NEW HOLLAND
SD440

REPAIR
MANUAL



87012624

04/03

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624

Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

Pages listed are a table of contents for that section

Section - Title ..... Page

1 - GENERAL INFORMATION 1-1
- General Service Information
- Important Information
- Service Tools
- Safety
- Units of Measure
- Bolt Torque Information
- Machine Specifications
- Welding Procedures

2 - ADJUSTMENTS 2-1
- Air Drill Leveling
- Floating Hoe/Shank Adjustments
- Sweep Pitch Adjustments

3 - MECHANICAL SERVICE 3-1
- Troubleshooting Tables
- Servicing Safety Precautions
- General Operating Information
- Grease Locations
- Maintenance
- Tire Pressures
- Tire Pressures and hub and Spindle Details
- Wheel Bolt Torque
- Heavy Caster Assembly
- Light Caster Assembly
- Caster Hub and Spindle Maintenance
- Walking Beam Replacement
- Wing Dual Caster Option
- Auxiliary Tow Hitch
- Caster Transport Lock Installation
- Pin Guides
- Depth Control Service
- Walking Beam Carrier Spool Replacement

4 - HYDRAULICS 4-1
- Hydraulics
- Replace Seals in Cylinders
- Hydraulic Cylinders
- Depth Control
- Wing Lift Hydraulics

5 - ELECTRICAL 5-1
- Connector Service Kit
- Remote Switch Installation

6 - TRIPS, OPENERS, AND PRESS WHEEL SERVICE 6-1
- Service of Openers
- Service Guide for Offset Shank Locations
- Press Wheels and Shanks
- Ground Openers and Seed Boots
- Troubleshooting Tables
- Trip Compressor Tool Kit
- Tension Link Kit - 550 Pound Trip
- Adjustment of Trip Assemblies
- Anti-Skewing Trip Shim Installation
- Heavy Duty Bearing Kits
- Press Wheel Removal
- Packer Wheel Rest Assembly
- Shank Spacing and Trip Release Pressure

7 - AIR SYSTEM 7-1
- Troubleshooting Tables
- Hoses
- Theory of Operation - Air System
- Methods of Determining Adequate Carrying Velocities
- Header Assemblies
- Hose Holder Brackets and Distribution Clamps

8 - ENDMARKER SERVICE 8-1
- Endmarkers
- Endmarker Replacement
- Endmarker Hydraulics

INDEX

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

SECTION 1
GENERAL INFORMATION

CONTENTS OF THIS SECTION

Page

GENERAL SERVICE INFORMATION 1-3

IMPORTANT INFORMATION 1-4

SERVICE TOOLS 1-4

SAFETY 1-5
- General Safety Practices 1-6
- Servicing Safety Precautions 1-6
- Safety During Operation 1-7
- Air and Air Hoses 1-10
- Hydraulics and Hydraulic Leaks 1-10
- Shields 1-11
- Electrical 1-11
- Tires 1-11
- Safety During Transport 1-12
- Safety Decals 1-12
- Transport Lighting Brackets 1-14
- Transport Lighting Electrical Assembly 1-16

UNITS OF MEASURE 1-18
- Abbreviations 1-18
- Conversion Chart 1-19

BOLT TORQUE INFORMATION 1-20

MACHINE SPECIFICATIONS 1-21
- Implement Dimensions 1-21
- Implement Weight 1-23
- Other Specifications 1-26

PAINT TOUCH-UP PROCEDURE 1-27

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

IMPLEMENT WEIGHT

Implement Weight in Kilograms and Pounds

BASE MACHINE WIDTH	NO. OF SHANKS 7.2" SPC	WITH HOE/TRIP SHANK	WITH 350 POUND TRIPS	WITH 550 POUND TRIPS
2 1/4" STEEL PRESS WHEELS				
27	45	6546 kg (14431 lbs)	7028 kg (15495 lbs)	7179 kg (15826 lbs)
33	55	7396 kg (16305 lbs)	7987 kg (17609 lbs)	8169 kg (18010 lbs)
39	65	8324 kg (18350 lbs)	9024 kg (19894 lbs)	9238 kg (20365 lbs)
45	75	10458 kg (23055 lbs)	11263 kg (24831 lbs)	11512 kg (25380 lbs)
51	85	11473 kg (25293 lbs)	12398 kg (27333 lbs)	13131 kg (28948 lbs)
57	95	12196 kg (26887 lbs)	13219 kg (29143 lbs)	13532 kg (29832 lbs)
3 1/2" STEEL PRESS WHEELS				
27	45	6539 kg (14415 lbs)	7021 kg (15479 lbs)	7176 kg (15821 lbs)
33	55	7392 kg (16296 lbs)	7983 kg (17600 lbs)	8165 kg (18001 lbs)
39	65	8315 kg (18331 lbs)	9015 kg (19875 lbs)	9229 kg (20346 lbs)
45	75	10450 kg (23038 lbs)	11256 kg (24814 lbs)	11505 kg (25363 lbs)
51	85	11496 kg (25345 lbs)	12422 kg (27385 lbs)	13154 kg (29000 lbs)
57	95	12185 kg (26862 lbs)	13208 kg (29118 lbs)	13520 kg (29807 lbs)
3" RUBBER PRESS WHEELS				
27	45	6671 kg (14706 lbs)	7063 kg (15570 lbs)	7303 kg (16101 lbs)
33	55	7555 kg (16655 lbs)	8146 kg (17959 lbs)	8328 kg (18360 lbs)
39	65	8507 kg (18754 lbs)	9207 kg (20298 lbs)	9421 kg (20769 lbs)
45	75	10673 kg (23529 lbs)	11478 kg (25305 lbs)	11727 kg (25854 lbs)
51	85	11712 kg (25821 lbs)	12638 kg (27861 lbs)	13370 kg (29476 lbs)
57	95	12467 kg (27485 lbs)	13490 kg (29741 lbs)	13803 kg (30430 lbs)

NOTE: Weights listed do not include ground engaging tools or harrows.

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

TROUBLESHOOTING TABLES

NOTE: For troubleshooting problems with your specific opener, refer to the operator's manual for that opener.

PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTIONS
Shovels behind tractor wheels not entering ground.	1. Soil has been compressed so the sweep does not enter the same amount of soil.	1. Lower the shank to enter the suitable amount of soil. Optional spacer blocks are available which will lower the shanks. Contact the parts department.
On 5-section machines with harrows mounted, the harrows interfere with each other when winging up.	1. Harrows are locked in the raised position.	1. Harrows may interfere with each other if locked in the raised position on some 5-section machines. When winging up, place the harrows in the lowered position.
Front shovels not cutting as deep as rear shovels.	1. Drill is not level. 2. Incorrect tire pressures.	1. Refer to Section 2 to level drill. 2. Inflate tires to correct pressure.
Drill not cutting evenly from side to side.	1. Cultivator is not level. 2. Incorrect tire pressures. 3. Incorrect sweep pitch. 4. Trips fastened to frame incorrectly. 5. Mud buildup on tires.	1. Refer to Section 2 to level drill. 2. Inflate tires to correct pressure. 3. Refer to Section 2 to adjust sweep pitch. 4. Ensure trip is square on frame and entire trip mount face contacts frame. 5. Mud scrapers are required for seeding. See your dealer.

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

WING LIFT ISOLATOR VALVE REPLACEMENT - 51' AND 57' AIR DRILLS

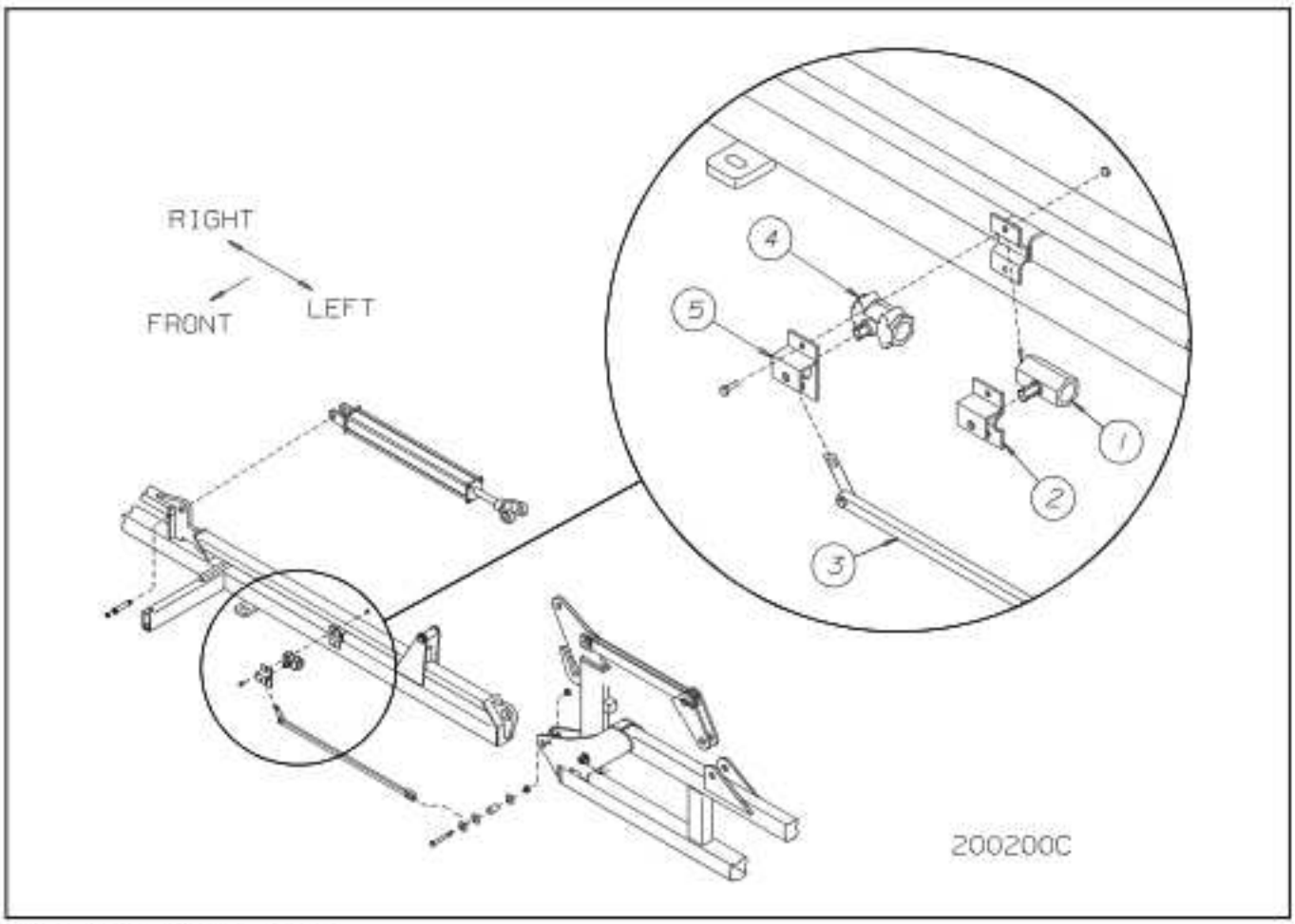
IMPORTANT: Ensure pressure in hydraulic circuit has been relieved before removing fittings.

1. Locate the wing lift isolator valve (1) (below) on the 12' inner wing of the air drill.

2. Remove the existing ball valve cover plate (2) (below) and the 3/8" x 1" bolts and locknuts. Unhook the control arm (3).

3. Remove the existing ball valve (1) and replace it with the new valve (4). Use a suitable thread sealant when assembling the new valve.

4. Attach the new cover plate (5). Reattach the control arm (3) and tighten in place with the 3/8" x 1 1/2" bolts and locknuts supplied.



Isolator Valve Replacement

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

REASSEMBLY OF CYLINDER

Reassemble the end cap onto the shaft:

11. The wiper seal on the rod cap makes it difficult to slide the rod cap back onto the shaft the way it was removed. To reassemble the rod cap, first remove the nut from the piston shaft.

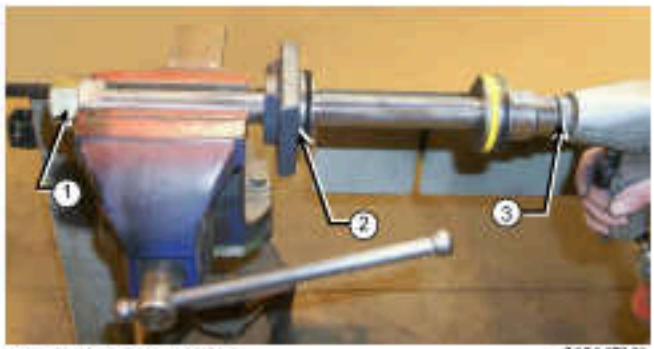
- Thread a locknut (1) and a jam nut (2) on the threaded clevis end of the piston shaft.



Shaft in Vise 202046M1

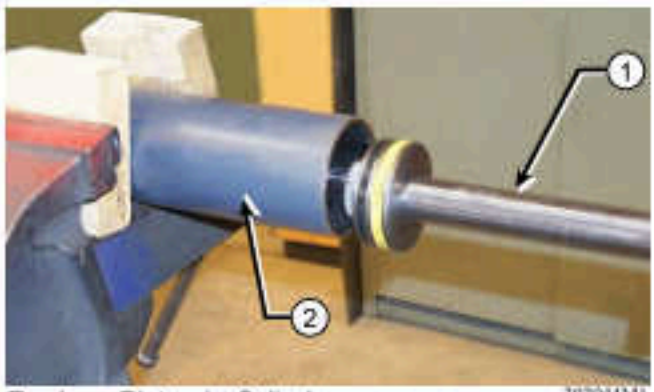
- Place the nut (1) into the vise and use an air tool and socket (3) to loosen the nut on the piston end of the shaft
- Place the nut (1) into the vise and use an air tool and socket (3) to loosen the nut on the piston end of the shaft.

12. Replace the cap (2) onto the shaft. Move the shaft so the opposite locking nut (1) is in the vise. Apply Loctite to the piston nut and tighten using an air tool and socket (3).



Replace Rod Cap 202047M1

13. Replace the piston (1) into the cylinder barrel (2). Piston inserted into the cylinder barrel (below).



Replace Piston in Cylinder 202044M1

14. Inserting piston rod cap assembly into the cylinder.


Replace End Cap 202043M1

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >

6. Remove the seal (1), bearing (2), and race (3).

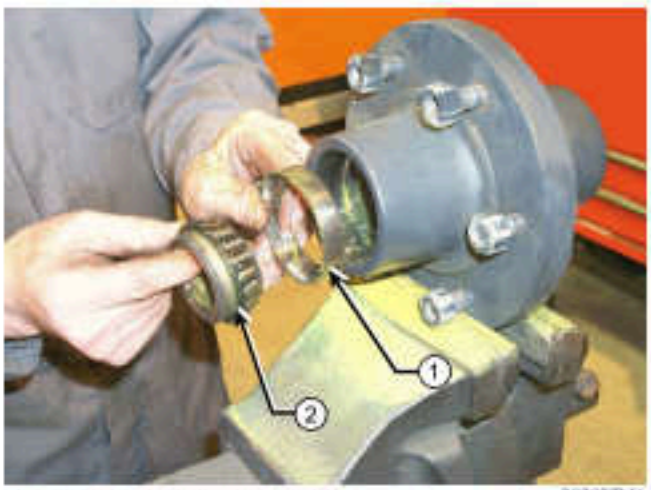


Drive Out Seal, Bearing, and Race 202024M1

7. Re-pack the bearing. Use your thumb to work new grease into the bearing.


Repack the Bearing 202026M1

8. Replace the race (1) and bearing (2).



Replacing Bearing and Race 202027M1

MidWestTech | New Holland SD440 Air Drill Service Manual | Publication 87012624 Order the manual at mid-west-tech.com >