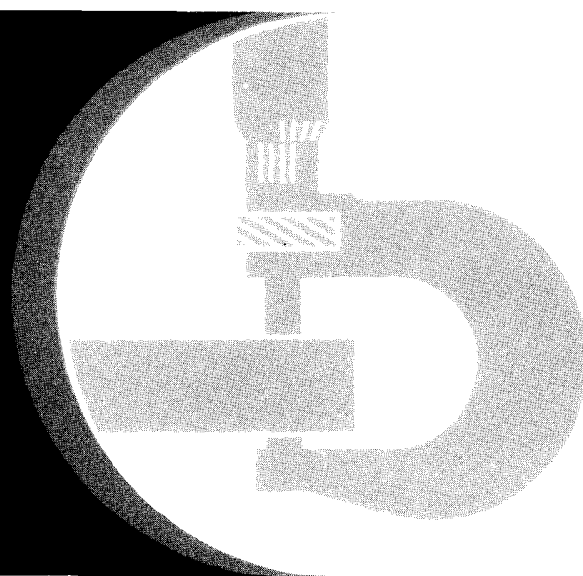


John Deere JD555 Crawler Loader



TECHNICAL MANUAL

John Deere Dubuque Works
TM-1111



Litho in U.S.A.

JD555 Crawler Loader

Technical Manual
TM-1111 (Nov-86)

SECTIONAL CONTENTS OF THIS MANUAL

Section 1 - General Information _____	_____
Section 1 - Tracks _____	_____
Section 2 - Axles and Suspension Systems _____	_____
Section 3 - Transmission _____	_____
Section 4 - Engines _____	_____
Section 5 - Engine Auxiliary Systems _____	_____
Section 6 - Torque Converter _____	_____
Section 9 - Steering Systems _____	_____
Section 15 - Equipment Attaching _____	_____
Section 16 - Electrical Systems _____	_____
Section 17 - Crawler Main Frame _____	_____
Section 18 - Operator's Station _____	_____
Section 19 - Sheet Metal _____	_____
Section 21 - Main Hydraulic System _____	_____
Section 30 - Winch _____	_____
Section 31 - Loader _____	_____
Section 33 - Backhoe _____	_____

continued on page 3

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SECTIONAL CONTENTS (Continued)

Section 37 - Log Arch _____	████████████████████
Section 40 - Winch Drive _____	████████████████████
Section 42 - Ground Conditioning Tool _____	████████████████████
Section 90 - System Testing _____	████████████████████
Section II - Index _____	████████████████████

The specifications and design information contained in this manual were correct at the time it was printed. It is John Deere's policy to continually improve and update our machines. Therefore, the specifications and design information are subject to change without notice. Wherever applicable, specifications and design information are in accordance with SAE and IEMC standards.

SECTION AND GROUP CONTENTS OF THIS MANUAL

SECTION 1 - GENERAL INFORMATION

- Group I - Contents
- Group II - Introduction and Safety Information
- Group III - General Specifications
- Group IV - Predelivery, Delivery and After-Sale Services
- Group V - Lubrication

SECTION 1 - TRACKS

- Group 0130 - Track Systems
- Group 0199 - Specifications and Special Tools

SECTION 2 - AXLES AND SUSPENSION SYSTEMS

- Group 0201 - Drive Axle Housing and Support
- Group 0210 - Differential or Bevel Drive
- Group 0225 - Input Drive Shafts
- Group 0250 - Axle Shaft, Bearings and Reduction Gears
- Group 0299 - Specifications and Special Tools

SECTION 3 - TRANSMISSION

- Group 0315 - Controls
- Group 0325 - Input Drive Shafts
- Group 0431 - Housings and Covers
- Group 0350 - Gears, Shafts, Bearings and Power Shift Clutch
- Group 0360 - Transmission Hydraulics
- Group 0399 - Specifications and Special Tools

SECTION 4 - ENGINES

- Group 0401 - Crankshaft and Main Bearings
- Group 0402 - Camshafts and Valve Actuating Means
- Group 0403 - Connecting Rods and Pistons
- Group 0404 - Cylinder Block (Liners)
- Group 0407 - Engine Oiling System
- Group 0408 - Ventilating System
- Group 0409 - Cylinder Head and Valves
- Group 0410 - Exhaust Manifold
- Group 0413 - Fuel Injection System
- Group 0415 - Engine Balancer
- Group 0416 - Turbocharger
- Group 0417 - Water Pump
- Group 0418 - Thermostats, Housings and Piping
- Group 0419 - Engine Oil Cooler
- Group 0420 - Fuel Filter
- Group 0421 - Fuel Transfer Pump
- Group 0422 - Starting System
- Group 0433 - Flywheel, Housing and Fasteners
- Group 0499 - Specifications and Special Tools

SECTION 5 - ENGINE AUXILIARY SYSTEMS

- Group 0505 - Cold Weather Starting Aids
- Group 0510 - Engine Cooling Systems
- Group 0520 - Intake System
- Group 0560 - External Fuel Supply Systems
- Group 0599 - Specifications and Special Tools

SECTION 6 - TORQUE CONVERTER

- Group 0615 - Controls and Linkage
- Group 0641 - Converter Housing and Cover
- Group 0651 - Converter Turbine, Gears, Shafts, Etc.
- Group 0660 - Converter Hydraulics
- Group 0699 - Specifications and Special Tools

SECTION 9 - STEERING SYSTEMS

- Group 0960 - Power Steering
- Group 0999 - Specifications and Special Tools

SECTION 15 - EQUIPMENT ATTACHING

- Group 1511 - Drawbar
- Group 1599 - Specifications and Special Tools

SECTION 16 - ELECTRICAL SYSTEMS

- Group 1671 - Batteries, Support and Cables
- Group 1672 - Alternator, Regulator and Charging System Wiring
- Group 1673 - Vehicle Lighting System
- Group 1674 - Wiring Harness and Switches
- Group 1699 - Specifications and Special Tools

SECTION 17 - CRAWLER MAIN FRAME

- Group 1741 - Crawler Main Frame
- Group 1746 - Frame Bottom Guard
- Group 1749 - Chassis Weights
- Group 1799 - Specifications and Special Tools

SECTION 18 - OPERATOR'S STATION

- Group 1808 - Comfort and Convenience Items
- Group 1810 - Operator Enclosure
- Group 1821 - Seat
- Group 1823 - Instruments and Indicators
- Group 1824 - External Engine Speed Controls
- Group 1899 - Specifications and Special Tools

SECTION 19 - SHEET METAL

- Group 1910 - Hood or Engine Enclosure
- Group 1921 - Grille and Grille Housing

SECTION 21 - MAIN HYDRAULIC SYSTEM

- Group 2160 - Hydraulic System
- Group 2199 - Specifications and Special Tools

SECTION 30 - WINCH

- Group 3015 - Controls Linkage
- Group 3041 - Winch Housing and Mounting Structure
- Group 3050 - Winch Drive and Clutches
- Group 3060 - Winch Hydraulic System
- Group 3099 - Specifications and Special Tools

SECTION 31 - LOADER

- Group 3102 - Buckets
- Group 3103 - Forks
- Group 3115 - Controls Linkage
- Group 3140 - Loader Frames
- Group 3160 - Loader Hydraulics
- Group 3199 - Specifications and Special Tools

SECTION 33 - BACKHOE

- Group 3302 - Bucket
- Group 3315 - Controls Linkage
- Group 3340 - Frames
- Group 3360 - Hydraulic System
- Group 3399 - Specifications and Special Tools

SECTION 37 - LOG ARCH

- Group 3740 - Frames

SECTION 40 - WINCH DRIVE

- Group 4051 - Gears, Shafts and Bearings
- Group 4099 - Specifications and Special Tools

SECTION 42 - GROUND CONDITIONING TOOL

- Group 4201 - Teeth and Shanks
- Group 4240 - Frame
- Group 4260 - Hydraulic System
- Group 4299 - Specifications and Special Tools

SECTION 90 - SYSTEM TESTING

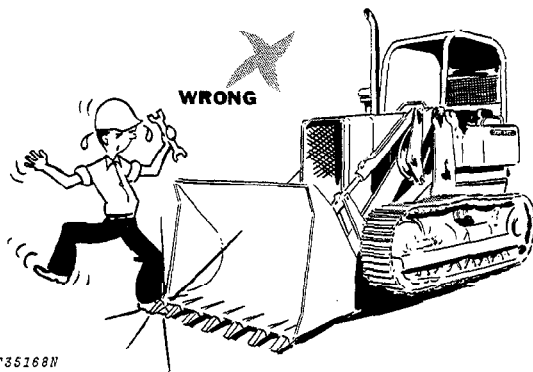
- Group 9005 - General Information - Seven Basic Steps of Testing and Diagnosis
- Group 9010 - Engine
- Group 9015 - Electrical System
- Group 9020 - Power Train
- Group 9025 - Hydraulic System
- Group 9025A - Hydraulic System (Analyzer)
- Group 9030 - Miscellaneous Components
- Group 9035 - Specifications and Special Tools

II INDEX

MAINTENANCE WITHOUT ACCIDENT

Before servicing, adjusting, or repairing crawlers which have attachments such as buckets, etc.—**LOWER** attachments to the ground—or, if necessary to raise them for access to certain parts, **SECURELY SUPPORT** by external means. **DO NOT** rely on controls to support or position attachments for maintenance.

Never allow **ANYONE** to walk under equipment that is raised and not properly blocked.

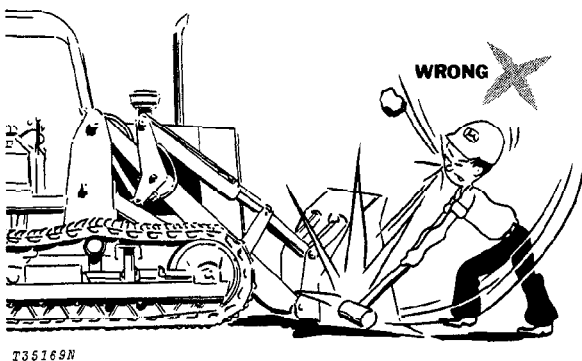


Avoid working directly under raised and blocked equipment unless absolutely necessary.

If the machine is on an incline, block it securely.

Use hoisting equipment for lifting heavy parts. **TAKE CARE! WATCH OUT FOR OTHER PEOPLE IN THE VICINITY.**

Use extreme caution in removing radiator caps, drain plugs, grease fittings, or hydraulic pressure caps.



Wear safety glasses when drilling, grinding, or hammering metal.

Make sure the maintenance area is adequately vented.

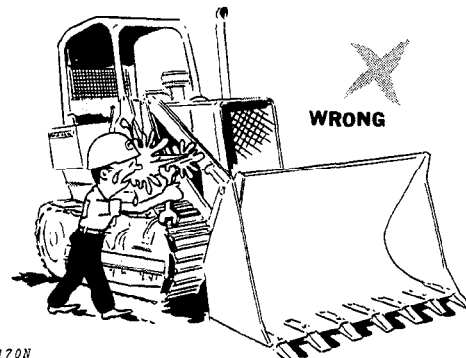
Keep maintenance area **CLEAN AND DRY**. Oily and wet floors are slippery; greasy rags are a fire hazard; wet spots are dangerous when working with electrical equipment.

Store starting aids in a cool and well-ventilated place, out of the reach of unauthorized personnel.

SERVICING PRECAUTIONS

Stop the engine before cleaning or lubricating the equipment.

Lower mounted equipment and tools to the ground *carefully*.



Engine coolant gets hot! Don't remove the radiator cap until coolant temperature is below the boiling point. Then turn cap slightly to relieve pressure before removing.

Exhaust gases are dangerous! Periodically check exhaust system for excessive leakage.

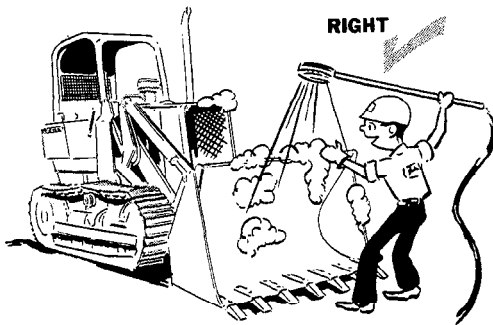
Don't forget a hydraulic system may be pressurized! To relieve pressure, shut off engine and move control levers until hydraulic functions do not respond.

When checking hydraulic pressure, be sure to use the correct test gauge for the pressure in the particular system.

MAINTENANCE WITHOUT ACCIDENT

Keep ALL equipment free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.

When preparing engine for storage, remember that inhibitor is volatile and therefore dangerous. Seal and tape openings after adding the inhibitor. Keep container tightly closed when not in use.

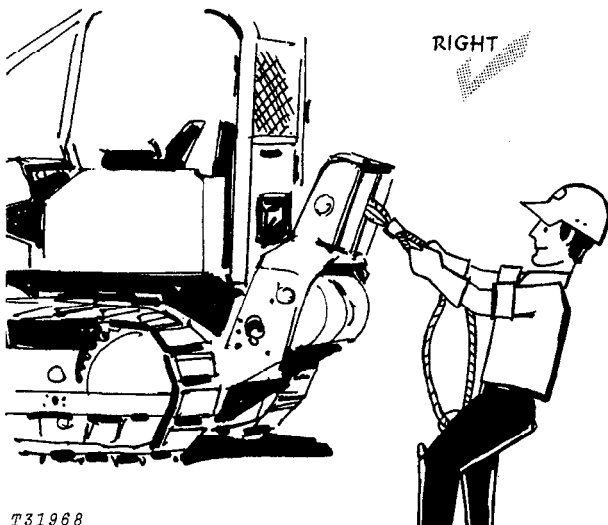


T35171N

ADJUSTING PRECAUTIONS

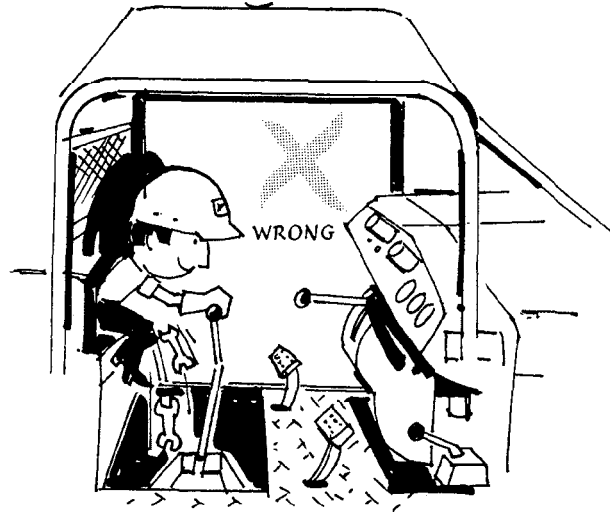
... for Operating Adjustments

Keep clutch and brake control units properly adjusted at all times. Before making adjustments, stop engine.



T31968

Always Wear Gloves When Handling Cable.

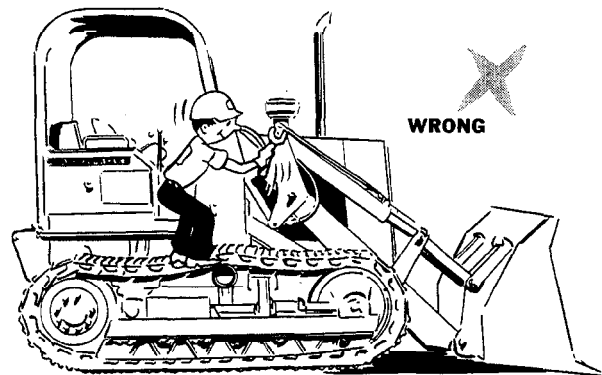


T31969

Before removing any housing covers, stop engine. Take all objects from your pockets which could fall into the opened housings. Don't let adjusting wrenches fall into opened housings.

... for Maintenance Adjustments

Don't attempt to check belt tension while the engine is running.



T35172N

Don't adjust the fuel system while the machine is in motion.

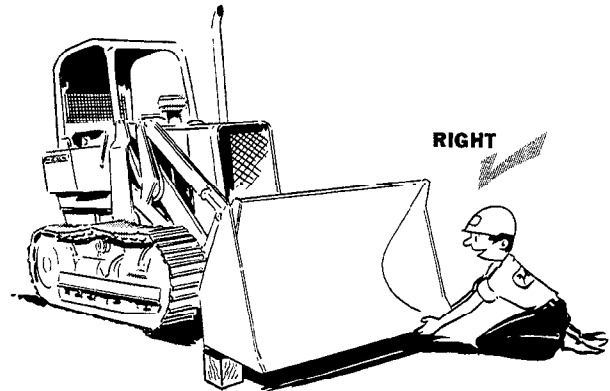
MAINTENANCE WITHOUT ACCIDENT

PRECAUTIONS DURING REPAIR

Before working on the engine fuel system—close fuel shutoff valve.

Before working on hydraulic system—make sure engine is not running and the system pressure is relieved by working the control levers in all directions with the engine shut off.

Before repairing the electrical system, or performing a major overhaul, make sure the batteries are disconnected.

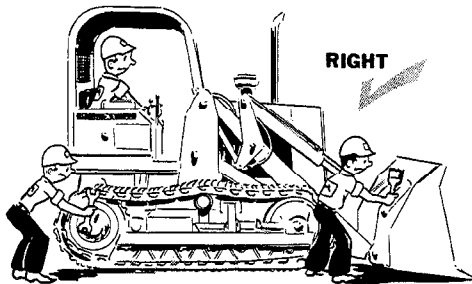


T35174N

When changing cutting edges on the bucket—

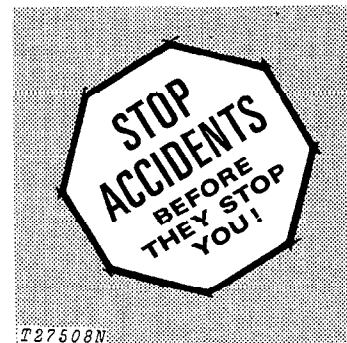
Stop the engine and securely block the bucket.

Never let your bare hands come in contact with the sharp edges. WEAR GLOVES.



T35173N

Keep all equipment free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.



T27508N

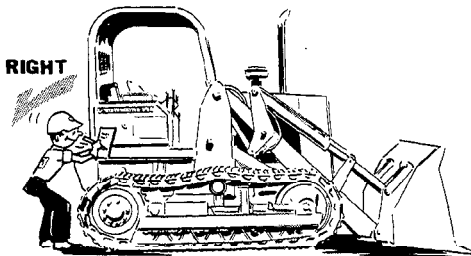
MAINTENANCE WITHOUT ACCIDENT

KNOW EQUIPMENT IS READY!

Check guards, ROPS, safety bars—all protective devices installed on the crawler. Every one should be in place and secure.

CHECK IT OUT!

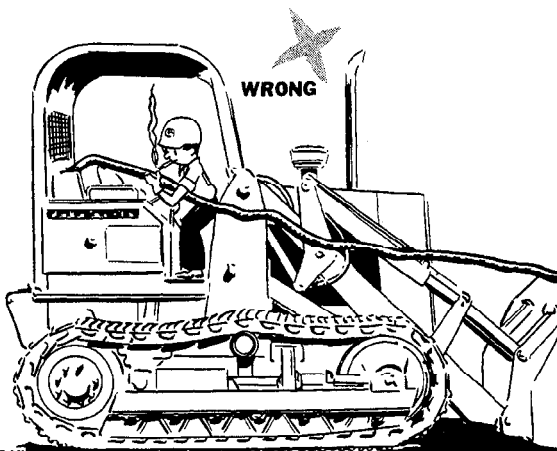
- GUARDS
- SHIELDS
- PROTECTIVE DEVICES
- ROLL-OVER PROTECTIVE STRUCTURES
- SEAT BELTS, ETC.



T35175N

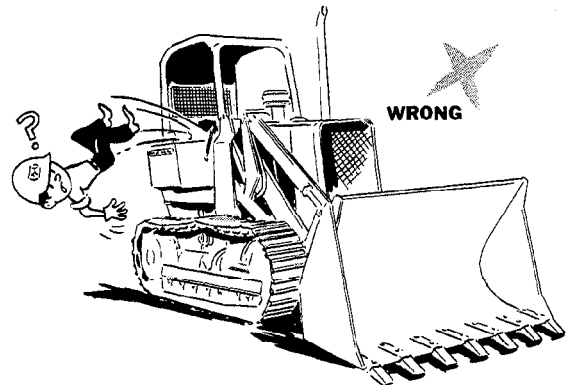
Carefully inspect equipment for visual defects—leaks in fuel, lubrication, and hydraulic systems. Do not search for pressurized fluid leaks with your hands. Use cardboard or wood to search for leaks.

Check and secure all caps and filler plugs for fuel, oils, radiator, etc.



T35176N

Check levels of fuel, coolant, hydraulic fluid, and lubricating oil. If fuel must be added—**FIRST, PUT OUT THAT CIGARET.**



T35177N

Be sure to clean any oil, grease or mud accumulation from floor of operator's compartment, stepping points, and grab rails to minimize the danger of slipping.

In freezing weather beware of snow or ice deposits on stepping points, grab rails, and floor.

Remove loose bolts, tools, or other objects from floor of operator's compartment.

Although it is impractical to try to cover every possible maintenance situation, the safety precautions recommended here should serve to develop and promote safe maintenance procedures.

The information contained in this manual is not intended to replace safety codes, insurance requirements, federal, state, and local laws, rules and regulations. In particular, your service area or jobsite activities may be subject to state safety rules and/or federal regulation under the Occupational Safety and Health Act (OSHA). Familiarize yourself with all regulations applicable to your situation in order to avoid possible safety violations.

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Group III

GENERAL SPECIFICATIONS

(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 unit equipped with 1-1/4 cu. yd. (0.96 m³) digging bucket with teeth, roll-over protective structure and standard equipment.)

Power (@ 2,200 engine rpm):	SAE	DIN
Gross	80 hp (59.7 kW*)	
Net	72 hp (53.7 kW*)	73 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator and muffler. The gross engine power is without fan. Gross and net flywheel power ratings are under SAE standard conditions of 500-ft. (152 m) altitude and 85°F (29°C) temperature and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 feet (3000 m) altitude.

**In the international system of units (SI), power is expressed in Kilowatts (kW).*

ENGINE:

John Deere, 4-cylinder, turbocharged diesel, 4-stroke cycle

Bore and stroke	4.19 x 5.00 in. (106.4 x 127 mm)
Piston displacement	276 cu. in. (4 523 cm ³)
Compression ratio	16.2 to 1
Maximum torque @ 1,200 rpm	230 lb-ft (31.8 kg-m)
NACC or AMA (U.S. Tax) horsepower	28
Lubrication	Pressure system with full-flow filter and cooler
Main bearings	5
Cooling	Pressurized with dual thermostat and controlled bypass
Fan	Blower
Air cleaner with restriction indicator	Dry
Electrical system	12-volt
Battery	Reserve capacity: 180 minutes

TRANSMISSION:

Converter-driven, 3-speed forward and reverse, Power Shift.

STEERING:

Steering clutches and brakes are controlled by a single pedal for each track. A separate pedal provides braking, and lockdown for parking.

Clutches . . . Oil-cooled, hydraulically-actuated, multiple-disk, 11-in. (279 mm) disks; 16 friction surfaces per clutch.

Brakes . . . Self-adjusting, self-energizing, oil-cooled contracting band with bonded lining.

TRAVEL SPEEDS:

	Forward		Reverse	
	mph	km/h	mph	km/h
1st	2.01	3.23	2.42	3.89
2nd	3.26	5.25	3.90	6.28
3rd	5.63	9.06	6.75	10.86

HYDRAULIC SYSTEM:

Control	Triple hydraulic valve with single-lever bucket control and third function control
Pump	Gear, 28 gpm (106 Lpm)
Pressure	2,250 psi (158.2 kg/cm ²)
Oil lines	Seamless steel tubing; double-wire braid hose
Filter	Micronic in return line

HYDRAULIC CYLINDERS:

	Bore	Stroke
Boom, two	4.25-in. (108 mm)	28.25-in. (718 mm)
Bucket, two	3.5 in. (89 mm)	31.1-in. (790 mm)
Cylinder rods	Ground, heat-treated, chrome-plated, polished	
Boom cylinder rods	2.25-in. (57 mm) dia.	
Bucket cylinder rods	1.75 in. (44.5 mm) dia.	

TRACKS (5-roller track frames with rock guards):
 Triple semi-grouser,
 open-center 14-in. (356 mm)
 Track shoes, each side 37
 Ground contact area 2,128 sq. in. (13 729 cm²)
 Ground pressure 8.2 psi (0.58 kg/cm²)
 Length of track on ground 76 in. (1.93 m)
 Track gauge 52 in. (1.32 m)
 Carrier roller 1
 Adjustment Hydraulic
 Clearance at rear crossbar 14.25 in. (362 mm)

BUCKETS:	SAE Heaped	
	Capacity	Width
Digging	1-1/4 cu. yd. (0.96 m ³)	72.25 in. (1.84 m)
Light Materials	1-3/4 cu. yd. (1.34 m ³)	78.25 in. (1.99 m)
Multi-purpose	1-1/4 cu. yd. (0.96 m ³)	73 in. (1.85 m)

OPERATING INFORMATION:

Breakout force 15,750 lb. (7 144 kg)
 Lifting capacity, full height 10,600 lb. (4 808 kg)
 Maximum dumping angle 50 deg.
 Raising time 7.0 sec.
 Dumping time 1.6 sec.
 Lowering time 4.0 sec.

CAPACITIES:	U.S.	Litres
Cooling system	5 gal.	18.9
Fuel tank	36 gal.	136.3
Crankcase including filter	15 qt.	14.2
Transmission (total capacity)	13.5 gal.	51.1
Final drive (each)	7 qt.	6.6
Hydraulic reservoir	7 gal.	26.5
Hydraulic system	13 gal.	49.2
Steering clutch housing		
(each side)	28 qt.	26.5
Winch reservoir	9 qt.	8.5
SAE operating weight with ROPS	18,225 lb.	(8 267 kg)

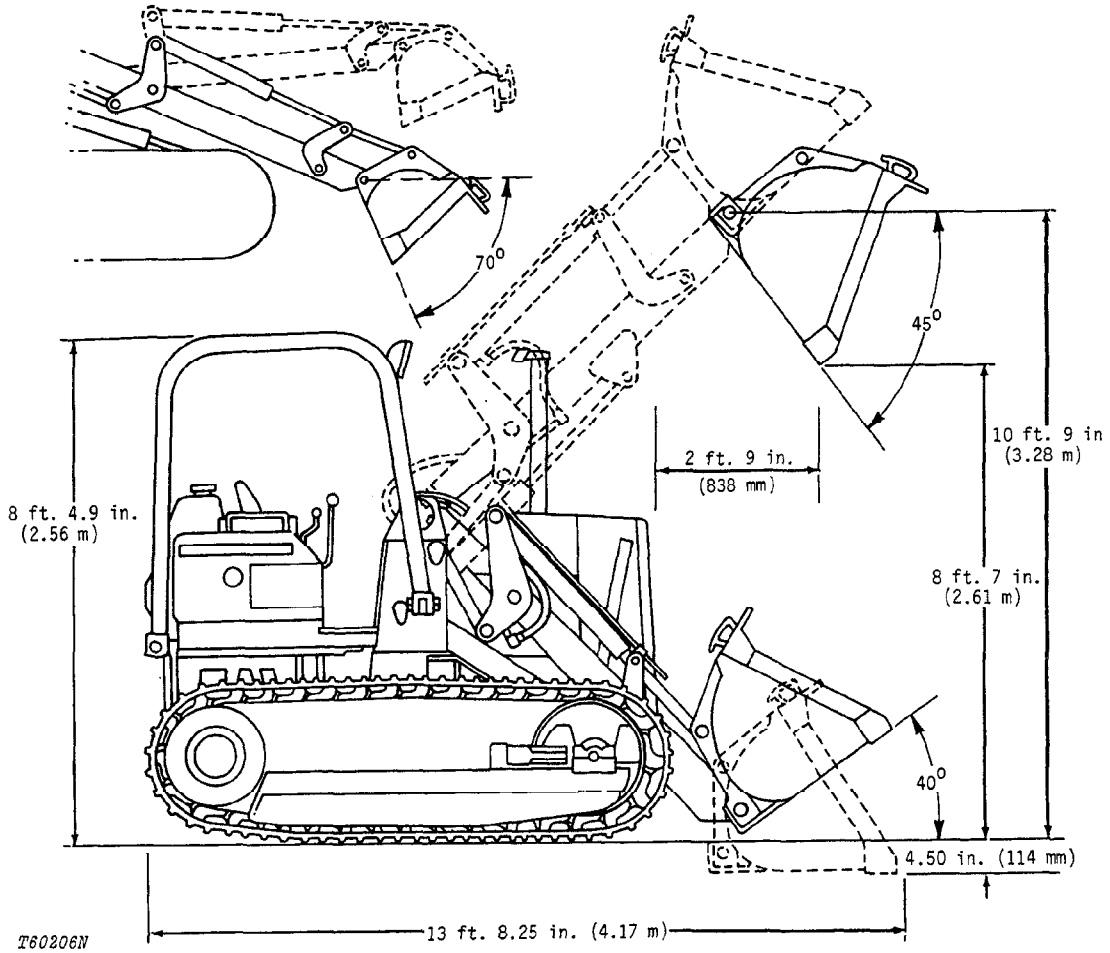
ADDITIONAL STANDARD EQUIPMENT:

Front bottom guard
 Front hitch
 Cushion seat with arm rests
 Key switch with push-button start switch
 Precleaner
 Electric hour meter
 Cigar lighter
 Vandal protection
 Bottom guard counterweight with fixed drawbar
 Bucket level indicator
 Radiator sand shield
 Sprocket weights
 Lights
 Enclosed alternator with solid state regulator
 Engine side shields
 Boom safety lock bar
 Muffler
 Tachometer
 Cold weather starting aid
 Front idler shields
 Master electrical disconnect switch
 Return-to-dig
 Decelerator
 Pedal steering

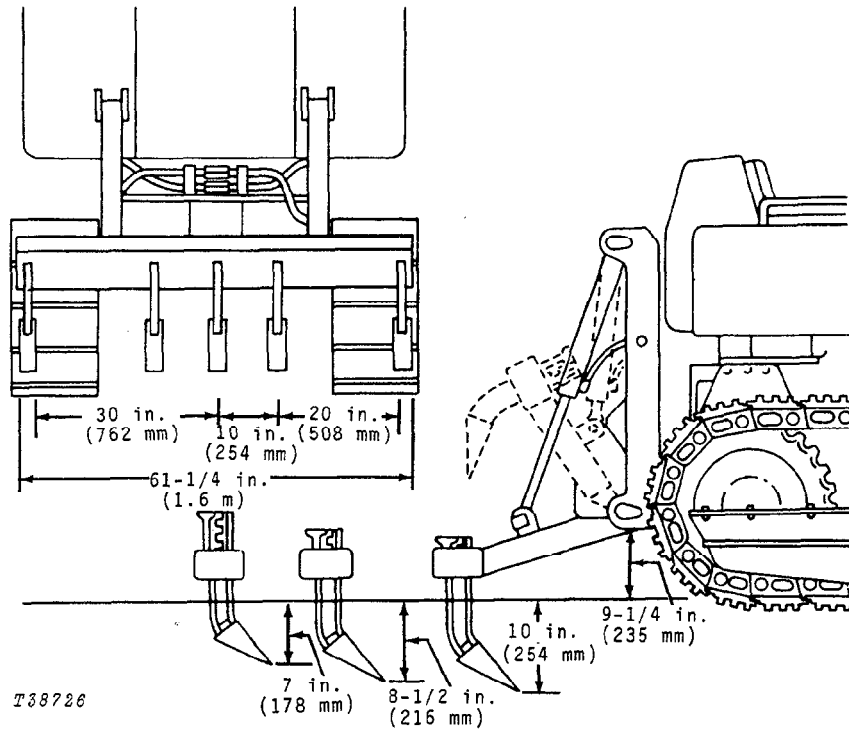
SPECIAL EQUIPMENT:

13-in. (330 mm) rubber shoes
 Cab (includes ROPS)
 Winch drive
 Two batteries
 Rear counterweight for multi-purpose bucket or log loader
 Brush screens
 Limb risers with overhead exhaust

LOADER OPERATING DIMENSIONS



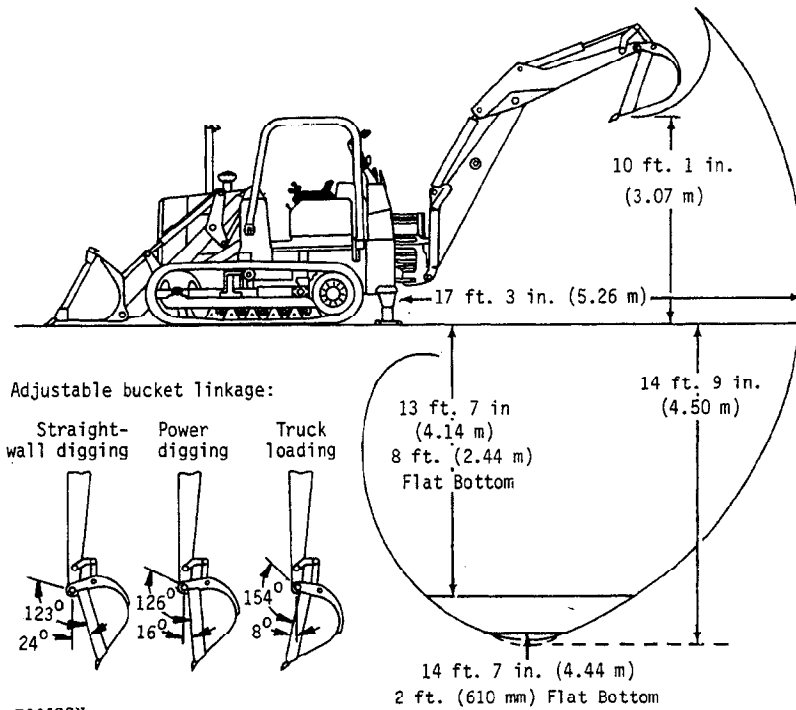
3110 RIPPER DIMENSIONS



T38726

Width (overall)	66 inches (1.7 m)
Working width (max.)	61-1/4 inches (1.6 m)
Penetration (Adjustable)	7, 8-1/2, 10 inches (178, 216 and 254 mm)
Cylinders	Double-Acting
Bore	2-1/2 inches (63.5 mm)
Stroke	15 inches (381 mm)
Weight with three teeth	685 pounds (311 kg)
Ground clearance at frame	9-1/4 inches (235 mm)

9300 BACKHOE SPECIFICATIONS



T60533N

Operating Information:

Digging Depth (ICED):

Maximum	14 ft. 9 in. (4.50 m)
2-ft. (610 mm) flat bottom	14 ft. 7 in. (4.44 m)
8-ft. (2.44 m) flat bottom	13 ft. 7 in. (4.14 m)
Swing arc	180 deg.
Digging force (bucket cylinder), ICED	9226 lb. (41.35 kN) (4185 kg)
Digging force, crowd cylinder	5835 lb. (26.15 kN) (2647 kg)
Reach from center of swing mast, ICED	17 ft. 3 in. (5.26 m)
Loading height, ICED	10 ft. 1 in. (3.07 m)
Transport height	11 ft. 1 in. (3.38 m)

Hydraulic System

Pressure	2250 psi (155.1 bar) (158.2 kg/cm ²)
Pump	28 gpm (106 L/min) @ 2500 engine rpm

Hydraulic Cylinders:

	Bore	Stroke	Rod Diameter
Boom	4.5-in. (114 mm)	34-in. (864 mm)	2.25-in. (57 mm)
Crowd	4-in. (102 mm)	33-in. (838 mm)	2-in. (51 mm)
Bucket	3.5-in. (89 mm)	27.37-in. (695 mm)	2.25-in. (57 mm)
Stabilizer	4-in. (102 mm)	16.62-in. (422 mm)	2-in. (51 mm)

Swing cylinder Rotary vane-type; built-in automatic swing cushion
Cylinder rods.....Ground, heat-treated, chrome-plated, polished

Stabilizer Width:

Transport position	7 ft. 3 in. (2.21 m)
Operating position (overall)	10 ft. 6 in. (3.20 m)
Operating position (ICED)	9 ft. 1 in. (2.77 m)

Buckets:

	Width		Struck Capacity	
	in.	mm	cu. ft.	m ³
Standard	12	305	2.5	0.071
	16	406	3.6	0.102
	18	457	4.4	0.125
	24	610	6.0	0.170
	30	762	7.6	0.215
Heavy-duty	36	914	7.2	0.204
	18	457	4.4	0.125
	24	610	6.0	0.170
Ejector	30	762	7.6	0.215
	24	610	4.2	0.119

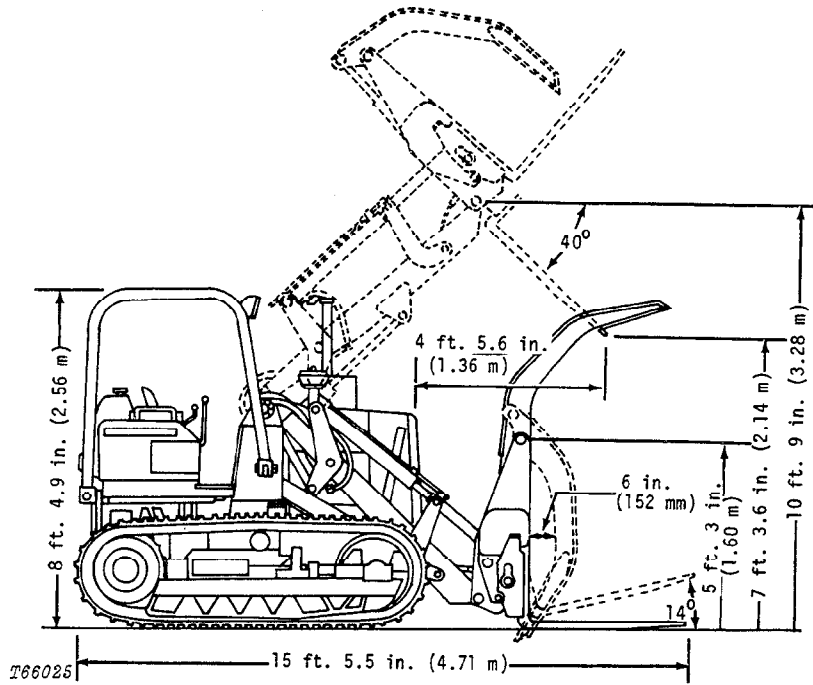
Attachments:

Ripper tooth replaces backhoe bucket. Cast steel, 225 lb. (102 kg) tooth has hardened replaceable tip. Bolt-on rubber street pads for stabilizer pads.

Shipping Weight:

Exclusive of mounting parts, bucket, and front counterweights 3200 lb. (1452 kg)

LUMBER FORK (WITH CLAMP) DIMENSIONS



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