SEBM001408

SHOP MANUAL

KOMATSU®

D20PL,PLL,AG-7
D20P,PG-7A
D21A,S,AG,QG-7
D21PG-7A

MACHINE MODEL	SERIAL NO.	MACHINE MODEL	SERIAL NO.
D20PL-7	**62001 and up**	**D21A-7**	**75001 and up**
D20PLL-7	**62001 and up**	**D21AG-7**	**75001 and up**
D20AG-7	**75001 and up**	**D21PG-7A**	**75001 and up**
D20P-7A	**75001 and up**	**D21S-7**	**61001 and up**
D20PG-7A	**75001 and up**	**D21QG-7**	**61001 and up**
		D21A-7T	**75001 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.

- D20, 21-7 mount the 4D95S-1 and 4D94E-1A engine. For details of the engine, see the 95 Series and 94 Series Engine Shop Manual.

© 2008 KOMATSU
All Rights Reserved
Printed in Japan 02-08 (01)

MidWestTech | Komatsu D20PL,PLL,AG-7, D20P,PG-7A, D21A,S,AG,QG-7, D21PG-7A Crawler Dozer Service Manual | Publication SEBM001408
Order the manual at mid-west-tech.com >

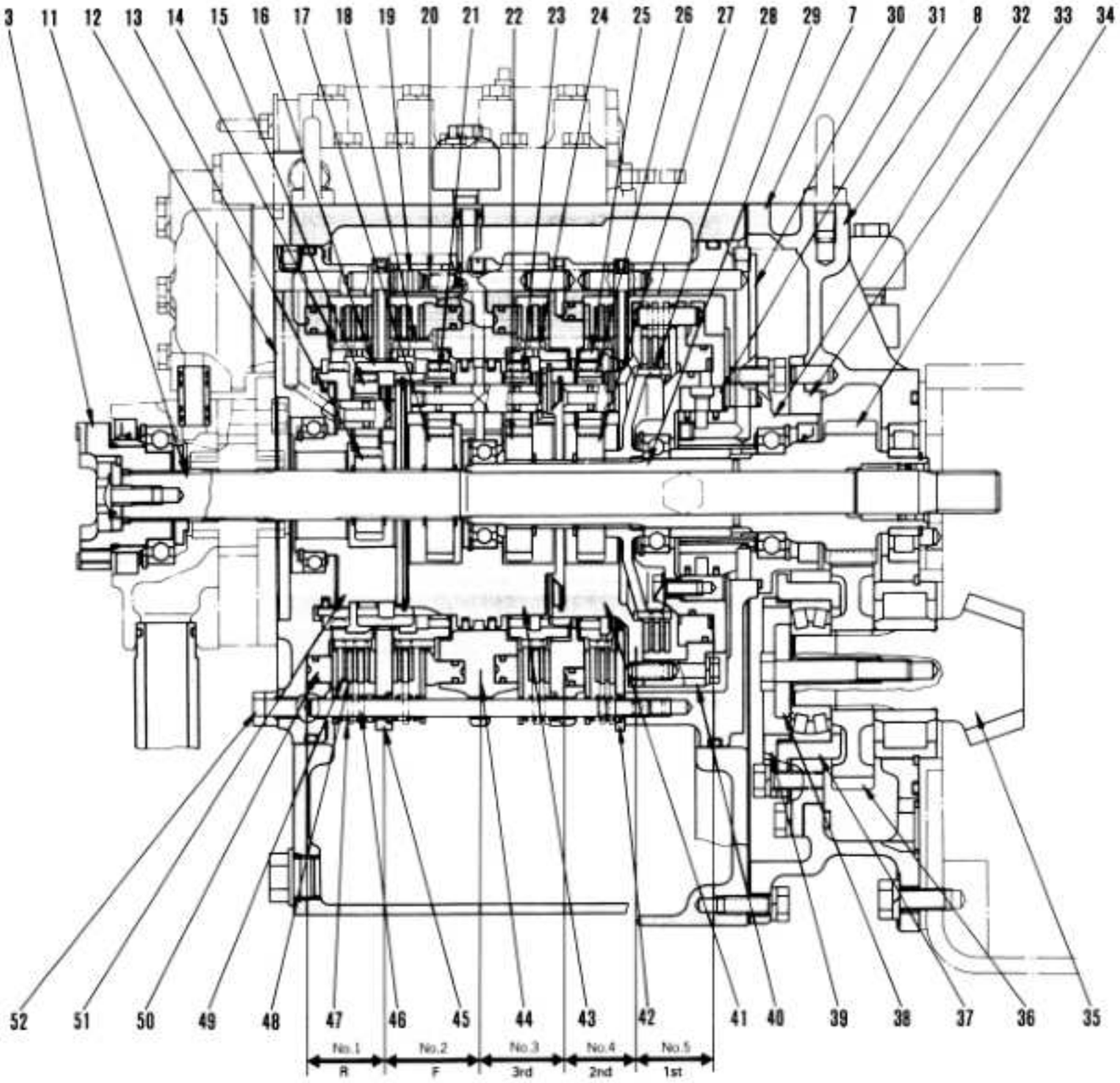
SPECIFICATIONS

D20A, AG, PL, PLL-7
D20P, PG-7A

Machine model				D20P-7A	D20PG-7A	D20P-7A (rubber shoe specification)	D20PL-7	D20PLL-7	D20AG-7
Serial No.				75001 – 78603	75001 – 76526	76527 – 78603	62001 – 62453	62001 – 62453	75001 – 76526
Weight	Operating weight • bare tractor		kg	3,360	3,430	3,430	3,510	4,080	3,040
	• with dozer			3,940	3,980	3,980	4,030	4,670	3,590
Performance	Blade capacity		m^3	0.89	0.89	0.89	0.87	0.80	0.76
	Min. turning radius 30		m	2.3	2.3	2.3	2.4	3.1	2.0
	Gradeability		deg	30	30	30	30	30	30
	Stability		deg	35	35	35	35	35	35
	Speed ranges	Forward 1st	km/h	2.8	3.0	3.0	2.8	2.8	3.0
		Forward 2nd		4.0	4.3	4.3	4.0	4.0	4.3
		Forward 3rd		7.5	8.1	8.1	7.5	7.5	8.1
		Reverse 1st	km/h	4.5	4.9	4.9	4.5	4.5	4.9
		Reverse 2nd		6.5	7.0	7.0	6.5	6.5	7.0
	Ground pressure	Bare tractor	kPa (kg/cm²)	19.6 (0.20)	19.6 (0.20)	19.6 (0.20)	13.7 (0.14)	8.8 (0.09)	29.4 (0.30)
		With dozer		22.6 (0.23)	23.5 (0.24)	23.5 (0.24)	15.7 (0.16)	10.8 (0.11)	35.3 (0.36)
Dimensions	Overall length	Bare tractor	mm	2,560	2,560	2,560	2,650	2,930	2,560
		With dozer		3,385	3,385	3,385	3,455	3,645	3,400
	Overall width	Bare tractor	mm	2,000	1,990	1,990	2,190	2,890	1,610
		With dozer		2,560	2,560	2,560	2,490	3,200	2,170
	Overall height	To top of canopy	mm	2,500	2,510	2,510	2,485	2,500	2,490
		To tip of exhaust pipe		2,335	2,345	2,345	2,320	2,335	2,330
		To top of operator's compartment		1,810	1,820	1,820	1,795	1,810	1,800
	Track gauge		mm	1,490	1,490	1,490	1,490	1,840	1,310
	Length of track on ground			1,685	1,685	1,685	1,820	2,085	1,685
	Width of track shoe (standard)			510	500	500	700	1,050	300
	Min. ground clearance (to drain port of steering case)			355	365	365	340	355	300

010107

MidWestTech | Komatsu D20PL,PLL,AG-7, D20P,PG-7A, D21A,S,AG,QG-7, D21PG-7... Order the manual at mid-west-tech.com >



101F07023

11. Input shaft
12. No.1 clutch housing
13. No.1 sun gear (24 teeth)
14. No.1 ring gear (72 teeth)
15. No.1 planet gear (21 teeth)
16. No.1 ring gear (66 teeth)
17. No.2 sun gear (36 teeth)
18. No.2 ring gear (72 teeth)
19. Transmission lubrication valve
20. Valve spring
21. No.2 planet gear (18 teeth)
22. No.3 sun gear (36 teeth)
23. No.3 planet gear (18 teeth)
24. No.3 ring gear (72 teeth)
25. No.4 ring gear (72 teeth)
26. No.4 planet gear (18 teeth)
27. No.4 sun gear (36 teeth)
28. No. 5 ring gear (72 teeth)
29. Output shaft
30. No.5 clutch housing
31. Seat
32. Cage
33. Plate
34. Transfer drive gear (21 teeth)
35. Pinion shaft (14 teeth)
36. Transfer driven gear (37 teeth)
37. Bearing cage
38. Retainer
39. Retainer
40. No.5 piston housing
41. No.4 carrier
42. Plate
43. No.2 and No.3 carrier
44. No.2 and No.3 clutch housing
45. Plate
46. Tie rod pin
47. Clutch spring
48. Clutch plate
49. Clutch disc
50. Clutch piston
51. No.1 carrier
52. Tie rod bolt

OUTLINE

The transmission is equipped with a planetary type, "3-forward and 3-reverse speed" transmission which is a combined structure of a planetary gear mechanism and disc cluthes.

The rotational direction and the revolution of the transmission output shaft is selected by fixing two disc clutches out of five disc clutches by means of control valve operation.

No.1 clutch is fixed in reverse, No.2 clutch in forward, No.3 clutch in third speed, No.4 clutch in second speed, and No.5 clutch in first speed.

Any speed can by selected from three forward speeds and three reverse speeds by fixing either No.1 or No.2 clutch and one clutch amoung No.3, No.4, and No.5 clutches and by combining two of the above.

Speeds and operating clutches

Speed		Operating clutch
Forward	Neutral	No.5 clutch
	First speed	No.2 and No.5 clutches
	Second speed	No.2 and No.4 clutches
	Third speed	No.2 and No.3 clutches
Reverse	Neutral	No.5 clutch
	First speed	No.1 and No.5 clutches
	Second speed	No.1 and No.4 clutches
	Third speed	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	3
No.2 clutch	2	2
No.3 clutch	2	2
No.4 clutch	2	2
No.5 clutch	2	3

MidWestTech | Komatsu D20PL,PLL,AG-7, D20P,PG-7A, D21A,S,AG,QG-7, D21PG-7A Crawler Dozer Service Manual | Publication SEBM001408
Order the manual at mid-west-tech.com >