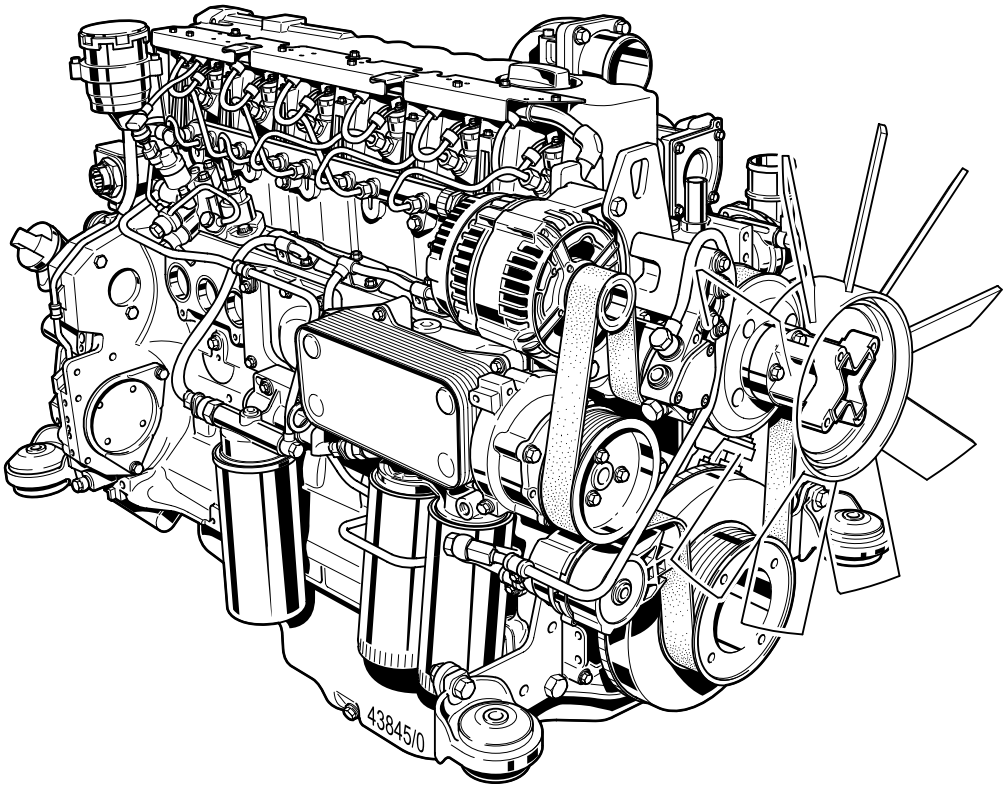


Operation Manual TCD 2012 L04/06 V2 TCD 2013 L04/06 V2





- Read and observe the information in this instruction manual. You will avoid accidents, retain the manufacturer's warranty and have a fully functional, ready to use engine at your disposal.
- This engine is exclusively for the purpose according to the scope of delivery - defined and built by the equipment manufacturer (use for the intended purpose). Any use above and beyond this is considered improper use. The manufacturer will not be liable for damages resulting from this. The user will bear the sole risk in this case.
- Use for the intended purpose also includes observance of the operating, maintenance and repair instructions specified by the manufacturer. The engine may only be used, maintained and repaired by persons who are familiar with it and instructed in the dangers.
- The pertinent rules for the prevention of accidents and other generally recognised safety and industrial medicine rules must be observed.
- When the engine is running there is a danger of injury caused by:
 - rotating / hot components
 - engines with extraneous ignition
 - ignition systems (high electrical voltage)
Contact must be avoided!
- The manufacturer will not be liable for damages resulting from unauthorised modification to the engine. Equally, manipulations to the injection and control system can affect the engine's performance and the exhaust characteristics. Compliance with environmental regulations will no longer be guaranteed in this case.
- Do not alter, obstruct or block the area of the cool air supply to the fan. The manufacturer will accept no liability for damages resulting from this.
- Only DEUTZ original parts may be used when carrying out maintenance/repair work on the engine. These have been designed especially for your engine and ensure a trouble-free operation. Failure to observe this will lead to voiding of the warranty!
- Maintenance/cleaning work on the engine may only be carried out when the engine is not running and has cooled down. When doing this, make sure that the electrical system is switched off (remove ignition key). The specifications for accident prevention with electrical systems (e.g. VDE-0100/-0101/-0104/-0105 Electrical protective measures against dangerous touch voltages) must be observed. Cover all electrical components tightly when cleaning with liquids.
- Do not work on the fuel system while the engine is running - **Danger to life.** Wait (1 minute) for the engine to come to a standstill (pressure release), as system is under high pressure: there is a - **Danger to life.** During the first trial run do not stand in the danger area of the engine (danger due to high pressure of leaks) - **Danger to life.**
 - In case of leaks immediately contact the workshop.
 - When working on the fuel system ensure that the engine is not unintentionally started during repairs - **Danger to life.**

Operation Manual

TCD 2012 L04/06 V2

TCD 2013 L04/06 V2

312 1890 en

Engine number:

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Please enter the engine number here. This will simplify the handling of customer service, repair and spare parts queries (see Section 2.1).

Illustrations and data in this instruction manual are subject to technical changes in the course of improvements to the engines. Reprinting and reproductions of any kind, even in part, require our written permission.



Foreword

Dear customer,

The liquid-cooled engines made by DEUTZ are developed for a wide variety of applications. An extensive range of variants ensures that the respective special requirements are met.

Your engine is equipped according to the installation, i.e. not all the parts and components described in this instruction manual are installed on your engine.

We have done our best to clearly identify the differences, so that you can easily find the operating, maintenance and repair instructions relevant to your engine.

Please read these instructions before you start your engine and observe the operating and maintenance instructions.

We are at your service for any questions you may have in this matter.

Your

DEUTZAG

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General

DEUTZ Diesel Engines

are the product of many years of research and development. The resulting know-how, coupled with stringent quality standards, guarantee their long service life, high reliability and low fuel consumption. It goes without saying that DEUTZ Diesel Engines meet the highest standards for environmental protection.

Beware of Running Engine

Shut the engine down before carrying out maintenance or repair work. Ensure that the engine cannot be accidentally started. Risk of accidents!
When working on the running engine, work clothing must be close fitting.
Observe industrial safety regulations when running the engine in an enclosed space or underground.
When the work is complete, be sure to refit any panels and guards that may have been removed. Never fill the fuel tank while the engine is running.

Care and Maintenance

Sound care and maintenance practices will ensure that the engine continues to meet the requirements placed on it. Recommended service intervals must be observed and service and maintenance work carried out conscientiously. Special care should be taken under abnormally demanding operating conditions.

Safety

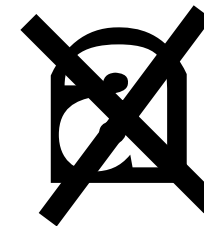


This symbol is used for all safety warnings which, if not observed, present a direct danger to life and limb for the person involved. Please follow them carefully. The attention of operating personnel should be drawn to these safety instructions. General safety and accident prevention regulations laid down by law must also be observed.

Service

Please contact one of our authorized service representatives in the event of breakdowns or for spare parts inquiries. Our trained specialists will carry out repairs quickly and professionally, using only genuine spare parts. Original parts from DEUTZ AG are always produced in accordance with state-of-the-art technology. The Technical Circulars listed in the instruction manual are obtainable from your DEUTZ partner. Please turn to the end of this manual for further service information.

Asbestos



DEUTZ original parts are asbestos-free.

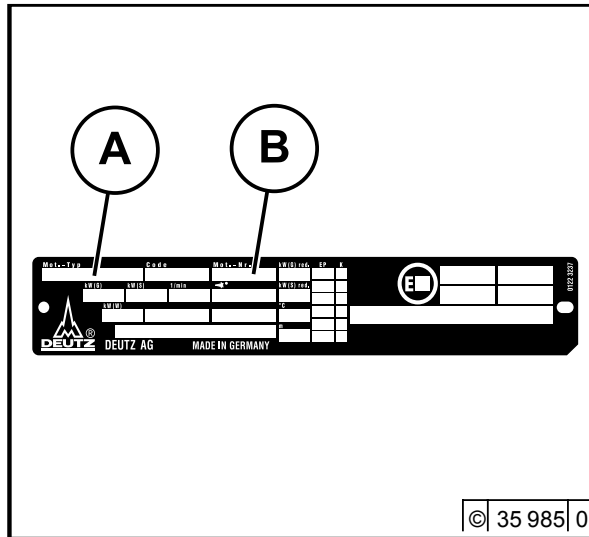
- 2.1 Engine type**
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Engine description

2.1 Engine type

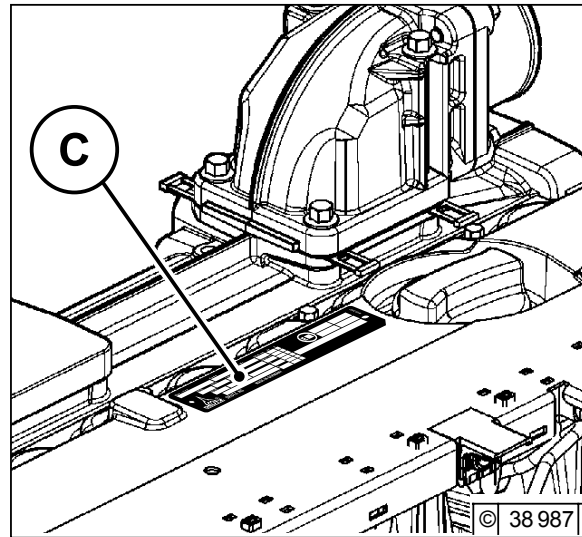
2

2.1.1 Company plate

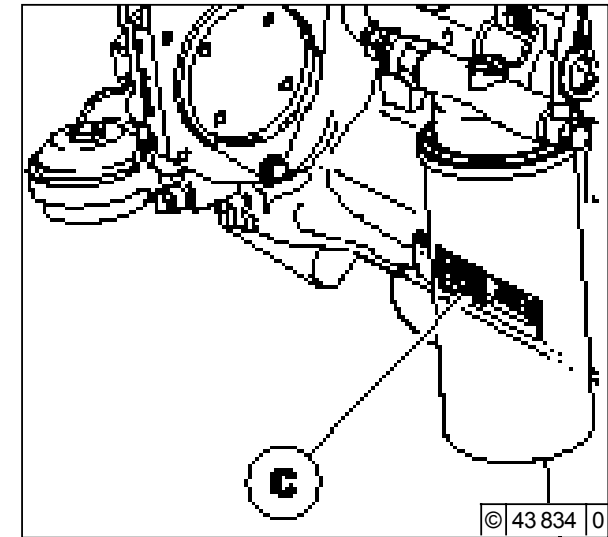


The engine type **A**, engine number **B** and the power data are stamped on the company plate. The engine type and number must be stated when purchasing spare parts.

2.1.2 Location of company plate

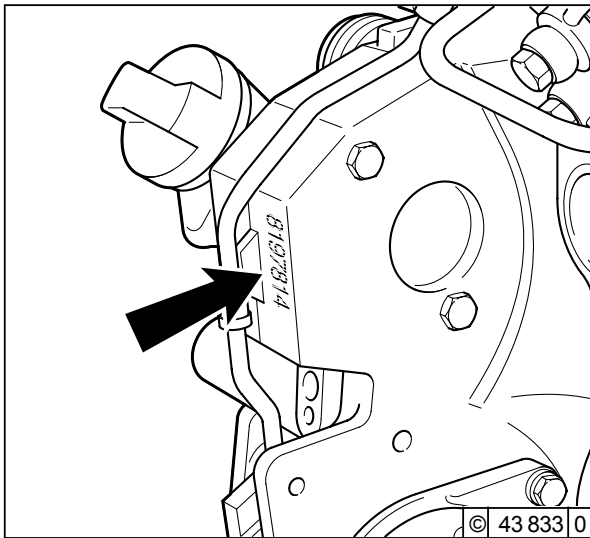


The company plate **C** is fixed to the cylinder head cover or the crankcase.



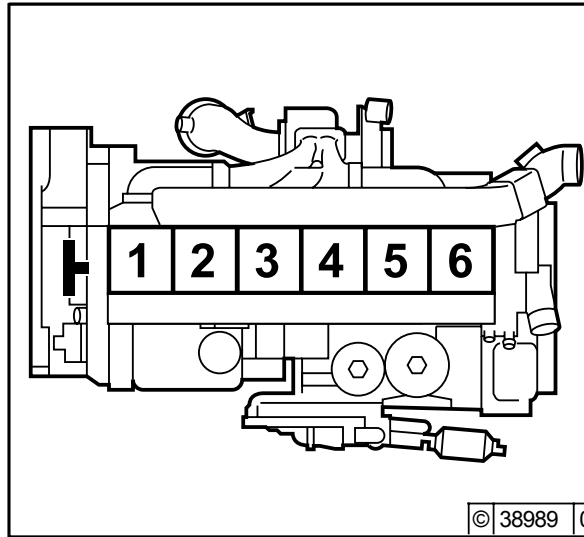
2.1 Engine type

2.1.3 Engine number



The engine number is stamped on the crankcase (arrow) and on the company plate.

2.1.4 Cylinder numbering



The cylinders are counted consecutively, starting from the flywheel.