

12M3/ 12M3 AWD

Motor Graders



M Series 3 graders bring the latest emissions reduction technology to the most durable, productive and comfortable motor graders on the market. From building roads to maintaining them, M Series Motor Graders are designed to help you get more work done in less time. Outstanding durability, unprecedented operator comfort and ease of service help to maximize your return on investment. M Series 3 Motor Graders meet U.S. EPA Tier 4 Final/ EU Stage IV emission standards.

Machine Controls

Simple, intuitive joystick controls replace levers, so hand and arm movement is reduced by 78%, helping reduce operator fatigue for better productivity. Control pods can be adjusted electronically, making it easy to set your ideal operating position.

Adding to ease of operation are features like Articulation Return to Center, which automatically returns the machine to a straight frame position with the touch of a button. Electronic Throttle Control provides the best match of horsepower and torque for the demands of the application. Selectable Blade Lift Modes allow you to choose Fine, Normal or Coarse blade lift modes to best fit your application or operating style.

Operator Station

In addition to excellent comfort and visibility, M Series 3 graders feature an updated seat with heated/ventilated options, as well as an optional seat belt indicator. The high capacity Heating, Ventilation and Air Conditioning (HVAC) system dehumidifies and pressurizes the cab, seals out dust and helps keep windows clear. An updated message display shows machine and diagnostic information. Now located in the center console, it also displays Cat® Grade Control Cross Slope readings conveniently in front of the operator. An optional deluxe radio with CD features MP3 and Bluetooth technology.

Emissions Technology

Emissions reduction technology on the M Series 3 Motor Grader is designed to be transparent, with no action required from the operator. There is no need to stop. Regeneration runs automatically at cold start-up and, if needed, in the background while you work. The Selective Catalytic Reduction system utilizes Diesel Exhaust Fluid (DEF), which can be conveniently filled from ground level. Simply refill the DEF tank when you refuel. A gauge on the dash shows your fluid level.



12M3/12M3 AWD Motor Graders Features

Engine and Power Train

A Cat C9.3 ACERT™ engine gives you the performance to maintain consistent grading speeds for maximum productivity. Programmable Autoshift option simplifies operation by allowing you to program the transmission to shift at optimal points to match your application. A new standard Economy Mode can be turned on to help you save fuel by reducing engine speed so the machine works in a more efficient range. The average fuel savings is up to 10 percent, depending on the application.

Standard Automatic Differential Lock/Unlock monitors machine and application parameters to unlock/re-lock the differential during operation, improving production and enhancing comfort while protecting the power train. A hydraulic demand fan automatically adjusts speed according to cooling needs, so when cooling demand is reduced, you benefit from more power to the ground and improved fuel efficiency.

All Wheel Drive

Optional All Wheel Drive (AWD) gives you the additional power to the ground you need to work more efficiently in mud, gravel, sand or snow. The added traction helps reduce sliding on side slopes.

Drawbar-Circle-Moldboard (D-C-M)

The drawbar, circle and moldboard are designed to make it easy to keep the components tight. One person can easily adjust or replace the patented top-adjust drawbar wear inserts from the top of the drawbar plate, reducing downtime. Durable nylon composite wear inserts maximize circle torque and component life. Sacrificial brass wear strips between the blade mounting group and moldboard can be easily adjusted and replaced. The Shimless Moldboard Retention System uses vertical and horizontal adjusting screws to keep moldboard wear strips aligned for reduced blade chatter and precise blade control.

Responsive Hydraulics

A proven load-sensing system and advanced electro-hydraulics give you superior implement control and responsive hydraulic performance. Proportional Priority Pressure-Compensating valves have different flow rates for the head and rod ends of the cylinder, so you can count on consistent, predictable implement response. Balanced hydraulic flow is proportioned to give you confidence that all implements will operate simultaneously without slowing the engine or speed of some implements.

Integrated Technologies

- Fully scalable, factory integrated optional Cat Grade Control Cross Slope helps you more easily maintain desired cross slope by automatically controlling one side of the blade.
- Optional Cat AccuGrade™ uses positioning and guidance technologies, machine sensors, and automatic blade control to help you get to grade faster, easier and more efficiently.
- Cat Product Link™ aids your equipment management with remote monitoring capabilities. A secure VisionLink® user interface lets you know where your equipment is, what it's doing and how it's performing so you can maximize efficiency and lower operating costs.

Safety

Some of the many safety features designed into the M Series 3 Motor Grader include:

- Ground-level Electrical Disconnect and Engine Shutoff switches.
- Operator Presence System keeps the parking brake engaged and hydraulic implements disabled until the operator is seated and machine is ready for operation.
- Hydraulic Lockout disables all implement functions while still providing machine steering control – especially useful while roading.
- Speed Sensitive Steering becomes less sensitive as ground speed increases for greater operator confidence and control.
- Optional rearview camera with in-cab monitor.

For more details on these and other features, please see your Cat Dealer or visit www.cat.com.

12M3/12M3 AWD Motor Graders Specifications

Engine			
Engine Model	Cat C9.3 ACERT		
Emissions	U.S. EPA Tier 4 Final/ EU Stage IV		
Base Power (1st gear) – Net	133 kW	179 hp	
Base Power (1st gear) – Net (Metric)	181 hp		
VHP Plus Range – Net	133-172 kW	179-231 hp	
VHP Plus Range – Net (Metric)	181-234 hp		
AWD Range – Net	141-188 kW	189-252 hp	
AWD Range – Net (Metric)	192-255 hp		
Displacement	9.3 L	567.5 in ³	
Bore	115 mm	4.5 in	
Stroke	149 mm	5.9 in	
Torque Rise	38%		
Maximum Torque (VHP Plus)	1138 N·m	840 lb-ft	
Maximum Torque (AWD On)	1247 N·m	920 lb-ft	
Speed @ Rated Power	2,000 rpm		
Number of Cylinders	6		
Derating Altitude	3050 m	10,000 ft	
High Ambient – Fan Speed			
Standard	1,400 rpm		
Maximum	1,550 rpm		
Minimum	500 rpm		
Standard Capability	43° C	109° F	
High Ambient Capability	50° C	122° F	
Gear – Net Power	VHP Plus kW (hp)	AWD Off kW (hp)	AWD On kW (hp)
Forward			
1st	133 (179)	141 (189)	149 (200)
2nd	141 (189)	149 (200)	164 (220)
3rd	149 (200)	156 (210)	168 (225)
4th	156 (210)	160 (215)	172 (231)
5th	160 (215)	164 (220)	188 (252)
6th	164 (220)	168 (225)	188 (252)
7th	168 (225)	172 (231)	188 (252)
8th	172 (231)	172 (231)	188 (252)
Reverse			
1st	133 (179)	133 (179)	133 (179)
2nd	141 (189)	141 (189)	141 (189)
3rd–6th	149 (200)	149 (200)	149 (200)

Engine (cont'd)

- Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.
- VHP Plus is standard for the 12M3 and 12M3 AWD.
- 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 3050 m (10,000 ft).
- Power as declared per ISO 14396
Rated rpm 2,000
VHP+ = 173 kW (232 hp)
AWD = 189 kW (253 hp)
- All nonroad U.S. EPA Tier 4, European Union (EU) Stage IIIB and IV, and Japan (MLIT) Step 4 diesel engines are required to use only Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. Biodiesel blends up to B20 (20% blend by volume) are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD. B20 should meet ASTM D7467 specification (biodiesel blend stock should meet Cat biodiesel spec, ASTM D6751 or EN 14214). Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are required. Consult your OMM for further machine specific fuel recommendations.
- Cat engines equipped with a Selective Catalytic Reduction (SCR) system are required to use:
 - Diesel Exhaust Fluid (DEF) which meets the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1.

Power Train

Forward/Reverse Gears	8 Forward/6 Reverse
Transmission	APECS, Direct Drive, Powershift
Brakes	
Service	Multiple Oil Disc
Service, Surface Area	23 000 cm ² 3,565 in ²
Parking	Multiple Oil Disc
Secondary	Dual Circuit

Hydraulic System

Circuit Type	Parallel
Pump Type	Variable Piston
Pump Output	210 L/min 55.7 gal/min
Maximum System Pressure	24 150 kPa 3,500 psi
Reservoir Tank Capacity	64.0 L 16.9 gal
Standby Pressure	6100 kPa 885 psi

- Pump output measured at 2,150 rpm.

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Operating Specifications

Top Speed		
Forward	46.6 km/h	29.0 mph
Reverse	36.8 km/h	23.0 mph
Turning Radius, Outside Front Tires	7.8 m	25 ft 7 in
Steering Range – Left/Right	50°	
Articulation Angle – Left/Right	20°	
Forward		
1st	4.1 km/h	2.5 mph
2nd	5.5 km/h	3.4 mph
3rd	8.0 km/h	5.0 mph
4th	11.0 km/h	6.9 mph
5th	17.1 km/h	10.6 mph
6th	23.3 km/h	14.5 mph
7th	32.0 km/h	19.9 mph
8th	46.6 km/h	29.0 mph
Reverse		
1st	3.2 km/h	2.0 mph
2nd	6.0 km/h	3.7 mph
3rd	8.7 km/h	5.4 mph
4th	13.5 km/h	8.4 mph
5th	25.3 km/h	15.7 mph
6th	36.8 km/h	23.0 mph

• Calculated with no slip and 14.0R24 tires.

Service Refill

Fuel Capacity	394 L	104 gal
Cooling System	57.0 L	15.0 gal
Hydraulic System		
Total	100 L	26.4 gal
Tank	64.0 L	16.9 gal
Engine Oil	30.0 L	7.9 gal
Trans./Diff./Final Drives	70.0 L	18.5 gal
Tandem Housing (Each)	76.0 L	20.0 gal
Front Wheel Spindle Bearing Housing	0.5 L	0.13 gal
Circle Drive Housing	7.0 L	1.8 gal
Diesel Exhaust Fluid	22.0 L	5.8 gal

Frame

Circle		
Diameter	1530 mm	60.2 in
Height	138 mm	5.4 in
Blade Beam Thickness	40.0 mm	1.6 in
Drawbar		
Height	152 mm	6.0 in
Width	76.2 mm	3.0 in
Thickness	12.7 mm	0.50 in
Front-Top/Bottom Plate		
Width	305 mm	12.0 in
Thickness	22.0 mm	0.87 in
Front Frame Structure		
Height	321 mm	12.6 in
Width	305 mm	12.0 in
Front Axle		
Height to Center	596 mm	23.5 in
Wheel Lean, Left/Right	18°	
Total Oscillation per Side	32°	

• Front-top/bottom plate – width tolerance ± 2.5 mm (0.098 in).

Tandems

Height	506 mm	19.9 in
Width	201 mm	7.9 in
Sidewall Thickness		
Inner	16.0 mm	0.63 in
Outer	18.0 mm	0.71 in
Drive Chain Pitch	50.8 mm	2.0 in
Wheel Axle Spacing	1523 mm	60.0 in
Tandem Oscillation		
Front Up	15°	
Front Down	25°	

Optional Tire Arrangements

Common Tire Options for M Series 3 Motor Graders

12M3/12M3 AWD		
Rim Size	Wheel Group	Tires
9 × 24	Single-Piece	14.0R24
13 × 25	Single-Piece	17.5R25
10 × 24	Multi-Piece	14.0R24
10 × 24	Multi-Piece	14.0-24
14 × 25	Multi-Piece	17.5R25
14 × 25	Multi-Piece	17.5-25

Note: Consult your dealer for individual tire width, size and brand.

12M3/12M3 AWD Motor Graders Specifications

Moldboard

Blade Width	3.7 m	12 ft
Moldboard		
Height	610 mm	24.0 in
Thickness	22.0 mm	0.87 in
Arc Radius	413 mm	16.3 in
Throat Clearance	166 mm	6.5 in
Cutting Edge		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
End Bit		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
Blade Pull		
Base GVW	11 462 kg	25,269 lb
Maximum GVW	15 541 kg	34,262 lb
Base GVW (AWD)	16 170 kg	35,649 lb
Maximum GVW (AWD)	22 512 kg	49,630 lb
Blade Down Pressure		
Base GVW	7275 kg	16,038 lb
Maximum GVW	13 294 kg	29,309 lb
Base GVW (AWD)	8151 kg	17,970 lb
Maximum GVW (AWD)	13 294 kg	29,309 lb

Blade Range

Circle Centershift		
Right	728 mm	28.7 in
Left	695 mm	27.4 in
Moldboard Sideshift		
Right	660 mm	26.0 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	1978 mm	77.9 in
Left	1790 mm	70.5 in
Maximum Lift Above Ground	480 mm	18.9 in
Maximum Depth of Cut	715 mm	28.1 in

Ripper

Ripping Depth, Maximum	426 mm	16.8 in
Ripper Shank Holders	5	
Ripper Shank Holder Spacing	533 mm	21.0 in
Penetration Force	9440 kg	20,812 lb
Pryout Force	12 607 kg	27,794 lb
Machine Length Increase, Beam Raised	1031 mm	40.6 in

Scarifier

Front, V-Type: Working Width	1205 mm	47.4 in
Front, V-Type, 5 or 11 Tooth		
Working Width	1031 mm	40.6 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
Rear		
Working Width	2133 mm	84.0 in
Scarifying Depth, Maximum	426 mm	16.8 in
Scarifier Shank Holders	9	
Scarifier Shank Holder Spacing	267 mm	10.5 in

Weights

Gross Vehicle Weight, Base		
Total	16 974 kg	37,420 lb
Front Axle	4238 kg	9,343 lb
Rear Axle	12 736 kg	28,077 lb
Gross Vehicle Weight, Maximum		
Total	25 013 kg	55,144 lb
Front Axle	7745 kg	17,075 lb
Rear Axle	17 268 kg	38,069 lb
Operating Weight, Typically Equipped		
Total	19 344 kg	42,647 lb
Front Axle	5468 kg	12,055 lb
Rear Axle	13 876 kg	30,592 lb

12M3/12M3 AWD Motor Graders Specifications

Weights – AWD

Gross Vehicle Weight, Base		
Total	17 966 kg	39,609 lb
Front Axle	4749 kg	10,469 lb
Rear Axle	13 217 kg	29,140 lb
Gross Vehicle Weight, Maximum		
Total	25 013 kg	55,144 lb
Front Axle	7745 kg	17,075 lb
Rear Axle	17 268 kg	38,069 lb
Operating Weight, Typically Equipped		
Total	20 236 kg	44,614 lb
Front Axle	5945 kg	13,107 lb
Rear Axle	14 291 kg	31,507 lb

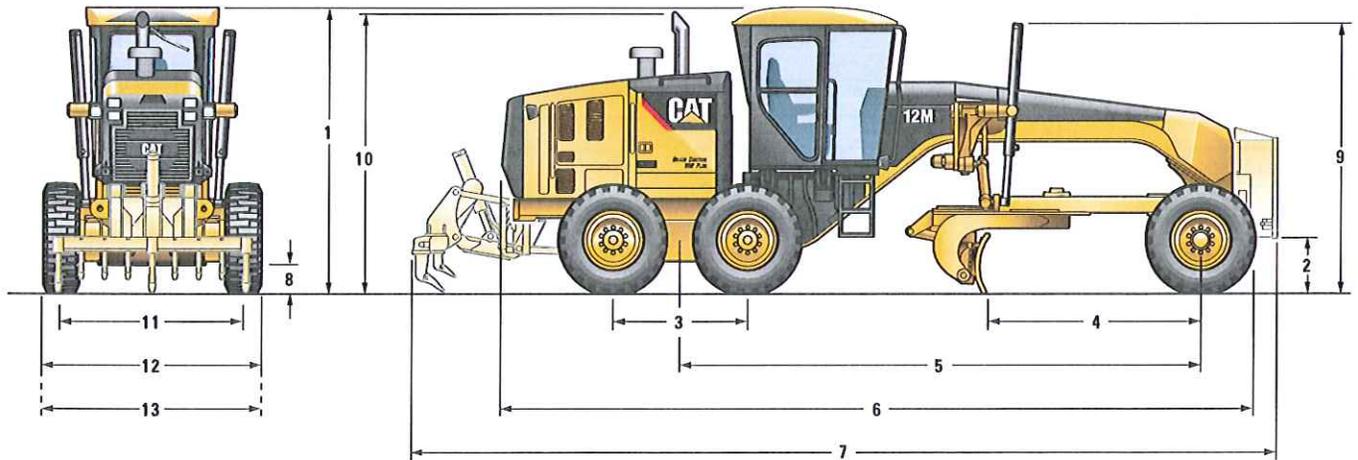
- Base operating weight on standard machine configuration is calculated with full fuel tank, coolant, lubricants, operator and 14.0R24 tires with single-piece (SP) rims.
- Typically equipped operating weight is calculated with push block, rear ripper/scarifier, 14.0R24 tires with single-piece (SP) rims, and other equipment.

Standards

ROPS/FOPS	ISO 3471/ISO 3499
Steering	ISO 5010
Brakes	ISO 3450
Sound	ISO 6394; ISO 6395

- The declared dynamic operator sound pressure level is 71 dB(A) for the 12M Series 3 and 12M Series 3 AWD when “ISO 6396:2008” is used to measure the value for a European Union “CE” marked machine. The measurement was conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds.
- The declared exterior sound power level is 107 dB(A) for the 12M Series 3 and 12M Series 3 AWD when the value is measured according to the dynamic test procedures and the conditions that are specified in “ISO 6395:2008.” The measurement was conducted for a European Union “CE” marked machine at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds and during diesel particulate filter regeneration.

Dimensions



1 Height – Top of Cab	3308 mm	130 in	8 Ground Clearance at Rear Axle	339 mm	13.3 in
2 Height – Front Axle Center	596 mm	23.5 in	9 Height to Top of Cylinders	3040 mm	120 in
3 Length – Between Tandem Axles	1523 mm	60.0 in	10 Height to Exhaust Stack	3256 mm	128 in
4 Length – Front Axle to Moldboard	2552 mm	100 in	11 Width – Tire Center Lines	2140 mm	84.3 in
5 Length – Front Axle to Mid Tandem	6123 mm	241 in	12 Width – Outside Rear Tires	2511 mm	98.9 in
6 Length – Front Tire to Rear of Machine	8912 mm	351 in	13 Width – Outside Front Tires	2511 mm	98.9 in
7 Length – Counterweight to Ripper	10 136 mm	399 in			

- Calculated with 14.0R24 Tires.

12M3/12M3 AWD Motor Graders Standard Equipment

Standard Equipment

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

POWER TRAIN

- Air cleaner, dual stage, dry type, diesel, with automatic engine derate and automatic dust ejector, service indicator through Cat Messenger
- Air-to-air after cooler (ATAAC)
- Belt, serpentine, automatic tensioner
- Brakes, oil disc, four-wheel, hydraulic
- Demand fan, hydraulic, swing-out
- Diesel exhaust fluid tank, 22.0 L (5.8 gal) ground level access, and sediment drain
- Differential Lock/Unlock, Automatic
- Drain, engine oil, ecology
- Economy mode
- Electronic over speed protection
- Engine, C9.3 with ACERT Technology, U.S. EPA Tier 4 Final/EU Stage IV emission standards
- Fuel tank, 394 L (104 gal), ground level access and sediment drain
- Fuel-water separator
- Muffler, underhood
- Parking brake – multi-disc, sealed, oil-cooled
- Priming pump, fuel
- Rear axle, modular
- Sediment drain, fuel tank
- Tandem drive
- Transmission, 8F/6R, powershift, direct drive, Advanced Productivity Electronic Control Strategy (APECS)

ELECTRICAL

- Alarm, back up
- Alternator, 150 ampere, sealed
- Batteries, maintenance free, heavy duty, 1,125 CCA
- Breaker panel, ground accessible
- Cab harness and electrical hydraulic valves
- Electrical system, 24V
- Grade Control Ready – Cab harness, software, electrical hydraulic valves, bosses and brackets
- Lights, roof-mounted roading, reversing, LED stop and tail
- Product Link
- Starter, electric

OPERATOR ENVIRONMENT

- Accelerator
- Air conditioning with heater
- Arm and wrist rest, electronically adjustable
- Articulation, automatic Return-to-Center
- 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, machine level
- Gauge cluster (analog) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp, regen, DEF
- Hour meter, digital
- Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and power steering
- Joystick, adjustable armrests
- Joystick gear selection
- Joystick hydraulic power steering
- 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 70 dB(A)
- Seat, cloth-covered, comfort suspension
- Seat belt, retractable 76 mm (3 in)
- Storage area for cooler/lunchbox
- Throttle control, electronic
- Windows, laminated glass:
 - fixed front with intermittent wiper
 - door with intermittent wipers (3)
- Windows: tempered
 - left and right side wipers
 - rear and intermittent wiper

FLUIDS

- Antifreeze
- Extended Life Coolant to -35°C (-30°F)

TIRES, RIMS AND WHEELS

- Partial allowance for tires on 254×607 mm (10×24 in) multi-piece rims is included in the base machine price and weight

OTHER STANDARD EQUIPMENT

- Accumulators, brake, dual certified
- Anti-glare paint
- Bumper, rear, integrated with hitch
- CD ROM Parts Book
- Clutch, circle drive slip
- Cutting edges
 - 152×16 mm ($6 \times 5/8$ in)
 - curved DH-2 steel
 - 19 mm ($3/4$ in) mounting bolts
- Doors (4), engine compartment, locking
- Drawbar – 6 shoes, replaceable wear strips
- Electrical hydraulic valves, hydraulic lines for base 8 functions
- Endbits
 - 16 mm ($5/8$ in) DH-2 steel
 - 19 mm ($3/4$ in) mounting bolts
- Fluid check, ground level
- Frame, articulated, with safety lock
- Ground level engine shutdown
- Ground level fueling
- Hammer (emergency exit)
- Horn, electric
- Hydraulic lines for base functions
- Lockout, hydraulic implement (for roading and servicing)
- Moldboard – $3658 \times 610 \times 22$ mm ($12\text{ ft} \times 24\text{ in} \times 7/8\text{ in}$)
- Mounting, cab roof accessories
- Pump, hydraulic, high capacity, 98 cm^3 (6 in^3)
- Radiator, cleanout access (both sides with swing doors)
- Secondary steering
- Serviceability, LH side
- S·O·SSM ports: engine, hydraulic, transmission, coolant, fuel
- Tandem walkway/guards
- Tool box

12M3/12M3 AWD Motor Graders

Optional Equipment

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

	kg*	lb*		kg*	lb*		kg*	lb*
ELECTRICAL			POWER TRAIN			WORK TOOLS/G.E.T.		
• Alternator, 280 ampere	2	5	• All Wheel Drive	892	1,967	• Blade extension, left hand, 610 mm (2 ft)	113	249
• Batteries:			• Precleaner, snow	2	5	• Blade extension, right hand, 610 mm (2 ft)	113	249
– extreme duty, 1,400 CCA	14	30	• Starter, extreme duty, 1,000 Amps	22	48	• Counterweight	427	939
• Lights:			• Transmission, autoshift	2	5	• Cutting edges, curved	43	95
– Headlights, high	38	84	OTHER ATTACHMENTS			• Endbits, overlay	24	52
– Headlights, low	35	77	• AccuGrade ARO	46	101	• Front lift group, mounting	5	11
– Working lights, basic	9	20	• Integrated cross slope	47	103	• Front lift group, mechanical	680	1,500
– Working lights, plus	10	22	• Accumulators, blade lift	55	121	• Grader bit, narrow and super penetration	181	400
– Warning: beacon or strobe	2	5	• Camera, rearview	9	20	• Mid-Mount Scarifier, Package	917	2,017
– Mounting for warning light	5	11	• Cat Product Link 321SR	13	29	• Moldboard		
GUARDS			• Cat Product Link 522	13	29	– 4267 mm × 610 mm × 22 mm (14 ft × 24 in × 7/8 in)	147	323
• Articulation guard	5	11	• Drain, ecology, engine Wiggins	2	5	– 4267 mm × 686 mm × 25 mm (14 ft × 27 in × 1 in)	284	625
• Fenders, front	121	266	• Heater, engine coolant:			• Push plate	1285	2,833
• Fenders, front, AWD	56	124	– 120V	1	3	• Ripper, rear	1042	2,292
• Fenders, rear	156	344	– 240V	1	3	• Ripper tooth	28	61
• Front axle guard	13	30	• Hydraulic arrangements with one or more additional hydraulic valves are available for rear ripper, dozer, snow plow and snow wing.			• Scarifier, front	434	956
• Sound suppression (bottom)	110	243	• Snow wing mounting, frame ready	91	200	• Snow Arrangement	161	355
• Sound suppression (enclosure)	15	33	• Starting aid, ether	0.5	1	• Snow Wing Ready Package	119	262
• Transmission	141	311				• Tow hitch	53	116
OPERATOR ENVIRONMENT						MACHINE ARRANGEMENTS		
• Mirrors, outside:						• Canadian Arrangement	2	4
– heated 24V	15	33				• European Arrangement	289	637
– mounted	15	33				• TUV Roding Arrangement	451	994
• Comfort Plus Arrangement	2	4						
• Comfort Premium Arrangement	3	7						

*Weights shown are to be added to the standard configuration when option is chosen.

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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Product ID: 12M3/12M3 AWD

AEHQ7069-01
Replaces AEHQ7069
(North America, Europe)

December 2013



140M3/ 140M3 AWD

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A Cat C9.3 ACERT™ engine gives you the performance to maintain consistent grading speeds for maximum productivity. Programmable Autoshift option simplifies operation by allowing you to program the transmission to shift at optimal points to match your application. A new standard Economy Mode can be turned on to help you save fuel by reducing engine speed so the machine works in a more efficient range. The average fuel savings is up to 10 percent, depending on the application.

Standard Automatic Differential Lock/Unlock monitors machine and application parameters to unlock/re-lock the differential during operation, improving production and enhancing comfort while protecting the power train. A hydraulic demand fan automatically adjusts speed according to cooling needs, so when cooling demand is reduced, you benefit from more power to the ground and improved fuel efficiency.

All Wheel Drive

Optional All Wheel Drive (AWD) gives you the additional power to the ground you need to work more efficiently in mud, gravel, sand or snow. The added traction helps reduce sliding on side slopes.

Drawbar-Circle-Moldboard (D-C-M)

The drawbar, circle and moldboard are designed to make it easy to keep the components tight. One person can easily adjust or replace the patented top-adjust drawbar wear inserts from the top of the drawbar plate, reducing downtime. Durable nylon composite wear inserts maximize circle torque and component life. Sacrificial brass wear strips between the blade mounting group and moldboard can be easily adjusted and replaced. The Shimless Moldboard Retention System uses vertical and horizontal adjusting screws to keep moldboard wear strips aligned for reduced blade chatter and precise blade control.

Responsive Hydraulics

A proven load-sensing system and advanced electro-hydraulics give you superior implement control and responsive hydraulic performance. Proportional Priority Pressure-Compensating valves have different flow rates for the head and rod ends of the cylinder, so you can count on consistent, predictable implement response. Balanced hydraulic flow is proportioned to give you confidence that all implements will operate simultaneously without slowing the engine or speed of some implements.

Integrated Technologies

- Fully scalable, factory integrated optional Cat Grade Control Cross Slope helps you more easily maintain desired cross slope by automatically controlling one side of the blade.
- Optional Cat AccuGrade™ uses positioning and guidance technologies, machine sensors, and automatic blade control to help you get to grade faster, easier and more efficiently.
- Cat Product Link™ aids your equipment management with remote monitoring capabilities. A secure VisionLink® user interface lets you know where your equipment is, what it's doing and how it's performing so you can maximize efficiency and lower operating costs.

Safety

Some of the many safety features designed into the M Series 3 Motor Grader include:

- Ground-level Electrical Disconnect and Engine Shutoff switches.
- Operator Presence System keeps the parking brake engaged and hydraulic implements disabled until the operator is seated and machine is ready for operation.
- Hydraulic Lockout disables all implement functions while still providing machine steering control – especially useful while roading.
- Speed Sensitive Steering becomes less sensitive as ground speed increases for greater operator confidence and control.
- Optional rearview camera with in-cab monitor.

For more details on these and other features, please see your Cat Dealer or visit www.cat.com.

140M3/140M3 AWD Motor Graders Specifications

Engine			
Engine Model	Cat C9.3 ACERT		
Emissions	U.S. EPA Tier 4 Final/ EU Stage IV		
Base Power (1st gear) – Net	149 kW	200 hp	
Base Power (1st gear) – Net (Metric)	202 hp		
VHP Plus Range – Net	149-188 kW	200-252 hp	
VHP Plus Range – Net (Metric)	202-255 hp		
AWD Range – Net	156-203 kW	210-272 hp	
AWD Range – Net (Metric)	213-276 hp		
Displacement	9.3 L	567.5 in ³	
Bore	115 mm	4.5 in	
Stroke	149 mm	5.9 in	
Torque Rise	39%		
Maximum Torque (VHP Plus)	1247 N·m	920 lb-ft	
Maximum Torque (AWD On)	1355 N·m	1,000 lb-ft	
Speed @ Rated Power	2,000 rpm		
Number of Cylinders	6		
Derating Altitude	3050 m	10,000 ft	
High Ambient – Fan Speed			
Standard	1,400 rpm		
Maximum	1,550 rpm		
Minimum	500 rpm		
Standard Capability	43° C	109° F	
High Ambient Capability	50° C	122° F	
Gear – Net Power	VHP Plus kW (hp)	AWD Off kW (hp)	AWD On kW (hp)
Forward			
1st	149 (200)	156 (210)	164 (220)
2nd	156 (210)	164 (220)	180 (241)
3rd	164 (220)	172 (231)	184 (247)
4th	172 (231)	176 (236)	188 (252)
5th	176 (236)	180 (241)	203 (272)
6th	180 (241)	184 (247)	203 (272)
7th	184 (247)	188 (252)	203 (272)
8th	188 (252)	188 (252)	203 (272)
Reverse			
1st	149 (200)	149 (200)	149 (200)
2nd	156 (210)	156 (210)	156 (210)
3rd–6th	164 (220)	164 (220)	164 (220)

Engine (cont'd)

- Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.
- VHP Plus is standard for the 140M3 and 140M3 AWD.
- 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 3050 m (10,000 ft).
- Power as declared per ISO 14396
Rated rpm 2,000
VHP+ = 189 kW (253 hp)
AWD = 204 kW (274 hp)
- All nonroad U.S. EPA Tier 4, European Union (EU) Stage IIIB and IV, and Japan (MLIT) Step 4 diesel engines are required to use only Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less. Biodiesel blends up to B20 (20% blend by volume) are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD. B20 should meet ASTM D7467 specification (biodiesel blend stock should meet Cat biodiesel spec, ASTM D6751 or EN 14214). Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specification are required. Consult your OMM for further machine specific fuel recommendations.
- Cat engines equipped with a Selective Catalytic Reduction (SCR) system are required to use:
 - Diesel Exhaust Fluid (DEF) which meets the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1.

Power Train

Forward/Reverse Gears	8 Forward/6 Reverse
Transmission	APECS, Direct Drive, Powershift
Brakes	
Service	Multiple Oil Disc
Service, Surface Area	23 000 cm ² 3,565 in ²
Parking	Multiple Oil Disc
Secondary	Dual Circuit

Hydraulic System

Circuit Type	Parallel
Pump Type	Variable Piston
Pump Output	210 L/min 55.7 gal/min
Maximum System Pressure	24 150 kPa 3,500 psi
Reservoir Tank Capacity	64.0 L 16.9 gal
Standby Pressure	6100 kPa 885 psi

- Pump output measured at 2,150 rpm.

140M3/140M3 AWD Motor Graders Specifications

Operating Specifications

Top Speed		
Forward	46.6 km/h	29.0 mph
Reverse	36.8 km/h	23.0 mph
Turning Radius, Outside Front Tires	7.8 m	25 ft 7 in
Steering Range – Left/Right	50°	
Articulation Angle – Left/Right	20°	
Forward		
1st	4.1 km/h	2.5 mph
2nd	5.5 km/h	3.4 mph
3rd	8.0 km/h	5.0 mph
4th	11.0 km/h	6.9 mph
5th	17.1 km/h	10.6 mph
6th	23.3 km/h	14.5 mph
7th	32.0 km/h	19.9 mph
8th	46.6 km/h	29.0 mph
Reverse		
1st	3.2 km/h	2.0 mph
2nd	6.0 km/h	3.7 mph
3rd	8.7 km/h	5.4 mph
4th	13.5 km/h	8.4 mph
5th	25.3 km/h	15.7 mph
6th	36.8 km/h	23.0 mph

• Calculated with no slip and 14.0R24 tires.

Service Refill

Fuel Capacity	394 L	104 gal
Cooling System	57.0 L	15.0 gal
Hydraulic System		
Total	100 L	26.4 gal
Tank	64.0 L	16.9 gal
Engine Oil	30.0 L	7.9 gal
Trans./Diff./Final Drives	70.0 L	18.5 gal
Tandem Housing (Each)	76.0 L	20.0 gal
Front Wheel Spindle Bearing Housing	0.5 L	0.13 gal
Circle Drive Housing	7.0 L	1.8 gal
Diesel Exhaust Fluid	22.0 L	5.8 gal

Frame

Circle		
Diameter	1530 mm	60.2 in
Height	138 mm	5.4 in
Blade Beam Thickness	40.0 mm	1.6 in
Drawbar		
Height	152 mm	6.0 in
Width	76.2 mm	3.0 in
Thickness	12.7 mm	0.50 in
Front-Top/Bottom Plate		
Width	305 mm	12.0 in
Thickness	22.0 mm	0.87 in
Front Frame Structure		
Height	321 mm	12.6 in
Width	305 mm	12.0 in
Front Axle		
Height to Center	596 mm	23.5 in
Wheel Lean, Left/Right	18°	
Total Oscillation per Side	32°	

• Front-top/bottom plate – width tolerance ± 2.5 mm (0.098 in).

Tandems

Height	506 mm	19.9 in
Width	201 mm	7.9 in
Sidewall Thickness		
Inner	16.0 mm	0.63 in
Outer	18.0 mm	0.71 in
Drive Chain Pitch	50.8 mm	2.0 in
Wheel Axle Spacing	1523 mm	60.0 in
Tandem Oscillation		
Front Up	15°	
Front Down	25°	

Optional Tire Arrangements

Common Tire Options for M Series 3 Motor Graders

140M3/140M3 AWD

Rim Size	Wheel Group	Tires
9 × 24	Single-Piece	14.0R24
13 × 25	Single-Piece	17.5R25
10 × 24	Multi-Piece	14.0R24
10 × 24	Multi-Piece	14.0-24
14 × 25	Multi-Piece	17.5R25
14 × 25	Multi-Piece	17.5-25

Note: Consult your dealer for individual tire width, size and brand.

140M3/140M3 AWD Motor Graders Specifications

Moldboard

Blade Width	3.7 m	12 ft
Moldboard		
Height	610 mm	24.0 in
Thickness	22.0 mm	0.87 in
Arc Radius	413 mm	16.3 in
Throat Clearance	166 mm	6.5 in
Cutting Edge		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
End Bit		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
Blade Pull		
Base GVW	11 672 kg	25,732 lb
Maximum GVW	15 541 kg	34,262 lb
Base GVW (AWD)	16 484 kg	36,341 lb
Maximum GVW (AWD)	22 512 kg	49,630 lb
Blade Down Pressure		
Base GVW	7475 kg	16,480 lb
Maximum GVW	13 294 kg	29,308 lb
Base GVW (AWD)	8351 kg	18,411 lb
Maximum GVW (AWD)	13 294 kg	29,308 lb

Blade Range

Circle Centershift		
Right	728 mm	28.7 in
Left	695 mm	27.4 in
Moldboard Sideshift		
Right	660 mm	26.0 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	1978 mm	77.9 in
Left	1790 mm	70.5 in
Maximum Lift Above Ground	480 mm	18.9 in
Maximum Depth of Cut	715 mm	28.1 in

Ripper

Ripping Depth, Maximum	426 mm	16.8 in
Ripper Shank Holders	5	
Ripper Shank Holder Spacing	533 mm	21.0 in
Penetration Force	9440 kg	20,812 lb
Pryout Force	12 607 kg	27,794 lb
Machine Length Increase, Beam Raised	1031 mm	40.6 in

Scarifier

Front, V-Type: Working Width	1205 mm	47.4 in
Front, V-Type, 5 or 11 Tooth		
Working Width	1031 mm	40.6 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
Rear		
Working Width	2133 mm	84.0 in
Scarifying Depth, Maximum	426 mm	16.8 in
Scarifier Shank Holders	9	
Scarifier Shank Holder Spacing	267 mm	10.5 in

Weights

Gross Vehicle Weight, Base		
Total	17 323 kg	38,191 lb
Front Axle	4355 kg	9,601 lb
Rear Axle	12 968 kg	28,590 lb
Gross Vehicle Weight, Maximum		
Total	25 013 kg	55,144 lb
Front Axle	7745 kg	17,075 lb
Rear Axle	17 268 kg	38,069 lb
Operating Weight, Typically Equipped		
Total	19 935 kg	43,950 lb
Front Axle	5692 kg	12,549 lb
Rear Axle	14 243 kg	31,401 lb

140M3/140M3 AWD Motor Graders Specifications

Weights – AWD

Gross Vehicle Weight, Base		
Total	18 316 kg	40,380 lb
Front Axle	4865 kg	10,726 lb
Rear Axle	13 451 kg	29,654 lb
Gross Vehicle Weight, Maximum		
Total	25 013 kg	55,144 lb
Front Axle	7745 kg	17,075 lb
Rear Axle	17 268 kg	38,069 lb
Operating Weight, Typically Equipped		
Total	20 827 kg	45,917 lb
Front Axle	6169 kg	13,601 lb
Rear Axle	14 658 kg	32,316 lb

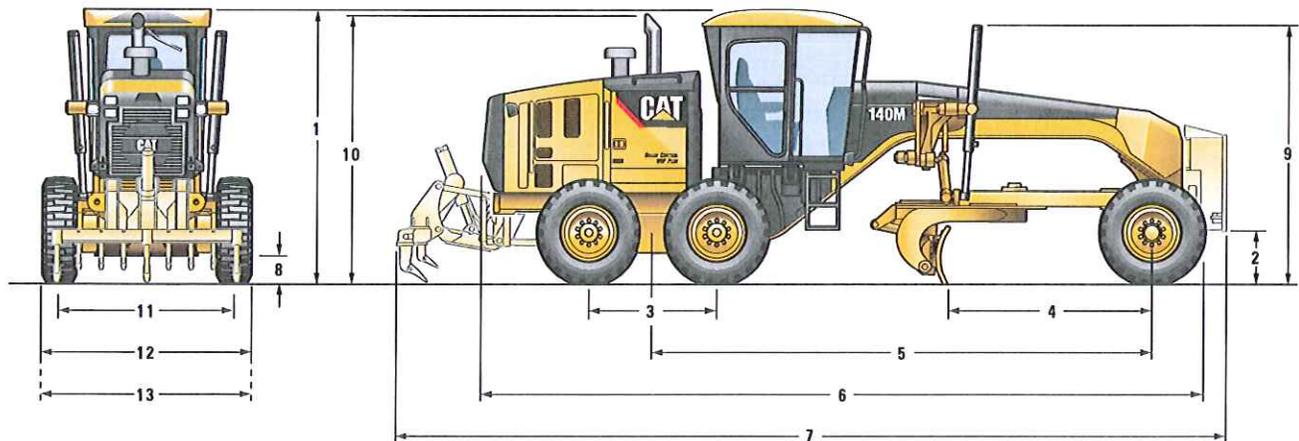
- Base operating weight on standard machine configuration is calculated with full fuel tank, coolant, lubricants, operator and 14.0R24 tires with multi-piece (MP) rims.
- Typically equipped operating weight is calculated with push block, transmission guard, rear ripper/scarifier, 14.0R24 tires with multi-piece (MP) rims, and other equipment.

Standards

ROPS/FOPS	ISO 3471/ISO 3499
Steering	ISO 5010
Brakes	ISO 3450
Sound	ISO 6394; ISO 6395

- The declared dynamic operator sound pressure level is 71 dB(A) for the 140M Series 3 and 140M Series 3 AWD when “ISO 6396:2008” is used to measure the value for a European Union “CE” marked machine. The measurement was conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds.
- The declared exterior sound power level is 107 dB(A) for the 140M Series 3 and 140M Series 3 AWD when the value is measured according to the dynamic test procedures and the conditions that are specified in “ISO 6395:2008.” The measurement was conducted for a European Union “CE” marked machine at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds and during diesel particulate filter regeneration.

Dimensions



1 Height – Top of Cab	3308 mm	130 in	8 Ground Clearance at Rear Axle	339 mm	13.3 in
2 Height – Front Axle Center	596 mm	23.5 in	9 Height to Top of Cylinders	3040 mm	120 in
3 Length – Between Tandem Axles	1523 mm	60.0 in	10 Height to Exhaust Stack	3256 mm	128 in
4 Length – Front Axle to Moldboard	2552 mm	100 in	11 Width – Tire Center Lines	2140 mm	84.3 in
5 Length – Front Axle to Mid Tandem	6123 mm	241 in	12 Width – Outside Rear Tires	2511 mm	98.9 in
6 Length – Front Tire to Rear of Machine	8912 mm	351 in	13 Width – Outside Front Tires	2511 mm	98.9 in
7 Length – Counterweight to Ripper	10 136 mm	399 in			

- Calculated with 14.0R24 Tires.

140M3/140M3 AWD Motor Graders Standard Equipment

Standard Equipment

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

POWER TRAIN

- Air cleaner, dual stage, dry type, diesel, with automatic engine derate and automatic dust ejector, service indicator through Cat Messenger
- Air-to-air after cooler (ATAAC)
- Belt, serpentine, automatic tensioner
- Brakes, oil disc, four-wheel, hydraulic
- Demand fan, hydraulic, swing-out
- Diesel exhaust fluid tank, 22.0 L (5.8 gal) ground level access, and sediment drain
- Differential Lock/Unlock, Automatic
- Drain, engine oil, ecology
- Economy mode
- Electronic over speed protection
- Engine, C9.3 with ACERT Technology, U.S. EPA Tier 4 Final/EU Stage IV emission standards
- Fuel tank, 394 L (104 gal), ground level access and sediment drain
- Parking brake – multi-disc, sealed, oil-cooled
- Priming pump, fuel
- Rear axle, modular
- Sediment drain, fuel tank
- Tandem drive
- Transmission, 8F/6R, powershift, direct drive, Advanced Productivity Electronic Control Strategy (APECS)

ELECTRICAL

- Alarm, back up
- Alternator, 150 ampere, sealed
- Batteries, maintenance free, heavy duty, 1,125 CCA
- Breaker panel, ground accessible
- Cab harness and electrical hydraulic valves
- Electrical system, 24V
- Grade Control Ready – Cab harness, software, electrical hydraulic valves, bosses and brackets
- Lights, roof-mounted roading, reversing, LED stop and tail
- Product Link
- Starter, electric

OPERATOR ENVIRONMENT

- Accelerator
- Air conditioning with heater
- Arm and wrist rest, electronically adjustable
- Articulation, automatic Return-to-Center
- 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, machine level
- Gauge cluster (analog) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp, regen, DEF
- Hour meter, digital
- Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and power steering
- Joystick, adjustable armrests
- Joystick gear selection
- Joystick hydraulic power steering
- 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 70 dB(A)
- Seat, cloth-covered, comfort suspension
- Seat belt, retractable 76 mm (3 in)
- Storage area for cooler/lunchbox
- Throttle control, electronic
- Windows, laminated glass:
 - fixed front with intermittent wiper
 - door with intermittent wipers (3)
- Windows: tempered
 - left and right side wipers
 - rear and intermittent wiper

FLUIDS

- Antifreeze
- Extended Life Coolant to -35°C (-30°F)

TIRES, RIMS AND WHEELS

- Partial allowance for tires on 254×607 mm (10×24 in) multi-piece rims is included in the base machine price and weight

OTHER STANDARD EQUIPMENT

- Accumulators, brake, dual certified
- Anti-glare paint
- Bumper, rear, integrated with hitch
- CD ROM Parts Book
- Clutch, circle drive slip
- Cutting edges
 - 152×16 mm ($6 \times 5/8$ in)
 - curved DH-2 steel
 - 19 mm ($3/4$ in) mounting bolts
- Doors (3), engine compartment, locking
- Drawbar – 6 shoes, replaceable wear strips
- Electrical hydraulic valves, hydraulic lines for base 8 functions
- Endbits
 - 16 mm ($5/8$ in) DH-2 steel
 - 19 mm ($3/4$ in) mounting bolts
- Fluid check, ground level
- Frame, articulated, with safety lock
- Ground level engine shutdown
- Hammer (emergency exit)
- Horn, electric
- Hydraulic lines for base functions
- Lockout, hydraulic implement (for roading and servicing)
- Moldboard – $3658 \times 610 \times 22$ mm ($12 \text{ ft} \times 24 \text{ in} \times 7/8 \text{ in}$)
- Mounting, cab roof accessories
- Pump, hydraulic, high capacity, 98 cm^3 (6 in^3)
- Radiator, cleanout access (both sides with swing doors)
- Secondary steering
- Serviceability, LH side
- S-O-SSM ports: engine, hydraulic, transmission, coolant, fuel
- Tandem walkway/guards
- Tool box

140M3/140M3 AWD Motor Graders

Optional Equipment

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

	kg*	lb*		kg*	lb*		kg*	lb*
ELECTRICAL			POWER TRAIN			WORK TOOLS/G.E.T.		
• Alternator, 280 ampere	2	5	• All Wheel Drive	892	1,967	• Blade extension, left hand, 610 mm (2 ft)	113	249
• Batteries:			• Precleaner, snow	2	5	• Blade extension, right hand, 610 mm (2 ft)	113	249
– extreme duty, 1,400 CCA	14	30	• Starter, extreme duty, 1,000 Amps	22	48	• Counterweight	427	939
• Lights:			• Transmission, autoshift	2	5	• Cutting edges, curved	43	95
– Headlights, high	38	84				• Endbits, overlay	24	52
– Headlights, low	35	77	OTHER ATTACHMENTS			• Front lift group, mounting	5	11
– Working lights, basic	9	20	• AccuGrade ARO	46	101	• Front lift group, mechanical	680	1,500
– Working lights, plus	10	22	• Integrated cross slope	47	103	• Grader bit, narrow and super penetration	181	400
– Warning: beacon or strobe	2	5	• Accumulators, blade lift	55	121	• Mid-Mount Scarifier, Package	917	2,017
– Mounting for warning light	5	11	• Camera, rearview	9	20	• Moldboard		
GUARDS			• Cat Product Link 321SR	13	29	–4267 mm × 610 mm × 22 mm (14 ft × 24 in × 7/8 in)	147	323
• Articulation guard	5	11	• Cat Product Link 522	13	29	–4267 mm × 686 mm × 25 mm (14 ft × 27 in × 1 in)	284	625
• Fenders, front	121	266	• Drain, ecology, engine Wiggins	2	5	• Push plate	1285	2,833
• Fenders, front, AWD	56	124	• Heater, engine coolant:			• Ripper, rear	1042	2,292
• Fenders, rear	156	344	– 120V	1	3	• Ripper tooth	28	61
• Front axle guard	13	30	– 240V	1	3	• Scarifier, front	434	956
• Sound suppression (bottom)	110	243	• Hydraulic arrangements with one or more additional hydraulic valves are available for rear ripper, dozer, snow plow and snow wing.			• Snow Arrangement	161	355
• Sound suppression (enclosure)	15	33	• Snow wing mounting, frame ready	91	200	• Snow Wing Ready Package	119	262
• Transmission	141	311	• Starting aid, ether	0.5	1	• Tow hitch	53	116
OPERATOR ENVIRONMENT						MACHINE ARRANGEMENTS		
• Mirrors, outside:						• Canadian Arrangement	2	4
– heated 24V	15	33				• European Arrangement	289	637
– mounted	15	33				• TUV Rooding Arrangement	451	994
• Comfort Plus Arrangement	2	4						
• Comfort Premium Arrangement	3	7						

*Weights shown are to be added to the standard configuration when option is chosen.

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

Product ID: 140M3/140M3 AWD

AEHQ7070-01
Replaces AEHQ7070
(North America, Europe)

December 2013



Effective with sales to the first user on or after December 1, 2014

CATERPILLAR LIMITED WARRANTY

For Selected Machine Models Designated by Caterpillar With 12 Month/Unlimited Hour Warranty

Worldwide

Caterpillar Inc. or any of its subsidiaries ("Caterpillar") warrants the following products sold by it to be free from defects in material and workmanship:

This warranty does not apply to new replacement engines.

This warranty does not apply to selected models or new replacement engines designated by Caterpillar in India and China.

(In other areas different warranties may apply. Copies of applicable warranties may be obtained by writing to Caterpillar Inc., 100 N.E. Adams St., Peoria, IL 61629.)

- New earthmoving, construction, material handling, forestry product, paving product, compact wheel loader, mini hydraulic excavator, skid steer loader, multi terrain loader, and compact track loader machines designated by Caterpillar as having 12-months/unlimited hour warranty. See your Cat® dealer for a complete listing of covered models.
- Attachments/work tools installed on such machines prior to delivery (unless covered by the Cat Work Tool warranty statement or another manufacturer's warranty). Hammer tool points and compacting plates used on hydraulic hammers are not warranted.

An additional warranty against breakage is applicable to certain Cat ground engaging tools. An additional warranty against wear is applicable to all landfill compactor tips when used in residential waste landfills. Refer to the applicable warranty statements for coverage detail.

This warranty does not apply to Cat batteries, Mobil-trac belts, rubber tracks used on multi terrain loaders, compact track loaders, and mini hydraulic excavators, or Cat Work Tools, which are covered by other Caterpillar warranties.

This warranty is subject to the following:

Warranty Period

For new machines and work tools/attachments the warranty period is 12-months/unlimited hours, starting from date of delivery to the first user.

Note: For hydraulic line's quick connect/disconnect components sold on compact wheel loaders, mini hydraulic excavators, skid steer loaders, multi terrain loaders, and compact track loader machines, the warranty period is 50 hours starting from the date of delivery to the first user.

Caterpillar Responsibilities

If a defect in material or workmanship is found during the warranty period, Caterpillar will, during normal working hours and at a place of business of a Cat dealer or other source approved by Caterpillar:

- Provide (at Caterpillar's choice) new, remanufactured, or Caterpillar approved repaired parts or assembled components needed to correct the defect.

Note: New, remanufactured, or Caterpillar approved replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period applicable to the product

in which installed as if such parts were original components of that product. Items replaced under this warranty become the property of Caterpillar.

- Replace lubricating oil, filters, antifreeze, and other service items made unusable by the defect.
- Provide reasonable and customary labor needed to correct the defect, except in the case of a new replacement engine originally installed by other than a Cat dealer or source approved by Caterpillar. In this case, labor is limited to repair only, and removal and installation is the user's responsibility.

User Responsibilities

The user is responsible for:

- Providing proof of delivery date to the first user.
- Labor costs, except as stated under "Caterpillar Responsibilities."
- Transportation costs, except as stated under "Caterpillar Responsibilities."
- Premium or overtime labor costs.
- Parts shipping charges in excess of those that are considered usual and customary.
- Local taxes, if applicable.
- Costs to investigate complaints, unless the problem is caused by a defect in Caterpillar material or workmanship.
- Giving timely notice of a warrantable failure and promptly making the product available for repair.

(Continued on reverse side...)

- Performance of the required maintenance (including use of proper fuel, oil, lubricants, and coolant) and items replaced due to normal wear and tear.
- Allowing Caterpillar access to all electronically stored data.
- Failures resulting from abuse, neglect, and/or improper repair.
- Failures resulting from user's delay in making the product available after being notified of a potential product problem.
- Failures resulting from unauthorized repair or adjustments, and unauthorized fuel setting changes.

Limitations

- Caterpillar is not responsible for:
- Failures resulting from any use or installation that Caterpillar judges improper.
 - Failures resulting from attachments, accessory items, and parts not sold or approved by Caterpillar.

This warranty covers every major component of the products. Claims under this warranty should be submitted to a place of business of a Cat dealer or other source approved by Caterpillar. For further information concerning either the location to submit claims or Caterpillar as the issuer of this warranty, write Caterpillar Inc., 100 N. E. Adams St., Peoria, IL USA 61629.

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