SM050
BEB12C1-01

FORKLIFT TRUCK

FG20/25/30-12
FG20H/25H/30H-12
FG20S/25S-12
FG20SH/25SH/30SH-12
FD20/25/30-12

KOMATSU FORKLIFT USA

SHOP MANUAL

FORKLIFT TRUCK

FG20/25/30-12
FD20H/25H/30H-12
FG20S/25S-12
FG20SH/25SH/30SH-12
FD20/25/30-12

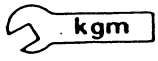
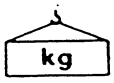
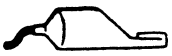
MACHINE MODEL	SERIAL NO.	ENGINE
FG20/25/30-12	10001A and up	H20-II
FG20H/25H/30H-12	10001A and up	H25
FG20S/25S-12	10001A and up	H20-II
FG20SH/25SH/30SH-12	10001A and up	H25
FD20/25/30-12	10001A and up	4D94E

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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01. GENERAL AND SPECIFICATIONS

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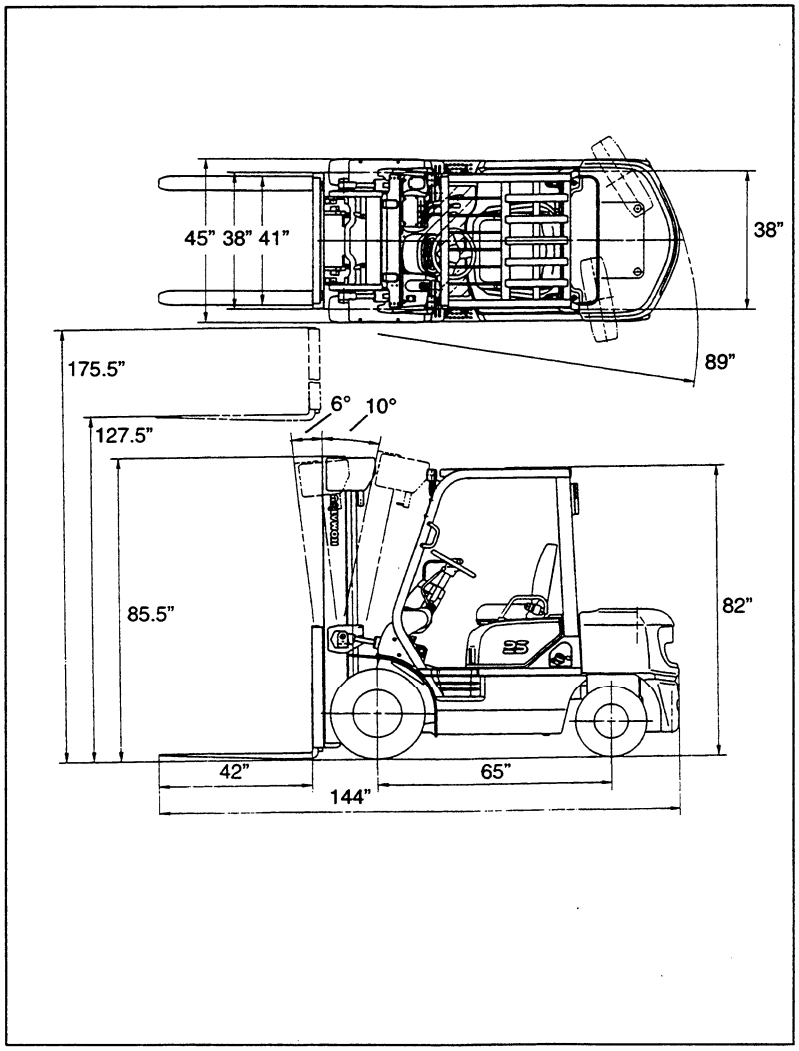
SPECIFICATIONS

FG20C-12 FG20HT-12 FD20T-12
FG20T-12 FG25HT-12 FD25T-12
FD25C-12 FG30HT-12 FD30T-12
FG25T-12
FG30C-12



GENERAL

Model		FG20C-12	FG20T-12	FG20HT-12	FD20T-12	FG25C-12	FG25T-12	FG25HT-12	FD25T-12	FG30C-12	FG30HT-12	FD30T-12
Capacity @ 24-in. (610 mm) load center	lbs (kg)	4,000 (1,814)				5,000 (2,268)				6,000 (2,722)		
Power plant type		Gasoline			Diesel	Gasoline			Diesel	Gasoline		Diesel
Number of wheels (front-wheel drive)		2/2										
Service weight	lbs (kg)	7,250 (3,290)	7,375 (3,345)		7,605 (3,450)	8,035 (3,645)	8,155 (3,700)		8,390 (3,805)	9,335 (4,235)	9,460 (4,290)	9,690 (4,395)

DIMENSIONS

Height to overhead guard	in. (mm)	81.5 (2,070)								82.3 (2,090)		
Lowered mast height (2 stage)	in. (mm)	85.0 (2,160)										
Extended mast height (83-in. 2-stage)	in. (mm)	175.5 (4,458)										
Maximum fork height (83-in 2-stage)	in. (mm)	127.5 (3,239)										
Free lift height (2-stage mast)	in. (mm)	5.7 (145)								6.0 (152)		
Length to face of forks (2-stage masts) [L]	in. (mm)	99.4 (2,525)				101.8 (2,585)				106.1 (2,695)		
Length to face of forks (3-stage masts) [L]	in. (mm)	99.4 (2,525)				101.8 (2,585)				106.2 (2,698)		
Overall width	in. (mm)	45.3 (1,150)								48.6 (1,235)		
Tilting angle, 2-stage masts (fwd./back.)	Degrees (°)	6/12										
Tilting angle, 3-stage masts (fwd./back.)	Degrees (°)	6/5										
Outside turning radius [OTR]	in. (mm)	86.2 (2,190)				89.0 (2,260)				93.7 (2,380)		
Load dist. from center axle (2-stage)	in. (mm)	17.9 (455)								18.7 (475)		
Load dist. from center axle (3-stage)	in. (mm)	17.9 (455)								18.8 (478)		
Right angle stacking aisle (2-stage masts)	in. (mm)	104.1 (2,645)+LL				106.9 (2,715)+LL				112.4 (2,855)+LL		
Right angle stacking aisle (3-stage masts)	in. (mm)	104.1 (2,645)+LL				106.9 (2,715)+LL				112.5 (2,858)+LL		

PERFORMANCE

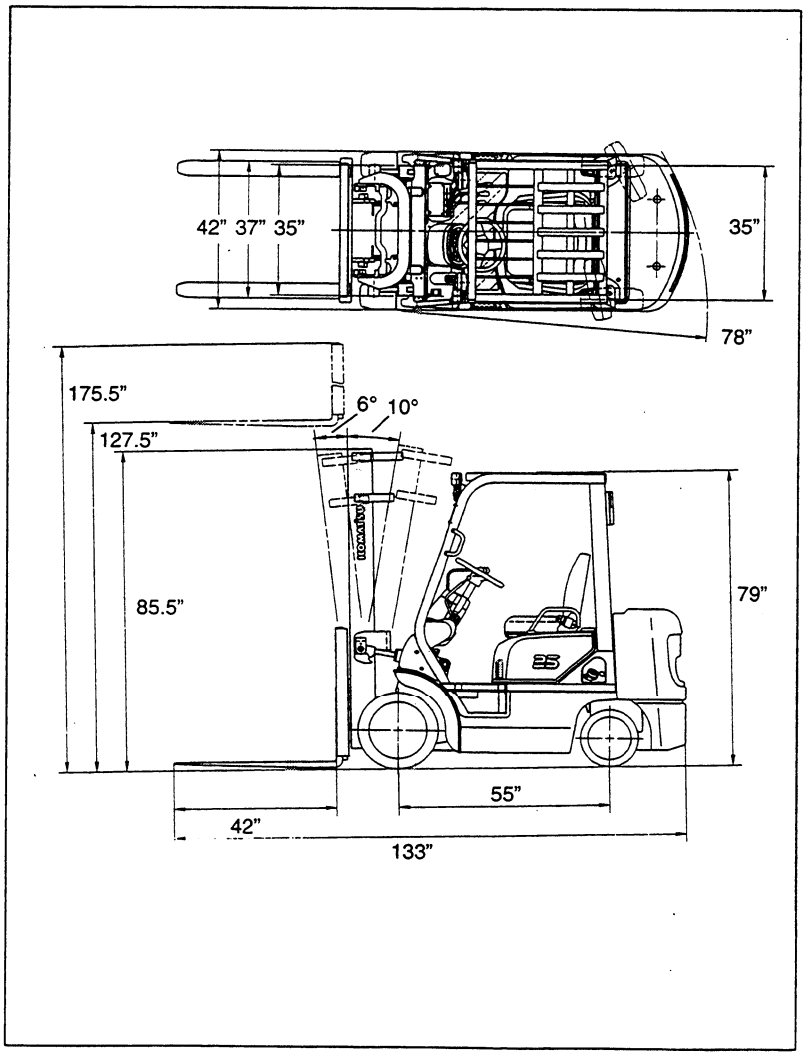
Max. travel speed, forward, loaded	mph (km/h)	10.3 (16.5)	10.9 (17.5)		10.0 (16.0)	10.3 (16.5)	10.9 (17.5)		10.0 (16.0)	11.3 (18.0)		10.9 (17.5)
Max. travel speed, forward, unloaded	mph (km/h)	11.6 (18.5)	11.9 (19.0)		11.3 (18.0)	11.6 (18.5)	11.9 (19.0)		11.3 (18.0)	12.2 (19.5)		11.9 (19.0)
Lifting speeds, loaded/unloaded (2-stage)	fpm (mm/s)	106/120 (540/610)		114/128 (580/650)	118/122 (600/620)	106/120 (540/610)		114/128 (580/650)	118/122 (600/620)	96/118 (490/600)	104/122 (530/620)	110/120 (560/610)
Lifting speeds, loaded/unloaded (3-stage)	fpm (mm/s)	100/114 (510/580)		108/122 (550/620)	116/118 (590/600)	100/114 (510/580)		108/122 (550/620)	116/118 (590/600)	96/114 (490/580)	102/118 (520/600)	110/116 (560/590)
Lowering speed, loaded/unloaded (2-stage)	fpm (mm/s)	98/79 (500/400)								96/83 (490/420)		
Lowering speed, loaded/unloaded (3-stage)	fpm (mm/s)	94/77 (480/390)										
Maximum drawbar pull	lbs. (kN)	3,460 (15.4)	3,970 (17.6)	4,740 (21.1)	4,520 (20.1)	3,460 (15.4)	3,970 (17.6)	4,740 (21.1)	4,520 (20.1)	3,000 (13.3)	4,630 (20.6)	4,190 (18.6)
Gradeability, loaded/unloaded	percent (%)	29/25	32/25	40/25	36 5/25	24/22	27/22	34/22	31/22	16/20	27/20	24/20

CHASSIS AND WHEELS

Tire size, front		7.00-12-12PR(I)								8 15-15-16PR(I)		
Tire size, rear		6.00-9-10PR(I)								6.50-10-10PR(I)		
Wheelbase		65.0 (1,650)										
Tread (center of tires), front/rear		38.0/37.8 (965/960)								39.6/38.0 (1,005/965)		
Ground clearance, under mast	in. (mm)	5.0 (127)										
Ground clearance, center of frame	in. (mm)	6.7 (170)								7.5 (190)		
Service brake type		Hydraulic										
Parking brake type		Mechanical										
Sterring type		F.H.P.S.										

POWER TRAIN

Engine model		H20-II	H25	4D94E	H20-II	H25	4D94E	H20-II	H25	4D94E
Rated power (SAE gross)	HP (kw) @ rpm	48.5 (36) @ 2450	60 (44.5) @ 2400	65 (48) @ 2450	48.5 (36) @ 2450	60 (44.5) @ 2400	65 (48) @ 2450	48.5 (36) @ 2450	60 (44.5) @ 2400	65 (48) @2450
Max. torque (SAE gross)	lb-ft (N-m) @ rpm	116 (157) @ 1600	141 (191) @ 1600	141 (191) @ 1800	116 (157) @ 1600	141-(191) @ 1600	141 (191) @ 1800	116 (157) @ 1600	141 (191) @ 1600	141 (191) @ 1800
No. of cylinder/displacement	cu.in. (cm^3)	4/121 (1982)	4/151 (2472)	4/170 (2775)	4/121 (1982)	4/151 (2472)	4/170 (2775)	4/121 (1982)	4/151 (2472)	4/170 (2775)
Cylinder bore x stroke	in. (mm)	3.4x3.3 (87.2x83)	3.6x3.7 (92x93)	3.7x3.9 (94x100)	3.4x3.3 (87.2x83)	3.6x3.7 (92x93)	3.7x3.9 (94x100)	4x3.3 (87.2x83)	3.6x3.7 (92x93)	3.7x3.9 (94x100)
Fuel tank capacity	U.S.gals. (liters)	15 (55)								
Air cleaner type		Cyclone								
Battery voltage/capacity (20-hour rating)	V/Ah	12/41		12/100	12/41		12/100	12/41		12/100
Clutch type		Dry clutch	Torque Converter		Dry clutch	Torque Converter		Dry clutch	Torque Converter	
Transmission type		Synchromesh	Toraflow		Synchromesh	Toraflow		Synchromesh	Toraflow	
Maxium hydraulic pressure	psi (bar)	2,650 (181)								
Hydraulic tank capacity	U.S.gals. (liters)	14 (52)								

LL=Load length

FG20ST-12 FG20SHT-12
FG25ST-12 FG25SHT-12
FG30SHT-12