AMENDMENTS
16 - 132

Draft opinion
Marianne Vind
(PE703.051v01-00)

Machinery products

Proposal for a regulation
Amendment 16  
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi  
Proposal for a regulation  
Recital 2

*Text proposed by the Commission*

(2) The machinery sector is an important part of the engineering industry and is one of the industrial mainstays of the Union economy. The social cost of the large number of accidents caused directly by the use of machinery can be reduced by inherently safe design and construction of machinery and by proper installation and maintenance.

*Amendment*

(2) The machinery sector is an important part of the engineering industry and is one of the industrial mainstays of the Union economy. The social cost of the large number of accidents caused directly by the use of machinery can be reduced by inherently safe design and construction of machinery and by proper installation and maintenance. *Hence, in view of the forthcoming implementation of the new EU framework on health and safety at work 2021-2027 and its “vision-zero” approach to work-related death, one of the objective of this regulation is to set out ambitious occupational health and safety requirements for machinery products.*

Or. en

Amendment 17  
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi  
Proposal for a regulation  
Recital 5 a (new)

*Text proposed by the Commission*

(5 a) High-level of occupational health and safety (OHS) requirements is essential to ensure good working conditions and safe workplaces. Participation of workers and their representatives is crucial to protect workers’ health and safety, including when installing and operating machinery products. Social partners and workers’ representatives play an important role in implementing and monitoring OHS requirements at workplace level. They
should be closely involved in all phases of risk assessment and occupational health and safety policies.

Amendment 18
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 23

Text proposed by the Commission

(23) In order to ensure that machinery products, when placed on the market or put into service, do not entail health and safety risks for persons or domestic animals and do not cause harm to property and, where applicable, the environment, essential health and safety requirements should be set out which have to be met in order for the machinery products to be allowed on the market. Machinery products should comply with the essential health and safety requirements when placed on the market or put into service. Where such machinery products are subsequently modified, by physical or digital means, in a way that is not foreseen by the manufacturer and that may imply that it no longer meets the relevant essential health and safety requirements, the modification should be considered as substantial. For example, users may upload software in a machinery product that is not foreseen by the manufacturer and that may generate new risks. In order to ensure the compliance of such a machinery product with the relevant essential health and safety requirements, the person that carries out the substantial modification should be required to perform a new conformity assessment before placing the modified machinery product on the market or putting it into service. That requirement should only apply with respect to the modified part of the machinery product, provided that the modification does not affect the...
does not affect the machinery product as a whole. In order to avoid an unnecessary and disproportionate burden, the person carrying out the substantial modification should not be required to repeat tests and produce new documentation in relation to aspects of the machinery product that are not impacted by the modification. It should be up to the person who carries out the substantial modification to demonstrate that the modification does not have an impact on the machinery product as a whole.

Amendment 19
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 24

Text proposed by the Commission

(24) In the machinery sector, around 98% of the companies are small or medium sized enterprises (SMEs). In order to reduce the regulatory burden on SMEs, notified bodies should adapt the fees for conformity assessments and reduce them proportionately to the specific interests and needs of SMEs.

Amendment

(24) In the machinery sector, around 98% of the companies are small or medium sized enterprises (SMEs). In order to reduce the regulatory burden on SMEs, notified bodies should adapt the fees for conformity assessments and reduce them proportionately to the specific interests and needs of SMEs. The nature and composition of the economic actors in the machinery sector should not lead to exemption of health and safety requirements full implementation.

Amendment 20
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 25
(25) Economic operators should be responsible for the compliance of machinery products with the requirements of this Regulation, in relation to their respective roles in the supply chain, so as to ensure a high level of protection of public interests, such as the health and safety of persons, where appropriate, domestic animals and property and, where applicable, the environment, as well as the fair competition on the Union market.

(25) Economic operators should be responsible for the compliance of machinery products with the requirements of this Regulation, in relation to their respective roles in the supply chain, so as to ensure a high level of protection of public interests, such as the health and safety of persons, in particular workers and users, where appropriate, domestic animals and property and, where applicable, the environment, as well as the fair competition on the Union market.

Or. en

Amendment 21
Krzysztof Hetman

Proposal for a regulation
Recital 29

Text proposed by the Commission

(29) The manufacturer or the manufacturer’s authorised representative should also ensure that a risk assessment is carried out for the machinery product, which the manufacturer wishes to place on the market. For this purpose, the manufacturer should determine which of the essential health and safety requirements that are applicable to the machinery product and in respect of which measures must be taken to address the risks that the machinery product may present. Where the machinery product integrates an artificial intelligence system, the risks identified during the risk assessment should include those risks that may appear during the machinery product’s lifecycle due to an intended evolution of its behaviour to operate with varying levels of autonomy. In this respect, where the machinery product integrates an artificial intelligence system, the risk assessment for the machinery product should consider the risk

Amendment

(29) The manufacturer or the manufacturer’s authorised representative should also ensure that a risk assessment is carried out for the machinery product, which the manufacturer wishes to place on the market. For this purpose, the manufacturer should determine which of the essential health and safety requirements that are applicable to the machinery product and in respect of which measures must be taken to address the risks that the machinery product may present. Where the machinery product integrates an artificial intelligence system, the risks identified during the risk assessment should include only foreseeable risks that may appear during the machinery product’s lifecycle due to an intended evolution of its behaviour to operate with varying levels of autonomy. In this respect, where the machinery product integrates an artificial intelligence system, the risk assessment for the machinery product should consider the risk
assessment for that artificial intelligence system that has been carried out pursuant to Regulation (EU) .../... of the European Parliament and of the Council\textsuperscript{23}.

\textsuperscript{23} \textsuperscript{+} OJ: Please insert in the text the number of the Regulation contained in document ... .

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23 + OJ: Please insert in the text the number of the Regulation contained in document ... .

Or. en

Amendment 22
Stefania Zambelli

Proposal for a regulation
Recital 29

\textit{Text proposed by the Commission}

(29) The manufacturer or the manufacturer’s authorised representative should also ensure that a risk assessment is carried out for the machinery product, which the manufacturer wishes to place on the market. For this purpose, the manufacturer should determine which of the essential health and safety requirements that are applicable to the machinery product and in respect of which measures must be taken to address the risks that the machinery product may present. Where the machinery product integrates an artificial intelligence system, \textit{the risks identified during the risk assessment should include those risks} that may appear during the machinery product’s lifecycle due to an intended evolution of its behaviour to operate with varying levels of autonomy. \textit{In this respect, where} the machinery product integrates an artificial intelligence system, \textit{the risk assessment for the machinery product should consider the risk assessment for that artificial intelligence system} that has been carried out pursuant to Regulation (EU) .../... of the European Parliament and of the Council\textsuperscript{23}.

\textit{Amendment}

(29) The manufacturer or the manufacturer’s authorised representative should also ensure that a risk assessment is carried out for the machinery product, which the manufacturer wishes to place on the market. For this purpose, the manufacturer should determine which of the essential health and safety requirements that are applicable to the machinery product and in respect of which measures must be taken to address the risks that the machinery product may present. Where the machinery product integrates an artificial intelligence system, \textit{appropriate guidelines should be drawn up, in order to properly assess the possible further risks} that may appear during the machinery product’s lifecycle due to an intended evolution of its behaviour to operate with varying levels of autonomy. \textit{The guidelines establishing the risk assessment procedures for the machinery, including the AI, should also take into account} the risk assessment (and the related terminology and risk levels) \textit{for the artificial intelligence system} that has been carried out pursuant to Regulation (EU) .../... of the European Parliament and of the Council\textsuperscript{23}.
Proposal for a regulation
Recital 32

Text proposed by the Commission

(32) It is necessary to ensure that machinery products from third countries entering the Union market comply with the requirements of this Regulation and do not pose a risk to the health and safety of persons, where appropriate, domestic animals and property and, where applicable, the environment, and in particular, that appropriate conformity assessment procedures have been carried out by manufacturers with regard to such machinery products. Provision should therefore be made for importers to ensure that machinery products that they place on the market comply with the requirements of this Regulation and do not pose a risk to the health and safety of persons, where appropriate, domestic animals and property and, where applicable, the environment. For the same reason, provision should also be made for importers to ensure that the conformity assessment procedures have been carried out and that the CE marking and technical documentation drawn up by manufacturers are available for inspection by the competent national authorities.

Amendment

(32) It is necessary to ensure that machinery products from third countries entering the Union market comply with the requirements of this Regulation and do not pose a risk to the health and safety of persons, in particular workers and users, where appropriate, domestic animals and property and, where applicable, the environment, and in particular, that appropriate conformity assessment procedures have been carried out by manufacturers with regard to such machinery products. Provision should therefore be made for importers to ensure that machinery products that they place on the market comply with the requirements of this Regulation and do not pose a risk to the health and safety of persons, where appropriate, domestic animals and property and, where applicable, the environment. For the same reason, provision should also be made for importers to ensure that the conformity assessment procedures have been carried out and that the CE marking and technical documentation drawn up by manufacturers are available for inspection by the competent national authorities.
Amendment 24
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 35

Text proposed by the Commission

(35) In view of ensuring the health and safety of the users of the machinery product, economic operators should ensure that all relevant documentation, such as the user's instructions, whilst containing precise and comprehensible information, is easily understandable, takes into account technological developments and changes to end-user behaviour, and is as up to date as possible. When machinery products are made available on the market in packages containing multiple units, the instructions and information should accompany the smallest commercially available unit.

Amendment

(35) In view of ensuring the health and safety of the users of the machinery product, economic operators should ensure that all relevant documentation, such as the user's instructions, whilst containing precise and comprehensible information, is easily understandable, including translations in relevant workers and consumers’ mother tongues, takes into account technological developments and changes to end-user behaviour, and is as up to date as possible. When machinery products are made available on the market in packages containing multiple units, the instructions and information should accompany the smallest commercially available unit.

Or. en

Amendment 25
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 39

Text proposed by the Commission

(39) This Regulation should be limited to setting out the essential health and safety requirements, supplemented by a number of more specific requirements for certain categories of machinery products. In order to facilitate the assessment of conformity with those health and safety requirements it is necessary to provide for a presumption of conformity for machinery which is in conformity with harmonised standards that are developed and which references are published in the Official Journal of the

Amendment

(39) This Regulation aims to set out health and safety requirements, supplemented by a number of more specific requirements for certain categories of machinery products. In order to facilitate the assessment of conformity with those health and safety requirements it is necessary to provide for a presumption of conformity for machinery which is in conformity with harmonised standards that are developed and which references are published in the Official Journal of the


Or. en

**Amendment 26**

Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation

Recital 39 a (new)

*Text proposed by the Commission*

(39 a) The Commission shall establish an early alert mechanism within the current inter-institutional structure to detect needed adjustments and revisions of existing machinery products OSH regulations, as well as to seek the concurrence of the European Agency for Safety and Health at work (EU-OSHA), especially in the context of digitalisation and Artificial Intelligence; the commission shall set up an injury database (IDB), covering all types of injuries linked to the use of machinery products, to monitor emerging risks; underlines the need to involve sectorial
social partners into this mechanism since they are the first confronted with changing elements.

Amendment 27
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 40

Text proposed by the Commission

(40) In the absence of relevant harmonised standards, the Commission should be able to establish technical specifications for the essential health and safety requirements. Recourse to technical specifications should be used as a fall back solution to facilitate the manufacturer’s obligation to comply with the health and safety requirements, for instance when the standardisation process is blocked due to a lack of consensus between stakeholders or there are undue delays in the establishment of a harmonised standard. Such delays could for example occur when the required quality is not reached.

Amendment

(40) In the absence of relevant harmonised standards, the Commission should be able to establish technical specifications for health and safety requirements. Recourse to technical specifications should be used as a fall back solution to facilitate the manufacturer’s obligation to comply with the health and safety requirements, for instance when the standardisation process is blocked due to a lack of consensus between stakeholders or there are undue delays in the establishment of a harmonised standard. Such delays could for example occur when the required quality is not reached.

Or. en

Amendment 28
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 41

Text proposed by the Commission

(41) Compliance with harmonised standards and with technical specifications established by the Commission should be voluntary. Alternative technical solutions should therefore be acceptable where compliance of the machinery with the

Amendment

(41) Compliance with harmonised standards and with technical specifications established by the Commission should be voluntary but must be considered as minimum requirements. Alternative technical solutions should therefore be
relevant essential health and safety requirements is demonstrated in the technical file.

acceptable where compliance of the machinery with health and safety requirements is demonstrated in the technical file.

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### Amendment 29
**Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi**

**Proposal for a regulation**

**Recital 42**

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
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<tbody>
<tr>
<td>(42) <strong>The essential</strong> health and safety requirements should be satisfied in order to ensure that the machinery product is safe. Those requirements should be applied with discernment to take account of the state of the art at the time of construction and of technical and economic requirements.</td>
<td>(42) Health and safety requirements should be satisfied in order to ensure that the machinery product is safe. Those requirements should be applied with discernment to take account of the state of the art at the time of construction and of technical and economic requirements. Nevertheless, reasonable anticipation of potentially hazardous development and use is to be expected during the certification process of health and safety requirements.</td>
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### Amendment 30
**Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi**

**Proposal for a regulation**

**Recital 43**

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
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<tbody>
<tr>
<td>(43) In view of addressing the risks stemming from malicious third party actions that have an impact on the safety of machinery products, this Regulation should include essential health and safety requirements for which a presumption of conformity may be given to the appropriate extent by a certificate or statement of conformity</td>
<td>(43) In view of addressing the risks stemming from malicious third party actions that have an impact on the safety of machinery products, this Regulation should include health and safety requirements for which a presumption of conformity may be given to the appropriate extent by a certificate or statement of conformity</td>
</tr>
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conformity issued under a relevant cybersecurity scheme adopted pursuant to and in accordance with Article 54(3) of Regulation (EU) 2019/881 of the European Parliament and of the Council.  


Or. en

Amendment 31
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 45

Text proposed by the Commission

(45) The list of high-risk machinery in Annex I to Directive 2006/42/EC is so far based on the risk emanating from the intended use or any reasonably foreseeable misuse of that machinery. Nevertheless, the machinery sector embraces new ways of designing and constructing machinery products that may imply high risks, regardless of such intended use or any reasonably foreseeable misuse. For example, software ensuring safety functions of machinery based on artificial intelligence, embedded or not in the machinery product, should be classified as a high-risk machinery product due to the characteristics of artificial intelligence such as data dependency, opacity, autonomy and connectivity, which might increase very much the probability and severity of harm and seriously affect the safety of the machinery product. Furthermore, the

Amendment

(45) The list of high-risk machinery in Annex I to Directive 2006/42/EC is so far based on the risk emanating from the intended use or any reasonably foreseeable misuse of that machinery. Nevertheless, the machinery sector embraces new ways of designing and constructing machinery products that may imply high risks, regardless of such intended use or any reasonably foreseeable misuse. For example, software ensuring safety functions of machinery based on artificial intelligence, embedded or not in the machinery product, should be classified as a high-risk machinery product due to the characteristics of artificial intelligence such as data dependency, opacity, autonomy and connectivity, which might increase very much the probability and severity of harm and seriously affect the safety of the machinery product. Furthermore, the
market for software ensuring safety functions of machinery products based on artificial intelligence is so far very small, which results in a lack of experience and data. Therefore, the conformity assessment of software ensuring safety functions based on artificial intelligence should be carried out by a third party.

Amendment 32
Stefania Zambelli

Proposal for a regulation
Recital 45 a (new)

Text proposed by the Commission

Amendment

(45a) Nevertheless, the provisions laid down in Articles 5(1) and 21(2) of this Regulation should be applied only to AI systems capable of self-determination and evolving during normal operation. By contrast, they should not be applied to conventional software that is not capable of learning or evolving and is programmed solely to make machinery products perform certain automated functions.

Amendment 33
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 60

Text proposed by the Commission

Amendment

(60) Member States should take all appropriate measures to ensure that machinery products covered by this Regulation may be placed on the market
only if, when properly installed and used for its intended purpose, or under conditions of use which can be reasonably foreseen, it does not endanger the health or safety of persons, and, where appropriate, domestic animals and property and, where applicable, the environment. Machinery products covered by this Regulation should be considered as non-compliant with the essential health and safety requirements laid down in this Regulation only under conditions of use, which could result from lawful and readily predictable human behaviour.

Nevertheless, reasonable anticipation of potentially hazardous development and use should be foreseen to assess compliance with health and safety requirements.

Or. en

Amendment 34
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Recital 65

Text proposed by the Commission

(65) In order to take into account technical progress and knowledge or new scientific evidence, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of amending the list of high-risk machinery products and the indicative list of safety components. It is of particular importance that the Commission carries out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and

Amendment

(65) In order to take into account technical progress and knowledge or new scientific evidence, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of amending the list of high-risk machinery products and the indicative list of safety components. It is of particular importance that the Commission carries out appropriate consultations during its preparatory work, including social partners at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and
Amendment 35  
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi  

Proposal for a regulation  
Recital 66  

Text proposed by the Commission  

(66) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission establishing technical specifications for the essential health and safety requirements, requesting the notifying Member State to take the necessary corrective measures in respect of a notified body that does not meet the requirements for its notification and establishing whether a national measure in respect of compliant machinery which a Member State finds to pose a risk to health and safety of persons is justified. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council.

Amendment  

(66) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission establishing technical specifications for the health and safety requirements, requesting the notifying Member State to take the necessary corrective measures in respect of a notified body that does not meet the requirements for its notification and establishing whether a national measure in respect of compliant machinery which a Member State finds to pose a risk to health and safety of persons, in particular workers and users, is justified. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council.

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Proposal for a regulation
Recital 76

Text proposed by the Commission

(76) It is necessary to provide for sufficient time for economic operators to comply with their obligations under this Regulation, and for Member States to set up the administrative infrastructure necessary for its application. The application of this Regulation should therefore be deferred.

Amendment

(76) It is necessary to provide for sufficient, but reasonable, time for economic operators to comply with their obligations under this Regulation, and for Member States to set up the administrative infrastructure necessary for its application.

Or. en

Amendment 37
Kim Van Sparrentak

Proposal for a regulation
Recital 76 a (new)

Text proposed by the Commission

(76 a) The harmonised standards relevant to this Regulation take into account the United Nations Convention on the Rights of Persons with Disabilities 1a (UN CRPD) and if the standards do not take the UN CRPD into account, manufacturers would have to explain why;

Amendment

(76 a) The harmonised standards relevant to this Regulation take into account the United Nations Convention on the Rights of Persons with Disabilities 1a (UN CRPD) and if the standards do not take the UN CRPD into account, manufacturers would have to explain why;

Or. en

Amendment 38
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Article 1 – paragraph 1

Text proposed by the Commission

This Regulation lays down requirements for the design and construction of machinery products to allow the making

Amendment

This Regulation lays down requirements for the design and construction of machinery products to allow the making
available on the market or putting into service of machinery products, and establishes rules on the free movement of machinery products in the Union ensuring a high level protection for all EU workers and citizens.

Amendment 39
Kim Van Sparrentak

Proposal for a regulation
Article 2 – paragraph 1 – point d

Text proposed by the Commission
(d) lifting accessories;

Amendment
(d) lifting accessories, including lifting appliances whose speed does not exceed 0.15 m/s;

Justification
‘Slow lifts’ are not explicitly included in the scope of the draft Machinery Regulation. The Machinery Directive applies to slow lifts by default because the Lifts Directive excludes ‘lifting appliances whose speed is not greater than 0.15 m/s’. Since there are specific requirements for slow lifts (section 6) in the Machinery legislation, it would make sense to list slow lifts in the scope along with a definition of a ‘slow lift’.

Amendment 40
Krzysztof Hetman

Proposal for a regulation
Article 2 – paragraph 2 – point g

Text proposed by the Commission
(g) agricultural and forestry vehicles, as well as systems, components, separate technical units, parts and equipment designed and constructed for such vehicles, that fall within the scope of application of Regulation (EU) No 167/2013;

Amendment
(g) agricultural and forestry vehicles, as well as systems, components, separate technical units, parts and equipment designed and constructed for such vehicles, that fall within the scope of application of Regulation (EU) No 167/2013, with the exclusion of machinery mounted on those
Proposal for a regulation
Article 2 – paragraph 2 – point g

Text proposed by the Commission

(g) agricultural and forestry vehicles, as well as systems, components, separate technical units, parts and equipment designed and constructed for such vehicles, that fall within the scope of application of Regulation (EU) No 167/2013;

Amendment

(g) agricultural and forestry tractors, as well as systems, components, separate technical units, parts and equipment designed and constructed for such vehicles, that fall within the scope of application of Regulation (EU) No 167/2013, except for the machinery products installed on those vehicles;

Proposal for a regulation
Article 3 – paragraph 1 – point f

Text proposed by the Commission

(f) an assembly as referred to in points (a), (b), (c), (d) and (e) missing only the upload of a software intended for its specific application.

Amendment

(f) an assembly as referred to in points (a), (b), (c), (d) and (e) missing only the upload of a software intended for the specific application planned by the manufacturer and which is the subject of the procedure assessing the conformity of the machinery product.

Proposal for a regulation
Article 3 – paragraph 1 – point f

Text proposed by the Commission

(f) an assembly as referred to in points (a), (b), (c), (d) and (e) missing only the upload of a software intended for its specific application.

Amendment

(f) an assembly as referred to in points (a), (b), (c), (d) and (e) missing only the upload of a software intended for the specific application planned by the manufacturer and which is the subject of the procedure assessing the conformity of the machinery product.
Proposal for a regulation
Article 3 – paragraph 1 – point 1 a (new)

Text proposed by the Commission

(1 a) *When machinery contains embedded software, preinstalled or installed subsequently, the latter shall be considered as an integrated part of the machinery;*

Or. en

Amendment 44
Stefania Zambelli

Proposal for a regulation
Article 3 – paragraph 1 – point 15

Text proposed by the Commission

(15) *‘artificial intelligence system’*

**means** an artificial intelligence system as defined in Article 3(1) of Regulation (EU) .../... of the European Parliament and of the Council\(^{28}\);

15) *'Artificial intelligence system': an artificial intelligence system as defined in Article 3(1) of Regulation (EU) .../... of the European Parliament and of the Council\(^{28}\), and that applies only to artificial intelligence systems with self-determining behaviour or logic which are capable of evolving during normal operation;*

\(^{28}\) + OJ: Please insert in the text the number of the Regulation contained in document … and insert the number, date, title and OJ reference of that Regulation in the footnote.

Or. it

Amendment 45
Kim Van Sparrentak

Proposal for a regulation
Article 3 – paragraph 1 – point 16

Text proposed by the Commission

Amendment
(16) ‘substantial modification’ means a modification of a machinery product, by physical or digital means after that machinery product has been placed on the market or put into service, which is not foreseen by the manufacturer and as a result of which the compliance of the machinery product with the relevant essential health and safety requirements may be affected;
Article 5 – paragraph 3 – introductory part

Text proposed by the Commission

3. A machinery product shall be included in the list of high-risk machinery products in Annex I if it poses a risk to human health taking into account its design and intended purpose. A machinery product shall be withdrawn from the list of high-risk machinery products in Annex I if it no longer poses such risk. The risk posed by a certain machinery product shall be established based on the combination of the probability of occurrence of harm and the severity of that harm.

Amendment

3. A machinery product shall be included in the list of high-risk machinery products in Annex I if it poses a risk to human health taking into account its design and intended purpose and foreseeable use. A machinery product shall be withdrawn from the list of high-risk machinery products in Annex I if it no longer poses such risk. The risk posed by a certain machinery product shall be established based on the combination of the probability of occurrence of harm and the severity of that harm.

Or. en

Amendment 48
Kim Van Sparrentak

Proposal for a regulation
Article 5 – paragraph 4 – point d

Text proposed by the Commission

(d) statistics on accidents caused by the machinery product for the preceding four years based, in particular information obtained from the Information and Communication System for Market Surveillance (ICSMS) information, safeguard clauses, Rapid Alert System (RAPEX) and the Machinery Administrative Cooperation Group reporting.

Amendment

(d) statistics on accidents caused by the machinery product for the preceding four years based, in particular information obtained from the Information and Communication System for Market Surveillance (ICSMS) information, safeguard clauses, Rapid Alert System (RAPEX), the Machinery Administrative Cooperation Group reporting and the Pan-European Injury Database.

Or. en

Amendment 49
Stefania Zambelli

Proposal for a regulation
Article 9 – paragraph 1
Where machinery products contain an artificial intelligence system, to which the essential health and safety requirements of Regulation (EU) …/… apply, this Regulation shall, in relation to that artificial intelligence system, only apply with regard to its safe integration into the overall machinery, so as not to compromise the safety of the machinery product as a whole.

Or. it

Amendment 50
Stefania Zambelli

Proposal for a regulation
Article 17 – paragraph 3

Text proposed by the Commission
3. The Commission is empowered to adopt implementing acts establishing technical specifications for the essential health and safety requirements set out in Annex III where the following conditions have been fulfilled:

(a) no reference to harmonised standards covering the relevant essential health and safety requirements is published in the Official Journal of the European Union in accordance with Regulation (EU) No 1025/2012;

(b) the Commission has requested one or more European standardisation organisations to draft a harmonised standard for the essential health and safety requirements and there are undue delays in the standardisation procedure or the request has not been accepted by any of the European standardisation

Amendment
deleted
organisations.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 46(3).

Amendment 51
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Article 17 – paragraph 3 – subparagraph 1

Text proposed by the Commission

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 46(3).

Amendment
Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 46(3). The European commission shall also consult relevant stakeholders, including social partners and trade unions.

Amendment 52
Stefania Zambelli

Proposal for a regulation
Article 18 – paragraph 2

Text proposed by the Commission

2. The EU declaration of conformity shall have the model structure set out in Annex V, shall contain the elements specified in the relevant modules set out in Annexes VI, VII, VIII and IX and shall be continuously updated. It shall be translated into the language or languages required by the Member State in which the machinery product is placed on the market or is made available on the market.

Amendment
2. The EU declaration of conformity shall have the model structure set out in Annex V, shall contain the elements specified in the relevant modules set out in Annexes VI, VII, VIII and IX. It shall be translated into the language or languages required by the Member State in which the machinery product is placed on the market or is made available on the market.
Amendment 53
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Article 23 – paragraph 1

Text proposed by the Commission

Member States may lay down requirements to ensure that persons, including workers, are protected when installing and using machinery products, provided that such rules do not allow for modification of a machinery product in a way that is not compatible with this Regulation.

Amendment

Member States may lay down requirements including trainings, sufficient resources and equipment to ensure that persons, including workers, are protected when installing and using machinery products, provided that such rules do not allow for modification of a machinery product in a way that is not compatible with this Regulation.

Or. en

Amendment 54
Stefania Zambelli

Proposal for a regulation
Annex I – point 24

Text proposed by the Commission

24. Software ensuring safety functions, including AI systems.

Amendment

24. The safety component of the AI-system software ensuring safety functions.

Or. it

Amendment 55
Elżbieta Rafalska
on behalf of the ECR Group
Beata Szydło, Anna Zalewska

Proposal for a regulation
Annex I – point 24

Text proposed by the Commission

24. Software ensuring safety functions, including AI systems.

Amendment

Amendment 56
Elżbieta Rafalska
on behalf of the ECR Group
Beata Szydło, Anna Zalewska

Proposal for a regulation
Annex I – point 24 a (new)

*Text proposed by the Commission*  
*Amendment*

24 a. *Safety component with fully or partially evolving behaviour or logic.*

Amendment 57
Stefania Zambelli

Proposal for a regulation
Annex I – point 25

*Text proposed by the Commission*  
*Amendment*

25. *Machinery embedding AI systems ensuring safety functions.*

deleted

Or. it

Amendment 58
Elżbieta Rafalska
on behalf of the ECR Group
Beata Szydło, Anna Zalewska

Proposal for a regulation
Annex I – point 25

*Text proposed by the Commission*  
*Amendment*

25. Machinery embedding *AI systems* ensuring safety functions.

25. Machinery embedding a *component ensuring safety functions with fully or partially evolving behaviour or logic.*
Amendment 59
Kim Van Sparrentak

Proposal for a regulation
Annex I – point 25 a (new)

Text proposed by the Commission

Amendment

25 a. escalators and moving walks;

Or. en

Amendment 60
Stefania Zambelli

Proposal for a regulation
Annex II – point 18

Text proposed by the Commission

Amendment

18. Software ensuring safety functions, including AI systems.

18. AI-system software ensuring safety functions.

Or. it

Amendment 61
Sara Skyttedal

Proposal for a regulation
Annex III – point 1 – introductory part

Text proposed by the Commission

Amendment

1. The manufacturer of a machinery product or his or her authorised representative shall ensure that a risk assessment is carried out in order to determine the health and safety requirements, which apply to the machinery product. The machinery product shall then be designed and constructed to prevent and minimise all relevant risks, taking into account the results of the risk assessment.

1. The manufacturer of a machinery product shall ensure that a risk assessment is carried out in order to determine the health and safety requirements, which apply to the machinery product. The machinery product shall then be designed and constructed to prevent or minimise all relevant risks, taking into account the results of the risk assessment.
assessment.

Amendment 62
Sara Skyttedal

Proposal for a regulation
Annex III – point 1 – paragraph 1 – introductory part

*Text proposed by the Commission*

By the iterative process of risk assessment and risk reduction referred to in the first subparagraph, the manufacturer or his or her authorised representative shall:

*Amendment*

By the iterative process of risk assessment and risk reduction referred to in the first subparagraph, the manufacturer shall:

Amendment 63
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – point 1 – paragraph 1 – point c

*Text proposed by the Commission*

(c) identify the hazards that may be generated by the machinery product and the associated hazardous situations, including hazards that may be generated during the lifecycle of the machinery product that are foreseeable at the time of placing of the machinery product on the market as an intended evolution of its fully or partially evolving behaviour or logic as a result of the machinery product designed to operate with varying levels of autonomy.

In this respect, where the machinery product integrates an artificial intelligence system, the machinery risk assessment shall consider the risk assessment for that artificial intelligence system that has been carried out pursuant to the Regulation … of the European Parliament and of the Council+ on a European approach for

*Amendment*

(c) identify the hazards that may be generated by the machinery product and the associated hazardous situations, including hazards that may be generated during the lifecycle of the machinery product that are foreseeable at the time of placing of the machinery product on the market as an intended evolution of its fully or partially evolving behaviour or logic as a result of the machinery product designed to operate based on machine learning technologies, potentially with varying levels of autonomy. In this respect, where the machinery product integrates an artificial intelligence system, the machinery risk assessment shall consider the risk assessment for that artificial intelligence system that has been carried out pursuant to the Regulation … of the
Artificial Intelligence+\textsuperscript{30} ;.

European Parliament and of the Council+ on a European approach for Artificial Intelligence+\textsuperscript{30} ;.

\textsuperscript{30}+ OJ: Please insert in the text the number of the Regulation contained in document … and insert the number, date, title and OJ reference of that Regulation in the footnote

\textsuperscript{30}+ OJ: Please insert in the text the number of the Regulation contained in document … and insert the number, date, title and OJ reference of that Regulation in the footnote

\textsuperscript{30}+ OJ: Please insert in the text the number of the Regulation contained in document … and insert the number, date, title and OJ reference of that Regulation in the footnote

Amendment 64
Kim Van Sparrentak

Proposal for a regulation
Annex III – point 1 – paragraph 1 – point d

Text proposed by the Commission

(d) estimate the risks, taking into account the severity of the possible injury or damage to health and the probability of its occurrence;

Amendment

(d) estimate the risks, taking into account the severity of the possible injury or damage to health, \textit{including mental health}, and the probability of its occurrence;

Or. en

Amendment 65
Sara Skyttedal

Proposal for a regulation
Annex III – point 1 – paragraph 1 – point f

Text proposed by the Commission

(f) eliminate the hazards or reduce the risks associated with these hazards by application of protective measures, in the order of priority established in section 1.1.2(b).

Amendment

(f) eliminate the hazards or sufficiently reduce the risks associated with these hazards by application of protective measures, in the order of priority established in section 1.1.2(b).

Or. en
2. The obligations laid down by the essential health and safety requirements only apply when the corresponding hazard exists for the machinery product in question when it is used under the conditions foreseen by the manufacturer or his or her authorised representative or in foreseeable abnormal situations. However, the principles of safety integration established in section 1.1.2 and the obligations concerning marking of machinery products and instructions referred to in sections 1.7.3 and 1.7.4 apply in all cases.

Amendment 67
Kim Van Sparrentak

Proposal for a regulation
Annex III – point 3

Text proposed by the Commission

3. The essential health and safety requirements laid down in this Annex are mandatory; however, taking into account the state of the art, it may not be possible to meet the objectives set by them. In that event, the machinery product shall, as far as possible, be designed and constructed with the purpose of approaching those objectives.

Amendment

3. The essential health and safety requirements laid down in this Annex are mandatory. Machinery product shall be designed and constructed with the purpose of approaching those objectives. Where this is impossible, the machinery shall not be placed on the market.
Text proposed by the Commission

(a) ‘hazard’ means a potential source of injury or damage to health;

Amendment 69
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.2 – point a

Text proposed by the Commission

(a) A machinery product shall be designed and constructed so that it is fit for its function, and can be operated, adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen but also taking into account any reasonably foreseeable misuse thereof. The aim of protective measures shall be to eliminate any risk throughout the foreseeable lifetime of the machinery product including the phases of transport, assembly, dismantling, disabling and scrapping.

Amendment

(a) ‘hazard’ means a potential source of injury or damage to health, including mental health;

Or. en

Amendment 70
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.2 – point a

Text proposed by the Commission

(a) A machinery product shall be designed and constructed so that it is fit for its function, and can be operated, adjusted and maintained without putting persons at risk when these operations are carried out under the reasonably foreseeable conditions of use but also taking into account any reasonably foreseeable misuse thereof. The aim of protective measures shall be to eliminate any risk throughout the foreseeable lifetime of the machinery product including the phases of transport, assembly, dismantling, disabling and scrapping.

Amendment

Or. en
(a) A machinery product shall be designed and constructed so that it is fit for its function, and can be operated, adjusted and maintained without putting persons at risk when these operations are carried out under the conditions foreseen but also taking into account any reasonably foreseeable misuse thereof. The aim of protective measures shall be to eliminate any risk throughout the foreseeable lifetime of the machinery product including the phases of transport, assembly, dismantling, disabling and scrapping.

Amendment 71
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.2 – point b – introductory part

Text proposed by the Commission

(b) In selecting the most appropriate methods, the manufacturer or his or her authorised representative shall apply the following principles, in the order given:

Amendment

(b) In selecting the most appropriate methods, the manufacturer shall apply the following principles, in the order given:

Amendment 72
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.2 – point e

Text proposed by the Commission

(e) A machinery product shall be designed and constructed in such a way that it is possible for the user to test the safety functions, and the machinery product shall be supplied with all the special equipment and accessories.

Amendment

(e) Machinery must be supplied with all the special equipment and accessories essential to enable it to be adjusted, maintained and used safely.
where appropriate, with the description of specific functional test procedures, essential to enable it to be tested, adjusted, maintained and used safely.

Justification

Not all safety functions can be tested by the operator, and it is not the user’s task to test all safety functions.

Amendment 73
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.2 – point e a (new)

Text proposed by the Commission

Amendment

(e a) The provisions set out in this annex must be implemented and interpreted with the concurrence of the European Agency for Safety and Health at work (EU-OSHA) in a way that fully secures the health and safety of workers or machinery products operators. Manufacturers and suppliers of the machinery products must always aim to provide highest possible OHS standards in order to ensure accident prevention and safe use of machinery products. Machinery product operators must be provided with adequate protective equipment to ensure safe use and maintenance.

Amendment 74
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.5 – paragraph 2
During the transportation of the machinery product and/or its component parts, there shall be no possibility of sudden movements or of hazards due to instability as long as the machinery product and/or its component parts are handled in accordance with the instructions.

Amendment 75
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – introductory part

Text proposed by the Commission
Under the intended conditions of use, the discomfort, fatigue and physical and psychological stress faced by the operator shall be reduced to the minimum possible, taking into account ergonomic principles such as:

Amendment
Under the intended conditions of use, the discomfort, fatigue and physical cognitive workload and faced by the operator shall be eliminated or reduced to the minimum possible, taking into account ergonomic principles such as:

Amendment 76
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point c

Text proposed by the Commission
(c) avoiding a machine-determined work rate;

Amendment
(c) no machine-determined work rate, allowing work-rate adaptivity and not allowing for work-rates that endanger health and safety, including psychological stress and cognitive workload;
Justification

Work-rates should always be adaptable. Machines nor employers should be able to set robot-like working speeds.

Amendment 77
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point c

Text proposed by the Commission

<table>
<thead>
<tr>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) avoiding a machine-determined work rate;</td>
</tr>
</tbody>
</table>

Or. en

Amendment 78
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point d

Text proposed by the Commission

<table>
<thead>
<tr>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) avoiding monitoring that requires lengthy concentration;</td>
</tr>
</tbody>
</table>

Or. en

Amendment 79
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point e

Text proposed by the Commission

<table>
<thead>
<tr>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) adapting the human-machinery product interface to the foreseeable characteristics of the operators, including with respect to a machinery product with intended fully or partially evolving behaviour or logic that is designed to</td>
</tr>
</tbody>
</table>

Or. en
operate with varying levels of autonomy; partially evolving behaviour or logic that is designed to operate based on machine learning technologies, potentially with varying levels of autonomy;

Amendment 80
Sara Skyttedal
Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point e

Text proposed by the Commission

(e) adapting the human-machinery product interface to the foreseeable characteristics of the operators, including with respect to a machinery product with intended fully or partially evolving behaviour or logic that is designed to operate with varying levels of autonomy;

Amendment

(e) adapting the human-machinery product interface to the foreseeable characteristics of the operators, including with respect to a machinery product with intended evolving behaviour or logic;

Justification

Varying levels of autonomy is not defined in the proposal.

Amendment 81
Sara Skyttedal
Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point f

Text proposed by the Commission

(f) adapting a machinery product with intended fully or partially evolving behaviour or logic that is designed to operate with varying levels of autonomy to respond to people adequately and appropriately (verbally through words and non-verbally through gestures, facial expressions or body movement) and to communicate its planned actions (what it deleted

Amendment

deleted
is going to do and why) to operators in a comprehensible manner.

Or. en

Justification

Text does not address an ergonomic principle.

Amendment 82
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point f

Text proposed by the Commission
(f) adapting a machinery product with intended fully or partially evolving behaviour or logic that is designed to operate with varying levels of autonomy to respond to people adequately and appropriately (verbally through words and non-verbally through gestures, facial expressions or body movement) and to communicate its planned actions (what it is going to do and why) to operators in a comprehensible manner.

Amendment
(f) adapting a machinery product with intended fully or partially evolving behaviour or logic that is designed to operate based on machine learning technologies, potentially with varying levels of autonomy to respond to people adequately and appropriately (verbally through words and non-verbally through gestures, facial expressions or body movement)

Or. en

Amendment 83
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.6 – paragraph 1 – point f a (new)

Text proposed by the Commission
(f a) communicating its planned actions (what it is going to do and why) to operators in a comprehensible manner.

Amendment
(f a) communicating its planned actions (what it is going to do and why) to operators in a comprehensible manner.

Or. en
Amendment 84
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.7 – paragraph 1

Text proposed by the Commission
The operating position shall be designed and constructed in such a way as to avoid any risk due to exhaust gases and/or lack of oxygen.

Amendment
The operating position shall be designed and constructed in such a way as to avoid any risk due to exhaust gases or lack of oxygen.

Or. en

Amendment 85
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.7 – paragraph 3

Text proposed by the Commission
Where appropriate, the operating position shall be fitted with an adequate cabin designed, constructed and/or equipped to fulfil the above requirements. The exit shall allow rapid evacuation. Moreover, when applicable, an emergency exit shall be provided in a direction which is different from the usual exit.

Amendment
Where appropriate, the operating position shall be fitted with an adequate cabin designed, constructed or equipped to fulfil the above requirements. The exit shall allow rapid evacuation. Moreover, when applicable, an emergency exit shall be provided in a direction which is different from the usual exit.

Or. en

Amendment 86
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.9 – paragraph 1

Text proposed by the Commission
The machinery product shall be designed and constructed so that the connection to it of another device, via any feature of the connected device itself or via any remote

Amendment
The machinery product shall be designed and constructed so that the connection to it of another device, via any feature of the connected device itself or via any remote
device that communicates with the machinery product does not lead to a hazardous situation.

device that communicates with the machinery product does prevent or minimise sufficiently all relevant risks of hazardous situations.

Or. en

Justification

There are always accepted residual risks which cannot be eliminated.

Amendment 87
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.9 – paragraph 1

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The machinery product shall be designed and constructed so that the connection to it of another device, via any feature of the connected device itself or via any remote device that communicates with the machinery product does not lead to a hazardous situation.</td>
<td>The machinery product shall be designed and constructed so that the connection to it of another device, via any feature of the connected device itself or via any remote device that communicates with the machinery product does not lead to other unintended and potentially hazardous functions.</td>
</tr>
</tbody>
</table>

Or. en

Amendment 88
Krzysztof Hetman

Proposal for a regulation
Annex III – Part 1 – point 1.1 – point 1.1.9 – paragraph 2

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A hardware component for connection that is critical for the compliance of the machinery product with the relevant health and safety requirements shall be designed so that it is adequately protected against accidental or intentional corruption. The machinery product shall collect evidence of a legitimate or illegitimate intervention in</td>
<td>A hardware component relevant for connection or access to software that is critical for the compliance of the machinery product with the relevant health and safety requirements shall be designed so that it is adequately protected against accidental or intentional corruption. The machinery product shall collect evidence of</td>
</tr>
</tbody>
</table>
the hardware component. a legitimate or illegitimate intervention in the **aforementioned** hardware component (relevant for connection or access to software that is critical for the compliance of the machinery product).

---

**Amendment 89**
Sara Skyttedal

**Proposal for a regulation**
Annex III – Part 1 – point 1.1 – point 1.1.9 – paragraph 2

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A hardware component for connection that is critical for the compliance of the machinery product with the relevant health and safety requirements shall be designed so that it is adequately protected against accidental or intentional corruption. The machinery product shall collect evidence of a legitimate or illegitimate intervention in the hardware component.</td>
<td>A hardware component for connection that is critical for the compliance of the machinery product with the relevant health and safety requirements shall be designed so that it is adequately protected against accidental or intentional corruption. The machinery product shall, where relevant and feasible, collect evidence of a legitimate or illegitimate intervention in the hardware component <strong>where. This requirement does not include detection of hardware manipulation.</strong></td>
</tr>
</tbody>
</table>

**Justification**

*The level of hazard caused by hardware manipulation is similar to other hazards from e.g. mechanical manipulation. The machinery product cannot log all data that would be related to the conformity of the machinery product.*

---

**Amendment 90**
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

**Proposal for a regulation**
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point a
(a) they can withstand, where appropriate to the circumstances and the risks, the intended operating stresses and intended and unintended external influences, including malicious attempts from third parties to create a hazardous situation;

(a) they can withstand, where appropriate to the circumstances and the risks, the intended operating stresses and intended and unintended external influences, including malicious attempts from third parties to create other unintended (and potentially hazardous) functions

Or. en

Amendment 91
Krzysztof Hetman

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point a

Text proposed by the Commission
(a) they can withstand, where appropriate to the circumstances and the risks, the intended operating stresses and intended and unintended external influences, including malicious attempts from third parties to create a hazardous situation;

Amendment
(a) they can reasonably withstand, where appropriate to the circumstances and the risks, the intended operating stresses and intended and unintended external influences, including malicious attempts from third parties to create a hazardous situation;

Or. en

Amendment 92
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point a

Text proposed by the Commission
(a) they can withstand, where appropriate to the circumstances and the risks, the intended operating stresses and intended and unintended external influences, including malicious attempts from third parties to create a hazardous situation;

Amendment
(a) they can withstand, where appropriate to the circumstances and the risks, the intended operating stresses and external influences, including predictable misuse to create a hazardous situation;
Justification

Adding malicious attempts is adding security issues to the Machinery Regulation, while the Regulation should focus on safety issues.

Amendment 93
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point d

Text proposed by the Commission

(d) the safety functions cannot be changed beyond the limits defined by the manufacturer in the machinery product risk assessment. The establishment of the limits of the safety functions shall be part of the risk assessment performed by the manufacturer, including any modifications to the settings or rules generated by the machinery product or by operators, covering also the learning phase, which cannot go beyond the limits addressed in the risk assessment;

Amendment

(d) the safety functions cannot be changed beyond the limits defined by the manufacturer in the machinery product risk assessment. The establishment of the limits of the safety functions shall be part of the risk assessment performed by the manufacturer, including any modifications to the settings or rules generated by the machinery product or by operators, covering also its development based on machine learning, which cannot go beyond the limits addressed in the risk assessment;

Amendment 94
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point f

Text proposed by the Commission

(f) the tracing log of the data generated in relation to an intervention and of the versions of safety software uploaded after the machinery product has been placed on the market or put into service, is enabled for five years after such upload, exclusively to demonstrate the conformity of the machinery product with this Annex further to a reasoned deleted
request from a competent national authority;

Justification

This obligation cannot be fulfilled by the manufacturer as the machinery’s ownership is transferred.

Amendment 95
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 2 – point g

Text proposed by the Commission

(g) recording of data on the safety related decision-making process after the machinery product has been placed on the market or put into service, is enabled and that such data is retained for one year after its collection, exclusively to demonstrate the conformity of the machinery product with this Annex further to a reasoned request from a competent national authority.

Amendment

(g) recording of data on the safety related machine-learning process after the machinery product has been placed on the market or put into service, is enabled and that such data is retained for one year after its collection, exclusively to demonstrate the conformity of the machinery product with this Annex further to a reasoned request from a competent national authority.

Or. en

Amendment 96
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.2 – point 1.2.1 – paragraph 4 – point c

Text proposed by the Commission

(c) modifications to the settings or rules, generated by the machinery product or by operators covering also the learning phase, shall be prevented, where such modifications may lead to hazardous situations;

Amendment

(c) modifications to the settings or rules, generated by the machinery product or by operators covering also the process of machine learning, shall be prevented, where such modifications may lead to hazardous situations;
**Amendment 97**
Sara Skyttedal

**Proposal for a regulation**
Annex III – Part 1 – point 1.3 – point 1.3.2 – paragraph 4

*Text proposed by the Commission*
Where a risk of rupture or disintegration remains despite the measures taken, the parts concerned shall be mounted, positioned *and/or* guarded in such a way that any fragments will be contained, preventing hazardous situations.

*Amendment*
Where a risk of rupture or disintegration remains despite the measures taken, the parts concerned shall be mounted, positioned *or* guarded in such a way that any fragments will be contained, preventing hazardous situations.

---

**Amendment 98**
Kim Van Sparrentak

**Proposal for a regulation**
Annex III – Part 1 – point 1.3 – point 1.3.7 – introductory part

*Text proposed by the Commission*
1.3.7. Risks related to moving parts *and* psychological stress

*Amendment*
1.3.7. Risks related to moving parts, psychological stress *and cognitive workload*

---

**Amendment 99**
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

**Proposal for a regulation**
Annex III – Part 1 – point 1.3 – point 1.3.7 – paragraph 4 – introductory part

*Text proposed by the Commission*
The prevention of risks of contact leading to hazard situations and the *psychological stress* that may be caused by the interaction

*Amendment*
The prevention of risks of contact leading to hazard situations and the *cognitive workload* that may be caused by the interaction with the machine shall be
with the machine shall be adapted to: adapted to:

Amendment 100
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 1 – point 1.3 – point 1.3.7 – paragraph 4 – introductory part

Text proposed by the Commission

The prevention of risks of contact leading to hazard situations and the psychological stress that may be caused by the interaction with the machine shall be adapted to:

Amendment

The prevention of risks of contact leading to hazard situations and the psychological stress and cognitive workload that may be caused by the interaction with the machine shall be adapted to:

Or. en

Amendment 101
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.3 – point 1.3.7 – paragraph 4 – point b

Text proposed by the Commission

(b) human-machine interaction. deleted

Amendment

Or. en

Amendment 102
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.3 – point 1.3.7 – paragraph 5

Text proposed by the Commission

The machinery product with fully or partially evolving behaviour or logic that is designed to operate with varying levels of autonomy shall be adapted to respond

Amendment

deleted

The machinery product with fully or partially evolving behaviour or logic that is designed to operate with varying levels of autonomy shall be adapted to respond
to people adequately and appropriately (verbally through words or nonverbally through gestures, facial expressions or body movement) and to communicate its planned actions (what it is going to do and why) to operators in a comprehensible manner.

Amendment 103
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.5 – point 1.5.1 – paragraph 2

**Text proposed by the Commission**
The safety objectives set out in Directive 2014/35/EU shall apply to a machinery product. However, the obligations concerning conformity assessment and the placing on the market and/or putting into service of a machinery product with regard to electrical risks are governed solely by this Regulation.

**Amendment**
The safety objectives set out in Directive 2014/35/EU shall apply to a machinery product. However, the obligations concerning conformity assessment and the placing on the market or putting into service of a machinery product with regard to electrical risks are governed solely by this Regulation.

Amendment 104
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.5 – point 1.5.4 – paragraph 1

**Text proposed by the Commission**
Errors likely to be made when fitting or refitting certain parts, which could be a source of risk, shall be made impossible by the design and construction of such parts or, failing this, by information given on the parts themselves and/or their housings. The same information shall be given on moving parts and/or their housings where the direction of movement needs to be

**Amendment**
Errors likely to be made when fitting or refitting certain parts, which could be a source of risk, shall be made impossible by the design and construction of such parts or, failing this, by information given on the parts themselves or their housings. The same information shall be given on moving parts or their housings where the direction of movement needs to be known in order to
known in order to avoid a risk.

Or. en

**Amendment 105**
Sara Skyttedal

**Proposal for a regulation**
Annex III – Part 1 – point 1.5 – point 1.5.13 – paragraph 2

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where a risk cannot be eliminated, the machinery product shall be so equipped that hazardous materials and substances can be contained, captured, evacuated, precipitated by water spraying, filtered or treated by another equally effective method.</td>
<td>Where a risk cannot be eliminated, the machinery product shall be so equipped that hazardous materials and substances can be contained, evacuated, precipitated by water spraying, filtered or treated by another equally effective method.</td>
</tr>
</tbody>
</table>

**In cases where the use of external devices are not feasible, information on the use of appropriate personal protective equipment (PPE) must be provided in the operating instructions.**

Or. en

**Justification**

There is no difference between contained and captured. Adding requirements for additional substance capturing devices might create additional risks, and will limit the intended use of e.g. garden and landscaping machinery.

**Amendment 106**
Sara Skyttedal

**Proposal for a regulation**
Annex III – Part 1 – point 1.7 – point 1.7.4 – paragraph 2

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>By way of exception, the maintenance instructions intended for use by specialised personnel mandated by the manufacturer or his or her authorised representative may be supplied in only one official language of</td>
<td>By way of exception, the maintenance instructions intended for use by specialised personnel mandated by the manufacturer or his or her authorised representative may be supplied in only one official language of</td>
</tr>
</tbody>
</table>

the Union which the
the Union which the specialised personnel understand.

Amendment 107
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 1 – point 1.7 – point 1.7.4 – paragraph 3

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructions may be provided in a digital format. However, upon purchaser’s request at the time of the purchase of the machinery product, the instructions shall be provided in paper format free of charge.</td>
<td>The instructions may be provided in a digital format. However, upon purchaser’s request at the time of the purchase of the machinery product, the instructions shall be provided in paper format free of charge over the entire lifecycle of the machinery product.</td>
</tr>
</tbody>
</table>

Amendment 108
Konstantinos Arvanitis, Nikolaj Villumsen, Leila Chaibi

Proposal for a regulation
Annex III – Part 1 – point 1.7 – point 1.7.4 – paragraph 3

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructions may be provided in a digital format. However, upon purchaser’s request at the time of the purchase of the machinery product, the instructions shall be provided in paper format free of charge.</td>
<td>The instructions may be provided in a digital format. However, upon purchaser’s request the instructions shall be provided in paper format free of charge, for up to five years after the time of the purchase.</td>
</tr>
</tbody>
</table>

Amendment 109
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.7 – point 1.7.4 – paragraph 4 – point c
Text proposed by the Commission

(c) be presented in a format that makes it possible for the end user to download the instructions and save them on an electronic device so that he or she can access them at all times, in particular during a breakdown of the machine. This requirement also applies to a machinery product where the instruction manual is embedded in the software of the machinery product. General principles for the drafting of instructions

or en

Amendment 110
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.7 – point 1.7.4 – point 1.7.4.2 – point 1 – point c

Text proposed by the Commission

(c) the EU declaration of conformity, or a document setting out the contents of the EU declaration of conformity, showing the particulars of the machinery product, not necessarily including the serial number and the signature, or the internet address where the EU declaration of conformity can be accessed.

or en

Amendment 111
Sara Skyttedal

Proposal for a regulation
Annex III – Part 1 – point 1.7 – point 1.7.4 – point 1.7.4.2 – point 1 – point w

Text proposed by the Commission

(c) the EU declaration of conformity, or a document setting out the contents of the EU declaration of conformity, showing the particulars of the machinery product, not necessarily including the serial number and the signature, or the internet address where the EU declaration of conformity can be accessed over the entire lifecycle of the machinery product;

or en
(w) where the machinery product design allows emissions of hazardous substances from the machinery product, the characteristics of the capturing, filtration or discharge device if such device is not provided with the machinery product, and any of the following:

i. the flow rate for the emission of hazardous materials and substances from the machinery product,

ii. the concentration of hazardous materials or substances around the machinery product coming from the machinery product or from materials or substances used with the machinery product,

iii. the effectiveness of the capturing or filtration device and the conditions to be observed to maintain its effectiveness over time.

The values referred to in the first subparagraph shall either be actually measured for the machinery product in question or established based on measurements in respect of a technically comparable machinery product, which is representative of the state of the art.

Or. en

Justification

Information requirement should only be applicable to machinery intended to generate hazardous substances from the materials likely to be processed.

Amendment 112
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – introductory part

Text proposed by the Commission

Amendment

2.2. PORTABLE HAND HELD
AND/OR HAND-GUIDED MACHINERY

2.2. PORTABLE HAND HELD OR
HAND-GUIDED MACHINERY
Amendment 113
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – paragraph 1 – introductory part

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portable hand-held and/or hand-guided machinery shall:</td>
<td>Portable hand-held or hand-guided machinery shall:</td>
</tr>
</tbody>
</table>

Or. en

Amendment 114
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – paragraph 1 – point c

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) present no risks of accidental starting and/or continued operation after the operator has released the handles. Equivalent steps shall be taken if this requirement is not technically feasible;</td>
<td>(c) present no risks of accidental starting or continued operation after the operator has released the handles. Equivalent steps shall be taken if this requirement is not technically feasible;</td>
</tr>
</tbody>
</table>

Or. en

Amendment 115
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – paragraph 1 – point e

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) have a device or a connected exhaust system, with an extraction connection outlet or equivalent system to capture or reduce emissions of hazardous substances. This requirement does not apply where its application would result in</td>
<td>(e) have a device or a connected exhaust system, with an extraction connection outlet or equivalent system to capture or reduce emissions of hazardous substances. This requirement does not apply where its application would result in</td>
</tr>
</tbody>
</table>
the creation of a new risk, where the main function of the machinery is the spraying of hazardous substances and to emissions of internal combustion engines. The handles of portable machinery shall be designed and constructed in such a way as to make starting and stopping straightforward.

Machinery may be equipped only with a connection for an exhaust system if they are intended for operation with existing exhaust systems.

In situations where the use of external devices are not feasible, information on the use of appropriate personal protective equipment must be provided in the instructions.

Amendment 116
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 1 – introductory part

Text proposed by the Commission

The instructions shall give the following information concerning vibrations, expressed as acceleration (m/s²), and transmitted by portable handheld and hand-guided machinery:

Amendment

The instructions shall give the following information concerning vibrations transmitted by portable handheld and hand-guided machinery:

Or. en

Amendment 117
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 1 – point a

Text proposed by the Commission

(a) the vibration total value from continuous vibrations to which the hand-arm system is subjected, if it

Amendment

(a) the vibration total value to which the hand-arm system is subjected, if it
arm system is subjected; exceeds 2.5 m/s². Where this value does not exceed 2.5 m/s², this must be mentioned;

Amendment 118
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 1 – point b

Text proposed by the Commission

(b) the mean value of the peak amplitude of the acceleration from repeated shock vibrations, to which the hand-arm system is subjected;

Amendment

deleled

Or. en

Amendment 119
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 1 – point c

Text proposed by the Commission

(c) the uncertainty of both measurements.

Amendment

(c) the uncertainty of this measurement.

Or. en

Amendment 120
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 2

Text proposed by the Commission

The values referred to in the first subparagraph shall either be those

Amendment

These values must be either those actually measured for the machinery in question or
actually measured for the machinery in question or those established on the basis of measurements in respect of a technically comparable machinery product, which is representative of the state of the art.

those established on the basis of measurements taken for technically comparable machinery which is representative of the machinery to be produced.

Amendment 121
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 3

Text proposed by the Commission
If harmonised standards or technical specifications adopted by the Commission in accordance with Article 17(3) cannot be applied, the vibration data shall be measured using the most appropriate measurement code for the machinery.

Amendment
If harmonised standards are not applied, the vibration data must be measured using the most appropriate measurement code for the machinery.

Amendment 122
Sara Skyttedal

Proposal for a regulation
Annex III – Part 2 – point 2.2 – point 2.2.1 – point 2.2.1.1 – paragraph 4

Text proposed by the Commission
The operating conditions during measurement and the methods used for measurement, or the reference of the harmonised standard applied, shall be specified.

Amendment
The operating conditions during measurement and the methods used for measurement, or the reference of the harmonised standard applied, must be specified.

Amendment 123
Kim Van Sparrentak
Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.2 – paragraph 1

Text proposed by the Commission
Where there is a risk that operators or other persons transported by the machinery may be crushed between parts of the machinery and the surroundings should the machinery roll or tip over, in particular for machinery equipped with a protective structure referred to in section 3.4.3 or 3.4.4, the machinery shall be designed or equipped with a restraint system so as to keep the persons in their seats or in the protective structure, without restricting movements necessary for operations or movements relative to the structure caused by the suspension of the seats. Such restraint systems or provision shall not be fitted if they increase the risk.

Amendment
Where there is a risk that operators or other persons transported by the machinery may be crushed between parts of the machinery and the surroundings should the machinery roll or tip over, in particular for machinery equipped with a protective structure referred to in section 3.4.3 or 3.4.4, the machinery shall be designed or equipped with a restraint system so as to keep the persons in their seats or in the protective structure, without restricting movements necessary for operations or movements relative to the structure caused by the suspension of the seats. Such restraint systems or provision shall have an ergonomic design and shall not be fitted if they increase the risk.

Or. en

Amendment 124
Kim Van Sparrentak

Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.2 – paragraph 2

Text proposed by the Commission
A visual or audible signal shall be provided at the driving position alerting the driver when the restraint system is not active.

Amendment
The machine shall not be able to move when the restraint system is not active in case there is a significant risk of tipping or rolling over. A visual and audible signal shall be provided at the driving position alerting the driver when the restraint system is not active.

Or. en

Amendment 125
Sara Skyttedal
Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.4 – paragraph 1

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomous mobile machinery products shall have a supervisory control function specific to the autonomous mode. This function shall allow the operator to remotely receive information from the machine. The supervisory control function shall only allow actions to stop and to start remotely the machine. It shall be designed and constructed to allow those actions only when the driver can see directly or indirectly the machine's movement and working area and the protective devices are operational.</td>
<td>In situations where a supervisory control function is needed as a protective measure on autonomous mobile machinery products, that function shall be specific to its autonomous operation. In situations where the supervisory control function allows a remote action from the operator, that function shall be designed in such a way that that action does not increase any risk.</td>
</tr>
</tbody>
</table>

Or. en

Amendment 126
Sara Skyttedal

Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.4 – paragraph 2

<table>
<thead>
<tr>
<th>Text proposed by the Commission</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The information the driver receives from the machine when the supervisory control function is active shall enable the driver to have a complete and accurate view of the operation, movement and safe positioning of the machine in its travel and working area.</td>
<td>deleted</td>
</tr>
</tbody>
</table>

Or. en

Amendment 127
Sara Skyttedal

Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.4 – paragraph 3
This information shall alert the driver of the occurrence of unforeseen or dangerous situations present or impending, which require driver’s intervention.

Amendment 128
Sara Skyttedal

Proposal for a regulation
Annex III – Part 3 – point 3.2 – point 3.2.4 – paragraph 4

If the supervisory control function is not active, the machinery shall not be able to operate.

Amendment 129
Sara Skyttedal

Proposal for a regulation
Annex III – Part 3 – point 3.3 – point 3.3.3 – paragraph 6

Autonomous mobile machinery products shall comply with any of the following conditions:

(a) it shall move and operate in an enclosed zone fitted with a peripheral protection system comprising guards or protective devices;

(b) it shall be equipped with devices intended to detect any human, domestic animal or any other obstacle in its vicinity, where those obstacles could give rise to a risk to health and safety of persons or of domestic animals or to safe
operation of the machinery product.

Justification

Text is too technology-specific. Issue is better addressed in harmonised standards.

Amendment 130
Krzysztof Hetman

Proposal for a regulation
Annex III – Part 3 – point 3.3 – point 3.3.3 – paragraph 6 – introductory part

Text proposed by the Commission

Autonomous mobile machinery products shall comply with any of the following conditions:

Amendment

Autonomous mobile machinery products shall comply with at least one of the two following conditions:

Amendment 131
Krzysztof Hetman

Proposal for a regulation
Annex III – Part 3 – point 3.3 – point 3.3.3 – paragraph 6 – point b

Text proposed by the Commission

(b) it shall be equipped with devices intended to detect any human, domestic animal or any other obstacle in its vicinity, where those obstacles could give rise to a risk to health and safety of persons or of domestic animals or to safe operation of the machinery product.

Amendment

(b) it shall be equipped with devices intended to detect any human, domestic animal or any other obstacle in its vicinity, where those obstacles could give rise to a risk to health and safety of persons or where appropriate of domestic animals or to safe operation of the machinery product.

Amendment 132
Sara Skyttedal

Proposal for a regulation
Machinery, lifting accessories and their components shall be capable of withstanding the stresses to which they are subjected during their *lifetime*, both in and, where applicable, out of use, under the installation and operating conditions provided for and in all relevant configurations, with due regard, where appropriate, to the effects of atmospheric factors and forces exerted by persons. This requirement shall also be satisfied during transport, assembly and dismantling.

Machinery, lifting accessories and their components shall be capable of withstanding the stresses to which they are subjected during their *lifecycle*, both in and, where applicable, out of use, under the installation and operating conditions provided for and in all relevant configurations, with due regard, where appropriate, to the effects of atmospheric factors and forces exerted by persons. This requirement shall also be satisfied during transport, assembly and dismantling.