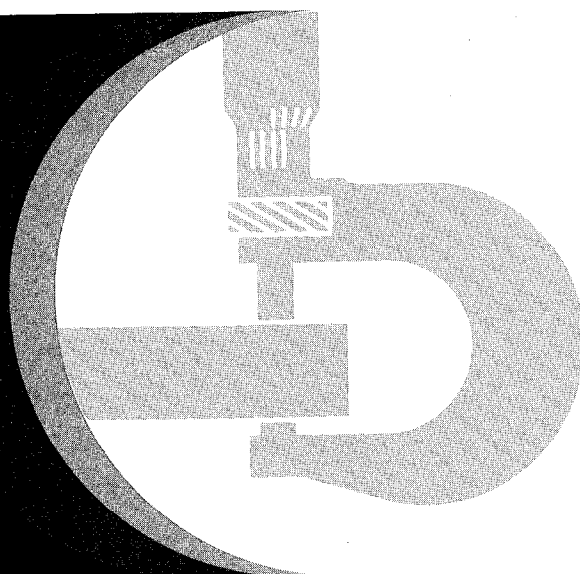


**John Deere
710B
Backhoe Loader**



TECHNICAL MANUAL

TM-1286 (Dec-86)

LITHO IN U.S.A.

710B BACKHOE LOADER TECHNICAL MANUAL TM-1286 (DEC-86)

SECTION AND GROUP CONTENTS

SECTION I—GENERAL INFORMATION

- Group I—Introduction and Safety Information
- Group II—General Specifications
- Group III—Torque Values
- Group IV—Lubrication

SECTION 01—WHEELS

- Group 0110—Powered Wheels and Fastenings
- Group 0120—Non-Powered Wheels and Fastenings

SECTION 02—AXLES AND SUSPENSION SYSTEMS

- Group 0200—Removal and Installation
- Group 0210—Differential or Bevel Drive
- Group 0225—Input Drive Shaft and U-Joints
- Group 0230—Non-Powered Wheel Axles
- Group 0240—Powered Wheel Axle (MFWD)
- Group 0250—Axle Shafts, Bearings and Reduction Gears
- Group 0260—Hydraulic System

SECTION 03—TRANSMISSION

- Group 0300—Removal and Installation
- Group 0315—Controls
- Group 0350—Gears, Shafts, Bearings and Power Shift Clutch
- Group 0360—Hydraulic System

SECTION 04—ENGINE

- Group 0400—Removal and Installation
- Group 0401—Crankshaft and Main Bearings

SECTION 04—ENGINE—Continued

- Group 0402—Camshaft and Valve Actuating Means
- Group 0403—Connecting Rods and Pistons
- Group 0404—Cylinder Block
- Group 0407—Oiling System
- Group 0409—Cylinder Head and Valves
- Group 0413—Fuel Injection System
- Group 0414—Intake Manifold
- Group 0416—Turbocharger
- Group 0417—Water Pump
- Group 0418—Thermostats, Housing and Water Piping
- Group 0419—Oil Cooler
- Group 0420—Fuel Filter
- Group 0421—Fuel Transfer Pump
- Group 0422—Starting Motor and Fastenings
- Group 0433—Flywheel, Housing and Fastenings

SECTION 05—ENGINE AUXILIARY SYSTEMS

- Group 0505—Cold Weather Starting Aids
- Group 0510—Cooling Systems
- Group 0515—Speed Controls
- Group 0520—Intake System
- Group 0560—External Fuel Supply Systems

SECTION 07—DAMPENER DRIVE

- Group 0752—Elements

Continued on next page

All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice. Wherever applicable, specifications and design information are in accordance with SAE and ICED standards.

Copyright© 1986
DEERE & COMPANY
Moline, Illinois
All Rights Reserved
A JOHN DEERE ILLUSTRATION
Previous Edition
Copyright© 1985 DEERE & COMPANY
Copyright© 1984 DEERE & COMPANY
Copyright© 1983 DEERE & COMPANY

T64;1286 01 231086

SECTION AND GROUP CONTENTS - Continued

SECTION 09 - STEERING SYSTEM

Group 0960 - Hydraulic System

SECTION 10 - SERVICE BRAKES

Group 1011 - Active Elements
Group 1060 - Hydraulic System

SECTION 11 - PARKING-EMERGENCY BRAKES

Group 1111 - Active Elements
Group 1115 - Controls Linkage

SECTION 16 - ELECTRICAL SYSTEMS

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

SECTION 17 - FRAME, CHASSIS, OR SUPPORTING STRUCTURE

Group 1740 - Frame Installation
Group 1749 - Chassis Weights

SECTION 18 - OPERATOR'S STATION

Group 1800 - Removal and Installation
Group 1810 - Operator Enclosure
Group 1821 - Seat and Seat Belt
Group 1830 - Heating and Air Conditioning

SECTION 19 - SHEET METAL AND STYLING

Group 1910 - Hood or Engine Enclosure
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 - Buckets
Group 3115 - Controls Linkage
Group 3140 - Frames
Group 3160 - Hydraulic System

SECTION 33 - BACKHOE

Group 3302 - Buckets, Teeth, Shanks, and Sidecutters
Group 3315 - Controls Linkage
Group 3340 - Frames
Group 3360 - Hydraulic System

SECTION 90 - SYSTEM TESTING

Group 9005 - General Information
Group 9010 - Engine
Group 9015 - Electrical System
Group 9020 - Power Train
Group 9025 - Hydraulic System

SECTION 99 - SPECIAL TOOLS

INDEX

SAFETY AND YOU

This is the safety-alert symbol. When you see this symbol on the machine or in this manual, be alert to the potential for personal injury .



AB6;T81389 053;TMSAFE 071085

PREVENT BATTERY EXPLOSIONS

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

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

Always remove grounded (-) battery clamp first and replace it last.



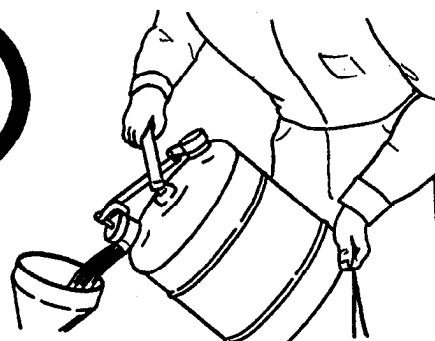
AB6;TS181 053;EXPLO 180485

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



AB6;TS185 053;FIRE1 240785

PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Keep a first aid kit and fire extinguishers handy.

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



AB6;TS186 053;FIRE2 080785

HANDLE STARTING FLUID SAFELY

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.



AB6;T6089A U 053;FIRE3 080785

UNDERSTAND CORRECT MACHINE OPERATION AND SERVICE

Only qualified people should operate and service the machine.

Learn the location and purpose of all controls, instruments, indicators, and labels.

Be sure you understand a service procedure before you work on the machine.

Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If it is necessary to make checks with the engine running, ALWAYS USE TWO PEOPLE — with the operator at the controls, able to see the person doing the checking.

Be sure transmission shift lever is in neutral. Apply and lock park brake.

KEEP HANDS AWAY FROM MOVING PARTS.



8NA;T6073AO T82;BHSA C 030485

WEAR PROTECTIVE CLOTHING

Wear fairly tight clothing . . . and safety equipment.

44A;T85056 T82;EXSA B 060684

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable uncomfortable loud noises.

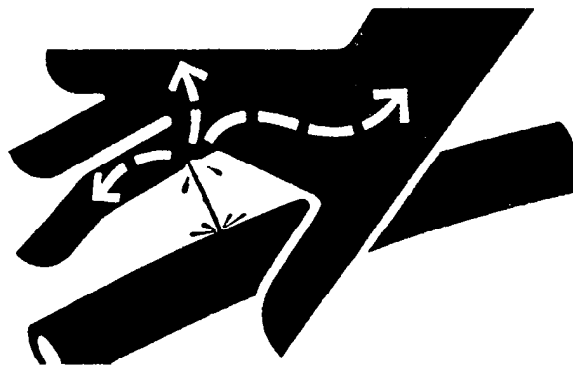


AB6;X7662 053;NOISE 150584

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.



AB6;X9811 053;FLUID 100584

PREVENT MACHINE RUNAWAY

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is by passed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.



AB6;TS177 053;BYPAS1 210585

INSPECT MACHINE

Inspect your machine carefully each day before you start it.
(See Pre-Start Inspection chapter.)

Use handholds and steps when you get on and off the machine. DO NOT use the steering wheel as a handrail.

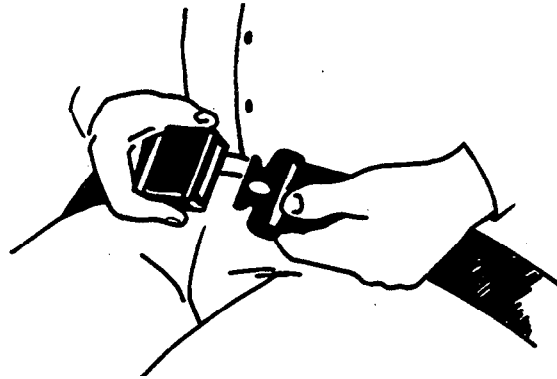


018;T5813AN T82;FLSA P 010485

USE SEAT BELT PROPERLY

Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if operating without a ROPS.



AB6;TS175 053;ROPS1 261184

KEEP RIDERS OFF MACHINE

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



AB6;TS173 053;RIDER 261184