

SHOP MANUAL

FD150/180/200Z-6 **FD200/250Z-6**

Machine Model

FD150/180/200Z-6

FD200/250Z-6

Serial No.

M180 – 2301 and up

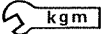
M181 – 3301 and up

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.

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
1.5 t on truck	FD150-6
1.8 t on truck	FD180-6
2 t on truck	FD200Z-6
2 t on truck	FD200-6
2.5 t on truck	FD250Z-6

SECTION INDEX

- 00. FOREWORD
- 10. GENERAL AND SPECIFICATIONS
- 20. TESTING AND ADJUSTING
- 30. REMOVAL AND INSTALLATION
- 40. DISASSEMBLY AND ASSEMBLY
- 50. MAINTENANCE STANDARD
- 60. STRUCTURE AND FUNCTION
- 70. CRITERIA FOR YEARLY INSPECTION
- 80. CONVERSION TABLE

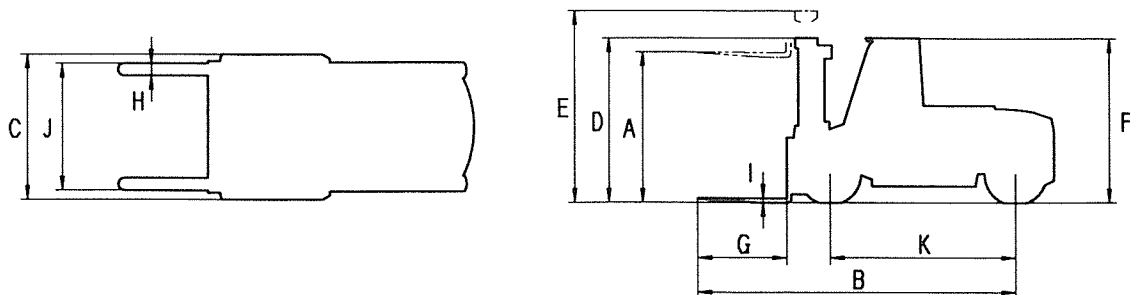
10. GENERAL AND SPECIFICATIONS

Specifications	10- 2
Periodic replacement of consumable parts ..	10- 5
Safety items for maintenance	10- 6
Standard tightening torque for bolts	10-14
Standard tightening torque for pipe joints ...	10-15

SPECIFICATIONS

Item			Unit	FD150-6	FD180-6	FD200Z-6	FD200-6	FD250Z-6
• Performance								
Capacity			kgf (lb)	15000 (33000)	18000 (40000)	20000 (44000)	20000 (44000)	25000 (55000)
Load center			mm (in)	900 (36)	900 (36)	900 (36)	1220 (48)	1220 (48)
Max. lifting height			A mm (in)	3000 (118)	3000 (118)	3000 (118)	3000 (118)	3000 (118)
Tilting angle (forward/backward)			degree	6/12	6/12	6/12	6/12	6/12
Lifting speed (with load)			mm/s(in/s)	360 (14.2)	310 (12.2)	270 (10.6)	300 (11.8)	270 (10.6)
Travel speed 1st, 2nd, 3rd, 4th (forward and reverse)			km/h(MPH)	7.0/13.0/22.0/29.0 (4.3/8.1/13.7/18.0)	7.0/13.0/22.0/29.0 (4.3/8.1/13.7/18.0)	7.0/13.0/22.0/28.0 (4.3/8.1/13.7/17.4)	10.0/17.0/28.0/34.0 (6.2/10.6/17.4/21.1)	10.0/17.0/28.0/34.0 (6.2/10.6/17.4/21.1)
Gradeability (at 1.6 km/h)			degree	15.5	12.5	11.0	13.3	11.4
Turning radius			mm (in)	5000 (196.9)	5000 (196.9)	5000 (196.9)	5850 (230.3)	5850 (230.3)
• Dimensions, weight								
Overall length			B mm (in)	7145 (281.3)	7205 (283.7)	7205 (283.7)	8690 (342.1)	8695 (342.3)
Overall width			C mm (in)	2985 (117.5)	3015 (118.7)	3095 (121.9)	3095 (121.9)	3095 (121.9)
Overall height mast lowered, extended, chassis			D,E,F mm (in)	3300,4790,3295 (129.9, 188.6, 129.7)	3600,5090,3325 (141.7,200.4,130.9)	3640,5130,3360 (143.3,202.0,132.3)	3800,5290,3360 (149.6,208.3,132.3)	3800,5290,3360 (149.6,208.3,132.3)
Fork length x width x thickness			GxHxI mm (in)	1820x250x90 (71.7x9.8x3.5)	1820x270x95 (71.7x10.6x3.7)	1820x280x95 (71.7x11.0x3.7)	2420x290x105 (95.2x11.4x4.1)	2420x310x105 (95.2x12.2x4.1)
Fork spread	Standard	RJ	mm (in)	890 – 2500 (35.0 – 98.4)	930 – 2500 (36.6 – 98.4)	950 – 2500 (37.4 – 98.4)	970 – 2500 (38.2 – 98.4)	1010 – 2500 (39.8 – 98.4)
	Side shift type fork mover			910 – 2700 (35.8 – 106.3)	930 – 2720 (36.6 – 107.1)	940 – 2730 (37.0 – 107.5)	950 – 2740 (37.4 – 107.9)	—
Wheelbase			K mm (in)	3700 (145.7)	3700 (145.7)	3700 (145.7)	4400 (173.2)	4400 (173.2)
Tread (front/rear)			mm (in)	2230/2305 (87.8/90.7)	2230/2305 (87.8/90.7)	2230/2265 (87.8/89.2)	2230/2265 (87.8/89.2)	2230/2265 (87.8/89.2)
• Engine								
Type			—	ISUZU 6BG1-T	ISUZU 6BG1-T	ISUZU 6BG1-T	Cummins 6CT8.3	Cummins 6CT8.3
Piston displacement			cc (cu.in)	6494 (396)	6494 (396)	6494 (396)	8267 (504)	8267 (504)
Flywheel horsepower			kW (HP)/rpm	110 (148)/2200	110 (148)/2200	110 (148)/2200	154 (207)/2200	154 (207)/2200
Fuel tank capacity			ℓ (US gal)	400 (106)	400 (106)	400 (106)	500 (132)	600 (159)
• Tires								
Front tires			—	12.00-24-16PR(I)	13.00-24-18PR(I)	14.00-24-20PR(I)	14.00-24-20PR(I)	12.00-24-24PR(I)
Rear tires			—	12.00-24-16PR(I)	13.00-24-18PR(I)	14.00-24-20PR(I)	14.00-24-20PR(I)	12.00-24-24PR(I)

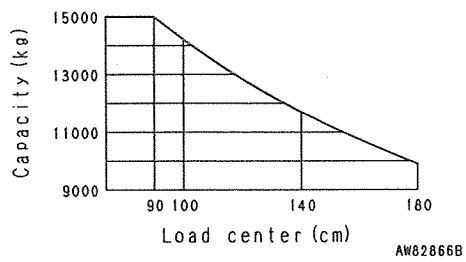
DIMENSION CHART



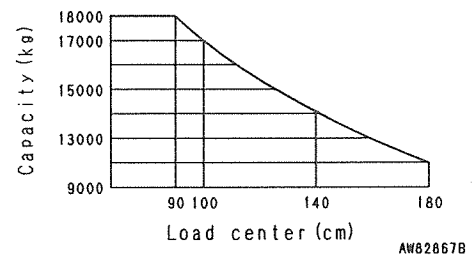
AW828640

CAPACITY CHART Fork specification

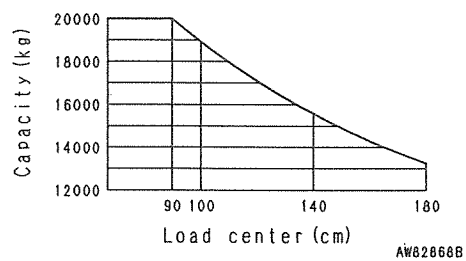
• FD150-6



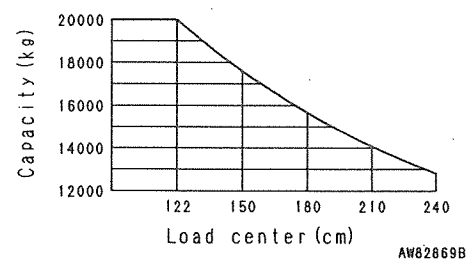
• FD180-6



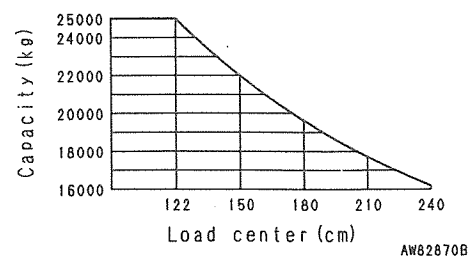
• FD200Z-6



• FD200-6

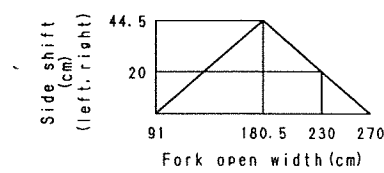
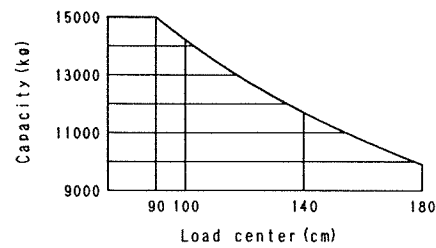


• FD250Z-6



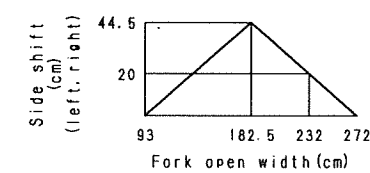
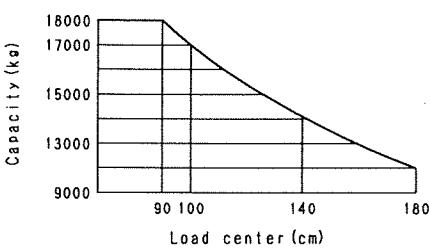
Side shift type fork mover specification

• FD150-6



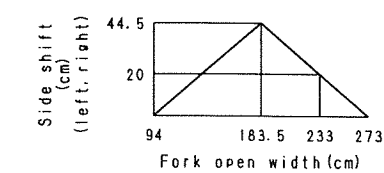
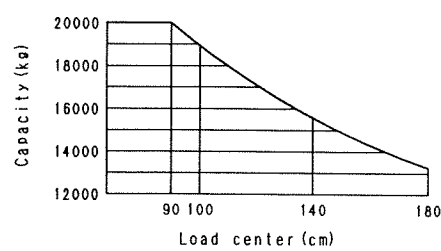
AW82871B

• FD180-6



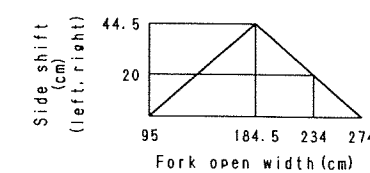
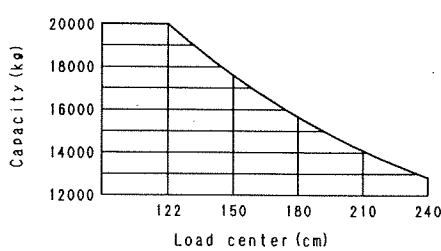
AW82872B

• FD200Z-6



AW82873B

• FD200-6



AW82874B