

# TS185

Towed Scraper

**CATERPILLAR®**



#### Scraper Bowl

Capacity – Heaped	14.5 m <sup>3</sup>	19 yd <sup>3</sup>
Width of Cut, to Router Bits	3785 mm	12 ft 5 in
Rated Load	21 050 kg	46,400 lb
Capacity Struck	11 m <sup>3</sup>	14.4 yd <sup>3</sup>
Depth of Cut – max	305 mm	12 in

## TS185 Features

### High-Strength, Abrasion-Resistant Steel in Bowl Interior

High-strength, abrasion-resistant steel on the apron face, floor walls, and ejector minimizes wear-load after load.

### Standard Heavy-Duty, Construction-Grade Brakes

Standard dry-disc brakes enhance your job site safety.

### Standard Radial Tires

Standard radial tires deliver reduced rolling resistance, excellent flotation, and durability.

### Walking-Beam Suspension

Independent walking-beam axles transfer loads for a smoother ride and reduced sway, improving cycle times and operator comfort.



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Originally designed by a road contractor for the construction industry, the Cat® TS185 Towed Scraper delivers outstanding performance and legendary durability. High-strength, abrasion-resistant steel in the scraper bowl minimizes wear. The rugged hitch, tongue, and structural design ensure long life in the toughest job site conditions. The exclusive walking-beam axle provides a smoother ride for the operator and a variable cutting edge angle for unmatched productivity. Designed to be pulled by Cat Track-Type Tractors or Challenger™ Tractors, the Cat TS185 Towed Scraper raises the standard.

# Scraper Bowl

## Unmatched Durability.

### High-Strength Bowl Design

The scraper bowl is constructed using L-shaped box sections of high strength steel for superior strength and dent resistance. The floor is a box-section structure made from high-strength, abrasion-resistant steel for maximum strength during top loading and rigidity during intermittent push loading.

High-strength, abrasion-resistant steel is used throughout the inside of the bowl for maximum wear resistance.

### Center Lift Design

The center lift design improves the strength and durability by placing the hydraulic cylinders between the tongue and spreader tube. This eliminates the need for draft arms, reducing weight and complexity.

### Cutting Edges

Common Cat® Wheel Tractor-Scraper cutting edges and router bits are used to ensure exceptional performance and great availability. The center cutting edge is in the stinger (drop down) position for good penetration and efficient material flow into the bowl.

When worn, the cutting edges can be rotated by 180 degrees, doubling the life.

### Ejector

The ejector is constructed from a single plate of high-strength, abrasion-resistant steel. The ejector extends beyond the front edge of the scraper floor to minimize carryback.

To minimize wear, the ejector weight is carried on steel rollers supported by a wear strip welded to the bowl floor. At the sides, alignment is maintained by Ultra High Molecular Weight (UHMW) plastic guides.

### Depth Indicator

A depth indicator is mounted on trailing scrapers to provide the operator a visual reference to scraper cut depth.



# Tongue and Hitch

Built rugged for extreme durability.



## Hitches for Cat® Tractors

Robust hitches are available for Cat Track-Type Tractors and Challenger™ MTS800/MTS900 Series Tractors. See your Cat dealer for hitches for other pulling machines.

## Rugged Hitch

To prevent pin wear, the hitch uses a massive 89 mm (3.5 in) pin securely held in place with eight bolts.

The hitch platform, positioned between the pulling machine and the tongue, contains two pins that allow  $\pm 45$  degrees of side to side oscillation (or roll),  $\pm 90$  degree turns (yaw), and  $\pm 27$  degrees of uphill/downhill movement (pitch).

An integrated stop block allows a 90 degree turning radius while preventing contact between the tongue and the pulling machine tires/tracks.

An adapter is available to convert the scraper hitch for pulling drawn implements, such as disk harrows and sheepfoot compactor rollers.

## Robust, Straight-Line Design

Built from 13 mm (0.5 inch) structural plate steel, the tongue is built to withstand the high drawbar forces imposed by track-type tractors pulling towed scrapers.

The straight-line design eliminates draft arms, hydraulic cylinders, and lines located outside the width of the bowl, improving the overall strength to most effectively transfer the drawbar power to the cutting edges.

## Countersunk Tandem Hitch

A countersunk hitch is provided in the push block of lead scrapers, allowing the scraper to be push loaded when a second scraper is not used.



# Hydraulics

Tough components for tough applications.

## Hose and Couplings

Cat XT™-3 ES (Enhanced Spiral) hose is used because its exclusive cover is formulated and manufactured by Caterpillar to provide up to 20 times more abrasion resistance than industry-standard hose. Cat XT-3 ES hose works at half of the SAE's bend radius without sacrificing cold flex capability. As additional protection all exposed hydraulic lines are solidly secured with rubber-lined clamps, protecting the hoses from failure caused by rubbing.

All hydraulic hose and lines use O-Ring Face Seal (ORFS) fittings for maximum leak prevention.

## Steel Hydraulic Lines in Scraper Bowl Walls

Brake lines and hydraulic lines for the rear scraper in tandem arrangements use steel lines inside the scraper bowl walls, eliminating hose damage caused by material in the bowl or during top loading.

## Hose Fittings

Three hose fitting options are available:

- 19 mm (3/4 in) poppet-style
- 13 mm (1/2 in) poppet-style
- Threaded flat-face connectors

Threaded flat-face connectors, available exclusively on Cat Towed Scrapers, allow connection and disconnection under pressure and are less susceptible to wear caused by hose movement.

# Attachments

Lower the costs of Challenger™ Tractors in scraper applications.



## **Rubber Track Guides**

Rubber Track Guides for Challenger MTS800 Series Tractors center the rubber tracks on roller wheels, and help prevent the track from moving into the machine or detacking, avoiding expensive downtime. The track guides extend the service life of the belt as the side-loading on the belt guide blocks is reduced.

Detacking is generally caused by sharp turns, usually under load. The rubber track guides can minimize tractor damage caused by detacking, but are not a replacement for sound operating techniques. Your Cat Dealer can provide training in proper towed scraper operation.

## **Hydraulic Hose Hanging Tower Kit**

The hydraulic hose hanging tower kit for Challenger MTS800 and MTS900 Series Tractors allows the hoses to move freely and eliminate entanglement while maintaining vertical alignment. This reduces hose fitting and valve wear for increased service life.

# Innovation

## Exclusive Cat Features.



### Walking-Beam Suspension

The TS185 uses a four-tire arrangement with independent walking-beam load transferring axles. The exclusive design gives the scraper a smoother ride, reduced side-to-side sway and easier finish grading.

### Adjustable Cutting Angle

The TS185 is equipped with an additional pair of lift cylinders at the rear of the scraper.

An experienced operator can use this exclusive feature to fine-tune the cutting depth for improved productivity. Steepen the cutting angle while drop cutting or during push loading. Use a shallower cut when loading lighter materials such as sand or dry topsoil.



## Wheels, Brakes

Raising the Standards.

### Standard Brakes – Construction-Grade

Standard heavy-duty brakes bring a new level of safety to the job site. Each machine is equipped with four calipers.

The hydraulically-actuated, dry-disc brakes are identical to the brakes used on Cat D400E Articulated Trucks.

### Standard Radial Tires

Standard radial tires reduce rolling resistance and provide excellent flotation and durability. Heavy-duty, five-piece rims ensure a long service life. Wheel hubs are oil-filled and sealed with Cat Duo-Cone™ seals.





# Customer Support

Unmatched support makes the difference.

## **Your Cat dealer is read to assist you with your purchase decision and everything after.**

- Make comparisons of machines with estimates of component life, preventative maintenance and cost of production.
- Financing packages are flexible to meet your needs.
- Your Cat dealer can evaluate the cost to repair, rebuild and replace your machine, so you can make the right choices.
- Most Cat dealers offer operator training to help you get the most out of your machine investment.
- For more information on Cat products, the variety of dealer services, and industry solutions, visit us at [www.cat.com](http://www.cat.com).



# TS185 Towed Scraper Specifications

## Scraper Bowl

Capacity – Heaped	14.5 m <sup>3</sup>	19 yd <sup>3</sup>
Width of Cut, to Router Bits	3785 mm	12 ft 5 in
Rated Load	21 050 kg	46,400 lb
Capacity Struck	11 m <sup>3</sup>	14.4 yd <sup>3</sup>
Depth of Cut – max	305 mm	12 in
Ground Clearance – max	597 mm	23.5 in
Cutting Edge – thickness	22 mm	0.87 in
Depth of Spread – max	711 mm	28 in
Apron Opening	1600 mm	63 in

## Pull Unit Recommendations

Steel Track-Type Tractor, Single Scraper	D8
Steel Track-Type Tractor, Tandem Scrapers	D9
Rubber Tracked Ag Tractor, Single Scraper	298 - 373 kW (400 - 500 hp)
Rubber Tracked Ag Tractor, Tandem Scrapers	373 - 447 kW (500 - 600 hp)
Rubber Tired Ag Tractor, Single Scraper	298 - 373 kW (400 - 500 hp)
Rubber Tired Ag Tractor, Tandem Scrapers	373 - 447 kW (500 - 600 hp)
Hydraulic Services Required – Single Scraper	3
Hydraulic Services Required – Tandem Scraper	6

## Hydraulics

Front Bowl Cylinder Bore	127 mm	5 in
Front Bowl Cylinder Stroke	508 mm	20 in
Rear Bowl Cylinder Bore	127 mm	5 in
Rear Bowl Cylinder Stroke	203 mm	8 in
Apron Cylinder Bore	102 mm	4 in
Apron Cylinder Stroke	965 mm	38 in
Ejector Cylinder Bore	127 mm	5 in
Ejector Cylinder Stroke	914 mm	36 in

## Weights

Empty Weight	11 748 kg	32,020 lb
Distribution, Empty – Tongue	28%	
Distribution, Empty – Axle	72%	
Distribution, Loaded – Tongue	29%	
Distribution, Loaded – Axle	71%	

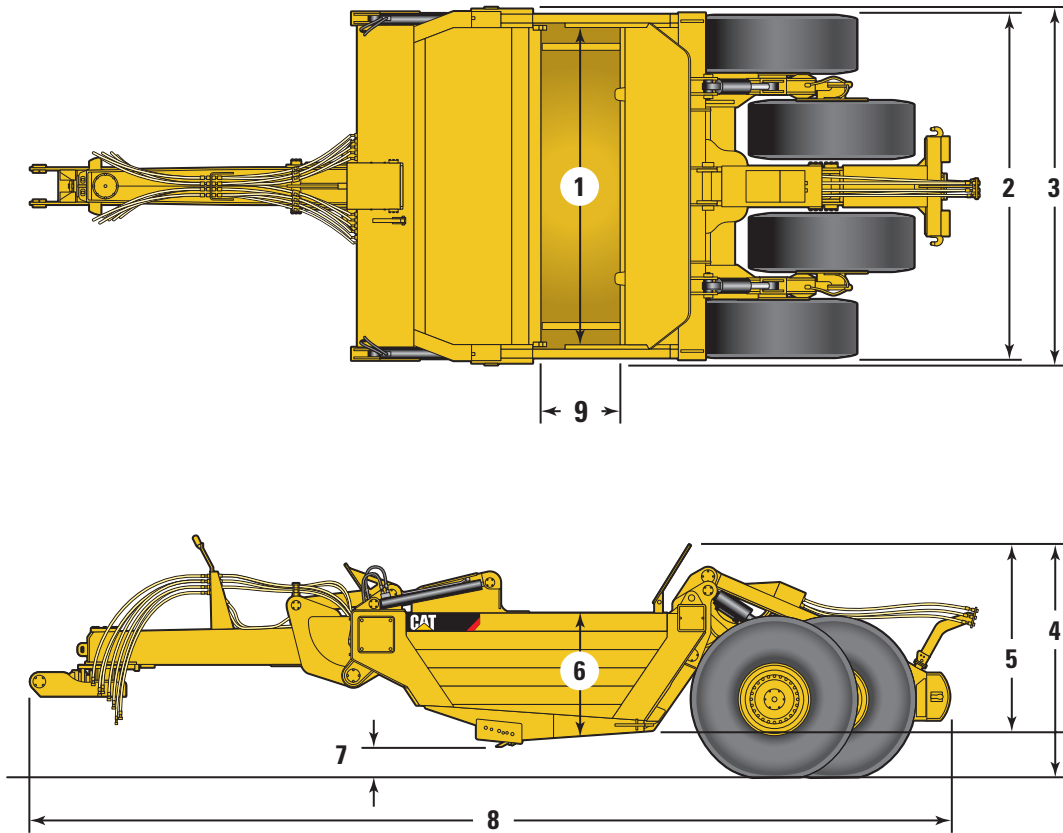
## Brakes and Tires

Brake Type	Dry-Disc
Calipers, Lead – qty	2 per side
Calipers, Trail – qty	2 per side
Tires – qty	4
Tire – Standard	23.5R25
Tire – Optional	26.5R25

# TS185 Towed Scraper Specifications

## Dimensions

All dimensions are approximate.



	mm	in
1 Width – Inside of Bowl	3632	143
2 Width – Outside Rear Tires	3835	151
3 Width – Outside Bowl	3988	157
4 Height – Overall Shipping	2515	99
5 Height – Floor to Top of Ejector	1930	76
6 Height – Sidewall	1219	48
7 Height – Ground to Cutting Edge – Maximum	687	27
8 Length – Maximum	9119	359
9 Length – Floor	1219	48

## TS185 Standard Equipment

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

### BOWL

Capacity, heaped, 14.5 m<sup>3</sup> (19 yd<sup>3</sup>)  
Capacity, struck, 11 m<sup>3</sup> (14.4 yd<sup>3</sup>)  
Center Lift System  
Cutting Edges, Reversible  
Router Bits  
UHMW Plastic Alignment Guides  
Ejector Roller System  
Variable Cutting Angle  
Apron Lock Mechanism

### HITCH AND TONGUE

Hitch Pin, 89 mm (3.5 in) diameter  
Hitch platform  
Integrated stop blocks  
Rear hitch countersunk in push block for tandem operation (Lead)  
Literature Storage Container

### HYDRAULICS

Cat XT™-3 ES Hose  
Hydraulic connections for tandem operation (Lead Scraper)  
Manual Lowering Valve  
ORFS Fittings  
Poppet-style Fittings, 19 mm (0.75 in)

### WHEELS AND TIRES

Braking System (hydraulic)  
Caliper Disc (1 per wheel)  
Walking-Beam Suspension  
23.5R25 Radial Tires (4)  
Five-Piece Rim  
Walking-Beam Transport Locks

### STRUCTURES

Push Block  
Rear Tow Hooks

## TS185 Optional Equipment

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

### HYDRAULICS

Quick-Connect Fittings  
Poppet-style fittings, 13 mm (0.5 in)  
Threaded, flat-face connectors

### WHEELS AND TIRES

Spare Rim  
26.5R25 Radial Tires (4)

# TS185 Towed Scraper

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

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