

the right choice...



MST

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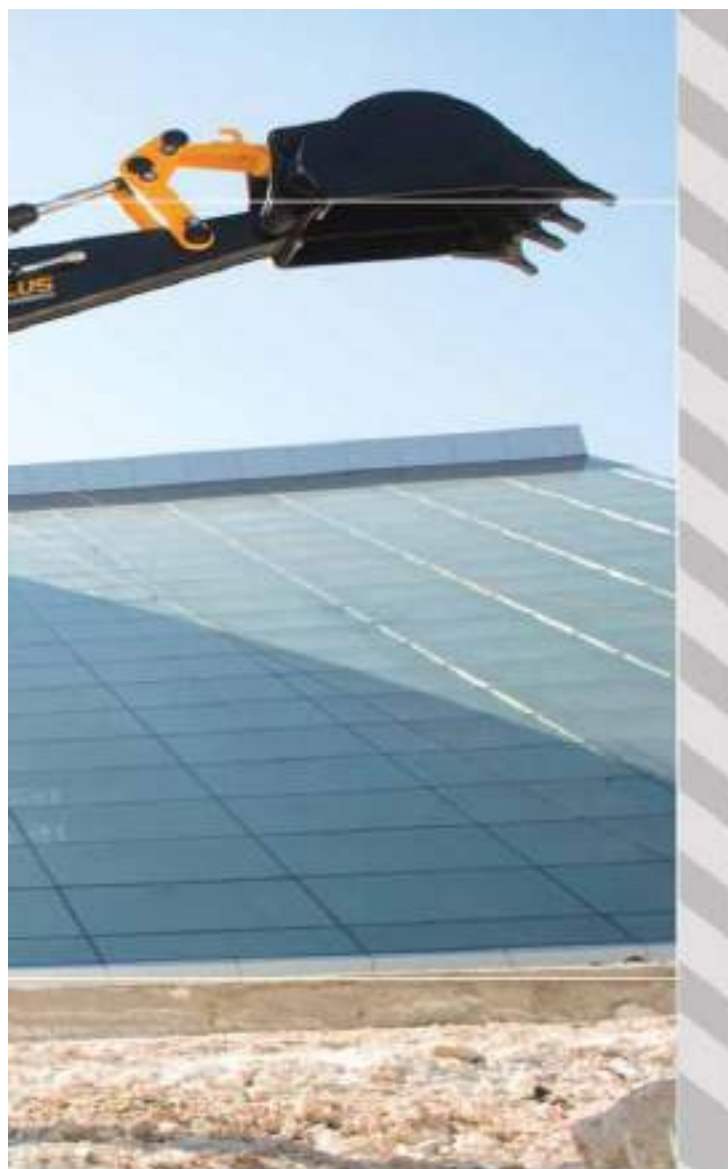


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MST BACKHOE LOADER M542 PLUS / M544 PLUS THE RIGHT CHOICE



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Modern design, ease of handling and comfort

Ergonomically positioned front and rear joystick control



Components quality-approved all over the world and high-quality materials

Owner's friendly with low operating and maintenance costs and economic fuel consumption



M544 PLUS

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PRODUCTION WITH ADVANCED TECHNOLOGY...



Defect-free welding technique thanks to robot welding having 3-D processing capacity



Totally enclosed paint-spraying booth which is protected against external factors and longer than a soccer pitch, where every part including the frame can be painted



Automobile-type system cable layout with connector which is resistant to dust and water and compliant with the German quality norms.



One-piece (I) heavy-duty frame, processed with unrivalled 3-D Robot Welding technique



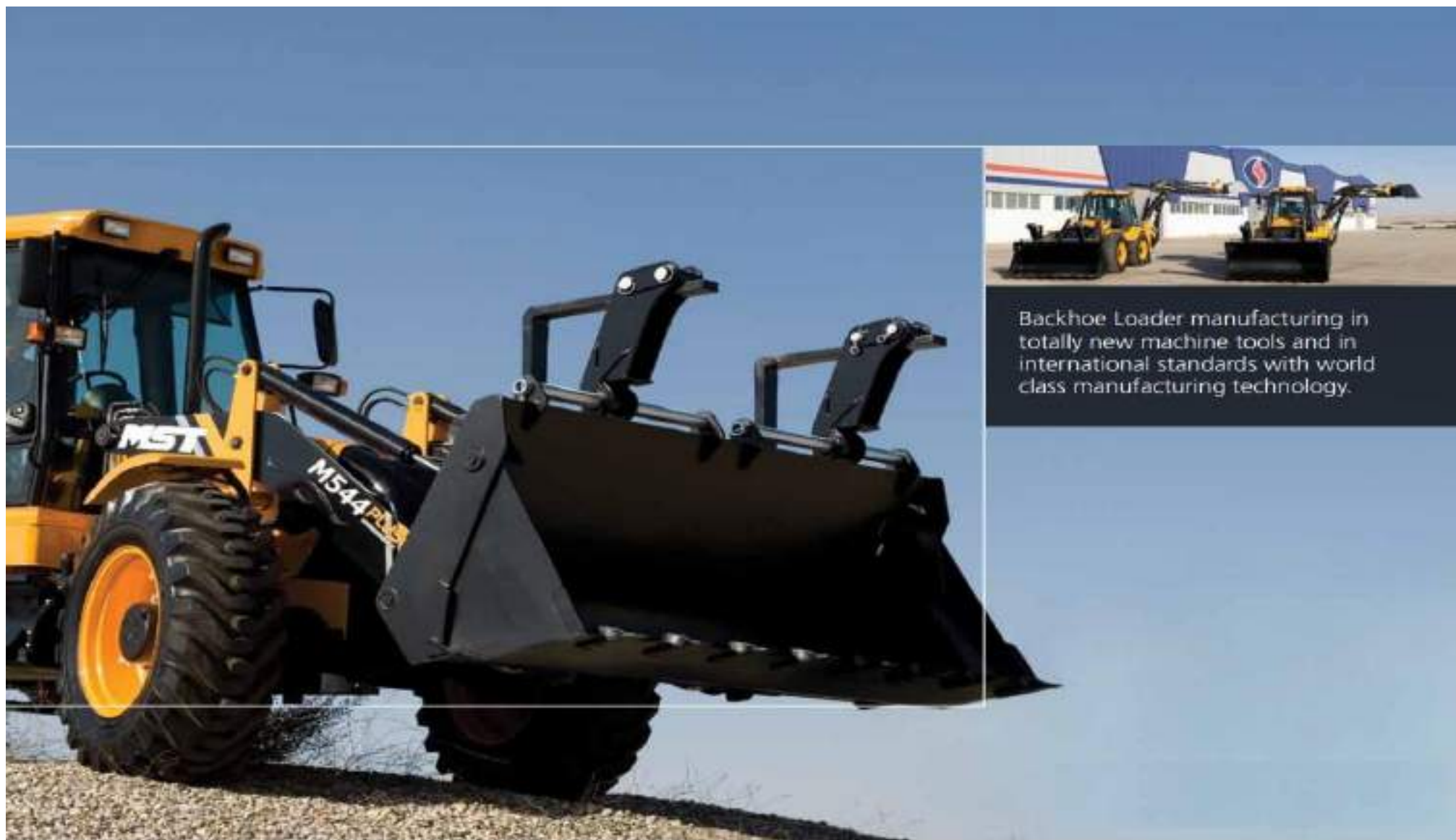
14.5 litres of muffler capacity. Reinforced flexible exhaust, venturi system outlet pipe mounted on the frame independently of the muffler. Trouble-free operation at temperatures up to 60°C thanks to the new venturi system throwing out the engine heat.



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Backhoe Loader manufacturing in totally new machine tools and in international standards with world class manufacturing technology.



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POWER AND PERFORMANCE ...



New M542 Plus and M544 Plus series are productivity oriented. Engine is long-lasting thanks to the high quality components used.

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Engine service life has been extended thanks to the compact cooler core and the pistons cooled with jet nozzles and a quieter and more environment-friendly engine has been developed.

1 Engine

Industrial type produces 413Nm torque at 1350rpm. High torque value reached at low speed provides fuel savings. Readily available spare parts and low maintenance costs make the engine superior to its competitors.

2 Transmission

Fully automatic Powershift transmission. Smooth and jerk-free operation with modulated shifting. Unique technology protecting the engine.

Ratio

2.64/1 compression ratio provides high traction, low consumption and high performance in grading and front bucket works.

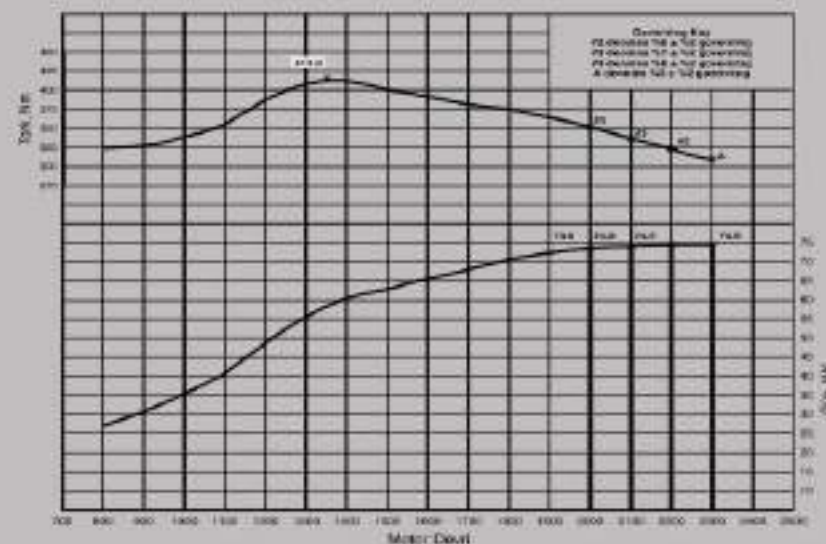
3 Pump

Higher pump efficiency thanks to pump coupled with transmission. Fuel consumption has been reduced by using less power train. Priority valve controlling the steering is integrated on the pump. Service and spare parts needs have been reduced through the simplified hydraulic system.



New Powerful Differential

Heavy-duty, high-strength differential. Limited slip differential (LSD) in rear axle. Totally enclosed optical reproducers, to ensure protection against external factors. Front axles with 16 degree floating allowing the machine to operate comfortably even at the toughest site conditions. Wet type brake system in the rear differential allowing safety and ease of handling. Vibration-free operation and direct power transfer due to the fact that there is no shaft joint.



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OPERATOR COMFORT

Operator cabin passed world class ROPS and FOPS tests provides highest level of security. Ergonomic control levers and the control panel designed in an intuitive manner have been put under the command of operator.

- Ergonomically positioned front and rear joystick control
- New instrument panel that can be easily controlled by the operator while operating the backhoe and the loader
- Wide angle of sight
- Forward-rear adjustable operator seat with seat belt and armrest
- Antiperspirant operator seat the height of which can be adjusted according to the operator's weight and by means of compressor air
- Audio system with two speakers

Cabin roof has been manufactured with double wall and its heat and noise insulation have been improved. Cabin roof is ABS fabric covered. Cabin floor has been insulated both from inside with rubber and from outside with special foam material.



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Multi-point heating and cooling system



New fuse panel providing service accessibility



Antiperspirant operator seat the height of which can be adjusted according to the operator's weight and by means of compressor air



Up-down and forward-rear adjustable steering wheel



Ergonomic control and instrument panel



Multifunctional instrument panel



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VERSATILE PERFORMANCE ...

LOADER...

While the material is loaded, undesirable spillage of material is avoided through the optimized bucket collection angle.



New buckets reinforced with back shell plates extending service life in firm and rocky grounds.



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BACKHOE...
 Inclined boom with high strength provides superior breakout force thanks to its reinforced design in the connection parts. Tandem pump with 2 stages enables the operator to make multi-movements easily. Extra durability has been ensured with toughened pins and bushings.



New teeth improved in compliance with the standards



With its new geometry, turning 1-2 is more resistant and faster.



Rear Stabilizer Foot
 Lengthened, box profile rear stabilizers increase durability. Backhoe lock that can be controlled from inside the cabin increases the safety of backhoe. Internal and external foot gap removal operation increases the ease of handling thanks to stabilizer foot fiber rests.



New pump and valve system enable the machine to make multiple movements easily.



License plate with new lighting system



Rear Bucket Connection
 High breakout force and additional carrying hook thanks to newly designed backhoe arm



Rear Slider
 Over-connected slider provides trouble-free operation and ease of handling



Front bumper with improved geometry
 Improved radiator air intake has been obtained by downshifting the battery connection center.



Diving and breakout force have been improved with new kinematics. Two-layer chrome coated hydraulic cylinders that can be operated at higher working speeds and repetition numbers have been used. Spare part availability has been facilitated thanks to common pin and bushing. Besides concealed hydraulic hoses and pipes, one-sided bearing of the loader arm connection increase the angle of sight of the operator



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ATTACHMENTS...

Easily changeable attachment options provide productive use in different working areas.



Forklift Fork
Folding Bucket



Special Buckets



Grading Blade



Hydraulic Auger



Timber Attachment



Breaker



Trapezoid
Bucket



Pallet



Ripper

MAINTENANCE...

Fully-equipped and experienced service network provides SANKO assurance in repair and maintenance works.



Strong after-sale services, wide service network and rich spare parts stock.



With the new hydraulic and diesel fuel tanks, pump, valve and hydraulic system problems have been avoided thanks to the filtration system in the hydraulic tank. Tanks can be locked to increase security.



Practical and short maintenance time



One-piece fiber bonnet provides both easy service accessibility and silent running.

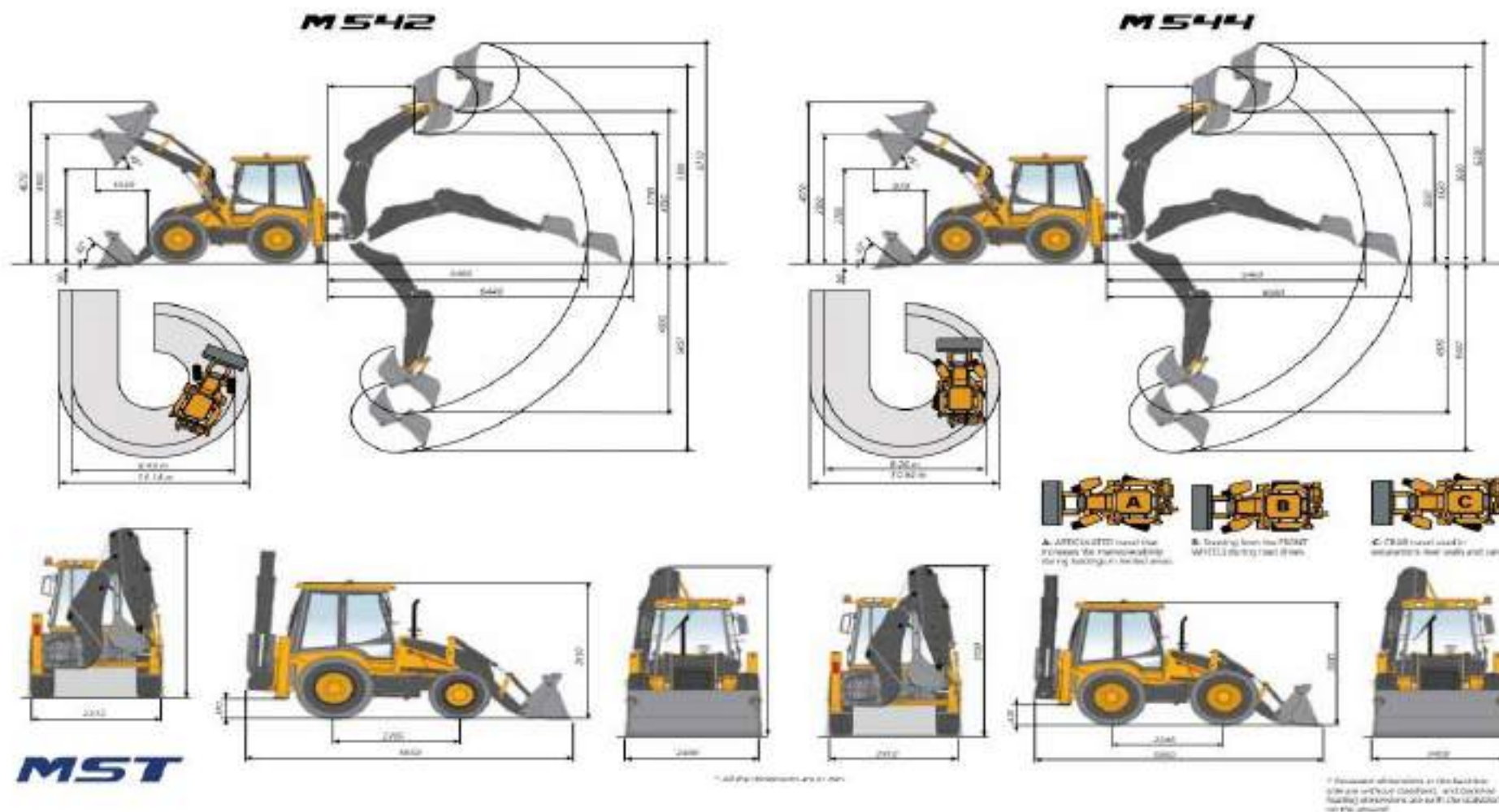


Economical and trouble-free service and repair process with the fragmented hose system.



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TECHNICAL SPECIFICATIONS



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Engine

Model/Block	F55E93
Model	1104C - 421 (Tax 2)
Maximum Power	74.5kW / 101 HP (ISO)R 1400R
Maximum Torque	413 Nm @ 1250 rpm
Displacement	4.4 ltr
Number of Cylinders	4
Bore	128 mm
Stroke	127 mm
Rated Engine Speed	2200 RPM
Air Filter	Dry type, with two elements, two stage
Cool Fan	Preheating

Transmission

- Heavy-duty 4 forward / 4 reverse speed Powershift low Speed Transmission provides high-torque in all situations.
- Electrically-actuated selector provides desired speed and power with the possibility of speed-shifting.
- Torque converter with 2 65% ratio increases the maneuverability of the machine.
- Electrically-operated 2-wheel-drive/4-wheel drive selection.
- ECU system controls the forward/reverse travel and shift selection electronically, thus prevents transmission failure due to erroneous shift selection.

Axles

- Epicyclo rear axle with Heavy-duty Limited Slip Differential (LSD) increases traction by transferring the correct drive torque at a higher rate in loose and uneven ground conditions.
- Front axle with maximum traction torque ratio provides superior traction in all working conditions.
- Powersteer Rod steering position in the front axle.
- Front axle has a 10° of trailing angle to allowing the machine to operate efficiently even at the toughest site conditions.

Speeds

Wt in standard type (1.8 D14-38) and at 2200 rpm engine speed

Speed	km/h
1	65.14
2	11.11
3	22.18
4	41.43

Brakes

- Water-cooled cylinders with pilot oil and oil bath disc brake enables the machine to stop efficiently in all working conditions.

Disc diameter : 255 mm

Friction surface : 26.207 mm²

Park brake is of a mechanical type where a cable connected to the rear axle lever shaft is operated by the brake holding pedal.

Hydraulic System

Pump Model : Integrated steering priority valve, H13-2 Tool handlers, full flow gear pump

Pump Max. Flow Rate : 154 l/min (at 2200 rpm engine speed)

Pump Max. Pressure : 280 bar

- Hydraulic system is equipped with special "anti-suck" and "anti-suction" valves.
- "Anti-loader valve" regulates the main and secondary pump automatically according to the flow rate required.
- In the hydraulic system, there is a hydraulic oil cooler that cools hydraulic oil even at hot climatic conditions.
- Magnets filter connected to the hydraulic oil return line filters particles in the oil up to 10 microns.
- For those joystick and loader control lever has been positioned in such a manner that provides operator ease of use.
- There is a safety system that deactivates hydraulic jockeys during travel.
- Attachments lines are controlled by electrically-operated levers.
- Hydraulic pumps can be variable flow type (with relief valve) in line with customer's demand optionally.

Electrical System

Machine is equipped with an alternator with 12V DC, and a 75 A alternator, and a parking system for cold start. There is a 135 Ah, low maintenance heavy-duty type battery on the machine.

Tires

	M542 Plus	M544 Plus
Front	16 D70-20	15.5R14-25
	12 layer section	12 layer section
Rear	16 R70-20	15.5R14-25
	12 layer section	12 layer section

Turning Capability

	M542 Plus	M544 Plus
From the bucket end	11.33 m dia	10.54 m dia
From the wheel track	8.40 m dia	8.20 m dia
Steering wheel lock	2° (Full Turn)	2° (Full Turn)

Loader

- Special bend rear body opening type wheel
- Wheel size (tr) : 1.2 m²
- Lifting weight at full height : 2160 kg
- Max. Bucket Breakout Force* : 7734 kgf
- Max. Arm Breakout Force* : 5060 kgf

Excavator

- GGG 80 Noctular cast iron
- Hydraulic disc lock
- Non-slipper plate steel drum
- Max. Bucket Breakout Force* : 5523 kgf
- Max. Arm Breakout Force* : 3554 kgf
- Max. Lifting Height : 6380 mm
- Max. Excavator Depth : 5807 mm
- Max. Hook point Access Range : 6407 mm
- Turning Angle : 180°
- Side (Full) Distance : 1154 mm

Liquid Capacities

Hydraulic system tank (net)	125 lt
fuel tank	130 lt
Engine Cooling System	25.5 lt
engine oil	10 lt
Front Axle Differential Oil	0.5 lt
Rear Axle Differential Oil	1.0 lt
Front Greasing	1.5 lt
Rear Greasing	2 x 1.5 lt
Gear Oil	14 lt

Weight

	M542 Plus	M544 Plus
Standard Machine	8900 kg	8900 kg
Telescopic Machine	8900 kg	9300 kg

Optional Attachments

- Skid-steer Arm
- Refueling Pump
- Hydraulic Breaker attachment
- Air Compressor
- GPS
- 165 Ah battery



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