

# Grader

6x4

G140 **ECO**

Stage IIIA Certified



**BELL**

# G140 ECO SPECIFICATIONS

ENGINE	6x4
MANUFACTURER AND MODEL	Cummins QSB6.7
EMISSIONS LEVEL	Stage 3A
NUMBER OF CYLINDERS	6
DISPLACEMENT	6,7 L (409 cu. in.)
ENGINE OUTPUT - Nett	148 kW (198 hp)
PEAK ENGINE TORQUE	960 Nm (706 lb.ft) @ 1 500 rpm
TORQUE RISE	22%
NET ENGINE POWER	
Gear 1	135 kW (181 hp)
Gear 2	136 kW (182 hp)
Gear 3	136 kW (182 hp)
Gear 4	138 kW (185 hp)
Gear 5	148 kW (198 hp)
Gear 6	148 kW (198 hp)
Reverse Gear 1	148 kW (198 hp)
Reverse Gear 2	148 kW (198 hp)
Reverse Gear 3	148 kW (198 hp)

DRIVETRAIN	6x4
MANUFACTURER & MODEL	ZF 6WG190
TRANSMISSION TYPE	Automatic Powershift
NUMBER OF SPEEDS: Forward	6
NUMBER OF SPEEDS: Reverse	3
FRONT AXLE	Heavy duty welded fabrication with integrated lean bar lock
FINAL DRIVES	Inboard-mounted planetary reduction, sealed in cooled, filtered oil.
BRAKES	Foot-controlled, hydraulically operated, multiple wet-disc brakes sealed in pressurized, cooled & filtered oil. Both independent systems effective on all 4 tandem wheels.
PRIMARY AND SECONDARY BRAKES	Hydraulically actuated, inboard of tandem pivot, self-adjusting, sealed in cooled and filtered oil, multi-disc (ISO 3450 compliant).
PARK BRAKE	Automatically spring applied, hydraulically released disc brake (ISO 3450).
FRONT AXLE OSCILLATION (Total)	32 deg.
FRONT WHEEL LEAN	20 deg.
DIFFERENTIAL	Spiral bevel gear system, hydraulically actuated with a clutch-type mechanism, allowing differential lock engagement while the machine is in motion. It can be applied in both manual and automatic differential lock modes.
TANDEM AXLE OSCILLATION (Total)	30 deg.
STEERING	The motor grader features hydraulic frame articulation for enhanced maneuverability and productivity, while crab steering minimizes side drift, positions tandems on stable ground, and improves side-slope stability
TYRE SIZE - Standard	14.00R24
SERVICE BRAKE TYPE	Multiple Wet Discs
SERVICE BRAKE ACTUATION	Hydraulic
GROUND CLEARANCE FRONT AXLE	546 mm (21.5 in.)

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PERFORMANCE	6x4
SPEED	
Forward Gear 1	5.1 kph (3 mph)
Forward Gear 2	7.9 kph (5 mph)
Forward Gear 3	12.8 kph (8 mph)
Forward Gear 4	19.6 kph (12 mph)
Forward Gear 5	30.2 kph (19 mph)
Forward Gear 6	45 kph (28 mph)
Reverse Gear 1	5.4 kph (3 mph)
Reverse Gear 2	13.5 kph (8 mph)
Reverse Gear 3	31.8 kph (20 mph)
Top Speed Forward	45 kph (28 mph)
Top Speed Reverse	31.8 kph (20 mph)

HYDRAULICS	6x4
TYPE	Variable displacement axial piston pump
PUMP DISPLACEMENT	100 cc / rev
PUMP FLOW, L / min (US-Gallons / min)	220 L / min (58 gal / min)
RELIEF PRESSURE	18 961 kPa (2 750 Psi)

KINEMATICS	6x4
CIRCLE SIDE SHIFT	789 mm (31 in.)
FRAME CIRCLE DIAMETER	1 500 mm (59 in.)
CIRCLE DRIVE	Hydraulic geroller motor driving a reduction worm box with overload wetplate clutch.
CIRCLE TYPE	Precision Circle: Sealed and lubricated slewing bearing, requiring no adjustment. Mounted between the drawbar and circleframe, which are welded and machined structures.
CIRCLE ROTATION	360 deg.
STEERING ANGLE, DEG	48 deg.
TURNING RADIUS - Minimum	7,22 m (23 ft. 8 in.)
FRAME ARTICULATION (each way)	22 deg.



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CAPACITIES	6x4
FUEL TANK (Refilling capacity)	400 L (106 US gal.)
HYDRAULIC TANK (Refilling Capacity)	68,75 L (18 US gal.)
COOLING SYSTEM	35 L (9 US gal.)
ENGINE OIL WITH FILTER	15 L (4 US gal.)
TRANSMISSION FLUID	33 L (9 US gal.)
DIFF HOUSING	32 L (8 US gal.)
TANDEM HOUSINGS	158 L (42 US gal.)
CIRCLE GEARBOX	5 L (1 US gal.)

MOULDBOARD / BLADE	6x4
DESCRIPTION	High strength welded construction, using wear resistant high carbon steel materials. Underlays/overlays & cutting edges can be exchanged left to right. Mouldboard bronze guides are easily replaceable and adjustable for precision.
WIDTH - Mouldboard	3 658 mm (12 ft. 0 in.)
MOULDBOARD HEIGHT	610 mm (24 in.)
THICKNESS - Mouldboard	20/25 mm combination
MOULDBOARD SIDESHIFT - Right	685,5 mm (12 ft. 27 in.)
MOULDBOARD SIDESHIFT - Left	685,5 mm (12 ft. 27 in.)
SHOULDER REACH	1 978 mm (6 ft. 5 in.)
HYDRAULIC BLADE TIP - Forward	42 deg.
HYDRAULIC BLADE TIP - Rearward	5 deg.
MOULDBOARD - Lift Above Ground	490 mm (19.3 in.)
MOULDBOARD ARC RADIUS	426 mm (16.8 in.)
THROAT CLEARANCE	111 mm (4.4 in.)
BANK ANGLE	90 deg.
DRAWBAR (DRAFT FRAME) Description	Welded box construction machined for flatness with variable height double ball-and-socket pivot connection
BLADE DOWN FORCE AT MAX WEIGHT	12 011 kg (26 480 lbs)
BLADE DOWN FORCE AT NORMAL WEIGHT	10 249 kg (22 595 lbs)
BLADE DOWN FORCE AT BASE WEIGHT	8 343 kg (18 393 lbs)
BLADE PULL AT MAX WEIGHT	14 637 kg (32 270 lbs)
BLADE PULL AT NORMAL WEIGHT	13 530 kg (29 829 lbs)
BLADE PULL AT BASE WEIGHT	11 947 kg (26 338 lbs)

CUTTING EDGE	6x4
DESCRIPTION	Through hardened Boron steel edge
THICKNESS	19 mm (0.7 in.)
WIDTH	203 mm (8 in.)

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ELECTRICAL	6x4
SYSTEM VOLTAGE	24 V
NUMBER OF BATTERIES	2
BATTERY CAPACITY	950 CCA
RESERVE CAPACITY	190 min.
AMP HOUR RATING	105 amp-hour
ALTERNATOR RATING	120 amp
NUMBER OF LED WORKLIGHTS	
Grading Option	4
Delux Option	12
Engine Bay - Standard	3

WEIGHTS	6x4
GROSS VEHICLE WEIGHT - BASE - Front Axle	5008 kg (11 040 lbs)
GROSS VEHICLE WEIGHT - BASE - Rear Axle	13 173 kg (29 041 lbs)
OPERATING WEIGHT	18 181 kg (40 082 lbs)
GROSS VEHICLE WEIGHT - TYPICAL - Front Axle	5 513 kg (12 154 lbs)
GROSS VEHICLE WEIGHT - TYPICAL - Rear Axle	15 033 kg (33 142 lbs)
WEIGHT WITH PUSH BLOCK & RIPPER	20 546 kg (45 296 lbs)
GROSS VEHICLE WEIGHT - Maximum - Front Axle	6 536 kg (14 410 lbs)
GROSS VEHICLE WEIGHT - Maximum - Rear Axle	16 264 kg (35 856 lbs)
OPERATING WEIGHT - MAX	22 800 kg (50 265 lbs)

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MID SCARIFIER	6x4
TYPE	Radial arm linkage with maintenance free bearings and underslung lift cylinder and hydraulic float. V-type scarifier beam with 3 pitch angle positions.
WIDTH OF CUT	1 188 mm (46.8 in.)
NUMBER OF SHANKS/TEETH	11
LIFT ABOVE GROUND	300 mm ( 11,8 in.)
MAX DEPTH	241 mm ( 9,5 in.)
SHANK SPACING	114 mm ( 4,5 in.)
SHANK SIZE	27.5 x 78 mm (1 x 3 in.)

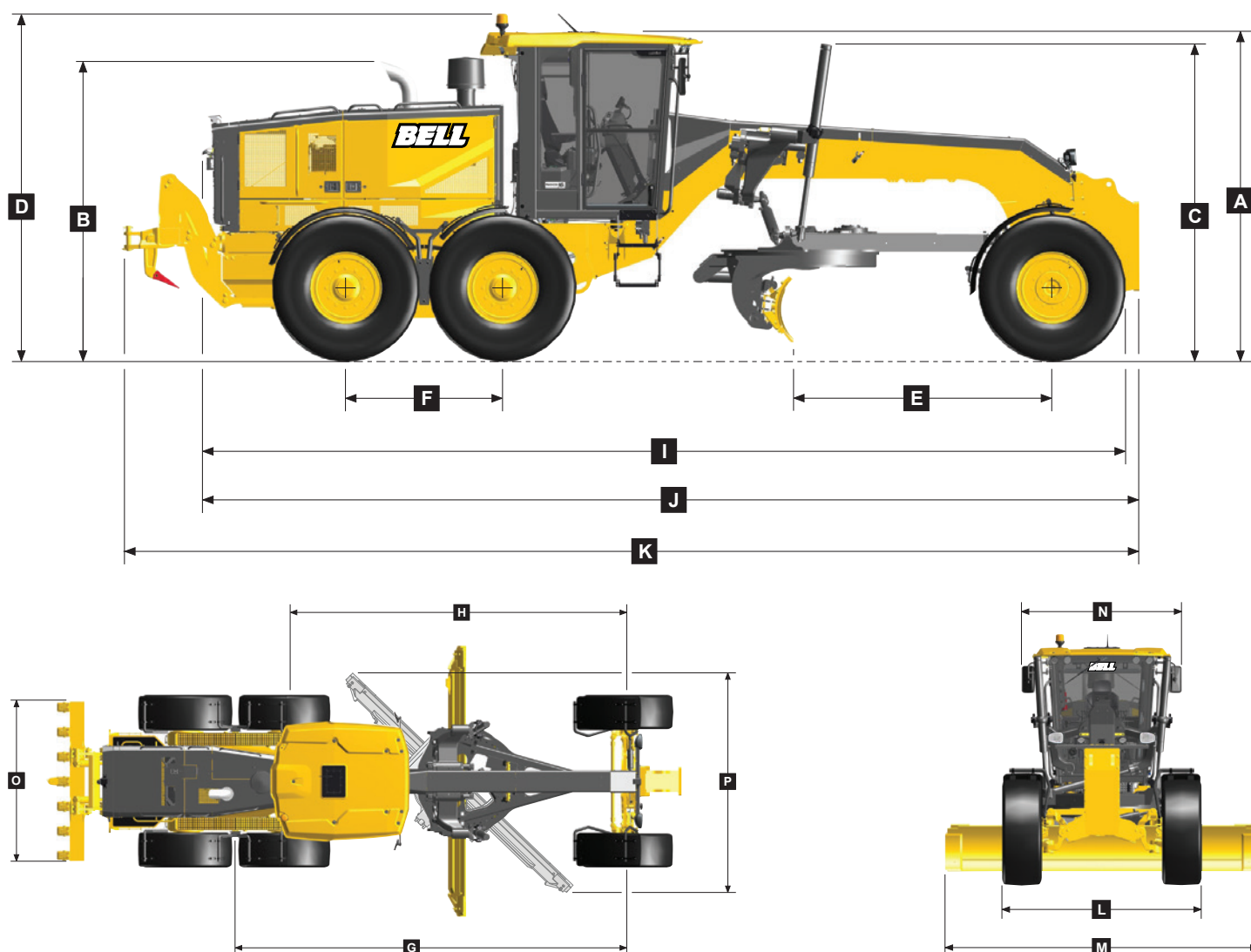
REAR RIPPER & SCARIFIER	6x4
DESCRIPTION	Parallel linkage, with maintenance free bearings and hydraulic float.
WIDTH OF CUT	
Ripper	2 300 mm (7 ft. 6 in.)
Scarifier	2 300 mm (7 ft. 6 in.)
MAX NUMBER OF SHANKS/TEETH	
Ripper	3
Scarifier	9
LIFT ABOVE GROUND	
Ripper	645 mm (25,4 in.)
Scarifier	815 mm (32,1 in.)
MAXIMUM DEPTH	
Ripper	370 mm (14,6 in.)
Scarifier	240 mm (9,4 in.)
SHANK SIZE	
Ripper	58 x 137 mm (2.3 x 5.3 in.)
Scarifier	27,5 x 78 mm (1.1 x 3.1 in.)

CAB	6x4
DESCRIPTION	Steel cab frame with GRP roof
ROPS/FOPS	Yes

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## MACHINE DIMENSIONS

<b>A</b>	Height-Cab	3 141 mm (10 ft. 4 in.)
<b>B</b>	Height-Exhaust-T3A	2 841 mm (9 ft. 4 in.)
<b>C</b>	Height-Blade Lift Cylinders	2 940 mm (9 ft. 8 in.)
<b>D</b>	Height-Beacon Light	3 313 mm (10 ft. 10 in.)
<b>E</b>	Front Axle Centre to Blade	2 580 mm (8 ft. 6 in.)
<b>F</b>	Tandem Axle Wheel Centres	1 567 mm (5 ft. 2 in.)
<b>G</b>	Front Axle Centre to Tandem Axle Pivot	6 272 mm (20 ft. 7 in.)
<b>H</b>	Front Axle Centre to Artic Centre	5 392 mm (17 ft. 8 in.)
<b>I</b>	Length-Overall w/o Pushblock/Ripper	9 168 mm (30 ft. 1 in.)
<b>J</b>	Length-Overall with Pushblock	9 353 mm (30 ft. 8 in.)
<b>K</b>	Length-Overall with Pushblock and Ripper	9 988 mm (32 ft. 9 in.)
<b>L</b>	Width over Tyre 14,00 R24 (Std G140)	2 492 mm (8 ft. 2 in.)
<b>L</b>	Width over Tyre 17.5 R24 (Option)	2 624 mm (8 ft. 7 in.)
<b>M</b>	Width over Blade-12Ft (Std)	3 663 mm (12 ft.)
<b>M</b>	Width over Blade-14Ft (Option)	4 273 mm (14 ft.)
<b>N</b>	Width over Mirrors-Operating Position	2 212 mm (7 ft. 3 in.)
<b>O</b>	Width over Ripper	2 300 mm (7 ft. 7 in.)
<b>P</b>	Width Transport Position - 12ft Blade	2 563 mm (8 ft. 5 in.)
<b>P</b>	Width Transport Position - 14ft Blade	2 970 mm (9 ft. 9 in.)



# Features & Options

Key: ● Standard ▲ Optional

G140 ECU	
CAB	
●	ROPS/FOPS certified
●	Standard cab
▲	Powered cab air precleaner
▲	Radio
▲	HVAC Climate control
●	Heating & vent only
ELECTRICAL	
▲	Rear camera
▲	Front camera
●	Reverse alarm
●	LED grading worklights
▲	LED Deluxe worklights
●	Engine bay lights
●	Rotating beacon lights
●	Wiper/washer with intermittent control
▲	Rear wipers
●	Headlights: Halogen
▲	Headlights: LED
●	Non-reversing fan motor
▲	Reversing fan motor
●	Battery 950 CCA
▲	Battery 1 350 CCA
GROUND ENGAGING TOOLS (GET)	
▲	Reverse overlay end bits

G140 ECU	
MOLDBOARD	
●	12 ft x 24 in
▲	14 ft x 24 in
WHEELSET	
●	14.00R24
▲	17.5R25
MUDGUARDS	
▲	Front
▲	Front and rear
OTHERS	
▲	Blade impact
▲	Quick service group
▲	Quick-fill fuel
●	Slip clutch
●	Sealed slew bearing
ATTACHMENTS	
●	Rear ripper
▲	Rear hitch
▲	Mid scarifier



All dimensions are shown in millimetres, unless otherwise stated between brackets.

Under our policy of continuous improvement, we reserve the right to change technical data and design without prior notice. Photographs featured in this brochure may include optional equipment.



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