



Installation Instructions for Small Grass Seeds Option

Before Getting Started

Before you begin installation of your Small Grass Seeds Option, read these instructions carefully and check that all parts and tools in kit are accounted for. All hand and specialty tools for installation are provided at owner's expense. Please retain these installation instructions for future reference and parts ordering information.

These installation instructions contain information for assembling the Small Grass Seeds Option to the main planter unit. Please read all instructions in your Operator Manual thoroughly before proceeding. Your Operator Manual includes information on operation, adjustment, troubleshooting, and maintenance for this attachment (some manual sections do not apply to all accessories).

All manuals are available free of charge by visiting www.greatplainsag.com. Have machine model and serial numbers available when looking for the manual you need.

The information in this manual is current at printing.

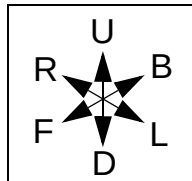
Some parts may change to assure top performance.

Safety & Symbol Information



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!

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel. An orientation rose in some line art illustrations shows the directions of: Up, Back, Left, Down, Front, Right.



NOTICE

A crucial point of information related to the current topic. Read and follow the directions to remain safe, avoid serious damage to equipment and ensure desired field results.

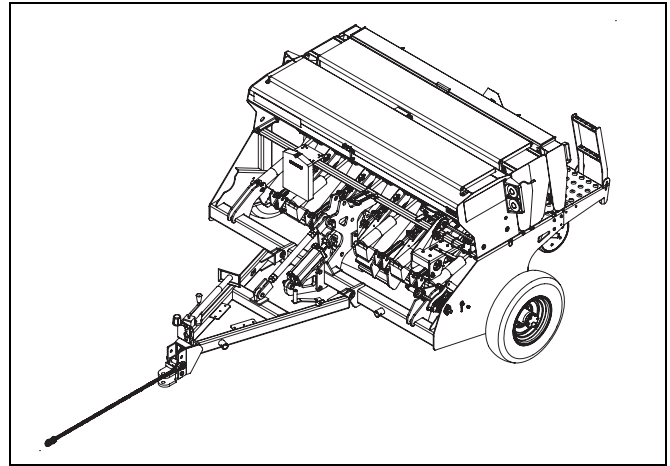


Figure 1
Small Grass Seeds Option on Model
800 End Wheel Drill

Be Aware of Signal Words

The following signal words designate a degree or level of hazard seriousness. Take the necessary precautions and exercise sound judgment.

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

General Information

These instructions explain how to install the Small Grass Seeds option.



Before installing this option make sure your machine is parked on a solid, level surface.

Small Grass Seeds Option	Reference Number
800 SGS 6" FLD INST WITH DRIVE	175-245A
800 SGS 7.5" FLD INST WITH DRIVE	175-247A
800 SGS 6" FLD INST WITH DRIVE	175-244A
800 SGS 7.5" FLD INST WITH DRIVE	175-246A

Refer to pages 10-12 for a detailed list of parts included in these kits. Use these lists to inventory parts received.

Document Family

Model 800 End Wheel Drill

175-057M Operator Manual
175-057P Parts Book
175-057B Seed Rate Charts

Tools Required

The following tools are required for installation:

- General hand tools

Note: Use Torque Chart located at the end of these instructions.

Using This Manual

This manual was written to help you install and prepare your new kit. The manual includes instructions for installation and setup. Read this manual and follow the recommendations for safe, efficient, and proper assembly and setup.

Read and understand "Important Safety Information" and "Operating Instructions" in the operator's manual before installing your new kit. As a reference, keep the operator's manual on hand while installing.

The information in this manual is current at printing. Some parts may change to assure top performance.

Use this kit only in conjunction with a Great Plains implement.

Further Assistance

Great Plains Manufacturing, Inc. wants you to be satisfied with your new Small Grass Seeds Option. If for any reason you do not understand any part of this manual or are otherwise dissatisfied with the product please contact:

Great Plains Service Department
1525 E. North St.
P.O. Box 5060
Salina, KS 67402-5060

Or go to www.greatplainsag.com and follow the contact information at the bottom of your screen for our service department.

Assembly Instructions

Install Small Grass Seed Box on Standard Seed Box w/Drive

(Kits 175-245A and 175-247A)

Refer to Figures 1 and 2, page 3.

1. Lower drill to the ground.
2. Remove ladder ①, ladder mounting bracket ②, and walkboard ③. Save removed items and hardware. Discard ladder mounting bracket ②.
3. Remove and save both box handles ④ and related hardware.
4. Use new walkboard supports ⑤a and ⑤b. Install new walkboard supports to the drill frame end panels with new hardware ($\frac{1}{2}$ x $1\frac{1}{4}$ bolts, lock washers and nuts).
5. Attach the small grass seed box to the back of the drill box as shown in Figure 2 through the mounting brackets ⑧ and ⑨. Use $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolts and $\frac{1}{2}$ " flange lock nuts to attach to the box. Use $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, $\frac{1}{2}$ " lock washers and $\frac{1}{2}$ " nuts to attach the bracket to the drill frame and walkboard supports.
6. Mount handles ④ to the back of the small seeds box using hardware saved from Step 3.
7. Install walkboard with hardware saved from Step 2.
8. Attach existing ladder to the left end of the walkboard using hardware removed earlier.

Install Small Grass Seed Box to Fertilizer Box Attached to Standard Seed Box w/o Drive

(Kits 175-244A and 175-246A)

Refer to Figures 1 and 2, page 3.

1. Lower drill to the ground.
2. Remove ladder ①, walkboard ③ and walkboard supports ⑥a and ⑥b. Save removed items and hardware. Discard supports ⑥a and ⑥b.
3. Remove and save both box handles ④ and related hardware.
4. Install extended walkboard end panels ⑦a and ⑦b with new hardware ($\frac{1}{2}$ x $1\frac{1}{4}$ bolts, lock washers and nuts). Attach existing ladder to the left end of the walkboard using hardware removed earlier.
5. Attach the small grass seed box to the back of the fertilizer box using mounting brackets ⑧ and ⑨ with the $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolts and $\frac{1}{2}$ " flange lock nuts. Use $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, $\frac{1}{2}$ " lock washers and $\frac{1}{2}$ " nuts to attach the bracket to the walkboard end panels.
6. Mount handles ④ to the back of the small seeds box using hardware saved from Step 3.
7. Install walkboard with hardware saved from Step 2.

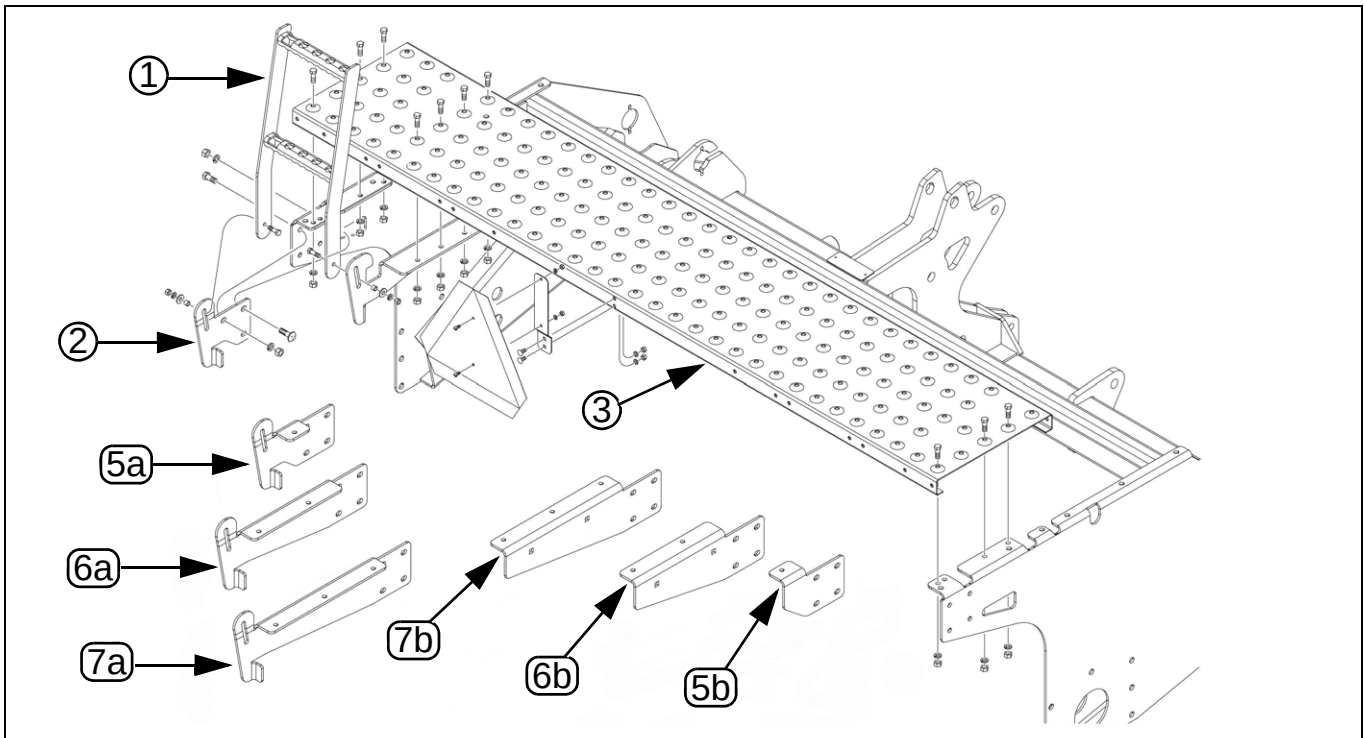


Figure 1
Walk Board Extensions

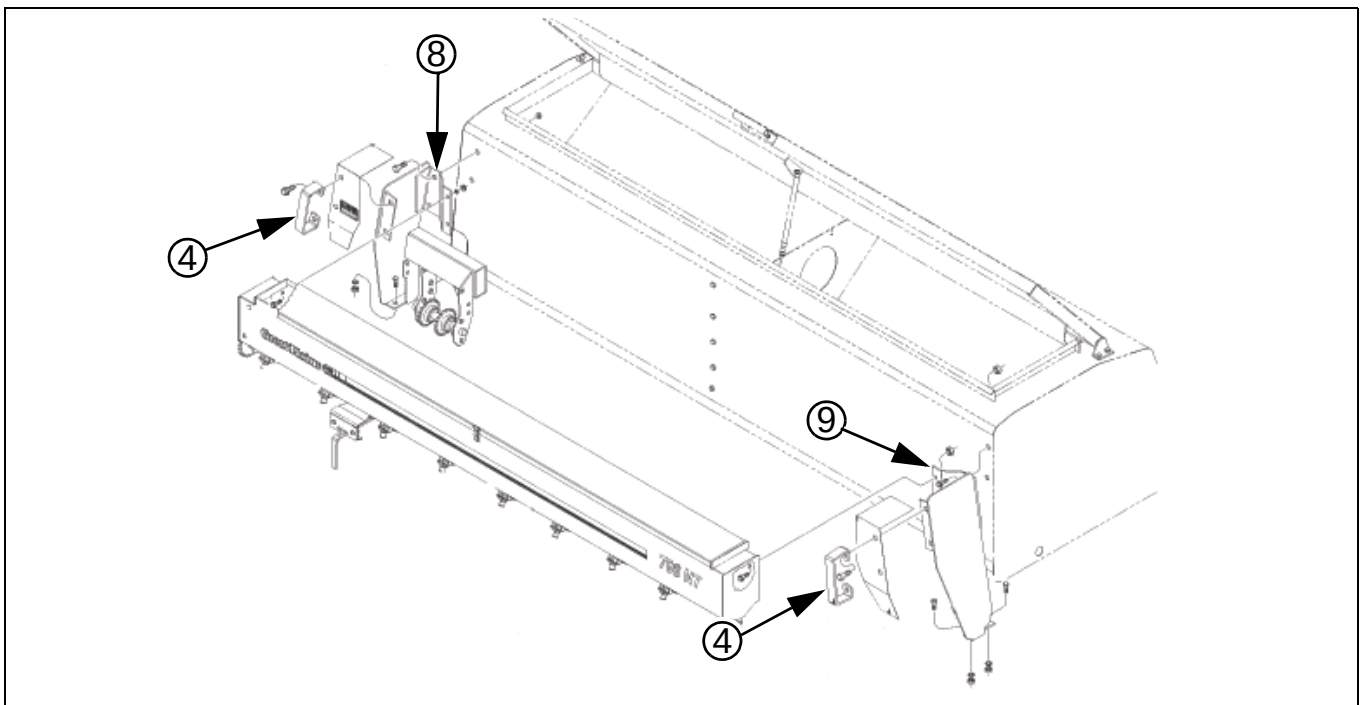


Figure 2
Small Grass Seed Box

Chain Routing

Note: The callouts below refer to the 175-266K Parts List, page 12.

Small Grass Seed Box w/Drive Auxiliary Jackshaft Installation

(Kits 175-245A and 175-247A)

Without Fertilizer Box Installed

Refer to Figure 3, page 6.

1. Loosely install the jackshaft mount (21) onto the left side of the upper main frame tube using the two U-bolts (20), four washers (19) and four nuts (18). Do not tighten nuts at this time.
2. Install the bearings (12) and flangettes (11) on the right sides of the gearbox mount side plate (A) and on the jackshaft mount (21), using the GR5 RHSND bolts (13), washers (10) and nuts (9). Tighten bolts.
3. At the left side of the gearbox mount side plate (A), install idler (5) using the HHCS (7), spacer (6), washers (4), and flanged lock nut (3). Slide the auxiliary jackshaft (8), solid end first, through the opening in the left end panel on the main seed box and through the jackshaft mount.

Note: Before passing the jackshaft through the gearbox mount side plate, slide the lock collar (15), sprocket (14), and RL #40, 70PT chain (23) onto the jackshaft.

4. Install two idler rollers (5) onto the left side of the jackshaft mount at the cutout slots using the HHCS bolts (7), spacers (6), washers (4), and flanged lock nuts (3).
5. Slide the 40C12 x $\frac{7}{8}$ hex bore sprocket (22) onto the end of the jackshaft protruding from the left side of the auxiliary jackshaft mount. Insert roll pins (17) into the end of the auxiliary jackshaft, and to the right side of the bearing mounted on the auxiliary jackshaft mount.
6. Align 12-tooth sprocket (22) with 12-tooth sprocket on small seeds box by sliding jackshaft mount right or left. Tighten U-bolts when aligned.
7. Slide the 40C22 x $\frac{7}{8}$ hex bore sprocket (14) and lock collar (15) up against the bearing mounted on the gearbox mount side plate. Tighten each set screw (16).
8. Install 40B19 x 36T spline bore sprocket (2) onto gearbox and fasten with snap ring (1).
9. Route the RL #40, 70PT chain (23) onto the drive gear sprocket (2) and the small seeds box auxiliary shaft sprocket (item A in Figure 4.). Adjust idler (5) to remove chain slack.

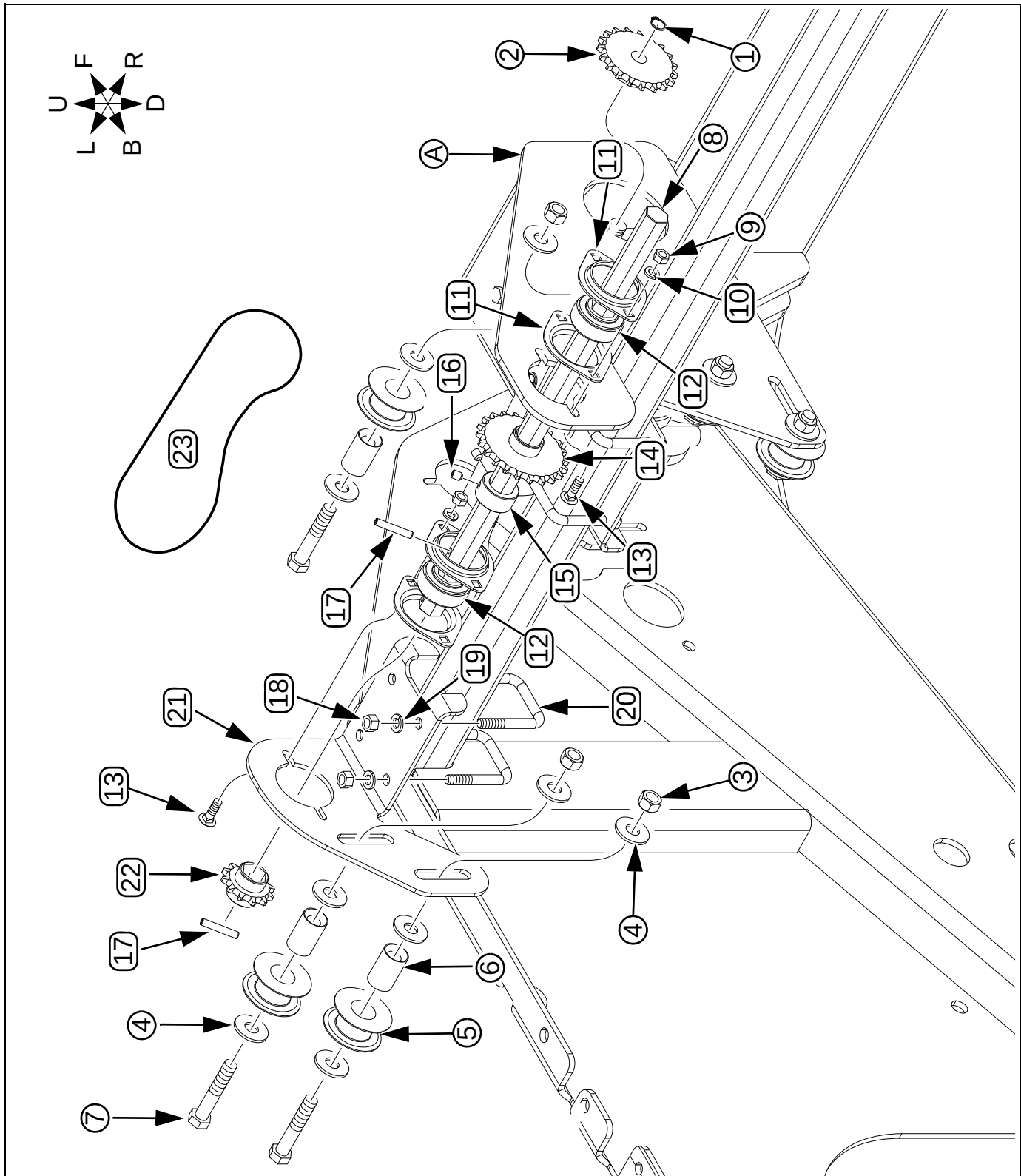


Figure 3
Auxiliary Jackshaft Assembly

Row Spacing Gear Placement and Idler Arm Installation

Refer to Figure 4

A. If the small seed box is mounted on a standard seed box, install the 17-tooth sprocket at position ①a. You may have to loosen the lock collar and sprocket set screws and slide the auxiliary jackshaft to the right in order to install and align the 17-tooth sprocket.

Note: The idler arm and 12-tooth sprocket assembly ③ are in the factory-installed position.

When alignment is completed, tighten lock collar and sprocket set screws.

B. If the small seed box is mounted on a fertilizer box and adjusted for 6 inch row spacing, install the sprocket at position ①b. Loosen the lock collar and sprocket set screws. Slide the auxiliary jackshaft to the right and through the right bearing plate ②.

Install the idler arm ③ on the right side of plate ② using the $\frac{1}{2}$ -13 x 1 GR5 RHSNB and $\frac{1}{2}$ - 13 flanged hex lock nut.

Slide the 12-tooth sprocket and $\frac{1}{2}$ -inch flat washer onto the idler arm ③. Secure sprocket and washer by inserting the cotter pin into the hole in the idler arm.

When alignment is completed, tighten lock collar and sprocket set screws.

C. If the small seed box is mounted on a fertilizer box and adjusted for $7\frac{1}{2}$ inch row spacing, install the sprocket at position ①c. You may have to loosen the lock collar and sprocket set screws and slide the auxiliary jackshaft to the right in order to install and align the 17-tooth sprocket.

Install the idler arm ③ on the left side of plate ② using the $\frac{1}{2}$ -13 x 1 GR5 RHSNB and $\frac{1}{2}$ - 13 flanged hex lock nut.

Slide the 12-tooth sprocket and $\frac{1}{2}$ -inch flat washer onto the idler arm ②. Secure sprocket and washer by inserting the cotter pin into the hole in the idler arm ③.

When alignment is completed, tighten lock collar and sprocket set screws.

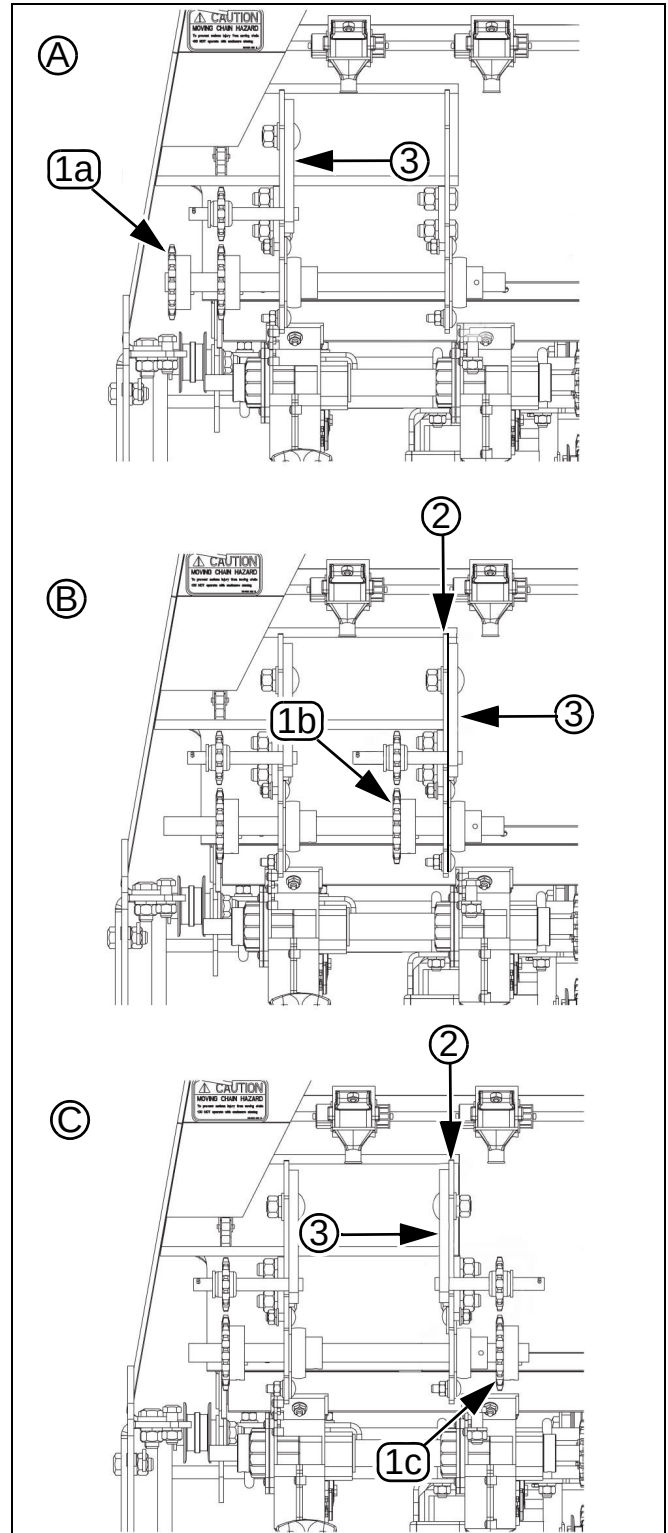


Figure 4
Row Spacing Gear and
Auxiliary Jackshaft Assembly

Small Grass Seed Box w/o Drive

(Kits 175-245A and 175-247A)

Fertilizer Box Installed

Refer to Figure 5

10. Assemble and route the chain ②③ from the 12-tooth sprocket ②② on the drive bracket over the agitator sprocket ①a to the 12-tooth sprocket on the small grass seed box ①b. Adjust idlers ⑤ to remove chain slack.

Gearbox to Main Seed Meters/Agitator w/ Small Seeds

Refer to Figure 5

Gearbox output to seed meter drive shaft slack:
 $\frac{3}{8}$ inch

Accessory jackshaft to small seeds jackshaft slack:
 $\frac{1}{2}$ inch.

Note: If an agitator is present on the main seed box, route chain as shown in Figure 5. If agitator is not present, route chain as shown in Figure 6.

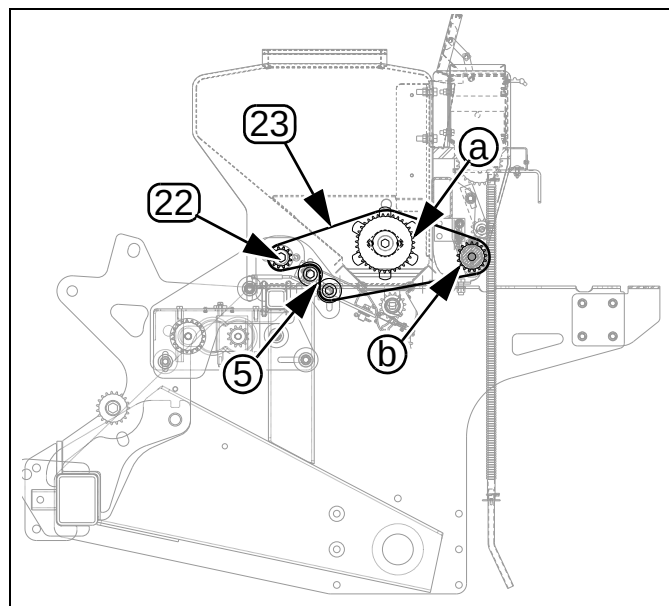


Figure 5
Chain Routing

28303

Small Seeds (only) Chains

Refer to Figure 6

Assemble and route the chain ②③ from the 12-tooth sprocket ②② on the drive bracket to the 12-tooth sprocket on the small grass seed box ①b. Adjust idlers ⑤ to remove chain slack.

Accessory Jackshaft to Small Seeds Jackshaft slack:
1 inch

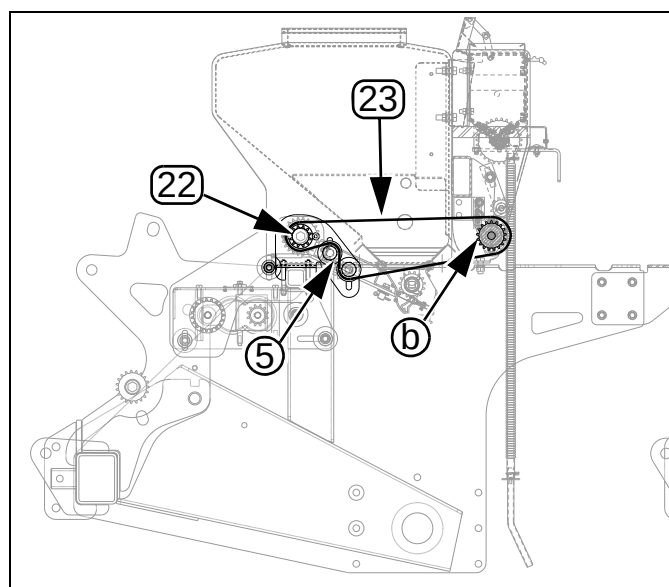


Figure 6
Chain Routing

28306

Fertilizer to Small Seeds Chain Routing

Refer to Figure 7

With Fertilizer Box Installed

1. Add 17-tooth sprocket **a** to the fertilizer jack shaft. Assemble and route chain **23** from the 17-tooth sprocket to the sprocket on the drive bracket. Adjust idler to remove chain slack.

Fertilizer jackshaft to small seeds jackshaft slack
 $\frac{1}{2}$ inch (13 mm).

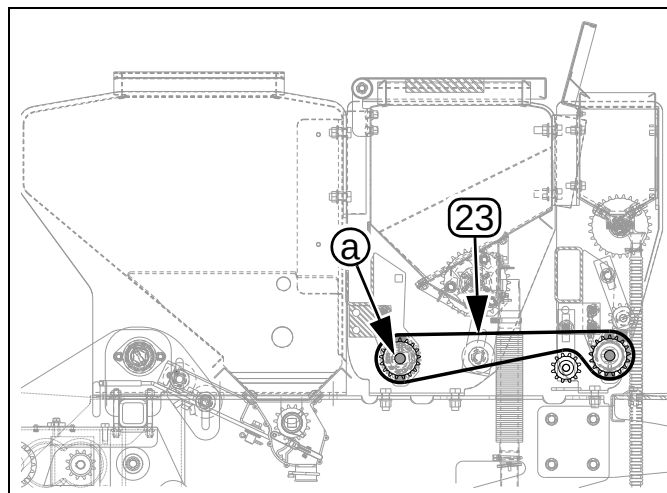


Figure 7
Chain Routing - Fertilizer to Small
Seed Box

28307

Seed Tube Assembly

Refer to Figure 8

1. Attach the hoses **1** to the drop tubes **2** with clamps **3**.

Note: If the fertilizer box is installed, use SGS side delivery tube assembly **4**. If the fertilizer box **is not** installed, use tube **5**.

2. Route the hoses behind the rear frame tubes on the drill.
3. Insert the lower end of each fertilizer hose **1** into the opener adapter with the tube opening facing forward. Secure in place with reinforcement ring **5** and #10 x $\frac{3}{8}$ " machine screws **6**.
4. Attach the fertilizer hoses to the fertilizer tubes using hose clamp **3**.
5. Refer to Seed Rate Book and Operator's Manual for setup, calibration and, use.

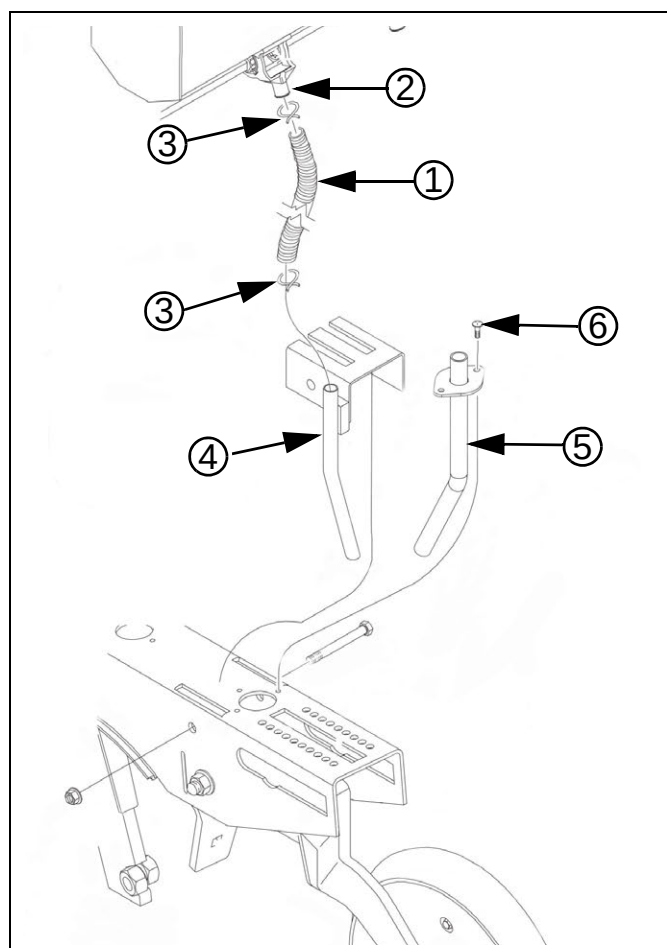


Figure 8
Seed Tube Assembly

28212

KIT 175-245A - PARTS LIST

Reference	Part Number	Description	Quantity
1	133-249L	SGS OPENER IN-ROW BUNDLE	12
2	136-250D	CHAIN RL #40 96 PITCHES	1
3	175-252M	MANUAL 800EW SML SDS FLD INST	1
4	176-266K	8FT EW AUX JACKSHAFT ASY	1
5	175-273L	8FT EW SML SDS BDL 6	1
6	175-416D	LH WLK BRD SUPP SML SEEDS	1
7	175-417D	RH WLK BRD SUPP SML SEEDS	1
8	802-034C	HHCS 1/2-13 X 1-1/4 GR5	8
9	803-020C	NUT HEX 1/2-13 PLT	8
10	804-015C	WASHER LOCK SPRING 1/2 PLT	8

KIT 175-247A - PARTS LIST

Reference	Part Number	Description	Quantity
1	133-249L	SGS OPENER IN-ROW BUNDLE	12
2	136-250D	CHAIN RL #40 96 PITCHES	1
3	175-252M	MANUAL 800EW SML SDS FLD INST	1
4	176-266K	8FT EW AUX JACKSHAFT ASY	1
5	175-272L	8FT EW SML SDS BDL 7-1/2	1
6	175-416D	LH WLK BRD SUPP SML SEEDS	1
7	175-417D	RH WLK BRD SUPP SML SEEDS	1
8	802-034C	HHCS 1/2-13 X 1-1/4 GR5	8
9	803-020C	NUT HEX 1/2-13 PLT	8
10	804-015C	WASHER LOCK SPRING 1/2 PLT	8

KIT 175-244A - PARTS LIST

Reference	Part Number	Description	Quantity
1	123-832H	SLOTTED IDLER ARM 1/2 X 3-5/16	1
2	133-325L	SGS OPENER SIDE DELIVERY BUNDLE	15
3	136-014D	CHAIN RL #40 79 PITCHES	1
4	142-298D	RH WLK BRD SUPP SML SDS-FERT	1
5	142-312D	LH WLK BRD SUPP SML SDS-FERT	1
6	168-127D	3/16 X 1 KEY	1
7	175-252M	MANUAL 800EW SML SDS FLD INST	1
8	175-273L	8FT EW SML SDS DBL 6	1
9	802-034C	HHCS Q/2-13 X 1-1/4 GR5	8
10	802-214C	RHSNB 1/2-13 X 1-1/4 GR5	1
11	803-020C	NUT HEX 1/2-13 PLT	8
12	803-169C	NUT HEX FLG LOCK 1/2-13 PLT	1
13	804-015C	WASHER LOCK SPRING 1/2 PLT	8
14	804-016C	WASHER FLAT 1/2 SAE PLT	1
15	805-067C	PIN COTTER 1/8 X 3/4	1
16	808-170C	SPKT 40B17 X 3/4 BORE W/KW&SS	1
17	817-025C	NO. 40 12T IDLER SPKT	1
18	838-265C	DECAL REFLECTOR AMBER 1-1/2 X 9	2

KIT 175-246A - PARTS LIST

Reference	Part Number	Description	Quantity
1	123-832H	SLOTTED IDLER ARM 1/2 X 3-5/16	1
2	133-325L	SGS OPENER SIDE DELIVERY BUNDLE	12
3	136-014D	CHAIN RL #40 79 PITCHES	1
4	142-298D	RH WLK BRD SUPP SML SDS-FERT	1
5	142-312D	LH WLK BRD SUPP SML SDS-FERT	1
6	168-127D	3/16 X 1 KEY	1
7	175-252M	MANUAL 800EW SML SDS FLD INST	1
8	175-272L	8FT EW SML SDS DBL 7-1/2	1
9	802-034C	HHCS Q/2-13 X 1-1/4 GR5	8
10	802-214C	RHSNB 1/2-13 X 1-1/4 GR5	1
11	803-020C	NUT HEX 1/2-13 PLT	8
12	803-169C	NUT HEX FLG LOCK 1/2-13 PLT	1
13	804-015C	WASHER LOCK SPRING 1/2 PLT	8
14	804-016C	WASHER FLAT 1/2 SAE PLT	1
15	805-067C	PIN COTTER 1/8 X 3/4	1
16	808-170C	SPKT 40B17 X 3/4 BORE W/KW&SS	1
17	817-025C	NO. 40 12T IDLER SPKT	1
18	838-265C	DECAL REFLECTOR AMBER 1-1/2 X 9	2

PARTS LIST - 175-266K

Reference	Part Number	Description	Quantity
1	800-141C	SNAP RING EXT F/PEERLESS G.B.	1
2	808-157C	SPKT 40B19 X 36T SPLINE BORE	1
3	803-169C	NUT HEX FLG. LOCK 1/2 - 13 PLT	3
4	804-017C	WASHER FLAT 1/2 USS PLT	9
5	817-406C	IDLER 1 PC 2.38 X 1.01 X 1.062	3
6	120-305D	TUBE RND 1" O.D. X 7/32W X 1.56	3
7	802-226C	HHCS 1/2-13 X 2-3/4 GR5	3
8	175-415D	8FT EW AUX JACK SHAFT	1
9	803-008C	NUT HEX 5/16 - 18 PLT	4
10	804-009C	WASHER LOCK SPRING 5/16 PLT	4
11	822-032C	FLANGETTE 52 MST	4
12	822-195C	BRG. 7/8 HEX 52MM SPHR O.D. PEER	2
13	802-282C	RHSNB 5/16 - 18 X 1 GR5	4
14	808-250C	SPKT 40C22 X 7/8 HEX BORE	1
15	402-058D	COLLAR LOCK 7/8 HEX	1
16	801-035C	SCREW SET 5/15-18 SKT KP X 3/8	2
17	805-180C	PIN ROLL 1/4 X 1-1/2 LG PLT	2
18	803-014C	NUT HEX 3/8 - 16 PLT	4
19	804-013C	WASHER LOCK SPRING 3/8 PLT	4
20	806-004C	U-BOLT 3/8 - 16 X 2 X 2-3/4	2
21	175-414D	8FT EW AUX JACK SHAFT MNT	1
22	808-219C	SPKT 40C12 X 7/8 HEX BORE	1
23	136-036D	CHAIN RL #40 70 PITCHES	1

Torque Values Chart

Bolt Size in-tpi ^a	Bolt Head Identification					
						
	Grade 2		Grade 5		Grade 8	
	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 mm x pitch ^c	Bolt Head Identification					
						
	Class 5.8		Class 8.8		Class 10.9	
	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.

25199

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