

Series 400 6076AFD Dual Fuel Engines



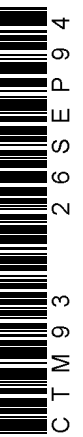
COMPONENT TECHNICAL MANUAL

Series 400 6076AFD
Dual Fuel Engines

CTM93 (26SEP94) English

Deere Power Systems Group
CTM93 (26SEP94)

LITHO IN U.S.A.
ENGLISH



Introduction

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.



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.

Use this component technical manual in conjunction with the machine technical manual. An application listing in the introduction identifies product-model/component type-model relationship. See the machine technical manual for information on component removal and installation, and gaining access to the components.

This manual is divided in two parts: repair and operation and tests. Repair sections contain

necessary instructions to repair the component. 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.

Component Technical Manuals are concise service guides for specific components. Component technical manuals are written as stand-alone manuals covering multiple machine applications.

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.

ABOUT THIS MANUAL

This component technical manual covers the recommended repair procedure for 6076, 7.6 L (466 cu. in.) dual fuel engines produced in Waterloo, Iowa.

This manual contains the necessary instructions to diagnose the electrical and natural gas/diesel fuel portions of the Dual Fuel System.

Use this information in conjunction with the following CTMs:

- CTM6 — For general engine repair
- CTM68 — For electronic fuel injection diagnostics and repair
- CTM77 — For charging and starter systems diagnostics and repair

Before beginning repair of an engine, clean the engine and mount on a repair stand. (See Group 03 - Engine Mounting in CTM6.)

Direction of engine crankshaft rotation in this manual is referenced from the flywheel end looking toward the front. Front of engine is fan drive end.

Read each module completely before performing any service.

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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.

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00

Engine Control Unit (ECU)
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01

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HANDLE FLUIDS SAFELY—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.



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TS227

HANDLE NATURAL GAS SAFELY

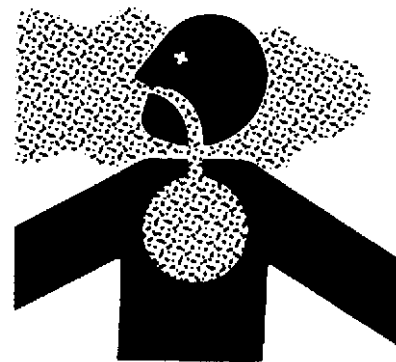
Handle natural gas with care: it is highly flammable. Do NOT smoke while working on or around natural gas equipment.

Natural gas fumes may cause sickness or death. Work in well ventilated area.

Shut off natural gas supply before servicing equipment.

Have a manual valve installed away from the engine to shut off gas supply in case of an emergency.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris.



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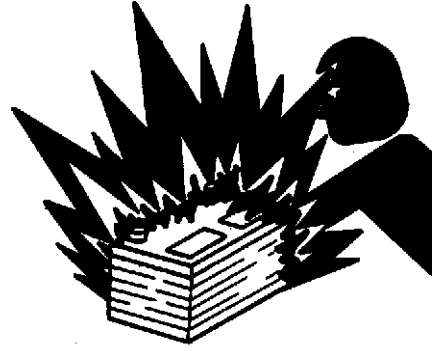
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TS227
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TS220

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).



DX,SPARKS -19-03MAR93

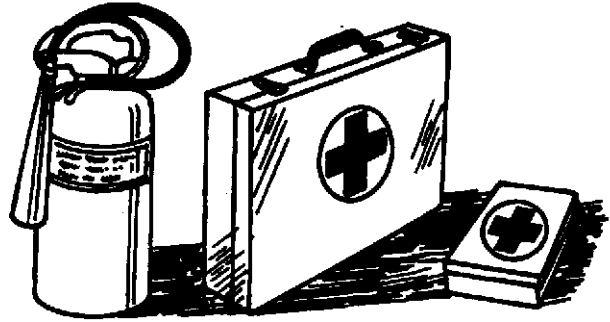
TS204 -JUN-23AUG88

PREPARE FOR EMERGENCIES

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.



DX,FIRE2 -19-03MAR93

TS291 -JUN-23AUG88

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 the hazard 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 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 quarts).
3. Get medical attention immediately.



DX,POISON -19-21APR93

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TS203

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