

# 7600, 7700, and 7800 Tractors Repair



JOHN DEERE

## TECHNICAL MANUAL 7600, 7700, and 7800 Tractors Repair

TM1500 (04NOV96) English

FOR COMPLETE SERVICE INFORMATION ALSO SEE:

7600, 7700, AND 7800 TRACTORS OPERATION AND TEST .....	TM1501
6068 ENGINES NORTH AMERICAN .....	CTM8
EUROPEAN .....	CTM3274
6076 ENGINES .....	CTM42
ENGINE ACCESSORIES .....	CTM67
ALTERNATORS AND STARTING MOTORS .....	CTM77
MFWD AXLES 1100 AND 1150 SERIES .....	CTM44

John Deere Waterloo Works  
TM1500 (04NOV96)

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.

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.

Preview Only

# Miscellaneous

## NOTICE TO THE DEALER

This is a complete revision for TM1500 Repair  
Technical Manual for 7600, 7700, and 7800  
Tractors.

This will replace TM1500 dated 19NOV93.

Preview Only

RX1500,DLR -19-04NOV96

## DEALER PREDELIVERY SERVICE

The John Deere delivery receipt, when properly filled out and signed by the dealer and customer, verifies predelivery and delivery services were satisfactorily performed. When delivering the tractor, give the customer his copy of the delivery receipt and operators manual. Be sure to explain their purposes to him.

Because of the shipping factors involved, plus extra finishing touches necessary to promote customer satisfaction, there are certain predelivery services that must be performed by the dealer. These services are listed in the first of two sections on the predelivery form which is attached to the tractor. The second section is a list of factory inspections that must be verified by the dealer.

Fill the form out completely and sign it. Send a copy to the factory and file the original with the shop order for the job. This will certify the proper delivery service has been completed.

Perform all services listed and check each job off as it is completed.

Preview Only

**QUICK REFERENCE SPECIFICATIONS****Engine:**

Slow Idle	800—900 rpm
Fast Idle	2225—2325 rpm
Rated Engine Speed	2100 rpm

**Valve Clearance:****Intake:**

7600	0.35 mm (0.014 in.)
7700 and 7800	0.38 mm (0.015 in.)

**Exhaust:**

7600	0.45 mm (0.018 in.)
7700 and 7800	0.51 mm (0.020 in.)

**Capacities:**

Fuel tank	344 L (91 gal)
-----------	----------------

**Cooling system:**

7600	24 L (25 qt)
7700	25 L (26.5 qt)
7800	26 L (27.5 qt)

Crankcase with Filter	18 L (19 qt)
-----------------------	--------------

**Transmission, Differential and Hydraulic system:**

Power Shift	91 L (24 gal)
Power Shift with MFWD	102.3 L (27 gal)
PowrQuad	87 L (22.9 gal)
PowrQuad with MFWD	98.3 L (25.9 gal)
PowrQuad with Creeper	91 L (24 gal)
PowrQuad with MFWD and Creeper	102.3 L (27 gal)

**Mechanical Front Wheel Drive:**

Axle Housing	8.5 L (9 qt)
Wheel Hub	1.9 L (2 qt)

**Torques:**

Front Axle Bolts	600 N·m (445 lb-ft)
Front Wheel to Hub	
Standard	136 N·m (100 lb-ft)
MFWD:	
Rim-to-Disk	310 N·m (230 lb-ft)
Disk-to-Hub	600 N·m (445 lb-ft)
Rear Wheel Sleeve Retaining Bolts (Final Torque):	
Cast Wheels	600 N·m (445 lb-ft)
Steel Wheels	500 N·m (370 lb-ft)
Rear Wheel-to-Rim	600 N·m (445 lb-ft)
Rear Steel Wheel	600 N·m (445 lb-ft)
Cab Mounting Bolts	204 N·m (150 lb-ft)