

**BID SUBMITTAL FORM**  
**Alabama County Joint Bid Program**  
**Heavy Equipment – Bid Item: Heavy Duty Motor Grader-Option B**

Company Name: THOMPSON TRACTOR COMPANY

Address: PO BOX 10367

BIRMINGHAM AL 35202-0367

Bid Submitted by: JAY SMITH

(Name of company representative)

Title: SALES OPERATIONS MGR E-mail address: JAYjaysmith@thompsontractor.com

Phone: 205-849-4242 Fax: \_\_\_\_\_

By submitting this bid, we agree:

Initials

The equipment model number identified below meets the bid specs for this bid item

JAS

That the bid price will be honored for all counties for the period from **July 1, 2026** to **December 31, 2026**.

JAS

The equipment will be delivered at the bid price to all counties participating in the joint bid program.

JAS

The company acknowledges the freight preparation and delivery price is to be included in the total bid price for the standard machine.

JAS

The company representative listed above will be the contact person for purchasing this bid item under the joint bid program.

JAS

The bid is accompanied by a current catalog or model specification document for the model number identified below.

JAS

The bid is accompanied by a copy of the manufacturer's standard warranty as required in the bid specifications.

JAS

The bid includes the E-Verify documentation required by Alabama law.

JAS

We comply with, and if awarded the contract, we will comply with, the requirements of Section 41-16-50 and Sections 41-16-160 to -166, Code of Alabama 1975.

JAS

If awarded the bid, a performance bond will be provided upon request.

JAS

The bid documents include the **Manufacturer's Suggested Retail Price Sheet (MSRP) for the Standard Machine.**

JAS


Total Bid Price for Standard Machine: \$ 324,362  
(Total Bid Price for Standard Machine Includes Freight Preparation, Delivery and Standard Warranty Costs) \*

Freight Preparation and Delivery: \$ 11,841  
(Included in Standard Machine Bid Price)

Manufacturer's Suggested Retail Price for Standard Machine: \$ 484,529

Equipment Model #: CATERPILLAR 140 (STEERING WHEEL)

Description: MOTOR GRADER

Signature of company representative submitting bid: 

Title: SALES OPERATIONS MANAGER

\* **NOTE:** Award will be made based on the total cost of the **Standard Machine**. The total cost of the standard machine is to include freight preparation, delivery and standard warranty cost. Freight preparation and delivery will be excluded from the total bid price of the standard machine in determining the percentage discount for any available options.

## BID SUBMITTAL FORM: OPTION COST SHEET

By submitting this bid, we agree:

To offer any available options at the percent difference between the Manufacturer's Suggested Retail Price Sheet and the actual bid price on the Standard Machine\*

YAF

The bid documents include the **Manufacturer's Suggested Retail Price Sheet (MSRP)** for the Standard Machine

YAF

Equipment Model #: CATERPILLAR 140 (STEERING WHEEL)

Description: MOTOR GRADER

Signature of company representative submitting bid:

Ray Smith

Title: SALES OPERATIONS MANAGER

**\*Note:** The percent difference between the **Manufacturer's Suggested Retail Price Sheet (MSRP)** for the standard machine as specified by these **Bid Specifications** and the actual price bid by the vendor will be calculated to determine the percentage discount to be applied to any available options. The bid price of the freight preparation and delivery cost shall be excluded in determining the percentage discount to be applied to available options. Any individual county may choose to add any available option to the standard machine at the percentage discount at the time of purchase.

**BID SPECIFICATIONS  
FOR  
HEAVY DUTY MOTOR GRADER – OPTION B**

**GENERAL**

These specifications shall be construed as the minimum acceptable standards for a heavy-duty motor grader. Should the manufacturer's current published data or specifications exceed these standards, the manufacturer's standards shall be considered minimum and shall be furnished. All integral parts not specifically mentioned in the scope of these specifications that are necessary to provide a complete working unit shall be furnished. Additionally, the machine offered for bid shall include all standard manufacturer's equipment. The motor graders must be a new current production model and shall meet all EPA and other applicable standards at the time of manufacture.

The use of specific names or numbers in the specifications is not intended to restrict the bidder or any seller or manufacturer but is intended solely for the purpose of indicating the type, size, and quality of equipment considered best adapted to the uses of counties participating in this joint bid.

**BID SUBMITTAL FORM**

Each bidder must submit his or her bid on the Bid Submittal Form included in the invitation to bid package. All written warranties to be submitted shall be attached to the Bid Submittal Form.

**BID PRICE**

The price bid shall include all destination charges, delivery charges, title fees, rebates and all other applicable costs and refunds.

**MANUALS**

Each unit shall be provided with one (1) copy of the operator's manual, one (1) copy of the repair manual and one (1) copy of the current parts manual. Units will not be accepted for delivery until the manuals as outlined above are received by the purchaser.

**REPLACEMENT PARTS AVAILABILITY**

Parts must be available for 5 years or 7,500 hours of use for the piece of equipment bid. If replacement parts are not delivered within three (3) working days of an order being placed, the bidder will deliver an equivalent machine for the County to use at no cost to the County until such time as the parts are delivered to the County so it can affect repairs to its machine.

**WARRANTY**

Bidders shall submit a copy of the manufacturer's standard warranty. Warranty shall include service response time of a maximum of 36 hours within notification by county.

Yes  No   
Page # \_\_\_\_\_  
or  
Attachment

**ENGINE**

Engine shall be a turbo-charged, direct injection, four-stroke, **6-cylinder** diesel engine and shall be electronically controlled for more efficient fuel injection and fuel burn.

**Engine Shall be designed and manufactured by the machine manufacturer.**

Yes  No   
Page # 2, 6, Bid Spec  
P. 1

Engine displacement shall not be less than **427 cu. in.** and shall develop, as standard, a rated variable net power of at least **165 -220 HP.**

Yes  No   
Page # 2, 6, Bid Spec  
P. 1

Engine shall be isolation/resilient mounted to minimize sound and vibration and shall meet currently required EPA emission regulations for manufacturer.

Yes  No   
Page # 18, Bid Spec  
P. 2

Engine compartment enclosure doors shall be lockable without the use of external locks and accessible from the ground. All daily service points shall be accessible from ground level and grouped together.

Yes  No   
Page # 14, Bid Spec  
P. 1, 8.

Engine will increase its low idle to **1,000 rpm** when the battery voltage is below **24.5 volts** for more than **5 minutes** to ensure adequate system voltage and battery reliability.

Yes  No   
Page # 2, Bid Spec  
P. 8

**STARTING SYSTEM**

Shall be equipped with a **24-volt** electrical system. **115-amp** alternator.

Yes  No   
Page # Bid Spec P. 8

**TRANSMISSION-8 Forward Speeds and 6 Reverse Speeds**

Shall be designed and built by the machine manufacturer and shall be a direct drive, powershift, counter-shaft type transmission.

Yes  No   
Page # 140 LVR PRICE  
PAGE  
→

Shall be equipped with built-in self-diagnostic capability

Yes  No   
Page # Bid Spec P. 3

A controlled throttle shifting system shall be standard to smooth directional gear changes without use of the inching pedal.

Yes  No   
Page # Bid Spec P. 3

Final drive shall be a planetary design.

Yes  No   
Page # Bid Spec P. 3

Machine shall be equipped with an electronic inching pedal for improved modulation and machine control, and with electronic over-speed protection to protect the engine and transmission from over speeding.

Yes  No   
Page # BID SPEC p. 5

Also, to be equipped with transmission guard.

Yes  No   
Page # BID SPEC p. 9

**TANDEM**

Machine to be equipped with differential lock/unlock electro-hydraulically controlled with a multi-disc design.

Yes  No   
Page # BID SPEC p. 3

Tandems shall be capable of oscillating **15 degrees** front up and **22 degrees** Rear up, with full machine articulation and having no interference between tandem wheel and machine structure

Yes  No   
Page # BID SPEC p. 5

**CONTROLS AND HYDRAULICS**

Conventional lever style controls

Yes  No   
Page # BID SPEC p. 3

Hydraulics system shall be a closed center, load sensing type, with a variable Displacement, axial piston-type pump.

Yes  No   
Page # BID SPEC p. 4

Implement valves shall be electro-hydraulic, designed and built by the machine manufacturer.

Yes  No   
Page # BID SPEC p. 4

Lock valves shall be integrated into the main implement valve to prevent cylinder drift.

Yes  No   
Page # BID SPEC p. 4

**BLADES**

Machine shall be equipped with **14 ft. long, 25 in** high and no less than **7/8** in thick moldboard with hydraulic side shift and tip control.

Yes  No   
Page # 140 LVR PRICE PAGE

Blade shall also include reversible overlay end bits.

Yes  No   
Page # 140 LVR PRICE PAGE

All blade functions shall be hydraulically or electronically actuated.

Yes  No   
Page # BID SPEC p. 4

Blade lift accumulators shall be available, to reduce vertical impact damage.

Yes  No   
Page # BID SPEC P. 8

**DRAWBAR AND CIRCLE**

Circle shall be a single piece, rolled ring forging with raised wearing surface top and bottom

Yes  No   
Page # BID SPEC P. 7

Must be equipped with replaceable wear strips between circle and support shoes.

Yes  No   
Page # BID SPEC P. 7

Rear drawbar shall be equipped with slip clutch designed to protect the circle, drawbar, and moldboard from shock when end of blade encounters, hidden objects.

Yes  No   
Page # BID SPEC P. 10

Drawbar shall feature welded protective wear plates to prevent lift group contact with the primary drawbar structure.

Yes  No   
Page # BID SPEC P. 7

The circle shall be steel construction with 6 replaceable wear shoes.

Yes  No   
Page # BID SPEC P. 7

**FRAME**

Articulated type main frame.

Yes  No   
Page # BID SPEC P. 1

Articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine.

Yes  No   
Page # BID SPEC P. 9

Shall be that of a flanged box section type frame that runs from the front bolster to the articulation joints.

Yes  No   
Page # BID SPEC P. 1

**STEERING WHEEL**

Fully hydraulic, 2-cylinder steering system, with front steering wheel angle not less than 50° left or right.

Yes  No   
Page # BID SPEC P. 5, 5

**TIRES**

All **six** wheels shall be **10 in by 24 in size** multi-piece tire rims and shall provide mounting for **14.00 R24** tires.

Yes  No   
Page # 140 4yr TIRE  
OPTIONS

Tires shall be Goodyear, Bridgestone/Firestone, or Michelin only, **14.00 x R24** 12PR Bias Tires.

Yes  No   
Page # 170 4yr TIRE  
OPTIONS

**BRAKES**

Service brakes shall be multi-disc, oil-cooled and completely sealed.

Yes  No   
Page # 818 SPEC. 4

**OIL ANALYSIS**

To be included at no cost of the duration of the warranty period selected at intervals recommended by the manufacturer's warranty and maintenance schedule.

Yes  No   
Page #     

**WEIGHT (STANDARD OPERATING)**

Base machine weight shall not be less than **42,325 lbs.** Weight shall include standard machine configuration, lubricants, coolants, full fuel tank, push block, transmission guard, rear ripper/scarifier, 14.0 R24 tires on multi-piece rims, and operator of **200lbs** This is factory specified operating weight only. No additional weights may be added for purpose of meeting these specifications.

Yes  No   
Page # BID Spec. 1  
3

## 140 HEAVY DUTY MOTOR GRADER B

140	HEAVY DUTY MOTOR GRADER B	2026 Pricing
505-6959	140 MOTOR GRADER STEERING WHEEL	\$440,518
543-2196	REGIONAL PACAKGE	\$0
243-6704	14' PLUS MOLDBOARD	\$2,662
	BLADE, 14' X 27" X 1"	\$0
548-8062	COLD WEATHER PACKAGE (ETHER STARTING AID)	\$984
548-8038	BLADE ACCUMULATORS	\$6,069
651-1836	TOP ADJUST DRAWBAR	\$0
233-7143	14' BLADE CUTTING EDGE	\$376
233-7160	OVERLAY END BITS	\$71
610-7189	ECOLOGY OIL DRAIN	\$0
548-8032	BASE HYDRAULICS	\$0
627-1553	HEAVY DUTY STARTER	\$0
548-8027	150 AMP ALTERNATOR	\$0
585-6621	JUMP START RECEPTACLE	\$0
599-0265	LOW HEADLIGHTS	\$1,775
599-0286	NO WORK LIGHTS	\$0
599-0279	REAR LIGHTS PLUS TURN SIGNALS	\$1,617
610-2240	WARNING BEACON MOUNTING	\$944
592-9979	CAB PLUS	\$0
461-3554	STANDARD SEAT	\$2,637
594-6360	SEAT BELT W/ INDICATOR	\$0
592-9983	AUXILIARY HEATER COVER	\$0
604-3128	NO TECHNOLOGY PACKAGE	\$0
628-1697	REAR VISION CAMERA	\$2,188
483-9353	EXTERNAL MIRRORS	\$0
602-5409	AM/FM BLUETOOTH RADIO	\$755
594-8364	MANUAL LOCK OUT	\$1,744
548-5890	CELULAR PRODUCT LINK PLE243	\$0
635-5493	NO CAT GRADE ARO	\$0
548-5879	REVERSING FAN	\$4,034
594-9610	SWING OUT FAN SUPPORT	\$0
548-8021	R134A REFRIGERANT FOR AC	\$0
644-4880	COOLANT	\$0
252-0679	14.0R24 MX XGLA2 * G2 MP MICHELIN RADIAL TIRES WITH MULTI-PIECE RIMS	\$13,025
585-4527	NO HITCH	\$0
548-5880	DECALS	\$0
548-5882	GP FILM	\$0
421-8926	SERIALIZED TECHNICAL MEDIA KIT	\$0
522-2419	TRANSMISSION GUARD	\$4,427
521-3250	CIRCLE SAVER	\$311
580-0241	ADDITIONAL REAR STEP	\$392
0P-2918	STORAGE PROTECTION	\$0
0P2265	ROLL ON - ROLL OFF	\$0
	<b>TOTAL BID PRICE FOR STANDARD MACHINE</b>	<b>\$324,362</b>
	<b>FREIGHT PREPARATION AND DELIVERY</b>	<b>\$11,841</b>
	<b>TOTAL MANUFACTURER'S SUGGESTED RETAIL PRICE FOR STANDARD MACHINE</b>	<b>\$484,529</b>

140LVR4-B MOTOR GRADER  
BRAZIL

Ship Weight  
lbs

LIST PRICE  
AT DEALER

Standard Equipment:

**POWERTRAIN**

Air cleaner, dry radial seal with service indicator and automatic dust ejector  
Air-to-air after cooler (ATAAC)  
Belt, serpentine, automatic tensioner  
Brakes, oil disc, four-wheel, hydraulic  
Demand fan with reversing, hydraulic  
Differential, lock/unlock  
Electronic over-speed and under-speed protection  
Parking brake, disc, hydraulic  
Sediment drain, fuel tank  
Transmission, 9 speed forward and 6 speed reverse with Finish Grading gear, power shift, direct drive  
VHP Plus (Variable Horse Power Plus)

**ELECTRICAL**

Alarm, back-up  
Batteries, maintenance free, heavy duty, 1125 CCA  
Breaker panel  
Hydro Mechanical valve  
Electrical system, 24V  
Lights, reversing, LED  
Starter, electric

**OPERATOR ENVIRONMENT**

Air Conditioning with heater  
Articulation  
Centershift pin indicator  
Display, digital speed and gear  
Doors, left and right  
Gauge, machine level  
Gauges (digital) inside the cab  
-Fuel  
-Articulation  
-Engine coolant temperature  
-Engine RPM  
-Hydraulic oil temperature  
-DEF/AdBlue  
10" Digital operator information system  
Meter, hour, digital  
Power port, 12V  
ROPS cab, ISO 6394 Sound  
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 with intermittent wiper

Cab storage

**TECHNOLOGY PRODUCTS**

**RADIOS**

Authorization varies by country, please contact your Cat marketing representative with questions or click on the on the  
<https://Catdealer.com/certification>  
PRODUCT LINK

Availability varies by country, please contact your Cat marketing representative with questions.

**SAFETY AND SECURITY**

Clutch, circle drive slip  
Doors engine compartment (two left hand two right hand) locking  
Doors, 2 service, left & right locking  
Ground level engine shutdown  
Hammer (emergency exit)  
Horn, electric  
Secondary steering  
Tandem walkway/guards

**TIRES, RIMS, AND WHEELS**

A partial allowance for tires on (254mm x 609.6mm (10" x 24") multi-piece rims is included in the base machine price and weight.

**FLUIDS**

Antifreeze  
Extended life coolant -40C/-40F

**OTHER STANDARD EQUIPMENT**

Accumulators -brake -dual certified  
Fluid check, ground level  
Fuel tank, 371 liters (98 gallon)  
Ground level fueling  
DEF/AdBlue Tank, 17 liters (4.5 gallon)  
Hydraulics for Base 10 Functions  
-Machine articulation,  
-Wheel lean,  
-Left and right blade lift with independent float  
-Drawbar centershift,  
-Circle drive  
-Blade sideshift  
-Blade tip  
-Ripper  
-Front lift  
One set of hydraulic lines supplied to front and one set to rear for FL/RIP.

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**LANE SELECTION**

OP-9002	LANE 2 ORDER . . . . .	0	NC
Only for dealers enrolled in the Base Orders Management (BOM) program.			
OP-9003	LANE 3 ORDER . . . . .	0	NC

**REGIONAL PACKAGES**

**REGIONAL PACKAGES**

L	543-2196	REGIONAL PACKAGE, GENERAL, LVR . . . . . Provides standard brake accumulators. For use in temperatures above -18C	0	NC
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**PERFORMANCE PACKAGES**

**MOLDBOARD PACKAGES**

L	243-6702	MOLDBOARD, 12' . . . . . Moldboard 12- x 24- x 7/8- (3658 x 610 x 22mm) with hydraulic side shift.	0	NC
L	243-6703	MOLDBOARD, 14' BASIC . . . . . Moldboard 14- x 25- x 7/8- (4267 x 635 x 22mm) with hydraulic side shift.	166	
L	243-6704	MOLDBOARD, 14' PLUS . . . . . Moldboard 14- x 27- x 1- (4267 x 686 x 25mm) with hydraulic side shift.	460	

**WEATHER PACKAGES (TANDEM MACHINES)**

L	548-8060	WEATHER, STANDARD . . . . . Recommended for year around use when typical ambient temperature range is 0C (32F) to 43C (110F) and operating at altitude below 1220 m (4000 feet). Includes 10W Hydraulic Oil and 1125 CCA battery. ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER	0	NC
L	548-8062	COLD WEATHER PACKAGE . . . . . Recommended for year around use when typical ambient temperature range is -18C (0F) to 43C (110F) and operating at altitude below 1220 m (4000 feet). INCLUDES: - Starting Aid, Ether - Batteries, Extreme Duty -1400 CCA - Oil, Hydraulic, 10W ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER	0	
L	548-8063	COLD WEATHER PLUS PACKAGE . . . . . Recommended for year around use when typical ambient temperature range is -40 degrees C (-40F) to 40C (104) or operating at altitude above 1220 m (4000 feet). INCLUDES: - Starting Aid, Ether - Cold Start; Transmission oil and fan brake bypass - Batteries, Extreme Duty -1400 CCA - Oil, Hydraulic, Cold, 0W-20 ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER	0	

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**PERFORMANCE PACKAGES (CONT.)**

***DRAWBAR ARRANGMENT***

L	651-1836	<b>DRAWBAR, TOP ADJUST</b> ..... 0 Top Adjust Drawbar and Circle. Top-adjust circle wear strips Setscrew moldboard wear strip adjustment. Adjustment allows for DCM assembly to keep tighter grades. Ideal for customers who perform finish grading work and frequently maintain their drawbar, circle and moldboard for factory tightness. ONLY FOR USE WITH: 635-5493 NO CAT GRADE ARO, TOP AD 548-5883 CAT GRADE, ARO, TOP AD 548-5885 CAT GRADE, CROSS SLOPE, TOP AD 548-5886 DIGITAL BLADE SLOPE METER 645-5059 CAT GRADE, 3D MASTLESS, TOP AD	0	NC
L	626-8089	<b>DRAWBAR, HPC</b> ..... 0 Caterpillar High Performance Circle replaces circle wear strips with a roller bearing. System eliminates need for circle adjustment and reduces maintenance. Ideal for customers in applications with high wear rate of circle strips, or applications where maintaining circle tightness without adjustment for precise finish grading is required. Includes top mounted nested greasebank for ease of greasing and reinforced circle for durability. Setscrew moldboard wear strip adjustment. ONLY FOR USE WITH: 635-5494 NO CAT GRADE ARO, HPC 645-5256 CAT GRADE, CROSS SLOPE, HPC 645-9616 CAT GRADE, 3D MASTLESS, HPC 645-5782 CAT GRADE, ARO, HPC	0	

***CUTTING EDGE & GRADER BITS***

L	233-7139	<b>CUTTING EDGE, 12' BLADE</b> ..... 44 6" x 5/8" (152 x 16 mm) curved cutting edge. ONLY FOR USE WITH: 243-6702 MOLDBOARD, 3.7M	44	NC
L	233-7143	<b>CUTTING EDGE, 14' BLADE</b> ..... 55 8- x 3/4" (203 x 19 mm) curved cutting edge ONLY FOR USE WITH: 243-6703 MOLDBOARD, 4.3M BASIC 243-6704 MOLDBOARD, 4.3M PLUS	55	
L	646-1355	<b>GRADERBIT2 STANDARD BIT 14</b> ..... 0 For use in Lane 3 only Serrated edge with 70 replaceable carbide tipped narrow bits with a tool-less retention system. ONLY FOR USE WITH: 243-6703 MOLDBOARD, 4.3M BASIC 243-6704 MOLDBOARD, 4.3M PLUS	0	
L	646-1531	<b>GRADERBIT2 WIDE BIT 14</b> ..... 0 For use in Lane 3 only Straight edge with 70 replaceable carbide tipped wide bits with a tool-less retention system. ONLY FOR USE WITH: 243-6703 MOLDBOARD, 4.3M BASIC 243-6704 MOLDBOARD, 4.3M PLUS	0	

***END BIT & OVERLAY***

L	233-7148	<b>END BITS, STANDARD</b> ..... 0 Moldboard end bits, standard, without overlay.	0	NC
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USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**PERFORMANCE PACKAGES (CONT.)**

**END BIT & OVERLAY (Cont.)**

L	233-7160	END BITS, OVERLAY . . . . .	52	
		Moldboard end cutting bit with a reversible overlay to protect the moldboard and cutting edge.		
		ONLY FOR USE WITH: 233-7143 CUTTING EDGE, 4.3M BLADE		

**POWERTRAIN**

**DRAIN ARRANGEMENT**

L	610-7189	DRAIN, ECOLOGY . . . . .	0	NC
		Includes ecology drain for engine oil		
		ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	635-5609	DRAIN, ECOLOGY AWD . . . . .	0	NC
		Includes ecology drain for engine oil		
		ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	631-2302	DRAIN, HIGH SPEED, ENG OIL . . . . .	0	
		High speed engine oil drain. Requires pump at service location to be attached to coupling receiver for high speed flow.		
		HSO drain can also manual/gravity drain.		
		ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	635-5610	DRAIN, HIGH SPEED, ENG OIL AWD . . . . .	0	
		High speed engine oil drain. Requires pump at service location to be attached to coupling receiver for high speed flow.		
		HSO drain can also manual/gravity drain.		
		ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		

**HYDRAULICS**

**NOTE: Hydraulic Definitions**

"Contains 10 base implement functions: machine articulation, wheel lean left and right blade lift with independent float, drawbar centershift, circle drive, blade sideshift, blade tip, ripper and front lift. One set of hydraulic lines run to front and one set to rear for attachments."

- DA1 = Dozer Angle 1 (angles front blade left OR right)
- DA2 = Dozer Angle 2 (angles front blade left AND right)
- MMS = Mid-Mounted Scarifier
- WM = Wing Mast (Snow Wing)
- WT = Wing Tilt (Snow Wing)

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**COOLING (CONT.)**

**REFRIGERANT**

L	548-8021	REFRIGERANT, R134A. . . . . To provide air conditioning using R134A refrigerant. For use with RORO shipping.	0	NC
L	548-8022	REFRIGERANT, R1234YF. . . . . To provide air conditioning using R1234YF refrigerant. For use with RORO shipping.	0	

**COOLANT**

L	644-4880	COOLANT, -40C (-40F) . . . . . Standard engine coolant	0	NC
L	644-4882	COOLANT, -50C (-58F) . . . . . Engine coolant recommended for extreme low temperatures	0	

**TIRES, RIMS, AND WHEELS**

**TIRES**

\*\*To calculate tire loads with machine attachments, please reference the MG Tire Selection Pocket Guide (media #AEXQ0403),

Available on the Electronic Sales Library.  
All tire selections should be made with consideration for planned machine attachments (OEM and aftermarket) and their additional weight. Each tire has a maximum load rating that is not to be exceeded. The tire selection should be based on the maximum of all tire position loads on the machine. Assistance for calculating the highest tire load can be found in the Tire Load Worksheet in the back of the Caterpillar Motor Graders Tire Selection Pocket Guide. Failure to abide by the load ratings of the tires without first consulting the local tire supplier representative could result in nullification of the tire warranty

**TIRES (TND)**

**MICHELIN**

L	252-0679	TIRES, 14.0R24 MX XGLA2 * G2 MP . . . . . Michelin XGLA2 1* on 10" x 24" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (7824 lbs) 3550 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER	1,069	
L	252-0701	TIRES, 14.0 R24 MX XSNO + *G2 MP. . . . . Michelin XSNO 1* on 10" x 24" multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (7824 lbs) 3550 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER	1,282	

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**TIRES, RIMS, AND WHEELS (CONT.)**

**MICHELIN (Cont.)**

L	254-7971	TIRES, 17.5 R25 MX XTLA *L2 SP . . . . . 979 For use in Lane 2 only Michelin XTLA 1* on 13" x 25" single piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	252-0771	TIRES, 17.5R25 MX XTLA * L2 MP . . . . . 1,371 Michelin XTLA 1* on 14" x 25" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	252-0777	TIRES, 17.5R25 MX XSNO + * G2 MP. . . . . 1,093 Michelin XSNO+ 1* on 14" x 25" multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		

**BRIDGESTONE**

L	648-0073	TIRES, 14.0R24 BS VSWAS G2 MP . . . . . 0 Bridgestone VSWAS 1* on 10" x 24" multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	252-0714	TIRES, 14.0 R24 BS VKT * G2 MP . . . . . 1,540 Bridgestone VKT 1* on 10" x 24" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING 3650 kg (8,045 lbs).** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	252-0720	TIRES, 14.0R24 BS VUT * L2 MP . . . . . 1,012 Bridgestone VUT 1* on 10" x 24" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	252-0775	TIRES, 17.5R25 BS VKT * D2A MP . . . . . 1,810 Bridgestone VKT 1* on 14" x 25" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	648-0075	TIRES, 17.5R25 BS VSWAS G2 MP . . . . . 0 Bridgestone VSWAS 1* on 14" x 25" multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		
L	654-9801	TIRES, 550/65R25 BS VTS *L3 MP . . . . . 0 Offers optimum traction and low ground pressure for fine grading applications. Bridgestone VTS 1* on 14" x 25" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg. ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER		

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**TIRES, RIMS, AND WHEELS (CONT.)**

**GOODYEAR**

L 612-1920 TIRES, 17.5-25 16PR GY SGL L2/G ..... 0  
 Goodyear SGL D/L-2A 16PR on 14x25 multi-piece rims load rating  
 ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER

**MAXAM**

L 578-9460 TIRES 14.00R24 MA MS202 \* MP ..... 0  
 Maxam MS202 2\* on 14- x 25- multi-piece rims.  
 SUITABLE FOR SNOW  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE  
 FOR INDIVIDUAL TIRE LOADS EXCEEDING (8600 lbs) 3900kg.\*  
 ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER

L 578-9458 TIRES 17.5R25 MA MS202 \*\* MP ..... 0  
 Maxam MS202 2\* on 14- x 25- multi-piece rims.  
 SUITABLE FOR SNOW  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE  
 FOR INDIVIDUAL TIRE LOADS EXCEEDING (8600 lbs) 3900kg.\*  
 ONLY FOR USE WITH: 505-6959 140LVR 16A T4 MOTOR GRADER

**MICHELIN**

L 249-7845 TIRES, 14.0R24 MX XSNO + \* G2 MP. .... 1,261  
 Michelin XSNO 1\* on 10" x 24" multi-piece rims.  
 SUITABLE FOR SNOW  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE  
 FOR INDIVIDUAL TIRE LOADS EXCEEDING (7824 lbs) 3550 kg.\*\*  
 ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER

L 252-0681 TIRES, 14.0R24 MX XGLA2 \* G2 MP ..... 1,048  
 Michelin XGLA2 1\* on 10" x 24" multi-piece rims.  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL  
 TIRE LOADS EXCEEDING (7824 lbs) 3550 kg.\*\*  
 ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER

L 252-0773 TIRES, 17.5R25 MX XTLA \* L2 MP ..... 268  
 Michelin XTLA 1\* on 14" x 25" multi-piece rims.  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL  
 TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.\*\*  
 ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER

L 252-0779 TIRES, 17.5R25 MX XSNO + \* G2 MP. .... 903  
 Michelin XSNO+ 1\* on 14" x 25" multi-piece rims.  
 SUITABLE FOR SNOW  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL  
 TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.\*\*  
 ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER

**BRIDGESTONE**

L 648-0078 TIRES, 14.0R24 BS VSWAS G2 MP ..... 0  
 Bridgestone VSWAS 1\* on 10" x 24" multi-piece rims.  
 THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL  
 TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.\*\*  
 ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER

USE	REF NO.	LANE 2 / 3 MANDATORY	Ship Weight lbs	LIST PRICE AT DEALER
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**TIRES, RIMS, AND WHEELS (CONT.)**

**BRIDGESTONE (Cont.)**

L	252-0716	TIRES, 14.0R24 BS VKT * G2 MP . . . . . 1, 519 Bridgestone VKT 1* on 10" x 24" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	252-0722	TIRES, 14.0R24 BS VUT * L2 MP . . . . . 991 Bridgestone VUT 1* on 10" x 24" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	249-7841	TIRES, 17.5R25 BS VKT * D2A MP . . . . . 1, 620 Bridgestone VKT 1* on 14" x 25" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	648-0080	TIRES, 17.5R25 BS VSWAS G2 MP . . . . . 0 Bridgestone VSWAS 1* on 14" x 25" multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	600-4199	TIRES, 550/65R25 BS VTS *L3 MP . . . . . 0 Offers optimum traction and low ground pressure for fine grading applications. Bridgestone VTS 1* on 14" x 25" multi-piece rims. THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8045 lbs) 3650 kg.**		

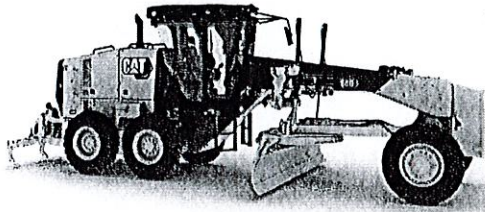
**MAXAM**

L	578-9463	TIRES 14.00R24 MA MS202 * MP . . . . . 0 Maxam MS202 1* on 10- x 24- multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8377 lbs) 3800kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		
L	578-9462	TIRES 17.5R25 MA MS202 ** MP . . . . . 0 Maxam MS202 2* on 14- x 25- multi-piece rims. SUITABLE FOR SNOW THE TIRE MANUFACTURER DOES NOT RECOMMEND THIS TIRE FOR INDIVIDUAL TIRE LOADS EXCEEDING (8600 lbs) 3900kg.** ONLY FOR USE WITH: 505-6961 140LVR 16A AWD T4 MOTOR GRADER		

**WORK TOOLS**

**REAR WORKTOOLS**

L	585-4527	NO HITCH . . . . . 0 Provides a plate that bolts to the bumper that allows for attachment points for ripper or auxiliary hoses. ONLY FOR USE WITH: 618-6161 GUARD, TRANSMISSION,W/O RIPPER		NC
L	607-7305	HITCH, TOWING (ISO) . . . . . 0 Retrieval hitch. Does not include pin. ONLY FOR USE WITH: 610-2053 GUARD, TRANSMISSION,W/ RIPPER		



# 140

## Motor Grader

# Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

### Table of Contents

<b>Specifications</b> .....	<b>2</b>		
Engine .....	2	Standard Circle and Drawbar .....	5
Powertrain .....	2	High Performance Circle and Drawbar .....	5
Hydraulic System .....	2	Standards .....	6
Operating Specifications .....	3	Sound Standards .....	6
Operating Weight – U.S. EPA Tier 4 Final/Stage V .....	3	Air Conditioning System .....	6
Power to the Ground (Non-AWD) .....	3	Rear Ripper/Scarifer .....	6
Power to the Ground (AWD) .....	3	Scarifer .....	6
Electrical .....	4	Blade Range (Non-AWD) .....	7
Service Refill Capacities .....	4	Blade Range (AWD) .....	7
Moldboard .....	4	Dimensions .....	8
Drawbar and Circle .....	5	Optional Tire Arrangements .....	8
<b>Standard and Optional Equipment</b> .....	<b>9</b>		
<b>140 Environmental Declaration</b> .....	<b>11</b>		

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

Engine		
Engine Model	Cat® C7.1	
Net Engine Power Range (Tandem)		
ISO 9249/SAE J1349	94-174 Kw	126-233 hp
Net Engine Power Range (AWD)		
ISO 9249/SAE J1349	98-194 Kw	131-248 hp
Bore	105 mm	4.1 in
Stroke	135 mm	5.3 in
Displacement	7.01 L	427.8 in <sup>3</sup>
Torque Rise (Tandem)	29%	
Torque Rise (AWD)	28%	
Maximum Torque (Tandem)	1070 N•m	789.2 lbf-ft
Maximum Torque (AWD)	1159 N•m	854.9 lbf-ft
Derating Altitude (Tandem)	4500 m	14,764 ft
Derating Altitude (AWD)	3000 m	9,843 ft
Rated Speed	2,000 rpm	
Number of Cylinders	6	
Idle Speed		
High Idle Speed	2,150 rpm	
Low Idle Speed (1F-8F and 1R-6R)	800 rpm	
Low Idle Speed (Hibernate 7 finish gear)	750 rpm	
Maximum Altitude at Full Power		
Non-AWD	4500 m	14,764 ft
AWD	3000 m	9,843 ft

- Advertised power is tested per the specified standard in effect at the time of manufacture.
- See page 10 for Environmental Declarations and Sustainability information.
- Net power available at the flywheel when the engine is equipped with fan, air cleaner, aftertreatment, and alternator with engine speed at 2,000 rpm.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) and are compatible\* with ULSD blended with the following lower-carbon intensity fuels\*\* up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester) \*\*\*
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels
- Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
- \* While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.
- \*\* Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.
- \*\*\* Engines with no aftertreatment devices are compatible with higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).

Powertrain	
Forward/Reverse Gears	9 Forward/6 Reverse including finish gear
Transmission	Direct Drive Powershift
High Idle Speed	2,150 rpm
Low Idle Speed	800 rpm
Air Cleaner	Dry
Brakes	Type System
Service	Dual Circuit Hydraulic
Service, Surface Area – Gross area per machine	23,000 cm <sup>2</sup>
Service, Surface Area – Net Area (accounting for grooves)	16,370 cm <sup>2</sup>
Parking	Spring Apply Hydraulic Release
Secondary	Dual Circuit Hydraulic

Hydraulic System		
Type (Implement/Steering/Brake)	Closed – Center	
Type (AWD)	Closed – Center	
Circuit Type	Parallel	
Pump Type	Variable Piston	
Pump Output	24,150 kPa at 2,000 rpm	3,503 psi at 2,000 rpm
System Flow for Implements, Steering, and Brake Pump		
74cc	0-148 L/min	0-39.09 gal/min
100cc (if equipped with reversing fan)	0-200 L/min	0-52.83 gal/min
Maximum System Pressure	25500 kPa	3698 psi
Reservoir Tank Capacity	60 L	15.85 gal
Standby Pressure	5000-6000 kPa	725-870 psi

\*Pump output measured at 2,000 rpm rated speed

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

Operating Specifications		
Top speed forward	48.3 km/h	30.1 mph
Top speed reverse	38.1 km/h	23.7 mph
Turning Radius, Outside Front Tires	7.5 m	295.3 in
Steering Range	50° Left and Right	
Articulation Angle	20° Left and Right	
Front Wheel Lean	18° Left and Right	
Total Oscillation	32°	
Forward		
Finish Gear (FG)	3.0 km/h	1.9 mph
1st	4.1 km/h	2.6 mph
2nd	5.6 km/h	3.5 mph
3rd	8.2 km/h	5.1 mph
4th	11.3 km/h	7.0 mph
5th	17.7 km/h	11.0 mph
6th	24.1 km/h	15.0 mph
7th	33.2 km/h	20.6 mph
8th	48.3 km/h	30.1 mph
Reverse		
1st	3.3 km/h	2.0 mph
2nd	6.1 km/h	3.8 mph
3rd	8.9 km/h	5.5 mph
4th	14.0 km/h	8.7 mph
5th	26.2 km/h	16.3 mph
6th	38.1 km/h	23.7 mph

• Machine speed measured at 2,150 rpm with 14.00R24 radial tires, no slip

Operating Weight – U.S. EPA Tier 4 Final/Stage V		
Weight, Typically Equipped, Lever Configuration, Tandem (Non-AWD)	19 127 kg	42,168 lb
Front Axle:	5425 kg	11,960 lb
Rear Axle:	13 702 kg	30,208 lb
Weight, Typically Equipped, Lever Configuration (AWD)	19 631 kg	43,279 lb
Front Axle:	5579 kg	12,300 lb
Rear Axle:	14 052 kg	30,979 lb
Weight, Typically Equipped, Joystick Configuration, Tandem (Non-AWD)	19 297 kg	42,543 lb
Front Axle:	5345 kg	11,784 lb
Rear Axle:	13 952 kg	30,759 lb
Weight, Typically Equipped, Joystick Configuration (AWD)	19 730 kg	43,497 lb
Front Axle:	5495 kg	12,114 lb
Rear Axle:	14 235 kg	31,383 lb

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

## Power to the Ground

Next Gen 140 Motor Grader constant net power is a true constant net. No matter the ambient condition or load, power to the ground is constant for a given engine speed and gear.

	Non-AWD				AWD			
	ISO:9249 Net		Power to the Ground*		ISO:9249 Net		Power to the Ground*	
Finish Gear	94 kW	126 hp	67 kW	90 hp	98 kW	131 hp	68 kW	91 hp
1F	126 kW	169 hp	95 kW	127 hp	132 kW	177 hp	95 kW	127 hp
2F	131 kW	176 hp	98 kW	131 hp	144 kW	193 hp	104 kW	139 hp
3F	136 kW	182 hp	99 kW	133 hp	155 kW	208 hp	108 kW	145 hp
4F	143 kW	192 hp	101 kW	135 hp	164 kW	220 hp	108 kW	145 hp
5F	147 kW	197 hp	101 kW	135 hp	173 kW	232 hp	110 kW	148 hp
6F	153 kW	205 hp	98 kW	131 hp	179 kW	240 hp	108 kW	145 hp
7F	159 kW	213 hp	92 kW	123 hp	188 kW	252 hp	106 kW	142 hp
8F	167 kW	224 hp	80 kW	107 hp	186 kW	249 hp	88 kW	118 hp

\*Performance variable fan speed 90%.

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

Electrical	
Starting System Type	Direct Electric
Heavy Duty Battery	
CCA at -18°	900 amp
Volts	12V
Quantity	2
Extreme Duty Battery (Standard Weather)	
CCA at -18°	1,125 amp
Volts	12V
Quantity	2
Extreme Duty Battery (Cold Weather Plus)	
CCA at -18°	1,400 amp
Volts	12V
Quantity	2
Basic Alternator	115 amps at 24V
Maximum Alternator	150 amps at 24V
Heavy Duty Alternator	200 amps at 24V

Service Refill Capacities		
Standard Circle Drive	7 L	1.8 gal
High Performance Circle Drive	9.5 L	2.5 gal
Cooling System	43 L	11.4 gal
Diesel Exhaust Fluid (DEF) Tank	17 L	4.5 gal
Engine Crankcase	20 L	5.3 gal
Fuel Tank	371 L	98.0 gal
Hydraulic System	60 L	15.9 gal
Tandem Housing (each)	70 L	18.5 gal
Transmission and Differential	68 L	18.0 gal

Moldboard						
Moldboard (Size)	12 ft Moldboard		14 ft Moldboard		14 ft Plus Moldboard	
Height	609.5 mm	24.0 in	609.5 mm	2.0 ft	686 mm	27.0 in
Width	3.7 m	12.1 ft	4.3 m	14.1 ft	4.3 m	14.1 ft
Thickness	22 mm	0.9 in	22 mm	0.9 in	25 mm	1.0 in
Arc Radius	413 mm	16.3 in	413 mm	16.3 in	413 mm	16.3 in
Throat Clearance	125 mm	4.9 in	117 mm	4.6 in	83 mm	3.3 in
<b>Cutting Edge</b>						
Height	152.4 mm	6.0 in	203.2 mm	8.0 in	203.2 mm	8.0 in
Width	1.8 m	5.9 ft	2.1 m	6.9 ft	2.1 m	6.9 ft
Thickness	15.9 mm	0.6 in	19 mm	0.7 in	19 mm	0.7 in
Height (Cutting Edges with Moldboard)	535.3 mm	21.1 in	563 mm	22.2 in	563 mm	22.2 in
Width (Cutting Edges with Moldboard)	3.7 m	12.1 ft	4.3 m	14.1 ft	4.3 m	14.1 ft
<b>End Bit</b>						
Height	449.2 mm	17.7 in	449.2 mm	17.7 in	511.2 mm	20.1 in
Width	152.4 mm	6.0 in	152.4 mm	6.0 in	235 mm	9.3 in
Thickness	15.9 mm	0.6 in	15.9 mm	0.6 in	12.5 mm	0.5 in
Height (Cutting edges with Moldboard)	553.6 mm	21.8 in	553.6 mm	21.8 in	577.2 mm	22.7 in
Width (Cutting edges with Moldboard)	3.7 m	12.1 ft	3.7 m	12.1 ft	4.3 m	14.1 ft

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

## Drawbar and Circle

Range of Motion	<b>Standard</b>
Circle Drive	360° of Blade Rotation
Link Bar	7 Positions to adjust the drawbar circle moldboard range of motion
Drawbar Shoes	4 with replaceable wear strips

## Standard Circle and Drawbar

Circle	
Section	Rolled Ring Forging
Outside Diameter	1530 mm    60.2 in
Number of Teeth	64
Rotation	360° when equipped with Cat Grade
Drawbar	
Height	152.4 mm    6.0 in
Width	76.2 mm    3.0 in
Thickness	12.7 mm    0.5 in
Shoes	6 - with replaceable wear strips
Bearing	N/A

## High Performance Circle and Drawbar

Circle		
Section	Welded Ring	
Outside Diameter	1202 mm	47.3 in
Number of Teeth	110	
Rotation	Right 70°	Left 70°
Drawbar		
Height	152.4 mm	6.0 in
Width	76.2 mm	3.0 in
Thickness	12.7 mm	0.5 in
Shoes	N/A	
Bearing	320 Hex Bearing	

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

Standards	
Cab Rollover Protective Structure (ROPS)	ISO 3471:2008
Cab Fallover Protective Structure (FOPS)	ISO 3449:2005, Level II
Brakes	ISO 3450:2011; AIS-143:2018
Steering	ISO 5010:2019*

Sound Standards	
Sound	ISO 6395:2008 ISO 6396:2008
Spectator Sound Level	105 dB(A)
Operator Sound Level	69 dB(A)

- The dynamic spectator sound power level measurements are performed according to the dynamic test procedures that are specified in ISO 6395:2008. The measurements were conducted at 70% of the maximum engine cooling fan speed. The machine was equipped with sound suppression system.
- The dynamic operator sound pressure level measurements are performed according to the dynamic test procedures that are specified in ISO 6396:2008. The measurements were conducted at 70% of the maximum engine cooling fan speed, with the cab doors and the cab windows closed. The cab was properly installed and maintained. The machine was equipped with sound suppression system.

Air Conditioning System	
• The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. Refer to the machine labeling for identification of the gas.	
– If equipped with R134a (Global Warming Potential = 1430), the system contains 1.6 kg (3.5 lb) of refrigerant which has a CO <sub>2</sub> equivalent of 2.288 metric tonnes (2.521 tons).	

Rear Ripper/Scarifer		
Ripping Depth Maximum	424 mm	16.7 in
Ripper Shank Holder	5	
Ripper Shank Holder Spacing		
Minimum	523.4 mm	20.6 in
Maximum	543.3 mm	21.4 in
Scarifier Depth Maximum	264 mm	10.4 in
Scarifier Shank Holders	9	
Scarifier Shank Spacing		
Minimum	255.7 mm	10.1 in
Maximum	277.7 mm	10.9 in
Penetration Force		
Non-AWD	84.6 kN	19018.8 lbf
AWD	84.6 kN	19018.8 lbf
Pryout Force		
Non-AWD	104 kN	23380. lbf
AWD	121.4 kN	27291.8 lbf
Machine Length Increase, Beam Raised	649.2 mm	25.6 in

Scarifier		
Front, V-Shape Carriage		
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-Shape Carriage		
Working Width	1781 mm	70.1 in
Scarifying Depth, Maximum	292 mm	11.5 in
Scarifier Shank Holders	13	
Scarifier Shank Holder Spacing	116 mm	4.6 in
Mid-Straight Carriage		
Working Width	2486 mm	97.9 in
Scarifying Depth, Maximum	283.8 mm	11.2 in
Scarifier Shank Holders	19	
Scarifier Shank Holder Spacing	114.3 mm	4.5 in

\* When equipped with optional secondary steering

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

<b>BLADE RANGE (NON-AWD)</b>						
	<b>STANDARD</b>		<b>TOP ADJUST</b>		<b>HIGH PERFORMANCE CIRCLE</b>	
<b>Circle centershift with 14 ft moldboard</b>						
Left	724 mm	28.5 in	724 mm	28.5 in	724 mm	28.5 in
Right	740 mm	29.1 in	740 mm	29.1 in	740 mm	29.1 in
<b>Moldboard side shift with 17.5/R25 MX12 tires</b>						
Left	821 mm	32.3 in	958 mm	37.7 in	958 mm	37.7 in
Right	947 mm	37.3 in	815 mm	32.1 in	815 mm	32.1 in
<b>Maximum shoulder reach outside tires (12 ft moldboard)</b>						
Left	1830 mm	72.0 in	1973 mm	77.7 in	1973 mm	77.7 in
Right	1948 mm	76.7 in	1797 mm	70.7 in	1797 mm	70.7 in
<b>Maximum shoulder reach outside of tires (14 ft moldboard)</b>						
Right	2496 mm	98.3 in	2632 mm	103.6 in	2632 mm	103.6 in
Left	2612 mm	102.8 ft	2482 mm	97.7 in	2482 mm	97.7 in
<b>Maximum blade position angle (both sides)</b>			104° (L) / 101.7° (R)			
<b>Maximum lift above ground</b>			447 mm	17.6 in	436 mm	17.2 in
<b>Maximum depth of cut</b>			640 mm	25.2 in	640 mm	25.2 in
<b>Maximum blade tip</b>						
Forward	50°		50°		50°	
Rear	5°		5°		5°	

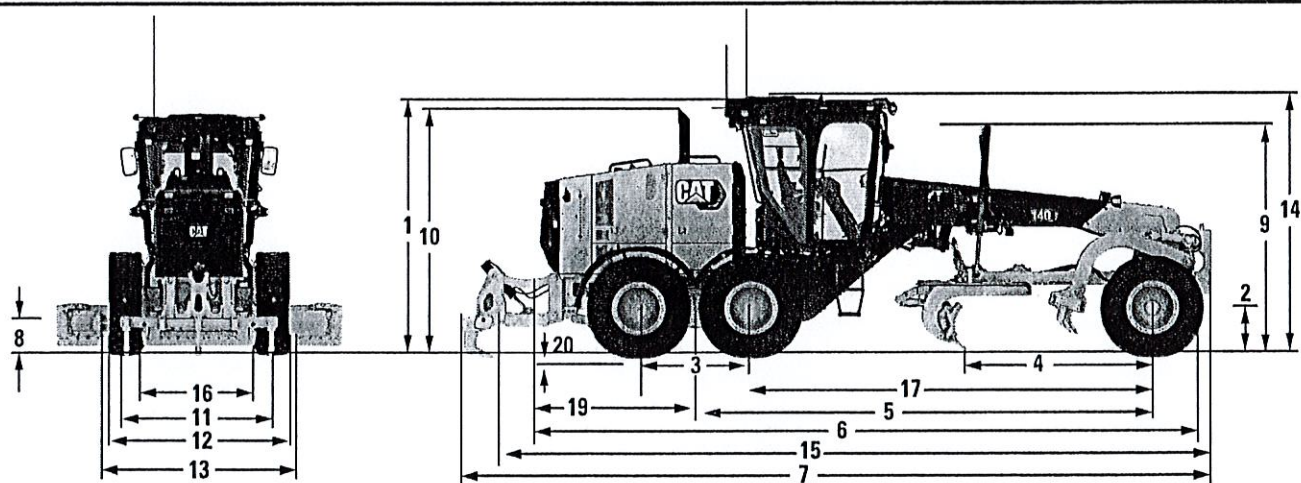
<b>BLADE RANGE (AWD)</b>						
	<b>STANDARD</b>		<b>TOP ADJUST</b>		<b>HIGH PERFORMANCE CIRCLE</b>	
<b>Circle centershift with 14 ft moldboard</b>						
Left	724 mm	28.5 in	724 mm	28.5 in	724 mm	28.5 in
Right	740 mm	29.1 in	740 mm	29.1 in	740 mm	29.1 in
<b>Moldboard side shift with 17.5/R25 MX12 tires</b>						
Left	821 mm	32.3 in	958 mm	37.7 in	958 mm	37.7 in
Right	947 mm	37.3 in	815 mm	32.1 in	815 mm	32.1 in
<b>Maximum shoulder reach outside tires (12 ft moldboard)</b>						
Left	1759 mm	69.3 in	1902 mm	74.9 in	1902 mm	74.9 in
Right	1877 mm	73.9 in	1726 mm	68.0 in	1726 mm	68.0 in
<b>Maximum shoulder reach outside of tires (14 ft moldboard)</b>						
Right	2425 mm	95.5 in	2561 mm	100.8 in	2561 mm	100.8 in
Left	2541 mm	100.0 ft	2411 mm	94.9 in	2411 mm	94.9 in
<b>Maximum blade position angle (both sides)</b>			104° (L) / 101.7° (R)			
<b>Maximum lift above ground</b>			447 mm	17.6 in	436 mm	17.2 in
<b>Maximum depth of cut</b>			640 mm	25.2 in	640 mm	25.2 in
<b>Maximum blade tip</b>						
Forward	50°		50°		50°	
Rear	5°		5°		5°	

# 140 Motor Grader Specifications

All data applies to all 140 configurations (Non-AWD, AWD, LVR, and JS) unless otherwise noted.

## Dimensions

All dimensions are approximate and may vary dependent on tire selection. Dimensions below are calculated with 14.0R24 tires.



1	Height – Top of Cab	3454 mm	136.0 in
2	Height Front Axle Center	612 mm	24.1 in
3	Length – Between Tandem Axles	1498 mm	59.0 in
4	Length Front Axle to Moldboard	2564 mm	100.9 in
5	Length Front Axle to Rear Axle	6136 mm	241.6 in
6	Length Front Tire to Rear of Machine (Non AWD)	8911 mm	350.8 in
7	Length – Push Plate to Ripper	10297 mm	405.4 in
8	Ground Clearance at Rear Axle	333 mm	13.1 in
9	Height to Top of Cylinders	3044 mm	119.8 in
10	Height to Exhaust Stack	3313 mm	130.4 in
11	Width – Rear Tire Center Lines	2087 mm	82.2 in
12	Width – Outside Rear Tires	2532 mm	99.7 in

13	Width – Outside Front Tires		
	LVR Configuration, Tandem – Non-AWD	2521 mm	99.3 in
	Joystick Configuration, Tandem – Non-AWD	2583 mm	101.7 in
	LVR Configuration, AWD	2667 mm	105.0 in
	Joystick Configuration, AWD	2667 mm	105.0 in
14	Maximum Height With Attachments		
	LVR Configuration	3476 mm	136.9 in
	Joystick Configuration	3450 mm	135.8 in
15	Length – Push Plate to Raised Ripper	9963 mm	392.2 in
16	Width – Inside Rear Tires	1642 mm	64.6 in
17	Length Front Axle to Articulation Hitch	5292 mm	208.3 in
18	Length – Rear Axle to Articulation Hitch	844 mm	33.2 in
19	Length – Rear Axle to Rear of Machine	2099 mm	82.6 in
20	Height – Tire Deflection at Performance Weight	64.5 mm	2.5 in

## Optional Tire Arrangements

Rim Size	Wheel Group	Tires
9 × 24	Single-Piece	14.00-24
10 × 24	Multi-Piece	14.00-24
14 × 25	Multi-Piece	17.5R25

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

# 140 Standard and Optional Equipment

## Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat® dealer for details.

	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT</b>			<b>SAFETY (CONTINUED)</b>		
"B" pillar mirrors	✓		Tandem walkways	✓	
Adjustable steering wheel/lever controls	✓		Warning beacon mounts		✓
Air suspension seat	✓		Integrated hazard lights		✓
AM/FM/Bluetooth®/WB radio		✓	Sound suppression		✓
Auxiliary heaters	✓		<b>POWERTRAIN</b>		
Base cab	✓		Cat® C7.1	✓	
Cab storage	✓		Eco mode	✓	
CB radio ready		✓	Reversing fan (LVR)		✓
Cell phone holder	✓		Reversing fan (JOY)	✓	
Coat hook	✓		Transmission with Autoshift		✓
Cup holder	✓		High-speed engine oil drain		✓
Defrost fans		✓	Ecology drain	✓	
Differential lock, manual (LVR)	✓		Cold weather package		✓
Differential lock, automatic (JOY)	✓		Cold weather package plus		✓
Digital blade slope meter (LVR)		✓	Engine idle shutdown	✓	
Digital blade slope meter (JOY)	✓		Shifter with upshift/downshift rocker	✓	
Dome interior light	✓		All-Wheel Drive (AWD)		✓
Electric throttle control	✓		<b>DRAWBAR CIRCLE MOLDBOARD</b>		
Entertainment radio ready (LVR)		✓	12 ft moldboard	✓	
Entertainment radio ready (JOY)	✓		14 ft moldboard		✓
Heated and ventilated premium seat		✓	Blade lift accumulators		✓
Heating/cooling cab system	✓		High Performance Circle		✓
Information display screen	✓		Circle drive slip clutch	✓	
Lower front wipers		✓	Circle saver		✓
Rear sun shades	✓		Standard drawbar circle moldboard	✓	
Rear window screen		✓	Top adjust circle		✓
ROPS/FOPS	✓		<b>ELECTRICAL</b>		
Satellite radio		✓	Sealed alternator	✓	
Seat belt	✓		150A brushed alternator	✓	
Vinyl seat	✓		200A brushed alternator		✓
Wipers, front	✓		Reversing lights	✓	
Wipers, rear		✓	Breaker panel	✓	
<b>SAFETY</b>			900 CCA (Tier 3)	✓	
Back-up alarm	✓		1,125 CCA heavy duty batteries (Tier 4 Final / Stage V)	✓	
Grab rails	✓		LED lights	✓	
Horn	✓		Low light and high light bars	✓	
Hydraulic brakes	✓		Snow wing LED lights		✓
Hydraulic system - integrated dead engine implement lower	✓		Drop down rear lights and turn signals	✓	
Hydraulic system - integrated work port pressure relief	✓				
License plate bracket		✓			
Manual lock out (LVR)		✓			
Operator Presence System	✓				
Parking brake	✓				
Rearview camera		✓			
Rearview mirror	✓				
Secondary steering system		✓			
Side view mirrors		✓			
Tandem toolbox	✓				

# 140 Standard and Optional Equipment

## Standard and Optional Equipment (continued)

Standard and optional equipment may vary. Consult your Cat® dealer for details.

	Standard	Optional		Standard	Optional
<b>SERVICE AND MAINTENANCE</b>			<b>TECHNOLOGY</b>		
Ground-level DEF and fuel fill	✓		Attachment Ready Option (ARO) (JOY)	✓	
Grouped location for engine oil and fuel filters	✓		Attachment Ready Option (ARO) (LVR)		✓
Extended life coolant	✓		Cat® Grade 3D		✓
Next generation fluid filters	✓		Cross Slope Assist (JOY)	✓	
Engine service light		✓	Cross Slope Assist (LVR)		✓
Remote flash	✓		RTK corrections radios for Cat Grade with 3D mastless		✓
PM alerts	✓		Stable Blade (JOY)	✓	
<b>GUARDS</b>			Stable Blade (LVR)		✓
Fender		✓	VisionLink™		✓
Cover, under cab platform		✓	Rear lights with LED lighting		✓
Steering Cylinder Guards (AWD only)		✓	LED lights		✓
<b>VERSATILITY</b>			Low light and high light bars		✓
Towing hitch		✓	Snow wing LED lights		✓
L3 tires		✓	Drop down rear lights and turn signals		✓
<b>TIRES</b>			People detect		✓
14-24		✓	Tire Pressure Monitoring System (TPMS)		✓
17.5-25		✓	E-fence (JOY)	✓	
14.0R24		✓	Auto articulation (JOY)	✓	
17.5R25		✓	Cat Production Measurement (CPM): efficiency coach and application segmentation		✓
550/65R25		✓			
<b>ATTACHMENTS AVAILABLE FROM FACTORY</b>					
Lift Groups		✓			
Counterweight		✓			
Push block		✓			
Mid-Machine Scarifier (MMS)		✓			
Rear Ripper/Scarifier		✓			
Moldboards		✓			
Front Blade		✓			
Tow hitch		✓			
Grader Bits on 14 ft moldboard		✓			
<b>ATTACHMENTS</b>					
Lift Groups		✓			
Counterweight		✓			
Push block		✓			
Mid-Machine Scarifier (MMS)		✓			
Rear Ripper/Scarifier		✓			
Moldboards		✓			
Front Blade		✓			
Snow Wings		✓			
V-Plow		✓			
Straight Plow		✓			
Brooms		✓			
One-way plow		✓			
Angling plow		✓			
U-V plow		✓			
Trip edge plow		✓			

# 140 Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

## Engine

- The Cat® C7.1 engine is available in configurations that meet U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Cat engines meeting U.S. EPA Tier 4 Final and EU Stage V are compatible with diesel fuel blended with the following lower-carbon intensity fuels up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)\*
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

*\*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel. For use of blends higher than 20% biodiesel, consult your Cat dealer.*

## Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. Refer to the machine labeling for identification of the gas.
  - If equipped with R134a (Global Warming Potential = 1430), the system contains 1.6 kg (3.5 lb) of refrigerant which has a CO<sub>2</sub> equivalent of 2.71 metric tonnes (2.674 tons).

## Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
  - Barium < 0.01%
  - Cadmium < 0.01%
  - Chromium < 0.01%
  - Lead < 0.01%

## Sound Performance

Spectator Sound Level – (ISO 6395:2008) 105 dB(A)

Operator Sound Level – (ISO 6396:2008) 69 dB(A)

- The dynamic spectator sound power level measurements are performed according to the dynamic test procedures that are specified in ISO 6395:2008. The measurements were conducted at 70% of the maximum engine cooling fan speed. The machine was equipped with a sound suppression system.
- The dynamic operator sound pressure level measurements are performed according to the dynamic test procedures that are specified in ISO 6396:2008. The measurements were conducted at 70% of the maximum engine cooling fan speed, with the cab doors and the cab windows closed. The cab was properly installed and maintained. The machine was equipped with sound suppression system.

## Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

## Features and Technology

- The following features and technology contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
  - Eco mode minimizes fuel consumption for light application.
  - Engine Idle Shutdown Timer reduces fuel burn, greenhouse gas emissions and unnecessary idle time by shutting down the machine after a preset idling period.
  - Cat Grade helps reduce fuel burn and greenhouse gas emissions by enabling you to achieve grade faster and more accurately by automating blade actions.
  - Cut maintenance costs with extended service intervals next generation filters.
  - Improve jobsite efficiency with lower operating costs with VisionLink™ insights.

## Recycling

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	81.95%
Iron	11.90%
Nonferrous Metal	1.45%
Mixed Metal	0.04%
Mixed Metal and Nonmetal	2.47%
Plastic	0.51%
Rubber	0.07%
Mixed Nonmetallic	0.44%
Fluid	0.28%
Other	0.56%
Uncategorized	0.33%
Total	100%

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance end-of-life value of the product. According to ISO 16714 (Earthmoving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused, or both.

All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

Because of variations of product configurations, the following value in the table may vary.

Recyclability – 98%

# Machine and Implement Controls

Unprecedented precision and ease of operation



Two electro-hydraulic joysticks with electronically adjustable control pods help position operators for optimal comfort, visibility and productive operation.

## Joystick Functions

The left joystick controls machine direction, steering, articulation, return-to-center, wheel lean, gear selection, left moldboard lift cylinder and float.

The right joystick controls drawbar, circle and moldboard functions as well as electronic throttle control and manual differential lock/unlock.

The steer tire angle matches the joystick position. A brake tensioning system holds the joystick in position until the operator moves it. The steering control automatically reduces steering sensitivity at higher ground speeds for predictable control.

Infinitely variable roller switches control the rear ripper and/or front lift group (when equipped). Optional Programmable Auxiliary Hydraulic Pod controls up to six additional hydraulic circuits.

## Electronic Throttle Control

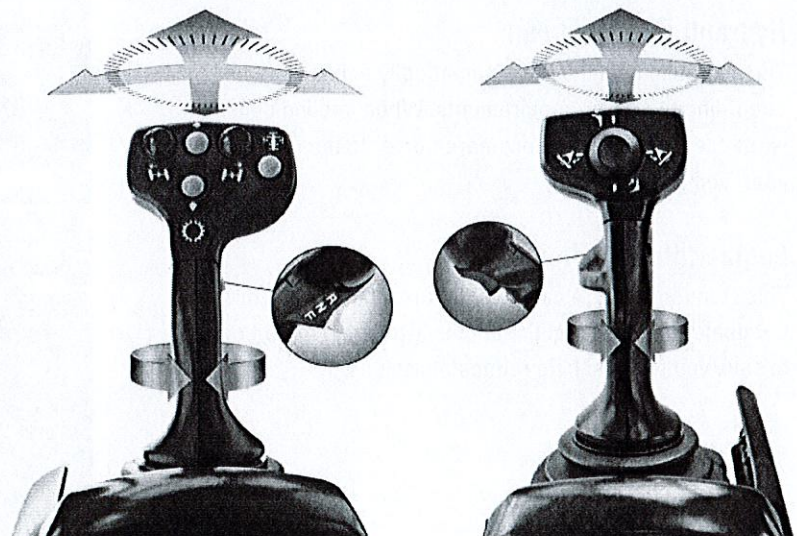
Electronic Throttle Control helps improve productivity by providing the best match of horsepower and torque for the demands of the application.

## Articulation Return-to-Center

Automatically returns the machine to a straight frame position from any angle with the touch of a button.

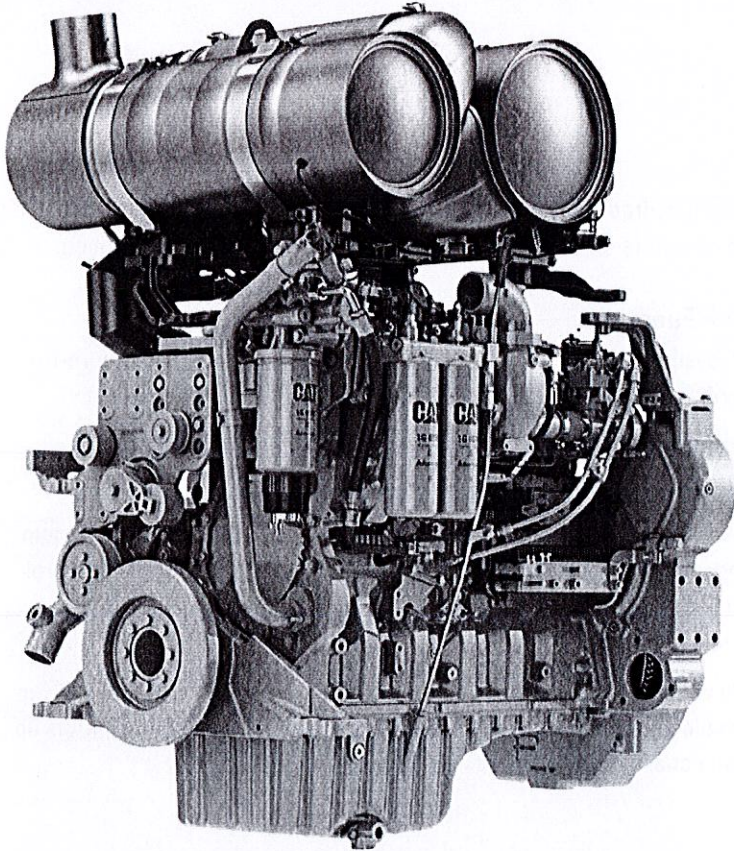
## Selectable Blade Lift Modes

Choose the blade lift modulation mode that best fits your application or operating style: Fine, Normal, or Coarse.



# Engine

Power and reliability



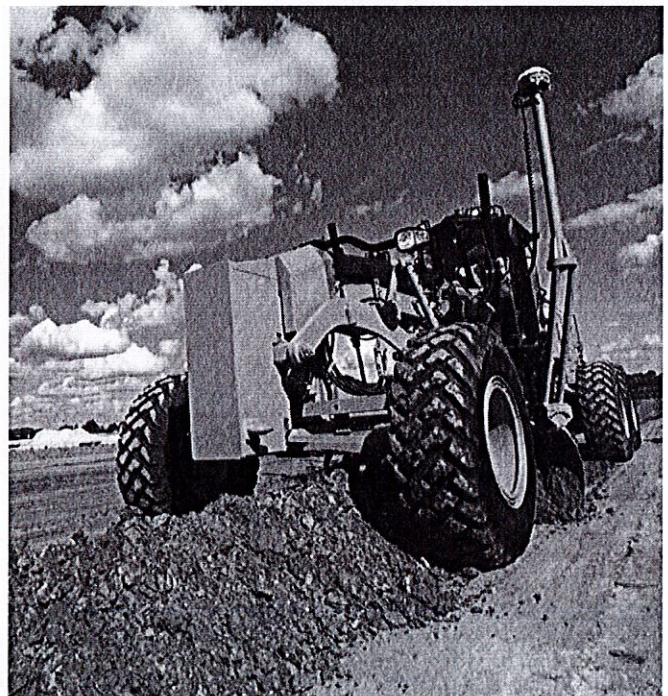
A Cat C9.3 engine gives you the performance you need to maintain consistent grading speeds for maximum productivity. Every U.S. EPA Tier 4 Final/EU Stage V engine is equipped with a combination of proven electronic, fuel, air and aftertreatment components. Applying proven technologies systematically and strategically helps meet your high expectations for productivity, fuel efficiency, reliability and service life.

## Hydraulic Demand Fan

The hydraulic demand fan automatically adjusts speed according to cooling requirements. When cooling demand is reduced, you benefit from more power to the ground and improved fuel efficiency.

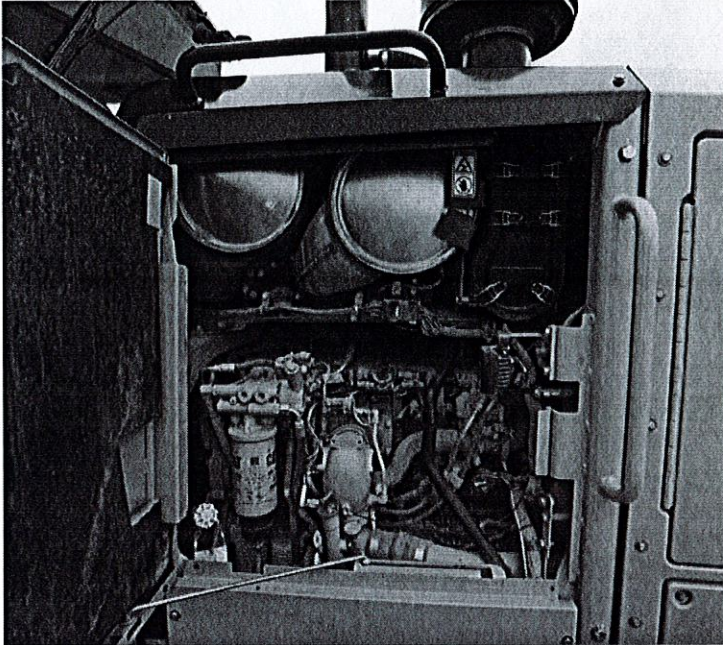
## Engine Idle Shutdown Timer

This standard feature can be software-enabled by your Cat dealer to shut down the engine after a set period of time to save you fuel and help reduce emissions.



# Emissions Technology

Proven, integrated solutions



Emissions reduction technology on the 140/150/160 Motor Graders 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.

## Aftertreatment Technologies

Caterpillar designed Tier 4 Interim products with Tier 4 Final standards in mind. To meet the additional 80 percent reduction in NOx emissions required by EPA Tier 4 Final/EU Stage V emission standards, Caterpillar engineers only needed to add one new system to the already proven aftertreatment solution in use, Selective Catalytic Reduction (SCR).

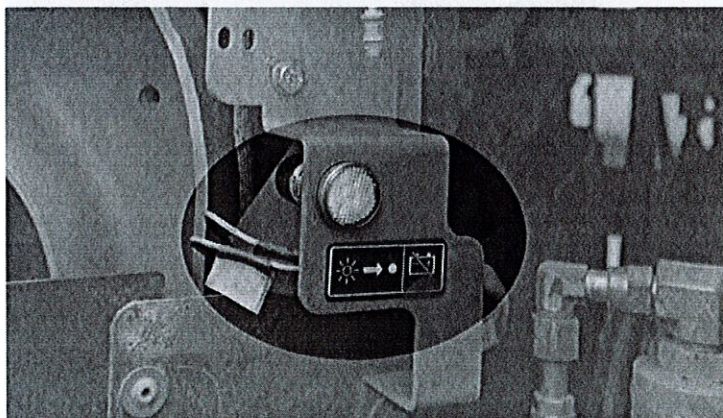


## Diesel Exhaust Fluid

Selective Catalytic Reduction 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.

When you turn the machine off, a pump will automatically purge the DEF lines. A light located inside the rear engine compartment will turn off, telling you the purge is complete and that it is safe to turn off the electrical disconnect. If the engine/aftertreatment temperatures are high, a Delayed Engine Shutdown will activate automatically to cool the machine and then purge the lines.

For complete aftertreatment information, please refer to your machine's Operation and Maintenance Manual.



# Power Train

Maximum power to the ground

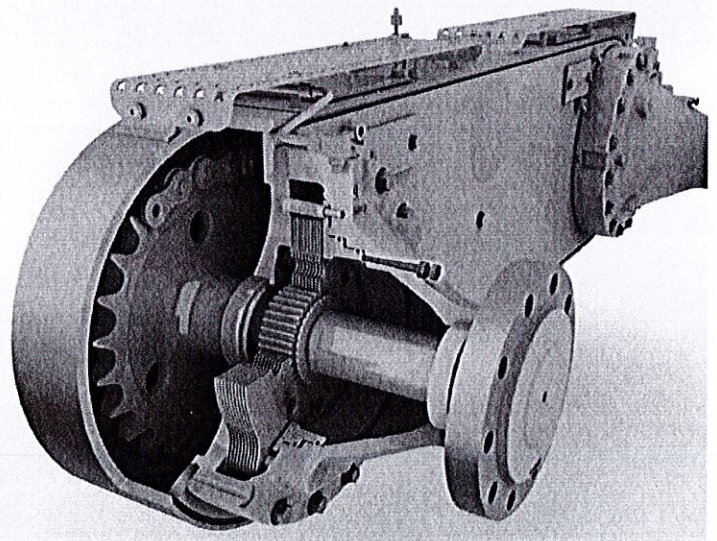
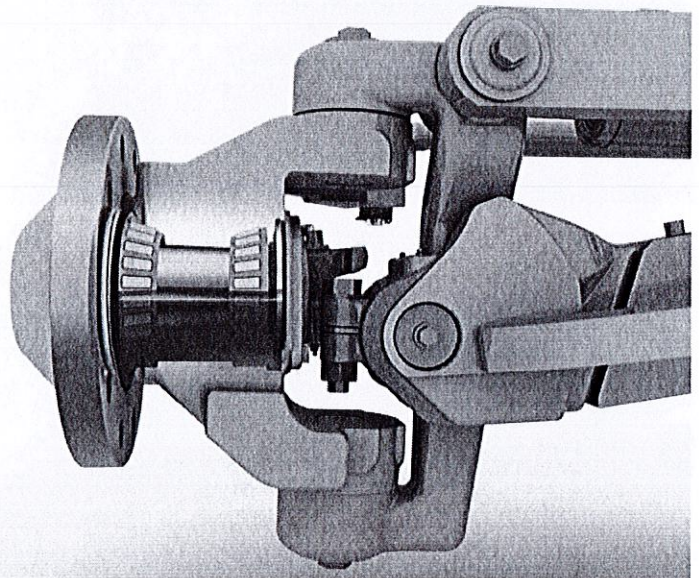
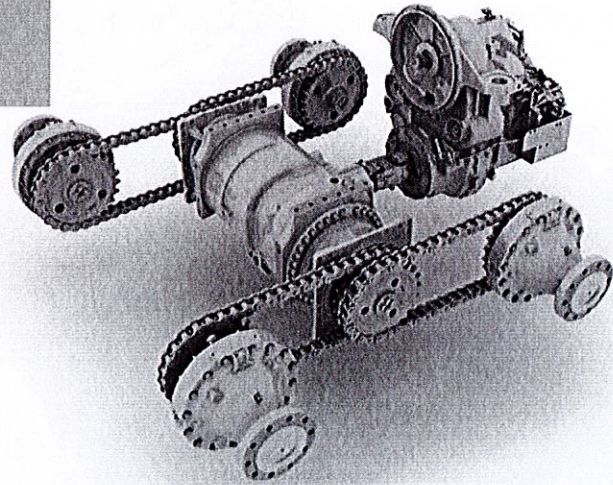
- Standard Automatic Differential Lock/Unlock monitors machine and application parameters to unlock/re-lock the differential during operation, improving production and enhancing comfort while protecting the power train.
- Full Electronic Clutch Pressure Control optimizes inching modulation for smooth shifts and directional changes.
- Programmable Autoshift option simplifies operation by allowing you to program the transmission to shift at optimal points to match your application.
- New standard Economy Mode can be turned on to help 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.
- Power Shift Countershaft Transmission maximizes power to the ground.
- Engine Over-Speed Protection prevents downshifting until an acceptable safe travel speed has been established.

## Front and Rear Axles

The sealed spindle keeps front axle bearings lubricated and protected from contaminants. The Cat "Live Spindle" design places the larger tapered roller bearing on the outside, where the load is greater, extending bearing life. A bolt-on modular rear axle improves serviceability and contamination control with easy access to differential components.

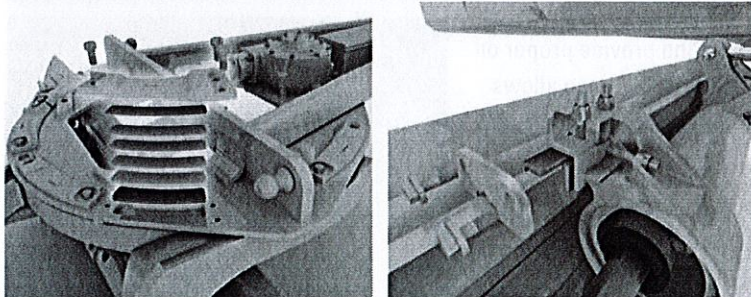
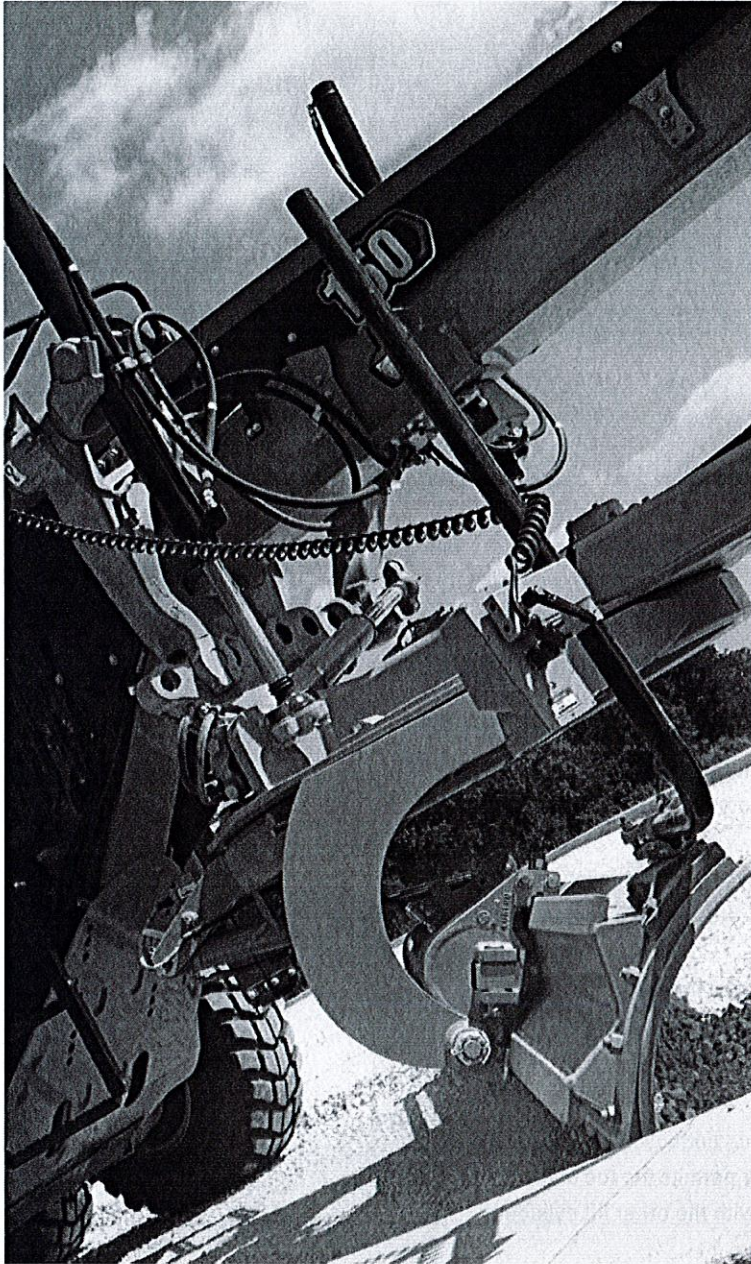
## Hydraulic Brakes

Oil-bathed multi-disc service brakes are hydraulically actuated for smooth, predictable braking and lower operating costs. Brakes are located at each tandem wheel and have a large total brake surface area to give you dependable stopping power and longer life.



# Structures and Drawbar-Circle-Moldboard

Service ease and precise blade control



Caterpillar designs motor grader frame and drawbar components to give you performance and durability. The one-piece forged steel circle stands up to high stress loads, and a sacrificial wear system helps keep your service time and costs down.

The articulation hitch features a large tapered roller bearing to carry loads evenly and smoothly. It is sealed to prevent contamination and a locking pin prevents articulation for safety during service or transport.

## Easy Maintenance for More Uptime

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 to save you money. 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.

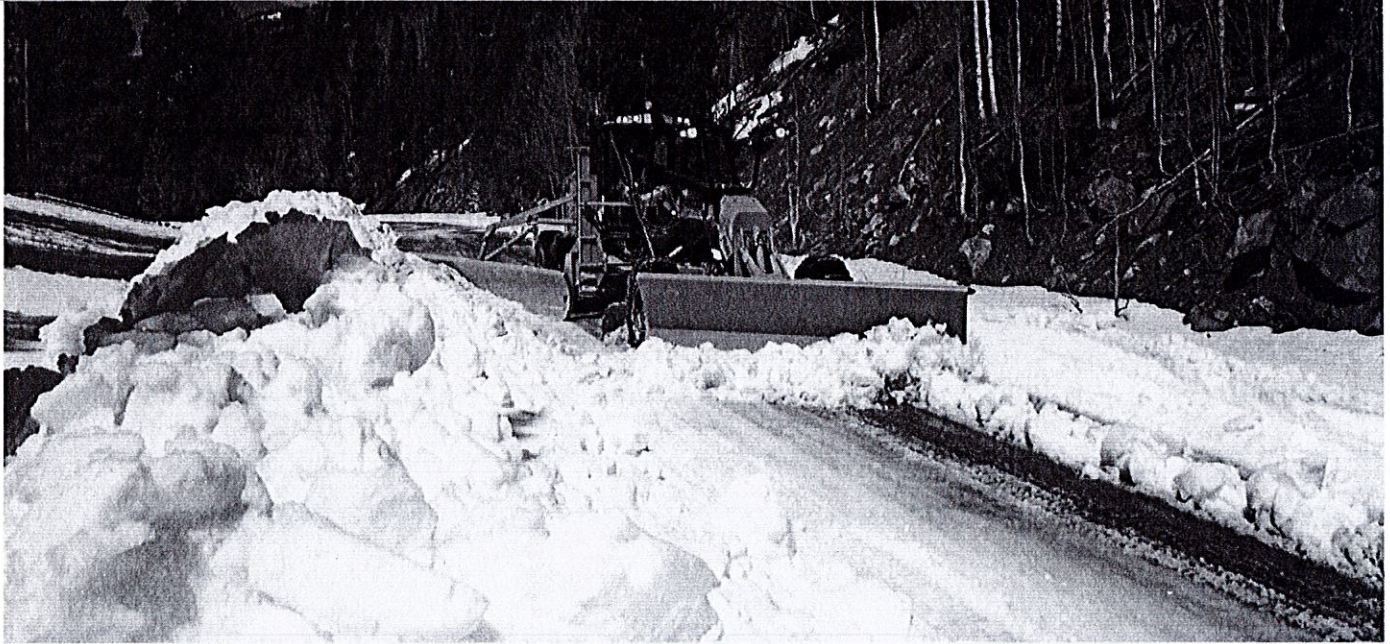
## Blade Angle and Moldboard

An aggressive blade angle, optimized moldboard curvature and large throat clearance help you work more efficiently by allowing material to roll more freely along the blade.

Heat-treated rails, hardened cutting edges and end bits, and heavy duty bolts to give you greater moldboard reliability and long service life. The link bar allows extreme moldboard positioning for easier bank sloping and ditch cutting/cleaning.

# Hydraulics

Advanced machine control



## Responsive Hydraulics

A proven load-sensing system and advanced electro-hydraulics give you superior implement control and responsive hydraulic performance that helps make your operator's job easier. Continuously matching hydraulic flow/pressure to power demands creates less heat and reduces power consumption.

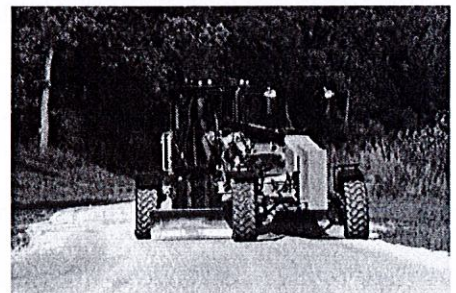
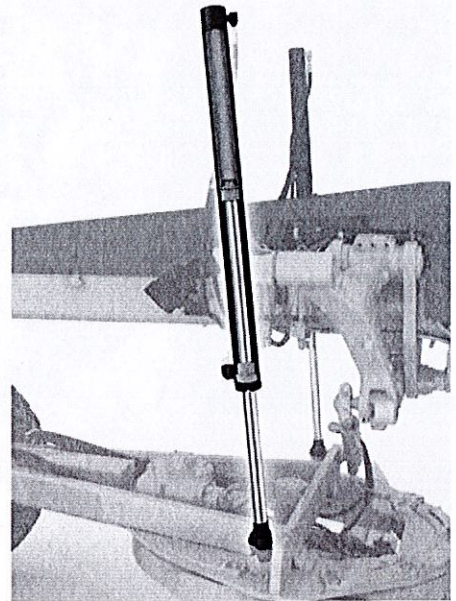
- Consistent, Predictable Movement – Proportional Priority Pressure-Compensating (PPP-C) valves have different flow rates for the head and rod ends of the cylinder, so you can count on consistent, predictable implement response.
- Balanced Flow – Hydraulic flow is proportioned to give you confidence that all implements will operate simultaneously without slowing the engine or speed of some implements.

## Blade Float

Allows the blade to move freely under its own weight. By floating both cylinders, the blade can follow the contours of the ground. Floating only one cylinder permits the toe of the blade to follow a hard surface while the operator controls the slope with the other lift cylinder.

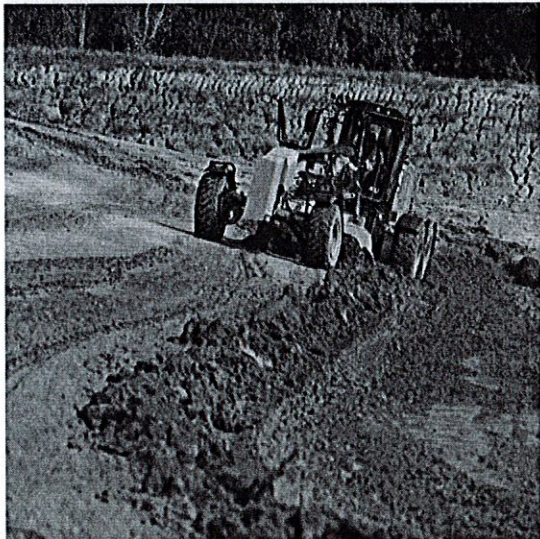
## Independent Oil Supply

Large, separate hydraulic oil supplies prevent cross-contamination and provide proper oil cooling, which reduces heat build-up and extends component life. Cat XT™ hose allows high pressures for maximum power and reduced downtime.



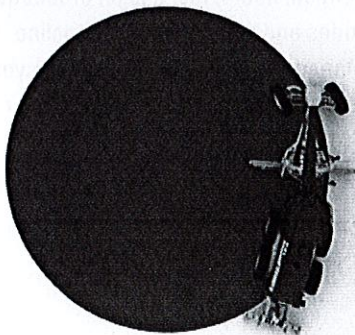
# All Wheel Drive (AWD)

Expanded machine versatility



■ Without Steering Compensation

■ With Steering Compensation



If you work in soft underfoot conditions where traction can be a challenge, optional All Wheel Drive (AWD) can give 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.

- Dedicated left and right pumps give you more precise hydraulic control. The infinitely variable pumps and motors maximize torque in each gear.
- AWD automatically increases horsepower to maximize your power to the ground.
- Standard Hydrostatic Mode disengages the transmission and provides hydraulic power to the front wheels only. Infinitely variable ground speed between 0-8 km/h (0-5 mph) is ideal for precise finish work.
- Cat Steering Compensation System enables a "powered turn" by adjusting the outside front tire speed up to 50% faster than the inside tire. This gives you improved control, reduces surface damage and greatly reduces turning radius in poor underfoot conditions.

# Integrated Technologies

Monitor, manage, and enhance job site operations



Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



**Equipment Management** – increase uptime and reduce operating costs.



**Productivity** – monitor production and manage job site efficiency



**Safety** – enhance job site awareness to keep your people and equipment safe.

Featured Cat Connect technologies include:

## Link

Link technologies provide wireless capability to machines enabling two-way transfer of information collected by on-board sensors, control modules, and other Cat Connect technologies using off-board apps, such as our VisionLink software.

## Product Link™/VisionLink®

Product Link takes the guesswork out of equipment management. Track location, hours, fuel usage, productivity, idle time, diagnostic codes and more through the online VisionLink interface. Manage your fleet in real time so you can maximize efficiency, improve productivity, and lower operating costs.

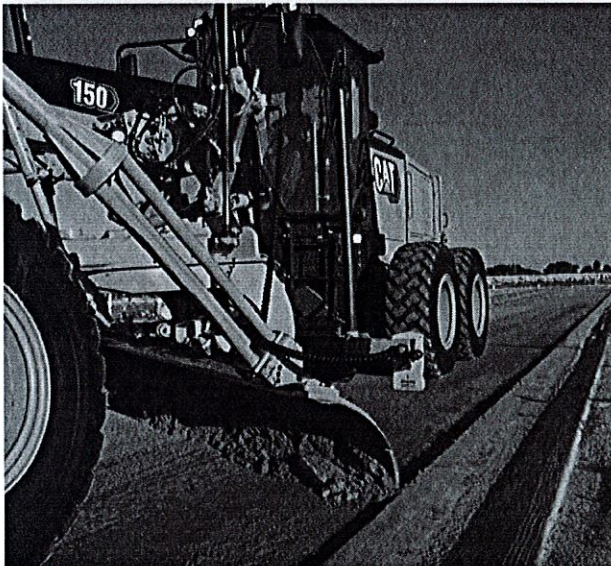


## Grade

Grade technologies combine digital design data, in-cab guidance, and automatic blade controls to enhance grading accuracy, reduce rework, and lower costs related to production earthmoving and rough, fine and finish grade applications.

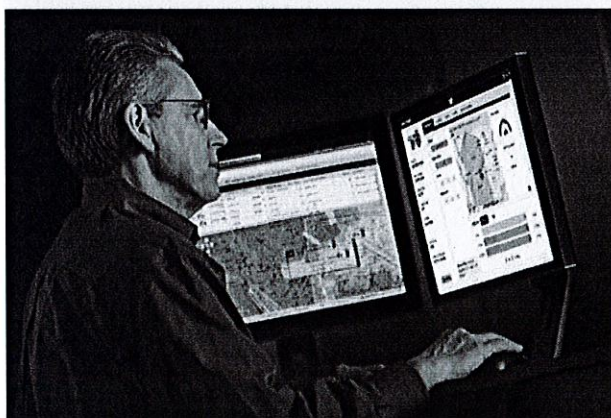
### Cat Grade Control Cross Slope

Cat Grade Control Cross Slope is an optional fully integrated, factory installed system that helps your operator improve grading efficiency and more easily maintain accurate cross slopes. The system automatically controls one side of the blade, reducing manual operator inputs by as much as 50 percent. Experienced operators can maintain peak efficiency levels throughout more of the work day, while less experienced operators can be more productive faster. The system is job-ready from day one, and scalable for the future with AccuGrade™ upgrade kits that provide additional 2D and/or 3D control.



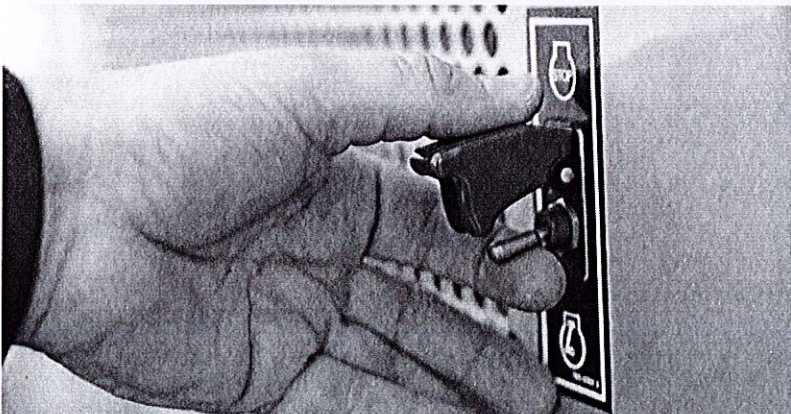
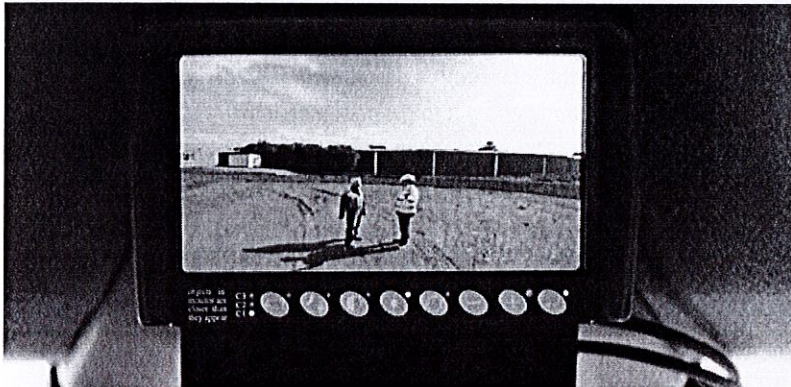
### Cat AccuGrade

AccuGrade is an optional dealer-installed grade control system that provides higher accuracy capabilities to the Cat Cross Slope system by adding Sonic, Laser, GPS, and/or Universal Total Station (UTS) technology when the job requires. In-cab guidance helps operators work more confidently and get to grade faster, in fewer passes, using less material, improving productivity and accuracy by nearly 50 percent over conventional methods. Grade stakes and checkers are minimized, making the job site safer and more cost effective. An AccuGrade Attachment Ready Option can be ordered as a factory or dealer-installed option. It includes built-in mounting points and internal wiring for easy installation of the AccuGrade system.



# Safety

Designed with protection in mind



## Safety Features

- Optional rearview camera with in-cab monitor
- New optional seat belt indicator light reminds operator to fasten safety belt
- Grouped, ground level service points
- Laminated front window glass
- Optional LED Lighting
- Ground-level electrical disconnect switch
- Ground-level engine shutoff switch
- Anti-glare paint eases night operation
- Optional front and rear fenders

### **Operator Presence Monitoring System**

Standard system keeps the parking brake engaged and hydraulic implements disabled until the operator is seated and the machine is ready for operation.

### **Speed Sensitive Steering**

Standard function makes steering less sensitive as ground speed increases for greater operator confidence and control.

### **Secondary Steering System**

Standard feature automatically engages an electric hydraulic pump in case of a drop in steering pressure so the operator can steer the machine to a stop.

### **Hydraulic Lockout**

Disables all implement functions while still providing machine steering control. This standard safety feature is especially useful while roading.

### **Brake Systems**

Brakes are located at each tandem wheel to eliminate braking loads on the power train. Redundant brake systems utilize accumulators to enable stopping in case of machine failure.

### **Walkways and Grab Rails**

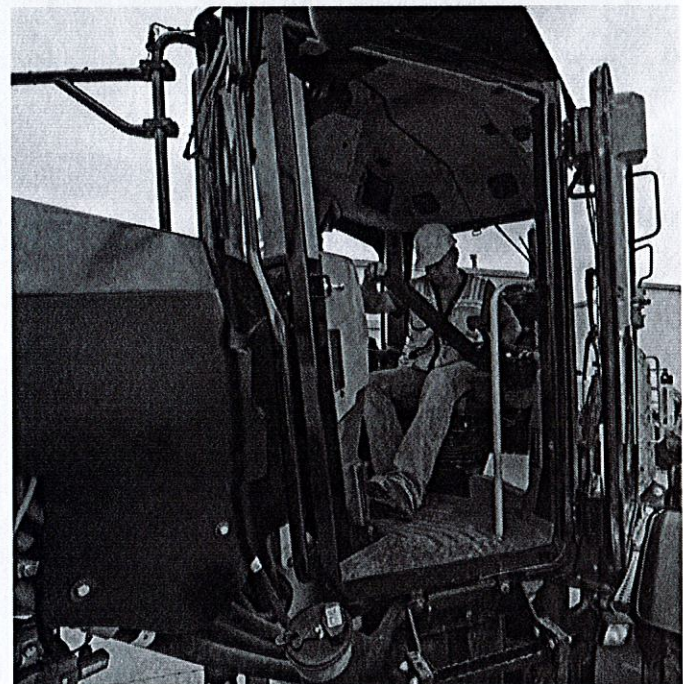
Perforated steel tandem walkways and convenient grab rails give you a sturdy platform when moving on, off and around the machine.

### **Circle Drive Slip Clutch**

Protects the drawbar, circle and moldboard from shock loads when the blade encounters an immovable object. This standard feature also reduces the possibility of abrupt directional changes in poor traction conditions.

### **Blade Lift Accumulators**

Help absorb impact loads to the moldboard by allowing vertical blade travel. This optional feature helps reduce wear and aids operator safety.



# Work Tools and Attachments

Equip your machine for the job



## Moldboard Options

The 140, 150, and 160 motor graders come equipped with a 3.7 m (12 ft) moldboard.

An optional 4.3 m (14 ft) blade is available for all models, as well as a 4.9 m (16 ft) moldboard for the 160.

## Ground Engaging Tools (GET)

A variety of tools are available from Cat Work Tools, including cutting edges, graderbits and end bits, all designed for maximum service life and productivity.

## Front Mounted Groups

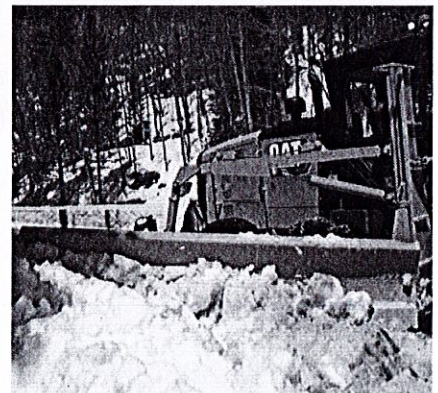
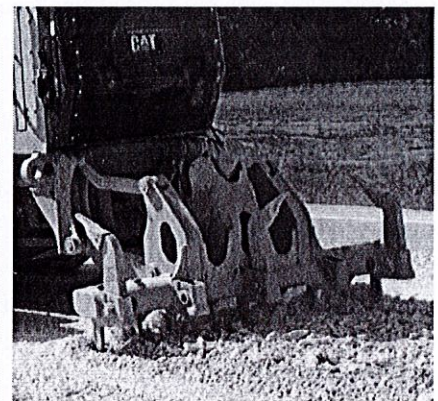
A front mounted push plate or front lift group are available. The front lift group can be combined with a front dozer blade or front scarifier for added versatility.

## Rear Ripper/Scarifier

Made to penetrate tough material fast and rip thoroughly for easier movement with the moldboard. The ripper includes three shanks (with holders for five). Nine scarifier shanks can also be added for additional versatility.

## Snow Removal Work Tools

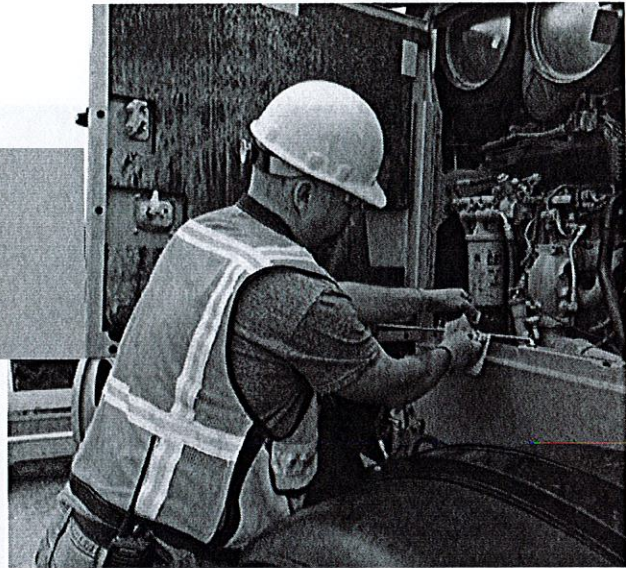
Snow plow, snow wing and mounting options increase machine versatility and utilization throughout the year.



# Smart Machine Systems

## Advanced Diagnostics

- Cat Messenger, combined with full systems integration, enhances diagnostic capability for quick analysis of critical data.
- Electronic Technician (Cat ET) lets service technicians access stored diagnostic data and configure machine parameters through the Cat Data Link.
- Low Battery Elevated Idle raises idle speed when low system voltage is detected, ensuring adequate system voltage and improving battery reliability.
- Automatic Engine Deration protects the engine by automatically lowering engine torque output and alerting the operator if critical conditions are detected.



## Serviceability and Customer Support

When uptime counts

Cat motor graders are designed to help you increase uptime and reduce costs. Grouped service points and extended service intervals save maintenance time. New optional LED lights in the left hand compartment makes it more convenient to service the machine in low light.

### Unparalleled Dealer Support

When it comes to supporting you, Cat dealers are second to none. From machine selection and purchase to maintenance support and rebuilds, Cat dealers have the experience and capabilities to help keep you up and running.



# Sustainability

Thinking generations ahead



## Fuel Efficiency

- Integrated machine systems and technologies improve productivity for greater accuracy, allowing the machine to do more work per gallon of fuel.
- New Economy Mode feature allows the machine to work in the most efficient engine speed range to help reduce fuel use.

## Green House Gas Emissions

- Reduced fuel consumption means reduced CO<sub>2</sub> emissions.

## Material Efficiency and Lifecycle Costs

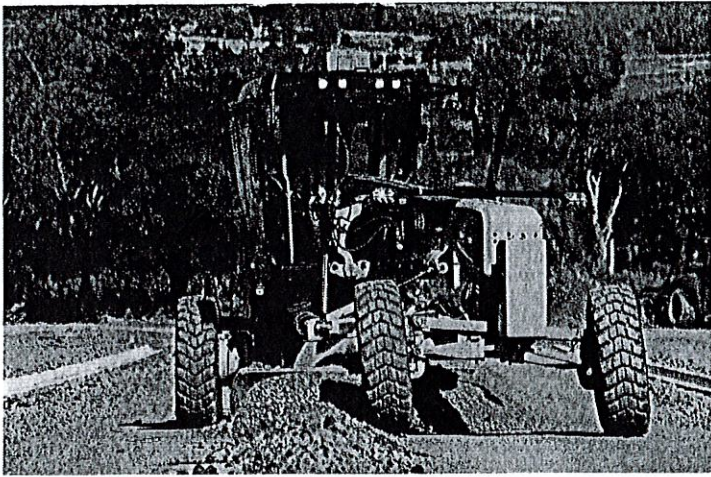
- Replaceable wear parts save maintenance time and cost, and extend major component life.
- Major components are built to be rebuilt, eliminating waste and saving customers money by giving the machine and/or major components a second – and even third – life.
- Approximately 95% of machine materials can be recycled (ISO 16714) to conserve valuable natural resources and further enhance machine end-of-life value.

## Sound

- Reduced engine noise and quieter cabs mean lower operator and spectator sound levels.

## Safety

- Ecology drains help make draining fluids more convenient and help prevent spills.
- Cartridge style hydraulic fluid filters provide safe clean draining of filters prior to replacement, helping to prevent fluid spills.
- A variety of safety features help safeguard operators and others on the job site.



Next Generation

# Cat<sup>®</sup> 140

## Motor Graders

### *Power to the Ground*

*A new specification is now available on Next Generation Cat<sup>®</sup> 140 Motor Graders, showing the actual power to the ground performance. Cat updated the power strategy (called Power to the Ground) so the machine now delivers consistent power in every condition – hot or cold weather, heavy or light load. This means the grader feels more stable, more predictable, and easier to control, especially when fine-grading. You still get the same real-world productivity, with smoother operation and better fuel efficiency.*

### **More Consistent Power to the Ground**

- With true constant net power, the machine delivers the same power at a given engine speed and gear, regardless of ambient temperature or load.
- This means operators experience more predictable grading performance. Consistent power to the ground also improves machine feel and control during fine-grading work.

### **Improved Grading Quality with Integrated Control Technologies**

- Because the power curve is more stable, technologies such as Cat Grade with Cross Slope, Stable Blade, and 3D Grade perform more accurately. Stable, predictable power improves automated blade control response.

### **No Loss in Real-World Productivity**

- With the Next Generation Cat 140 motor graders, you get the same legendary performance for road building, site prep, ditching, and snow removal—now backed by the latest design evolution. The model numbers changed. The capability didn't.

### **Better Fuel Efficiency**

- Power to the Ground supports smoother operation and reduced fuel burn by avoiding unnecessary power spikes, allowing the machine to run in optimized power more often.



# Cat® 140 Motor Grader

## Technical Specifications

AWD												
140 (16A) LVR / JOY				140 (15B) JOY				140 (13A) LVR				
Power Type	ISO 9249 Net		Power to Ground*		ISO 9249 Net		Power to Ground*		ISO 9249 Net		Power to Ground*	
Finish Gear	98 kW	131 hp	68 kW	91 hp	-				-			
1F	132 kW	177 hp	95 kW	128 hp	149 kW	200 hp	95 kW	127 hp	147 kW	197 hp	100 kW	134 hp
2F	144 kW	193 hp	104 kW	139 hp	164 kW	220 hp	107 kW	143 hp	162 kW	217 hp	112 kW	150 hp
3F	155 kW	208 hp	108 kW	145 hp	168 kW	225 hp	104 kW	139 hp	166 kW	223 hp	110 kW	148 hp
4F	164 kW	220 hp	108 kW	145 hp	172 kW	231 hp	98 kW	132 hp	170 kW	228 hp	105 kW	141 hp
5F	173 kW	232 hp	110 kW	147 hp	188 kW	252 hp	104 kW	139 hp	186 kW	249 hp	110 kW	148 hp
6F	179 kW	240 hp	108 kW	145 hp	188 kW	252 hp	96 kW	129 hp	201 kW	270 hp	118 kW	158 hp
7F	188 kW	252 hp	106 kW	142 hp	188 kW	252 hp	82 kW	110 hp	201 kW	270 hp	104 kW	139 hp
8F	186 kW	249 hp	88 kW	118 hp	188 kW	252 hp	63 kW	85 hp	201 kW	270 hp	84 kW	113 hp
Max Torque	1158 N•m		854 lb-ft		1247 N•m		920 lb-ft		1247 N•m		920 lb-ft	
Rated Speed	2,000 rpm				2,000 rpm				2,000 rpm			
Peak Torque	1,400 rpm				1,000 rpm				1,000 rpm			

Non-AWD												
140 (16A) LVR / JOY				140 (15B) JOY				140 (13A) LVR				
Power Type	ISO 9249 Net		Power to Ground*		ISO 9249 Net		Power to Ground*		ISO 9249 Net		Power to Ground*	
Finish Gear	98 kW	131 hp	67 kW	90 hp	-				-			
1F	131 kW	176 hp	94 kW	126 hp	141 kW	189 hp	96 kW	129 hp	141 kW	189 hp	92 kW	123 hp
2F	154 kW	207 hp	102 kW	137 hp	149 kW	200 hp	103 kW	138 hp	149 kW	200 hp	99 kW	133 hp
3F	148 kW	198 hp	106 kW	142 hp	156 kW	209 hp	107 kW	143 hp	156 kW	209 hp	103 kW	138 hp
4F	152 kW	204 hp	105 kW	141 hp	160 kW	215 hp	106 kW	142 hp	160 kW	215 hp	101 kW	135 hp
5F	157 kW	211 hp	105 kW	141 hp	164 kW	220 hp	104 kW	139 hp	168 kW	225 hp	103 kW	138 hp
6F	164 kW	220 hp	104 kW	139 hp	168 kW	225 hp	100 kW	134 hp	172 kW	231 hp	99 kW	133 hp
7F	179 kW	240 hp	105 kW	141 hp	172 kW	231 hp	90 kW	121 hp	188 kW	252 hp	99 kW	133 hp
8F	186 kW	249 hp	88 kW	118 hp	172 kW	231 hp	61 kW	82 hp	188 kW	252 hp	65 kW	87 hp
Max Torque	1158 N•m		854 lb-ft		1247 N•m		920 lb-ft		1247 N•m		920 lb-ft	
Rated Speed	2,000 rpm				2,000 rpm				2,000 rpm			
Peak Torque	1,400 rpm				1,000 rpm				1,000 rpm			

\* Calculated powers verified by independent testing at Nebraska Tractor Lab, Lincoln NE, August 19, 2024. Conditions include dry concrete track with average temperature 24° C (75° F).  
 \*Ground speed matched (+/-50 rpm engine). Performance variable fan speed 90%



For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com).

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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AEXQ4682-01 (02-2026)  
 Build Number: 16A  
 (Global)



# BID SPECIFICATIONS

## Cat® 140 (16A) LVR Non-AWD Motor Grader BID SPECIFICATIONS

AEXQ4530-02 (05-2026)

### BASIC SPECIFICATIONS

- Y \_\_\_ N \_\_\_ Machine shall be designed and built by the manufacturer.
- Y \_\_\_ N \_\_\_ Base machine weight shall not be less than 37,490 lbs (17 005 kg). Weight shall include: standard machine configuration, lubricants, coolants, full fuel tank and operator of 200 lbs (91 kg).
- Y \_\_\_ N \_\_\_ Machine height to top of the cab shall not exceed 136 in (3454 mm).
- Y \_\_\_ N \_\_\_ Machine length from the front axle to end of tow hitch shall not be more than 208.3 in (5292 mm).
- Y \_\_\_ N \_\_\_ Machine wheel base (distance from front axle to mid tandem) shall not be more than 241.6 in (6136 mm).
- Y  N \_\_\_ **The rear frame shall have two T-beam channels with an integrated bumper as standard.**
- Y \_\_\_ N \_\_\_ A toolbox shall be provided.
- Y \_\_\_ N \_\_\_ Machine shall utilize a dedicated push to start button with start ring used to activate accessory power and to shut engine off.

### BASIC SPECIFICATIONS - OPTIONAL ATTACHMENTS

- Y \_\_\_ N \_\_\_ Machine shall have vandal protection standard including locks for cab doors, engine side shields (4), top tank radiator access door, engine coolant surge tank, hydraulic reservoir cap, fuel tank cap, and tool box.
- Y \_\_\_ N \_\_\_ An optional rear hitch shall be provided.
- Y \_\_\_ N \_\_\_ Machine length from counterweight to ripper shall not exceed 405.4 in (10 297 mm).
- Y \_\_\_ N \_\_\_ Tow hitch shall be available.
- Y \_\_\_ N \_\_\_ Rear ripper/scarifier with tow hitch shall be available.
- Y \_\_\_ N \_\_\_ Snow wing ready ripper shall be available for Cat Mastless snow wing.

### ENGINE

- Y \_\_\_ N \_\_\_ Engine shall be designed and built by the manufacturer.
- Y  N \_\_\_ **Engine shall be a turbo-charged, direct injection, four stroke, 6-cylinder diesel engine.**
- Y \_\_\_ N \_\_\_ Engine shall meet U.S. EPA Tier 4 Final and European Union Stage V emission standards.
- Y \_\_\_ N \_\_\_ Engine shall be electronically controlled for more efficient fuel injection and fuel burn.
- Y \_\_\_ N \_\_\_ Engine shall achieve rated power requirement with engine displacement not more than 7.1L (428 in<sup>3</sup>) for better fuel economy.
- Y  N \_\_\_ **Engine shall develop a rated net power as follows, per ISO 9249**
- **Finish Gear - 138 hp (103 kW)**
  - **1st Gear - 182 hp (136 kW)**
  - **2nd Gear - 189 hp (141 kW)**
  - **3rd Gear - 194 hp (145 kW)**
  - **4th Gear - 205 hp (153 kW)**
  - **5th Gear - 211 hp (157 kW)**
  - **6th Gear - 217 hp (162 kW)**
  - **7th Gear - 227 hp (169 kW)**
  - **8th Gear - 227 hp (169 kW)**

## BID SPECIFICATIONS

- Y \_\_\_ N \_\_\_ Machine shall develop a drawbar power or power to ground. Power to ground is power available to wheels after fan and powertrain losses. Power to ground utilizes a constant net horsepower to allow engine to compensate for fan loads.  
The minimum power to the ground shall be as follows
- Finish Gear - 102 hp (76 kW)
  - 1st Gear - 139 hp (103 kW)
  - 2nd Gear - 145 hp (108 kW)
  - 3rd Gear - 145 hp (108 kW)
  - 4th Gear - 148 hp (110 kW)
  - 5th Gear - 147 hp (110 kW)
  - 6th Gear - 144 hp (108 kW)
  - 7th Gear - 136 hp (101 kW)
  - 8th Gear - 109 hp (81 kW)
- Y ~~X~~ N \_\_\_ Engine will increase its low idle speed to 1,000 rpm when the battery voltage is below 24.5 volts for more than 5 minutes to ensure adequate system voltage and battery reliability.
- Y \_\_\_ N \_\_\_ Altitude deration will not occur at altitudes less than 10,000 ft (3048 m). The deration rate above 10,000 ft (3048 m) shall be 1.5% per 1000 ft (305 m).
- Y \_\_\_ N \_\_\_ Peak engine power shall not be achieved at an engine speed greater than 1800 rpm.
- Y \_\_\_ N \_\_\_ Rated engine power shall not be achieved at an engine speed greater than 2000 rpm.
- Y \_\_\_ N \_\_\_ Engine will have a minimum torque rise of 26% from 1080 rpm to peak torque following ISO 9249 (net power with max fan).
- Y \_\_\_ N \_\_\_ Engine enclosure and daily service points shall be accessible from ground level and grouped on the left side of the machine.
- Y \_\_\_ N \_\_\_ Engine fan shall automatically adjust fan speed via an electronically controlled pressure relief valve to meet engine cooling requirements thus reducing noise and heat.
- Y \_\_\_ N \_\_\_ Engine fan shall be reversable with operator adjustment of reversing interval from 20 minutes to 120 minutes. Manual fan purger shall be available upon operator request.
- Y ~~X~~ N \_\_\_ Engine shall allow for at least 1000 hours of operation between oil changes.
- Y ~~X~~ N \_\_\_ Engine shall be isolation/resilient mounted to minimize sound and vibration.
- Y \_\_\_ N \_\_\_ Engine compartment doors shall be lockable without the use of external locks.
- Y \_\_\_ N \_\_\_ Engine shall automatically lower engine torque and alert the operator if critical conditions are detected.
- Y \_\_\_ N \_\_\_ Engine shall have an air-to-air after cooler for superior engine performance.
- Y \_\_\_ N \_\_\_ Engine oil cooler shall be a water to oil shell and tube cooler system.
- Y \_\_\_ N \_\_\_ Machine shall have a 12,000 hour coolant interval from factory.
- Y \_\_\_ N \_\_\_ The charged air cooler (ATAAC) shall have 9.5 fins per inch.
- Y \_\_\_ N \_\_\_ Economy mode (Eco mode) shall be able to be enabled and disabled by the operator through the onboard machine display.
- Y \_\_\_ N \_\_\_ Eco mode shall be lockable via onboard programmable password protection.
- Y \_\_\_ N \_\_\_ Eco mode shall be available directly from factory to increase net efficiency.
- Y \_\_\_ N \_\_\_ DEF tank reservoir shall have a heater to thaw DEF fluid.
- Y \_\_\_ N \_\_\_ DEF lines should be heated to prevent freezing during extremely cold ambient conditions.
- Y \_\_\_ N \_\_\_ Engine idle shutdown shall be available.

### ENGINE - OPTIONAL ATTACHMENTS

- Y \_\_\_ N \_\_\_ An engine coolant heater shall be available to assist in cold weather starting.
- Y \_\_\_ N \_\_\_ Ether starting aid shall be available and must automatically meter ether injection to prevent engine damage.

### POWERTRAIN / TRANSMISSION

- Y \_\_\_ N \_\_\_ Transmission shall be designed and built by the machine manufacturer.
- Y \_\_\_ N \_\_\_ Transmission shall be a direct drive, power shift, countershaft type.

## BID SPECIFICATIONS

- Y  N  Transmission shall be equipped with built-in self-diagnostic capability.
- Y  N  Transmission shall have no less than 9 forward speeds and 6 reverse speeds (for added safety).
- Y  N  Finish Gear shall be available for speeds 0.65 mph to 1.9 mph.
- Y  N  Transmission shall have 5 working gears between 0-11.3 mph (0-17.7 km/h), for dirt applications.
- Y  N  Transmission shall be isolated/resilient mounted to reduce sound and vibration.
- Y  N  A controlled throttle shifting system shall be standard to smooth directional gear changes without use of the inching pedal.
- Y  N  Electronic Throttle Control (cruise control) shall be standard and shall be controlled by a push button, located on the right side transmission shifting console. Two switches will be available: One for throttle lock to maintain engine speed even when service brake is applied and one for setting throttle speed with service brake application reducing speed. The second switch is for increasing and decreasing engine rpm when electronic throttle lock is activated and resumes set throttle setting.
- Y  N  Electronic Throttle Control modes, set, and accelerate functions shall be located on the right side shifting console for easy access.
- Y  N  A load compensating system for the transmission shall be standard to ensure consistent shift quality in all applications.
- Y  N  Differential Lock/Unlock shall be electro-hydraulically controlled, as a standard feature.
- Y  N  Differential Lock/Unlock shall be a multi-disc design.
- Y  N  Final drive shall be a planetary design.
- Y  N  The total surface area of all the transmission clutch packs shall not be less than 175.3 in<sup>2</sup> (1131 cm<sup>2</sup>).
- Y  N  Diameter at the output end of the transmission shaft shall be no less than 2.29 in (58.1 mm).
- Y  N  Machine shall be equipped with an electronic inching pedal for improved modulation and machine control.
- Y  N  Machine shall be equipped with electronic over-speed protection to prevent the engine and transmission from over speeding, as a standard feature.
- Y  N  Machine will shift down a gear when engine speed gets too low.
- Y  N  Machine will shift to neutral to reduce the machine stalling.

### POWERTRAIN / TRANSMISSION - OPTIONAL ATTACHMENTS

- Y  N  An autoshift transmission option shall be available on all forward and reverse gears.
- Y  N  Inching pedal modulation setting shall be available in the machine display.

### STEERING AND IMPLEMENT CONTROLS

- Y  N  Steering wheel is required to operate machine.
- Y  N  Operation of wheel lean, articulation, drawbar, circle and moldboard, as well as optional auxiliary hydraulics will be low effort short throw mechanical controls.
- Y  N  Primary left side control levers will include: 1) left lift cylinder lift, lower and float control, 2) blade side shift (left and right), 3) blade pitch, 4) circle rotate, and 5) ripper auxiliary hydraulic circuit raise and lower.
- Y  N  Primary right side control levers will include: 1) right lift cylinder lift, lower and float control, 2) wheel lean (left and right), 3) machine articulation, 4) drawbar, circle, and moldboard (DCM) center shift, and 5) front lift hydraulic circuit raise/lower and float control.
- Y  N  Secondary steering shall be standard and ground-driven.

### BRAKES

- Y  N  Machine shall have primary and secondary service brakes.
- Y  N  Entire braking system shall meet all requirements of ISO 3450:2011.
- Y  N  Two separate left and right hydraulic brake accumulators shall be standard for safety.

## BID SPECIFICATIONS

- Y\_\_\_ N\_\_\_ Parking brake shall be a single rotor, air cooled, spring applied, and hydraulically released. Externally located for easy service and inspection.
- Y\_\_\_ N\_\_\_ **Machine, Drawbar, Circle, and Moldboard shall be achieved via a right hand multifunction, 3-axis, joystick, including moldboard slide and tip, drawbar center shift through a 4 way hat switch and circle turn by a left or right twist intuitively.**
- Y\_\_\_ N\_\_\_ Service brakes shall be multi-disc, oil-cooled, and sealed; they will also provide access to check and determine brake wear without removing or disassembling the brake assembly.
- Y\_\_\_ N\_\_\_ Service brake disc surfaces shall be grooved and carry oil between discs and plates with brakes fully applied.
- Y\_\_\_ N\_\_\_ Service brakes shall be hydraulically actuated, utilizing dual, independent brake circuits.
- Y  N\_\_\_ **Brakes shall be continuously pressurized, filtered, and oil cooled.**
- Y\_\_\_ N\_\_\_ **Machine shall have individual brake pods for each rear wheel, located at each rear wheel inside the tandem box, independent of tandem chains.**
- Y\_\_\_ N\_\_\_ Compensation components shall be required at all four tandem brake pods in addition to the brake wear indicator.
- Y\_\_\_ N\_\_\_ Brake line protection, including tandem walkways and hydraulic brake line guarding, shall be required to prevent line damage.
- Y\_\_\_ N\_\_\_ Service brakes shall provide a minimum of 2,537 in<sup>2</sup> (16 371 cm<sup>2</sup>) of total friction material surface area used at each of the four tandem wheels to eliminate braking loads on the powertrain.

### HYDRAULIC SYSTEM

- Y\_\_\_ N\_\_\_ A standard, triple-redundant hydraulic relief system shall protect machine hydraulic components.
- Y\_\_\_ N\_\_\_ Hydraulic implement pump shall produce between 0 and 40.9 gal/min (155 L/min) of oil flow at high idle.
- Y  N\_\_\_ **Hydraulic system shall be a closed center, load sensing type, with a variable displacement, axial piston-type pump.**
- Y\_\_\_ N\_\_\_ Hydraulic system shall be fully sealed, using duo-cone and O-ring face seals to prevent leaks, contamination, and spillage.
- Y\_\_\_ N\_\_\_ The hydraulic tank shall have a baffling system to reduce potential pump cavitations.
- Y\_\_\_ N\_\_\_ The maximum hydraulic system pressure shall be no more than 3,500 psi (24 150 kPa).
- Y  N\_\_\_ **Implement valves shall be mechanical, designed and built by the machine manufacturer.**
- Y  N\_\_\_ **Implement valves shall be proportional priority pressure compensating for consistent response, when multi-functioning any combination of implement controls and independent of engine speed.**
- Y\_\_\_ N\_\_\_ Steering and implement pump shall be solely dedicated to steering and implement controls and not shared with any other components.
- Y  N\_\_\_ **Lock valves shall be integrated into the main implement valve to prevent cylinder drift.**
- Y\_\_\_ N\_\_\_ The hydraulic stand-by pressure shall be no more than 870 psi (6000 kPa).
- Y\_\_\_ N\_\_\_ Left and right blade lift cylinders shall have independent float capability as standard equipment.
- Y\_\_\_ N\_\_\_ A sight gauge will be provided for checking hydraulic reservoir fluid.
- Y\_\_\_ N\_\_\_ Hydraulic oil change service interval shall be no less than 6000 hours with oil sampling.
- Y\_\_\_ N\_\_\_ Hydraulic system shall have a separate oil tank solely dedicated to the implement pump.
- Y\_\_\_ N\_\_\_ **Hydraulic filter will have 1000 hour change filter interval.**

### HYDRAULICS SYSTEM - OPTIONAL

- Y\_\_\_ N\_\_\_ Optional up to 3 auxiliary hydraulic circuits: mid-machine scarifier, snow wing mast, snow wing tilt, and dozer angle shall be available.

### FRONT AXLE AND TANDEMS

## BID SPECIFICATIONS

- Y\_\_\_ N\_\_\_ Front axle oscillation shall be no less than 32 degrees total, per side 16 degrees up, 16 degrees down.
- Y\_\_\_ N\_\_\_ Front axle shall be an arched design for maximum ground clearance.
- Y\_\_\_ N\_\_\_ **Wheel spindle shall be a "live" spindle design and rotate inside a sealed compartment with lightweight oil for lubrication of the bearings.**
- Y\_\_\_ N\_\_\_ **Front spindle shall be heat induction hardened.**
- Y\_\_\_ N\_\_\_ **Front wheel spindle bearings shall be a double tapered design with the larger diameter bearing mounted closest to the centerline of the front tire.**
- Y\_\_\_ N\_\_\_ **Front wheel spindle maintenance intervals shall be no less than 2000 hrs.**
- Y  N\_\_\_ **Front wheel steering angle shall be a maximum of 50 degrees left or right.**
- Y\_\_\_ N\_\_\_ Maximum front wheel lean shall be no less than 18 degrees left or right.
- Y\_\_\_ N\_\_\_ Machine turning radius shall not exceed 24 ft 6 in (7.5 m) using front steering, full articulation, and unlocked differential.
- Y\_\_\_ N\_\_\_ Distance between center of tandem wheels shall be no less than 59.0 in (1498 mm).
- Y\_\_\_ N\_\_\_ Tandem chain pitch shall not be less than 2.0 in (50.8 mm).
- Y  N\_\_\_ **Tandems shall be capable of oscillating 15 degrees front tandem up and 25 degrees front tandem down, with full machine articulation and having no interference between tandem wheel and machine structure.**
- Y\_\_\_ N\_\_\_ Mechanical steering stops located at each wheel and steering cylinder relief valves shall be present to prevent steering system damage during normal operation.
- Y\_\_\_ N\_\_\_ Steering tie rod ends shall be heat induction hardened.
- Y\_\_\_ N\_\_\_ Machine shall provide 2 steering cylinders for maximum steering force.
- Y\_\_\_ N\_\_\_ When equipped with a ripper, the machine shall have a minimum ramp angle of 16.8 degrees.

### TIRES AND RIMS

- Y\_\_\_ N\_\_\_ An 8 in (20.32 cm) by 24 in (60.96 cm) size 3-piece tire rim shall be available to provide mounting for 14.00R24 conventional tires.

### TIRES AND RIMS - OPTIONAL ATTACHMENTS

- Y\_\_\_ N\_\_\_ A 9 in (22.86 cm) by 24 in (60.96 cm) size single-piece tire rim shall be available to provide mounting for 13.0-24 and 14.00R24 conventional tires.
- Y\_\_\_ N\_\_\_ A 13 in (33.0 cm) by 25 in (63.5 cm) size single-piece tire rim shall be available to provide mounting for 17.5-25 tires.
- Y\_\_\_ N\_\_\_ A 14 in (35.6 cm) by 25 in (63.5 cm) size 3-piece tire rim shall be available to provide mounting for 17.5-R25 tires.
- Y\_\_\_ N\_\_\_ A 14 in (35.6 cm) by 25 in (63.5 cm) size 3-piece tire rim shall be available to provide mounting for Bridgestone 550/65R25 tires.

### OPERATOR STATION

- Y\_\_\_ N\_\_\_ A 36,680 BTU/h (10.75 kW) heater shall have an integral pressurizer and four-speed brushless fan motor along with A/C.
- Y\_\_\_ N\_\_\_ Seat shall be a cloth-covered suspension seat with 3-inch (76 mm) retractable seat belts, adjustments for fore-aft position, seat height, seat back angle, thigh support, and lumbar support.
- Y\_\_\_ N\_\_\_ An enclosed cab with ROPS (Rollover Protective Structure) according to ISO 3471:2008 shall be provided.
- Y\_\_\_ N\_\_\_ Cab door shall have a hold-open clasp with a ground-level release and a release in the cab.
- Y\_\_\_ N\_\_\_ Cab shall be isolation-mounted to the front frame section of the machine.
- Y\_\_\_ N\_\_\_ Cab shall have fixed front window of laminated glass with intermittent wiper.
- Y\_\_\_ N\_\_\_ FOPS (Falling Object Protective Structure) shall be provided according to ISO 3449:2005.
- Y\_\_\_ N\_\_\_ Machine shall have no less than 16 adjustable vents standard positioned to direct air to front windows and operator.

# BID SPECIFICATIONS

- Y\_\_\_ N\_\_\_ Radio ready arrangement will include 24V to 12V converter, two speakers, antenna, and wiring.
- Y\_\_\_ N\_\_\_ An instrument cluster shall be integrated into main tablet style display and include a speedometer, tachometer, coolant temperature, fuel, and articulation angle gauge.
- Y\_\_\_ N\_\_\_ Tablet style touchscreen display shall be high definition, anti-glare, and scratch resistant.
- Y\_\_\_ N\_\_\_ Operator cab fresh air-filter shall be accessible for clean out and replacement from outside of the cab.
- Y\_\_\_ N\_\_\_ Machine shall have the optional Cat Grade with Cross Slope system fully integrated into the machine design with integral hydraulic and electrical components.
- Y\_\_\_ N\_\_\_ A real-time information system shall monitor all system data and alert the operator of any faults through a digital text display. This information system shall be programmable for multiple languages.
- Y\_\_\_ N\_\_\_ Left and right side cab doors shall be provided.
- Y\_\_\_ N\_\_\_ Digital machine hour meter shall be provided.
- Y\_\_\_ N\_\_\_ The forward visibility shall unobstructed visibility of the blade, heel and toe, back of the cutting edge, and front tires.
- Y\_\_\_ N\_\_\_ Access to cab shall be three anti-skid steps.
- Y\_\_\_ N\_\_\_ Cab shall have cup holder, personal cooler holder/storage compartment for operator manual, with a molded floor mat.
- Y\_\_\_ N\_\_\_ Window washer fluid bottle refill spout shall be located external of the cab.
- Y\_\_\_ N\_\_\_ Cab shall have "split C post" pillars located behind the operator.
- Y\_\_\_ N\_\_\_ Cab shall have heating, ventilation, and air conditioning vents/ducts in the cab ceiling/headliner.
- Y\_\_\_ N\_\_\_ Cab shall have door release lever activated from ground level or with the operator heel without stretching or obstruction to the release.
- Y\_\_\_ N\_\_\_ Cat Detect rear vision with HD camera and rear camera view will display in the machine display as "always on" or display when machine is placed in reverse.

## OPERATOR STATION - OPTIONAL ATTACHMENTS

- Y\_\_\_ N\_\_\_ Integrated display and wiring for rear vision camera shall be available with capability to view at all times without interfering with the gauge and diagnostic display.
- Y\_\_\_ N\_\_\_ **Machine shall have the Standard Cat Grade with Cross Slope Assist system fully integrated into the machine design with integral hydraulic and electrical components.**
- Y\_\_\_ N\_\_\_ A rear defroster fan shall be available.
- Y\_\_\_ N\_\_\_ An air suspension seat shall be available.
- Y\_\_\_ N\_\_\_ Heated and ventilated air suspension seat shall be available.
- Y\_\_\_ N\_\_\_ Cab shall have sliding side windows available.
- Y\_\_\_ N\_\_\_ Cab shall have "B" pillar mirrors increasing visibility to the rear of the machine and ripper.
- Y\_\_\_ N\_\_\_ Cab shall have optional auxillary heater available with additional 4 vents under the seat. Auxillary heater will be 18,493 BTU.
- Y\_\_\_ N\_\_\_ Wipers shall be provided on doors, lower front windows and rear windows.

## TECHNOLOGY - OPTIONAL ATTACHMENTS

- Y\_\_\_ N\_\_\_ Digital Blade Slope Meter shall be available.
- Y\_\_\_ N\_\_\_ Attachment Ready Option (ARO) shall be available from the factory. This option shall include additional mounting brackets and electrical harnesses for easy installation of the electronics kit.
- Y\_\_\_ N\_\_\_ Cat Grade with Cross Slope Assist system shall be available from the factory in order to ensure proper calibration and installation for improved accuracy and performance.
- Y\_\_\_ N\_\_\_ Cat Grade with 3D matless integrated system shall be available from the factory in order to ensure proper grade accuracy within 30 mm.

## BID SPECIFICATIONS

Y \_\_\_ N \_\_\_ Manufacturer must provide Stable Grade sensor and software to automatically reduce engine speed in various applications to reduce machine bounce and scalloping of surface.

### **DRAWBAR, CIRCLE, MOLDBOARD (DCM)**

- Y  N \_\_\_ Top adjust DCM wear strips shall be replaceable drop-in inserts made from nylon composite material, replaceable, and adjustable from the top of the drawbar plate via removable cover plates.
- Y  N \_\_\_ The drawbar shall feature welded protective wear plates to prevent lift group contact with the primary drawbar structure.
- Y \_\_\_ N \_\_\_ The standard moldboard plus cutting edges width shall be at least 12 ft (3658 mm); moldboard plus cutting edges height shall be at least 21.9 in (556 mm); moldboard thickness shall be 0.9 in (22 mm); and cutting edge height shall be 6.0 in x 0.6 in (152 x 16 mm).
- Y \_\_\_ N \_\_\_ Moldboard shall have a bank slope angle capability of at least 90 degrees to both sides.
- Y \_\_\_ N \_\_\_ Moldboard shall have no less than 16.3 in (413 mm) arc radius (blade curvature) for optimum productivity.
- Y \_\_\_ N \_\_\_ Top adjust DCM moldboard retention system shall have no more than two retention points located on the left and right side of the moldboard. The surface area shall not be less than 55,332 mm<sup>2</sup> (85.76 in<sup>2</sup>).
- Y \_\_\_ N \_\_\_ Moldboard shall have a hydraulic tip control through a range of 40 degrees fore and 5 degrees aft.
- Y \_\_\_ N \_\_\_ **Standard top adjust moldboard wear strips shall be adjusted with lock screws, providing shim-less adjustment capability both vertical & horizontal.**
- Y \_\_\_ N \_\_\_ The moldboard shall be pre-stressed during manufacturing for superior strength and durability.
- Y \_\_\_ N \_\_\_ Moldboard slide rails shall be constructed of a heat-treated, high carbon steel and have replaceable bronze alloy wear inserts on top and bottom.
- Y \_\_\_ N \_\_\_ Circle shall be a single piece, rolled-ring forging, with raised wear surfaces on the top and bottom.
- Y  N \_\_\_ Circle shall be rotated by a hydraulically driven motor with a minimum circle pinion torque capability of 12,538.56 ft-lb (17,000 N-m).
- Y \_\_\_ N \_\_\_ **Circle teeth contact surfaces shall be induction-hardened on the front 240 degrees of the circle.**
- Y \_\_\_ N \_\_\_ Blade lift and center shift cylinders shall have replaceable bronze coated steel wear inserts in the ball sockets with removable shims to insure the ability to remove free play throughout the useful wear insert life.
- Y \_\_\_ N \_\_\_ **The standard mounting hardware for cutting edges and end bits shall be 3/4 in (16 mm).**
- Y \_\_\_ N \_\_\_ **Link bar shall have large diameter 7 positions for increased versatility, the center most of which bear replaceable bushings.**
- Y \_\_\_ N \_\_\_ Linkbar pin shall be separate from pin pulling mechanism for easier service and lower O&O costs.
- Y \_\_\_ N \_\_\_ The lift cylinder casting shall be welded to the front frame for added strength and structural integrity.
- Y \_\_\_ N \_\_\_ The draft frame pivot connection shall have a single ball stud with grease zerk. Ball stud shall be bolt-on, shimable and adjustable to allow for quick and easy field serviceable design.
- Y \_\_\_ N \_\_\_ Pinion gear shall be separate from the pinion shaft to allow for a quick and easy serviceable design.
- Y \_\_\_ N \_\_\_ Circle outside diameter shall be no less than 60.2 in (1530 mm).
- Y \_\_\_ N \_\_\_ Throat clearance with standard moldboard shall be at least 119 mm.
- Y \_\_\_ N \_\_\_ A greaseable moldboard pivot pin shall be available as standard equipment.
- Y  N \_\_\_ There will be no more than 6 replaceable wear inserts between the circle and drawbar providing at least 120 in<sup>2</sup> (770 cm<sup>2</sup>) of wear surface area and 6 additional wearstrips on circle shoes totaling 19 in<sup>2</sup> (122 cm<sup>2</sup>).

# BID SPECIFICATIONS

## CIRCLE AND MOLDBOARD - OPTIONAL ATTACHMENTS

- Y \_\_\_ N \_\_\_ The standard moldboard plus cutting edges width shall be at least 12 ft (3658 mm); moldboard plus cutting edges height shall be at least 21.9 in (556 mm); moldboard thickness shall be 0.9 in (22 mm); and cutting edge height shall be 6.0 in x 0.6 in (152 x 16 mm).
- Y \_\_\_ N \_\_\_ The optional 14 foot moldboard plus cutting edges width shall be at least 14 ft (4267 mm); moldboard plus cutting edges height shall be at least 23.1 in (587 mm); moldboard thickness shall be 0.9 in (22 mm); and cutting edge height shall be 8.0 in x 0.7 in (203 x 19 mm).
- Y  N \_\_\_ Blade lift accumulators shall be provided, protecting cutting edge and other components from damage from shock loads as an option.
- Y \_\_\_ N \_\_\_ Three sideshift anchor positions shall be provided for extended reach capability on optional 14 foot moldboard.
- Y \_\_\_ N \_\_\_ 2 foot right-hand blade extension shall be available for all moldboards.
- Y \_\_\_ N \_\_\_ 2 foot left-hand blade extension shall be available for all moldboards.
- Y \_\_\_ N \_\_\_ **Optional High Performance Circle (HPC) shall be available from the factory. HPC replaces shims, shoes and wear inserts for drawbar to circle connection with an excavator bearing. Easy greasing of the HPC shall be completed in a nested grease bank.**
- Y \_\_\_ N \_\_\_ **Optional HPC must have drain holes on the bottom side and a segmented ring for inspection.**
- Y \_\_\_ N \_\_\_ **Optional Grader Bit 2 adapter boards and standard or wide bits shall be available from the factory as a replacement for cutting edge. Grader bits provide up to 20 times life of cutting edge in the correct application.**

## ELECTRICAL

- Y  N \_\_\_ Machine shall have a 150 amp hour 1125 CCA heavy-duty battery.
- Y  N \_\_\_ Machine shall have a minimum 150 amp alternator at 24 volts provided which is brushless for increased life and durability.
- Y \_\_\_ N \_\_\_ A 24 V to 12 V converter with 15-amp capacity shall be provided.
- Y \_\_\_ N \_\_\_ Starting system shall be a 24V direct electric type.
- Y \_\_\_ N \_\_\_ LED white reversing lamps and LED stop lamps shall be provided.
- Y \_\_\_ N \_\_\_ Electrical system shall have a master disconnect switch with a removable key (in addition to the ignition switch) accessible from the ground level.
- Y \_\_\_ N \_\_\_ All core machine systems shall be electronically connected, optimizing performance and preventing machine damage.
- Y \_\_\_ N \_\_\_ All wiring shall be arranged and located so as to facilitate regular visual inspections, not be in contact with hot surfaces, and not routed with other services lines such as fuel and oil.
- Y \_\_\_ N \_\_\_ All harnesses / cabling shall be secured with clipping clamps providing a gap between the conduit / harness and the mounting surface preventing material build-up.

## ELECTRICAL - OPTIONAL ATTACHMENTS

- Y \_\_\_ N \_\_\_ Machine shall have 200 amp hour 1400 CCA extreme duty batteries available.
- Y \_\_\_ N \_\_\_ Machine shall have a 200 amp alternator at 24 volts available which is brushless for increased life and durability.
- Y \_\_\_ N \_\_\_ Drop down lights shall be available to move LED stop lamps out to the width of the machine.
- Y \_\_\_ N \_\_\_ There shall be quantity six (6) 3.75 in (95 mm) round LED mounted on the cab, 4 forward facing and 2 rear facing available as an option.
- Y \_\_\_ N \_\_\_ There shall be quantity two (2) 3.75 in (95 mm) round LED heel work lamps mounted underneath the cab available as an option.

## BID SPECIFICATIONS

- Y\_\_\_ N\_\_\_ There shall be quantity two (2) 3.75 in (95 mm) round LED mid-frame toe lamps shall be available to illuminate moldboard and surrounding area available as an option.
- Y\_\_\_ N\_\_\_ There shall be quantity two (2) 3.75 in (95 mm) round LED ripper work lamps available as an option.
- Y\_\_\_ N\_\_\_ There shall be quantity two (2) 3.75 in (95 mm) round LED snow wing work lamps mounted on rights side of cab available as an option.
- Y\_\_\_ N\_\_\_ High or low bar headlights with front turn signals shall be available.
- Y\_\_\_ N\_\_\_ Four warning lights shall be integrated in the each side of the cab available as an option.
- Y\_\_\_ N\_\_\_ Optional warning light with beacon mount shall be available.
- Y\_\_\_ N\_\_\_ A 24 V to 12 V converter with 30 amp capacity shall be available.

### SERVICEABILITY

- Y\_\_\_ N\_\_\_ The dip stick for checking transmission fluid shall be at ground level.
- Y\_\_\_ N\_\_\_ Hydraulic tank site gauge shall be readable at ground level.
- Y\_\_\_ N\_\_\_ Hydraulic tank filter shall be a cartridge-style filter located near the hydraulic oil tank.
- Y\_\_\_ N\_\_\_ Ability for ground level fueling shall be provided.
- Y\_\_\_ N\_\_\_ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports.
- Y\_\_\_ N\_\_\_ A two-way communication tool shall give service technicians easy access to stored diagnostic data and allow configuration of machine parameters.
- Y\_\_\_ N\_\_\_ Machine shall provide three points of contact on all areas of the machine for mounting and dismounting.
- Y ~~X~~ N\_\_\_ The articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine.
- Y\_\_\_ N\_\_\_ Left- and right-side tandem case assemblies shall be covered with a punched steel plate to provide an adequate platform for standing and walking.
- Y\_\_\_ N\_\_\_ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports.
- Y\_\_\_ N\_\_\_ **Engine primary and final fuel filters shall have 1000 hour service replacement interval.**
- Y\_\_\_ N\_\_\_ Engine shall have primary fuel filter with fuel water separator and electronic sensor, quick release dual stage filter, and primer pump.
- Y\_\_\_ N\_\_\_ The centralized lube bank shall be at the articulation joint to give access to difficult zerks.
- Y\_\_\_ N\_\_\_ Transmission filter restriction indicator shall be displayed in the cab.
- Y\_\_\_ N\_\_\_ Lock out / Tag out capabilities shall be provided standard and increase the safety levels during down time. This ensures that an energy-isolating device and the machine cannot be operated during maintenance.
- Y\_\_\_ N\_\_\_ Remote machine diagonistics shall be available.
- Y\_\_\_ N\_\_\_ Operator-intiated remote software flash shall be available.
- Y\_\_\_ N\_\_\_ Planned Maintenance (PM) alerts shall be available to alert the operator and alerts can be populated via VisionLink.™
- Y\_\_\_ N\_\_\_ Diesel fuel fill shall be ground level in the front frame of the machine and not require a fuel tank external of the front frame.

### SERVICEABILITY - OPTIONAL ATTACHMENTS

- Y\_\_\_ N\_\_\_ High-speed oil drain system shall be available with ground level quick connect access.
- Y ~~X~~ N\_\_\_ A guard shall be available to protect the machine's transmission from debris.
- Y\_\_\_ N\_\_\_ A guard shall be available to suppress sound from the engine.
- Y\_\_\_ N\_\_\_ A guard for the rear cab windows shall be available.
- Y\_\_\_ N\_\_\_ An internal service lights shall be available to illuminate engine compartment.
- Y\_\_\_ N\_\_\_ A circle pinion grease bucket, known as circle saver, with remote grease line shall be available for standard top adjust DCM.
- Y\_\_\_ N\_\_\_ A cover shall be available for under cab.

# BID SPECIFICATIONS

Y  N  No-tools removal of the engine enclosure and lower engine compartment shall be available for easier maintenance and service of the machine.

## MINIMUM SERVICE FILL CAPACITIES

Y  N  Standard fuel tank capacity shall not be more than 98 gallons (371 L).  
Y  N  Standard cooling system capacity shall not be less than 14.3 gallons (54 L).  
Y  N  Standard hydraulic tank capacity shall not be more than 32.5 gallons (123 L).  
Y  N  Standard engine oil capacity shall not be less than 5.3 gallons (20 L).  
Y  N  Standard tandem housing capacity shall not be less than 18.5 gallons (70 L) each.  
Y  N  Standard transmission and differential oil capacity shall not be less than 15.9 gallons (60 L).  
Y  N  Standard front wheel spindle bearing housing capacity shall not be less than 0.2 gallons (0.6 L).  
Y  N  Standard circle drive housing capacity shall not be less than 1.8 gallons (7 L).  
Y  N  Optional HPC circle drive housing capacity shall not be less than 2.5 gallons (9.5 L).  
Y  N  Diesel exhaust fluid (DEF) tank capacity shall not be less than 4.5 gallons (17 L).

## SAFETY AND ENVIRONMENTAL

Y  N  A standard circle drive slip clutch shall be provided to reduce horizontal moldboard impact damage.  
Y  N  Black glare-reducing paint shall be used on the front frame and engine enclosure to decrease glare from other equipment lights and reflection from the sun and snow.  
Y  N  An external emergency kill switch shall be available for ground level engine shut down.  
Y  N  Machine shall have laminated glass for the front windows and doors, to protect the operator from shattered glass.  
Y  N  Machine shall provide dual exits allowing for emergency egress should one side become obstructed.  
Y  N  Electrical system shall have a master disconnect switch with a removable key and lock for added safety (in addition to the ignition switch).  
Y  N  Machine shall have back-up lights and sounding alarm when reverse gears are selected.  
Y  N  Environmentally friendly drain valves shall be provided for the hydraulic oil, engine oil, engine coolant, transmission, differential and fuel tank.  
Y  N  Cooling fan shall have a shroud and rear grill for protection during service.  
Y  N  Machine shall allow cab interior and exterior lights to remain on, separate from ignition switch, for safe exit of the machine during night operation.  
Y  N  Engine and transmission shall be rubber isolation mounted to reduce noise and vibration.  
Y  N  Rear vision camera shall be integrated into machine display and wiring shall be available.

## SAFETY AND ENVIRONMENTAL - OPTIONAL ATTACHMENTS

Y  N  A guard shall be available to protect the machine's transmission from debris.  
Y  N  Front and rear vision cameras shall be available.  
Y  N  Cat Detect 360° camera shall be available with four cameras.  
Y  N  Cat Detect 360° camera with People Detection shall be available.  
Y  N  Blade lift accumulators shall be available as an option to reduce vertical impact damage.  
Y  N  Drop down rear lights (stop and turn signal lights) shall be available to span the profile of the machine for increased safety.  
Y  N  Outside mounted mirrors (optional heated) shall be available.

## ADDITIONAL FEATURES

Y  N  Rear ripper shall have 5 ripper shank holders.  
Y  N  Rear ripper shall have a working penetration of maximum 16.0 in (406.4 mm) and a penetration force of at least 19,018 lb (8626 kg).

## BID SPECIFICATIONS

- Y\_\_\_ N\_\_\_ Rear fenders shall meet ISO:3457 requirements and shall not interfere with the ability to fully open any cab or engine enclosures or service access doors.
- Y\_\_\_ N\_\_\_ All core machine systems shall be electronically connected optimizing performance and preventing machine damage.

### OPTIONAL ATTACHMENTS

- Y\_\_\_ N\_\_\_ An integrated communication tool providing flow of vital machine data and location shall be available. This system shall give automatic updates on machine parameters such as machine hours, machine condition, location, fault codes, and alarms.
- Y\_\_\_ N\_\_\_ Machine shall have a engine coolant circulating heater available.
- Y\_\_\_ N\_\_\_ Machine shall have a transmission solenoid valve guard available.
- Y\_\_\_ N\_\_\_ A mid-machine scarifier shall be available.
- Y\_\_\_ N\_\_\_ A dedicated front blade shall be available.
- Y\_\_\_ N\_\_\_ A front mount scarifier shall be available from Caterpillar attachments.
- Y\_\_\_ N\_\_\_ A front lift group shall be available.
- Y\_\_\_ N\_\_\_ A pushblock/counterweight shall be available.
- Y\_\_\_ N\_\_\_ A rear ripper shall be available.
- Y\_\_\_ N\_\_\_ Rear fenders option shall be available.
- Y\_\_\_ N\_\_\_ Mastless snow wing shall be available.
- Y\_\_\_ N\_\_\_ Masted snow wing shall be available.

**Bid specs are intended for use by North American buyers only and are subject to change. Model configuration may change depending on country of use. Please contact your local Caterpillar dealer for the most up-to-date specifications for your area.**

Effective with sales to the first user on or after June 1, 2015

# 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:

- 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
- Cat Work Tools
- Select models designated by Caterpillar that are sold in India and China

These products 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.
- For Draglines, Electric Rope Shovels, Hard Rock Movers, Hard Rock Feeders, the warranty period is not to exceed 24 months from shipment of the last major component from the Caterpillar place of manufacture.

### 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.

### 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.

- 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.

### 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.
- Failures resulting from abuse, neglect, and/or improper storage or 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.

(Continued on the reverse side...)

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.

Caterpillar's obligations under this Limited Warranty are subject to, and shall not apply in contravention of, the laws, rules, regulations, directives, ordinances, orders, or statutes of the United States, or of any other applicable jurisdiction, without recourse or liability with respect to Caterpillar.

A) For products operating outside of Australia, Fiji, Nauru, New Caledonia, New Zealand, Papua New Guinea, the Solomon Islands, and Tahiti, the following is applicable:

NEITHER THE FOREGOING EXPRESS WARRANTY NOR ANY OTHER WARRANTY BY CATERPILLAR, EXPRESS OR IMPLIED, IS APPLICABLE TO ANY ITEM CATERPILLAR SELLS THAT IS WARRANTED DIRECTLY TO THE USER BY ITS MANUFACTURER.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EXCEPT CATERPILLAR EMISSION-RELATED COMPONENTS WARRANTY FOR NEW ENGINES, WHERE APPLICABLE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISION OF MATERIAL AND SERVICES, AS SPECIFIED HEREIN.

CATERPILLAR IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

CATERPILLAR EXCLUDES ALL LIABILITY FOR OR ARISING FROM ANY NEGLIGENCE ON ITS PART OR ON THE PART OF ANY OF ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN RESPECT OF THE MANUFACTURE OR SUPPLY OF GOODS OR THE PROVISION OF SERVICES RELATING TO THE GOODS.

IF OTHERWISE APPLICABLE, THE VIENNA CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS IS EXCLUDED IN ITS ENTIRETY.

B) For products operating in Australia, Fiji, Nauru, New Caledonia, New Zealand, Papua New Guinea, the Solomon Islands, and Tahiti, the following is applicable:

THIS WARRANTY IS IN ADDITION TO WARRANTIES AND CONDITIONS IMPLIED BY STATUTE AND OTHER STATUTORY RIGHTS AND OBLIGATIONS THAT BY ANY APPLICABLE LAW CANNOT BE EXCLUDED, RESTRICTED OR MODIFIED ("MANDATORY RIGHTS"). ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED (BY STATUTE OR OTHERWISE), ARE EXCLUDED WITHOUT LIMITING THE FOREGOING PROVISIONS OF THIS PARAGRAPH, WHERE A PRODUCT IS SUPPLIED FOR BUSINESS PURPOSES. THE CONSUMER GUARANTEES UNDER THE CONSUMER GUARANTEES ACT 1993 (NZ) WILL NOT APPLY.

NEITHER THIS WARRANTY NOR ANY OTHER CONDITION OR WARRANTY BY CATERPILLAR, EXPRESS OR IMPLIED (SUBJECT ONLY TO THE MANDATORY RIGHTS), IS APPLICABLE TO ANY ITEM CATERPILLAR SELLS THAT IS WARRANTED DIRECTLY TO THE USER BY ITS MANUFACTURER.

IF THE MANDATORY RIGHTS MAKE CATERPILLAR LIABLE IN CONNECTION WITH SERVICES OR GOODS, THEN TO THE EXTENT PERMITTED UNDER THE MANDATORY RIGHTS, THAT LIABILITY SHALL BE LIMITED AT CATERPILLAR'S OPTION TO (a) IN THE CASE OF SERVICES, THE SUPPLY OF THE SERVICES AGAIN OR THE PAYMENT OF THE COST OF HAVING THE SERVICES SUPPLIED AGAIN AND (b) IN THE CASE OF GOODS, THE REPAIR OR REPLACEMENT OF THE GOODS, THE SUPPLY OF EQUIVALENT GOODS, THE PAYMENT OF THE COST OF SUCH REPAIR OR REPLACEMENT OR THE ACQUISITION OF EQUIVALENT GOODS.

CATERPILLAR EXCLUDES ALL LIABILITY FOR OR ARISING FROM ANY NEGLIGENCE ON ITS PART OR ON THE PART OF ANY OF ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN RESPECT OF THE MANUFACTURE OR SUPPLY OF GOODS OR THE PROVISION OF SERVICES RELATING TO THE GOODS.

CATERPILLAR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES UNLESS IMPOSED UNDER MANDATORY RIGHTS. IF OTHERWISE APPLICABLE, THE VIENNA CONVENTION (CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS) IS EXCLUDED IN ITS ENTIRETY.

C) For products supplied in Australia:

IF THE PRODUCTS TO WHICH THIS WARRANTY APPLIES ARE:

- I. PRODUCTS OF A KIND ORDINARILY ACQUIRED FOR PERSONAL, DOMESTIC OR HOUSEHOLD USE OR CONSUMPTION; OR
- II. PRODUCTS THAT COST AUD 40,000 OR LESS,

WHERE THOSE PRODUCTS WERE NOT ACQUIRED FOR THE PURPOSE OF RE-SUPPLY OR FOR THE PURPOSE OF USING THEM UP OR TRANSFORMING THEM IN THE COURSE OF PRODUCTION OR MANUFACTURE OR IN THE COURSE OF REPAIRING OTHER GOODS OR FIXTURES, THEN THIS SECTION C APPLIES.

THE FOLLOWING MANDATORY TEXT IS INCLUDED PURSUANT TO THE AUSTRALIAN CONSUMER LAW AND INCLUDES REFERENCES TO RIGHTS THE USER MAY HAVE AGAINST THE DIRECT SUPPLIER OF THE PRODUCTS. OUR GOODS COME WITH GUARANTEES THAT CANNOT BE EXCLUDED UNDER THE AUSTRALIAN CONSUMER LAW. YOU ARE ENTITLED TO A REPLACEMENT OR REFUND FOR A MAJOR FAILURE AND COMPENSATION FOR ANY OTHER REASONABLY FORESEEABLE LOSS OR DAMAGE. YOU ARE ALSO ENTITLED TO HAVE THE GOODS REPAIRED OR REPLACED IF THE GOODS FAIL TO BE OF ACCEPTABLE QUALITY AND THE FAILURE DOES NOT AMOUNT TO A MAJOR FAILURE. THE INCLUSION OF THIS TEXT DOES NOT CONSTITUTE ANY REPRESENTATION OR ACCEPTANCE BY CATERPILLAR OF LIABILITY TO THE USER OR ANY OTHER PERSON IN ADDITION TO THAT WHICH CATERPILLAR MAY HAVE UNDER THE AUSTRALIAN CONSUMER LAW.

TO THE EXTENT THE PRODUCTS FALL WITHIN THIS SECTION C BUT ARE NOT OF A KIND ORDINARILY ACQUIRED FOR PERSONAL, DOMESTIC OR HOUSEHOLD USE OR CONSUMPTION, CATERPILLAR LIMITS ITS LIABILITY TO THE EXTENT IT IS PERMITTED TO DO SO UNDER THE AUSTRALIAN CONSUMER LAW TO, AT ITS OPTION, THE REPAIR OR REPLACEMENT OF THE PRODUCTS, THE SUPPLY OF EQUIVALENT PRODUCTS, OR THE PAYMENT OF THE COST OF SUCH REPAIR OR REPLACEMENT OR THE ACQUISITION OF EQUIVALENT PRODUCTS.

THE WARRANTY SET OUT IN THIS DOCUMENT IS GIVEN BY CATERPILLAR INC. OR ANY OF ITS SUBSIDIARIES, 100 N. E. ADAMS ST., PEORIA, IL USA 61629. TELEPHONE 1 309 675 1000. THE USER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MAKING A CLAIM UNDER THE WARRANTY SET OUT IN THIS DOCUMENT, EXCEPT AS EXPRESSLY STATED OTHERWISE IN THIS DOCUMENT, AND THE USER IS REFERRED TO THE BALANCE OF THE DOCUMENT TERMS CONCERNING CLAIM PROCEDURES, CATERPILLAR RESPONSIBILITIES AND USER RESPONSIBILITIES.

TO THE EXTENT PERMISSIBLE BY LAW, THE TERMS SET OUT IN THE REMAINDER OF THIS WARRANTY DOCUMENT (INCLUDING SECTION B) CONTINUE TO APPLY TO PRODUCTS TO WHICH THIS SECTION C APPLIES.

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# Employment Eligibility Verification



Welcome  
Terence Martin

User ID  
TMOFS-102

Last Login  
09:22 AM - 01/06/2012 Log Out

Click any for help

- Home
- My Cases
- New Case
- View Cases
- Search Cases
- My Profile
- Edit Profile
- Change Password
- Change Security Questions
- My Company
- Edit Company Profile
- Add New User
- View Existing Users
- Close Company Account
- My Reports
- View Reports
- My Resources
- View Essential Resources
- Take Tutorial
- View User Manual
- Contact Us

## Company Information

**Company Name:** Thompson Tractor Co., Inc.

**Company ID Number:** 47130

**Doing Business As (DBA) Name:**

**DUNS Number:**

[View / Edit](#)

### Physical Location:

**Address 1:** 2401 Pinson Highway

**Address 2:**

**City:** Birmingham

**State:** AL

**Zip Code:** 35217

**County:** JEFFERSON

### Mailing Address:

**Address 1:** P O. Box 10367

**Address 2:**

**City:** Birmingham

**State:** AL

**Zip Code:** 35202-0367

### Additional Information:

**Employer Identification Number:** 630377478

**Total Number of Employees:** 1,000 to 2,499

**Parent Organization:**

**Administrator:**

**Organization Designation:**

**Employer Category:**

**NAICS Code:** 423 - MERCHANT WHOLESALERS, DURABLE GOODS

[View / Edit](#)

**Total Hiring Sites:** 40

[View / Edit](#)

**Total Points of Contact:** 3

[View / Edit](#)

[View MOU](#)

## Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type See Specific Instructions on page 2:	Name (as shown on your income tax return) <b>Thompson Tractor Co., Inc. DBA Thompson Power Systems, Thompson Lift Truck Co.</b>	
	Business name, if different from above <b>and The Cat Rent Store</b>	
	Check appropriate box: <input type="checkbox"/> Individual/Sole proprietor <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ ..... <input checked="" type="checkbox"/> Exempt payee <input type="checkbox"/> Other (see instructions) ▶	
	Address (number, street, and apt. or suite no.) <b>P O Box 10367 2401 Pinson Hwy. Tarrant, AL 35217</b>	
	City, state, and ZIP code <b>Birmingham, AL 35202-0367</b>	
List account number(s) here (optional) <b>Lockbox Remit To: P O Box 934005, Atlanta, GA 31193-4005</b>		
<b>Part I Taxpayer Identification Number (TIN)</b>		

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I Instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number : : :
or
Employer identification number <b>63 : 0377478</b>

### Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

**Certification Instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the Instructions on page 4.

<b>Sign Here</b>	Signature of U.S. person ▶ <i>Linda L. Demax, Controller</i>	Date ▶
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### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

#### Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity.

Company ID Number: 47130

the Employer issues a tentative nonconfirmation based upon a photo non-match. The Employer will determine whether the employee contests the tentative nonconfirmation as soon as possible after the Employer receives it.

4. If the employee contests a tentative nonconfirmation issued by DHS, the Employer will provide the employee with a referral letter and instruct the employee to contact the Department through its toll-free hotline within 8 Federal Government work days.

5. If the employee contests a tentative nonconfirmation based upon a photo non-match, the Employer will provide the employee with a referral letter to DHS. DHS will electronically transmit the result of the referral to the Employer within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary.

6. The Employer agrees that if an employee contests a tentative nonconfirmation based upon a photo non-match, the Employer will send a copy of the employee's Form I-551 or Form I-766 to DHS for review by:

- Scanning and uploading the document, or
- Sending a photocopy of the document by an express mail account (furnished and paid for by DHS).

7. The Employer understands that if it cannot determine whether there is a photo match/non-match, the Employer is required to forward the employee's documentation to DHS by scanning and uploading, or by sending the document as described in the preceding paragraph, and resolving the case as specified by the Immigration Services Verifier at DHS who will determine the photo match or non-match.

#### ARTICLE IV

##### **SERVICE PROVISIONS**

The SSA and DHS will not charge the Employer for verification services performed under this MOU. The Employer is responsible for providing equipment needed to make inquiries. To access the E-Verify System, an Employer will need a personal computer with Internet access.

#### ARTICLE V

##### **PARTIES**

This MOU is effective upon the signature of all parties, and shall continue in effect for as long as the SSA and DHS conduct the E-Verify program unless modified in writing by the mutual consent of all parties, or terminated by any party upon 30 days prior written notice to the others. Any and all system enhancements to the E-Verify program by DHS or SSA, including but not limited to the E-Verify checking against additional data sources and instituting new verification procedures, will be covered under this MOU and will not cause the need for a supplemental MOU that outlines these changes. DHS agrees to train employers on all changes made to E-Verify through the use of mandatory refresher tutorials and updates to the E-Verify manual. Even

Company ID Number: 47130

without changes to E-Verify, the Department reserves the right to require employers to take mandatory refresher tutorials.

Termination by any party shall terminate the MOU as to all parties. The SSA or DHS may terminate this MOU without prior notice if deemed necessary because of the requirements of law or policy, or upon a determination by SSA or DHS that there has been a breach of system integrity or security by the Employer, or a failure on the part of the Employer to comply with established procedures or legal requirements. Some or all SSA and DHS responsibilities under this MOU may be performed by contractor(s), and SSA and DHS may adjust verification responsibilities between each other as they may determine.

Nothing in this MOU is intended, or should be construed, to create any right or benefit, substantive or procedural, enforceable at law by any third party against the United States, its agencies, officers, or employees, or against the Employer, its agents, officers, or employees.

Each party shall be solely responsible for defending any claim or action against it arising out of or related to E-Verify or this MOU, whether civil or criminal, and for any liability wherefrom, including (but not limited to) any dispute between the Employer and any other person or entity regarding the applicability of Section 403(d) of IIRIRA to any action taken or allegedly taken by the Employer.

The employer understands that the fact of its participation in E-Verify is not confidential information and may be disclosed as authorized or required by law and DHS or SSA policy, including but not limited to, Congressional oversight, E-Verify publicity and media inquiries, and responses to inquiries under the Freedom of Information Act (FOIA).

The foregoing constitutes the full agreement on this subject between the SSA, DHS, and the Employer.

The individuals whose signatures appear below represent that they are authorized to enter into this MOU on behalf of the Employer and DHS respectively.

**To be accepted as a participant in E-Verify, you should only sign the Employer's Section of the signature page. If you have any questions, contact E-Verify Operations at 888-464-4218.**

**Employer Thompson Tractor Co., Inc.**

**Frank M Wright**

\_\_\_\_\_  
Name (Please type or print)

\_\_\_\_\_  
Title

*Electronically Signed*

**07/11/2007**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Department of Homeland Security – Verification Division**

Company ID Number: 47130

**INFORMATION REQUIRED  
FOR THE E-VERIFY PROGRAM**

Information relating to your Company:

Company Name: Thompson Tractor Co., Inc.

Company Facility Address: 2401 Pinson Highway  
Birmingham, AL 35217

Company Alternate Address: P.O. Box 10367  
Birmingham, AL 35202-0367

County or Parish: JEFFERSON

Employer Identification Number: 630377478

North American Industry  
Classification Systems Code: 423

Parent Company: \_\_\_\_\_

Number of Employees: 1,000 to  
2,499      Number of Sites Verified for: 5

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State.

- GEORGIA      5 site(s)

Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:

Name: **Kimberly A Stark**  
Telephone Number: **(205) 849 - 4279**      Fax Number: **(205) 849 - 4565**  
E-mail Address: **kimberlystark@thompsontractor.com**

Name: **Frank M Wright**  
Telephone Number: **(205) 849 - 4267**      Fax Number: **(205) 849 - 4854**  
E-mail Address: **frankwright@thompsontractor.com**

Company ID Number: 47130

**USCIS Verification Division**

\_\_\_\_\_  
Name (Please type or print)

\_\_\_\_\_  
Title

*Electronically Signed*  
\_\_\_\_\_

*07/11/2007*  
\_\_\_\_\_

Signature

Date