

9 9 S A E N E T H O R S E P O W E R



**JOHN DEERE**

**J**

**DOZER**

**650J**



**DOZER**

# Specifications

## Engine 650J LT / 650J XLT / 650J LGP

Manufacturer and Model	John Deere 4045H
Non-Road Emission Standards	EPA Tier 3/EU Stage IIIA
Cylinders	4
Displacement	4.5 L (276 cu. in.)
SAE Net Rated Power @ 2,200 rpm	74 kW (99 hp)
Net Peak Torque @ 1,200 rpm	447 Nm (329 lb.-ft.)
Aspiration	altitude-compensating turbocharger with charge air cooler
Lubrication	pressure system with full-flow spin-on filter and oil-to-water cooler
Air Cleaner	dual safety element dry type, evacuator valve
Slope Operation (maximum angle)	45 deg.

## Cooling

Blower-type cooling fan	
Engine Coolant Rating	-37 deg. C (-34 deg. F)
Engine Radiator	10 fins per in.
Hydrostatic Cooler and Hydraulic Cooler (oil/air)	10 fins per in.
Charge Air Cooler (air/air)	10 fins per in.

## Powertrain

<b>Transmission</b>	dual-path, electronic-controlled, hydrostatic drive; load-sensing, automatically adjusts speed and power to match changing load conditions; each track is powered by a variable-displacement piston pump and 2-speed motor combination; decelerator controls speed; transmission neutral lock with safety start switch
Travel Speeds (forward and reverse)	0-8.0 km/h (0-5.0 mph)
<b>Steering</b>	single-lever steering, direction control, and counterrotation; full power turns and infinitely variable track speeds provide unlimited maneuverability and optimum control; hydrostatic steering eliminates steering clutches and brakes
<b>Final Drives</b>	heavy-duty triple-reduction final drives attach directly to the mainframe; isolated from track and dozer frame loads
<b>Brakes</b>	hydrostatic (dynamic) braking stops the machine whenever the direction-control lever is moved to neutral or whenever the decelerator is depressed to the detent
<b>Service Brakes</b>	hydrostatic braking when direction-control lever is moved to neutral or when the decelerator is depressed to the detent
<b>Parking Brakes</b>	exclusive safety feature engaged wet, multiple-disc brakes automatically whenever the engine stops, whenever the operator depresses the decelerator pedal to the brake position, whenever the unit is in neutral for 3 seconds (with detected motion), or whenever the park lock lever is in the park position; machine cannot be driven with brake applied, reducing wear-out or need for adjustment

## Hydraulics

Open-center hydraulic system with gear pump	
Pump Flow @ 2,200 rpm	56.8 L/min. (15 gpm)
System Relief Pressure	20 684 kPa (3,000 psi)
Filter, Return Oil	10 micron
Controls	3-function hydraulic valve with low-effort single-lever T-bar

## Electrical

Voltage	12 volt
Battery Capacity	950 CCA
Reserve Capacity	190 min.
Alternator Rating	65 amp
<b>Standard Lights</b>	3 total: grille mounted (2) and rear mounted (1), and rear reflectors (2)

## Undercarriage

	650J LT	650J XLT	650J LGP
<b>Tracks</b>	John Deere Dura-Trax™, deep-heat-treated, pins and bushings sealed for life; rollers and idlers permanently sealed and lubricated	John Deere Dura-Trax, deep-heat-treated, pins and bushings sealed for life; rollers and idlers permanently sealed and lubricated	John Deere Dura-Trax, deep-heat-treated, pins and bushings sealed for life; rollers and idlers permanently sealed and lubricated

<b>Undercarriage (continued)</b>	<b>650J LT</b>		<b>650J XLT</b>		<b>650J LGP</b>	
Track Gauge (standard) . . . . .	1549 mm (5 ft. 1 in.)		1549 mm (5 ft. 1 in.)		1753 mm (5 ft. 9 in.)	
Grouser Width (closed center, single bar) . . . . .	457 mm (18 in.)		457 mm (18 in.)		711 mm (28 in.)	
Chain . . . . .	sealed and lubricated		sealed and lubricated		sealed and lubricated	
Shoes (each side) . . . . .	38		40		40	
Track Rollers (single flange, each side) . . . . .	6		7		7	
<b>Undercarriage Track</b>	<i>Standard</i>	<i>Maximum Life</i>	<i>Standard</i>	<i>Maximum Life</i>	<i>Standard</i>	<i>Maximum Life</i>
Track Length on Ground . . . . .	2210 mm (7 ft. 3 in.)	2210 mm (7 ft. 3 in.)	2337 mm (7 ft. 8 in.)	2337 mm (7 ft. 8 in.)	2337 mm (7 ft. 8 in.)	2337 mm (7 ft. 8 in.)
Ground Contact Area . . . . .	20 206 cm <sup>2</sup> (3,132 sq. in.)	20 206 cm <sup>2</sup> (3,132 sq. in.)	21 368 cm <sup>2</sup> (3,312 sq. in.)	21 368 cm <sup>2</sup> (3,312 sq. in.)	33 239 cm <sup>2</sup> (5,152 sq. in.)	33 239 cm <sup>2</sup> (5,152 sq. in.)
Ground Pressure . . . . .	40.7 kPa (5.9 psi)	42.1 kPa (6.1 psi)	38.6 kPa (5.6 psi)	40.0 kPa (5.8 psi)	26.2 kPa (3.8 psi)	27.6 kPa (4.0 psi)
Track Pitch . . . . .	171 mm (6.73 in.)	171 mm (6.73 in.)	171 mm (6.73 in.)	171 mm (6.73 in.)	171 mm (6.73 in.)	171 mm (6.73 in.)

## Serviceability

### Refill Capacities

Fuel Tank . . . . .	178 L (47 gal.)
Cooling System with Recovery Tank . . . . .	16 L (17 qt.)
Engine Oil with Filter . . . . .	14 L (15 qt.)
Transmission Reservoir with Filter . . . . .	43 L (11.3 gal.)
Final Drive (each) . . . . .	6.6 L (7 qt.)
Hydraulic Reservoir and Filter . . . . .	32.2 L (8.5 gal.)

## Operating Weights

With Full Fuel Tank, 79-kg (175 lb.) Operator,  
ROPS, and Standard Equipment

2667-mm (105 in.) Blade and 457-mm (18 in.)

Track Shoes . . . . . 8419 kg (18,560 lb.)

8455 kg (18,600 lb.)

N/A

3251-mm (128 in.) Blade and 711-mm (28 in.)

Track Shoes . . . . . 8977 kg (19,750 lb.)

### Optional Components

Maximum Life Undercarriage . . . . . 277 kg (610 lb.)

295 kg (650 lb.)

333 kg (735 lb.)

Rock Guards (4) . . . . . 118 kg (260 lb.)

134 kg (295 lb.)

118 kg (260 lb.)

Rock Guards

For Maximum Life Undercarriage . . . . . 82 kg (181 lb.)

96 kg (211 lb.)

96 kg (211 lb.)

508-mm (20 in.) Track Shoes . . . . . 79 kg (174 lb.)

83 kg (183 lb.)

– 344 kg (– 760 lb.)

610-mm (24 in.) Track Shoes (adjust to

base weight) . . . . . – 172 kg (– 380 lb.)

Cab . . . . . 306 kg (675 lb.)

306 kg (675 lb.)

306 kg (675 lb.)

Counterweight

Rear (each) . . . . . 150 kg (330 lb.) in base

150 kg (330 lb.)

150 kg (330 lb.)

Front (each) . . . . . 209 kg (240 lb.) in base

209 kg (240 lb.)

209 kg (240 lb.)

Front Tow Hook . . . . . in base

in base

in base

Retrieval Hitch . . . . . 23 kg (50 lb.)

23 kg (50 lb.)

23 kg (50 lb.)

Extended Drawbar . . . . . 33 kg (72 lb.)

33 kg (72 lb.)

33 kg (72 lb.)

Limb Risers . . . . . 104 kg (229 lb.)

104 kg (229 lb.)

104 kg (229 lb.)

Screens

Rear . . . . . 34 kg (76 lb.)

34 kg (76 lb.)

34 kg (76 lb.)

Side . . . . . 43 kg (94 lb.)

43 kg (94 lb.)

43 kg (94 lb.)

Front and Doors . . . . . 81 kg (179 lb.)

81 kg (179 lb.)

81 kg (179 lb.)

Winch

4000S . . . . . 652 kg (1,437 lb.)

652 kg (1,437 lb.)

652 kg (1,437 lb.)

Fairlead, 4-Roller . . . . . 85 kg (187 lb.)

85 kg (187 lb.)

85 kg (187 lb.)

Ripper, Parallelogram . . . . . 981 kg (2,163 lb.)

981 kg (2,163 lb.)

981 kg (2,163 lb.)

All-Hydraulic Heavy-Duty C Frame (less

blade) . . . . . – 628 kg (– 1,384 lb.)

– 628 kg (– 1,384 lb.)

– 667 kg (– 1,470 lb.)

2921-mm (115 in.) Blade, All-Hydraulic

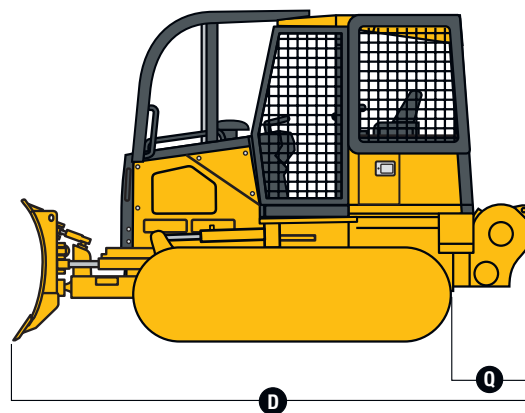
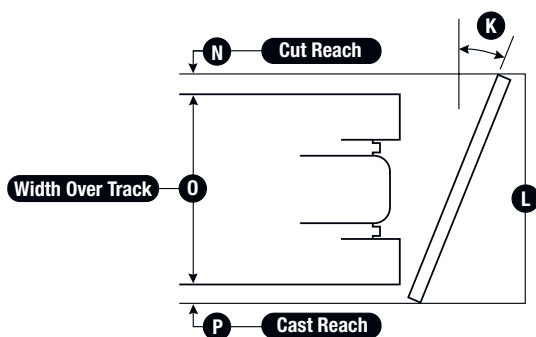
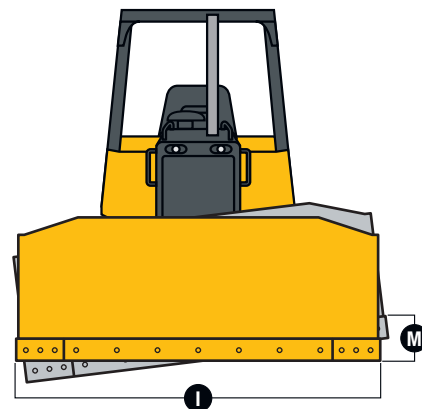
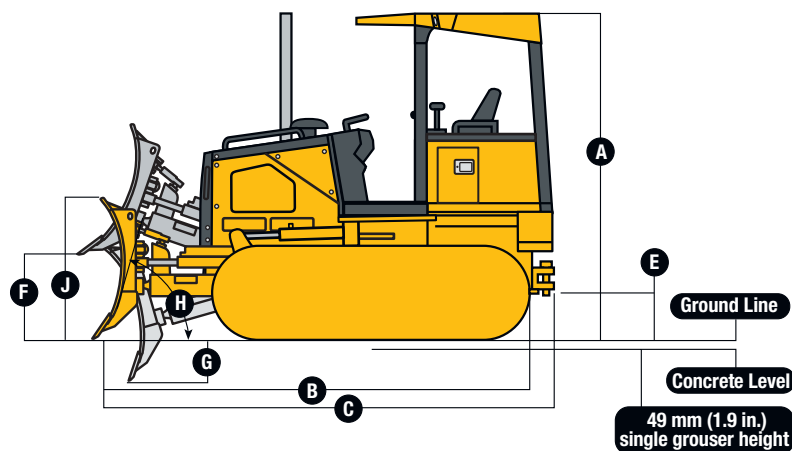
Heavy-Duty C Frame (adjust to base

weight) . . . . . – 61 kg (– 134 lb.)

3073-mm (121 in.) Blade, All-Hydraulic

Heavy-Duty C Frame (adjust to base

weight) . . . . . – 33 kg (– 74 lb.)



#### Machine Dimensions

	650J LT	650J XLT	650J LGP
<b>A</b> Overall Height (ROPS or cab) . . . . .	2769 mm (9 ft. 1 in.)	2769 mm (9 ft. 1 in.)	2769 mm (9 ft. 1 in.)
Height of Grousers . . . . .	48 mm (1.9 in.)	48 mm (1.9 in.)	48.3 mm (1.9 in.)
<b>B</b> Overall Length . . . . .	4089 mm (13 ft. 5 in.)	4242 mm (13 ft. 11 in.)	4242 mm (13 ft. 11 in.)
<b>C</b> Overall Length with Extended Drawbar . . . . .	4216 mm (13 ft. 10 in.)	4293 mm (14 ft. 1 in.)	4293 mm (14 ft. 1 in.)
<b>D</b> Overall Length with Winch . . . . .	4547 mm (14 ft. 11 in.)	4724 mm (15 ft. 6 in.)	4724 mm (15 ft. 6 in.)
<b>E</b> Ground Clearance with Single-Bar Grouser (excluding grouser height) . . . . .	363 mm (14 in.)	363 mm (14.3 in.)	363 mm (14.3 in.)
<b>Maximum Life Undercarriage</b> . . . . .	368 mm (14.5 in.)	368 mm (14.5 in.)	368 mm (14.5 in.)
<b>F</b> Blade Lift Height . . . . .	818 mm (32 in.)	818 mm (32.2 in.)	818 mm (32.2 in.)
<b>G</b> Blade Digging Depth . . . . .	500 mm (20 in.)	500 mm (19.7 in.)	500 mm (19.7 in.)
<b>H</b> Blade Cutting Edge Angle (adjustable) . . . . .	52 to 60 deg.	52 to 60 deg.	52 to 60 deg.

#### 650J LT Blade Specs

<b>I</b> Width . . . . .	2667 mm (105 in.)	2921 mm (115 in.)	3150 mm (124 in.)
<b>J</b> Height . . . . .	1067 mm (3 ft. 6 in.)	955 mm (3 ft. 2 in.)	894 mm (2 ft. 11 in.)
SAE Capacity . . . . .	2.22 m <sup>3</sup> (2.91 cu. yd.)	1.96 m <sup>3</sup> (2.57 cu. yd.)	1.88 m <sup>3</sup> (2.46 cu. yd.)
<b>K</b> Blade Angle . . . . .	22.2 deg.	22.2 deg.	22.2 deg.
<b>L</b> Angled Width . . . . .	2469 mm (8 ft. 1 in.)	2705 mm (8 ft. 11 in.)	2916 mm (9 ft. 7 in.)
<b>M</b> Tilt . . . . .	363 mm (14.3 in.)	399 mm (15.7 in.)	429 mm (16.9 in.)
<b>N</b> Cut Reach . . . . .	117 mm (4.6 in.)	233.68 mm (9.2 in.)	340.36 mm (13.4 in.)
<b>O</b> Width Over Track . . . . .	2007 mm (6 ft. 7 in.)	2007 mm (6 ft. 7 in.)	2464 mm (8 ft. 1 in.)
<b>P</b> Cast Reach . . . . .	345 mm (13.6 in.)	465 mm (18.3 in.)	569 mm (22.4 in.)

## 650J XLT Blade Specs

<b>I</b> Width	2667 mm (105 in.)	2921 mm (115 in.)	3150 mm (124 in.)
<b>J</b> Height	1067 mm (3 ft. 6 in.)	955 mm (3 ft. 2 in.)	894 mm (2 ft. 11 in.)
SAE Capacity	2.22 m³ (2.9 cu. yd.)	1.96 m³ (2.57 cu. yd.)	2.0 m³ (2.46 cu. yd.)
<b>K</b> Blade Angle	22.2 deg.	22.2 deg.	22.2 deg.
<b>L</b> Angled Width	2469 mm (8 ft. 1 in.)	2705 mm (8 ft. 11 in.)	2916 mm (9 ft. 7 in.)
<b>M</b> Tilt	363 mm (14.3 in.)	399 mm (15.7 in.)	429 mm (16.9 in.)
<b>N</b> Cut Reach	117 mm (4.6 in.)	233.68 mm (9.2 in.)	340 mm (13.4 in.)
<b>O</b> Width Over Track	2007 mm (6 ft. 7 in.)	2007 mm (6 ft. 7 in.)	2007 mm (6 ft. 7 in.)
<b>P</b> Cast Reach	345 mm (13.6 in.)	465 mm (18.3 in.)	569 mm (22.4 in.)

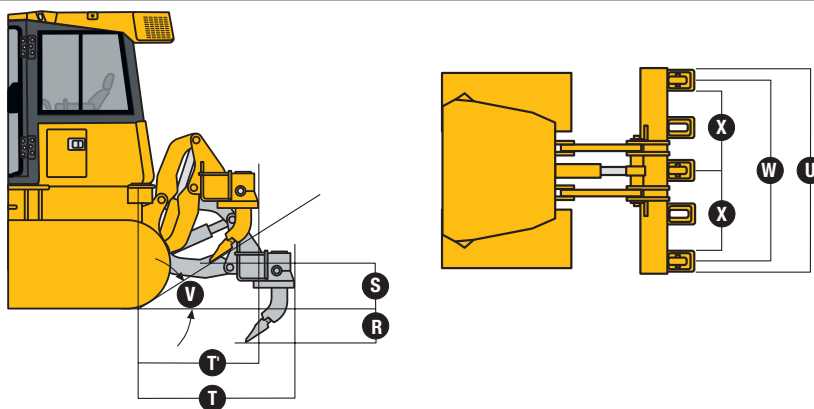
## 650J LGP Blade Specs

<b>I</b> Width	2921 mm (115 in.)	3150 mm (124 in.)	3251 mm (128 in.)
<b>J</b> Height	955 mm (3 ft. 2 in.)	894 mm (2 ft. 11 in.)	955 mm (3 ft. 2 in.)
SAE Capacity	1.96 m³ (2.57 cu. yd.)	1.88 m³ (2.46 cu. yd.)	2.22 m³ (2.91 cu. yd.)
<b>K</b> Blade Angle	22.2 deg.	22.2 deg.	22.2 deg.
<b>L</b> Angled Width	2705 mm (8 ft. 11 in.)	2916 mm (9 ft. 7 in.)	3010 mm (9 ft. 11 in.)
<b>M</b> Tilt	399 mm (15.7 in.)	429 mm (16.9 in.)	445 mm (17.5 in.)
<b>N</b> Cut Reach	5 mm (0.2 in.)	112 mm (4.4 in.)	157 mm (6.2 in.)
<b>O</b> Width Over Track	2464 mm (8 ft. 1 in.)	2464 mm (8 ft. 1 in.)	2464 mm (8 ft. 1 in.)
<b>P</b> Cast Reach	236 mm (9.3 in.)	340 mm (13.4 in.)	389 mm (15.3 in.)

## Rear Ripper

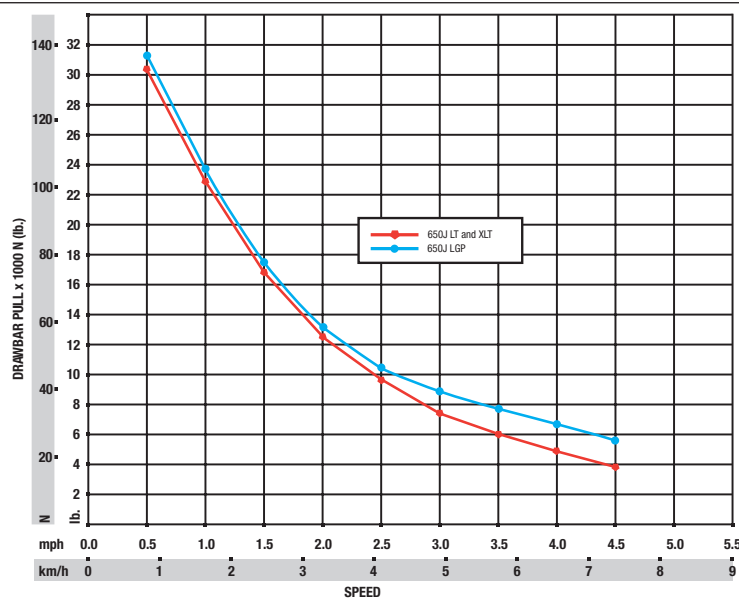
<b>Q</b> 4000S Winch Length	752 mm (30 in.)
<b>R</b> Maximum Penetration	508 mm (20 in.)
<b>S</b> Maximum Clearance Under Tip	508 mm (20 in.)
<b>T</b> Overall Length (lowered position)	1450 mm (57 in.)
<b>T'</b> Overall Length (raised position)	1015 mm (40 in.)
<b>U</b> Overall Beam Width	1830 mm (72 in.)
<b>V</b> Slope Angle (full raise)	40 deg.
<b>W</b> Ripping Width	1670 mm (66 in.)
<b>X</b> Distance Between Shanks (3 installed)	806 mm (32 in.)
Distance Between Holes In Shank	80 mm (3.1 in.)

## 650J LT / 650J XLT / 650J LGP



## Drawbar Pull

Crawler Speed vs Ground Pull ..... usable pull will depend on traction and weight of tractor





## 650J CRAWLER DOZERS

**Key:** ● Standard equipment ▲ Optional or special equipment

See your John Deere dealer for further information.

### 650 Engine

- Meets EPA Tier 3/EU Stage IIIA emissions
- Electronic control with automatic engine protection
- Dual safety element dry-type air cleaner, evacuator valve
- Muffler, self draining, under hood, with vertical stack
- ▲ Environmental service drains
- ▲ Ether start aid
- ▲ Engine coolant heater, 110 volts
- ▲ Engine coolant heater, fuel fired
- ▲ Chrome exhaust
- ▲ Fuel filter heater
- ▲ Rotary ejection engine air precleaner

#### Cooling

- Enclosed safety fan guard (conforms to SAE J1308 and ISO3457)
- Perforated engine side shields
- Heavy-duty grille
- ▲ Extreme-duty grille

#### Transmission

- Remote diagnostic test ports
- ▲ Environmental service drains

#### Hydraulic System

- 3-function hydraulics
- ▲ 4-function hydraulics with rear plumbing
- ▲ Drive-through hydraulic pump for use with winch
- ▲ Integrated Grade Control (IGC)

#### Mainframe, Access Panels

- Front tow loop (bolt-on)
- Reinforced engine and mid-frame bottom guards
- Integral transmission guard
- Vandal protection: Engine access door / Side tank access doors / Fuel tank / Instrument panel / Transmission reservoir / Hydraulic reservoir

#### Attachments

- ▲ Retrieval hitch with pin
- ▲ Extended rigid drawbar with pin for pull-type implements
- ▲ Drawbar, extended for winch (with or without Fairlead)
- ▲ Ripper, parallelogram with 5 shank pockets and 3 teeth
- ▲ Winch, John Deere, power in/free spool out OR power out
- ▲ 4-roller fairlead for winch

### 650 Attachments (continued)

- ▲ Root-rake blade attachment
- ▲ Rear-mounted toolbox

#### Undercarriage

- Full-length, smooth-surface track frame covers
- Chain guides, front and rear
- Double-flange roller
- ▲ Full-length rock guards
- ▲ Center track chain guide
- ▲ Maximum Life Undercarriage System

#### Canopy Cab Operator's Station / Electrical

- Retractable seat belts, 51 mm (2 in.) (conform to SAE J386)
- ▲ Retractable seat belts, 76 mm (3 in.) (conform to SAE J386)
- ▲ Accessories: Convex wide-angle interior rearview mirror / Thigh cushions (2) / Seat-side lockable storage box/lunch box/cup holder
- Power port, 12 volts
- ▲ Lockable side-seat storage compartment
- Air conditioner, 24,000 Btu
- Tinted glass
- Dome light
- Heater (roof mount)
- Front and door wipers
- Mechanical suspension vinyl seat
- Mechanical suspension fabric seat
- ▲ Air suspension vinyl seat
- ▲ Air suspension fabric seat
- ▲ Under-seat heater
- ▲ Rear wiper
- ▲ AM/FM, weather-band radio, clock
- ▲ External-mounted attachment mirror
- Sealed alternator, 65 amps
- Master electrical disconnect switch
- Lights, grille mounted (2), rear mounted (1)
- ▲ Work lights, roof mounted
- Battery, single, 12 volts
- ▲ Battery, dual, 12 volts
- ▲ JDLINK™ Select or Ultimate wireless communication system (available only in U.S. and Canada)

## CONTROL OWNING AND OPERATING COSTS

**Customer Personal Service (CPS)** is part of our proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

**Customer Support Advisors (CSAs)** lend a *personal* touch to Customer Personal Service (CPS). Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for *your* business and take the burden of machine maintenance off your shoulders.

**Fluid analysis program** tells you what's going on inside *all* of your machine's major components so you'll know if there's a problem *before* you see a decline in performance. Fluid analysis is included in most extended coverage and preventive-maintenance agreements.

**Component life-cycle data** gives you vital information on the projected life span of components and lets you make informed decisions on machine maintenance by telling you approximately how many hours of use you can expect from

an engine, transmission, or hydraulic pump. This information can be used to pre-empt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

**Preventive Maintenance (PM) agreements** give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

**Extended coverage** gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And an extended coverage contract also travels well because it's backed by John Deere and is honored by *all* Deere construction dealers.



JOHN DEERE

DKAJUDZR Litho in U.S.A. (10-06)

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions specified per ISO9249.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on units with standard equipment, rollover protective structures, full fuel tanks, and 79-kg (175 lb.) operators.

