

Technical Documentation Engine Working Instructions

Engine L 48/60

Work No. Edition for Information

Plant No. *

See content in Bookmarks

6644-1

MAN B&W Diesel AG • D-86135 Augsburg • Postfach 10 00 80 • Telefon (0821) 3 22-0 • Telex 5 37 96-0 man d



© 1998 MAN B&W Diesel AG

All copyrights reserved for reprinting, photomechanical reproduction (photocopying/microcopying) and translation of this documents or part of it.



6644 B2-01 E

07.99

02/02

Table of contents

•	•	•	□	1	Introduction
•	•	•	□	1.1	Preface
•	•	•	□	1.2	How the working instructions/work cards are organised, and how to use them
			□	2	Work cards, arranged by subjects/key words
			□	3	Work cards, arranged by subassembly groups
					Categories of information
					Information
					Description
					Instruction
					Data/formulas/symbols
					Intended for ...
					Experts
					Middle management
					Upper management

Introduction

1 Introduction

2 Work cards,

arranged by subjects/key words

3 Work cards,

arranged by subassembly groups of the engine

Work cards and maintenance schedule

The working instructions/work cards are closely related to the maintenance schedule of the engine contained in Volume B1 of the technical documentation. The latter briefly specifies the maintenance work to be done, whereas this volume gives a step-by-step description, with illustrations, of the operating sequences required to maintain the operational reliability and efficiency of the engine. The work cards have an introductory part describing the purpose of the work, and contain information also stating which tools and appliances are required. For most of the jobs, several work cards have to be consulted.

Work cards serve the particular purpose of providing essential information in concise form.

Ordinal system

Work cards have in the first part been arranged by subjects/key words; in the second part, the order follows the subassembly group system of the engine. Both parts contain indices giving the contents of work cards that concern your engine.

One standard paper sheet and one foil-sealed copy of each work card is available. The foil-sealed copies are insensitive to being soiled and can be used for information while the job is being done.

How the working instructions/work cards are organised, and how to use them

1.2

Structure

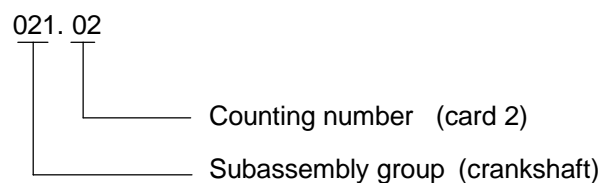
Work cards contain the following information as a rule:

- Notes on the purpose of the jobs to be done,
- on the relevant work cards, i.e. those work cards containing further essential or useful information,
- on the necessary tools and appliances,
- any supplementary details/technical data and
- the individual operating sequences, starting in each case with the original condition and followed by the individual working steps.

Tools are marked with the tool number in illustrations and texts; other parts are marked with their item number.

Numbering

The ordinal number of the work cards - on top at the right - is composed of the three-digit subassembly group number (or of a neutral numerical combination) and a counting number, for example:



How to find the work cards required

The work cards are contained in the lists of Section 2 and 3. The list, Part 1 is a summary of work cards by subjects/key words, the list, Part 2 contains working instructions arranged in an order following the subassembly group system of the engine.

Access to the ordinal system of the list, Part 3 is ensured by the subassembly group list. Illustrated by a cross section and a longitudinal section of the engine, it lists the subassembly group numbers in tabulated form, representing the order in which the work cards of this section have been arranged.

Safety notes

Text passages in italic type draw the attention to dangers sources of failure, technical necessities, supplementary information. The following are used:

▲▲▲ *Danger! Imminent danger.*

Possible consequences: Death or most severe injuries, total damage to property.

▲▲ *Caution! Potentially dangerous situation.*

Possible consequences: Severe injuries.

▲ *Attention! Possibly dangerous situation.*

Possible consequences: Slight injuries, possible damage to property.

△△ *Important! For calling attention to error sources/handling errors.*

△ *Tip! For tips regarding use and supplementary information.*

Clearances and tolerances
temperatures and pressures

Clearances and tolerances, temperatures and pressures are contained in
Section 2.5, Volume B1.

Values for the tightening of bolted connections and the appropriate
lubricants are contained in work cards [000.29](#), [000.30](#) and [000.31](#).

Ordering tools

Information concerning the ordering of tools or parts of these is given in
Section 3.4 of Volume B1, or in the spare parts catalogue B3.

Work cards,
arranged by subjects/key words

1 Introduction

2 Work cards,
arranged by subjects/key words

3 Work cards,
arranged by subassembly groups of the engine

Table of contents

					<input type="checkbox"/>	001 Operating media systems/Pipes
	•	•			<input type="checkbox"/>	000.03 Operating media systems Flushing and cleaning
	•	•			<input type="checkbox"/>	000.08 Cooling water system Cleaning
	•	•			<input type="checkbox"/>	000.15 Pipes Replacement
	•	•			<input type="checkbox"/>	000.16 Pipes Cleaning, Acid Bath Treatment and Preservation
	•	•			<input type="checkbox"/>	000.17 Solderless screwed pipe unions Mounting
	•	•			<input type="checkbox"/>	000.18 Solderless screwed pipe unions Additional parts
					<input type="checkbox"/>	002 Operating media/Auxiliary agents
	•	•			<input type="checkbox"/>	000.04 Lubricating oil Assessing and treating
	•	•			<input type="checkbox"/>	000.05 Lube oil/fuel Carry out drop test
	•	•			<input type="checkbox"/>	000.07 Cooling water Checking
	•	•			<input type="checkbox"/>	000.14 Engine or components Preservation treatment
	•	•			<input type="checkbox"/>	000.19 Loctite Products Use
					<input type="checkbox"/>	003 Machine elements
	•	•			<input type="checkbox"/>	000.11 Galvanized bearings Assessing
	•	•			<input type="checkbox"/>	000.11 Deep-groove bearing Assessing
Categories of information						
						Information
						Description
						Instruction
						Data/formulas/symbols
						Intended for ...
						Experts
						Middle management
						Upper management

		<input type="checkbox"/>	005	Operating data/Operating results
			000.25	Ignition and compression pressures Determination
		<input type="checkbox"/>	000.40	Charge air cooler/crankcase Measuring the differential pressure
				Categories of information
				Information
				Description
				Instruction
				Data/formulas/symbols
				Intended for ...
				Experts
				Middle management
				Upper management