

8500 and 8600 Air Drills
Service Manual

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SAFETY, RULES SERVICE MANUAL INTRODUCTION, AND TORQUE SPECIFICATIONS

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SAFETY RULES



This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death. 1-1-C

NOTE: *To prevent injury on the job, follow the Safety rules in this section and other sections throughout this manual. Follow the instructions carefully.*

The procedures recommended and shown in this manual are good, effective service methods. However, all possible procedures and service hazards may not be covered. Therefore, if you use a tool or procedure not recommended, you must make sure that the method you select is a safe method.



Read operator's manual to familiarize yourself with control lever functions. 46-27-A



Operate tractor and equipment controls from the seat position only. Any other method could result in serious injury. 48-55-A



This is a one man machine, no riders allowed. 35-8-A



Jumping on or off the machine can cause an injury. Always face the machine, use the hand rails and steps, and get on or off the machine slowly. 50-07-A



Unauthorized modifications to this machine can cause injury or death. Do not make unauthorized modifications to this machine. 50-08-A



Before using the tires of the air drill as a step, make sure that the tires are firmly on the ground. 50-20-A



Lower all attachments to the ground or use stands to safely support the attachments before you do any maintenance or service. 49-11A



Pin sized and smaller streams of hydraulic oil under pressure can penetrate the skin and result in serious infection. If hydraulic oil under pressure does penetrate the skin, seek medical treatment immediately. Maintain all hoses and tubes in good condition. Make sure all connections are tight. Make a replacement of any tube or hose that is damaged or thought to be damaged. DO NOT use your hand to check for leaks; use a piece of cardboard or wood. 40-6-B



Before you attempt to move the machine or fold the frames for transport, make sure all air is removed from the hydraulic cylinders and lines. Personal injury or damage to the machine can result if you do not follow these instructions. 50-09A



Missing shields, guards, or access panels can cause injury or death. Before you start the tractor engine and move this machine, always install all shields, guards, or access panels correctly. 50-11-A

SERVICE MANUAL INTRODUCTION

This service manual has been prepared with the latest service information available. Troubleshooting, removal, disassembly, inspection and installation procedures, and complete specifications and tightening references can be found in most sections. Some sections have drawings but no written procedure because the job is so easily done. This service manual is one of the most important tools available to the service technician.

Right, Left, Front, and Rear

The terms right-hand and left-hand and front and rear as used in this manual indicate the right and left sides, and front and rear of the machine as seen from the rear of the machine looking forward.

Table of Contents

A Table of Contents is in the front of this manual. The Table of Contents shows the main divisions and the sections that are in each division. The individual sections also have a Table of Contents.

Page Numbers

All page numbers are made of two numbers separated by a dash, such as 4002-9. The number before the dash is the section number. The number following the dash is the page number in that section. Page numbers will be found at the upper right or left of each page.

Illustrations

Illustrations are put as near as possible to the text and are to be used as part of the text.

Clear and Simple English

This manual is written in C.A.S.E. (Clear and Simple English). C.A.S.E. is easier to read and understand than "regular" English because C.A.S.E. uses a small number of common words and has special rules for writing.

Special Tools

Special tools are needed to remove and install, disassemble and assemble, check and adjust some component parts of this machine.


Order special tools from either of the following companies.


Service Tools
P.O. Box 314
Owatonna, Minnesota 55060

Jobborn Manufacturing Co.
97 Frid Street
Hamilton, Ontario L8P 4M3
Canada

TORQUE SPECIFICATIONS - HARDWARE

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers, dry, or when lubricated with engine oil. Not applicable if special graphites, molydisulfide greases, or other extreme pressure lubricants are used.

Grade 5 Bolts, Nuts, and Studs		
		
Size	Pound-Feet	Newton metres
1/4 in	9-11	12-15
5/16 in	17-21	23-28
3/8 in	35-42	48-57
7/16 in	54-64	73-87
1/2 in	80-96	109-130
9/16 in	110-132	149-179
5/8 in	150-180	203-244
3/4 in	270-324	366-439
7/8 in	400-480	542-651
1.0 in	580-696	787-944
1-1/8 in	800-880	1085-1193
1-1/4 in	1120-1240	1519-1681
1-3/8 in	1460-1680	1980-2278
1-1/2 in	1940-2200	2631-2983

Grade 8 Bolts, Nuts, and Studs		
		
Size	Pound-Feet	Newton metres
1/4 in	12-15	16-20
5/16 in	24-29	33-39
3/8 in	45-54	61-73
7/16 in	70-84	95-114
1/2 in	110-132	149-179
9/16 in	160-192	217-260
5/8 in	220-264	298-358
3/4 in	380-456	515-618
7/8 in	600-720	814-976
1.0 in	900-1080	1220-1465
1-1/8 in	1280-1440	1736-1953
1-1/4 in	1820-2000	2468-2712
1-3/8 in	2380-2720	3227-3688
1-1/2 in	3160-3560	4285-4827

NOTE: Use thick nuts with Grade 8 bolts.

TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS

Tube OD Hose ID	Thread Size	Pound- Feet	Newton metres
37 Degree Flare Fittings			
1/4 in 6.4 mm	7/16-20	6-12	8-16
5/16 in 7.9 mm	1/2-20	8-16	11-21
3/8 in 9.5 mm	9/16-18	10-25	14-33
1/2 in 12.7 mm	3/4-16	15-42	20-56
5/8 in 15.9 mm	7/8-14	25-58	34-78
3/4 in 19.0 mm	1-1/16-12	40-80	54-108
7/8 in 22.2 mm	1-3/16-12	60-100	81-135
1.0 in 25.4 mm	1-5/16-12	75-117	102-158
1-1/4 in 31.8 mm	1-5/8-12	125-165	169-223
1-1/2 in 38.1 mm	1-7/8-12	210-250	285-338

Tube OD Hose ID	Thread Size	Pound- Feet	Newton metres
Straight Threads with O-ring			
1/4 in 6.4 mm	7/16-20	12-19	16-25
5/16 in 7.9 mm	1/2-20	16-25	22-23
3/8 in 9.5 mm	9/16-18	25-40	34-54
1/2 in 12.7 mm	3/4-16	42-67	57-90
5/8 in 15.9 mm	7/8-14	58-92	79-124
3/4 in 19.0 mm	1-1/16-12	80-128	108-174
7/8 in 22.2 mm	1-3/16-12	100-160	136-216
1.0 in 25.4 mm	1-5/16-12	117-187	159-253
1-1/4 in 31.8 mm	1-5/8-12	165-264	224-357
1-1/2 in 38.1 mm	1-7/8-12	250-400	339-542

Split Flange Mounting Bolts		
Size	Pound- Feet	Newton metres
5/16-18	15-20	20-27
3/8-16	20-25	26-33
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GENERAL MACHINE SPECIFICATIONS

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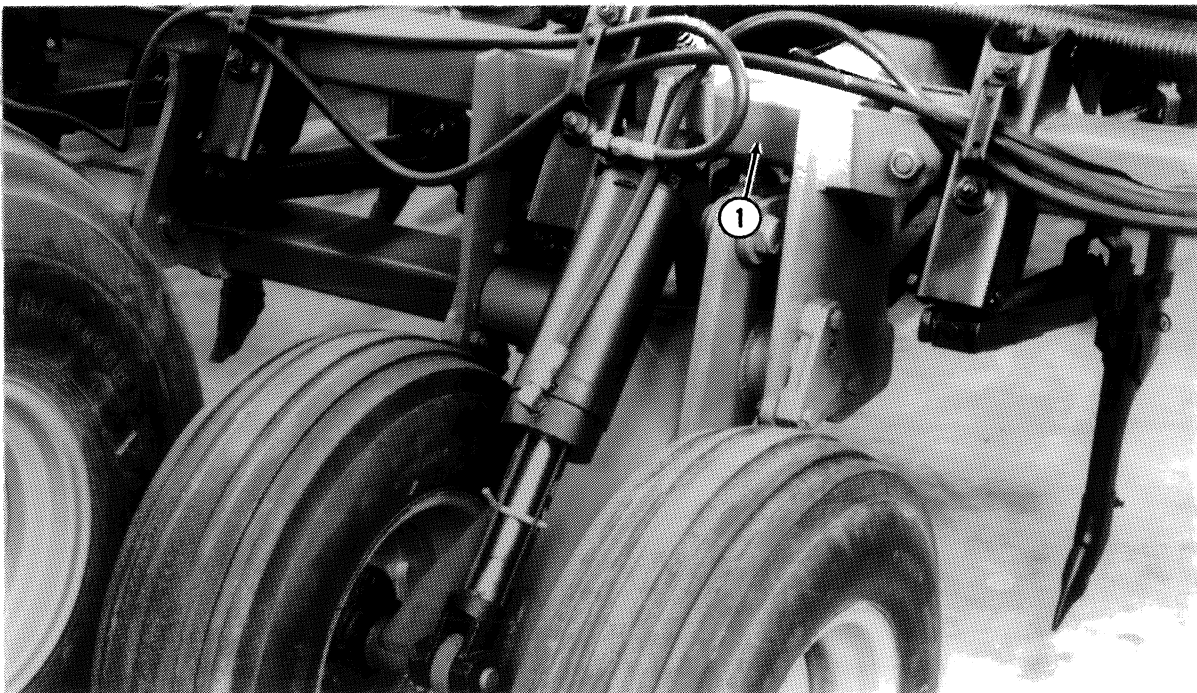
PRODUCT IDENTIFICATION AND SERIAL NUMBERS



865486

1. Model 8500 Air Drill

Product Identification Number (P.I.N.)
(Plate is located on hopper frame)



865501

1. Model 8500 Air Drill

Product Identification Number (P.I.N.)
(Plate is located on frame above left-hand dual gauge wheel)

PRODUCT IDENTIFICATION AND SERIAL NUMBERS



1. Model 8600 Air Drill

Product Identification Number (P.I.N.)
(Plate is located on hopper frame)

SPECIFICATIONS 8500 AIR DRILL

Electrical System

Electrical system voltage 12 volts, negative ground

Monitor fuse 10 amperes slow blow

Replacement Bulbs Bulb Number

Turn signal and flasher lamps 1156

Tail lamps 168

Tire Air Pressure

NOTE: See *Wheels and Tires in Section 9010.*

Size	Ply Rating	Type Tread	Air Pressure		
			psi	kPa	kg/cm ²
9.5L x 15	6	Rib Flotation	32	220	2.25
19L x 16.1	8	Rib Flotation	24	165	1.68

Travel Speed

Maximum towing speed 15 mph (29 km/h)

Maximum seeding speed 8 mph (13 km/h)

NOTE: The tractor must weigh the same or more than the air drill including the load in the hopper.

Hopper Capacities

Seed only 146 bushels (5.11 m³)

Fertilizer only 120 bushels (4.20 m³)

Seed and fertilizer

1.3 to 1 ratio - Seed 86 bushels (3.01 m³)

Fertilizer 64 bushels (2.24 m³)

1.6 to 1 ratio - Seed 92 bushels (3.22 m³)

Fertilizer 58 bushels (2.03 m³)

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