

JOHN DEERE 400 AND 425 HAY CUBERS



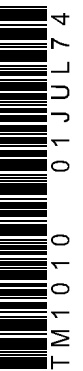
JOHN DEERE

TECHNICAL MANUAL JOHN DEERE 400 AND 425 HAY CUBERS

TM1010 (01JUL74) English

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ENGLISH



400 AND 425 HAY CUBERS

Technical Manual

TM-1010 (Jul-74)

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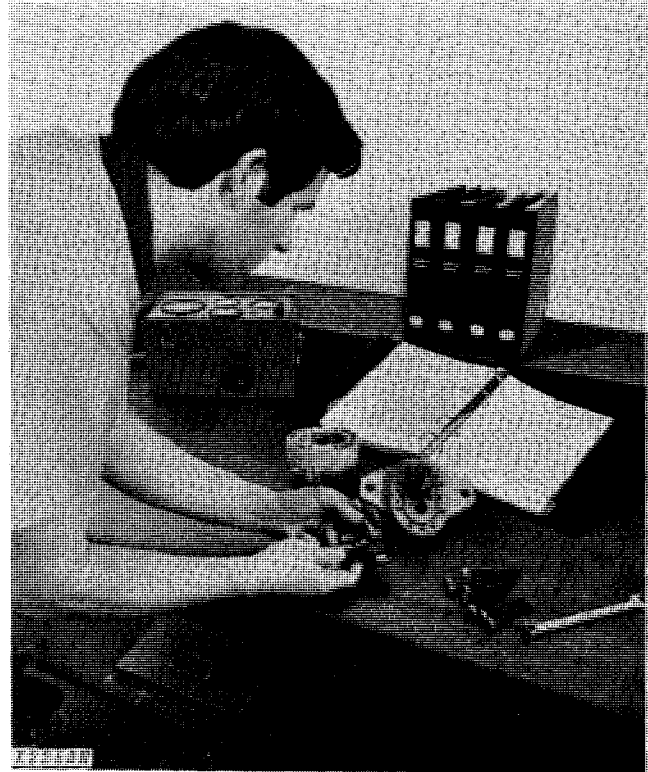
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All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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 manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

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 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

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Group 5 SPECIFICATIONS

Over-all length:

Pickup gauge wheel to hitch:

400 Cuber.....20 ft. 6 in. (6.2 m)

425 Cuber.....20 ft. (6.1 m)

With elevator lowered31 ft. 1 in. (9.2 m)

Width8 ft. (2.4 m)

Height:

With elevator lowered:

400 Cuber.....12 ft. (3.7 m)

425 Cuber.....13 ft. 1 in. (4.0 m)

Without elevator and mufflers 8 ft. 10 in. (2.7 m)

Weight:

Empty:

400 Cuber.....(Approx.) 13200 lbs. (5987 kg)

425 Cuber.....(Approx.) 13880 lbs. (6296 kg)

With fuel and water tanks full:

400 Cuber.....(Approx.) 16205 lbs. (7350 kg)

425 Cuber.....(Approx.) 16885 lbs. (7659 kg)

Propelling drive..... Variable with V-belt

Ground speeds:

Variable range 1st 1.7- 3.3 mph (1-3 km/h)

Variable range 2nd 3.3- 6.7 mph (2-5 km/h)

Variable range 3rd 6.7- 13.4 mph (5-11 km/h)

Variable range 4th 13.4- 26.8 mph (10-22 km/h)

Variable range reverse 1.7- 3.8 mph (3-6 km/h)

Tire sizes:

Rear—low-profile all-weather

(28 psi [193 kPa]) 14:9-26, 8-ply rated

Front-rib implement:

400 Cuber (40 psi [275 kPa]) 7:50-16,
6-ply rated

425 Cuber (35 psi [241 kPa]) 11L-15,
8-ply rated

Front gauge wheels—smooth

Implement (12 psi [83 kPa]) 4:00-8,
4-ply rated

Wheel tread—center to center:

Rear 80-1/8 in. (204 cm)

Front:

400 Cuber..... 68-3/8 in. (174 cm)

425 Cuber..... 74-1/4 in. (189 cm)

Front gauge wheels:

400 Cuber..... 90 in. (229 cm)

425 Cuber..... 87 in. (221 cm)

Steering Full-power hydrostatic

Brakes:

Mechanical:

400 Cuber ... Individual, mechanical disk type

425 Cuber (Serial No. -655)
Individual, mechanical disk type

Hydraulic:

425 Cuber (Serial No. 656-)
Individual 6 in. (15.24 cm)
hydraulic disk type

Capacities: (All U.S. Measure)

Fuel tank 83 gal. (314 l)

Water tank 300 gal. (1135 l)

Engine cooling system 11 gal. (42 l)

Engine crankcase with filter 5 gal. (19 l)

Transmission 14 pts. (7 l)

Final drives, each 4-1/2 pts. (2 l)

Planetary gear box 17 gal. (64 l)

Hydraulic reservoir 8 gal. (30 l)

Hydraulic system (complete) 10 gal. (38 l)

Main clutch 11 in. O.C., double plate
(27.94 cm)

Pickup width between flares .. 6 ft. 1 in. (1.9 m)

Pickup draper belt speed

(400 Cuber) ... 313 rpm or 3.6 mph (6 km/h)

Pickup cylinder speed (425 Cuber) .. 65-137 rpm

Pickup feeder speed (425 Cuber) 27-56 rpm

Pickup auger diameter..... 18 in. (45.72 cm)
 Feed opening width 20 in. (50.80 cm)
 Number of cutterhead knives..... 2
 Cutterhead speed 1,373 rpm
 Number of die openings 66
 Size of die opening 1-1/4 in. sq.
 (3.18 cm)
 Length of die 6 in. (15.24 cm)
 Die..... Individually replaceable, heat-treated
 alloy steel and chrome plated
 Die-feeding means Single press wheel
 Unit density of cubes
 45-55 lbs. per cu. ft. (721-881 kg/m³)
 Bulk density of cubes
 25-32 lbs. per cu. ft. (400-513 kg/m³)
 Length of cube 2 to 3 in. (5.08-7.62 cm)
 Conveyor and elevator chain..... CA 2050 with
 rubber flights
 Water pump:
 Type Centrifugal
 Capacity @ 2,800 rpm
 and 25 psi (172 kPa) 68 gal. per min.
 (429 m³/s)
 Water tank protection..... Coated inside with
 corrosion-resistant material

ENGINE

Make of engine Detroit Diesel 6V-71
 Model No. Model 7064-7200
 Engine type..... 2 cycle
 Bore and stroke..... 4-1/4 x 5 in. (10.79 x
 12.70 cm)
 Net rated horsepower:
 @85°F. and 500 ft. elev. 216 hp
 Number of cylinders 6
 Piston displacement 425.6 cu. in.
 (1238 kg/m³)
 Speed: No load 2250 rpm
 Full load 2100 rpm
 Idle Speed..... 750-800 rpm
 Air cleaner..... Dry type
 Electrical system 12-volt generator
 Type of fuel Diesel
 Compression ratio 18:7:1
 Battery size 12-volt SAE Group 8D, 205 amp

(Specifications and design subject to change without notice.)

STANDARD TORQUE CHART

Use the following torque chart for tightening all bolts unless specified otherwise.

The types of bolts and cap screws are identified by head markings as follows:

Plain head: regular type.

3-dash head: tempered steel high-strength type.

6-dash head: tempered steel extra high-strength type.

Machine bolts and cap screws 7/8 inch and larger are sometimes formed hot rather than cold, which accounts for the lower torque value.

RECOMMENDED TORQUE IN FT-LBS (Nm) COARSE AND FINE THREADS			
Bolt Diameter	Plain Head	Three Dashes	Six Dashes
1/4	Not used	10 (14)	14 (19)
5/16	Not used	20 (27)	30 (41)
3/8	Not used	35 (47)	50 (68)
7/16	35 (47)	55 (75)	80 (108)
1/2	55 (75)	85 (115)	120 (163)
9/16	75 (102)	130 (176)	175 (237)
5/8	105 (142)	170 (230)	240 (325)
3/4	185 (251)	300 (407)	425 (576)
7/8	160 (217)	445 (603)	685 (929)
1	250 (339)	670 (908)	1030 (1397)
1-1/8	330 (447)	910 (1224)	1460 (1980)
1-1/4	480 (651)	1250 (1695)	2060 (2793)

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