

WARRANTY REGISTRATION AND POLICY

Buhler Manufacturing products are warranted for a period of twelve (12) months from original date of purchase, by original purchaser, to be free from defects in material and workmanship under correct, normal agricultural use and proper applications.

Buhler Manufacturing's obligations under this warranty shall be limited to the repair or exchange, at Buhler Manufacturing's option, of any Buhler Manufacturing product or part which proves to be defective as provided. Buhler Manufacturing reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection.

The above warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Buhler Manufacturing's factory, nor to goods altered or repaired by anyone other than an authorized Buhler Manufacturing representative.

Buhler Manufacturing makes no Express Warranties other than those, which are specifically described. Any description of goods, including any references and specifications in catalogues, circulars and other written material published, is for the sole purpose of identifying goods and shall conform to such descriptions. Any sample or model is for illustrative purposes only and does not create an Express Warranty that the goods conform to sample or model shown.

The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Manufacturing will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

WARRANTY CLAIMS:

Warranty requests must be prepared on Buhler Manufacturing Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

WARRANTY LABOR:

Any labor subject to warranty **must** be authorized by Buhler Manufacturing. The labor rate for replacing defective parts, where applicable, will be credited at a rate determined by the Company, Buhler Manufacturing.

IMPORTANT FACTS:

Buckets and Bucket Tines Carry No Warranty

Bent Spears Carry No Warranty

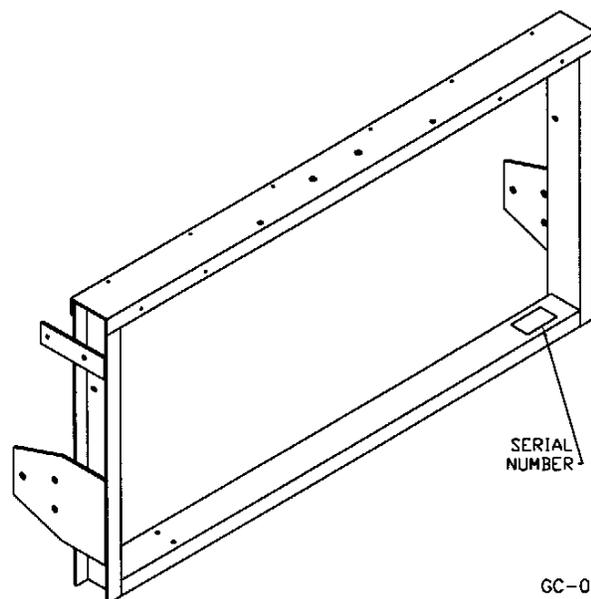
Snowblower Fan Shafts Carry No Warranty

Mower Blades Carry No Warranty

Portable Auger Parts Have Two (2) Year Warranty

SAFETY INSTRUCTIONS

1. Keep all safety shields in place.
2. Do not stand close to the cleaner while it is operating.
3. Keep hands, feet and clothing away from moving parts.
4. Shut off power to adjust, service or clean.
5. Make certain electric motors are grounded.
6. All wiring should be done by a competent electrical contractor to assure the motor is receiving the correct voltage and the cable will carry the correct load.
7. If an electric switch is used for starting the cleaner put a padlock on it to prevent unauthorized persons or children from starting the cleaner.
8. Periodically check all nuts and bolts to see that they are tight.
9. Tow the cleaner only at low speeds (approx. 45 mph)
10. Use a slow moving vehicle sign and warning lights if it is necessary to move the cleaner on a roadway.
11. The bolts which clamp on the drum screen straps should be turned so the end of the bolt trails the direction of rotation as explained in the assembly instructions.

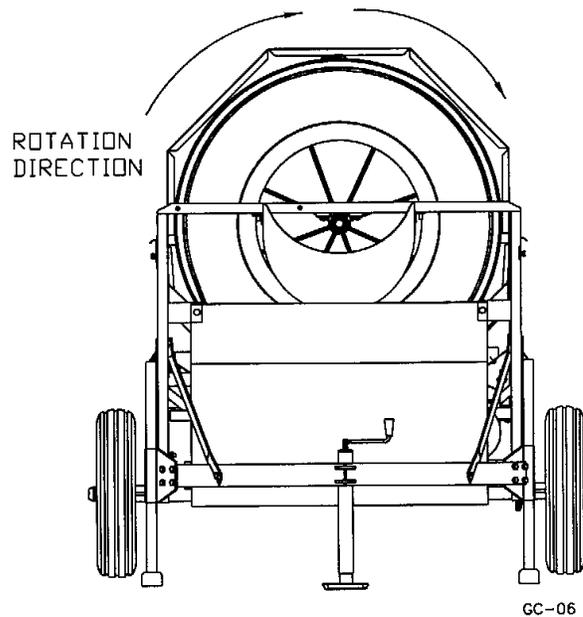


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MODEL #480 GRAIN CLEANER OPERATING INSTRUCTIONS**OPERATION**

The Cleaner will remove not only "fines" and chaff, but also large trash such as cob pieces or stalks. A 3 hp, 1725 RPM electric motor is recommended to drive the cleaner. The electric motor and a weatherproof switch to control the motor must be supplied by the customer. Be certain that the power source is properly grounded.

When viewed from the front end (the intake end), the outside drum turns approximately 19 revolutions per minute and rotates clockwise as shown in drawing below.



The jack is used both to hook up the cleaner for transport and to adjust the slope of the cleaner.

⚠ CAUTION: During operation the cleaner should rest on the two adjustable front legs, not the jack. Adjust the cleaner height to achieve maximum capacity without grain loss through the trash chute. The cone flow control must also be adjusted so trash can get through while minimizing grain loss.

The capacity of the cleaner will vary with the type of grain and moisture content. Adjust the flow on the intake auger to match cleaner capacity. The cleaner should be run until empty before stopping. Do not leave grain in cleaner or start the cleaner with a load of grain on it.

SCREENS

A variety of screens are available to suit your needs. Screens should be mounted so the lap joints are on one of the screen support bars.

MODEL #480 GRAIN CLEANER OPERATING INSTRUCTIONS - CONT'D.**8" x 11' INTAKE AUGER OPTION**

An 8" x 11' utility auger is available as an option. A swivel arm to connect the auger to the cleaner and a cradle for transport are supplied with all cleaners. The utility auger requires a 2 hp, 1725-RPM electric motor to be supplied by the customer. The utility auger comes with a flow control so input can be matched to cleaner capacity.

FRAME SIDE PANEL AND TRASH PAN OPTION

A kit consisting of side panels for the frame and a trash pan to catch fines is available as an option. The trash pan has an auger, which feeds the fines to an opening at one end of the pan.

SERVICE

Belt tension must be maintained to assure maximum belt lift. Check the belt tension frequently and remove any trash, which might accumulate in the pulley grooves. If the cleaner has the trash pan option, be sure to clean out any remaining grain in the trough to keep it from rotting. When hauling the cleaner for a long distance, always check the wheel bolts before leaving.

TOWING

Towing speed should not exceed 45 miles per hour. Use a safety chain when towing on the highway.

STORAGE

Store the cleaner inside a dry place to prevent deterioration of the belts. Clean thoroughly before placing in storage.

MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS

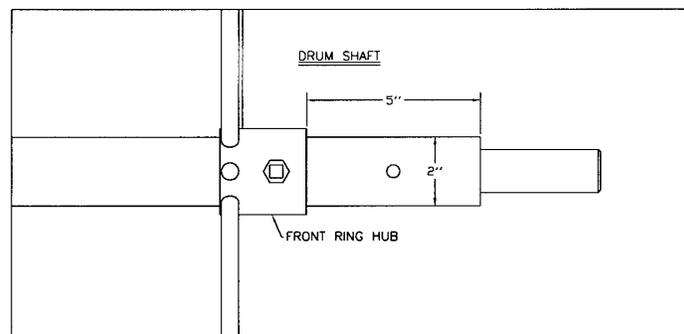
The following instructions refer to the intake end of the cleaner as the front and the output end as the rear.

1. (Drawing #1)
Join the front and rear frame (#1 and #2) together using the frame sides (#3 and #4) and ½" x 1 ¼" cap screws, lock washers and hex nuts. The right hand frame (#3) has two extra 5/16" holes, which must be turned so they face up at the front of the cleaner. The frame ends and sides must be squared before the bolts are tightened.

2. (Drawing #1)
Mount the wheels on the axle assembly (#6). The easiest way to mount the axle under the cleaner is by lifting the frame assembly with a hoist or front end loader and then bolting on the axle braces (#7 & 8) between the frame sides and the axle. The front axle brace (#8) has an extra hole 5 ½" from one end which must be turned facing down. Two frame braces (#10) are bolted to the brace using this hole. The other end of the brace bolts to the front frame. Use ½" x 1 ¼" cap screws, lock washers and hex nuts for all the braces.

3. (Drawing #1)
Bolt the hitch assembly (#5) to the front frame using ½" x 1 ¼" cap screws. Mount the jack (#13) to the round sleeve on the hitch brace. The jack is used when hooking up the cleaner for towing and to adjust the slope of the cleaner. Insert the two front legs (#14) and lock in place using a ½" x 4 ½" pin (#15) and a spring clip. If the cleaner is purchased with a trash pan, the next step should be the pan assembly (step #11). These instructions follow the instructions for the basic cleaner. If there is no pan, continue with step #4.

4. (Drawing #2)
Assemble the cone and drum on the drum shaft (#39) before mounting the assembly on the grain cleaner frame. The cone assembly inside the drum is shown at the bottom of the drawing. Check to see that all rings are turned as shown. The cone sleeve (#36) fits between the rear center drum ring (#34) and the rear drum ring (#36). Do not forget to slide the cone flow control (#43) and cone support ring (#42) onto the drum shaft before tightening any rings. Use a 3/8" x ¾" set screw and hex nut to tighten rings. Begin by positioning the front drum ring (#32) on the drum shaft as shown in the drawing below.

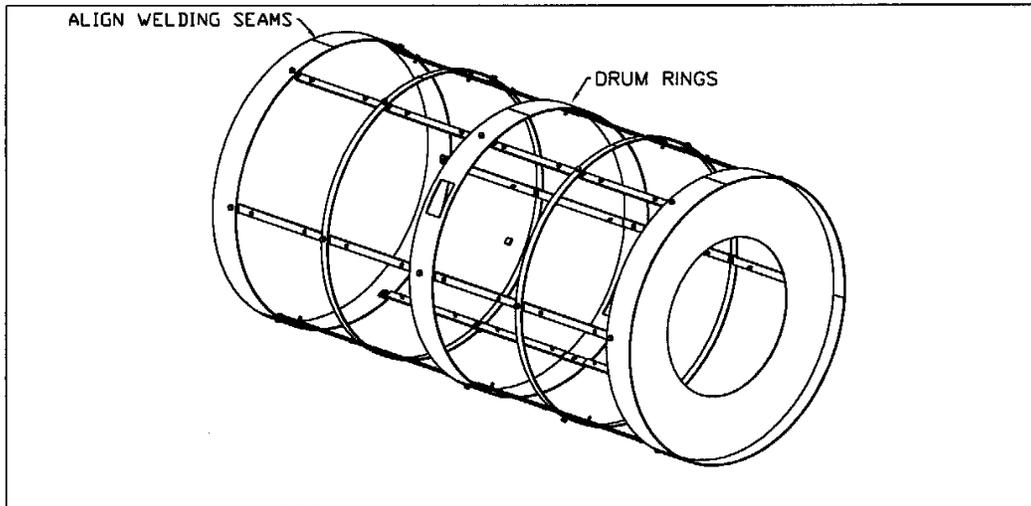


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MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS - CONT'D.

4. Bolt on every other drum support bar (#37) using 5/16" x 1" carriage bolts, lock washers and hex nuts. This will enable you to align the outside holes and leave plenty of room to work on the cone inside the drum.

ALERT: The welding seams on the drum rings must all be aligned as shown in drawing below.



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The cone is assembled inside the drum before finishing the outer drum assembly. Bolt the cone screen supports (#38) inside the cone rings using 5/16" x 1" carriage bolts, lock washers and hex nuts. Bolt on the rest of the drum support bars and lock all rings on the drum shaft.

ALERT: Only three of six drum bars have holes for self tapping screws. Space these with the three without holes.

MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS - CONT'D.

5. (Drawing #2)
Lift the entire cone and drum assembly into the cleaner frame. Slide a 1 ¼" pillow bearing onto each end of the drum shaft. Bolt the bearings under the rear frame using ½" x 1 ¾" cap screws, lock washers, flat washers and hex nuts. Use ½" x 1 ¾" cap screws on the top of the front frame. Center the drum assembly in the frame and lock the bearing collars in place.
6. (Drawing #3)
Mount two 1" pillow bearings (#64) on the reducer shaft (#65) and bolt the bearings to the bottom of the reducer mount welded to the front frame as shown in drawing. The longer keyway on the reducer shaft faces to the inside of the cleaner. Use ½" x 1 ¾" cap screws, lock washers, flat washers and hex nuts. A 3" double pulley (#66) is mounted on the inside of the reducer shaft and an 18" double pulley (#62) is mounted on the outside. The 2 ½" long key (#77) is used on the 18" pulley.
7. (Drawing #3)
Bolt the motor mount (#67) to the front frame with two motor mount clamps (#69) using 3/8" x 1 ¼" cap screws, lock washers and hex nuts. The motor mount should be turned as shown in drawing. Bolt the motor guard (#68) and a 3 hp electric motor (not supplied) to the motor mount using 3/8" x 1" cap screws, lock washers, flat washers and hex nuts. Mount a 3" double pulley on the electric motor and connect this pulley and the 18" pulley (#62) with two B-87 belts (#76). A ½" x 4" sq. head set screw threaded through a bracket welded to the front frame acts as a belt tightener. The 3" motor pulley is supplied by the customer.
8. (Drawing #3)
Mount two B-140 belts (#54) on the outside ring welded to the front drum ring and the 3" pulley at the back of the reducer shaft. Assemble the two idler arms (#71) and the 4 ½" o.d. idler pulleys (#73) on the idler arm shaft welded to the front frame as shown in drawing. Use a 5/8" x 4" cap screw (#87) and lock nut. A flat washer is placed on each side and between the idler pulleys. A bushing (#72) slides on the shaft between the idler arms and is held on by a ¼" cotter pin. The two tightener springs hook into the 5/16" hole at the top corner of the idler and into the top edge of the right hand frame side.

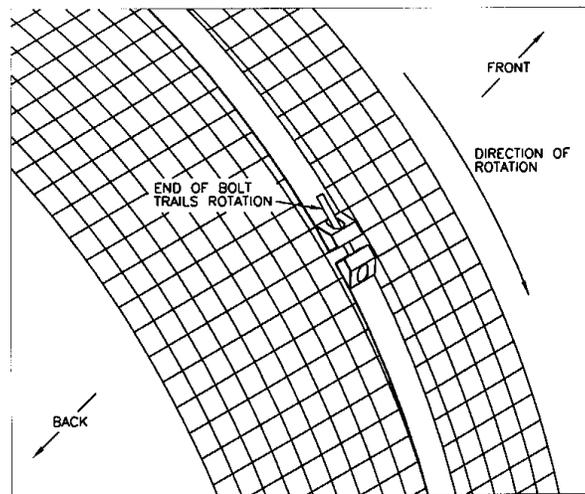
If the cleaner is purchased with a trash pan, the next step should be to assemble the pulleys and idler for the trash pan. These instructions follow the instructions for the basic cleaner. When all pulleys have been mounted, bolt the pulley guard (#74) to the front frame and hitch using 5/16" x ¾" cap screws, lock washers and hex nuts. Bolt the intake pan (#75) to the top of the front frame using 3/8" x 1" cap screws, lock washers and hex nuts.

MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS - CONT'D.

9. (Drawing #4)
Fasten the discharge pan (#91) to the rear frame using four $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws and two $\frac{5}{16}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts. Bolt the bottom trash chute mounting bracket (#93) to the rear frame using $\frac{5}{16}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts. The bracket must be turned as shown in drawing.
10. (Drawing #2)
Mount the three cone screen sections (#49) on the cone frame in-side the drum. Pin all three sections to the cone at the ends and joints using $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws and flat washers, and then strap the ends and center using straps (#45, #46, & #47). Tighten straps with $\frac{1}{4}$ " x $2\frac{1}{2}$ " round head bolts and hex nuts. After strapping, all the remaining self tapping screws are inserted in the cone. Assemble the three pieces of the drum around the outer drum. A convenient way to hold the screen in position during assembly is by hooking several small springs across the lap joint. Two springs to hold the screen in place (#152) are included in the bag with each cleaner.



CAUTION: All the strap bolts holding the drum screens should be turned so the end of the bolt trails the direction of rotation as shown in the drawing. This is done so the end of the bolt will not accidentally hook onto your hand or clothing while the drum is rotating.



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Be sure the screens are flat against the drum rings before fastening with $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws and flat washers around the edges and joints. Straps (#44) are placed around the screen at each drum ring and tightened using $\frac{1}{4}$ " x $2\frac{1}{2}$ " round head bolts and $\frac{1}{4}$ " hex nuts. After trapping, the remaining self tapping screws are inserted in the drum.

MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS - CONT'D.

11. (Drawing #3)

After the drum screens are in place, the rear drum shield (#132) is mounted to the rear frame using six $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws and two $\frac{3}{8}$ " x 1" cap screws, lock washers and hex nuts. Join the discharge pan (#91) and the rear drum shield (#132) where they overlap at the ends using four $\frac{1}{4}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts.

12. SIDE PANEL AND TRASH PAN OPTION (DRAWING #2)

If the cleaner is purchased with a trash pan, the assembly should be done immediately after the frame assembly (step #3). If the trash pan is added later you will have to assemble it under the cleaner or pull the cleaner apart. Assembly under the cleaner requires at least two persons.

Bolt the two trash pan ends (#100) and sides (#98) to the bottom trough using $\frac{1}{4}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts. With the keyed flighting stub shaft facing to the front of the cleaner, slide the pan assembly into the frame so it rests on the frame sides. The side panels (#97) have some $\frac{5}{16}$ " holes along the bottom edge and some $\frac{9}{16}$ " holes. These holes should line up with the holes in the trash pan. Bolt on the trash at this time using only the positions corresponding with the $\frac{9}{16}$ " holes. The remaining $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws mount both the trash pan and the side panels.

Mount a 6" single pulley (#102) at the end of the flighting and a 3" single pulley (#103) at the end of the reducer shaft (#65). Connect these pulleys with a B-37 belt (#105). Assemble the 3" idler pulley (#104) on the bracket welded to the front frame using a $\frac{5}{8}$ " x 3" cap screw, use a $\frac{5}{8}$ " hex nut (#109) if necessary to make sure the idler lines up with the belt. Place $\frac{5}{8}$ " flat washers on both sides of the idler and on the slot on the welded bracket.

Bolt the side panels (#97) to the front and rear frame using $\frac{1}{4}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts and to the frame sides using $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws.

13. 8" x 11' UTILITY AUGER OPTION (DRAWING #4)

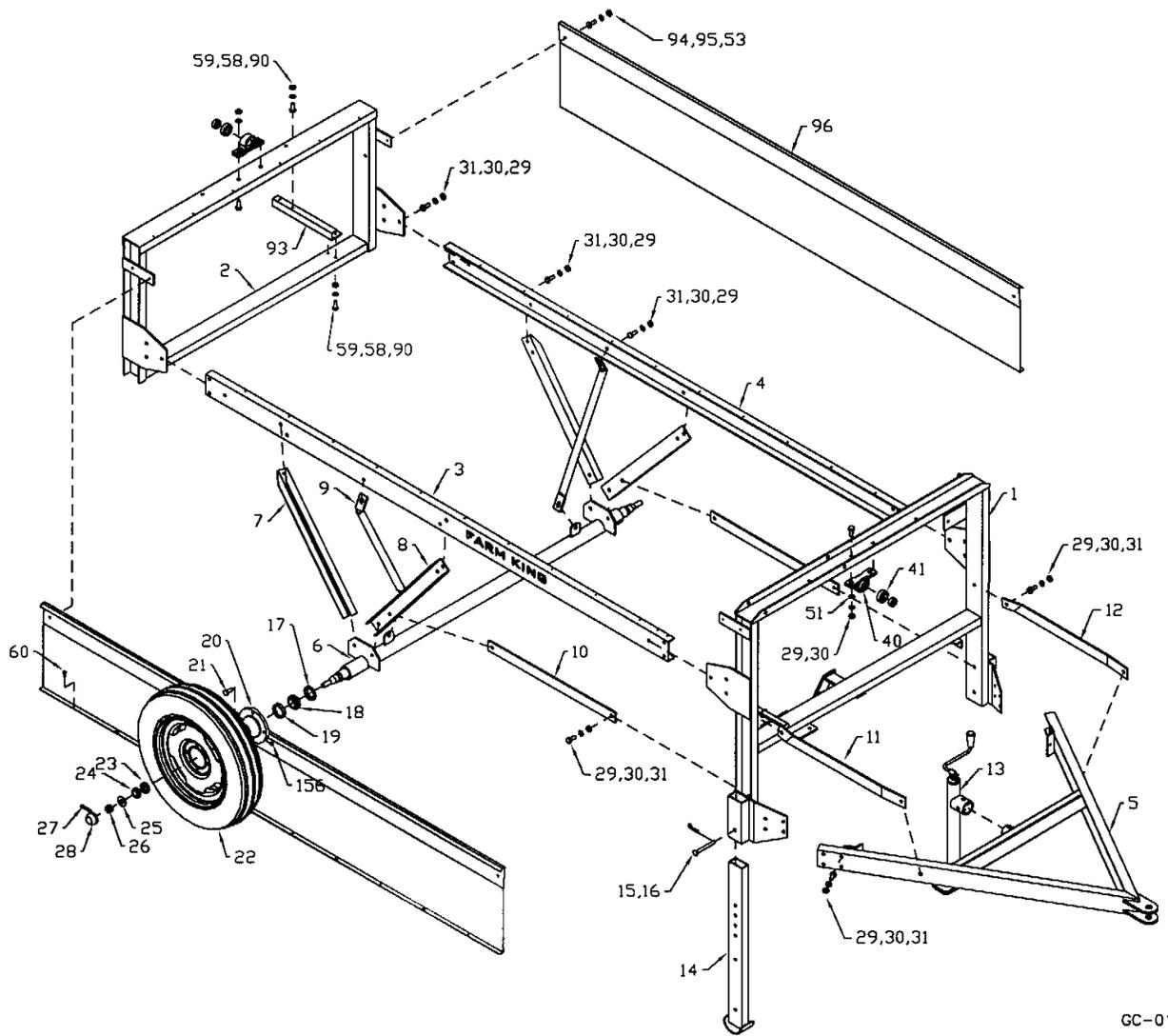
Bolt the intake assembly (#113) to the bottom of the intake auger (#111) using a cap (#114) with $\frac{3}{8}$ " x $1\frac{3}{4}$ " cap screws, lock washers and hex nuts. Assemble the bottom bearing (#106) using bearing cap (#115) with $\frac{5}{16}$ " x $\frac{3}{4}$ " cap screws, lock washers and hex nuts. Clamp the flow control assembly to the tube positioned so the washer welded to the rod acts as a stop when the intake is completely uncovered by the flow control slide.

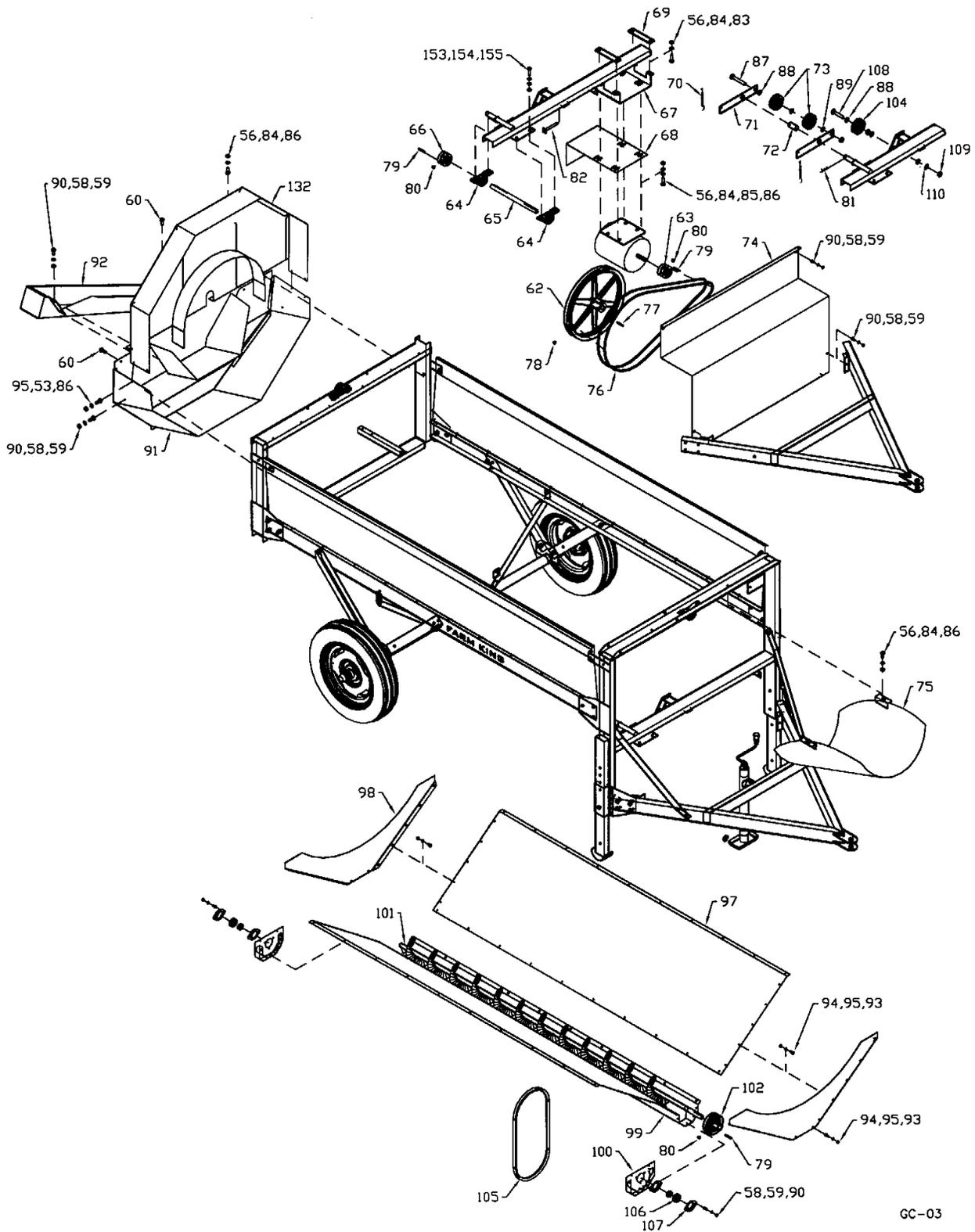
MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS - CONT'D.

The motor mount (#118) swivels on a pin (#119). Mount the 12" double pulley at the top of the auger. A 2 hp electric motor with a 3 ½" double pulley and belt (all supplied by customer) is recommended to drive the intake auger. Tighten the belt using a ½" x 3" sq. head set screw on the motor mount. Mount the guard (#117) using ¼" x 1" cap screws, lock washers and hex nuts. One hex nut is placed between the guard and the brackets bolted to the auger end plate.

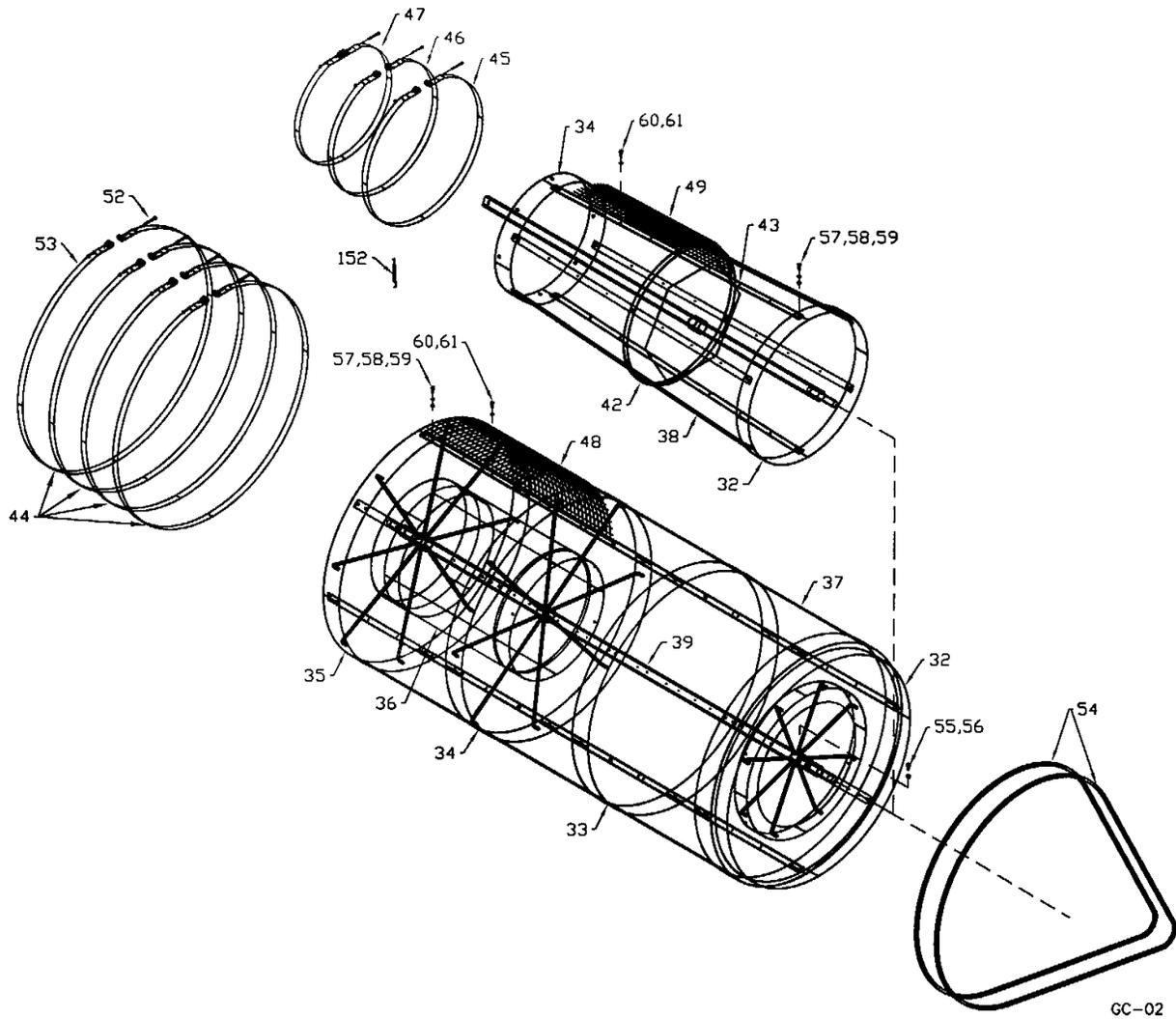
Bolt the offset connector (#120) to the auger end plate turned as shown in drawing. The wider edge is turned up. Use 3/8 x 1" cap screws, lock washers and hex nuts. Bolt the connector plate (#121) to the offset connector using the same hardware. The swivel (#122) is attached to the connector plate using pin (#119).

The swivel arm assembly bolts to the frame as shown in drawing no. 7. The cradle (#138) bolts to the back of the frame as shown. A locking pin (#135) locks the arm to the frame. In working position you turn the arm to the inside and lock in place. During transport, the arm is locked in the outside position while the intake auger rests in the cradle where it is held down by a clamp (#139).

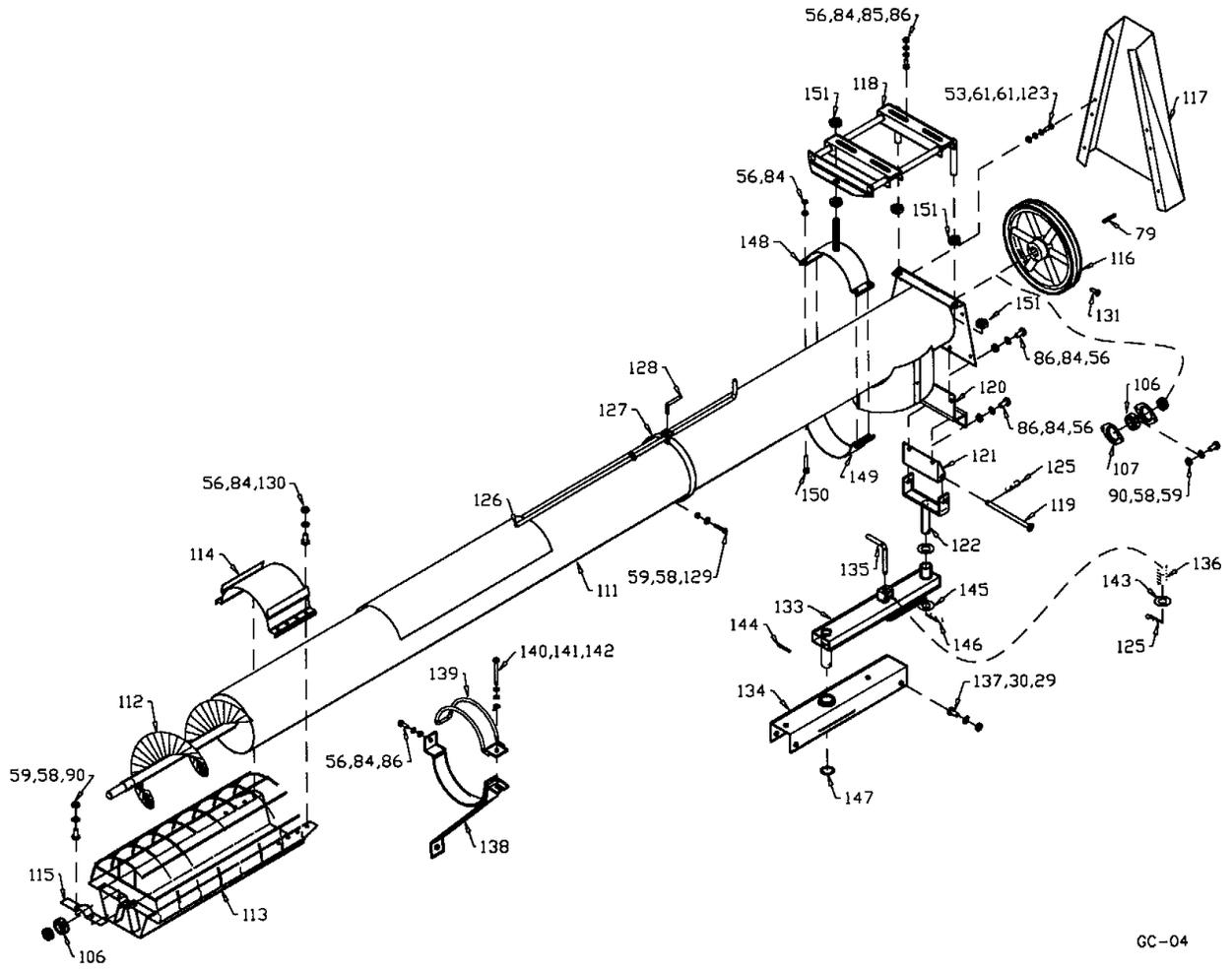




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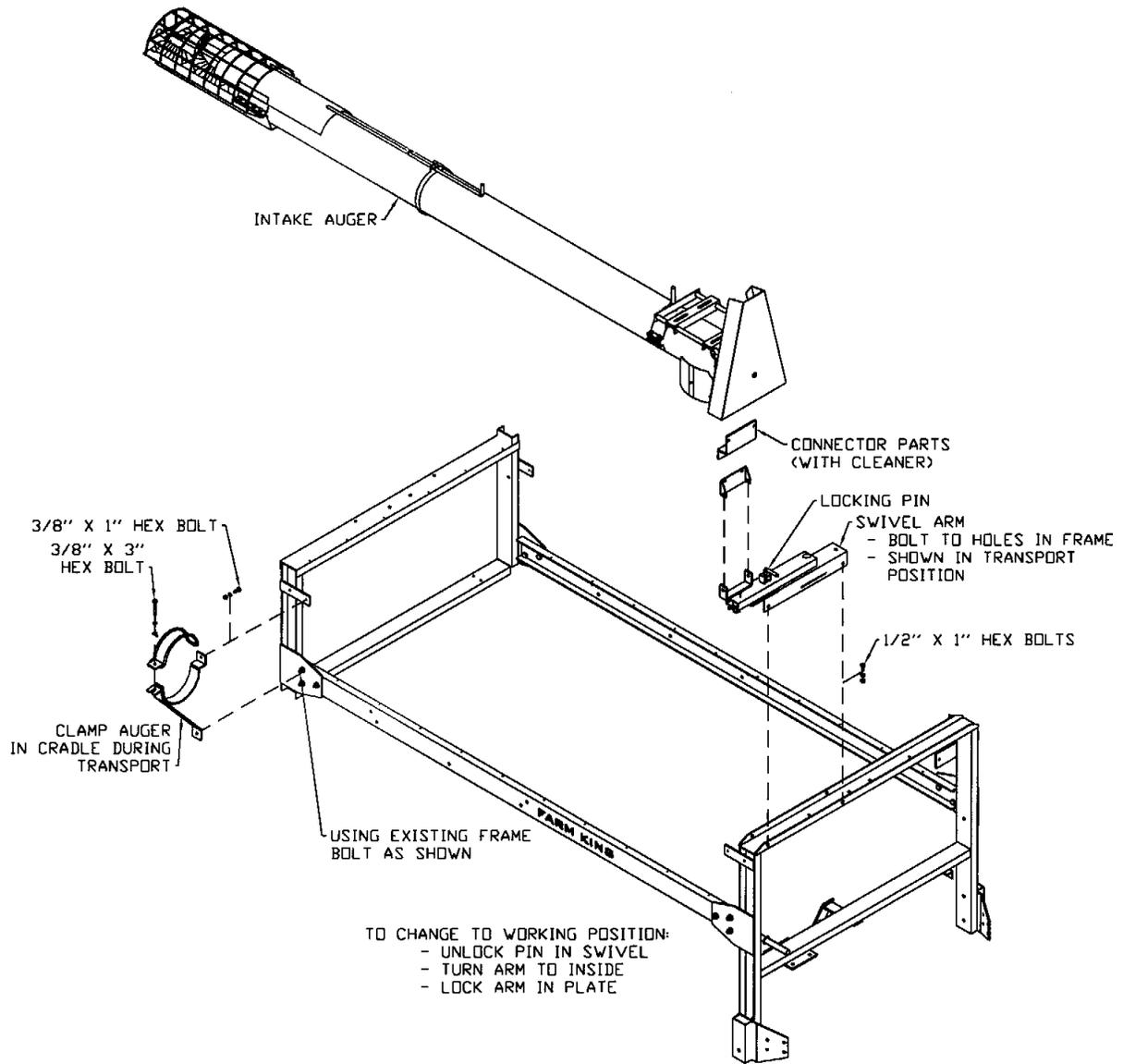


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INTAKE AUGER SWIVEL ARM



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WHEN ORDERING PARTS

Always give your dealer the Model and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

#480 GRAIN CLEANER

ITEM	PART #	DESCRIPTION
1	973269	Front Frame
2	973202	Rear Frame
3	973203	R.H. Frame Side (105 1/2")
4	973204	L.H. Frame Side (105 1/2")
5	973205	Hitch Assembly
6	973206	Axle Assembly (2 3/8" x 62")
7	973207	Rear Axle Assembly (2 3/8" x 26")
8	973208	Front Axle Brace (26")
9	973209	Side Axle Brace (1 1/4" x 25")
10	973210	Frame Brace (69")
11	973211	R.H. Hitch Brace (29")
12	973212	L.H. Hitch Brace (29")
13	F3260	Jack
14	973213	Front Legs (32")
15	973214	Front Leg Pin (1/2" x 4 1/2")
16	961012	#16 Hair Pin Clip
17	961891	Oil Seal (SE11)
18	967712	Inner Bearing Cone (LM97048)
19	967711	Inner Bearing Cup (LM67010)
20	105173	4-Bolt Hub W/ Bearing Cups (H411)
21	968404	1/2" Wheel Bolt
22	F7110	15" x 4 1/2" x 4" Bolt Wheel
23	968405	Outer Bearing Cup (LM11910)
24	968406	Outer Bearing Cone (LM11949)
25	9812416	3/4" I.D. Flat Washer (S.A.E.)
26	81834	3/4" I.D. Slotted Hex Nut
27	981309	1/8" x 1 1/4" Cotter Pin
28	968409	Dust Cap (DC12)
29	81636	1/2" Hex Nut
30	81637	1/2" Lock Washer
31	81620	1/2" x 1 1/4" Hex Bolt
32	973215	Front Drum Ring
33	973216	Front Center Drum Ring
34	973217	Rear Center Drum Ring
35	973218	Rear Drum Ring

36	973219	Cone Sleeve
37	973220	Drum Screen Support (96") W/ Screen Holes
	973288	Drum Screen Support (96") W/ Screen Holes
38	973221	Cone Screen Support (62 3/4")
39	973222	Drum Shaft (2" x 105 1/2")
40	973223	1 1/4" Pillow Block W/ Bearing
41	961676	1 1/4" Bearing Only (207)
42	973224	Cone Support Ring
43	973225	Cone Flow Control
44	973226	Drum Strap 1 1/4" x 149"
45	973227	Front Cone Strap 1 1/4" x 92 1/4"
46	973228	Center Cone Strap 1 1/4" x 83"
47	973229	Rear Cone Strap 1 1/4" x 73 1/2"
48	973230	4 x 4 Drum Screen Section (3 Req'd)
	973231	5 x 5 Drum Screen Section (3 Req'd)
	973232	6 x 6 Drum Screen Section (3 Req'd)
	973233	8 x 8 Drum Screen Section (3 Req'd)
	973234	10 x 10 Drum Screen Section (3 Req'd)
49	973235	2 x 2 Cone Screen Section (3 Req'd)
	973236	5/8" x 5/8" Cone Screen Section (3 Req'd)
	973237	3 x 3 Cone Screen Section (3 Req'd)
	973238	4 x 4 Cone Screen Section (3 Req'd)
	903522	5 x 5 Cone Screen Section (3 Req'd)
50	87553	1/2" x 1 3/4" Hex Bolt
51	9812420	1/2" Flat Washer (B.S.)
52	9812398	1/4" x 2 1/2" Rd. Hd. Bolt
53	81544	1/4" Hex Nut
54	973270	B-164 V-Belt
55	812037	3/8" x 3/4" Sq. Hd. Set Screw
56	81592	3/8" Hex Nut
57	812626	5/16" x 1" Carriage Bolt
58	81569	5/16" Lock Washer (pl)
59	81568	5/16" Hex Nut (pl)
60	9812392	1/4" x 3/4" Self Tapping Screw
61	81546	1/4" Flat Washer (B.S.)
62	973416	18" Dbl. Pulley, B-Groove, 1" Bore
63		3" Dbl. Pulley (Supplied by customer)
64	961792	1" Pillow Block W/ Brg.
65	973240	Reducer Shaft, 1" x 14"
66	F888	3" Dbl. Pulley, B-Groove, 1" Bore
67	973241	Motor Mount
68	973242	Motor Guard
69	973243	Motor Mount Clamp
70	973618	Belt Tightener Spring
71	973244	Idler Arm, 2" x 12"
72	973245	Reducer Shaft Bushing

73	973645	Idler Pulley, 5/8" I.D. x 4 5/8" (Flat)
74	F4508	Pulley Guard
75	973247	Intake Pan
76	973248	B-87 V-Belt
77	900286	1/4" x 2 1/2" Square Key
78	985639	3/8" x 1/2" Socket Set Screw
79	901550	1/4" x 1 3/4" Square Key
80	988999	3/8" x 3/8" Socket Set Screw
81	812435	1/4" x 1 3/4" Cotter Pin
82	9812380	1/2" x 4" Sq. Hd. Set Screw
83	86171	3/8" X 1 1/4" Hex Bolt
84	81593	3/8" Lock Washer
85	84000	3/8" Flat Washer (bs)
86	86170	3/8" X 1" Hex Bolt
87	81671	5/8" X 4" Hex Bolt
88	81678	5/8" Flat Washer (bs)
89	812482	5/8" Lock Nut
90	81549	5/16" X 3/4" Hex Bolt
91	F4527	Discharge Pan
92	973272	Trash Discharge Chute
93	973273	Trash Chute Btm. Mtg. Bracket
94	81525	1/4" x 3/4" Hex Bolt
95	81545	1/4" Lock Washer
96	973253	Side Panels
97	973254	Trash Pan Side
98	973255	Trash Pan Ends
99	973256	Trash Pan Through
100	973257	Trash Pan Trough Ends
101	973258	Trash Pan Flighting
102	966165	6" Single Pulley, B-Groove, 1" Bore
103	973616	3" Single Pulley, B-Groove, 1" Bore
104	968892	3" Idler Pulley, 5/8" I.D.
105	973259	B-37 V-Belt (Used w/ trash pan option)
106	961627	1" Bearing W/ Collar
107	963009	1" Bearing Flange Set
108	84289	5/8" x 3" Hex Bolt (pl)
109	81676	5/8" Hex Nut (pl)
110	81677	5/8" Lock Washer (pl)
111	973290	8" X 10' Tube Assembly
112	973261	8" X 11' Flighting
113	963805	8" Intake Guard Clamp
114	961455	8" Intake Guard Clamp
115	961913	1" Bearing Cup
116	961567	12" Double Pulley
117	F1307	Belt Guard
118	963707	Motor Mount

119	963024	Hinge Pin, 1/2" X 7 3/8"
120	973291	Offset Connector
121	973629	Connector Plate
122	973627	Intake Auger Swivel
123	81527	1/4" X 1" Hex Bolt
124	963030	1/2" X 3" Sq. Hd. Set Screw
125	9812430	1/8" X 1" Cotter Pin
126	973267	8" Flow Control Clamp
127	973268	8" Flow Control Clamp
128	963145	Flow Control Screw
129	81553	5/16" X 1 1/2" Hex Bolt
130	81578	3/8" X 1 3/4" Hex Bolt
131	81213	3/8" X 1" Sq. Hd. Set Screw
132	F4521	Rear Drum Shield
133	973277	Transport Mounting Plate
134	973278	Arm Mounting Plate
135	973279	Transport Locking Pin
136	973280	Locking Pin Spring
137	81619	1/2" X 1" Hex Bolt
138	973281	Intake Auger Cradle
139	973282	Cradle Clamp
140	81585	3/8" X 3 1/2" Hex Bolt
141	964001	3/8" Flat Washer (10 Ga)
142	84217	3/8" Wing Nut
143	84048	1/2" S.A.E. Flat Washer
144	81276	1/4" X 2" Roll Pin
145	84522	1" S.A.E. Flat Washer
146	9712434	1/4" X 1 1/2" Cotter Pin
147	9812438	1 1/4" Rim Washer
148	963808	Top Motor Mount Clamp
149	963809	Bottom Motor Mount Clamp
150	811795	3/8" X 2" Hex Bolt
151	81700	3/4" Hex Nut
152	973289	Screen Spring (.437"O.D. X 6.155" LONG)
153	81600	7/16" x 1 3/4" Hex Bolt (pl)
154	81614	7/16" Hex Nut (pl)
155	81615	7/16" Lock Washer (pl)
156	84583	Grease Fitting 1/8" NPT STR

#480 GRAIN CLEANER - BUNDLE NUMBERS

QUANTITY REQUIRED	BUNDLE NUMBER	DESCRIPTION
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480 GRAIN CLEANER Y480

1	F4321	#480 Crate
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480 GRAIN CLEANER WITH TRASH PAN SYSTEM Y482

1	F4322	#480 Crate w/shroud and fines auger
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TRASH PAN AND SIDE PANEL OPTION: Y481

1	F4520	side panels, trash pan ends
1	F4522	trash pan trough
1	F4523	carton of parts

8" x 11' UTILITY AUGER OPTION: Y811S

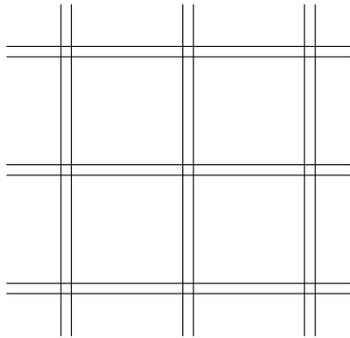
1	F1419	tube and flighting
1	F1405	intake assembly
1	F1307	belt guard
1	F1413	flow control
1	F1410	carton of parts

Screens available (one set of cone screens and one set of drum screens required per cleaner)

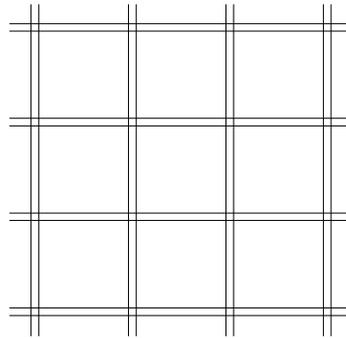
F4511	2 x 2 cone screen
F4512	5/8 x 5/8 cone screen
F4513	3 x 3 cone screen
F4514	4 x 4 cone screen
F4515	4 x 4 drum screen
F4516	5 x 5 drum screen
F4517	6 x 6 drum screen
F4518	8 x 8 drum screen
F4519	10 x 10 drum screen

GRAIN CLEANER SCREENS

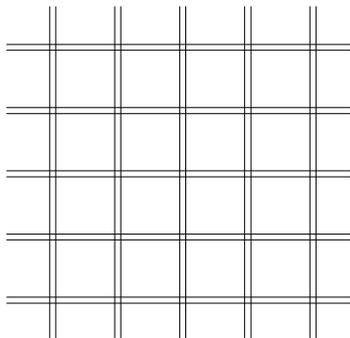
- ILLUSTRATED IN ACTUAL SIZES



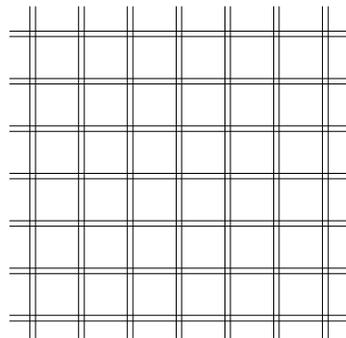
5/8 X 5/8 X 17 GA.



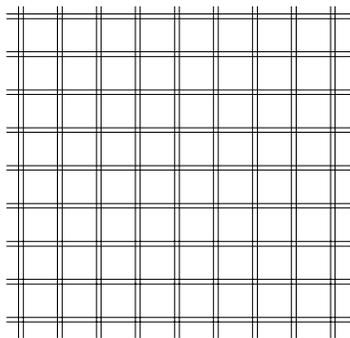
2 X 2 X 19 GA.



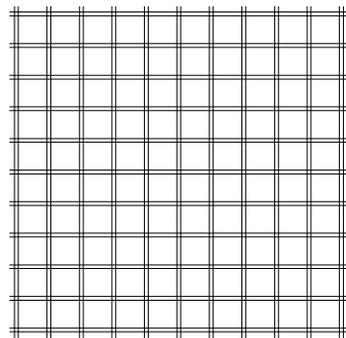
3 X 3 X 21 GA.



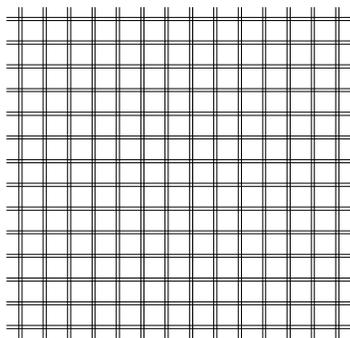
4 X 4 X 23 GA.



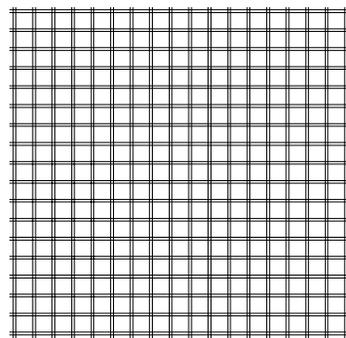
5 X 5 X 24 GA.



6 X 6 X 25 GA.



8 X 8 X 27 GA.



10 X 10 X 29 GA.

#360 AND #480 GRAIN CLEANER SCREENS AVAILABLECONE SCREENSOUTSIDE DRUM SCREENSCORN SCREENS

2 x 2 x 19 ga. - small

4 x 4 x 23 ga. - standard

5/8 x 5/8 x 17 ga. - standard

WHEAT SCREENS

4 x 4 x 23 ga. - standard

8 x 8 x 27 ga. - standard

3 x 3 x 21 ga. - large

6 x 6 x 25 ga. - large

SUNFLOWER SCREENS

2 x 2 x 19 ga. - standard

8 x 8 x 27 ga. - small

5/8 x 5/8 x 17 ga. - large

6 x 6 x 25 ga. - standard

SOYBEAN SCREENS

3 x 3 x 21 ga. - small

6 x 6 x 25 ga. - small

2 x 2 x 19 ga. - standard

5 x 5 x 24 ga. - standard

MILO SCREENS

4 x 4 x 23 ga. - standard

8 x 8 x 27 ga. - standard

3 x 3 x 21 ga. - large

6 x 6 x 25 ga. - large

OPTIONAL DRUM SCREEN

10 x 10 x 28 ga