

450G, 455G, 550G, 555G, 650G Crawler Repair

TECHNICAL MANUAL 450G, 455G, 550G, 555G, 650G Crawler Repair

TM1404 14JUN11 (ENGLISH)



For complete service information also see:

450G, 455G, 550G, 555G, 650G Operation and Test (Complete)	TM1403
450G, 455G, 550G, 555G, 650G Repair (Complete).....	TM1404

Contents

Section 00—General Information

- Group 0001—Safety Information
- Group 0002—General Specifications
- Group 0003—Torque Values
- Group 0004—Fuels and Lubricants

Section 01—Tracks

- Group 0130—Track System
- Group 0199—Dealer Fabricated Tools

Section 02—Axles and Suspension Systems

- Group 0250—Axle Shaft, Bearings, and Reduction Gears
- Group 0260—Hydraulic System
- Group 0299—Dealer Fabricated Tools

Section 03—Transmission

- Group 0315—Control Linkage
- Group 0325—Input Drive Shafts and U-Joints
- Group 0350—Gears, Shafts, Bearings and Clutch
- Group 0360—Hydraulic System
- Group 0399—Dealer Fabricated Tools

Section 04—Engine

- Group 0400—Removal and Installation

Section 05—Engine Auxiliary Systems

- Group 0505—Cold Weather Starting Aid
- Group 0510—Cooling System
- Group 0515—Speed Controls and Fuel Shut-Off Linkage
- Group 0520—Intake System
- Group 0560—External Fuel Supply System

Section 06—Torque Converter

- Group 0600—Removal and Installation
- Group 0651—Turbine, Gears and Shaft

Section 07—Dampener Drive

- Group 0700—Removal and Installation

Section 09—Steering Systems

- Group 0920—Power Steering Linkage
- Group 0960—Hydraulic System

Section 16—Electrical System

- Group 1671—Batteries, Support and Cables
- Group 1672—Alternator, Regulator, and Charging System Wiring

- Group 1673—Lighting System
- Group 1674—Wiring Harness and Switches
- Group 1676—Instruments and Indicators
- Group 1677—Motors and Actuators

Section 17—Frames, Chassis, or Supporting Structure

- Group 1740—Frame Installation
- Group 1749—Chassis Weights
- Group 1799—Dealer Fabricated Tools

Section 18—Operator's Station

- Group 1800—Removal and Installation
- Group 1821—Seat and Seat Belt

Section 19—Sheet Metal and Styling

- Group 1910—Hood and Engine Enclosure
- Group 1913—Miscellaneous Guards
- Group 1921—Grille and Grille Housing
- Group 1927—Fenders

Section 20—Safety, Convenience and Miscellaneous

- Group 2004—Horn and Warning Devices

Section 21—Main Hydraulic System

- Group 2160—Hydraulic System

Section 31—Loader

- Group 3102—Bucket
- Group 3115—Controls Linkage
- Group 3140—Frames
- Group 3160—Hydraulics

Section 32—Bulldozer

- Group 3201—Blades
- Group 3215—Controls Linkage
- Group 3240—Frames
- Group 3260—Hydraulic System

Section 33—Backhoe

- Group 3300—Removal and Installation
- Group 3302—Buckets
- Group 3315—Controls Linkage
- Group 3340—Frames
- Group 3360—Hydraulic System

*Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication.
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Section 00 General Information

Contents

Page	Page
Group 0001—Safety Information	
Handle Fluids Safely—Avoid	
Fires.....	00-0001-1
Prevent Battery Explosions.....	00-0001-1
Prepare for Emergencies.....	00-0001-1
Prevent Acid Burns.....	00-0001-2
Handle Chemical Products Safely.....	00-0001-2
Avoid High-Pressure Fluids.....	00-0001-3
Park Machine Safely.....	00-0001-3
Support Machine Properly.....	00-0001-3
Wear Protective Clothing.....	00-0001-4
Work in Clean Area.....	00-0001-4
Service Machines Safely.....	00-0001-4
Work In Ventilated Area.....	00-0001-5
Illuminate Work Area Safely.....	00-0001-5
Replace Safety Signs.....	00-0001-5
Use Proper Lifting Equipment.....	00-0001-6
Remove Paint Before Welding or Heating.....	00-0001-6
Avoid Heating Near Pressurized Fluid Lines.....	00-0001-6
Keep ROPS Installed Properly.....	00-0001-7
Service Tires Safely.....	00-0001-7
Avoid Harmful Asbestos Dust.....	00-0001-8
Practice Safe Maintenance.....	00-0001-8
Use Proper Tools.....	00-0001-9
Dispose of Waste Properly.....	00-0001-9
Live With Safety.....	00-0001-9
Group 0002—General Specifications	
450G Crawler Dozer	
Specifications.....	00-0002-1
450G Drain and Refill Capacities.....	00-0002-3
450G—LT Crawler Dozer	
Specifications.....	00-0002-4
450G—LT Drain and Refill Capacities.....	00-0002-6
450G—LGP Crawler Dozer	
Specifications.....	00-0002-7
450G—LGP Drain and Refill Capacities.....	00-0002-9
455G Crawler Loader	
Specifications.....	00-0002-10
455G Crawler Loader Specifications—cont.....	00-0002-12
455G Drain and Refill Capacities.....	00-0002-12
550G—LT Crawler Dozer	
Specifications.....	00-0002-13
550G—LT Drain and Refill Capacities.....	00-0002-15
550G—LGP Crawler Dozer	
Specifications.....	00-0002-16
550G—LGP Drain and Refill Capacities.....	00-0002-18
555G Crawler Loader	
Specifications.....	00-0002-19
555G Drain and Refill Capacities.....	00-0002-21
650G Crawler Dozer	
Specifications.....	00-0002-22
650G Drain and Refill Capacities.....	00-0002-24
650G—LGP Crawler Dozer	
Specifications.....	00-0002-25
650G—LGP Drain and Refill Capacities.....	00-0002-27
9310 Backhoe Specifications.....	00-0002-27
9310 Backhoe Lift Capacity (G Series Loaders).....	00-0002-28
9310 Backhoe Lift Capacity (G-Series Dozers).....	00-0002-29
Group 0003—Torque Values	
Specifications.....	00-0003-1
Hardware Torque Specifications.....	00-0003-1
ROPS Torque Specifications.....	00-0003-1
Checking Track Shoe Cap Screw Torque.....	00-0003-2
Unified Inch Bolt and Screw Torque Values.....	00-0003-3
Metric Bolt and Screw Torque Values.....	00-0003-4
Additional Metric Cap Screw Torque Values.....	00-0003-5
Check Oil Lines And Fittings.....	00-0003-6
Service Recommendations for 37° Flare and 30° Cone Seat Connectors.....	00-0003-6
Service Recommendations for O-Ring Boss Fittings.....	00-0003-7
Service Recommendations For Flat Face O-Ring Seal Fittings.....	00-0003-8
Service Recommendations For Inch Series Four Bolt Flange Fittings.....	00-0003-9
Service Recommendations for Metric Series Four Bolt Flange Fitting.....	00-0003-10
Group 0004—Fuels and Lubricants	
Fuel Specifications.....	00-0004-1
Storing Fuel.....	00-0004-1
Do Not Use Galvanized Containers.....	00-0004-1
Diesel Engine Oil.....	00-0004-2
Final Drive Oil.....	00-0004-3

Continued on next page

	Page
Track Roller, Front Idler, and Carrier Roller Oil.....	00-0004-3
Transmission, Steering Clutches, Hydraulic and Winch Oil.....	00-0004-4
Grease	00-0004-5
Heavy Duty Diesel Engine Coolant	00-0004-6
Alternative and Synthetic Lubricants.....	00-0004-6
Lubricant Storage	00-0004-7





Handle Fluids Safely—Avoid Fires

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



TS227 —UN—23AUG88

DX,FLAME -19-29SEP98-1/1

Prevent Battery Explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



TS204 —UN—23AUG88

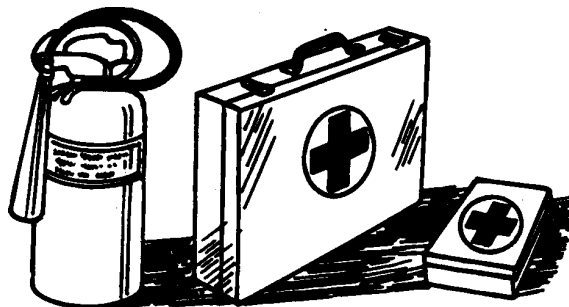
DX,SPARKS -19-03MAR93-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



TS291 —UN—23AUG88

DX,FIRE2 -19-03MAR93-1/1

Prevent Acid Burns

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

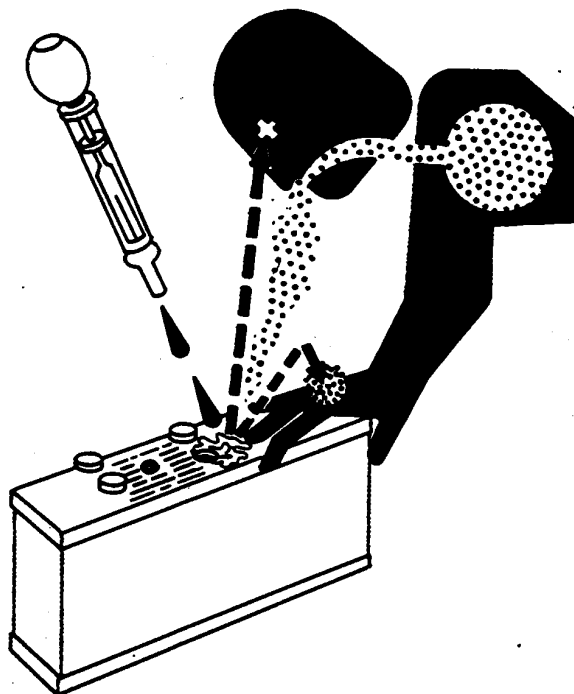
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
3. Get medical attention immediately.



TS203 —UN—23AUG88

DX, POISON -19-21APR93-1/1

Handle Chemical Products Safely

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



TS1132 —UN—26NOV90

DX, MSDS, NA -19-03MAR93-1/1

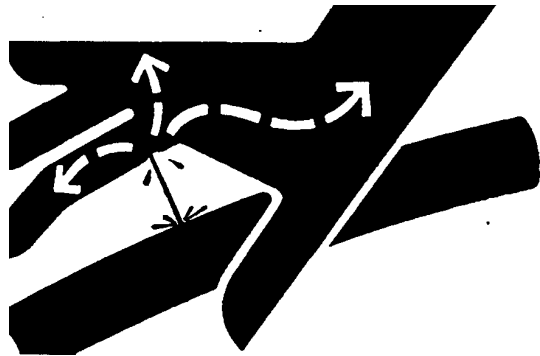
Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in



X9811 —UN—23AUG88

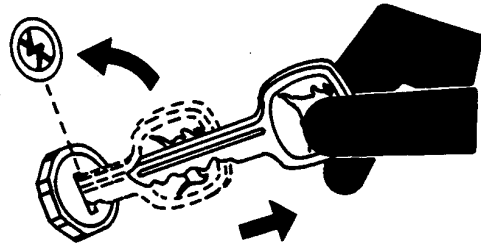
Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID -19-20AUG09-1/1

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



TS230 —UN—24MAY89

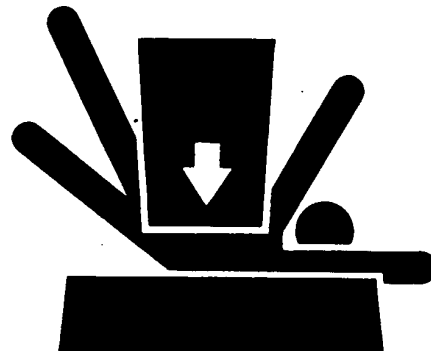
DX,PARK -19-04JUN90-1/1

Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.



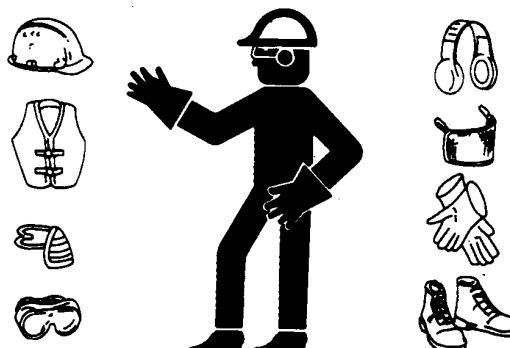
TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



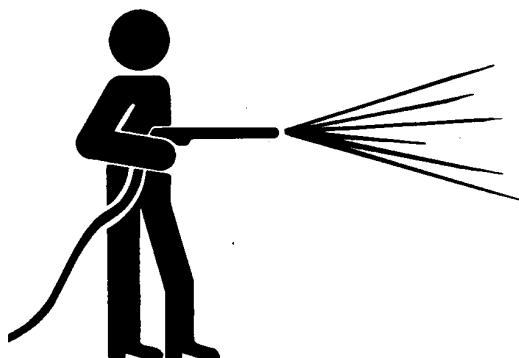
TS206 —UN—23AUG88

DX,WEAR2 -19-03MAR93-1/1

Work in Clean Area

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



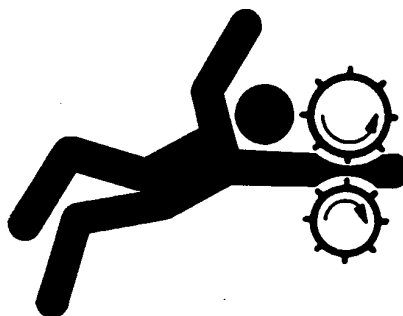
T6642EJ —UN—18OCT88

DX,CLEAN -19-04JUN90-1/1

Service Machines Safely

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



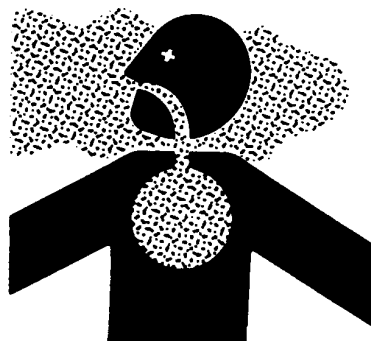
TS228 —UN—23AUG88

DX,LOOSE -19-04JUN90-1/1

Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



TS220 —UN—23AUG88

DX,AIR -19-17FEB99-1/1

Illuminate Work Area Safely

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



TS223 —UN—23AUG88

DX,LIGHT -19-04JUN90-1/1

Replace Safety Signs

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.



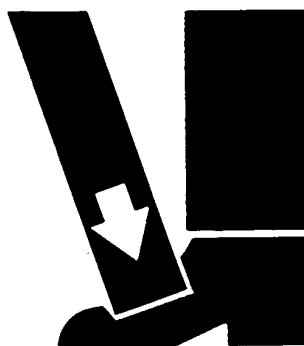
TS201 —UN—23AUG88

DX,SIGNS1 -19-04JUN90-1/1

Use Proper Lifting Equipment

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



TS226 —UN—23AUG88

DX,LIFT -19-04JUN90-1/1

Remove Paint Before Welding or Heating

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.



TS220 —UN—23AUG88

DX,PAINT -19-24JUL02-1/1

Avoid Heating Near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.



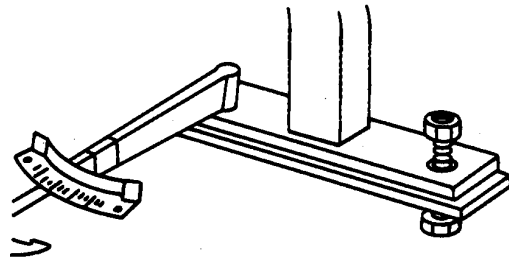
TS953 —UN—15MAY90

DX,TORCH -19-10DEC04-1/1

Keep ROPS Installed Properly

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.



TS212 —UN—23AUG88

DX,ROPS3 -19-03MAR93-1/1

Service Tires Safely

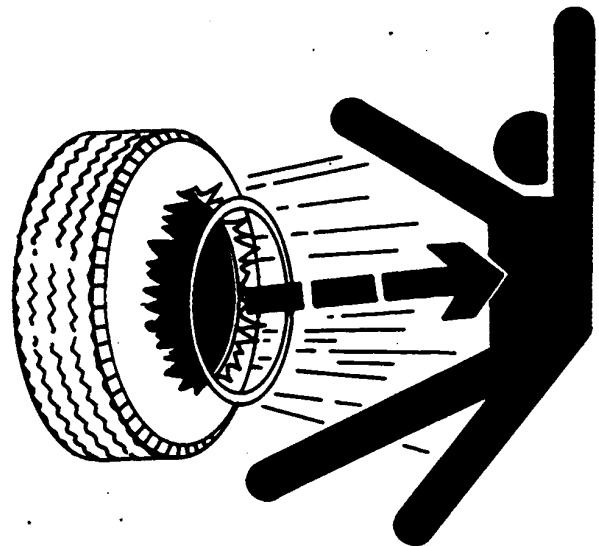
Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.



TS211 —UN—23AUG88

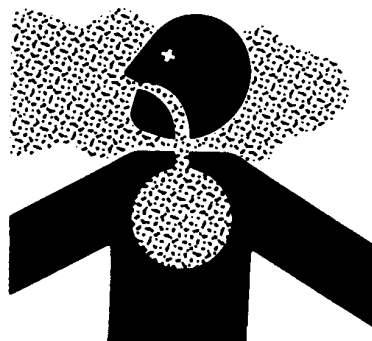
DX,RIM -19-24AUG90-1/1

Avoid Harmful Asbestos Dust

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos.



Keep bystanders away from the area.

DX,DUST -19-15MAR91-1/1

TS220 —UN—23AUG88

Practice Safe Maintenance

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



DX,SERV -19-17FEB99-1/1

TS218 —UN—23AUG88

Use Proper Tools

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.



TS779 —UN—08NOV89

DX,REPAIR -19-17FEB99-1/1

Dispose of Waste Properly

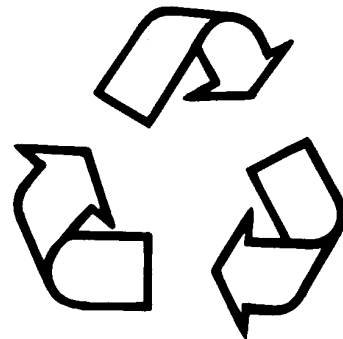
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



TS1133 —UN—26NOV90

DX,DRAIN -19-03MAR93-1/1

Live With Safety

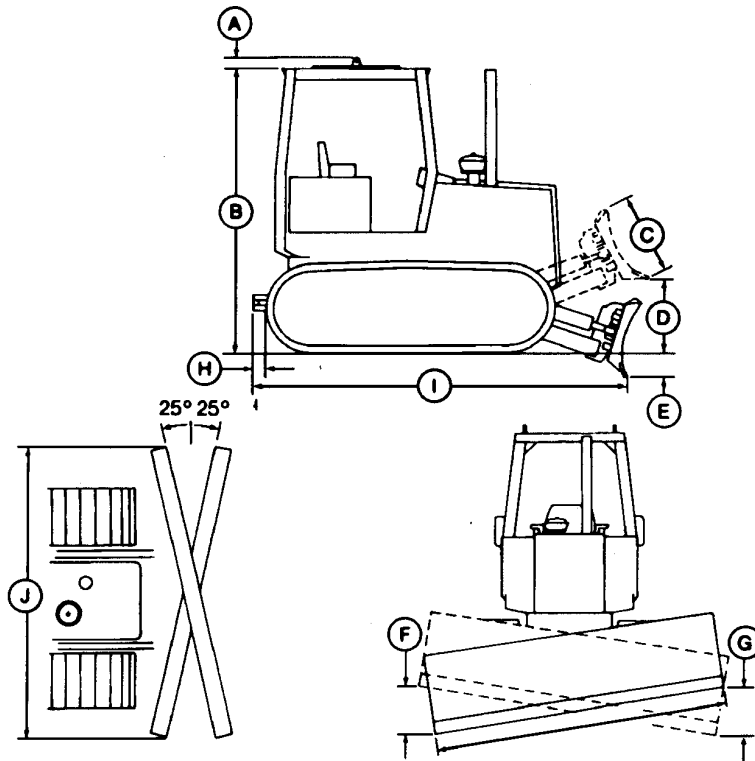
Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



TS231 —19—07OCT88

DX,LIVE -19-25SEP92-1/1

450G Crawler Dozer Specifications



T7347AC —UN—23JUL90

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective

structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Blade capacity shown is for a 2230 mm (7 ft 3.8 in.) blade. All blades are interchangeable between the 450G, 550G, and the 650G.

Item	Measurement	Specification
Operator	Weight	80 kg (175 lb)
Blade	Angled Width	2230 mm (7 ft 3.8 in.)

A—Canopy extension	60 mm (2.4 in.)
B—Canopy height	2.70 m (8 ft 10 in.)
C—Blade height	827 mm (2 ft 8.6 in.)
D—Blade lift height	815 mm (2 ft 8.1 in.)
E—Digging depth	504 mm (1 ft 7.9 in.)
F—Blade tilt (right side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
G—Blade tilt (left side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
H—Drawbar extension	280 mm (11 in.)
I—Overall length	3917 mm (12 ft 10.2 in.)
J—Blade width:	
Standard blade (angled width)	2230 mm (7 ft 3.8 in.)
Wide blade (angled width)	2686 mm (8 ft 9.7 in.)
Standard	2464 mm (8 ft 1 in.)
Wide	2921 mm (9 ft 7 in.)

Continued on next page

TX,115,FF1816 -19-12JAN93-1/2

General Specifications

Track gauge:	1450 mm (57 in.)
Blade capacity:	
Standard blade	1.3 m ³ (1.63 yd ³)
Wide blade	1.6 m ³ (2.1 yd ³)

Engine: John Deere 4045D (Direct Drive only) or 4045T (S.N. —840460) or John Deere PowerTech 4.5L engine type 4045TT061 (S.N. 840461—)

Type	Naturally aspirated (4045D) altitude compensating turbocharge (4045T)
Bore and stroke	106.5 x 127 mm (4.19 x 5.00 in.)
No. of cylinders	4
Fuel consumption, typical (S.N. —840460)	4.9 to 8.7 L/h (5 to 2.3 gal/hr)
Fuel consumption, typical (S.N. 840461—)	6.3 to 9.5 L/h (1.7 to 2.5 gal/hr)
Compression ratio (S.N. —840460)	17.8 to 1
Compression ratio (S.N. 840461—)	17 to 1
Electrical system	12 volt (with battery disconnect switch, if equipped)
Battery	12 volt
Alternator	65 amp
SAE net power at 2100 rpm SAE gross power at 2100 rpm	52 kW (70 hp) 54.5 kW (73 hp)
Maximum net torque at 1300 rpm	309 N·m (228 lb-ft)
Drawbar	38 kW (51 hp)
Displacement (S.N. —840460)	4.524 L (276 cu in.)
Displacement (S.N. 840461—)	4.5 L

Transmission: Powershift (4F-4R) with torque converter or direct drive. Full power shift, Dura-Shift with torque converter or direct drive, designed and built by John Deere. You can power shift easily from one gear to another as conditions change without stopping the machine or using a clutch. Power control inching pedal adds versatility. Four speeds forward and reverse allow the operator to match speeds to the working conditions.

Hydraulic pump:	Gear
Pressure	18 961 kPa (2750 psi)
Flow at 2100 rpm	64 L/min (17 gpm)

Steering:	
Clutches	Wet multiple disk
Brakes	Wet band

Undercarriage:	
Grouser, closed-center	406 mm (16 in.)
Track shoes, each side	37
Ground contact area	15 690 cm ² (2432 in. ²)
Ground pressure (direct drive)	44.6 kPa (6.47 psi)
Ground pressure (torque converter)	45.2 kPa (6.55 psi)

Operating Weight (with ROPS):

Direct Drive	7152 kg (15 732 lb)
Torque Converter	7243 kg (15 932 lb)
450G—TC with Wide Shoes (Direct Drive)	7586 kg (16 688 lb)
450G—TC with Wide Shoes (Torque Converter)	7677 kg (16 888 lb)

TX,115,FF1816 -19-12JAN93-2/2

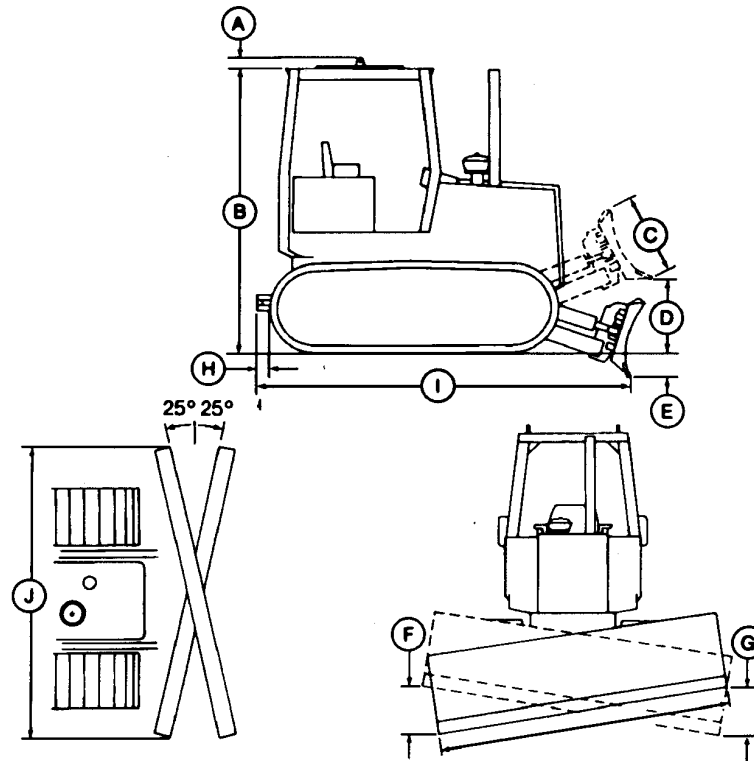
General Specifications

450G Drain and Refill Capacities

	Metric	English
Fuel tank	155 L	41 gal
Engine coolant	17 L	18 qt
Engine oil, including filter change (S.N. —840460)	8.5 L	9 qt
Engine oil, including filter change (S.N. 840461—)	14 L	14.8 qt
Transmission:		
Transmission, direct drive (S.N. —790984)	80.25 L	21.2 gal add 34 L (9 gal) w/winch if equipped
Transmission, direct drive (S.N. 790985—)	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Transmission, torque converter	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Hydraulic reservoir	38 L	10 gal
Hydraulic system	55.3 L	14.6 gal
Final drive (each side)	6.6 L	7 qt

TX,115,FF1917 -19-08OCT93-1/1

450G—LT Crawler Dozer Specifications



NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective

structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Blade capacity shown is for a 2230 mm (7 ft 3.8 in.) blade. All blades are interchangeable between the 450G, 550G, and the 650G.

Item	Measurement	Specification
Operator	Weight	80 kg (175 lb)
Blade	Angled Width	2230 mm (7 ft 3.8 in.)

A—Canopy extension	60 mm (2.4 in.)
B—Canopy height	2.70 m (8 ft 10 in.)
C—Blade height	827 mm (2 ft 8.6 in.)
D—Blade lift height	815 mm (2 ft 8.1 in.)
E—Digging depth	504 mm (1 ft 7.9 in.)
F—Blade tilt (right side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
G—Blade tilt (left side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
H—Drawbar extension	280 mm (11 in.)
I—Overall length	3917 mm (12 ft 10.2 in.)
J—Blade width:	
Standard blade (angled width)	2230 mm (7 ft 3.8 in.)
Wide blade (angled width)	2686 mm (8 ft 9.7 in.)
Standard	2464 mm (8 ft 1 in.)
Wide	2921 mm (9 ft 7 in.)

Continued on next page

TX,115,FF1816 -19-12JAN93-1/2

T7947AC—UN—23JUL90

General Specifications

Track gauge:	1450 mm (57 in.)
Blade capacity:	
Standard blade	1.3 m ³ (1.63 yd ³)
Wide blade	1.6 m ³ (2.1 yd ³)

Engine: John Deere 4045D (Direct Drive only) or 4045T (S.N. —840460) or John Deere PowerTech 4.5L engine type 4045TT061 (S.N. 840461—)

Type	Naturally aspirated (4045D) or altitude compensating turbocharge (4045T)
Bore and stroke	106.5 x 127 mm (4.19 x 5.00 in.)
No. of cylinders	4
Fuel consumption, typical (S.N. —840460)	4.9 to 8.7 L/h (5 to 2.3 gal/hr)
Fuel consumption, typical (S.N. 840461—)	6.3 to 9.5 L/h (1.7 to 2.5 gal/hr)
Compression ratio (S.N. —840460)	17.8 to 1
Compression ratio (S.N. 840461—)	17 to 1
Electrical system	12 volt (with battery disconnect switch, if equipped)
Battery	12 volt
Alternator (S.N. —840460)	65 amp
Alternator (S.N. 840461—)	95 amp
SAE net power at 2100 rpm	52 kW (70 hp)
SAE gross power at 2100 rpm	54.5 kW (73 hp)
Maximum net torque at 1300 rpm	309 N·m (228 lb-ft)
Drawbar	38 kW (51 hp)
Displacement (S.N. —840460)	4.524 L (276 cu in.)
Displacement (S.N. 840461—)	4.5 L

Transmission: Powershift (4F-4R) with torque converter or direct drive. Full power shift, Dura-Shift with torque converter or direct drive, designed and built by John Deere. You can power shift easily from one gear to another as conditions change without stopping the machine or using a clutch. Power control inching pedal adds versatility. Four speeds forward and reverse allow the operator to match speeds to the working conditions.

Hydraulic pump:	Gear
Pressure	18 961 kPa (2750 psi)
Flow at 2100 rpm	64 L/min (17 gpm)

Steering:	
Clutches	Wet multiple disk
Brakes	Wet band

Undercarriage:	
Grouser, closed-center	406 mm (16 in.)
Track shoes, each side	40
Ground contact area	17 632 cm ² (2733 in. ²)
Ground pressure (direct drive)	41.1 kPa (5.97 psi)
Ground pressure (torque converter)	41.7 kPa (6.04 psi)

Operating Weight (with ROPS):	
Direct Drive	7415 kg (16 310 lb)
Torque Converter	7505 kg (16 510 lb)

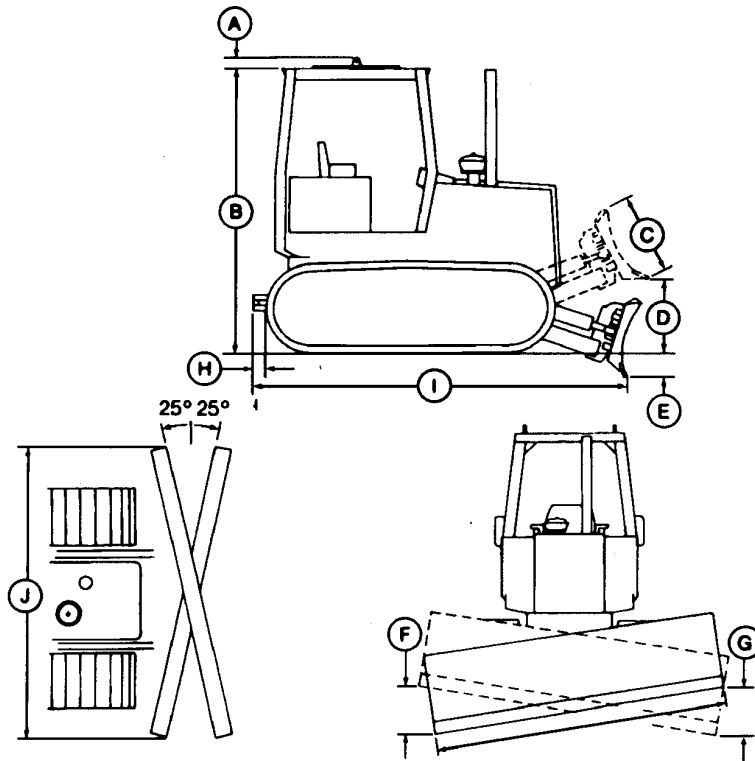
TX,115,FF1816 -19-12JAN93-2/2

General Specifications

450G—LT Drain and Refill Capacities

	Metric	English
Fuel tank	155 L	41 gal
Engine coolant	17 L	18 qt
Engine oil, including filter change (S.N. —840460)	8.5 L	9 qt
Engine oil, including filter change (S.N. 840461—)	14 L	14.8 qt
Transmission:		
Transmission, direct drive (S.N. —790984)	80.25 L	21.2 gal add 34 L (9 gal) w/winch if equipped
Transmission, direct drive (S.N. 790985—)	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Transmission, torque converter	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Hydraulic reservoir	38 L	10 gal
Hydraulic system	55.3 L	14.6 gal
Final drive (each side)	8.5 L	9 qt

TX,115,FF1917 -19-08OCT93-1/1

450G—LGP Crawler Dozer Specifications

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective

structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Blade capacity shown is for a 2230 mm (7 ft 3.8 in.) blade. All blades are interchangeable between the 450G, 550G, and the 650G.

Item	Measurement	Specification
Operator	Weight	80 kg (175 lb)
Blade	Angled Width	2230 mm (7 ft 3.8 in.)

A—Canopy extension	60 mm (2.4 in.)
B—Canopy height	2.70 m (8 ft 10 in.)
C—Blade height	827 mm (2 ft 8.6 in.)
D—Blade lift height	815 mm (2 ft 8.1 in.)
E—Digging depth	504 mm (1 ft 7.9 in.)
F—Blade tilt (right side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
G—Blade tilt (left side):	
Standard blade	330 mm (1 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
H—Drawbar extension	280 mm (11 in.)
I—Overall length	3917 mm (12 ft 10.2 in.)
J—Blade width:	
Standard blade (angled width)	2230 mm (7 ft 3.8 in.)
Wide blade (angled width)	2686 mm (8 ft 9.7 in.)
Standard	2464 mm (8 ft 1 in.)
Wide	2921 mm (9 ft 7 in.)

Continued on next page

TX,115,FF1816 -19-12JAN93-1/2

T7347AC —UN—23JUL90

General Specifications

Track gauge:	1450 mm (57 in.)
Blade capacity:	
Standard blade	1.3 m ³ (1.63 yd ³)
Wide blade	1.6 m ³ (2.1 yd ³)

Engine: John Deere 4045D (Direct Drive only) or 4045T (S.N. —840460) or John Deere PowerTech 4.5L engine type 4045TT061 (S.N. 840461—)

Type	Naturally aspirated or altitude compensating turbocharge
Bore and stroke	106.5 x 127 mm (4.19 x 5.00 in.)
No. of cylinders	4
Fuel consumption, typical (S.N. —840460)	4.9 to 8.7 L/h (5 to 2.3 gal/hr)
Fuel consumption, typical (S.N. 840461—)	6.3 to 9.5 L/h (1.7 to 2.5 gal/hr)
Compression ratio (S.N. —840460)	17.8 to 1
Compression ratio (S.N. 840461—)	17 to 1
Electrical system	12 volt (with battery disconnect switch, if equipped)
Battery	12 volt
Alternator	65 amp
SAE net power at 2100 rpm	52 kW (70 hp)
SAE gross power at 2100 rpm	54.5 kW (73 hp)
Maximum net torque at 1300 rpm	309 N·m (228 lb-ft)
Drawbar	38 kW (51 hp)
Displacement (S.N. —840460)	4.524 L (276 cu in.)
Displacement (S.N. 840461—)	4.5 L

Transmission: Powershift (4F-4R) with torque converter or direct drive. Full power shift, Dura-Shift with torque converter or direct drive, designed and built by John Deere. You can power shift easily from one gear to another as conditions change without stopping the machine or using a clutch. Power control inching pedal adds versatility. Four speeds forward and reverse allow the operator to match speeds to the working conditions.

Hydraulic pump:	Gear
Pressure	18 961 kPa (2750 psi)
Flow at 2100 rpm	64 L/min (17 gpm)

Steering:

Clutches	Wet multiple disk
Brakes	Wet band

Undercarriage:

Grouser, closed-center	610 mm (24 in.)
Track shoes, each side	40
Ground contact area	26 445 cm ² (4099 in. ²)
Ground pressure (direct drive)	29.0 kPa (4.2 psi)
Ground pressure (torque converter)	29.3 kPa (4.25 psi)

Operating Weight (with ROPS):

450G—LGP Direct Drive	7833 kg (17 232 lb)
450G—LGP Torque Converter	7924 kg (17 432 lb)

TX,115,FF1816 -19-12JAN93-22

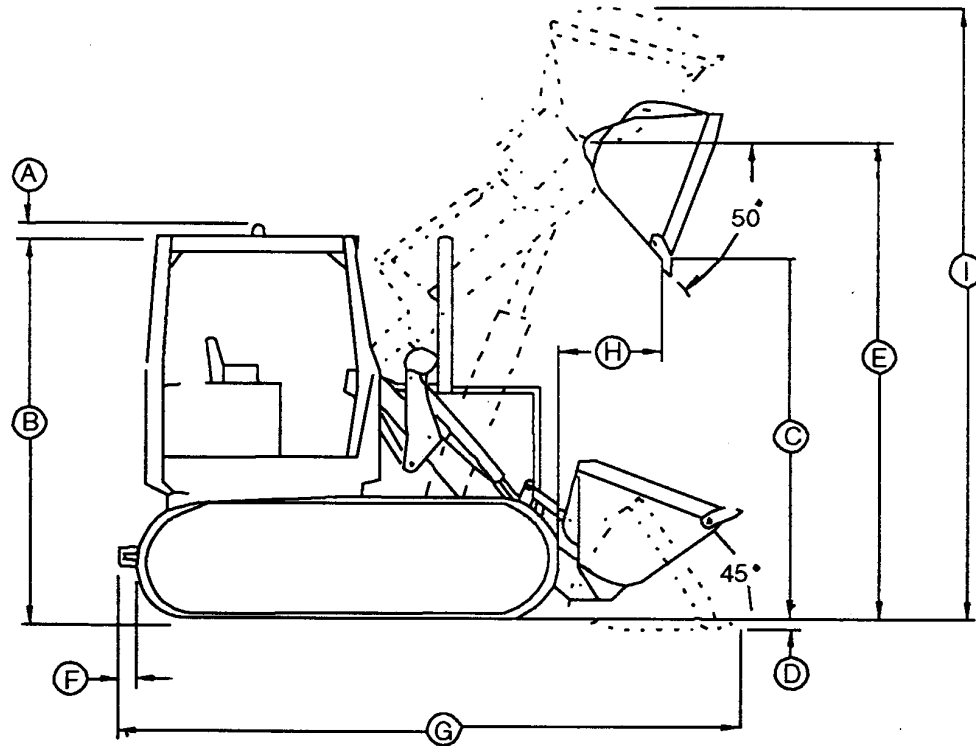
General Specifications

450G—LGP Drain and Refill Capacities

	Metric	English
Fuel tank	155 L	41 gal
Engine coolant	17 L	18 qt
Engine oil, including filter change (S.N. —840460)	8.5 L	9 qt
Engine oil, including filter change (S.N. 840461—)	14 L	14.8 qt
Transmission:		
Transmission, direct drive (S.N. —790984)	80.25 L	21.2 gal add 34 L (9 gal) w/winch if equipped
Transmission, direct drive (S.N. 790985—)	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Transmission, torque converter	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Hydraulic reservoir	38 L	10 gal
Hydraulic system	55.3 L	14.6 gal
Final drive (each side)	8.5 L	9 qt

TX,115,FF1917 -19-08OCT93-1/1

455G Crawler Loader Specifications



NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications

are based on a machine with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item		Measurement		Specification	
Operator		Weight		80 kg (175 lb)	
				Standard Track	Wide-Track
A—Canopy top				60 mm (2.4 in.)	60 mm (2.4 in.)
B—Overall height:					
	Standard height ROPS			2708 mm (106.6 in.)	2708 mm (106.6 in.)
	Low-profile ROPS			2588 mm (101.9 in.)	2588 mm (101.9 in.)
	Cab			2769 mm (109 in.)	2769 mm (109 in.)
C—Dump clearance, maximum height (45° discharge)				2620 mm (103.1 in.)	2635 mm (103.7 in.)
D—Digging depth				135 mm (5.3 in.)	135 mm (5.3 in.)
E—Height to hinge pin				3251 mm (128 in.)	3251 mm (128 in.)
F—Tow bar				533 mm (1 ft 9 in.)	533 mm (1 ft 9 in.)
G ^a —Overall length				4564 mm (179.7 in.)	4448 mm (175.1 in.)
H—Reach at max height (45° discharge)				871 mm (34.3 in.)	773 mm (30.4 in.)
I—Maximum operating height				4285 mm (168.7 in.)	4169 mm (164.1 in.)
Track gauge:					
	Standard Track			1450 mm (57 in.)	
	Wide Track			1727 mm (68 in.)	

^aIncludes 2 counterweights. Each counterweight is 50.5 mm (2 in.) thick.

Engine:		
Type (S.N. —840460)	John Deere 4045T and 4045D	
Type (S.N. 840461—)	John Deere 4.5 L engine type 4045TT067	

Continued on next page

TX,9000,RB178 -19-14JUN11-1/2

T8198BD —UN—14APR94

General Specifications

Rated power at 2100 rpm	SAE net 52.2 kW (70 hp) SAE gross 54.5 kW (73 hp)
Bore and stroke	106.5 x 127 mm (4.19 x 5.00 in.)
No. of cylinders	4
Displacement (S.N. —840460)	4.524 L (276 cu in.)
Displacement (S.N. 840461—)	4.5 L
Compression ratio (S.N. —840460)	16.2 to 1
Compression ratio (S.N. 840461—)	17 to 1
Electrical system	12 volt (with battery disconnect switch if equipped)
Alternator	65 amp
Maximum net torque at 1300 rpm	309 N·m (250 lb-ft)
Cooling system pressure	69 kPa (10 psi)

Transmission: Full power shift, Dura-Shift direct drive transmission is designed and built by John Deere. You can power shift easily from one gear to another as conditions change without stopping the machine or using a clutch. Power control inching pedal adds versatility. Four speeds forward and reverse allow the operator to match speeds to the working conditions.

Hydraulics:

Pump	Gear
Pressure	17 927 kPa (2600 psi)
Flow at 2100 rpm	118 L/min (31 gpm)

Cylinders:

Boom (bore x stroke)	100 mm (3.93 in.) x 827 mm (32.55 in.)
Bucket (bore x stroke)	90 mm (3.5 in.) x 744 mm (29.30 in.)
Cylinder rod dia.	50 mm (1.96 in.)

Steering:

Clutches	Wet multiple disks
Brakes	Wet band

Undercarriage:

Standard Track:

Two-bar grouser, closed-center	356 mm (14 in.)
Track shoes, each side	37
Ground clearance	330 mm (13 in.)
No. of track rollers	5
Ground contact area	13 729 cm ² (2128 in. ²)
Ground pressure, Direct Drive	60.1 kPa (8.71 psi)
Ground pressure, Torque Converter	60.7 kPa (8.8 psi)
Carrier roller	1

Wide Track:

Two-bar grouser, closed center	533 mm (21 in.)
Track shoes, each side	37
Ground clearance	330 mm (13 in.)
No. of track rollers	5
Ground contact area	20 595 cm ² (3192 in. ²)
Ground pressure, Direct Drive	41.8 kPa (6.06 psi)
Ground pressure, Torque Converter	42.2 kPa (6.12 psi)
Carrier roller	1

TX,9000,RB178 -19-14JUN11-2/2

General Specifications

455G Crawler Loader Specifications—cont.

Bucket Type	General Purpose		
	Wide Track ^a	Standard	Multipurpose ^b
Capacity, heaped, SAE	1.0 m ³ (1.3 cu yd)	1.0 m ³ (1.3 cu yd)	1.0 m ³ (1.3 cu yd)
Capacity, struck, SAE	0.79 m ³ (1.03 cu yd)	0.80 m ³ (1.05 cu yd)	0.80 m ³ (1.05 cu yd)
Bucket width	2.4 m (92.1 in.)	1.91 m (75.4 in.)	1.90 m (74.8 in.)
Bucket weight, w/teeth	546 kg (1204 lb)	477 kg (1053 lb)	989 kg (2180 lb)
Breakout force, SAE	78.3 kN (17 600 lb)	70 kN (15 735 lb)	59.6 kN (13 400 lb)
Bucket raise time	6.5 sec	6.5 sec	6.6 sec
Bucket dump time	1.5 sec	1.5 sec	1.5 sec
Bucket lower time	2.7 sec	2.7 sec	2.3 sec

^aWith three counterweights, zero sprocket weight

^bWith four counterweights and two sprocket weights

Maximum Travel Speeds		
455G Loader:		
Forward Gear Speeds:	km/h	mph
1	3.7	2.3
2	5.3	3.3
3	6.6	4.1
4	9.5	5.9
Reverse Gear Speeds:	km/h	mph
1	4.0	2.5
2	5.8	3.6
3	7.2	4.5
4	10.3	6.4

Operating Weight:

	Standard Track w/ROPS	8503 kg (18 745 lb)
	Wide Track w/ROPS	8866 kg (19 545 lb)
Adjustment to operating weights:		
	Cab	add 306 kg (676 lb)
	Bucket teeth, bolt-on	minus 63 kg (139 lb)
	Radial ripper w/3-shanks, w/o drawbar and counterweight	add 32 kg (70 lb)
	Counterweight	add 136 kg (300 lb)

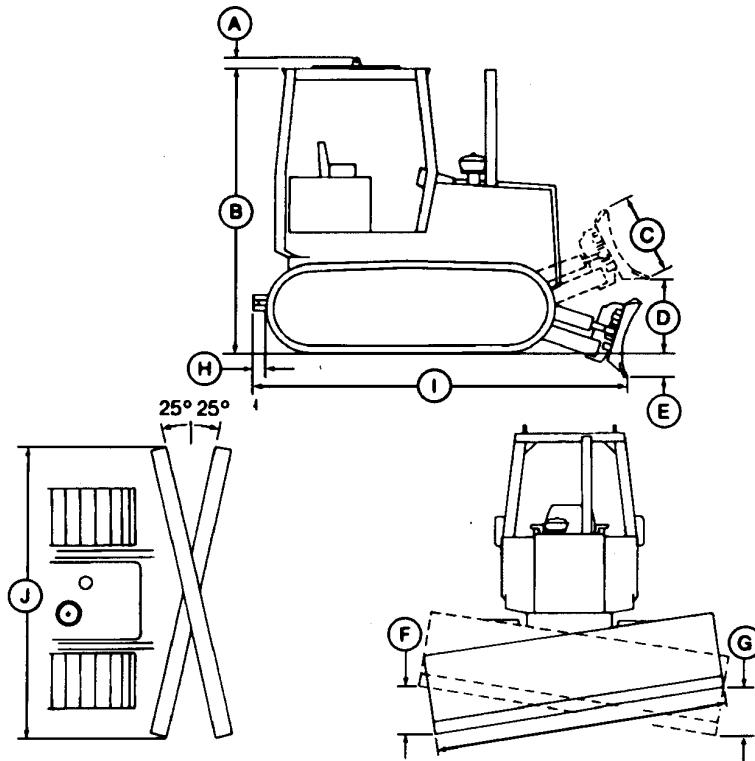
TX,115,RR3026 -19-14APR94-1/1

455G Drain and Refill Capacities

	Metric	English
Fuel tank	155 L	41 gal
Engine coolant	17 L	18 qt
Engine oil, including filter change (S.N. —840460)	8.5 L	9 qt
Engine oil, including filter change (S.N. 840461—)	14 L	15 qt
Transmission add 34 L (9 gal) w/winch if equipped	102 L	27 gal
Hydraulic reservoir	37.8 L	10 gal
Final drive (each side)	6.6 L	7 qt

TX,115,RR3044 -19-14APR94-1/1

550G—LT Crawler Dozer Specifications



NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective

structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Blade capacity shown is for a 2230 mm (7 ft 3.8 in.) blade. All blades are interchangeable between the 450G, 550G, and the 650G.

Item	Measurement	Specification
Operator	Weight	80 kg (175 lb)
Blade	Angled Width	2230 mm (7 ft 3.8 in.)

A—Canopy extension	60 mm (2.4 in.)
B—Canopy height	2.72 m (8 ft 11 in.)
C—Blade height	847 mm (2 ft 9.3 in.)
D—Blade lift height	866 mm (2 ft 10.1 in.)
E—Digging depth	460 mm (1 ft 6.1 in.)
F—Blade tilt (right side):	
Standard blade	357 mm (2 ft 1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
G—Blade tilt (left side):	
Standard blade	357 mm (1 ft 2.1 in.)
Wide blade	391 mm (1 ft 3.4 in.)
H—Drawbar extension	280 mm (11 in.)
I—Overall length	3917 mm (12 ft 10.2 in.)
J—Blade width:	
Standard blade (angled width)	2415 mm (7 ft 11.1 in.)
Wide blade (angled width)	2686 mm (8 ft 9.7 in.)
Standard blade	2667 mm (8 ft 9 in.)
Wide blade	2921 mm (9 ft 7 in.)

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TX,115,FF1816 -19-12JAN93-1/2

T7347AC —UN—23JUL90

General Specifications

Track gauge:	1550 mm (61 in.)
Blade capacity:	
Standard blade	1.7 m ³ (2.3 yd ³)
Wide blade	1.8 m ³ (2.3 yd ³)

Engine: John Deere 4045T (S.N. —840460) or John Deere PowerTech 4.5L engine type 4045TT062 (S.N. 840461—)

Type	Turbocharged
Bore and stroke	106.5 x 127 mm (4.19 x 5.00 in.)
No. of cylinders	4
Fuel consumption, typical (S.N. —840460)	7.0 to 10.5 L/h (1.8 to 2.8 gal/h)
Fuel consumption, typical (S.N. 840461—)	4.9 to 8.7 L/h (5 to 2.3 gal/hr)
Compression ratio (S.N. —840460)	17.2 to 1
Compression ratio (S.N. 840461—)	17 to 1
Electrical system	12 volt (with battery disconnect switch, if equipped)
Battery	12 volt
Alternator (S.N. —840460)	65 amp
Alternator (S.N. 840461—)	95 amp
SAE net power at 2100 rpm	59.5 kW (80 hp)
SAE gross power at 2100 rpm	62 kW (83 hp)
Maximum net torque at 1300 rpm	353 N·m (260 lb-ft)
Drawbar	43 kW (58 hp)
Displacement (S.N. —840460)	4.524 L (276 cu in.)
Displacement (S.N. 840461—)	4.5 L

Transmission: Powershift (4F-4R) with torque converter or direct drive. Full power shift, Dura-Shift with torque converter or direct drive, designed and built by John Deere. You can power shift easily from one gear to another as conditions change without stopping the machine or using a clutch. Power control inching pedal adds versatility. Four speeds forward and reverse allow the operator to match speeds to the working conditions.

Hydraulic pump:	Gear
Pressure	18 961 kPa (2750 psi)
Flow at 2100 rpm	64 L/min (17 gpm)

Steering:

Clutches	Wet multiple disk
Brakes	Wet band

Undercarriage:

Grouser, closed-center	457 mm (18 in.)
Track shoes, each side	40
Ground contact area	17 626 cm ² (2732 in. ²)
Ground pressure (direct drive)	44.1 kPa (6.4 psi)
Ground pressure (torque converter)	44.7 kPa (6.47 psi)

Operating Weight (with ROPS):

Direct Drive	7947 kg (17 483 lb)
Torque Converter	8038 kg (17 683 lb)

TX,115,FF1816 -19-12JAN93-2/2

General Specifications

550G—LT Drain and Refill Capacities

	Metric	English
Fuel tank	155 L	41 gal
Engine coolant	17 L	18 qt
Engine oil, including filter change (S.N. —840460)	12.3 L	13 qt
Engine oil, including filter change (S.N. 840461—)	14 L	14.8 qt
Transmission:		
Transmission, direct drive (S.N. —790984)	80.25 L	21.2 gal add 34 L (9 gal) w/winch if equipped
Transmission, direct drive (S.N. 790985—)	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Transmission, torque converter	102 L	27 gal add 34 L (9 gal) w/winch if equipped
Hydraulic reservoir	38 L	10 gal
Hydraulic system	55.3 L	14.6 gal
Final drive (each side)	9.5 L	10 qt

TX,115,FF1917 -19-08OCT93-1/1