

*Ready to Perform  
To Your Applications*



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FMIT0150

(11/18)



PRESENTED BY :



**GRENDIA LX**

*Diesel Counterbalanced Trucks 10.0-15.0 ton*

Note: Performance specifications may vary depending on standard manufacturing tolerances, vehicle condition, types of tyres, floor or surface conditions, applications or operating environment. Trucks may be shown with non-standard options. Specific performance requirements and locally available configurations should be discussed with your Mitsubishi forklift truck dealers. Mitsubishi Forklift Trucks follows a policy of continual product improvement. For this reason, some materials, options and specifications could change without notice.

# Mitsubishi GRENDIA LX

FD100NM1-150ANM1 Series Forklift Trucks

**TECHNOLOGY WITH THE POWER**

Available in capacities from 10 to 15 tons, heavy duty diesel counterbalanced Mitsubishi forklift trucks are as strong as they are reliable... and built to deliver high performance in every kind of environment.

The four model range matches modern design with proven and tested technology, excellent engineering with local back-up, to optimize your productivity. Driver friendly, they also offer smooth lifting, excellent all-round visibility and high levels of driver comfort.



**FD150ANM1**

**TO DELIVER**



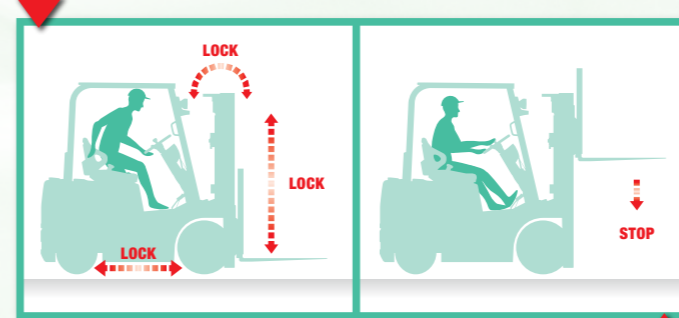
## INTEGRATED PRESENCE SYSTEM - "IPS"

Grendia LX is fitted with Mitsubishi's IPS, an integrated active safety system designed to improve vehicle safety by actively detecting problems, hence eliminating accidents. It does not only ensure safety during vehicle operation but also prevents errors when the operator is not seated, protecting both the operator and the workplace from potential accidents.

## HYDRAULIC AND TRAVEL INTERLOCK

Grendia LX forklift trucks are equipped with hydraulic and travel interlock protection device that is linked to the operator's seat. If the operator is not seated, the hydraulic and the movement of the vehicle itself, are automatically deactivated in order to prevent injury or damage to property.

\* Note that brakes are not applied in travel interlocking, so trucks can still move on slopes due to gravity.



## LIFT LOCK

The forks on the Mitsubishi Grendia LX are automatically locked when the ignition is switched off, so they remain in position even if the lift lever is accidentally bumped or moved.

## WIDE HIGH-GRIP STEPS

Ample foot space and grip to ensure operator does not slip. Not only are the side steps designed to be wide enough for standing comfortably, the step heights are also aligned ergonomically so that operators can walk up without the need to overstretch their legs. The anti-slip design grips the operator firmly with every step taken.

This ensures that operators are kept safe both before and after the truck operation.

## PARKING BRAKE ALARM

Buzzer will sound off if parking lever is not engaged when key switch is off. Human tends to forget things and applying the parking brake is probably one of them. That is why the Grendia LX is equipped with an audible alarm that hums off to remind operators if the parking brake lever is not pulled.



## OPERATOR SENSING SEAT WITH SEATBELT

The Grendia LX seat is not just comfortable with ample cushioning and suspension, but also equipped with an operator sensing device to constantly detect the operator. In the case that the operator is not detected, the hydraulic and travel interlock will activate to prevent accidents. The seat is also equipped with a seat belt that triggers a warning lamp whenever it is not fastened.

# PERFORMANCE, RELIABILITY & COMFORT

## EASY OPERATION. DRIVER COMFORT

These heavyweight trucks deliver all the productivity and reliability you would expect from a Mitsubishi forklift trucks - in a rugged, extremely powerful package. And although they are tough in action, they are gentle on the driver and the environment. Low noise, effortless hydraulic control and refined ergonomics make driving pleasure, while emissions have been minimized to meet the strict regulations.

## VISIBILITY WITH STRENGTH

Visibility is one of the important factors that affects performance.

Operators who cannot see the loads clearly tend to operate slower and also are more prone to accidents. Usually, the strength of the mast, carriage and overhead guard might be compromised as slimmer or a smaller design is used to increase the visibility.

At Mitsubishi forklift trucks, the mast, carriage and overhead guard are designed with Finite Element Analysis (FEA) computer program which helps design engineers to stretch the components as slim as it can be but at the same time, maintain minimum stress points. When a component is experiencing as little stress as it can be, it will be able to withstand much heavier load and impacts without failing.



## PERFORMANCE AND RELIABILITY

Performance and reliability is what every machinery should have and the Grendia LX is designed just as such.

Using the reliable and robust 6D16 engine assisted with a turbo charger, the truck can reach a top speed of 30km/hr. Its automatic 3 gears shift design ensures that the truck always starts off at the first gear with high torque and finishes at the third gear with good power and speed.

To control such great power and momentum, the brake application is vacuum assisted so that operator can easily slow down or stop the truck. Steering is done effortlessly through a full hydrostatic steering design where operator can easily steer tight corners even in a stationary position.



## COMFORT

It is important to always keep the operator comfortable, so that the work does not get hindered.

Grendia LX starts off by having a quick release steering column for easy entry and exit. The seat is well cushioned, and the contoured back support allows the operator to sit nicely in place. Adjustable features allow operator to move the seat into the most suited position for easy operation. The digital meter panel is placed right behind the steering wheel so that operator may see it without straining the neck or body. The display extracts feedback data and cleverly shows useful information like truck speed, and time as what the operator desires.



# SERVICEABILITY

Maintenance is the key factor to keeping your forklift trucks reliable and problem free. And having a truck that is easy to maintain and upkeep should be one of the considerations. Mitsubishi forklift trucks have designed the Grendia LX with easy maintenance constantly in our mind.

Firstly, the daily checks are simple enough. Dipsticks and oil level gauges are located in easy to reach locations and operators can readily lift up the engine cover without the need of tools. For greater access, the side covers, radiator cover and floor plates can be easily removed to reveal a spacious and unrestricted area. Any periodic servicing or repairs can be completed in a shorter amount of time.

The truck is also equipped with a control module that intelligently monitors the truck conditions. Under abnormal situation, it will trigger an error to inform operator so that minor repairs can be carried out before a major failure. We all know that major failures take both time and money to repair. That is why we designed our system to prevent such situations. Time equals to money and with Mitsubishi trucks in hand, you know you save both!



# SPECIFICATIONS

Characteristics				DIESEL ENGINE TRUCK				
1	Type of Truck			FD100NM1	FD120NM1	FD135NM1	FD150ANM1	
2	Model			10000	12000	13500	15000	
3	Loading Capacity		kg	10000	12000	13500	15000	
4	Load Center		mm	600				
Performance								
5	Maximum Fork Height		mm	A	3000	3000	3000	3000
6	Free Fork Height		mm	B	72	79	88	88
7	Speeds	Lifting	Loaded	mm/s	460	390	340	330
			Unloaded	mm/s	500	500	420	420
		Lowering	Loaded	mm/s	460	460	480	480
			Unloaded	mm/s	480	480	400	400
8	Tilt	Mast	Forward	deg	15	15	15	15
			Backward	deg	12	12	12	12
9	Speeds	Traveling	Loaded	km/h	24.5	23	20.5	19
			Unloaded	km/h	30	29.5	30	29.5
10	Maximum Drawbar Pull	stationary on slope	Loaded	kN	105	104	96	96
	Drawbar Pull	at 1.6km/h	Loaded	kN	73	72	67	67
11	Maximum Gradeability	stationary on slope	Loaded	%	42	41	33.1	30.9
	Gradeability	at 1.6km/h	Loaded	%	31.6	27.2	22.7	21.2
12	Turning Radius		mm	C	4000	4060	4160	4550
13	Practical Intersecting Aisle Width		mm		3510	3545	3650	3795
Dimensions								
14	Overall Length to Fork Face		mm	D	4295	4375	4525	4830
15	Width	with Standard Tires	mm	E	2515	2515	2605	2605
		with Lowered Mast	mm	F	3090	3090	3330	3330
16	Height	with Extended Mast (with backrest)	mm	G	4590	4590	4830	4830
		to top of Overhead Guard	mm	H	2915	2915	2960	2960
17	Forks (Thickness x Width x Length)		mm		72x180x1220	79x180x1220	88x180x1220	88x180x1220
18	Forks Spread (Out-to-Out Minimum / Maximum)		mm		480-2020	480-2020	480-2020	480-2020
19	Front Overhang (Centre of Front Axle to Fork Face)		mm	K	755	765	790	795
20	Wheelbase		mm	L	2800	2800	2800	3100
21	Tread Width	Front, Standard Tires	mm	M	1900	1900	1905	1905
		Rear, Tires	mm	N	1965	1965	1925	1925
22	Ground Clearance	at Lowest point mast	mm		260	260	305	300
		at Center of Wheelbase	mm		310	310	355	355
23	Tire Size	Front	mm		10.00-20-14PR	10.00-20-16PR	12.00-20-18PR	12.00-20-18PR
		Rear	mm		10.00-20-14PR	10.00-20-16PR	12.00-20-18PR	12.00-20-18PR
Weight								
24	Machine Weight		kg		14590	15830	17470	17930
Brake								
25	Service Brake Type				Air Hydraulic Composite			
26	Parking Brake Type				Mechanical			
Power Train								
27	Engine	Model			6D16-TL			
		Max. Rated Power/rpm to DIN70020		kW/rpm	100/2200			
		Max. Rated Torque/rpm to DIN70020		Nm/rpm	490/1200			
		Displacement		cc	7550			
		Fuel Tank Capacity	L		180	180	180	220
28	Transmission	Type			Powershift			
		Forward			3 speed			
		Backward			3 speed			
29	Relief of Pressure	For Attachments	Mpa		20.6			

