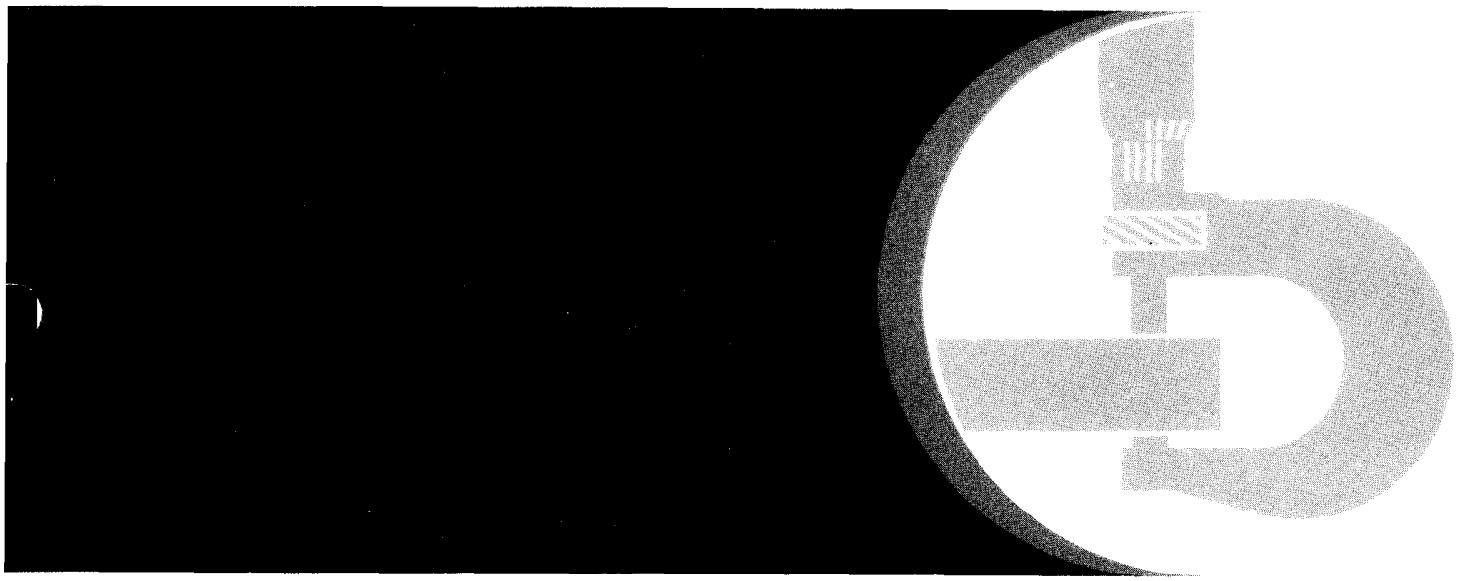
John Deere
JD555
Crawler Loader



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

continued on page 3

Litho in U.S.A.

SECTIONAL CONTENTS (Continued)

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.

Litho in U.S.A.

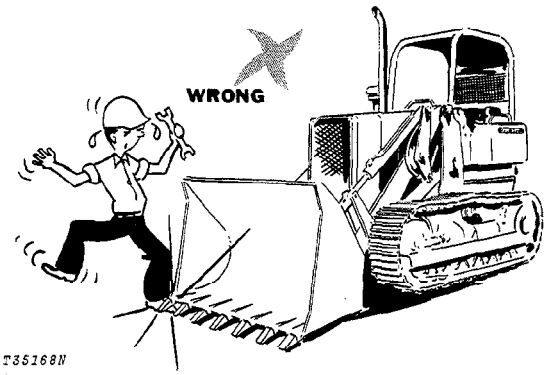
SECTION AND GROUP CONTENTS OF THIS MANUAL

Litho in U.S.A.

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.



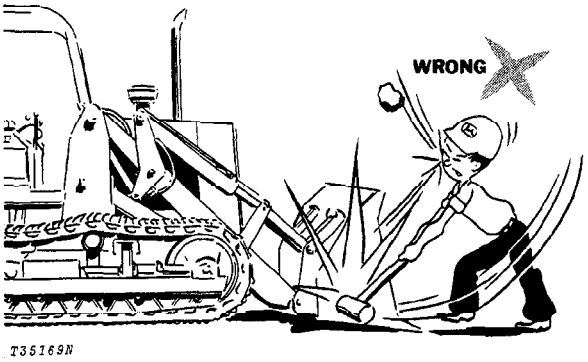
T35168N

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.



T35169N

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

Make sure the maintenance area is adequately vented.

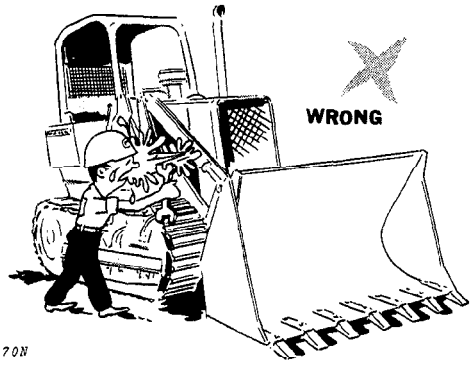
Keep maintenance area CLEAN AND DRY. Oily and wet floors are slippery; greasy rags are a fire hazard; wet spots are dangerous when working with electrical equipment.

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.*



T35170N

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.

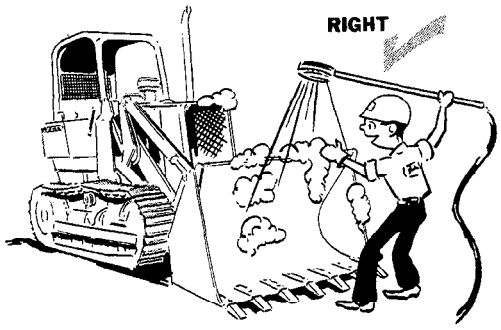
Don't forget a hydraulic system may be pressurized! To relieve pressure, shut off engine and move control levers until hydraulic functions do not respond.

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.

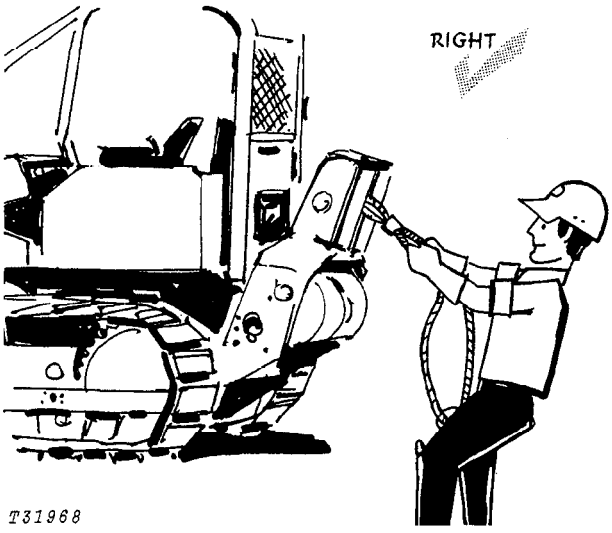


T35171N

ADJUSTING PRECAUTIONS

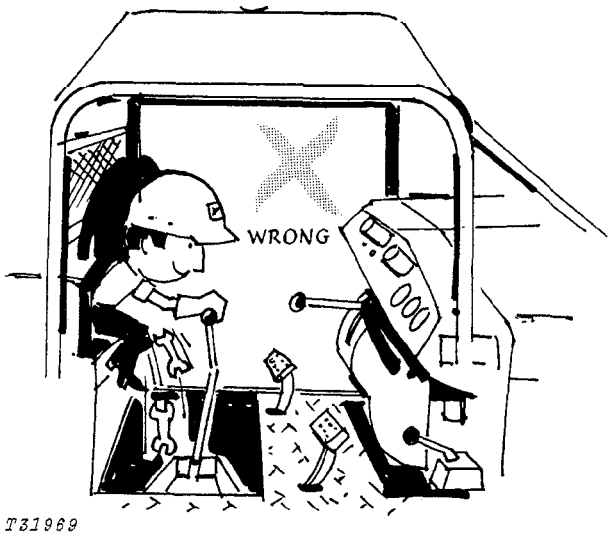
....for Operating Adjustments

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



T31968

Always Wear Gloves When Handling Cable.

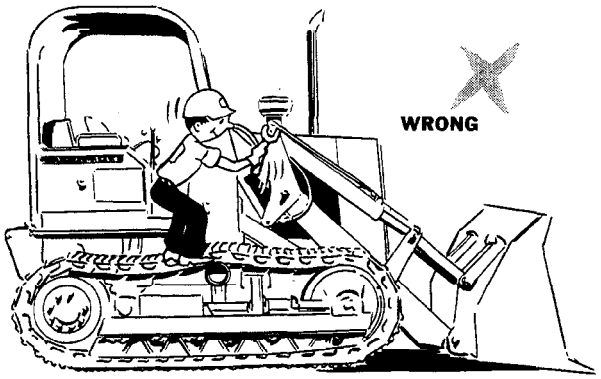


T31969

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.

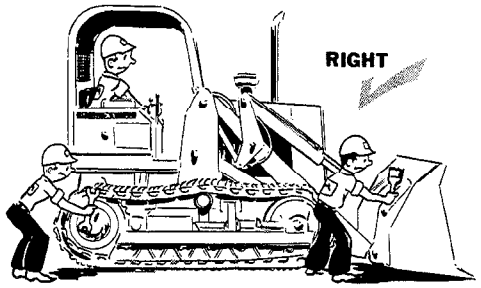
MAINTENANCE WITHOUT ACCIDENT

PRECAUTIONS DURING REPAIR

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

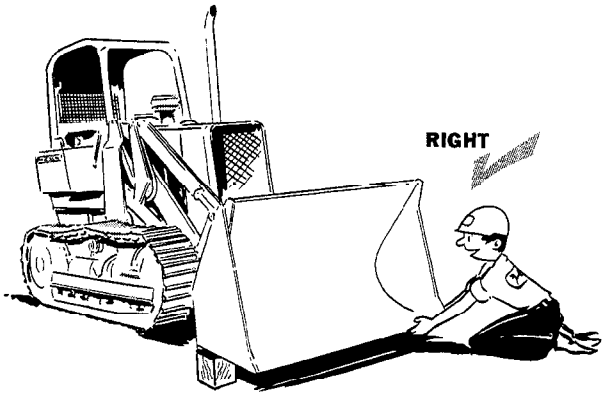
Before working on hydraulic system—make sure engine is not running and the system pressure is relieved by working the control levers in all directions with the engine shut off.

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



T35173N

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



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.

T27508N

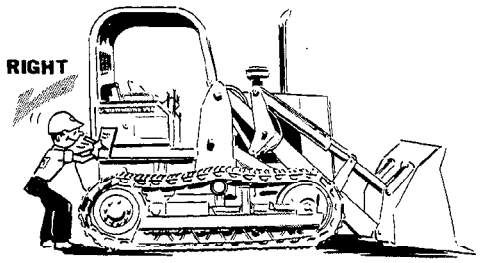
MAINTENANCE WITHOUT ACCIDENT

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!

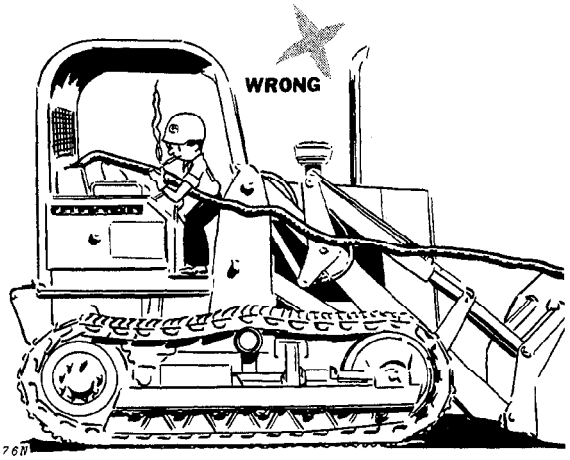
- ☐ GUARDS
- ☐ SHIELDS
- ☐ PROTECTIVE DEVICES
- ☐ ROLL-OVER PROTECTIVE STRUCTURES
- ☐ SEAT BELTS, ETC.



T35175N

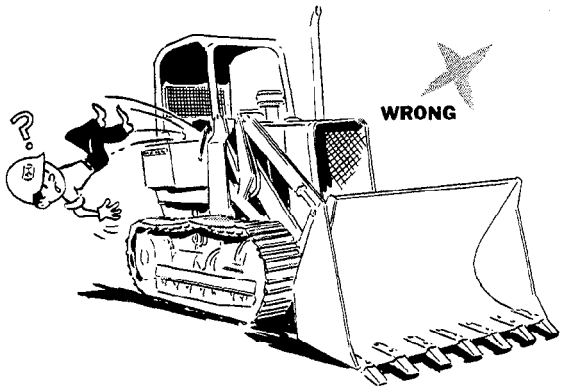
Carefully inspect equipment for visual defects—leaks in fuel, lubrication, and hydraulic systems. Do not search for pressurized fluid leaks with your hands. Use cardboard or wood to search for leaks.

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 cm³)
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/cm²)
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.

Litho in U.S.A.

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 m³)	72.25 in. (1.84 m)
Light Materials	1-3/4 cu. yd. (1.34 m³)	78.25 in. (1.99 m)
Multi-purpose	1-1/4 cu. yd. (0.96 m³)	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

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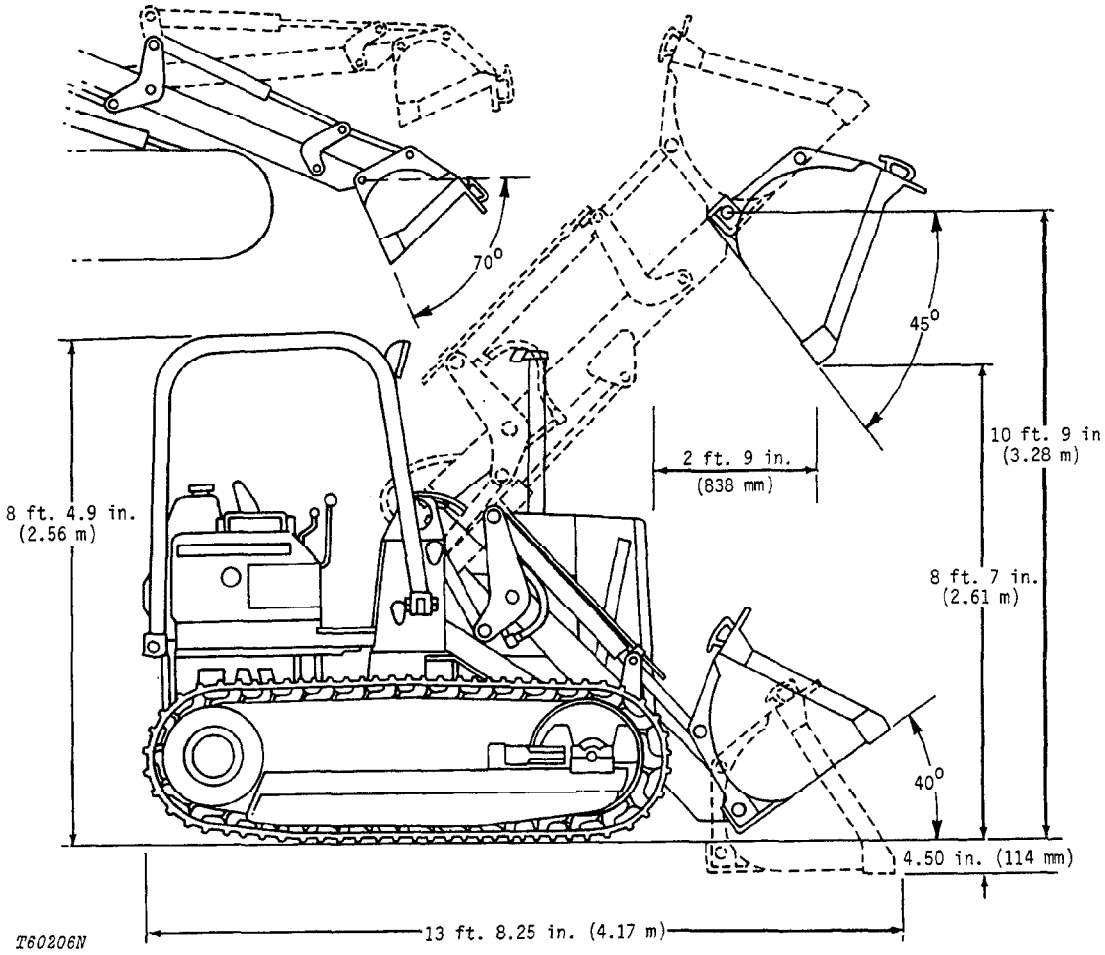
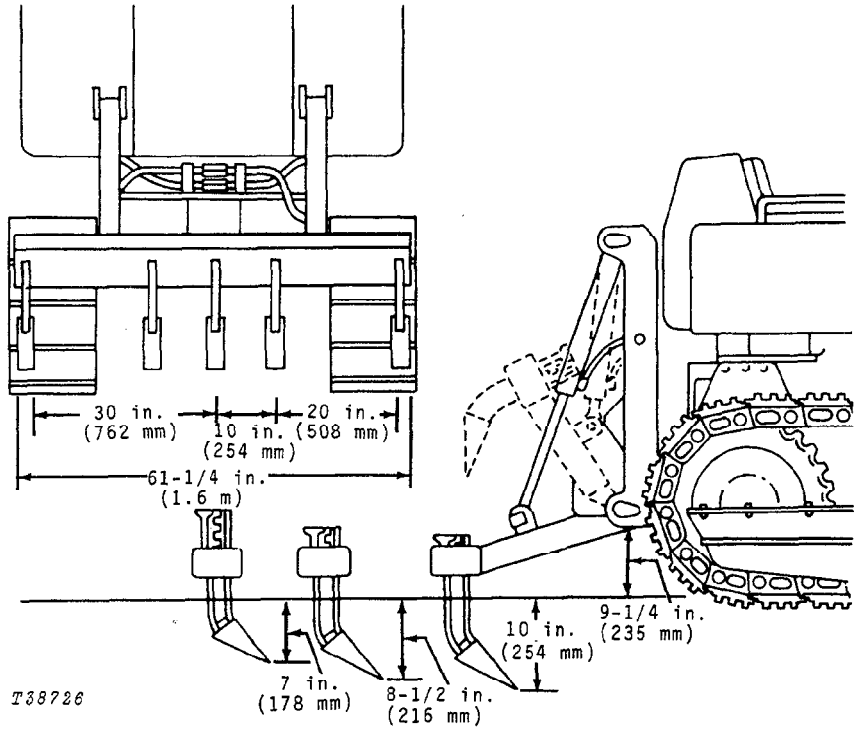
LOADER OPERATING DIMENSIONS

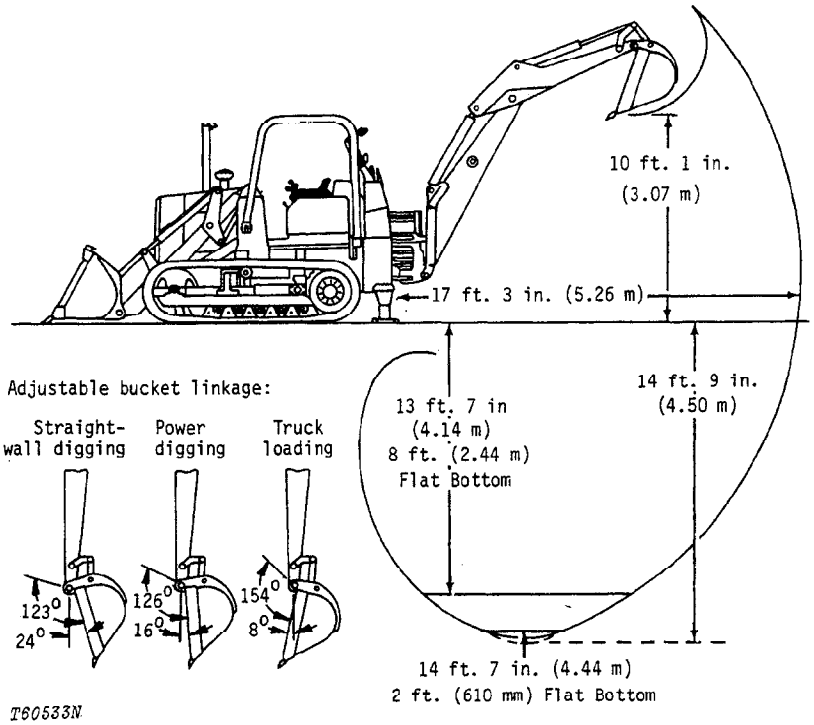


3110 RIPPER DIMENSIONS



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



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/cm²)
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.	m³
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
	36	914	7.2	0.204
Heavy-duty	18	457	4.4	0.125
	24	610	6.0	0.170
	30	762	7.6	0.215
Ejector	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