

SECTION 2

CRAWLER TYPE  
 DOZER SHOVELS

CONTENTS

Features . . . . .	2-2
Specifications . . . . .	2-3
Bucket Specifications . . . . .	2-8
SAE Loader Ratings . . . . .	2-11
Loader and Dump Truck Combination . .	2-12
Front Attachments . . . . .	2-14
Rock Bucket . . . . .	2-15
Large Bucket . . . . .	2-16
Multi-Purpose Bucket . . . . .	2-17
Side Dump Bucket . . . . .	2-19
Three-Way Bucket . . . . .	2-22
Production . . . . .	2-24

## Features

## CRAWLER TYPE DOZER SHOVELS

- **Powerful, economical Komatsu engine:** Direct-injection system with Microturbulence Combustion Chamber(MTCC)saves fuel and distributes clean exhaust.
- **Power-efficient HYDROSHIFT:** Komatsu's unique HYDROSHIFT transmission consists of a damper and a planetary-gear type, hydraulically-actuated transmission. This HYDROSHIFT transmission assures not only efficient power transmitting ability but also single-lever control of travel speed and F/R directional changes for easy operation. (D21.D31.D41)
- **Komatsu's unique TORQFLOW:** Assures smooth and responsive power shift for instant speed and directional changes.
- **Efficient PV-MV(variable-displacement pump and motor) hydrostatic transmission:** Discharge flow is variable depending on needs, assuring reduced fuel consumption. Unitized construction of pump and motor minimizes dust invasion into hydrostatic transmission system, enhancing reliability. (D66S)
- **Faster loading cycle:** A single lever allows full control of all bucket movements for shorter cycle time. A kickout device automatically stops bucket at the desired height. An automatic positioner sets the bucket at an optimum digging angle for easy digging.
- **Bucket:** Rock type bucket is standard. The huge-capacity bucket is designed for special toughness and longer life. (D75S. D95S. D155S)
- **Inching pedal:** Enables convenient, precise approach to dump trucks and obstacles. Also provides dynamic digging when it is depressed halfway and then abruptly released.
- **Excellent performance on swampy ground:** Komatsu's exclusive circular arc shoes allow a minimum of soilsticking. Together with a long length of track on ground, they reduce ground pressure for ample flotation and drawbar pull.(swamp dozer shovels)
- **Tough undercarriages:** Unique Komatsu dust seals between track links and pins to prevent dirt and mud from entering pin-to-bushing clearances and minimizing link pitch elongation for longer track service. Floating seals in idlers and track and carrier rollers to keep dirt out and lubricant in for reduced maintenance and extended undercarriage life.
- **Low-noise operation:** Rubber-pad mounting for engine and hood, double walls between engine room and instrument panel all help to reduce noise.
- **Simple maintenance:** Spin-on type element is employed for the engine oil filter and fuel filter. Easy-to-replace element for the hydraulic oil filter. Check/ refill ports and a filter element of the air cleaner are easily accessible from the hatch on the engine hood. Thus facilitating smooth daily check and maintenance procedures.

Specifications

CRAWLER TYPE  
DOZER SHOVELS

Item		Model	D20S-6	D21S-6	D21S-6A	D31S-18
OPERATING WEIGHT		kg(lb)	3790 (8,360)	3840 (8,470)	*4830 (10,650)	6670 (14,700)
FLYWHEEL HORSEPOWER		HP(kW)/rpm	40(29.5)/2450	40(29.5)/2450	44.4(33.1)/2450	70(52)/2350
BUCKET CAPACITY		m <sup>3</sup> (cu.yd)	0.4 (0.5)	0.4 (0.5)	0.57 (0.75)	0.8 (1.0)
PERFORMANCE:						
Travel speed		km/h(MPH)				
Forward	1st		2.8 ( 1.7 )	2.6 ( 1.6 )	2.3 ( 1.4 )	2.2 ( 1.4 )
	2nd		4.0 ( 2.5 )	4.4 ( 2.7 )	4.1 ( 2.5 )	3.9 ( 2.4 )
	3rd		7.5 ( 4.7 )	—	6.8 ( 4.2 )	6.5 ( 4.0 )
Reverse	1st		4.5 ( 2.8 )	3.3 ( 2.1 )	2.5 ( 1.6 )	2.4 ( 1.5 )
	2nd		6.5 ( 4.0 )	5.6 ( 3.5 )	4.5 ( 2.8 )	4.3 ( 2.7 )
	3rd		—	—	7.4 ( 4.6 )	7.1 ( 4.4 )
Max. drawbar pull		kg(lb/kN)	4410 (9,720/43.2)	4500 (9,920/44.1)	5090 (11,220/49.9)	8880 (19,580/87)
DIMENSIONS:						
Overall length		mm(ft.in)	3490 ( 11' 5" )	3490 ( 11' 5" )	4240 ( 13' 11" )	4090 ( 13' 5" )
Overall width		mm(ft.in)	1610 ( 5' 3" )	1610 ( 5' 3" )	1610 ( 5' 3" )	1790 ( 5' 10" )
Overall height(at transport)		mm(ft.in)	**1705 ( 5' 7" )	**1705 ( 5' 7" )	***1695 ( 5' 7" )	**1925 ( 6' 4" )
Track gauge		mm(ft.in)	1310 ( 4' 4" )	1310 ( 4' 4" )	1310 ( 4' 4" )	1450 ( 4' 9" )
Length of track on ground		mm(ft.in)	1685 ( 5' 6" )	1685 ( 5' 6" )	1820 ( 6' )	1880 ( 6' 2" )
Ground pressure		kg/cm <sup>2</sup> (PSI/kPa)	0.37 (5.26/36.3)	0.38 (5.40/37.3)	0.44 (6.26/43.4)	0.54 (7.68/52.9)
ENGINE:						
Model			KOMATSU 4D95S-W	KOMATSU 4D95S-W	KOMATSU 4D95S-W	KOMATSU 6D95L
Number of cylinders		mm(in.)	4 – 95 × 95	4 – 95 × 95	4 – 95 × 95	6 – 95 × 115
-bore × stroke			(3.74 × 3.74)	(3.74 × 3.74)	(3.74 × 3.74)	(3.74 × 4.53)
Piston displacement		ltr(cu.in)	2.69 (164)	2.69 (164)	2.69 (164)	4.89 (298)
UNDERCARRIAGE:						
No. of rollers		Carrier/track	1/5	1/5	1/6	1/5
Width of shoe standard		mm(in.)	300 (11.8)	300 (11.8)	300 (11.8)	330 (13.0)
CAPACITY:						
Fuel tank		ltr.(U.S.Gal)	60 (15.9)	60 (15.9)	60 (15.9)	115 (30.4)

\* With ROPS canopy  
\*\* Without exhaust pipe  
\*\*\* Without ROPS canopy and exhaust pipe

Specifications

CRAWLER TYPE  
DOZER SHOVELS

Model		D41S-3	D53S-17	D57S-1	D60S-8
Item					
OPERATING WEIGHT	kg(lb)	11040 (24,340)	13630 (30,050)	15280 (33,690)	17470 (38,510)
FLYWHEEL HORSEPOWER	HP(kW)/rpm	90(68)/2350	110(82.1)/1900	135(101)/1900	160(119)/1750
BUCKET CAPACITY	m <sup>3</sup> (cu.yd)	1.2 (1.6)	1.5 (2.0)	1.8 (2.4)	1.8 (2.4)
PERFORMANCE:					
Travel speed	km/h(MPH)				
Forward	1st	2.4 ( 1.5 )	3.0 ( 1.9 )	3.1 ( 1.9 )	2.5 ( 1.6 )
	2nd	4.4 ( 2.7 )	5.4 ( 3.4 )	5.7 ( 3.5 )	4.0 ( 2.5 )
	3rd	7.6 ( 4.7 )	8.8 ( 5.5 )	9.5 ( 5.9 )	6.0 ( 3.7 )
	4th	-	-	-	8.7 ( 5.4 )
	5th	-	-	-	11.3 ( 7.0 )
Reverse	1st	3.0 ( 1.9 )	3.6 ( 2.2 )	3.8 ( 2.4 )	3.3 ( 2.1 )
	2nd	5.5 ( 3.4 )	6.5 ( 4.0 )	6.9 ( 4.3 )	5.3 ( 3.3 )
	3rd	9.4 ( 5.8 )	10.4 ( 6.5 )	11.5 ( 7.1 )	7.9 ( 4.9 )
	4th	-	-		11.3 ( 7.0 )
Max. drawbar pull	kg(lb/kN)	12800 (28,220/125)	16610 (36,630/163)	28750 (63,390/282)	17540 (38,680/172)
DIMENSIONS:					
Overall length	mm(ft.in)	4890 (16' 1" )	5425 (17'10" )	5650 (18' 6" )	5790 (19' )
Overall width	mm(ft.in)	1940 ( 6' 4" )	2045 ( 6' 9" )	2145 ( 7' )	2355 ( 7' 9" )
Overall height(at transport)*	mm(ft.in)	2175 ( 7' 2" )	2380 ( 7' 9" )	2475 ( 8' 1" )	2531 ( 8' 4" )
Track gauge	mm(ft.in)	1540 ( 5' 1" )	1600 ( 5' 3" )	1700 ( 5' 7" )	1880 ( 6' 2" )
Length of track on ground	mm(ft.in)	2060 ( 6' 9" )	2200 ( 7' 3" )	2425 ( 7'11" )	2635 ( 8' 8" )
Ground pressure	kg/cm <sup>2</sup> (PSI/kPa)	0.67 (9.53/65.7)	0.77 (11.0/75.5)	0.79 (11.2/77.5)	0.72 (10.2/70.6)
ENGINE:		KOMATSU	KOMATSU	KOMATSU	KOMATSU
Model		6D105	4D130	S4D130	6D125
Number of cylinders	mm(in.)	6 – 105 × 125	4 – 130 × 160	4 – 130 × 160	6 – 125 × 150
-bore x stroke		(4.13 × 4.92)	(5.12 × 6.30)	(5.12 × 6.30)	(4.92 × 5.91)
Piston displacement	ltr(cu.in)	6.49 (396)	8.495 (518)	8.495 (518)	11.04 (674)
UNDERCARRIAGE:					
No. of rollers	Carrier/track	1/5	1/5	1/6	2/6
Width of shoe standard	mm(in.)	400 (15.7)	400 (15.7)	400 (15.7)	460 (18.1)
CAPACITY:					
Fuel tank	ltr.(U.S.Gal)	245 (65.0)	250 (66.1)	280 (74.0)	280 (74.0)

\* Without exhaust pipe



Specifications

CRAWLER TYPE  
DOZER SHOVELS

Model		D65S-8	D66S-1	D75S-5	D95S-2
Item					
OPERATING WEIGHT	kg(lb)	17770 (39,180)	17890 (39,440)	21220 (46,780)	29800 (65,700)
FLYWHEEL HORSEPOWER	HP(kW)/rpm	160(119)/1850	160(119)/2100	200(149)/2000	245(183)/1850
BUCKET CAPACITY	m <sup>3</sup> (cu.yd)	1.8 (2.4)	2.0 (2.6)	2.2 (2.9)	3.2 (4.2)
PERFORMANCE:					
Travel speed	km/h(MPH)				
Forward	1st	3.4 ( 2.1 )	10.2 ( 6.3 )	3.3 ( 2.0 )	3.2 ( 2.0 )
	2nd	6.1 ( 3.8 )	—	5.8 ( 3.6 )	5.8 ( 3.6 )
	3rd	9.8 ( 6.1 )	—	9.6 ( 6.0 )	10.1 ( 6.3 )
Reverse	1st	4.5 ( 2.8 )	10.2 ( 6.3 )	4.3 ( 2.7 )	3.8 ( 2.4 )
	2nd	7.8 ( 4.8 )	—	7.5 ( 4.5 )	6.9 ( 4.3 )
	3rd	12.2 ( 7.6 )	—	12.1 ( 7.5 )	11.9 ( 7.4 )
Max. drawbar pull	kg(lb/kN)	21330 (47,030/209)	22490 (49,590/220)	25530 (56,280/250)	34580 (76,240/339)
DIMENSIONS:					
Overall length	mm(ft.in)	5790 (19' )	6575 (21' 7" )	6200 (20' 4" )	6330 (20' 9" )
Overall width	mm(ft.in)	2355 ( 7' 9" )	2210 ( 7' 3" )	2500 ( 8' 2" )	2850 ( 9' 4" )
Overall height(at transport)*	mm(ft.in)	2531 ( 8' 4" )	2560 ( 8' 5" )	2615 ( 8' 7" )	2755 ( 9' )
Track gauge	mm(ft.in)	1880 ( 6' 2" )	1800 ( 5'11" )	1950 ( 6' 5" )	2250 ( 7' 5" )
Length of track on ground	mm(ft.in)	2635 ( 8' 8" )	2630 ( 8' 8" )	2735 ( 9' )	3050 (10' )
Ground pressure	kg/cm <sup>2</sup> (PSI/kPa)	0.73 (10.4/71.6)	0.83 (11.8/81.4)	0.84 (11.9/82.4)	0.96 (13.65/94.1)
ENGINE:		KOMATSU	KOMATSU	KOMATSU	KOMATSU-CMS.
Model		6D125	SA6D110	S6D125	NT855
Number of cylinders	mm(in.)	6 – 125 × 150	6 – 110 × 125	6 – 125 × 150	6 – 139.7 × 152.4
-bore × stroke		(4.92 × 5.91)	(4.33 × 4.92)	(4.92 × 5.91)	(5.5 × 6)
Piston displacement	ltr(cu.in)	11.04 (674)	7.13 (435)	11.04 (674)	14.01 (855)
UNDERCARRIAGE:					
No. of rollers	Carrier/track	2/6	1/6	2/7	2/7
Width of shoe					
standard	mm(in.)	460 (18.1)	410 (16.1)	460 (18.1)	510 (20.1)
CAPACITY:					
Fuel tank	ltr.(U.S.Gal)	280 (74.0)	290 (76.6)	400 (106)	480 (126.8)

\* Without exhaust pipe

Specifications

CRAWLER TYPE  
 DOZER SHOVELS

Item		Model	D155S-1	D20Q-6	D21Q-6	D31Q-18
OPERATING WEIGHT		kg(lb)	41800 (92,150)	4070 (8,970)	4120 (9,080)	7010 (15,450)
FLYWHEEL HORSEPOWER		HP(kW)/rpm	350(261)/2000	40(29.5)/2450	39.5(29.5)/2450	70(52)/2350
BUCKET CAPACITY		m <sup>3</sup> (cu.yd)	4.5 (5.9)	0.4 (0.5)	0.4 (0.5)	0.8 (1.0)
PERFORMANCE:						
Travel speed		km/h(MPH)				
Forward	1st		3.2 ( 2.0 )	2.8 ( 1.7 )	2.6 ( 1.6 )	2.2 ( 1.4 )
	2nd		5.9 ( 3.7 )	4.0 ( 2.5 )	4.4 ( 2.7 )	3.9 ( 2.4 )
	3rd		10.2 ( 6.3 )	7.5 ( 4.7 )	—	6.5 ( 4.0 )
	Reverse					
	1st		3.9 ( 2.4 )	4.5 ( 2.8 )	3.3 ( 2.1 )	2.4 ( 1.5 )
	2nd		7.1 ( 4.4 )	6.5 ( 4.0 )	5.6 ( 3.5 )	4.3 ( 2.7 )
Reverse	3rd		12.1 ( 7.5 )	—	—	7.1 ( 4.4 )
Max. drawbar pull		kg(lb/kN)	33400 (73.650/328)	4380 (9,660/43.0)	4470 (9,850/43.9)	8850 (19,510/86.8)
DIMENSIONS:						
Overall length		mm(ft.in)	7730 (25' 4" )	3410 (11' 2" )	3410 (11' 2" )	3990 (13' 1" )
Overall width		mm(ft.in)	3020 ( 9'11" )	2000 ( 6' 7" )	2000 ( 6' 7" )	2250 ( 7' 5" )
Overall height(at transport)*		mm(ft.in)	2945 ( 9' 8" )	1740 ( 5' 9" )	1740 ( 5' 9" )	1975 ( 6' 6" )
Track gauge		mm(ft.in)	2380 ( 7'10" )	1490 ( 4'11" )	1490 ( 4'11" )	1650 ( 5' 5" )
Length of track on ground		mm(ft.in)	3620 (11'11" )	1685 ( 5' 6" )	1685 ( 5' 6" )	1880 ( 6' 2" )
Ground pressure		kg/cm <sup>2</sup> (PSI/kPa)	1.03 (14.65/101.0)	0.24 (3.41/23.5)	0.24 (3.41/23.5)	0.31 (4.41/30.4)
ENGINE:						
Model			KOMATSU S6D155	KOMATSU 4D95S-W	KOMATSU 4D95S-W	KOMATSU 6D95L
Number of cylinders		mm(in.)	6 – 155×170	4 – 95×95	4 – 95×95	6 – 95×114
-bore x stroke			(6.10×6.69)	(3.74×3.74)	(3.74×3.74)	(3.74×4.53)
Piston displacement		ltr(cu.in)	19.26 (1175)	2.69 (164)	2.69 (164)	4.89 (298)
UNDERCARRIAGE:						
No. of rollers		Carrier/track	2/8	1/5	1/5	1/5
Width of shoe standard		mm(in.)	560 (22.0)	510 (20.1)	510 (20.1)	600 (23.6)
CAPACITY:						
Fuel tank		ltr.(U.S.Gal)	650 (171.7)	60 (15.9)	60 (15.9)	115 (30.4)

\* Without exhaust pipe

Specifications

CRAWLER TYPE  
DOZER SHOVELS

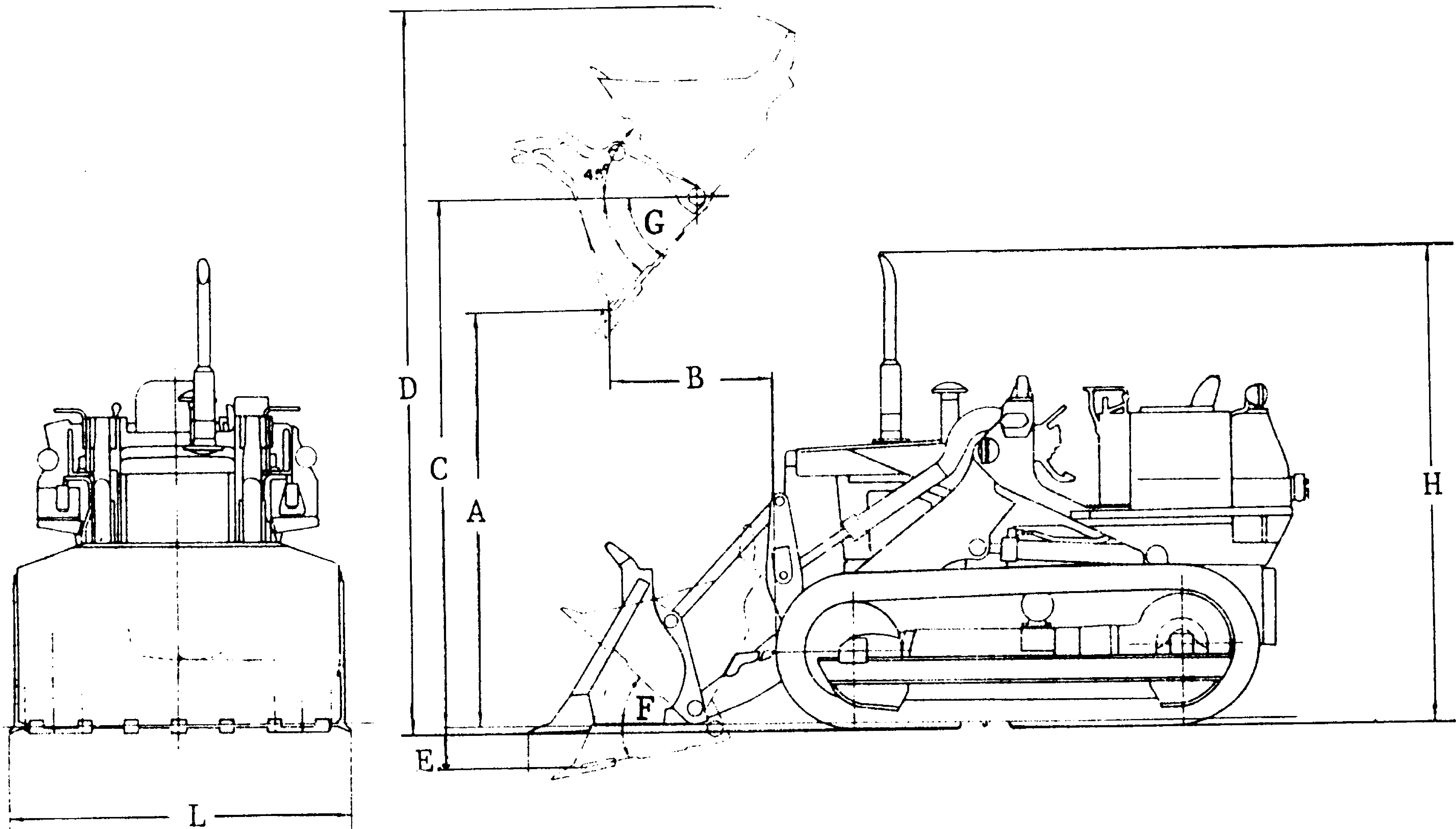
Item		Model	D41Q-3
OPERATING WEIGHT		kg(lb)	11300 (24,910)
FLYWHEEL HORSEPOWER		HP(kW)/rpm	90(68)/2350
BUCKET CAPACITY		m <sup>3</sup> (cu.yd)	1.2 (1.6)
PERFORMANCE:			
Travel speed		km/h(MPH)	
Forward	1st		2.4 ( 1.5 )
	2nd		4.4 ( 2.7 )
	3rd		7.6 ( 4.7 )
Reverse	1st		3.0 ( 1.9 )
	2nd		5.5 ( 3.4 )
	3rd		9.4 ( 5.8 )
Max. drawbar pull		kg(lb/kN)	12800 (28,220/125)
DIMENSIONS:			
Overall length		mm(ft.in)	4815 (15'10" )
Overall width		mm(ft.in)	2320 ( 7' 7" )
Overall height(at transport)*		mm(ft.in)	2195 ( 7' 2" )
Track gauge		mm(ft.in)	1760 ( 5' 9" )
Length of track on ground		mm(ft.in)	2060 ( 8' 6" )
Ground pressure		kg/cm <sup>2</sup> (PSI/kPa)	0.49 (6.97/48.1)
ENGINE:			KOMATSU
Model			6D105
Number of cylinders		mm(in.)	6 – 105 × 125
-bore x stroke			(4.13 × 4.92)
Piston displacement		ltr(cu.in)	6.49 (396)
UNDERCARRIAGE:			
No. of rollers		Carrier/track	1/5
Width of shoe			
standard		mm(in.)	560 (22.0)
CAPACITY:			
Fuel tank		ltr.(U.S.Gal)	245 (65.0)

\* Without exhaust pipe



# Bucket Specifications

# CRAWLER TYPE DOZER SHOVELS



Model		D20S-6	D21S-6	D21S-6A	D31S-18
Item					
Bucket capacity	m <sup>3</sup> (cu.yd)	0.4 (0.5)	0.4 (0.5)	0.57 (0.75)	0.8 (1.0)
L Width of bucket	mm(ft.in)	1670 ( 5' 6" )	1670 ( 5' 6" )	1670 ( 5' 6" )	1905 ( 6' 3" )
A Dumping clearance	mm(ft.in)	2130 ( 7' )	2130 ( 7' )	2500 ( 8' 2" )	2540 ( 8' 4" )
B Dumping reach	mm(ft.in)	735 ( 2' 5" )	735 ( 2' 5" )	795 ( 2' 7" )	830 ( 2' 9" )
C Hinge pin height	mm(ft.in)	2590 ( 8' 6" )	2590 ( 8' 6" )	3010 ( 9'11" )	3105 (10' 2" )
D Operating height	mm(ft.in)	3405 (11' 2" )	3405 (11' 2" )	3935 (12'11" )	4135 (13' 7" )
E Digging depth(at10°)	mm(in)	190 (7.5)	190 (7.5)	340 (13.4)	240 (9.4)
F Tiltback at ground level	degree	44	44	40	43
G Dumping at max. lift	degree	50	50	50	50
H Overall height	mm(ft.in)	2155 (7'1")	2155 (7'1")	*2435 (8')	2645 (8'8")
Breakout force	kg(lb)	3570 (7,870)	3570 (7,870)	3220 (7,100)	6400 (14,100)
Tipping load	kg(lb)	2160 (4,760)	2190 (4,830)	3050 (6,730)	4260 (9,400)

★ With ROPS canopy



**Bucket  
Specifications**

**CRAWLER TYPE  
DOZER SHOVELS**

Model		D41S-3	D53S-17	D57S-1	D60S-8
Item					
Bucket capacity	m <sup>3</sup> (cu.yd)	1.2 (1.6)	1.5 (2.0)	1.8 (2.4)	1.8 (2.4)
L Width of bucket	mm(ft.in)	2115 ( 6'11" )	2130 ( 7' )	2290 ( 7' 6" )	2497 ( 8' 2" )
A Dumping clearance	mm(ft.in)	2600 ( 8' 6" )	2760 ( 9' 1" )	2890 ( 9' 6" )	2730 ( 8'11" )
B Dumping reach	mm(ft.in)	1030 ( 3' 5" )	1070 ( 3' 6" )	1190 ( 3'11" )	1300 ( 4' 3" )
C Hinge pin height	mm(ft.in)	3285 (10' 9" )	3540 (11' 7" )	3660 (12' )	3545 (11' 8" )
D Operating height	mm(ft.in)	4450 (14' 7" )	4960 (16' 3" )	5115 (16' 9" )	4855 (15'11" )
E Digging depth(at10°)	mm(in)	285 (11.2)	365 (14.4)	345 (13.6)	390 (15.4)
F Tiltback at ground level	degree	44	45	45	45
G Dumping at max. lift	degree	48	50	50	50
H Overall height	mm(ft.in)	2995 (9'10")	3080 (10'2")	2925 (9'7")	3046 (10')
Breakout force	kg(lb)	8500 (18,700)	10132 (22,340)	11650 (25,680)	13300 (29,320)
Tipping load	kg(lb)	7040 (15,500)	8450 (18,630)	10620 (23,410)	10650 (23,480)

Model		D65S-8	D66S-1	D75S-5	D95S-2
Item					
Bucket capacity	m <sup>3</sup> (cu.yd)	1.8 (2.4)	2.0 (2.6)	2.2 (2.9)	3.2 (4.2)
L Width of bucket	mm(ft.in)	2497 ( 8' 2" )	2395 ( 7'10" )	2500 ( 8' 2" )	2492 ( 9' 8" )
A Dumping clearance	mm(ft.in)	2730 ( 8'11" )	3055 (10' )	3200 (10' 6" )	3245 (10' 8" )
B Dumping reach	mm(ft.in)	1300 ( 4' 3" )	1125 ( 3' 8" )	1305 ( 4' 3" )	1310 ( 4' 4" )
C Hinge pin height	mm(ft.in)	3545 (11' 8" )	3925 (12'11" )	4055 (13' 4" )	4250 (13'11" )
D Operating height	mm(ft.in)	4855 (15'11" )	5210 (17' 1" )	5545 (18' 2" )	6020 (19' 9" )
E Digging depth(at10°)	mm(in)	390 (15.4)	350 (13.8)	380 (15.0)	410 (16.1)
F Tiltback at ground level	degree	45	43	45	47
G Dumping at max. lift	degree	50	50	50	50
H Overall height	mm(ft.in)	3046 (10')	3180 (10'5")	3285 (10'9")	3665 (12')
Breakout force	kg(lb)	14020 (30,910)	16450 (36,270)	17890 (39,440)	22700 (50,040)
Tipping load	kg(lb)	11100 (24,480)	12390 (27,320)	14160 (31,220)	19960 (44,010)

Bucket  
Specifications

CRAWLER TYPE  
DOZER SHOVELS

Model		D155S-1	D20Q-6	D21Q-6	D31Q-18
Item					
Bucket capacity	m <sup>3</sup> (cu.yd)	4.5 (5.9)	0.4 (0.5)	0.4 (0.5)	0.8 (1.0)
L Width of bucket	mm(ft.in)	3150 (10' 4" )	2040 ( 6' 8" )	2040 ( 6' 8" )	2300 ( 7' 7" )
A Dumping clearance	mm(ft.in)	3695 (12' 1" )	2235 ( 7' 4" )	2235 ( 7' 4" )	2640 ( 8' 8" )
B Dumping reach	mm(ft.in)	1555 ( 5' 1" )	685 ( 2' 3" )	685 ( 2' 3" )	750 ( 2' 6" )
C Hinge pin height	mm(ft.in)	4800 (15' 9" )	2650 ( 8' 8" )	2650 ( 8' 8" )	3175 (10' 5" )
D Operating height	mm(ft.in)	6645 (21'10" )	3270 (10' 9" )	3270 (10' 9" )	4015 (13' 2" )
E Digging depth(at10°)	mm(in)	420 (16.5)	120 (4.7)	120 (4.7)	185 (7.3)
F Tiltback at ground level	degree	45	42	42	43
G Dumping at max. lift	degree	50	50	50	50
H Overall height	mm(ft.in)	3920 (12'10" )	2190 (7'2" )	2190 (7'2" )	2695 (8'10" )
Breakout force	kg(lb)	27180 (59,930)	4060 (8,950)	4060 (8,950)	6800 (15,000)
Tipping load	kg(lb)	28200 (62,180)	2340 (5,160)	2480 (5,470)	4430 (9,770)

Model		D41Q-3
Item		
Bucket capacity	m <sup>3</sup> (cu.yd)	1.2 (1.6)
L Width of bucket	mm(ft.in)	2415 ( 7'11" )
A Dumping clearance	mm(ft.in)	2655 ( 8' 9" )
B Dumping reach	mm(ft.in)	980 ( 3' 3" )
C Hinge pin height	mm(ft.in)	3285 (10' 9" )
D Operating height	mm(ft.in)	4400 (14' 5" )
E Digging depth(at10°)	mm(in)	195 (7.7)
F Tiltback at ground level	degree	44
G Dumping at max. lift	degree	48
H Overall height	mm(ft.in)	3015 (9'11" )
Breakout force	kg(lb)	9000 (19,850)
Tipping load	kg(lb)	7500 (16,540)

**(1) DATA CHARACTERISTIC TO DOZER SHOVELS (USING DATA FOR D95S-2 FOR REFERENCE)**

**(A) BUCKET CAPACITY: 3.2 M<sup>3</sup> (4.2 CU.YD.)**  
Refers to heaped capacity. Conforms to SAE J7426 (Front End Loader Bucket Rating) or JIS D0005-1963.

**(B) MAXIMUM LOADING CAPACITY: 6400 KG (14,110 LB)**

The weight of heaped capacity, assuming the material has a standard specific weight of 2000 kg/m<sup>3</sup>. Thus the maximum loading capacity for D95S-2 is:

$$3.2 \text{ m}^3 \times 2000 \text{ kg/m}^3 = 6400 \text{ kg.}$$

The machine can handle a load of this weight safely and stably. Maximum loading capacity complies with SAE J818. It does exceed 32% of the static tipping load (see below).

**(C) BREAKOUT FORCE: 22,700 KG (50,040 LB)**

Breakout force is the vertical upward force which is exerted at a position 4 inches (101.6 mm) behind the tip of the bucket cutting edge and achieved through the component of forces to lift and/or tilt the bucket about the specific pivot point. (SAE J732C 4.7)

**(D) TIPPING LOAD: 19,960 KG (44,010 LB)**

The static tipping load is measured with the bucket in its most unstable position (raised all the way back with the hinge pin as far forward as possible and the lift arm almost level). The static tipping load is the load at which the

track rollers just begin to raise up off the track. (SAE J732C 4.3) The larger the tipping load, the more stable the machine.

**(E) LIFTING CAPACITY: 19,000 KG (41,900 LB)**

With the rear of machine tied down, the vertical upward force to raise the lift arm by the lift cylinder is the lifting capacity. Accordingly, this force is determined by the hydraulic lifting capacity (according to the SAE J732C 4.6)

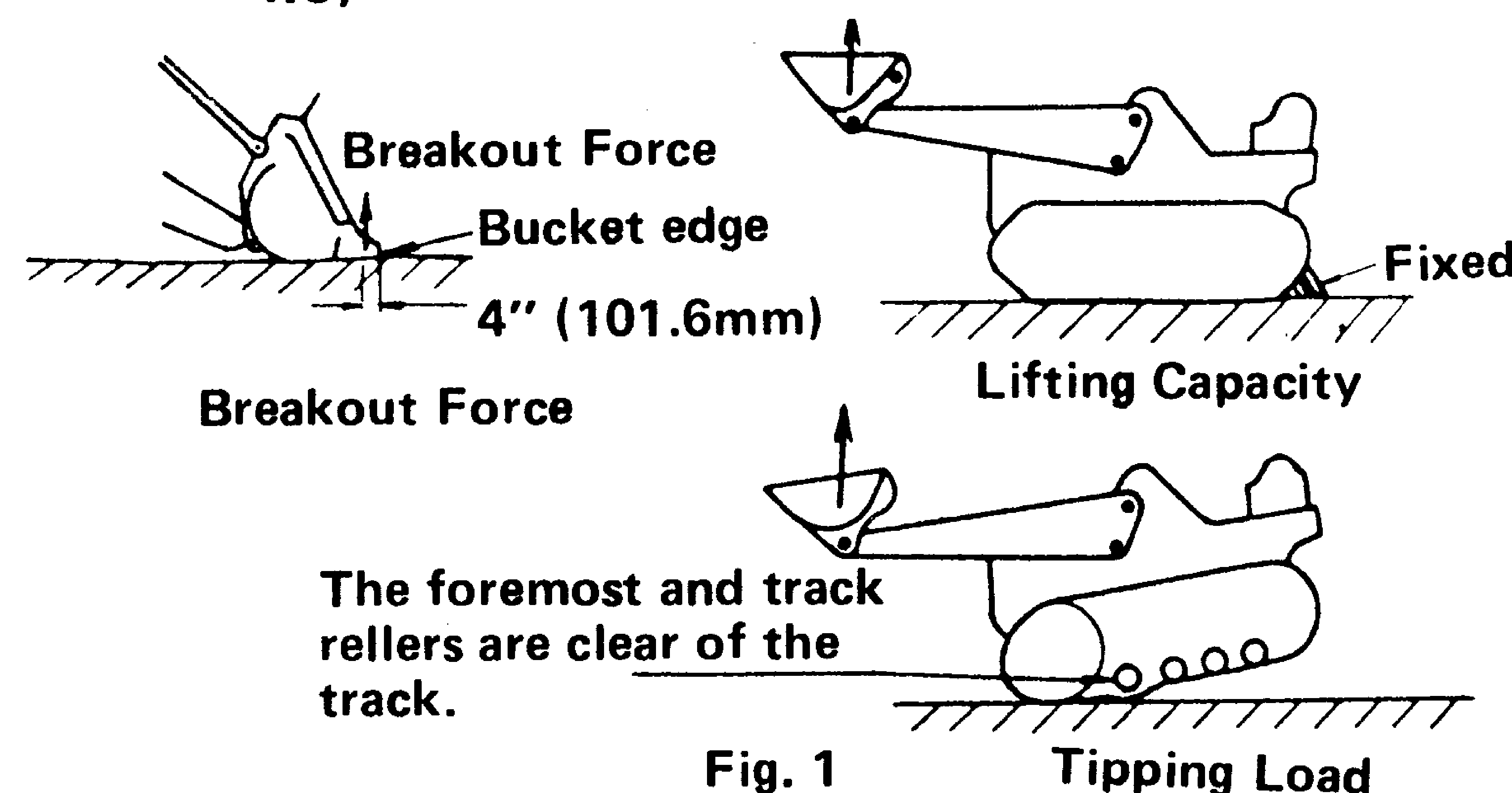


Fig. 1

**(F) DUMPING CLEARANCE AND DUMPING REACH**

These two data are required to be referred to in selecting a dozer shovel for use in a loading-hauling operation in combination with a dump with a dump truck.

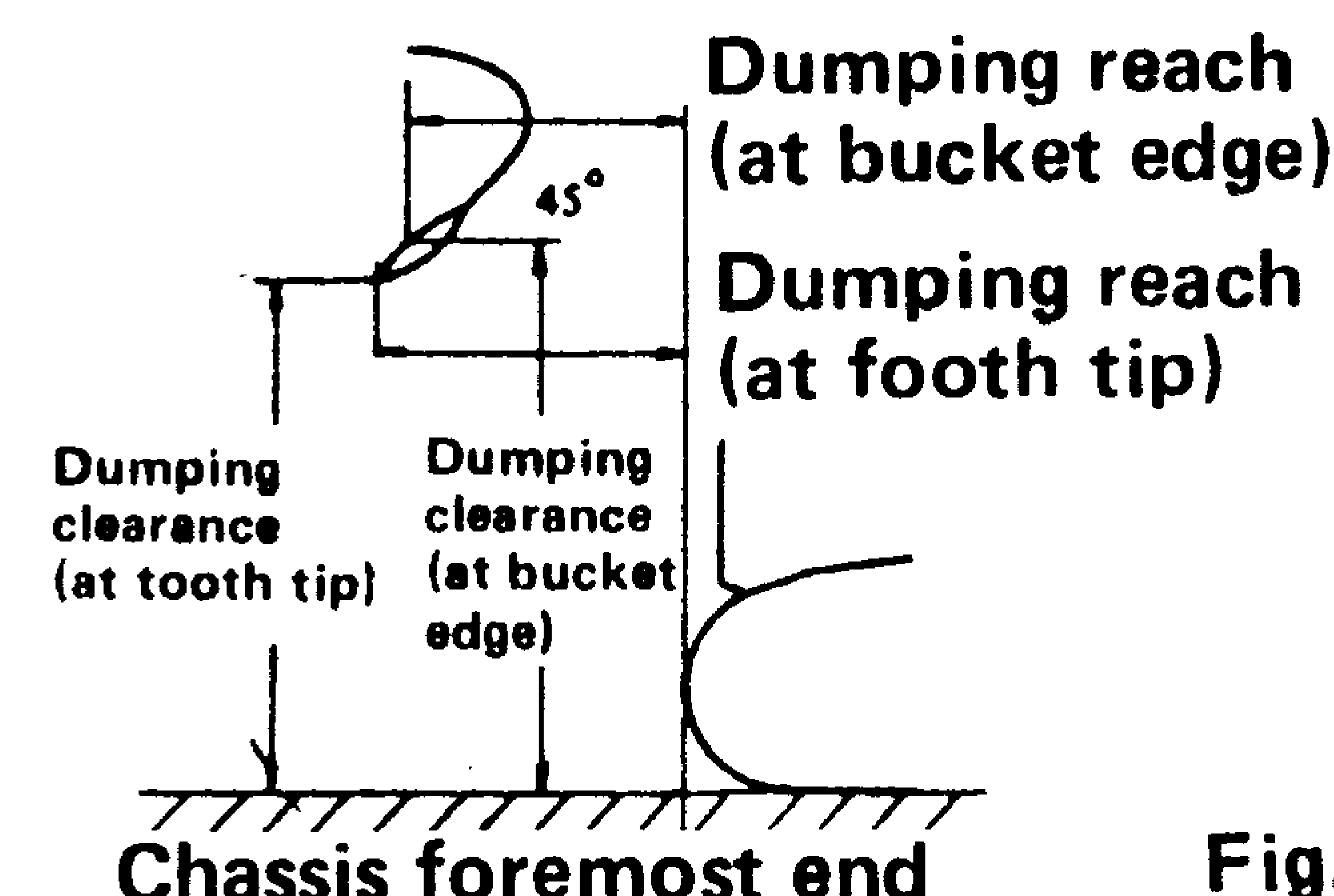
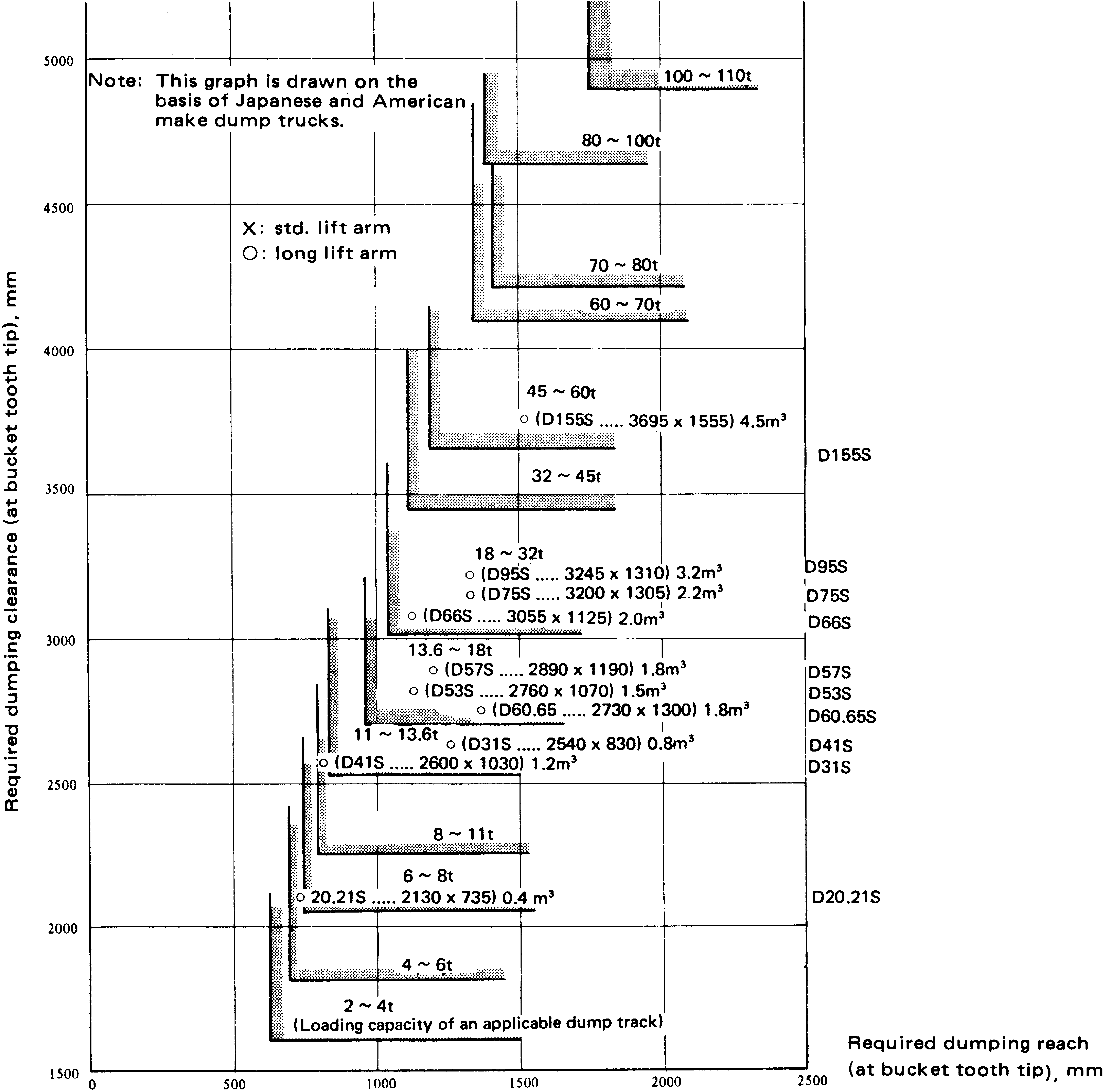


Fig. 2



SELECTION GUIDE FOR OPTIMUM DOZER SHOVEL FOR DUMP TRUCK



Loader and Dump Track  
Combination

CRAWLER TYPE  
DOZER SHOVELS

If the standard arm can not provide the required dumping clearance and reach, use one of the optional longer arms. Since the center of gravity of the dozer shovel will be different with optional arm, use a counter-weight at the rear of the

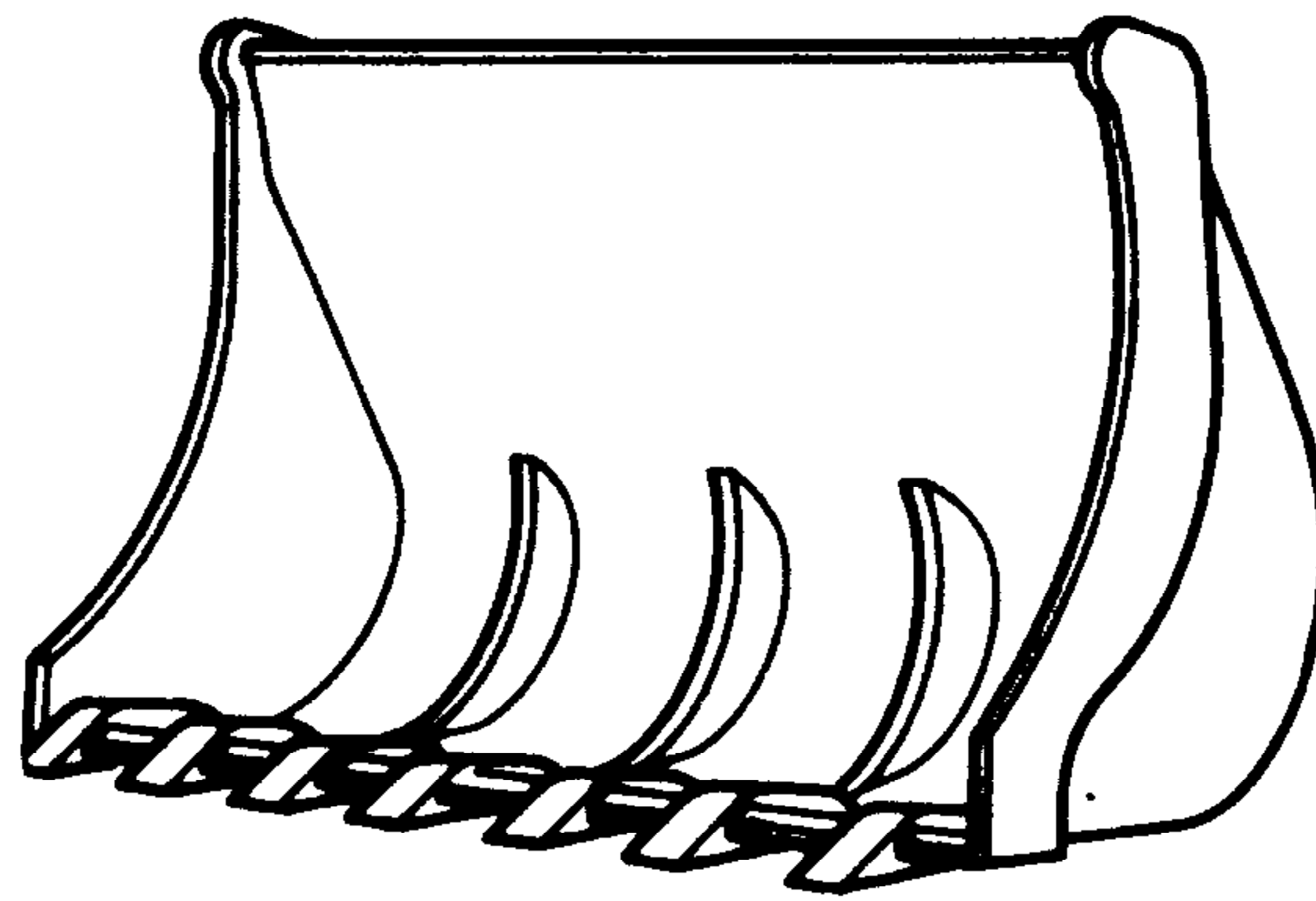
Combinations of KOMATSU dozer shovels and dump trucks in terms of dumping clearance and reach

Dozer Shovel Model	Bucket capacity (m <sup>3</sup> )	Dump truck Payload (ton)	* Loading cycle
D20, D21S-6	0.4	4 — 6	5 — 8
D31S-18	0.8	6 — 11	4 — 7
D41S-3	1.2	11 — 13.6	5 — 6
D53S-17	1.5	11 — 13.6	4 — 5
D57S-1	1.8	13.6 — 18	4 — 5
D60S-8, D65S-8	1.8	13.6 — 18	4 — 5
D66S-1	2.0	13.6 — 18	4 — 5
D75S-5	2.2	13.6 — 18	3 — 4
D95S-2	3.2	18 — 32	3 — 5
D155S-1	4.5	32 — 45	4 — 5

\* Loading cycle is estimated for soil of a specific weight of 2000 kg/m<sup>3</sup>.

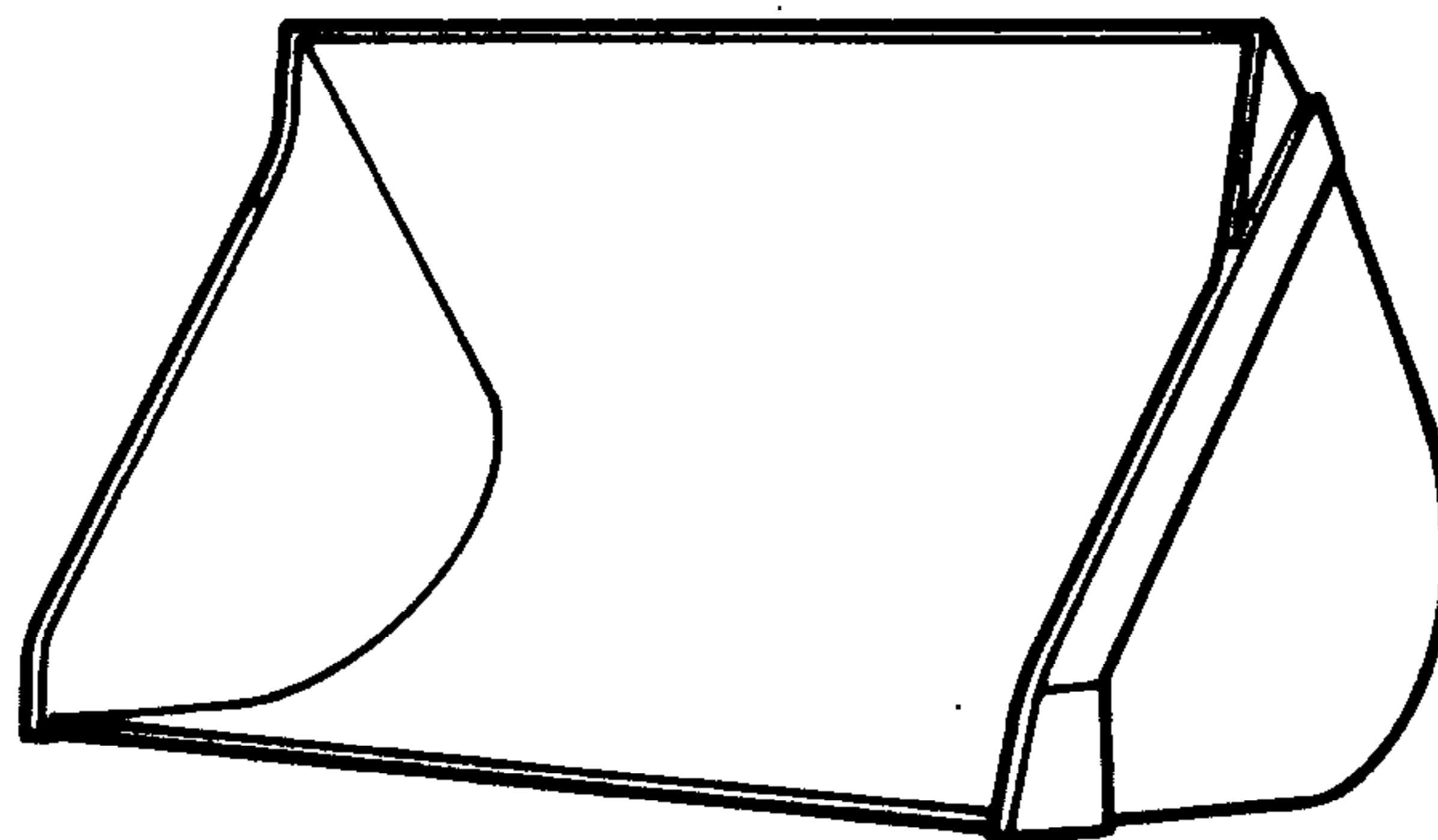
## Front Attachments

## CRAWLER TYPE DOZER SHOVELS



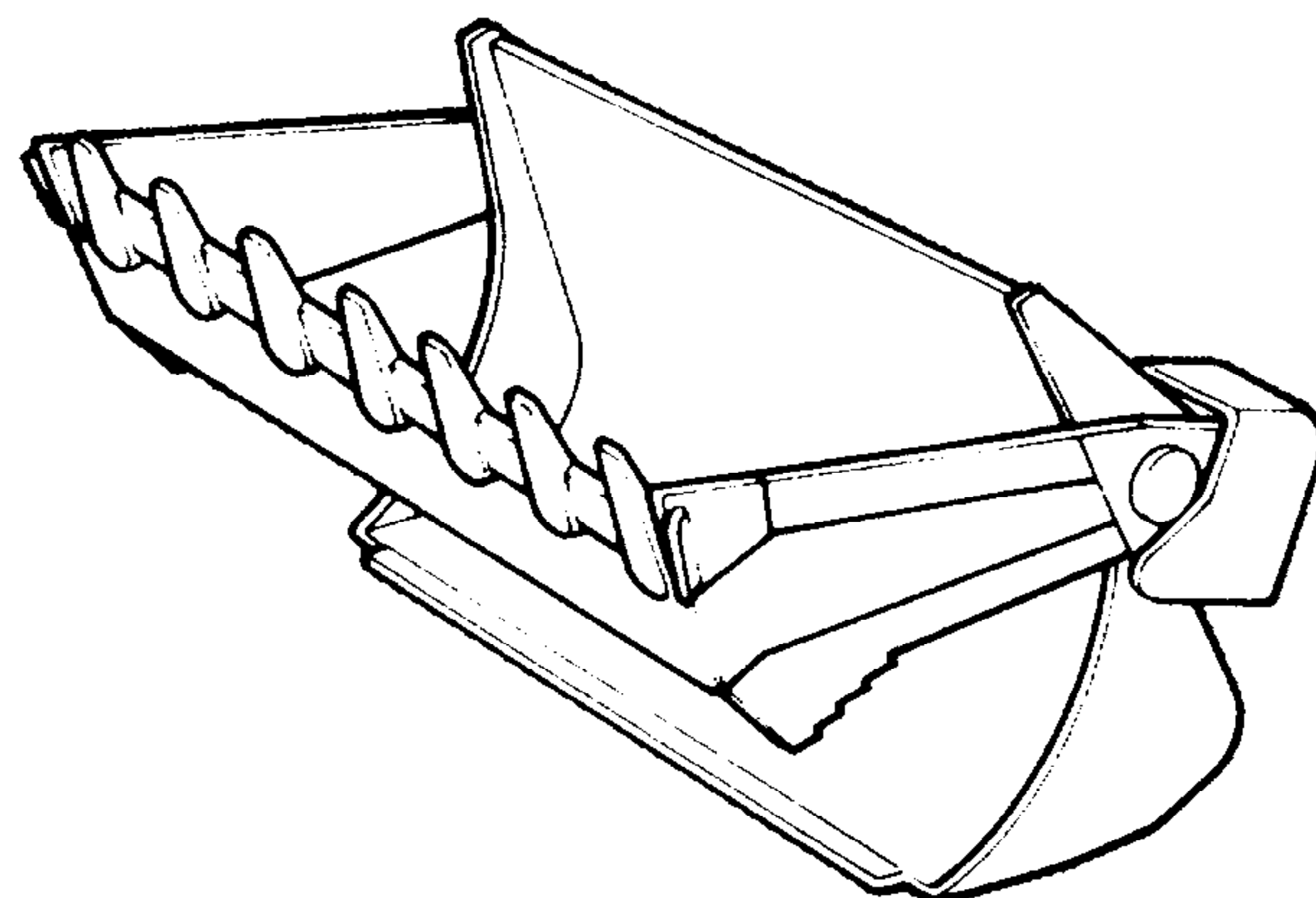
### ROCK BUCKET

Used for digging and loading rocks. Strengthened with reinforced plates.



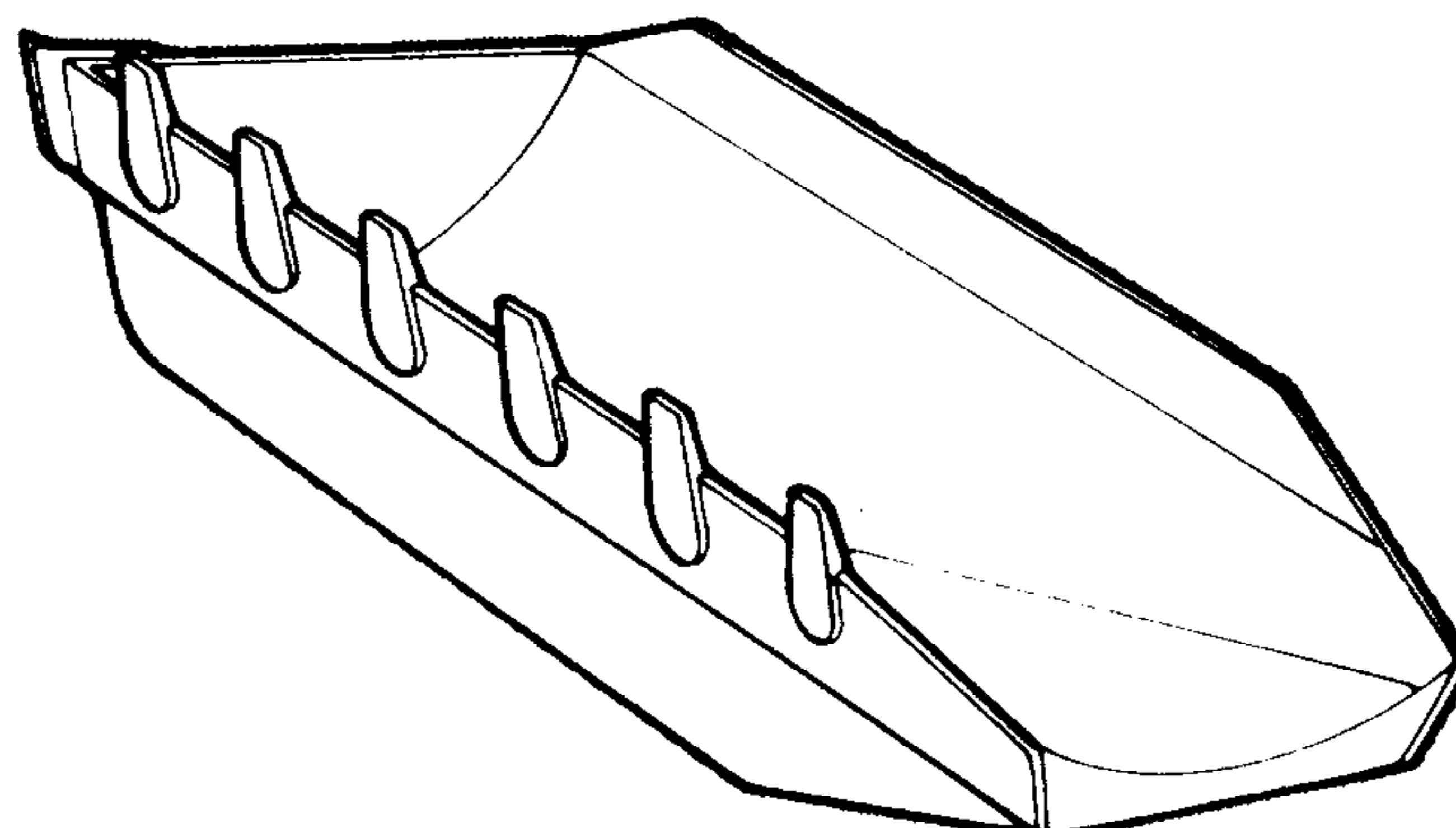
### LARGE BUCKET

Used for loading and carrying big loads of material of light specific gravity, such as sand and coke.



### MULTIPURPOSE BUCKET

Consists of a bucket and blade section which can be opened and closed. This "4-in-1" bucket can function as a bucket, blade, scraper, or clamshell.



### SIDE-DUMP BUCKET

### THREE-WAY BUCKET

Can dump forward or to the side with turning the tractor. Shortens cycle time for higher productivity. (A three-way bucket is also available.)



Rock Bucket

CRAWLER TYPE  
DOZER SHOVELS

ROCK BUCKET (with semi-double grouser shoe)

Item \ Model		D53S-17	D57S-1	D60S-8,D65S-8	D66S-1
Bucket capacity	m <sup>3</sup> (cu.yd)	1.5 (2.0)	1.6 (2.1)	1.8 (2.4)	2.0 (2.6)
Weight	kg(lb)	915 (2,020)	1000 (2,200)	1310 (2,890)	1390 (3,060)
Bucket width	mm(ft.in)	2130 ( 7' )	2290 ( 7' 6" )	2495 ( 8' 2" )	2395 ( 7'10" )
Bucket height	mm(ft.in)	1315 ( 4' 4" )	1310 ( 4' 4" )	1280 ( 4' 2" )	1300 ( 4' 3" )
Dumping clearance	mm(ft.in)	2760 ( 9' 1" )	2890 ( 9' 6" )	2730 ( 8'11" )	3055 (10' )
Dumping reach	mm(ft.in)	1070 ( 3' 6" )	1190 ( 3'11" )	1270 ( 4' 2" )	1125 ( 3' 8" )
Digging depth(10°)	mm(in)	365 (14.4)	345 (13.6)	390 (15.4)	350 (13.8)
No.of teeth		7	7	8	9

Item \ Model		D75S-5 ※ Standard	D95S-2 ※ Standard	D155S-1 ※ Standard	
Bucket capacity	m <sup>3</sup> (cu.yd)	2.2 (2.9)	3.2 (4.2)	4.5 (5.9)	
Weight	kg(lb)	1600 (3,530)	2380 (5,250)	3290 (7,250)	
Bucket width	mm(ft.in)	2500 ( 8' 2" )	2940 ( 9' 8" )	3150 (10' 4" )	
Bucket height	mm(ft.in)	1510 ( 4'11" )	1685 ( 5' 6" )	1885 ( 6' 2" )	
Dumping clearance	mm(ft.in)	3200 (10' 6" )	3245 (10' 8" )	3695 (12' 1" )	
Dumping reach	mm(ft.in)	1305 ( 4' 3" )	1310 ( 4' 4" )	1555 ( 5' 1" )	
Digging depth(10°)	mm(in)	380 (15.0)	410 (16.1)	420 (16.5)	
No.of teeth		9	8	8	

Large Bucket

CRAWLER TYPE  
DOZER SHOVELS

LARGE BUCKET (with semi-double grouser shoe)

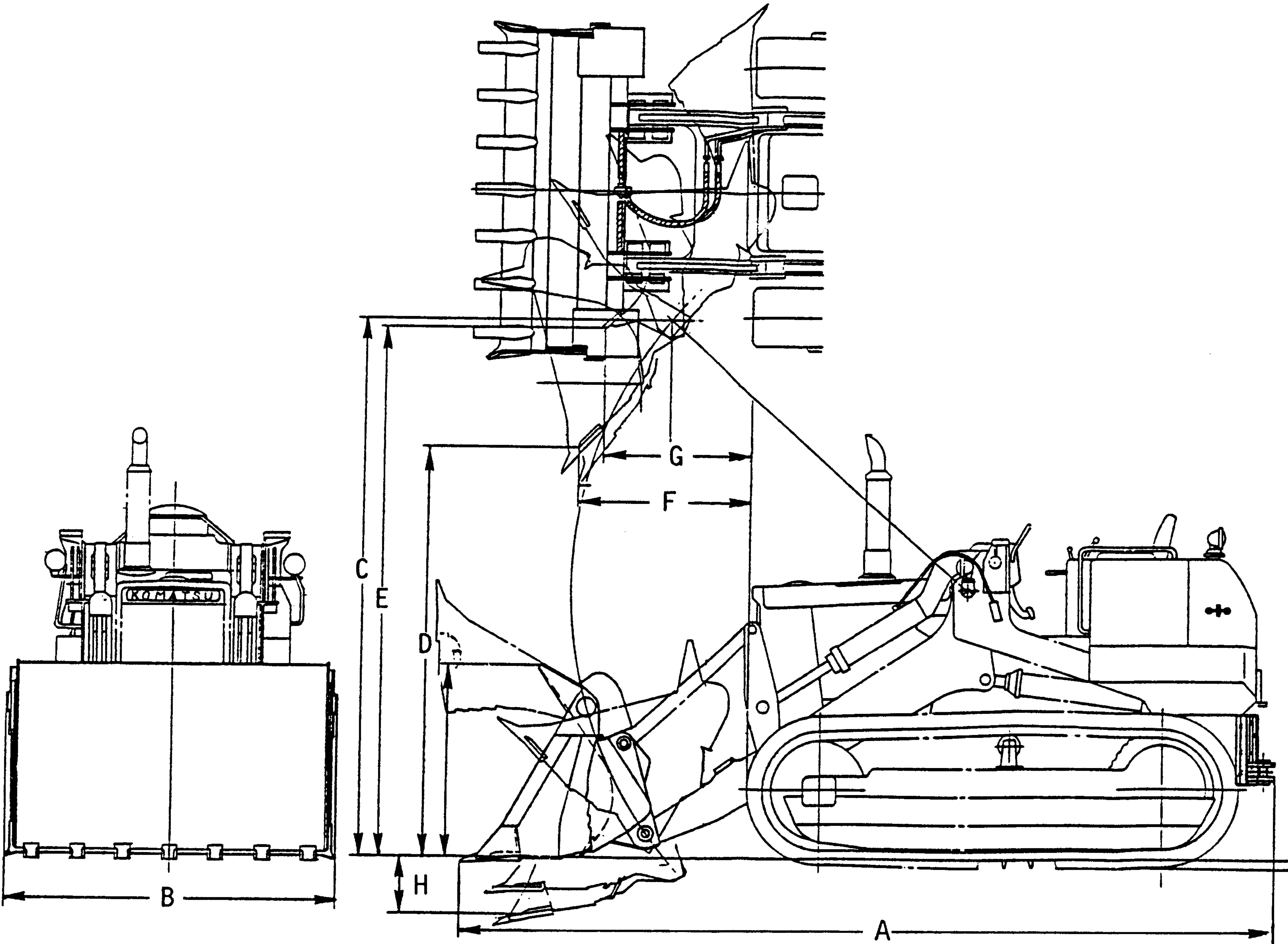
ItemModel		D31S-18	D53S-17	D57S-1	D60S-8,D65S-8
Bucket capacity	m <sup>3</sup> (cu.yd)	1.0 (1.3)	1.7 (2.2)	1.9 (2.5)	2.2 (2.9)
Weight	kg(lb)	425 (940)	765 (1,690)	910 (2,010)	1140 (2,510)
Bucket width	mm(ft.in)	2015 ( 6' 7" )	2130 ( 7' )	2290 ( 7' 6" )	2495 ( 8' 2" )
Bucket height	mm(ft.in)	1160 ( 3'10" )	1465 ( 4'10" )	1545 ( 5' 1" )	1385 ( 4' 7" )
Dumping clearance	mm(ft.in)	2515 ( 8' 2" )	2715 ( 8'11" )	2825 ( 9' 3" )	2660 ( 8' 9" )
Dumping reach	mm(ft.in)	830 ( 2' 9" )	1105 ( 3' 8" )	1255 ( 4' 1" )	1220 ( 4' )
Digging depth(10°)	mm(in)	265 (10.4)	380 (15.0)	350 (13.8)	415 (16.3)
No.of teeth		6	–	–	–
Counter weight	kg(lb)	420 (930)	–	–	–

ItemModel		D75S-5			
Bucket capacity	m <sup>3</sup> (cu.yd)	2.5 (3.3)			
Weight	kg(lb)	1240 (2,730)			
Bucket width	mm(ft.in)	2500 ( 8' 2" )			
Bucket height	mm(ft.in)	1650 ( 5' 5" )			
Dumping clearance	mm(ft.in)	3160 (10' 4" )			
Dumping reach	mm(ft.in)	1360 ( 4' 6" )			
Digging depth(10°)	mm(in)	390 (15.4)			
No.of teeth		–			
Counter weight	kg(lb)	–			



Multi-Purpose  
Bucket

CRAWLER TYPE  
DOZER SHOVELS





Multi-Purpose  
Bucket

CRAWLER TYPE  
DOZER SHOVELS

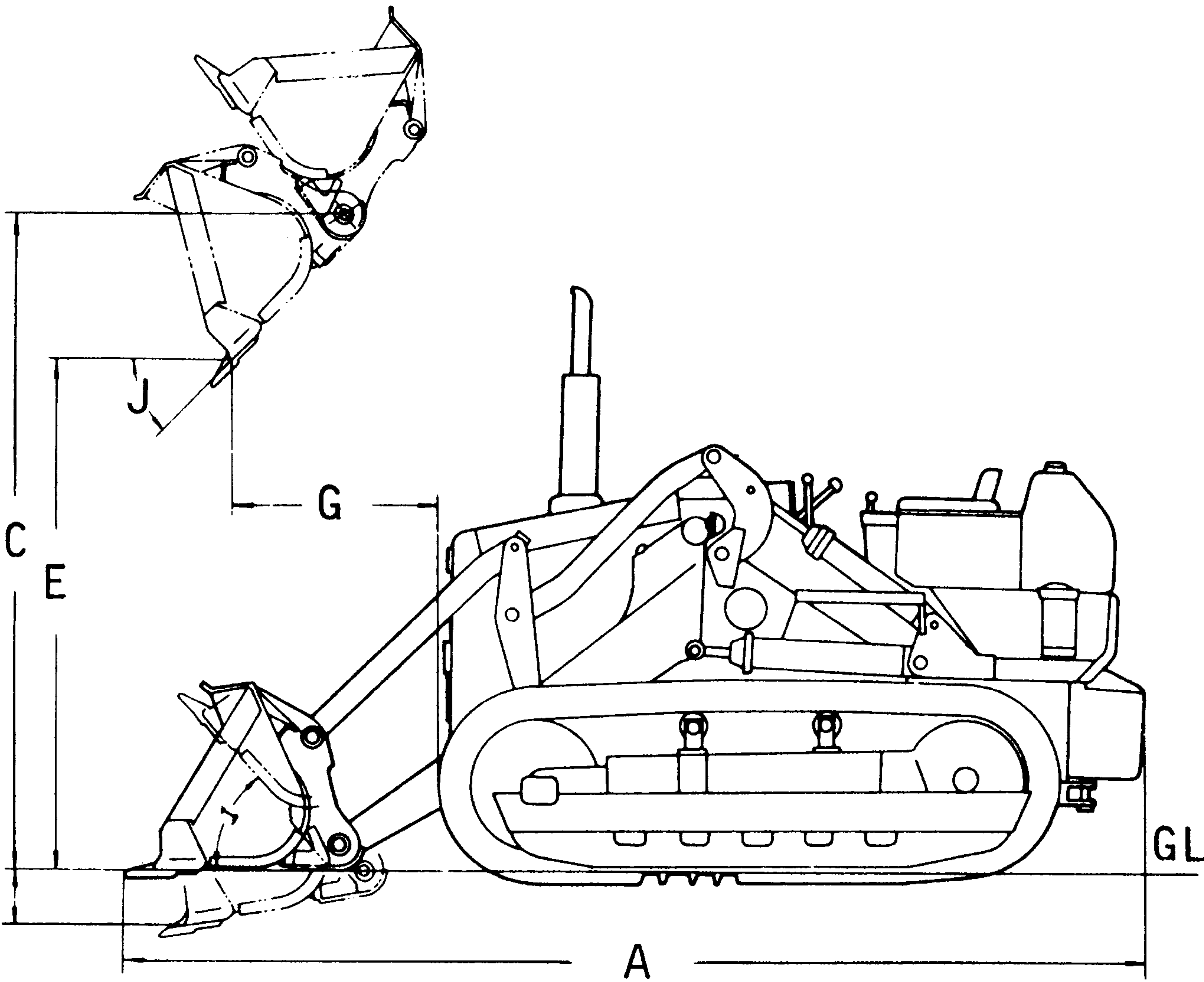
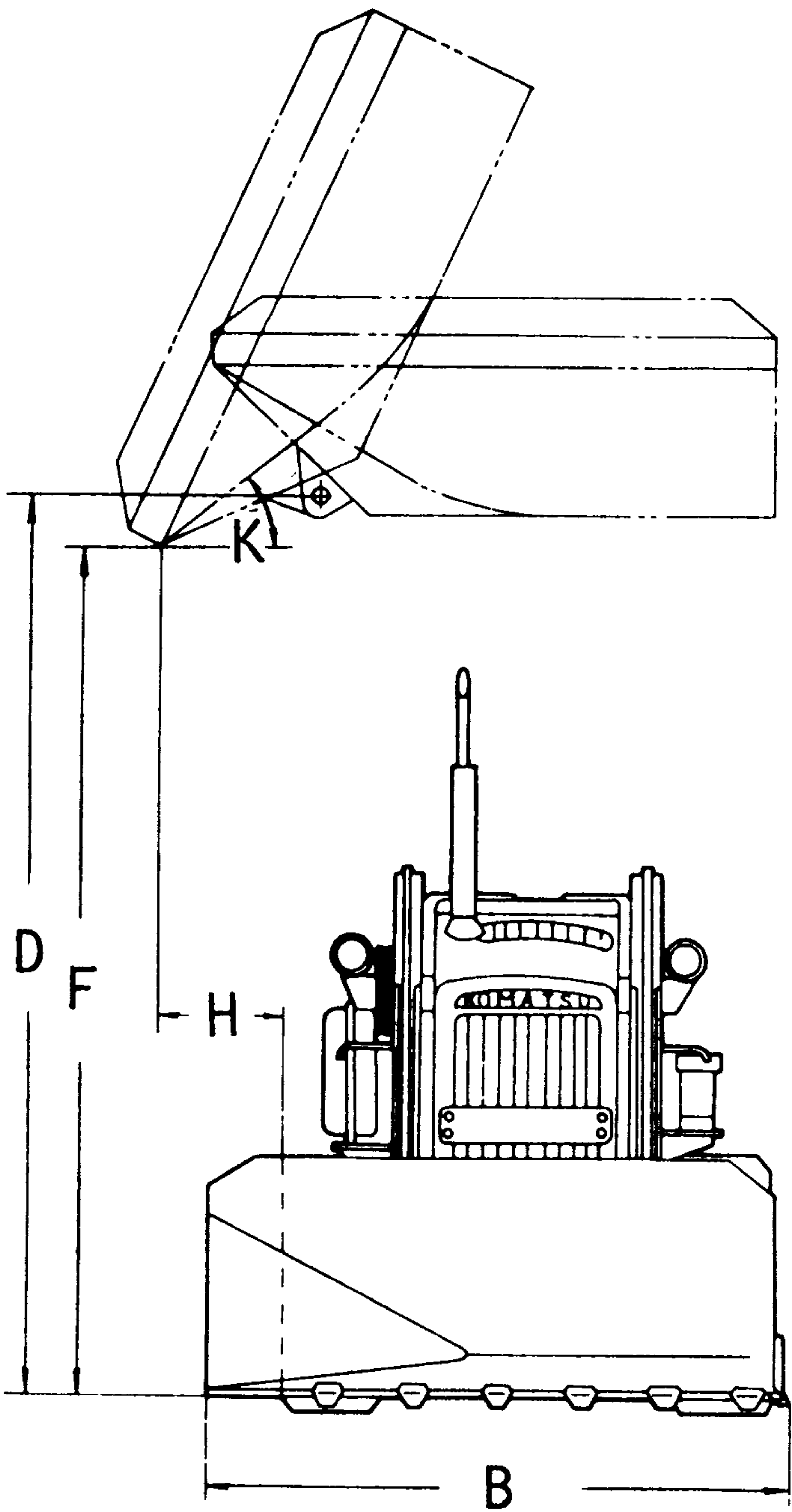
MULTI-PURPOSE BUCKET (with semi-double grouser shoe)

Item		Model	D31S-18	D41S-3	D53S-17	D57S-1
OPERATING WEIGHT		kg(lb)	7605 (16,770)	11730 (25,860)	14150 (31,200)	15600 (34,400)
A	OVERALL LENGTH	mm(ft.in)	4580 (15' )	5125 (16'10" )	5615 (18' 5" )	5700 (18' 8" )
B	OVERALL WIDTH	mm(ft.in)	1940 ( 6' 4" )	2115 ( 6'11" )	2135 ( 7' )	2295 ( 7' 6" )
BUCKET CAPACITY		m <sup>3</sup> (cu.yd)	0.8 (1.0)	1.2 (1.6)	1.4 (1.8)	1.6 (2.1)
BUCKET EQUIPMENT:						
Weight		kg(lb)	685 (1,510)	1105 (2,440)	1320 (2,910)	1210 (2,670)
Max. dumping angle		degree	50	50	50	50
Max.tiltback at ground		degree	44	45	45	45
C	Height to hinge pin	mm(ft.in)	3105 (10' 2" )	3285 (10' 9" )	3540 (11' 7" )	3660 (12' )
D	Dumping clearance	mm(ft.in)	2410 ( 7'11" )	2460 ( 8' 1" )	2620 ( 8' 7" )	2780 ( 9' 1" )
E	Bottom dumping clearance	mm(ft.in)	3055 (10' )	3220 (10' 7" )	3500 (11' 6" )	3595 (11'10" )
F	Dumping reach	mm(ft.in)	820 ( 2' 8" )	985 ( 3' 3" )	1140 ( 3' 9" )	1235 ( 4' 1" )
G	Bottom dumping reach	mm(ft.in)	710 ( 2' 4" )	875 ( 2'10" )	985 ( 3' 3" )	1065 ( 3' 6" )
H	Max.digging depth(10°)	mm(in)	365 (14.4)	425 (16.7)	435 (17.1)	400 (15.7)
Counter weight		kg(lb)	600 (1,320)	-	375 (830)	500 (1,100)

Item		Model	D60S-8	D65S-8	D66S-1	D75S-5
OPERATING WEIGHT		kg(lb)	17850 (39,360)	18150 (40,020)	19200 (42,340)	22490 (49,590)
A	OVERALL LENGTH	mm(ft.in)	5925 (19' 5" )	5925 (19' 5" )	6715 (22' )	6370 (20'11" )
B	OVERALL WIDTH	mm(ft.in)	2495 ( 8' 2" )	2495 ( 8' 2" )	2465 ( 8' 1" )	2500 ( 8' 2" )
BUCKET CAPACITY		m <sup>3</sup> (cu.yd)	1.8 (2.4)	1.8 (2.4)	1.8 (2.4)	2.2 (2.8)
BUCKET EQUIPMENT:						
Weight		kg(lb)	1490 (3,280)	1490 (3,280)	1650 (3,640)	2090 (4,610)
Max. dumping angle		degree	50	50	50	50
Max.tiltback at ground		degree	45	45	45	45
C	Height to hinge pin	mm(ft.in)	3545 (11' 8" )	3545 (11' 8" )	3925 (12'11" )	4055 (13' 4" )
D	Dumping clearance	mm(ft.in)	2630 ( 8' 8" )	2630 ( 8' 8" )	2940 ( 9' 8" )	3080 (10' 1" )
E	Bottom dumping clearance	mm(ft.in)	3440 (11' 3" )	3440 (11' 3" )	3870 (12' 8" )	3980 (13' 1" )
F	Dumping reach	mm(ft.in)	1330 ( 4' 4" )	1330 ( 4' 4" )	1090 ( 3' 7" )	1365 ( 4' 6" )
G	Bottom dumping reach	mm(ft.in)	1210 ( 4' )	1210 ( 4' )	930 ( 3' 1" )	1195 ( 3'11" )
H	Max.digging depth(10°)	mm(in)	440 (17.3)	440 (17.3)	445 (17.5)	430 (16.9)
Counter weight		kg(lb)	-	-	-	605 (1,330)

Side Dump  
Bucket

CRAWLER TYPE  
DOZER SHOVELS



Side-Dump  
Bucket

CRAWLER TYPE  
DOZER SHOVELS

SIDE-DUMP BUCKET (with semi-double grouser shoe)

Item		Model	D41S-3(R)(L)	D53S-17(R)(L)	D57S-1(R)(L)	D60S-8(R)(L)
OPERATING WEIGHT		kg(lb)	12020 (26,500)	14430 (31,820)	15920 (35,100)	17530 (38,650)
A	OVERALL LENGTH	mm(ft.in)	5220 (17' 1" )	5630 (18' 6" )	5845 (19' 2" )	5770 (18'11" )
B	OVERALL WIDTH	mm(ft.in)	2215 ( 7' 3" )	2320 ( 7' 7" )	2395 ( 7'10" )	2775 ( 9' 1" )
BUCKET EQUIPMENT:						
Bucket capacity		m <sup>3</sup> (cu.yd)	1.2 (1.6)	1.4 (1.8)	1.6 (2.1)	1.3 (1.7)
Weight		kg(lb)	1190 (2,620)	1470 (3,240)	1530 (3,370)	1570 (3,460)
Height to hinge pin:						
C	Front dump	mm(ft.in)	3285 (10' 9" )	3540 (11' 7" )	3660 (12' )	3545 (11' 8" )
D	Side dump	mm(ft.in)	3680 (12' 1" )	3860 (12' 8" )	3980 (13' 1" )	3715 (12' 2" )
Dumping clearance:						
E	Front dump	mm(ft.in)	2450 ( 8' )	2615 ( 8' 7" )	2735 ( 9' )	2745 ( 9' )
F	Side dump	mm(ft.in)	3440 (11' 3" )	3675 (12' 1" )	3805 (12' 6" )	3430 (11' 3" )
Dumping reach						
G	Front	mm(ft.in)	1175 ( 3'10" )	1200 ( 3'11" )	1340 ( 4' 5" )	1255 ( 4' 1" )
H	Side	mm(ft.in)	355 ( 1' 2" )	440 ( 1' 5" )	400 ( 1' 4" )	495 ( 1' 7" )
Max.tiltback at ground		degree	44	45	45	45
J	Max. dumping angle	degree	50	50	50	50
K	Max. side dump angle	degree	42	42	42	40
Max.digging depth(10°)		mm(in)	325 (13.0)	400 (15.7)	375 (14.8)	395 (15.6)
Counter weight		kg(lb)	525 (1,160)	375 (830)	500 (1,100)	-



Side-Dump  
Bucket

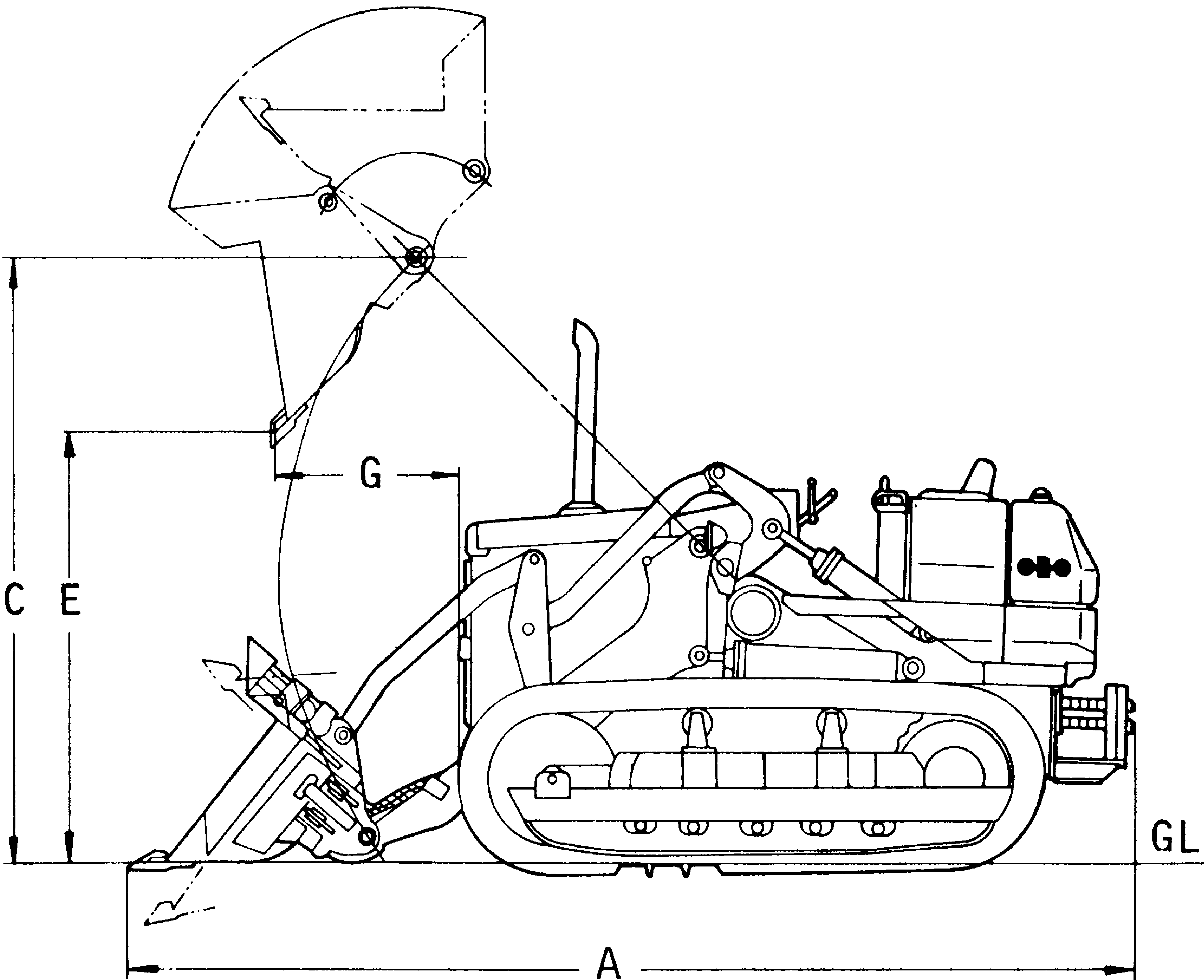
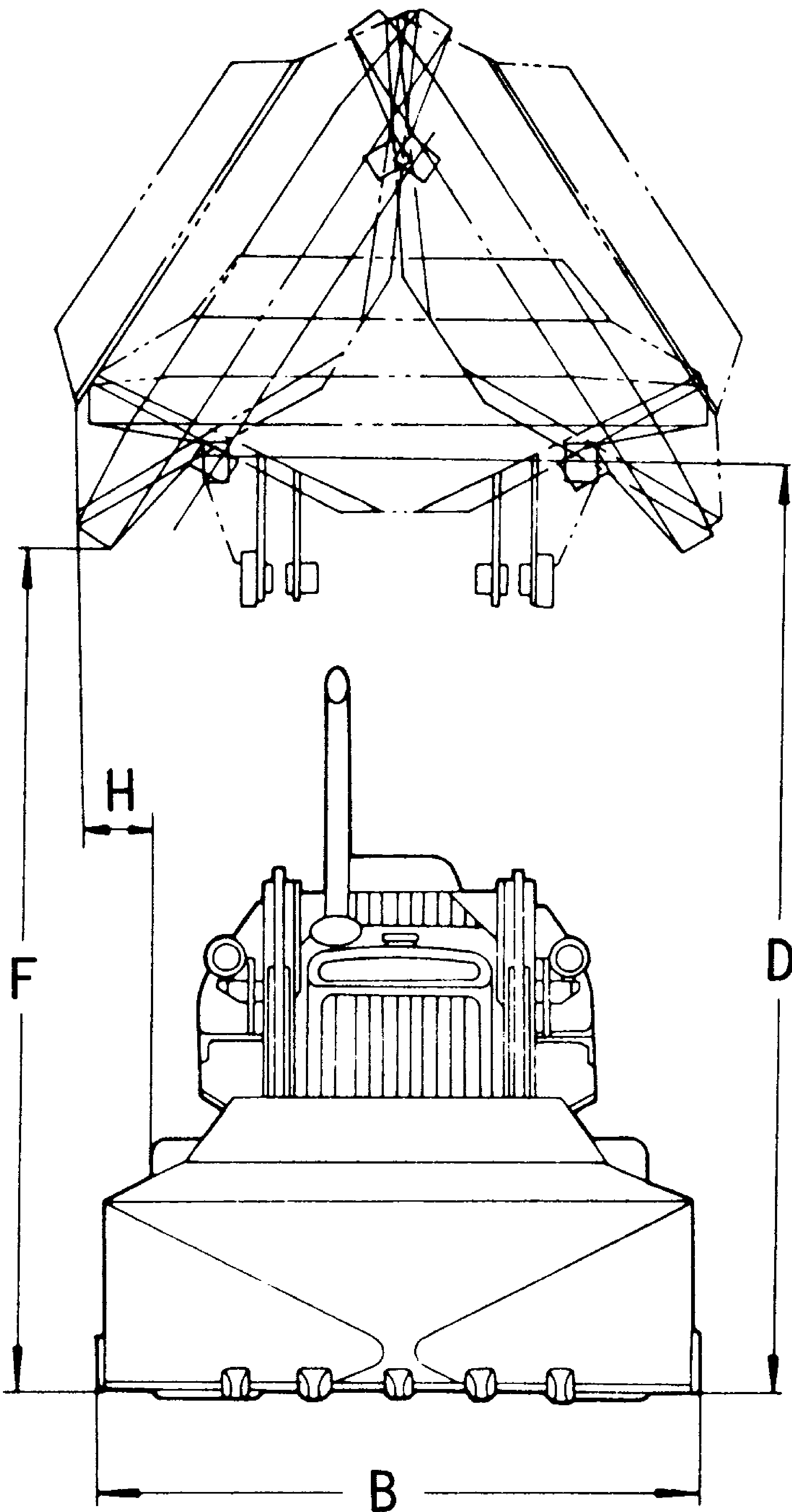
CRAWLER TYPE  
DOZER SHOVELS

SIDE-DUMP BUCKET (with semi-double grouser shoe)

Item		Model	D65S-8(R)(L)	D75S-5(R)(L)		
OPERATING WEIGHT		kg(lb)	17580 (38,760)	22580 (49,790)		
A	OVERALL LENGTH	mm(ft.in)	5770 (18'11" )	6355 (20'10" )		
B	OVERALL WIDTH	mm(ft.in)	2775 ( 9' 1" )	2900 ( 9' 6" )		
BUCKET EQUIPMENT:						
	Bucket capacity	m <sup>3</sup> (cu.yd)	1.3 (1.7)	2.0 (2.6)		
	Weight	kg(lb)	1570 (3,460)	2180 (4,810)		
	Height to hinge pin:					
C	Front dump	mm(ft.in)	3545 (11' 8" )	4055 (13' 4" )		
D	Side dump	mm(ft.in)	3715 (12' 2" )	4360 (14' 4" )		
	Dumping clearance:					
E	Front dump	mm(ft.in)	2745 ( 9' )	3095 (10' 2" )		
F	Side dump	mm(ft.in)	3430 (11' 3" )	4025 (13' 2" )		
	Dumping reach					
G	Front	mm(ft.in)	1255 ( 4' 1" )	1385 ( 4' 7" )		
H	Side	mm(ft.in)	495 ( 1' 7" )	510 ( 1' 8" )		
	Max.tiltback at ground	degree	45	45		
	Max. dumping angle	degree	50	50		
	Max. side dump angle	degree	40	45		
	Max.digging depth(10°)	mm(in)	395 (15.6)	405 (15.9)		
	Counter weight	kg(lb)	–	605 (1,330)		

Three-Way  
Bucket

CRAWLER TYPE  
DOZER SHOVELS



Three-Way  
Bucket

CRAWLER TYPE  
DOZER SHOVELS

THREE-WAY BUCKET (with semi-double grouser shoe)

Item		Model	D41S-3	D53S-17	D57S-1	D66S-1
OPERATING WEIGHT		kg(lb)	12200 (26,900)	15040 (33,160)	16190 (35,700)	20285 (44,730)
A	OVERALL LENGTH	mm(ft.in)	5240 (17' 2" )	5715 (18' 9" )	5880 (19' 4" )	7390 (24' 3" )
B	OVERALL WIDTH	mm(ft.in)	2360 ( 7'10" )	2500 ( 8' 2" )	2500 ( 8' 2" )	2570 ( 8' 5" )
BUCKET EQUIPMENT:						
Bucket capacity		m <sup>3</sup> (cu.yd)	1.2 (1.6)	1.4 (1.8)	1.6 (2.1)	1.9 (2.5)
Weight		kg(lb)	1370 (3,020)	1820 (4,010)	1790 (3,950)	2330 (5,140)
Height to hinge pin:						
C	Front dump	mm(ft.in)	3285 (10' 9" )	3540 (11' 3" )	3660 (12' )	3925 (12'11" )
D	Side dump	mm(ft.in)	3620 (11'11" )	3910 (12'10" )	4030 (13' 3" )	4305 (14' 1" )
Dumping clearance:						
E	Front dump at 45°	mm(ft.in)	2435 ( 8' )	2590 ( 8' 6" )	2710 ( 8'11" )	2680 ( 8'10" )
F	Side dump at 42°	mm(ft.in)	3440 (11' 3" )	3730 (12' 3" )	3840 (12' 7" )	4230 (13'11" )
Dumping reach						
G	Front at 45°	mm(ft.in)	1190 ( 3'11" )	1230 ( 4' )	1370 ( 4' 6" )	1360 ( 4' 6" )
H	Side at 42°	mm(ft.in)	355 ( 1' 2" )	450 ( 1' 6" )	400 ( 1' 4" )	360 ( 1' 2" )
Max.tiltback at ground		degree	44	41	45	45
Max. dumping angle		degree	50	50	50	50
Max. side dump angle		degree	42	42	42	42
Max.digging depth(10°)		mm(in)	330 (13.0)	410 (16.1)	380 (15.0)	490 (19.3)
Counter weight		kg(lb)	525 (1,160)	630 (1,390)	500 (1,100)	400 (880)



Production

CRAWLER TYPE  
DOZER SHOVELS

STANDARD PRODUCTION (m<sup>3</sup>/hr)

White area indicates average production

ESTIMATED CYCLE TIME		BUCKET SIZE ** (m <sup>3</sup> )												CYCLES PER HOUR
SEC.	MIN.	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.5	5.0		
24	0.40	120	180	240	300	360	420	480	540	600	675	750	150	
27	0.45	107	160	213	267	320	373	427	480	533	600	667	133	
30	0.50	96	144	192	240	288	336	384	432	480	540	600	120	
33	0.55	87	131	175	218	262	305	349	393	436	491	545	109	
36	0.60	80	120	160	200	240	280	320	360	400	450	500	100	
39	0.65	74	111	148	185	222	258	295	332	369	415	462	92	
42	0.70	69	103	137	171	206	240	274	309	343	386	429	86	
45	0.75	64	96	128	160	192	224	256	288	320	360	400	80	
48	0.80	60	90	120	150	180	210	240	270	300	338	375	75	

STANDARD PRODUCTION (cu.yd/hr)

White area indicates average production

ESTIMATED CYCLE TIME		BUCKET SIZE ** (cu.yd)												CYCLES PER HOUR
SEC.	MIN.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
24	0.40	150	225	300	375	450	525	600	675	750	825	900	150	
27	0.45	133	200	267	333	400	467	533	600	667	733	800	133	
30	0.50	120	180	240	300	360	420	480	540	600	660	720	120	
33	0.55	109	164	218	273	327	382	436	491	545	600	655	109	
36	0.60	100	150	200	250	300	350	400	450	500	550	600	100	
39	0.65	92	138	185	231	277	323	369	415	462	508	554	92	
42	0.70	86	129	171	214	257	300	343	386	429	471	514	86	
45	0.75	80	120	160	200	240	280	320	360	400	440	480	80	
48	0.80	75	113	150	188	225	263	300	338	375	413	450	75	

\* Actual production = (Standard production) × (Bucket factor) × (Job efficiency)

\*\* Bucket size: Heaped bucket capacity

Bucket factor (K)

Loading conditions	K
Easy loading	1.0 ~ 1.1
Average loading	0.95 ~ 1.0
Rather difficult loading	0.9 ~ 0.95
Difficult loading	0.85 ~ 0.9

Job efficiency (E)

Operating conditions	E
Good	0.83
Average	0.75
Rather poor	0.67
Poor	0.58