## **Shop Manual**

# WA100NI-8E0

#### **WHEEL LOADER**

Model: WA100M-8E0 Serial number: H11840 AND UP

- This shop manual may contain attachments and optional equipment that are not available in your area. Please consult your local KOMATSU distributor for those items you may require.
- · Materials and specifications are subject to change without notice.
- The Wheel Loader WA100M-8E0 is equipped with the engine SAA4D94LE-3.



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ABBREVIATION LIST INDEX AND FOREWORD

#### **ABBREVIATION LIST**

 This list of abbreviations includes the abbreviations used in the text of the shop manual for parts, components, and functions whose meaning is not immediately clear. The spelling is given in full with an outline of the meaning.

- Abbreviations that are used in general society may not be included.
- Special abbreviations which appear infrequently are noted in the text.
- This list of abbreviations consists of two parts. The first part is a list of the abbreviations used in the text of the manual, and the second part is a list of the abbreviations used in the circuit diagrams.

#### List of abbreviations used in the text

Abbrevia- tion	Actual word spelled out	Purpose of use (major applicable machine (*1), or component/system)	Explanation
ABS	Antilock Brake System	Travel and brake (HD, HM)	This is a function that releases the brake when the tires skid (tires are not rotated). This function applies the brake again when the tires rotate.
AISS	Automatic Idling Setting System	Engine	This is a function that automatically sets the idle speed.
AJSS	Advanced Joystick Steering System	Steering (WA)	This is a function that performs the steering operations with a lever instead of using a steering wheel. This function performs gear shifting and changing forward and reverse direction.
ARAC	Automatic Retarder Accelerator Control	Travel and brake (HD, HM)	This is a function that automatically operates the retarder with a constant braking force when letting go of the accelerator pedal on the downhill.
ARSC	Automatic Retarder Speed Control	Travel and brake (HD, HM)	This is a function that automatically operates the retarder to ensure that the machine speed does not accelerate above the speed set by the opera- tor when letting go of the accelerator pedal on the downhill.
ASR	Automatic Spin Regulator	Travel and brake (HD, HM)	This is a function that drives both wheels automatically using the optimum braking force when the tire on one side spins on the soft ground sur- faces.
ATT	Attachment	Work equipment	A function or component that can be added to the standard specification.
BCV	Brake cooling oil control valve	BRAKE (HD)	This is a valve that bypasses a part of the brake cooling oil to reduce the load applied to the hydraulic pump when the retarder is not being used.
CAN	Controller Area Network	Communication and electronic control	This is one of communication standards that are used in the network on the machine.
CDR	Crankcase Depression Regulator	Engine	This is a regulator valve that is installed to CCV ventilator. It is written as CDR valve and is not used independently.
CLSS	Closed-center Load Sensing System	Hydraulic system	This is a system that can actuate multiple actuators simultaneously regardless of the load (provides better combined operation than OLSS).

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INDEX AND FOREWORD ABBREVIATION LIST

Purpose of use (major Abbrevia-Actual word spelled out applicable machine (\*1), Explanation tion or component/system) This is a function that maintains optimum fuel injection amount and fuel injection timing. This CRI Common Rail Injection **Engine** is performed the engine controller which electronically controls supply pump, common rail, and injector. This is an electronic control device that send Electronic Control the command to actuators using the signals **ECM** Electronic control system Module from the sensors on the machine so that the optimum actuation is performed. (Same as This is a proportional electromagnetic valve Electronic Control Transmission **ECMV** that decreases the transmission shock by grad-Modulation Valve (D, HD, WA, etc) ually increasing oil pressure for engaging Electronically Con-This is a device that ensures smooth high-Travel **ECSS** speed travel by absorbing vibration of machine trolled (WA) during travel with hydraulic spring effect of Suspension System This is an electronic control device that send the command to actuators using the signals **ECU** Electronic Control Unit Electronic control system from the sensors on the machine so that the optimum actuation is performed. (Same as This is a function that recirculates a part of Exhaust Gas Recircuexhaust gas to combustion chamber, so that it **EGR** Engine lation reduces combustion temperature, and reduces emission of NOx. This is a function with which operator can Equipment Managecheck information from each sensor on the **EMMS** ment Monitoring Sys-Machine monitor machine (filter, oil replacement interval, malfunctions on machine, failure code, and failure Electromagnetic proportional control This is a Electromagnetic Pro-**EPC** mechanism with which actuators operate in Hydraulic system portional Control proportion to the current. This structure protects the operator's head from Falling Object Protecfalling objects. (Falling object protective struc-**FOPS** Cab and canopy tive Structure ture) This performance is standardized as ISO 3449. Forward-Neutral-Re-F-N-R Operation Forward - Neutral - Reverse verse Communication Global Positioning Sys-This system uses satellites to determine the **GPS** (KOMTRAX, KOMTRAX current location on the earth. Plus) Communication Global Navigation Sat-**GNSS** (KOMTRAX, KOMTRAX This is a general term for system uses satellites ellite System such as GPS, GALILEO, etc. Plus) This is a function that enables the machine to Hydrostatic Steering Steering turn without steering clutch by controlling a dif-HSS System (D Series) ference in travel speed of right and left tracks with a combination of hydraulic motor and Hydraulic transmission system that uses a Transmission Hydro Static Transmiscombination of hydraulic pump and hydraulic **HST** sion (D, WA) motor without using gears for stepless gear

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