SEBM018300

SHOP MANUAL

KOMATSU®

WA120-3 (EU SPEC.)

MACHINE MODEL

WA120-3 (EU SPEC.)
(Auto shift 4-speed transmission specification)

SERIAL NUMBER

53001 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.

- WA120-3 (EU SPEC.) mount the S4D102E-1 engine.
  For details of the engine, see the 102 Series Engine Shop Manual.

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SPECIFICATIONS

Machine model				WA120-3
Serial No.				53001 and up
Weight	Operating weight		(kg)	8,170
	Distribution (front)		(kg)	3,330
	Distribution (rear)		(kg)	4,840
Performance	Bucket capacity (piled) (with BOC)		(m^3)	1.4
	Rated load		(kg)	2,240
	Travel speed	FORWARD 1st	(km/h)	7.0
		FORWARD 2nd	(km/h)	11.7
		FORWARD 3rd	(km/h)	21.2
		FORWARD 4th	(km/h)	34.5
		REVERSE 1st	(km/h)	7.4
		REVERSE 2nd	(km/h)	12.2
		REVERSE 3rd	(km/h)	22.0
		REVERSE 4th	(km/h)	35.0
	Max. rimpull (Forward)		(N {kg})	74,530 {7,600}
	(Reverse)		(N {kg})	70,120 {7,150}
	Gradeability		(deg)	25
	Min. turning radius	Center of outside wheel	(mm)	4,470
		Outside portion of chassis	(mm)	5,180
Dimensions	Overall length (with BOC)		(mm)	5,960
	Overall width (chassis)		(mm)	2,310
	Bucket width		(mm)	2,390
	Overall height (top of cab)		(mm)	3,100
	(Bucket raised)		(mm)	4,570
	Wheelbase		(mm)	2,600
	Tread		(mm)	1,780
	Min. ground clearance		(mm)	425
	Height of bucket hinge pin		(mm)	3,475
	Dumping clearance (tip of bucket edge)		(mm)	2,785
	(tip of BOC)		(mm)	2,725
	Dumping reach (tip of bucket edge)		(mm)	930
	(tip of BOC)		(mm)	960

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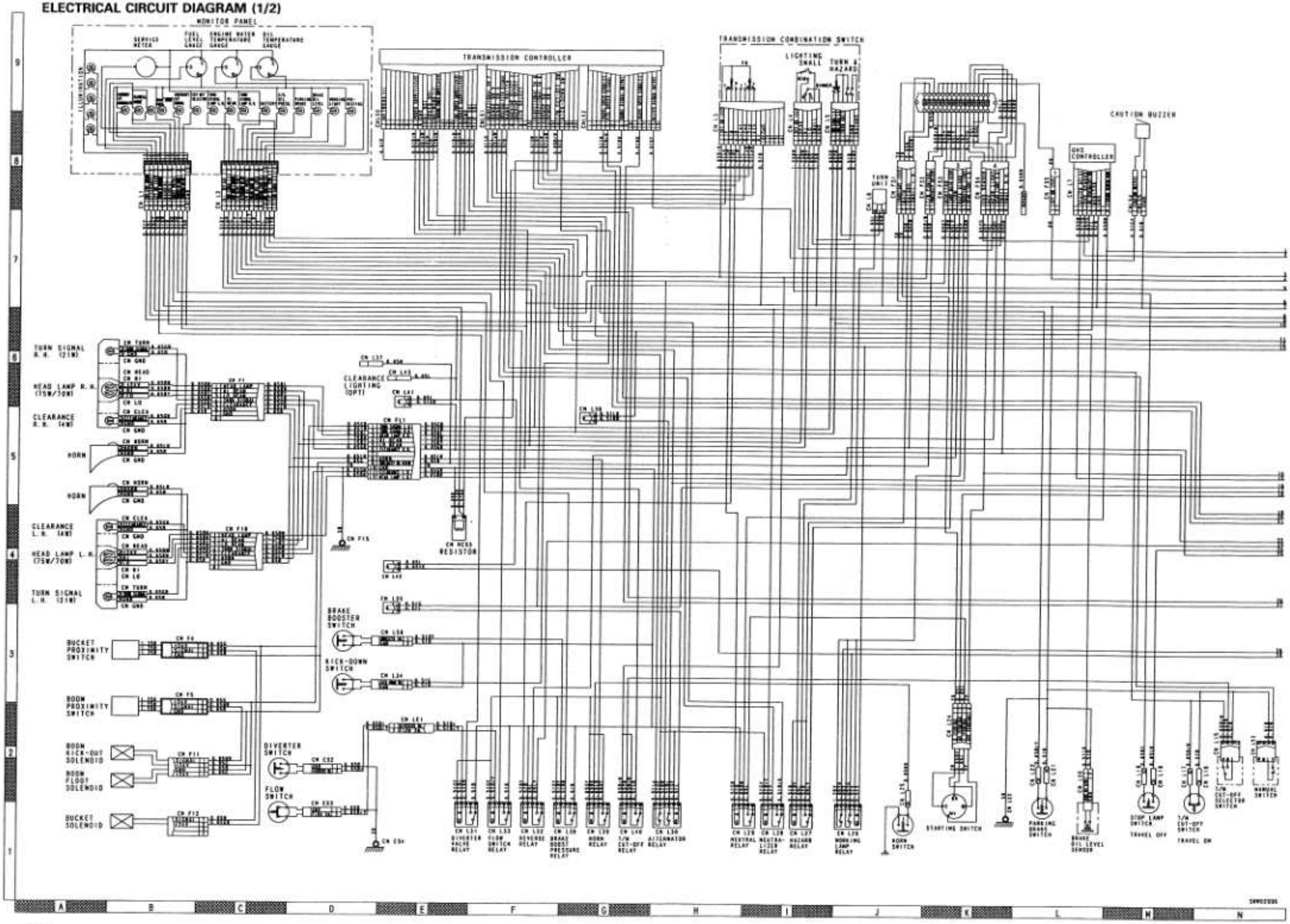
	Machine model		WA120-3
	Serial No.		53001 and up
Dimensions	Bucket dump angle	(deg)	47
	Bucket tilt angle (SAE carring position)	(deg)	46
	Digging depth (10° dump)(tip of bucket edge)	(mm)	180
	(tip of BOC)	(mm)	210
Engine	Model		Komatsu S4D102E-1
	Type		4-cycle, water-cooled, in-line, 4-cylinder, direct injection
	No. of cylinders – bore x stroke	(mm)	4 – 102 x 120
	Piston displacement	(ℓ (cc))	3.92 (3,920)
	Flywheel horsepower	(kW (HP)/rpm)	63 (85)/2,400
	Maximum torque	(Nm (kgm)/rpm)	348 (35.5)/1,600
	Fuel consumption ratio	(g/kWh (g/HPh))	231 (172)
	High idling speed	(rpm)	2,600
	Low idling speed	(rpm)	825
	Starting motor		24 V 4.5 kW
	Alternator		24 V 35 A
	Battery		12 V 110 Ah x 2
Power train	Torque converter		3-element, 1-stage, single-phase (Komatsu TCA30-6A)
	Transmission		Spur gear, constant-mesh multiple-disc, hydraulically actuated, modulation type, F4-R4
	Reduction gear		Spiral bevel gear
	Differential		Straight bevel gear, torque proportioning
	Final drive		Planetary gear, single reduction
Axle, wheel	Drive type		Front/rear-wheel drive
	Front axle		Fixed-frame, semi-floating
	Rear axle		Center pin support type, semi-floating
	Tire		17.5-25-12PR(L-2)
	Wheel rim		1,400 x 25SDC
	Inflation pressure Front tire	(kPa (kg/cm²))	294 (3.0)
	Rear tire	(kPa (kg/cm²))	294 (3.0)
Brakes	Main brake		Front/rear wheel independent braking wet-type sealed disc brakes with hydraulic booster
	Parking brake		Thrust shaft (transmission shaft) braking, wet-type disc brake, mechanical type
	Emergency brake		Uses parking brake

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Machine model			WA120-3
Serial No.			53001 and up
Steering system	Type		Articulated type
	Structure		Fully hydraulically power steering
Emergency Steering	Type		Ground driven
Hydraulic system	Hydraulic pump type (Hydraulic+Steering pump)		Gear type (SAL(2)45)
	Delivery	(ℓ/min.)	115
	Control valve: Set pressure for work equipment	(MPa {kg/cm²})	Spool type 20.59 {210}
	Control valve: Set pressure for steering	(MPa {kg/cm²})	Orbit-roll valve type 18.6 {190}
	Cylinder: Boom cylinder No. – bore x stroke	(mm)	Reciprocating piston 2 – 100 x 606
	Cylinder: Bucket cylinder No. – bore x stroke	(mm)	Reciprocating piston 1 – 100 x 424
	Cylinder: Steering cylinder No. – bore x stroke	(mm)	Reciprocating piston 2 – 60 x 340
Work equipment	Link type		Single link
	Bucket edge type		Flat edge with BOC

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ELECTRICAL CIRCUIT DIAGRAM (1/2)



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