

# 8850 Tractor



TECHNICAL MANUAL 8850 Tractor

TM1254 (01FEB85) English



John Deere Waterloo Works TM1254 (01FEB85)

> LITHO IN U.S.A. ENGLISH

# 8850 TRACTOR TECHNICAL MANUAL TM-1254 (FEB-85)

#### CONTENTS-REPAIR SECTIONS

SECTION 10—GENERAL Group 00—Specification and Special Tools Group 05—Predelivery, Delivery and After-Sale Services Group 10—Tune-up Group 15—Lubrication

SECTION 15-SEPARATION

- Group 00-Specifications and Special Tools
- Group 05-Front Drive
- Group 10-Fuel Tanks and Fenders
- Group 15-Front End
- Group 20—Front End and Engine From Clutch Housing
- Group 25-Engine
- Group 30-SOUND-GARD® Body
- Group 35-Front Hinge From Rear Hinge
- Group 40-Front Hinge
- Group 45-Clutch Housing
- Group 50—Rear Hinge
- Group 55-Torque Divider
- Group 60-Transmission
- Group 65—Final Drives
- SECTION 25-ENGINE REPAIR
  - Group 00-Specifications and Special Tools
  - Group 05—Acquire Access to Cylinder Head, Valves and Camshaft
  - Group 10—Cylinder Head, Valves and Camshaft Group 15—Acquire Access to Block, Liners,
    - Pistons and Rods

Group 20-Cylinder Block, Liners, Pistons and Rods Group 25-Acquire Access to Crankshaft, Main Bearings and Flywheel Group 30-Crankshaft, Main Bearings and Flywheel Group 35—Acquire Access to Lubrication System Group 40-Lubrication System Group 45-Acquire Access to Cooling System Group 50-Cooling System SECTION 30-FUEL AND AIR SYSTEM REPAIR Group 00-Specifications and Special Tools Group 05-Acquire Access to Air Intake System Group 10-Air Intake System Group 15-Acquire Access to Diesel Fuel System Group 20-Diesel Fuel System Group 25 --- Speed Control Linkage SECTION 40—ELECTRICAL REPAIR Group 00-Specifications and Special Tools Group 05-Harness Replacement Group 06-Connector Repair Group 10-John Deere Charging Circuit Group 15-Starter Circuit Repair

- Group 21-DELCO-REMY Starting Motor
- Group 25-Lighting Circuits
- Group 30—INVESTIGATOR™ II Warning System and Digital Tach. Repair
- Group 35-Accessory Circuits

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.

> COPYRIGHT® 1985 DEERE & COMPANY Maline, filinois All rights reserved A JOHN DEERE ILLUSTRUCTION Previous Edition Copyright < 1984 Copyright < 1982 Copyright < 1981 DEERE & COMPANY

> > U10;010GEN AX2 040385

Litho in U.S.A.

#### CONTENT-CONTINUED

Group 00—Specifications and Special Tools

Group 05—Remove/Install Clutch Oil Pressure Valve Housing

- Group 10—Clutch Oil Pressure Regulating Valve Housing
- Group 15—Clutch Operating Piston Housing
- Group 20—PERMA CLUTCH™
- Group 25—QUAD-RANGE™ Planetary
- Group 30—Independent PTO
- Group 35-Torque Divider and Drive Shafts
- Group 40----QUAD-RANGE™ Transmission
- Group 45—Shift Lever Assembly
- Group 50-Front Differential
- Group 55-Rear Differential Housing
- Group 60-Differential Lock Valves
- Group 65-Final Drives
- Group 70—Transmission Oil Filter Relief Valve Housing
- Group 75—Transmission Oil Cooler and Thermal Relief Valve

#### SECTION 60-STEERING/BRAKES REPAIR

- Group 00-Specifications and Special Tools
- Group 05—Remove/Install Power Steering Components
- Group 10-Steering Column
- Group 15—Metering Pump
- Group 20-Steering Valve
- Group 25—Steering and Feedback Cylinders
- Group 30—Remove/Install Brake Valve and Brake Accumulator
- Group 35—Brake Valve
- Group 40-Brake Accumulator
- Group 45—Bleeding Brakes and Testing Brake Assembly
- Group 50-Brake Pistons, Plates, and Disks

#### SECTION 70-HYDRAULIC REPAIR

- Group 00—Specifications and Special Tools
- Group 05-Charge Pump Assembly
- Group 10-Remove/Install Main Hydraulic Pump
- Group 15-Main Hydraulic Pump

- Group 20—Remove/Install Charge Circuit Valves and Attenuator
- Group 25-Charge Pump Control Valve
- Group 30-Hydraulic Filter Relief Valve Housing
- Group 35—Remove/Install HYDRA-

CUSHIONED<sup>™</sup> Seat Valve Assembly and Accumulator

- Group 40—Seat Valve Assembly
- Group 45---Remove and Install Pressure Control Valve
- Group 50—Pressure Control Valve
- Group 55—Remove/Install Rockshaft Components
- Group 60-Rockshaft Components
- Group 65-Lift Assist Cylinders
- Group 70-Draft Sensing Cylinders
- Group 75—Hitch Components
- Group 80----Remove/Install Selective Control Valves and Controls
- Group 85—Selective Control Valve and Coupler
- Group 90—Remote Cylinder
- Group 95—Transmission-Hydraulic System Cleanup Procedure

SECTION 80-MISCELLANEOUS REPAIR

- Group 00-Specifications and Special Tools
- Group 05-Wheels
- Group 10-Hinge Pins
- Group 15—Front Weight

#### SECTION 90-OPERATOR STATION REPAIR

- Group 00---Specifications and Special Tools
- Group 05—Air Conditioning System
- Group 06-Air Conditioning System Service
- Group 10—Heating System
- Group 15—HYDRACUSHIONED Seat
- Group 20—Miscellaneous Components

#### SECTION 95-MISCELLANEOUS OPTIONS

- Group 00-Specifications and Special Tools
- Group 60—Auxiliary Steering System
- Group 61—Auxiliary Brakes System
- Group 62-Auxiliary Trailer Brake

#### SAFETY MESSAGES

This safety alert symbol and word **CAUTION** identifies important safety messages in this manual and on tractor. When you see this symbol, be alert to the possibility of personal injury and carefully read message that follows.

#### IMPORTANT

The **IMPORTANT** message identifies potential problems which may cause consequential damage to tractor. Following recommended procedure will instruct technician how to avoid problem.

#### NOTES

The word *NOTE* is followed by a statement that identifies a qualification or exception to a previous statement. A "NOTE" may also identify nice-to-know information pertinent to, but not directly related to previous statement.

U10;010/NT E 101281

U10;010HNT C 101281

U10;0101NT D 101201

# STAY CLEAR OF MOVING TRACTOR

Be sure everyone is clear of tractor and attached equipment before starting engine or moving steering wheel. Tractor and equipment move (A), even with transmission in PARK. Some steering movement often occurs as engine starts.

Never try to get on or off a moving tractor.

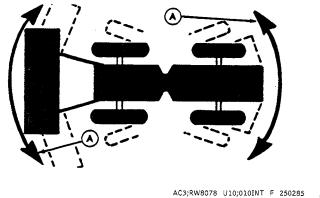
Before dismounting, place the transmission in PARK and lower implements to the ground. If tractor is to be left unattended, stop the engine and remove the key.

#### 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;T5177 U01;BYPA51 040385

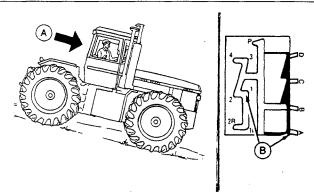
#### TRANSPORT TRACTOR SAFELY

Before descending a steep hill (A), shift to a low gear (B) to control the tractor with little or no braking. Never coast downhill.

When transporting on icy or graveled surfaces, be alert for skids which could result in loss of steering control. To decrease chance of skids, reduce speed and be sure tractor is properly ballasted.

Never tow tractor faster than 8 km/h (5 mph) with all wheels on the ground. With rear wheels raised, never tow tractor faster than 16 km/h (10 mph).

Use of radial ply tires require special precautions, see Operator Manual.

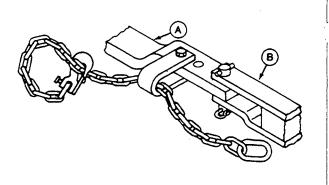


AC3;RW4421 U10;010INT G 030484

Litho in U.S.A.

#### USE A SAFETY CHAIN

A safety chain will help control drawn equipment (B) should it accidentally separate from the drawbar (A) while transporting. Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning. See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine.



#### AB6;TS163 053;CHAIN 310884

U01;TOW 061284

#### TOW EQUIPMENT PROPERLY

Use caution when towing loads at transport speeds. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. Avoid hard braking applications. (Consult implement operator's manual for recommended transport speeds.)

Use additional caution when transporting towed loads under adverse surface conditions, when turning, or on inclines.

#### USE ADEQUATE SERVICE FACILITIES

Keep the service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment.

Make sure the service area is adequately vented.

Periodically check the shop exhaust system for leakage. Engine exhaust gas is dangerous.

Be sure all electrical outlets and tools are properly grounded.

Use adequate light for the job at hand.

Use lifting equipment and safety stands which have adequate strength for the job being performed.

Wear fairly tight clothing.

Know where the first aid kit and fire extinguishers are located, and know how to use them.

U10;010INT I 210183

#### SERVICE TRACTOR SAFELY

Do not service the tractor while it is in motion or while the engine is running.

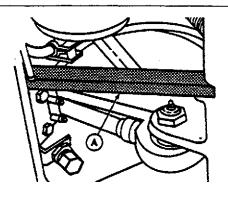
Stay clear of hinge area when engine is running. Stop engine and remove key before working near hinge.

Drive shaft does not turn at engine start-up until clutch pedal is depressed and released. Be aware of sudden rotation of drive shaft as clutch is actuated.

Install lock bars (A) on tractor hinge before performing service work in hinge area. Be sure lock bars are removed before operating tractor.

Disconnect the battery ground cable before working on the electrical system or working in any area when you might accidentaly contact electrical components. A short circuit could cause burns as well as damaging the electrical system.

Reinstall all shields removed during service.



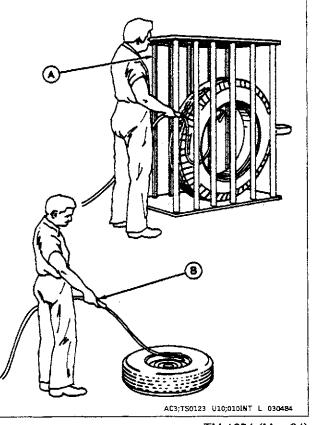
AC3;RW8506 U10;010INT AX2 210183

#### SERVICE TIRES SAFELY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

When sealing tire beads on rims, never exceed 240 kPa (2.4 bar) (35 psi) or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead, and reinflate.

Detailed agricultural tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55. Such information is also available from the Rubber Manufacturers Association and from tire manufacturers.



Litho in U.S.A.

RW10411

# DO NOT MODIFY TRACTOR

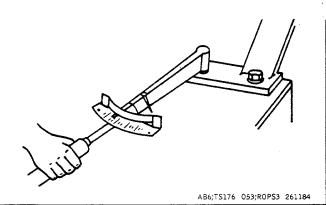
Unauthorized modification to the machine may impair the function and/or safety and affect machine life.

Never modify structural members of SOUND-GARD body (A) by welding, bending, drilling or cutting as this might weaken the structure. If any structural member is damaged, replace the entire structure. Do not attempt repairs.

### 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. A damaged ROPS should be replaced, not reused.



AJ7;RW1041 1 U01;MODIFY 4WD 250585

# OBSERVE ELECTRICAL SERVICE PRECAUTIONS

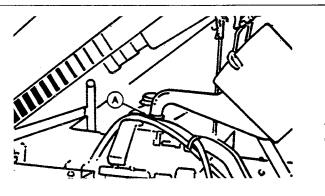
Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. To avoid sparks, connect ground cable last and disconnect it first. When using a booster battery, follow instructions in Operator's Manual.

To avoid shocks and burns, disconnect battery ground cable before servicing any part of electrical system.

AC3;RW8074 U10;010INT BX2 061282

### SERVICE COOLING SYSTEM SAFELY

I: adiator cap (A) must be removed, do not remove it when engine is hot. Shut the engine off and wait until it cools. Then turn the cap to the first stop to relieve pressure before removing it completely.



TM-1254 (Feb-85) 104;008 250285

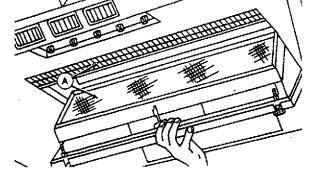
#### **AVOID HIGH-PRESSURE FLUIDS**

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other tines. 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.

#### HANDLE CHEMICALS PROPERLY

SOUND-GARD body air filters (A) are not designed to filter out harmful chemicals. Follow instructions given in the implement operator's manual and those given by the chemical manufacturer when using agricultural chemicals.



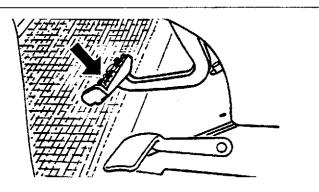
AJ7;RW5704L U01;HANDLE 2 311084

AB6;X9811 053;FLUID 100584

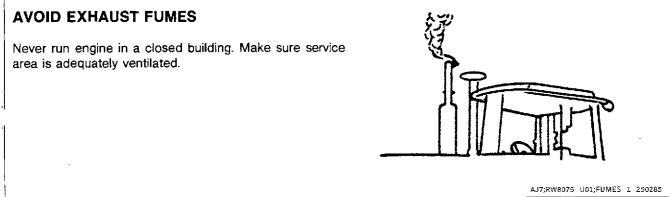
#### SERVICE BRAKE ACCUMULATOR SAFELY

Relieve all pressure from accumulator before disconnecting brake accumulator or brake valve. To do so open bleed screws and pump brake pedal with engine stopped, until pedal easily goes all way down.

The accumulator is charged with dry nitrogen to a pressure of 500 psi (3450 kPa) (35 bar). If it needs recharging, have job done only by a qualified service person and only with dry nitrogen.



AC3;RW8103 U10;010INT FX1 220283





TM-1254 (Feb-85)

# AVOID EXPLOSIONS OR FIRE

Batteries produce explosive gas. Before using booster batteries, read instructions in operator's manual.

Before connecting or disconnecting battery charger, turn the charger off to avoid sparks. See instructions in operator's manual.

Be careful with starting fluid or any type fuel.

Never smoke while handling fuel.

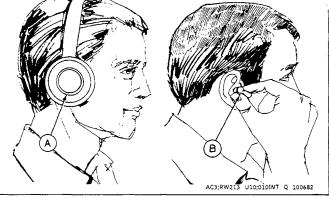


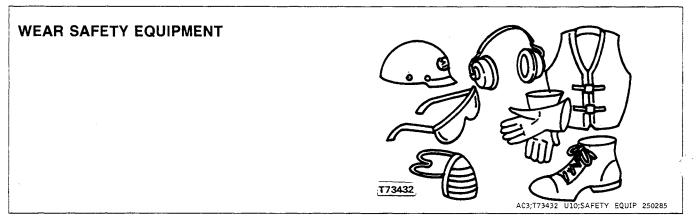
AC3;RW5895 U10;AVOID FIRE 250285

### **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 or uncomfortable, loud noises.





# MORE MANUALS: https://www.ebooklibonline.com/



Suggest:

If the above button click is invalid. Please download this document first, and then click the above link to download the complete manual. Thank you so much for reading