

## 1. TITLE OF THE CERTIFICATE (NL)

**Diploma Beroepsonderwijs**  
**Kwalificatie: Technisch specialist verbrandingsmotoren**  
**Kwalificatiedossier: Verbrandingsmotortechiek**

In the original language

## 2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

**Certificate Senior Secondary Vocational Education**  
**Qualification: Technical specialist combustion engines**  
**Qualification file: Combustion engine technology**

This translation has no legal status

## 3. PROFILE OF SKILLS AND COMPETENCES

Core task 1: Carries out maintenance on combustion engines

- 1.1 Inspects the combustion engine and prepares maintenance work on combustion engines
- 1.2 Carries out maintenance work on components and/or systems of combustion engines that operate on the basis of mechanical principles
- 1.3 Carries out maintenance work on components and/or systems that operate on the basis of electrical, electronic or digital principles.

Core task 2: Contributes to optimising work

- 2.1 Attends work meetings
- 2.2 Contributes to optimising work processes

Core task 3: Carries out complex repair and/or installation and/or overhaul work on components and systems of combustion engines

- 3.1 Prepares complex repair and/or installation and/or overhaul work on components and systems of combustion engines
- 3.2 Carries out complex repair and/or installation and/or overhaul work on components and systems of combustion engines that operate on the basis of mechanical principles
- 3.3 Carries out complex repair and/or installation and/or overhaul work on components and systems that operate on the basis of electrical, electronic or digital principles

Core task 4: Inspects and makes a diagnosis for components and systems of combustion engines

- 4.1 Prepares the inspection and diagnosis of components and systems of combustion engines
- 4.2 Carries out inspection and makes a diagnosis for components of combustion engines that operate on the basis of mechanical principles
- 4.3 Makes a diagnosis on components of combustion engines that operate on the basis of electrical, electronic or digital principles

Core task 5: Commissions combustion engines

- 5.1 Prepares commissioning
- 5.2 Carries out/coordinates the testing of combustion engines/installations
- 5.3 Carries out/coordinates adjustments, commissioning and handover
- 5.4 Maintains contacts with clients and other internal and external specialists

**\* Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://www.europass.cedefop.europa.eu/>

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#### 4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE

The Technical specialist combustion engines is employed in a workshop at combustion engine companies. For overhaul, maintenance and repair, these companies have specially equipped workshops. He also often works on location at customers. This involves (large) diesel and gas motors for ships, power generators for example at hospitals, combined heat and power plants for greenhouses and (mobile) equipment. The Technical specialist combustion engines carries out non-standard and non-routine tasks.

#### 5. OFFICIAL BASIS OF THE CERTIFICATE

<p><b>Name and status of the body awarding the certificate</b> The certificate issued on completion of the programme is signed by the examination board at the school where the pupil attended the programme.</p>	<p><b>Name and status of the national/regional authority providing accreditation/recognition of the certificate</b> Ministry of Education, Culture and Science</p>																				
<p><b>Level of the certificate (national or international)</b> Qualification level 4 of the Dutch VET qualification structure Characteristics: non-job related skills such as tactical and strategic capacities. The professional bears his or her own responsibility, which is not only related to practical implementation in terms of monitoring and supervision, but also a more formal, organisational responsibility. The range of tasks also includes drafting new procedures. NLQF-niveau 4 - EQF level 4 - ISCED 3A</p>	<p><b>Grading scale / Pass requirements</b></p> <table border="0"> <tr><td>10</td><td>excellent</td></tr> <tr><td>9</td><td>very good</td></tr> <tr><td>8</td><td>good</td></tr> <tr><td>7</td><td>very satisfactory</td></tr> <tr><td>6</td><td>pass</td></tr> <tr><td>5</td><td>fail</td></tr> <tr><td>4</td><td>unsatisfactory</td></tr> <tr><td>3</td><td>very unsatisfactory</td></tr> <tr><td>2</td><td>poor</td></tr> <tr><td>1</td><td>very poor</td></tr> </table>	10	excellent	9	very good	8	good	7	very satisfactory	6	pass	5	fail	4	unsatisfactory	3	very unsatisfactory	2	poor	1	very poor
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<p><b>Access to next level of education/professions</b> The Technical specialist combustion engines can advance to higher professional education, for example Electrical Engineering, Automotive Engineering, Civil Engineering or Mechanical Engineering. There are other higher professional education study courses that train for the profession engineering teacher or motor vehicle engineering teacher.</p>	<p><b>International agreements</b> Technical specialist combustion engines is not a regulated profession in the Netherlands. However, the education and training for this profession on qualification level 4 is regulated under the European directive 2005/36/EC, amended by directive 2013/55/EU. The regulated education and training gives access to regulated professions at the level of a diploma according to article 11 of this directive.</p>																				
<p><b>Legal basis</b> Act on Vocational Education and Training (WEB), registered number of qualification (crebo): 25831 The education and training for this qualification is offered as of 01-08-2022.</p>																					

#### 6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Senior secondary vocational education features two learning pathways: the school-based pathway (bol) and the training on the job pathway (bbl).

In the school-based pathway, the majority of the course consists of theory at school. The extent of the practical component (vocational practice) is between 20% and 60%. In the training on the job pathway, the extent of vocational practice is at least 60% of the course. The participant works four days a week in a training company, and attends school for theory subjects just one day a week.

In principle it is possible to follow both learning pathways, but which pathway is offered will depend on the individual educational institution.

<p><b>Average duration of the education/ training leading to the certificate</b></p>	<p><b>4 years (6400 study hours) (depending on previous education)</b></p>
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#### Entry requirements

The certificate preparatory vocational secondary education (vmbo) advanced vocational programme, combined programme, or theoretical programme, or a comparable level.

## 7. ADDITIONAL INFORMATION

Dutch senior secondary VET is based on qualification files, that each contain one or more qualifications. The information included in part 3 and 4 is derived directly from the qualification file determined by the Minister of Education, Culture and Science. The complete qualification file can be found at [kwalificaties.s-bb.nl](http://kwalificaties.s-bb.nl), only in Dutch.

Optional subjects are linked to the qualification. The optional subjects have a total size of 15% of the course duration. The optional subjects completed by the student are listed on the certificate.

Additional information, including a description of the Dutch national qualifications system, is available at the Netherlands National Reference Point (NRP): [www.s-bb.nl](http://www.s-bb.nl). The NRP is the information centre for vocational qualifications in the Netherlands. SBB has been appointed in this capacity by the Ministry of Education, Culture and Science.