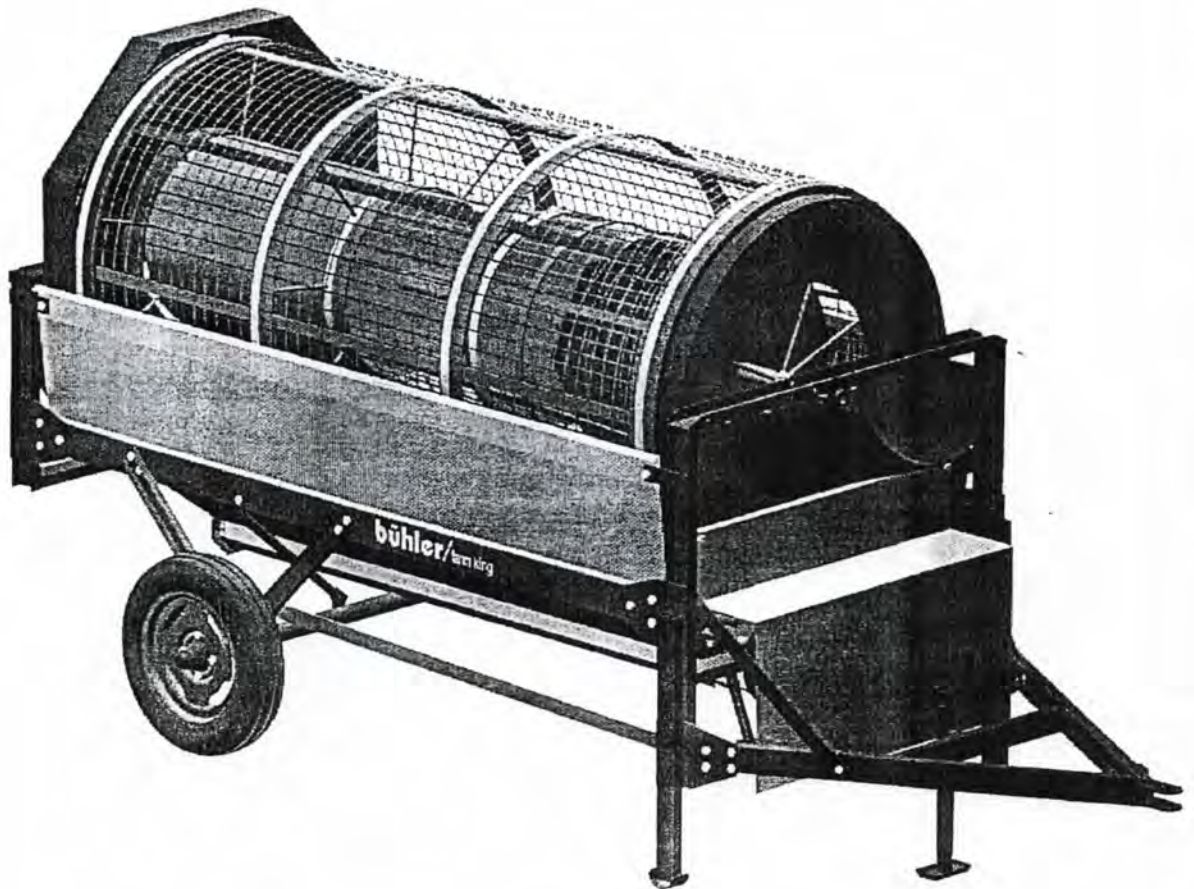


bühler

farm king



480 Grain Cleaner

Operator's and Parts Manual
FK328

2007

TABLE OF CONTENTS

DESCRIPTION	PAGE
WARRANTY	1
INTRODUCTION	2
SAFETY	3
Safety	3
General Safety	4
Start-up Safety	4
Operation Safety	4
Transport Safety	5
Service and Maintenance Safety	5
Storage Safety	5
Safety Signs	6
Safety Sign Installation	6
ASSEMBLY	7
Assembly Instructions	7
OPERATION	13
Theory of Operation of Grain Cleaner	13
Operating Instructions	14
MAINTENANCE	
Service	16
Storage	16
Bolt Torque	17
PARTS DRAWINGS	18
Grain Cleaner Drawings	18
Intake Auger Swivel Arm Drawing	22
Grain Cleaner Parts List	23
GRAIN CLEANER SCREENS	28
SHIPPING KIT AND BUNDLE NUMBERS	30

WARRANTY POLICY

Buhler Manufacturing products are warranted for a period of twelve (12) months (90 days for commercial application) 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 100% of the dealer's posted shop rate. Defective parts will receive an extra 10% discount to assist with freight or other incidental costs.

GOVERNMENT LEGISLATION:

Warranty terms and conditions are subject to Provincial or State legislation.

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
Loader Parts Have Two (2) Year Warranty

IMPORTANT NOTE: This warranty does not apply to rentals

INTRODUCTION

The Buhler Farm King 480 Grain Cleaner handles up to 2,500 bushels per hour depending on moisture content and the amount of dockage. Its high capacity is a result of a two stage screening process and a large 48" diameter drum. 15" wheels and a full frame transport make the 480 easy to move. A removable intake auger and a hand-operated jack let you adjust the cleaner for operation in the field. The 480 runs on a standard 3hp. electric motor. Other features include sealed bearings, high grade steel and oven-baked paint. Together with a solid 1 1/2 " centre shaft and 3/16" formed channel frame, they guarantee rugged, reliable operation for years to come.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Buhler Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhler.com for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

SAFETY INSTRUCTIONS

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.



The safety alert symbol means...

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



CAUTION

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



WARNING

The Warning Symbol indicates a potentially hazardous situation that, 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.



DANGER

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

GENERAL SAFETY INSTRUCTIONS

Have a first-aid kit available for use and know how to use it.

Have a fire extinguisher available, stored in a highly visible location, and know how to use it.

Wear appropriate protective gear. This list may include but is not limited to:

- hard hat
- protective shoes with slip resistant soles
- protective glasses or goggles
- heavy gloves
- wet weather gear
- hearing protection
- respirator or filter mask

Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.

Do not attempt any unauthorized modifications to your Buhler product as this could affect function or safety, and could affect the life of the equipment.

Inspect and clean the working area before operating.

Keep hands, feet, clothing, and hair away from moving parts.

Ensure bystanders are clear of the area before operating.

START-UP SAFETY

Do not let inexperienced operators or children run this equipment.

Place all tractor and machine controls in neutral before starting.

Operate only with ROPS and seatbelt equipped tractors.

Do not operate inside a building unless there is adequate ventilation.

Ensure all shields are in place and in good condition before operating.

Make certain electric motors are grounded.

OPERATION SAFETY

Do not permit riders.

Do not wear loose fitting clothing during operation.

TRANSPORT SAFETY

Review Transport Safety instructions in tractor manual before moving.

Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.

Do not tow equipment that does not have brakes at speeds over 32km/h (20 mile/h).

Do not tow equipment that does not have brakes that, when fully loaded, has a mass (weight) over 1.5 t (3300 lb.) and more than 1.5 times the mass (weight) of the towing unit.

Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.

Never have the equipment in operation during transport.

The equipment should never be towed without the safety chain securely attached to the unit and the towing vehicle.

Always travel at a safe speed.

Inflate transport tires to recommended pressure.

SERVICE AND MAINTENANCE SAFETY

Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

Support the equipment with blocks or safety stands before working beneath it.

Follow good shop practices including:

- keep service area clean and dry
- be sure electrical outlets and tools are properly grounded
- use adequate light for the job.

Use only tools, jacks, and hoists of sufficient capacity for the job.

Replace and secure all shields removed during servicing before operating.

Use heavy leather gloves to handle sharp objects.

STORAGE SAFETY

Store the unit in an area away from human activity.

Do not permit children to play on or around the stored machine.

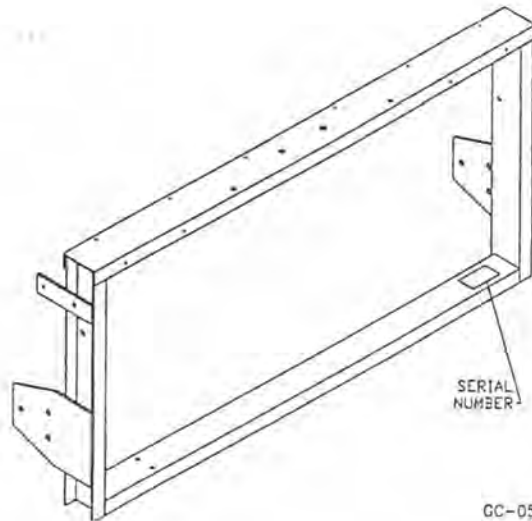
Support the frame on stands and blocks to provide a secure base.

SAFETY SIGNS

The following illustration shows the approximate location and detail of safety signs. Keep all safety signs clean and legible and replace any that are damaged or missing. When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

INSTALLATION

To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place. Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.



GC-05

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.

- (Page 18)

Join the front and rear frame (#1 and #2) together using the frame sides (#3 and #4) and $\frac{1}{2}$ " x $1\frac{1}{4}$ " hex bolts, lock washers and hex nuts. The right hand frame (#3) has two extra $\frac{5}{16}$ " 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.
- (Page 18)

Mount the wheels on the axle assembly (#6). Torque wheel bolts to 80 ft/lbs. 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 $5\frac{1}{2}$ " 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 $\frac{1}{2}$ " x $1\frac{1}{4}$ " hex bolts, lock washers and hex nuts for all the braces.
- (Page 18)

Bolt the hitch assembly (#5) to the front frame using $\frac{1}{2}$ " x $1\frac{1}{4}$ " hex bolts. 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 $\frac{1}{2}$ " x $4\frac{1}{2}$ " 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.
- (Page 20)

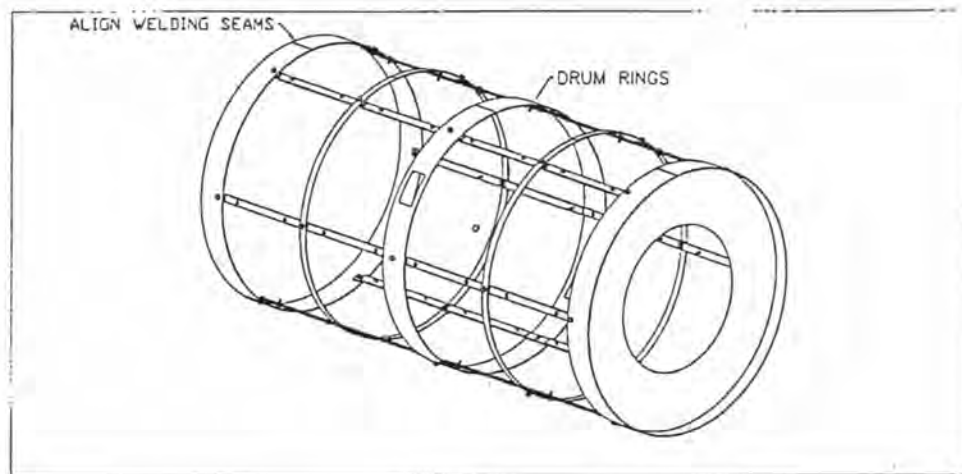
Assemble the cone and drum on the drum shaft (#39) before mounting the assembly on the grain cleaner frame. The cone assembly inside the drum is shown at the bottom of the drawing. Check to see that all rings are turned as shown. The cone extension tube (#36) fits between the rear center drum ring (#34) and the rear drum ring (#35). 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 $\frac{3}{8}$ " x $\frac{3}{4}$ " 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.



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.



CC-09

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. (Page 18 & 20)
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 on the top of the rear frame using ½" x 1 ¾" hex bolts, lock washers, flat washers and hex nuts. Use ½" x 1 ¾" hex bolts under the front frame. Center the drum assembly in the frame and lock the bearing collars in place. Slide the two drum drive belts (#54) onto the drum before bolting on the bearings.

6. (Page 19)
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 7/16" x 1 ¾" hex bolts 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. (Page 19)
Bolt the motor mount (#67) to the front frame with two motor mount clamps (#69) using 3/8" x 1 ¼" hex bolts, 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" hex bolts, 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.

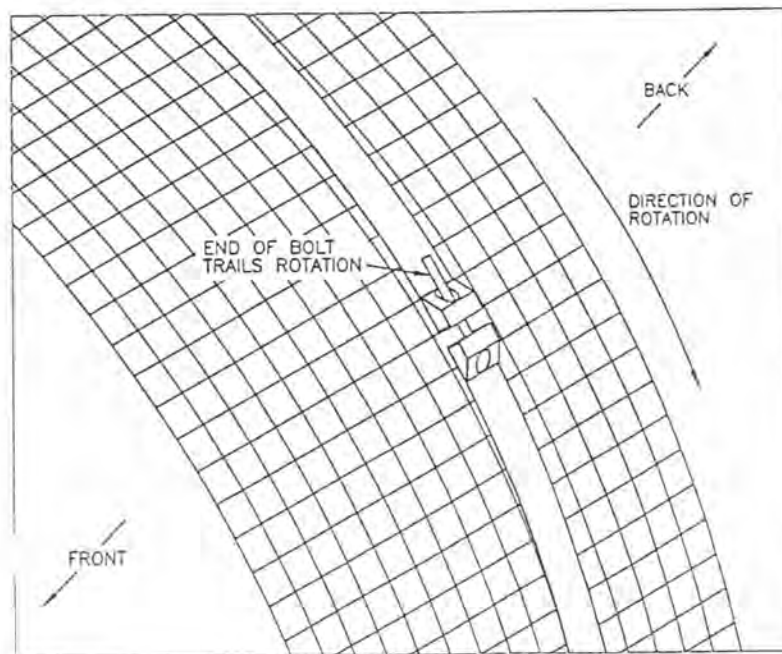
8. (Page 19)
Mount two B-164 belts (#54) on the outside ring welded to the front drum ring and the 3" pulley at the back of the reducer shaft. Assemble the two idler arms (#71) and the 4 5/8" o.d. idler pulleys (#73) on the idler arm shaft welded to the front frame as shown in drawing. Use a 5/8" x 4" hex bolt (#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" hex bolts, lock washers and hex nuts. Bolt the intake pan (#75) to the top of the front frame using 3/8" x 1" hex bolts, lock washers and hex nuts.

MODEL #480 GRAIN CLEANER ASSEMBLY INSTRUCTIONS – cont'd.

9. (Page 19)
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 $\frac{3}{4}$ " hex bolts, lock washers and hex nuts. Bolt the bottom trash chute mounting bracket (#93) to the rear frame using $\frac{5}{16}$ " x $\frac{3}{4}$ " hex bolts, lock washers and hex nuts. The bracket must be turned as shown in drawing.
10. (Page 20)
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.



GC-10

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. (Page 19)**

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" hex bolts, 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 $\frac{3}{4}$ " hex bolts, lock washers and hex nuts.

12. SIDE PANEL AND TRASH PAN OPTION (Page 19)

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 (#98) and sides (#97) to the bottom trough using $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolts, 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" hex bolt, 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 $\frac{3}{4}$ " hex bolts, 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 (Page 21)

Bolt the intake assembly (#113) to the bottom of the intake auger (#111) using a cap (#114) with $\frac{3}{8}$ " x 1 $\frac{3}{4}$ " hex bolts, lock washers and hex nuts. Assemble the bottom bearing (#106) using bearing cap (#115) with $\frac{5}{16}$ " x $\frac{3}{4}$ " hex bolts, 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 threaded rods on the motor mount assembly (#118) are inserted through the two holes in the end plate at the top of the auger as shown in drawing. A $\frac{3}{4}$ " hex nut (#151) on each side locks the motor mount in place. The threaded rod welded to the top motor mount clamp (#148) is fitted through the hole in the back of the motor mount. This is also held in place with a $\frac{3}{4}$ " hex nut on each side. Bolt the bottom motor mount clamp (#149) to the top half using $\frac{3}{8}$ " x 2" hex bolts, lock washers and hex nuts.

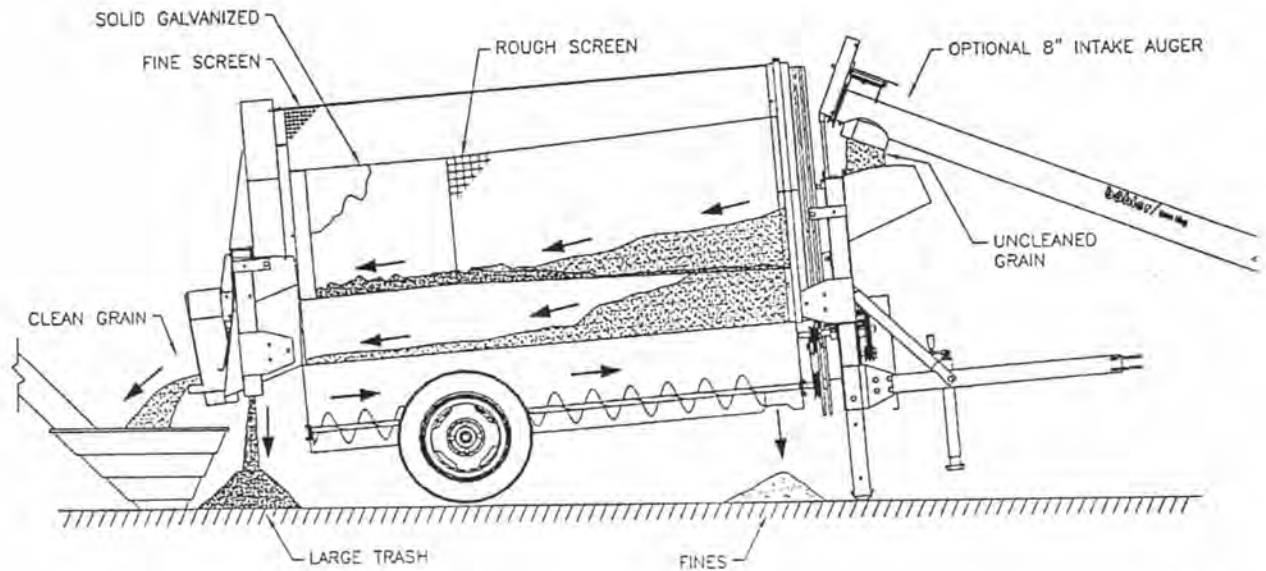
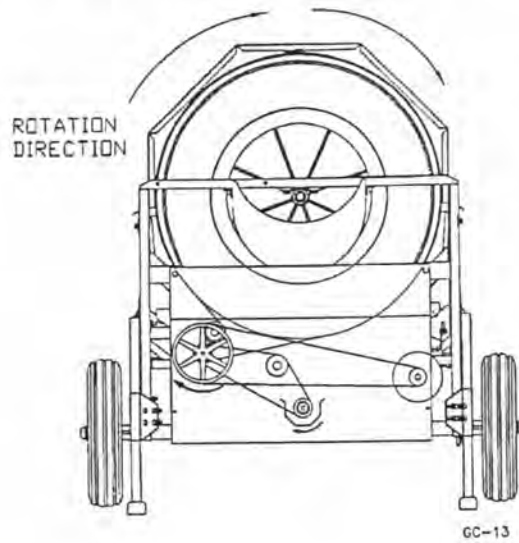
Mount the 12" double pulley at the top of the auger. A 2 hp electric motor with a 3 $\frac{1}{2}$ " double pulley and belt (all supplied by customer) is recommended to drive the intake auger. Tighten the belt using a $\frac{1}{2}$ " x 3" sq. head set screw on the motor mount. Mount the guard (#117) using $\frac{1}{4}$ " x 1" hex bolts, 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. This connector is on the outside of the auger end plate with the offset out towards the pulley. Use $\frac{3}{8}$ x 1" hex bolts, 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 on page 15. 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).

MODEL #480 GRAIN CLEANER OPERATING INSTRUCTIONS

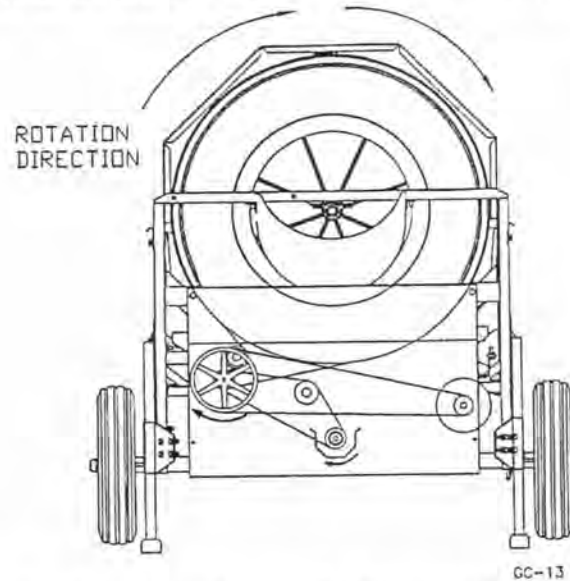
THEORY OF OPERATION OF GRAIN CLEANER



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.

TOWING

Towing speed should not exceed 45 miles per hour. Use a safety rated tow chain when towing.

MAINTENANCE

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. Tires should be filled to a maximum of 60 psi.

STORAGE

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

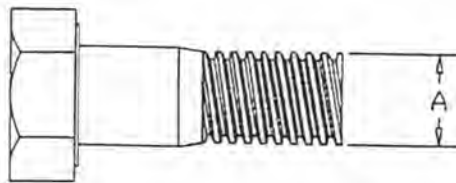
BOLT TORQUE

CHECKING BOLT TORQUE

The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS

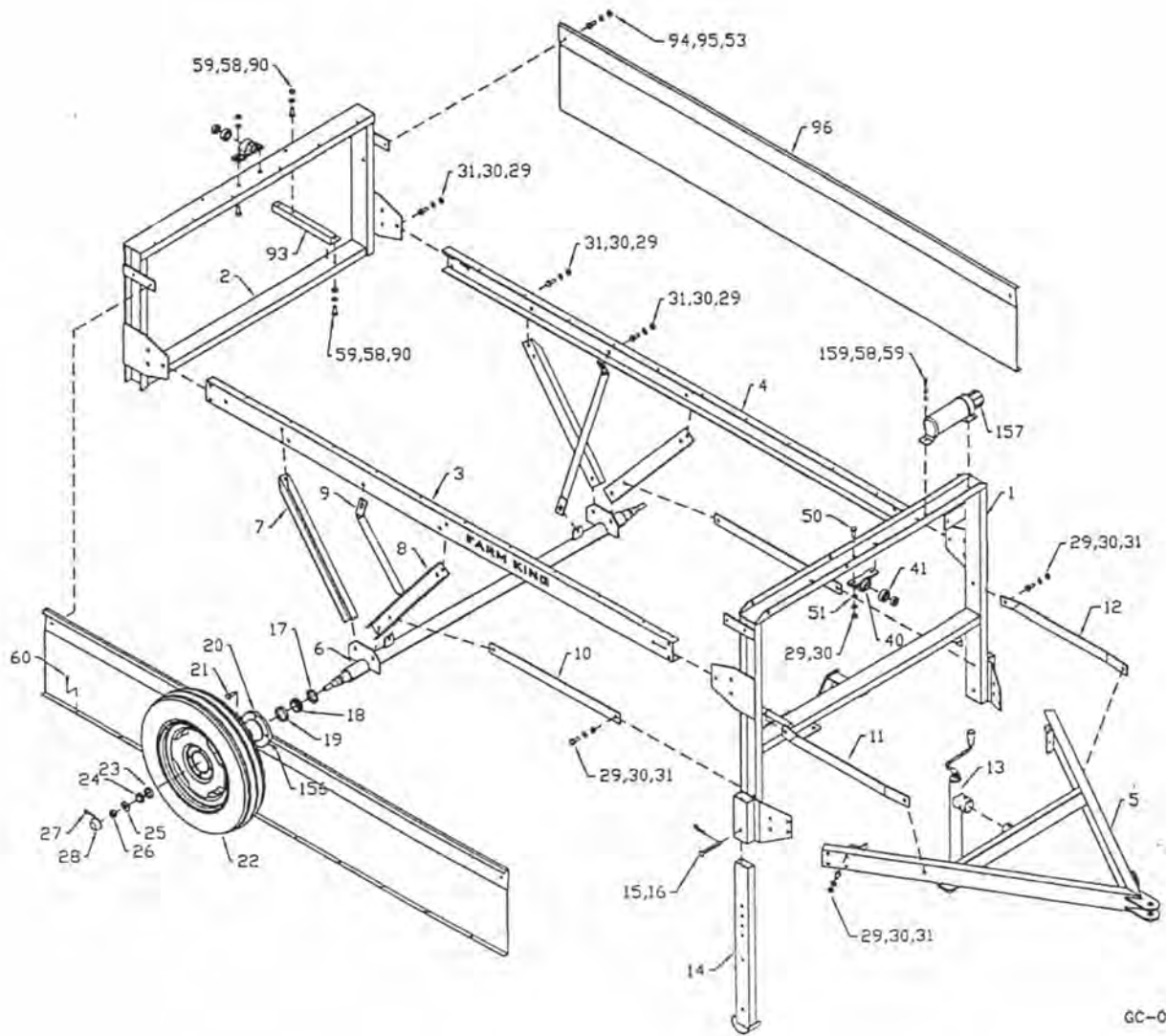
Bolt Diameter "A"	Bolt Torque *					
	SAE 2		SAE 5		SAE 8	
	N.m	(lb-ft)	N.m	(lb-ft)	N.m	(lb-ft)
1/4"	8	(6)	12	(9)	17	(12)
5/16"	13	(10)	25	(19)	36	(27)
3/8"	27	(20)	45	(33)	63	(45)
7/16"	41	(30)	72	(53)	100	(75)
1/2"	61	(45)	110	(80)	155	(115)
9/16"	95	(70)	155	(115)	220	(165)
5/8"	128	(95)	215	(160)	305	(220)
3/4"	225	(165)	390	(290)	540	(400)
7/8"	230	(170)	570	(420)	880	(650)
1"	345	(225)	850	(630)	1320	(970)

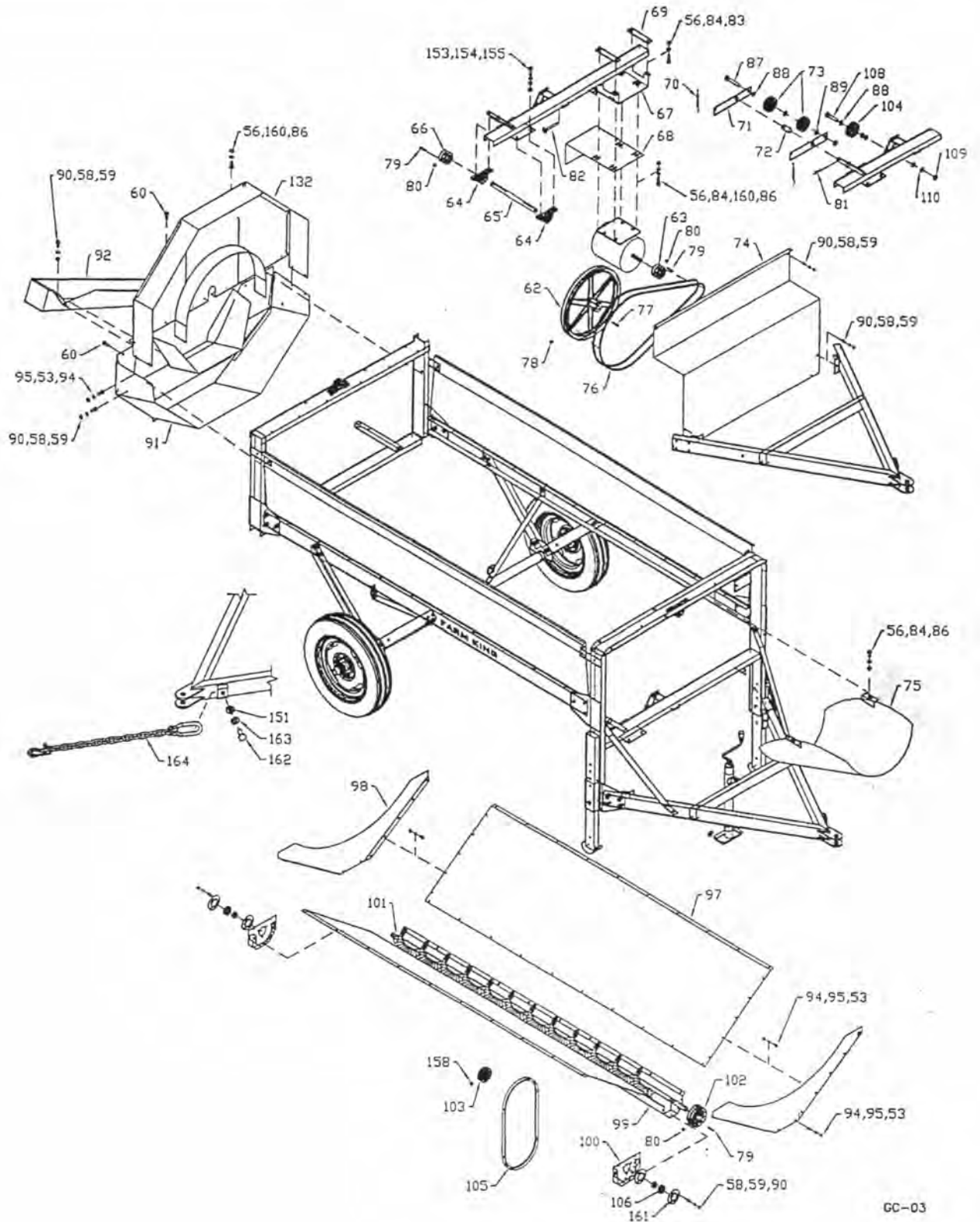


GC-14

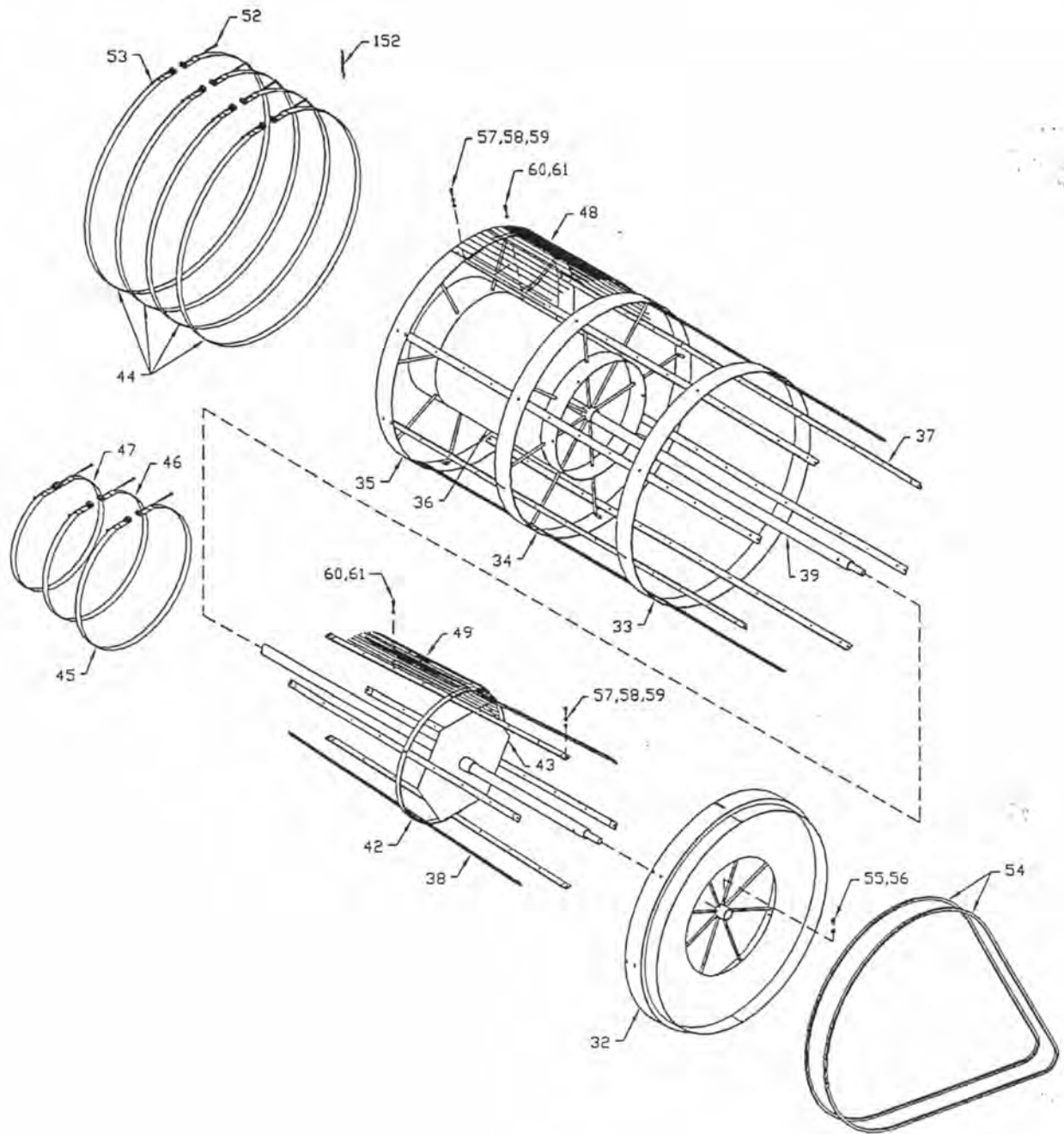
Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or hex bolts unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and hex bolts are identified by their head markings.

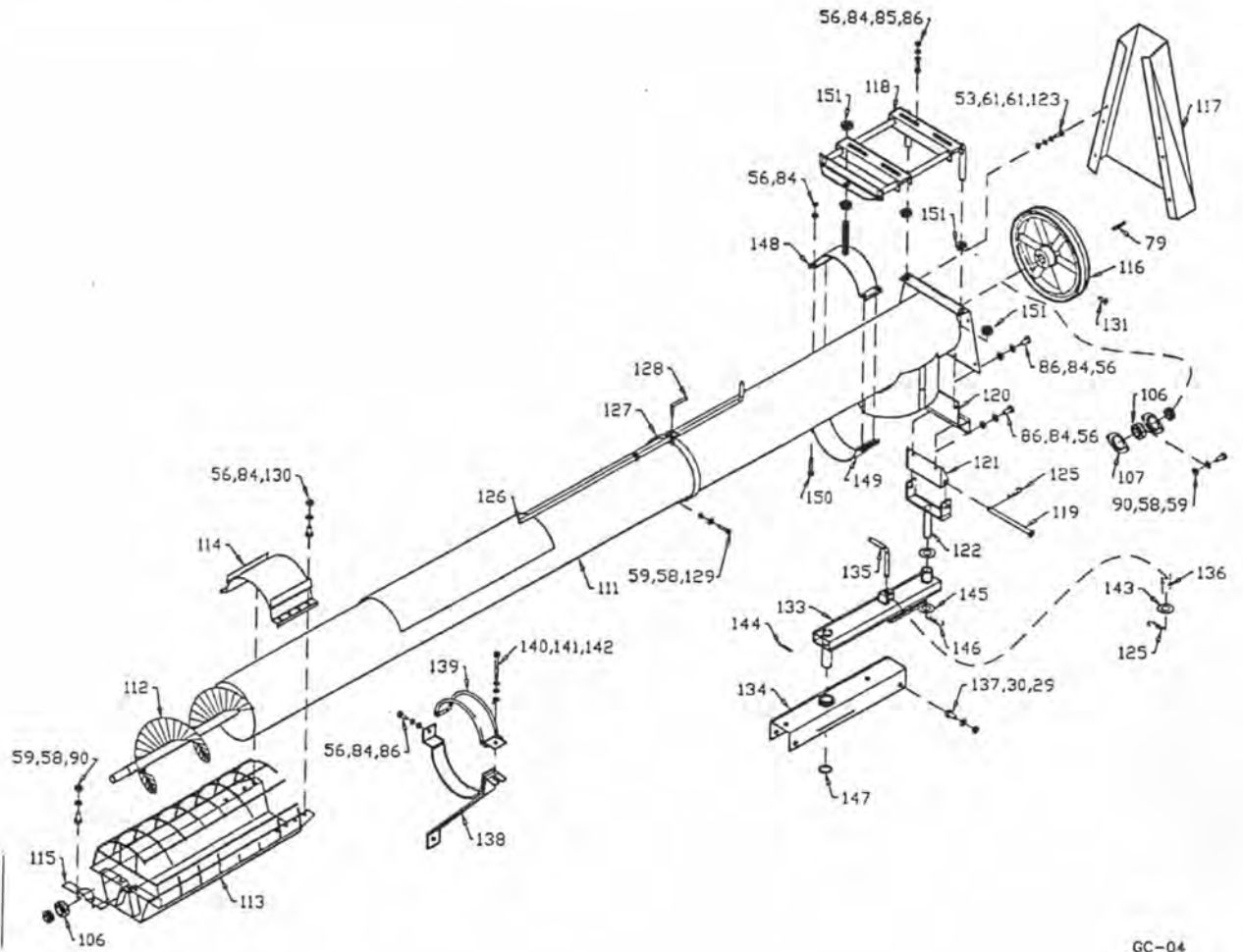




GC-03

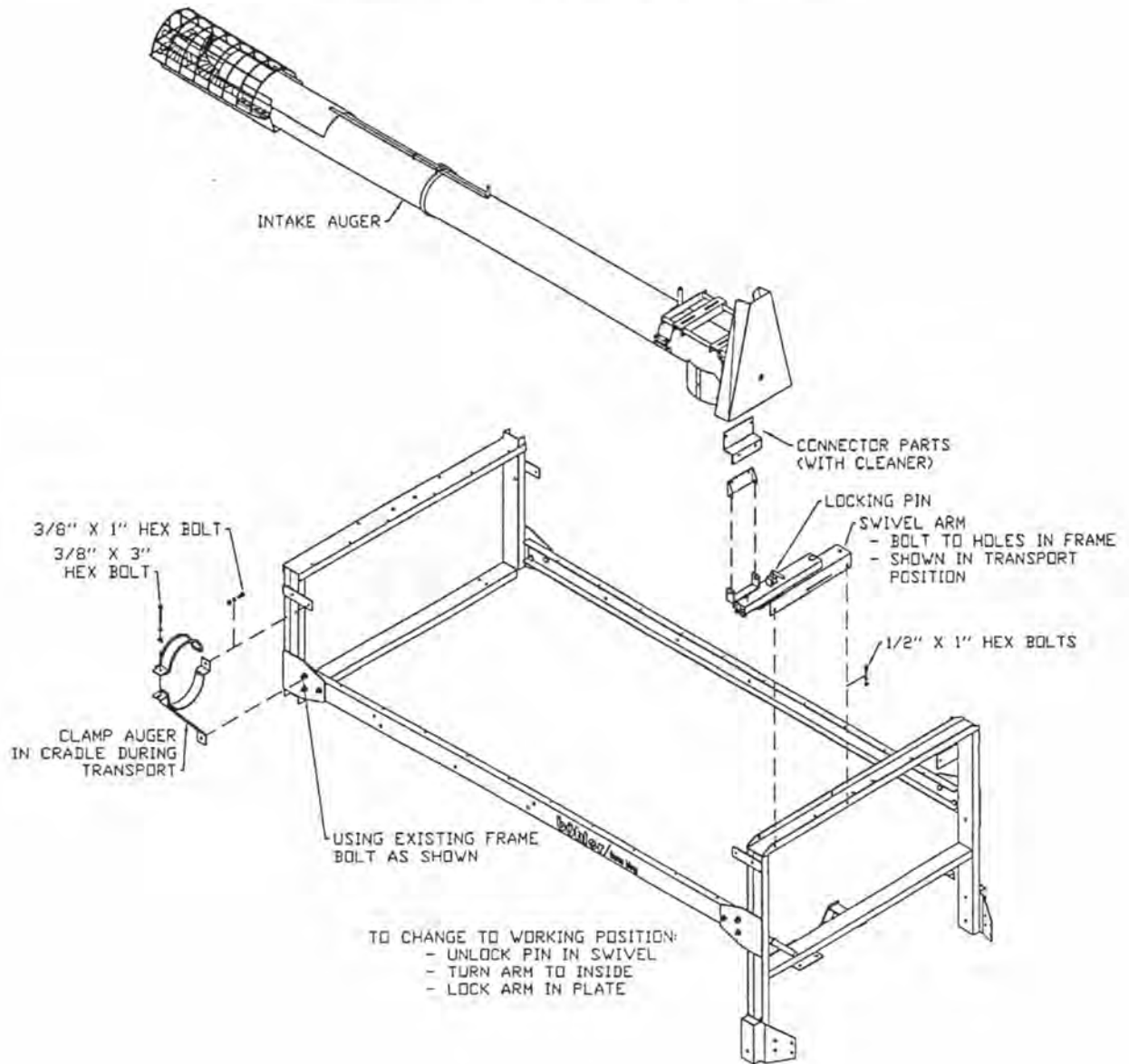


GC-02



GC-04

INTAKE AUGER SWIVEL ARM



CC-07

WHEN ORDERING PARTS

Always give your dealer the Model, Color 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	Right Hand Frame Side (105 1/2")
4	973204	Left Hand Frame Side (105 1/2")
5	973205	Hitch Assembly
6	973206	Axle Assembly (2 3/8" x 62")
7	973207	Rear Axle Brace (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	Right Hand Hitch Brace (29")
12	973212	Left Hand 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 with Bearing Cups (H411)
	9105173	H411 Hub Assembly
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" Slotted Hex Nut (br)
27	9812486	1/8" x 1 1/2" 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

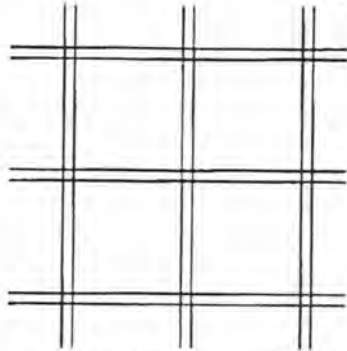
34	973217	Rear Center Drum Ring
35	973218	Rear Drum Ring
36	F4501	Cone Extension Tube
37	973220	Drum Screen Support (96") with Screen Holes
	973288	Drum Screen Support (96") with Screen Holes
38	973221	Cone Screen Support (62 3/4")
39	973222	Drum Shaft (2" x 105 1/2")
40	973223	1 1/4" Pillow Block with 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 148 1/4"
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 Required)
	973231	5 x 5 Drum Screen Section (3 Required)
	973232	6 x 6 Drum Screen Section (3 Required)
	973233	8 x 8 Drum Screen Section (3 Required)
	973234	10 x 10 Drum Screen Section (3 Required)
49	973235	2 x 2 Cone Screen Section (3 Required)
	973236	5/8" x 5/8" Cone Screen Section (3 Required)
	973237	3 x 3 Cone Screen Section (3 Required)
	973238	4 x 4 Cone Screen Section (3 Required)
	903522	5 x 5 Cone Screen Section (3 Required)
50	87553	1/2" x 1 3/4" Hex Bolt
51	81638	1/2" Flat Washer (B.S.)
52	9812398	1/4" x 2 1/2" Round Head Bolt
53	81544	1/4" Hex Nut
54	973270	B-164 V-Belt
55	812037	3/8" x 3/4" Square Head 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	5/16" Flat Washer (B.S.)
62	973287	18" Double Pulley, B-Groove, 1" Bore
63		3" Double Pulley (Supplied by customer)
64	961792	1" Pillow Block with Bearing
65	973240	Reducer Shaft, 1" x 14"
66	F888	3" Double 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	81210	1/4" x 2" Cotter Pin
82	9812380	1/2" x 4" Square Head Set Screw
83	86171	3/8" X 1 1/4" Hex Bolt
84	81593	3/8" Lock Washer
85	84000	7/16" 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 Bottom Mounting 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 with trash pan option)
106	961627	1" Bearing with 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

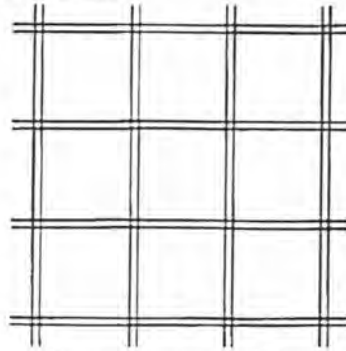
113	963805	8" Intake Guard Clamp
114	961455	8" Intake Guard Clamp
115	961913	1" Bearing Cup
116	961567	12" Double Pulley
117	F1307	Belt Guard
118	963707	Motor Mount
119	902996	Hinge Pin, 1/2" X 7 3/8"
120	973291	Offset Connector
121	973629	Connector Plate
122	900316	Intake Auger Swivel
123	81527	1/4" X 1" Hex Bolt
125	9812430	1/8" X 1" Cotter Pin
126	903066	8" Flow Control Clamp
127	903065	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" Square Head Set Screw
132	F4521	Rear Drum Shield
133	973277	Transport Mounting Plate
134	973278	Arm Mounting Plate
135	973279	Transport Locking Pin
136	973280	Transport Spring (pl)
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	9812434	1/4" X 1 1/2" Cotter Pin
147	967110	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	967900	Grease Fitting 1/8" NPT STR
157	909277	Manual Holder

158	967141	5/16" x 1/4" Socket Set Screw
159	812026	5/16" x 1" Hex Bolt (pl)
160	81570	3/8" Flat Washer (pl)
161	973511	1" x 3" BRG Flanges 52MS
162	84467	3/4" Hex Bolt (pl)
163	81701	3/4" Lock Washer (pl)
164	F0420	1/4" Safety Chain

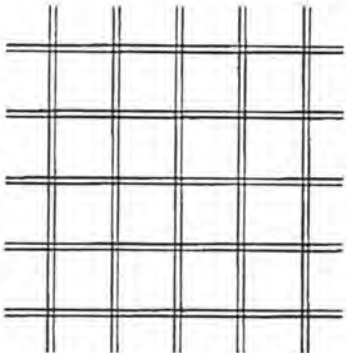
GRAIN CLEANER SCREENS - illustrated in actual sizes



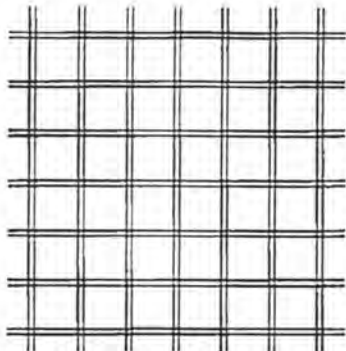
5/8 X 5/8 X 17 GA.



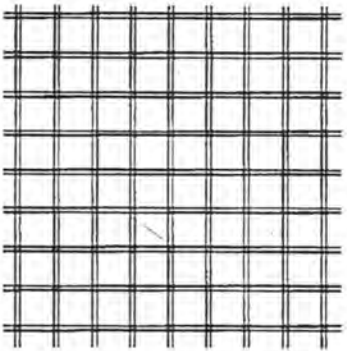
2 X 2 X 19 GA.



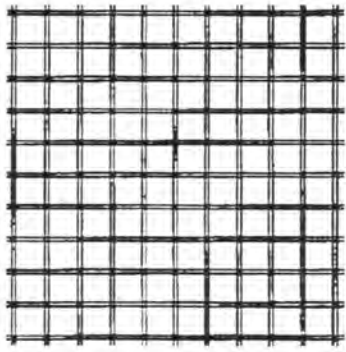
3 X 3 X 21 GA.



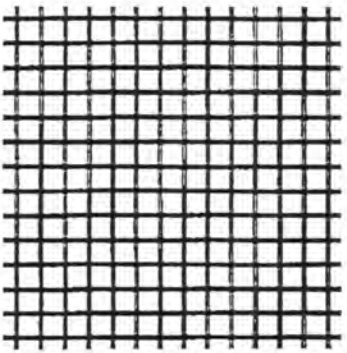
4 X 4 X 23 GA.



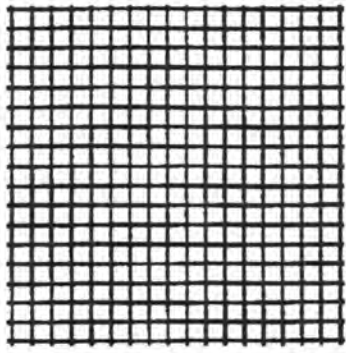
5 X 5 X 24 GA.



6 X 6 X 25 GA.



8 X 8 X 27 GA.



10 X 10 X 29 GA.

#360 AND #480 GRAIN CLEANER SCREENS AVAILABLE**CONE SCREENS****OUTSIDE DRUM SCREENS**CORN 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

5 x 5 x 24 ga. - large

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.

SHIPPING KIT AND BUNDLE NUMBERS

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

QUANTITY	BUNDLE NO.	DESCRIPTION
Y480 480 GRAIN CLEANER		
1	F0617	#480 Crate
Y482 480 GRAIN CLEANER WITH TRASH PAN SYSTEM		
1	F0618	#480 Crate w/shroud and fines auger

NOTE: Screens and Motor (3 hp) are not included with the grain cleaner.

SCREEN SETS AVAILABLE

(One Set of Cone Screens and One Set of Drums Screens required per Cleaner)

F4512	5/8 x 5/8 Cone Screen
F4511	2 x 2 Cone Screen
F4513	3 x 3 Cone Screen
F4514	4 x 4 Cone Screen
F4319	5 x 5 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

CONE (SCALPER) SCREEN 4PCS → 32" WIDE x 48" LONG. (MUST CUT TO FIT)

DRUM (SIFTING) SCREEN 3PCS → 32" WIDE x 115 1/4" LONG.
3PCS → 32" WIDE x 39 1/2" LONG.

SHIPPING KIT AND BUNDLE NUMBERS – cont'd.**Y481 TRASH PAN AND SIDE PANEL OPTION**

1	F4520	Side Panels, Trash Pan Ends
1	F4522	Trash Pan Trough
1	F4523	Carton of Parts

Y811S 8" x 11' UTILITY AUGER OPTION

1	F1419	Tube and Flighting
1	F1405	Intake Assembly
1	F1307	Belt Guard
1	F1413	Flow Control
1	F1410	Carton of Parts

OPTIONAL BUNDLE NUMBERS:

The following is a list of options available for the Kits listed above.

Y207	Set of Two Implement Tires
F0019	Reflective Safety Decal Package
F0021	Safety Light Kit