

# Shop Manual

HYDRAULIC  
EXCAVATOR

***PC290LC-10***

SERIAL NUMBERS 15001 and up

**KOMATSU**



SHOP MANUAL

# HYDRAULIC EXCAVATOR

## PC290LC - 10

Model                      Serial Number

PC290LC - 10    15001 and up

---

# 00 Index and foreword

---

---

**Index**

00 Index and foreword .....	00-1
Index .....	00-2
Foreword, safety and general information .....	00-14
Important safety notice .....	00-14
How to read the shop manual .....	00-21
Explanation of terms for maintenance standard .....	00-23
Handling equipment of fuel system devices .....	00-25
Handling of intake system parts .....	00-26
Handling of hydraulic equipment .....	00-27
Method of disconnecting and connecting of push-pull type coupler .....	00-29
Handling of electrical equipment .....	00-32
How to read electric wire code .....	00-40
Precautions when performing operation .....	00-43
Practical use of KOMTRAX .....	00-48
Standard tightening torque table .....	00-49
List of abbreviation .....	00-55
Conversion table .....	00-60
01 Specification .....	01-1
Table of contents .....	01-2
Specifications .....	01-3
Specification drawings .....	01-3
Working range drawings .....	01-4
Specifications .....	01-5
Weight table .....	01-8
Table of fuel, coolant and lubricants .....	01-9
10 Structure and function .....	10-1
Table of contents .....	10-2
Engine and cooling system .....	10-3
Engine related parts .....	10-3
KVTG .....	10-5
EGR system piping drawing .....	10-12
EGR system circuit diagram .....	10-14
EGR valve .....	10-16
EGR cooler .....	10-18
KCCV layout drawing .....	10-20
KCCV ventilator .....	10-22
KDPF .....	10-24
Cooling system .....	10-28
Power train .....	10-30
Power train system .....	10-30
Swing circle .....	10-32
Swing machinery .....	10-33
Final drive .....	10-35
Undercarriage and frame .....	10-37
Track frame and idler cushion .....	10-37
Hydraulic system .....	10-39
Hydraulic equipment layout drawing .....	10-39
Valve control .....	10-41
Hydraulic tank .....	10-43
CLSS .....	10-45
Main pump .....	10-50
Control valve .....	10-74
Swing motor .....	10-128
Travel motor .....	10-139
PPC valve .....	10-153
Solenoid valve .....	10-174
Attachment circuit selector valve (for high pressure circuit) .....	10-177
Attachment circuit selector valve (for low pressure circuit) .....	10-179
Center swivel joint .....	10-182
Accumulator .....	10-184

Work equipment .....	10-185
Work equipment.....	10-185
Work equipment shim.....	10-186
Bucket play adjustment shim.....	10-187
Cab and its attachments.....	10-188
Cab mount and cab tipping stopper .....	10-188
ROPS cab .....	10-189
Electrical system .....	10-190
Electrical control system .....	10-190
Machine monitor system.....	10-234
KOMTRAX system.....	10-254
Sensor .....	10-256
20 Standard value tables.....	20-1
Table of contents .....	20-2
Standard service value table.....	20-3
Standard value table for engine related parts.....	20-3
Standard value table for chassis related parts.....	20-5
30 Testing and adjusting .....	30-1
Table of contents .....	30-2
Related information on testing and adjusting .....	30-3
Tools for testing and adjusting .....	30-3
Sketch of tools for testing and adjusting .....	30-7
Engine and cooling system.....	30-9
Testing engine speed .....	30-9
Testing boost pressure .....	30-10
Testing exhaust gas color .....	30-11
Testing mass air flow and temperature sensor .....	30-12-2
Testing and adjusting valve clearance.....	30-13
Testing compression pressure.....	30-16
Measuring blowby pressure .....	30-20
Measuring engine oil pressure.....	30-21
Measuring EGR valve and KVGT oil pressure.....	30-22
Measuring fuel pressure .....	30-23
Measuring fuel delivery, return and leakage.....	30-29
Bleeding air from fuel system .....	30-34
Testing fuel circuit for leakage .....	30-36
Handling cylinder cutout mode operation.....	30-37
Handling no-injection cranking operation.....	30-38
Testing and adjusting air conditioner compressor belt tension .....	30-39
Replacing fan belt .....	30-40
Power train.....	30-41
Testing swing circle bearing clearance .....	30-41
Undercarriage and frame.....	30-42
Testing and adjusting track tension .....	30-42
Hydraulic system .....	30-43
Releasing remaining pressure from hydraulic circuit.....	30-43
Measuring and adjusting oil pressure in work equipment, swing, and travel circuits.....	30-44
Testing oil pressure in control circuit.....	30-48
Testing and adjusting oil pressure in pump PC control circuit.....	30-49
Testing and adjusting oil pressure in pump LS control circuit .....	30-52
Testing output pressure of solenoid valve .....	30-57
Measuring PPC valve output pressure .....	30-61
Adjusting play of work equipment and swing PPC valves.....	30-63
Testing pump swash plate sensor.....	30-64
Isolating the parts causing hydraulic drift in work equipment.....	30-65
Testing oil leakage .....	30-67
Bleeding air from hydraulic circuit .....	30-70
Testing and charging accumulator (manufactured by NOK) nitrogen gas pressure for attachment (low pressure side) .....	30-71-1
Testing and charging accumulator nitrogen gas pressure for attachment (high pressure side) .....	30-71-3

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

<https://shopservicemanual.com/>

Service Manuals from 2\$