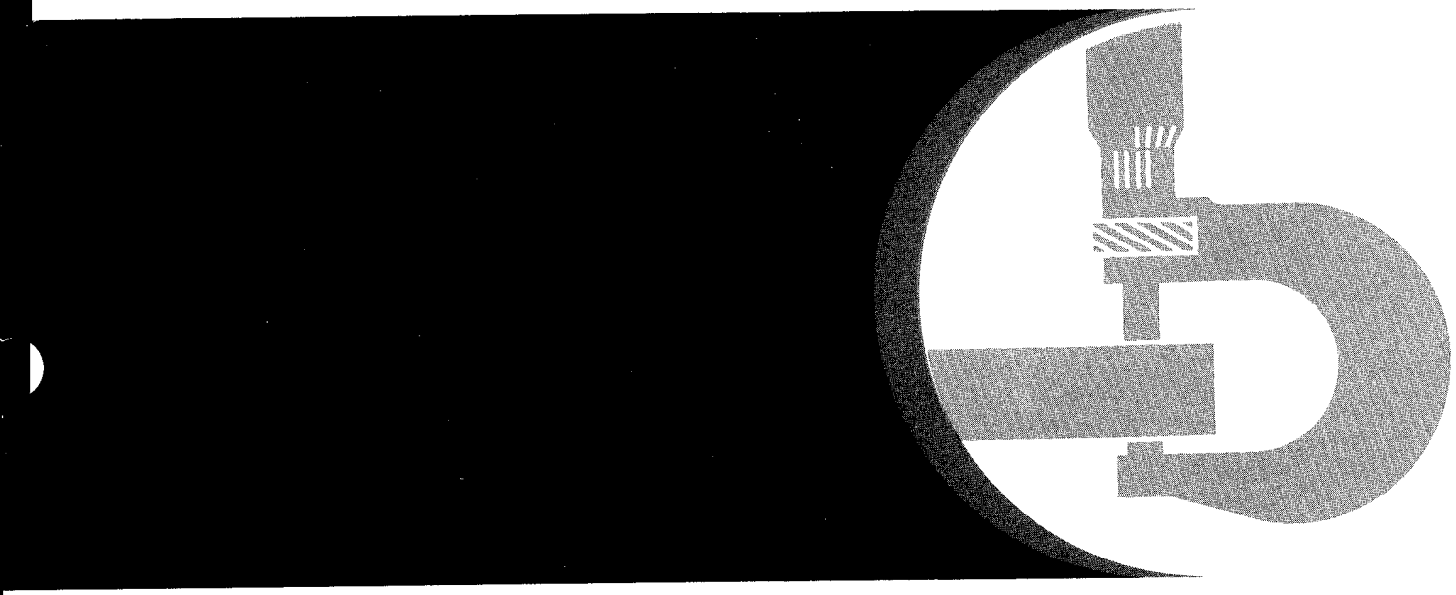
John Deere JD570 and JD570A Motor Grader



TECHNICAL MANUAL

TM-1001 (Dec-87)

JD570 AND JD570-A MOTOR GRADERS

Technical Manual
TM-1001 (Dec-87)

CONTENTS

The specifications and design information contained in this manual were correct at the time it was printed. It is John Deere's policy to continually improve and update our machines. Therefore, the specifications and design information are subject to change without notice.

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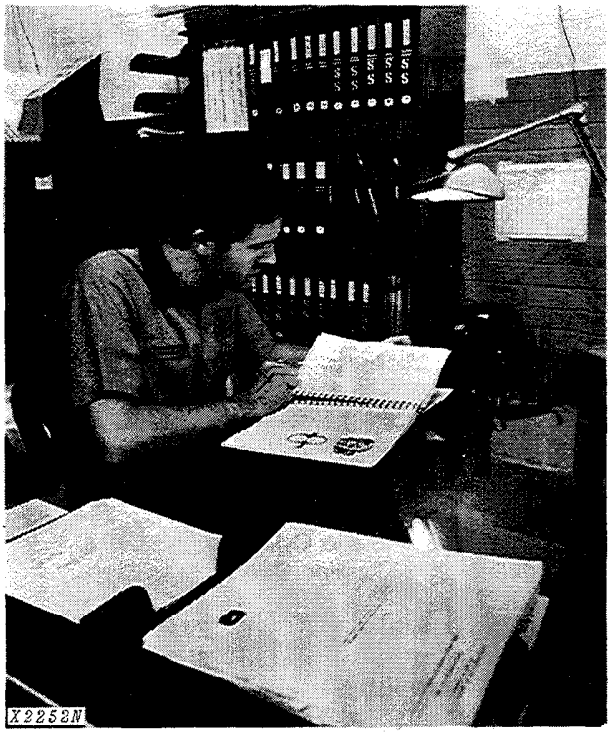
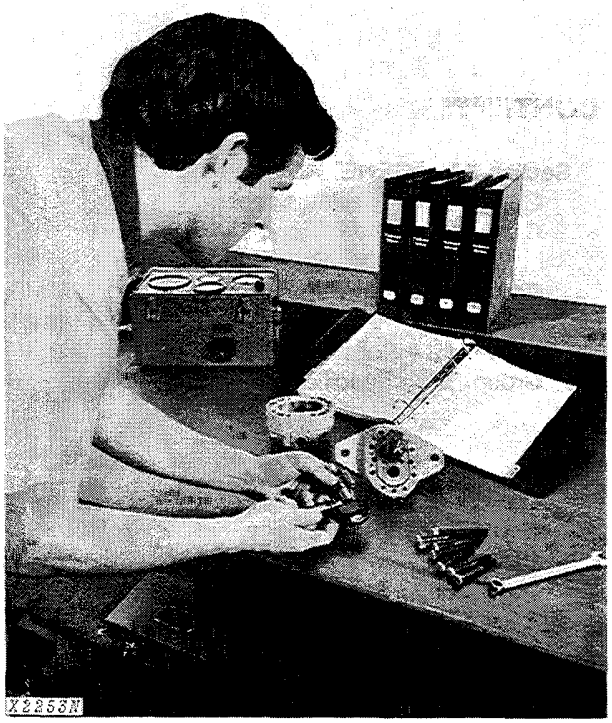
Litho in U.S.A.

INTRODUCTION



Use FOS Manuals for Reference



Use Technical Manuals for Actual Service

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

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

- **FOS Manuals—For Reference**

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 personnel.

When a service technician 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.

- **Technical Manuals—For Actual Service**

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 service technician.

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

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*

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

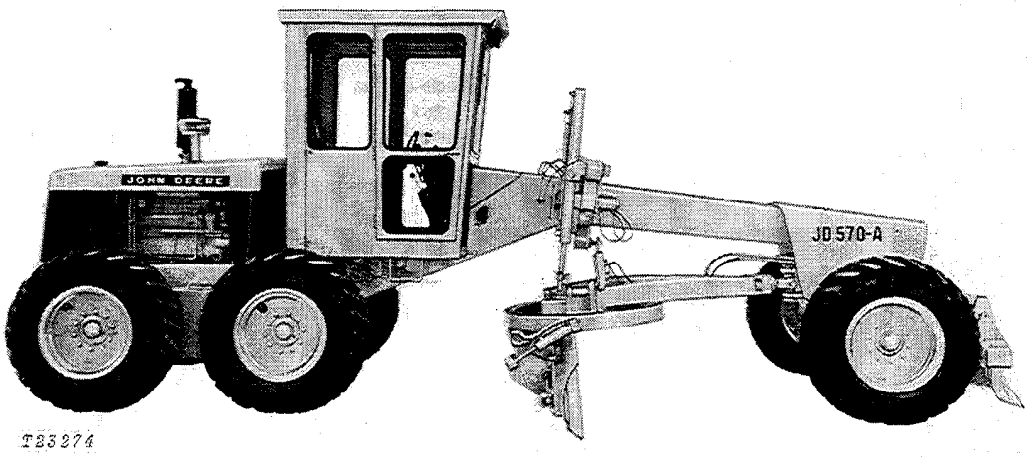


Fig. 1-JD570-A Motor Grader

Group 5
SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 13.00-24, 8-ply-rating, tubeless tires and standard equipment.)

JD570-A

Power @ 2300 engine rpm):	**SAE**	**DIN**
Gross	92 hp (68.6 kW*)	
Net	85 hp (63.4 kW)	86.2 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner water pump, lubricating oil pump, fuel pump, alternator and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft. altitude and 85°F. temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 feet (3000 m) altitude.
*In the international system of units (SI), power is expressed in kilowatts (kW).

Engine: John Deere turbocharged diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle
Bore and stroke ..... 4.02x4.33 in. (102x110 mm)
Piston displacement ..... 329 cu. in. (5392 cm³)
Compression ratio ..... 16.2 to 1
Maximum torque @ 1300 rpm ... 238 lb-ft (323 Nm) (32.8 kg-m)
NACC or AMA (U.S. Tax) horsepower 38.6
Main bearings 7
Lubrication ..... Pressure system w/full-flow filter
Cooling ..... Pressurized w/thermostat and fixed bypass
Fan ..... Suction
Air cleaner w/restriction indicator ..... Dry
Electrical system ..... 12-volt w/alternator
Batteries (2) ..... Reserve capacity: 360 minutes

Transmission... Power Shift, 8 forward and 4 reverse selections

Differential Lock ..... Foot-operated, hydraulically actuated

Travel Speeds (2300 engine rpm, no tire slip):

Shift Lever Position	**mph**	**km/h**
Forward 1	2.0	3.3
2	2.9	4.6
3	4.5	7.2
4	5.8	9.4
5	7.6	12.2
6	9.8	15.8
7	12.8	20.6
8	21.6	34.8
Reverse 1	2.5	4.0
2	3.5	5.6
3	5.5	8.8
4	7.1	11.4

Final Drives ..... Inboard planetary

Brakes:
Service ..... Foot-operated, hydraulically actuated, wet-disk, effective on 4 tandem wheels
Parking ..... Hand-operated, mechanical, expanding dry shoe, effective on 4 tandem wheels

Steering:
Front ..... Full hydraulic power system
Rear ..... Hydraulically articulated frame steering (22 deg. left or right)
Turning radius ..... 18 ft. (5.49 m)
Range ..... 51 deg. left or right

Hydraulic System: Closed-center
Pressure ..... 2000 psi (137.9 bar) (140.6 kg/cm²)
Pump ..... Variable displacement, 27 gpm (102 L/min) @ 2300 engine rpm

Circle: 5.50x1x4.62x1 in. (140x25x117x25 mm) welded angle, 4 ft. 6 in. (1.37 m) dia.
Rotation ..... 360 deg.
Drive ..... Hydraulic motor and worm gear

Drawbar ..... Tapered box, max. 3x7x0.375 in. (76x178x9.5 mm) wall, w/universal swivel

Blade:	**Standard**	**Optional**
Length	12 ft. (3.66 m)	12 ft. (3.66 m)
Height	22 in. (559 mm)	22 in. (559 mm)
Thickness	0.62 in. (15.8 mm)	0.75 in. (19.1 mm)

Blade Lifting Mechanism:
Control ..... Dual-lever, hydraulic
Cylinders (2) ..... 3 in. (76 mm) dia. bore; 42 in. (1.07 m) stroke

Blade Range:
Lift above ground ..... 1 ft. 1 in. (330 mm)
Blade side-shift:
Right ..... 2 ft. 2.75 in. (679 mm)
Left ..... 2 ft. 7.25 in. (794 mm)
Shoulder reach outside wheels:
Right ..... 5 ft. 11.5 in. (1.82 m)
Left ..... 6 ft. 5.25 in. (1.96 m)
Pitch ..... 32 deg. total

Thank you so much for reading.

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