SEN04766-00

SHOP MANUAL

KOMATSU®

D85C-21

MACHINE MODEL	SERIAL NUMBER
D85C-21	**36551 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.

- D85C-21 mount the S6D125-2 engine.
  For details of the engine, see the 125-2 Series Engine Shop Manual.

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SPECIFICATIONS

Machine model				D85C-21	
Serial number				36551 and up	
Operating Weight	With boom + counterweight + cab + side cover		(kg)	5.5 m Boom	7.3 m Boom
				30,050	30,350
Performance	Max. lifting load		(kN (kg))	402 (41,000)	337 (34,350)
	Boom overhang		(m)	1.22 — 5.5	1.35 — 7.3
	Gradeability		(deg)	30	
	Stability (front, rear, left, right)		(deg)	35	
	Transmission speed ranges	Forward 1st	(km/h)	3.5	
		Forward 2nd	(km/h)	6.5	
		Forward 3rd	(km/h)	10.7	
		Reverse 1st	(km/h)	4.7	
		Reverse 2nd	(km/h)	8.3	
		Reverse 3rd	(km/h)	13.3	
Dimensions	Ground pressure	With boom + counterweight + cab + side cover	(MPa (kg/cm²))	0.090 (0.90)	0.089 (0.91)
	Overall length		(mm)	4,805	
	Overall width	Counterweight is retracted	(mm)	3,490	
		Counterweight is extended	(mm)	5,305	
	Overall height	To top of exhaust pipe	(mm)	3,365	
		To top of cab	(mm)	3,640	
		To top of boom (boom is retracted)	(mm)	5.5 m Boom	7.3 m Boom
				6,060	7,845
		To top of counterweight (counterweight is retracted)	(mm)	2,730	

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Machine model				D85C-21
Serial number				36551 and up
Dimensions	Track gauge		(mm)	2,250
	Length of track on ground		(mm)	2,730
	Track shoe width (standard)		(mm)	610
	Minimum ground clearance (To bottom surface of undercover)		(mm)	415
Engine	Name			KOMATSU S6D125-2
	Type of engine			4-cycle, water-cooled, in-line, vertical type, direct injection, with turbocharger
	No. of cylinder – Bore x stroke		(mm)	6 – 125 x 150
	Piston displacement		(cc)	11,040
	Performance	Flywheel horsepower	(kw (HP)/rpm)	168 (225)/2,000
		Max. torque	(Nm (kgm)/rpm)	1,000 (102)/1,400
		Max. speed at no load	(rpm)	2,200
		Min. speed at no load	(rpm)	600
		Min. fuel consumption ratio	(g/kw•h (g/HP•h))	206 (152)
	Starting motor			24V, 7.5kW (11kW)
	Alternator			24V,35A (If equipped 50A)
	Battery			12, 170Ah x 2 (If equipped 200Ah x 2)
	Radiator core type			D-6
Power train	Torque converter			3-element, single-stage, single phase
	Transmission			Planetary gear, multiple disc clutch, hydraulically actuated, force-feed lubrication gear pump, forward 3-speed, reverse 3-speed
	Bevel gear shaft			Spiral bevel gear, force-feed lubrication gear pump

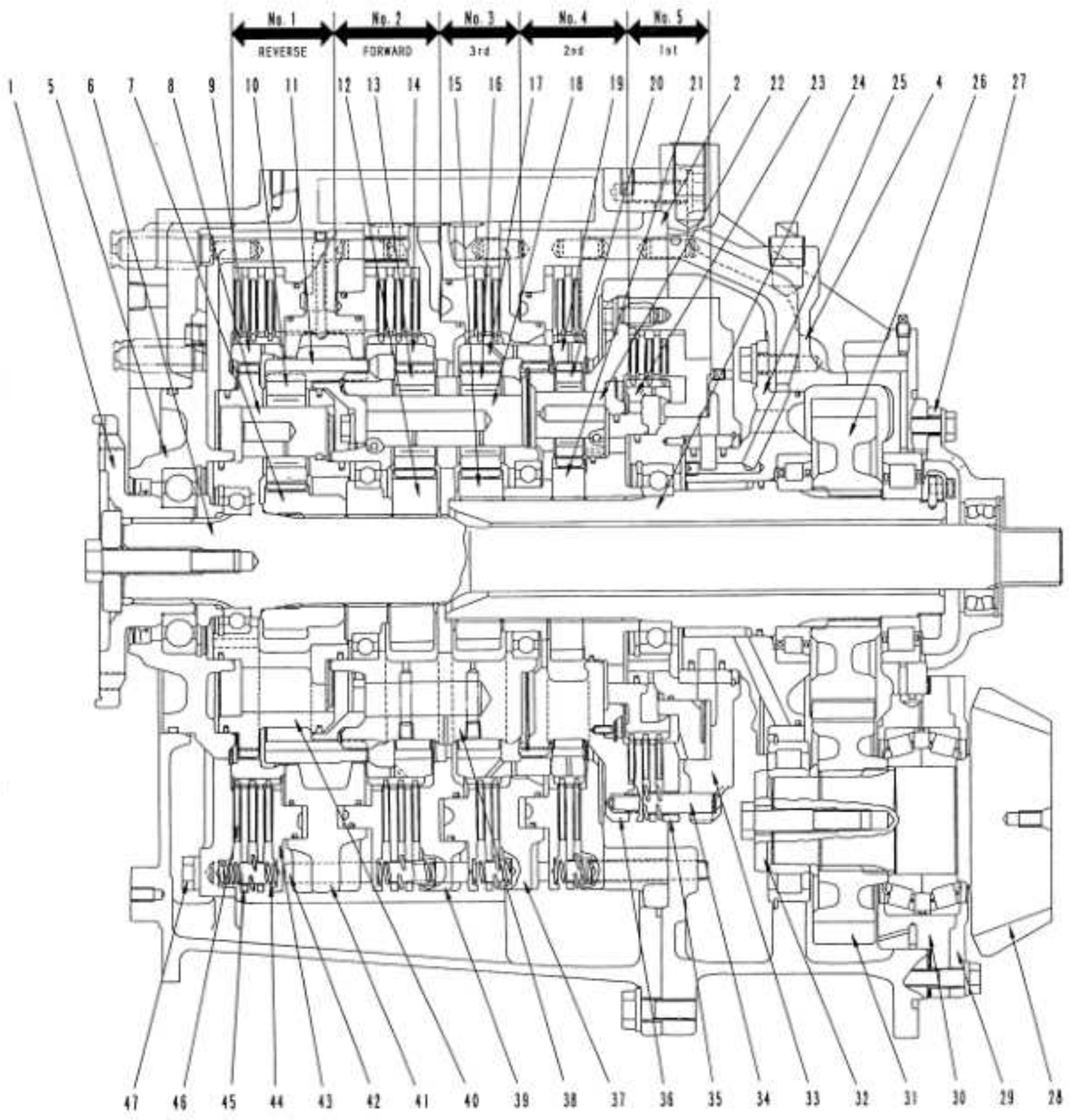
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Machine model			D85C-21
Serial number			36551 and up
Power train	Clutch and brake	Steering clutch	Wet type, multiple clutch disc, spring boosted, hydraulically actuated (manual type), interconnected with brake
		Steering brake	Wet type, multiple clutch disc, spring boosted, hydraulically actuated (pedal operated, manual type), interconnected with clutch
	Final drive		Spur gear, reduction gear 2-stage, splash type lubrication
Undercarriage	Suspension		Rigid, non-oscillation type
	Carrier roller		2 each side
	Track roller		6 each side
	Track shoe (610 mm)		Assembly type, single grouser, 38 each side, pitch: 216.25 mm
Transmission pump			Gear type (SAL(2)040)
Scavenging pump			Gear type
Steering pump			Gear type (FAR063)
Work equipment	Counterweight		Segment plate type, adjustable hydraulic control.
	Counterweight pump		Gear type (SAL(2)040)
	Winch	Type	Hydraulically controlled, double drums, reversible.
		Transmission	Wet-multiple disc clutch type.
		Brake	Wet-multiple disc type.
		Pump	Gear type
		Hook speeds (Bare drum)	
		Raise 1st (m/min.)	9.6
		2nd (m/min.)	21.7
		Lower 1st (m/min.)	9.3
		2nd (m/min.)	21.0

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1. Input coupling
2. Transmission case
3. Transmission valve
4. Transfer case
5. Front cover
6. Input shaft
7. No. 1 sun gear (37 teeth)
8. Pinion shaft
9. No. 1 ring gear (95 teeth)
10. No. 1 planet gear (27 teeth)
11. No. 1 ring gear (91 teeth)
12. No. 2 sun gear (43 teeth)
13. No. 2 planet gear (26 teeth)
14. No. 2 ring gear (95 teeth)
15. No. 3 sun gear (43 teeth)
16. No. 3 planet gear (26 teeth)
17. No. 3 ring gear (95 teeth)
18. Pinion shaft
19. No. 4 ring gear (95 teeth)
20. No. 4 planet gear (23 teeth)
21. No. 4 sun gear (49 teeth)
22. Pinion shaft
23. No. 5 gear
24. Output shaft
25. Bearing cage
26. Transfer drive gear (32 teeth)
27. Bearing cage
28. Bevel pinion (21 teeth)
29. Cover
30. Bearing cage
31. Transfer drive gear (25 teeth)
32. Retainer
33. No. 5 clutch housing
34. Connecting rod
35. No. 5 clutch piston
36. No. 4 carrier
37. No. 4 clutch housing
38. No. 2, 3 carrier
39. No. 3 clutch housing
40. No. 1 carrier
41. No. 1, 2 clutch housing
42. Connecting rod
43. Clutch piston
44. Clutch spring
45. Clutch plate
46. Clutch disc
47. Tie bolt

Speeds and operating clutches

	Speed	Operating clutch
Forward	Neutral	No. 5 clutch
	1st	No. 2 and No. 5 clutches
	2nd	No. 2 and No. 4 clutches
	3rd	No. 2 and No. 3 clutches
Reverse	Neutral	No. 5 clutch
	1st	No. 1 and No. 5 clutches
	2nd	No. 1 and No. 4 clutches
	3rd	No. 1 and No. 3 clutches

Number of discs and plates on each clutch

Clutch No.	Number of discs	Number of plates
No. 1 clutch	3	2
No. 2 clutch	3	2
No. 3 clutch	2	1
No. 4 clutch	2	1
No. 5 clutch	3	2

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