



CENTRALIZED MAINTENANCE POINTS FOR EASY INSPECTION AND MAINTENANCE

Inspection and maintenance is made easy thanks to a fully extendable engine hood, removable side covers and centralized maintenance points. In addition, the time intervals between oil changes and lubrication requirements have been increased, resulting in lower maintenance costs.



GRENDIA

*Ready to Perform
To Your Applications*



www.mitforklift.com.sg

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FMIT0145

(02/18)



PRESENTED BY :

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.

Internal Combustion Pneumatic Tyre 1.5-3.5 ton

Mitsubishi

GRENDIA

Series Forklift Trucks

SETTING NEW STANDARDS



FGE15N

Electronically controlled gasoline engine
Capacity rating 1500kg @ 500mm load center

A next generation, higher performance machine

Thanks to the application of new technologies the Mitsubishi Grendia is not only easier to operate but friendly to the environment as well.

The new Mitsubishi Grendia's engine is very fuel-efficient and has ultra low emissions, which either complies with or exceeds the latest international environmental standards. In addition to safety. For instance, all Grendia forklift trucks has increased rider comfort and enhanced which enhances safety and helps reduce accidents. LCD graphic displays and digital monitoring systems also make the Grendia safer more efficient.

It's the forklift of tomorrow that's available today.



FD25N

Diesel engine
Capacity rating 2500kg @ 500mm load center

MEETS THE ENVIRONMENTAL REQUIREMENTS OF TODAY AND TOMORROW

GRENDIA'S ECO-POWER



Electronically controlled gasoline engine K25E



Three-way catalytic muffler

**NEW 2007 EMISSION STANDARDS COMPLIANT*:
NEW ELECTRONICALLY CONTROLLED GASOLINE ENGINE**

Mitsubishi Grendia's advanced gasoline engine, which helped pioneer the standard use of electronically controlled fuel injection and three-way catalytic converters in forklift trucks, has evolved even further. The new Grendia has achieved remarkable environmental controls and complies with all 2007 Emission Standards while still maintaining high performance and reliability levels.

* 2007 Emissions Standard for Specific Special Vehicles (including off-road vehicles)
Compliant with Emissions Standard for Specific Special Vehicles
Ministry of the Environment
Ministry of Economy, Trade and Industry
Ministry of Land, Infrastructure and Transport



TWO-LEVEL HIGH/LOW SPEED LIMITER

The Grendia's automatic speed limiter can be set to two levels – outdoors (HIGH) and indoors (LOW). Drivers can alternate between the two speed limits at the flick of a switch, helping them to choose the most appropriate fuel efficiency for the location.

* Standard for Electronically Controlled Gasoline Engine Trucks



POWER/SOFT MODE SWITCH

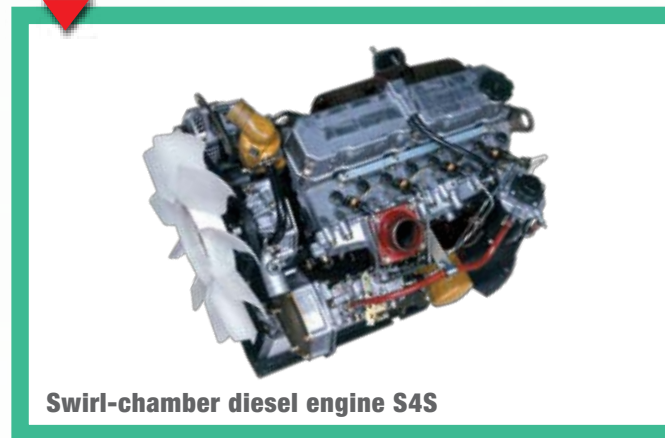
Depending on the task, two power levels can be selected: POWER mode, which maximizes power output and SOFT mode for fuel efficiency and low noise levels. Selecting SOFT mode cuts CO₂ emissions by approximately 13% compared to the POWER mode.

* Standard for Electronically Controlled Gasoline Engine Trucks

2007 EMISSION STANDARDS COMPLIANT*: HIGH RELIABILITY DIESEL ENGINE

The well-known performance levels of the highly acclaimed Mitsubishi Diesel Engine have been maintained but now come with eco-friendly refinements. The upgraded engines have now achieved low emission levels in compliance with the 2007 Emission Standards without compromising horsepower or reliability.

* 2007 Emissions Standard for Specific Special Vehicles (including off-road vehicles)
Compliant with Emissions Standard for Specific Special Vehicles
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Swirl-chamber diesel engine S4S



LOW-NOISE DESIGN FOR MAXIMUM COMFORT WITH MINIMAL OPERATOR FATIGUE

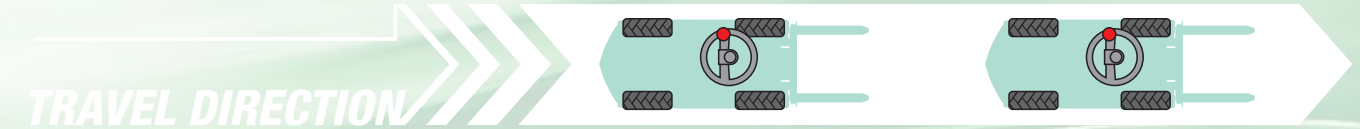
With features such as low-noise engine, enhanced soundproofing of the engine compartment and floor level noise dampening, Mitsubishi Forklift Trucks has achieved a quiet working environment both for the operator and the surrounding working environment.

* ISO-equivalent noise level (When diesel engine is in SOFT mode at high idle speed)

STEERING SYNCHRONIZER

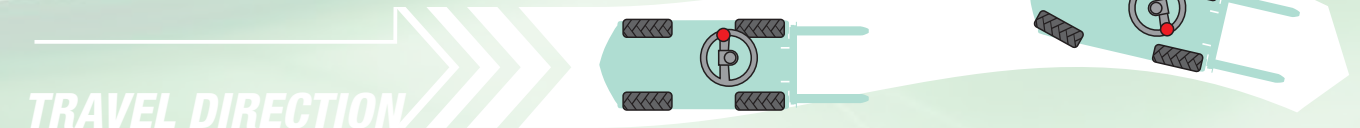
With full hydrostatic steering, steering is easy but hard to keep the truck straight without continuously adjusting the steering wheel. Such operation is difficult when truck has to work in confined space like containers. With steering synchronizer, the system actively checks and eliminates the misalignments to keep the truck straight without constantly adjusting the steering wheel.

With Steering Synchroniser



Without Steering Synchroniser

* Difficulty in maintaining a straight line while driving



"SAFETY FIRST"

INTEGRATED PRESENCE SYSTEM – "IPS"

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



NEW INTEGRATED DIGITAL MONITORS

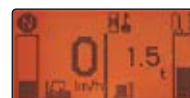
In the cab, digital displays are used to provide easier monitoring of systems and controls. The digital panel illuminates when the ignition is switched on allowing speed, load weight and system monitors to be checked at a glance.



VEHICLE SPEED DISPLAY



LOAD WEIGHT DISPLAY



optional

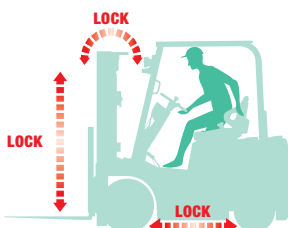
MAST AND TRAVEL INTERLOCK

Mitsubishi Grendia forklift trucks are equipped with mast and travel interlock protection device that is linked to the operator's seat. If the operator is not seated, the mast and (for torque-converter models) the movement of the vehicle itself, is automatically locked 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 fork on the Mitsubishi Grendia is automatically locked when the ignition is switched off, so it remains in position even if the lift lever is accidentally bumped or moved.



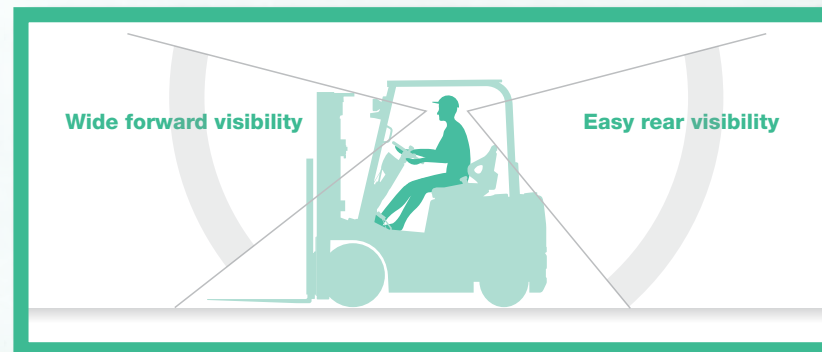
"SAFETY FIRST"

– YET ANOTHER GRENDIA HALLMARK

INNOVATIVE AND RELIABLE SAFETY FEATURES HELP PROTECT OPERATORS AND WORKPLACE

NEUTRAL SAFETY

A Neutral Safety device, which prevents the engine from starting unless the forward/backward lever is positioned at neutral, is now built in on all vehicles, including all torque-converter-fitted vehicles and all direct drive vehicles.



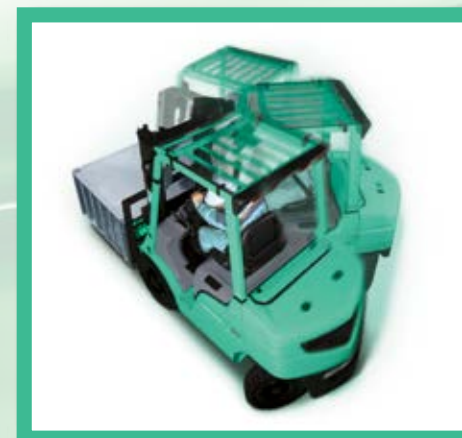
WIDE FORWARD VISIBILITY CLEAR REAR VISIBILITY

Unlike some forklift trucks, Mitsubishi Grendias have wide unobstructed visibility that extends from the tip of the fork to the top of the mast. Greater rear visibility is made possible by the Grendia's compact tail design.

HIGH-MOUNTED REAR COMBINATION LAMP

All Mitsubishi Grendias are installed with rear combination lamps above the head guard that clearly signals braking or stopping to vehicles or persons behind the forklift truck.

* Positions will differ for forklifts requiring vehicle inspection in Japan.



COMPACT TURNING

Tight turns are easy with the Grendia thanks to a fully hydraulic power steering fitted with steering synchronizer/mechanism for 100% stationary steering. Its manoeuvrability allows for easy U-turns and navigation in small workspaces.

EXCELLENT PERFORMANCE

POWERFUL LIFTING CAPACITY

Mitsubishi Grendias are constructed with a low center of gravity frame that optimised vehicle balance and stability during lifting. That means a greater load capacity with much greater stability. The high-torque, high-power engine maintains a stable lift speed regardless of the load, helping operators to increase productivity.



EXCELLENT LIFTING ABILITY

Lift speed: **640mm/s** (when loaded)
660mm/s (when not loaded) • FGE25ZN

No capacity deration up to a height of 4 meters (2-stage mast)

SOFT LANDINGS

Another exclusive feature found on the Mitsubishi Grendias is soft landing system that activates when the fork nears the ground, automatically protecting loads from hard drops or shocks.

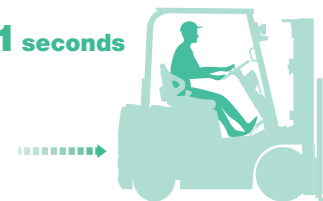
* only for two-stage masts

SMOOTH RUNNING

The high power engine and the high performance transmission are perfectly matched to produce an extremely smooth start/acceleration as well as excellent traction even on uphill slopes. Excellent braking and stopping control is provided by a robust and reliable due-servo system.

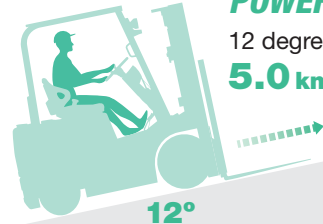
SMOOTH ACCELERATION

10m acceleration **3.1 seconds** (unloaded) • FD25N



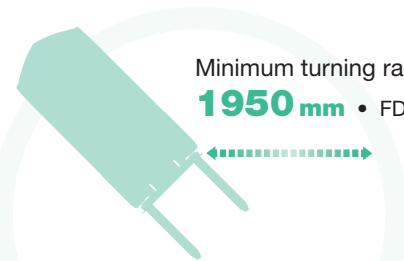
POWERFUL UPHILL ABILITY

12 degree uphill velocity
5.0 km/h (unloaded) • FD25N



EXCELLENT STEERING ABILITY

Minimum turning radius
1950 mm • FD15N



GRENDIAS ARE EASY TO MANEUVER EVEN IN CRAMPED WAREHOUSES AND DELIVERY BAYS

Right angle stacking aisle width
3650 mm • FD15N



EASY OPERATION. DRIVER COMFORT.



Suspension seat with hip support mechanism. Ability to adjust position and extent of reclining according to body shape for maximum comfort. Seat belt fitted with warning light. Soft-grip handle makes getting in and out easier.



Inching pedal allows delicate movements.



Electric shift lever can be moved back and forth at the touch of a finger. (for torque-converter models only).



Switches for optional functions positioned on the right side of the dashboard.



Acrylic roof for comfortable operation in outdoor conditions. Easily installed and uninstalled.



Combination switch integrating indicators and headlight switches.



Tiltable steering column

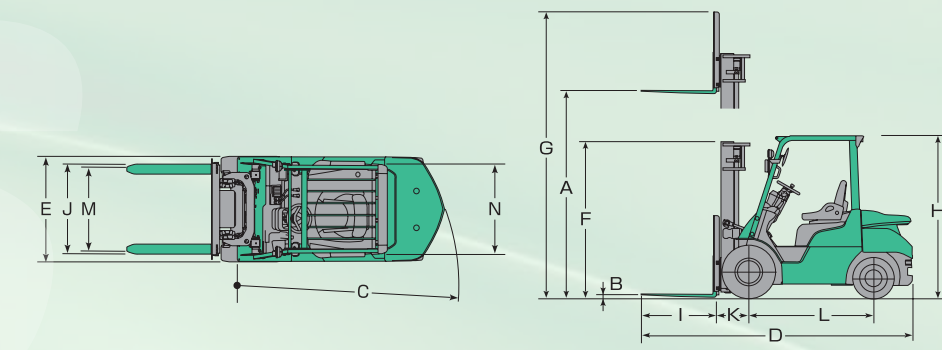


Power-train full floating structure for excellent vibration reduction. The entire power-train is supported by vibration absorbent rubber mounts.



Fully hydraulic power steering
The full hydraulic steering allows for effortless steering even if truck is in a stationary position.

SPECIFICATIONS



CHARACTERISTICS				DIESEL ENGINE TRUCK										GASOLINE ENGINE TRUCK										ELECTRONICALLY CONTROLLED GASOLINE ENGINE TRUCK																																	
Type of Truck																																																									
Model				FD15N		FD18N		FD20CN		FD20N		FD25N		FD30N		FD35N		FG15N		FG15ZN		FG18N		FG18ZN		FG20CN		FG20N		FG20ZN		FG25N		FG25ZN		FG30N		FG35N		FGE15N		FGE18N		FGE20CN		FGE20N		FGE20ZN		FGE25N		FGE25ZN		FGE30N		FGE35N	
Loading Capacity				1500		1750		2000		2500		3000		3500		1500		1750		2000		2500		3000		3500		1500		1750		2000		2500		3000		3500		1500		1750		2000		2500		3000		3500							
Load Center				500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500											
PERFORMANCE																																																									
Maximum Fork Height				3000										3000										3000																																	
Free Fork Height				115										115										115																																	
Speeds	Lifting	Loaded	mm/s	630		630		500		420		490		570		490		570		570		520		580		520		580		460		390		630		580		640		580		640		510		430											
		Unloaded	mm/s	690		650		660		530		450		560		650		560		650		650		600		660		600		660		530		450		650		590		660		590		660		530		440									
	Lowering	Loaded	mm/s	520		520		500		530		420		520		520		520		520		520		500		500		530		420		520		520		520		520		500		500		530		420											
		Unloaded	mm/s	500		500		500		500		400		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		500		400									
Tilt	Mast	Forward	deg	6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6		6									
		Backward	deg	12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12		12									
Speeds	Traveling (Powershift)	Loaded	km/h	19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19									
		Unloaded	km/h	19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5									
	Traveling (Manual)	Loaded	km/h	19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19		19									
		Unloaded	km/h	19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5		19.5									
Maximum Drawbar Pull	Powershift	Loaded	kgf	1260		1250		1210		1830		1810		1770		1680		1110		1530		1090		1520		1480		1520		1750		1500		1730		1710		1630		1710		1670		1690		1860		1690		1870		1860		1750			
		Manual	kgf	1180		1160		1130		1500		1480		1460		1380		960		1280		950		1270		1230		1280		1620		1250		1590		1500		1390		1380		1360		1390		1630		1380		1620		1660		1560			
Maximum Gradeability	Powershift	Loaded	%	33		29		25		36		31		25		21		29		25		29		25		31		30		35		25		30		24		20		48		42		36		34		38		29		33		27		22	
		Manual	%	30		27		23		29		24		20		17		24		24		22		29		25		25		32		21		27		22		19		38		34		29		28		33		24		28		24		20	
Turning Radius	Powershift	Loaded	mm	1950		1980		2020		2200		2230		2380		2440		1950		2200		1980		2020		2020		2200		2230		2380		2440		1950		1980		2020		2200		2230		2380		2440		2380		2440					
Practical Intersecting Aisle Width	Powershift	Loaded	mm	2065		2080		2105		2195		2215		2325		2365		2065		2195		2080		2105		2105		2195		2215		2325		2365		2065		2080		2105		2195		2215		2325		2365									
Practical Aisle for Right Angle Stacking	Manual	Loaded	mm	3650		3680		3735		3955		3985		4170		4230		3650		3955		3680		3735		3735		3955		3985		4170		4230		3650		3680		3735		3955		3985		4170		4230									
DIMENSIONS																																																									
Overall Length				3180		3220		3275		3405		3480		3805		3865		3180		3220		3275		3405		3480		3805		3865		3180		3220		3275		3405		3480		3805		3865													
Width	with Standard Tires	mm	E	1065		1065		1150		1275		1290		1065		1065		1150		1275		1290		1065		1065		1150		1275		1290		1065		1065		1150		1275		1290															
		with Optional Duals	mm		1330		1480		1490		1330		1330		1480		1490		1330		1330		1480		1490		1330		1330		1480		1490		1330		1330		1480		1490		1330		1330												
Height	with Lowered Mast	mm	F	1990		1990		2015		2130		1990		1990		2015		2130		1990		1990		2015		2130		1990		1990		2015		2130		1990		1990		2015		2130															
		with Extended Mast (with Backrest)	mm <td>G</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td> <td colspan="2">4055</td>	G	4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055		4055														
		to Top of Overhead Guard	mm <td>H</td> <td colspan="2">2065</td> <td colspan="2">2065</td> <td colspan="2">2074</td> <td colspan="2">2093</td> <td colspan="2">2103</td> <td colspan="2">2065</td> <td colspan="2">2065</td> <td colspan="2">2074</td> <td colspan="2">2093</td> <td colspan="2">2103</td> <td colspan="2">2065</td> <td colspan="2">2065</td> <td colspan="2">2074</td> <td colspan="2">2093</td> <td colspan="2">2103</td> <td colspan="2">2065</td> <td colspan="2">2065</td> <td colspan="2">2074</td> <td colspan="2">2093</td> <td colspan="2">2103</td>	H	2065		2065		2074		2093		2103		2065		2065		2074		2093		2103		2065		2065		2074		2093		2103		2065		2065		2074		2093		2103														
Forks (Thickness x Width x Length)	mm	I	35x100x920		45x100x920		45x122x1070		35x100x920		35x100x920		45x100x920		45x100x920		45x122x1070		35x100x920		35x100x920		45x122x1070		35x100x920		35x100x920		45x122x1070		35x100x920		35x100x920		45x122x1070		35x100x920		35x100x920		45x122x1070		35x100x920		35x100x920												
Fork Spread (Out-to-Out Minimum / Maximum)	mm	J	200-920		244-920		244-1000		244-1000		200-920		220-920		220-1000		250-1000		200-920		244-920		244-1000		244-1000		200-920		244-920		244-1000		244-1000		244-1000		244-1000		244-1000		244-1000																
Front Overhang (Center of Front Axle to Fork Face)	mm	K	400		415		455		400		490		400		415		455		400		415		455		400		415		455		400		415		455		400		415		455																
Wheelbase	mm	L	1400		1400		1600		1700		1400		1400		1600		1700		1400		1400		1600		1700		1400		1400		1600		1700		1400		1400		1600		1700																
Tread Width	Front, standard tires	mm	M	890		890		960		1060		890		890		960		1060		890		890		960		1060		890		890		960		1060		890		890		960		1060															
		Front, optional duals	mm		1025		1140		1140		1025		1140		1140		1025		1140		1025		1140		1140		1025		1140		1140		1025		1140		1140		1025		1140																
Ground Clearance	Rear tyres	mm	N	900		980		980		900		900		980		980		900		900		980		980		900		900		980		980		900		900		980		980																	
		at Lowest point outer mast	mm		110		110		115		135		150		110		110		115		135		150		110		110		115		135		150		110		110		115		135		150														
Tyre Size	at Center of Wheelbase	mm		150		160		190		200		150		150		160		190		200		150		150		160		190		200		150		150		160		190		200																	
		Size Front, standard		6.50-10-10-PR		6.50-10-5.00		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		7.00-12-12PR		28x9-15-12PR		250-15-16PR		6.50-10-10-PR		7.00-12-12PR		28x9-15-12PR		250-15-16PR													
Tyre Size	Size Front, optional dual	mm		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR		4.50-12-8-PR		5.50-15-8PR		6.00-15-10PR															
		Size Rear		5.00-8-8-PR		5.																																																			