

KOMATSU

SHOP MANUAL

ELECTRIC LIFT TRUCK

FB10EX/14EX/15EX/18EX-11

FB15EXG/18EXG-11

SERIAL No.
807001 and up

FB20EX/25EX-11

FB20EXG/25EXG-11

SERIAL No.
814001 and up

FB30-11

SERIAL No.
814001 and up

SHOP MANUAL

FB10EX/18EX-11, FB20EX/25EX-11, FB30-11

Komatsu Utility Co., Ltd.
FORKLIFT COMPANY

2-4-1 Shiba-koen, Minato-ku, Tokyo105-0011, Japan

KOMATSU FORKLIFT

KOMATSU

SHOP MANUAL

ELECTRIC LIFT TRUCK

FB10EX/14EX/15EX/18EX-11

FB15EXG/18EXG-11

SERIAL No.
807001 and up

FB20EX/25EX-11

FB20EXG/25EXG-11

SERIAL No.
814001 and up

FB30-11

SERIAL No.
814001 and up

SECTION INDEX

10. GENERAL AND SPECIFICATIONS

20. TESTING AND ADJUSTING

30. REMOVAL AND INSTALLATION

40. DISASSEMBLY AND ASSEMBLY

50. MAINTENANCE STANDARD

60. STRUCTURE AND FUNCTION

70. TROUBLESHOOTING

80. CRITERIA FOR YEARLY INSPECTION

FOREWORD

For a machine and its components to maintain their performance for a long time, it is necessary to carry out appropriate operation, preventive maintenance, troubleshooting, and service to prevent failures or problems before they occur.

Of these operations, this shop manual gives information mainly on operations carried out at a repair shop. These include an outline needed for service and maintenance operations, together with details of the structure and function, inspection and maintenance, installation and removal, disassembly and assembly, maintenance standards, troubleshooting, and periodic inspection and adjustment of components for the machine. The units given for tightening torques in this manual use the SI units as the standard, so a conversion table is given at the end of the section.

This shop manual has been prepared with the target of making materials that will help you to gain proper knowledge of the product, its structure and function, and proper methods for maintenance, to use proper judgement and remedies when there is a failure or problem with the machine, and to improve the quality of maintenance.

Always be sure that you fully understand the contents of this manual together with the Operation and Maintenance Manual, and make full use of it when handling the machine.

In this manual, for simplification, the weight categories of the machine may be used instead of the model name.

Weight category	Model name
1 ton truck	FB10EX
1.35 ton truck	FB14EX
1.5 ton truck	FB15EX / 15EXG
1.75 ton truck	FB18EX / 18EXG
2 ton truck	FB20EX / 20EXG
2.5 ton truck	FB25EX / 25EXG
3 ton truck	FB30

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.

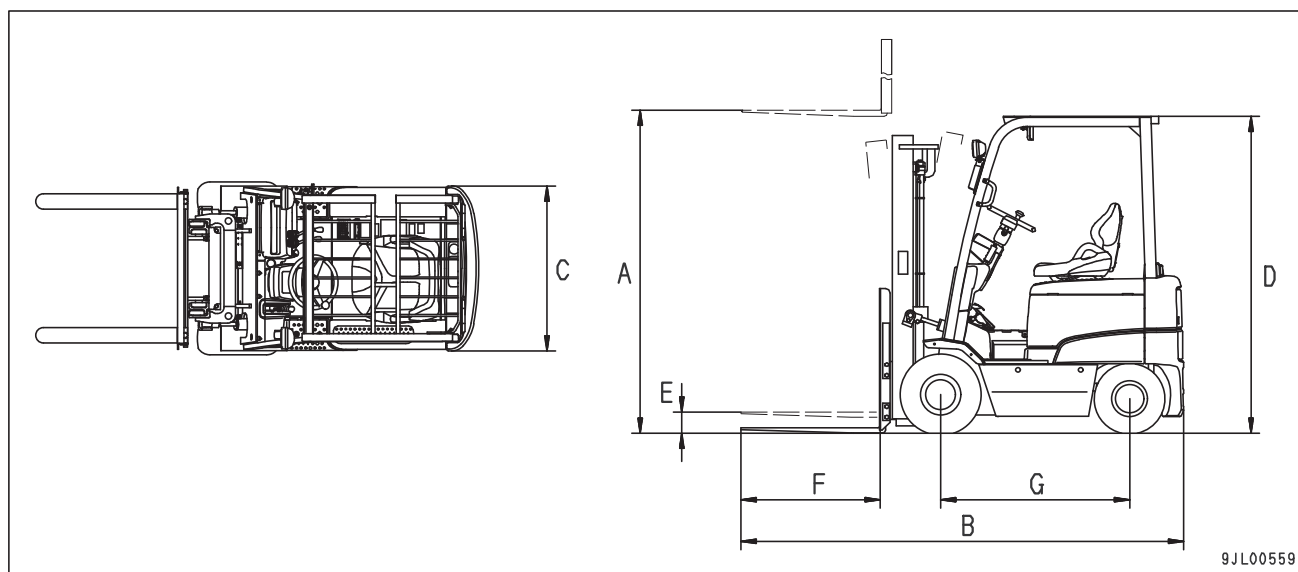
10. GENERAL AND SPECIFICATIONS

Outside view and specifications	10- 2
Periodic replacement of consumable parts . . .	10- 5
Safety items for maintenance.	10- 6
Standard tightening torque for bolts	10-12
Standard tightening torque for pipe joints	10-13
How to use loctite	10-14
Conversion table	10-15

OUTSIDE VIEW AND SPECIFICATIONS

FB10EX-11 – FB18EX-11

Item		Unit	FB10EX-11	FB14EX-11	FB15EX-11	FB18EX-11	
• Performance							
Rated capacity		kg	1000	1350	1500	1750	
Load center		mm	500	500	500	500	
Std. mast lift height	A	mm	3000	3000	3000	3000	
Lifting speed (loaded)		mm/s	360	350	340	340	
Travel speed (unloaded)		km/h	17	17	17	17	
Max. gradeability (loaded)		% (degree)	22.0 (12.5)	20.0 (11.5)	19.0 (11.0)	17.0 (9.5)	
• Dimensions, weight							
Overall length (with std. forks)		B	mm	2775	2930	2930	2965
Overall width (at tire, single)		C	mm	1070	1070	1115	1115
Overall height	Mast lowered		mm	1970	1970	1970	1970
	Overhead guard	D	mm	2095	2095	2095	2095
Free lift (overall mast height)		E	mm	135	140	140	140
Fork length		F	mm	770	920	920	920
Wheelbase		G	mm	1250	1250	1250	1250
Service weight (with standard battery)		kg	2510	2715	2905	3080	
• Motor output							
Drive		kw/h	AC 7.3	AC 7.3	AC 7.3	AC 7.3	
Pump		kw/5min	DC 9.0	DC 9.0	DC 9.0	DC 9.0	
PS		kw/h	DC 0.4	DC 0.4	DC 0.4	DC 0.4	
• Tire size							
Front tires		—	6.00-9-10PR	6.00-9-10PR	21x8-9-14PR	21x8-9-14PR	
Rear tires		—	5.00-8-8PR	5.00-8-8PR	5.00-8-8PR	5.00-8-10PR	



Item		Unit	FB15EXG-11	FB18EXG-11
• Performance				
Rated capacity		kg	1500	1750
Load center		mm	500	500
Std. mast lift height	A	mm	3000	3000
Lifting speed (loaded)		mm/s	340	340
Travel speed (unloaded)		km/h	17	17
Max. gradeability (loaded)		% (degree)	19.0 (11.0)	17.0 (9.5)
• Dimensions, weight				
Overall length (with std. forks)		B	mm	3150
Overall width (at tire, single)		C	mm	1115
Overall height	Mast lowered		mm	1970
	Overhead guard	D	mm	2095
Free lift (overall mast height)		E	mm	140
Fork length		F	mm	920
Wheelbase		G	mm	1470
Service weight (with standard battery)		kg	3105	3305
• Motor output				
Drive		kw/h	AC 7.3	AC 7.3
Pump		kw/5min	DC 9.0	DC 9.0
PS		kw/h	DC 0.4	DC 0.4
• Tire size				
Front tires		—	21x8-9-14PR	21x8-9-14PR
Rear tires		—	5.00-8-8PR	5.00-8-10PR

