

JOHN DEERE 400 HAY CUBER



OPERATORS MANUAL JOHN DEERE 400 HAY CUBER

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INTRODUCTION

Your new John Deere Hay Cuber is a dependable machine. With proper care and operation, you can expect to receive the service and long life designed and built into it. Like any precision machine your cuber will require some attention at regular intervals. When any questions arise regarding lubrication and adjustments, etc., use your manual as a guide to service your machine the RIGHT WAY.

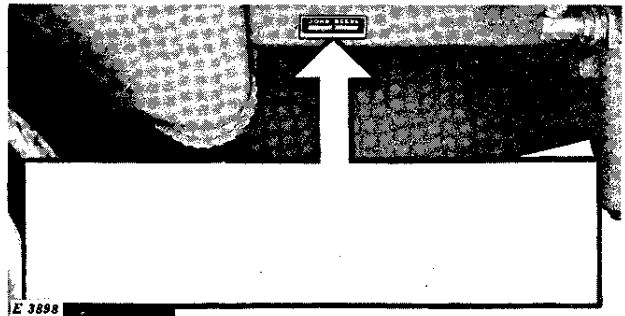
For engine service not covered in this manual or for parts service, see your General Motors Detroit Diesel Engine distributor or dealer.

If you need additional information or special service on the Hay Cuber, see your John Deere dealer.

When in need of parts either to replace worn parts or to make emergency repairs, see your local John Deere dealer.

When ordering parts, give your dealer the model and serial number of your cuber. This information will help him give you prompt and efficient service.

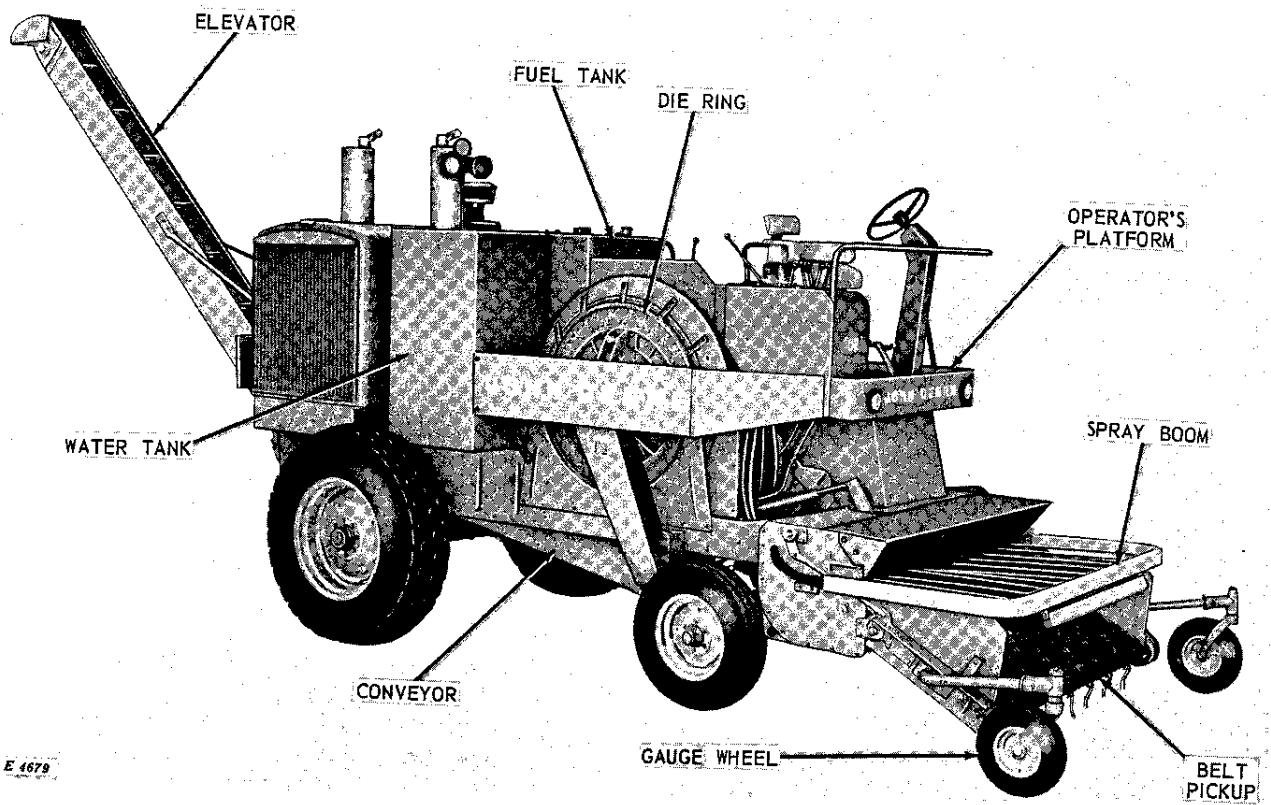
The serial number of your cuber is located on the left-hand side of the main frame between the ladder and the front wheel. (Record it in the space below.)



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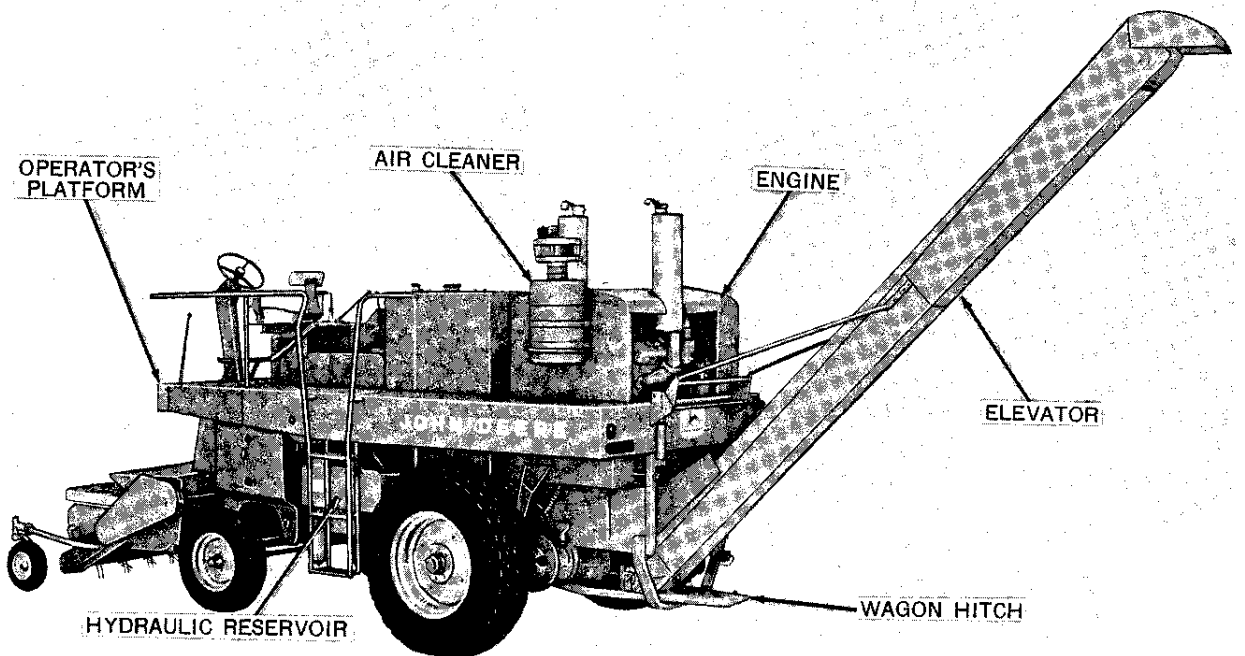
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NOTE: Right- and left-hand sides referred to in this manual are determined from a position at the rear of the machine facing in the direction of travel.



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Right Front View—John Deere 400 Hay Cuber



E 4680

Left Rear View—John Deere 400 Hay Cuber

SPECIFICATIONS

Over-all length:

Pickup gauge wheel to hitch. 20 feet 6 inches
 With elevator lowered 31 feet 1 inch
 Width 8 feet

Height:

With elevator lowered 12 feet
 Without elevator and mufflers 8 feet 10 inches

Weight:

Empty Approximately 13,200 pounds
 With fuel and water tanks full Approximately 16,205 pounds
 Propelling drive Variable with V-belt

Ground speeds:

variable range 1st.7- 1.7 mph
 variable range 2nd 1.3- 3.3 mph
 variable range 3rd 3.0- 6.7 mph
 variable range 4th. 6.0-13.4 mph
 variable range reverse 1.7- 3.8 mph

Tire sizes:

rear—low-profile all-weather
 (28 psi) 14.9 x 26, 8-ply
 front—rib implement
 (40 psi) 7.50 x 16, 6-ply
 front gauge wheels—smooth implement
 (12 psi) 4.00 x 8, 4-ply

Wheel tread—center to center:

Rear. 80-1/8 inches
 Front 68-3/8 inches
 Front gauge wheels 90 inches

Steering Full hydrostatic

Brakes Individual, mechanical disk type

Capacities: (All U.S. Measure)

Fuel tank 83 gallons
 Water tank 300 gallons
 Engine cooling system. 11 gallons
 Engine crankcase with filter. . . 5 gallons
 Transmission 14 pints
 Final drives each 4-1/2 pints
 Planetary gear box. 17 gallons
 Hydraulic reservoir 8 gallons
 Hydraulic system (complete) . . 10 gallons
 Main clutch 11 inches O.C., double plate
 Pickup width between flares . . . 6 feet 1 inch

Pickup draper belt speed.. 313 rpm or 3.6 mph
 Pickup auger diameter 18 inches
 Feed opening width 20 inches
 Number of cutterhead knives 2
 Cutterhead speed 1,373 rpm
 Number of die openings 66
 Size of die opening 1-1/4-inch square
 Length of die 6 inches
 Die Individually replaceable,
 heat-treated, and chrome plated
 Die-feeding means Single press wheel
 Unit density of cubes 45-55 pounds per
 cubic foot
 Bulk density of cubes 25-32 pounds per
 cubic foot
 Length of cube 2 to 3 inches
 Conveyor and elevator chain . . CA 2050 with
 rubber flights

Water pump:

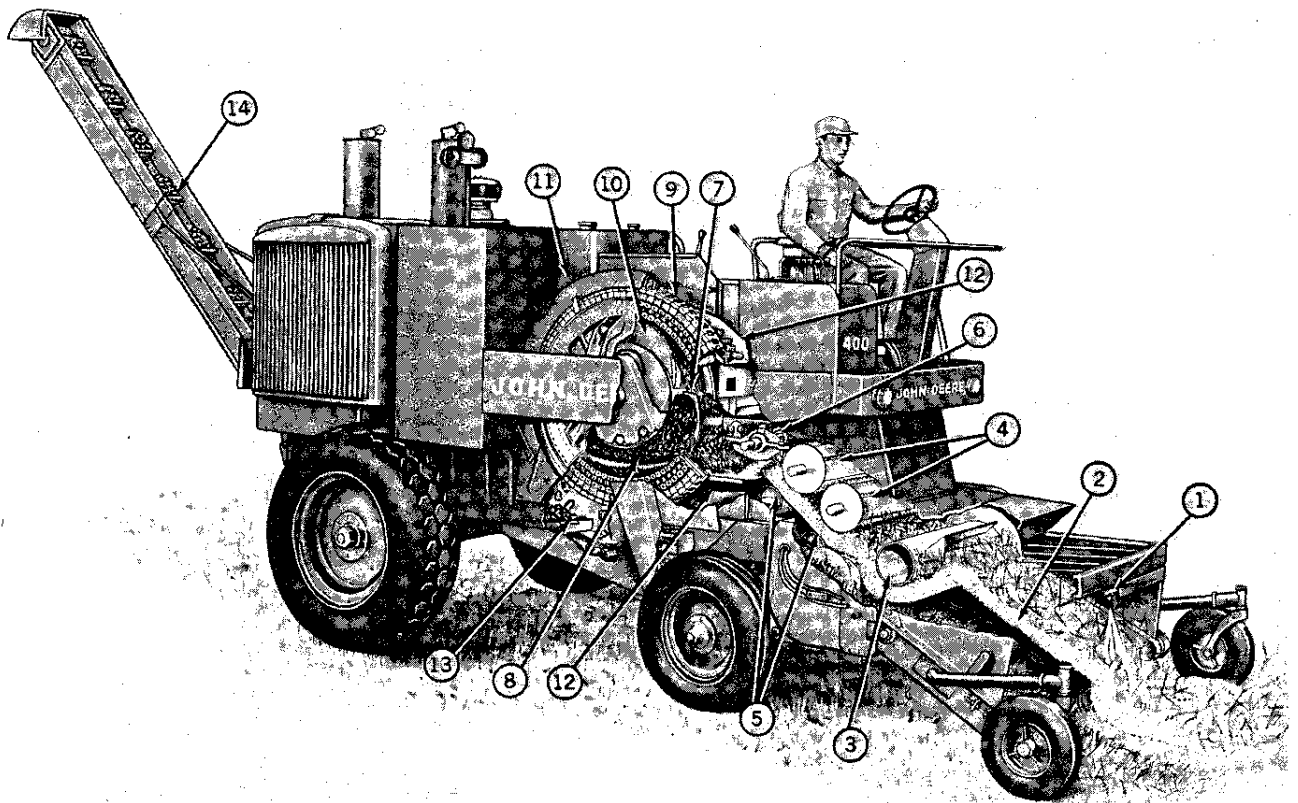
Type Centrifugal
 Capacity @2,800 rpm
 and 25 psi 68 gallons per minute
 Water tank protection Coated inside with
 corrosion-resistant material

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 inches
 Net rated horsepower:
 @85° F. and 500 ft. elev. 216 h.p.
 Number of cylinders 6
 Piston displacement 425.6 cubic inch
 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 are subject to change without notice.)

HOW THE CUBER WORKS



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For a better understanding of the operation of your cuber and the importance of the various adjustments in this manual, knowledge of the cubing cycle is important.

After alfalfa has field-cured to about 10 percent moisture, it is ready for cubing. Upon pick-up by the cuber the hay is sprayed with water (1). A belt-type pickup (2) picks up the windrow—preferably made with a windrower—as it does a clean job and saves a maximum number of leaves. The water and a natural soluble adhesive found on the surface of the alfalfa plant make the "glue" which helps bond the cube. The high pressure of the cuber completes the bonding.

An auger behind the pickup (3) takes the crop from the pickup and center-feeds it to the first of two identical sets of feed rolls. Drum-type rolls (4) are on the top of each set; smooth rolls (5) are on the bottom. The smooth roll design and solid deck reduce leaf loss.

A reel-type, two-knife cutterhead (6) chops the hay. In addition, the cutterhead serves as a

mixing unit and delivers the chopped material to the auger feeder.

A large-diameter auger (7), and five spiral bars (8) on the inside of the auger housing, move material uniformly to all of the openings in the die ring (9).

As the material leaves the auger flight, a single, heavy, large-diameter press wheel (10) forces the material into and through the 66 die openings in the die ring.

An adjustable deflector (11) around the outside of the die ring breaks off cubes in lengths from 2 to 3 inches. The die ring is open at the top so the operator can reach down and check cube samples as they leave the ring.

Sheet-metal chutes (12) channel the cubes to a conveyor (13) located beneath the die ring. The conveyor then carries the cubes to the elevator (14) at the rear of the machine, which delivers them into the trailing wagon.

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