

# SHOP

# MANUAL

# KOMATSU

## PC210, 210LC, 210NLC PC240LC, 240NLC-7K

MACHINE MODEL

SERIAL NUMBER

**PC210-7K**

**K40001 AND UP**

**PC210LC-7K**

**K40001 AND UP**

**PC210-NLC-7K**

**K40001 AND UP**

**PC240LC-7K**

**K40001 AND UP**

**PC240NLC-7K**

**K40001 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.

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# 01 GENERAL

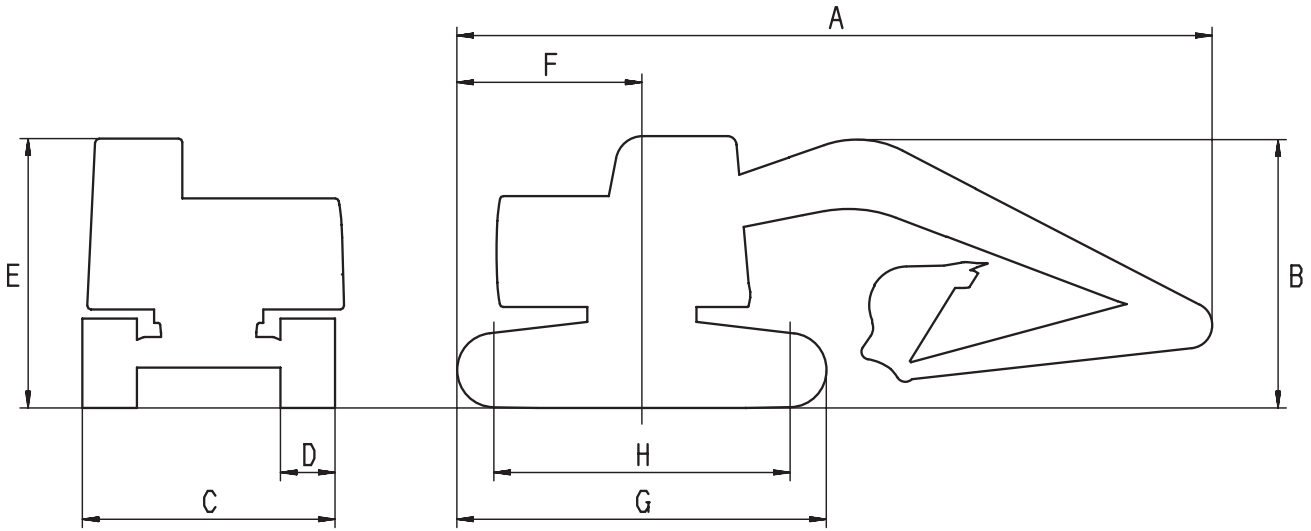
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# SPECIFICATION DIMENSION DRAWINGS

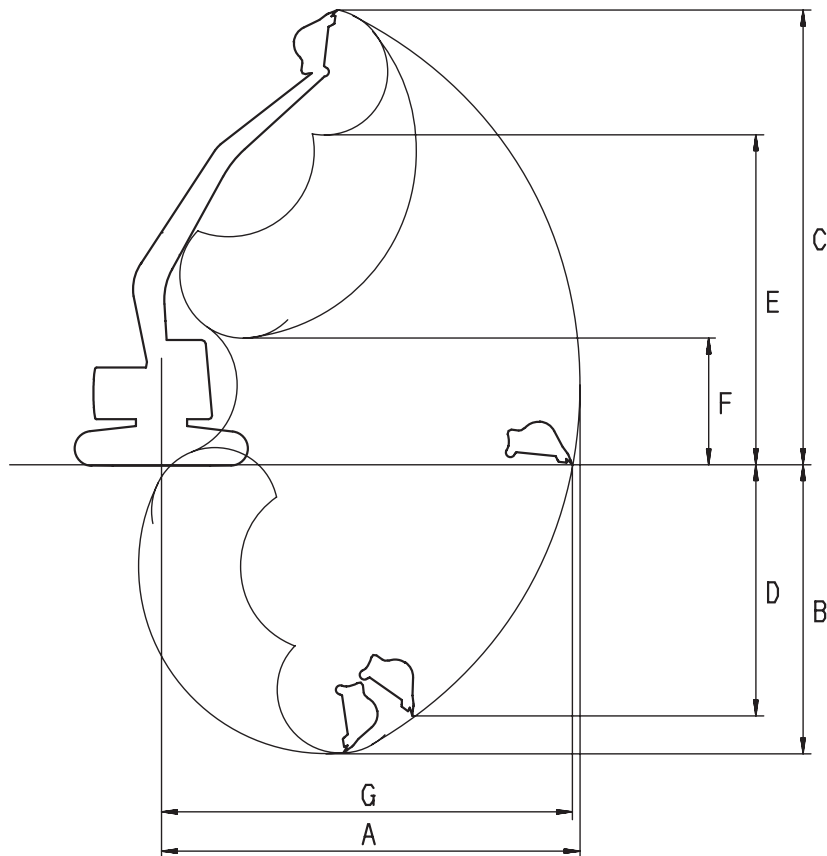
PC210-7K, PC210LC-7K, PC210NLC-7K

## DIMENSIONS



9JM01330

## WORKING RANGES



9JM01328



**DIMENSIONS**

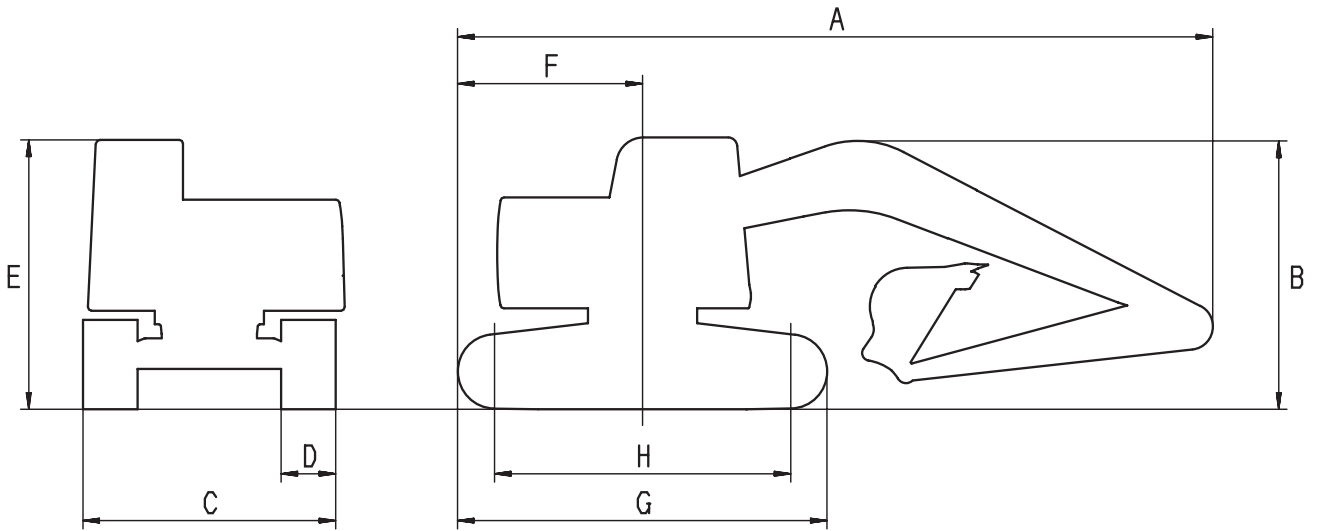
	Item	Unit	PC210-7K	PC210LC-7K	PC210NLC-7K
A	Overall length	mm	9,425		
B	Overall height	mm	3,000		
C	Overall width	mm	2,800	3,080	2,540
D	Track shoe width	mm	600	700	500
E	Height of cab	mm	3,000		
F	Tail swing radius	mm	2,750		
G	Track overall length	mm	4,080	4,450	4,450
H	Length of track on ground	mm	3,270	3,640	3,655
	Min. ground clearance	mm	440		

**WORKING RANGES**

	Item	Unit	PC210-7K	PC210LC-7K	PC210NLC-7K
A	Max. digging reach	mm	9,875		
B	Max. digging depth	mm	6,620		
C	Max. digging height	mm	10,000		
D	Max. vertical wall depth	mm	5,980		
E	Max. dumping height	mm	7,110		
F	Min. dumping height	mm	2,645		
G	Max. reach at ground level	mm	2,645		

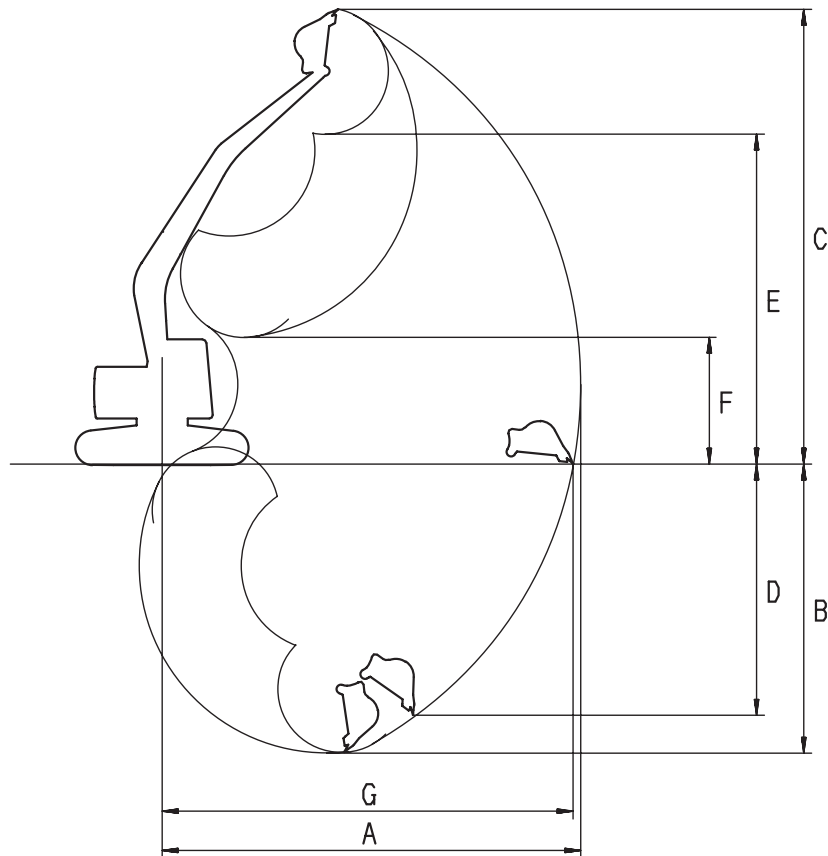
PC240LC-7K, PC240NLC-7K

DIMENSIONS



9JM01330

WORKING RANGES



9JM01328

**DIMENSIONS**

	Item	Unit	PC240LC-7K	PC240NLC-7K
A	Overall length	mm	9,885	9,885
B	Overall height	mm	3,160	3,160
C	Overall width	mm	2,980	3,280
D	Track shoe width	mm	600	700
E	Height of cab	mm	3,015	3,015
F	Tail swing radius	mm	2,940	2,940
G	Track overall length	mm	4,250	4,640
H	Length of track on ground	mm	3,460	3,845
	Min. ground clearance	mm	440	400

**WORKING RANGES**

	Item	Unit	PC240LC-7K	PC240NLC-7K
A	Max. digging reach	mm	10,180	10,180
B	Max. digging depth	mm	6,920	6,920
C	Max. digging height	mm	10,000	10,000
D	Max. vertical wall depth	mm	6,010	6,010
E	Max. dumping height	mm	7,035	7,035
F	Min. dumping height	mm	2,530	2,530
G	Max. reach at ground level	mm	10,020	10,020

## SPECIFICATIONS

## PC210-7K, PC210LC-7K, PC210NLC-7K

Machine model			PC210-7K	PC210LC-7K	PC210NLC-7K
Serial Number			K40001 and up		
Bucket capacity		m <sup>3</sup>	0.8		
Operating weight		kg	19,300	20,700	
Working ranges	Max. digging depth	mm	6,620		
	Max. vertical wall depth	mm	5,980		
	Max. digging reach	mm	9,875		
	Max. reach at ground level	mm	9,700		
	Max. digging height	mm	10,000		
	Max. dumping height	mm	7,110		
Performance	Max. digging force (using power max. function)	kN {kg}	138.3 {14,100} (149.1 {15,200})		
	Swing speed	rpm	12.4		
	Swing max. slope angle	deg.	20		
	Travel speed	km/h	Lo: 3.0 (※ Mi: 4.1) Hi: 5.5		
	Gradeability	deg.	35		
	Ground pressure [standard shoe width]	kPa {kg/cm <sup>2</sup> } [mm]	36.3 {0.37} [700]		
	Dimensions	Overall length (for transport)	mm	9,425	9,425
Overall width		mm	2,800	3,080	2,540
Overall width of track		mm	2,800	3,080	2,540
Overall height (for transport)		mm	3,000	3,000	3,000
Overall height to chassis		mm	3,000	3,000	3,000
Ground clearance to bottom of upper structure		mm	1,085	1,085	1,085
Min. ground clearance		mm	440	440	440
Tail swing radius		mm	2,750	2,750	2,750
Min. swing radius of work equipment		mm	3,040	3,040	3,040
Height of work equipment at min. swing radius		mm	8,005	8,005	8,005
Length of track on ground		mm	3,270	3,655	3,655
Track gauge		mm	2,200	2,380	2,040
Height of machine cab		mm	2,335	2,335	2,335

※ : The "Mi" mode is on the multi-monitor specification machine only.

Machine model		PC210-7K	PC210LC-7K	PC210NLC-7K		
Serial Number		K40001 and up				
Engine	Model Type	SAA6D102E-2-A 4-cycle, water-cooled, in-line, vertical, direct injection, with turbo charger				
	No. of cylinders - bore x stroke Piston displacement	mm l {cc}	6 - 102 x 120 5.883 {5,883}			
	Performance	Flywheel horsepower	kW/rpm {HP/ rpm}	106.7/1,950 {143/1,950}		
		Max. torque	Nm/rpm {kgm/ rpm}	610.0/1,500 {62.2/1,500}		
		Max. speed at no load	rpm	2,150		
Min. speed at no load		rpm	1,030			
Min. fuel consumption	rpm g/kWh {g/HPh}	215 {160}				
Starting motor		24V, 4.5 kW				
Alternator		24V, 35 A				
Battery		12V, 110 Ah x 2				
Radiator core type		Corrugated CWX-4				
Under- carriage	Carrier roller	2 on each side				
	Track roller	7 on each side	9 on each side			
	Track shoe	Assembly-type triple grouser, 45 on each side	Assembly-type triple grouser, 49 on each side			
Hydraulic system	Hydraulic pump	Type x No. Delivery Set pressure	HPV95+95, variable displacement  Piston type: 214 x 2 Piston type: 37.2 {380}			
		Control valve	Type x No. Control method	6-spool type x 1 Hydraulic		
	Hydraulic motor		Travel motor	HMV110ADT-2, Piston type (with brake valve, parking brake): x 2		
		Swing motor	KMF125ABE-5, Piston type (with safety valve, holding brake): x 1			
	Hydraulic cylinder	Type	Boom	Arm	Bucket	
			Double acting piston	Double acting piston	Double acting piston	
		Inside diameter of cylinder	120	135	115	
		Diameter of piston rod	85	95	80	
Stroke		1,334.5	1,490	1,120		
Max. distance between pins	3,204.5	3,565	2,800			
Min. distance between pins	1,870	2,075	1,680			
Hydraulic tank		Closed box type				
Hydraulic filter		Tank return side				
Hydraulic cooler		CF40-1 (Air cooled)				

## PC240LC-7K, PC240NLC-7K

Machine model			PC240LC-7K	PC240NLC-7K
Serial Number			K40001 and up	
Bucket capacity		m <sup>3</sup>	1.0	1.0
Operating weight		kg	22,700	24,130
Working ranges	Max. digging depth	mm	6,920	6,920
	Max. vertical wall depth	mm	6,010	6,010
	Max. digging reach	mm	10,180	10,180
	Max. reach at ground level	mm	10,020	10,020
	Max. digging height	mm	10,000	10,000
	Max. dumping height	mm	7,035	7,035
Performance	Max. digging force (using power max. function)	kN {kg}	158.9 {16,200} (171.6 {17,500})	158.9 {16,200} (171.6 {17,500})
	Swing speed	rpm	11.7	11.7
	Swing max. slope angle	deg.	25	25
	Travel speed	km/h	Lo: 3.1 (※ Mi: 4.2) Hi: 5.5	Lo: 3.1 (※ Mi: 4.2) Hi: 5.5
	Gradeability	deg.	35	35
	Ground pressure [standard shoe width]	kPa {kg/cm <sup>2</sup> } [mm]	50.0 {0.51} [600]	41.2 {0.42} [700]
	Overall length (for transport)	mm	9,885	9,885
Overall width	mm	2,980	3,280	
Overall width of track	mm	2,980	3,280	
Overall height (for transport)	mm	3,160	3,160	
Overall height to chassis	mm	3,015	3,015	
Ground clearance to bottom of upper structure	mm	1,110	1,110	
Min. ground clearance	mm	440	440	
Tail swing radius	mm	2,940	2,940	
Min. swing radius of work equipment	mm	3,450	3,450	
Height of work equipment at min. swing radius	mm	8,110	8,110	
Length of track on ground	mm	3,460	3,845	
Track gauge	mm	2,380	2,580	
Height of machine cab	mm	2,390	2,390	

※ : The "Mi" mode is on the multi-monitor specification machine only.

Machine model		PC240LC-7K	PC240NLC-7K			
Serial Number		K40001 and up				
Engine	Model		SAA6D102E-2-C			
	Type		4-cycle, water-cooled, in-line, vertical, direct injection, with turbo charger			
	No. of cylinders - bore x stroke	mm	6 - 102 x 120			
	Piston displacement	l {cc}	5.883 {5,883}			
	Performance					
	Flywheel horsepower	kW/rpm {HP/rpm}	125/2,000 {167/2,000}			
	Max. torque	Nm/rpm {kgm/rpm}	686/1,500 {70/1,500}			
	Max. speed at no load	rpm	2,260			
	Min. speed at no load	rpm	1,060			
	Min. fuel consumption	g/kWh {g/HP}	212 {153}			
	Starting motor		24V, 4.5 kW			
	Alternator		24V, 35 A			
	Battery		12V, 110 Ah x 2			
	Radiator core type		Corrugated CF19-5			
Under-carriage	Carrier roller		2 on each side			
	Track roller		8 on each side	10 on each side		
	Track shoe		Assembly-type triple grouser, 47 on each side	Assembly-type triple grouser, 51 on each side		
Hydraulic system	Hydraulic pump	Type x No. Delivery Set pressure	HPV95+95, variable displacement			
		l/min MPa (kg/cm <sup>2</sup> )	Piston type: 214 x 2 Piston type: 37.2 {380}			
	Control valve	Type x No. Control method	6-spool type x 1 Hydraulic			
	Hydraulic motor	Travel motor Swing motor	HMV110ADT-2, Piston type (with brake valve, parking brake): x 2 KMF125ABE-5, Piston type (with safety valve, holding brake): x 1			
	Hydraulic cylinder	Type		Boom	Arm	Bucket
				Double acting piston	Double acting piston	Double acting piston
		Inside diameter of cylinder	mm	130	140	130
Diameter of piston rod		mm	90	100	90	
Stroke		mm	1,335	1,635	1,020	
Max. distance between pins	mm	3,205	2,235	2,625		
Min. distance between pins	mm	1,870	3,870	1,605		
	Hydraulic tank		Closed box type			
	Hydraulic filter		Tank return side			
	Hydraulic cooler		CF40-1 (Air cooled)			

**WEIGHT TABLE****PC210-7K, PC210LC-7K, PC210NLC-7K**

This weight table is for use when handling components or when transporting the machine.

Unit: kg

Machine model	PC210-7K	PC210LC-7K	PC210NLC-7K
Serial Number	K40001 and up		
Engine assembly	749		
• Engine	598		
• Damper	6		
• Hydraulic pump	145		
Radiator oil cooler assembly	110		
Hydraulic tank, filter assembly (excluding hydraulic oil)	123		
Fuel tank (excluding fuel)	121		
Revolving frame	1,729		
Operator's cab	278		
Operator's seat	35		
Counterweight	3,735		
Swing machinery	160		
Control valve	263		
Swing motor	60		
Travel motor	98 x 2		
Center swivel joint	36		
Track frame assembly	4,712		
• Track frame	2,534		
• Swing circle	273		
• Idler	99 x 2		
• Idler cushion	135 x 2		
• Carrier roller	16 x 4		
• Track roller	36 x 18		
• Final drive (including travel motor)	343 x 2		



Unit: kg

Machine model	PC210-7K	PC210LC-7K	PC210NLC-7K
Serial Number	K40001 and up		
Track shoe assembly			
• Standard triple grouser shoe (600 mm)	1,215x2	1,325 x 2	1,325 x 2
• Standard triple grouser shoe (700 mm)	1,405x5	1,530 x 2	1,530 x 2
• Wide triple grouser shoe (800 mm)	1,530x2	1,670 x 2	-
• Road liner (rubber pad type) (600 mm)	1,470x2	1,600 x	-
Boom assembly	1,408		
Arm assembly	653		
Bucket assembly	628		
Boom cylinder assembly	172 x 2		
Arm cylinder assembly	226		
Bucket cylinder assembly	136		
Link assembly (large)	81		
Link assembly (small)	22 x 2		
Boom pin	48 + 8 x 2 + 31 + 10 + 26		
Arm pin	11 + 8		
Bucket pin	20 x 2		
Link pin	13 x 2		

**PC240LC-7K, PC240NLC-7K**

Unit: kg

Machine model	PC240LC-7K	PC240NLC-7K
Serial Number	K40001 and up	K40001 and up
Engine assembly	749	749
• Engine	598	598
• Damper	6	6
• Hydraulic pump	145	145
Radiator oil cooler assembly	119	119
Hydraulic tank, filter assembly (excluding hydraulic oil)	123	123
Fuel tank (excluding fuel)	121	121
Revolving frame	2,048	2,048
Operator's cab	278	278
Operator's seat	35	35
Counterweight	5,056	5,056
Swing machinery	237	237
Control valve	263	263
Swing motor	60	60
Travel motor	98 x 2	98 x 2
Center swivel joint	36	36
Track frame assembly	4,828	5,460
• Track frame	2,558	3,046
• Swing circle	293	293
• Idler	99 x 2	99 x 2
• Idler cushion	135 x 2	135 x 2
• Carrier roller	16 x 4	16 x 4
• Track roller	36 x 16	36 x 20
• Final drive (including travel motor)	362 x 2	362 x 2

Unit: kg

Machine model	PC240LC-7K	PC240NLC-7K
Serial Number	K40001 and up	K40001 and up
Track shoe assembly		
• Standard triple grouser shoe (600 mm)	1,340 x 2	1,455 x 2
• Standard triple grouser shoe (700 mm)	1,470 x 2	1,595 x 2
• Wide triple grouser shoe (800 mm)	1,600 x 2	1,735 x 2
• Road liner (rubber pad type) (600 mm)	1,535 x 2	1,665 x 2
Boom assembly	1,825	1,825
Arm assembly	1,213	1,213
Bucket assembly	722	722
Boom cylinder assembly	195 x 2	195 x 2
Arm cylinder assembly	262	262
Bucket cylinder assembly	161	161
Link assembly (large)	82	82
Link assembly (small)	22 x 2	22 x 2
Boom pin	50 + 10 x 2 + 31 + 10 + 26	50 + 10 x 2 + 31 + 10 + 26
Arm pin	11 + 10	11 + 10
Bucket pin	20 x 2	20 x 2
Link pin	17 x 2	17 x 2

# FUEL, COOLANT, AND LUBRICANTS

RESERVOIR	KIND OF FLUID	AMBIENT TEMPERATURE								CAPACITY (l)	
		-22 -30	-4 -20	14 -10	32 0	50 10	68 20	86 30	104°F 40°C	Specified	Refill
Engine oil pan	Engine oil								SAE 30	26.3	24
									SAE 10W		
									SAE 10W-30		
									SAE 15W-40		
Damper case										0.75	—
Swing machinery case										6.6	6.6
Final drive case (each side)									SAE 30	4.7	4.5
Idler (1 each)									0.07-0.08	0.07-0.08	
Track roller (1 each)									0.19-0.20	0.19-0.20	
Carrier roller (1 each)									0.075-0.085	0.075-0.085	
Hydraulic system	Engine oil								SAE 10W	240	143
									SAE 10W-30		
									SAE 15W-40		
	Hydraulic oil								H046-HM (★)		
Fuel tank	Diesel fuel								ASTM D975 No. 2	400	—
									ASTM D975A No.1		
Cooling system	Coolant	Add antifreeze								PC210, PC210LC, PC210NLC-7	PC210, PC210LC, PC210NLC-7
											22.4
										PC240LC, PC240NLC-7	PC240LC, PC240NLC-7
										30.9	30.9

★ For the H-046-HM, use the oil recommended by Komatsu.