SM181
BED07E1-01

FORKLIFT TRUCK (DX20 SERIES)

FG50/60/70-7
FD50E/60E/70E-7
FD50/60/70/80-7

KOMATSU FORKLIFT USA

SHOP MANUAL

(DX20 SERIES)
FG50/60/70-7
FD50E/60E/70E-7
FD50/60/70/80-7

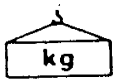
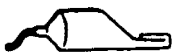
MACHINE MODEL	SERIAL NO.
FG50/60/70-7	40001 and up
FD50E/60E/70E-7	40001 and up
FD50/60/70/80-7	40001 and up

PRECAUTIONS WHEN PERFORMING THE SERVICE WORK

Always pay attention to "Safety" before starting any work — this is important.
Never attempt any work where danger to yourself or to other persons.
Whenever work requiring safety precautions are described in this manual, a flag mark ⚠ inserted, always make double sure that safety measures are taken.
Other unmarked work, should always be performed after studying and using your common sense to prevent accidents.

DESCRIPTION OF THE SYMBOLS

The symbols described below are used in this manual for convenience and better understanding.

Symbol	Item	Description
	Safety	Special safety precautions are needed to perform the work.
	Note	Special technical precautions are needed to perform the work.
	Tightening torque	Fastening parts that require specified tightening force when assembling.
	**Weight**	Weight of parts or systems
	**Coat**	Places to be coated with adhesives, etc. when assembling

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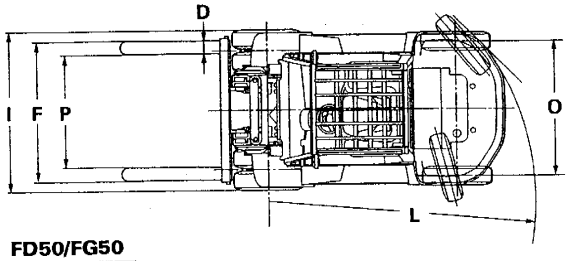
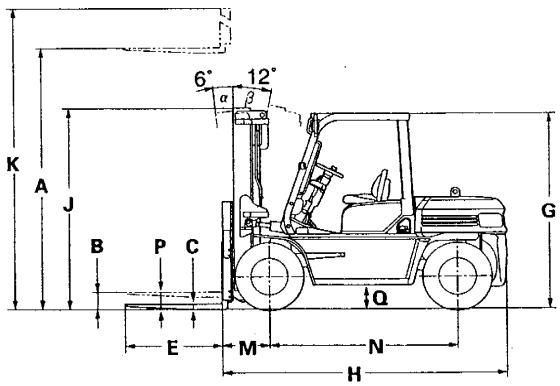
SPECIFICATIONS

STANDARD MODEL

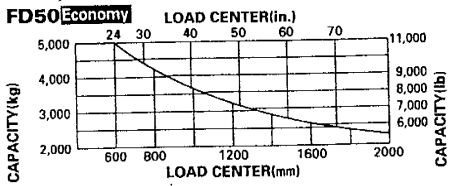
		Model	Manufacturer's Designation				FD50-7	FG50-7
Characteristics	1	Capacity	Capacity at 600mm (24") Load Center			kg (lb)	5000 (11,000)	
	2	Power Type	Diesel, Gasoline, LPG				Diesel	Gasoline
	3	Tyre Type	Solid, Pneumatic				Pneumatic	
	4	Operator Type	Driver Standing, Sitting				Sitting	
	5	Wheel (*=driven)	Number Front/Rear				2*/2	
Dimensions	6	Lift	Std. Fork Height / Free Lift			mm (in) A/B	3000(118) / 210(8.3)	
	7	Forks	Thickness × Width × Length			mm (in) C×D×E	55 × 150 × 1220 (2.2 × 5.9 × 48.0)	
	8	Forks Opening Range	Max. / Min.			mm (in) F	1700/300 (66.9/11.8)	
	9	Tilting Angle	Forward / Backward			degree α/β	6/12	
	10	Overall Dimensions	Height, Overhead Guard			mm (in) G	2440 (96.1)	
	11		Length to Face of Forks			mm (in) H	3470 (136.6)	
	12		Width			mm (in) I	1880 (74.0)	
	13		Height, Mast Lowered			mm (in) J	2500 (98.4)	
	14		Height, Mast Extended			mm (in) K	4350 (171.2)	
	15	Turning Radius	Outside			mm (in) L	3250 (127.9)	
	16	Load Distance	From Center of Front Axle			mm (in) M	570 (22.4)	
	17	Right Angle Stacking Aisle	Plus Load Length			mm (in)	5240 (206.3)	
Performance	18	Speeds	Travel	Forward & Reverse	Loaded	1st km/h (mph)	11.0 (6.8)	
	19					2st km/h (mph)	30.0 (18.6)	28.0 (17.4)
	20				Unloaded	1st km/h (mph)	12.0 (7.5)	
	21					1nd km/h (mph)	32.0 (19.9)	31.0 (19.3)
	22		Lifting Loaded / Unloaded			mm/s (fpm)	530/560 (104/110)	420/430 (83/85)
	23		Lowering Loaded / Unloaded			mm/s (fpm)	550/580 (108/114)	
	24	Max. Drawbar Pull				kN (lb)	61 (13,820)	55 (12.360)
	25	Grade ability				%	60	52
Weights	26	Service Weight				kg (lb)	7540 (16,620)	7340 (16,180)
	27	Axle Loading	Loaded Front / Rear			kg (lb)	11200/1340(24,690/2,950)	11110/1240(24,500/2,730)
	28		Unloaded Front / Rear			kg (lb)	3660/3880(8,070/8,550)	3560/3780(7,850/8,330)
Chassis & Wheels	29	Tyre Size	Front / Rear				300-15-18PR(I)/8.25-15-12PR(I)	
	30	Wheelbase				mm (in) M	2300 (90.5)	
	31	Tread	Front / Rear			mm (in) O	1580/1640 (62.2/64.6)	
	32	Ground clearance	Lowest Point			mm (in) P	225 (8.8)	
	33		Center of Frame			mm (in) Q	280 (11.0)	
	34	Brakes	Service / Parking				Hydraulic, Powered /Mechanical	
	35	Steering	Type				Power Steering	
	36	Battery	Voltage / Capacity 5-Hour Rating			V/Ah	24/56	12/48
Drive	37	Internal Combustion Engine	Make / Model				KOMATSU 6D102E	NISSAN TB42
	38		Rated Horsepower / RPM (SAE Gross)			kW (HP) @rpm	73 (100) @2250	66 (88) @2300
	39		Max. Torque / RPM (SAE Gross)			N.m (lb.ft) @rpm	353 (260) @1600	275 (203) @1900
	40		Number of Cylinders / Displacement			cm³ (cu.in)	6/5880 (359)	6/4169 (254)
	41		Cylinder Bore × Stroke			mm (in)	102×120 (4.0×4.7)	96×96 (3.8×3.8)
	42		Fuel Tank Capacity			Ltr (U.S.gal)	140 (37)	
	43		Air Cleaner				Cyclone	
	44	Clutch	Type				Torque Converter	
	45	Transmission	Type				TOROFLOW	
	46	Hydraulic	Max. Pressure / Tank Capacity			bar(psi) / Ltr(U.S.gal)	181 (2,630) / 70 (18)	





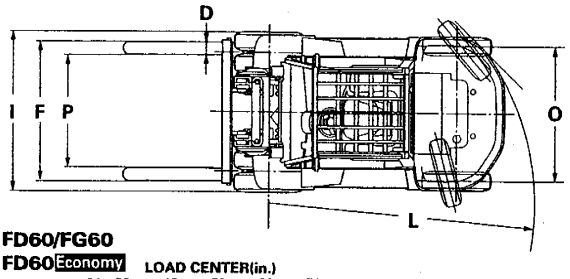
FD50/FG50

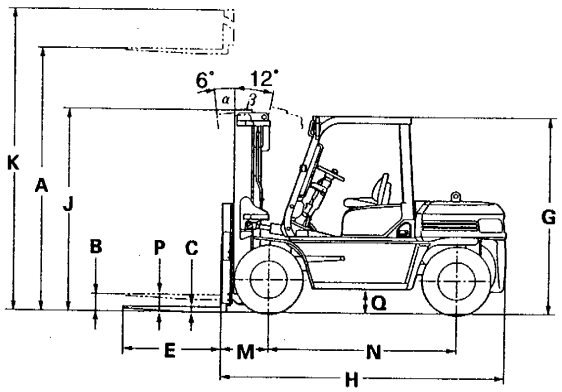
FD50 Economy



Capacities shown are for trucks equipped with 2-stage view mast up through 5000mm (197in.) maximum fork height, 1700mm(66.9in.) carriage, 1220mm(48in.) forks. Contact your distributor or dealer for capacity information with other equipment.

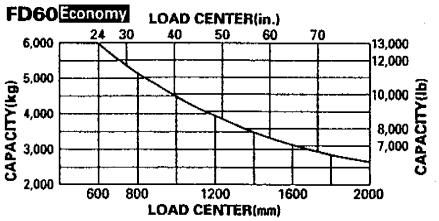
		Model	Manufacturer's Designation			FD60-7	FG60-7
Characteristics	1	Capacity	Capacity at 600mm (24") Load Center		kg (lb)	6000 (13,200)	
	2	Power Type	Diesel, Gasoline, LPG			Diesel	Gasoline
	3	Tyre Type	Solid, Pneumatic			Pneumatic	
	4	Operator Type	Driver Standing, Sitting			Sitting	
	5	Wheel (*=driven)	Number Front/Rear			4*/2	
Dimensions	6	Lift	Std. Fork Height / Free Lift	mm (in)	A/B	3000(118) / 215(8.5)	
	7	Forks	Thickness × Width × Length	mm (in)	C×D×E	60 × 150 × 1220 (2.4 × 5.9 × 48.0)	
	8	Forks Opening Range	Max. / Min.	mm (in)	F	1700/300 (66.9/11.8)	
	9	Tilting Angle	Forward / Backward	degree	α/β	6/12	
	10	Overall Dimensions	Height, Overhead Guard	mm (in)	G	2440 (96.1)	
	11		Length to Face of Forks	mm (in)	H	3475 (136.8)	
	12		Width	mm (in)	I	1960 (77.2)	
	13		Height, Mast Lowered	mm (in)	J	2500 (98.4)	
	14		Height, Mast Extended	mm (in)	K	4350 (171.2)	
	15	Turning Radius	Outside	mm (in)	L	3250 (127.9)	
	16	Load Distance	From Center of Front Axle	mm (in)	M	575 (22.6)	
	17	Right Angle Stacking Aisle	Plus Load Length	mm (in)		5245 (206.5)	
Performance	18	Speeds	Travel Forward & Reverse Loaded	1st km/h (mph)		11.0 (6.8)	
	19			2st km/h (mph)		30.0 (18.6)	28.0 (17.4)
	20			1st km/h (mph)		12.0 (7.5)	
	21		Unloaded	1nd km/h (mph)		32.0 (19.9)	31.0 (19.3)
	22		Lifting Loaded / Unloaded		mm/s (fpm)	500/560 (98/110)	420/430 (83/85)
	23		Lowering Loaded / Unloaded		mm/s (fpm)	550/580 (108/114)	
	24	Max. Drawbar Pull			kN (lb)	59 (13,270)	54 (12.130)
	25	Grade ability			%	47	44
Weights	26	Service Weight			kg (lb)	8360 (18,430)	8200 (18,080)
	27	Axle Loading	Loaded Front / Rear		kg (lb)	12790/1507(28,200/3,460)	12710/1500(28,020/3,310)
	28		Unloaded Front / Rear		kg (lb)	3730/4630(8,220/10,210)	3640/4560(8,020/10,050)
Chassis & Wheels	29	Tyre Size	Front / Rear			8.25-15-12PR(I)/8.25-15-12PR(I)	
	30	Wheelbase			mm (in) M	2300 (90.5)	
	31	Tread	Front / Rear		mm (in) O	1450/1640 (57.1/64.6)	
	32	Ground clearance	Lowest Point		mm (in) P	225 (8.8)	
	33		Center of Frame		mm (in) Q	285 (11.2)	
	34	Brakes	Service / Parking			Hydraulic, Powered /Mechanical	
	35	Steering	Type			Power Steering	
	36	Battery	Voltage / Capacity 5-Hour Rating		V/Ah	24/56	12/48
Drive	37	Internal Combustion Engine	Make / Model			KOMATSU 6D102E	NISSAN TB42
	38		Rated Horsepower / RPM (SAE Gross)		kW (HP) @rpm	73 (100) @2250	66 (88) @2300
	39		Max. Torque / RPM (SAE Gross)		N.m (lb.ft) @rpm	353 (260) @1600	275 (203) @1900
	40		Number of Cylinders / Displacement		cm³ (cu.in)	6/5880 (359)	6/4169 (254)
	41		Cylinder Bore × Stroke		mm (in)	102×120 (4.0×4.7)	96×96 (3.8×3.8)
	42		Fuel Tank Capacity		Ltr (U.S.gal)	140 (37)	
	43		Air Cleaner			Cyclone	
	44	Clutch	Type			Torque Converter	
	45	Transmission	Type			TORQFLOW	
	46	Hydraulic	Max. Pressure / Tank Capacity		bar(psi) / Ltr(U.S.gal)	181 (2,630) / 70 (18)	





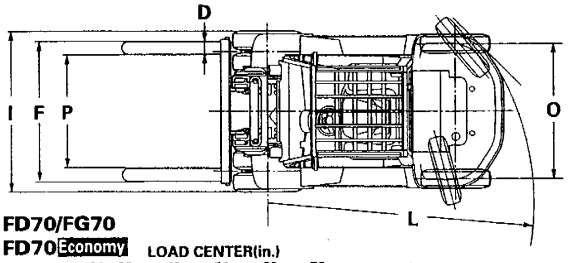
FD60/FG60

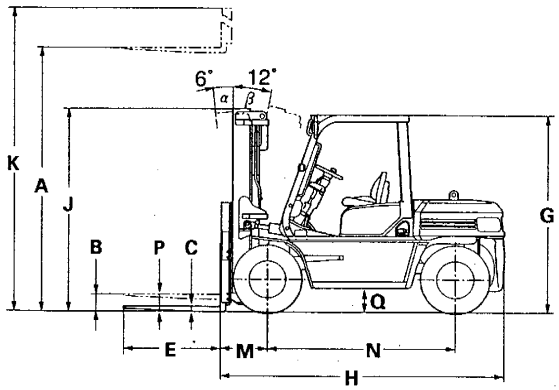
FD60 Economy



Capacities shown are for trucks equipped with 2-stage view mast up through 5500mm (217in.) maximum fork height, 1700mm(66.9in.) carriage, 1220mm(48in.) forks. Contact your distributor or dealer for capacity information with other equipment.

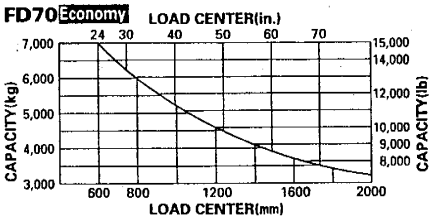
		Model	Manufacturer's Designation			FD70-7	FG70-7
Characteristics	1	Capacity	Capacity at 600mm (24") Load Center		kg (lb)	7000 (15,400)	
	2	Power Type	Diesel, Gasoline, LPG			Diesel	Gasoline
	3	Tyre Type	Solid, Pneumatic			Pneumatic	
	4	Operator Type	Driver Standing, Sitting			Sitting	
	5	Wheel (*=driven)	Number Front/Rear			4*/2	
Dimensions	6	Lift	Std. Fork Height / Free Lift	mm (in)	A/B	3000(118) / 220(8.7)	
	7	Forks	Thickness × Width × Length	mm (in)	C×D×E	65 × 150 × 1220 (2.5 × 5.9 × 48.0)	
	8	Forks Opening Range	Max. / Min.	mm (in)	F	1700/300 (66.9/11.8)	
	9	Tilting Angle	Foraward / Backward	degree	α/β	6/12	
	10	Overall Dimensions	Height, Overhead Guard	mm (in)	G	2440 (96.1)	
	11		Length to Face of Forks	mm (in)	H	3565 (140.3)	
	12		Width	mm (in)	I	1960 (77.2)	
	13		Height, Mast Lowered	mm (in)	J	2585 (101.8)	
	14		Height, Mast Extended	mm (in)	K	4350 (171.2)	
	15	Turning Radius	Outside	mm (in)	L	3350 (131.9)	
	16	Load Distance	From Center of Front Axle	mm (in)	M	585 (23.0)	
	17	Right Angle Stacking Aisle	Plus Load Length	mm (in)		5355 (210.8)	
Performance	18	Speeds	Travel, Forward & Reverse, Loaded	1st km/h (mph)		11.0 (6.8)	
	19			2st km/h (mph)		28.0 (17.4)	
	20		Unloaded	1st km/h (mph)		12.0 (7.5)	
	21			1nd km/h (mph)		31.0 (19.3)	
	22		Lifting Loaded / Unloaded	mm/s (fpm)		450/500 (89/98)	365/390 (72/77)
	23		Lowering Loaded / Unloaded	mm/s (fpm)		500/550 (98/108)	
	24	Max. Drawbar Pull		kN (lb)		59 (13,270)	55 (12,340)
	25	Grade ability		%		39	38
Weights	26	Service Weight		kg (lb)		9150 (20,170)	9000 (19,840)
	27	Axle Loading	Loaded Front / Rear	kg (lb)		14310/1840(31,550/4,060)	14230/1780(31,370/3,920)
	28		Unloaded Front / Rear	kg (lb)		3710/5440(8,180/11,990)	3620/5380(7,980/11,860)
Chassis & Wheels	29	Tyre Size	Front / Rear			8.25-15-14PR(I)/8.25-15-14PR(I)	
	30	Wheelbase		mm (in)	M	2500 (98.4)	
	31	Tread	Front / Rear	mm (in)	O	1540/1700 (60.6/66.9)	
	32	Ground clearance	Lowest Point	mm (in)	P	225 (8.8)	
	33		Center of Frame	mm (in)	Q	285 (11.2)	
	34	Brakes	Service / Parking			Hydraulic, Powered /Mechanical	
	35	Steering	Type			Power Steering	
	36	Battery	Voltage / Capacity 5-Hour Rating		V/Ah	24/56	12/48
Drive	37	Internal Combustion Engine	Make / Model			KOMATSU S6D102E	NISSAN TB42
	38		Rated Horsepower / RPM (SAE Gross)		kW (HP) @rpm	73 (100) @2250	66 (88) @2300
	39		Max. Torque / RPM (SAE Gross)		N.m (lb.ft) @rpm	353 (260) @1600	275 (203) @1900
	40		Number of Cylinders / Displacement		cm³ (cu.in)	6/5880 (359)	6/4169 (254)
	41		Cylinder Bore × Stroke		mm (in)	102×120 (4.0×4.7)	96×96 (3.8×3.8)
	42		Fuel Tank Capacity		Ltr (U.S.gal)	140 (37)	
	43		Air Cleaner			Cyclone	
	44	Clutch	Type			Torque Converter	
	45	Transmission	Type			TORQFLOW	
	46	Hydraulic	Max. Pressure / Tank Capacity		bar(psi) / Ltr(U.S.gal)	181 (2,630) / 70 (18)	





FD70/FG70

FD70 Economy



Capacities shown are for trucks equipped with 2-stage view mast up through 5000mm (197in.) maximum fork height, 1700mm(66.9in.) carriage, 1220mm(48in.) forks. Contact your distributor or dealer for capacity information with other equipment.