Shop Manual

VEBM550101

WA65-6
WA70-6
WA80-6
WA90-6
WA100M-6

WHEEL LOADER

Model:	Serial number:
WA65-6	H60051 AND UP
WA70-6	H60051 AND UP
WA80-6	H60051 AND UP
WA90-6	H00051 AND UP
WA100M-6	H60051 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 Loaders WA65-6 and WA70-6 are equipped with the engine 4D95LWE-5.
  The Wheel Loaders WA80-6 is equipped with the engine S4D95LWE-5.
  The Wheel Loaders WA90-6 and WA100M-6 are equipped with the engine SAA4D95LE-5.

- For details of this engine see Engine Manual: WA65-WA80-6 SEN04408-00
  WA90-6 and WA100M-6 SEN04357-00

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WA80-6 – Lubricants and operating mediums

The specified filling volumes represent approximate values; the testing devices are binding. The selection of a viscosity class depends on the ambient temperature prevailing over a longer period of time. The temperature limits are to be regarded as guiding values; for a brief period, the actual temperature may be higher or lower than these guiding values.

Components	Lubricants, fuel etc.	BI code	Quality grades	Temperature ranges	Viscosity ranges	Approx. filling capacity in litres
Engine	Engine oil EO (KOMATSU genuine parts)	EO15W40-DH EO10W30-DH	API CH-4 or API CI-4	-15 °C to 45 °C -20 °C to 30 °C	SAE 15W-40 [1] SAE 10W-30	11.5 (11) *
Transfer Gear Box	AGIP ROTRA MULTI THT ESSO TORQUE FLUID 56 MOBILFLUID 424 MOBILLUBE D LS 80W-90 SHELL SPIRAX LS ESSO TORQUE FLUID 62	GO 80	API-GL4 API-GL4 API-GL4 API GL-5 API-GL4 API-GL4	–	SAE 80 [1] SAE 80 SAE 80 SAE 80W-90 SAE 80W-90 SAE 10W-30	1.3
Front Axle	AGIP ROTRA MULTI THT ESSO TORQUE FLUID 56 MOBILFLUID 424 MOBILLUBE D LS 80W-90 SHELL SPIRAX LS ESSO TORQUE FLUID 62	GO 80	API-GL4 API-GL4 API-GL4 API GL-5 API-GL4 API-GL4	–	SAE 80 [1] SAE 80 SAE 80 SAE 80W-90 SAE 80W-90 SAE 10W-30	Planet Gear: 2 x 0.7 Differential: 8.0
Rear Axle	AGIP ROTRA MULTI THT ESSO TORQUE FLUID 56 MOBILFLUID 424 MOBILLUBE D LS 80W-90 SHELL SPIRAX LS ESSO TORQUE FLUID 62	GO 80	API-GL4 API-GL4 API-GL4 API GL-5 API-GL4 API-GL4	–	SAE 80 [1] SAE 80 SAE 80 SAE 80W-90 SAE 80W-90 SAE 10W-30	Planet Gear: 2 x 0.7 Differential: 8.0
Hydraulic system, steering	Hydraulic oil HYD	KOMATSU HO46-HM	–	-20 °C to 50 °C	ISO VG 46 [1]	50
	Engine oil EO (KOMATSU genuine parts)	EO15W40-DH EO10W30-DH	API CH-4 or API CI-4	-15 °C to 45 °C -20 °C to 30 °C	SAE 15W-40 SAE 10W-30	
	or BIO-E-HYD hydraulic oil	BIO-E-HYD 0530	HEES (acc. to VDMA fluid technology)	-15 °C to 20 °C	ISO VG 46	
Service Brake	AGIP LHM Super	HYD	–	–	–	1.2
Cooling system	Antifreeze and anti-corrosive	AF-NAC	KOMATSU Supercoolant [1]			9.1
Fuel tank	Diesel fuel [2]	CFPP Class B CFPP Class D CFPP Class E CFPP Class F	DIN-EN 590	up to 0°C up to -10°C up to -15°C up to -20°C	–	130
Grease nipples	Lithium-Based Multi-Purpose Grease	MPG-A	KP 2N-20	–	NLGI 2	–
Air conditioning	Coolant Refrigerant oil	NRS NRS	R134a (CFC-free) PAG (polyalkylglycol)	–	–	1200 g 180 cm³
The specified filling capacities are approximate guidelines; test specifications are binding. The selection of the viscosity class depends on the predominantly existing outside temperature. The temperature limits are to be regarded as guidelines which can be exceeded up or down for a brief period.						
*)Top-up quantity [1]) Factory filling [2]) If using fuels with a sulphur content between 0.5 to 1.0 %, reduce the engine-oil change intervals by half.						

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Diagrams

Wiring diagrams

NOTE
Wiring diagrams can be found in section 90 "Others".

Hydraulic circuit diagram

NOTE
Hydraulic circuit diagrams can be found in section 90 "Others".

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★ For more details of testing and adjusting of the engine, see Engine Manual Part-No.

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WA90-6 and WA100M-6 SEN04357-00

- When using the standard value table to make judgement for testing, adjusting, and troubleshooting the following precautions are necessary.

1. The standard values in the table are the values for a new machine and are given as reference values for the time when the machine is shipped from the factory. These values should be used as a guide when estimating wear and tear after the machine has been operated, and when carrying out repairs.

2. The permissible values given in the table are values estimated based on the results of various tests carried out on machines shipped from the factory. They should be used together with other information such as repair conditions or the operating history of the machine when judging the condition of the machine.

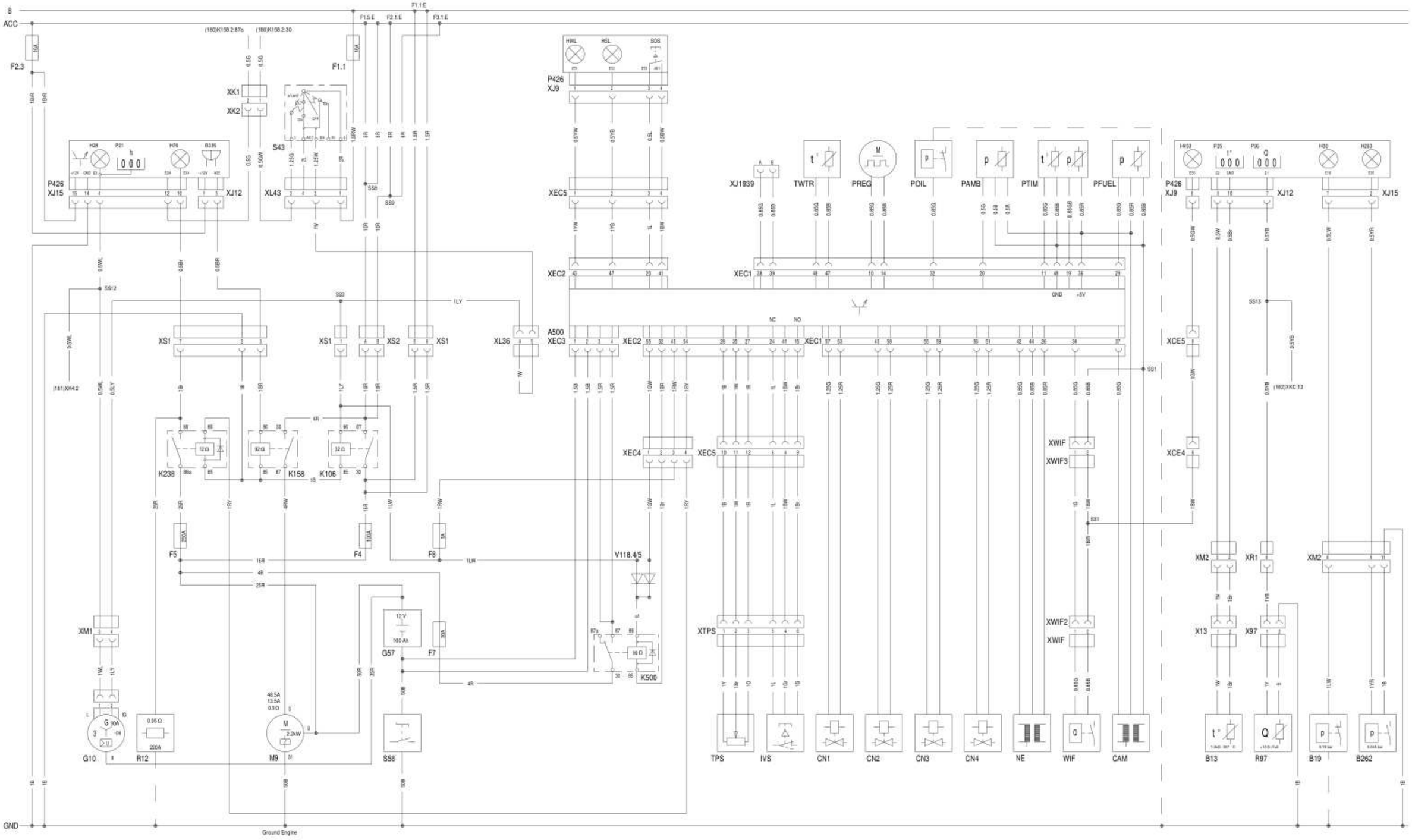
3. These standard values do not form a basis for judging claims.

⚠

- **When carrying out testing, adjusting, or troubleshooting, park the machine on level ground and use the safety pins and blocks to prevent the machine from moving.**
- **When carrying out work together with other workers, always use signals and do not let unauthorized people near the machine.**
- **When checking the water level, always wait for the water to cool down. If the radiator cap is removed while the water is still hot, the water will spurt out and cause burns.**
- **Be careful not to get caught in the fan, fan belt, or other rotating parts.**

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Wiring diagram 1/9 – WA90-6, WA100M-6



No.	Componente	Pos.	No.	Componente	Pos.	No.	Componente	Pos.	No.	Componente	Pos.	No.	Componente	Pos.	No.	Componente	Pos.
S43	Key Switch	6	H28	Control Lamp Alternator	2	B13	Sensor Cooling Watertemperature	25	XL...	Connector Floor Frame-Harness	-	TPS	Throttle Position Sensor	15	SOS	Push Botton Switch Diagnostic Fault	13
S58	Battery Main Switch	9	H29	Control Lamp Engine Oil Press.	27	B19	Sensor Engine Oil Pressure	26	XM...	Connector Engine Harness	-	CN...	Injector 1...4	16	-	-	-
K106	Relay Battery	7	H76	Control Lamp Preheater Engine	4	B262	Sensor Air Cleaner	28	XF...	Connector Front Frame Harness	-	NE	Engine Crankshaft SpeedSensor	20	-	-	-
K158	Relay Startermotor	5	H283	Control Lamp Air Cleaner	28	B335	Buzzer Main Monitor	4	XJ...	Connector Main Monitor	-	WIF	"Water In Fuel" Sensor	22	IVS	Idle Validation Switch	18
K158.2	Relay Komtrax	5	H453	Control Lamp "Water In Fuel"	25	V118...	Diode 3A	10	XS...	Connector Box Relais	-	TWTR	Engine Coolant Temperature Sensor	16	P21	Service Meter	3
K238	Relay Air Preheater Engine	3	HWL	"Warning" Lamp Engine Controller	12	-	-	-	XR...	Connector Rear Frame Harness	-	PREG	Fuel Pump Actuator	18	P25	Gauge Cooling Watertemperature	25
K300	Relay Power Engine Controller	11	HSL	"Stop" Lamp Engine Controller	12	R12	Air Preheater Engine	3	F...	Fuse	-	POIL	Engine Oil Pressure Switch	19	P96	Gauge Fuel Level	26
G10	Alternator	2	-	-	-	R97	Sensor Fuel Level	26	SS...	Joint Of Wires	-	PAMB	Barometric Pressure Sensor	20	P426	Main Monitor	2
G57	Battery	8	-	-	-	A500	Engine Controller	12	XEC...	Connector Engine Controller	-	PTIM	Intake Manifold Air Temperature/Pressure Sen.	21	-	-	-
M9	Starter Motor	6	-	-	-	XJ1939	Service Connector	16	XK...	Connector Relay Komtrax	-	PFUEL	Fuel Pressure-Sensor	23	CAM	Engine Crankshaft Position Sensor	23

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