

ENGINE

Model	Case Family IV, 667TA/EBD Tier III Certified
Type	4-stroke, turbocharged and air-to-air cooled
Cylinders	6
Bore/Stroke	4.09 in x 5.20 in (104 x 132 mm)
Displacement	411 in ³ (6.7 L)
Fuel injection	Electronic
Fuel	#2 Diesel
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel cooler	
Air filter	Dry type element w/warning restriction indicator
Mid-mount cooling module	External independant mounted coolers
Fan – Hydraulic drive	
Style	8 blade puller
Diameter	32 in (813 mm)
Water pump	Integral
Engine oil	
Pump	Deep sump plate cooler with pressurized under- piston nozzles
Pump operating angles	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow, spin-on cartridge
Engine speeds (rpm)	
Rated speed, full load	2000
Horsepower – Peak	
Max Power Range	
Gross	227 (169 kW) @ 2000 rpm
Net	213 (159 kW) @ 2000 rpm
Standard Power Range	
Gross	210 (157 kW) @ 1800 rpm
Net	198 (148 kW) @ 1800 rpm
Economy Power Range	
Gross	190 (142 kW) @ 1500 rpm
Net	181 (135 kW) @ 1500 rpm

NOTE: Gross horsepower and torque per SAE J1995.
Net horsepower and torque per SAE J1349.

ENGINE (CONTD.)

Torque – Peak	
Max Power Range	
Gross	739 lb-ft (1002 N-m)@ 1400 rpm
Net	712 lb-ft (966 N-m)@ 1400 rpm
Standard Power Range	
Gross	724 lb-ft (982 N-m)@ 1400 rpm
Net	701 lb-ft (950 N-m)@ 1300 rpm
Economy Power Range	
Gross	712 lb-ft (966 N-m)@ 1200 rpm
Net	693 lb-ft (940 N-m)@ 1200 rpm
Torque rise	
Standard power @ 2000 rpm	32.2%

DRIVETRAIN

Transmission	4F/3R Proportional w/Electronic Control Module torque sensing autoshift/manual shift and modulation	
Gears	Helical cut	
Gear ratios	Forward	Reverse
1st	3.754	3.551
2nd	2.089	1.981
3rd	1.072	1.017
4th	0.636	NA
Torque converter	Stall ratio 2.28:1	
Differential	Limited slip w/45% transfer on front and rear axles	
Rear axle oscillation	24° total	
Front and rear axle		
Differential ratio	4.11	
Planetary ratio	6.00	
Final axle ratio	24.67	
Planetaries	Outboard	
Service brakes	Hydraulically actuated, maintenance-free, multiple wet disc w/accumulator to all four wheels	
Brake surface area	592 in ² per hub (0.38 m ²)	
Parking brakes	Spring-applied hydraulic release disc on transmission output shaft	
Travel speeds – mph (km/h) w/23.5-25 L3 tires	Forward	Reverse
1st	4.4 (7.1)	4.9 (7.9)
2nd	7.8 (12.6)	8.6 (13.8)
3rd	14.5 (23.3)	15.7 (25.3)
4th	23.0 (37.0)	NA

NOTE: Travel speeds at full engine throttle.

ELECTRICAL

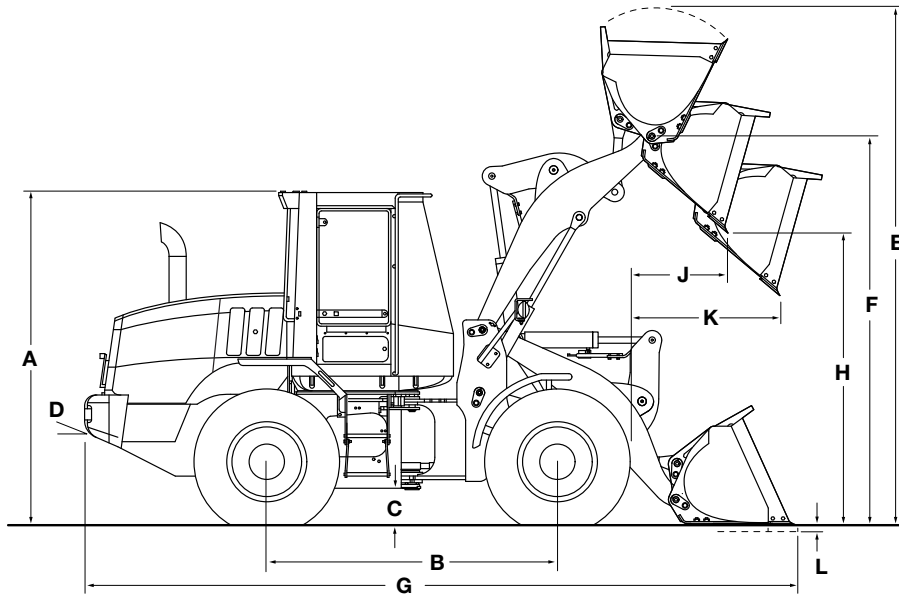
Voltage	24 Volts, negative ground
Alternator	70 amp
Batteries	(2) 12 volt

HYDRAULICS

Pump (steering/implement)	Closed centered pressure/flow compensated
Variable displacement	3.84 in ³ /rev 31.6 gpm @ 2000 rpm @ 3600 psi (119.6 L/min @ 2000 rpm @ 24 821 kPa)
Implement pump	Closed centered pressure/flow compensated
Variable displacement	3.84 in ³ /rev 31.6 gpm @ 2000 rpm @ 3600 psi (120 L/min @ 2000 rpm @ 24 821 kPa)
Loader control valve	Closed-center, sectional 2, 3 or 4-spool with pilot control for lift, tilt and auxiliary hydraulics, electromagnetic detents in float, raise and rollback
Loader auxiliary steering	Hydraulic orbital center-pivot articulating w/on-demand oil flow
High pressure standby	3600 psi (24 821 kPa)
Filtration	10-micron, full flow replaceable cartridges on return line, condition indicator light for filter

CYLINDERS

Lift cylinder	
Bore diameter	6.0 in (152 mm)
Rod diameter	3.5 in (89 mm)
Stroke	31.75 in (806 mm)
Dump cylinder	
Bore diameter	6.5 in (165.1 mm)
Rod diameter	3.5 in (89 mm)
Stroke	23.61 in (599.6 mm)



DIMENSIONS

A. Height to top of ROPS cab	135.8 in (3450 mm)
B. Wheelbase	131.5 in (3340 mm)
C. Ground clearance	16.4 in (415.8 mm)
D. Angle of departure	33°
Width –	
Overall* w/o bucket	113.6 in (2.89 m)
Centerline tread	87.8 in (2.23 m)
Turning radius* – outside	237.5 in (6.03 m)
Turning angle –	
From center	40°
Total angle	80°
Rear axle oscillation, total	24°

NOTE: *Dimensions taken with 23.5-25 XHATL tires. Additional dimensions on pages 3 and 4.

WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
Base counterweight	-1,499 lb (-680 kg)	-3,608 lb (-1637 kg)	-3,045 lb (-1381 kg)
L2BIAS tires	-1,116 lb (-506 kg)	-895 lb (-406 kg)	-790 lb (-358 kg)
L3BIAS tires	-480 lb (-218 kg)	-385 lb (-175 kg)	-340 lb (-154 kg)
ROPS Canopy	-295 lb (-134 kg)	-339 lb (-154 kg)	-314 lb (-142 kg)

NOTE: **Unit equipped with Z-Bar loader arms, 4.25 yd³ (3.2 m³) general purpose pin on bucket w/bolt-on edge, 23.5-25 XHATL tires, ROPS cab with heater/AC, full counterweight, heavy-duty batteries, front and rear fenders, full fuel and 175 lb (79 kg) operator. Adjust select options from rated weight.

PERFORMANCE DATA

821E Z-Bar	4.50 yd ³ (3.4 m ³)	4.25 yd ³ (3.2 m ³)
	Bucket w/Bolt-on Edge	Bucket w/Bolt-on Edge
SAE bucket capacity – struck	3.78 yd ³ (2.89 m ³)	3.54 yd ³ (2.71 m ³)
Heaped	4.43 yd ³ (3.39 m ³)	4.15 yd ³ (3.17 m ³)
Bucket width – outside	115.3 in (2.93 m)	115.3 in (2.93 m)
Bucket weight	3,508 lb (1591 kg)	3,442 lb (1561 kg)
E. Operating height – fully raised w/spillguard	217.7 in (5.53 m)	216.4 in (5.50 m)
F. Hinge pin height – fully raised	162.3 in (4.12 m)	162.3 in (4.12 m)
G. Overall length – bucket level on ground	310.8 in (7.89 m)	309.4 in (7.86 m)
Dump angle – fully raised	55°	55°
H. Dump height – fully raised, 45° dump	116.6 in (2.96 m)	117.5 in (2.98 m)
J. Bucket reach – fully raised, 45° dump	44.6 in (1.13 m)	43.6 in (1.11 m)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	67.7 in (1.72 m)	67.0 in (1.70 m)
Operating load – ISO	13,555 lb (6148 kg)	13,674 lb (6202 kg)
Maximum material density – ISO	3,057 lb/yd ³ (1814 kg/m ³)	3,298 lb/yd ³ (1957 kg/m ³)
Tipping load – ISO		
Straight	31,376 lb (14 232 kg)	31,639 lb (14 351 kg)
40° turn	27,110 lb (12 297 kg)	27,348 lb (12 405 kg)
Lift capacity –		
Full height	20,204 lb (9164 kg)	20,275 lb (9196 kg)
Maximum reach	27,571 lb (12 506 kg)	27,658 lb (12 545 kg)
Ground	36,608 lb (16 605 kg)	36,864 lb (16 721 kg)
Breakout force w/tilt cylinder	34,416 lb (15 611 kg)	35,408 lb (16 061 kg)
Maximum rollback –		
Ground	41°	41°
Carry position	44°	44°
@ Maximum reach	54°	54°
@ Full height	59°	59°
L. Dig depth	2.9 in (75 mm)	2.9 in (75 mm)
Maximum grading angle w/bucket – back dragging	60°	60°
Loader clearance circle	519.9 in (13.206 m)	519.1 in (13.186 m)

821E XR	4.5 yd ³ GP (3.4 m ³)	4.25 yd ³ GP (3.2 m ³)	4.25 yd ³ GP (3.2 m ³)
	Bucket w/Bolt-on Edge	Bucket w/Bolt-on Edge	Bucket w/Teeth & Segments
E. Operating height – fully raised w/spillguard	235.1 in (5971 mm)	233.7 in (5937 mm)	233.7 in (5937 mm)
F. Hinge pin height – fully raised	179.7 in (4564 mm)	179.7 in (4564 mm)	179.7 in (4564 mm)
G. Overall length – bucket level on ground	329.9 in (8380 mm)	328.6 in (8345 mm)	333.9 in (8480 mm)
Dump angle – fully raised	49°	49°	49°
H. Dump height – fully raised, 45° dump	134.0 in (3402 mm)	134.8 in (3425 mm)	131.4 in (3338 mm)
J. Bucket reach – fully raised, 45° dump	49.0 in (1246 mm)	48.0 in (1219 mm)	52.1 in (1323 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	84.9 in (2156 mm)	84.2 in (2139 mm)	86.9 in (2206 mm)
Operating load – ISO	10,601 lb (4809 kg)	10,698 lb (4852 kg)	10,622 lb (4818 kg)
Maximum material density – ISO	2,391 lb/yd ³ (1419 kg/m ³)	2,580 lb/yd ³ (1531 kg/m ³)	2,562 lb/yd ³ (1520 kg/m ³)
Tipping load – ISO			
Straight	24,783 lb (11 241 kg)	24,996 lb (11 338 kg)	24,844 lb (11 269 kg)
40° turn	21,203 lb (9617 kg)	21,396 lb (9705 kg)	21,244 lb (9636 kg)
Lift capacity –			
Full height	18,558 lb (8418 kg)	18,627 lb (8449 kg)	18,507 lb (8395 kg)
Maximum reach	22,858 lb (10 368 kg)	22,945 lb (10 408 kg)	22,821 lb (10 352 kg)
Ground	26,334 lb (11 945 kg)	26,570 lb (12 052 kg)	26,434 lb (11 990 kg)
Breakout force w/tilt cylinder	34,956 lb (15 856 kg)	35,962 lb (16 312 kg)	32,479 lb (14 732 kg)
Loader clearance circle	539.8 in (13 710 mm)	538.8 in (13 686 mm)	546.7 in (13 885 mm)

NOTE: Performance data unit equipped with 23.5R25 XHATL tires, ROPS cab w/heater and A/C, full counterweight, standard batteries, front and rear fenders, full fuel and 175 lb (79 kg) operator. Specifications per SAE J732, J1234, J695, J742 and J818.

PERFORMANCE DATA

821E Z-Bar	4.25 yd ³ (3.2 m ³)	3.5 yd ³ (2.6 m ³)	3.5 yd ³ (2.6 m ³)
	Bucket w/Teeth	Bucket w/Bolt-on Edge	Bucket w/Teeth
SAE bucket capacity – struck	3.54 yd ³ (2.71 m ³)	2.90 yd ³ (2.22 m ³)	2.90 yd ³ (2.22 m ³)
Heaped	4.15 yd ³ (3.17 m ³)	3.44 yd ³ (2.63 m ³)	3.44 yd ³ (2.63 m ³)
Bucket width – outside	120.0 in (3.05 m)	115.3 in (2.93 m)	120.0 in (3.05 m)
Bucket weight	3,560 lb (1615 kg)	3,107 lb (1410 kg)	3,225 lb (1463 kg)
E. Operating height – fully raised w/spillguard	216.4 in (5.50 m)	210.1 in (5.34 m)	210.1 in (5.34 m)
F. Hinge pin height – fully raised	162.3 in (4.12 m)	162.3 in (4.12 m)	162.3 in (4.12 m)
G. Overall length – bucket level on ground	314.7 in (7.99 m)	303.1 in (7.70 m)	308.4 in (7.83 m)
Dump angle – fully raised	55°	55°	55°
H. Dump height – fully raised, 45° dump	114.1 in (2.90 m)	121.5 in (3.09 m)	118.1 in (3.00 m)
J. Bucket reach – fully raised, 45° dump	47.6 in (1.21 m)	38.8 in (.98 m)	42.8 in (1.09 m)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	69.5 in (1.76 m)	64.0 in (1.63 m)	66.6 in (1.69 m)
Operating load – ISO	13,595 lb (6167 kg)	13,932 lb (6320 kg)	13,856 lb (6285 kg)
Maximum material density – ISO	3,279 lb/yd ³ (1946 kg/m ³)	4,050 lb/yd ³ (2403 kg/m ³)	4,028 lb/yd ³ (2390 kg/m ³)
Tipping load – ISO			
Straight	31,482 lb (14 280 kg)	32,178 lb (14 596 kg)	32,025 lb (14 526 kg)
40° turn	27,190 lb (12 333 kg)	27,864 lb (12 639 kg)	27,711 lb (12 570 kg)
Lift capacity –			
Full height	20,155 lb (9142 kg)	20,615 lb (9351 kg)	20,495 lb (9296 kg)
Maximum reach	27,536 lb (12 490 kg)	28,014 lb (12 707 kg)	27,893 lb (12 652 kg)
Ground	36,731 lb (16 661 kg)	37,388 lb (16 959 kg)	37,257 lb (16 899 kg)
Breakout force w/tilt cylinder	31,977 lb (14 505 kg)	40,738 lb (18 479 kg)	36,332 lb (16 480 kg)
Maximum rollback –			
Ground	41°	41°	41°
Carry position	44°	44°	44°
@ Maximum reach	54°	54°	54°
@ Full height	59°	59°	59°
L. Dig depth	2.9 in (75 mm)	2.9 in (74 mm)	2.9 in (74 mm)
Maximum grading angle w/bucket – back dragging	61°	59°	59°
Loader clearance circle	526.5 in (13.374 m)	515.6 in (13.10 m)	522.9 in (13.28 m)

821E XR	3.5 yd ³ GP (2.63 m ³)	3.5 yd ³ GP (2.63 m ³)
	Bucket w/Bolt-on Edge	Bucket w/Teeth & Segments
E. Operating height – fully raised w/spillguard	227.4 in (5777 mm)	227.4 in (5777 mm)
F. Hinge pin height – fully raised	179.7 in (4564 mm)	179.7 in (4564 mm)
G. Overall length – bucket level on ground	322.3 in (8186 mm)	327.6 in (8320 mm)
Dump angle – fully raised	49°	49°
H. Dump height – fully raised, 45° dump	138.9 in (3527 mm)	135.5 in (3441 mm)
J. Bucket reach – fully raised, 45° dump	43.2 in (1097 mm)	47.3 in (1200 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	80.9 in (2055 mm)	83.7 in (2126 mm)
Operating load – ISO	10,934 lb (4960 kg)	10,860 lb (4926 kg)
Maximum material density – ISO	3,179 lb/yd ³ (1886 kg/m ³)	3,157 lb/yd ³ (1873 kg/m ³)
Tipping load – ISO		
Straight	25,486 lb (11 560 kg)	25,338 lb (11 493 kg)
40° turn	21,868 lb (9919 kg)	21,721 lb (9852 kg)
Lift capacity –		
Full height	18,964 lb (8602 kg)	18,845 lb (8548 kg)
Maximum reach	23,302 lb (10 570 kg)	23,180 lb (10 514 kg)
Ground	27,081 lb (12 284 kg)	26,947 lb (12 223 kg)
Breakout force w/tilt cylinder	41,369 lb (18 765 kg)	36,897 lb (16 736 kg)
Loader clearance circle	534.6 in (13 579 mm)	542.3 in (13 776 mm)

INSTRUMENTATION

Electronic Information Center
Displays/Gauges –
Speedometer
Tachometer
Direction selected F/N/R
Transmission modes – Auto shift/Manual shift
Gear position
Engine coolant temperature
Fuel level
Transmission oil temperature
Hydraulic oil temperature
Hourmeter
Work mode
Indicator lights –
Low fuel
Turn signals
High beam lights
Grid heater*
Brake pressure
Master indicator
Auxiliary steering*
Parking brake
Audible alarms –
Caution alarm
Critical alarm
Backup alarm
Horn

NOTE: *If equipped with option.

OPERATOR ENVIRONMENT

ROPS cab w/ heat
Key start
Articulated power steering w/tilt column
Fully adjustable, suspension seat
Foot throttle
Single lever 2-spool loader control w/wrist rest
Cup holder
Coat hook
(1) Interior rearview mirror
2 in (51 mm) retractable seat belt
Storage tray behind seat
Cooled lunch box
Single brake pedal
F/N/R shuttle switch
External rear view mirrors
Lock box
Pressurized air filtering
Anti-glare window strip
Defroster
Side window, partial/fully open
Dome light
Wipers, rear and intermittent front
Windshield washers, front and rear
Rubber floor mat

LOADER

Z-bar loader linkage
Single control for lift and tilt
Positive hold float
Automatic return-to-dig
Automatic height control
Automatic return-to-travel
Brake pedal transmission disconnect
Bucket position indicator on bucket

CYCLE TIME

Raise w/rated bucket load	5.6 sec
Dump w/rated bucket load	1.2 sec
Lower (empty)	
Power down	2.8 sec
Float down	2.2 sec

SERVICE CAPACITIES

Fuel tank	76 gal (288 L)
Hydraulic system	
Total	46.0 gal (174 L)
Reservoir	23.8 gal (90 L)
Transmission	
Service w/filter	10.5 gal (39.7 L)
Front and rear axle	
Front	39.5 qt (37.4 L)
Rear	25.0 qt (23.7 L)
Engine oil w/filter	22 qt (21 L)
Cooling system	10.8 gal (40.9 L)

OPERATING WEIGHTS

Z-Bar

Unit equipped with ROPS cab with heater and A/C, full counterweight, 23.5-25 XHATL tires, wide front and rear fenders, 3.5 yd³ (2.68 m³) general purpose loader bucket, full fuel, 175 lb (79 kg)
operator 37,844 lb (17 166 kg)

XR

Unit equipped with ROPS cab with heater and A/C, full counterweight, 23.5-25 XHATL tires, wide front and rear fenders, 3.5 yd³ (2.68 m³) general purpose loader bucket, full fuel, 175 lb (79 kg)
operator 39,045 lb (17 710 kg)

STANDARD EQUIPMENT

OPERATOR'S ENVIRONMENT

See page 5

ENGINE

Case Family IV 667TA/EBD
Tier III certified
Selectable work modes
 Max power
 Auto power
 Standard power
 Economy power
Turbocharger
Charge air cooling
Automatic fan belt tensioner
Integral engine oil cooling
Fuel filter w/water trap
Dual element air cleaner
70 amp alternator
(2) 700 CCA 12-volt batteries
Liquid-cooled radiator
Non spark-arresting muffler
Mid-mounted cooling module
Common rail electronic fuel injection

OPTIONAL EQUIPMENT

OPERATOR'S COMPARTMENT

Cloth-covered air-suspension seat
Sound Shield noise suppression package
Cab air-conditioning w/heater
Radio
Radio-ready (12 or 24-volt)
Auxiliary power (12-volt)
Cab convenience package
RH steps and platform
Rotating beacon
Second brake pedal
Open ROPS
Joystick steering

LOADER

See page 5

DRIVETRAIN

4-wheel drive
4F/3R Selectable autoshift/manual shift transmission
Electronic Control Module – Programmable, computer controlled proportional shifting with programmable gear selection
Onboard diagnostics
Single lever electronic shift control
F/N/R switch in loader control handle
Downshift button
Torque converter
Outboard planetary axles
Limited-slip differentials
Transmission oil cooler
Brake pedal transmission disconnect
Hydraulic wet disc brakes
Spring-applied hydraulic release parking brake
Limp-Home Mode
Lubed-for-life drive shaft

ENGINE

Cold weather package
 Heavy-duty batteries
 Fuel heater
 Hydraulic oil cooler bypass
 Low temperature hydraulic oil
 Grid heater

LOADER

Extended reach XR
Attachment auxiliary hydraulics
Buckets (see page 3 & 4)
Loader coupler systems

HYDRAULICS

Auxiliary hydraulics
Ride Control
Secondary steering
3 or 4-spool loader valves with 2 or 3-lever loader control
Hydraulic reversing fan
Hydraulic cooler

HYDRAULICS

Single lever 2-spool loader control valve
Low-effort steering
Hydraulic driven fan
(8) Diagnostic quick couplers

OTHER

Electric hood lift
Front and rear fenders
Lights –
 (2) Front driving headlights (high/low beam)
 (2) Front flood
 (2) Stop/tail lights and backup light
 (2) Rear flood
 Front and rear turn signal/flash
Standard counterweight
Drawbar hitch
Articulation locking bar
Lift arm locking bar
Lift and tie-down points – front/rear
Backup alarm
Remote drain points

TIRES

23.5 x 25 L3 Bias
23.5 R 25 L2 Radial
23.5 R 25 L3 Radial

OTHER

Special paint
Full coverage fenders
Belly pan
Tool box
Full counterweight - Z-Bar
Temperature controlled fan

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Equipment Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Equipment Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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