



Technical Bulletin

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DEUTZ engines

- All above-mentioned DEUTZ engines
- Product number(s) EKZ:
All product code numbers
- Assemblies:
99

DEUTZ engines – Guidelines for the warranty

This technical bulletin contains information on the warranty for:

- End customers
- Installation customers (OEM)
- DEUTZ service partners

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Note:
The part numbers indicated in this document are not subject to updating.
Binding for the identification of spare parts is exclusively the spare parts documentation.

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Avoidance of warranty cases

The best case for everyone involved:

A fault-free operation of the engine or system without warranty cases is our joint aim.

DEUTZ AG contributes to this by offering quality with system:

- Professional
- Structured
- Throughout the company
- Certified

The installation customer contributes to this through:

- Adherence to the installation guidelines
- The use of approved operating media only
- Detailed instruction of the operator

The operator can contribute to this through:

- Regular maintenance and care, in accordance with the specifications of the operating manual
- Using the service network of DEUTZ AG (Dealer Directory, see: www.deutz.com > Partner > List of partner)
- Exclusive use of original DEUTZ parts and original DEUTZ replacement parts
- Leaving the engine in the condition as delivered, especially in relation to performance and exhaust behaviour

Quality with system

We develop, manufacture and sell our products and services while applying a quality management system that fulfils the requirements of our customers, the classification societies and the applicable quality assurance standards and is thus oriented to the needs of the market. This is audited regularly on behalf of the company management.

Zero errors - we pursue this admittedly ambitious and difficult target with the utmost commitment. Our quality management system comprises essential components for preventing faults and an early warning system in the event that faults occur despite this. Quantifiable improvements confirm the accuracy of this target and the success of our endeavours.

Warranty cases are, so to say, the other side of the coin when it comes to striving for quality. We are proud of the quality of our products, but are not afraid of straight talk when it comes to defects. The company management is keen to pay special attention to warranty processing in the interest of the customer. This brochure provides an overview of the subject.

Success is quantified, the customer's opinion counts

Important benchmarks for monitoring the success of customer satisfaction are the sales and turnover figures as well as the development of market shares. However, it is also particularly important for us to find out what the customers think of our products and how they rate the performance of our international DEUTZ service network.

Every operator is therefore requested to contact his DEUTZ service partner with his concerns, questions and suggestions. The DEUTZ service partner will receive and process suggestions, wishes, opinions and complaints in the interest of the customer, in his own interest and in the interest of DEUTZ AG in a suitable form or communicate these to us for processing and follow-up.

Engines need maintenance

Our customers prefer DEUTZ products on account of their operational safety, reliability and durability. Nevertheless, regular maintenance and care is necessary to maintain these good properties. Only in this way can our highly sophisticated products meet the stringent industrial demands for performance required of them.

The operating instructions contain maintenance specifications relating to operating conditions and operating time. These maintenance measures are an integral element of the engine's proper operation. Failure to comply with them can result in damage to the engine and a reduction in its reliability and service life.

To make sure your DEUTZ remains a DEUTZ

If the durability and reliability of your engine are to be maintained so that you can always rely on your DEUTZ engine, changes to the power, combustion and exhaust performance must be avoided. The most effective way to fulfil the maintenance specifications involves commissioning an authorised DEUTZ service partner with the expert implementation of all maintenance work. Our DEUTZ service partners have the best knowledge of DEUTZ products; their employees are trained and have the required original DEUTZ parts and original DEUTZ replacement parts, the requisite documentation as well as the correct special tools.

A careful and complete validation of maintenance work carried out is recommended for the end customer - including the replenished lubricants and exchanged parts - e.g. by making an entry in the operating manual provided (maintenance schedule) and by retaining relevant receipts. DEUTZ reserves the right to request purchased receipts in respect to the parts and materials used for the maintenance or invoices concerning the maintenance work carried out by a DEUTZ service partner in the case of a potential warranty case.



Maintenance work by installation customers, their partner organisation or also by end customers themselves may only be performed by persons with the necessary qualification. In this context too, we play a supportive role, offering product-relevant seminars on engine and system technologies in our DEUTZ training centres.

Examples of typical maintenance work include:

- Replacing lubricants and coolant corresponding to the intervals and specifications
- Replacing filters
- Replacing worn parts
- Testing and if necessary:
 - Readjusting the valve clearance
 - Readjusting the V-belt tensioning
 - Retightening fastening and connecting elements

Maintenance and wearing parts are not covered by the warranty for the engine or system.

Specified maintenance work that has not been carried out regularly or has not been done so in adequate time or correctly can lead to loss of a warranty claim.

Damage due to inadequate maintenance is not covered by the warranty.

Engines need care

High-quality technical products, such as today's diesel engines, require a minimum amount of care in order to function reliably, as do the systems and equipment they contain

Careful handling means the operator is spared faults and failures. This applies to the entire service life of the product, irrespective of whether there is still a claim to warranty for the system, unit or engine. Care includes obvious things such as regular professional cleaning, replenishing operating media, preventing the penetration of water and dirt, protection against corrosion, checking the function of monitoring devices, exclusive use of specified operating media (lubricating oil, fuel, coolant, AdBlue...) as well as immediate shutdown if exceeding the permissible operating states.

The care depends on the training and actions of persons entrusted with operation of the engine. We advise that operators of our products qualify their personnel who are employed with maintenance and operation of the systems and engines for this responsible work, while providing them with operating manuals and maintenance schedules and instructing them in detail.

Examples of damage that can be prevented through proper care and maintenance:

- Damage to the electrics due to inadequate cleaning (steam jets)
- Damage to the starter and gear ring due to incorrect operation
- Damage due to inadequate response to warning indications
- Faults in the fuel system due to contaminated fuel
- Damage to the cooling system due to contamination, inadequate cooling system protection or insufficient cooling air supply
- Dust damage (wear) due to improper treatment of air filters and supply lines
- Damage due to a lack of lubricating oil or the use of unsuitable lubricating oil
- Damage to the engine charging (turbocharger) and exhaust aftertreatment system due to incorrect operation, the use of incorrect operating media or as a result of manipulation

Engines need spare parts

Every engine needs the right spare parts for optimum maintenance and care.

Original DEUTZ parts - the first choice technically and economically

Our original DEUTZ parts are made with the expertise of the engine manufacturer and therefore exhibit perfect geometry and functioning.

Thanks to their quality, continuously optimised in line with state-of-the-art developments, they ensure a low failure risk and a high level of operational safety.

With their rapid availability and complete scope of supply, our original DEUTZ parts make outage times shorter and hence reduce repair costs.

Similarity is not proof.

Attractive offers by partners of non-original parts are meant to entice, but a third party part is rarely the same standard as a DEUTZ original part. Even though it may appear to be so at first glance, you cannot always rely on it.

Non-original parts are manufactured without our expertise. And quality is not always immediately apparent. It is often based on properties that are sometimes difficult to evaluate by outsiders.

Examples of this are the composition of materials and complex geometrical forms.

Therefore only use original DEUTZ parts for maintenance and repair, because:



It is not the price but costs that count.

Non-original parts may be cheaper than original DEUTZ parts, but the lower price is frequently the result of inferior quality that is not immediately visible on the surface. In many cases these quality shortfalls do not become apparent until use. This can lead to damage to the engine and high follow-up costs for the operator. The operator has to bear the costs, DEUTZ AG suffers damage to its image and the only beneficiary is the partner selling the non-original part.

Examples of damage that can be caused by non-original parts:

- High lubricating oil consumption and wear or even piston seizure due to inadequate honing of the cylinder liners and unsuitable piston ring fitting.
- Leakages due to low temperature resistance and poor resistance to lubricating oil, fuel and coolant in gaskets.
- Poor running performance through to piston seizure due to inadequate material quality and inaccurate dimensioning of piston rings.
- Engine failure due to low pressure resistance and tensile strength or incorrectly designed safety valves in filters.
- Component destruction due to incorrect filters assumed to be suitable (lubricating oil and fuel filter)
- Low engine power, higher emissions and higher fuel consumption due to incorrect geometry of the inlet ducts in cylinder heads.
- Overheating damage due to inadequate cooling air throughput as a result of incorrect cooling fin geometry in cylinder liners and cylinder heads for air-cooled engines.

Warranty of DEUTZ AG

DEUTZ AG offers its customers:

- Warranty as customer service
- Clear contractual regulations
- Warranty programmes with individual extension option
- Worldwide support
- Support through continually updated technical bulletins and product information

Customers are assured good service thanks to:

- Information on planned and implemented commissioning
- Support by authorised DEUTZ service partners

Warranty as service for the customer

We do our best to supply our customers with products without any material or production faults. However, some faults may be concealed and only occur after delivery and during operation despite careful production and testing. We therefore promise to remedy such faults in the engines and systems that we deliver.

If - contrary to expectations - defects become apparent in the supplied products during the incoming goods inspection at the installation customer, during installation of the supplied products in equipment of the installation customer or before completing the commissioning, a remedial solution will be provided quickly after immediately informing the DEUTZ service network.

Owing to the technical complexity of the products, certain concealed defects can remain undetected even during the tests described at the installation customer and only become apparent during operation. We provide warranty programmes for such events that cannot be fully excluded despite all precautions. These programmes offer buyers and operators of our engines optimum safety.

Our DEUTZ service partners are authorised to professionally remedy any faults that occur in our engines within the warranty period corresponding to our terms and conditions of business and the documented warranty and coordinate this with the head office.

We learn from mistakes

Special focus is concentrated on the monitoring and rectification of such "faults occurring externally" during our improvement measures. The data material gained is utilised to complete the extensive measures required to remedy the causes of the fault after immediate analysis. Of course, this applies for both components we develop and manufacture ourselves as well as for components supplied by subcontractors.

We utilise every warrant case - at first annoying for all parties alike - as an opportunity to make our products even safer, more reliable and better, while enhancing the benefits for customers and operators. This calls for a mutual understanding of the warranty terms combined with a rapid, open, objective and unrestricted communication in the event of damage.



The purchase agreement - A basis for every warranty

The warranty within the guarantee period covers:

- Defects in the delivery including the absence of explicitly assured properties insofar as they
- prevent use or lead to a significant impairment of use.

This applies to:

- Obvious defects
- Defects during use

If these are the result of a circumstance:

- Before the beginning of the warranty period

In particular on account of:

- Defective design
- Poor materials
- Defective implementation

The complete and binding warranty scope is derived from the purchase agreement and the terms and conditions of business of DEUTZ AG.

We reserve the right to check and recognize any warranty claim pursuant to the purchase agreement and terms and conditions of business. No further legal claim can be derived from the potential recognition. If a warranty application is not recognised or only partially so, a written justification will be provided.

The conditions apply as formulated in the purchase agreement or terms and conditions of business and represent the obligation of the company in respect to its contractual partners expressed correctly in formal legal terms.

Warranty handling

Warranty can be claimed with:

- The installation customer, i.e. the ordering party or buyer (contractual warranty claim of the ordering party)
- or
- the end customer, i.e. the operator of a DEUTZ engine in a unit or in a system (warranty claim assigned by the ordering party).

The following are responsible for rectifying the defect:

- The service network of DEUTZ AG.

The authorised service partners of DEUTZ AG (service centres, associated companies, national representatives and partners) are the first point of call worldwide for maintenance, care, repair and supply with original DEUTZ parts and original DEUTZ replacement parts during and after the warranty. Installation customers and operators (end customers) can contact the nearest service partner of DEUTZ AG in the event of a fault and commission them with the task of rectifying the fault. Insofar as a warranty case is involved, the troubleshooting will extensively be conducted free of charge for the customer.

The DEUTZ service partner will handle the warranty claims directly with us. Services extending beyond this will be invoiced to the customer.

Defect rectification

In the case of warranty, the partner of the DEUTZ AG service network will

- repair
- or
- replace the relevant components with components of equal standard free of charge at his own discretion and, if necessary, after consultation with the head office of DEUTZ AG.

Replaced parts become the property of DEUTZ AG. DEUTZ AG and its authorised service partners request that installation customers or operators (end customers) carry out minor repairs themselves after coordination. Requisite original DEUTZ parts or original DEUTZ replacement parts will be provided free of charge in these cases.



Special case of self-service

The following are responsible for rectifying the defect:

- The authorised customer service of the installation customer

Some prominent manufacturers - primarily of commercial vehicles and tractors - who have their own international service network similar to that of DEUTZ AG have setups coordinated with us, where the service for the DEUTZ engines installed in their units can also be carried out in their contractual workshops or works branches besides the service for their products. They will also deal with warranty cases. Individual details concerning this can be found in the documents of these manufacturers supplied with the units. As coordinated, the service network of DEUTZ AG will only be active in consultation with the manufacturer's organisation in exceptional cases for such units.

The costs for defect rectification

DEUTZ AG shall bear:

- The costs for the spare part including the shipping costs
- The appropriate costs for disassembling and installing the spare part
- The costs for the requisite provision of DEUTZ fitters and assistants.

Principles of DEUTZ AG in the case of damage

- The customer will be helped immediately, professionally and quickly.

With this basic principle, less attention is placed on the administrative handling and more on the technical rectification of the fault. However, this presupposes confidence that the customer will pay the DEUTZ AG service partner for the work he has commissioned if it turns out, after all, that it is not covered by the warranty.

DEUTZ AG shall not bear:

- The costs for consequential damage

These are not covered by the warranty. Warranty work is carried out within normal working hours. Maintenance work commissioned by the installation or end customer to be performed at the same time shall be at the expense of these customers.

If the service partner or DEUTZ AG determines, during implementation or after completion of the repair, that the fault has been caused by circumstances for which DEUTZ AG is not responsible, the resultant costs shall be invoiced to the customer. The same applies if a reconstruction of the damage caused is no longer possible by dismantling a component or the entire engine.

Your contribution to defect rectification

A defect rectification is not possible without the collaboration of the ordering party (installation customer) or the operator of the engine or system (end customer). The obligations of the customer are actually a matter of course, but the latter must:

- Commission the DEUTZ AG service partner in writing.

Service partners of DEUTZ AG are predominantly independent companies. They are reimbursed by DEUTZ AG for the services provided in the warranty cases. They charge the customer for services not covered by the warranty.

Providing time and opportunities for defect rectification.

If the operational safety is put at risk or in order to prevent disproportionately large damage, the customer can rectify the defect himself or have it rectified at the expense of DEUTZ AG, after written declaration of agreement by DEUTZ AG. Modifications or commissioning work carried out without the prior consent of DEUTZ AG shall render the warranty claim invalid. If the customer does not grant time or opportunity to eliminate defects, he shall waive his warranty claim.

Warranty exclusions

Objective limits to the warranty

Transport risk

- A case for the insurance company.

Corresponding to the agreement, we have every delivery insured against insurable risks on the request of and at the expense of the customer.

Transport damage must be claimed against the forwarding agent or reported to the insurance company responsible for the transport upon receipt. It is not covered by the warranty.

Unsuitable storage

- Can be avoided by the customer.

Damage to the delivery item resulting from the storage duration and/or improper storage conditions, for example blocked nozzles, resinified guides of moving parts, corrosion, is not covered by the warranty. This also applies for extended warranties.

DEUTZ engines are usually protected against corrosion for a limited time period. Corrosion protection is only sufficient for storage under controlled conditions. After longer storage, inspections, reworking and, if necessary, renewed protection against corrosion must be carried out before commissioning.



Faults during commissioning

- Can be avoided by commissioning experts.

Our DEUTZ service partners are the best points of contact for technically correct and fault-free commissioning. If the commissioning is carried out by DEUTZ AG, special terms and conditions of business shall apply to this. The body entrusted with commissioning is liable for doing it properly.



DEUTZ AG is not responsible for incorrect assembly or incorrect commissioning by the ordering party or by third parties.

Faults caused by third parties

Defects for which DEUTZ AG is not responsible, caused by:

- Inappropriate or improper use of the engine
- Failure to comply with the installation guidelines
- Subsequent add-on installations and conversions not approved by us
- Incorrect or negligent handling, misuse and operating errors
- Improper engine operation, e.g. blocked cooling system, too low a level of engine lubricating oil, failure to observe warning devices etc.
- Unsuitable operating media, replacement materials
- Chemical, electrochemical or electrical influences that are not the fault of DEUTZ AG
- Repairs by persons or companies that are not authorised to carry out warranty work on DEUTZ engines.

Natural wear

Abrasion and wear are natural processes, not "defects".

Periods

The warranty period for a DEUTZ engine is limited by periods of validity

- After expiry of the applicable period in months after delivery
- After expiry of the applicable period in months after commissioning
- After expiry of the applicable period or after reaching a mileage in km (or miles) (depending on the application)

Depending on what occurs first.

Defects that have not resulted in the item supplied itself

The warranty of DEUTZ AG only refers to the products its supplies and any resultant defects in these.

The decisive factor is not the symptom, but the cause

Faults occurring during operation might not be due to a defect in the item supplied for which we are responsible, although this may appear to be so at first inspection.

In the case of such faults, it cannot simply be assumed that their rectification will be recognised as a warranty case. If the listed cause or a similar cause becomes clear when troubleshooting for the symptoms listed below as examples, the fault can only be rectified by invoicing the customer.

Warranty and customer satisfaction

Installation customers and end customers have a common interest with us:

- High reliability of our products and as fault-free an operation as possible.

This also means:

- Avoidance of unnecessary downtimes if a fault should occur - no matter what the reason.

The worldwide service network of DEUTZ AG will provide fast help in the event of a fault in order to immediately restore the function of the engine or system.

The DEUTZ service partners are also authorised to conduct work covered by the warranty.

However, it is not possible for the service partner to make the final decision as to whether a fault is recognised as a warranty case. This is clarified by DEUTZ AG upon application.

Decisions concerning warranty applications are made according to specified rules, any rejections that are necessary are explained to the applicant.

The utmost priority of DEUTZ AG including the DEUTZ service network remains the satisfaction of customers with our products, even in warranty cases. The employees and service partners of DEUTZ AG are aware of the correctness and significance of this objective and know:

The customer ensures success

Every authorised service partner will be pleased to accept any requests and suggestions.

- You can find the nearest DEUTZ service partner at: www.deutz.com > Partner > List of partner)
- Our Internet site provides the option of direct contact: www.deutz.com > Contact



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If you have questions on this topic, please contact the staff member(s) below.

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