



4320 Tractor

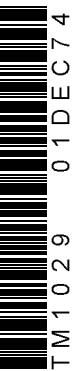


TECHNICAL MANUAL 4320 Tractor

TM1029 (01DEC74) English

John Deere Tractor Works
TM1029 (01DEC74)

LITHO IN U.S.A.
ENGLISH



4320 TRACTOR

TECHNICAL MANUAL

TM-1029 (Aug-70)

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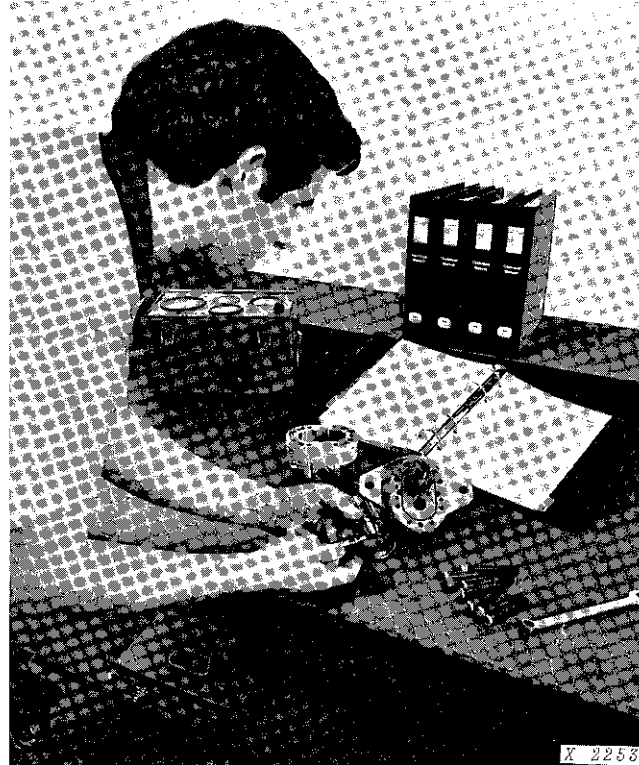
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INTRODUCTION



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 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.

Some features of this technical manual:

- *Table of contents at front of whole manual*
- *Contents at front of each Section*
- *Specifications at end of each Group*
- *Special tools at end of each Group*

 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.

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.

Section 10 GENERAL

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Group 5 GENERAL TRACTOR SPECIFICATIONS

HORSEPOWER:

Observed at PTO 115

ENGINE:

Type 6-cylinder, in-line, valve-in-head,
 diesel, turbocharged

Bore and stroke 4-1/4 in. x 4-3/4 in.

Displacement 404 cu. in.

Compression ratio 15.7 to 1

Firing order 1-5-3-6-2-4

Valve clearance Intake-0.018 in.
 Exhaust-0.022 in.

Injection pump timing TDC

Engine Speeds:

Working range 1500 to 2200 rpm

Maximum transport speed 2500 rpm

Engine speeds:

Slow idle 800 rpm

1900 rpm load 2150 rpm idle

2200 rpm load 2400 rpm idle

2500 rpm load 2650 rpm idle

LUBRICATION SYSTEM:

Full pressurized
 with full-flow micronic oil
 filter, water cooled oil
 cooler, and bypass valves
 for filter and cooler.

FUEL SYSTEM:

Type Direct injection

Filter Two-stage with replaceable
 impregnated paper element.

Injection pump type Inlet metering,
 distributing type

Air cleaner . . Dry type with safety element

COOLING SYSTEM:

Type Pressurized with centrifugal pump

Temperature control Heavy-duty
 thermostat

CAPACITIES:

Fuel tank 44 U.S. gals.

Cooling system 28 U.S. qts.

Crankcase (with filter change) 16 U.S. qts.

Transmission-hydraulic system (add 4-1/2
 gals. to capacity if equipped with Power Front
 Wheel Drive) 14 U.S. gals.

TRANSMISSION:

Type Syncro-Range, constant mesh

Clutch Heavy-duty, 13-1/2 in. plate,
 foot operated

Gear selections 8 forward and 2 reverse

Shifting 4 stations, synchronized
 forward shifting within stations

POWER TAKE-OFF:

Type Single 1-3/8-inch PTO shaft with rear power take-off.
Speed (1900 engine rpm) 540 or 1000 rpm
Rear PTO Ahead of Drawbar Hitch Point:
540 rpm 14 in.
1000 rpm 16 in.

HYDRAULIC SYSTEM:

Type Closed center, constant pressure.
Actuates power steering, power brakes, Power Front Wheel Drive, and implement control.
Standby pressure 2250 psi

BRAKES Hydraulically power actuated, disk-type operating in oil
Provision for manual operation with brake accumulator to supply oil.

STEERING Full power, hydrostatic type.
Provision for manual operation.

ELECTRICAL SYSTEM:

Type 12-volt, negative ground
Alternator 12-volt, 55 amps
Air Conditioned tractors 12-volt, 72 amps
Battery Two, 6-volt, 75-plate 172-ampere-hour

FRONT TIRES* 7.5L-15, 6-ply

REAR TIRES* 20.8-34, 10-ply

FRONT WHEEL TREAD 51 to 80 in.

REAR WHEEL TREAD:

18.4-38 tire, regular axle 60 to 91 in.

* Additional tire sizes available.

* * Tractors with air conditioned cabs and 18.4-34 tires.

GROUND SPEEDS IN MILES PER HOUR(2200 engine rpm and with 18.4-38 rear tires):

Gear	
1st	1.9
2nd	3.0
3rd	4.0
4th	5.1
5th	6.4
6th	8.3
7th	10.9
8th	17.7
1st reverse	3.9
2nd reverse	6.2

POWER FRONT-WHEEL DRIVE:

Type Hydraulic motor driven with planetary gear reduction in wheel hub, uses pressure oil from hydraulic system
Torque Low (series connected) and high (parallel connected)
Controls Solenoid operated control valves, synchronized with transmission controls
Planetary disconnect Hydraulic wet brake on ring gear releases when drive is disengaged

DIMENSIONS:

Wheelbase (Subtract 1 inch for tractors equipped with Power Front-Wheel Drive) 106-1/2 in.
Over-all length 159-1/2 in.
Over-all height* * 113 in.
Height to steering wheel 81-1/2 in.
Over-all width 89-3/4 in.
Turning radius
Without Power Front Wheel Drive (minimum tread and brakes applied) 136 in.
Power Front Wheel Drive (with drive engaged in "High Torque", brakes applied and minimum wheel tread) 126 in.

SHIPPING WEIGHT(With equipment for average field service, less fuel and ballast). Add 385 lbs. if equipped with Roll Gard. Add 1,000 lbs. for Power Front-Wheel Drive
Row-Crop 9,050 lbs.
Standard 9,070 lbs.

(Specifications and design subject to change without notice.)

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