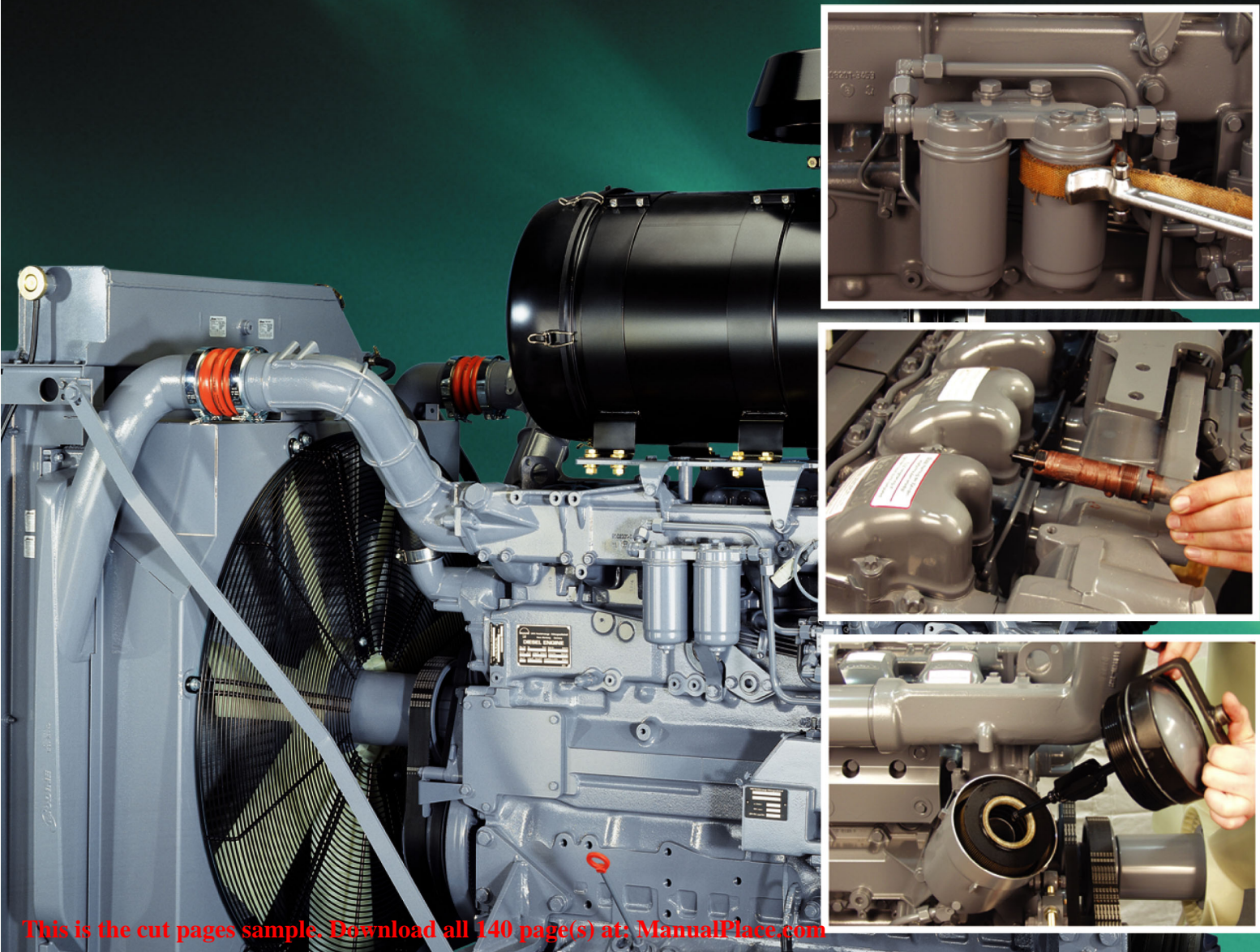


Service Record Book



MAN Industrial Diesel Engines



Dear Customer,

Congratulations on your decision to purchase a MAN Diesel engine. These engines boast top performance and operational reliability while requiring only a minimum of maintenance. However, to ensure faultless operation, some checks and maintenance work are necessary at regular intervals.

This handbook provides an overview of all specified maintenance work.

Service work has to be carried out on the basis of operating hours clocked up according the checklists (pages 11 and following) by MAN-authorized workshops.

To make it easier for you to handle your new engine correctly, the following publications are available:

- Operating Instructions
- Fuels, Lubricants, Coolants for MAN Diesel Engines
- Spare-parts catalogue
- Service record book

We shall be pleased to answer your questions on aspects which cannot be clarified with these publications. When submitting an enquiry, please always indicate **the 14-digit engine number** which you can find on the form "General data" **on page 3** or on the model plate on the engine.

Yours faithfully,
MAN Nutzfahrzeuge Aktiengesellschaft
Nuremberg Works

Since our products are in continuous development, we reserve the right to make technical modifications.

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Notes

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Name and address of owner	
Data on engine	
Engine model:	Output in kW:
Works number:	Date of commission:
Engine number:	Engine speed in rpm:
Name of MAN agent:	
Data on drive system	
Type of drive system (e.g. generator, pump):	
Construction number, year of construction:	
Place and date of 20-60 hour service:	



Notes

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General notes

Please note that servicing must only be carried out by an authorised MAN workshop.

After each service the workshop will confirm that the work has been correctly carried out to checklist by stamping and signing the service booklet.

Care should be taken that all entries are complete, correct and legible.

A trial run is to be made after each service.

Notes about work and/or repairs that seem to be necessary or have been carried out can also be recorded.

Servicing for engines in continuous operation (> 3000 h / a) and in peak load operation (< 3000 h / a)

These engines are regularly serviced every 200 operating hours. Apart from this the screw cap on the cooling system and the coolant are to be changed every 2 and 4 years respectively.

All servicing which must be carried out up to 10 000 operating hours and the regular servicing after 2 or 4 years are listed from page 9.

Servicing for engines for standby operation

These engines generally run for only a few operating hours annually. Servicing is therefore to be carried out each year.

All servicing that must be regularly carried out up to 10 years is listed from page 115 onwards.

The service after 20-60 operating hours

This first service is imperative.

In the context of the first maintenance the form “General data” on page 3 is to be filled in by the MAN-authorised workshop.

**Danger:**

This refers to working and operating procedures which must be complied with in order to rule out the risk to persons.

**Caution:**

This refers to working and operating procedures which must be complied with in order to prevent damage to or destruction of material.

**Note:**

Explanatory descriptions which help in understanding the relevant work or operating procedure to be carried out.

Assembly of pipes

**Danger:**

No pipes may be bent. Risk of breakage!

Fitting flat seals / gaskets

Gaskets are frequently used with sealants or adhesives as an aid to assembly or to achieve a better seal. Above all when parts with different levels of thermal expansion (e.g. aluminium and cast iron) are bonded, this can mean that the gasket is shifted during operation by the so-called stitching or sewing machine effect and leaks occur.

Example: The cap of the front crankshaft seal. If a sealing agent or an adhesive is used here the flat seal will move inwards in the course of time as a result of the different expansion rates of the materials. Oil will be lost, for which the shaft seal may be thought to be responsible.

Perfect assembly of gaskets can only be achieved if the following instructions are adhered to:

- Use only genuine MAN seals / gaskets.
- The sealing faces must be undamaged and clean.
- Do not use any sealing agent or adhesive – as an aid to fitting the seals a little grease can be used if necessary so that the seal will stick to the part to be fitted.
- Tighten bolts evenly to the specified torque.

Assembly of round sealing rings

- Use only genuine MAN round sealing rings.
- The sealing faces must be undamaged and clean.
- Always wet round sealing rings with engine oil before fitting them.

Extent of warranty

MAN warrants that within the period of the warranty all D 08 and D 28 engines components identified as being faulty will, at MAN's discretion, be either replaced or repaired, the warranty conditions being decisive for this.

Repairs

For execution of the necessary work the customer has to

- grant the necessary time and opportunity,
- provide at his own expense helpers, machinery and equipment and carry out secondary work,
- perform at his own expense any work above and beyond the original extent of the order.

Depending on the kind of damage, MAN will assume to a reasonable amount both the travelling expenses arising for authorised service technicians and the necessary dispatch costs for spare and replacement parts. Extra costs in connection with particular travelling and dispatch expenses are to be borne by the customer. Repairs will be performed within normal, regular working hours. Extra costs for work outside regular working hours are to be borne by the customer.

The warranty does not include

- the exchange of wearing parts such as filters, V-belts and service products (oil, antifreeze and anti-corrosion agents),
- the costs of the execution of the normal service work to be carried out at regular intervals,
- damage resulting from the use of unsuitable service products or from improper handling / operation,
- indirect costs of loss of use, of loss of time, of expenses for board and lodging, of freight charges, of fuel and of all other consequential costs which may be incurred in connection with warranty cases,
- any damage which arises if the "Installation instructions for industrial diesel engines" are disregarded.



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