

# 8120, 8220, 8320, 8420 & 8520 Tractors Operation & Test

## OPERATION AND TEST SERVICE MANUAL

8220, 8320, 8420, 8520, 8120

TM1980 23NOV09 (ENGLISH)

For complete service information also see:

Starfire Real Time Kinematic (RTK) Base  
Station Diagnosis and Tests      TM2820

8120, 8220, 8320, 8420 & 8520 Tractors  
(Worldwide Edition)      TM1970

Series 450, 6081 Diesel Engines      CTM86

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## Foreword

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.

**CAUTION:**

---

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.

Technical manuals are divided in two parts: repair and operation and tests. Repair sections tell how to repair the components. Operation and tests sections help you identify the majority of routine failures quickly.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Technical Manuals are concise guides for specific machines. They are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

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## Group 05 - Safety

### Recognize Safety Information



#### ***Safety-alert symbol***

This is a 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 operating practices.

### Handle Fluids Safely—Avoid Fires



#### ***Avoid Fires***

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.

### Prevent Battery Explosions



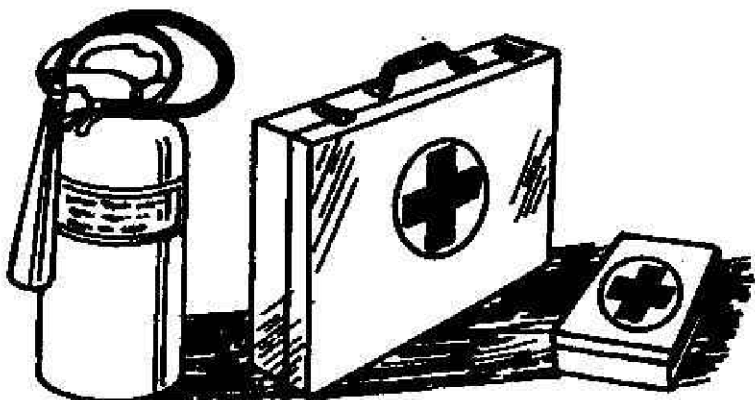
### **Battery Explosions**

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).

### **Prepare for Emergencies**



### **First Aid Kit**

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.



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