

SHOP

MANUAL

**KOMATSU**

**WA180PT-3**

**PARALLEL TOOL CARRIER**

MACHINE MODEL

**WA180PT**

SERIAL No.

**50001 and up**

# CONTENTS

	No. of page
<b>01 GENERAL .....</b>	<b>01-1</b>
<b>10 STRUCTURE AND FUNCTION .....</b>	<b>10-1</b>
<b>20 TESTING AND ADJUSTING .....</b>	<b>20-1</b>
<b>40 MAINTENANCE STANDARD .....</b>	<b>40-1</b>
<b>90 OTHERS .....</b>	<b>90-1</b>

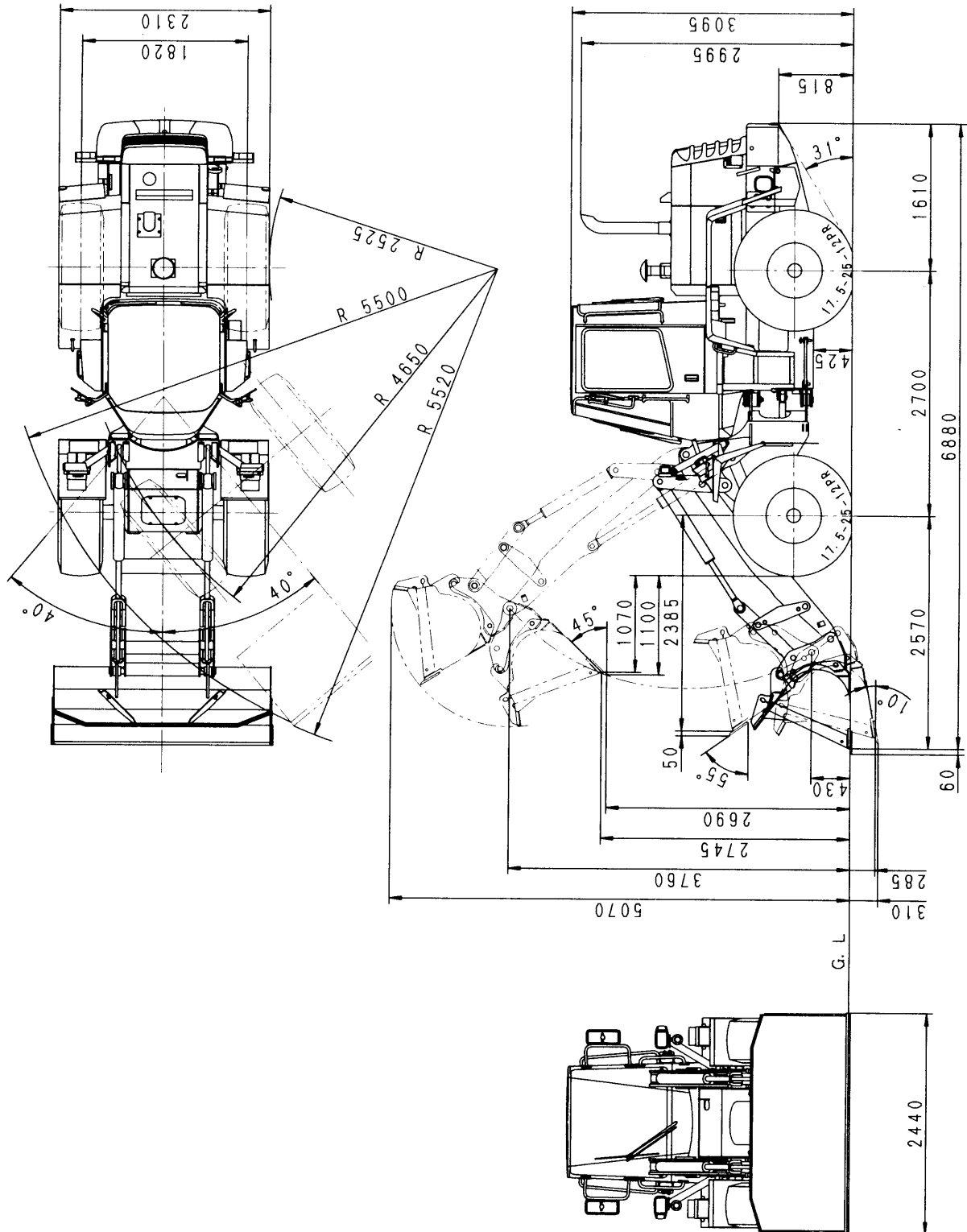
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# 01 GENERAL

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General assembly drawing .....	01- 2
Specifications .....	01- 3
Weight table .....	01- 6
List of lubricant and water .....	01- 7

# GENERAL ASSEMBLY DRAWING



SWW04081

※ The diagram shows the values for the machine with ROPS cab.

## SPECIFICATIONS

Machine model		WA180PT-3		
Serial No.		50001 and up		
Weight	Operating weight	(kg)	10,195	
	Distribution (front)	(kg)	4,215	
	Distribution (rear)	(kg)	5,980	
Performance	Bucket capacity (piled) (with bolt-on teeth)	(m <sup>3</sup> )	1.7	
	Rated load	(kg)	2,720	
	Travel speed	FORWARD 1st	(km/h)	7.2
		FORWARD 2nd	(km/h)	12.0
		FORWARD 3rd	(km/h)	22.0
		FORWARD 4th	(km/h)	34.5
		REVERSE 1st	(km/h)	7.7
		REVERSE 2nd	(km/h)	12.6
		REVERSE 3rd	(km/h)	22.9
		REVERSE 4th	(km/h)	35.0
	Max. rimpull (Forward)		(N {kg})	81,350 {8,300}
		(Reverse)	(N {kg})	76,450 {7,800}
	Gradeability	(deg)	25	
Min. turning radius	Center of outside wheel	(mm)	4,650	
	Outside portion of chassis	(mm)	5,520	
Dimensions	Overall length (with BOC)	(mm)	6,940	
	Overall width (chassis)	(mm)	2,310	
	Bucket width	(mm)	2,440	
	Overall height (top of cab)		(mm)	3,095
		(Bucket raised)	(mm)	5,070
	Wheelbase	(mm)	2,700	
	Tread	(mm)	1,820	
	Min. ground clearance	(mm)	425	
	Height of bucket hinge pin	(mm)	3,760	
	Dumping clearance (tip of bucket edge)		(mm)	2,745
		(tip of BOC)	(mm)	2,690
	Dumping reach (tip of bucket edge)		(mm)	1,070
(tip of BOC)		(mm)	1,100	


Machine model		WA180PT-3
Serial No.		50001 and up
Dimensions	Bucket dump angle (deg)	49
	Bucket tilt angle (SAE carrying position) (deg)	55
	Digging depth (10° dump)(tip of bucket edge) (mm)	285
	(tip of BOC) (mm)	310
Engine	Model	Komatsu S6D102E-1
	Type	4-cycle, water-cooled, in-line, 6-cylinder, direct injection, with turbocharger
	No. of cylinders – bore x stroke (mm)	6 – 102 x 120
	Piston displacement (ℓ {cc})	5.88 {5,880}
	Flywheel horsepower (kW {HP})/rpm	82 {110}/2,400
	Maximum torque (Nm {kgm})/rpm	417 {42.5}/1,600
	Fuel consumption ratio (g/kWh {g/HPH})	218 {162}
	High idling speed (rpm)	2,600
	Low idling speed (rpm)	775
	Starting motor	24 V 4.5 kW
Alternator	24 V 50 A	
Battery	12 V 110 Ah x 2	
Power train	Torque converter	3-element, 1-stage, single-phase (Komatsu TCA30-6Z)
	Transmission	Spur gear, constant-mesh multiple-disc, hydraulically actuated, modulation type
	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/cm <sup>2</sup> }) Rear tire (KPa {kg/cm <sup>2</sup> })	294 {3.0} 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

Machine model		WA180PT-3	
Serial No.		50001 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)40+14)	
	Delivery (l/min.)	144	
	Control valve	Set pressure for work equipment (MPa {kg/cm <sup>2</sup> })	Spool type 20.59 {210}
		Set pressure for steering (MPa {kg/cm <sup>2</sup> })	Orbit-roll valve type 18.6 {190}
	Cylinder	Boom cylinder No. – bore x stroke (mm)	Reciprocating piston 2 – 110 x 705
Bucket cylinder No. – bore x stroke (mm)		Reciprocating piston 2 – 100 x 800	
Steering cylinder No. – bore x stroke (mm)		Reciprocating piston 2 – 60 x 340	
Work equipment	Link type	Parallel link	
	Bucket edge type	Flat edge with BOC	

## GENERAL

## WEIGHT TABLE

## WEIGHT TABLE

 This weight table is a guide for use when transporting or handling components.

Unit: kg

Machine model	WA180PT-3D
Serial No.	50001 and up
Engine	510
Radiator	53
Torque converter	35
Transmission (with torque converter)	480
Front drive shaft	12
Center drive shaft	11
Rear drive shaft	6.3
Front axle	387
Rear axle	393
Axle pivot (rear axle)	69
Wheel (each)	82
Tire (each)	106
Orbit-roll valve	8.2
Priority valve	5.5
Steering cylinder (each)	14
Brake booster	11
Hydraulic tank	53

Machine model	WA180PT-3D
Serial No.	50001 and up
Hydraulic, Steering pump	10
Main control valve	26.5
Boom cylinder (each)	67
Bucket cylinder (each)	62.5
Engine hood assembly	76.7
Front frame	710
Rear frame	629
Boom (including bushing)	486
Bellcrank (each)	60
Link (bellcrank side) (each)	21
Link (bucket side) (set of each side)	48
Link (bucket side) (each)	43
Multi coupler	250
Bucket (with BOC)	720
Counterweight	1,310
Fuel tank	68
Battery (each)	30
ROPS Cab assembly	500
Floor support	152