRAULIC: - the car should be lowered to the rescue position by releasing the lowering valve (those undertaking the task should be trained to listen for the oil moving).

NOTE: On some valve types there may be no audible sign of oil movement. Someone **must check** to see if the lift has moved after two seconds of operation. **All attempts to move the lift must cease if no movement has occurred.** In these circumstances further action must only be undertaken by a trained lift engineer.

TRACTION: - the car should be moved in the direction which is easier. This is dependent on the car loading.

Moving the car in the down direction should always be attempted first. If the car fails to move it could indicate that the safety gear has operated. In these circumstances further action must only be undertaken by a trained lift engineer.

Generally the landing duty personnel are in charge of the operations and only instructions communicated by them are to be acted upon. A system of confirming the instructions between landing and machine space personnel must be in operation before any movement of the car is attempted, this may involve the use of radios. Machine space personnel should stop operations if it is obvious that there are conditions that require the services of a lift engineer. The landing duty operative should continually reassure those trapped and inform them of what is happening. Only on instruction from the landing duty operative should the lift car be moved. The process is continued until the required level is reached (indicated by the emergency lift car position indicator or the landing duty operative).

Confirmation that car movement has stopped should be made between machine space and landing personnel.

HYDRAULIC: After lowering the lift car the hydraulic gate valve must be closed (listen to ensure the oil has stopped).

TRACTION: The traction lift hand winding is stopped and the brake reapplied, remove brake release.

Passengers must be told to move to the back of the car and not to attempt to leave the car until instructed to do so. Be particularly clear with instructions if lift car has through doors. The landing doors should then be opened using the door release key. The landing operative should open the doors the minimum amount to check that the car is level before allowing passengers from the car onto the landing. Doors must be locked open with a suitable door blocking device (see Appendix 5). After the release of the passengers, close the landing doors (where the doors cannot be locked closed, a suitable barrier must be placed around the entrance). Leave the lift isolated; lock the machine space access door[s].

All participants completing the training must fully understand each process, not only what to do but also why. Upon completion of the training each person must be able to demonstrate the process. Upon successful completion of the training, records should be maintained detailing the date, type and location of the lift equipment upon which the training was given and who conducted and received the training.

Any certification of trainees should only be applicable to the named individuals and relevant for the specific equipment on which training has been conducted.

A Sample certificate is given in Appendix 6

For clarification of this information sheet contact your company Safety Advisor or the LEIA Safety and Training Manager.

Definitions:

Lift engineer: Lift engineers should have a minimum qualification of EAL NVQ Level 3 or its equivalent.

Trained person: A person suitably trained and qualified by knowledge and practical experience, and provided with the necessary instructions, to enable the required work / task to be carried out safely.

National standards

1. BS 7255: 2001: Safe working on lifts.
2. BS EN 13015: 2001 Maintenance for lifts and escalators-Rules for maintenance instructions.

Appendix 1 – Extract of HSE letter ‘RESCUE OF PERSONS FROM LIFT CAR’

Extract of letter from HSE to LEIA 25th March 2013

RESCUE OF PERSONS FROM LIFT CAR

"...The above suite of Regulations [*LOLER 1998 and MHSWR 1999*] are supplemented by the general requirements of the Health and Safety at Work Etc. Act 1974 (HSW), which in Sections 2 & 3 place duties on employers and the self employed.

If I were to consider how the above regulations might be applied to the situation of persons trapped in passenger lifts, I believe the following important aspects are set out below:-

Even when lifts have been well maintained there are sufficient factors present that affect the reliability and therefore influence the chances of a machine breakdown. Where machines have been less well maintained the probability of a breakdown increases. Therefore I believe it is foreseeable that any lift can suffer a breakdown with persons on board. Evidence supports this position.

We should also consider the potential for harm. I believe that a well maintained and installed machine has effective systems to protect the persons inside the car from significant harm, whilst they remain in the car. I accept that there may be situations where the risks to persons increase as a result of them being trapped (eg a lift serving critical care patients in a hospital). I believe , however, that the risks to those persons being rescued (and potentially the rescuers) increase when rescue of trapped persons is underway. There are obvious risks of falls into the lift well during rescue (a number of previous incidents supports this) as well as the potential for the machine to move in a way not anticipated by the occupants or poorly informed rescuers (with an obvious hazard of shearing or crushing injuries). The potential harm to occupiers or rescuers could be considered high and even fatal.

Given the combination of foreseeability of a lift breaking down and the occupiers requiring rescue with subsequent potential for serious harm, I believe the duty holders must consider the risks involved in rescuing trapped occupants.

A duty holder must therefore

- 1 Have arrangements in place to rescue trapped occupants - these arrangements must take account of the likely occupants of the car.
- 2 The arrangements including any necessary equipment must be reliable
- 3 Any person identified by the duty holder as being a "rescuer" must be capable and competent carry out the work.
- 4 The "rescuer" must be trained to carry out the work. The training must be appropriate and delivered by persons who are themselves competent to train.
- 5 The number of rescuers trained to carry out the work should be appropriate to the size and foreseeable operational times of the lift.
- 6 The rescuer's skills and competence must be maintained to a level where they can reliably rescue persons at any time. If rescues are infrequent the requirement for refresher training in rescue increases.
- 7 The provision of rescue services can be sourced from an external service provider or from with an employers own staff. Irrespective of where the service or persons are sourced, the level of competence to rescue from the specific lift(s) is identical.

A suitable and sufficient risk assessment must consider all the aspects noted above and inform both the duty holder and employees of the risks involved.

In addition to the above I also recognise the importance of the principals set out in British Standard 7255:2012 'Code of Practice for Safe Working on Lifts', which I acknowledge is an authoritative text in the above matters and would be considered by HSE as a benchmark in our enforcement decisions."

Appendix 2 - Generic Risk Assessment



Brief description of activity: Passenger release within door zone and hand winding. Traction and Hydraulic machines	Site Address/ Location: <i>[Insert details of site]</i>	Date of Assessment: Carried out by: Revision status:
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							Resultant Risk Values		
Activity/ Hazard	Risk	Frequency (F)	Severity (S)	Risk Value	Persons Affected	Control Measures	F	S	Resultant Risk
Persons trapped in lift being or becoming Claustrophobic	Panic attack as a result of the passenger being trapped.	Remote	Potential health issue	Medium	Person(s) trapped in lift car.	<ul style="list-style-type: none"> Persons involved in passenger release to reassure passengers of their safety and that they will be released. Depending on the nature of the mechanical/electrical failure of the equipment and the environmental conditions (numbers trapped, hot weather conditions consider contacting the Emergency services (Fire and Ambulance). 	Remote	Potential serious Injury	Medium
Accessing machinery spaces	Slips/Trips and overhead obstructions	Remote	Serious Injury	Medium	Person involved in passenger release.	<ul style="list-style-type: none"> Ensure that PPE (e.g. safety shoes & gloves) are worn and personnel are familiar with the correct use of PPE Ensure access to the machine space is safe and that personnel are familiar with the access/egress arrangements. Ensure adequate lighting is available and used. 	Ext Remote	Serious Injury	Low
Moving machinery	Entanglement/ crushing.	Probable	Serious Injury	High	Person involved in passenger release.	<ul style="list-style-type: none"> Machinery within machine rooms should be guarded. Unguarded moving parts must be adequately highlighted. Secure / remove loose clothing (e.g. ties) and secure / cover long hair. Isolate all lift machinery during release process. Do not open landing doors until confirmed that lift has stopped. 	Ext Remote	Serious Injury	Low
Uncontrolled movement of the lift car.	Lift crashing into pit/shaft ceiling or safety gear being activated.	Probable	Serious Injury	High	Person(s) trapped in lift car.	<ul style="list-style-type: none"> Personnel to have been trained and instructions for the lift are available for reference. Extreme caution must be exercised on MRL and gearless machines. Ensure that personnel involved in release have adequate knowledge and physical ability to move the lift to a landing. Ensure that instructions for the safe movement of the equipment are available, understood and followed. 	Remote	Serious Injury	Medium
Electrical	Electrical shock/arcing of the equipment.	Probable	Serious Injury	High	Person involved in passenger release.	<ul style="list-style-type: none"> Electrically isolate the machinery (if possible). Do not remove any electrical guarding to the machinery. Keep electrically conducting material clear of the controller ie. bunches of keys/lift landing door release key. 	Ext Remote	Serious injury	Low
Working at height	Falling down the lift shaft.	Probable	Fatal Injury	Very High	Persons involved in passenger release and trapped personnel	<ul style="list-style-type: none"> Lift must be manually moved to a landing door zone to allow doors to be opened safely without any void being open. 	Ext Remote	Fatal Injury	Medium
	Falling off the machine plinth (if applicable)		Serious Injury	High		<ul style="list-style-type: none"> If this is not achieved then there is a potential risk of personnel involved in the passenger release and trapped passengers falling through any significant gap form the landing or from within the car. Passengers should be told to go to the back of the car whilst opening the doors. 	Ext Remote	Serious Injury	low

(cont)

Appendix 2 - Generic Risk Assessment

Brief description of activity: Passenger release within door zone and hand winding. Traction and Hydraulic machines	Site Address/ Location: <i>[Insert details of site]</i>	Date of Assessment: Carried out by: Revision status:
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Activity/ Hazard	Risk	Frequency (F)	Severity (S)	Risk Value	Persons Affected	Control Measures	F	S	Resultant Risk
Hit by closing door	Slips, Trips and Falls from Height	Probable	Serious Injury	Medium	Persons involved in passenger release and trapped personnel	•Use Door Blocking Device to prevent doors closing	Ext Remote	Serious Injury	Low
						•Prior to leaving site, complete the log card in full.			

Additional comments/ on site changes

Severity	Risk Value Table				Risk Value
Fatal	Med	High	V.High	V.High	Low – Acceptable
Serious Injury	Low	Med	High	V.High	Med – Monitor
Minor Injury	Low	Low	Med	High	High – Review
Negligible	Low	Low	Low	Med	V.High – Stop Work
	Extremely remote	Remote	Probable	Extremely probable	
	Frequency				

Signing this document confirms that you have been advised and agree to undertake the activity in accordance with the control measures identified	Position	Name & Signature	Date:
	Manager:	_____	_____
	Employee 1	_____	_____
	Employee 2	_____	_____

APPENDIX 3



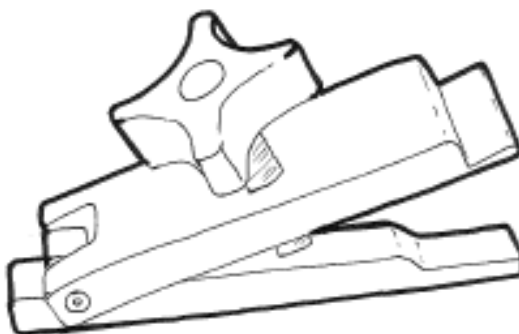
**Lift out of
Service**

Example of Landing Safety Sign

APPENDIX 4



Example of a Lock Off Isolation Device

APPENDIX 5**Example of a Door Blocking Device**

APPENDIX 6

SAFE RELEASE LIFTS LIMITED

This is to certify that

**has been trained in the method of Safe Release of
Passengers from a lift car**

Site address: _____

Lift location: _____

Lift No: _____

Date: _____

This Training is valid for a period of 12 months from the above date

**Signed for and on behalf of
Customer/Client**

**Signed for and on behalf of
Safe Release Lifts Ltd**

F Bloggs

AN Other

**F Bloggs
Estate Manager**

**AN Other
Course Trainer**

N.B. This certificate is only valid for the equipment identified above

This course does not constitute any liability on Safe Release Lifts Limited for the actions of the person to whom this certificate is issued.