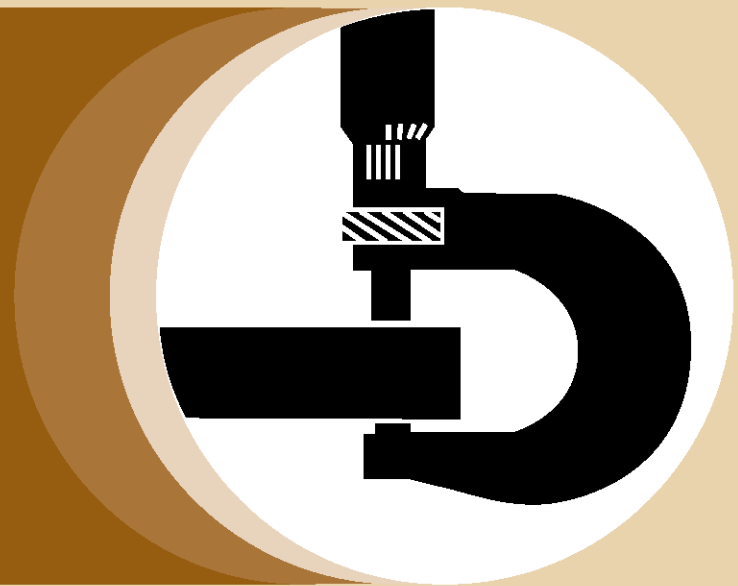


**Series 300
3179, 4239, 6359,
4276, and 6414
Diesel Engines**

**COMPONENT
TECHNICAL
MANUAL**



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**Deere Power Systems Group
CTM4 (28OCT95)**

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.

JOHN DEERE DEALERS

IMPORTANT: The changes listed below make your current CTM obsolete. Discard CTM4, dated 24 Jan 90. Please copy this page and route through your service department.

- Specifications listed at the beginning of each group have been updated.
- Engine model designation and application charts have been updated to include the latest product models. (Group 01.)
- Engine break-in oil information has been added. Engine coolant requirements and specifications have been revised. (Group 02.)
- Methods for properly lifting of engines have been revised and added. (Group 03.)
- Valve clearance checking and adjustment procedure revised to show that these procedures MUST BE done with engine COLD. Cylinder head removal, inspection, and installation procedures have been revised. (Group 05.)
- Main thrust bearing, compression ring, piston pin length and crankshaft rod journal specifications have been added. Tools required for piston and rod assembly have been updated. Procedures for measuring piston skirt, piston pin bore and piston-to-liner clearance have been revised. (Group 10.)
- Specifications for six-piece thrust bearing and main bearing cap screw torque for Dubuque and Saran-built engines have been added. (Group 15.)
- Crankshaft gear removal and installation procedures, crankshaft grinding guidelines and specifications chart have been revised. (Group 15.)
- Procedures for installing upper idler shaft for Saran engines requiring a special washer has been added. (Group 16.)
- Procedures for both aluminum and composite material timing gear covers have been added. (Group 16.)
- Description of standard-flow and high-flow oil coolers have been added. (Group 20.)
- Procedures for identifying and installing the oil bypass valve, which reflect a new design configuration have been added. (Group 20.)
- Water pump procedures have been revised to reflect a unitized (one-piece) water seal. (Group 25.)
- Checking Water Pump Cap Screw Protrusion procedure has been added for Saran 4-and 6-cylinder OEM engines. (Group 25.)
- Removal and installation procedures for the aftercooler have been added. (Group 30.)
- Turbocharger radial bearing clearance and axial bearing endplay procedures have been revised. (Group 30.)
- Engine break-in procedures have been revised. (Group 100.)
- Removal and installation procedures for the fuel shut-off solenoid have been added. Procedures for the removal, repair, and installation of the fuel injection pumps have been revised. (Group 35.)
- Fuel injection pump specifications chart has been updated to include dynamic timing values for all engine models. Procedures for dynamic timing using TIME TRAC® Kit has been added. Check and Adjust Engine Speed procedure for Lucas CAV and Stanadyne pumps have been added. (Group 115.)

ABOUT THIS MANUAL

This Component Technical Manual (CTM4) covers the recommended repair procedures for the following engines:

- All 179 cu. in. (2.9 L), 239 cu. in. (3.9 L), and 359 cu. in. (5.9 L) produced in Saran, France having Engine Serial No. (CD394145—).
- All 239 cu. in. (3.9 L) and 359 cu. in. (5.9 L) produced in Dubuque, Iowa having Engine Serial No. (T0100001—300000).
- All 276 cu. in. (4.5 L) and 414 cu. in. (6.8 L) produced in Dubuque, Iowa having Engine Serial No. (T0100001—300000). These engines have serial number plates with raised letters and numbers, and were manufactured November 1983 or later.

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

This manual contains SI Metric units of measure, followed immediately by the U.S. customary units of measure.

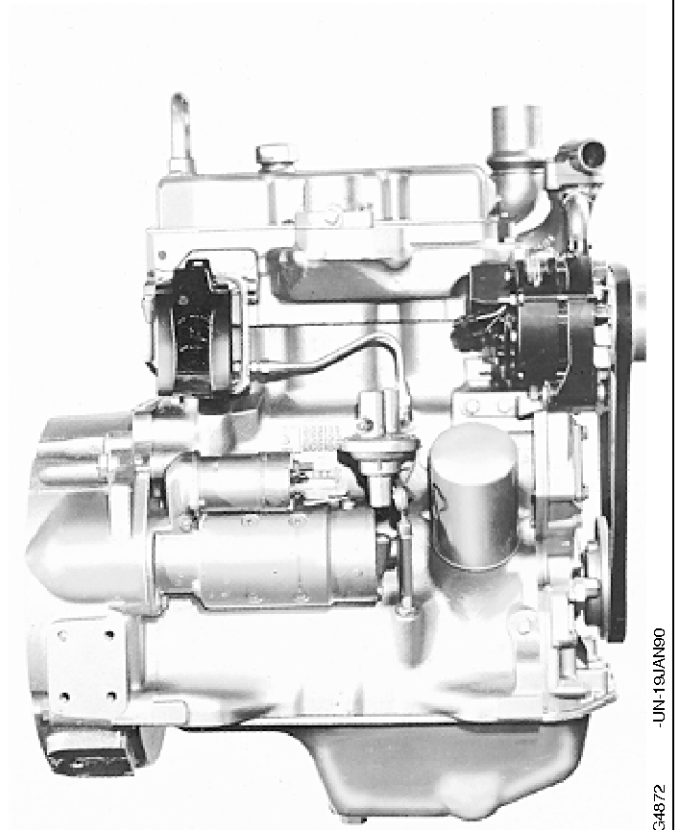
Direction of engine crankshaft rotation in this manual is referenced from facing the flywheel looking toward water pump. Front of engine is water pump end.
NORMAL CRANKSHAFT ROTATION IS COUNTERCLOCKWISE.

Some components of this engine may be serviced without removing the engine from the machine. Refer to the specific machine technical manuals for information on components that can be serviced without removing the engine from the machine and for engine removal and installation procedures.

Read each module completely before performing service to check for differences in procedure or specifications. Follow only the procedures that apply to the engine model number you are working on. If only one procedure is given, that procedure applies to all 300 Series Diesel Engines in this manual.

S11,2000,DF -19-28SEP95

3179D ENGINE IDENTIFICATION

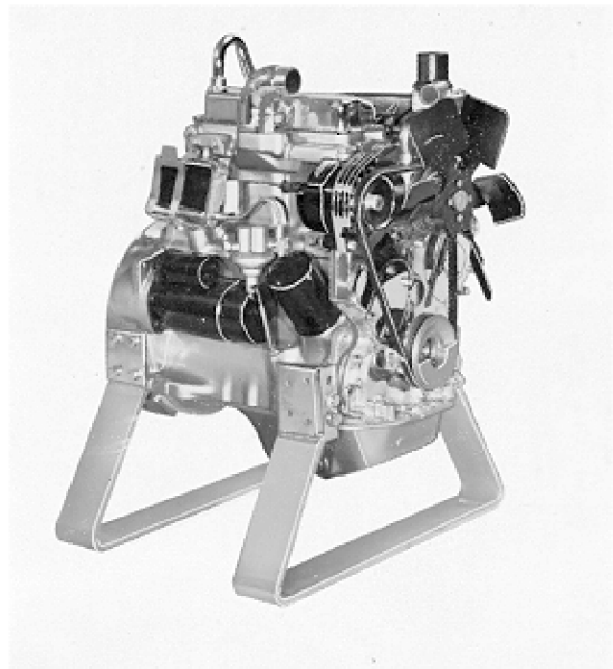


3179D Engine

RG.CTM4,DW610 -19-01NOV95

RG4872
-UN-19JAN90

4276D ENGINE IDENTIFICATION



4276D Engine

RG.CTM4,DW611 -19-28SEP95

RG4873
-UN-19JAN90



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