

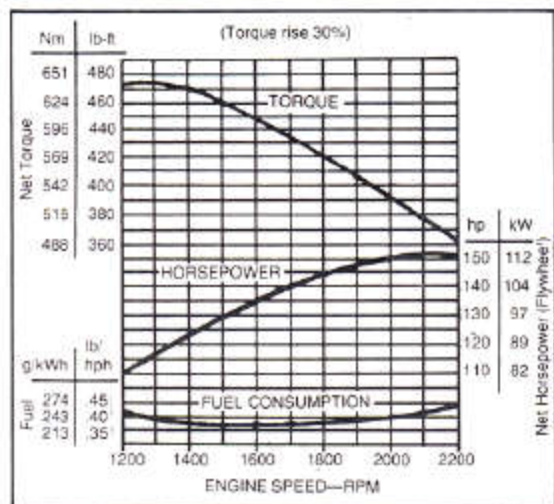


# 644C WITH CARON SOIL COMPACTION SYSTEM\*



Unit shown with Caron Soil Compaction System

## ENGINE PERFORMANCE



Fuel consumption rate based on maximum horsepower at each net torque requirement. Depending on operation variables, a typical duty cycle averages about three-fourths of maximum fuel usage.

\*Note: All specifications for compaction system provided by Caron Compactor Co.

## FEATURES

152 SAE net hp (113 kW)  
John Deere turbocharged diesel

4-wheel drive

Caron 115 in. (2.92 m) × 33 in. (838 mm)  
blade or optional loader bucket

Twin-turbine torque converter with  
power-shift transmission. 4 speeds  
forward, 2 reverse

Power steering. Articulated frame

4-wheel wet-disk power brakes and  
parking brake

Caron compactor wheels with heavy-duty  
field-replaceable caps and adjustable  
cleaner bars with replaceable tips

Inboard planetary final drives

Single-lever loader control  
w/optional automatic return-to-  
dig and optional boom height  
control

Optional brake-actuated transmission  
disconnect

Optional front-axle hydraulic differential  
lock or NoSPIN front differential

Optional vandal protection

Roll-over protective structure (ROPS)  
w/cab and tinted safety glass. Meets criteria  
of SAE J394, SAE J1040A, and ISO 3471.  
Also meets FOPS (falling object protective  
structure) criteria SAE J231 and ISO 3449.

# 644C WITH CARON COMPACTION SYSTEM SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, specifications are based on a machine equipped with all standard equipment, ROPS cab, full fuel tank, 175 lb. (79 kg) operator, and Caron Soil Compaction System.)

Power (@ 2200 engine rpm):	SAE	DIN
Gross .....	167 hp (125 kW)	
Net .....	152 hp (113 kW)	113 kW

Net engine power is with standard equipment including air cleaner, exhaust system, alternator and cooling fan. Gross power is without cooling fan. Power ratings are at standard conditions per SAE J1349 and DIN 70 020. No derating is required up to 10,000 feet (3050 m) altitude.

**Engine:** John Deere turbocharged and intercooled diesel; vertical 6-cylinder, valve-in-head, 4-stroke cycle.

Bore and stroke .....	4.56×4.75 in. (116×121 mm)
Piston displacement .....	466 cu. in. (7,636 L)
Compression ratio .....	15.5 to 1
Maximum torque @ 1300 rpm .....	472 lb-ft (640 Nm) (65.2 kg-m)
Torque rise .....	30 percent
NACC or AMA (U.S. Tax) horsepower .....	49.9
Lubrication .....	Pressure system w/full-flow filter
Cooling .....	Pressurized w/thermostat and controlled bypass
Fan: w/air conditioner .....	Suction
w/o air conditioner .....	Blower
Air cleaner w/restriction indicator .....	Dry
Electrical system .....	12-volt w/alternator
Batteries (three 12-volt) 25 amps at 80°F (27°C) .....	Reserve capacity: 170 min. ea.
BCI group 31 cold cranking capacity at 0°F (-18°C) .....	.625 amps
Alternator: Standard .....	.42 amps
Optional .....	.62 amps

### Torque Converter:

Type .....	Twin-turbine
Torque multiplication .....	4.92 to 1

**Transmission** ..... Power Shift planetary

### Differentials:

Front and rear .....	Standard
Front hydraulic differential lock .....	Optional
Front NoSPIN .....	Optional

**Drive Axles** ..... Inboard-mounted planetary gears to each wheel. Front axle fixed. Rear axle oscillates 22-degree total. 15.6 in. (396 mm) vertical travel at center of wheel.

### Brakes:

**Service** ..... Power-actuated, 4-wheel, inboard-mounted, wet-disk. Foot-operated by either pedal. Left pedal also disconnects transmission.

**Parking** ..... 10×3-in. (254×76 mm) expanding shoe on transmission output shaft, foot-operated. Includes transmission disconnect. Warning light on instrument panel. Warning buzzer.

**Steering** ..... Full power steering. Frame articulated 80 degrees by two hydraulic cylinders. Turning radius measured to center line of outside wheel is 16 ft. 9 in. (5.10 m).

<b>Cylinder Size:</b> Stroke .....	17.24 in. (438 mm)
Bore .....	3.5 in. ( 89 mm)
Rod diameter .....	1.75 in. ( 44 mm)

### Hydraulic Systems:

**Loader functions** ..... Independent engine-driven gear pump delivers 58.0 gpm (3.66 L/s) at 600 psi (4137 kPa) (42.2 kg/cm<sup>2</sup>) and 2200 engine rpm. 2625 psi (18 099 kPa) (184.6 kg/cm<sup>2</sup>) relief-valve pressure setting.

**Control** ..... Single-lever; dual hydraulic valve. Optional triple hydraulic valve for fork or multipurpose bucket.

**Steering and brakes** ..... Engine-driven, 8-piston, variable-displacement pump delivers 28.5 gpm (1.8 L/s) at 1800 engine rpm and 2000 psi (13 790 kPa) (140.6 kg/cm<sup>2</sup>). Maximum system pressure is 2400 psi (16 548 kPa) (168.7 kg/cm<sup>2</sup>).

### Capacities:

	U.S.	Liters
Cooling system .....	47 qt.	44.5
Fuel tank .....	56 gal.	212
Crankcase .....	18 qt.	17
Crankcase, including filter .....	20 qt.	19
Transmission case and filters .....	39 qt.	37
Front differential .....	24 qt.	23
Rear differential .....	24 qt.	23
Loader hydraulic sump .....	84 qt.	80

### Additional Standard Equipment:

Adjustable vinyl seat w/o suspension	Horn
Alternator, 42 amp	Instrument panel warning lights:
Antifreeze	Hydraulic filter bypass
Articulation transport lock	Parking brake
Batteries, low maintenance	Key switch
Cigaret lighter	Lights, driving w/o guard
Differential, standard front and rear	Lights, stop and tail
Engine sideshields	Loader hydraulic system indicator
Fixed drawbar	Muffler
Fuel filter	Precleaner
Gauges:	Pushbutton safety start
Coolant temperature	Rear bottom guard
Electric hourmeter	Reverse warning alarm
Engine oil pressure	ROPS canopy w/seat belt
Fuel	Side and rear counterweights
Transmission oil pressure	Toolbox
Transmission oil temperature	Transistorized voltage regulator
Voltmeter	Turbocharged w/aspirated air cleaner
Hand grips	

### Optional or Special Equipment:

Adjustable deluxe seat	Hydraulic front differential lock
Adjustable deluxe suspension cloth seat for cab	NoSPIN front differential
Adjustable deluxe suspension vinyl seat	Hydraulic tube shield
Alternator, 62 amp	License plate bracket
Automatic boom height control	Lights, flashing and turn signal
Automatic return to dig	Lights, front and rear work
Auxiliary front bottom guard	Lights, driving w/guard
Auxiliary cutting edges	Lockable engine sideshields w/front hood
Auxiliary sideweights	Lockable instrument panel covers
Auxiliary spill guard	Pest covers (for canopy or cab w/o heater)
Bucket teeth	Rear axle disconnect
Emergency steering	Rear canopy shield
Engine coolant heater	For ROPS cab:
Ether starting aid	Mirrors
Floor mat	Radio—AM
Front fenders	Rear wiper and cover
Heater for canopy	Windshield washer
ROPS cab w/heater/defroster, pressurizer, dome light, front wiper and 62-amp alternator	
ROPS cab w/o heater/defroster, pressurizer, but with dome light, front wiper and 42-amp alternator	
ROPS cab w/air conditioner, heater/defroster, pressurizer, dome light, front wiper and 62-amp alternator	
SMV emblem	
Side counterweights	
3-in. (76 mm) seat belt	
Triple hydraulic valve for loader	
Transmission disconnect	

## CARON SOIL COMPACTION SYSTEM\*

**Dimensions**

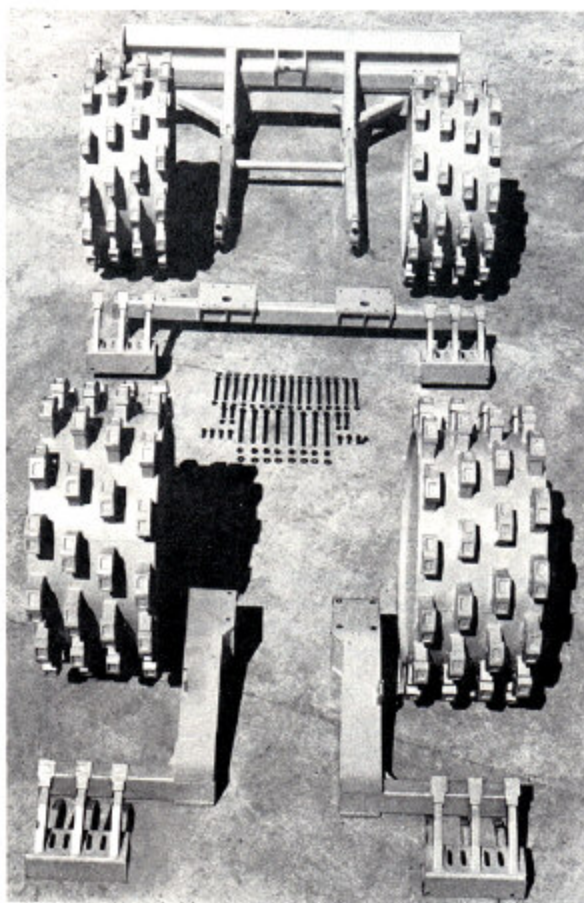
Height	10 ft. 6 in. (3.20 m)
Wheelbase	115 in. (2.92 m)
Tread width	.80 in. (2.03 in)
Width over drums	104 in. (2.64 m)
Space between drums	.56 in. (1.42 m)
Length with dozer blade	20 ft. 6.9 in. (6.27 m)
Length with loader and bucket	22 ft. 6.8 in. (6.8 m)

**Dozer Dimensions**

Height	.33 in. (838 mm)
Width	115 in. (2.92 m)

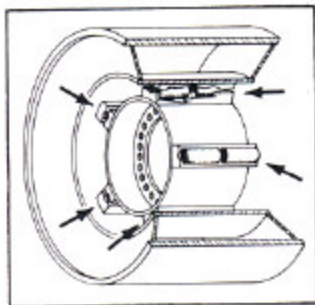
**Weights**

Operating weight	34,582 lb. (15 686 kg)
Ballast capacity per wheel	760 lb. (345 kg)
Wheels (each)	2,530 lb. (1148 kg)
Front cleaner support	668 lb. (303 kg)
Rear cleaner support (each)	363 lb. (165 kg)
Cleaner assembly (each)	188 lb. (85 kg)
Dozer	2,528 lb. (1147 kg)
Dozer cylinder stop	.56 lb. (25 kg)

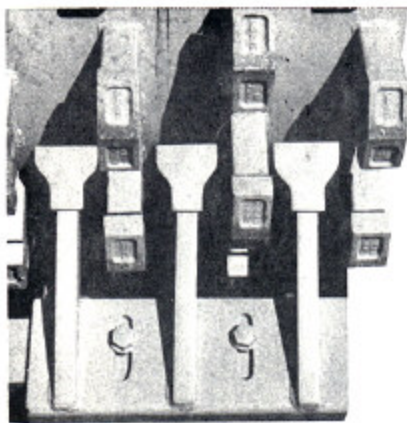


\*Specs by Caron Compactor Co.

## CARON SOIL COMPACTION SYSTEM\* SPECIAL FEATURES

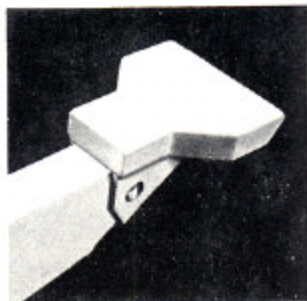


**Rub-R-Ride shock absorbers.** Cushion machine and operator against shock, vibration, and fatigue. Prolong component life.



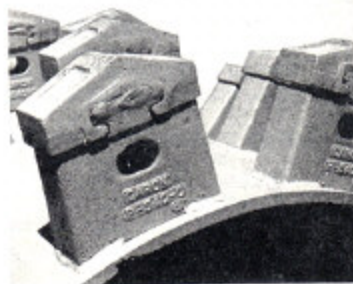
**Adjustable for wear.** As cleaner tips wear, loosen cleaner assembly bolts and slide cleaner inward toward drum to close up wear gaps.

Open areas between cleaner tips and tamper feet minimize material buildup—thereby reducing friction, drag, and excessive fuel consumption.



**Replaceable wear tips.** Hardened alloy-steel wear tips lock into place with flex pins for easy-off, easy-on replacement.

Narrow width of cleaner system allows machine to work close to walls and abutments.



**New tamper foot design—heavy duty field-replaceable caps.** Tamper caps of hardened alloy steel slide into position from outside of wheel, and require only one weld on the outside. This eliminates the need to crawl under machine or between wheel and machine.

Worn caps are easy to replace. Just remove welds and add new caps. No frozen bolts or pins to contend with.

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