8430 and 8630 Tractors

JOHN DEERE

TECHNICAL MANUAL

8430 and 8630
Tractors

TM1143 (01Nov86) English

TM1143 (01Nov86)

LITHO IN U.S.A.
ENGLISH

8430 AND 8630 TRACTORS
TECHNICAL MANUAL
TM-1143 (Feb-79)

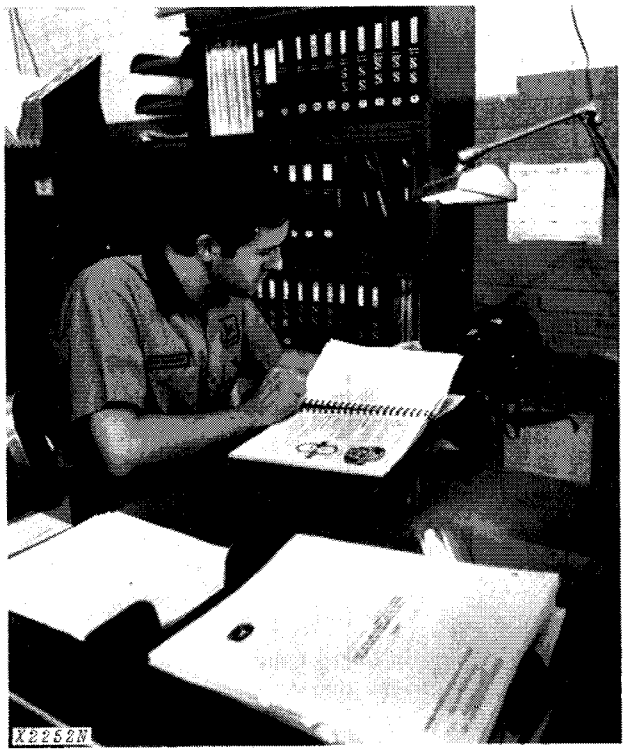
CONTENTS

All information, illustrations and specifications contained in this technical 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.

A-OO

Litho in U.S.A.

INTRODUCTION



Use FOS Manuals for Reference

Use Technical Manuals for Actual Service

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 personnel and for reference by experienced technicians.

Technical Manuals are concise service guides for a *specific* machine. Technical Manuals are on-the-job guides containing only the vital information needed by an experienced technician.

When a service person 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.

Some features of this technical manual:

- *Table of contents at front of manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

This technical manual was planned and written for you—an experienced technician. 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 identifies 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.

Litho in U.S.A.

Section 10
GENERAL

CONTENTS OF THIS SECTION

Group 5
GENERAL TRACTOR SPECIFICATIONS

Horsepower:*
- Maximum observed at PTO
  - 8430 ..... 175 (130 kW)
  - 8630 ..... 225 (168 kW)

Engine:
- Type ..... 6-cylinder, in-line, valve-in-head, diesel, turbocharged, and intercooled
- Engine Speeds:
  - Slow idle ..... 800 rpm
  - Working range ..... 1500 to 2100 rpm
  - Maximum transport speed ..... 2300 rpm
- Bore and stroke
  - 8430 ..... 4.56 x 4.75 in. (11.6 x 12.1 cm)
  - 8630 ..... 5.12 x 5 in. (13.0 x 12.7 cm)
- Displacement
  - 8430 ..... 466 cu. in. (7636 cm^3)
  - 8630 ..... 619 cu. in. (10 143 cm^3)
- Compression ratio
  - 8430 ..... 15.5 to 1
  - 8630 ..... 15.4 to1
- Firing order 1-5-3-6-2-4
- Valve clearance ..... 8430 ....see 20-10-5
  8630 ....see 25-10-5
- Injection pump timing ..... TDC

Lubrication System ..... Force-feed pressurized with full-flow oil filter and by-pass

Fuel System:
- Type ..... Direct injection
- Injection pump type ..... Multiple plunger, in-line
- Air cleaner ..... Dry type with safety element

Cooling System:
- Type ..... Pressurized with centrifugal pump
- Temperature controlled by heavy-duty thermostats
  - 8430 ..... 2 thermostats
  - 8630 ..... 3 thermostats

Litho in U.S.A.