

# Product Specifications For 797F



## Weights - Approximate

|                                   |                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Nominal Rated Payload</b>      | 363 t                                                                                                                    |
| <b>Rated Gross Machine Weight</b> | 623690 kg                                                                                                                |
| <b>Chassis Weight</b>             | 215217 kg                                                                                                                |
| <b>Body Weight</b>                | 43000 kg                                                                                                                 |
| <b>Note (1)</b>                   | Consult your tire manufacturer for maximum tire load                                                                     |
| <b>Note (2)</b>                   | Chassis weight with full fuel and fluids, standard & mandatory attachments, hoist, body mounting group, rims, and tires. |
| <b>Note (4)</b>                   | Tier 4 Chassis Weight: 486263 lb (220565 kg)                                                                             |

## Engine

|                                |                                                                                                                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gross Power - SAE J1995</b> | 2983 kW                                                                                                                                                                             |
| <b>Engine Model</b>            | Cat® C175-20                                                                                                                                                                        |
| <b>Net Power - SAE J1349</b>   | 2828 kW                                                                                                                                                                             |
| <b>Rated Speed</b>             | 1750 r/min                                                                                                                                                                          |
| <b>Emissions</b>               | U.S. EPA Compliant. Where applicable, the Cat C175-20 engine is compliant with U.S. EPA emission standards. Tier 4 engine option available to meet Tier 4 Final emission standards. |
| <b>Bore</b>                    | 175 mm                                                                                                                                                                              |
| <b>Stroke</b>                  | 220 mm                                                                                                                                                                              |

|                     |                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Displacement</b> | 106 l                                                                                                                                           |
| <b>Note (1)</b>     | Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator. |
| <b>Note (2)</b>     | U.S. EPA Tier 4 Final available for applicable markets.                                                                                         |
| <b>Note (3)</b>     | High Altitude Low Maintenance Ratio Engine Configuration (4x4) option available.                                                                |

## Body Hoists

|                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <b>Type</b>                         | Twin, two-stage hydraulic cylinders with snubbing valve. |
| <b>Pump Flow - High Idle</b>        | 1140 L/min                                               |
| <b>Relief Valve Setting - Raise</b> | 24200 kPa                                                |
| <b>Body Raise Time - High Idle</b>  | 25 s                                                     |
| <b>Body Lower Time - Float</b>      | 18 s                                                     |
| <b>Body Power Down- High Idle</b>   | 18 s                                                     |

## Suspension

|                                          |                                                                                                                     |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Type</b>                              | Self-contained nitrogen/oil cylinders, rear strut pin-to-pin mounting, top & bottom double shear clevis attachments |
| <b>Effective Cylinder Stroke - Front</b> | 99.1 mm                                                                                                             |
| <b>Effective Cylinder Stroke - Rear</b>  | 93.2 mm                                                                                                             |
| <b>Rear axle - Oscillation</b>           | ±3.96 degrees                                                                                                       |

## Service Refill Capacities

|                  |        |
|------------------|--------|
| <b>Fuel Tank</b> | 3785 l |
|------------------|--------|

|                                                              |                                                       |
|--------------------------------------------------------------|-------------------------------------------------------|
| <b>Fuel Tank (Tier 4)</b>                                    | 4542 l                                                |
| <b>Diesel Exhaust Fluid Tank</b>                             | 375 l                                                 |
| <b>Cooling System</b>                                        | 1160 l                                                |
| <b>Crankcase</b>                                             | 390 l                                                 |
| <b>Front Wheels - Each</b>                                   | 61 l                                                  |
| <b>Differentials</b>                                         | 1250 l                                                |
| <b>Steering Tank</b>                                         | 254 l                                                 |
| <b>Steering System - Including Tank</b>                      | 360 l                                                 |
| <b>Brake/Hoist Tank</b>                                      | 770 l                                                 |
| <b>Brake Hoist System - Includes Tank</b>                    | 1850 l                                                |
| <b>Torque Converter Sump</b>                                 | 303 l                                                 |
| <b>Torque Converter/Transmission System - Including Sump</b> | 629 l                                                 |
| <b>Note (1)</b>                                              | DEF Tank only available for EPA Tier 4 engine option. |

## Weight Distributions - Approximate

|                            |                                               |
|----------------------------|-----------------------------------------------|
| <b>Front Axle - Empty</b>  | 47.20%                                        |
| <b>Rear Axle - Empty</b>   | 52.80%                                        |
| <b>Front Axle - Loaded</b> | 33.30%                                        |
| <b>Rear Axle - Loaded</b>  | 66.70%                                        |
| <b>Note</b>                | Weight distributions optimized with Cat body. |

# Final Drives

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Type                  | Double reduction, planetary with full floating axles. |
| Differential Ratio    | 1.276:1                                               |
| Planetary Ratio       | 16.67:1                                               |
| Total Reduction Ratio | 21.26:1                                               |
| Note                  | Double reduction, planetary with full floating axles. |

# Tires

|          |                                                                                                                                                       |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tires    | 59/80 R63                                                                                                                                             |
| Rims     | 44 x 63                                                                                                                                               |
| Note     | Quick Change Rims optional.                                                                                                                           |
| Note (1) | Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and TKPH (TMPH) capabilities. |

# Braking System

|                                    |                                                                           |
|------------------------------------|---------------------------------------------------------------------------|
| Service Brakes                     | Service Brakes: Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated |
| Front Wet Disc Brake Surface Area  | 132 259 cm²                                                               |
| Rear - Wet Disc Brake Surface Area | 198 388 cm²                                                               |
| Standards                          | Service and Secondary: ISO 3450:2011                                      |
| Parking Brake                      | Four-corner, Multi-disc, Spring Applied, Hydraulically Released           |
| Load Brake                         | Rear service brakes                                                       |

**Note**

Anti-Lock Brake System (ABS) optional with CMD package

## Capacity - HP Body - 100% Fill Factor

|               |                                          |
|---------------|------------------------------------------|
| <b>Struck</b> | 225 yd <sup>3</sup> / 172 m <sup>3</sup> |
|---------------|------------------------------------------|

|                          |                                          |
|--------------------------|------------------------------------------|
| <b>Heaped (SAE 2:1)*</b> | 330 yd <sup>3</sup> / 252 m <sup>3</sup> |
|--------------------------|------------------------------------------|

|                 |                                                         |
|-----------------|---------------------------------------------------------|
| <b>Note (1)</b> | Consult your local Cat dealer for body recommendations. |
|-----------------|---------------------------------------------------------|

## Cab

|                         |                                      |
|-------------------------|--------------------------------------|
| <b>Air Conditioning</b> | HFC - 134A refrigerant: 24,300 Btu/h |
|-------------------------|--------------------------------------|

|                           |             |
|---------------------------|-------------|
| <b>Heater / Defroster</b> | 38900 Btu/h |
|---------------------------|-------------|

|             |                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------|
| <b>Note</b> | Ambient capabilities down to -30C (-22F) for heater/defroster and up to 50C (122F) for air conditioning. |
|-------------|----------------------------------------------------------------------------------------------------------|

|                       |                                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------------|
| <b>FOPS Standards</b> | FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II criteria and ISO 13459:2012 Level II |
|-----------------------|---------------------------------------------------------------------------------------------------------------|

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| <b>ROPS Standards (2)</b> | ROPS (Rollover Protective Structure) meets ISO 3471:2008 criteria and ISO 13459:2012 |
|---------------------------|--------------------------------------------------------------------------------------|

## Steering

|                       |      |
|-----------------------|------|
| <b>Steering Angle</b> | 40 ° |
|-----------------------|------|

|                           |               |
|---------------------------|---------------|
| <b>Steering Standards</b> | ISO 5010:2019 |
|---------------------------|---------------|

|                                 |        |
|---------------------------------|--------|
| <b>Turning Diameter - Front</b> | 37.4 m |
|---------------------------------|--------|

|             |                                  |
|-------------|----------------------------------|
| <b>Note</b> | Turning Diameter (ISO 7457:2009) |
|-------------|----------------------------------|

## Transmission

|                    |           |
|--------------------|-----------|
| <b>Forward - 1</b> | 10.7 km/h |
|--------------------|-----------|

|                    |           |
|--------------------|-----------|
| <b>Forward - 2</b> | 14.4 km/h |
|--------------------|-----------|

|                    |           |
|--------------------|-----------|
| Forward - 3        | 19.3 km/h |
| Forward - 4        | 26.1 km/h |
| Forward - 5        | 35 km/h   |
| Forward - 6        | 47.3 km/h |
| Forward - 7        | 63.6 km/h |
| Reverse            | 11.9 km/h |
| Top Speed - Loaded | 63.6 km/h |

## Dimensions

|                                 |          |
|---------------------------------|----------|
| Rear Axle - Clearance - Loaded  | 947 mm   |
| Inside Body Depth - Maximum     | 3363 mm  |
| Overall Height - Body Raised    | 15701 mm |
| Loaded Ground Clearance         | 786 mm   |
| Loading Height - Empty          | 6998 mm  |
| Engine Guard Clearance - Loaded | 1025 mm  |
| Height - Top of ROPS - Empty    | 6526 mm  |
| Front Canopy Height - Empty     | 7709 mm  |
| Overall Body Length             | 14802 mm |
| Inside Body Length              | 9976 mm  |
| Overall Length                  | 15080 mm |

|                                           |         |
|-------------------------------------------|---------|
| <b>Wheel Base</b>                         | 7195 mm |
| <b>Rear Axle - Tail</b>                   | 3944 mm |
| <b>Dump Clearance</b>                     | 2017 mm |
| <b>Centerline Front Tire Width</b>        | 6534 mm |
| <b>Overall Canopy Width</b>               | 9116 mm |
| <b>Outside Body Width</b>                 | 9755 mm |
| <b>Inside Body Width</b>                  | 8513 mm |
| <b>Centerline of Rear Dual Tire Width</b> | 6233 mm |
| <b>Overall Tire Width</b>                 | 9529 mm |

## Sound

|                            |                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------|
| <b>Sound Standards (2)</b> | Operator sound pressure level, 78 dB(A), is tested to ISO 6394:2008 and ISO 6396:2008 |
|----------------------------|---------------------------------------------------------------------------------------|

## 797F Standard Equipment

### ELECTRICAL

Alarm, back-up  
 Brushless, alternator, 150 ampere  
 Batteries, 12V (2) 93 amp-hour  
 Converter, 12V electrical  
 Electrical system, 24V, 10, 20 and 25 amp  
 Battery charge receptacle  
 Lighting system:
 

- Back-up and hazard lights
- Directional signals (front, rear LED)
- Front stair access/Service deck
- Stop/tail lights (LED)
- Engine compartment
- VIMS, blue light (LED)
- Headlights with lo-hi beam selector

### OPERATOR ENVIRONMENT

Standard cab:

- Standard optimized operator seats
- Suspension trainer seat
- Flip down front visor
- Standard side of cab access

Deluxe cab:

- Heated and ventilated seats
- Suspension trainer seat
- Retractable front visor
- Rear of cab access and standard side of cab access
- Power windows

Deluxe cold weather cab:

- Heated and ventilated seats
- Suspension trainer seat
- Retractable front visor
- Rear of cab access and standard side of cab access
- Power windows
- Heated mirrors



All cab options include the following features:

Air conditioner with automatic climate control

12V DC power supply (3)

Coat hook

Diagnostic connection port

Dome courtesy light

Entertainment radio ready 5 amp converter, speakers and wiring harness

Gauges/Indicators:

- Gauge panel: Transmission fluid temperature; Brake oil temperature; Engine coolant temperature; Fuel level; Torque converter oil temperature

- Electric engine control fault indicator

- Electric hour meter

- Speedometer

- Tachometer

- Transmission gear indicator

- VIMS message center with advisor

Heater/defroster (11 070 kCal/43,930 Btu)

Horn

Cat Detect System

Storage compartments

Hoist, body control (electric)

ROPS cab, insulated/sound suppressed

Seat, operator, air suspension

Seatbelt, operator, three-points, retractable

Seat, trainer, air suspension

Seatbelt, trainer, two-points, retractable

Stairway and walkway access, 600 mm (23.6 in)

Steering wheel, multi tilt, padded, telescopic

Tinted glass

Window, operator, electric powered

Windshield wiper, intermittent control and washer

Cup holder

Mirrors, right and left

## **POWER TRAIN**

C175-20 emits equivalent to Tier 2 emission standards:

- Turbocharging (4)/Air-to-Air Aftercooler (ATAAC)

- Air cleaner with precleaner (4)

- Ground level engine shutdown

- Ether starting aid (automatic)

- Elevated low idle control

- Crankcase protection

- Multi-point oil pressure sensing

- Automatic starter protection

Braking system:

- Park brake integrated with gear selector
- Brake release motor (towing)
- Oil-cooled, multi-disc (front and rear) – service, retarding, parking, secondary
- Automatic Retarder Control, adjustable
- Engine overspeed protection
- Extended life brake disc material

Transmission:

- 7-speed, automatic powershift with electronic controls (ECPC)
- Body-up shift inhibitor
- Controlled throttle shifting
- Directional shift management
- Neutral coast inhibitor
- Neutral start switch
- Downshift/Reverse shift inhibitor
- Individual clutch modulation
- Body-up reverse neutralizer
- Programmable top speed
- Lock-up torque converter

Pre-lubrication/engine

Rear axle continuous lubrication/filtration

## **OTHER STANDARD EQUIPMENT**

Traction Control System

Auto lubrication system

Aux “buddy” dumping quick connect

Aux steering quick connect (towing)

Driveline guard

Fast fill fuel system

Fuel filter with water separator

Ground level VIMS data port

Ground level battery lockout

Ground level transmission lockout

Ground level engine start lockout

Ground level engine shut-down

High-speed crankcase oil change

Reservoirs (3 separate):

- Brake/Hoist, Steering/Fan, Transmission/Converter

Rock ejectors

Supplemental steering (automatic)

Tie-down eyes

Center hitch and tow points (front), tow pin (rear)

Vandalism protection locks

Vital Information Management System (VIMS):

- Includes VIMS Payload Monitor with max payload and speed manager

Hydraulic filters, 1,000 hour

S•O•S<sup>SM</sup> sample ports

Service points, ground level

Sight level gauges for hydraulic/engine oil

## **ANTIFREEZE**

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

## **797F Optional Equipment**

### **OPTIONAL EQUIPMENT**

Cat Detect System

Cabin air precleaner

Throttle lock

Engine delay shutdown timer

Antifreeze/coolant protects to -50° C (-58° F)

Fuel tank (7570 L/2,000 gal)

SL-V grease injectors

Body heat

Rear axle lubrication cooler

External digital payload display

Oil renewal system

Oil renewal system with 3 day tank

Engine coolant and oil heater for cold weather starts

Road Analysis Control (RAC)

Portable fire extinguisher

Torque converter guard

Brake wear indicator gauge

Rims (wedge)

Rim guard