**-5.4 >> Control position**

It reiterates the need to reorganize the whole paragraph providing for the revision of 5.4.1 and 5.4.2 to better define the aspects related, among the other things, to the use of remote control (wired or wireless), the visibility, the safety distances of the place control, the possibility of being under the vehicle to the lift in motion

some point to be considered:

- Visibility: must be best defined to avoid having to provide for remote control or double operator even in the case of car scissor lifts (the side opposite the vehicle operator remains hidden)

- The use of a remote control raises the possibility of the presence of persons in the dangerous area.

- With remote control, likely misuse become more predictable (ie: operator under the load)

- In case of use of remote control, a warning device (acoustic or optical) could be activated, to remind potentially hazardous condition.

- restrictions on the use of the remote control should be introduced to avoid unpredictable proper misuse (ie: Limit the remote control operation only for the initial 300mm stroke

- With remote control in use automatically the speed of the lift is reduced to that permitted value in case of presence people under the load in motion.

FM aims to rewrite the text and share it with EGEA WG1 members.

5.4 Control position

Control devices shall be designed and arranged so that the operator or bystander are not jeopardized in the use of the lift and can keep watching the dangerous area to avoid jeopardize of eventual bystanders

If the conditions are so that the hazardous area cannot be completely viewed from the operating position (ie: due to the dimensions of lift and lifted vehicle), suitable countermeasures must be provided (see annex B)

*Annex B (informative)*

* *Operation by remote control*
	+ *The operator moves to be in the condition to watch the whole dangerous area*
	+ *In the case of wired remote control it can be still impossible to control the entire dangerous area (Ie: wire too short) : in this case is to be expected to use following mentioned devices:*
		- *Use of mirrors and cameras*
		- *One or more additional release switch located so that a second (or more) operator pushing it complete the view to the whole dangerous area*
		- *Audible/visual warning signal (to alert bystander not to enter in the dangerous area)*

**(Remote control)**

*Wired remote control* may be used to let the operator to be in the condition to watch the dangerous area, without going into the dangerous area itself (unless this is specifically permitted by the manufacturer of the lift: in this case the lift shall fulfil the provisions of paragraph 5.22

*Wireless remote control* shall conform to Annex F (normative)

Wireless remote control must ensure the impossibility of involuntary exchange between two lifts in operation in the same workshop (see annex B) resulting in possible involuntary movement of the wrong lift

Annex B (informative)

* + Wireless controls shall be individually paired to the lift they operate. The pairing process must be conducted by the operator and will automatically expire in not more than 15 minutes

Wireless controls must operate in defined standing area (infrared control system,…) so even if exchanged do not create problems of involuntary movements

This applies to the operation of both multiple and single lifting devices

Where it is possible to control the lift from more than one control station, there shall be measures to enable the function of only one control station at any one time

In addition, if the vehicle lift is mobile, the operator shall be able to observe the space in front of the vehicle

**5.4.1 Layout**

Control devices shall be designed and arranged so that they are easy reach of a standing operator and so that he operator is not jeopardized by the load, or the motion of the lift, or part of the lift.

Where it is possible to control the lift from more than one control station, there shall be measure to enable only one control station at any one time

Remote control systems (wireless or wired) are only allowed if they only operate within a defined standing area which gives the operator a direct view to the load to be lifted/lowered (ie: short cable, infrared control system). If this requirement (direct view) cannot be fulfilled, other safety measures are necessary (see annex B).

*Annex B (informative)*

* *The requirement can be fulfilled by*
	+ *An additional release switch at the vehicle lift which has to be pushed when using the remote control. This additional switch shall be located so that the person pushing it has a direct view to the load to be lifted/lowered*
	+ *A load sensor on the lift that switches off the remote control when the load is on the lift*
	+ *Limited lifting height of 300mm when using the remote control*

If the position of the operator can be under the load the requirements of 5.2.2 shall be fulfilled in addition

When more than on vehicle lift is installed in the workshop, all wirelesscontrols shall be individually paired to the lift they operate. The pairing process shall be conducted by the operator and shall expire every 15 minutes

Wireless control systems shall conform to annex F (normative)

**5.4.2 Visibility**

The control position to operate the vehicle lift shall be designed and arranged so that the operator can watch the load carrying device and the load whilst in motion, as well as the space under the load carrying device and the load. This applies to the operation of both multiple and single lifting devices.

If the vehicle lift is intended to be used so that the hazardous area cannot be completely viewed from the operating position (the use of tools like mirrors or cameras/monitors is acceptable), ie: vehicle lifts for rail-bound vehicles, one or more additional release switch(es) approving the command for lifting movements (on the side of the lifting system positioned across from the control position) are required

 NOTE: this need negotiation between user and manufacturer respectively supplier of the vehicle lift

In addition if the vehicle lift is mobile the operator shall be able to observe the space especially ni moving direction of the vehicle lift

**PROPOSAL**

**5.4 Controls**

Control devices shall be designed and arranged so that the operator and bystanders are not jeopardized in the use of the lift

This applies to the operation of both multiple and single lifting devices

**5.4.1 Lay out**

Control devices shall be designed and arranged so that they are easy reach of a standing operator and so that he operator is not jeopardized by the load, or the motion of the lift, or part of the lift.

Where it is possible to control the lift from more than one control station, there shall be measure to enable only one control station at any one time (see annex B)

*Annex B (informative)*

*This can be achieved with the ability to preselect the active command or ensuring the impossibility of overlap between two control station (In the case of multiple control station, any command implemented on a control station when the movement is already active due to previous activation of other control station has no effect (or stops the activated command)*

**5.4.2 Visibility**

The control position to operate the vehicle lift shall be designed and arranged so that the operator can watch the load carrying device and the load whilst in motion, as well as the space under the load carrying device and the load.

If the conditions are so that the hazardous area cannot be completely viewed from the operating position (ie: due to the dimensions of lift and/or lifted vehicle), suitable countermeasures must be provided (see annex B)

*Annex B (informative)*

*Examples of suitable countermeasures to be provided in case that the hazardous area cannot be completely viewed from the operating position*

* *One or more additional release switch located so that a second (or more) operator pushing it complete the view to the whole dangerous area*
	+ *NOTE: this could need negotiation between user and manufacturer respectively supplier of the vehicle lift*
* *Use of (additional) remote controls: The operator moves to be in the condition to watch the whole dangerous area*
* *Use of mirrors and cameras*
* *Audible/visual warning signal (to alert bystander not to enter in the dangerous area)*

In addition, if the vehicle lift is mobile the operator shall be able to observe the space especially in moving direction of the vehicle lift

**5.4.3 Remote controls**

**Hypotesys 1: the destination of use of the lift and trained operator are considered sufficient to ensure the proper management of the remote control**

The remote control unit must meet different requirements depending on the destination of use specified in the instruction manual of the lift.

If the function of the remote control is clearly limited in the destination of use, only to let the operator moves to be in the condition to watch the whole dangerous area without going into the dangerous area itself, the remote control has not particular requirements beyond those required for fixed controls

If the function of the remote control is such as to provide for the presence of the operator under the lifted vehicle moving, the activation of remote control should automatically put the lift in the condition to work in accordance with the provisions in the case of operator under the lifted vehicle moving (the lift shall fulfil the provisions of paragraph 5.22)

Wired remote controls

Wired remote control, in a lift where the manufacturer doesn’t provide the presence of operator under the lifted vehicle moving, can be considered as a secondary control system and has not particular requirements beyond those required for fixed controls

Wireless remote controls

Wireless remote control shall conform to Annex F (normative)

If more than one vehicle lift are installed in the workshop, wireless remote control must ensure the impossibility of involuntary exchange between two lifts (see annex B) resulting in possible involuntary movement of the wrong lift

Annex B (informative)

* + Wireless controls must operate in defined standing area (infrared control system,…) so even if exchanged do not create problems of involuntary movements
	+ Wireless remote controls not operating in defined standing area shall be individually paired to the lift they operate. The pairing process must be conducted by the operator and will automatically expire in not more than 15 minutes

**Hypotesys 2: the destination of use of the lift and trained operator are NOT considered sufficient to ensure the proper management of the remote control: the remote control shall be intrinsically safe**

If the remote control is enabled to work through the whole lifting/lowering movements, the activation of the remote control should automatically put the lift in the condition to work in accordance with the provisions in the case of operator under the lifted vehicle moving (the lift shall fulfil the provisions of paragraph 5.22)

If the remote control is enabled to work only for a short lifting stroke from the ground level (ie: 300mm, only to let the operator have the possibility to check the correct pick up of the load) the remote control has not particular requirements beyond those required for fixed controls

Wired remote controls

Wired remote control can be considered as a secondary control system and has not particular requirements beyond those required for fixed controls

Wireless remote controls

Wireless remote control shall conform to Annex F (normative)

If more than one vehicle lift are installed in the workshop, wireless remote control must ensure the impossibility of involuntary exchange between two lifts (see annex B) resulting in possible involuntary movement of the wrong lift

Annex B (informative)

* + Wireless controls must operate in defined standing area (infrared control system,…) so even if exchanged do not create problems of involuntary movements
	+ Wireless remote controls not operating in defined standing area shall be individually paired to the lift they operate. The pairing process must be conducted by the operator and will automatically expire in not more than 15 minutes

**5.4.3 Controlling several load carrying devices >>> 5.4.4**

**5.4.4 Emergency stop device >>> 5.4.5**

**5.4.5 Stopping device >>> 5.4.6**