

CEMA



CEMA Guidelines for  
**Transition Provisions  
& Exemptions**  
for Non Road Mobile  
**Machinery Engines**

(Includes Flexibility & Replacement Engines)

## The European Agricultural Machinery Industry

- 4,500 manufacturers
- 28 billion Euro production volume
- 135,000 persons employed directly
- additional 125,000 persons in the distribution and service network
- 450 different machine types

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# 1.0 Introduction

This document concerns the non-road mobile machinery Directive 97/68/EC as amended<sup>1</sup> by 2011/88/EU.

These guidelines have been prepared by CEMA to provide clarification and support to engine and equipment manufacturers on the transition provisions from one stage to the next specifically flexibility and sell off. Additionally they provide guidance on the exemption for replacement engines.

There are two separate provisions in the directive related to the transition from one stage to the next. These guidelines cover both of those provisions, as follows:

1. **Flexibility** – the scheme to allow a limited number of engines complying with the most recent previous stage to be manufactured after the entry into force of a new stage.
2. **Sell-off** – the provision to allow engines manufactured during one stage to be placed on the market after the entry into force of the new stage.

These guidelines are intended to answer the questions that are likely to be asked by users of the Directive. They have been prepared without formal input from the European Commission.

The whole Exhaust Emission Directive applies to engines whether or not already installed in machines.

## 2.0 Scope

These guidelines cover compression ignition engines used in Non-Road Mobile Machinery (NRMM), excluding engines used in railcars, locomotives and inland waterway vessels. They do not cover agricultural & forestry tractors.

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<sup>1</sup> The term “as amended” means inclusive of all amendments to 97/68/EC up to the date of publication of this document. In this case it means that the amendments 2001/63/EC, 2002/88/EC, 2004/26/EC, 2006/105/EC and 2010/26/EU are also included.

# 3.0 Definitions

*(from Article 2 of Directive 97/68/EC)*

Engine production date shall mean the date when the engine passes the final check after it has left the production line. At this stage the engine is ready to be delivered or to be put on stock.

Placing on the market shall mean the action of making an engine available for the first time on the market, for payment or free of charge, with a view to distribution and/or use in the Community.

## Clarification of placing on the market of engines

In addition to the definition in Directive 97/68/EC, the following clarification on the point in time at which an engine is considered to be placed on the market was provided in a letter to GEME members from the Commission services, dated 22 December 2006:

'Normally it is considered that the engine is placed on the market once it leaves the production factory of the manufacturer situated within the Community and is available for customers. If the engine is manufactured outside the Community, it is considered placed on the market once granted release for free circulation by customs.

If the manufacturer of the engine and the manufacturer of the equipment are the same entity, placing on the market takes place when the equipment is placed on the market or, if imported into the Community, when the equipment is being cleared by customs and granted release for free circulation.'

Manufacturer shall mean the person or body who is responsible to the approval authority for all aspects of the type-approval process and for ensuring conformity of production. It is not essential that the person or body is directly involved in all stages of the construction of the engine.

[This is the definition of engine manufacturer.](#)

Non-Road Mobile Machinery shall mean any mobile machine, transportable industrial equipment or vehicle with or without body work, not intended for the use of passenger- or goods-transport on the road, in which an internal combustion engine as specified in Annex I Section 1 is installed,

**NOTE:** Non-Road Mobile Machinery is hereafter referred to as NRMM.

Original Equipment Manufacturer (OEM) shall mean a manufacturer of a type of non-road mobile machine.

# 4.0 Flexibility scheme

## 4.1 Overview

(from Article 2 of Directive 97/68/EC)

Flexibility scheme shall mean the procedure allowing an engine manufacturer to place on the market, during the period between two successive stages of limit values, a limited number of engines, to be installed in non-road mobile machinery, that only comply with the previous stage of emission limit values.

This “flexibility scheme” is an instrument for OEM’s to facilitate transition to the next stage of engine exhaust emissions regulation by allowing the continued production of a limited quantity of most recent previous stage engines. The OEM is free to apply it or not. The flexibility scheme duration should not be derived from this definition, but from the provisions in Annex XIII of the Directive or the following sections of this Guide.

(from Annex 13, Section 1.1 and 1.2, of Directive 97/68/EC)

‘...an OEM that wishes to make use of the flexibility scheme... shall request permission from any approval authority for the OEM’s engine manufacturers to place on the market engines intended for the OEM’s exclusive use. The number of engines that do not comply with the current emission limits, but are approved to the most recent previous stage of emission limits, shall not exceed the ceilings set out in Sections 1.2.1. and 1.2.2.’ of Annex XIII of 97/68/EC for stage IIIB or ‘...in Sections 1.1.1 and 1.1.2’ for all other stages.

The following sections explain the duration of the flexibility scheme, how an OEM can determine the quantity of flexed engines permitted under this scheme (flexibility allowance), the process for making an application to an approval authority, the required marking for engines and machines, and the utilisation of flexibility.

## 4.2 Duration of the flexibility scheme

The duration of a flexibility scheme normally coincides with the duration of the stage it applies to. However for category ‘P’ (power  $37 \leq P < 56$  kW, stage IIIB), a derogation is defined in Directive 2011/88/EU where for the period for placing on the market flexed engines is limited to 3 years from the start of this stage since there is no following stage published in the Directive.

There is no time limit for placing machines with flexed engines on the market providing the flexed engine itself has been placed on the EU market within the time limit.

Depending upon the priorities of each OEM there are different ways to use the flexibility allowance.

The granted number of flexed engines can be placed on the market by the manufacturer on request of the OEM for example already during the first month or first year of the new emission stage for the engine power category, or the placing on the market of the flexed engines can be spread over a longer period, up to, but not beyond, the last day of the emission stage for that category.

The emission stages for variable speed and constant speed engines are shown in Figure 1 & Figure 2 respectively.

Figure 1: Emission stages for variable speed engines

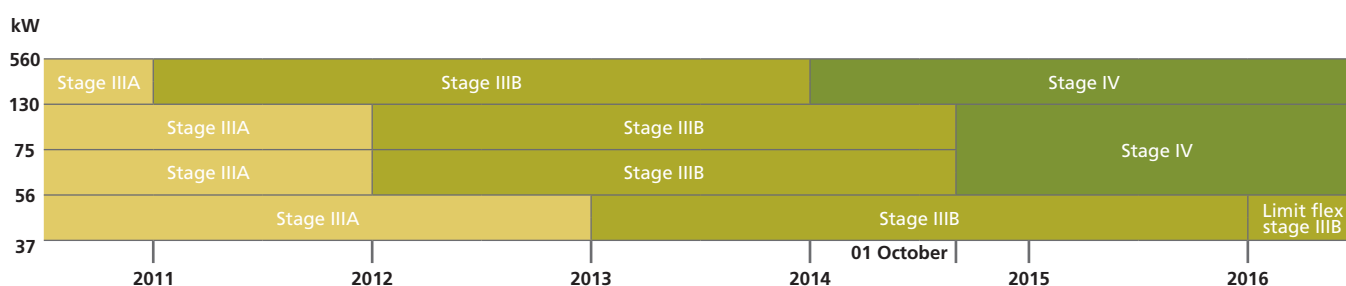
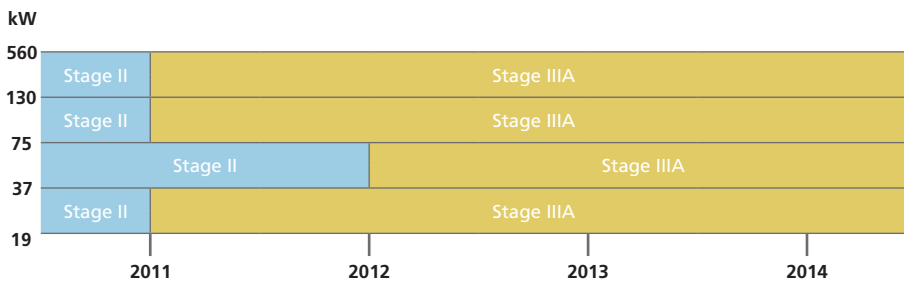


Figure 2: Emission stages for constant speed engines



## 4.3 Determination of the flexibility allowance

### 4.3.1 General

Each OEM may apply for flexibility allowance classifying his machines according to the power categories the installed engines belong to. The categories are those defined in Article 9.3 of the Directive in terms of power band and emission stage.

It means that:

- The flexibility allowances are granted based on engine categories. Machinery type has no role for this application.
- An OEM may not combine NRMM and agricultural and forestry tractors for his schemes.
- Flexibility for variable speed engines and constant speed engines are handled separately as these are separate engine categories.
- An OEM may not transfer, neither partly nor totally his flexibility allowance from one engine power category to another.
- An OEM may not transfer partly nor totally his flexibility allowance to another OEM.

The flexibility scheme offers two options

- a percentage allowance, based upon prior machine sales, or alternatively
- a fixed number allowance.

For all emission stages except for stage IIIB, both allowances remain as originally published in the 2004/26/EC amendment to Directive 97/68/EC (20% in the case of the percentage of sales allowance). See 4.3.3

### 4.3.2 Special considerations for stage IIIB

Directive 2011/88/EU allows the OEM to apply for enlarged flexibility to a maximum of 37,5% or an increase of fixed volume for stage IIIB. Any flexibility granted under pre-2011/88/EU provisions remains valid. A further application for flexibility in accordance with Directive 2011/88/EU is permitted but not mandatory unless the increase is being sought.

In the case of an OEM that has already been granted an amount of engines of a given category under a pre-2011/88/EU flexibility scheme, that amount shall be subtracted from the amount of engines granted in the corresponding category according to Directive 2011/88/EU. In the specific case that an OEM has been granted a fixed quantity in the category  $37 \leq P < 75$  kW, the amounts that shall be subtracted from any new allowances in  $37 \leq P < 56$  kW and  $56 \leq P < 75$  kW categories shall be allocated according to the quantity of flexed engines that have been used by the OEM in those categories.

On 17 Feb 2012, the Commission services advised Member States that they expected the same sales figures for the original 20% calculation to be re-used for the 37.5% calculation, instead of using new 5 year sales data.

Examples of calculations are given in Annex A - Flexibility application examples.

### 4.3.3 Available options within the flexibility scheme

The OEM may choose between two alternative options:

The specific allowances for each option are given in Table 1 and Table 2 respectively, and are identified for each category and stage.

Table 1: Percentage of sales (Option 1)

Stage IIIA in force		Stage IIIB in force		Stage IV in force	
Engine Power Category (kW)	Percentage Flexibility	Engine Power Category (kW)	Percentage Flexibility	Engine Power Category (kW)	Percentage Flexibility
[K] 19 ≤ P < 37	20%				
[J] 37 ≤ P < 75	20%	[P] 37 ≤ P < 56	37,5%		
[I] 75 ≤ P < 130	20%	[N] 56 ≤ P < 75	37,5%	[R] 56 ≤ P < 130	20%
[H] 130 ≤ P ≤ 560	20%	[M] 75 ≤ P < 130	37,5%	[Q] 130 ≤ P ≤ 560	20%
		[L] 130 ≤ P ≤ 560	37,5%		

Table 2: Fixed quantity (Option 2)

Stage IIIA in force		Stage IIIB in force		Stage IV in force	
Fixed Quantity Engine Category (kW)	Fixed Quantity Flexibility	Fixed Quantity Engine Category (kW)	Fixed Quantity Flexibility	Fixed Quantity Engine Category (kW) <sup>2</sup>	Fixed Quantity Flexibility
19 ≤ P < 37	200			19 ≤ P < 37	200
37 ≤ P < 75	150	37 ≤ P < 56	200	37 ≤ P < 75	150
75 ≤ P < 130	100	56 ≤ P < 75	175	75 ≤ P < 130	100
130 ≤ P ≤ 560	50	75 ≤ P < 130	250	130 ≤ P ≤ 560	50
		130 ≤ P ≤ 560	125		

### 4.3.4 Option 1: percentage flexibility

The flexibility allowance is based on the average sales of machines over the previous years.

*(from Annex XIII of Directive 97/68/EC)*

‘The number of engines placed on the market under the flexibility scheme shall, in each engine category, not exceed...’ either 20% or 37,5 % (depending upon emission stage) ‘of the annual quantity of equipment with engines in that category that is placed on the market by the OEM...’

The calculation basis is the average sales over the past 5 years on the EU market.

*(from Annex XIII of Directive 97/68/EC)*

‘Where an OEM has placed equipment on the Union market for less than 5 years, the average shall be calculated based on the period for which the OEM has placed equipment on the Union market.’

This average may be calculated over a shorter time to consider the case where machines in that category were sold for less than 5 years.

The Directive does not define the start and the ending of the 5 year period, so it may be interpreted as 60 months or 5 calendar years preceding the application for flexibility by the OEM.

<sup>2</sup> Currently stage IV does not extend below 56 kW.



Consequently, it is advisable to check the requirement with the chosen approval authority prior to application.

The resulting quantity is the total allowance granted for any flexibility scheme. Under no circumstance shall this allowance be interpreted as a yearly allowance.

The OEM is free to apply for flexibility at any time, before as well as after the start of a new emission stage.

Examples of calculations are given in Annex A - Flexibility application examples.

### 4.3.5 Option 2: fixed quantity flexibility

This is granted in the quantities and for the power categories listed in Table 2.

Sales quantities and/or the actual sale of machines prior to the time when the application for flexibility is presented play no role.

### 4.3.6 Use of both percentage flexibility and fixed quantity

The choice between percentage of sale and fixed quantities is made by the OEM for each power category. Any combination is allowed, under the condition that there is no overlap between the categories.

For example, a manufacturer applying for stage IV fixed quantity flexibility in the power category  $37 \leq P < 75$  kW could not apply for percentage flexibility in the power category  $56 \leq P < 130$  kW; otherwise the manufacturer is receiving two allocations for the power range  $56 \leq P < 75$  kW.

## 4.4 Application to an approval authority

*(from Section 1.1, Annex XIII, Directive 97/68/EC)*

'...an OEM that wishes to make use of the flexibility scheme... shall request permission from any approval authority for the OEM's engine manufacturers to place on the market engines intended for the OEM's exclusive use..'

The OEM has the freedom to choose the approval authority to which the application for flexibility must be submitted.

*(from Article 2, Directive 97/68/EC)*

'Approval authority shall mean a Member State's competent authority or authorities responsible for all aspects of type-approval of an engine or of an engine family, for issuing and withdrawing approval certificates, for serving as the contact point with the approval authorities of the other Member States, and for verifying the manufacturer's conformity of production arrangements.'

A list of European approval authorities is published by the Commission services on the following webpage:

<http://ec.europa.eu/enterprise/sectors/mechanical/documents/contacts/non-road-approval/>

**NOTE:** No responsibility is taken for links to third party sites which may be changed without notification.

It is recommended to verify that the information on that webpage is updated and to contact the chosen approval authority to find out who is appointed within that organisation to receive and consider applications for flexibility schemes.

*(from Annexe XIII of Directive 97/68/EC)*

'1.4. The OEM shall include in his application to an approval authority the following information:

(a) a sample of the labels to be affixed to each piece of non-road mobile machinery in which an engine placed on the market under the flexibility scheme will be installed...;

and

(b) a sample of the supplementary label to be affixed on the engine ...'

1.5. The OEM shall provide the approval authority with any necessary information connected with the implementation of the flexibility scheme that the approval authority may request in order to make a decision.' (Annex XIII of 97/68/EC)

It is recommended to use the example of application form detailed in Annex B – Request to use the flexibility provisions provided for in Annex XIII of Directive 97/68/EC.

To facilitate communication with approval authority, it is recommended to submit the application in one of the official languages of the country of the approval authority.

## 4.5 Required markings for engines and machines

### 4.5.1 General marking requirements

All markings shall meet the requirements defined in Section 3.3 of Annex I of Directive 97/68/EC:

These marks must be durable for the useful life of the engine and must be clearly legible and indelible. If labels or plates are used, they must be attached in such a manner that in addition the fixing is durable for the useful life of the engine, and the labels/plates cannot be removed without destroying or defacing them.

### 4.5.2 Label on the flexed engines

(from Section 3 of Annex I of Directive 97/68/EC)

Flexibility engines must bear all the markings required of an engine that has been manufactured in conformity with 97/68/EC, including the type approval number.

In addition;

(from Annexe XIII of Directive 97/68/EC)

'2.2. The engine manufacturer must put a label on those engines with the following text:'

'Engine placed on the market under the flexibility scheme'

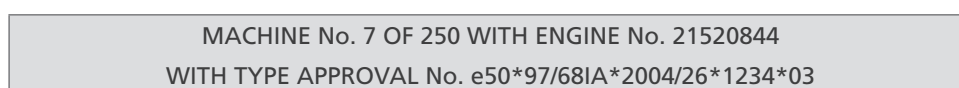
The text may be included in a separate label or the text could appear on any other existing engine labels. This text is complementary and under no circumstance does it replace the normal engine marking.

### 4.5.3 Label on machines equipped with flexed engines

(from Annexe XIII of Directive 97/68/EC)

'...The labels shall bear the following text: "MACHINE No ...(sequence of machines) OF ... (total number of machines in respective power band) WITH ENGINE No ... WITH TYPE APPROVAL (Dir. 97/68/EC) No ...'

[Figure 3: Example of an equipment flexibility label](#)



MACHINE No. 7 OF 250 WITH ENGINE No. 21520844  
WITH TYPE APPROVAL No. e50\*97/68IA\*2004/26\*1234\*03

There is no specific prescription about the marking location, but it is recommended to follow the general requirements of Section 3.4.1 of Annex I of the Directive<sup>3</sup>. In general it may be advisable to attach it adjacent to or integrated with the machine data plate.

<sup>3</sup> These marks must be located so as to be readily visible to the average person ...

#### 4.5.4 Special labelling considerations for stage IIIB

In the case of an OEM that has already been granted a pre-2011/88/EU flexibility scheme, the machine sequence series shall be handled as follows if increased flexibility according to Directive 2011/88/EU is granted.

Where the original numbering was such as "Machine number 26 of 121" and the flexibility allowance becomes, for example, 227, the machine numbering sequence continues but at some point at or before 121 units have been placed on the market the total number of machines should be changed to reflect the new maximum allowance.

In the specific case that an OEM has been granted a fixed quantity in the category 37 to 75 kW, the numbering sequence shall be revised following the same principle as used for the calculation of the new allowance.

## 4.6 Utilisation of flexibility

### 4.6.1 General

Machines fitted with flexed engines and marked with the required sequential machine labels may be placed on the market in any EU Member State, regardless of which approval authority granted the flexibility. All machines equipped with a flexed engine placed on the market in the EU (including the outermost regions of those member states) will consume flexibility from the OEM's allowance.

Directive 97/68/EC is also applicable in the EEA countries (Norway, Iceland and Liechtenstein), whilst Switzerland also requires compliance with the engine emission Directive 97/68/EC. This means that any machines with a flexed engine placed on the market in these countries also utilise flexibility from the OEM's EU allowance.

EU candidate countries may also apply Directive 97/68/EC during their preparation for EU Membership and therefore flexibility may be consumed in these countries.

Consequently, OEM's are advised to check the latest status of those countries applying Directive 97/68/EC in order to determine the total number of EU flexibility engines that will be consumed against the OEM's allowance.

Further information on those countries applying Directive 97/68/EC are given in Annex D – Countries applying engine emission Directive 97/68/EC, of this document.

### 4.6.2 Providing approval authorities with information on utilisation of flexibility

*(from Annex XIII of Directive 97/68/EC)*

**'1.6. The OEM shall provide any requesting type approval authority in the Member States, with any information that the type approval authority requires in order to confirm that any engine claimed to be, or labelled as being, placed on the market under a flexibility scheme is properly so claimed or labelled.'**

Useful information to be able to provide to any requesting approval authority is described in:

Annex C – Example of useful information to be stored and available to provide according to Annex XIII of Directive 97/68/EC in case of request from any approval authority.

### 4.6.3 OEM request to the engine manufacturer

When an OEM makes a request to an engine manufacturer for the production and procurement of flexed engines, it should be anticipated that the engine manufacturer will seek a written assurance by the OEM that he has applied for and/or has been granted permission from an official approval authority for the use of the flexibility scheme and that the OEM agrees to be bound by the regulations.

The engine manufacturer remains responsible for placing on the market the engines requested by the OEM. The exchange of information between OEM and manufacturer is not defined in detail by the Directive. It is recommended that clear documentation is retained by OEM and manufacturer and that such correspondence is available in case of market surveillance.

## 5.0 Sell-off provision

*(from Section 4, Article 9 of Directive 97/68/EC)*

'For each category, the above requirements shall be postponed by two years in respect of engines with a production date prior to the said date'

This clause defines the conditions for placing on the market of engines manufactured prior to the end of the stage whose requirements they meet, but are still in stocks of the manufacturer after the end of that stage.

This clause, commonly designated as "sell-off provision", allows two years to have those engines placed legally on the market.

### 5.1 ***Impact for the engine manufacturer***

It means that during the two years after the start of a new stage of emissions, the engine manufacturer may place on the EU market, engines meeting the requirements of the preceding stage, provided those engines are built prior to the date above. The determining factor for the sell off provision is only the production date; the location of production or storage is irrelevant. This means engines could be produced and stored inside or outside of the European Union.

Example - Emission Stage IIIB is in effect 1st January 2012 for 75-130 kW engine:

- The engine manufacturer may place Stage IIIA engines on EU market until 31 December 2013 provided those Stage IIIA engines are produced no later than 31 December 2011.

### 5.2 ***Impact for the original equipment manufacturer (OEM)***

The Directive does not set any requirement for machines placing on the market, so the OEM may place on the EU market, without time limitation, machines equipped with selloff engines

Example - Emission Stage IIIB is in effect 1st January 2012 for 75-130 kW engine:

- The OEM may continue to produce and place on EU market machines with Stage IIIA engines provided those Stage IIIA engines were produced on or prior to 31 December 2011 and placed on the EU market no later than 31 December 2013. Machines equipped with such engines may be placed on the market (sale, registration, ...) during any following year.

### 5.3 ***Impact for machines imported into the European Union***

When a machine is first imported into the European Union that is usually the moment when its engine is first placed on EU market. In that case the limitation period of two years indirectly applies to the machine as well.

Example - Emission Stage IIIB is in effect 1st January 2012 for 75-130 kW engine.

- Imported machines with Stage IIIA engines may be placed on the EU market, until 31 December 2013, provided those Stage IIIA engines were produced no later than 31 December 2011.

The two-year limit on importation would not apply to machines if the engines had already been separately placed on the EU market before being shipped outside the EU for installation in the machines.

# 6.0 Replacement engines:

*(from Article 2 of directive 97/68/EC)*

**'Replacement engines shall mean a newly built engine to replace an engine in a machine, and which has been supplied for this purpose only'**

*(from Paragraph 1a, Article 10, directive 97/68/EC)*

**'Without prejudice to Article 7a and to Article 9(3g) and (3h), replacement engines, except for railcar, locomotive and inland waterway vessel propulsion engines, shall comply with the limit values that the engine to be replaced had to meet when originally placed on the market.'**

It means that if the machine was originally placed on EU market with a Stage I compliant engine, then the replacement engine must at least comply to Stage I, even if the replacement engine is placed on the market many years later when the emission stage in effect is Stage IIIA. Replacement with a Stage II or Stage IIIA engine would also be permitted as such engines will comply with the limit values applicable to the original stage I engine, so long as they are installed in accordance with their type approval.

Engines that are not newly built, such as overhauled (remanufactured) engines that have already been previously placed on the market, are not classified as replacement engines. No further requirements are applicable to those engines as they are already on the market

In addition to the normal engine markings:

*(from Paragraph 1c, Article 10, directive 97/68/EC)*

**'A label bearing the text "REPLACEMENT ENGINE" and bearing the unique reference of the associated derogation shall be affixed to engines covered by paragraph 1a or 1b.'**

It should be noted that for replacement engines other than those for railcars and locomotives there is no 'unique reference of the associated derogation' referred to in the above paragraph. Therefore for the engines within the scope of this guidance document the required text is simply:

**"REPLACEMENT ENGINE"**

All markings shall meet the requirements defined in Section 3.3 of Annex I of the Directive:

These marks must be durable for the useful life of the engine and must be clearly legible and indelible. If labels or plates are used, they must be attached in such a manner that in addition the fixing is durable for the useful life of the engine, and the labels/plates cannot be removed without destroying or defacing them.

There is no specific prescription about the marking location, but it is recommended to follow the general requirements of Section 3.4 of Annex I of the Directive. In general it may be advisable to attach it adjacent to or integrated with the normal engine markings.

# Annex A

## Flexibility application examples

### A.1 General

The examples that follow are provided for variable speed engine flexibility for stages IIIB & IV. Similar principles would apply for calculations of constant speed engine flexibility for stage IIIA, using the appropriate values from

Table 1 & Table 2

### A.2 Stage IIIB flexibility

#### A.2.1 Percentage based calculation

(from Section 1.2.1, Annex XIII of directive 97/68/EC)

'The number of engines placed on the market under the flexibility scheme shall, in each category, not exceed 37,5% of the annual quantity of equipment with engines in that category that is placed on the market by the OEM (calculated as an average of the latest 5 years' sales on the Union market).'

##### A.2.1.1 Sales $\geq$ 5 years

Stage in force for which flexibility is sought:	Variable speed stage IIIB category N [ $56 \leq P < 75$ kW] (effective from 1 January 2012)
Date of application to approval authority:	May 2012
5-year period for which the OEM has confirmed sales records:	01 March 2007 – 29 February 2012

**NOTE:** As indicated in 4.3.4 of these guidelines, the Directive does not define the start and the ending of the 5 year period, so it may be interpreted as 60 months or 5 calendar years preceding the application for flexibility by the OEM. This example is based on the interpretation of 60 months.

Year	Sales in EU 27
2007 (10 months)	700
2008	900
2009	1200
2010	1500
2011	1600
2012 (2 months)	100
TOTAL	6000
Annual average	1200

<b>Resulting calculated flexibility allowance for entire stage (37.5%)</b>
<b>450</b>

### A.2.1.2 Sales < 5 years

(from Annex XIII of Directive 97/68/EC)

'Where an OEM has placed equipment on the Union market for less than 5 years, the average shall be calculated based on the period for which the OEM has placed equipment on the Union market.'

Stage in force for which flexibility is sought:	Variable speed stage IIIB category N [ $56 \leq P < 75$ kW] (effective from 1 January 2012)
Date of application to approval authority:	August 2012
5-year period for which the OEM has confirmed sales records:	01 July 2009 – 30 June 2012

Year	Sales in EU 27
2009 (6 months)	500
2010	1500
2011	1600
2012 (6 months)	600
TOTAL	4200
Annual average	1400

<b>Resulting calculated flexibility allowance for entire stage</b>  <b>(37.5%)</b>
<b>525</b>

### A.2.2 Fixed quantity

The fixed quantity allowances are those as presented in Table 2: Fixed quantity (Option 2) for the respective category and do not change depending upon previous years OEM sales on the Union market.

### A.2.3 Special cases where an increase is being sought to flexibility already granted under 2010/26/EC amendment to Directive 97/68/EC

#### A.2.3.1 Fixed quantity flexibility for $130 \leq P \leq 560$ kW

The OEM has in this example already been granted an amount of 50 engines under the flexibility scheme preceding the increased allowance issued in Directive 2011/88/EU.

When new flexibility allowance of 125 engines according to Directive 2011/88/EU is sought, the granted approval has to say that the new max allowance in this power category will be a total of 125 engines during stage IIIB including the number of engines granted in any eventual earlier application.

#### A.2.3.2 Fixed quantity flexibility for $56 \leq P < 75$ kW

Application date:	January 2013
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The OEM has in this example already for the  $37 \leq P < 75$  kW power category been granted an amount of 150 engines under the flexibility scheme preceding the increased allowance issued in directive 2011/88/EU.

When new flexibility allowance of 175 engines in power category  $56 \leq P < 75$  kW according to 2011/88/EU is sought, the approval authority has in the granted approval to say that the total amount of engines in this power category will be a total of 175 engines during stage IIIB including the number of engines granted in any eventual earlier application.

Since this new application affect also engines in power category  $37 \leq P < 56$  kW (The OEM has in the previous application sent in to the approval authority example of label "MACHINE No. \_\_\_OF \_\_\_..." for the power category  $37 \leq P < 75$  kW) and now this will change due to the new application. In order to avoid holding allowances in overlapping categories the OEM must also to send in an application for new flexibility for power category  $37 \leq P < 56$  kW.

#### A.2.3.3 Percentage based flexibility for category M [ $75 \leq P < 130$ kW]

Application date:	January 2013
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The OEM has in this example already for this power category been granted an amount of 120 engines based on percentage calculation under the flexibility scheme preceding the increased allowance issued in Directive 2011/88/EU.

A calculation following the percentage allowance according to Option 1a shows that the new 37,5% allowed amount according to Directive 2011/88/EU is less than if the fixed quantity allowance for this power category.

The OEM has the option to choose fixed quantity in his new application.

## A.3 Stage IV flexibility

### A.3.1 Percentage based calculation

#### A.3.1.1 Sales ≥ 5 years

Stage in force for which flexibility is sought:	Variable speed stage IV category R [56 ≤ P < 130 kW] (effective from 01 October 2014)
Application date:	
Most recent 5-year period for which the OEM has confirmed sales records:	01 September 2009 – 31 August 2014

Year	Sales in EU 27	Sales in new EU countries
2009 (4 months)	400	
2010	1600	
2011	1800	
2012	2100	
2013	1900	6 (6 months)
2014 (8months)	1200	8
TOTAL(S)	9000	14
Annual average(s)	1800	12

<b>Resulting calculated flexibility allowance for entire stage (20%):</b>
<b>362</b>

As the sales period in the new countries are less than 5 years, the average quantity has been calculated on the effective period based on stipulation of the Directive for period of sales lower than 5 years.

**NOTE:** This is one way for calculation, other approaches are also foreseeable. As a consequence CEMA is seeking further clarification.

#### A.3.1.2 Sales < 5 years

(from Annex XIII of Directive 97/68/EC)

‘Where an OEM has placed equipment on the Union market for less than 5 years, the average shall be calculated based on the period for which the OEM has placed equipment on the Union market.’

Stage in force for which flexibility is sought:	Variable speed stage IV category R [56 ≤ P < 130 kW]
Application date:	August 2012
Period (<5 years) for which the OEM has confirmed sales records:	01 July 2011 – 30 June 2014

Year	Sales in EU 27	Sales in new EU countries
2011 (6 months)	500	
2012	1500	
2013	1600	10 (6 months)
2014 (6 months)	600	10
TOTAL(S)	4200	20
Annual average(s)	1400	20

<b>Resulting calculated flexibility allowance for entire stage (20%):</b>
<b>284</b>

As the sales period in the new countries are less than 5 years, the average quantity has been calculated on the effective period based on stipulation of the Directive for period of sales lower than 5 years.

### A.3.2 Fixed quantity

The fixed quantity allowances are those as presented in Table 2: Fixed quantity (Option 2) for the respective category and do not change depending upon previous years OEM sales on the Union market.



# Annex B

## **Request to use the flexibility provisions provided for in Annex XIII of Directive 97/68/EC**

1. Name and address of the equipment manufacturer					
2. Name, position and contact details of the person making the request					
3. Name and address of the approval authority to which the request is made					
4. Type of engine (tick box)		Variable speed		Constant speed	
5a. Option 1: Percentage of sales Category for which permission is sought to place most recent previous stage engines on the market under the percentage flexibility option (tick box)	Stage IIIA in force	19 ≤ P < 37 kW [K]		20%	
		37 ≤ P < 75 kW [J]		20%	
		75 ≤ P < 130 kW [I]		20%	
		130 ≤ P ≤ 560 kW [H]		20%	
	Stage IIIB in force	37 ≤ P < 56 kW [P]		37,5%	
		56 ≤ P < 75 kW [N]		37,5%	
		75 ≤ P < 130 kW [M]		37,5%	
		130 ≤ P ≤ 560 kW [L]		37,5%	
	Stage IV in force	56 ≤ P < 130 kW [R]		20%	
		130 ≤ P ≤ 560 kW [Q]		20%	
	5b. Option 2: Fixed quantity Category for which permission is sought to place most recent previous stage engines on the market under the fixed quantity option (tick box)	Stage IIIA in force	19 ≤ P < 37 kW		200
			37 ≤ P < 75 kW		150
75 ≤ P < 130 kW			100		
130 ≤ P ≤ 560 kW			50		
Stage IIIB in force		37 ≤ P < 56 kW		200	
		56 ≤ P < 75 kW		175	
		75 ≤ P < 130 kW		250	
		130 ≤ P ≤ 560 kW		125	
Stage IV in force		37 ≤ P < 75 kW		150	
		75 ≤ P < 130 kW		100	
		130 ≤ P ≤ 560 kW		50	
6. Quantity of engine requested to be placed on the EU market under the flexibility scheme				..... engines	
NOTES:					
<ul style="list-style-type: none"> <li>• One application required in respect to each category for which flexibility is sought.</li> <li>• Only one option 5a or 5b is permitted for each power range.</li> <li>• Requests for overlapping power categories not permitted.</li> </ul>					
7. Name and signature of the requestor					
8. Date and place of request					

# Annex C

## **Example of useful information to be stored and available to provide according to Annex XIII of Directive 97/68/EC in case of request from any approval authority**

1. Name and address of the equipment manufacturer			
2. Name and address of the approval authority who authorised the request to place engines on the EU market under the flexibility scheme			
3. Name, position and contact details of the person authorized by the OEM to provide information			
4. Type of engine (tick box)	Variable speed	Constant speed	
5a. Option 1: Percentage of sales Category for which permission is granted to place the most recent previous stage engines on the market under the percentage flexibility option (tick box)	Stage IIIA in force	19 ≤ P < 37 kW [K]	20%
		37 ≤ P < 75 kW [J]	20%
		75 ≤ P < 130 kW [I]	20%
		130 ≤ P ≤ 560 kW [H]	20%
	Stage IIIB in force	37 ≤ P < 56 kW [P]	37,5%
		56 ≤ P < 75 kW [N]	37,5%
		75 ≤ P < 130 kW [M]	37,5%
		130 ≤ P ≤ 560 kW [L]	37,5%
Stage IV in force	56 ≤ P < 130 kW [R]	20%	
	130 ≤ P ≤ 560 kW [Q]	20%	
5b. Option 2: Fixed quantity Category for which permission is granted to place the most recent previous stage engines on the market under the fixed quantity flexibility option (tick box)	Stage IIIA in force	19 ≤ P < 37 kW	200
		37 ≤ P < 75 kW	150
		75 ≤ P < 130 kW	100
		130 ≤ P ≤ 560 kW	50
	Stage IIIB in force	37 ≤ P < 56 kW	200
		56 ≤ P < 75 kW	175
		75 ≤ P < 130 kW	250
		130 ≤ P ≤ 560 kW	125
Stage IV in force	37 ≤ P < 75 kW	150	
	75 ≤ P < 130 kW	100	
130 ≤ P ≤ 560 kW	50		
6. Quantity of engines permitted by the approval authority to be placed on the EU market under the flexibility scheme NOTE: • only one option 5a or 5b is permitted.	..... engines		
7. Number of engines placed on the market under the flexibility scheme	..... engines		
8. Date and place			

### Details of the equipment with engines placed on the EU market under the flexibility scheme

Sequence No.	Machine Model	Machine PIN	Engine S/N	Engine manuf. year	Destination country

# Annex D

## **Countries applying engine emission Directive 97/68/EC**

### D.1 EU Member States & their territories

All 27 EU countries are required to apply Directive 97/68/EC within the parts of their territory that are within the EU. Some member states have overseas territories (referred to as 'outermost regions') that are part of the EU even though geographically not part of Europe, such as the Azores, the Canary Islands, Madeira, French Guiana, Guadeloupe, Martinique, Réunion, The list of such areas that are part of the EU may change over time.

The European Commission publishes a list of Member States and their associated regions that are part of the EU. This can be found at the following link:

[http://europa.eu/about-eu/countries/index\\_en.htm](http://europa.eu/about-eu/countries/index_en.htm)

[http://ec.europa.eu/regional\\_policy/activity/outermost/index\\_en.cfm#3](http://ec.europa.eu/regional_policy/activity/outermost/index_en.cfm#3)

### D.2 European Economic Area (EEA) countries

Besides the 27 EU countries, the EEA countries Norway, Iceland and Liechtenstein as well as Switzerland apply Directive 97/68/EC.

### D.3 EU Acceding country

Croatia is listed as an acceding country and will become an EU Member state on 1 July 2013. They have fully adopted the Engine emission directive.

### D.4 EU candidate countries

Iceland, The former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey are listed as EU candidate countries. Turkey has adopted the directive but they will allow stage IIIA compliant variable speed compression ignition engines 56 - 560 kW to be placed on the market during stage IIIB period.

### D.5 EU potential candidate countries

Albania, Bosnia and Herzegovina and Kosovo under UN Security Council Resolution 1244 have been registered as potential EU candidate countries.

### D.6 European microstates

European microstates, Andorra, Monaco, San Marino and the Vatican also apply Directive 97/68/EC.

### D.7 Regions that are associated with EU member states but not part of the EU

Some parts of member states are not part of the EU, despite forming part of the European continent (for example the Isle of Man and Channel Islands (Jersey and Guernsey), and the Faroe Islands.)

Several territories associated with member states that are outside geographic Europe are also not part of the EU (such as Greenland, Aruba, the Netherlands Antilles, and all the non-European British overseas territories.)

In most cases Directive 97/68/EC will not apply in these regions, though it is advisable to check for the latest situation.

### D.8 Other regions

Some other regions request machines with engines that comply with Directive 97/68/EC. These regions are not required to use Directive 97/68/EC and therefore may apply their own requirements. For example, Israel has its own flexibility scheme.

# The European Agricultural Machinery Industry

## Who we are

The European agricultural machinery industry is a successful innovative part of the engineering industry. We develop solutions for all challenges and demands from the farming sector – in Europe but also other parts of the world.

CEMA is the voice of the European agricultural machinery industry. It represents and promotes the interests of this important industry sector on a European level by co-ordinating the views of the national associations and their members. It provides know-how of the sector to the European institutions and other organizations to achieve a fair competitive environment via harmonized standards and regulations.

CEMA is a European network consisting of a Secretariat in Brussels and the National Association offices in the different countries. While the coordinating function is with the Secretariat in Brussels, much of the work of CEMA is conducted by staff of the national associations and also industry representatives. The CEMA network by this fits to the needs of the political structures of the European Union as well as the necessities of an industry with many small and medium-sized companies in addition to global players.

## What we offer

Feeding the growing world population, providing enough renewable resources and protecting the environment are core issues for today's agriculture and the whole society. To reach these targets agricultural machines are a key factor for success.

Modern agricultural machines enable farmers to:

- efficiently use the scarce agricultural area
- maximize harvest results via minimal losses and careful treatment
- use water in a targeted and responsible way for irrigation when needed
- nourish plants with exactly the amount of fertilizer not provided by the soil
- protect their crops against damage via exact dosage and targeted application to maximize the yield while protecting nature
- take the right decisions by providing all necessary information electronically
- manage their farms efficiently

The European agricultural machinery industry provides solutions for all of these challenges - from large farms around the world with several thousand hectares to family-run farms in alpine areas. There are solutions optimized specifically for small-scale organic farming needs as well as industrial-style production of renewable energy plants. The use of agricultural machinery is a prerequisite for all these farm types to be effective.

## The network

Founded more than 50 years ago CEMA is a registered international non-profit association according to Belgium law. The members of CEMA are the European national associations of the agricultural engineering industry:



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