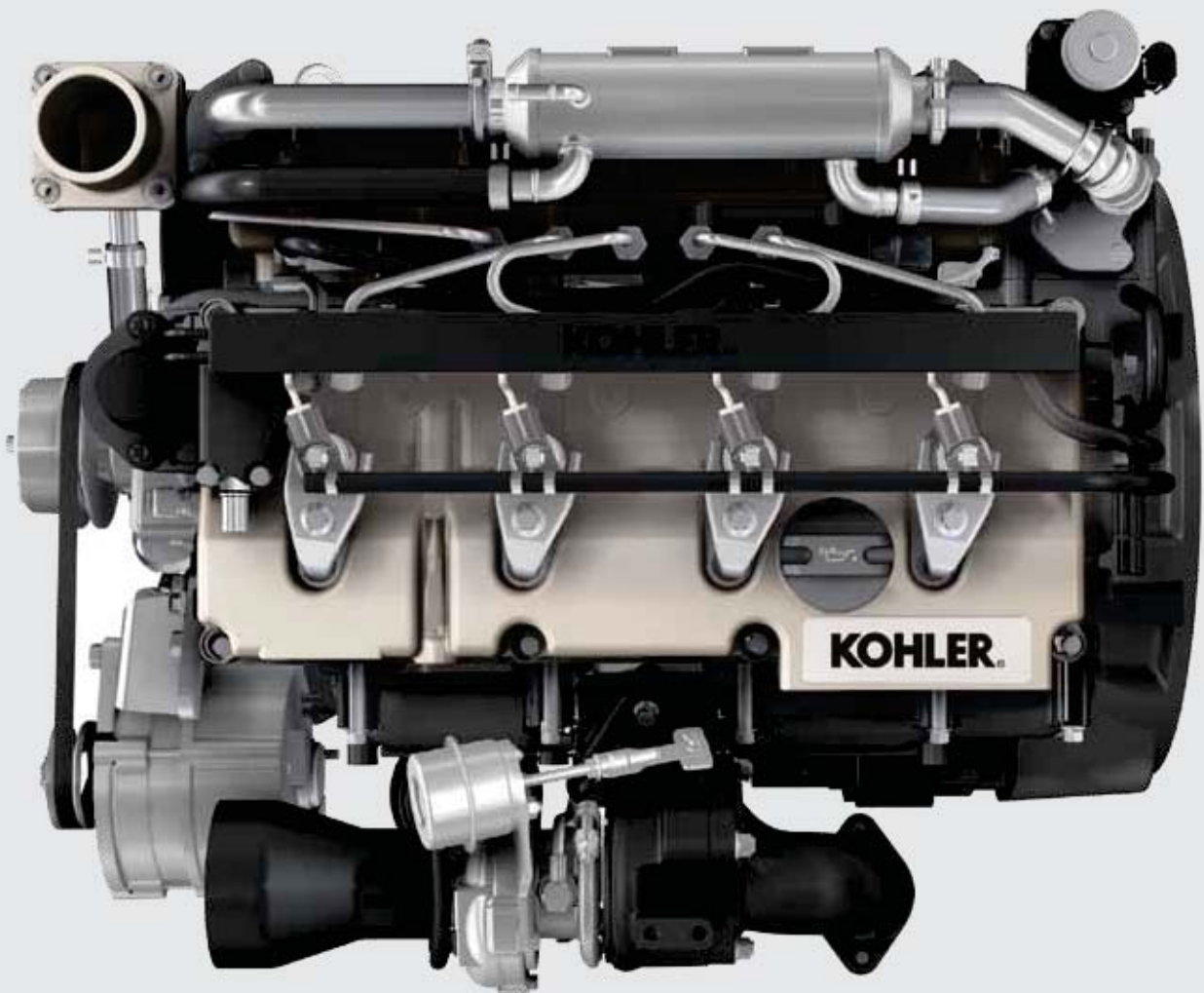


1903 TCR -2504 TCR

WORKSHOP MANUAL



KOHLER® Diesel KDI



KOHLER®

REGISTRATION OF MODIFICATIONS TO THE DOCUMENT

Any modifications to this document must be registered by the drafting body, by completing the following table.

| Drafting body | Code document | Model N° | Edition | Revision | Date issue | Date Review | Written by | Endorsed |
|---------------|---------------|----------|---------|----------|------------|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| DICOM/ATLO | ED0053029590 | 51273 | 1° | 0 | 24/04/2013 | 24/04/2013 |  |  |

The online manuals are provided with hyperlinks which direct you to each individual chapter. By clicking on;

- the analytic index titles you can go directly to the selected subject.
- the blue underlined words you can go directly to a paragraph, a table or a picture.
- clicking next to the bottom page number you come back to the analytic index.
- the mark (↪) after the title of a paragraph, indicates that the procedure is not required in order to disassemble the engine, however the procedures are featured in order to illustrate the disassembly of components.

Introduction - Foreword

- This manual contains the instructions needed to carry out proper use and maintenance of the engine, therefore it must always be available, for future reference when required.
- All data, units of measurement and relevant symbols are shown in the table on [Page 9](#).
- Safety pictograms can be found on the engine and it is the operator's responsibility to keep them in a perfectly visible condition and replace them when they are no longer legible.
- Information, description and pictures in this manual reflect the state of the art at the time of the marketing of engine.
- However, the development of engines is continuous. Therefore, the information in this manual is subject to change without notice.
- **KOHLER** reserves the right to make, at any time, changes on the engines for technical or commercial reasons.
- These changes do not require **KOHLER** to intervene on the production marketed up to that time and nor to consider this manual as inappropriate.
- Any additional section that **KOHLER** will deem necessary to supply at a later stage must be kept with the manual and considered as an integral part of it.
- The information contained in this manual is the sole property of **KOHLER**, therefore no partial or total reproduction or replication is allowed without the express permission of **KOHLER**.

Intended use of the engine

- The intended use of the engine is that in compliance with the machine on which it is installed.
- Any repairs or changes other than those specified by **KOHLER** in this manual are considered improper.
- **KOHLER** declines all responsibility for any change to the engine not described in this manual and performed by unauthorised personnel not authorised by **KOHLER**.

Regulations for safety and accident prevention

- Those who carry out maintenance operations on the engine must use the safety equipment and the personal protection equipment.
- **KOHLER** declines all direct and indirect liability for failure to comply with the conduct regulations contained in this manual.
- **KOHLER** cannot contemplate every reasonably unforeseeable misuse capable of posing a potential hazard.

Scrapping

- In the event of scrapping, the machine shall be disposed of in appropriate dumps, in compliance with the legislation in force.
- Before scrapping, it is necessary to separate the rubber or plastic parts.
- The parts only composed of plastic material, aluminium and steel can be recycled if collected by the appropriate centres.
- Waste oil must be collected and disposed of properly to safeguard the environment. According to the laws in force, it is classified as hazardous waste, therefore it must be collected by the appropriate centres.
- For the collection of waste oil you must contact the "Mandatory Consortium for Used Oils".

A

| | |
|--------------------------------------------------------------|-----|
| Accident prevention, Regulations for safety and | 3 |
| Adjustment "WASTE GATE" valve | 180 |
| Air filter (cartridge replacement)..... | 178 |
| Alternator belt (replacement and adjustment), Poly-V | 165 |
| Assembly and high-pressure pump, Timing system gear | 134 |
| ASSEMBLY INFORMATION..... | 124 |
| Assembly lubrication circuit | 145 |
| Assembly recommendations..... | 124 |
| Assembly, Electric component | 151 |
| Assembly, Cylinder head unit | 136 |
| Assembly, EGR Circuit..... | 155 |
| Assembly, Engine block..... | 125 |
| Assembly, Exhaust manifold..... | 145 |
| Assembly, Flange unit..... | 133 |
| Assembly, Fuel system | 141 |
| Assembly, Intake manifold..... | 144 |
| Assembly, Oil sump unit | 132 |
| Assembly, Turbo-compressor..... | 150 |
| Assembly, Water circuit | 149 |

B

| | |
|-------------------------------------------------------|-----|
| Balancer shafts (optional), Configurations with | 48 |
| Balancer shafts (replacement) | 175 |
| Battery features | 20 |
| Before start-up..... | 56 |

C

| | |
|-------------------------------------------------------------------------------|-----|
| Check, Oil pump..... | 123 |
| Circuit, Cooling | 32 |
| Circuit, Lubrication..... | 29 |
| Components handling..... | 49 |
| Components, Identification of engine | 12 |
| Components,Electrical..... | 43 |
| Configuration (chapter general configuration), Information on engine | 12 |
| Configuration (chapter assembly), Information on engine | 124 |

| | |
|-----------------------------------------------------|-----|
| Configurations with balancer shafts (optional)..... | 48 |
| Connecting rod - piston assembly..... | 118 |
| Coolant (chapter fluids supply)..... | 161 |
| Coolant (chapter liquid drainage information) | 64 |
| Coolant..... | 20 |
| Cooling circuit..... | 32 |
| Crankcase | 112 |
| Crankshaft | 117 |
| Cylinder head unit assembly..... | 136 |
| Cylinder head unit disassembly..... | 100 |

D

| | |
|--------------------------------------------------------|-----|
| Definitions, Glossary and | 9 |
| DIAGNOSTIC INFORMATION..... | 191 |
| Diagnostic tool error list | 192 |
| Diagrams, Performance | 17 |
| Dimensions, Engine..... | 16 |
| Disassembly (EGR), Exhaust fumes recycle circuit | 87 |
| Disassembly, Cylinder head unit | 100 |
| Disassembly, Electric components | 88 |
| Disassembly, Engine block..... | 105 |
| Disassembly, Exhaust manifold..... | 92 |
| Disassembly, Flange unit..... | 100 |
| Disassembly, Injection circuit..... | 97 |
| Disassembly, Intake manifold | 96 |
| Disassembly, Lubrication circuit | 94 |
| Disassembly, Oil sump unit..... | 104 |
| Disassembly, Recommendations for..... | 87 |
| Disassembly, Timing system gear..... | 99 |
| Disassembly, Turbocharger..... | 91 |
| Disassembly, Water recirculation components | 92 |

E

| | |
|---------------------------------------|-----|
| EGR Circuit assembly | 155 |
| EGR valve replacement..... | 74 |
| Electric component assembly..... | 151 |
| Electric components disassembly | 88 |

E

Electric system..... 38

Electrical components 43

Electronic injector replacement..... 66

Engine block assembly 125

Engine block disassembly 105

Engine dimensions 16

Engine identification, Manufacturer and..... 10

Engine oil (chapter liquid drainage information) 65

Engine oil (chapter fluids supply) 161

Engine pulley and phonic wheel assembly..... 148

Engine pulley and phonic wheel disassembly 93

Engine specifications 14

Engine starting after storage 62

Engine storage (over 6 months) 62

Engine storage (up to 6 months) 62

Engine, Intended use of the..... 3

Environmental impact, Safety and..... 59

EPA regulations, Name plate for 11

Error list, Diagnostic tool..... 192

Exhaust circuit, Intake and 35

Exhaust fumes recycle circuit disassembly (EGR)..... 87

Exhaust manifold assembly 145

Exhaust manifold disassembly 92

F

Features, Battery 20

Filter (cartridge replacement), Air..... 178

Flange unit assembly 133

Flange unit disassembly 100

FLUIDS SUPPLY INFORMATION 161

Foreword, Introduction 3

Fuel 19

Fuel filter replacement 85

Fuel system..... 22

Fuel system assembly..... 141

G

Gear (for 3rd / 4th PTO), Idler 168

GENERAL INFORMATION..... 9

General remarks..... 56

Glossary and Definitions 9

H

Handling, Components 49

Heater (replacement) 164

High-pressure pump replacement..... 69

High-pressure pump, Timing system gear assembly and 134

I

Identification of engine components..... 12

Idler gear (for 3rd / 4th PTO) 168

INFORMATION ABOUT FAILURES..... 188

INFORMATION ABOUT OPTIONAL COMPONENTS..... 163

INFORMATION FOR REPLACING THE FUNCTIONAL UNITS..... 66

INFORMATION ON ADJUSTMENTS 180

Information on engine configuration (chapter assembly) 124

Information on engine configuration (chapter general configuration)..... 12

Information on resources used in graphics software POLAR-XL..... 194

Information and safety signals..... 59

Injection circuit disassembly 97

Injector replacement, Electronic..... 66

Intake and exhaust circuit..... 35

Intake manifold assembly 144

Intake manifold disassembly..... 96

Intended use of the engine 3

Introduction - Foreword 3

INTRODUCTION - FOREWORD 3

It's a preview. You can download the full file by clicking the link below.

<https://shopservicemanual.com/>

Service Manuals from 2\$