CAT® Lift Trucks

Service Manual

MC/FC

Chassis, Mast & Options

EP16K	ETB6A-00011-up
EP18K	ETB6A-50001-up
EP20KC	ETB7A-00011-up

For use with EP16K-EP20KC
Controller Service Manual.

99759-61100

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GENERAL INFORMATION

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Technical Data

Truck Models				EP16K	EP18K	EP20KC
Class				1.6 ton	1.8 ton	2.0 ton
Load Capacity/Load Center			N (kgf)/mm [lbf/in.]	15690 (1600)/500 [3530/20]	17650 (1800)/500 [3970/20]	19610 (2000)/500 [4410/20]
Truck size	Length to Fork Face	A	mm (in.)	2064 (81.3)	2064 (81.3)	2178 (85.7)
	Width	B	mm (in.)	1070 (42.1)	1070 (42.1)	1130 (44.5)
	Height of Overhead Guard	C	mm (in.)	2040 (80.3)	2040 (80.3)	2040 (80.3)
Wheelbase		D	mm (in.)	1360 (53.5)	1360 (53.5)	1463 (57.6)
Service Weight (W/O Battery)			kg (lb)	1790 (3946)	1875 (4134)	1915 (4222)
Tread Front/Rear		E/F	mm (in.)	913/898 (35.9/35.4)	913/898 (35.9/35.4)	935/898 (36.8/35.4)
Tires Size	Front			18 × 7-8	18 × 7-8	200/50-10
	Rear			16 × 6-8	16 × 6-8	16 × 6-8
Turning Radius			mm (in.)	1810 (71.3)	1810 (71.3)	1910 (75.2)
Travel Speeds Unloaded/Loaded			km/h (mph)	16/14 (10/8.7)	16/14 (10/8.7)	16/14 (10/8.7)
Gradeability Loaded			%	19	17	15
Lift Speeds Unloaded/Loaded			m (in.)/sec	0.60/0.40 (23.6/15.7)	0.60/0.39 (23.6/15.4)	0.60/0.38 (23.6/15.0)
Lowering Speed Unloaded/Loaded			m (in.)/sec	0.50/0.52 (19.7/20.5)	0.50/0.52 (19.7/20.5)	0.50/0.52 (19.7/20.5)
Battery Voltage			V	48	48	48
Battery Rated Capacity (5 hrs.) MAX			Ah	600	600	720
Battery Compartment Size			mm (in.)	1006 × 521 × 650 (39.6 × 20.5 × 25.6)	1006 × 624 × 650 (39.6 × 24.6 × 25.6)	1006 × 624 × 650 (39.6 × 24.6 × 25.6)
Battery Weight			kg (lb)	865 (1907)	865 (1907)	1000 (2205)
Tilt Angle (forwards-backwards)				6°-7°	6°-7°	6°-7°
Drive Motor, 60 min rating			kW	2 × 4.5	2 × 4.5	2 × 4.5
Hydraulic Motor (15% duty)			kW	11.5	11.5	11.5
Steering Motor, 60 min rating			kW	0.54	0.54	0.54
Drive Motor Control Method				IGBT CHOPPER	IGBT CHOPPER	IGBT CHOPPER
Hydraulic Motor Control Method				IGBT CHOPPER	IGBT CHOPPER	IGBT CHOPPER

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Conditions in the machine	Check item	What to check	Remedy
Key switch OFF Emergency switch ON	Hydraulic line	Hoses, pipes and connectors for damage and sign of leak.	Repair leaking or damaged parts.
	Hydraulic devices	Check control valve and hydraulic cylinders for damage and oil leaks.	Repair damaged or leaking parts, if any.
	Electrical connectors and wires	Check connectors for tightness, burns and breakage; check wires for insulator stripping and signs of rubbing.	Repair.
Key switch ON Emergency switch OFF	System check lamp	Check the lamp goes ON and OFF properly; if not, check its bulb.	Replace lamp bulb if blown.
	LED indicator (red) in the controller	Be sure that red LEDs go ON and OFF correctly.	Proper functioning of LED indicator is essential to troubleshooting.
	Hydraulic devices	With your hands kept off control levers, see if solenoid valves and hydraulic pump are making any abnormal sound.	Refer to the sections dealing with control valve and hydraulic pump, respectively.
		Operate control lever to see if any abnormal sound, indicative of flow throttling, comes from control solenoid valve or from any other solenoid valve.	(Proper function of solenoid valves is essential to troubleshooting.)
	Work attachments	Check each work attachment for the following: (a) Does it work properly? (b) Does it "inch" properly? (c) Does mast go down with proper speed?	See "5. Trouble-shooting guide for solenoid control valves" on page 2-35.

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