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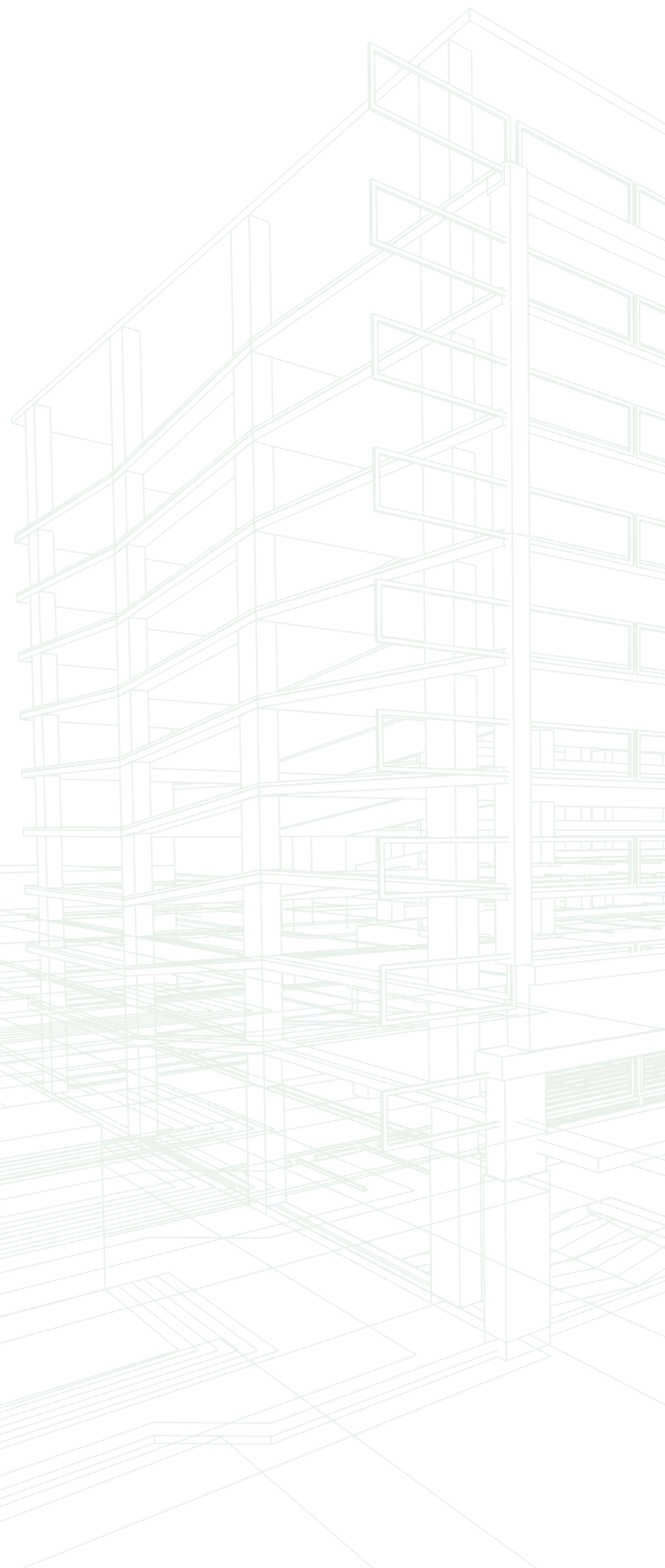


# Non-Road Mobile Machinery (NRMM) Practical Guide v.6

January 2024

# Abbreviations

<b>AQ</b>	Air Quality
<b>CAZ</b>	Central Activities Zone
<b>CCFL</b>	Cleaner Construction For London
<b>CEMP</b>	Construction Environmental Management Plan
<b>CLP</b>	Construction Logistics Plan
<b>GL</b>	Greater London
<b>GLA</b>	Greater London Authority
<b>HGV</b>	Heavy Goods Vehicle
<b>LEZ</b>	Low Emission Zone
<b>MEWP</b>	Mobile Elevated Working Platform
<b>NOx</b>	Oxides of Nitrogen
<b>NRMM</b>	Non-Road Mobile Machinery
<b>OA</b>	Opportunity Area
<b>PM</b>	Particulate Matter
<b>SPG</b>	Supplementary Planning Guidance
<b>TAN</b>	Type Approval Number
<b>ULEZ</b>	Ultra Low Emission Zone



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# Section 1: Introduction

## 1.1 Background

The London Atmospheric Emissions Inventory 2019 estimates that NRMM exhaust emissions in construction are responsible for approximately 70 Tonnes of Particulate Matter (PM) and 1350 Tonnes of toxic Oxides of Nitrogen (NOx) emissions in London each year.

As other industries address their contribution to poor Air Quality the construction industry must also make changes to safeguard the health of their employees and the public. In 2015 the Mayor of London introduced bold new standards for machinery used on construction and demolition sites to combat this, in the form of an NRMM Low Emission Zone (LEZ).

Cleaner Construction is a London-wide Local Government initiative working in partnership with the construction industry to improve air quality.

## 1.2 Purpose

This document provides guidance on the London NRMM Low Emission Zone, including the processes and procedures that must be in place on all development sites to comply with the policy. It also signposts future changes to the policy.

It is intended as a guide for contractors, Local Authorities and other regulators, suppliers and developers to better understand what is expected of sites.

Model planning conditions are also given for Local Authorities to apply to relevant sites. In the interest of good practice, all sites are expected to comply with the requirements set out within this document regardless of whether or not planning conditions apply. However, it is strongly advised that the model planning condition (section 3.4) is put in place by Local Authorities.

This guidance document should be considered in conjunction with construction logistics planning, dust controls and monitoring, to minimise emissions from construction and demolition sites.

## 1.3 Contact us

If you have any questions or would like to speak to someone about the NRMM requirements in London, please email [nrmm.london@merton.gov.uk](mailto:nrmm.london@merton.gov.uk)

# Section 2: Key Definitions

## 2.1 Definition of NRMM

NRMM is defined as any mobile machine or vehicle that is not solely intended for carrying passengers or goods on the road. Generally, this includes all machinery on site, even those with road going registration plates, such as telehandlers and dumpers, as well as those that are not self-propelled, such as generators and compressors.

The NRMM LEZ only applies to machines on construction and demolition sites, with rated power outputs between 37-560kW.

### Examples of NRMM include, but are not limited to:

- Excavators
- Dumpers
- Piling Rigs
- Generators
- Mobile cranes
- MEWPs
- Static Pumps
- Compressors
- Crushers
- Telehandlers
- Pavers
- Bulldozers

## 2.2 Central Activity Zone and Canary Wharf

The Central Activity Zone (CAZ) and Canary Wharf are defined areas of Central London where more stringent NRMM emission standards are in place.

## 2.3 Opportunity Areas

Opportunity Areas are London's major source of brownfield land having significant capacity for development. The impacts of these dense areas of redevelopment need to be minimised. Therefore, emission standards in these areas match those in the CAZ and Canary Wharf.

## 2.4 NRMM development zones map

An online map of the CAZ, Canary Wharf, and Opportunity Area boundaries is available here: <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/nrmm>

If any area of the site is within the CAZ, Canary Wharf, or an Opportunity Area, the whole site needs to comply with the CAZ emission standards.

The map allows you to enter a post code or pinpoint the site location to identify which standards you need to meet.

# Section 3: The Requirements

## 3.1 Current requirements

NRMM on all sites within Greater London is required to meet Emission Stage IIIB as a minimum; and NRMM on all sites within either the Central Activities Zone (CAZ) or Opportunity Areas (OAs) is required to meet Emission Stage IV as a minimum.

The site and all in-scope machinery (37-560kW) must be registered on the GLA NRMM Website (see Section 3.2).

Generators are required to meet Emission Stage V across the whole of London. When bringing a generator to site, you must ask your supplier for a Stage V generator. If a suitable Stage V solution is not available for the site, you will need to apply for an exemption (see Section 4.5).

	Zone	
	Greater London	Central Activity Zone / Opportunity Areas
Generators	V	V
All other machine types	IIIB	IV

Figure 1: Current requirements

Some types and sizes of machine are not manufactured at Emission Stages IIIB or IV. In those cases sites are still expected to comply with the minimum standards, which means sourcing equipment that meets EU Stage V.

In certain circumstances the supply of compliant equipment can be limited. Therefore, the GLA will continue to manage exemption requests on a case by case basis. Exemptions can be applied for on the NRMM online register (see Sections 3.2 & 4.5).

If you are unable to procure machinery of the required emission standard by original engine stage or retrofit, you will need to apply for an exemption (see Section 4.5). To qualify for an exemption, you will need to prove that compliant equipment, including retrofit solutions are not available. The best possible emission stage must be met.

Where non-compliance is identified, action must be taken within 5 working days, whether this be removing the machine from site, acquiring supporting documentation, or adding to the NRMM Register.

Any machine that is labelled as "uncertified", or words to that effect, must be removed from site as soon as possible. There is no scope for an exemption or retrofit for these machines. If an engine has been labelled incorrectly, the owner of the machine can contact the Vehicle Certification Agency (VCA) to seek permission to relabel the machine here: <https://www.vehicle-certification-agency.gov.uk/get-in-touch/>. The machine will still need to be removed from site while permission is sought.

### 3.2 Online register

Sites where the NRMM Low Emission Zone applies are required to log all machinery online using this register:

<https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/nrmm>

The register is designed as a live record of machinery on site during the course of the development, and must be kept up to date throughout the development. You will need to create an account before you can register sites and machinery.

Once you have an account you can register a site, invite others to access your site records, and accept invitations to register machinery at someone else's site.

When you are registering a new site, you will be able to drop a pin on the site location webmap or enter the site's post code to identify which emission zone your site is in.

Local Authority users can request to view machinery and site details in their region through the register.

### 3.3 Future of the Requirements

From **1st January 2025** the CAZ, Opportunity Areas and Greater London zones will no longer have different emission standards. All NRMM on all sites within Greater London will be required to meet Stage IV as a minimum. Generators will continue to be required to meet Stage V.

From **1st January 2030** all NRMM within Greater London will need to meet Stage V as a minimum.

The Mayor of London aims for London to be zero emissions from NRMM by **1st January 2040**.

	NRMM LEZ Zone	
	Greater London	CAZ / Canary Wharf / Opportunity Area
Current	Stage IIIB	Stage IV
From 1st January 2025	Stage IV	Stage IV
From 1st January 2030	Stage V	Stage V

Figure 2: Upcoming requirements

### 3.4 Model Planning Condition

The NRMM LEZ applies to all construction and demolition sites within Greater London. The following planning condition should be placed on those developments in order to help mitigate their impact on air quality and safeguard the health of those who work on site.

*"All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards set out in chapter 7 of the GLA's supplementary planning guidance "Control of Dust and Emissions During Construction and Demolition" dated July 2014 (SPG), or subsequent guidance. Unless it complies with the standards set out in the SPG, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority. The developer shall keep an up to date list of all NRMM used during the demolition, site preparation and construction phases of the development on the online register at <https://nrmm.london/> "*

# Section 4: Recommended Management Procedures

## 4.1 Roles and Responsibilities

The Principal Contractor has overarching responsibility for NRMM Compliance on site.

All machinery, including that which is used by sub-contractors, is required to be compliant. It is strongly recommended that appropriate conditions are made within contracts between Principal Contractors, Sub-contractors and suppliers to ensure that only compliant machinery is brought to site.



## 4.2 Physical Checks

It is strongly recommended that the Principal Contractor reminds contractors and suppliers of the Emission Stage required at the site location. Type Approval Numbers (TANs) for in-scope machines should be requested prior to arrival where possible (see section 5.2 for how to interpret TANs).

Engines should be checked on arrival to ensure that the machine is compliant, and that the declared TAN is correct and visible on the engine (appendices 2 & 3 show example Type Approval Plates).

If the TAN is not evident, is incorrect, or evidences that the machine is non-compliant, this can then be addressed immediately, by replacing the machine, seeking further documentation, or arranging for a retrofit as appropriate.

All sites should have a nominated NRMM contact who keeps the NRMM register up to date and liaises with the Local Authority during an NRMM inspection. When machinery arrives, the nominated NRMM contact should be notified and supplied with the required emission information. This emissions information should be double-checked during internal environmental audits/routine checks to ensure the machinery is compliant and the NRMM online register is up to date.

A compliance checklist flowchart is shown in Appendix 1.



## 4.3 Suppliers

If you own your machinery, or hire machinery out, it is advisable to add bespoke labels to your machines containing the EU Emission Stage and Type Approval Number. Because the Emission Stage is given as a code (shown in Section 5.2), and the engine plate can be tricky to locate, sites often struggle to assess machines for compliance. Clear in-house labelling often makes life easier for site managers and other customers, and can reduce the number of NRMM compliance queries you receive. There are some national labelling schemes that you can adopt, or you can make these labels yourselves. The original engine labelling must not be removed or obscured. Additional labels are for the benefit of site and fleet management only.

Justification for exemptions can also be complex, and almost always requires a statement from the supplier/owner of the machine. Having statements and evidential documentation pre-prepared can simplify the application process.

Our team are happy to help with the introduction of any processes, fleet inspections, and assess your options when considering fleet upgrades. Please feel free to contact us at [nrmm.london@merton.gov.uk](mailto:nrmm.london@merton.gov.uk).

## 4.4 Retrofits

Only retrofit technology that has been endorsed by the Energy Saving Trust NRMM certification scheme should be installed on machinery to ensure the retrofit is correctly specified and fitted. A list of suppliers and endorsed products can be found on the Energy Savings Trust's website here: <https://energysavingtrust.org.uk/service/non-road-mobile-machinery-certification/>

Retrofit suppliers must ensure adequate identifying information is displayed on each retrofit. A certificate of installation must be supplied with the product to enable sites to easily demonstrate compliance. In addition to product and emission information, the certificate must also include details of the machine on which it is installed (i.e. serial numbers). Copies of certificates for all retrofits on site need to be readily accessible for inspection, either as paper copies or saved electronically.

Copies of retrofit certificates should also be uploaded to the website as supporting information.

To guarantee compliance, the retrofit product must reduce both Particulates (PM) and Oxides of Nitrogen (NOx) emissions to the required levels. Bear in mind that different types of retrofit achieve different emission reductions, and some retrofits do not guarantee compliance in all London Zones. If in doubt, please contact us at [nrmm.london@merton.gov.uk](mailto:nrmm.london@merton.gov.uk), and we can help you identify which products guarantee compliance for your machinery. The GLA will continue to manage exemption requests on a case by case basis where it is not yet possible to achieve the required emission level. Space within the engine compartment and safety may also be limiting factors.

## 4.5 Exemptions

All NRMM with a power output between 37kW and 560kW must be registered on the GLA NRMM Register, regardless of any exemptions that the machine may qualify for. Exemptions can only be applied for through the GLA Register.

While the exemption requests are awaiting approval the exemption is active, however these applications may be refused and sites should be prepared to remove the machine from site in such cases to prevent non-compliance. The GLA aim to respond to exemption requests within 10 working days.

If you would like to appeal an exemption decision please get in touch with us at [nrmm.london@merton.gov.uk](mailto:nrmm.london@merton.gov.uk).

The full exemption & retrofit policy is available on the NRMM online register.

**Viability (Other) Exemptions:** Some site operations require particular machine specifications, such as a certain size, weight or load-bearing. In some cases this can significantly limit the availability of compliant equipment. If you have tried but are unable to procure machinery at the required Emission Stage, you should apply for a Viability Exemption online. For the exemption to be granted the machine must meet the next best possible emission standard and reasonable justification must be given for why the required stage cannot be met. Evidence must be provided to demonstrate that compliant equipment and retrofit solutions are not available, such as statements from suppliers and/or manufacturers.

Exemptions are not guaranteed. Submitted evidence is reviewed on a case-by-case basis taking into account the nature of the request and supply at the time of the exemption request. For this reason it is advisable to check availability of compliant equipment with several suppliers. Once accepted, this exemption lasts for 1 year, after which time you will need to re-apply for the exemption.

If the exemption is granted you will also be given a unique reference number, which can be used for subsequent deployments of the machine within that 1 year time period.

**Short Term (Emergency) Exemption:** Where emergencies arise (e.g. site flooding) a short term exemption can be granted to enable non-compliant NRMM to remain on site for up to 30 days. Due to the nature of such emergencies, these exemptions can be applied for retrospectively.

Short term exemptions can also be applied for if the machine is awaiting the installation of a retrofit. Evidence that retrofit equipment has been ordered, such as copies of correspondence, purchase orders, invoices or quotations, must be uploaded with the exemption request on the GLA NRMM register.

### Generators

Battery alternatives now exist for some site power applications, which can remove the need for a generator entirely. However, if you need to bring a generator to site, you must ask your supplier for a Stage V generator. If a suitable Stage V solution is not available, you will need to apply for an exemption.

Exemption requests for generators must include:

- Evidence that the site has requested a Stage V generator from the supplier.
- Details of the suppliers current Stage V fleet and orders to demonstrate that the supplier is quickly moving towards a Stage V fleet.
- Loading data (or equivalent) to demonstrate loading issues on site where applicable, and what load management technology was considered to overcome this (e.g. Smart distribution boards, Battery/Flywheel energy storage etc).

Generator exemptions are case-specific. If the generator is redeployed to another site or to another power application (for example from powering site welfare to powering a tower crane), a new exemption request must be made.

If in doubt, please contact us at [nrmm.london@merton.gov.uk](mailto:nrmm.london@merton.gov.uk).

# Section 5: Inspections

## 5.1 Health and Safety

Site health and safety procedure must be followed at all times during NRMM inspections. If for health and safety reasons a particular item of NRMM on site cannot be inspected, the person carrying out the inspection should ask to see the appropriate documentation for that machine. Evidence for the compliance of those machines must be kept on site to be made available to the auditor on request.

## 5.2 Reading Type Approval Plates

Approved engines have an emission EC Type Approval Number (TAN), found on the engine's emission Type Approval plate. This should be permanently fixed to the engine, and durable for its operational lifetime. The exact location of the Type Approval plate varies from one machine to another.

The number takes one of the three following formats.

The TAN for engines meeting emission stages between I and IV take the following format:

**e11\*97/68PA\*2004/26\*XXXX\*YY**

(Note that this is an example and not a real Type Approval Number)

- e11\*** the member state authority that tested the engine
- 97/68** the original EC base legislation the approval is for
- P** the encoding letter of the EU Emissions Stage (**Emission Code**)
- A\*** variable speed (A) or constant speed (B) engine
- 2004/26\*** the latest level of the legislation that the approval relates to
- XXXX\*** the identification number of the manufacturer or importer
- YY** indicates if the approval has any revisions

Using the tables below, an engine's EU Emissions Stage and Power Band (kW) can be identified from the **Emission Code** in the Type Approval Number. Note that Encoding letters D and K indicate Power Band 19kW – 37kW which are currently outside of the kW threshold of the NRMM requirements.

Emission Code	Emission Stage	Power Bands
A	EU Stage I	130 ≤ kW ≤ 560
B		75 ≤ kW < 130
C		37 ≤ kW < 75
D	EU Stage II	18 ≤ kW < 37
E		130 ≤ kW ≤ 560
F		75 ≤ kW < 130
G	EU Stage IIIA	37 ≤ kW < 75
H		130 ≤ kW ≤ 560
I		75 ≤ kW < 130
J	EU Stage IIIB	37 ≤ kW < 75
K		18 ≤ kW < 37
L		130 ≤ kW ≤ 560
M	EU Stage IV	75 ≤ kW < 130
N		56 ≤ kW < 75
P		37 ≤ kW < 56
Q	EU Stage IV	130 ≤ kW ≤ 560
R		56 ≤ kW < 130

The TAN for engines meeting EU Stage V can take either of the following formats:

**e11\*2016/1628\*2016/1628EV4/D\*XXXX\*YY**

(note that this is an example and not a real Type Approval Number)

- e11\*** the member state authority where the engine was tested
- 2016/1628\*** the original EC base legislation that the type approval is for
- 2016/1628** the latest amendment to the EC legislation
- EV4** engine category identification code (**Emission Code**)
- /D\*** fuel type (D = diesel)
- XXXX\*** sequential number of type approval
- YY** extension number of the type approval (optional)

Within the Emission Code, V indicates a variable speed engine, while C indicates a constant speed engine.

**OR**

**e11 EV4/D V-XXXX**

(note that this is an example and not a real Type Approval Number)

- e11** the member state authority where the engine was tested
- EV4** engine category identification code (**Emission Code**)
- /D** fuel type (D = diesel)
- V** EU Emission Stage
- XXXX** sequential number of type approval

Within the Emission Code, V indicates a variable speed engine, while C indicates a constant speed engine.

Emission Code	Emission Stage	Power Bands
EV6 / EC6	EU Stage V	130 ≤ kW ≤ 560
EV5 / EC5		56 ≤ kW < 130
EV4 / EC4		37 ≤ kW < 56

Example Type Approval Plates with explanations of what information can be gathered from them are available in Appendix 2 & 3.

## 5.3 Difficulty locating the Type Approval Number

Engine plates are sometimes difficult to locate. If you are having trouble finding a Type Approval plate you should get in touch with the supplier or manufacturer who may be able to tell you where it is located.

If no Type Approval Number is evident on the machine, or if it cannot be read for any reason, then appropriate documentation must be obtained and kept as evidence of the engine's compliance.

This can be either:

- A Type Approval Certificate issued by a Type Approval Authority
- OR**
- A Declaration of Conformity from the manufacturer; showing the Type Approval Number for that engine.

Example Type Approval Certificates and acceptable Declarations of Conformity from the manufacturer are shown in Appendix 4. Adequate identifying information linking the engine to the Type Approval Certificate must be visible on both the machine and certificate for the machine to be compliant.

If no Type Approval Number is evident on the machine, or if it cannot be read for any reason, and suitable documentation is not available, the machine is non-compliant in all of London.

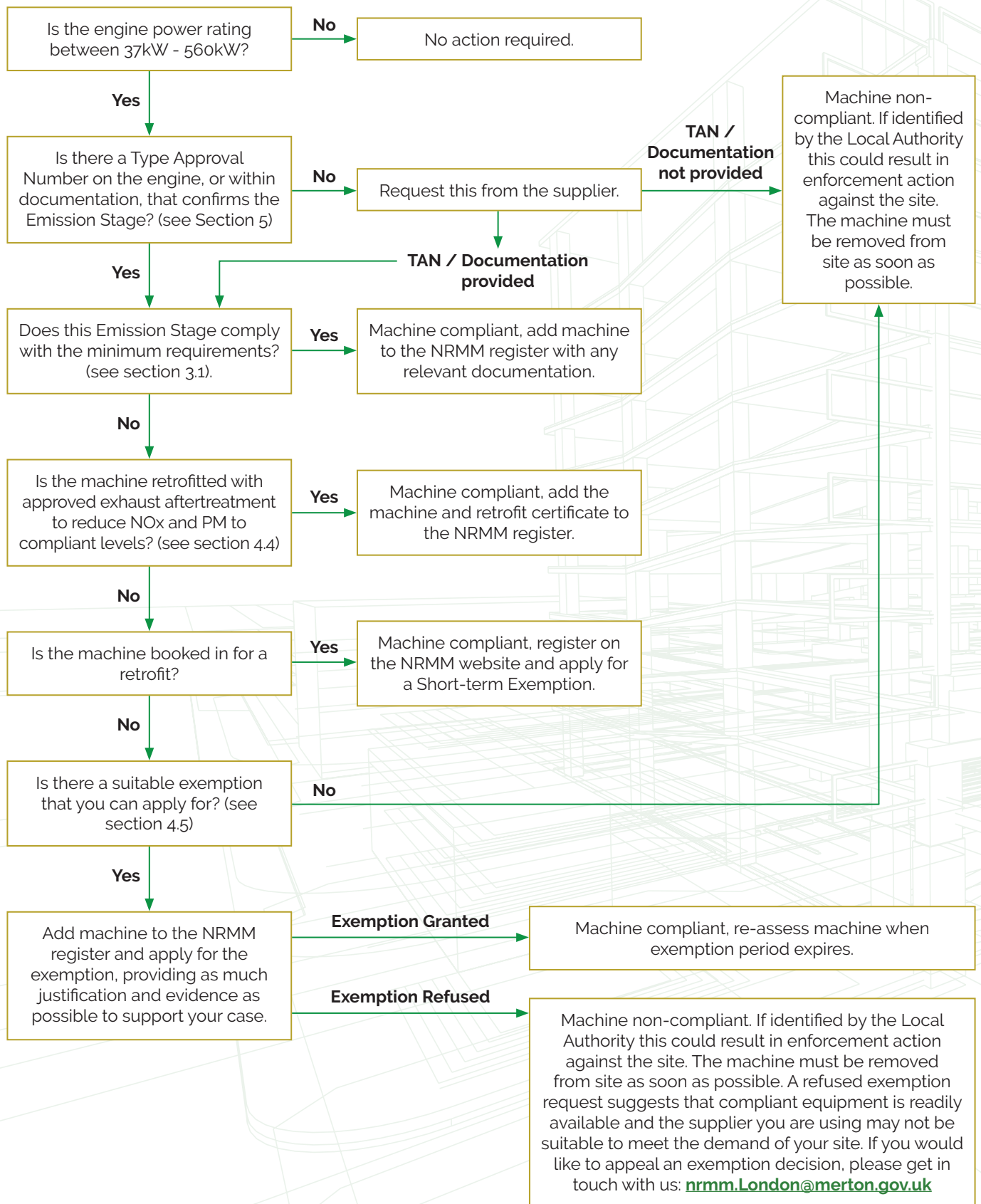
US EPA approval under the 'Tier' system is not an accepted equivalent for the NRMM Low Emission Zone.

## 5.4 Inaccessible machinery

Inaccessible machinery should be treated in the same way as an engine plate that cannot be read. Evidence for the compliance of those machines must be kept on site to be made available to the Local Authority on request. This applies to any area where it would not be expected for a site visitor to be able to access, including exclusion zones and areas where specialist health and safety requirements apply.

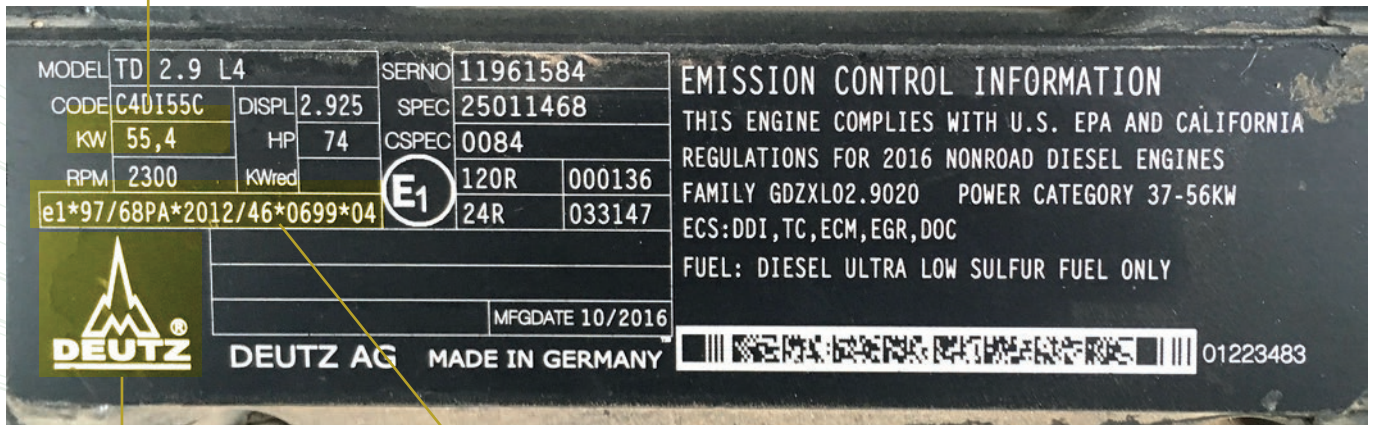
# Appendices

## Appendix 1: Compliance checklist flowchart



## Appendix 2: Example Type Approval Plates (Stage I – IV)

Power output: **55.4 kW**

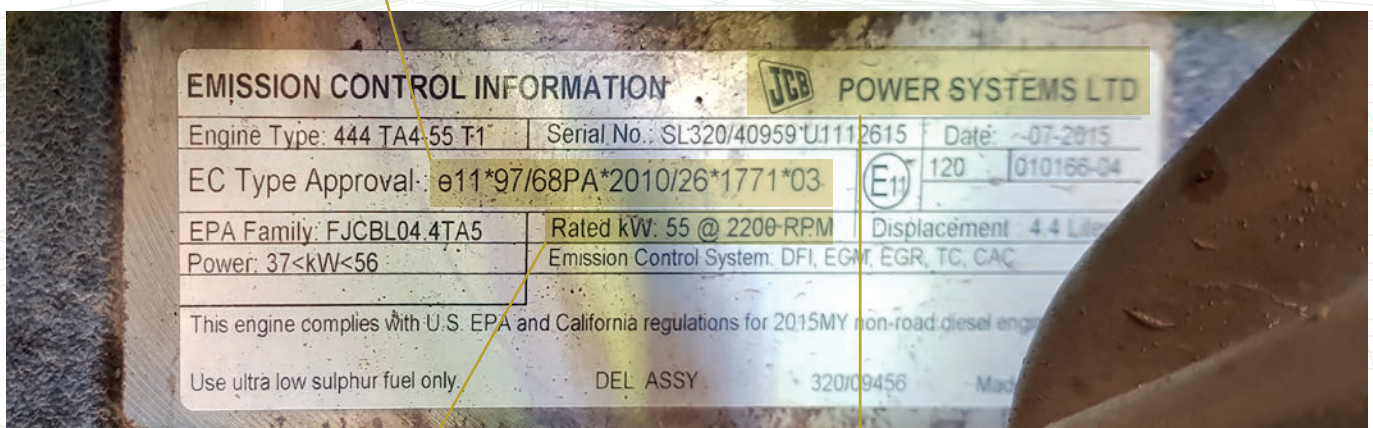


Manufacturer: **Deutz**

Type Approval Number:  
**e1\*97/68PA\*2012/46\*0699\*04**

Manufacturer	<b>Deutz</b>
Power Output (kW)	<b>55.4</b>
Type Approval Number	<b>e1*97/68PA*2012/46*0699*04</b>
EU Emission Stage	<b>Stage IIIB</b>

Type Approval Number:  
**e11\*97/68PA\*2010/26\*1771\*03**



Power output: **55 kW**

Manufacturer: **JCB**

Manufacturer	<b>JCB</b>
Power Output (kW)	<b>55</b>
Type Approval Number	<b>e11*97/68PA*2010/26*1771*03</b>
EU Emission Stage	<b>Stage IIIB</b>

Type Approval Number:  
**e1\*97/68GA\*2001/63\*0141\*00**

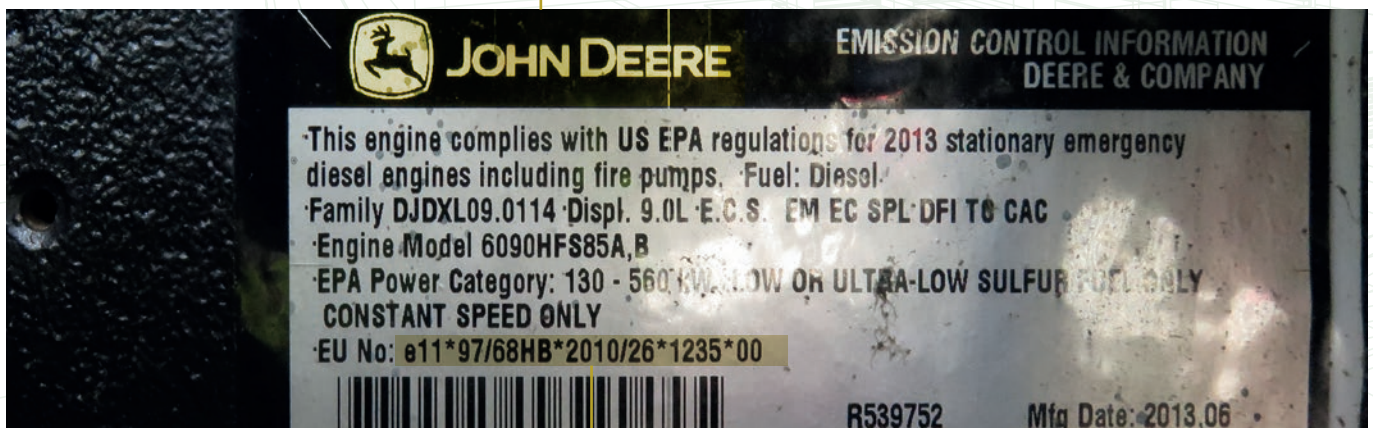
Manufacturer: **Kubota**

Power output: **44 kW**



Manufacturer	<b>Kubota</b>
Power Output (kW)	<b>44</b>
Type Approval Number	<b>e1*97/68GA*2001/63*0141*00</b>
EU Emission Stage	<b>Stage II</b>

Manufacturer: **John Deere**



Type Approval Number:  
**e11\*97/68HB\*2010/26\*1235\*00**

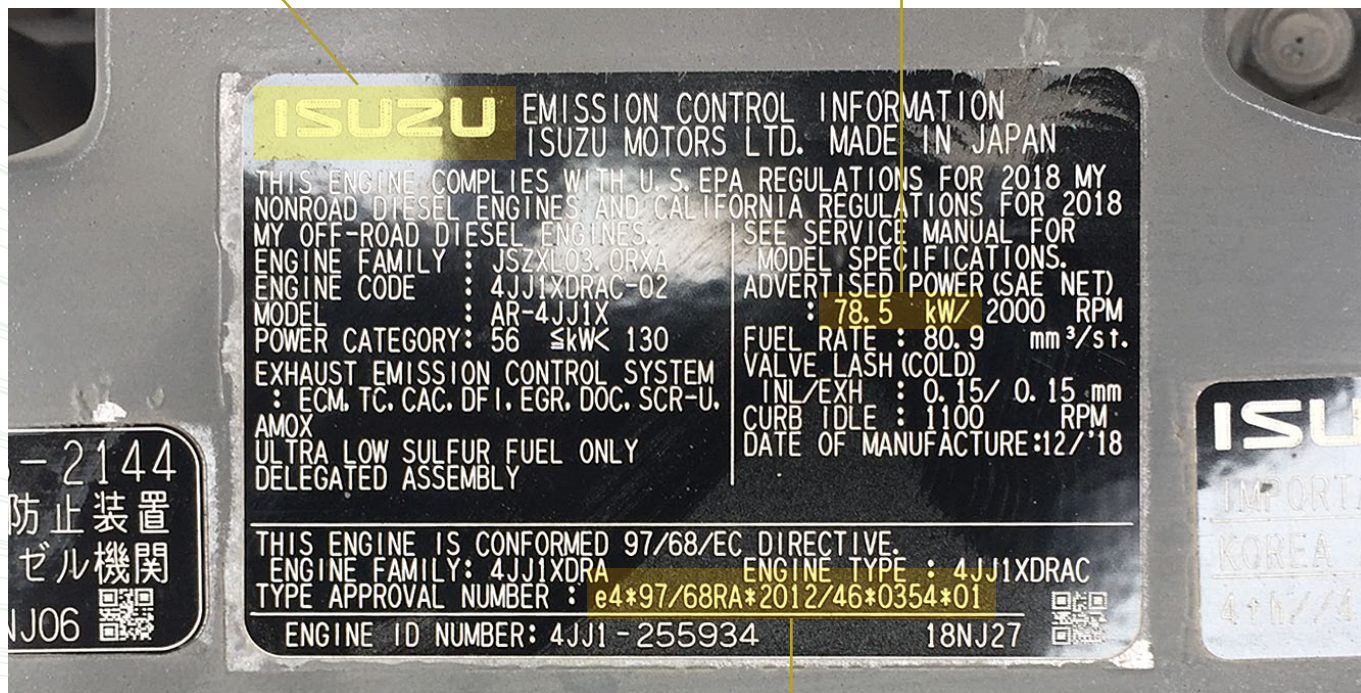
Power output:  
**Not shown, check external plates**

Manufacturer	<b>John Deere</b>
Power Output (kW)	<b>Not shown, check external plates</b>
Type Approval Number	<b>e11*97/68HB*2010/26*1235*00</b>
EU Emission Stage	<b>Stage IIIA</b>



Manufacturer: **Isuzu**

Power output: **78.5 kW**

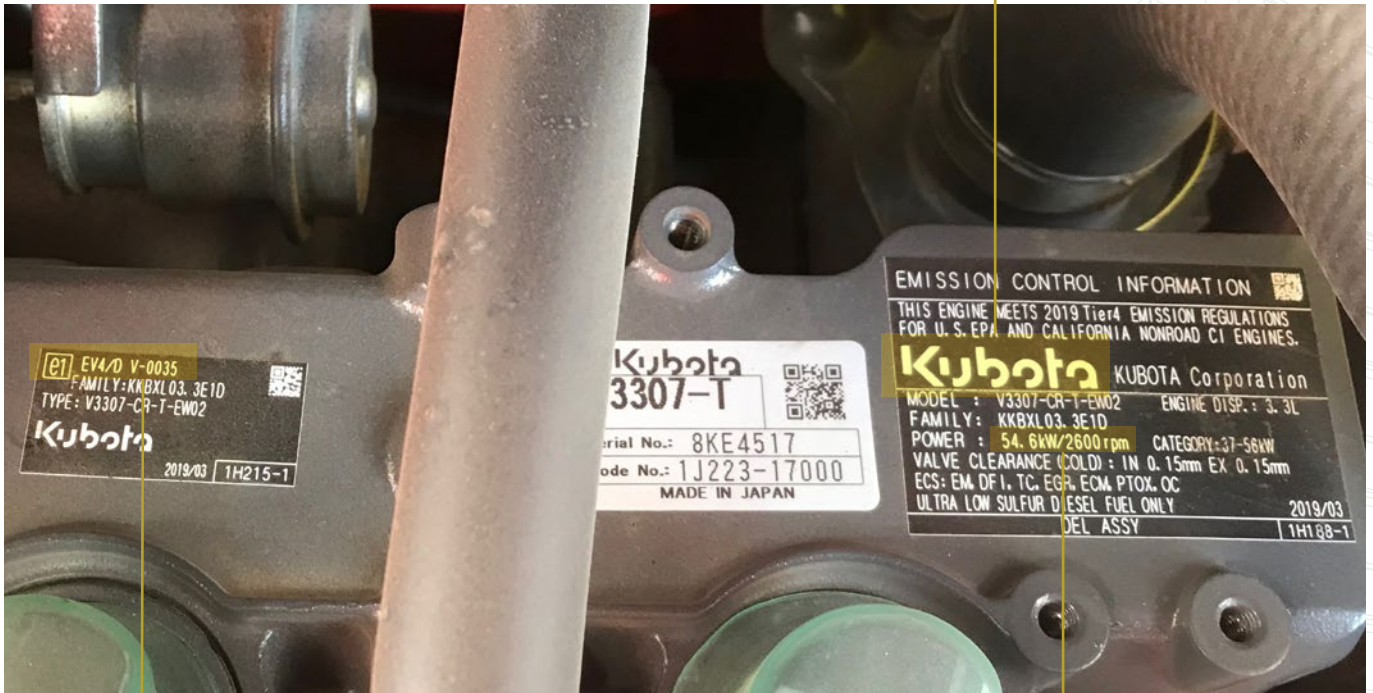


Type Approval Number:  
**e4\*97/68RA\*2012/46\*0354\*01**

Manufacturer	<b>Isuzu</b>
Power Output (kW)	<b>78.5</b>
Type Approval Number	<b>e4*97/68RA*2012/46*0354*01</b>
EU Emission Stage	<b>Stage IV</b>

## Appendix 3: Example Type Approval Plates (Stage V)

Manufacturer: **Kubota**



Type Approval Number:  
**e1 EV4/D V-0035**

Power output: **54.6 kW**

Manufacturer	<b>Kubota</b>
Power Output (kW)	<b>54.6</b>
Type Approval Number	<b>e1 EV4/D V-0035</b>
EU Emission Stage	<b>Stage V</b>

Manufacturer: **Komatsu**

<b>KOMATSU</b> Komatsu Ltd. Made in Great Britain		Engine No. 22352773	EPA STD / FEL CARB		
Date of Mfg 10JAN19		Family	NOx	NOx	
Model SAA6D107E-3-B		Category 130 - 560 kW	PM	PM	
CPL 5454	FR96731	CID/L 408 / 6.7	Valve Lash Cbld 0.254	Int 0.508 Exh	Timing - TDC ELECTRONIC
Ref No. 6756-B0-KU11		Fuel rate at adv. HP/kW 108 mm <sup>3</sup> /st		Firing Order	
e5*2016/1628*2016/1628EV6/D*0051		M313	Ad. HP/kW 213 / 159 at 2050 rpm	1 5 3 6 2 4	
RSL	E/C	ECS: DDI ECM TC CAC EGR PTOX CC		Idle Speed (rpm) 71050	

Type Approval Number:  
**e5\*2016/1628\*2016/1628EV6/D\*0051**


Power output: **159 kW**

Manufacturer	<b>Komatsu</b>
Power Output (kW)	<b>159</b>
Type Approval Number	<b>e5*2016/1628*2016/1628EV6/D*0051</b>
EU Emission Stage	<b>Stage V</b>

# Appendix 4: Suitable Documentation for Type Approval Number

## Type Approval Certificate issued by the VCA

Approval Authority for UK



VCA Headquarters  
1 The Eastgate Office Centre  
Eastgate Road  
Bristol, BS5 6XX  
United Kingdom  
Switchboard: +44 (0) 117 951 5151  
Main Fax: +44 (0) 117 952 4103  
Email: [enquiries@vca.gov.uk](mailto:enquiries@vca.gov.uk)  
Web: [www.vca.gov.uk](http://www.vca.gov.uk)

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY Rev 10/03

COMMUNICATION CONCERNING THE APPROVAL GRANTED TO AN ENGINE TYPE OR FAMILY OF ENGINE TYPES WITH REGARD TO THE EMISSION OF POLLUTANTS PURSUANT TO DIRECTIVE 97/68/EC, AS LAST AMENDED BY DIRECTIVE 2006/105/EC

Type-Approval No. **e11\*97/68LA\*2006/105\*1257\*01**

Reason(s) for extension (where appropriate): To cover:

- 1) Corrected NRTC results
- 2) Updated report for same and was multiple filters

Identifying information for the engine

SECTION I

0. GENERAL

0.1 Make (name of undertaking): Cummins Inc.

0.2 Manufacturer's designation of the parent/and (if applicable) of the family engine(s) type(s)<sup>(9)</sup>: **E313 (QSB6.7)**

0.3 Manufacturer's type coding as marked on the engine(s):  
**Location: valve cover**

Method of affixing: metal or mylar plate – adhesive backed

0.4 Specification of machinery to be propelled by the engine<sup>(2)</sup>: non-road


0.5 Name and address of manufacturer  
Cummins Engine Company  
500 Jackson St.  
Columbus, Indiana 47202-3005  
USA

Name and address of manufacturer's authorised representative (if any): Not applicable

0.6 Location, coding and method of affixing of the engine identification number: valve cover – metal or mylar plate – adhesive backed

USK212720

an executive agency of the Department for Transport



Only page 1 of 10 shown for illustrative purposes.

## Type Approval Certificate issued by SNCH

Approval Authority  
for Luxembourg



GRAND-DUCHÉ DE LUXEMBOURG  
Ministère du Développement durable  
et des Infrastructures  
Département des Transports  
L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE  
CERTIFICATION ET D'HOMOLOGATION

Registre de Commerce: B 27180



L-5201 Sandweiler

Référence: e13\*97/68PA\*2011/88\*0003\*01

Annexes: - Rapport technique  
- Fiche de renseignements du constructeur

Sandweiler, le 14 janvier 2014

### CERTIFICAT DE RECEPTION CE PAR TYPE EC TYPE-APPROVAL CERTIFICATE

Communication concernant <sup>(1)</sup> / Communication concerning the <sup>(1)</sup>:

- la délivrance d'une réception / type approval
- l'extension d'une réception / extension of type approval
- le refus d'une réception / refusal of type approval
- le retrait d'une réception / withdrawal of type approval

d'un type de moteur / famille de moteurs, en ce qui concerne les émissions de polluants,  
en application de la Directive 97/68/CE, modifiée en dernier lieu par la Directive 2011/88/UE.  
of an engine type or family of engine types with regard to the emission of pollutants pursuant to Directive 97/68/EC,  
as last amended by Directive 2011/88/EU.

Type Approval  
Number specified

Réception par type N°:

Type-approval number:

e13\*97/68PA\*2011/88\*0003\*01

Motifs de l'extension (le cas échéant):  
Reason for extension (where appropriate):

see: List of modifications, Appendix 0 of technical report.

#### PARTIE I PART I

0. Généralités:  
General:

0.1. Marque de fabrique (nom de l'entreprise):

Make (name of undertaking):

YANMAR CO., LTD.

0.2. Appellation du constructeur du type du moteur  
représentatif et (le cas échéant) des types des  
moteurs de la famille <sup>(1)</sup>:

Manufacturer's designation of the parent- and (if applicable) of the  
family engine(s) type(s) <sup>(1)</sup>:

Type du moteur représentatif:

Parent engine type:

4TTWPC

Type de la famille:

Family engine type:

YD3300DTCPEC

Types des moteurs de la famille:

Engine types within the family:

4TTNAC, 4TTPAC, 4TTQAC, 4TTSAC, 4TTVAC,  
4TTWAC, 4TTNAC

Identifying  
information for the  
engine

Page 1 of 8

Only page 1 of 8 shown for illustrative purposes.

# Komatsu Declaration of Conformity



Declaration from the Manufacturer

Komatsu UK Ltd.  
Durham Road, Birtley  
Chester-le-Street  
Co. Durham DH3 2QX

Telephone: 0191 410 3155  
Fax: 0191 492 4242

## Declaration of Conformity

### The undersigned, Manufacturer :

KOMATSU UK Ltd  
Durham Road, Birtley  
Chester-le-Street  
Co. Durham DH3 2QX, UK

### Declares in accordance with Directive 2006/42/EC Annex II, Part 1, Section A that the machinery listed below:

Machine designation	Komatsu Hydarulic Excavator
Type	PC490LC-10
Serial number	K60148
Construction year	2015
Engine type	SAA6D125E-6A

Identifying information for the engine

### Conforms to the requirements of the following EC Directives:

<b>Machinery Directive</b>	<b>2006/42/EC</b> and amendments
<b>Electromagnetic Compatibility Directive</b>	<b>2004/108/EC</b> and amendments
<b>Outdoor noise Directive</b>	<b>2000/14/EC, 2005/88/EC</b> & amendments
<b>R&amp;TTE Directive</b>	<b>1999/5/EC</b> and amendments

### Harmonised standards:

**EN 474-1:2006+A4:2013 EN 474-5:2006+A3:2013**

### Additional requirements from Directive 2000/14/EC and amendments, if applicable:

Conformity assessment procedure	<b>Annex VIII</b>
Engine power according Directive 2000/14/EC	270 KW @ 1900 rpm
Guaranteed sound power level	107 dB/1pW
Measured sound power level	102 dB/1pW
Certificate number / issue and expiration date	0888-OND-009/8 Jan2015/Dec2015
Notified Body	MIRA Ltd, Nuneaton, CV10 0TU, UK

### Type Examination Certificates, if applicable :

Certificate Number	Issue date	Notified Body
e11*97/68LA*2010/26*1073*00	09/07/2010	VCA, Bristol, BS5 6XX, UK

Type Approval Number specified

This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes all components which are added, and/or operations carried out subsequently by any third party.

### Name and address of the person authorized to compile the technical file :

Komatsu UK Ltd,  
Durham Road, Birtley  
Chester-le-Street  
Co. Durham, DH3 2QX, UK

### On behalf of the manufacturer,

Name(1), Function(2), Signature(3), Place(4) Date: 19/09/2015

(1)   
(2) Quality Manager

(3) Signature:   
(4) Birtley

Registered Office:  
Komatsu UK Ltd,  
Durham Road, Birtley,  
Chester-le-Street,  
County Durham, DH3 2QX  
VAT No GB 440 9386 41  
Registered No. 1948743 England



KLET001

## Appendix 5: Suitable Retrofit Certificates



Certificate  
Number

[REDACTED]

### CERTIFICATE OF INSTALLATION OF HJS EXHAUST EMISSIONS ABATEMENT DEVICE

The vehicle / machine specified below has been installed with an HJS SCRT retrofit emissions reduction system. This consists of 2x Diesel Particulate Filters, an SCR Catalyst and AdBlue dosing system, supplied by Cybrand AEC Ltd.

HJS are an approved manufacturer for the Transport for London Low Emission Zone (LEZ / ULEZ), the Non Road Mobile Machinery (NRMM RAS) register, and major construction emissions retrofit requirements.

The HJS SCRT System reduces diesel exhaust particulate matter and NOx in accordance with the EU **Stage 5** requirements of these schemes.

Identifying information for the machine on which the retrofit is installed. If the retrofit is removed and fitted to a new machine, a new certificate will need to be issued

The manufacturer, product, and supplier are all approved by the Energy Savings Trust. Note that there are other approved companies and products available

Unique identifying information that can be found on the retrofit

Equipment / Vehicle Details : [REDACTED]

Rig Serial number / asset number: [REDACTED]

Manufacturer Serial Number - [REDACTED]

Engine Model: [REDACTED]

Engine Output: 433 kW

Equipment Owner / Number: [REDACTED]

Abatement Device Type / Model : HJS SCRT

Device Part Numbers: [REDACTED]

Manufacturer	HJS Emission Technology GmbH & Co. KG Dieselweg 12 D-58706 Menden/Sauerland Germany
Supplier	Cybrand AEC Ltd Building 90 Thornton Science Park Ince Chester CH2 4NU

Approved by:

Name: [REDACTED]

Company: Cybrand AEC Ltd

Date: [REDACTED]



## Non-Road Mobile Machinery Retrofit Accreditation Scheme (NRMM RAS)



### Machinery Installation Certificate and Manufacturer's Declaration of Installation

Certificate no.	*****	Date of issue	**/**/****														
<b>1. Machine and engine details</b>																	
a. Machine type	Generating Set	b. Model/series	██████														
c. Manufacturer	██████	d. Machine serial no.	*****														
e. Engine manufacturer	██████	f. Engine model	██████														
g. Engine serial no.	*****	h. Engine EU Stage (e.g. IIIA) prior to retrofit	IIIA														
i. Engine power (kW)	560kW	j. Engine emissions type approval number	*****														
k. Vehicle registration mark (if applicable)	*****	l. Engine displacement (cc)	16.12 Ltr														
m. Machine owner details	██████	n. Machine hours at fitment	*****														
<b>2. NRMM RAS approved system details</b>																	
a. System supplier	IMS	b. System brand name	IMS-eco SCRT														
c. NRMM RAS company approval no.	CN-2101 (GCERT 73)	d. NRMM RAS product approval no.	P-2101 (PCERT 112)														
System part numbers		System serial numbers															
e. DPF*	██████	f. DPF*	.....														
g. SCR*	██████	h. SCR*	.....														
i. ECU*	██████	j. ECU*	.....														
k. Other***		l. Other***															
m. Retrofit Emission Control (REC) system class (acc. Reg 132)	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;">I <input type="checkbox"/></td> <td style="text-align: center;">IIA <input type="checkbox"/></td> <td style="text-align: center;">III <input type="checkbox"/></td> <td style="text-align: center;">IV <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> </table>	I <input type="checkbox"/>	IIA <input type="checkbox"/>	III <input type="checkbox"/>	IV <input type="checkbox"/>			✓		n. Post retrofit emission stage equivalence	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;">IIIB/IV PM only <input type="checkbox"/></td> <td style="text-align: center;">IV NOx only <input type="checkbox"/></td> <td style="text-align: center;">V <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">✓</td> </tr> </table>	IIIB/IV PM only <input type="checkbox"/>	IV NOx only <input type="checkbox"/>	V <input type="checkbox"/>			✓
I <input type="checkbox"/>	IIA <input type="checkbox"/>	III <input type="checkbox"/>	IV <input type="checkbox"/>														
		✓															
IIIB/IV PM only <input type="checkbox"/>	IV NOx only <input type="checkbox"/>	V <input type="checkbox"/>															
		✓															
<b>3. Manufacturer/installer details</b>																	
a. Name	IMS																
b. Address	18-20 Gelders Hall Rd, Shepshed, Loughborough LE12 9NH																
c. Telephone no.	01509 506792																
d. Email	sales@silencers.co.uk																
e. Installation date	**/**/****	f. Post installation fitment smoke test															
<b>4. Installation handover and sign-off</b>																	
Machine Owner/Operator		Manufacturer (or installer on their behalf)															
a. Signed	*****	b. Signed	*****														
c. Name	*****	d. Name	*****														
e. Position	*****	f. Position	*****														
g. Company	██████	h. Company	IMS														
i. Date	DD.MM.YYYY	j. Date	DD.MM.YYYY														

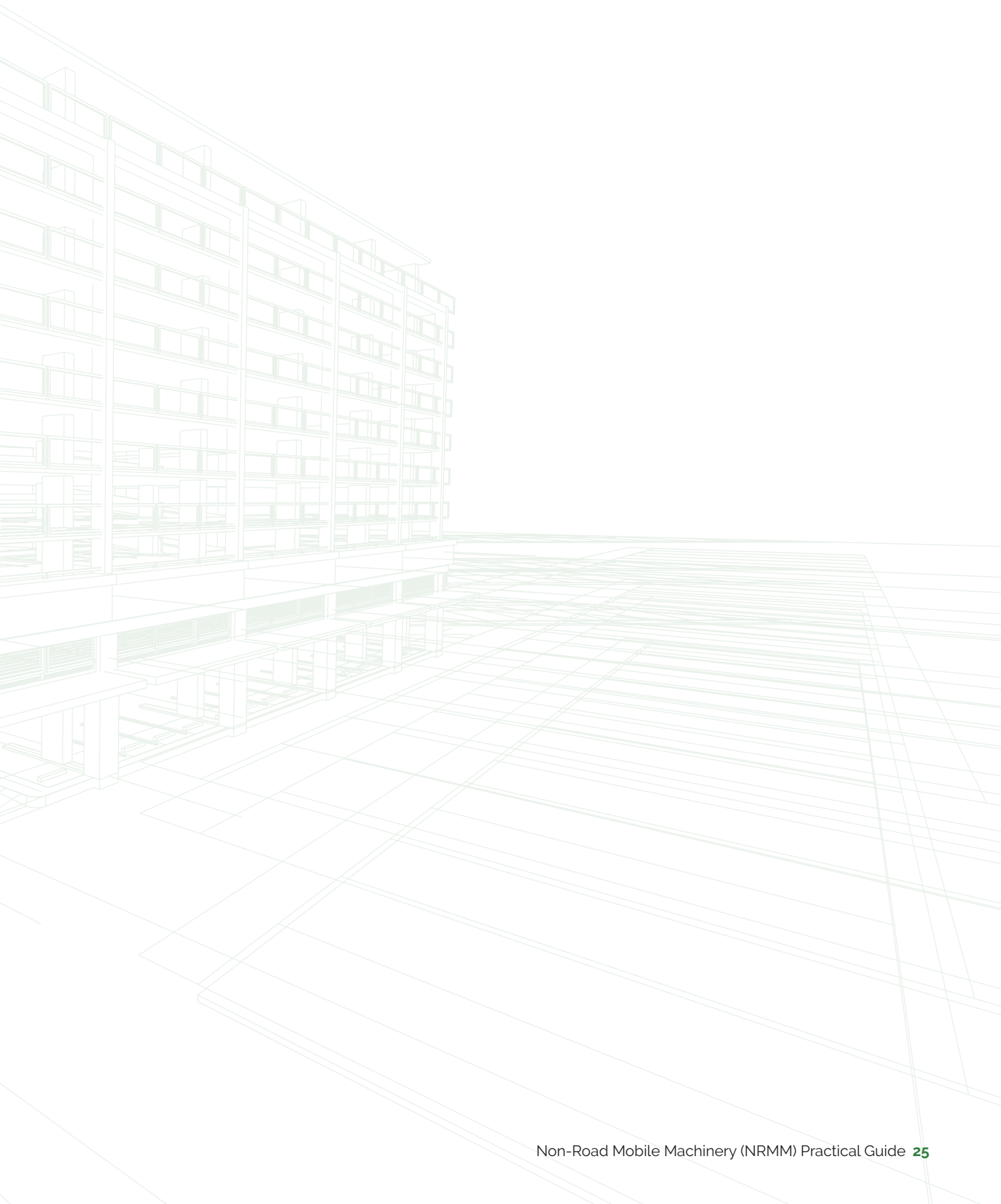
Key

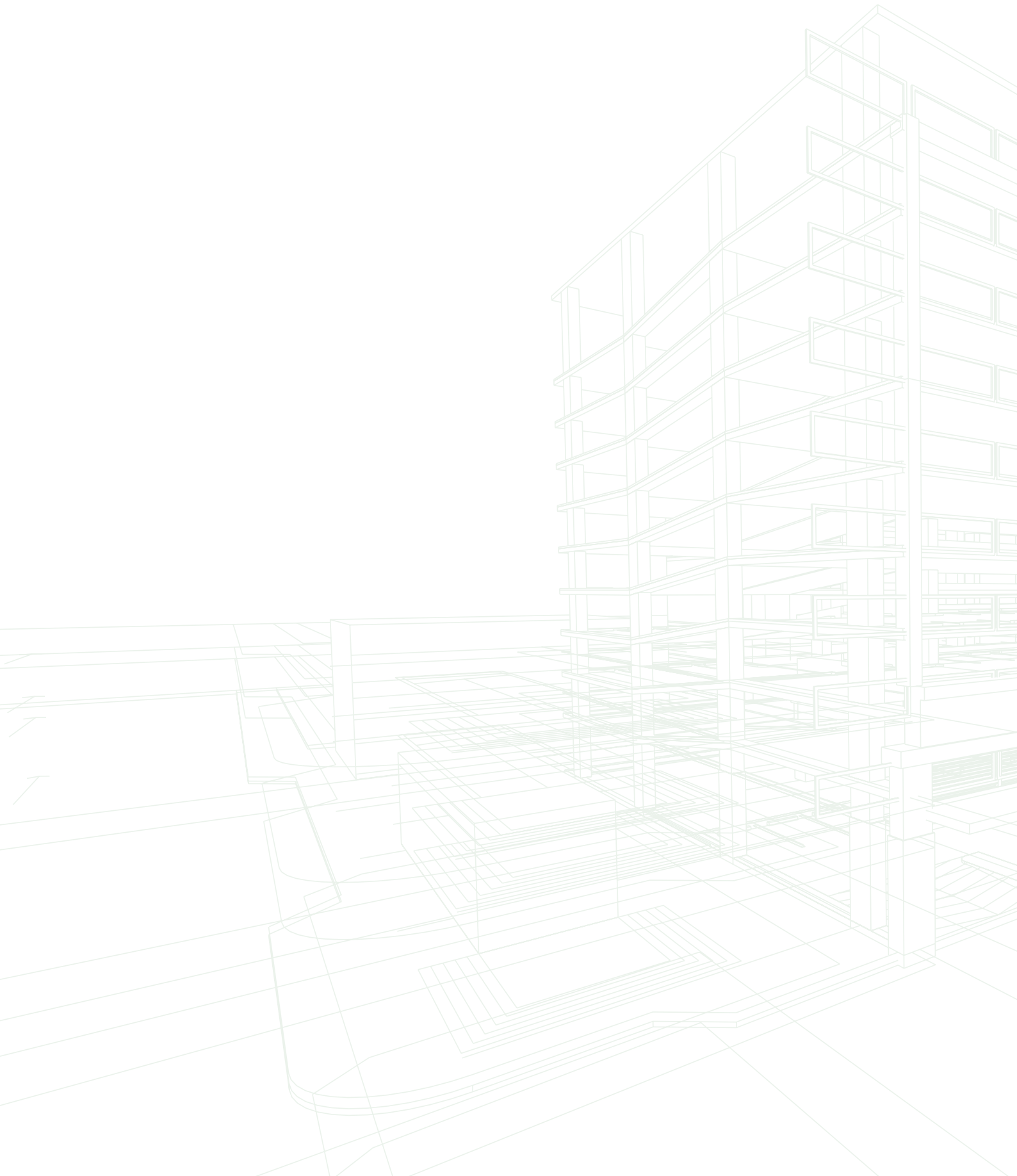
Identifying information for the machine on which the retrofit is installed. If the retrofit is removed and fitted to a new machine, a new certificate will need to be issued

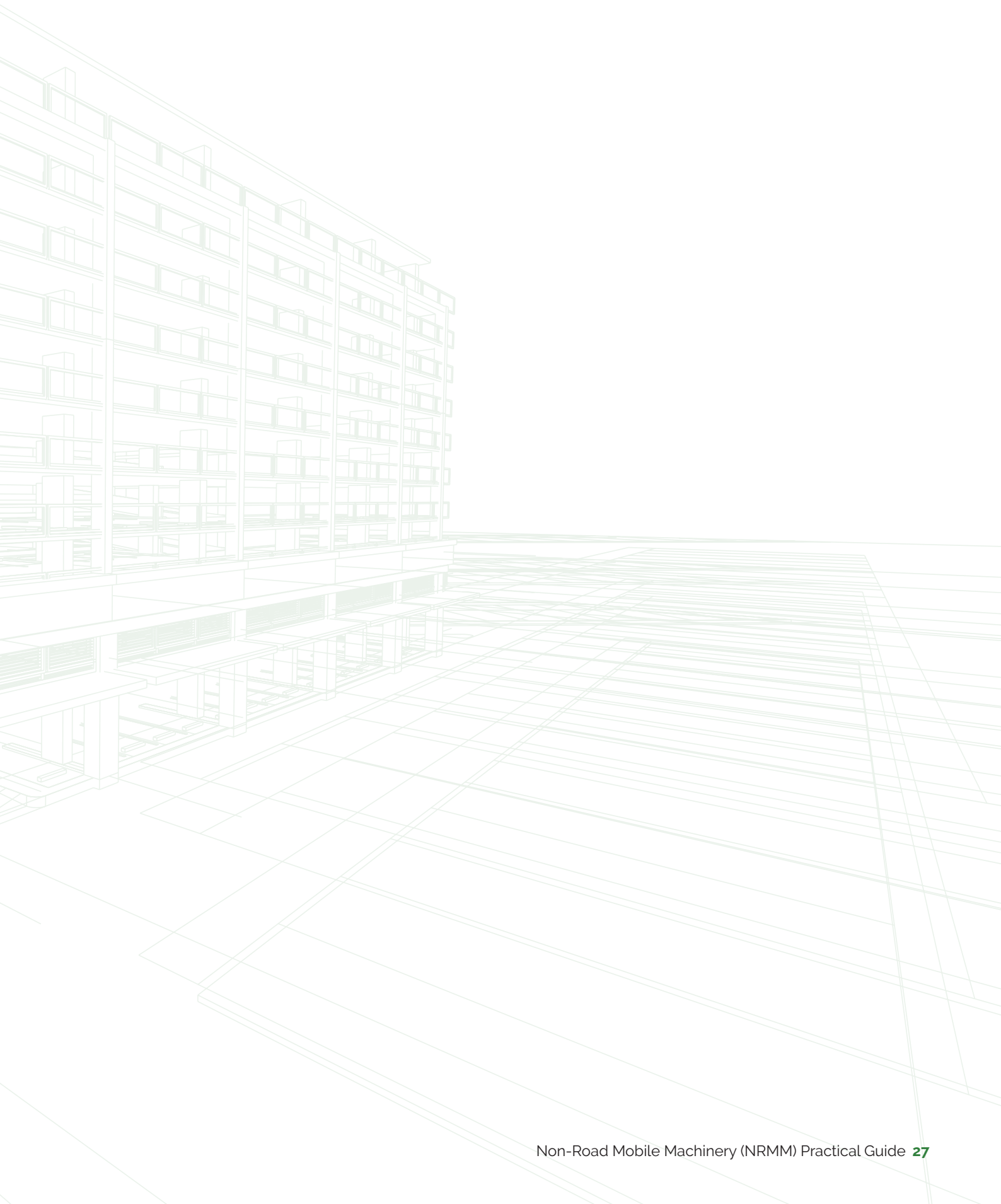
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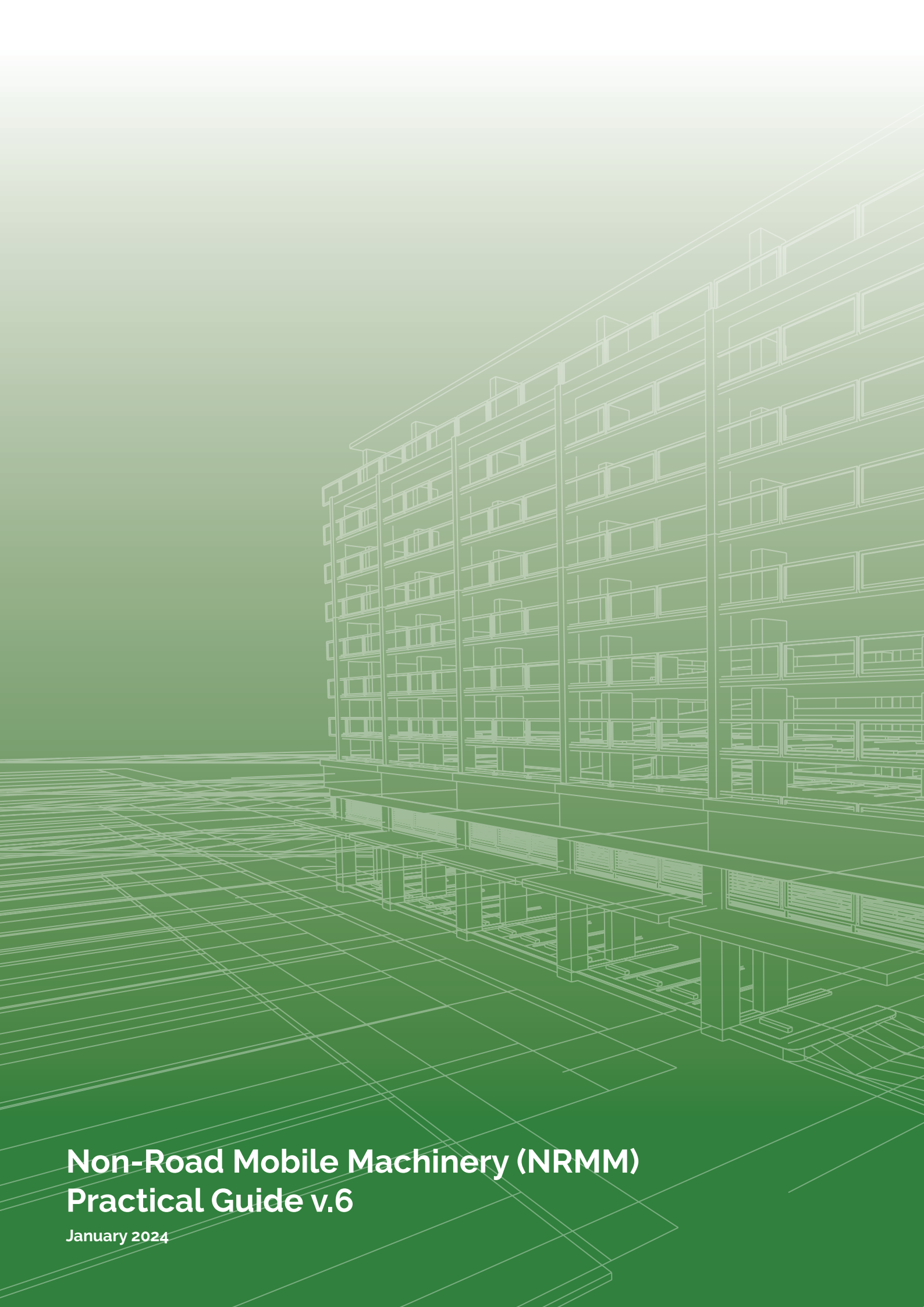
Unique identifying information that can be found on the retrofit











# Non-Road Mobile Machinery (NRMM) Practical Guide v.6

January 2024