

# 410J

## Engine

### 410J

	<i>For use in U.S., Canada, and Europe</i>	<i>For use outside U.S., Canada, and Europe</i>
Manufacturer and Model	John Deere PowerTech™ E 4045HT054 turbocharged, standard	John Deere 4045T PowerTech turbocharged, standard*
Non-Road Emissions Standard	EPA Tier 3/EU Stage IIIA	EPA Tier 2/EU Stage II
Displacement	4.5 L (276 cu. in.)	4.5 L (276 cu. in.)
Net Peak Power (ISO9249)	73 kW (98 hp) @ 2,000 rpm	72 kW (96 hp) @ 2,100 rpm
Net Peak Torque (ISO9249)	416 Nm (306 lb.-ft.) @ 1,300 rpm	378 Nm (278 lb.-ft.) @ 1,500 rpm
Net Torque Rise	47%	26%
Lubrication	pressure system with spin-on filter and cooler	pressure system with spin-on filter and cooler
Air Cleaner	dual-stage dry type with safety element and evacuator valve	dual-stage dry type with safety element and evacuator valve

\*This engine not available on 410J TMC.

## Cooling

Fan Type	suction
Engine Coolant Rating	-37 deg. C (-34 deg. F)
Engine Oil Cooler	oil to water

## Powertrain

**Transmission** 4-speed, helical-cut gears, full PowerShift™ with hydraulic reverser standard; electric clutch cutoff on loader lever

**Torque Converter** single stage, dual phase with 2.63:1 stall ratio; 280 mm (11 in.)

### Maximum Travel Speeds with Standard

Engine	<i>Forward</i>	<i>Reverse</i>
Gear 1	5.9 km/h (3.7 mph)	7.4 km/h (4.6 mph)
Gear 2	10.8 km/h (6.7 mph)	13.6 km/h (8.5 mph)
Gear 3	21.9 km/h (13.6 mph)	21.6 km/h (13.4 mph)
Gear 4	37.4 km/h (23.2 mph)	N/A

### Axles

Axle Oscillations, Stop to Stop (both axles) . . . 22 deg.

Axle Ratings	<i>Mechanical-</i>		
	<i>Standard</i>	<i>front-wheel drive</i>	<i>Rear</i>
Static	18 000 kg (39,683 lb.)	12 000 kg (26,455 lb.)	13 000 kg (28,660 lb.)
Dynamic	7200 kg (15,873 lb.)	6000 kg (13,228 lb.)	7000 kg (15,432 lb.)
Ultimate	32 950 kg (72,642 lb.)	28 200 kg (62,170 lb.)	30 600 kg (67,461 lb.)

**Differentials** hydraulic locking rear, electric, foot actuated; limited slip front

**Steering (ISO5010)** hydrostatic power and emergency steering

Axle	<i>Mechanical-</i> <i>front-wheel drive</i>	<i>Non-powered front</i>
Curb-Turning Radius		
With Brakes	3.58 m (11 ft. 9 in.)	3.44 m (11 ft. 4 in.)
Without Brakes	4.08 m (13 ft. 5 in.)	3.94 m (12 ft. 11 in.)
Bucket Clearance Circle		
With Brakes	10.11 m (33 ft. 2 in.)	9.89 m (32 ft. 5 in.)
Without Brakes	11.05 m (36 ft. 3 in.)	10.76 m (35 ft. 4 in.)
Steering Wheel Turns (lock to lock, flow amplified)	2.6 to 3.6	3.1 to 4.4

### Final Drive

Mechanical-Front Wheel heavy-duty, outboard planetary final drives distribute shock loads over 3 gears

Rear Axle heavy-duty, outboard planetary final drives distribute shock loads over 4 gears

### Brakes (conform to ISO 3450)

Service power assisted, hydraulic wet disc, mounted inboard, self-adjusting and self-equalizing

Parking spring-applied, hydraulically released, wet, multi disc, independent of service brakes with electric switch control

## Hydraulics

## 410J

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Main Pump	pressure-compensated load sensing (PCLS), axial piston
Pump Flow @ 2,200 rpm	
Backhoe	159 L/m (42 gpm)
Loader	159 L/m (42 gpm)
System Relief Pressure	
Backhoe	24 993 kPa (3,625 psi)
Loader	24 993 kPa (3,625 psi)
<b>Backhoe Controls</b>	two-lever manual standard; pilot controls with pattern select, three-lever manual controls with foot swing, and manual and/or electric auxiliary functions optional
<b>Loader Controls</b>	single-lever control with electric clutch cutoff switch standard; manual auxiliary function optional

## Cylinders

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Type	heat-treated, chrome-plated, polished rods; hardened-steel (replaceable bushings) pivot pins		
	<i>Bore</i>	<i>Rod Diameter</i>	<i>Stroke</i>
<b>Loader Boom (2)</b>	80 mm (3.15 in.)	50 mm (1.97 in.)	790 mm (31.10 in.)
<b>Loader Bucket (1)</b>	90 mm (3.54 in.)	50 mm (1.97 in.)	744 mm (29.29 in.)
<b>Backhoe Boom (1)</b>	125 mm (4.92 in.)	63 mm (2.48 in.)	897 mm (35.31 in.)
<b>Backhoe Crowd (1)</b>	115 mm (4.53 in.)	63 mm (2.48 in.)	698 mm (27.49 in.)
<b>Backhoe Bucket (1)</b>	100 mm (3.94 in.)	63 mm (2.48 in.)	810 mm (31.89 in.)
<b>Backhoe Swing (2)</b>	90 mm (3.54 in.)	50 mm (1.97 in.)	278 mm (10.94 in.)
<b>Backhoe Extendable Dipperstick (1)</b>	70 mm (2.76 in.)	40 mm (1.57 in.)	1214 mm (47.78 in.)
<b>Backhoe Stabilizer, Standard (2)</b>	100 mm (3.94 in.)	50 mm (1.97 in.)	500 mm (19.69 in.)
<b>Non-Powered Axle (1)</b>	70 mm (2.76 in.)	42 mm (1.65 in.)	213 mm (8.39 in.)
<b>Mechanical-Front-Wheel Drive (1)</b>	67 mm (2.64 in.)	42 mm (1.65 in.)	210 mm (8.27 in.)

## Electrical

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Voltage	12 volt
Alternator Rating	90 amp
<b>Lights</b>	4 halogen: 2 front and 2 rear (32,500 candlepower each); turn signals and flashers 2 front and 2 rear; stop and taillights and 2 rear reflectors

## Operator Station

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Type (SAE J1040)	canopy, isolation mounted, ROPS/FOPS, left/right access, with molded roof
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## Tires/Wheels

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	<i>Front</i>	<i>Rear</i>
Non-Powered Front Axle	11L-16 SL F-3 (12) 14.5/75-16.1 SL F-3 (10)	19.5L-24 R-4 (10) 21L-24 R-4 (10)
Mechanical-Front-Wheel Drive	12.5/80-18 I-3 (10) 340/80R18 XMCL 12.5/80-18 I-3 (10)	19.5L-24 R-4 (10) 500/70R24 XMCL 21L-24 R-4 (10)

## Serviceability

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Hydraulic Oil Filter, Spin-On Enclosed Replaceable Element, Vertically Mounted	6-micron filtration / 1,000 service hours
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### Refill Capacities

Cooling System	25 L (26 qt.)
Rear Axle	18 L (19 qt.)
Engine Oil (including vertical spin-on filter)	13 L (14 qt.)
Torque Converter and Transmission	15 L (16 qt.)
Fuel Tank (with ground-level fueling)	155 L (41 gal.)
Hydraulic System	95 L (25 gal.)
Hydraulic Reservoir	39 L (10.2 gal.)
Mechanical-Front-Wheel-Drive Housing	
Axle	6.5 L (7 qt.)
Planetary (each)	1 L (1 qt.)

## Operating Weights

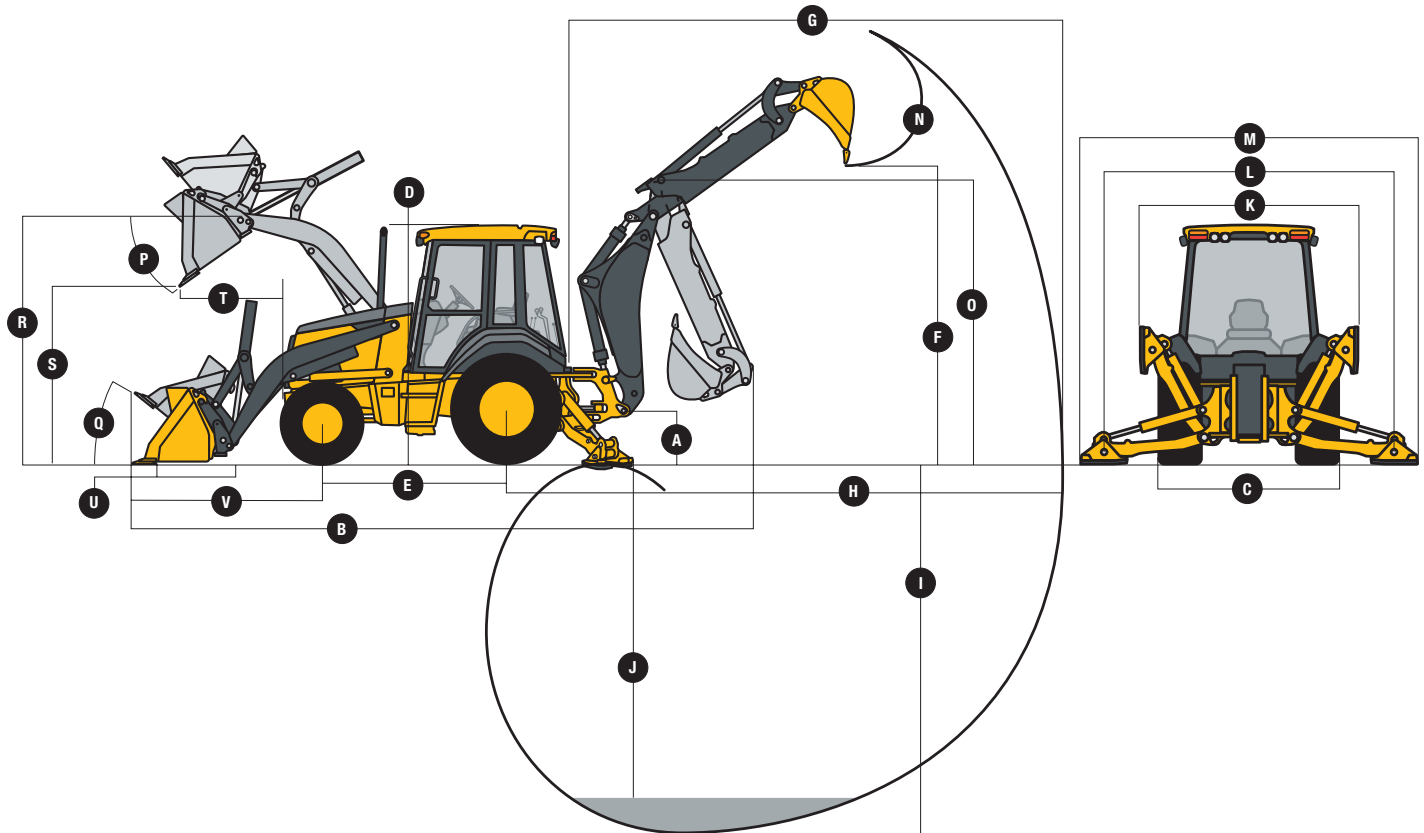
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With Full Fuel Tank, 79-kg (175 lb.) Operator, and Standard Equipment	6839 kg (15,080 lb.)
Typical with Cab, Mechanical-Front-Wheel Drive, Extendable Dipperstick, and 454-kg (1,000 lb.) Counterweight	8426 kg (18,580 lb.)
<b>Optional Components</b>	
Cab	263 kg (580 lb.)
Mechanical-Front-Wheel Drive with Tires	220 kg (485 lb.)
Extendable Dipperstick	289 kg (638 lb.)
Front Loader Coupler	286 kg (630 lb.)
Backhoe Bucket Coupler	63 kg (138 lb.)

## Overall Dimensions

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- A** Ground Clearance (minimum) . . . . . 356 mm (14 in.)
- B** Overall Length (transport) . . . . . 7.29 m (23 ft. 11 in.)
- C** Width over Tires . . . . . 2.18 m (7 ft. 2 in.)
- D** Height to Top of ROPS/Cab . . . . . 2.82 m (9 ft. 3 in.)
- E** Length from Axle to Axle
  - Non-Powered Front Axle . . . . . 2.11 m (6 ft. 11 in.)
  - Mechanical-Front-Wheel-Drive Axle . . . . . 2.14 m (7 ft. 0 in.)



## Backhoe Dimensions / Performance

410J

Backhoe specifications are with 610-mm x 0.21 m<sup>3</sup> (24 in. x 7.5 cu. ft.) bucket

- Bucket Range . . . . . 305–762 mm (12–30 in.)
- Digging Force
  - Bucket Cylinder . . . . . 65.8 kN (14,801 lb.)
  - Crowd Cylinder . . . . . 38.9 kN (8,741 lb.)
- Swing Arc . . . . . 180 deg.
- Operator Control . . . . . two levers

	<i>With Standard Backhoe</i>	<i>With Optional Extendable Dipperstick Retracted</i>	<i>Extended</i>
<b>F</b> Loading Height (truck loading position) . . . . .	3.81 m (12 ft. 6 in.)	3.86 m (12 ft. 8 in.)	4.72 m (15 ft. 6 in.)
<b>G</b> Reach from Center of Swing Pivot . . . . .	5.99 m (19 ft. 8 in.)	6.07 m (19 ft. 11 in.)	7.21 m (23 ft. 8 in.)
<b>H</b> Reach from Center of Rear Axle . . . . .	7.11 m (23 ft. 4 in.)	7.19 m (23 ft. 7 in.)	8.33 m (27 ft. 4 in.)
<b>I</b> Digging Depth (SAE maximum) . . . . .	4.83 m (15 ft. 10 in.)	4.90 m (16 ft. 1 in.)	6.10 m (20 ft. 0 in.)
<b>J</b> Digging Depth (SAE)			
610-mm (2 ft.) Flat Bottom . . . . .	4.78 m (15 ft. 8 in.)	4.85 m (15 ft. 11 in.)	6.07 m (19 ft. 11 in.)
2440-mm (8 ft.) Flat Bottom . . . . .	4.45 m (14 ft. 7 in.)	4.55 m (14 ft. 11 in.)	5.82 m (19 ft. 1 in.)
<b>K</b> Stabilizer Width (transport) . . . . .	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)	2.30 m (7 ft. 7 in.)
<b>L</b> Stabilizer Spread (operating) . . . . .	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)	3.45 m (11 ft. 4 in.)
<b>M</b> Stabilizer Overall Width (operating) . . . . .	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)	4.03 m (13 ft. 3 in.)
<b>N</b> Bucket Rotation . . . . .	190 deg.	190 deg.	190 deg.
<b>O</b> Transport Height . . . . .	3.94 m (12 ft. 11 in.)	3.91 m (12 ft. 10 in.)	3.91 m (12 ft. 10 in.)

## Loader Dimensions / Performance

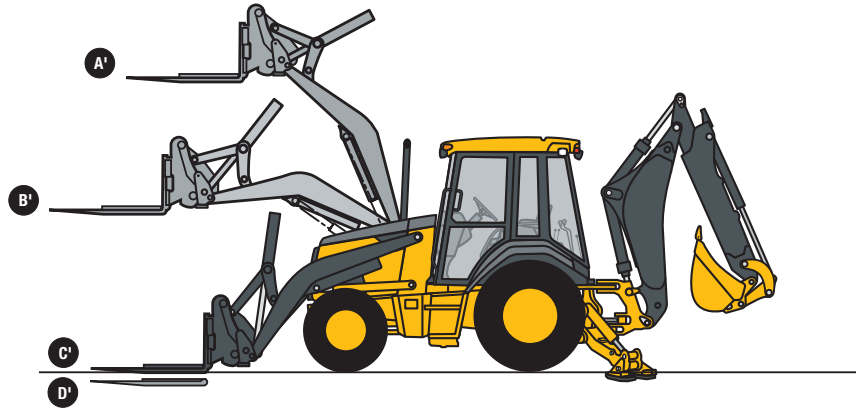
(See page 29 for line art)

### 410J

<b>P</b> Bucket Dump Angle (maximum)	45 deg.			
<b>Q</b> Rollback Angle at Ground Level	40 deg.			
	<i>Heavy-duty long lip</i>	<i>Heavy-duty</i>	<i>Heavy-duty</i>	<i>Multipurpose</i>
Bucket Capacity	0.96 m <sup>3</sup> (1.25 cu. yd.)	1.00 m <sup>3</sup> (1.31 cu. yd.)	1.15 m <sup>3</sup> (1.50 cu. yd.)	1.00 m <sup>3</sup> (1.31 cu. yd.)
Width	2184 mm (86 in.)	2337 mm (92 in.)	2388 mm (94 in.)	2337 mm (92 in.)
Weight	405 kg (892 lb.)	521 kg (1,148 lb.)	548 kg (1,208 lb.)	817 kg (1,800 lb.)
Breakout Force	45.4 kN (10,210 lb.)	45.8 kN (10,300 lb.)	45.2 kN (10,170 lb.)	42.9 kN (9,650 lb.)
Lift Capacity (full height)	3332 kg (7,340 lb.)	3269 kg (7,200 lb.)	3210 kg (7,070 lb.)	2996 kg (6,600 lb.)
<b>R</b> Height to Bucket Hinge Pin (maximum)	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)	3.35 m (11 ft. 0 in.)
<b>S</b> Dump Clearance (bucket at 45 deg.)	2.54 m (8 ft. 4 in.)	2.69 m (8 ft. 10 in.)	2.67 m (8 ft. 9 in.)	2.62 m (8 ft. 7 in.)
<b>T</b> Reach at Full Height (bucket at 45 deg.)	902 mm (35.5 in.)	762 mm (30.0 in.)	787 mm (31.0 in.)	818 mm (32.2 in.)
<b>U</b> Digging Depth Below Ground (bucket level)	107 mm (4.2 in.)	170 mm (6.7 in.)	157 mm (6.2 in.)	182 mm (7.2 in.)
<b>V</b> Length From Front Axle Centerline to Bucket Cutting Edge	2.18 m (7 ft. 2 in.)	2.03 m (6 ft. 8 in.)	2.03 m (6 ft. 8 in.)	2.15 m (7 ft. 1 in.)

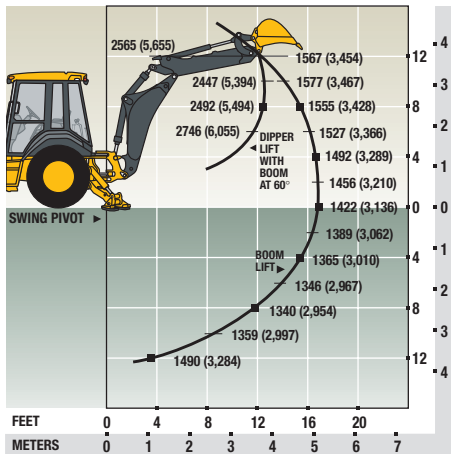
## Lift Capacity with Quick-Coupler / Forks

<b>Hydraulic Capacity</b>	1219-mm (48 in.) tines	1524-mm (60 in.) tines
<b>A'</b> Maximum Height	2073 kg (4,570 lb.)	1891 kg (4,170 lb.)
<b>B'</b> Maximum Reach	3162 kg (6,971 lb.)	3003 kg (6,621 lb.)
<b>C'</b> At Ground Line	4145 kg (9,138 lb.)	3883 kg (8,561 lb.)
<b>D'</b> Below Ground Line	211 mm (8.3 in.)	211 mm (8.3 in.)

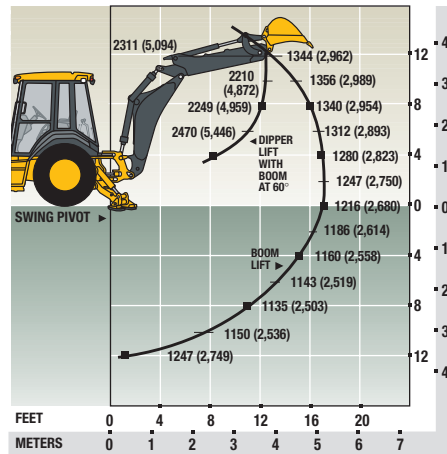


Lift capacities are over-end values in kg (lb.) according to SAE J31. Figures listed are 87% of the maximum lift force available. Base vehicle includes counterweight.

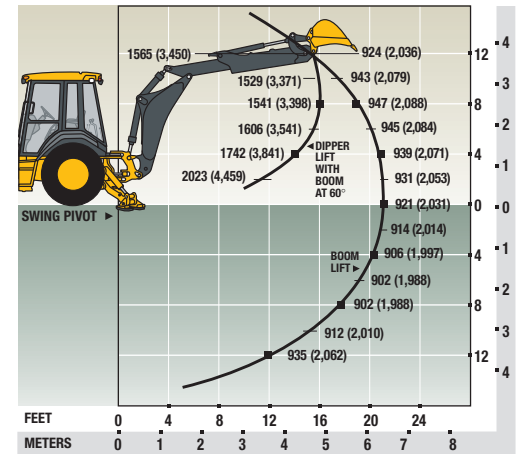
410J Backhoe with Standard Dipperstick



410J Backhoe with 1.22-m (4 ft.) Extendable Dipperstick, Retracted



410J Backhoe with 1.22-m (4 ft.) Extendable Dipperstick, Extended



For more detailed spec information and available options, log on to [www.JohnDeere.com](http://www.JohnDeere.com).