

# STX30, STX38, and STX46 Lawn Tractors



## TECHNICAL MANUAL



**John Deere  
Worldwide Commercial and  
Consumer Equipment Division**

**TM1561 (15Mar97)  
Replaces TM1561 (01Sep95) and  
TM1418 (26Oct92)**



**STX38 Gear Drive**



**STX38 Hydrostatic Drive**



**STX38 Motorsport Edition**



**STX46 Gear Drive**



**STX46 Hydrostatic Drive**

This technical manual is written for an experienced technician and contains sections that are specifically for this product. It is a part of a total product support program.

The manual is organized so that all the information on a particular system is kept together. The order of grouping is as follows:

- Table of Contents
- Specifications
- Theory of Operation
- Troubleshooting Diagram
- Diagnostics
- Tests & Adjustments
- Repair

Note: Depending on the particular section or system being covered, not all of the above groups may be used.

Each section will be identified with a symbol rather than a number. The groups and pages within a section will be consecutively numbered.

All information, illustrations and specifications in this 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.

We appreciate your input on this manual. To help, there are postage paid post cards included at the back. If you find any errors or want to comment on the layout of the manual please fill out one of the cards and mail it back to us.

**Safety**



**Specifications and Information**



**Engine**



**Electrical**



**Power Train (Gear)**



**Power Train (Hydrostatic)**



**Steering**



**Miscellaneous**



COPYRIGHT© 1997  
JOHN DEERE HORICON WORKS  
Horicon, Wisconsin  
All rights reserved



## **RECOGNIZE SAFETY INFORMATION**



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

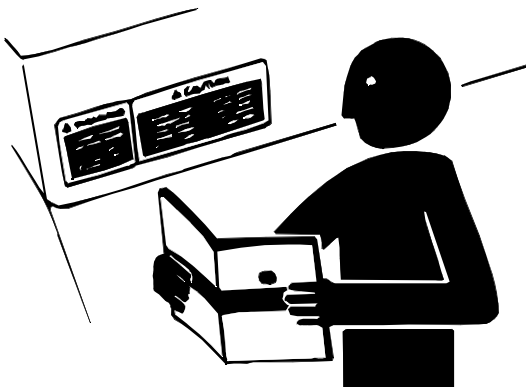
Follow recommended precautions and safe servicing practices.

### **Understand Signal Words**

A signal word—**DANGER**, **WARNING**, or **CAUTION**—is used with the safety-alert symbol. **DANGER** identifies the most serious hazards.

**DANGER** or **WARNING** safety signs are located near specific hazards. General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.

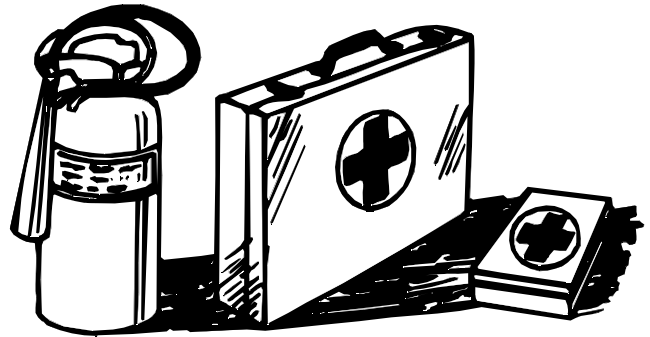
## **REPLACE SAFETY SIGNS**



Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

## **HANDLE FLUIDS SAFELY-AVOID FIRES**

### **Be Prepared For Emergencies**



When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

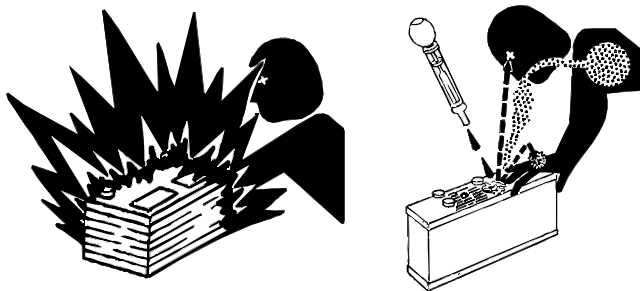
Do not store oily rags; they can ignite and burn spontaneously.

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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

## USE CARE IN HANDLING AND SERVICING BATTERIES



### Prevent Battery Explosions

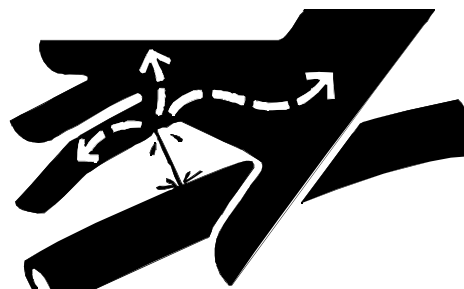
- Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.
- Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.
- Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

### Prevent Acid Burns

- Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.
- **Avoid acid burns by:**
  1. Filling batteries in a well-ventilated area.
  2. Wearing eye protection and rubber gloves.
  3. Avoiding breathing fumes when electrolyte is added.
  4. Avoiding spilling or dripping electrolyte.
  5. Use proper jump start procedure.
- **If you spill acid on yourself:**
  1. Flush your skin with water.
  2. Apply baking soda or lime to help neutralize the acid.
  3. Flush your eyes with water for 10\_15 minutes.
  4. Get medical attention immediately.
- **If acid is swallowed:**
  1. Drink large amounts of water or milk.
  2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
  3. Get medical attention immediately.

## USE CARE AROUND HIGH-PRESSURE FLUID LINES

### Avoid High-pressure Fluids



Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid injury from escaping fluid under pressure by stopping the engine and relieving pressure in the system before disconnecting or connecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

### Avoid Heating Near Pressurized Fluid Lines



Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.



Thank you very much  
for your reading.  
Please click here  
to get more information.