

Series II Sweep Retrofit Kit Instructions

Models:

12 IN. AND 16 IN.

Instruction Manual

PNEG-2155

Version 1.1

Date: 12-22-17







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NOTES

1 Safety Cautions

Topics Covered in this Chapter

- Safety Guidelines
- Cautionary Symbol Definitions
- Safety Precautions
- Safety Sign-off Sheet

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in SERIOUS INJURY or DEATH.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

ST-0001-3

Cautionary Symbol Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.

Table 1-1 Description of the different cautionary symbols

Symbol	Description
△ DANGER	This symbol indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.
⚠ WARNING	This symbol indicates a potentially hazardous situation which, if not avoided, can result in serious injury or death.
△ CAUTION	This symbol indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.
NOTICE	This symbol is used to address practices not related to personal injury.
	This symbol indicates a general hazard.
	This symbol indicates a prohibited activity.
	This symbol indicates a mandatory action.

ST-0005-2

Safety Precautions

This is all the topics contained in the Master Safety Reference File. Mainly used to verify formatting before releasing the topic.

Use Personal Protective Equipment

• Use appropriate personal protective equipment:

Eye Protection



Respiratory Protection



Foot Protection



Hearing Protection



Head Protection



Fall Protection



Hand Protection



- · Wear clothing appropriate to the job.
- · Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition.
 Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

Lifting Hazard

- Single person lift can cause injury.
- Use a mechanical lifting device to lift or move the equipment during installation.



ST-0021-2

Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.



ST-0003-1

Sharp Edge Hazard

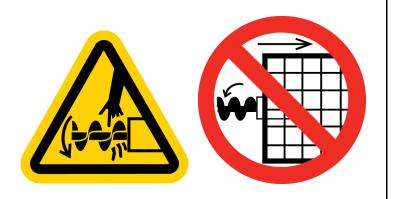
- This product has sharp edges, which can cause serious injury.
- To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.



ST-0036-2

Rotating Auger Hazard

- Keep clear of rotating augers and moving parts.
- Do not remove or modify guards or covers.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.
- Failure to follow these precautions will result in serious injury or death.



ST-0037-1

Stay Clear of Moving Parts

- Entanglement in rotating sprocket or moving chain will cause serious injury or death.
- Keep all guards and covers in place at all times.
- Lock-out power source before making adjustments, cleaning, or maintaining equipment.



ST-0063-1

Operate Motor Properly

- All electrical connections must be made in accordance with applicable local codes (National Electrical Code for the US, Canadian Electric Code, or EN60204 along with applicable European Directives for Europe). Make sure equipment and bins are properly grounded.
- Lock-out power before resetting motor overloads.
- Do not repetitively stop and start the drive in order to free a plugged condition. Jogging the drive in this manner can damage the equipment and drive components.



ST-0009-3

Chapter 1: Safety Cautions

Do Not Enter Bin

- · Rotating flighting will kill or dismember.
- Flowing material will trap and suffocate.
- Crusted material will collapse and suffocate.
 - If you must enter the bin:
 - 1. Shut off and lock out all power sources.
 - 2. Use a safety harness and safety line.
 - 3. Station another person outside the bin.
 - 4. Avoid the center of the bin.
 - 5. Wear proper breathing equipment or respirator.







ST-0061-1

Use Unload Equipment Properly

- Do not operate this equipment alone. Make sure someone nearby is aware of the proper shut down sequence in the event of an emergency.
- Do not allow any person intoxicated or under the influence of drugs to operate this equipment. All operators must be adequately rested and prepared to perform all functions of operating the equipment.
- Do not start equipment until all persons are clear of the work area and safety guards are in place.
- Do not allow anyone inside a bin, truck, or wagon which is being unloaded by an auger. Flowing grain can trap and suffocate in seconds.
- Use ample overhead lighting after sunset to light the work area.
- Always use caution to not hit the auger when positioning the load.
- · Do not leave equipment operating while unattended.
- Be aware of pinch points, which can trap or catch objects and cause injury.
- Be sure all equipment is locked in position before operating.
- Always lock out all power sources to the equipment when unloading is finished.





ST-0051-1

Safety Sign-off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

Date	Employee Name	Supervisor Name

ST-0007

2 Series II Sweep Retrofit Kit Instructions

Topics Covered in this Chapter

- Motor Frame Swap Callout Reference Chart
- Motor Frame Swap Instructions

Motor Frame Swap Callout Reference Chart

D 6"	Part #		2	
Ref#	12 in.	16 in.	Description	
1	GC09770	GC09770	Belt guard top	
2	GC06673	PT0747	Sheave	
3	MHC00028	MHC00743	V-belt	
4	GC09764	GC09764	Belt guard bottom shell assembly	
5	GC09762	GC09762	Belt guard bottom back assembly	
6	GC09759	GC09759	Belt guard bottom plate	
7	S-248	S-248	3/8 in. flat washer	
8	S-1054	S-1054	3/8 in. lock washer	
9	S-7469	S-7469	3/8 x 1 in. HHCS bolt	
10	MTR-0025F	MTR-0025F	Motor	
11	GC09756	GC09756	Motor mount top plate	
12	GC09750	GC09750	Motor mount pivot tube	
13	GC09755	GC09755	Motor mount hinge	
14	S-7835	S-7835	1 in. flat washer	
15	S-240	S-240	1-8 in. hex nut	
16	GC09757	GC09757	Motor mount pivot shaft	
17	S-7241	S-7241	1/8 x 1-1/4 in. cotter pin	
18	GC09877	GC09877	Belt guard plate	
19	PT1298	CE-00583	Sheave	
20	GC06516	GC06687	Bushing	
21	GC09992	GC09992	Motor jack assembly	
22	GC09984	GC09984	Motor mount channel	
23	S-869	S-869	3/4 x 2 in. HHCS bolt	
24	S-233	S-233	3/4 in. split lock washer	
25	S-234	S-234	3/4 in. hex nut	

Chapter 2: Series II Sweep Retrofit Kit Instructions

	Pa	rt #	Bereitstein	
Ref#	12 in.	16 in.	Description	
26	GC10798	GC07080	Sweep section frame	
27	GC07880	GC07877	Collector ring sump (Existing spider assembly)	
28	GC20814	GC20233	Cross brace (New spider assembly)	
29	GC04615	GC04615	Sump weld center well assembly	
30	S-8127	S-8127	3/4 x 3 in. HHCS bolt	
31	S-7622	S-7622	1-8 x 3-1/2 in. HHCS bolt	
32	S-8418	S-8418	1-8 in. nylock nut	
33	GC20239	GC20239	Motor frame	
34	GC20820	GC20247	Sweep skid	
35	S-8760	S-8760	1/2 x 1-1/2 in. HHTB bolt	
36	S-2120	S-2120	1/2 in. flat washer	
37	S-3729	S-3729	1/2 in. hex nut	
38	GC20244	GC20244	Motor mount plate	
39	BG-0098	BG-0098	3/4 x 8 in. thread rod	
40	S-866	S-866	3/4 in. flat washer	
41	S-7876	S-7876	1/2 x 1-3/4 in. HHCS bolt	
42	S-236	S-236	1/2 in. split washer	
43	GC20248	GC20248	Motor cover	
44	GC20252	GC20252	Motor front cover	
45	S-9066	S-9066	3/8 x 1-1/4 in. flange bolt	
46	PDS-289	PDS-289	Caster mount weld	
47	PDS-071	PDS-071	Rear support wheel	
48	PDS-661G	PDS-661G	Sweep wheel assembly	
49	GC03348	GC03348	Short frame tube	
50	GC20817-BS	GC20238	Front wheel strut weld	
51	GC20819	GC20262	Front wheel shield	
52			Template for rear plate	
53			Template for side plate	
54			Plasma cut holes on the rear plate	
55			Plasma cut holes on the side plate	

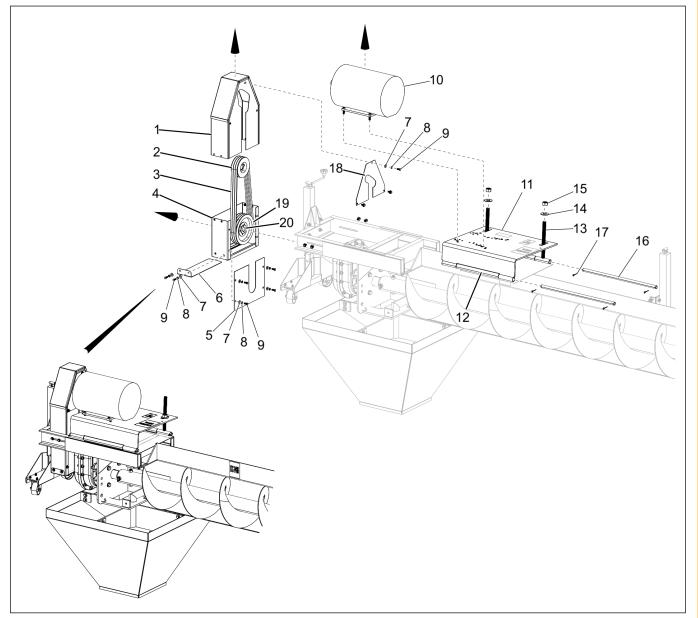
Motor Frame Swap Instructions

What You Should Know

This retrofit kit is used for fixing the problem that occurs with Series II Sweeps. This kit will replace the auger motor frame with a heavier motor frame similar to the existing X-Series Sweep.

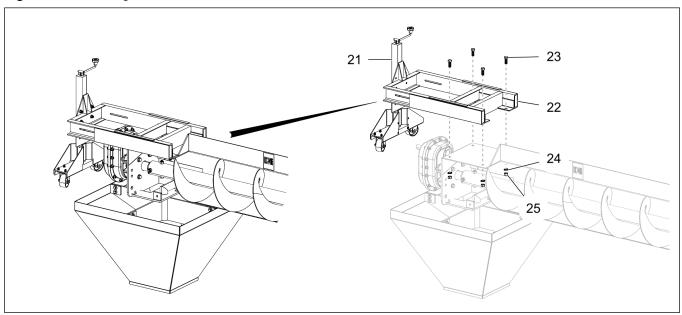
- 1. Disconnect the electrical power and unbolt the conduit from the first section of sweep frame.
- 2. Remove the existing belt guards (1, 4, 5 and 6), belts (3), pulleys (2 and 19), motor mount (11) and motor (10) from the center pivot assembly.

Figure 2-1 Removing the belt guards, belts, motor and pulley



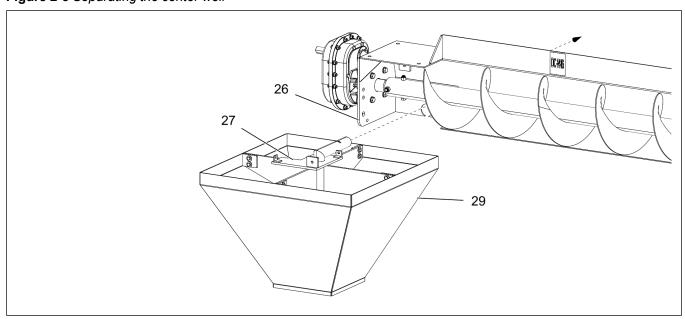
3. Remove the existing motor frame (22) along with motor jack assembly (21) from the center pivot assembly.

Figure 2-2 Removing the motor frame



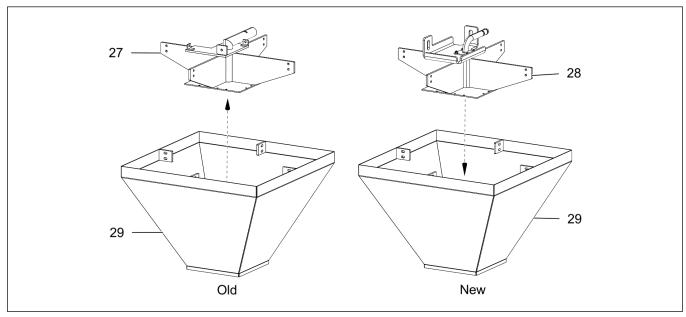
4. Move the reducer and sweep section (26) along with the auger away from the center well (29) to access the existing spider assembly (27).

Figure 2-3 Separating the center well



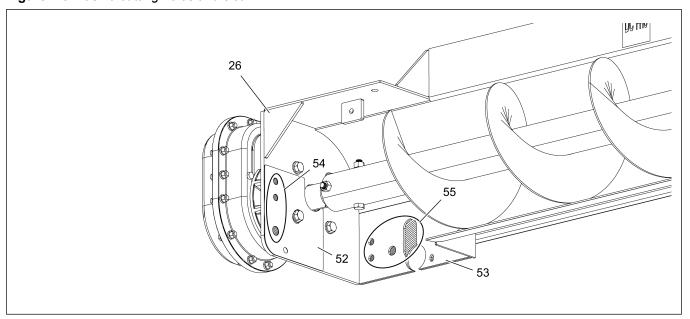
5. Remove the existing spider assembly (27) from the center well (29) and replace with new spider assembly (28).

Figure 2-4 Replacing the spider assembly



- 6. Using the template (52), cut out 3 holes (54) into the rear plate of existing sweep center section (26).
- 7. Using the template (53), cut out 3 holes and a slot (55) into the side plate of existing sweep center section (26).

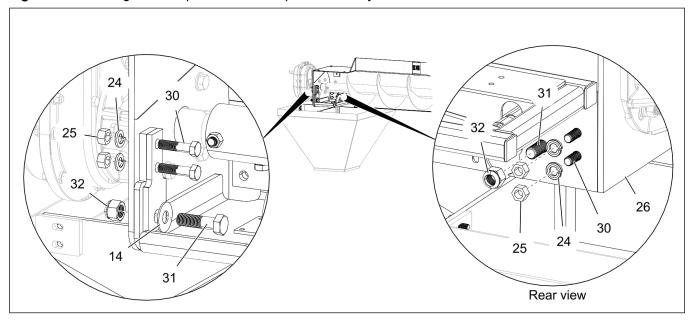
Figure 2-5 Plasma cutting holes and slot



8. Move the reducer and sweep section (26) back along with the auger and attach it to the spider assembly (28) using the provided 3/4 x 3 in. HHCS bolts (30) and 1-8 x 3-1/2 in. HHCS bolt (31), 1 in. flat washer (14) and 3/4 in. lock washers (24), 3/4 in. nuts (25) and 1-8 in. nylock nut (32).

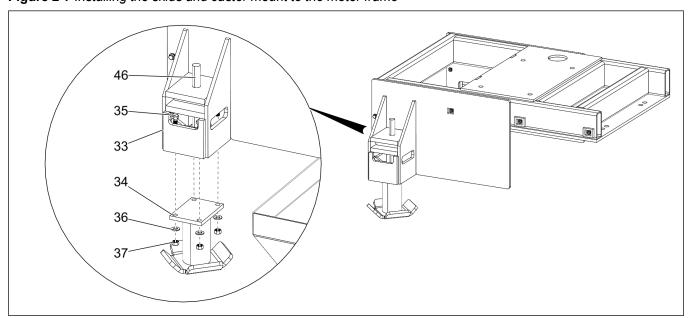
NOTE: The new sweep section connection is floating type, when compared to the previous connection.

Figure 2-6 Attaching the sweep section to the spider assembly

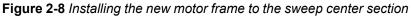


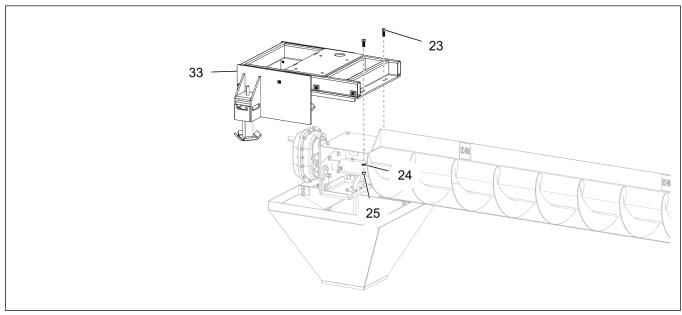
9. Install skids (34) and caster mounts (46) to motor frame (33) using 1/2 x 1-1/2 in. HHTB bolts (35), 1/2 in. flat washers (36) and 1/2 in. nuts (37).

Figure 2-7 Installing the skids and caster mount to the motor frame



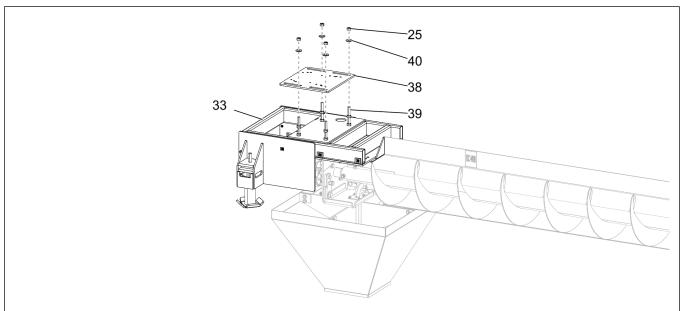
10.Install new motor frame assembly (33) to the center pivot using the 3/4 x 2 in. HHCS bolts (23), 3/4 in. lock washers (24) and 3/4 in. nuts (25).





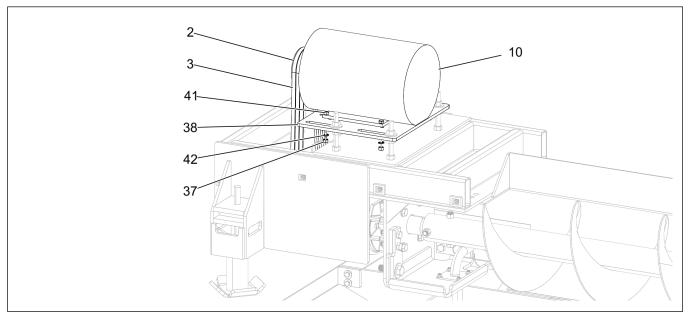
11.Install the motor mount plate (38) to the motor frame (33) using the thread rod (39), 3/4 in. flat washers (40) and 3/4 in. nuts (25).

Figure 2-9 Installing the motor mount plate to the motor frame



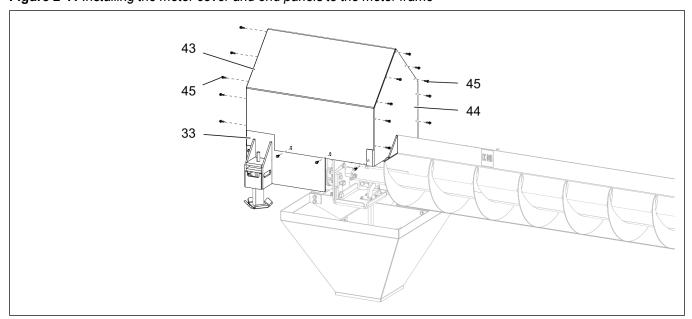
12.Install the pulley (2), belts (3) and motor (10) to the motor mount plate (38) using $1/2 \times 1-3/4$ in. HHCS bolts (41), 1/2 in. split washers (42) and 1/2 in. nuts (37).

Figure 2-10 Installing the pulley, belts and motor to the motor frame



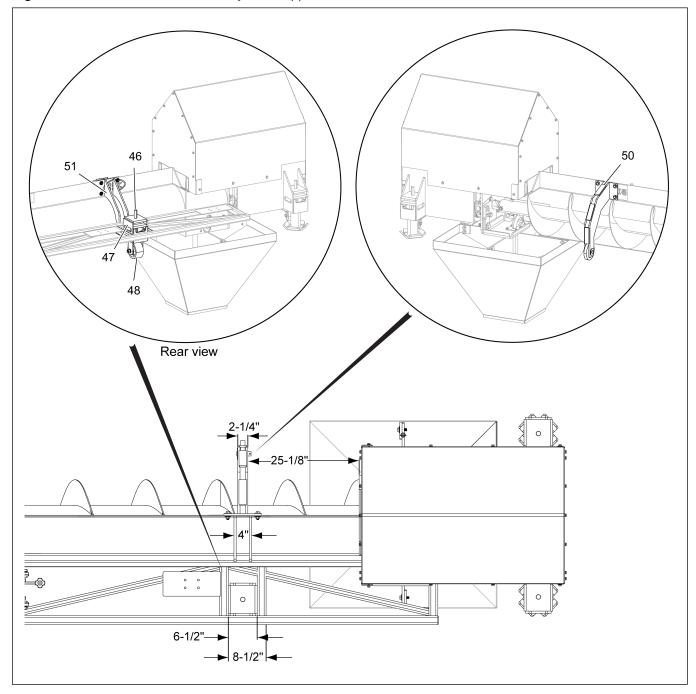
13.Install the motor cover (43) to the motor frame (33) along with the end panels (44) using the 3/8 x 1-1/4 in. flange bolts (45).

Figure 2-11 Installing the motor cover and end panels to the motor frame



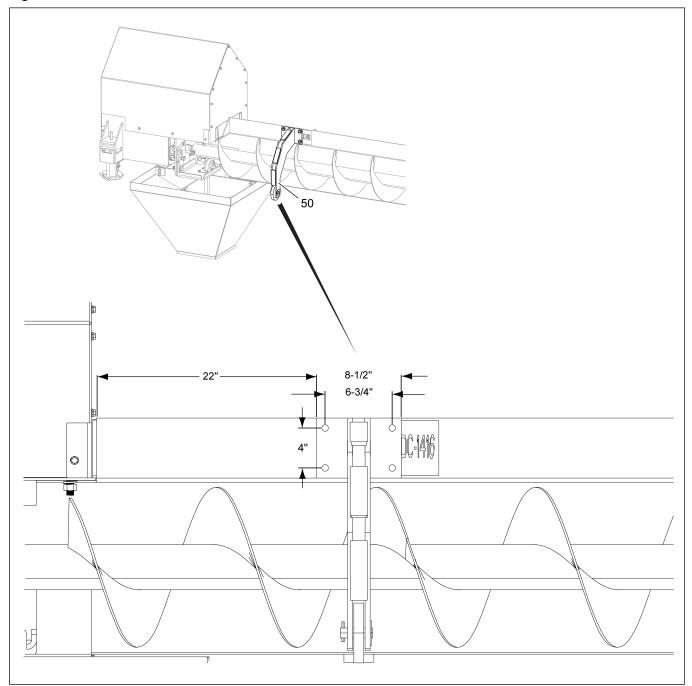
14. Field cut the diagonal tube of section frame for the supplied dimensions to install the rear support, wheel assembly and front wheel strut.

Figure 2-12 Position of wheel assembly, rear support and front wheel strut



15. Position the front wheel strut (50) against the backshield to the supplied dimensions and field drill four holes for 1/2 in. bolts to attach the front wheel strut.

Figure 2-13 Field drill holes for front wheel strut

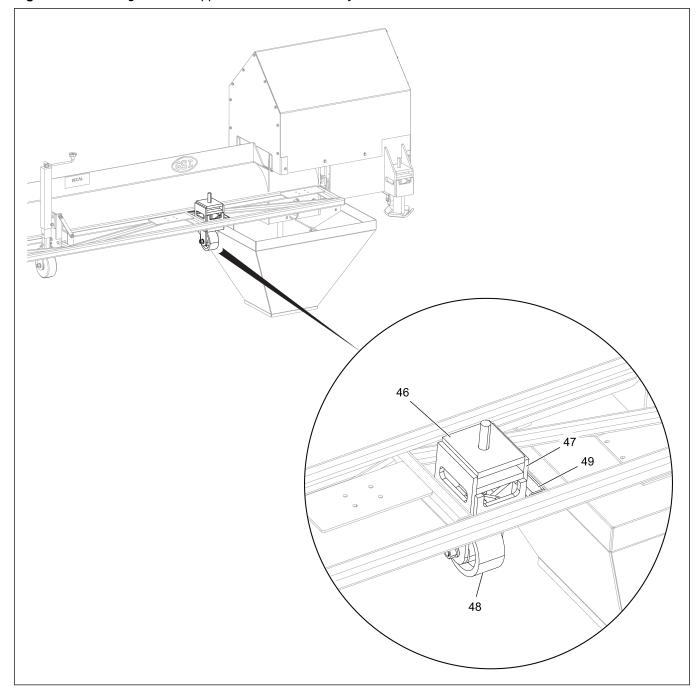


16. Weld the rear support (47) and wheel assembly (48) to the section frame.

NOTE: Field cut the angular frame tube as required to allow the positioning of support wheel.

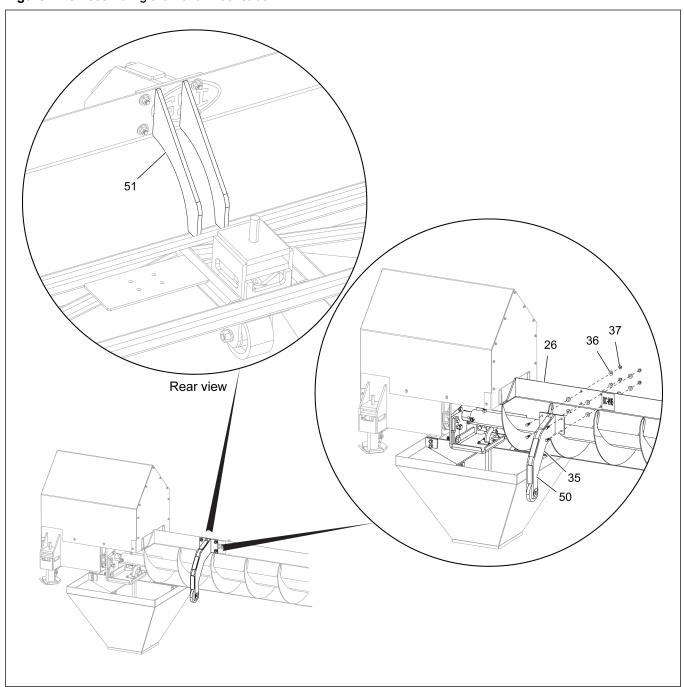
17. Weld the short frame tube (49) to the section frame.

Figure 2-14 Welding the rear support and wheel assembly



- 18.Install the front wheel strut (50) to the backshield using 1/2 x 1-1/2 in. HHTB bolts (35), 1/2 in. flat washers (36) and 1/2 in. nuts (37).
- 19. Position the two front wheel shield supports (51) to the supplied dimensions and weld it to the backshield. Refer to *Figure 2-12*, *page 21*.

Figure 2-15 Assembling the front wheel strut



20.Repeat the steps from 14 - 19 to install the sweep wheel strut and wheel supports for each section of sweep.

3 Parts List

Topics Covered in this Chapter

• Series II Sweep Retrofit Kit Parts List

Series II Sweep Retrofit Kit Parts List

Figure 3-1 Series II sweep retrofit kit parts

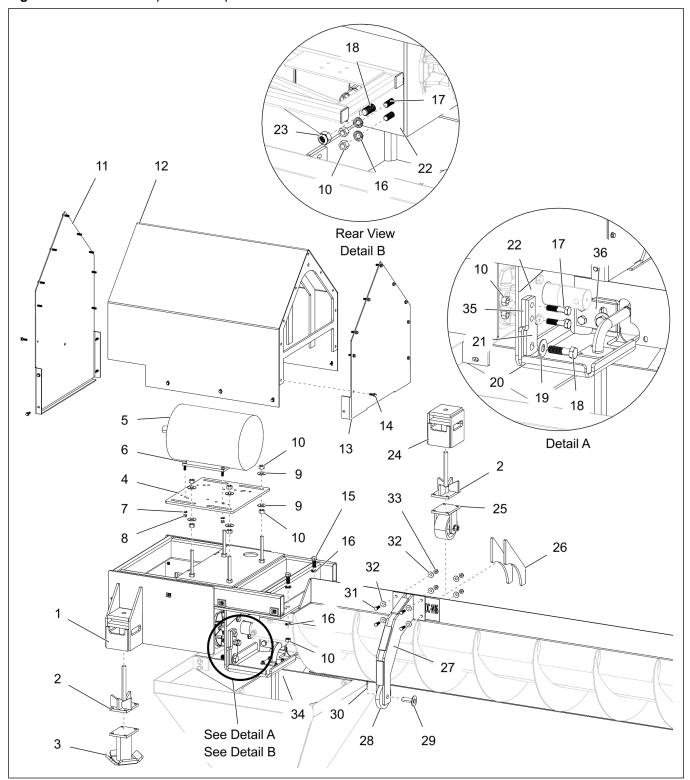


Table 3-1 Series II sweep retrofit kit parts list

5.4	Part #		Description	
Ref#	12 in.	16 in.	Description	
1	GC20239	GC20239	Series II Motor Mount Assembly	
2	PDS-289	PDS-289	X-Series Caster Mount Weldment	
3	GC20820	GC20247	Sweep Skid Weldment	
4	GC20244	GC20244	Series II Motor Mount Plate Field Fix	
5	MTR-0025F	MTR-0025F	Motor, 20 HP 3 PH 1765 RPM 1-5/8 in. Shaft	
6	S-7876	S-7876	1/2 x 1-3/4 in. HHCS Bolt	
7	S-236	S-236	1/2 in. Split Lock Washer	
8	S-3729	S-3729	1/2 in. Hex Nut	
9	S-866	S-866	3/4 in. Flat Washer	
10	S-234	S-234	3/4 in. Hex Nut	
11	GC20253	GC20253	Series II Sweep Auger Motor Back Cover	
12	GC20248	GC20248	Series II Sweep Auger Motor Cover Weldment	
13	GC20252	GC20252	Series II Sweep Auger Motor Front cover	
14	S-9066	S-9066	3/8 x 1-1/4 in. Flange Bolt	
15	S-869	S-869	3/4 x 2 in. HHCS Bolt	
16	S-233	S-233	3/4 in. Split Lock Washer	
17	S-8127	S-8127	3/4 x 3 in. HHCS Bolt	
18	S-7622	S-7622	1-8 in. x 3-1/2 HHCS Bolt	
19	S-7835	S-7835	1 in. I.D. Flat Washer	
20	GC20813	GC20235-BS	Series II Sweep - Pivot Pipe Weldment	
21	PDS-359	PDS-359	X-Series Sweep HD Pivot Plate	
22	GC10798	GC07080	Series II Sweep HD Section 16 x 144 in. Pivot	
23	S-8418	S-8418	1-8 in. Nylock Nut	
24	PDS-071	PDS-071	Rear Support Wheel Strut	
25	PDS-661G	PDS-661G	X-Series Sweep Wheel Assembly	
26	GC20819	GC20262	Series II Sweep Front Wheel Shield Support	
27	GC20817	GC20238	Series II Sweep Front Wheel Strut Weldment	
28	PDS-054	PDS-054	X-Series Sweep Front Support Wheel Machined	
29	PDS-341	PDS-341	X-Series Front Wheel Pin Weldment	
30	S-1341	S-1341	3/16 x 2 in. Slotted Rolled Spring Pin	
31	S-8760	S-8760	1/2 x 1-1/2 in. HHTB Bolt	
32	S-2121	S-2121	1/2 in. Flat Washer	
33	S-8506	S-8506	1/2 in. Flange Nut	
34	GC06851	GC06851	Series II Sweep Collector Ring Sump Brace	
35	PDS-079	PDS-079	Plate Slot Spacer	
36	PDS-078	PDS-078	Plate Pivot Slot	
N/S	GC03348	GC03348	0.188 x 2 x 2 x 12 in. Tube	

NOTES

GSI Group, LLC Limited Warranty

The GSI Group, LLC ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
	Performer Series Direct Drive Fan Motor	3 Years
AP Fans and Flooring	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
AP/Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years
	Feeder System Pan Assemblies	5 Years **
Cumberland	Feed Tubes (1-3/4" and 2.00")	10 Years *
Feeding/Watering Systems	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems	Portable and Tower Dryers	2 Years
Farm Fans Zimmerman	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years

- Warranty prorated from list price:
 0 to 3 years no cost to end-user
 3 to 5 years end-user pays 25%
 5 to 7 years end-user pays 50%
 7 to 10 years end-user pays 75%
- ** Warranty prorated from list price: 0 to 3 years - no cost to end-user 3 to 5 years - end-user pays 50%
- † Motors, burner components and moving parts not included. Portable dryer screens included. Tower dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

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This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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