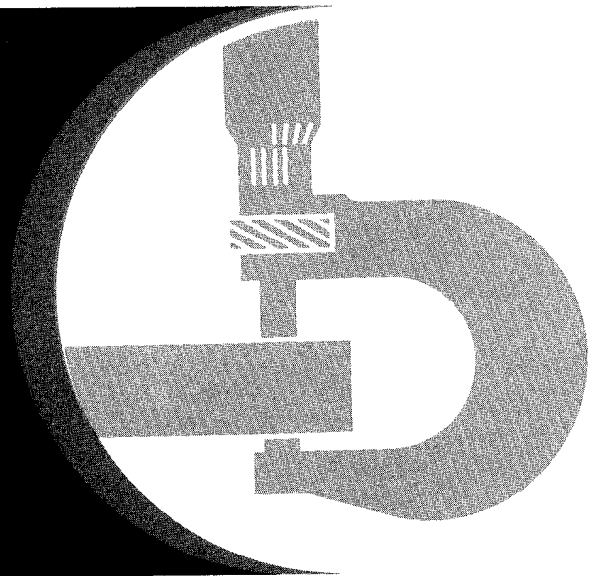


**John Deere
JD570 and JD570A
Motor Grader**



TECHNICAL MANUAL

TM-1001 (Dec-87)

JD570 AND JD570-A MOTOR GRADERS

**Technical Manual
TM-1001 (Dec-87)**

CONTENTS

Section 10 - GENERAL

- Group 5 - Specifications
- Group 10 - Predelivery, Delivery, and After-Sale Services
- Group 15 - Tune-up and Adjustment
- Group 20 - Lubrication
- Group 25 - Separation
- Group 30 - Specifications and Special Tools

Section 20 - ENGINE

- Group 5 - Diagnosing Engine Malfunctions
- Group 10 - Basic Engine
- Group 15 - Engine Lubrication
- Group 20 - Speed Control Linkage
- Group 25 - Engine Cooling System

Section 30 - FUEL SYSTEM

- Group 5 - Diagnosing Malfunctions
- Group 10 - Fuel Tank, Filters, and Transfer Pump
- Group 15 - Air Intake System
- Group 20 - Fuel Injection Pump
Fuel Injection Nozzles
(See SM-2045)
- Group 25 - Specifications and Special Tools

Section 40 - ELECTRICAL SYSTEM

- Group 5 - Description and Wiring Diagrams
- Group 10 - Charging System - Engine
Serial No. (-130705)
- Group 15 - Charging System - Engine
Serial No. (130706-)
- Group 20 - Starting Motor

Section 50 - POWER TRAIN

- Group 5 - Engine Disconnect Clutch
- Group 10 - Transfer Drive
- Group 15 - Power Shift Transmission
- Group 20 - Differential, Differential Control and Valve
- Group 25 - Final Drive System
- Group 30 - Specifications and Special Tools

Section 60 - POWER STEERING AND BRAKES

- Group 5 - Power Steering Valve
- Group 10 - Brake Valve
- Group 15 - Brake Cylinders and Disks
- Group 20 - Parking Brake

Section 70 - HYDRAULIC SYSTEM

- Group 5 - Components and Tests
- Group 6 - System Testing (Analyzer) Serial No. (001700-)
- Group 10 - Filters, Valves, and Accumulator
- Group 15 - Main Hydraulic Pump
- Group 20 - Function Control Valves
- Group 25 - Hydraulic Cylinders
- Group 30 - Circle Drive Hydraulic Motor
- Group 35 - Saddle Valve and Retaining Pins
- Group 40 - Specifications and Special Tools

Section 80 - MISCELLANEOUS

- Group 5 - Circle Drive Gearbox
- Group 10 - Drawbar, Circle and Moldboard
- Group 15 - Saddle, Main Frame, Front Axle and Scarifier
- Group 20 - Specifications and Special Tools

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.

OOA

Litho in U.S.A.

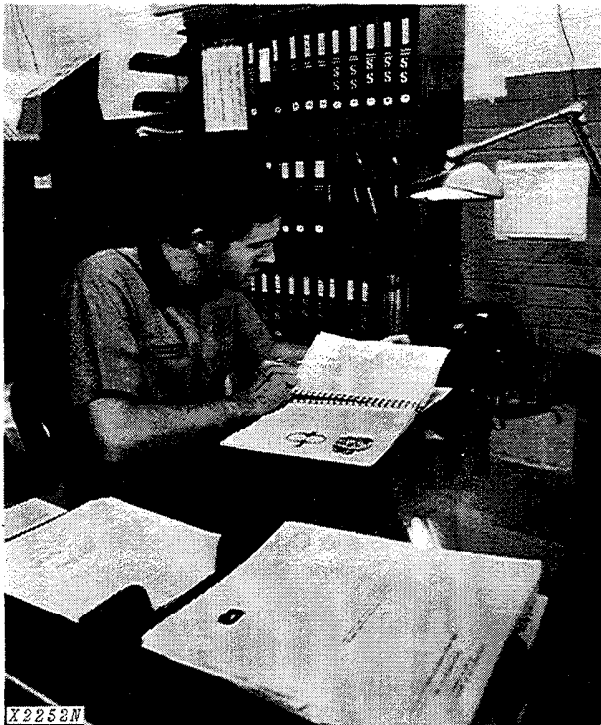
Previous Editions

Copyright © 1980 Deere & Company
Copyright © 1979 Deere & Company
Copyright © 1978 Deere & Company
Copyright © 1977 Deere & Company
Copyright © 1976 Deere & Company
Copyright © 1975 Deere & Company

Copyright © 1974 Deere & Company
Copyright © 1973 Deere & Company
Copyright © 1972 Deere & Company
Copyright © 1971 Deere & Company
Copyright © 1969 Deere & Company
Copyright © 1967 Deere & Company

**Copyright © 1987
DEERE & COMPANY
Moline, Illinois
All rights reserved**

INTRODUCTION



Use FOS Manuals for Reference

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.



Use Technical Manuals for Actual Service

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.

Section 10 GENERAL

CONTENTS OF THIS SECTION

	Page		Page
GROUP 5 - SPECIFICATIONS		GROUP 25 - SEPARATION	
JD570-A Machine Specifications	5-2,3	Separating Power Unit from Frame	25-1
JD570-A Dimensions	5-4	Separating Engine from Transmission	25-2
JD570 Machine Specifications	5-5	Separating Transfer Drive from	
JD570 Dimensions	5-6	Transmission	25-2
GROUP 10 - PREDELIVERY, DELIVERY,		Separating Tandems from Power Unit	25-3
AND AFTER-SALE SERVICES		Separating Clutch Housing from	
Predelivery Service	10-1	Transmission	25-3
Delivery Service	10-16	Assembling Clutch Housing to	
After-Sale Inspection	10-16	Transmission	25-3
GROUP 15 - TUNE-UP AND ADJUSTMENT		Assembling Tandems to Power Unit	25-3
General Information	15-1	Assembling Transfer Drive to	
Preliminary Engine Testing	15-1	Transmission	25-3
Engine Tune-up	15-1	Assembling Engine to Transmission	25-4
Grader Adjustment	15-2	Assembling Power Unit to Frame	25-4
Hydraulic System Average Cycle			
Times	15-3	GROUP 30 - SPECIFICATIONS AND SPECIAL	
GROUP 20 - LUBRICATION		TOOLS	
Lubrication Chart	20-1	Making Special Tools	30-1
Engine Lubricating Oils	20-2	Torque Values	30-1
Greases	20-2	Special Tools	30-1

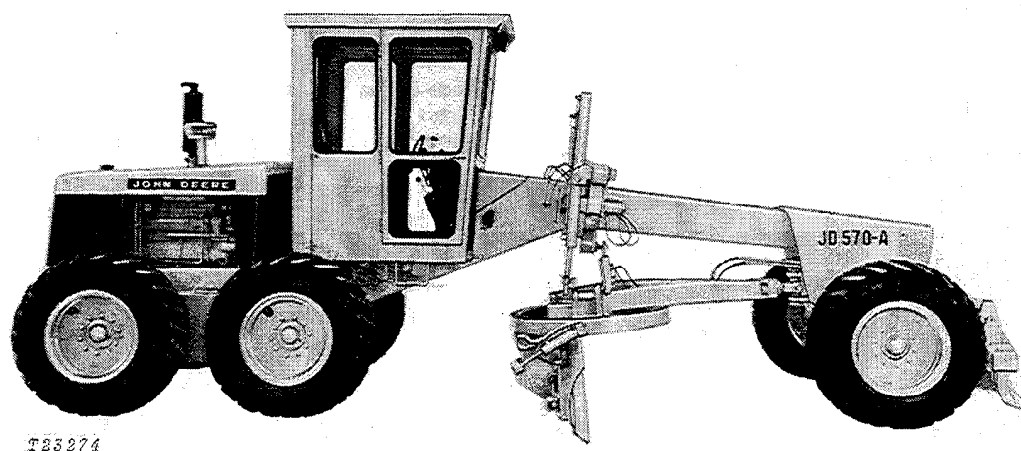


Fig. 1-JD570-A Motor Grader

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 (at 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 cm ³)
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.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com