



John Deere 1530 Tractor



JOHN DEERE

TECHNICAL MANUAL

John Deere
1530 Tractor

TM4280 (01Mar73) English



John Deere Waterloo Works
TM4280 (01Mar73)

LITHO IN U.S.A.
ENGLISH



CONTENTS

SECTION 10 — GENERAL

- Group 5 - Specifications
- Group 10 - Pre-delivery, delivery and after-sales inspections
- Group 15 - Lubrication and periodic service
- Group 20 - Engine and tractor tune-up
- Group 25 - Tractor separation

SECTION 20 — ENGINE

- Group 5 - General information, diagnosing malfunctions
- Group 10 - Cylinder head and camshaft
- Group 15 - Cylinder block, liners, pistons and connecting rods
- Group 20 - Crankshaft, main bearings and flywheel
- Group 25 - Timing gear train
- Group 30 - Oil pump, oil pressure regulating valve and oil filter
- Group 35 - Engine cooling system
- Group 40 - Speed control linkage

SECTION 30 — FUEL SYSTEM

- Group 5 - Diagnosing malfunctions
- Group 10 - Fuel tank, transfer pump, fuel filter
- Group 15 - Fuel injection pumps
- Group 20 - Injection nozzles
- Group 25 - Cold weather starting aid

SECTION 40 — ELECTRICAL SYSTEM

- Group 5 - Diagnosing malfunctions
- Group 10 - Components and wiring diagram
- Group 15 - Bosch starting motor
- Group 17 - Delco-Remy starting motor
- Group 20 - Bosch alternator and regulator
- Group 22 - Motorola alternator and regulator

SECTION 50 — POWER TRAIN

- Group 5 - Engine clutches and clutch linkage
- Group 10 - Hi-Lo shift unit
- Group 15 - Collar-shift transmission
- Group 20 - Differential
- Group 25 - Final drives
- Group 30 - Continuous-running PTO
- Group 35 - Independent PTO

SECTION 60 — FRONT AXLE, STEERING SYSTEM AND BRAKES

- Group 5 - Front axle
- Group 10 - Steering system
- Group 15 - Hydraulic brakes

SECTION 70 — HYDRAULIC SYSTEM

- Group 5 - General information, diagnosing malfunctions and tests
- Group 10 - Oil reservoir, filter, valves and oil cooler
- Group 15 - Hydraulic pump and transmission oil pump
- Group 20 - Rockshaft
- Group 25 - Selective control valve and breakaway coupler
- Group 30 - Remote cylinder

SECTION 80 — MISCELLANEOUS

- Group 5 - Belt pulley
- Group 10 - DE LUXE seat
- Group 15 - Front and rear wheels

INTRODUCTION



Use FOS Manuals for Reference

This technical manual is part of a twin concept of service:

- FOS Manuals – for reference
- Technical Manuals – for actual service

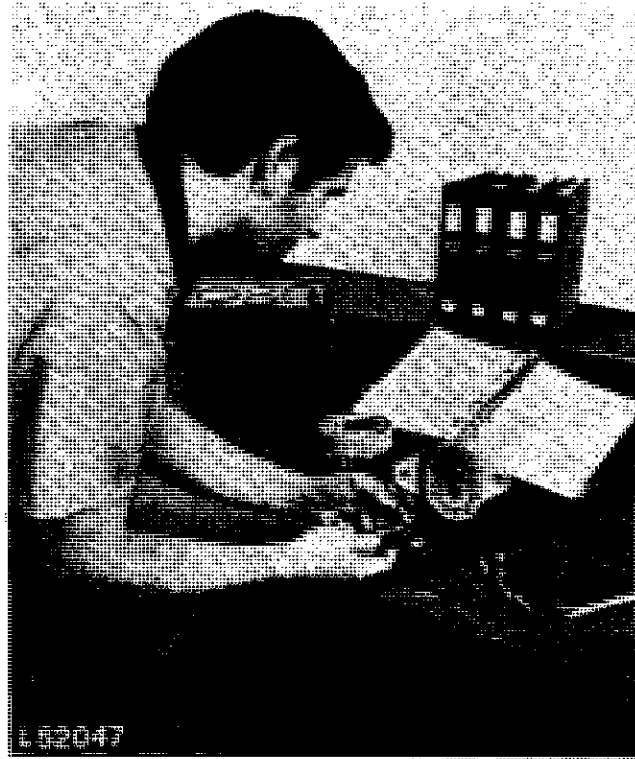
The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of trouble shooting, general maintenance, and basic types of failures and their causes. FOS Manuals are for training new men and for reference by experienced men.

Technical Manuals are concise service guides for a specific machine. Technical Manuals are on-the-job guides containing only the vital information needed by a journeyman mechanic.



When a serviceman should refer to a FOS Manual for more information, a FOS symbol like the one at the left is used in the TM to identify the reference.



Use Technical Manuals for Actual Service

Some features of this technical manual:

- *Table of contents at front of whole Manual.*
- *Contents at front of each Section*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications at end of each Group*
- *Special tools at end of each Group*

This technical manual was planned and written for you—a journeyman mechanic. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

Section 10 GENERAL

CONTENTS OF THIS SECTION

GROUP 5 — SPECIFICATIONS

	Page
Serial numbers	5-2
Model numbers	5-2
Engine	5-2
Engine clutch	5-2
Electrical system	5-2
Transmission	5-3
Hi-Lo shift unit	5-3
Differential and final drives	5-3
Differential lock	5-3
PTO	5-3
Hydraulic system	5-3
Power steering	5-3
Manual steering	5-3
Hydraulic brakes	5-3
Capacities	5-3
Travel speeds	5-3
Front and rear wheels	5-3
Dimensions and weights	5-3

GROUP 10 — PREDELIVERY, DELIVERY AND AFTER-SALES INSPEC- TIONS

Predelivery inspection	10-1
Delivery inspection	10-4
After-sales inspection	10-4

GROUP 15 — LUBRICATION AND PERIODIC SERVICE

	Page
Lubrication and periodic service	15-1

GROUP 20 — ENGINE AND TRACTOR TUNE-UP

General information	20-1
Preliminary engine testing	20-1
Engine tune-up	20-2
Checking engine performance	20-3
Tractor tune up	20-3
Standard torques	20-5

GROUP 25 — TRACTOR SEPARATION

Separating between engine and tractor front end	25-1
Removing and installing engine	25-3
Removal and installation of clutch housing	25-5
Removal and installation of final drives	25-7
Removal and installation of rockshaft	25-8
Torques for hardware	25-9
Special tools	25-10

Group 5 SPECIFICATIONS

SERIAL NUMBERS

The engine serial number is stamped into the name plate at the lower right of the front cylinder block.

NOTE: If ordering engine parts, indicate all digits of the serial number on the name plate.

The name plate showing the tractor serial number is located on the right-hand side of the front support.

NOTE: If ordering tractor parts, (excluding engine parts), indicate all digits of the serial number on the name plate.

MODEL NUMBERS

The injection pump, injection nozzles, the alternator, starter and the hydraulic pump have model numbers to facilitate identification of different makes of a given unit.

SPECIFICATIONS

ENGINE

Number of cylinders	3
Cylinder liner bore	102 mm (4.02 in.)
Stroke	110 mm (4.33 in.)
Displacement	2690 cm ³ (164 cu.in.)
Compression ratio	16.2 : 1
Maximum torque at 1500 rpm	17.0 mkp (123 ft.lbs.)
Firing order	1 - 2 - 3
Valve clearance (engine hot or cold)	
Intake valve	0.35 mm (0.014 in.)
Exhaust valve	0.45 mm (0.018 in.)

Fast idle	2650 rpm
Slow idle	650 rpm
Working speed range	1500 to 2500 rpm
PTO power* (at 2500 rpm engine speed and 650 rpm powershaft speed)	46 HP (34.3 kw)

ENGINE CLUTCH

Dual dry disk clutch, foot-operated

Single dry disk clutch with torsion damper (isolator), foot-operated (on tractors with independent PTO)

ELECTRICAL SYSTEM

Batteries	2 x 12 volts, 55 ampere-hours
or	1 x 12 volts, 70 ampere-hours
Starter	12 volts, 4 HP
Alternator	14 volts, 28 amps.
Battery terminal grounded	negative

* With the engine run in (more than 100 hours of operation) and having reached operating temperature (engine and transmission); measured by means of a dynamometer. Permissible variation $\pm 5\%$.



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