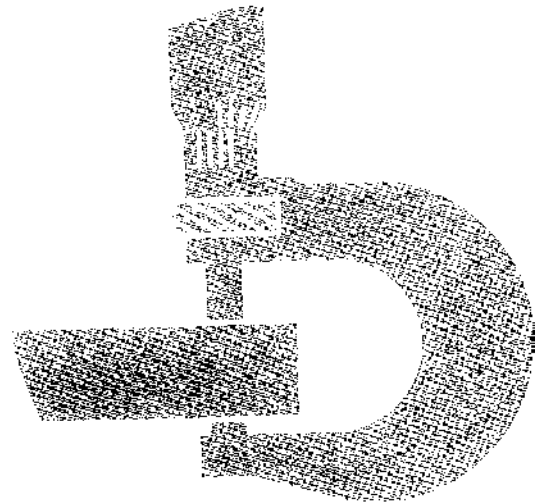


**John Deere
740
Skidder**



TECHNICAL MANUAL

JD740 SKIDDER Technical Manual TM-1059 (Dec-79)

SECTION AND GROUP CONTENTS OF THIS MANUAL

Section I - GENERAL INFORMATION

- Group I Contents and Index
- Group II Introduction and Safety Information

Section 10 - GENERAL

- Group 5 Specifications
- Group 10 Predelivery, Delivery, and After-Sale Services
- Group 15 Lubrication

Section 20 - ENGINE

- Group 4 Engine Removal and Installation
- Group 5 Basic Engine
- Group 10 Engine Lubrication System
- Group 15 Speed Control Linkage
- Group 20 Engine Cooling System
- Group 25 Specifications and Special Tools

Section 30 - FUEL SYSTEM

- Group 5 Fuel Tank and Filters
- Group 10 Air Intake System
- Group 15 Fuel Injection System
- Group 20 Specifications and Special Tools

Section 40 - ELECTRICAL SYSTEM

- Group 5 Batteries
- Group 10 Charging System Components
- Group 15 Starting System Components
- Group 20 Lighting and Accessory Components
- Group 25 Specifications and Special Tools

Section 50 - POWER TRAIN

- Group 5 Engine Disconnect Clutch
- Group 10 Drive Shafts
- Group 15 Power Shift Transmission
- Group 20 Axle Assemblies
- Group 25 Differential
- Group 30 Specifications and Special Tools

Section 60 - HYDRAULIC SYSTEM

- Group 5 Hydraulic Pumps
- Group 10 Auxiliary Winch Drive Motor
- Group 15 Steering Valve
- Group 20 Brake Valve
- Group 25 Miscellaneous Control Valves
- Group 30 Filters, Oil Cooler, Accumulators, and Sump
- Group 35 Cylinders, Lines, and Fittings
- Group 40 Specifications and Special Tools

Section 70 - MISCELLANEOUS

- Group 4 Separation
- Group 5 Main Winch (-218191)
- Group 6 Main Winch (218192-)
- Group 10 Auxiliary Winch
- Group 15 Frames
- Group 16 Fire Suppression System
- Group 17 Fire Extinguisher
- Group 20 Blades
- Group 25 Log Arch
- Group 30 Specifications and Special Tools

Section 80 - TESTING AND DIAGNOSIS

- Group 5 General Information
- Group 10 Engine
- Group 15 Fuel System
- Group 20 Electrical System
- Group 25 Power Train
- Group 30 Hydraulic System
- Group 31 Hydraulic System (Analyzer)
- Group 35 Miscellaneous Components
- Group 40 Specifications and Special Tools

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 ICED standards.

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ALPHABETICAL INDEX

A

Accumulator, brake	60-30-10
Accumulator, emergency	60-30-13
After-sales inspection	10-10-15
Air cleaner	30-10-1
Air intake system	30-10-1
Alternator, 22-amp	40-10-1
Alternator, 42-amp	40-10-15
Alternator, 55-amp	40-10-9
Ammeter	40-20-3
Analyzer testing	80-31-1
Auxiliary winch	70-10-1
Auxiliary winch clutch valve	60-25-24
Auxiliary winch control lever and linkage	60-25-23
Auxiliary winch control valve	60-25-21
Auxiliary winch drive motor	60-10-1
Axles assemblies	50-20-1

B

Basic engine	20-5-2
Batteries	40-5-1
Blade control valve	60-25-6
Blade control valve linkage	60-25-9
Blades	70-20-1
Blower package	40-20-4
Brake accumulator	60-30-10
Brake, parking (-210081)	50-10-8
Brake, parking (210082-)	50-10-12
Brake valve	60-20-1

C

Cab equipment	40-20-4
Cab separation	70-4-4
Cam followers	20-5-5
Camshaft	20-5-4
Canopy (ROPS) separation	70-4-3
Charging system	40-10-1
Clutch, disconnect	50-5-2
Clutch, disconnect linkage	50-5-8
Clutch valve linkage	60-25-30
Cold weather starting aids	30-10-15
Connecting rods	20-5-9
Control valve linkage	60-25-29
Cooling system, engine	20-20-1
Crankshaft, main bearings and flywheel	20-5-12
Cylinder block, liners, pistons and rods	20-5-7
Cylinder head and valves	20-5-1
Cylinder, lift	60-35-1
Cylinder, steering	60-35-2
Cylinder, tilt	60-35-5

D

Dash lamps	40-20-1
Delivery service	10-10-15
Differential	50-25-1
Differential lock valve	60-25-4
Disconnect clutch, engine	50-5-2
Disconnect clutch linkage	50-5-8
Drive shafts	50-10-1

E

Electrical system testing	80-20-1
Block diagram	80-20-2, 80-20-7
Component location	80-20-6
Component wire routing	80-20-12
Diagnosing malfunctions	80-20-4
Precautions	80-20-2
Schematic diagram	80-20-2, 80-20-9
Testing	80-20-19
Theory	80-20-1
Visual inspection	80-20-3
Emergency steering accumulator	60-30-13
Emergency steering low pressure warning switch	60-30-16
Emergency steering warning system	40-20-4
Engine, basic	20-5-1
Engine frame	70-4-7
Engine oil cooler	20-10-1
Engine oil filter	20-10-1
Engine oil pressure gauge	40-20-1
Engine oil pump	20-10-2
Engine removal and installation	20-4-3
Engine system testing	80-10-1
Diagnosing malfunctions	80-10-2
Tests and adjustments	80-10-5
Theory of operation	80-10-1
Visual inspection	80-10-2
Engine water temperature gauge	40-20-1
Equipment frame	70-15-3

F

Fan belt idler pulley	20-20-5
Filter engine oil	20-10-1
Filter, return oil	60-30-5
Filter, transmission	60-30-8
Fire extinguisher	70-17-1
Fire suppression system	60-16-1
Flywheel	20-5-12
Frame bottom guards	70-15-4
Frame, engine	70-4-7, 70-15-1
Frame, equipment	70-4-7, 70-15-3
Frame locking bar	70-15-3

P	
Parking brake (-210081)	50-10-8
(210082-)	50-10-12
Piston pins	20-5-8
Piston rings	20-5-8
Pistons	20-5-7
Power shaft countershaft	50-15-21
Power shift transmission	50-15-1

Power train testing	80-25-1
Block diagram	80-25-4
Diagnosing malfunctions	80-25-9
Power flow	80-25-7
Test	80-25-11
Theory of operation	80-25-1
Predelivery service	10-10-1
Pressure control valve	60-25-1
Pulley, alternator	40-10-7
Pump drive assembly	60-5-18
Pump, oil engine	20-10-2
Pump, water	20-20-1

R

Radiator	20-20-1
Reduction shaft	50-15-7
Rings, piston	20-5-8
Rocker arm assembly	20-5-3

S

Safety precautions	3
Scavenge pump	60-5-3
Separation	70-4-3
Cab	70-4-4
Canopy (ROPS)	70-4-3
Engine and equipment frames	70-4-7
Service, predelivery	10-10-1
Shift valve assembly	60-25-27
Special tools:	
Air intake system	30-20-2
Auxiliary winch	70-30-11
Charging system	40-25-2
Cooling system	20-25-17
Drive shafts	50-30-20
Electrical system testing	80-40-9
Engine:	
Air intake system	30-20-2
Basic	20-25-7
Cooling system	20-25-17
Fuel injection system	30-20-9
Engine disconnect clutch	50-30-20
Engine system testing	80-40-2
Fuel injection system	30-20-6
Fuel system	30-20-5
Fuel system testing	80-40-4
Hydraulic pumps	60-40-13
Hydraulic system (analyzer) testing	80-40-19
Main winch control valves	60-40-24
Power shift transmission	50-30-21
Power steering valve	60-40-18
Starting system	40-25-7
Wheels	50-30-24

Specifications:

Accumulators, hydraulic	60-40-32
Air intake system	30-20-1
Auxiliary winch	70-30-9
Auxiliary winch drive motor	60-40-15
Auxiliary winch valves	60-40-21
Axle assemblies	50-30-12
Batteries	40-25-1
Brake valve	60-40-18
Charging system	40-25-1
Cooling system	20-25-15
Cylinders, hydraulic	60-40-34
Differential	50-30-16
Differential lock valve	60-40-20
Drive shafts	50-30-3
Electrical system testing	80-40-6
Engine:	
Air intake system	30-20-1
Basic	20-25-1
Cooling system	20-25-15
Fuel injection system	30-20-5
Fuel system	30-20-1
Lubrication system	20-25-13
Engine disconnect clutch	50-30-1
Engine system testing	80-40-1
Filters, hydraulic	60-40-30
Frames	70-30-15
Fuel injection system	30-20-5
Fuel system	30-20-1
Fuel system testing	80-40-4
Fuel tank	30-20-1
General	10-5-2
Hydraulic pumps	60-40-1
Hydraulic system (analyzer) testing	80-40-15
Hydraulic system testing	80-40-10
Lighting and accessory components	40-25-9
Log arch	70-30-16
Lubrication system	20-25-13
Main winch (-218191)	70-30-1
(218192-)	70-30-4
Main winch control valves	60-40-22
Miscellaneous components	80-40-21
Power shift transmission	50-30-5
Power steering valve	60-40-15
Pressure control valve	60-40-19
Starting system	40-25-4
Transmission valves	60-40-26
Wheel weights	50-30-15
Wheels	50-30-14
Winch testing	40-20-2
Stacking blade	70-20-1
Starter button	40-20-2

Starting motor	40-15-1
Starting system circuit breaker	40-20-3
Steering cylinder	60-35-2
Steering valve	60-15-1
Storage, lubricants	10-15-2
Storage, temporary	10-10-1
Stroke control valve (4.01 cu. in. pump)	60-5-16
Stroke control valve (6.00 cu. in. pump)	60-5-12

T

Temporary storage	10-10-1
Testing and diagnosis, general	80-5-2
Thermostats, water	20-20-4
Tilt control valve	60-25-7
Tilt cylinder	60-35-5
Torque value chart	10-10-13
Trail blade	70-20-1
Transmission charge pump	60-5-5
Transmission clutch and pressure regulating valves	60-25-31
Transmission control valve	60-25-25
Transmission filters	60-30-8
Transmission hydraulic oils	10-15-2
Transmission lube pressure gauge	40-20-2
Transmission modulating valve	60-25-37
Transmission oil pressure regulating valve	60-25-33
Transmission oil temperature gauge	40-20-2
Transmission, power shift	50-15-1
Transmission testing	80-25-1
Turbocharger, AiResearch	30-10-2
Turbocharger, Schwitzer	30-10-8

V

Valve, brake	20-5-4, 60-20-1
Valve clearance adjustment	20-5-4
Valve guides	20-5-2
Valve, hydraulic control	60-25-1
Valve lift check	20-5-1
Valve, oil cooler bypass	20-10-1
Valve seat inserts	20-5-2
Valve, steering	60-15-5
Valves, engine	20-5-1
Vibration damper	20-5-14

W

Water manifold and thermostats	20-20-4
Water pump	20-20-1
Wheel weights (-218139)	50-20-11
(218140-)	50-20-12
Wheels	50-20-8
Winch adjustments	80-35-4
Winch auxiliary	70-10-1
Winch control and regulating valve (-218191)	60-25-10
Winch control lever and linkage (-218191)	60-25-13
Winch control valve (218192-)	60-25-14
Winch control valve linkage (218192-)	60-25-19
Winch, main (-218191)	70-5-1
(218192-)	70-6-1
Winch output shaft	50-15-9
Winch testing	80-35-1

COMPLETE PAGE LISTING WITH LATEST DATE LINES

I-I-1,2	(Dec-79)	20-5-13,14	(Dec-79)	40-10-13,14	(Nov-77)
I-I-3,4	(Dec-79)	20-5-15,16	(Dec-79)	40-10-15,16	(Mar-79)
I-I-5,6	(Dec-79)	20-5-17,18	(Dec-79)	40-10-17,18	(Nov-77)
I-I-7,8	(Dec-79)	20-10-1,2	(Dec-79)	40-10-19,20	(Nov-77)
I-I-9,10	(Dec-79)	20-10-3,4	(Dec-79)	40-10-21,22	(Nov-77)
I-II-1,2	(Dec-79)	20-15-1,2	(Nov-77)	40-15-1,2	(Nov-77)
I-II-3,4	(Dec-79)	20-20-1,2	(Mar-79)	40-15-3,4	(Nov-77)
I-II-5,6	(Dec-79)	20-20-3,4	(Mar-79)	40-15-5,6	(Nov-77)
I-II-7,8	(Dec-79)	20-20-5,6	(Dec-79)	40-15-7,8	(Nov-77)
		20-20-7,8	(Dec-79)	40-20-1,2	(Dec-79)
10-5-1,2	(Mar-79)	20-25-1,2	(Mar-79)	40-20-3,4	(Dec-79)
10-5-3,4	(Mar-79)	20-25-3,4	(Dec-79)	40-20-5,6	(Mar-79)
10-10-1,2	(Mar-79)	20-25-5,6	(Dec-79)	40-20-7,8	(Mar-79)
10-10-3,4	(Mar-79)	20-25-7,8	(Mar-79)	40-25-1,2	(Nov-77)
10-10-5,6	(Mar-79)	20-25-9,10	(Mar-79)	40-25-3,4	(Nov-77)
10-10-7,8	(Mar-79)	20-25-11,12	(Mar-79)	40-25-5,6	(Mar-79)
10-10-9,10	(Mar-79)	20-25-13,14	(Dec-79)	40-25-7,8	(Nov-77)
10-10-11,12	(Mar-79)	20-25-15,16	(Mar-79)	40-25-9,10	(Mar-79)
10-10-13,14	(Mar-79)	20-25-17,18	(Mar-79)		
10-10-15,16	(Mar-79)			50-5-1,2	(Dec-79)
10-10-17,18	(Mar-79)	30-5-1,2	(Dec-79)	50-5-3,4	(Nov-77)
10-10-19,20	(Mar-79)	30-5-3,4	(Mar-79)	50-5-5,6	(Nov-77)
10-10-21,22	(Mar-79)	30-10-1,2	(Mar-79)	50-5-7,8	(Nov-77)
10-10-23,24	(Mar-79)	30-10-3,4	(Mar-79)	50-5-9,10	(Nov-77)
10-10-25,26	(Mar-79)	30-10-5,6	(Mar-79)	50-10-1,2	(Dec-79)
10-10-27,28	(Mar-79)	30-10-7,8	(Mar-79)	50-10-3,4	(Dec-79)
10-10-29,30	(Mar-79)	30-10-9,10	(Mar-79)	50-10-5,6	(Dec-79)
10-15-1,2	(Mar-79)	30-10-11,12	(Mar-79)	50-10-7,8	(Nov-77)
10-20-1,2	(Nov-77)	30-10-13,14	(Mar-79)	50-10-9,10	(Nov-77)
10-20-3,4	(Nov-77)	30-10-15,16	(Mar-79)	50-10-11,12	(Nov-77)
10-20-5,6	(Nov-77)	30-10-17,18	(Mar-79)	50-10-13,14	(Nov-77)
10-20-7,8	(Nov-77)	30-15-1,2	(Dec-79)	50-10-15,16	(Nov-77)
10-20-9,10	(Nov-77)	30-15-3,4	(Dec-79)	50-15-1,2	(Dec-79)
10-20-11,12	(Nov-77)	30-15-5,6	(Dec-79)	50-15-3,4	(Dec-79)
10-20-13,14	(Nov-77)	30-15-7,8*	(Mar-79)	50-15-5,6	(Dec-79)
10-20-15,16	(Nov-77)	30-15-9,10*	(Mar-79)	50-15-7,8	(Dec-79)
10-25-1,2	(Nov-77)	30-20-1,2	(Mar-79)	50-15-9,10	(Dec-79)
10-25-3,4	(Nov-77)	30-20-3,4	(Mar-79)	50-15-11,12	(Dec-79)
10-25-5,6	(Nov-77)	30-20-5,6	(Dec-79)	50-15-13,14	(Dec-79)
10-25-7,8	(Nov-77)	30-20-7,8*	(Mar-79)	50-15-15,16	(Dec-79)
		30-20-9,10*	(Mar-79)	50-15-17,18	(Dec-79)
20-4-1,2	(Dec-79)			50-15-19,20	(Dec-79)
20-4-3,4	(Nov-77)	40-5-1,2	(Mar-79)	50-15-21,22	(Dec-79)
20-4-5,6	(Nov-77)	40-5-3,4	(Dec-79)	50-15-23,24	(Dec-79)
20-5-1,2	(Mar-79)	40-10-1,2	(Mar-79)	50-15-25,26	(Dec-79)
20-5-3,4	(Mar-79)	40-10-3,4	(Nov-77)	50-15-27,28	(Dec-79)
20-5-5,6	(Dec-79)	40-10-5,6	(Nov-77)	50-15-29,30	(Dec-79)
20-5-7,8	(Mar-79)	40-10-7,8	(Nov-77)	50-15-31,32	(Dec-79)
20-5-9,10	(Dec-79)	40-10-9,10	(Mar-79)	50-15-33,34	(Dec-79)
20-5-11,12	(Dec-79)	40-10-11,12	(Nov-77)	50-15-35,36	(Dec-79)

Vertical lines indicate pages included with this revision.

* Remove pages from manual

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COMPLETE PAGE LISTING WITH LATEST DATE LINES

50-15-37,38	(Dec-79)	60-25-5,6	(Mar-79)	70-4-1,2	(Dec-79)
50-15-39,40	(Dec-79)	60-25-7,8	(Dec-79)	70-4-3,4	(Dec-79)
50-20-1,2	(Nov-77)	60-25-9,10	(Dec-79)	70-4-5,6	(Dec-79)
50-20-3,4	(Dec-79)	60-25-11,12	(Dec-79)	70-4-7,8	(Mar-79)
50-20-5,6	(Dec-79)	60-25-13,14	(Dec-79)	70-5-1,2	(Nov-77)
50-20-7,8	(Dec-79)	60-25-15,16	(Dec-79)	70-5-3,4	(Nov-77)
50-20-9,10	(Nov-77)	60-25-17,18	(Dec-79)	70-5-5,6	(Nov-77)
50-20-11,12	(Nov-77)	60-25-19,20	(Dec-79)	70-5-7,8	(Nov-77)
50-25-1,2	(Mar-79)	60-25-21,22	(Dec-79)	70-5-9,10	(Nov-77)
50-25-3,4	(Dec-79)	60-25-23,24	(Dec-79)	70-5-11,12	(Dec-79)
50-25-5,6	(Dec-79)	60-25-25,26	(Dec-79)	70-5-13,14	(Nov-77)
50-25-7,8	(Mar-79)	60-25-27,28	(Dec-79)	70-5-15,16	(Nov-77)
50-25-9,10	(Dec-79)	60-25-29,30	(Dec-79)	70-5-17,18	(Nov-77)
50-25-11,12	(Dec-79)	60-25-31,32	(Dec-79)	70-5-19,20	(Mar-79)
50-25-13,14	(Dec-79)	60-25-33,34	(Dec-79)	70-6-1,2	(Mar-79)
50-30-1,2	(Nov-77)	60-25-35,36	(Dec-79)	70-6-3,4	(Nov-77)
50-30-3,4	(Nov-77)	60-25-37,38	(Dec-79)	70-6-5,6	(Dec-79)
50-30-5,6	(Nov-77)	60-25-39,40	(Dec-79)	70-6-7,8	(Dec-79)
50-30-7,8	(Nov-77)	60-30-1,2	(Nov-77)	70-6-9,10	(Dec-79)
50-30-9,10	(Mar-79)	60-30-3,4	(Dec-79)	70-6-11,12	(Nov-77)
50-30-11,12	(Dec-79)	60-30-5,6	(Mar-79)	70-6-13,14	(Nov-77)
50-30-13,14	(Nov-77)	60-30-7,8	(Nov-77)	70-6-15,16	(Nov-77)
50-30-15,16	(Nov-77)	60-30-9,10	(Dec-79)	70-6-17,18	(Dec-79)
50-30-17,18	(Dec-79)	60-30-11,12	(Dec-79)	70-6-19,20	(Dec-79)
50-30-19,20	(Dec-79)	60-30-13,14	(Dec-79)	70-6-21,22	(Dec-79)
50-30-21,22	(Dec-79)	60-30-15,16	(Dec-79)	70-6-23,24	(Dec-79)
50-30-23,24	(Dec-79)	60-30-17,18	(Dec-79)	70-6-25,26	(Dec-79)
		60-35-1,2	(Nov-77)	70-10-1,2	(Mar-79)
60-5-1,2	(Dec-79)	60-35-3,4	(Nov-77)	70-10-3,4	(Mar-79)
60-5-3,4	(Dec-79)	60-35-5,6	(Nov-77)	70-10-5,6	(Mar-79)
60-5-5,6	(Dec-79)	60-40-1,2	(Nov-77)	70-10-7,8	(Nov-77)
60-5-7,8	(Dec-79)	60-40-3,4	(Nov-77)	70-10-9,10	(Nov-77)
60-5-9,10	(Dec-79)	60-40-5,6	(Nov-77)	70-10-11,12	(Nov-77)
60-5-11,12	(Dec-79)	60-40-7,8	(Nov-77)	70-15-1,2	(Nov-77)
60-5-13,14	(Dec-79)	60-40-9,10	(Dec-79)	70-15-3,4	(Nov-77)
60-5-15,16	(Dec-79)	60-40-11,12	(Dec-79)	70-16-1,2	(Mar-79)
60-5-17,18	(Dec-79)	60-40-13,14	(Dec-79)	70-16-3,4	(Dec-79)
60-5-19,20	(Dec-79)	60-40-15,16	(Mar-79)	70-16-5,6	(Mar-79)
60-10-1,2	(Nov-77)	60-40-17,18	(Mar-79)	70-16-7,8	(Dec-79)
60-15-1,2	(Nov-77)	60-40-19,20	(Nov-77)	70-17-1,2	(Dec-79)
60-15-3,4	(Nov-77)	60-40-21,22	(Nov-77)	70-20-1,2	(Nov-77)
60-15-5,6	(Mar-79)	60-40-23,24	(Nov-77)	70-20-3,4	(Nov-77)
60-15-7,8	(Mar-79)	60-40-25,26	(Nov-77)	70-25-1,2	(Nov-77)
60-15-9,10	(Mar-79)	60-40-27,28	(Mar-79)	70-30-1,2	(Nov-77)
60-15-11,12	(Mar-79)	60-40-29,30	(Nov-77)	70-30-3,4	(Mar-79)
60-20-1,2	(Dec-79)	60-40-31,32	(Dec-79)	70-30-5,6	(Nov-77)
60-20-3,4	(Mar-79)	60-40-33,34	(Dec-79)	70-30-7,8	(Mar-79)
60-20-5,6	(Mar-79)	60-40-35,36	(Nov-77)	70-30-9,10	(Nov-77)
60-25-1,2	(Mar-79)			70-30-11,12	(Nov-77)
60-25-3,4	(Mar-79)			70-30-13,14	(Nov-77)
				70-30-15,16	(Mar-79)

Vertical lines indicate pages included with this revision.

COMPLETE PAGE LISTING WITH LATEST DATE LINES

80-5-1,2	(Mar-79)	80-30-27,28	(Mar-79)	80-40-13,14	(Mar-79)
80-10-1,2	(Nov-77)	80-30-29,30	(Mar-79)	80-40-15,16	(Nov-77)
80-10-3,4	(Nov-77)	80-30-31,32	(Mar-79)	80-40-17,18	(Nov-77)
80-10-5,6	(Mar-79)	80-30-33,34	(Mar-79)	80-40-19,20	(Nov-77)
80-10-7,8	(Mar-79)	80-30-35,36	(Mar-79)	80-40-21,22	(Mar-79)
80-10-9,10	(Mar-79)	80-30-37,38	(Mar-79)		
80-10-11,12	(Mar-79)	80-30-39,40	(Mar-79)	Index-1,2*	(Mar-79)
80-10-13,14	(Mar-79)	80-30-41,42	(Mar-79)	Index-3,4*	(Mar-79)
80-15-1,2	(Nov-77)	80-30-43,44	(Dec-79)	Index-5,6*	(Mar-79)
80-15-3,4	(Nov-77)	80-30-45,46	(Mar-79)	Index-7,8*	(Mar-79)
80-15-5,6	(Mar-79)	80-30-47,48	(Mar-79)	Index-9,10*	(Mar-79)
80-20-1,2	(Mar-79)	80-30-49,50	(Mar-79)	Index-11,12*	(Mar-79)
80-20-3,4	(Dec-79)	80-30-51,52	(Mar-79)		
80-20-5,6	(Mar-79)	80-30-53,54	(Mar-79)		
80-20-7,8	(Mar-79)	80-30-55,56	(Mar-79)		
80-20-9,10	(Mar-79)	80-30-57,58	(Mar-79)		
80-20-11,12	(Mar-79)	80-30-59,60	(Dec-79)		
80-20-13,14	(Mar-79)	80-30-61,62	(Mar-79)		
80-20-15,16	(Mar-79)	80-30-63,64	(Dec-79)		
80-20-17,18	(Mar-79)	80-30-65,66	(Mar-79)		
80-20-19,20	(Mar-79)	80-30-67,68	(Dec-79)		
80-20-21,22	(Mar-79)	80-30-69,70	(Mar-79)		
80-20-23,24	(Mar-79)	80-30-71,72	(Mar-79)		
80-20-25,26	(Mar-79)	80-31-1,2	(Dec-79)		
80-20-27,28	(Mar-79)	80-31-3,4	(Nov-77)		
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80-20-33,34	(Dec-79)	80-31-9,10	(Nov-77)		
80-20-35,36	(Dec-79)	80-31-11,12	(Dec-79)		
80-20-37,38	(Nov-77)	80-31-13,14	(Nov-77)		
80-20-39,40	(Nov-77)	80-31-15,16	(Nov-77)		
80-25-1,2	(Nov-77)	80-31-17,18	(Nov-77)		
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80-25-7,8	(Nov-77)	80-31-23,24	(Mar-79)		
80-25-9,10	(Nov-77)	80-31-25,26	(Nov-77)		
80-25-11,12	(Nov-77)	80-31-27,28	(Nov-77)		
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80-30-7,8	(Mar-79)	80-35-1,2	(Nov-77)		
80-30-9,10	(Mar-79)	80-35-3,4	(Nov-77)		
80-30-11,12	(Dec-79)	80-35-5,6	(Nov-77)		
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80-30-15,16	(Mar-79)	80-40-1,2	(Mar-79)		
80-30-17,18	(Dec-79)	80-40-3,4	(Mar-79)		
80-30-19,20	(Dec-79)	80-40-5,6	(Dec-79)		
80-30-21,22	(Dec-79)	80-40-7,8	(Dec-79)		
80-30-23,24	(Dec-79)	80-40-9,10	(Mar-79)		
80-30-25,26	(Mar-79)	80-40-11,12	(Mar-79)		

Vertical lines indicate pages included with this revision.

* Remove pages from manual.

Group II

INTRODUCTION AND SAFETY INFORMATION

INTRODUCTION



Use FOS Manuals for Reference

This technical manual is part of a twin concept of service:

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

•FOS Manuals—for reference

Fundamentals of Service (FOS) Manuals cover basic theory of operation, *fundamentals* of trouble shooting, *general* maintenance, and *basic* types of failures and their causes. FOS Manuals are for training new personnel and for reference by experienced service technicians.



When a service technician should refer to a FOS Manual for more information, a FOS symbol like the one at the left is used in the TM to identify the reference.

•Technical Manuals—for actual service

Technical Manuals are concise service guides for a specific machine. Technical manuals are on-the-job guides containing only the vital information needed by an experienced service technician.



Use Technical Manuals for Actual Service

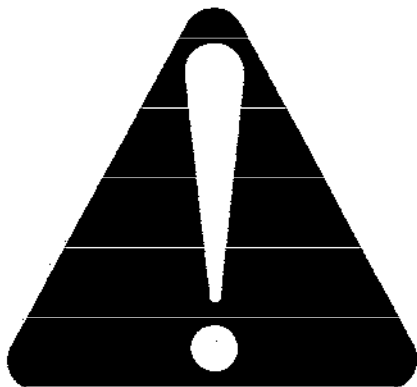
This technical manual was planned and written for you—an experienced service technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Some features of this manual:


- Inside front cover - "Table of Contents" and "Maintenance Without Accident".
- Section 10 - General specifications and services.
- Sections 20 through 70 - Removal, repair, testing (components removed), installation, and adjustment.
- Section 80 - Detailed explanation of system operation, diagnosis, visual inspection, testing, and adjustments.
- Specifications grouped and illustrated at the end of each section.
- Inside rear cover - Index.

MAINTENANCE WITHOUT ACCIDENT

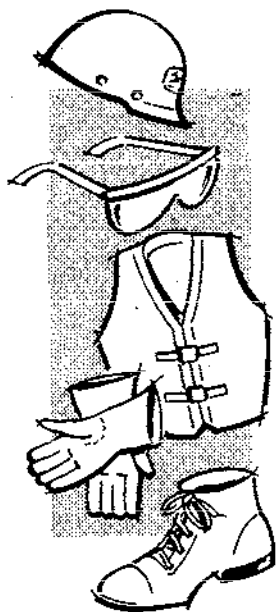
WORK SAFELY



T27999N

 This safety alert symbol is used for important safety messages. When you see this symbol, the possibility of personal injury exists if safety message is not followed.

**EVERY EMPLOYER HAS A
SAFETY PROGRAM. KNOW
WHAT IT IS!**



T27501N

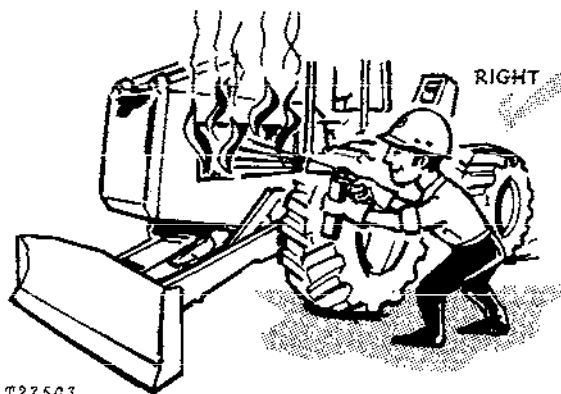
Consult your shop foreman for specific instructions on a job, and the safety equipment required.

For instance, you may need: Hard hat, safety shoes, safety goggles, heavy gloves, reflector vests, ear protectors, respirators.



T27502N

ALWAYS AVOID loose clothing or any accessory—flopping cuffs, dangling neckties and scarves, or rings and wrist watches—that can catch in moving parts and put you out of work.



T27503

BE ALERT!

Plan ahead — work safely — avoid accidental damage and injury. If a careless moment does cause an accident or fire, react quickly with the tools and skills at hand — know how to use a first aid kit and a fire extinguisher — and where to get aid and assistance. In an emergency, split-second action is the key to safety.



T27504N

MAINTENANCE WITHOUT ACCIDENT

Specific safety procedures should always be observed, whether servicing or making repairs on the skidder. Remembering these—in time!—can prevent an injury...or save your life....

AVOID FIRE HAZARDS—

Fuel Is Dangerous!

- Don't smoke while refueling.
- Don't smoke while handling highly flammable material.
- Engine should be shut off when refueling.
- Use care in refueling if the engine is hot.



T33257N

Don't use open pans of gasoline or diesel fuel for cleaning parts. Good commercial, nonflammable solvents are preferred.

Battery Gas Is Highly Flammable!

Provide adequate ventilation when charging batteries.



T27506N

Don't check battery charge by placing metal objects across the posts.

- Don't allow sparks or open flame near batteries.
- Don't smoke near battery.

Flame Is Not a Flashlight!

Never check fuel, battery electrolyte or coolant levels with an open flame.

Never use an open flame to look for leaks anywhere on the equipment.

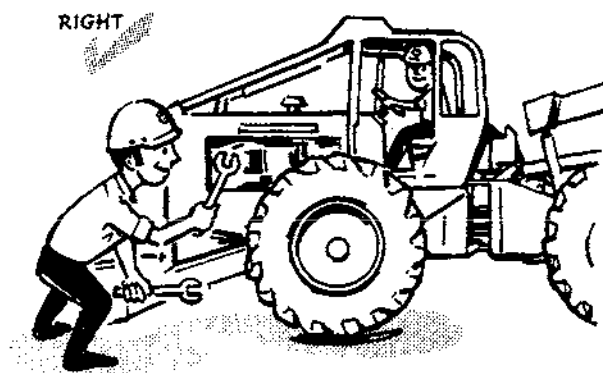
Never use an open flame as a light anywhere on or around the equipment.

KNOW WHERE FIRE EXTINGUISHERS ARE KEPT!

UNDER ALL MAINTENANCE CONDITIONS—

Do not perform any work on the skidder unless authorized to do so. Then be sure you understand the services required. Follow recommended procedures.

Never service the equipment while it is being operated.



T33258N

Avoid working on equipment with the engine running. If it is necessary to make checks with the engine running, **ALWAYS USE TWO SERVICE TECHNICIANS**—one, the operator, at the controls, the other checking within view of the operator. Also, put the transmission in neutral, set the brake, and apply any safety locks provided. **KEEP HANDS AWAY FROM MOVING PARTS.**

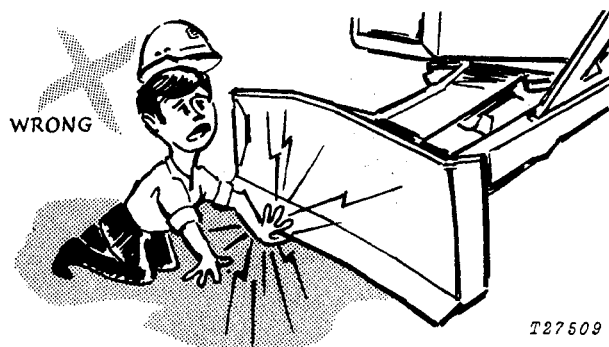


T27508N

MAINTENANCE WITHOUT ACCIDENT

Before servicing, adjusting, or repairing skidders which have attachments such as blades, 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.

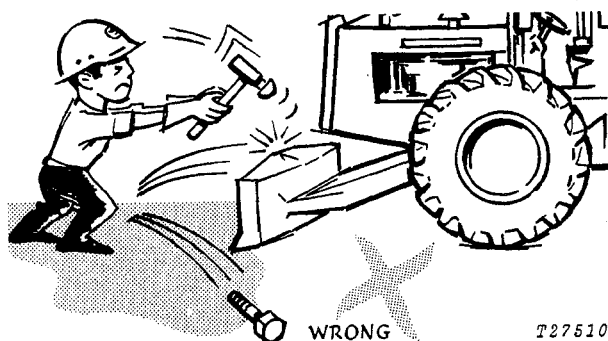


Avoid working directly under raised and blocked equipment unless absolutely necessary.

If the skidder 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.

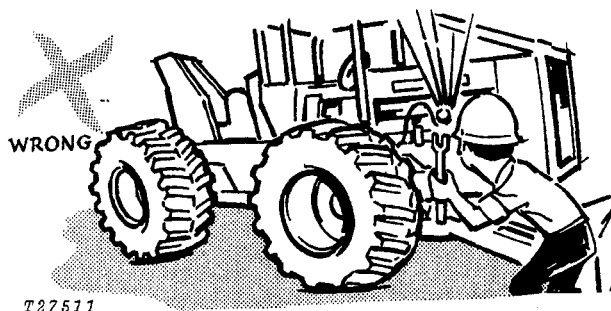
Store starting aids in a cool and well-ventilated place, out of the reach of unauthorized personnel.

SERVICING PRECAUTIONS

Stop the engine before cleaning or lubricating the skidder.

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.



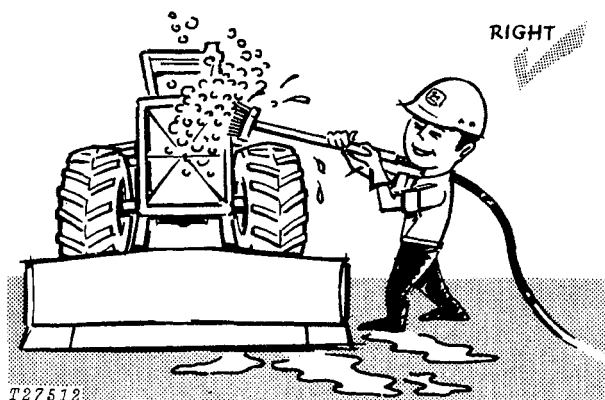
Exhaust gases are dangerous! Periodically check exhaust system for excessive leakage.

Don't forget the hydraulic system may be pressurized! To relieve system pressure, stop engine, lower blade and operate blade control lever, brakes, and steering wheel until system fails to respond.

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

The skidder is equipped with a brake accumulator—recharge by using only dry nitrogen. To discharge brake accumulator apply the brake pedal about 30 times.

MAINTENANCE WITHOUT ACCIDENT



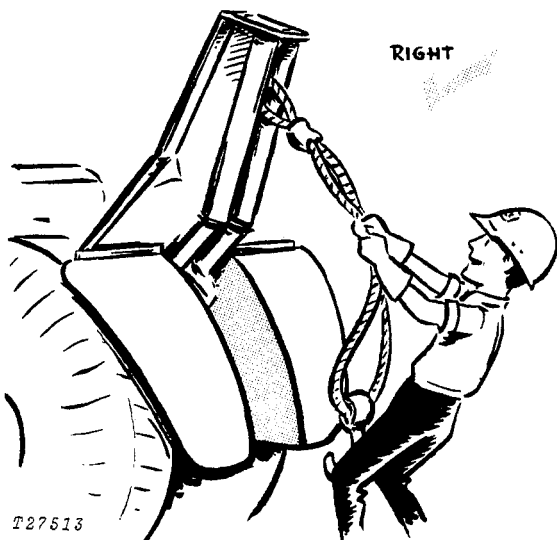
Keep ALL components free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.

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

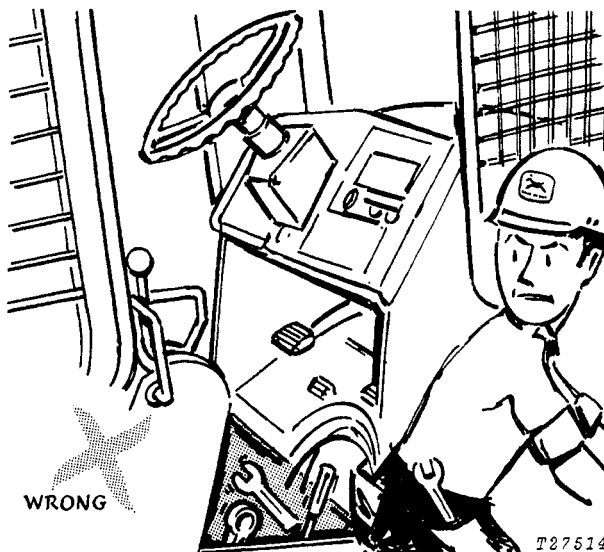
ADJUSTING PRECAUTIONS

....for Operating Adjustments

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



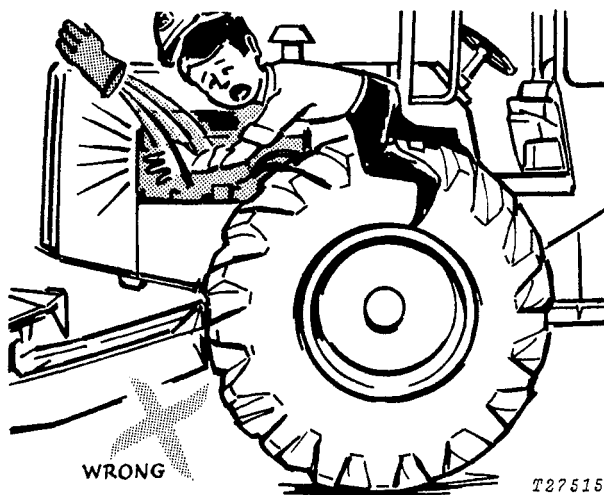
Always wear gloves when handling cable.



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

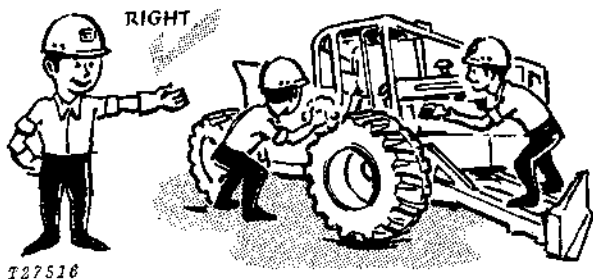
Don't attempt to check belt tension while the engine is running.



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

MAINTENANCE WITHOUT ACCIDENT

PRECAUTIONS DURING REPAIR

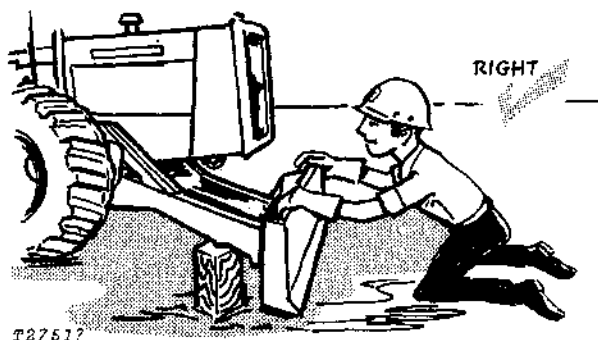


Keep all equipment free of dirt and oil. This attention will minimize fire hazards and facilitate spotting of loose or defective parts.

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

When changing cutting edges on blade—

Stop the engine and securely block the blade.



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

MAINTENANCE WITHOUT ACCIDENT

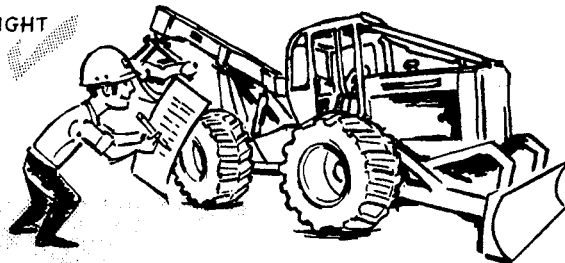
KNOW EQUIPMENT IS READY!

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

CHECK IT OUT!

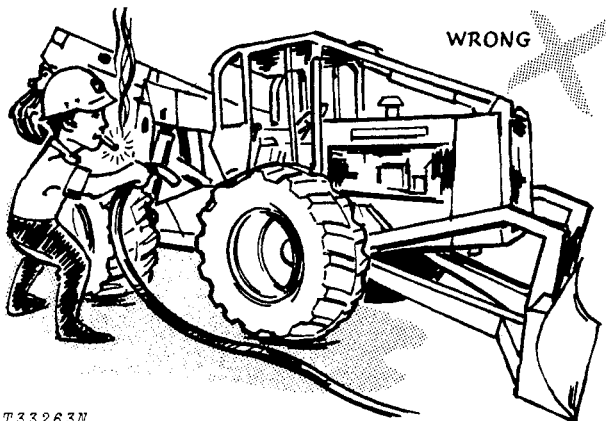
- ☐ GUARDS
- ☐ CANOPIES
- ☐ SHIELDS
- ☐ PROTECTIVE DEVICES
- ☐ ROLL-OVER PROTECTIVE STRUCTURES
- ☐ SEAT BELTS
- ☐ FIRE EXTINGUISHER
- ☐ FIRE SUPPRESSION SYSTEM, ETC.

RIGHT



T33262N

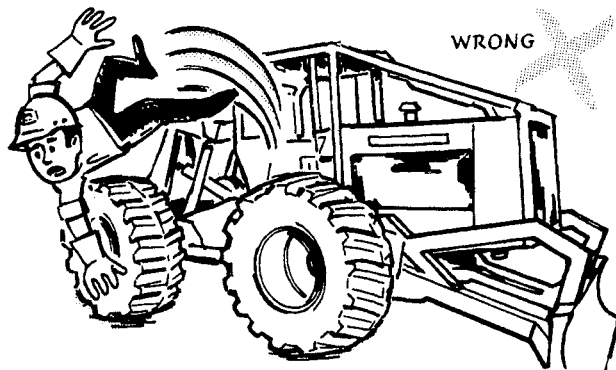
Carefully inspect equipment for visual defects — leaks in fuel, lubrication, and hydraulic systems. Do not search for pressurized fluid leaks with your hands. Use cardboard or wood to search for leaks.



T33263N

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

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



WRONG

T33264N

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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