

2011 Caterpillar 12M Grader GM024



Make	Caterpillar		Model	12M		
Year	2011	Hours	11675		As at	04/10/2021
Mileage				km	As at	
Serial/VIN	B9R00117			Engine Serial		
Details	2011 Caterpillar 12M Motor Grader Asset GM024. See more component hours details in the GES Equipment report on the auction page for this asset. Offered for sale via online auction in "As Is" condition, running to drive on to buyers transport ex site Pinjarra, WA. Australia.					
Asking price	AUD	Under review - call for pricing				
Ex site	Australia, Western Australia, Pinjarra					
Service history	See the component hours data at the end of this report.					

For further details, to make an offer or book an inspection, contact

Global Equipment Solutions on Office: 08 9201 1142











GM024 COMPONENTS

Machine Type	Last Changed	Component Hours	Hours remaining until change out	Lifespan										Next Change	Change out Interval
Cat Grader				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%		
Serial #				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%		
R9B00117															
Frame Hours															
11675															
ENGINE	5093	6582	5418											17093	12000
TRANSMISSION	5093	6582	1418											8000	8000
F/L WHEEL HUB	5093	6582	1418											8000	8000
F/R WHEEL HUB	5093	6582	1418											13093	8000
L/H TANDEM	11675	0	8000											19675	8000
R/H TANDEM	11675	0	8000											19675	8000
DIFF	5093	6582	1418											13093	8000
ENGINE MIDLIFE	5093	6582	1418											13093	8000
CENTRE HITCH	5093	6582	1418											13093	8000
COOLER PACK	5093	6582	1418											13093	8000
STEERING CYLS	5093	6582	1418											13093	8000

12M

Motor Grader



Cat® C6.6 ACERT™ VHP

Base Power (1st gear) – Net	118 kW	158 hp
VHP Range – Net	118-129 kW	158-173 hp
VHP Plus Range – Net	118-144 kW	158-193 hp

Gross Vehicle Weight – Base

Total	14 998 kg	33,064 lb
Front Axle	4499 kg	9,919 lb
Rear Axle	10 498 kg	23,145 lb

Moldboard

Blade Width	3.668 m	12 ft 0 in
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Engine

Engine Model	Cat® C6.6 ACERT™ VHP	
Base Power (1st gear) – Net	118 kW	158 hp
VHP range – Net	118-129 kW	158-173 hp
VHP Plus range – Net	118-144 kW	158-193 hp
Displacement	6.6 L	403 in ³
Bore	105 mm	4.13 in
Stroke	125 mm	4.92 in
Torque Rise (VHP Plus)	40%	
Max Torque (VHP Plus)	963 N-m	710 lb ft
Speed @ rated power	2,000 rpm	
Number of cylinders	6	
Derating altitude	3505 m	11,500 ft

Std – Fan speed	– max	1,450 rpm	
	– min	600 rpm	
Std – Ambient Capability	43° C	109° F	
Hi Ambient – Fan speed	– max	1,650 rpm	
	– min	600 rpm	
Hi Ambient Capability	50° C	122° F	

- Max torque (VHP Plus) measured at 1,400 rpm.
- Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.
- VHP Plus is an optional attachment.
- Net power advertised is the power available at rated speed of 2,000 rpm, measured at the flywheel when engine is equipped with fan running at minimum speed, air cleaner, muffler and alternator.
- No engine derating required up to 3505 m (11,500 ft).

12M Net Power

Gear	VHP	VHP Plus
	kW (hp) – Net	kW (hp) – Net
Fwd. 1st	118 (158)	118 (158)
	2nd	121 (163)
	3rd	125 (168)
	4th	129 (173)
	5th	129 (173)
	6th	129 (173)
	7th	129 (173)
	8th	129 (173)
Rev. 1st	118 (158)	118 (158)
	2nd	121 (163)
	3rd – 6th	125 (168)

Power Train

Forward/Reverse Gears	8 Fwd/6 Rev	
Transmission	Direct drive, power shift, countershaft	
Brakes – Service	Multiple oil-disc	
– Service, surface area	23 000 cm ²	3,565 in ²
– Parking	Multiple oil disc	
– Secondary	Dual circuit control system	

Hydraulic System

Circuit type	Electro-hydraulic closed center, load sensing	
Pump type	Variable piston	
Pump output	193 L/min	51 gal/min
Maximum system pressure	24 100 kPa	3,500 psi
Standby Pressure	3100 kPa	450 psi

- Pump output measured at 2,150 rpm

Operating Specifications

Top Speed – Fwd.	45.7 km/h	28.4 mph
– Rev.	36.1 km/h	22.4 mph
Turning radius, outside front tires	7.4 m	24 ft 3 in
Steering range – left/right	47.5°	
Articulation angle – left/right	20°	
Fwd. 1st	4 km/h	2.5 mph
2nd	5.4 km/h	3.4 mph
3rd	7.8 km/h	4.9 mph
4th	10.8 km/h	6.7 mph
5th	16.8 km/h	10.4 mph
6th	22.8 km/h	14.2 mph
7th	31.4 km/h	19.5 mph
8th	45.7 km/h	28.4 mph
Rev. 1st	3.1 km/h	1.9 mph
2nd	5.9 km/h	3.6 mph
3rd	8.5 km/h	5.3 mph
4th	13.2 km/h	8.2 mph
5th	24.8 km/h	15.4 mph
6th	36 km/h	22.4 mph

Service Refill

Fuel Capacity	341 L	90 gal
Cooling system	33 L	8.7 gal
Hydraulic system – tank	64 L	16.9 gal
Engine Oil	14 L	3.7 gal
Trans./Diff./Final Drives	62.5 L	16.5 gal
Tandem housing (each)	59 L	15.6 gal
Front wheel spindle bearing housing	0.5 L	0.1 gal
Circle drive housing	7 L	1.8 gal

Frame

Circle – diameter	1530 mm	60.2 in
– blade beam thickness	35 mm	1.4 in
Drawbar – height	152 mm	6 in
– width	76.2 mm	3 in
– thickness	9.5 mm	0.4 in
– yoke bar thickness	19.1 mm	0.75 in
Front frame structure		
– height	254 mm	10 in
– width	254 mm	10 in
– thickness	16 mm	0.63 in
Front axle		
– height to center	572 mm	22.5 in
– wheel lean, left/right	18°	
– total oscillation per side	32°	

Tandems

Height	502 mm	19.76 in
Width	172 mm	6.76 in
Sidewall thickness – inner	14 mm	0.5 in
– outer	16 mm	0.6 in
Drive chain pitch	44.5 mm	1.8 in
Wheel axle spacing	1510 mm	59.5 in
Tandem oscillation – front up	15°	
– front down	25°	

Moldboard

Blade width	3.668 m	12 ft
Moldboard – height	609.6 mm	24 in
– thickness	22 mm	0.87 in
Arc radius	413 mm	16.3 in
Throat clearance	124 mm	4.88 in
Cutting edge – width	152.4 mm	6 in
– thickness	16 mm	0.6 in
End Bit – width	152.4 mm	6 in
– thickness	16 mm	0.6 in
Blade Pull – base GVW	9448 kg	20,830 lb
– max GVW	11 731 kg	25,862 lb
Down Pressure – base GVW	7968 kg	17,566 lb
– max GVW	12 816 kg	28,254 lb

- Blade pull calculated at 0.9 traction coefficient, which is equal to ideal no-slip conditions, and Gross Machine Weight.

Blade Range

Circle centershift – right	656 mm	25.8 in
– left	656 mm	25.8 in
Moldboard sideshift – right	660 mm	26 in
– left	510 mm	20.1 in
Maximum blade position angle	90°	
Blade tip range – forward	40°	
– backward	5°	
Maximum shoulder reach outside of tires		
– right	1905 mm	75 in
– left	1742 mm	68.6 in
Maximum lift above ground	427 mm	16.8 in
Maximum depth of cut	720 mm	28.3 in

Ripper

Ripping depth, maximum	424 mm	16.7 in
Ripper shank holders	5	
Ripper shank holder spacing	533 mm	21 in
Penetration force	8578 kg	18,911 lb
Pryout force	11 781 kg	25,972 lb
Machine length increase, beam raised	995 mm	39.2 in

Scarifier

Front, V-Type, 5 or 11 tooth

Working width	1205 mm	47.4 in
Scarifying depth, maximum	467 mm	18.4 in
Scarifier shank holders	5/11	
Scarifier shank holder spacing	116 mm	4.6 in

Mid, V-Type

Working width	1184 mm	46.6 in
Scarifying depth, maximum	292 mm	11.5 in
Scarifier shank holders	11	
Scarifier shank holder spacing	116 mm	4.6 in

Mid, straight

Working width	1800 mm	71 in
Scarifying depth, maximum	317 mm	12.5 in
Scarifier shank holders	17	
Scarifier shank holder spacing	111 mm	4.4 in

Rear

Working width	2310 mm	91 in
Scarifying depth, maximum	266 mm	10.5 in
Scarifier shank holders	9	
Scarifier shank holder spacing	267 mm	10.5 in

Weights

Gross Vehicle Weight – base

– total	14 998 kg	33,064 lb
– front axle	4499 kg	9,919 lb
– rear axle	10 498 kg	23,145 lb

Gross Vehicle Weight – max

– total	20 271 kg	44,690 lb
– front axle	7237 kg	15,954 lb
– rear axle	13 034 kg	48,736 lb

- Base operating weight calculated on standard machine configuration with 13.00-24 12PR (G-2) tires, full fuel tank, coolant, lubricants and operator.

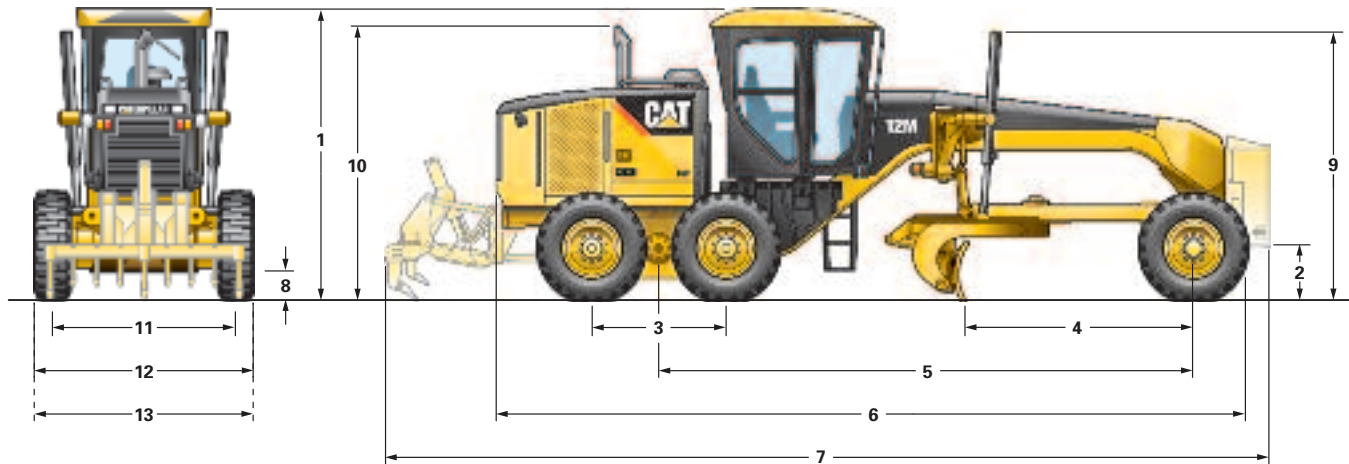
Standards

ROPS/FOPS	ISO 3471:1992/ISO 3449:1992
Steering	ISO 5010:1992
Brakes	ISO 3450:1996
Sound	ISO 6394:1998/ISO 6395:1988

- The static sound operator pressure level measured according to ISO 6394:1988 for a cab offered by Caterpillar, when properly installed, maintained and tested with doors and windows closed and hydraulic fan at maximum speed is 70 dB(A).
- The dynamic spectator sound power level for the standard machine when equipped with sound suppression package and hydraulic fan running at 70% of maximum speed, machine sound measured is less than 105 dB(A), complying with EU 2000/14/EC requirement.

Dimensions

All dimensions are approximate, based on standard machine configuration with 13.00-24 12PR (G-2) tires.



1	Height – top of cab	3290 mm	129.5 in
2	Height – front axle center	572 mm	22.5 in
3	Length – between tandem axles	1511 mm	59.5 in
4	Length – front axle to moldboard	2511 mm	98.9 in
5	Length – front axle to mid tandem	5915 mm	232.8 in
6	Length – front tire to rear of machine	8488 mm	334.1 in
7	Length – counterweight to ripper	9889 mm	389.3 in

8	Ground clearance at rear axle	347 mm	13.6 in
9	Height to top of cylinders	2920 mm	115 in
10	Height to exhaust stack	2885 mm	113.6 in
11	Width – tire center lines	2136 mm	84.1 in
12	Width – outside rear tires	2512 mm	98.9 in
13	Width – outside front tires	2531 mm	99.6 in

Optional Tire Arrangements

Total machine width and changes in machine weight are shown for common tire options.

Wheel Group	Tires	Outside Front Tires Width		Outside Rear Tires Width		Tire Arrangement Weight	
9x24 SP	13.00-24 Firestone SGG RB 12PR	2531 mm	99.6 in	2512 mm	98.9 in	0 kg	0 lb
10x24 MP	14.00-24 Goodyear SGG 12PR	2562 mm	100.9 in	2541 mm	100 in	223 kg	491 lb
10x24 MP	14.00R24 Bridgestone VKT 1 Star	2562 mm	100.9 in	2541 mm	100 in	520 kg	1,146 lb
10x24 MP	14.00R24 Michelin XGLA2 1 Star	2567 mm	101.1 in	2546 mm	100.2 in	327 kg	720 lb
10x24 MP	14.00R24 Bridgestone VUT 1 Star	2550 mm	100.4 in	2529 mm	99.6 in	302 kg	666 lb
14x25 MP	17.5R25 Bridgestone VKT 1 Star	2734 mm	107.6 in	2713 mm	106.8 in	694 kg	1,531 lb
13x25 SP	17.5R25 Michelin XTLA 1 Star	2805 mm	110.4 in	2784 mm	109.6 in	293 kg	647 lb
13x25 SP	17.5R25 Michelin XHA 1 Star	2801 mm	110.3 in	2780 mm	109.4 in	425 kg	937 lb

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

OPERATOR ENVIRONMENT

- Air Conditioner with heater
- Arm and wrist rest, adjustable
- Articulation, automatic Return-to-Center
- Ashtray and lighter
- Cat Messenger, operator information system
- Centershift pin indicator
- Coat hook
- Cup holder
- Display, digital speed and gear
- Doors, left and right side with wiper
- Gauge cluster – articulation, engine coolant temp, engine RPM, fuel, system voltage
- Gauge, machine level
- Hour meter, digital
- Joystick hydraulic controls
 - implements, steering, transmission
- Ladders, cab, left and right side
- Lights, night time cab
- Mirror, inside rearview, wide angle
- Power port, 12V
- Radio Ready, Entertainment
- ROPS cab, sound suppressed
- Seat belt, retractable 76 mm (3 in)
- Seat, cloth-covered, comfort suspension
- Storage area for cooler/lunchbox
- Throttle control, electronic
- Windows, laminated glass:
 - fixed front with intermittent wiper
 - side and rear (3)

POWER TRAIN

- Air cleaner, dual stage, dry type, automatic dust ejector, service indicator through Cat Messenger
- Air-to-air after cooler (ATAAC)
- Belt, serpentine, automatic tensioner
- Brakes, four-wheel hydraulic
- Differential, lock/unlock
- Drain, engine oil, ecology
- Electronic over speed protection
- Engine, Cat® C6.6 with ACERT™ Technology
- Fuel-water separator
- Hydraulic demand fan
- Muffler, under hood
- Parking brake – multi-disc, sealed, oil-cooled
- Priming pump, fuel
- Rear axle, modular
- Sediment drain, fuel tank
- Transmission, 8F/6R, power shift, direct drive
- VHP (Variable Horsepower)

ELECTRICAL

- Alarm, back up
- Alternator, 80 ampere, sealed
- Batteries, maintenance free, heavy duty 1125 CCA
- Breaker panel, ground accessible
- Electrical system, 24V
- Grade Control Ready – Cab harness, software, electrical hydraulic valves, bosses and brackets
- Lights, reversing
- Lights, roading, roof-mounted
- Lights, stop and tail, LED
- Product Link Ready
- Starter, electric

OTHER STANDARD EQUIPMENT

- Brake accumulators, dual certified
- Bumper, rear, integrated with hitch
- CD ROM Parts Book
- Clutch, circle drive slip
- Cutting edges
 - curved DH-2 steel
 - 152 mm × 16 mm (6 in × 5/8 in)
 - 19 mm (3/4 in) mounting bolts
- Doors (3), engine compartment, locking
- Drawbar – 6 shoe with replaceable wear strips
- Endbits
 - 16 mm (5/8 in) DH-2 steel
 - 19 mm (3/4 in) mounting bolts
- Extended Life Coolant to –35° C (–30° F)
- Fluid check, ground level
- Frame, articulated, with safety lock
- Fuel tank, ground level access
- Ground level engine shutdown
- Hammer (emergency exit)
- Horn, electric
- Hydraulics, base 8 implement controls
- Hydraulics, load-sensing
- Lockout, hydraulic implement for roading
- Moldboard
 - 3658 mm × 610 mm × 22 mm (12 ft × 24 in × 7/8 in)
 - hydraulic sideshift and tip
- Mounting, cab roof accessories
- Paint, glare reducing – top of front frame and rear enclosure
- Pump, hydraulic, high capacity (98 cc/6 in³)
- Radiator cleanout access
- Secondary steering
- Serviceability, LH side
- S•O•SSM ports: engine, hydraulic, transmission, coolant, fuel
- Tandem walkway/guards
- Tool box
- Tow hitch

TIRES, RIMS, & WHEELS

- Partial allowance for tires and multi-piece rims

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

	kg	lb
ELECTRICAL		
Alternator, 150 Ampere	2	5
Batteries:		
Extreme Duty, 1400 CCA	44	96
Heavy Duty, 1125 CCA	18	40
Converter, Communication (CB)	2	5
Lights:		
5 Lighting Arrangements, including rear roading, drop down		
Warning, LED strobe	1	2
GUARDS		
Covers, Screen	4	9
Debris	9	20
Transmission Sides/Sound		
Transmission	133	293
OPERATOR ENVIRONMENT		
Fan, Defroster, Rear Window	2	4
Mirrors, Outside:		
Heated 24V	15	33
Mounted	15	32
Seat, Air Suspension, Cloth	5	10
Shade, Sun	4	9
Wiper, Each Side	0	1
Wiper/Washer, Rear	0	1
POWER TRAIN		
Engine, Variable Horsepower Plus (VHP Plus)		
Precleaner, Sy-Klone	2	5
Transmission, Autoshift	2	5

	kg	lb
OTHER ATTACHMENTS		
AccuGrade ARO	41	90
Accumulators, Blade Lift	77	170
Camera, Rearview	7	15
Caterpillar Product Link 321SR	13	29
Compressor/Tank, Air	18	40
Fenders, Front	56	124
Fenders, Rear	163	360
Heater, Engine Coolant:		
120V	0.5	1
240V	1	3
Hydraulic Arrangements with One or More Additional Hydraulic Valves are Available for Rear Ripper, Blade, Mid Mount Scarifier, Front Lift Group, Snow Plow and Snow Wing.		
Security System	5	10
Snow Wing Mounting, Frame Ready	104	229
Starting Aid, Ether	0.5	1
WORK TOOLS/G.E.T.		
Blade Extension, 610 mm (2 ft)		
Left Hand	109	240
Cutting Edges, Curved	18	40
Endbits, Overlay	24	52
Front Lift Group, Manual	680	1,500
Mid Mount Scarifier	939	2,071
Moldboard		
4267 mm × 610 mm × 22 mm (14 ft × 24 in × 7/8 in)		
4267 mm × 686 mm × 25 mm (14 ft × 27 in × 1 in)		
Push Plate, Counterweight	884	1,950
Ripper, Rear	998	2,200
Ripper Tooth	30	67
Scarifier, Tooth	69	152
MACHINE ARRANGEMENTS		
Canadian Arrangement		
European Arrangement		
Roading Arrangement		
Snow Arrangement		

Note: Not all attachments are available in all regions.