



AFS 2003:6

INSPECTION OF LIFTING DEVICES AND CERTAIN OTHER TECHNICAL DEVICES

(Changes implemented up to and including 28 June 2011)

INSPECTION OF LIFTING DEVICES AND CERTAIN OTHER TECHNICAL DEVICES

The Swedish Work Environment Authority's provisions regarding inspection of lifting devices and certain other technical devices together with guidelines for the application of the provisions

The Swedish Work Environment Authority's provisions regarding inspection of lifting devices and certain other technical devices

Adopted on 25 September 2003

(Changes implemented up to and including 28 June 2011)

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Scope

Section 1. These provisions apply to the lifting devices and other technical devices stated in Appendix 1 to the provisions. However, they do not apply to the lifting of persons with cranes, or trucks which are not primarily intended for lifting of persons. Nor do they apply to devices such as those referred to in Chapter 2, Section 13 of the Public Order Act (SFS 1993:1617).

Section 2. In these provisions, employers are defined as

- those who conduct professional activities without employees, alone or jointly with a family member,
- those who conduct activities for joint benefit and
- those who employ temporary labour to perform work in their activities.

Definitions

Section 3. In these provisions, the following terms are used with the meanings given below.

EEA	European Economic Area.
Internal inspection	An inspection which is performed for internal activities (also by external parties) under internal direction.
Fly-jib	Extra jib intended to be fitted at the end of a crane jib in order to extend it.
Vehicle	Device on wheels, tracks, runners or similar, intended for transport on the ground.
Vehicle crane	Arm crane or jib crane which is mounted on a vehicle.
In-depth periodic inspection	Inspection with an increased scope of examination and longer periodic time intervals compared to periodic inspection.
Initial inspection	Inspection which is performed prior to a device being put into service for the first time.
Hoist	A lifting device with a controlled load-carrying member which can move between fixed landings.
Crane	A lifting device which, with the aid of a non-controlled load-carrying member, can lift and lower the load vertically as well as move it horizontally. In these provisions, crane also refers to loader or truck with crane jib mounted in the tool bar.
International inspection	Periodic inspection performed in accordance with inspection regulations, which are harmonized and accepted in two or more countries within the EEA.

Fly bar system	Lifting device used for lifting and supporting decorations, lighting devices etc. at theatres, studios, assembly halls or similar, consisting of fly bar, track ropes and wire rope sheave as well as haulage cable or winding gear (stage hoist) or, with the aid of one or more track ropes, chains, etc. (point lift)
Lifting device	Device for the lifting or lowering loads.
Maximum load	The heaviest load for which a lifting device is intended.
Assembly inspection	Inspection conducted <ul style="list-style-type: none"> – prior to a device being put into service or put back into service after having been disassembled and moved to a new erection site or new vehicle, or – prior to a device being put back into service after a site has been raised, stabilized or supplemented with additional or relocated landings.
Assembly plan	A written document with information about how a device shall be assembled and other information necessary for assessing that the assembly provides adequate safety in all parts.
Order-picking truck	Truck with elevated operator platform, specially designed to facilitate picking up goods from pallet racks.
Point lift	See stage hoist.
Revision inspection	Inspection performed on device which has undergone repair, modification, reconstruction or addition, or which is feared to be damaged in a way that has a significant impact on safety.
Periodic inspection	Inspection which is performed regularly after a device has been put into service.

Terms of use

Section 4. A device which is included in Appendix 1 may only be used if it meets the conditions in Sections 5–7, Section 8 or alternatively Sections 9–12 and Section 14. However, this does not apply during test commissioning, running adjustments or similar measures, which are necessary to be able to conduct the inspection.

If the inspection body has indicated that its assessment in accordance with Section 14 only applies if certain specified deficiencies are rectified, additional measures shall be taken to rectify these deficiencies.

The Swedish Work Environment Authority may consent to a device being used even if the requirements of Section 14 have not been met. Lifting devices mounted on vehicles, covered by the Militära vägtrafikkungörelsen (Military Road Traffic Ordinance) (SFS 1974:97), may be used for 45 days without having been subject to a periodic inspection in accordance with Section 8 or Sections 9–12, if the vehicle has been taken from a mobilization depot and a periodic inspection was performed in conjunction with the vehicle being placed in the depot.

Inspection

Initial inspection

Section 5. A device which is included in Appendix 1 shall have undergone an initial inspection in accordance with Section 15. However, this does not apply to these devices

- for which the Ordinance of the Swedish National Board of Occupational Safety and Health (AFS 1993:10) with provisions for machinery and certain other technical devices or corresponding regulations in any other country in the EEA applied when they were released onto the market within the EEA, or
- for which the provisions of the Swedish Work Environment Authority (AFS 2008:3) Machines or corresponding regulations in any other country within EEA applied when they were released onto the market within EEA, or
- which were put into service within EEA and at the time of commissioning were not encompassed by the requirement for an initial inspection. (AFS 2008:6).

Mounting inspection

Section 6. A device for which assembly inspection is required in accordance with Appendix 1 shall undergo an inspection in accordance with Section 16 each time it has been installed or assembled at an erection site or to a vehicle.

However, this does not apply for the first erection or the first assembly if

- the device shall undergo its initial inspection in accordance with Section 5, or
- the equivalent inspection has been performed under the direction of the manufacturer, in order to meet the requirements of the Ordinance of the Swedish National Board of Occupational Safety and Health (AFS 1993:10) with provisions regarding machines and certain other technical devices or the corresponding regulations in a country within EEA, or
- equivalent inspections were performed under the manufacturer's responsibility in order to meet the requirements of the Swedish Work Environment Authority's provisions (AFS 2008:3) with provisions regarding machines or corresponding regulations in another country within EEA. (AFS 2008:6).

If the device has been raised or stabilized or if landings have been added or relocated, it must undergo a new assembly inspection after each executed measure except in the cases referred to in Section 16, Paragraph 2.

Revision inspection

Section 7. A device which is included in Appendix 1 and which has undergone repair, modification, reconstruction or addition or which is feared to be damaged in a way which has a significant impact on safety must undergo revision inspection in accordance with Section 22 before it is put back into service.

However, this does not apply if the device has undergone the equivalent inspection in any other country within the EEA and has been found to provide adequate safety.

Periodic inspection

Section 8. Any device included in Appendix 1 shall have undergone a periodic inspection in accordance with Section 17 at the points in time stated in Section 20.

International inspection

Section 9. Instead of periodic inspection in accordance with Section 8, an user may choose to have a device that is included in Appendix 2 undergo an international inspection which shall consist of

- periodic inspection comprising inspections and tests in accordance with Sections 17 and 18, and in applicable cases
- in-depth periodic inspection in accordance with Section 19.

Section 10. International inspection may also be performed in accordance with corresponding regulations from another country within the EEA.

Section 11. Periodic inspection in accordance with Sections 17 and 18 shall be performed at the points in time stated in Section 20. However, in the years during which an in-depth periodic inspection has been performed in accordance with Section 19, a periodic inspection in accordance with Sections 17 and 18 does not need to be performed.

Section 12. In-depth periodic inspection in accordance with Section 19 shall be performed no later than at the end of the interval stated for the device in Appendix 2. The interval is calculated on the basis of the date on which the device was commissioned or when an in-depth periodic inspection was last performed.

If the results of an in-depth periodic inspection showed that the device can only be used with adequate safety during part of the interval until the next in-depth periodic inspection, a new inspection shall be performed before that part of the interval has expired.

Inspection body

Section 13. Inspection shall be performed by an inspection body which can demonstrate impartiality as well as procedures and competences which correspond to the requirements of a type A body in accordance with SS-EN 45004 (Swedish Standard); General criteria for the operation of various types of bodies performing inspection.

Regarding lifting devices mounted on vehicles which are covered by the Militära vägtrafikkungörelsen (Military Road Traffic Ordinance) (SFS 1974:97), the inspection may, however, be performed by an inspection body equivalent to type B.

The inspection body shall be registered with the Swedish Work Environment Authority as well as be accredited for the task in accordance with the Regulation (EC) No 765/2008 of the European Parliament and of the Council from 9 July 2008, setting out the requirements for accreditation and market surveillance relating to the marketing of products, and repeal of Regulation (EEC) No 339/93 and the Act (2011:791) on Accreditation and Conformity Assessment or similar procedure, or in accordance with the corresponding provisions in another country within the EEA. (*AFS 2011:11*)

International inspection in accordance with Sections 9–12 may, however, be performed by an inspection body which meets the requirements of the corresponding provisions from another EEA country.

Assessment

Section 14. During the most recent inspection, the inspection body shall have made the following assessments.

1. For devices which have been inspected in accordance with Sections 5–8, it shall be assessed whether they comply with the applicable provisions from the Swedish National Board of Occupational Safety and Health and the Swedish Work Environment Authority in the respects specified for them in Sections 15–17 and Section 22.
2. For devices which have undergone international inspection in accordance with Sections 9–12, it shall be assessed
 - whether they satisfy the requirements specified for them in Sections 17–19,
 - for what part of the interval until the next in-depth periodic inspections they can be used with adequate safety.
3. All devices shall also be assessed as to whether they offer adequate overall safety.

Scope of inspection

Initial inspection

Section 15. The initial inspection shall include the following:

- Inspection of the suitability of the device for its intended purpose.

- Examination of drawings, circuit diagrams, information about loads, materials and surface treatment.
- Inspection to ensure that maintenance and continuous supervision can be performed in a safe manner.
- Inspection of the calculations required in order to be able to assess the overall strength, stability and safety.
- Inspection of instructions for use, operation, rescue, continuous supervision and maintenance.
- Inspection to establish that the device complies with the examined documentation.
- Inspection to establish that the device and associated guards and protective devices have been installed in the intended manner.
- Functional inspection of protective devices.
- Function test with test load.

Mounting inspection

Section 16. The assembly inspection shall include the following:

- Inspection to establish that the device and associated safeguards and protective devices have been installed and assembled in the intended manner.
- Function test with the requisite load.

Assembly inspection in connection with a device on an erection site in the event that it has been raised, stabilized or supplemented with additional or relocated landings does not need to be performed if all of the following conditions are met.

- The device has been assessed as offering adequate safety at an assembly inspection in connection with the erection.
- The inspection body has, in connection with the assembly inspection, assessed that the assembly offers adequate safety, in accordance with a reported assembly plan.
- The assembly has been performed in accordance with this assembly plan.
- Internal inspection of the assembly has been performed and documented. The scope of the internal inspection shall be the same as what is specified in the first paragraph. The person who performed the internal inspection shall have the competence and knowledge about the device that is necessary to be able to assess whether the assembly offers adequate safety.

Periodic inspection

Section 17. Periodic inspection in accordance with Section 8 shall include the following:

- Inspection of the parts of the device which are of importance for safety and the work environment, relating to wear and tear, cracks, damage, corrosion etc.
- Function test with the requisite load.
- Inspection of guards and protective devices.
- Inspection to establish that the essential instructions for use, operation and maintenance are available.

Section 18. Periodic inspection in accordance with the provisions of international inspection in Section 9 shall include the inspections stated in Section 17 as well as the following:

Inspection to establish that the device, after static loading with a test load in accordance with Appendix 2, does not show any deformation or damage. For lifting devices with variable range, this is done through the following two loading tests with test loads in accordance with Appendix 2, and with the jib in the most unfavourable direction

- at the radius at which the device with fully extended outriggers takes maximum load
- at the largest radius (including any fly-jib).

Section 19. In-depth periodic inspection in accordance with Section 9 shall include the inspections referred to in Sections 17 and 18, as well as the following:

Inspection of all load-bearing components with consideration of

- cracking and fatigue fractures
- permanent deformations
- incipient modifications of form
- loosened or damaged components.

If it is necessary for the inspection body to be able to assess whether the device conforms to the requirements, parts or components shall be disassembled. The inspection body shall also test the load-bearing components of the device which need to undergo non-destructive testing in order to be able to make an assessment in accordance with Section 14.

Furthermore, the inspection body shall assess whether any parts of machinery do not offer adequate safety as a result of their having exceeded their estimated life.

Regular inspection month

Section 20. Periodic inspection and in-depth periodic inspection in accordance with Sections 8 and 9 shall be performed during the device's regular inspection month or no later than the second month thereafter. The inspection may also be performed before the regular inspection month. The regular inspection month is the month in which the current inspection interval expires, in accordance with Appendices 1 and 2.

However, if an inspection is performed more than two months before the regular inspection month, a new regular inspection month shall be calculated based on the date at which the inspection was actually performed.

If the device has been disassembled and thereafter undergoes assembly inspection and periodic inspection at the same time, the regular inspection month shall be calculated based on this event.

The regular inspection month for a device which has not previously undergone periodic inspection and in-depth periodic inspection shall be calculated on the basis of the points of time in accordance with the following table.

Devices	Basis for the calculation of the regular inspection month
Devices which are not encompassed by the requirements for initial inspection or assembly inspection.	The date on which the device was commissioned.
Devices which have undergone initial inspection.	The date on which the initial inspection was performed.
Devices which have undergone initial assembly inspection.	The date on which the first assembly inspection was performed.

Section 21. If a device is used in such a way that it is subjected to very low grades of wear and tear or other significant influences for the safety of the device, the Swedish Work Environment Authority may extend the inspection interval in accordance with Appendix 1 by a maximum of 24 months.

Revision inspection

Section 22. Revision inspection shall in applicable parts include:

- Examination of manufacture documentation.
- Assessment of reparation methods.
- Assessment of repairs performed.
- Inspection to establish that the device complies with the examined documentation.
- Function test with the requisite load.

Measures after inspection

Section 23. After concluded inspection, the inspection body shall make the following assessments:

- For devices which were inspected in accordance with Sections 5–8, it shall be assessed whether they comply with the provisions in force from the Swedish National Board of Occupational Safety and Health and the Swedish Work Environment Authority in the respects specified for them in Sections 15–17 and Section 22.
- For devices which have been inspected in accordance with Section 9, it shall be assessed whether they comply with the requirements in the respects specified for them in Sections 18 and 19.
- All devices shall be assessed as to whether they offer overall adequate safety for their use.

The inspection body shall issue a certificate in accordance with Section 25 regarding the outcome of the inspection (inspection certificate). If the device is deemed to offer adequate safety, the inspection body shall also label it in a visible place with an inspection sign of a permanent nature in accordance with Section 26.

If an inspection has been performed in accordance with Sections 5–8, the certificate and the sign shall be written in Swedish. If inspection has been performed in accordance with Section 9, the certificate and the sign shall be written in Swedish and English.

Section 24. If the device is deemed to not offer adequate safety, the inspection body shall notify the Swedish Work Environment Authority of this as soon as possible.

Inspection certificate

Section 25. The inspection certificate shall contain the following information:

- The device's identification information.
- Maximum load and, where appropriate, the maximum number of persons.
- The name of the inspection body.
- Accreditation number.
- Accreditation mark.
- Inspection date.
- The name of the inspector.
- Information about the inspection having been performed in accordance with these provisions. For a device which has been inspected in accordance with Section 9, it shall instead be indicated that an

inspection has been performed in accordance with the rules for international inspection.

- The result of the assessment in accordance with Section 14.
- Any conditions about measures in order for the device to offer adequate safety.
- Regular inspection month (year, month) for the next periodic inspection and date (year, month) for any in-depth periodic inspection in accordance with Section 9.

For devices which have been inspected in accordance with Sections 5–8, the inspection certificate shall in addition contain an identifiable reference to an assembly plan.

For devices which have been inspected in accordance with Section 9, the inspection certificate shall also contain an identification mark for international inspection in accordance with Appendix 3. Attached to the inspection certificate there shall also be a check list which indicates the scope of the inspection.

Inspection sign

Section 26. The inspection sign shall clearly indicate:

- Identification information.
- The inspection body's name and accreditation mark.
- Accreditation number.
- Marking which shows the regular inspection month for the next periodic inspection (year, month).
- Marking which shows that the device has been inspected and has thereby been assessed to offer adequate safety. If the device has been inspected in accordance with Section 9, the sign shall in addition include a marking, in accordance with Appendix 3, which shows that the inspection has been performed according to the rules for international inspection.

Documentation etc.

Section 27. An employer who uses a device that it is obligatory to inspect shall retain the following documentation, or a copy of:

- The most recent inspection certificate.
- The inspection certificate from the initial inspection if the device has undergone one of these.
- Information about who has issued the declaration of conformity as and when required, in accordance with Section 8 of the Ordinance of the Swedish National Board of Occupational Safety and Health (AFS 1993:10), with regulations for machines and certain other technical devices or the corresponding provisions in a country within EEA.
- Information about the date when the device was first commissioned.
- The instructions for use, operation and maintenance that are essential.
- Where appropriate, the assembly plan that has been assessed by the inspection body to offer adequate safety. The provisions of the first paragraph shall also apply to those renting out or in another way leasing a device that is obligated to be inspected.

Section 28. Documentation in accordance with Section 27, or a copy of it, shall be available for inspection inside the device or in its vicinity.

Section 29. If the device is transferred, documentation shall be submitted to the new owner, in accordance with Section 27.

Regulations regarding penalties

Section 30. The regulations in Section 4 constitute the provisions in accordance with Chapter 4,

Section 2 of the Work Environment Act (SFS 1977:1160). The regulations in Section 27 constitute provisions in accordance with Chapter 4, Section 8 of the same act. Violations of the above provisions may result in fines, in accordance with Chapter 8, Section 2 of the same act.

Effective date and provisional regulations

These provisions shall come into force on 1 January 2004.

At the same time, the Swedish Work Environment Authority's provisions (AFS 2001:6) on the inspection of lifting devices and certain other technical devices will be repealed.

An inspection which has been performed in accordance with AFS 2001:6 or older corresponding provisions constitute valid inspections in accordance with the new provisions.

AFS 2008:6 with amendments shall come into force on 29 December 2009. AFS 2011:11

1. These provisions shall come into force on 1 August 2011.
2. Accreditation in accordance with these regulations is equivalent to accreditation stipulated in accordance with older provisions.

Appendix 1

Specification of the scope, requirements for assembly inspection and interval for periodic inspection in accordance with Section 20. Regarding requirements for the initial inspection of certain devices, see Section 5.

Line	Type of device	Interval for periodic inspection	Assembly inspection	Specification of the scope
1	Excavators.	First time 36 months, second time 24 months, thereafter 12 months.	–	Self-propelled machines on tracks, wheel or legs, and mounted equipment with linkage, intended primarily for excavating with face shovel or drag shovel without movement of the undercarriage. Exemptions apply for machines whose kerb weight (mass of operational and unladen machine, with the driver) is less than 1,500 kg. Self-propelled motor-driven wheels and track machines with a mainframe designed to support both a front mounted load unit and a loader equipment mounted excavator unit. The inspection also includes the equipment.
2	Loader cranes.	12 months.	Yes.	Power-driven vehicle cranes whose load moment is greater than 12 tonne metres. Exception: Inspection of mobile cranes are regulated in line 9 and

				inspection of semi-mobile tower cranes are regulated in line 15.
3	Lifting devices with controlled load-carrying member in form of a platform mounted to a vehicle for loading and unloading of the vehicle.	24 months.	—	

Line	Type of device		Interval for periodic inspection	Assembly inspection	Specification of the scope
4	Hoists.		12 months.	Yes.	<p>Hoists intended for professional use by specially-instructed personnel.</p> <p>Exempted from the requirement of inspection are hoists intended solely for goods and materials with automatic loading and unloading and maximum load under 4,000 kg as well as hoists on ships.</p> <p>Also exempted from the requirement of assembly inspection are hoists whose only assembly consists of the arrangement of landings if they have been assembled in accordance with an assembly plan that was inspected by the inspection body during the most recent periodic inspection and at that time were assessed as offering adequate safety.</p>
5	Fly bar system and point lifts.	Power-driven.	12 months.	Yes.	<p>Fly bar system and point lifts within stage areas and associated adjacent areas as well as within an auditorium and/or public spaces.</p>
6		Hand-powered.	36 months.	Yes.	<p>Exempted from the requirement of periodic inspection are hand-powered stage hoists and point lifts which are not counterweight balanced as well as power-driven point lifts which are equipped with a locking device, which secures the cargo's normal operation mode and whose lifting function is used exclusively for the maintenance of fittings etc., e.g., cleaning or changing of lights.</p>
7	Vehicle lifts.		12 months.	Yes.	<p>Lifting device with controlled load-carrying member for the lifting of vehicles (the whole vehicle) and intended for work to be performed with the employee under the elevated vehicle.</p> <p>Vehicle lifts not intended for fixed installations are exempt from the assembly inspection requirement.</p>

Line	Type of device	Interval for periodic inspection	Assembly inspection	Specification of the scope
8	Cranes.	12 months.	Yes.	<p>Power-driven cranes whose maximum load or load moment is in excess of 500 kg or 5 metric tonnes.</p> <p>Exception: Inspection of vehicle cranes is regulated in line 2 and inspection of semi-mobile tower cranes is regulated in line 15.</p> <p>Exempted from the requirement of assembly inspection are cranes which do not have power-driven horizontal motion as well as cranes which consist of a wheel loader or industrial truck with crane jib mounted in the tool bar.</p>
9	Mobile cranes.	12 months.	—	Loader cranes on purpose-built power-driven vehicle.
10	Stripper cranes.	12 months.	Yes.	Lifting devices with a controlled load-carrying member and fitted with stripper tongs or stripper equipment for extracting ingots from cast iron moulds or a casting machine.
11	Grapple cranes.	12 months.	Yes.	Lifting devices with a controlled load-carrying member, fitted with a grapple for transporting steel ingots, cast iron moulds.
12	Storage and retrieval machines.	12 months.	Yes.	<p>Machines which are bound to rails or guide rails, inside as well as outside of the crane path.</p> <p>The machines have a lifting devices and are able to move sideways for placing unit loads in racks or for picking goods by hand in shelf or pallet racks.</p>

Line	Type of device	Interval for periodic inspection	Assembly inspection	Specification of the scope
13	Power-driven lifting devices intended for lifting by employees.	12 months.	Yes.	<p>Exceptions: inspection of vehicle-mounted lifting platforms for loading and unloading of the vehicle is regulated in line 3.</p> <p>Exemption from the requirement of inspection applies for</p> <ul style="list-style-type: none"> – order picking trucks with a lifting height less than 1.2 m, as well as – other devices with a lifting height less than 0.5 m. <p>Exempted from the requirement of assembly inspection are modular built devices if they are moved or adjusted within the same workplace, if the inspection body has made the assessment of the assembly plan, in connection with previous assembly inspection, that it offered adequate safety.</p>
14	Power-driven devices at loading bays to offset height differences between goods vehicles and the loading bay.	24 months.	–	
15	Semi-mobile tower cranes.	12 months.	–	Self-erecting tower cranes intended to be transported by towing vehicles to their erection site.

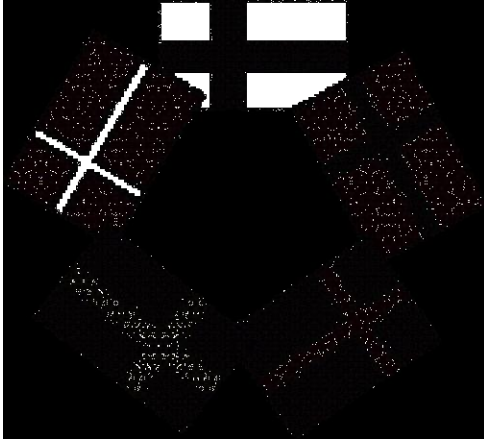
Appendix 2

International inspection in accordance with Sections 9–12. Specification of the scope, intervals for the periodic inspection and in-depth periodic inspection in accordance with Section 20, as well as test load.

Line	Type of device	Interval for periodic inspect	Test load	Interval for in-depth periodic inspection	Specification of the scope
A	Excavators.	12 months.	–	–	Self-propelled machines on tracks, wheel or legs, and mounted equipment with linkage, intended primarily for excavating with face bucket or drag bucket without movement of the undercarriage. Self-propelled motor-driven wheels and track machines with a mainframe designed to support both a front mounted loader equipment and a rear mounted excavator equipment. The machines also include the equipment attached.
B	Power-driven loader cranes.	12 months.	Maximum load < 5 tonnes: 125 %. Maximum load 5 to 20 tonnes: 120%. Maximum load 20 to 50 tonnes: 115 %. Maximum load > 50 tonnes: 110 %.	10 years.	Arm crane or jib crane mounted on a vehicle. Exception: Inspection of mobile cranes are regulated in line E.
C	Tail lifts.	12 months.	–	–	Lifting devices with controlled load-carrying member in the form of a platform, vehicle-mounted for loading and unloading of the vehicle.
D	Tower cranes.	12 months.	Maximum load < 5 tonnes: 125 %. Maximum load 5 to 20 tonnes: 120%. Maximum load 20 to 50 tonnes: 115 %. Maximum load > 50 tonnes: 110 %.	10 years.	Slewing crane with the jib attached to a vertical tower.

Line	Type of device	Interval for periodic inspection	Test load	Interval for in-depth periodic inspection	Specification of the scope
E	Mobile cranes.	12 months	Maximum load < 5 tonnes: 125 %. Maximum load 5 to 20 tonnes: 120 %. Maximum load 20 to 50 tonnes: 115 %. Maximum load > 50 tonnes: 110 %.	10 years.	Loader cranes on purpose-built power-driven vehicle.
F	Mobile work platforms including mast climbing work platforms.	12 months.	150%, however, a minimum of 100 kg.	10 years.	Device with man-carrying basket for the lifting of persons which, with the aid of controls in the basket, can be set at different heights in order to carry out, e.g., repairs, maintenance or inspection work, and which with the aid of a chassis can be moved freely or on tracks, and device with work platform which is controlled by and moves along at least one load-bearing mast, intended for the lifting of persons and which can be set at different heights in order to carry out, e.g., repairs, maintenance or inspection work.

Appendix 3



Guidelines for the application of the provisions regarding inspection of lifting devices and certain other technical devices

The Swedish Work Environment Authority communicates the following guidelines for application of the Authority's provisions (AFS 2003:6) regarding inspection of lifting devices and certain other technical devices.

Background

Guidelines have a different legal status than provisions. They are not mandatory; instead, their function is to clarify the meaning of the provisions by, for example, explaining suitable ways of meeting the requirements and giving examples of practical solutions and procedures as well as providing recommendations, background information and references.

These inspection provisions replace AFS 2001:6, Inspection of lifting devices and certain other technical devices. Rules for "international inspection" have been introduced after a proposal to harmonize the inspection rules for certain types of machines in the Nordic countries. An agreement was made between the Nordic Foreign Affairs ministers to incorporate the proposal in Reykjavík, 7 December 2000. The proposal also includes requirements for the inspection bodies to report to the Work Environment authorities in their respective countries about accidents, incidents and systematic errors which they become aware of in their activities, as well as that the Work Environment authorities in the various countries shall organize systems for the exchange of experiences between the authorities and the inspection bodies as well as between authorities in the various countries. In the future, agreements about international inspection may encompass more countries than just Sweden, Denmark, Finland, Norway and Iceland.

At the same time, requirements for assembly inspections of loader cranes have been introduced. In connection with earlier work on provisions, it was indicated in documents circulated for comments that it is not unusual that vehicle cranes are fitted on vehicles that are too small, which can entail major risks for accidents due to lack of stability.

The inspection performed in accordance with these provisions does not replace the internal inspection and on-going supervision of lifting devices that employers are required to perform in accordance with the Work Environment Act and other provisions from the Swedish National Board of Occupational Safety and Health and the Swedish Work Environment Authority. A device that is used beyond the time intended by the manufacturer can, for example, be required to undergo condition monitoring.

Rules concerning performance, continuous supervision and condition monitoring exist in the Swedish standards or provisions and guidelines from the Swedish National Board of Occupational Safety and Health and the Swedish Work Environment Authority.

Rules about the inspection of technical devices also exist in the provisions of other authorities. For example, in the Swedish National Board of Housing, Building and Planning (Boverket) statute book, there are provisions regarding inspection of lifts, escalators, ski-lifts and cable-cars, motor-powered doors and devices for disposing of or removing waste.

Comments on certain paragraphs

Scope

To Section 1. The provisions are issued with the support of the Work Environment Ordinance (SFS 1977:1166). This means that they have the same scope as the Work Environment Act (SFS 1977:1160).

The Work Environment Act is applicable in all activities in which there are employees. It also applies to students and prisoners in institutions, for conscripts and the equivalent. The laws' regulations regarding protection against risks posed by technical devices also applies to shareholders in trading

companies, economic associations and similar organizations as well as sole traders and family-run companies. This means that the provisions also apply to these groups.

Activities which are not professional, however, fall outside the jurisdiction of the provisions. "Professional" usually means activities of an economic nature that are performed on a regular and permanent basis. An activity does not need to be performed for profit in order for it to be regarded as professional. This means that some non-profit activities may be covered by the provisions if they are of reasonable permanency and scope and are financed through fees to the public. The provisions, however, do not apply to activities which fall entirely within private life. Examples of these activities are the maintenance of family property, hobby and leisure activities as well as non-profit activities which cannot be considered professional, according to the above.

A number of older regulations from the Swedish National Board of Occupational Safety and Health regarding the inspection of lifting devices did not apply to sole traders and family companies. This was because they had been issued with the support of an older legislation, which had a more narrow scope. These regulations were repealed when AFS 1998:3 came into force, regarding inspection of lifting devices and certain other technical devices, and the new provisions comply with the scope of the Work Environment Act.

Cranes and industrial trucks are normally not intended for lifting of persons. Provisions regarding the temporary lifting of persons with cranes or trucks can be found in the Swedish Work Environment Authority's provisions (AFS 2006:7) regarding temporary lifting of persons using cranes or trucks. In addition to technical requirements, the provisions also contain rules about the inspection. (AFS 2008:6).

In the Public Order Act (SFS 1993:1617), there are rules for amusement devices. Rules for the inspection of these can be found in the Swedish National Police Board's statute book.

Definitions

For Section 3. In the definition of a crane, a non-controlled load-carrying member refers to lifting ropes, chains, hooks, hook blocks etc., which lift the load directly and can swing freely in several directions. A hook or other tool which can oscillate freely in an eye bolt or similar is considered a non-controlled load-carrying member.

Terms of use

For Section 4. The use of a device in this context relates to operation.

It is primarily the Swedish Work Environment Authority's regional supervisory organization, the Work Environment Inspectorate, that decides whether a device may be used.

Inspection

For Section 5. Examples of devices which are subject to the requirements of initial inspection are building hoists intended for the carriage of passengers, mine hoists and theatre hoists.

For Section 7. In order to assess whether a device offers adequate safety after repair, modification or conversion, it may also be necessary for the inspection body to have the opportunity to examine the device before the repair, modification or conversion is performed.

During the assessment of repairs and modifications performed, applicable SS-ISO/EA standards may provide guidance.

If a substantial modification of or addition to a device is made, this may in some cases be considered as equivalent to the manufacturing of a new machine. In which case, the rules of AFS 2008:3 Machines apply, as they would for a new device. The requirement for revision inspection applies to devices for which AFS 2008:3 does not apply, in the event of modification or addition. (AFS 2008:6).

For Section 13. Information about which inspection bodies are accredited for inspection in accordance with these provisions can be obtained directly from the Swedish Board for Accreditation and Conformity Assessment (SWEDAC). The purpose of the requirement that inspection bodies shall be registered with the Swedish Work Environment Authority is to ensure that all inspection bodies can be reached with information and summons to experience exchange meetings. (*AFS 2011:11*)

For Section 15. When assessing the suitability for their intended purpose, impact from the surrounding environment should also be taken into consideration. The size of the test load to be used is assessed on a case to case basis by the inspection body. In the assessment of the test load, the Swedish Work Environment Authority's instructions for accredited testing and certification bodies, together with other standards, may provide some guidance.

For Section 16. The surface's load-bearing capacity, fittings and anchorages as well as distances to surrounding devices or walls are examples of inspection points in connection with the erection of a lifting device.

The size of the load to be used is assessed from case to case by the inspection body on the basis of the function or protective device which is to be tested.

For Section 17. Inspection with technical aids such as X-ray or ultrasound may be necessary in some circumstances in order to detect cracks.

The size of the requisite load to be used is assessed on a case to case basis by the inspection body on the basis of the function or protective device which is to be tested.

For Section 18. The static load with a test load, which is to be performed if a device is inspected in accordance with Section 9, means that the maximum load for the device might need to be reduced so that the useful life of the device is not shortened. During periodic load tests with overload, consultation should take place with the manufacturer.

For Section 21. It is primarily the Swedish Work Environment Authority's regional supervisory organization, the Work Environment Inspectorate, that decides whether to extend the inspection interval.

For Section 22. In order to assess whether a device offers adequate safety after a repair, modification or conversion, it may also be necessary for the inspection body to examine the device before the repair, modification or conversion is performed.

During the assessment of repairs and modifications performed, applicable SS-ISO/EA standards may provide guidance.

The size of the cargo to be used is assessed from case to case by the inspection body on the basis of the function or functions which are to be tested.

Measures after inspection

For Section 23. For a lifting device, the stipulated maximum load may constitute the starting point for the assessment of whether a device offers adequate safety.

In the assessment of whether a device offers adequate safety, the Swedish Work Environment Authority's instructions for accredited testing and certification bodies, in conjunction with other standards, may provide some guidance.

Certain defects may be of such a nature that the inspection body makes the assessment that after the defect has been rectified, a renewed inspection is not necessary before the device is put back into service. In which case, the inspection body may indicate in the inspection certificate that the device offers adequate safety provided that specific defects have been corrected. The requirements in Section 4 mean that it is punishable to put the device into service before these defects have been rectified.

For Section 24. The Swedish Work Environment Authority can be communicated by sending a copy to the local supervisory organization, the Work Environment Inspectorate, in the district where the device is being used or intended to be used.

Examples of deficiencies that may result in the inspection body assessing that the device does not offer adequate safety are constructive defects, or when the inspection results show that the device is being used beyond its constructive useful life.

Inspection sign

For Section 26. Identification information may consist of a manufacturing number.

Even if the inspection sign bears a marking that shows that the device has been inspected and therefore has been assessed to offer adequate safety, this may mean that the assessment only applies if certain specified deficiencies have been rectified, see Section 14.

If a new inspection sign is put up on a previously inspected device, it is advisable to remove or conceal the old sign.

Documentation etc.

For Section 28. If the documentation referred to in Section 27, Paragraph 1, is stored in immediate proximity to the device, the requirement in Section 28 can also be considered to have been fulfilled.

It is important that the documentation is stored in such a way, or is of such a nature, that it is not affected by oils or other chemicals.

Inspectors from the Swedish Work Environment Authority and inspectors from accredited inspection bodies may need to check the documentation in order to complete their work duties.

The right of safety representatives to access documents is regulated in Chapter 6, Section 6 of the Work Environment Act (SFS 1977:1160).

For Appendix 1

Line 1: Examples of work equipment are a jib with bucket shank and a bucket or piling unit. If an excavator is equipped so that it meets the definition of a crane in accordance with Section 3 and is used for lifting or lowering loads, it shall also be inspected in accordance with the requirements in line 8 in order to be used.

Line 4: The Ordinance (SFS 1999:371) on the monitoring of hoists and certain other motor-powered devices authorizes the Swedish National Board of Housing, Building and Planning (Boverket) to stipulate the inspection of hoists with exemptions for those intended for professional use by specially instructed staff. This limitation in Boverket's housing statutory right is not unequivocal and Boverket, together with the Swedish Work Environment Authority, has made an interpretation which means that Boverket has primary statutory responsibility for e.g., passenger lifts, goods-passenger lifts, platform lifts, wheelchair lifts, stair lifts, goods lifts, service lift and inspection lifts, while the Swedish Work Environment Authority has primary statutory responsibility for, among others, the following types of lifts which are subject to the inspection requirements in these provisions: building hoists, lifts for cranes and mine lifts.

Line 13: Examples of power-driven lifting devices intended for the lifting of employees are mobile work platforms, stationary work platforms, cradles, silo vehicles, mast climbing work platforms, order picking trucks as well as adjustable driving compartments.

Line 14: Examples of power-driven devices in loading bays to offset height differences between

goods vehicles and loading bays are mechanical and hydraulic loading docks, and lifting tables in loading bays.

Information from the Swedish Work Environment Authority
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AFS 1982:17	Notes of Duty Hours, Overtime and Additional Hours (amended in AFS 2000:9)
AFS 1998:4	Use of Work Equipment
AFS 2001:3	Use of Personal Protective Equipment
AFS 1998:5	Work with Display Screen Equipment
AFS 1994:1	Job Adaptation and Rehabilitation
AFS 2000:42	Workplace Design (amended in AFS 2003:1)
AFS 1998:1	Ergonomics for the Prevention of Musculoskeletal Disorders
AFS 1992:10	Noise (amended in AFS 2000:15)
AFS 1982:3	Solitary Work
AFS 1999:7	First Aid and Crisis Support
AFS 2000:4	Chemical Hazards in the Working Environment
AFS 1993:17	Victimisation at Work
AFS 1996:1	Minors at Work (amended in AFS 2000:31)
AFS 1980:14	Psychological and Social Aspects of the Working Environment
AFS 2001:1	Systematic Work Environment Management (amended in AFS 2003:4)
AFS 1997:11	Safety Sign and Warning Signals at Workplaces

In order to keep up to date regarding the Swedish Work Environment Authority's provisions, it is advisable to visit our web site www.av.se regularly and check which provisions apply for the activity in question under "Law and provisions".

In order to find out about the current law or provision text using the internet, for example, enter www.lagrummet.gov.se and access the latest version of the laws and provisions that you are interested in.

Please note that there may be errors in documents on the internet and that in a legal respect, it is the printed version that is applicable.