

# Type Approval / Type Approval Test for combustion engines

## The seal of quality for diesel engines

### A challenge to your business

Since diesel engines are the driving force behind the world's shipping industry, huge sums are invested in developing new or more advanced models that promise safer and more reliable operation. Type approval is an essential component for such new developments - it ensures your customer's safe ship operations.

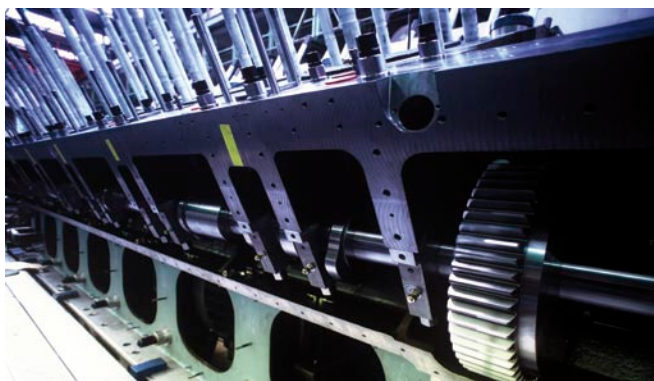
### The solution you need

Germanischer Lloyd (GL) approves diesel engines according to its own Rules as well as IMO conventions e.g. SOLAS for application on seagoing- and inland waterway ships and offshore installations. Based on these experiences GL is recognised to approve engine types also according to other international and

national industry standards or regulations e.g. approval of engine types for railway and power plants such as the KTA (German Nuclear Safety Standards Commission). GL pays particular attention in its evaluation and testing procedures to safety and reliability – as emphasised by the corporate motto “Operating 24/7”. Since a single GL diesel engine expert coordinates the entire type approval process, you always know whom to contact if you have any questions, queries or special requests.

### GL – your best partner

Why choose GL for type approval and certification of diesel engines? As one of the world's leading classification societies, we can point to more than 140 years of maritime experience and expertise. Moreover, we guarantee that your type approval process will be performed solely by highly qualified specialists with many years of experience in the fields of engine manufacturing and operational engineering on ships. This not only ensures a smooth and efficient approval process but also underlines the quality of type approval by GL.



From the inspection of single components to the approval of the entire engine - GL is your reliable partner

# Combustion Engines Type Approval (Test)

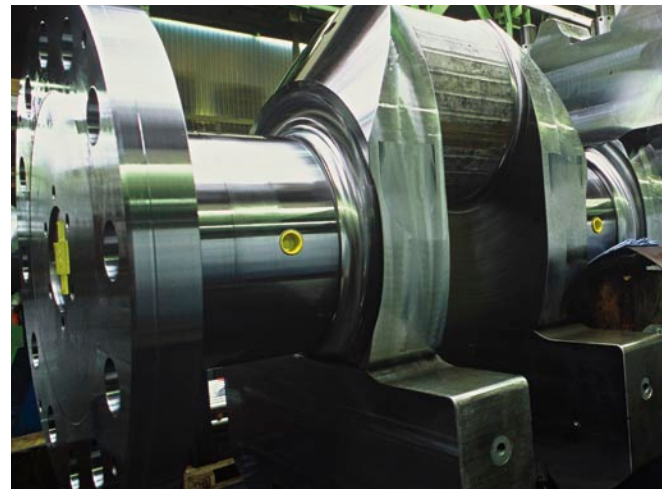
## Process for issuance and modification of type approval

Process step	First time approval of new type of combustion engine	Renewal of existing type approval	Extension of existing type approval	Extension of existing type approval by licensee
<b>Award of contract</b>	Submission of application and specification documents to GL GL makes firm offer to customer Contract awarded to GL			
<b>Submission of documents</b>	Submission of all documents* required for approval.	Submission of all modification or extension documents* required for approval by GL		
<b>Examination and evaluation of documents</b>	On basis of GL Rules & Guidelines and IMO SOLAS Convention			On basis of current requirements and list of references for all licensee-licensor documents*
<b>Approval of documents</b>	If results are positive: Issuance of Approval Letter at request also as "General Drawing Approval"			
<b>Tests run</b>	Conducted by customer, witnessed by GL engine expert	Not necessary		
<b>Proof of production compliance</b>	Inspection/audit by GL engine expert if applicable	Verification is carried out by GL during the ongoing inspection process of individual and new combustion engines		
<b>Type Approval/Type Test Certificate, valid – 5 years</b>	Issued by GL, publication on the Internet			Not necessary

\* A list of all documents required for approval is available in the GL Rules and Guidelines under I-1-2-2.B, Table 2.1

## Benefits that make all the difference

- Independent confirmation of the quality of your diesel engine design by a classification society renowned for its high performance level
- Global acceptance and recognition of the quality of your products
- Competitive advantages through the GL seal of approval
- GL Type Approval certifies that your diesel engine types fulfil all necessary GL & IMO SOLAS requirements for deployment on board ships
- Publication of your certificates on the GL website as a quality reference for existing and potential customers



Verified engine components for safe operations and a long lifetime

### One-stop shopping at GL

By combining type approval of your diesel engine types with other GL services such as **air pollution prevention certification**, and **certification to the EU's Marine Equipment Directive (MED)**, you can save yourself a great deal of time, money and unnecessary work.

Some manufacturer-related services are also available e.g. **Alternative Product Certification (APC)**, accreditation as manufacturer of mass-produced engines, approval of your processes or entire organisation or **ISO 9001:2008**.