

Kraftfahrt-  
Bundesamt



## Information Sheet

on the flexibility scheme according to Directive 97/68/EC  
(MFLEXI)

Issue: May 2014

Vehicle Technology



## Information Sheet on the flexibility scheme according to Directive 97/68/EC (MFLEXI)

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## Information Sheet on the flexibility scheme according to Directive 97/68/EC (MFLEXI)

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### 1 Introduction

Engines of non-road mobile machinery are subject to the provisions of Directive 97/68/EC relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery.

In order to give manufacturers of mobile machinery the time required for arranging the necessary machine design adaptations to a new engine type upon entering into force of a new emission standard (stage), Article 10 par. 5 proposes the flexibility scheme. This is an exemption from the required compliance with the currently applicable exhaust gas regulations which allow an engine manufacturer during a period between two successive emission standards (stage) to place on the market a limited number of specified engines, which only comply with the emission limits of the previous standard (stage).

The Directive 2011/88/EU changes the process regulated in Annex XIII of Directive 97/68/EC. In particular, the number of engines increases for which a flexibility scheme can be applied for.

For the first time, it is now possible to apply for a flexibility scheme also for engines for locomotives.

This document is designed to help applicants who want to use the flexibility scheme. The procedure described here does not constitute a legal requirement in addition to the existing relevant legislation. The information provided applies to standard cases. In special cases the Kraftfahrt-Bundesamt (KBA) may take differing decisions.

### 2 Definition of terms

#### Placing on the market

Placing on the market shall mean the initial provision of an engine, whether for consideration or not, on the market for delivery and/or use in the Community.

#### Engine category

Classification of engines with regard to their power and emission standard. The engine category is the first digit following the Base Directive number (here 97/68/EC) within the engine approval number.

#### Responsible Authority

The Authority responsible for granting approvals under the flexibility scheme is the KBA.

#### Contact

Kraftfahrt-Bundesamt  
Sachgebiet 422  
24932 Flensburg  
E-mail: 422@kba.de

#### Applicant

The flexibility scheme may only be used by manufacturers of non-road mobile machinery (machine manufacturers). Therefore all applications must be submitted by a machine manufacturer or an agent authorised by him.

#### Application requirement

The applicant has to demonstrate once that he can responsibly handle all issues in connection with the procedure and meet the obligations arising from the flexibility scheme. For this purpose, he has to complete the form Applicant's details in accordance with Annex I of this information sheet and submit a copy of the company's current entry in the register of companies.

If the applicant already holds an approval from the KBA, the self-disclosure requirement shall be dropped.

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### 3 Submitting the application

The application can be submitted by way of postal delivery or e-mail using the forms attached to Annex III, IV and V or as an informal letter. In any case however, full details have to be given.

For each engine category a separate application has to be submitted. However, several engines within the same category are pooled in one flexibility scheme (including those from different manufacturers).

The units for the flexibility scheme for stage IIIA increased by the amending Directive 2011/88/EU can also be adopted on flexibility systems which are already applied and still valid by an informal application.

#### Details of the machinery/equipment type

The type designations of the machinery and equipment to which the manufacturer wishes to fit the engines that will be placed on the market under the applied flexibility scheme have to be stated. Several types may be stated.

#### Number of engine units (not for locomotives)

The machinery manufacturer selects the method for calculating the maximum number of engines available to him. The possible options are: number of units dependent on the machinery marketed within the Community over the last five years (97/68/EC, Annex XIII, section 1.1.1 resp. 1.2.1) or a fixed number of engines (97/68/EC, Annex XIII, section 1.2.1 resp. 1.2.2).

In the case of the calculation based on the number of engines placed on the market over the last five years the number of engines marketed under a flexibility scheme must not exceed 20 % for stage II and stage IIIB engines and 37.5 % for stage IIIA engines of the OEM's annual sales of equipment with engines of that engine category (calculated as the average of the sales on the EU market over the last five years).

#### Example:

A manufacturer applies in November 2011 for a flexibility system for engine category I (emission stage IIIA, 75 kW – 130 kW). He demonstrates his sales figures for machines which were fitted with such engines by using the following list.

Nov. - Dec. 2005	400
Jan. - Dec. 2006	2,000
Jan. - Dec. 2007	1,500
Jan. - Dec. 2008	1,700
Jan. - Dec. 2009	1,300
Jan. - Oct. 2010	1,000
Total number of units over the last 5 years	7,900
Average over last 5 years	1,580
Number of engines to be placed on the market under a flexibility scheme (37.5 % of the average of last 5 years)	<b>593</b>

If an OEM has marketed equipment in the Community for a period of less than 5 years the average will be calculated based on the period for which the OEM has marketed equipment in the EU. The same applies to sales in those countries that have been EU members for less than 5 years.

In the case of placing a fixed number of engines on the market the following values are prescribed for each engine category:

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For engines stage II and stage IIIB the following values are in force:

19 kW < 37 kW *)	200
37 kW < 75 kW	150
75 kW < 130 kW	100
130 kW - 560 kW	50

\*) Valid only for stage II. For stage IIIB no flexibility scheme is needed because no stage IV exists in this power category.

For engines of stage IIIA the following values are prescribed:

37 kW < 56 kW	200
56 kW < 75 kW	175
75 kW < 130 kW	250
130 kW - 560 kW	125

### Number of engines for locomotives

For a maximum period of three years from the start of stage IIIB an OEM can apply for an approval for placing at most sixteen stage IIIA engines for powering locomotives on the market which are intended for exclusive use by the OEM. Such an approval can only be granted if there are technical reasons for that the limits of stage IIIB cannot be fulfilled.

The OEM may also apply for his engine manufacturer to bring an additional quantity of 10 engines into the market with a rated net power of more than 1 800 kW, that are exclusively for the use in locomotives in the United Kingdom. For this purpose a safety certificate has to be obtained for the operation of these locomotives in the net of the United Kingdom respectively the evidence has to be supplied that this obtaining is possible.

### Details of the engines

At the time of application to the KBA details on **type designations** and **type-approval numbers** of the engines have to be provided. If a further engine of the same category or a further machine is to be included at a later time, applicants have to inform the Authority. After checking the documents an extension to the approval will be granted.

### Sample labels/plates

Samples of the additional labels to be affixed on the machinery and engines in line with Directive 97/68/EC Annex XIII section 1.4 have to be sent together with the application.

The plate/label to be affixed to the machinery by the OEM has to include the following informations:

- Total number of machines which are equipped with an engine of the corresponding category placed on the market under the flexibility scheme
- Sequential number of the machine from the corresponding number of units
- Serial number of the engine
- Type-approval number of the engine

A general presentation of the plate structure suffices for the purpose of the sample. The engine number and/or type-approval number can be represented by wildcards since the engine serial number is not yet known at the time of application and the approval number varies if different engines are used.

### Example:

**MACHINE No. ....X.....OF.....n )\***.....  
**WITH ENGINE NUMBER: ?????????**  
**AS PER TYPE-APPROVAL NUMBER:**  
**e?97/68??\*????/??\*????\*??**

)\*: n = Total number of engines in one engine category

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The engine plate has to be affixed on the engine by the engine manufacturer and include the following wording:

Engine placed on the market under the flexibility scheme

Normally, the machinery manufacturer receives an engine plate sample from the engine manufacturer to apply for a flexibility scheme at the KBA.

If a machinery manufacturer uses engines from several engine manufacturers, a sample of each engine manufacturer has to be enclosed with the application.

Alternatively, the additional details of the machinery label or engine plate can also be included in the non-official section of any existing machine or engine type plate. Wording in English will also be accepted.

### 4 Measures after the receipt of the flexibility scheme

The Member States have the possibility to check if engines have been placed on the market and labelled in accordance with the flexibility scheme. For this purpose the machinery manufacturer has to provide all documentation requested by the relevant Authority for assessment.

The machinery manufacturer has to provide evidences on request that the number of engines approved under the flexibility scheme has not been exceeded. The machinery manufacturer is fully responsible for complying with the obligations arising from the flexibility scheme including machines manufactured by third parties.

### 5 Frequently asked questions

#### **What is the benefit of a flexibility scheme for the machinery manufacturer?**

An approved flexibility scheme allows the machinery manufacturer to order a limited number of engines from an engine supplier after a new emission stage enters into force and becomes binding. These engines need only to comply with the closest preceding emission stage.

#### **Who submits the application?**

The application has to be submitted by the machinery manufacturer.

#### **How has the application to be submitted?**

The application can be submitted informally including the details requested by the KBA either by postal delivery or by e-mail to the addresses stated. However, it is recommended to use the application forms attached here.

#### **When has the application to be submitted?**

There is no deadline applied. The machinery manufacturer has to provide evidence of a valid flexibility scheme at the time of ordering an engine from an engine manufacturer that complies with the last applicable emission stage.

#### **What documentation has to be provided together with the application?**

Section 1.4, Annex XIII of Directive 97/86/EC describes additional labels/plates which have to be affixed to the machine by the machinery manufacturer respectively to the engine by the engine manufacturer.

Samples of these two labels/plates have to be attached to the application (imagery will suffice). The machinery manufacturer will usually receive engine plate samples from the engine manufacturers on request.

#### **How much does the approval of a flexibility scheme cost?**

In accordance with the scale of fees the current fee for approval of a flexibility scheme is approx. EUR 150. This amount is independent of the number of engines and machines that may be placed on the market under the approved flexibility scheme. Extensions to existing flexibility schemes cost approx. 100,- €.

#### **May a machinery manufacturer based outside the EU apply for flexibility scheme?**

Yes.

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### How long can a flexibility scheme be used?

A flexibility scheme can be used for the period between two emission stages. If there is no subsequent stage the flexibility scheme is limited to the maximum permissible number of engines.

**Exception:** In the case of stage IIIA the flexibility scheme is additionally limited in time for a maximum of three years. Only within this period the engines can be placed on the market by the engine manufacturer.

### By what date is a flexibility scheme required?

A flexibility scheme is required for constant speed engines of stage II for the respective engine categories from:

Cat. D	(19 kW < 37 kW)	1 <sup>st</sup> Jan. 2011
Cat. E	(130 kW - 560 kW)	1 <sup>st</sup> Jan. 2011
Cat. F	(75 kW < 130 kW)	1 <sup>st</sup> Jan. 2011
Cat. G	(37 kW < 75 kW)	1 <sup>st</sup> Jan. 2012

for other engines than constant speed engines of stage IIIA for the respective engine categories from:

Cat. H	(130 kW - 560 kW)	1 <sup>st</sup> Jan. 2011
Cat. I	(75 kW < 130 kW)	1 <sup>st</sup> Jan. 2012
Cat. J	(56 kW < 75 kW)	1 <sup>st</sup> Jan. 2012
Cat. J	(37 kW < 56 kW)	1 <sup>st</sup> Jan. 2013

and for other engines than constant speed engines of Stage IIIB for the respective engine categories from:

Cat. L	(130 kW - 560 kW)	1 <sup>st</sup> Jan. 2014
Cat. M	(75 kW < 130 kW)	1 <sup>st</sup> Oct. 2014
Cat. N	(56 kW < 75 kW)	1 <sup>st</sup> Oct. 2014

### How verifies the manufacturer the number of machines which were placed on the market over the last 5 years in the EU?

In the case of calculation based on the number of engines placed on the market over the last five years (Dir. 97/68/EC, Annex XIII, point 1.2) the manufacturer attaches a list of sold machines for the corresponding period to the application. This list has to show the year of sale and the engine type approval numbers.

### Are different types of engines covered by one flexibility system?

A single flexibility system can include different types of engines of one engine category (also including different engine manufacturers).

### What is an engine type-approval number?

The engine manufacturer will receive a type-approval number for an engine type approved under Directive 97/68/EC. The type-approval number has to be stated on the engine type plate.

### Are existing storage engines removed from the engine number approved by the flexibility system No.

### What is a storage engine?

Engines that have been manufactured before the subsequent emission stage became binding are termed storage engines. They can be placed on the market by the **engine manufacturer** 24 months beyond the date on which the next emission stage takes effect and becomes binding.



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### Annex I (Applicant's details)

#### A General details of the machinery manufacturer

Official name:

[as per Company Register]

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Address:

---

Telephone number:

---

Telefax number:

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E-mail address:

---

Managing Director:

---

Technical Director:

---

Production programme:

[brief description of the machinery and equipment that is intended to be equipped with the engines]

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Applications for flexibility schemes are submitted

by a machinery manufacturer

by an authorised agent of the machinery manufacturer.

Who (individual or organisational unit of this entity) normally applies for flexibility schemes and extensions and is the general contact for the Krafftahrt-Bundesamt?

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Address to which all communications and notifications should be sent:

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Who will pay the fees?

The machinery manufacturer

The following entity

The following entity: [a contract must be submitted, see Annex II of the **Information Sheet on the flexibility scheme according to Directive 97/68/EC (MFLEXI)**]

Name: \_\_\_\_\_

Street, number: \_\_\_\_\_

Post code, Town: \_\_\_\_\_

Country: \_\_\_\_\_

### **B Quality control details**

#### **a) Control of labelling the supplied engines:**

\_\_\_\_\_  
Type of control:

\_\_\_\_\_  
Responsible department and responsible person, if applicable:

#### **b) Control of labelling the finished machinery:**

\_\_\_\_\_  
Type of control:

\_\_\_\_\_  
Responsible department and responsible person, if applicable:

#### **c) Control of the number of units of fitted engines:**

\_\_\_\_\_  
Type of control:

\_\_\_\_\_  
Responsible department and responsible person, if applicable:

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**d) Defects found in relation to items a) to c):**

.....  
Procedure in case of defects found:

.....  
Responsible department and responsible persons, if applicable:

**e) Overall responsibility for quality control:**

.....  
Responsible department and responsible persons, if applicable:

.....

.....  
(Official name of the machinery manufacturer)

.....  
(Date)

.....  
(Name and signature)

**Enclosure:** Current excerpt from the Company Register (copy)

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### Annex II (Agreement on payment of fees)

We

.....  
(Company or individual who will pay the fees, for companies, please state official company name)

.....  
(Street)

.....  
(Town)

.....  
(Country)

agree herewith to pay all costs incurred by the company

.....  
(Applicant)

.....  
(Street)

.....  
(Town)

.....  
(Country)

in connection with the approval of a flexibility scheme according to Directive 97/68/EC at the Kraftfahrt-Bundesamt.

.....  
(Place, date)

.....  
(Name (official company name if applicable) and signature)

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### Annex III (Application for a flexibility scheme (stage II))

Kraftfahrt Bundesamt  
Sachgebiet 422  
24932 Flensburg

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Email: \_\_\_\_\_

Dear Sir or Madam,

we herewith apply for a flexibility scheme to be granted according to Annex XIII of Directive 97/68/EC for our

**Type/Types** (Machinery type(s)/OEM-Type(s)): \_\_\_\_\_ ,  
to be fitted with **stage II** engines.

We require

according to Annex XIII, section 1.1.1 \_\_\_\_\_ engines.  
(20 % of the annual sales of machinery with engines of that category)

According to Annex XIII, section 1.1.2 (fixed number of engines)

200 (19 < 37 kW) engines.

150 (37 < 75 kW) engines.

100 (75 < 130 kW) engines.

50 (130 – 560 kW) engines.

Engine type(s): \_\_\_\_\_

Type-approval number(s)  
of the engine type(s): \_\_\_\_\_

Yours sincerely

\_\_\_\_\_  
Date and signature

### Enclosures:

- Sample machine label/plate in accordance with 97/68/EC Annex XIII section 1.4
- Sample engine label/plate in accordance with 97/68/EC Annex XIII section 2.2

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### Annex IV (Application for a flexibility scheme (stage IIIA))

Kraftfahrt Bundesamt  
Sachgebiet 422  
24932 Flensburg

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Email: \_\_\_\_\_

Dear Sir or Madam,

we herewith apply for a flexibility scheme to be granted according to Annex XIII of Directive 97/68/EC for our

**Type/Types** (Machinery type(s)/OEM-Type(s)): \_\_\_\_\_ ,  
to be fitted with **stage IIIA** engines.

We require

according to Annex XIII, section 1.2.1 \_\_\_\_\_ engines.  
(37,5 % of the annual sales of machinery with engines of that category)

According to Annex XIII, section 1.2.2 (fixed number of engines)

200 (37 < 56 kW) engines.

175 (56 < 75 kW) engines.

250 (75 < 130 kW) engines.

125 (130 – 560 kW) engines.

Engine type(s): \_\_\_\_\_

Type-approval number(s)  
of the engine type(s): \_\_\_\_\_

Yours sincerely

\_\_\_\_\_  
Date and signature

### Enclosures:

- Sample machine label/plate in accordance with 97/68/EC Annex XIII section 1.4
- Sample engine label/plate in accordance with 97/68/EC Annex XIII section 2.2

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**Annex V (Application for a flexibility scheme (stage IIIB))**

Kraftfahrt Bundesamt  
Sachgebiet 422  
24932 Flensburg

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Email: \_\_\_\_\_

Dear Sir or Madam,

we herewith apply for a flexibility scheme to be granted according to Annex XIII of Directive 97/68/EC for our

**Type/Types** (Machinery type(s)/OEM-Type(s)): \_\_\_\_\_ ,  
to be fitted with **stage IIIB engines**.

We require

according to Annex XIII, section 1.1.1 \_\_\_\_\_ engines.  
(20 % of the annual sales of machinery with engines of that category)

According to Annex XIII, section 1.1.2 (fixed number of engines)

150 (56 < 75 kW) engines.

100 (75 < 130 kW) engines.

50 (130 – 560 kW) engines.

Engine type(s): \_\_\_\_\_

Type-approval number(s)  
of the engine type(s): \_\_\_\_\_

Yours sincerely

\_\_\_\_\_  
Date and signature

**Enclosures:**

- Sample machine label/plate in accordance with 97/68/EC Annex XIII section 1.4
- Sample engine label/plate in accordance with 97/68/EC Annex XIII section 2.2

## Legal notice

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● ● ● ● ● We score with road safety!