

### ENGINE

Model	Case Family IV 445TA/E3 diesel, Tier III certified	
Type	4-stroke, turbocharged	
Cylinders	4	
Bore/Stroke	4.09 in x 5.19 in (104 x 132 mm)	
Displacement	274 in <sup>3</sup> (4.5 L)	
Fuel injection	Direct high pressure common rail (HPCR)	
Fuel	Diesel	
Primary fuel filter	5 micron	
Secondary fuel filter	30 micron w/water trap and indicating lamp	
Air intake	Cross-flow	
Cooling	Liquid	
Engine speeds* (rpm)		
Rated speed, full load	2200	
Low idle	900 - 1000	
High idle, no load	2330 - 2430	
Horsepower		
Gross	97 (72 kW) @ 2200 rpm	
Net	95 (71 kW) @ 2200 rpm	
Maximum torque @ 1400 rpm		
Gross	334 lb-ft (453 N-m)	
Net	326 lb-ft (442 N-m)	
Torque rise at rated speed	45%	

NOTE: \*Engine speeds with standard transmission.  
Meets federal emission regulations.

### ENGINE COOLING

Radiator		
Core type	Square wave	
Core size area	487 in <sup>2</sup> (.315 m <sup>2</sup> )	
Rows of tubes	5	
Fan		
Style	9 blade viscous suction	
Diameter	19.6 in (500 mm)	
Ratio	1.4:1	
Water pump		
Style	Integral	
Engine oil Pump	Deep sump plate cooler with pressurized under-piston nozzles	
Pump operating angle ratings		
Side-to-side	Rated 35°	
Fore and aft	Rated 35°	
Oil filtration	Replaceable, full-flow cartridge	

### TIRES

Front	4WD - 12.5/80 x 16.5, 8PR
Rear	4WD - 21L x 24, 10PR

### POWERTRAIN

Transmission	4-speed synchromesh with hydraulically actuated clutches and electric F/R shuttle control, clutch disconnect buttons on the transmission shifter and loader control lever		
	4WD w/limited slip differential, outboard planetary drive, on-the-go push button activation and 12.5/80 x 18 front tires		
Gear ratios	Forward	Reverse	
1st	5.603	4.643	
2nd	3.431	2.884	
3rd	1.584	1.313	
4th	0.793	0.657	
Torque converter			
Ratio	2.64		
Differential lock	On-the-go push-button activation		
Front 4WD axle			
Differential ratio	2.5		
Planetary hub ratio	6.4		
Total reduction ratio	12.0		
Rear axle			
Differential ratio	2.5		
Planetary hub ratio	6.4		
Total reduction ratio	16.0		

Service brakes  
Individually applied, power assisted, hydraulically actuated, maintenance-free, self-adjusting, inboard mounted, wet disc, 2 per side

Disc area 384 in<sup>2</sup> (.25 m<sup>2</sup>)

Parking brakes  
String applied hydraulic release (SAHR)

Travel speeds - mph (km/h)	1st	2nd	3rd	4th
Forward	4.0 (6.4)	6.3 (10.1)	13.5 (21.8)	25.4 (40.9)
Reverse	4.7 (7.6)	7.5 (12.1)	16.2 (26.1)	30.5 (49.1)

NOTE: Travel speeds at 2310 engine rpm.

### ELECTRICAL

Voltage	12 volts, negative ground	
Alternator	90 amp	
Cold weather grid heater w/dual CCA batteries	12-volt, 850	
Power plugs	(2) 30 amps ea.	

### HYDRAULICS

Pump	Variable displacement axial piston pump, transmission mounted	
Main relief pressure	3100 + 0 - 100 psi @ 40 gpm (214 + 0 - 6 bar @ 151 L/min)	
Filtration	7-micron, full flow replaceable cartridge on return line, condition indicator light for filter	
Oil cooler	Heavy-duty	
Loader flow @ rated engine rpm	Combined functions 40.0 gpm @ 3100 psi (151 L/min @ 214 bar)	
	Individual functions 31.5 gpm @ 3100 psi (119 L/min @ 214 bar)	
Loader control valve	Pressure compensated loader hydraulics for simultaneous lift and bucket operation	
	Hydraulics for simultaneous multifunction operation	
	Sectional valve single lever control for lift, tilt and auxiliary hydraulics, positive hold float and return-to-dig	
Loader auxiliary hydraulics with proportional thumb switch w/detent on loader control handle	0 to 31.5 gpm (0 to 119 L/min)	
Backhoe flow @ rated engine rpm	40 gpm @ 3100 psi (151 L/min @ 214 bar)	

### Pilot Backhoe Controls

Backhoe Control Valve	Pressure compensated backhoe Top 8-spool sectional closed-center with flushing inlet and circuits in parallel	
-----------------------	---	--

### Backhoe auxiliary hydraulics

Uni-directional flow, adjustable variable flow from 0 to 36 gpm (136 L/min)	Control operation Pilot Button on left joystick	
Bi-Directional flow, variable flow from 0 to 38 gpm (144 L/min) @ rated engine rpm	Control operation Dual proportional thumb control on left joystick	

## OPERATOR ENVIRONMENT

ROPS/FOPS canopy
Key start
Hydrostatic steering
Vinyl air suspension seat w/180° swivel
Seat turn around idle
Electronic hand and foot throttles
Ergonomic loader control lever w/push-button activation of differential lock and transmission de-clutch
Backhoe pilot controls
(2) Accessory power plugs (30 amp)
Anti-vandalism covers (canopy only)
Cup holder
Coat hook w/tether strap (cab only)
Interior rearview mirror
3 in (76 mm) retractable seat belt
Storage compartment w/lid
Left side storage tray
+900 lb (408 kg) counterweight
Extendahoe
4WD

## INSTRUMENTATION

Vehicle Control Module w/menu driven options and onboard diagnostics
Cruise control
Foot throttle sensitivity
Cold weather idle settings
Maintenance settings
Gauges
Engine water temperature
Converter oil temperature
Fuel
Tachometer/hourmeter
Voltmeter
Warning lights
Air cleaner restriction
Alternator
A/C high pressure
Cold start
Engine oil pressure
Hydraulic oil filter bypass
Parking brake
Rear axle fluid temperature sensing system
Low fuel
Audible alarms w/diagnostics
Coolant temperature
Engine oil pressure
Parking brake engagement
Shuttle engagement/seat position
Backup alarm
Horn - dual switched front & rear

## TURNING DIAMETER

4WD – engaged
Brakes on                   23 ft 11 in (7.29 m)
Brakes off                   29 ft 8 in (9.08 m)
4WD – disengaged
Brakes on                   22 ft 6 in (6.85 m)
Brakes off                   27 ft 0 in (8.22 m)
NOTE: Turning diameter dimensions curb to curb w/21L x 24 tires and 93 (2.36 m) general purpose bucket.

## OPERATING WEIGHTS

<b>Lightest Configuration</b>
Unit equipped with 4WD, ROPS canopy, vinyl air suspension seat, 93 in (2.36 m) general purpose loader bucket, 24 in (610 mm) Universal backhoe bucket, Extendahoe dipper, 21L x 24 rear tires, 12.5 x 80/18 front tires, single battery, flip over stabilizer pads, 900 lb counterweight, no operator                   14,905 lb (6761 kg)
<b>Heaviest Configuration</b>
Unit equipped with 4WD, ROPS 2 door cab, cloth air suspension seat, 93 in (2.36 m) 4 IN 1® loader bucket, 24 in (610 mm) Universal backhoe bucket, Extendahoe® dipperstick, 21L x 24 rear tires, dual batteries, flip stabilizer pads, 900 lb counterweight, no operator                   18,128 lb (8,223 kg)

<b>Add-on weights</b>
Cab (over canopy)                   +454 lb (206 kg)
Extendahoe®                   +496 lb (225kg)
4WD w/driveshaft guard                   +283 lb (128 kg)

## SERVICE CAPACITIES

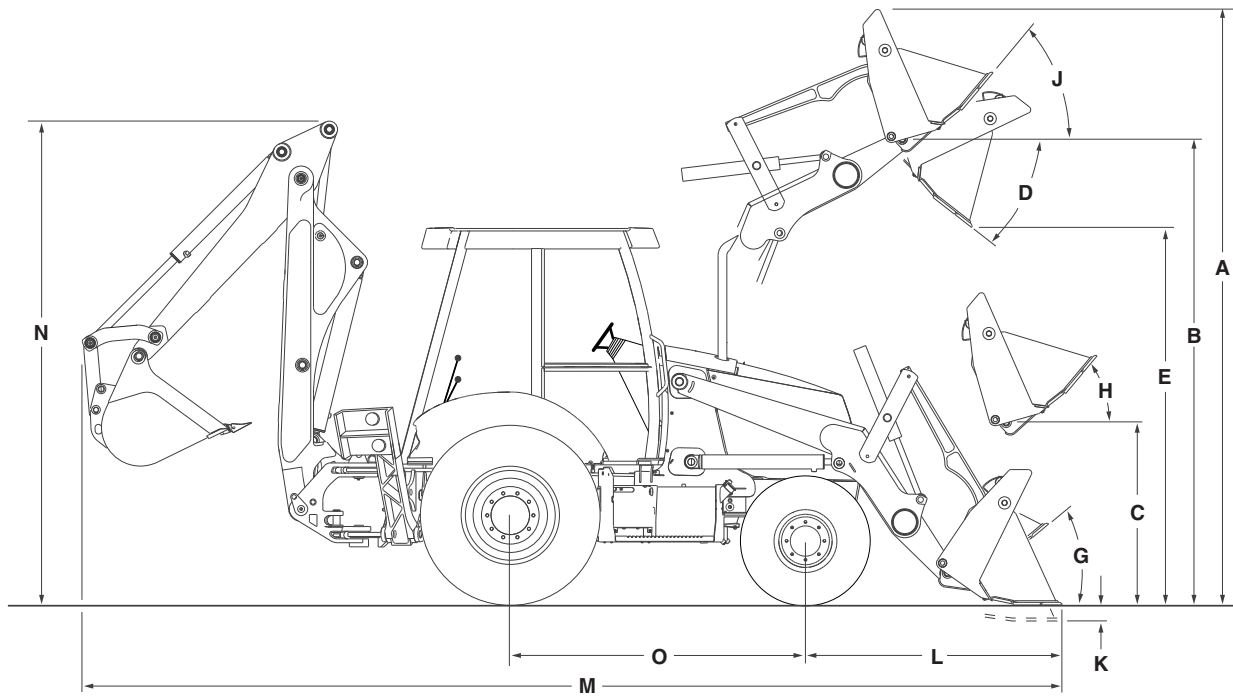
Fuel tank                   42.0 gal (159 L)
Hydraulic system
Total                   29.5 gal (11.5 L)
Total w/Extendahoe®                   31.0 gal (117.2 L)
Reservoir w/filter                   12.5 gal (47.1 L)
Reservoir w/o filter                   12.0 gal (45.2 L)
Transmission
4WD Total system                   20.5 qt (19.4 L)
4WD Front axle
Differential                   6.7 qt (6.3 L)
Planetaries                   .63 qt (.6 L)
Rear axle
Differential and planetaries                   9.7 qt (18.6 L)
Engine oil w/filter                   14.4 qt (13.6 L)
Cooling system
w/heater                   19.0 qt (18.0 L)
w/o heater                   18.3 qt (17.3 L)
Window washer reservoir                   3.5 qt (3.3 L)

## LOADER

Single-lever control for lift and tilt
Positive hold float
Return-to-dig
Automatic self-leveling
In-line, reverse linkage
Dual parallel dump cylinders
Clutch disconnect button on loader control and shift levers
Bucket position indicator
<b>Loader Bucket Sizes</b>
Width      Weight      Struck      Heaped
General Purpose Bucket
93 in      933 lb*      1.07 yd³      1.25 yd³
(2.36 m)      (423 kg)      (0.82 m³)      (0.96 m³)
4 IN 1® Bucket
93 in      1,628 lb      1.0 yd³      1.2 yd³
(2.36 m)      (738 kg)      (0.76 m³)      (0.92 m³)

## BACKHOE

Pilot operated control system
Fingertip stabilizer controls
Thumb operated proportional extendahoe control
One touch idle
Thumb operated proportional auxiliary hydraulics
Infinitely adjustable towers w/wrist wrests
In cab pattern changer
Over-center design
Cast, ductile iron boom, and swing tower
Closed-center hydraulics - Pro Control System
17, 940 lb-ft (24 370 N-m) swing torque
Case attachment coupler
Flip over stabilizer pads
<b>Backhoe Bucket Sizes</b>
Width                   Weight                   Heaped
Universal Buckets
12 in                   290 lb                   3.40 ft³
(305 mm)                   (132 kg)                   (0.10 m³)
16 in                   346 lb                   3.60 ft³
(406 mm)                   (157 kg)                   (0.10 m³)
18 in                   350 lb                   5.30 ft³
(457 mm)                   (159 kg)                   (0.15 m³)
24 in                   413 lb                   7.70 ft³
(610 mm)                   (187 kg)                   (0.22 m³)
30 in                   475 lb                   10.20 ft³
(762 mm)                   (215 kg)                   (0.29 m³)
36 in                   535 lb                   12.70 ft³
(914 mm)                   (243 kg)                   (0.36 m³)
High Capacity Buckets
24 in                   450 lb                   8.50 ft³
(610 mm)                   (204 kg)                   (0.24 m³)
30 in                   517 lb                   10.60 ft³
(762 mm)                   (235 kg)                   (0.30 m³)



## LOADER DIMENSIONS

	General Purpose Bucket*	4 IN 1® Bucket
<b>A.</b> Overall operating height – fully raised	14 ft 4 in (4.36 m)	14 ft 7 in (4.45 m)
Height to –		
<b>B.</b> Bucket hinge pin fully raised	11 ft 6 in (3.51 m)	11 ft 6 in (3.51 m)
<b>C.</b> Bucket hinge pin @ SAE carry	13.1 in (334 mm)	14.6 in (372 mm)
<b>D.</b> Dump angle @ full height	45°	45°
<b>E.</b> Dump clearance @ full height, 45° dump –		
Bucket	9 ft 2 in (2.80 m)	9 ft 3 in (2.83 m)
Clam open	NA	10 ft 0 in (3.06 m)
<b>F.</b> Dump reach @ full height, 45° dump –		
Bucket	30.0 in (763 mm)	27.8 in (707 mm)
Clam open	NA	14.3 in (362 mm)
Bucket rollback –		
<b>G.</b> @ groundline	40°	40°
<b>H.</b> @ SAE carry	45°	45°
<b>J.</b> @ full height	Adjustable	Adjustable
<b>K.</b> Digging depth below grade –		
Bucket flat	1.3 in (33 mm)	2.4 in (61 mm)
<b>L.</b> Reach from front axle centerline – bucket on ground	77.6 in (1.97 m)	75.2 in (1.91 m)
Lift capacity to full height	6,182 lb (2804 kg)	5,514 lb (2501 kg)
Breakout force –		
Lift cylinders	9,164 lbf (40 760 N)	8,904 lbf (39 600 N)
Dump cylinders	9,480 lbf (42 170 N)	10,302 lbf (45 820 N)
Bucket cutting edge width	82 in (2.08 m)/93 in (2.36 m)	82 in (2.08 m)
Maximum grading angle	116°	116°
Maximum clam opening	NA	38.3 in (972 mm)
Moldboard height	NA	36.8 in (934 mm)
Raising time to full height	3.4 sec	3.4 sec
Bucket dumping time	1.5 sec	1.5 sec
Lowering time –		
Power down	2.4 sec	2.4 sec
Return-to-dig	3.2 sec	3.2 sec
Clam –		
Open time	NA	2.3 sec
Close time	NA	3.1 sec

NOTE: Loader dimensions taken with 4WD,  
21L x 24 rear tires and 93 in (2.36 m) general purpose  
bucket \*without bolt-on cutting edge.

## DIMENSIONS

	Extendahoe®	
	Retracted	Extended
<b>M.</b> Overall transport length –		
General purpose bucket	22 ft 10 in (6.95 m)	NA
4 IN 1® bucket	22 ft 8 in (6.92 m)	NA
Overall transport width	7 ft 9 in (2.36 m)	NA
Height –		
To top of canopy	8 ft 11 in (2.71 m)	8 ft 11 in (2.71 m)
To top of cab	8 ft 11 in (2.73 m)	8 ft 11 in (2.73 m)
To top of exhaust stack	8 ft 9 in (2.66 m)	8 ft 9 in (2.66 m)
<b>N.</b> Transport	11 ft 4 in (3.44 m)	NA
Ground clearance at backhoe frame	14.5 in (366 mm)	14.5 in (366 mm)
Angle of departure	20°	20°
Front wheel tread –		
2WD	72.7 in (1.85 m)	72.7 in (1.85 m)
4WD	77.0 in (1.96 m)	77.0 in (1.96 m)
Rear wheel tread	69.6 in (1.77 m)	69.6 in (1.77 m)
Width across front tires		
2WD	88.3 in (2.24 m)	88.3 in (2.24 m)
4WD	89.6 in (2.28 m)	89.6 in (2.28 m)
Width across rear tires	91.8 in (2.33 m)	91.8 in (2.33 m)
<b>O.</b> Wheelbase –		
2WD	84 in (2.13 m)	84 in (2.13 m)
4WD	84.5 in (2.15 m)	84.5 in (2.15 m)

NOTE: Dimensions taken with 21L x 24 rear tires and 12.5/80 x 18 front tires except that data marked 2WD is taken with 14.5/75 x 16.1 front tires.

## CYLINDERS

	Bore Diameter	Rod Diameter	Stroke
<b>Loader</b>			
Lift (2)	3.25 in (82.6 mm)	1.75 in (44.5 mm)	30.2 in (766 mm)
Bucket (2)	3.0 in (76 mm)	1.5 in (38.1 mm)	20.6 in (522 mm)
4 IN 1® clam (2)	3.0 in (76 mm)	1.75 in (44.5 mm)	9.1 in (231 mm)
<b>Backhoe</b>			
Boom	5.25 in (133.4 mm)	2.50 in (63.5mm)	33.2 in (842 mm)
Dipperstick	5.0 in (127 mm)	2.5 in (63 mm)	22.9 in (583 mm)
Bucket	3.5 in (89 mm)	2.5 in (63 mm)	34.3 in (872 mm)
Extendahoe®	3.0 in (76 mm)	1.75 in (44.5 mm)	42.0 in (1.07 m)
Swing (2)	4.0 in (101.6 mm)	2.0 in (50.8 mm)	11.5 in (292 mm)
Stabilizer (2)	4.25 in (108 mm)	2.0 in (50.8 mm)	20.4 in (519 mm)
<b>Steering</b>			
2WD	2.75 in (69.9 mm)	1.5 in (38.1 mm)	6.7 in (170 mm)
4WD	2.48 in (63 mm)	1.5 in (38.1 mm)	9.53 in (242 mm)

## BACKHOE LIFT CAPACITIES

Boom Lift	Distance from swing pivot (m)	Extendahoe®	
		Retracted	Extended
		Backhoe lift capacity – lb (kg)	Backhoe lift capacity – lb (kg)
+16 ft (4.87 m)			12 ft 5 in (3.79) 1,350 (612)
+14 ft (4.27 m)	9 ft 6 in (2.89)	2,350 (1066)	14 ft 7 in (4.45) 1,775 (805)
+12 ft (3.66 m)	11 ft 10 in (3.61)	2,575 (1168)	16 ft 2 in (4.93) 1,850 (839)
+10 ft (3.05 m)	13 ft 4 in (4.06)	2,700 (1225)	17 ft 2 in (5.23) 1,875 (850)
+8 ft (2.44 m)	14 ft 5 in (4.40)	2,650 (1202)	18 ft 0 in (5.49) 1,875 (850)
+6 ft (1.83 m)	15 ft 2 in (4.62)	2,600 (1179)	18 ft 7 in (5.67) 1,875 (850)
+4 ft (1.22 m)	15 ft 6 in (4.72)	2,575 (1168)	18 ft 10 in (5.74) 1,875 (850)
+2 ft (0.61 m)	15 ft 7 in (4.75)	2,525 (1145)	18 ft 11 in (5.77) 1,850 (839)
<b>Ground Level</b>	15 ft 5 in (4.70)	2,425 (1100)	18 ft 10 in (5.74) 1,850 (839)
-2 ft (0.61 m)	15 ft 0 in (4.57)	2,400 (1088)	18 ft 5 in (5.62) 1,800 (816)
-4 ft (1.22 m)	14 ft 2 in (4.32)	2,300 (1043)	17 ft 9 in (5.41) 1,800 (816)
-6 ft (1.83 m)	12 ft 10 in (3.91)	2,300 (1043)	16 ft 9 in (5.11) 1,800 (816)
-8 ft (2.44 m)	11 ft 2 in (3.40)	2,300 (1043)	15 ft 7 in (4.75) 1,800 (816)
-10 ft (3.05 m)	8 ft 7 in (2.62)	2,425 (1099)	13 ft 11 in (4.24) 1,850 (839)
-12 ft (3.66 m)			11 ft 7 in (3.53) 2,025 (918)
-14 ft (4.27 m)			7 ft 11 in (2.41) 2,450 (1111)
<b>Dipper Lift</b>			
+14 ft (4.27 m)			13 ft 4 in (4.06) 2,580 (1170)
+12 ft (3.66 m)	10 ft 7 in (3.23)	4,360 (1978)	14 ft 3 in (4.35) 2,680 (1216)
+10 ft (3.05 m)	11 ft 2 in (3.40)	4,190 (1901)	14 ft 6 in (4.42) 2,700 (1225)
+8 ft (2.44 m)	10 ft 11 in (3.33)	4,160 (1887)	14 ft 5 in (4.40) 2,880 (1306)
+6 ft (1.83 m)	10 ft 2 in (3.10)	4,680 (2123)	13 ft 11 in (4.24) 2,910 (1320)
+4 ft (1.22 m)	8 ft 3 in (2.58)	5,590 (2536)	12 ft 11 in (3.94) 3,050 (1383)

## BACKHOE OPERATIONAL DATA

	Extendahoe®	
	Retracted	Extended
Digging depth –		
Maximum	14 ft 10 in (4.52 m)	18 ft 3 in (5.56 m)
Maximum w/hi-capacity bucket	15 ft 3 in (4.65 m)	18 ft 8 in (5.69 m)
2 ft (610 mm) flat bottom	14 ft 8 in (4.47 m)	18 ft 2 in (5.54 m)
8 ft (2.44 m) flat bottom	13 ft 9 in (4.19 m)	17 ft 6 in (5.33 m)
Overall reach from –		
Rear axle centerline	22 ft 0 in (6.70 m)	25 ft 5 in (7.75 m)
Swing pivot	18 ft 5 in (5.61 m)	21 ft 10 in (6.65 m)
Loading height	11 ft 5 in (3.48 m)	13 ft 3 in (4.04 m)
Loading reach – dipper retracted	8 ft 8 in (2.64 m)	11 ft 6 in (3.50 m)
Swing arc	180°	180°
Bucket rotation –		
#1 position	164°	164°
#2 position	190°	190°
Stabilizer spread – operating	11 ft 1 in (3.38 m)	11 ft 1 in (3.38m)
Digging force –		
Bucket cylinder	12,821 lbf (57 031 N)	12,821 lbf (57 031 N)
Dipper cylinder	7,784 lbf (25 066 N) w/bucket @ 50°	5,635 lbf (25 066 N) w/bucket @ 51°
Leveling angle		
maximum slope that backhoe will make vertical cut	12°	12°

NOTE: Lift capacities apply straight to the rear of prime mover. Equipped with 24 in (610 mm) Universal H.D. trenching bucket and Case coupler except as noted.

## STANDARD EQUIPMENT

### OPERATOR'S COMPARTMENT

See page 2

### ENGINE

Case Family IV 445TA/E3 non EGR turbocharged diesel  
Tier III certified  
Integral crank driven balancer  
Automatic fan belt tensioner  
Integral engine oil cooling  
Primary 5 micron fuel filter  
Secondary 30 micron fuel filter w/water trap  
Dual element air cleaner with integral pre-cleaner  
90 amp alternator  
(2) 850 CCA 12-volt batteries  
Grid heater  
Heavy-duty radiator w/deaeration bottle  
Non-spark-arresting muffler  
Aspirated air cleaner  
Swing out fuel cooler  
Cruise control

## OPTIONAL EQUIPMENT

### OPERATOR'S COMPARTMENT

2 door cab with –

Air-conditioning, 100% filtered air, in-cab filter access, 8 adjustable roof vents, 2 floor vents, w/heater

Defroster

Dome light - door activated

Wipers, front and rear

Tinted glass

Floor mat

Cloth air suspension seat

Tilt wheel

Radio-ready kit w/antenna and speakers

Side window partial hold open

Inside release for side windows

Cab Convenience Package

Windshield washer w/adjustable nozzles (front & rear)

Reduced sound level to 72 dB(A)

Sun visor

Vinyl-covered interior

### LOADER

See page 2

### BACKHOE

See page 2

### POWERTRAIN

4WD

4F/4R Power shuttle synchromesh transmission

Torque converter

Transmission de-clutch

Electro-hydraulic differential lock

Hydrostatic steering

Wet disc brakes

Remote lube front axle pivot

Cab, right door

Canopy Convenience Package

Front windshield w/wiper & washer

85 dB(A) sound

Floor mat

Sun visor

### LOADER

Hydraulic attachment coupler

Attachment auxiliary hydraulics

3-spool valve hydraulics w/thumb controlled electro hydraulic switch w/detent

Buckets (see page 2)

### BACKHOE

Case integrated hydraulic coupler

Buckets (see page 2)

### HYDRAULICS

2-spool loader control valve

7-spool backhoe control valve

Heavy-duty oil cooler

### OTHER

Forward tilt engine hood

Replaceable, molded front bumpers

Front/rear tie downs

Reflective logos

Lights - Cab and Canopy

(2) Rear tail/stop

(2) Front flashers/turn

(2) Rear flashers/turn

(2) Front & 4 rear adjustable halogen lights (55 w)

Tool box

900 lb (408 kg) counterweight

3 in (76 mm) retractable seat belt

Ride control

Flip over stabilizer pads

### ENGINE

Spark arresting muffler

### POWERTRAIN

4 x 3 Powershift transmission with Autoshift (4WD unit only)

Comfort Steer

### HYDRAULICS

Auxiliary backhoe uni-directional hydraulics

Auxiliary backhoe bi-directional hydraulics

Button operated for pilot controls

### OTHER

Special paint

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.

Case is a registered trademark of CNH America LLC. Any trademarks referred to herein, in association with goods and/or services of companies other than CNH America LLC, are the property of those respective companies.



[www.casece.com](http://www.casece.com)

