

GRADALL® XL 3300R

RAIL MAINTENANCE MACHINE

When it comes to mobility just about anywhere, the Gradall Model XL 3300R Rail Maintenance Machine goes the extra mile. Operate it on rough terrain. On paved surfaces. Plus, this model has a Diversified rail gear for mobility on railroad tracks. It's the ideal multi-task solution for city commuter lines and railroads that need to maintain track side vegetation, build and repair crossings, clean up landslides or replace rails and ties.



SPECIFICATIONS

Upperstructure Engine

Deere 6068TF150 diesel, turbocharged, liquid cooled, 4 cycle, 6 cylinder, 414 cid (6.8 L) 4.19" bore x 5.00" stroke (106 mm x 127 mm) 170:1 compression ratio.

148 hp (110 kW) gross at 2,100 rpm, 138 hp (103 kW) net at 2,100 rpm. 443 ft-lb (600 Nm) gross torque at 1400 rpm.

Altitude capability: 10,000' (3,048 m). Derate 4% per 1,000' (305 m) above 10,000' (3,048 m).

Maximum slope: 45°

12 volt starter, 105 amp alternator, one SAE #C31-S 810 CCA battery, two-stage dry type air cleaner with centrifugal precleaner and safety element. Evacuator valve and service indicator, spin-on oil filter, spin-on fuel filter/water separator.

Fuel tank capacity: 67 gallons (253 L).

Hydraulic System

PUMPS

One load-sensing, axial piston pump; oil flow 0-75 GPM (0-283 L/min).

One gear pump (brake and steering) 9.5 GPM (36 L/min).

SYSTEM MONITOR

Electronic monitor in cab indicates low hydraulic fluid level, high hydraulic fluid temperature, and condition of hydraulic suction and return filters.

SYSTEM SPECIFICATIONS

Eight cylinders

- 2 boom hoist: 4.25" ID, 3.0" rod (108 mm x 76 mm), 23.4" (594 mm) stroke.
- 1 tool: 4.75" ID, 3.0" rod (121 mm x 76 mm), 18.9" (480 mm) stroke.
- 1 telescope: 3.5" ID, 2.559" rod (89 mm x 65 mm), 11' (3.34 m) stroke.
- 2 stabilizers: 3.75" ID, 2.56" rod (95 mm x 65 mm), 24" (610 mm) stroke.
- 2 single-acting axle oscillation cylinders: 4.0" ID, 4.0" rod (102 mm x 102 mm), 5.5" (140 mm) stroke.

Three hydraulic motors

Swing, 51 hp (38 kW); tilt, 18 hp (13 kW); propel motor, 113 hp (84 kW).

Operating pressures:

Hoist.....	4,900 psi	(33,784 kPa)
Tilt.....	2,050 psi	(14,138 kPa)
Swing.....	3,300 psi	(22,759 kPa)
Tool.....	4,900 psi	(33,784 kPa)
Telescope.....	4,900 psi	(33,784 kPa)
Propel.....	4,900 psi	(33,784 kPa)
Pilot System.....	500 psi	(3,448 kPa)
Braking and Steering.....	2,400 psi	(16,550 kPa)
Blade and Stabilizers.....	3,000 psi	(20,680 kPa)

Oil Capacity

Reservoir 35 gallons (133 L), system 55 gallons (209 L). Pressurized reservoir with visual oil level gauges.

Filtration System

10 micron return filter with magnet and 100 mesh suction strainer in reservoir.

Fin and tube-type oil cooler with thermal by-pass and relief valves.

Pressure-compensated, load-sensing valves with circuit reliefs in all circuits.

Controls

Two hydraulic joysticks (hoist & bucket, telescope & swing), one rocker switch (tilt) control upperstructure. Hydraulic joysticks mounted on arm pods, independently adjustable for individual operator comfort and convenience. Joysticks are self-centering; when controls are released, power for movement disengages and swing and tilt brake set automatically.

A tilting/telescoping steering column provides smoother, comfortable steering. Hydraulic foot pedal controls braking functions, giving smoother performance with infinite control. Travel speed is regulated with an electronic foot pedal control. A switch on the FWD/REV selector provides 1st/2nd gear selection. Independent rocker switches control stabilizers, axle oscillation, park brake, and hazard lights. Another switch on the column provides marker lights, high/low headlights, and direction indicators.

Engine Controls and Instrumentation

Key operated ignition/starter switch, throttle, hour meter and air cleaner condition indicator. Electronic monitor indicates fuel level, low battery charge, coolant level, hydraulic oil level, lube oil pressure, high coolant temperature, and engine rpm. Fuel saving auto idle feature sends engine rpm to idle when control circuits are in neutral for seven seconds.

Weight

Approximate working weight with 36" (914mm) excavating bucket, fuel tank half full, railroad guidewheels and outriggers 42,250 lb (19,164 kg).

Rated bucket breakout force:
19,240 lb (85.6 kN).

Rated boom force: 21,940 lb (97.6 kN).

Undercarriage

A full-time 4-wheel drive transfer case delivers power from the hydraulic drive motor to the drive axles. Both axles are equipped with internal wet-disc type service brakes. The steering axle is fitted with oscillation lock cylinders. Two stabilizer arms provide a solid digging platform for increased stability. A blade attachment for finish grading (as shown) is one of many options available for specific applications.

Maximum turning radius:
21'3" (6.46 m).

Undercarriage Drive

Variable displacement high torque piston motor powers the 2-speed power shift transmission. Speed mode selection can also be done while moving. Electronically operated travel alarm signals excavator movement.

Travel speed on flat, level surface—mph (kmh/hr):

	Creep Mode	Standard Mode
First Gear	1.0 mph (1.6 kmh)	3.2 mph (5.2 kmh)
Second Gear	5.0 mph (8.1 kmh)	12.4 mph (20.0 kmh)

Operator Cab

All-weather cab with tinted safety glass windows, skylight, acoustical lining, four-way adjustable operator's seat, filtered fresh air heater and defroster. Front window slides to overhead storage. Rearview mirrors on right and left sides. Standard equipment on the XL 3300R includes operator's seat belt, windshield wiper and washer, high/low beam headlights, parking lights, brake lights, 4-way hazard lights, turn indicator lights, and swing lights.

Swing

Priority swing circuit with axial piston motor. Planetary transmission.

Swing speed: 9.5 rpm.

Swing Brake

Automatic spring-set/hydraulic release wet disc parking brake. Dynamic braking is provided by the hydraulic system.

GRADALL Model XL 3300R Excavator Rated Lift Capacity Over End or Side on Tires, Axle Oscillation Cylinders Locked: LB (KG)

LOAD POINT HEIGHT		LOAD RADIUS				
		MIN. RADIUS	10' (3m)	15' (4.6m)	20' (6.1m)	MAX. RADIUS
Above Ground Level	15' (4.6m)	9954 @ 11' 3" (4515 @ 3.4m)		7238 (3283)	5029 (2281)	4239 @ 22' 7" (1923 @ 6.9m)
	10' (3m)	10491 @ 12' 10" (4759 @ 3.9m)		8497 (3854)	5405 (2452)	3962 @ 24' 0" (1797 @ 7.3m)
	BOOM LEVEL (7'9")	10344 @ 13' 3" (4692 @ 4.0m)		8495 (3853)	5360 (2431)	3869 @ 24' 3" (1755 @ 7.4m)
	5' (1.5m)	9860 @ 13' 5" (4472 @ 4.1m)		8285 (3758)	5255 (2384)	3777 @ 24' 4" (1713 @ 7.4m)
At Ground Level		9905 @ 11' 10" (4493 @ 3.6m)		7901 (3584)	5085 (2307)	3884 @ 23' 6" (1762 @ 7.2m)
Below Ground Level	5' (1.5m)	5508 @ 6' 7" (2498 @ 2.0m)	7326 (3323)	6337 (2874)	4883 (2215)	4380 @ 21' 6" (1987 @ 6.6m)
	10' (3m)	3926 @ 7' 11" (1781 @ 2.4m)	4774 (2165)	4822 (2187)		4416 @ 17' 10" (2003 @ 5.4m)

NOTE: The above loads are in compliance with SAE Standard J1097 NOV88. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

All loads shown that are not shaded are limited by hydraulic lift capacity. All shaded loads are limited by stability.

The rated lift capacity is based on the machine being equipped with 6,200 lb (2,813 kg) counterweight, standard boom and no bucket. Adjust the listed rated capacities according to each bucket as follows:

- 8035-6004 60" (1.5 m) ditching, subtract 757 lb (343 kg)
- 8035-6014 24" (610 mm) excavating, subtract 579 lb (263 kg)
- 8035-6006 30" (762 mm) excavating, subtract 639 lb (290 kg)
- 8035-6002 36" (914 mm) excavating, subtract 696 lb (316 kg)
- 8035-6003 30" (762 mm) pavement removal, subtract 992 lb (451 kg)

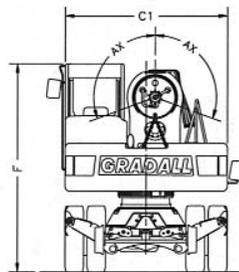
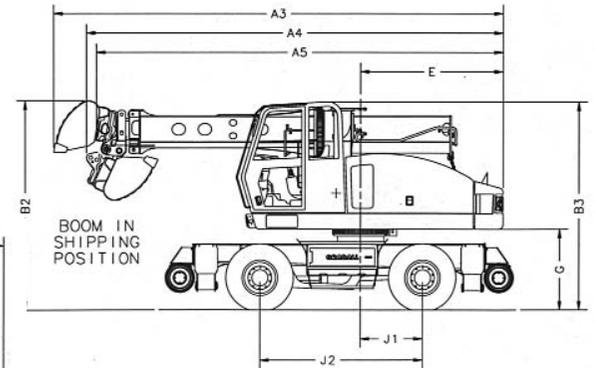
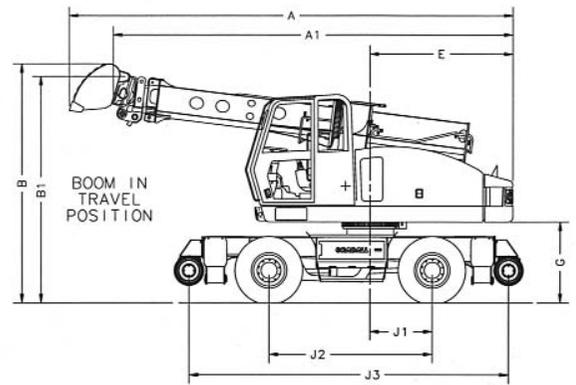
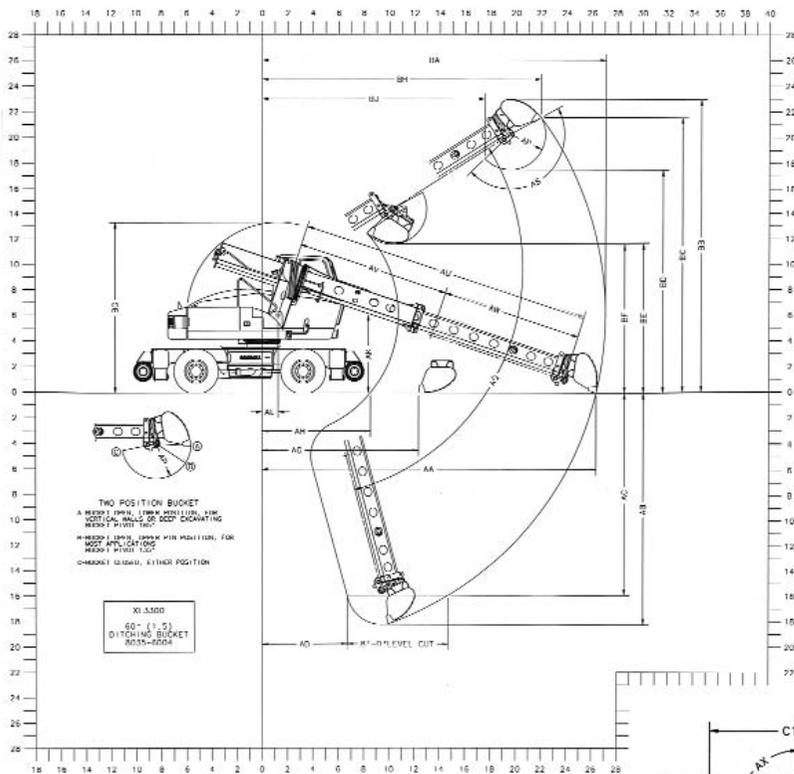
NOTE: Bucket adjustment values are 87% of the actual bucket weights. The load point is located on the bucket pivot point, including loads listed for maximum radius.

GRADALL Model XL 3300R Excavator Rated Lift Capacity Over End or Side on Tires & Outriggers, Axle Oscillation Cylinders Locked: LB (KG)

LOAD POINT HEIGHT		LOAD RADIUS				
		MIN. RADIUS	10' (3m)	15' (4.6m)	20' (6.1m)	MAX. RADIUS
Above Ground Level	15' (4.6m)	9954 @ 11' 3" (4515 @ 3.4m)		7238 (3283)	5029 (2281)	4239 @ 22' 7" (1923 @ 6.9m)
	10' (3m)	10491 @ 12' 10" (4759 @ 3.9m)		8497 (3854)	5652 (2564)	4256 @ 24' 0" (1930 @ 7.3m)
	BOOM LEVEL (7'9")	10384 @ 13' 3" (4710 @ 4.0m)		8747 (3968)	5778 (2621)	4274 @ 24' 3" (1939 @ 7.4m)
	5' (1.5m)	10266 @ 13' 5" (4657 @ 4.1m)		8836 (4008)	5872 (2663)	4289 @ 24' 4" (1945 @ 7.4m)
At Ground Level		9905 @ 11' 10" (4493 @ 3.6m)		7901 (3584)	5570 (2527)	4471 @ 23' 6" (2004 @ 7.2m)
Below Ground Level	5' (1.5m)	5508 @ 6' 7" (2498 @ 2.0m)	7326 (3323)	6337 (2874)	4883 (2215)	4489 @ 21' 6" (2036 @ 6.6m)
	10' (3m)	3926 @ 7' 11" (1781 @ 2.4m)	4774 (2165)	4822 (2187)		4416 @ 17' 10" (2003 @ 5.4m)

Do not attempt to lift or hold any load greater than these rated values at specified load radii and heights. The weight of slings and any auxiliary lifting devices must be deducted from the rated load to determine the net load that may be lifted.

NOTE: All rated loads are based on the machine being stationary and level on a firm supporting surface. For safe working loads, the user must make due allowance for his particular job conditions, such as soft or uneven ground, out of level conditions, side loads, hazardous conditions, experience of personnel, etc. The operator and other personnel must fully acquaint themselves with the Operator's Manual furnished by the manufacturer before operating this machine, and rules for safe operation of equipment must be adhered to at all times.



Dimensions

Shown with 8035-6004 60" (1.5m) ditching bucket

- A** Overall length with bucket open (travel position): 23'2" (7)
- A1** Overall length without bucket (travel position): 20'10" (6.3)
- A3** Overall length with bucket open (shipment position): 23'6" (7.2)
- A4** Overall length with bucket closed (shipment position): 21'10" (6.6)
- A5** Overall length without bucket (shipment position): 21'3" (6.4)
- B** Overall height with bucket open: 12'5" (3.8)
- B1** Overall height without bucket (travel position): 11'9" (3.6)
- B2** Overall height with bucket open (shipment position): 10'10" (3.3)
- B3** Overall height without bucket (shipment position): 10'10" (3.3)
- C1** Width of upperstructure: 8'6" (2.6)
- E** Swing clearance, rear of upperstructure: 7'6" (2.3)
- F** Top of cab to groundline: 10'10" (3.3)
- G** Clearance, upperstructure to groundline: 4'2" (1.3)
- J1** Axis of rotation to centerline of fixed axle: 3'3" (1)
- J2** Wheelbase of undercarriage: 8'6" (2.6)
- J3** Axis of rotation to front of undercarriage: 7'0" (2.1)
- AA** Maximum radius at groundline (165° pivot): 26'5" (8)
- AB** Maximum digging depth (165° pivot): 18'4" (5.6)
- AC** Maximum depth for 8' level cut: 16'0" (4.8)
- AD** Minimum radius for 8' level cut at depth *AC*: 6'9" (2)
- AG** Minimum level cut radius with bucket flat on groundline: 12'5" (3.8)
- AH** Minimum radius at groundline: 8'6" (2.6)
- AK** Boom pivot to groundline: 6'1" (1.8)
- AL** Boom pivot to axis of rotation: 1'3" (381 mm)
- AP** Bucket tooth radius: 2'9" (838 mm)
- AQ** Boom pivot angle: 32° Up and 75° Down
- AS** Bucket pivot angle: 135° and 165° (See AA and AB)
- AU** Maximum telescoping boom length (boom pivot to bucket pivot): 23'0" (7.0)
- AV** Minimum telescoping boom length (boom pivot to bucket pivot): 12'0" (3.6)
- AW** Telescoping boom travel: 11'0" (3.3)
- AX** Bucket tilt angle (both sides of center): 110°
- BA** Maximum radius of working equipment (165° pivot): 27'1" (8.2)
- BB** Maximum height of working equipment: 22'11" (6.9)
- BC** Maximum bucket tooth height: 21'6" (6.5)
- BD** Minimum clearance of bucket teeth with bucket pivot at maximum height: 17'6" (5.3)
- BE** Minimum clearance of fully curled bucket at maximum boom height (165° pivot): 11'9" (3.6)
- BF** Minimum clearance of bucket teeth at maximum boom height: 11'8" (3.6)
- BG** Maximum height of working equipment with bucket below groundline: 13'4" (4.1)
- BH** Radius of bucket teeth at maximum height (165° pivot): 22'0" (6.7)
- BJ** Minimum radius of bucket teeth at maximum bucket pivot height (165° pivot): 17'7" (5.3)

Transport dimensions without attachment:

- Length: 21'3" (6.4)
- Height: 10'10" (3.3)
- Width: 8'6" (2.6)

Metric units are meters (m) unless noted

Railgear

RW1630G WITH DOUBLE OUTRIGGER BOXES

Capacity

Axles rated at 40,000 lbs.

Gauge

56 1/2 inch Std.

Railgear

Sideshift Action allows quick and easy deployment. Attached to Outriggers/Extended Frame Mechanical Pin-offs in Stowed and Rail Positions. Slotted Links provide axle "droop" to prevent lifting a railwheel in super-elevated curves and crossings.

Brakes

Optional External Cobra brakes. (air activated)

Axles

Rear Axle is a 3-1/4 inch diameter 110,000 psi yield steel with 5 inch tapered roller bearings.



Optional Equipment

Worklights: 2 spotlights on boom cradle, 3 floodlights on cab, 2 floodlights on left front shrouding.

H.I.D. worklight package also available.

Vandalism protection kit: Lexan cab windows, locking reservoir cap and sight gauge cover; locking engine hood, fuel cap and battery box.

Spark arrestor.

Revolving beacon.
Cold start package for engine: includes ether start kit and additional battery.

Air conditioning.

Inside hose trough with additional hosing and piping for pneumatic or hydraulic powered attachments.

Blade attachment.

Front outrigger option.

GRADALL®

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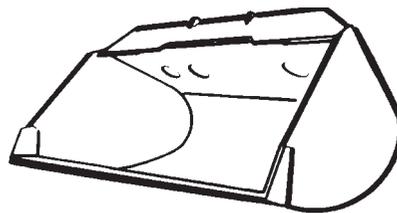


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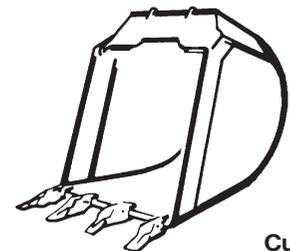
Attachments

Buckets fabricated of steel plate, with high strength, low alloy cutting edges and wear strips. Standard attachments available for wide range of applications. Capacities shown are in heaped cu. yd.



8035-6004	60" (1.5 m)		
Constant radius			
ditching bucket		.80	.61

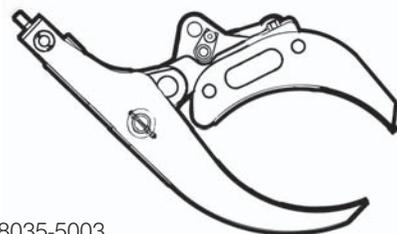
Cu.
yd. m³



8035-6014	24" (610 mm)		
Excavating bucket		.38	.29
8035-6006	30" (762 mm)		
Excavating bucket		.57	.43
8035-6002	36" (914 mm)		
Excavating bucket*		.68	.52

Cu.
yd. m³

*This bucket is the only bucket certified for road travel.



8035-5003
Fixed thumb grapple

It is Gradall Policy to continually improve its products. Therefore, designs, materials and specifications are subject to change without notice and without incurring any liability on units already sold. Units pictured are equipped with optional equipment. See applicable specifications and price lists for optional equipment.