

New Dimensions
in Motion



HITACHI

LX70

Big Power, Balanced Distribution and Operating Ease Increase Productivity!

BEST MATCHING CONTROL SYSTEM

- The powerful HST (Hydrostatic Drive System) provides easy and energy saving operation.
- Ideally balanced traction force and breakout force enhance productivity.
 - High dumping clearance and reach means easy loading onto large dump trucks.
 - Extra long wheelbase and superb wide tread stability.
 - Roomy operator's station with light-touch electrically operated travel control lever.
 - Monitoring/alarm system indicates the status of key machine functions.
 - Hitachi's original power steering mechanism provides outstanding maneuverability and high-speed straight-line travel.
 - ORS (O-Ring Seal) and water-proof electric connectors ensure hydraulic/electric line reliability.
 - Inboard wet disc brakes and sealed bucket linkage pins reduce maintenance time and high reliability.

Shown with optional equipment

- Rated Engine HP 58.2 kW (78 HP)
- Operating Weight 6 800 kg (15 000 lb)
- Bucket Capacity 1.0—1.5 m³ (1.31—1.96 cu yd)



HST Efficiency Increases Power, Speed, Reliability, Fuel Economy and Operating Ease to New Highs!

BMC (Best Matching Control System)

High Performance

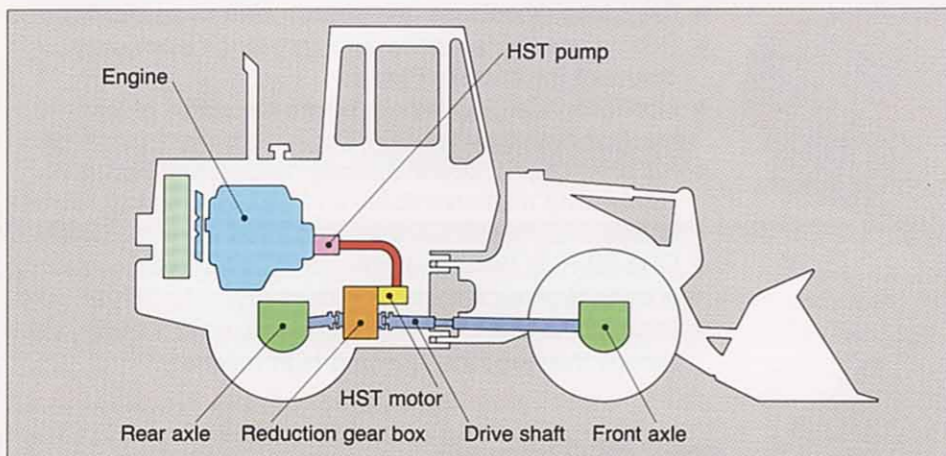
HST balances traction and breakout force for maximum productivity.

High Ergonomic Standard

Optimally-matched to suit operator comfort for easy and safe operation.

High Reliability

The LX70 is feature-packed for high reliability and durability.



Hydrostatic Drive System (HST)

The LX70 has lots of advanced mechanisms: the HST-Hitachi original, engine speed sensing system and 2-speed (high/low) powershift transmission.

The HST features automatic control of oil pressure/flow through pump and motor according to job conditions, ensuring maximum productivity and economy.

1. GREAT PRODUCTION

The HST provides big traction force at a low travel speed, allowing powerful penetration into the earth, unmatched

by the torque converter type.

The result is efficient digging and high production.

2. MINIMUM TIRE SLIPPAGE

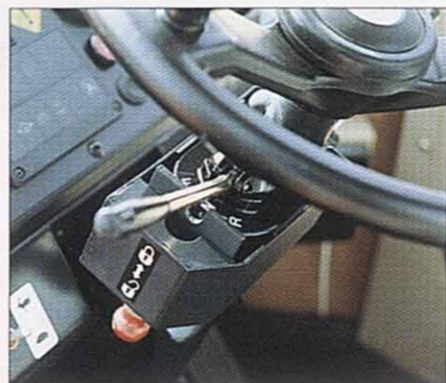
The HST gives well-balanced traction force and breakout force to minimize tire slippage.

3. NO SPEED SHIFTING REQUIRED

Variable displacement pump/motor give a wide speed range: There's no need for cumbersome speed shift during loading cycle, permitting effortless operation and minimum operator's fatigue.

Isuzu 4BD1T Engine

4-cycle, direct injection turbocharged diesel engine has a high power output of 58.2 kW (78 HP) and sharp torque rise for powerful operation.



Fingertip Control

The light-touch electrically controlled direction change lever, mounted on the steering column, reduces the shifting effort to only 1.2 kg (2.6 lb).

No speed shifting required for normal loading cycle, thanks to the HST with its wider low speed range.



Electronic Monitor

Hitachi's original monitoring system gives machine operating conditions and if an abnormal condition is detected, this monitor gives an audible and visible warning to the operator.



Easy Bucket Control

Light-touch mechanical linkage type control levers are designed for responsive and precise control. An optional port is available on the control valve for the special attachments.



Operator Comfort

The operator's station is designed and laid out for maximum comfort and efficiency.

Fully adjustable operator's seat with armrest reduces operator fatigue. Z-bar linkage eliminates dead space of forward visibility.

Plenty of work space and ergonomically arranged instruments, levers, and pedals. Vibration and noise are kept to a minimum.



ROPS Cab (Factory Option)

The ROPS cab is mounted on the shock-absorbing rubbers and sound-absorbing materials are used for operator comfort. Suspension seat, cab pressurizer, air conditioner, cab heater, defroster and seat belt are available as options.



Canopy (Standard)

The operator's station is mounted through shock-absorbing rubbers to minimize vibration. Plenty of foot space with inclined footrest floor provide minimum operator fatigue.



The above stop lamp bracket is expanded to the full scale of the vehicle width as allowed in Japan. The license plate bracket is an option.





High Dumping Clearance

The high dumping clearance of 2 585 mm (8' 6") makes it easy to load materials onto large dump trucks.

The large 50-degree tiltback angle of the bucket substantially reduces material spillage for load-and-carry operations with high efficiency.

Hitachi's Original Z-bar Linkage

Hitachi's original Z-bar linkage provides high breakout force with fast cycle times and this linkage arrangement minimizes bucket angle change during the arm lifting operation for minimum material spillage.

Automatic Lift Arm Kickout

For repeated drumping at the same height, the lift arm kickout can be set to automatically stop the lift arm at the preselected height. The lift arm kickout helps provide faster cycle times and simplify the operator's job.

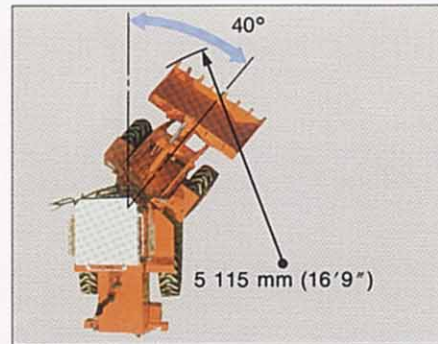
Bucket Positioner

The bucket positioner can be set to return the bucket to the digging position automatically. This lets the operator concentrate on steering and other operations.



Wide Loader Arm

High-strength, wide loader arm. This provides better visibility and makes the loader arm more resistant to twisting when corner loading the bucket. The LX70 has a welded box tube which spreads the loading forces throughout the arm, increases arm rigidity, and eliminates high stress concentration in limited areas.



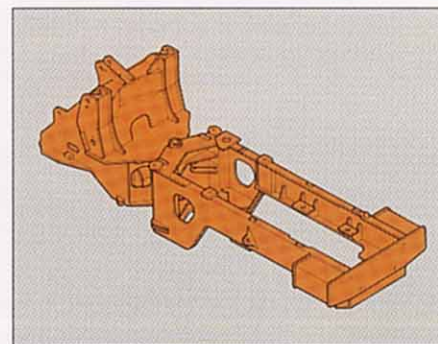
Small Turning Radius

Light-touch, full-hydraulic power steering. 40-degree articulation on both right and left side provides minimum turning radius of only 5 115 mm (16' 9") measured at the outside corner of the bucket.



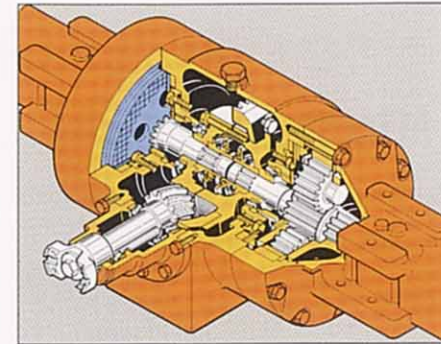
High Stability

Rear axle oscillates ± 13 degrees to keep all wheels in ground contact. Long wheelbase and wide tread provide additional stability and ample tipping load for load-and-carry operation.



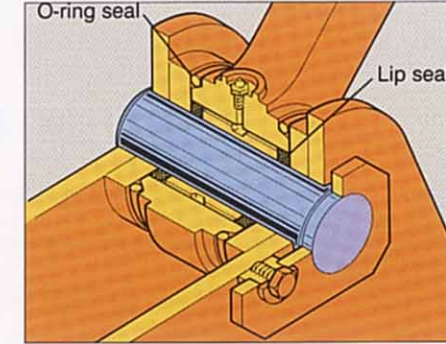
Rugged Main Frame

High-strength, welded box-beam construction for front and rear frames. Front and rear frames are jointed with hardened-steel pins and supported by roller bearings for the upper and needle bearings for the lower parts to improve reliability.



Inboard Wet Disc Brakes

Long life, adjustment-free wet disc brakes are packed in the final drive, efficiently keeps the brake discs cool for maximum durability.



Reduced Maintenance Time

Z-bar linkage reduces number of joint pins. All joint pins used have lip seals, and the bucket joint pins use dual sealing (lip seal and O-ring seal) for extended service life and reduced maintenance time.

Centralized Electrical System

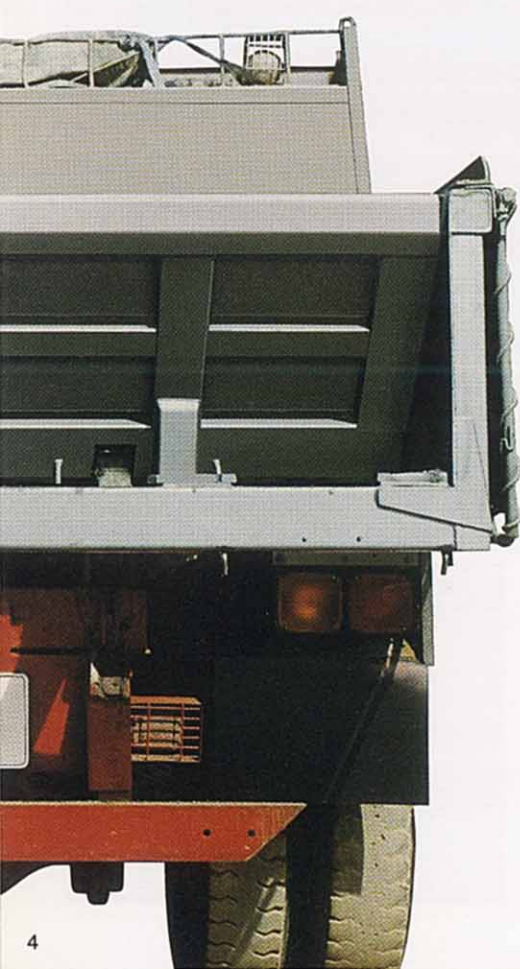
The electrical system has been designed to bring all main harnesses into one distribution center which provides a centralized serviceable location for many electrical components. Most electrical diagnostic work can be done in this one location.

Reliable Hydraulic/Electric Lines

ORS (O-ring seal) and water-proof electric connector ensure hydraulic/electric line reliability.

High-Speed Straight-Line Travel

Hitachi's original power steering mechanism, consisting of high-response priority valve* and orbit-roll, allows excellent high-speed straight-line travel and sharp turning. (*Diverts the oil flow to the steering circuit or the loader hydraulic circuit.)



Specifications

ENGINE

Model Isuzu 4BD1T
 Type Water-cooled, 4-cycle, 4-cylinder in-line, direct injection chamber type, turbo-charged diesel engine

Rated flywheel horsepower
 DIN* 6271, net 58.8 kW (80 PS) at 2 200 min⁻¹ (2 200 rpm)
 SAE**J1349, net 58.2 kW (78 HP) at 2 200 min⁻¹ (2 200 rpm)

(*DIN: Deutsche Industrie Norm (German Industrial Standards)
 (**SAE: Society of Automotive Engineers, USA)

Maximum torque 299 N·m (30.5 kgf·m, 221 lbf·ft) at 1 600 min⁻¹ (1 600 rpm)

Piston displacement 3.86 l (235 cu in)
 Bore and stroke 102 mm x 118 mm (4.0" x 4.6")
 Starting system 24 V/4.5 kW electric motor starting
 Batteries 2 x 12 V/64 AH
 Air cleaner Dry type air cleaner with evacuator valve and double elements

TRANSMISSION

HST (Hydrostatic drive system) with engine speed sensing system and 2-speed (high/low) powershift transmission for maximum productivity and minimum tire slippage. Modulating function assures shockless acceleration/deceleration and directional change without braking. Neutral start system prevents accidental starts.

Travel speeds with 16.9-24-10PR (L-2) tires:

	Forward	Reverse
Low speed range	0–12.0 km/h (7.5 mph)	0–12.0 km/h (7.5 mph)
High speed range	0–32.0 km/h (19.9 mph)	0–32.0 km/h (19.9 mph)

Low speed range: For digging and loading operations
 High speed range: For speedy job-to-job travel

AXLE AND FINAL DRIVE

4-wheel drive system. A semi-floating front axle is fixed to the front frame. Center-pin-supported, semi-floating rear axle provides total oscillation of ±13°. A spiral bevel gear for reduction and a single-reduction planetary gear on each wheel. Conventional differentials standard. Optional NoSPIN differential on front axle is recommended for slippery underfoot conditions.

BRAKES

Service brakes: Hydraulically boosted, inboard-mounted, wet disc brakes actuate all 4 wheels. 2 pedals provided: the right for service braking and the left for braking with inching traveling.
 Parking brake: Dry disc type, applied on front propeller shaft.

TIRES

Front and rear: 16.9-24-10PR (L-2)
 Rims: W15L-24

STEERING SYSTEM

Center-pivot-frame articulation. Full-hydraulic power steering. Articulation angle of 40° on each side for a minimum turning radius of 5 115 mm (16'9") measured at the outside corner of the bucket.

MAIN FRAME

Front and rear high-strength frames of welded box construction, linked by hardened steel pins and upper roller bearings and lower needle bearings.

FRONT-END ATTACHMENTS

Z-bar linkage provides superior breakout force and fast cycle times. Lift arm, linkage and bucket are made of high-tensile steel. All joint pins with dust seals for extended pin life and greasing intervals.

BUCKET CONTROLS

Lift arm: Positions Raise, Hold, Lower and Float. Automatic kickout at full lift height.
 Bucket: Positions Tilt, Hold and Dump. Automatic bucket positioner adjustable to desired loading angle. No visual spotting required.

Cycle times with rated load in bucket:
 Raise 5.3 sec
 Dump 0.9 sec
 Lower (empty bucket) 3.1 sec

HYDRAULIC SYSTEM

HST (HYDROSTATIC DRIVE SYSTEM)
 HST with 4-wheel drive, coupled with a 2-speed (high/low) powershift transmission.

Pump type 1 variable displacement axial piston pump
 Max. oil flow 154 l/min (40.7 US gpm, 33.9 lpm gpm)
 Relief valve setting 370 bar (370 kgf/cm², 5 260 psi)
 Motor type 1 variable displacement axial piston motor

HST charging pump 1 gear pump
 Max. oil flow 50.3 l/min (13.3 US gpm, 11.1 Imp gpm)
 Relief valve setting 30 bar (30 kgf/cm², 427 psi)

PUMP FOR LOADER AND STEERING
 Pump type 1 gear pump
 Max. oil flow 123 l/min (32.5 US gpm, 27.1 Imp gpm)
 Relief valve setting:
 Loader operations 210 bar (210 kgf/cm², 2 990 psi)
 Steering 175 bar (175 kgf/cm², 2 490 psi)

HYDRAULIC CYLINDERS

High-strength piston rods and tubes. Cylinder cushion mechanisms are provided for steering cylinders to absorb shocks when piston rods reach stroke ends.

Dimensions:

	Q'ty	Bore	Rod dia.
Lift arm	2	110 mm (4.3")	60 mm (2.4")
Bucket	1	110 mm (4.3")	60 mm (2.4")
Steering	2	60 mm (2.4")	35 mm (1.4")

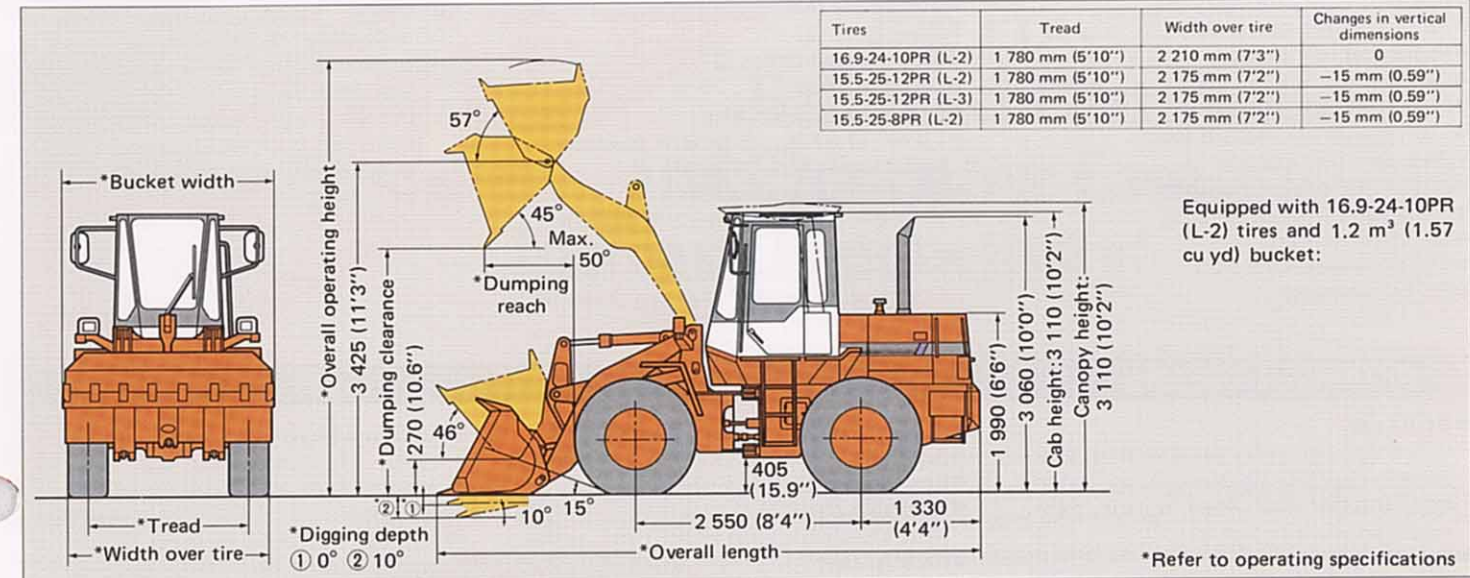
SERVICE REFILL CAPACITIES

	Liter	US gal	lpm gal
Fuel tank	120	31.7	26.4
Engine coolant	23.0	6.08	5.06
Engine oil	13.0	3.43	2.86
Transmission	5.5	1.45	1.21
Brake oil tank	0.28	0.074	0.062
Front axle	16.0	4.23	3.52
Rear axle	16.0	4.23	3.52
Hydraulic tank	60.0	15.9	13.2
Hydraulic system	70.0	18.5	15.4

OPERATING WEIGHT

Operating weight: 6 800 kg (15 000 lb), including rated capacity of lubricants, coolant, full fuel tank, 16.9-24-10PR (L-2) tires, 1.2 m³ (1.57 cu yd) capacity general-purpose bucket, canopy, operator and other standard equipments.

DIMENSIONS



SPECIFICATIONS

Bucket type	General purpose		Light material	
	With teeth	With cutting edges	With teeth	With cutting edges
Bucket capacity	1.2 m ³ (1.57 cu yd)		1.5 m ³ (1.96 cu yd)	
	1.0 m ³ (1.31 cu yd)		1.3 m ³ (1.70 cu yd)	
Dumping clearance at max. height and 45° dump angle	2 585 mm (8'6")	2 635 mm (8'8")	2 520 mm (8'3")	2 565 mm (8'5")
Reach at 2 130 mm (7'0") height and 45° dump angle	1 410 mm (4'8")	1 380 mm (4'6")	1 450 mm (4'9")	1 425 mm (4'8")
Reach at max. height and 45° dump angle	1 065 mm (3'6")	1 015 mm (3'4")	1 145 mm (3'9")	1 095 mm (3'7")
Reach with arm horizontal and bucket level	2 100 mm (6'11")	2 030 mm (6'8")	2 205 mm (7'3")	2 135 mm (7'0")
Digging depth	Bucket horizontal 100 mm (3.9")	95 mm (3.7")	100 mm (3.9")	95 mm (3.7")
	10° digging angle 275 mm (10.8")	260 mm (10.2")	295 mm (11.6")	275 mm (10.8")
Overall operating height	4 415 mm (14'6")	4 415 mm (14'6")	4 560 mm (15'0")	4 560 mm (15'0")
Overall length	Bucket on ground 6 000 mm (19'8")	5 930 mm (19'5")	6 105 mm (20'0")	6 035 mm (19'10")
	Bucket in carry position 5 980 mm (19'7")	5 920 mm (19'5")	6 050 mm (19'10")	5 995 mm (19'8")
Turning radius (outside corner of bucket carry position)	5 115 mm (16'9")	5 100 mm (16'9")	5 145 mm (16'11")	5 130 mm (16'10")
Static tipping load*	Straight 4 850 kg (10 700 lb)	4 780 kg (10 500 lb)	4 750 kg (10 500 lb)	4 675 kg (10 300 lb)
	Full 40° turn 4 200 kg (9 260 lb)	4 130 kg (9 110 lb)	4 100 kg (9 040 lb)	4 025 kg (8 870 lb)
Breakout force	64.7 kN (6 600 kgf, 14 600 lbf)	59.8 kN (6 100 kgf, 13 400 lbf)	57.3 kN (5 840 kgf, 12 900 lbf)	53.3 kN (5 440 kgf, 12 000 lbf)
Operating weight*	6 800 kg (15 000 lb)	6 850 kg (15 100 lb)	6 870 kg (15 100 lb)	6 920 kg (15 300 lb)

Notes: 1. All dimensions, weights and performance data based on SAE J732 FEB80 and J742 FEB85 Standards.
 2. Static tipping load and operating weight marked with * include 16.9-24-10PR(L-2) tires (no ballast) with lubricants, coolant, full fuel tank, canopy and operator. Machine stability and operating weight depend on tire size and other attachments. Compensate operating weight and static tipping load with weight changes listed below.

WEIGHT CHANGES

Tires and options	Change in operating weight	Change in tipping load	
		Straight	Full 40° turn
16.9-24-10PR (L-2)	0	0	0
15.5-25-12PR (L-2) tubeless tires	+69 kg (+152 lb)	+48 kg (+106 lb)	+42 kg (+93 lb)
15.5-25-12PR (L-3) tubeless tires	+132 kg (+291 lb)	+92 kg (+203 lb)	+82 kg (+181 lb)
15.5-25-8PR (L-2) tubeless tires	+43 kg (+95 lb)	+30 kg (+66 lb)	+26 kg (+57 lb)
ROPS cab in lieu of canopy	+519 kg (+1 140 lb)	+449 kg (+990 lb)	+429 kg (+946 lb)
Bucket teeth (removed)	-44 kg (-97 lb)	+56 kg (+123 lb)	+56 kg (+123 lb)
Bolt-on cutting edges (removed)	-100 kg (-220 lb)	+131 kg (+289 lb)	+131 kg (+289 lb)

STANDARD EQUIPMENT Standard equipment may vary by country, so please consult your Hitachi dealer for details.

- Engine
- Alternator (24 V-30 A)
- Dry type air cleaner (dual element)
- Powershift transmission (2 fwd/2 rev)
- Conventional differentials
- Dry disc type parking brake
- Full hydraulic power steering
- Front and rear fenders
- Canopy
- Rear working lights (2)
- Turn signals and hazard lamps
- Rearview side mirrors
- Automatic bucket positioner
- Automatic lift arm kickout
- Standard tool kit
- Electric starter (4.5 kW)
- Engine preheater
- Hydrostatic drive system
- 4-wheel drive system
- Wet disc type service brakes
- 16.9-24-10PR (L-2) tires
- Horn
- Adjustable seat
- Headlights (2)
- Stop and tail lamps (2)
- Drawbar hitch
- 2-spool hydraulic valve
- 1.2 m³ (1.57 cu yd) general purpose bucket (with bolt-on teeth)
- Monitoring/alarm system
 - Audible and visible warning system "Stop group"
 - Engine oil pressure, engine coolant temperature, HST charging pressure,

- brake oil level and parking brake.
- "Caution group"
- Engine coolant temperature, engine oil filter clogging alternator charge, air cleaner clogging and parking brake.
- Gauge and pilot lamps
 - Engine coolant temperature gauge, fuel level gauge, hourmeter, speedometer, turn signal pilot lamps, headlight pilot lamps, working light pilot lamp, and engine pre-heater pilot lamp.

OPTIONAL EQUIPMENT

- ROPS cab (front and rear windshield washers and wipers, cigarette lighter, ashtray, floor mat, interior rear view mirror, cab-mounted working lights)
- Cab pressurizer
- Suspension seat
- Air conditioner (factory option)
- Seat belt
- Emergency steering system
- Lockable covers (Not attachable with ROPS cab)
- Backup alarm
- Additional hydraulic equipments:
 - 3-spool hydraulic valve less 3rd spool control lever and 3rd spool ports plugged
 - 3-spool hydraulic valve kit (3-spool valve, control lever, hoses and pipings)

WORKING EQUIPMENT

- Loading bucket

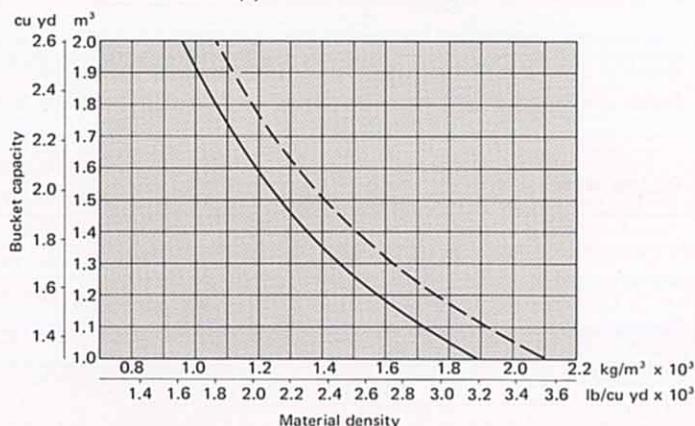
Bucket type	Bucket capacity*	Bucket width	Bucket weight
General purpose with bolt-on teeth	1.2 m ³ (1.57 cu yd)	2 350 mm (7'9")	580 kg (1 280 lb)
Light material with bolt-on teeth	1.5 m ³ (1.96 cu yd)	2 350 mm (7'9")	650 kg (1 430 lb)

*SAE heaped

- Excavation bucket: 1.0 m³ (1.31 cu yd)
- Multi purpose bucket: 1.0 m³ (1.31 cu yd)
- Cutting edges (Not applicable with bucket teeth)
- Logging equipment
- Dumping fork
- Lumber grapple
- Lumber fork
- Multi coupler
- Tires:
 - 15.5-25-12PR (L-2)
 - 15.5-25-12PR (L-3)
 - 15.5-25-8PR (L-2)

BUCKET SELECTION

- ROPS cab in lieu of canopy
- Standard canopy



This guide will help you in selecting proper bucket size for material density and loader configurations. However, specific bucket size should only be determined after adding or subtracting all the tipping load changes due to specifications.

These specifications are subject to change without notice. Illustrations may or may not include optional equipment and accessories, and all standard equipment.

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