Main Seed Box Agitator Kit
13-Foot End Wheel Drills

Used with:
- 1300/F-1610 16 row 10 inch (25.4 cm)
- 1300/F-2175 21 row 7.5 inch (19.1 cm)
- 1300/F-2606 26 row 6 inch 9 (15.2 cm)

When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

General Information

These instructions explain how to install a Main Seed Box Agitator Kit. The agitator stirs seed in the main box directly above the meter cups. This helps prevent bridging of light fluffy seeds and helps separate seeds sticky with innoculant.

IMPORTANT !

The seed box agitator does not guarantee consistent seeding of hard to meter seeds such as Brome Grass or “bin run” seed that contains crop residue.

These instructions apply to an installation of:

Kit	Kit Description
175-205A	1300 AGITATOR UPGRADE BUNDLE, 6 IN
175-206A	1300 AGITATOR UPGRADE BUNDLE, 7 1/2 IN
175-207A	1300 AGITATOR UPGRADE BUNDLE,10 IN

One kit updates one drill.

These kits are only for the pull-type 13-foot end wheel drill. There are separate kits for 3-point drills.

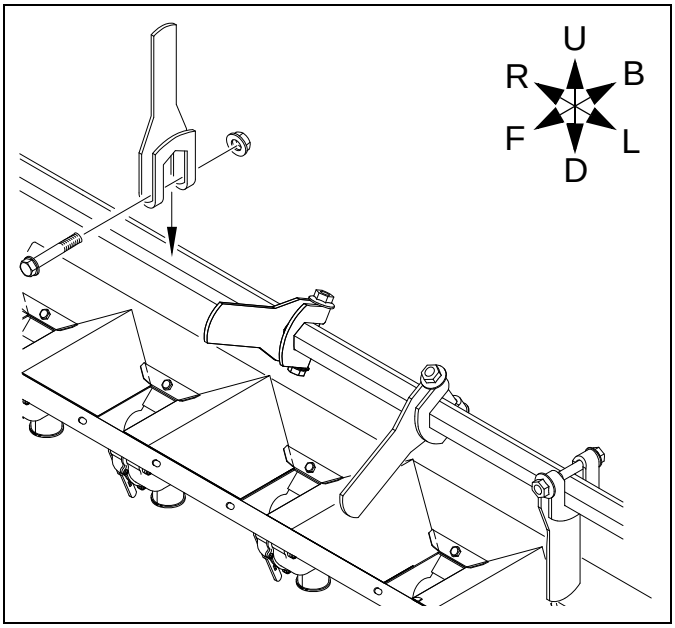


Figure 1 29338
Agitators Above Cups

Related Documents

Have the Operator Manual at hand for drill movements.

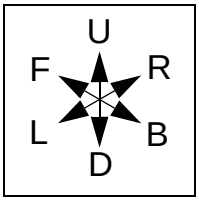
175-157M 1300 End-Wheel Drill Operator Manual

Have the current Parts Manual at hand for parts ID.

175-157P 1300 End-Wheel Drill Parts Manual

Notations and Conventions

“Left-hand” and “Right-hand” are facing in the direction of machine travel. An orientation rose in the line art illustrations shows the directions of Left-hand, Right-hand, Front, Back, Up, Down.



Call-Outs

① to ⑨ Single-digit callouts identify components in the currently referenced Figure or Figures. These numbers may be reused for different items from page to page.

11 to 46 Two-digit callouts in the range 11 to 46 reference new parts from the new parts lists beginning on page 16.

91 to 95 Two-digit callouts in the range 91 to 95 reference affected existing parts from the table on page 17. The descriptions match those in your Parts Manual. The narrative and table indicate any re-use of the parts.

Before You Start

Comprehension

Review these instructions. Make sure the installers understand where each part or assembly is installed, and what tools are required for the task.

Note: Illustrations in this manual, based on the parts manuals for this family of drills, may show exploded views that are fully disassembled. Rely on the instructions for required disassembly and reassembly steps.

Pre-Assembly Preparation

Tools Required

- updated drill Parts Manual (see page 1)
- suitable tractor for raising drill
- basic hand tools, including:
  snap ring pliers
  punch for seating $^{1}/_{4}$ in roll pins
- two people are suggested for agitator shaft installation

Work Location

- Clean out the main seed box. See Operator Manual for instructions. If treated seed has been used,
  - open seed cup doors to clean-out position,
  - wash out the box,
  - thoroughly rinse the box, and
  - allow box to dry.

  Do this in a suitable location other than where the installation work is to be performed.
- Move the drill to a location with:
  - access to tractor,
  - adequate illumination, and;
  - solid, level surface
  - clear surface beneath for recovery of any falling or dropped parts - if the surface is not clear, have a tarp or drop cloth available.

Prepare Drill

If unhitching, install parking stand and lower the drill.

⚠WARNING

Negative Tongue Weight Hazard:
This drill has a negative tongue weight when openers are raised. Lower openers and remove hydraulic pressure before unhitching the drill in the unfolded position. Unhitching with the openers raised will result in sudden elevation of the tongue, causing injury or death.

⚠CAUTION

Possible Chemical Hazard
This installation requires contact with interior components of the main seed box. If treated seed has ever been used in the box, follow chemical supplier instructions for protective equipment and cleaning residue from the seed box.

Assembly Instructions

Install Agitator Shaft

1. Remove and discard the existing end-panel covers (1) from inside the drill box. Save nuts, washers and bolts for use later.

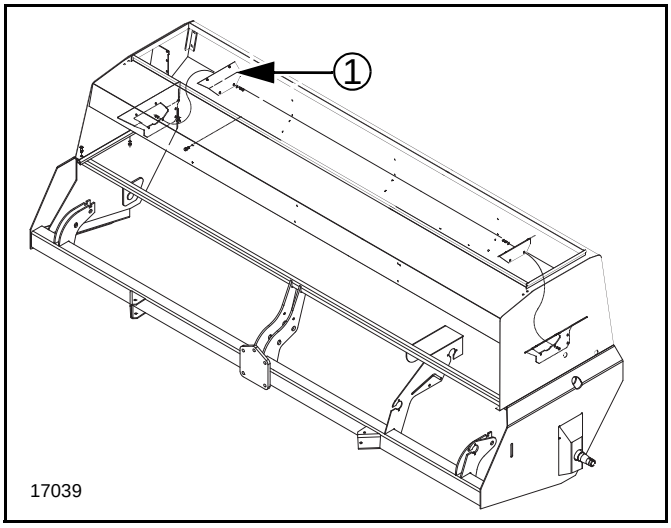


Figure 2
End Panel Covers

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2. Using 5/16 x 3/4 inch carriage bolts, lock washers and nuts, install flanges (1) and bearings (2) on both bearing plates (3).
3. On the right-hand bearing plate, plug the extra holes (4 and 5) with 5/8 x 1 inch bolts and jam nuts.

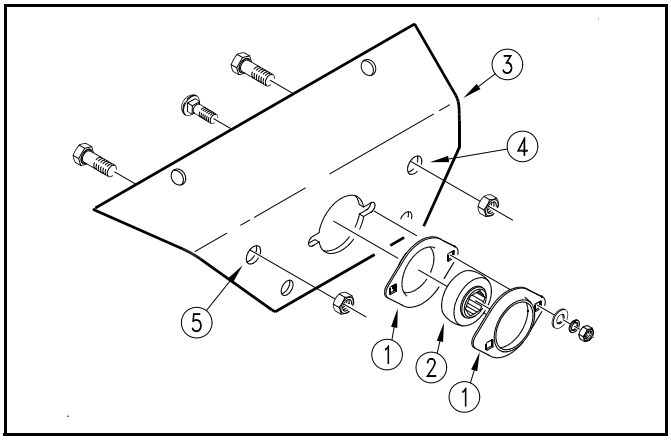

Figure 3
Bearing Flanges

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4. Assemble sprockets on the left-hand bearing plate. Slide the 17-tooth idler sprocket (1) over the 5/8 inch, square-head bolt (2). Run one jam nut (3) up against the sprocket and torque to 100 foot pounds. Run a second jam nut (4) up on the square-head bolt. Insert the assembly into hole (5) in bearing plate. Adjust second jam nut until the center of the sprocket is about 2 1/2 inches from the bearing plate. Install lock washer (6) and jam nut (7) and torque to 100 foot pounds.

   If your drill has a small-seeds attachment, install a second 17-tooth sprocket in extra hole (8). If your drill does not have a small-seeds attachment, install a 5/8 x 1 inch bolt and jam nut in extra hole (8).

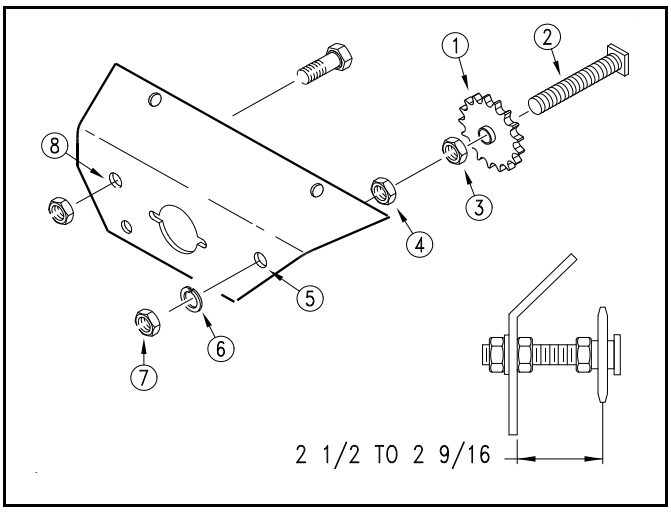

Figure 4
Sprocket

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5. Install bearing plates (1) in drill box using bolts, washers, and nuts removed earlier.

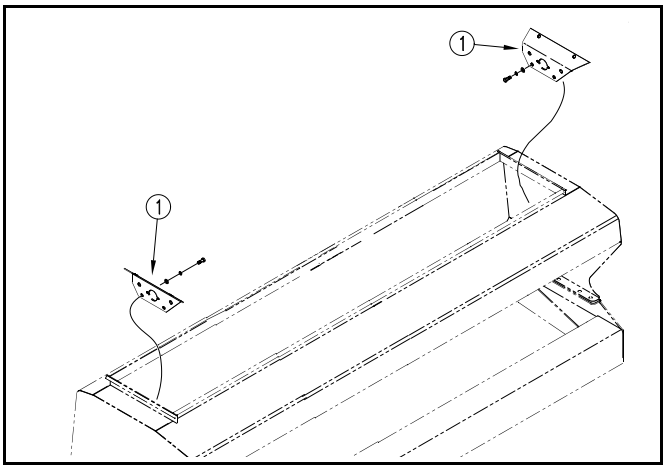

Figure 5
Bearing Plates

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6. Slide the agitator shaft (1) into the seed box through the hole in the left side of the drill. As you install the shaft, thread bearings and lock collars onto shaft in the following order.

- Slide shaft through bearing plate (2)
- Install lock collar (3)
- Slide shaft through first divider (4)
- Install flange, bearing and flange (5)
- Slide shaft through second divider (6)
- Install flange, bearing and flange (7)
- Slide shaft through third divider (8)
- Install flange, bearing and flange (9)
- Install lock collar (10)

7. Bolt the flanges to the box dividers using 5/16 x 3/4 inch carriage bolts, lock washers and nuts.

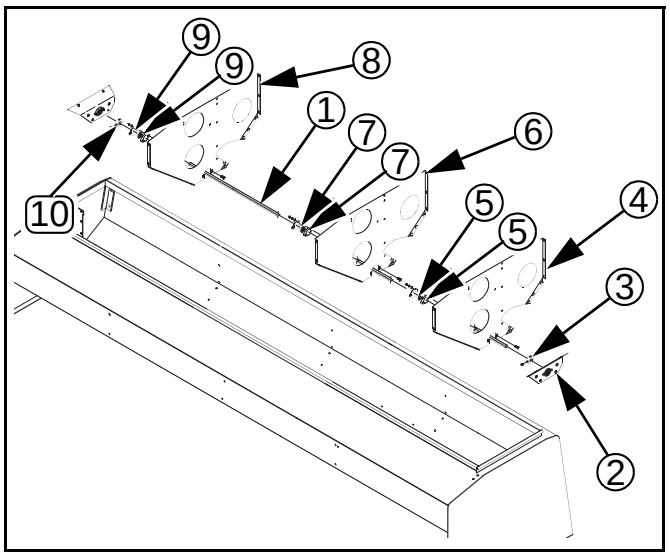

Figure 6 17043
Agitator Shaft

Install Agitator Drive

If the drill has a small-seeds attachment, remove the drive chain for the small-seeds attachment and proceed to *Final Drive Connection,* page 3.

1. Move idlers out of drill drive chains and remove chains.
2. Loosen bolts holding jackshaft bearings (1). Remove jackshaft (2) from drill.
3. Install the 12-tooth sprocket (3) on jackshaft. Leave sprocket set screw loose. Re-install jackshaft and drive chains.
4. Mount the idler assembly (4) on drill frame using 1/2 inch U-bolts, lock washers and nuts. Leave U-bolts loose.

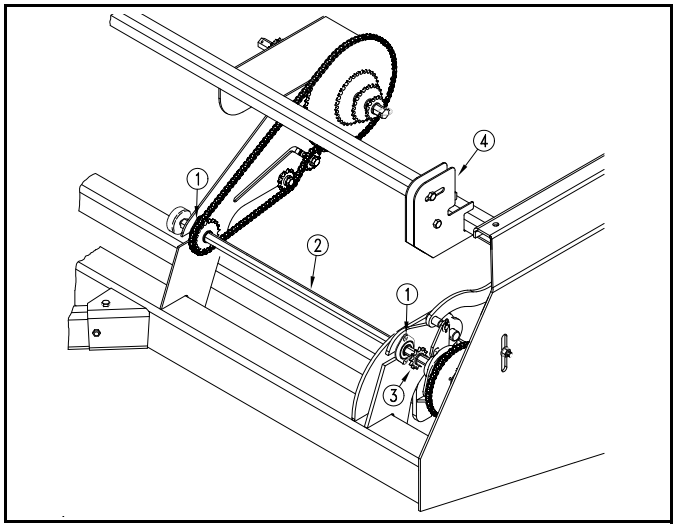

Figure 7 17044
Agitator Drive

Final Drive Connection

For drills with small-seeds attachment:

> Thread the drive chain (1) over the idlers on the idler assembly (2), back through the cutout in the box, over and under the agitator sprocket and idlers (3), around the small-seeds sprocket (4), and back to front 18-tooth sprocket (5) as shown.

On drills without small-seeds attachment:

> Thread the drive chain (6) over the idlers on the idler assembly (2), back through the cutout in the box, around the agitator sprocket and idler (3), and back to the front 18-tooth sprocket (5) as shown.

After connecting the chain, align sprockets. Move the agitator sprocket if necessary and secure by tightening set screws. Change the position of the idler sprockets as needed by adjusting the 5/8 inch jam nuts. Move the idler assembly as needed then tighten U-bolts. Move the 18-tooth front sprocket as needed and secure by tightening set screw.

Once all the chains are aligned, tighten lock collars on the drill shaft. Be sure to lock the collars against the bearings mounted to the bearing plates.

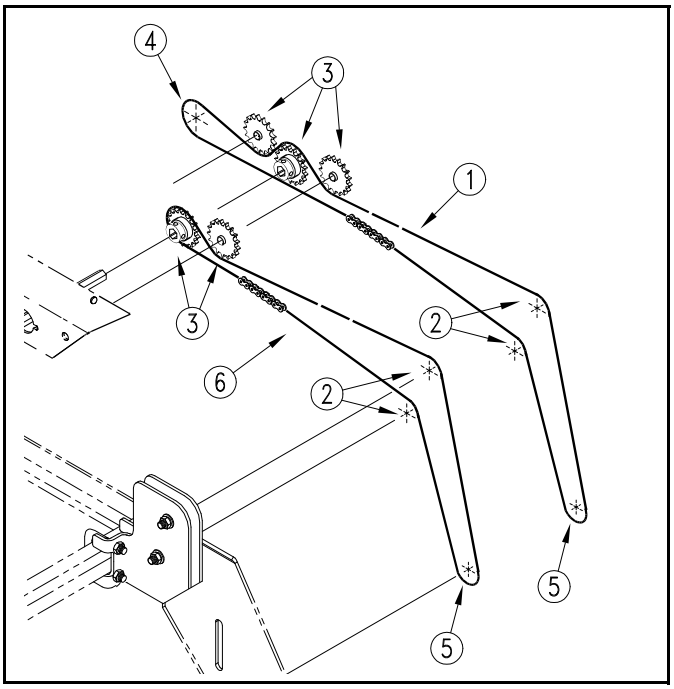

Figure 8 17045
Final Drive Connection

Agitator Paddle Installation

Slip one paddle (1) over the agitator shaft directly above a seed cup. Slip a 1/4 x 2 inch flange bolt (2) through the paddle and secure with a flange lock nut (3). Before tightening bolt, carefully rotate the drive system to make sure paddle does not hit the tray dividers.

After checking for interference, torque bolts to 9 foot pounds (108 inch pounds).

Install the next paddle over the next seed cup. Index paddle 1/6th of a turn by sliding it onto the next set of shaft flats. Continue the installation using the next set of flats for each paddle.

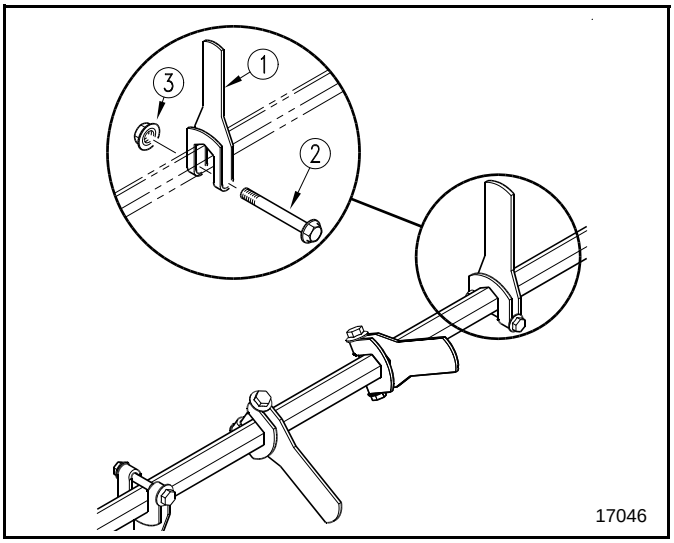

Figure 9 17046
Agitator Paddle Installation

Listing of Parts

175-205A Agitator Update Bundle, 6 Inch

Qty.	Part No.	Part Description
1	175-201L	1300 AGITATOR BASIC BOX OF PARTS
1	175-202L	1300 AGITATOR TINE BDL 7 1/2 INCH
1	175-341D	1300 AGITATOR SHAFT

175-206A Agitator Update Bundle, 7 1/2 Inch

Qty.	Part No.	Part Description
1	175-201L	1300 AGITATOR BASIC BOX OF PARTS
1	175-203L	1300 AGITATOR TINE BDL 7 1/2 INCH
1	175-341D	1300 AGITATOR SHAFT

175-207A Agitator Update Bundle, 10 Inch

Qty.	Part No.	Part Description
1	175-201L	1300 AGITATOR BASIC BOX OF PARTS
1	175-204L	1300 AGITATOR TINE BDL 10 INCH
1	175-341D	1300 AGITATOR SHAFT

Torque Values

Bolt Size	Bolt Head Identification					
	 Grade 2		 Grade 5		 Grade 8	
in-tpi[a]	N-m[b]	ft-lb[d]	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12
1/4-28	8.5	6	13	10	18	14
5/16-18	15	11	24	17	33	25
5/16-24	17	13	26	19	37	27
3/8-16	27	20	42	31	59	44
3/8-24	31	22	47	35	67	49
7/16-14	43	32	67	49	95	70
7/16-20	49	36	75	55	105	78
1/2-13	66	49	105	76	145	105
1/2-20	75	55	115	85	165	120
9/16-12	95	70	150	110	210	155
9/16-18	105	79	165	120	235	170
5/8-11	130	97	205	150	285	210
5/8-18	150	110	230	170	325	240
3/4-10	235	170	360	265	510	375
3/4-16	260	190	405	295	570	420
7/8-9	225	165	585	430	820	605
7/8-14	250	185	640	475	905	670
1-8	340	250	875	645	1230	910
1-12	370	275	955	705	1350	995
1 1/8-7	480	355	1080	795	1750	1290
1 1/8-12	540	395	1210	890	1960	1440
1 1/4-7	680	500	1520	1120	2460	1820
1 1/4-12	750	555	1680	1240	2730	2010
1 3/8-6	890	655	1990	1470	3230	2380
1 3/8-12	1010	745	2270	1670	3680	2710
1 1/2-6	1180	870	2640	1950	4290	3160
1 1/2-12	1330	980	2970	2190	4820	3560

Bolt Size	Bolt Head Identification					
	 Class 5.8		 Class 8.8		 Class 10.9	
mm x pitch[c]	N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

a. in-tpi = nominal thread diameter in inches-threads per inch

b. N· m = newton-meters

c. mm x pitch = nominal thread diameter in mm x thread pitch

d. ft-lb = foot pounds

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

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