

GRADALL®

D154

CROSSOVER HYDRAULIC EXCAVATOR



D154



SPECIFICATIONS

Undercarriage

4 x 4

Wheelbase: 190" (4.83 m)

Width 102" (2.6 m)

Gross Vehicle Axle Weight Rating:

36,200 lb (16,420 kg)

Front Axles:

13,200 lb (5,987 kg) rating

Rear Axle:

23,000 lb (10,433 kg) rating 6.14 ratio, single reduction with driver controlled differential lock.

Suspension:

Front: leaf springs with automatic lock-out cylinders.

Rear: Solid mount.

Brakes:

Front: Meritor "Q" Series Cam-Master.

Size: 16.5" x 5" (419 mm x 127 mm).

ABS Brakes. Automatic Slack Adjusters.

Rear: Meritor "P" Series Cam-Master.

Size: 16.5" x 7" (419 mm x 178 mm).

Automatic Slack Adjusters.

Spring brake system incorporates emergency and parking brakes on the rear axle.

Wheels:

Hub piloted disc 10-stud, 11.25" (286 mm) bolt circle.

Tires:

Front: M/S11R22.5 16-ply mud and snow traction tread.

Rear: M/S11R22.5 16-ply mud and snow traction tread.

Steering:

Integral hydraulic power steering.

Standard Chassis Equipment

Halogen headlights, tail lights, back-up lights and alarm, stoplights, identification lights front and rear, directional lights, 4-way hazard lights. Front tow hooks, desiccant type air dryer with automatic purge valve.

Engine

Cummins ISB 6.7. 660 ft lb Torque @ 1600 RPM. 250 HP @ 2300 RPM

Intake: Electric grid air warmer.

Air Filter: 2-stage dry type with safety element, ejector valve and service indicator.

Electrical System: 12 volt, 160 amp alternator with integral voltage regulator. 2 SAE Group 31 1900 CCA batteries.

Fuel Tank Capacity: 100 gal (378 L)

DEF Tank Capacity: 13 gal (49 L)

Transmission: Allison 3500 RDS automatic.

Gear Speeds (with 11R22.5 tires):

Gear	1	2	3	4	5
MPH	10.6	21.7	31.6	48.7	55.0
Km/hr	(17.0)	(34.9)	(50.9)	(78.4)	(88.5)

Gear	REV
MPH	9.74
Km/hr	(15.2)

Chassis Cab

Two-person cab. Sun visor. Gauges for oil pressure, coolant temperature, air tank pressures, fuel level, DEF level, voltmeter, speedometer with odometer, tachometer, hour meter. Engine and transmission monitor lights. Engine shutdown controlled by engine electronics. Indicator lights and controls for rear axle differential lock. Park brake control. Tinted safety glass. Roll up and down windows. Instrument panel lights. Windshield wiper/washer, West Coast style mirror system with plane and convex mirrors. Fresh air heater and defroster. Thermostatically controlled heater. Dome light. Air suspension seat with seat belt. Key ignition switch with neutral start.

Hydraulic System

PUMPS

One load-sensing bent axis piston pump; 0-58 GPM (0-219 L/min) total.

SYSTEM SPECIFICATIONS

Four Double Acting Cylinders

- 2 hoist cylinders: 3.25" bore x 2.25" rod x 28.5" stroke (83 mm x 57 mm x 724 mm).
- 1 tool cylinder: 4.5" bore x 2.5" rod x 18.88" stroke (114 mm x 63.5 mm x 479 mm).
- 1 boom cylinder: 3.25" bore x 2.25" rod x 123" stroke (83 mm x 57 mm x 3124 mm).

Hydraulic Motor

Swing, 51 Hp (38kW); tilt, 21 Hp (16kW).

Operating Pressures:

Hoist.....	3,800 psi (262 BAR)
Tilt.....	2,500 psi (172 BAR)
Swing.....	3,800 psi (262 BAR)
Tool.....	3,800 psi (262 BAR)
Telescope.....	3,800 psi (262 BAR)
Pilot system.....	550 psi (38 BAR)

Oil Capacity

Reservoir 62 gallons (235 L), system 68 gallons (235 L). Pressurized reservoir with visual oil level gauge.

Filtration System

5 micron return filter. 10 micron pilot filter. Fin and tube-type oil cooler with thermostatically controlled cooling fan. Pressure-compensated, load-sensing valves with circuit reliefs in all circuits.

Upperstructure Cab

All-weather cab isolated from frame on rubber mounts. Tinted safety glass windows, skylight, acoustical lining, four-way adjustable operator's seat, dome light, filtered air heater and defroster, A/C, and AM/FM Radio.

The heat source is provided by a fast response, closed circuit hydraulic heater with 20,000 BTU/Hr. capacity.

Front window slides to overhead storage. Rearview mirrors on right and left sides of the machine. Windshield wiper and washer.

Remote Control

Upperstructure powered by chassis hydraulics through PTO. Travel and brake pedals in the upperstructure cab. Steering controlled with left hand joystick. Digging brakes and front axle lockout cylinders set automatically with travel pedal in neutral. Parking brakes controlled by toggle.

Electrically operated alarm mounted on undercarriage signal remote control movement in either direction, reverse movement when driven from undercarriage cab.

Upperstructure Controls

Two electronic joysticks control (hoist, bucket, telescope and swing), one rocker switch (tilt) control. Joysticks are mounted on arm pods that are adjustable for individual operator comfort and convenience. Quick change joystick pattern using interactive display.

Two foot pedals for remote control of undercarriage travel and brakes. Steering is handled with a rocker switch on top of the left hand joystick.

Joysticks and pedals are self-centering; when controls are released, power for movement disengages and swing and travel brakes set automatically.

System Monitor

Top selector buttons include: joystick pattern, hour meter and indicator lamps.

Bottom selector buttons include: engine speed control, auto idle select, A/C on select and heater temperature control.

The display shows as follows: park brake, low air brake pressure, malfunction indicator lamp (MIL), hydraulic oil level warning, hydraulic oil filter warning, engine stop lamp, amber warning lamp (engine), wait to start lamp, diesel particulate filter lamp, high exhaust system temperature, engine speed, fuel level, DEF level, transmission gear request, transmission gear status, transmission oil temp, hydraulic oil temp, mode status (travel/remote), PTO engaged, check transmission lamp and cab blower fan.

Swing

Priority swing circuit with axial piston motor. Planetary transmission.

Swing speed: 8 RPM.

Swing Brake

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

GRADALL Model D154 4x4 Lift Capacity Over Side or Rear - LB. (kg)

LOAD POINT HEIGHT		LOAD RADIUS						
		15' (4.6 m)		20' (6.1 m)		Maximum radius		
		Over End	Over Side	Over End	Over Side		Over End	Over Side
ABOVE GROUND LEVEL	19'1" (5.8 m)					19'0" (5.8 m)	3000 (1360)	3000 (1360)
	15'0" (4.6 m)	4660 (2115)	4660 (2115)	3180 (1440)	3180 (1440)	21'5" (6.5 m)	2880 (1305)	2880 (1305)
	10'0" (3.0 m)	5390 (2445)	5390 (2445)	3530 (1600)	3530 (1600)	22'9" (6.9 m)	2880 (1305)	2880 (1305)
	BOOM LEVEL 8'8" (2.7 m)	5490 (2490)	5490 (2490)	3580 (1625)	3580 (1625)	22'11" (7 m)	2885 (1310)	2885 (1310)
	5'0" (1.5 m)	5480 (2485)	5480 (2485)	3615 (1640)	3615 (1640)	23'0" (7 m)	2905 (1320)	2905 (1320)
AT GROUND LEVEL		4760 (2160)	4760 (2160)	3365 (1525)	3365 (1525)	25'0" (7.6 m)	2950 (1340)	2950 (1340)
BELOW GROUND LEVEL	5'0" (1.5 m)	3690 (1675)	3690 (1675)			19'7" (6 m)	2955 (1340)	2955 (1340)
	10'0" (3.0 m)	2695 (1220)	2695 (1220)			15'1" (4.6 m)	2690 (1220)	2690 (1220)
	10'9" (3.5 m)					14'2" (4.3 m)	2580 (1170)	2580 (1170)

NOTE: The above loads are in compliance with the SAE standard J1097 DEC2005. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

The rated lift capacity is based on the machine being equipped with counterweight, standard boom, standard tires, no auxiliary hydraulics and no bucket.

Adjust the listed rated capacities by subtracting the value for bucket/attachment used:

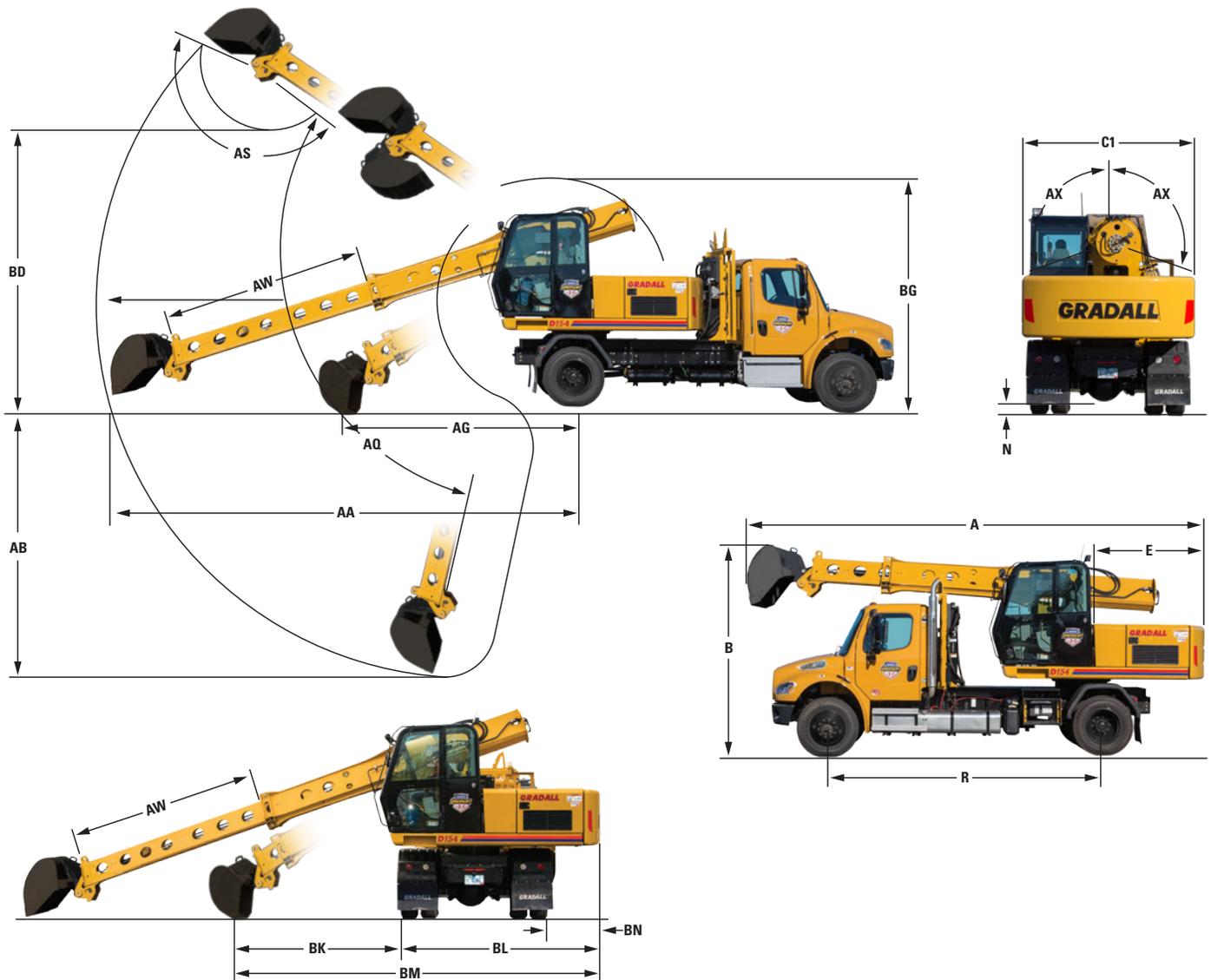
82106006 60" (1.5 m) Ditching - 789 lbs (358 kg)
82156008 36" (914 mm) Excavating - 786 lbs (357 kg)

NOTE: Bucket adjustment values are 87% of the actual bucket weights.

The load point is located on the bucket pivot point, including load listed for maximum radius.

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 devices must be deducted from the rated load to determine the net load that may be lifted.

ATTENTION: 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 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. Rules for safe operation of equipment must be adhered to at all times.



Shown with 8215-6006 60" (1.52 m) ditching bucket

4 x 4

A	22'0" (6.7 m)	Overall length (boom in rack) with bucket
B	12'7" (3.8 m)	Overall height (boom in rack) with bucket
C1	8'6" (2.6 m)	Width of upperstructure
E	6'5" (2.0 m)	Swing clearance, rear of upperstructure
N	10" (254 mm)	Ground clearance (per SAE J1234)
R	15'10" (4.8 m)	Wheel base
AA	25'0" (7.6 m)	Maximum radius at ground line (165° pivot)
AB	12'11" (3.9 m)	Maximum digging depth (165° pivot)
AG	11'0" (3.4 m)	Minimum level cut radius with bucket flat on ground line
AQ	30° Up & 60° Down	Boom pivot angle
AS	165°	Bucket pivot angle
AW	10'3" (3.1 m)	Telescoping boom travel
AX	110°	Bucket tilt angle (both sides of center)
BD	16'10" (5.1 m)	Minimum clearance of bucket teeth, with bucket pivot at maximum height

4 x 4

BG	14'8" (4.5 m)	Maximum height of working equipment with bucket below ground line
BK	6'20" (2.1 m)	Minimum bucket cleanup
BL	10'8" (3.3 m)	Swing lane clearance
BM	17'6" (5.3 m)	Minimum machine swing radius at ground level
BN	30" (762 mm)	Passenger side swing clearance

Rated boom force:

16,387 lb (72.9 kN)

Rated bucket breakout force:

11,400 lb (50.7 kN)

Weight:

Approximate working weight, including a 60" (1.54 m) bucket, fuel tank half full.
4x4: 34,500 lb (15,650 kg)

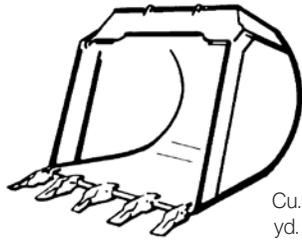
Specifications subject to change without notice.

Optional Equipment

- Set of five working lights
- Passenger side door step
- Auxiliary hydraulics
- Rear step

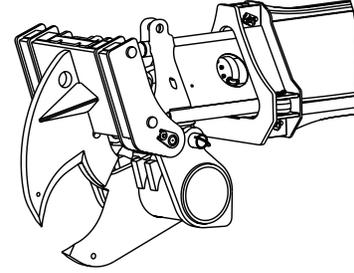
Attachments

Buckets fabricated of steel plate, with high strength, low alloy cutting edges and wear strips. Standard attachments available for wide range of applications.



8215-6008 36" (914 mm)
Excavating bucket

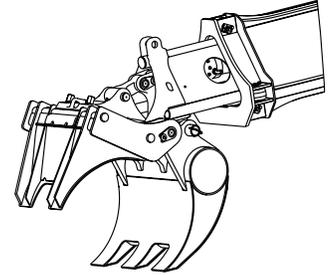
	Cu.	
	yd.	m ³
5/8		0.54



8215-5004 Tree limb shear attachment



8215-6004 24" (0.610 m)
Pavement removal bucket



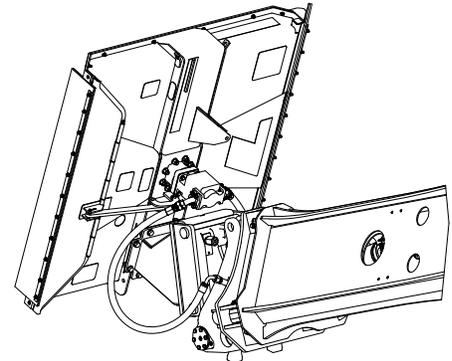
8215-5003 Fixed thumb grapple



8215-6006 60" (1.52 m)
Ditching bucket

8215-5001 60" (1.52 m)
Ditching bucket w/ bolt on edge

Cu.
yd. m³



8215-5005 50" (1.27 m)
Rotary Mower

8215-5006 40" (1.02 m)
Flail Mower

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 shown may have optional equipment.

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